STATE OF OHIO
DEPARTMENT OF HIGHWAYS

HOL-62-(21.08-21.51)

HOLMES COUNTY

HARDY AND BERLIN TOWNSHIPS
& VILLAGE OF MILLERSBURG

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-668(2)	

F-668(2)

1/128

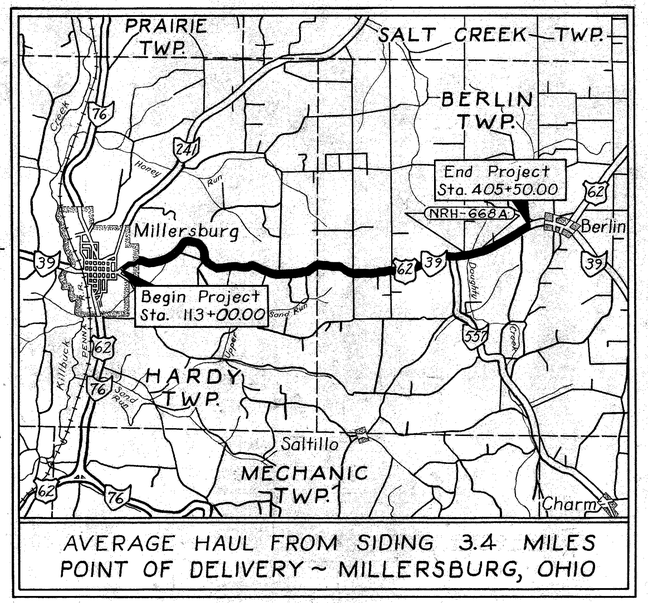
HOL-62-(21.08-21.51)

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.

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
CENTER LINE
PROPERTY LINE
POLE LINE — Telephone ☎ — Electric Ⓟ
FENCE LINE
RAILROADS
GUARD RAIL — New — Old
DRAIN PIPE — New — Old

INDEX OF SHEETS



AVERAGE HAUL FROM SIDING 3.4 MILES
POINT OF DELIVERY ~ MILLERSBURG, OHIO

LOCATION PLAN
SCALE: 1 IN. = 1 MI.

PORTION TO BE IMPROVED
FEDERAL ROADS
STATE ROADS
OTHER ROADS

LINE DATA

BEGIN PROJECT STA. 113+00.00
END PROJECT STA. 405+50.00
GROSS LENGTH OF PROJECT 29,250 LIN. FT.
DEDUCTION FOR EQUATION:
STA. 329+49.00 BACK = STA. 329+50.00 AHEAD = −1.00 LIN. FT.
NET LENGTH OF PROJECT 29,249 LIN. FT. OR 5.539 MILES
ADD FOR WORK AND APPROACHES
STA. 405+50.00 TO STA. 406+00.00 = 50 LIN. FT.
STA. 276+50.00 LT. = 438 LIN. FT.
NET LENGTH OF WORK 29,737 Lin. FT. OR 5.632 MILES

SCALES

PLAN	1" = 50'	1"=100'
PROFILE ~ HORIZONTAL	1" = 50'	1"=100'
PROFILE ~ VERTICAL		1"=10'
CROSS SECTIONS		1"=10'

The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

The Right of Way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for maintenance and safety of traffic will be set forth in these plans and estimates.

Approved: J E Zuckerell
Date: 10-3-57 Division Deputy Director.

Approved: C. H. Mahnerlein
Date: 12-17-57 Deputy Director of Planning and Programming.

Approved: M Overmann
Date: 12-12-57 Engineer of Bridges.

Approved: P.E. Shultz
Date: 12-14-57 Engineer of Location and Design.

Approved: P.E. Mackstein
Date: 12-14-57 Deputy Director of Design and Construction.

Approved:
Date: First Assistant Director.

Approved: George J. Thomson
Date: 12/18/57 Acting Director of Highways

STANDARD DRAWINGS

L-1	4-1-50	I-14 G	1-22-52	I-15 Nº3	12-1-54		
		I-12	7-1-54	SP-53	7-21-53		
L-3	4-1-50	I-1,2,3,4 & 5	2-20-45	S-27-P.C.1	5-1-52		
L-3-A	4-1-50	I-8 C.B. 2-2A & B	8-1-56	S-27-P.C.3	2-20-45		
RI-1	1-3-55	I-8 C.B. 1-3 & 1-4	5-1-52	S-27-P.C.4	1-4-54		
T-35	1-2-56	I-8 C.B. 2-3 & 2-4	5-1-52				
		I-8 C.B. Nº16	4-1-55				
DR-1	1-3-55	I-15 Nº1	8-1-55				
G-7.07	6-1-56	I-15 Nº2-A	6-1-57				

SUPPLEMENTAL SPECIFICATIONS

E-101	1-1-57
B-119 Rev.	8-11-57
M-106.6(d)	12-4-57

FILE Nº	HOL-62-(21.08-21.51)
	Date of Letting ____ 195__
	Contract Nº ____

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

CAM-309

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

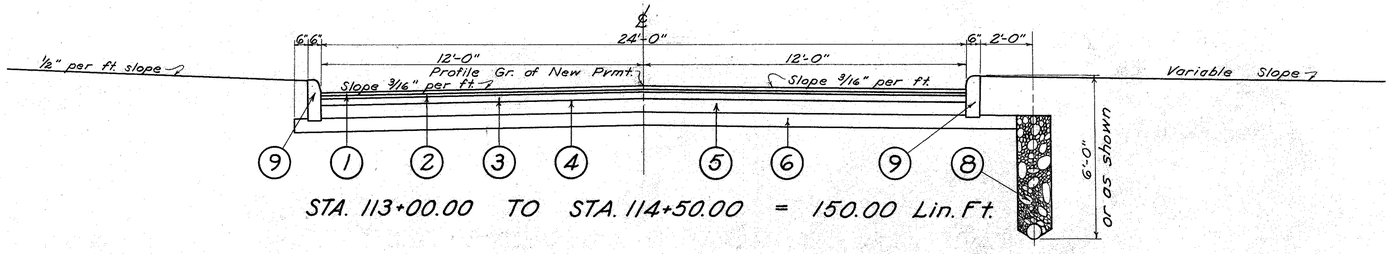
2/128

HOL-62-(21.08-21.51)

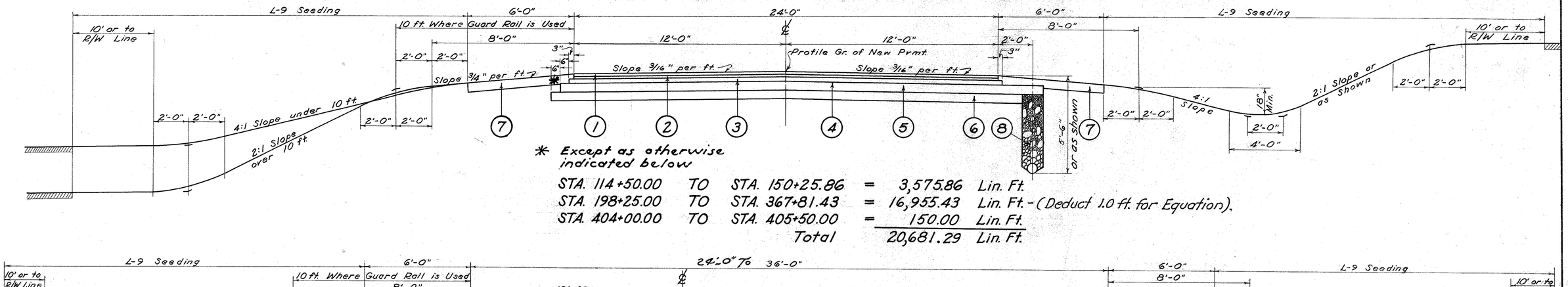
TYPICAL SECTION

TYPE T-35 ON B-119

SCALE 3/8" = 1'-0"

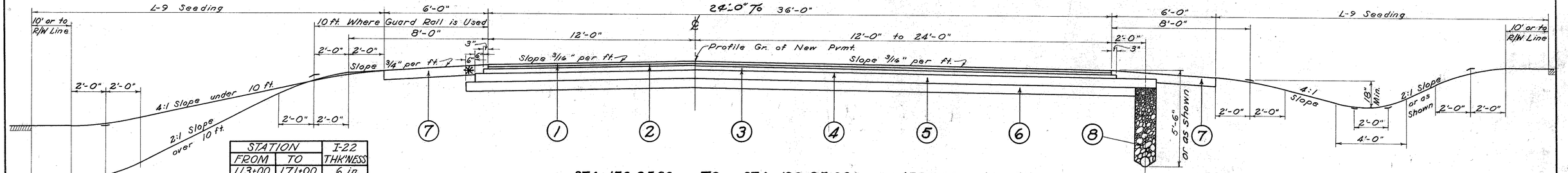


STA. 113+00.00 TO STA. 114+50.00 = 150.00 Lin. Ft.

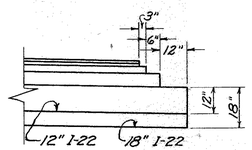


* Except as otherwise indicated below

STA. 114+50.00	TO	STA. 150+25.86	= 3,575.86	Lin. Ft.
STA. 198+25.00	TO	STA. 367+81.43	= 16,955.43	Lin. Ft. - (Deduct 1.0 ft. for Equation).
STA. 404+00.00	TO	STA. 405+50.00	= 150.00	Lin. Ft.
		Total	20,681.29	Lin. Ft.

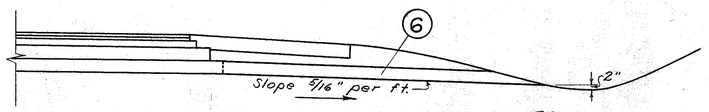


STATION		I-22
FROM	TO	THK'NESS
113+00	171+00	6 in.
171+00	175+00	12 in.
175+00	305+25	6 in.
305+25	307+00	18 in.
307+00	343+00	6 in.
343+00	347+00	12 in.
347+00	383+00	6 in.
383+00	383+50	18 in. — See Note Sh. # 22.
383+50	405+50	6 in.

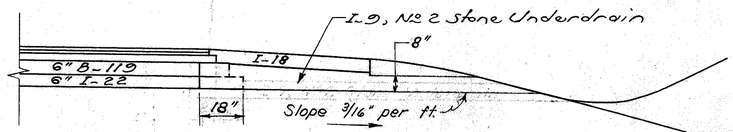


EDGE TREATMENT FOR 12" & 18" I-22 SUBBASE

STA. 150+25.86 TO STA. 198+25.00 = 4799.14 Lin. Ft.
STA. 368+30.57 TO STA. 404+00.00 = 3569.43 Lin. Ft.
Total 8368.57 Lin. Ft.



SUBBASE DRAINAGE IN ROCK CUTS

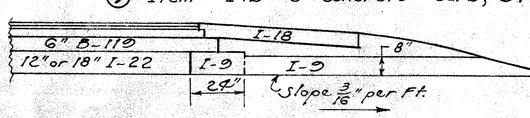


STONE UNDERDRAIN DETAIL IN CUTS & FILLS

See Stone Underdrain Note on Sheet No 4

~ KEY ~

(1) Item	T-35	1½" Asphaltic Concrete Surface Course, Type "A" (70-85).
(2) Item	B-35	1¼" Asphaltic Concrete Leveling Course (70-85).
(3) Item	B-35	2¾" Asphaltic Concrete Base Course (70-85).
(4) Item	T-30	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 or Sec. M-5.2, RC-1 or RC-2 applied at the rate of 0.35 gal. per sq. yd.
(5) Item	B-119	6" Crushed Aggregate Base Course.
(6) Item	I-22	6-18" Subbase, _____ (See thickness table).
(7) Item	I-18	6" Stabilized Crushed Aggregate Shoulders. #
(8) Item	I-4	6" Pipe Underdrain. (To be placed where shown on plans).
(9) Item	I-12	6" Concrete Curb, Std. Type 6.



I-18 Shoulders shall be stabilized with calcium chloride (See note in proposal).

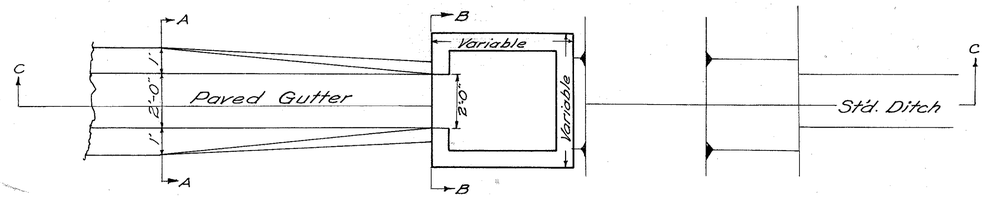
TYPICAL DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

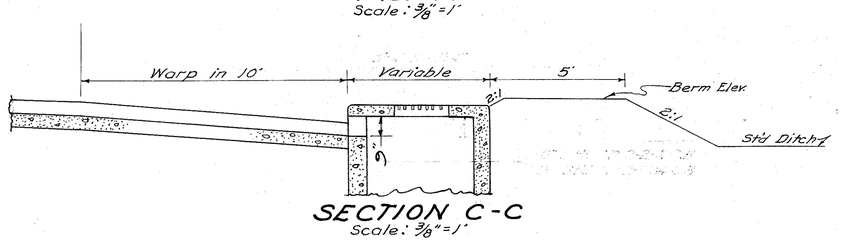
3/128

HOL-62-(21.08-21.51)

I-14-WARP IN PAVED GUTTER TO FIT C.B.

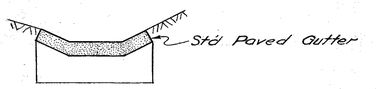


PLAN
Scale: 3/8" = 1'

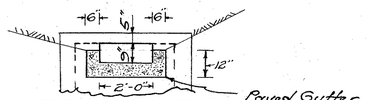


SECTION C-C
Scale: 3/8" = 1'

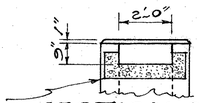
Note:
Warped gutter sections shall be measured and paid for as standard type I paved gutter, as per plan.



SECTION-A-A
Scale: 3/8" = 1'



SECTION-B-B
Scale: 3/8" = 1'
(For 2-3 & 2-4 Catch Basins)



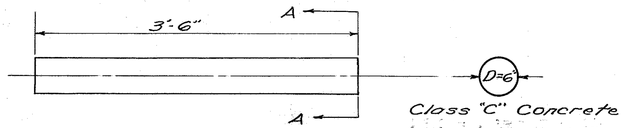
SECTION B-B
Scale 3/8" = 1'
(For 2-2A Catch Basin)

NOTE: All side inlets on 2-3, 2-4 & 2-2A Catch Basins, where paved gutter abuts, shall be modified to 2'-0"X0'-9"

NOTE: All paved gutter is to be warped into Catch Basins as shown at:-		See Sheet Number
Std. No 2-4	STA. 158+52, 52' Rt.	12
Std. No 2-3	STA. 159+00, 50' Lt.	12
Std. No 2-2A C.B.	STA. 232+32, 32' Rt.	16
Std. No 2-3 C.B.	STA. 318+74, 27' Rt.	19

MONUMENTS RESET

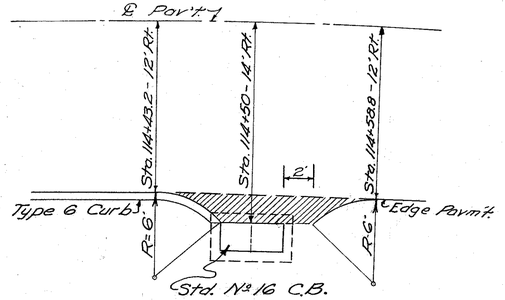
See Sheet No 4



PLAN
Scale: 1" = 1'-0"

SECTION A-A

PAVEMENT FLARE @ C. BASIN Rt. of STA. 114+50



ESTIMATED QUANTITIES (Cross Hatched Area Only)

T-30 - Prime	1 Gal.
T-35 - 1½" Surface Course	0.10 Cu. Yds.
B-35 - 1¼" Leveling Course	0.10 Cu. Yds.
B-35 - 2¾" Base Course	0.20 Cu. Yds.
B-119 - 6" Base Course	0.50 Cu. Yds.
I-22 - 6" Subbase	0.70 Cu. Yds.

Quan'ts carried to Sh. No 7

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4/128

HOL.-62-(21.08-21.51)

GENERAL NOTES

UNDERGROUND ELECTRIC CABLE:— The contractor shall exercise extreme care in his operations in the immediate vicinity of the 220 volt underground cable shown on alignment sheet No. 11 on the right of Station 139+58.

DESIGN SPEED:— The geometrics for this project have been planned for a design speed of 50 miles per hour between Sta. 113+00 and 145+00 and 60 miles per hour from Sta. 145+00 to Sta. 405+50.

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

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

FIELD OFFICE:— The contractor shall provide a suitable field office in accordance with section 5-0.01(b) having a minimum floor area of 300 Sq. ft. The contractor shall have a telephone installed and maintained during the construction of the project.

UTILITIES:— Any and all work required for removing, relocating and constructing new facilities for private or public utilities will be done by and at the expense of their respective owners, and the contractor shall co-operate with the Utility Companies by arranging his work in such a manner that needless confliction will be avoided. In particular in the vicinity of Sta. 116+00 and Sta. 119+00, the Ohio Gas Co. has 2" and 4" gas mains where excavation shall be made with caution. After rough grading has been completed between Sta. 113+00 and Sta. 120+00, the Ohio Gas Co. will lay a new 4" gas main under the right berm, a distance of 5 feet from the right edge of the proposed pavement and properly back fill the ditch. Also between Sta. 391+00 and Sta. 398+00, the Berlin Water Co. has a 4" water line which will have to be relaid by the water company during grading operations in this area.
The contractor shall exercise extreme care while removing excavation in this location, to an elevation approximately 1 foot above the pipe. The contractor shall then co-operate with Berlin Water Co. representatives by permitting them to remove and salvage the pipe without undue interference. After rough grading operations are completed between the foregoing limits, the company will relay their water line under the left berm, a distance of 5 feet from the edge of the proposed pavement and properly back fill the ditch.

LOCATION OF WATER AND GAS LINES:— The State of Ohio will not be responsible for the accuracy of the locations shown of the existing water and gas lines. They are shown as near correct as the available information permits. The exact depth and location of the water and gas lines where proposed structures and storm sewers are to be placed shall be determined by the contractor prior to the installation of such items. Adjustments of flow lines of proposed catch basins and proposed storm sewers may be made at the direction of the Engineer, to meet existing conditions.

SEEDING AND PROTECTING:— Quantities for seeding, Item L-9, are calculated for the soil areas between lines ten feet outside the work limits, as shown on the cross sections, or to the right-of-way line, if such line is less than ten(10) feet from the work limits. Seeding shall not be used on areas where rock or hard shale is encountered in cut slopes or where fill slopes are composed of rock.

EXISTING PAVEMENT REMOVAL:— After the existing pavement has been removed, the old roadway shall be plowed, harrowed and dragged to a smooth grade, the old ditches shall be filled and the entire area left in a neat condition. Cost of this work shall be included in the unit price bid for Pavement Removal, Item E-8. Areas shall then be seeded in accordance with Item L-9

PAVED GUTTERS:— Paved gutters shall be constructed of stone or broken concrete to a minimum thickness of twelve inches or Class "E" concrete to a minimum thickness of six inches. Solid precast concrete blocks may be used in lieu of stone with a minimum thickness of twelve inches. Thickness of paved gutter shall be measured perpendicular to the surface of the ditch.

Concrete gutters shall have an impressed joint at intervals of ten (10) feet.

When constructed of material other than concrete the material shall be grouted in place.

T-10 MODIFIED:— This item shall consist of furnishing No. 3 and No. 34 aggregate, as directed by the Engineer, in lieu of the grading specified under Item T-10. All other provisions of Item T-10 shall apply.

ITEM E-3:— Channel excavation has been calculated through the roadway area of the 66" pipe at Sta. 139+48.6 and the 8'-7"x5'-11" pipe arch at Sta. 322+90. Any additional excavation required to remove unsuitable foundation material for these structures shall be measured and paid for as Item E-3, Channel Excavation.

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

DRIVES AND MAIL BOX TURNOUTS:— Mail box turnouts and residence drives shall be paved with 5" of B-119 material and 2" of T-35 surface course. Field drives shall be paved with 6" of B-119 material. Dimensions of drives shall be in accordance with Type 2 driveway on Std. Dwg. Dr-1, unless otherwise shown in the plans.

COMPACTION FOR DRIVE AND APPROACHES:— The subgrade for drives, mail box turnouts and approaches paved with T-35 and/or B-119 material, except approaches on which compacted subgrade is listed as a pay item, shall be compacted for a depth of 6 inches to the density required in Table III, Item E-101.09. Payment for subgrade compaction, as specified above, shall be included in unit price bid for item E-101, Roadway Excavation.

REMOVAL OF TREES AND STUMPS:— The number and size of trees and stumps shown below for removal under the construction as detailed on these plans are as nearly correct as available information permits. The State of Ohio will not be responsible for any variations found during construction. The lump sum bid for Item E-9, Removal of Trees and Stumps, shall constitute full payment for this Item and no additional compensation will be allowed.

The number and size of trees and stumps are estimated below:

12" to 18" =	314	30" to 36" =	5
18 to 24" =	64	36 to 42" =	0
24" to 30" =	25	42" to 48" =	0

LIMITATION OF ACCESS:— All private drives and public approaches on the project have been determined and negotiations entered into with the property owners on the basis of locations shown on the plans. No change in location on these drives or approaches shall be made during construction or there after, nor shall any additional drives or approaches to the project be permitted during the construction or thereafter.

PART WIDTH CONSTRUCTION:— When necessary for the satisfactory maintenance of traffic, pavement shall be constructed part width at a time. Care shall be exercised to prevent the construction of a butt joint on centerline, in B-119 and I-22 courses. This shall be accomplished by building the B-119 and I-22 courses, placed with the first portion of the pavement built, to extend at least 18 inches beyond the centerline, and by surfacing no closer than 18 inches to this edge. When the second portion of the pavement is built, a 12 inch width of the projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement. All additional cost shall be included in the unit price bid for pertinent pavement items.

RESETTING U.S.C.G.S. BENCH:— The U.S.C.G.S. bench mark stamped 5-30-1934 located 8.5 ft. left of sta. 250+45 and the U.S.C.G.S. bench mark stamped T-30-1934, located 41 ft. left Sta. 363+40, will be destroyed by the construction of this project. The Division Office will furnish new bronze tablets which are to be placed in new concrete posts and set in undisturbed ground, within the right-a-way, so that the top of post is approximately 5 inches above the ground. Accurate levels shall be run between the old and the new bench marks in two(2) separate runnings. The elevation of the new B. M's. shall be established and reported to the Division Location and Design office on special forms to be furnished for submission to Washington, D.C. The old B. M's. shall then be destroyed and the bronze tablets removed and returned with the report to Location and Design. All cost included in item I-8, Monuments Reset. For detail of monument, see Sheet 3.

SMALL DRAINS:— Where drains from downspouts, field drains, etc., are encountered and not shown on the plans, they shall be given an unobstructed outlet as directed by the Engineer. Estimated additions of pipe are provided in the plans for this work. No drains carrying domestic waste shall be connected to any proposed drainage facility.

DUMPED ROCK CHANNEL PROTECTION:— Excavation necessary for placing dumped rock shall be included in the unit price bid per cu. yd. for Item I-10, Dumped Rock Channel Protection.

MAINTAINING TRAFFIC:— The contractor shall maintain two-way traffic at all times of the following locations; Sta. 113+00 to Sta. 121+00; Sta. 128+00 to 130+00; Sta. 133+00 to 163+00; Sta. 168+00 to 170+00; Sta. 193+00 to Sta. 208+00; Sta. 211+00 to Sta. 214+00; Sta. 241+00 to Sta. 251+00; Sta. 276+00 to Sta. 279+00; Sta. 294+00 to Sta. 395+00; Sta. 350+00 to Sta. 372+00; and Sta. 386+00 to Sta. 405+50, where construction overlaps existing U.S.R. 62, except that one-way traffic will be permitted over the grade of the highway in the overlapping areas during pavement operations in these locations. Traffic, except on overlapping areas described above, will be maintained by others on the existing pavement.

Temporary traffic lanes shall be surfaced with T-10 material, treated with calcium chloride and the surface maintained daily in a manner satisfactory to the Engineer. Two way traffic lanes shall be surfaced with aggregate at least 20 feet wide and one-way traffic lanes shall have surfacing aggregate not less than 12 feet wide.

Maintenance of traffic shall be in accordance with the provisions of Sec. G-7.07. Payment for constructing, maintaining and removing temporary traffic lanes, except furnishing and placing T-10 and M-10 Items, shall be included in the lump sum bid for Maintaining Traffic. Maximum use shall be made of the existing pavement for traffic maintenance, holding the length and duration of use of temporary traffic lanes to an absolute minimum. The Contractor shall not haul on existing pavement on areas maintained by others except with legal loads.

STONE UNDERDRAINS:— No. 2 Stone Underdrains shall be constructed at intervals not to exceed 50 ft. on both sides of pavement on tangent & 25' intervals on the low side of pavement on curves, except in rock cuts where I-22 subbase extends to ditch and in areas where I-4 Pipe Underdrains are to be constructed. Additional underdrains may be required and shall be constructed at locations determined by the Engineer. An estimated quantity of 8,680 lin. ft. has been included in the general summary for this Item. I-9 Drain to be used in its entirety.

EXTRA QUANTITIES:— Specific locations of use of extra quantities shown on sheets 6 and 7 to be used where directed by the Engineer shall be made a matter of record by incorporation into the final change order governing the construction of this project.

END WALLS:— Standard end walls called for in these plans shall be those shown on Std. Dwg. S-27 P.C. & unless otherwise specifically marked.

NON RIGID PAVEMENT REMOVAL:— Removal & disposal of existing non rigid pavement, except where otherwise indicated on the plans for removals outside normal construction limits, shall be measured & paid for as Item E-101, Roadway Excavation.

FEDERAL PARTICIPATION:— There will be no federal participation in the cost of Item T-36, asphaltic concrete surface course & Item T-30 prime coat used on driveways beyond the right of way limits except where existing drives have bituminous or concrete surfaces. The estimated quantity of T-30 & of T-35 specified on these plans for paving drives beyond right of way lines & not eligible for federal participation is estimated to be 541 Gallons of T-30 & 86 Cu. Yd. of T-35.

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5/128

HOL-62-(21.08-21.51)

NEW PAVEMENT:

24 ft. Curbed Pavement:-
Sta. 113+00.00 to Sta. 114+50.00 = 150.00 LIN. FT.

24 ft. Normal Pavement:-
Sta. 114+50.00 to Sta. 405+50.00 = 29,100.00 Lin. Ft.
Deductions:-
For Equation:
(Sta. 329+49.00 Back = Sta. 329+50.00 Ahead) = 1.00 Lin. Ft.
For Bridge:
Sta. 367+81.43 to Sta. 368+30.57 = 49.14 Lin. Ft.
Total Deductions = 50.14 Lin. Ft.
TOTAL LENGTH: (29,100.00 - 50.14) = 29,049.86 LIN. FT.

12 ft. Truck Lane:-
Sta. 153+25.86 to Sta. 195+00.00 = (℄ 4174.14 Lin. Ft.) * 4162.04 Lin. Ft.
Sta. 370+00.00 to Sta. 401+50.00 = (℄ 3150.00 Lin. Ft.) * 3159.44 Lin. Ft.
TOTAL LENGTH: * 7321.48 LIN. FT.

Pavement Transitions:-(Truck Lanes)
Sta. 150+25.86 to Sta. 153+25.86 = (300.00 × 6.00 ft. ave. width) ÷ 9 = 200.00 S. Y.
Sta. 195+00.00 to Sta. 198+25.00 = (325.00 × 5.59 " " ") ÷ 9 = 201.86 " "
Sta. 368+30.57 to Sta. 370+00.00 = (169.43 × 6.00 " " ") ÷ 9 = 112.95 " "
Sta. 401+50.00 to Sta. 404+00.00 = (250.00 × 6.00 " " ") ÷ 9 = 166.67 " "
TOTAL: 681.48 SQ. YD.

ITEM I-22, Subbase

24 ft. Curbed Pavement:-
Sta. 113+00.00 to Sta. 114+50.00 = (150.00 × 0.5 × 27.5) ÷ 27 = 76.39 C.Y.

24 ft. Normal Pavement:-
Sta. 114+50.00 to Sta. 171+00.00 = (5650.00 × 0.5 × 26.5) ÷ 27 = 2772.69 C.Y.
Sta. 171+00.00 to Sta. 175+00.00 = (400.00 × 1.0 × 27.5) ÷ 27 = 407.41 " "
Sta. 175+00.00 to Sta. 305+25.00 = (13025.00 × 0.5 × 26.5) ÷ 27 = 6391.90 " "
Sta. 305+25.00 to Sta. 307+00.00 = (175.00 × 1.5 × 27.5) ÷ 27 = 267.36 " "
Sta. 307+00.00 to Sta. 329+49.00 = (2249.00 × 0.5 × 26.5) ÷ 27 = 1103.68 " "
Sta. 329+50.00 to Sta. 343+00.00 = (1350.00 × 0.5 × 26.5) ÷ 27 = 662.50 " "
Sta. 343+00.00 to Sta. 347+00.00 = (400.00 × 1.0 × 27.5) ÷ 27 = 407.41 " "
Sta. 347+00.00 to Sta. 367+81.43 = (2081.43 × 0.5 × 26.5) ÷ 27 = 1021.44 " "
Sta. 368+30.57 to Sta. 383+00.00 = (1469.43 × 0.5 × 26.5) ÷ 27 = 721.11 " "
Sta. 383+00.00 to Sta. 383+50.00 = (50.00 × 1.5 × 27.5) ÷ 27 = 76.39 " "
Sta. 383+50.00 to Sta. 405+50.00 = (2200.00 × 0.5 × 26.5) ÷ 27 = 1079.63 " "
Total = 14,911.52 C.Y.

12 ft. Truck Lane:-
Sta. 153+25.86 to Sta. 171+00.00 = ℄ 1774.14 Lin. Ft. (*1755.74 × 0.5 × 12) ÷ 27 = 390.16 C.Y.
Sta. 171+00.00 to Sta. 175+00.00 = ℄ 400.00 Lin. Ft. (400.00 × 1.0 × 12) ÷ 27 = 177.78 " "
Sta. 175+00.00 to Sta. 195+00.00 = ℄ 2000.00 Lin. Ft. (*2006.30 × 0.5 × 12) ÷ 27 = 445.84 " "
Sta. 370+00.00 to Sta. 383+00.00 = ℄ 1300.00 Lin. Ft. (*1309.54 × 0.5 × 12) ÷ 27 = 291.01 " "
Sta. 383+00.00 to Sta. 383+50.00 = ℄ 50.00 Lin. Ft. (50.31 × 1.5 × 12) ÷ 27 = 33.54 " "
Sta. 383+50.00 to Sta. 401+50.00 = ℄ 1800.00 Lin. Ft. (*1799.59 × 0.5 × 12) ÷ 27 = 399.91 " "
Total = 1738.24 C.Y.

Pavement Transition:
681.48 × (6 ÷ 36) = 113.58 C.Y.
Estimated additional I-22 for Subbase drainage to I-4 drains = 22.00 C.Y.
Estimated additional I-22 for Subbase drainage to ditches in rock cuts = 1157.00 C.Y.

TOTAL 18,018.73 CU. YDS.

ITEM B-119, 6" Crushed Aggregate Base Course.
(150.00 × 0.5 × 24) ÷ 27 = 66.67 C.Y.
(29049.86 × 0.5 × 25.5) ÷ 27 = 13,717.99 " "
(7321.48 × 0.5 × 12) ÷ 27 = 1627.00 " "
[681.48 × (6 ÷ 36)] = 113.58 " "
Additional to I-4 Drains = 215.00 " "

TOTAL 15,740.24 Cu. Yd.

ITEM T-30, Bituminous Prime Coat. (0.35 gal. per sq. yd.)
[(150.00 × 24) ÷ 9] × 0.35 = 140.00 Gal's.
[(29049.86 × 25.5) ÷ 9] × 0.35 = 28,807.86 "
[(7321.48 × 12) ÷ 9] × 0.35 = 3416.69 "
(681.48 × 0.35) = 238.52 "

TOTAL 32,603.07 GAL'S.

Item Special, Mixing Calcium Chloride and Crushed Aggregate
53,927.72 L.F. (From I-18 Calc.) × 6 × 1/9 = 3618 Sq. Yd.

Item M-10, Calcium Chloride for Stabilized Shoulders
3618 (1.5 + 0.6) ÷ 2000 = 37.4 Tons
Item M-10 for Maintaining Traffic = 247.5 "
Total Item M-10 (To General Summary): 284.9 Tons
use 285 Tons

* = Lineal feet used for calculations.

ITEM B-35, 2¾" Asphaltic Concrete Base Course (70-85).
(150.00 × 0.2292 × 24) ÷ 27 = 30.56 C.Y.
(29049.86 × 0.2292 × 24.5) ÷ 27 = 6041.73 " "
(7321.48 × 0.2292 × 12) ÷ 27 = 745.81 " "
[681.48 × (2.75 ÷ 36)] = 52.06 " "

TOTAL 6870.16 CU. YDS.

ITEM B-35, 1¼" Asphaltic Concrete Leveling Course (70-85).
(150.00 × 0.1042 × 24) ÷ 27 = 13.89 C.Y.
(29049.86 × 0.1042 × 24) ÷ 27 = 2690.66 " "
(7321.48 × 0.1042 × 12) ÷ 27 = 339.07 " "
[681.48 × (1¼ ÷ 36)] = 23.66 " "

TOTAL 3067.28 CU. YDS.

ITEM T-35, 1½" Asphaltic Concrete Surface Course, Type "A" (70-85).
(150.00 × 0.125 × 24) ÷ 27 = 16.67 C.Y.
(29049.86 × 0.125 × 24) ÷ 27 = 3227.76 " "
(7321.48 × 0.125 × 12) ÷ 27 = 406.75 " "
[681.48 × (1½ ÷ 36)] = 28.40 " "

TOTAL 3679.58 CU. YDS.

ITEM I-18, 6" Stabilized Crushed Aggregate Shoulders.
29,049.86 × 2 = 58,099.72 Lin. Ft.
Deduct for Approaches from Line Sheets. {251 + 181 + 185 + 206 + 114 + 341 + 283 + 301 + 480 + 540 + 700 + 392 + 352 + 346} = 4,672.00 " "
(Average Thickness = 0.48 Ft.) Net Length = 53,427.72 Lin. Ft.
(53,427.72 × 0.48 × 6) ÷ 27 = 5698.96 Cu. Yds.

TOTAL 5,698.96 CU. YDS.

ITEM E-101, Compacted Subgrade.
24 Ft. Pavement. = 29,049.86 Lin. Ft.
Deduct for Rock Cut, (126+50 to 131+00; 163+50 to 167+50; 206+50 to 213+50; 223+50 to 227+50; 245+50 to 250+00; 256+00 to 262+00; 284+50 to 290+50; 390+50 to 395+50). = 4,100.00 " "
24,949.86 Lin. Ft. × 24 ÷ 9 = 66,532.96 Sq. Yds.
12 Ft. Truck Lane, = 7,321.48 Lin. Ft.
Deduct for Rock Cut, (163+50 to 167+50 & 390+50 to 395+50) = 900.00 " "
6,421.48 L.F. × 12 ÷ 9 = 8,561.97 " "
Add for Truck Lane Transitions. = 681.48 " "
TOTAL 75,776.41 SQ. YDS.

EARTHWORK AND SEEDING

STATION FROM	STATION TO	RDWY. EXC. CU. YDS.	EMBANKMENT CU. YDS.	EMB. +15% CU. YDS.	SEEDING SQ. YDS.	FERTILIZER LBS.	LIME LBS.
113+00	195+69.80	131,476	114,327	131,476	93,385	16,809	84,047
195+69.80	220+56.50	64,391	55,992	64,391	32,285	5,811	29,057
220+56.50	243+63.64	55,781	48,505	55,781	28,811	5,186	25,930
243+63.64	270+06.77	71,528	62,198	71,528	35,875	6,458	32,288
270+06.77	304+63.06	79,662	69,271	79,662	49,411	8,894	44,470
304+63.06	393+42.91	98,006	43,411	49,923	79,196	14,252	71,276
393+42.91	405+50	11,100	9,653	11,100	11,029	1,985	9,926
TOTALS		511,944	403,357	463,861	329,992	59,395 lbs. / 29.70 Tons.	296,994 lbs. / 148.50 Tons.

Total Excess Excavation = 511,944 − 463,861 = 48,083 Cu. Yds.

ITEM E-11, Water.
Embankment = 403,357 × 5 ÷ 1000 = 2017
B-119 = 18,911 × 5 ÷ 1000 = 95
I-18 = 5,699 × 5 ÷ 1000 = 29
I-22 = 18,867 × 5 ÷ 1000 = 94
TOTAL 2235 M-GALS.

ITEM T-10, For Maintaining Traffic. (16,500 Lin. Ft. × 75 ÷ 100) = TOTAL, ≠ 12,375 CU. YDS.
ITEM M-10, Calcium Chloride, (12,375 ÷ 50) = TOTAL, 247.5 TONS.
≠ Use 6190 C.Y. T-10 & 6185 C.Y. T-10 Mod.

* Extra quantities to be placed where directed by the Engineer. Any of these items may be non-performed and payment will be made on the basis of final measurement.

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL-62-(21.08-21.51)

6/128

TOTAL FROM SHEET Nº :

2	3	4	5	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	*	ITEM		GRAND TOTAL	UNIT	DESCRIPTION
																								CODE TYPE 6201 — ROADWAY —
			511,944																	E-101		511,944	CU. YDS.	ROADWAY EXCAVATION, AS PER PLAN.
			75,776					569	679	484	859		1040				920			E-101		80,327	SQ. YDS.	COMPACTED SUBGRADE.
				2085	1280																			
							760	690	1030	440	700		3500	10		1005				E-8		3365	SQ. YDS.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (RIGID TYPE), AS PER PLAN.
				253																E-8		8135	SQ. YDS.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT (FLEXIBLE TYPE), AS PER PLAN.
				814																E-8		253	SQ. FT.	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK.
																				E-8		814	LIN. FT.	REMOVAL AND DISPOSAL OF EXISTING CURB.
																				E-9		LUMP	LUMP	REMOVAL OF TREES AND STUMPS.
			2235																	E-11		2235	M-GAL.	WATER.
				508	16		166		33		23		308	137	110	157		124		E-12		1582	LIN. FT.	PIPE REMOVED — 15" AND UNDER.
						84	116				46		8	638	145	52	56			E-12		1145	LIN. FT.	PIPE REMOVED — OVER 15"
				250																E-12		250	LIN. FT.	PIPE REMOVED FOR STORAGE — 15" AND UNDER.
				364																E-12		364	LIN. FT.	PIPE REMOVED FOR STORAGE — OVER 15".
											1					1				I-8		2	EACH	MONUMENTS RESET, AS PER PLAN
				223																I-13		223	SQ. FT.	4" CONCRETE SIDEWALK.
				85																I-15		85	LIN. FT.	GUARD RAIL REMOVED AND DISPOSED OF.
				412.5	275	1037.5	887.5	800	275	1450	1837.5	2225	662.5	275		500	886.72	1115		I-15		12,639.22	LIN. FT.	GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP) AS PER STD. DRWG. I-15 Nº 2-A.
					176		512							176						I-15		864	LIN. FT.	GUARD RAIL, WOVEN WIRE TYPE, 3 TAPES STANDARD STRENGTH OR WIRE CABLE TYPE, 3 CABLES.
			329.992																	L-9		329.992	SQ. YDS.	SEEDING AND PROTECTING.
			29.7																	L-9		29.70	TONS	COMMERCIAL FERTILIZER - (12-12-12)
			148.5																	L-9		148.50	TONS	AGRICULTURAL LIMING MATERIALS.
			285																	M-10		285	TONS	CALCIUM CHLORIDE FURNISHED AND APPLIED
			35618																	Special		35618	SQ. YD.	MIXING CALCIUM CHLORIDE AND CRUSHED AGGREGATE
			6190																	T-10		6190	CU. YDS.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC.
			6185																	T-10		6185	CU. YDS.	MODIFIED TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC, AS PER PLAN.
																								— DRAINAGE —
				291		14	26	273	21	44	120	60	120		20	38	2	59		E-2		1088	CU. YDS.	EXCAVATION FOR STRUCTURES.
				40		1345		13				44	30		361	5				E-3		1838	CU. YDS.	CHANNEL EXCAVATION.
				38									46	42	172	82	58			I-1		438	LIN. FT.	12" PLAIN CORRUGATED METAL PIPE, SEC. M-6.4(a) FOR DRIVEWAYS.
				110	100				130	34	32			120		78		142		I-1		746	LIN. FT.	15" PLAIN CORRUGATED METAL PIPE, SEC. M-6.4(a) FOR DRIVEWAYS.
											202		52	40		74				I-1		368	LIN. FT.	18" PLAIN CORRUGATED METAL PIPE, SEC. M-6.4(a) FOR DRIVEWAYS.
													44	50						I-1		94	LIN. FT.	21" PLAIN CORRUGATED METAL PIPE, SEC. M-6.4(a) FOR DRIVEWAYS.
						100	190										38			I-1		328	LIN. FT.	24" PLAIN CORRUGATED METAL PIPE, SEC. M-6.4(a) FOR DRIVEWAYS.
											60									I-1		60	LIN. FT.	27" PIPE FOR DRIVEWAYS.
							42													I-1		42	LIN. FT.	42" PIPE FOR DRIVEWAYS.
																		348		I-2		348	LIN. FT.	15" CLASS 'A' STORM SEWERS.
																		6		I-2		6	LIN. FT.	8" CLASS 'A' STORM SEWERS.
				120													952	54		I-2		1126	LIN. FT.	18" CLASS 'A' STORM SEWERS.
									790											I-2		790	LIN. FT.	24" CLASS 'A' STORM SEWERS.
				474													466			I-2		940	LIN. FT.	30" CLASS 'A' STORM SEWERS.
							868													I-2		868	LIN. FT.	36" CLASS 'A' STORM SEWERS.
							52													I-2		52	LIN. FT.	42" CLASS 'A' STORM SEWERS.
																	288			I-2		288	LIN. FT.	27" CLASS 'A' STORM SEWERS.
										40	80				68	88			120	I-2		396	LIN. FT.	12" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				54													96	80		I-2		230	LIN. FT.	15" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				94			178		76								80	54		I-2		482	LIN. FT.	18" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				68		78	116						90	124	148					I-2		624	LIN. FT.	24" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				56													50			I-2		106	LIN. FT.	30" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
																	40			I-2		40	LIN. FT.	27" CLASS 'A' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				240																I-2		240	LIN. FT.	12" CLASS 'B' STORM SEWERS.
				26																I-2		26	LIN. FT.	12" CLASS 'B' STORM SEWERS UNDER PAVEMENT OR APPROACHES.
				184				2189	896				200	2914	1282	574	1026		300	I-4		9565	LIN. FT.	6" UNDERDRAINS.
								40						60	20		40	10	30	I-4		200	LIN. FT.	6" HELICAL CORRUGATED METAL PIPE, SEC. M-6.4(h), WITHOUT PERFORATIONS FOR OUTLETS FOR UNDERDRAINS.

Cont'd.

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

7/128

HOL-62-(21.08-21.51)

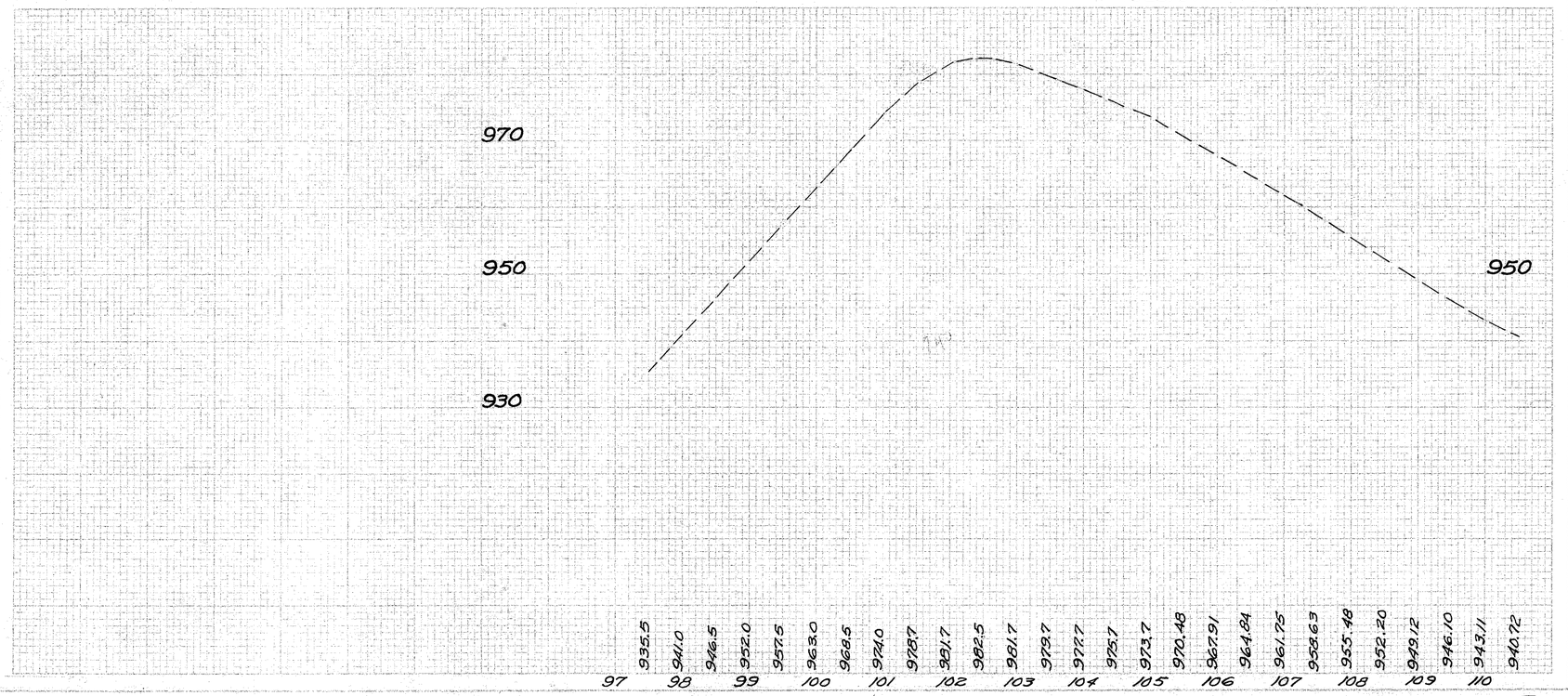
TOTAL FROM SHEET Nº 2	3	4	5	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	*	ITEM	100% STATE	GRAND TOTAL	UNIT	DESCRIPTION
																								CODE TYPE 6201
																								– DRAINAGE, (cont'd.) –
								2							2					I-5		4	EACH	6" PIPE SPECIALS FOR UNDERDRAINS.
																		1		I-5		1	EACH	8" PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.
																1				I-5		1	EACH	12 PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.
									1									2		I-5		2	EACH	18" PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.
											1									I-5		1	EACH	24" PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.
				5																I-8		1	EACH	CATCH BASINS, STANDARD Nº 2-2A MODIFIED
				2					2						1		3	1		I-8		5	EACH	CATCH BASINS, STANDARD Nº 1-3.
							3													I-8		9	EACH	CATCH BASINS, STANDARD Nº 2-3.
				3					1		2						4	4		I-8		3	EACH	CATCH BASINS, STANDARD Nº 2-4.
						1								1						I-8		15	EACH	CATCH BASINS, STANDARD Nº 2-2A.
				3																I-8		2	EACH	CATCH BASINS, STANDARD Nº 2-2B.
							1							1						I-8		3	EACH	CATCH BASINS, STANDARD Nº 16.
		4400					1												320	I-8		2	EACH	CATCH BASINS, STANDARD Nº 2-3 MODIFIED
							1													I-9		9000	LIN. FT.	STONE UNDERDRAINS, Nº 2.
						49	10	37		5	15	10	13	11	6	55				I-8		1	EACH	CATCH BASINS, STANDARD Nº 2-4 MODIFIED
				34		66	50	34		5	30		35		24	75	20	10		I-10		211	SQ. YDS.	RIPRAP, TYPE 'A' (GROUT FILLED).
																				I-10		383	CU. YDS.	DUMPED ROCK CHANNEL PROTECTION.
				78		868	1024	79			1770		710	516		325			130	I-14		5500	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1, AS PER PLAN
				6																I-16		6	EACH	CATCH BASINS ABANDONED.
							4.0													S-1		4.0	CU. YDS.	CONCRETE FOR STRUCTURES, CLASS 'C'.
				6.1		7.0	2.4	1.6	0.9	0.8	1.2	0.8	1.8		11.0	3.2	0.6	0.4	1.2	S-1		39.0	CU. YDS.	CONCRETE FOR STRUCTURES, CLASS 'E'.
							50													S-4		50	LBS.	REINFORCING STEEL.
				1			8.5				2		9		4	5.4	1.3	1	1.8	S-22		34	CU. YDS.	REMOVAL OF PORTIONS OF EXISTING STRUCTURE.
				1		1	2								1	1				S-24			LUMP	REMOVAL OF EXISTING STRUCTURES. AS PER PLAN
									80											S-27		80	LIN. FT.	15" PIPE FOR ROADWAY CULVERTS.
																106				S-27		106	LIN. FT.	24" PIPE FOR ROADWAY CULVERTS.
													108							S-27		108	LIN. FT.	30" PIPE FOR ROADWAY CULVERTS.
								202		170										S-27		372	LIN. FT.	24" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) ; OR HEAVY DUTY REINFORCED CONCRETE CULVERT PIPE, SEC. M-106.6(d) FOR ROADWAY CULVERTS.
												190								S-27		190	LIN. FT.	24" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) 12 GAGE FOR ROADWAY CULVERTS.
											142									S-27		142	LIN. FT.	36" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) ; OR HEAVY DUTY REINFORCED CONCRETE CULVERT PIPE, SEC. M-106.6(d) FOR ROADWAY CULVERTS.
																84				S-27		84	LIN. FT.	48" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) FOR ROADWAY CULVERTS.
				128																S-27		128	LIN. FT.	54" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) FOR ROADWAY CULVERTS.
								190										98		S-27		288	LIN. FT.	24" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE SEC. M-6.4(d) FOR ROADWAY CULVERTS
						144														S-28		144	LIN. FT.	66" SECTIONAL CORRUGATED METAL STRUCTURE, SEC. M-6.4(g)(c), 10-10 GAGE, AS PER PLAN
															100					S-28		100	LIN. FT.	8'-7" × 5'-11" SECTIONAL CORRUGATED METAL STRUCTURE, SEC. M-6.4(g)(d), 10-8 GAGE, AS PER PLAN
																								– PAVEMENT –
				296																I-12		296	LIN. FT.	STANDARD TYPE 6 CONCRETE CURB.
		5699																		I-18		5699	CU. YDS.	STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES
	1	18,019																		I-22		18,020	CU. YDS.	SUBBASE.
	1	15,740	289	178	92	204	132	316	221.6	232.6		417	392	217	187	310	131			B-119		19,060	CU. YDS.	CRUSHED AGGREGATE BASE COURSE.
	0.2	6870.2																		B-35		6,871	CU. YDS.	ASPHALTIC CONCRETE BASE COURSE (70-85).
	0.1	3067.3																		B-35		3068	CU. YDS.	ASPHALTIC CONCRETE LEVELING COURSE (70-85).
	1	32,603	566	339	191	414	209	470	407	450		799	689	440	291	388	170			T-30	541	38,427 ✓	GAL'S.	BITUMINOUS PRIME COAT, SEC. M-5.7 RT-2 OR RT-3; OR SEC. M-5.2 RC-1 OR RC-2
	0.1	3679.6	90.4	51.0	30.3	64.0	31.6	71.9	63.4	55.0		122.2	105.3	69.8	44.7	58.7	27.3			T-35	86	4566 ✓	CU. YDS.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE 'A' (70-85).
																								– STRUCTURES OVER 20 FT. SPAN –
																								SEE SHEET Nº 120 FOR QUANTITIES. – – – BRIDGE Nº HOL-62-2591
																				Special		LUMP	LUMP	CONSTRUCTION LAYOUT STAKES.
																								* EXTRA QUANTITIES TO BE PLACED WHERE DIRECTED BY THE ENGINEER.

FED. RD. DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO		8 / 128

HOL-62-(21.08-21.51)

MATCH LINE STA. 110+50

PLAN
Scale: 1"=100'



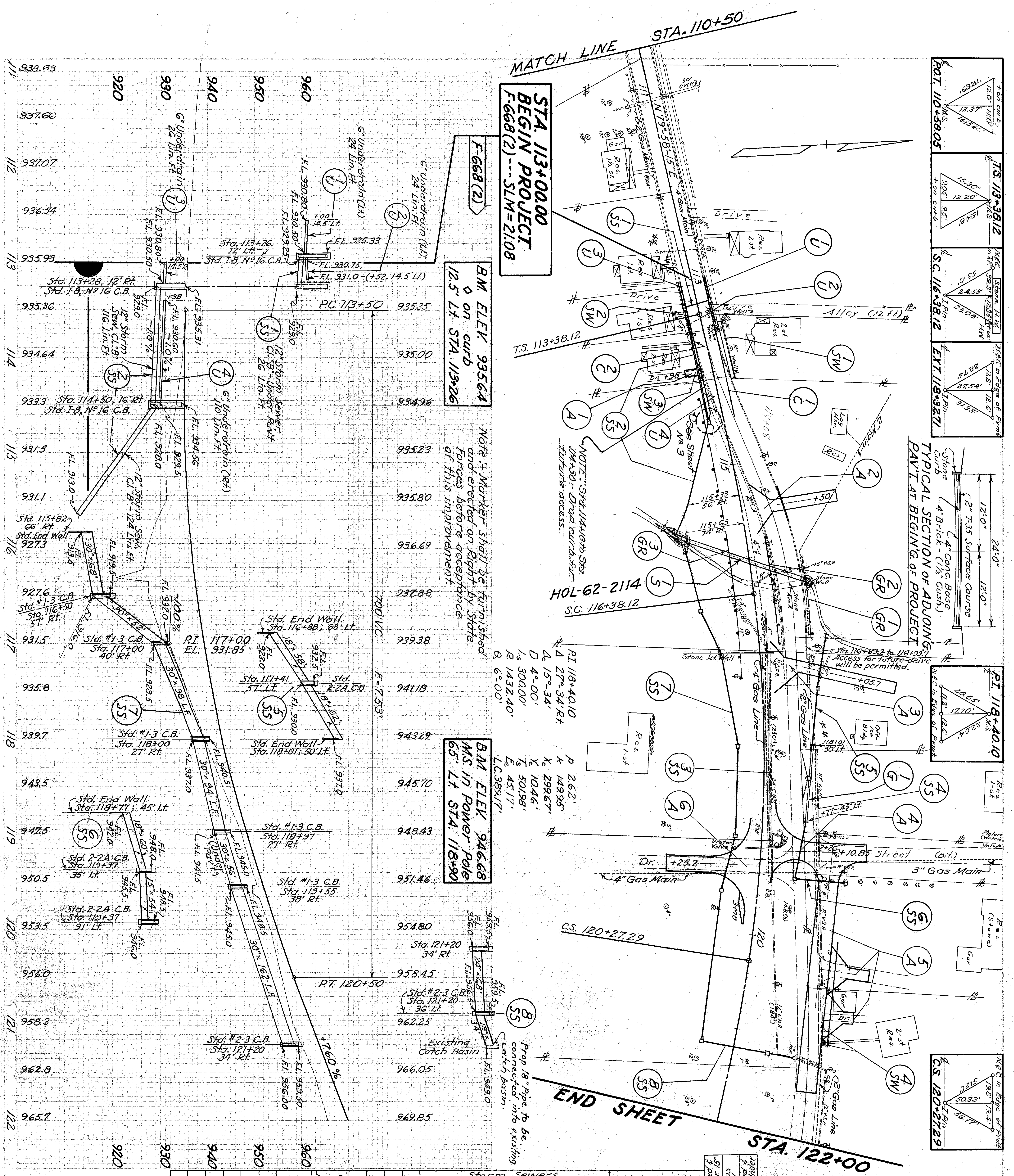
ESTIMATED QUANTITIES

SEE SHEET NO.	DESCRIPTION	STATION TO STATION	SIZE	TOTALS

PLAN & PROFILE--STA. 97+50 TO STA. 110+50

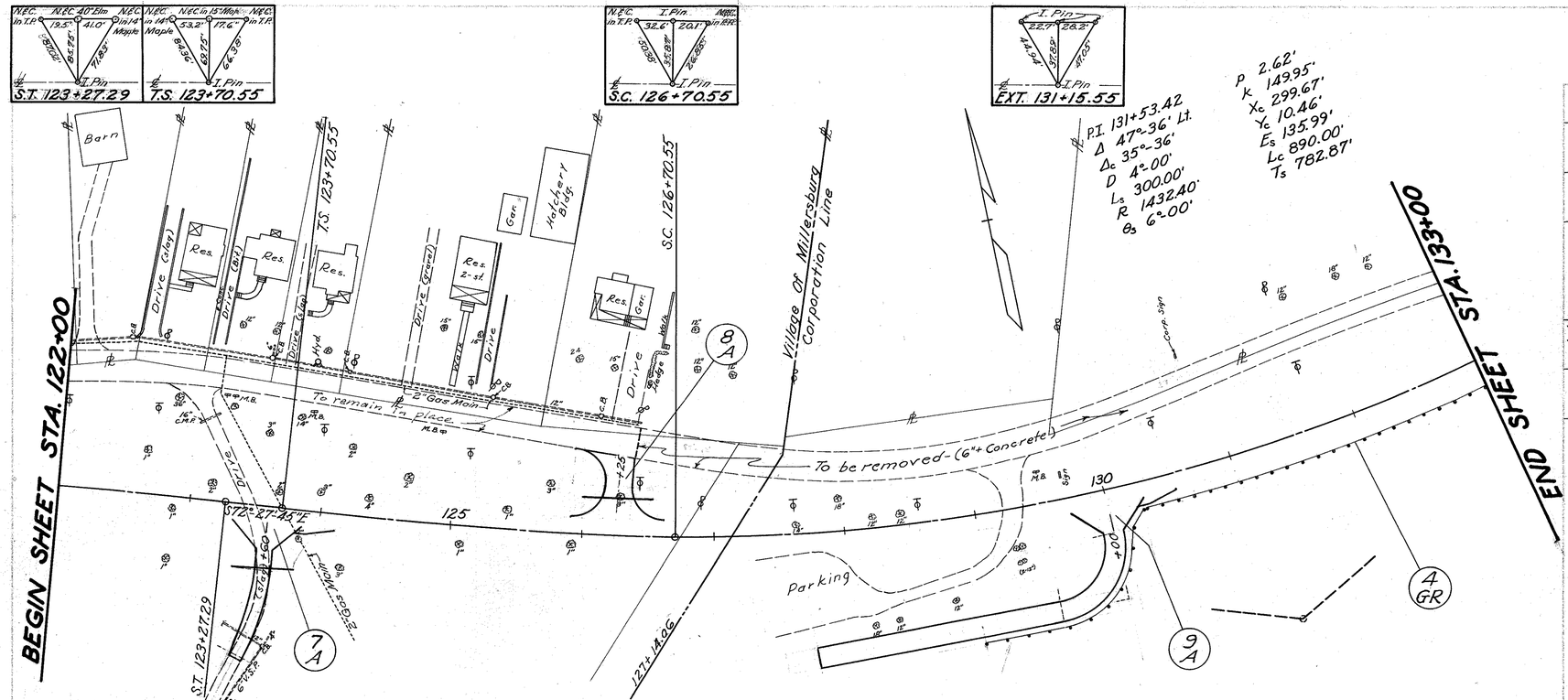
FED. ROAD DIVISION 2 | STATE OHIO | PROJECT

HOL-62-(21.08-21.51)



PLAN & PROFILE -- STA.112+00 TO STA.122+00

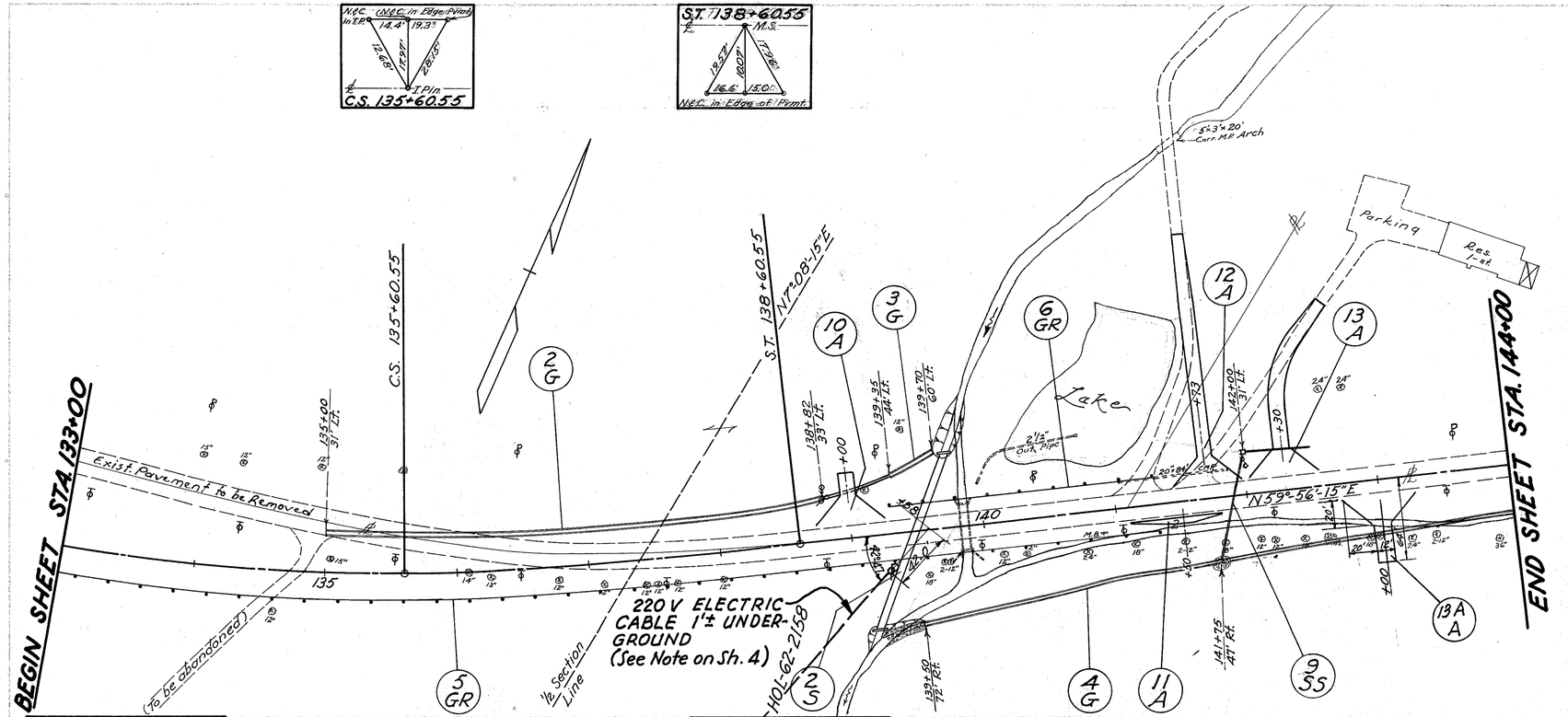
REF. NO.	STATION TO STATION	SIDE	T-35 Surface Course	T-30 Prime Coat	B-119 Aggr. Base	4" Conc. Walk (3')	Curb Type 6	6" Pipe Underdrain	Pipe For Driveways 12"	Pipe For Driveways 15"	Paved Gutter Type 1	54" Pipe Sec. M-6.4(d)	Structure Excavatn.	Channel Excavatn.	Concrete Class "E"	Dump Rock Protection	Storm Sewers: Under Pav't. Class "B" 12"	Storm Sewers: Class "B" 12"	Storm Sewers Class "A" Under Pav't. 15"	Storm Sewers Class "A" Under Pav't. 18"	Storm Sewers Class "A" Under Pav't. 24"	Storm Sewers Class "A" Under Pav't. 30"	Storm Sewers Class "A" 18"	Storm Sewers Class "A" 30"	Catch Basins-I-8 Std. № 1-3	Catch Basins-I-8 Std. № 2-3	Catch Basins-I-8 Std. № 16	Catch Basins-I-8 Std. № 2-2A	Pipe Removed & Stored-Over 15"	Catch Basins Abandoned	Pipe Removed & Stored-15" & Under	Remove & Dispose Of: Portion Existg. Struct.	Remove & Dispose Of: Stone Curb	Remove & Dispose Of: Rigid Pav't.	Remove & Dispose Of: Existg. Walk	Remove & Dispose Of: Existg. Struct.	Remove & Dispose Of: Pipe-15" & Under	Remove & Dispose Of: Pipe Over 15"	Guard Rail Removed	Guard Rail Roadway	SEE SHEET NO.
			C.Y.	Gal.	C.Y.	S.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	C.Y.	C.Y.	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	Ea.	Ea.	Ea.	Ea.	L.F.	Ea.	L.F.	C.Y.	L.F.	S.Y.	S.Y.	Lump Sum	L.F.	L.F.	L.F.	L.F.	
1-A	113+98	Rt.	1.0	6	2																																				76
2-A	115+50	Lt.	9.0	57	23				38																																100
3-A	117+05.74	Lt.	13.0	79	32																																36				76
4-A	119+10.85	Lt.	14.3	90	52																																				77
5-A	2+26 Lt. on Appr. 4-A		39.1	240	129					110																															77
6-A	119+25.2	Rt.	14.0	94	51																																				77
1-SW	113+50 to 114+11	Lt.				183																													183						
2-SW	113+35	Rt.				25																													25						
3-SW	113+65	Rt.				15																													15						
4-SW	120+47(±) to 121+00(±)	Lt.																														1			30						
1-C	113+00 to 114+50	Lt.					150																																		
2-C	113+00 to 114+46	Rt.					146																																		
1-U	113+00 to 113+26	Lt.						24																																	
2-U	113+26 to 113+52	Lt.						24																																	
3-U	113+00 to 113+28	Rt.						26																																	
4-U	113+38 to 114+50	Rt.						110																																	
1-S	116+04											128	284	40	3.9	34													34	2						1	38				106
1-GR	116+08 to 116+93	Lt.																																					85		
2-GR	115+80 to 116+91.2	Lt.																																						112.5	
3-GR	114+25 to 117+24.7	Rt																																						300	
1-SS	113+27																26										1														
2-SS	113+28 to 115+63	Rt.																240									2														
3-SS	116+30(±) to 121+20(±)	R&L																											330	4	250						184				
4-SS	118+00(±) to 120+40(±)	Lt.																																			250				
5-SS	116+88 to 118+01	Lt.											3		1.4								120					1													
6-SS	118+77 to 119+37	Lt.											2		0.3				54	60								2													
7-SS	115+82 to 121+20	Rt.											2		0.5							56		474	5	1															
8-SS	121+20	L.&R.																		34	68					1															
1-G	118+01 to 118+77	Lt.									78																														
	113+00 to 121+50±)	Lt.																															814	2085							
TOTALS			90.4	566	289	223	296	184	38	110	78	128	291	40	6.1	34	26	240	54	94	68	56	120	474	5	2	3	3	364	6	250	1	814	2085	253	1	508		85	412.5	



ESTIMATED QUANTITIES

SHEET NO.	SIDE	STATION TO STATION	Pipe Removal 15" & Under L.F.	Exist. Pav't. Removal Rigid Type S.Y.	Guard Rail Road-way L.F.	Guard Rail App-roach L.F.	Pipe for Drive-ways 15" L.F.	T-35 Surface Course C.Y.	T-30 Prime Coat Gal.	B-119 Aggre. gate Base C.Y.
83										
78										
78										
		7-A 123+60 to 8-A 126+25	16	1280	275	176	46	11.1	70	28
	Rt.							9.0	63	35
	Lt.						54			
	Rt.	9-A 130+00 to 126+42						30.9	206	115
	Lt.	126+42 to 133+20(t)			275	176				
	Rt.	4-GR 130+28.19 to 133+00								
		TOTALS	16	1280	275	176	100	51.0	339	178

PLAN & PROFILE -- STA. 122+00 TO STA. 133+00

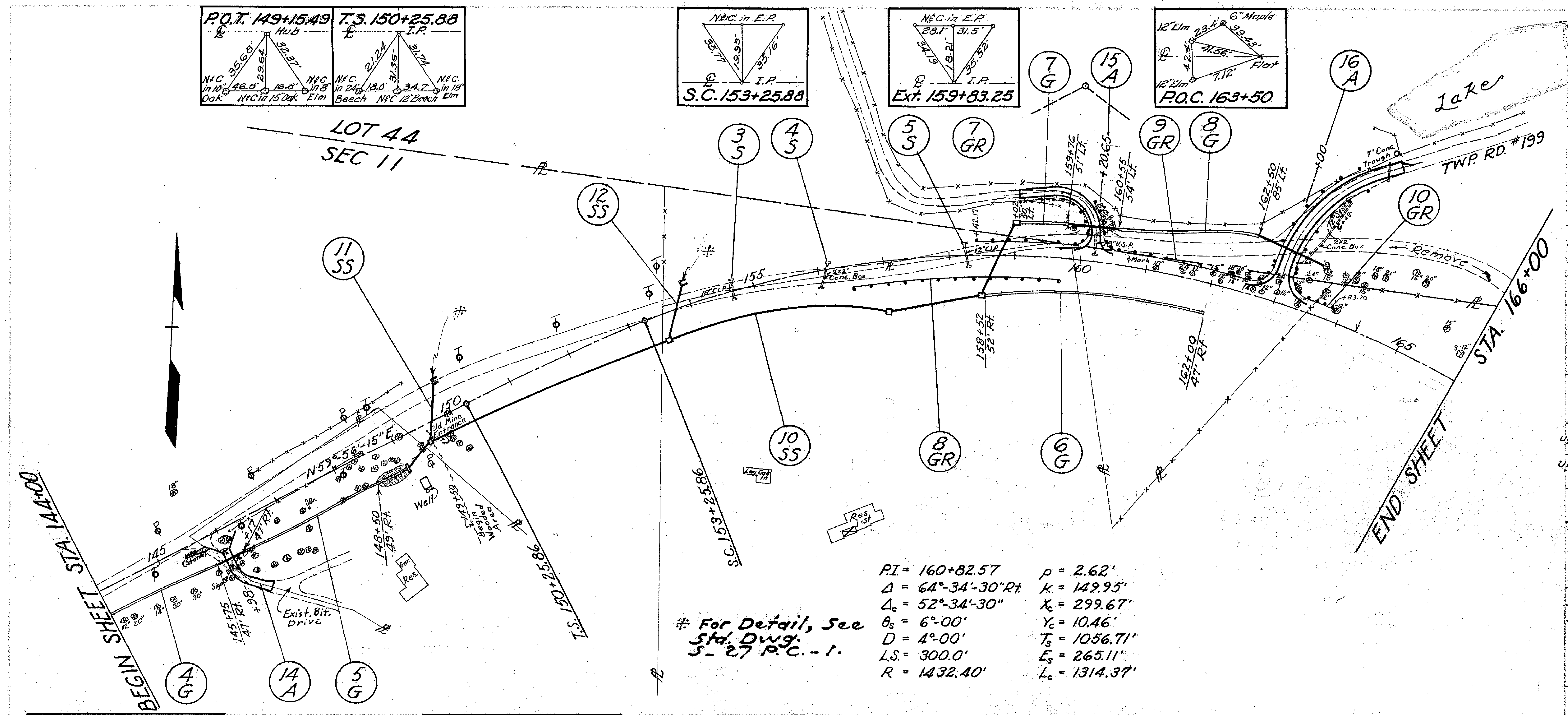


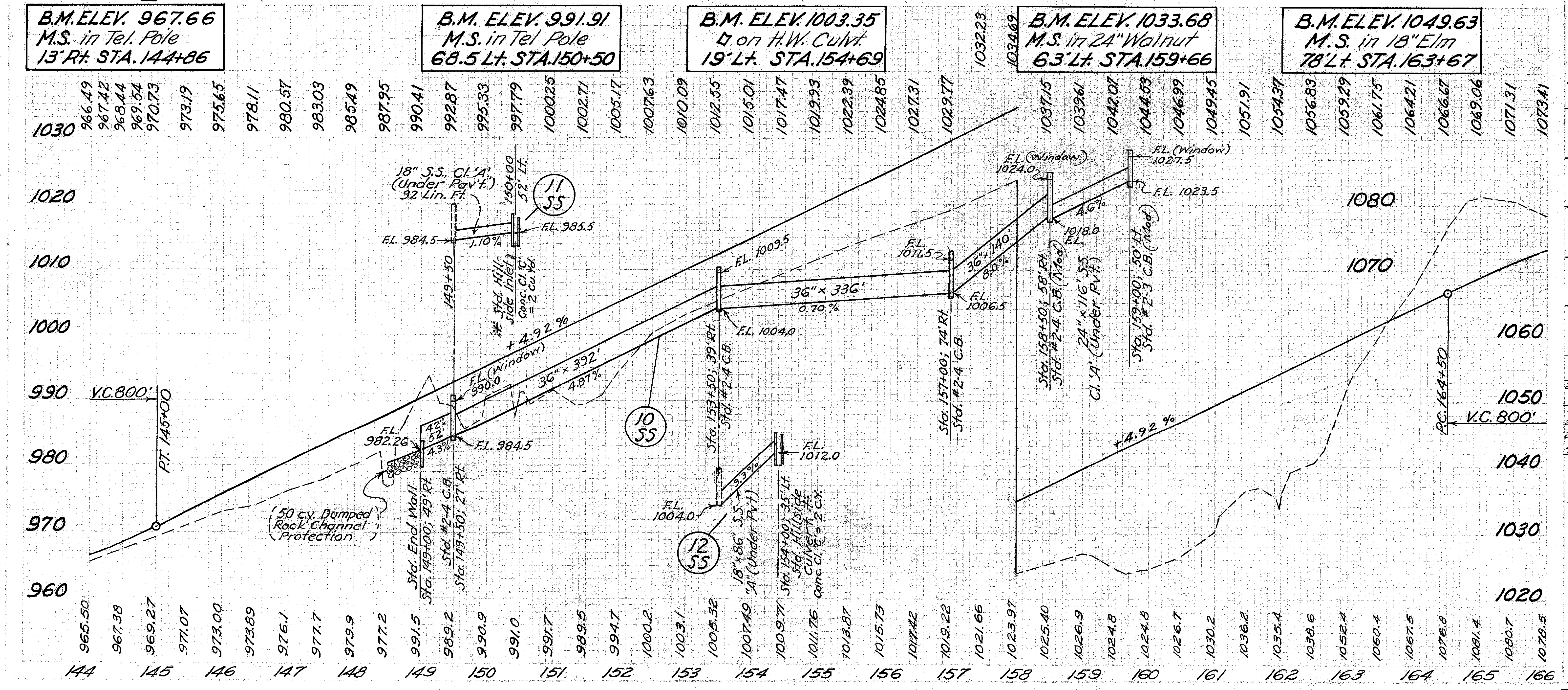
ITEM	STATION TO STATION	DIRECTION	Guard Rail/ Roadway Lin. Ft.	Remov'l Exist. Struct. Lump Sum	Pipe Removal Over 15" L.F.	Dump Rock Channel Protectn. C.Y.	Channel Excavath. C.Y.	Structure Excavath. C.Y.	Rip Rap S.Y.	Storm Sewer Cl. "A" Under Pavt. Lin. Ft. 24"	Pipe for Driveways Lin. Ft. 24"	66" Cor. M. Pipe Sec. M64 (2) (G) #10 ga. L.F.	Concrete Cl. "E" C.Y.	Catch Basin Std. 18 #2-2B Ea.	Paved Gutter Type 1 L.F.	Rdwy. Subgr. C.Y.	T-35 Surf. Course Gal.	T-30 Prime Coat Gal.	Class "B" Rdwy. Concrete C.Y.
10-A	139+00	Lt.									52								
11-A	141+50 -- (2 M.B.)	Rt.																	
12-A	141+73	Lt.	99		84														
13-A	142+30	Lt.	1/																
13A-A	143+00	Rt.	79	1							48								
5-GR- 133+00.0 to 141+31.76		Rt.																	
6-GR- 139+30.0 to 141+30.0		Lt.																	
2-S - 139+48.6			837.5									144	6.6						
9-SS- 141+75 to 142+00		L&R	200.0										0.4	1					
2-G	135+00 to 138+82	Lt.													382				
3-G	139+35 to 139+70	Lt.													36				
4-G	139+50 to 144+00	Rt.	107	1	84	1	41	12	1345	66	78	8	2		450				
																1.8	11	161	102
																12.4	78	31	
																quantities to be provided by Change Order at time of construction			
			1037.5		84	1				1425	78	144	7.0	1	868				
										14									
										49									
										76									
										00									
										18									
										001									
										144									
										7.0									
										868									
										1									
										92									
										90									

PLAN & PROFILE -- STA. 133+00 TO STA. 144+00

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

HOL-62-(21.08-21-51)



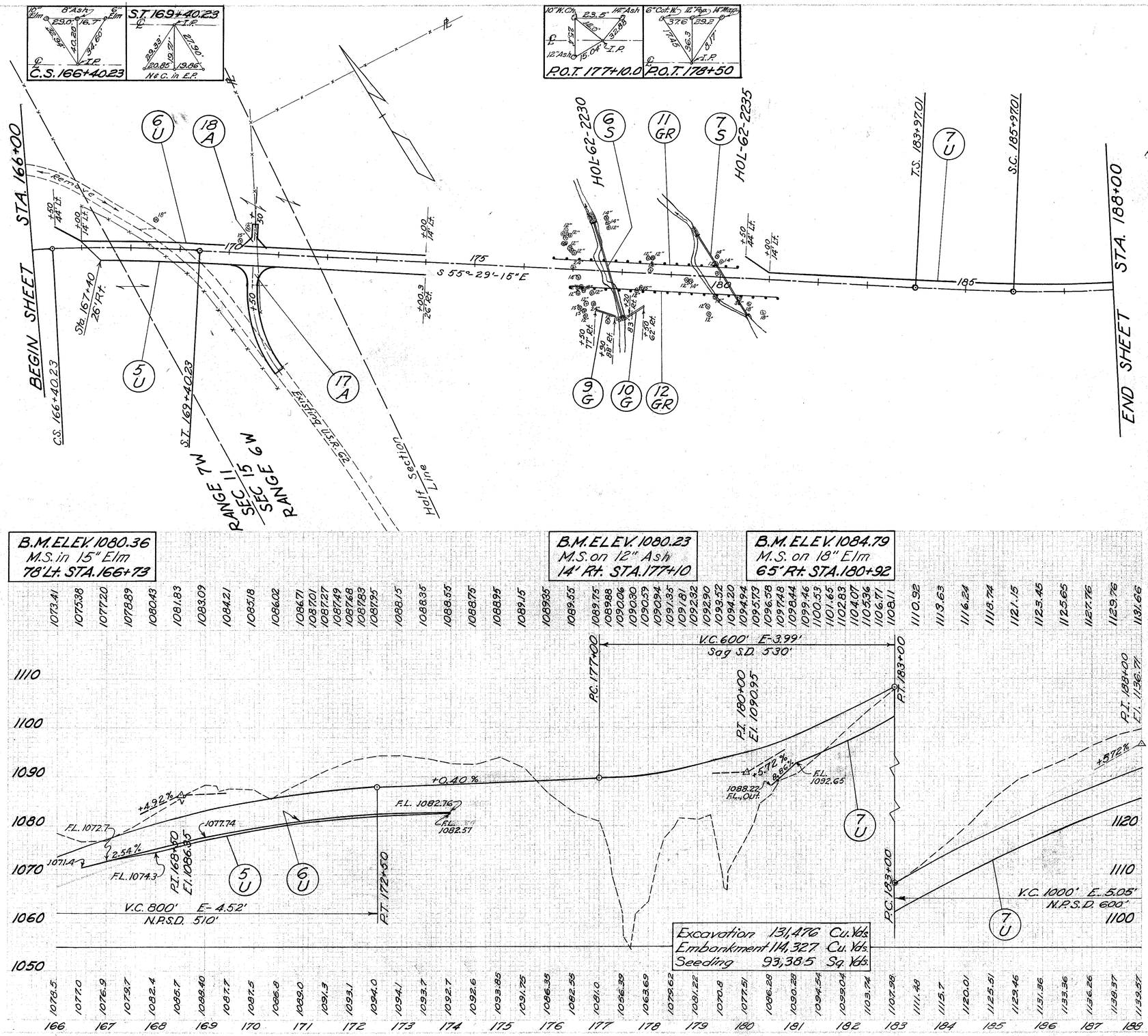


Station to Station	T-35 Surface Course C.Y.	T-30 Prime Coat Gal.	B-119 Aggr. Base C.Y.		Pipe, Drive-ways. 24" L.F.	Pipe, Drive-ways. 42" L.F.	Paved Gutter Type 1 L.F.	Reinfq. Steel Lbs.	Structure Excavation C.Y.	Dump. Rock Chanl. Protect. C.Y.	Storm Sewer Under Pav't. Cl. "A" 18" L.F.	Storm Sewer Under Pav't. Cl. "A" 24" L.F.	Storm Sewer Class 'A' 36" L.F.	Storm Sewer Class 'A' 42" L.F.	Catch Basin Std. 2-4 Ea.	Catch Basin Std. 2-4 Mod. Ea.	Catch Basin Std. 2-3 Mod. Ea.	Concrete Cl. "E" C.Y.	Concrete Cl. "C" C.Y.	Rip-rap S.Y.	6" Pipe Underdrain L.F.	6" Pipe Underdrain Outlet L.F.		Exist. Pav't. Flex. Type S.Y.	Removals Exist'g. Struct. Lump Sum	Removals Port. Ext. Struct. C.Y.	Removals Pipe Under 15" L.F.	Removals Pipe Over 15" L.F.	Guard Rail Approach Lin. Ft.	Guard Rail Roadway Cir. Lin. Ft.	Guard Rail Roadway St. Lin. Ft.	See Sheet No.
14-A 145+98 Rt.	12.4	78	31			42			5									1.5								2		17				80
15-A 160+20.65 Lt.	14.8	93	37		80																					1.5	66	30	160	75		80
16-A 163+00 Lt.	36.8	243	136		110															10					1		100		352	100		81
7-GR-158+42.17 to 159+90.10 Lt.																															150	
8-GR-156+50 to 159+82.14 Rt.																															325	
9-GR-160+54.15 to 162+52.00 Lt.																															200	
10-GR-163+46.72 to 163+83.70 Lt.																															37.5	
10-SS 149+00 to 159+00 Rt.									3	50		116	868	52	3	1	1	0.9														
11-SS 149+50 to 150+00 L.& R.								25	9		92								2													
12-SS 153+50 to 154+00 L.& R.								25	9		86								2													
3-S 154+65 ℄																										2		32				
4-S 156+15 ℄																									1							
5-S 158+28 ℄																										3		37				
4-G 144+00 to 145+75 Rt.							175																									
5-G 146+17 to 148+50 Rt.							233																									
6-G 158+52 to 162+00 Rt.							338																									
7-G 159+02 to 159+76 Lt.							78																									
8-G 160+55 to 162+50 Lt.							200																									
163+20 (±) to 166+00 Lt.																								760								
	64	414	204		190	42	1024	50	26	50	178	116	868	52	3	1	1	2.4	4	10				760	2	6.5	166	116	512	175	712.5	
																														887.5		

PLAN & PROFILE - STA. 144+00 TO STA. 166+00

FED. RD. DIV.NO.	STATE	PROJECT	SHEET NO.
2	OHIO		13 / 128

HOL-62-(21.08-21.51)



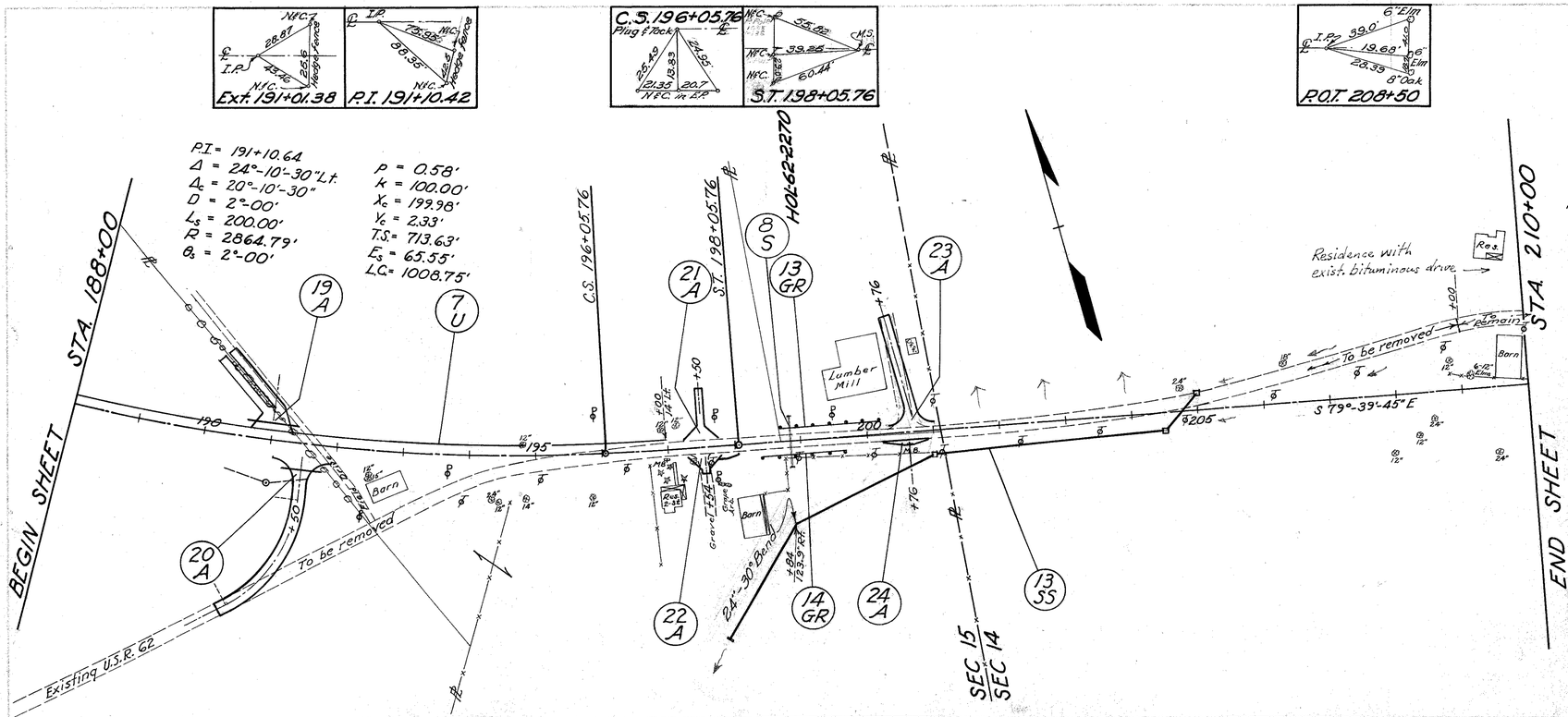
SHEET NO.	STATION TO STATION		T-35 Surface Course	B-35 Level'g Course	T-30 Prime Coat	B-35 Asph.c. Base	B-19 Aggr. Base	T-22 Aggr. Subbase	24" Pipe Sec. M. 6.6 (A)	Excavation Structure	Channel Excavation	Concrete Class "E"	Dumped Rock Chan. Protect'n.	6" Pipe Underdrain	6" Pipe Underdrain Outlet	Rip rap	Paved Gutter Type 1	6" Pipe Underdrain Specials 45° 6" Bend. Wye	Existing Pav't. Removed Rec. Type	Compacted Subgrade	Guard Rail Road Way
			Cu.Yds.	Cu.Yds.	Gal/S.	Cu.Yds.	Cu.Yds.	Cu.Yds.	Lin.Ft.	C.Y.	C.Y.	C.Y.	C.Y.	L.F.	L.F.	S.Y.	L.F.	Each	Each	S.Y.	Lin.Ft.
			31.6		209		116													569	82
							16														87
17-A	170+50	Rt.																			
18-A	170+30	Lt.																			
11-GR	176+60 to 180+35	Lt.																			
12-GR	176+95 to 181+20	Rt.																			
6-S	177+74																				
7-S	180+10																				
6-U	166+30 to 174+00	Lt.												740	20	25	1	1		375	108
5-U	167+00 to 174+00	Rt.												712		12				425	109
7-U	180+50 to 188+00	Lt.												737	20						
	166+00 to 168+35	Lt.																			
9-G	177+50 to 177+90	Rt.																			
10-G	178+20 to 178+50	Rt.																			
			31.6		209		132		202	273	13	1.6	34	2189	40	37	79	1	1	690	800

PLAN & PROFILE -- STA. 166+00 TO STA. 188+00

FED. ROAD DIVISION	STATE	PROJECT	SHEET NUMBER
2	OHIO		

14
128

HOL-62-(21.08-21.51)



Station	Guard Rail Roadway Lin. Ft.	Compacted Subgrade S.Y.	Exist. Bit. Pvmt. Removal Flex. Type S.Y.	Pipe Removal 15" & Under L.F.	15" Pipe for Roadway Culvert L.F.	Structure Excavation C.Y.	Pipe Spec. 30" Bend 24" Ea.	Catch Basin Std. 2-3 Ea.	Catch Basin Std. 2-2A Ea.	18" Storm Sewer CL IV Under Pvmt. L.F.	24" Storm Sewer CL IV L.F.	Concrete CL "E" C.Y.	Pipe for Driveways Lin. Ft. 15"	6" Pipe Under-drain Lin. Ft.	T-22 Aggr. Subbase Cu. Yds.	B-119 Aggr. Base Cu. Yds.	B-35 Asphic. Base Cu. Yds.	T-30 Prime Coat Gal's.	B-35 Level'g. Course Cu. Yds.	T-35 Surface Course Cu. Yds.	
191+00																					Lt.
191+50																					Rt.
197+50																					Rt.
197+54																					Lt.
200+76																					Rt.
200+76																					Lt.
19-A 191+00																					
20-A 191+50																					
21-A 197+50																					
22-A 197+54																					
23-A 200+76																					
24-A 200+76																					
13-GR 198+40 to 199+65	125	679	590	80	80	19	1	1	1			0.5	68		720	388.5	21.0	13.0	67.0	4.5	37.7
14-GR 198+70 to 200+20	150		440	33									62								8.3
7-U 189+00 to 197+00	110													896							5.1
8-S 198+84												0.4									19.1
191+50 to 193+35																					1.7
203+00 to 210+00																					
13-SS 197+70 to 205+00	1030	679	1030	80	80	21	2	2	1	790	790	0.9	130	896	316	470	71.9				

PLAN & PROFILE - - STA. 188+00 TO STA. 210+00

FED. AID PROJECT NO.	STATE	PROJECT	SHEET NO.
2	OHIO		15 / 128

HOL-62-(21.08-21.51)

P.O.T. 212+25
P.I. 41.2 N.I.C.T.P.
25.70
26.2
2.00
P.I.
Δ 43.28
N.I.C.

P.O.T. 217+50
12" C.I.P.
62.60'
49.75
23.6
12" Water
50.75
14" C.I.P.

P.O.T. 225+21.84
24" Waste
108.5
Hubs
12.2
77.4
P.I.
1020
12" Waterline

HOL-62-2309

BEGIN SHEET STA. 210+00

END SHEET STA. 232+00

Exist. Pav't to Remain

Regulator

Gas Line

(Remove)

Existing U.S. Rt. 62

To Remain

TWP. RD. #153

Half Sec. Line

Barn

Barn

Res.

Shed

Br. Res.

25 A

15 GR

9 S

28 A

8 A S

26 A

27 A

16 GR

29 A

215 220 225 230

S. 79° 39' 45" E.

+75

+50

B.M. ELEV. 1195.45
M.S. in Power Pole
120' Lt. STA. 211+00

B.M. ELEV. 1174.22
on H.W. Culvert
255' Rt. STA. 218+10

B.M. ELEV. 1203.36
on corr. conc. Cistern
255' Rt. STA. 226+50

1173.30 1173.64 1173.97 1174.29 1174.60 1174.91 1175.20 1175.49 1175.76 1176.01 1176.27 1176.52 1176.74 1176.97 1177.18 1177.39 1177.58 1177.95 1178.27 1178.56 1178.81 1179.01 1179.15 1179.19 1179.18 1179.10 1178.94 1178.72 1178.43 1178.07 1177.64 1177.14 1176.57 1175.93 1175.58 1175.21 1174.84 1174.43 1174.02 1173.58 1173.14 1172.66 1172.18 1171.68 1171.16 1170.62 1170.07 1169.49 1168.90 1168.29 1167.67 1167.02 1166.36 1165.69 1164.99 1164.28 1163.55 1162.80 1162.03 1161.25 1160.46 1159.64 1158.80 1157.95 1157.08 1156.19 1154.36 1152.47 1150.50

12" Cl. 'A' Storm Sewer (Under Pav't.) - 40 Lin. Ft.
Sta. 210+13 20' Lt.
Sta. 210+13 20' Rt.
F.L. 1163.5
8 A S

1200
1190
1180
1170
1160
1150
1140

P.T. 212+00 El. 1176.96
+1.667%
+0.463%
P.C. 216+00
P.T. 216+00
Y.C. 800' E. 1.20' N.P.S.D. 990'
Bal. Sta. 220+56.5
P.T. 225+00 El. 1182.39
+0.463%
-4.559%
Y.C. 1800' E. 11.30' N.P.S.D. 725'

Excavation	64,391	Cu. Yds.
Embankment	55,992	Cu. Yds.
Seeding	32,285	Sq. Yds.

182.67 182.37 183.37 183.91 179.61 184.91 183.89 179.95 176.25 172.75 169.37 165.67 161.77 157.6 154.0 151.0 148.8 147.6 147.3 147.4 147.9 152.6 157.0 161.7 165.7 170.9 176.9 183.4 190.6 196.9 200.57 201.7 197.3 190.8 185.1 179.9 175.9 173.8 172.9 171.0 166.8 161.6 158.0 154.2 150.1

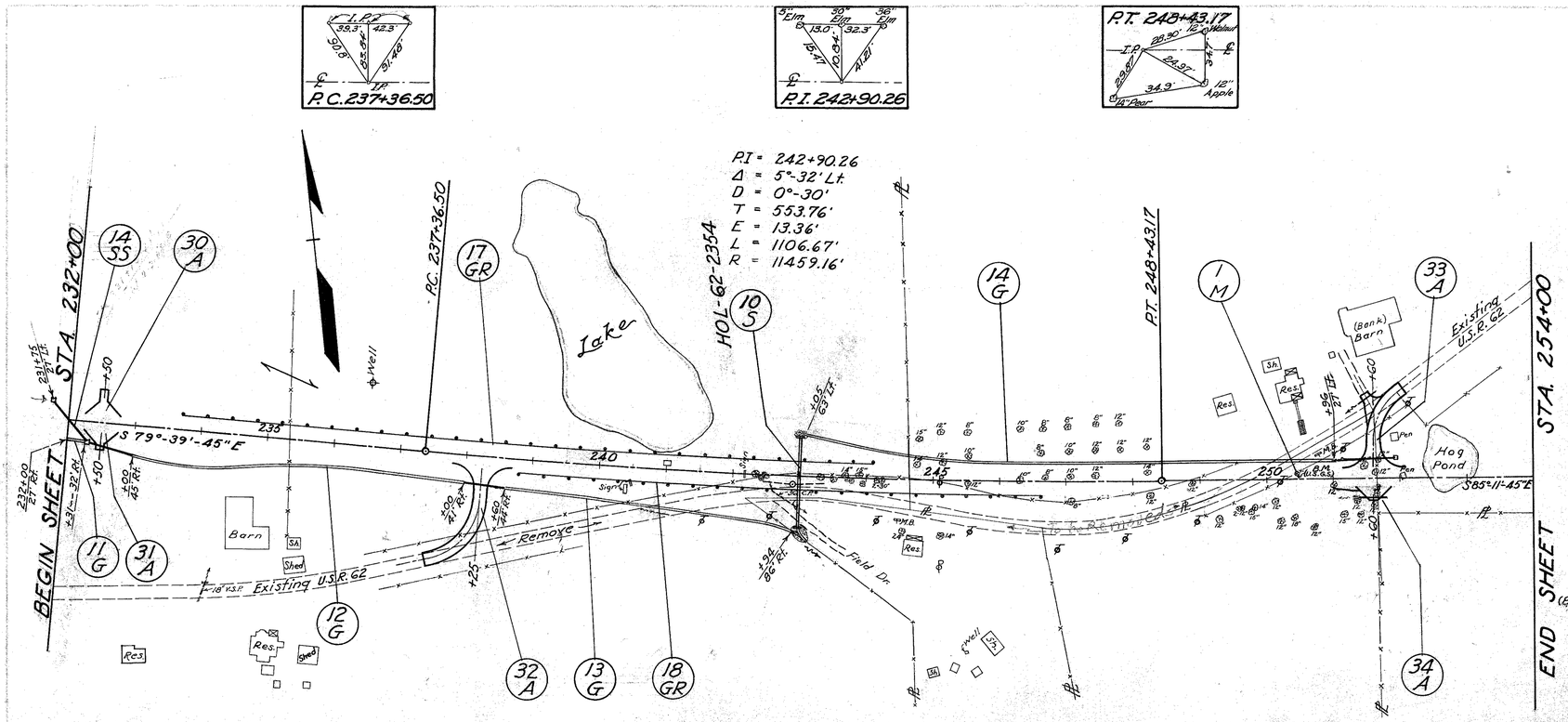
210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232

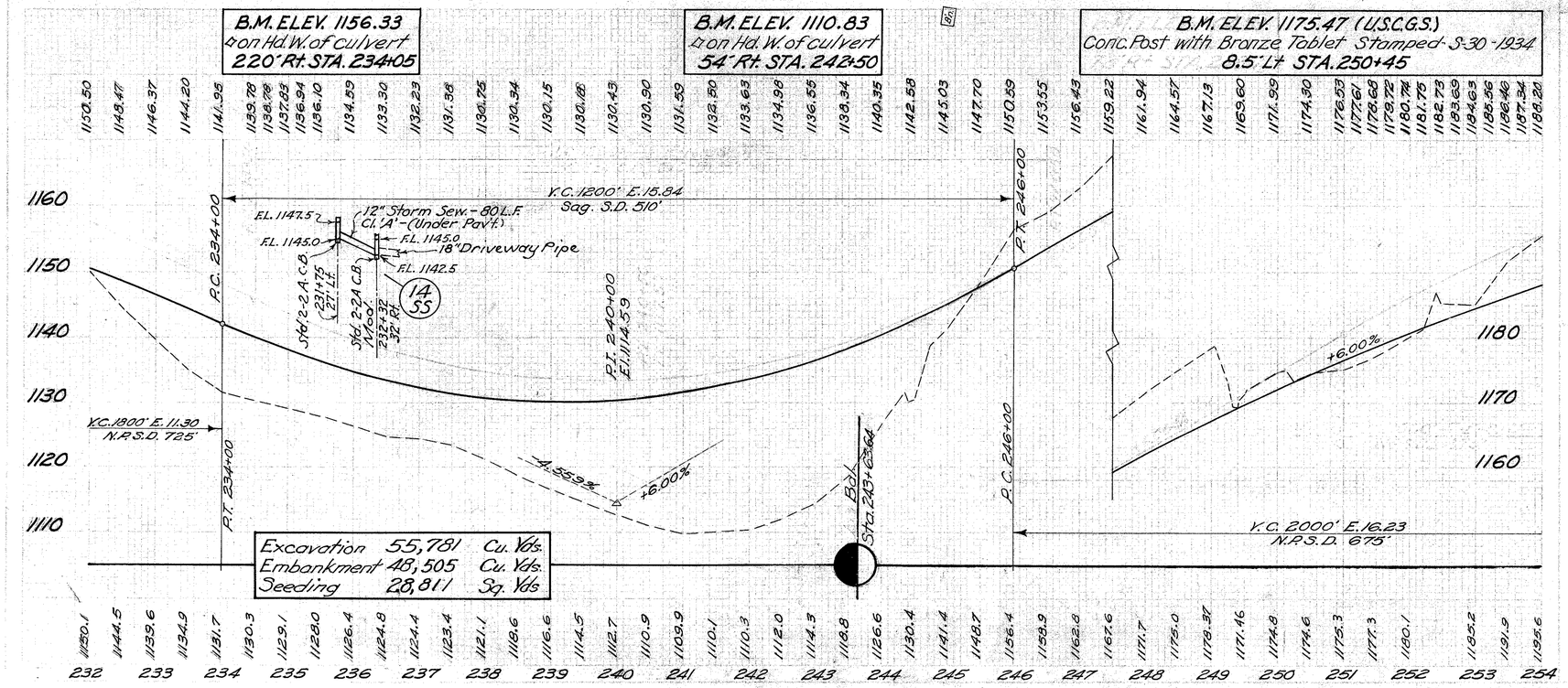
STATION TO STATION		SEE SHEET NO.	Guard Rail, Road-way Cir. Sta.	Lin. Ft.	Compacted Subgrade S.Y.	Exist. Pav't. Removed Flex Type S.Y.	12" Storm Sewer-Cl. A (under Pav't.) L.F.	Riprap S.Y.	Dump Rock Protect'n. C.Y.	Structure Excavat'n. C.Y.	Concrete Cl. "E" C.Y.	Pipe for Driveways Lin. Ft. 15"	24" Pipe Sec. M-6.4 (a) (b) (c) or Sec. M-6.6(a) L.F.	T-22 Aggr. Subbase Cu. Yds.	B-19 Aggr. Base Cu. Yds.	B-35 Asph. Base Cu. Yds.	T-30 Prime Coat Gal/S.	B-35 Surface Level'g Course Cu. Yds.	T-35 Surface Course Cu. Yds.
25-A	213+75	85																Lt.	26.6
26-A	213+75	85																Rt.	9.9
27-A	215+50	86																Rt.	26.9
28-A	222+75	87	100	12.5	484	440	40	5	5	44	0.8	34	170	407	221.6	63.4	167	Lt.	
29-A	222+75	87															62	Rt.	
		111															128	Lt.	
15-GR	214+57.5 to 222+00														16.1			Rt.	
16-GR	215+98 to 221+73														16.1				
9-S	219+00														98.6				
8A-S	210+13																		
	213+90(±) to 215+50(±)		762.5	575														Lt.	

PLAN & PROFILE--STA. 210+00 TO STA. 232+00

FED. AID PROJECT	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
2	OHIO			16 / 128

HOL-62-(21.08-21.51)

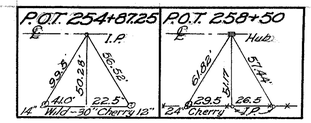


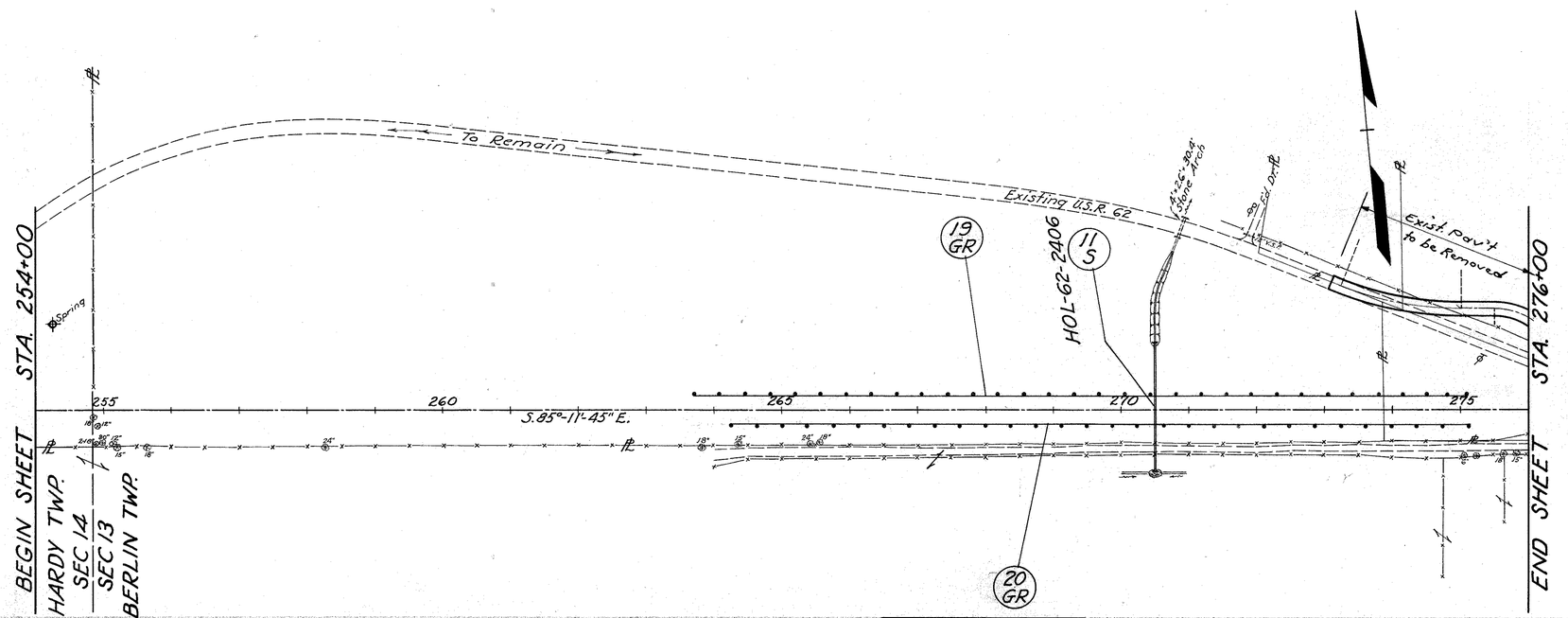


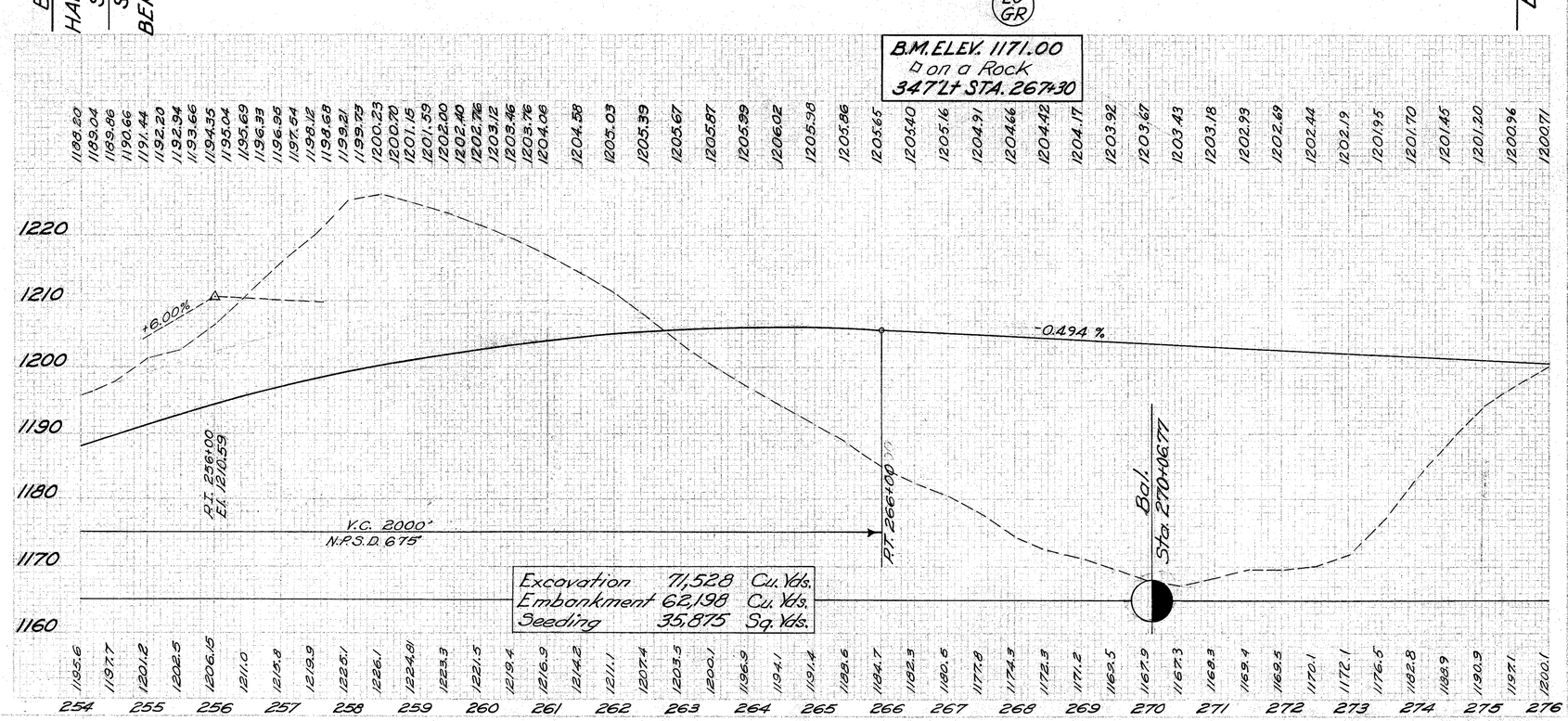
Station	Guard Rail Roadway Lin. Ft.	Removals: Existing Flexible Type S.Y.	Removals: Pipe Underdrain L.F.	Removals: Pipe over 15" L.F.	Removals: Reinforced Concrete Structure C.Y.	Removals: Existing Structure C.Y.	Compacted Subgrade S.Y.	Catch Basins Std. 2-2A Each	Monument Reset Each	Rip-rap C.Y.	Dump Rock Channel Protection C.Y.	Concrete Cl. "E" C.Y.	Structure Excavation C.Y.	36" Pipe-Sec. M-6.4 (D) or Sec. M-6.2 (D) L.F.	12" Storm Sew. Cl. 'A' Under Pav't. L.F.
232+00							494	1		5				142	80
233+00		23					378								
234+00															
235+00								1							
236+00															
237+00															
238+00															
239+00															
240+00								1							
241+00															
242+00															
243+00															
244+00															
245+00															
246+00								1							
247+00															
248+00															
249+00															
250+00															
251+00															
252+00															
253+00															
254+00								1							
Totals	1337.5	700	859	60	46	2		2	1	10	15	30	12	120	80

Station	Pipe for Driveways Lin. Ft. 15"	18"	27"	T-35 Surface Course Cu. Yds.	B-35 Leveling Course Cu. Yds.	T-30 Prime Coat Gal's.	B-35 Aphlc. Base Cu. Yds.	B-119 Aggr. Base Cu. Yds.	I-22 Aggr. Subbase Cu. Yds.	Paved gutter Type 1 L.F.	Excavation Cu. Yds.	Embankment Cu. Yds.	Seeding Sq. Yds.
30-A	232+50	Lt.											
31-A	232+50	Rt.		26.9		178		16.		31			
32-A	238+25	Lt.		28.4		172		98.6		504			
33-A	251+60	Rt.		1.7				30.		440			
34-A	251+60							14.		795			
17-GR	233+70 to 244+11.8	Lt.											
18-GR	238+80 to 246+64.41	Rt.											
14-SS	231+75 to 232+32	L. & R.											
11-G	232+00 to 232+31	Rt.								31			
12-G	233+00 to 238+00	Rt.								504			
13-G	238+60 to 242+94	Rt.								440			
14-G	243+05 to 250+96	Lt.								795			
10-S	243+00	℄											
	238+15(±) to 240+85(±)												
1-M	250+45	Lt.											
Totals				55.0		450		232.6		1770	32	202	60

PLAN & PROFILE -- STA. 232+00 TO STA. 254+00







ESTIMATED QUANTITIES

SHEET NO.	STATION TO STATION	SIDE	Guard Rail	Road Way Lin. Ft.	Concrete Class "E" Cu. Yd.	Excavation Structures Cu. Yd.	Excavation Channel Cu. Yd.	Riprap. "A" Sq. Yd.	24" Pipe C.M.P. Metal Sec. M.46 (a), 12 Ga. Lin. Ft.
113	19-GR-263+70 to 275+07.5	Lt.		1137.5					
	20-GR-264+25 to 275+12.5	Rt.		1087.5					
	11-S 270+50				0.8	60	44	10	190
					0.8	60	44	10	190

22250

PLAN & PROFILE--STA. 254+00 TO STA 276+00

FED. NO. STATE PROJECT
2 OHIO

18
128

HOL-62-(21.08-21.51)

P.O.T. 276+50 ℄ Rt.
52.53' 14.63' 43.87'
24.5 23.7
T.P.

P.O.T. 287+80
43.18' 18.86' 14.42' 26.0 Existing Fence

P.C. 293+68.62 Hub
50.95' 54.67'
23.4 26.5
T.P.

P.I. 297+46.18 ℄ Rt.
27.44'
26.19' 7.0
13.8' 21.8'
NEC. of EP

P.I = 297+46.18
Δ = 2°-31' Lt.
D = 0°-20'
T = 377.56'
E = 4.15'
L = 755.00'
R = 17,188.73'

HOL-62-2451

BEGIN SHEET STA. 276+00

STA. 298+00 END SHEET

Exist. Pav't. to be Removed +50

Exist. Pav't. to be Removed

Pav't. to be removed

S.85°-11'-45" E.

280 285 290 295

#204 #64.5 #13.2 #40 Lt. #27 Rt. +100 #38 Rt. +40 +100 45' Lt. +100 14' Lt.

A Underdrain A Underdrain

24" CMP(6') 18" CMP x 32' 30" CMP 12"x36" R.C.P.

Barn Shed Shed Shed Shed Res. Res. Well Well Barn

TWP. RD. #5

SEC. 13 LOT 5

35 A 36 A 37 A 38 A 12 S 13 S 39 A 15 G 21 GR 16 G 14 S 22 GR 8 U 40 A

B.M. ELEV. 1201.60
Top end of conc. wall
23' Rt. STA. 277+55

B.M. ELEV. 1185.85
Top top conc. w. of barn
105' Rt. STA. 296+90

-0.49.4 %

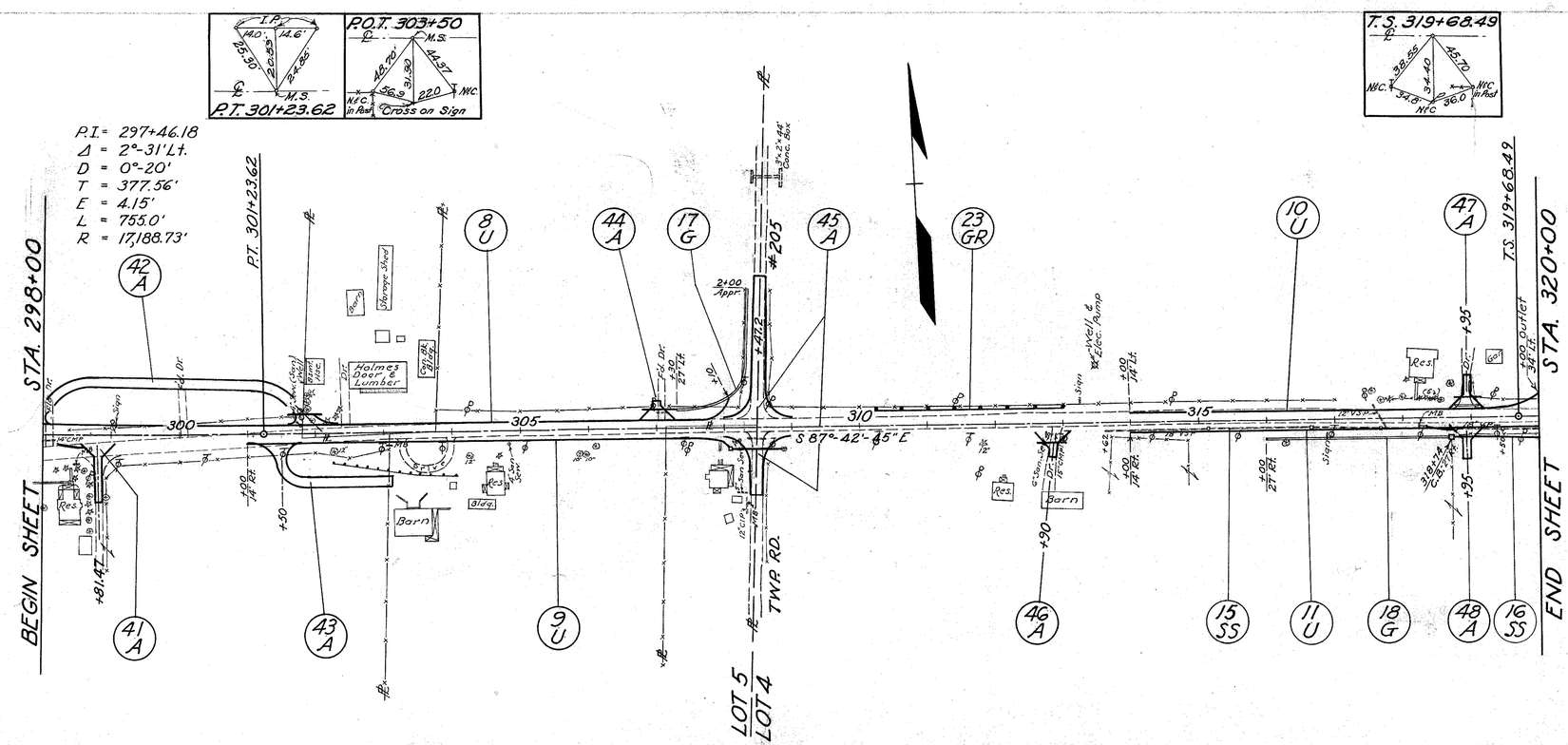
F.L. 1185.04

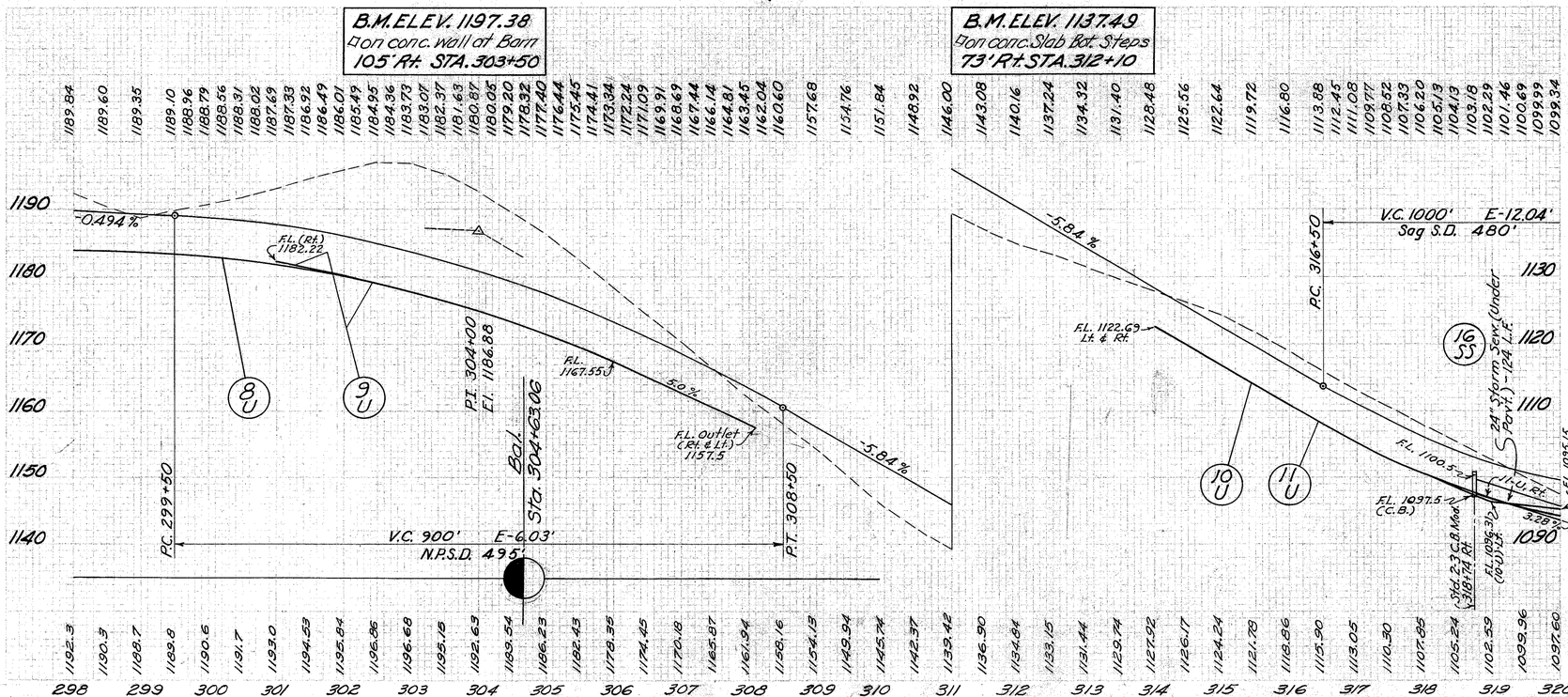
Excavation 79,662 Cu. Yds.
Embankment 69,271 Cu. Yds.
Seeding 49,411 Sq. Yds.

STA.	Ground Line	Grade Line
276	1200.71	1200.1
277	1200.46	1200.7
278	1200.22	1199.8
279	1199.97	1198.2
280	1199.72	1198.9
281	1199.48	1194.5
282	1199.23	1193.1
283	1198.98	1194.9
284	1198.74	1196.6
285	1198.49	1194.7
286	1198.24	1193.6
287	1197.99	1192.6
288	1197.75	1193.0
289	1197.50	1194.1
290	1197.25	1196.6
291	1197.01	1199.20
292	1196.76	1201.4
293	1196.51	1205.0
294	1196.27	1209.2
295	1196.02	1212.7
296	1195.77	1216.0
297	1195.52	1220.7
298	1195.28	1224.7
	1195.03	1229.8
	1194.78	1227.6
	1194.54	1221.1
	1194.29	1213.9
	1194.04	1207.1
	1193.80	1201.8
	1193.55	1196.6
	1193.30	1192.2
	1193.05	1188.2
	1192.81	1184.2
	1192.56	1180.5
	1192.31	1178.5
	1192.07	1178.2
	1191.82	1178.1
	1191.57	1179.4
	1191.33	1182.0
	1191.08	1186.1
	1190.83	1189.8
	1190.58	1191.9
	1190.34	1190.4
	1190.09	1190.84
	1189.84	1192.2

SHEET NO.	STATION TO STATION	SIDE	Storm Sewer Cl. A (Under Rd.) 24" L.F.	Pipe for Driveway Lin. Ft. 12"	18"	21" C.Y.	Concrete Cl. E Rip-rap	30" Pipe Roadway Culvert L.F.	Structure Excavation C.Y.	Channel Excavation C.Y.	Dumped Rock Chan. Protection C.Y.	6" Pipe Underdrain L.F.	Compacted Subgrade S.Y.	Paved Gutter Type 1 L.F.	Removals Pipe Under 15" L.F.	Pipe Over 15" L.F.	Concrete Curb & Gutter L.F.	Concrete Sidewalk S.F.	Concrete Pavement S.Y.	Guard Rail Lin. Ft.	Road Way
90													1040		18						
92	35-A 276+50	Lt.	57.8																		
96	36-A 277+65	Rt. & Rt.	8.4																		
18	37-A 281+64.5		41.0																		
	38-A 231+13.2	Lt.	8.8																		
	40-A 297+39	Rt.	4.5																		
	39-A 291+13.2	Rt.	1.7																		
	21-GR 291+90 to 294+63.11	Lt.																			
	22-GR 292+17.3 to 296+04.13	Rt.																			
	12-S 279+00	Rt.																			
	13-S 291+13	Rt.																			
	14-S 294+44	℄																			
	15-G 291+38 to 295+00	Lt.																			
	16-G 291+00 to 294+40	Rt.																			
	8-U 296+00 to 298+00	Lt.																			
	281+85(℄) to 237+00(℄)	Rt.																			
			122.2	799	417	90	46	52	44	18	13	108	120	30	35	200	7.0	1040	365 345	200	275.0 387.5	114	662.5

PLAN & PROFILE--STA. 276+00 TO STA. 298+00





Ref. No.	Station to Station	Side	T-35 Surface Course	T-30 Prime Coat	B-119 Aggr. Base	Paved Gutter Type 1	24" (Under Pav't.) Storm Sewer Cl. "A"	Pipe For Driveways Lin. Ft. 12"	Pipe For Driveways Lin. Ft. 15"	Pipe For Driveways Lin. Ft. 18"	Pipe For Driveways Lin. Ft. 21"	Catch Basins Std. 2-3 Mod.	Catch Basins Std. 22A	Rip-rap	6" Pipe Underdrain	6" Pipe Underdrain Outlet	Removals Pipe 15" & Under	Removals Pipe Over 15"	Removals Exist'g. Pav't.	Guard Rail-Approach	Guard Rail Roadway	See Sheet No.
			Cu.Yds.	Gal's.	Cu.Yds.	L.F.	L.F.					Ea.	Ea.	S.Y.	L.F.	L.F.	L.F.	L.F.	S.Y.	L.F.	Lin.Ft.	
41-A	298+81.47	Rt.	9.8	62	24.0																	93
42-A	297+75 to 302+00	Lt.	18.5	117	69.0				50								32					94
44-A	307+00	Lt.			13.0						50						16					103
45-A	308+47.2	L.&R.	41.6	275	152.0				70				1	11			26					95
46-A	312+90	Rt.	5.5	35	14.0					40							23					96
47-A	318+95	Lt.	4.6	29	12.0			42											10			96
48-A	318+95	Rt.	1.7	11	20.0																	97
43-A	301+50	Rt.	23.6	160	88.0															176		94
23-GR-	310+25 to 313+00	Lt.																			275	
15-SS-	313+62 to 320+00	Rt.															40	638				
16-SS-	318+74 to 320+00	Rt.					124					1										
8-U	298+00 to 308+10	Lt.													1010	20						
9-U	301+00 to 308+10	Rt.													704	20						
10-U	314+00 to 320+00	Lt.													600	20						
11-U	314+00 to 320+00	Rt													600							
17-G	307+30 to (2+00-Ap. 45-A)	Lt.				244																
18-G	316+00 to 318+74	Rt.				272																
			105.3	689	392.	516	124	42	120	40	50	1	1	11	2914	60	137	638	10	176	275	

PLAN & PROFILE - - STA. 298+00 TO STA. 320+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

20
128

HOL-62-(21.08-21.51)

S.C. 322+68.49 | P.I. 324+41.51 | N&C. in E.P. | S.T. 329+02.87 | C.S. 326+0287 | T.S. 338+46.30 | S.C. 341+46.30

P.I.- 324+41.51
Δ = 25°-22'-30" Lt.
Δ_c = 13°-22'-30"
D = 4°-00'
L_s = 300.00'
θ = 6°-00'
p = 2.62'
k = 149.95'
X_c = 299.67'
Y_c = 10.46'
R = 1432.40'
T_s = 473.02'
E_s = 38.54'
L.C. = 334.38'

EQUATION BACK STA. 329+49.00 AHEAD STA. 329+30.00

BEGIN SHEET STA. 320+00 — END SHEET STA. 342+00

B.M. ELEV. 1092.26
Iron conc. slab
90' Rt. STA. 320+90

B.M. ELEV. 1111.07
Iron conc. Wool Mill
69' Rt. STA. 333+90

V.C. 1000' E-12.04'
Sag S.D. 480'
12" Cl. 'A' Storm Sew. (Under Pav't) - 68 L.F.
Sta. 321+85; 36' Lt. F.L. 1032.0
Sta. 321+85; 32' Rt.
17 SS

P.R.C. 326+50 — P.T. 334+50 — P.C. 341+00
P.I. 321+50 El. 1084.68
P.I. 330+50 El. 1118.79
SHORT STA. 99.00'
+3.79% — -1.16% — 3.55% — -3.64% — 2.57% — +3.79%
F.L. El. 1107.32 (Lt. & Rt.) — F.L. El. 1109.33 (Lt. & Rt.)
F.L. El. 1104.62 (Rt.) — F.L. El. 1096.07
F.L. 1094.7 — F.L. 1090.0 — F.L. 1092.0 (11-U) — F.L. 1091.27 (16-SS)
OUTLET F.I. 1088.98
14" Ø STA. 328+00 F.I. El. 1102.89
Std. 2-3 C.B. (320+65, 34.75' Rt.) — Std. 2-3 C.B. (321+50, 37' Rt.) — Std. End Wall (6.5' Riprap)
V.C. 800' E-4.95' N.P.S.D. 485'

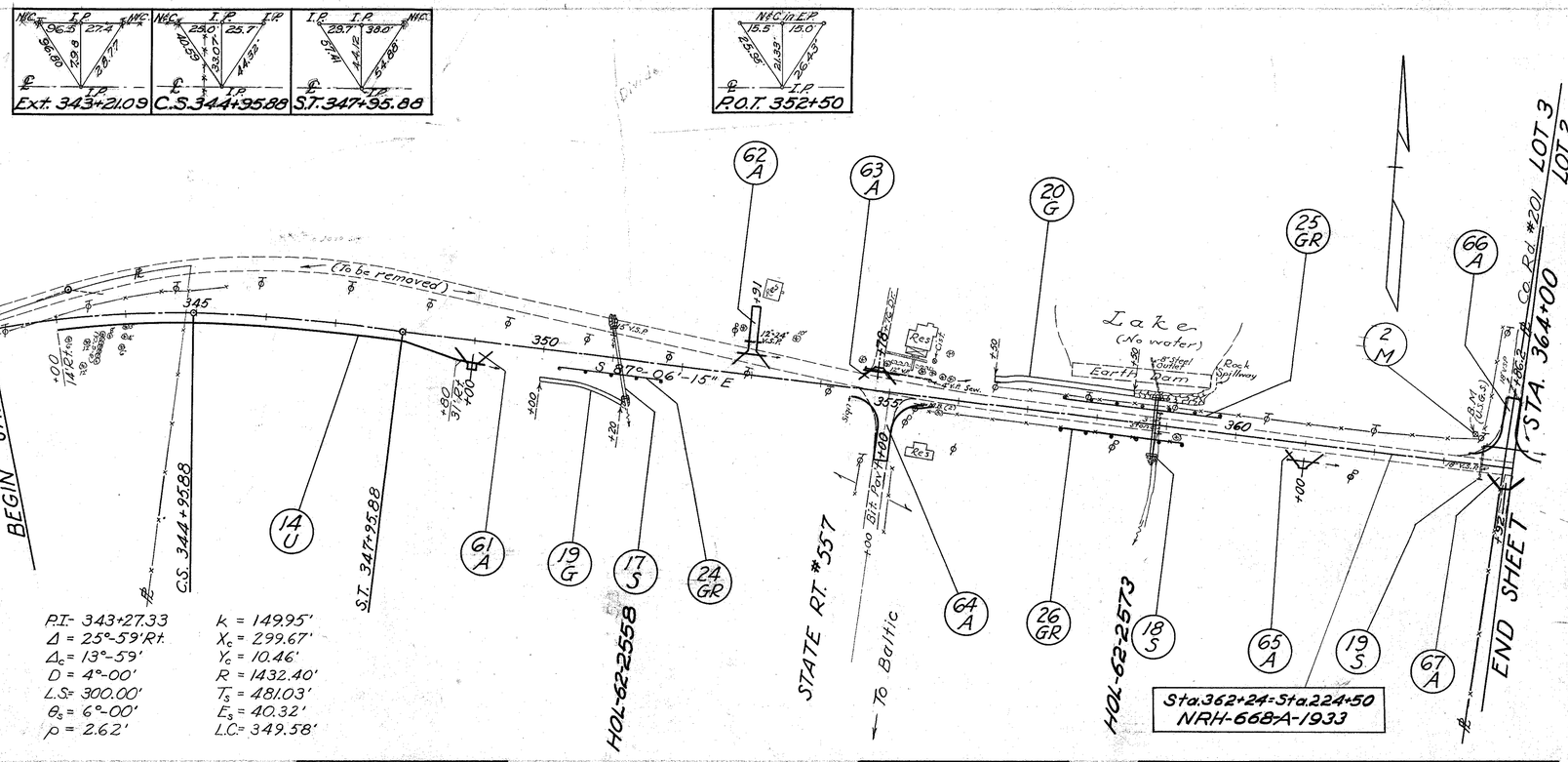
Sta.	Grade	Sta.	Grade
320	1097.60	331	1116.37
321	1095.09	332	1115.38
322	1093.60	333	1114.37
323	1092.38	334	1113.72
324	1091.80	335	1112.98
325	1091.86	336	1112.31
326	1092.31	337	1111.69
327	1092.79	338	1110.97
328	1094.42	339	1110.50
329	1096.31	340	1110.20
330	1097.14	341	1109.82
331	1101.7	342	1109.35
332	1105.3		1109.19
333	1107.8		1108.81
334	1111.69		1108.72
335	1110.97		1108.55
336	1110.50		1108.42
337	1110.20		1108.70
338	1109.82		1109.25
339	1109.35		1110.4
340	1109.19		1110.8
341	1108.81		1110.8
342	1108.72		

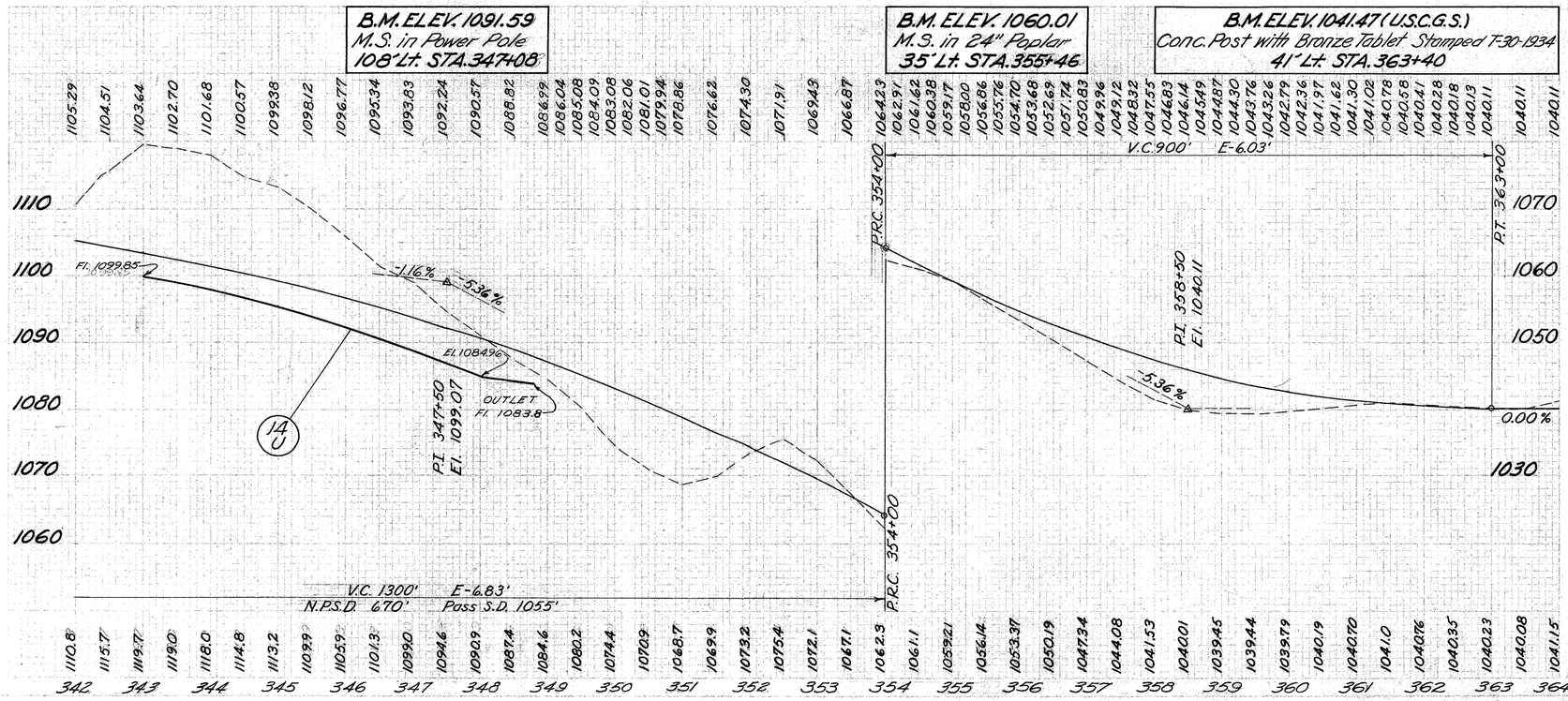
Sheet No.	Sta.	Rt. or Lt.	Surface Course 7-35 Cu. Yds.	Prime Coat T-30 Gals.	Aggr. Base B-119 Cu. Yds.	Concrete Class "E" Cu. Yds.	Excavation, Structures Cu. Yds.	Excavation, Channel Cu. Yds.	8'-5" Arch Corr. Met. Pipe Sec. M-36 (Old) Lin. Ft.	Pipe For Driveways Lin. Ft. 12"
49-A	321+00	Rt.	13.5	85	46					48
50-A	330+70	Lt.	5.0	50	28					48
51-A	330+70	Rt.	2.0	44	18					
52-A	332+50	Rt.	4.7	30	12					
53-A	332+65	Lt.	4.0	25	10					
54-A	332+38.5	Rt.	4.0	25	10					
55-A	333+68	Rt.	7.2	46	18					30
56-A	334+53	Lt.	7.2	46	18					
57-A	335+30	Lt.	7.7	48	19					
58-A	336+30	Rt.	6.5	41	16					46
59-A	339+68	Lt.			12					
60-A	341+00									
15-SS	322+90	⊄				10.6	18	361	100	
16-SS	336+46	⊄								
11-U	320+00 to 320+65	Rt.				0.4	2			
12-U	324+00 to 332+00	Lt.								
13-U	328+00 to 332+00	Rt.								
15-SS	320+00 to 321+45	Rt.								
16-SS	320+00 to 321+50	Rt.								
17-SS	321+85	⊄								

Sheet No.	Sta.	Rt. or Lt.	Storm Sewer, CL 'A' Under Pavem't 12" Lin. Ft.	Std. 2-3 Catch Basin Ea.	Riprap S.Y.	Pipe Under Fills 12" Lin. Ft.	Pipe Under Fills Over 15" Lin. Ft.	Removals Pipe Culvert Ea.	Removals Pipe Culvert Cu. Yds.	Removals Struct. Ex'ct Cu. Yds.	Pumped Rock Chan'l. Protect. Cu. Yds.
49-A	321+00	Rt.									
50-A	330+70	Lt.	148	1	6						
51-A	330+70	Rt.	68								
52-A	332+50	Rt.									
53-A	332+65	Lt.									
54-A	332+38.5	Rt.									
55-A	333+68	Rt.					24			1	
56-A	334+53	Lt.									
57-A	335+30	Lt.					23				
58-A	336+30	Rt.									
59-A	339+68	Lt.					23				
60-A	341+00										
15-SS	322+90	⊄					24			1	24
16-SS	336+46	⊄								2	
11-U	320+00 to 320+65	Rt.									
12-U	324+00 to 332+00	Lt.									
13-U	328+00 to 332+00	Rt.									
15-SS	320+00 to 321+45	Rt.									
16-SS	320+00 to 321+50	Rt.									
17-SS	321+85	⊄									

Sheet No.	Sta.	Rt. or Lt.	Underdrain 6" Pipe Lin. Ft.	Underdrain 6" Outlet Pipe Lin. Ft.	Underdrain 6" 45° Bend Ea.	Underdrain 6" Wye Ea.
49-A	321+00	Rt.				
50-A	330+70	Lt.				
51-A	330+70	Rt.				
52-A	332+50	Rt.				
53-A	332+65	Lt.				
54-A	332+38.5	Rt.				
55-A	333+68	Rt.				
56-A	334+53	Lt.				
57-A	335+30	Lt.				
58-A	336+30	Rt.				
59-A	339+68	Lt.				
60-A	341+00					
15-SS	322+90	⊄	84	20	1	1
16-SS	336+46	⊄	788			
11-U	320+00 to 320+65	Rt.	410			
12-U	324+00 to 332+00	Lt.				
13-U	328+00 to 332+00	Rt.				
15-SS	320+00 to 321+45	Rt.				
16-SS	320+00 to 321+50	Rt.				
17-SS	321+85	⊄				

PLAN & PROFILE--STA. 320+00 TO STA. 342+00





Item	Sheet No.	Guard Rail/ Road Way Lin. Ft.	Exist. Pav't. Flex. Type S.Y.	Removals: Pipe Under 15" L.F.	Removals: Pipe over 15" L.F.	Removals: Pav't. Struct. Conc. C.Y.	Removals: Exist'g Struct. Lump Sum	Rip Rap S.Y.	Monument Reset Each	6" Pipe underdrain L.F.	Pipe Spec. 16 Gage Ea.	12" Storm Sew. C.I.P. under Pav't. L.F.	Jump Rock Protect'n C.Y.	Channel Excavation C.Y.	Structure Excavation C.Y.
61-A 343+00	99			24		0.4		10							34
62-A 352+91	99			96				45							4
63-A 354+78	103				29		2								
64-A 355+00	98				8		1								
65-A 361+00	99				52	3				574	1				
66-A 363+96.2	98														
67-A 363+92	103														
24-GR 350+25 to 351+75	116	150													
25-GR-357+50 to 359+25	117	175													
26-GR-357+50 to 359+25		175													
19-G 350+00 to 351+20			1005												
20-G 352+50 to 358+50															
17-S 351+09															
18-S 358+88.75															
19-S 363+56															
14-U 343+00 to 348+80															
2-M 363+40															
345+00(℄) to 349+00(℄) Lt.		500	1005					55		574					

Item	Sheet No.	T-35 Surface Course Co. Yds.	T-30 Prime Coat Gal's.	B-1/9 Aggr. Base Co. Yds.	Paved Gutter Type 1 L.F.	Pipe Roadway Culv. 24" L.F.	Pipe Rd.Cul. Sec. M 64.61 48" L.F.	Conc. C.I.P.E. C.Y.	Pipe For Driveways Lin. Ft. 12"	15"	18"
61-A 343+00 Rt.	99	9.0	57	14						28	
62-A 352+91 Lt.	99	40	25	23					42		
63-A 354+78 Lt.	103	16.1	106	10						50	
64-A 355+00 Rt.	98			59							
65-A 361+00 Lt.	99	15.6	103	12					40		
66-A 363+96.2 Rt.	98			57							74
67-A 363+92	103			12							
24-GR 350+25 to 351+75 Rt.	116				125						
25-GR-357+50 to 359+25 Lt.	117				200						
26-GR-357+50 to 359+25 Rt.											
19-G 350+00 to 351+20 Rt.						106		0.8			
20-G 352+50 to 358+50 Lt.							84	2.4			
17-S 351+09 ″											
18-S 358+88.75 ″											
19-S 363+56 ″											
14-U 343+00 to 348+80 Rt.											
2-M 363+40											
345+00(℄) to 349+00(℄) Lt.											
		447	291	187	325	106	84	3.2	82	78	74	38

PLAN & PROFILE -- STA. 342+00 TO STA. 364+00

HOL-62-(21.08-21.51)

P.O.T. 366+50

T.S. 373+74.24

S.C. 376+74.24

Ext. 379+69.86

C.S. 382+65.49

S.T. 385+65.49

HOL-62-2591
Existing Structure
Type - Conc. Beam
Span - 45 Ft.
Skew - 20° Lt. Fwd.
Approach Slabs-None
Exist't. Superstructure To Be Widened
See Sheets No. 119-120

Sta. 370+74 = Sta. 233+00
NRH-668-A-1933

PI = 379+85.62
Δ = 35°-39' Lt.
Δc = 23°-39'
D = 4°-00'
Ls = 300.00'
R = 1432.40'
θs = 6°-00'

P = 2.62'
K = 149.95'
Xc = 299.67'
Ye = 10.46'
Ts = 611.38'
Es = 74.98'
Lc = 591.25'

BEGIN SHEET STA. 364+00

END SHEET STA. 386+00

Existing U.S.R. 62 To Remain

Removals

Creek

Dougherty

+20-50 Rt. Dumped Rock Chan. Protection

+08-56 Rt. Std. End Wall (Skew 20°-0") Std. 2-2A-C.B.

+30-56 Rt. Std. End Wall (Length 54'-6" Skew 20°-0") Std. 2-2A-C.B. 20 Cu. Yds. Dumped Rock Chan. Protection

+50-26 Rt.

+50-39 Rt. Std. 2-3 C.B.

+00-39 Rt. Std. 2-3 C.B.

+70-50 Rt. Std. 2-3 C.B.

+50-42 Lt.

+00-14 Lt.

+72-53 Lt. Std. 2-2-A-C.B.

+75-31 Lt. Std. 2-2-A-C.B.

+00-39 Rt. Std. 2-2-A-C.B.

Note:- I-9 drains for drainage of 18" Subbase Sta. 383+00 to Sta. 383+50, shall be placed at an angle of 45°

B.M. ELEV. 1040.65
on Br. # Ho-62-262
18' Rt. STA. 367+80

B.M. ELEV. 1087.24
on End Wk. E. Side of Hse.
125' Lt. STA. 377+60

V.C. 900' E-8.84

P.C. 366+50

P.T. 375+50

Bridge Limits

367+81.43 Bridge 368+30.57

2-8'-30" Class A Storm Sewer

50'-30" Class A Storm Sewer Under Pav't.

96'-15" Class A S. Sewer Under Pav't.

40'-27" Class A Storm Sewer Under Pav't.

542'-18" Class A Storm Sewer

410'-18" Class A S. Sewer

248'-30" Class A Storm Sewer

288'-27" Class A S. Sewer

80'-18" Class A Under Pav't.

Sta. 373+72 Std. No. 2-2-A C.B.

Sta. 376+70 Std. 2-3-C.B.

Sta. 376+75 Std. 2-2-A-C.B.

Sta. 382+00 Std. 2-2-A-C.B.

Sta. 386+00 Std. 2-2-A-C.B.

Sta. 373+50 Std. 2-3-C.B.

Sta. 371+00 Std. 2-3-C.B.

P.I. 371+00 El. 1040.11

+00 Lt. Underdrain F.L. 1035.8

+50 Rt. Underdrain F.L. 1034.0

Rt. Underdrain F.L. 1032.0

Lt. Underdrain F.L. 1031.0

F.L. 1030.2

F.L. 1041.0

F.L. 1054.0

F.L. 1056.0 (Rt. & Lt.) Underdrain

F.L. 10395 (Rt. & Lt.) Underdrain

F.L. 10460

F.L. 1058.8

F.L. 1060.2

F.L. 1057.0

F.L. 1055.0

F.L. 1075.3

F.L. 1074.5

F.L. 1078.0

F.L. 1081.2

F.L. 1092.2

F.L. 1102.9

F.L. 1127.2

F.L. 1123.0

F.L. 1119.0

F.L. 1152.0

F.L. 1154.7

0.00 %

+7.86 %

8.0 %

6.2 %

5.0 %

3.7 %

3.9 %

3.3 %

7.1 %

Excavation 98,006 Cu. Yds.
Embankment 43,411 Cu. Yds.
Seeding 79,196 Sq. Yds.

ESTIMATED QUANTITIES

Item	Unit	68-A 365+50	69-A 370+72	70-A 373+50	71-A 376+50	72-A 383+25	73-A 386+00	74-A Pvt. Dr.
Class "A" Storm Sewer 18"	L.F.							
Class "A" Storm Sewer 27"	L.F.							
Class "A" Storm Sewer 30"	L.F.							
Class "A" Storm Sewer Under Pavement 15"	L.F.							
Class "A" Storm Sewer Under Pavement 18"	L.F.							
Class "A" Storm Sewer Under Pavement 27"	L.F.							
Class "A" Storm Sewer Under Pavement 30"	L.F.							
Class "E" Conc.	C.Y.							
Catch Basin Each	Each							
Pipe Underdrain 6"	L.F.							
Pipe for Driveways 6"	L.F.							
Guard Rail Road Way Lin. Ft.								
Compacted Subgrade S.Y.								
6" Pipe Underdrain Outlets	L.F.							
Removals Pipe Under 15"	L.F.							
Removals Pipe Over 15"	L.F.							
Removals Ret. Exist. Struct.	C.Y.							
Structure Excavation	C.Y.							
Class "A" Chan. Protection	C.Y.							
Pipe for Driveways Catch Basin Each	Each							
12" 24" Lin. Ft.								
I-22 Aggr. Subbase	Cu. Yds.							
B-19 Aggr. Base	Cu. Yds.							
B-35 Asphc. Base	Cu. Yds.							
T-30 Prime Coat	Gal's.							
B-35 Surface Leveling Course	Cu. Yds.							
T-35 Surface Course	Cu. Yds.							

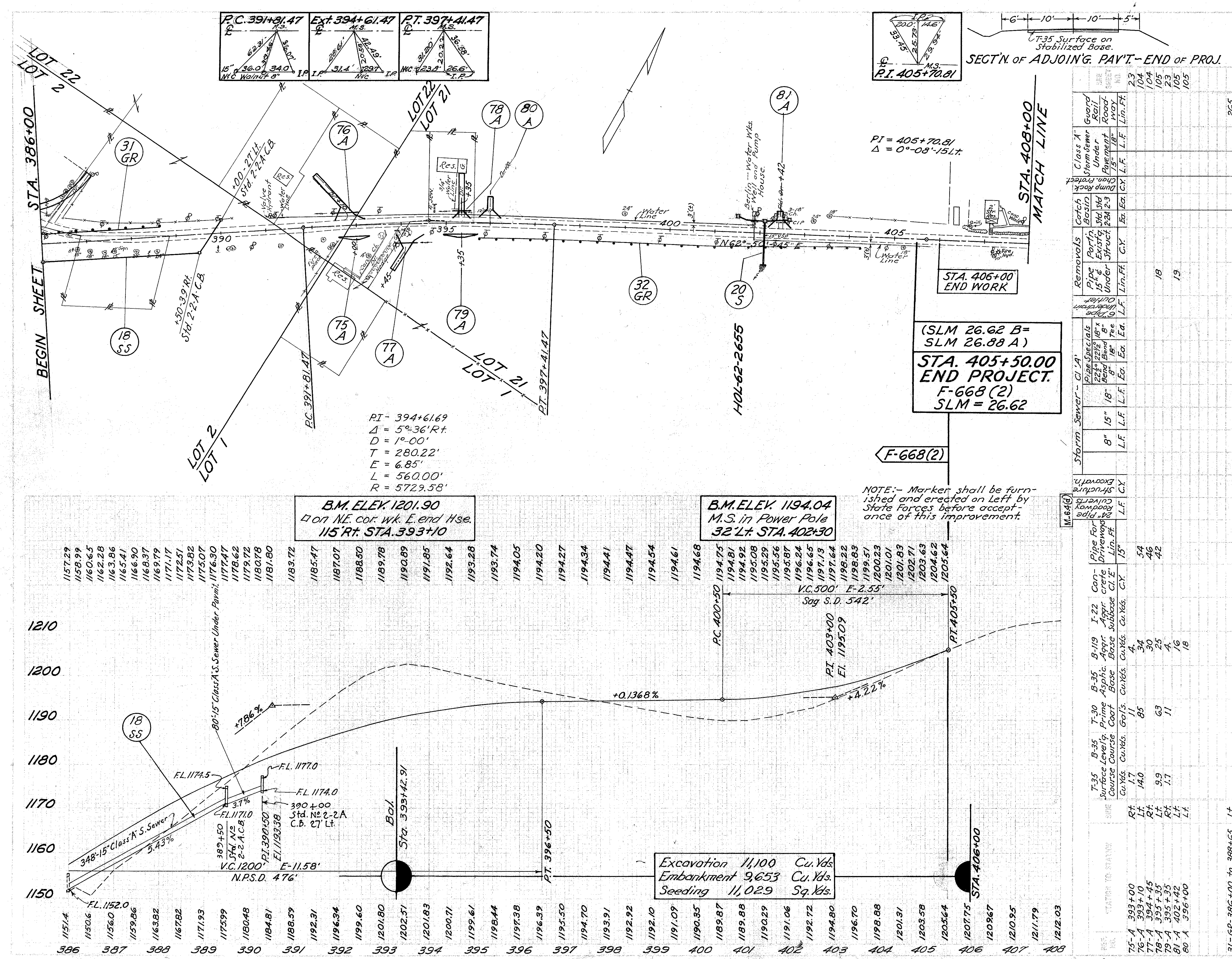
Item	Unit	27-GR 367+33.39 to 368+69.59	28-GR 367+29.91 to 369+16.11	29-GR 377+40.0 to 380+85.18	30-GR 378+20.0 to 380+23.54	31-GR 383+40 to 386+00
Class "A" Storm Sewer 18"	L.F.					
Class "A" Storm Sewer 27"	L.F.					
Class "A" Storm Sewer 30"	L.F.					
Class "A" Storm Sewer Under Pavement 15"	L.F.					
Class "A" Storm Sewer Under Pavement 18"	L.F.					
Class "A" Storm Sewer Under Pavement 27"	L.F.					
Class "A" Storm Sewer Under Pavement 30"	L.F.					
Class "E" Conc.	C.Y.					
Catch Basin Each	Each					
Pipe for Driveways 6"	L.F.					
Guard Rail Road Way Lin. Ft.		88.72	88.36	350.0	250.0	60.0
Compacted Subgrade S.Y.		920				
6" Pipe Underdrain Outlets	L.F.	40				
Removals Pipe Under 15"	L.F.	1026		520	506	20
Removals Pipe Over 15"	L.F.	95				
Removals Ret. Exist. Struct.	C.Y.	1.3				
Structure Excavation	C.Y.	24	32			
Class "A" Chan. Protection	C.Y.	2	20			
Pipe for Driveways Catch Basin Each	Each	2	1	1		
12" 24" Lin. Ft.		58				
I-22 Aggr. Subbase	Cu. Yds.					
B-19 Aggr. Base	Cu. Yds.	16	18	10.2	12	15
B-35 Asphc. Base	Cu. Yds.					88
T-30 Prime Coat	Gal's.	46	184		158	59
B-35 Surface Leveling Course	Cu. Yds.	7.2	28.0		23.5	
T-35 Surface Course	Cu. Yds.					

Item	Unit	18-SS 368+30 to 386+00	19-SS 373+50 to 373+72	20-SS 376+70 to 376+75	15-U 368+20 to 373+50	16-U 368+50 to 373+50
Class "A" Storm Sewer 18"	L.F.					
Class "A" Storm Sewer 27"	L.F.					
Class "A" Storm Sewer 30"	L.F.					
Class "A" Storm Sewer Under Pavement 15"	L.F.					
Class "A" Storm Sewer Under Pavement 18"	L.F.					
Class "A" Storm Sewer Under Pavement 27"	L.F.					
Class "A" Storm Sewer Under Pavement 30"	L.F.					
Class "E" Conc.	C.Y.					
Catch Basin Each	Each					
Pipe for Driveways 6"	L.F.					
Guard Rail Road Way Lin. Ft.		886.72				
Compacted Subgrade S.Y.		920				
6" Pipe Underdrain Outlets	L.F.	40				
Removals Pipe Under 15"	L.F.	1026				
Removals Pipe Over 15"	L.F.	95				
Removals Ret. Exist. Struct.	C.Y.	1.3				
Structure Excavation	C.Y.	2	20	58	38	4
Class "A" Chan. Protection	C.Y.	2	20	58	38	4
Pipe for Driveways Catch Basin Each	Each	2	1	1		
12" 24" Lin. Ft.		58.7	388	3.10		
I-22 Aggr. Subbase	Cu. Yds.					
B-19 Aggr. Base	Cu. Yds.	3.10				
B-35 Asphc. Base	Cu. Yds.					
T-30 Prime Coat	Gal's.					
B-35 Surface Leveling Course	Cu. Yds.					
T-35 Surface Course	Cu. Yds.					

* 49.14 Lin. Ft. has been deducted for Bridge Limits from Stations shown

PLAN & PROFILE -- STA. 364+00 TO STA. 386+00

230
1957
2028
2082



M-6.4(d)

REF. NO.	STATION TO STATION	SIDE	T-35 Surface Course Cu.Yds.	B-35 Level'g. Course Cu.Yds.	T-30 Prime Coat Gal's.	B-35 Asph'c. Base Cu.Yds.	B-119 Aggr. Base Cu.Yds.	I-22 Aggr. Subbase Cu.Yds.	Concrete Cl. 'E' C.Y.	Pipe For Driveways Lin. Ft. 15"	24" Pipe Roadway Culverts L.F.	Structure Excavat'n. C.Y.	Storm Sewer - Cl 'A'	Storm Sewer - Cl 'A' 8" L.F.	Storm Sewer - Cl 'A' 15" L.F.	Storm Sewer - Cl 'A' 18" L.F.	Pipe Specials 22½° Bend 8" Ea.	Pipe Specials 22½° Bend 18" Ea.	Pipe Specials 18"x8" Tee Ea.	6" Pipe Underdrain Outlet L.F.	Removals Pipe 15" & Under Lin.Ft.	Removals Portn. Exist'g. Struct. C.Y.	Catch Basin Std. 2-2A Ea.	Catch Basin Std 2-3 Ea.	Dump Rock Chan. Protect. C.Y.	Class "A" Storm Sewer Under Pavement 15" L.F.	Class "A" Storm Sewer Under Pavement 18" L.F.	Guard Rail Roadway Lin.Ft.	SEE SHEET NO.
75-A	393+00	Rt.	1.7		11		4.																						23
76-A	393+10	Lt.	14.0		85		34			54																			104
77-A	394+45	Rt.					30			46																			104
78-A	395+35	Lt.	9.9		63		25			42											18								105
79-A	395+35	Rt.	1.7		11		4.																						23
81-A	402+42	Lt.					16														19								105
80 A	396+00	Lt.					18																						105
31-GR	386+00 to 388+65	Lt.																										265	
32-GR	395+75 to 404+25.77	Rt.																										850	
20-S	402+10	℄							0.4		98	59		6		54	1	1	1	10	87	1	2	1	10		54		118
18-SS	386+00 to 390+00	R&L.													348								2			80			
			27.3		170		131		0.4	142	98	59		6	348	54	1	1	1	10	124	1	4	1	10	80	54	1115	

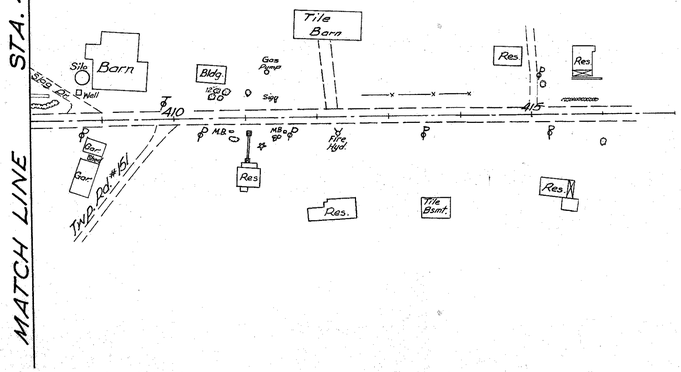
PLAN & PROFILE--STA.386+00 TO STA.408+00

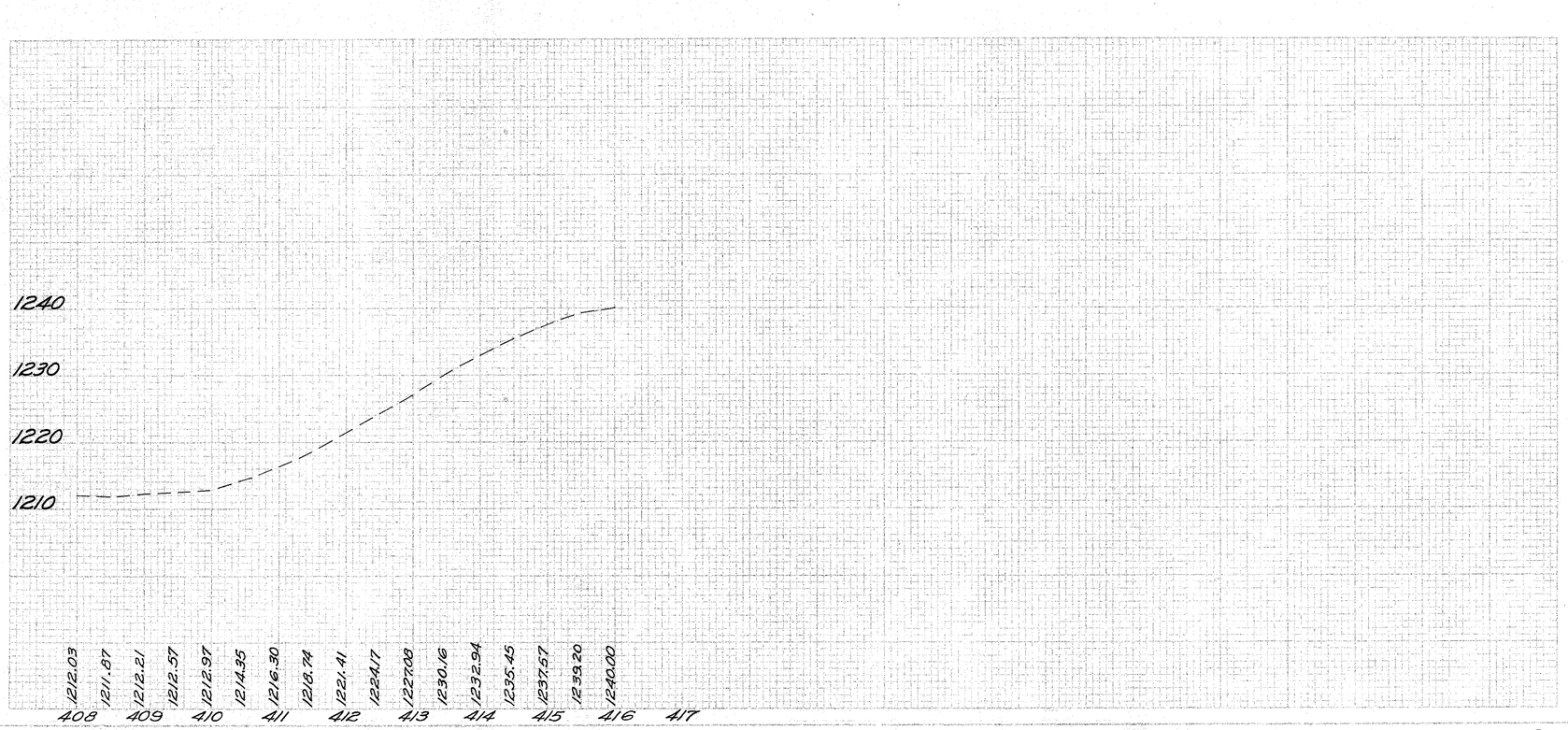
FED. ROAD DIVISION	STATE	PROJECT	TYPE WORK
2	OHIO		

24
128

HOL-62-(21.08-21.51)

MATCH LINE STA. 408+00





ESTIMATED QUANTITIES

REF. SHT.	STATION TO STATION	SIDE

SEE SHEET SHT.

PLAN & PROFILE--STA. 408+00 TO STA. 417+00

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

25/128

HOL-62-(21.08-21.51)

T.S. 113+38.12 — D=4°-00' RT. — S.T. 123+27.29

LT. Edge Pvmt. Grade	LT. Add Super	LT. Width	TABLE "A" Station	Profile Grade	RT. Width	RT. Deduct Crown	RT. Edge Pvmt. Grade
935.74	.19	12	113+00	935.93	12	.19	935.74
935.49	—		+25	935.62			935.49
935.40			T.S. +38.12	935.48			935.40
935.35			+50	935.35			935.16
935.27			+75	935.14			934.95
935.25			114+00	935.00			934.81
935.26			+25	934.95			934.76
935.39			+50	934.96			934.77
935.61			+75	935.06			934.87
935.91			115+00	935.23			935.04
936.28			+25	935.48			935.29
936.69			+50	935.80			935.61
937.23			+75	936.21			936.02
937.87			116+00	936.69			936.50
938.55			+25	937.25			937.06
938.96	1.58		S.C. +38.12	937.57			937.38
939.27			+50	937.88			937.69
939.98			+75	938.59			938.40
940.77			117+00	939.38			939.19
941.63			+25	940.24			940.05
942.57			+50	941.18			940.99
943.59			+75	942.20			942.01
944.68			118+00	943.29			943.10
945.85			+25	944.46			944.27
947.09			+50	945.70			945.51
948.42			+75	947.03			946.84
949.82			119+00	948.43			948.24
951.30			+25	949.91			949.72
952.85			+50	951.46			951.27
954.49			+75	953.10			952.91
956.19			120+00	954.80			954.61
957.98			+25	956.59			956.40
958.14	1.58		C.S. +27.29	956.75			956.56
959.81	—		+50	958.45			958.26
961.62			+75	960.35			960.16
963.44			121+00	962.25			962.06
965.25			+25	964.15			963.96
967.07			+50	966.05			965.86
968.87			+75	967.95			967.76
970.61			122+00	969.85			969.66
972.38			+25	971.75			971.56
974.14			+50	973.65			973.46
975.85			+75	975.55			975.36
977.59			123+00	977.45			977.26
979.30			+25	979.31			979.12
979.48			S.T. +27.29	979.48		.19	979.32
980.98	—	12	+50	981.11	12	obt. Graph.	980.98

Obtained Graphically

T.S. 123+70.55 — D=4°-00' LT. — S.T. 138+60.55

LT. Edge Pvmt. Grade	LT. Deduct Crown	LT. Width	TABLE "B" Station	Profile Grade	RT. Width	RT. Add Super	RT. Edge Pvmt. Grade
980.98		12	123+50	981.11	12	—	980.98
982.35	obt. Graph.		T.S. +70.55	982.53			982.51
982.66	—		+75	982.83			982.86
984.29	.19		124+00	984.48			984.68
985.87			+25	986.06			986.35
987.38			+50	987.57			987.96
988.82			+75	989.01			989.48
990.19			125+00	990.38			991.03
991.49			+25	991.68			992.40
992.72	.19	12	+50	992.91	12	—	993.73

Obtained Graphically

T.S. 123+70.55 — D=4°-00' LT. — S.T. 138+60.55

LT. Edge Pvmt. Grade	LT. Deduct Crown	LT. Width	TABLE "B" (Cont) Station	Profile Grade	RT. Width	RT. Add Super	RT. Edge Pvmt. Grade
993.87	.19	12	125+75	994.06	12	—	994.99
994.96			126+00	995.15		obt. Graph.	996.19
995.97			+25	996.16			997.35
996.92			+50	997.11			998.41
997.64			S.C. +70.55	997.83		1.58	999.22
997.79			+75	997.98			999.37
998.59			127+00	998.78			1000.17
999.32			+25	999.51			1000.90
999.99			+50	1000.18			1001.57
1000.57			+75	1000.76			1002.15
1001.09			128+00	1001.28			1002.67
1001.54			+25	1001.73			1003.12
1001.92			+50	1002.11			1003.50
1002.22			+75	1002.41			1003.80
1002.46			129+00	1002.65			1004.04
1002.62			+25	1002.81			1004.20
1002.72			+50	1002.91			1004.30
1002.74			+75	1002.93			1004.32
1002.69			130+00	1002.88			1004.27
1002.57			+25	1002.76			1004.15
1002.39			+50	1002.58			1003.97
1002.12			+75	1002.31			1003.70
1001.79			131+00	1001.98			1003.37
1001.39			+25	1001.58			1002.97
1000.92			+50	1001.11			1002.50
1000.37			+75	1000.56			1001.95
999.76			132+00	999.95			1001.34
999.07			+25	999.26			1000.65
998.32			+50	998.51			999.90
997.49			+75	997.68			999.07
996.59			133+00	996.78			998.17
995.62			+25	995.81			997.20
994.58			+50	994.77			996.16
993.47			+75	993.66			995.05
992.29			134+00	992.48			993.87
991.04			+25	991.23			992.62
989.72			+50	989.91			991.30
988.32			+75	988.51			989.90
986.86			135+00	987.05			988.44
985.36			+25	985.55			986.94
983.86			+50	984.05		1.58	985.44
983.23			C.S. +60.55	983.42		—	984.79
982.36			+75	982.55			983.90
980.86			136+00	981.05			982.30
979.36			+25	979.55			980.70
977.86			+50	978.05			979.13
976.36			+75	976.55			977.58
974.86			137+00	975.05			976.03
973.40			+25	973.59			974.49
972.03			+50	972.22			973.01
970.74			+75	970.93			971.55
969.54			138+00	969.73			970.16
968.43			+25	968.62			968.86
967.39			+50	967.58			967.66
966.99			S.T. +60.55	967.18			967.19
966.45			+75	966.64			966.59
965.59			139+00	965.78		—	965.64
964.82			+25	965.01		.19	964.82
964.13			+50	964.32		.19	964.13
963.52	.19	12	+75	963.71	12	.19	963.52

Obtained Graphically

T.S. 150+25.86 — D=4°-00' RT. — S.T. 169+40.23

LT. Edge Pvmt. Grade	LT. Add Super	LT. Width	TABLE "C" Station	Profile Grade	RT. Width	RT. Deduct Crown	RT. Edge Pvmt. Grade
992.68	—	12	149+50	992.87	12	.19	992.68
993.93			+75	994.10	12	.19	993.91
995.23			150+00	995.33	12	.19	995.14
996.59			+25	996.56	12	.19	996.37
996.62			T.S. +25.86	996.60	12.2	.19	996.41
998.00			+50	997.79	13	.20	997.59
999.45			+75	999.02	14	.22	998.80
1000.90			151+00	1000.25	15	.23	1000.02
1002.35			+25	1001.48	16	.25	1001.23
1003.80			+50	1002.71	17	.27	1002.44
1005.25			+75	1003.94	18	.28	1003.66
1006.70			152+00	1005.17	19	.30	1004.87
1008.15			+25	1006.40	20	.31	1006.09
1009.60			+50	1007.63	21	.32	1007.31
1011.03			+75	1008.86	22	.34	1008.52
1012.40			153+00	1010.09	23	.36	1009.73
1013.77			+25	1011.32	23.9	.37	1010.95
1013.81			S.C. +25.86	1011.36	24	.38	1010.98
1015.10	—		+50	1012.55			1012.17
1016.38	3.00		+75	1013.78			1013.40
1017.63			154+00	1015.01			1014.63
1018.86			+25	1016.24			1015.86
1020.09			+50	1017.47			1017.09
1021.32			+75	1018.70			1018.32
1022.55			155+00	1019.93			1019.55
1023.78			+25	1021.16			1020.78
1025.01			+50	1022.39			1022.01
1026.24			+75	1023.62			1023.24
1027.47			156+00	1024.85			1024.47
1028.76			+25	1026.08			1025.70
1029.93			+50	1027.31			1026.93
1031.16			+75	1028.54			1028.16
1032.39			157+00	1029.77			1029.39
1033.62			+25	1031.00			1030.62
1034.85			+50	1032.23			1031.85
1036.08			+75	1033.46			1033.08
1037.31			158+00	1034.69			1034.31
1038.54			+25	1035.92			1035.54
1039.77			+50	1037.15			1036.77
1041.00			+75	1038.38			1038.00
1042.23			159+00	1039.61			1039.23
1043.46			+25	1040.84			1040.46
1044.69			+50	1042.07			1041.69
1045.92			+75	1043.30			1042.92
1047.15			160+00	1044.53			1044.15
1048.38			+25	1045.76			1045.38
1049.61			+50	1046.99			1046.61
1050.84			+75	1048.22			1047.84
1052.07			161+00	1049.45			1049.07
1053.30			+25	1050.68			1050.30
1054.53			+50	1051.91			1051.53
1055.76			+75	1053.14			1052.76
1056.99			162+00	1054.37			1053.99
1058.22			+25	1055.60			1055.22
1059.45			+50	1056.83			1056.45
1060.68			+75	1058.06			1057.68
1061.91			163+00	1059.29			1058.91
1063.14			+25	1060.52			1060.14
1064.37			+50	1061.75			1061.37
1065.60			+75	1062.98			1062.60
1066.83	3.00	12	164+00	1064.21	24	.38	1063.83

Obtained Graphically

T.S. 150+25.86 — D=4°-00' RT. — S.T. 169+40.23

LT. Edge Pvmt. Grade	LT. Add Super	LT. Width	TABLE "C" (Cont.) Station	Profile Grade	RT. Width	RT. Deduct Crown	RT. Edge Pvmt. Grade
1068.06	3.00	12	164+25	1065.44	24	.38	1065.06
1069.29			+50	1066.67			1066.29
1070.50			+75	1067.88			1067.50
1071.68			165+00	1069.06			1068.68
1072.82			+25	1070.20			1069.82
1073.93			+50	1071.31			1070.93
1074.99	3.00		+75	1072.38			1072.00
1075.95	—		166+00	1073.41			1073.03
1176.83			+25	1074.41			1074.03
1177.33			C.S. +40.23	1075.01			1074.63
1177.65			+50	1075.38			1075.00
1178.43			+75	1076.31			1075.93
1179.17			167+00	1077.20			1076.82
1179.86			+25	1078.06			1077.68
1180.50			+50	1078.89			1078.51
1181.08			+75	1079.68			1079.30
1181.61			168+00	1080.43			1080.05
1182.08			+25	1081.15			1080.77
1182.50			+50	1081.83			1081.45
1182.92			+75	1082.48			1082.10
1183.34			169+00	1083.09			1082.71
1183.75			+25	1083.67			1083.29
1184.01			S.T. +40.23	1084.00			1083.62
1184.18			+50	1084.21			1083.83
1184.59			+75	1084.71			1084.33
1185.01			170+00	1085.18			1084.80
1185.43			+25	1085.62			1085.24
1185.83			+50	1086.02			1085.64
1086.19			+75	1086.38			1086.00
1086.52	—	12	171+00	1086.71	24	.38	1086.33

Obtained Graphically

T.S. 183+97.01 — D=2°-00' LT. — S.T. 198+05.76

LT. Edge Pvmt. Grade	LT. Deduct Crown	LT. Width	TABLE "D" Station	Profile Grade	RT. Width	RT. Add Super	RT. Edge Pvmt. Grade
1107.92	.19	12	183+00	1108.11	24	.38	1107.73
1109.34			+25	1109.53		—	1109.17
1110.73			+50	1110.92			1110.66
1112.10			+75	1112.29			1112.16
1113.28			T.S. +97.01	1113.47			1113.47
1113.44			184+00	1113.63			1113.64
1114.75			+25	1114.94			1115.09
1116.05			+50	1116.24			1116.55
1117.31			+75	1117.50			1117.98
1118.55			185+00	1118.74			1119.38
1119.77			+25	1119.96			1120.76
1120.96			+50	1121.15			1122.11
1122.12			+75	1122.31			1123.43
1123.13			S.C. +97.01	1123.32			1124.58
1123.26			186+00	1123.45			1124.71
1124.37			+25	1124.56			1125.93
1125.46			+50	1125.65		—	1127.11
1126.53	.19	12	+75	1126.72	24	1.69	1128.22

Obtained Graphically

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

26/128

HOL-62-(21.08-21.51)

T.S. 183+97.01 — D = 2°00' LT. — S.T. 198+05.76

LT. — TABLE "D" (Con't) — RT.

Edge Pvmt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pvmt. Grade
1127.57	.19	12	187+00	1127.76	24	1.69	1129.26
1128.58			+25	1128.77			1130.27
1129.57			+50	1129.76			1131.26
1130.53			+75	1130.72			1132.22
1131.47			188+00	1131.66			1133.16
1132.38			+25	1132.57			1134.07
1133.27			+50	1133.46			1134.96
1134.13			+75	1134.32			1135.82
1134.97			189+00	1135.16			1136.66
1135.78			+25	1135.97			1137.47
1136.56			+50	1136.75			1138.25
1137.31			+75	1137.50			1139.00
1138.05			190+00	1138.24			1139.74
1138.76			+25	1138.95			1140.45
1139.45			+50	1139.64			1141.14
1140.11			+75	1140.30			1141.80
1140.74			191+00	1140.93			1142.43
1141.35			+25	1141.54			1143.04
1141.94			+50	1142.13			1143.63
1142.49			+75	1142.68			1144.18
1143.03			192+00	1143.22			1144.72
1143.54			+25	1143.73			1145.23
1144.02			+50	1144.21			1145.71
1144.48			+75	1144.67			1146.17
1144.91			193+00	1145.10			1146.60
1145.32			+25	1145.51			1147.01
1145.74			+50	1145.93			1147.43
1146.16			+75	1146.35			1147.85
1146.58			194+00	1146.77			1148.27
1147.00			+25	1147.19			1148.69
1147.42			+50	1147.61			1149.11
1147.84			+75	1148.03	24	1.69	1149.53
1148.26			195+00	1148.45	24		1149.91
1148.68			+25	1148.87	23.9		1150.25
1149.10			+50	1149.29	23.4		1150.55
1149.52			+75	1149.71	21.8		1150.84
1149.94			196+00	1150.13	20.0		1151.14
1150.03			C.S.+05.76	1150.22	19.7		1151.21
1150.35			+25	1150.55	18.6		1151.44
1150.77			+50	1150.96	17.3		1151.74
1151.19			+75	1151.38	16.2		1152.03
1151.61			197+00	1151.80	15.3		1152.33
1152.03			+25	1152.22	14.5		1152.64
1152.45			+50	1152.64	13.8		1152.93
1152.87			+75	1153.06	13.1		1153.23
1153.29			198+00	1153.48	12.3		1153.54
1153.39			S.T.+05.76	1153.58	12.2		1153.60
1153.71			+25	1153.90	12.0		1153.84
1154.13			+50	1154.32	12.0		1154.16
1154.55			+75	1154.74	12.0		1154.55
1154.97	.19	12	199+00	1155.16	12.0		1154.97

Obtained Graphically

P.C. 237+36.50 — D = 0°30' LT. — P.T. 248+43.17

LT. — TABLE "E" — RT.

Edge Pvmt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pvmt. Grade
1134.40	.19	12	236+00	1134.59	12		1134.40
1133.73			+25	1133.92			1133.78
1133.11			+50	1133.30			1133.21
1132.55			+75	1132.74			1132.70
1132.04			237+00	1132.23			1132.24
1131.59			+25	1131.78			1131.84
1131.39			P.C.+36.50	1131.58			1131.67
1131.19			+50	1131.38			1131.49
1130.85			+75	1131.04			1131.20
1130.56			238+00	1130.75		.38	1130.94
1130.33			+25	1130.52			1130.71
1130.15			+50	1130.34			1130.53
1130.03			+75	1130.22			1130.41
1129.96			239+00	1130.15			1130.34
1129.95			+25	1130.14			1130.33
1129.99			+50	1130.18			1130.37
1130.09			+75	1130.28			1130.47
1130.24			240+00	1130.43			1130.62
1130.45			+25	1130.64			1130.83
1130.71			+50	1130.90			1131.09
1131.03			+75	1131.22			1131.41
1131.40			241+00	1131.59			1131.78
1131.83			+25	1132.02			1132.21
1132.31			+50	1132.50			1132.69
1132.85			+75	1133.04			1133.23
1133.44			242+00	1133.63			1133.82
1134.09			+25	1134.28			1134.47
1134.79			+50	1134.98			1135.17
1135.55			+75	1135.74			1135.93
1136.36			243+00	1136.55			1136.74
1137.23			+25	1137.42			1137.61
1138.15			+50	1138.34			1138.53
1139.13			+75	1139.32			1139.51
1140.16			244+00	1140.35			1140.54
1141.25			+25	1141.44			1141.63
1142.39			+50	1142.58			1142.77
1143.59			+75	1143.78			1143.97
1144.84			245+00	1145.03			1145.22
1146.15			+25	1146.34			1146.53
1147.51			+50	1147.70			1147.89
1148.93			+75	1149.12			1149.31
1150.40			246+00	1150.59			1150.78
1151.89			+25	1152.08			1152.27
1153.36			+50	1153.55			1153.74
1154.81			+75	1155.00			1155.19
1156.24			247+00	1156.43			1156.62
1157.65			+25	1157.84			1158.03
1159.03			+50	1159.22		.38	1159.41
1160.40			+75	1160.59			1160.74
1161.75			248+00	1161.94			1162.07
1163.08			+25	1163.27			1163.36
1164.03			P.T.+43.17	1164.22			1164.27
1164.38			+50	1164.57			1164.62
1165.67			+75	1165.86			1165.87
1166.94			249+00	1167.13			1167.10
1168.18			+25	1168.37			1168.30
1169.41			+50	1169.60			1169.49
1170.62			+75	1170.81			1170.66
1171.80	.19	12	250+00	1171.99	12		1171.80

Obtained Graphically

P.C. 293+68.62 — D = 0°20' LT. — P.T. 301+23.62

LT. — TABLE "F" — RT.

Edge Pvmt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pvmt. Grade
1192.12	.19	12	293+00	1192.31	12		1192.12
1192.00			+25	1192.19			1192.04
1191.88			+50	1192.07			1191.99
1191.78			P.C.+68.62	1191.97			1191.98
1191.75			+75	1191.94			1191.97
1191.63			294+00	1191.82			1191.94
1191.51			+25	1191.70			1191.87
1191.38			+50	1191.57			1191.76
1191.26			+75	1191.45		.38	1191.64
1191.14			295+00	1191.33			1191.52
1191.01			+25	1191.20			1191.39
1190.89			+50	1191.08			1191.27
1190.77			+75	1190.96			1191.15
1190.64			296+00	1190.83			1191.02
1190.52			+25	1190.71			1190.90
1190.39			+50	1190.58			1190.77
1190.27			+75	1190.46			1190.65
1190.15			297+00	1190.34			1190.53
1190.02			+25	1190.21			1190.40
1189.90			+50	1190.09			1190.28
1189.78			+75	1189.97			1190.16
1189.65			298+00	1189.84			1190.03
1189.53			+25	1189.72			1189.91
1189.41			+50	1189.60			1189.79
1189.28			+75	1189.47			1189.66
1189.16			299+00	1189.35			1189.54
1189.04			+25	1189.23			1189.42
1188.91			+50	1189.10			1189.29
1188.77			+75	1188.96			1189.15
1188.60			300+00	1188.79			1188.98
1188.37			+25	1188.56		.38	1188.75
1188.12			+50	1188.31			1188.50
1187.83			+75	1188.02			1188.20
1187.50			301+00	1187.69			1187.82
1187.17			P.T. +23.62	1187.36			1187.36
1187.14			+25	1187.33			1187.33
1186.73			+50	1186.92			1186.83
1186.30			+75	1186.49			1186.34
1185.82	.19	12	302+00	1186.01	12		1185.82

Obtained Graphically

T.S. 319+68.49 — D = 4°00' LT. — S.T. 329+02.87

LT. — TABLE "G" — RT.

Edge Pvmt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pvmt. Grade
1102.99	.19	12	318+75	1103.18	12	.19	1102.99
1102.10			319+00	1102.29			1102.14
1101.27			+25	1101.46			1101.35
1100.50			+50	1100.69			1100.65
1099.98			T.S. +68.49	1100.17			1100.17
1099.80			+75	1099.99			1100.02
1099.15			320+00	1099.34			1099.45
1098.56			+25	1098.75			1098.96
1098.03			+50	1098.22			1098.54
1097.57			+75	1097.76			1098.20
1097.16			321+00	1097.35			1097.91
1096.87			+25	1097.00			1097.70
1096.53			+50	1096.72			1097.54
1096.30			+75	1096.49			1097.44
1096.14			322+00	1096.33			1097.42
1096.03			+25	1096.22			1097.47
1095.98			+50	1096.17			1097.61
1095.99			S.C. +68.49	1096.18			1097.75
1096.00			+75	1096.19			1097.81
1096.08			323+00	1096.27			1098.00
1096.21			+25	1096.40		2.00	1098.21
1096.40			+50	1096.59			1098.40
1096.66			+75	1096.85			1098.66
1096.98			324+00	1097.17			1098.98
1097.35			+25	1097.54			1099.35
1097.79			+50	1097.98			1099.79
1098.28			+75	1098.47			1100.28
1098.84			325+00	1099.03			1100.84
1099.45			+25	1099.64			1101.45
1100.13			+50	1100.32			1102.13
1100.87			+75	1101.06		2.00	1102.87
1101.67			326+00	1101.86			1103.63
1101.77			C.S. +02.87	1101.96			1103.71
1102.52			+25	1102.71			1104.35
1103.44			+50	1103.63			1105.07
1104.37			+75	1104.56			1105.78
1105.26			327+00	1105.45			1106.48
1106.11			+25	1106.30			1107.17
1106.92			+50	1107.11			1107.83
1107.70			+75	1107.89			1108.49
1108.43			328+00	1108.62			1109.10
1109.12			+25	1109.31			1109.68
1109.78			+50	1109.97			1110.22
1110.40			+75	1110.59			1110.72
1110.99			329+00	1111.18			1111.17
1111.04			S.T. +02.87	1111.23			1111.23
1111.52			+25	1111.71			1111.63
1112.03			+50	1112.22			1112.07
1112.49			+75	1112.68		.19	1112.49
1112.92	.19	12	330+00	1113.11	12	.19	1112.92

Obtained Graphically

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

27/128

HOL-62-(21.08-21.51)

T.S. 338+46.30 — D = 4°00' RT. — S.T. 347+95.88

LT. Edge Pvmt. Grade	LT. Add Super	LT. Width	TABLE "H" Station	Profile Grade	RT. Width	RT. Deduct Crown	RT. Edge Pvmt. Grade
1110.20	—	12	337+75	1110.38	12	.19	1110.19
1109.98			338+00	1110.09			1109.90
1109.76			+25	1109.84			1109.61
1109.61			T.S.+46.30	1109.55			1109.36
1109.59			+50	1109.51			1109.32
1109.42			+75	1109.22			1109.03
1109.27			339+00	1108.93			1108.74
1109.12			+25	1108.64			1108.45
1108.98			+50	1108.35			1108.16
1108.84			+75	1108.06			1107.87
1108.70			340+00	1107.77			1107.58
1108.55			+25	1107.48			1107.29
1108.42			+50	1107.19			1107.00
1108.28			+75	1106.90			1106.71
1108.13			341+00	1106.61			1106.42
1107.93			+25	1106.31			1106.12
1107.74			S.C.+46.30	1106.04			1105.85
1107.70			+50	1105.99			1105.80
1107.41			+75	1105.65			1105.46
1107.08	—		342+00	1105.29			1105.10
1106.72	2.00		+25	1104.91			1104.72
1106.32			+50	1104.51			1104.32
1105.89			+75	1104.08			1103.89
1105.45			343+00	1103.64			1103.45
1104.99			+25	1103.18			1102.99
1104.51			+50	1102.70			1102.51
1104.01			+75	1102.20			1102.01
1103.49			344+00	1101.68			1101.49
1102.94	2.00		+25	1101.13			1100.94
1102.37	—		+50	1100.57			1100.38
1101.75			+75	1099.99			1099.80
1101.19			C.S.+95.88	1099.49			1099.30
1101.09			345+00	1099.38			1099.19
1100.38			+25	1098.76			1098.57
1099.63			+50	1098.12			1097.93
1098.83			+75	1097.45			1097.26
1097.97			346+00	1096.77			1096.58
1097.10			+25	1096.06			1095.87
1096.22			+50	1095.34			1095.15
1095.30			+75	1094.60			1094.41
1094.39			347+00	1093.83			1093.64
1093.45			+25	1093.04			1092.85
1092.50			+50	1092.24			1092.05
1091.54			+75	1091.41			1091.22
1090.72			S.T.+95.88	1090.71			1090.52
1090.56			348+00	1090.57			1090.38
1089.61			+25	1089.71			1089.52
1088.66			+50	1088.82			1088.63
1087.72	—		+75	1087.91			1087.72
1086.80	.19	12	349+00	1086.99	12	.19	1086.80

Obtained Graphically

T.S. 373+74.24 — D = 4°00' LT. — S.T. 385+65.49

LT. Edge Pvmt. Grade	LT. Deduct Crown	LT. Width	TABLE "I" Station	Profile Grade	RT. Width	RT. Add Super	RT. Edge Pvmt. Grade
1058.37	.19	12	373+00	1058.56	24	.38	1058.18
1059.81			+25	1060.00		—	1059.62
1061.32			+50	1061.51			1061.23
1062.83			T.S.+74.24	1063.02			1063.02
1062.88			+75	1063.07			1063.03
1064.48			374+00	1064.67			1064.92
1066.15			+25	1066.34			1066.87
1067.87			+50	1068.06			1068.85
1069.64			+75	1069.83			1070.86
1071.47			375+00	1071.66			1072.91
1073.36			+25	1073.55			1074.98
1075.29			+50	1075.48			1077.10
1077.26			+75	1077.45			1079.25
1079.22			376+00	1079.41			1081.40
1081.19			+25	1081.38			1083.57
1083.15			+50	1083.34			1085.73
1085.06			S.C.+74.24	1085.25			1087.80
1085.12			+75	1085.31			1087.86
1087.08			377+00	1087.27			1089.96
1089.05			+25	1089.24		—	1092.02
1091.01			+50	1091.20		3.00	1094.01
1092.98			+75	1093.17			1095.98
1094.94			378+00	1095.19			1097.94
1096.91			+25	1097.10			1099.91
1098.87			+50	1099.06			1101.87
1100.84			+75	1101.03			1103.84
1102.80			379+00	1102.99			1105.80
1104.77			+25	1104.96			1107.77
1106.73			+50	1106.92			1109.73
1108.70			+75	1108.89			1111.70
1110.66			380+00	1110.85			1113.66
1112.63			+25	1112.82			1115.63
1114.59			+50	1114.78			1117.59
1116.56			+75	1116.75			1119.56
1118.52			381+00	1118.71			1121.52
1120.49			+25	1120.68			1123.49
1122.45			+50	1122.64			1125.45
1122.42			+75	1124.61			1125.42
1126.38			382+00	1126.57			1129.36
1128.35			+25	1128.54			1131.26
1130.31			+50	1130.50			1133.07
1131.53			C.S.+65.49	1131.72			1134.18
1132.28			+75	1132.47			1134.93
1134.24			383+00	1134.43			1136.72
1136.21			+25	1136.40			1138.49
1138.17			+50	1138.36			1140.25
1140.14			+75	1140.33			1142.00
1142.10			384+00	1142.29			1143.74
1144.07			+25	1144.26			1145.47
1146.03			+50	1146.22			1147.18
1147.98			+75	1148.17			1148.88
1149.88			385+00	1150.07			1150.57
1151.75			+25	1151.94			1152.22
1153.57			+50	1153.76			1153.86
1154.68			S.T.+65.49	1154.87			1154.87
1155.36			+75	1155.55			1155.48
1157.10			386+00	1157.29			1157.10
1158.80			+25	1158.99			1158.69
1160.46			+50	1160.65			1160.27
1162.09	.19	12	+75	1162.28	24	3.00	1161.90

Obtained Graphically

P.C. 391+81.47 — D = 1°00' RT. — P.T. 397+41.47

LT. Edge Pvmt. Grade	LT. Add Super	LT. Width	TABLE "U" Station	Profile Grade	RT. Width	RT. Deduct Crown	RT. Edge Pvmt. Grade
1181.61	.19	12	390+50	1181.80	24	.38	1181.42
1182.58	.19		+75	1182.77			1182.39
1183.54	—		391+00	1183.72			1183.34
1184.51			+25	1184.61			1184.23
1185.46			+50	1185.47			1185.03
1186.45			+75	1186.29			1185.90
1186.72			P.C.+81.47	1186.50			1186.12
1187.42			392+00	1187.07			1186.68
1188.27	—		+25	1187.81			1187.43
1188.98	.86		+50	1188.50			1188.12
1189.64			+75	1189.16			1188.78
1190.26			393+00	1189.78			1189.40
1190.84			+25	1190.36			1189.98
1191.37			+50	1190.89			1190.51
1191.87			+75	1191.39			1191.01
1192.33			394+00	1191.85			1191.47
1192.74			+25	1192.26			1191.88
1193.12			+50	1192.64			1192.26
1193.45			+75	1192.97			1192.59
1193.76			395+00	1193.28			1192.90
1194.01			+25	1193.55			1193.15
1194.22			+50	1193.74			1193.36
1194.40			+75	1193.92			1193.54
1194.53			396+00	1194.05			1193.67
1194.63			+25	1194.15			1193.77
1194.68			+50	1194.20			1193.82
1194.72	.86		+75	1194.24			1193.86
1194.68	—		397+00	1194.27			1193.89
1194.58			+25	1194.30			1193.92
1194.48			P.T.+41.47	1194.32			1193.94
1194.44			+50	1194.34			1193.96
1194.33			+75	1194.37			1193.99
1194.28			398+00	1194.41			1194.03
1194.27	—		+25	1194.44			1194.06
1194.28	.19	12	+50	1194.47	24	.38	1194.03

Obtained Graphically

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

940
930
930
930
930
930
930
930

END WALK ½"/Ft. F-17 C-22 3/4"/Ft. F-32 8:1
934.97
114+11
934.38

F-15 C-28 F-10
935.00
114+00
934.64

E. Hse. ½"/Ft. F-4 C-30 F-1 ½"/Ft. E. Hse.
935.14
113+75
935.10

Top Wall E.dr. BEGIN 3' WALK F-2 C-36 F-2 E. Hse.
935.35
113+50
935.30

F-1 C-31 F-2 E. Hse.
935.42
113+43
935.44

F-1 C-43 Bot. Steps
936.52
113+33
935.60

C-35
935.93
113+00
935.93

BEGIN PROJECT

112+50
936.54

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	299			16	234
41		22	49		
	45			10	15
32		28	25		2
	89			27	14
32		30	5		
	89			31	4
32		36	4		
	46			9	1
32		31	3		
	34			14	1
30		43	1		
	92			48	1
20		35	0		

1-A →

60 50 40 30 20 10 ℄ 10 20 30 40

930
930
920
930
920
920
930
930
930

3:1 F-445 3:1 C-7 932.50
939.38
117+00
931.5

2:1 F-710 2:1 C-14 924.00
939.06
116+90
929.4

C-63 F-20 F-828 C-12 919.00
937.88
116+50
927.6

2:1 C-51 F-812 C-22 918.00
936.69
116+00
927.3

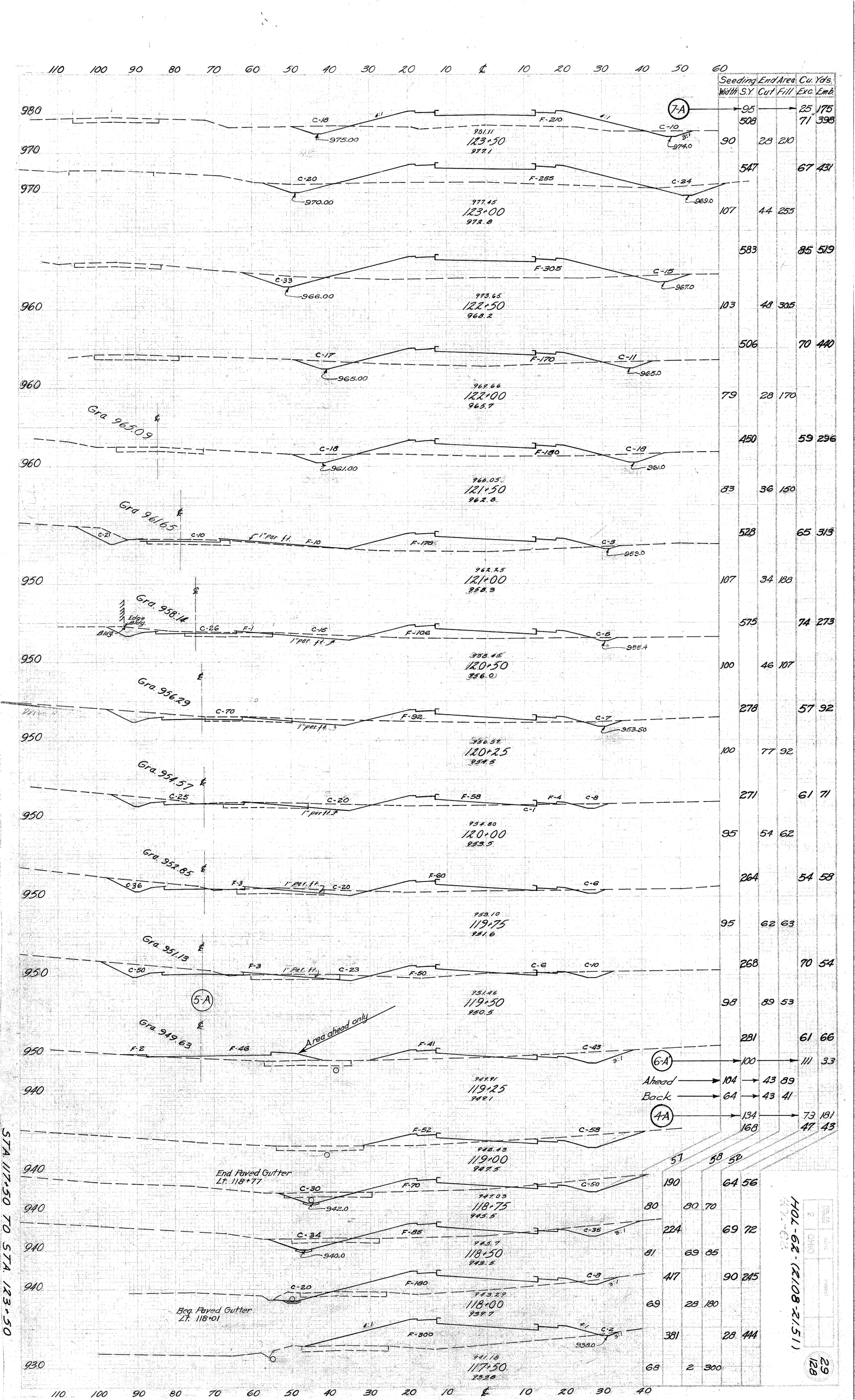
3:1 F-680
935.80
115+50
931.1

4:1 F-460
935.23
115+00
931.5

½"/Ft. F-275 3/4"/Ft. 2:1
934.96
End Curb Sec. 114+50
933.29

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
3-A →	310	→		8	507
	411			8	690
80		7	445		
	95			4	214
	91		14	710	
	489			66	1154
129		75	848		
	681			137	1537
116		73	812		
	556			68	1381
2-A →	105	→		32	113
84		0	680		
	453			0	1056
79		0	460		
	461			0	681
87		0	275		

TO STA. 117+00


110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60
Seeding End Area Cu. Yds.
Width S.Y. Cut Fill Exc. Emb.
980
970
960
950
940
930
C-18
F-210
C-10
975.00
974.0
961.11
123+50
972.1
7-A
95 25 175
508 71 398
90 28 210
C-20
F-255
C-24
970.00
969.0
977.45
123+00
972.8
547 67 431
107 44 255
C-33
F-305
C-15
966.00
967.0
973.65
122+50
968.2
583 85 519
103 48 305
C-17
F-170
C-11
965.00
965.0
962.66
122+00
965.7
506 70 440
79 28 170
Gra. 965.09
C-18
F-150
C-18
961.00
961.0
966.05
121+50
962.8
450 59 296
83 36 150
Gra. 961.65
C-21
C-10
1' per ft.
F-10
F-178
C-3
959.0
962.25
121+00
958.3
528 65 313
107 34 188
Gra. 958.14
Edge Bldg.
Bldg
C-26
F-1
C-15
1' per ft.
F-106
C-5
955.4
958.45
120+50
956.0
575 74 273
100 46 107
Gra. 956.29
C-70
1' per ft.
F-92
C-7
953.50
956.59
120+25
954.5
278 57 92
100 77 92
Gra. 954.57
C-25
C-20
1' per ft.
F-58
F-4
C-1
C-8
954.80
120+00
953.5
271 61 71
95 54 62
Gra. 952.85
C-36
F-3
1' per ft.
C-20
F-60
C-6
953.10
119+75
951.6
264 54 58
95 62 63
Gra. 951.13
C-50
F-3
1' per ft.
C-23
F-50
C-6
C-10
951.46
119+50
950.5
5-A
268 70 54
98 89 53
Gra. 949.63
Area ahead only
F-2
F-46
F-41
C-43
948.91
119+25
949.1
6-A
281 61 66
100 111 33
Ahead 104 43 89
Back 64 43 41
4-A
134 73 181
168 47 43
F-52
C-58
946.43
119+00
947.5
57 58 52
End Paved Gutter
Lt. 118+77
C-30
F-70
C-50
942.0
947.03
118+75
945.5
190 64 56
80 80 70
C-34
F-85
C-35
940.0
945.7
118+50
943.5
224 69 72
81 69 85
C-20
F-180
C-8
943.29
118+00
939.7
417 90 245
69 28 180
Beg Paved Gutter
Lt. 118+01
F-300
C-2
938.0
941.18
117+50
938.8
381 28 444
68 2 300
STA. 117+50 TO STA. 123+50
1401-62-(2108-21.511)
29
128

HOL-62-(21.08-21.51)

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
				2931	13
102	597	1570	7		
				1231	6
103	262	1320	7		
				1113	7
91	291	905	7		
				193	24
68	442	366	0		
				1177	6
356	68	492	0		
				193	16
60	339	165	0		
				138	
62	394	43	17		
				132	
80	481	34	132		
				326	
93	49	220			
				781	52
414					
				644	7
84					
				816	8
307					
				825	7
100					
				693	5
226					
				1046	7
103					
				2265	13
567					
				1400	7
101					
				2637	13
569					
				1448	7
104					
				2818	13
603					
				1535	7
113					

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

1010
1000
990

Drive
C-1,570
F-7
2:1
998.78
127+00
1016.1

Drive
C-1,320
F-7
998.05
126+77
1011.1

C-905
F-7
997.11
126+50
1006.8

8-A

2:1
C-366
2:1
995.15
126+00
999.63

3:1
C-165
3:1
992.91
125+50
994.4

C-24
987.0
F-3
C-9
F-14
C-10
988.0
990.38
125+00
989.3

980

C-18
4:1
983.0
F-132
4:1
C-16
982.0
987.57
124+50
984.25

C-37
4:1
978.0
F220
4:1
C-12
978.0
984.48
124+00
979.8

50 40 30 20 10 ℄ 10 20 30 40 50

1010
1000

2:1
F-7
C-644
1001.0
1002.91
129+50
1011.7

C-825
F-7
1000.85
1002.79
129+20
1011.6

See Approach Sta. 130+00

C-1046
F-7
1000.75
1002.65
129+00
1015.9

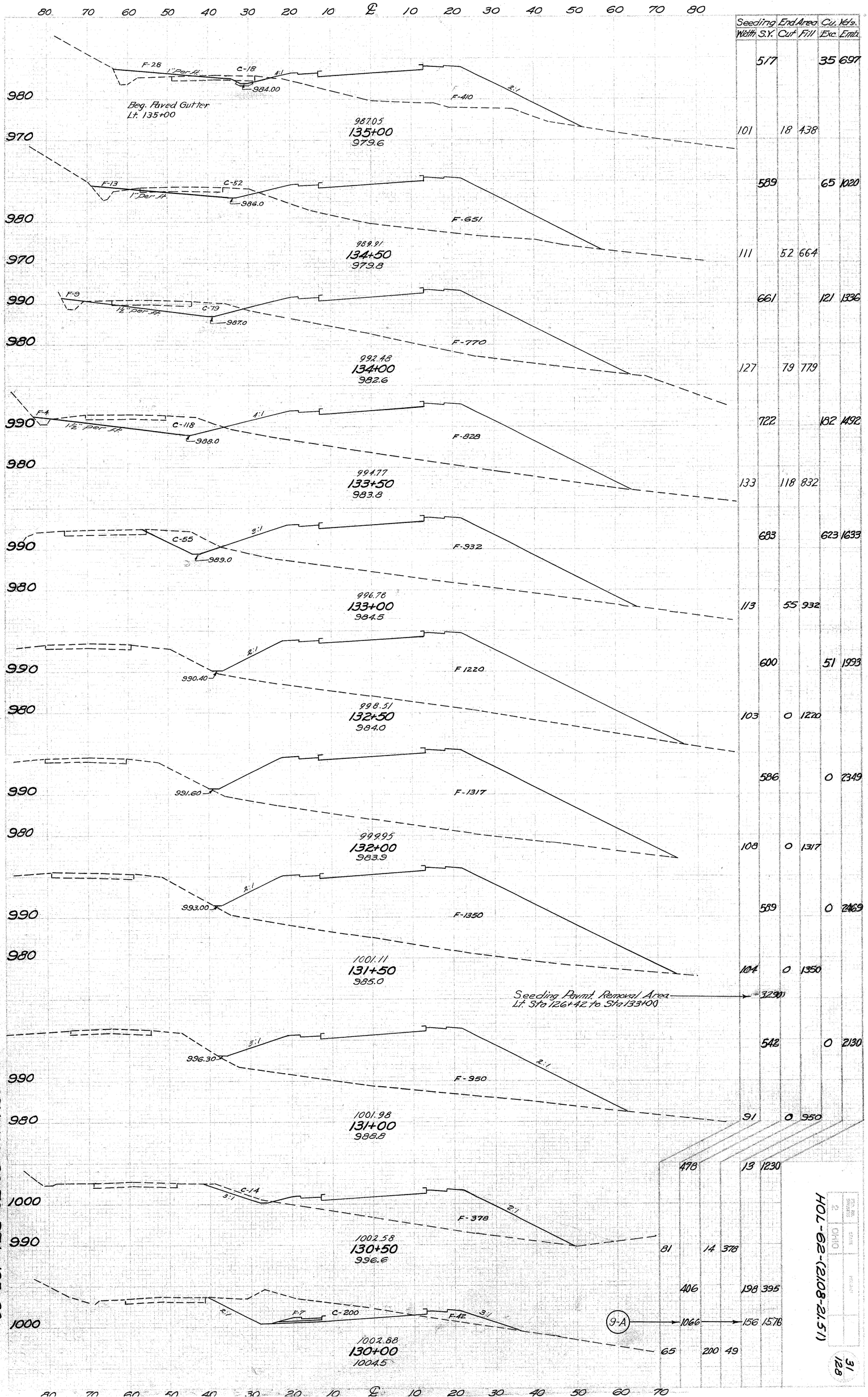
C-1400
F-7
1000.5
1002.11
128+50
1019.4

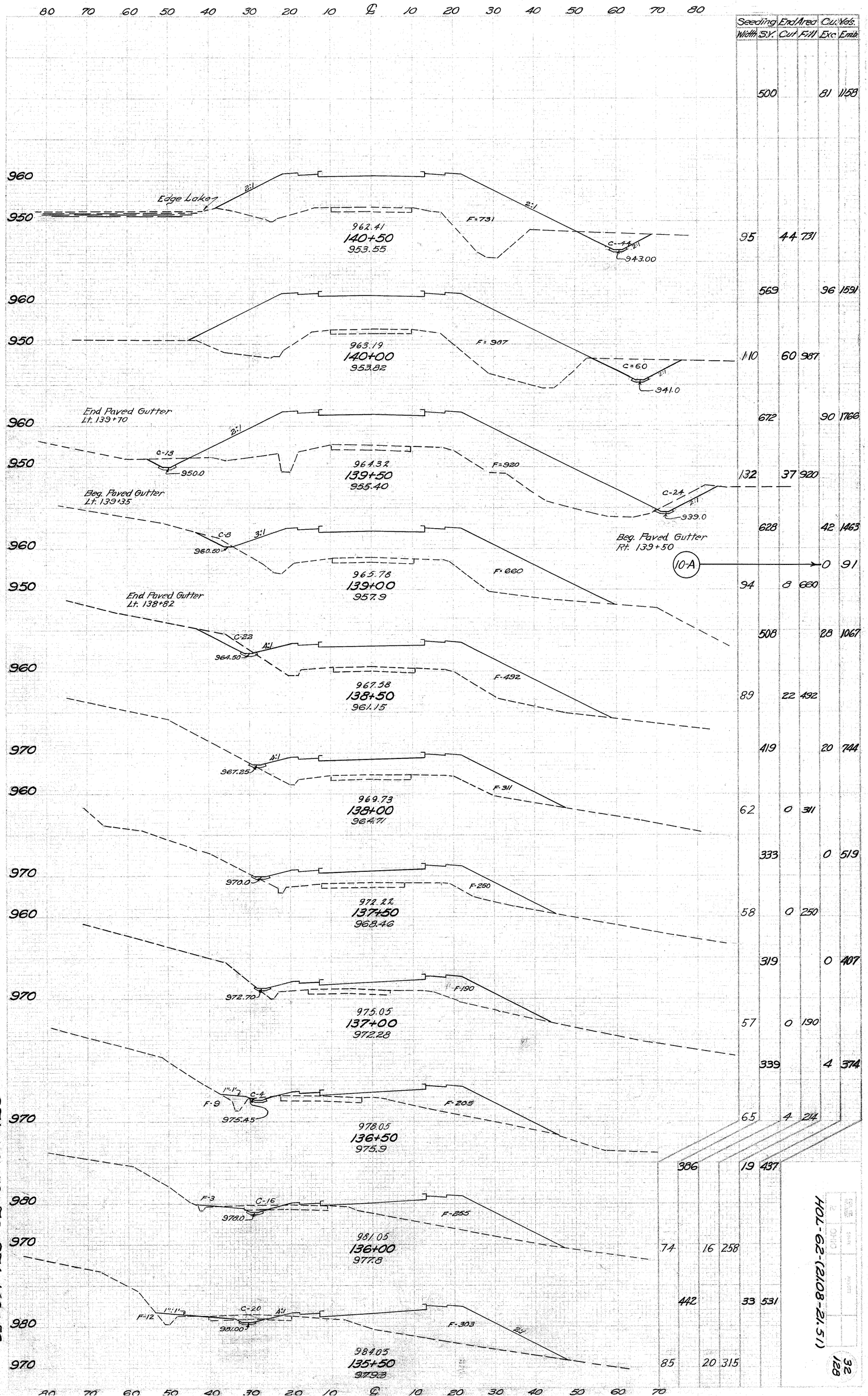
E. Dr.
E. Dr.
C-1448
2:1
F-7
1000.25
1001.28
128+00
1019.6

C-1595
2:1
2:1
F-7
1000.18
127+50
1019.5

50 40 30 20 10 ℄ 10 20 30 40 50 60 70

STA. 124+00 TO STA. 129+50


80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80
Beg. Paved Gutter Lt. 135+00
F-28
1" Per Ft.
C-18
4:1
984.00
2:1
F-410
987.05
135+00
979.6
F-13
1" Per Ft.
C-52
986.0
F-651
989.91
134+50
979.8
F-9
1½" Per Ft.
C-79
987.0
F-770
992.48
134+00
982.6
F-4
1½" Per Ft.
C-118
4:1
988.0
F-828
994.77
133+50
983.8
C-55
3:1
983.0
F-932
996.76
133+00
984.5
2:1
990.40
F 1220
998.51
132+50
984.0
991.60
F-1317
999.95
132+00
983.9
2:1
993.00
F-1350
1001.11
131+50
985.0
3:1
996.30
2:1
F-950
1001.98
131+00
988.8
C-14
3:1
F-378
1002.58
130+50
996.6
F-7
C-200
F-42
3:1
1002.88
130+00
1004.5
STA. 130+00 TO STA. 135+00
Seeding Permit Removal Area
Lt. Sta 126+42 to Sta 133+00
9-A
Seeding Width S.Y. Cut Fill Exc. Emb.
517 35 697
101 18 438
589 65 1020
111 52 664
661 121 1336
127 79 779
722 182 1492
133 118 832
683 623 1633
113 55 932
600 51 1993
103 0 1220
586 0 2349
108 0 1317
589 0 2469
104 0 1350
3290
542 0 2130
91 0 950
478 13 1230
81 14 378
406 198 395
1066 156 1576
65 200 49
HOL-62-(21.08-21.51)
OHIO
31
128



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	500			81	1158
95		44	731		
	569			96	1591
110		60	987		
	672			90	1766
132		37	920		
	628			42	1463
				0	91
94		8	660		
	508			28	1067
89		22	492		
	419			20	744
62		0	311		
	333			0	519
58		0	250		
	319			0	407
57		0	190		
	339			4	374
65		4	214		
	386			19	437
74		16	258		
	442			33	531
85		20	315		

STA. 135+50 TO STA. 140+50

HOL-62-(21.08-21.51)

32
128

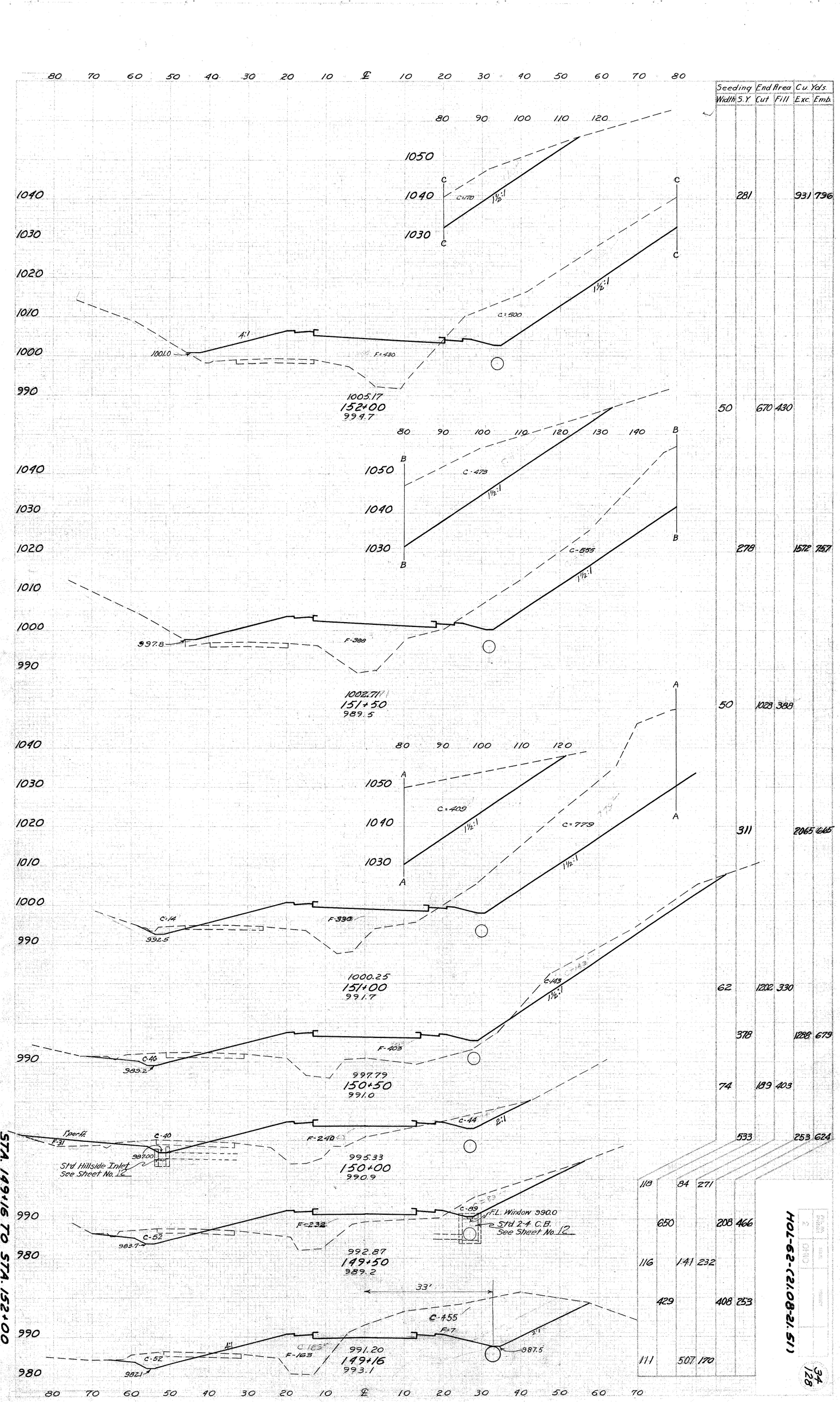
HOL-62-(21.08-21.51)

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	367			34	166
65		23	77		
	378			61	107
71		43	39		
	392			89	60
70		53	26		
	378			84	63
66		38	42		
	392			87	111
75		56	78		
	422			103	216
77		55	155		
13-A →	315	→		159	28
	406			77	378
69		28	253		
12-A →	464	→		39	257
	422			60	605
83		37	400		
	467			75	852
85		44	520		

Quantities to be provided by change Order at time of Construction.

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	205			368	98
120		735	160		
	617			982	310
102		326	175		
	547			365	412
95		68	270		
	517			106	481
91		46	250		
	492			70	413
86		30	196		
	497			51	348
93		25	180		
	486			64	293
82		44	136		
14-A →	170	→		23	169
	414			54	220
67		14	102		

STA 141+00 TO STA. 149+00



Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	281			931	796
50		670	430		
	278			1572	757
50		1028	389		
	311			2065	645
62		1202	330		
	378			1288	679
74		189	403		
	533			253	624
118		84	271		
	650			208	466
116		141	232		
	429			408	253
111		507	170		

STA. 149+16 TO STA. 152+00

HOL-62-(21)08-21.511

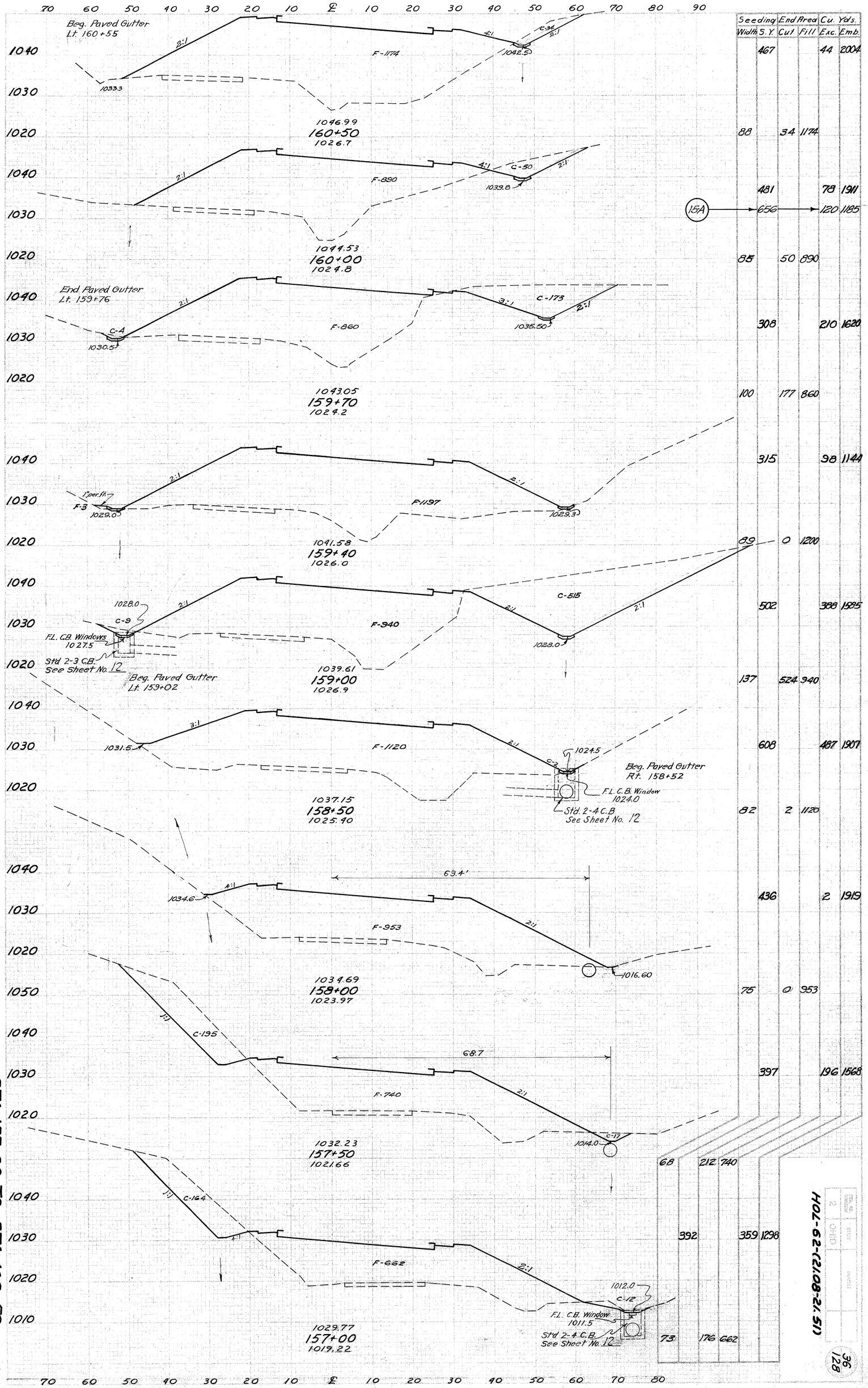
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

35
128

HOL-62-(21.08-21.51)

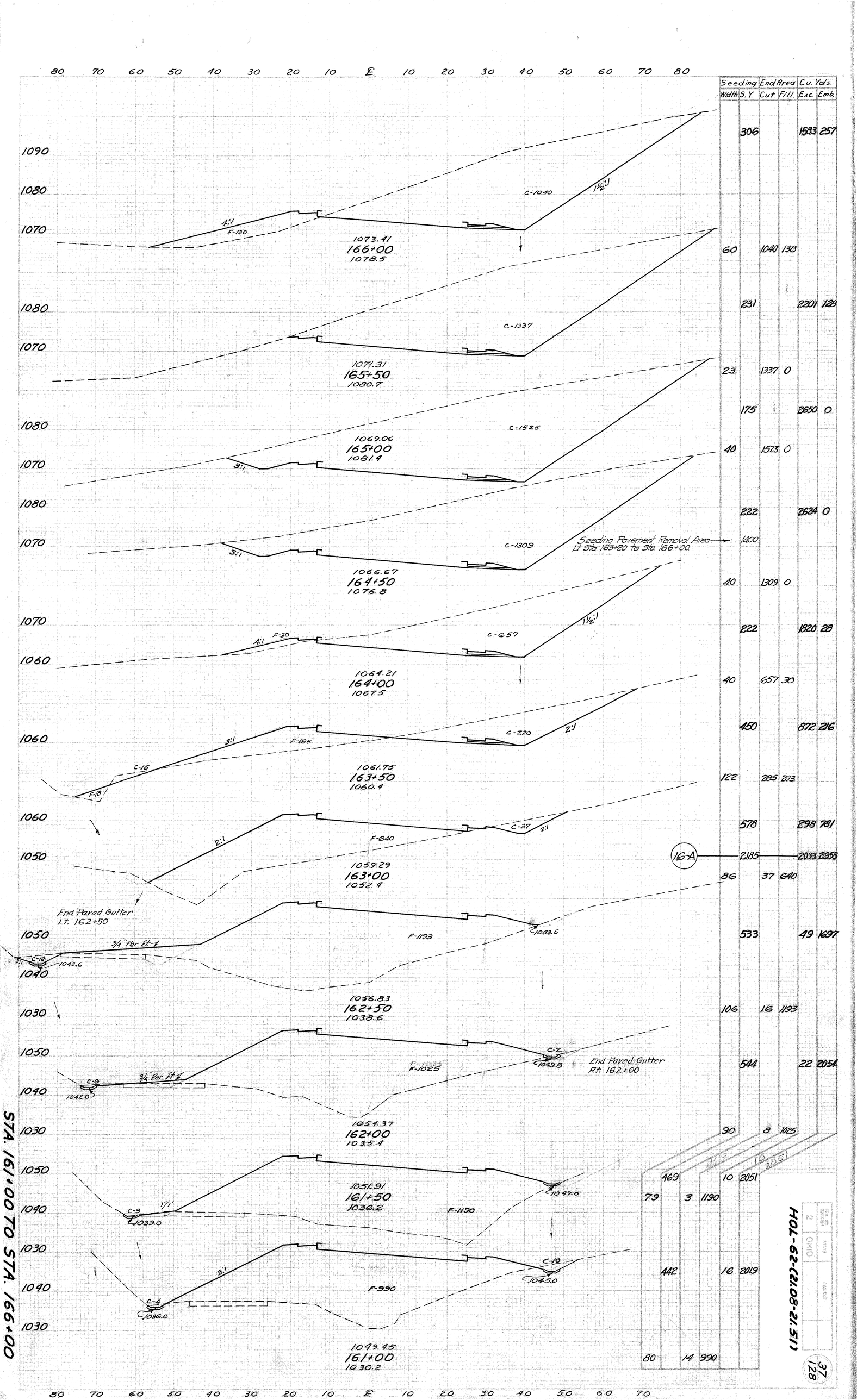
Cu. Yds. Emb.	1303		789		834		1526		1379		1186		1057		981		955		775	
Cu. Yds. Exc.	222		30		0		0		116		175		221		401		557		630	
End Area Fill		745		960		842		806		683		598		544		516		515		430
End Area Cut		64		0		0		0		125		64		175		258		344		336
Seeding S.Y.	442		232		206		403		383		297		242		225		231		258	
Seeding Width		86		81		67		78		60		47		40		41		42		51

STA. 152+50 TO STA. 156+50



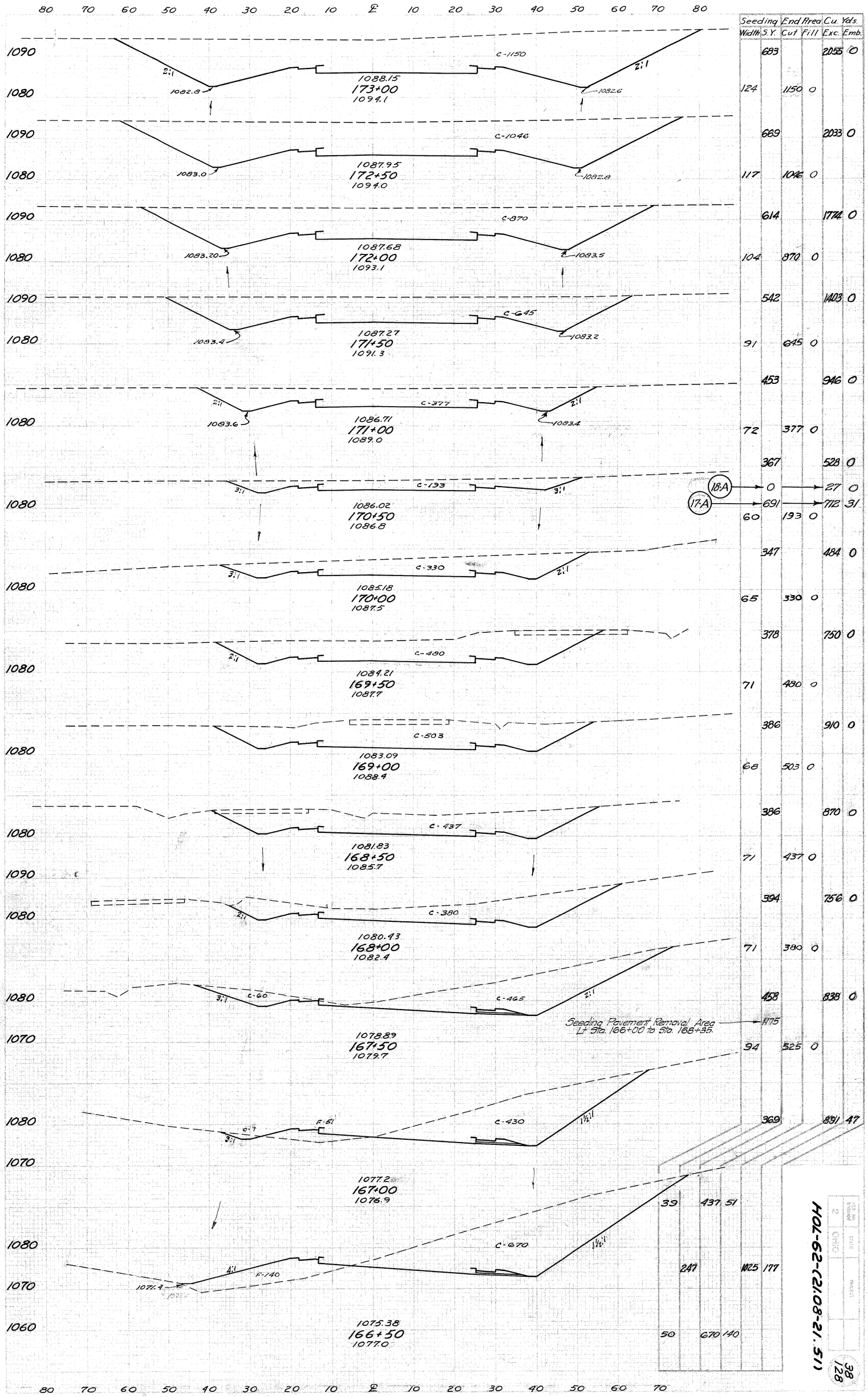
Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	467			44	2004
88		34	1174		
	481			78	1911
(15A) →	656	→		120	1185
85		50	890		
	308			210	1620
100		177	860		
	315			98	1144
89		0	1200		
	502			388	1595
137		524	940		
	608			487	1907
82		2	1120		
	436			2	1919
75		0	953		
	397			196	1568
68		212	740		
	392			359	1298
73		176	662		

H02-62-(21.08-21.51)



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	306			1583	257
60		1040	138		
	231			2201	128
23		1337	0		
	175			2650	0
40		1523	0		
	222			2624	0
40		1309	0		
	222			1820	28
40		657	30		
	450			872	216
122		285	203		
	578			298	781
	2,185			2033	2953
86		37	640		
	533			49	1697
106		16	1193		
	544			22	2054
90		8	1025		
	469			10	2051
79		3	1190		
	442			16	2019
80		14	990		

HOL-62-(21.08-21.51)

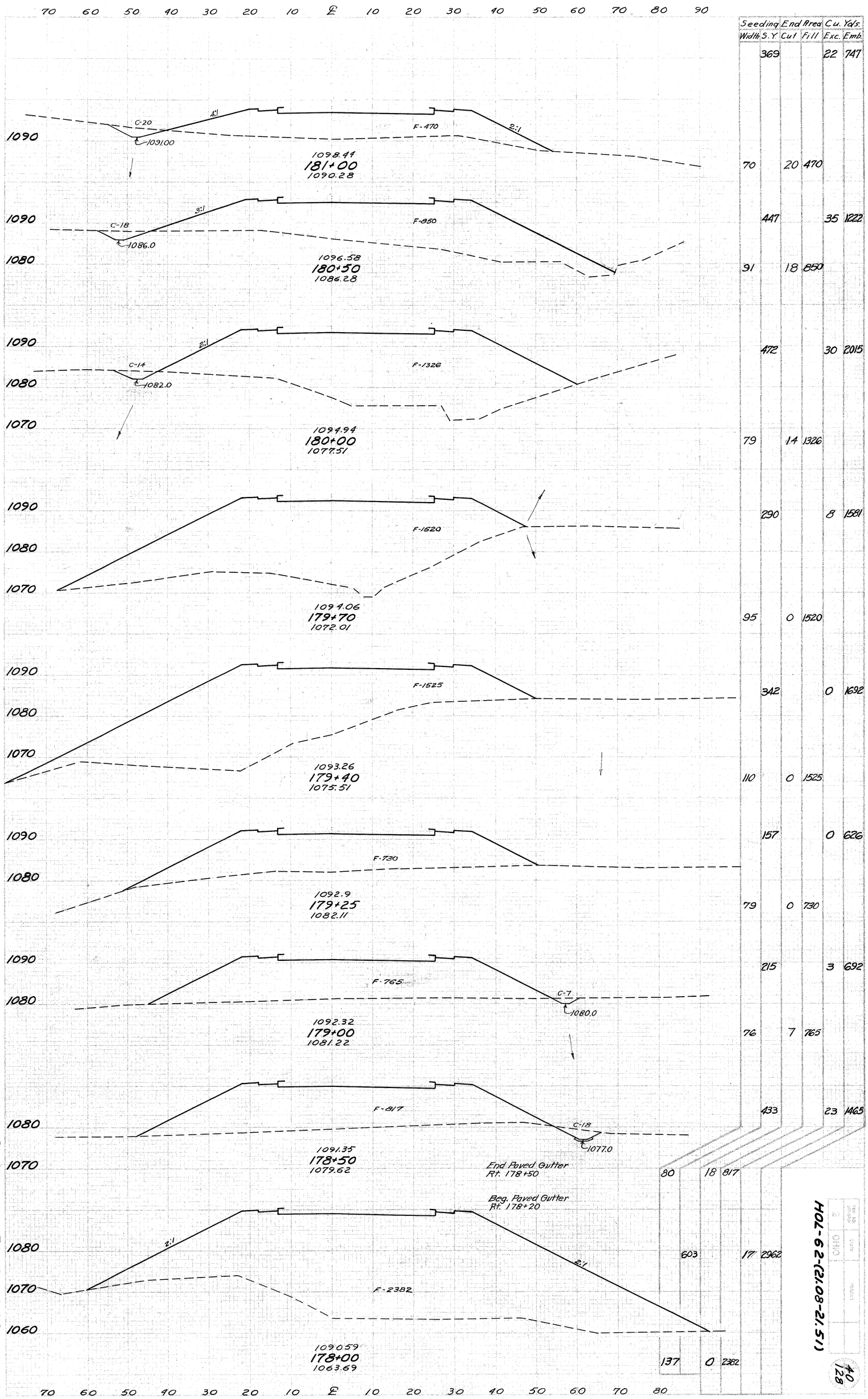

80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80
Seeding Width | End Area S.Y. | Cut | Fill | Cu. Yds. Exc. | Emb.
1090
1080
2:1
1082.8
C-1150
1088.15
173+00
1094.1
1082.6
683 2055 0
124 1150 0
C-1046
1087.95
172+50
1094.0
1083.0
1082.8
669 2033 0
117 1046 0
C-870
1087.68
172+00
1093.1
1083.20
1083.5
614 1774 0
104 870 0
C-645
1087.27
171+50
1091.3
1083.4
1083.2
542 1403 0
91 645 0
C-377
1086.71
171+00
1089.0
1083.6
1083.4
453 946 0
72 377 0
C-193
1086.02
170+50
1086.8
3:1
367 528 0
18-A → 0 → 27 0
17-A → 691 → 712 31
60 193 0
C-330
1085.18
170+00
1087.5
347 484 0
65 330 0
C-480
1084.21
169+50
1087.7
378 750 0
71 480 0
C-503
1083.09
169+00
1088.4
386 910 0
68 503 0
C-437
1081.83
168+50
1085.7
386 870 0
71 437 0
C-380
1080.43
168+00
1082.4
394 756 0
71 380 0
C-60
C-465
Seeding Pavement Removal Area
L± Sta. 166+00 to Sta. 168+35.
458 838 0
1175
1078.89
167+50
1079.7
94 525 0
C-7
F-51
C-430
1½:1
369 891 47
1077.2
167+00
1076.9
39 437 51
C-670
4:1
F-140
1071.4
247 1025 177
1075.38
166+50
1077.0
50 670 140
STA. 166+50 TO STA. 173+00
HOL-62-(21.08-21.51)
OHIO
38
128

Seeding	End Area	Cu. Yds.		
Width S.Y.	Cut	Fill	Exc.	Emb.
404	5			2625
143	10	300		
393	7			2827
152	6	3290		
463	16			2319
126	22	1244		
199	11			551
113	18	740		
663	141			1148
104	120	307		
619	483			4446
119	402	35		
703	1253			88
134	951	0		
736	2200			0
138	1220	0		
225	0			
129	995	0		
742	1908			0
132	1066	0		
725	1977			0
122	1089	0		
716				

End Paved Gutter
Rt. 177+30

Beg. Paved Gutter
Rt. 177+50

STA. 173+50 TO STA. 177+74

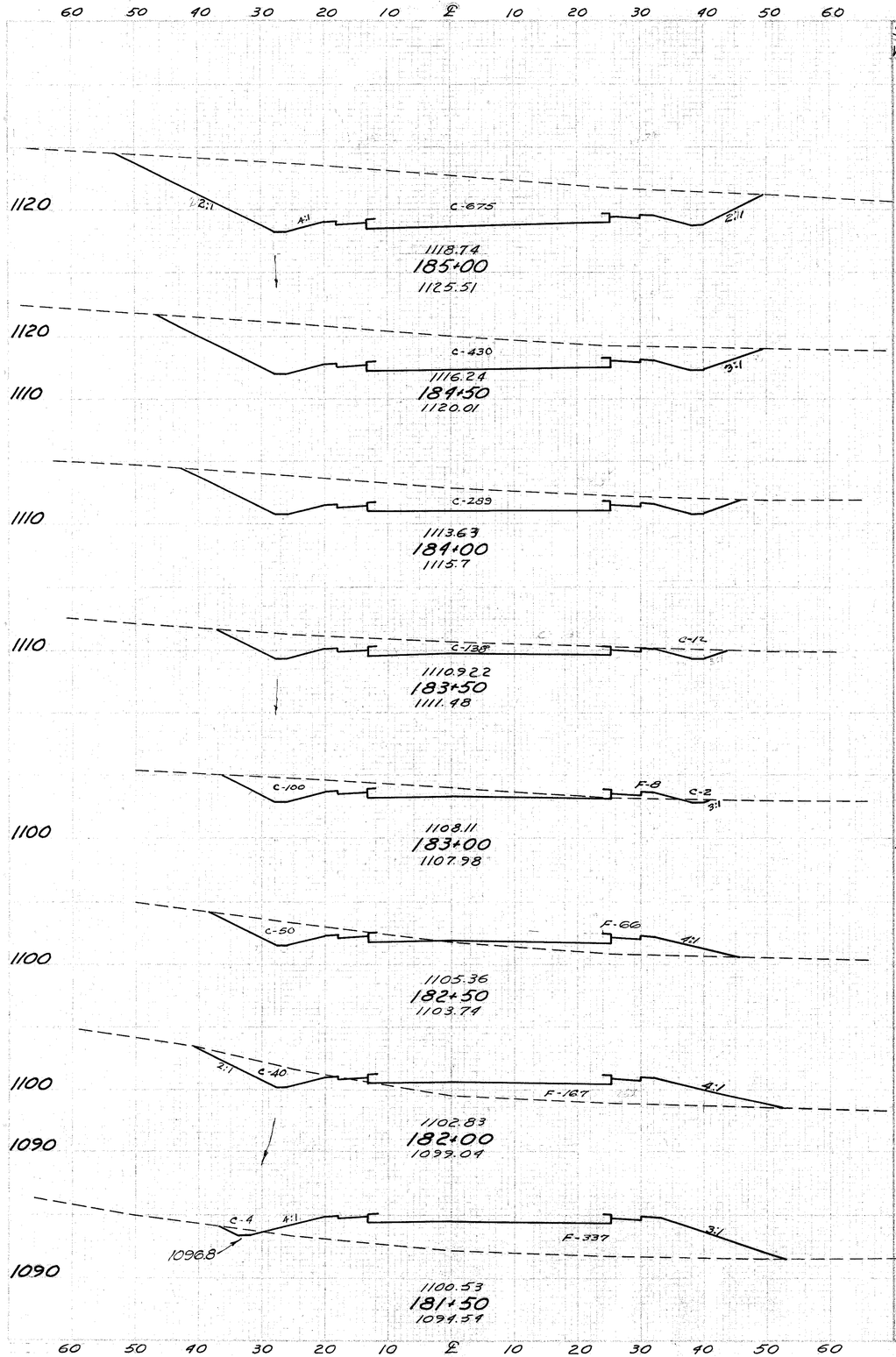


Seeding Width	S.Y	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	369			22	747
70		20	470		
	447			35	1222
91		18	850		
	472			30	2015
79		14	1326		
	290			8	1581
95		0	1520		
	342			0	1692
110		0	1525		
	157			0	626
79		0	730		
	215			3	692
76		7	765		
	433			23	1465
80		18	817		
	603			17	2962
137		0	2382		

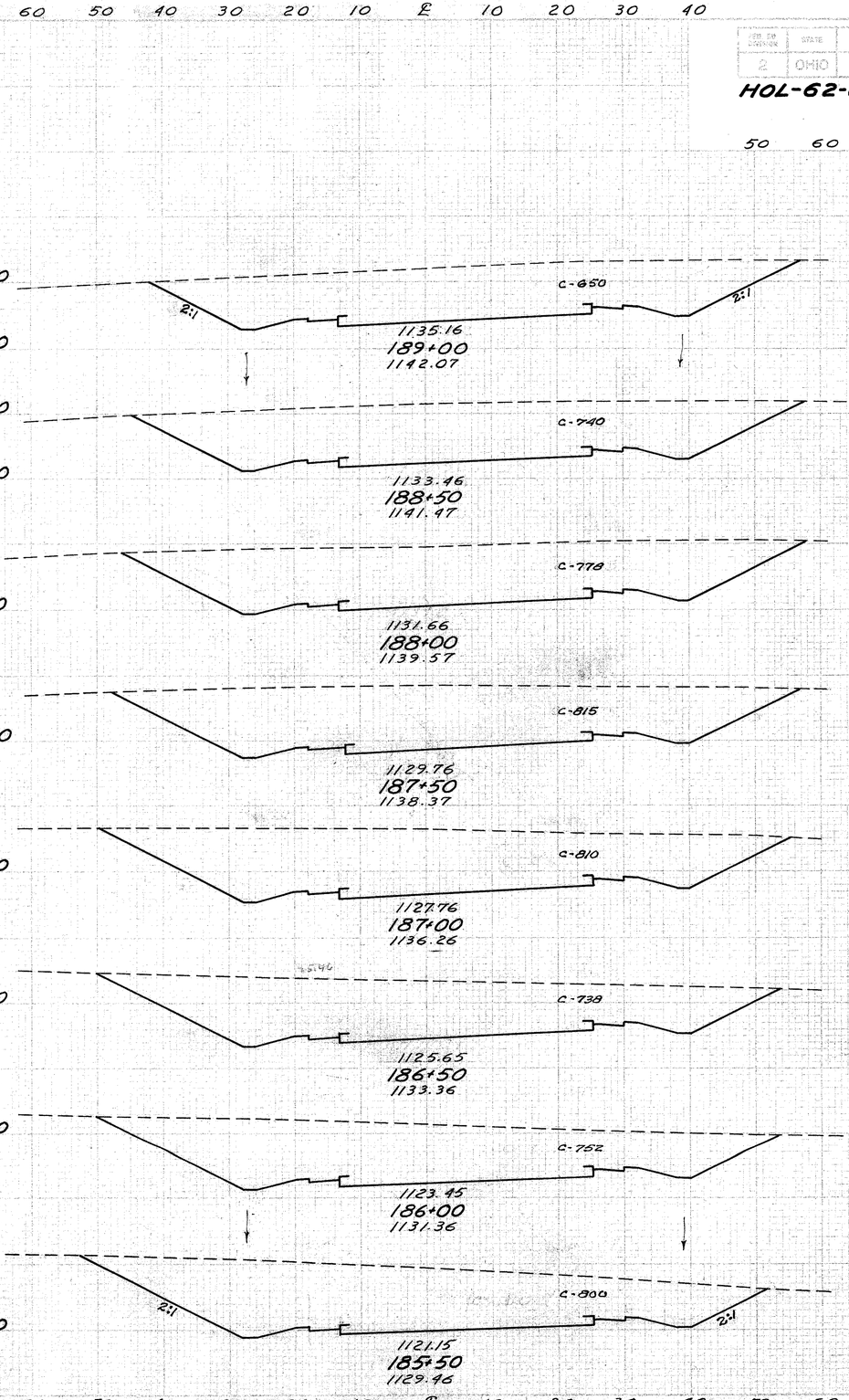
H02-6-2(21.08-21.51)

SHEET NO.	STATE	PROJECT
2	OHIO	

HOL-62-(21.08-21.51)



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	444			1366	0
78		675	0		
	414			1023	0
71		430	0		
	375			666	0
64		289	0		
	328			406	0
54		150	0		
	286			233	7
49		102	8		
	297			141	69
58		50	66		
	350			83	216
68		40	167		
	364			41	467
63		4	337		



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	414			1162	0
75		650	0		
	431			1287	0
80		740	0		
	447			1406	0
81		778	0		
	453			1475	0
82		815	0		
	458			1505	0
83		810	0		
	456			1433	0
81		738	0		
	450			1380	0
81		752	0		
	453			1437	0
82		800	0		

STA. 181+50 TO STA. 189+00

Seeding	End Area	Cu. Yds.
Width S.Y.	Cut / Fill	Exc. / Emb.
128	4573	0
129	2505	0
719	4506	0
150	2362	0
714	4224	0
127	2200	0
588	2367	0
126	2060	0
278	1527	0
124	2064	0
698	3610	0
113	1645	0
554	2467	0
99	1190	0
925		
511	1895	0
85	1235	857 0 330 61
458	1421	0
80	2248	678 0 610 38

20A

19A

433	620	0	1202	0	
76	422	635	0	1162	0
76	417	605	0	1148	0
74					

FED. TO DIVISION | STATE | PROJ.
2 | OHIO

42
128

HOL-62-(21.08-21.51)

Seeding Bank Removal Area
Rt. Sta. 191+50 to Sta. 193+35

C-2505 1:1 2:1 1147.61 194+50 1170.23

C-2362 1146.77 194+00 1169.53

C-2200 1145.93 193+50 1166.53

C-2060 1145.93 193+20 1164.23

Edge of Berm

C-2064 1145.10 193+00 1163.43

C-1645 1144.15 192+97 1159.70

C-1190 1143.22 192+00 1155.00

C-857 1142.13 191+50 1151.18

C-678 1140.93 191+00 1147.98

C-620 1139.64 190+50 1145.98

C-635 1138.24 190+00 1144.81

C-605 1136.75 189+50 1142.87

STA. 189+50 TO STA. 194+50

FED. ROAD | STATE | DIST. | COUNTY
2 | OHIO

HOL-62-(21.08-21.51)

90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50

C-200 2:1 3:1
1152.64
197+50
1154.44

E. Bldg.
C-695
1151.80
197+00
1157.1

C-1212
1150.96
196+50
1159.72

C-1718
1150.13
196+00
1162.08

STA. 195+69.8
Bal. Point

c-2206
1149.29
195+50
1163.46

c-2434 2:1 3:1
1148.45
195+00
1163.56

Excavation	131,476 Cu. Yds.
Embankment	114,327 Cu. Yds.
Seeding	93,385 Sq. Yds.

	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
21-A		0			0	16
22-A		0			337	0
	66	200	0			
		444			829	0
	94	695	0			
		556			1766	0
	106	1212	0			
		614			2704	0
	115	1718	0			
		410			865	0
		678			3633	0
		268			2168	0
	129	2206	0			
		728			4296	0
	133	2434	0			

50 40 30 20 10 ℄ 10 20 30 40 50

F-52 4:1 C-43 2:1
1160.19
202+00
1158.9

F-129 C-64
1159.35
1156.0
201+50
1156.17

F-207 4:1 C-40 2:1
1158.51
201+00
1154.2
1154.0 Std. 2-3 CB See Sh. 14
FL. Ele. 950.0

F-250 2:1 4:1 C-6 3:1
1157.67
200+50
1152.47
1152.0

F-342 3:1
1156.83
200+00
1151.39

F-353 2:1
1156.00
199+50
1150.65

F-320 2:1
1155.16
199+00
1150.26

F-250 3:1 2:1
1154.32
198+50
1150.49

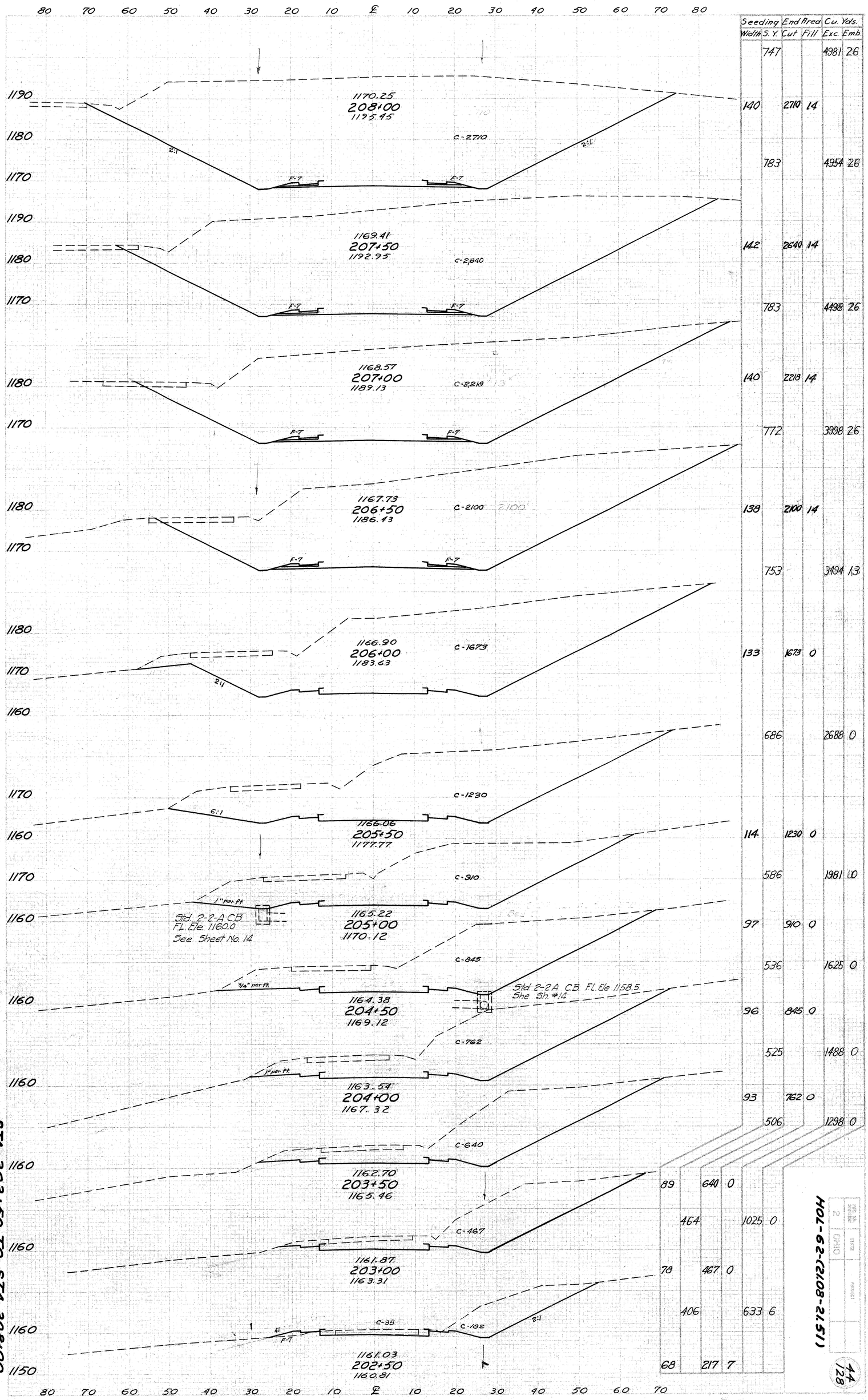
F-85 4:1 3:1
1153.48
198+00
1151.74

	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
		347			241	55
	57		43	52		
		350			99	168
	69		64	129		
		389			96	311
	71		40	207		
23-A		323			30	456
		381			43	423
	66		6	250		
		372			6	548
	68		0	342		
		381			0	644
	69		0	353		
		383			0	623
	69		0	320		
		375			0	528
	66		0	250		
		317			0	310
	48		0	85		
		317			185	79

90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50

50 40 30 20 10 ℄ 10 20 30 40 50

STA. 195+00 TO STA. 202+00



Seeding Width S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
747			4981	26
140	2710	14		
783			4954	26
142	2640	14		
783			4498	26
140	2218	14		
772			3998	26
138	2100	14		
753			3494	13
133	1673	0		
686			2688	0
114	1230	0		
586			1981	0
97	910	0		
536			1625	0
96	845	0		
525			1488	0
93	762	0		
506			1298	0
89	640	0		
464			1025	0
78	467	0		
406			633	6
68	217	7		

STA. 202+50 TO STA. 208+00

H.O.L.-6-2-(2.08-2.511)

OHIO

44
128

HOL-62-(21.08-21.51)

	Seeding		End Area		Cu. Yds.	
	Width	S.Y.	Cut	Fill	Exc.	Emb.
25-A		552			197	161
26-A		94			131	48
		397			551	30
	80		465	14		
		481			1165	26
	93		793	14		
		561			1969	26
	109		1333	14		
		313			1376	13
	116		1640	14		
		321			1542	13
	115		1691	14		
		619			2735	26
	108		1263	14		
		558			1986	26
	93		882	14		
		514			1565	26
	92		808	14		
		503			1498	26
	88		810	14		
		500				
		561			2122	26
	114		1482	14		
		656			3093	26
	122		1858	14		
		697			4193	26
	129		2670	14		

Seeding Pavement Removal Area Lt. Sta. 209+00 to Sta. 210+00.

STA. 208+50 TO STA. 213+50

Seeding Width	S.Y.	End Area Cut	Cu. Yds. Fill	Exc.	Emb.
178	1706	5	3292	23	6067
171	969	7	5937	7	5937
162	922	3	3120	6	5472
151	869	3	2390	6	4815
132	786	3	2410	6	3912
111	675	4	1815	6	2838
96	853	3	1250	3	1991
0	673	0	900	157	753
0	306	13	726	133	270
0	510	14	274	130	18
82	492	75	383	63	130

(27A)

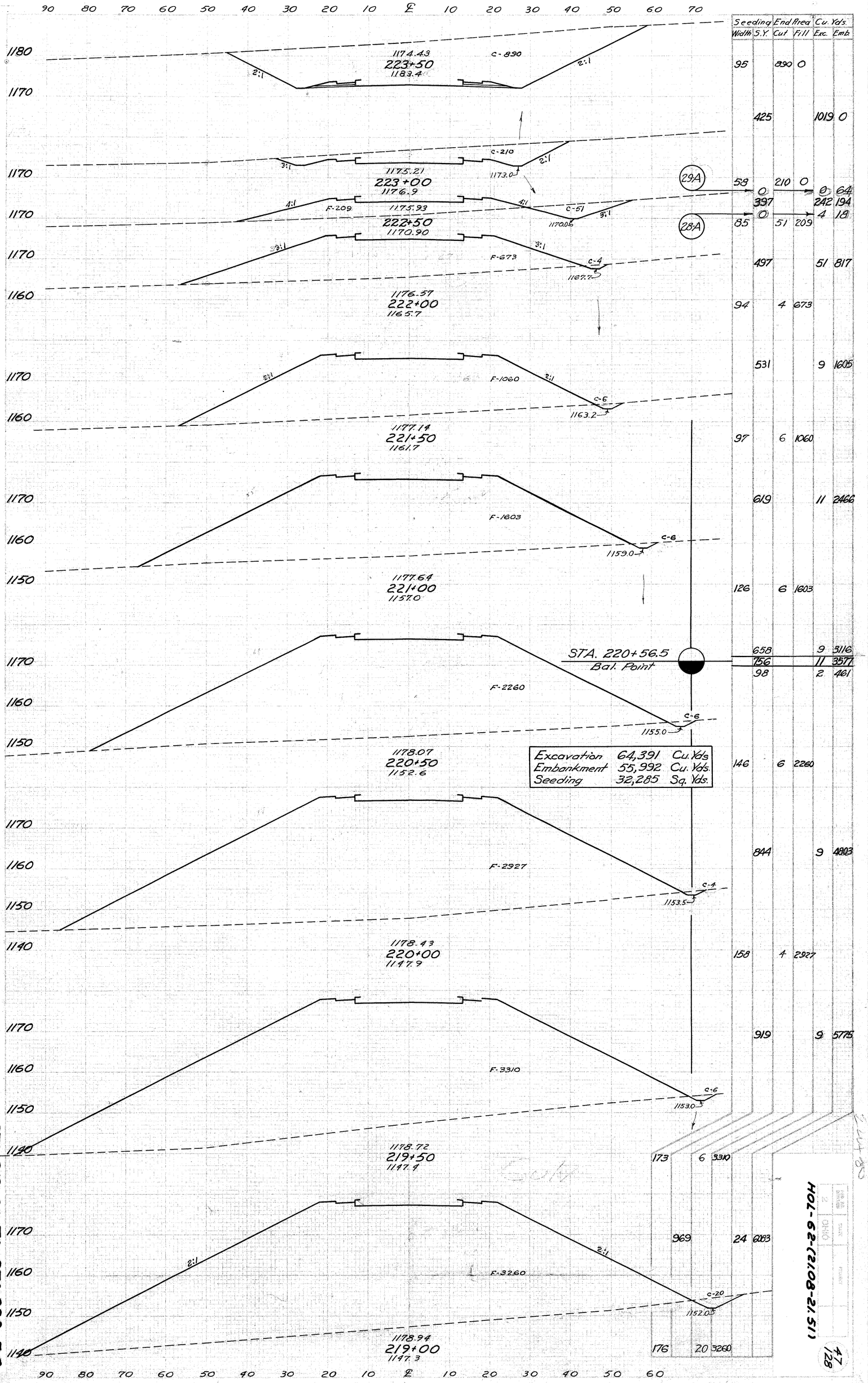
FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

46
128

HOL-62-(21.08-21.51)

Seeding Permit Required
Lt. Sta. 218+90 to Sta. 215+50

STA. 219+00 TO STA. 218+50



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
95		890	0		
	425			1019	0
58		210	0	0	64
	397			242	194
	0			4	18
85		51	209		
	497			51	817
94		4	673		
	531			9	1605
97		6	1060		
	619			11	2466
126		6	1603		
	658			9	3116
	756			11	3577
	98			2	461
146		6	2260		
	844			9	4803
158		4	2927		
	919			9	5775
173		6	3310		
	969			24	6083
176		20	3260		

Excavation	64,391	Cu. Yds.
Embankment	55,992	Cu. Yds.
Seeding	32,285	Sq. Yds.

STA. 219+00 TO STA. 223+50

HOL-62-(21)08-21.511

17/28

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

48
128

HOL-62-(21.08-21.51)

Cu. Yds. Emb.	0		0		0		0		0		0		0		0		0		0		0		0
Cu. Yds. Exc.	2057		2048		1988		2383		3242		4342		5778		7097		7148		5972		4318		2512
End Area Fill		0		0		0		0		0		0		0		0		0		0		0	
End Area Cut		1142		1070		1077		1497		2004		2685		3555		4110		3610		2840		1823	
Seeding S.Y.	567		572		575		628		714		819		942		1031		1031		944		806		625
Width		104		102		105		121		136		159		180		191		180		160		130	

STA. 224+00 TO STA. 229+00

HOL-62-(21.08-21.51)

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	469			13	1042
87		7	600		
	500			16	1051
93		10	535		
	478			15	819
79		6	349		
	372			17	453
55		12	140		
	292			76	130
50		70	0		
	328			287	0
68		240	0		
	389			594	0
72		402	0		
	419			881	0
79		550	0		
	486			1324	0
96		880	0		
	544			1815	0
100		1080	0		

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	442			11	906
76		5	425		
	419			10	757
75		6	393		
	414			9	785
74		4	455		
	394			6	801
68		2	410		
	383			6	767
70		4	418		
	406			7	834
76		4	483		
	439			10	933
82		7	525		

Sta. 233+00 Rt. Beg. Paved Gutter

Sta. 232+32 Rt. End Paved Gutter

Sta. 232+00 Rt. Beg. Paved Gutter

STA. 229+50 TO STA. 237+50

Seeding	End Area	Cu. Yds.
Wat'l S.Y.	Cut / Fill	Exc. / Emb.
758	21	3583
136	1895	11
744	18	3449
132	1830	8
722	15	3319
128	1755	8
689	12	3106
120	1600	5
644	8	2745
112	1365	4
592	6	2312
101	1132	3
547	6	1909
96	930	4
93	525	10
409	7	1752
83	554	7
464	285	13
277	1209	1857

PID NO.	STATE	PROJECT	
2	OHIO		

50
128

HOL-62-(21.08-21.51)

Seeding, Mulch, Removal Area Rt. Sta. 238+15 to Sta 240+85

Sta. 238+00 Rt. End Paved Gutter

Sta. 238+60 Rt. Begin Paved Gutter

32 A

STA. 238+00 TO STA. 242+00

FED. DIV.	STATE	PROJECT
2	OHIO	

HOL-62-(21.08-21.51)

	Cu. Yds.	
Seeding	End Area	Cu. Yds.
Width S.Y.	Cut / Fill	F.r.c. / Emb.
803	730 / 160	1616 / 2417
143	764	1234 / 292
132	603 / 155	1094 / 304
717	578 / 173	737 / 335
126	681	313 / 557
119	218 / 189	116 / 1271
647	5 / 960	11 / 2046
114	120 / 413	8 / 1905
575	7 / 1250	11 / 2621
93	5 / 1530	3 / 715
617	44	3180
129	521 / 717	
775	196	
11	3345	

Excavation 55,781 Cu. Yds.
Embankment 48,505 Cu. Yds.
Seeding 2981 Sq. Yds.

STA. 243+63.64
Bal. Point

Ahead 42 / 1854
Back 0 / 1854
150 / 137
1961
12 / 1925
137

End Paved Gutter
Rt. 242+94

Beg. Paved Gutter
Lt. 243+05

Ahead Only
C-42
1116.0

C-7
1103.7

C-1230
F-153
3½" per ft.
4:1
1136.43
247+00
1162.8

C-603
F-148
4:1
1153.55
246+50
1158.9

C-579
F-166
3½" per ft.
3:1
1150.59
246+00
1156.4

C-218
F-182
2:1
1147.70
245+50
1148.7

C-120
F-413
3½" per ft.
2:1
1140.0
1145.03
245+00
1141.4

C-15
F-960
3:1
1135.3
1142.58
244+50
1130.4

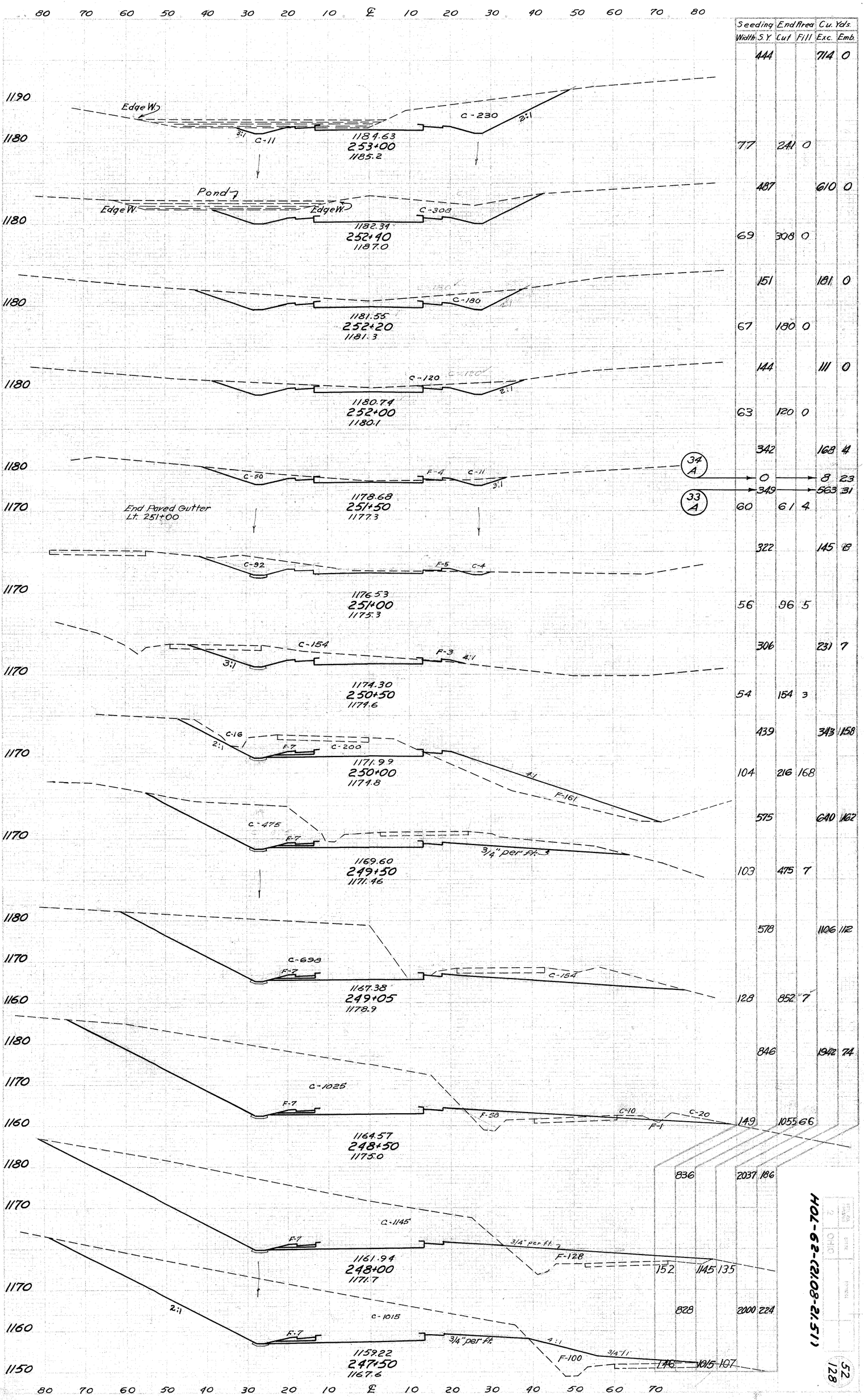
C-7
F-1250
2:1
1130.5
1140.35
244+00
1126.6

C-5
F-1580
3:1
1124.9
1138.34
243+50
1118.8

C-5
F-1834
3:1
1112.3
1136.55
243+00
1114.3

C-5
F-1975
3:1
1112.3
1134.98
242+50
1112.0

STA. 242+50 TO STA. 247+00


80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80
Seeding Width | End Area S.Y. | Cut | Fill | Cu. Yds. Exc. | Emb.
1190
1180
1170
1160
1150
Edge W.
C-11
3:1
1184.63
253+00
1185.2
C-230
2:1
444 714 0
77 241 0
Pond 7
Edge W.
Edge W.
C-308
1182.39
252+40
1187.0
487 610 0
69 308 0
C-180
1181.55
252+20
1181.3
151 181 0
67 180 0
C-120
1180.74
252+00
1180.1
144 111 0
63 120 0
C-80
F-4
C-11
3:1
1178.68
251+50
1177.3
End Paved Gutter
Lt. 251+00
342 168 11
34 A → 0 → 8 23
33 A → 349 → 563 31
60 61 4
C-92
F-5
C-4
1176.53
251+00
1175.3
322 145 8
56 96 5
C-154
3:1
F-3
4:1
1174.30
250+50
1174.6
306 231 7
54 154 3
C-16
2:1
F-7
C-200
1171.99
250+00
1174.8
439 343 158
104 216 168
4:1
F-161
C-475
F-7
3/4" per ft.
1169.60
249+50
1171.46
575 640 162
103 475 7
C-698
F-7
C-154
1167.38
249+05
1178.9
578 1106 112
128 852 7
C-1025
F-7
F-58
C-10
C-20
F-1
1164.57
248+50
1175.0
846 1942 74
149 1055 66
C-1145
F-7
3/4" per ft.
F-128
1161.94
248+00
1171.7
836 2037 186
152 1145 135
2:1
C-1015
F-7
3/4" per ft.
4:1
F-100
3/4" per ft.
1159.22
247+50
1167.6
828 2000 224
146 1015 107
STA. 247+50 TO STA. 253+00
HOL-62-(2108-21.511)
52
128

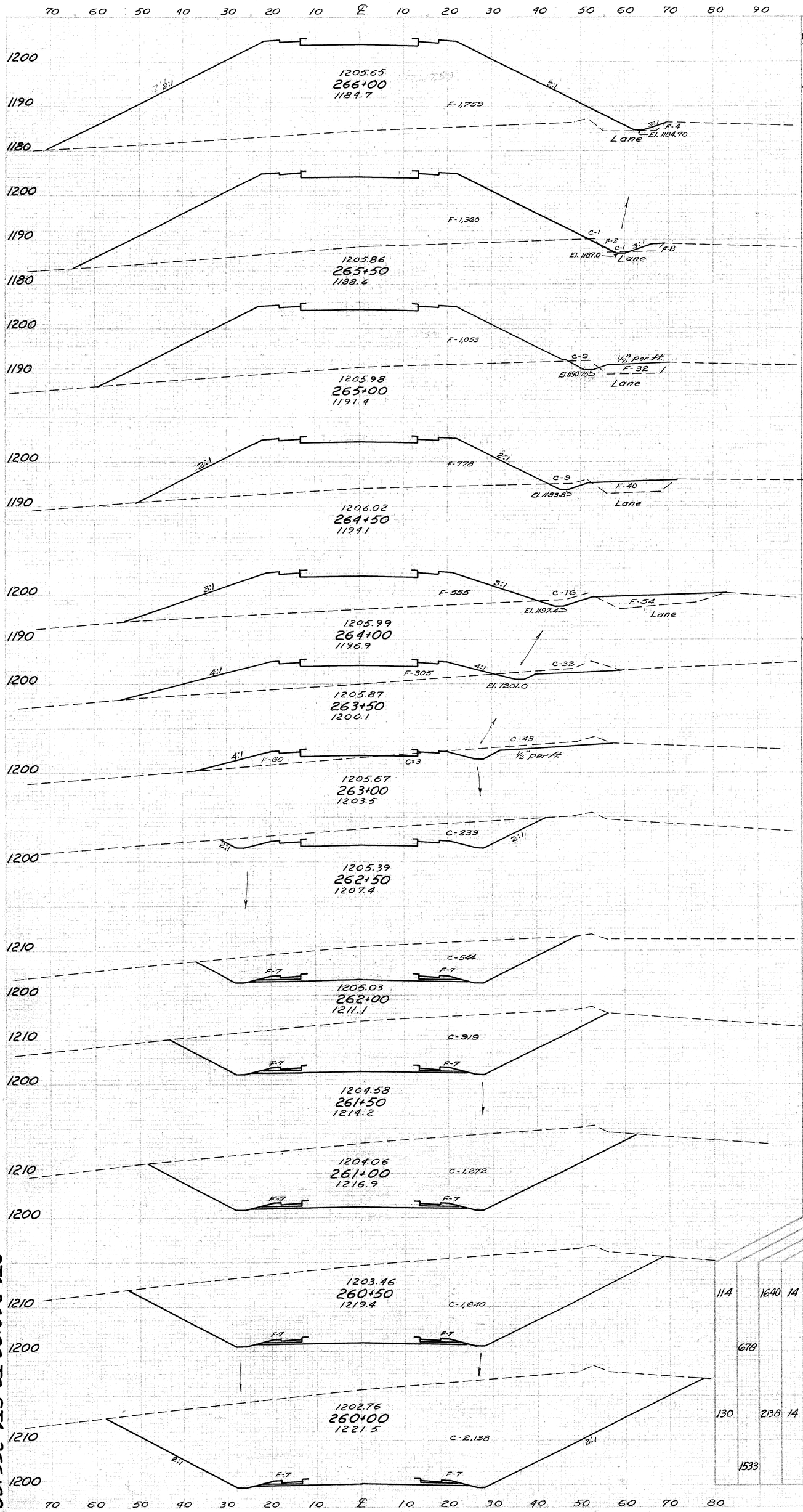
Seeding	End Area	Cu. Yds.
Width	S.Y. Cut / Fill	Exc. / Emb.
146	2830 14	5310 26
844		
158	3055 14	5784 26
903		
167	3170 14	5389 26
911		
161	2650 14	4466 26
856		
147	2173 14	3558 26
764		
128	1670 14	2788 26
603		
118	1309 14	2201 13
639		
112	1068 0	1989 0
614		
109	1080 0	1755 0
567		
95	815 0	1423 0
508		
88	722 0	1159 0
475		
83	530 0	

NO.	DATE	INDEX
2	ONIC	

53
128

HOL-62-(21.08-21.51)

STA. 253+50 TO STA. 259+00

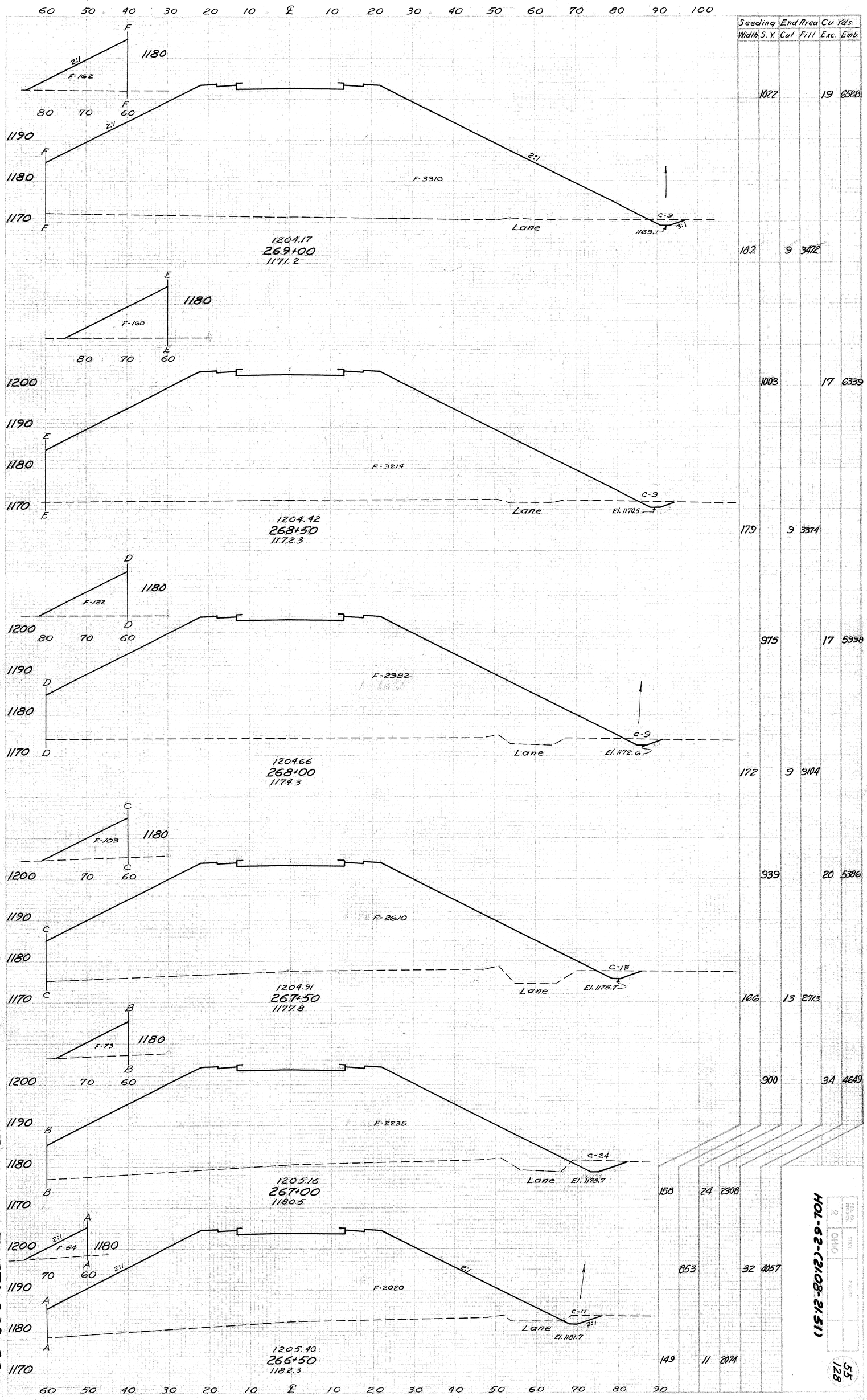


Seeing Width	S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	792			10	3553
136		0	1763		
	733			2	2901
128		2	1370		
	697			10	2273
123		9	1085		
	681			17	1762
112		9	818		
	658			23	1321
125		16	609		
	625			44	846
100		32	305		
	497			72	338
79		46	60		
	386			264	56
60		239	0		
	375			725	13
75		544	14		
	456			1355	26
89		919	14		
	533			2029	26
103		1272	14		
	603			2696	26
114		1640	14		
	678			3498	26
130		2138	14		
	1533			8922	52

HOL-6-(21.08-21.51)

NO.	DESIGN	STATE	
2	OHIO		
		PROJECT	

54
128



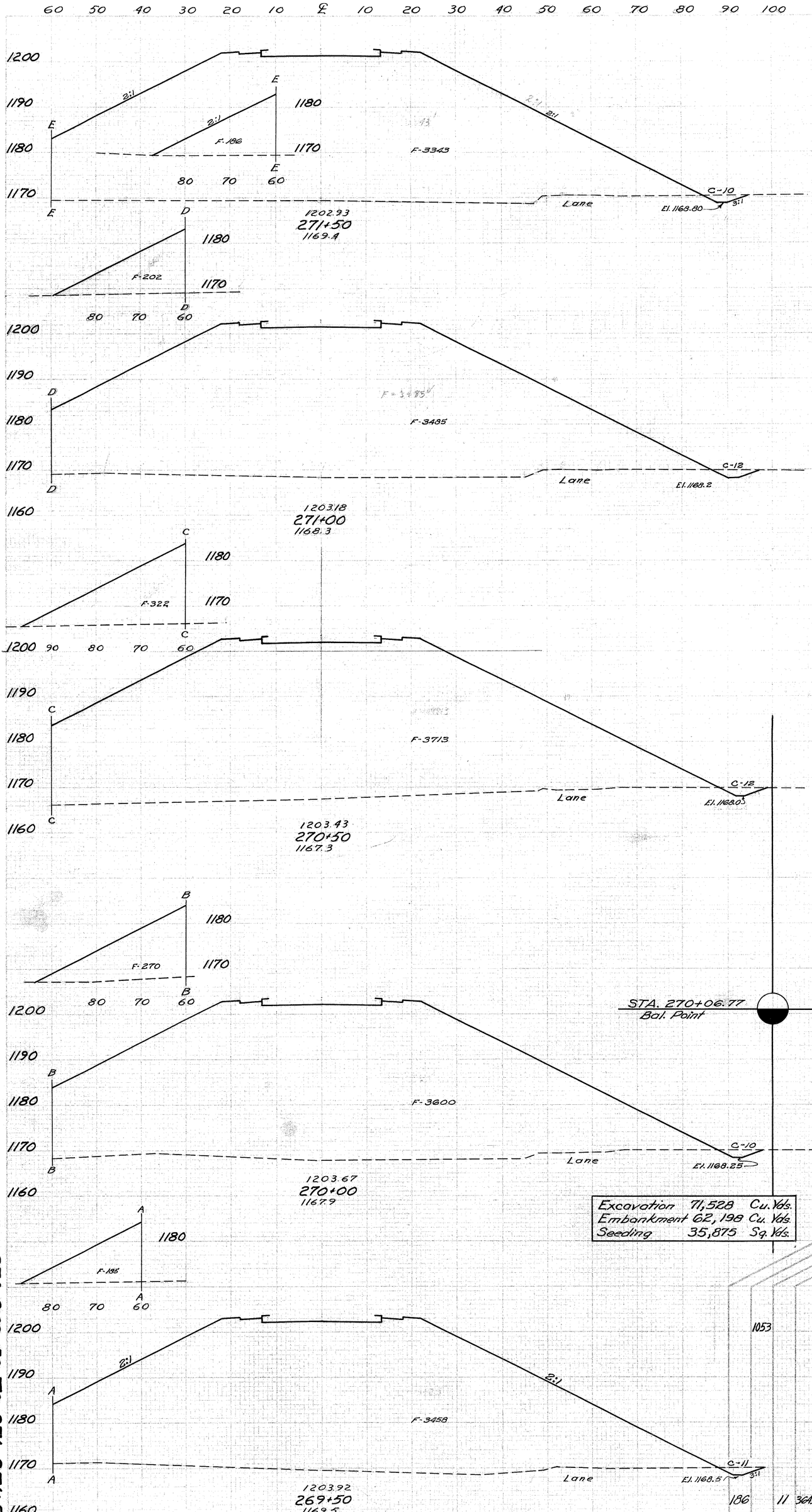
Seeding Width	S.Y.	End Area Cut	Fill	Cu Yds. Exc.	Emb.
	1022			19	6588
182		9	3472		
	1003			17	6339
179		9	3374		
	975			17	5998
172		9	3104		
	939			20	5386
166		13	2713		
	900			34	4649
158		24	2308		
	853			32	4057
149		11	2074		

STA. 266+50 TO STA. 269+00

HOL-62-(21.08-21.51)

NO.	REVISION	STATE	PROJECT
12		ILL.	

55
128

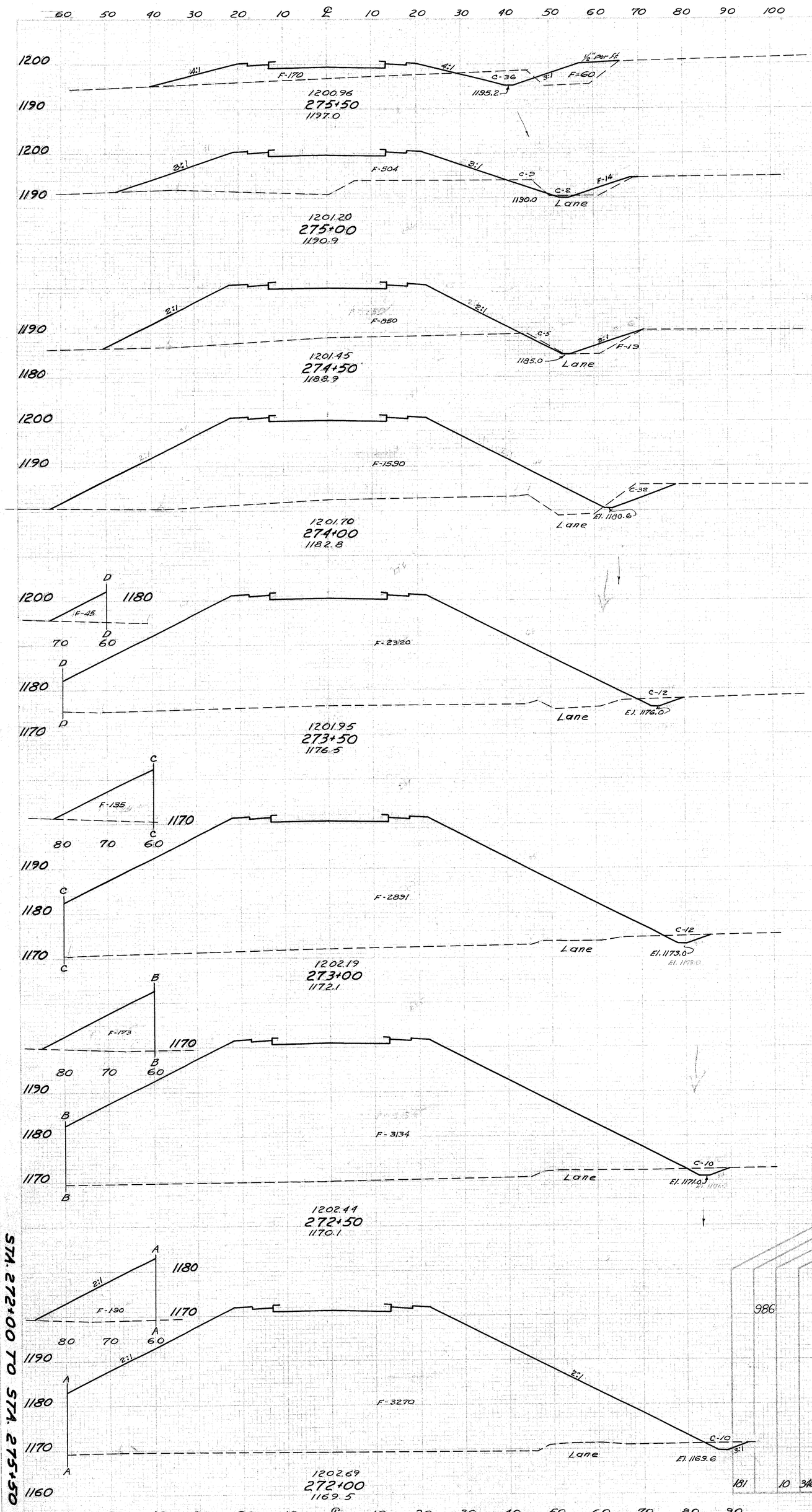


Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	1011			19	6471
183		10	3529		
	1031			20	6681
188		12	3687		
	1069			22	7150
197		12	4035		
	936			17	6328
	1083			20	7319
	147			3	991
193		10	3870		
	1053			19	6956
186		11	3643		

Excavation	71,528 Cu. Yds.
Embankment	62,198 Cu. Yds.
Seeding	35,875 Sq. Yds.

HOL-62-(21.08-21.51)

56
128



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	567			154	286
93		36	230		
	553			44	693
106		11	518		
	611			15	12184
114		5	869		
	694			34	22177
136		32	1590		
	792			41	36662
149		12	2365		
	878			22	49921
167		12	3026		
	947			20	58641
174		10	3307		
	986			19	62661
181		10	3460		

STA. 272+00 TO STA. 275+50

HOL-62-(21.08-21.51)

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
68		10	180		
	339			25	227
54		17	65		
	336			16	249
67		0	204		
	411			7	508
81		8	345		
	447			44	528
80		40	225		
	394			83	264
62		50	60		
	55			52	33
	336			110	76
59		69	22		
	375			156	94
76		100	79		
	392			181	116
	1412			222	713
65		95	46		
	489			208	116
111		130	79		

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
113		1345	14		
	581			2042	26
96		860	14		
	478			1269	26
76		510	14		
	386			713	13
63		260	0		
	322			298	0
53		62	0		
	253			57	76
38		0	82		
	294			0	254
68		0	192		
	364			0	414
	704			83	1011
63		0	255		
	386			8	517
76		9	303		
400				18	447

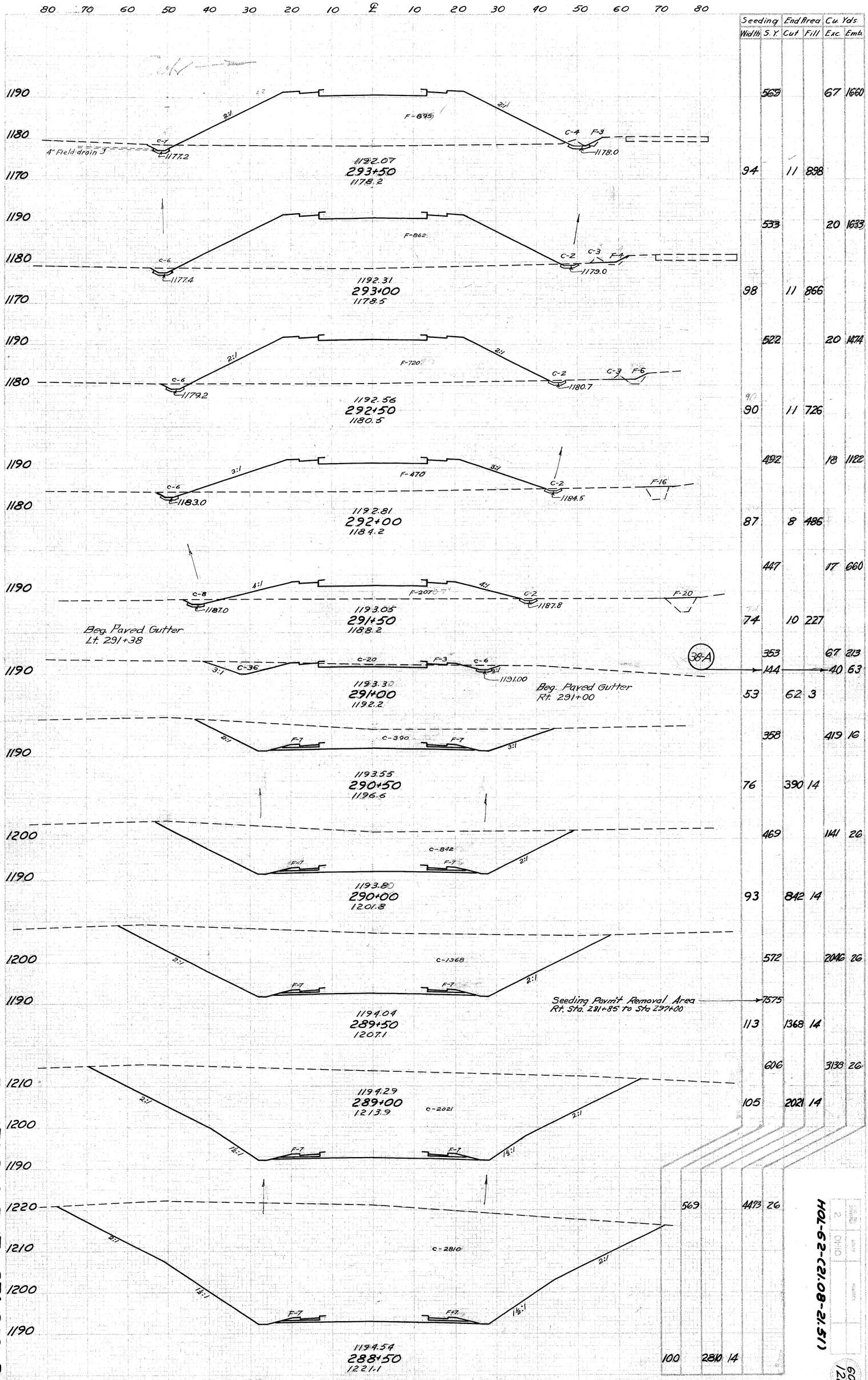
FED. ROAD PROJECT NO.	STATE	PROJECT
2	OHIO	

59
128

HOL-62-(21.08-21.51)

	Seeding	End Area	Cu. Yds.
	S.Y.	Cut / Fill	Exc. / Emb.
288+00	564	3751 / 14	6075 / 26
287+50	586	4265 / 14	7422 / 26
287+00	622	3625 / 14	7306 / 26
286+50	647	2908 / 14	6049 / 26
286+00	636	4754 / 26	
	103		
	108		
	116		
	117		
	112	3226 / 14	3732 / 26
	132	1805 / 14	2917 / 26
		678	631

STA. 285+50 TO STA. 288+00



Seeding Width	S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	569			67	1660
94		11	898		
	533			20	1633
98		11	866		
	522			20	1474
90		11	726		
	492			18	1122
87		8	486		
	447			17	660
74		10	227		
	353			67	213
	144			40	63
53		62	3		
	358			419	16
76		390	14		
	469			1141	26
93		842	14		
	572			2046	26
	7575				
113		1368	14		
	606			3138	26
105		2021	14		
	569			4473	26
100		2810	14		

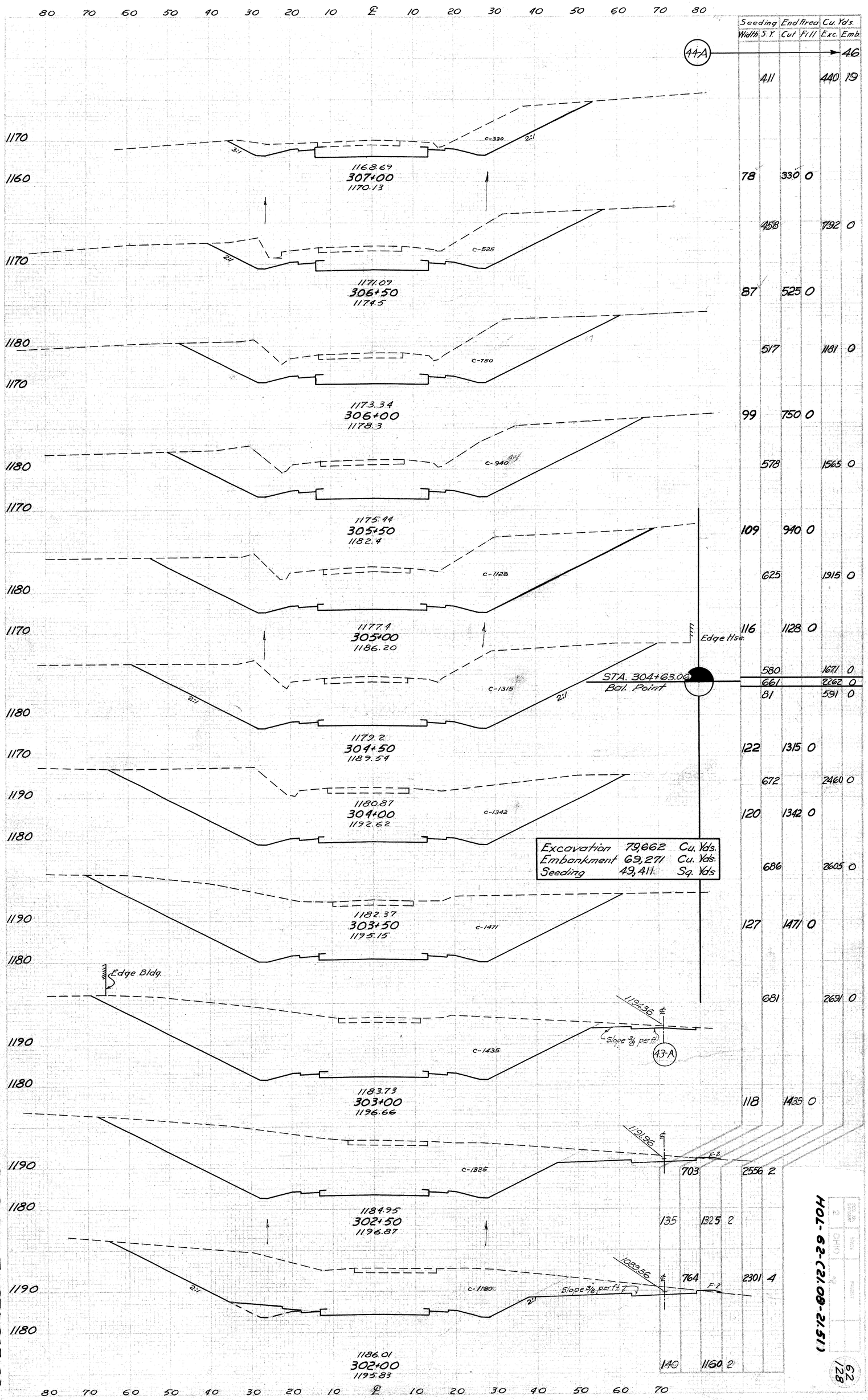
HOL-6-2(21.08-21.51)

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
OHIO	HOL-62-(21.08-21.51)	61	128

Seeding Width S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb
439			465	56
60	147	40		
361			267	120
70	141	90		
411			339	194
78	225	120		
425			306	224
75	105	122		
431			110	370
80	14	278		
444	26	769		
80	14	553		
606	172	1193		
138	172	735		
692	216	1509		
111	61	895		

Seeding Width S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb
778			2317	0
140	1342	0		
742			1875	0
127	683	0		
603			954	0
90	347	0		
500			599	0
90	300	0		
569			639	0
115	390	0		
669			680	0
126	344	0		
58	→	51	2	
661			846	5
112	570	5		
583			856	24
98	355	21		

STA 294+00 TO STA 304+50



STA. 302+00 TO STA. 307+00

HOL-62-(21.08-21.51)

FA. RD. DIVISION	STATE	PROJECT
2	OHIO	

HOL-62-(21.08-21.51)

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

1140 — 2:1 — F-425 — 4:1 — C-5 — 1137.7
1146.0
311+00
1139.39
1130

1140 — 2:1 — F-410 — C-7 — 1141.2
1148.92
310+50
1142.33

1150 — 3:1 — F-360 — C-6 — 1146.3
1140 — 1151.84
310+00
1145.71

1150 — 4:1 — F-277 — C-11 — 1151.0
1154.76
309+50
1149.92

1150 — F-178 — C-19 — 3:1
1157.68
309+00
1154.09

1160 — F-110 — C-15
1150 — 1159.72
308+65
1156.96

1160 — F-88 — C-2 — 3:1
1150 — 1160.31
308+55
1157.74

1160 — F-65 — C-3 — 1158.7
1150 — 1161.41
308+36
1159.18

1160 — F-62 — C-55 — 2:1
1162.09
308+25
1160.02

Edge Hse.

1160 — C-20 — 4:1 — F-49 — C-52
1158.0
1163.95
308+00
1161.9

Paved Gutter
See Sheet No. 19

C-7 — F-14 — C-31 — F-7 — C-107 — 2:1
1160 — 1166.14
307+50
1165.8

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

Seeding Width	S.Y.	Cut	Fill	End Area Exc.	Cu. Yds. Emb.
	469			9	764
87		5	425		
	472			11	773
83		7	410		
	439			12	713
75		6	360		
	419			16	590
76		11	277		
	400			28	421
68		19	178		
	253			22	187
62		15	110		
62				3	37
49		2	88		
869				308	637
106				2	54
51		3	65		
69				12	26
62		55	62		
185				59	51
71		72	49		
392				201	65
70		145	2:1		

45-A → 46-A

1170 60 50 40 30 20 10 ℄ 10 20 30 40

1160.7
1160
6"I-4
1150
1157.5
15 x 70' I-1 Pipe
1156.75
1154.7
1156.2
308 +20 40 60 80 309 +20 +40 +60 +80 310 +20 +40

1120 — 2:1 — C-498 — 2:1
1119.72
315+50
1121.8
1110

1120 — 2:1 — C-535
1122.64
315+00
1121.24

1120 — 3:1 — C-403
1125.56
314+50
1126.19

1120 — 3:1 — F-4 — C-5 — C-20 — C-120 — 2:1
1128.48
314+00
1127.93

1130 — 4:1 — F-55 — C-38 — 3:1
1131.4
313+50
1129.75
1120

1130 — 3:1 — F-125 — C-13 — 1131.0
1134.32
313+00
1131.44

1130 — 2:1 — F-235 — C-6 — 1133.0
1137.24
312+50
1133.14

1130 — F-331 — C-6 — 1134.5
1140.16
312+00
1134.83

1140 — 2:1 — F-400 — 4:1 — C-5 — 1135.7
1130 — 1143.08
311+50
1136.9

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

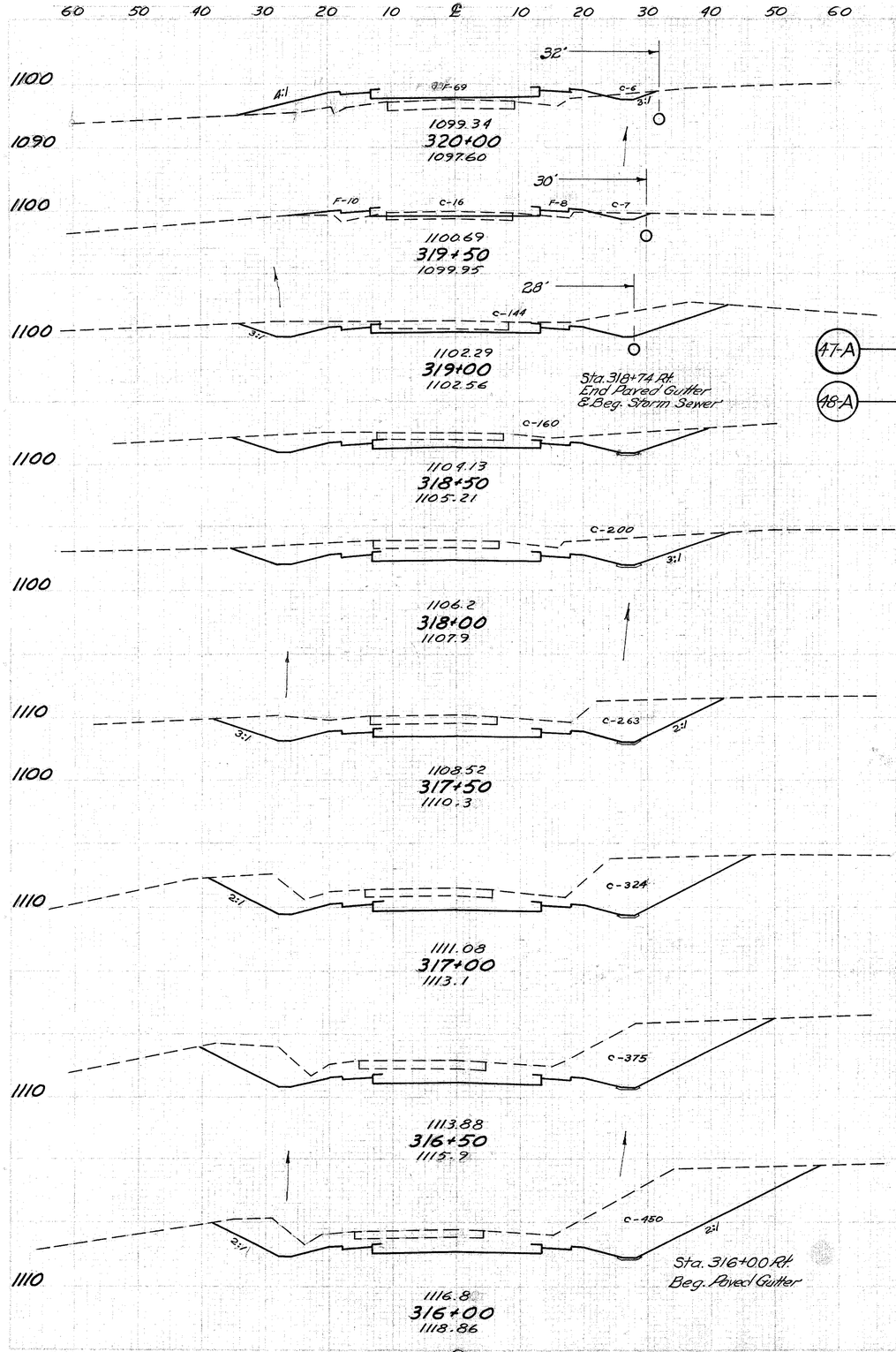
Seeding Width	S.Y.	Cut	Fill	End Area Exc.	Cu. Yds. Emb.
	478			878	0
88		498	0		
	508			864	0
95		535	0		
	500			869	0
85		403	0		
	408			507	4
62		145	4		
	339			169	55
60		38	55		
	367			47	167
72		13	125		
36					
	403			18	333
73		6	235		
	419			11	524
78		6	331		
	444			10	677
82		5	400		

STA. 307+50 TO STA. 315+50

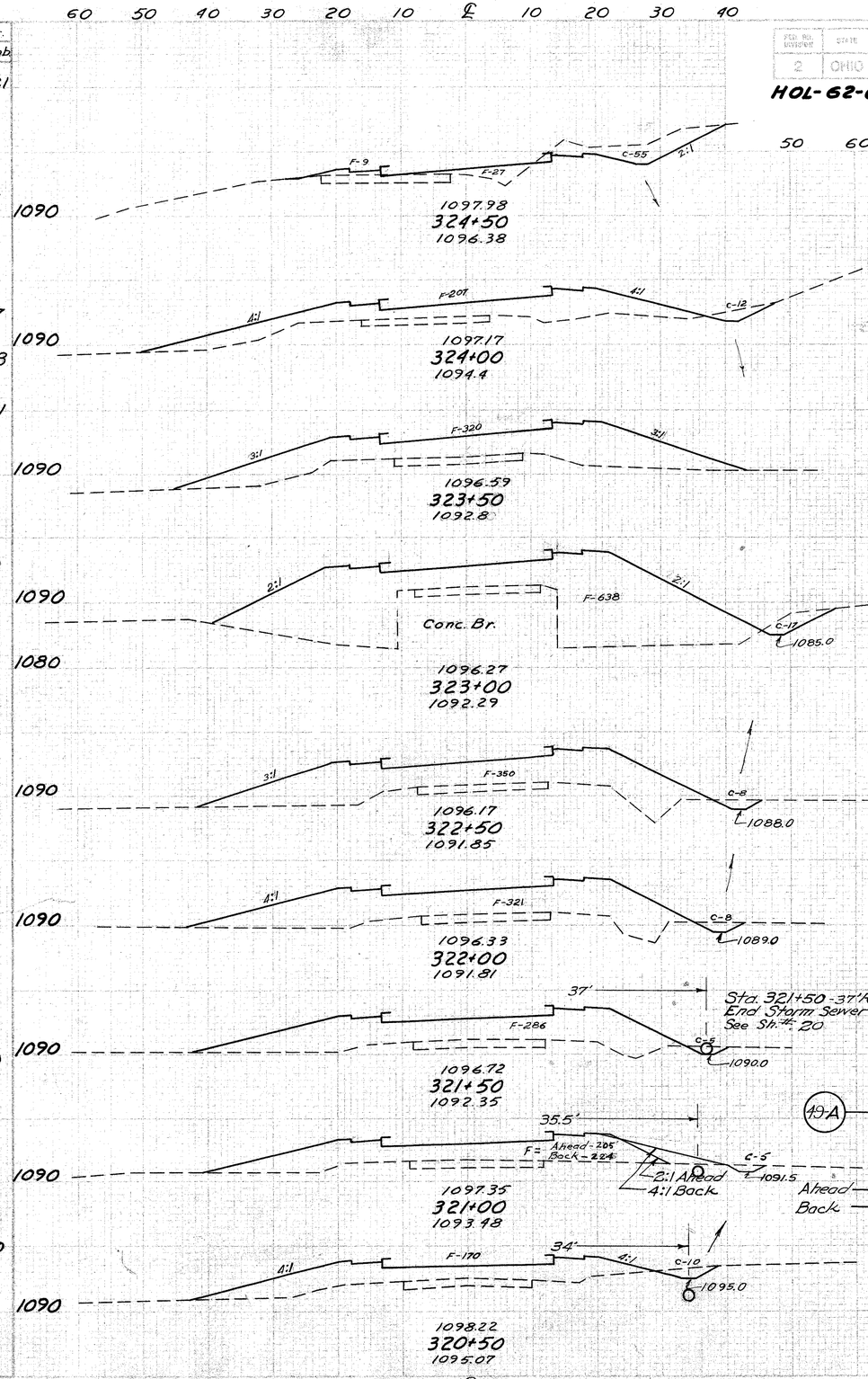
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

64
128

HOL-62-(21.08-21.51)



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	328			15	221
51		6	69		
	256			27	81
41		23	18		
	286			155	17
47-A →					13
62		144	0		
48-A →				20	51
	342			281	0
61		160	0		
	347			333	0
64		200	0		
	364			429	0
67		263	0		
	389			544	0
73		324	0		
	422			647	0
79		375	0		
	456			764	0
85		450	0		



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
54		55	36		
	386			62	225
85		12	207		
	447			11	488
76		0	320		
	453			16	887
87		17	638		
	450			23	915
75		8	350		
	414			15	621
74		8	321		
	400			12	562
70		5	286		
19-A →					117
	356			5	455
Ahead →	58	→ 0	205		
Back →	73	→ 5	224		
	389			14	365
67		10	170		

STA. 316+00 TO STA. 324+50

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	411			801	0
73		430	0		
	417			856	0
77		495	0		
	447			940	0
84		520	0		
	478			982	13
88		541	14		
	489			964	20
88		500	8		
	475			843	23
83		410	17		
	453			676	32
80		320	18		
	400			449	24
64		165	8		
	328			204	41

1110
C-430 2:1 2:1
1109.97
328+50
1114.91

1110
C-495 3:1
1108.62
328+00
1113.05

1110
C-9 2:1
C-520
1100
1107.11
327+50
1110.55

1100
F-14 2:1
C-541 2:1
1105.45
327+00
1107.85

1100
F-8 3:1
C-500
1103.63
326+50
1107.9

1100
F-17
C-410
1101.86
326+00
1105.3

1100
F-18
C-320
1100.32
325+50
1101.90

1090
F-5 3:1
C-20
F-3
C-145 2:1
1099.03
325+00
1097.2

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

Seeding Width	S.Y.	End Area Cut	Fill	En. Yds. Exc.	Emb.
	244			5	100
	239			28	33
	281			120	10
54		102	3		
	333			289	3
66		210	0		
	375			454	0
69		280	0		
	403			676	0
76		450	0		
	433			903	0
80		525	0		
	458			972	0
85		525	0		
	436			889	0
75		435	0		

1110
C-2 F-18 F-10
1112.5
1115.19
333+00
1113.7

54-A → 6
53-A → 7

1110
C-6 3:1 F-6 C-12 F-2 C-10 3:1
1115.23
332+50
1114.36

52-A → 9

1110
C-77 F-3 C-26
1115.12
332+00
1115.38

1110
C-210 3:1
1114.85
331+50
1116.36

1110
2:1 C-280 3:1
1114.42
331+00
1117.12

51-A → 53 17
50-A → 172 15

1110
C-450 2:1
1113.84
330+50
1117.75

1110
C-525
1113.11
330+00
1117.69

1110
C-525
1112.22
329+50
1116.87

EQUATION
STA. 329+50 AHEAD
STA. 329+49 BACK

1110
2:1 C-435 2:1
1111.18
329+00
1116.07

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

STA. 325+00 TO STA. 333+00

HOL-62-(21.08-21.51)

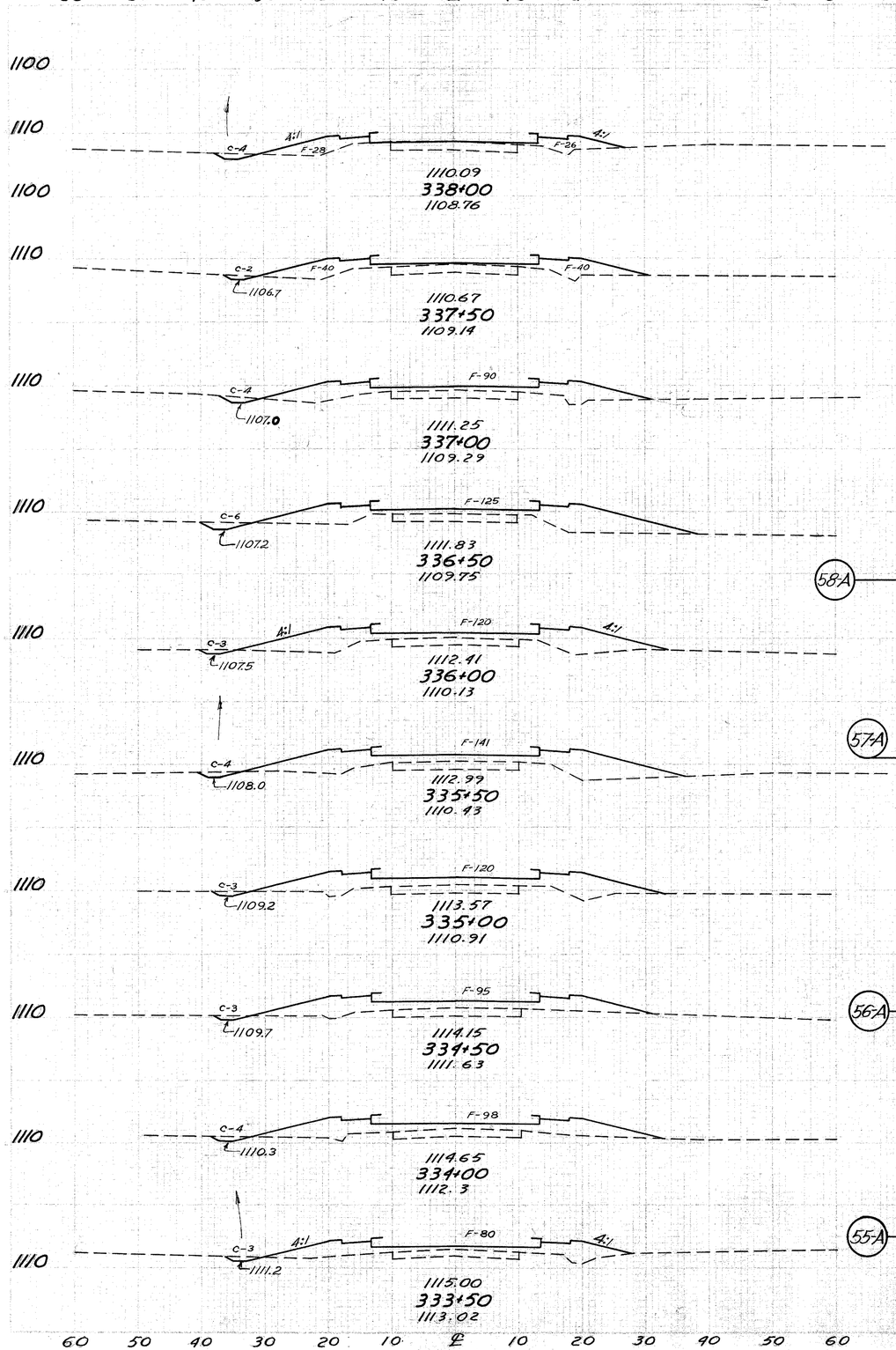
Seeding Width	End Area S.Y.	Cut	Fill	Cu. Yds. Exc.	Emb.
	292			23	87
50	4	54			
	283			6	124
52	2	80			
	314			6	157
61	4	90			
	350			9	199
65	6	125			
	344			8	227
59	3	120			
	344			6	242
65	4	141			
	336			6	242
56	3	120			
	306			6	199
54	3	95			
	308			6	179
57	4	98			
	294			6	165
49	3	80			

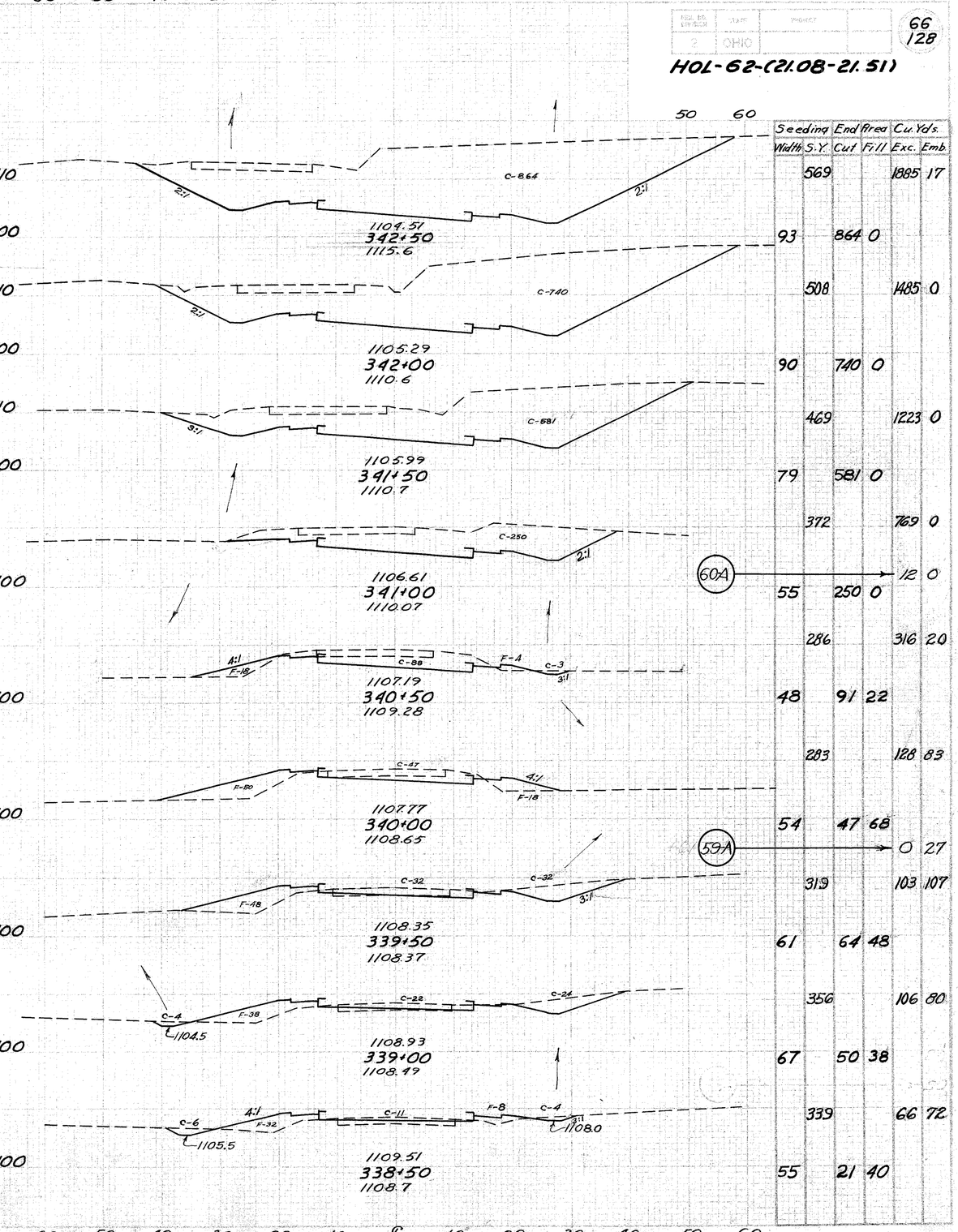
58-A → 46

57-A → 27

56-A → 43

55-A → 39



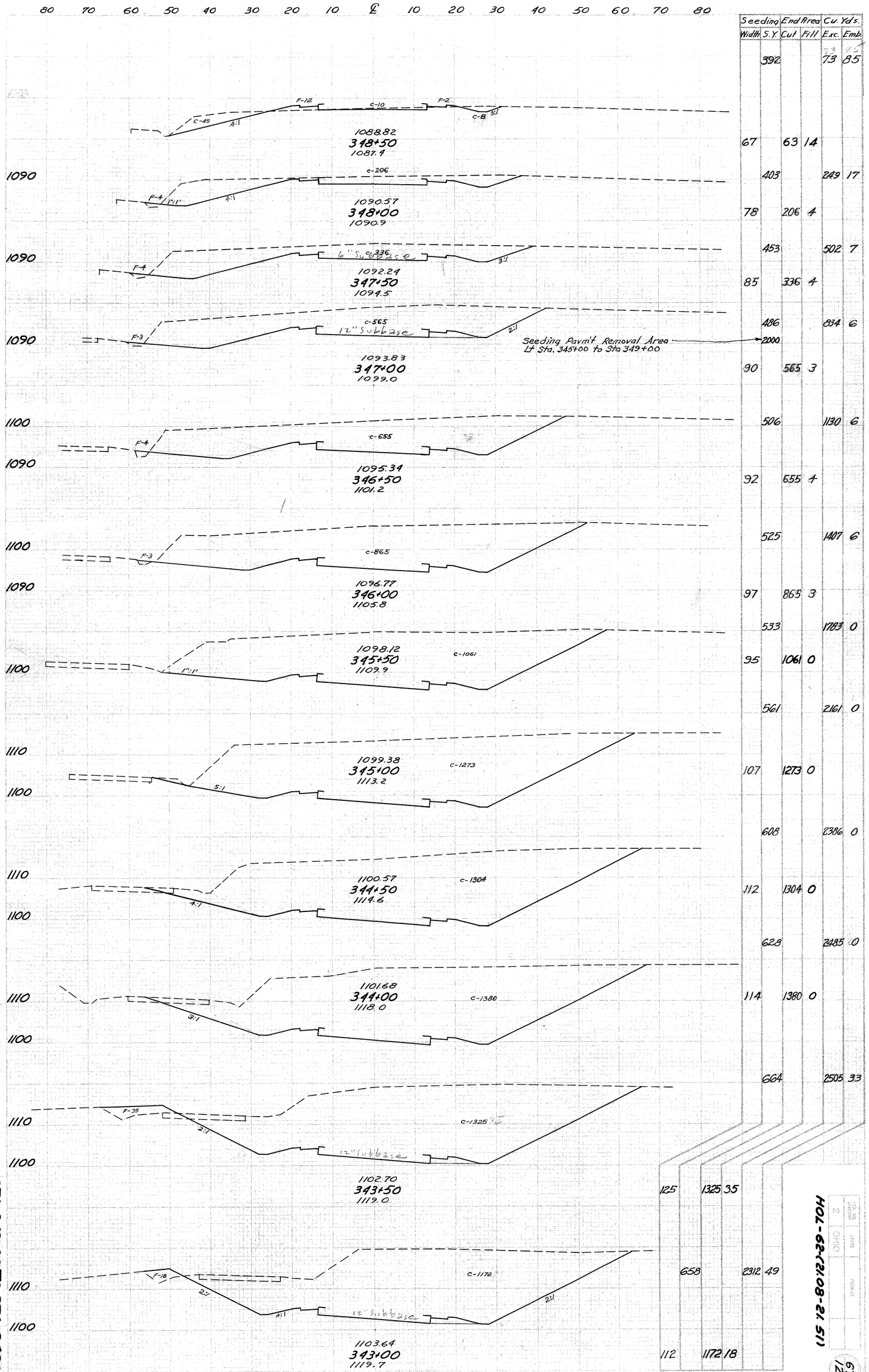


Seeding Width	End Area S.Y.	Cut	Fill	Cu. Yds. Exc.	Emb.
	569			1885	17
93		864	0		
	508			1485	0
90		740	0		
	469			1223	0
79		581	0		
	372			769	0
55		250	0	12	0
	286			316	20
48		91	22		
	283			128	83
54		47	68		
				0	27
	319			103	107
61		64	48		
	350			106	80
67		50	38		
	339			66	72
55		21	40		

60-A →

59-A →

STA. 333+50 TO STA. 342+50



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	392			73	85
67		63	14		
	403			249	17
78		206	4		
	453			502	7
85		336	4		
	486			834	6
	2000				
90		565	3		
	506			1130	6
92		655	4		
	525			1407	6
97		865	3		
	533			1783	0
95		1061	0		
	561			2161	0
107		1273	0		
	608			2386	0
112		1304	0		
	628			2485	0
114		1380	0		
	664			2505	33
125		1325	35		
	658			2312	49
112		1172	18		

STA. 343+00 TO STA. 348+50

HOL-62(21.08)-21.511

HOL-62-(21.08-21.51)

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	344			212	14
67		126	12		
	100			5	27
	383			268	33
71		163	24		
	419			179	99
80		30	83		
	519			44	501
107		18	458		
	597			45	984
108		31	605		
	575			56	1085
99		30	567		
	503			38	942
82		11	450		
	444			19	669
78		10	272		
	422			24	324
74		16	78		
				10	

62-A → 100

64-A → 98 | 322 | | 156 | 7 | 76 | 12

63-A → 319 | | 216 | 1 | 35

61-A → 422 | | 0 | 782

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
72		0	428		
	397			0	776
71		0	410		
	422			0	782
81		0	435		
	453			6	648
82		6	265		
	414			35	349
67		32	112		
	331			62	148
52		35	48		
	314			89	52
61		61	8		
	322			156	7
55		108	0		
	319			216	1
60		125	1		
	325			239	3
57		133	2		
	317			219	5
57		103	3		

End Paved Gutter & Beg. Riprap
Lt. 358+50
See Sheet No. 21

End Paved Gutter
Rt. 351+20

Beg. Paved Gutter
Rt. 350+00

Beg. Paved Gutter
Lt. 356+50

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	73			32	6
53		62	15		
	410			193	51
70		112	31		
	356			214	35
58		119	7		
	347			261	6
67		163	0		
	375			279	2
68		138	2		
	353			196	11
59		74	10		14
	356			75	58
40		7	53		
	294			17	188
66		11	150		
	386			15	403
73		5	285		
	408			8	681
74		4	450		
	406			4	813

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	403			83	196
77		50	125		
	419			94	211
74		52	103		
	397			94	172
69		49	83		
	392			95	128
72		54	55		
				4	53
	394			81	100
70		34	53		
	378			82	80
66		55	33		
	282			97	27
64		80	4		
	72			34	1
54		87	3		
					8
				94	26
57	142	80	13	87	8

STA. 359+00 TO STA. 367+00

FED. ROAD SYSTEM | STATE | PROJECT
2 | OHIO |

69
128

HOL-62-(21.08-21.51)

End Dumped Rock Lt. Sta. 359+50 See Sheet No. 21

Beg Dumped Rock & End Riprap Lt. Sta. 359+00 See Sheet No. 21

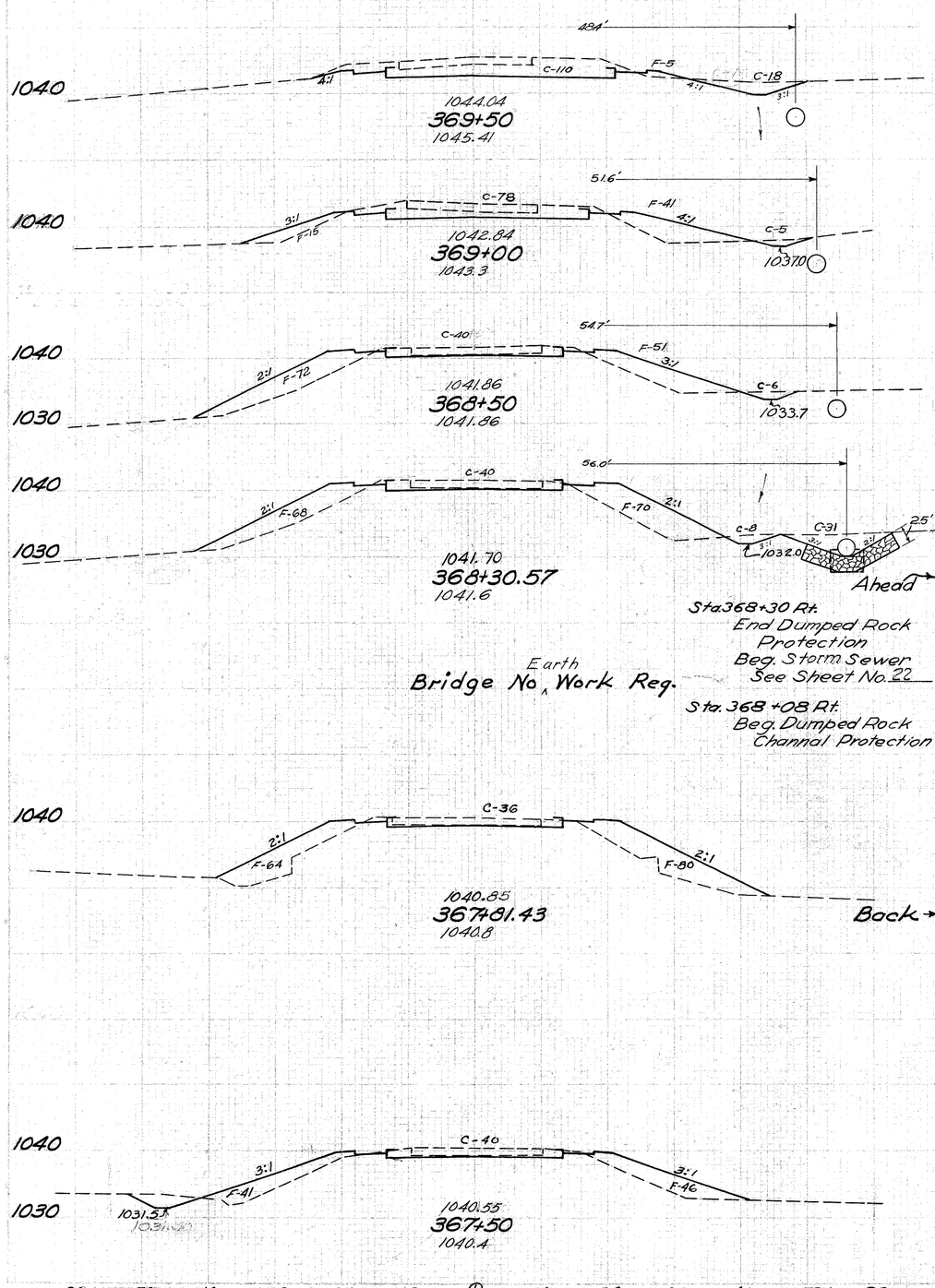
65-A

68-A

67-A

66A

60 50 40 30 20 10 ℄ 10 20 30 40 50 60



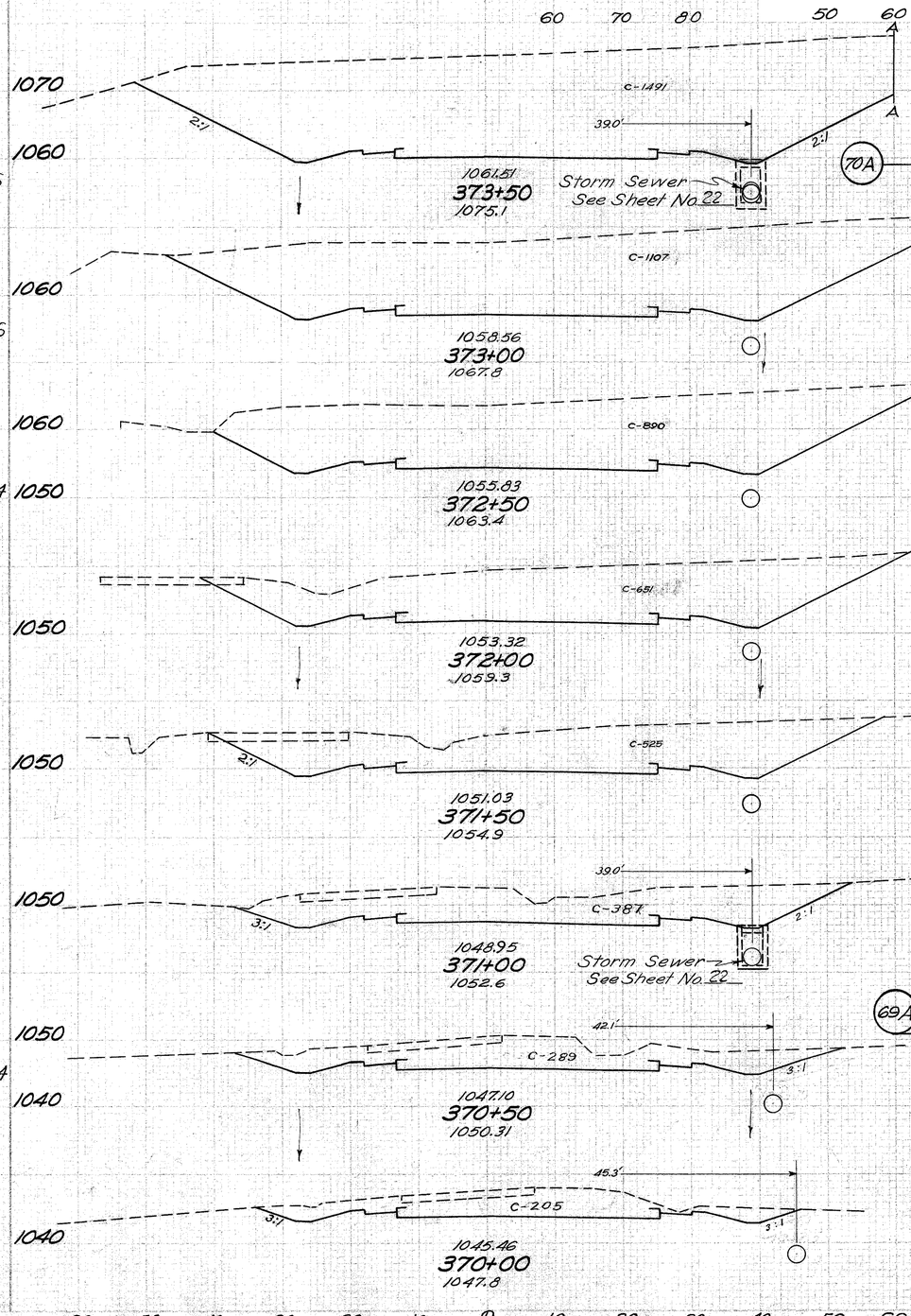
Sta 368+30 Rt.
End Dumped Rock Protection
Beg. Storm Sewer
See Sheet No. 22

Earth
Bridge No. Work Req.

Sta. 368+08 Rt.
Beg. Dumped Rock
Channal Protection

Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	317			308	5
58		128	5		
	347			195	56
67		83	56		
	403			119	166
78		46	123		
	166			45	94
76		79	139		
	244			44	134
72		36	144		
	68			40	87

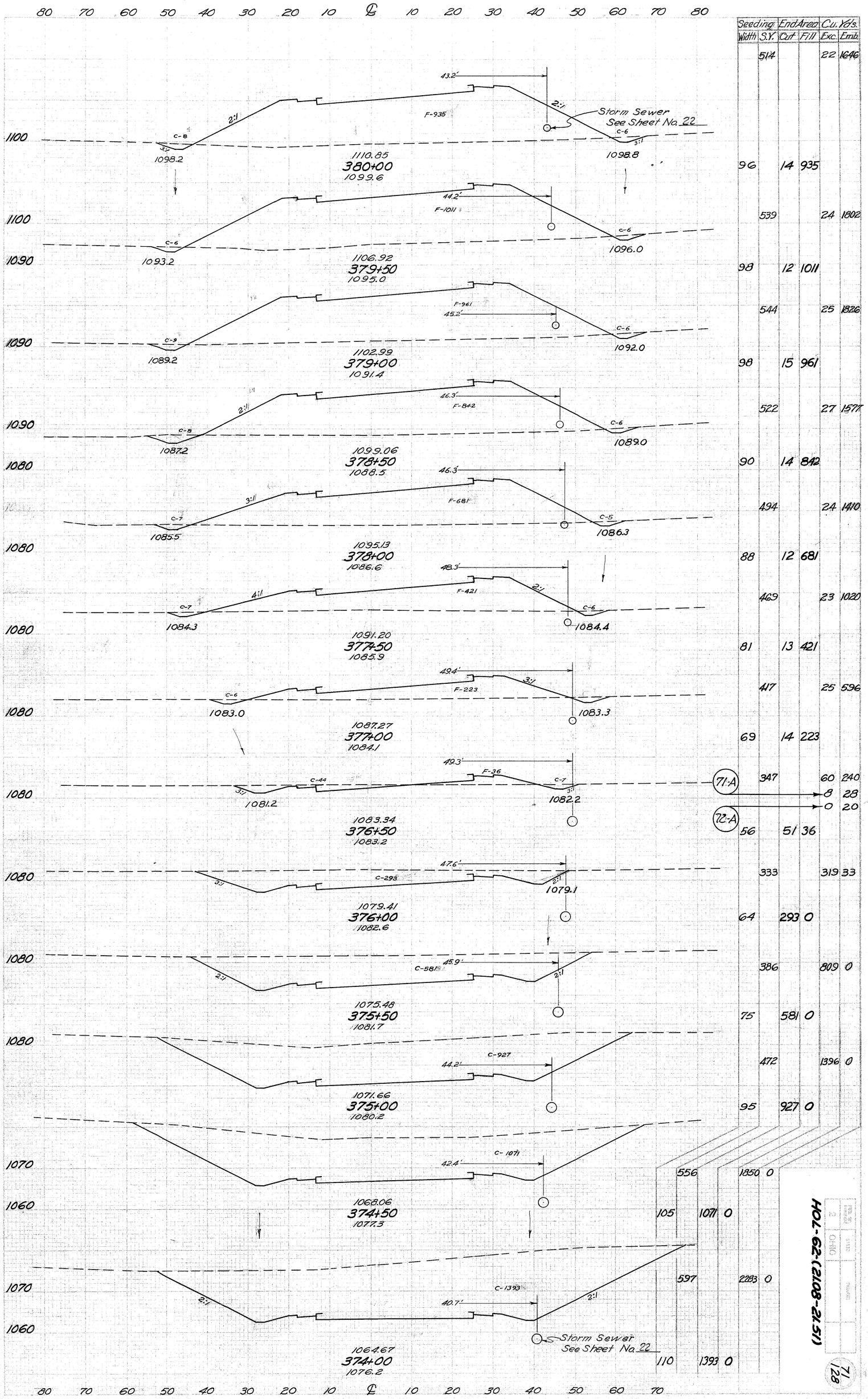
60 50 40 30 20 10 ℄ 10 20 30 40 50 60



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	617			2754	0
112		1581	0		
	697			1566	36
97		1107	0		
	581			2489	0
84		890	0		
	503			1849	0
82		651	0		
	461			1427	0
75		525	0		
	436			1089	0
69		387	0		
	400			844	0
71		289	0		
	389			626	0
56		205	0		
	353			457	0
71		24			

60 50 40 30 20 10 ℄ 10 20 30 40 50 60

STA. 367+50 TO STA. 373+50

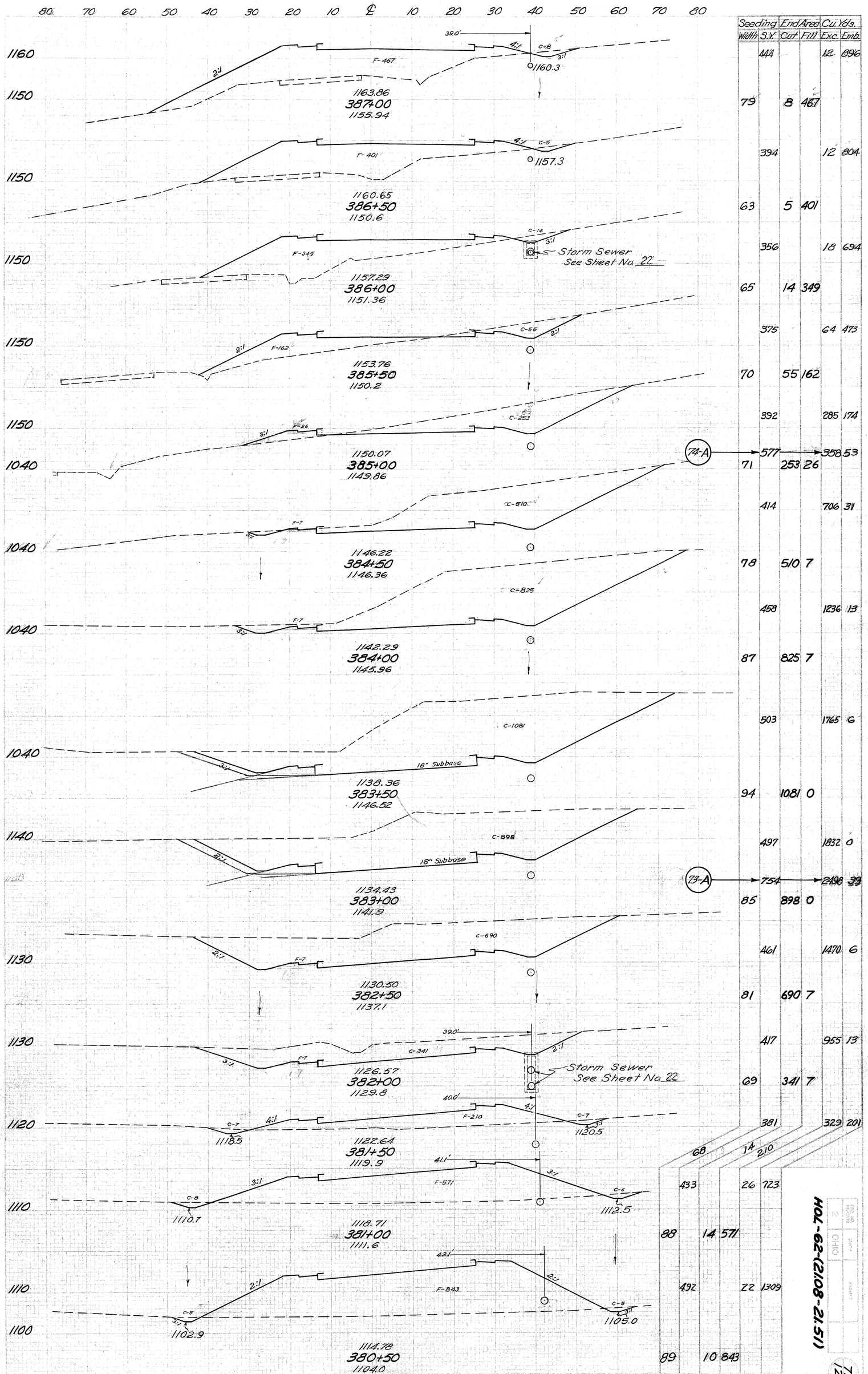


Seeding Width	S.Y.	End Areas Cut	Fill	Cu. Yds. Exc.	Emb.
	514			22	1646
96		14	935		
	539			24	1802
98		12	1011		
	544			25	1826
98		15	961		
	522			27	1577
90		14	842		
	494			24	1410
88		12	681		
	469			23	1020
81		13	421		
	417			25	596
69		14	223		
	347			60	240
				8	28
				0	20
56		51	36		
	333			319	33
64		293	0		
	386			809	0
75		581	0		
	472			1396	0
95		927	0		
	556			1850	0
105		1071	0		
	597			2283	0
110		1393	0		

HOL-62-(2108-21.51)

FED. NO.	STATE
2	OHIO
PROJECT	

71
128



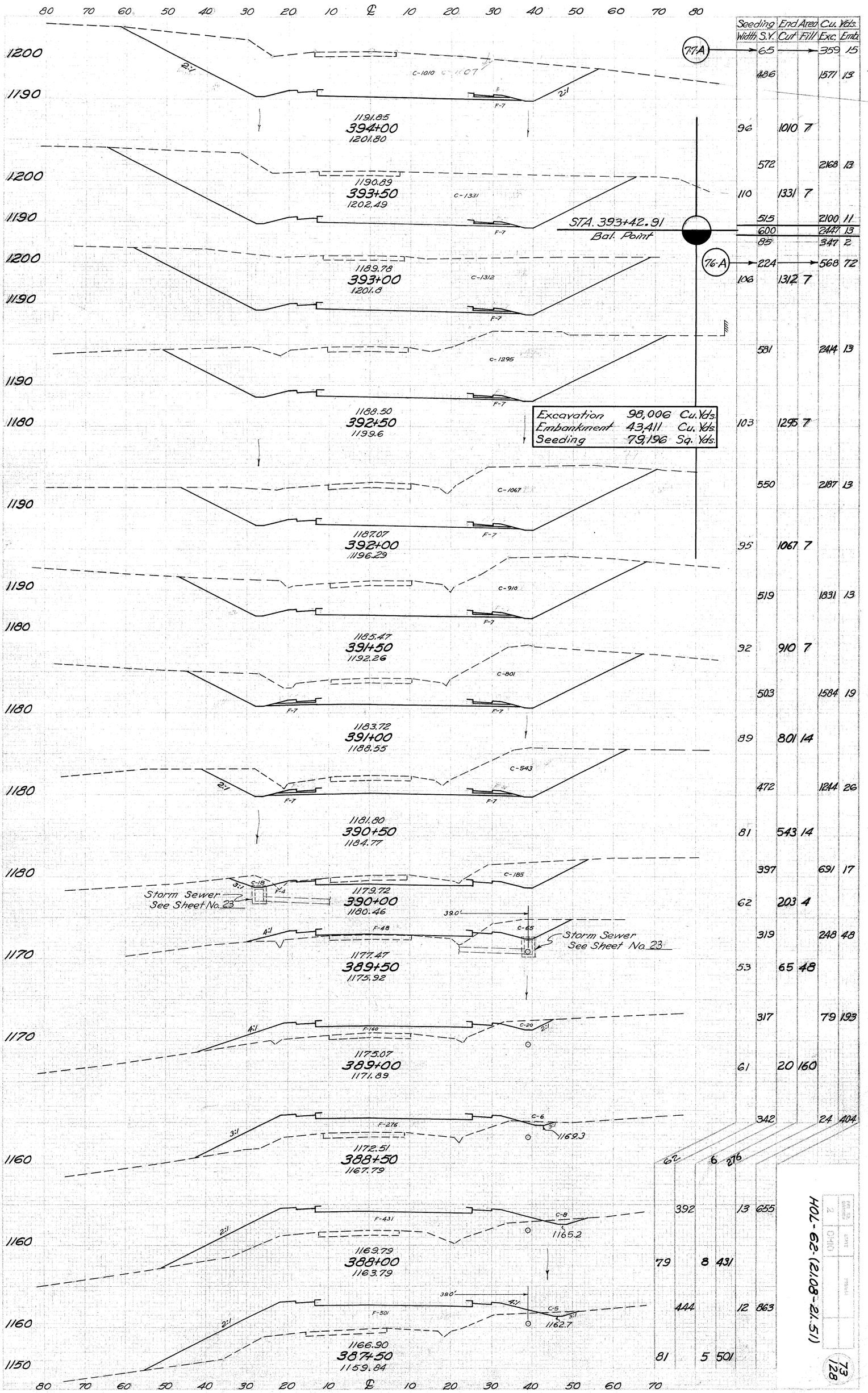
Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	444			12	896
79		8	467		
	394			12	804
63		5	401		
	356			18	694
65		14	349		
	375			64	473
70		55	162		
	392			285	174
71		253	26		
	414			706	31
78		510	7		
	458			1236	13
87		825	7		
	503			1765	6
94		1081	0		
	497			1832	0
85		898	0		
	461			1470	6
81		690	7		
	417			955	13
69		341	7		
	381			329	201
68		14	210		
	433			26	723
88		14	571		
	492			22	1309
89		10	843		

74-A → 577 → 358 53

73-A → 754 → 2498 39

HOL-62-(2108-21.51)

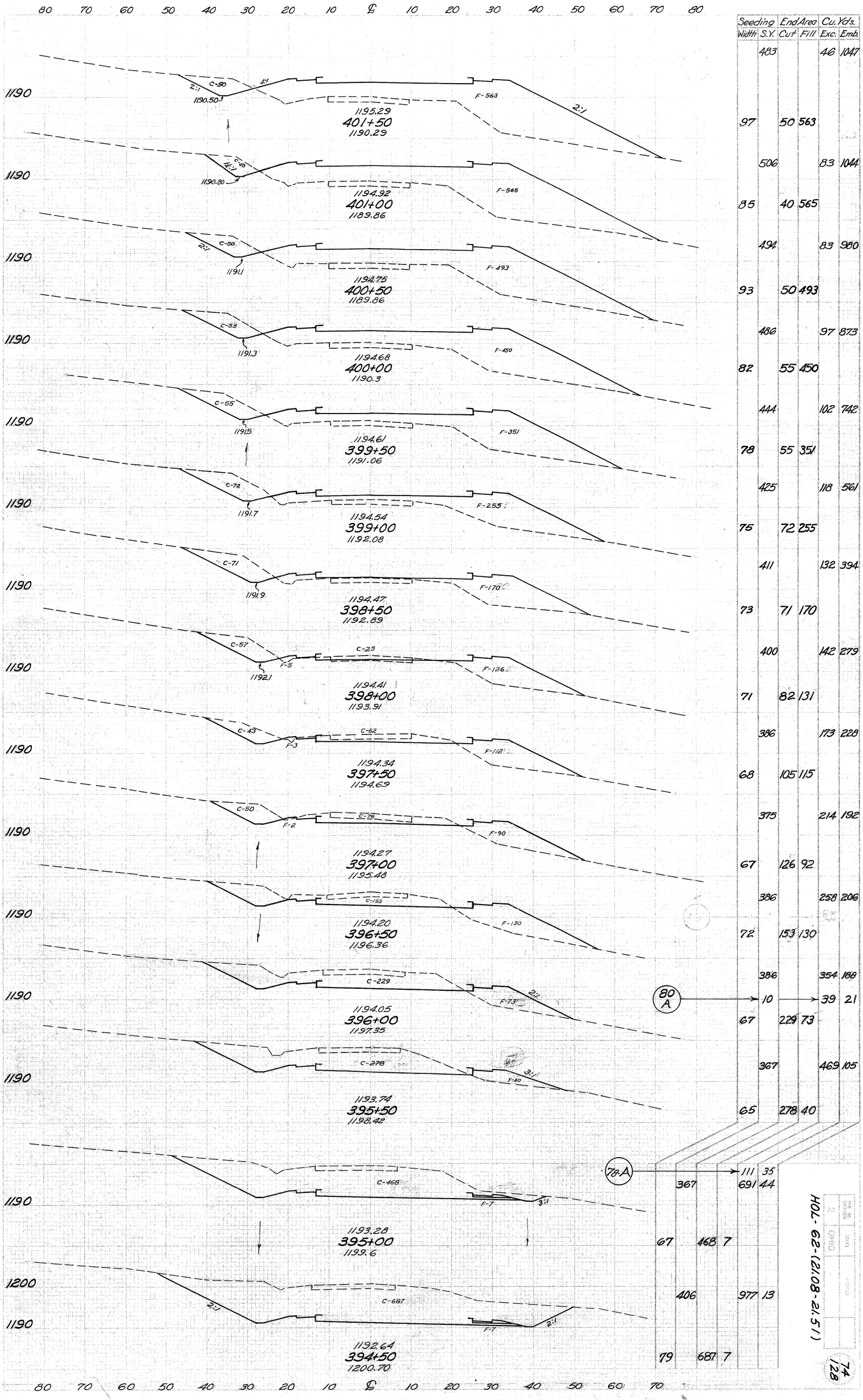
72
128



Excavation	98,006	Cu. Yds.
Embankment	43,411	Cu. Yds.
Seeding	79,196	Sq. Yds.

Seeding Width	S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
77-A	65			359	15
	486			1571	13
96		1010	7		
	572			2168	13
110		1331	7		
	515			2100	11
	600			2447	13
	85			347	2
76-A	224			568	72
106		1312	7		
	581			2414	13
103		1295	7		
	550			2187	13
95		1067	7		
	519			1831	13
92		910	7		
	503			1584	19
89		801	14		
	472			1244	26
81		543	14		
	397			691	17
62		203	4		
	319			248	48
53		65	48		
	317			79	193
61		20	160		
	342			24	404
62		6	276		
	392			13	655
79		8	431		
	444			12	863
81		5	501		

H0L-62-(21.08-21.51)



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
	483			46	1047
97		50	563		
	506			83	1044
85		40	565		
	494			83	980
93		50	493		
	486			97	873
82		55	450		
	444			102	742
78		55	351		
	425			118	561
75		72	255		
	411			132	394
73		71	170		
	400			142	279
71		82	131		
	386			173	228
68		105	115		
	375			214	192
67		126	92		
	386			258	206
72		153	130		
	386			354	189
80 A →	10	→		39	21
67		229	73		
	367			469	105
65		278	40		
78 A →	111			35	
	691			44	
67	468	7			
	406			977	13
79	687	7			

HOL-62-(21.08-21.51)

Seeding Width	End Area S.Y.	C.U. Yds. Cut	Fill	Exc.	Emb.
	0	0	0		
84	233	177	40	164	37
79	453	124	35	279	69
79	439	114	62	220	90
66	403	24	90	128	141
61	353	0	189	22	258
66	353	0	289	0	445
77	397	0	421	0	657
77	428	0	568	0	916

Excavation 11,100 Cu.Yd.
Embankment 9653 Cu.Yd.
Seeding 11,029 Sq.Yd.

HOL-62-(21.08-21.51)

75
128

END OF EARTHWORK
STA. 406+00

406+00
1207.71

405+50
1205.64
1205.61

405+00
1203.63
1203.55

404+50
1201.83
1201.26

404+00
1200.23
1198.04

403+50
1198.83
1196.67

403+00
1197.64
1194.78

402+50
1196.65
1192.70

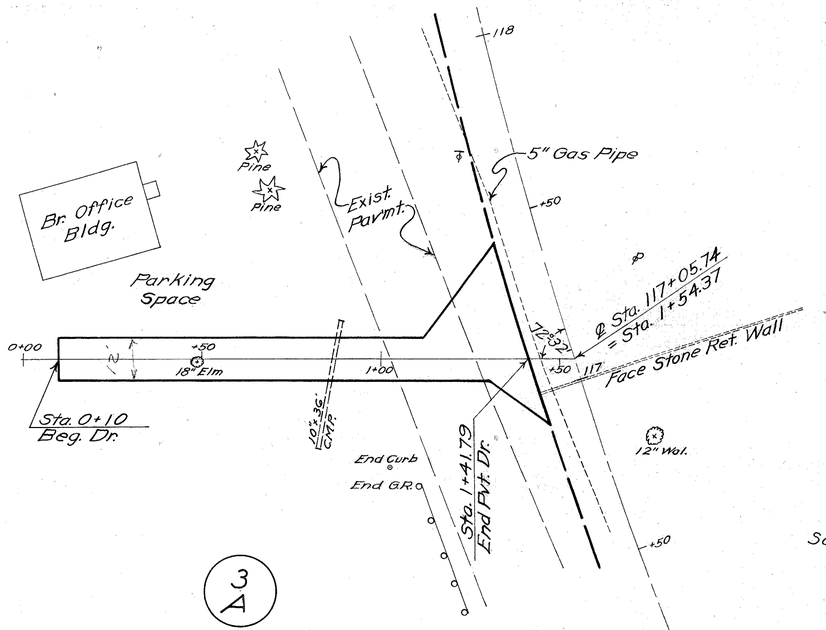
402+00
1195.87
1191.02

STA. 402+00 TO STA. 406+00

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

76
128

HOL-62-(21.08-21.51)

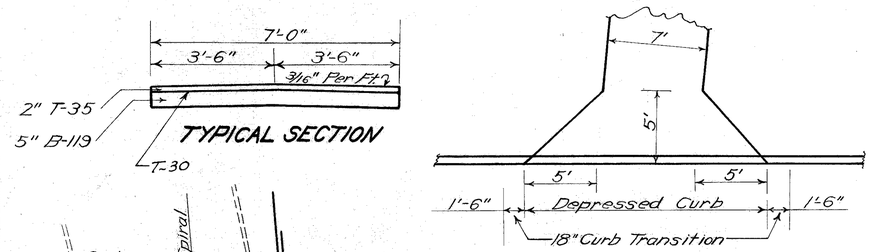


PLAN
Scale: 1"=20'

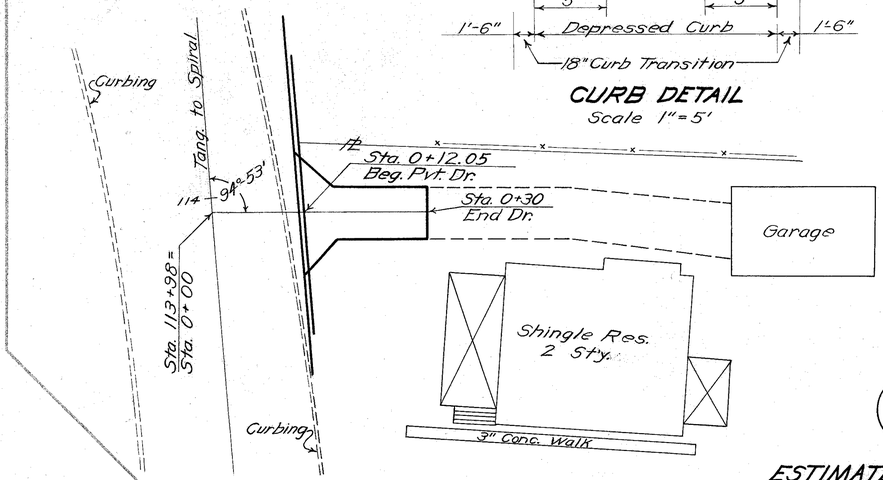
3
A

ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course (2")	13 Cu. Yds.
T-30	Bituminous Prime Coat	79 Gals.
B-119	Aggregate Base Course (5")	32 Cu. Yds.
E-12	Pipe Removed (15"ϕ Under)	36 Lin. Ft.



CURB DETAIL
Scale 1" = 5'

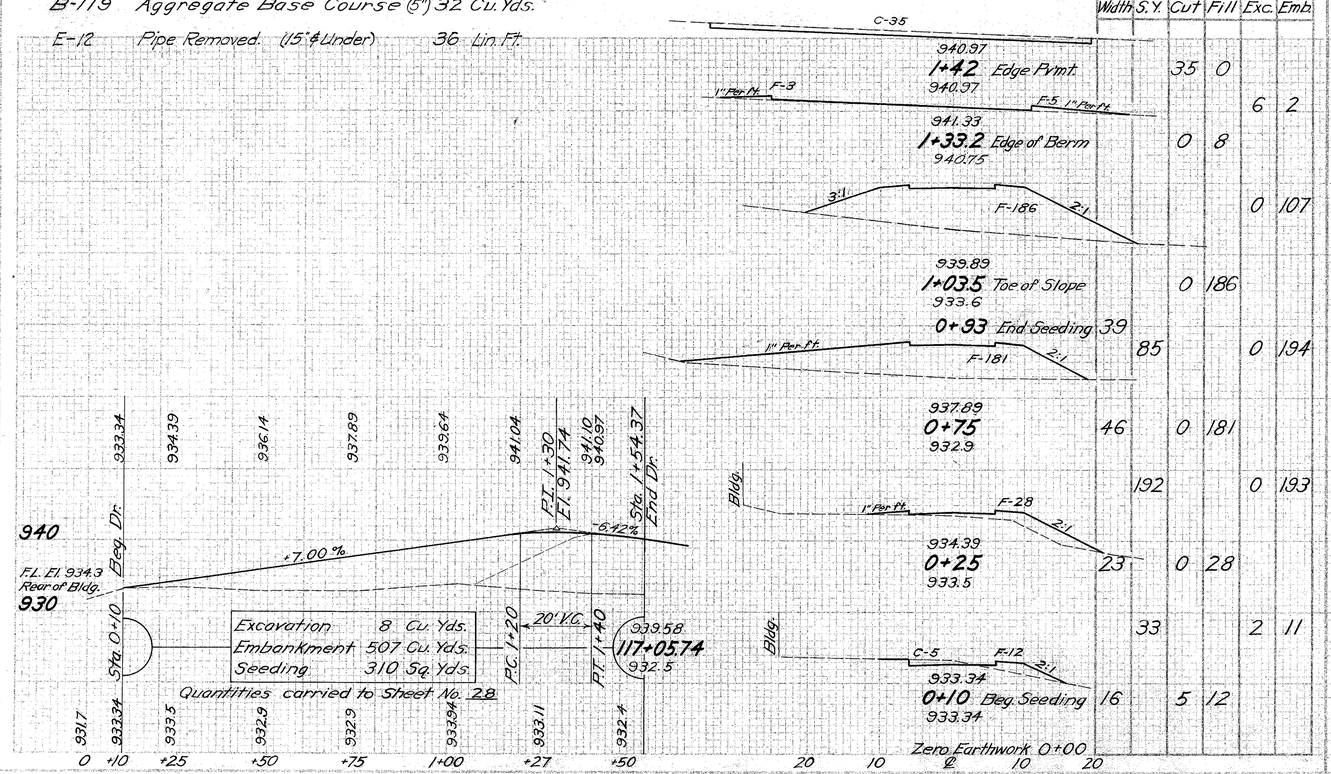


PLAN
Scale: 1"=10'

1
A

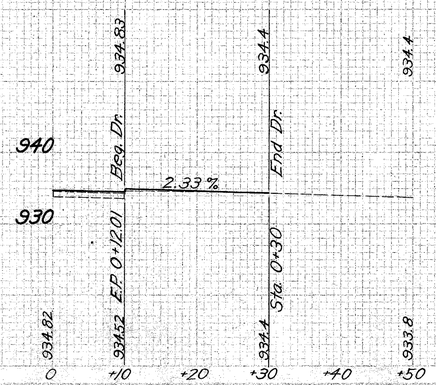
ESTIMATED QUANTITIES

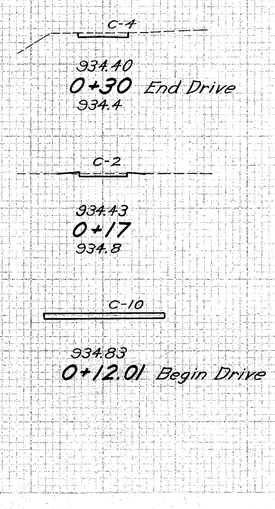
T-35	Asph. Conc. Surf. Course (2")	1 Cu. Yds.
T-30	Bituminous Prime Coat	6 Gals.
B-119	Aggregate Base Course (5")	2 Cu. Yds.



Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
		35	0		
				6	2
		0	8		
				0	107
		0	186		
39	85			0	194
		0	181		
	192			0	193
	23	0	28		
	33			2	11
	16	5	12		

TOTAL EXCAVATION = 2 CU. YDS.
Quantity carried to Sheet No. 28





Excavation Area	C.Y.	Embankment Area	C.Y.
4		0	
	1		0
2		0	
	1		0
10		0	

1
A

3
A

TYPE 2 PVT. DR. STA. 117+05.74 LT. ℄ TYPE 2 MODIFIED PVT. DR. STA. 113+98 RT.

FED. ROAD DIVISION	STATE	PROJECT		
2	OHIO			

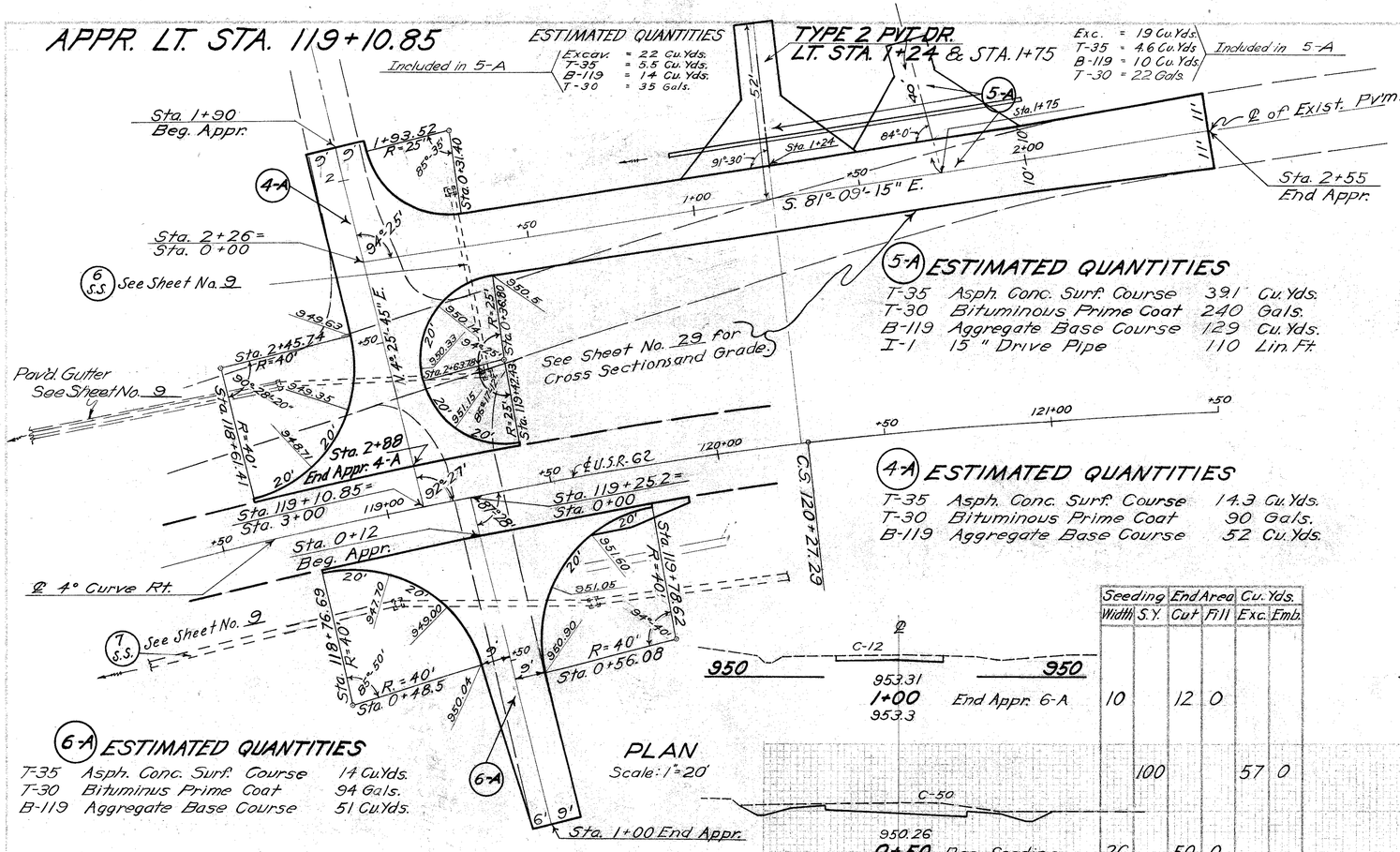
77
128

HOL-62-(21.08-21.51)

APPR. LT. STA. 119+10.85

ESTIMATED QUANTITIES
Included in 5-A
Excav. = 2.2 Cu.Yds.
T-35 = 5.5 Cu.Yds.
B-119 = 14 Cu.Yds.
T-30 = 35 Gals.

TYPE 2 PVT. DR.
LT. STA. 1+24 & STA. 1+75
Exc. = 1.9 Cu.Yds.
T-35 = 4.6 Cu.Yds.
B-119 = 1.0 Cu.Yds.
T-30 = 22 Gals.
Included in 5-A



5-A ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course	39.1	Cu. Yds.
T-30	Bituminous Prime Coat	240	Gals.
B-119	Aggregate Base Course	129	Cu. Yds.
I-1	15" Drive Pipe	110	Lin. Ft.

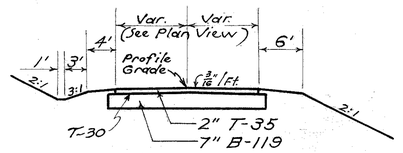
4-A ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course	14.3	Cu. Yds.
T-30	Bituminous Prime Coat	90	Gals.
B-119	Aggregate Base Course	52	Cu. Yds.

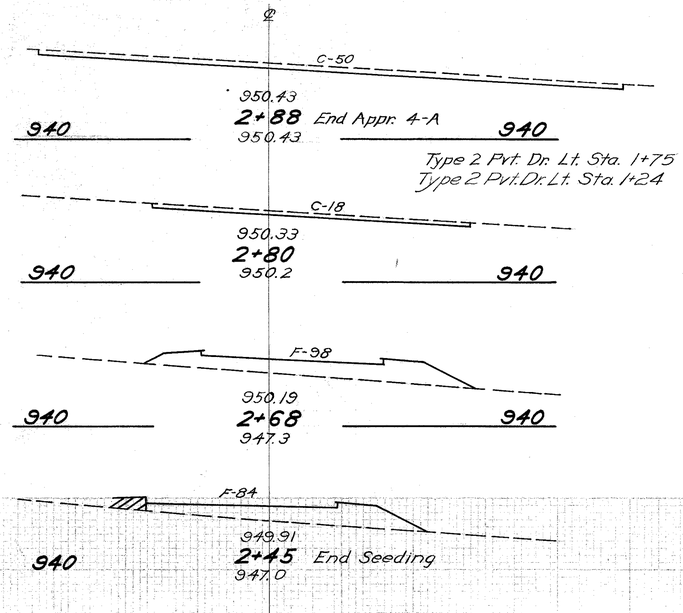
6-A ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course	1.4	Cu. Yds.
T-30	Bituminous Prime Coat	9.4	Gals.
B-119	Aggregate Base Course	5.1	Cu. Yds.

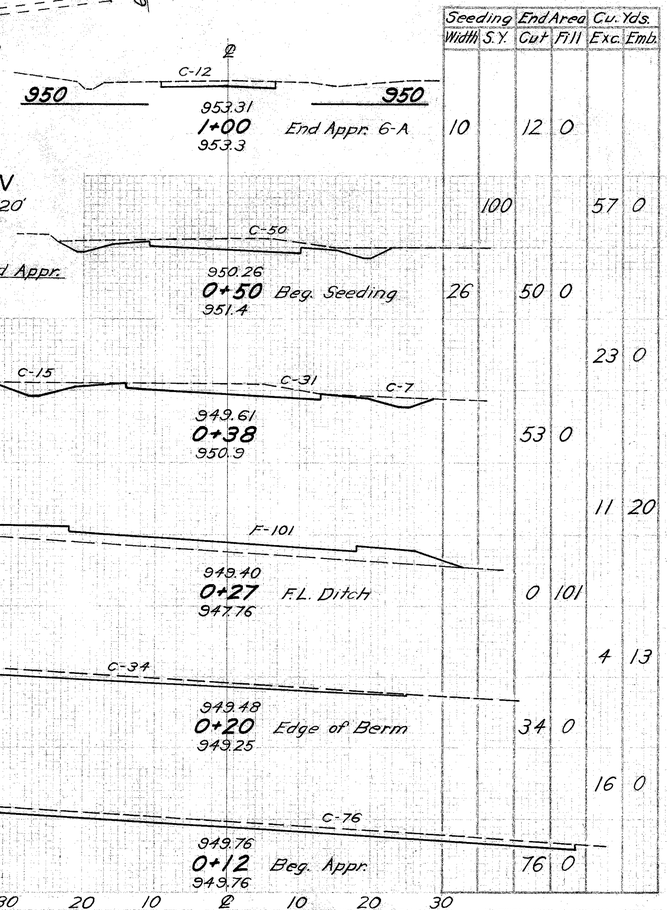
PLAN
Scale: 1"=20'



TYPICAL SECTION
ROAD APPROACH

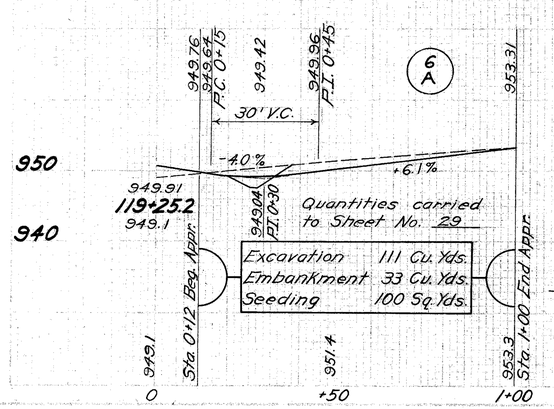


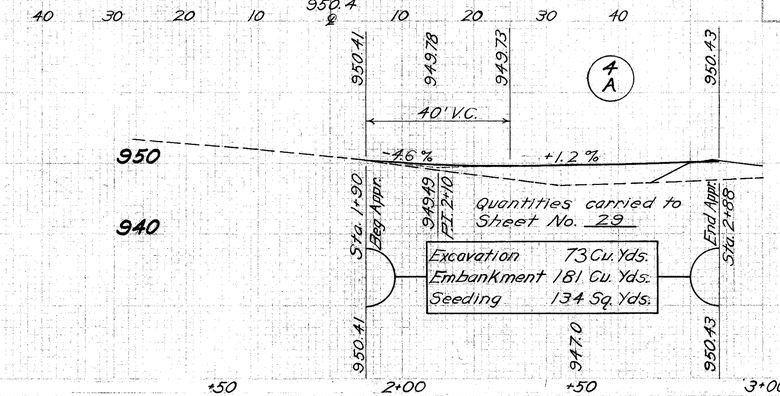
Seeding		End Area		Cu. Yds.	
Width	S.Y.	Cut	Fill	Exc.	Emb.
		50	0		
				19	0
				22	0
				10	0
		18	0		
				4	22
		0	98		
				0	78
15		0	84		
	113			13	79
30		15	11		
	21			5	2
8		10	0		



10		12	0		
				57	0
100					
26		50	0		
				23	0
		53	0		
				11	20
		0	101		
				4	13
		34	0		
				16	0
		76	0		

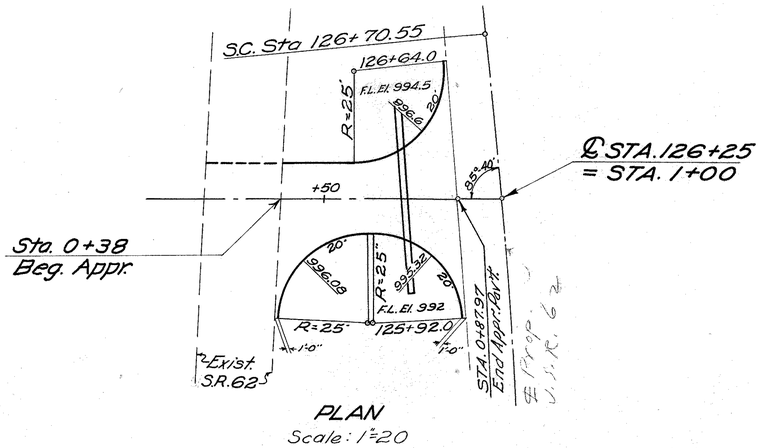
APPR. RT. STA. 119+25.2





4 A
5 A
6 A

APPR. LT. STA. 119+10.85 - APPR. RT. STA. 119+25.2



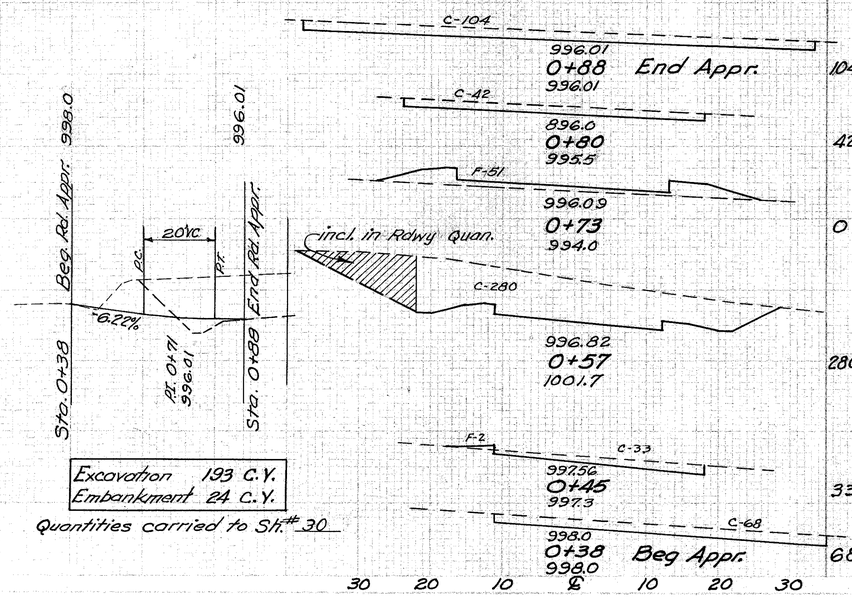
PLAN
Scale: 1"=20

8
A

ESTIMATED QUANTITIES

T-35 – 2" Asphaltic Conc. Surf. Course	9.0 Cu. Yds.
T-30 – Bituminous Prime Coat	63 Gals.
B-119 – 7" Crushed Agg. Base Course	35.0 Cu. Yds
I-1 – 15" Pipe for Driveways	54. Lin. Ft.

Note: Seeding incl. in Rdwy. Quantities

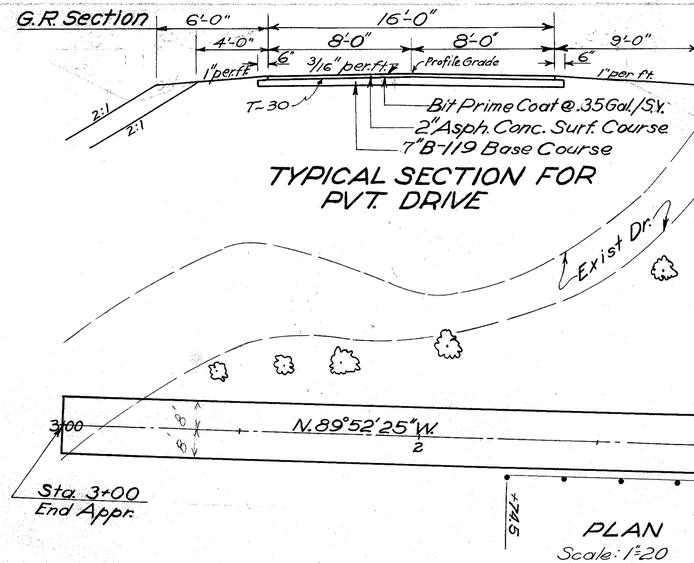


	End Area		Cu. Yds.	
	Cut	Fill	Exc.	Emb.
1000				
	104	0		
			22	0
	42	0		
			5	7
	0	51		
			83	15
	280	0		
			70	1
	33	2		
			13	1
	68	0		

30 20 10 ℄ 10 20 30

Excavation 193 C.Y.
Embankment 24 C.Y.

Quantities carried to Sht.# 30



PLAN
Scale: 1"=20

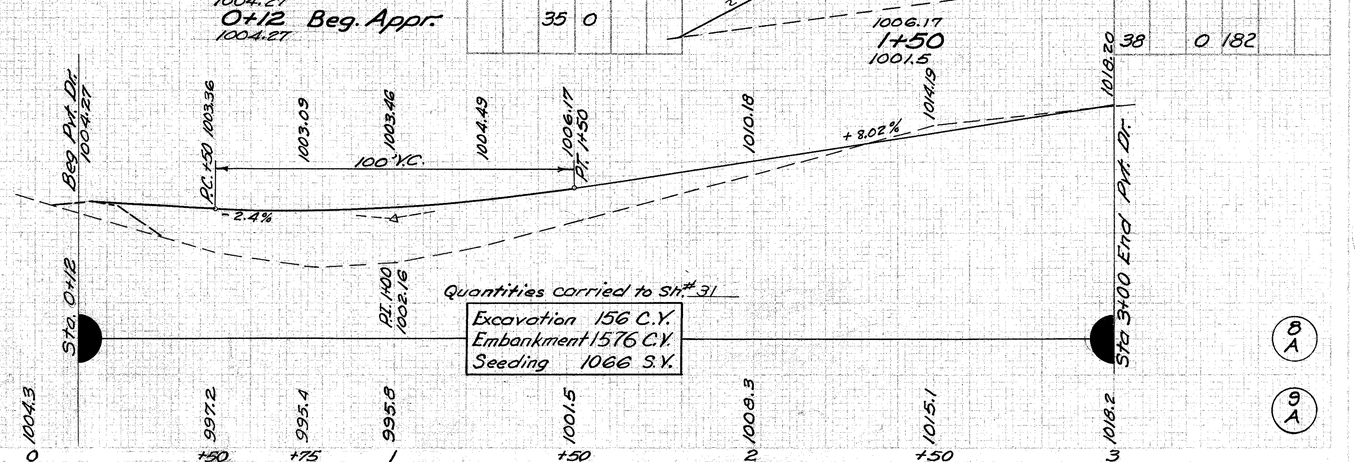
9
A

ESTIMATED QUANTITIES

T-35 – 2" Asphaltic Conc. Surf. Course	30.9 Cu. Yds
B-119 – 7" Crushed Agg. Base Course	115 Cu. Yds
T-30 – Bituminous Prime Coat	206. Gals
I-15 – Approach Guard Rail	176. Lin. Ft.

	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
1000						
F-408		408			0	8.19
1003.09 0+75 995.4	60		0	408		
1000						
F-263		174			0	360
1003.45 0+46 Beg. Seeding 997.5	48		0	263		
C-24					11	110
1004.05 0+21 1004.1						
1000						
C-35					10	0
1004.27 0+12 Beg. Appr. 1004.27		35	0			

	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
C-10						
1018.20 3+00 End Appr. 1018.2	8		10	0		
1010						
C-47						
1014.19 2+50 1015.1		100			53	0
1010						
F-64 C-21						
1010.18 2+00 1008.3	28		47	0		
1000						
F-182		178			63	59
1006.17 1+50 1001.5	36		21	64		
		206			19	228
1018.20 End Part. Dr.	38		0	182		



Quantities carried to Sht.# 31

Excavation 156 C.Y.
Embankment 1576 C.Y.
Seeding 1066 S.Y.

8
A

9
A

APPROACHES:– STA 126+25 LT. – STA 130+00 RT.

SEC. NO. DESIGNED	STATE	PROJECT	SHEET TOTAL
2	OHIO		

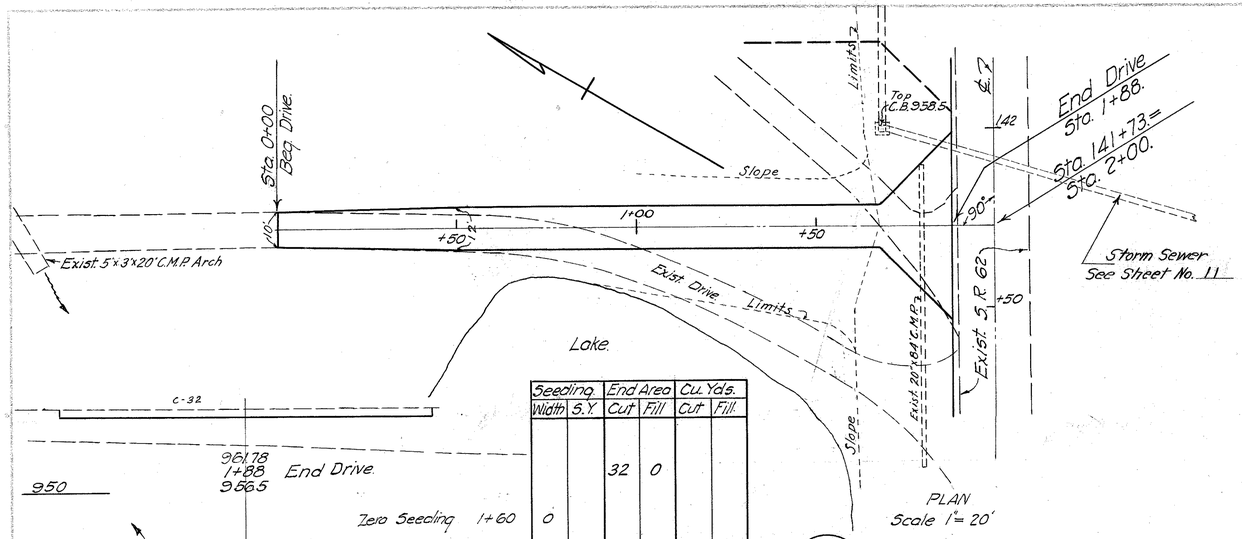
78
128

HOL-62-(21.08-21.51)

PROJ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

79
128

HOL-62-(21.08-21.51).



12
A

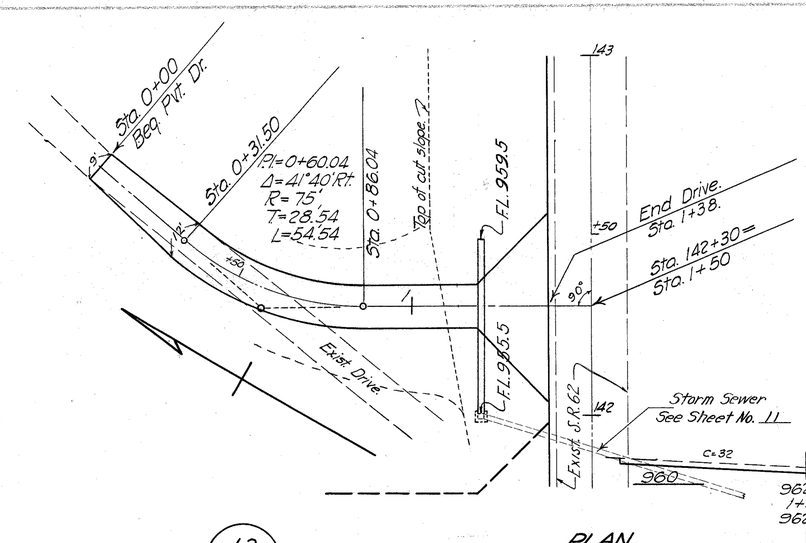
ESTIMATED QUANTITIES.

B-119	Aggr. Base Course	40.5 Cu. Yds.
T-30	Bit. Prime Coat	102 Gals.
T-35	Asp. Concr. Surf. Course	16.1 Cu. Yds.
E-12	Pipe Removed (20")	84 Lin. Ft.

Seeding		End Area		Cu. Yds.	
Width	S.Y.	Cut	Fill	Cut	Fill
		32	0		
	23			22	49
42		0	70		
	178			0	111
22		0	50		
	144			4	69
30		4	24		
	106			9	26
8		6	4	4	2
	13				
0		0	0		

Excavation	39	Cu. Yds.
Embankment	257	Cu. Yds.
Seeding	464	Sq. Yds.

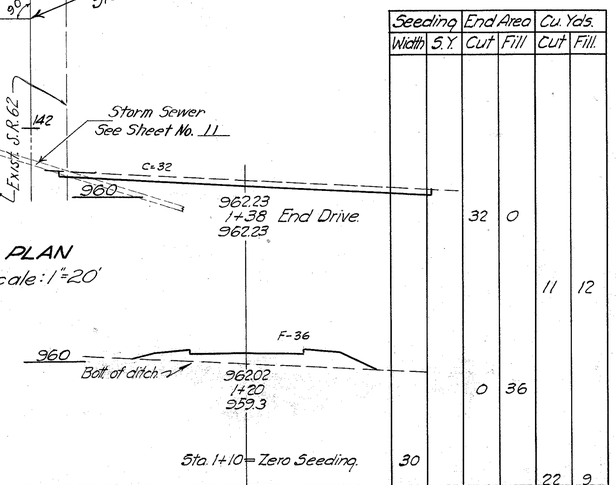
Carried to Sheet No. 33



13
A

ESTIMATED QUANTITES

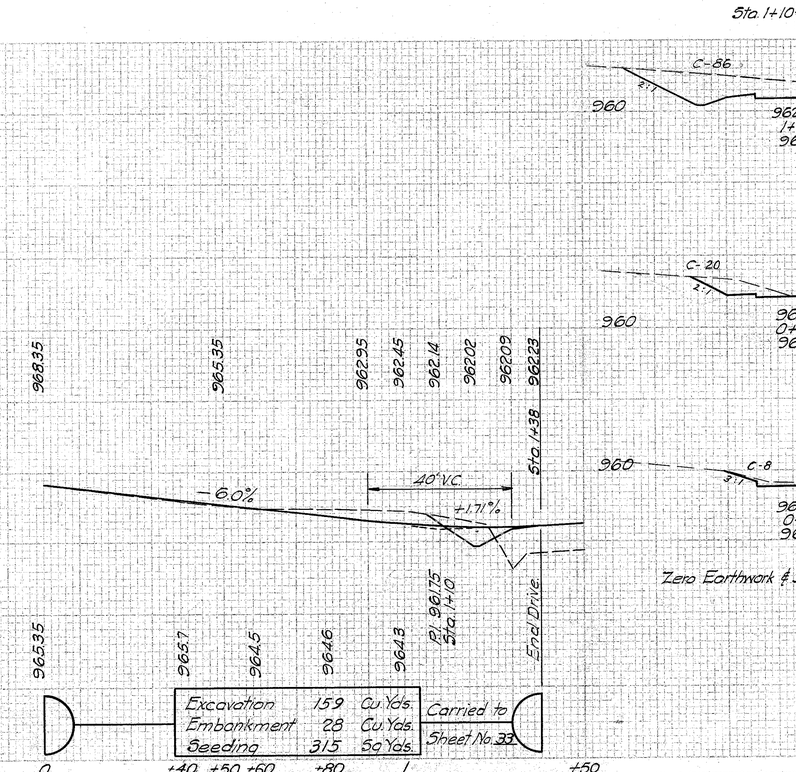
B-119	Aggr. Base Course	31 Cu. Yds.
T-30	Bit. Prime Coat	78 Gals.
T-35	Asp. Concr. Surf. Course	12.4 Cu. Yds.
I-1	24" Drive Pipe	48 Lin. Ft.



Seeding		End Area		Cu. Yds.	
Width	S.Y.	Cut	Fill	Cut	Fill
		32	0		
				11	12
		0	36		
30					
				22	9
	50				
38		86	0		
	148			90	3
20		20	4		
	100			31	4
10		8	0		
	17			5	0
0		0	0		

12
A

13
A



Excavation	159	Cu. Yds.
Embankment	28	Cu. Yds.
Seeding	315	Sq. Yds.

Carried to Sheet No. 33

TYPE 2 PVT. DR. LT. STA. 141+73 & STA. 142+30

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

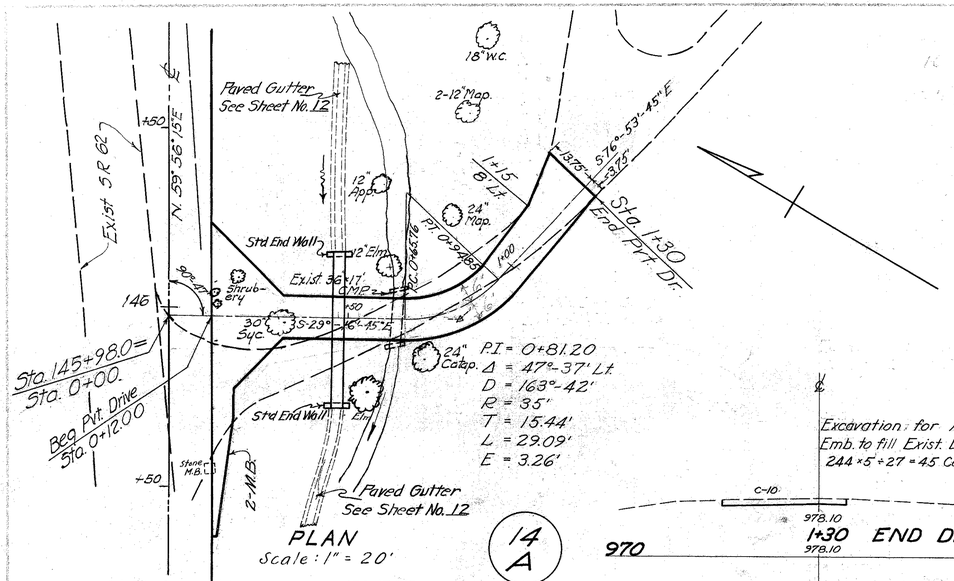
80
128

HOL-62-(21.08-21.51)

15
A

ESTIMATED QUANTITIES

B-119 Aggregate Base Course.	37.0 Cu. Yds.
T-30 Bituminous Prime.	93 Gals.
T-35 Asph. Concr. Surf. Course.	14.8 Cu. Yds.
I-1 24" Drive Pipe.	80 Lin. Ft.
E-12 Pipe Removal (Under 15").	66 Lin. Ft.
E-12 Pipe Removal (Over 15").	30 Lin. Ft.
I-15 Approach Guard Rail.	160 Lin. Ft.
I-15 Highy Guard Rail (Circular).	75 Lin. Ft.
S-22 Removal Portin. Exist. Struct.	1.5 Cu. Yds.

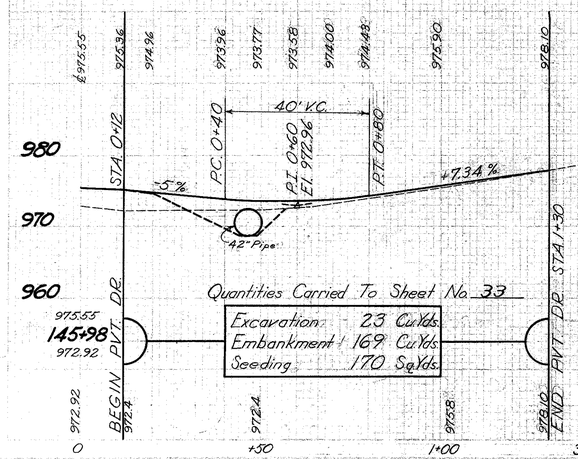


PLAN
Scale: 1" = 20'

14
A

ESTIMATED QUANTITIES

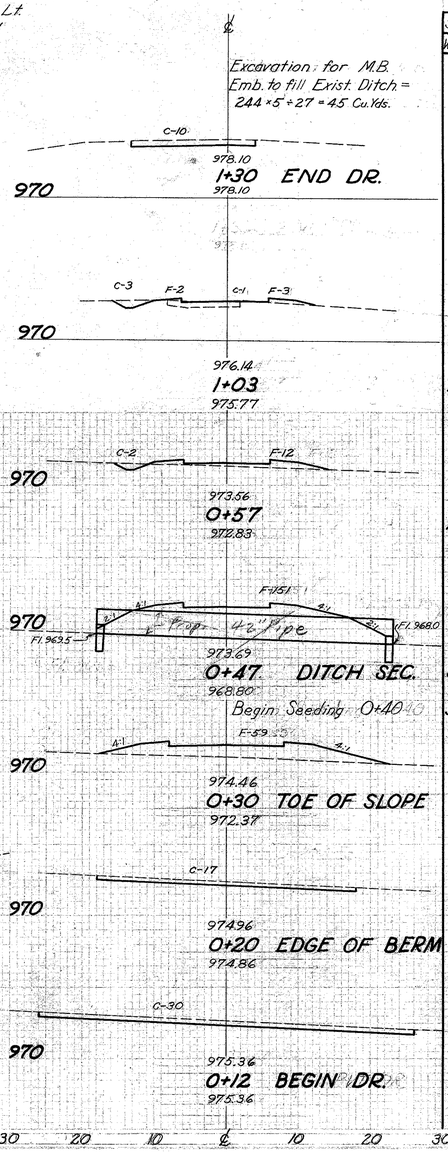
B-119	5" Aggregate Base Course.	31 Sq. Yds.
T-30	Bituminous Prime Coat.	78 Gal.
T-35	2" Asphaltic Concrete Surface Course.	12.4 Cu. Yds.
I-1	42" Pipe For Driveways.	42 Lin. Ft.
E-12	Pipe Removal (over 15").	17 Lin. Ft.
S-22	Removal of Portions of Exist. Struct.	2 Cu. Yds.
S-1	Concrete for Structures, Class "E".	1.5 Cu. Yds.
E-2	Excavation for Structures.	5 Cu. Yds.



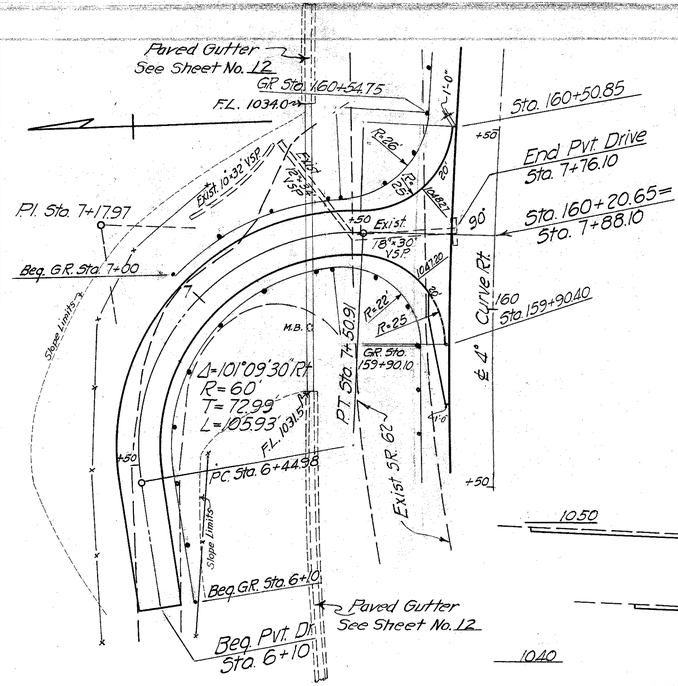
Quantities Carried To Sheet No. 33

Excavation	23 Cu. Yds.
Embankment	169 Cu. Yds.
Seeding	170 Sq. Yds.

Excavation for M.B. Emb. to fill Exist. Ditch. = 244 × 5 ÷ 27 = 45 Cu. Yds.

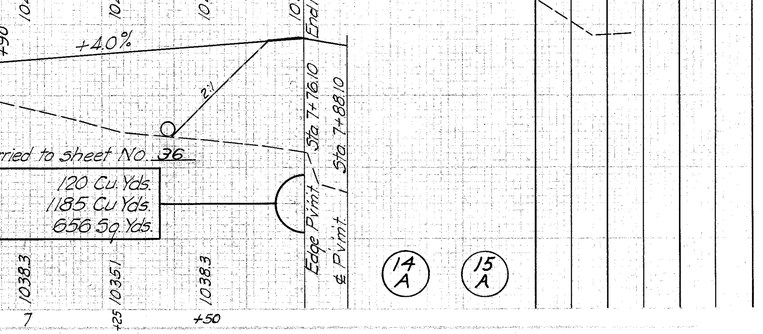


Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
				3	0
					45
8		10	0		
	30			7	3
12		4	5		
	84			3	14
21		2	12		
31		0	30		
35	25	0	151		
30					
		0	66		
		0	59		
				3	11
17	0				
				7	0
30	0				



PLAN
Scale: 1" = 20'

Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		24	0		
				9	0
		12	0		
				6	294
		0	610		
71					
		289		4	637
59		6	250		
		267		56	244
37		55	13		
		100		45	10
8		6	0		



Quantities carried to Sheet No. 36

Excavation	120 Cu. Yds.
Embankment	1185 Cu. Yds.
Seeding	656 Sq. Yds.

14 A

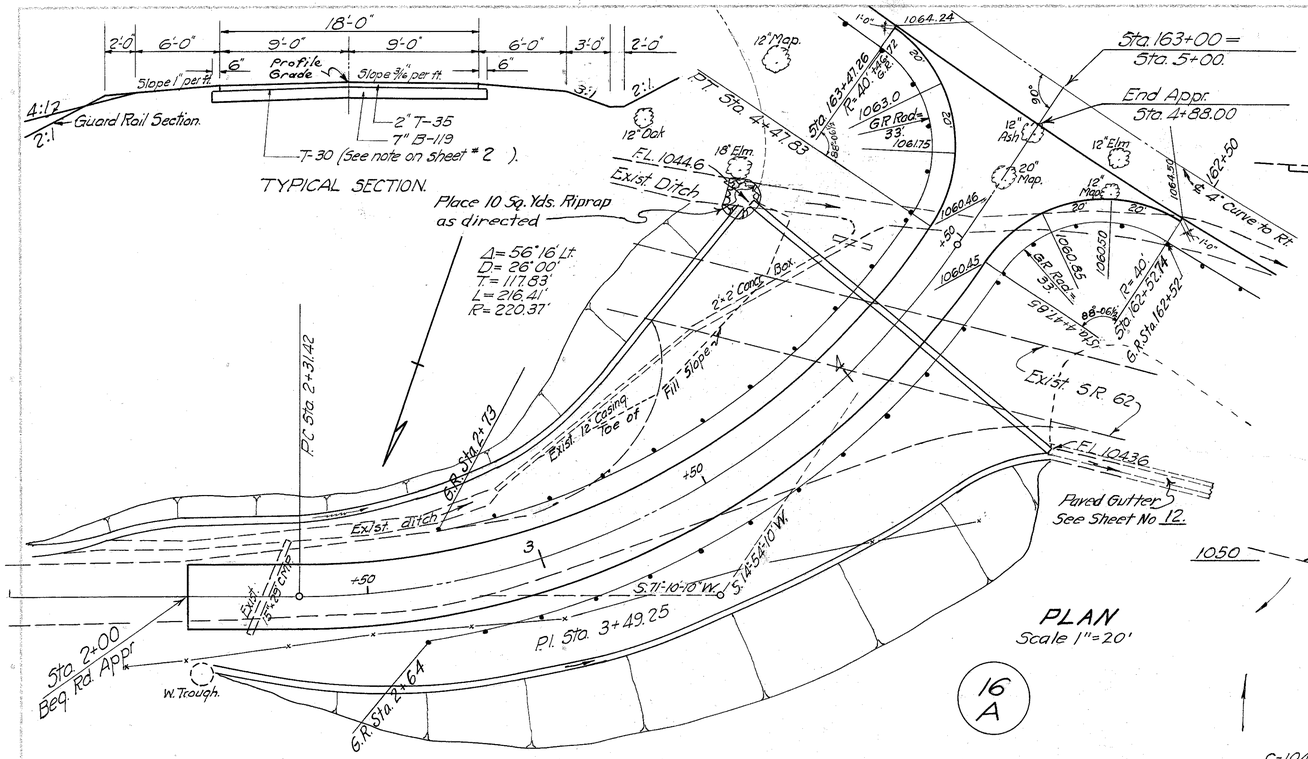
15 A

Drive & M. Box Rt. STA. 145+98 - Drive & M. Box Lt. STA. 160+20.65

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

81
128

HOL-62-(21.08-21.51)



ESTIMATED QUANTITIES

B-119	Agg. Base Course	136	Cu. Yds.
T-30	Bit. Prime Coat.	243	Gals.
T-35	Asp. Concr. Surf. Course.	36.8	Cu. Yds.
E-12	Pipe Removal (15" & Under)	100	Lin. Ft.
S-24	Removal of Exist. Str.	Lump	Sum.
I-1	24" Drive Pipe	110	Lin. Ft.
I-15	Approach Type Guard Rail	352	Lin. Ft.
I-15	Roadway Guard Rail (Circular)	100.	Lin. Ft.
I-10	Riprap	10	Sq. Yds.

Quantities carried to Sheet No. 37.

Excavation	2033	Cu. Yds.
Embankment	2953	Cu. Yds.
Seeding	2185	Sq. Yds.

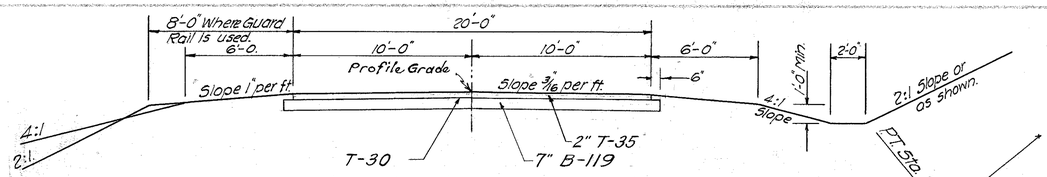
Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		79	0		
				20	0
		30	0		
				22	664
78		0	920		
	280			253	959
132		350	408		
	686			732	667
115		440	312		
	531			630	413
76		240	134		
	344			270	163
48		52	42		
	222			77	63
32		31	26		
	122			29	24
12		0	0		

TWP. RD. APPR. LT. STA. 163+00.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

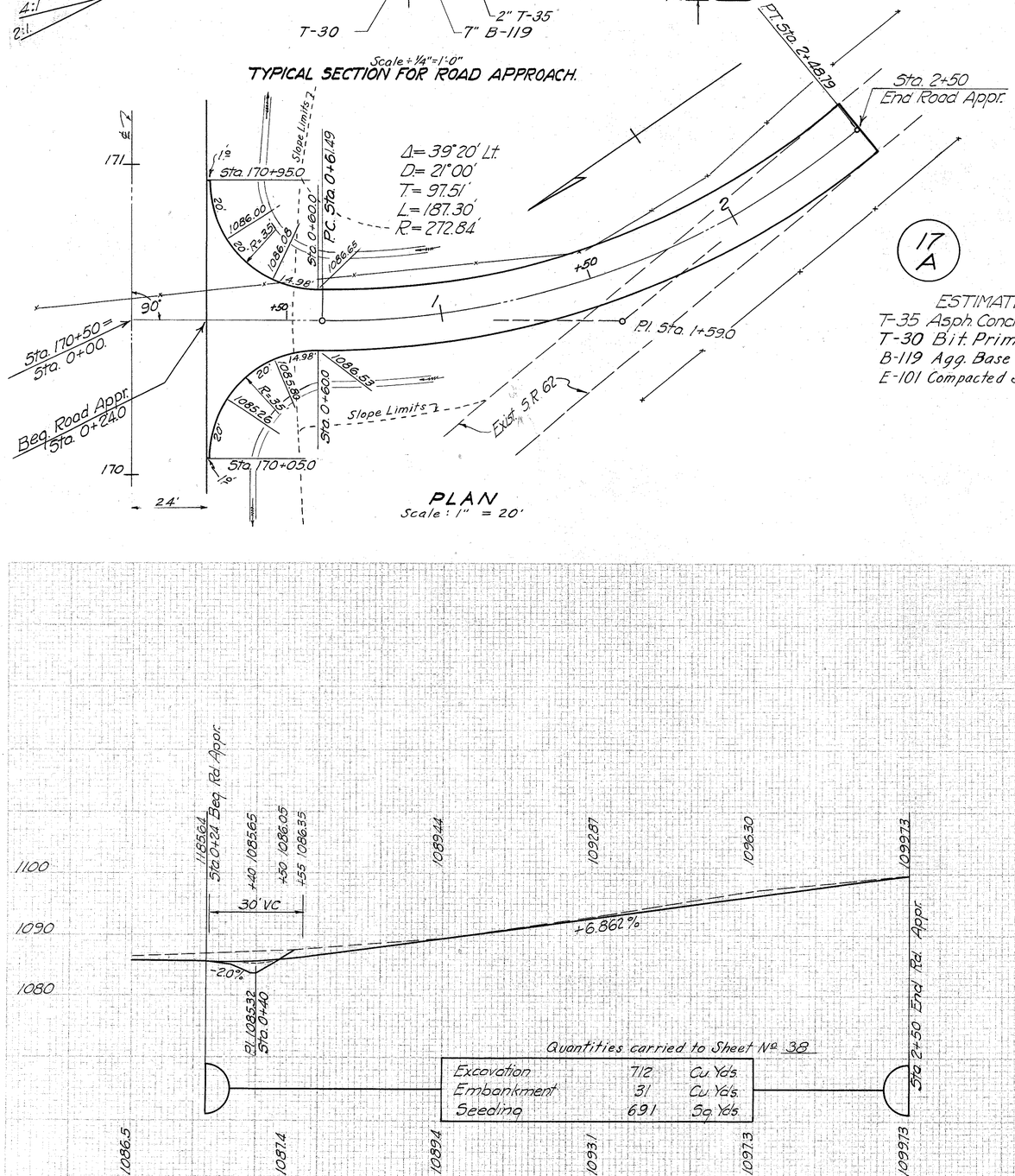
82
128

HOL-62-(21.08-21.51).



TYPICAL SECTION FOR ROAD APPROACH.

Scale: 1/4"=1'-0"



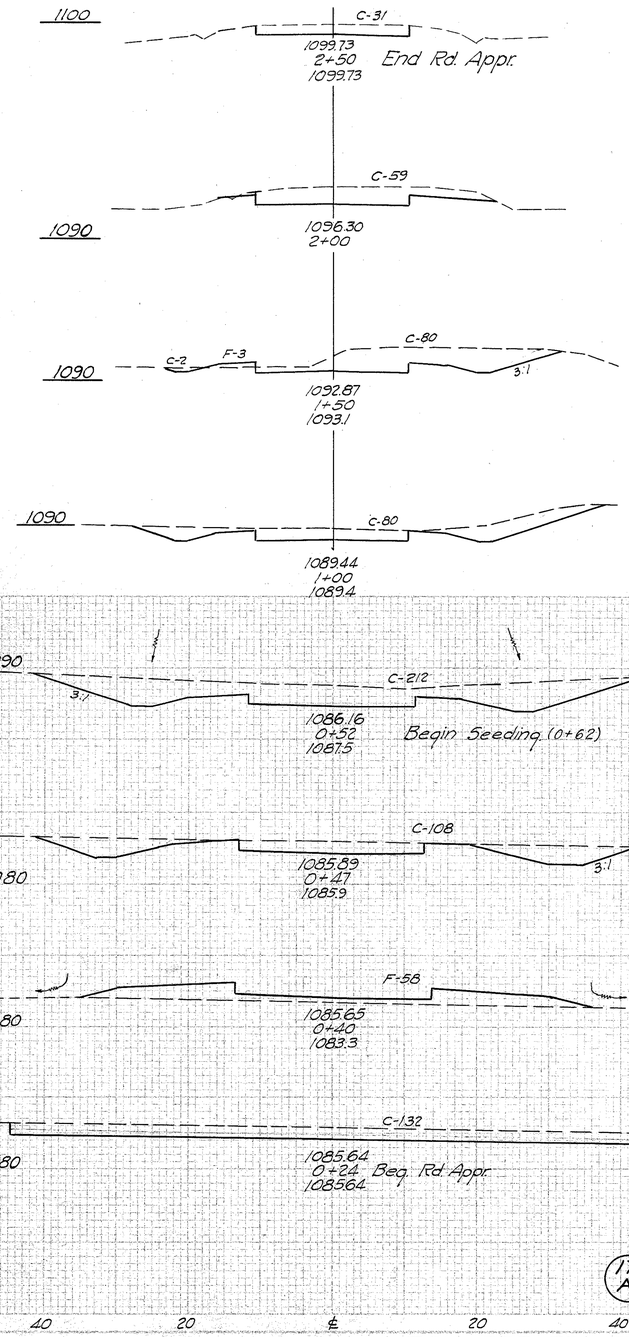
PLAN

Scale: 1" = 20'

17
A

ESTIMATED QUANTITIES.

T-35 Asph. Concr. Surf. Course (2")	31.6	Cu. Yds.
T-30 Bit. Prime Coat	209	Gals.
B-119 Agg. Base Course (7")	116	Cu. Yds.
E-101 Compacted Subgrade	569	Sq. Yds.



17
A

Seeding Width	Seeding S.Y.	End Area Cut.	End Area Fill.	Cu. Yds. Cut.	Cu. Yds. Fill.
12		31	0		
	86			88	0
19		59	0		
	147			131	3
34		82	3		
	222			150	3
46		80	0		
	236			260	0
66		212	0		
				90	0
		108	0		
				14	8
		0	58		
				39	17
		132	0		

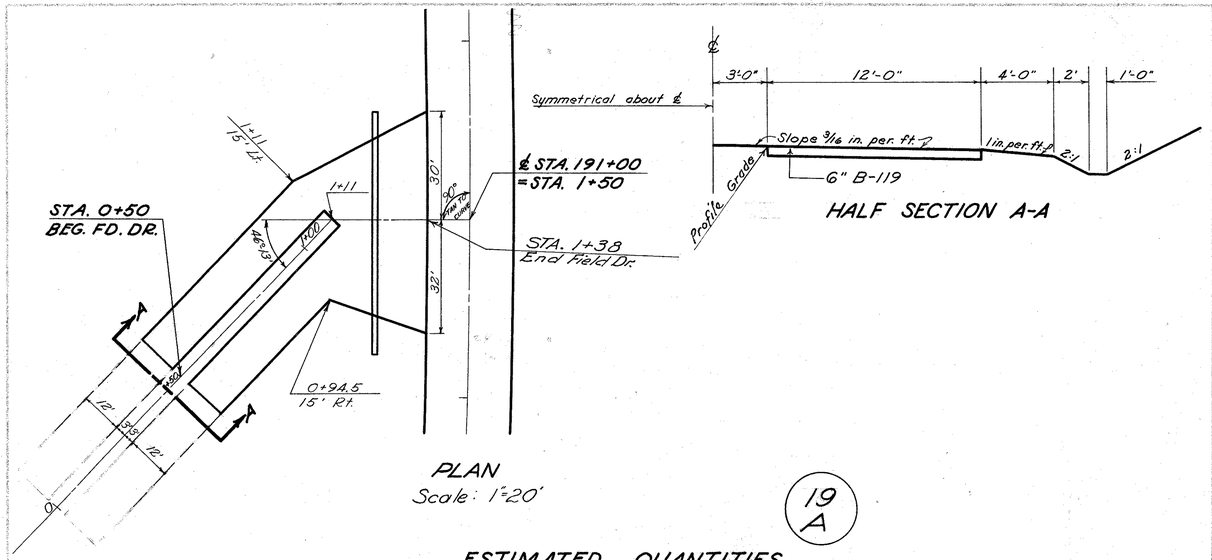
40 20 ℄ 20 40

RD. APPR. RT. STA. 170+50.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

83
128

HOL-62-(21.08-21.51)



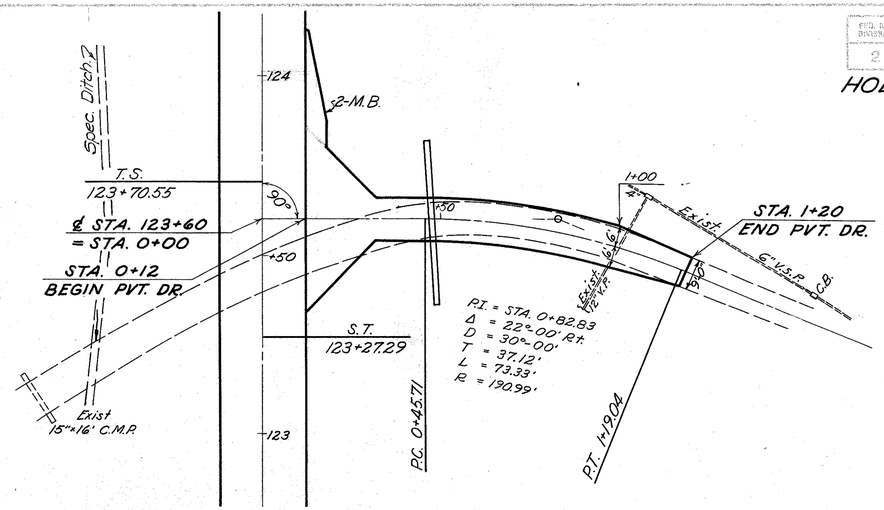
HALF SECTION A-A

PLAN
Scale: 1"=20'

19
A

ESTIMATED QUANTITIES

B-119	6" Crushed Aggregate Course.	72	Cu.Yds.
I-1	15" Drive Pipe.	68	Lin.Ft.

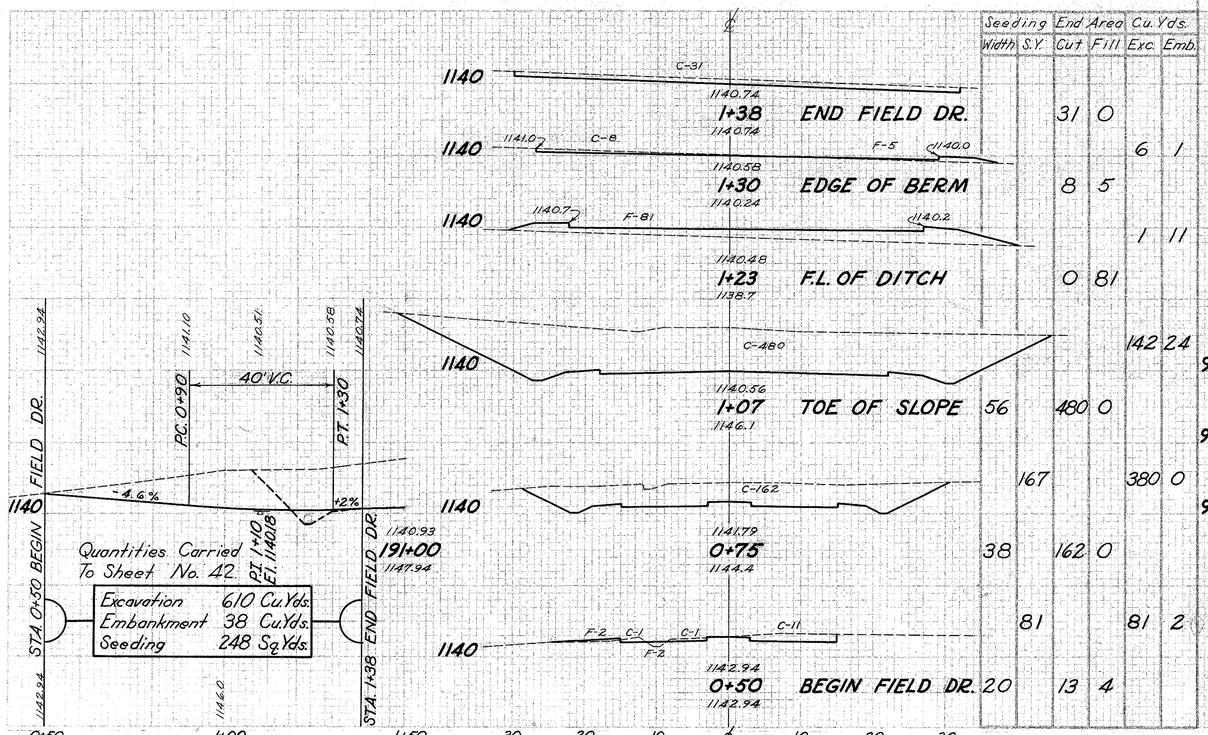


PLAN
Scale: 1"=20'

7
A

ESTIMATED QUANTITIES

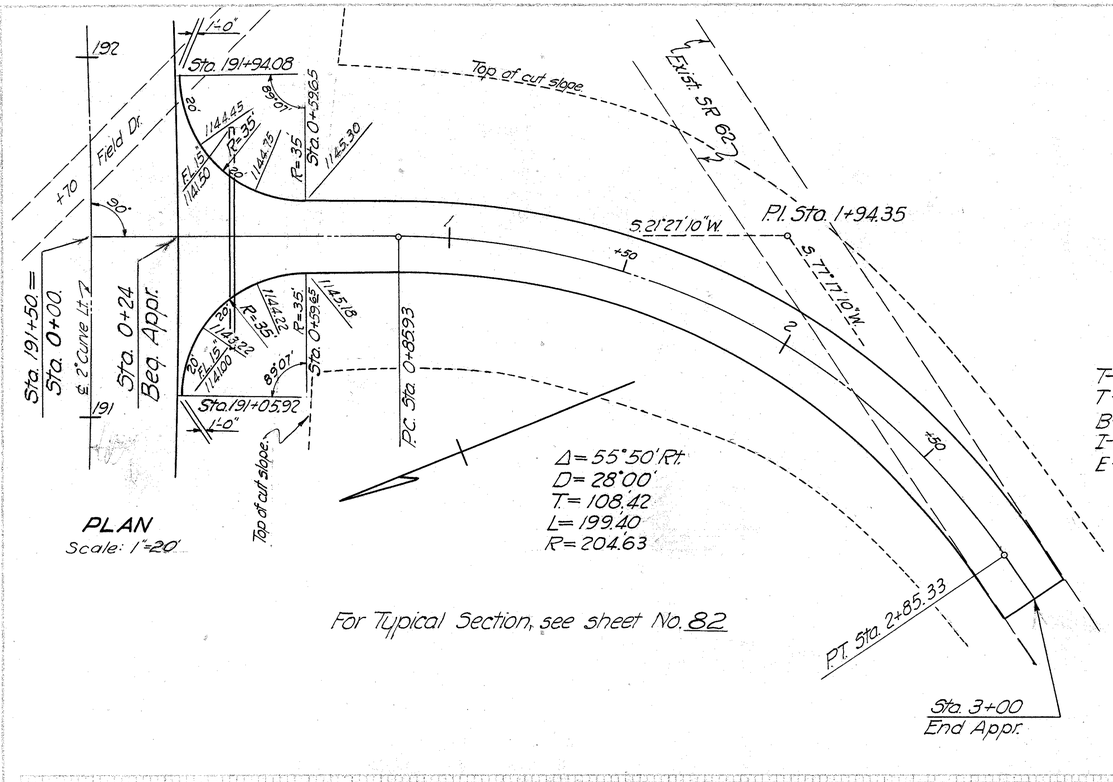
T-35	2" Asphaltic Concrete Surface Course.	11.1	Cu.Yds.
T-30	Bituminous Prime Coat.	70	Gals.
B-119	5" Crushed Aggregate Base Course.	28	Cu.Yds.
I-1	15" Drive Pipe.	46	Lin.Ft.
E-12	Pipe Removal. (Under 15")	16	Lin.Ft.


Seeding
End Area
Cu. Yds.
Width
S.Y.
Cut
Fill
Exc.
Emb.
1140
C-31
1140.74
1+38 END FIELD DR.
1140.74
1140
1141.0
C-8
F-5
1140.0
1140.58
1+30 EDGE OF BERM
1140.24
1140
1140.7
F-81
1140.2
1140.48
1+23 F.L. OF DITCH
1138.7
1140
C-480
1140.56
1+07 TOE OF SLOPE
1146.1
1140
C-162
1141.79
0+75
1144.4
1140
F-2
C-1
C-1
C-11
F-2
1142.94
0+50 BEGIN FIELD DR.
1142.94
℄
1142.94
STA. 0+50 BEGIN FIELD DR.
1141.10
1140.51
1140.58
1140.74
40' V.C.
P.C. 0+90
P.T. 1+30
-4.6%
+2%
P.T. 1+10
El. 1140.18
1140.93
191+00
1147.94
STA. 1+38 END FIELD DR.
0+50
1+00
1+50
30
20
10
℄
10
20
30
Quantities Carried
To Sheet No. 42
Excavation 610 Cu.Yds.
Embankment 38 Cu.Yds.
Seeding 248 Sq.Yds.
31 0
6 1
8 5
1 11
0 81
142 24
56 480 0
167 380 0
38 162 0
81 81 2
20 13 4
990
980
970
976.6
976.9
977.1
977.5
978.19
977.41
977.15
978.73
979.75
980
970
STA. 0+12 BEGIN PVT. DR.
0+50
+50
1
℄
C-5
977.15
1+20 END PVT. DR.
977.15
C-2
F-10
977.41
1+00
977.1
F-36
978.45
0+75
976.9
0+65 Beg. Seeding
980
C-3
A-1
F-68
976.6
979.49
0+55 TOE OF SLOPE
977.1
F-154
973.96
0+46 F.L. DITCH
974.8
982.35
C-22
980.27
981.31
0+20 EDGE OF BERM
981.35
C-30
981.73
0+12 BEG. PVT. DR.
981.73
970
980
980
980
970
STA. 1+20 END PVT. DR.
977.2
977.3
977.5
977.6
977.7
977.8
977.9
978.2
978.3
978.4
978.5
978.6
978.7
978.8
978.9
979.0
979.1
979.2
979.3
979.4
979.5
979.6
979.7
979.8
979.9
980.0
980.1
980.2
980.3
980.4
980.5
980.6
980.7
980.8
980.9
981.0
981.1
981.2
981.3
981.4
981.5
981.6
981.7
981.8
981.9
982.0
982.1

FED. ROL DIVISION	STATE	PROJECT	
2	OHIO		

84
128

HOL-62-(21.08-21.51).



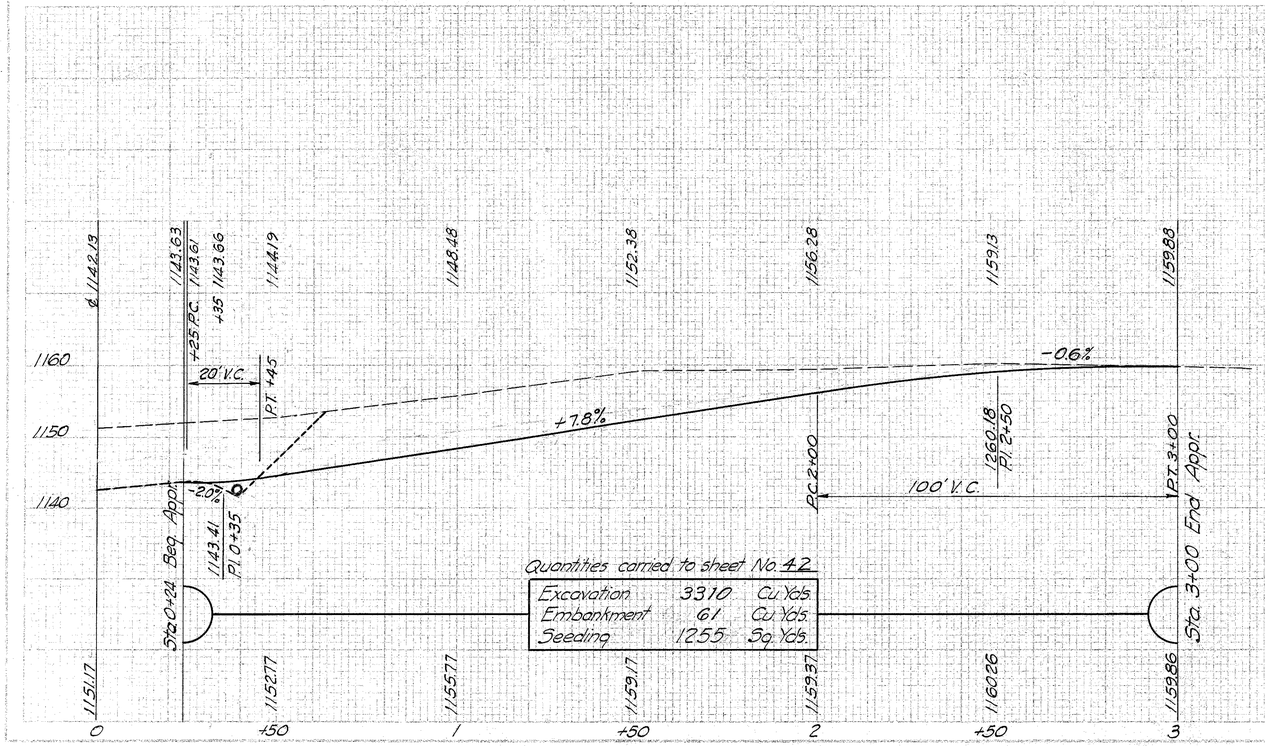
PLAN
Scale: 1"=20'

For Typical Section, see sheet No. 82

20 A

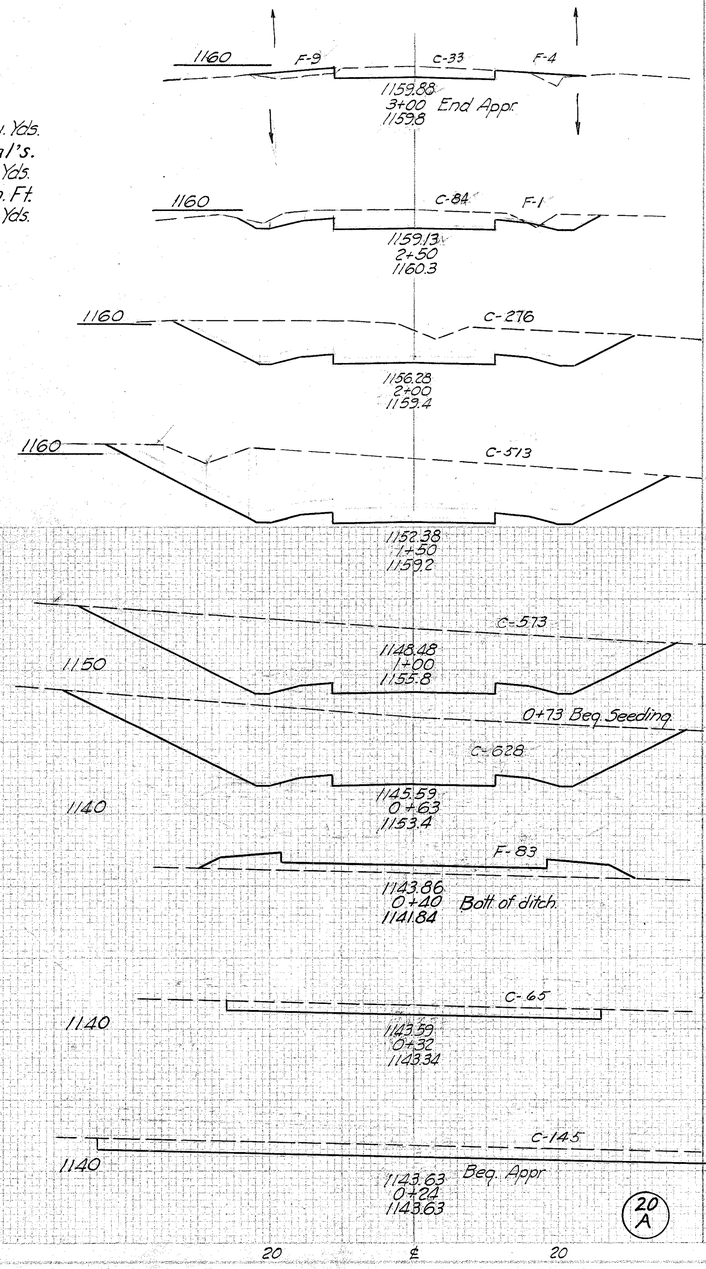
ESTIMATED QUANTITIES.

T-35	Asph. Conc. Surf. Course (2")	37.7 Cu. Yds.
T-30	Bit. Prime Coat	249 Gal's.
B-119	Agg. Base Course (7")	138.5 Cu. Yds.
I-1	15" Drive Pipe	62 Lin. Ft.
E-101	Compacted Subgrade	67.9 Sq. Yds.



Quantities carried to sheet No. 42

Excavation	3310	Cu. Yds.
Embankment	61	Cu. Yds.
Seeding	1255	Sq. Yds.



Seeding		End Area		Cu. Yds.	
Width	S.Y.	Cut	Fill	Cut	Fill
24		33	13		
	150			108	13
30		84	1		
	214			333	1
47		276	0		
	306			731	0
63		513	0		
	369			1006	0
70		573	0		
216					
74				823	0
		628	0		
				268	35
		0	83		
				10	12
		65	0		
				31	0
		145	0		

R.D. APPR. RT. STA. 191+50.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

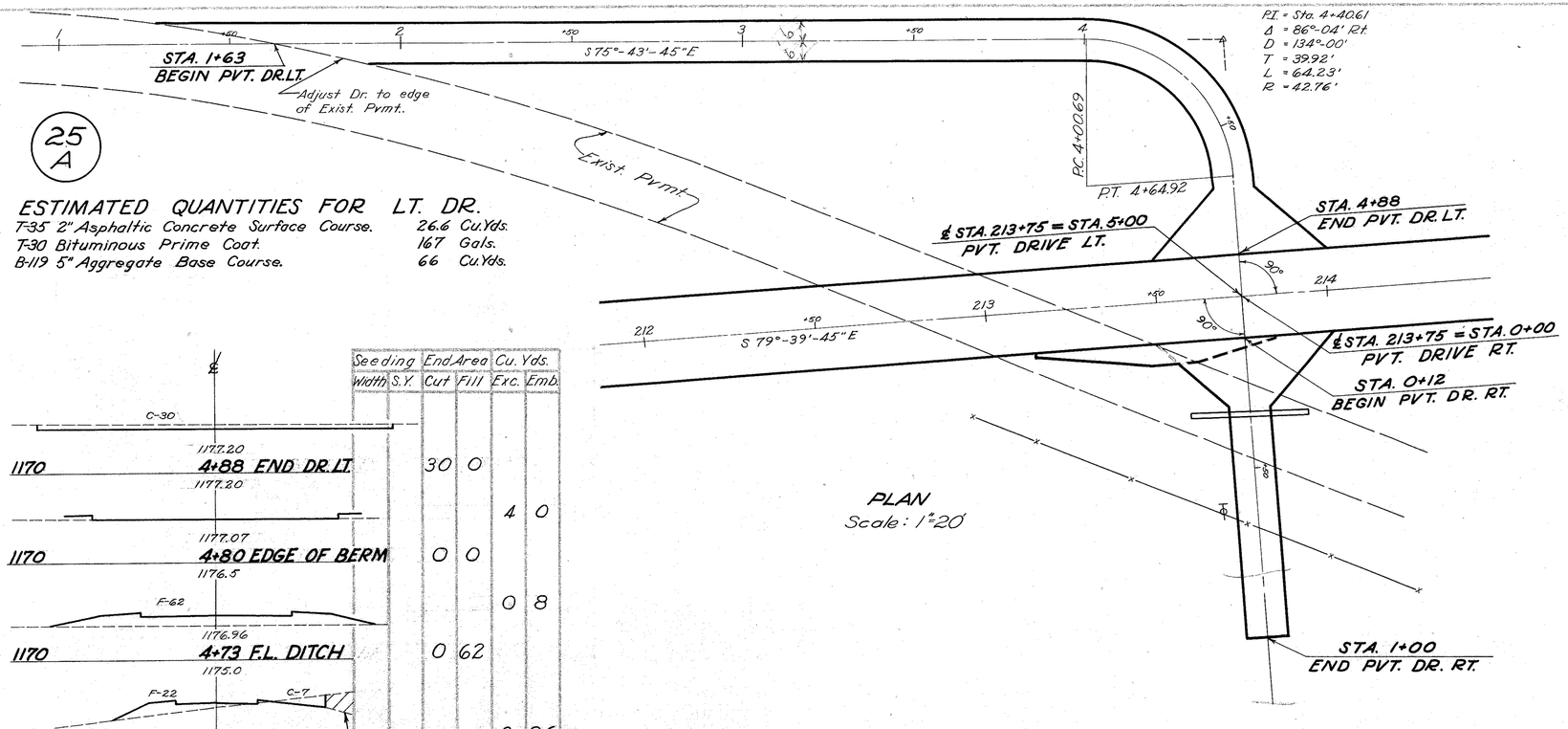
85
128

HOL-62-(21.08-21.51)

25
A

ESTIMATED QUANTITIES FOR LT. DR.

T-35	2" Asphaltic Concrete Surface Course.	26.6 Cu.Yds.
T-30	Bituminous Prime Coat.	167 Gals.
B-119	5" Aggregate Base Course.	66 Cu.Yds.

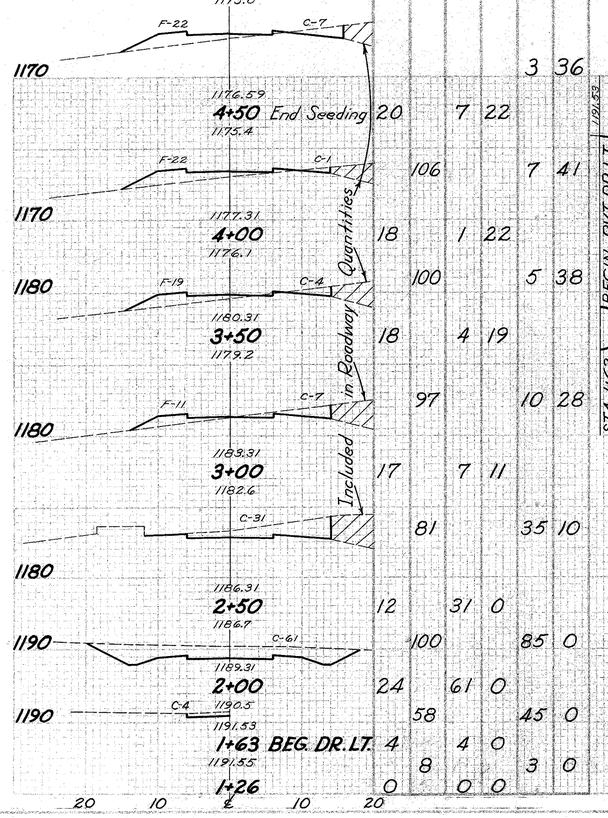


PLAN
Scale: 1"=20'

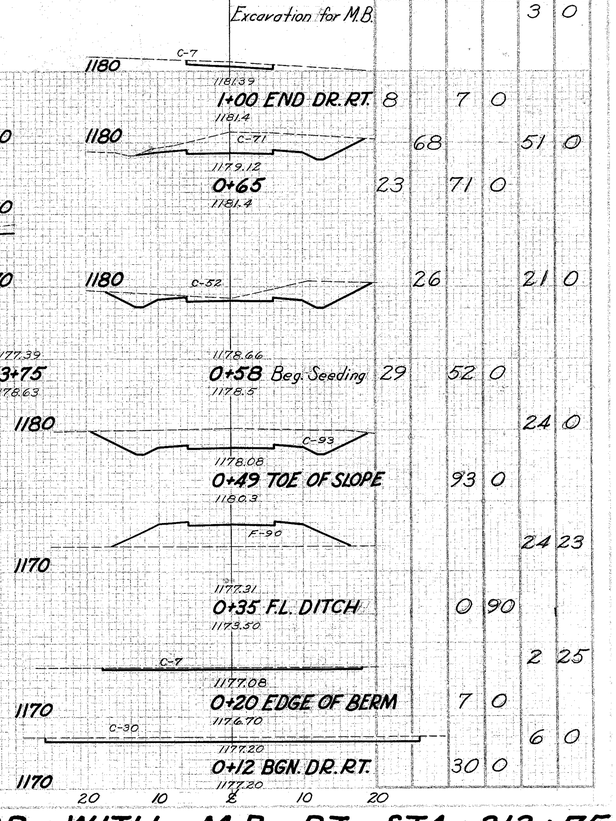
26
A

ESTIMATED QUANTITIES FOR M.B. & RT. DR.

T-35	2" Asphaltic Concrete Surface Course.	9.9 Cu.Yds.
T-30	Bituminous Prime Coat.	62 Gals.
B-119	5" Aggregate Base Course.	25 Cu.Yds.
I-1	15" Drive Pipe.	34 Lin.Ft.



	Seeding		End Area		Cu. Yds.	
	Width	S.Y.	Cut	Fill	Exc.	Emb.
1177.20						
1177.07			30	0		
1176.5					4	0
1176.96			0	0		
1175.0					0	8
1176.59			0	62		
1175.4					3	36
1176.1	20		7	22		
1179.2		106			7	41
1182.6	18		1	22		
1189.31		100			5	38
1186.7	18		4	19		
1191.53		97			10	28
	17		7	11		
		81			35	10
	12		31	0		
		100			85	0
	24		61	0		
		58			45	0
	4		4	0		
	0		8	0	3	0

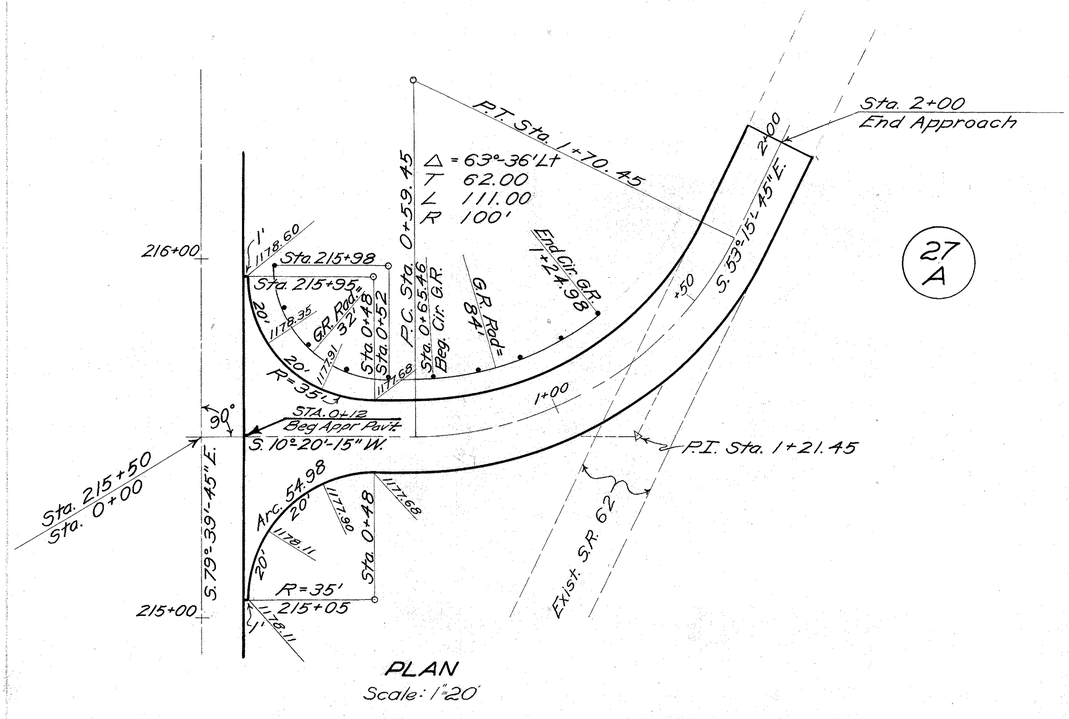


	Seeding		End Area		Cu. Yds.	
	Width	S.Y.	Cut	Fill	Exc.	Emb.
					3	0
1181.39						
1181.4			8	7	0	
1179.12		68			51	0
1181.4			23	71	0	
1178.66						
1178.5			29	52	0	
					24	0
1180.3						
			93	0		
					24	23
1177.31						
1179.30			0	90		
					2	25
1177.08						
1176.70			7	0		
					6	0
1177.20						
1177.20			30	0		

PVT. DR. LT. & PVT. DR. WITH M.B. RT. STA. 213+75

DIST. NO.	STATE	PROJECT	SHEET NO.
2	OHIO		86 / 128

H0L-62-(21.08-21.51)



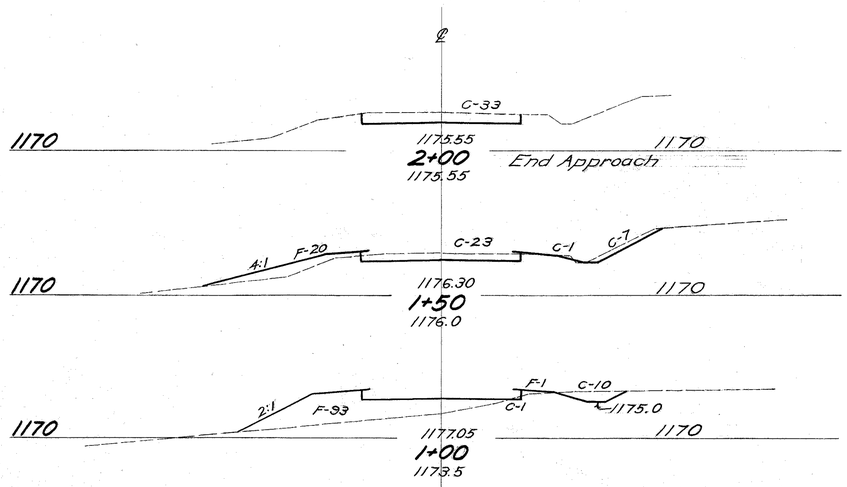
PLAN
Scale: 1"=20'

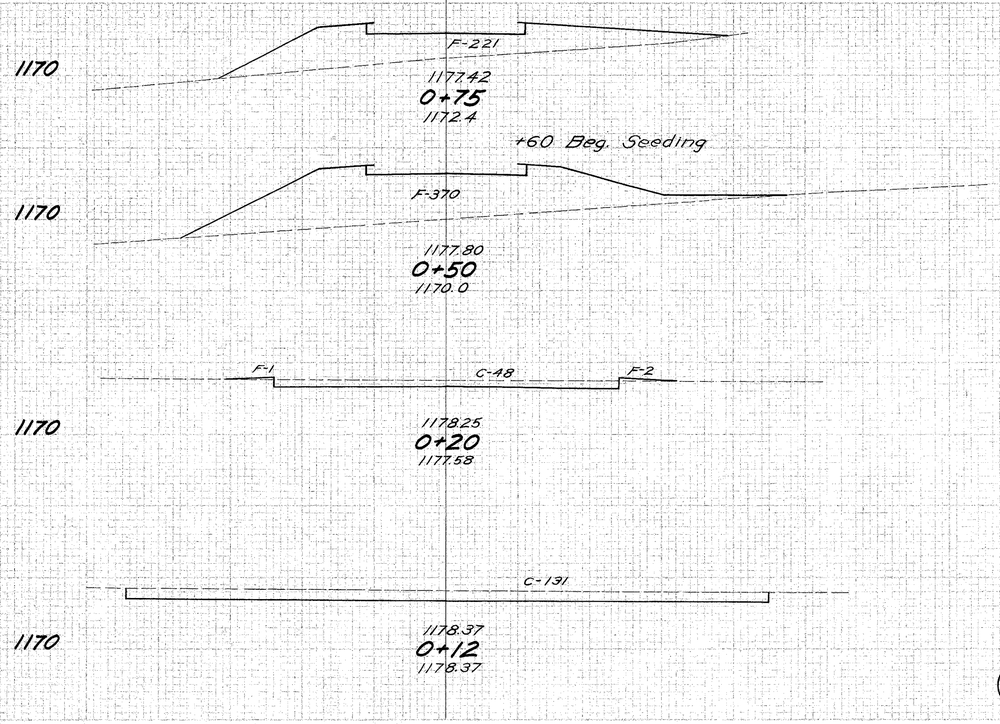
27 A

For Typical Section see sheet No. 82

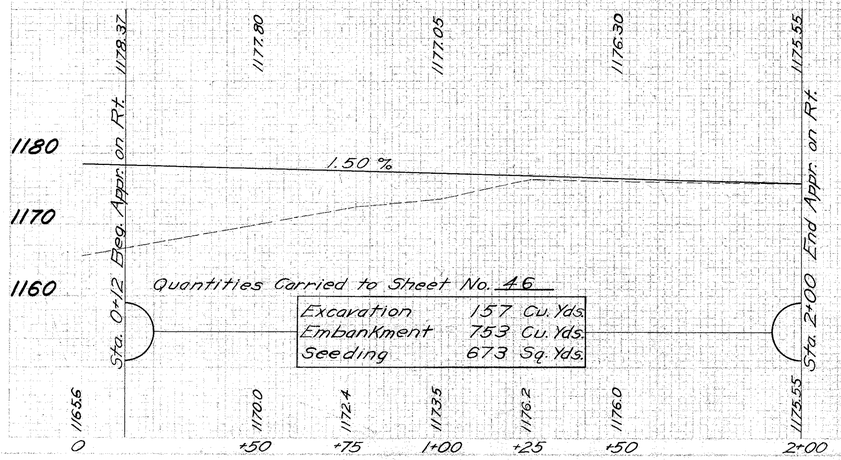
ESTIMATED QUANTITIES

T-35	2 " Asphaltic Conc. Surface Course	26.9	Cu. Yds.
B-119	7" Crushed Aggregate Base Course	98.6	Cu. Yds.
T-30	Bituminous Prime Coat	178	Gal's.
I-15	Circular Roadway Guard Rail	100	Lin. Ft.
I-15	Straight Roadway Guard Rail	12.5	Lin. Ft.
E-101	Compacted Subgrade	484	Sq. Yds.





27 A



Quantities Carried to Sheet No. 46

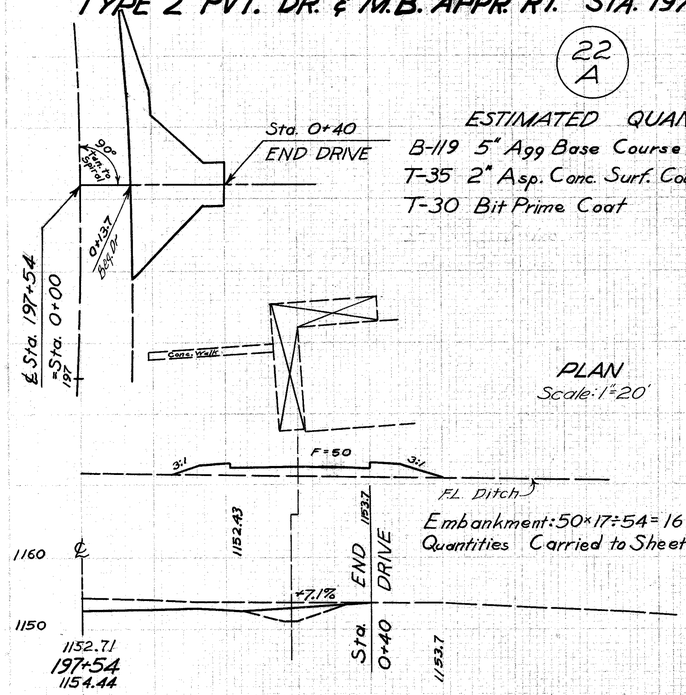
Excavation	157	Cu. Yds.
Embankment	753	Cu. Yds.
Seeding	673	Sq. Yds.

Seeding Width	Seeding Sq. Yd.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
10		33	0		
	158			59	19
47		31	20		
	233			39	106
37		11	94		
	126			5	146
54		0	221		
96					
61				0	274
		0	370		
				27	207
		48	3		
				27	1
		131	0		

ROAD APPROACH RT. STA. 215+50

TYPE 2 PVT. DR. & M.B. APPR. RT. STA. 197+54

22 A

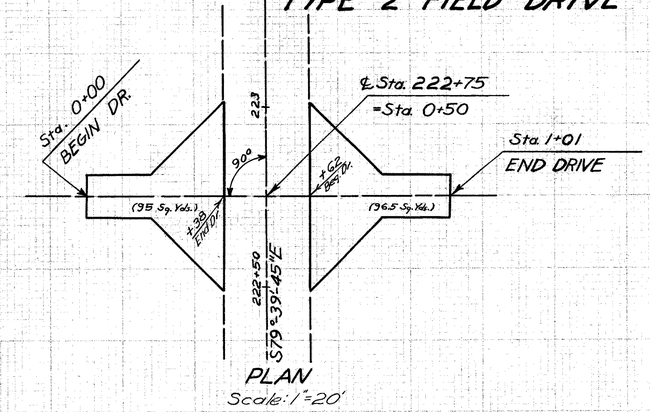


ESTIMATED QUANTITIES

B-119	5" Agg Base Course	13 Cu.Yd
T-35	2" Asp. Conc. Surf. Course	5.1 Cu.Yd
T-30	Bit Prime Coat	38 Gals.

Embankment: 50×17÷54 = 16 Cu.Yds.
Quantities Carried to Sheet No. 43

TYPE 2 FIELD DRIVE RT & LT. STA. 222+75

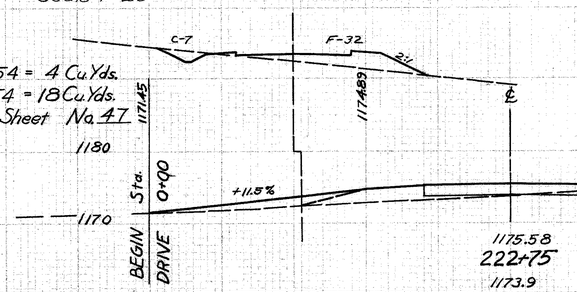


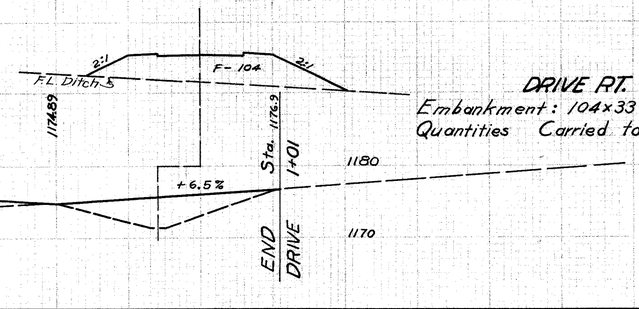
ESTIMATED QUANTITES

		DR. Lt.	DR. Rt.
B-119	6" Agg. Base Course	16 Cu.Yd.	16 Cu.Yd.

28 A 29 A

DRIVE LT.
Excavation: 7×30÷54 = 4 Cu.Yds.
Embankment: 32×30÷54 = 18 Cu.Yds.
Quantities Carried to Sheet No. 47

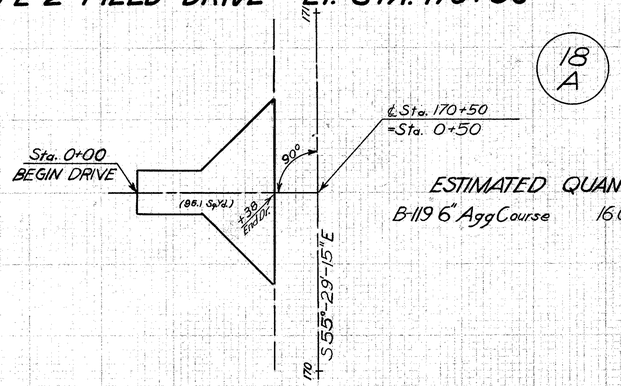




DRIVE RT.
Embankment: 104×33÷54 = 64 Cu.Yds.
Quantities Carried to Sheet No. 47

TYPE 2 FIELD DRIVE LT. STA. 170+50

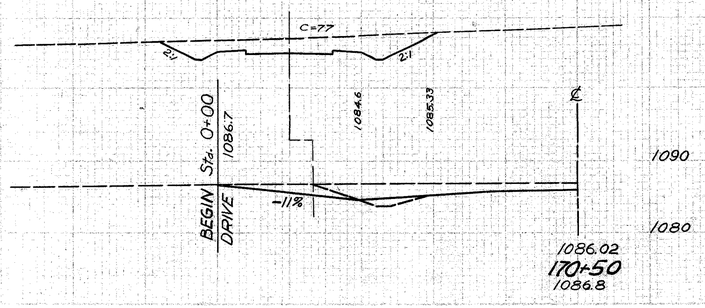
18 A



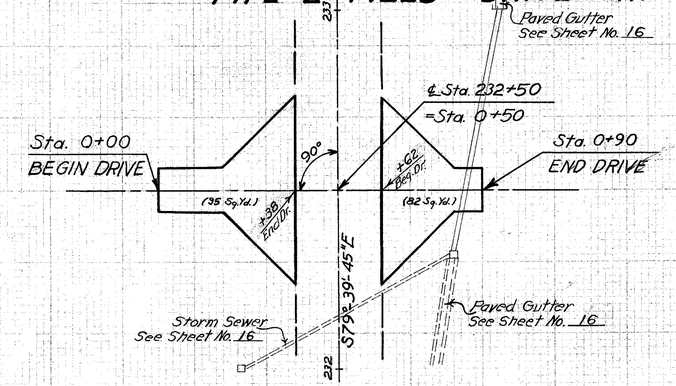
ESTIMATED QUANTITIES

B-119	6" Agg Course	16 Cu.Yds.

Excavation: 77×19÷54 = 27 Cu. Yds.
Quantities Carried to Sheet No. 38



TYPE 2 FIELD DRIVE RT. & LT. STA. 232+50

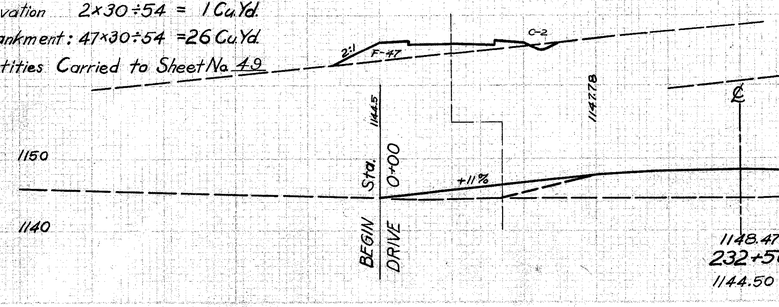


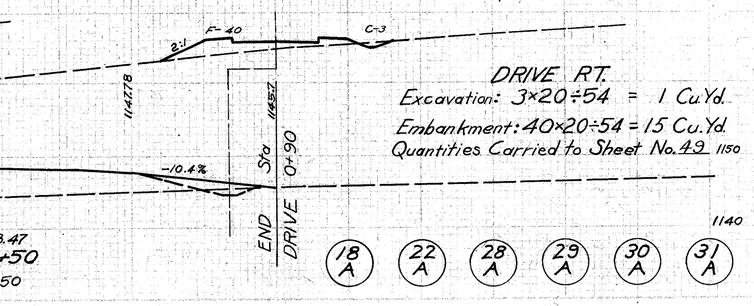
ESTIMATED QUANTITIES

		DR. LT.	DR. RT.
B-119	6" Agg Base Course	16 Cu.Yds.	14 Cu.Yds.
I-1	18" Drive Pipe	0	68 Lin. Ft.

30 A 31 A

DRIVE LT.
Excavation 2×30÷54 = 1 Cu.Yd.
Embankment: 47×30÷54 = 26 Cu.Yd.
Quantities Carried to Sheet No. 49





DRIVE RT.
Excavation: 3×20÷54 = 1 Cu.Yd.
Embankment: 40×20÷54 = 15 Cu.Yd.
Quantities Carried to Sheet No. 49

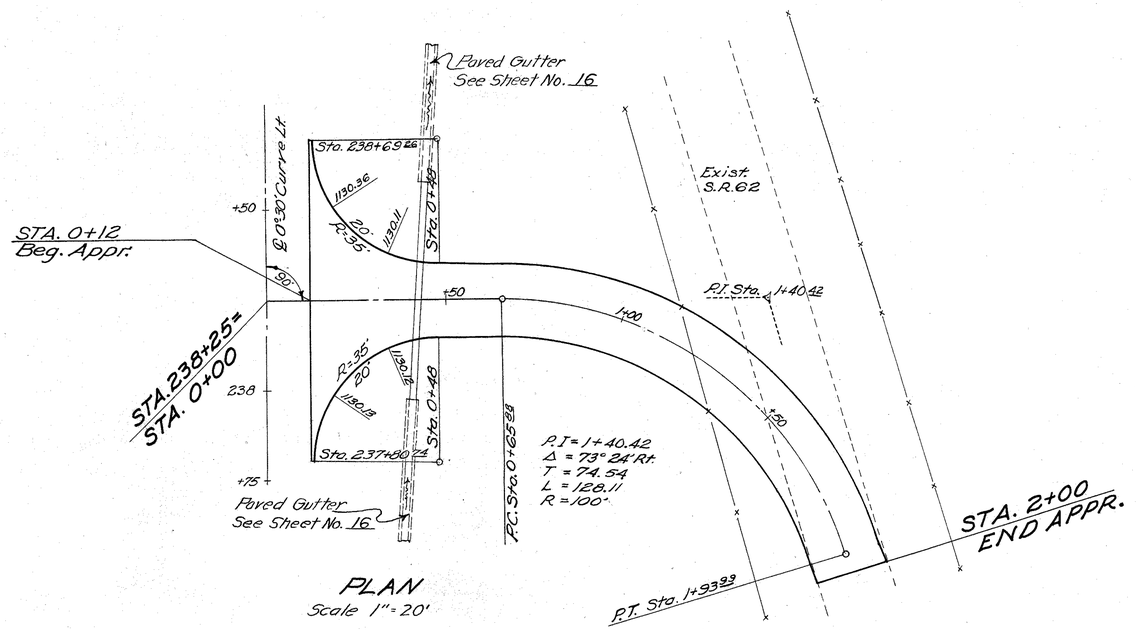
18 A 22 A 28 A 29 A 30 A 31 A

APPROACHES: - STA. 170+50 LT. - STA. 197+54 RT. - STA. 222+75 RT. & LT. - STA. 232+50 RT. & LT.

REG. NO. DIVISION	STATE	PROJECT	TYPE PROJ.
2	OHIO		

88
128

HOL-62-(21.08-21.51)



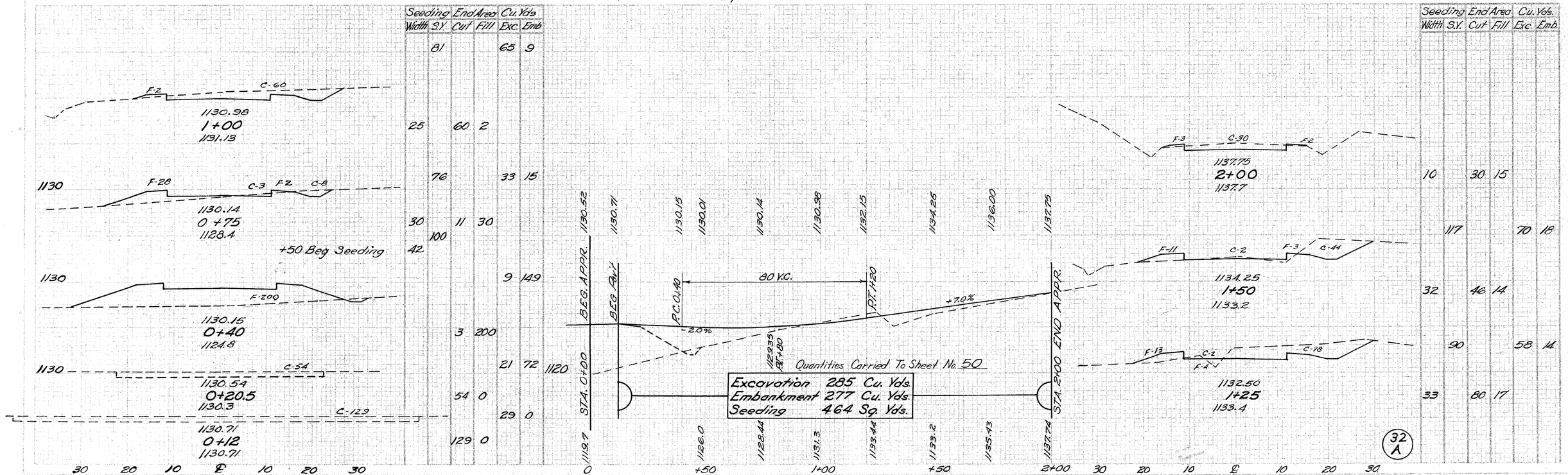
PLAN
Scale 1" = 20'

32
A

ESTIMATED QUANTITIES

T-35 Aspholtic Concrete Surface Course (2")	26.9 Cu.Yd.
T-30 Bituminous Prime Coat	178 Gal's.
B-119 Crushed Aggregate Base Course (7")	98.6 Cu.Yd.
I-1 27" Drive Pipe	60 Lin.Ft.
E-101 Compacted Subgrade	484 Sq.Yds.

For Typical Section see sheet No. 82

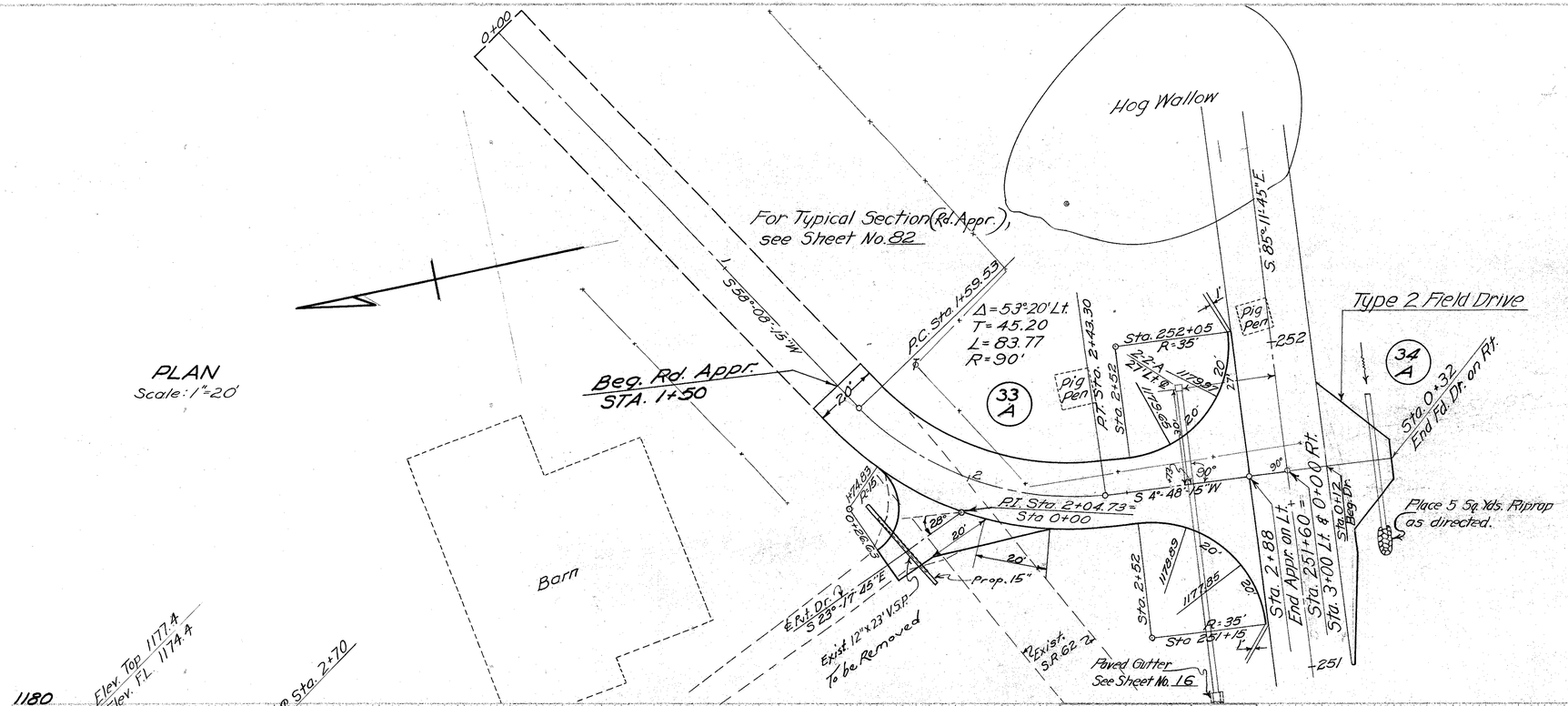


R.D. APPR. RT. STA. 238+25

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

89
128

H.Q.L - 62-(21.08-21.51)



34 A

ESTIMATED QUANTITIES

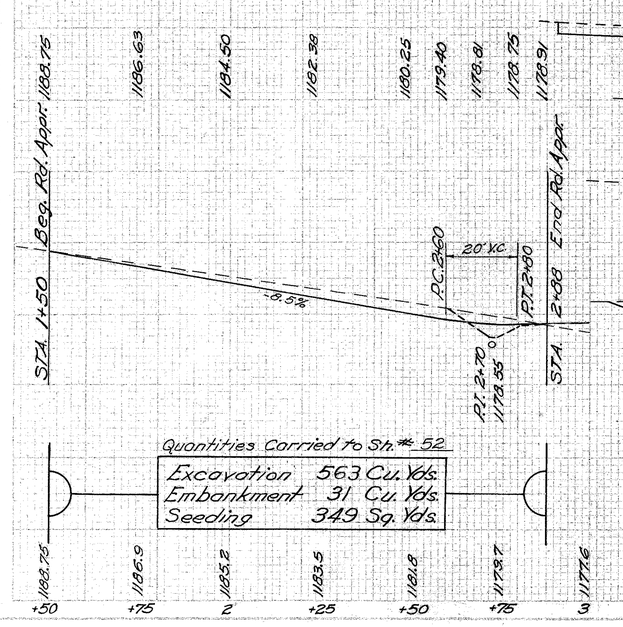
B-119 Aggregate	14 Cu. Yds.
I-1 18" Drive Pipe	42 Lin. Ft.
T-35, 2" Asph. Conc. Surf. Course (M.B. Only)	1.7 Cu. Yds.
Riprap	5 Sq. Yds.

33 A

ESTIMATED QUANTITIES.

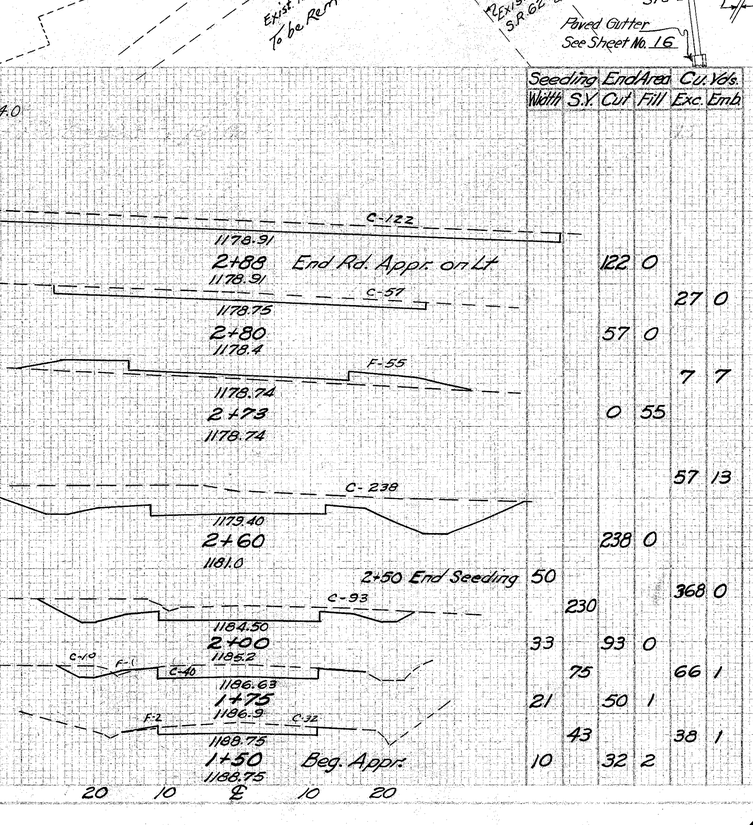
T-35 2" Asphaltic Conc. Surf. Course.	26.4 Cu. Yds.
T-30 Bituminous Prime Coat	172 Gals.
B-119 Crushed Aggr. Base Course.	90 Cu. Yds.
I-1 - 18" Drive Pipe	92 Lin. Ft.
I-1 - 15" Drive Pipe	32 Lin. Ft.
I-8 - 2-2-A C.B.	1 Each
E-12 - Pipe Removed (15" & Under)	23 Lin. Ft.
E-101 - Compacted Subgrade	375 Sq. Yds.

18" DRIVE PIPE AT STA. 2+73



Quantities Carried to Sh. # 52

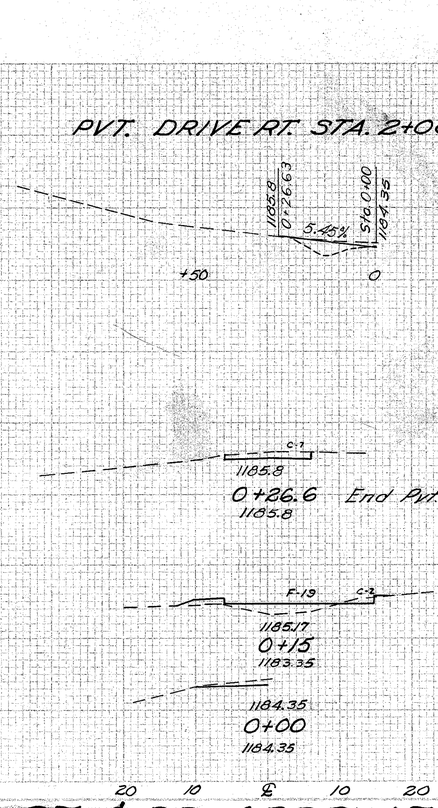
Excavation	563 Cu. Yds.
Embankment	31 Cu. Yds.
Seeding	349 Sq. Yds.

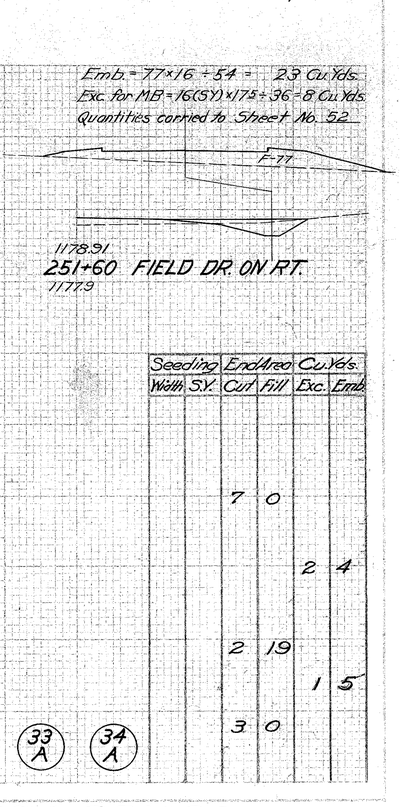


Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
		122	0		
				27	0
		57	0		
				7	7
		0	55		
				57	13
		238	0		
				368	0
50	230				
33		93	0		
75				66	1
21		50	1		
43				38	1
10		32	2		

Emb. = 77 × 16 ÷ 54 = 23 Cu. Yds.
Exc. for MB = 16(SY) × 175 ÷ 36 = 8 Cu. Yds.
Quantities carried to Sheet No. 52

PVT. DRIVE RT. STA. 2+00





Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
		7	0		
				2	4
		2	19		
				1	5
		3	0		

33 A 34 A

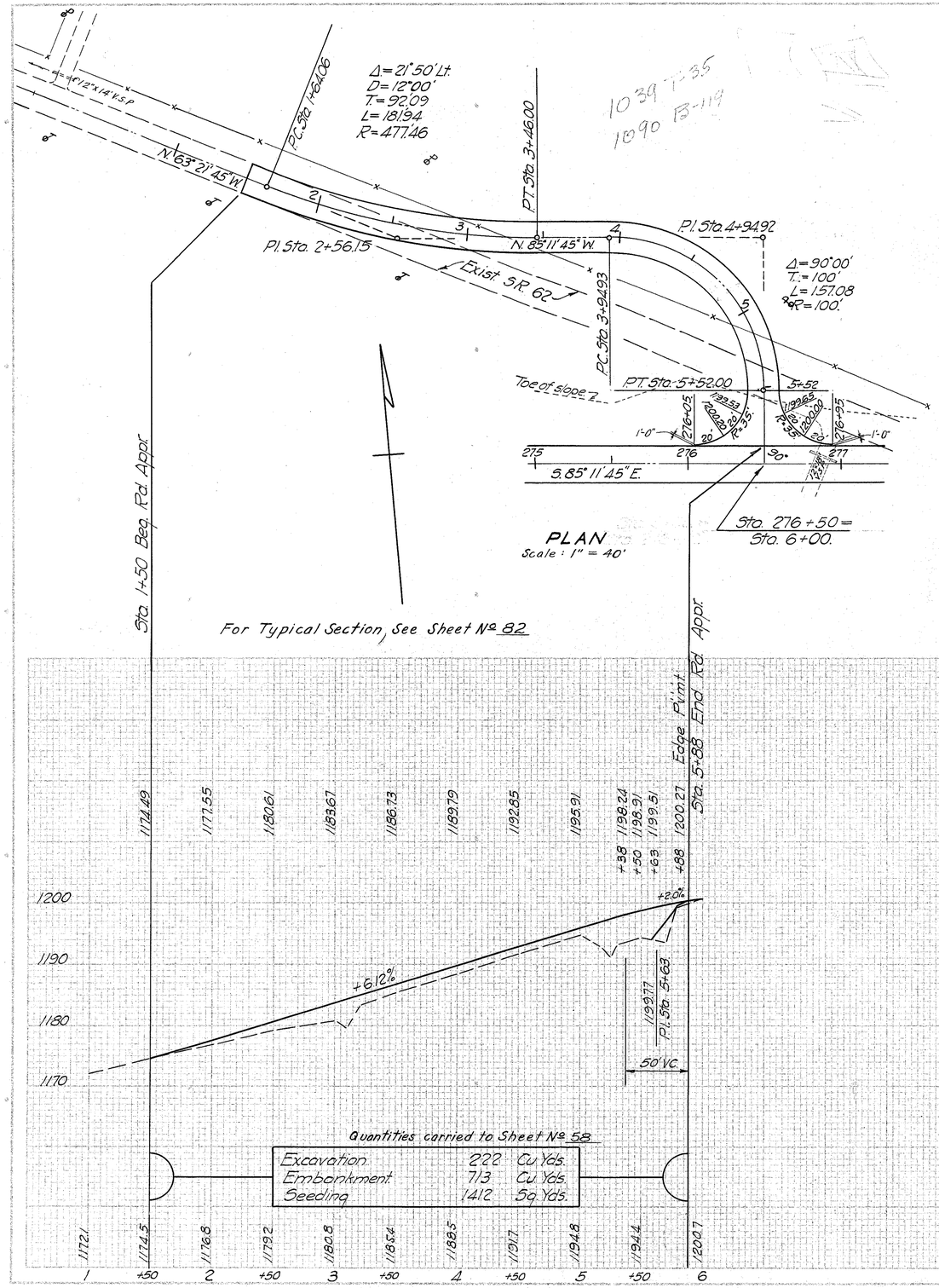
20 10 ℄ 10 20

F.D. & M.B. RT. & RD. APPR. LT STA. 251+60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

90
128

HOL-62-(21.08-21.51).

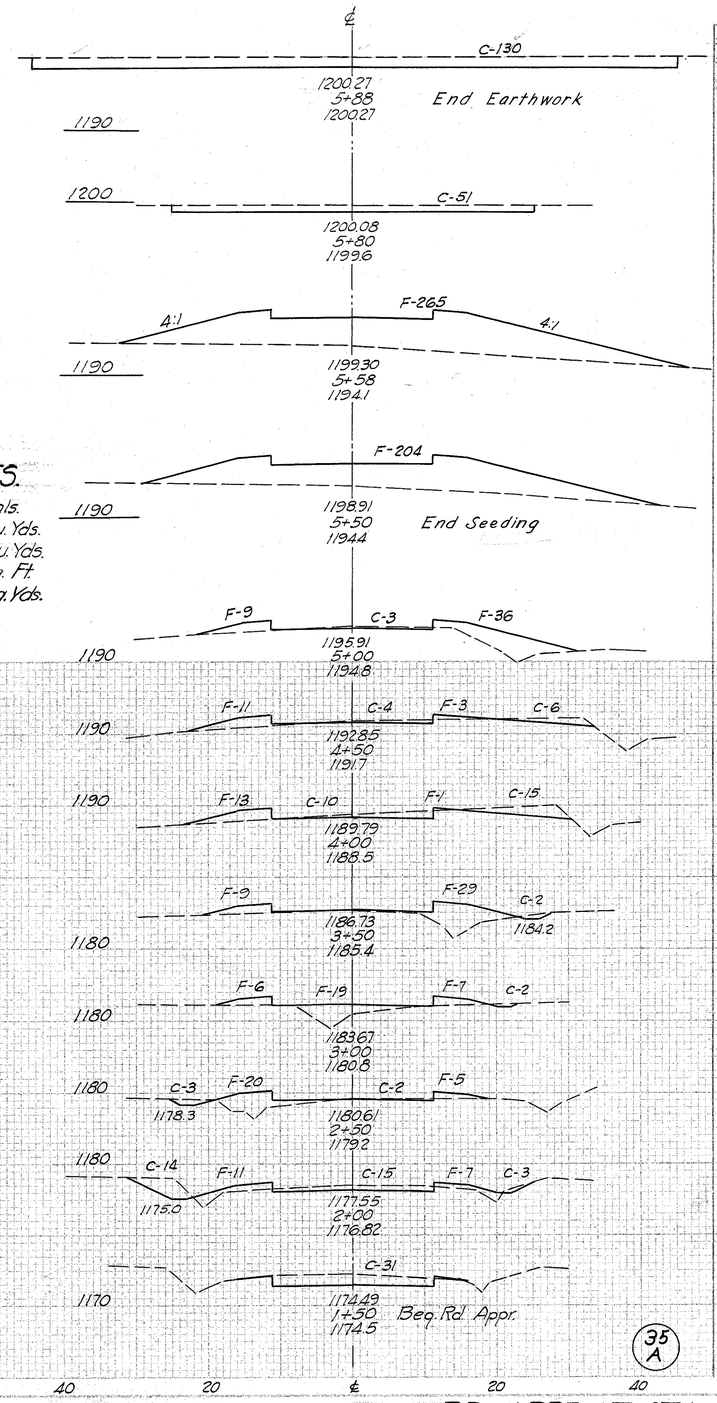


Quantities carried to Sheet No. 58		
Excavation	222	Cu. Yds.
Embankment	713	Cu. Yds.
Seeding	1412	Sq. Yds.

35
A

ESTIMATED QUANTITIES.

T-30 Bit. Prime Coat	382	Gals.
B-119 Aggr. Base Course.	212.0	Cu. Yds.
T-35 Asph. Conc. Surf. Course.	57.8	Cu. Yds.
E-12 Pipe Removed (12")	18	Lin. Ft.
E-101 Compacted Subgrade	1040	Sq. Yds.



Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		130	0		
				27	0
		51	0		
				21	108
		0	265		
				0	70
54		0	204		
	242			3	231
33		3	45		
	194			12	55
37		10	14		
	200			32	26
35		25	14		
	181			25	48
30		2	38		
	147			4	65
23		2	32		
	136			6	53
26		5	25		
	178			34	40
38		32	18		
	134			58	17
10		31	0		

R.D. APPR. LT. STA. 276+50.

FED. RD. DIVISION	STATE	PROJECT	TYPE WORK
2	OHIO		

91/128

HOL-62-(21.08-21.51)

STA. 0+00
BEGIN APPR.

Slope Limits

1'-0"

282+14.28
R-40'

282+12.73
R-40'

Existing S.R. 62

℄ STA. 281+64.50 = STA. 2+00

Sta. 1+88 = End Appr. Pavmt.

1-46.28

1197.43

1197.07

1197.59

FL. 1194.0

1197.77

2-52.28

Exist. 12"x36" V.S.P.

To be removed as Pavmt. Removal.

0+50

+50

18"C.M.P.

5'

8.5'

9'

1

S 5°-38'-15" W

Sta. 2+12 - Beg. Appr. Pavmt.

3

Place 5 Sq. Yds. Riprap as directed

90°-00'

1198.02

1197.13

1197.74

1+47.71

R-40'

2+53.72

FL. 1193.6

Ex. 57 12"x36" V.S.P.

STA. 3+13
END APPR.

Slope Limits

R-40'
281+16.27

R-40'
281+14.72

Sta. 281+37
40' Rt.

Place 8 Sq. Yds. Riprap as directed.

Sta. 281+29
FL. 1190.0

S 83°-11'-45" E

281

Pavement Ditch

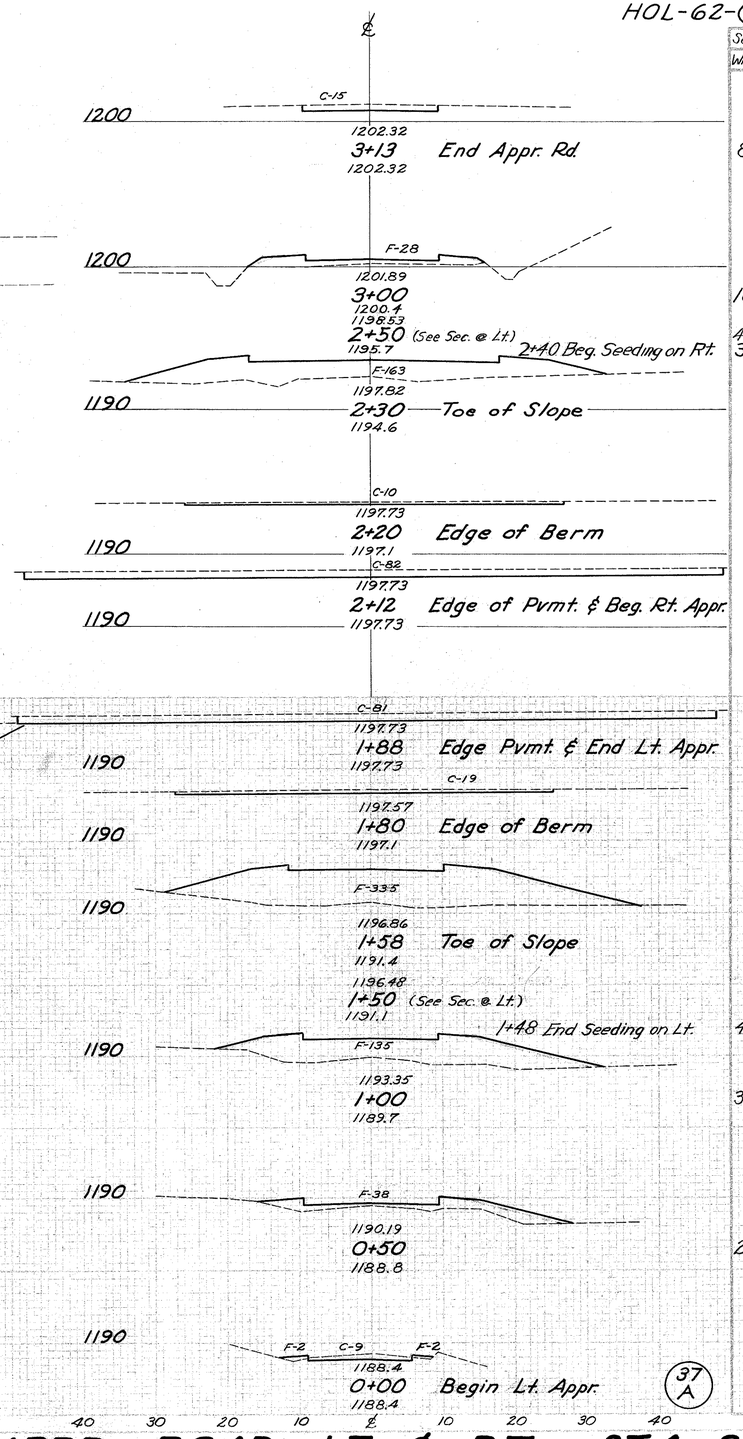
PLAN
Scale 1"= 20'

ESTIMATED QUANTITIES

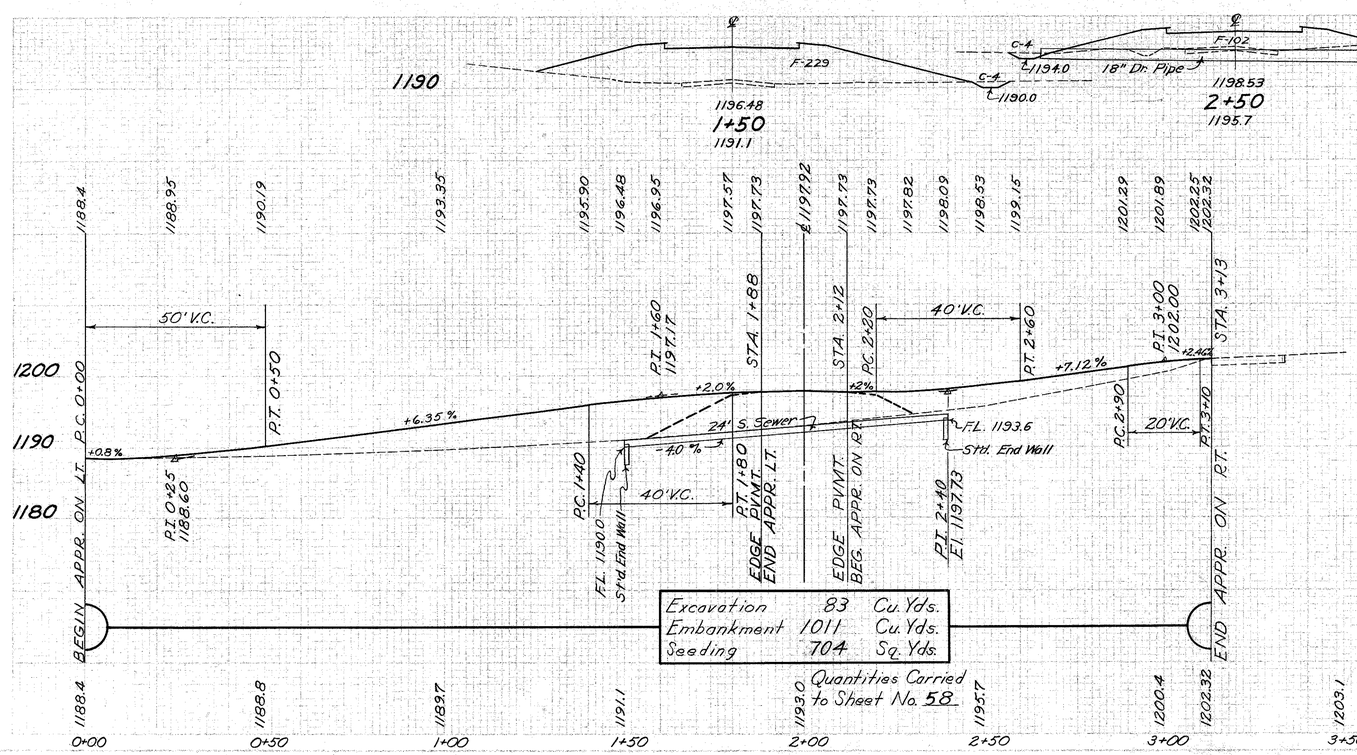
T-35	2" Asphaltic Concrete Surface Course.	41	Cu. Yds.
T-30	Bituminous Prime Coat.	269	Gals.
B-119	7" Crushed Aggregate Base.	150	Cu. Yds.
I-1	18" Pipe for Driveways	52	Lin. Ft.
I-2	24" Pipe for Storm Sewers (Class "A" under Pvmt.)	90	Lin. Ft.
S-1	Concrete for Structures (Class "E")	0.80	Cu. Yds.
I-10	Riprap	13	Sq. Yds.

37/A

FOR TYPICAL SECTION, SEE TWP. RD. APPR. STA. 163+00 ON SHEET NO. 81



Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
8		15	0		
	17			4	7
16		0	28		
	178			20	120
48	48	22	102		
38				8	98
		0	163		
				2	30
		10	0		
				14	0
		82	0		
	0			0	0
		81	0		
				14	0
		19	0		
				8	136
		0	335		
0				1	84
		4	229		
40					
	200			4	337
35		0	135		
	167			0	160
		0	38		
25					
	94			8	39
9		9	4		



Excavation	83	Cu. Yds.
Embankment	1011	Cu. Yds.
Seeding	704	Sq. Yds.

Quantities Carried to Sheet No. 58

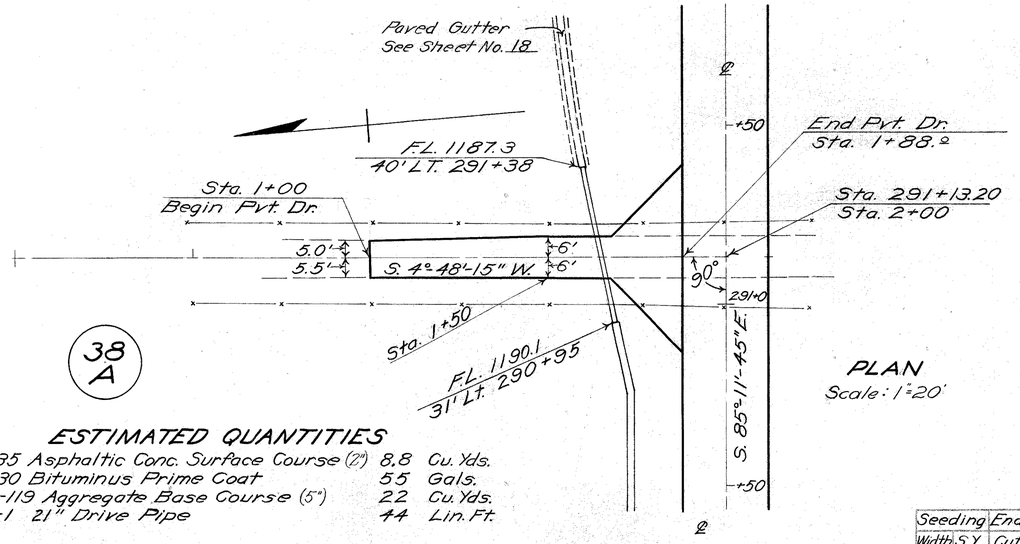
37/A

APPR. ROAD LT. & RT. STA 281+64.50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

92
128

HOL-62-(21.08-21.51)

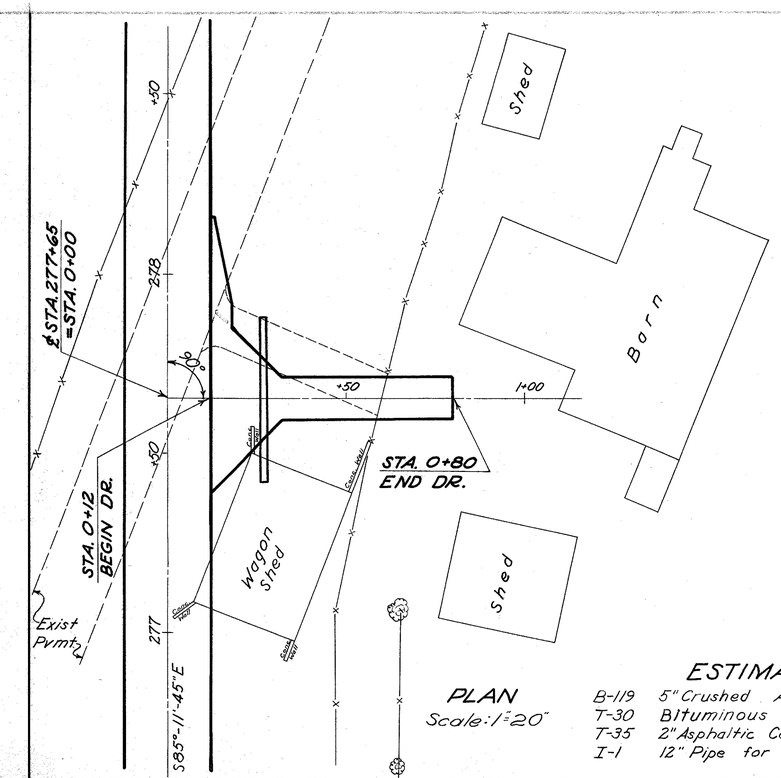


38
A

PLAN
Scale: 1"=20'

ESTIMATED QUANTITIES

T-35 Asphaltic Conc. Surface Course (2")	8.8	Cu. Yds.
T-30 Bituminus Prime Coat	55	Gals.
B-119 Aggregate Base Course (5")	22	Cu. Yds.
I-1 21" Drive Pipe	44	Lin. Ft.

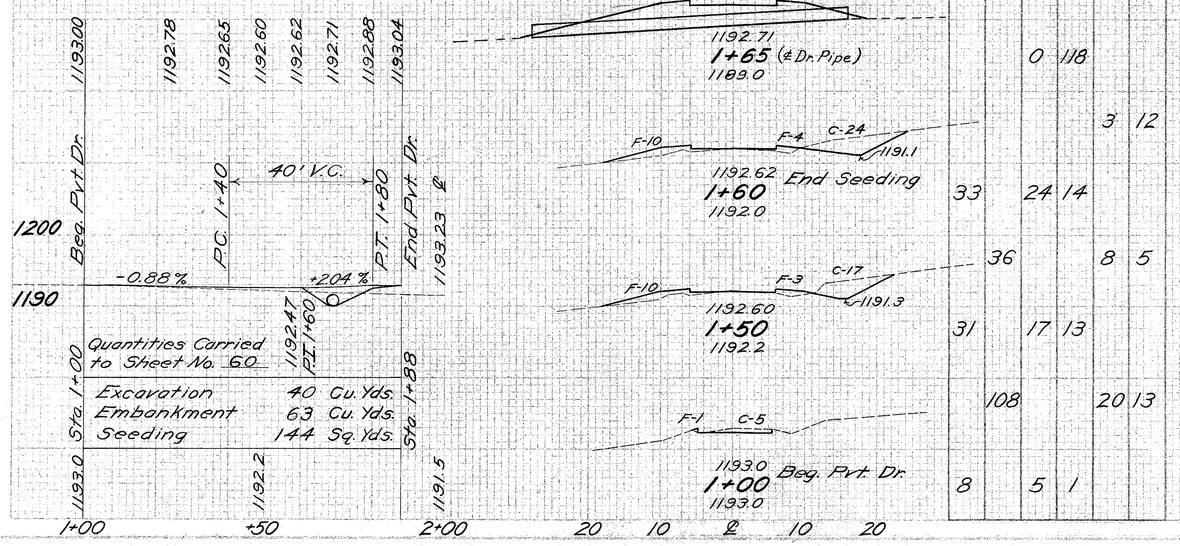


36
A

PLAN
Scale: 1"=20'

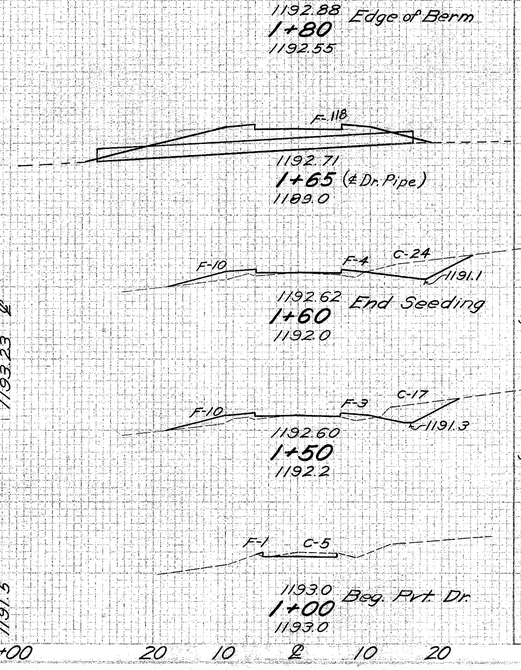
ESTIMATED QUANTITIES

B-119	5" Crushed Aggregate Base.	21	Cu. Yds.
T-30	Bituminous Prime Coat.	52	Gals.
T-35	2" Asphaltic Concrete Surface Course.	8.4	Cu. Yds.
I-1	12" Pipe for Driveways.	46	Lin. Ft.

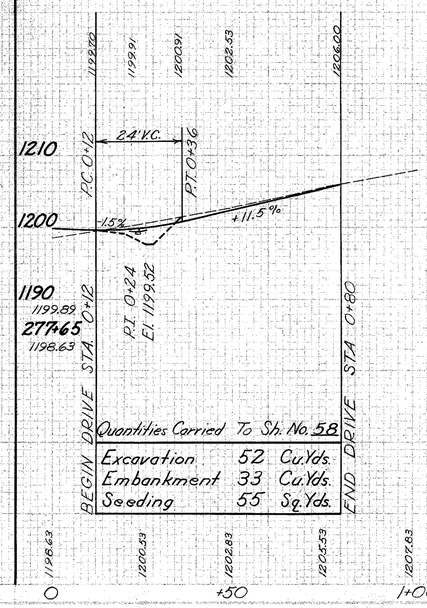


Quantities Carried to Sheet No. 60

Excavation	40	Cu. Yds.
Embankment	63	Cu. Yds.
Seeding	144	Sq. Yds.

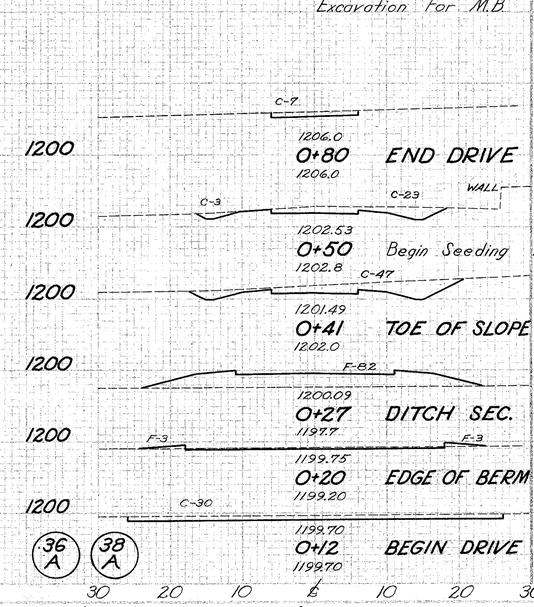


Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
		32	0		
				6	0
		11	0		
				3	33
		0	118		
				3	12
	33	24	14		
				8	5
	36				
	31	17	13		
				20	13
	108				
	8	5	1		



Quantities Carried To Sh. No. 58

Excavation	52	Cu. Yds.
Embankment	33	Cu. Yds.
Seeding	55	Sq. Yds.



	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
Excavation For M.B.					3	0
0+80 END DRIVE			8	7	0	
0+50 Begin Seeding		55			18	0
0+41 TOE OF SLOPE			25	26	0	
0+27 DITCH SEC.					12	0
0+20 EDGE OF BERM			47	0		
0+12 BEGIN DRIVE					12	21
				0	82	
					0	11
				0	6	
					7	1
			30	0		

PVT. DR. LT. STA. 291+13.20 & PVT. DR. & M.B. RT. STA. 277+65.00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

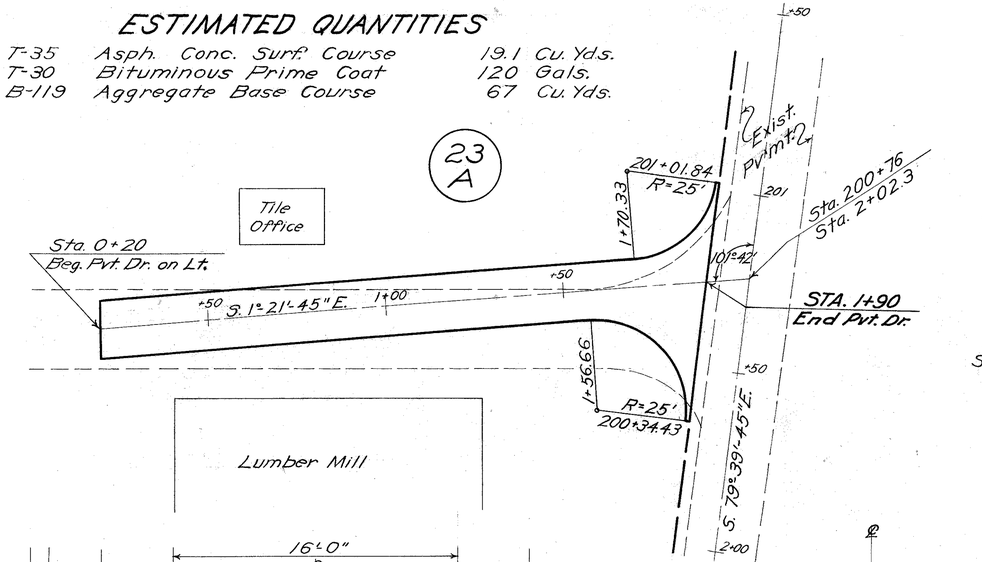
93
128

HOL-62-(21.08-21.51)

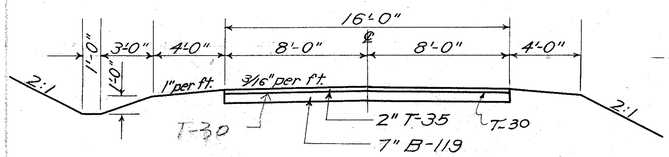
ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course	19.1 Cu. Yds.
T-30	Bituminous Prime Coat	120 Gals.
B-119	Aggregate Base Course	67 Cu. Yds.

23 A



PLAN
Scale: 1"=20'



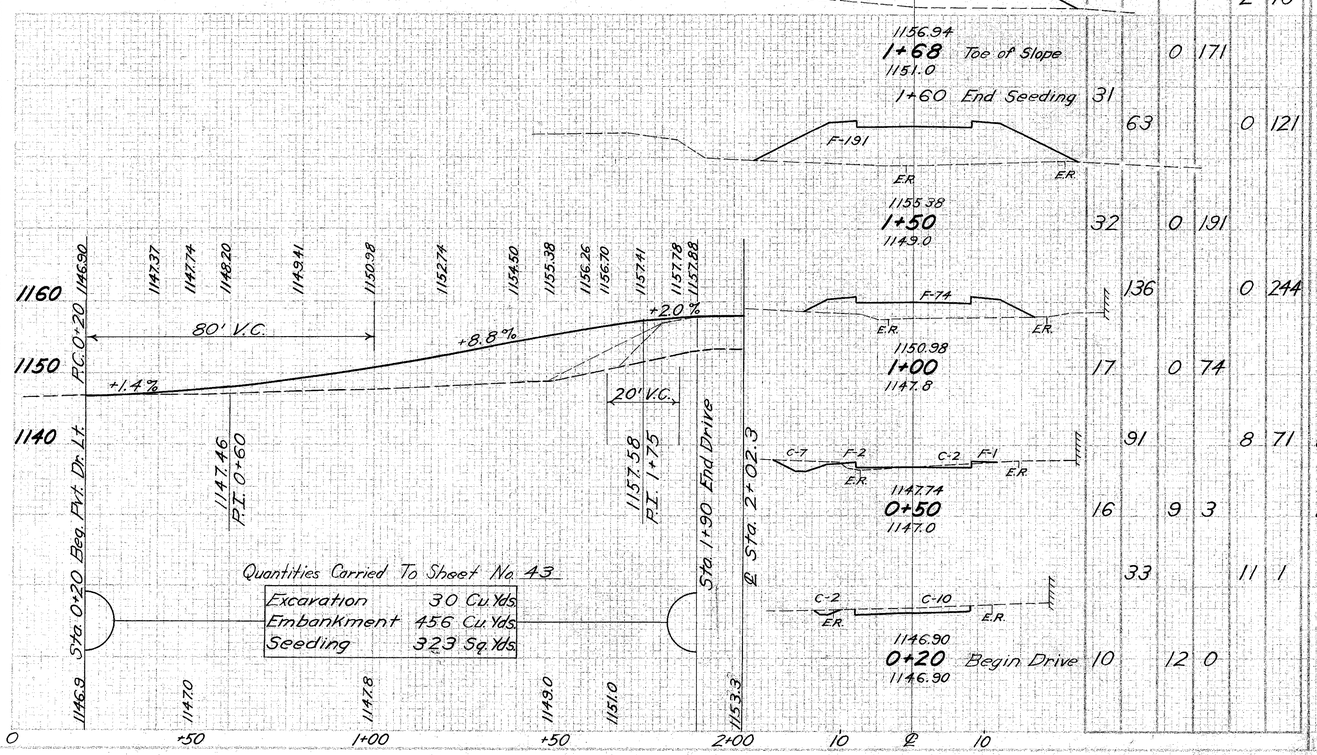
TYPICAL SECTION FOR PRIVATE DRIVE
STA. 200+76

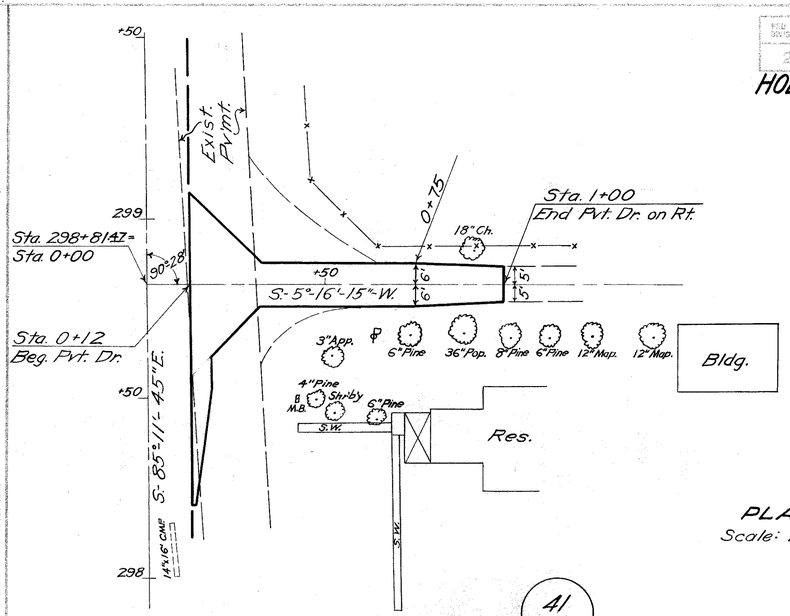
	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
1157.88						
1+90 End Pvt. Dr. 1150			40	0		
1157.88						
C-6					6	0
1157.64						
1+80 Edge of Berm			6	0		
1157.2 1150						
F-171					2	19
1156.94						
1+68 Toe of Slope			0	171		
1151.0						
1+60 End Seeding	31			63	0	121
F-191						
E.R. E.R.						
1155.38						
1+50	32		0	191		
1149.0						
F-74				136	0	244
E.R. E.R.						
1150.98						
1+00	17		0	74		
1147.8						
C-7 F-2 C-2 F-1				91	8	71
E.R. E.R.						
1147.74						
0+50	16		9	3		
1147.0						
C-2 C-10				33	11	1
E.R. E.R.						
1146.90						
0+20 Begin Drive	10		12	0		
1146.90						

C-40

Quantities Carried To Sheet No. 43

Excavation	30 Cu. Yds.
Embankment	456 Cu. Yds.
Seeding	323 Sq. Yds.





PLAN
Scale: 1"=20'

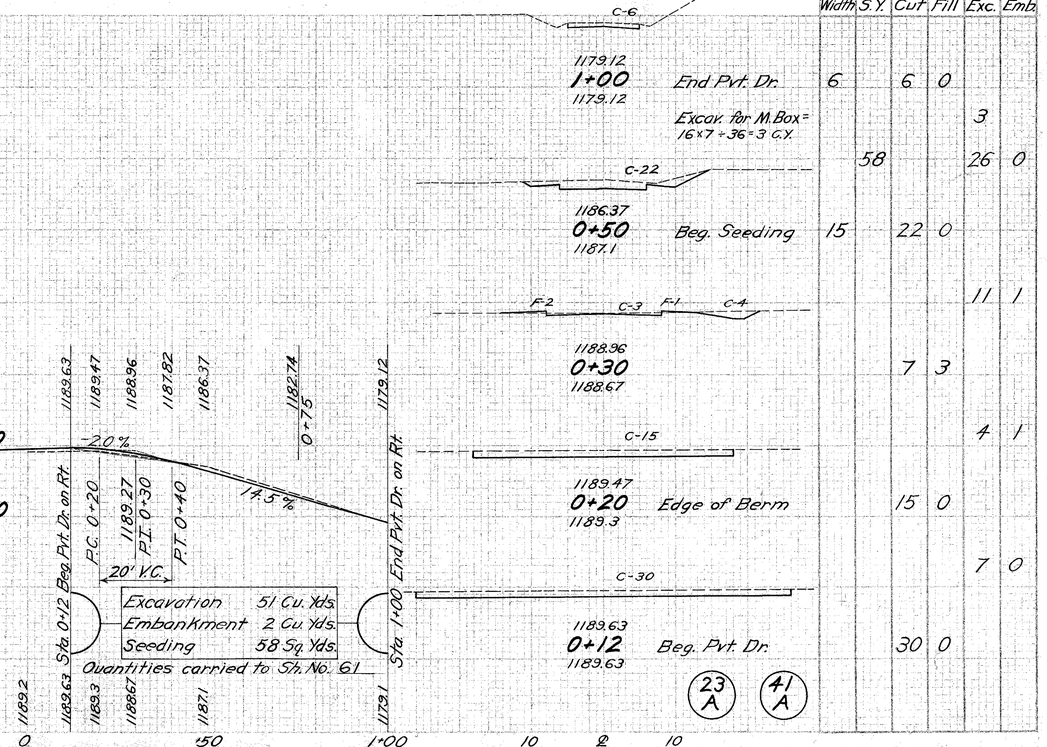
41 A

ESTIMATED QUANTITIES

T-35	Asph. Conc. Surf. Course	9.8 Cu Yds.
T-30	Bituminous Prime Coat	62.0 Gals.
B-119	Aggregate Base Course	24 Cu. Yds.

	Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
C-6						
1179.12						
1+00 End Pvt. Dr.	6		6	0		
1179.12						
Excav. for M. Box = 16x7÷36=3 C.Y.					3	
		58			26	0
C-22						
1186.37						
0+50 Beg. Seeding	15		22	0		
1187.1						
F-2 C-3 F-1 C-4					11	1
1188.96						
0+30			7	3		
1188.67						
C-15					4	1
1189.47						
0+20 Edge of Berm			15	0		
1189.3						
C-30					7	0
1189.63						
0+12 Beg. Pvt. Dr.			30	0		
1189.63						

Excavation 51 Cu. Yds.
Embankment 2 Cu. Yds.
Seeding 58 Sq. Yds.
Quantities carried to Sh. No. 61



23 A 41 A

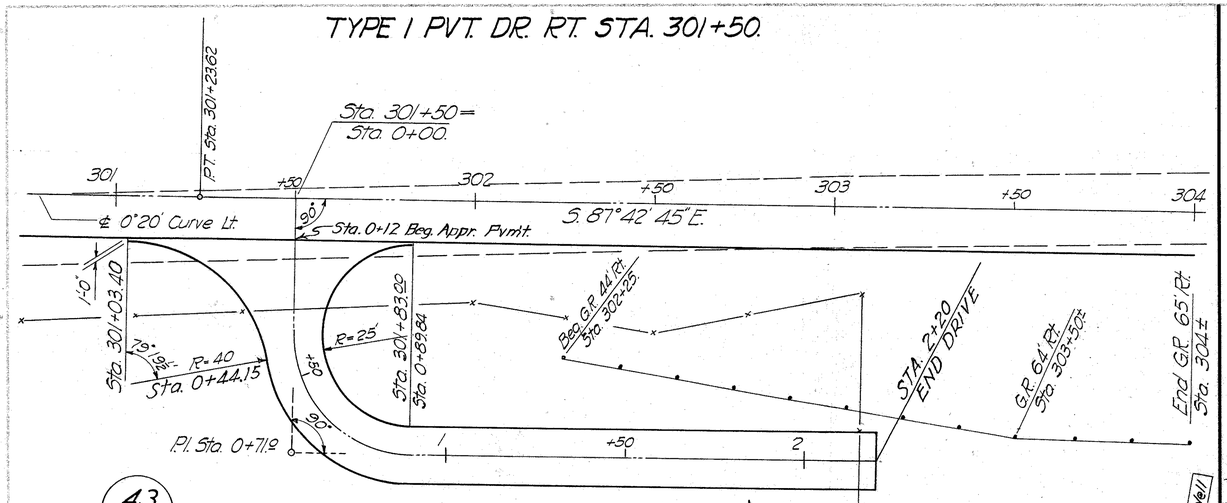
PVT. DRS: STA. 200+76 LT. & STA. 298+81.47 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

94
128

HOL-62-(21.08-21.51)

TYPE I PVT. DR. RT. STA. 301+50.



43 A

ESTIMATED QUANTITIES

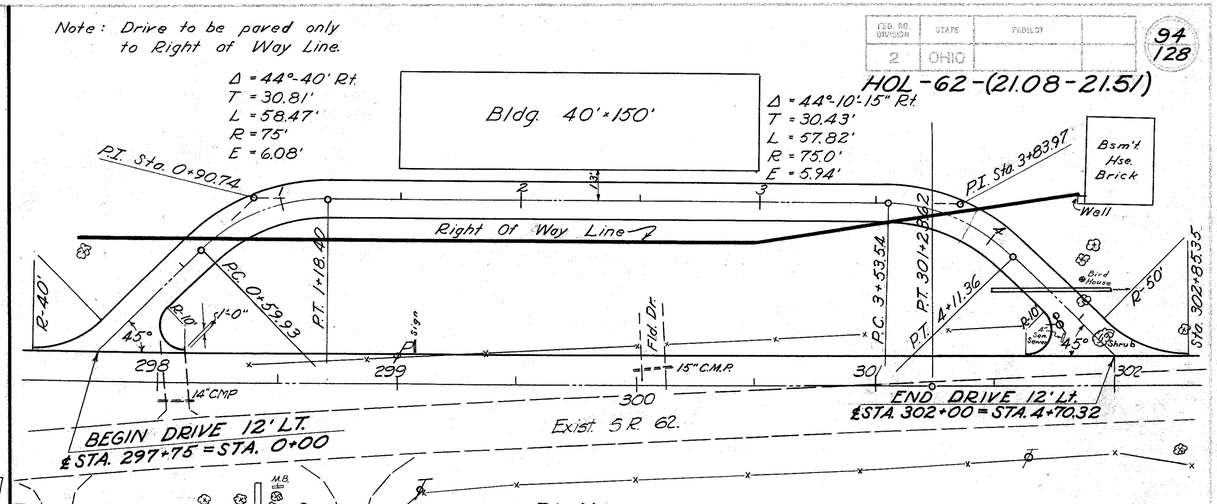
T-35	Asphaltic Conc. Surf. Course	23.6	Cu.Yds.
B-119	Agg. Base Course	88	Cu.Yds.
T-30	Bituminous Prime Coat	160	Gals.
I-15	Appr. Guard Rail	176	Lin. Ft.

PLAN
Scale 1"= 20'.

Quantities carried to sheet No. 19

For earthwork, see cross section sheets No. 61 & 62

Note: Drive to be paved only to Right of Way Line.



PLAN
Scale 1"=30'

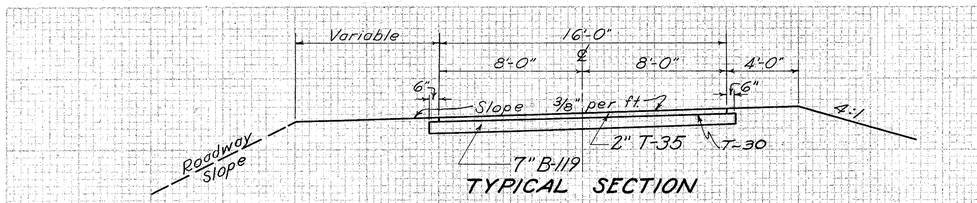
42 A

ESTIMATED QUANTITIES

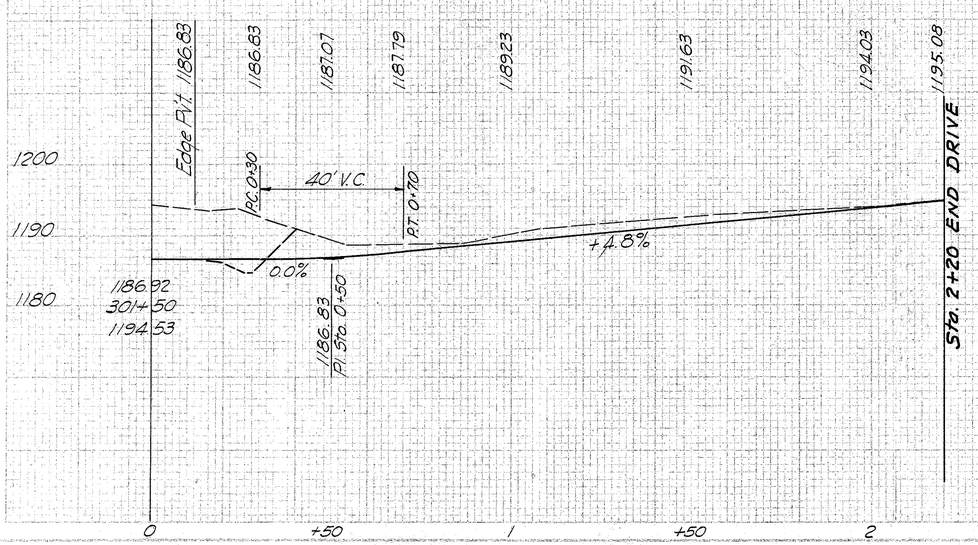
T-35	2" Asphaltic Concrete Surface Course.	18.5	Cu.Yds.
B-119	7" Crushed Aggregate Base Course.	69	Cu.Yds.
T-30	Bituminous Prime Coat.	117	Gals.
I-1	15" Drive pipe.	50	Lin.Ft.
E-12	Pipe removal. (15" and under)	32	Lin.Ft.

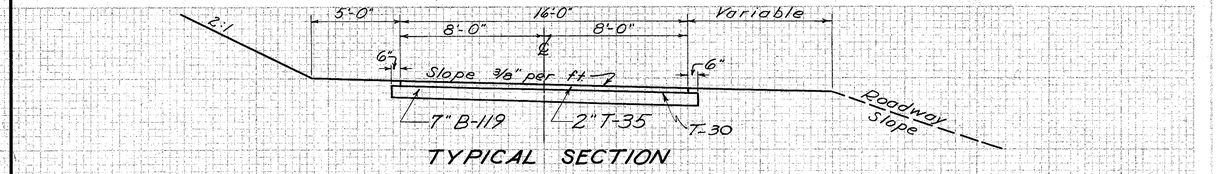
Quantities carried to sheet No. 19

For earthwork, see cross section sheet No. 61

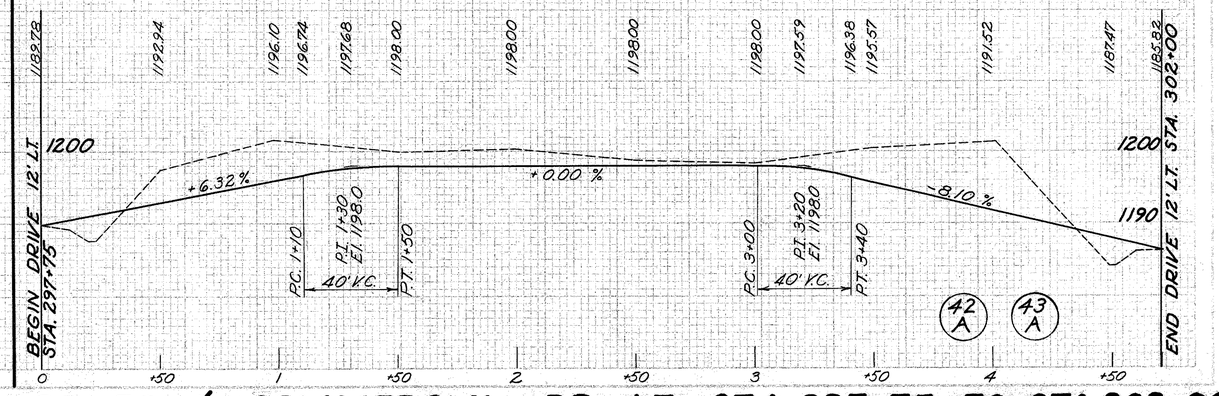


TYPICAL SECTION





TYPICAL SECTION



42 A 43 A

PVT. DR. RT. STA. 301+50 & COMMERCIAL DR. LT. STA. 297+75 TO STA. 302+00

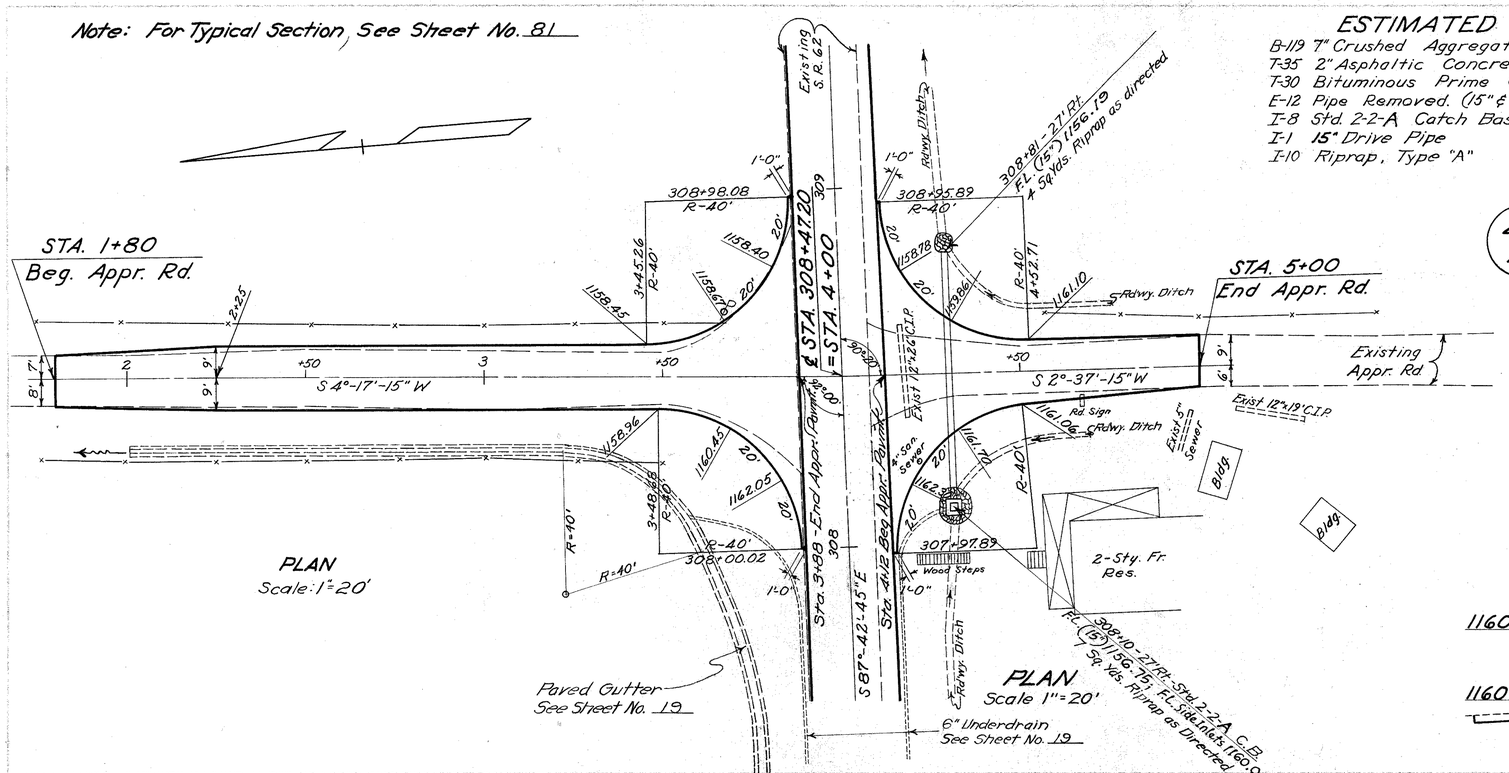
Note: For Typical Section, See Sheet No. 81

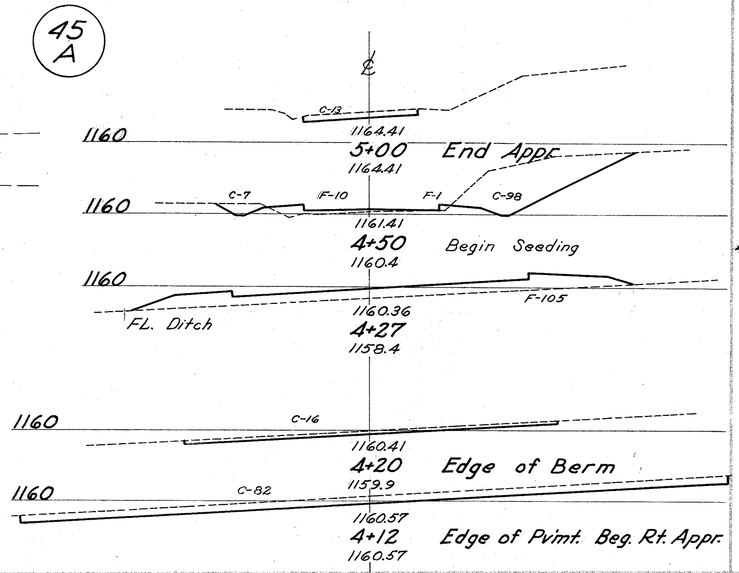
ESTIMATED QUANTITIES

B-119	7" Crushed Aggregate Base.	152	Cu. Yds.
T-35	2" Aspholtic Concrete Surface Course.	41.6	Cu. Yds.
T-30	Bituminous Prime Coat.	275	Gals.
E-12	Pipe Removed. (15" & Under)	26	Lin. Ft.
I-8	Std. 2-2-A Catch Basin	1	Ea.
I-1	15" Drive Pipe	70	Lin. Ft.
I-10	Riprap, Type "A"	11	Sq. Yds.

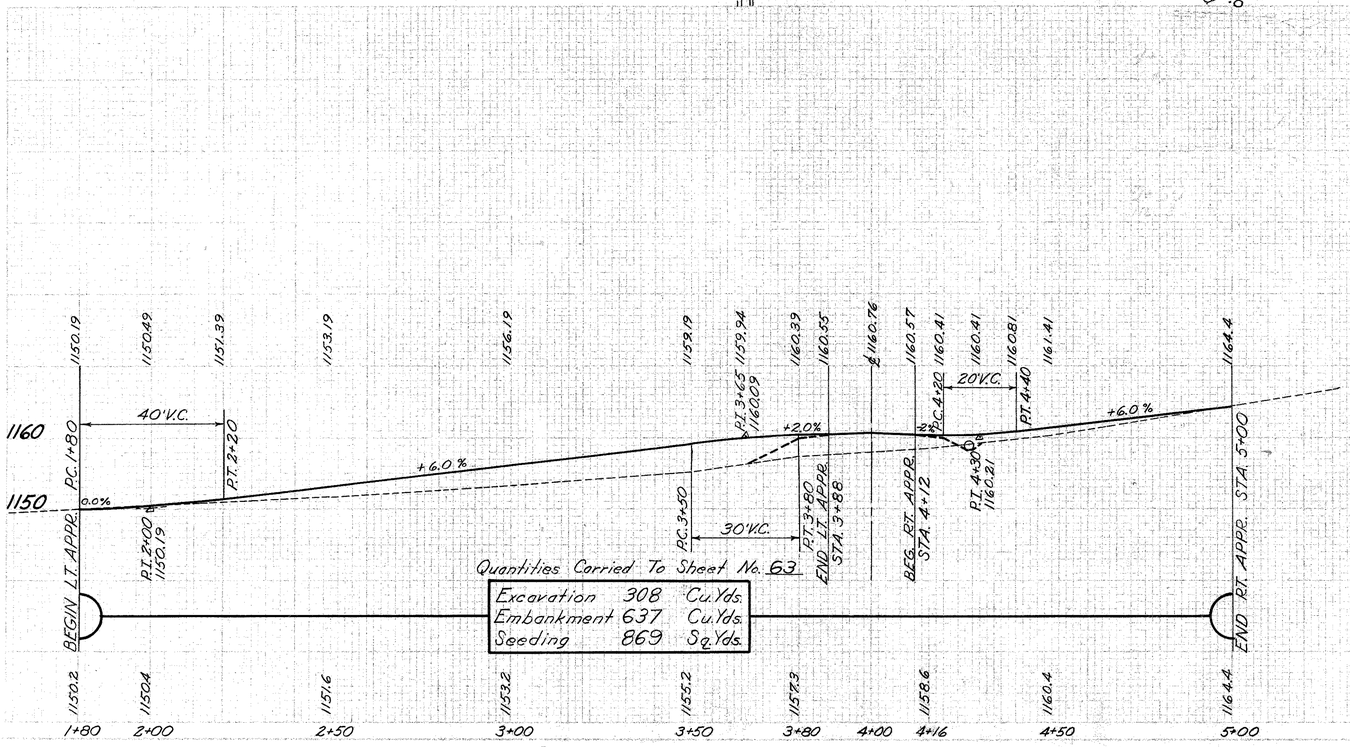
SHEET NO.	STATE	PROJECT	SHEET NO.
2	OHIO		95 128

HOL-62-(21.08-21.51)





Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
6		13	0		
	142			109	10
45		105	11		
				45	49
		0	105		
				2	14
		16	0		
				15	0
		82	0		
0				0	0
		81	0		
				15	0
		21	0		
				13	44
38		24	157		
24				12	90
50		20	166		
	272			22	286
48		4	143		
	214			36	165
29		35	35		
	208			102	46
46		75	15		
	71			44	6
18	80	43	0	64	0
0		0	0		



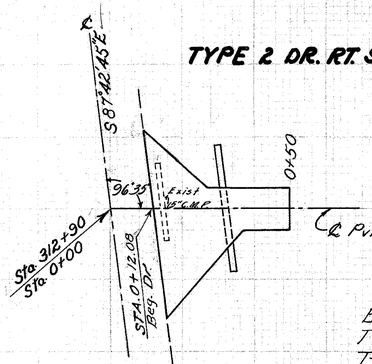
APPR. ROAD LT. & RT. STA. 308+47.20

FED. AID PROJECT NO.	STATE	PROJECT
2	OHIO	

96
128

HOL-62-(21.08-21.51)

TYPE 2 DR. RT. STA. 312+90



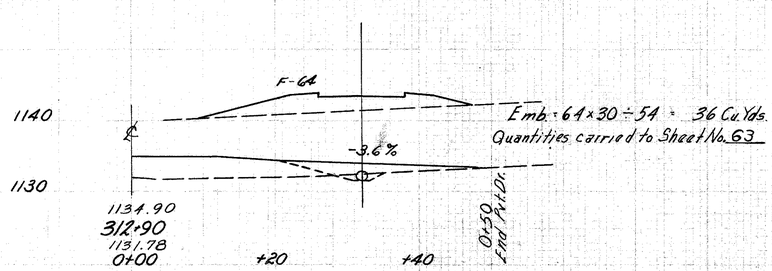
PLAN
Scale: 1"=20'

46
A

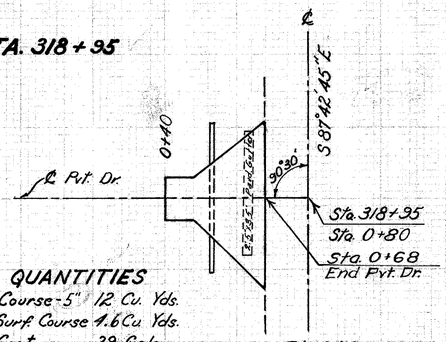
ESTIMATED QUANTITIES

B-119	Agg. Base Course 5"	14 Cu. Yds.
T-35	Asp. Conc. Surf. Course 2"	5.5 Cu Yds.
T-30	Bit. Prime Coat	35 Gals.
E-12	Pipe Removal (15"ø under)	23 Lin. FT.
I-1	18" Drive Pipe	40 Lin. FT.

ed



TYPE 2 PVT. DR. LT. STA. 318+95



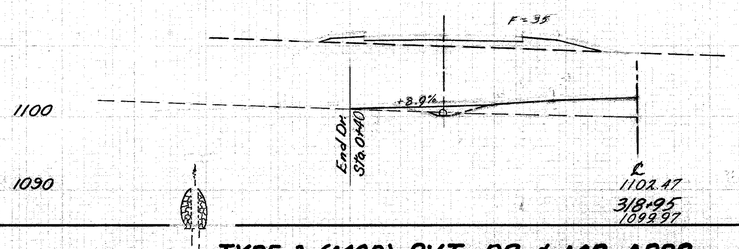
PLAN
Scale: 1"=20'

47
A

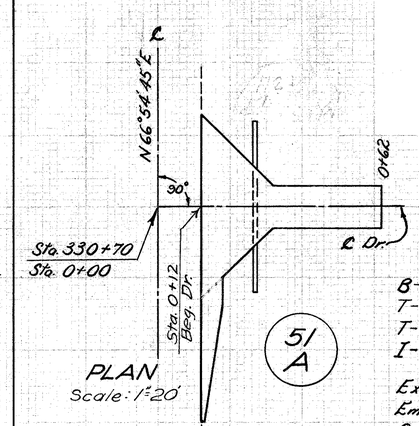
ESTIMATED QUANTITIES

B-119	Agg. Base Course-5"	12 Cu. Yds.
T-35	Asp. Concr. Surf. Course	4.6 Cu. Yds.
T-30	Bit. Prime Coat	29 Gals.
E-8	Rem. of Existing Pav't. (Gutter)	10 Sq. Yds.
I-1	12" Drive Pipe	42 Lin. Ft.

Emb. = 35 x 20 ÷ 54 = 13 Cu. Yds.
Quantities carried to sheet No. 64



TYPE 2 F.O. DR. & MB. APPR. RT. STA. 330+70



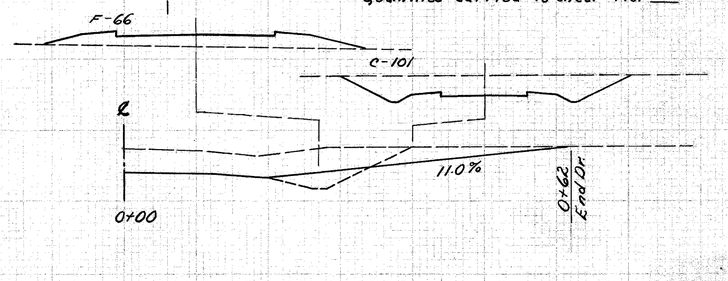
PLAN
Scale: 1"=20'

51
A

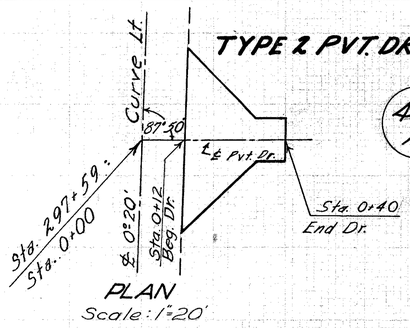
ESTIMATED QUANTITIES

B-119	Agg. Base Course-5"	18 Cu. Yds.
T-35	Asp. Concr. Surf. Course	7 Cu. Yds.
T-30	Bit. Prime Coat	44 Gals.
I-1	12" Drive Pipe	48 Lin. Ft.

Excav. = 101 x 28 ÷ 54 = 53 Cu. Yds.
Emb. = 66 x 14 ÷ 54 = 17 Cu. Yds.
Quantities carried to sheet No. 65



TYPE 2 PVT. DR. RT. STA. 297+59



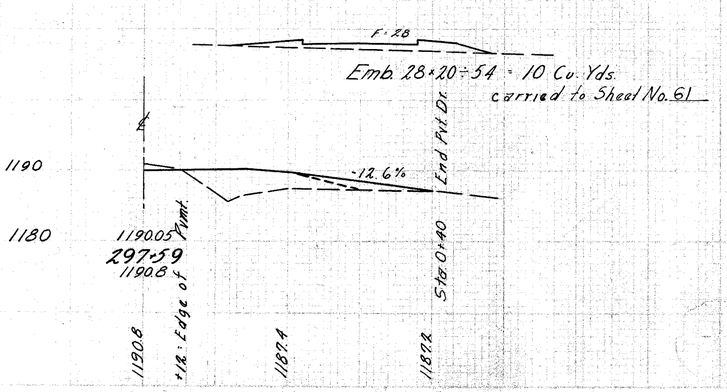
PLAN
Scale: 1"=20'

40
A

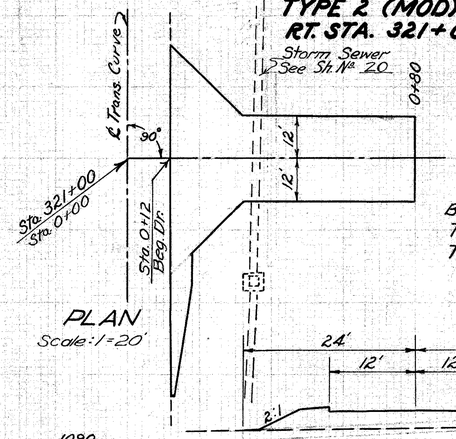
ESTIMATED QUANTITIES

B-119	Agg. Base Course 5"	8 Cu Yds.
T-35	Asp. Conc. Surf. Course 2"	4.5 Cu Yds.
T-30	Bit. Prime Coat	29 Gals.

Quantities carried to Sheet No. 61



TYPE 2 (MOD) PVT. DR. & MB. APPR. RT. STA. 321+00

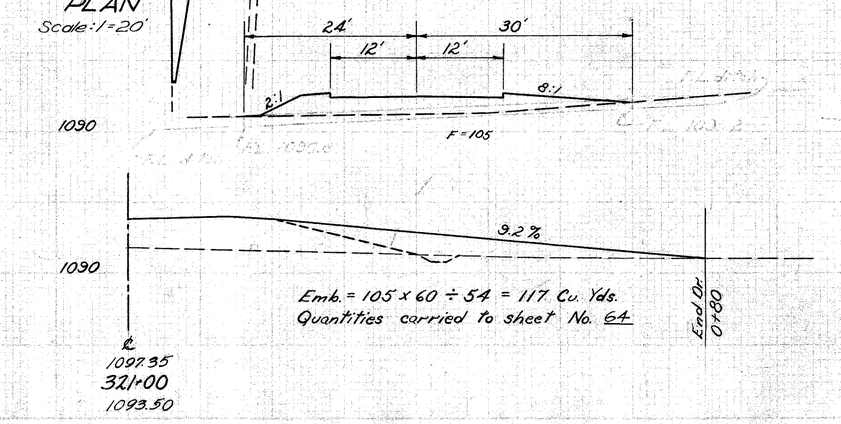


PLAN
Scale: 1"=20'

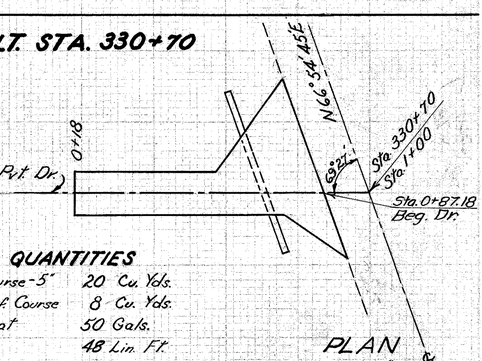
49
A

ESTIMATED QUANTITIES

B-119	Agg. Base Course-7"	46 Cu. Yds.
T-35	Asp. Concr. Surf. Course	13.5 Cu. Yds.
T-30	Bit. Prime Coat	85 Gals.



TYPE 2 PVT. DR. LT. STA. 330+70

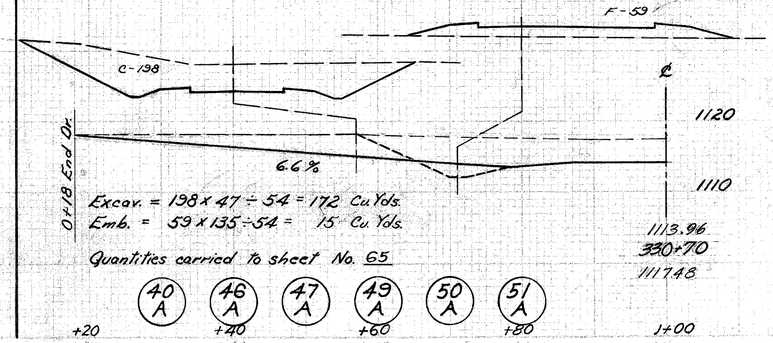


PLAN
Scale: 1"=20'

ESTIMATED QUANTITIES

B-119	Agg. Base Course-5"	20 Cu. Yds.
T-35	Asp. Concr. Surf. Course	8 Cu. Yds.
T-30	Bit. Prime Coat	50 Gals.
I-1	12" Drive Pipe	48 Lin. Ft.

Quantities carried to sheet No. 65



40 A | 46 A | 47 A | 49 A | 50 A | 51 A

APPROACHES: - STA. 297+59 RT. - STA. 312+90 RT. - STA. 318+95 LT. - STA. 321+00 RT. - STA. 330+70 LT. & RT.

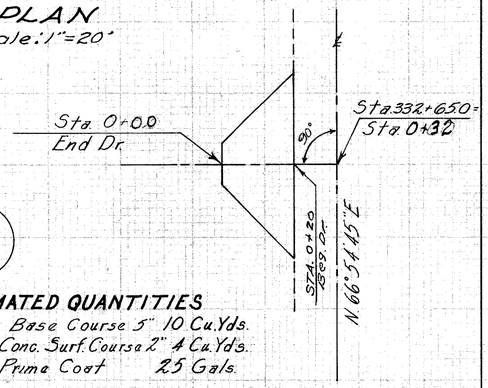
FED. HIGHWAY DIVISION	STATE	PROJECT	
2	OHIO		

97/128

HOLMES-62 (21.08-21.51)

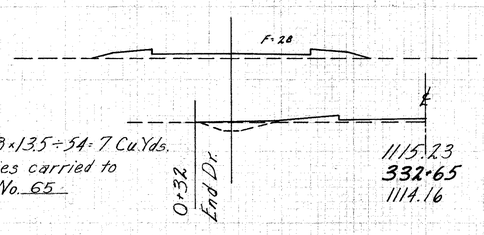
TYPE 2 PVT. DR. LT. STA. 332+65

PLAN
Scale: 1"=20'



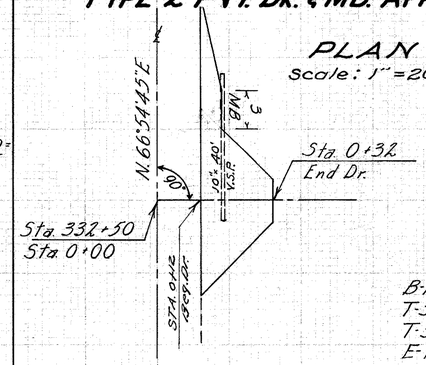
53/A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 10 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 4 Cu.Yds.
T-30 Bit. Prime Coat 2.5 Gals.



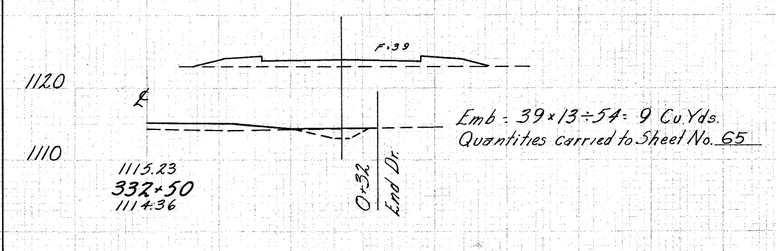
TYPE 2 PVT. DR. & MB. APPR. RT. STA. 332+50

PLAN
Scale: 1"=20'

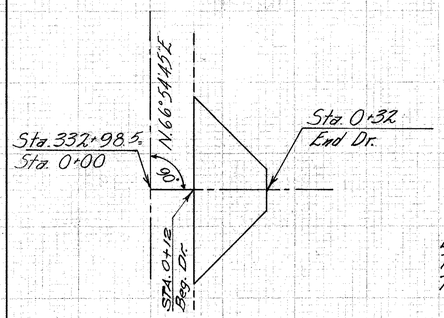


52/A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 12 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 4.7 Cu.Yds.
T-30 Bit. Prime Coat 30 Gals.
E-12 Pipe Removed (Under 15") 40 Lin. Ft.



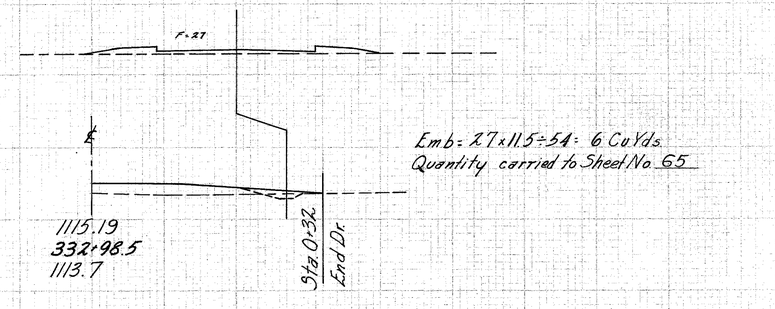
TYPE 2 PVT. DR. RT. STA. 332+98.5



54/A

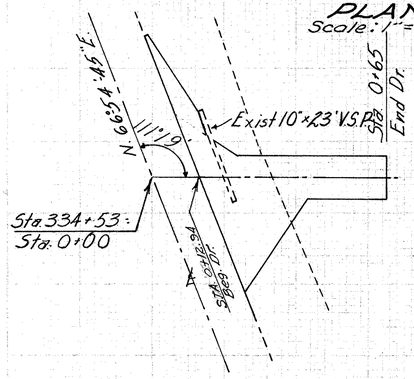
ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 10 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 4.0 Cu.Yds.
T-30 Bit. Prime Coat 2.5 Gals.

PLAN
Scale: 1"=20'



TYPE 2 (MOD) PVT. DR. & MB. APPR. RT. STA. 334+53

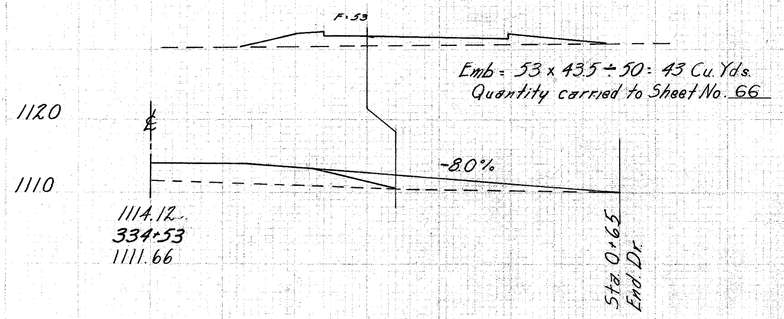
PLAN
Scale: 1"=20'



56/A

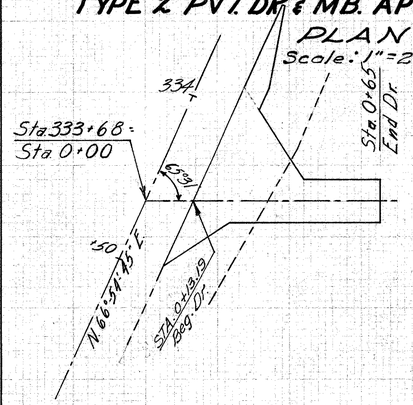
ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 18 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 7.2 Cu.Yds.
T-30 Bit. Prime Coat 4.6 Gals.

E-12 Pipe Removed (Under 15") 23 Lin. Ft.



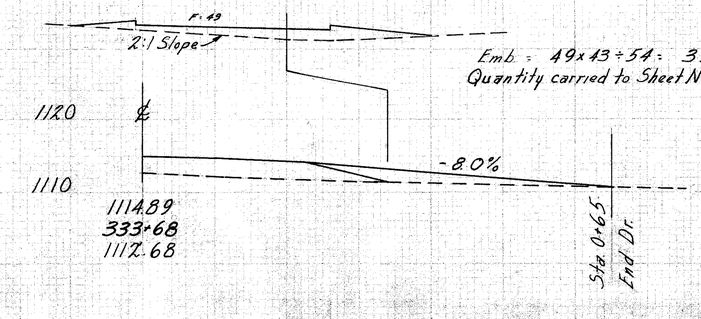
TYPE 2 PVT. DR. & MB. APPR. RT. STA. 333+68

PLAN
Scale: 1"=20'



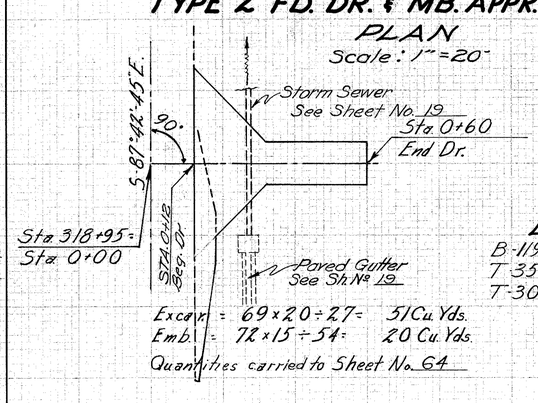
55/A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 18 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 7.2 Cu.Yds.
T-30 Bit. Prime Coat 4.6 Gals.



TYPE 2 FD. DR. & MB. APPR. RT. STA. 318+95

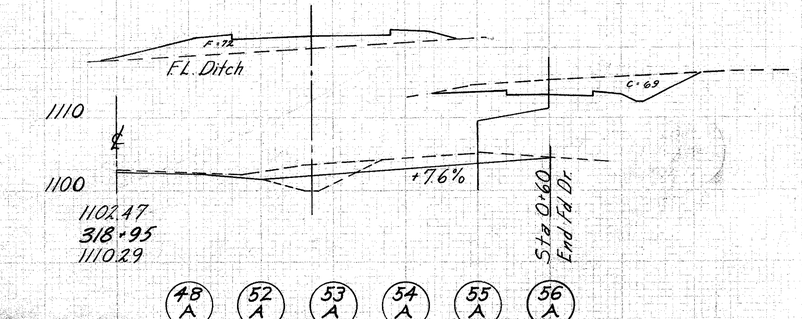
PLAN
Scale: 1"=20'



48/A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 2.0 Cu.Yds.
T-35 Asp. Conc. Sur. Course 2" 1.7 Cu.Yds.
T-30 Bit. Prime Coat 1.1 Gals.

Excav. = 69×2.0÷2.7= 51 Cu.Yds.
Emb. = 7.2×1.5÷54= 2.0 Cu.Yds.
Quantities carried to Sheet No. 64



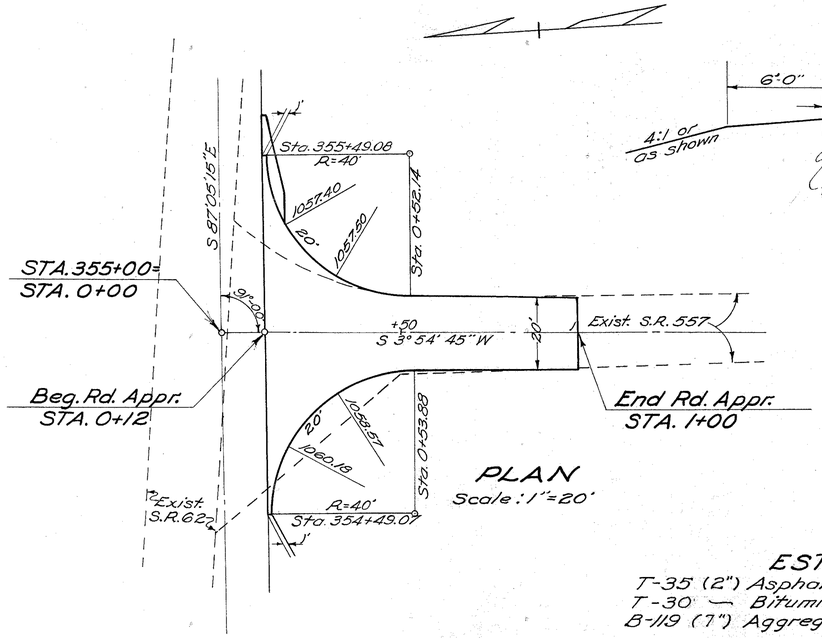
48/A 52/A 53/A 54/A 55/A 56/A

APPROACHES: - STA. 318+95 RT. - STA. 332+50 RT. - STA. 332+65 LT. - STA. 332+98.5 RT. - STA. 333+68 RT. - STA. 334+53 RT.

REG. RD. NETWORK	STATE	PROJECT	TYPE PLANS
2	OHIO		

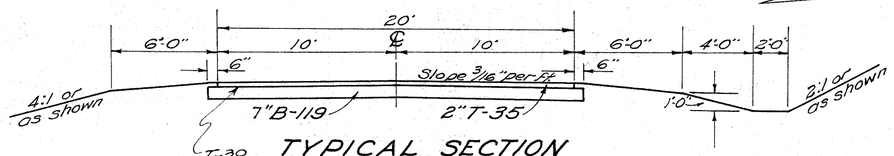
98
128

HOL-62-(21.08-21.51)

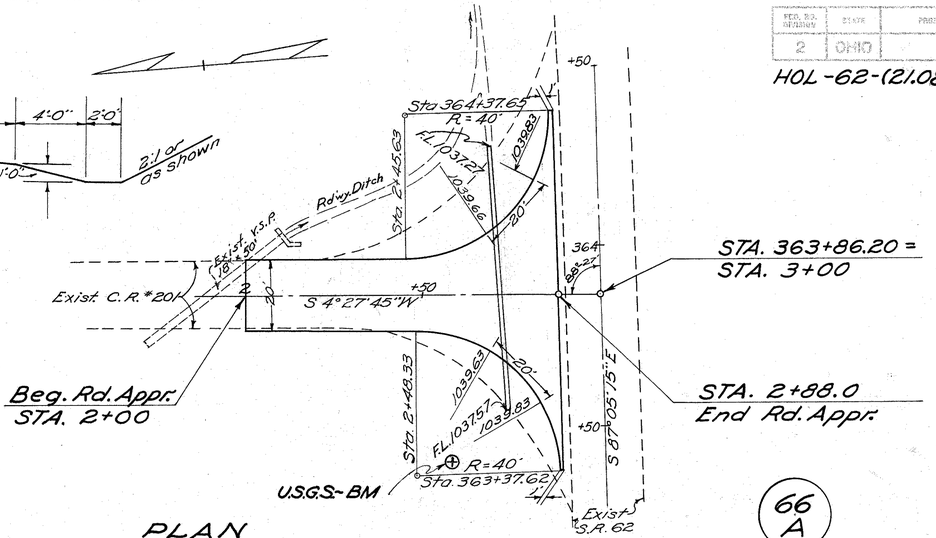


PLAN
Scale: 1" = 20'

64
A



TYPICAL SECTION



PLAN
Scale: 1" = 20'

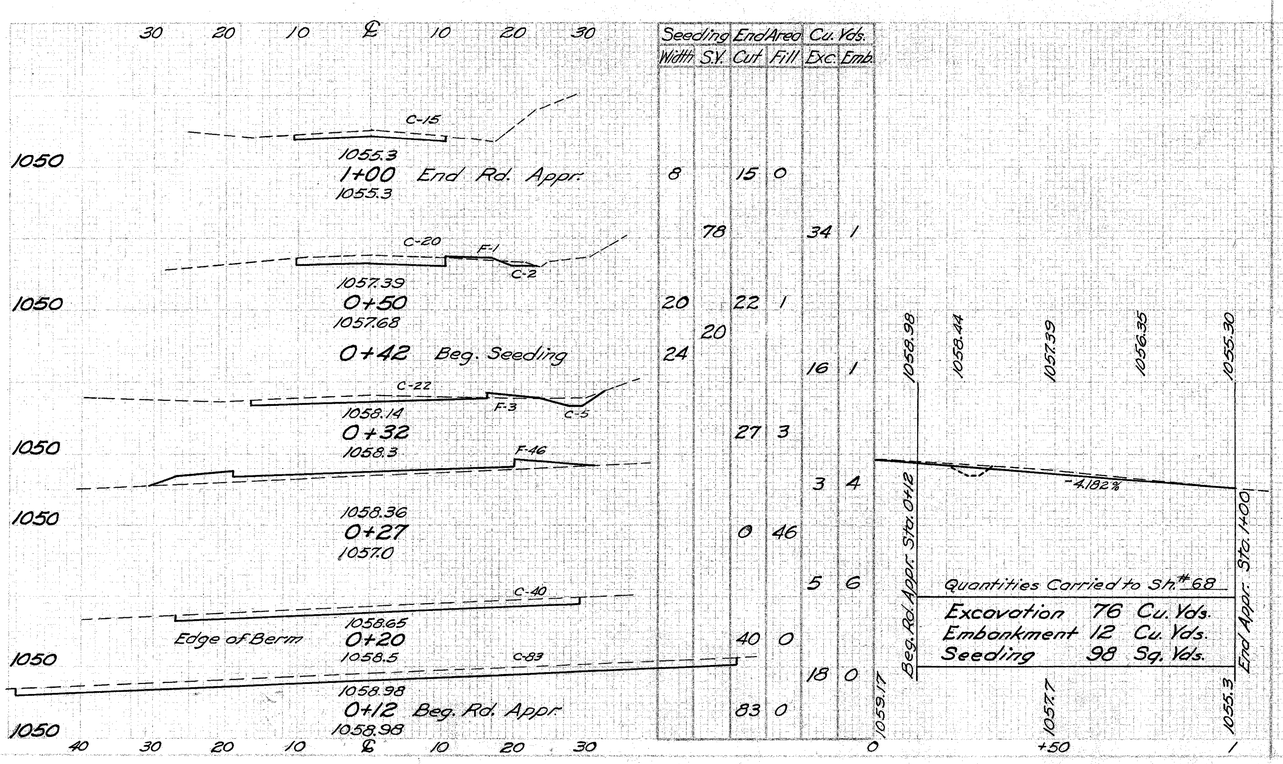
66
A

ESTIMATED QUANTITIES

T-35 (2") Asphaltic Concrete Surface Course.	16.1 Cu. Yd.
T-30 — Bituminous Prime Coat	106 Gals.
B-119 (7") Aggregate Base Course	59 Cu. Yd.

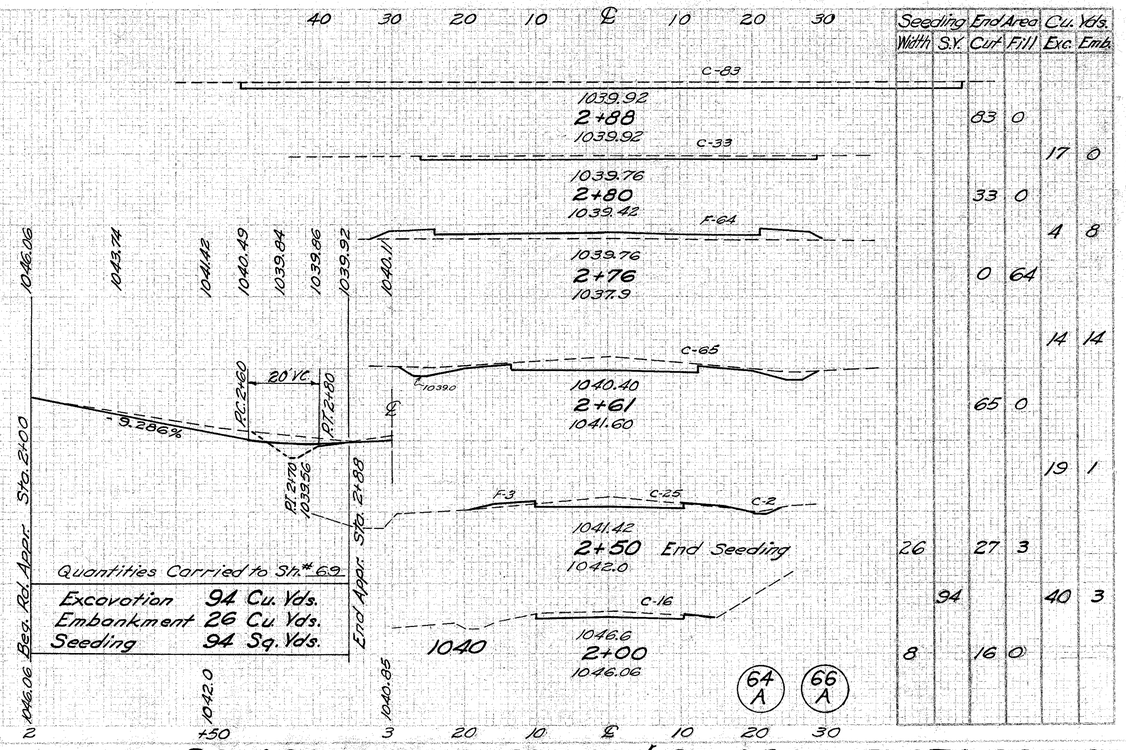
ESTIMATED QUANTITIES

T-35 (2") Asphaltic Concrete Surface Course	15.6 Cu. Yds.
T-30 — Bituminous Prime Coat	10.3 Gals.
B-119 (7") Aggregate Base Course	57 Cu. Yds.
I-1 18" Drive Pipe	7.4 Lin. Ft.



Quantities Carried to Sh.# 68

Excavation	76	Cu. Yds.
Embankment	12	Cu. Yds.
Seeding	98	Sq. Yds.



Quantities Carried to Sh.# 69

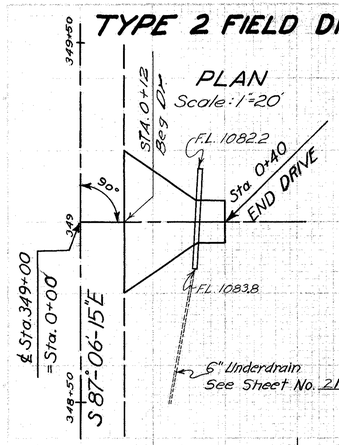
Excavation	94	Cu. Yds.
Embankment	26	Cu. Yds.
Seeding	94	Sq. Yds.

64 A | 66 A

RD. APPR. RT. STA. 355+00 & RD. APPR. LT. STA. 363+86.2

HOL-62-(21.08-21.51)

TYPE 2 FIELD DRIVE RT. STA. 349+00

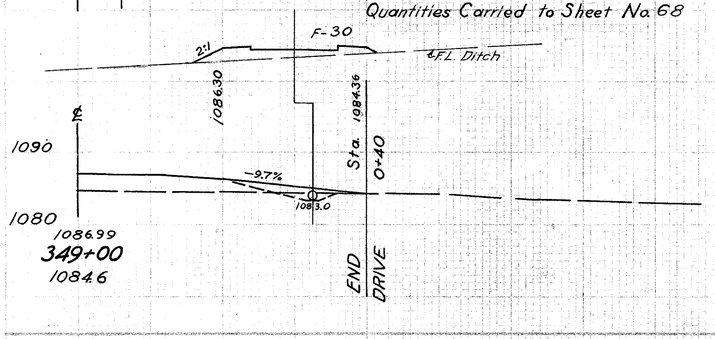


ESTIMATED QUANTITIES

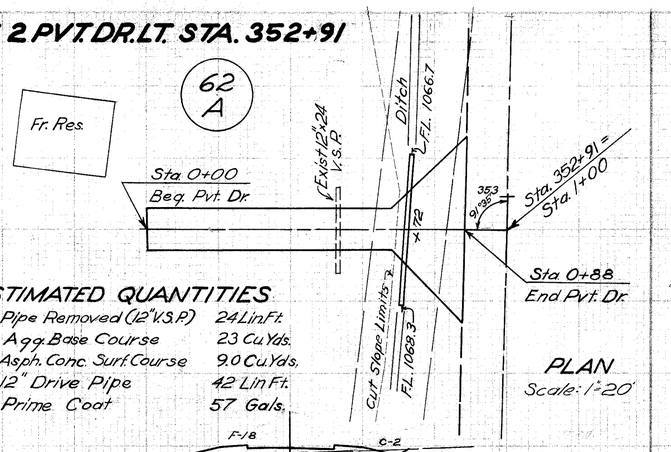
B-119 6" Agg. Base Course	14 Cu Yds.
I-1 15" Drive Pipe	28 Lin. Ft.

61 A

Embankment: 30×18÷54 = 10 Cu.Yds.
Quantities Carried to Sheet No. 68



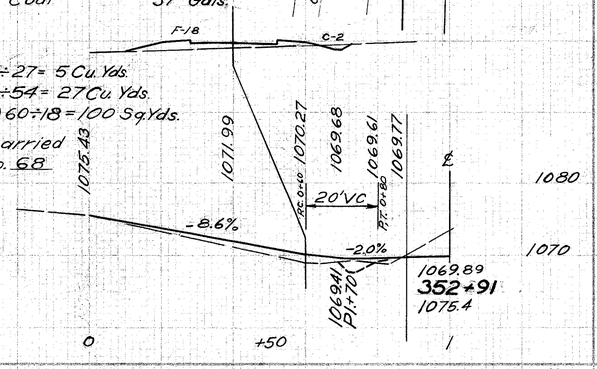
TYPE 2 PVT.DR.LT. STA. 352+91



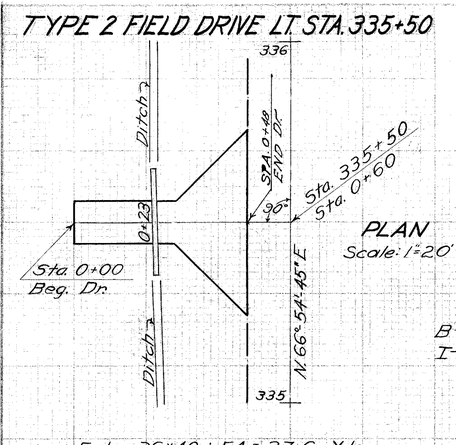
ESTIMATED QUANTITIES

E-12 Pipe Removed (12" V.S.P.)	24 Lin.Ft.
B-119 Agg. Base Course	23 Cu.Yds.
T-35 Asph. Conc. Surf. Course	9.0 Cu.Yds.
I-1 12" Drive Pipe	42 Lin.Ft.
T-30 Prime Coat	57 Gals.

Excav = 10×2÷27 = 5 Cu.Yds.
Emb = 18×80÷54 = 27 Cu.Yds.
Seed = (8+22) 60÷18 = 100 Sq.Yds.
Quantities carried to Sheet No. 68



TYPE 2 FIELD DRIVE LT. STA. 335+50

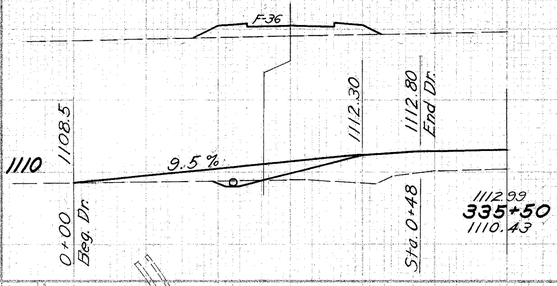


57 A

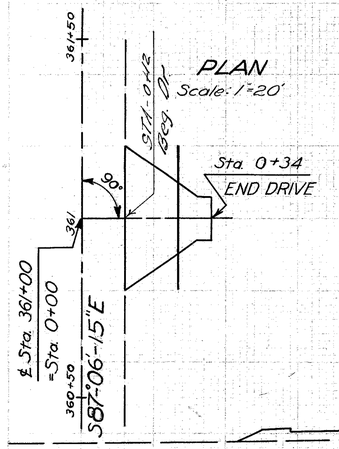
ESTIMATED QUANTITIES

B-119 Aggregate	18 Cu. Yds.
I-1 12" Dr. Pipe	30 Lin. Ft.

Emb. = 36×40÷54 = 27 Cu. Yds.
Quantity carried to Sheet No. 66



TYPE 2 FIELD DRIVE RT. STA. 361+00

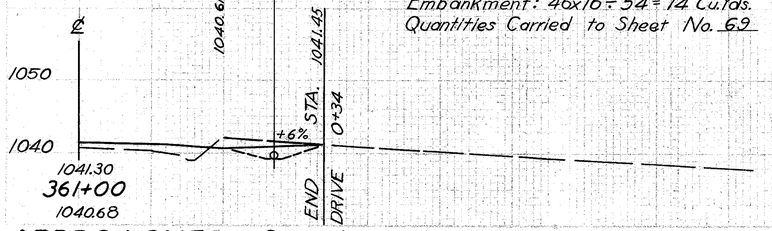


ESTIMATED QUANTITIES

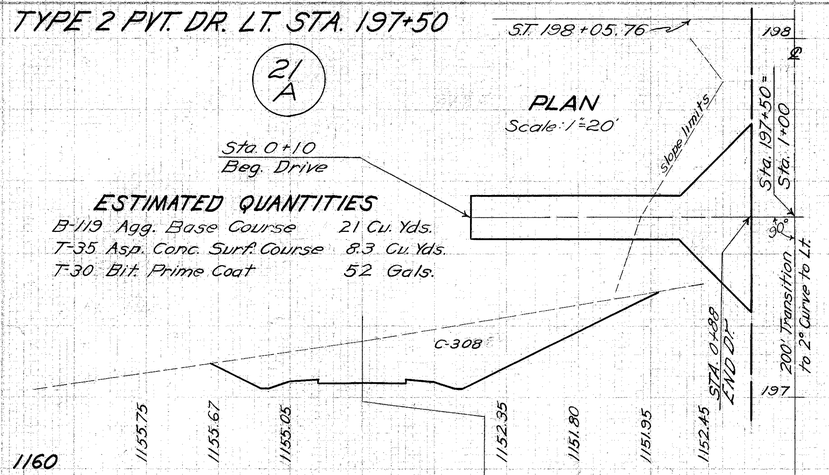
B-119 6" Agg Base Course	12 Cu. Yds.
I-1, 12" Drive Pipe	40 Lin. Ft.

65 A

Embankment: 46×16÷54 = 14 Cu.Yds.
Quantities Carried to Sheet No. 69

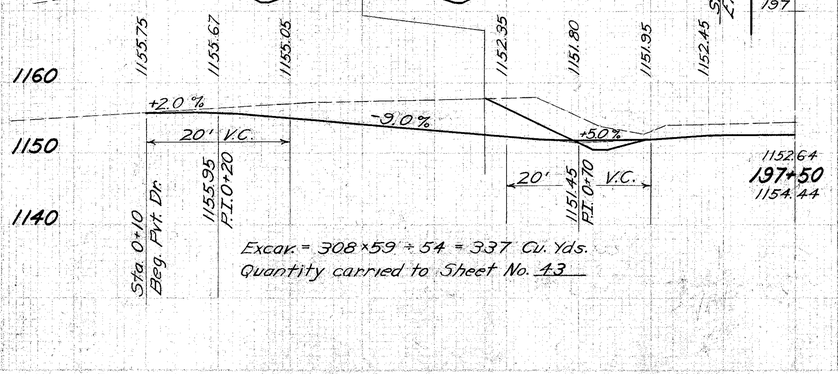


TYPE 2 PVT. DR. LT. STA. 197+50



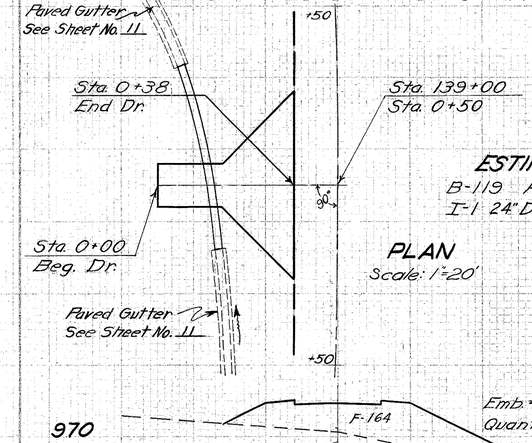
ESTIMATED QUANTITIES

B-119 Agg. Base Course	21 Cu. Yds.
T-35 Asp. Conc. Surf. Course	8.3 Cu. Yds.
T-30 Bit. Prime Coat	52 Gals.



Excav. = 308×59÷54 = 337 Cu. Yds.
Quantity carried to Sheet No. 43

TYPE 2 FIELD DRIVE LT. STA. 139+00

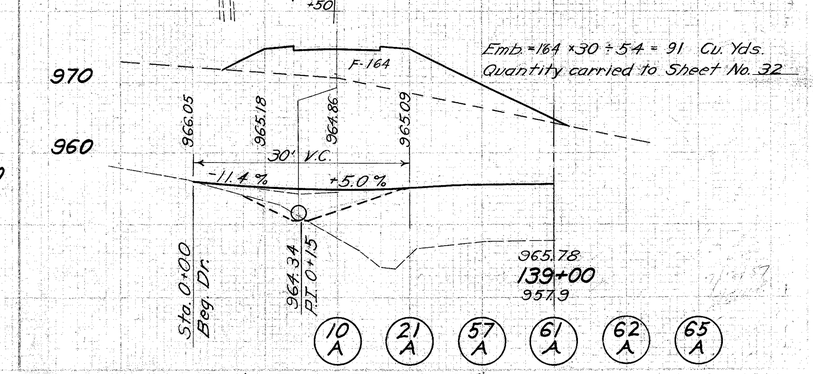


10 A

ESTIMATED QUANTITIES

B-119 Aggregate	16 Cu. Yds.
I-1 24" Drive Pipe	52 Lin. Ft.

Emb. = 164×30÷54 = 91 Cu. Yds.
Quantity carried to Sheet No. 32



10 A | 21 A | 57 A | 61 A | 62 A | 65 A

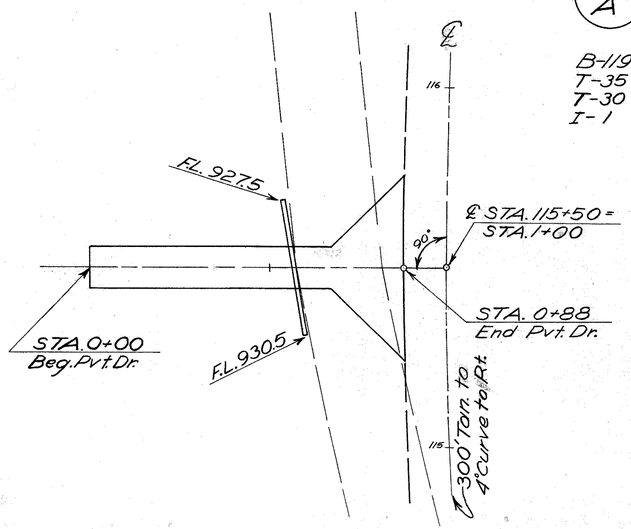
APPROACHES: STA. 139+00 LT. – STA. 197+50 LT. – STA. 335+50 LT. – STA. 349+00 RT. – STA. 352+91 LT. – STA. 361+00 RT. & STA. 352+91 LT.

TYPE 2 PVT. DR. LT. STA. 115+50

(2 / A)

ESTIMATED QUANTITES

B-119	Agg. Base Course (5")	23	Cu. Yds.
T-35	Asph. Conc. Sur. Course (2")	9.0	Cu. Yds.
T-30	Bit. Prime Coat.	57	Gals.
I-1	12" Drive Pipe	38	Lin. Ft.



PLAN
Scale: 1"=20'

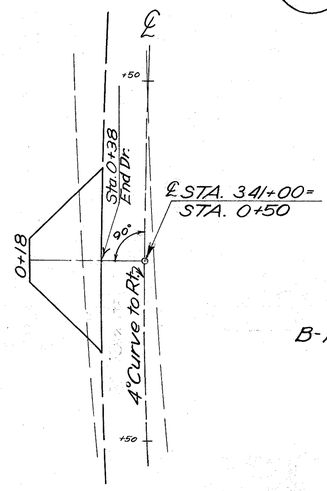
TYPE 2 FIELD DRIVE LT. STA. 341+00

FED. ROAD DIV. NO.	STATE	PROJECT	SHEET NO.
2	OHIO		

100 / 128

HOL-62-(21.08-21.51)

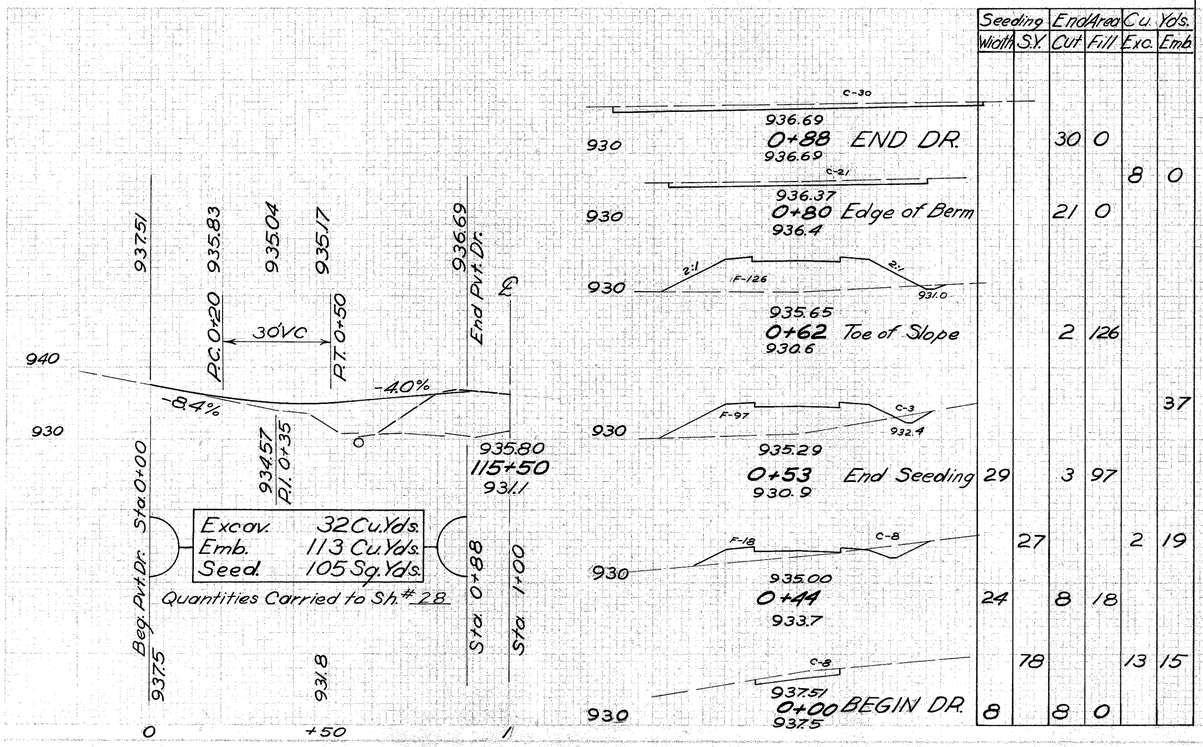
(60 / A)



PLAN
Scale: 1"=20'

ESTIMATED QUANTITIES

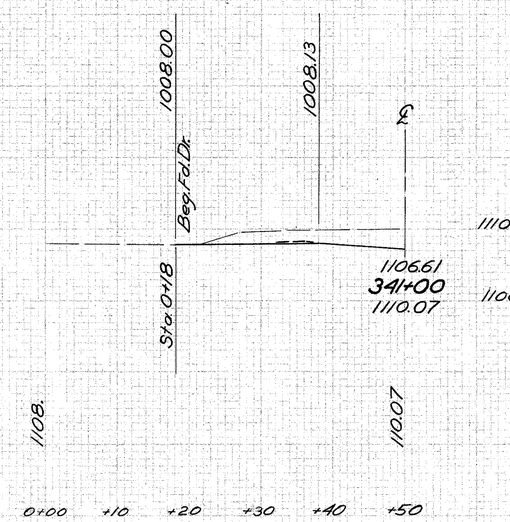
B-119 6" Crushed Aggregate Base 12 Cu. Yds.



Seeding		End Areas		Cu. Yds.	
Width	S.Y.	Cut	Fill	Exc.	Emb.
		30	0		
				8	0
		21	0		
		2	126		
					37
29		3	97		
	27			2	19
24		8	18		
	78			13	15
8		8	0		

C-30 936.69 **0+88 END DR.** 936.69
C-21 936.37 **0+80 Edge of Berm** 936.4
F-126 2:1 2:1 931.0 935.65 **0+62 Toe of Slope** 930.6
F-97 C-3 932.4 935.29 **0+53 End Seeding** 930.9
F-18 C-8 935.00 **0+44** 933.7
C-8 937.51 **0+00 BEGIN DR.** 937.5

930



Note: No Pipe Req.

Excavation	12 Cu. Yds.
Embankment	0 Cu. Yds.
Seeding	0 Sq. Yds.

Quantities Carried to Sheet # 66

(2 / A) (60 / A)

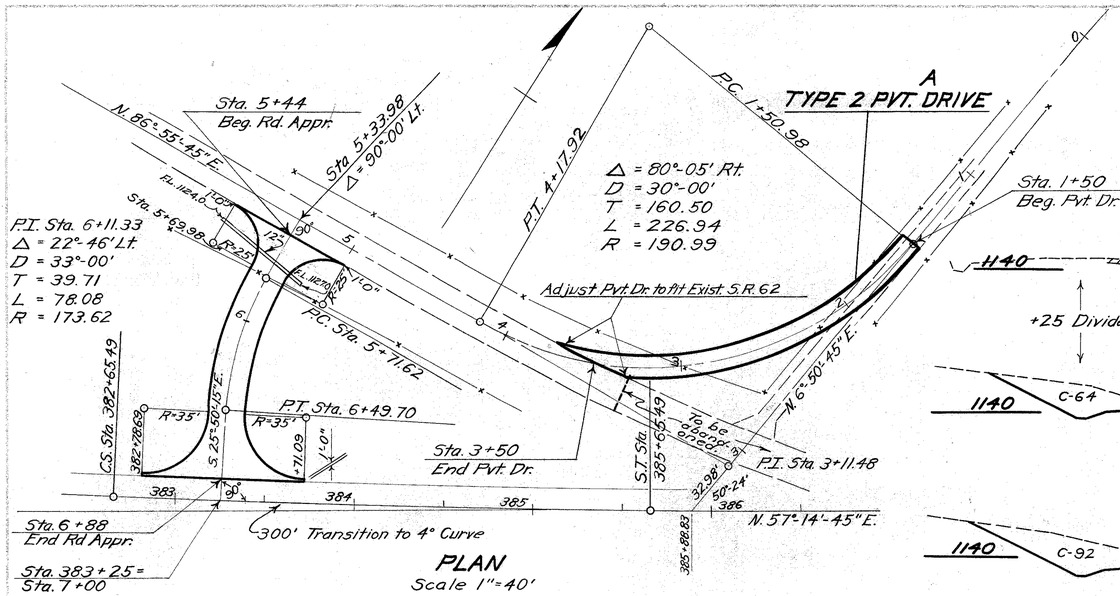
APPROACHES: STA. 115+50 LT. - STA. 341+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

101
128

HOL-62-(21.08-21.51)

A
TYPE 2 PVT. DRIVE



PLAN
Scale 1"=40'

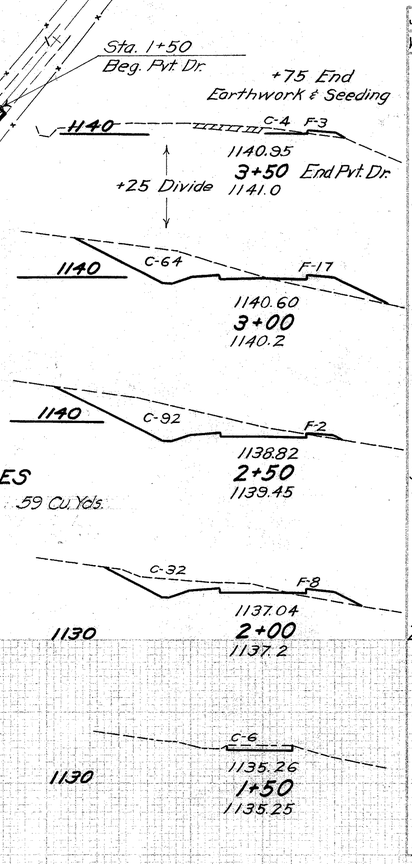
ESTIMATED QUANTITIES
B-119 Aggregate Base Course (8") 59 Cu. Yds.

ESTIMATED QUANTITIES.

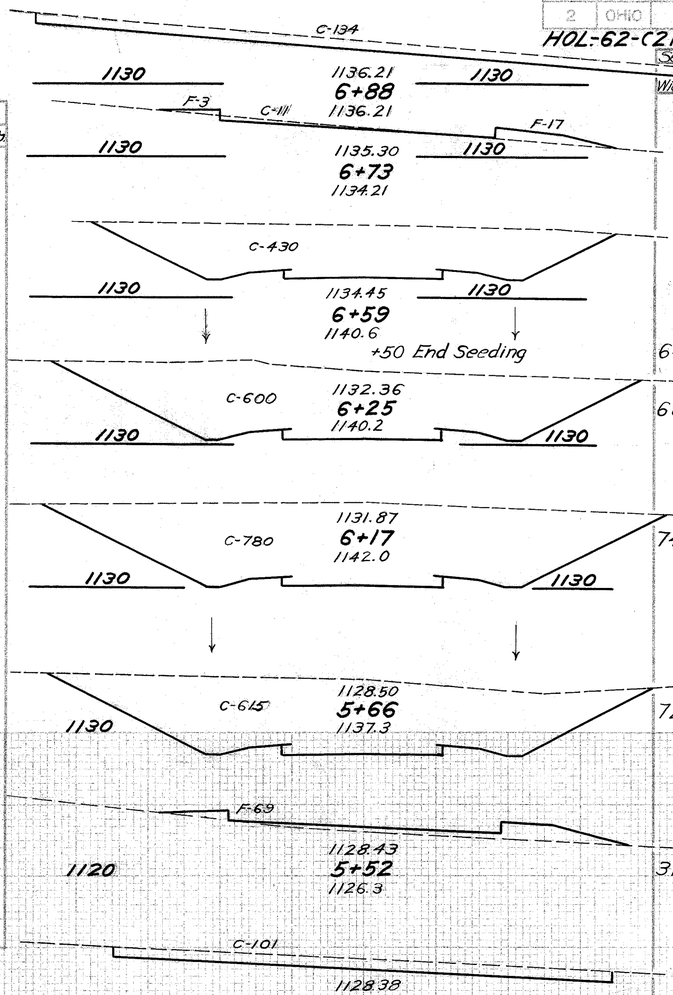
T-35	Asph. Concr. Surf. Course	23.5 Cu. Yds.
B-119	Aggregate Base Course	88. Cu. Yds.
T-30	Bituminous Prime Coat	158 Gals.
I-1	12" Dr. Pipe	58 Lin. Ft.
E-101	Compacted Subgrade	426 Sq. Yds.

73 A For Typical Section see sheet No. 82

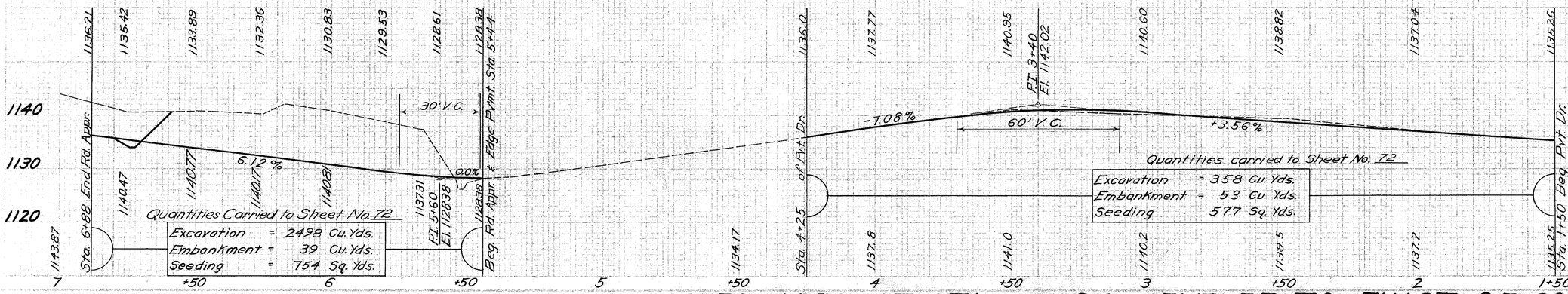
74 A



Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
4		0	0		
	28			1	1
6		4	3		
	111			63	19
34		64	17		
	183			144	18
32		92	2		
	161			115	9
26		32	8		
	94			35	7
8		6	0		



Seeding Width	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
		134	0		
				40	6
		11	20		
				114	5
		430	0		
64					
	183			649	0
68		600	0		
	63			204	0
74		780	0		
	414			1317	0
72		615	0		
	80			159	18
31		0	69		
	14			15	10
0		101	0		



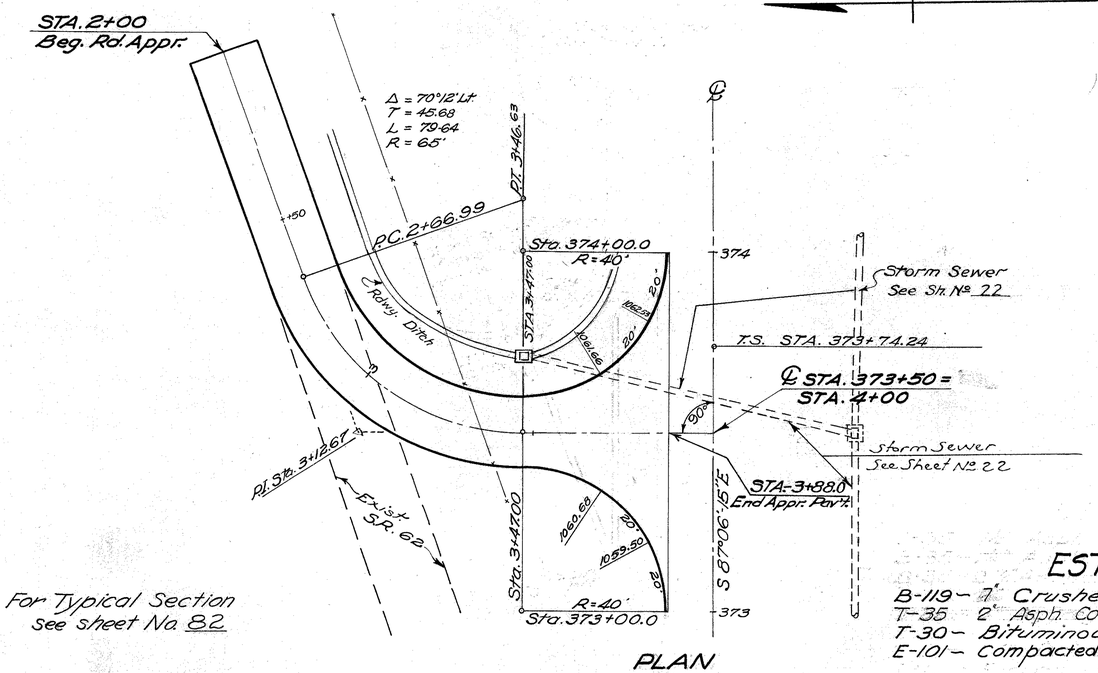
73 A 74 A

RD. APPR. LT. STA. 383+25 & PVT. DR. TO EXIST. S.R. 62 LT. STA. 385+88.83

DIST. NO. DIVISION	STATE	PROJECT	TOTAL SHEETS
2	OHIO		

102
128

HOL-62-(21.08-21.51)

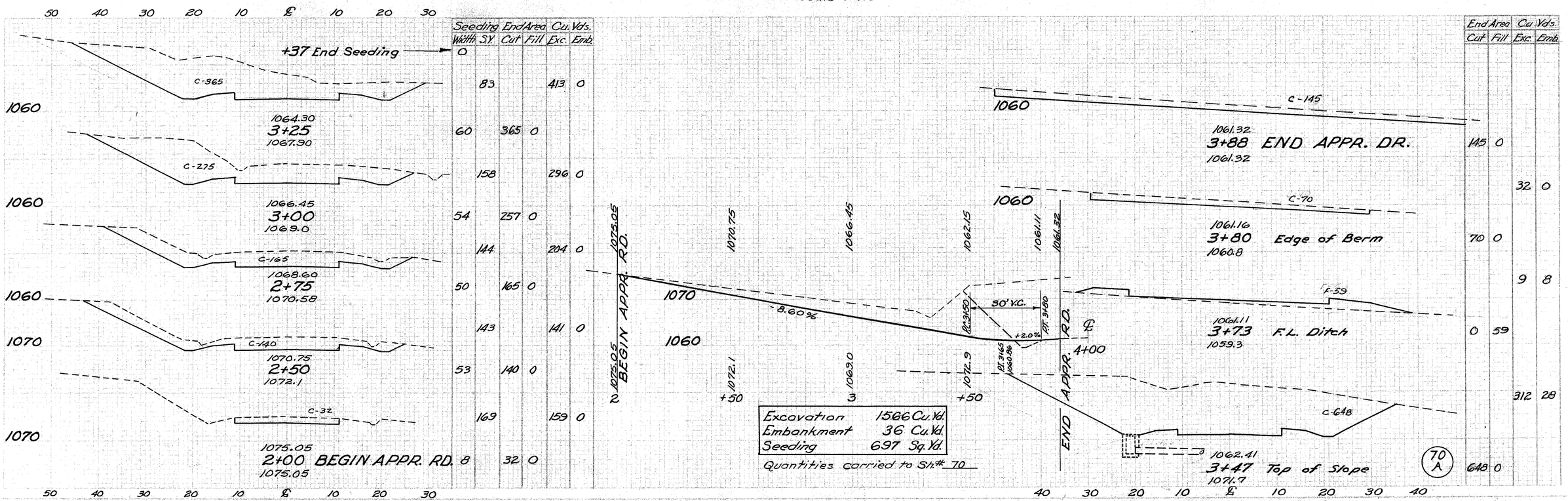


70
A

For Typical Section
see sheet No. 82

ESTIMATED QUANTITIES.

B-119 – 7" Crushed Aggregate Base Course	102.0	Cu. Yds.
T-35 2" Asph. Conc. Surf. Course	28.0	Cu. Yds.
T-30 – Bituminous Prime Coat	184	Gals.
E-101 – Compacted Subgrade	494	Sq. Yds.



R.D. APPR. LT. STA. 373+50

TYPE 2 PVT DR. & MB APPR. RT. STA. 336+30

58 A

337
N 66°54'45" E
+50
12'+38
STA. 0+14.09 Beg. Dr.
Sta. 0+61 END DRIVE
Beg. 10'x23'VSP
Sta. 336+30= Sta. 0+00
336
℄

ESTIMATED QUANTITIES

E-12	Pipe Removal (15" & Under)	23 Lin. Ft.
B-119	Agg. Base Course	19 Cu. Yds.
T-35	Asph. Concr. Surf. Course	7.7 Cu. Yds.
T-30	Bit. Prime Coat	48 Gals.

PLAN
Scale: 1"=20'

Emb = 66 × 37.5 ÷ 54 = 46 Cu. Yds.
Quantity Carried to Sheet No. 66

F-66
on 4:1 slope
111.37
10.0%
Sta. 0+61 END DR
℄
1110
1112.06
336+30
1100
1109.92

TYPE 2 FIELD DRIVE RT. STA. 363+92

67 A

S 87°06'15" E
364
90°
Sta. 0+32 END DR.
Sta. 363+92 = Sta. 0+00
STA. 0+12 Beg. Dr.
℄

PLAN
Scale: 1"=20'

ESTIMATED QUANTITIES
B-119 Agg. Base Course 12 Cu. Yds.
Quantity Carried to Sheet No. 69

Excav. = 71 (Sq. Yds.) × 4" (Av. thick) ÷ 36 = 8 Cu. Yds.
Carried to Sheet No. 69

1040
-12.5%
1040.11
363+92
1040.1
1030
Sta. 0+32 END DR.

TYPE 2 FIELD DR. LT. STA. 307+00

44 A

HOL-62-(21.08-21.51)

Paved Gutter See Sheet No. 19

ESTIMATED QUANTITIES

B-119	6" Aggregate Base Course	13	Cu. Yds.
I-1	21" Pipe for Driveways	50	Lin. Ft.
E-12	Removal of Pipe (15" and Under)	16	Lin. Ft.

30+50
Sta. 307+00 = Sta. 0+50
90°
Sta. 0+12 BEGIN DR.
Sta. 0+38 END DRIVE
S 87°06'15" E 42.75'
PLAN
Scale: 1"=20'
F-96
Ditch Slope
Exist. Pvmt.
30+00
168.50
Sta. 0+12 168.93
-5.1%
1170
1160
BEGIN DR.
END DR.
1168.69
307+00
1170.13

Embankment:
96 × 26 ÷ 54 = 46 Cu. Yds.
Quantities Carried to Sheet No. 62

TYPE 2 PVT. DR & MB APPR. RT. STA. 339+68

59 A

Sta 339+68 = Sta. 0+00
+340
FL. 1105.0
Sta. 0+50 End Drive
N 66°54'45" E
72'+34
STA. 0+12.46 Beg. Dr.
FL. 1105.8
+50

ESTIMATED QUANTITIES

B-119	Agg. Base Course	16 Cu. Yds.
T-35	Asp. Conc. Surf. Course	6.5 Cu. Yds.
T-30	Bit. Prime Coat	41 Gals.
I-1	12" Drive Pipe	46 Lin. Ft.

PLAN
Scale: 1"=20'

F-39
Emb: 39 × 37.5 ÷ 54 = 27 Cu. Yds.
Quantity Carried to Sheet No. 66
1108.30
STA. 0+12.46
1110
-3.996 %
1108.51
339+68
1100
1108.47
BEGIN DR.
END DR. STA. 0+50

TYPE 2 PVT. DR. LT. STA. 354+78

63 A

Res.
Const. Work
Exist 12'VSP
FL. 1057.0
5.0%
355
24" Mop
Sta. 354+78 = Sta. 1+00
90°
STA. 0+98 Beg. Dr.
Sta. 0+68 END DR.
FL. 1059.1
+50
S 87°06'15" E.
Exist US 62
℄

ESTIMATED QUANTITIES

E-12	Pipe Removal (15" & Under)	96 Lin. Ft.
B-119	Agg. Base Course	10 Cu. Yds.
T-35	Asph. Conc. Surf. Course	4 Cu. Yds.
T-30	Bit Prime Coat	25 Gals.
I-1	15" Drive Pipe	50 Lin. Ft.
S-22	Rem. of Port. Exist. Struct.	0.4 Cu. Yds. (H.W.)

PLAN
Scale: 1"=20'

Emb = 105 × 18 ÷ 54 = 35 Cu. Yds.
Quantity Carried to Sheet No. 68

F-105
Sta. 0+68 END DR.
1060.24
354+78
1060.3

TYPE 2 FIELD DRIVE LT. STA. 365+50

68 A

Sta. 0+00 BEG. DR.
FL. 1033.6
24" x 24" Conc. M.P.
S 87°06'15" E.
Sta. 365+50 = Sta. 0+50
90°
STA. 0+38 End Drive
FL. 1034.4
365+50
PLAN
Scale: 1"=20'

F-95
Ditch Slope
Emb. = 95 × 30 ÷ 54 = 53 Cu. Yds.
Excav. = 22 × 8 × 0.58 ÷ 27 = 4 Cu. Yds.
Quant. Carried to Sheet No. 69
12.4%
1040.11
365+50
1039.89
Sta. 0+00 BEG DR.

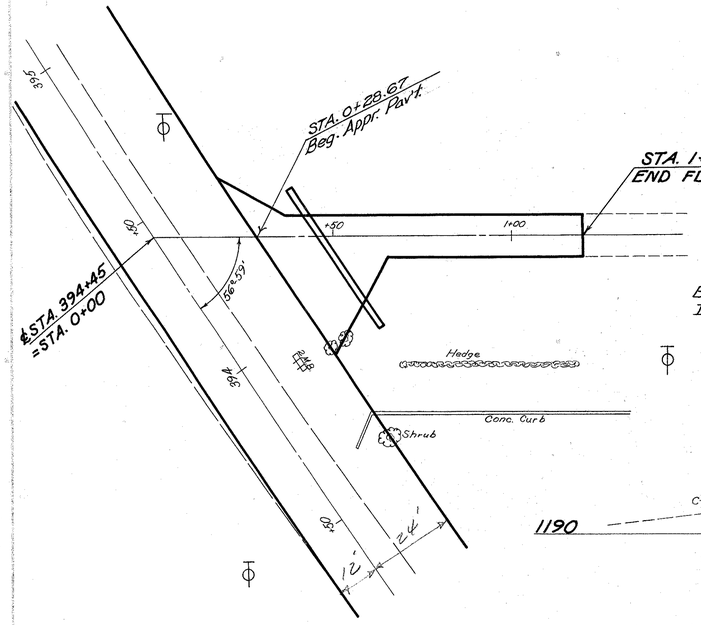
44 A | 58 A | 59 A | 63 A | 67 A | 68 A

APPROACHES: - STA. 307+00 LT. - STA. 336+30 RT. - STA. 339+68 RT. - STA. 354+78 LT. - STA. 363+92 RT. - STA. 365+50 LT.

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

104
128

HOL-62-(21.08-21.51)

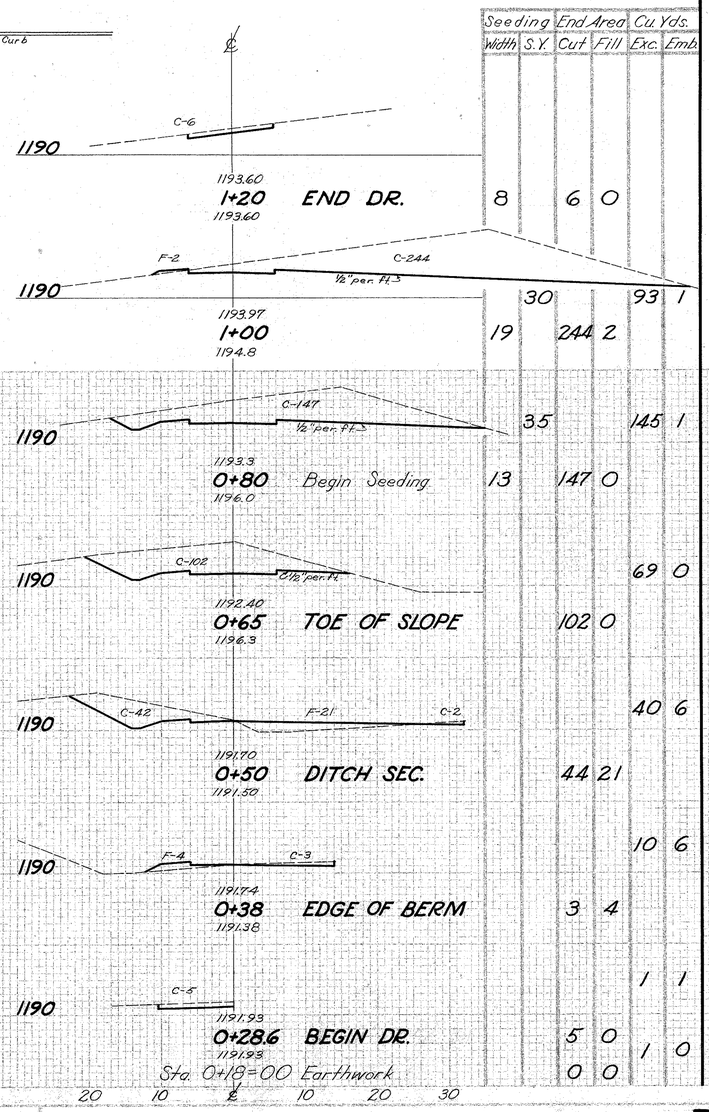


PLAN
Scale: 1"=20'

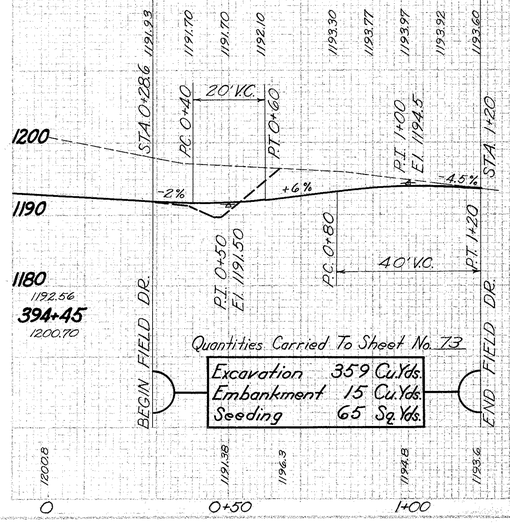
77
A

ESTIMATED QUANTITIES

B-119 6" Aggregate Base Course.	30	Cu. Yds.
I-1 15" Drive Pipe.	46	Lin. Ft.

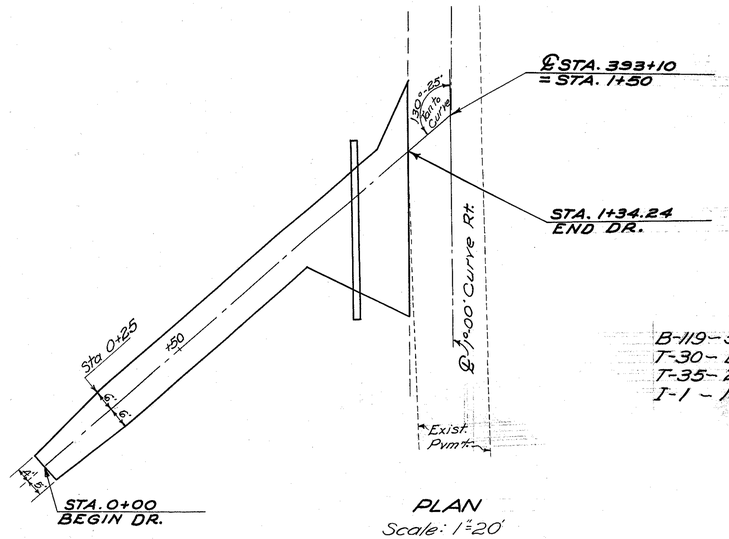


	Seeding		End Area		Cu. Yds.	
	Width	S.Y.	Cut	Fill	Exc.	Emb.
1+20 END DR.		8	6	0		
		30			93	1
1+00		19	244	2		
		35			145	1
0+80 Begin Seeding		13	147	0		
					69	0
0+65 TOE OF SLOPE			102	0		
					40	6
0+50 DITCH SEC.			44	21		
					10	6
0+38 EDGE OF BERM		3	4			
					1	1
0+28.6 BEGIN DR.		5	0		1	0
Sta. 0+18=00 Earthwork			0	0		



Quantities Carried To Sheet No. 73

Excavation	359	Cu. Yds.
Embankment	15	Cu. Yds.
Seeding	65	Sq. Yds.

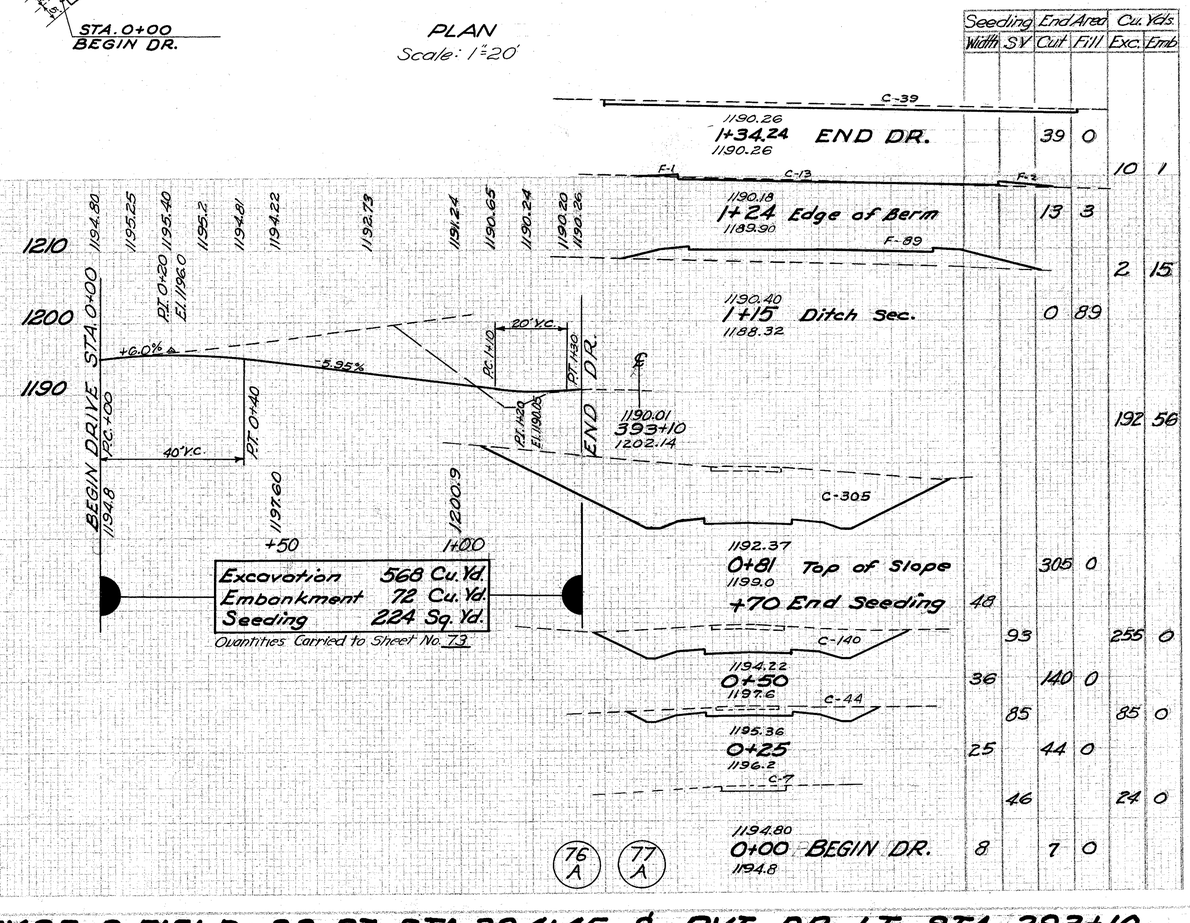


PLAN
Scale: 1"=20'

76
A

ESTIMATED QUANTITIES

B-119 - 5" Crushed Aggregate Base Course	34	C.Y.
T-30 - Bituminous Prime Coat	85	Gal.
T-35 - 2" Aspholtic Conc. Surf. Course	14	C.Y.
I-1 - 15" Pipe for Driveways	54	L.F.



	Seeding		End Area		Cu. Yds.	
	Width	S.Y.	Cut	Fill	Exc.	Emb.
1+34.24 END DR.			39	0		
					10	1
1+24 Edge of Berm			13	3		
					2	15
1+15 Ditch Sec.			0	89		
					192	56
0+81 Top of Slope			305	0		
+70 End Seeding		48				
		93			255	0
0+50		36	140	0		
		85			85	0
0+25		25	44	0		
		46			24	0
0+00 BEGIN DR.		8	7	0		

Excavation 568 Cu. Yd.
Embankment 72 Cu. Yd.
Seeding 224 Sq. Yd.

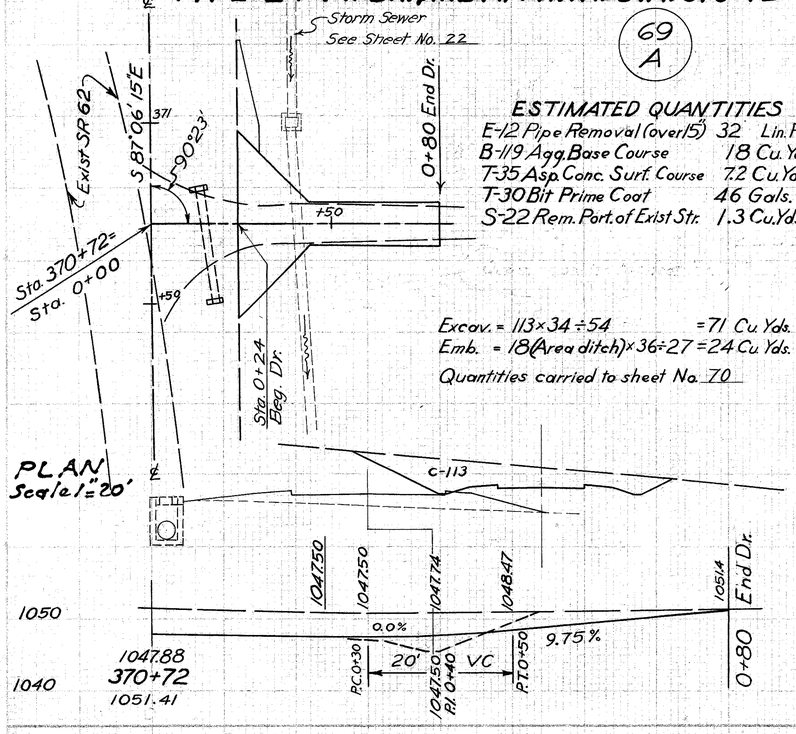
Quantities Carried to Sheet No. 73

76 A | 77 A

TYPE 2 FIELD DR. RT. STA. 394+45 & PVT. DR. LT. STA. 393+10

TYPE 2 PVT. DR. & MB APPR. RT. STA. 370+72

69 A

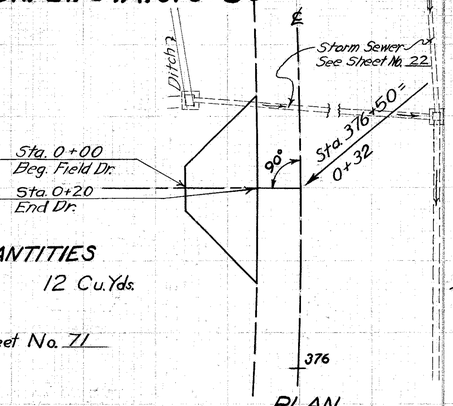


ESTIMATED QUANTITIES

E-12 Pipe Removal (over 15")	32	Lin. Ft.
B-119 Agg. Base Course	18	Cu. Yds.
T-35 Asp. Conc. Surf. Course	7.2	Cu. Yds.
T-30 Bit Prime Coat	46	Gals.
S-22 Rem. Port. of Exist Str.	1.3	Cu. Yds.

Excav. = 113×34÷54 = 71 Cu. Yds.
Emb. = 18(Area ditch)×36÷27 = 24 Cu. Yds.
Quantities carried to sheet No. 70

TYPE 2 FIELD DR. LT. STA. 376+50

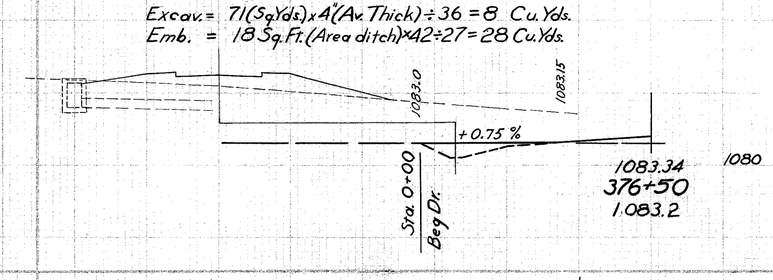


71 A

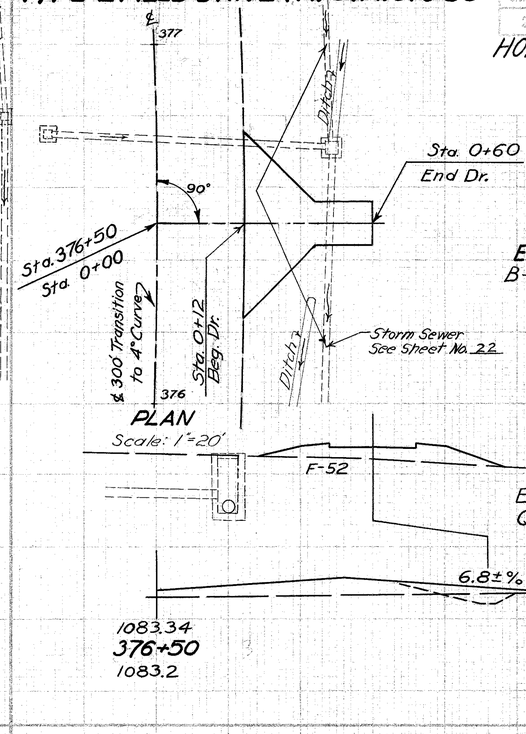
ESTIMATED QUANTITIES
B-119 Aggregate 12 Cu. Yds.

Earthwork Quantities Carried to sheet No. 71

Excav. = 71(Sq. Yds.)×4"(Av. Thick)÷36 = 8 Cu. Yds.
Emb. = 18 Sq. Ft. (Area ditch)×42÷27 = 28 Cu. Yds.



TYPE 2 FIELD DRIVE RT. STA. 376+50

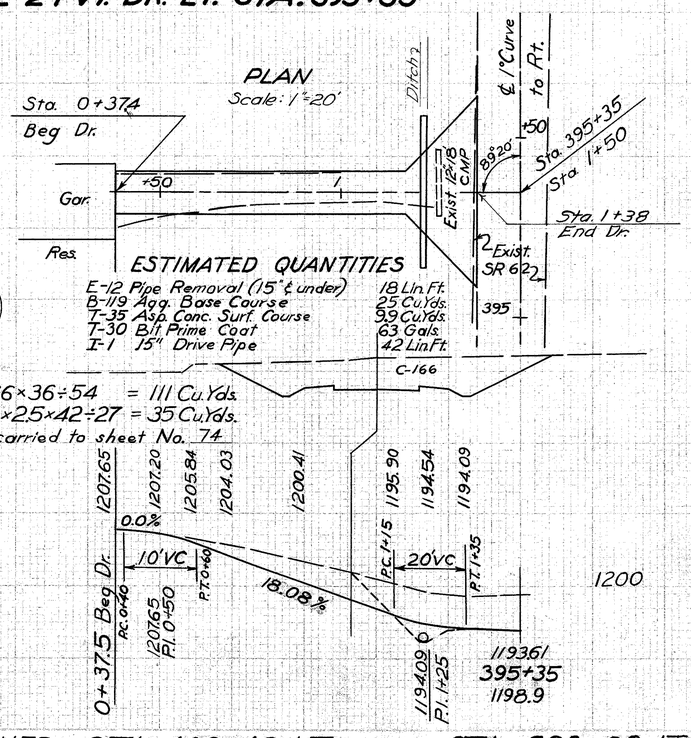


72 A

ESTIMATED QUANTITIES
B-119 Aggregate 15 Cu. Yds.

Emb. = 52×21÷54 = 20 Cu. Yds.
Quantity carried to sheet No. 71

TYPE 2 PVT. DR. LT. STA. 395+35



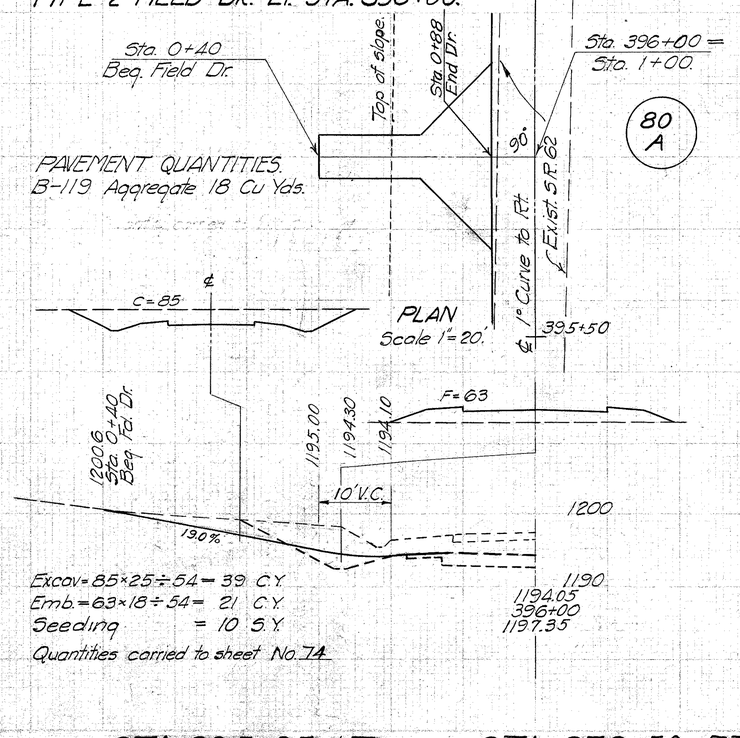
78 A

ESTIMATED QUANTITIES

E-12 Pipe Removal (15" & under)	18	Lin. Ft.
B-119 Agg. Base Course	25	Cu. Yds.
T-35 Asp. Conc. Surf. Course	9.9	Cu. Yds.
T-30 Bit Prime Coat	63	Gals.
I-1 15" Drive Pipe	42	Lin. Ft.

Excav. = 166×36÷54 = 111 Cu. Yds.
Emb. = ½×18×2.5×42÷27 = 35 Cu. Yds.
Quantities carried to sheet No. 74

TYPE 2 FIELD DR. LT. STA. 396+00.



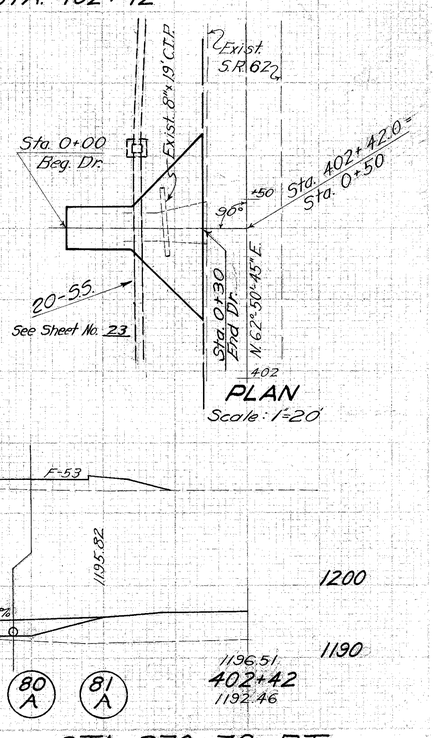
80 A

Excav = 85×25÷54 = 39 C.Y.
Emb. = 63×18÷54 = 21 C.Y.
Seeding = 10 S.Y.
Quantities carried to sheet No. 74

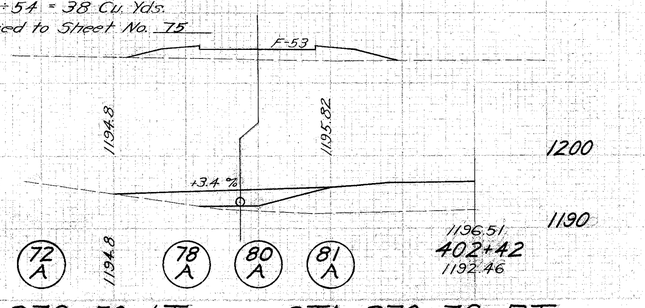
TYPE 2 FIELD DR. LT. STA. 402+42

81 A

ESTIMATED QUANTITIES
E-12 Pipe Removed (15" & under) 19 Lin. Ft.
B-119 Aggregate Base Course 16 Cu. Yds.



Emb. = 53×39÷54 = 38 Cu. Yds.
Quantity carried to Sheet No. 75



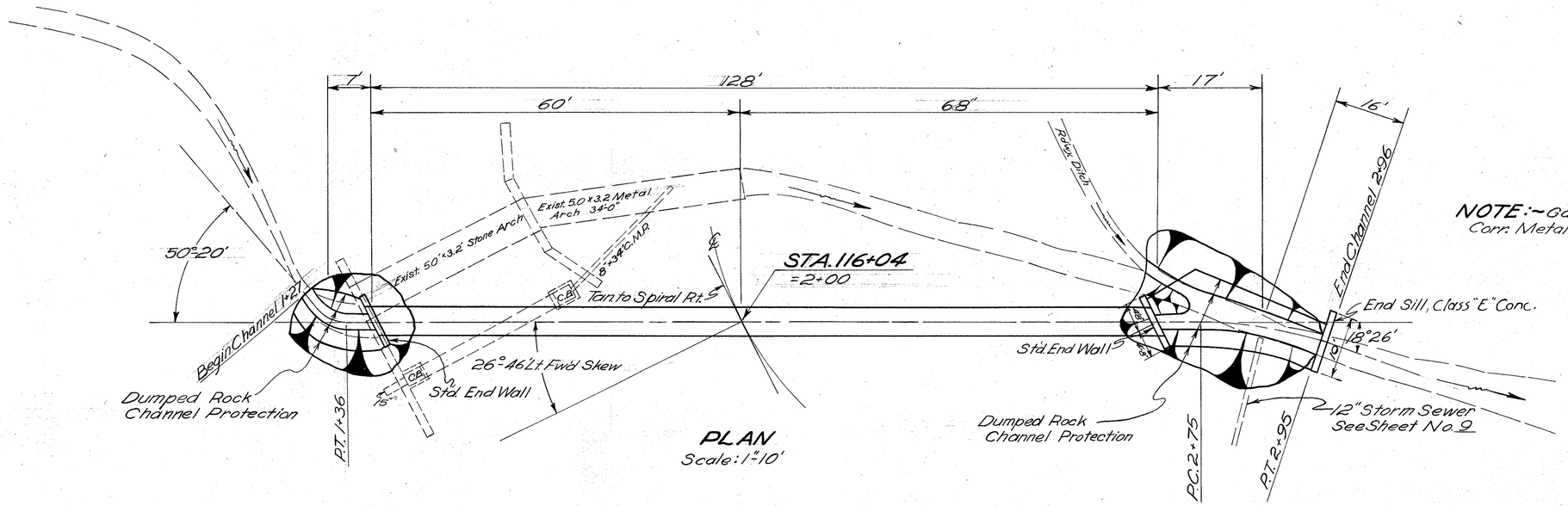
69 A | 71 A | 72 A | 78 A | 80 A | 81 A

APPROACHES: STA. 402+42 LT. – STA. 396+00 LT. – STA. 395+35 LT. – STA. 376+50 RT. – STA. 376+50 LT. – STA. 370+72 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

106
128

HOL-62-(21.08-21.51)



PLAN
Scale: 1"=10'

NOTE:- Gauge for Paved Bituminous Coated Corr. Metal Pipe shall be No. 8 gauge.

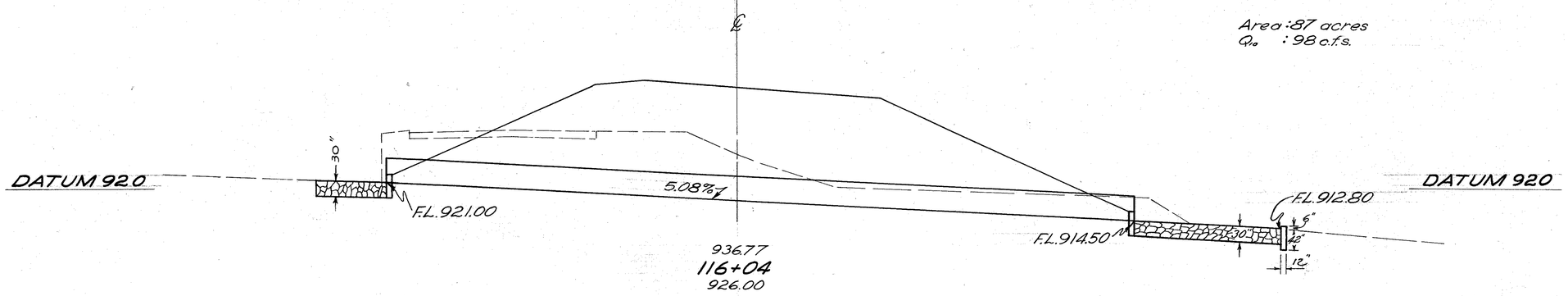
WORK REQUIRED

Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

54" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d)	128 L.F.
Channel Excavation	40 C.Y.
Excavation for Structure	284 C.Y.
Concrete for Structure (Class E)	3.9 C.Y.
Removal of Pipe (15" and Under)	38 L.F.
Catch Basins Abandoned	2 Each
Removal of Existing Structure (Stone Arch)	Lump Sum
Dumped Rock Channel Protection	34 C.Y.
Remove and Store 5.0'x3.2' Corr. Metal Pipe Arch	34 L.F.

Area: 87 acres
Q_{10} : 98 c.f.s.



CROSS SECTION
Scale: 1"=10'

1/S

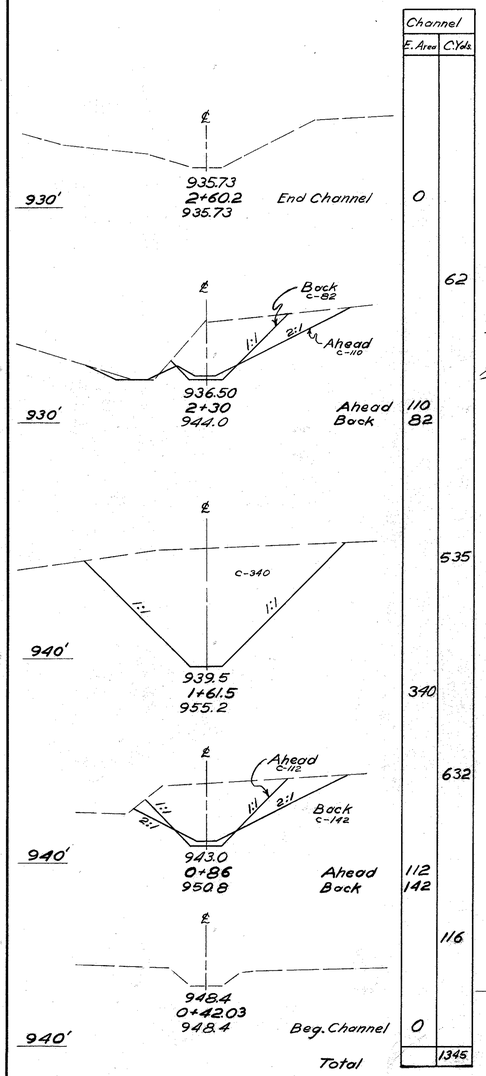
STA. 116+04 - 54"x128' PIPE CULVERT

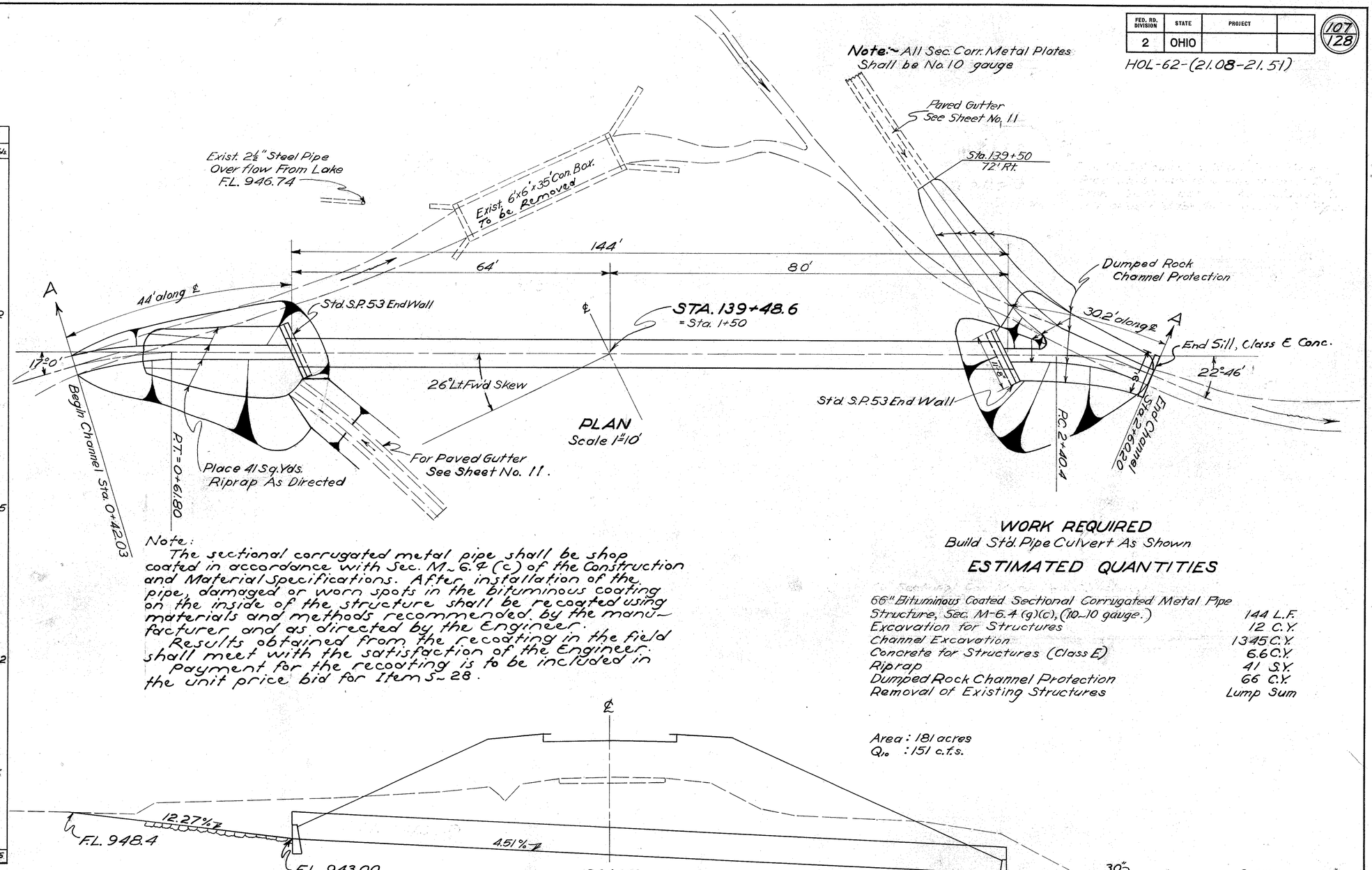
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

107/128

HOL-62-(21.08-21.51)

Note:~ All Sec. Corr. Metal Plates Shall be No. 10 gauge





Note:
The sectional corrugated metal pipe shall be shop coated in accordance with Sec. M-6.4 (c) of the Construction and Material Specifications. After installation of the pipe, damaged or worn spots in the bituminous coating on the inside of the structure shall be recoated using materials and methods recommended by the manufacturer, and as directed by the Engineer.
Results obtained from the recoating in the field shall meet with the satisfaction of the Engineer.
Payment for the recoating is to be included in the unit price bid for Item S-28.

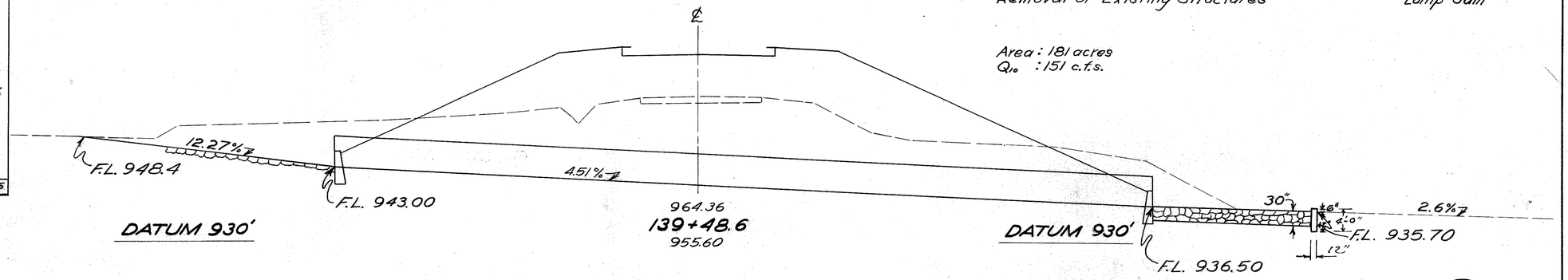
WORK REQUIRED

Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

66" Bituminous Coated Sectional Corrugated Metal Pipe Structure, Sec. M-6.4 (g)(c), (10-10 gauge.)	144 L.F.
Excavation for Structures	12 C.Y.
Channel Excavation	1345 C.Y.
Concrete for Structures (Class E)	6.6 C.Y.
Riprap	41 S.Y.
Dumped Rock Channel Protection	66 C.Y.
Removal of Existing Structures	Lump Sum

Area: 181 acres
Q_{10}: 151 c.f.s.



SECTION-AA
Scale 1"=10'

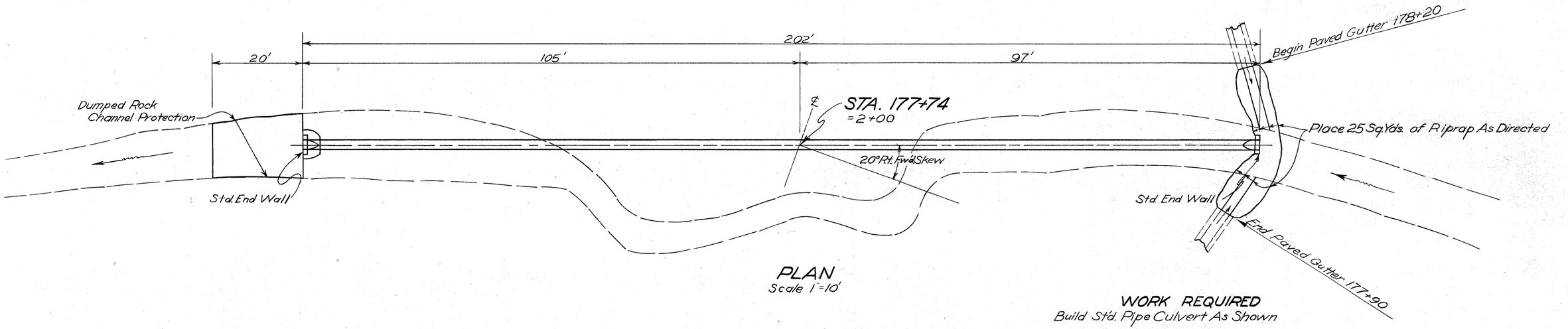
2/S

STA. 139+48.6 - 66"x144' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

108/28

HOL-62(21.08-21.51)



PLAN
Scale 1"=10'

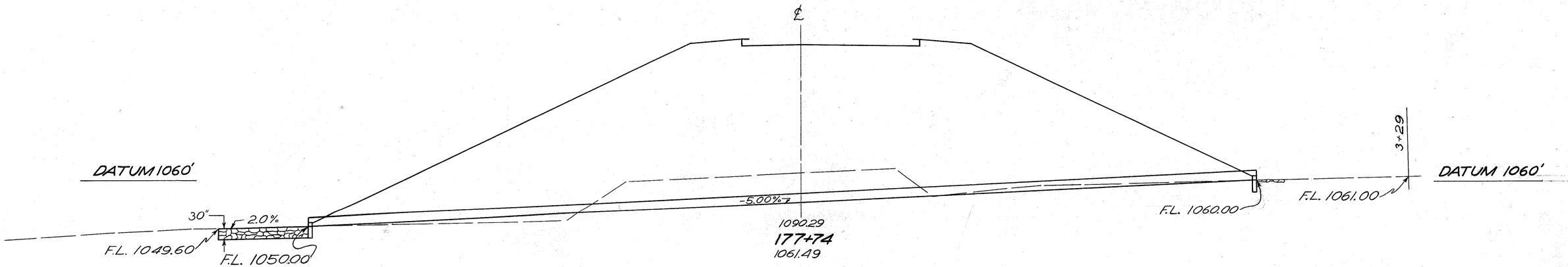
WORK REQUIRED

Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) 14 Gauge or Heavy Duty Reinf. Con. Pipe, Sec. M-106.6 (d)	202 L.F.
Excavation for Structures	72 C.Y.
Concrete for Structures (Class E)	0.8 C.Y.
Dumped Rock Channel Protection	2.3 C.Y.
Riprap	25 S.Y.

Area : 16 acres
Q_{10} : 31 c.f.s.



CROSS SECTION
Scale 1"=10'

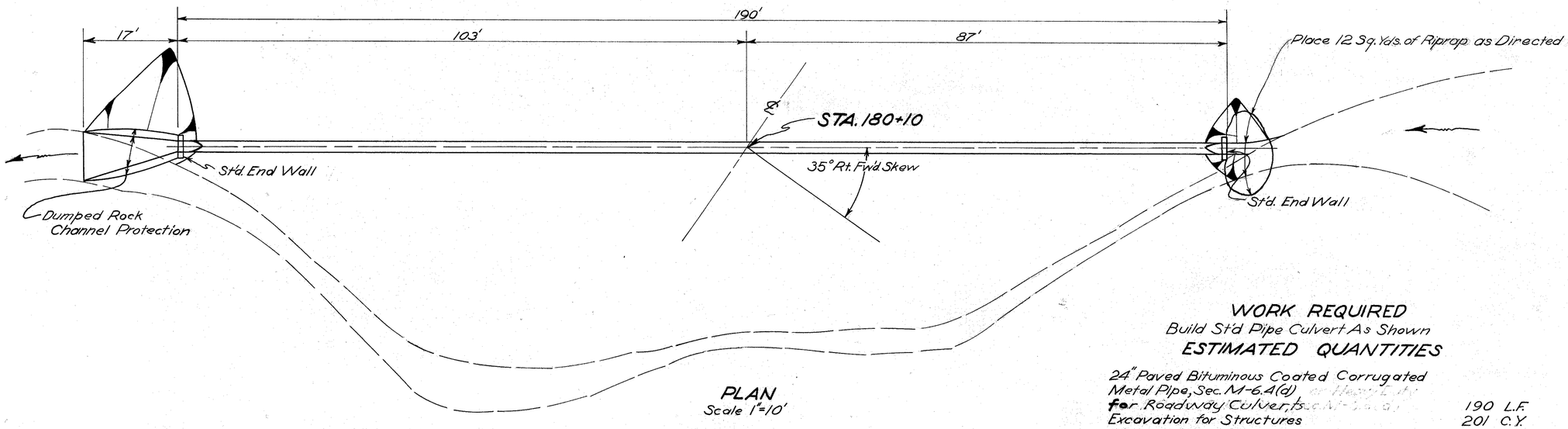
6/S

STA. 177+74 - 24"x202' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

109/128

HOL-62-(21.08-21.51)



PLAN
Scale 1"=10'

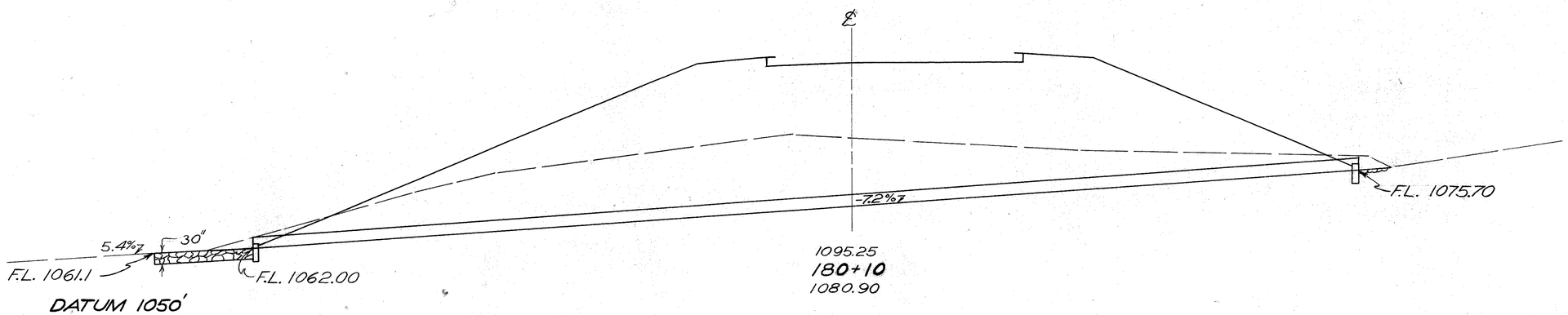
WORK REQUIRED

Build Std Pipe Culvert As Shown

ESTIMATED QUANTITIES

24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) for Roadway Culvert, ~~Sec. M-6.4(b)~~	190 L.F.
Excavation for Structures	201 C.Y.
Channel Excavation	13 C.Y.
Concrete for Structures (Class E)	0.8 C.Y.
Dumped Rock Channel Protection	11 C.Y.
Riprap	12 S.Y.

Area: 16 acres
Q_{10} : 31 c.f.s.



CROSS SECTION
Scale 1"=10'

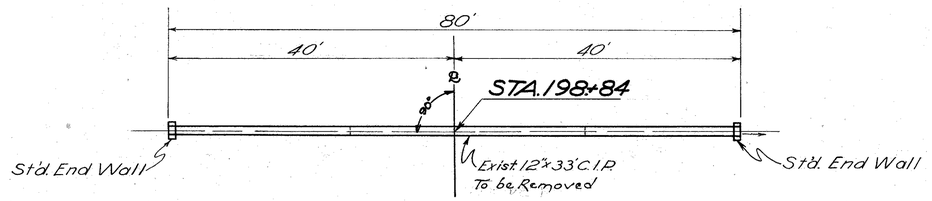
7/5

STA. 180+10 - 24"x190' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110/128

HOL-62-(21.08-21.51)

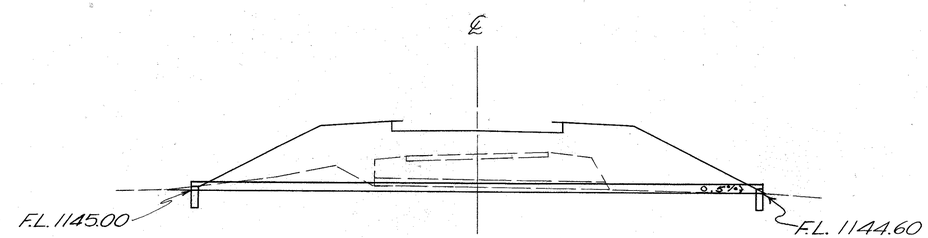


PLAN
Scale: 1"=10'

WORK REQUIRED
Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

15" Pipe for Roadway Culverts	80 L.F.
Excavation for Structure	19 C.Y.
Concrete for Structure (Class E)	05 C.Y.
Pipe Removal (15" and Under)	33 L.F.



CROSS SECTION
Scale: 1"=10'

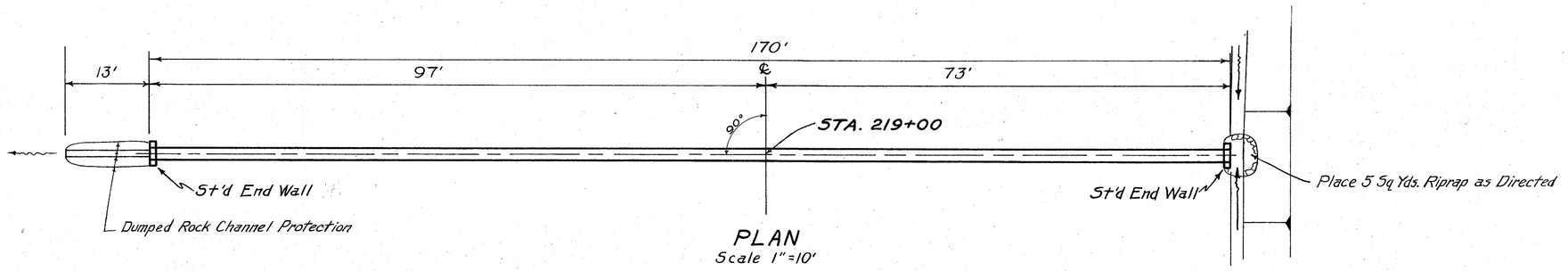
8/S

STA. 198+84
15"x 80' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111/128

HOL-62-(21.08-21.51)



PLAN
Scale 1"=10'

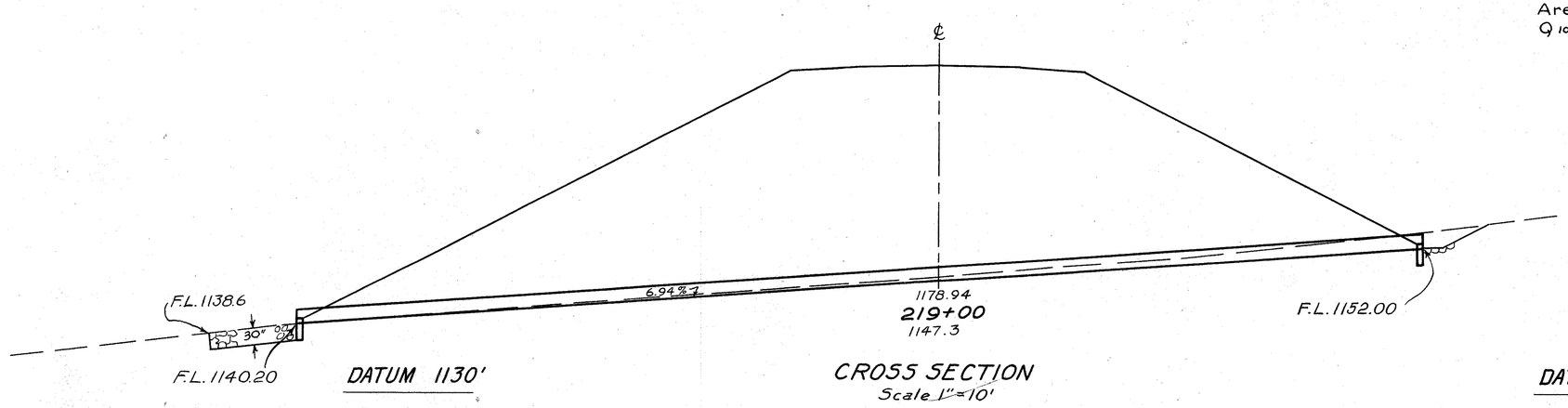
Work Required

Build St'd Pipe Culvert As Shown

Estimated Quantities

24" Paved Bituminous Coated Corrug. Metal Pipe, Sec. M-6.4 (d) or Heavy Duty Reinforced Concrete Culvert Pipe, Sec. M-106.6 (d)	170 L.F.
Excavation for Structures	44 C.Y.
Concrete for Structures (Class E)	0.8 C.Y.
Dumped Rock Channel Protection	5 C.Y.
Riprap	5 Sq.Y.

Area: 4 Acres
Q_{10} : 13 c.f.s.



CROSS SECTION
Scale 1"=10'

9/S

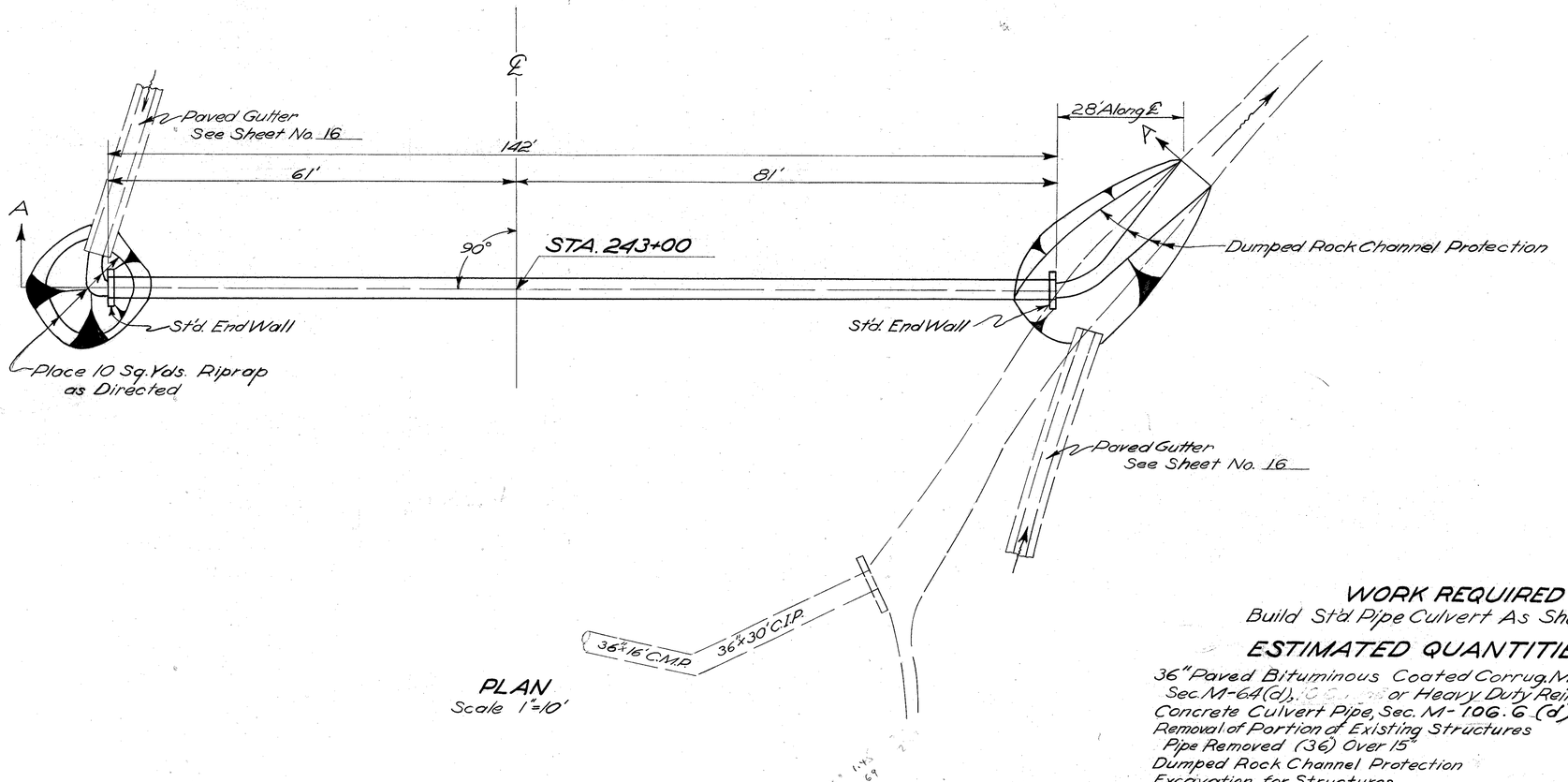
STA. 219+00

24"x 170' PIPE CULVERT

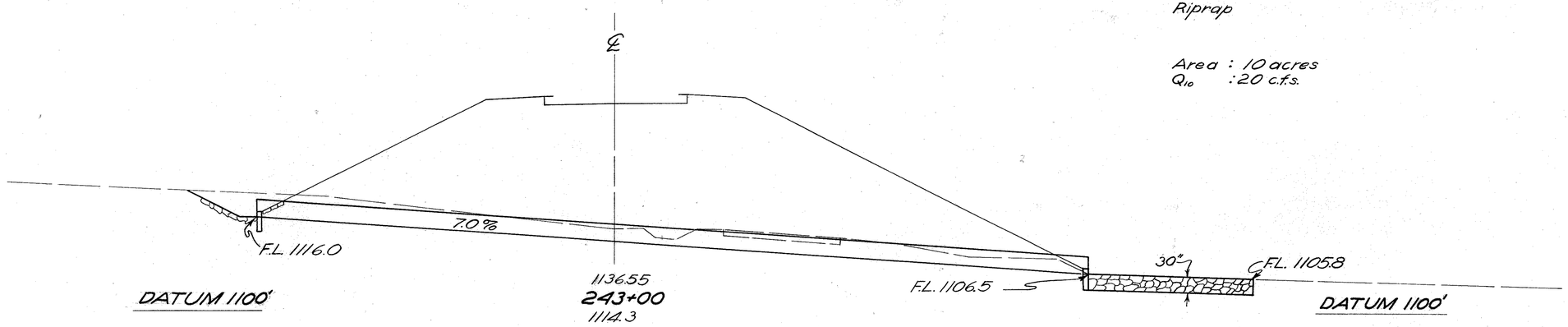
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

112/128

HOL-62-(21.08-21.51)



PLAN
Scale 1"=10'



SECTION-A-A
Scale 1"=10'

WORK REQUIRED

Build Std Pipe Culvert As Shown

ESTIMATED QUANTITIES

36" Paved Bituminous Coated Corrug. Metal Pipe, Sec. M-64(d), or Heavy Duty Reinforced Concrete Culvert Pipe, Sec. M-106.6.(d)	142 L.F.
Removal of Portion of Existing Structures	2 C.Y.
Pipe Removed (36) Over 15'	46 L.F.
Dumped Rock Channel Protection	30 C.Y.
Excavation for Structures	120 C.Y.
Concrete for Structures (Class E)	1.2 C.Y.
Riprap	10 S.Y.

Area : 10 acres
Q_{10} : 20 c.f.s.

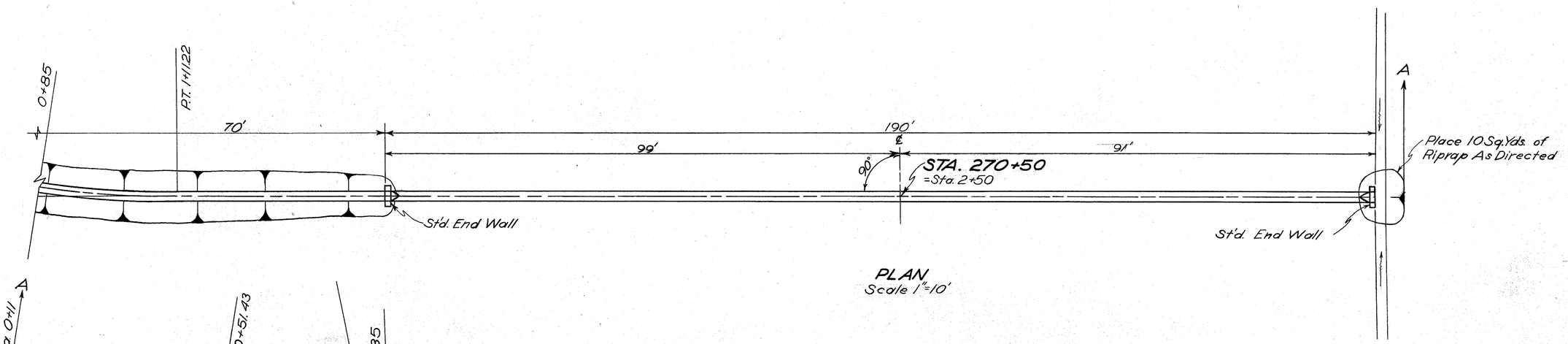
10/S

STA. 243+00 - 36" x 142' PIPE CULVERT

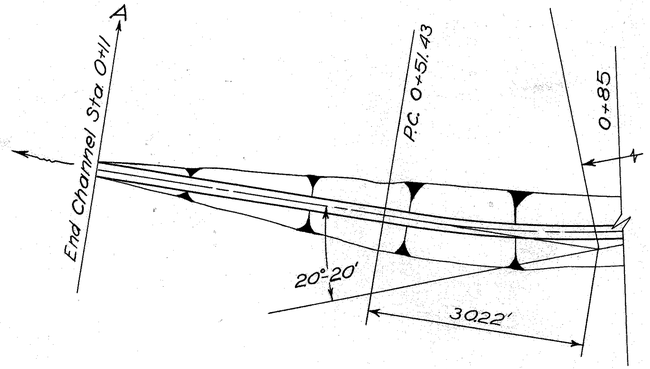
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

113
128

HOL-62(21.08-21.51)



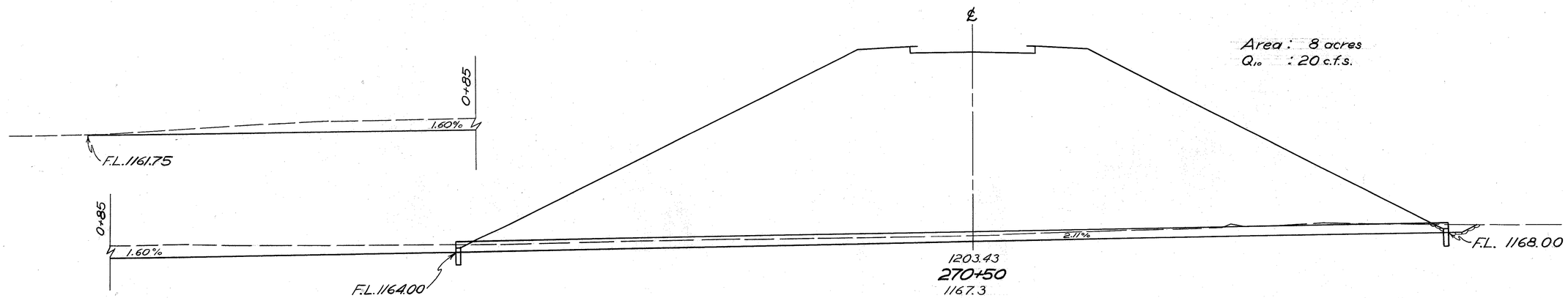
PLAN
Scale 1"=10'



WORK REQUIRED
Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4 (d), 12 gage	190 L.F.
Excavation for Structures	60 C.Y.
Channel Excavation	44 C.Y.
Concrete for Structures (Class E)	0.8 C.Y.
Riprap	10 S.Y.



SECTION-A-A
Scale 1"=10'

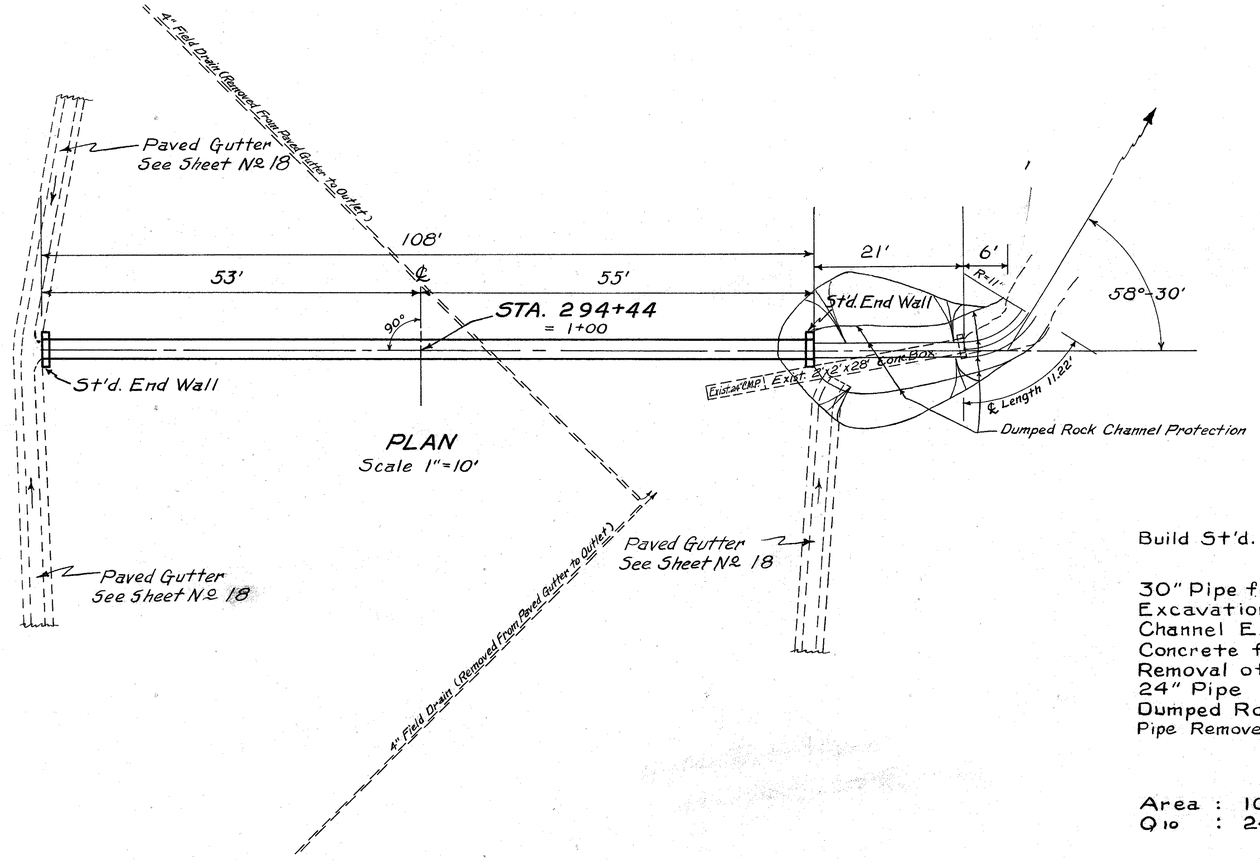
11
S

STA. 270+50 - 24"×190' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL-62-(21.08-21.51)

114
128



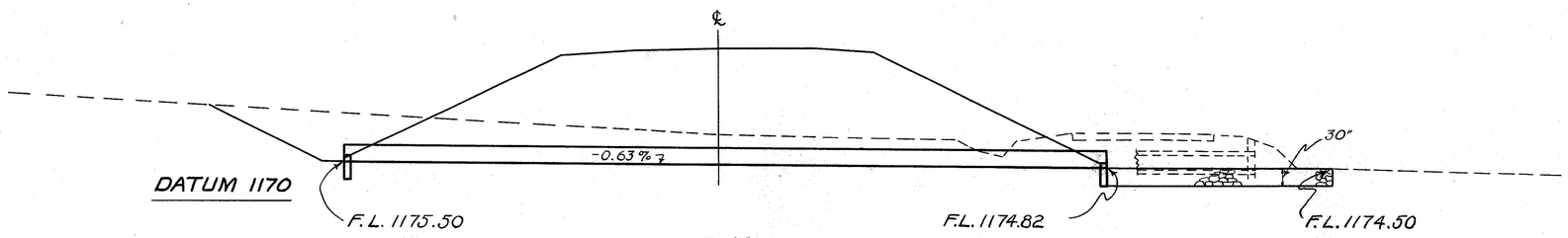
WORK REQUIRED

Build Std'd. Pipe Culvert As Shown

ESTIMATED QUANTITIES

30" Pipe for Roadway Culverts	108	Lin. Ft.
Excavation for Structures	120	Cu. Yds.
Channel Excavation	30	Cu. Yds.
Concrete for Structures (Class E)	1.0	Cu. Yds.
Removal of Portions of Existing Structures	9	Cu. Yds.
24" Pipe Removed	8	Lin. Ft.
Dumped Rock Channel Protection	35	Cu. Yds.
Pipe Removed (4" Field Drain)	220	Lin. Ft.

Area : 10 Acres
Q10 : 24 c.f.s.



CROSS SECTION
Scale 1"=10'

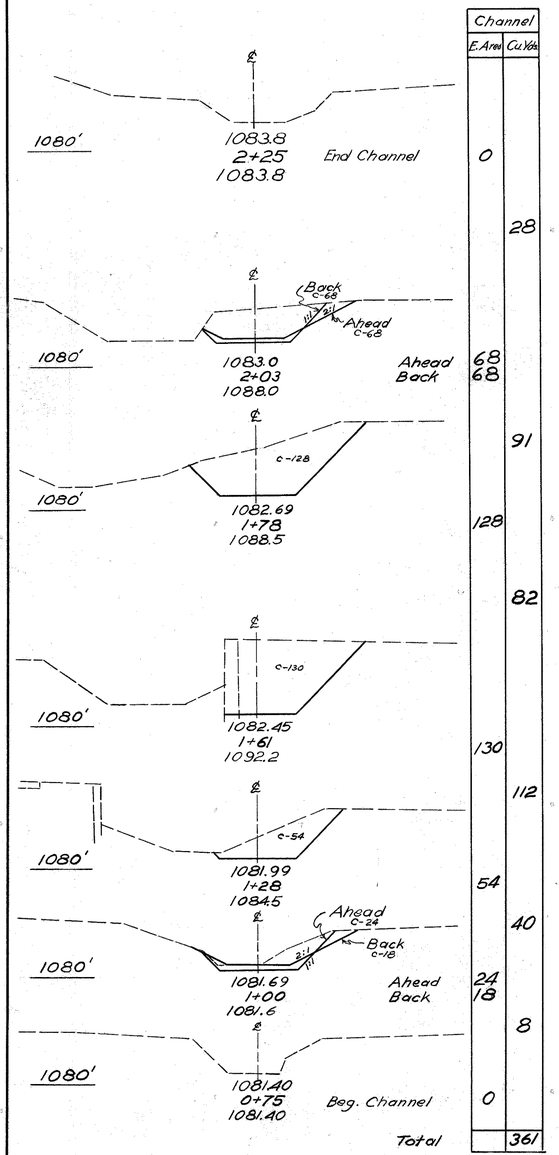
14
S

STA. 294+44
30"x108' PIPE CULVERT

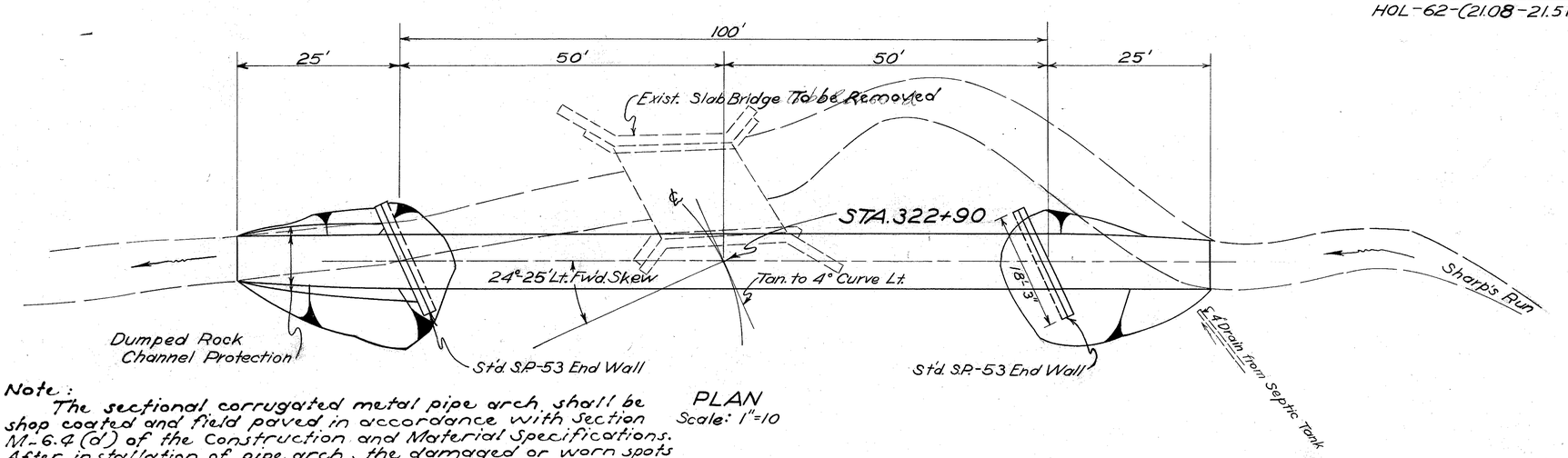
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115/128

HOL-62-(21.08-21.51)



Channel E. Area	Channel Cu. Yds.
0	
	28
68	
68	
	91
128	
	82
130	
	112
54	
	40
24	
18	
	8
0	
	361



PLAN
Scale: 1"=10

Note:
The sectional corrugated metal pipe arch shall be shop coated and field paved in accordance with Section M-6.4 (d) of the Construction and Material Specifications. After installation of pipe arch, the damaged or worn spots in the bituminous coating on the inside of the structure shall be recoated using materials and methods recommended by the manufacturer and as directed by the Engineer.

Results obtained from the field paving shall meet with the satisfaction of the Engineer.

The bituminous paving may consist of an acceptable mixture of hot sand and Sec. M-5.1 asphalt cement spread and compacted, to the satisfaction of the Engineer, to form a smooth, durable pavement and having a minimum thickness of approximately one inch over the inside crests of the corrugations.

Payment for these operations shall be included in the unit price bid for Item S-28.

WORK REQUIRED

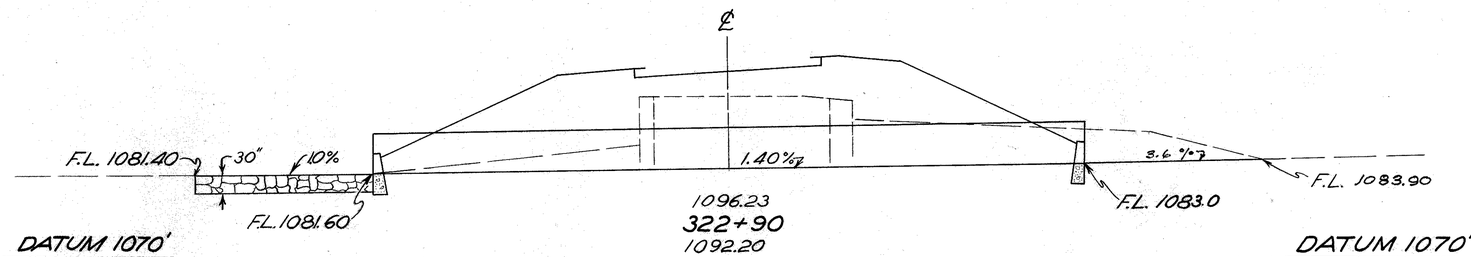
1. Build Std Pipe Culvert As Shown

ESTIMATED QUANTITIES

8'-7"x5'-11" Sectional Corr. Metal Plate Arch Structure - Sec. M-6.4(g)(d) (10-8 Gage)	100 L.F.
Excavation for Structures	18 C.Y.
Channel Excavation	361 C.Y.
Concrete for Structures (Class E)	10.6 C.Y.
Dumped Rock Channel Protection	24 C.Y.
Removal of Existing Structure	Lump Sum

Area: 336 acres
Q_{10}: 246 c.f.s.

Note: ~ For details not shown, see Std. Dwg S.P-53. Plates shall be formed with 2" corrugations and shall be No.10 gauge for all plates except bottom and corner plates which will be No. 8 gauge



CROSS SECTION
Scale: 1"=10'

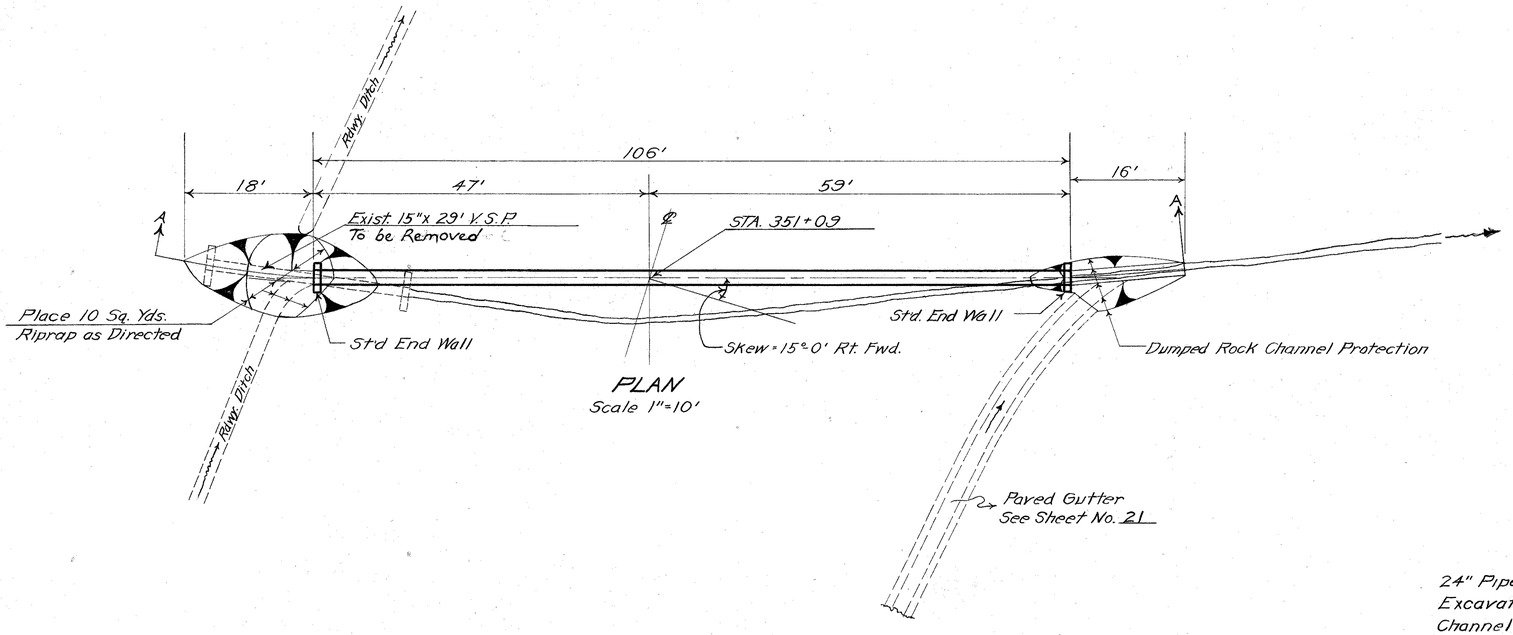
15/S

STA. 322+90
8'-7"x5'-11"x100' SECT. CORR. METAL PIPE ARCH STRUCT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL-62-(21.08-21.51)

116
128



PLAN
Scale 1"=10'

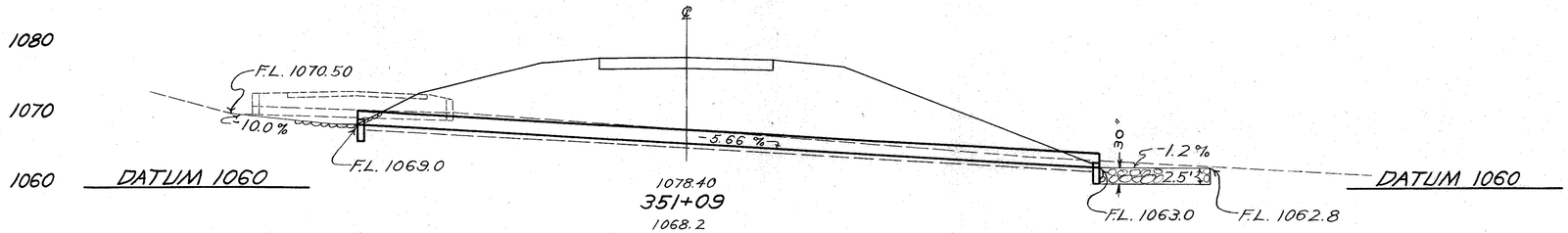
WORK REQUIRED

Build Std Pipe Culvert as shown.

ESTIMATED QUANTITIES

24" Pipe for Roadway Culvert	106 Lin. Ft.
Excavation for Structures	34 Cu. Yds.
Channel Excavation	5 Cu. Yds.
Concrete for Structures (Class 'E')	0.80 Cu. Yds.
Riprap	10 Sq. Yds.
Dumped Rock Channel Protection	8 Cu. Yds.
Pipe Removal (15")	29 Lin. Ft.
Removal of Portions of Exist. Structure	2 Cu. Yds.

Area: 10 acres
Q10: 15 c.f.s.



SECTION-A-A
Scale 1"=10'

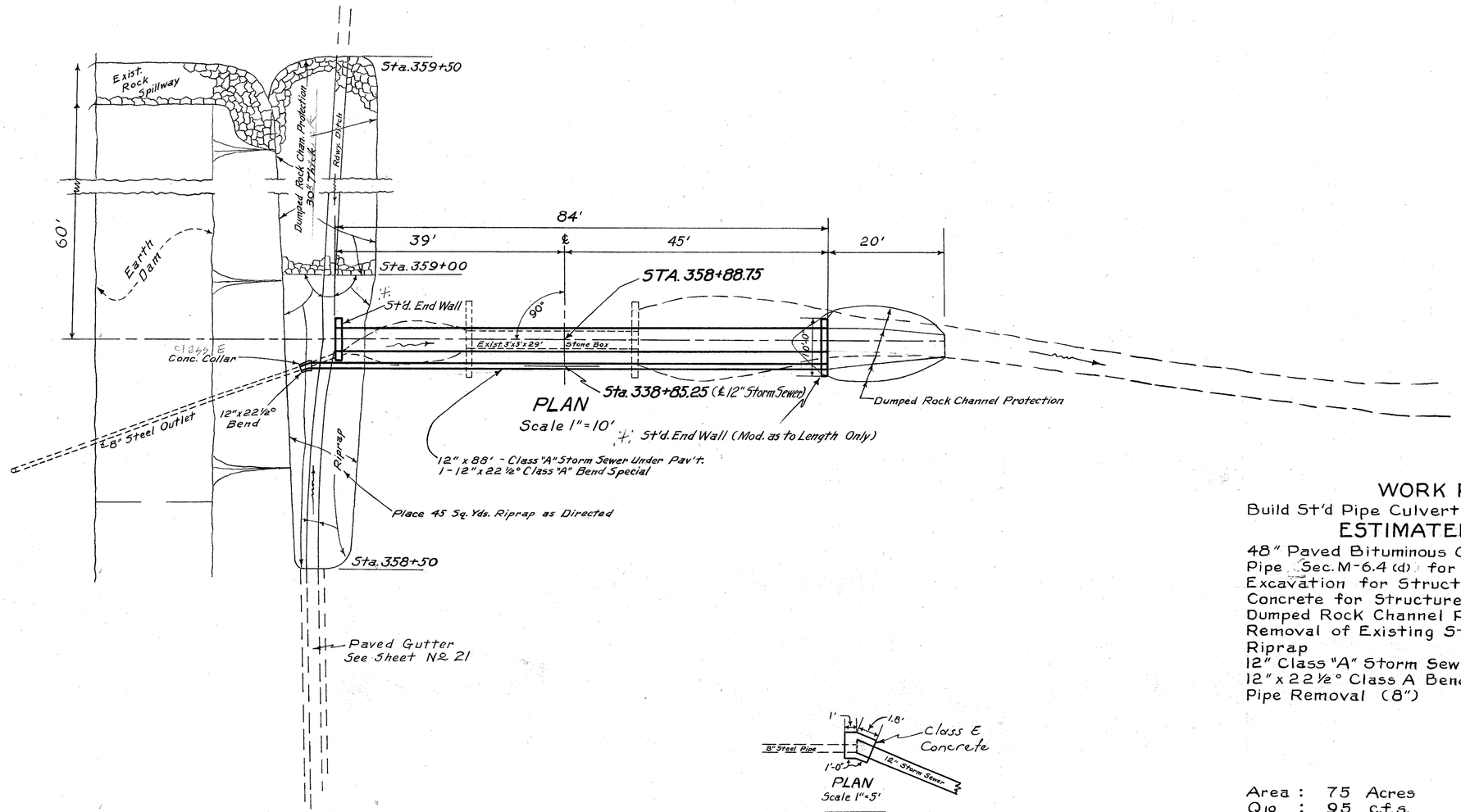
17
S

STA. 351+09
24"x106' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

117/128

HOL-62-(21.08-21.51)



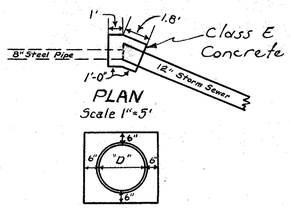
WORK REQUIRED

Build St'd Pipe Culvert As Shown

ESTIMATED QUANTITIES

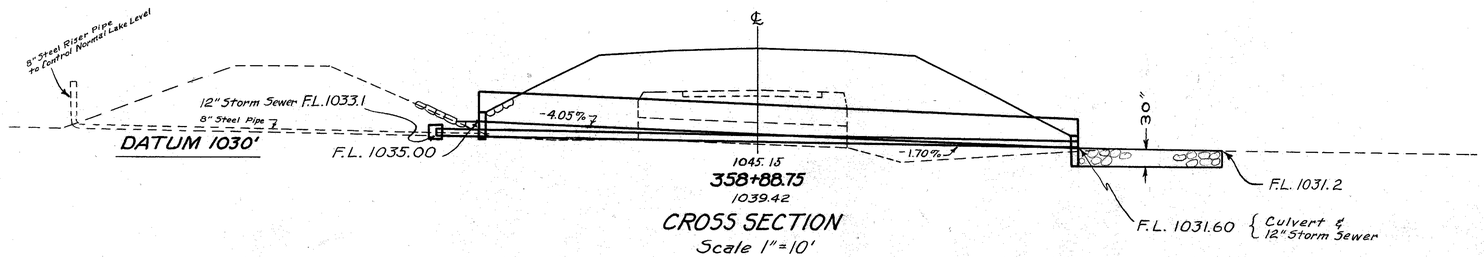
48" Paved Bituminous Coated Corrg. Metal Pipe (Sec. M-6.4 (d)) for Rdw'y. Culvert	84	L.F.
Excavation for Structures	4	C.Y.
Concrete for Structures (Class E)	2.4	C.Y.
Dumped Rock Channel Protection	67	C.Y.
Removal of Existing Structure	Lump Sum	
Riprap	45	Sq. Y.
12" Class "A" Storm Sewer Under Pav't	88	Lin. Ft.
12" x 22½° Class A Bend Special	1	Each
Pipe Removal (8")	8	Lin. Ft.

Area : 75 Acres
Q10 : 95 c.f.s.



1033.1
1031.6

CONCRETE COLLAR FOR 12" STORM SEWER



DATUM 1030'

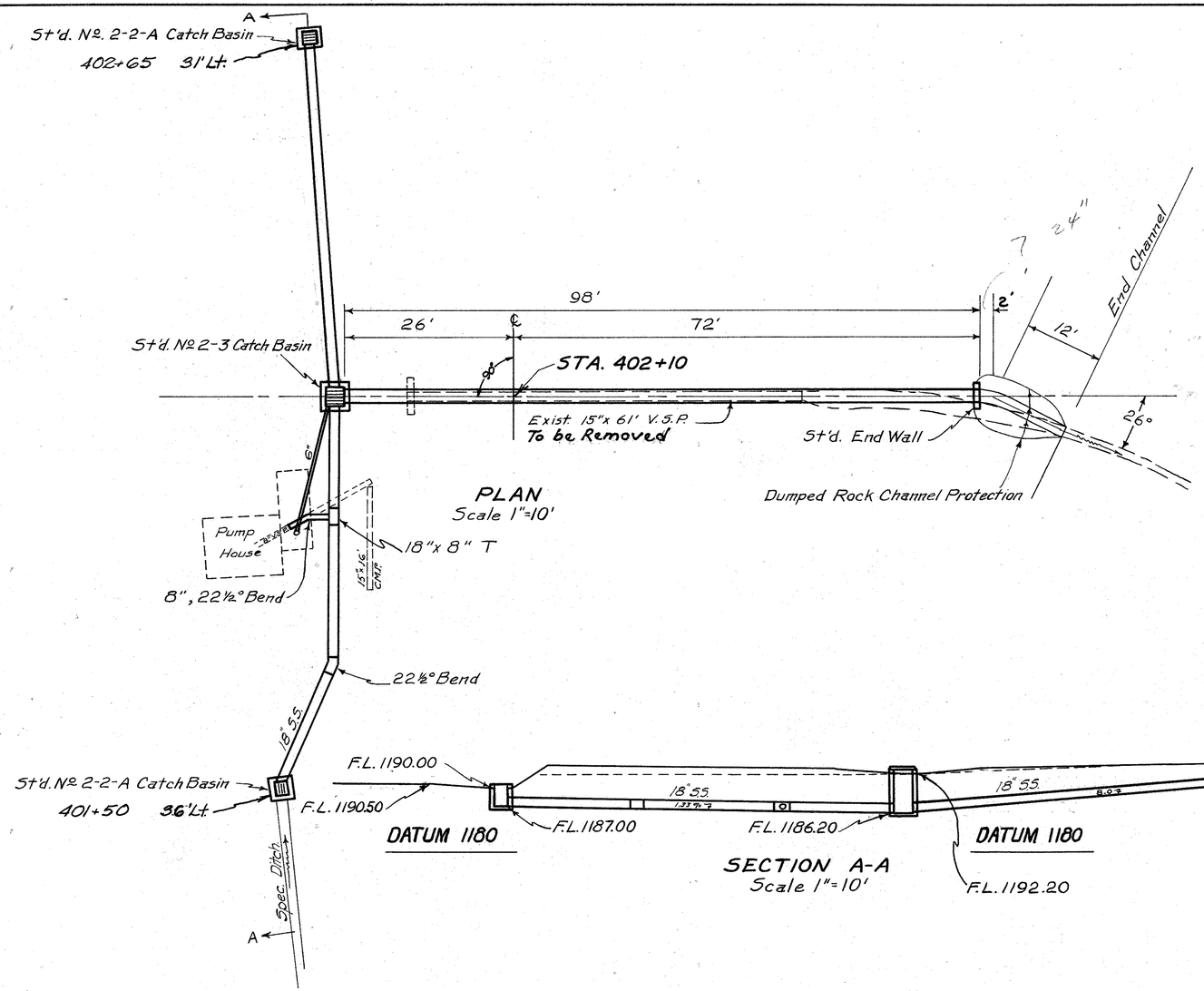
18/S

STA. 358+88.75
48"x84' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

118/128

HOL-62 (21.08-21.51)



PLAN
Scale 1"=10'

SECTION A-A
Scale 1"=10'

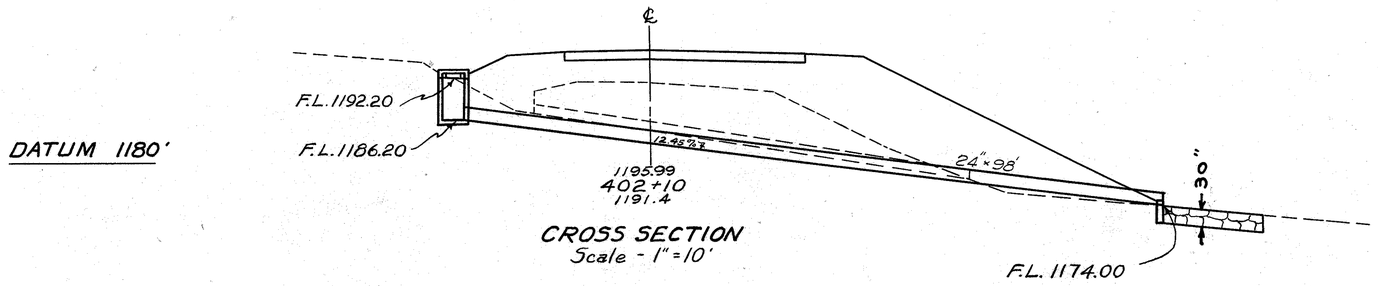
WORK REQUIRED

Build St'd. Pipe Culvert and St'd. No. 2-3 Catch Basin **and Storm Sewer as shown.**

ESTIMATED QUANTITIES

24" Pipe for Roadway Culverts, Sec. M.6.4(d)	98	L.F.
Excavation for Structures	59	C.Y.
Concrete for Structures (Class E)	0.4	C.Y.
St'd. No. 2-3 Catch Basin	1	Each
St'd. No. 2-2-A Catch Basin	2	Each
18" Class A Storm Sewer Under Pavement	54	L.F.
Pipe Removed (15" and Under)	87	L.F.
Removal of Portions of Existing Structures	1	C.Y.
18" x 8" T, Pipe Special, Class A Storm Sewer	1	Each
18", 22½° Bend, Pipe Special, Class A Storm Sewer	1	Each
Dumped Rock Channel Protection	10	C.Y.
8", 22½° Bend, Pipe Special, Class A Storm Sewer	1	Each
8" Class A Storm Sewer	6	L.F.
6" Pipe Underdrain (Outlet)	10	L.F.
18" Class A Storm Sewer	54	L.F.

Area : 9 Acres
Q 10 : 22 c.f.s.



CROSS SECTION
Scale - 1"=10'

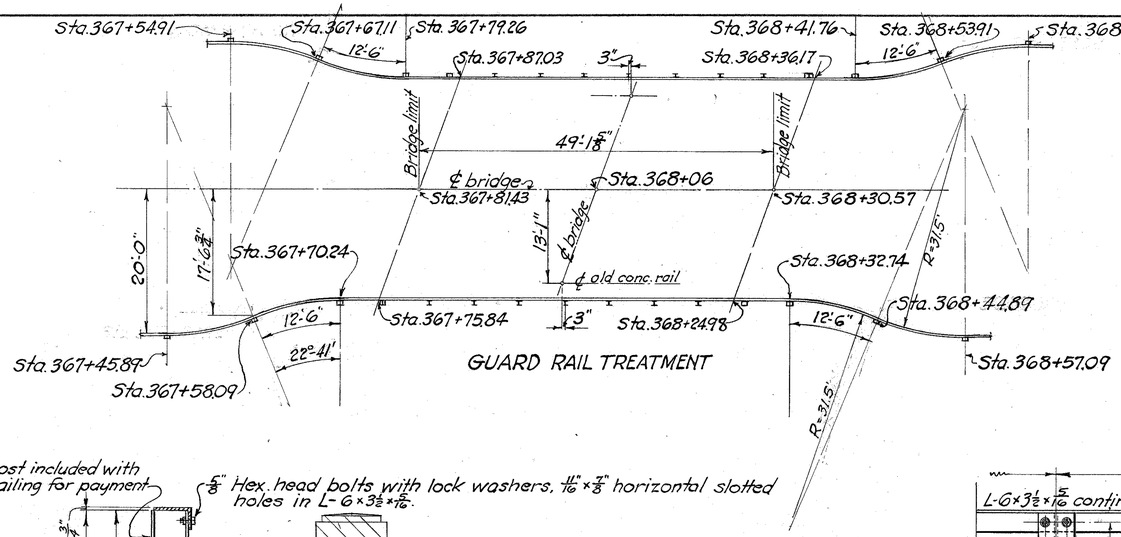
20/S

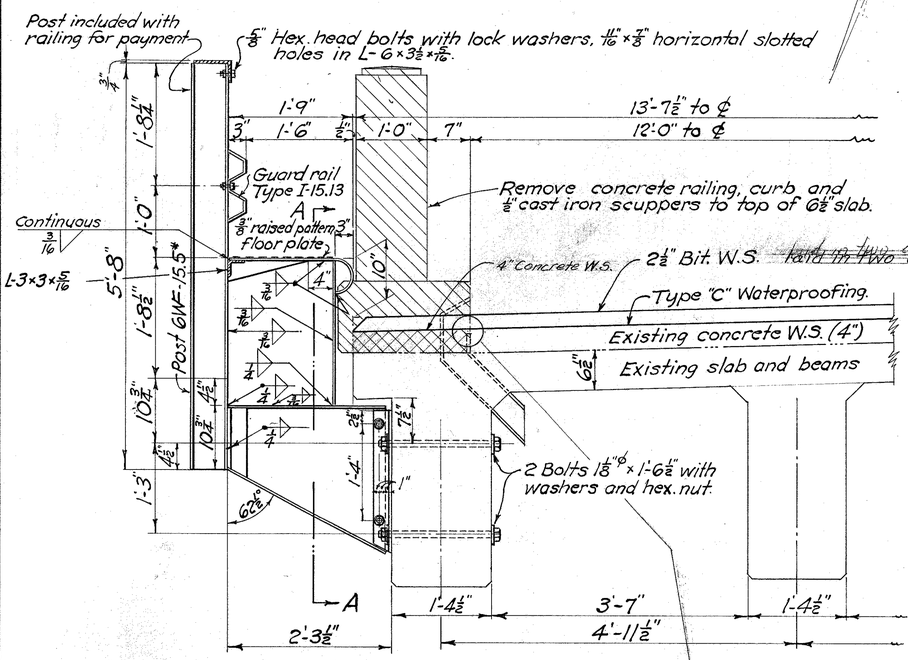
STA. 402+10
24"x 98' PIPE CULVERT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

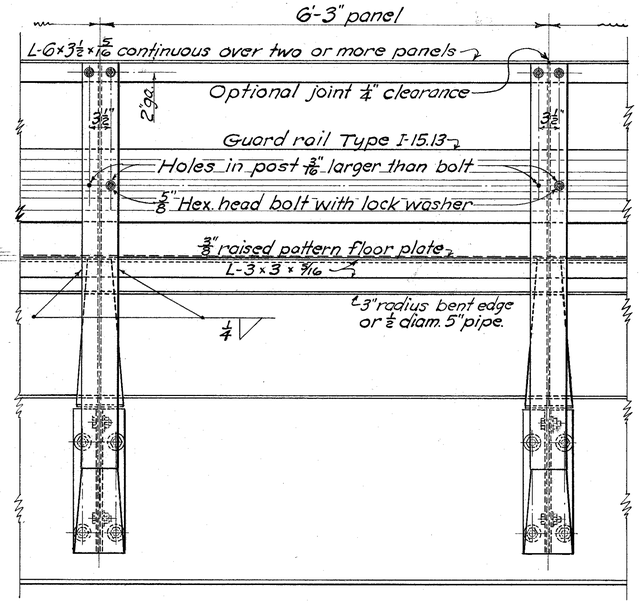
119/128

HOL-62-(21.08-21.51)

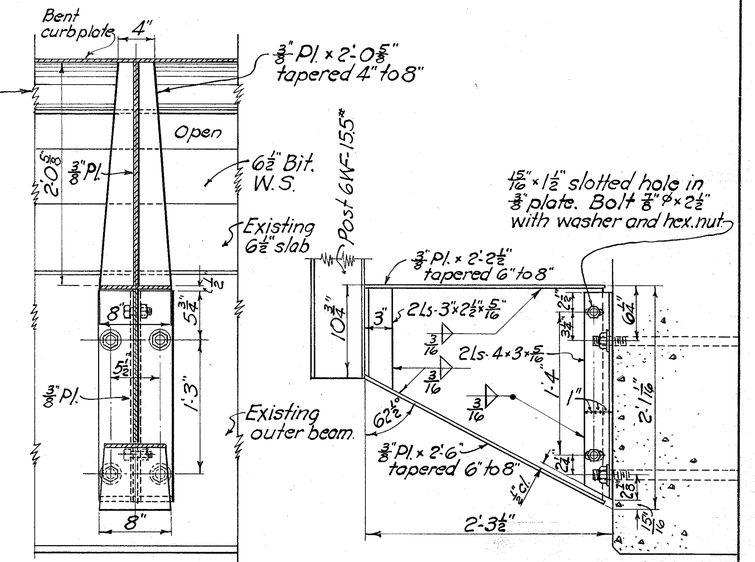




TRANSVERSE RAIL SECTION

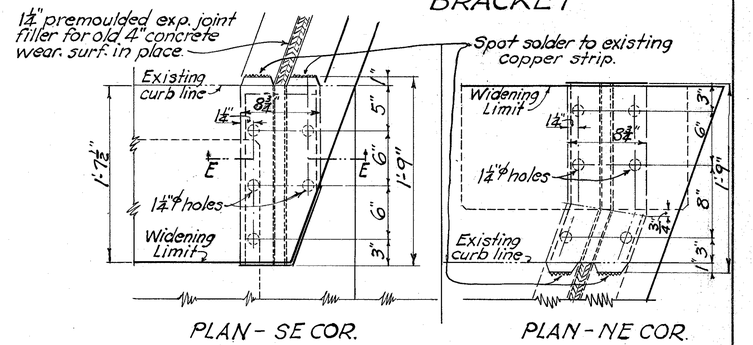


PANEL ELEVATION



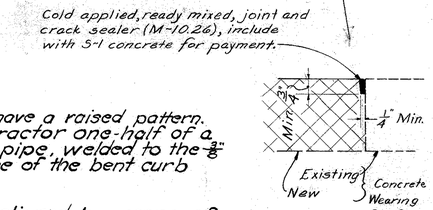
SECTION A-A

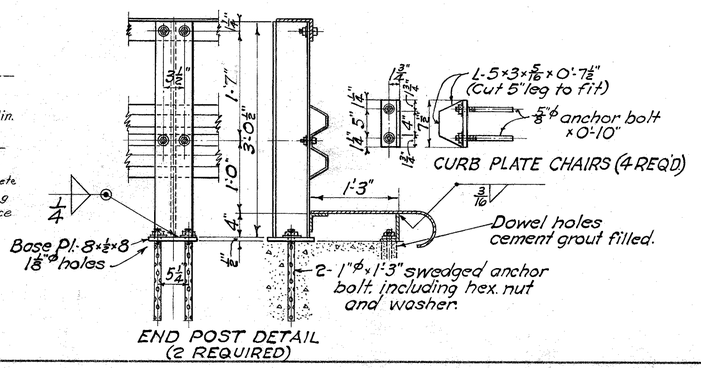
DETAIL OF SUPPORTING BRACKET



PLAN - SE COR.

PLAN - NE COR.





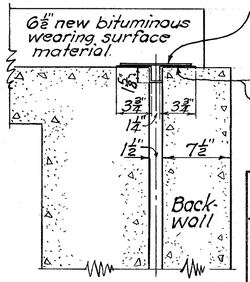
END POST DETAIL (2 REQUIRED)

NOTES:

The ⅜" curb plate is to have a raised pattern. At the option of the Contractor one-half of a 5" diameter extra strong pipe, welded to the ⅜" plate, may be used in place of the bent curb plate as shown.

Railing posts shall be aligned by means of ⅞"ϕ bolts in slotted holes in bracket plate and then welded permanently in position.

The assembly of railing posts, connecting angles and brackets may be shop welded prior to erection if the contractor so desires except the posts shall be field-welded to the brackets after the brackets are bolted in place so as to permit vertical adjustment of the posts if necessary.



SECTION E-E

COPPER EXPANSION JOINT EXTENSION DETAILS (2 LENGTHS REQUIRED)

8" width - 16 oz Copper Strip under bituminous surface course only. Spot solder on one side at 6" intervals.

12" width of 16 oz copper strip. Bed copper strip in bituminous material.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

WIDENING DETAILS, NEW RAILINGS, ETC., ON
BRIDGE No. HOL-62-25.91
OVER DOUGHTY CREEK
HOLMES COUNTY
SEC. HOL-62-(21.08-21.51)

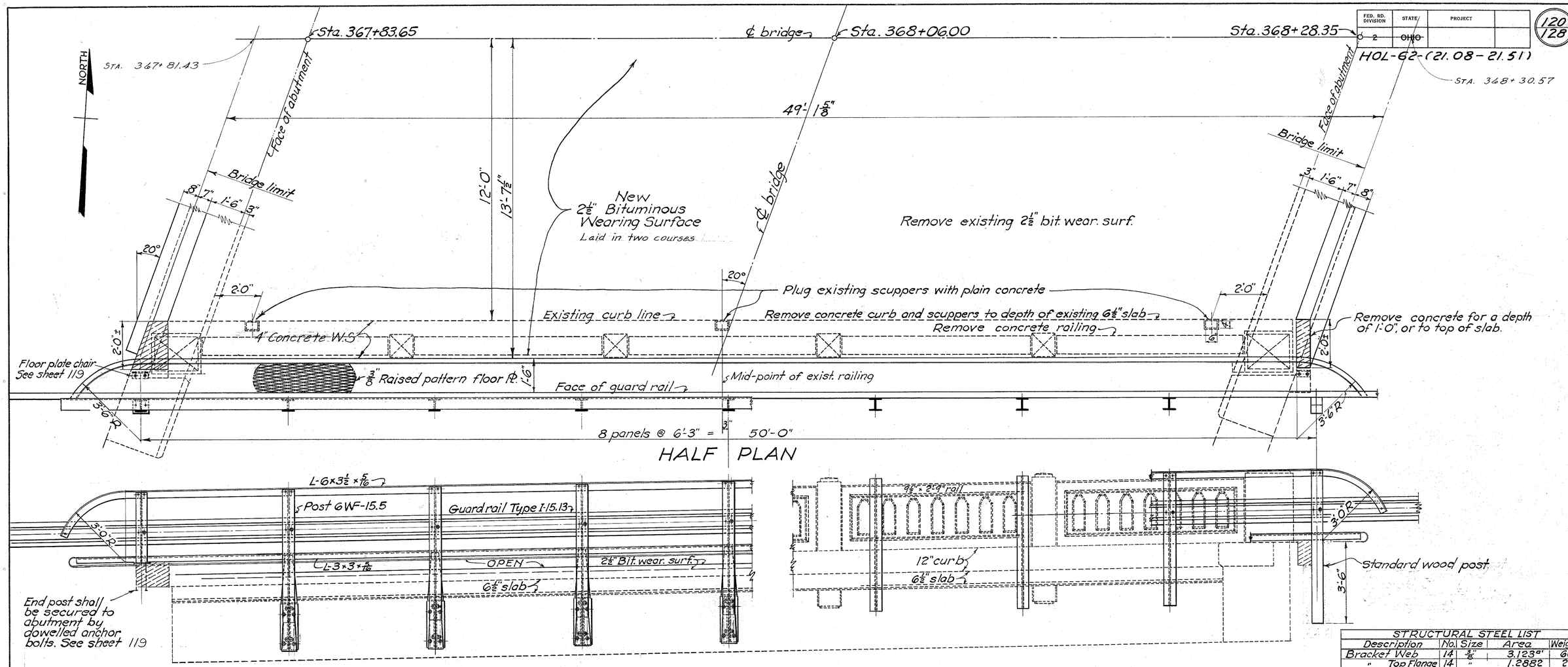
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HGM	HGM	HGM	J.M.L.	C.D.B.	10-26-57	

11/80

FED. RD. DIVISION	STATE	PROJECT	
5 2	OHIO		

120
128

HOL-62-(21.08 - 21.51)



NOTE: Two way traffic shall be maintained. The Contractor shall complete the work on one side of the structure before beginning work on the other side. A 20 ft. minimum clear roadway width shall be maintained across the structure.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstr.	Abut.	Gen.		
E-8	131	Sq.Yd.	Removal and Disposal of Existing Wearing Course	131				
S-2	LUMP	SUM	Plug (Concrete, Class "C") Scupper Holes (6)	Lump				
S-3	150	Sq.Yd.	Type "C" Waterproofing	150				
S-7	7805	Lb.	Structural Steel	7805				
S-8	7805	Lb.	Field Painting of Structural Steel	7805				
S-9	LUMP	SUM	Expansion Joint - (16 oz sheet copper)	Lump				
S-14	98.28	Lin.Ft.	Railing (Type I-15.13 with hand rail and steel posts and bolts)	98.28				
S-22	LUMP	SUM	Removal of Portions of Existing Structure			Lump		
S-23	89	Lin.Ft.	Dowel holes	77	12			
T-35	11	Cu.Yd.	Asphaltic Concrete Surface Course, Type A or C (70-85)	11				
S-1	2	Cu.Yd.	4" Class C concrete wearing surface	2				

STRUCTURAL STEEL LIST

Description	No.	Size	Area	Weight
Bracket Web	14	5/16"	3.123 sq in	669
" Top Flange	14	"	1.2882	276
" Bott. "	14	"	1.46	313
" Connections	28	L 3 x 2 1/2 x 5/16 x 10 1/2	56	137
" "	28	L 4 x 3 x 7/16 x 1'-10 1/2"	7.2	378
				1773
Curb Web	14	5/16"	2.90 sq in	621
" Flange	14	"	1.026 sq in	220
" Chair	4	L-5 x 3 x 7/16 x 0'-7 1/2"		21
" Plate L	2	L-3 x 3 x 7/16 x 55'-3		674
" Raised Pattern Fl. Pl.	2	3/8"	2'-3" x 55'-3"	4065
Rail Post Base Plate	2	1/2"	8" x 8"	18
				5619
Bolts 1 1/8" ø x 1'-6 1/2"	56			360
" 7/8" ø x 0'-2 1/2"	28			26
" Anchor 1" ø x 1'-3"	4			17
" " 3/4" ø x 0'-10"	8			10
			TOTAL	7805

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN AND ELEVATION NOTES AND ESTIMATED QUANTITIES FOR WIDENING BRIDGE No. HOL-62-25.91 OVER DOUGHTY CREEK HOLMES COUNTY

SEC. HOL-62-(21.08 - 21.51)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HGM	HGM	HGM	JML	COB	10-28-57	

11/9/17

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED FOR PROJECT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121/128

HOL-62-(21.08-21.51)
RIGHT OF WAY PLAN

PARCEL NO.	OWNER	AREA A^s	EXIST BLDG'S	SHEET NO.	REMARKS
1-LA	Raymond J. & Marilyn Ruth Starner	1.000	No	126	
2	Not Used.				
3	" "				
4	" "				
5-LA	Richard & Virgina Cary	0.000	No	122	
5-X	" " " "	0.015	"	122	
6-LA	Eliza Snyder	0.432	"	122	
6-X	" "	0.015	"	122	
7-LA	R.R. & Maxine Keller	0.274	"	122	
8-LA	Moses J. Hostetler	0.000	"	122	
9-LA	Roxie Troyer	0.000	"	122	
10-LA	Lloyd E. & Virginia Wolf	0.064	"	122	
11-LA	Briar Hill Stone Co.	0.105	"	122	
12-LA	Elmer C. & Charlotte E. Blum	2.028	"	122	
13-LA	Mary Shrimplin	0.016	Yes	122	
14-LA	Catherine Metzler			122	Not Needed
15-LA	Catherine Gray			122	" "
16-LA	Emery E. & Ilia E. Lyton			122	" "
17-LA	Reuben F. & Florence I. Kieffaber			122	" "
18-LA	Adrian M. Nigh			122	" "
19-LA	Owen & Frances Mullet			122-123	" "
20-LA	Dale & Carolyn Gamerstfelder		No	123	Limited Access Only
21-LA	Briar Hill Stone Co.	3.007	"	122&123	
22-LA	Chester B. Blum	0.240	"	123	
22A-LA	" " "			123	Limited Access Only
22-X	" " "	0.053	No	123	
23-LA	Wayland & Opal Waltman	0.952	"	123-124	
24-LA	Elizabeth Mae High	0.544	"	124	
25-LA	Harold T. Jr. & Marjorie Myer Blum	1.033	"	124	
26-LA	Mary Joan Atha	1.031	"	124	
27-LA	Ray M. White, etux.	0.865	"	124	
28-LA	" " " "	0.874	"	124	
29-LA	Harris H. Palmer	0.211	"	124	
29-A	" " "	0.673	"	124	
30-LA	Noah D. & Marvanna Miller	10.044	"	124-125	
30-A	" " " " "	0.140	"	124	
30-B	" " " " "	0.379	"	125	
30-W	" " " " "	0.072	"	124	
30-X	" " " " "	0.064	"	124-125	
30-Y	" " " " "	0.041	"	125	
30-Z	" " " " "	0.037	"	125	
31-LA	Joseph N. Coblentz, etal.	1.944	Yes	125	
32-LA	Alvin B. Miller	0.131	No	125	
33-LA	Jessie Armor	4.509	Yes	125	
33-A	" "	0.137	No	125	
34-LA	Alvin M. & Katie Hershberger	4.829	"	125	
35-LA	Benjamin J. Miller	5.360	"	125-126	
35-A	" " "	0.147	"	125	
36-LA	Eli J. Troyer	0.292	Yes	126	
37-LA	Leo Mast	0.574	No	126	
37-A	" "	0.011	"	126	
38-LA	Albert J. & Lavina Troyer	1.363	"	126	
38A-LA	" " " " "	0.917	"	126	
38-A	" " " " "	0.029	"	126	
39-LA	Noah M. Gingerich, etal.	2.732	Yes	126	
40-LA	Leo Mast	6.734	No	126	
40A-LA	" "	1.026	"	126	
40-A	" "	0.340	"	126	
40-B	" "	0.071	"	126	
40-X	" "	0.163	"	126	

PARCEL NO.	OWNER	AREA A^s	EXIST BLDG'S	SHEET NO.	REMARKS
41-LA	Moses A. & Freda Schlaboch			126	Limited Access Only
42-LA	Joseph & Susan Coblentz	5.673	No	126	
42-A	" " " "	0.039	"	126	
43-LA	Alvin & Mae Gingerich	0.257	"	126	
44-LA	Noah A. & Clara A. Troyer	0.248	Yes	126	
44A-LA	" " " " "	0.618	No	126	
45-LA	Joseph N. & Susan Coblentz	0.865	Yes	126-127	
45-A	" " " " "	0.165	No	127	
46-LA	Howard & Elizabeth Aling	0.099	Yes	127	
46-A	" " " "	0.019	No	127	
47-LA	Jay Mast	1.657	"	127	
47-A	" "	0.135	"	127	
47-B	" "	0.016	"	127	
48-LA	Sharp Run Dairy Co.	0.087	"	127	
49-LA	Glen & Alice Mast	1.559	Yes	127	
49-X	" " " "	0.025	No	127	
50-LA	Ralph V. & Mary Aling	0.016	"	127	
51-LA	Upton Sinclair Aling	0.016	"	127	
52-LA	Ralph V. & Mary Aling	0.016	"	127	
53-LA	Yost H. & Fonnie Miller	0.020	"	127	
54-LA	Phyllis Kaser	0.020	"	127	
55-LA	J. Ray & Erma Mast	0.058	"	127	
56-LA	Glen & Alice Mast	0.153	"	127	
57-LA	Ada Mast, etal.	0.893	"	127	
58-LA	David S. & Elsie K. Miller	3.285	"	127	
59-LA	Edna C. Yoder	0.178	"	127	
60-LA	Sturges Miller	1.053	"	127-128	
60-A	" "	0.184	"	128	
61-LA	Joseph J. & Lovina Miller	0.219	"	127-128	
61-A	" " " " "	0.000	"	128	
62-LA	" " " " "	1.549	"	128	
62-A	" " " " "	0.156	"	128	
63-LA	Floyd & Alma P. Crilow	0.060	"	128	Prior Easement
63-A	" " " " "	0.138	"	128	
64-LA	Orie & Emma Oswald	0.148	"	128	
65-LA	Joseph J. & Lovina Miller	0.225	"	128	
66-LA	Noah J. & Silva Beachy	0.149	"	128	
67-LA	Mose M. & Susan Miller	0.029	"	128	
68-LA	Harry M. Kaufman	0.139	"	128	
69-LA	Celsus & Esther Mast	0.156	Yes	128	
70-LA	Clifford J. Kandell	0.126	No	128	
71-LA	Marion W. & Marilyn Kandell	0.071	"	128	
72-LA	Willard Miller	1.955	"	128	

VILLAGE OF MILLERSBURG — HARDY TWP. — SEC. 11 — T. 9N. — R. 7 W.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

122/128

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN

MOSES J. HOSTETLER
8-LA
P.R.O. 0.067 Ac
T.B.A. 0.000 Ac

ROXIE TROYER
9-LA
P.R.O. 0.057 Ac
T.B.A. 0.000 Ac

LLOYD E. & VIRGINIA WOLFE
10-LA
P.R.O. 0.077 Ac
T.B.A. 0.064 Ac

CATHERINE METZLER
14-LA
Not Needed

CATHERIN GRAY
15-LA
Not Needed

EMERY E. & ILIA E. LYTON
16-LA
Not Needed

REUBEN F. & FLORENCE I. KIEFFABER
17-LA
Not Needed

RICHARD & VIRGINA CARY
5-LA
P.R.O. 0.209 Ac
T.B.A. 0.000 Ac
5-X 0.015 Ac

MARY SHRIMPLIN
13-LA
P.R.O. 0.051 Ac
T.B.A. 0.016 Ac

ELIZA SNYDER
6-LA
P.R.O. 0.204 Ac
T.B.A. 0.432 Ac
6-X = 0.015 Ac

R.R. & MAXINE KELLER
7-LA
T.B.A. 0.274 Ac

ADRIAN M. NIGH
18-LA
Not Needed

OWEN & FRANCES MULLET
19-LA
Not Needed

BRIAR HILL STONE CO.
11-LA
P.R.O. 0.179 Ac
T.B.A. 0.105 Ac

ELMER C. & CHARLOTTE E. BLUM
12-LA
P.R.O. 0.584 Ac
T.B.A. 2.028 Ac

P.I = 118+40.10
Δ = 27°-34' Rt.
Δc = 15°-34'
θs = 6°-00'
D = 4°-00'
Ls = 300.00'
R = 1432.40'
P = 2.62'
K = 149.95'
Xc = 292.67'
Yc = 10.46'
Ts = 501.98'
Es = 45.17'
Lc = 389.17'

Weldon A. & Ellen M. Anderson
Richard & Virgina Cary
Moses J. Hostetler
Roxie Troyer
Lloyd E. & Virginia Wolfe
Catherine Metzler
Adrian M. Nigh
Reuben F. & Florence I. Kieffaber
Emery E. & Ilia E. Lytton
Catherine Gray
Owen & Frances Mullet
Weigand
H.L. Metten
R. & S. Miller
Eliza Snyder
R.R. & Maxine Keller
Elmer C. & Charlotte E. Blum
Briar Hill Stone Co.
Existing R/W Line
Corporation Line
SHEET
END
STA. 127+00
S.C. 126+70.55

VILLAGE OF MILLERSBURG —— HARDY TWP. —— SEC. 11 —— T. 9 N. —— R. 7 W.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123/128

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN

P.I. = 131+53.42
Δ = 47°-36' Lt.
Δ_c = 35°-36'
D = 4°-00'
L_s = 300.00'
R = 1432.40'
θ_s = 6°-00'
p = 2.62'
k = 149.95'
X_c = 299.67'
Y_c = 10.46'
L_s = 135.99'
L_c = 890.00'
T_s = 782.87'

BEGIN SHEET

Owen & Frances Mullet

Corp Line

N. 19°-25' E.

Dale & Carolyn Gamerstfelder

N. 16°-55' E.

Chester B. Blum

STA. 127+00

127+57.49 66.68' Lt.

127+56.17 60.40' Lt.

20-LA

129+68.88 49.10' Lt.

N43°-16'-15" E. Corp. Line 127+14.06

21-LA

Park-ing

127+50 80' Rt.

132+00 70.5' Lt.

Existing R/W Line

22 A-LA

135+00 38.5' Lt.

Hdwl. Tr.

21-LA

Existing R/W Line

130

135' #9 GOLF TEE

21-LA

132+00 95' Rt.

134+00 75' Rt.

Brior Hill Stone Co.

#8 GOLF GREEN

C.S. 133+60.55

S.W. QR. SEC. H S.E. QR.

S.T. 138+60.55

N. 7°-08' E. 137+41.65

QE Section Line

138+60.55 50' Lt.

138+50 70' Rt.

220 Volt electric cable 1'± underground

139+00 105' Rt.

139+50 65' Lt.

139+80 105' Lt.

22-X

140+20 105' Lt.

140+00 50' Lt.

22-LA

140

42°47'

42.0

141+00 70' Rt.

141+48.54 50' Lt.

N. 7°-12' E. 141+10.50 ℄

Park-ing

Res.

END SHEET

Wayland & Opal Waltman

23-LA

143+50 50' Lt.

143+50 75' Rt.

N 59°-56'-15" E

STA. 143+50

℄ drive

21-LA

DALE & CAROLYN GAMERSTFELDER
20-LA
Limited Access Only

BRIAR HILL STONE CO.
21-LA
P.R.O. 1.341 Ac
T.B.A. 3.007 Ac

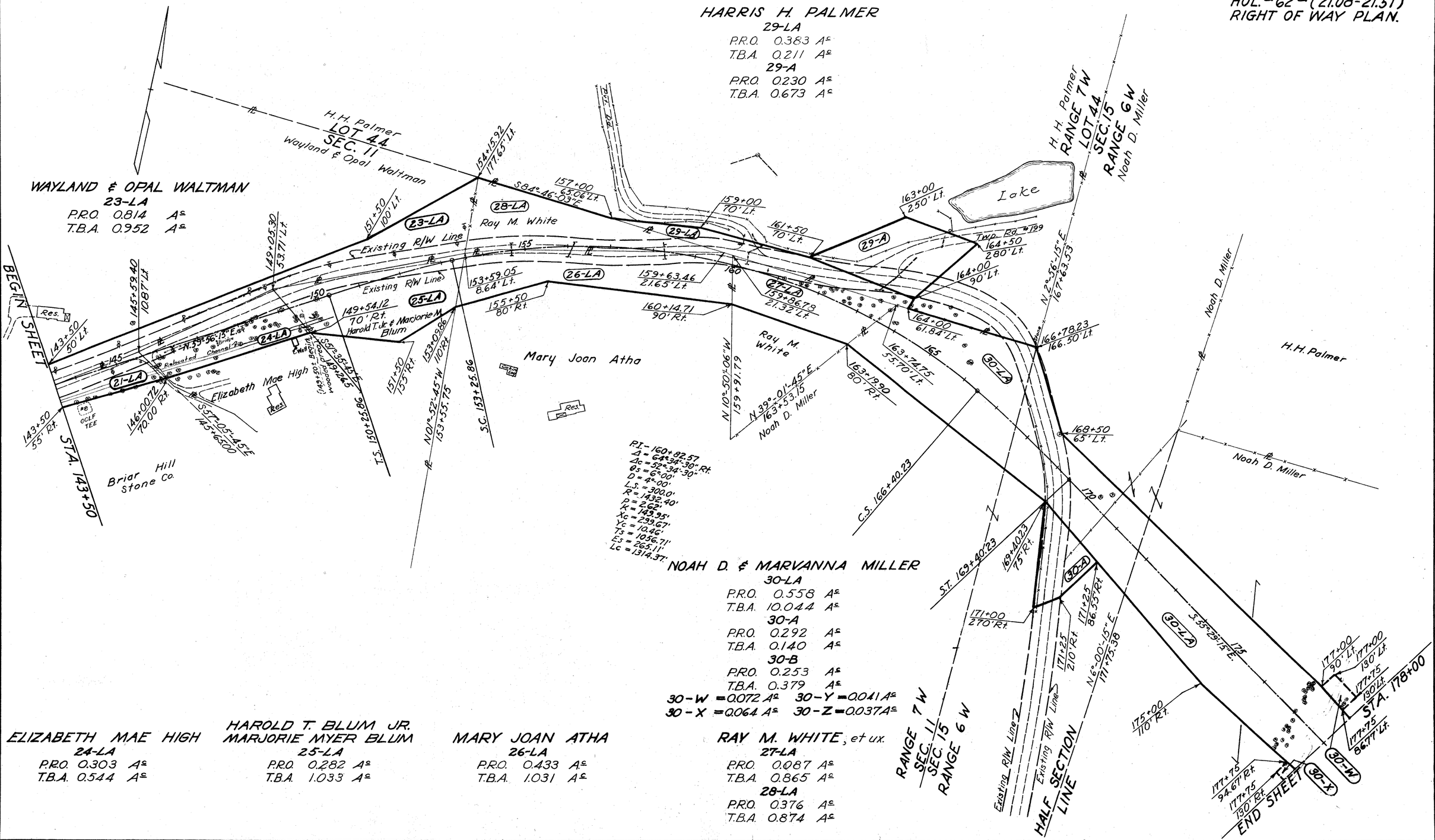
CHESTER B. BLUM
22-LA
P.R.O. 0.461 Ac
T.B.A. 0.240 Ac
22-X
0.053 Ac
22A-LA
Limited Access Only

HARDY TWP. — SEC. 11 & LOT 44 — T.9N. — R.7W. AND SEC. 15 — T.9N. — R.6W.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

124/128

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

125
128

HOL.-62-(21.08-21.51)

RIGHT OF WAY PLAN

HARDY TWP. — SEC'S. 14 & 15 — T.9N. — R.6W.

STA. 178+00

BEGIN SHEET

179+25 80.32' Lt.
179+50 115' Lt.
179+75 115' Lt.
179+75 78.16' Lt.

Noah D. Miller

T.S. 183+97.01

S.C. 185+92.01

P.I. - 191+10.64
Δ = 24°-10'-30" Lt.
Δc = 20°-10'-30"
D = 2°-00'
Ls = 200.00'
R = 2864.79'
θs = 2°00'
p = 0.58'
k = 100.00'
Xc = 199.98'
Yc = 2.33'
T.S. = 713.63'
Es = 65.55'
L.C. = 1008.75'

JOSEPH N. COBLENTZ, et al.
31-LA
P.R.O. 0.957 Ac.
T.B.A. 1.944 Ac.

ALVIN B. MILLER
32-LA
P.R.O. 0.145 Ac.
T.B.A. 0.131 Ac.

Joseph N. & Susan Coblentz
S 24°-50'-45" E
191+43.36
Noah D. Miller

C.S. 196+05.76

S.T. 198+05.76
N 4°-13'-15" E
198+67.40

N 4°-13'-15" E
201+09.60
Armor
Jessie

Jessie Armor

STA. 209+00

178+50 130' Rt.
178+50 90.49' Rt.
180+25 80.74' Rt.
180+25 100' Rt.
181+00 100' Rt.
181+00 76.56' Rt.
183+97.01 60' Rt.
186+50 75' Rt.
190+50 72.34' Rt.
191+50 230' Rt.
190+50 310' Rt.
192+33.61 90' Rt.
194+00 80' Rt.
198+05.76 55' Rt.
197+70 292' Rt.
198+84 123.9' Rt.
200+44.86 58.86' Rt.
201+09.81 1.99' Rt.
201+16.03 60' Rt.
206+00 110' Rt.
209+00 90' Rt.

183+97.01 60' Lt.
190+89.33 50' Lt.
196+05.76 110' Lt.
198+61.70 50' Lt.
201+04.24 50' Lt.
209+00 90' Lt.

Joseph N. & Susan Coblentz

Lumber Mill

Existing R/W Line

Existing R/W Line 2

Noah D. Miller

Jessie Armor

Joseph N. & Susan Coblentz

S 71°-50'-05" W

S 44°-28'-47" W

S.55°-29'-15"E.

S.79°-39'-45"E.

180 185 190 195 200 205

30-Y 30-X 30-Z 30-LA 30-B 31-LA 32-LA 33-LA

Barn Rest Grge Barn

SEC. 14 SEC. 15

MATCH LINE

JESSIE ARMOR
33-LA
P.R.O. 1.525 Ac.
T.B.A. 4.509 Ac.
33-A
P.R.O. 0.226 Ac.
T.B.A. 0.137 Ac.

HARDY TWP. — SEC. 14 — T.9N. — R.6W.

STA. 209+00

MATCH LINE

209+00 90' Lt.
215+00 60' Lt.
217+84.81 125' Lt.
225+50 105' Lt.
228+00.26 65' Lt.
237+36.50 80' Lt.
240+50 90' Lt.

209+00 60' Rt.
215+00 50' Rt.
215+00 130' Rt.
216+50 69.57' Rt.
216+50 210' Rt.
218+06.62 90' Rt.
225+50 115' Rt.
228+15.43 75' Rt.
233+50 75' Rt.
237+36.50 65' Rt.
237+36.50 199' Rt.
238+50 165' Rt.
239+00 78.99' Rt.

Jessie Armor
N 4°-33'-15" E
217+97.50
Alvin M. & Katie Hershberger

Alvin M. & Katie Hershberger
N 4°-09'-15" E
228+07.13
Benjamin J. Miller

P.C. 237+36.50

Lake

4" Well

Jessie Armor

Alvin M. & Katie Hershberger

ALVIN M. & KATIE HERSHBERGER
34-LA
T.B.A. 4.829 Ac.

BENJAMIN J. MILLER
35-LA
P.R.O. 0.500 Ac.
T.B.A. 5.360 Ac.
35-A
P.R.O. 0.186 Ac.
T.B.A. 0.147 Ac.

S.79°-39'-45"E.

210 215 220 225 230 235 240

33-LA 34-LA 35-LA 35-A

Barn Res. Barn Barn Barn Res. Res. Res. Res.

Existing R/W Line 2

Existing R/W Line

18" C.I.P.

18" U.S.F.

Sign

H.O. & Rosemary Graff

Alvin M. & Katie Hershberger

Benjamin J. Miller

HALF SEC. LINE

END SHEET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
128

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN

HARDY TWP. — SEC. 14 — T. 9N. — R. 6W. AND BERLIN TWP. — SEC. 13 — T. 9N. — R. 6W.

P.I. - 242+90.26
Δ = 5°-32' Lt.
D = 0°-30'
T = 553.76'
E = 13.37'
L = 1106.67'
R = 11,459.16'
P.C. = 237+36.50
P.T. = 248+43.17

ALBERT J. & LAVINA TROYER
38-LA
P.R.O. 0.402 Ac
T.B.A. 1.363 Ac
38-A
P.R.O. 0.153 Ac
T.B.A. 0.029 Ac
38 A-LA
T.B.A. 0.917 Ac

LEO MAST
40-LA
T.B.A. 6.734 Ac
40 A-LA
P.R.O. 0.409 Ac
T.B.A. 1.026 Ac
40-A
P.R.O. 0.149 Ac
T.B.A. 0.340 Ac
40-B
P.R.O. 0.055 Ac
T.B.A. 0.071 Ac
40-X = 0.163 Ac

ELI J. TROYER
36-LA
P.R.O. 0.310 Ac
T.B.A. 0.292 Ac

LEO MAST
37-LA
P.R.O. 0.337 Ac
T.B.A. 0.574 Ac
37-A
P.R.O. 0.037 Ac
T.B.A. 0.011 Ac

NOAH M. GINGERICH, etal.
39-LA
P.R.O. 0.135 Ac
T.B.A. 2.732 Ac

Benjamin J. Miller
Albert J. & Lavina Troyer
Leo Mast
Noah M. Gingerich
Existing R/W Line
Barn
Res
Shed
Hog Pond
Spring
1½" Water line gravity flow to Res. & Barn.
Lake
HARDY TWP.
SEC. 14
Section Line
SEC. 13
BERLIN TWP.
BEGIN SHEET
MATCH LINE
STA. 240+50
STA. 272+00

BERLIN TWP. — SEC. 13 & LOT 5 — T. 9N. — R. 6W.

JOSEPH & SUSAN COBLENTZ
42-LA
P.R.O. 0.987 Ac
T.B.A. 5.673 Ac
42-A
P.R.O. 0.053 Ac
T.B.A. 0.039 Ac

NOAH A. & CLARA A. TROYER
P.I. = 297+46.18
Δ = 2°-31' Lt.
D = 0°-20'
T = 377.56'
E = 4.15'
L = 755.00'
R = 17,188.73'
44-LA
P.R.O. 0.147 Ac
T.B.A. 0.248 Ac
44A-LA
P.R.O. 0.367 Ac
T.B.A. 0.618 Ac

RAYMOND J. & MARILYN RUTH STARNER
1-LA
T.B.A. 1.000 Ac

MOSES A. & FREDA SCHLABACH
41-LA
Limited Access Only

ALVIN & MAE GINGERICH
43-LA
P.R.O. 0.625 Ac
T.B.A. 0.257 Ac

R.J. & M.R. Starner
Leo Mast
Noah M. Gingerich
Joseph & Susan Coblentz
Noah A. & Clara Troyer
Alvin & Mae Gingerich
Moses A. & Freda Schlabach
Existing R/W Line
Barn
Res
Shed
Ch. Hse
Holmes Lumber
Spring
4" Underdrain
SEC. 13
Section Line
LOT 5
BERLIN TWP.
MATCH LINE
END SHEET
STA. 272+00
STA. 304+00

BERLIN TWP. — LOT'S 3,4 & 5 — T.9N. — R.6W.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

127/128

HOL. - 62 - (21.08 - 21.51)
RIGHT OF WAY PLAN.

EQUATION
Subtract 1.00'
Short Station 99.00'

JOSEPH N. & SUSAN COBLENTZ
45-LA
P.R.O. 0.600 Ac
T.B.A. 0.865 Ac
45-A
P.R.O. 0.032 Ac
T.B.A. 0.165 Ac

JAY MAST
47-LA
P.R.O. 1.756 Ac
T.B.A. 1.657 Ac
47-A
P.R.O. 0.032 Ac
T.B.A. 0.135 Ac
47-B
P.R.O. 0.015 Ac
T.B.A. 0.016 Ac

GLEN & ALICE MAST
49-LA
P.R.O. 1.462 Ac
T.B.A. 1.559 Ac
49-X = 0.025 Ac

56-LA
P.R.O. 0.219 Ac
T.B.A. 0.153 Ac

HOWARD & ELIZABETH ALING
46-LA
P.R.O. 0.097 Ac
T.B.A. 0.099 Ac
46-A
P.R.O. 0.006 Ac
T.B.A. 0.019 Ac

SHARP RUN DAIRY CO.
48-LA
P.R.O. 0.134 Ac
T.B.A. 0.087 Ac

J. RAY & ERMA MAST
55-LA
P.R.O. 0.086 Ac
T.B.A. 0.058 Ac

UPTON SINCLAIR ALING
51-LA
P.R.O. 0.047 Ac
T.B.A. 0.016 Ac

YOST H. & FANNIE MILLER
53-LA
P.R.O. 0.062 Ac
T.B.A. 0.020 Ac

PHYLLIS KASER
54-LA
P.R.O. 0.062 Ac
T.B.A. 0.020 Ac

RALPH V. & MARY ALING
50-LA
P.R.O. 0.047 Ac
T.B.A. 0.016 Ac
52-LA
P.R.O. 0.046 Ac
T.B.A. 0.016 Ac

LOT 4 — Glen & Alice Mast
LOT 3 — Edna Yoder

BERLIN TWP. — LOT'S 2,3 & 4 — T.9N. — R.6W.

DAVID S. & ELSIE K. MILLER
58-LA
P.R.O. 2.163 Ac
PRIOR EASEMENT 0.663 Ac
T.B.A. 3.285 Ac

EDNA C. YODER
59-LA
PRIOR EASEMENT 0.319 Ac
T.B.A. 0.178 Ac

ADA MAST, etal.
57-LA
P.R.O. 0.596 Ac
T.B.A. 0.893 Ac

STURGES MILLER
60-LA
PRIOR EASEMENT 1.513 Ac
T.B.A. 1.053 Ac
60-A
P.R.O. 0.200 Ac
T.B.A. 0.184 Ac

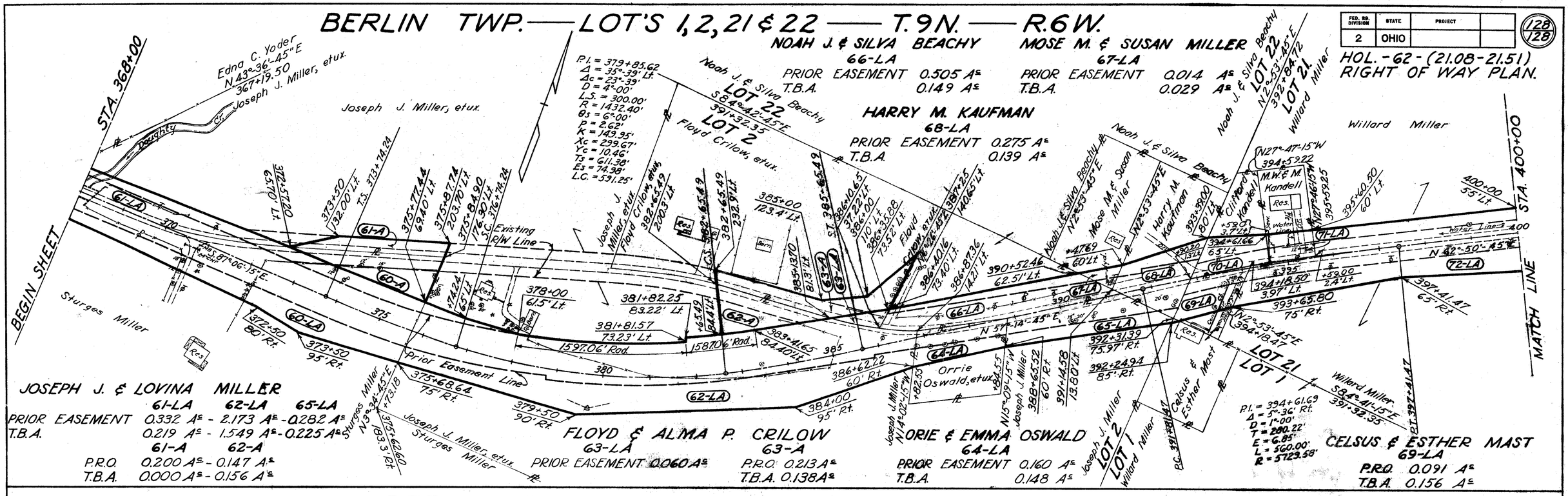
LOT 4 — Glen & Alice Mast
LOT 3 — David S. & Elsie K. Miller
LOT 2 — Sturges Miller

BERLIN TWP. — LOT'S 1, 2, 21 & 22 — T.9N. — R.6W.

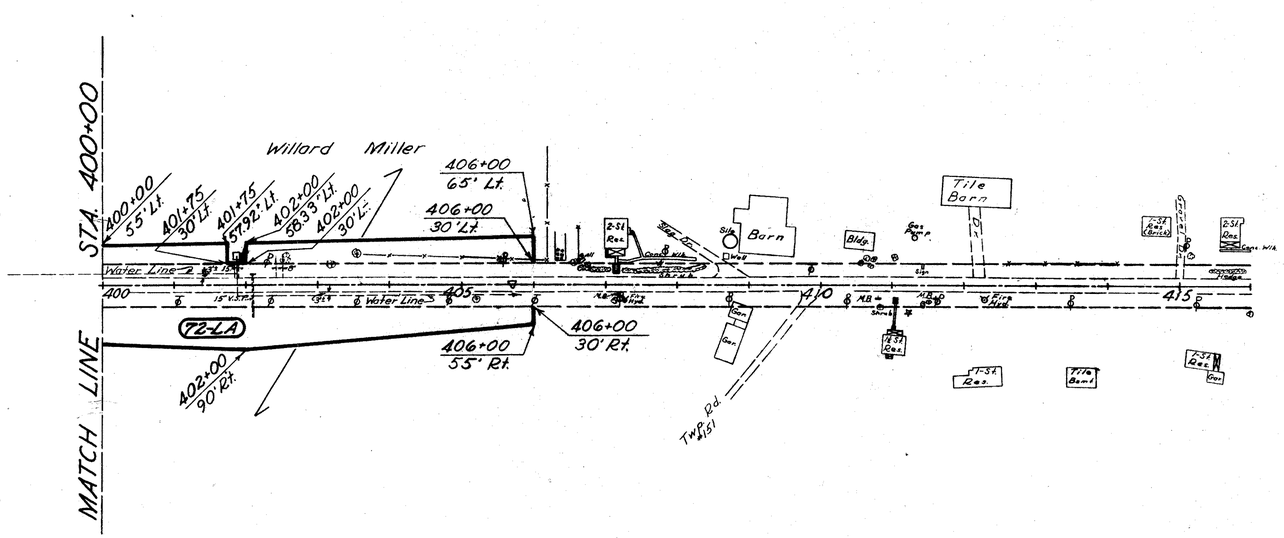
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

128/128

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN.



BERLIN TWP. — LOT 21 — T.9N. — R.6W.



CLIFFORD J. KANDELL
70-LA
P.R.O. 0.110 Ac
T.B.A. 0.126 Ac

MARION W. & MARILYN KANDELL
71-LA
P.R.O. 0.073 Ac
T.B.A. 0.071 Ac

WILLARD MILLER
72-LA
P.R.O. 1.534 Ac
T.B.A. 1.955 Ac

Berm Material

Sod & Topsoil = X' = Approx. depth

Auger boring - plan view

Core boring - plan view

Auger boring - plotted to vertical scale only

● Water content nearly equal to or greater than liquid limit.

◉ This A-4a soil will be rubbery and unstable at water contents which exceed the optimum

Note: Figures beside borings indicate water content in percent.

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS - 266 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	A-1-a(0)	A-1-a	59	20	7	13	1	NP	NP	12	1
Gravel with sand	A-1-b(0)	A-1-b	49	18	14	14	5	23	2	14	9
Coarse and fine sand	—	A-3a	4	25	46	18	7	NP	NP	12	9
Gravel and stone fragments with sand & silt	A-2-4(0)	A-2-4	41	12	17	20	10	26	4	14	16
Gravel with sand, silt & clay	A-2-6(0)	A-2-6	53	14	9	15	9	30	14	16	2
Sandy silt	A-4(4)	A-4a	22	7	16	36	19	25	7	16	104
Silt	A-4(8)	A-4b	5	3	8	60	24	29	7	20	38
Silt and clay	A-6(8)	A-6a	14	5	10	41	30	32	12	18	59
Silty clay	A-6(11)	A-6b	8	2	5	39	46	37	18	21	10
Elastic clay	A-7-5(20)	A-7-5	0	1	1	19	79	71	38	45	1
Clay	A-7-6(13)	A-7-6	6	4	6	36	48	46	20	23	17

Overburden (Visual classification)

Limestone (Visual classification)

Sandstone (Visual classification)

Shale (Visual classification)

Coal (Visual classification)

Samples Taken
Lab. Nos. So. 55974-56007 Incl.
56144-56163 Incl.
56317-56431 Incl.
56450-56539 Incl.

Moisture Density Samples
Lab. Nos. So. 56432-56440 Incl.

General Note

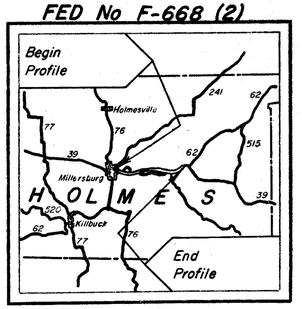
Bituminous pavement in good condition. Some patching and longitudinal cracking in spots.

SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

1/7

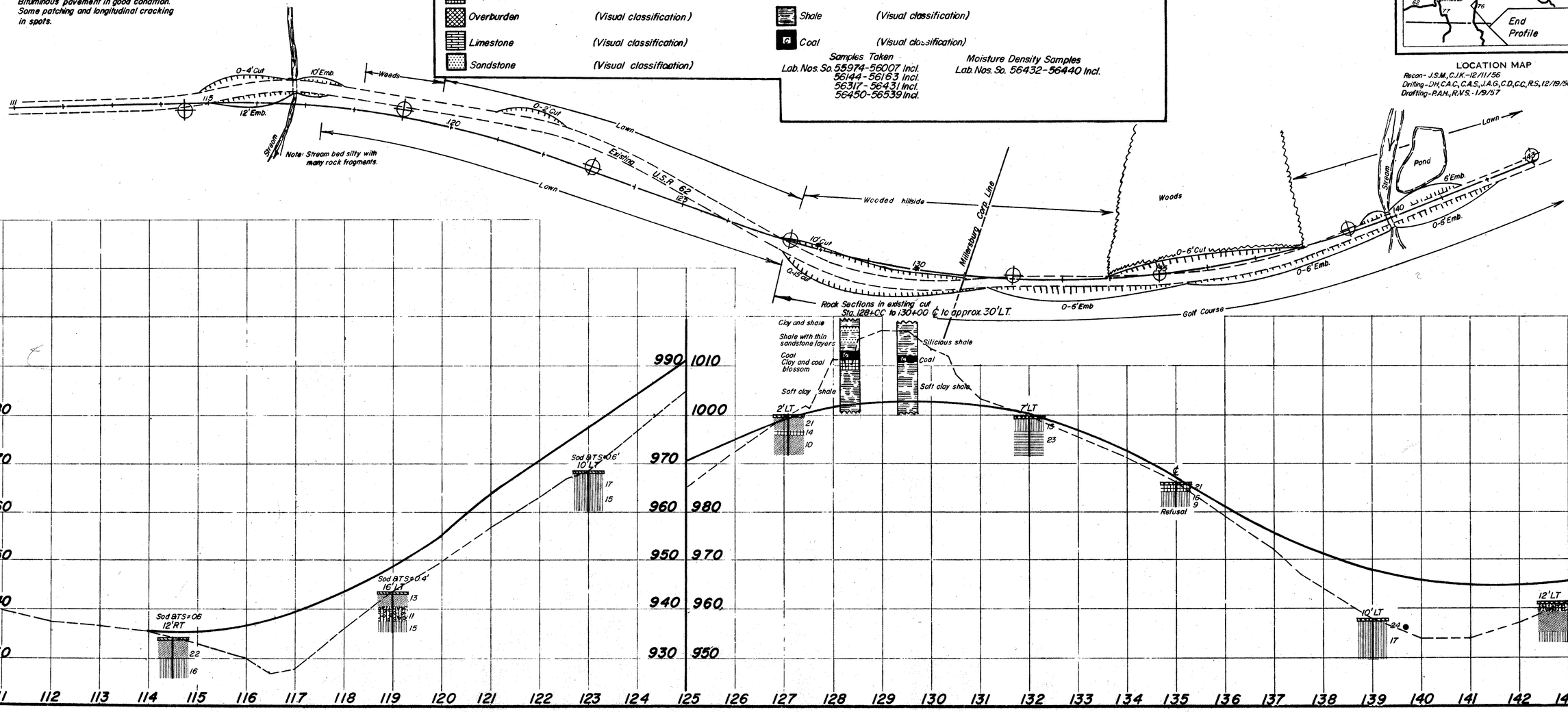
NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT

FED No F-668 (2)



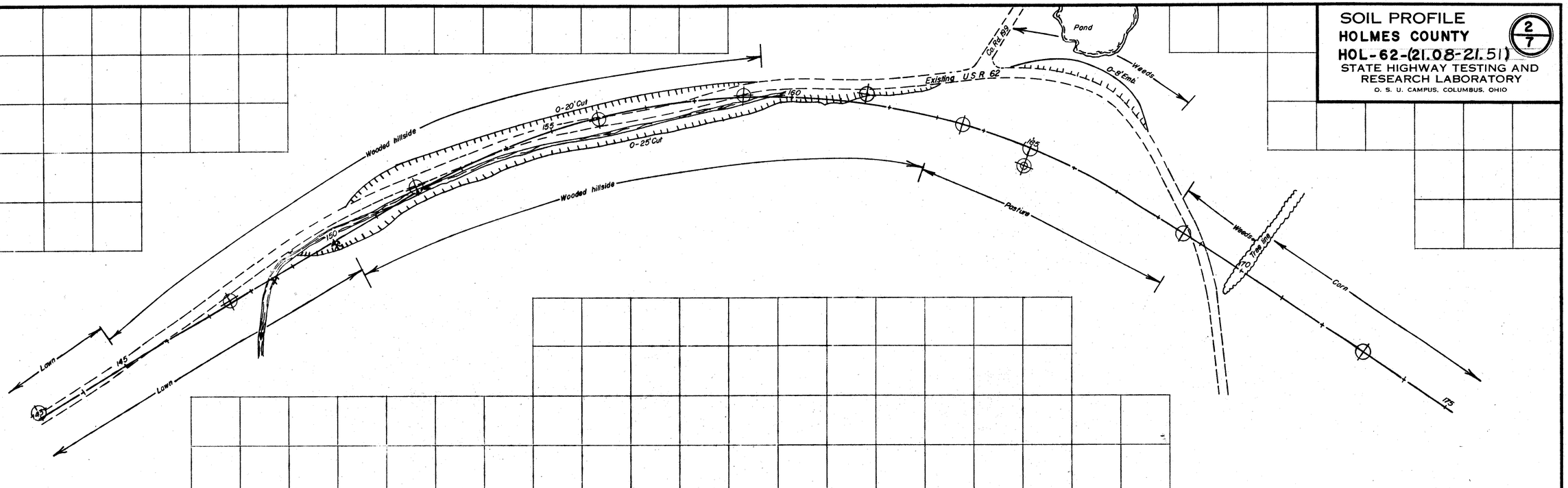
LOCATION MAP

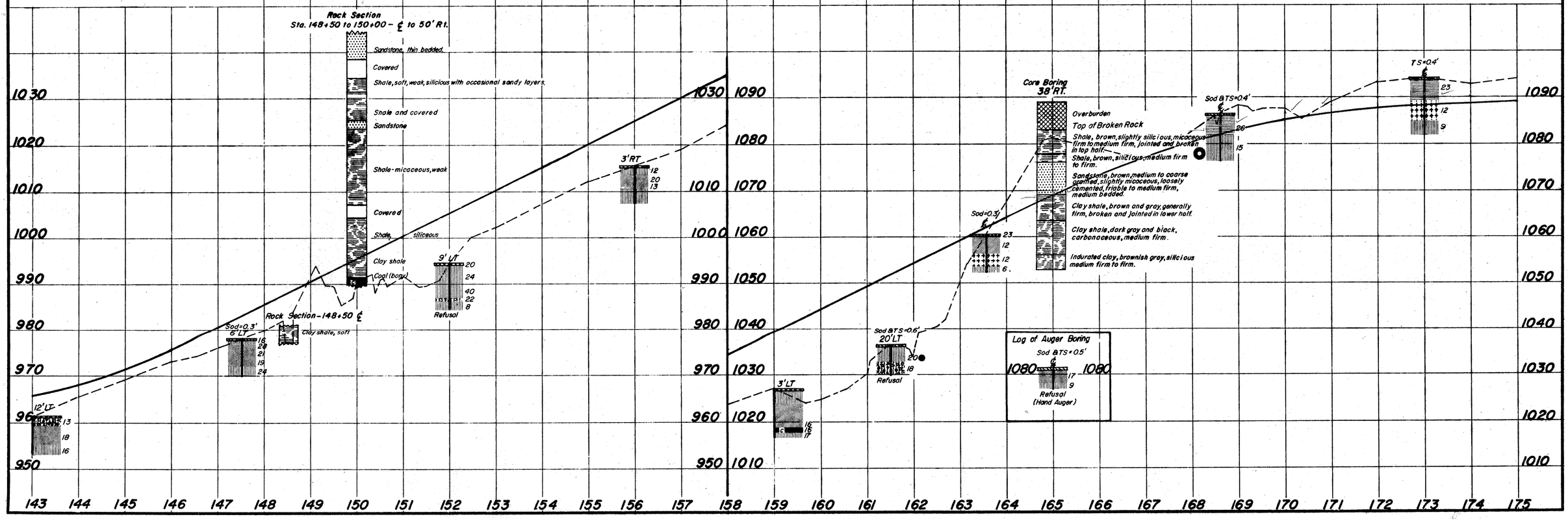
Recon - J.S.M., C.J.K. - 12/11/56
Drafting - D.H., C.A.C., C.A.S., J.A.G., C.D., C.C., R.S., 12/19/56
Drafting - P.A.H., R.V.S. - 1/9/57



SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

2/7

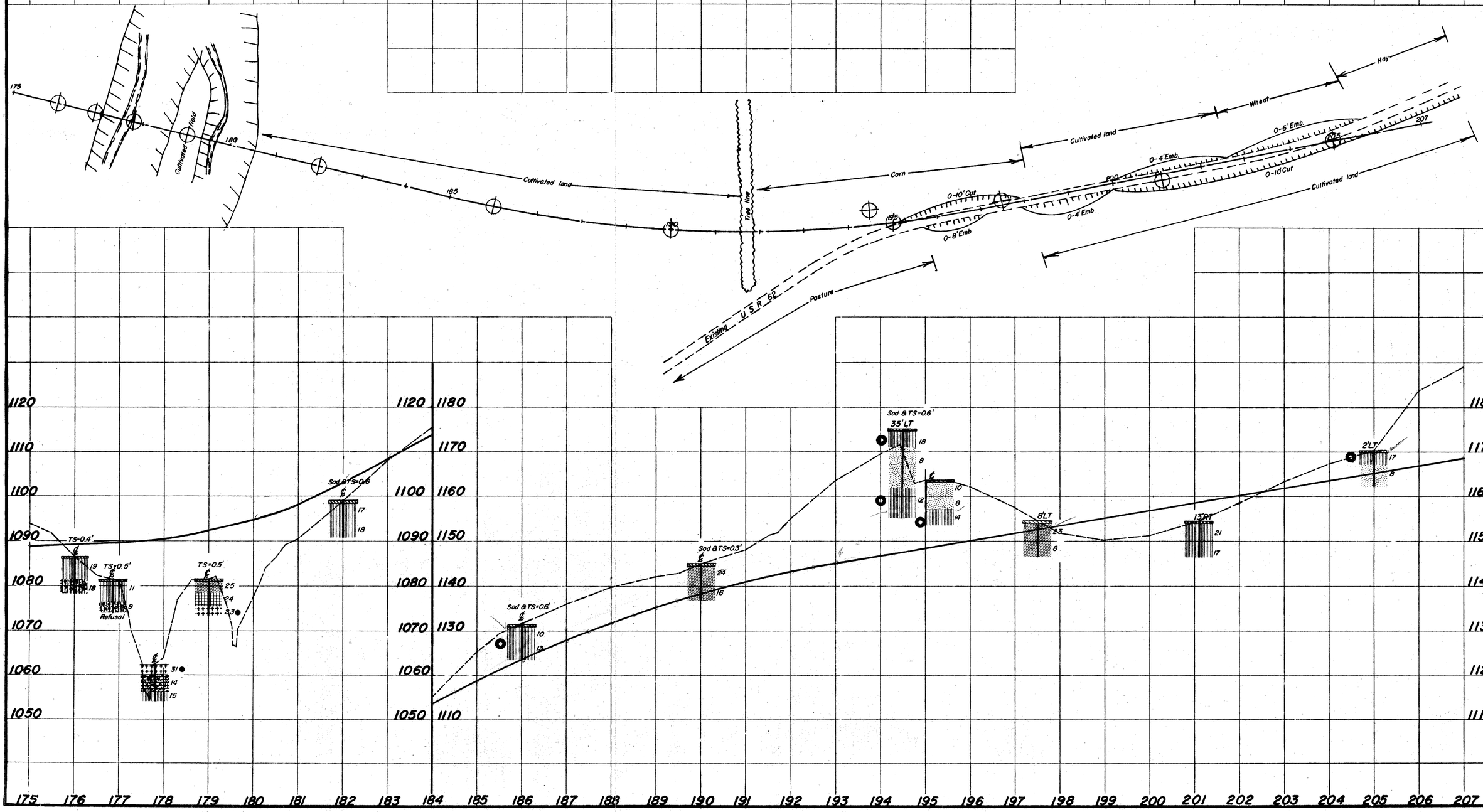




SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

3/7



SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)

4/7

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

Hay
Cultivated land
Cultivated land
NOTE: Sandstone outcrop at Sta. 208+50-50' L.T.
Core Boring
NOTE: Small overburden knob at Sta. 212+00
0-6' Cut
Cultivated land
Weeds
Existing U.S.R. 62
Tree line
Creek
Cultivated land
Pasture
Co Rd 153
Sod @ TS=0.6'
Sod @ TS=0.5'
Sod @ TS=0.5'
Sod @ TS=0.6'
Sod @ TS=0.5'
Core Boring
Sod @ TS=0.5'
Refusal
Sod @ TS=0.4'
Sod @ TS=0.5'
Existing U.S.R. 62
Weeds
Sod @ TS=0.5'
Sod @ TS=0.5'
Sod @ TS=0.0'

Brown sandy clay with broken sandstone in lower third.
Top of Broken Rock
Sandstone, brown and reddish brown, coarse to medium grained friable, broken at top and 1187.8-1185.3'
Soft clay, gray and brown containing nodular limestone.
Shale, gray, silicious, medium firm to soft, broken at top and in middle third.
Clay shale, dark gray, medium firm, broken, with sandstone fragments at base.

Brownish gray silt clay, sandy near base, soft.
Weathered brown clay shale, very soft and crumbly.
Brown and gray clay, with broken soft clay shale and gravel.
Red and brown hard clay, ferruginous in part, with nodular limestone and gravel.
Very soft clay shale
Clay shale, gray and brownish gray, with nodular limestone (Indication of thin nodular layer of marine limestone at approx. 32.0 or 33.0) generally soft, very broken with inclined bedded surfaces.
Firm bedrock not encountered.

Pond
Note: Low wet area from Sta 240+00 to Sta 242+00.
Pasture
Orchard
0-8' Cut
New wheat
0-4' Emb
Weeds
Rock section Sta. 244+00 to 249+00
Meatured along left ditch of existing pavement, right of proposed ℄ 10' to 75'
0-15' Cut
Sod @ TS=0.6'
Sod @ TS=0.8'
Sod @ TS=0.6'
25' LT
Refusal
Sod @ TS=0.3'
Sod @ TS=0.3'
Sod @ TS=0.3'
35' LT
Refusal
Sod @ TS=0.3'
Core Boring 60' LT
TS=0.4' 55' RT
Refusal
TS=0.4' 55' RT
Refusal
Sod @ TS=0.3'
Refusal (Hand Auger)
Sod @ TS=0.3'
Refusal (Hand Auger)
Sod @ TS=0.3'
Refusal (Hand Auger)

Overburden
Limestone
Coal (bony)
Gray clay
Shale - silicious, grading to a clay shale
Sandstone - thin bedded, jointed concretions in upper part
Shale, silicious, grading to clay shale in upper part
Coal blossom
Shale - silicious to clay shale
Sandstone - thin bedded, medium grained

Moisture Density Samples
Sta. 248+00 - ℄
(0.3'-2.0')
Max. dry wt. 112.0 Lbs/cu.ft.
Optimum moist. 15.8 %
(2.0'-9.5')
Max. dry wt. 114.6 Lbs/cu.ft.
Optimum moist. 14.6 %

Moisture Density Samples
Sta. 257+00-55' RT
(0.4'-3.5')
Max. dry wt. 117.0 Lbs/cu.ft.
Optimum moist. 13.5 %
(3.5'-11.5')
Max. dry wt. 112.0 Lbs/cu.ft.
Optimum moist. 15.6 %

Moisture Density Sample
Sta. 260+50-55' RT
(0.4'-5.5')
Max. dry wt. 117.0 Lbs/cu.ft.
Optimum moist. 13.5 %

Overburden
Weathered and decomposed shale, very soft and crumbly
Top of Firm Rock
Shale, brown, silicious, firm, intermittently broken in top half
Sandstone, dark gray, fine to medium grained, firm, shaly cross bedded.
Shale, gray, silicious, firm, broken in top third grading to sandstone at base.

SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)

5/7

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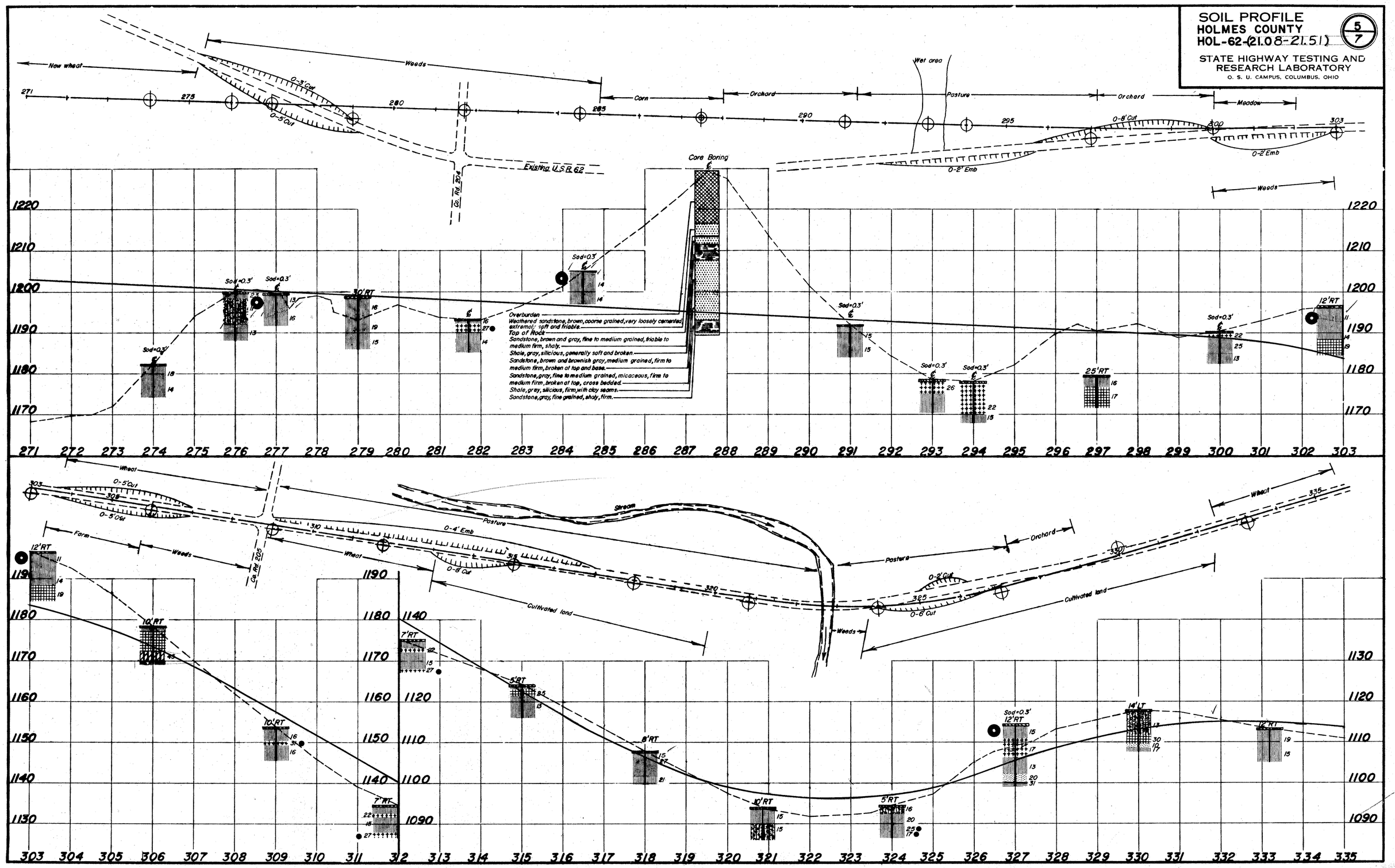

SOIL PROFILE

HOLMES COUNTY
HOL-62-(21.08-21.51)

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
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6
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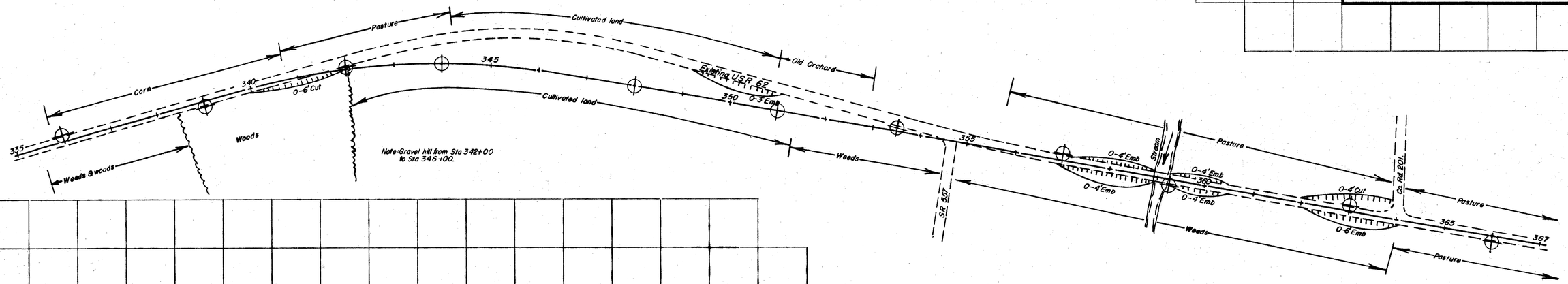

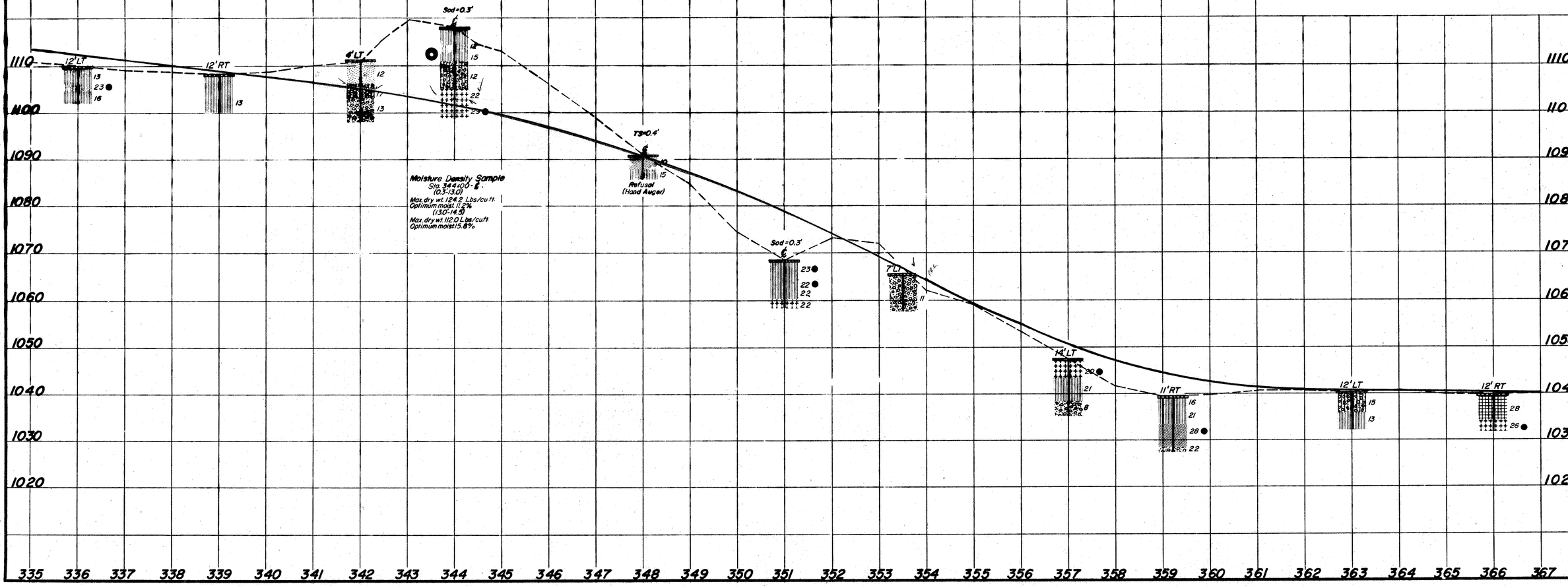

SOIL PROFILE
HOLMES COUNTY
HOL-62-(21.08-21.51)

7/7

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