

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F-668(2)

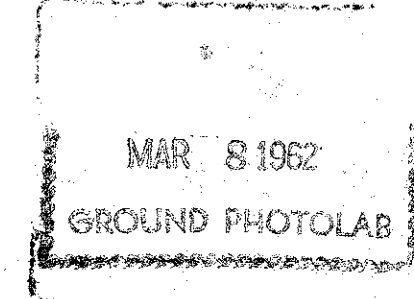
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-668(2)

128

HOL-62-(21.08-21.51)

HOL-62-(21.08-21.51)
HOLMES COUNTY
HARDY AND BERLIN TOWNSHIPS
& VILLAGE OF MILLERSBURG

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.



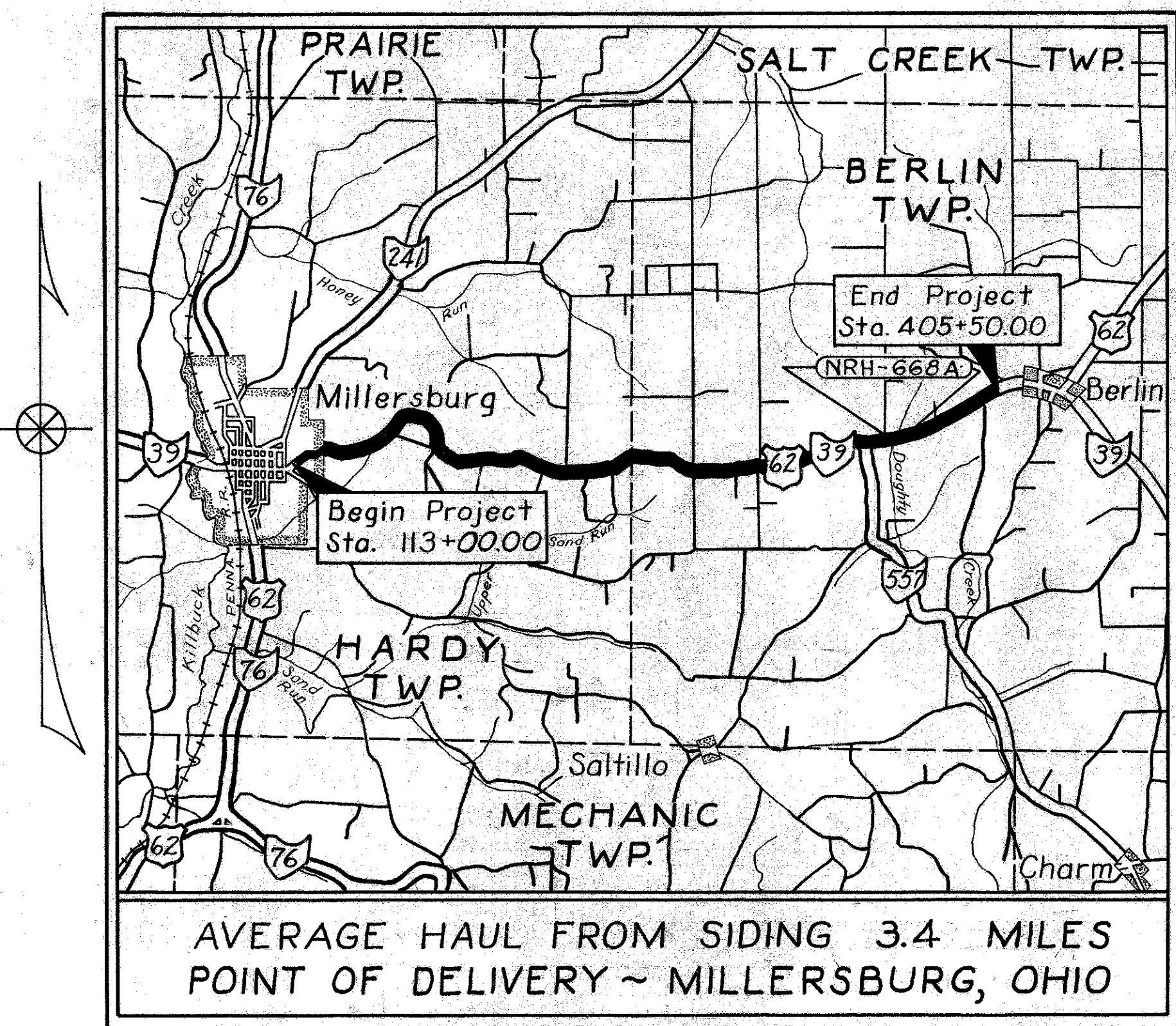
CONVENTIONAL SIGNS

COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
CORPORATION LINE	-----
CENTER LINE	-----
PROPERTY LINE	-----
POLE LINE	-----
FENCE LINE	-----
RAILROADS	-----
GUARD RAIL	-----
DRAIN PIPE	-----

Telephone	⊕	Electric	⊕
New	-----	Old	-----
New	-----	Old	-----

INDEX OF SHEETS

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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

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

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

STANDARD DRAWINGS

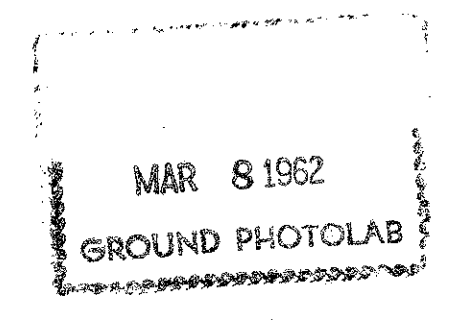
L-1	4-1-50	I-14 G	1-22-52	I-15 N ^o 3	12-1-54
L-3	4-1-50	I-12	7-1-54	SP-53	7-21-53
L-3-A	4-1-50	I-1,2,3,4 & 5	2-20-45	S-27-PC.1	5-1-52
RI-1	1-3-55	I-8 C.B. 2-2A & B	8-1-56	S-27-PC.3	2-20-45
T-35	1-2-56	I-8 C.B. 1-3 & 1-4	5-1-52	S-27-PC.4	1-4-54
DR-1	1-3-55	I-8 C.B. 2-3 & 2-4	5-1-52		
G-707	6-1-56	I-8 C.B. N ^o 16	4-1-55		
		I-8 C.B. N ^o 1	8-1-55		
		I-15 N ^o 2-A	6-1-57		

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: JOE Quicksall
Date: 10-3-57 Division Deputy Director.
- Approved: C. H. Mahoney
Date: 12-17-57 Deputy Director of Planning and Programming.
- Approved: J. A. Overman
Date: 12-12-57 Engineer of Bridges.
- Approved: P. E. Schultz
Date: 12-14-57 Engineer of Location and Design.
- Approved: P. E. Madeter
Date: 1-2-57 Deputy Director of Design and Construction.
- Approved: _____
Date: _____ First Assistant Director.
- Approved: George J. Sherman
Date: 12/18/57 Acting Director of Highways



SUPPLEMENTAL SPECIFICATIONS

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

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: _____
DIVISION ENGINEER DATE

FILE N^o HOL-62-(21.08-21.51)
Date of Letting 195
Contract N^o

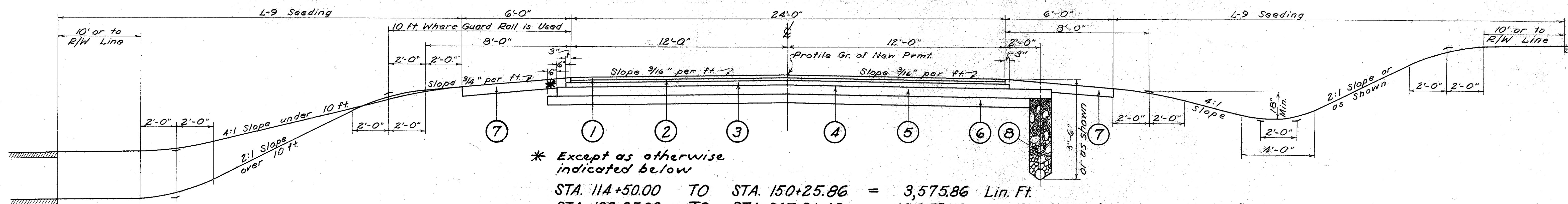
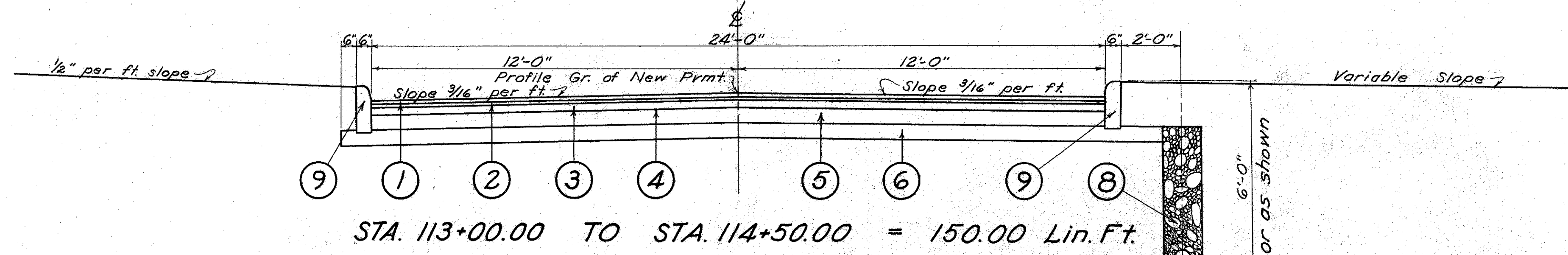
TYPICAL SECTION

TYPE T-35 ON B-119

SCALE $\frac{3}{8}'' = 1'-0''$

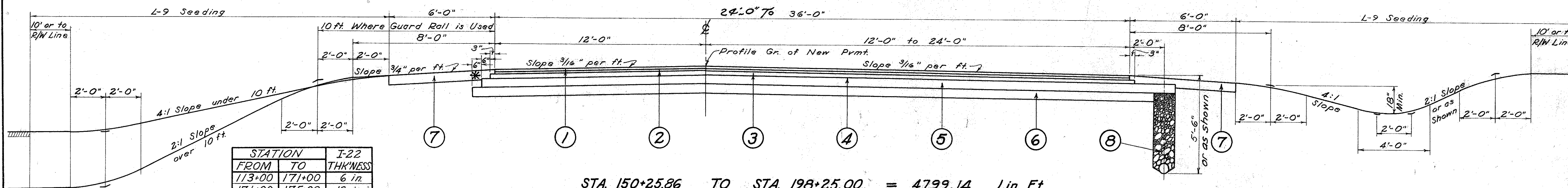
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HOL-62-(21.08-21.51)



* 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.

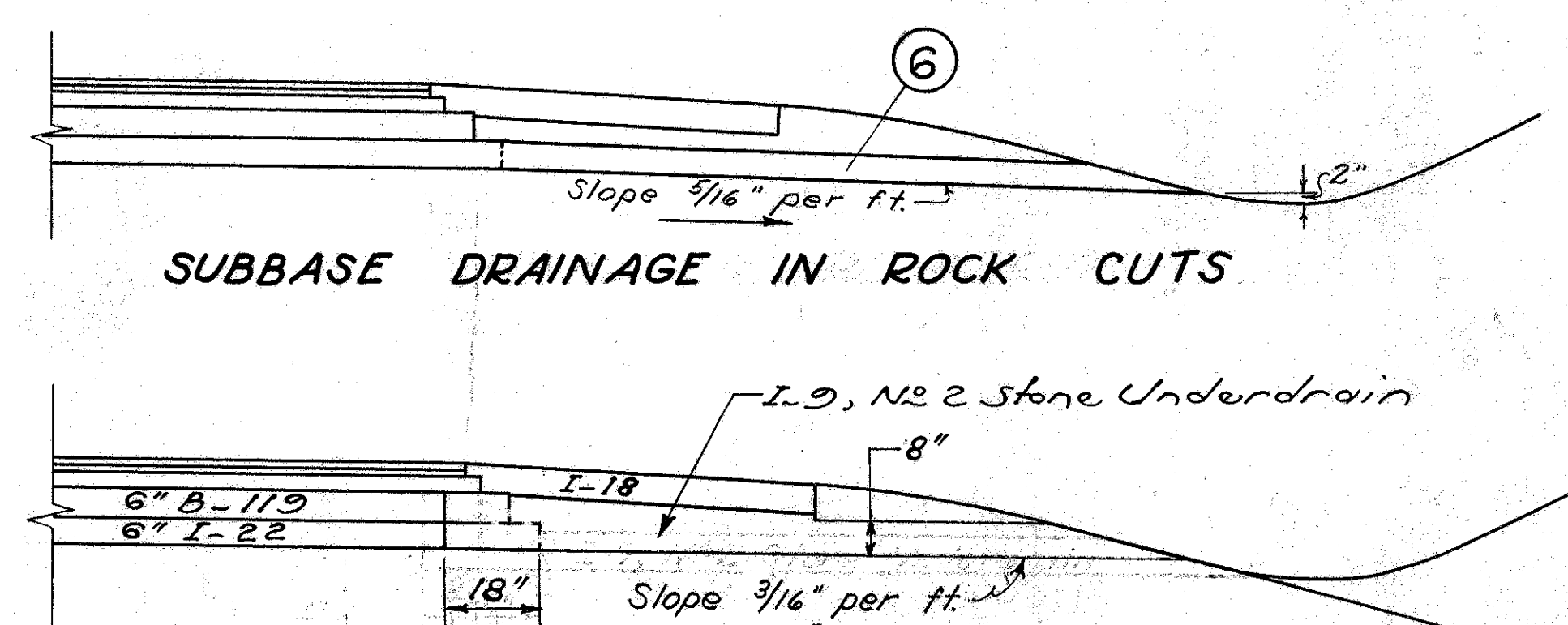
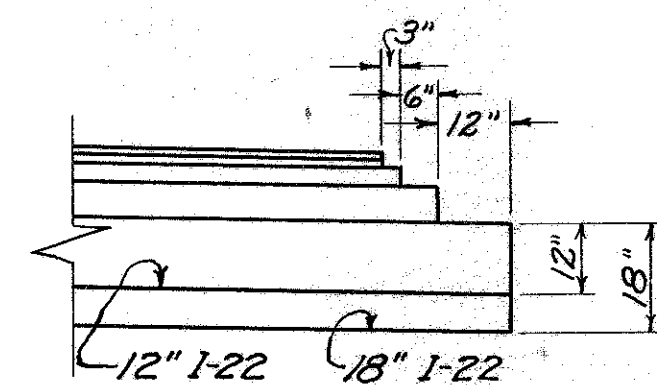


STA. 150+25.86	TO	STA. 198+25.00	=	4,799.14	Lin. Ft.
STA. 368+30.57	TO	STA. 404+00.00	=	3,569.43	Lin. Ft.
Total				8,368.57	Lin. Ft.

STATION FROM	TO	I-22 THICKNESS
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.
383+50	405+50	6 in.

See Note Sh.#22.

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



STONE UNDERDRAIN DETAIL IN CUTS & FILLS
See Stone Underdrain Note on Sheet No 4

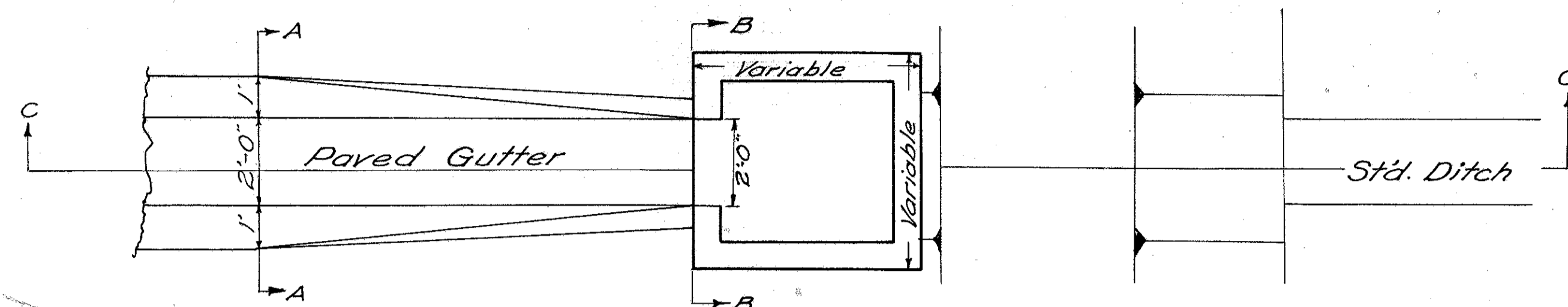
- ~ KEY ~
- ① Item T-35 1 1/2" Asphaltic Concrete Surface Course, Type "A" (70-85).
 - ② Item B-35 1 1/4" Asphaltic Concrete Leveling Course (70-85).
 - ③ Item B-35 2 3/4" Asphaltic Concrete Base Course (70-85).
 - ④ Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 or Sec. M-5.2, RC-1 or RC-2 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" 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 G.

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

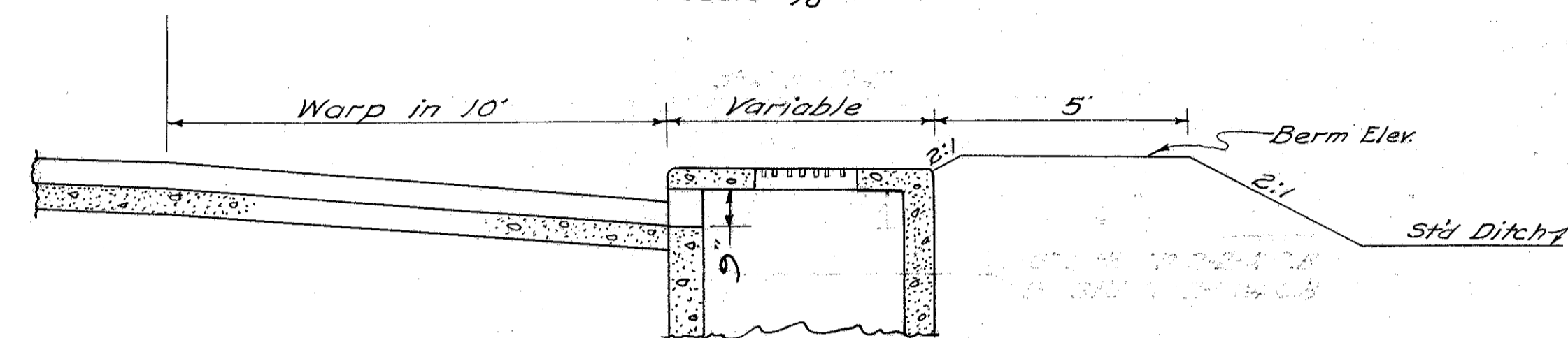
TYPICAL DETAILS

1-14-WARP IN PAVED GUTTER TO FIT C.B.

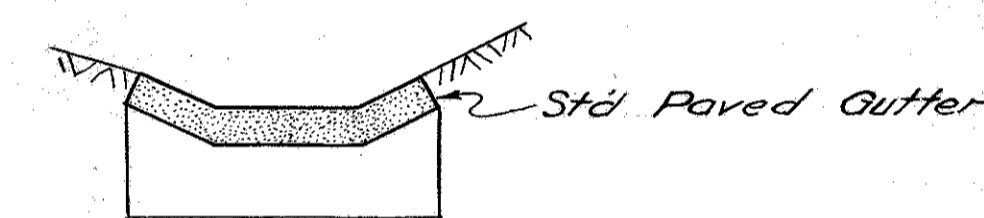
Note: Warped gutter sections shall be measured and paid for as standard type 1 paved gutter, as per plan.



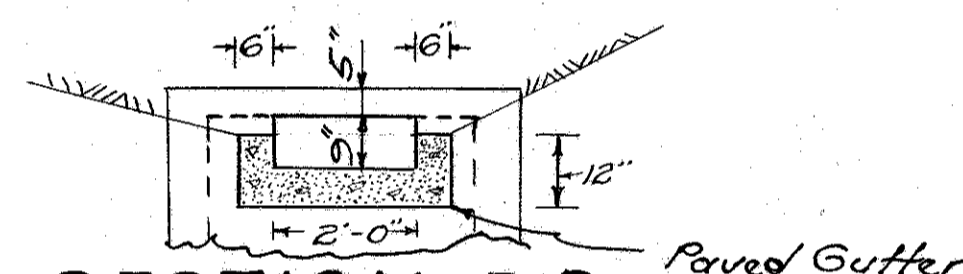
PLAN
Scale: 3/8"=1'



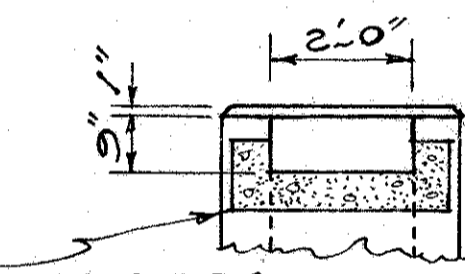
SECTION C-C
Scale: 3/8"=1'



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



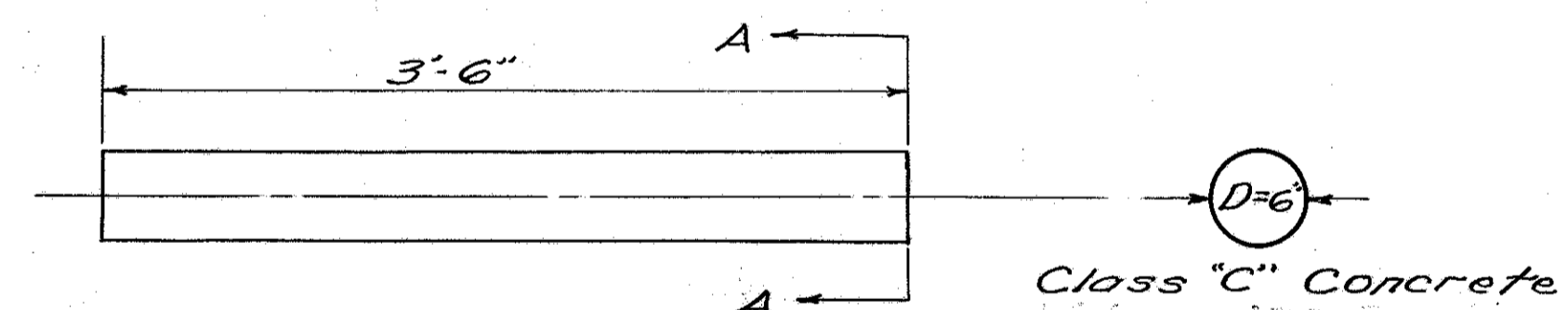
SECTION-B-B
Scale: 3/8"=1'
(For 2-3 & 2-4 Catch Basins)



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" x 0'-9"

MONUMENTS RESET
See Sheet No 4

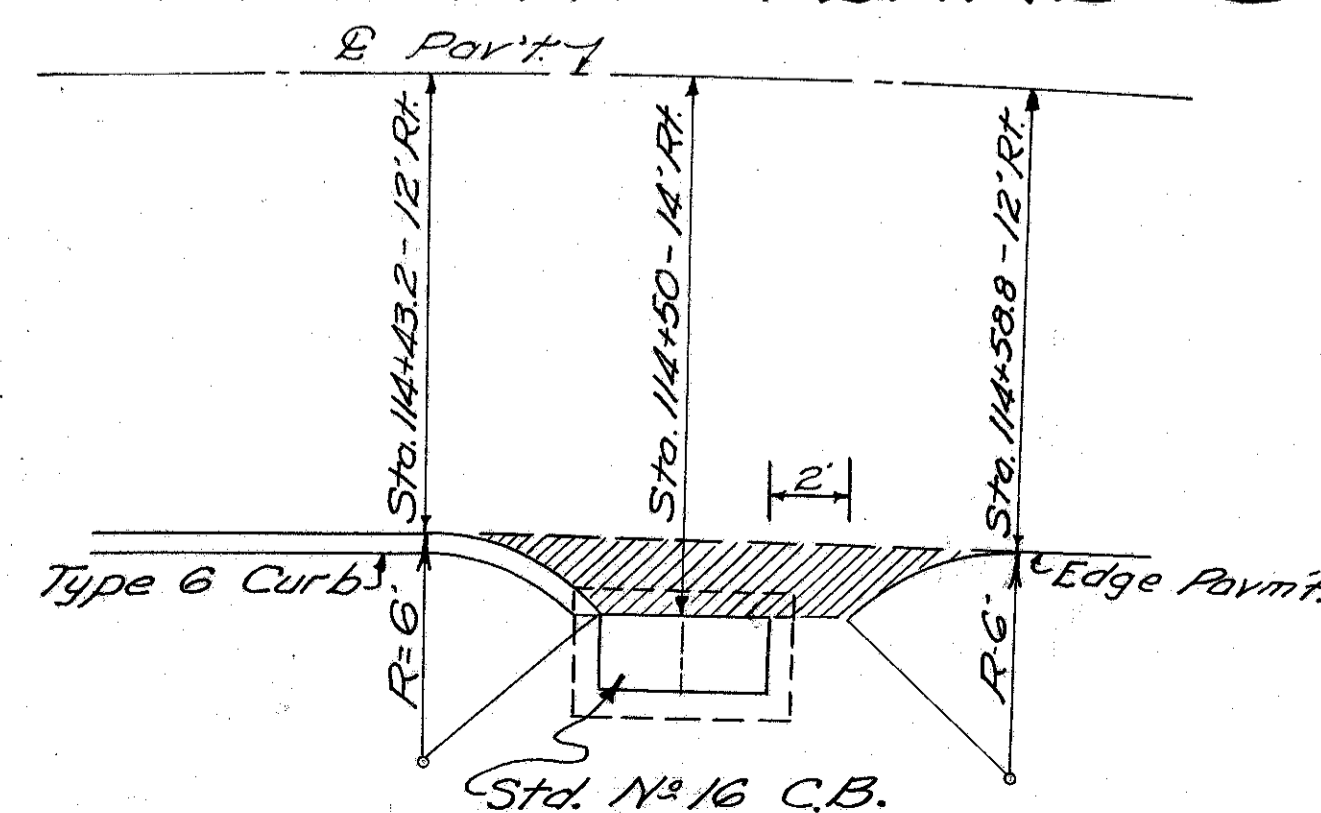


PLAN
Scale: 1"=1'-0"

SECTION A-A

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

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



ESTIMATED QUANTITIES (Cross Hatched Area Only)

T-30 - Prime	1 Gal.
T-35 - 1/2" Surface Course	0.10 Cu. Yds.
B-35 - 1/4" Leveling Course	0.10 Cu. Yds.
B-35 - 2 3/4" Base Course	0.20 Cu. Yds.
B-119 - 6" Base Course	0.50 Cu. Yds.
I-22 - 6" Subbase	0.70 Cu. Yds.

Quant's carried to Sh. No 7

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 N=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 S-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 cooperate 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 cooperate 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" x 5'-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 MAILBOX 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 S-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 at 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. 345+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. 6-7.07. 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-35, 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

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 = (3025.00 * 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 = 4174.14 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.
(2904986 * 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.
[(2904986 * 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.

* = Lineal feet used for calculations.

ITEM B-35, 2 3/4" Asphaltic Concrete Base Course (70-85).

(150.00 * 0.2292 * 24) ÷ 27 = 30.56 C.Y.
(2904986 * 0.2292 * 24.5) ÷ 27 = 6041.73 " "
(7321.48 * 0.2292 * 12) ÷ 27 = 745.81 " "
[681.48 * (275 ÷ 36)] = 52.06 " "

TOTAL 6870.16 CUYDS.

ITEM B-35, 1 1/4" Asphaltic Concrete Leveling Course (70-85).

(150.00 * 0.1042 * 24) ÷ 27 = 13.89 C.Y.
(2904986 * 0.1042 * 24) ÷ 27 = 2690.66 " "
(7321.48 * 0.1042 * 12) ÷ 27 = 339.07 " "
[681.48 * (1 1/4 ÷ 36)] = 23.66 " "

TOTAL 3067.28 CUYDS.

ITEM T-35, 1 1/2" Asphaltic Concrete Surface Course, Type "A" (70-85).

(150.00 * 0.125 * 24) ÷ 27 = 16.67 C.Y.
(2904986 * 0.125 * 24) ÷ 27 = 3227.76 " "
(7321.48 * 0.125 * 12) ÷ 27 = 406.75 " "
[681.48 * (1 1/2 ÷ 36)] = 28.40 " "

TOTAL 3679.58 CUYDS.

ITEM I-18, 6" Stabilized Crushed Aggregate Shoulders.

29,049.86 * 2 = 58,099.72 Lin. Ft.
Deduct for Approaches { 251+181+185+206+114+341+283 }
from Line Sheets, { +301+480+540+700+392+352+346 }
(Average Thickness = 0.48 Ft.) Net Length 4,672.00 " "
(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. = 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	393+42.91	43,411	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	296,994
Total Excess Excavation = 511,944 - 463,861 = 48,083 Cu. Yds.							

Item Special, Mixing Calcium Chloride and Crushed Aggregate
53,427.72 L.F. (From I-18 Calc.) * 6 * 1/9 = 35,618 Sq. Yd.

Item M-10, Calcium Chloride for Stabilized Shoulders
35,618 (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

ITEM E-11, Water.

Embarkment = 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) = 12,375 CUYDS.
ITEM M-10, Calcium Chloride, (12,375 ÷ 50) = 247.5 TONS.
TOTAL, 12,375 CUYDS. & 247.5 TONS.
Use 6190 C.Y. T-10 & 6185 C.Y. T-10 Mod.

SUMMARY OF QUANTITIES

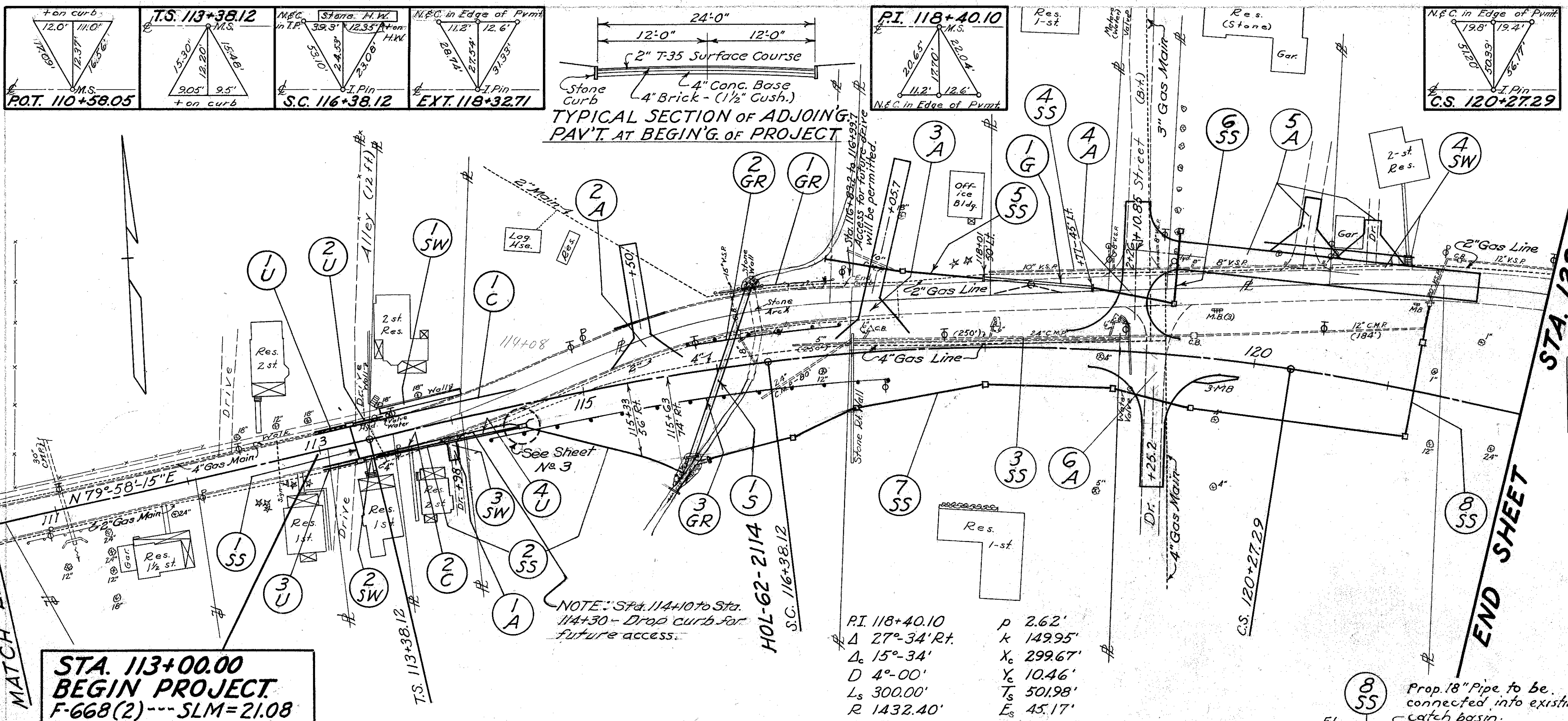
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

7
128

HOL-62-(21.08-21.51)

TOTAL FROM SHEET NO																							ITEM	100% STATE	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	*								
~ DRAINAGE, (cont'd) ~																											
								2							2			1				I-5		4	EACH	6" PIPE SPECIALS FOR UNDERDRAINS.	
																						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.	
																			2			I-5		2	EACH	18" PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.	
																						I-5		1	EACH	24" PIPE SPECIALS FOR CLASS 'A' STORM SEWERS.	
																						I-8		1	EACH	CATCH BASINS, STANDARD NO 2-2A MODIFIED	
				5																		I-8		5	EACH	CATCH BASINS, STANDARD NO 1-3.	
				2																		I-8		9	EACH	CATCH BASINS, STANDARD NO 2-3.	
																						I-8		3	EACH	CATCH BASINS, STANDARD NO 2-4.	
																						I-8		15	EACH	CATCH BASINS, STANDARD NO 2-2A.	
																						I-8		2	EACH	CATCH BASINS, STANDARD NO 2-2B.	
																						I-8		3	EACH	CATCH BASINS, STANDARD NO 16.	
																						I-8		2	EACH	CATCH BASINS, STANDARD NO 2-3 MODIFIED	
	4400																					I-9	320	9000	LIN. FT.	STONE UNDERDRAINS, NO 2.	
																						I-8		1	EACH	CATCH BASINS, STANDARD NO 2-4 MODIFIED	
																						I-10		211	SQ. YDS.	RIPRAP, TYPE 'A' (GROUT FILLED).	
																						I-10		383	CU. YDS.	DUMPED ROCK CHANNEL PROTECTION.	
																						I-14		5500	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1, AS PER PLAN	
																						I-16		6	EACH	CATCH BASINS ABANDONED.	
																						S-1		4.0	CU. YDS.	CONCRETE FOR STRUCTURES, CLASS 'C'.	
																						S-1		39.0	CU. YDS.	CONCRETE FOR STRUCTURES, CLASS 'E'.	
																						S-4		50	LBS.	REINFORCING STEEL.	
																						S-22		34	CU. YDS.	REMOVAL OF PORTIONS OF EXISTING STRUCTURE.	
																						S-24			LUMP	REMOVAL OF EXISTING STRUCTURES, AS PER PLAN	
																						S-27		80	LIN. FT.	15" PIPE FOR ROADWAY CULVERTS.	
																						S-27		106	LIN. FT.	24" PIPE FOR ROADWAY CULVERTS.	
																						S-27		108	LIN. FT.	30" PIPE FOR ROADWAY CULVERTS.	
																						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.	
																						S-27		190	LIN. FT.	24" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) 12 GAGE FOR ROADWAY CULVERTS.	
																						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.	
																						S-27		84	LIN. FT.	48" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) FOR ROADWAY CULVERTS.	
																						S-27		128	LIN. FT.	54" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE, SEC. M-6.4(d) FOR ROADWAY CULVERTS.	
																						S-27		288	LIN. FT.	24" PAVED BITUMINOUS COATED CORRUGATED METAL PIPE SEC. M-6.4(d) FOR ROADWAY CULVERTS	
																						S-28		144	LIN. FT.	66" SECTIONAL CORRUGATED METAL STRUCTURE, SEC. M-6.4(g)(c), 10-10 GAGE, AS PER PLAN	
																						S-28		100	LIN. FT.	8'-7" x 5'-11" SECTIONAL CORRUGATED METAL STRUCTURE, SEC. M-6.4(g)(d), 10-8 GAGE, AS PER PLAN	
~ PAVEMENT ~																											
																						I-12		296	LIN. FT.	STANDARD TYPE 6 CONCRETE CURB.	
																						I-18		5699	CU. YDS.	STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES	
																						I-22		18,020	CU. YDS.	SUBBASE.	
																						B-119		19,060	CU. YDS.	CRUSHED AGGREGATE BASE COURSE.	
																						B-35		6,871	CU. YDS.	ASPHALTIC CONCRETE BASE COURSE (70-85).	
																						B-35		3068	CU. YDS.	ASPHALTIC CONCRETE LEVELING COURSE (70-85).	
																						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 RC2	
																						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.



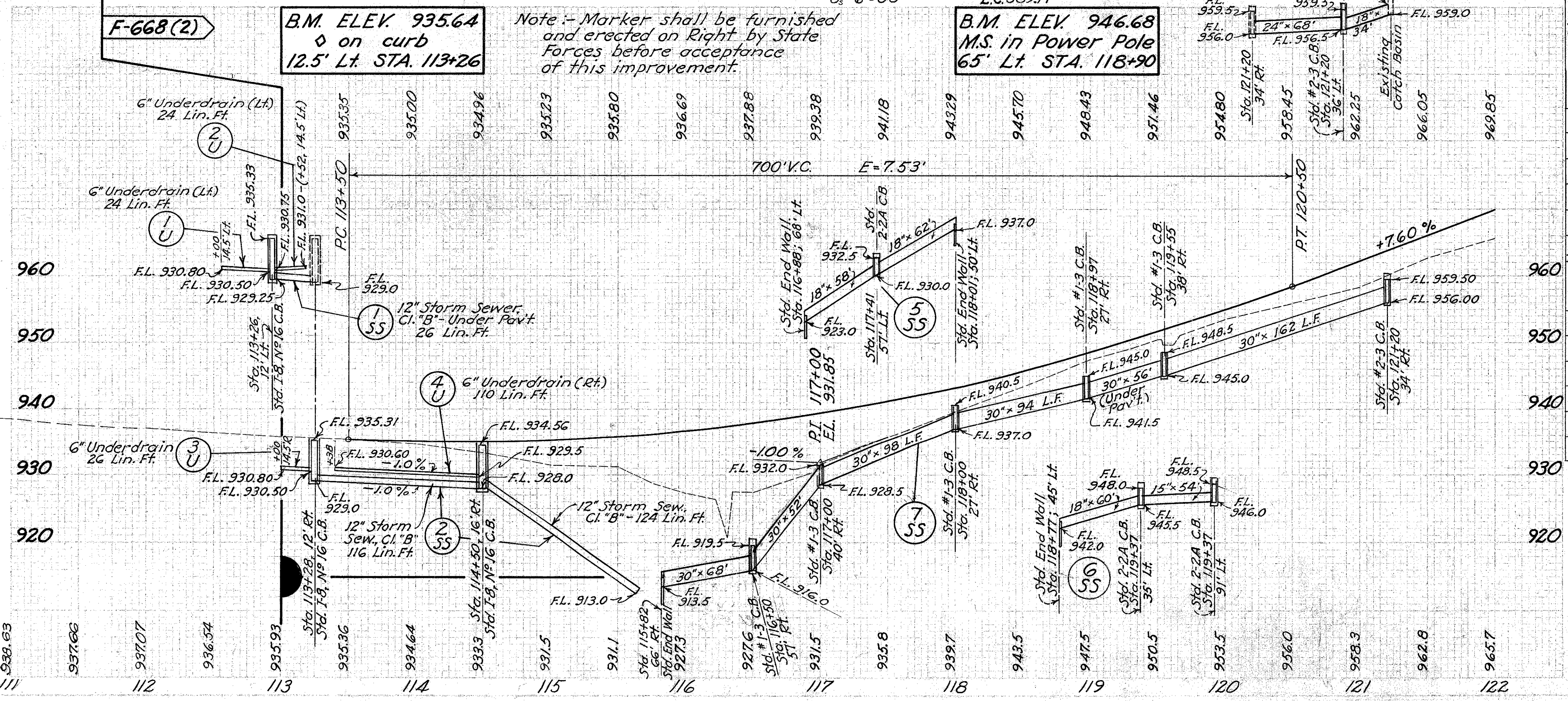
**STA. 113+00.00
BEGIN PROJECT.
F-668(2) --- SLM=21.08**

**B.M. ELEV. 935.64
on curb
12.5' Lt. STA. 113+26**

Note: Marker shall be furnished and erected on Right by State Forces before acceptance of this improvement.

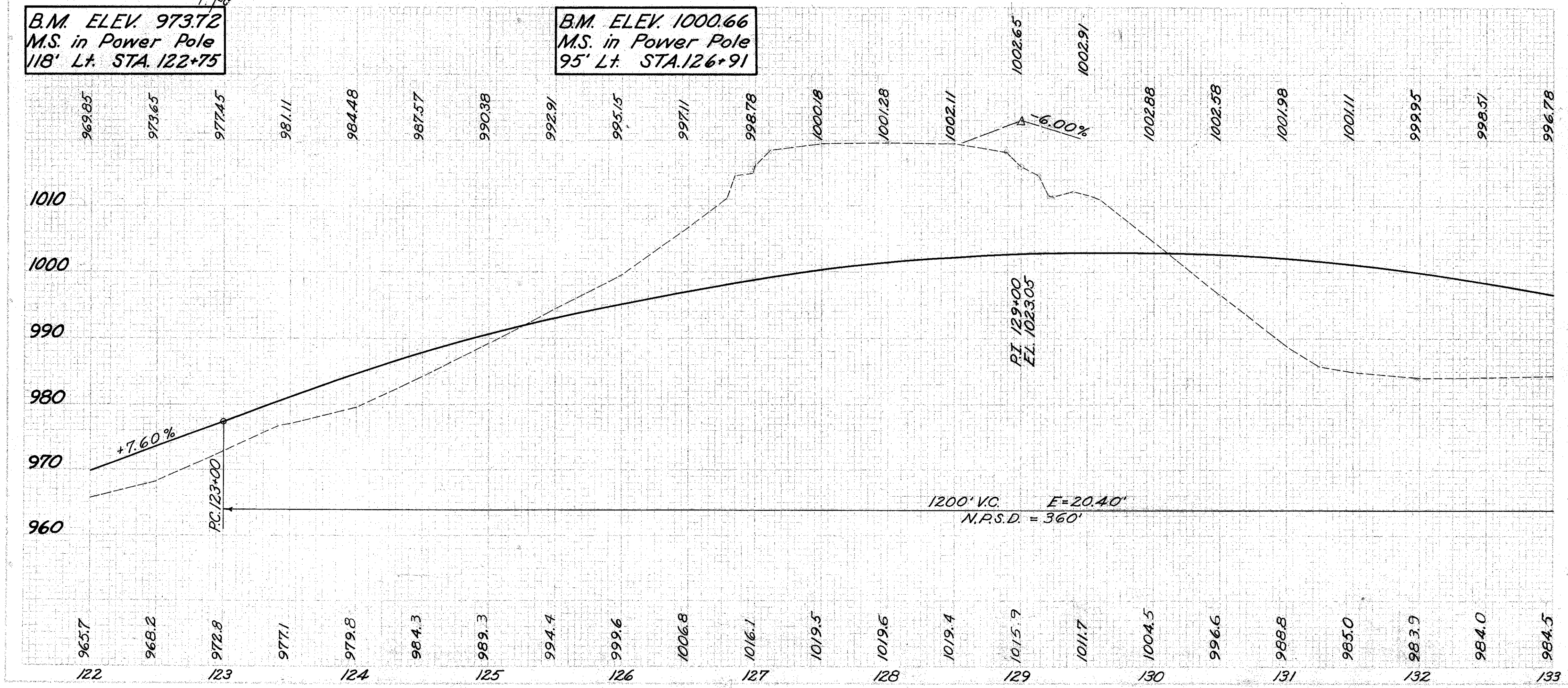
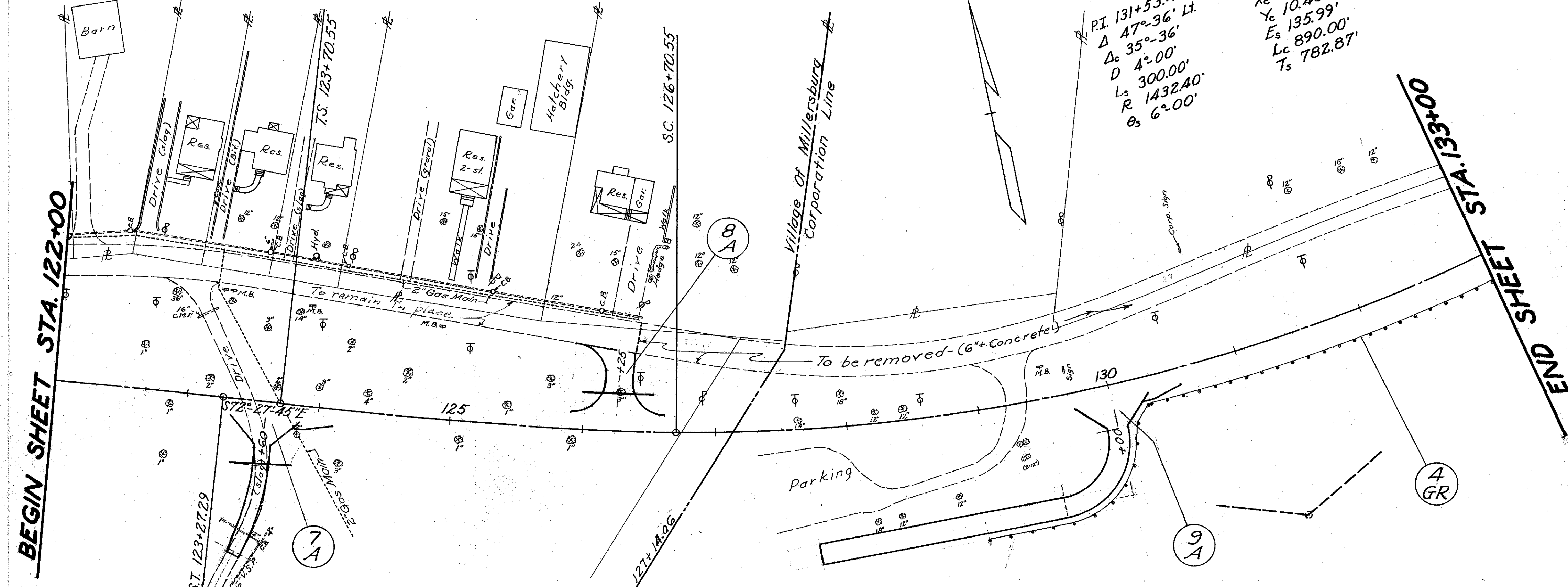
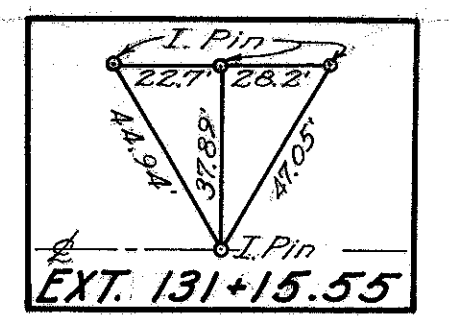
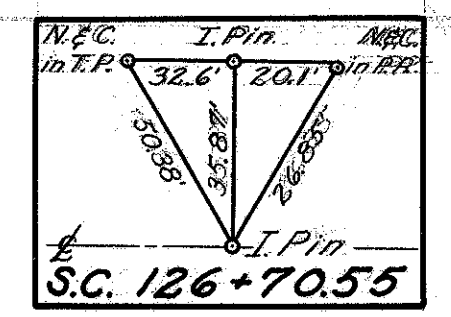
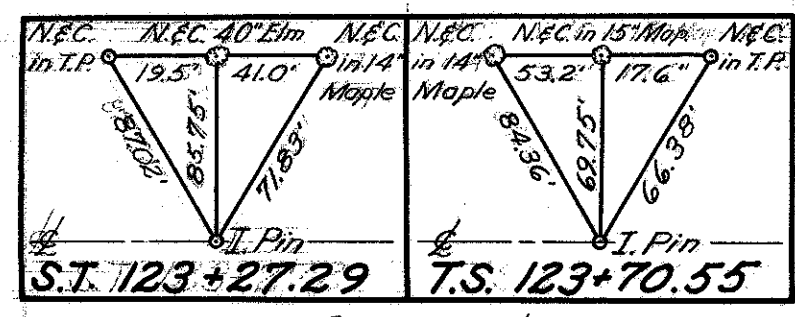
**B.M. ELEV. 946.68
M.S. in Power Pole
65' Lt. STA. 118+90**

PI 118+40.10
p 2.62'
k 149.95'
Δ 27°-34' Rt.
Xc 299.67'
D 4°-00'
Y 10.46'
Ts 501.98'
R 1432.40'
Es 45.17'
Lc 389.17'



SEE SHEET NO.	REMOVE & DISPOSE OF	STATION TO STATION	CLASS	TYPE	DEPTH	REMARKS
76	10' x 10' x 10' L.F.L.F.	112+00 to 113+00	1-A	113+98	1.0	113+50 to 114+11
76	10' x 10' x 10' L.F.L.F.	113+00 to 114+00	2-A	115+50	2.0	113+35
77	10' x 10' x 10' L.F.L.F.	114+00 to 115+00	3-A	117+05.74	3.0	113+65
77	10' x 10' x 10' L.F.L.F.	115+00 to 116+00	4-A	119+10.85	4.0	120+47(5) to 121+00(5)
77	10' x 10' x 10' L.F.L.F.	116+00 to 117+00	5-A	121+25.2	5.0	113+00 to 114+50
77	10' x 10' x 10' L.F.L.F.	117+00 to 118+00	6-A	123+00	6.0	113+00 to 114+46
106	10' x 10' x 10' L.F.L.F.	118+00 to 119+00	1-U	113+00	1.0	113+26
106	10' x 10' x 10' L.F.L.F.	119+00 to 120+00	2-U	115+26	2.0	113+52
106	10' x 10' x 10' L.F.L.F.	120+00 to 121+00	3-U	117+28	3.0	113+28
106	10' x 10' x 10' L.F.L.F.	121+00 to 122+00	4-U	119+38	4.0	114+50
106	10' x 10' x 10' L.F.L.F.	122+00 to 123+00	1-S	116+04	1.0	116+04
106	10' x 10' x 10' L.F.L.F.	123+00 to 124+00	1-GR	116+08	1.0	116+99
106	10' x 10' x 10' L.F.L.F.	124+00 to 125+00	2-GR	115+80	2.0	116+91.2
106	10' x 10' x 10' L.F.L.F.	125+00 to 126+00	3-GR	114+25	3.0	117+24.7
106	10' x 10' x 10' L.F.L.F.	126+00 to 127+00	1-SS	113+27	1.0	115+63
106	10' x 10' x 10' L.F.L.F.	127+00 to 128+00	2-SS	113+28	2.0	115+63
106	10' x 10' x 10' L.F.L.F.	128+00 to 129+00	3-SS	116+50(3)	3.0	121+20(3)
106	10' x 10' x 10' L.F.L.F.	129+00 to 130+00	4-SS	116+88	4.0	118+01
106	10' x 10' x 10' L.F.L.F.	130+00 to 131+00	5-SS	118+77	5.0	119+37
106	10' x 10' x 10' L.F.L.F.	131+00 to 132+00	6-SS	115+82	6.0	121+20
106	10' x 10' x 10' L.F.L.F.	132+00 to 133+00	7-SS	121+20	7.0	121+20
106	10' x 10' x 10' L.F.L.F.	133+00 to 134+00	1-G	118+01	1.0	118+77
106	10' x 10' x 10' L.F.L.F.	134+00 to 135+00	113+00	121+50	1.0	121+50

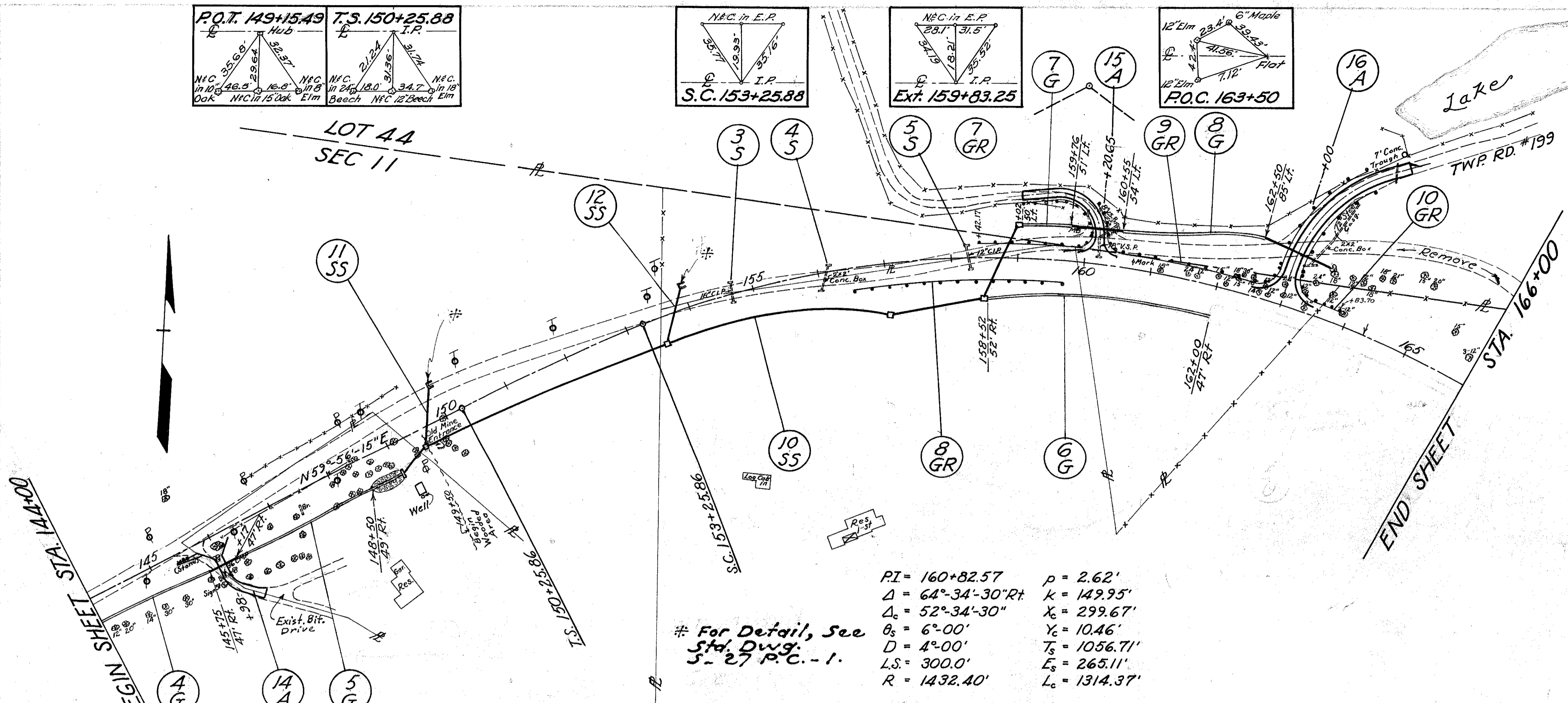
PLAN & PROFILE -- STA. 112+00 TO STA. 122+00



P 2.62'
 X 149.95'
 Yc 299.67'
 Yc 10.46'
 Es 135.99'
 Lc 890.00'
 Ts 782.87'

STATION TO STATION		ESTIMATED QUANTITIES
7-A	123+60	
8-A	126+25	
9-A	130+00	
126+42 to 133+20(±) Lt.		
4-GR 130+28.79 to 133+00 Rt.		
TOTALS		
Surf. Course	T-35	51.0
Prime Coat	T-30	339
Aggregate Base	B-19	178
Pipe for Drive Ways	15"	100
	16"	16
	1280	1280
Exist. Pavt. Removal	1280	1280
Pipe, Removal Under	16	16
Guard Rail, Roadway	L.F.	176
Guard Rail, Approach	L.F.	78
Guard Rail, Footch	L.F.	78

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



$PI = 160+82.57$ $p = 2.62'$
 $\Delta = 64^\circ-34'-30''$ $k = 149.95'$
 $\Delta_c = 52^\circ-34'-30''$ $X_c = 299.67'$
 $\theta_s = 6^\circ-00'$ $Y_c = 10.46'$
 $D = 4^\circ-00'$ $T_s = 1056.71'$
 $L.S. = 300.0'$ $E_s = 265.11'$
 $R = 1432.40'$ $L_c = 1314.37'$

* For Detail, See Sta. Dwg. 5-27 P.C.-1.

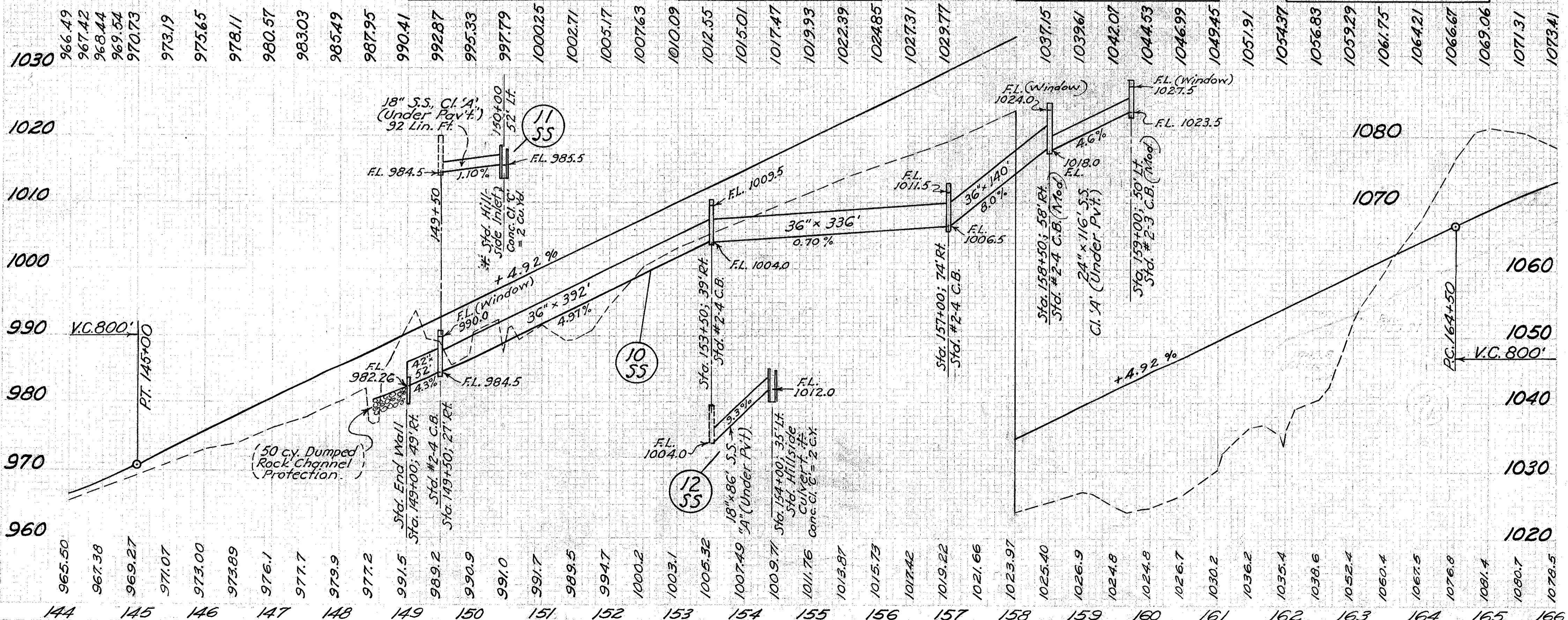
B.M. ELEV. 967.66
 M.S. in Tel. Pole
 13' RT. STA. 144+86

B.M. ELEV. 991.91
 M.S. in Tel. Pole
 68.5 Lt. STA. 150+50

B.M. ELEV. 1003.35
 on H.W. Culvert
 19' Lt. STA. 154+69

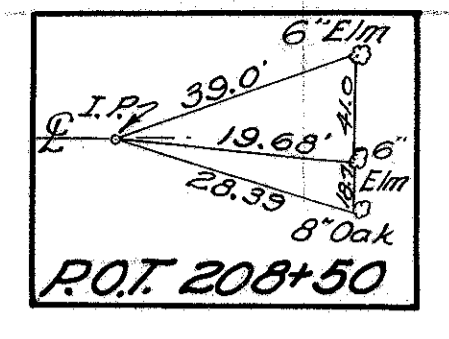
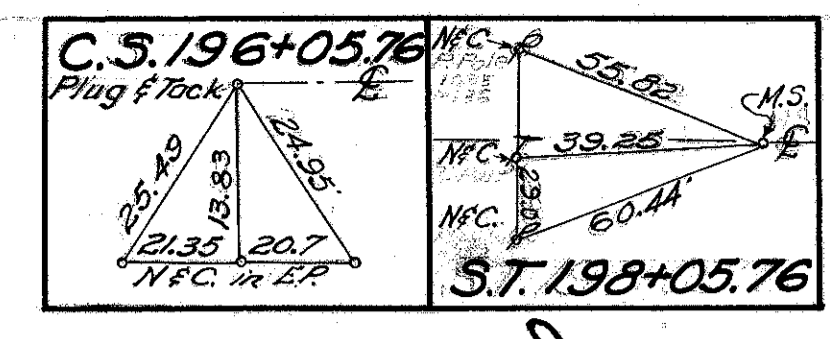
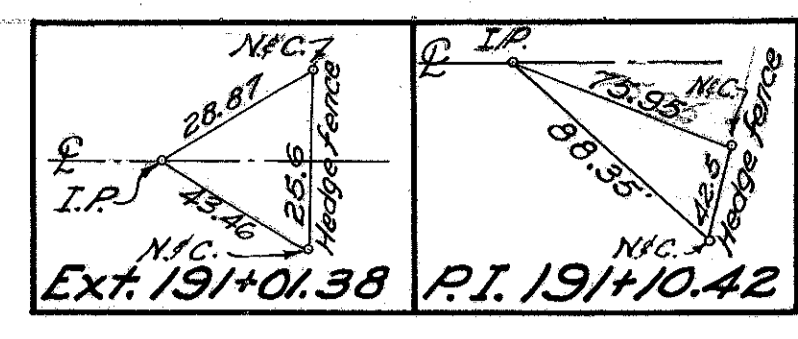
B.M. ELEV. 1033.68
 M.S. in 24" Walnut
 63' Lt. STA. 159+66

B.M. ELEV. 1049.63
 M.S. in 18" Elm
 78' Lt. STA. 163+67

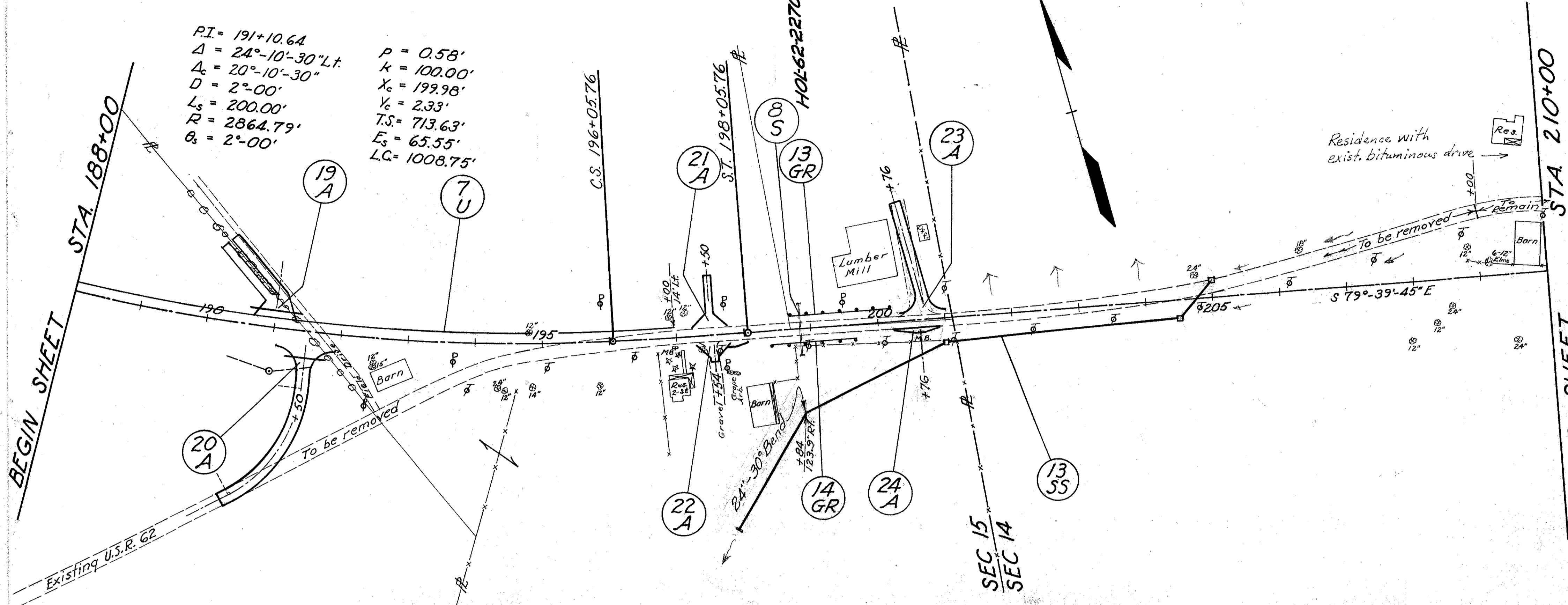


STATION	PIPE	PIPE DIA.	PIPE TYPE	PIPE L.F.	PIPE C.Y.	CONCRETE	CONCRETE C.Y.	CATCH BASIN	STORM SEWER	DUMP ROCK	STRUCTURE	REINFORCING	PIPE DRIVEWAYS	APPROX. BASE	REMARKS
144-145	14-A	145+98	RT	42	80										14-A 145+98
145-146	15-A	160+20.65	Lt	70	110										15-A 160+20.65
146-147	16-A	163+00	Lt												16-A 163+00
147-148	7-GR	158+42.17 to 159+90.10	Lt												7-GR 158+42.17 to 159+90.10
148-149	8-GR	146+50 to 159+82.14	Rt												8-GR 146+50 to 159+82.14
149-150	9-GR	160+54.15 to 163+52.00	Lt												9-GR 160+54.15 to 163+52.00
150-151	10-GR	163+46.72 to 163+83.70	Lt												10-GR 163+46.72 to 163+83.70
151-152	10-SS	149+00 to 159+00	Rt												10-SS 149+00 to 159+00
152-153	11-SS	149+50 to 150+00	Lt												11-SS 149+50 to 150+00
153-154	12-SS	153+50 to 154+00	Lt												12-SS 153+50 to 154+00
154-155	3-S	154+65	Rt												3-S 154+65
155-156	4-S	156+15	Rt												4-S 156+15
156-157	5-S	158+28	Rt												5-S 158+28
157-158	4-G	144+00 to 145+75	Rt												4-G 144+00 to 145+75
158-159	5-G	146+17 to 148+50	Rt												5-G 146+17 to 148+50
159-160	6-G	158+52 to 162+00	Rt												6-G 158+52 to 162+00
160-161	7-G	159+02 to 159+76	Lt												7-G 159+02 to 159+76
161-162	8-G	160+55 to 162+50	Lt												8-G 160+55 to 162+50
162-163	163+20(Lt) to 166+00	Lt													163+20(Lt) to 166+00

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



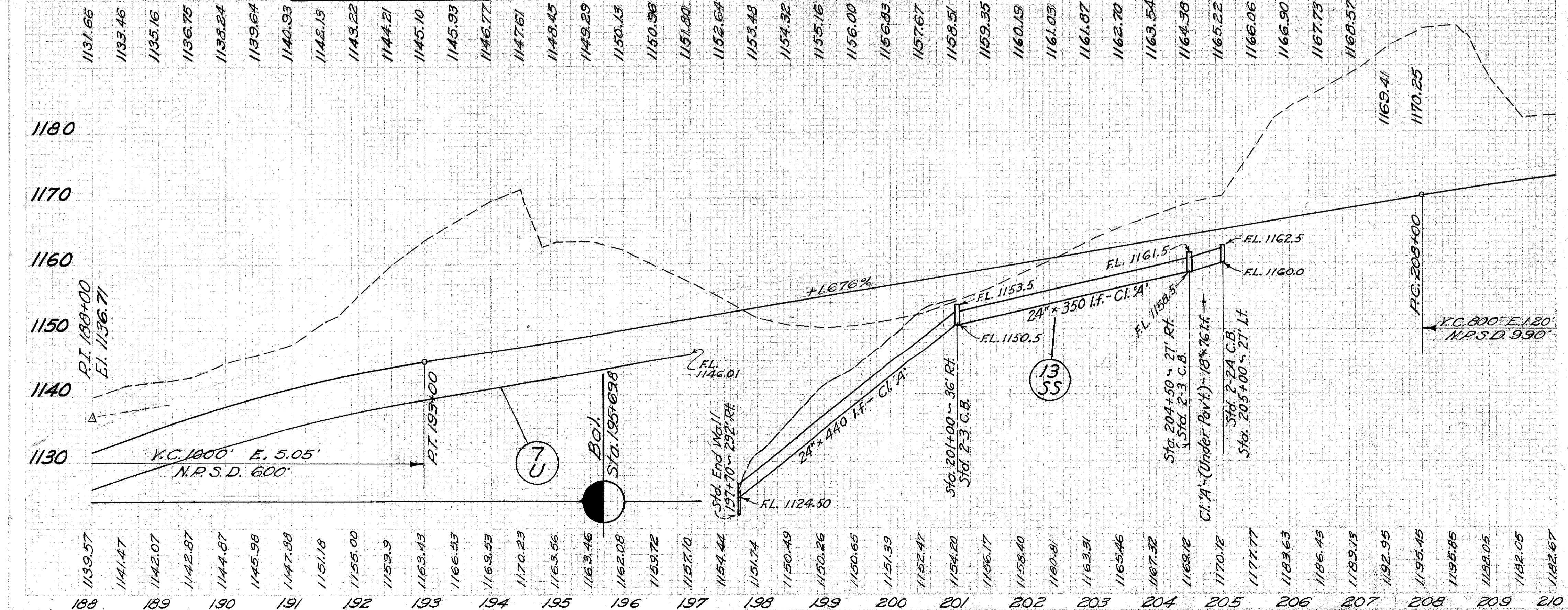
$PI = 191+10.64$
 $\Delta = 24^\circ-10'-30''$ L.T.
 $\Delta_c = 20^\circ-10'-30''$
 $D = 2^\circ-00'$
 $L_s = 200.00'$
 $R = 2864.79'$
 $\theta_c = 2^\circ-00'$
 $P = 0.58'$
 $k = 100.00'$
 $X_c = 199.98'$
 $Y_c = 2.33'$
 $T.S. = 713.63'$
 $E_s = 65.55'$
 $L.C. = 1008.75'$



B.M. ELEV. 1162.34
 M.S. on Tel. Pole
 135' R.T. STA. 193+00

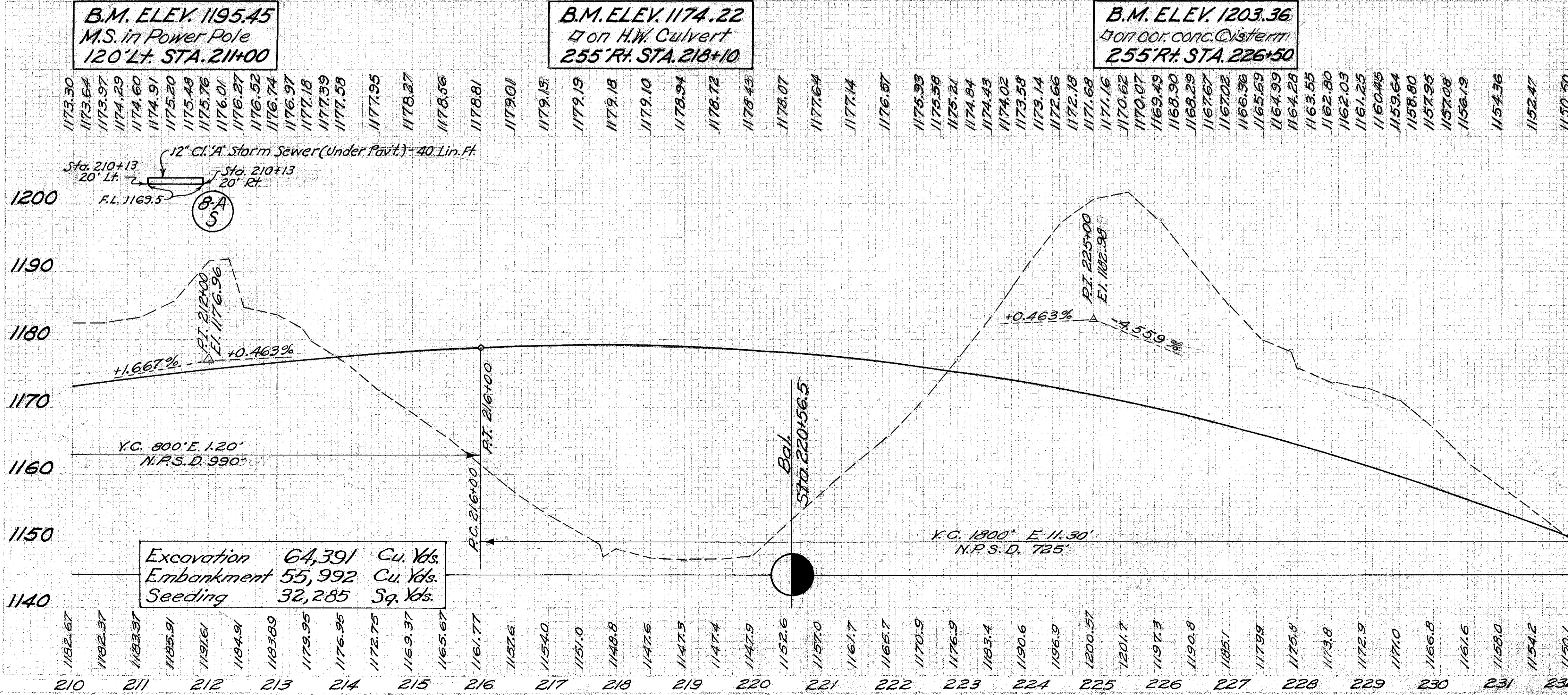
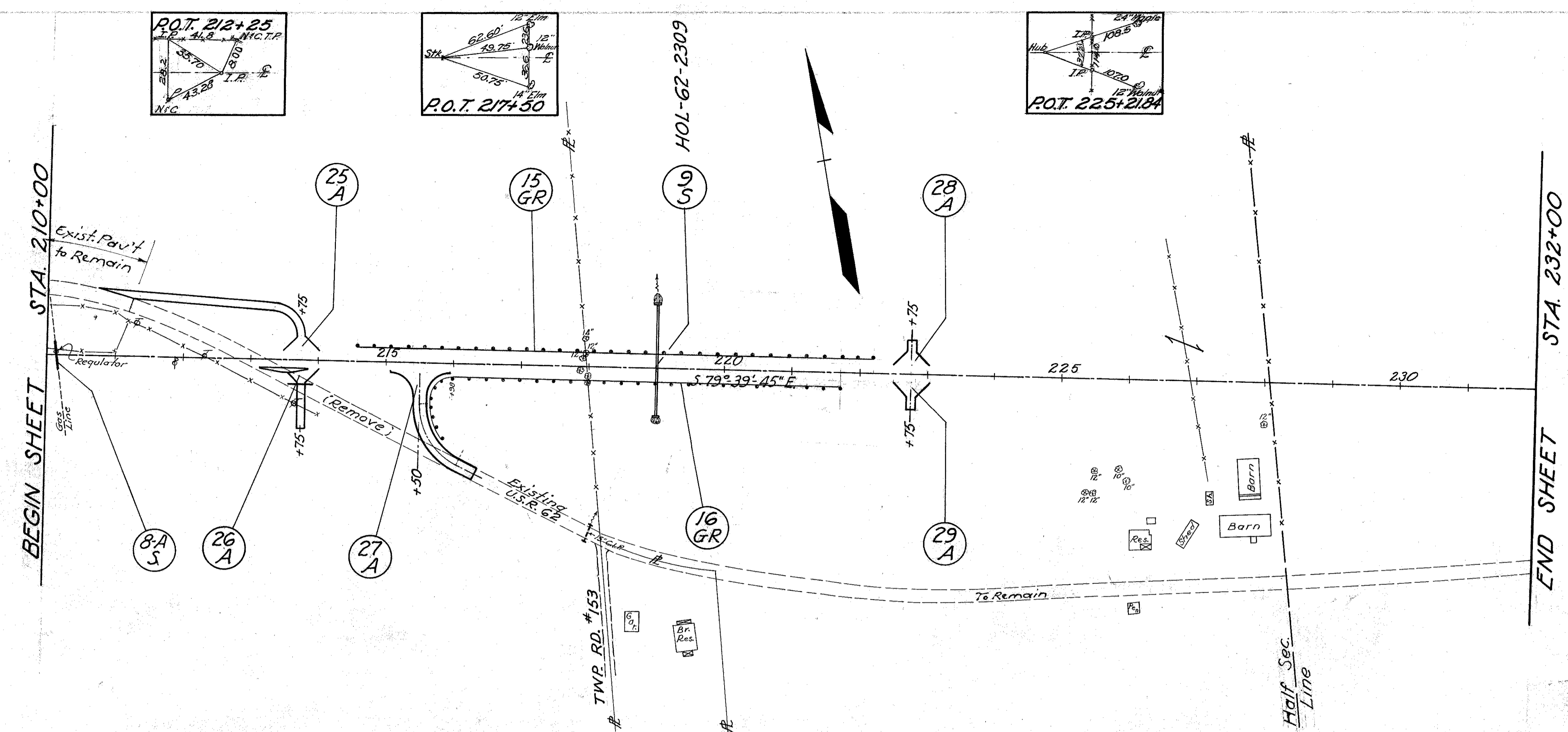
B.M. ELEV. 1147.42
 M.S. in Power Pole
 35' L.T. STA. 199+50

B.M. ELEV. 1177.05
 M.S. in 24" Hickory
 58' L.T. STA. 206+25



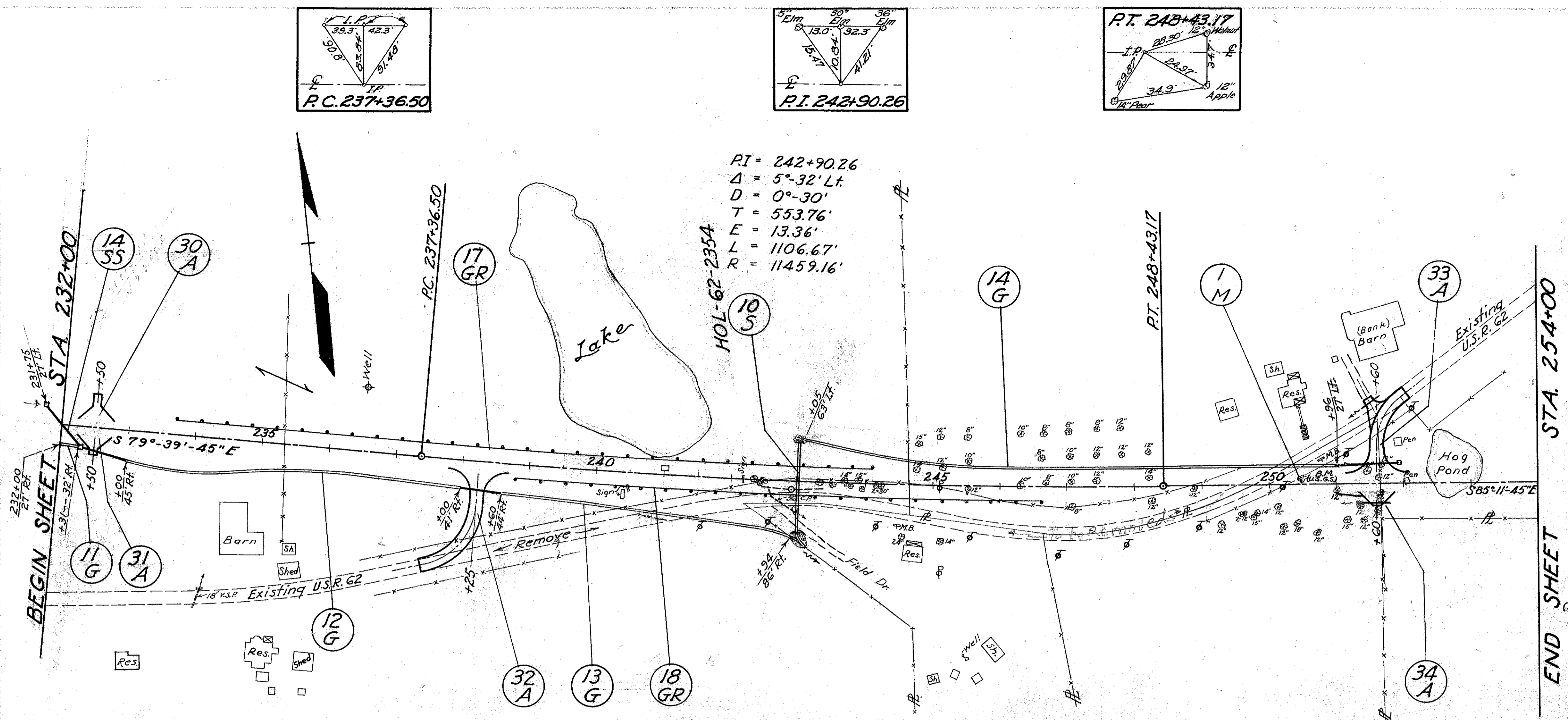
STATION TO STATION	ITEM	QUANTITY	UNIT	AMOUNT	REMARKS
19-A 191+00	19-A	191+00	Lf		
20-A 191+50	20-A	191+50	Rt		
21-A 191+50	21-A	191+50	Lf		
22-A 191+54	22-A	191+54	Rt		
23-A 200+76	23-A	200+76	Lf		
24-A 200+76	24-A	200+76	Rt		
13-GR 198+40 to 199+65	13-GR	198+40 to 199+65	Rt		
14-GR 198+70 to 200+20	14-GR	198+70 to 200+20	Lf		
T-U-188+00 to 197+00	T-U	188+00 to 197+00	Lf		
B-S 198+84	B-S	198+84	Rt		
13-SS 197+70 to 205+00	13-SS	197+70 to 205+00	Rt		
19-4	19-4	191+00	Lf		
20-4	20-4	191+50	Rt		
21-4	21-4	191+50	Lf		
22-4	22-4	191+54	Rt		
23-4	23-4	200+76	Lf		
24-4	24-4	200+76	Rt		
13-GR	13-GR	198+40 to 199+65	Rt		
14-GR	14-GR	198+70 to 200+20	Lf		
T-U	T-U	188+00 to 197+00	Lf		
B-S	B-S	198+84	Rt		
13-SS	13-SS	197+70 to 205+00	Rt		
7-35	7-35	Surface Leveling Course	Curves	37.7	
B-35	B-35	Leveling Course	Curves	8.3	
T-30	T-30	Prime Asphalt Coat	Gal's	52	
B-35	B-35	Asphalt Coat	Gal's	38	
T-30	T-30	Base Coat	Gal's	120	
B-35	B-35	Base Coat	Gal's	11	
B-119	B-119	Aggr. Under Base	Curves	720	
I-22	I-22	Aggr. Under Base	Curves	198.5	
6" Pipe	6" Pipe	Under Drain	Lin. Ft.	21.0	
15" Pipe	15" Pipe	Under Drain	Lin. Ft.	15.0	
24" Storm Sewer	24" Storm Sewer	Under Drain	Lin. Ft.	67.0	
15" Storm Sewer	15" Storm Sewer	Under Drain	Lin. Ft.	4.5	
Concrete	Concrete	Cl. F.	C.Y.	0.5	
24" Storm Sewer	24" Storm Sewer	Cl. F.	C.Y.	0.4	790.76
15" Storm Sewer	15" Storm Sewer	Cl. F.	C.Y.	2	1
15" Storm Sewer	15" Storm Sewer	Cl. F.	C.Y.	1	1
30" Band	30" Band	24"	Ea.	1	1
30" Band	30" Band	24"	Ea.	1	1
Excavation	Excavation	Structure	C.Y.	19	
15" Pipe for Roadway	15" Pipe	for Roadway	L.F.	80	33
15" Pipe for Roadway	15" Pipe	for Roadway	L.F.	80	33
Existing Pavement	Existing Pavement	Removal	S.Y.	590	440
Subgrade	Subgrade	Compacted	S.Y.	679	
Guard Rail	Guard Rail	Rail	Lin. Ft.	125	150
14					
83					
84					
87					
89					
110					
1030					
679					
275					

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

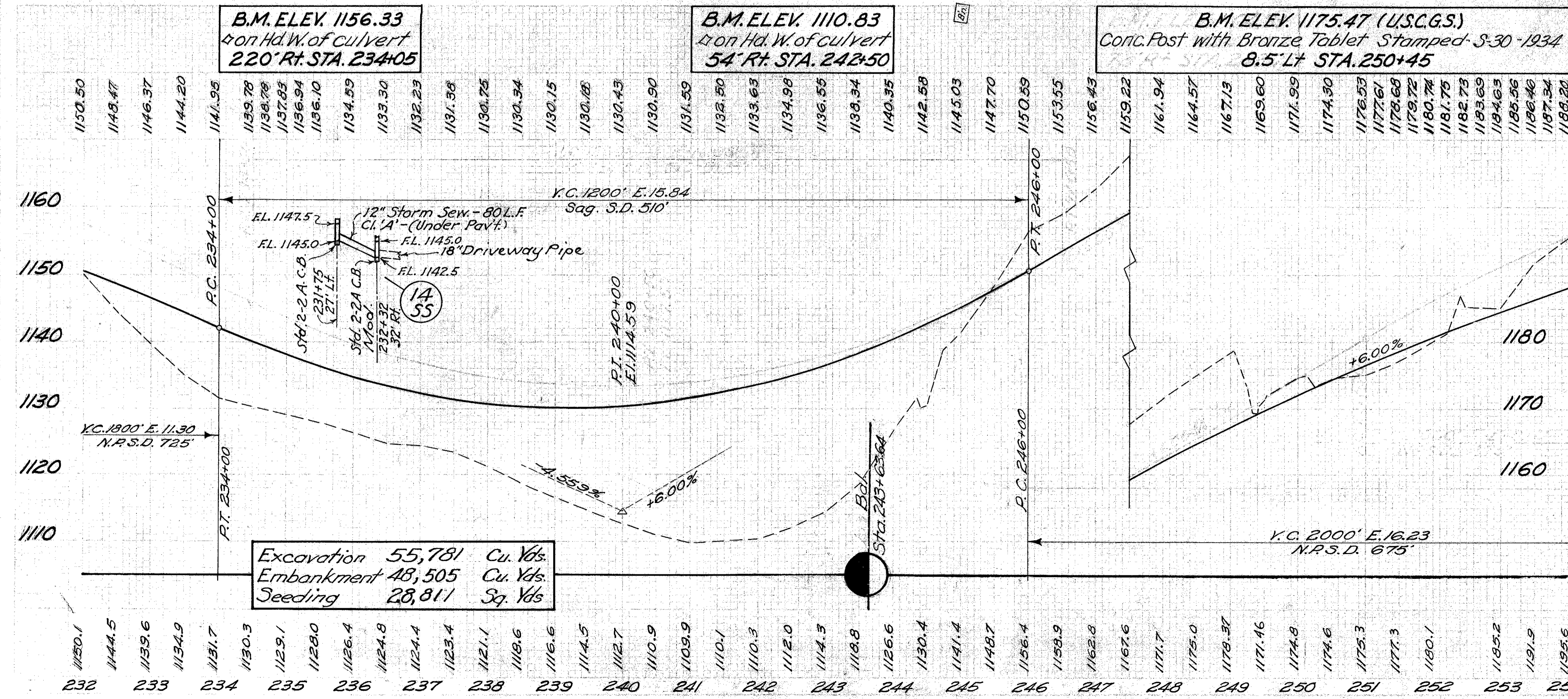


STATION TO STATION	SPK	24" Pipe (d) (Sec. 116-64)	15" Pipe for Driveways (Lin. Ft)	Concrete Cl. # E	Structure Excavation	Dump Rock Protection	Riprap	18" Storm Sewer (Under Pavt.)	Exist. Pavt. Removal Flex. Type	Compacted Subgrade	Guard Rail, Roadway, Circ. Str.	LINE FT.
25-A 213+75	Lt.	266										85
26-A 215+75	Rt.	99	34									85
27-A 215+50	Lt.	26.9										86
28-A 222+75	Lt.											87
29-A 222+75	Rt.											87
15-GR-214+57.5 to 222+20.0	Lt.											762.5
16-GR-215+58 to 221+73	Rt.											575
9-S-219+00	±											111
8-A-S 210+13	±											111
213+90(L) to 215+50(L) Lt.												111
												1450
												1450

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



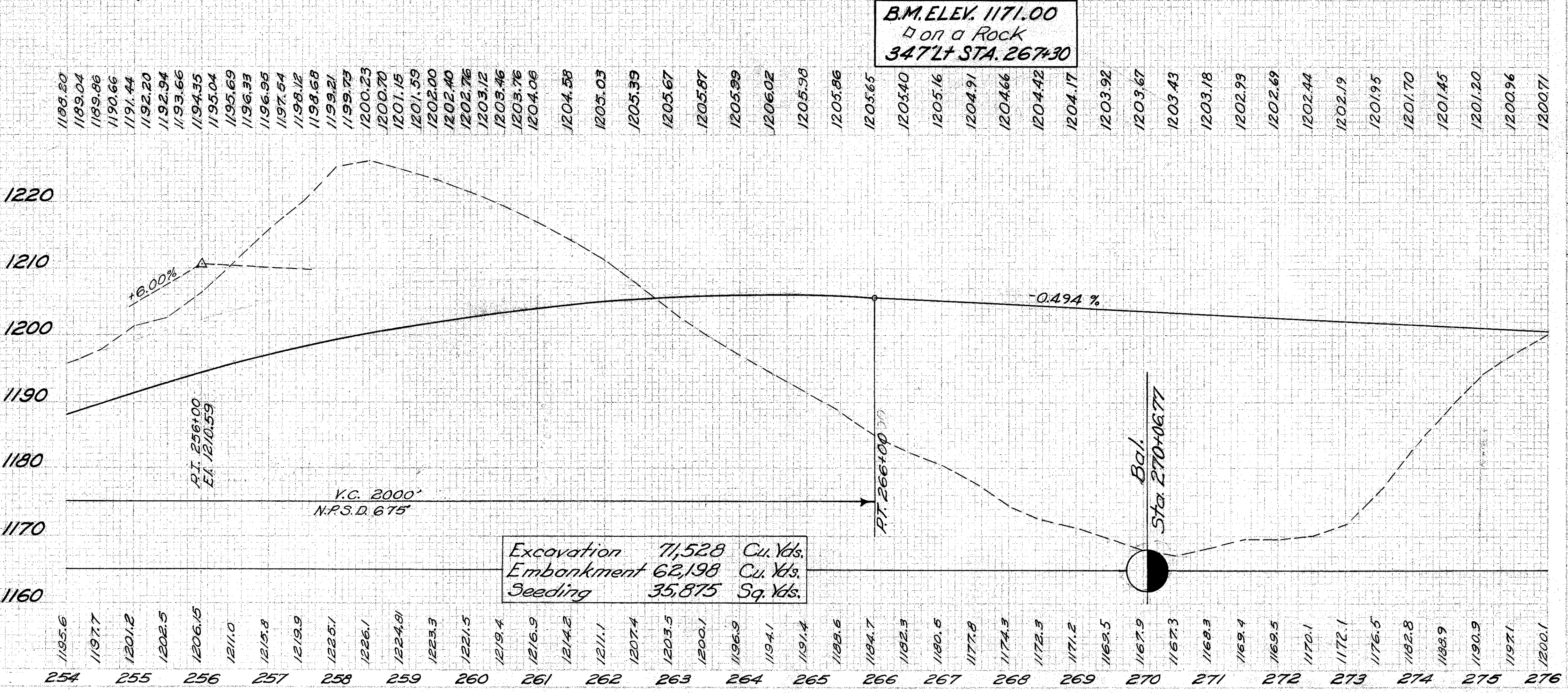
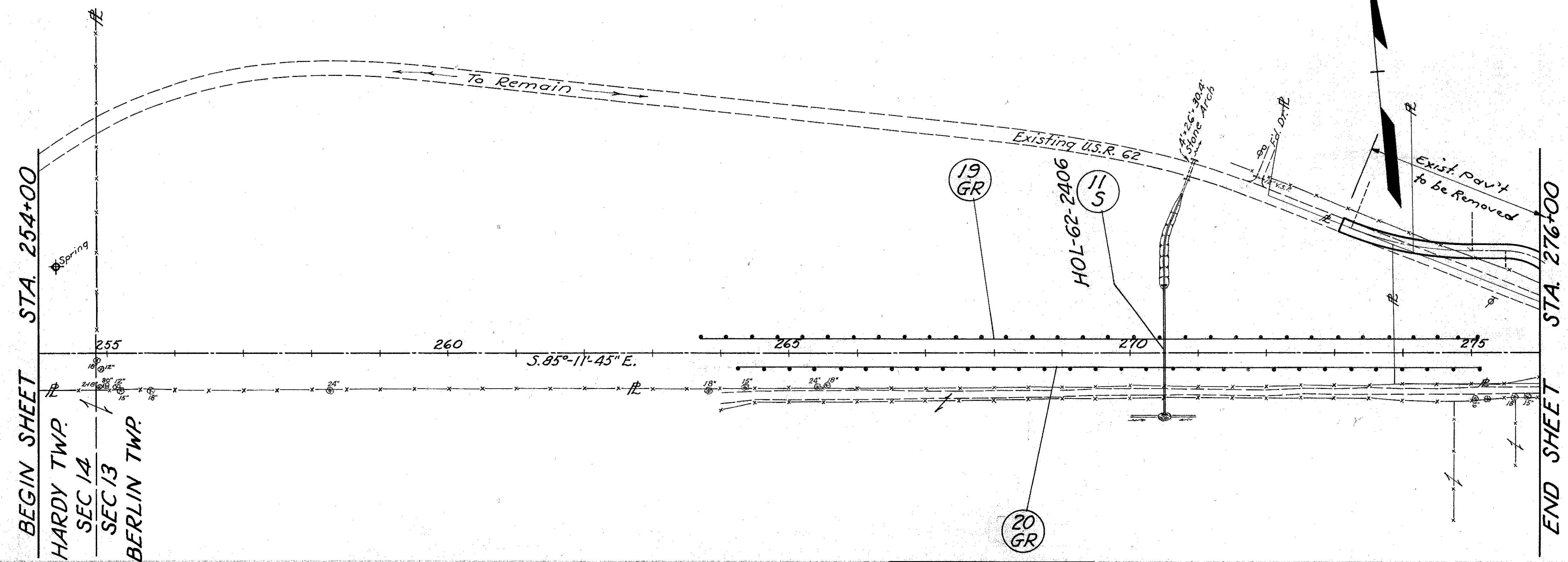
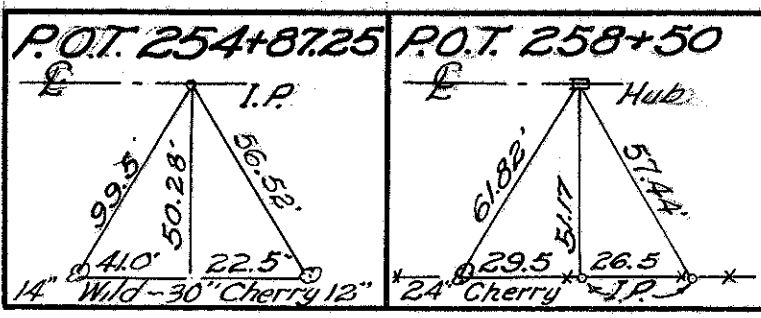
$PI = 242+90.26$
 $\Delta = 5^{\circ}32' Lt.$
 $D = 0^{\circ}30'$
 $T = 553.76'$
 $E = 13.36'$
 $L = 1106.67'$
 $R = 11459.16'$



Excavation 55,781 Cu. Yds.
 Embankment 48,505 Cu. Yds.
 Seeding 28,811 Sq. Yds.

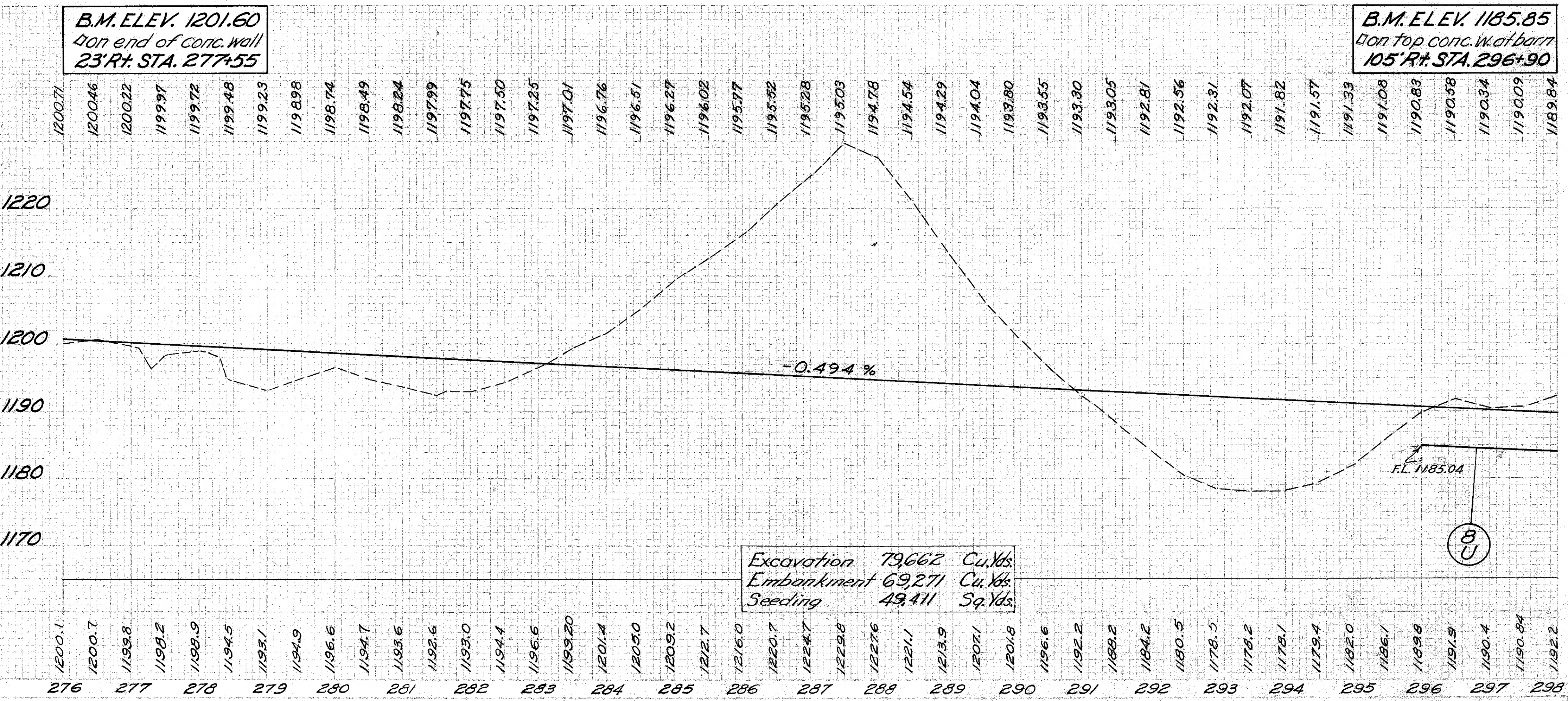
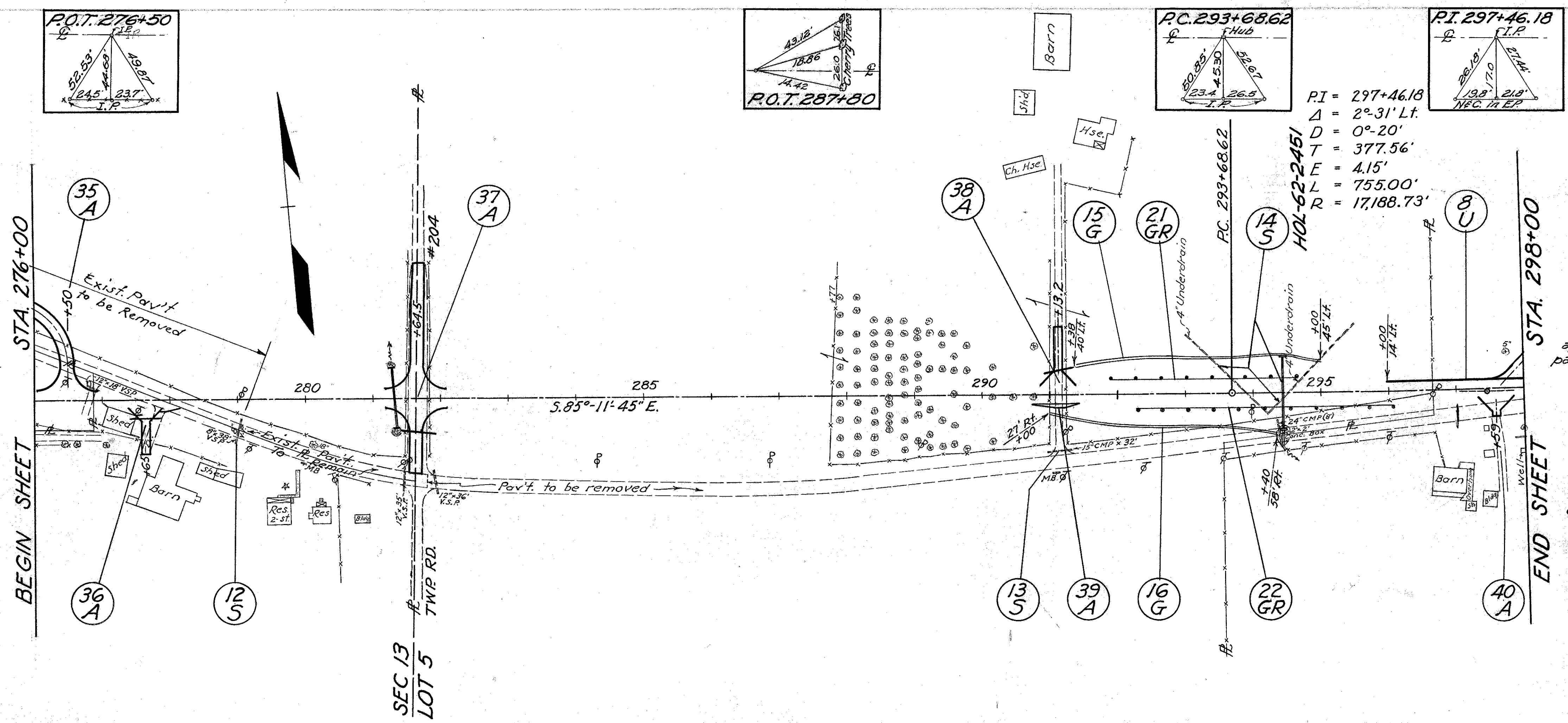
STATION TO STATION	12" Storm Sew. C.I. 12" L.F.	36" Pipe-3cc of Sec. M-60 L.F.	Structure Excavation C.Y.	Concrete C.I. E. C.Y.	Dump Rock Chornel Protect'n. C.Y.	Rip and Rep. C.Y.	Nonumnt. Reset. Each	Catch Basins 24" x 24" x 24" Each	Compacted Subgrade S.Y.	Exist. Flexible Pav. Type S.Y.	Removals Pipe 15" Under Pipe 15" Over 15" L.F. L.F. C.Y.	Guard Rail Road-Way Lin. Ft.
30-A 232+50												
31-A 232+50												
32-A 238+25												
33-A 251+60												
34-A 251+60												
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.												
12-G 233+00 to 238+00 Rt.												
13-G 238+60 to 242+94 Rt.												
14-G 243+05 to 250+96 Lt.												
10-S 243+00												
238+15(2) to 240+85(L)												
1-M 250+45												
30-A 232+50												
31-A 232+50												
32-A 238+25												
33-A 251+60												
34-A 251+60												
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.												
12-G 233+00 to 238+00 Rt.												
13-G 238+60 to 242+94 Rt.												
14-G 243+05 to 250+96 Lt.												
10-S 243+00												
238+15(2) to 240+85(L)												
1-M 250+45												
30-A 232+50												
31-A 232+50												
32-A 238+25												
33-A 251+60												
34-A 251+60												
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.												
12-G 233+00 to 238+00 Rt.												
13-G 238+60 to 242+94 Rt.												
14-G 243+05 to 250+96 Lt.												
10-S 243+00												
238+15(2) to 240+85(L)												
1-M 250+45												

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



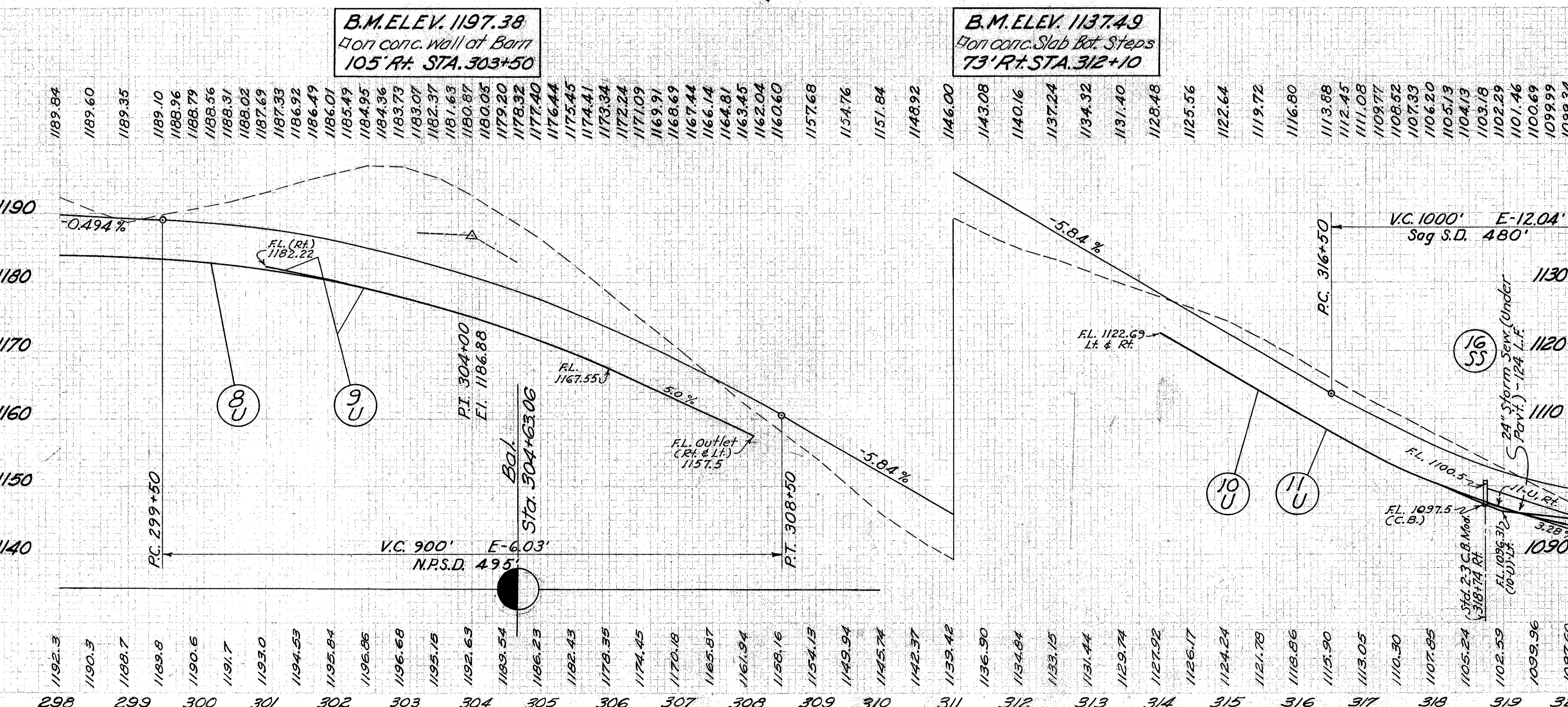
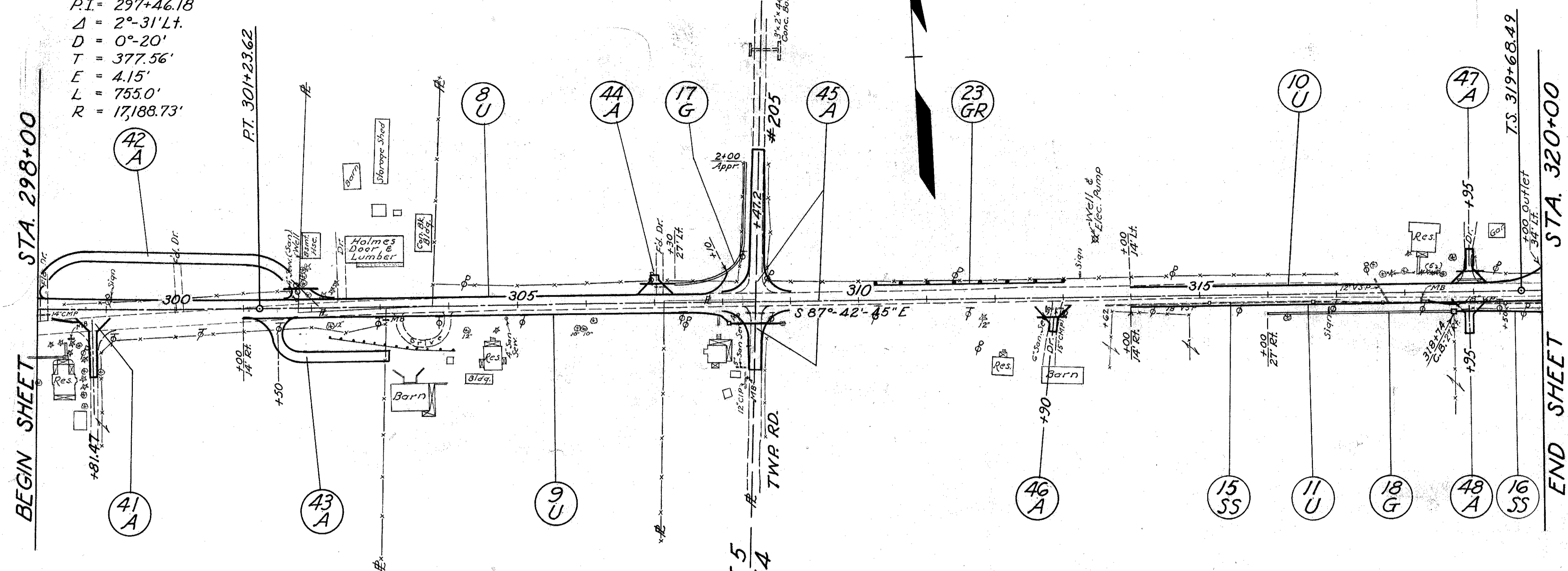
STATION TO STATION	SEE SHEET NO.	ESTIMATED QUANTITIES
19-GR-263+70 to 275+07.5 Lt	1137.5	Excavation Structures 60
20-GR-264+25 to 275+12.5 Rt	1087.5	Excavation Channels 44
11-S 270+50	113	Riprap 10
		Concrete Class "E" 0.8
		24" Pipe Corr. Metal Sec. M64 (6) 12.6
		Guard Rail 1137.5
		Rockway 1087.5
		190
		10
		44
		10
		190

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



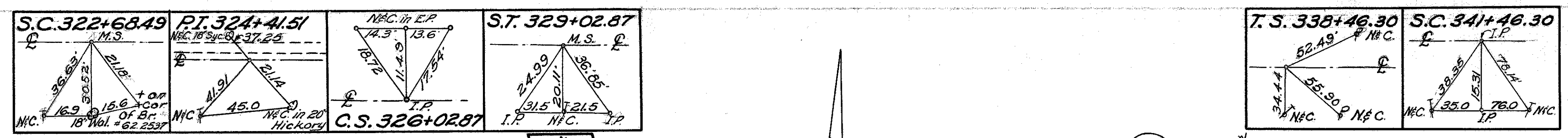
STATION TO STATION	Excavation	Embankment	Seeding	Storm Sewer	Pipe For	Concrete	Roadway	Structure	Excavation	Channel	Dumped	Rock Chn	6" Pipe	Underdrain	Paved	Subgrade	Removals	SEE SHEET
35-A 276+50	57.8	382.1		90	46	0.8	13								1040	18	90	90
36-A 277+65	8.4	53			52												91	91
37-A 281+64.5	41.0	269			44												92	92
38-A 291+13.2	8.8	55															96	96
40-A 291+59	4.5	29															78	78
39-A 291+13.2	1.7	11																
21-GR-291+90 to 294+65.11																		
22-GR-292+17.5 to 296+04.73																		
12-S 279+00																		
13-S 291+13																		
14-S 294+44																		
15-G 291+38 to 295+00																		
16-G 291+00 to 294+40																		
8-U 296+00 to 298+00																		
281+85(±) to 297+00(±) RT.																		

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

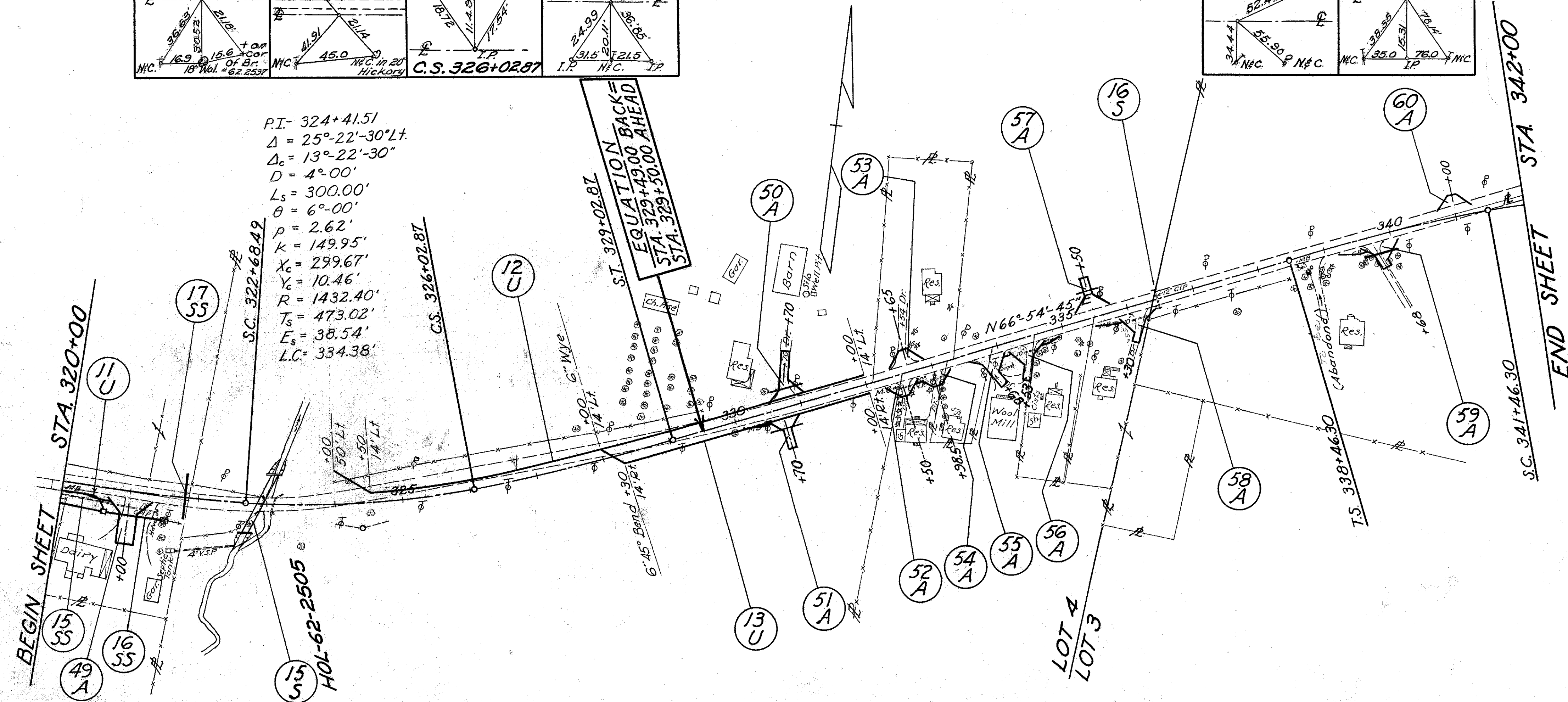


SEE NO.	STATION TO STATION	SOE	T-35 Surface Course Cu.Yds.	T-30 Prime Coef.	B-19 Aggr. Base Cu.Yds.	Paved Gutter Type I L.F.	24" Und. er Pavt. er Sewer Type I L.F.	Pipe For Driveways Lin. Ft.	Catch Basins Std. 22A 1' Dia. 1' High No.	Rip rap S.Y.	6" Pipe Under drain L.F.	6" Pipe Under drain L.F.	Removals ADP Exist Over Pipe L.F.	Guard Rail- App- roach L.F.	Guard Rail L.F.	SEE SHEET NO.
41-A	298+81.47	Rt.	9.8	62	24.0			12"	1							93
42-A	297+75 to 302+00	Lt.	18.5	117	69.0			15"								94
44-A	307+00	Lt.	4.16	275	152.0			18"	1							103
45-A	308+47.2	Lt.	5.5	55	14.0			20"								95
46-A	312+90	Rt.	4.6	29	12.0			24"								96
47-A	318+95	Rt.	1.7	11	20.0			24"								97
48-A	318+35	Rt.	23.6	160	88.0			24"								97
43-A	301+30	Lt.														94
23-GR	310+25 to 313+00	Lt.				244	272									
15-SS	313+62 to 320+00	Rt.														
16-SS	318+74 to 320+00	Rt.														
8-U	298+00 to 308+10	Lt.														
9-U	301+00 to 308+10	Rt.														
10-U	314+00 to 320+00	Lt.														
11-U	314+00 to 320+00	Rt.														
17-G	307+30 to (2+00-App 45A) Lt.															
18-G	316+00 to 318+74	Rt.														

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

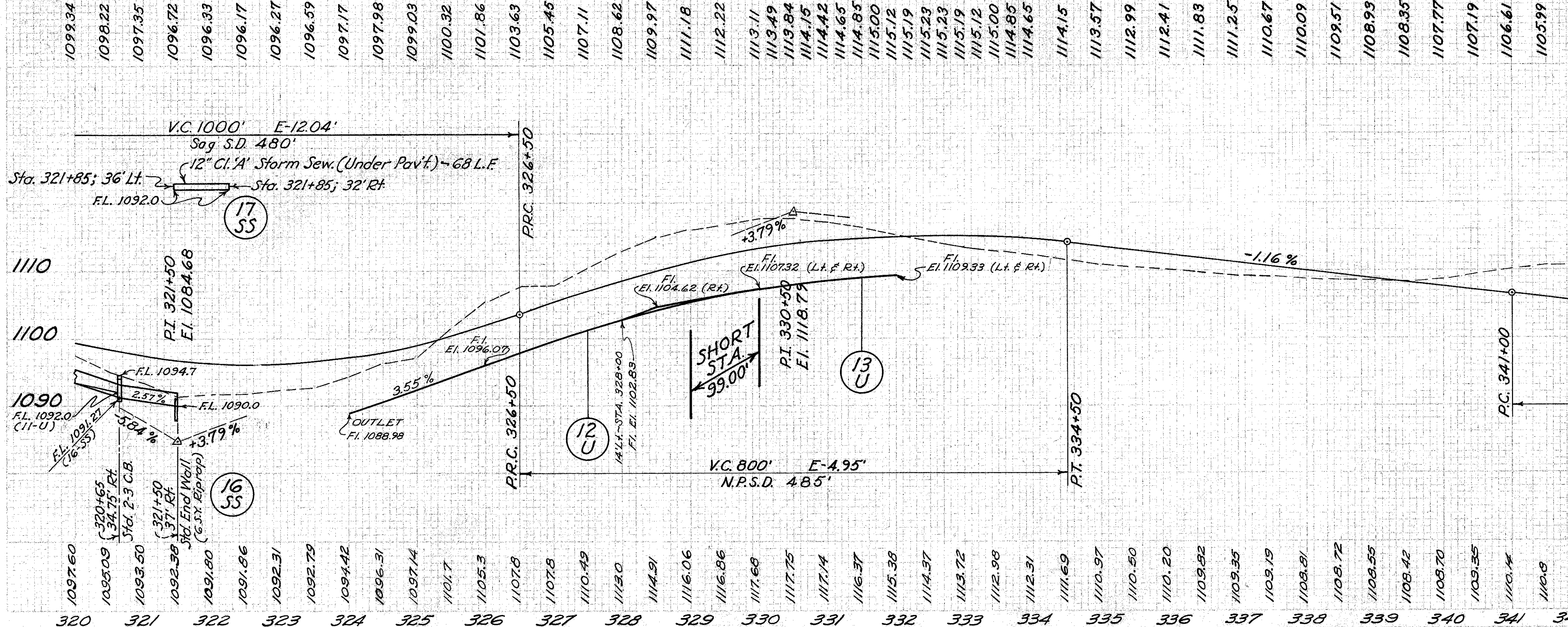


P.I. = 324+41.51
 $\Delta = 25^\circ-22'-30''$ Lt.
 $\Delta_c = 13^\circ-22'-30''$
 $D = 4^\circ-00'$
 $L_s = 300.00'$
 $\theta = 6^\circ-00'$
 $p = 2.62'$
 $k = 149.95'$
 $X_c = 299.67'$
 $Y_c = 10.46'$
 $R = 1432.40'$
 $T_s = 473.02'$
 $E_s = 38.54'$
 $L.C. = 334.38'$



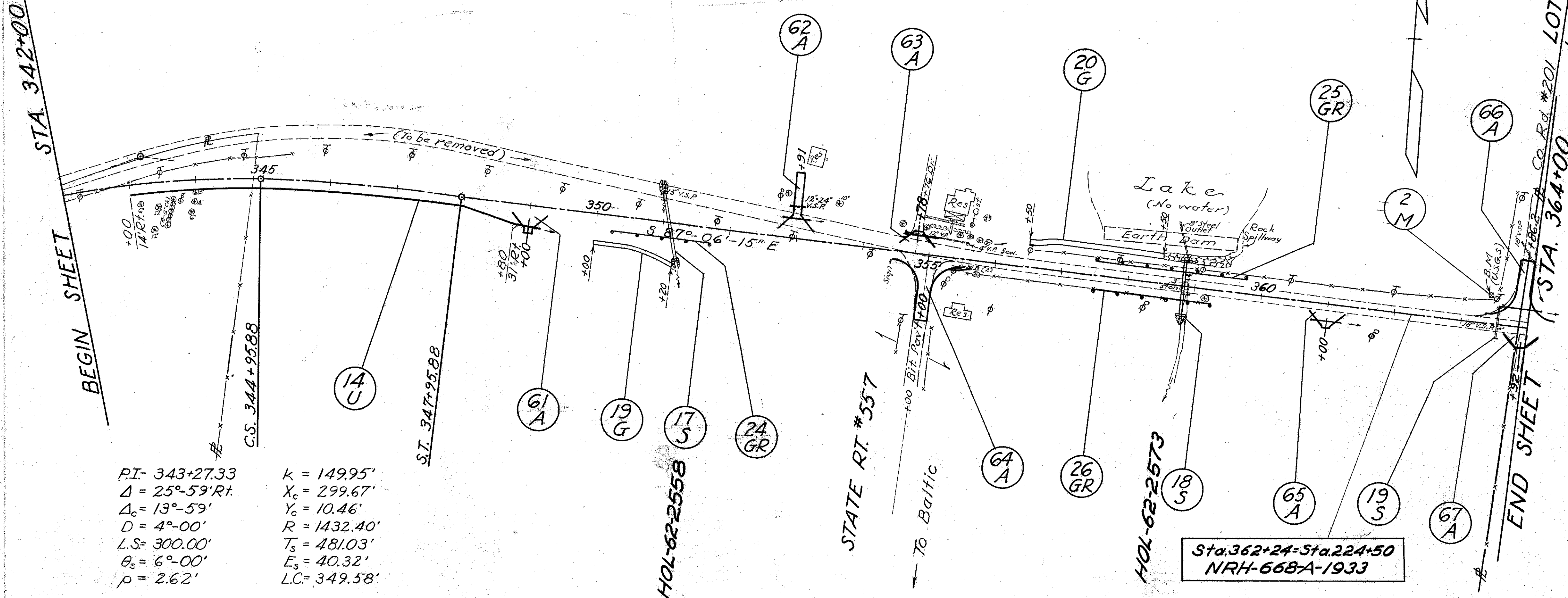
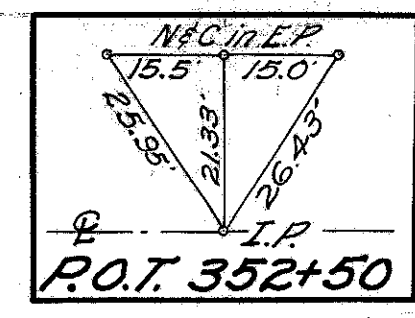
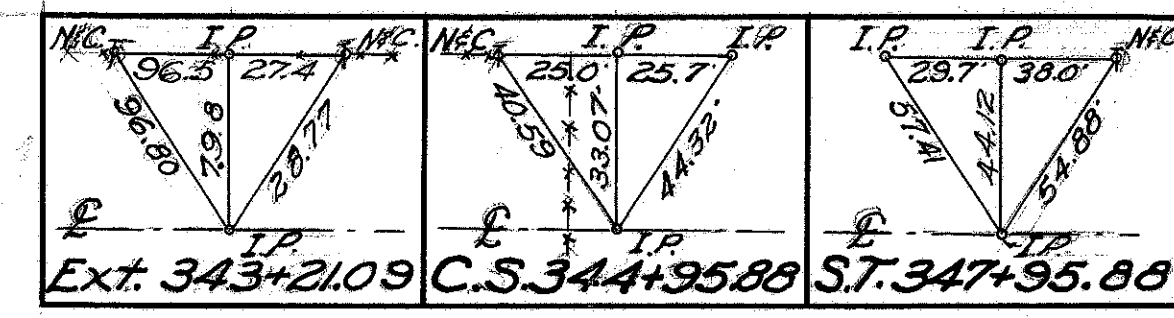
B.M. ELEV. 1092.26
 on conc. slab
90" R.F. STA. 320+90

B.M. ELEV. 1111.07
 on conc. Wool Mill
69" R.F. STA. 333+90

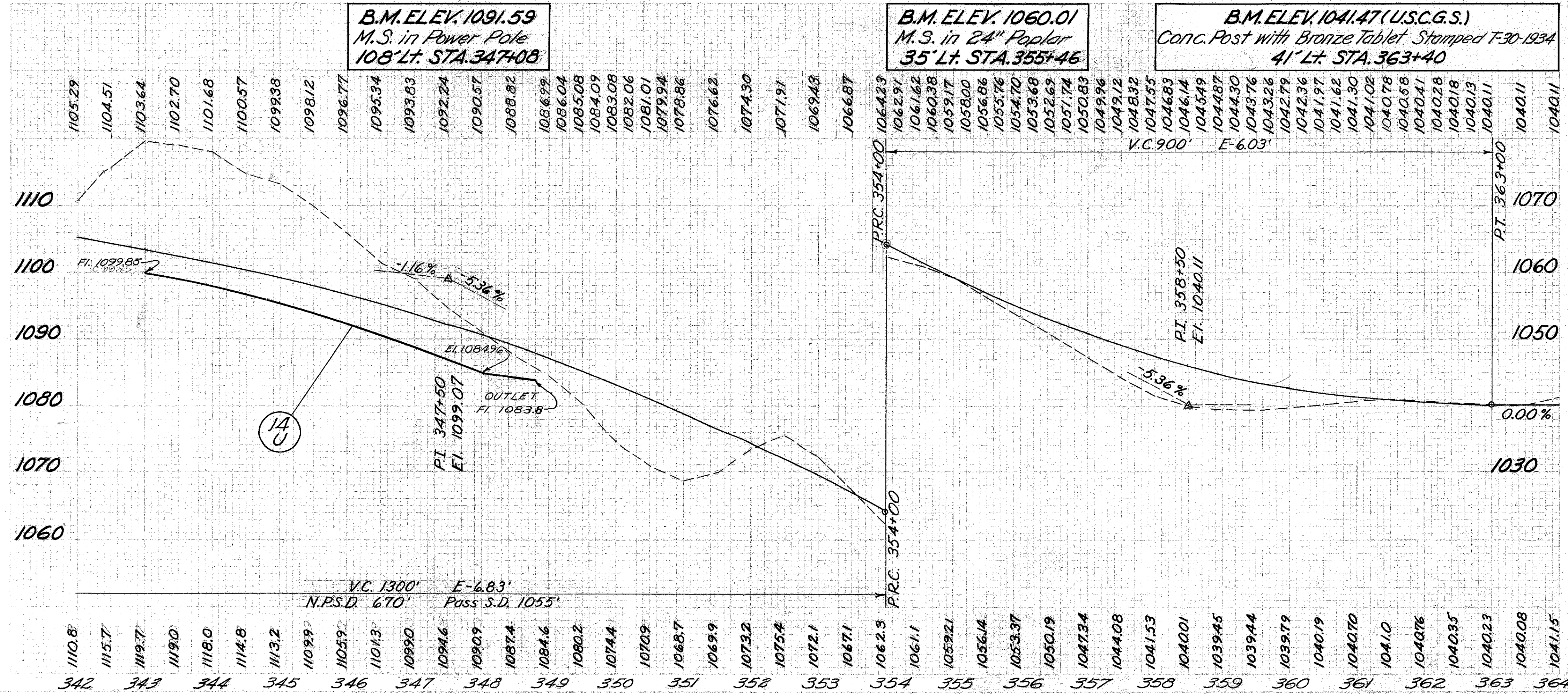


ITEM NO.	STATION TO STATION	QTY	UNIT	REMARKS
49-A	321+00	46	cu yds	Excavation
50-A	330+70	20	cu yds	Excavation
51-A	332+70	18	cu yds	Excavation
52-A	332+50	12	cu yds	Excavation
53-A	332+65	10	cu yds	Excavation
54-A	332+98.5	10	cu yds	Excavation
55-A	333+68	18	cu yds	Excavation
56-A	334+53	18	cu yds	Excavation
57-A	335+50	19	cu yds	Excavation
58-A	339+68	19	cu yds	Excavation
60-A	341+00	16	cu yds	Excavation
15-S	322+90	2	cu yds	Concrete
16-S	336+46	2	cu yds	Concrete
11-U	320+00 to 320+65	24	cu yds	Underdrain
12-U	324+00 to 332+00	148	cu yds	Underdrain
13-U	328+00 to 332+00	68	cu yds	Underdrain
15-SS	320+00 to 321+45	1	cu yds	Storm Sewer
16-SS	320+00 to 321+50	1	cu yds	Storm Sewer
17-SS	321+85	1	cu yds	Storm Sewer

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



PI= 343+27.33 K = 149.95'
 Δ = 25°-59' Rt. Xc = 299.67'
 Δc = 13°-59' Yc = 10.46'
 D = 4°-00' R = 1432.40'
 L.S. = 300.00' Ts = 481.03'
 θs = 6°-00' Es = 40.32'
 P = 2.62' LC = 349.58'



STATION TO STATION	SIDE	T-35 Surface Course Cu.Yds.	T-30 Prime Coat Cu.Yds.	B-19 Paved Appl. Base Cu.Yds.	Paved Gutter Type 1 24" L.F.	Pipe Ready Culk. 24" L.F.	Pipe Roly. Sec. M. 6" (G) 48" L.F.	Con-crete Cl. 12" L.F.	Pipe For Driveways 12" 15" 18" Lin. Ft.	Structure Excavation	Channe. Excavation	Dump Rock	Chanel Protect.	12" Storm Sew. Cl. 4" L.F.	Pipe 12" 15" 18" under (ft.)	6" Pipe Underdrain	Monument Reset	Rip rap S.Y.	Removals	Exist. Flex. Type S.Y.	Guard Rail	
61-A 349+00	Rt.	9.0	57	14																		
62-A 352+91	Lt.	4.0	25	10																		
63-A 354+78	Lt.	16.1	106	59																		
64-A 355+00	Rt.	15.6	103	57																		
65-A 361+00	Lt.			12																		
66-A 363+06.2	Lt.			12																		
67-A 363+92	Rt.																					
24-GR 350+25 to 351+75	Rt.																					
25-GR 351+50 to 359+25	Lt.																					
26-GR 357+50 to 359+25	Rt.																					
19-G 350+00 to 351+20	Rt.																					
20-G 356+50 to 359+50	Lt.																					
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(E) to 349+00(E) Lt.																						

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

CURVE TABLES

T.S. 183+97.01			D=2°00' LT.			S.T. 198+05.76		
LT.			TABLE "D" (Cont)			RT.		
Edge Pmnt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pmnt. 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	

P.C. 237+36.50			D=0°30' LT.			P.T. 248+43.17		
LT.			TABLE "E"			RT.		
Edge Pmnt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pmnt. 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	

P.C. 293+68.62			D=0°20' LT.			P.T. 301+23.62		
LT.			TABLE "F"			RT.		
Edge Pmnt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pmnt. 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	

T.S. 319+68.49			D=4°00' LT.			S.T. 329+02.87		
LT.			TABLE "G"			RT.		
Edge Pmnt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pmnt. 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.	

CURVE TABLES

T.S. 338+46.30			D=4°00' RT.			S.T. 347+95.88		
LT.			TABLE "H"			RT.		
Edge Pmnt. Grade	Add Super	Width	Station	Profile Grade	Width	Deduct Crown	Edge Pmnt. 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	

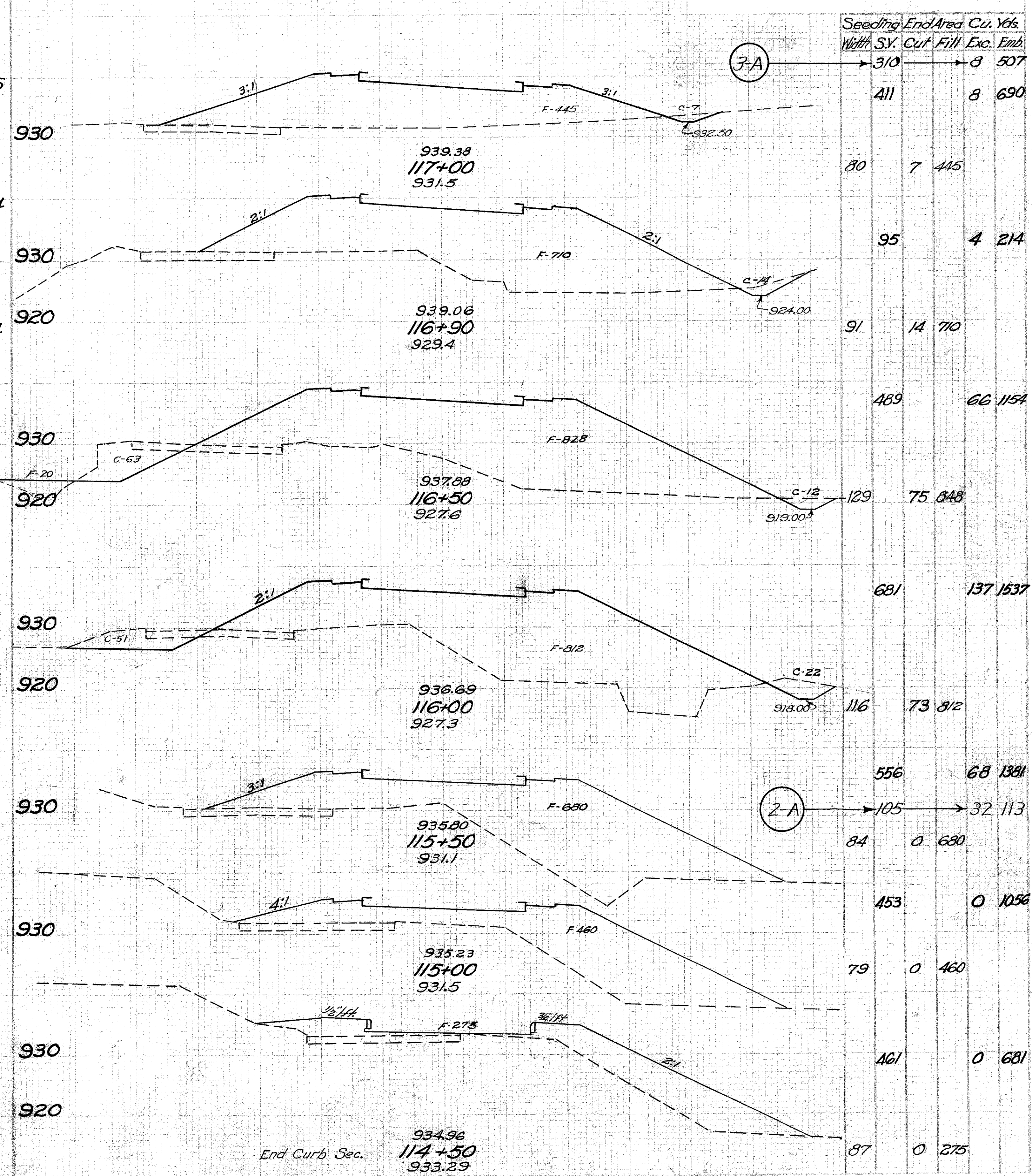
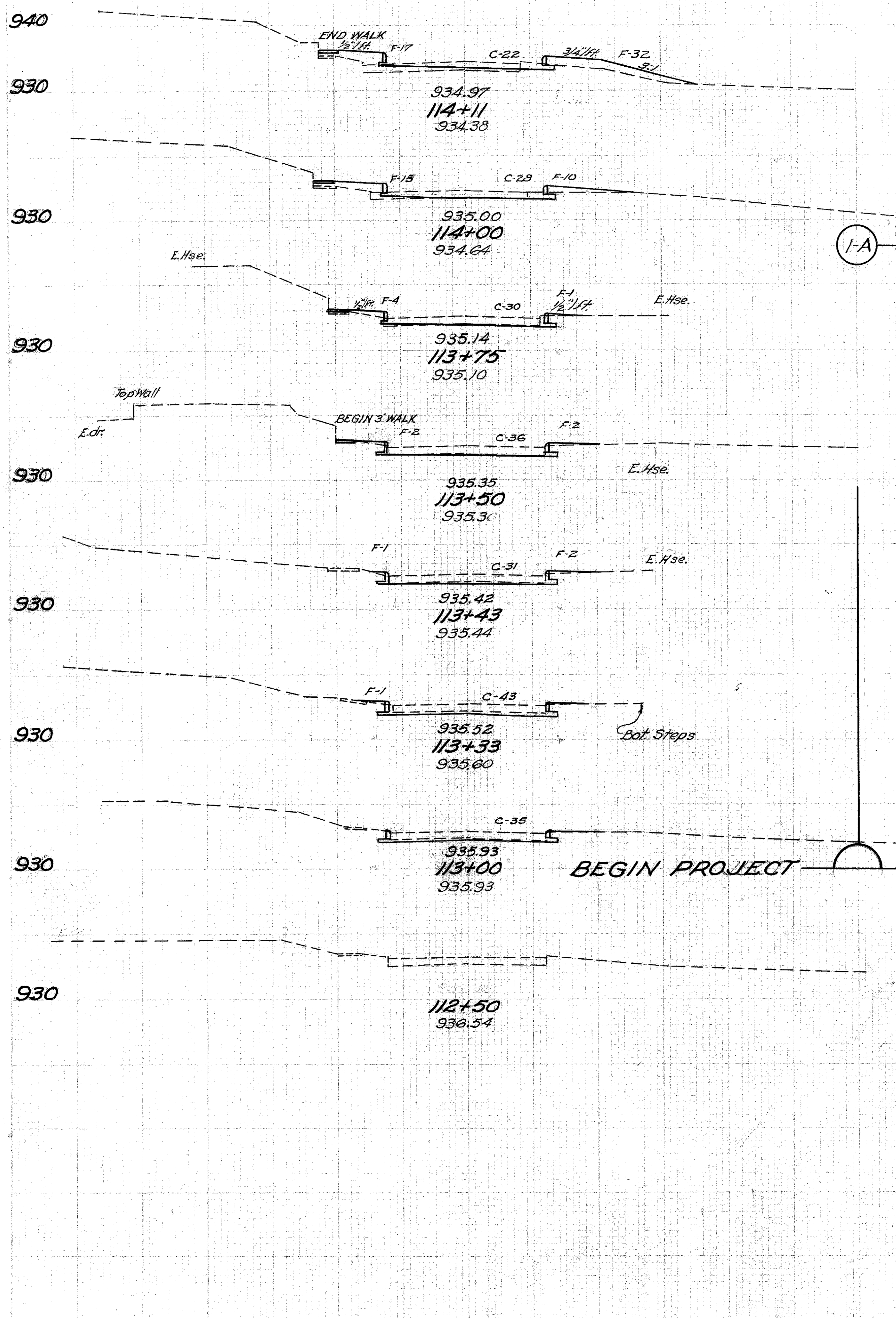
T.S. 373+74.24			D=4°00' LT.			S.T. 385+65.49		
LT.			TABLE "I"			RT.		
Edge Pmnt. Grade	Deduct Crown	Width	Station	Profile Grade	Width	Add Super	Edge Pmnt. Grade	
1058.37	.19	12	373+00	1058.56	24	.38	1058.18	
1059.81			+25	1060.00			1059.62	
1061.32			+50	1061.51			1061.23	
1062.83			T.S.+74.24	1063.02			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	

P.C. 391+81.47			D=1°00' RT.			P.T. 397+41.47		
LT.			TABLE "J"			RT.		
Edge Pmnt. Grade	Add Super	Width	Station	Profile Grade	Width	Deduct Crown	Edge Pmnt. 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	

60 50 40 30 20 10 0 10 20 30 40 50 60

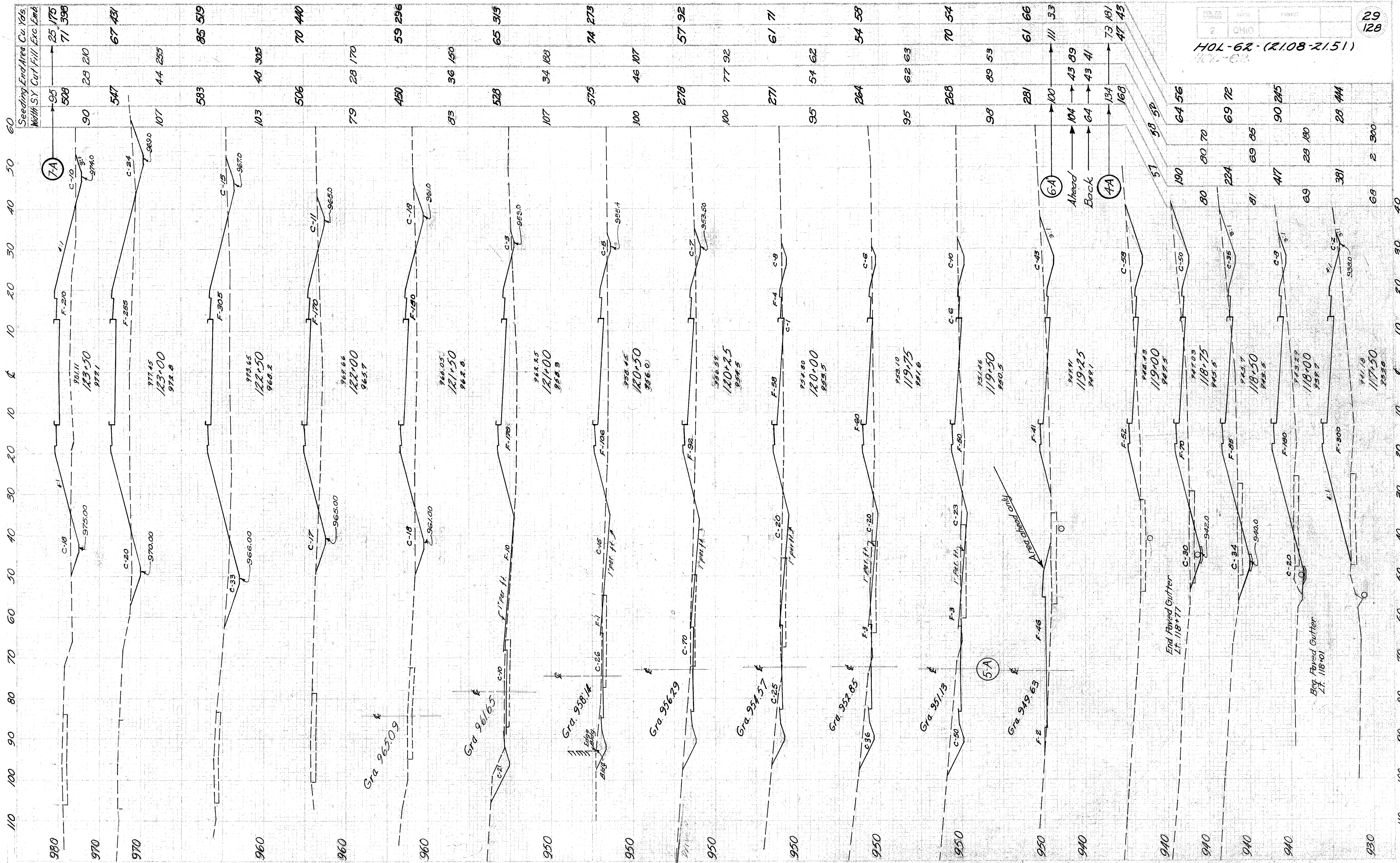
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Seedling Width	End Area		Cu. Yds.	
	S.Y.	Cut/Fill	Exc.	Emb.
299			16	234
41	22	49		
45		10	15	
32	28	25	2	
89		27	14	
32	30	5		
89		31	4	
32	36	4		
46	9	1		
32	31	3		
34		14	1	
30	43	1		
92		48	1	
20	35	0		



60 50 40 30 20 10 0 10 20 30 40 50 60

60 50 40 30 20 10 0 10 20 30 40 50 60 TO STA. 117+00



STA. 117+50 TO STA. 123+50

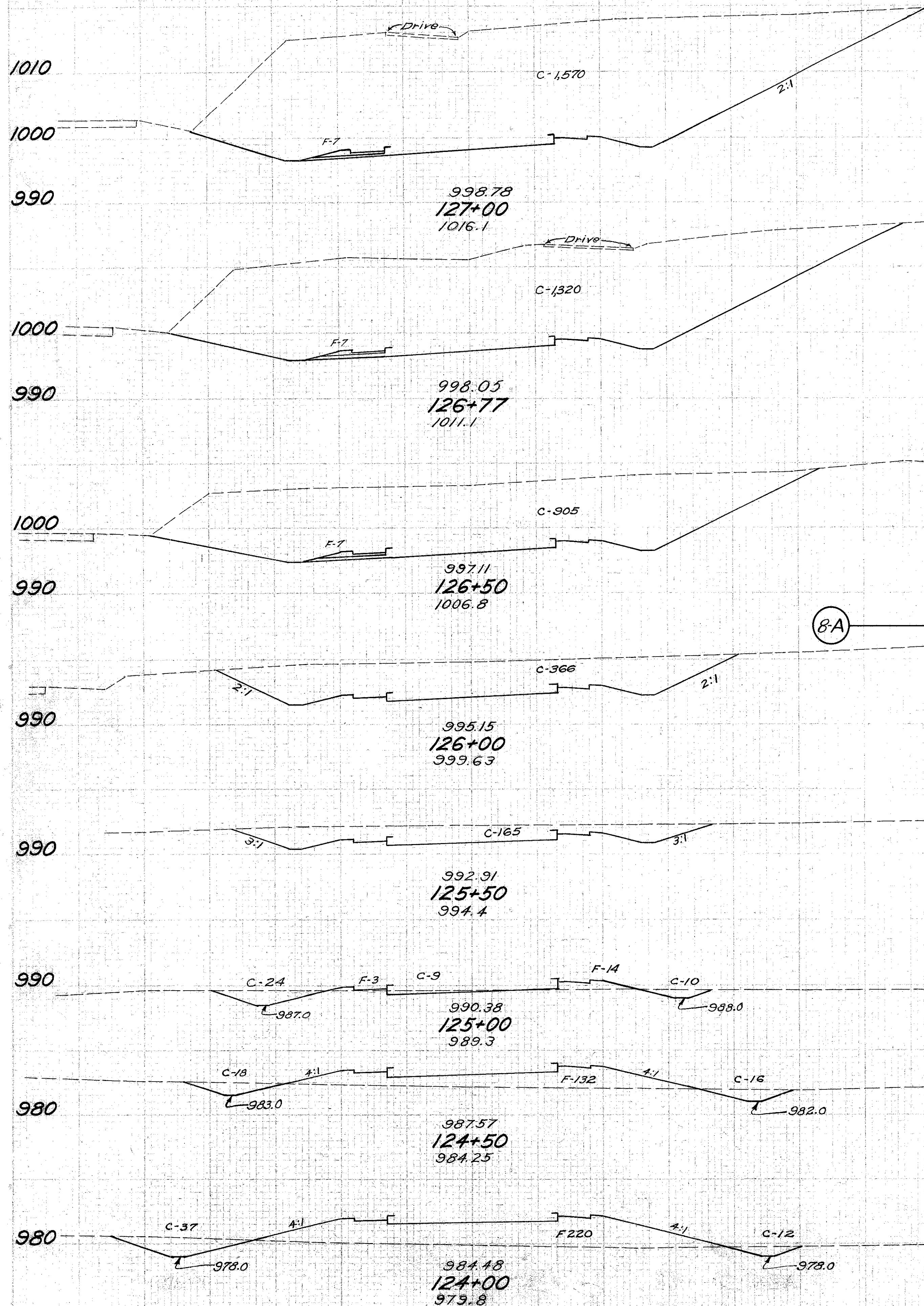
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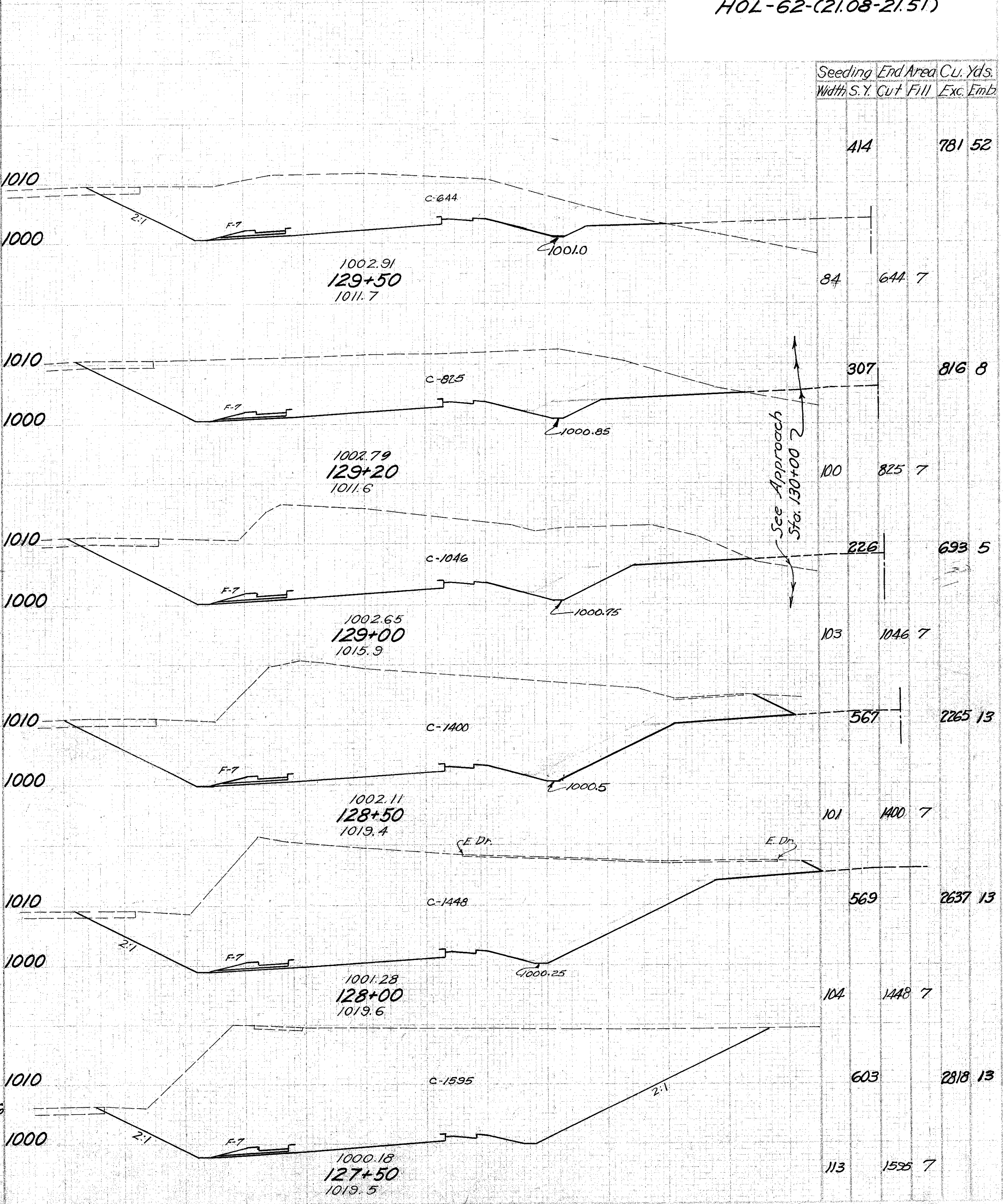
HOL-62-(21.08-21.51)

Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
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Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
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597	2931	13			
102	1570	7			
262	1231	6			
103	1320	7			
291	1113	7			
91	905	7			
0	193	24			
442	1177	6			
68	366	0			
356	492	0			
60	165	0			
339	193	16			
62	43	17			
394	71	138			
80	34	132			
481	77	326			
93	49	220			

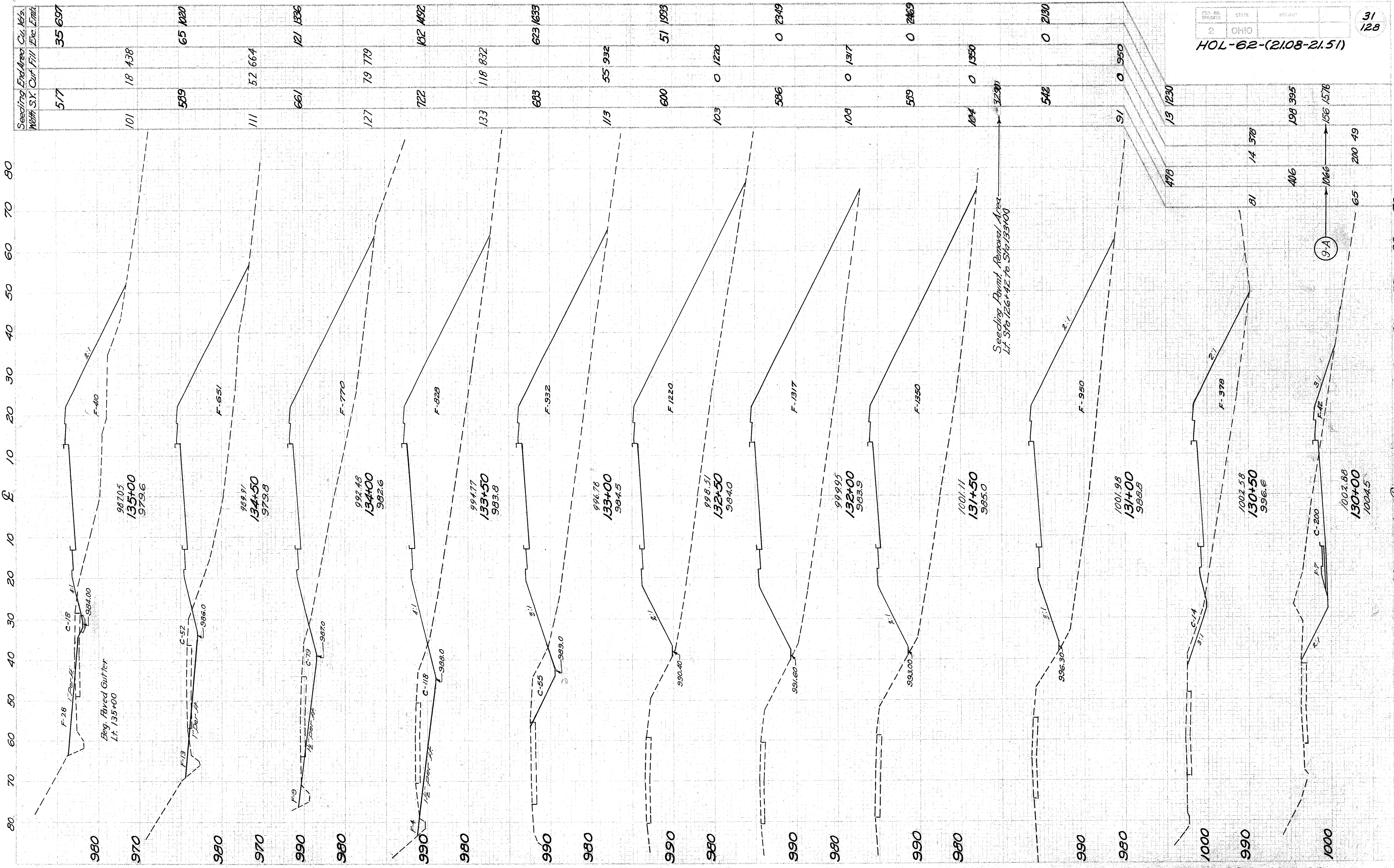


414	781	52			
84	644	7			
307	816	8			
100	825	7			
226	693	5			
103	1046	7			
567	2265	13			
101	1400	7			
569	2637	13			
104	1448	7			
603	2818	13			
113	1595	7			

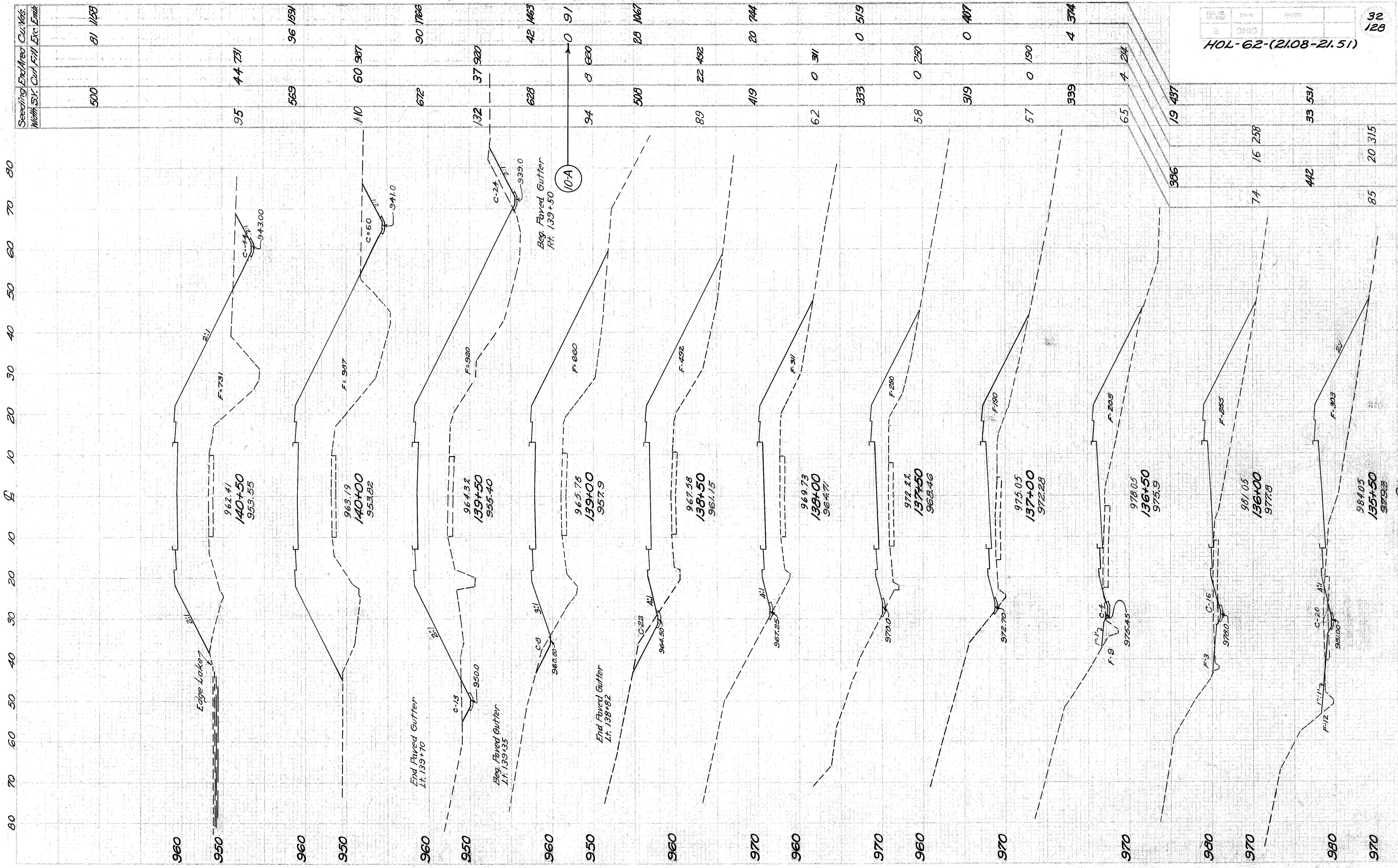
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50 40 30 20 10 0 10 20 30 40 50

STA. 124+00 TO STA. 129+50



STA. 130+00 TO STA. 135+00



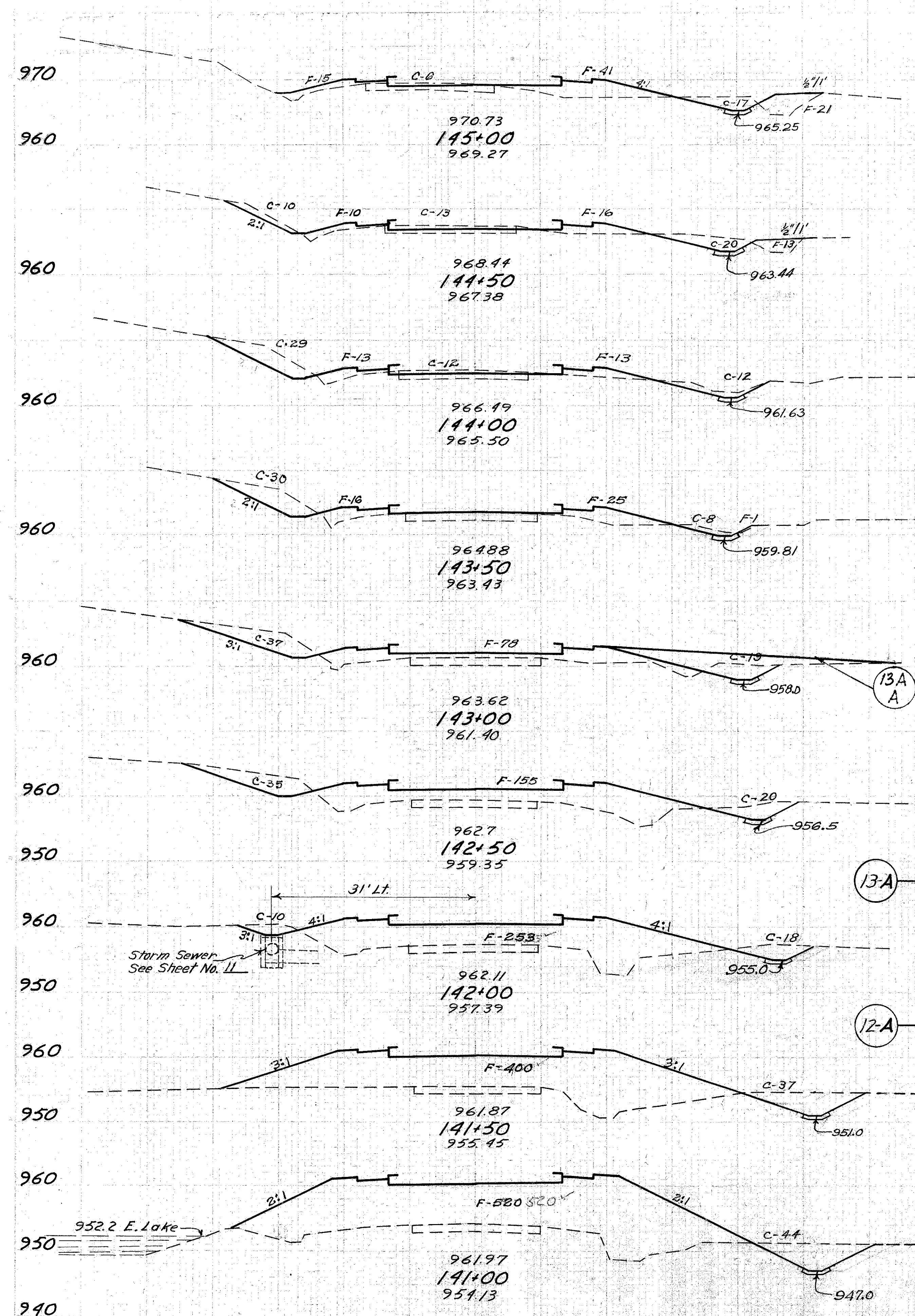
STA. 135+50 TO STA. 140+50

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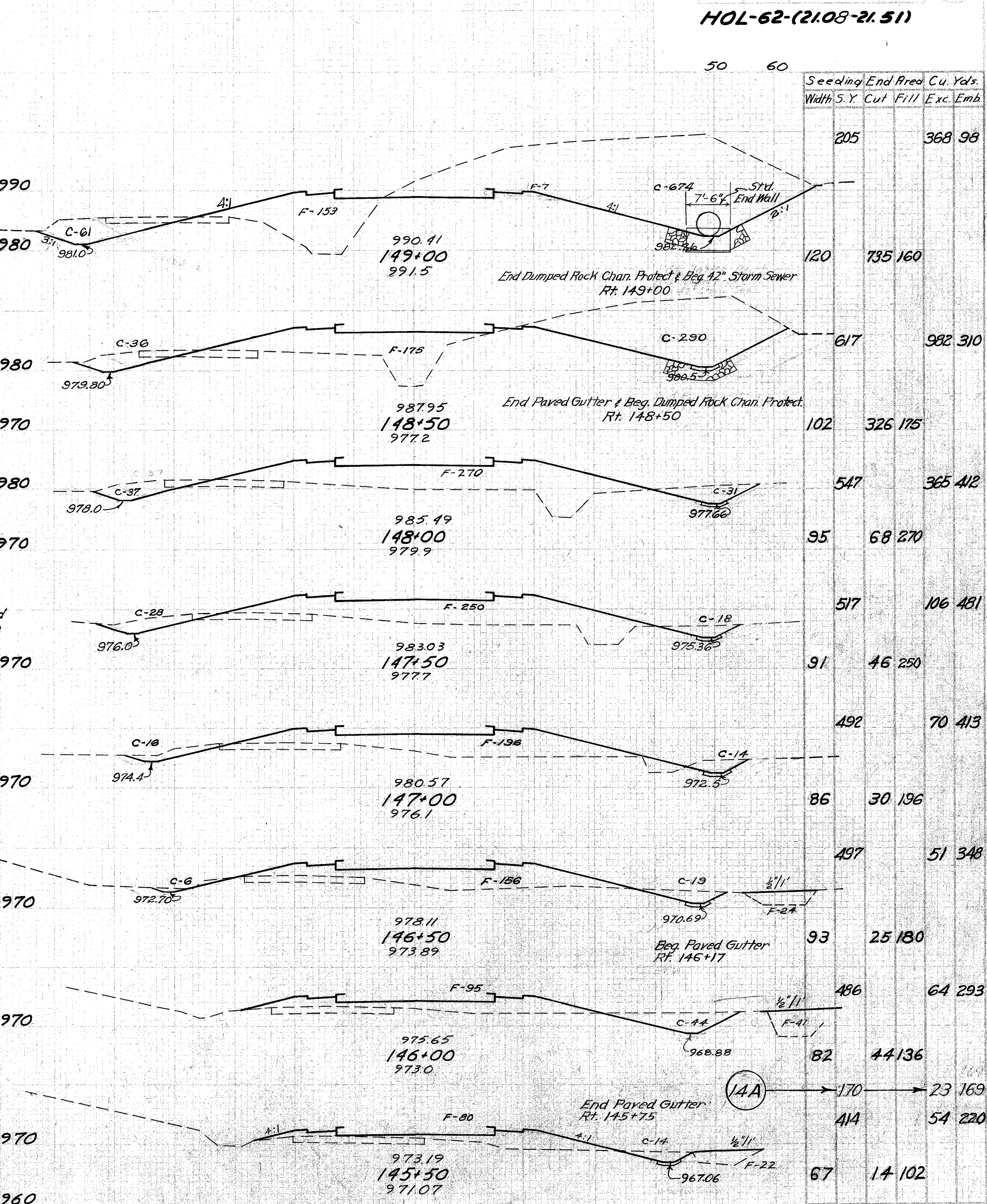
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Seeding Width	End Area	Cu. Yds.
5 Y.	Cut	Fill
Exc.	Emb.	

Seeding Width	End Area	Cu. Yds.
5 Y.	Cut	Fill
Exc.	Emb.	



367		34	166
65	23	77	
378	61	107	990
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	
315	159	28	
406	77	378	
69	28	253	
422	60	605	
83	37	400	
467	75	852	
85	44	520	



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	
496	64	293	
82	44	136	
170	23	169	
414	54	220	
67	14	102	

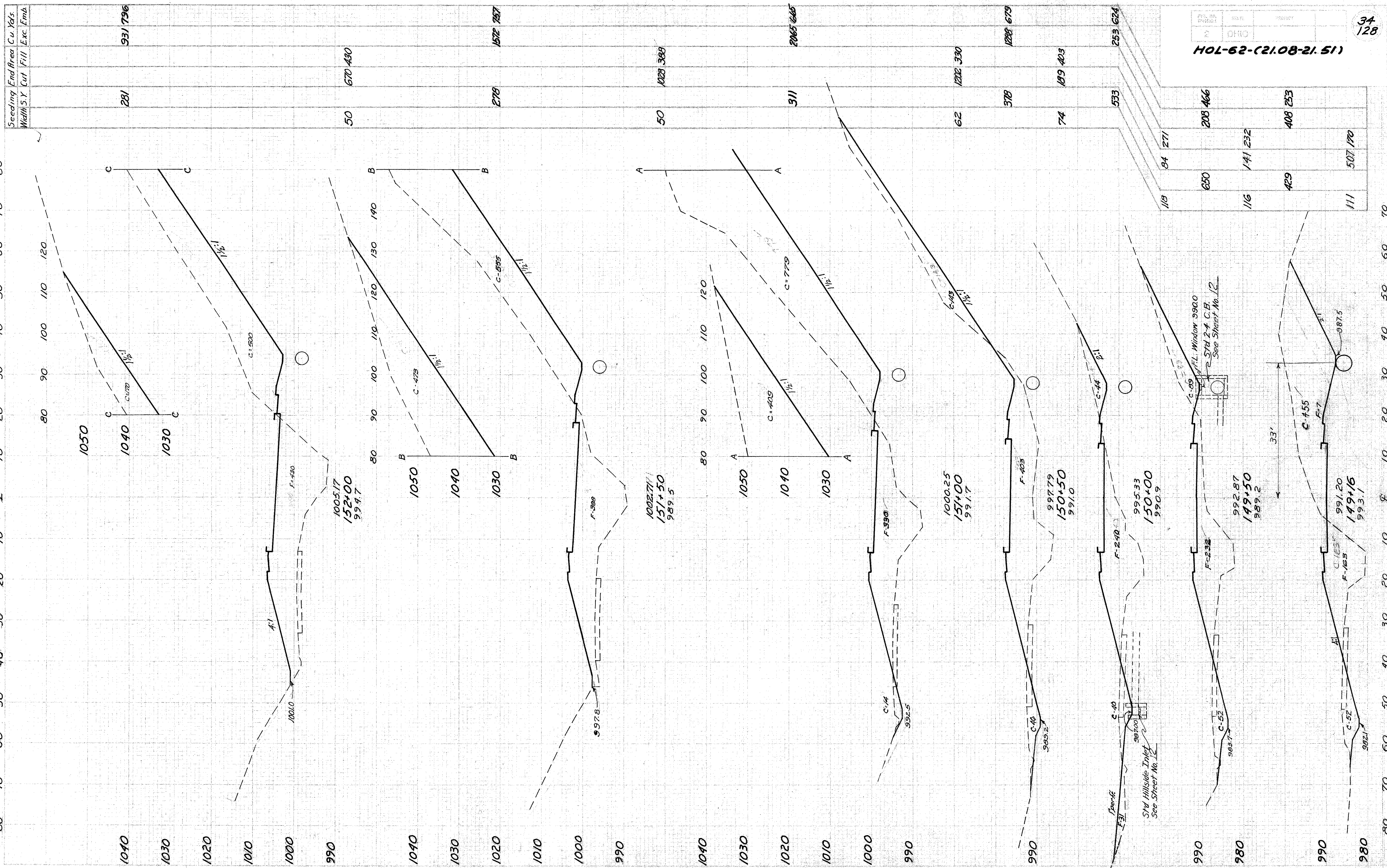
Quantities to be provided by change order at time of construction.

13-A

12-A

14-A

STA 141+00 TO STA 149+00



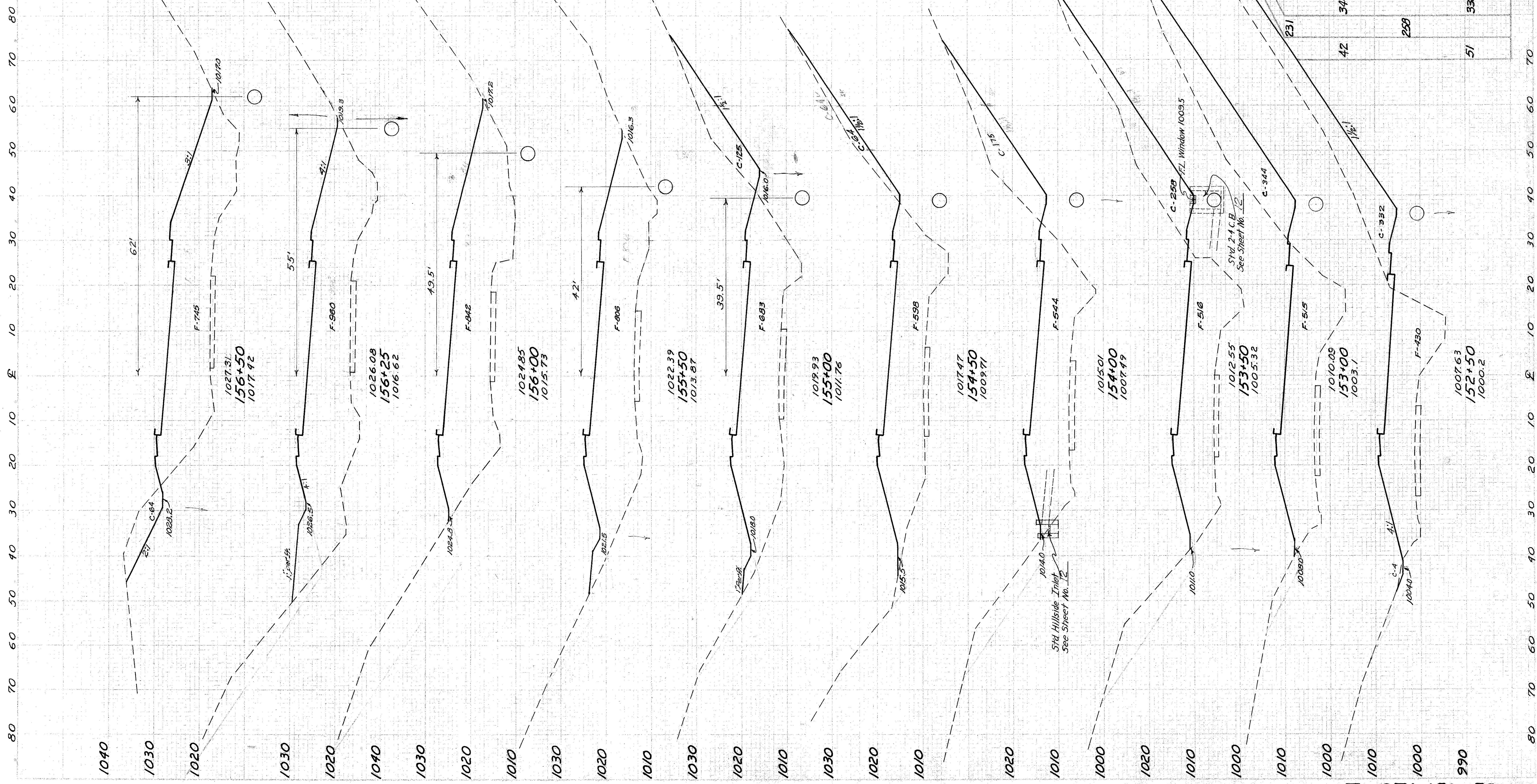
STA. 149+16 TO STA. 152+00

Seeding End Area Cu. Yds.
Width 5 Y. Cut Fill Exc. Emb.

FILE NO.	STATE	PROJECT
2	OHIO	

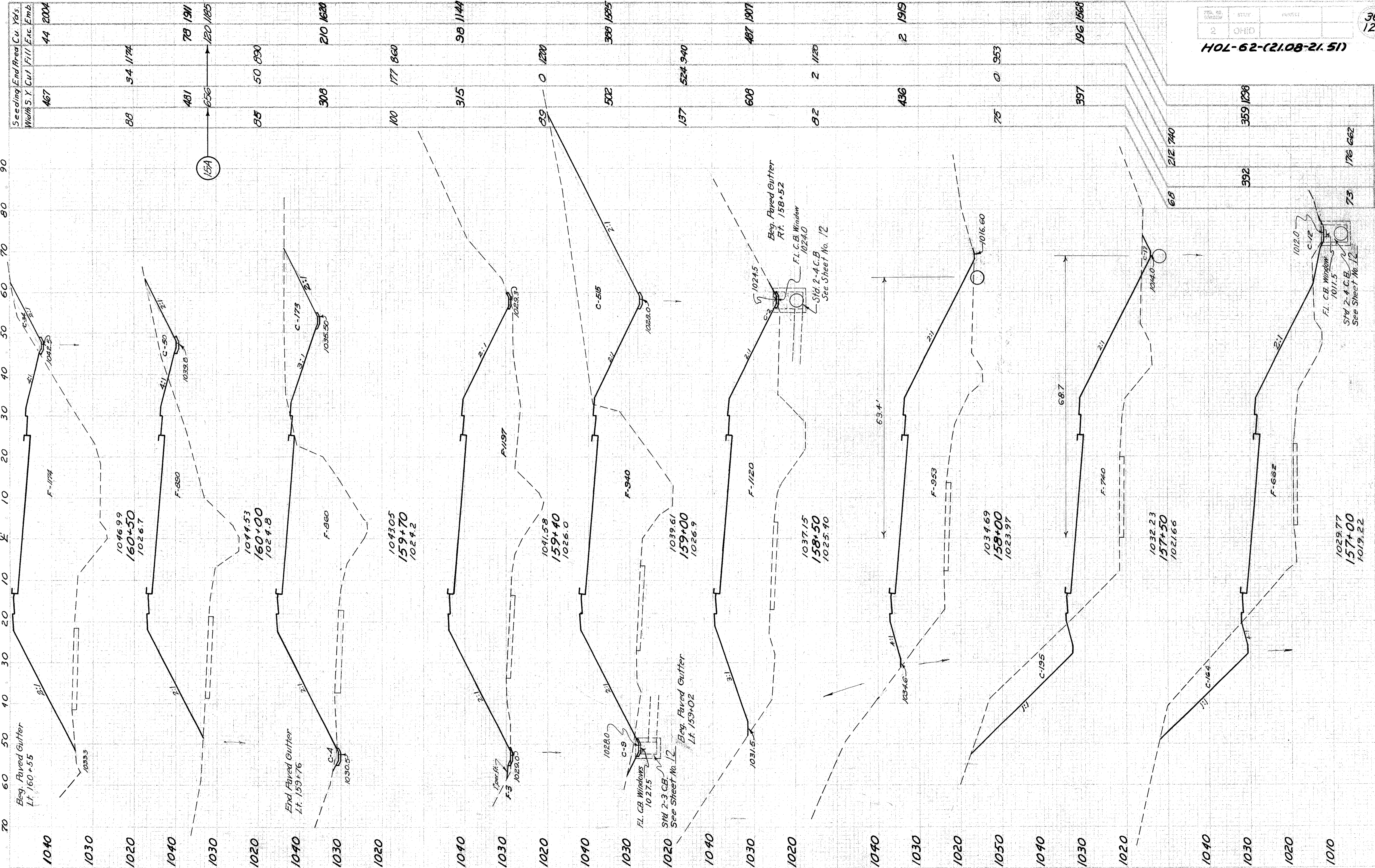
35
128

HOL-62-(21.08-21.51)



STA. 152+50 TO STA. 156+50

442	222	1303
86	64	745
232	30	789
81	0	960
206	0	834
67	0	842
403	0	1526
78	0	806
383	116	1579
60	125	683
297	175	106
47	64	598
242	221	1057
40	175	544
225	401	981
41	258	516
231	557	955
42	344	515
258	630	875
51	336	430



STA. 157+00 TO STA. 160+50

FL. C.B. Window
 STA 2-4 C.B.
 See Sheet No. 12

Beg. Paved Gutter
 Lt. 159+02
 See Sheet No. 12

Beg. Paved Gutter
 Rt. 158+52
 FL. C.B. Window
 STA 2-4 C.B.
 See Sheet No. 12

1029.77
 157+00
 1019.22

1034.69
 158+00
 1023.97

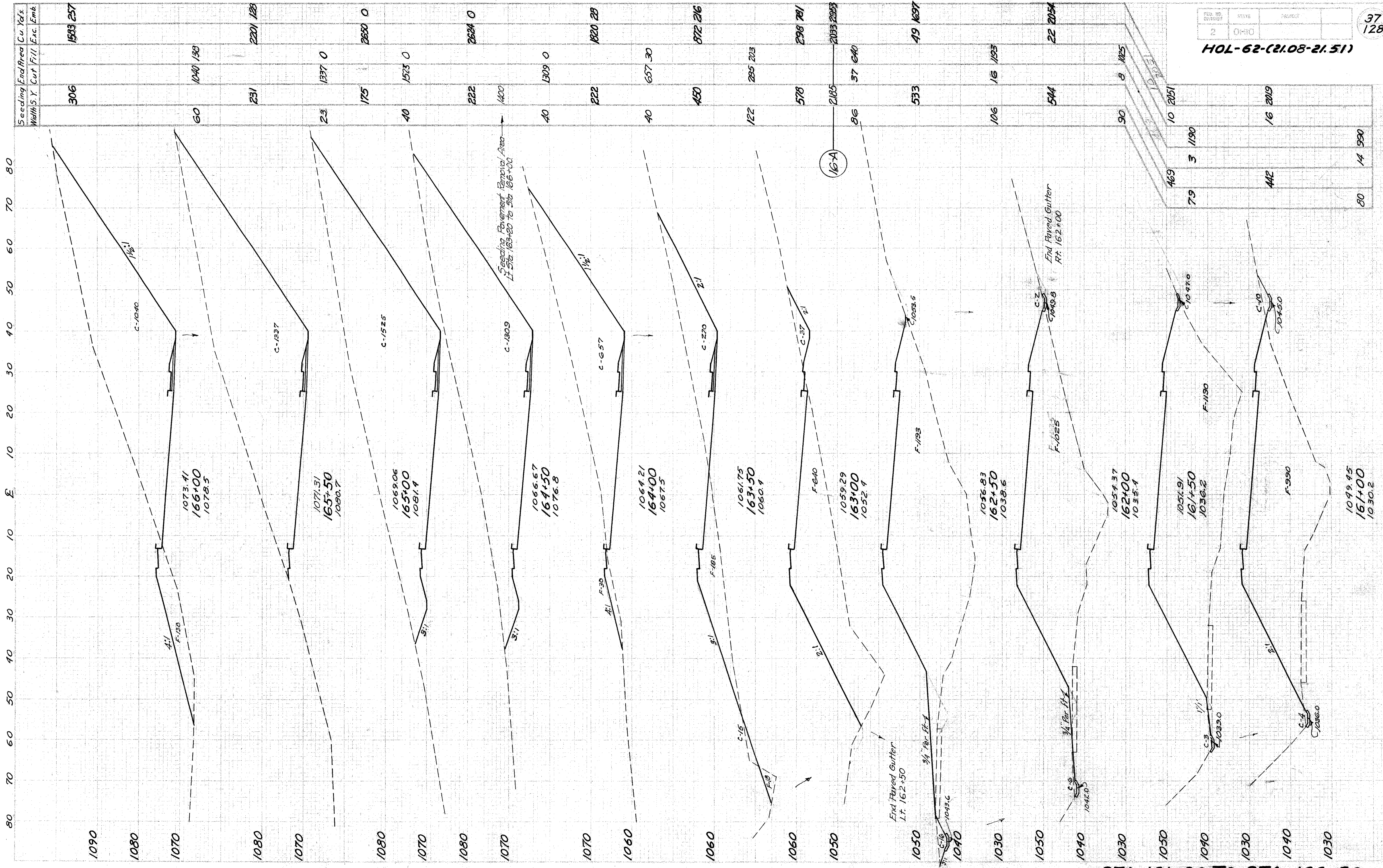
1039.61
 159+00
 1026.9

1041.58
 159+40
 1026.0

1043.05
 159+70
 1024.2

1044.53
 160+00
 1024.8

1046.99
 160+50
 1026.7



STA. 161+00 TO STA. 166+00

FED. DISTRICT	STATE	PROJECT
2	OHIO	

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Seeding End Area
Widths Y Cut Fill Exc. Emb.

306	1533	257
60	1040	133
231	220	128
23	1337	0
175	2630	0
40	1533	0
222	2624	0
400		
40	1309	0
222	1820	28
40	657	30
450	872	216
122	285	203
578	298	791
2185	2033	2393
86	37	640
533	49	1637
106	16	1193
544	22	2054
90	8	1025
469	10	2051
79	3	1190
442	16	2019
80	14	990

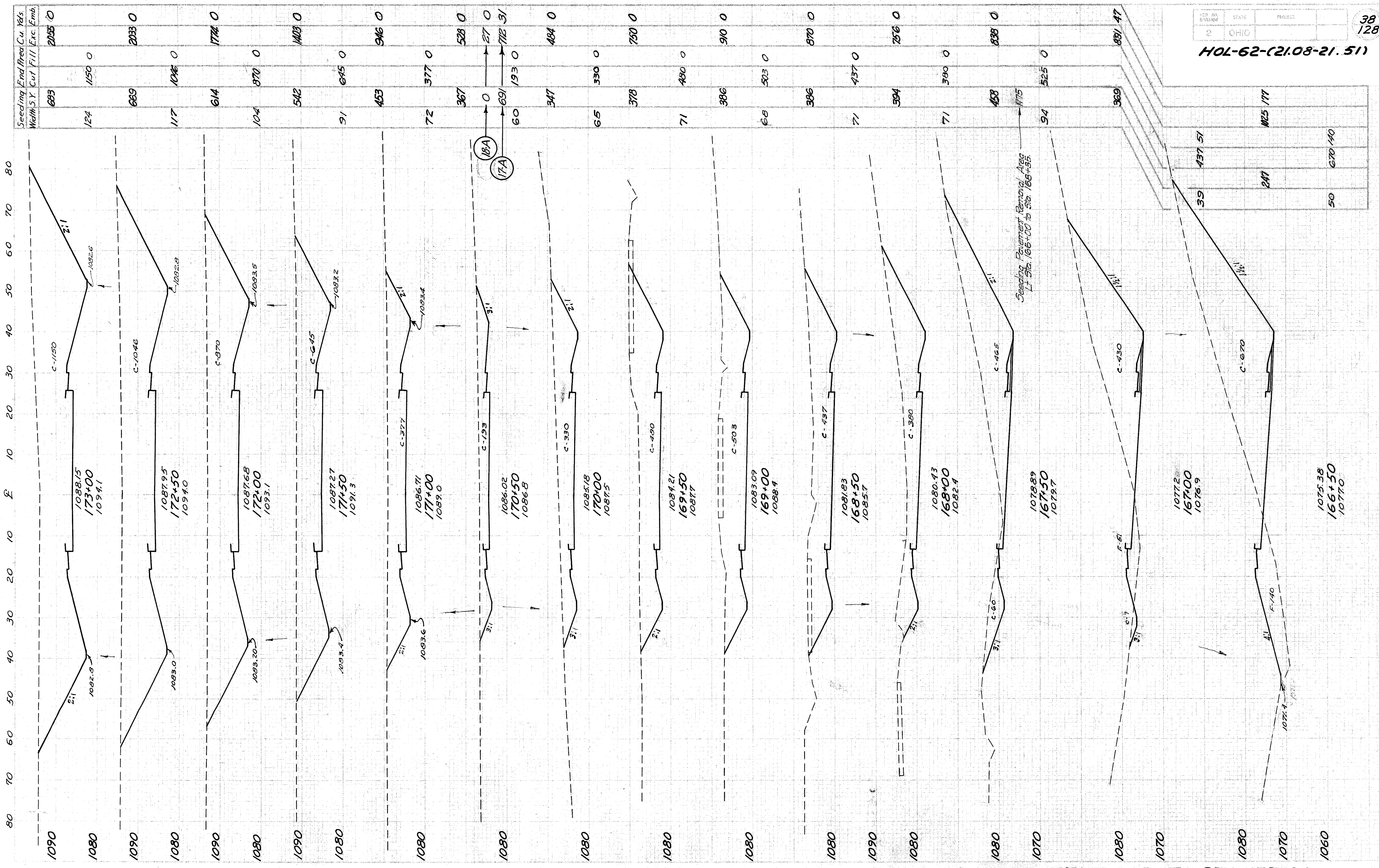
Seeding Pavement Removal Area
H Sta. 163+20 To Sta. 166+00

End Flared Gutter
Rt. 162+00

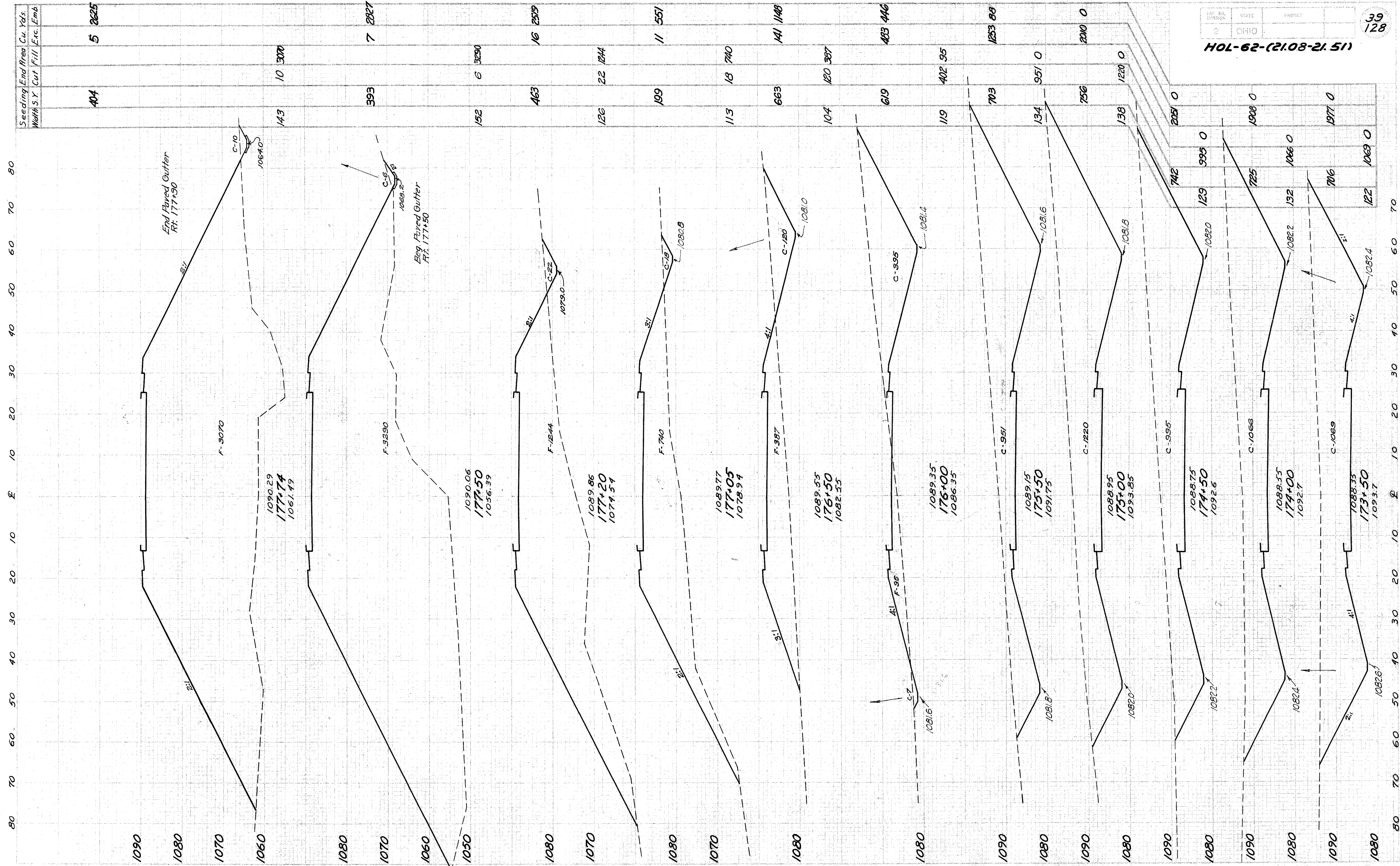
End Flared Gutter
Lt. 162+50

3/4" Per Ft. X

3/4" Per Ft. X



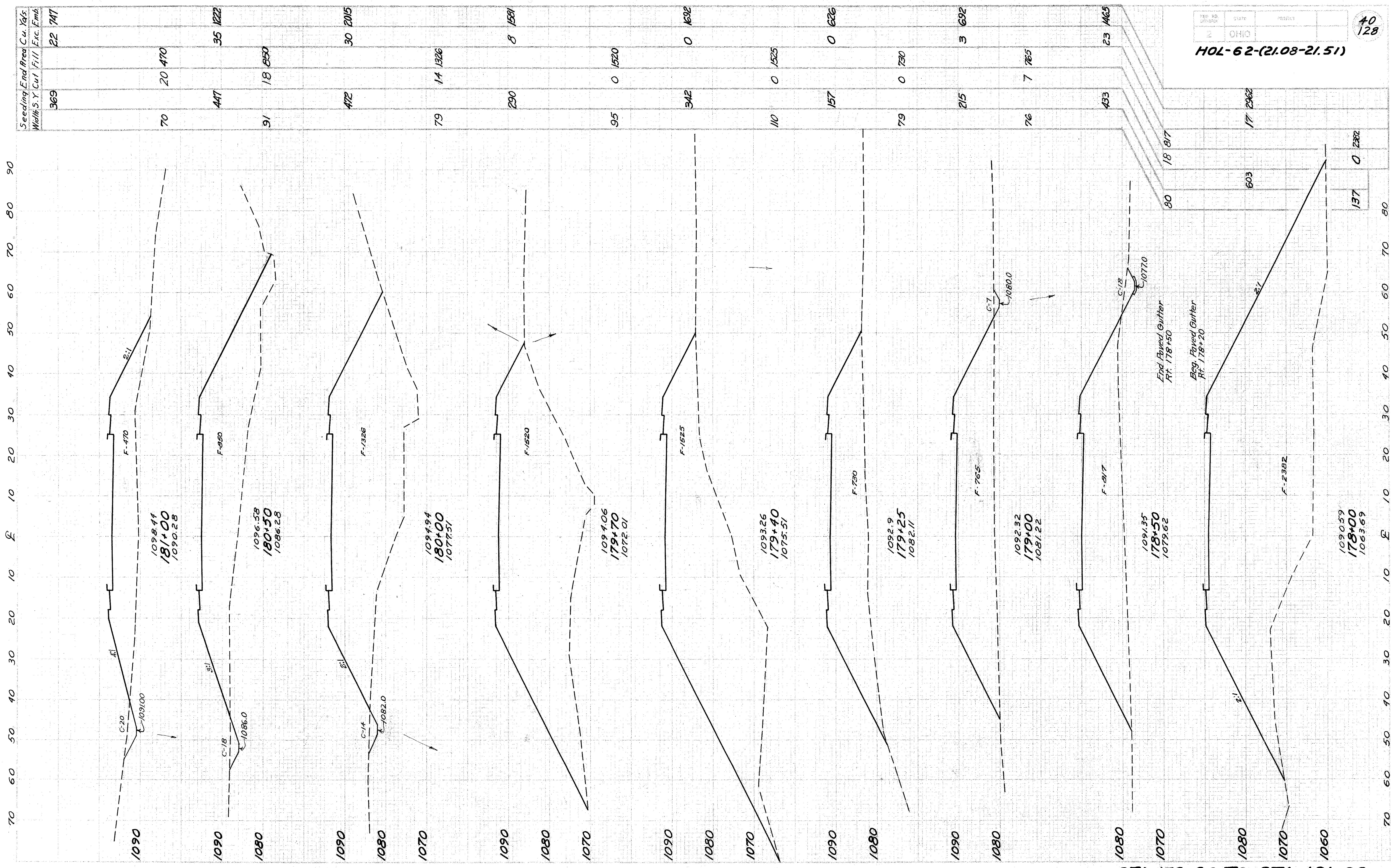
STA. 166+50 TO STA. 173+00



Seeding End Area Cu. Yds.
Width S.Y. Cut Fill Exc. Emb.

404	5	2625
143	10	3070
393	7	2827
152	6	3250
463	16	2519
126	22	1244
199	11	551
113	18	740
663	141	1148
104	120	387
619	483	446
119	402	95
703	1253	88
134	951	0
756	2010	0
138	1220	0
2051	0	0
742	995	0
129	1908	0
725	1066	0
132	1066	0
706	1977	0
122	1063	0

STA. 173+50 TO STA. 177+74



FILE NO.	STATE	PROJECT
2	OHIO	

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Seeding	End Area	Cu. Yds.
Width	S. Y. Cut	Fill
	Exc.	Emb.

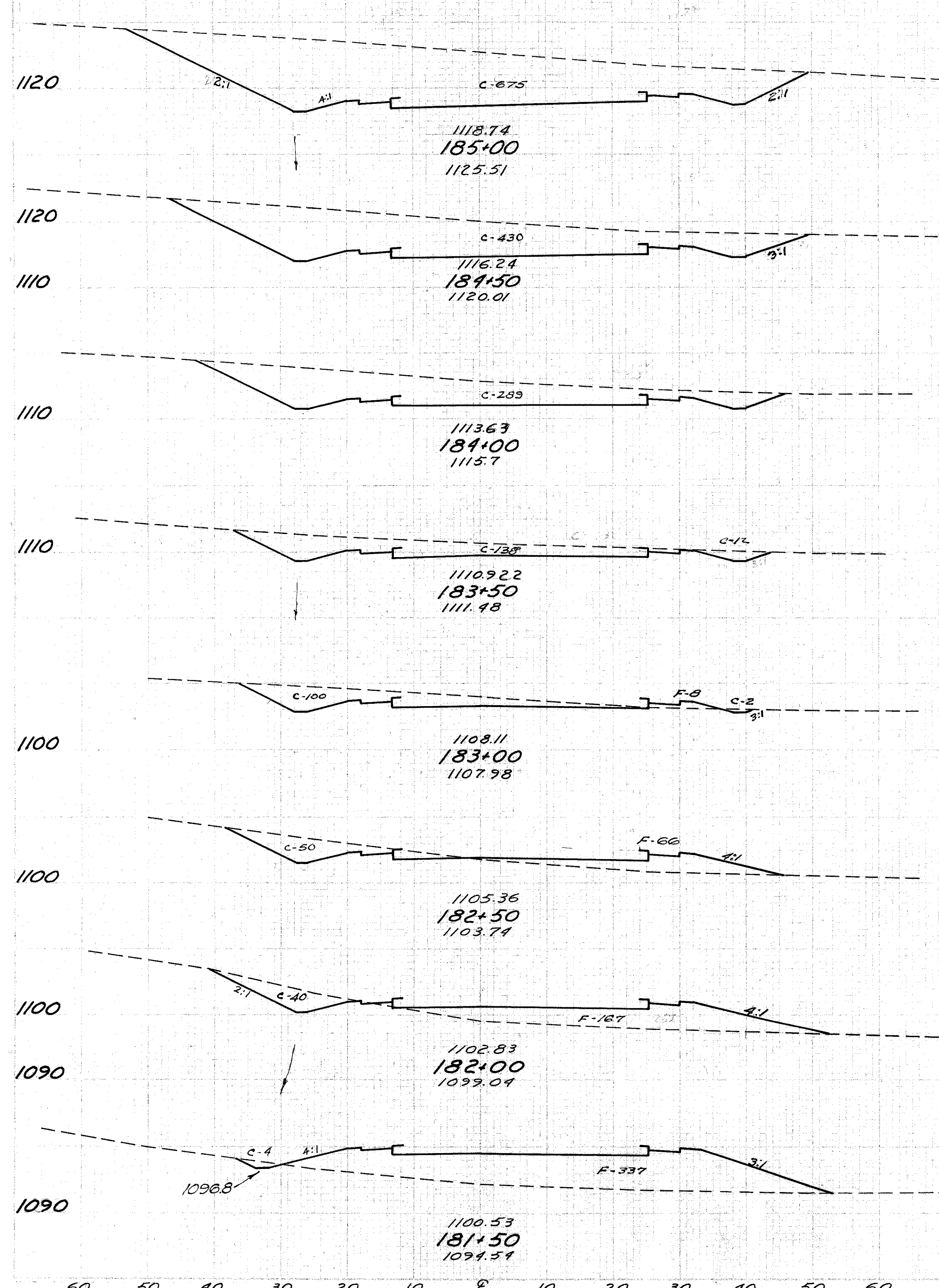
369	22	747
70	20	470
447	35	1222
91	18	850
472	30	2015
79	14	1326
290	8	1581
95	0	1520
342	0	1692
110	0	1525
157	0	626
79	0	730
215	3	632
76	7	765
433	23	1465
18	18	817
17	29	62
137	0	282

STA. 178+00 TO STA. 181+00

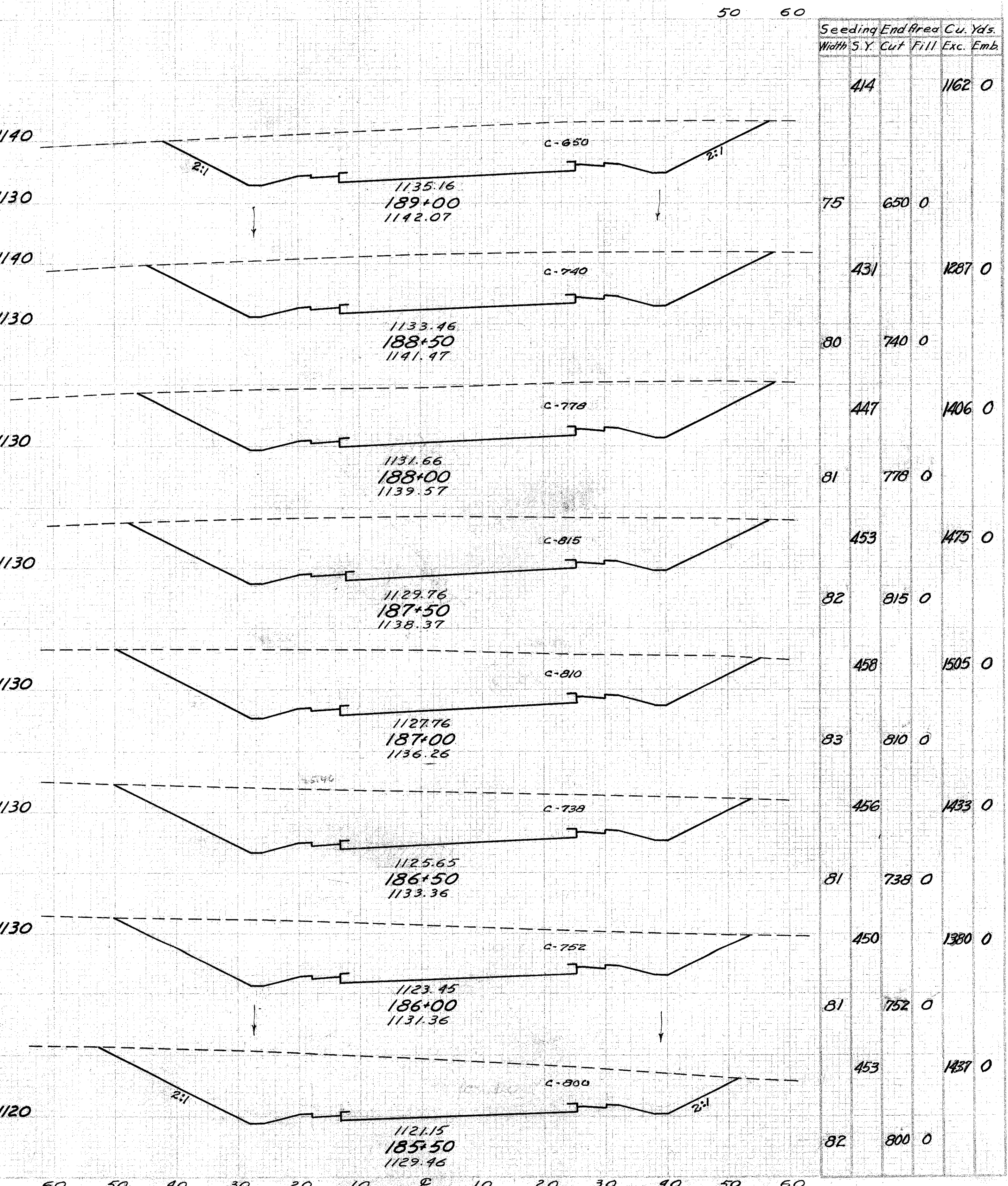
60 50 40 30 20 10 E 10 20 30 40 50 60

60 50 40 30 20 10 E 10 20 30 40

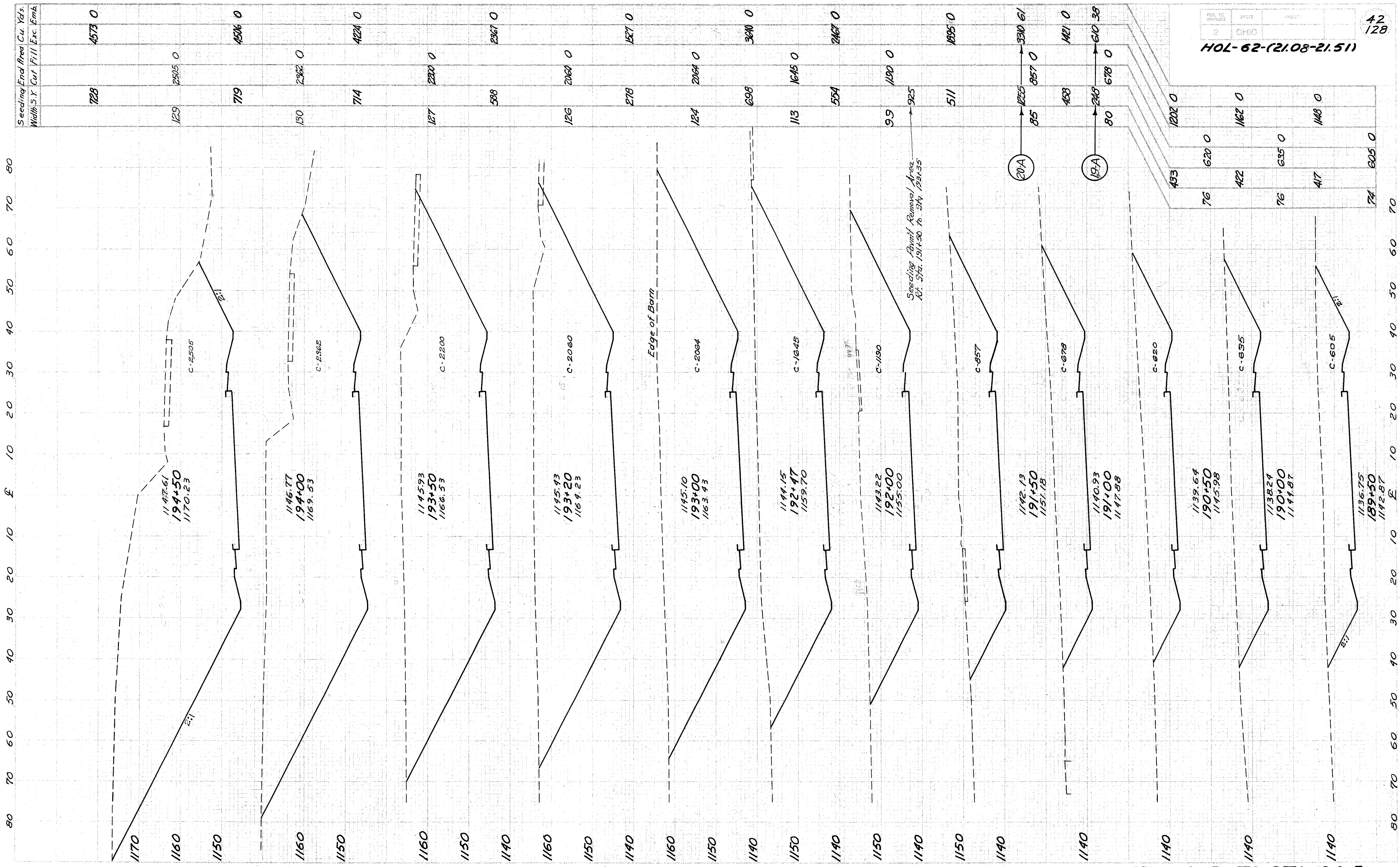
HOL-62-(2108-21.51)



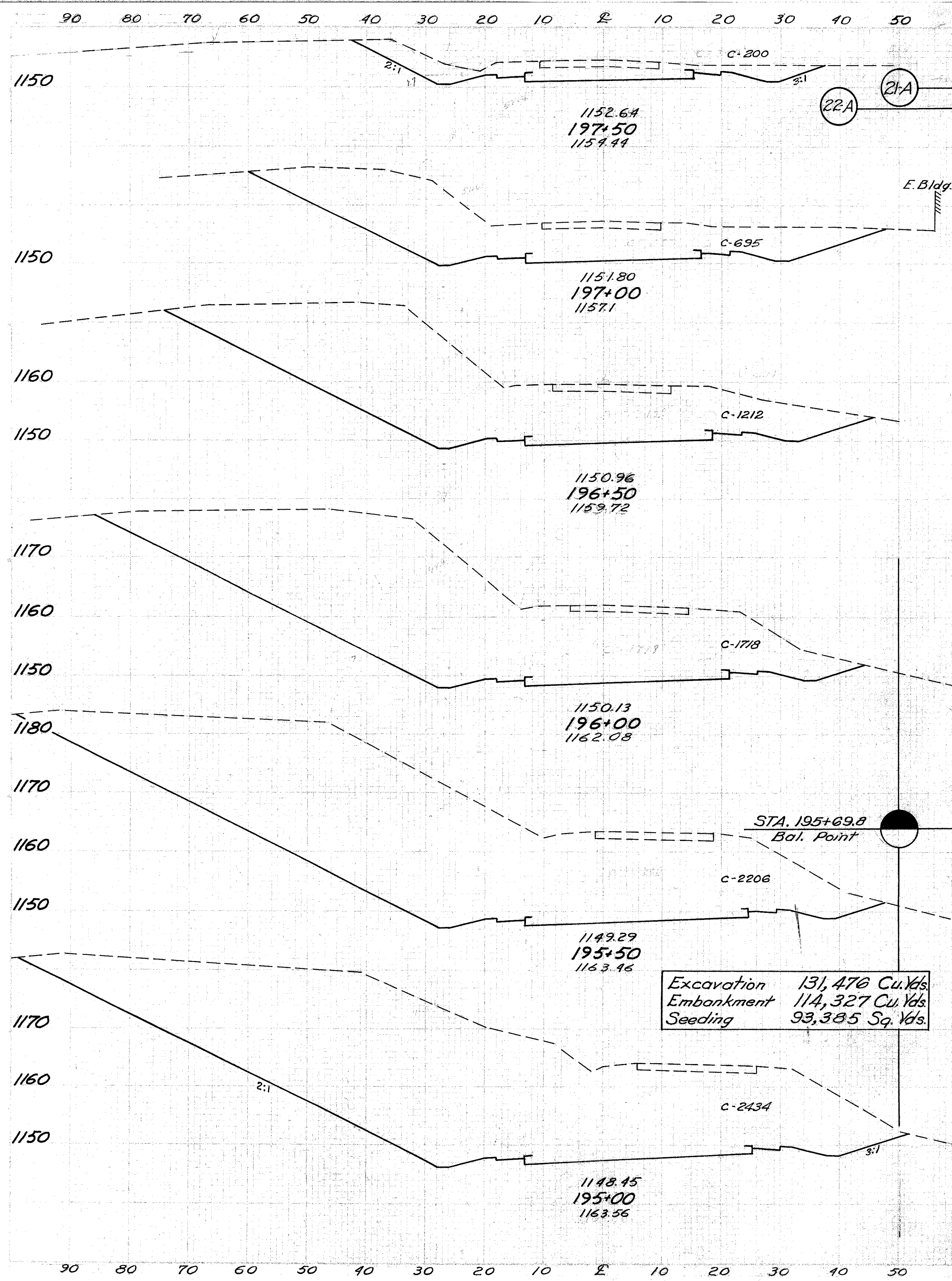
Station	Seeding Width	End Area	Cu. Yds.
185+00	444	1125.51	444 0
186+00	71	1131.66	71 467
187+00	83	1135.16	83 216
187+50	81	1138.37	81 167
188+00	82	1141.97	82 0
188+50	80	1142.07	80 0
189+00	75	1142.07	75 0



STA. 181+50 TO STA. 189+00



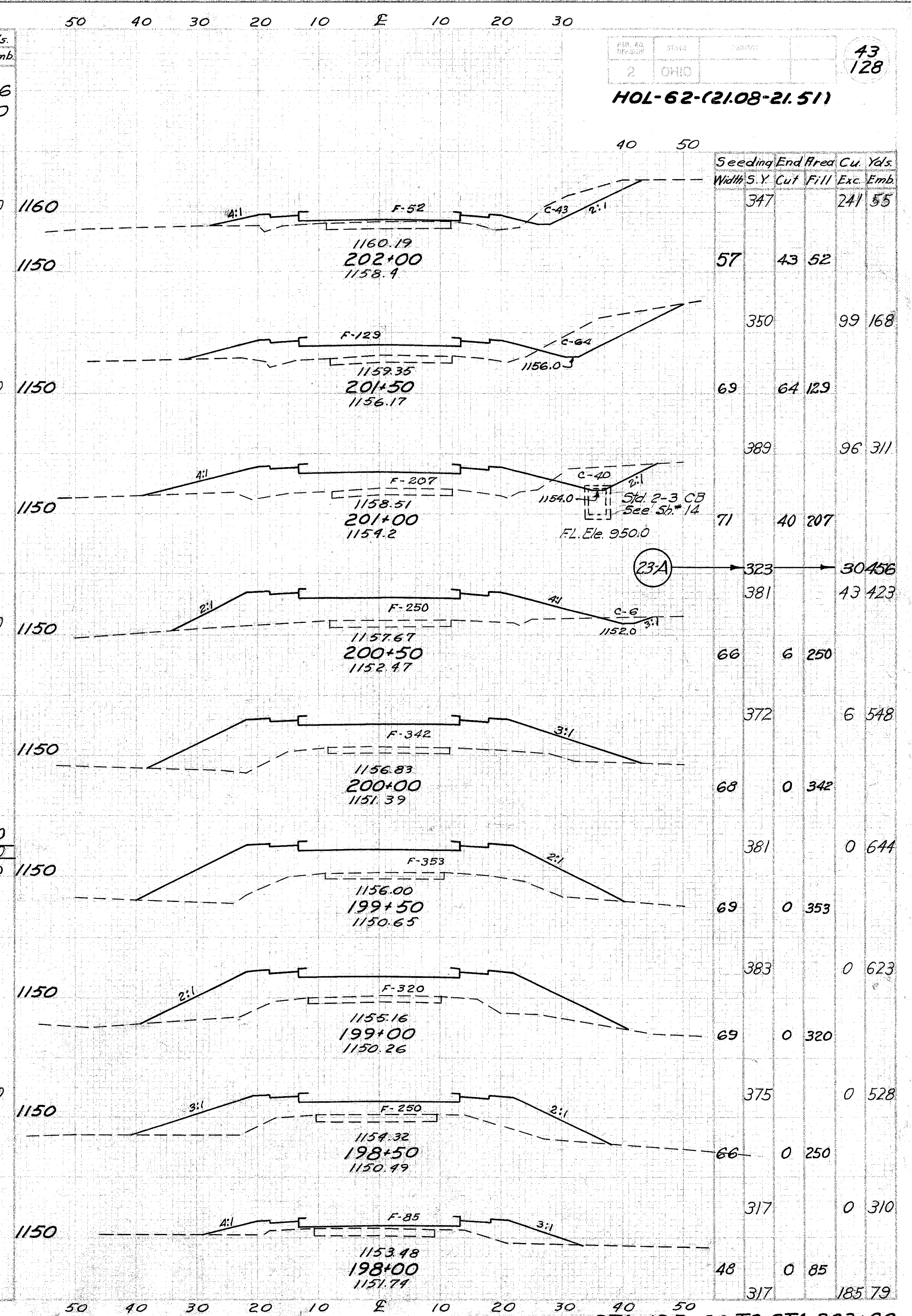
STA. 189+50 TO STA. 194+50



Seeding Width	End Area	Cu. Yds.
5. Y.	Cut	Fill Exc. Emb.
0	0	16
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	2768	0
129	2206	0
728	4296	0
133	2434	0

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

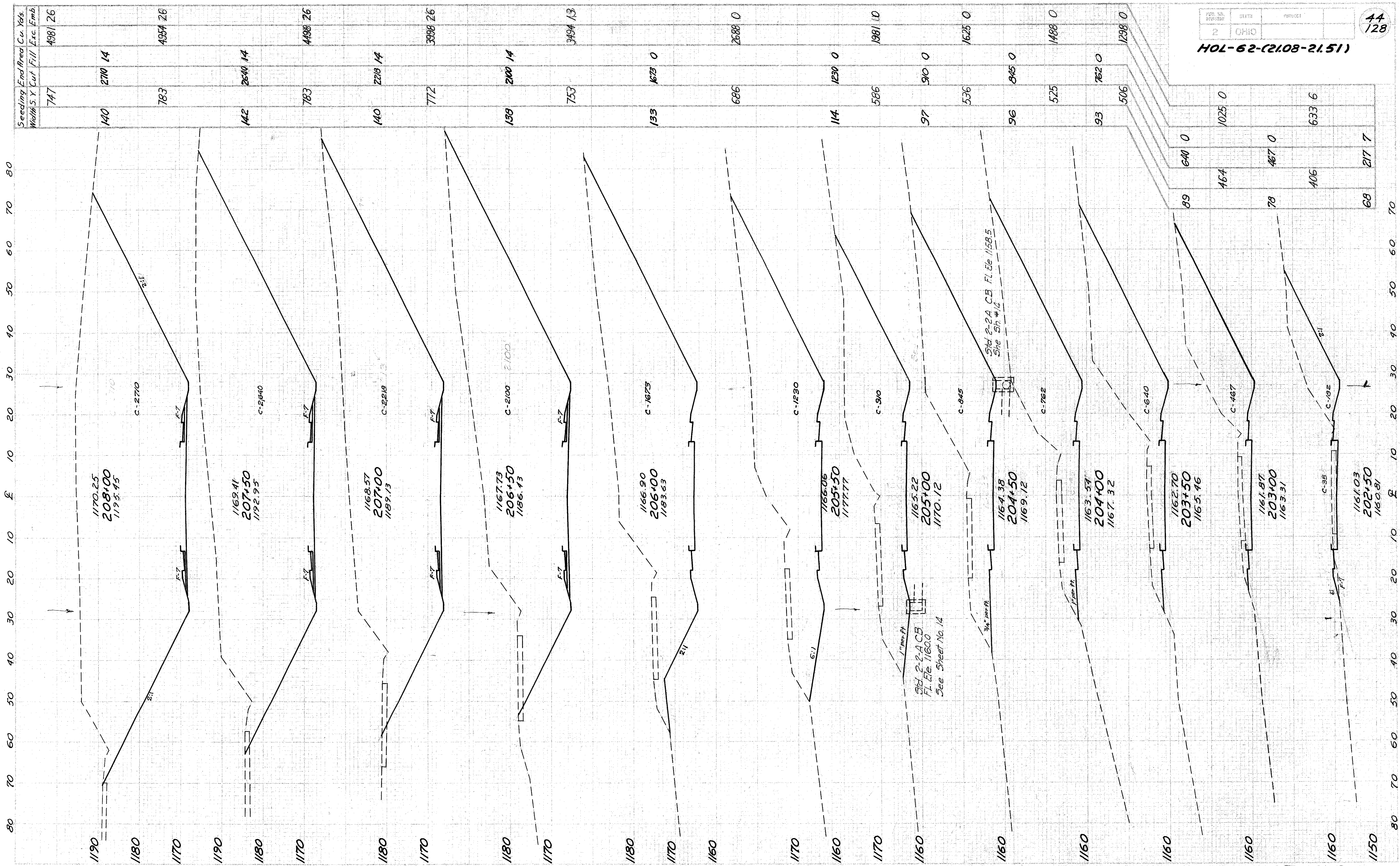
STA. 195+69.8
 Bal. Point



Seeding Width	End Area	Cu. Yds.
5. Y.	Cut	Fill Exc. Emb.
347	241	55
57	43	52
350	99	168
69	64	129
389	96	311
71	40	207
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

FL. Ele. 950.0
 Std. 2-3 C3
 See Sh. 14

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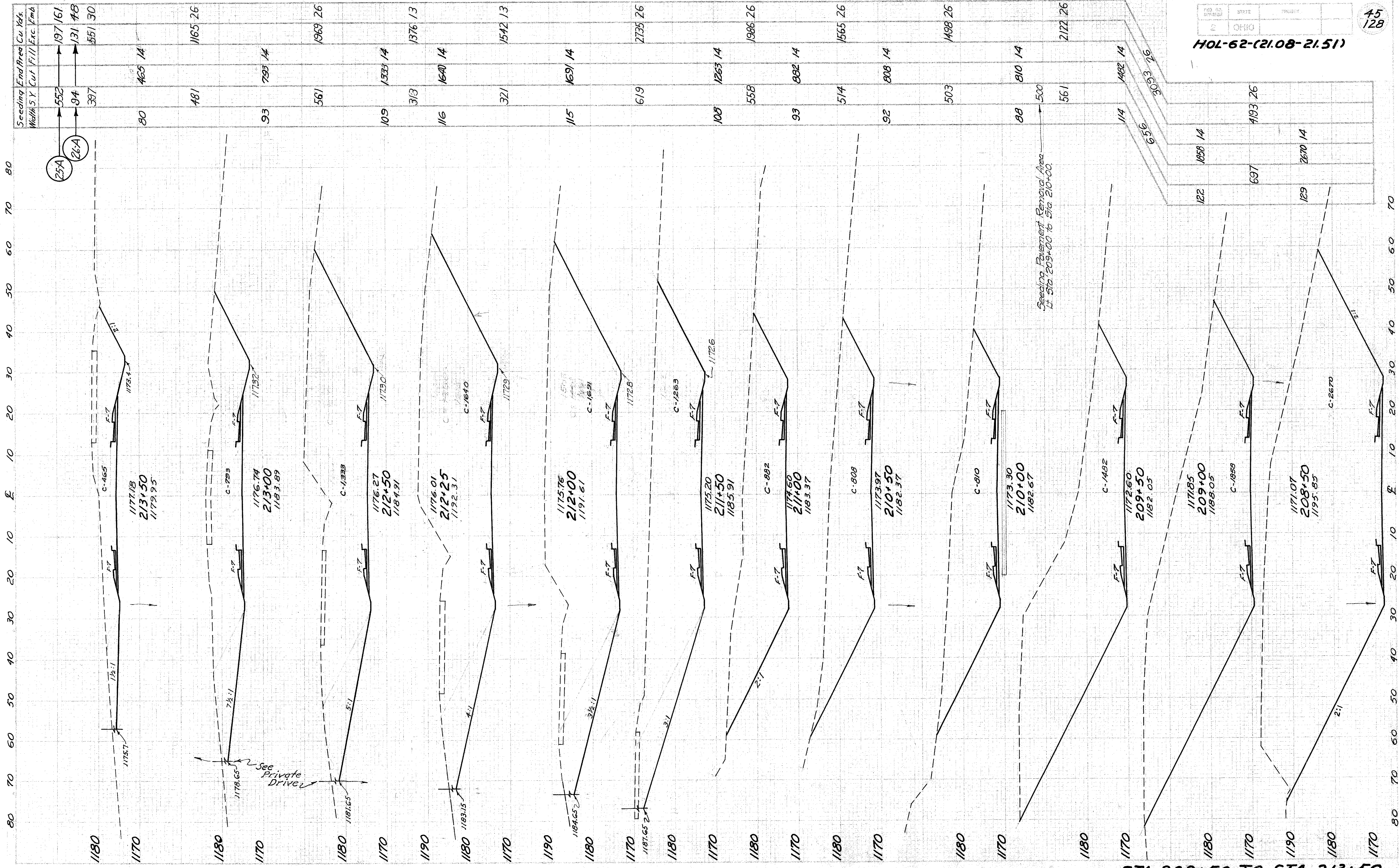
Proj. No.	STATE	PROJECT
2	OHIO	

HOL-62-(21.08-21.51)

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Seeding	End Road	Cu. Yds.	Widths	Cut	Fill	Exc.	Emb.
747	498	26					
140	270	14					
783	495	26					
142	264	14					
783	498	26					
140	228	14					
772	398	26					
158	200	14					
753	349	13					
133	162	0					
686	268	0					
114	123	0					
586	198	10					
97	90	0					
536	162	0					
96	84	0					
525	148	0					
93	76	0					
506	129	0					
640	102	0					
464	102	0					
467	46	0					
406	63	6					
68	21	7					

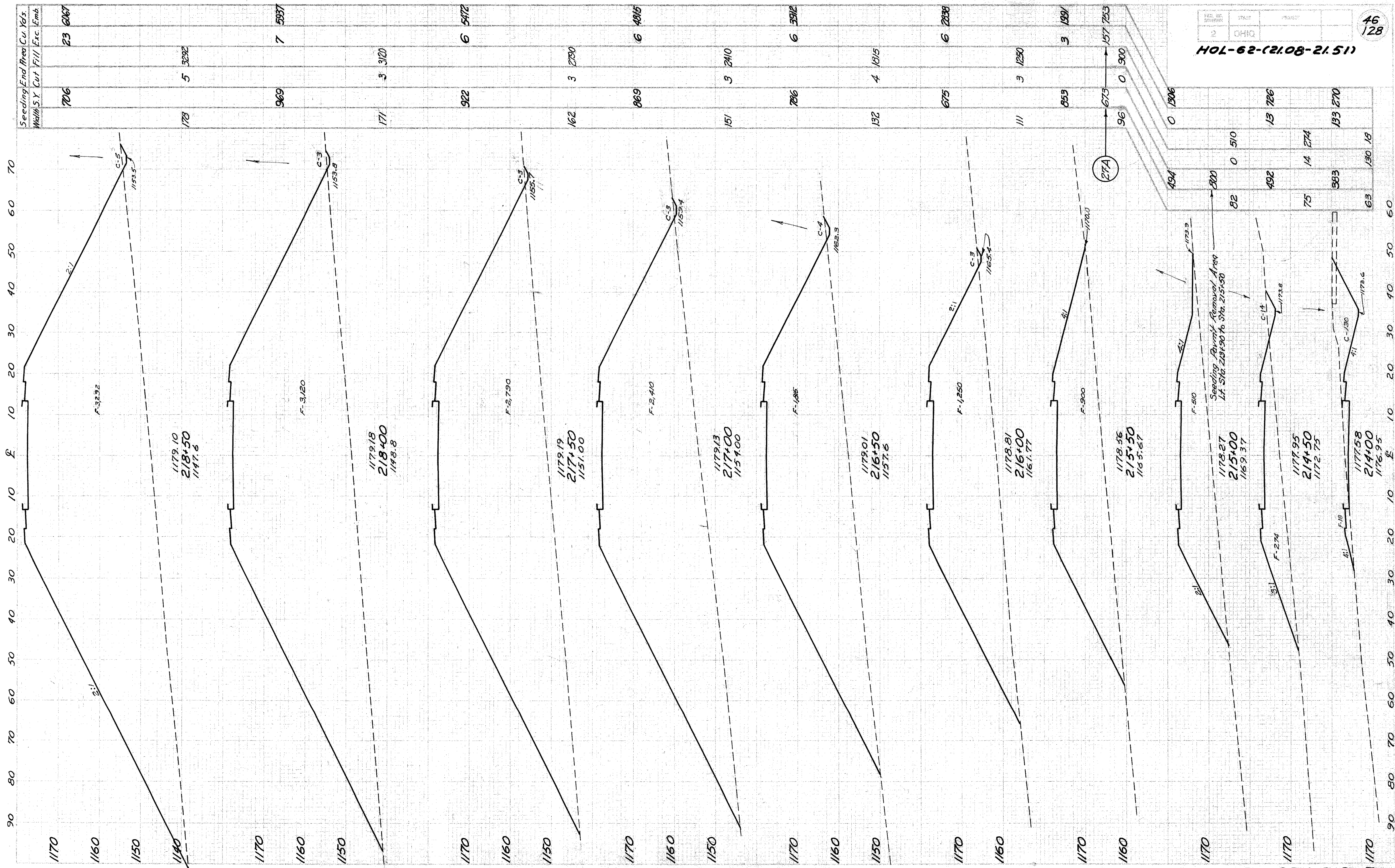
STA. 202+50 TO STA. 208+00



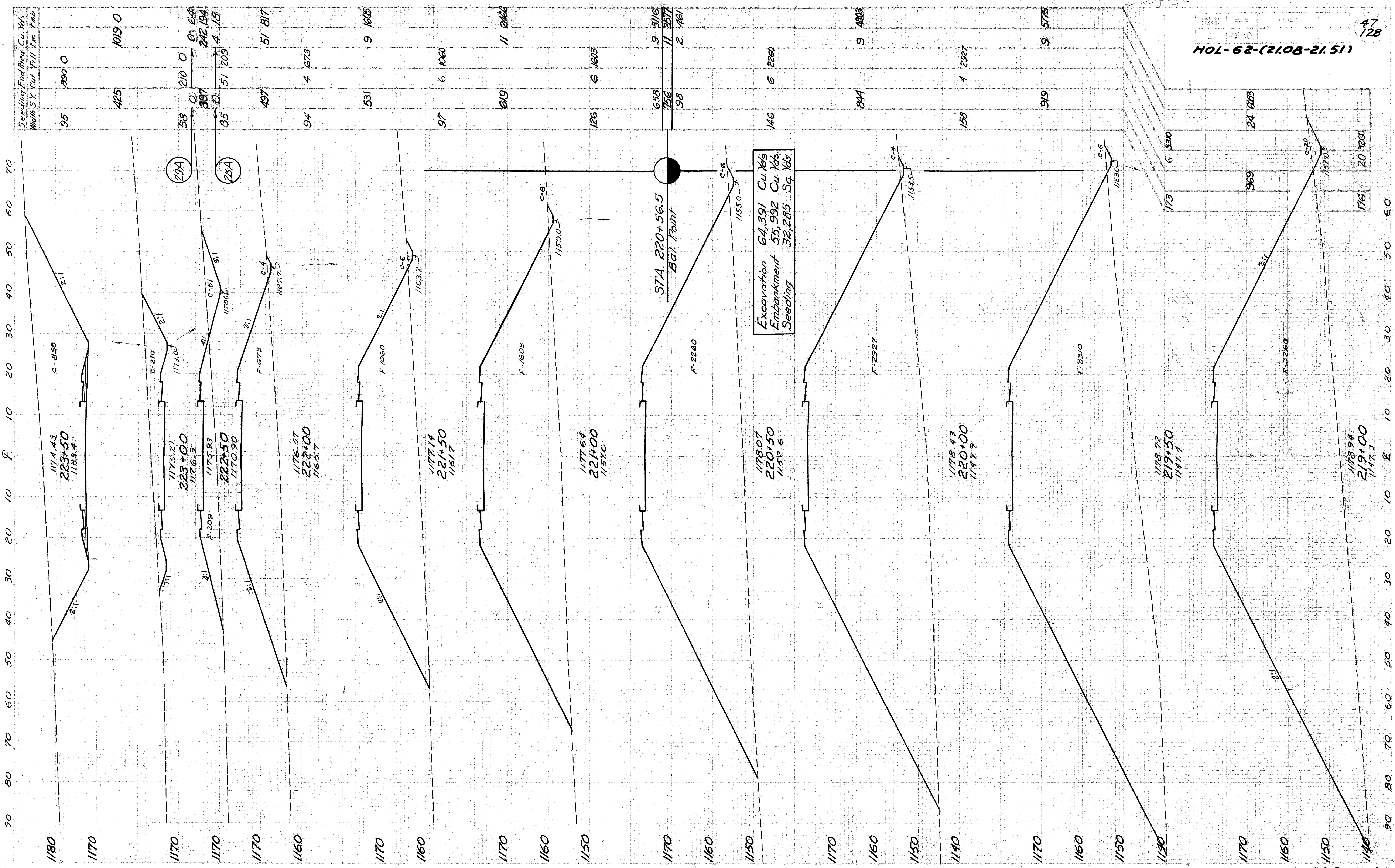
25A
26A

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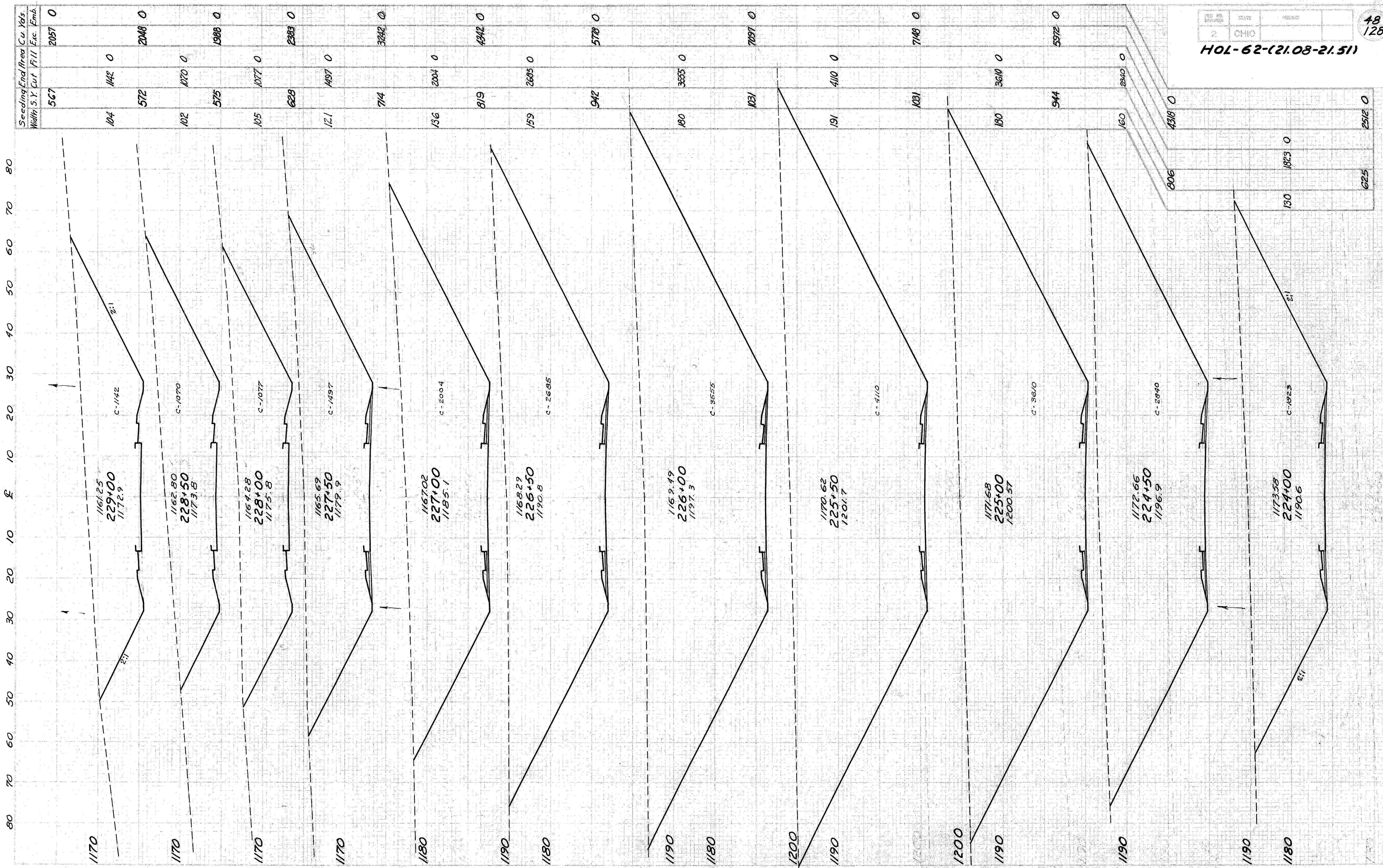
STA. 208+50 TO STA. 213+50



STA. 214+00 TO STA. 218+50

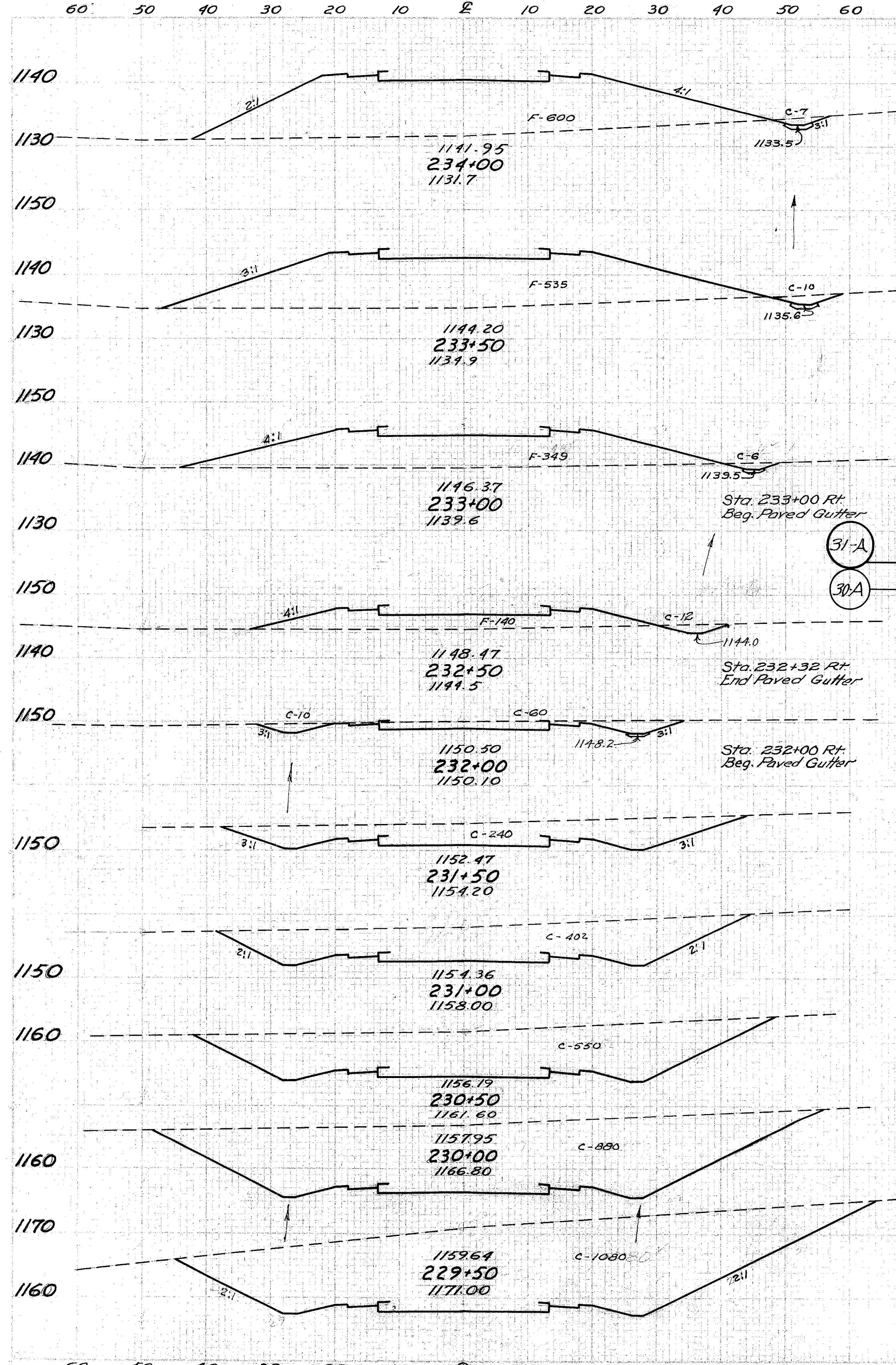


STA. 219+00 TO STA. 223+50



Seeding	End Area	Cu. Yds.	Width	5 Y. Cut	Fill	Exc.	Emb.
567	2057	0					
104	142	0					
572	2048	0					
102	1070	0					
575	1988	0					
105	1077	0					
628	2383	0					
121	1497	0					
714	3842	0					
136	2004	0					
819	4342	0					
159	2685	0					
942	578	0					
180	3535	0					
1031	7097	0					
191	4110	0					
1031	7148	0					
180	3610	0					
944	5972	0					
160	2940	0					
806	4318	0					
130	1823	0					
625	2512	0					

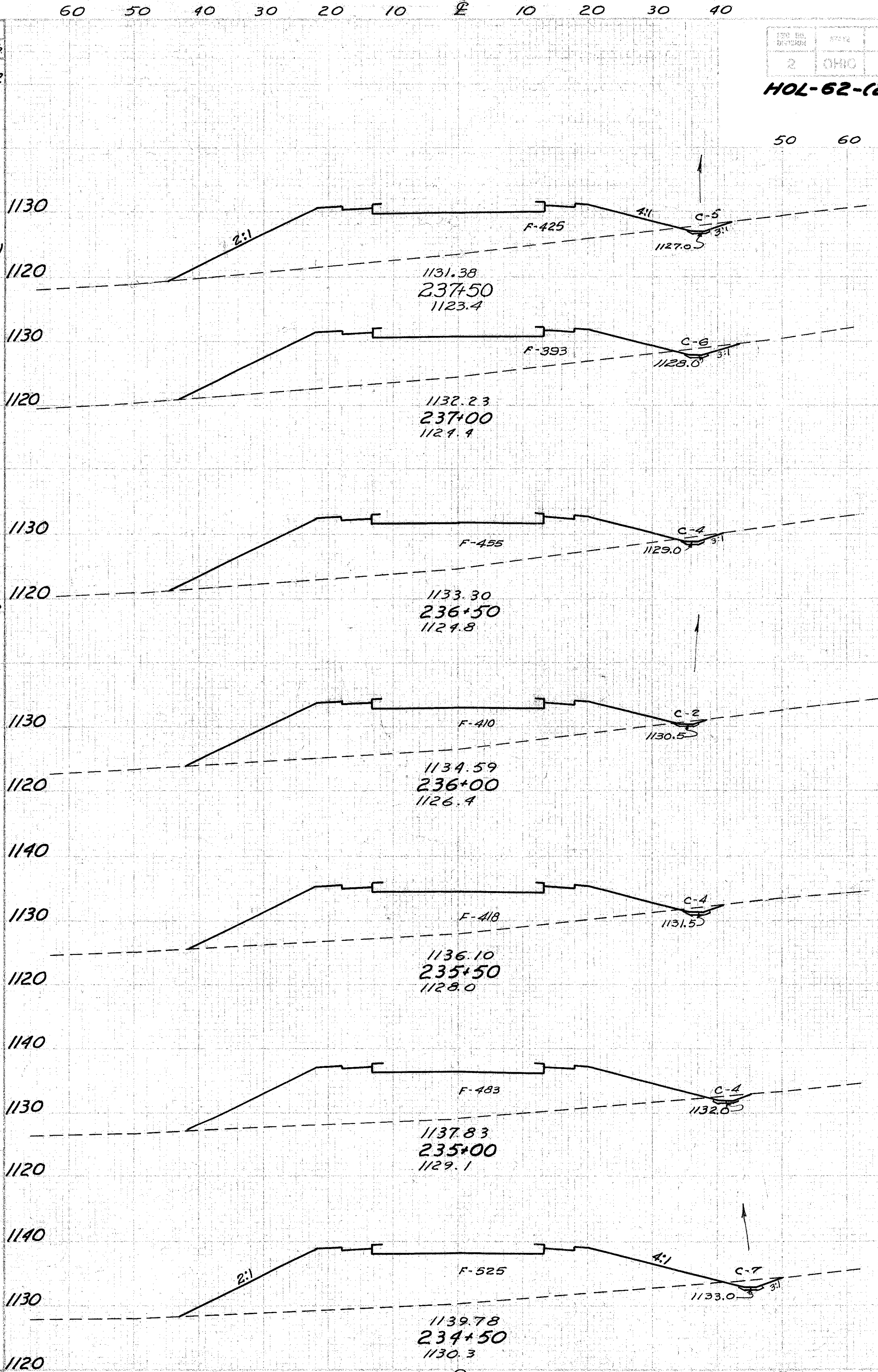
STA. 224+00 TO STA. 229+00



Seeding Width	End Area	Cu. Yds.
S.Y.	Cut	Fill
Exc.	Emb.	
469	13	1042
87	7	600
500	16	1051
93	10	535
478	15	819
79	6	349
0	1	15
0	1	26
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

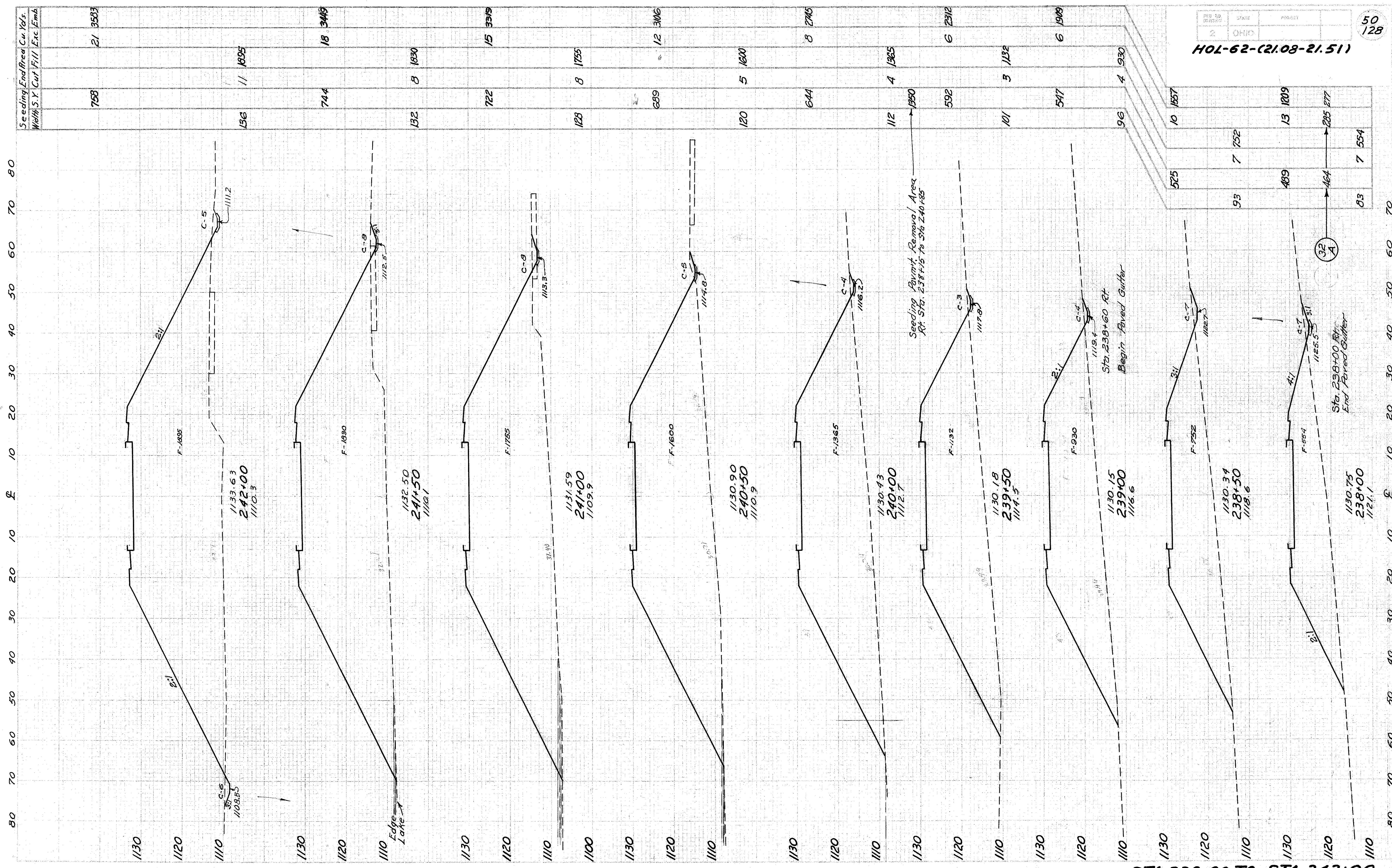
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Seeding Width	End Area	Cu. Yds.
S.Y.	Cut	Fill
Exc.	Emb.	
442	11	906
76	5	425
419	10	757
75	6	393
414	9	785
74	4	455
394	6	801
68	2	410
383	6	767
70	4	418
406	7	834
76	4	483
439	10	933
82	7	525

STA. 229+50 TO STA. 237+50



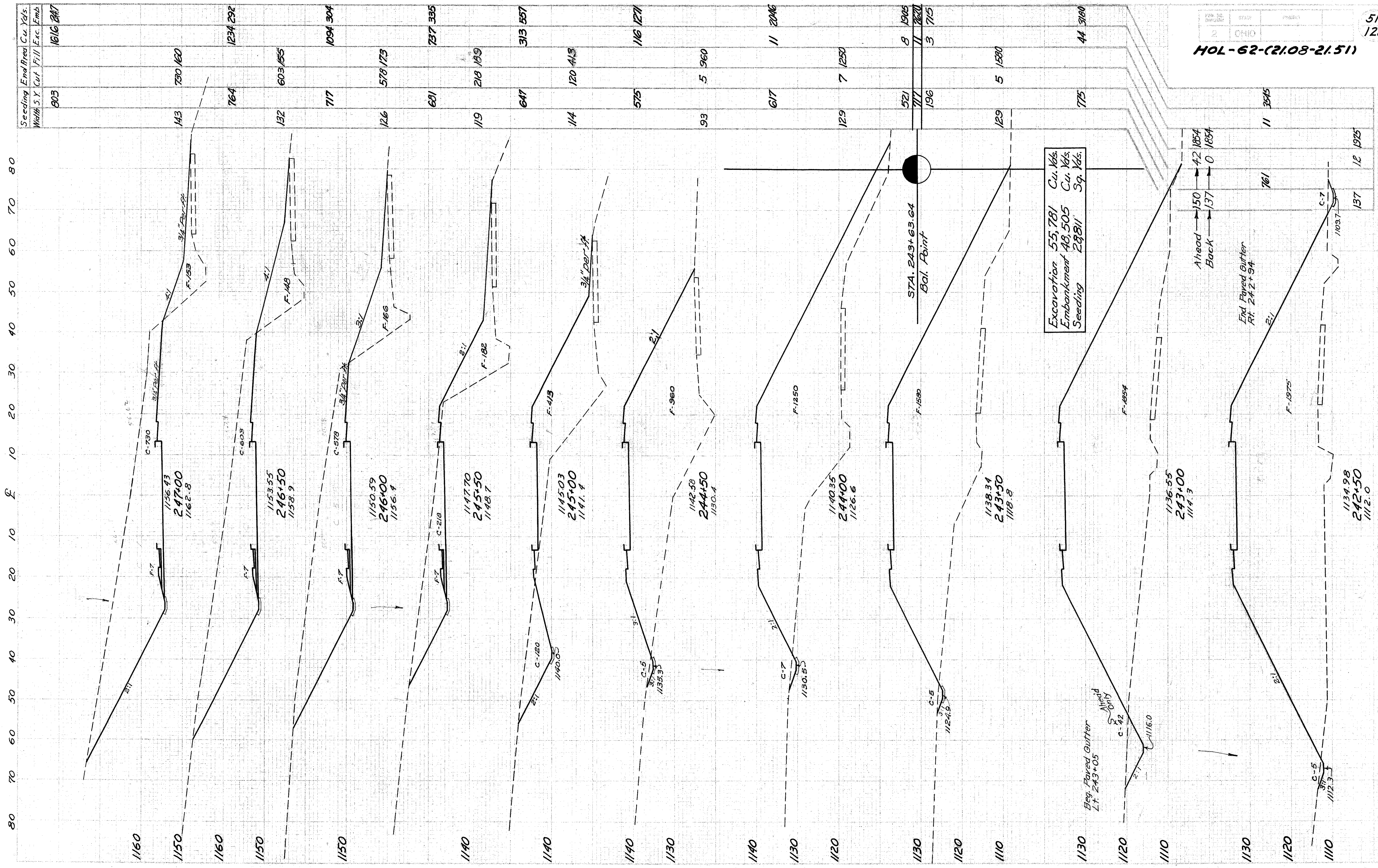
NO. OF	STATE	PROJECT
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10	1857	13	1209
93	7 752	489	285 277
96	4 930	83	7 554

STA. 238+00 TO STA. 242+00



Station	Seeding Width S.Y.	End Area	Cut Cu. Yds.	Fill Cu. Yds.	Emb. Area
242+50	803	143	730	160	1616
243+00	764	132	603	855	1234
243+50	717	126	578	173	1094
244+00	681	119	218	189	1094
244+50	647	114	120	413	313
245+00	575	93	5	960	575
245+50	617	129	7	1250	11
246+00	521	129	5	1580	8
246+50	717	775	11	1854	11
247+00	196	11	3	715	44

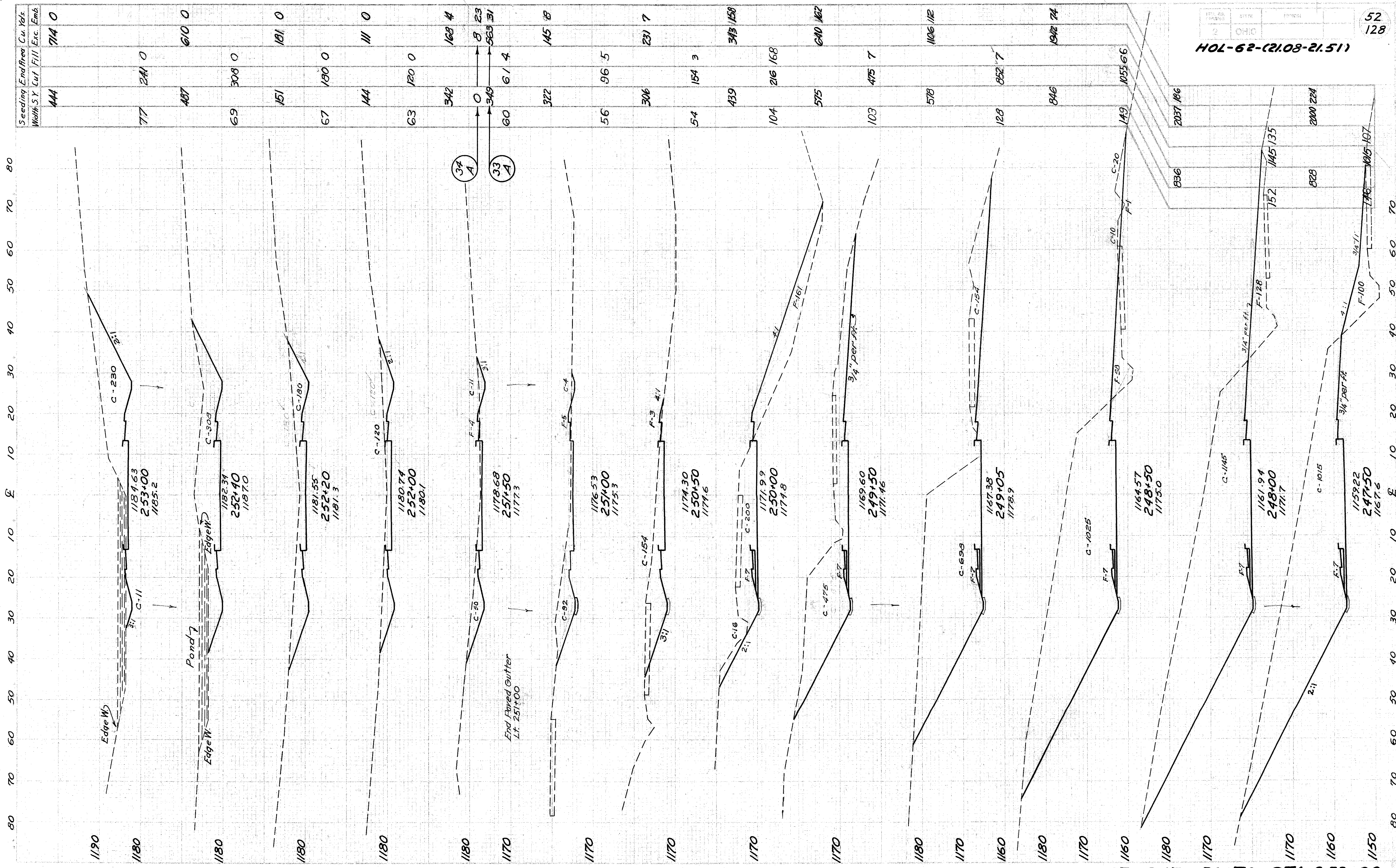
Excavation 55,781 Cu. Yds.
 Embankment 48,505 Cu. Yds.
 Seeding 28,811 Sq. Yds.

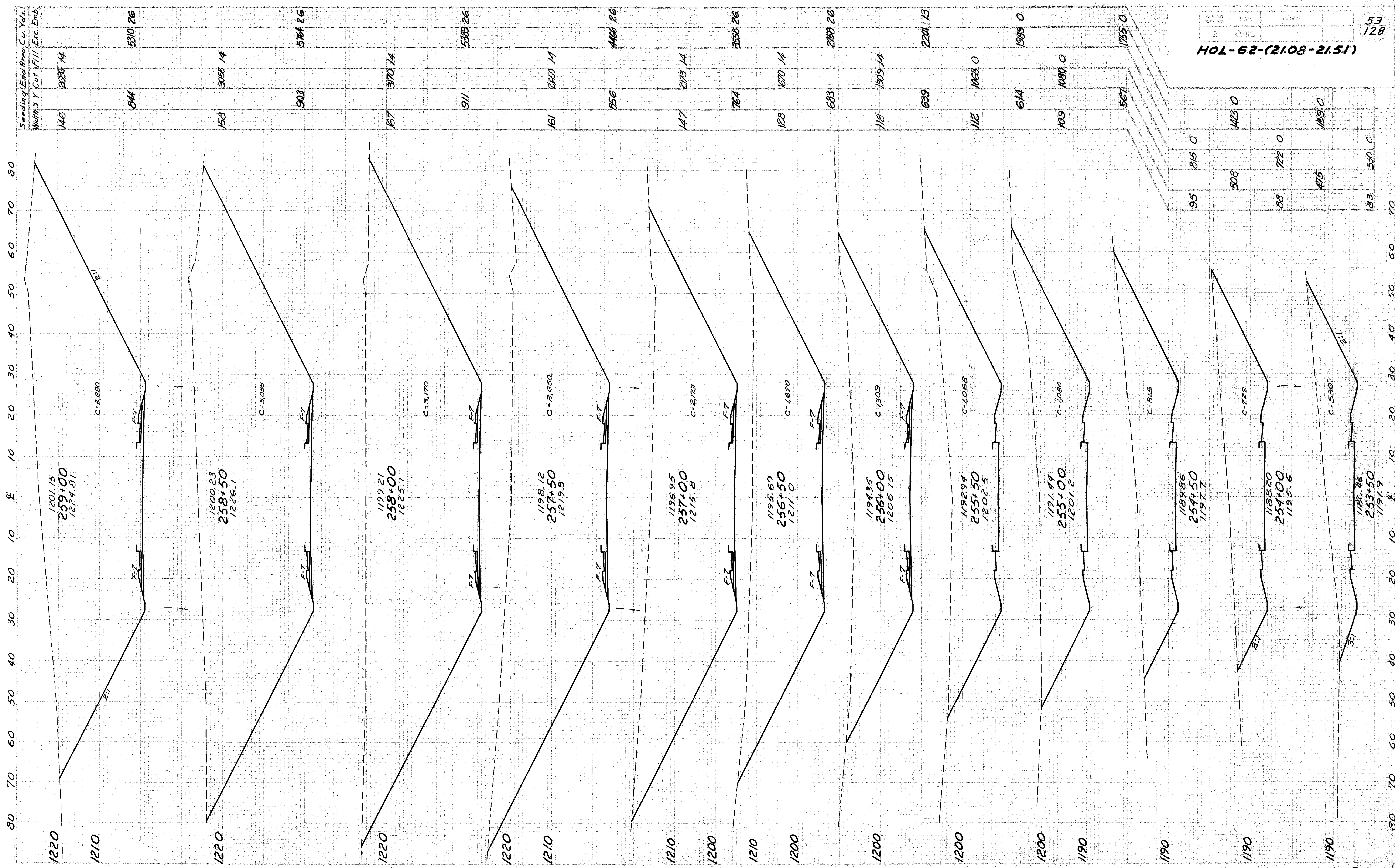
STA. 243+63.64
 Bal. Point

Ahead → 150
 Back ← 137
 0 1854

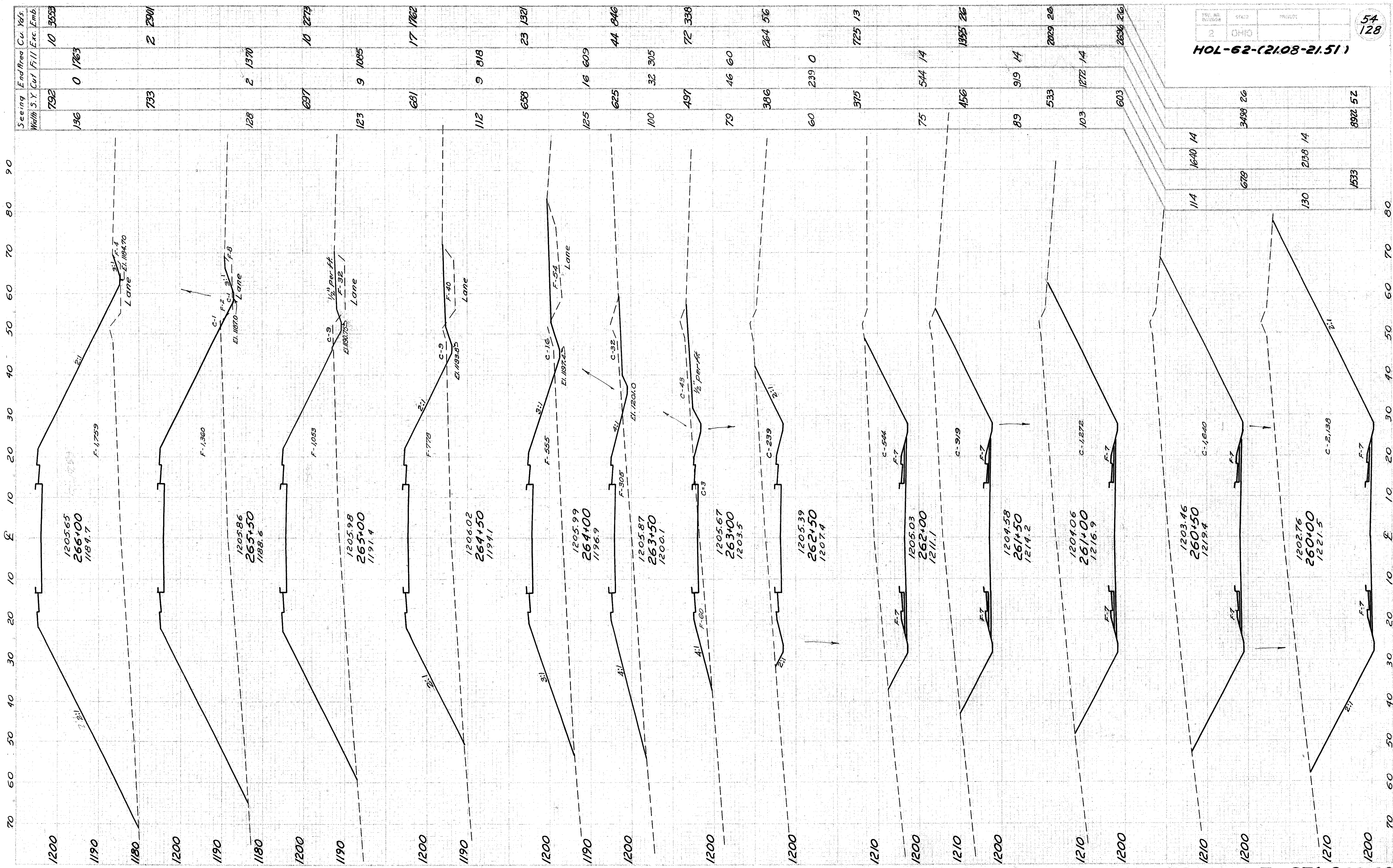
End Paved Gutter
 Rt. 242+94

Beg. Paved Gutter
 Lt. 243+05



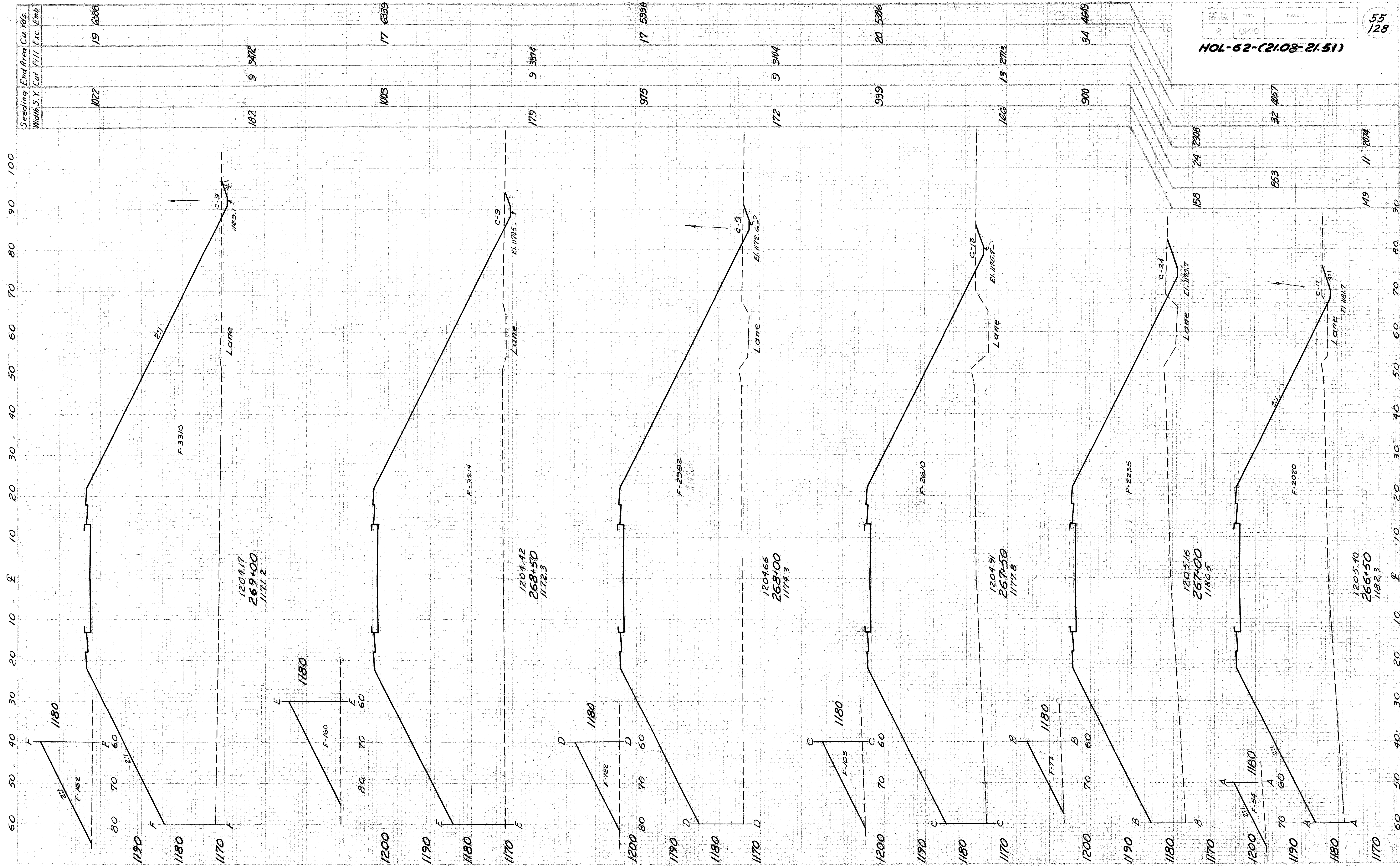


STA. 253+50 TO STA. 259+00



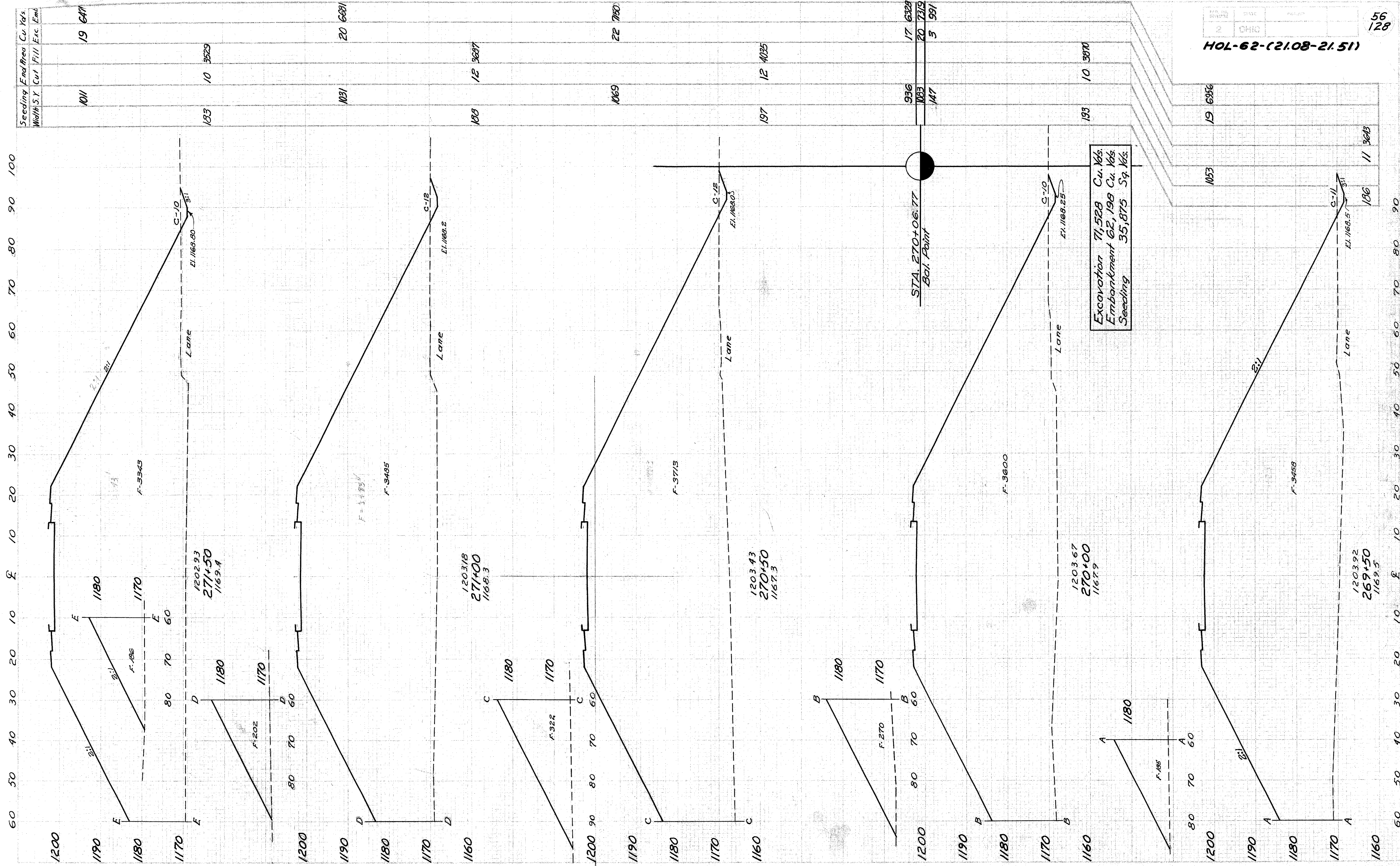
Station	Width	S.Y.	Cut	Fill	Exc.	Emb.	Seeing	End Area	Cu. Yds.
260+00	156	0	1763	0	1763	10	792	10	3653
261+00	128	2	1370	2	1370	2	733	2	2901
262+00	123	9	1085	9	1085	10	697	10	2273
263+00	112	9	818	9	818	17	681	17	1762
264+00	60	23	1321	23	1321	23	658	23	1321
265+00	125	16	609	16	609	44	625	44	846
266+00	100	32	305	32	305	72	497	72	338
267+00	79	46	60	46	60	264	386	264	516
268+00	60	239	0	239	0	725	375	725	13
269+00	75	544	14	544	14	1395	456	1395	26
270+00	89	919	14	919	14	2029	533	2029	26
271+00	103	1272	14	1272	14	2636	603	2636	26
272+00	114	1640	14	1640	14	3498	678	3498	26
273+00	130	2158	14	2158	14	4533	892	4533	26
274+00	153	2922	52	2922	52	5922	1222	5922	26

STA. 260+00 TO STA. 266+00

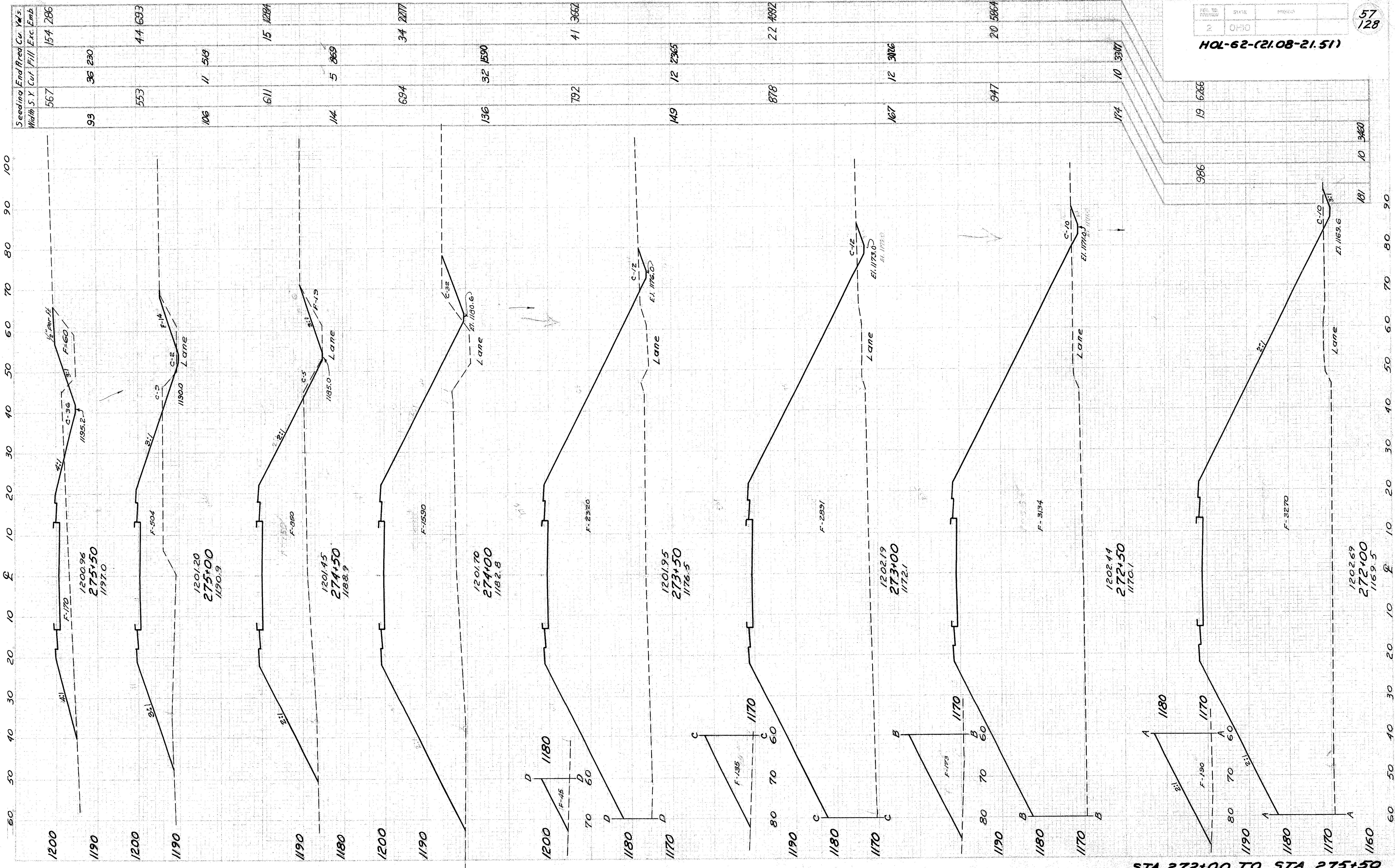


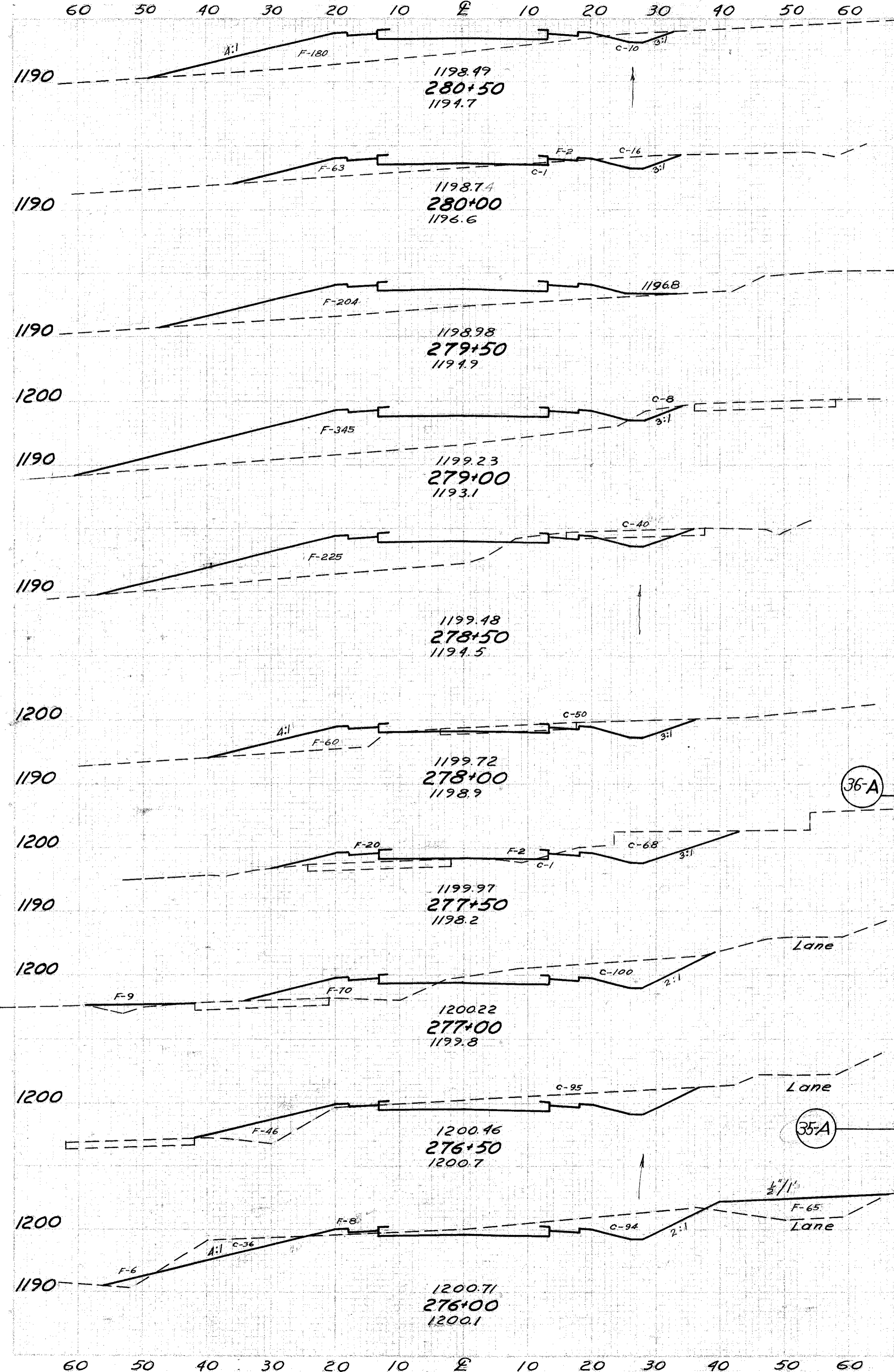
Seeding	End Area	Cu. Yds.
Width	S. Y.	Cut
Fill	Exc.	Emb.
1022	19	6588
182	9	3472
1003	17	6339
179	9	3374
975	17	5996
172	9	3104
939	20	5306
162	13	2713
900	34	4649
153	24	2308
853	32	4857
149	11	2074

STA. 266+50 TO STA. 269+00

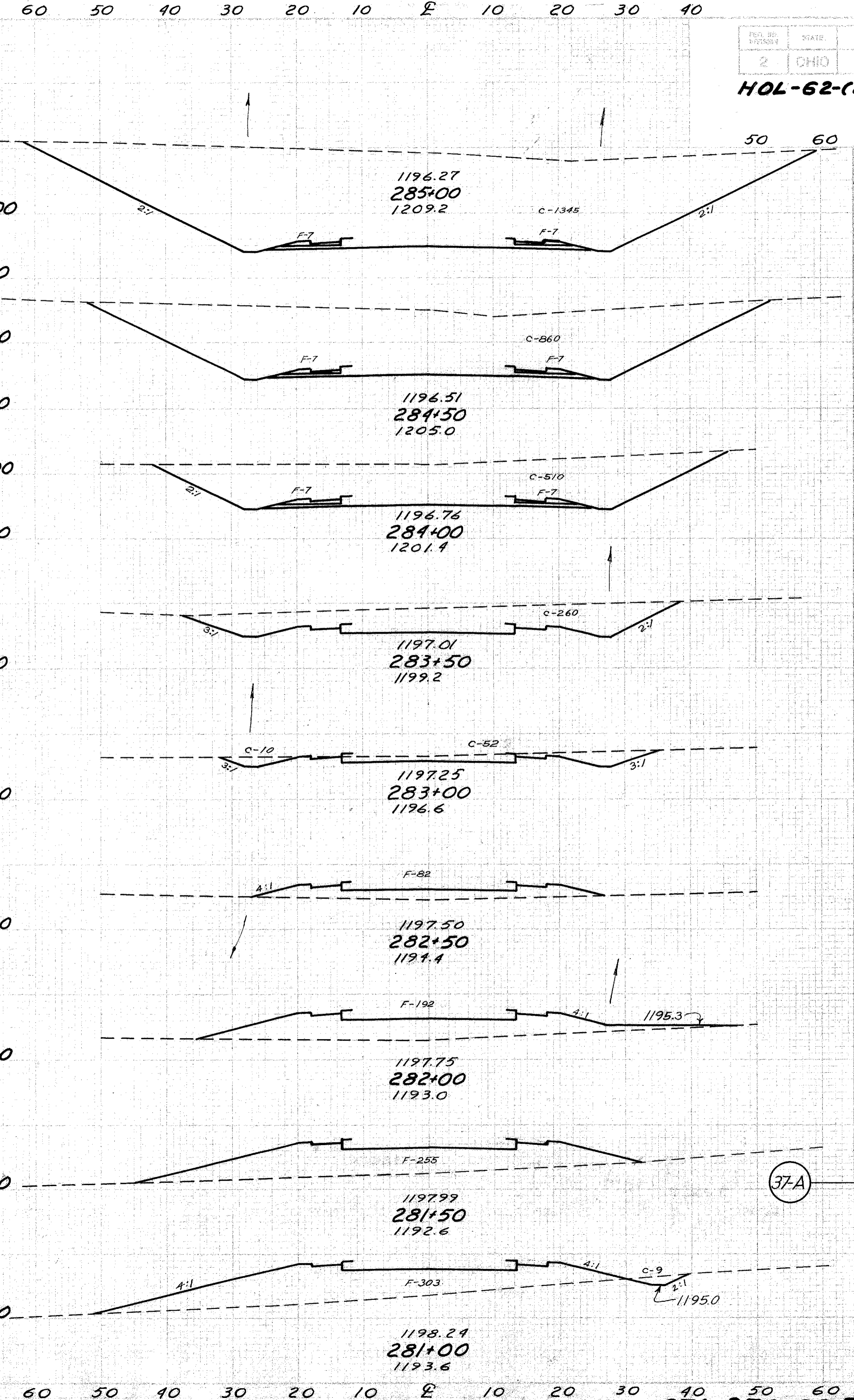


Seeding	Final Area	Cu. Yds.			
Width	S.Y.	Cut	Fill	Exc.	Emb.
1011	19	6411			
183	10	3529			
1031	20	6681			
185	12	3687			
1069	22	7160			
197	12	4035			
936	17	6329			
1083	20	7112			
147	3	991			
193	10	3870			
1053	19	6956			
186	11	3643			





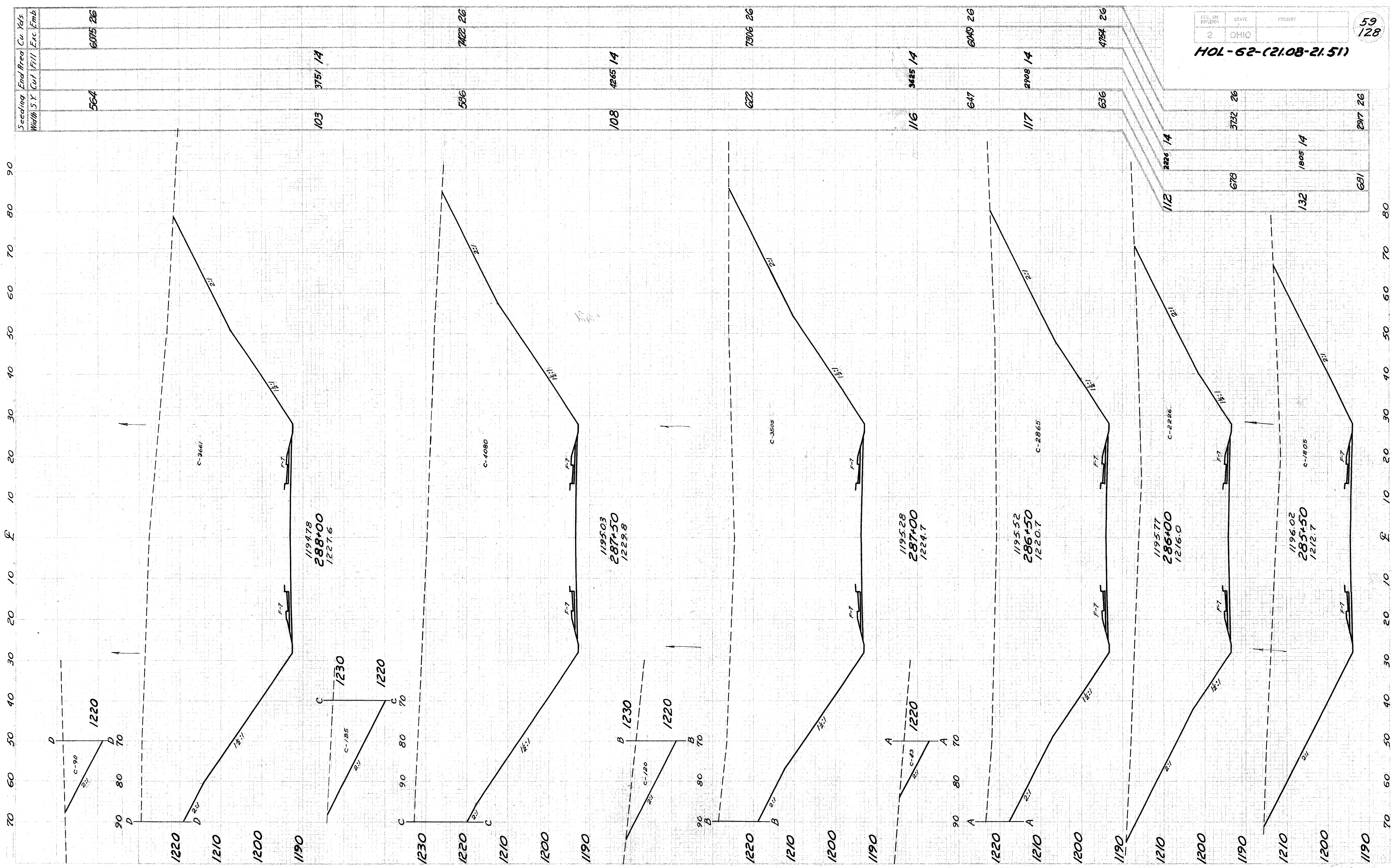
Seeding	End Area	Cu. Yds.			
Width	S.Y.	Cut	Fill	Exc.	Emb.
68	10	180			
339		25	227		
54	17	65		1200	
336		16	249	1190	
67	0	204		1200	
411		7	508	1190	
81	8	345		1200	
447		44	528	1190	
80	40	225		1190	
394		83	264		
62	50	60		1190	
55			52	33	
336		110	76		
59	69	22		1190	
375		156	94		
76	100	79		1190	
392		181	116		
65	95	46		1190	
489		208	116		
111	130	79		1190	



Seeding	End Area	Cu. Yds.			
Width	S.Y.	Cut	Fill	Exc.	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		

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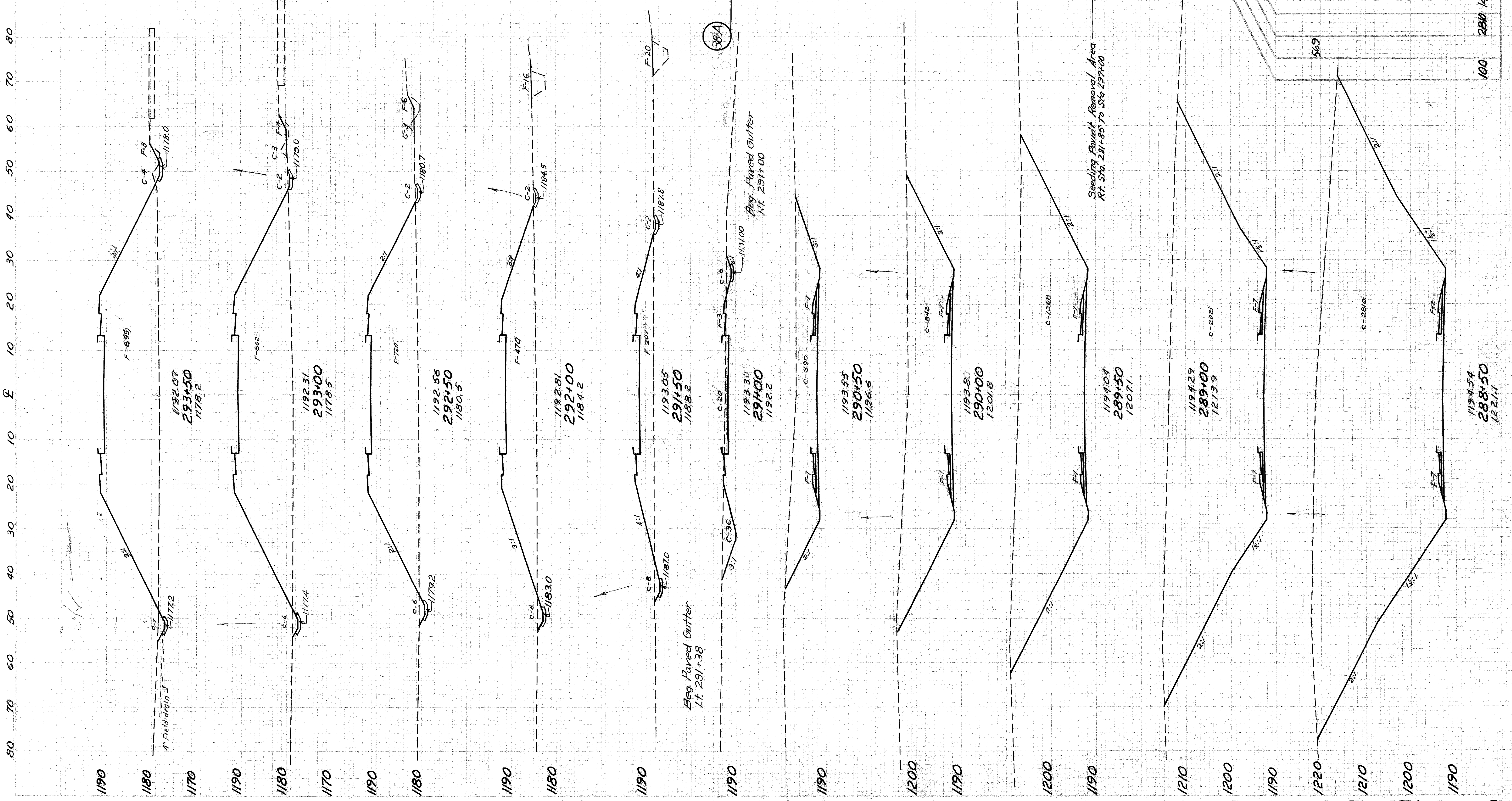
STA. 276+00 TO STA. 285+00



Seeding	Final Area	Cu Yds.			
Width	S.Y.	Cut	Fill	Exc.	Emb.
564		6075	26		
103	3751	14			
586		7422	26		
108	4265	14			
622		7506	26		
116	3625	14			
647		6049	26		
117	2908	14			
636		4794	26		
112	2226	14			
678		5732	26		
132	1805	14			
681		2917	26		

STA. 285+50 TO STA. 288+00

Seeding	End Area	Cu. Yds.			
Width	X	Cut	Fill	Exc.	Emb.
563		67	1660		
94	11	898			
553		20	1633		
98	11	866			
522		20	1474		
90	11	726			
492		18	1122		
87	8	486			
447		17	660		
74	10	227			
363		67	213		
44		40	63		
53	62	3			
368		419	16		
76	390	14			
469		144	26		
93	842	14			
572		2046	26		
113	1368	14			
606		3138	26		
105	2021	14			
100	2810	14			
4473	26				



STA. 288+50 TO STA. 293+50

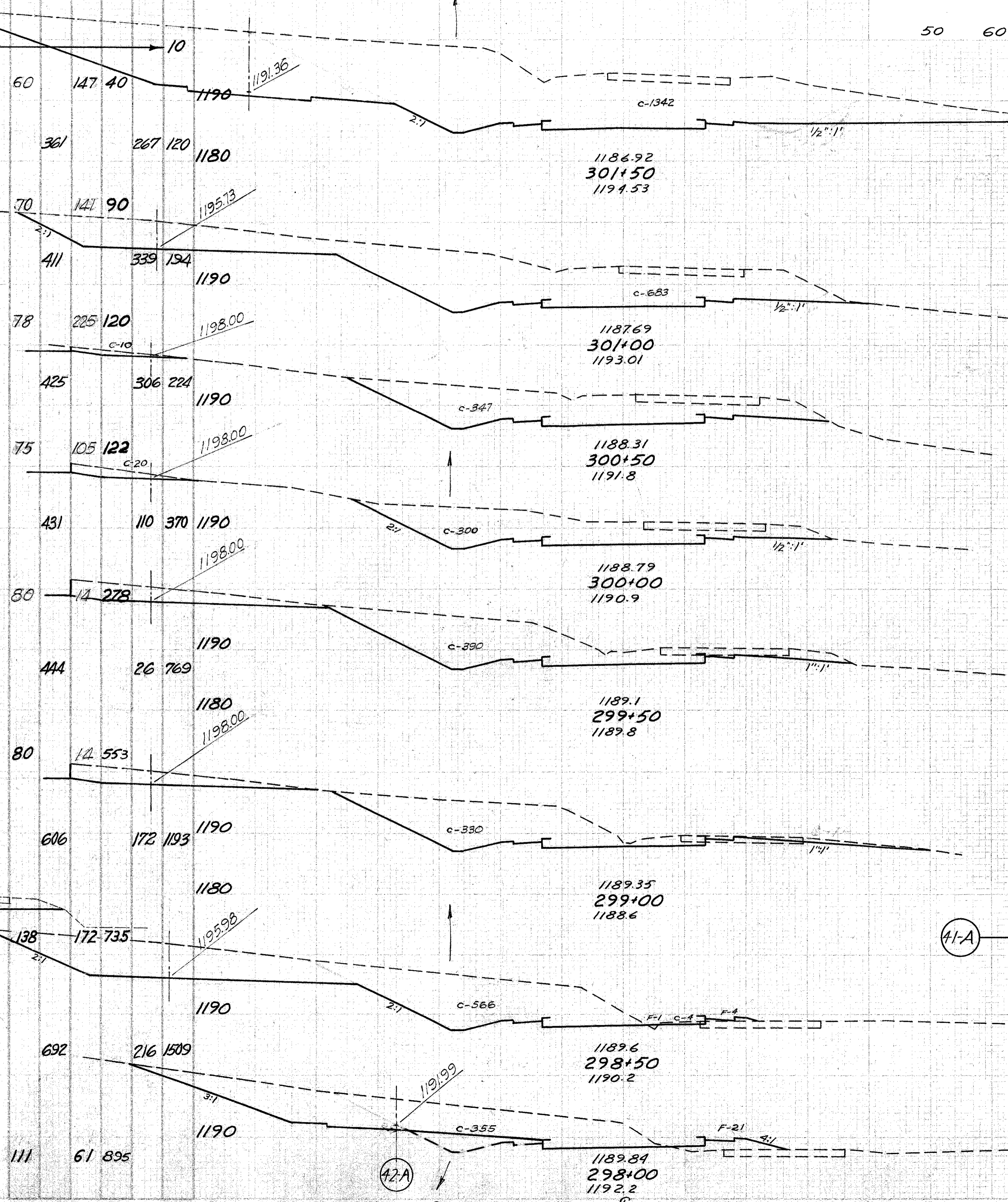
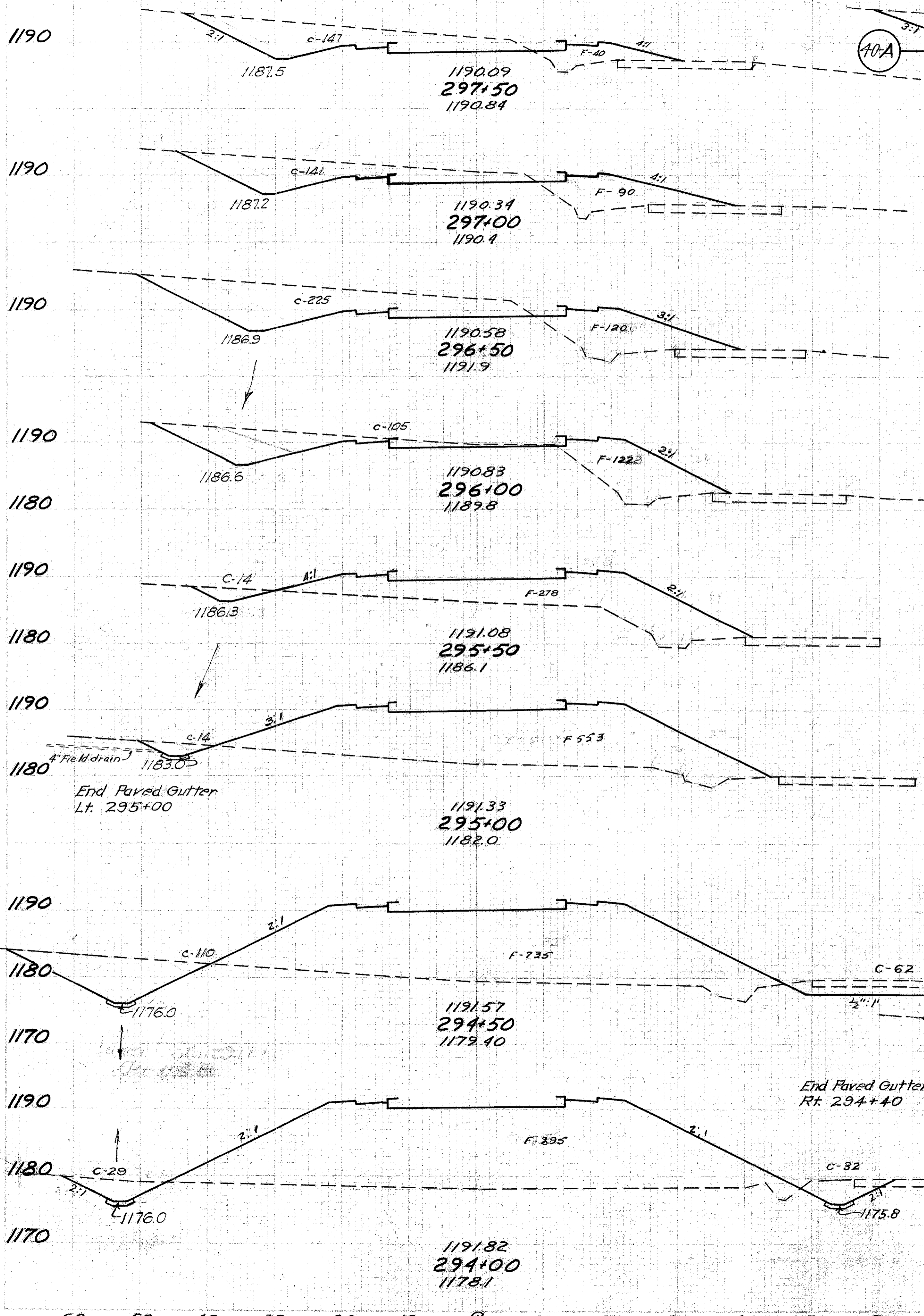
60 50 40 30 20 10 E 10 20 30 40 50 60

60 50 40 30 20 10 E 10 20 30 40

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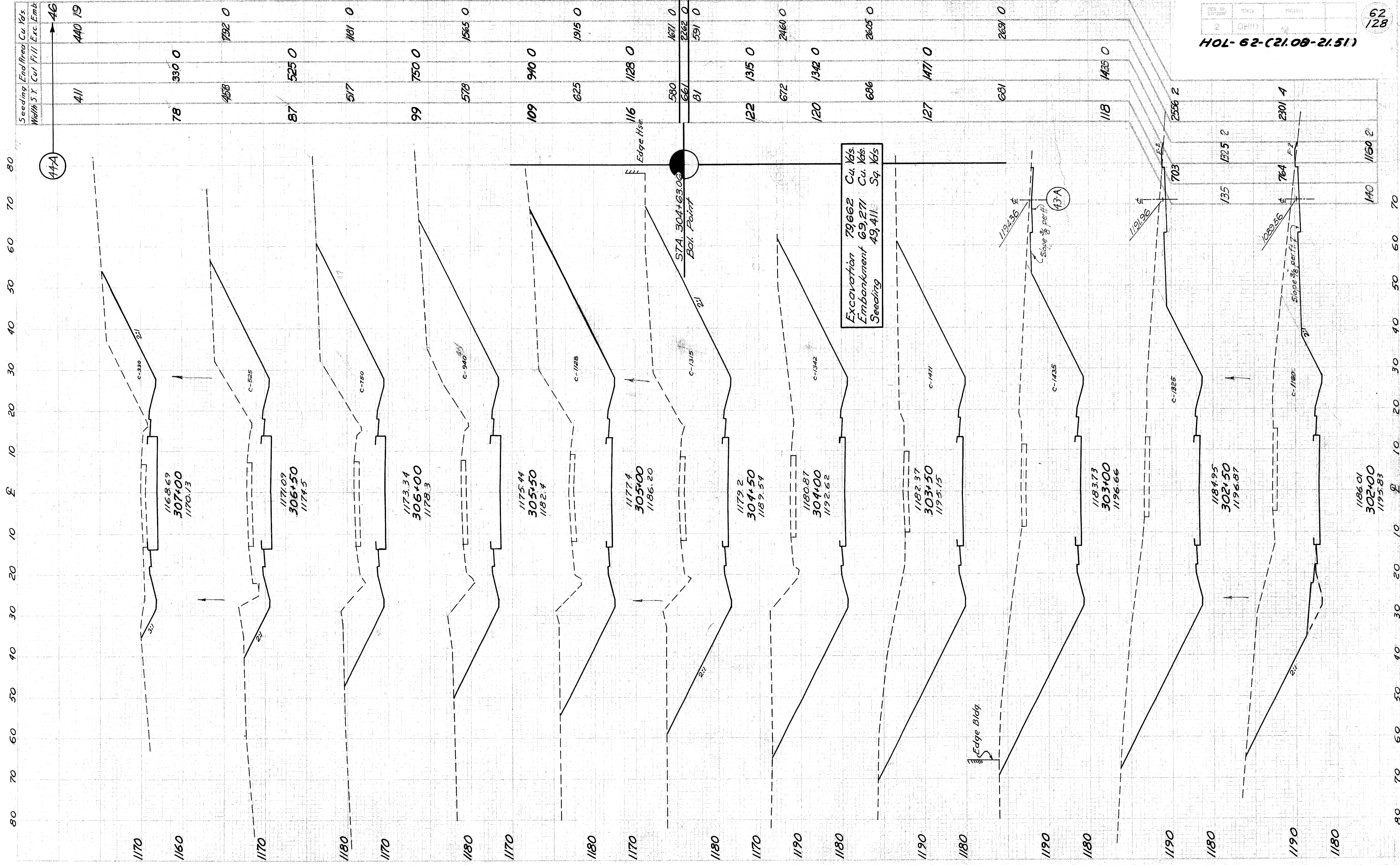
Seeding	End Area	Cu. Yds.
Width S.Y.	Cut	Fill Exc. Emb.
439	465	56

Seeding	End Area	Cu. Yds.
Width S.Y.	Cut	Fill 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



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

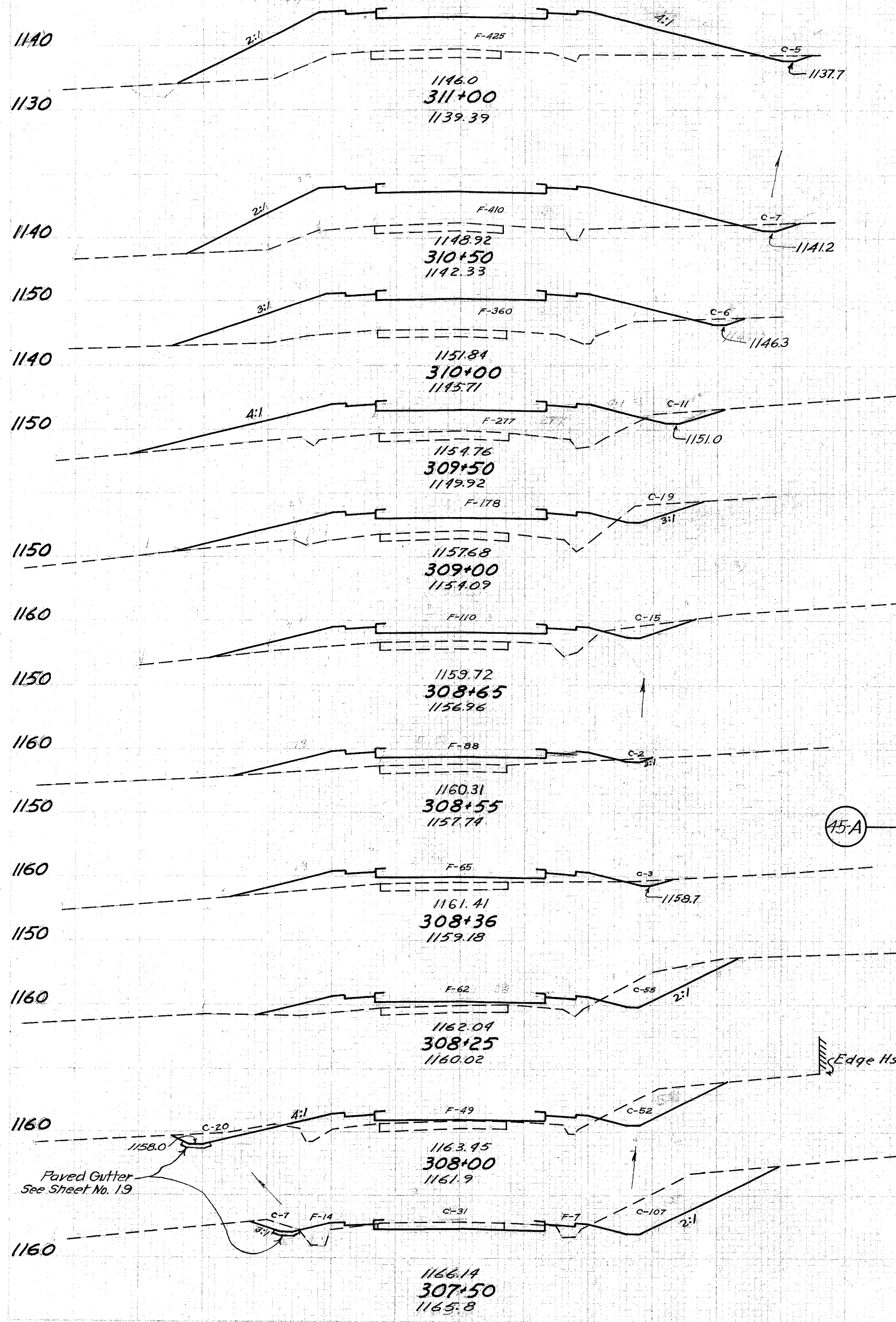
Seeding	End/Prop	Cu. Yds.			
Width 5 Y.	Cut	Fill	Exc.	Emb.	
411	78	330	0	440	19
87	525	0	458	792	0
99	750	0	517	1161	0
109	940	0	578	1565	0
122	1315	0	625	1915	0
127	1471	0	686	2605	0
127	1471	0	681	2691	0

STA. 302+00 TO STA. 307+00

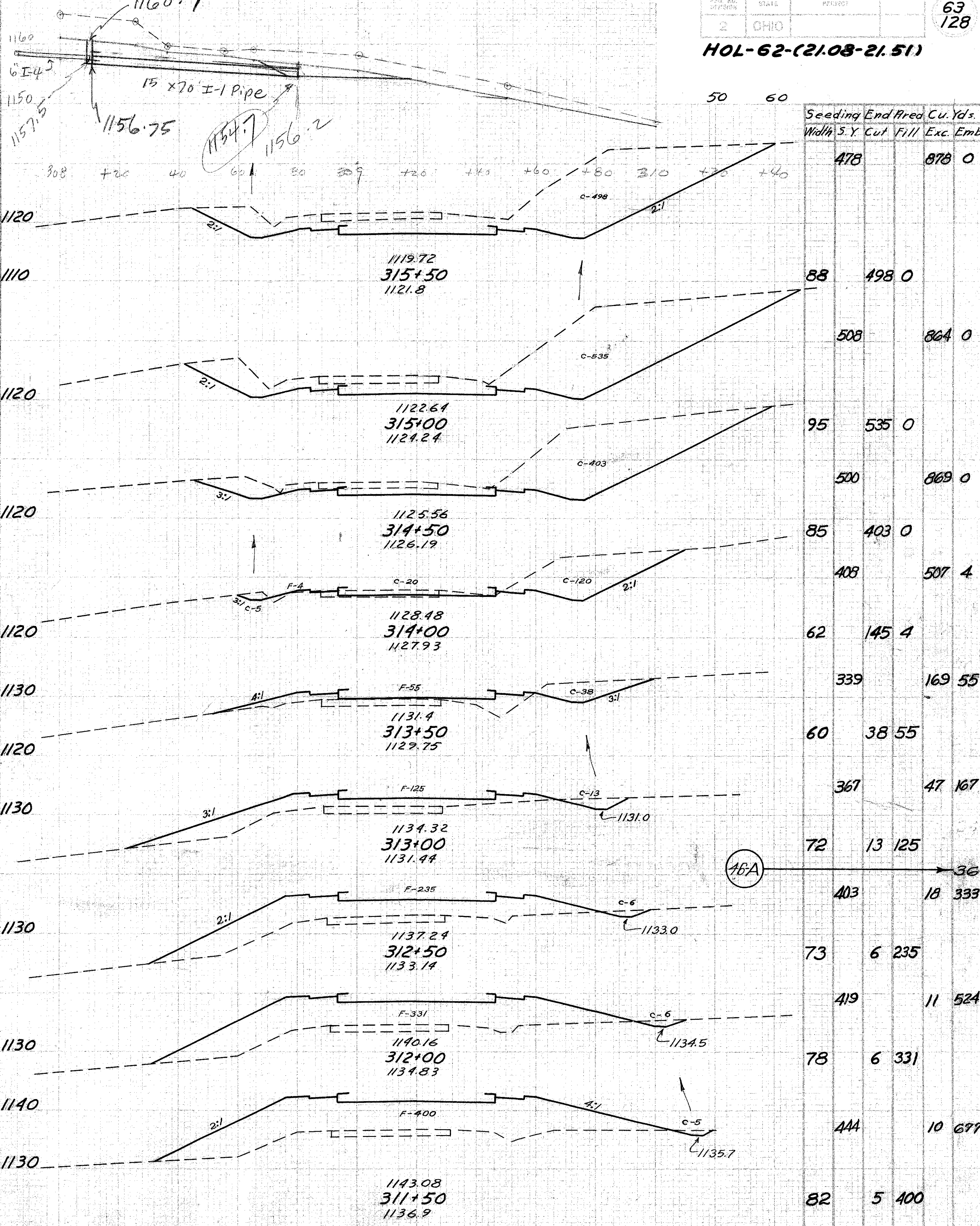
60 50 40 30 20 10 E 10 20 30 40 50 60

1170 60 50 40 30 20 10 E 10 20 30 40

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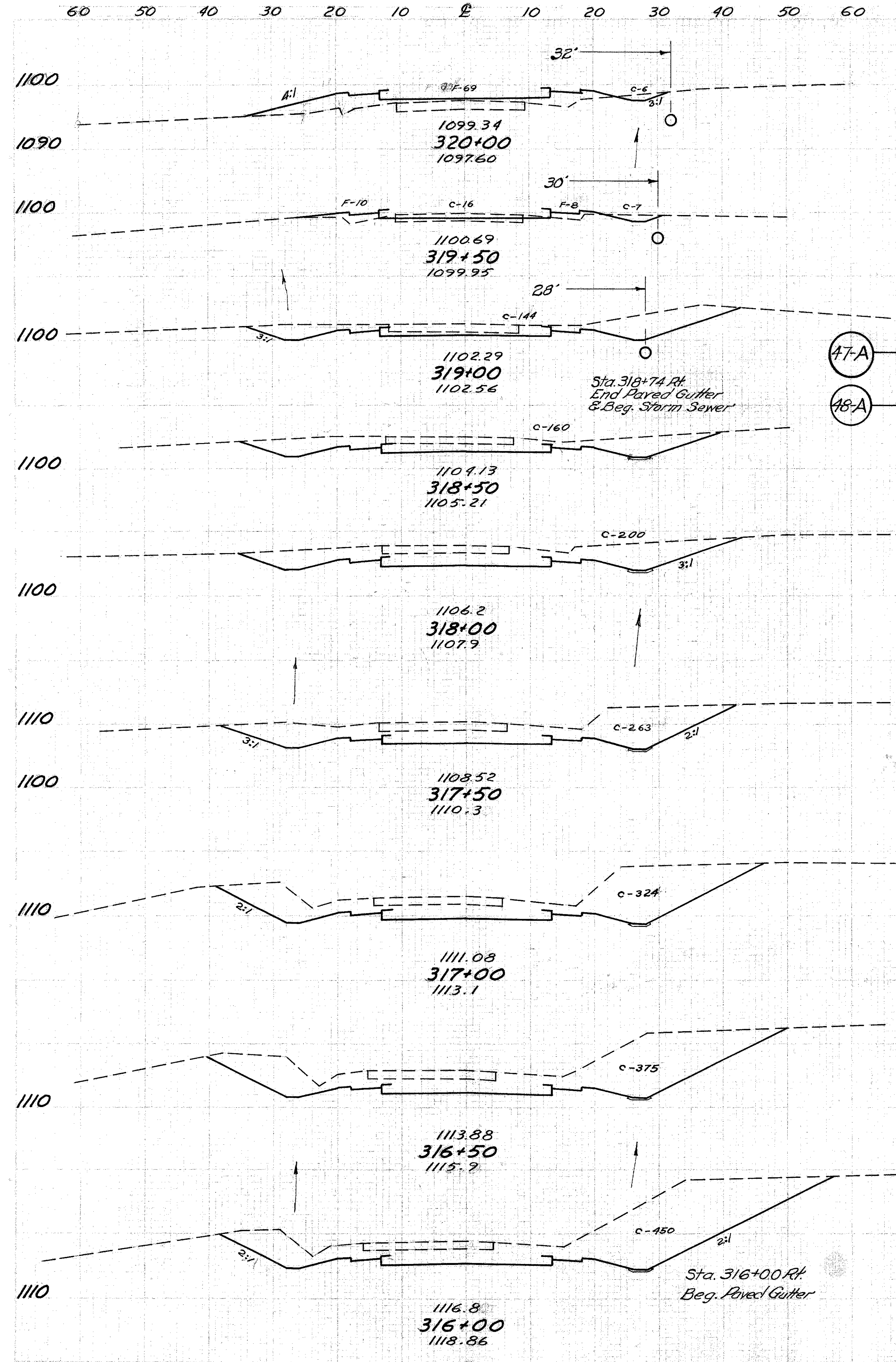


Station	Seeding End Area Cu. Yds.				
	Width	S.Y.	Cut	Fill	Exc. Emb.
311+00	469		9	764	
310+50	87	5	425		
310+50	472		11	773	
310+50	83	7	410		
310+00	439	12	713		
310+00	75	6	360		
309+50	419	16	590		
309+50	76	11	277		
309+00	400	28	421		
309+00	68	19	178		
308+65	253	22	187		
308+65	62	15	110		
308+55	62	3	37	1130	
308+55	49	2	88		
308+55	869			308	637
308+36	106	2	54		
308+36	51	3	65		
308+25	69	12	26		
308+25	62	55	62		
308+00	185	59	51		
308+00	71	72	49		
307+50	392		201	65	
307+50	70	145	21		

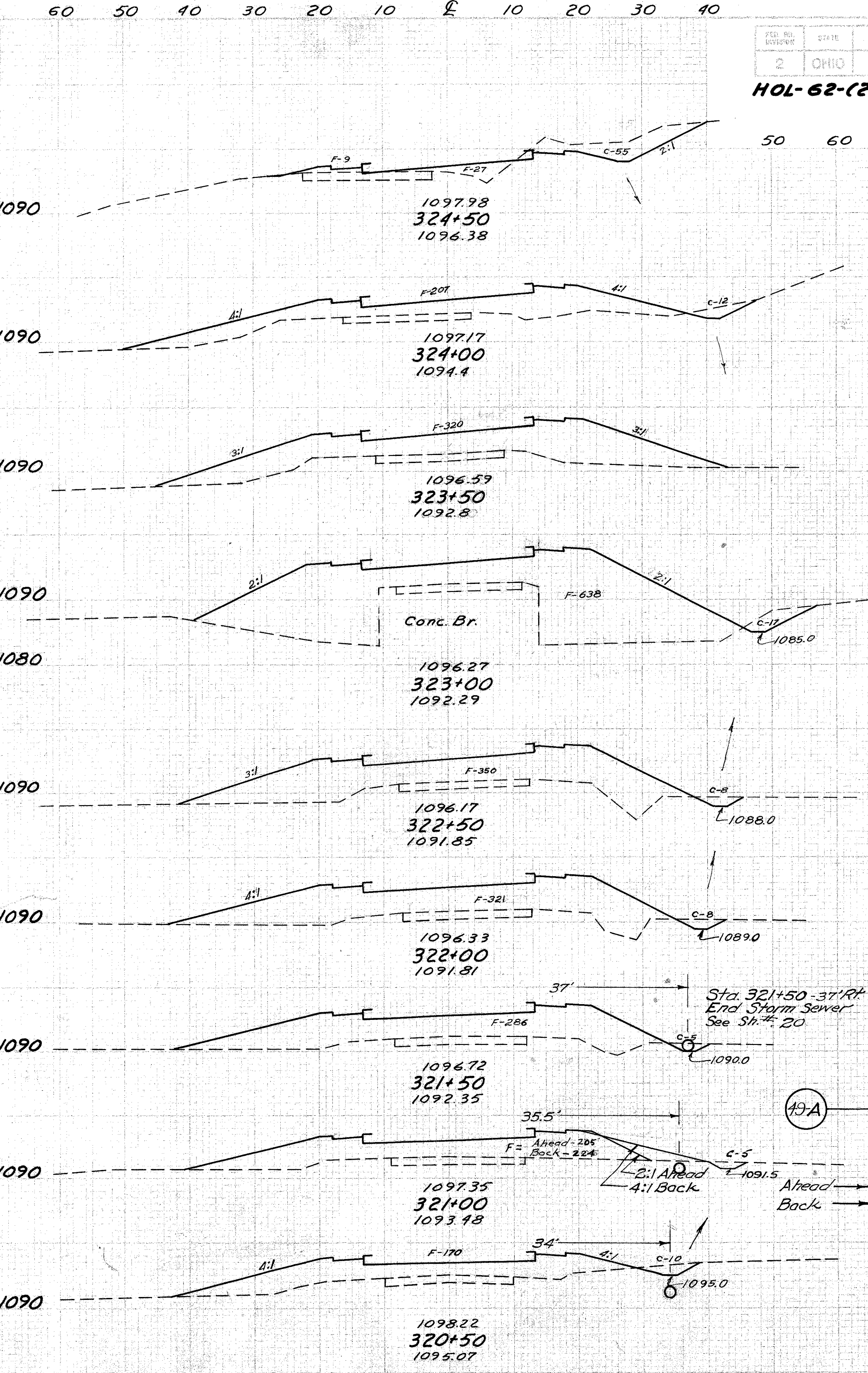


Station	Seeding End Area Cu. Yds.				
	Width	S.Y.	Cut	Fill	Exc. Emb.
315+50	478			878	0
315+50	88			498	0
315+50	508			864	0
315+00	95			535	0
315+00	500			869	0
314+50	85			403	0
314+50	408			507	4
314+00	62			145	4
313+50	339			169	55
313+50	60			38	55
313+00	367			47	167
313+00	72			13	125
312+50	403			18	333
312+50	73			6	235
312+00	419			11	524
312+00	78			6	331
311+50	444			10	677
311+50	82			5	400

STA 307+50 TO STA 315+50



Seeding Width	End Area		Cu. Yds.	
	S.Y.	Cut	Fill	Exc. Emb.
328			15	221
51	6	69		
256			27	81
41	23	18		
286			155	17
62	144	0		13
342			20	51
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	End Area		Cu. Yds.	
	S.Y.	Cut	Fill	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		
356			5	455
58	0	205		
73	5	224		
389			14	365
67	10	170		

64
128
HOL-62-(21.08-21.51)

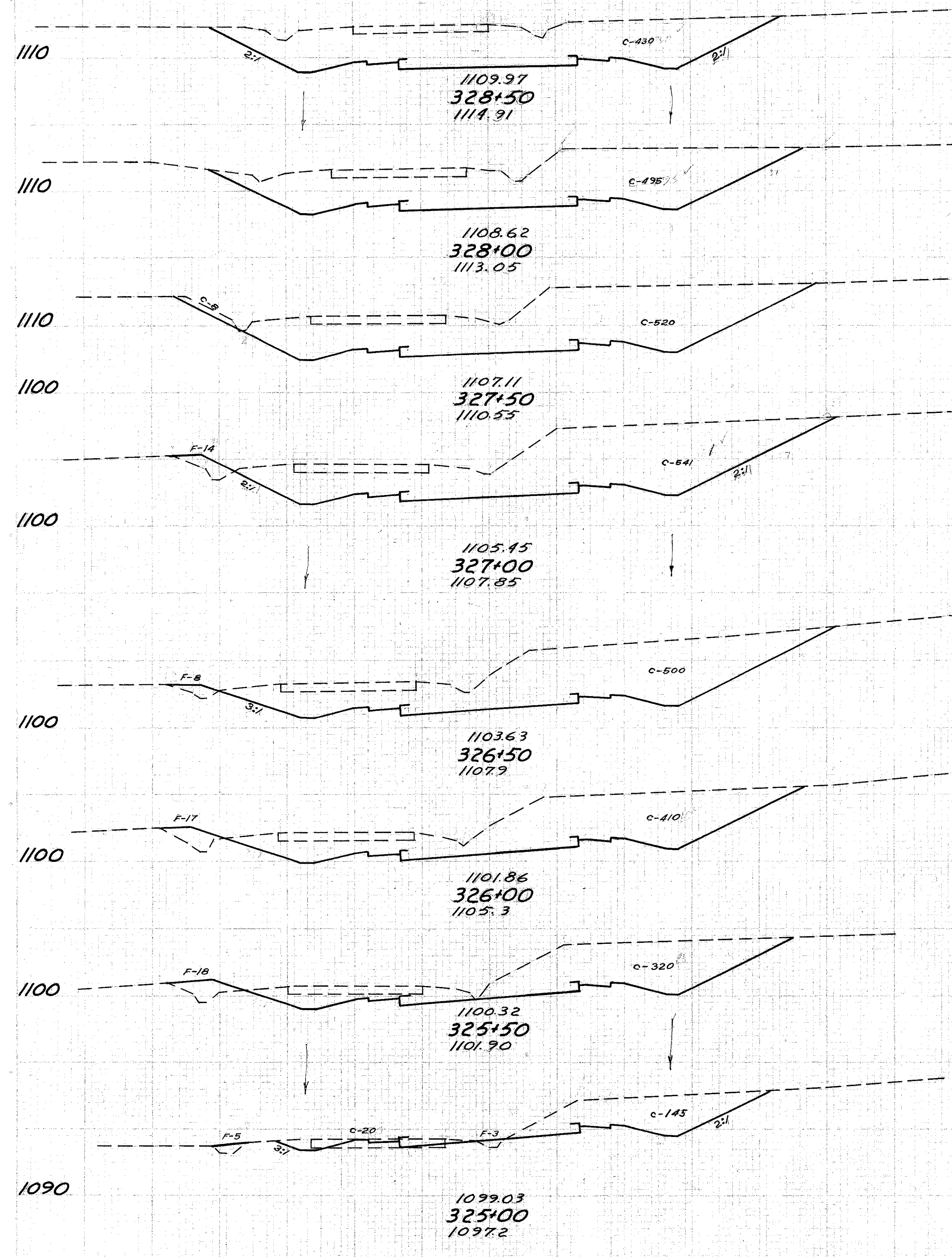
STA. 316+00 TO STA. 324+50

60 50 40 30 20 10 £ 10 20 30 40 50 60

60 50 40 30 20 10 £ 10 20 30 40

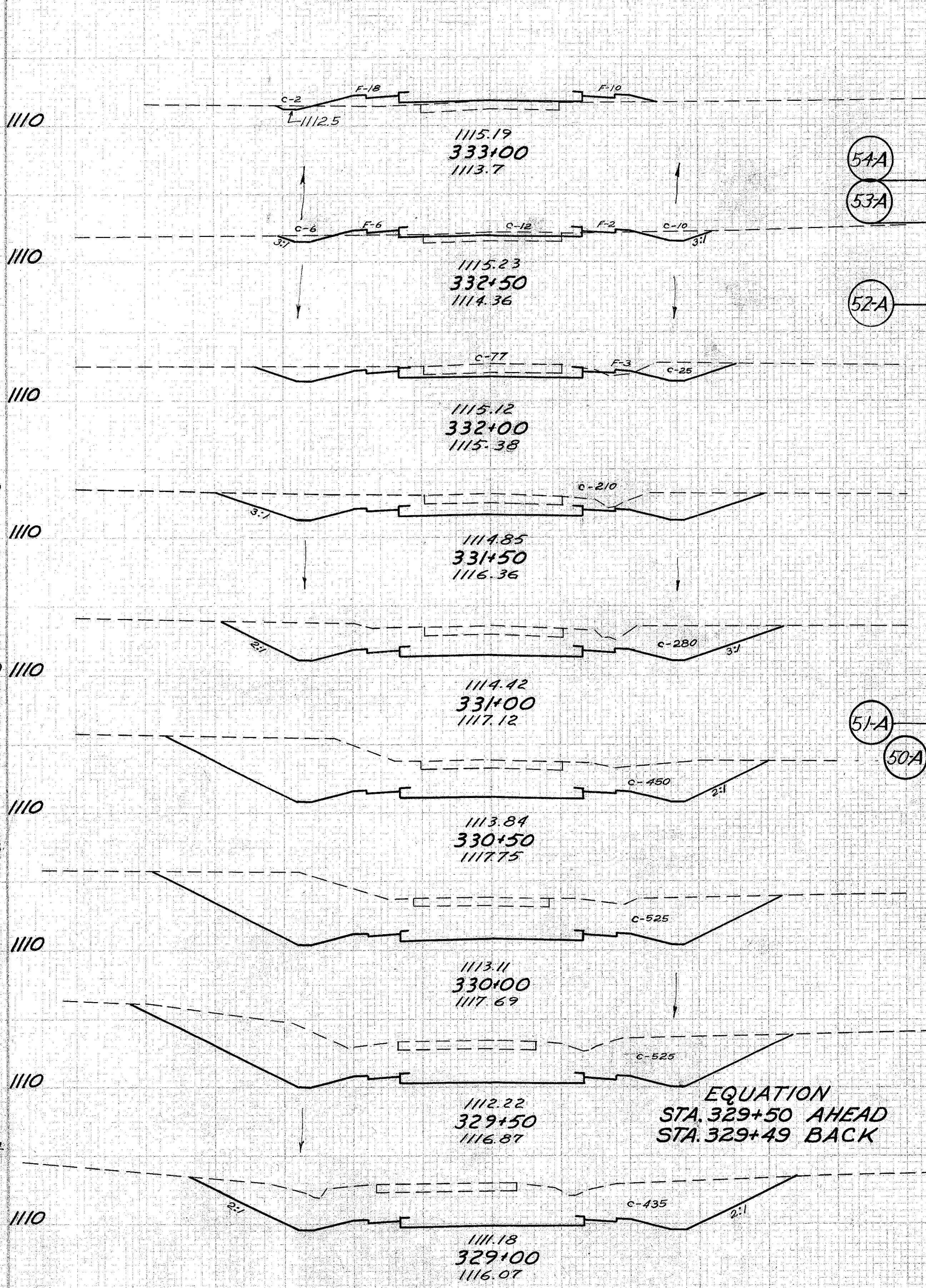
HOL-62-(21.08-21.51)

50 60



Seeding	End Area	Cu. Yds.
Width 5-Y.	Cut	Fill 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

Seeding	End Area	Cu. Yds.
Width 5-Y.	Cut	Fill Exc. Emb.
244		5 100
39	2 28	
239		28 33
47	28 8	
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	



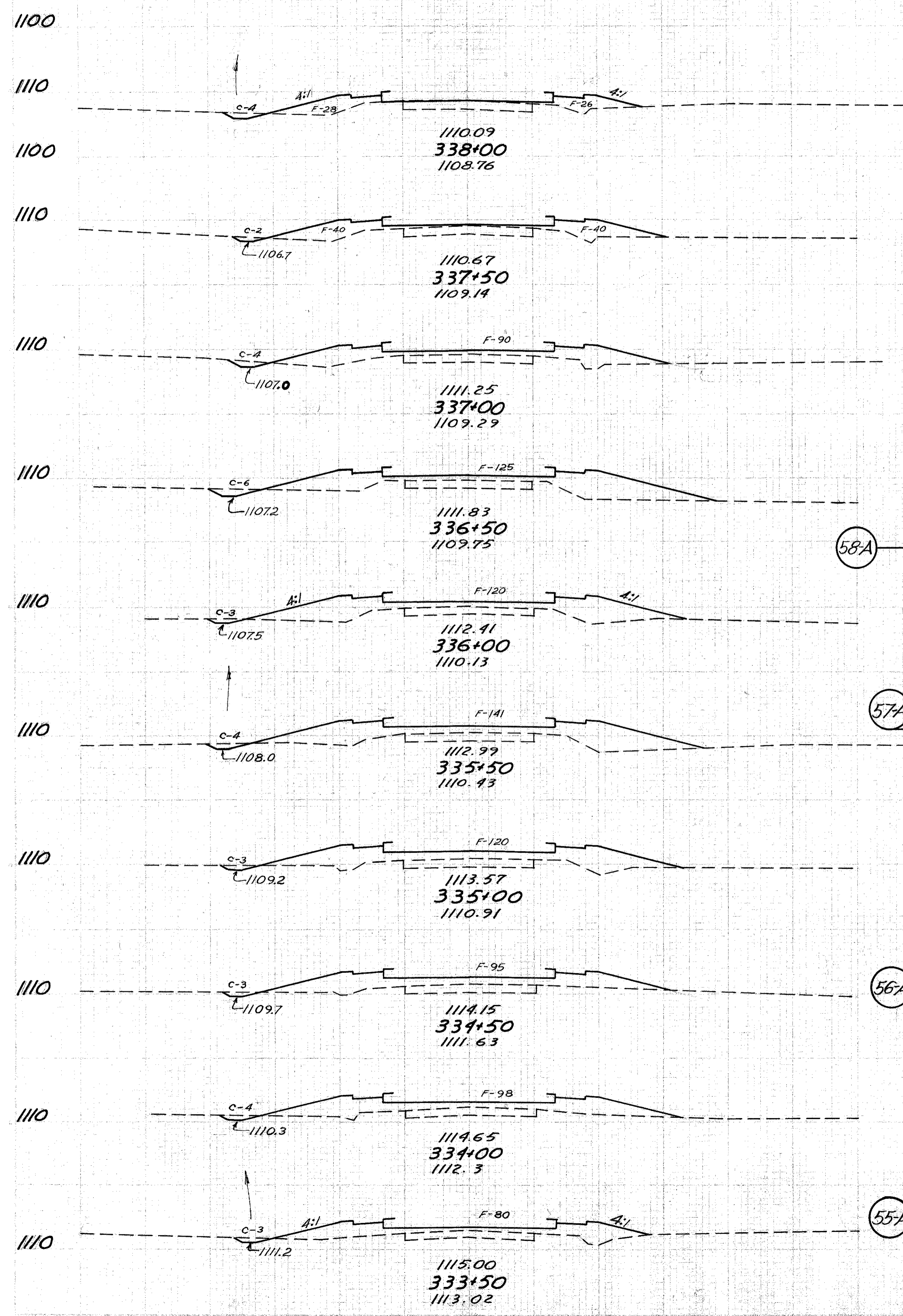
EQUATION
STA. 329+50 AHEAD
STA. 329+49 BACK

STA. 325+00 TO STA. 333+00

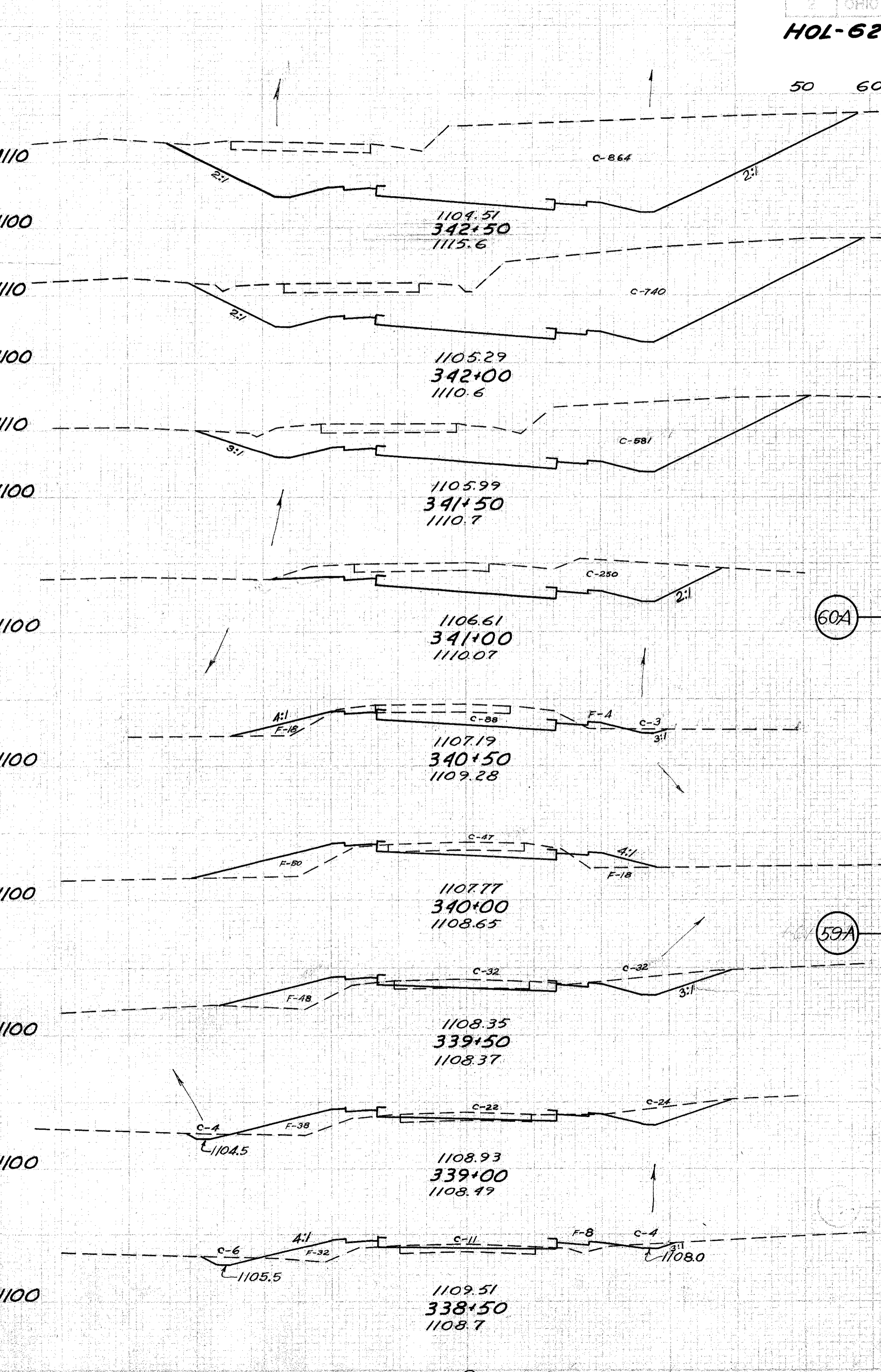
60 50 40 30 20 10 £ 10 20 30 40 50 60

60 50 40 30 20 10 £ 10 20 30 40

HOL-62-(21.08-21.51)



Seeding	End Area	Cu. Yds.
Width S.Y.	Cut	Fill 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

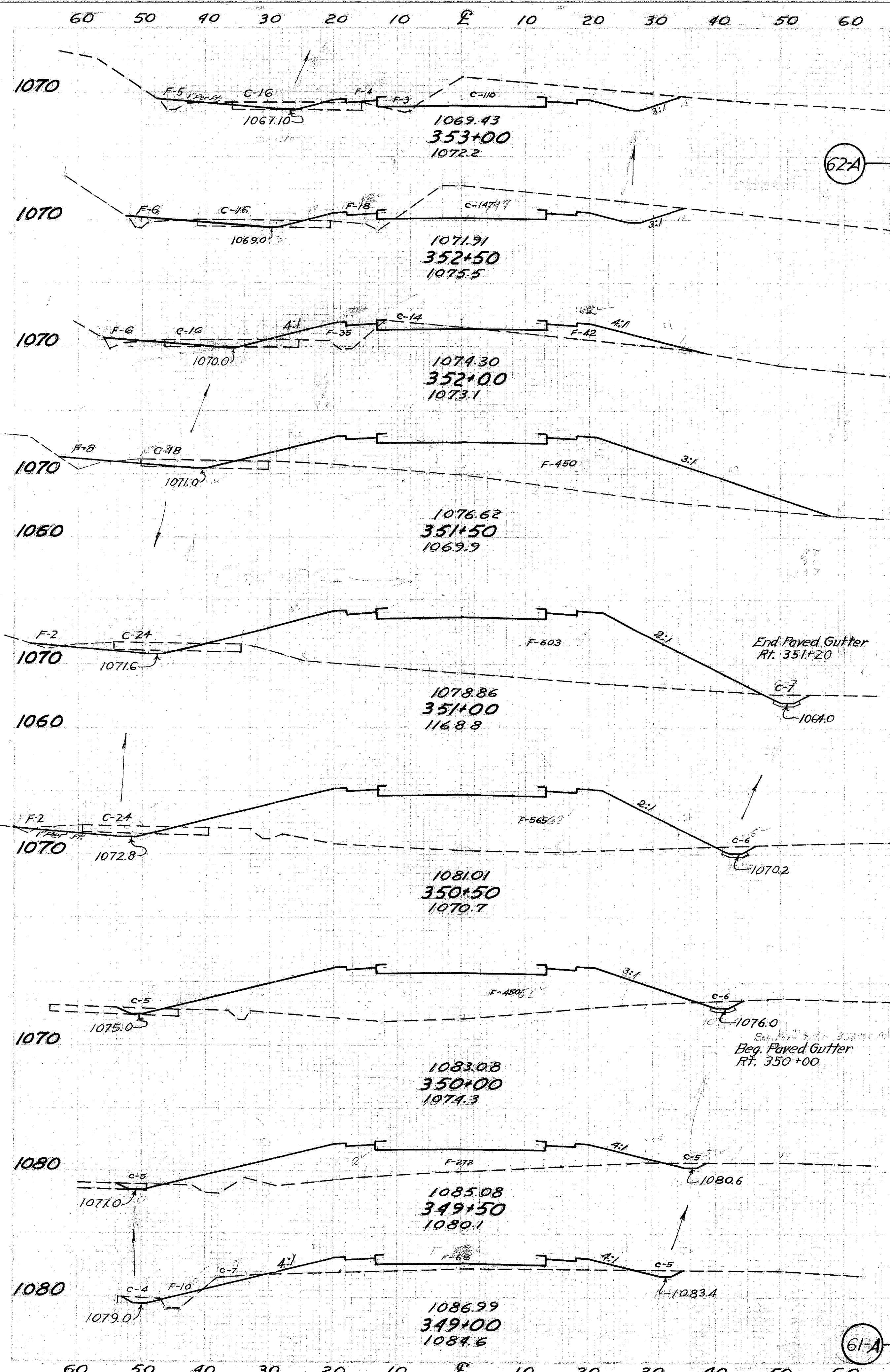


Seeding	End Area	Cu. Yds.
Width S.Y.	Cut	Fill Exc. Emb.
569		1885 17
93		864 0
508		1485 0
90		740 0
469		1223 0
79		581 0
372		769 0
55		250 0
286		316 20
48		91 22
283		128 83
54		47 68
319		103 107
61		64 48
356		106 80
67		50 38
339		66 72
55		21 40

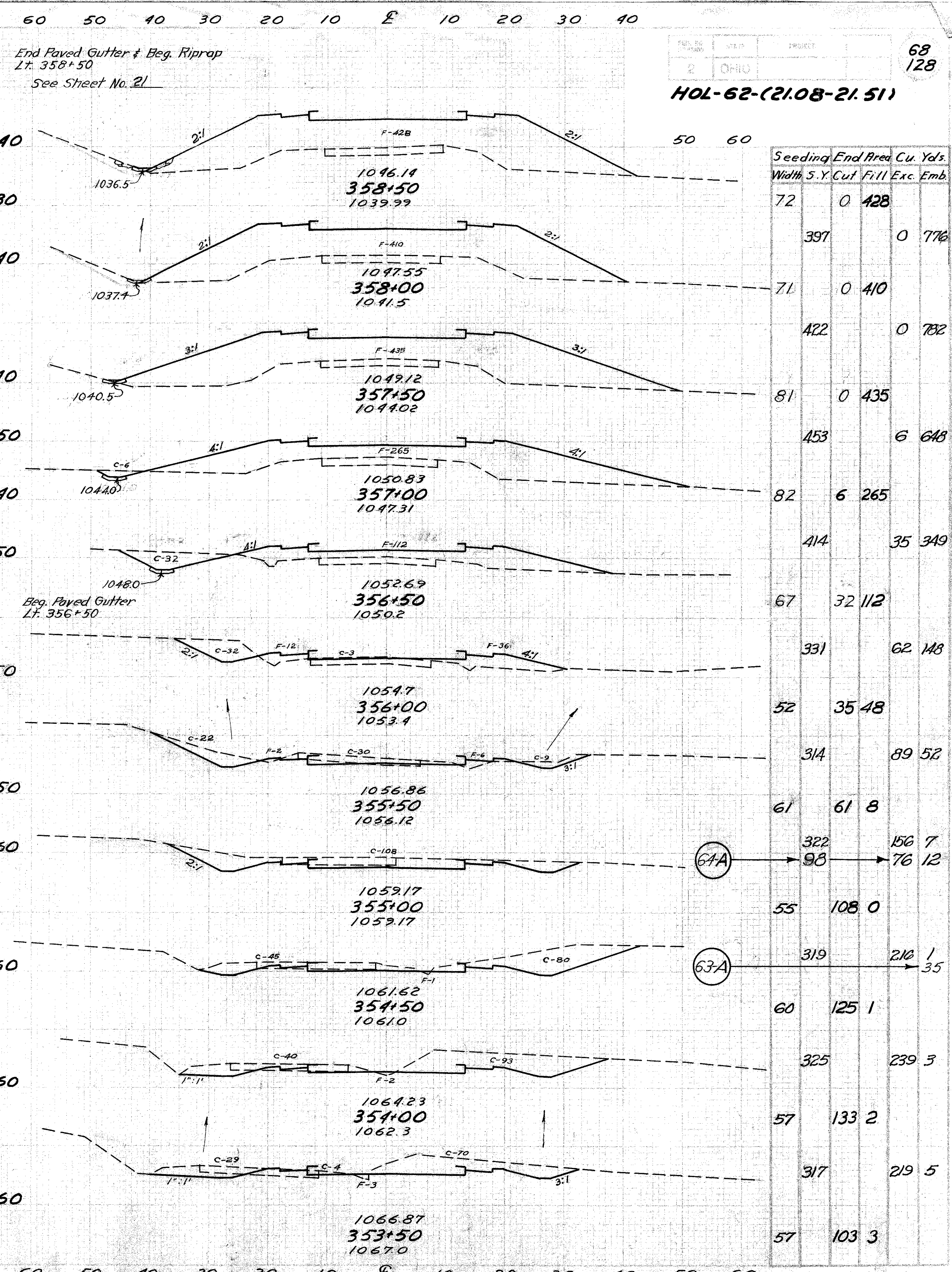
60 50 40 30 20 10 £ 10 20 30 40 50 60

60 50 40 30 20 10 £ 10 20 30 40 50 60

STA. 333+50 TO STA. 342+50



Station	Seeding		End Area		Cu. Yds.	
	Width	S. Y.	Cut	Fill	Exc.	Emb.
1070	344		212	14		
1070	67	126	12			
1070	100		5	27		
1070	383		268	33		
1070	71	163	24			
1070	419		179	99		
1070	80	30	83			
1070	519		44	501		
1060	107	18	458			
1070	597		45	984		
1060	108	31	605			
1070	575		56	1085		
1070	39	30	567			
1070	503		38	942		
1070	82	11	450			
1080	444		19	669		
1080	78	10	272			
1080	422		24	324		
1080	74	16	78			



Station	Seeding		End Area		Cu. Yds.	
	Width	S. Y.	Cut	Fill	Exc.	Emb.
1040	72	0	428			
1040	397		0	776		
1040	71	0	410			
1040	422		0	782		
1040	81	0	435			
1050	453		6	648		
1040	82	6	265			
1050	414		35	349		
1050	67	32	112			
1050	331		62	148		
1050	52	35	48			
1050	314		89	52		
1050	61	61	8			
1060	322		156	7		
1060	98		76	12		
1060	55	108	0			
1060	319		216	1		
1060	60	125	1			
1060	325		239	3		
1060	57	133	2			
1060	317		219	5		
1060	57	103	3			

68
128
HOL-62-(21.08-21.51)

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

End Paved Gutter
Rt. 351+20

Beg. Paved Gutter
Lt. 356+50

Beg. Paved Gutter
Rt. 350+00

61-A

61-A

63-A

62-A

50 60

61-A

61-A

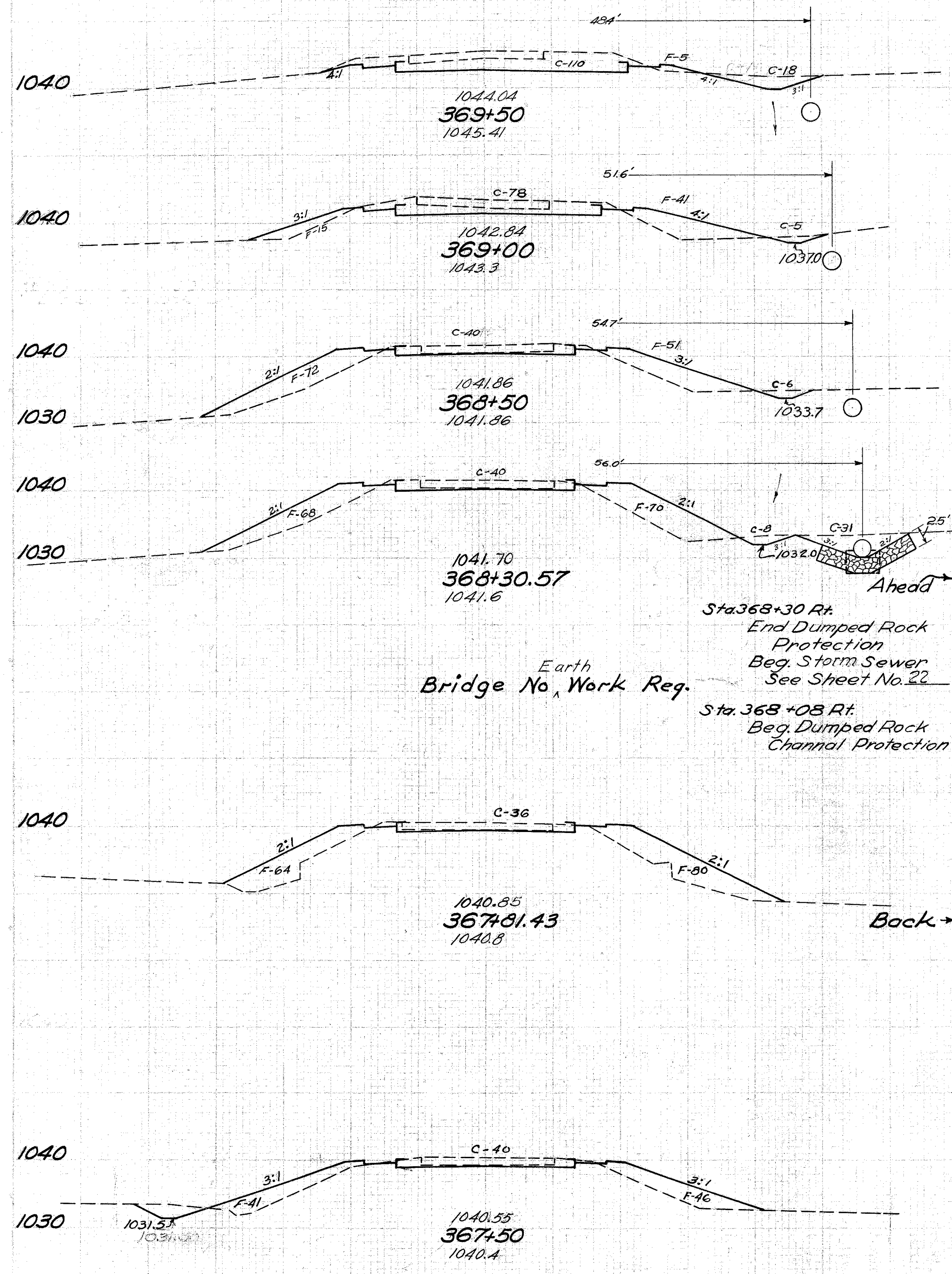
63-A

60 50 40 30 20 10 0 10 20 30 40 50 60

60 50 40 30 20 10 0 10 20 30 40

10 20 30 40

Seeding Width	End Area S.Y.	Cut	Fill	Cu. Yds. Exc.	Yds. Emb.
317				308	5

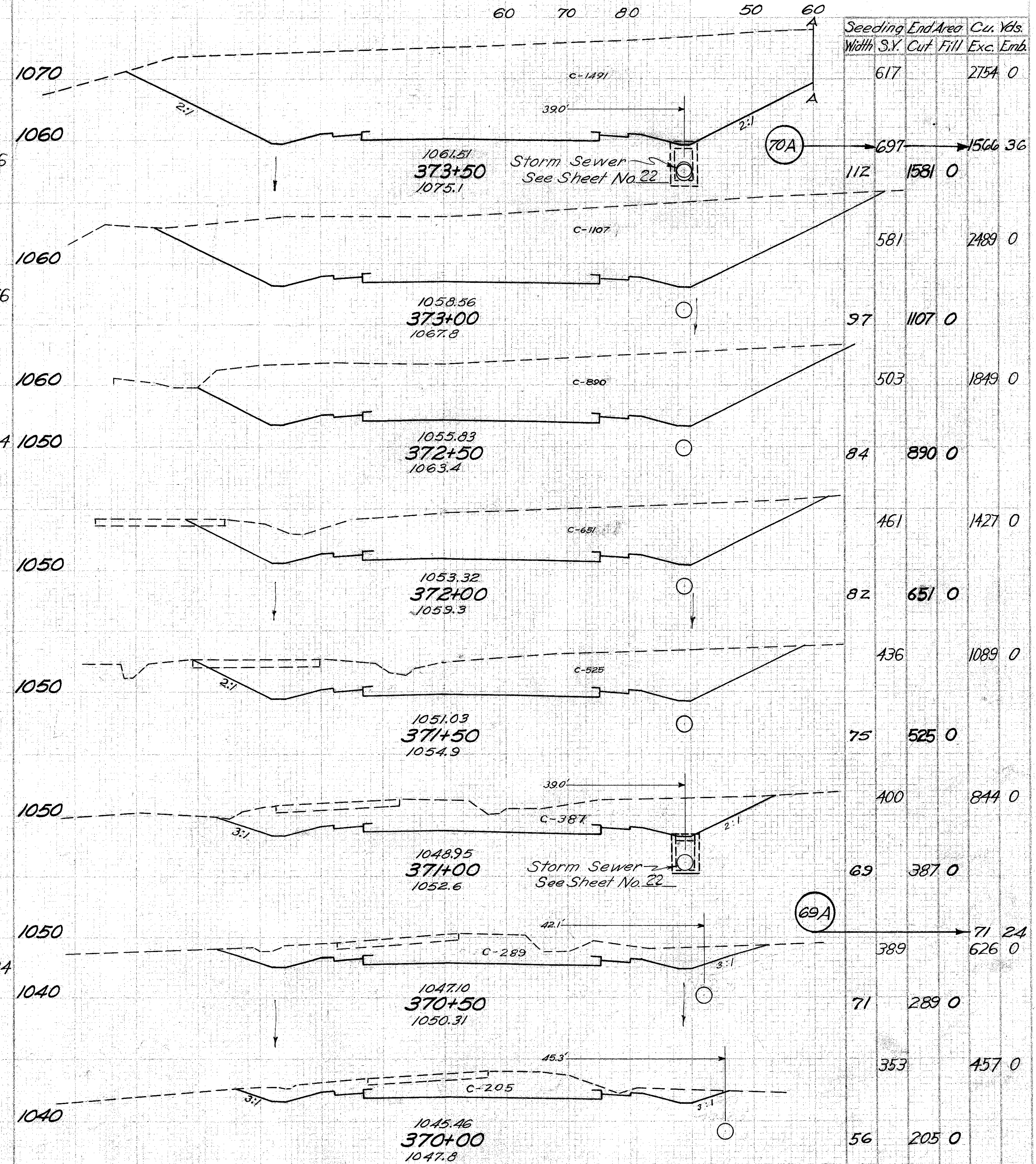


58	128	5
347	195	56
67	83	56
403	119	166
73	46	123
166	45	94
79	138	
36	144	
244	44	134
68	40	87

Earth
 Bridge No. Work Req.

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

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



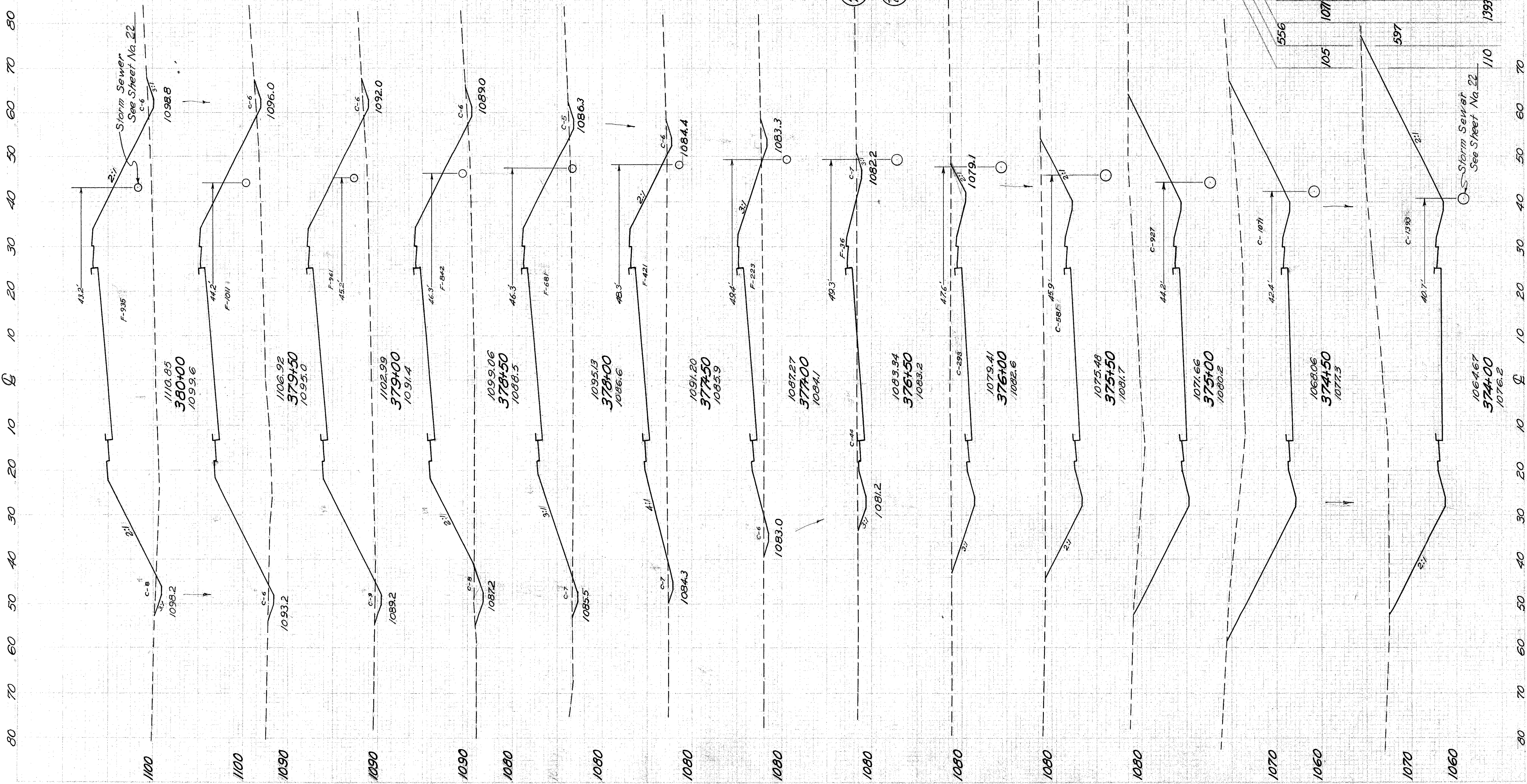
617	2754	0
697	1566	36
112	1581	0
581	2489	0
97	1107	0
503	1849	0
84	890	0
461	1427	0
82	651	0
436	1089	0
75	525	0
400	844	0
69	387	0
389	71	24
71	289	0
353	457	0
56	205	0

60 50 40 30 20 10 0 10 20 30 40 50 60

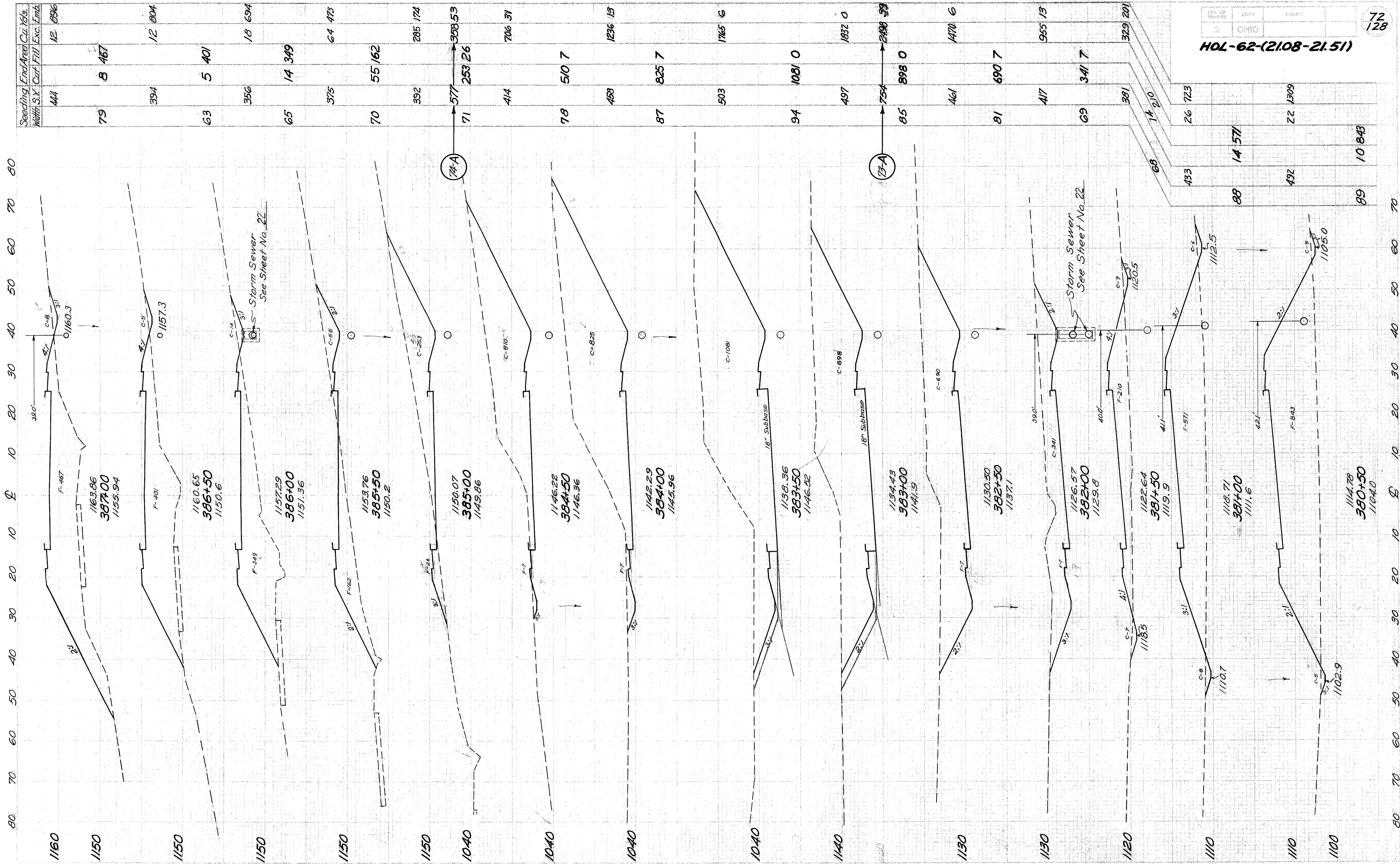
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10 20 30 40

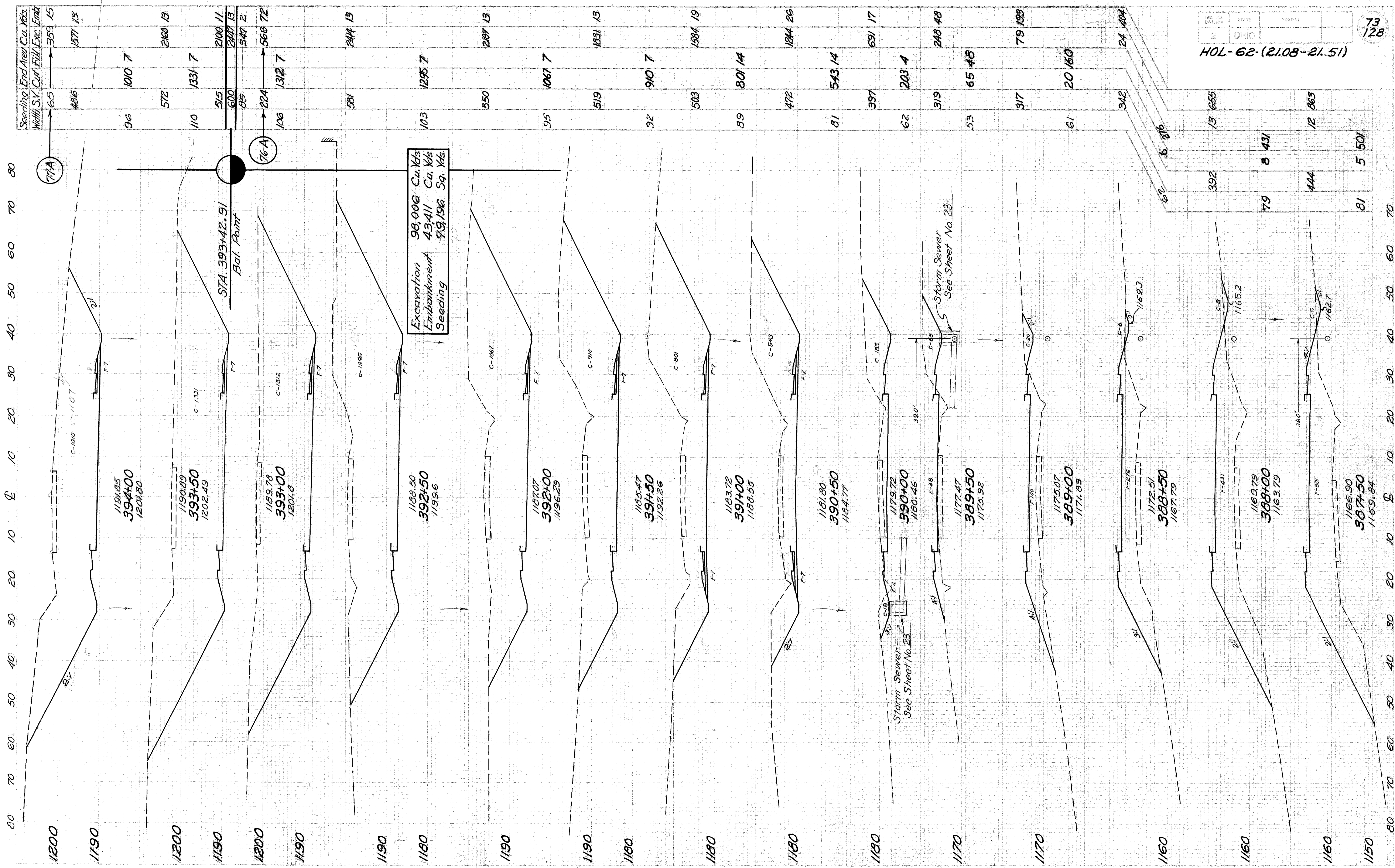
Seeding	End Area	Cur. Vols.
Width S.Y.	Cur. Fill	Exc. Emb.
514		22
96	14 935	24
539		1802
98	12 1011	25
544		1826
98	15 961	27
522		1971
90	14 842	24
494		1410
88	12 681	23
469		1020
81	13 421	25
417		596
69	14 223	60
347		240
71-A		28
72-A		20
56	51 36	319
333		333
64	293 0	293 0
386		809 0
75	581 0	581 0
472		1996 0
95	927 0	927 0



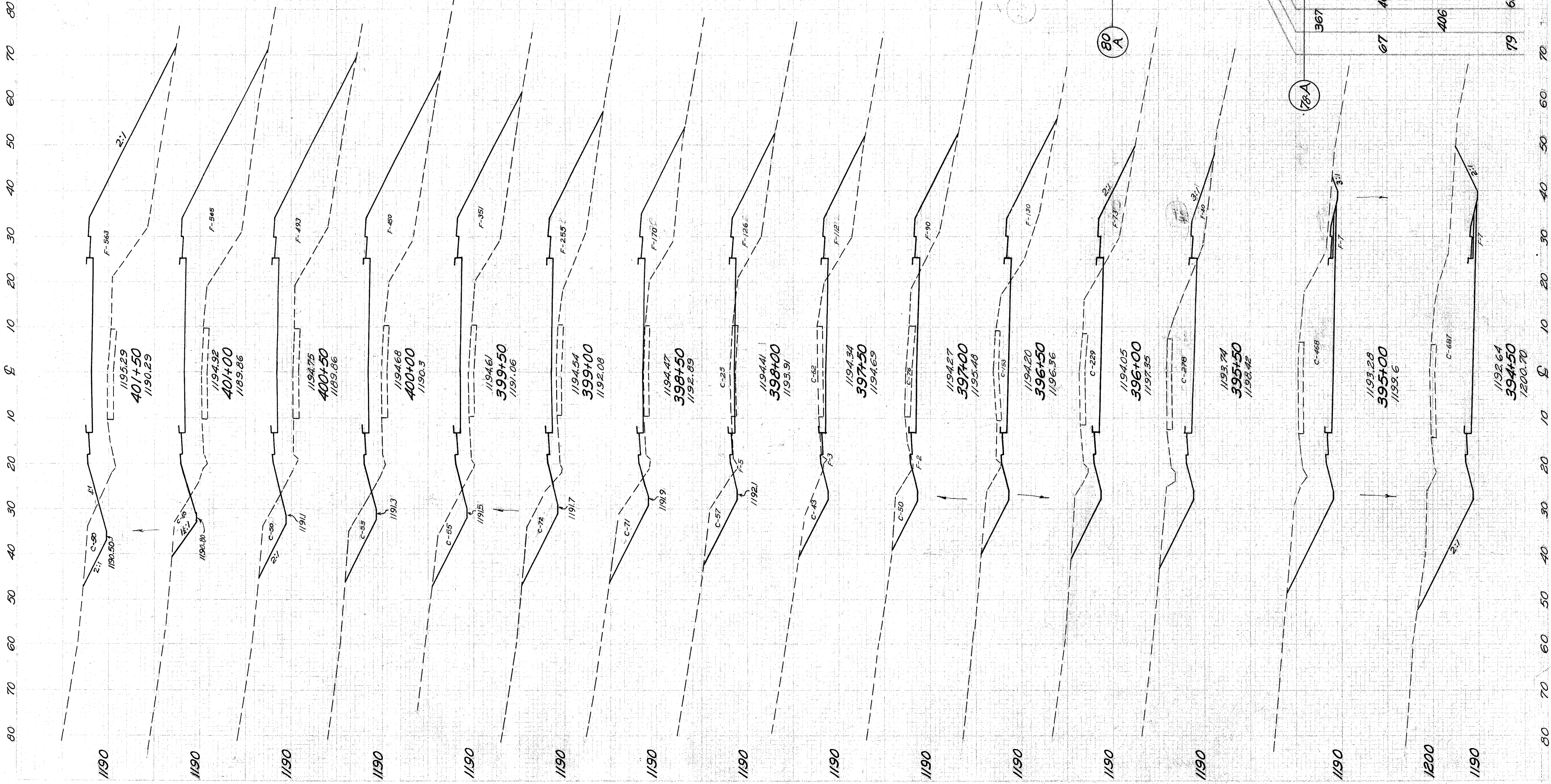
STA. 374+00 TO STA. 380+00



STA. 380+50 TO STA. 387+00



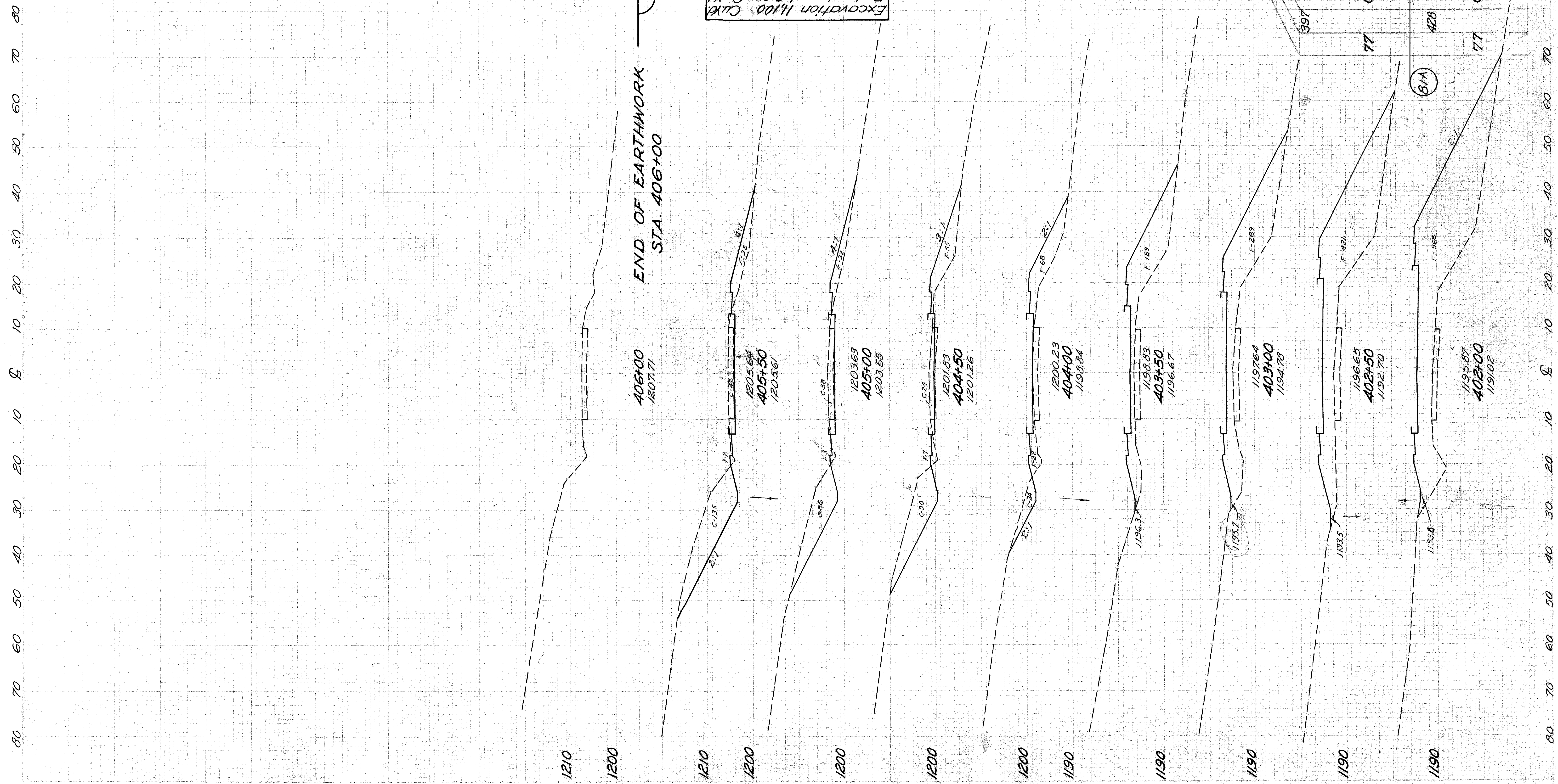
STA. 387+50 TO STA. 394+00



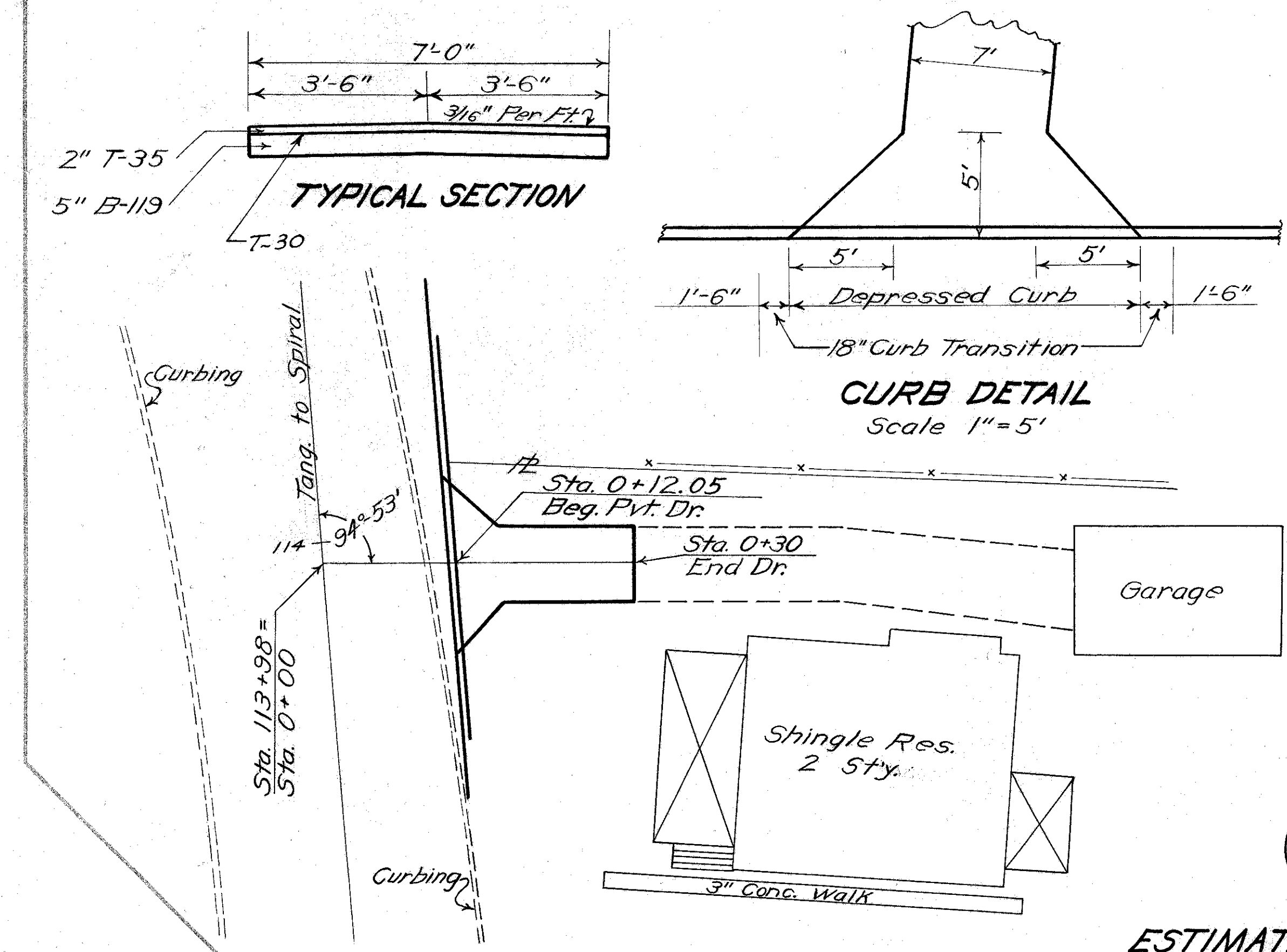
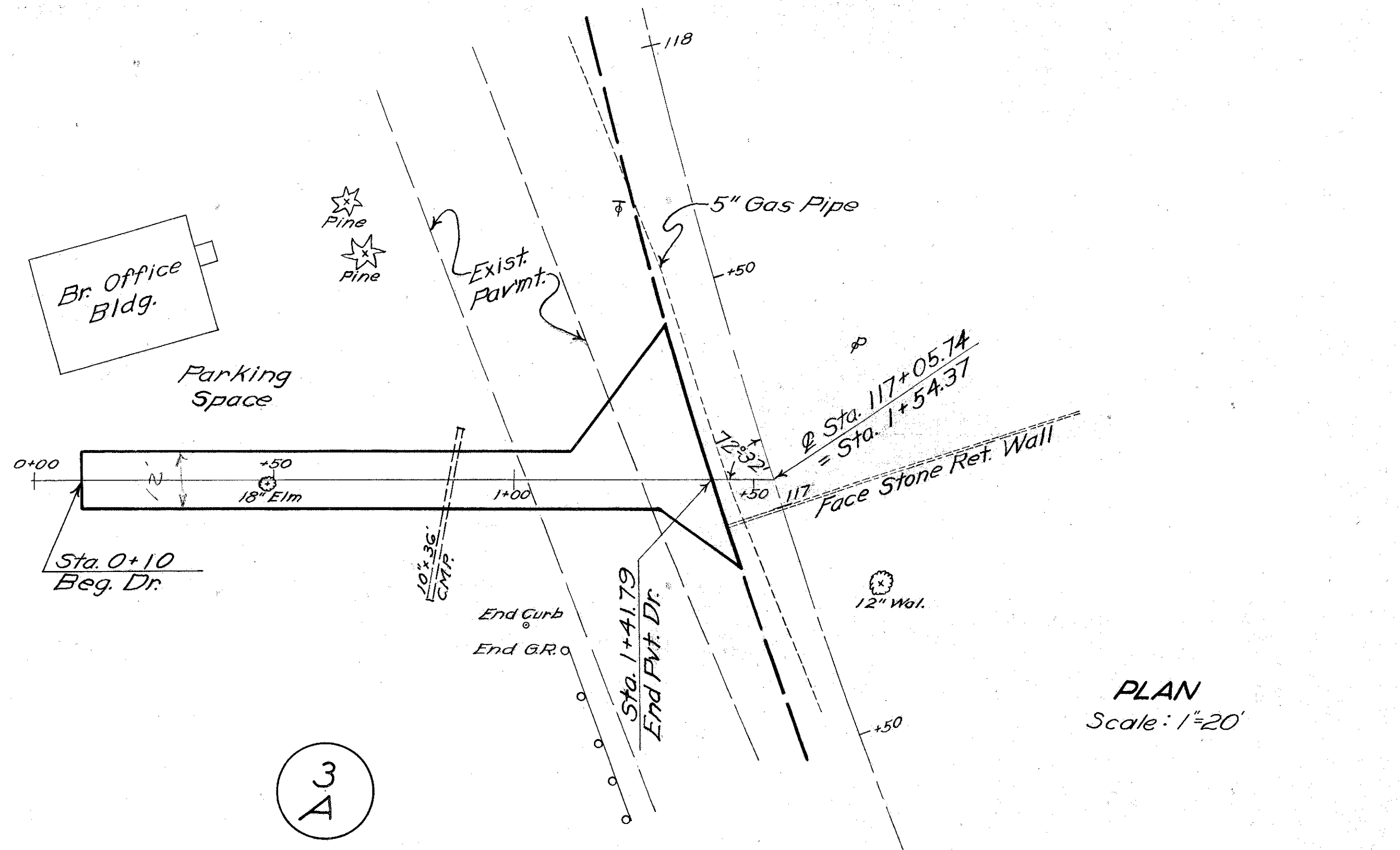
Station	Seeding	End Area	Exc. Yds.	Width	S.X. Cut	Fill	Exc. Emb.
394+50	483	46	1047				
395+50	97	50	563				
396+50	506	83	1044				
397+50	85	40	565				
398+50	494	83	980				
399+50	93	50	493				
400+50	486	97	873				
401+50	82	55	450				
402+50	444	102	742				
403+50	78	55	351				
404+50	425	118	561				
405+50	75	72	255				
406+50	411	132	394				
407+50	73	71	170				
408+50	400	142	279				
409+50	71	82	131				
410+50	386	173	228				
411+50	68	105	115				
412+50	375	214	192				
413+50	67	126	92				
414+50	386	258	206				
415+50	72	153	130				
416+50	386	354	188				
417+50	10	39	21				
418+50	67	228	73				
419+50	367	469	105				
420+50	65	278	40				
421+50	111	35					
422+50	367	69	44				
423+50	67	468	7				
424+50	406	977	13				
425+50	79	687	7				

STA. 394+50 TO STA. 401+50

Seeding End Area Cu. Yds.
 Width S.V. Cur. Fill Exc. Emb.



STA. 402+00 TO STA. 406+00



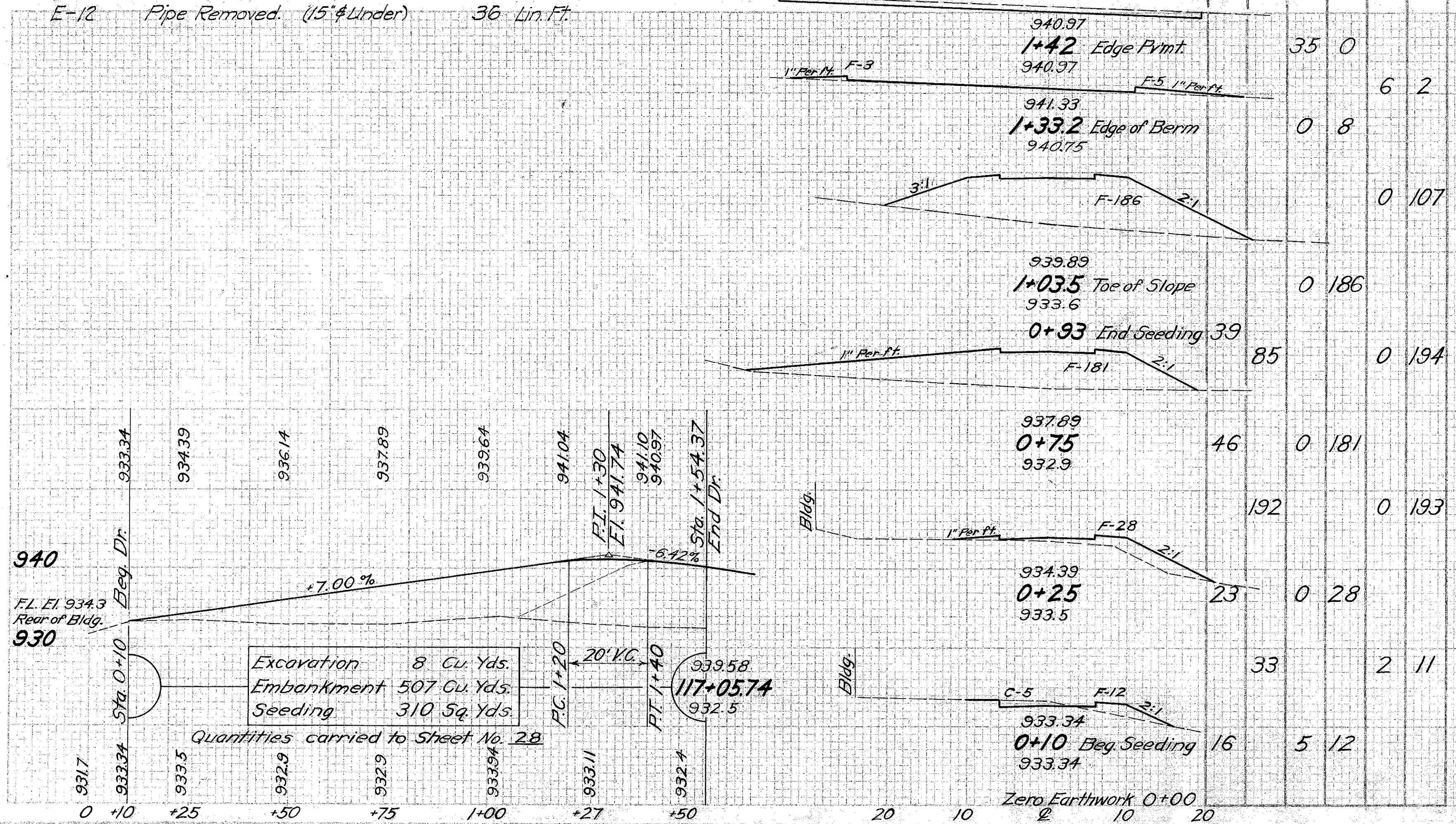
ESTIMATED QUANTITIES

- 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" Under) 36 Lin. Ft.

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	End Area	Cu. Yds.
Width S.Y.	Cut	Fill Exc. Emb.



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

Excavation	Embankment	
	Area C.Y.	Area C.Y.
0+30 End Drive	4	0
0+17	2	0
0+12.01 Begin Drive	10	0

TYPE 2 PVT. DR. STA. 117+05.74 LT.

TYPE 2 MODIFIED PVT. DR. STA. 113+98 RT.

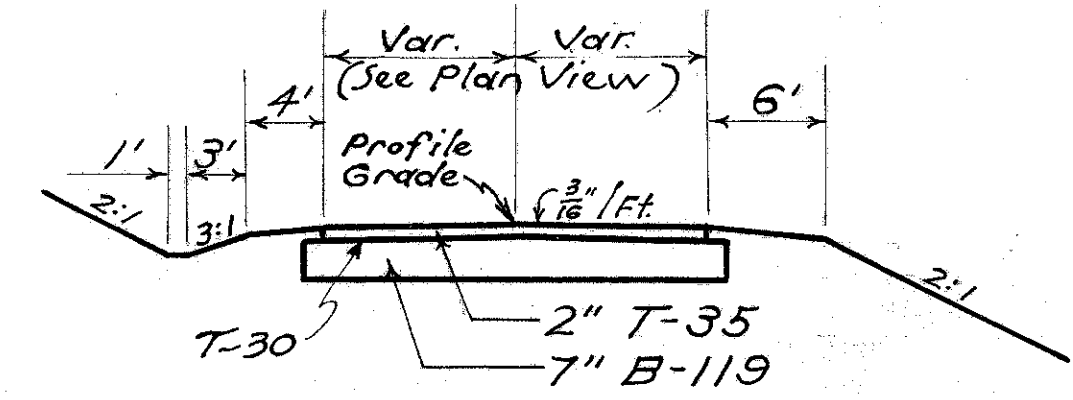
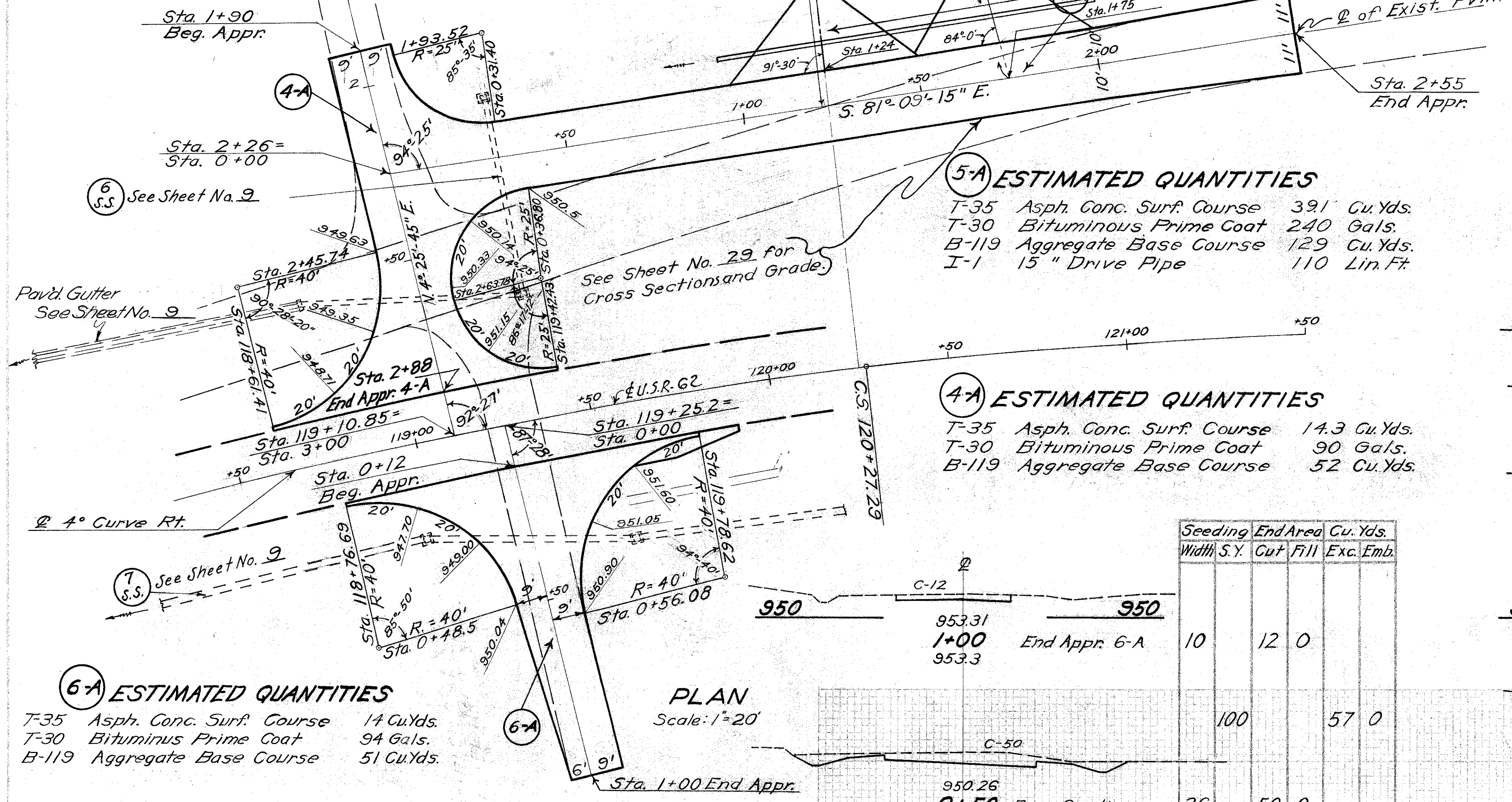
APPR. LT. STA. 119+10.85

ESTIMATED QUANTITIES

- Excav. = 22 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. = 19 Cu.Yds.
- T-35 = 4.6 Cu.Yds.
- B-119 = 10 Cu.Yds.
- T-30 = 22 Gals.



TYPICAL SECTION ROAD APPROACH

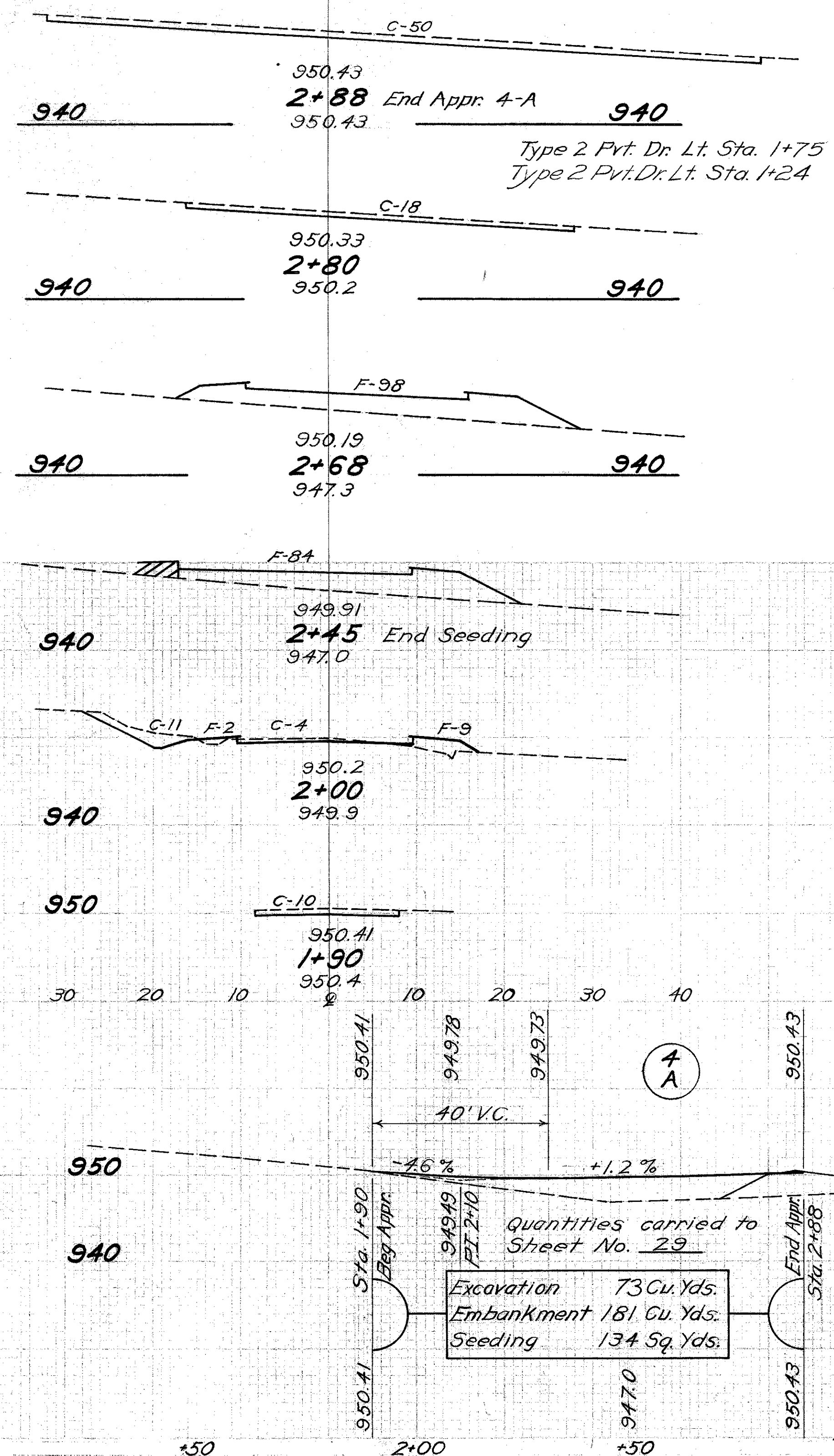
- 5-A ESTIMATED QUANTITIES**
- T-35 Asph. Conc. Surf. Course 391 Cu.Yds.
 - T-30 Bituminous Prime Coat 240 Gals.
 - B-119 Aggregate Base Course 129 Cu.Yds.
 - I-1 15" Drive Pipe 110 Lin.Ft.

- 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 14 Cu.Yds.
 - T-30 Bituminous Prime Coat 94 Gals.
 - B-119 Aggregate Base Course 51 Cu.Yds.

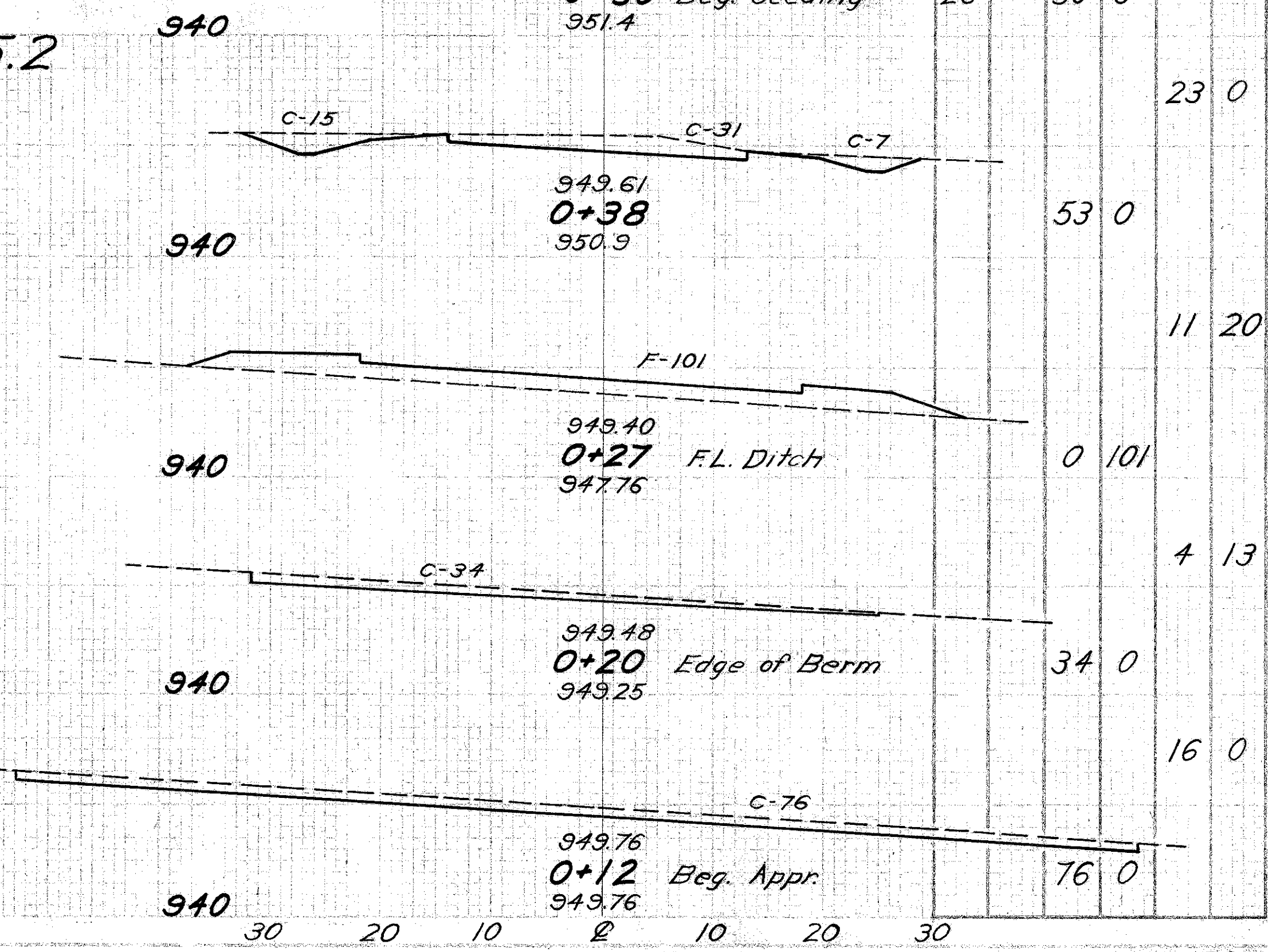
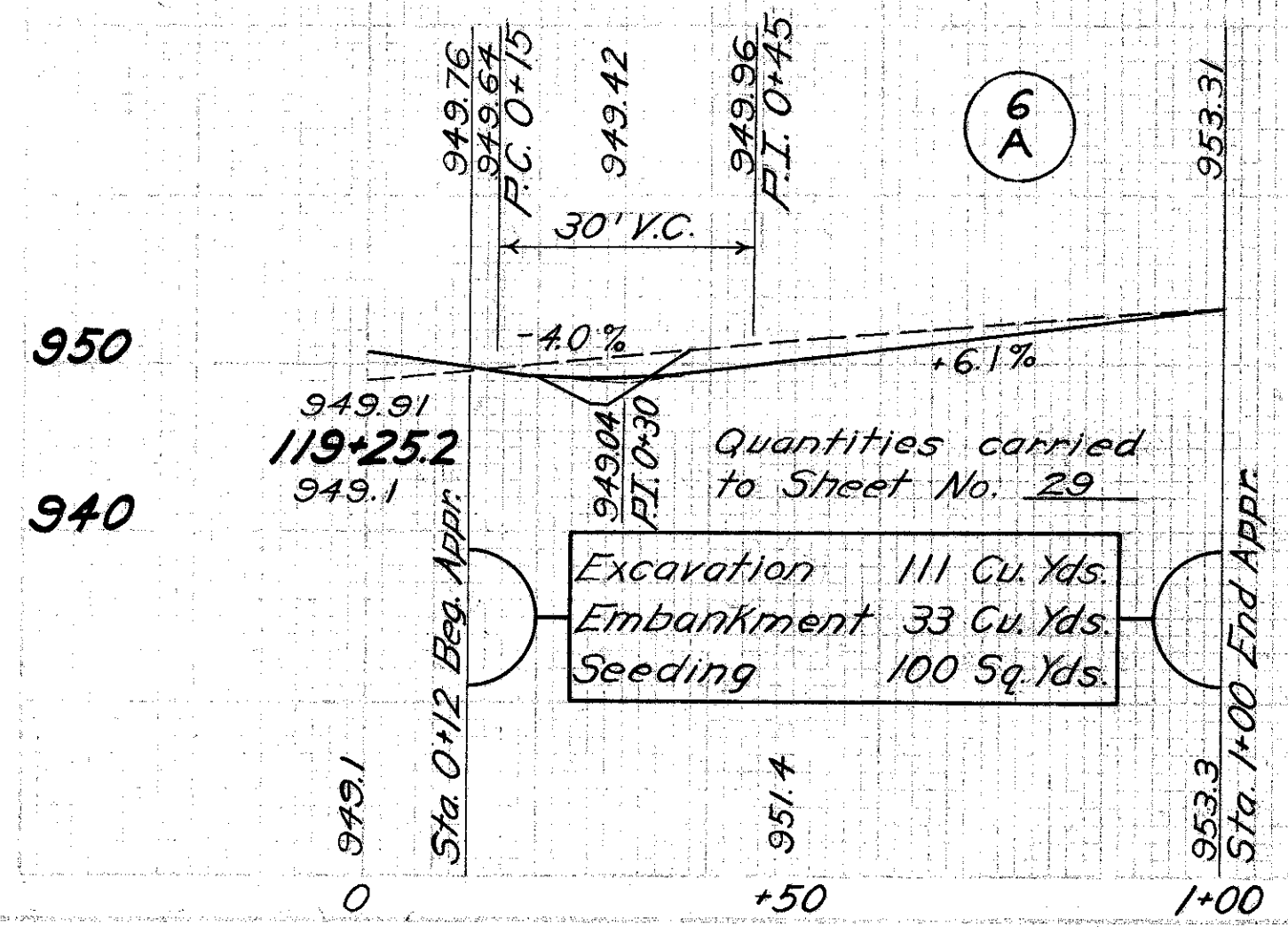
PLAN
Scale: 1"=20'

Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
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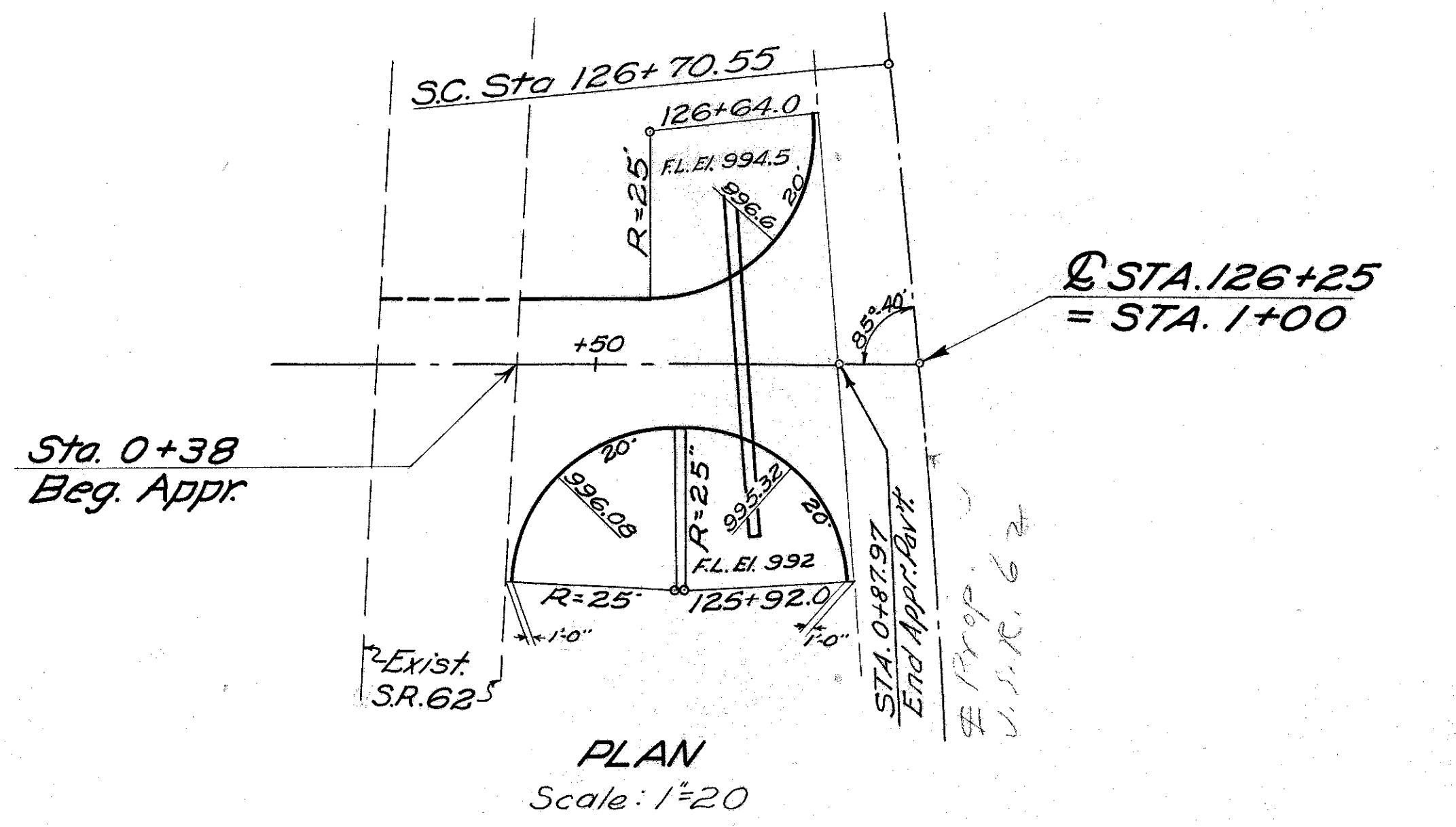
Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
940	950.43	2+88	940	50	0
940	950.43	940	19	0	22
940	950.33	2+80	940	18	0
940	950.2	940	10	0	4
940	950.19	2+68	940	0	98
940	947.3	940	0	78	0
940	949.91	2+45	940	15	0
940	947.0	End Seeding	113	13	79
940	950.2	2+00	940	30	15
940	949.9	940	21	5	2
950	950.41	1+90	940	8	10
940	950.4	940	10	0	0

APPR. RT. STA. 119+25.2



- Quantities carried to Sheet No. 29
- Excavation 73 Cu.Yds.
 - Embankment 181 Cu.Yds.
 - Seeding 134 Sq.Yds.

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



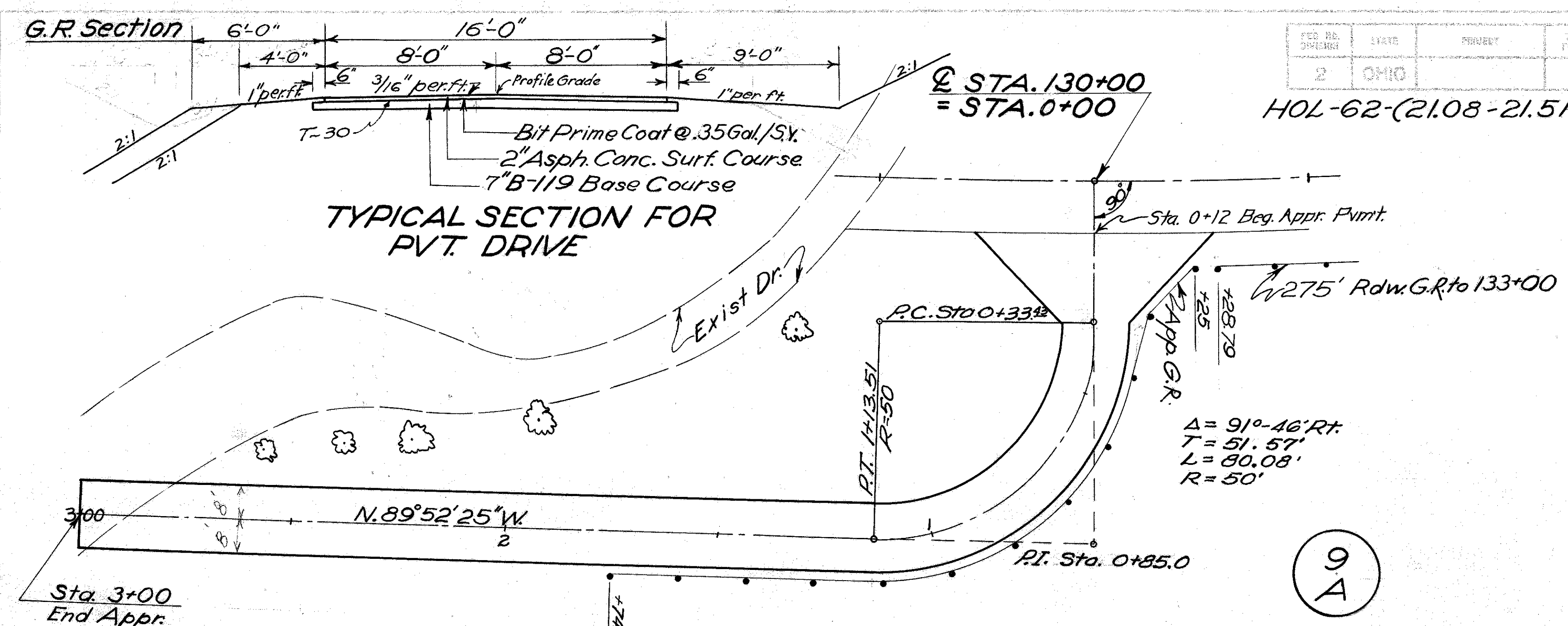
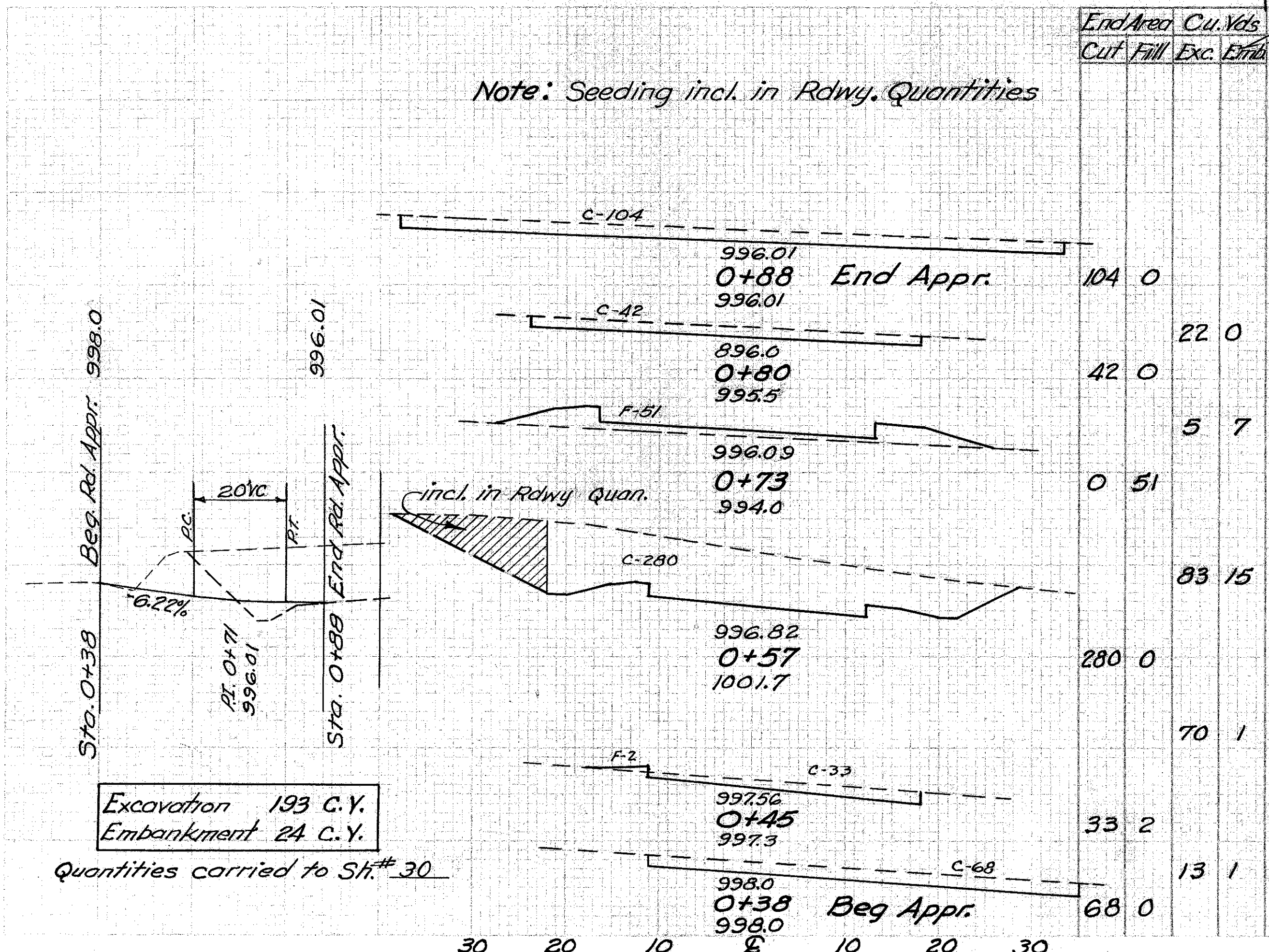
PLAN
Scale: 1"=20'

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



TYPICAL SECTION FOR P.V.T. DRIVE

PLAN
Scale: 1"=20'

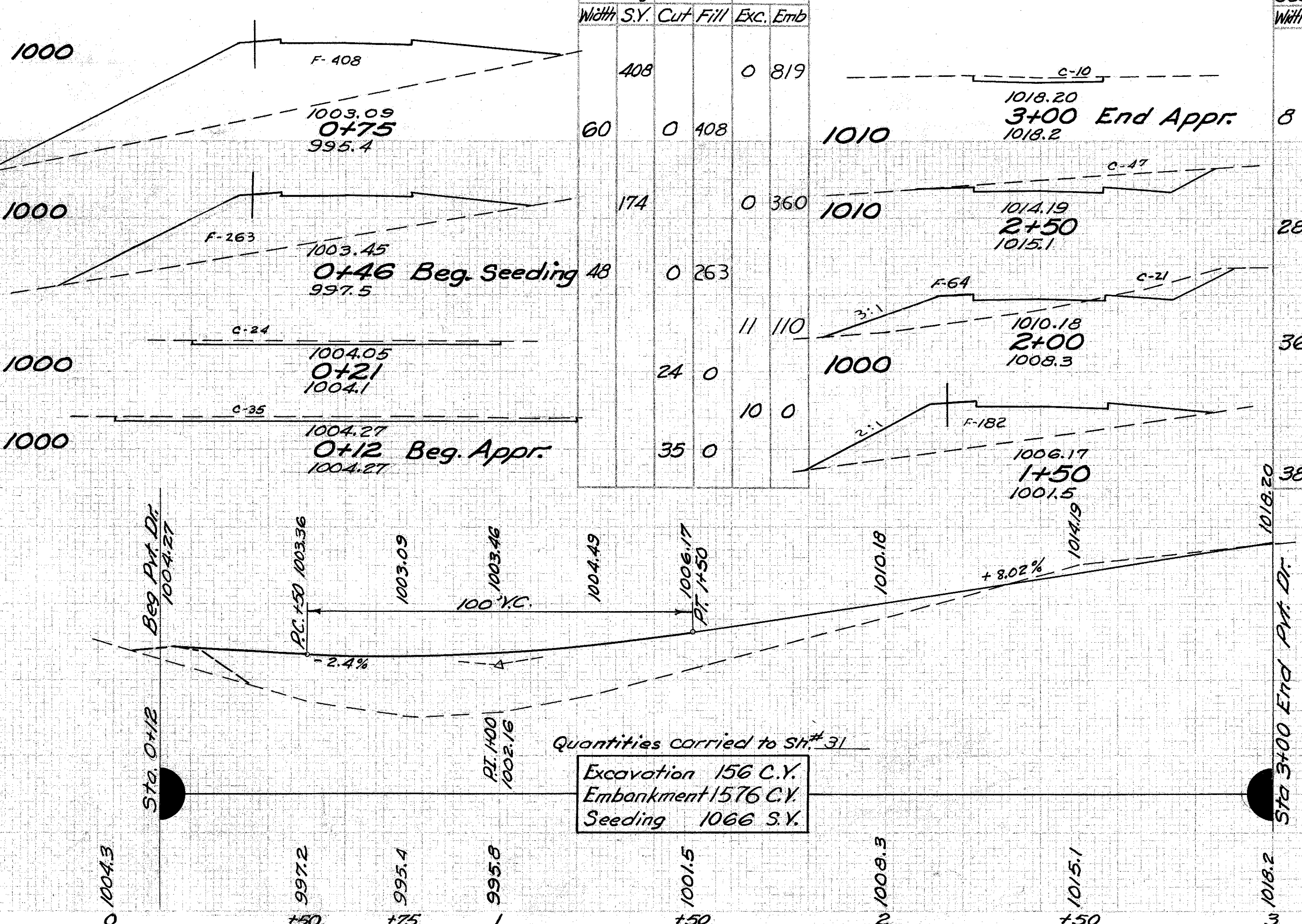
9
A

ESTIMATED QUANTITIES

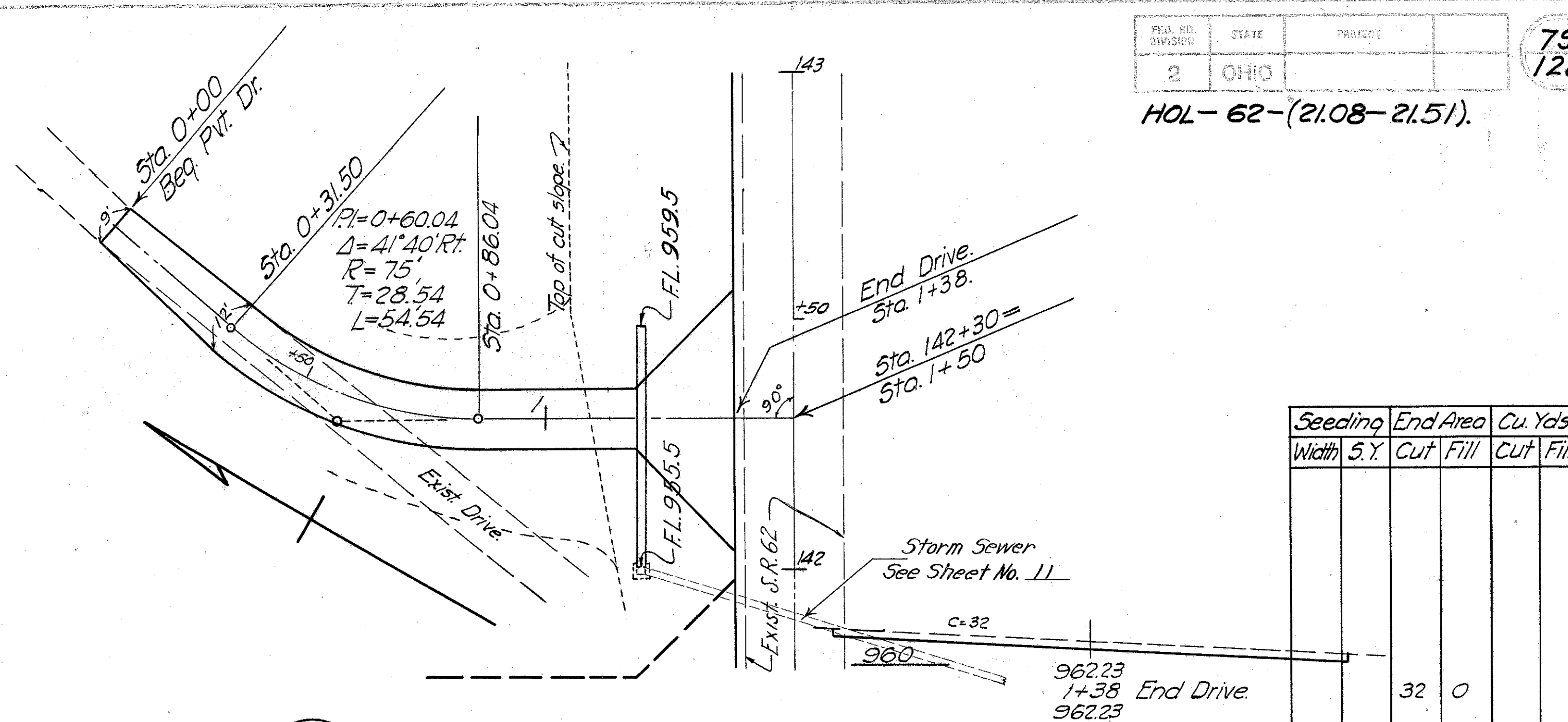
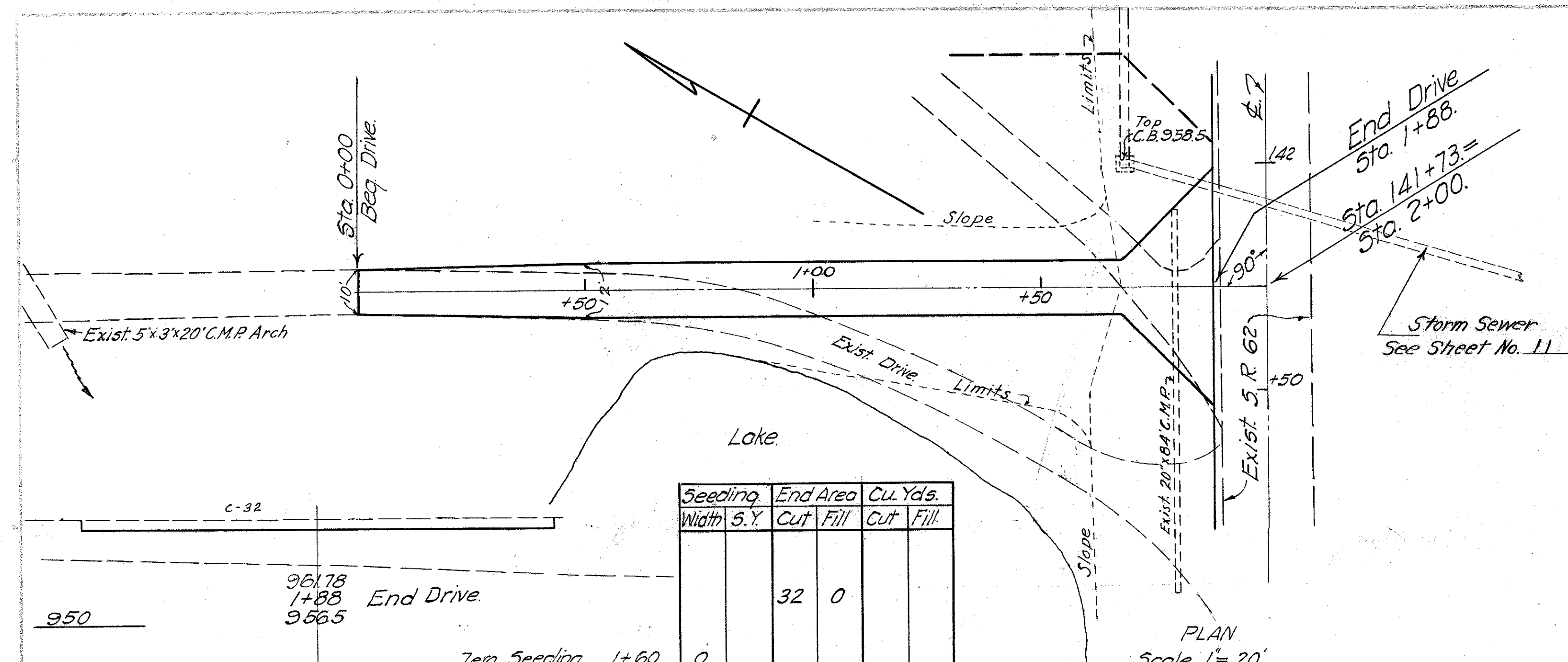
- T-35 - 2" Asphaltic Conc. Surf. Course 30.9 Cu. Yds.
- B-119 - 7" Crushed Agg. Base Course 11.5 Cu. Yds.
- T-30 - Bituminous Prime Coat 206 Gals.
- I-15 - Approach Guard Rail 176 Lin. Ft.

Seeding Width	End Area	Cu. Yds.
Width SY	Cut Fill	Exc. Emb
408	0	819
60	0	408
174	0	360
48	0	263
24	0	110
35	0	100

Seeding Width	End Area	Cu. Yds.
Width SY	Cut Fill	Exc. Emb
8	10	0
28	47	0
178	63	59
36	21	64
206	19	228
38	0	182



APPROACHERS: - STA 126+25 IT - STA 130+00 PT



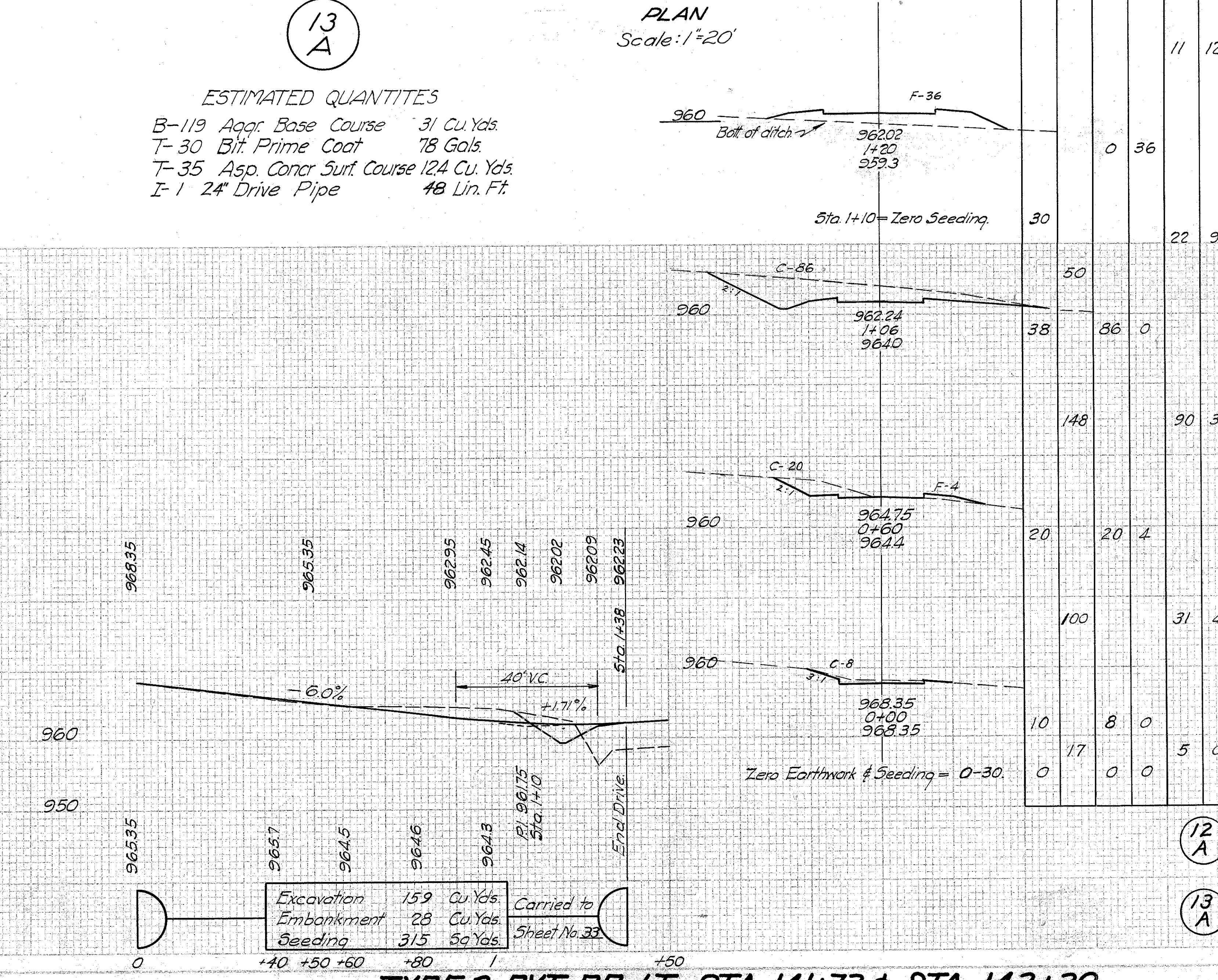
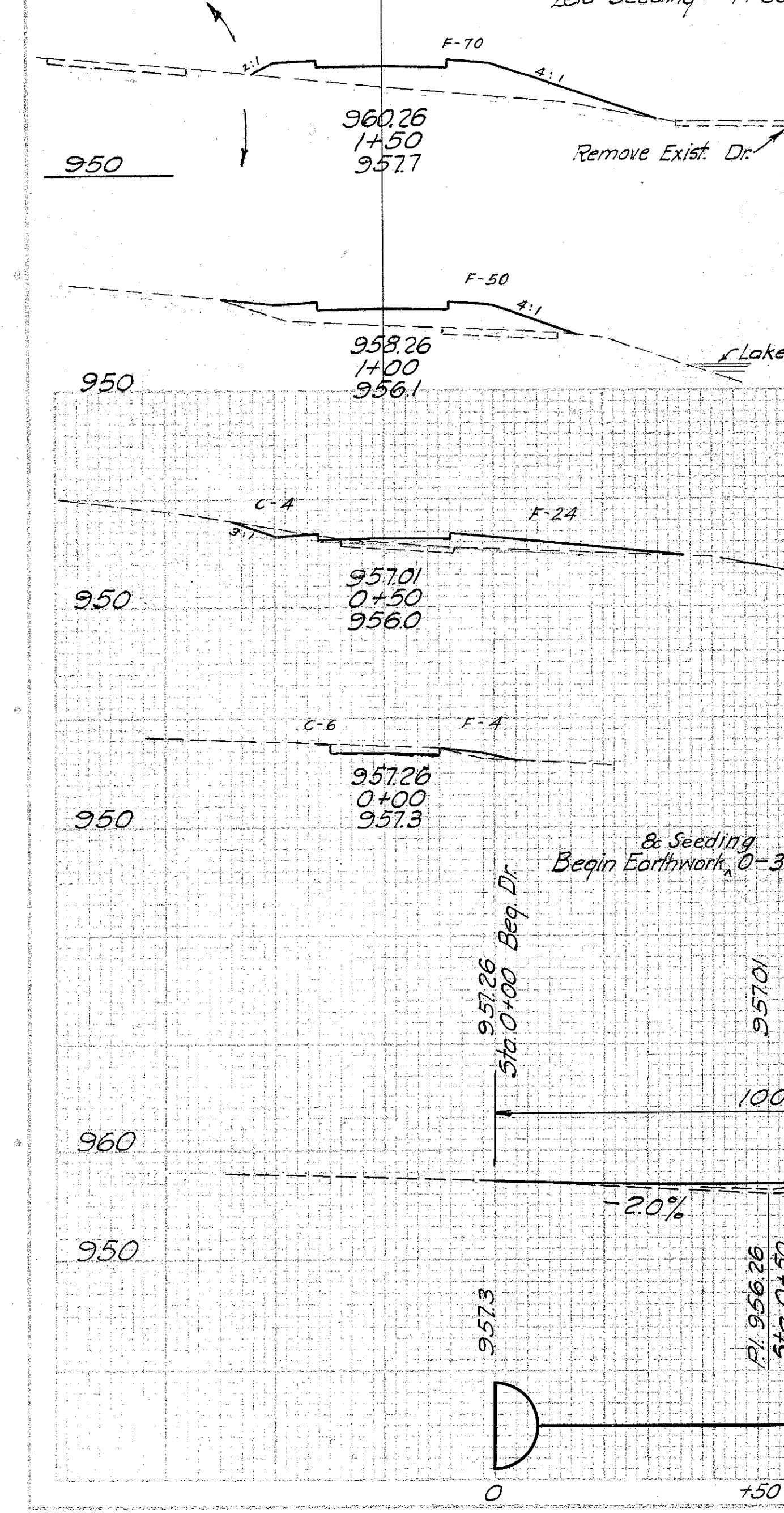
Seeding Width	S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Cut	Fill
32	0	32	0		
0	23			22	49
42	0	70			
	178			0	111
22	0	50			
	144			4	69
30	4	24			
	106			9	26
8	13	4	2		
0	0	0	0		

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.

13 A

ESTIMATED QUANTITIES
 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.



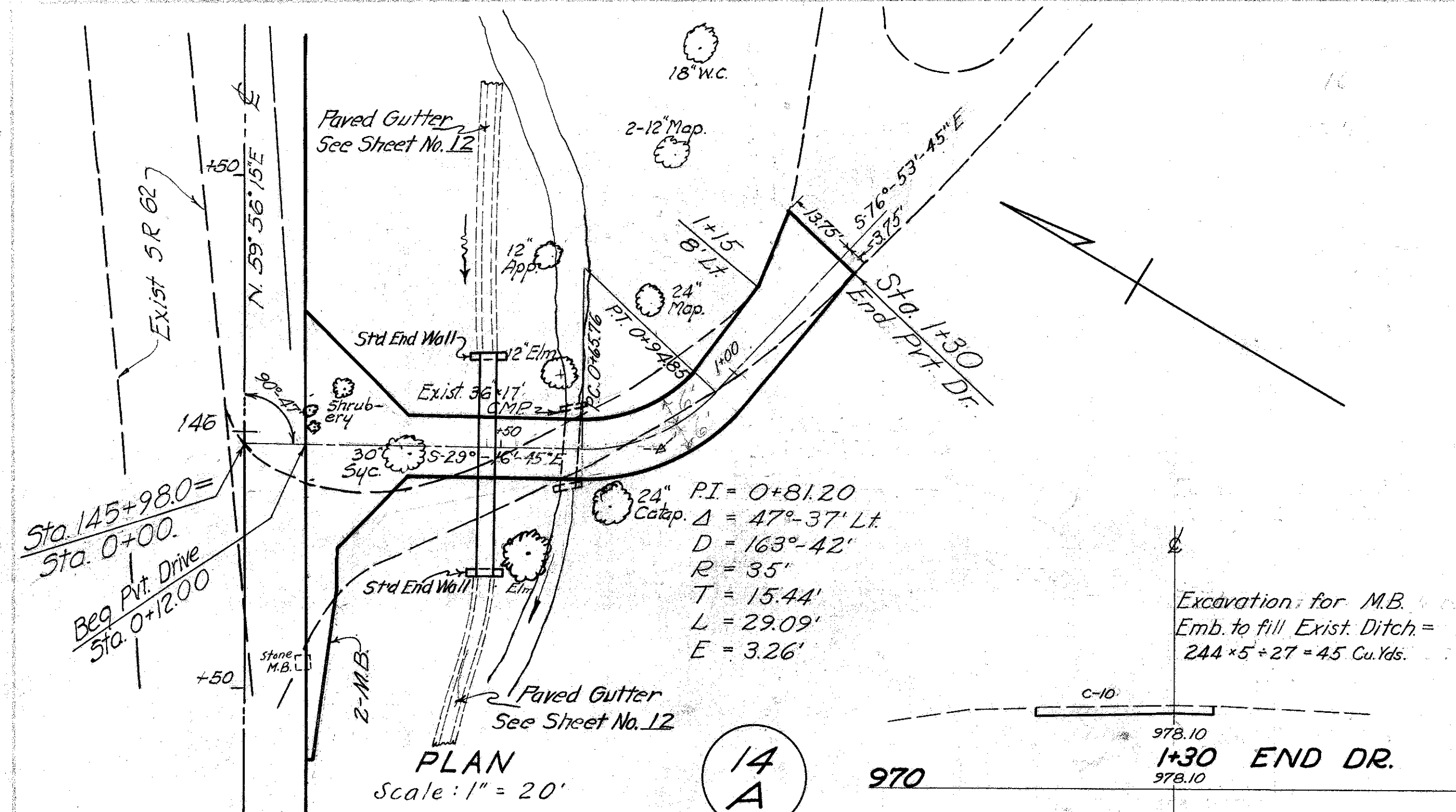
Excavation	39 Cu. Yds.	Carried to Sheet No. 33
Embankment	257 Cu. Yds.	
Seeding	464 Sq. Yds.	

Excavation	159 Cu. Yds.	Carried to Sheet No. 33
Embankment	28 Cu. Yds.	
Seeding	315 Sq. Yds.	

15 A

ESTIMATED QUANTITIES

B-119 Aggregate Base Course	370 Cu. Yds.
T-30 Bituminous Prime	93 Gal.
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 Hq'h'y Guard Rail (Circular)	75 Lin. Ft.
S-22 Removal Port'n. Exist. Struct.	1.5 Cu. Yds.



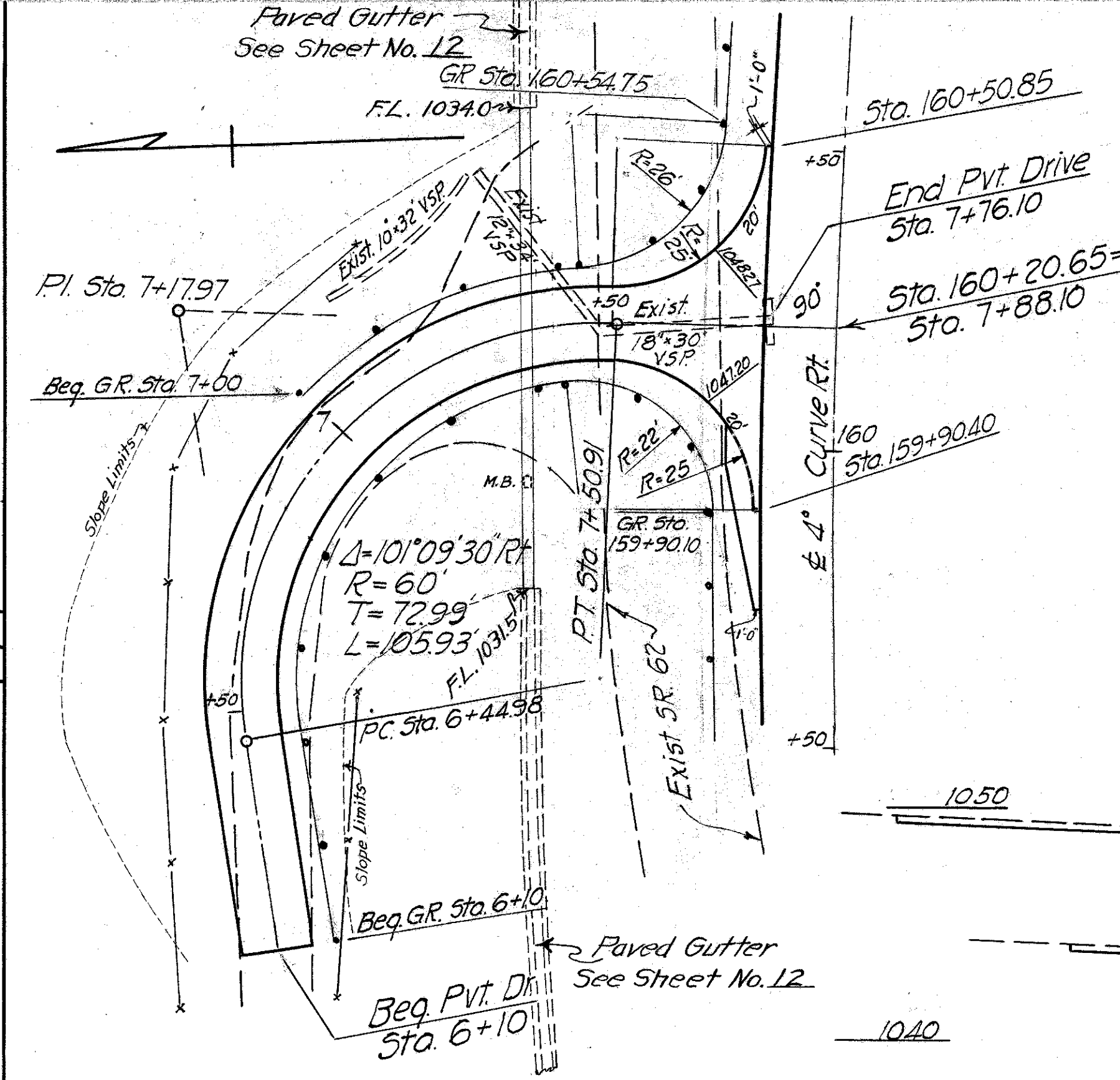
PLAN Scale: 1" = 20'

14 A

ESTIMATED QUANTITIES

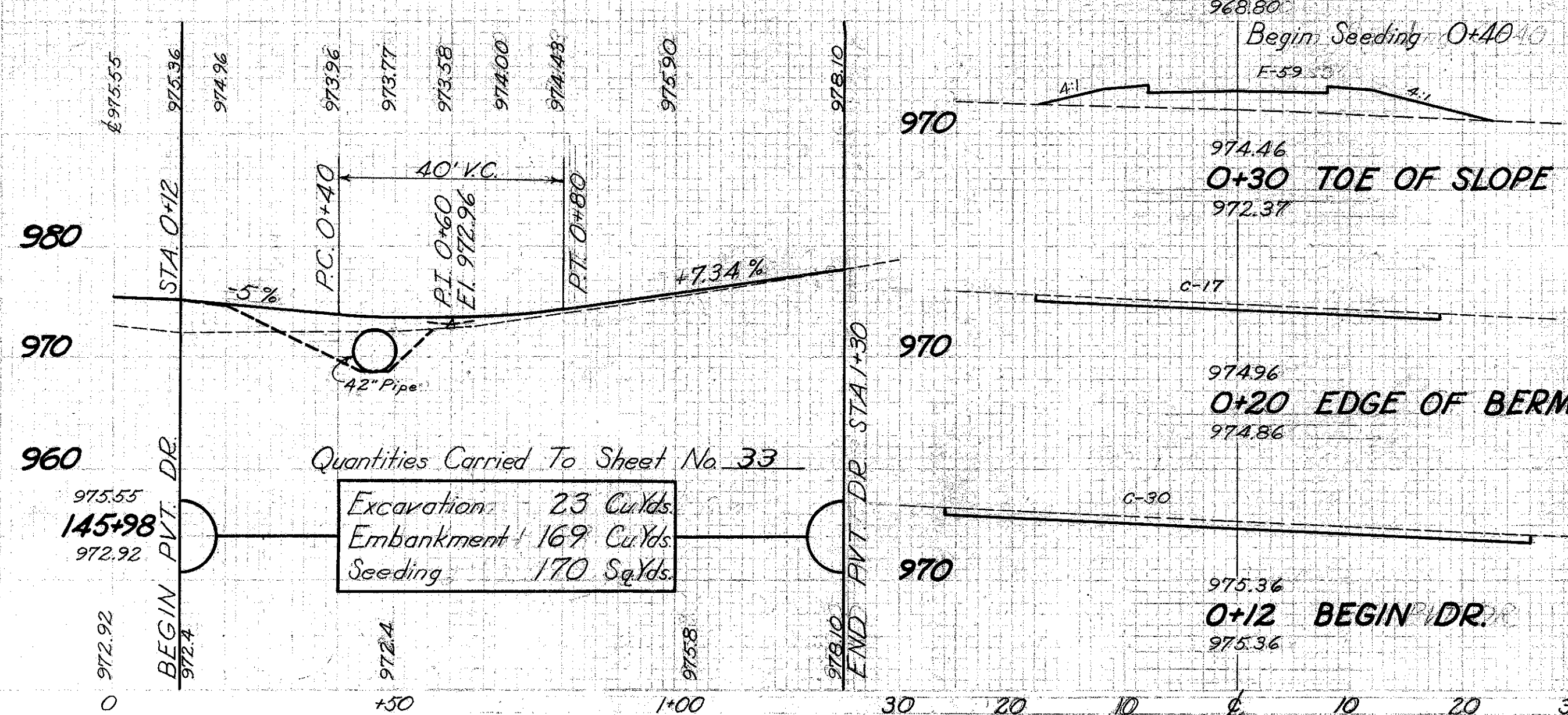
B-119 5" Aggregate Base Course	31 Sq. Yds.
T-30 Bituminous Prime Coat	78 Gal.
T-35 2" Asphaltic Concrete Surface Course	12.4 Cu. Yds.
I-1 42" Pipe For Driveways	42 Lin. Ft.
E-12 Pipe Removal (over 15")	17 Lin. Ft.
S-22 Removal of Portions of Exist. Struct.	2 Cu. Yds.
S-1 Concrete for Structures, Class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

Width	S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Exc.	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
3				3	11
17				0	
7				0	
30				0	

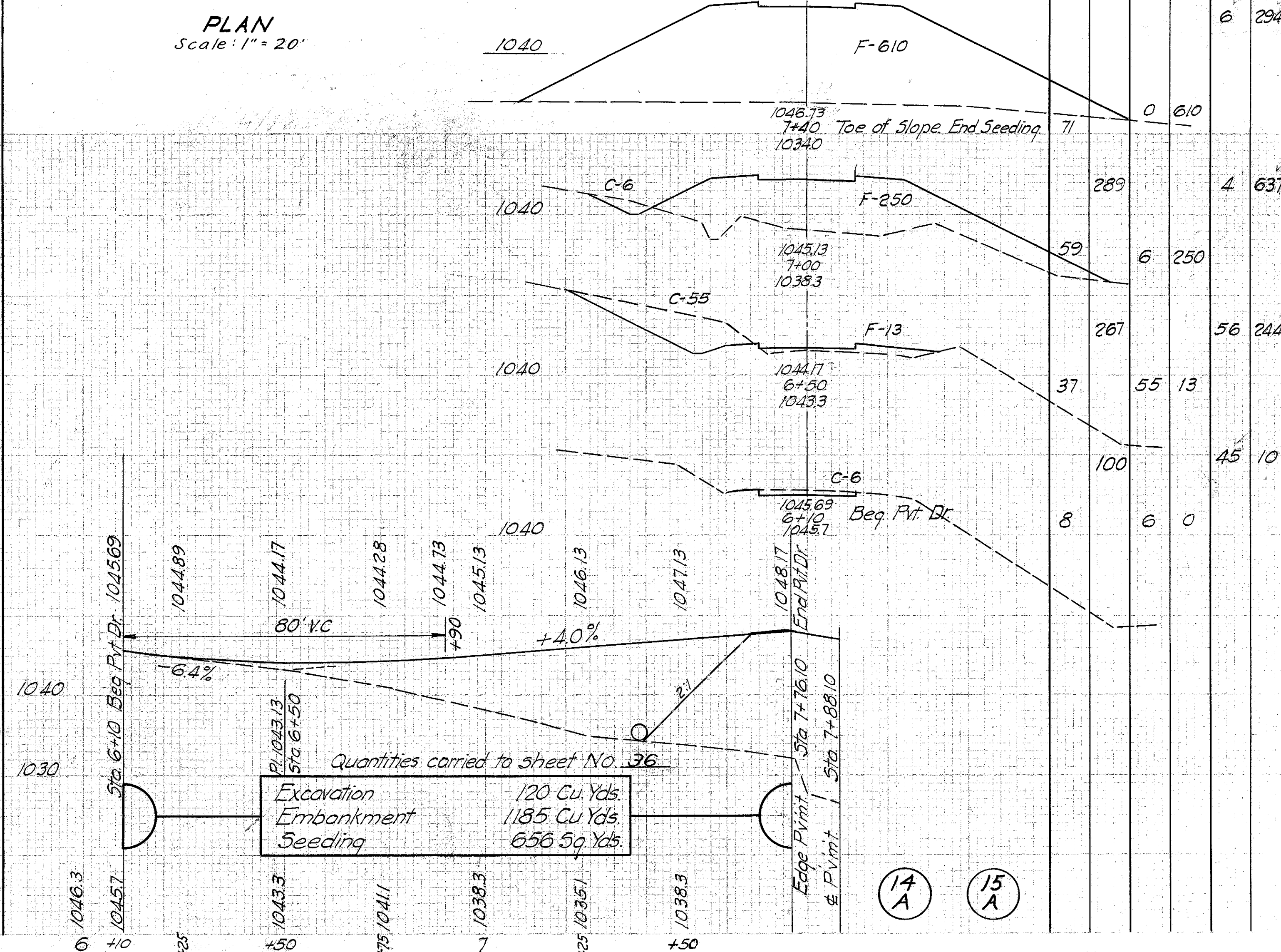


PLAN Scale: 1" = 20'

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



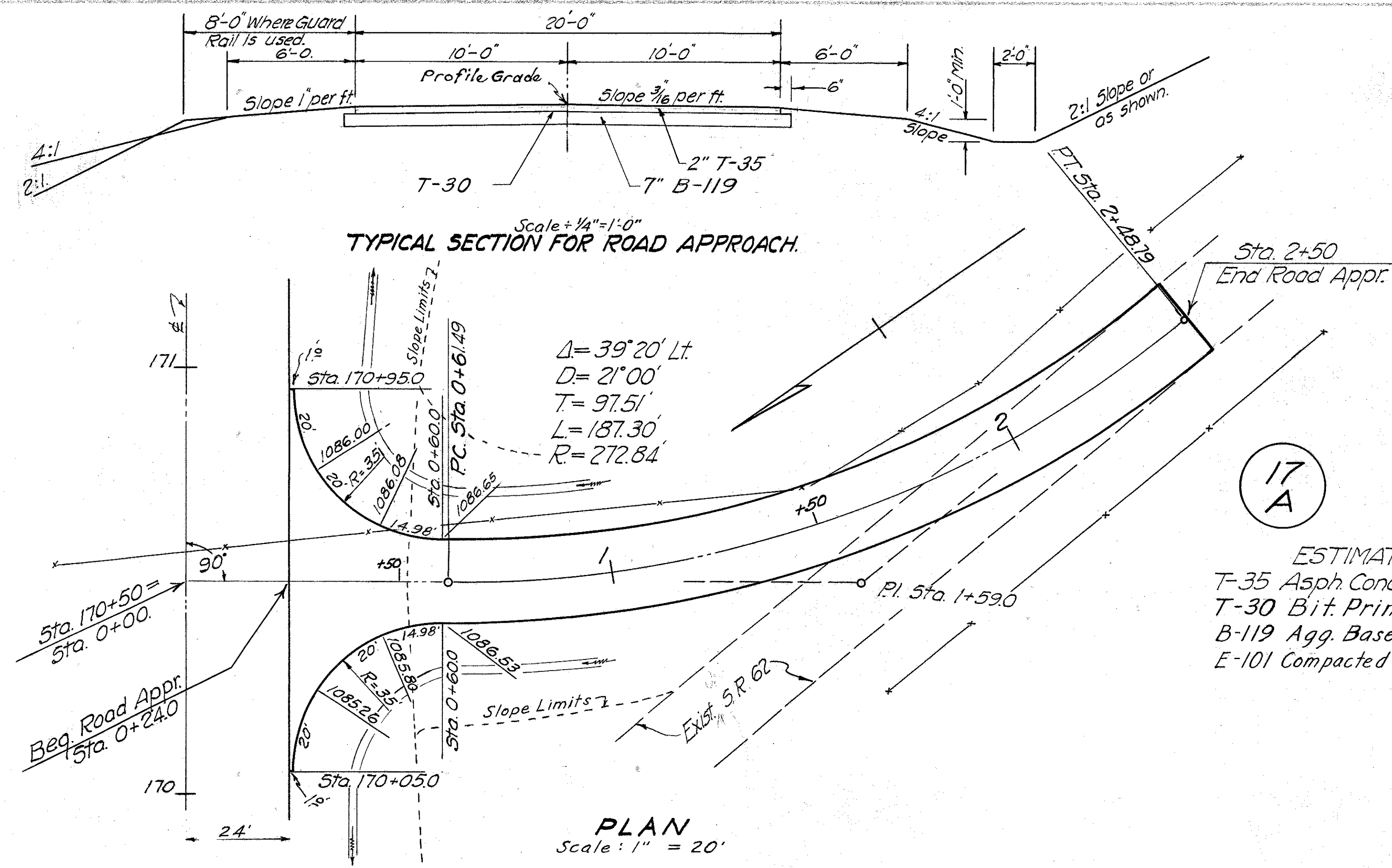
Quantities Carried To Sheet No. 33
Excavation: 23 Cu. Yds.
Embankment: 169 Cu. Yds.
Seeding: 170 Sq. Yds.



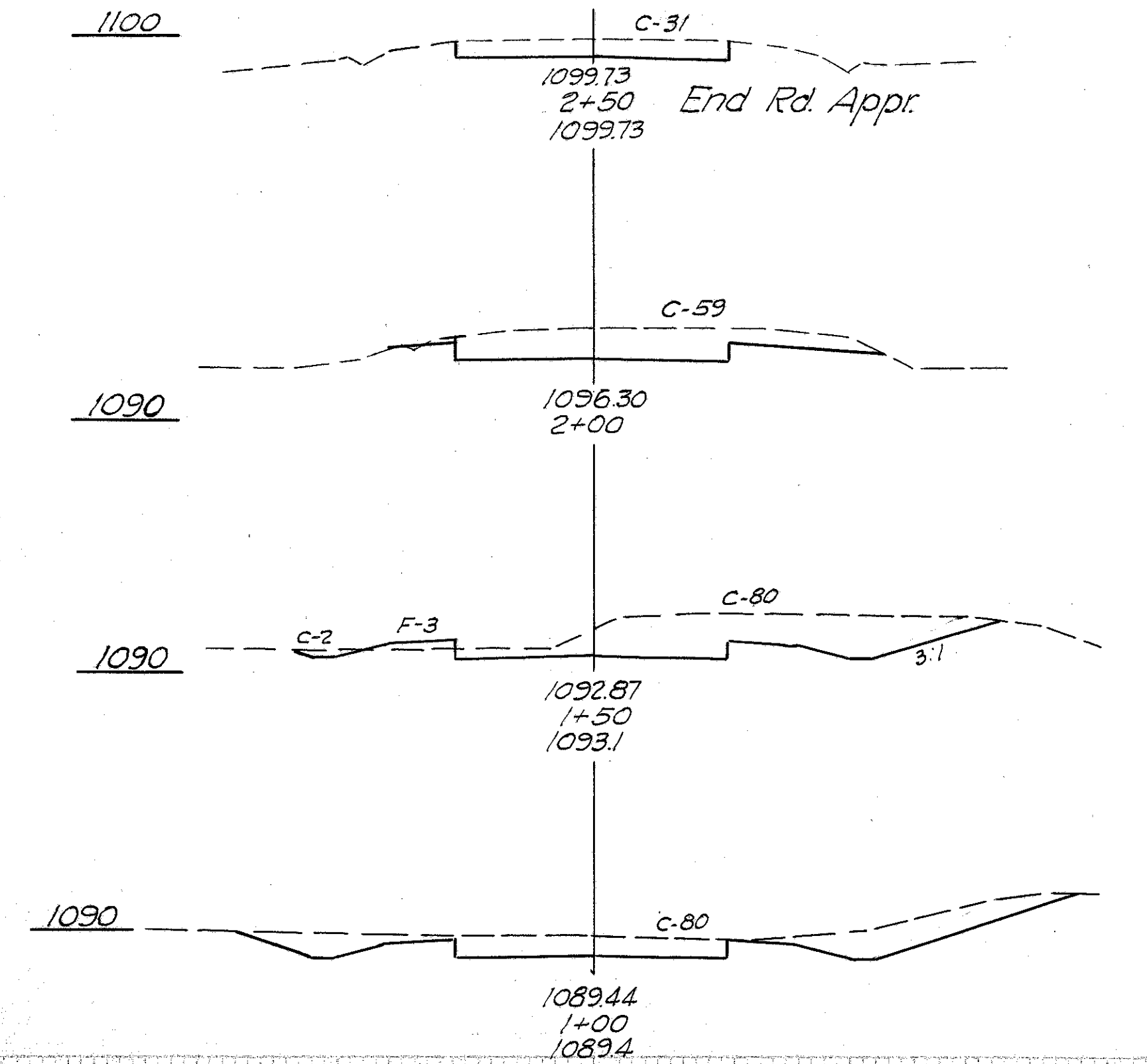
Quantities carried to sheet NO. 36
Excavation: 120 Cu. Yds.
Embankment: 118.5 Cu. Yds.
Seeding: 656 Sq. Yds.

14 A

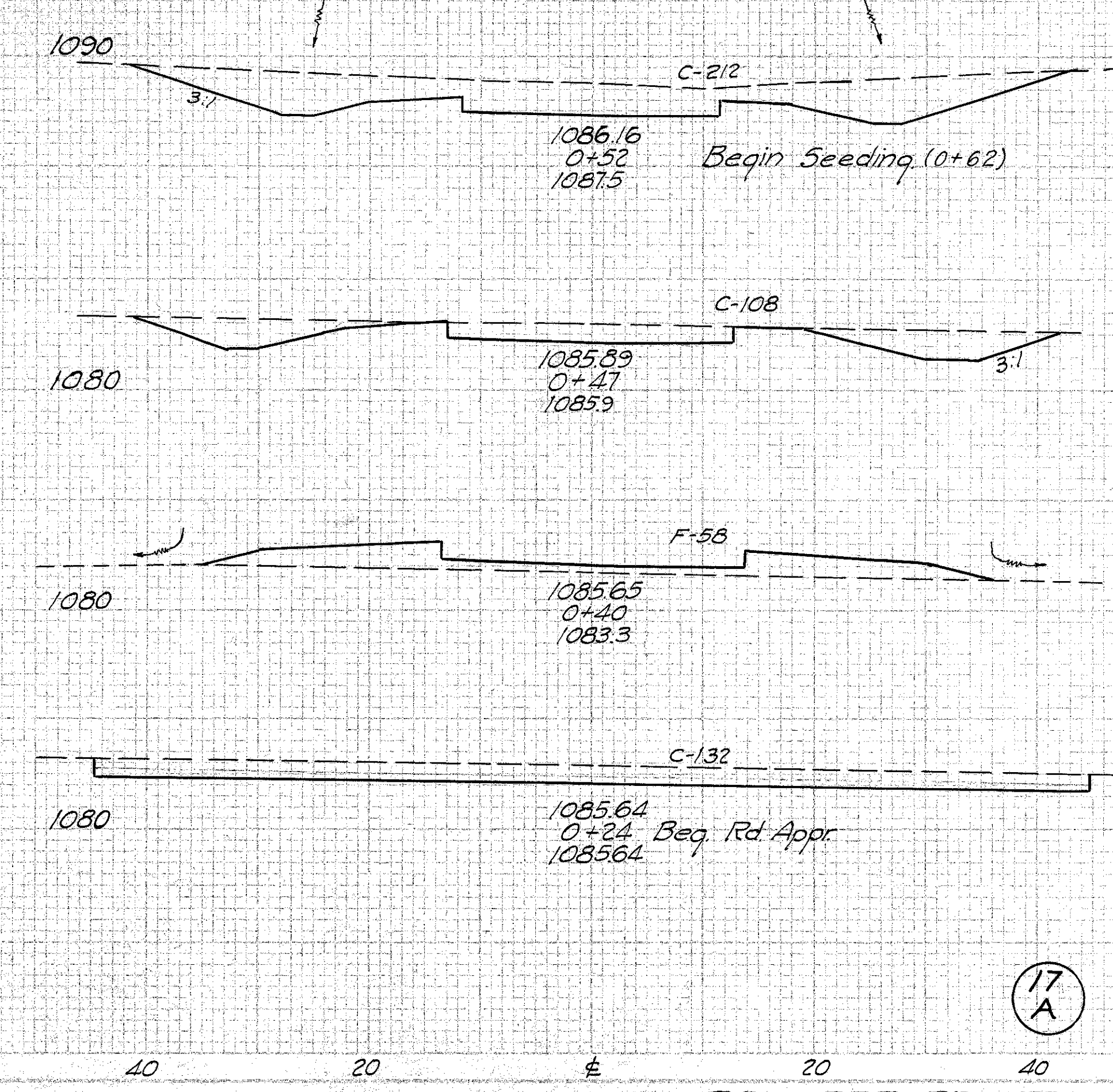
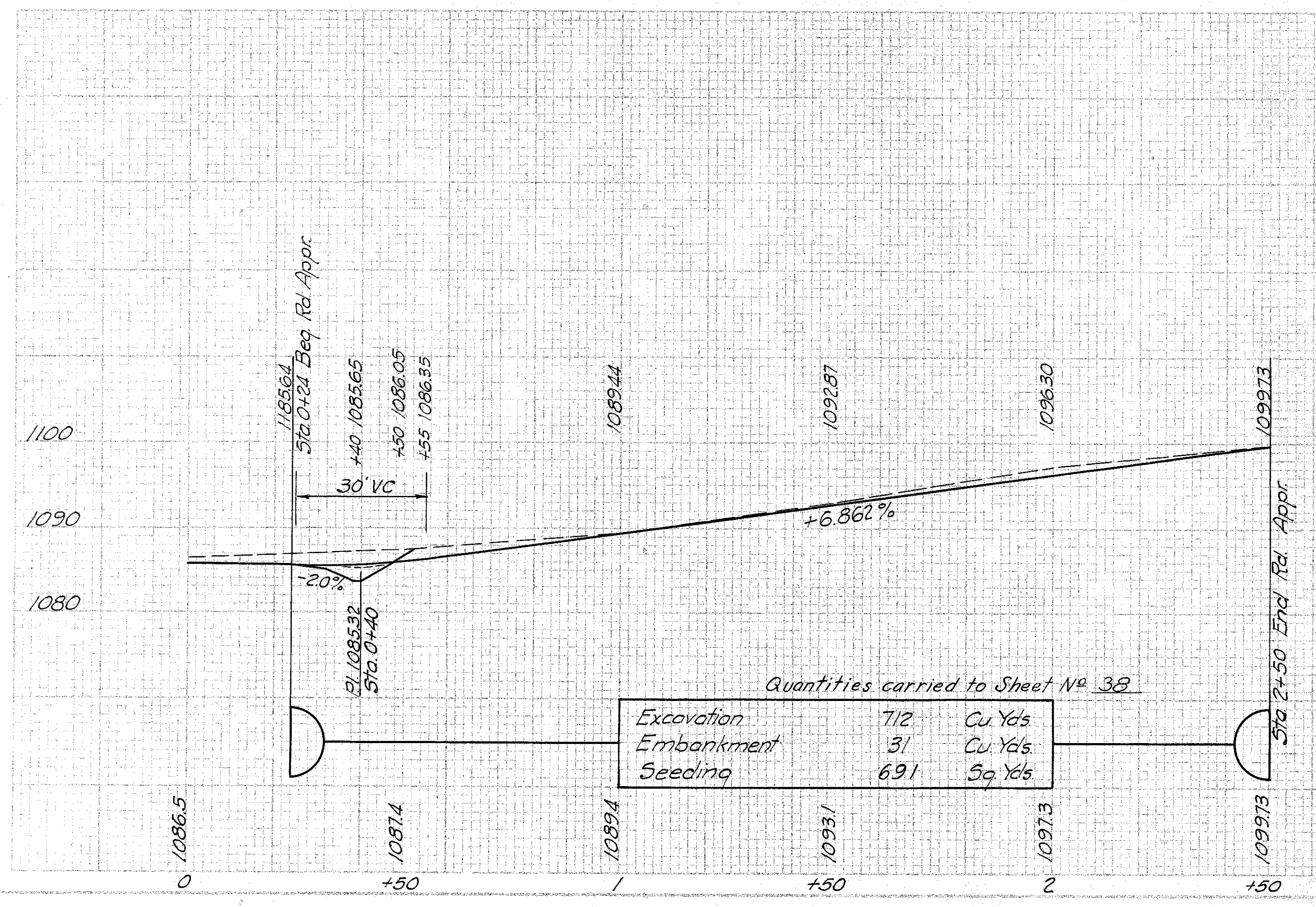
15 A

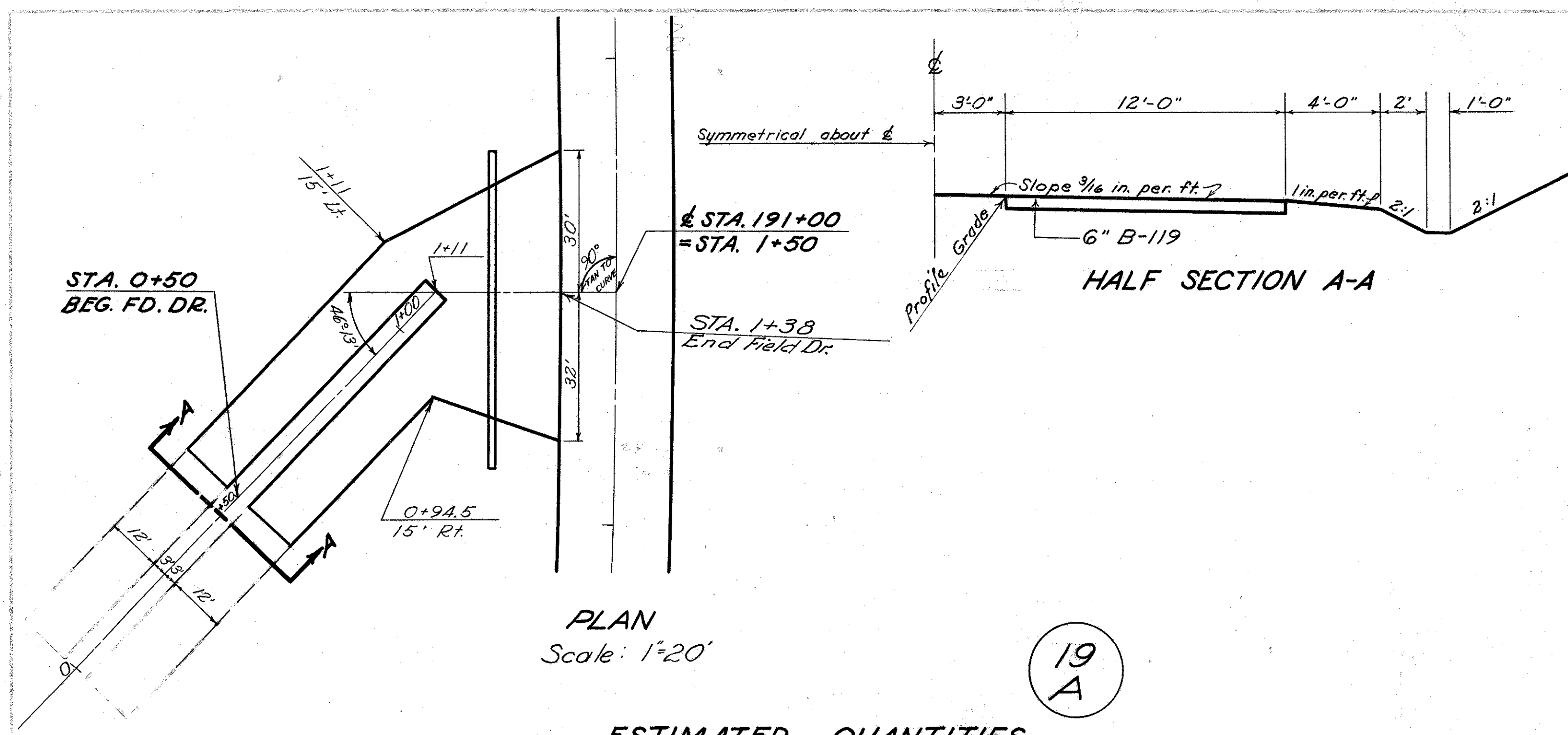


ESTIMATED QUANTITIES.
 T-35 Asph. Concr. Surf. Course (2") 31.6 Cu. Yds.
 T-30 Bit. Prime Coat 209 Gal's.
 B-119 Agg. Base Course (7") 116 Cu. Yds.
 E-101 Compacted Subgrade 569 Sq. Yds.



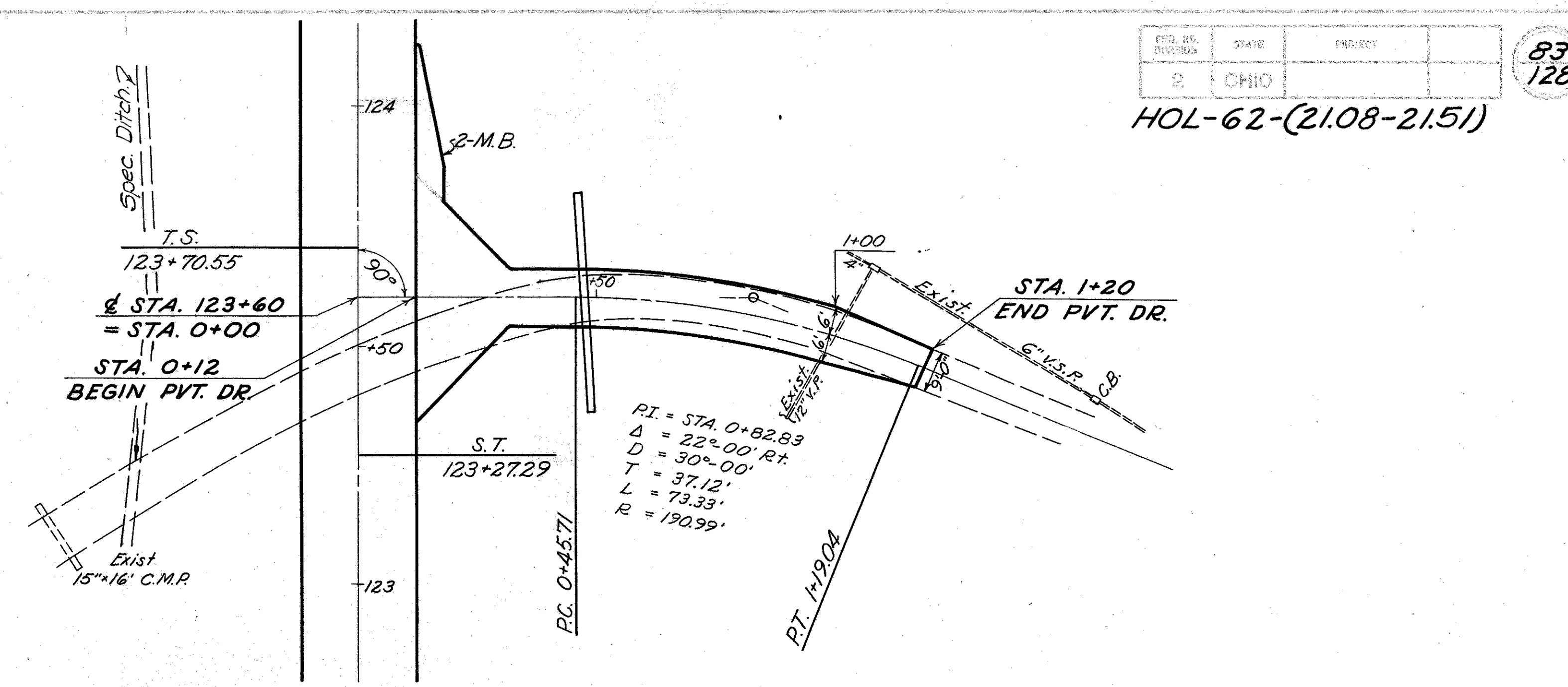
Seeding Width S.Y.	End Area		Cu. Yds.	
	Cut.	Fill.	Cut.	Fill.
12	31	0		
86			88	0
147			131	3
34	82	3		
222			150	3
46	80	0		
236			260	0
66	212	0		
			50	0
	108	0		
			14	8
	0	58		
			39	17
	132	0		





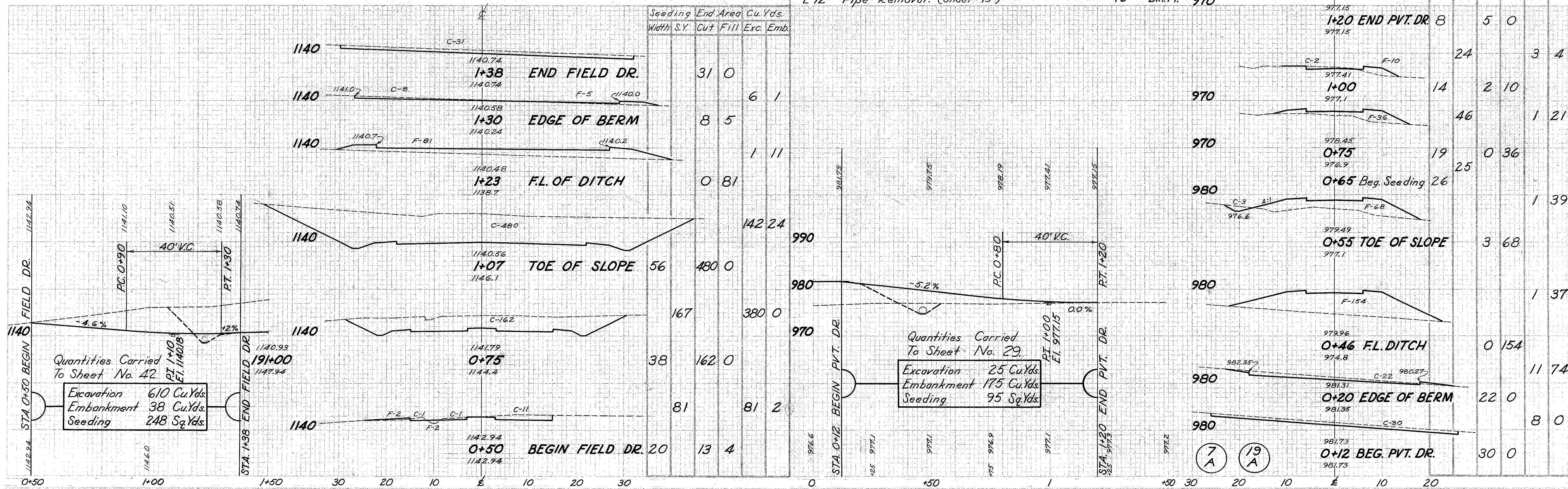
ESTIMATED QUANTITIES
 B-119 6" Crushed Aggregate Course. 72 Cu.Yds.
 I-1 15" Drive Pipe. 68 Lin.Ft.

19
A

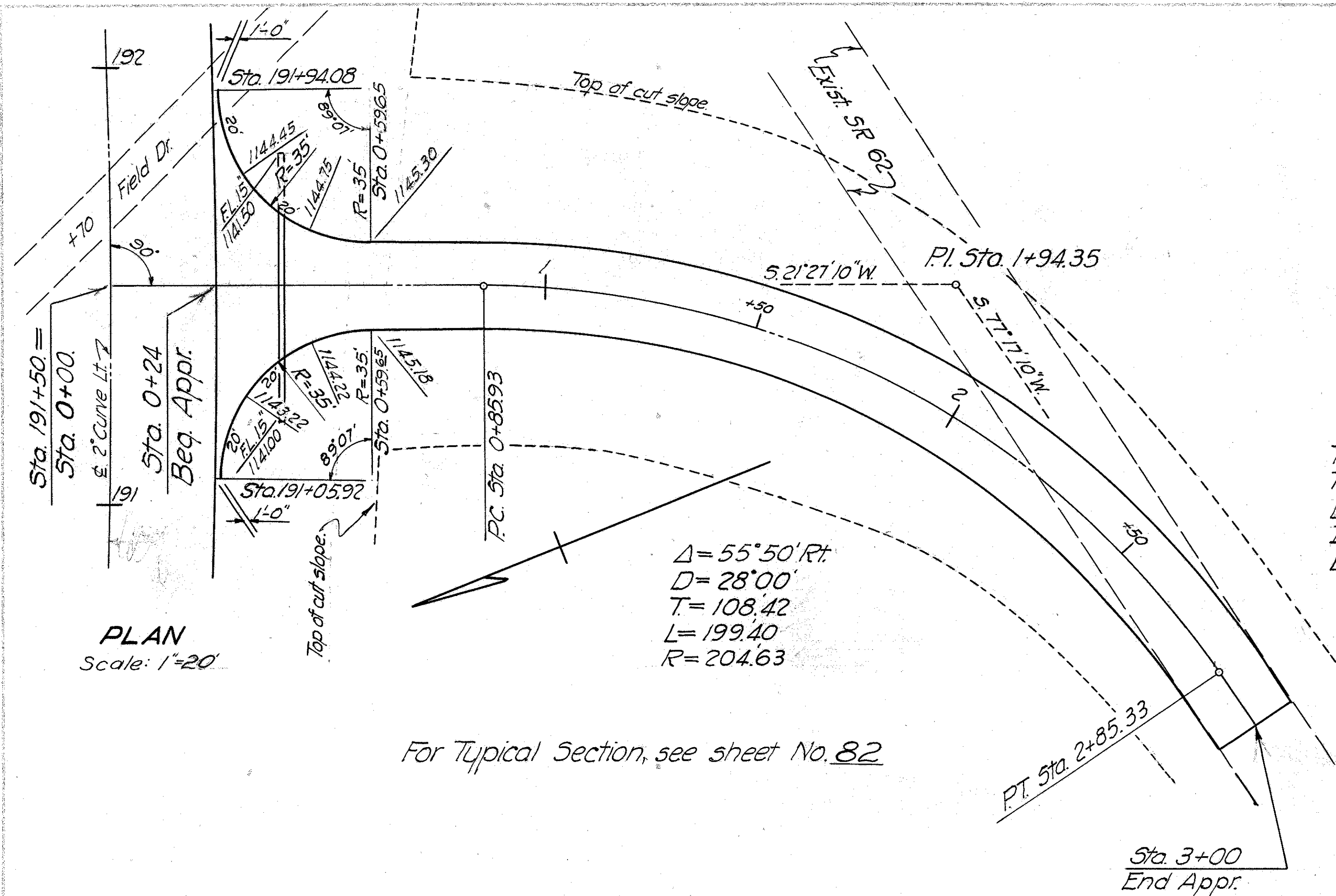


ESTIMATED QUANTITIES
 T-35 2" Asphaltic Concrete Surface Course. 11.1 Cu.Yds.
 T-30 Bituminous Prime Coat. 70 Gals.
 B-119 5" Crushed Aggregate Base Course. 28 Cu.Yds.
 I-1 15" Drive Pipe. 46 Lin.Ft.
 E-12 Pipe Removal. (Under 15") 16 Lin.Ft.

7
A

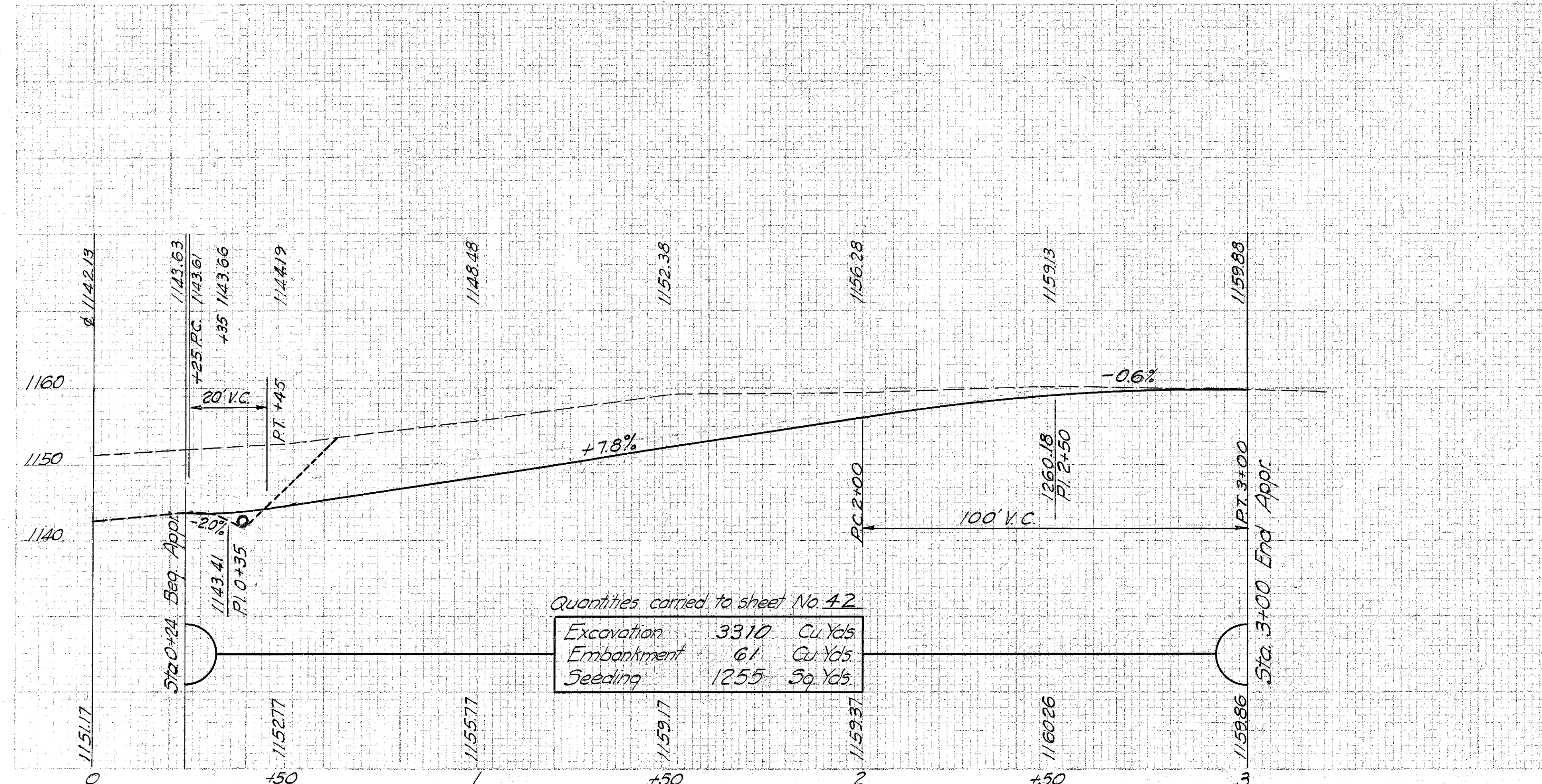
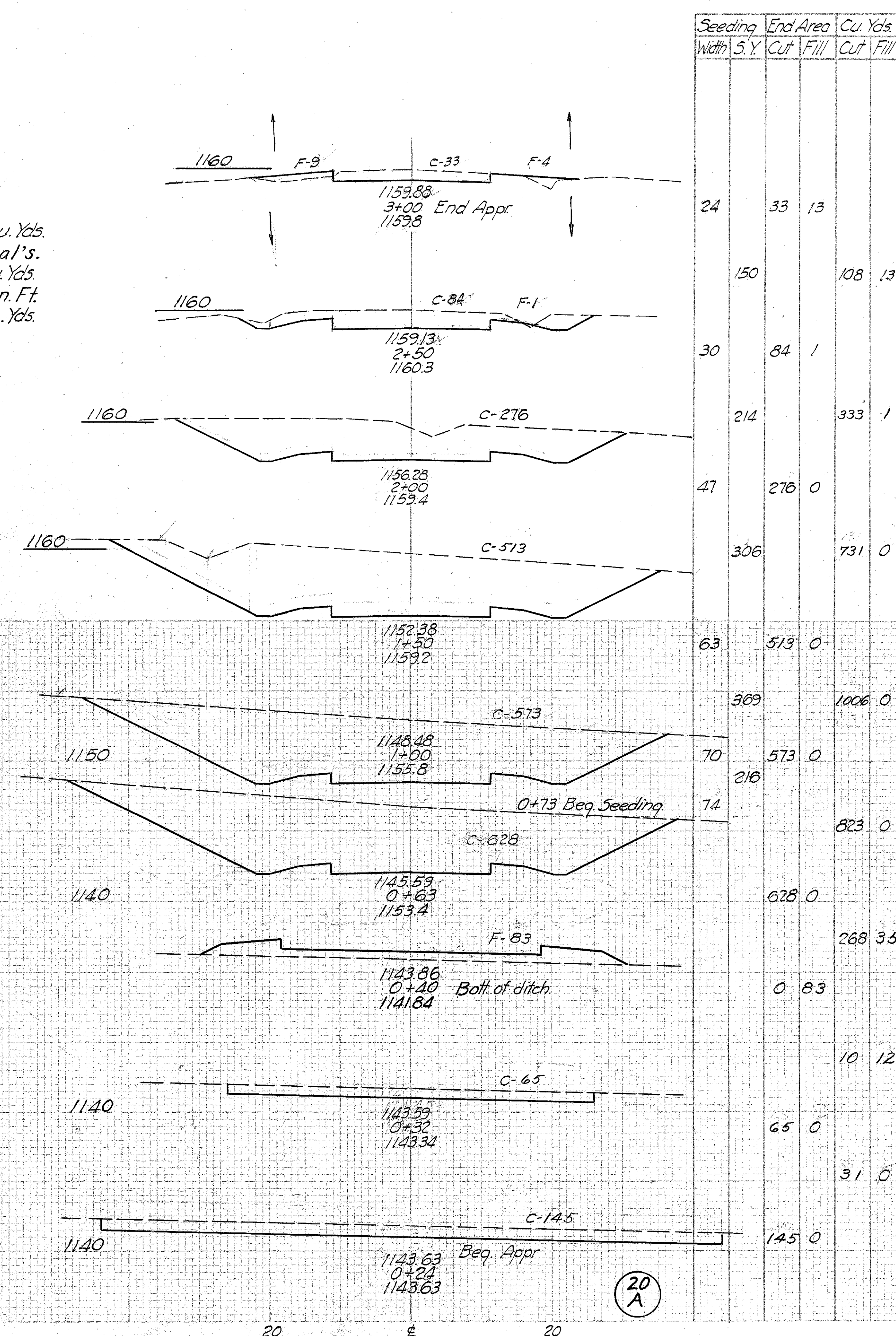


FIELD DR. LT. STA. 191+00 & PVT. DR. WITH M.B. RT. STA. 123+60



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 679 Sq. Yds.



Quantities carried to sheet No. 42

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

Seeding Width	End Area		Cu. Yds.	
	S.Y.	Cut	Fill	Cut
		33	13	
	150			108
	30	84	1	
	214			333
	47	276	0	
	306			731
	63	573	0	
	369			1006
	70	573	0	
	216			823
	14			0
		628	0	
			268	35
		0	83	
				10
		65	0	
				31
				0
		145	0	

20
A

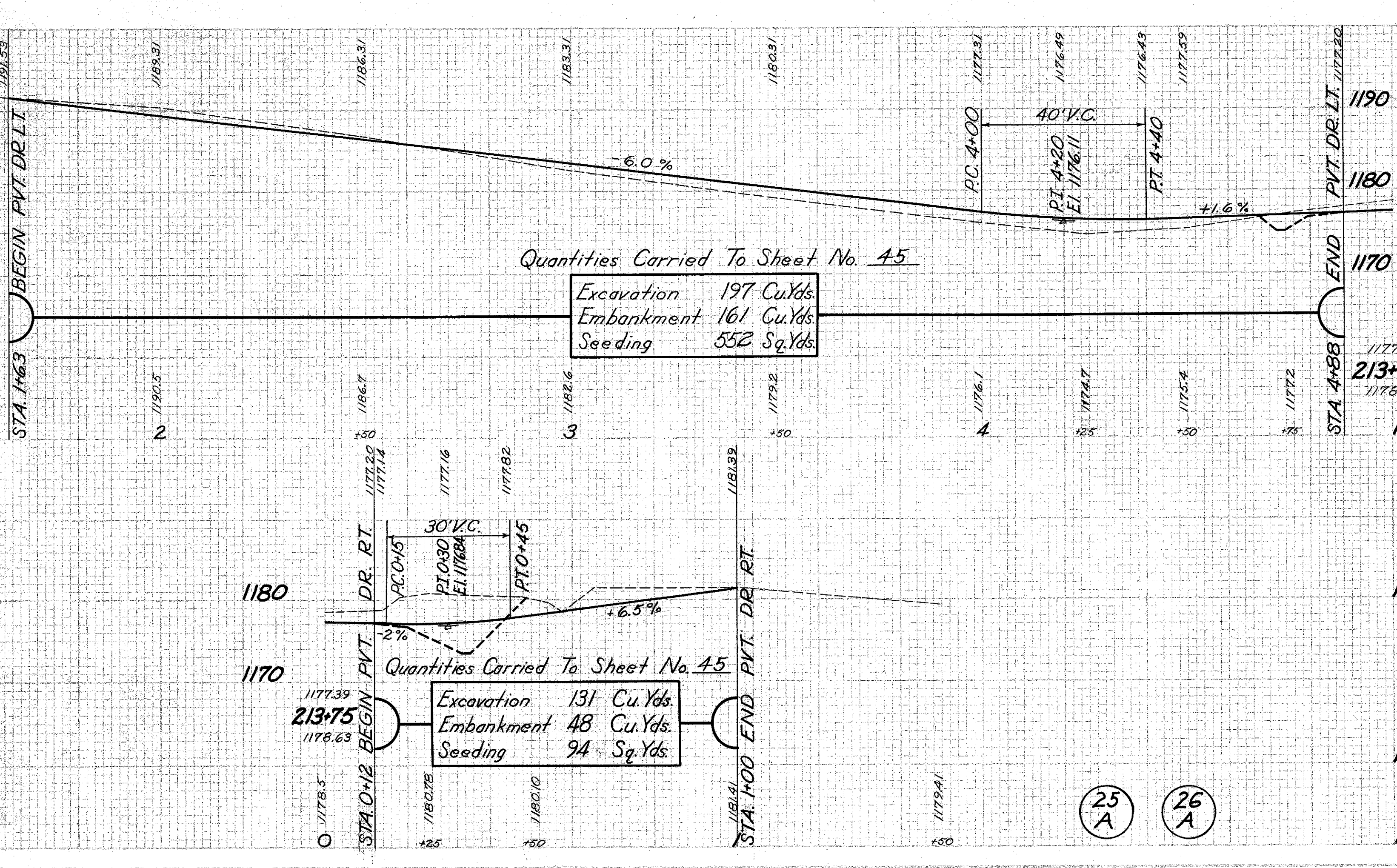
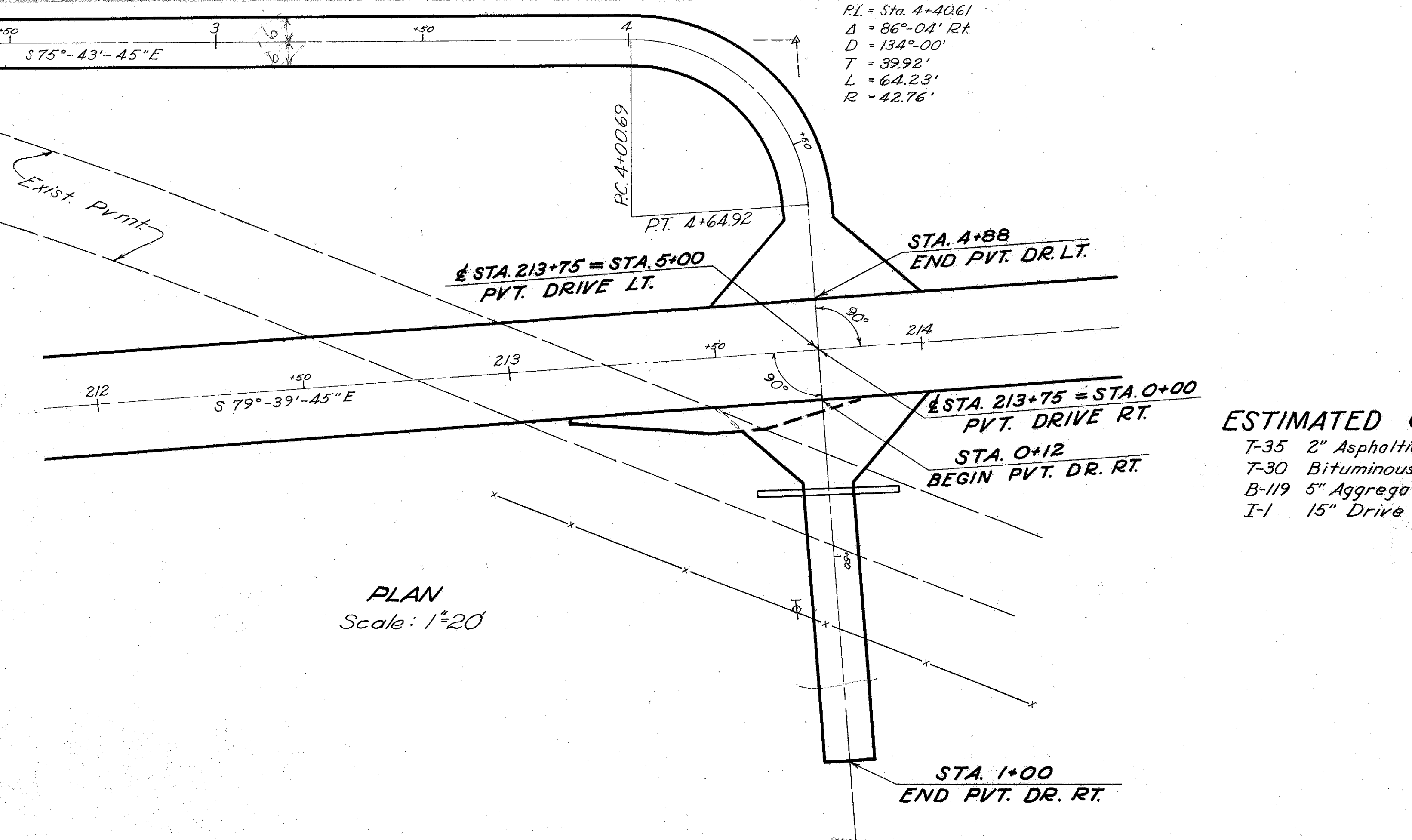
25
A

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.

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.

Station	Description	Seeding		End Area		Cu. Yds.	
		Width S.Y.	S.Y.	Cut	Fill	Exc.	Emb.
1170	4+88 END DR. LT.			30	0		
1170	4+80 EDGE OF BERM			0	0	4	0
1170	4+73 FL. DITCH			0	62	0	8
1170	4+50 End Seeding	20	7	22		3	36
1170	4+00	18	1	22			
1180	3+50	100	5	38			
1180	3+00	97	10	28			
1180	2+50	81	35	10			
1190	2+00	24	61	0			
1190	1+63 BEG. DR. LT.	8	4	0			
1190	1+26	0	8	0		3	0



Station	Description	Seeding		End Area		Cu. Yds.	
		Width S.Y.	S.Y.	Cut	Fill	Exc.	Emb.
1180	1+00 END DR. RT.	8	7	0			
1180	0+65	23	71	0			
1180	0+58 Beg. Seeding	29	52	0			
1180	0+49 TOE OF SLOPE		93	0			
1170	0+35 FL. DITCH		0	90			
1170	0+20 EDGE OF BERM		7	0			
1170	0+12 BGN. DR. RT.		30	0			

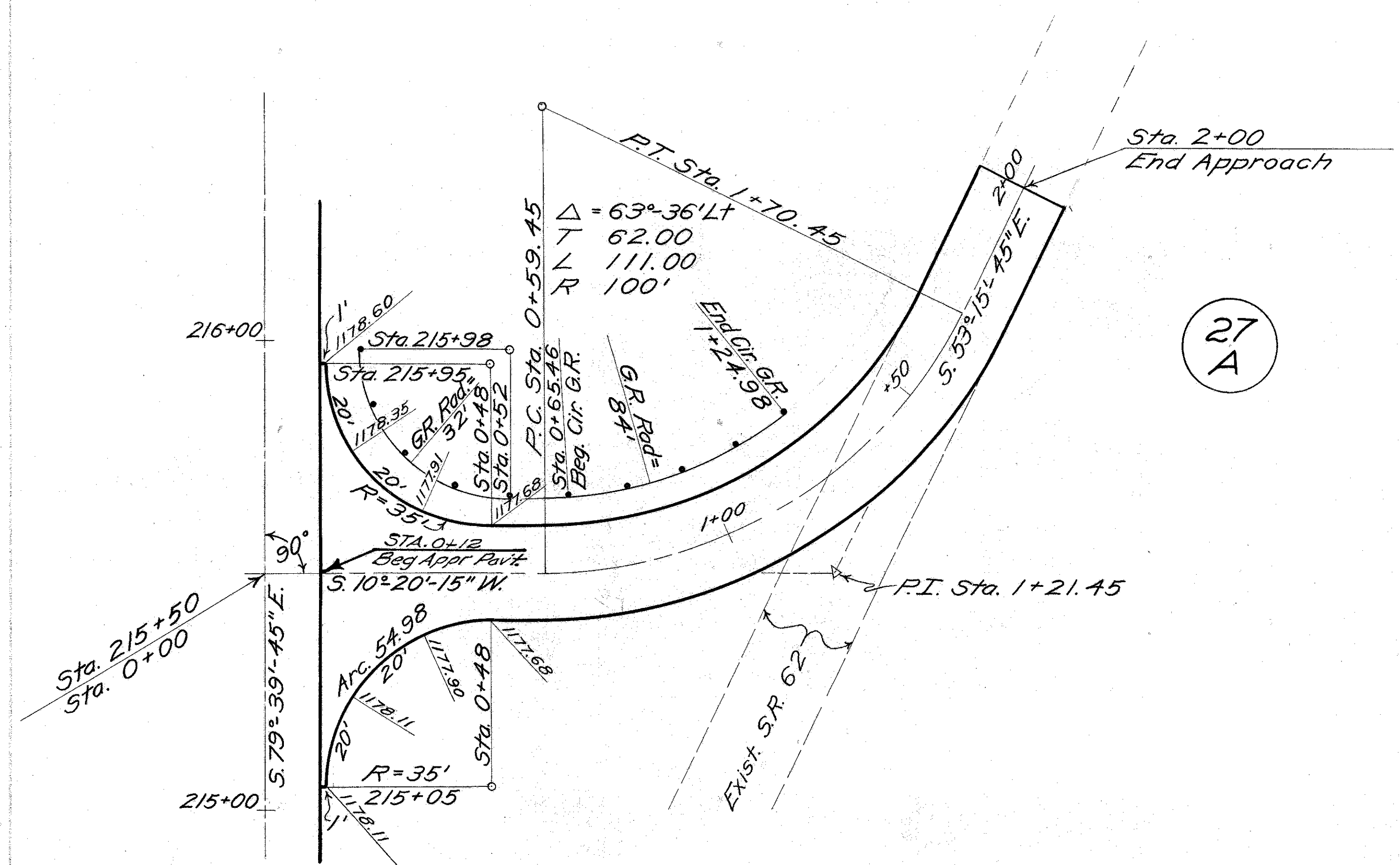
Quantities Carried To Sheet No. 45
 Excavation 197 Cu.Yds.
 Embankment 161 Cu.Yds.
 Seeding 552 Sq.Yds.

Quantities Carried To Sheet No. 45
 Excavation 131 Cu.Yds.
 Embankment 48 Cu.Yds.
 Seeding 94 Sq.Yds.

25 A 26 A

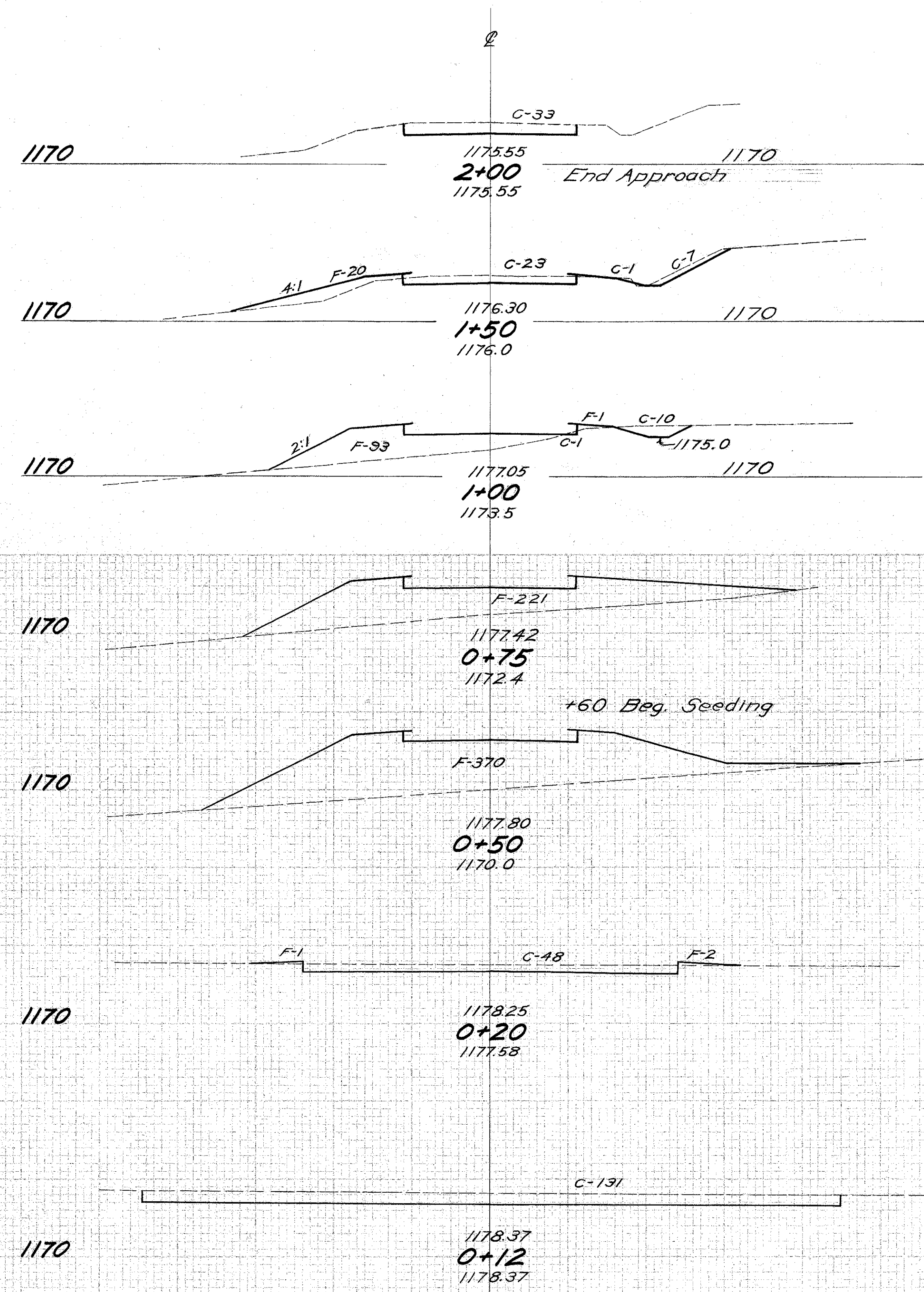
ESTIMATED QUANTITIES

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	Gals.
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.

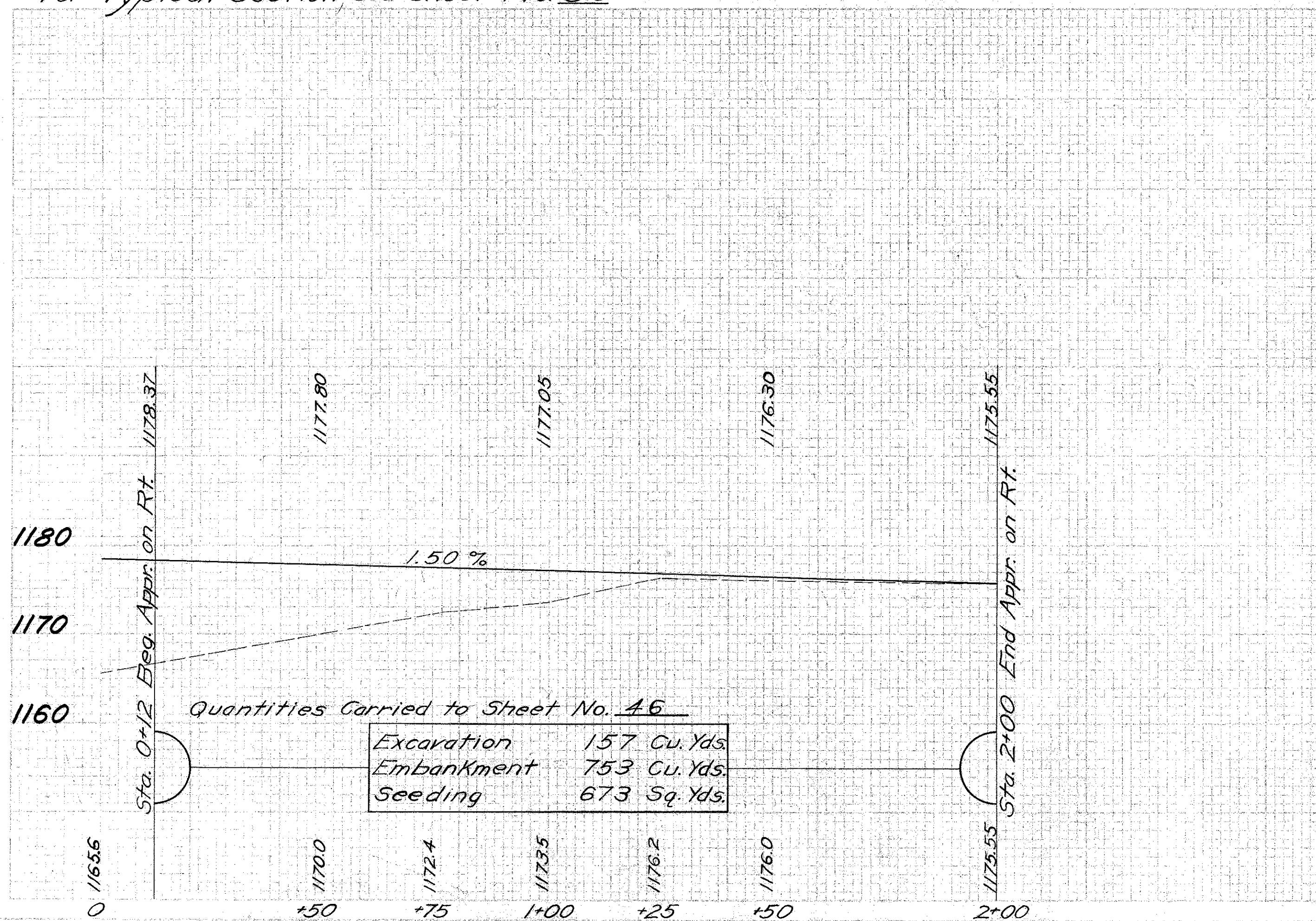


PLAN
Scale: 1"=20'

For Typical Section see sheet No 82



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



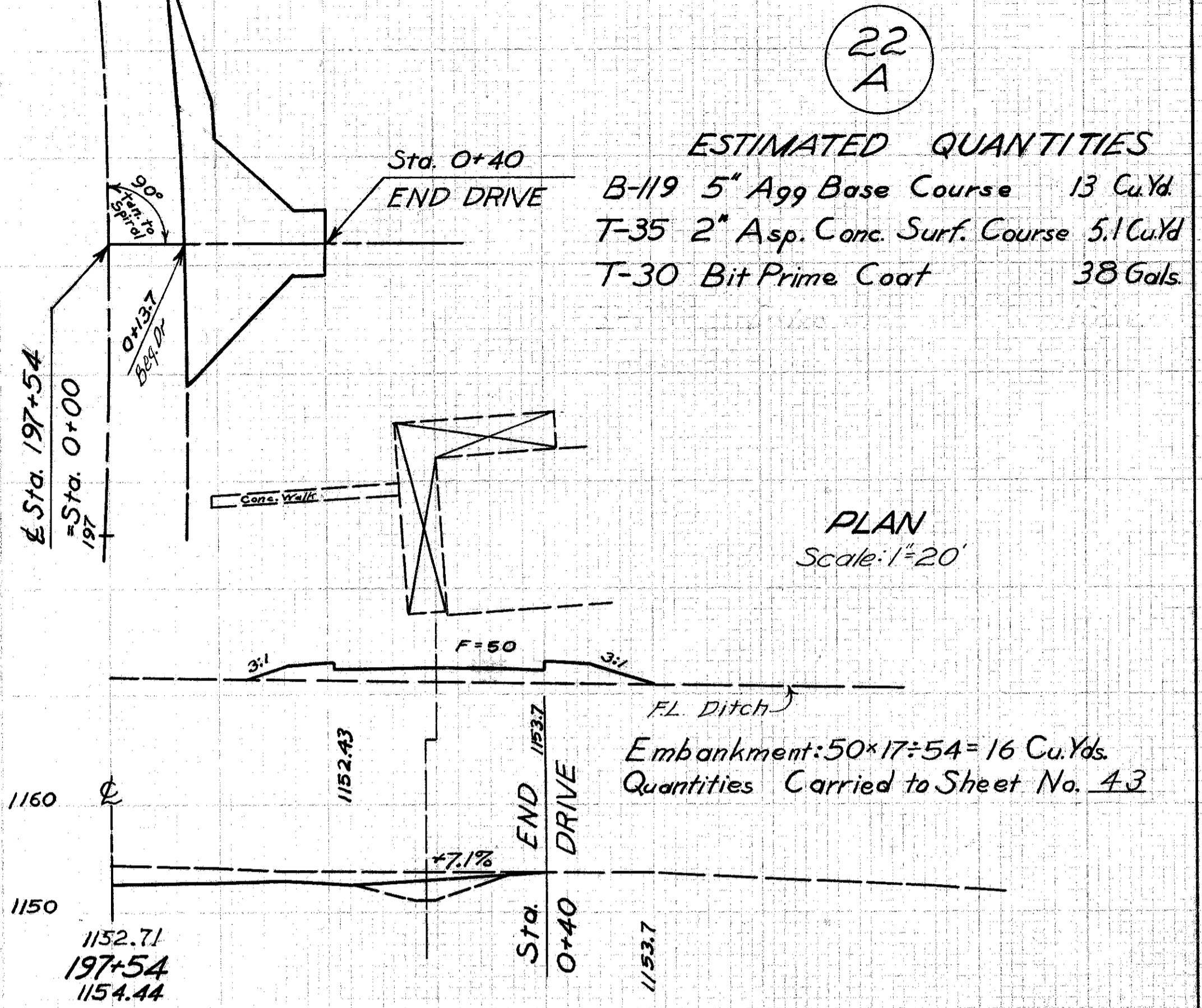
Quantities Carried to Sheet No. 46

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

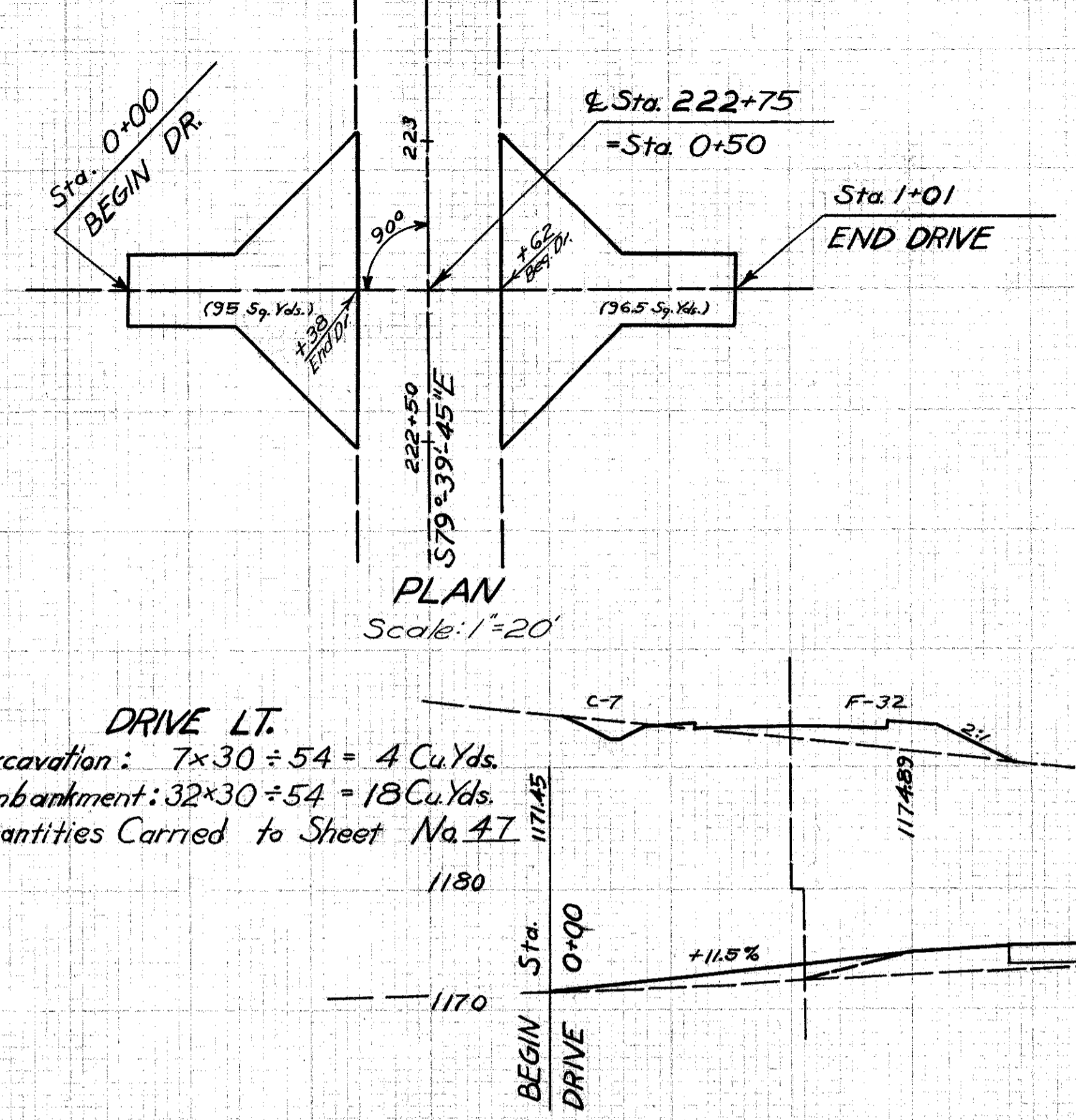
ROAD APPROACH RT. STA. 215+50

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

22
A



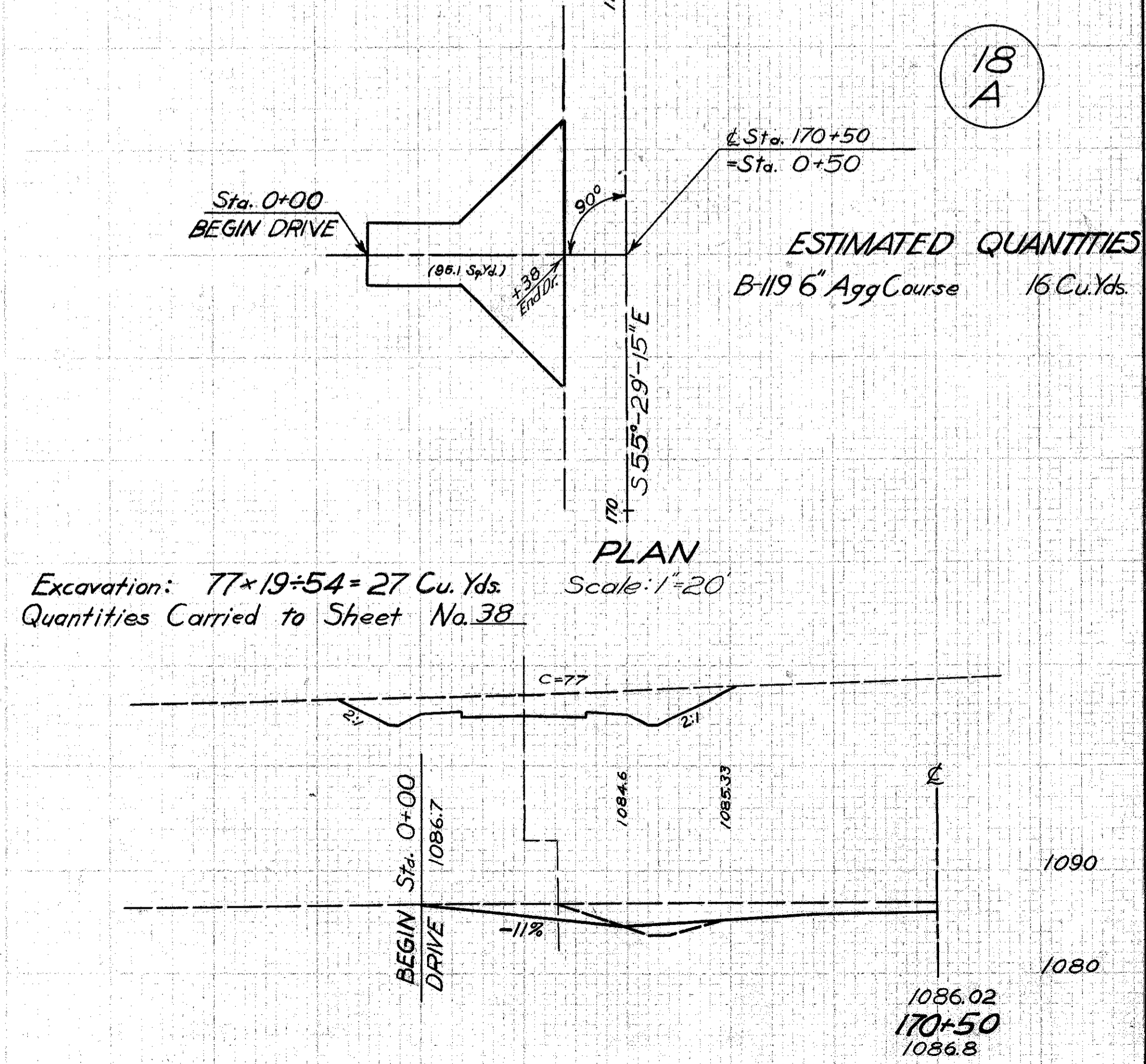
TYPE 2 FIELD DRIVE RT & LT. STA. 222+75



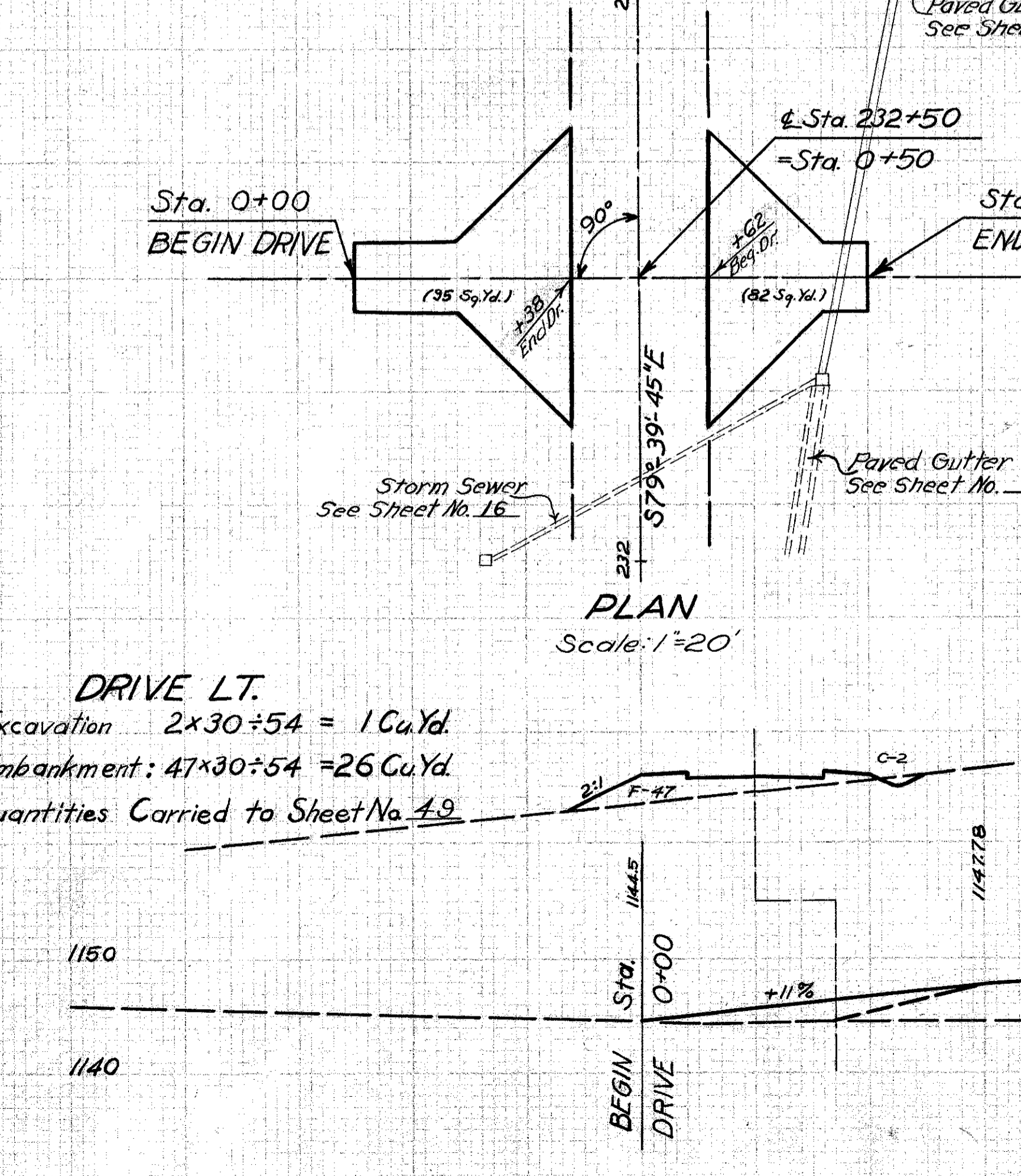
DR. LT. 16 Cu.Yd.
 DR. RT. 16 Cu.Yd.
 28
A 29
A

TYPE 2 FIELD DRIVE LT. STA. 170+50

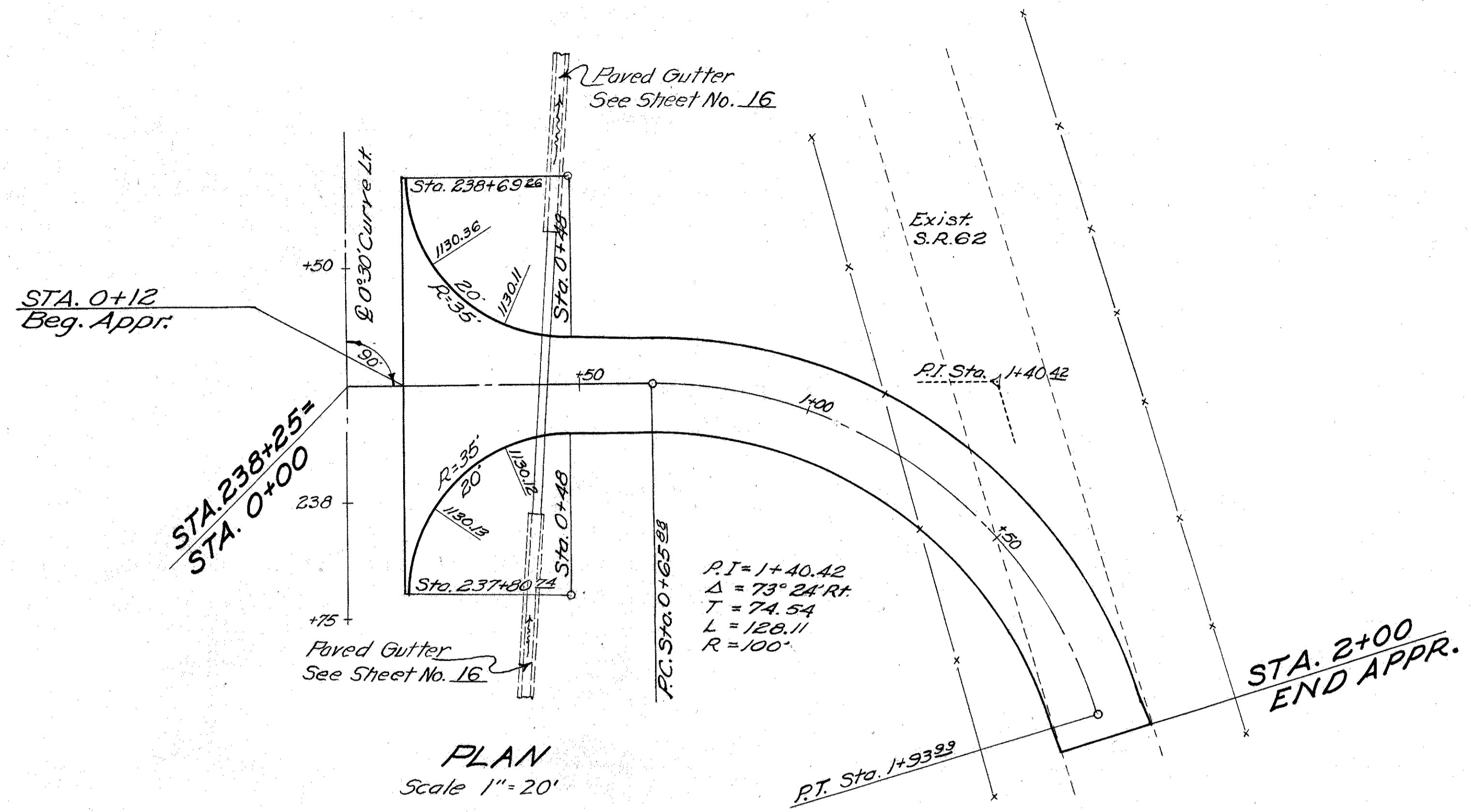
18
A



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



DR. LT. 16 Cu.Yds.
 DR. RT. 14 Cu.Yds.
 30
A 31
A



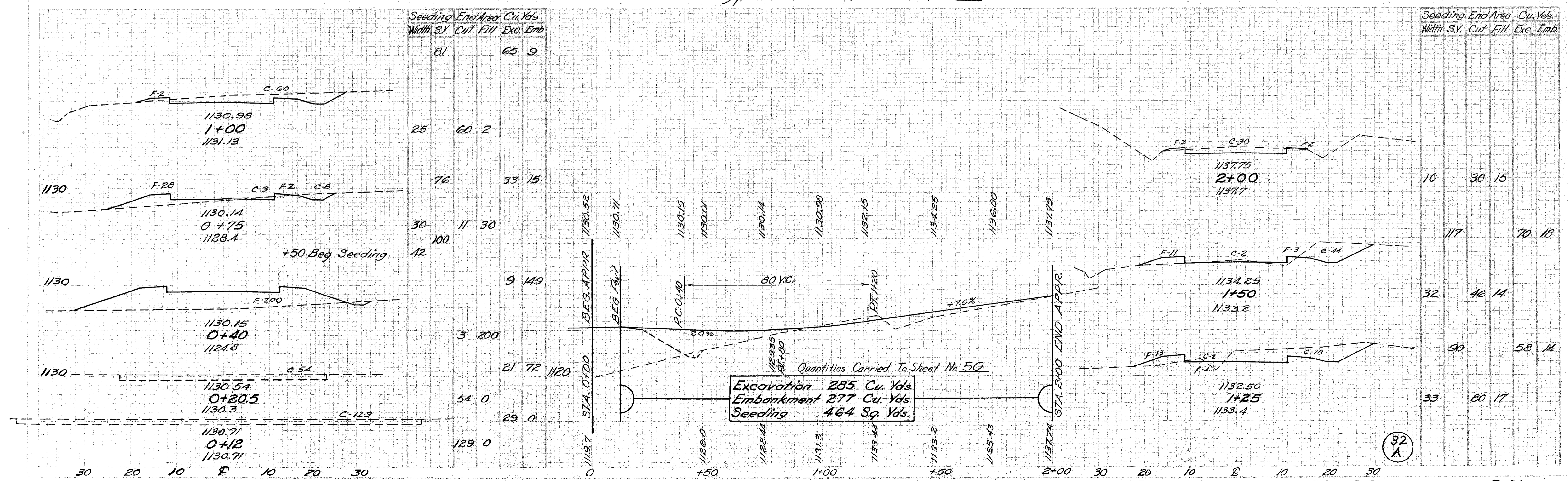
PLAN
Scale 1" = 20'

For Typical Section see sheet No. 82

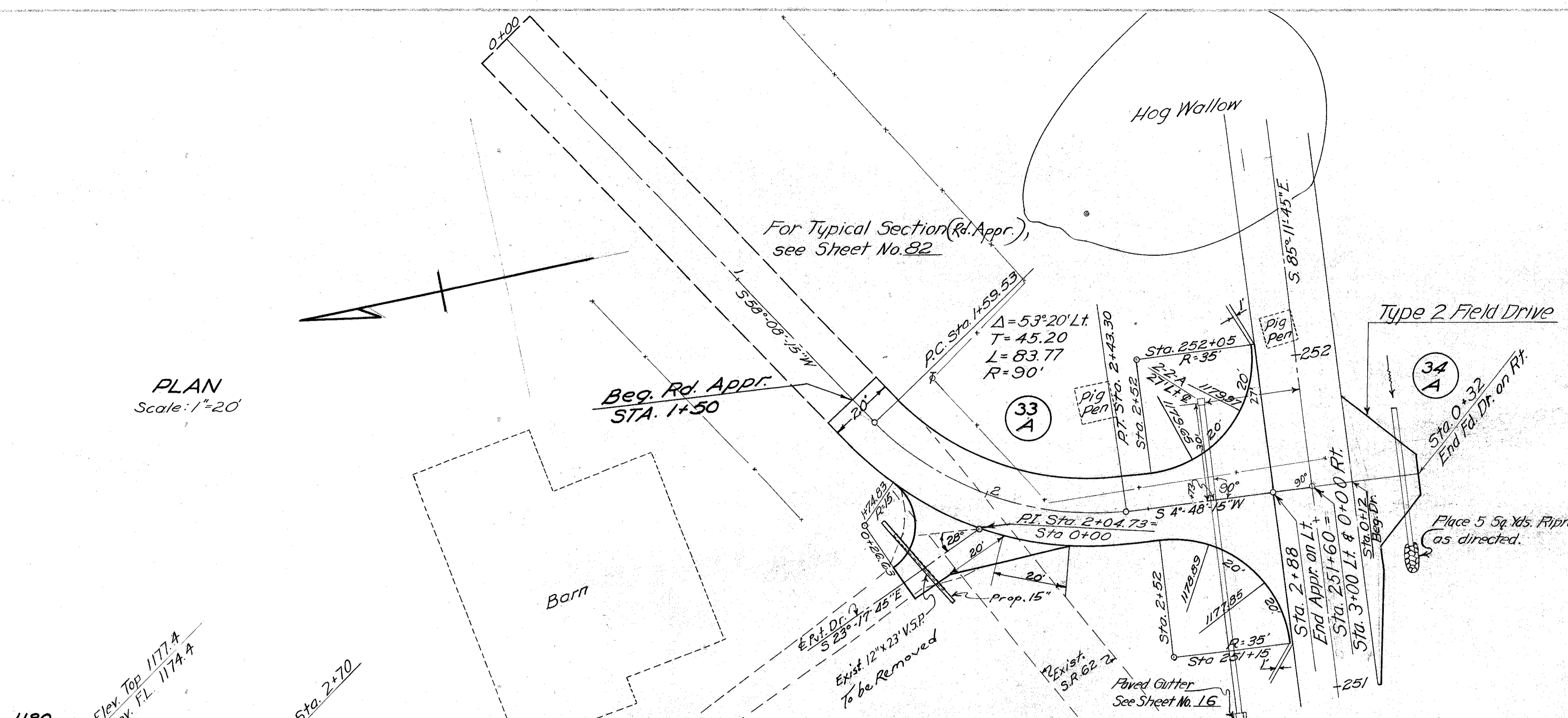
32
A

ESTIMATED QUANTITIES

T-35 Asphaltic Concrete Surface Course (2")	26.9 Cu. Yd.
T-30 Bituminous Prime Coat	178 Gal.
B-119 Crushed Aggregate Base Course (1")	98.6 Cu. Yd.
I-1 27" Drive Pipe	60 Lin. Ft.
E-101 Compacted Subgrade	484 Sq. Yds.



PLAN
Scale: 1"=20'



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.) 1.7 Cu. Yds.
 Riprap 5 Sq. Yds.

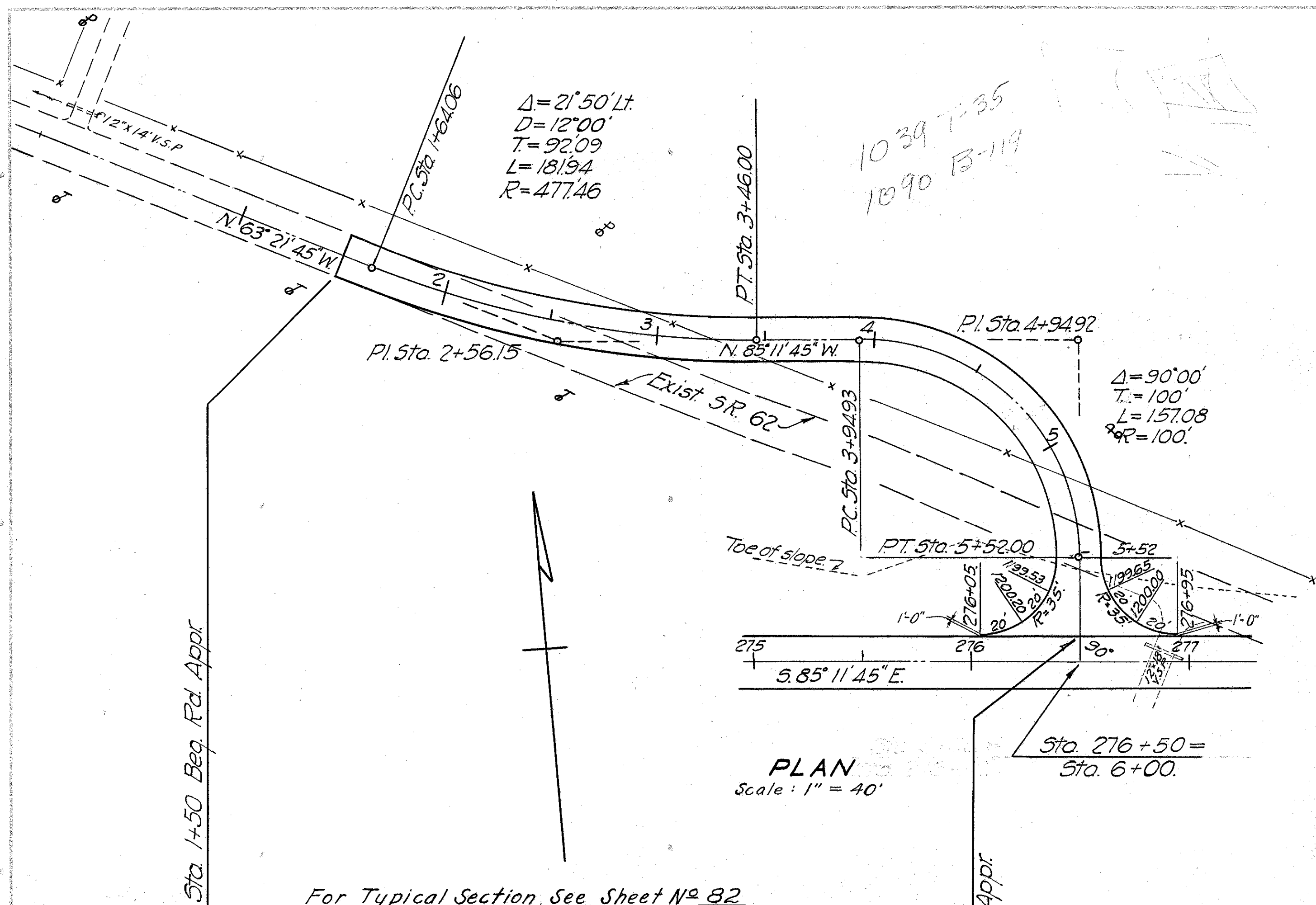
ESTIMATED QUANTITIES.
 T-35 2" Asphaltic Conc. Surf. Course 26.4 Cu. Yds.
 T-30 Bituminous Prime Coat 172 Gals.
 B-119 Crushed Aggr. Base Course 90 Cu. Yds.
 I-1 18" Drive Pipe 92 Lin. Ft.
 I-1 15" Drive Pipe 32 Lin. Ft.
 I-8 2-2-A C.B. 1 Each
 E-12 Pipe Removed (15" & Under) 23 Lin. Ft.
 E-101-Compacted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

Sta.	Elev.	Notes	Exc.	Emb.	Seeding
1+50	1188.75	Beg. Rd. Appr.			
2+70	1186.63	18" Drive Pipe			
2+80	1178.75	End Rd. Appr. on Lt			
2+88	1178.91	End Rd. Appr.			
2+60	1179.40	2+60			
2+50	1181.0	2+50 End Seeding			
2+40	1184.50	2+40			
2+30	1186.63	2+30			
2+20	1186.9	2+20			
2+15	1188.75	Beg. Appr.			

Sta.	Elev.	Notes	Exc.	Emb.	Seeding
2+00	1184.35	Pvt. Drive Rt.			
2+15	1183.35	2+15			
2+26.6	1185.8	End Pvt. Dr.			
2+50	1181.0	2+50			
2+60	1179.40	2+60			
2+73	1178.74	2+73			
2+80	1178.4	2+80			
2+88	1178.91	2+88			
2+88	1178.91	Field Dr. on Rt.			

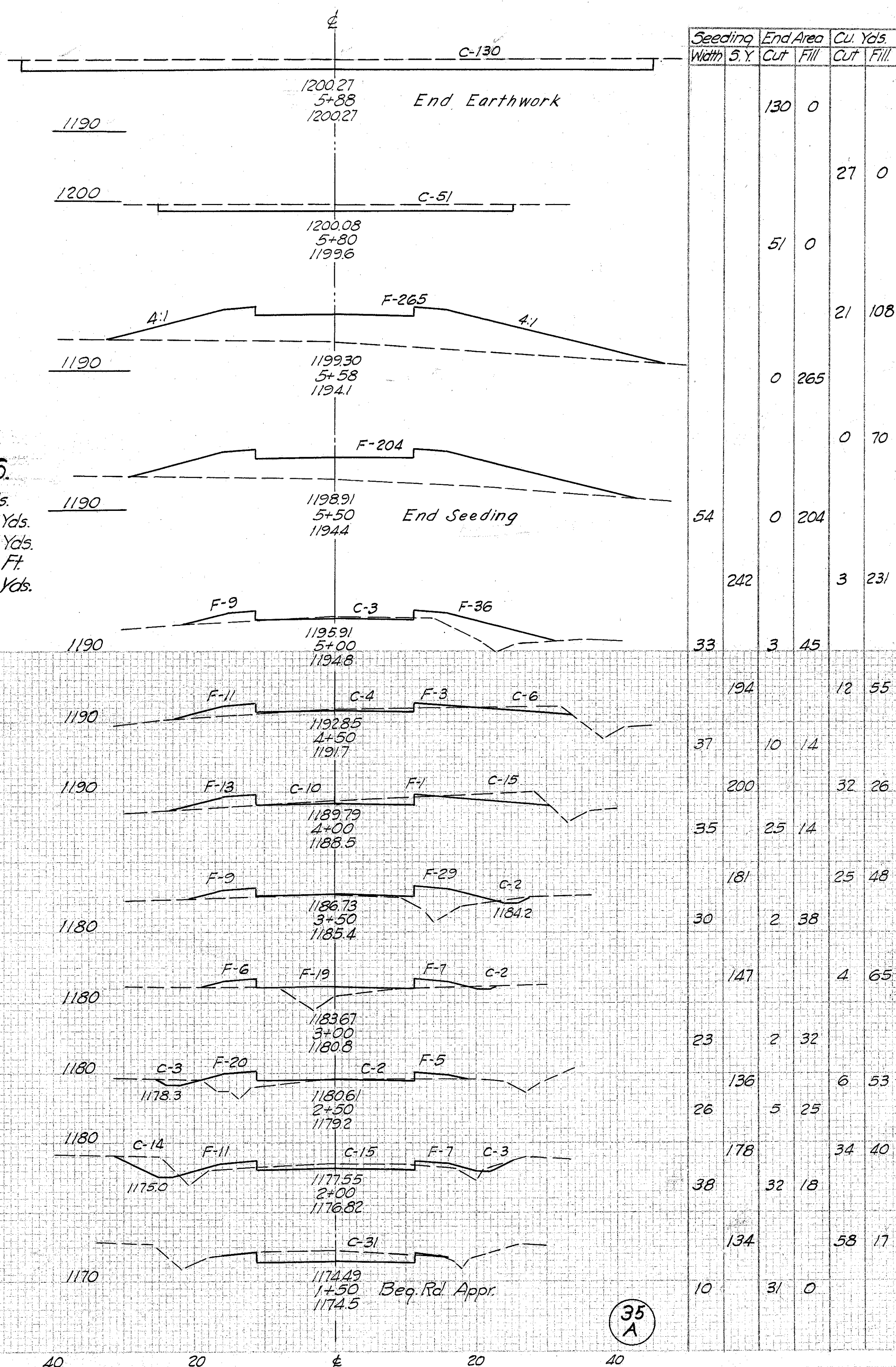
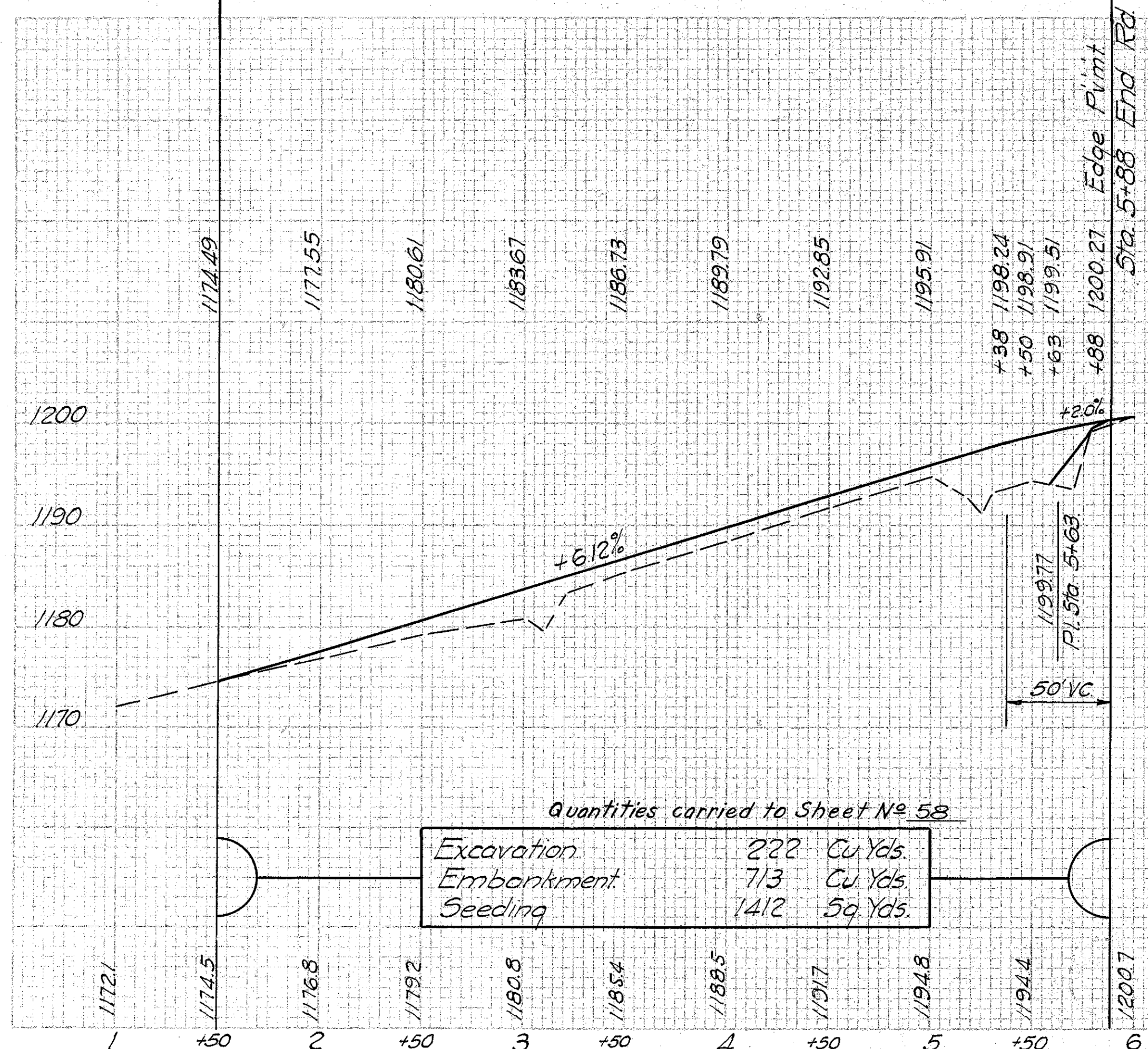
Quantities Carried to St. # 52
 Excavation 563 Cu. Yds.
 Embankment 31 Cu. Yds.
 Seeding 349 Sq. Yds.

Emb. = 77x16 + 54 = 23 Cu. Yds.
 Exc. for MB = 16(51)x175 + 36 = 8 Cu. Yds.
 Quantities carried to Street No. 52



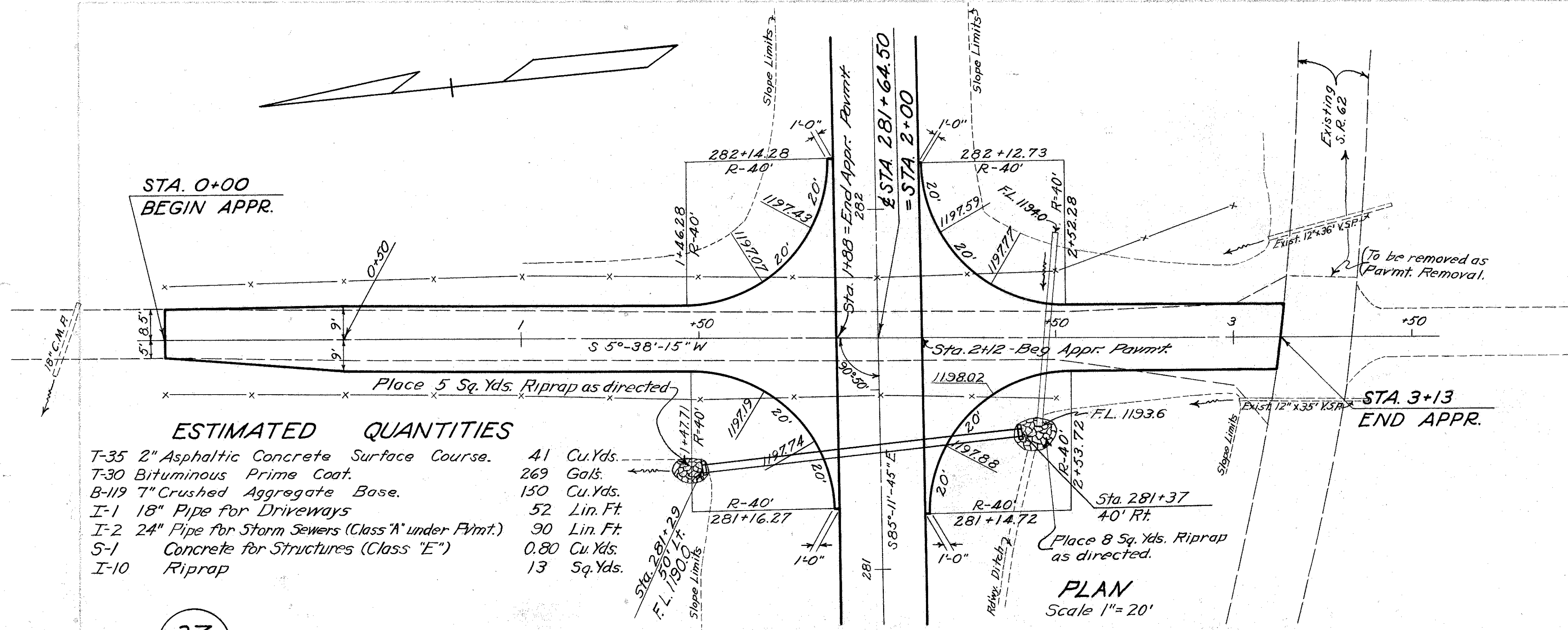
35
A

ESTIMATED QUANTITIES.
 T-30 Bit. Prime Coat 382 Gals.
 B-119 Aqqr. 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.



35
A

HOL-62-(21.08-21.51)

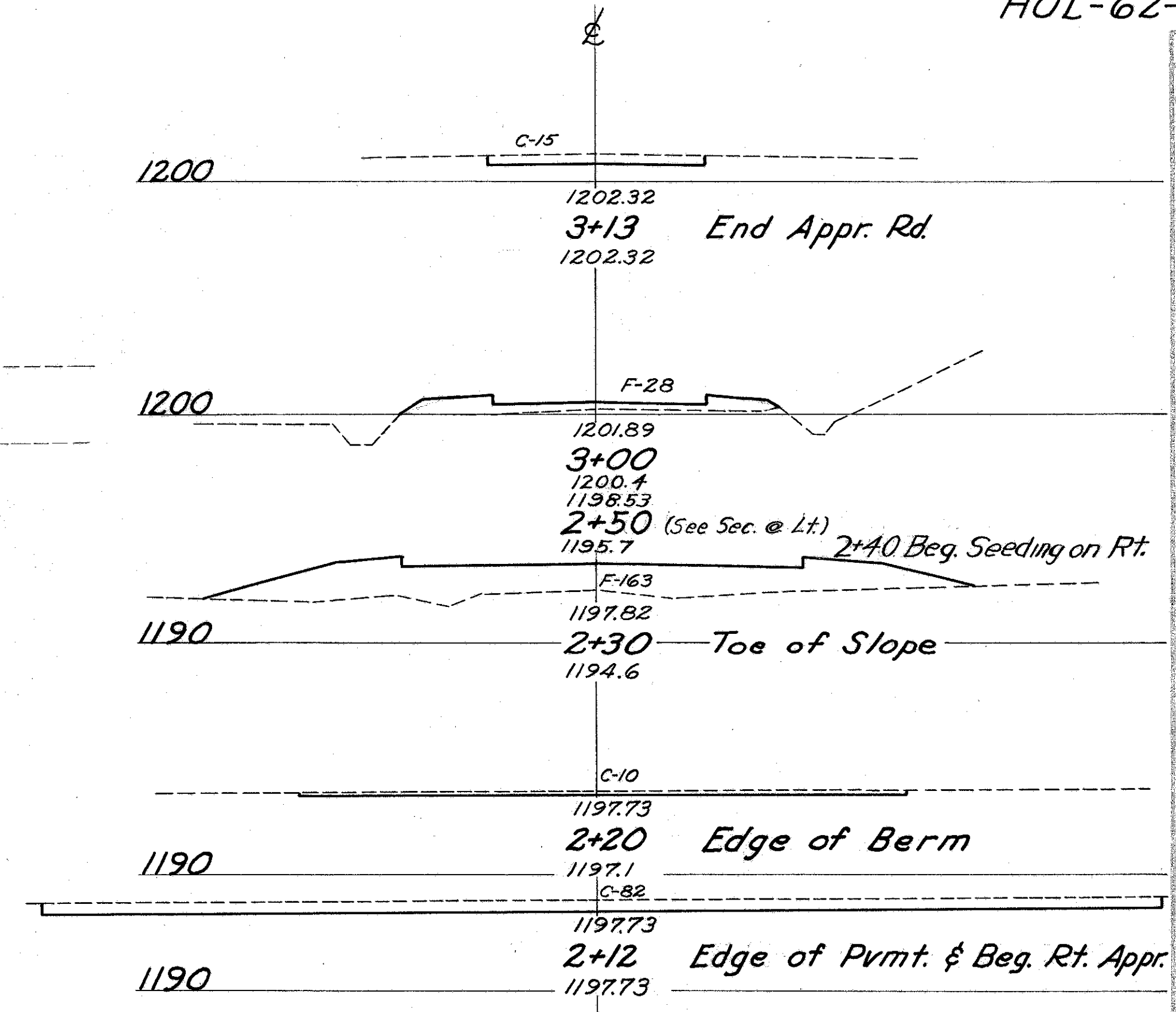


ESTIMATED QUANTITIES

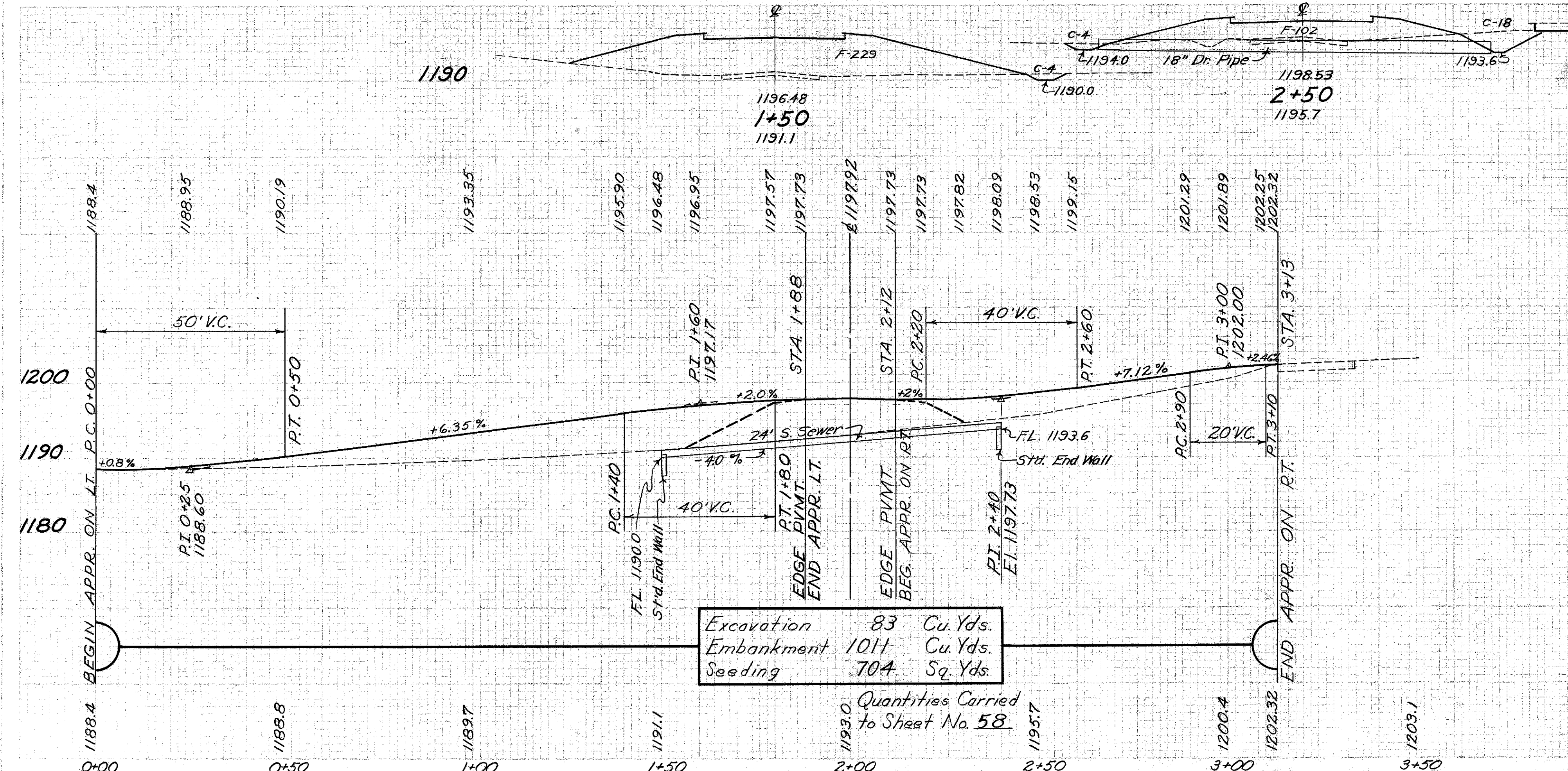
T-35 2" Asphaltic Concrete Surface Course.	41 Cu.Yds.
T-30 Bituminous Prime Coat.	269 Gal.
B-119 7" Crushed Aggregate Base.	150 Cu.Yds.
I-1 18" Pipe for Driveways	52 Lin. Ft.
I-2 24" Pipe for Storm Sewers (Class "A" under Pmnt.)	90 Lin. Ft.
S-1 Concrete for Structures (Class "E")	0.80 Cu.Yds.
I-10 Riprap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

37
A

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



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

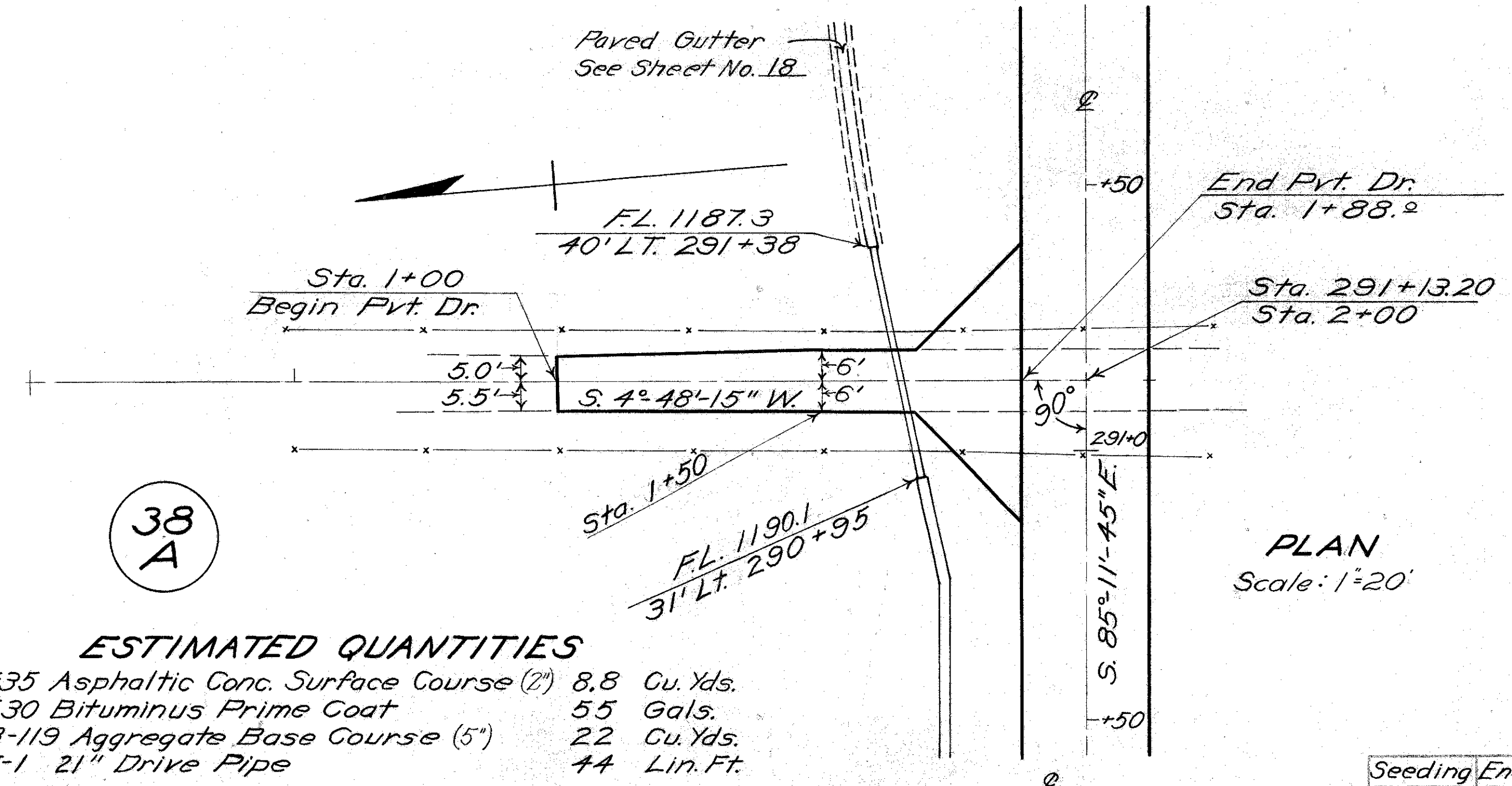


Excavation 83 Cu.Yds.
Embankment 1011 Cu.Yds.
Seeding 704 Sq.Yds.

Quantities Carried to Sheet No. 58

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

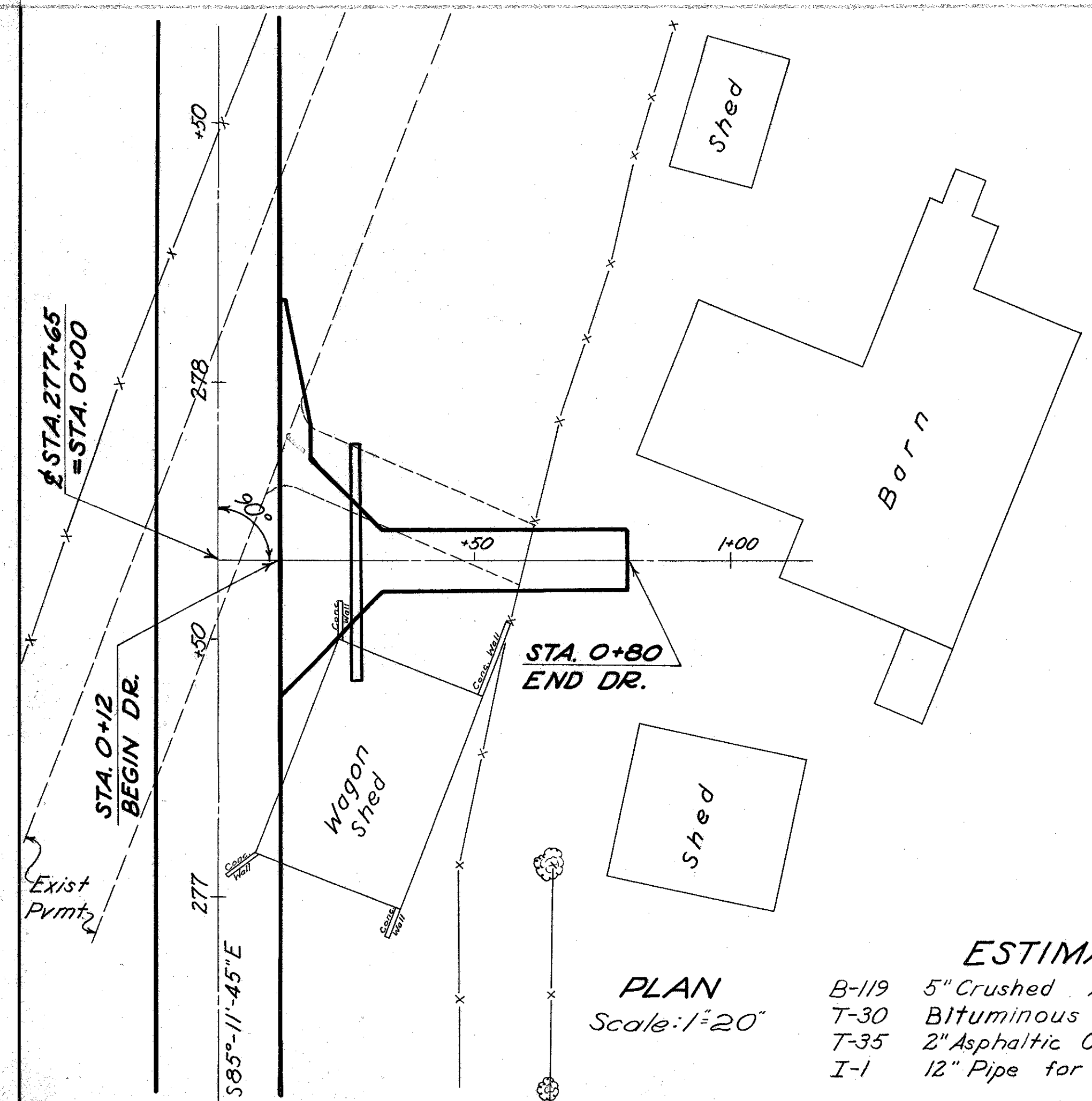
37
A



38
A

ESTIMATED QUANTITIES

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

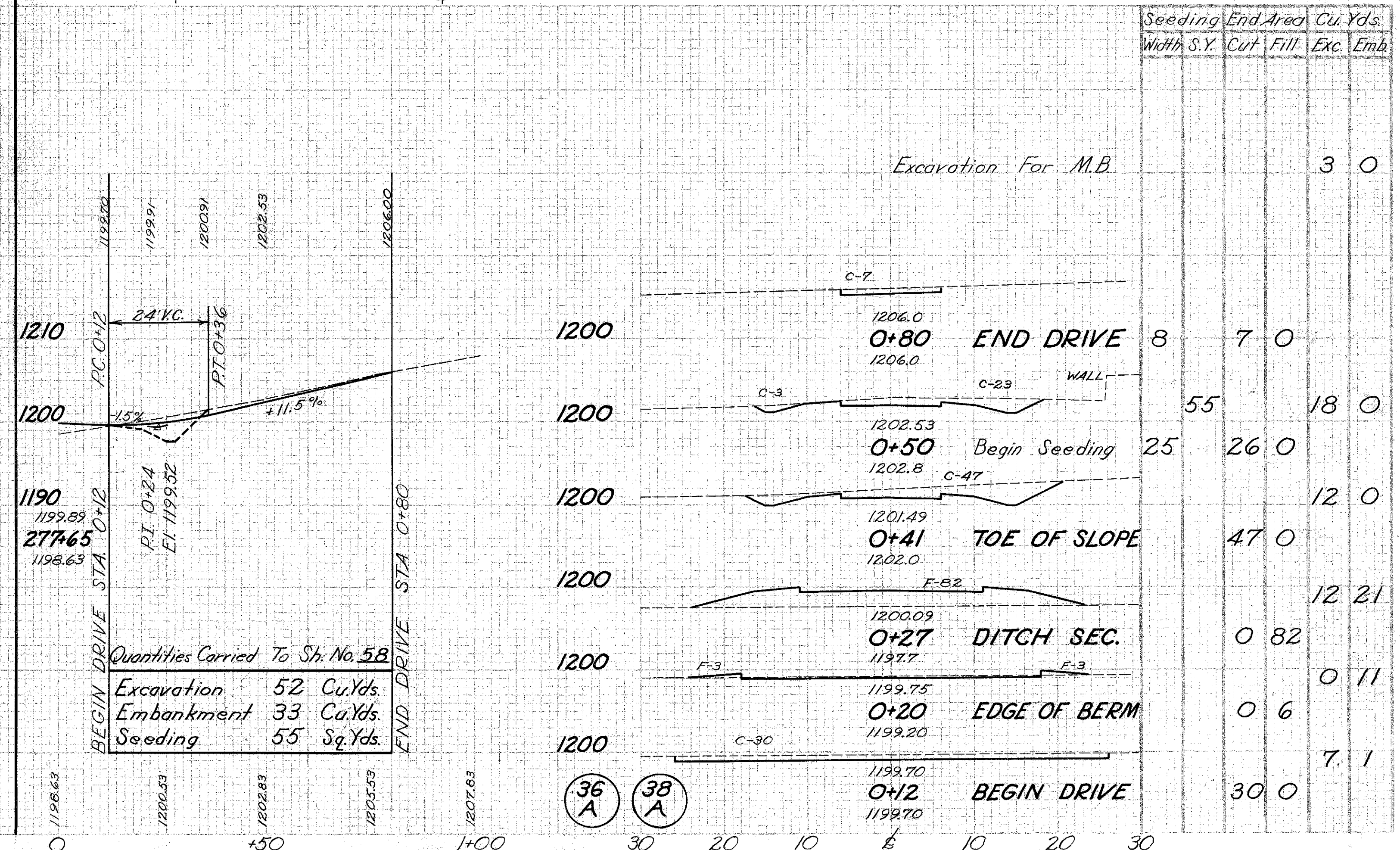
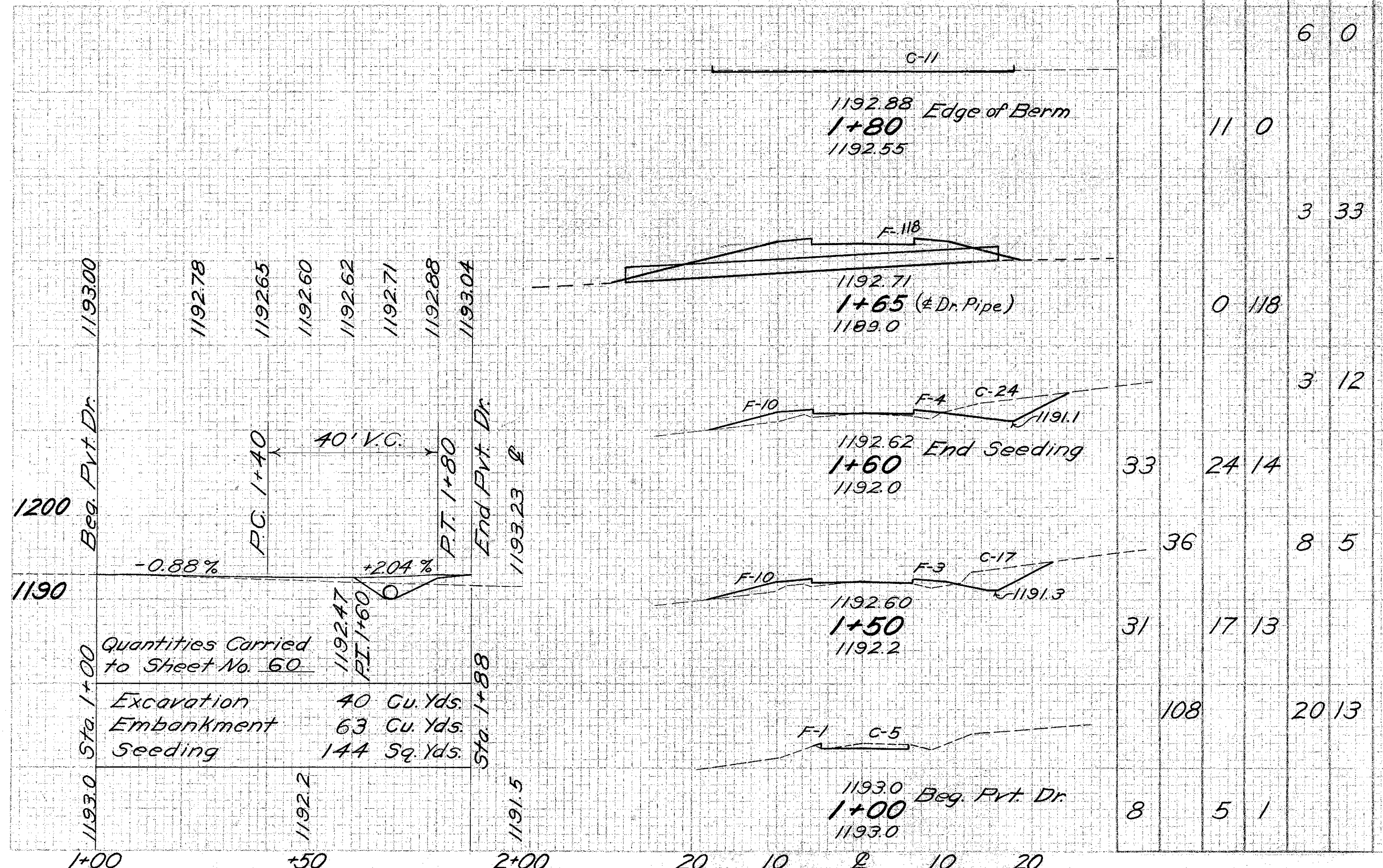


36
A

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.

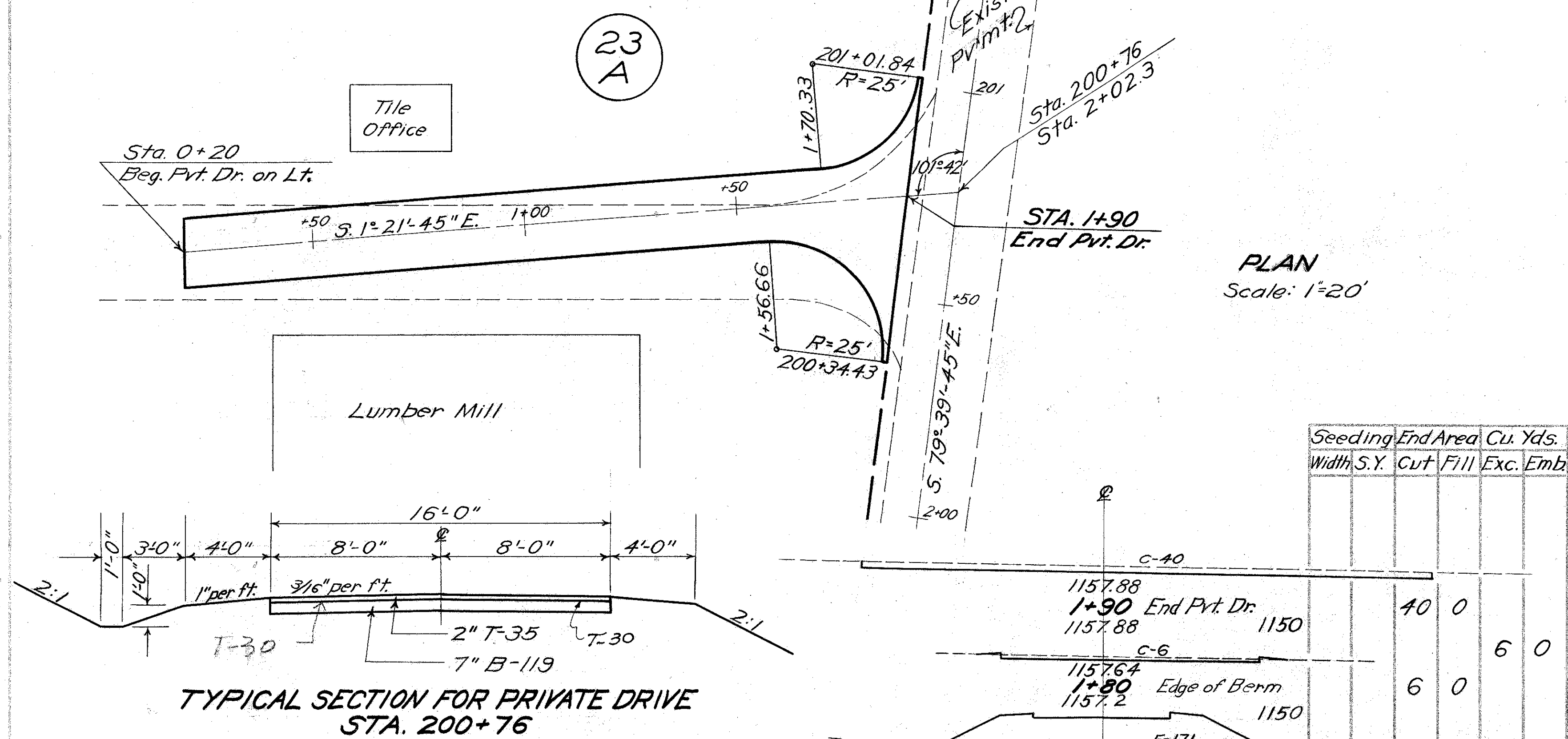
Station	Description	Width S.Y.	Cut	Fill	Exc.	Emb.
1190						
1193.04	End Pvt. Dr. 1+88		32	0		
1193.04						



ESTIMATED QUANTITIES

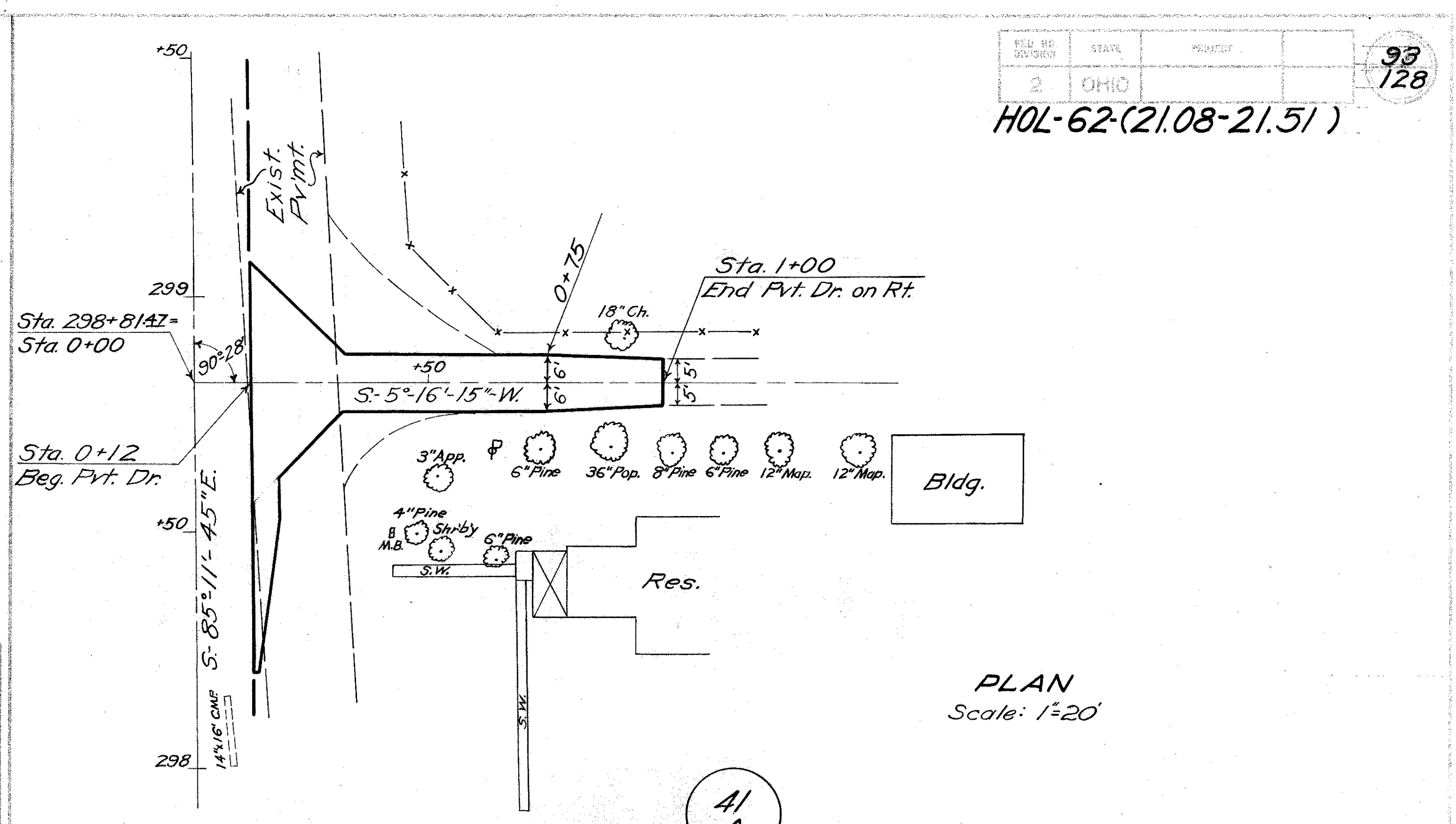
T-35 Asph. Conc. Surf. Course 19.1 Cu. Yds.
 T-30 Bituminous Prime Coat 120 Gals.
 B-119 Aggregate Base Course 67 Cu. Yds.

23
A



PLAN
Scale: 1"=20'

Seeding Width	End Area S.Y.	Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.



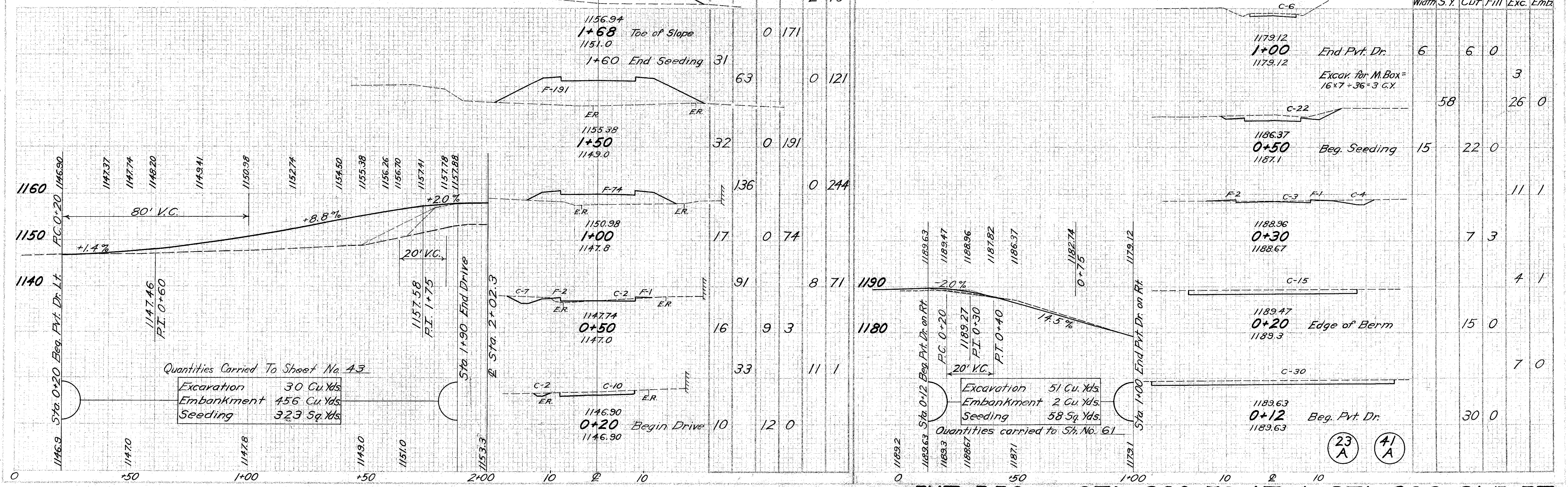
PLAN
Scale: 1"=20'

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.

41
A

Seeding Width	End Area S.Y.	Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.

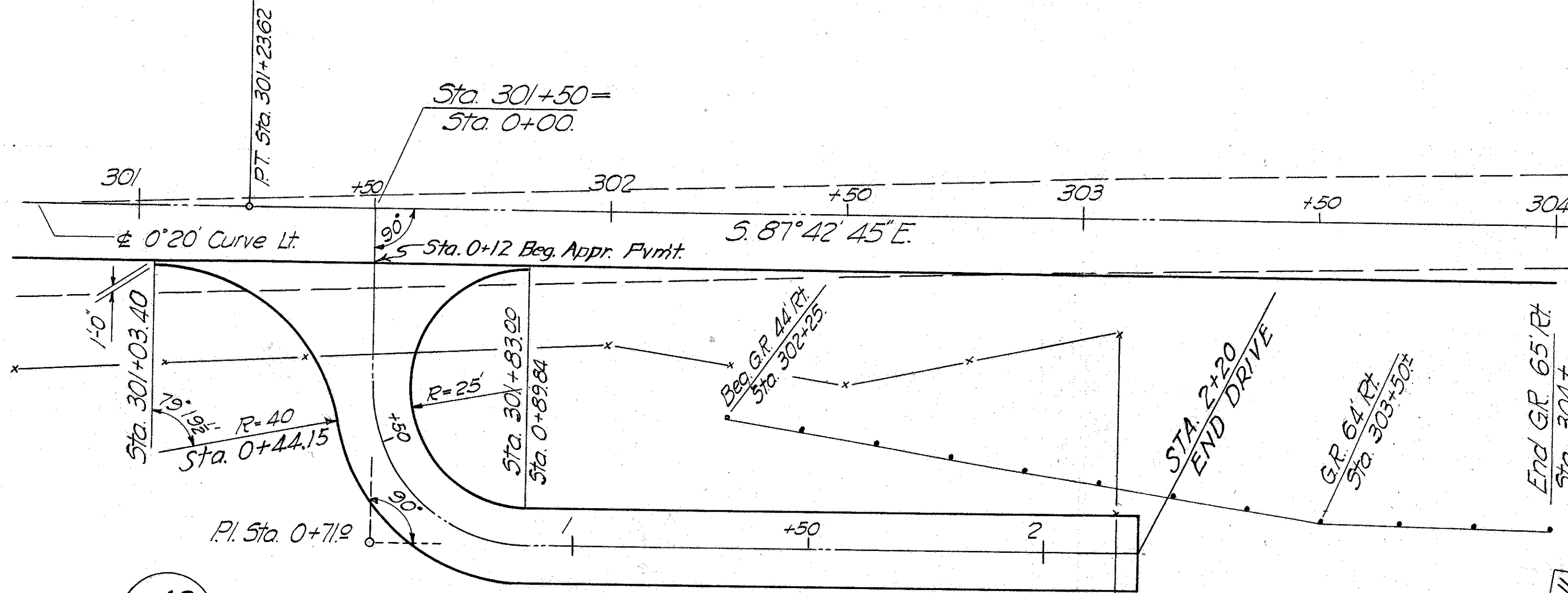


PVT. DRS: STA. 200+76 LT. & STA. 298+81.47 RT.

23
A

41
A

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.

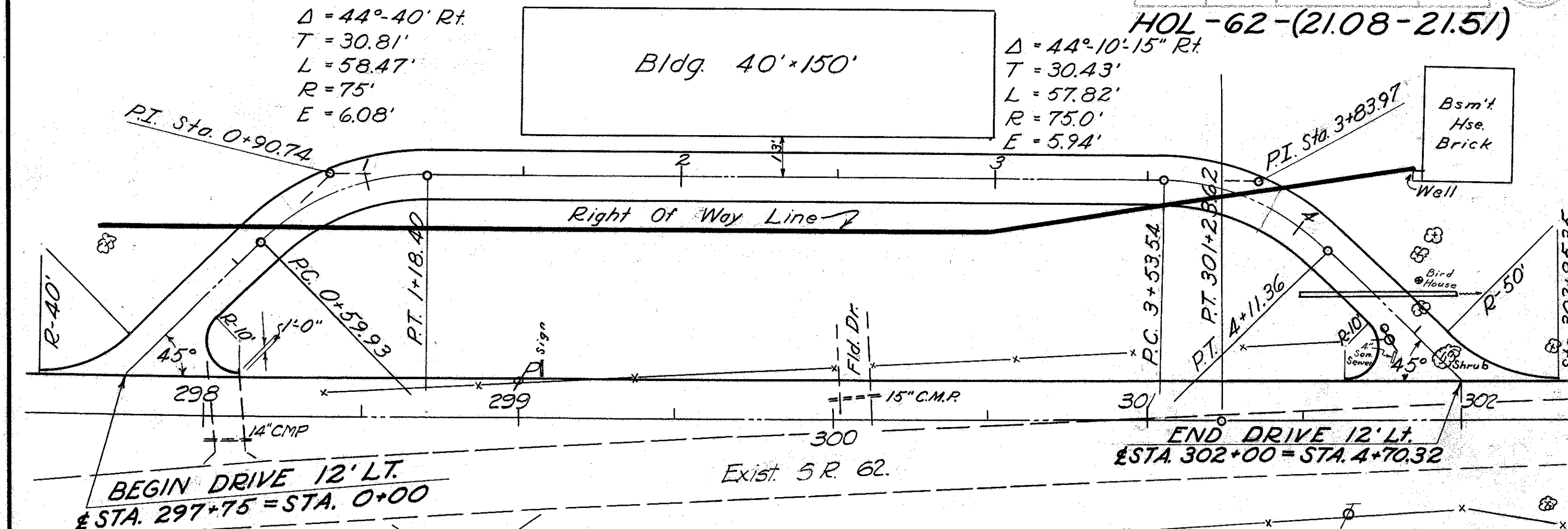
PLAN
Scale 1" = 20'

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.

$\Delta = 44^\circ 40' \text{ Rt.}$
 $T = 30.81'$
 $L = 58.47'$
 $R = 75'$
 $E = 6.08'$

$\Delta = 44^\circ 10' 15'' \text{ Rt.}$
 $T = 30.43'$
 $L = 57.82'$
 $R = 75.0'$
 $E = 5.94'$



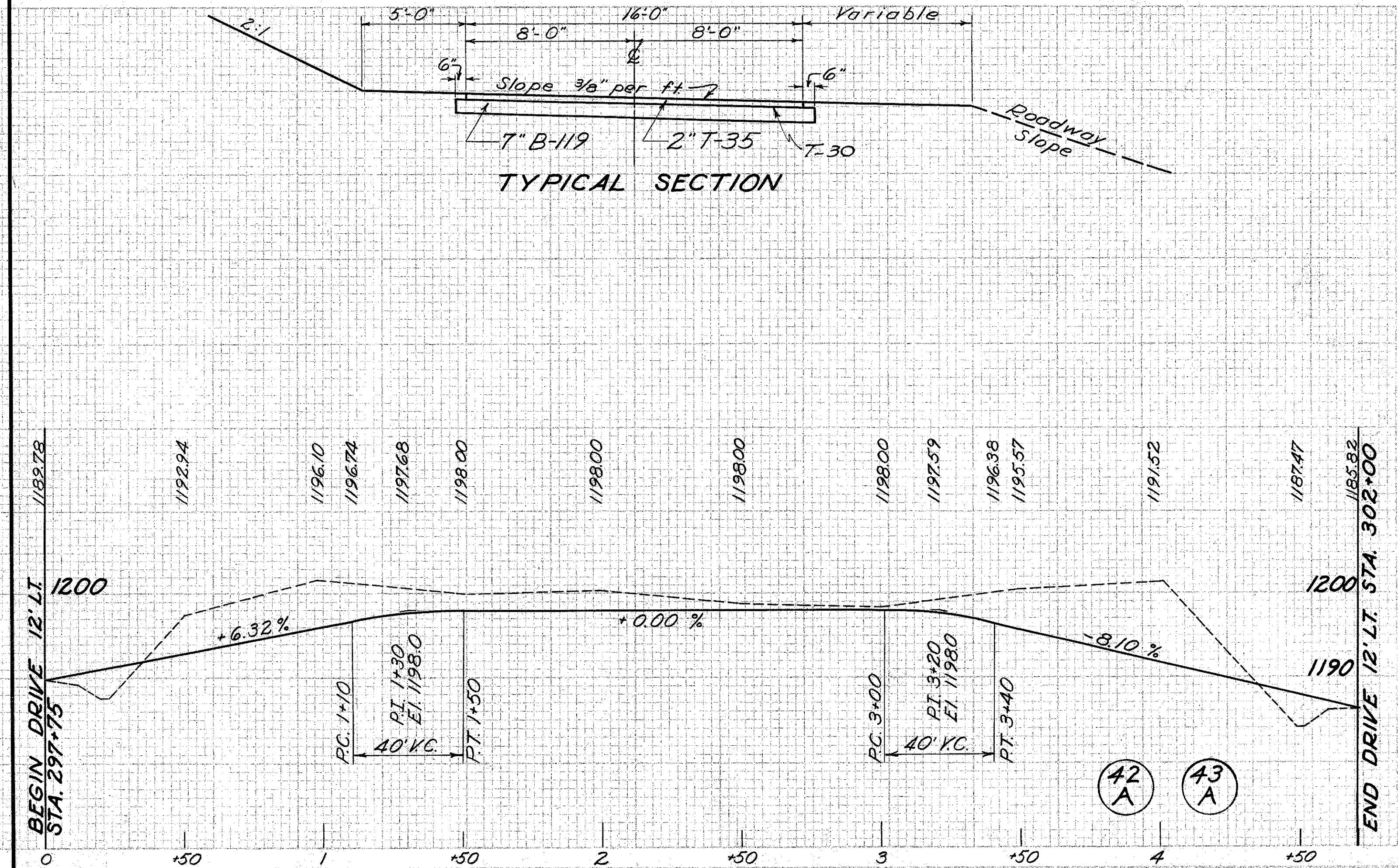
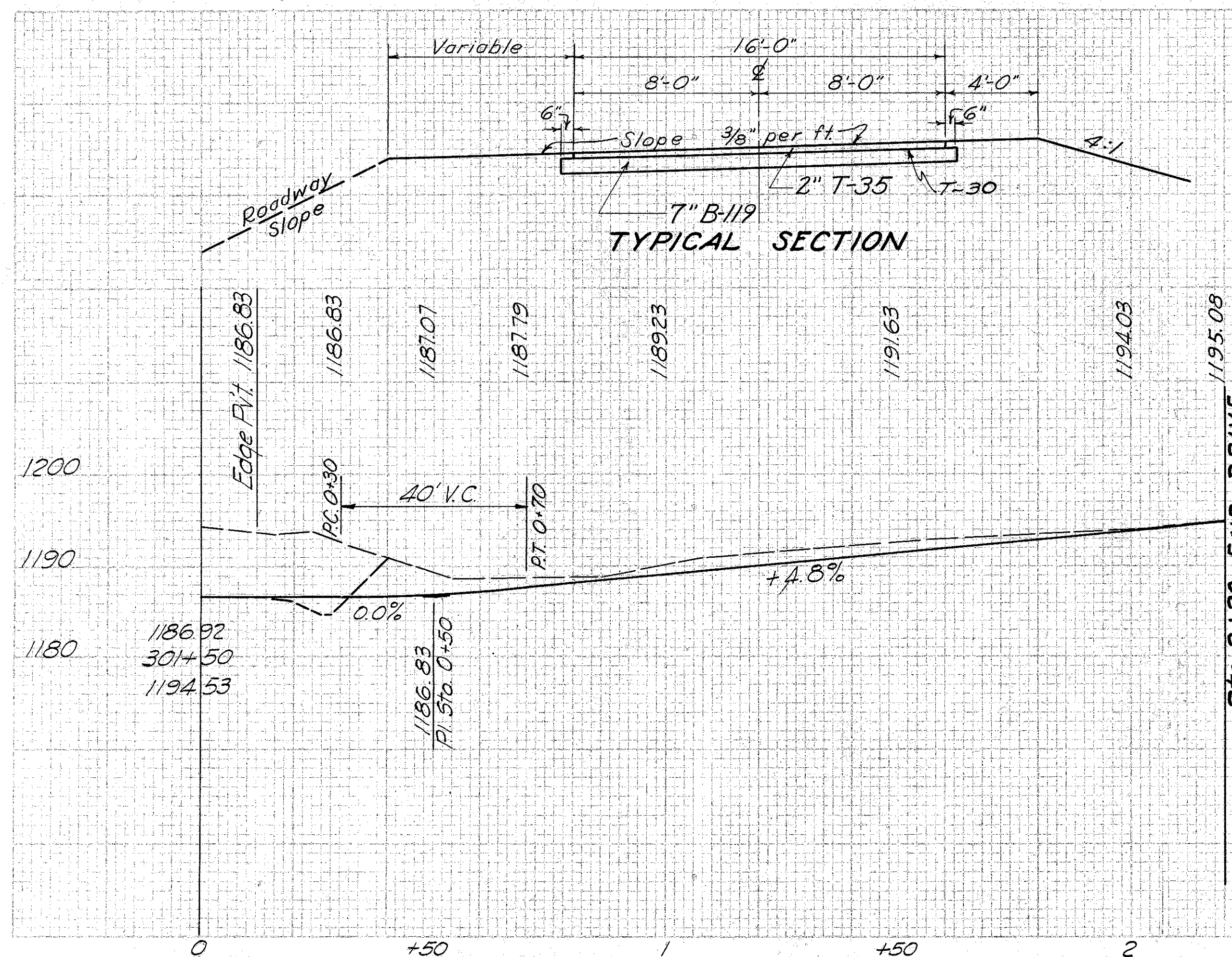
42
A

PLAN
Scale 1" = 30'

ESTIMATED QUANTITIES

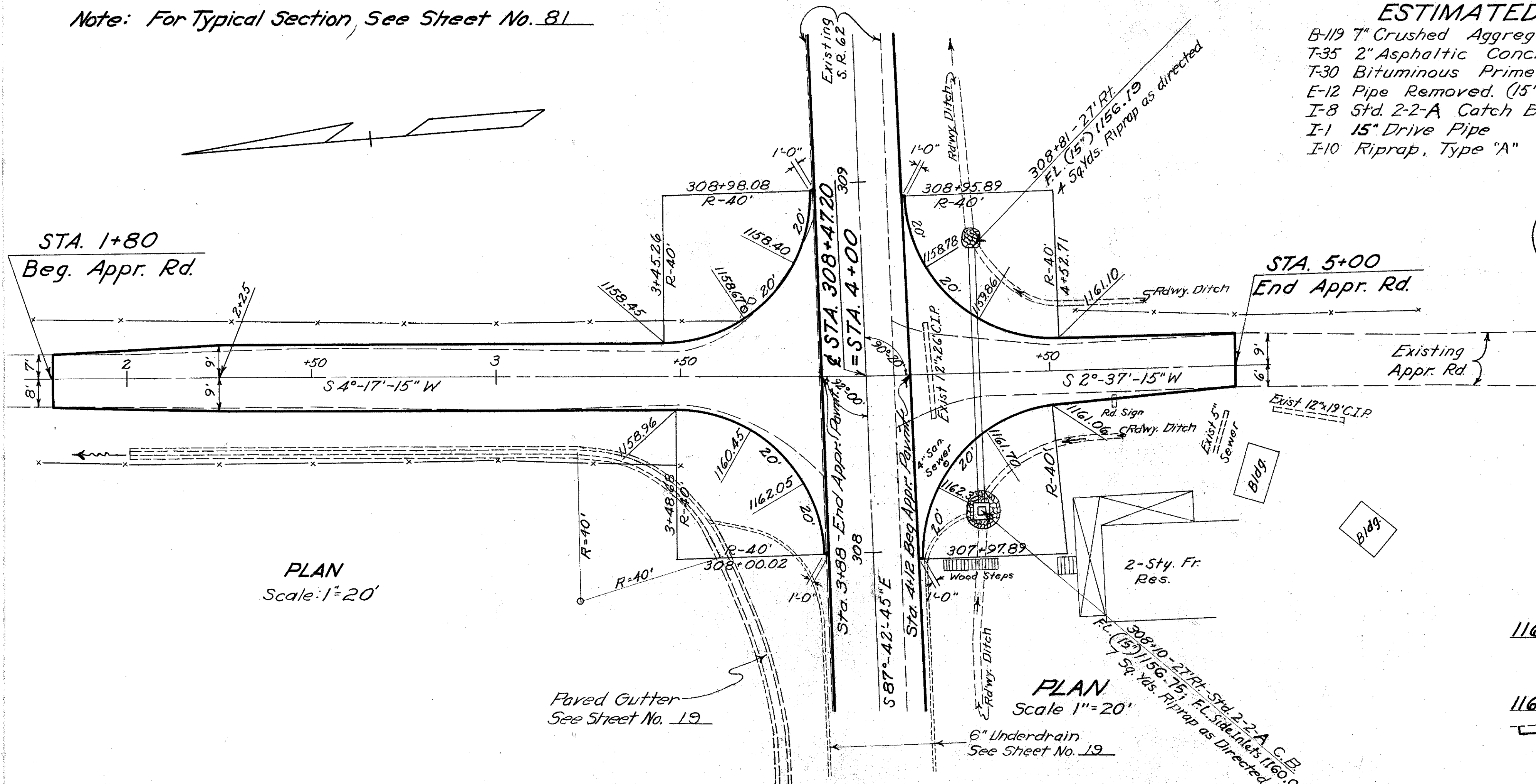
T-35 2" Asphaltic Concrete Surface Course	18.5 Cu.Yds.
B-119 7" Crushed Aggregate Base Course	69 Cu.Yds.
T-30 Bituminous Prime Coat	117 Gals.
I-1 15" Drive pipe	50 Lin. Ft.
E-12 Pipe removal (15" and under)	32 Lin. Ft.

Quantities carried to sheet No. 19
For earthwork, see cross section sheet No. 61



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

Note: For Typical Section, See Sheet No. 81



PLAN
Scale: 1"=20'

PLAN
Scale: 1"=20'

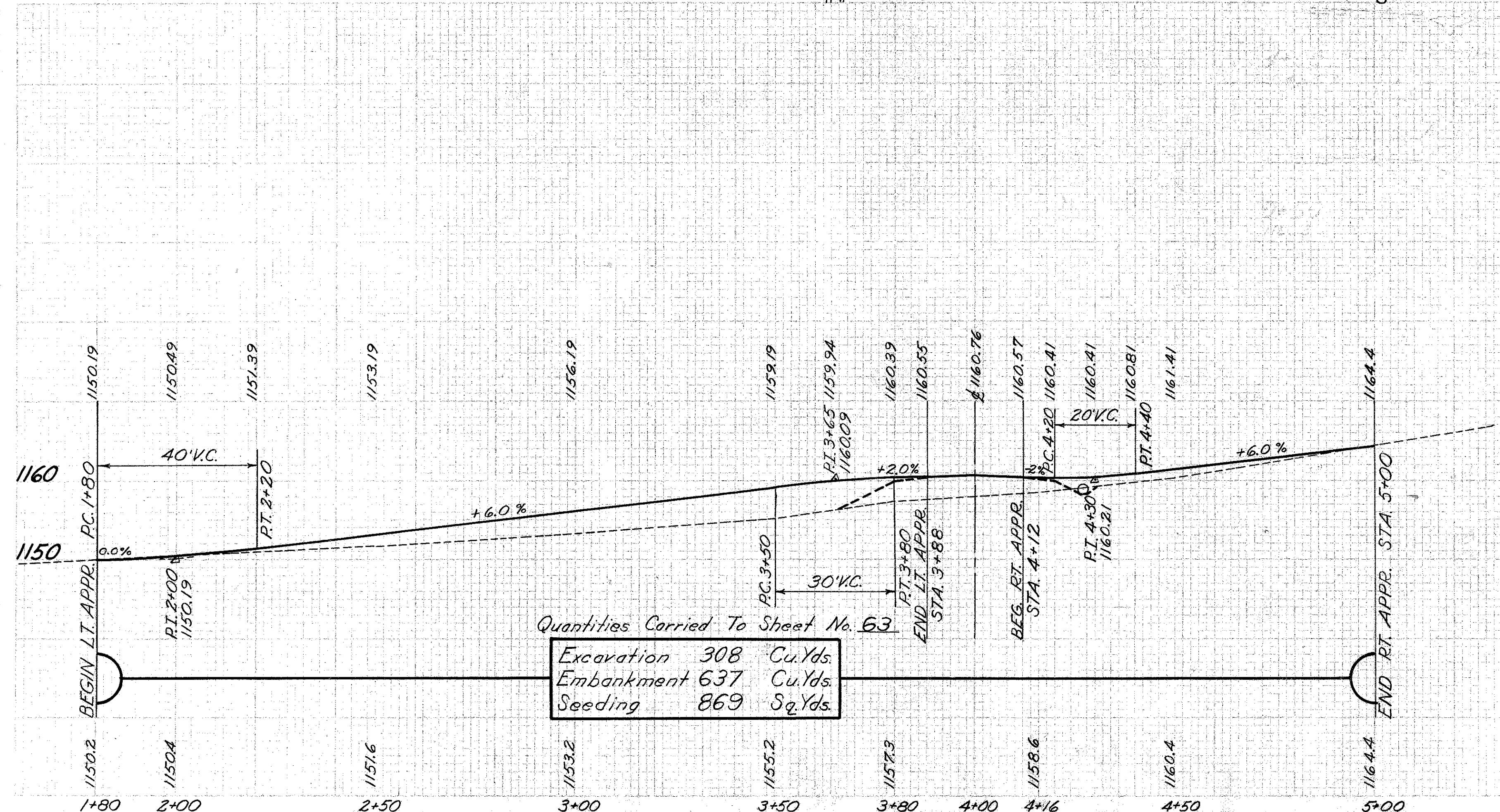
ESTIMATED QUANTITIES

B-19 7" Crushed Aggregate Base.	152	Cu. Yds.
T-35 2" Asphaltic 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.

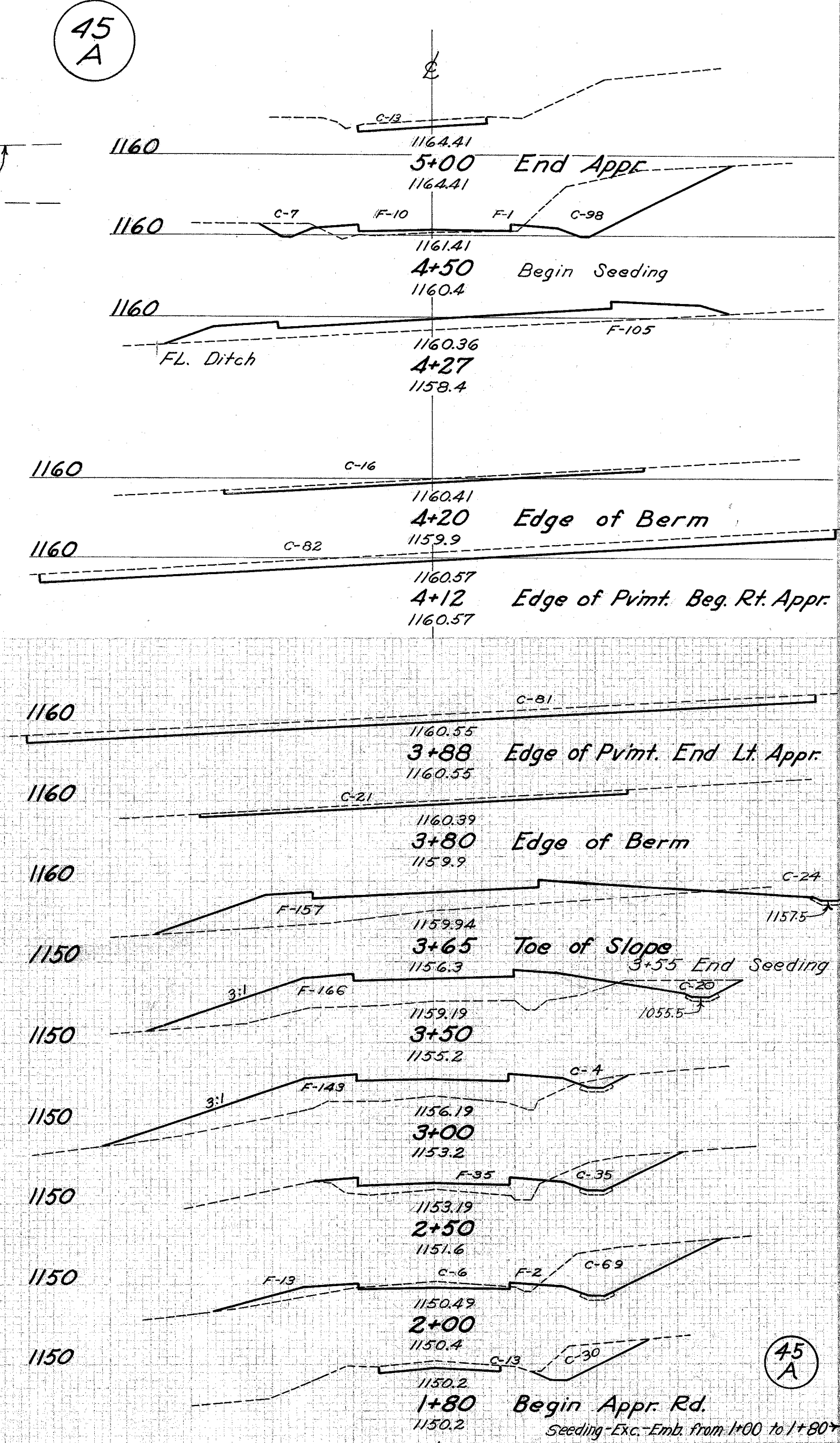
NO. OF STATIONS	STATE	PROJECT	TYPE ROAD	95 128
2	OHIO			

HOL-62-(21.08-21.51)

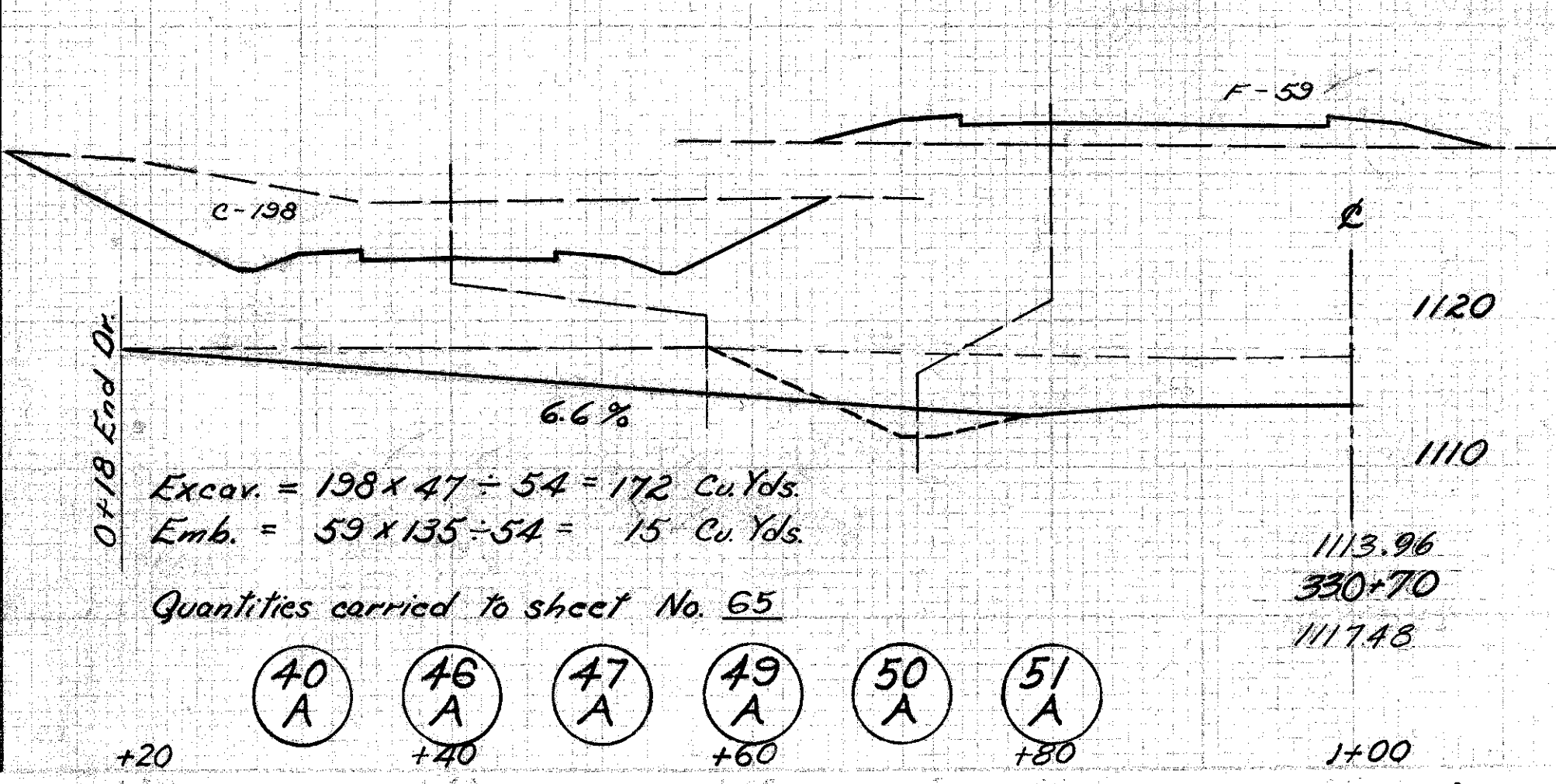
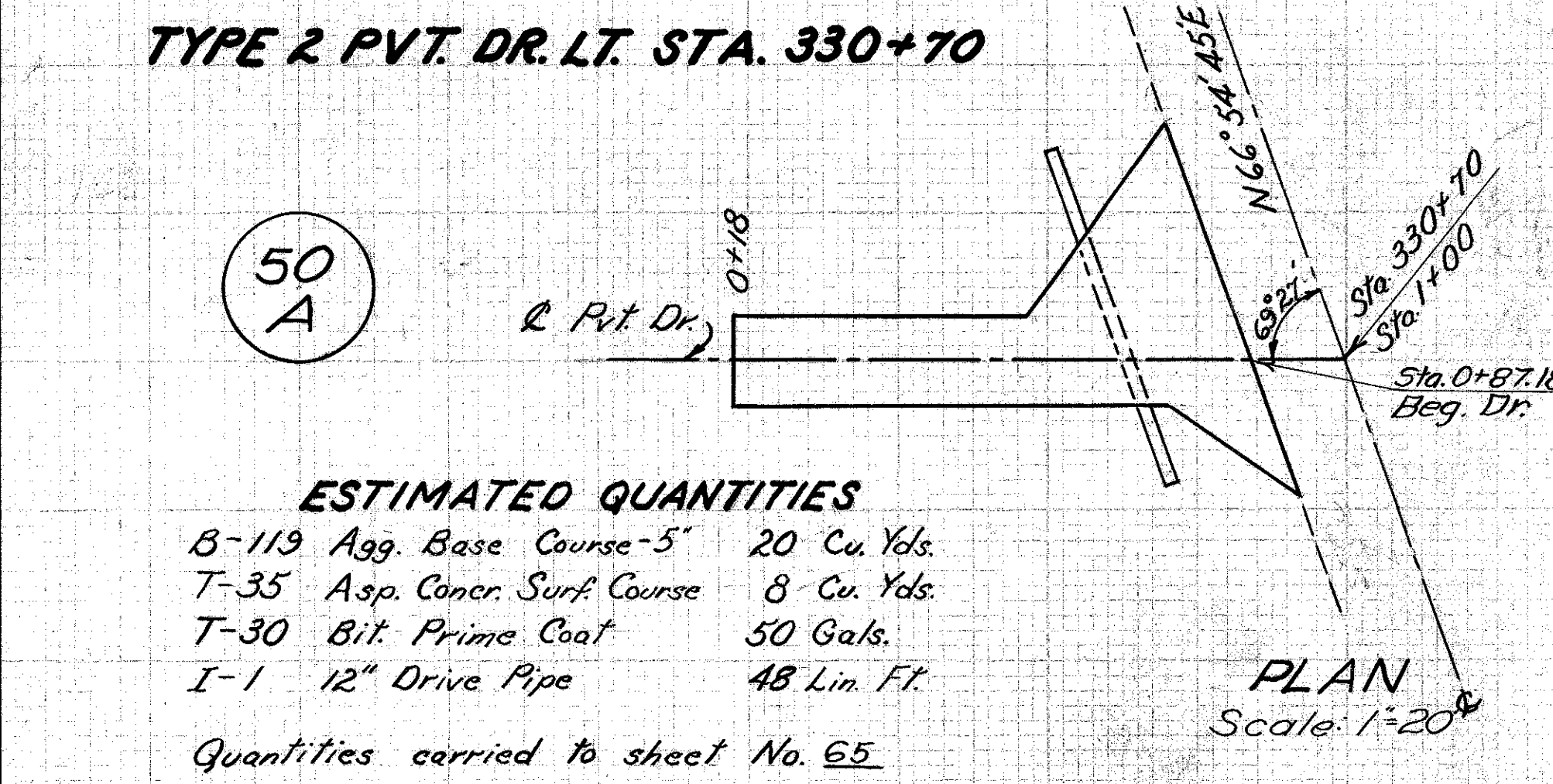
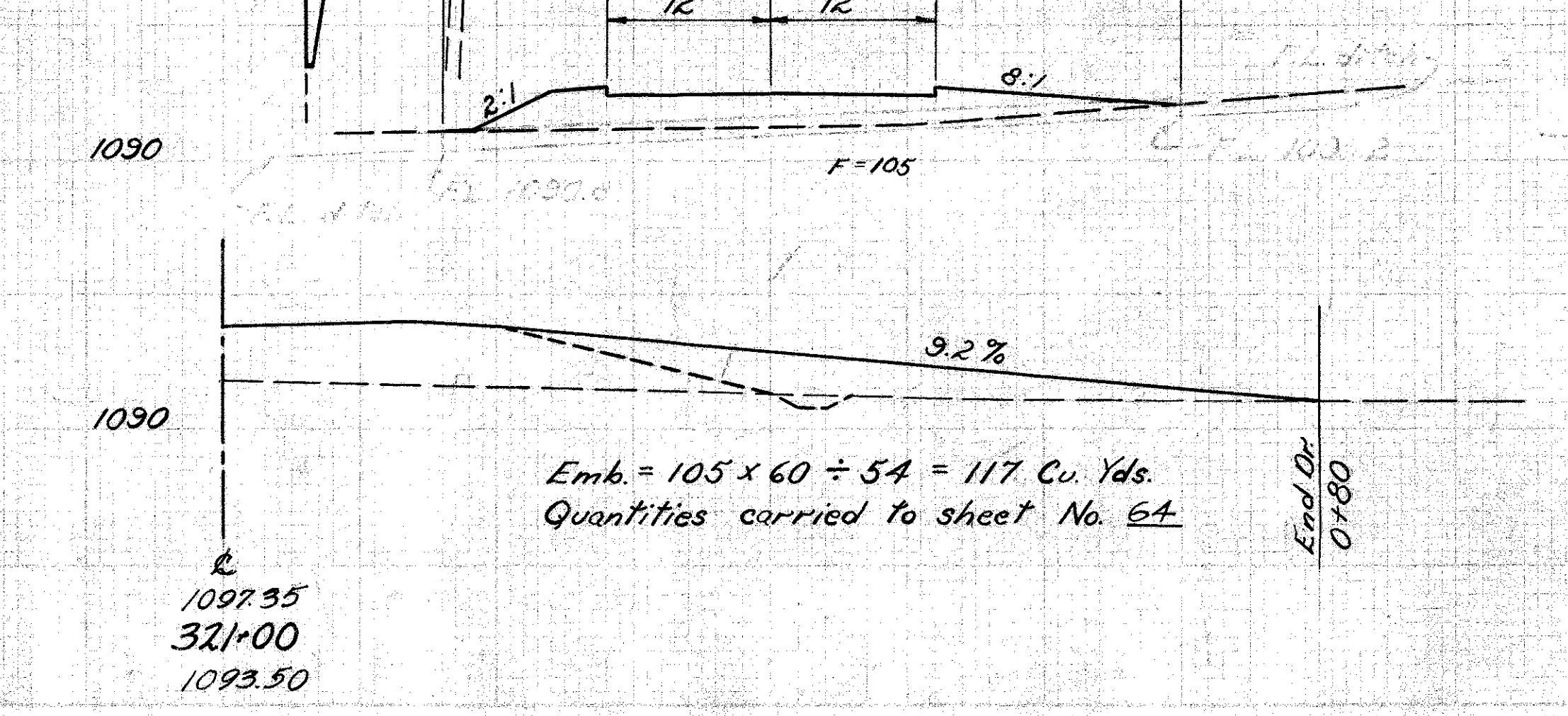
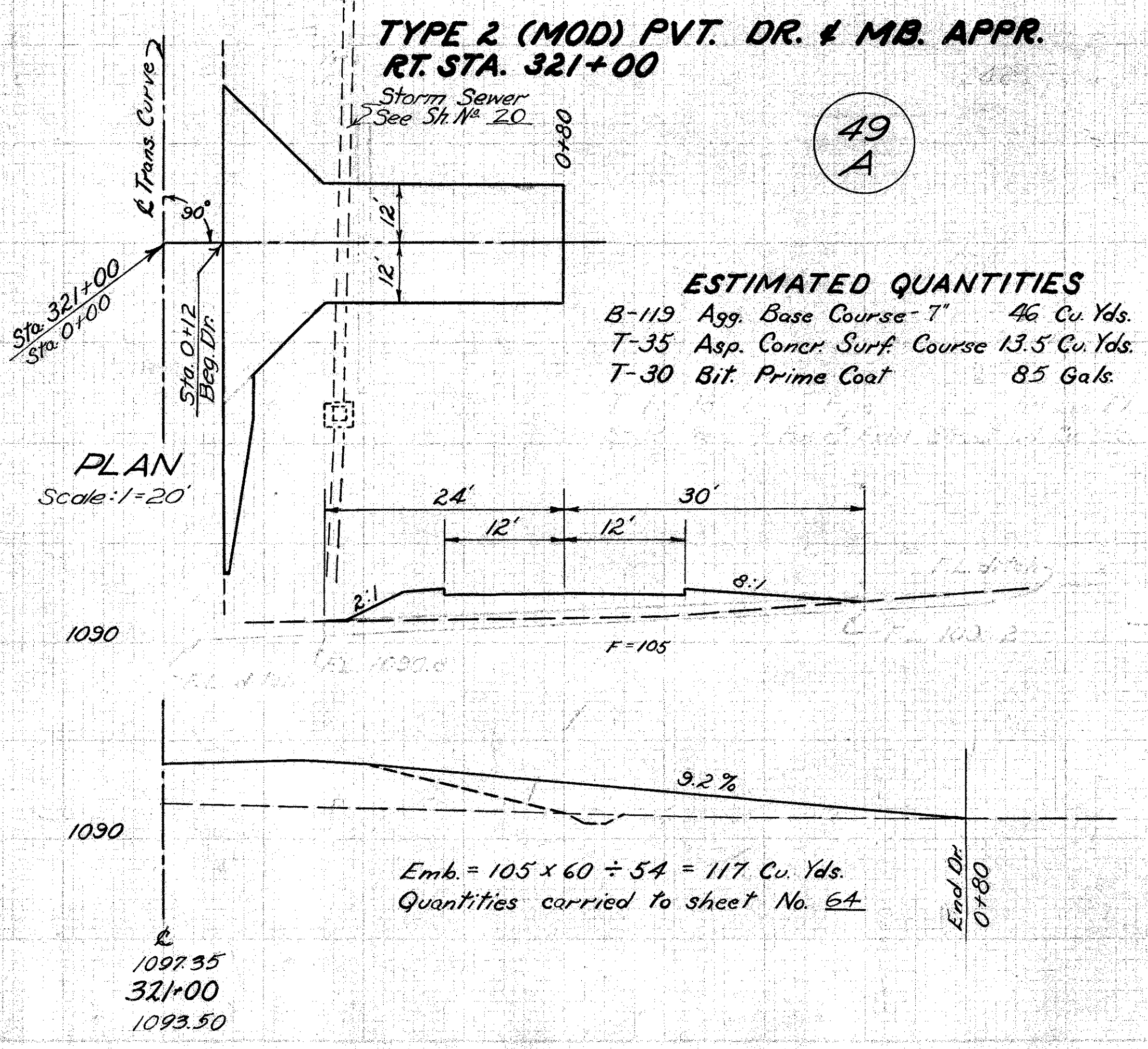
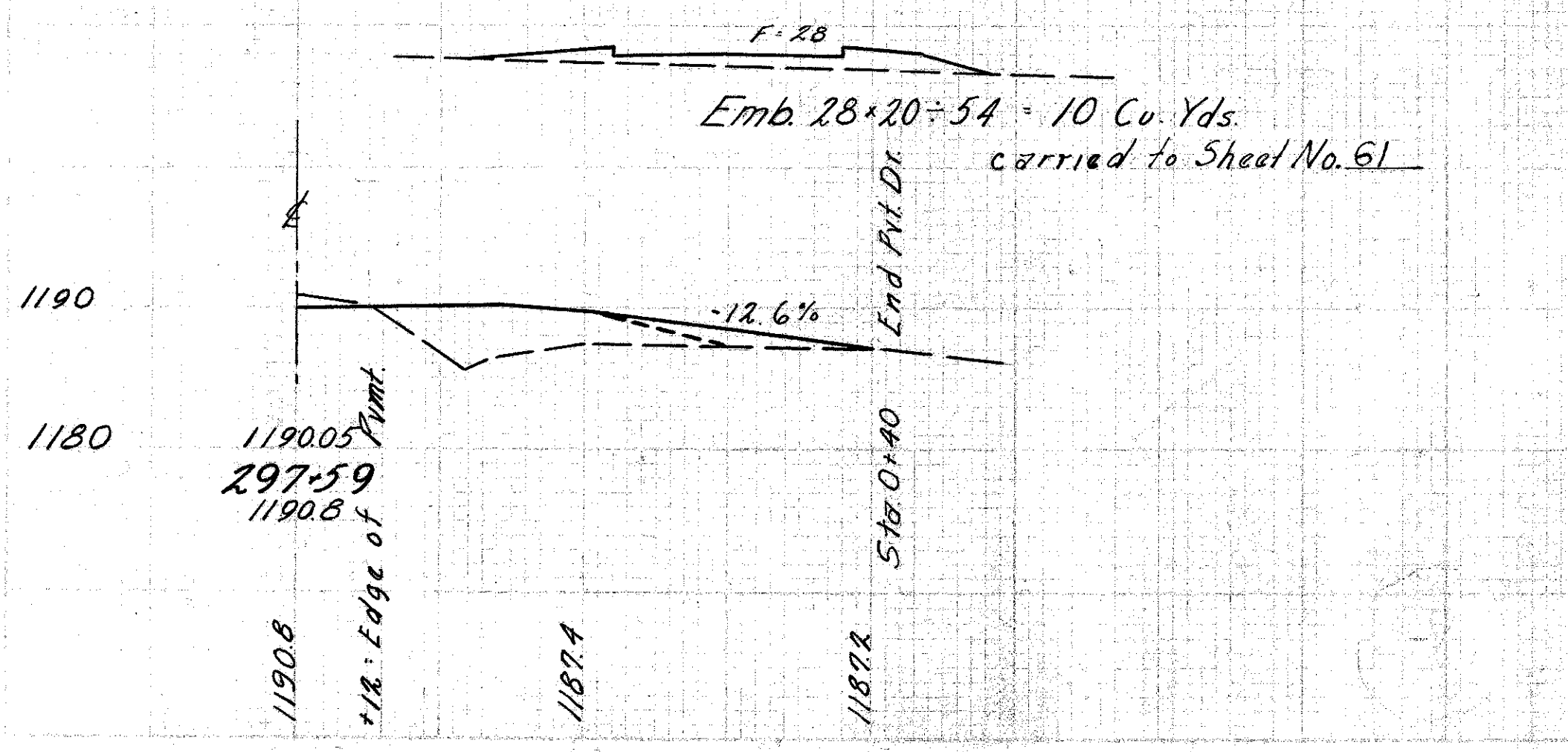
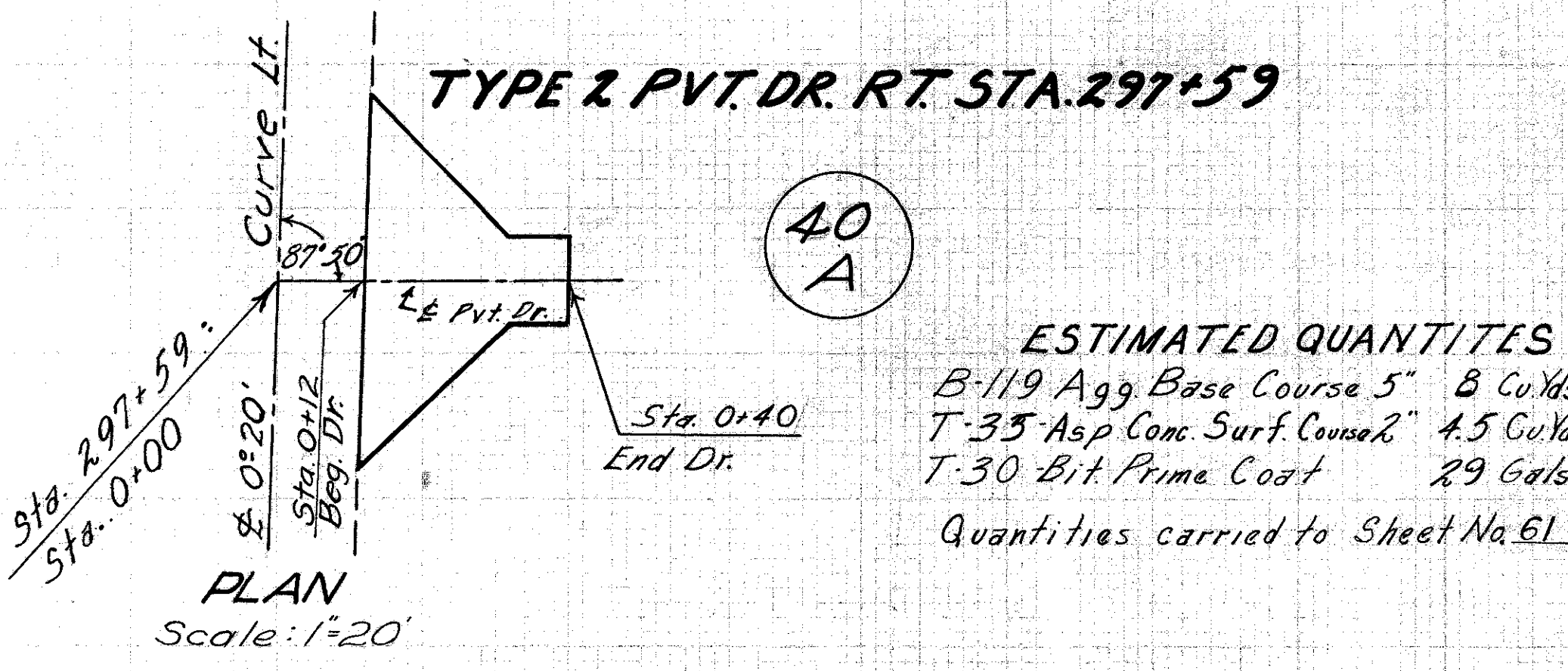
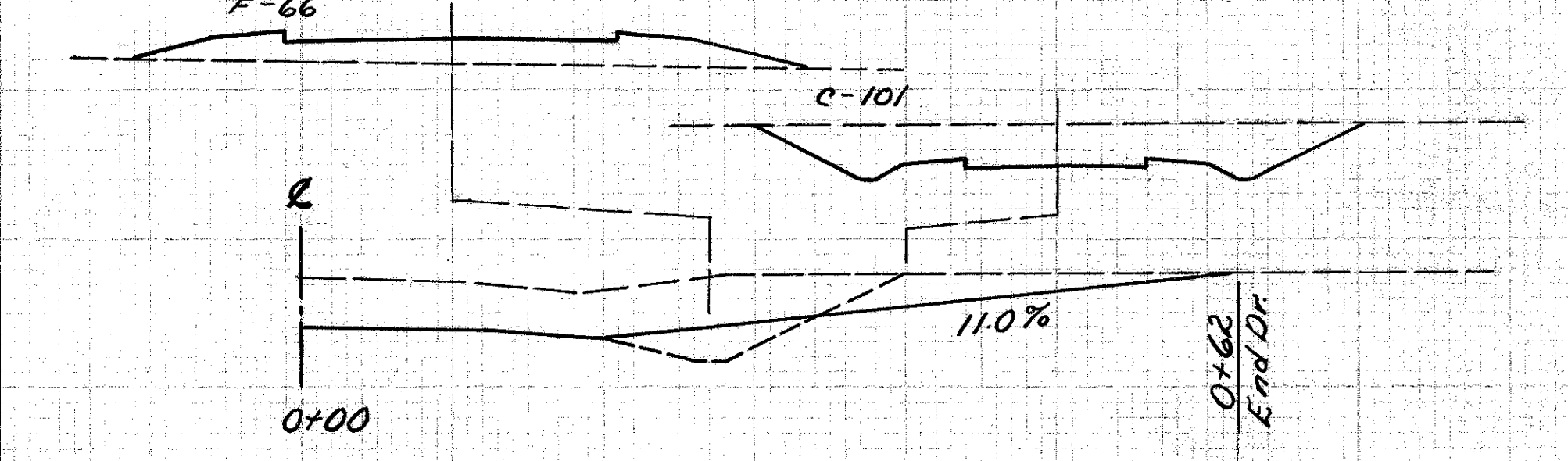
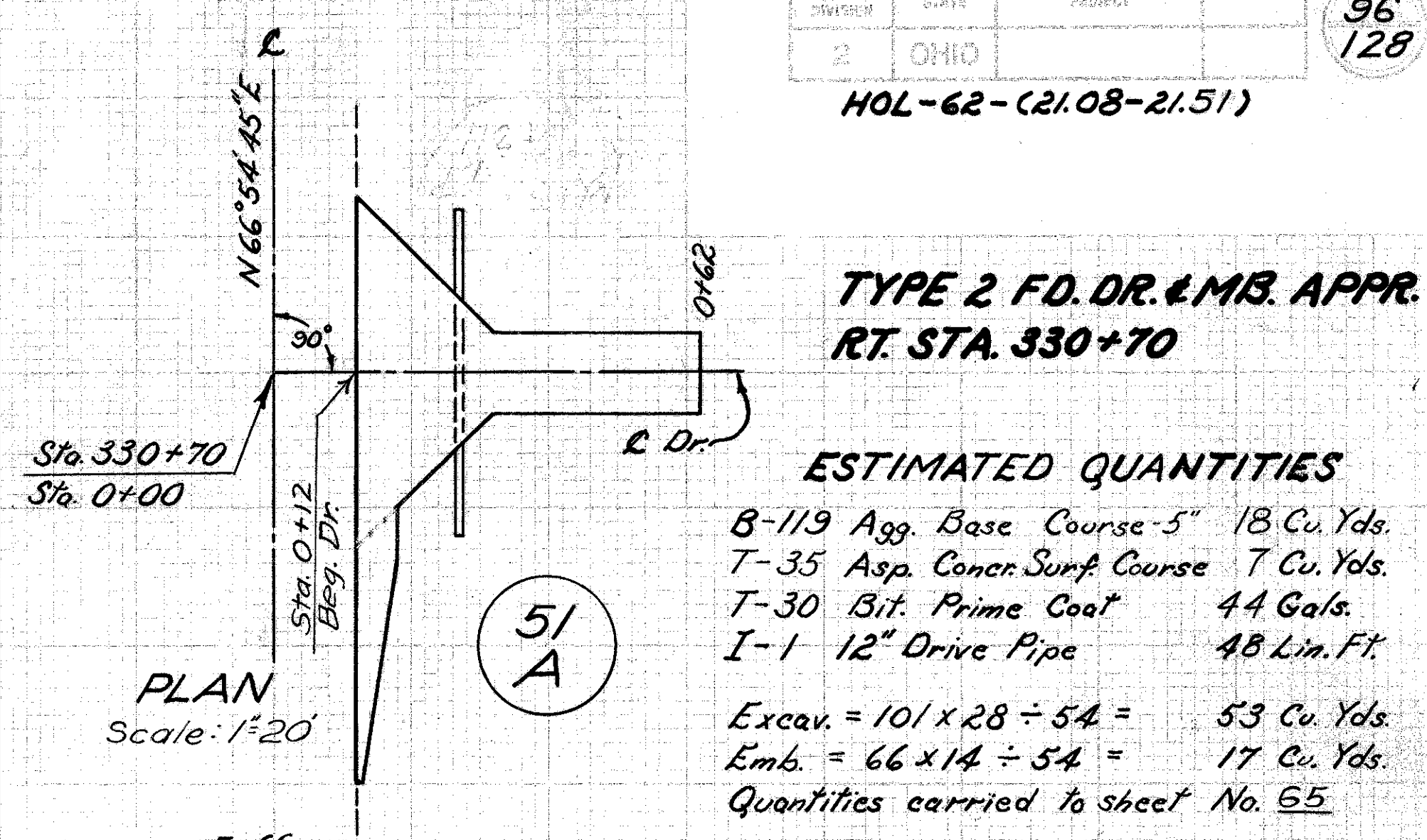
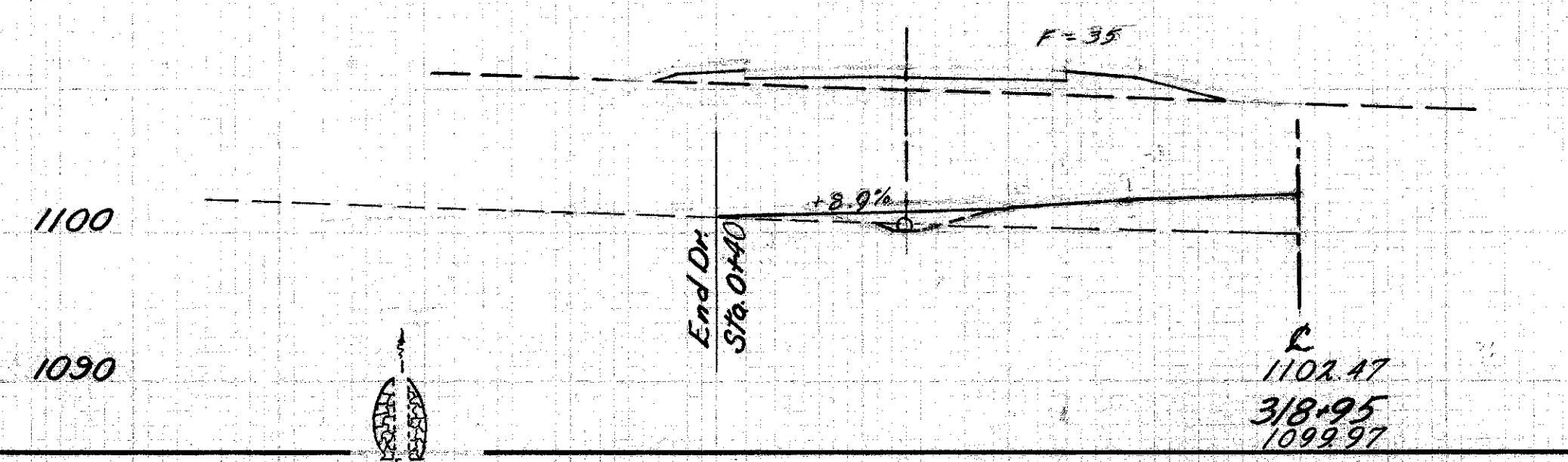
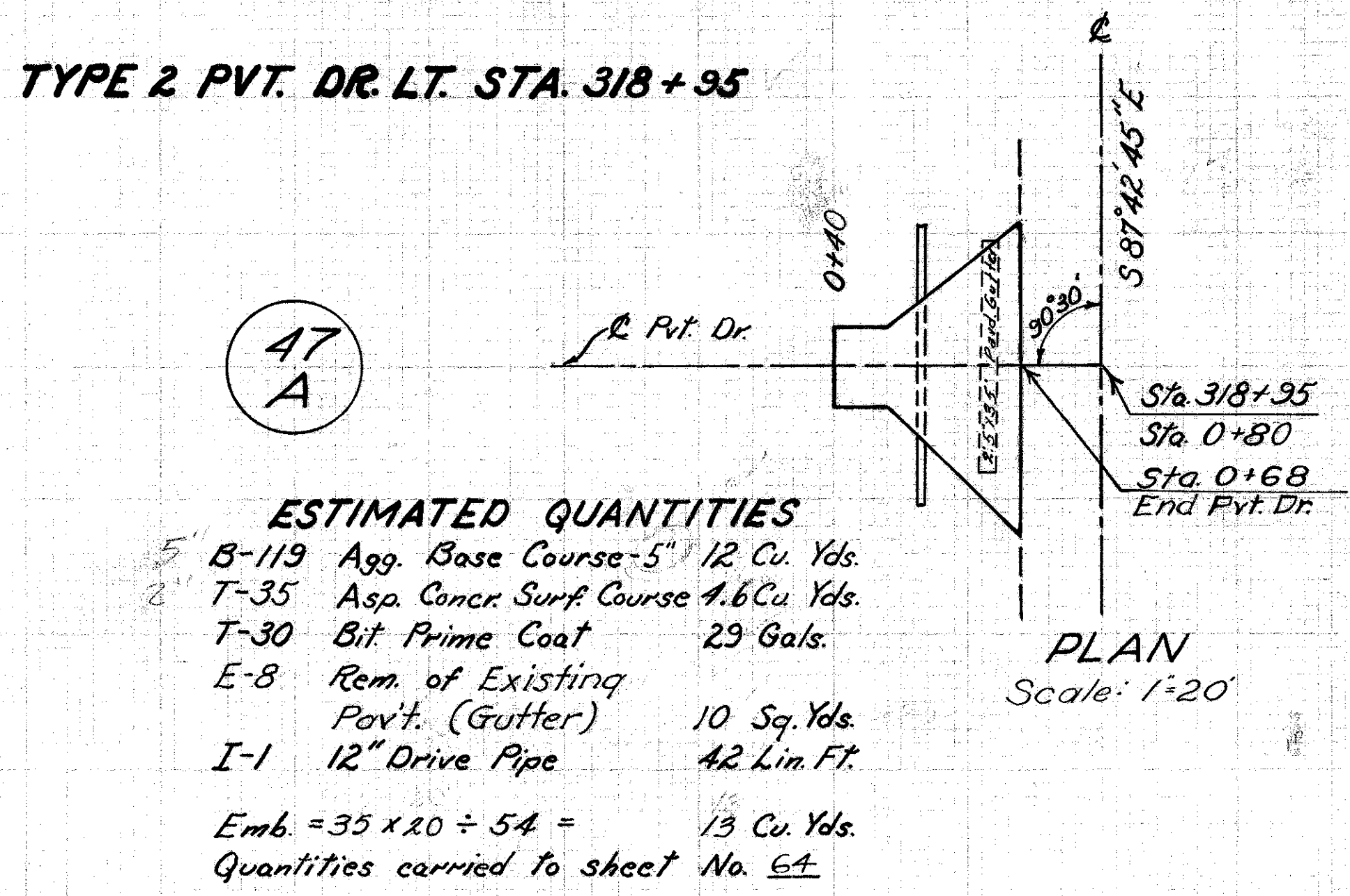
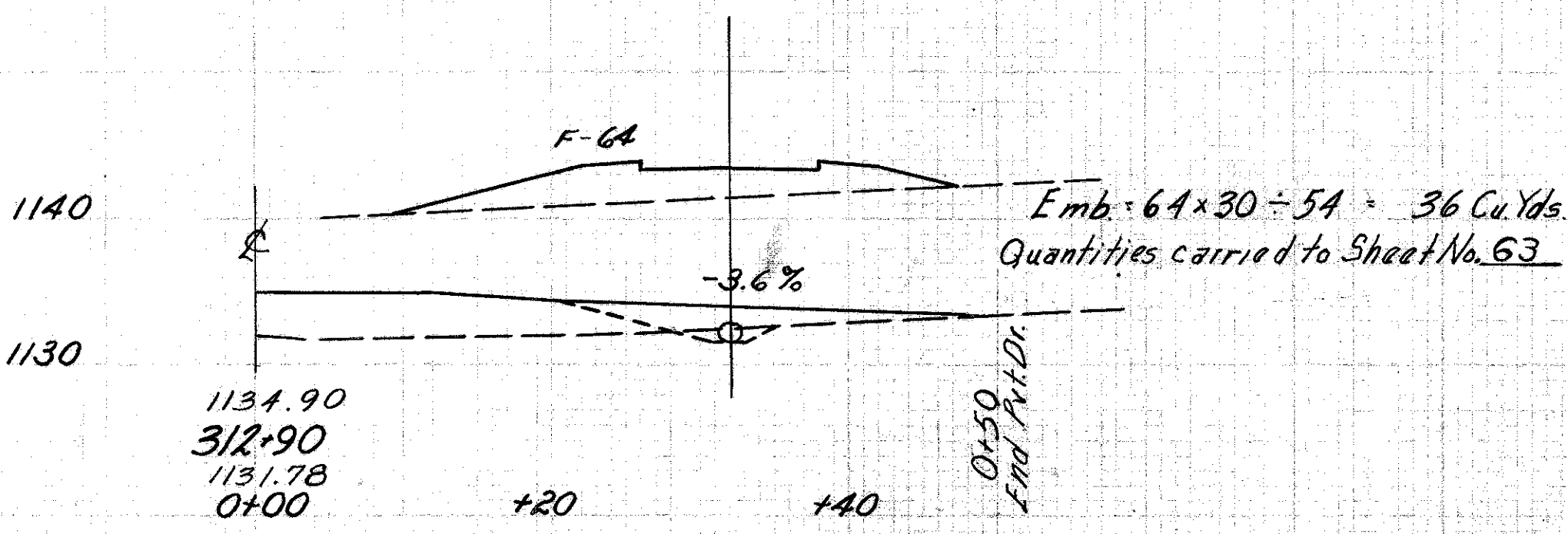
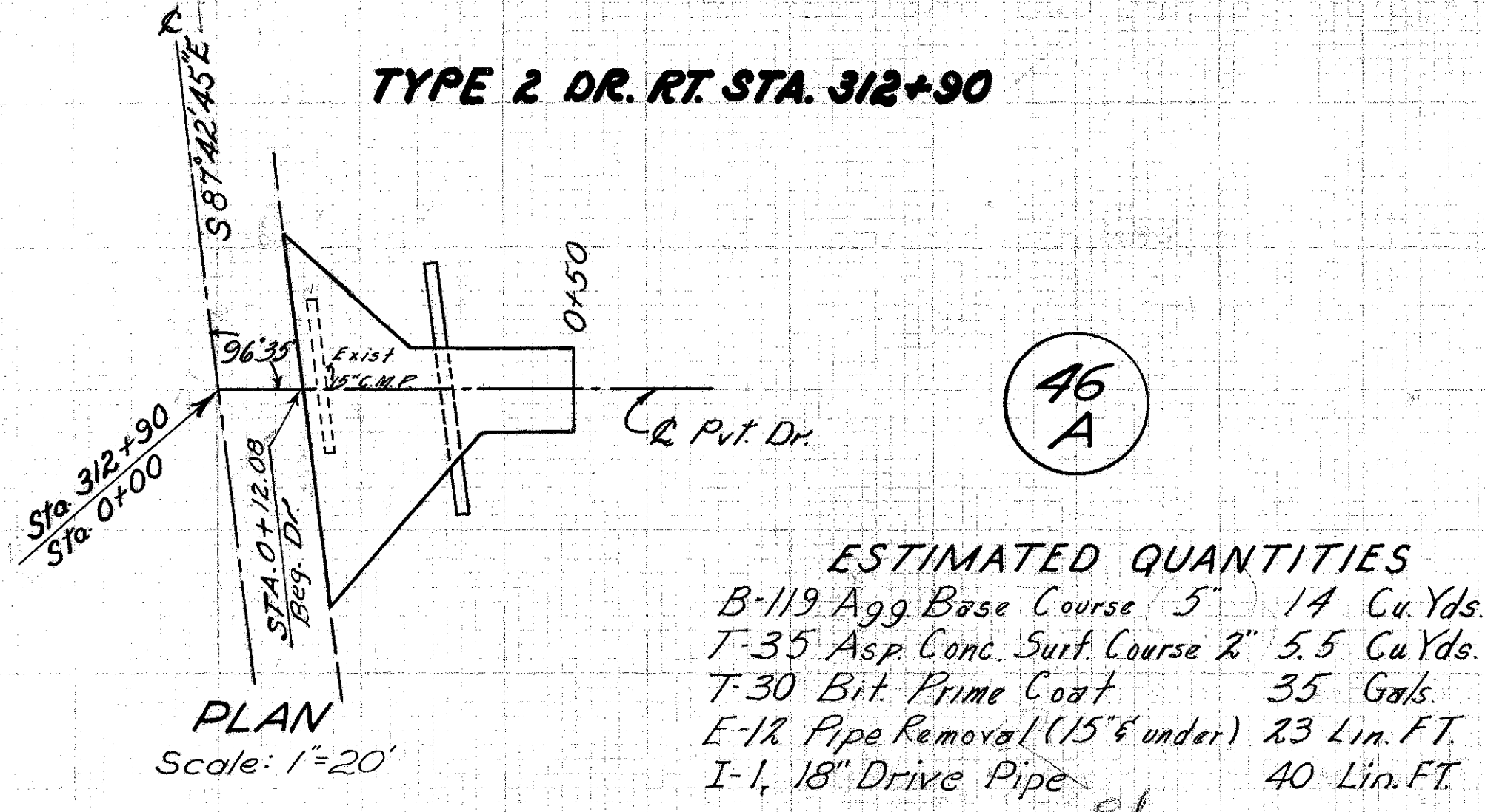
Width	S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.
6		13	0		
142				109	10
45		105	11		
				45	49
		0	105		
				2	14
				0	0
				81	0
				15	0
				21	0
					13 44
38		24	157		
24				12	90
50		20	166		
		272		22	286
48		4	143		
		214		36	165
29		35	35		
		208		102	46
46		75	15		
		71		44	6
18		43	0	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



Quantities Carried To Sheet No. 63
 Excavation 308 Cu. Yds.
 Embankment 637 Cu. Yds.
 Seeding 869 Sq. Yds.



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

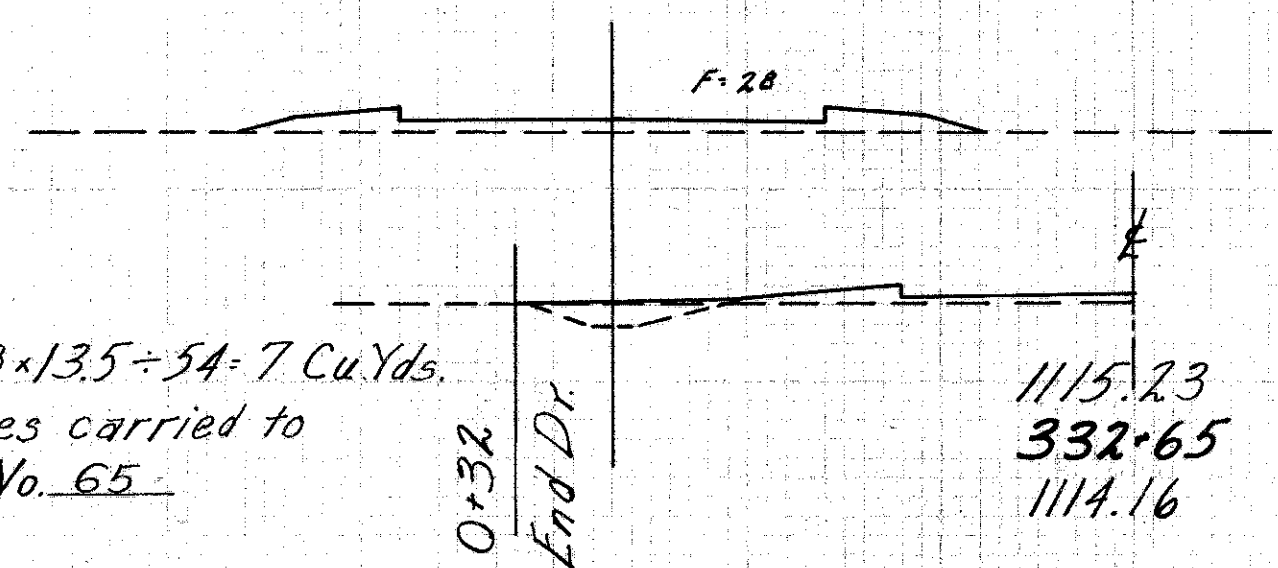


TYPE 2 PVT. DR. LT. STA. 332+65

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.

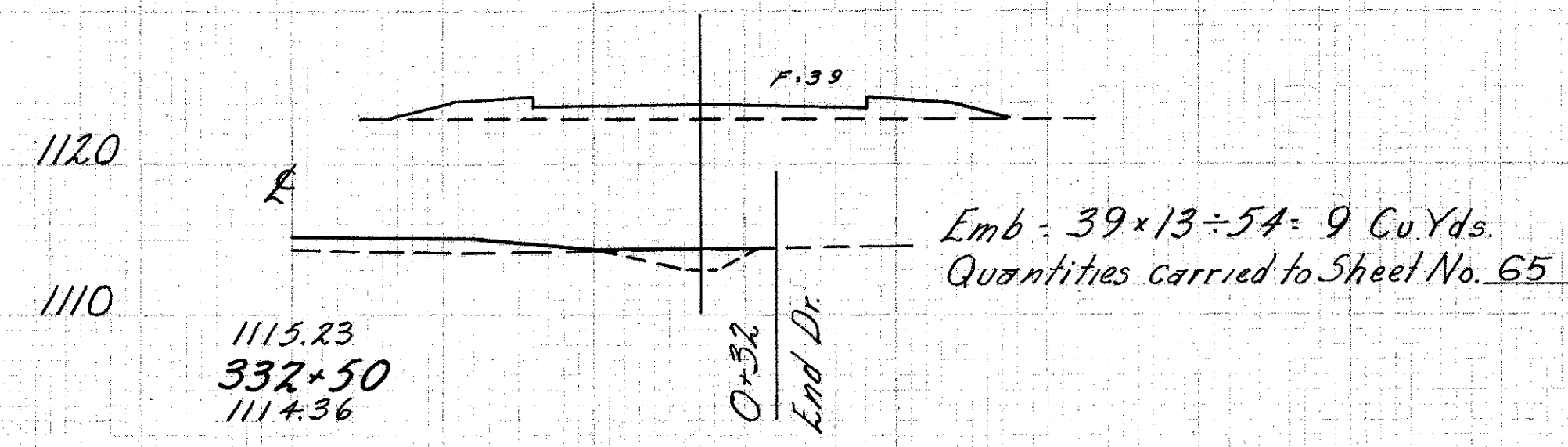


TYPE 2 PVT. DR. & MB. APPR. RT. STA. 332+50

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.

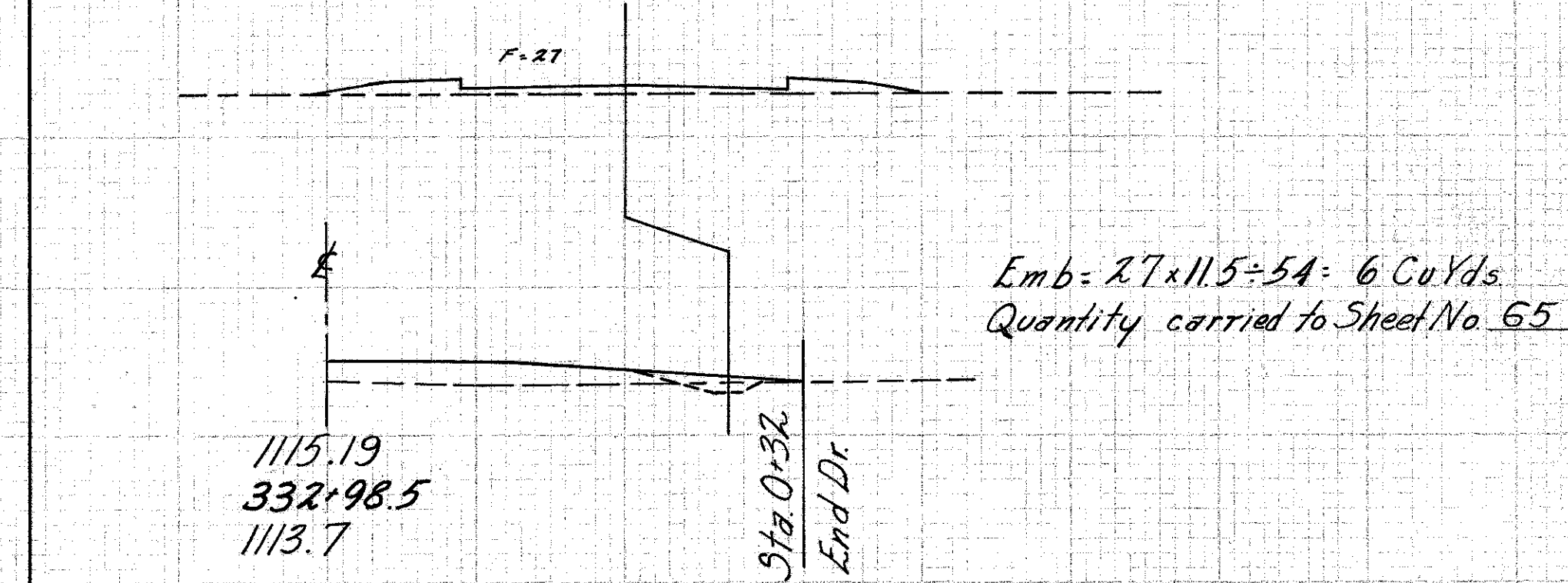


TYPE 2 PVT. DR. RT.
STA. 332+98.5

PLAN
Scale: 1"=20'

54
A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 10 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 40 Cu.Yds.
T-30 Bit. Prime Coat 25 Gals.



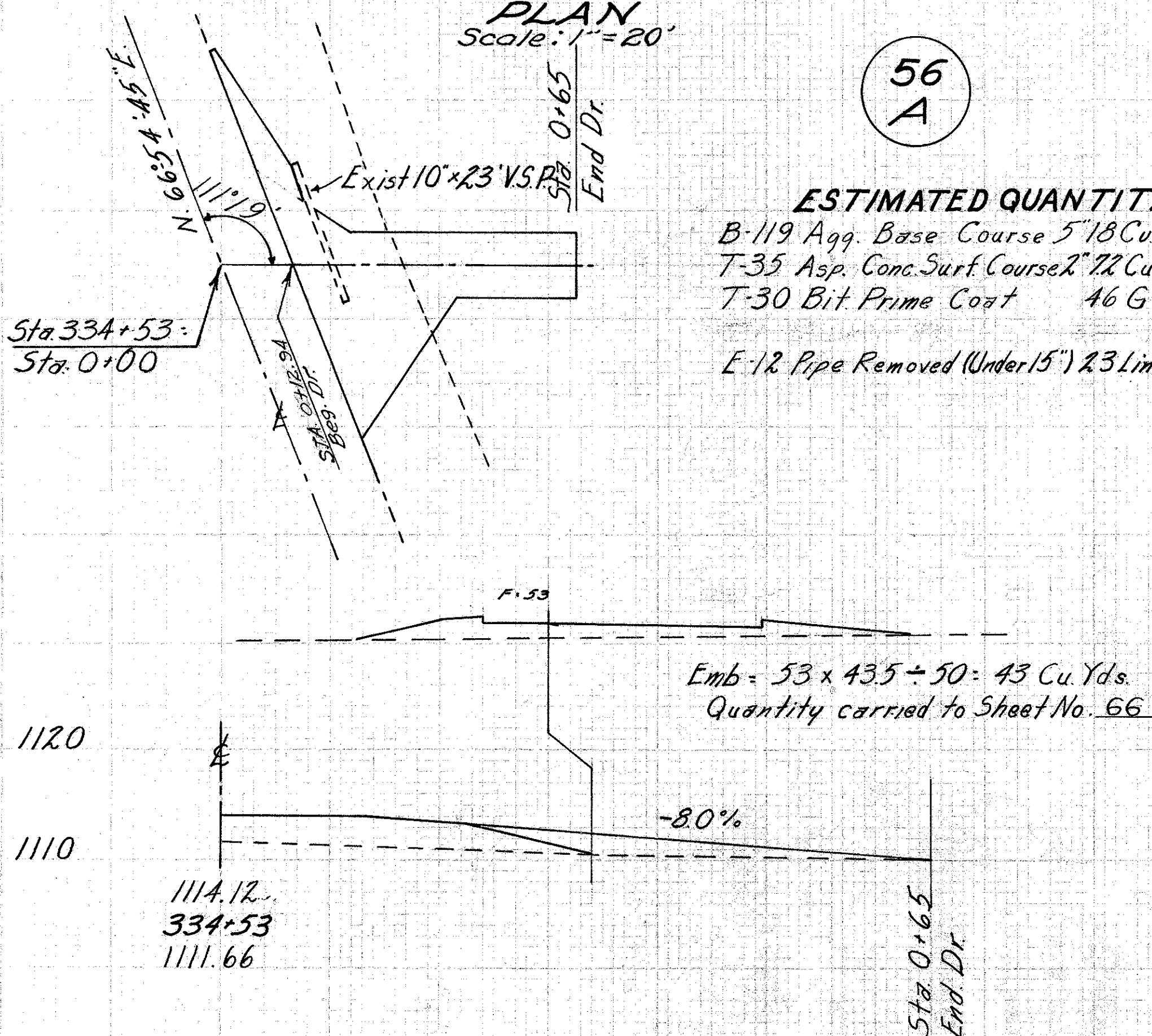
HOLMES-62 (21.08-21.51)

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

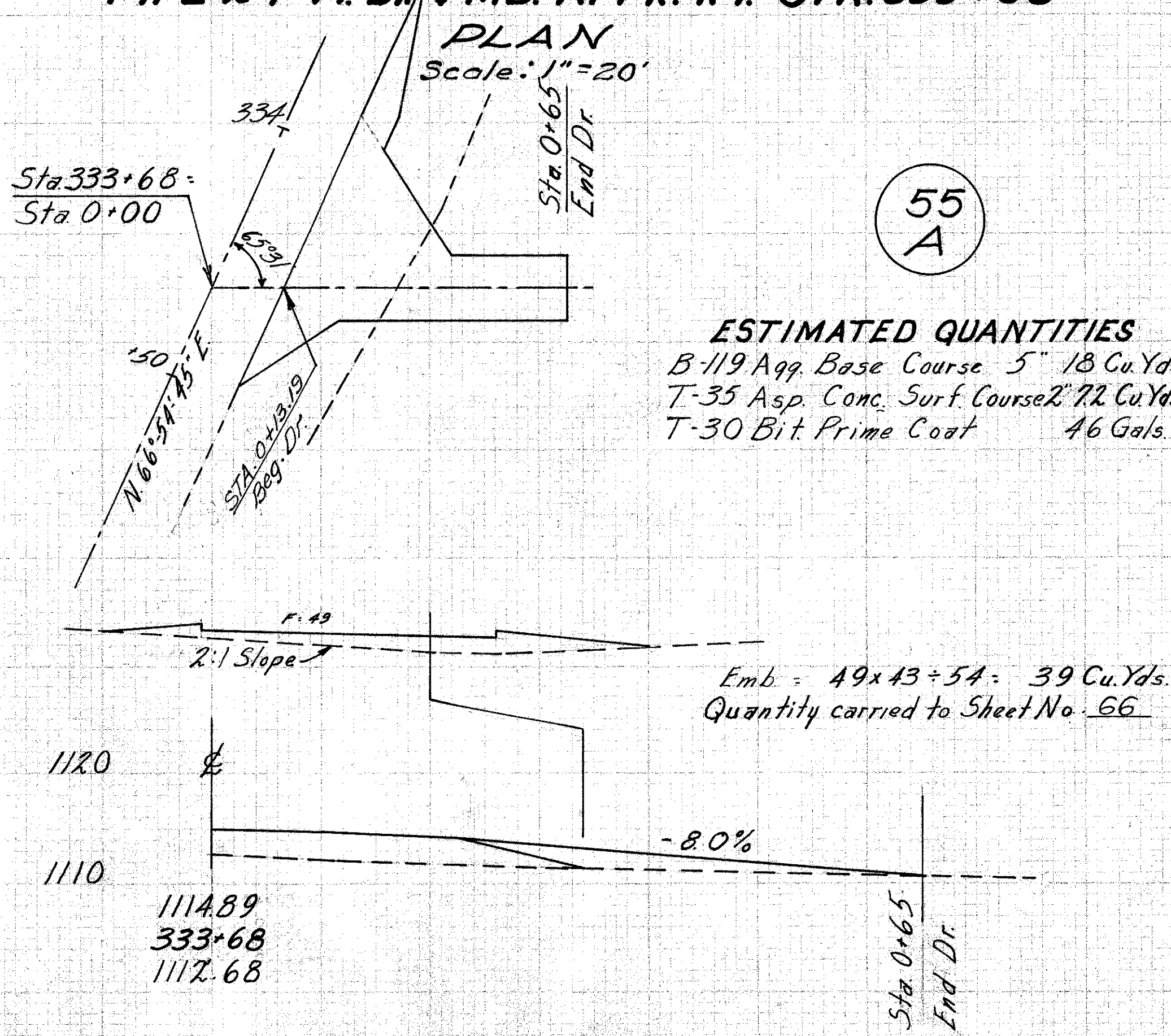


TYPE 2 PVT. DR. & MB. APPR. RT. STA. 333+68

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 46 Gals.

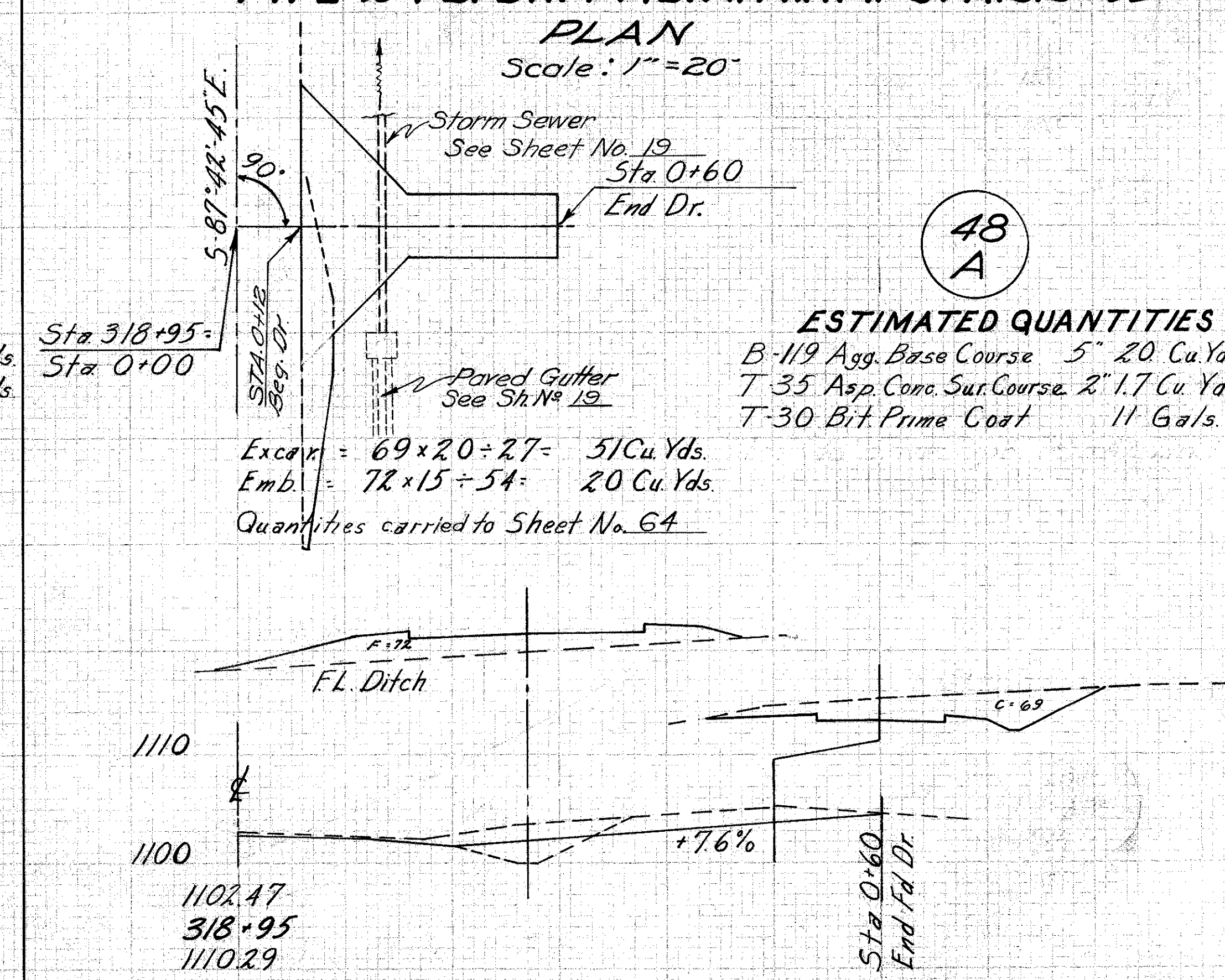


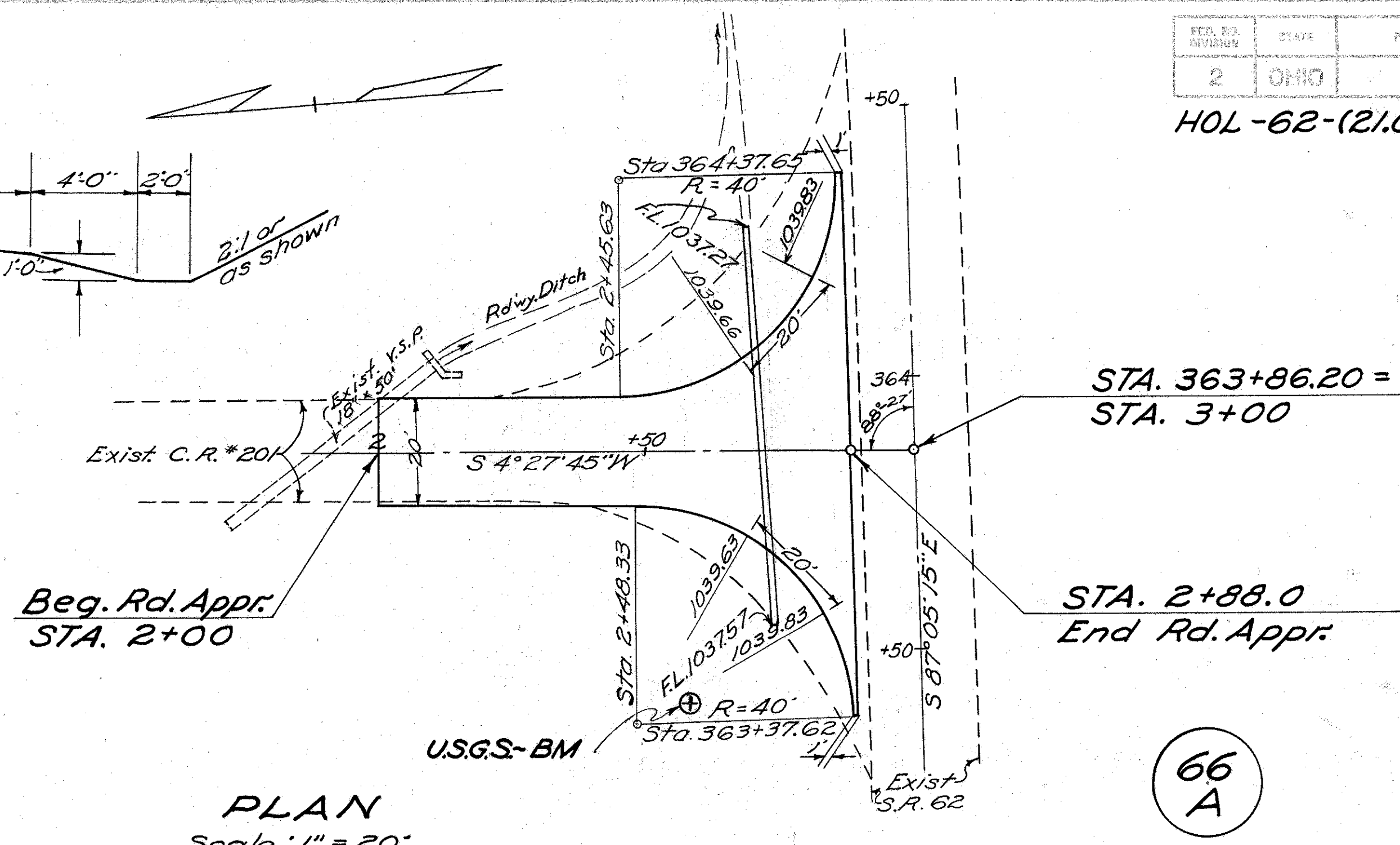
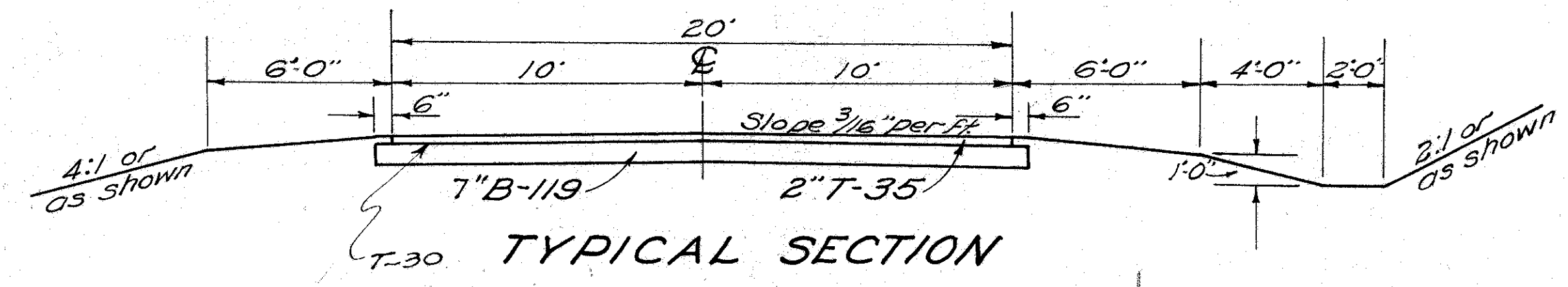
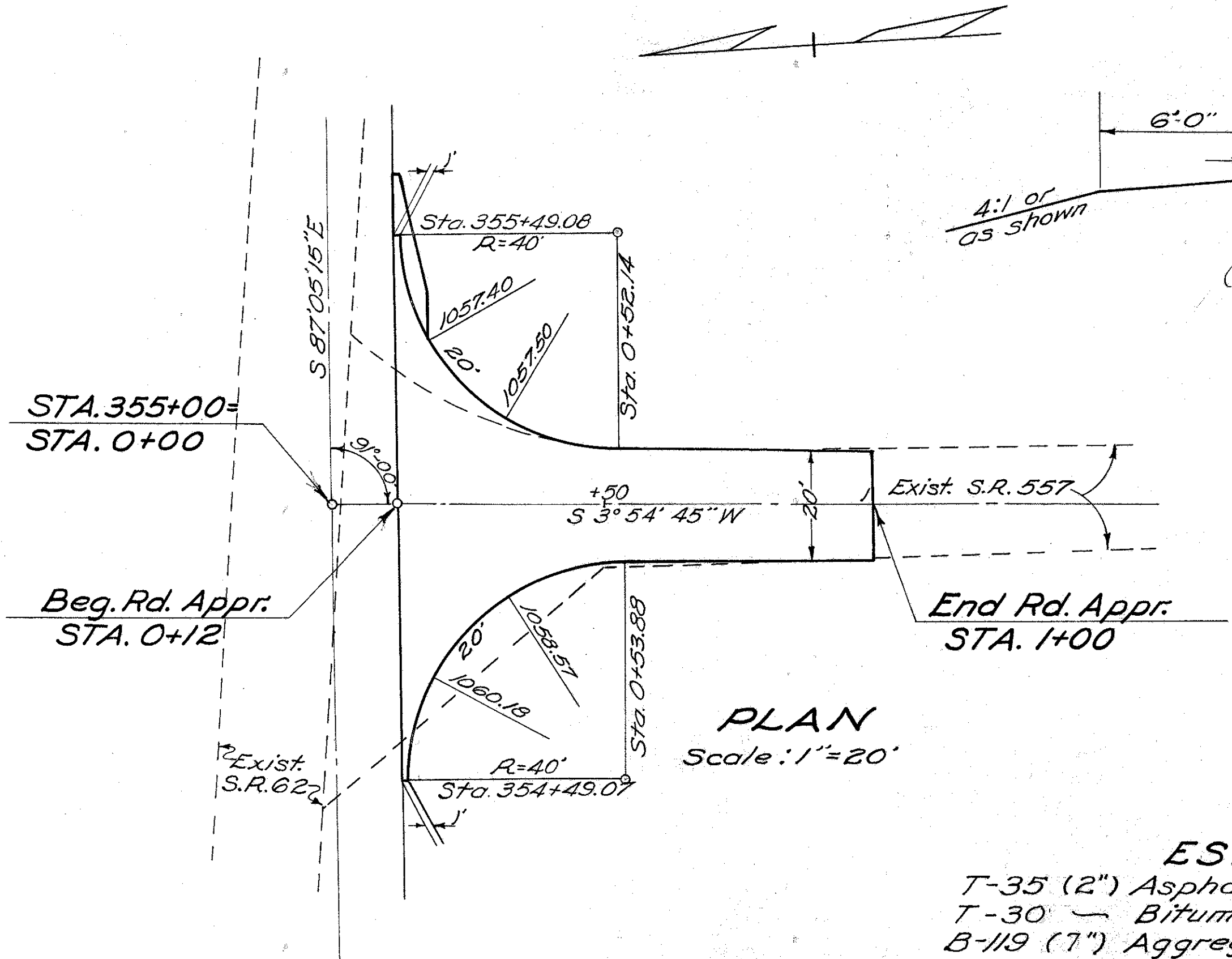
TYPE 2 FD. DR. & MB. APPR. RT. STA. 318+95

PLAN
Scale: 1"=20'

48
A

ESTIMATED QUANTITIES
B-119 Agg. Base Course 5" 20 Cu.Yds.
T-35 Asp. Conc. Surf. Course 2" 1.7 Cu.Yds.
T-30 Bit. Prime Coat 11 Gals.





64
A

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.

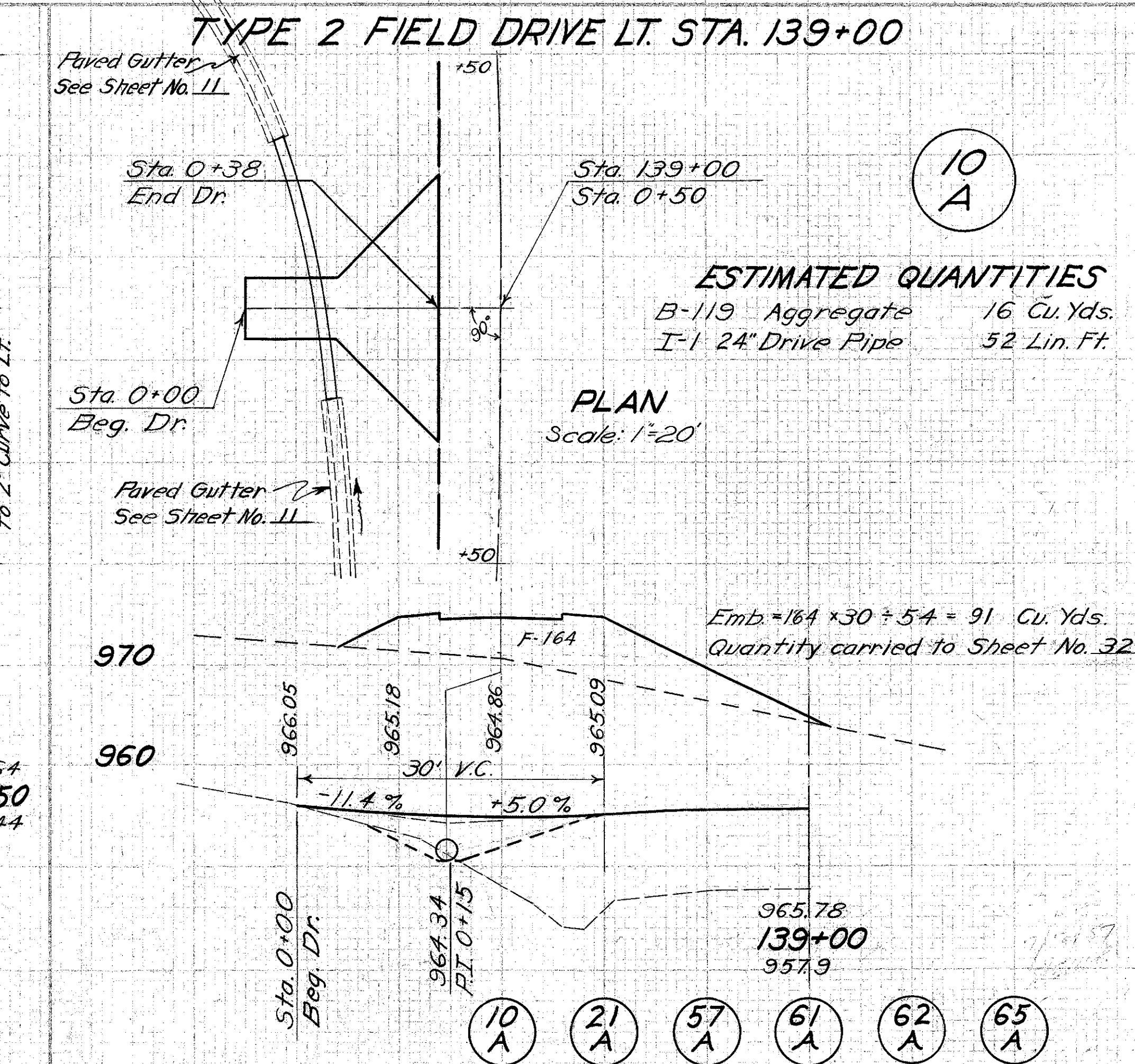
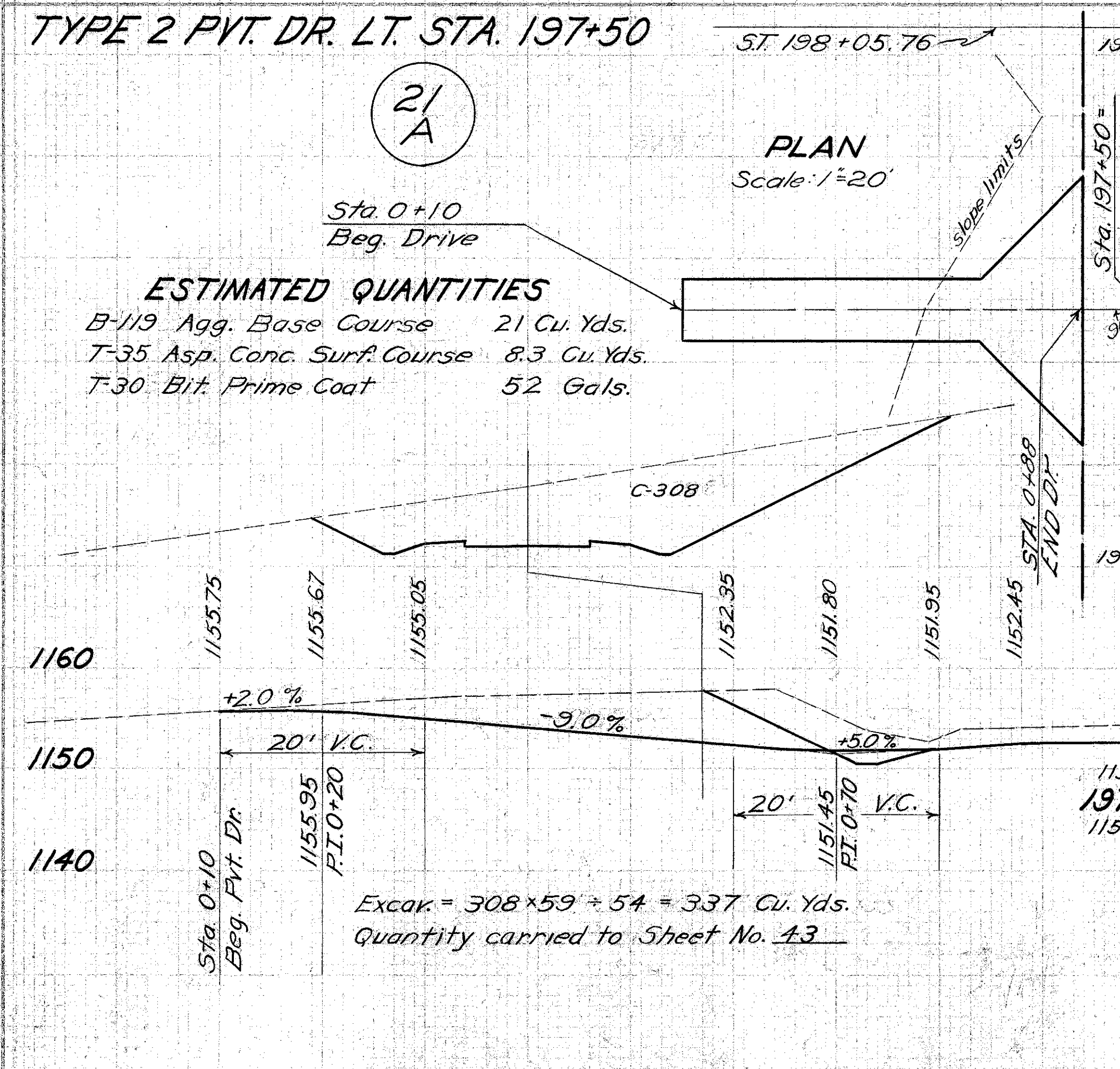
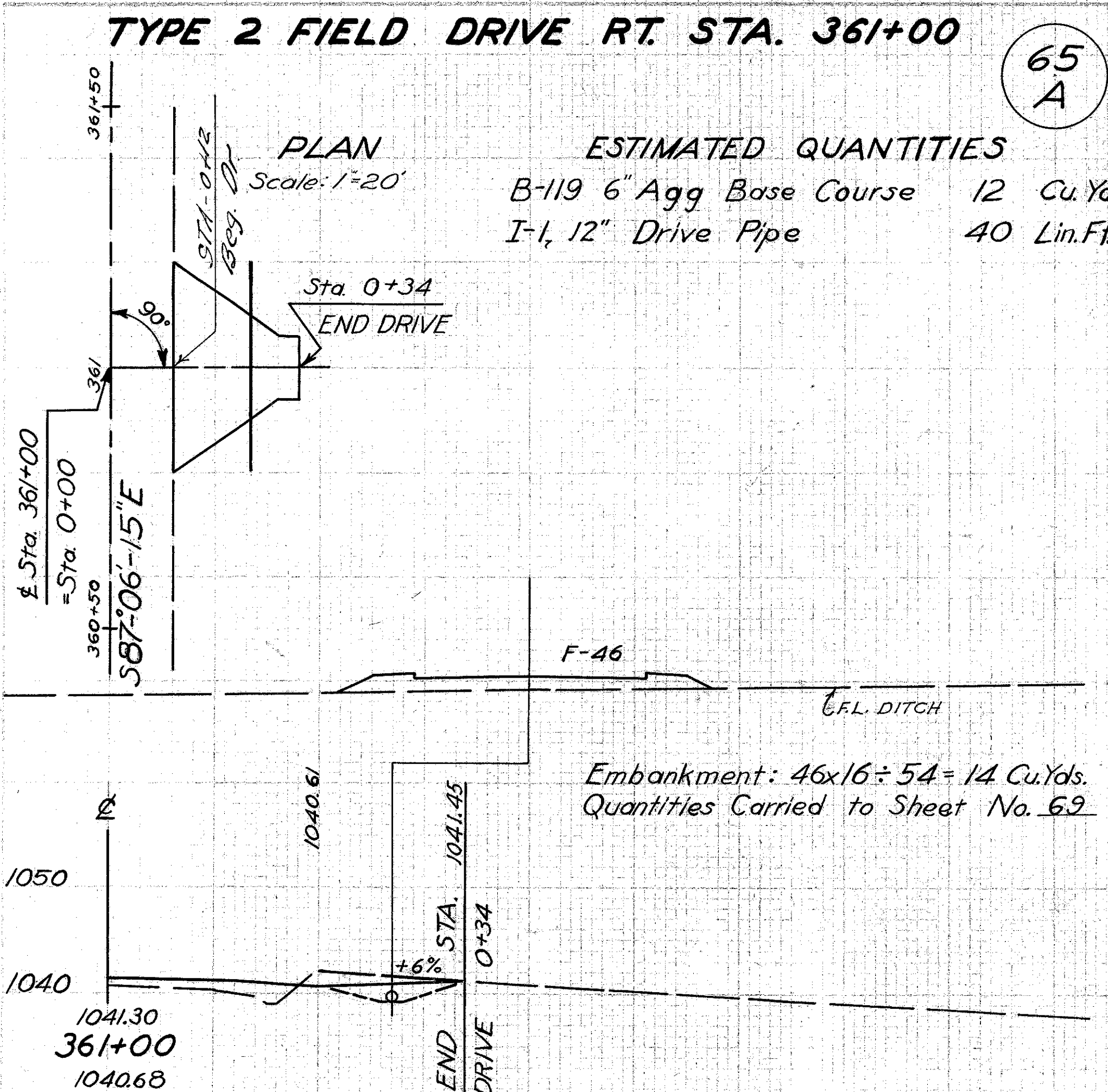
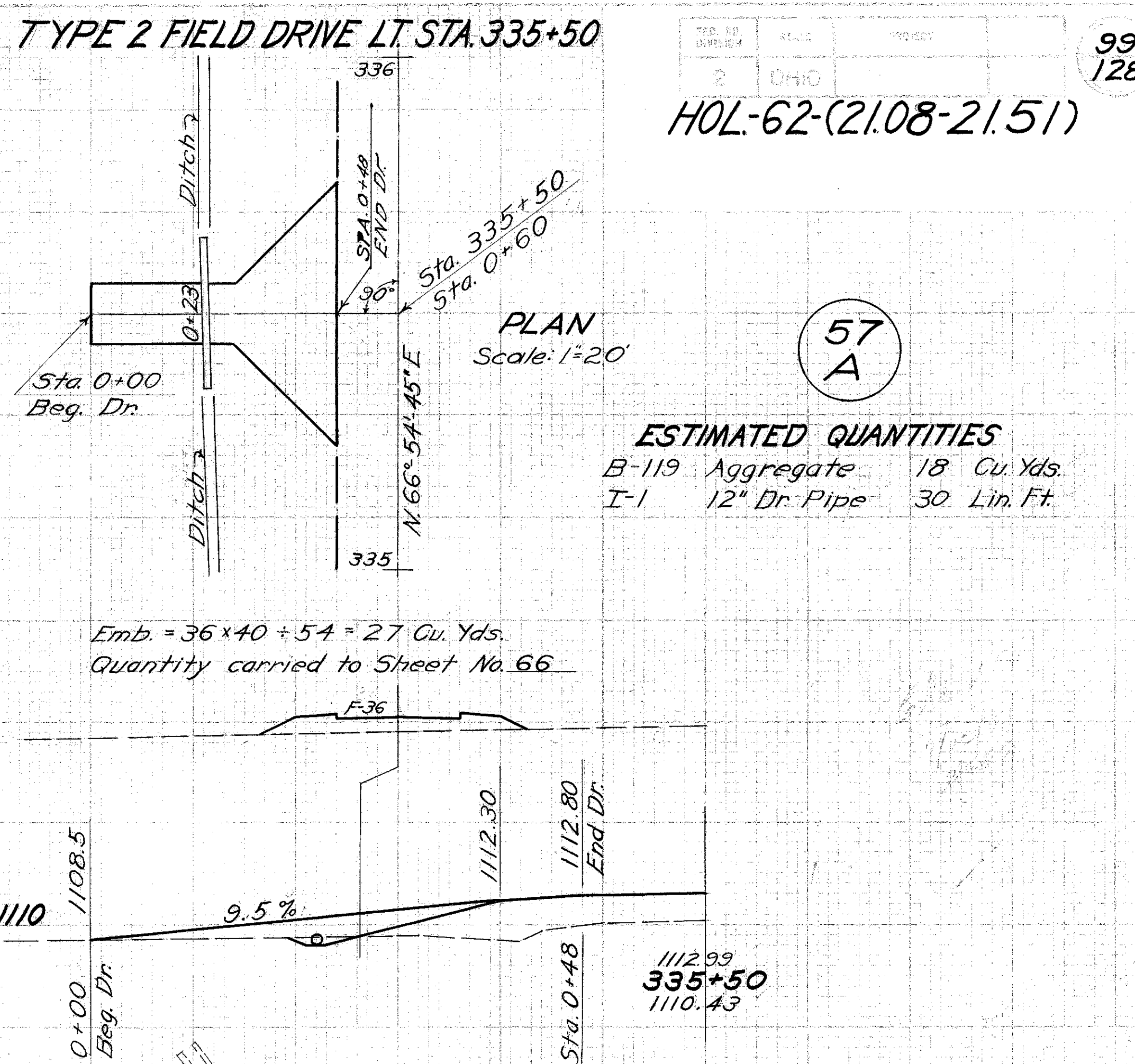
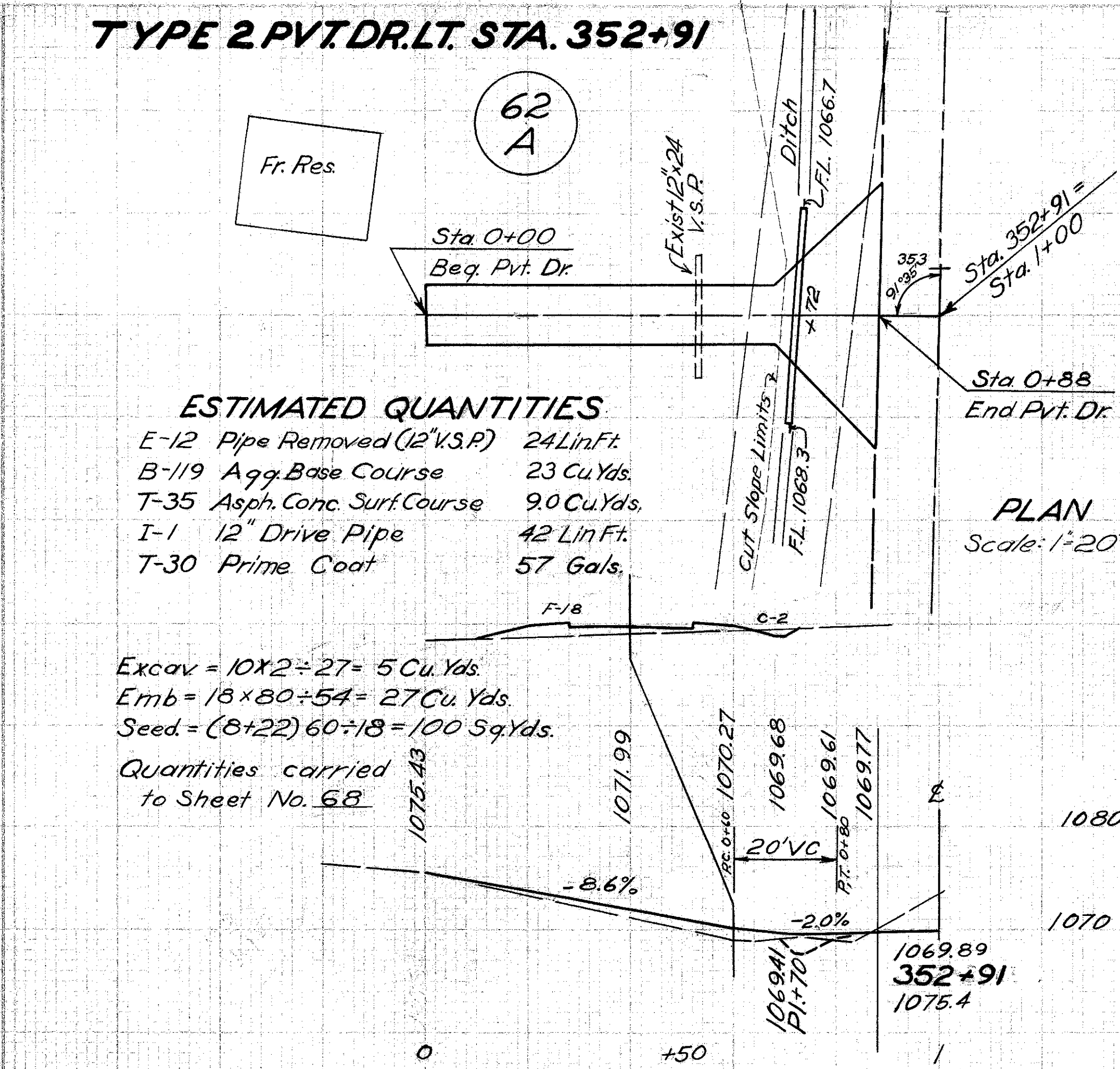
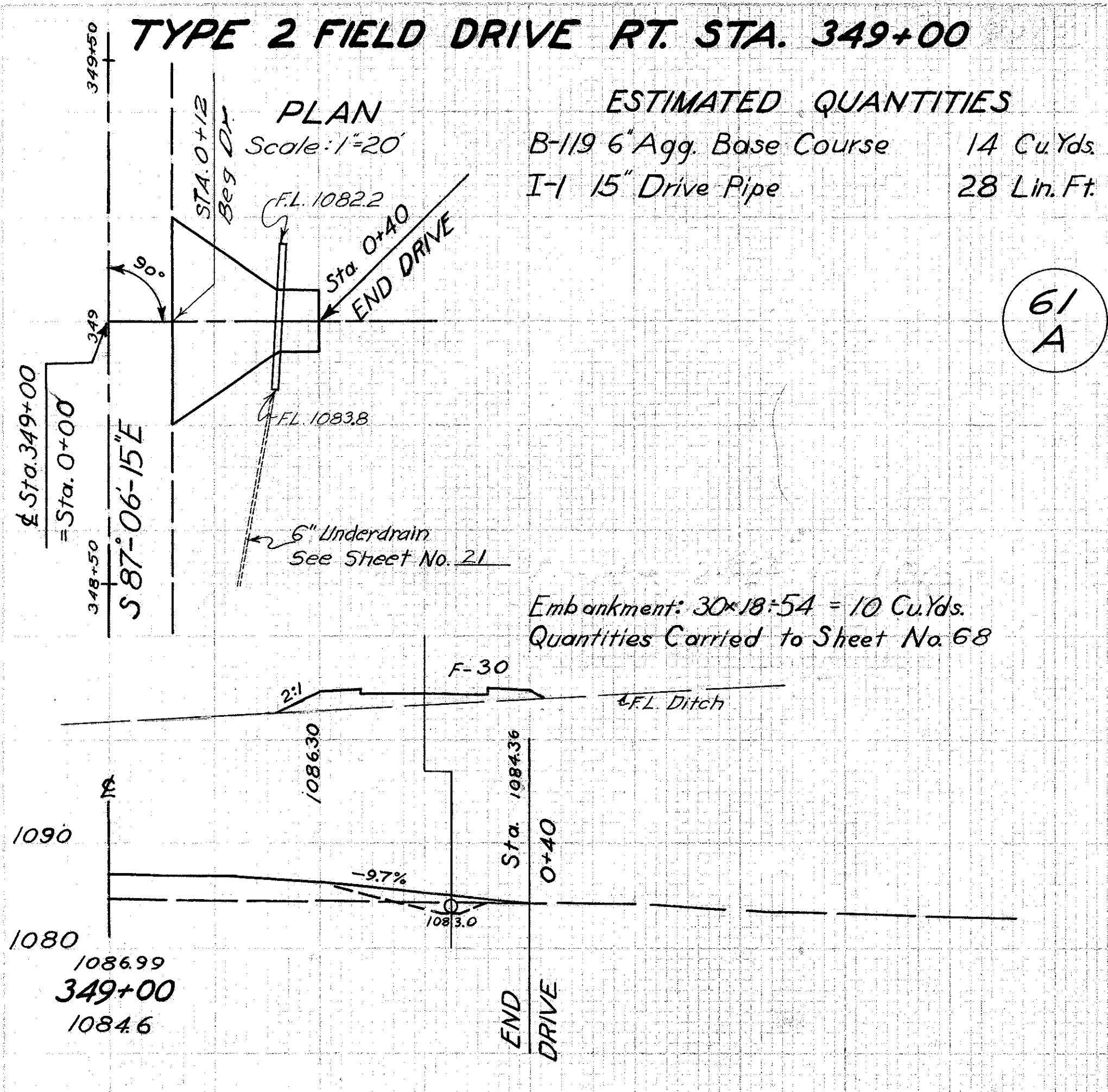
ESTIMATED QUANTITIES
 T-35 (2") Asphaltic Concrete Surface Course 15.6 Cu. Yds.
 T-30 - Bituminous Prime Coat 103 Gals.
 B-119 (7") Aggregate Base Course 57 Cu. Yds.
 I-1 18" Drive Pipe 74 Lin. Ft.

Station	Width						Seeding	End Area	Cu. Yds.	Exc.	Emb.
	30	20	10	0	10	20					
1050							8	15	0		
1050							20	22	1		
1050							24				
1050							27	3			
1050							0	46			
1050								5	6		
1050							40	0			
1050							83	0			

Station	Width						Seeding	End Area	Cu. Yds.	Exc.	Emb.
	40	30	20	10	0	10					
1039.92							83	0			
1039.76							33	0			
1039.42							0	64			
1039.76											14
1040.40							65	0			
1041.60											19
1041.42							26	27	3		
1042.0							94				40
1046.6							8	16	0		

RD. APPR. RT. STA. 355+00 & RD. APPR. LT. STA. 363+86.0

HOL-62-(21.08-21.51)



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.

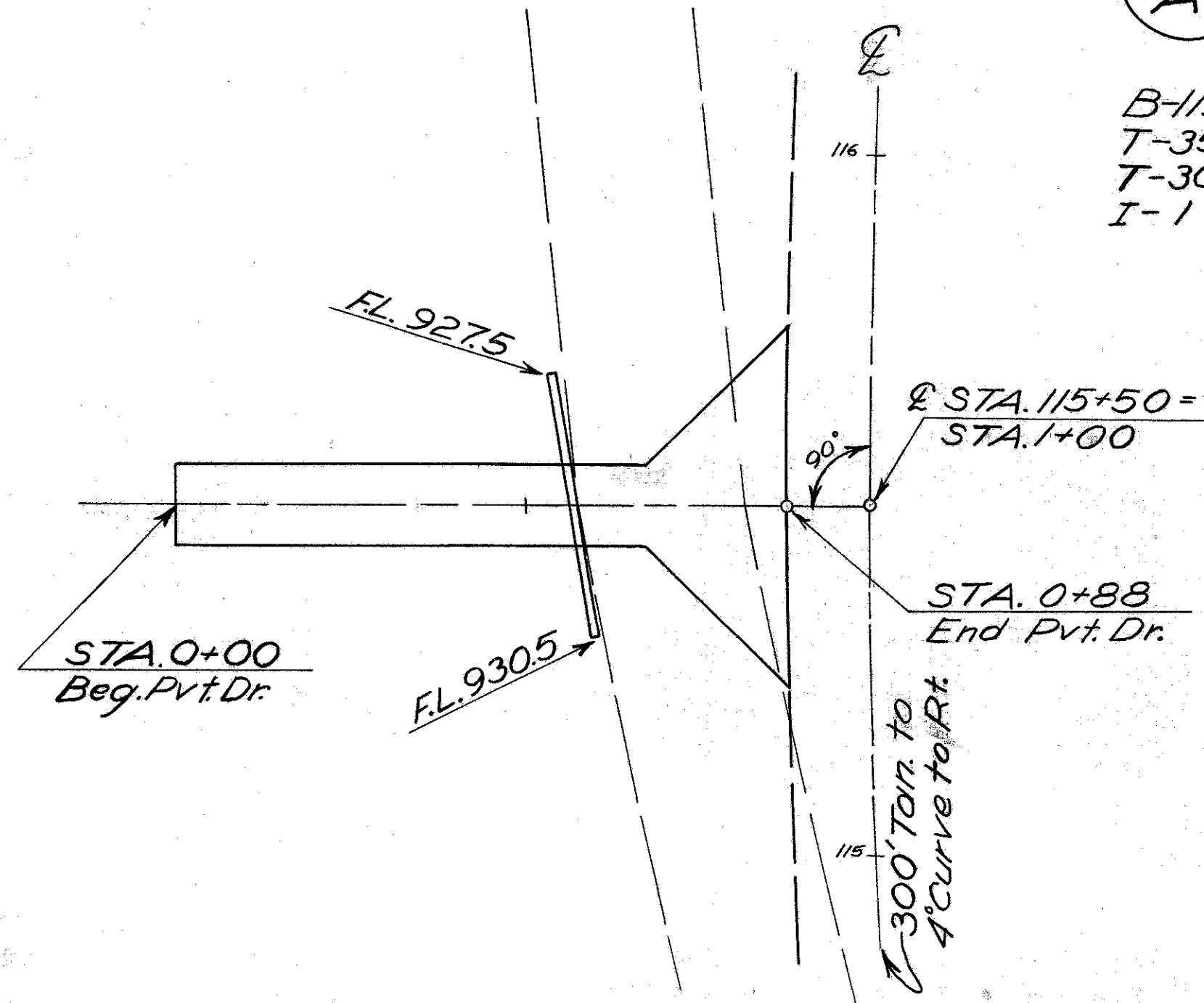
10 A 21 A 57 A 61 A 62 A 65 A

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

2
A

ESTIMATED QUANTITIES

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 Gal.
I-1	12" Drive Pipe	38 Lin. Ft.

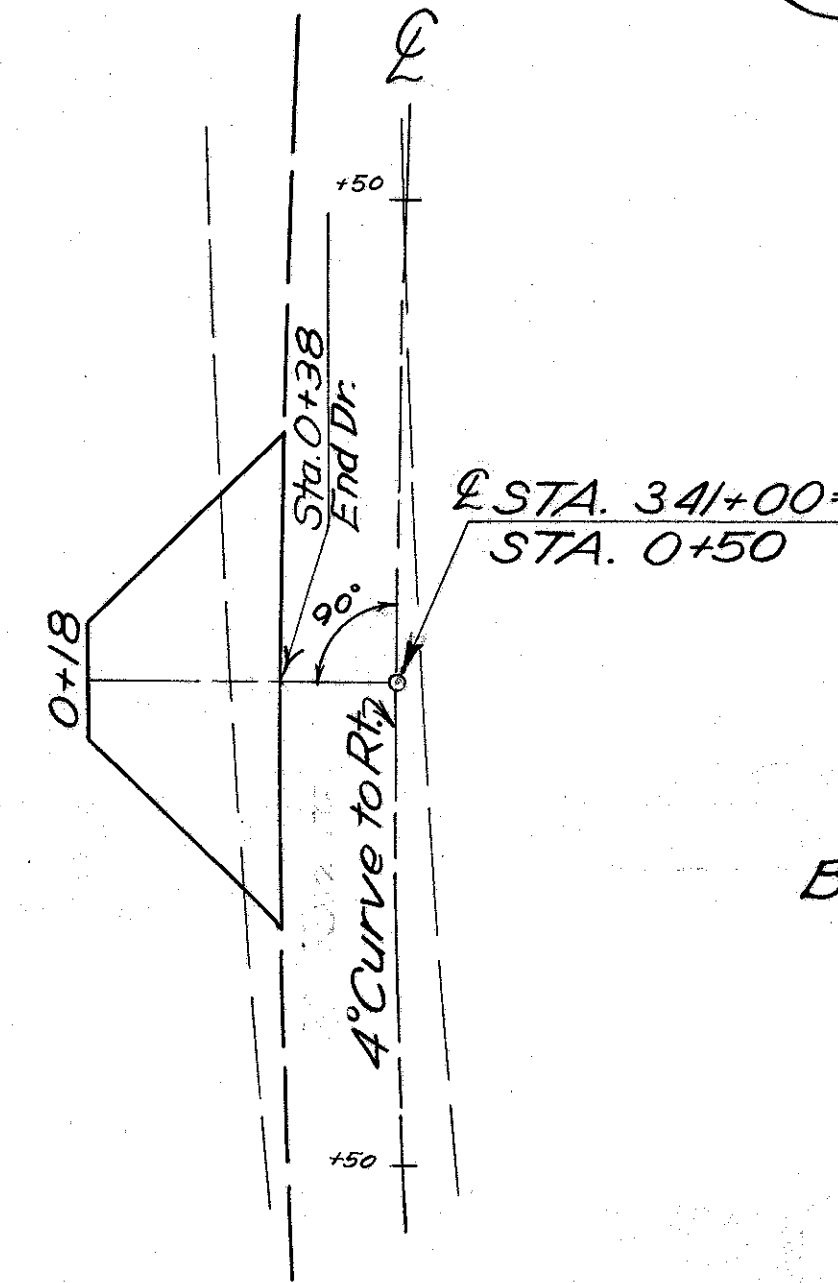


PLAN
Scale: 1"=20'

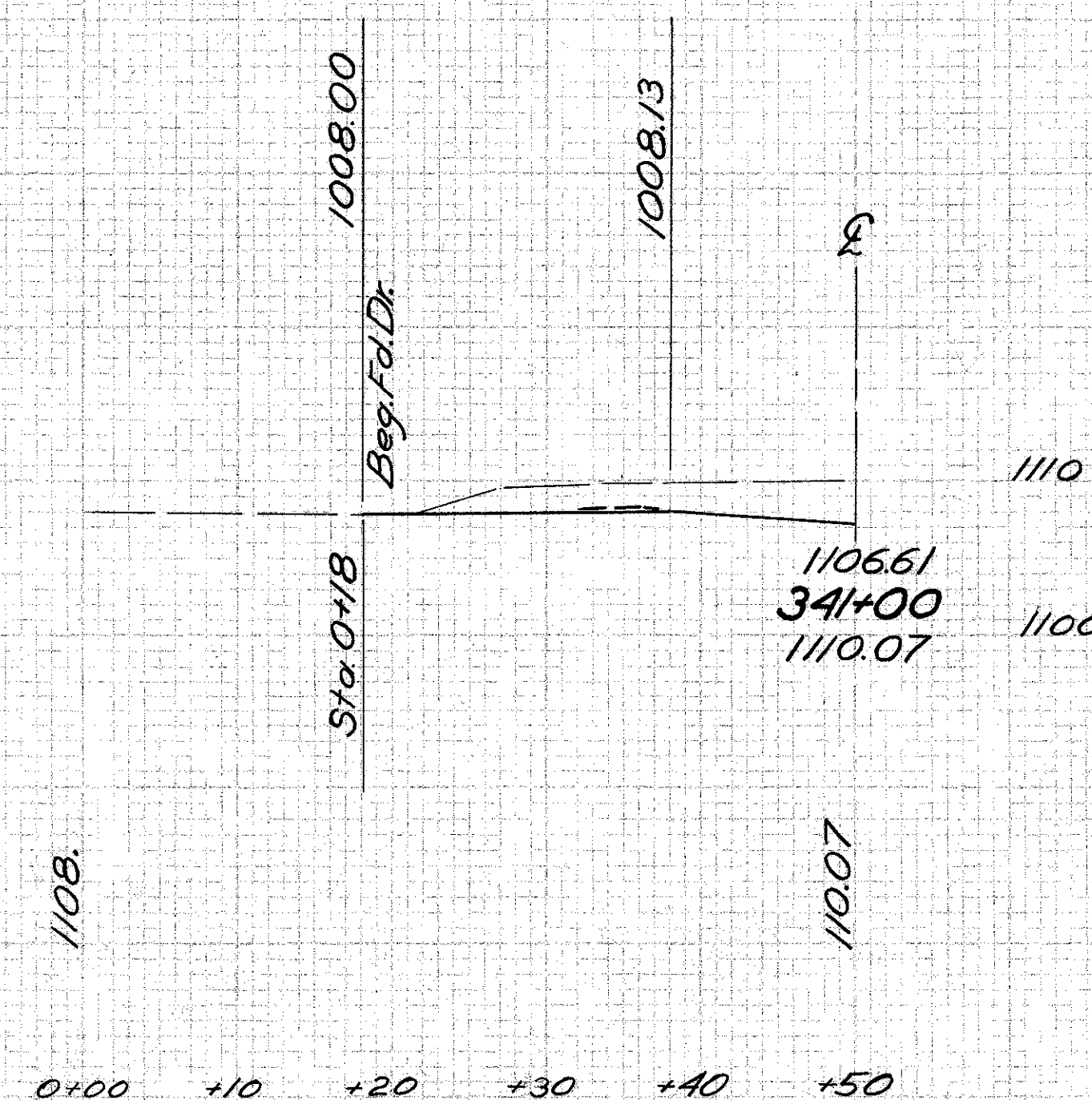
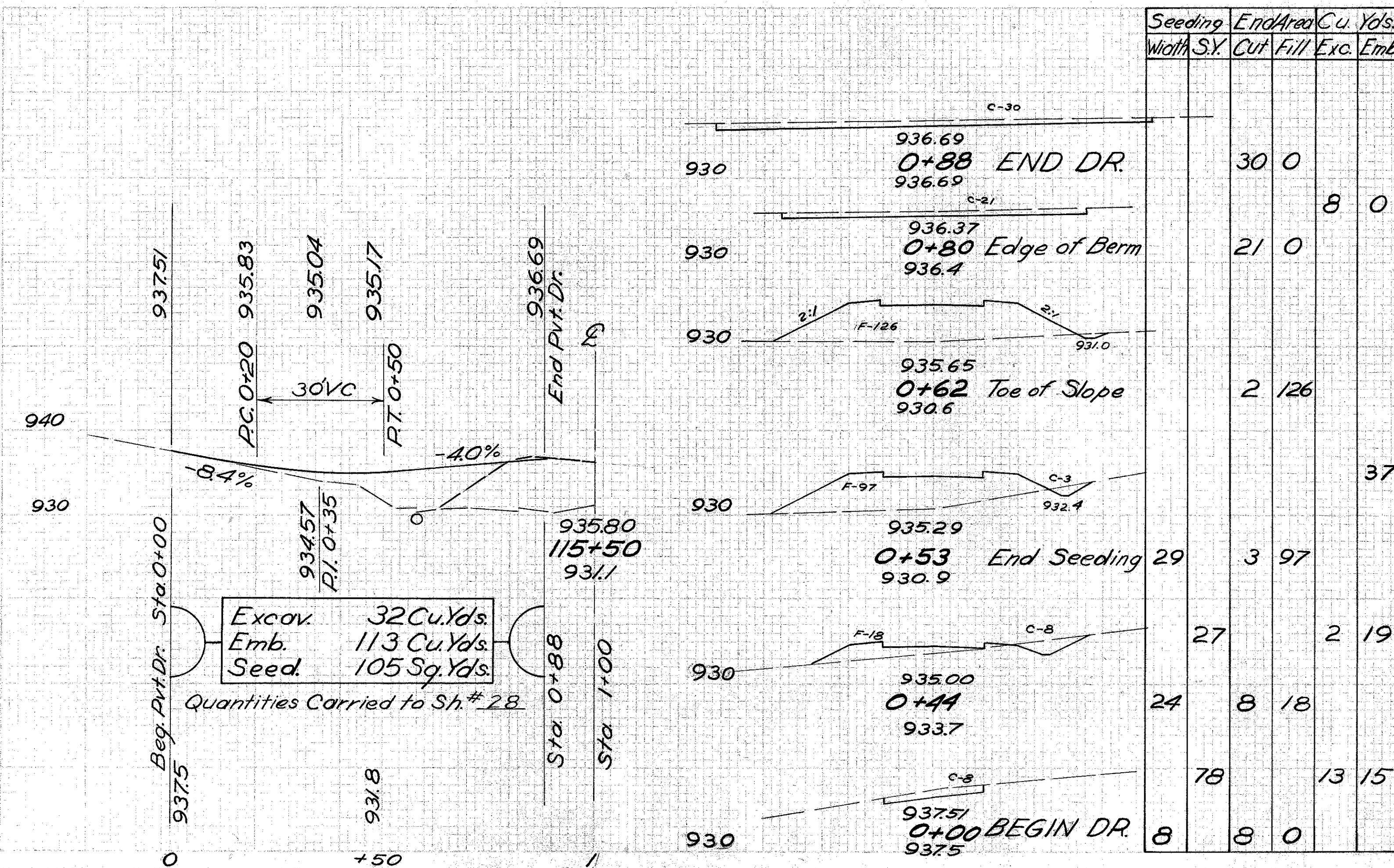
TYPE 2 FIELD DRIVE LT. STA. 341+00

60
A

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



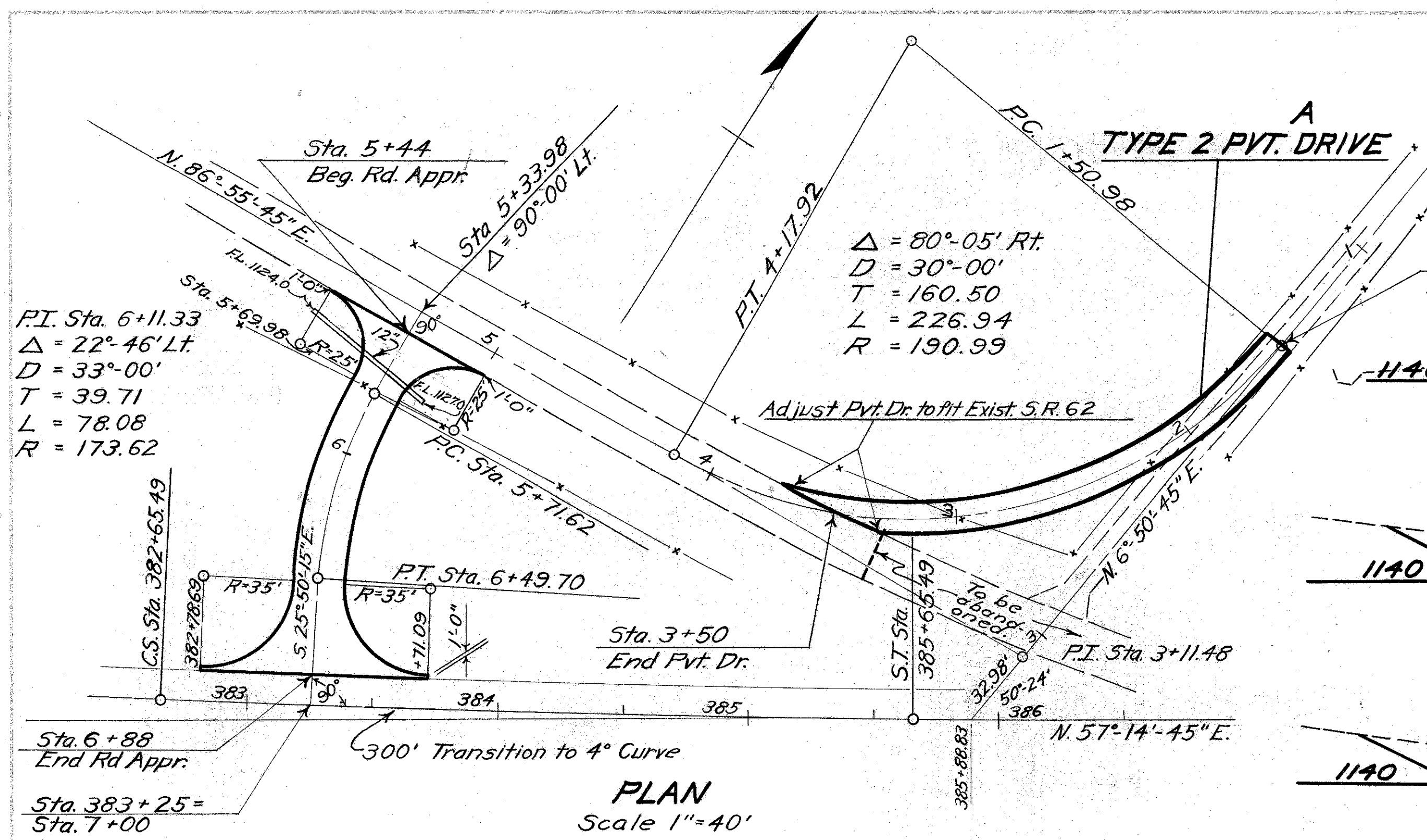
PLAN
Scale: 1"=20'



Note: No Pipe Req.
Excavation 12 Cu. Yds.
Embankment 0 Cu. Yds.
Seeding 0 Sq. Yds.
Quantities Carried to Sheet # 66

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

2
A 60
A



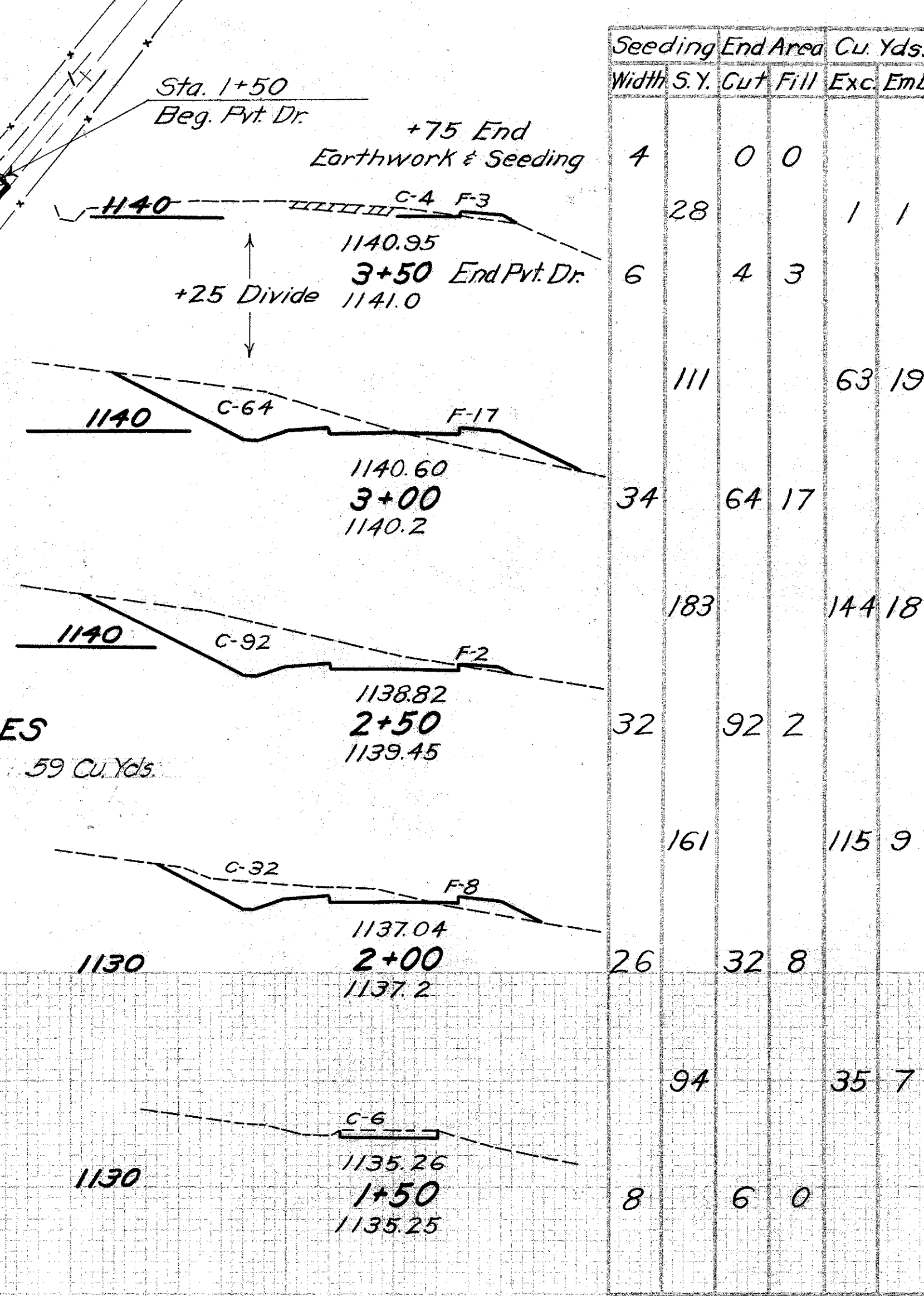
PLAN
Scale 1"=40'

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

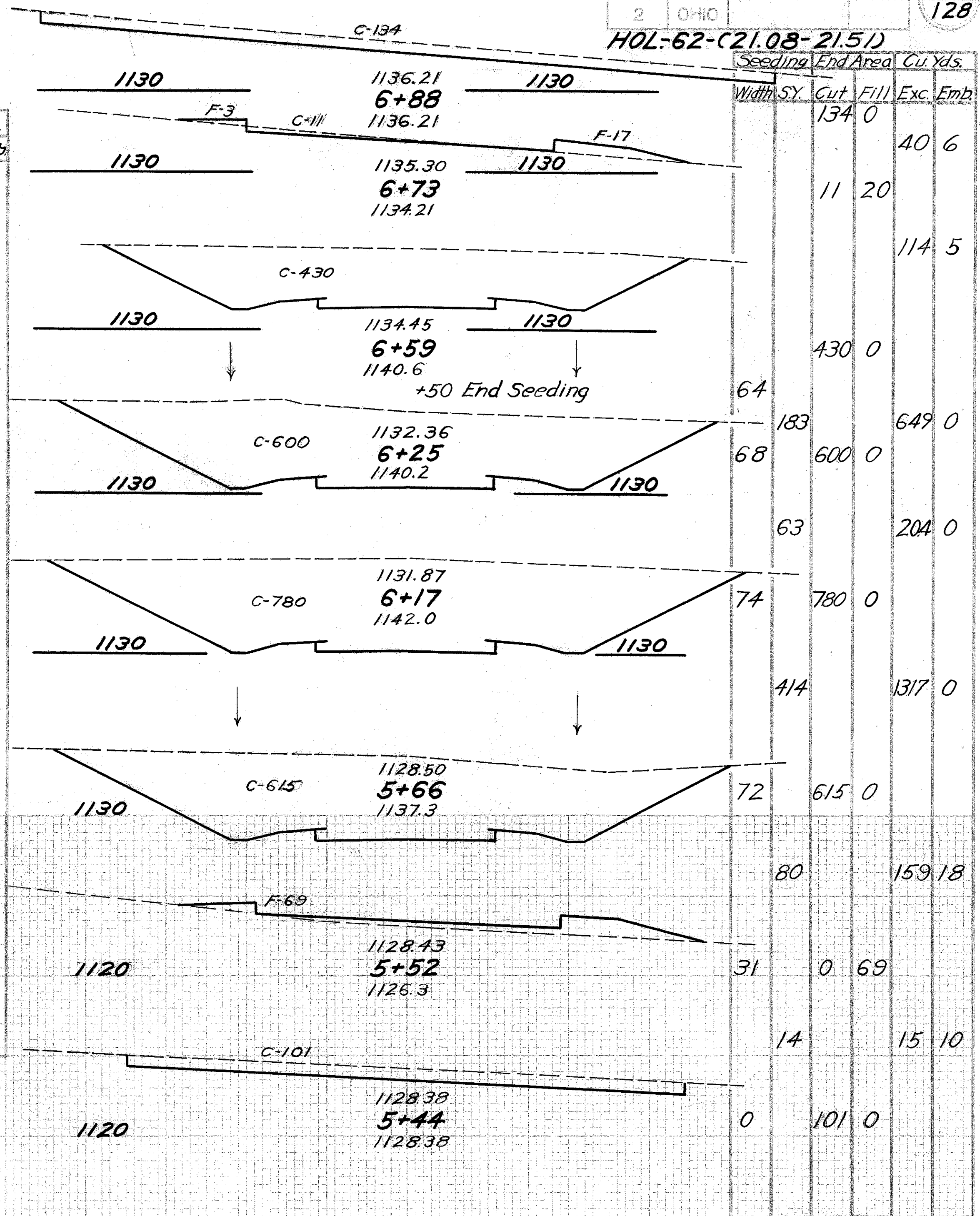
- ESTIMATED QUANTITIES.**
- T-35 Asph. Concr. Surf. Course 235 Cu.Yds.
 - B-119 Aggregate Base Course 88 Cu.Yds.
 - T-30 Bituminous Prime Coat 158 Gals.
 - I-1 12" Dr. Pipe 58 Lin. Ft.
 - E-101 Compacted Subgrade 426 Sq.Yds.

73 For Typical Section
A see sheet No. 82

74
A



Station	Seeding		End Area		Cu. Yds.	
	Width S.Y.	Cut	Fill	Exc.	Emb.	
1+50	4	0	0			
2+50	28	0	1	1		
3+50	6	4	3			
4+50	111		63	19		
5+50	34	64	17			
6+50	183		144	18		
7+00	32	92	2			

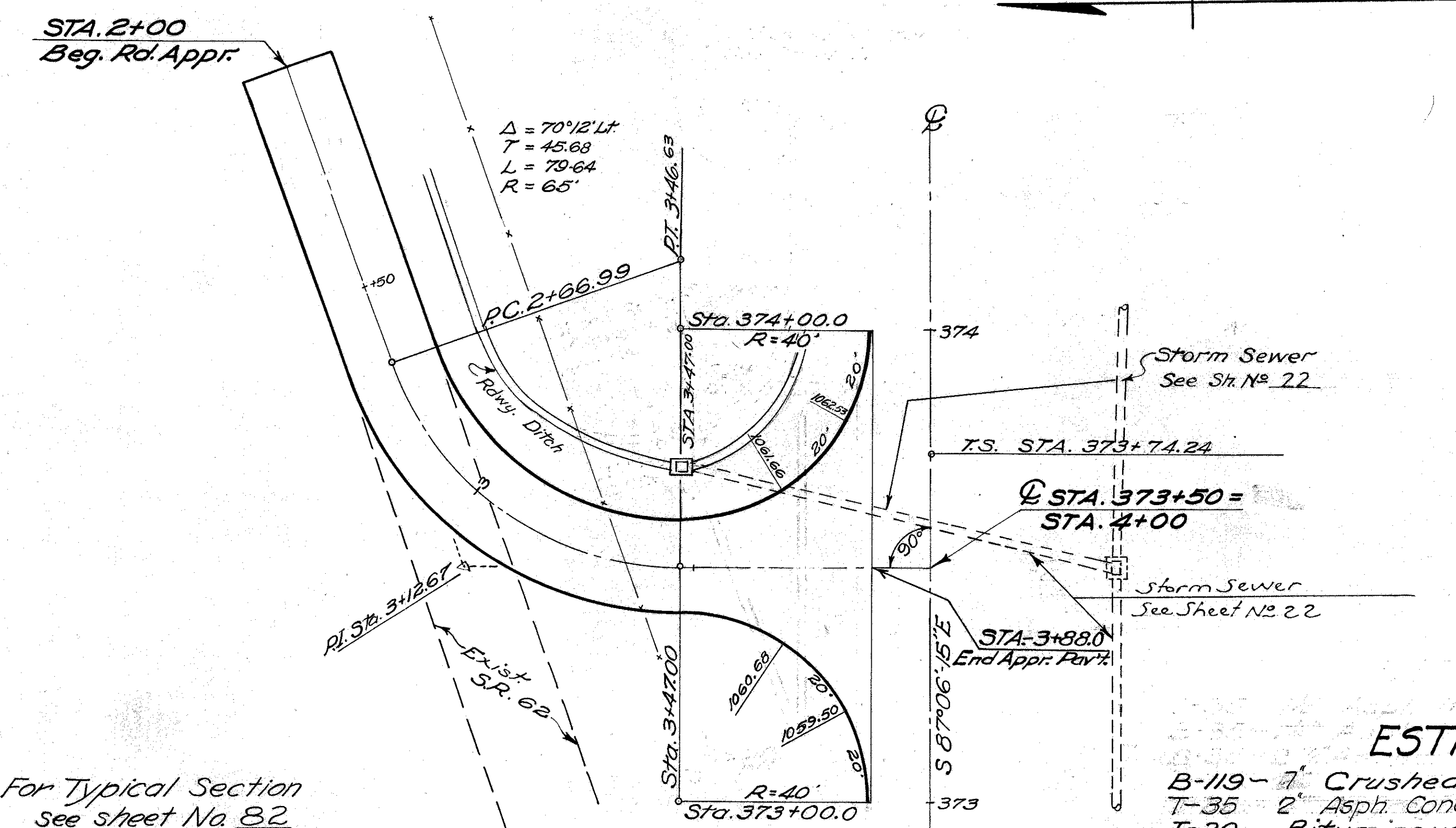


Quantities Carried to Sheet No. 72
Excavation = 2498 Cu.Yds.
Embankment = 39 Cu.Yds.
Seeding = 754 Sq.Yds.

Quantities carried to Sheet No. 72
Excavation = 358 Cu. Yds.
Embankment = 53 Cu. Yds.
Seeding = 577 Sq. Yds.

73
A

74
A

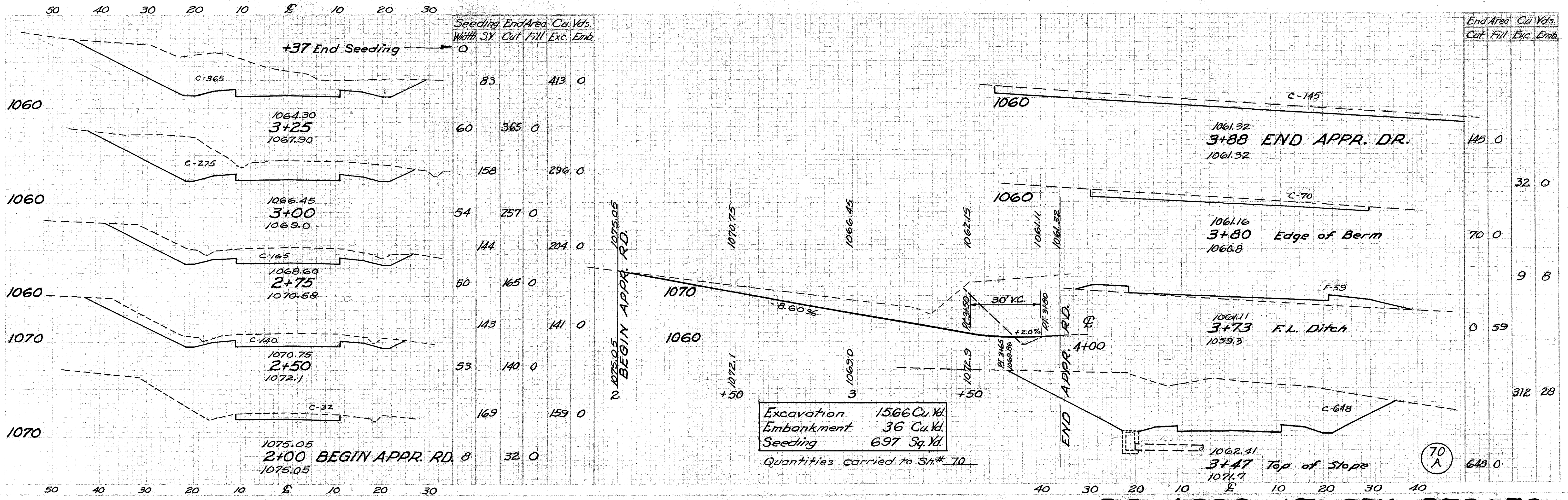


For Typical Section
see sheet No. 82

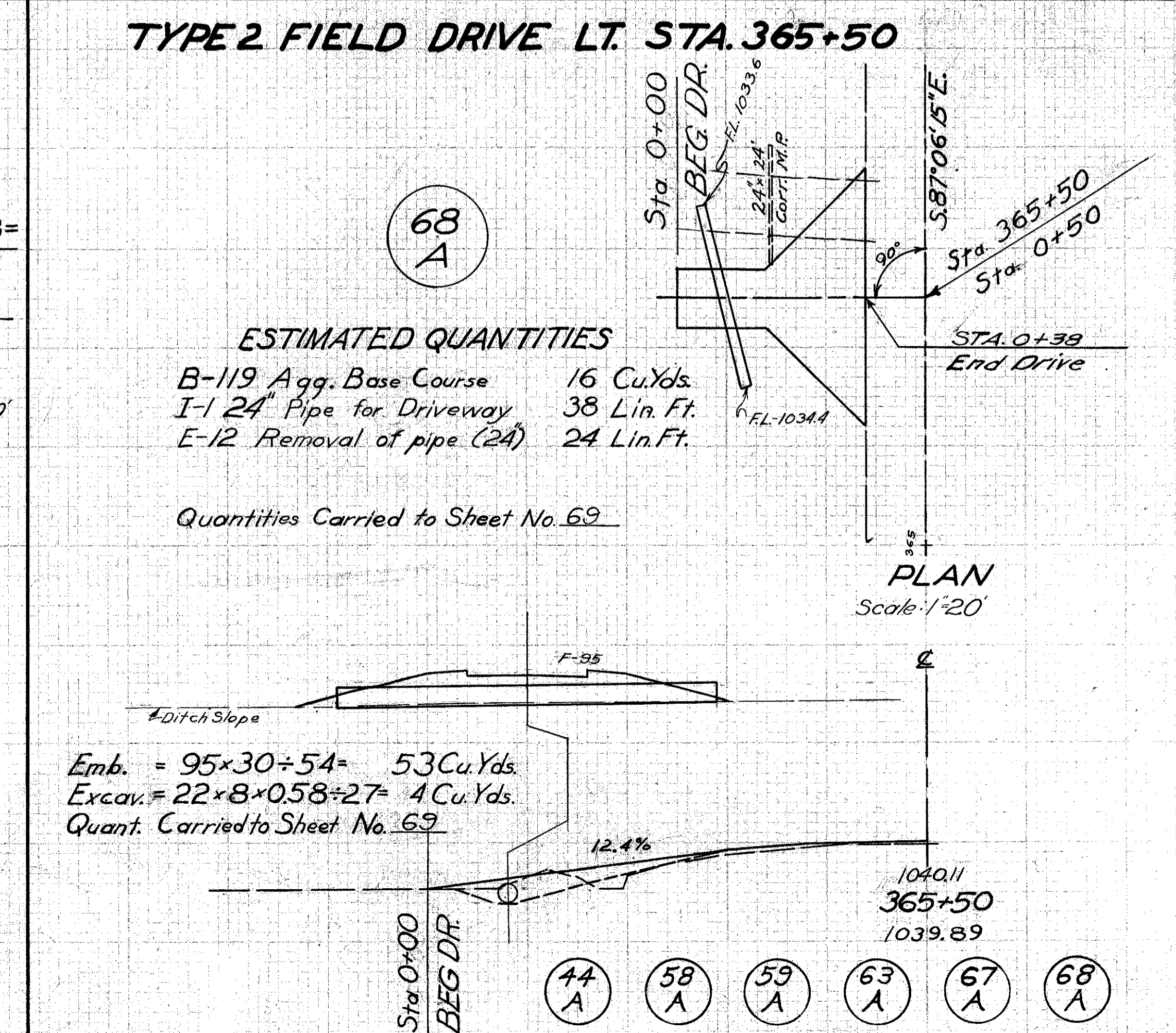
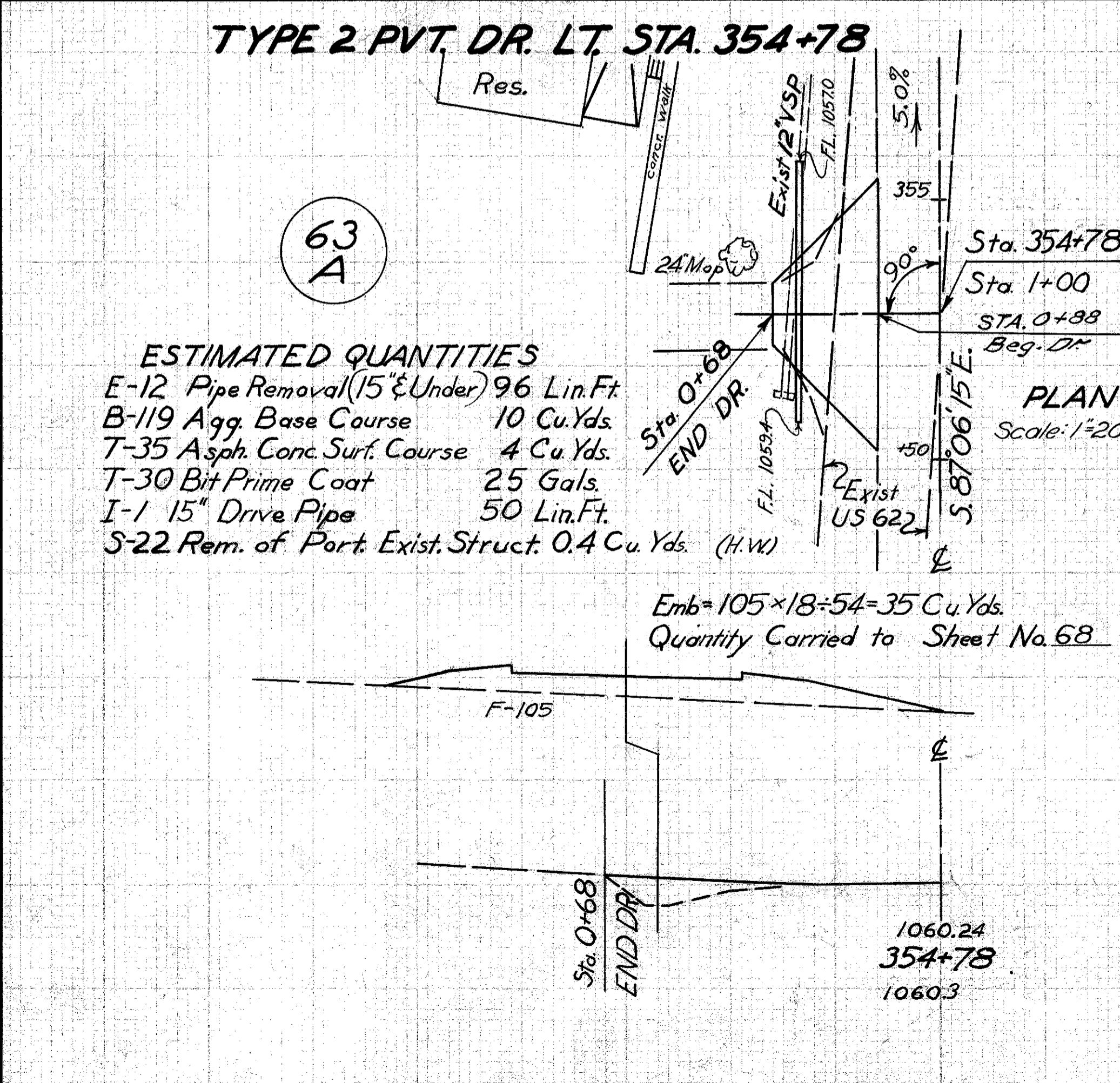
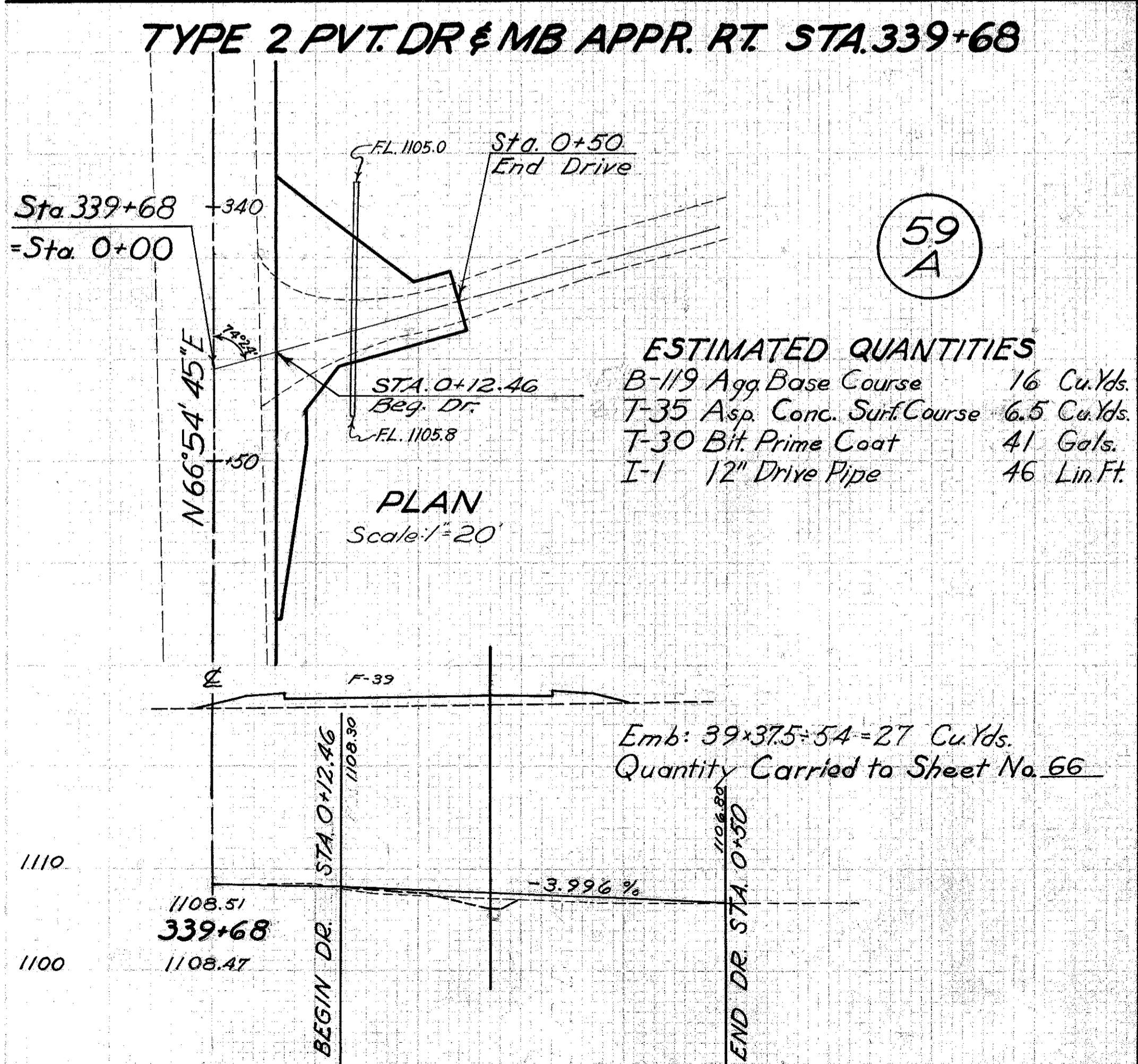
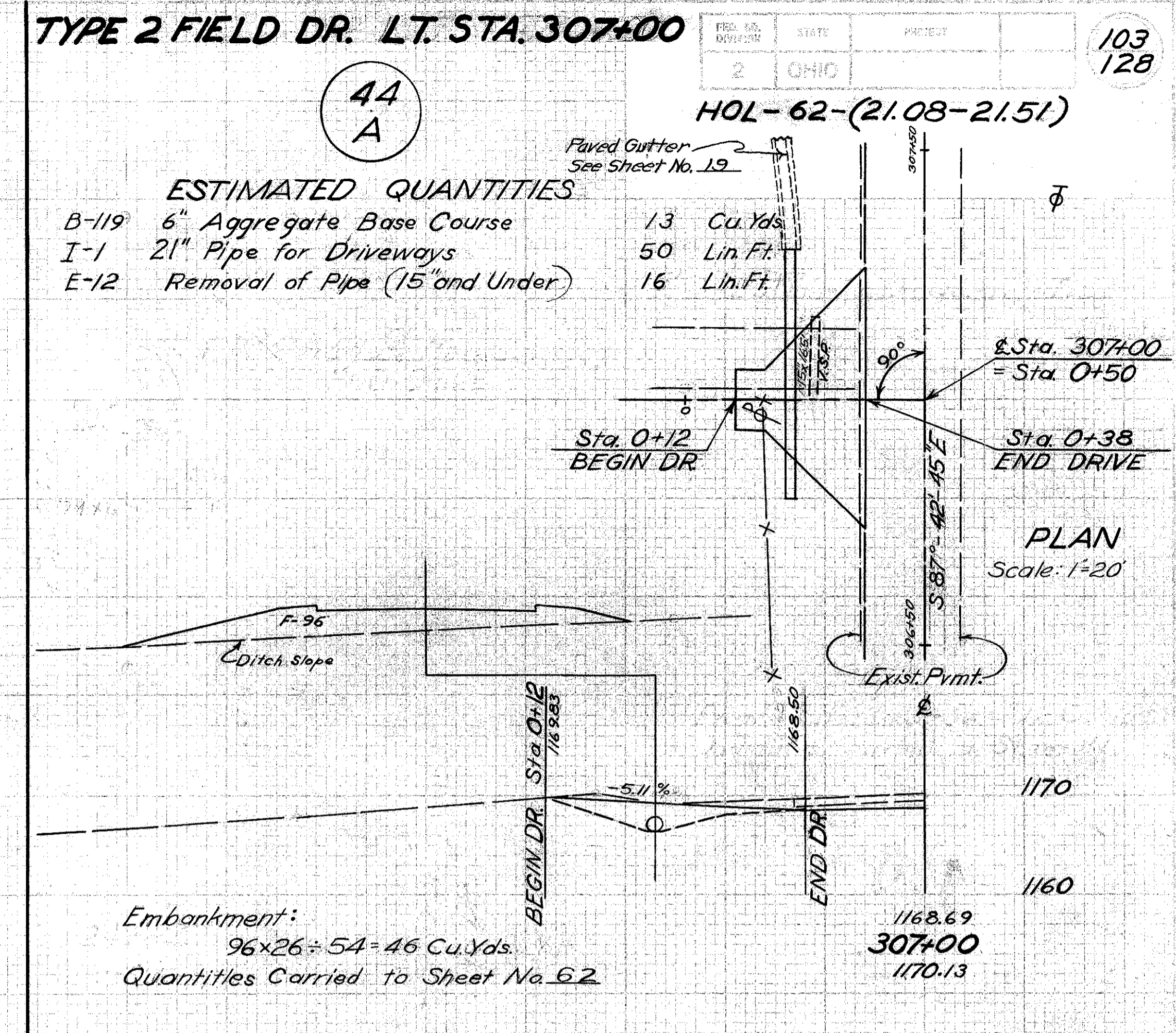
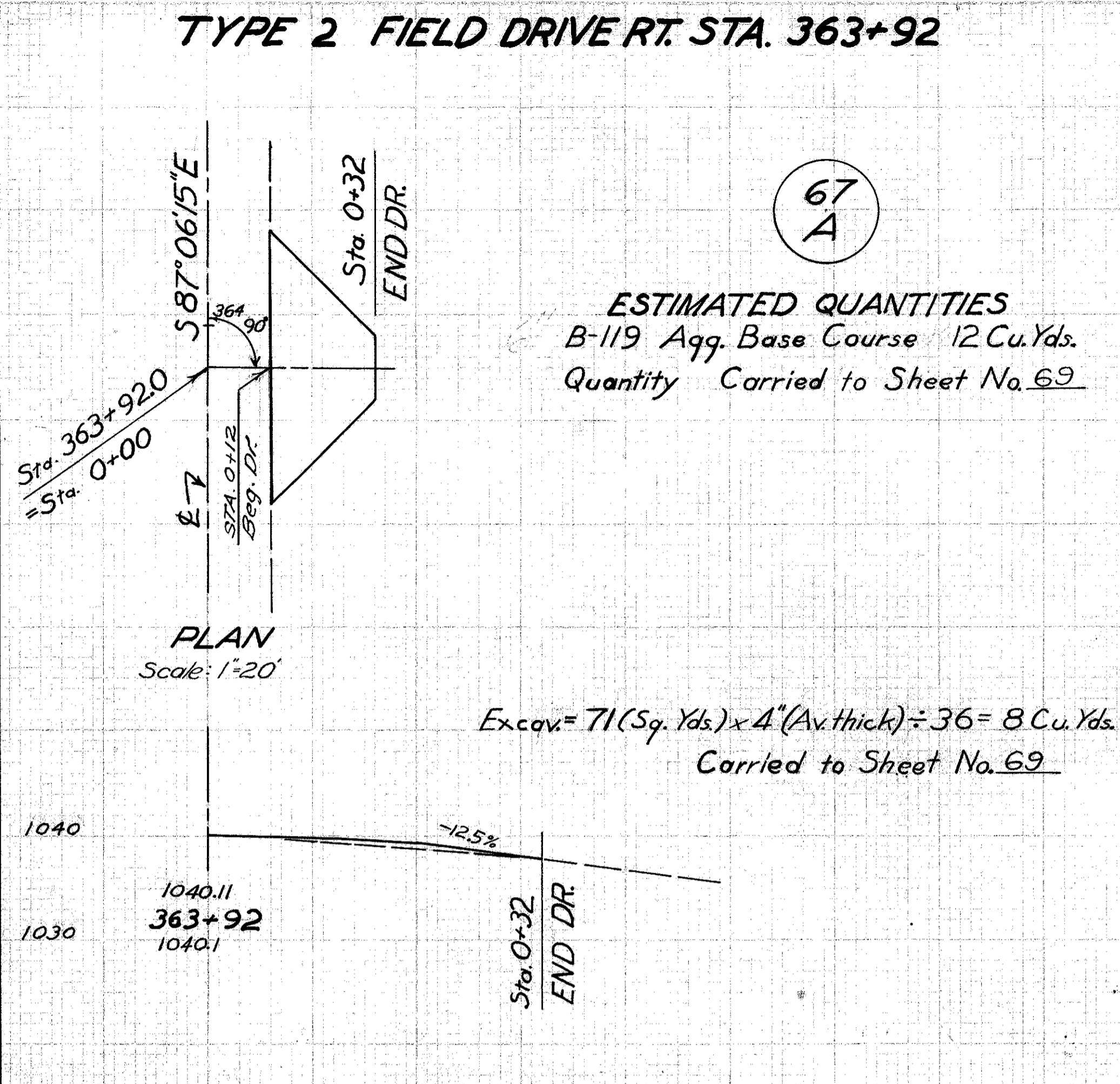
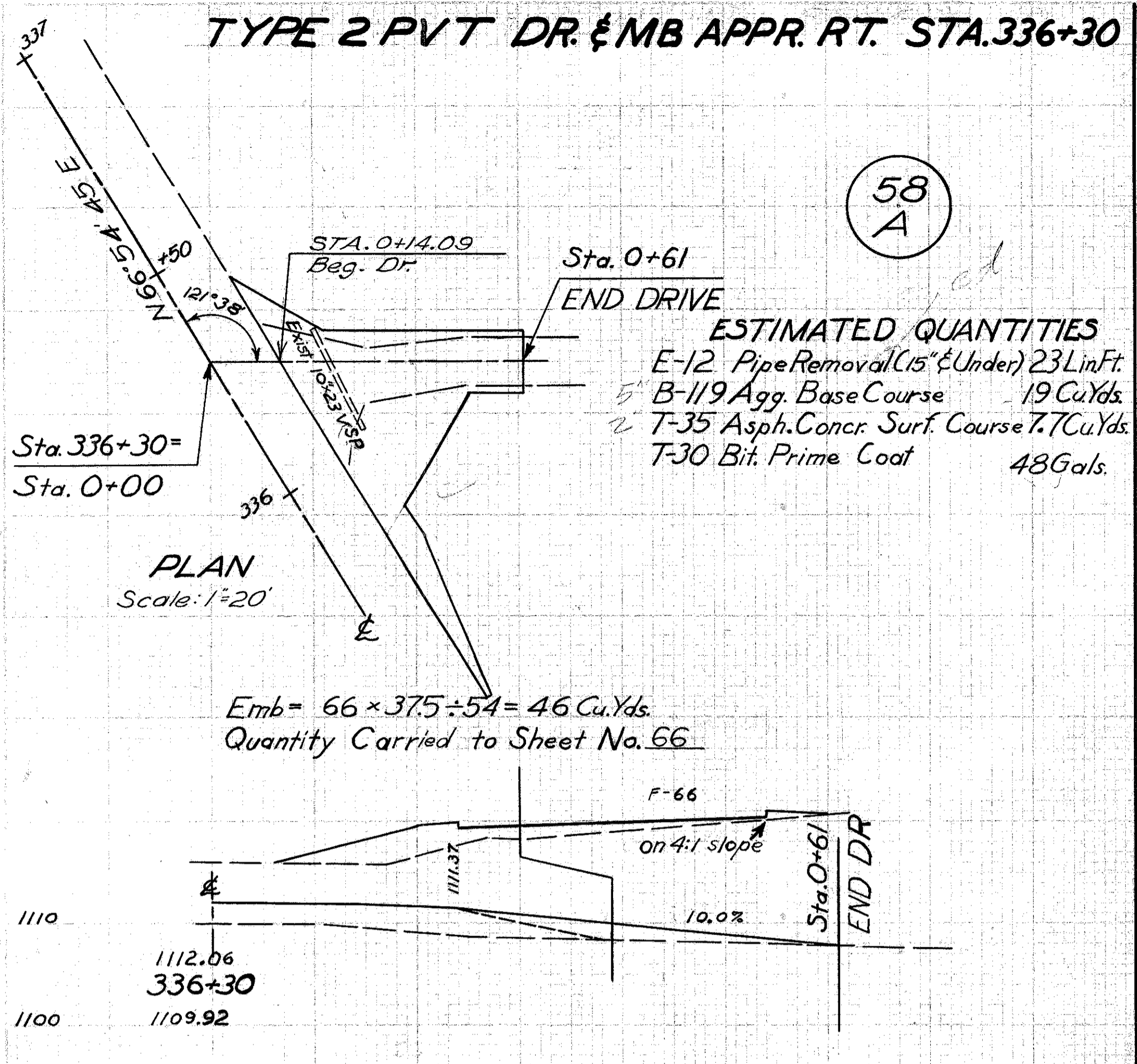
PLAN
Scale: 1"=20'

ESTIMATED QUANTITIES.

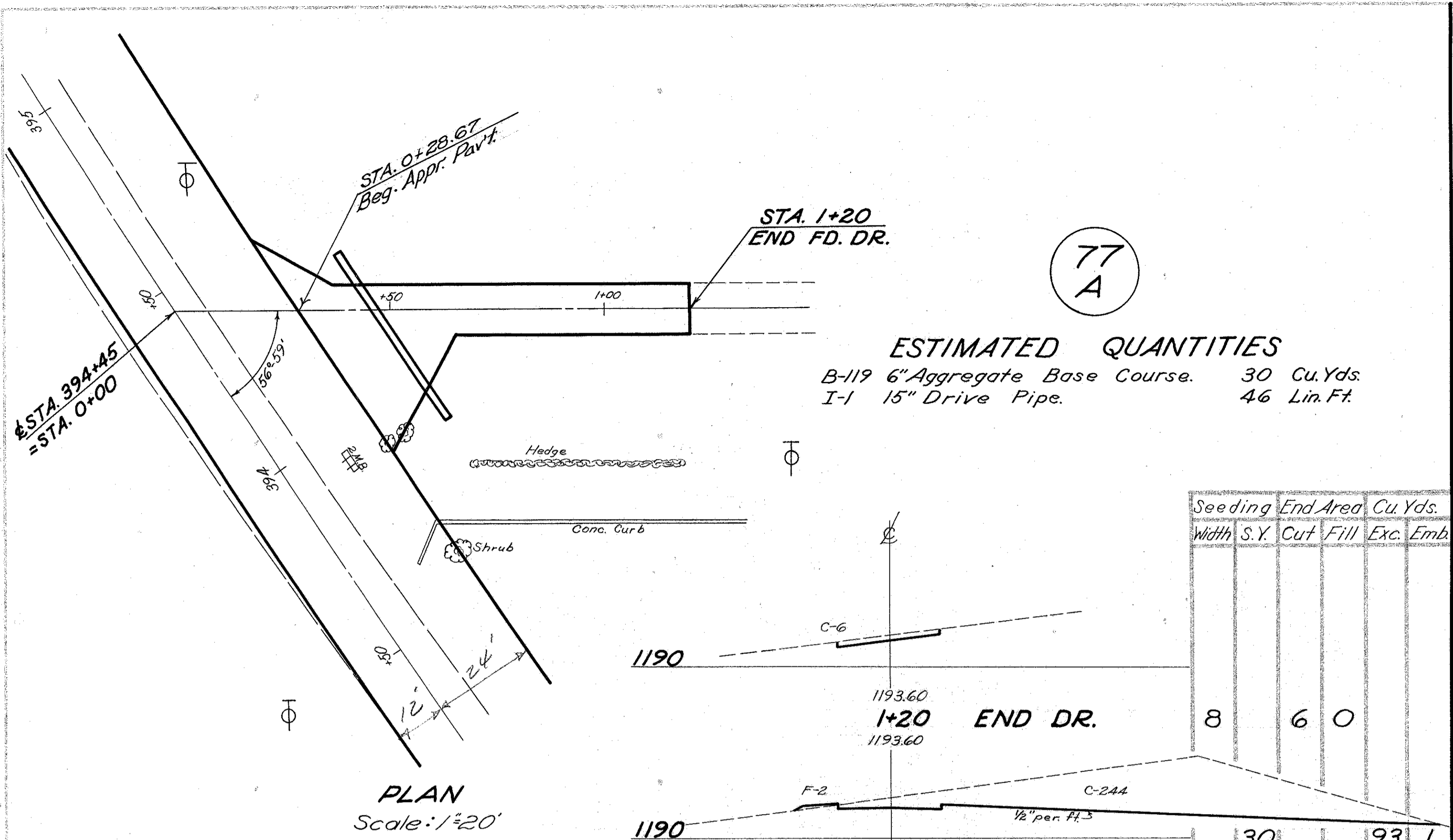
B-119 - 7" Crushed Aggregate Base Course	102.0 Cu. Yds.
T-35 - 2" Asp. Conc. Surf. Course	28.0 Cu. Yds.
T-30 - Bituminous Prime Coat	184 Gals.
E-101 - Compacted Subgrade	494 Sq. Yds.



Excavation 1566 Cu. Yd.
Embankment 36 Cu. Yd.
Seeding 697 Sq. Yd.
Quantities carried to Sh. # 70

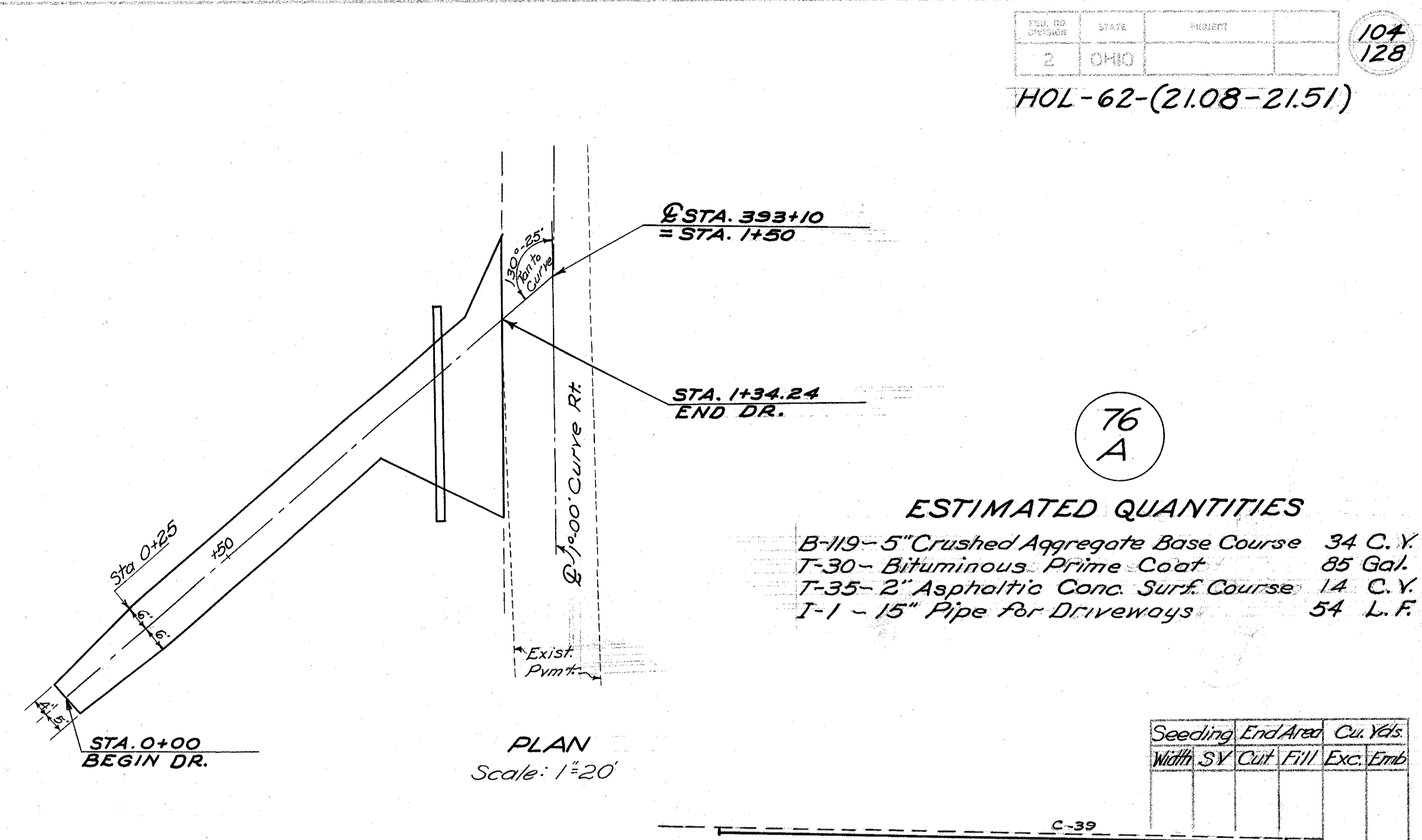


APPROACHES: - STA. 307+00 LT. - STA. 336+30 RT. - STA. 339+68 RT. - STA. 354+78 LT. - STA. 363+92 RT. - STA. 365+50 LT.



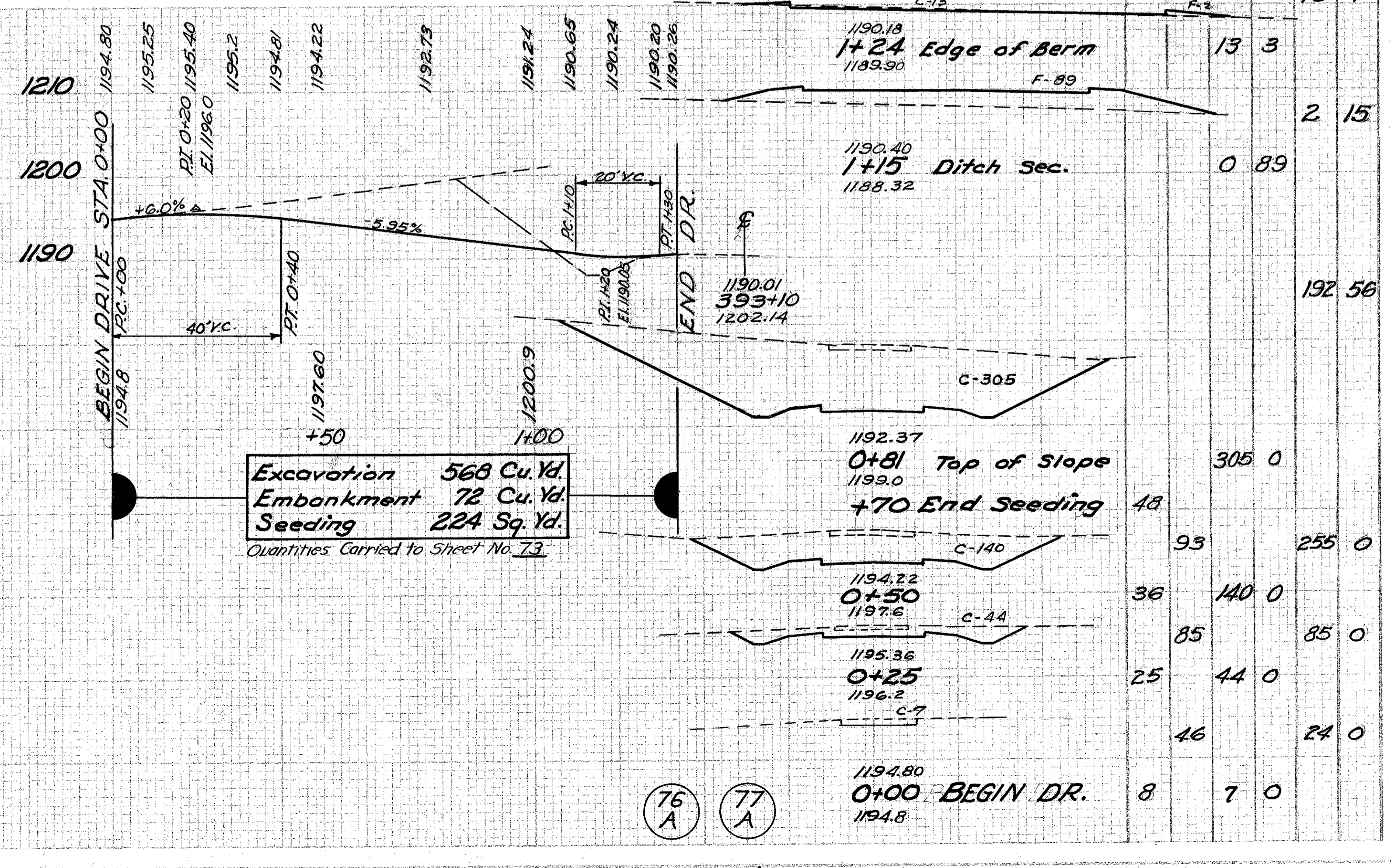
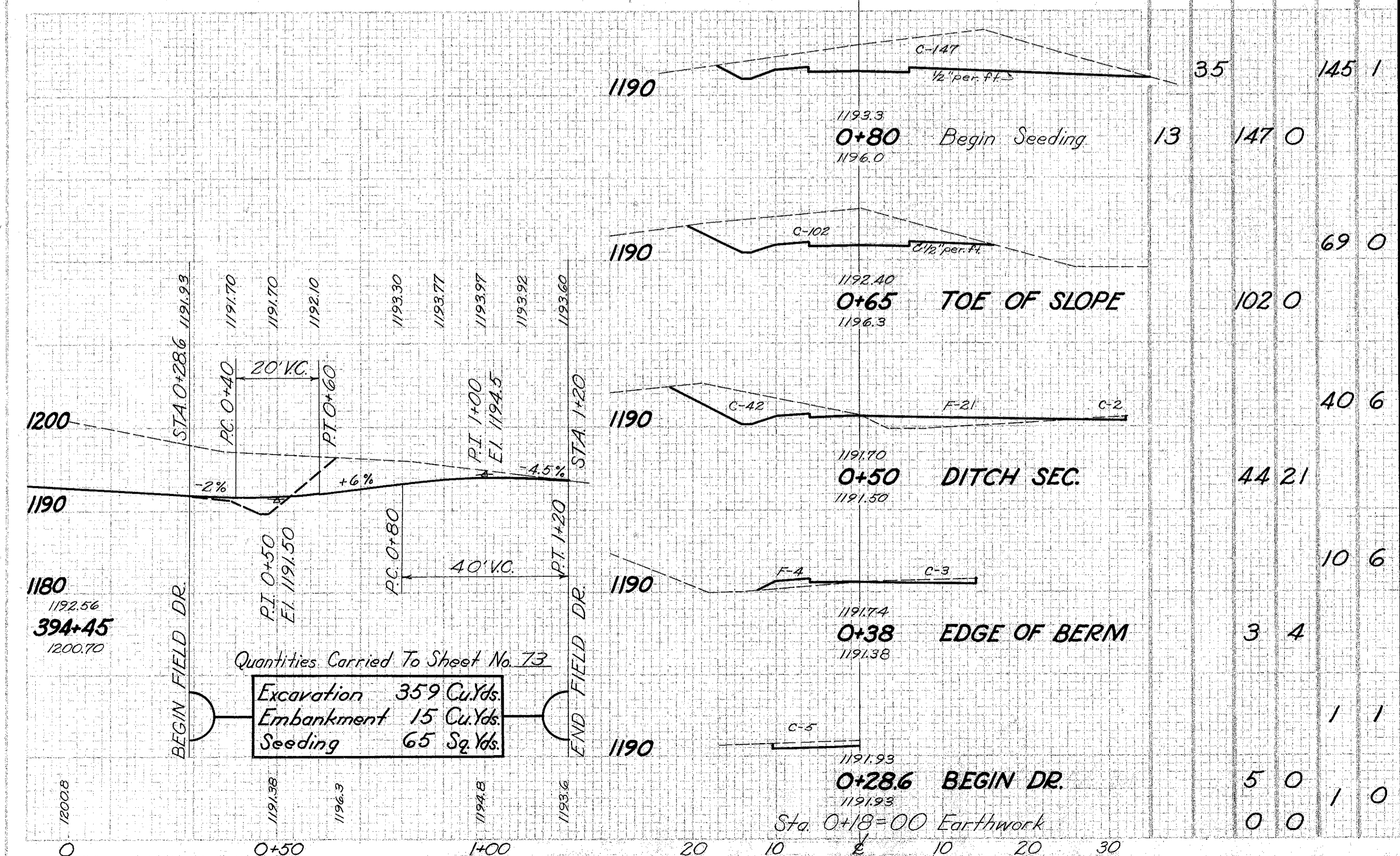
ESTIMATED QUANTITIES
 B-119 6" Aggregate Base Course. 30 Cu. Yds.
 I-1 15" Drive Pipe. 46 Lin. Ft.

Seeding Width	End Area S.Y.	Cu. Yds.	
		Cut	Fill
8	60	0	0
19	244	2	0
30	93	1	0



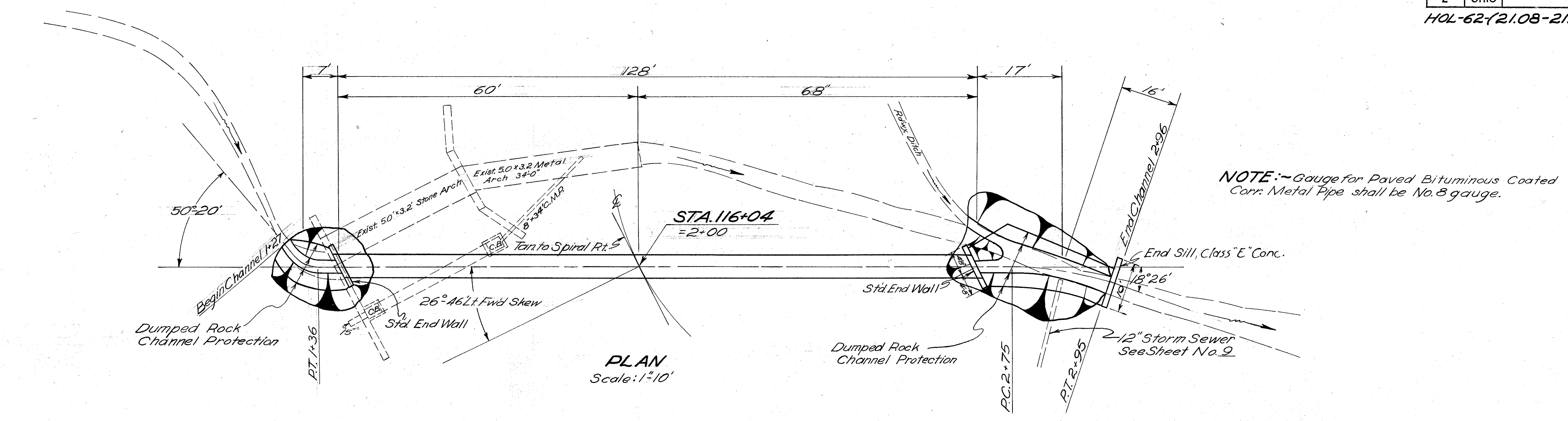
ESTIMATED QUANTITIES
 B-119-5" Crushed Aggregate Base Course 34 C. Y.
 T-30- Bituminous Prime Coat 85 Gal.
 T-35- 2" Asphaltic Conc. Surf. Course 14 C. Y.
 I-1- 15" Pipe for Driveways 54 L. F.

Seeding Width	End Area S.Y.	Cu. Yds.	
		Cut	Fill
39	0	0	0
10	1	0	0
13	3	0	0
0	89	0	0
192	56	0	0



Quantities Carried To Sheet No. 73
 Excavation 359 Cu. Yds.
 Embankment 15 Cu. Yds.
 Seeding 65 Sq. Yds.

Excavation 568 Cu. Yd.
 Embankment 72 Cu. Yd.
 Seeding 224 Sq. Yd.
 Quantities Carried to Sheet No. 73



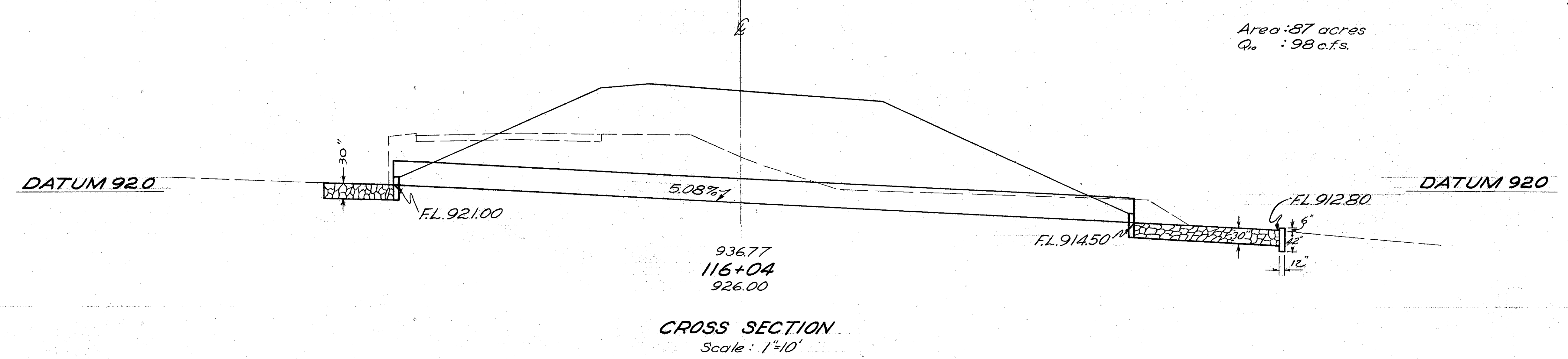
NOTE: - Gauge for Paved Bituminous Coated Corr. Metal Pipe shall be No. 8 gauge.

PLAN
Scale: 1"=10'

WORK REQUIRED
Build Std. Pipe Culvert As Shown

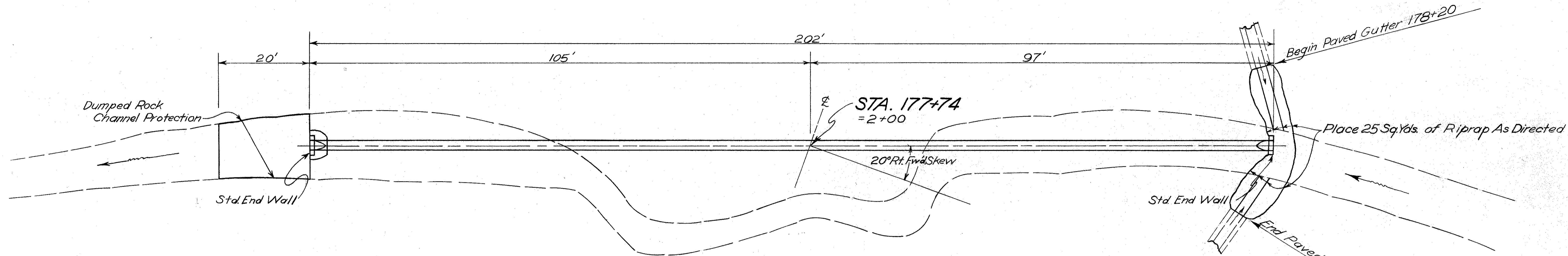
ESTIMATED QUANTITIES	
54" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d)	128 L.F.
Channel Excavation	40 C.Y.
Excavation for Structure	284 C.Y.
Concrete for Structure (Class E)	3.9 C.Y.
Removal of Pipe (15" and Under)	38 L.F.
Catch Basins Abandoned	2 Each
Removal of Existing Structure (Stone Arch)	Lump Sum
Dumped Rock Channel Protection	34 C.Y.
Remove and Store 50x3.2 Corr. Metal Pipe Arch	34 L.F.

Area: .87 acres
Q_s: 98 c.f.s.



CROSS SECTION
Scale: 1"=10'

STA. 116+04-54x128 PIPE CULVERT



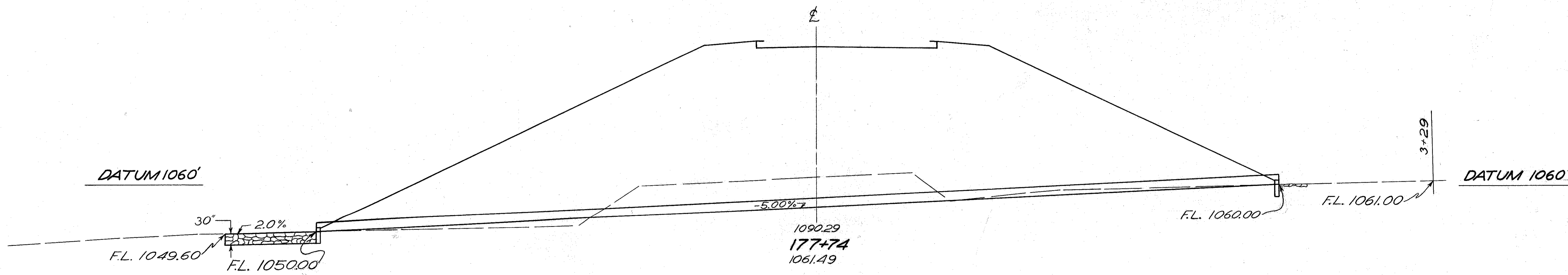
PLAN
Scale 1"=10'

WORK REQUIRED
Build Std. Pipe Culvert As Shown

ESTIMATED QUANTITIES

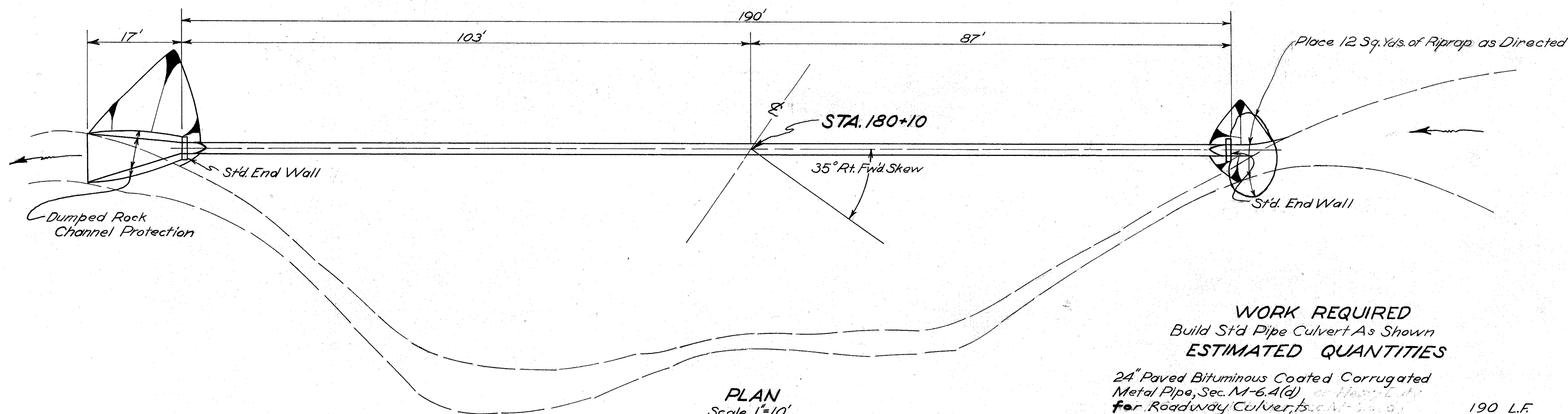
24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) 14 Gauge or Heavy Duty	202 L.F.
Reinf. Con. Pipe, Sec. M-106.6 (d)	72 C.Y.
Excavation for Structures	0.8 C.Y.
Concrete for Structures (Class E)	2.3 C.Y.
Dumped Rock Channel Protection	25 S.Y.
Riprap	

Area : 16 acres
Q₁₀ : 31 c.f.s.



CROSS SECTION
Scale 1"=10'

STA. 177+74 - 24" x 202' PIPE CULVERT

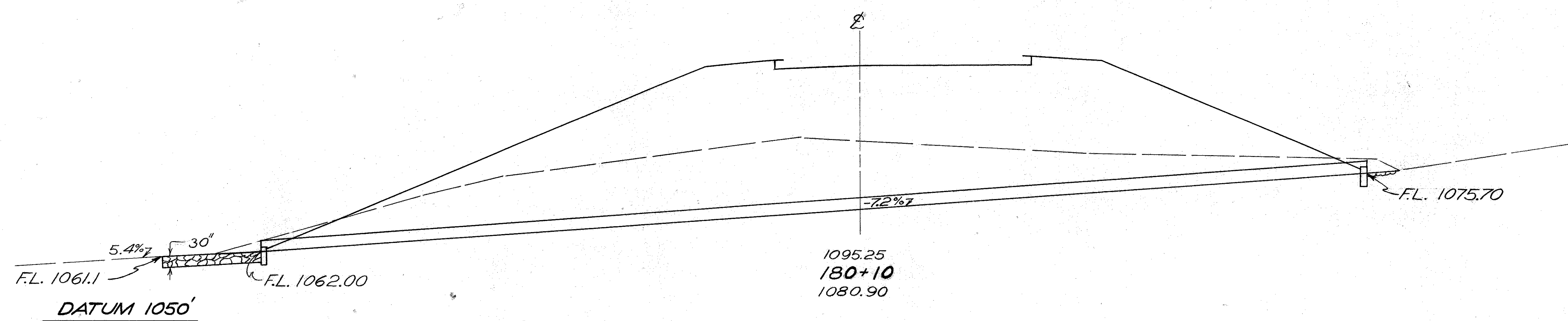


PLAN
Scale 1"=10'

WORK REQUIRED
Build Std Pipe Culvert As Shown
ESTIMATED QUANTITIES

24" Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) or Heavy Duty for Roadway Culverts, Sec. M-2.4.1	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.

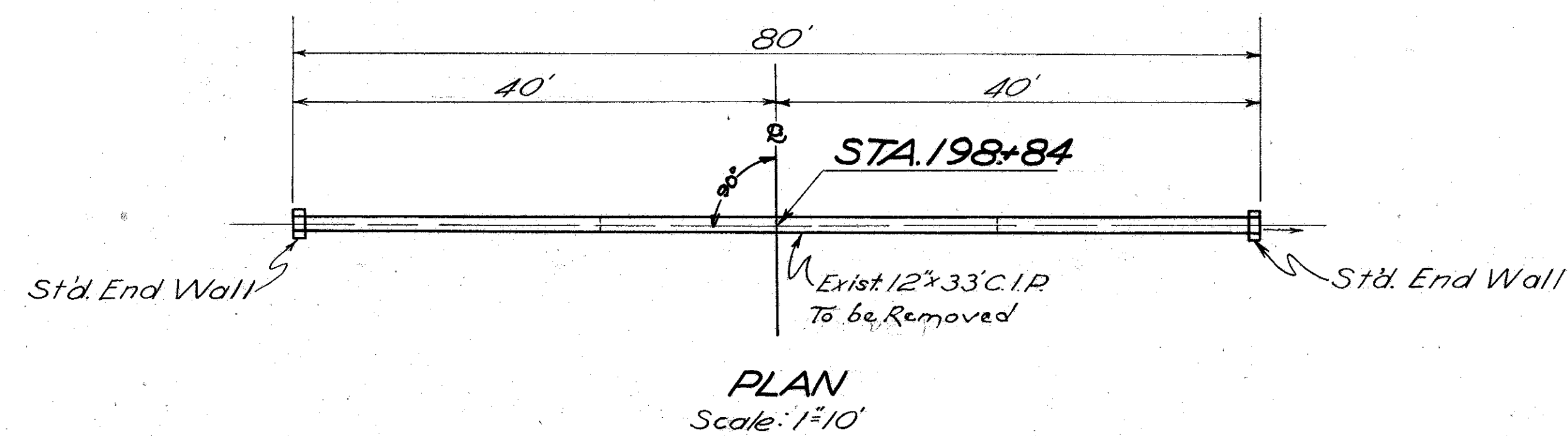
Area: 16 acres
Q₁₀: 31 c.f.s.



CROSS SECTION
Scale 1"=10'

DATUM 1050'

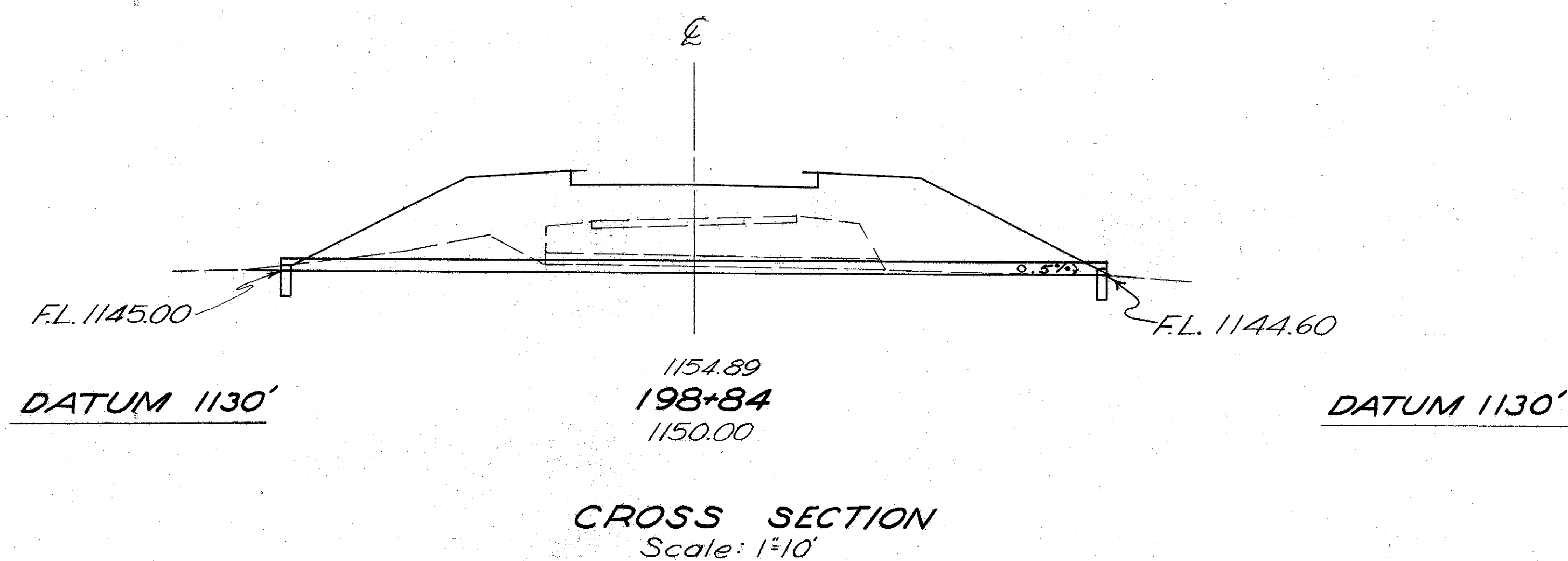
STA. 180+10 - 24x190 PIPE CULVERT



WORK REQUIRED
Build Std. Pipe Culvert As Shown

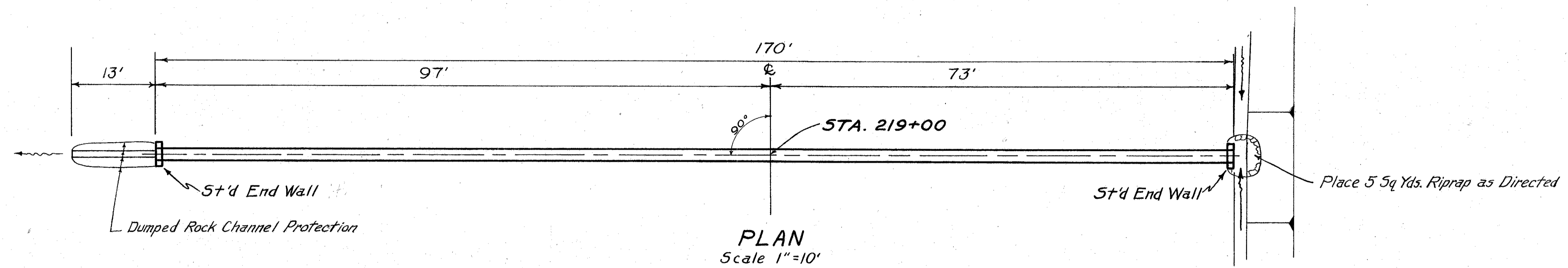
ESTIMATED QUANTITIES

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.



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

8
S

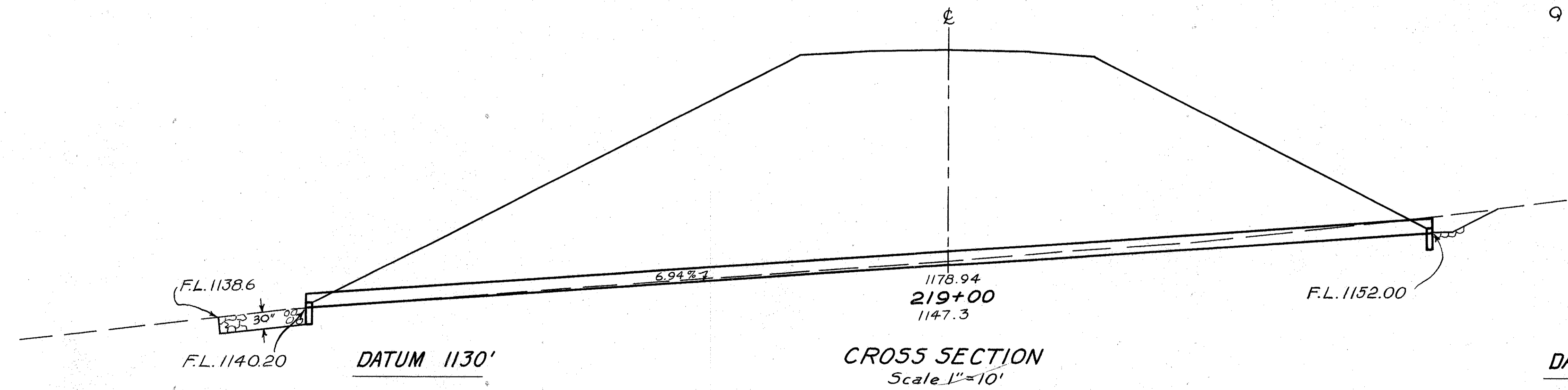


Work Required
Build Std Pipe Culvert As Shown

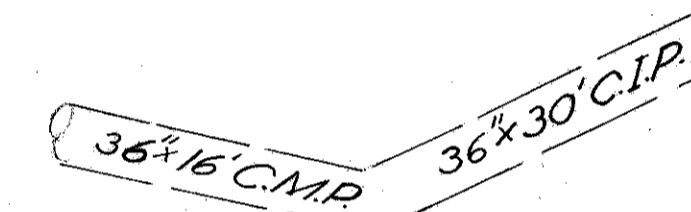
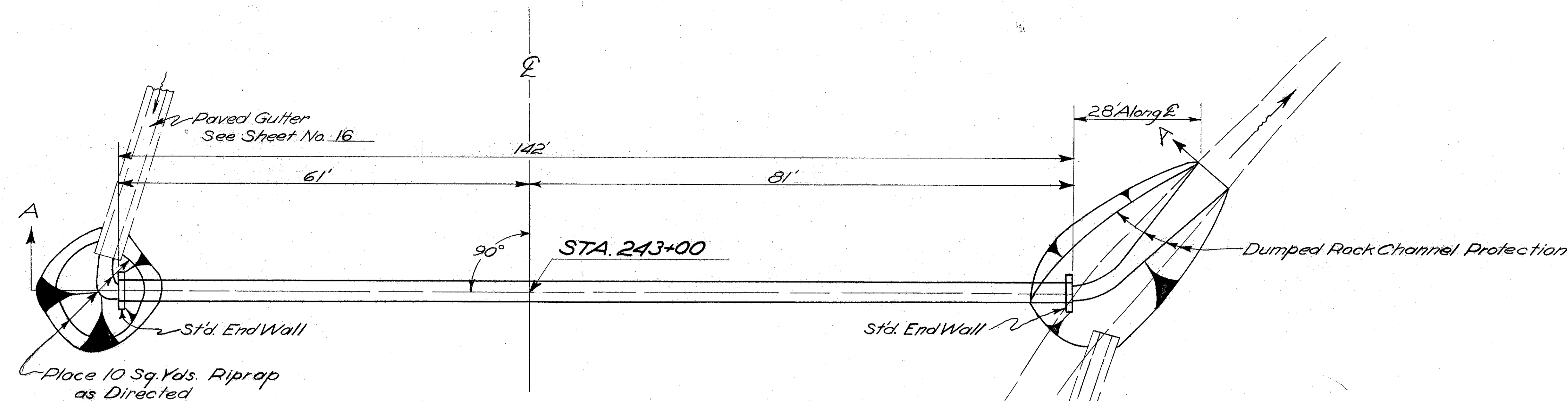
Estimated Quantities
 24" Paved Bituminous Coated Corrug. Metal Pipe, Sec. M-6.4 (d) or Heavy Duty Reinforced Concrete Culvert Pipe, Sec. M-106.6 (d)
 Excavation for Structures
 Concrete for Structures (Class E)
 Dumped Rock Channel Protection
 Riprap

170 L.F.
 44 C.Y.
 0.8 C.Y.
 5 C.Y.
 5 Sq.Y.

Area: 4 Acres
 Q₁₀ : 13 c.f.s.



STA. 219+00
24" x 170' PIPE CULVERT



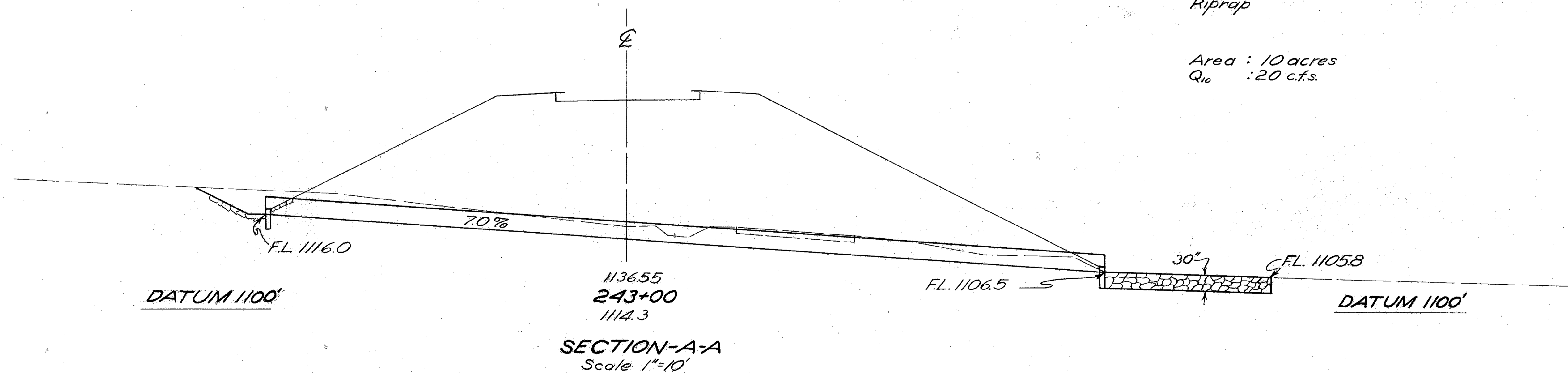
PLAN
Scale 1"=10'

WORK REQUIRED
Build St'd Pipe Culvert As Shown

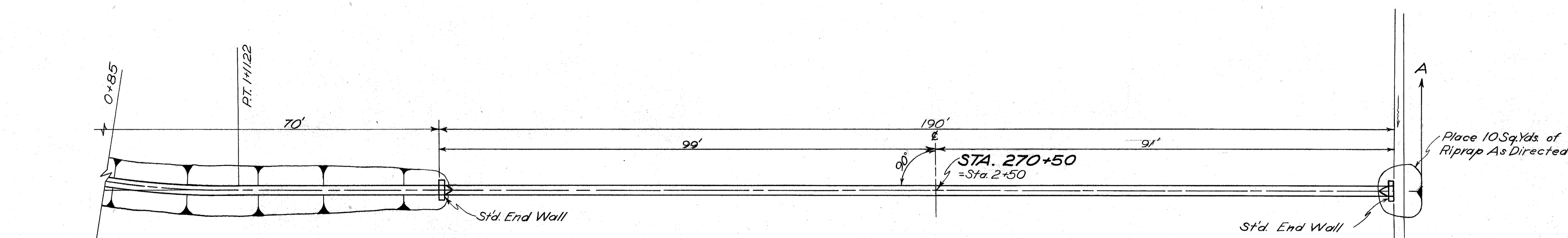
ESTIMATED QUANTITIES

36" Paved Bituminous Coated Corrug. Metal Pipe, Sec. M-64(d), 10' 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.

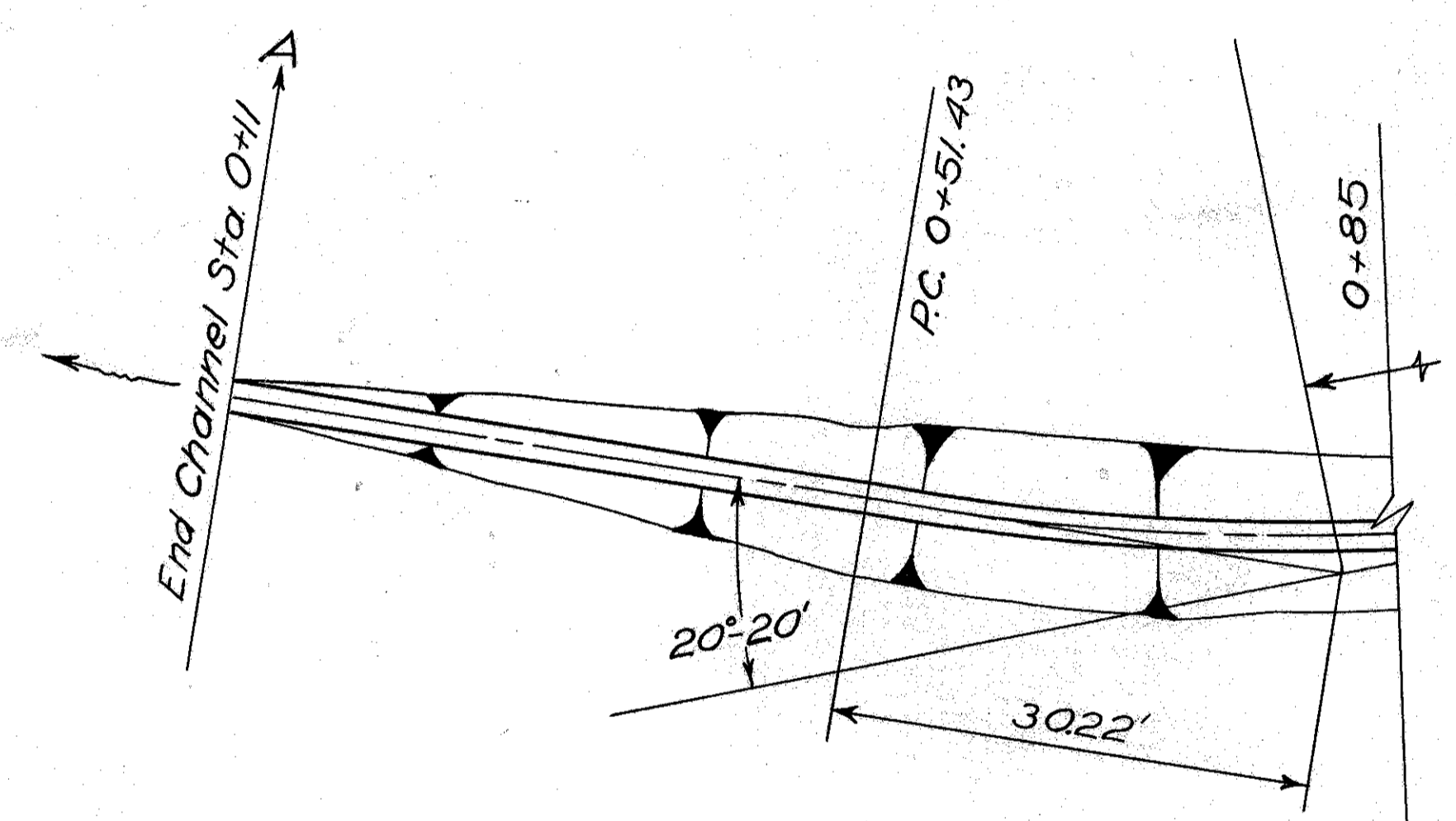
Area : 10 acres
Q₁₀ : 20 c.f.s.



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



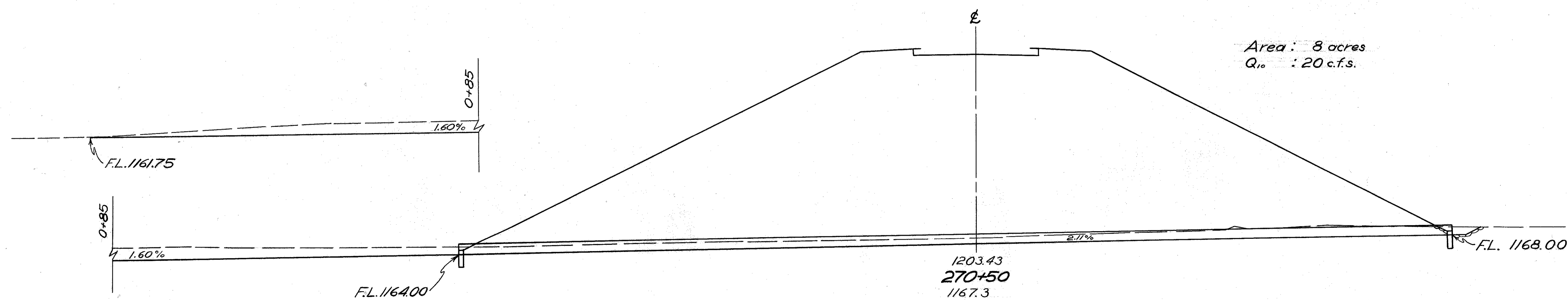
PLAN
Scale 1"=10'



WORK REQUIRED
Build Std. Pipe Culvert As Shown

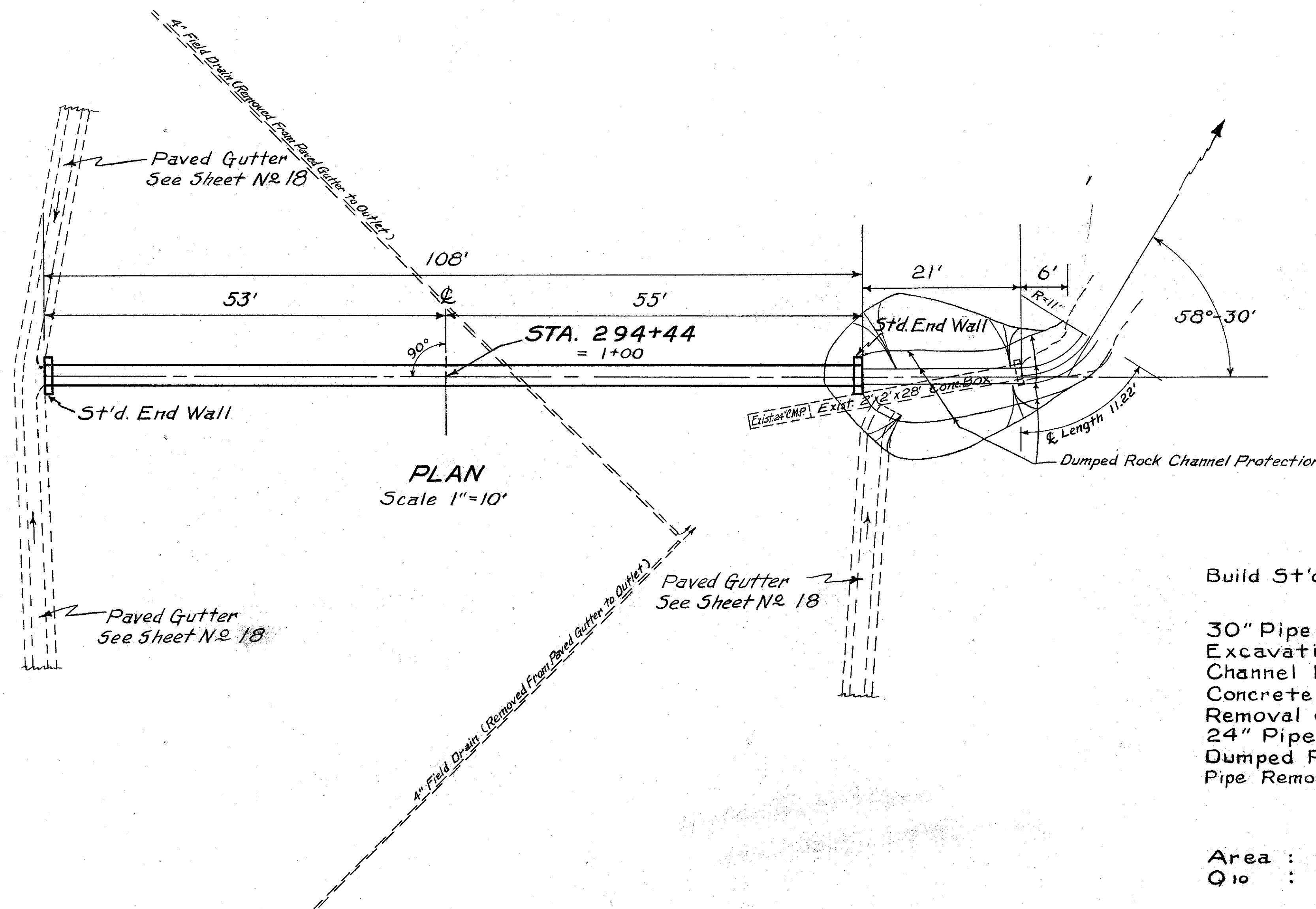
ESTIMATED QUANTITIES

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'

STA. 270+50 - 24x190 PIPE CULVERT

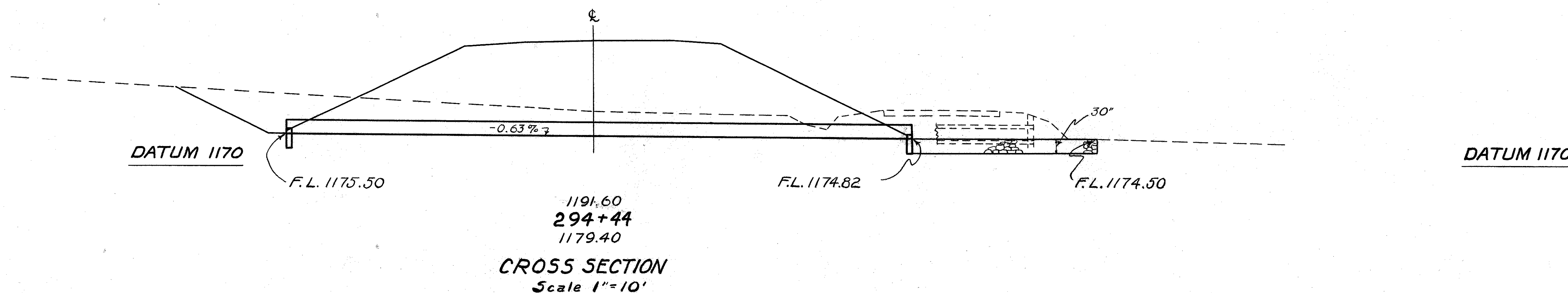


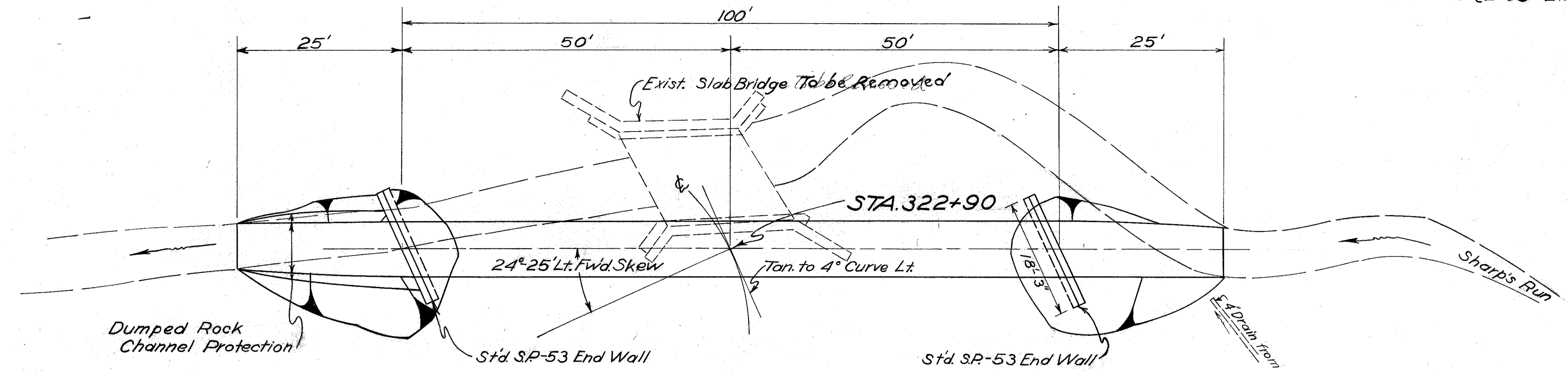
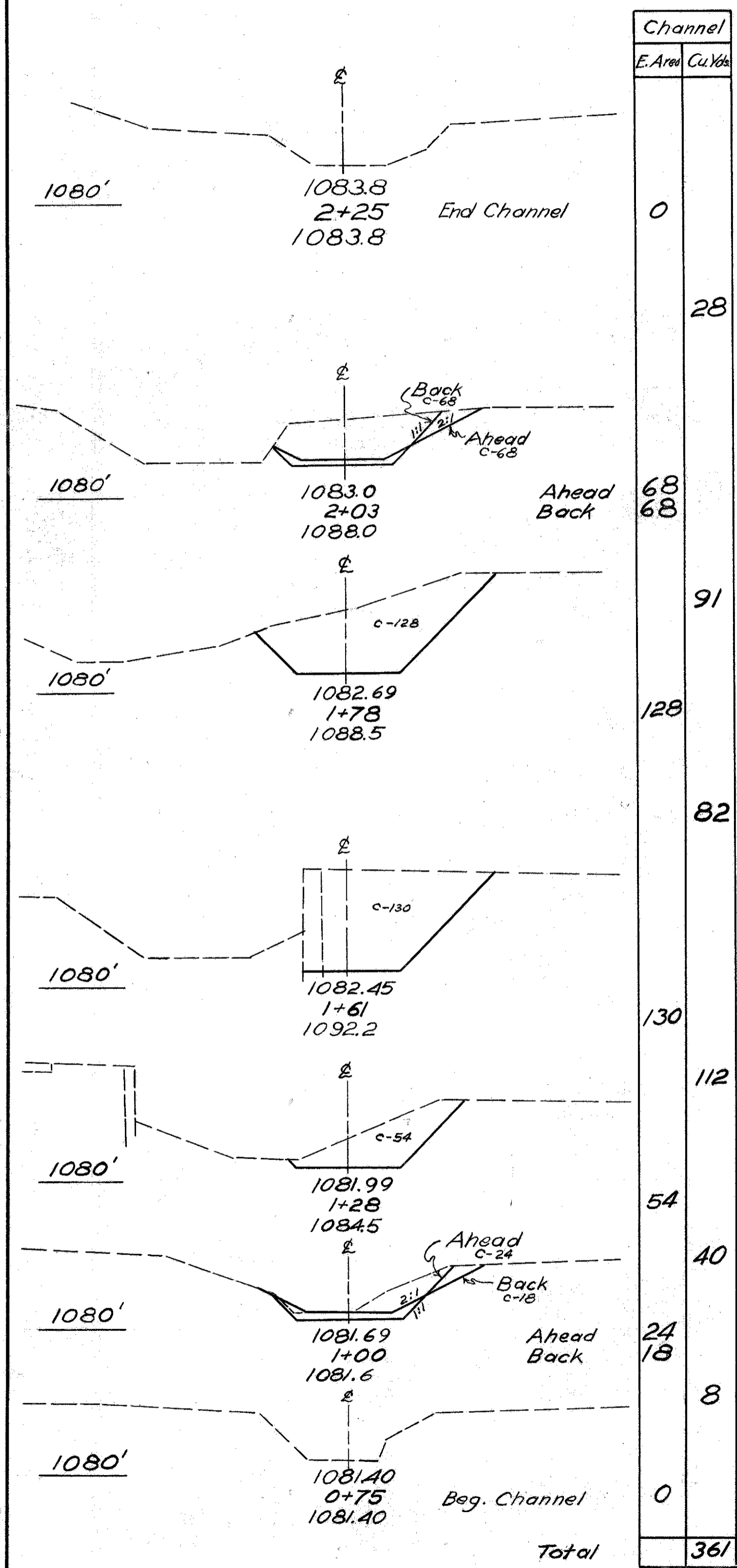
WORK REQUIRED
Build St'd. Pipe Culvert As Shown

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.





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.

PLAN
Scale: 1"=10'

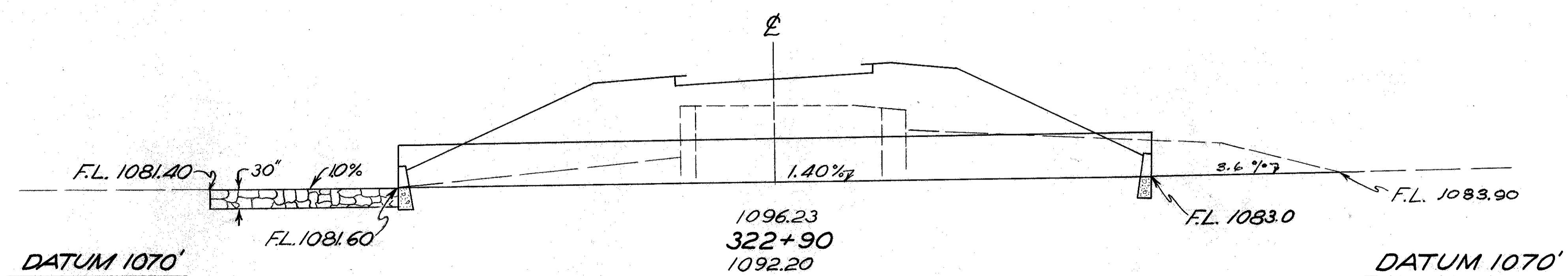
WORK REQUIRED
Build Std Pipe Culvert As Shown

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

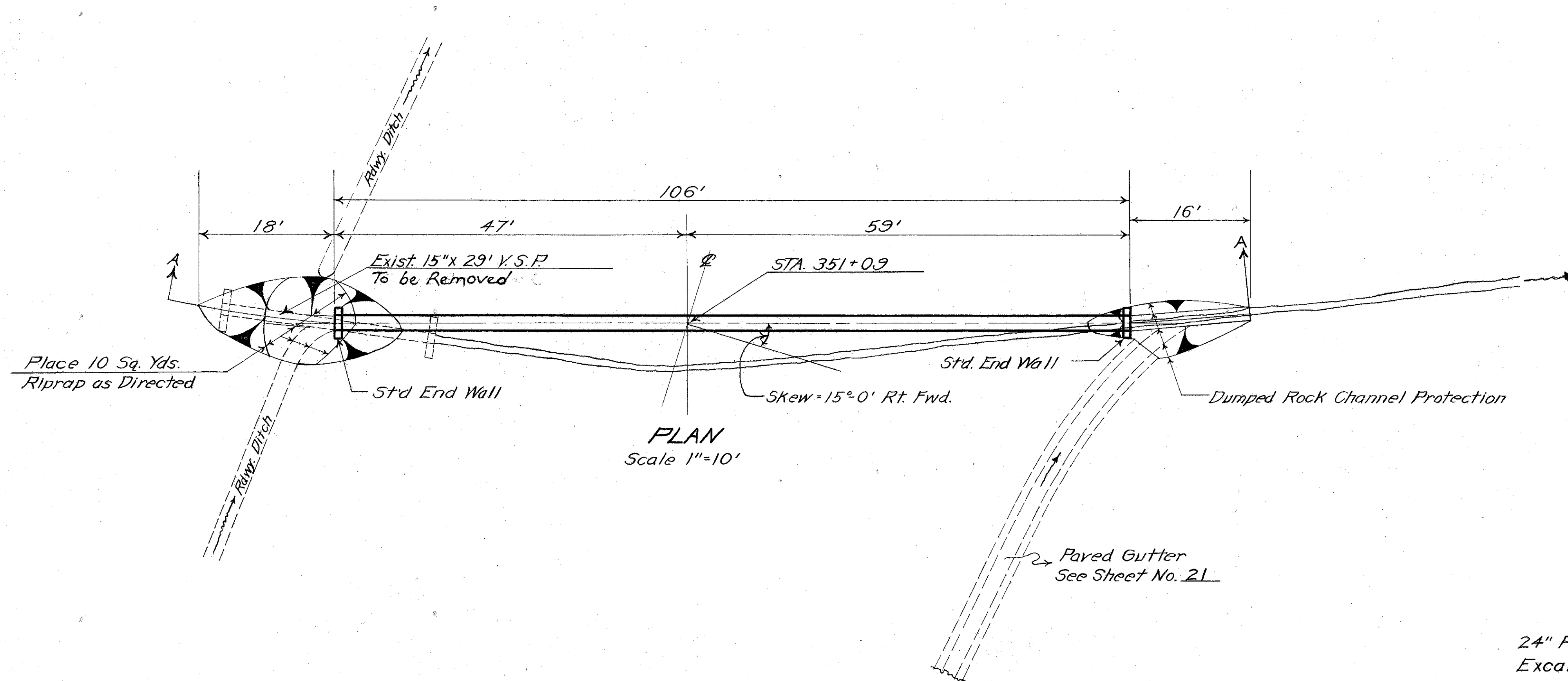
Note: For details not shown, see Std. Dwg S.P.-53. Plates shall be formed with 2" corrugations and shall be No. 10 gauge for all plates except bottom and corner plates which will be No. 8 gauge

Area : 336 acres
Q₁₀ : 246 c.f.s.



CROSS SECTION
Scale: 1"=10'

STA. 322+90
8'-7"x5'-11" x 100' SECT. CORR. METAL PIPE ARCH STRUCT.



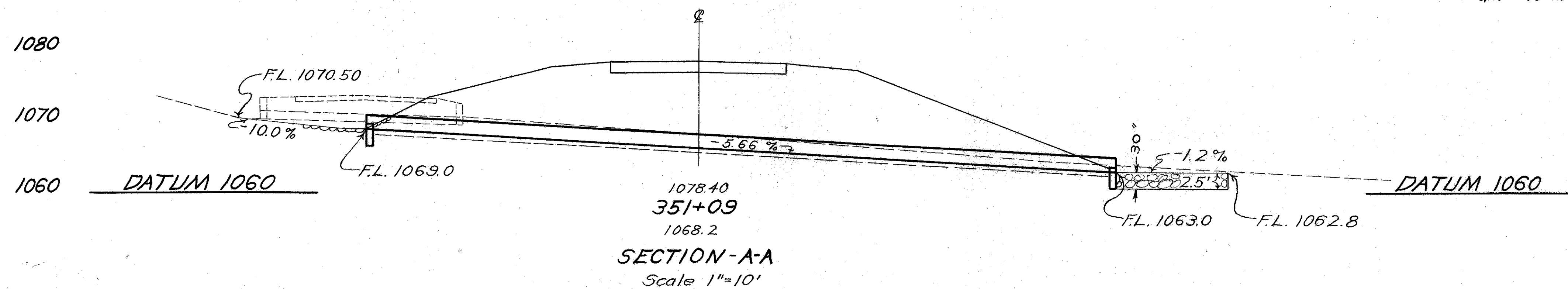
PLAN
Scale 1"=10'

WORK REQUIRED
Build Std Pipe Culvert as shown.

ESTIMATED QUANTITIES

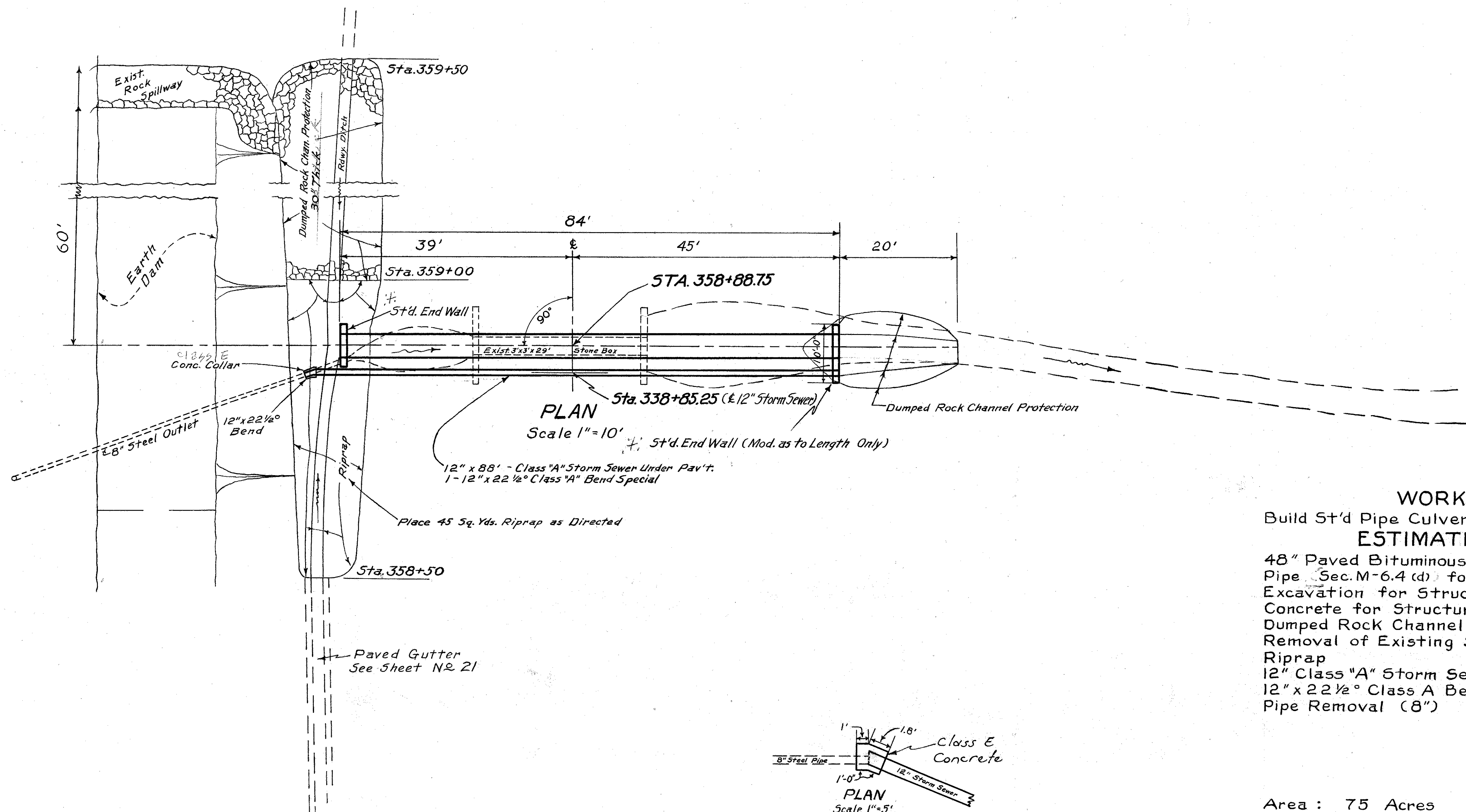
24" Pipe for Roadway Culvert	106 Lin. Ft.
Excavation for Structures	34 Cu. Yds.
Channel Excavation	5 Cu. Yds.
Concrete for Structures (Class 'E')	0.80 Cu. Yds.
Riprap	10 Sq. Yds.
Dumped Rock Channel Protection	8 Cu. Yds.
Pipe Removal (15")	29 Lin. Ft.
Removal of Portions of Exist. Structure	2 Cu. Yds.

Area: 10 acres
Q₁₀: 15 c.f.s.



SECTION-A-A
Scale 1"=10'

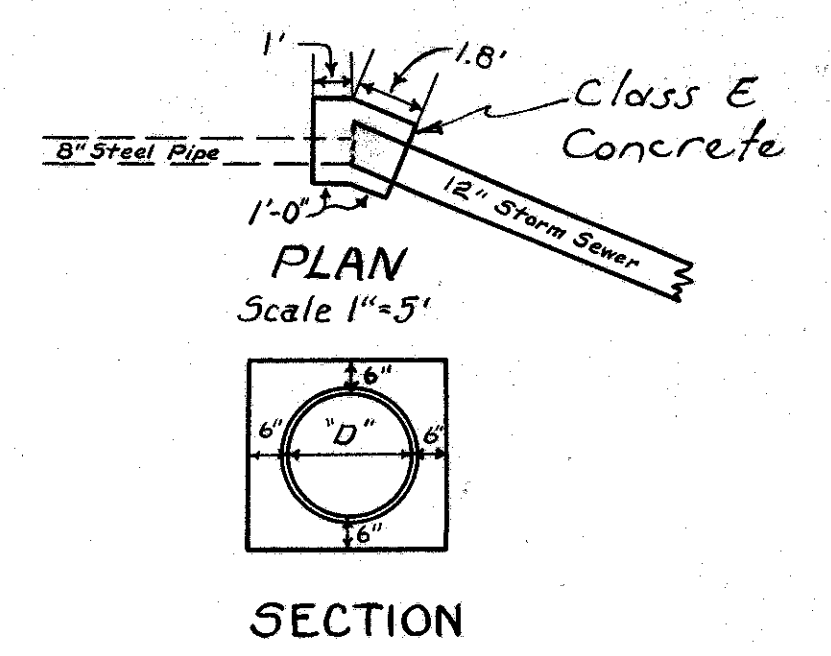
STA. 351+09
24" x 106' PIPE CULVERT



WORK REQUIRED
Build St'd Pipe Culvert As Shown

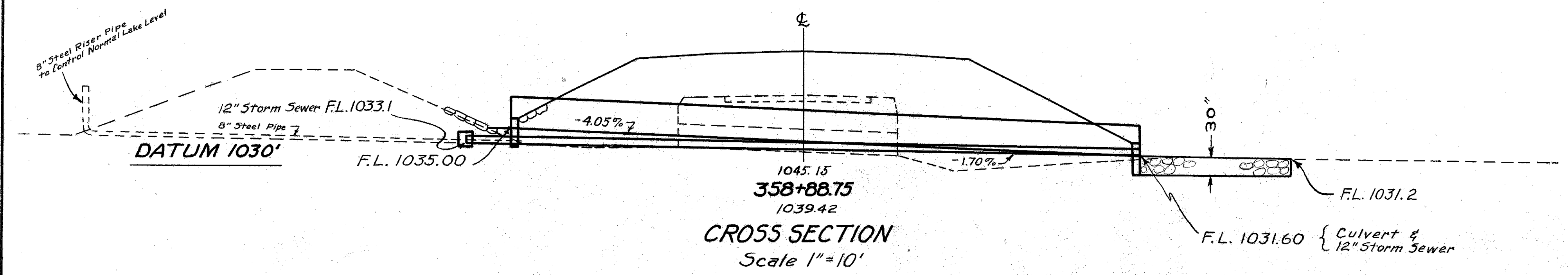
ESTIMATED QUANTITIES

48" Paved Bituminous Coated Corrg. Metal Pipe (Sec. M-6.4 (d)) for Rdwy. 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 22 1/2° Class A Bend Special	1	Each
Pipe Removal (8")	8	Lin. Ft.



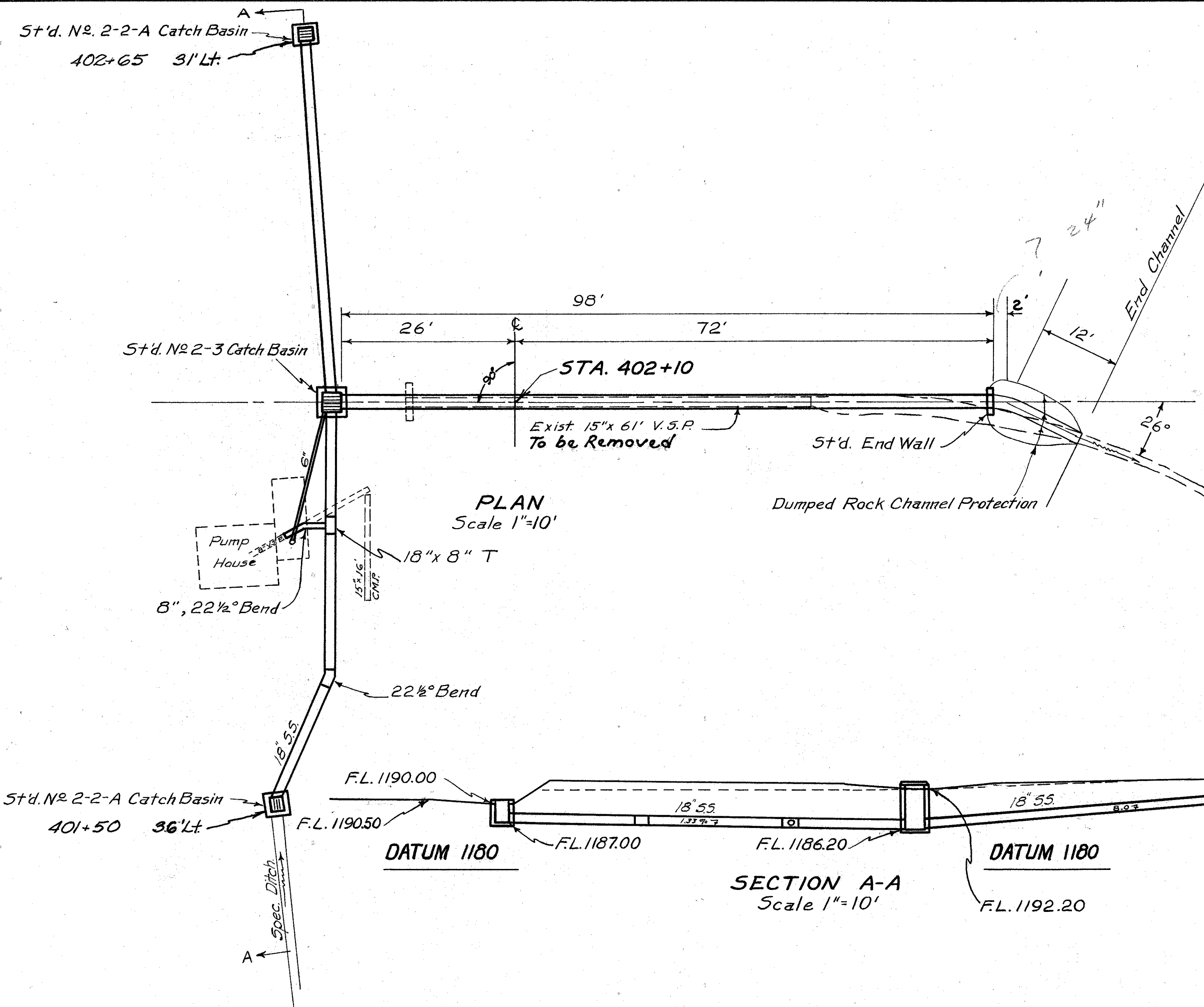
Area : 75 Acres
Q₁₀ : 95 c.f.s.

CONCRETE COLLAR FOR 12" STORM SEWER



(18)
S

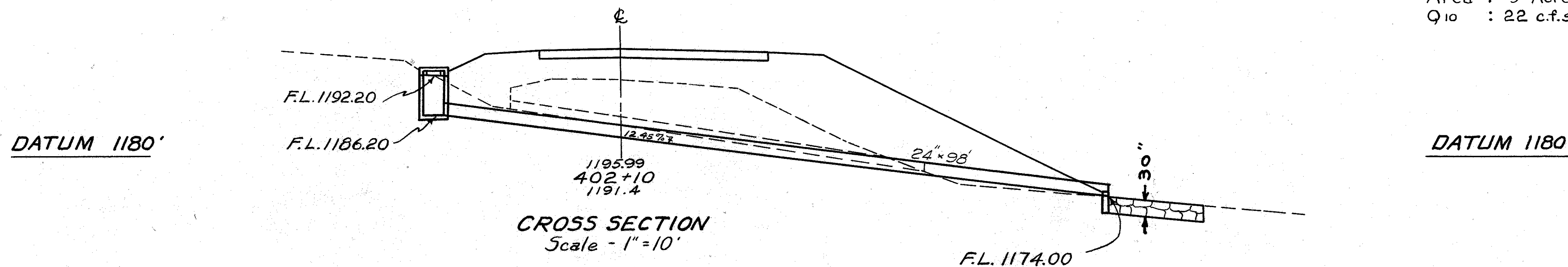
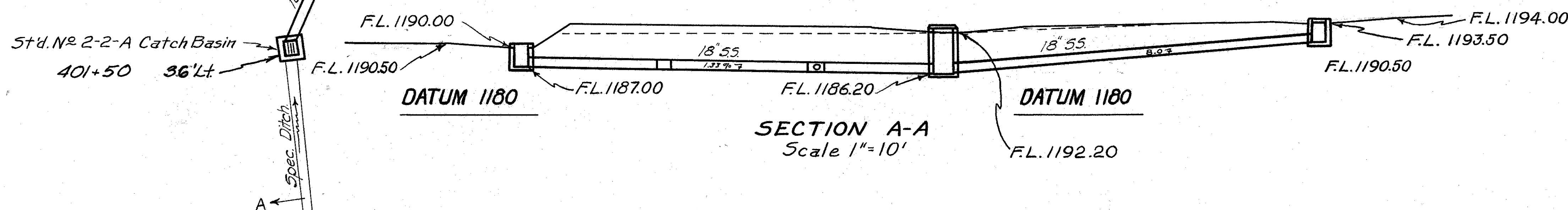
STA. 358+88.75
48" x 84' PIPE CULVERT



WORK REQUIRED
Build Std. Pipe Culvert and Std. No. 2-3 Catch Basin and Storm Sewer as shown.

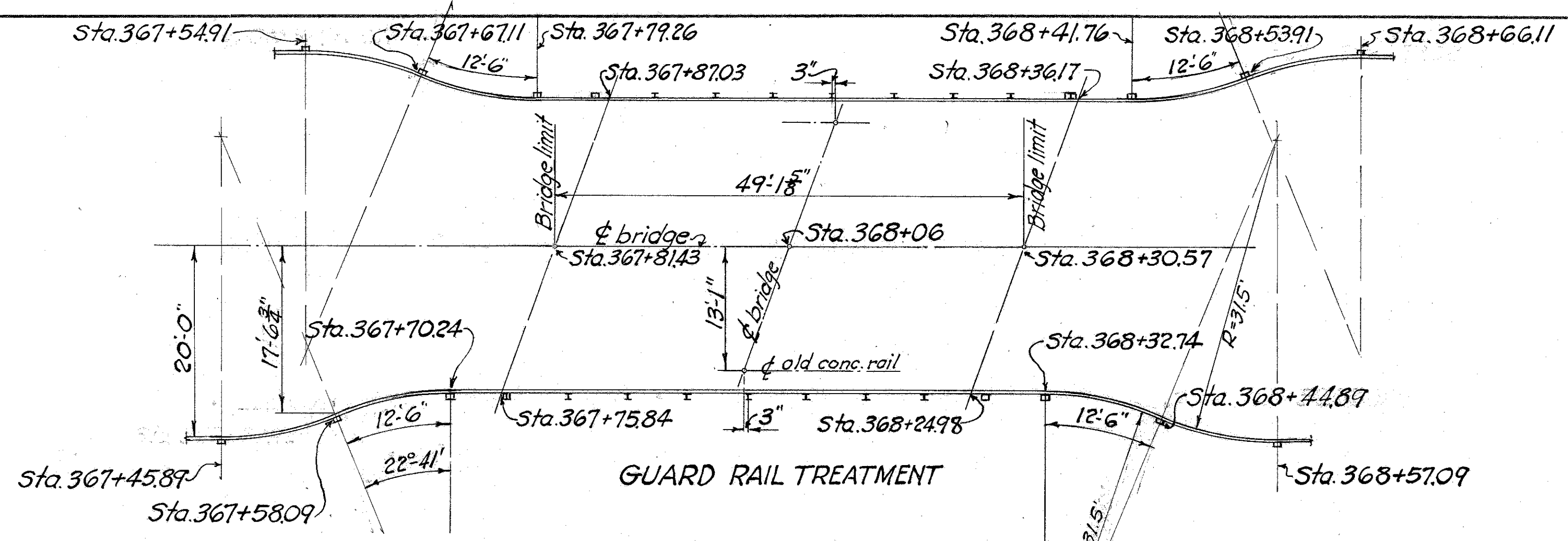
ESTIMATED QUANTITIES

24" Pipe for Roadway Culverts, Sec. M.G. 4(d)	98	L.F.
Excavation for Structures	59	C.Y.
Concrete for Structures (Class E)	0.4	C.Y.
Std. No. 2-3 Catch Basin	1	Each
Std. 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", 22 1/2° Bend, Pipe Special, Class A Storm Sewer	1	Each
Dumped Rock Channel Protection	10	C.Y.
8", 22 1/2° 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.

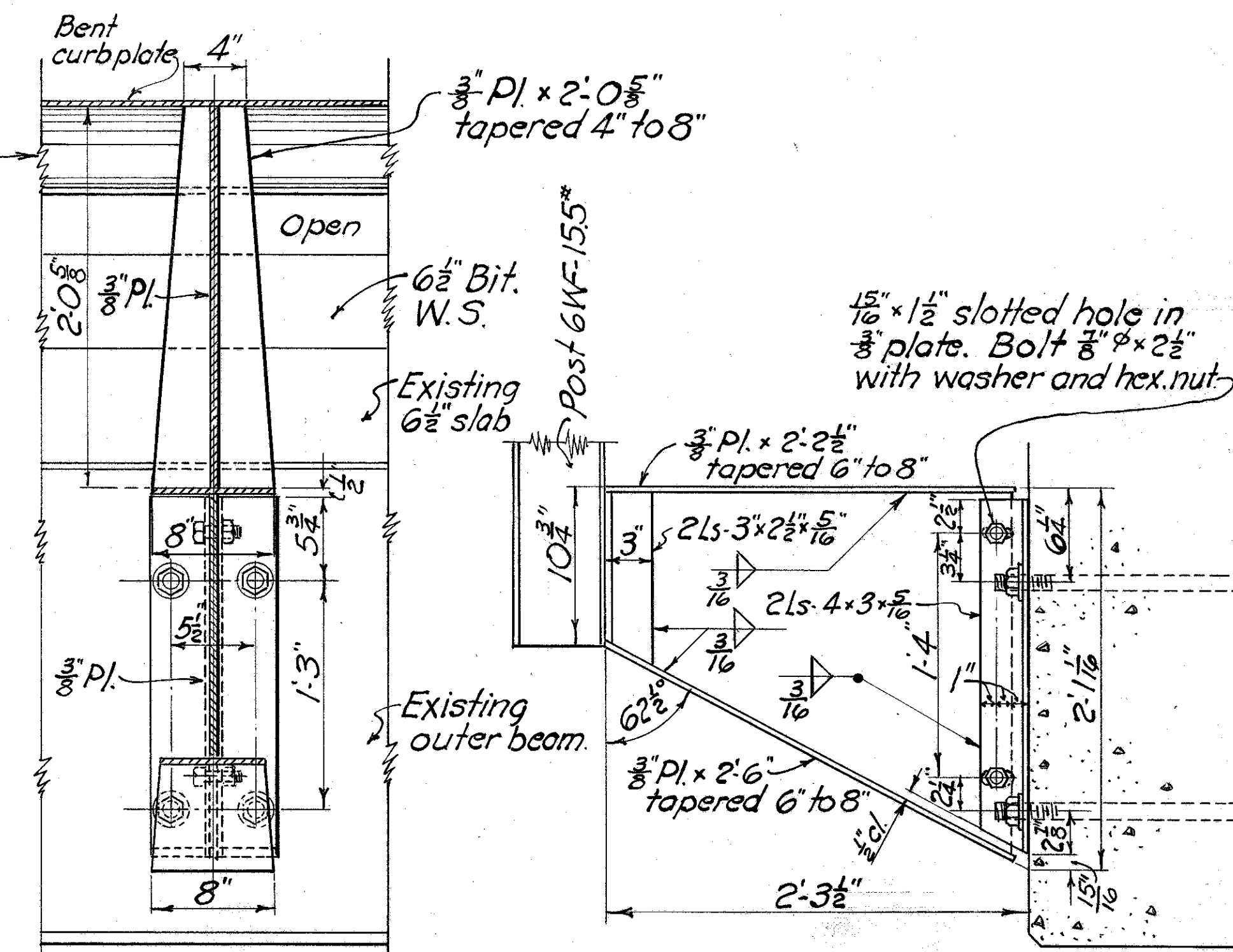


Area : 9 Acres
Q₁₀ : 22 c.f.s.

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

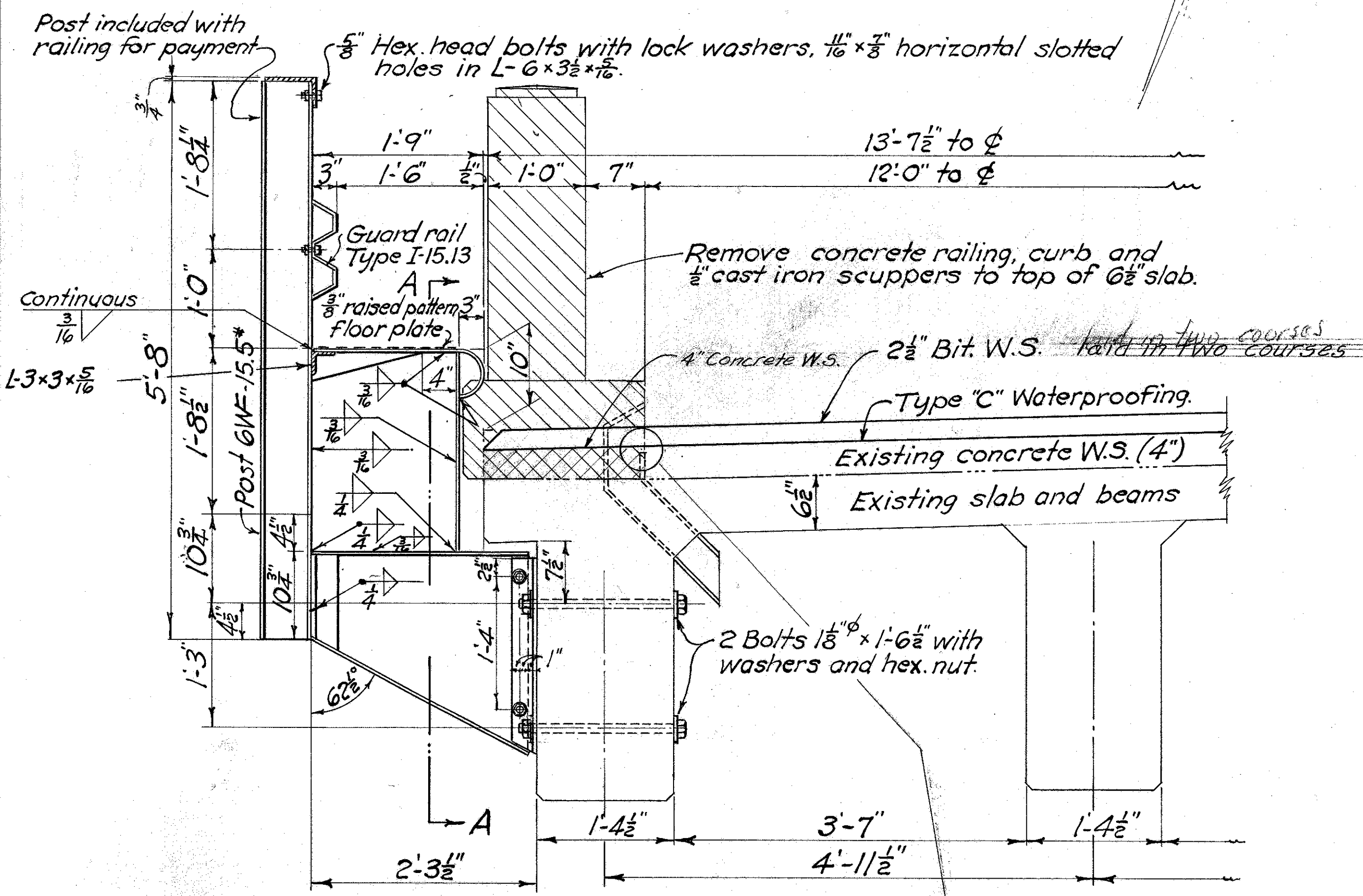


Note: Curb plate is to be continuous for 2 or 3 panels, with $\frac{3}{8}$ " open joint at brackets.

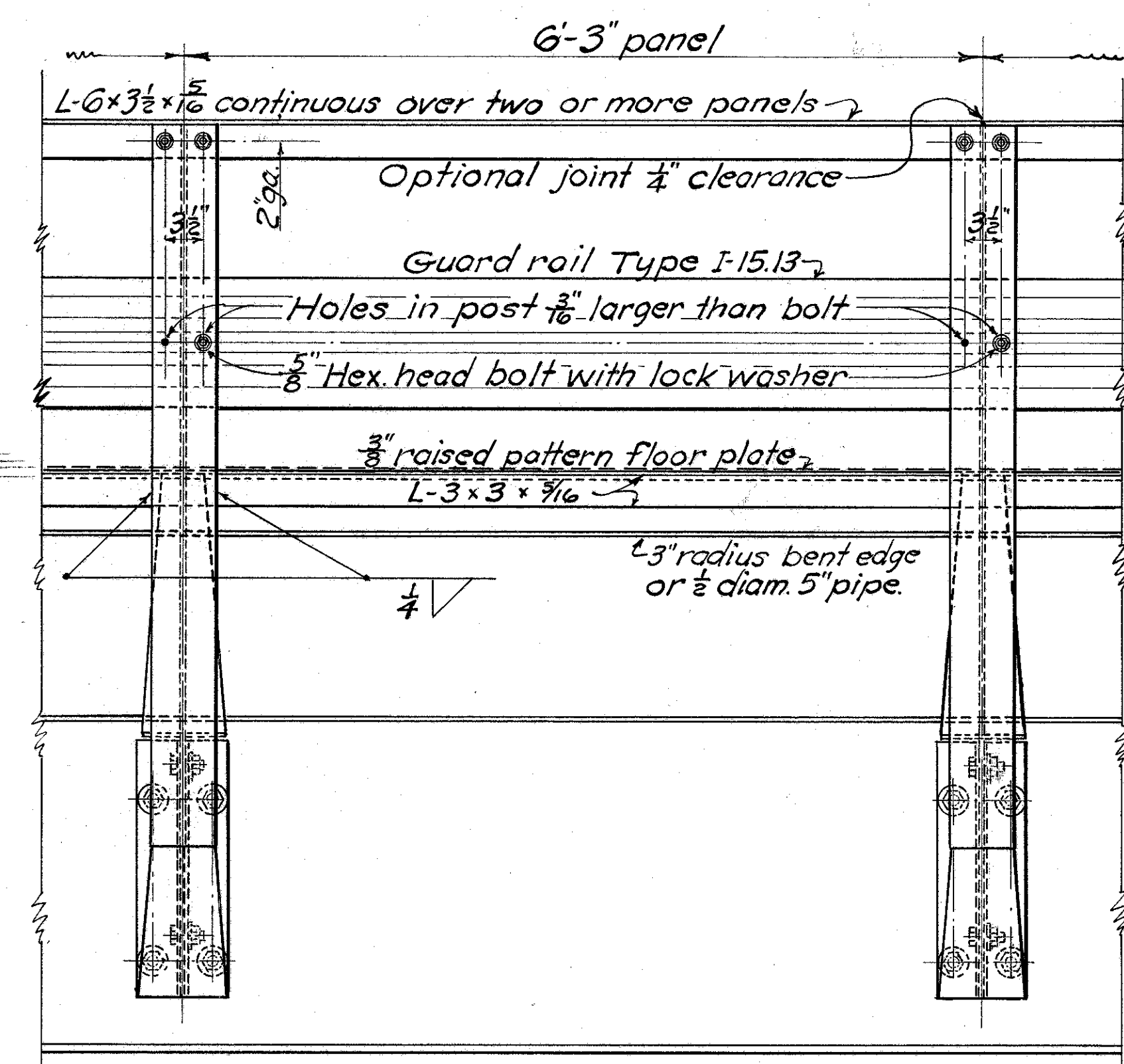


SECTION A-A

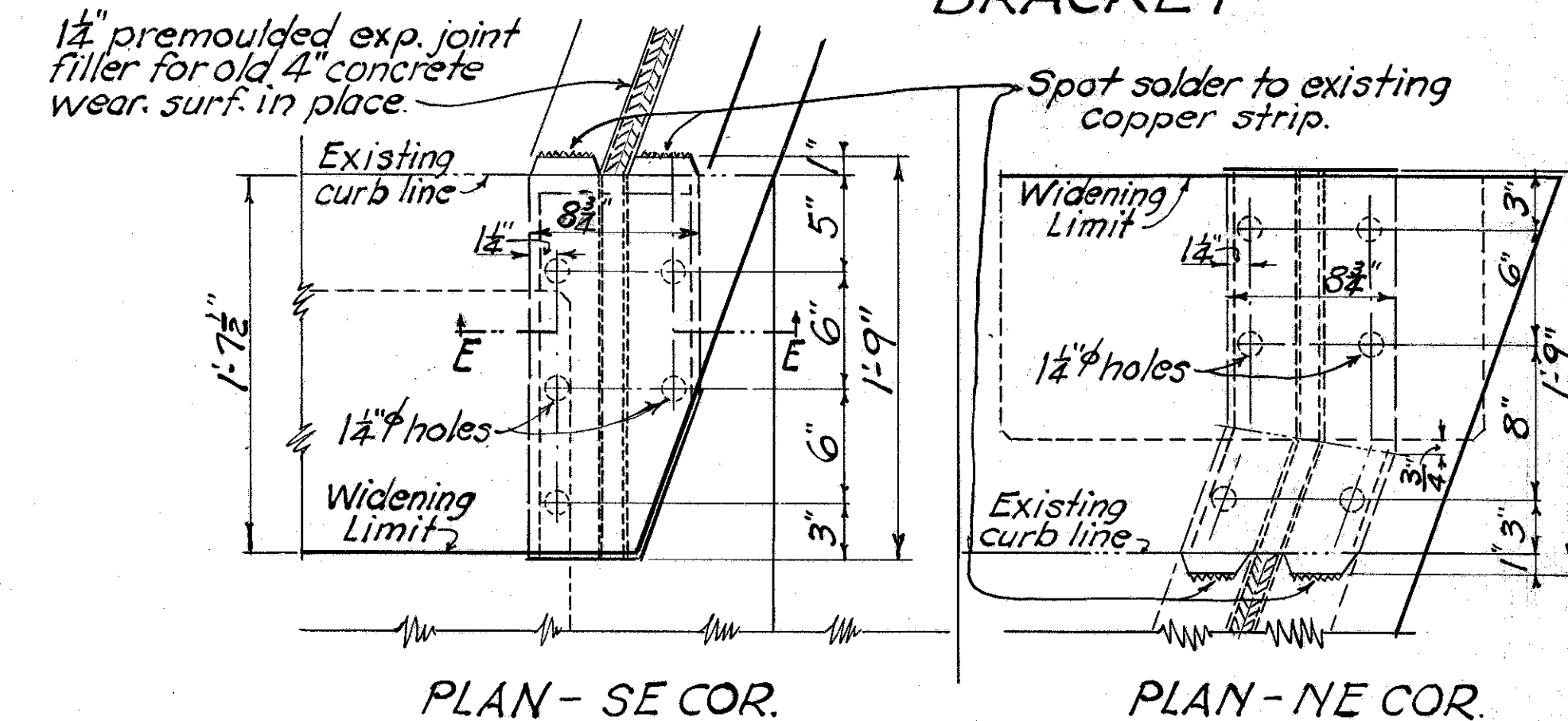
DETAIL OF SUPPORTING BRACKET



TRANSVERSE RAIL SECTION

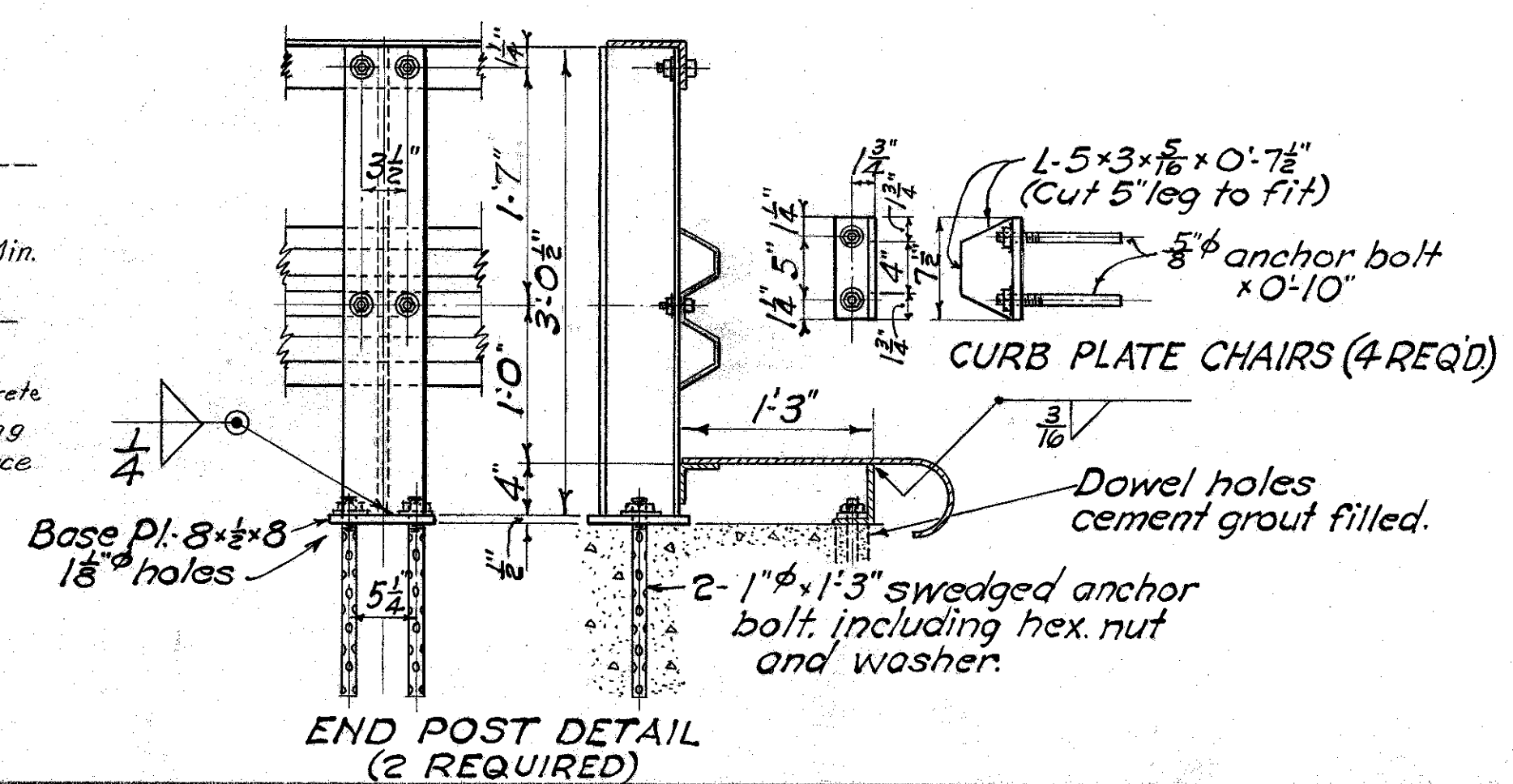


PANEL ELEVATION

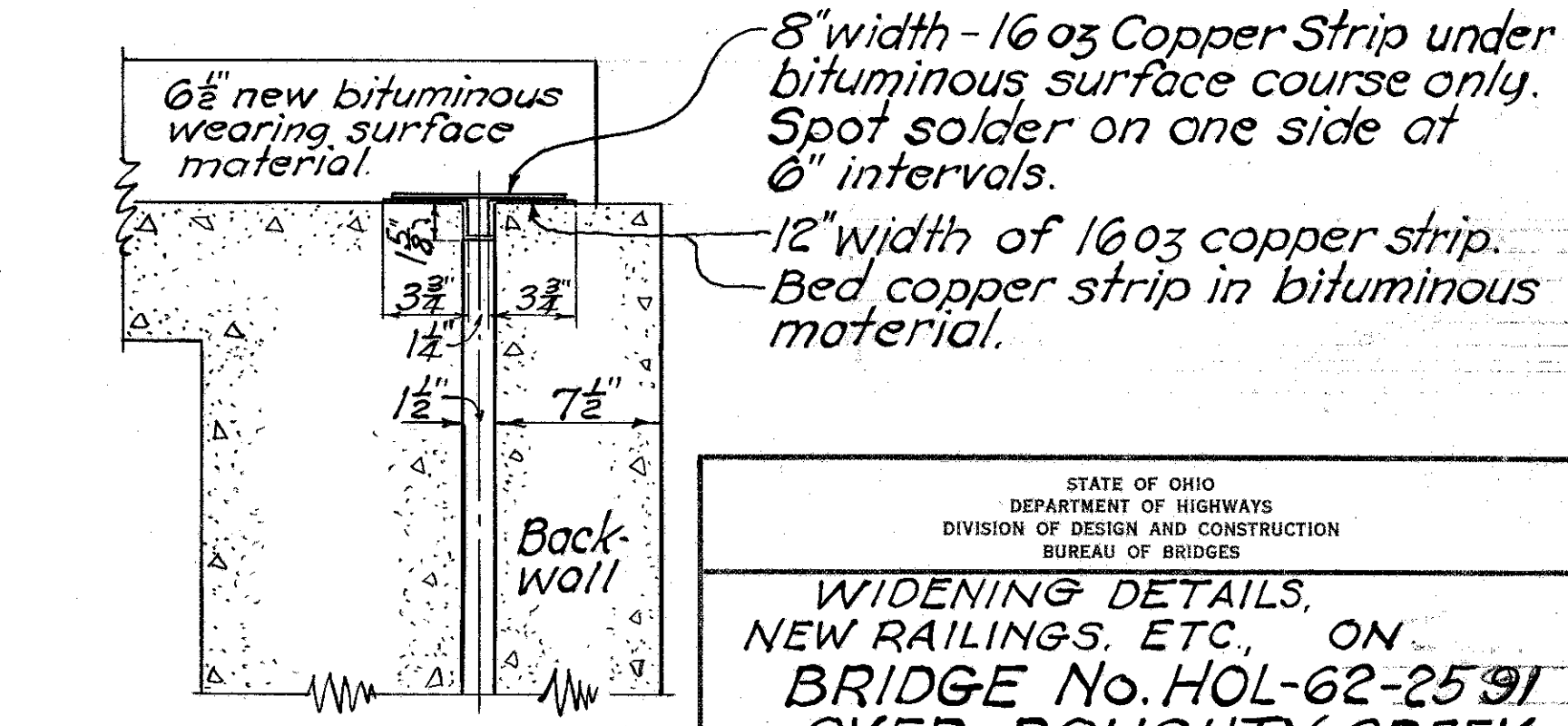


PLAN - SE COR.

PLAN - NE COR.



END POST DETAIL (2 REQUIRED)



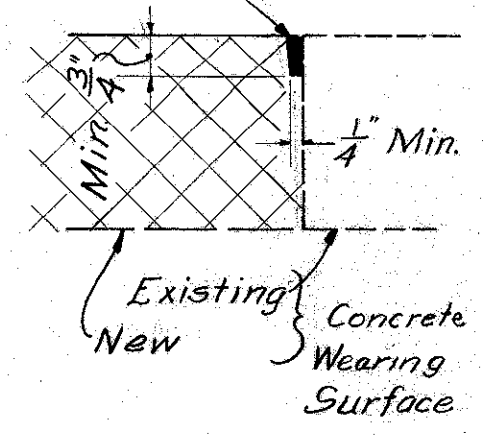
SECTION E-E
COPPER EXPANSION JOINT
EXTENSION DETAILS
(2 LENGTHS REQUIRED)

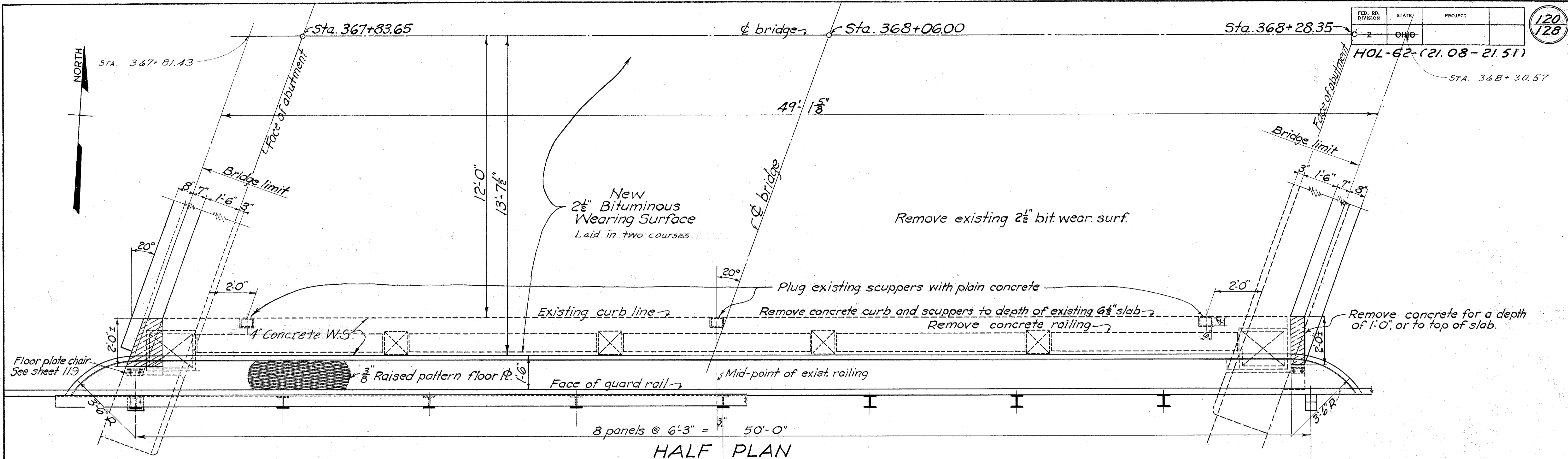
8" width - 1603 Copper Strip under bituminous surface course only. Spot solder on one side at 6" intervals.
12" width of 1603 copper strip. Bed copper strip in bituminous material.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
WIDENING DETAILS, NEW RAILINGS, ETC., ON BRIDGE No. HOL-62-2591 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.	10-28-37	

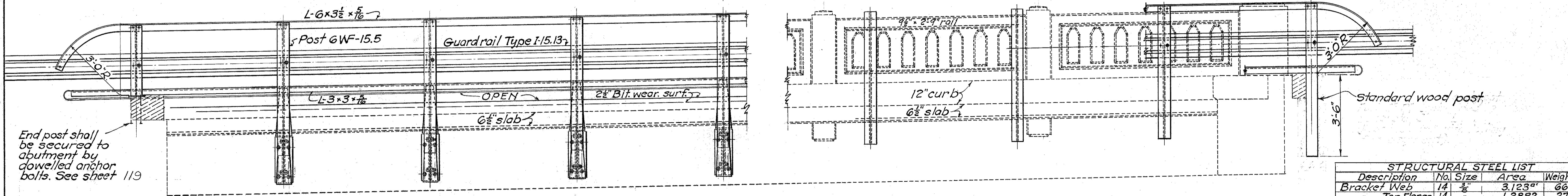
NOTES:
The $\frac{3}{8}$ " curb plate is to have a raised pattern. At the option of the Contractor one-half of a 5" diameter extra strong pipe, welded to the $\frac{3}{8}$ " plate, may be used in place of the bent curb plate as shown.
Railing posts shall be aligned by means of $\frac{3}{8}$ " bolts in 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.

Cold applied, ready mixed, joint and crack sealer (M-10.26), include with 5-1 concrete for payment.





HALF PLAN



NEW RAILING

ELEVATION

OLD RAILING

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

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		

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.

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
HGM	HGM	HGM	JML		10-28-57

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 & Virginia 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. Hostetter	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	4829	"	125	
35-LA	Benjamin J. Miller	5360	"	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 Schlabach			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. & Fannie 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. & Lavina 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. & Lavina 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. 9 N. — R. 7 W.

FED. RD. DIVISION	STATE	PROJECT	122 128
2	OHIO		

HOL.-62-(21.08-21.51)
RIGHT OF WAY PLAN
EMERY E. & ILIA E. LYTON
16-LA
Not Needed

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

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

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

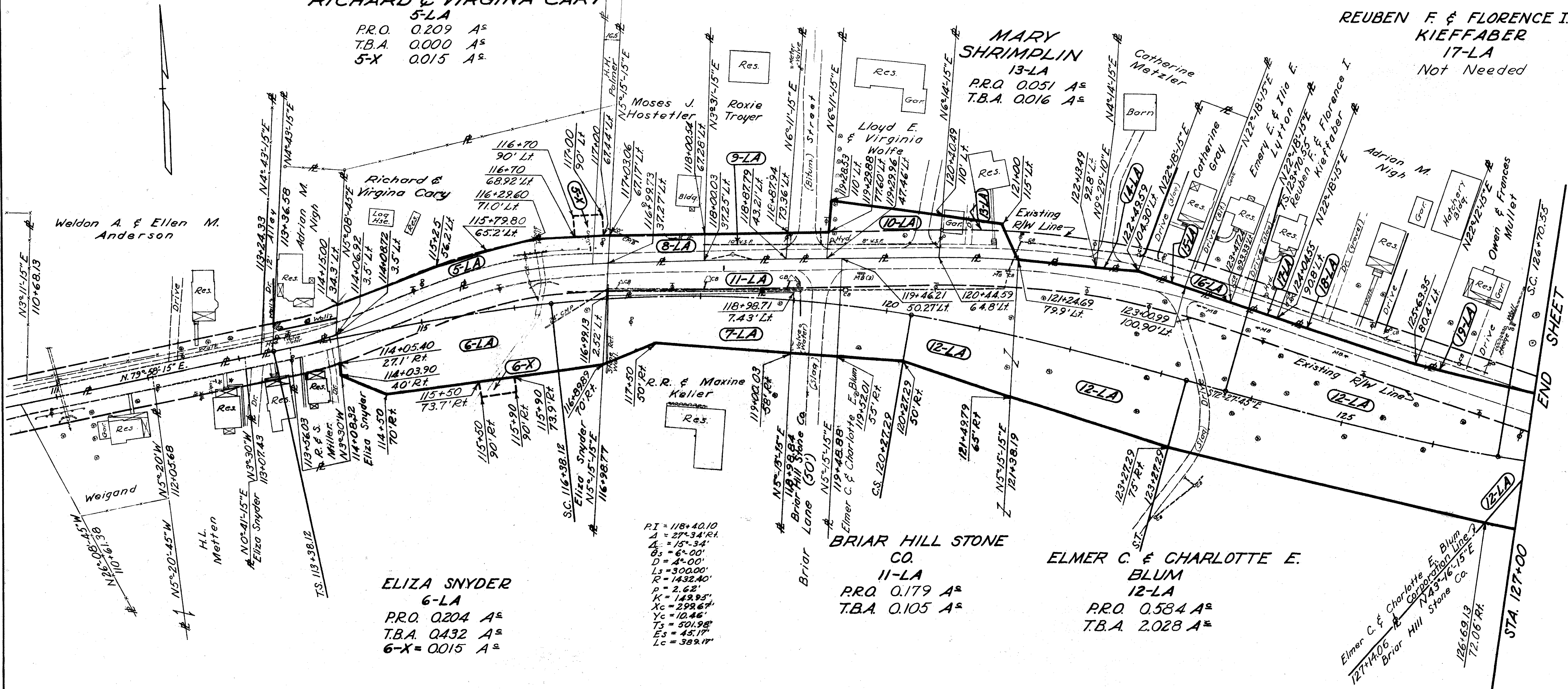
CATHERINE METZLER
14-LA
Not Needed

CATHERIN GRAY
15-LA
Not Needed

RICHARD & VIRGINIA CARY
5-LA
P.R.O. 0.209 A^s
T.B.A. 0.000 A^s
5-X 0.015 A^s

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

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



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

PI = 118+40.10
A = 27°34' RT
Δ = 15°34'
Os = 6°00'
D = 4°00'
Ls = 300.00'
R = 1432.40'
p = 2.62'
K = 142.95'
Xc = 299.67'
Yc = 10.46'
Ts = 50.198'
Es = 45.17'
Lc = 382.17'

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

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

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

ADRIAN M. NIGH
18-LA
Not Needed

OWEN & FRANCES MULLET
19-LA
Not Needed

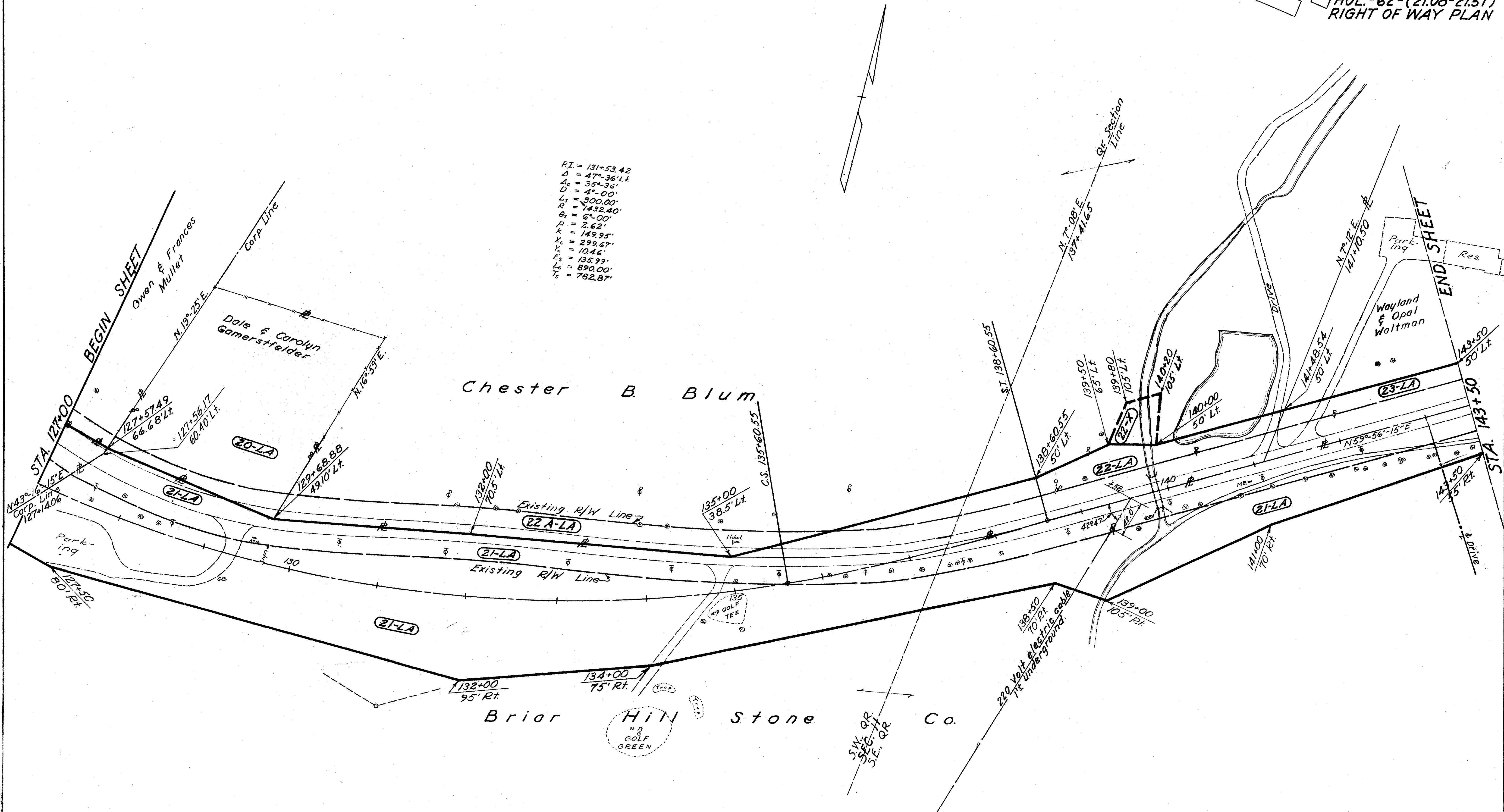
END SHEET

STA. 127+00

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

FED. RD. DIVISION	STATE	PROJECT	123 128
2	OHIO		

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



DALE & CAROLYN GAMERSTFELDER
20-LA
Limited Access Only

BRIAR HILL STONE CO.
21-LA
P.R.O. 1341 A^c
T.B.A. 3.007 A^c

CHESTER B. BLUM
22-LA
P.R.O. 0.461 A^c
T.B.A. 0.240 A^c
22-X
0.053 A^c
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		124/28

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

HARRIS H. PALMER

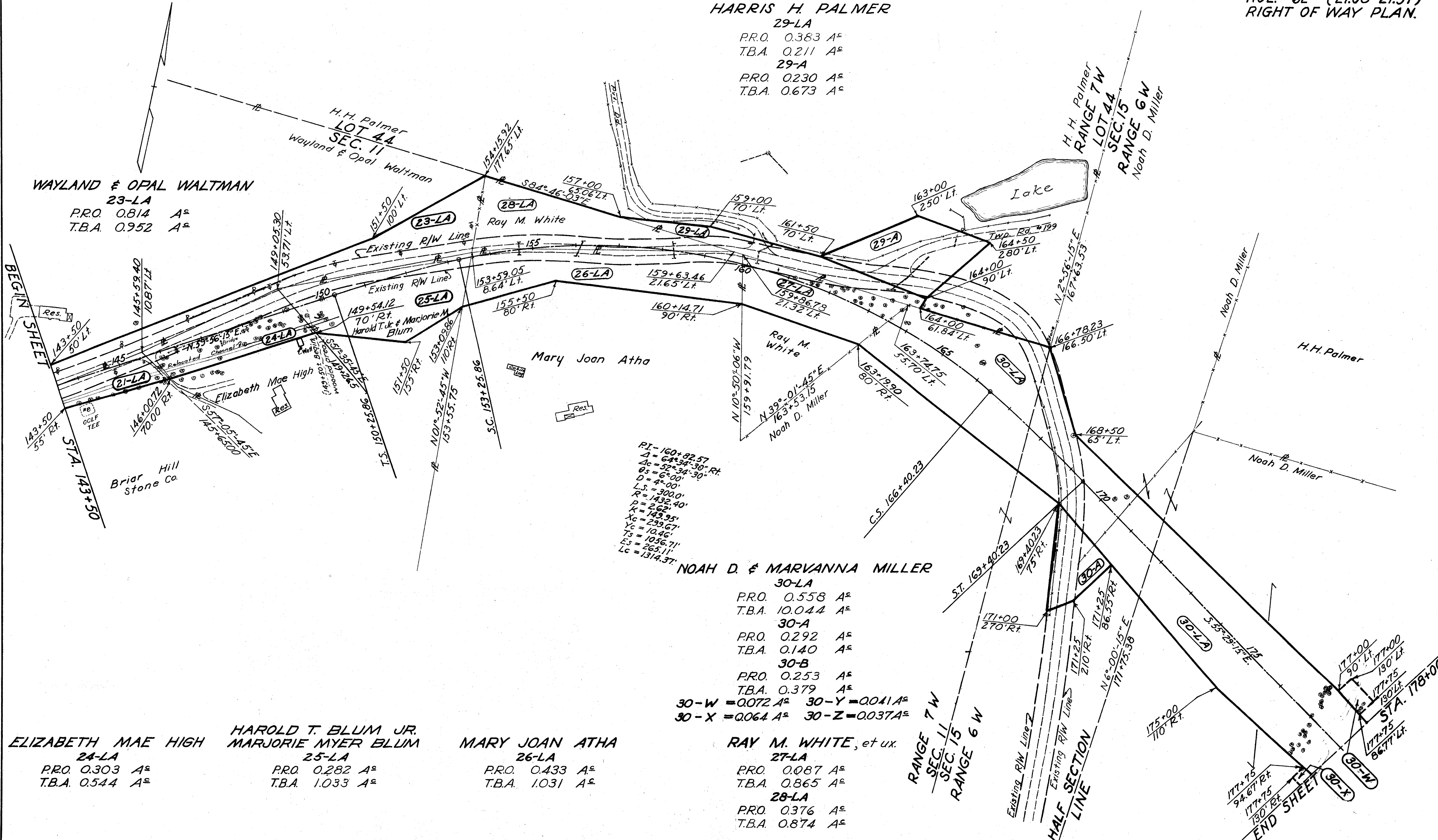
29-LA
P.R.O. 0.383 A^c
T.B.A. 0.211 A^c
29-A
P.R.O. 0.230 A^c
T.B.A. 0.673 A^c

WAYLAND & OPAL WALTMAN

23-LA
P.R.O. 0.814 A^c
T.B.A. 0.952 A^c

H. H. Palmer
LOT 44
SEC. 11
Wayland & Opal Waltman

H. H. Palmer
RANGE 7 W
LOT 44
SEC. 15
RANGE 6 W
Noah D. Miller



PI = 160+82.57
A = 64°34'30" Rt
Zc = 52°34'30"
Ds = 6°00'
D = 4°00'
Ls = 300.0'
R = 1432.40'
P = 2.62'
K = 149.95'
Xc = 239.67'
Yc = 10.46'
Ts = 1036.71'
Es = 265.11'
Lc = 1314.37'

NOAH D. & MARVANNA MILLER

30-LA
P.R.O. 0.558 A^c
T.B.A. 10.044 A^c
30-A
P.R.O. 0.292 A^c
T.B.A. 0.140 A^c
30-B
P.R.O. 0.253 A^c
T.B.A. 0.379 A^c
30-W = 0.072 A^c 30-Y = 0.041 A^c
30-X = 0.064 A^c 30-Z = 0.037 A^c

ELIZABETH MAE HIGH
24-LA
P.R.O. 0.303 A^c
T.B.A. 0.544 A^c

HAROLD T. BLUM JR.
MARJORIE MYER BLUM
25-LA
P.R.O. 0.282 A^c
T.B.A. 1.033 A^c

MARY JOAN ATHA
26-LA
P.R.O. 0.433 A^c
T.B.A. 1.031 A^c

RAY M. WHITE, et ux.
27-LA
P.R.O. 0.087 A^c
T.B.A. 0.865 A^c
28-LA
P.R.O. 0.376 A^c
T.B.A. 0.874 A^c

RANGE 7 W
SEC. 11
SEC. 15
RANGE 6 W

HALF SECTION LINE

END SHEET

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

FED. RD. DIVISION	STATE	PROJECT	125 128
2	OHIO		

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

JOSEPH N. COBLENTZ, et al.

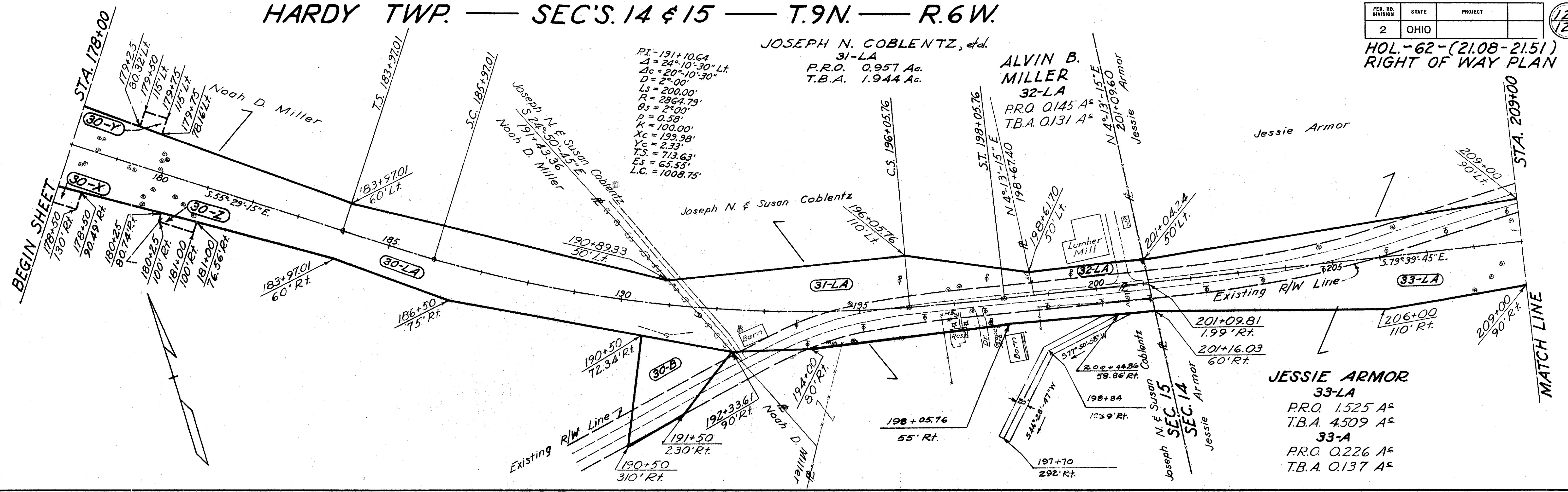
ALVIN B. MILLER
32-LA

PI-191+10.64
Δ = 24°-10'-30" Lt.
Δc = 20°-10'-30"
D = 2°-00'
Ls = 200.00'
R = 2864.79'
Bs = 2°-00'
P = 0.58'
K = 100.00'
Xc = 199.98'
Yc = 2.33'
Ts = 713.63'
Es = 65.55'
L.C. = 1008.75'

31-LA
P.R.O. 0.957 A^c
T.B.A. 1.944 A^c

P.R.O. 0.145 A^c
T.B.A. 0.131 A^c

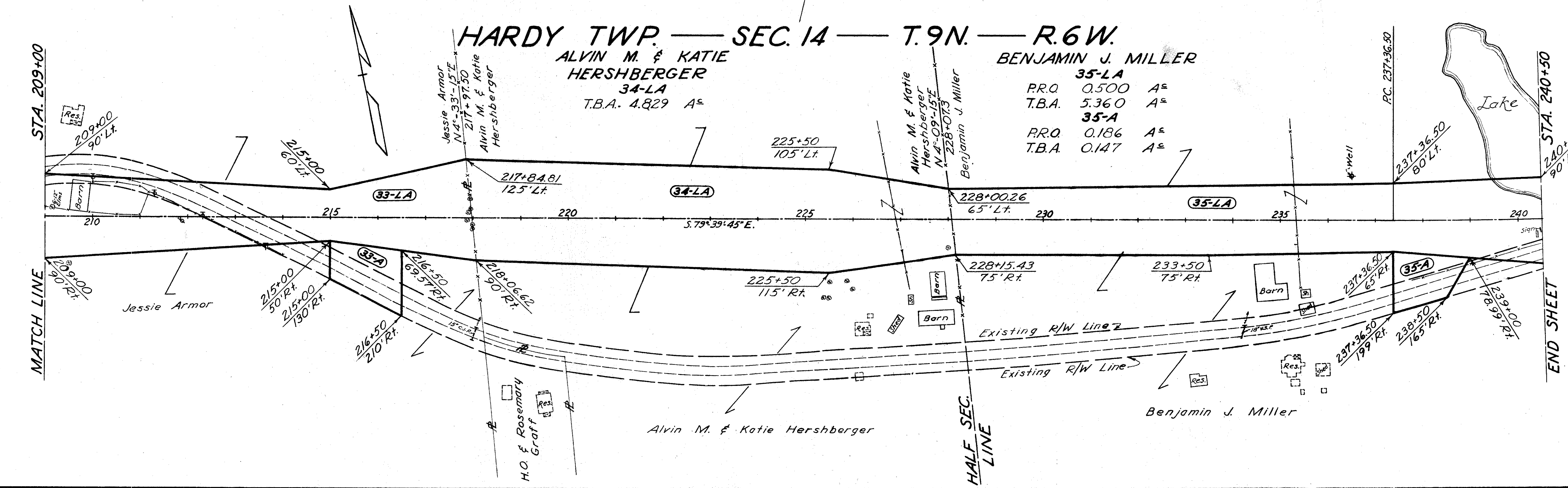
Jessie Armor



HARDY TWP. — SEC. 14 — T.9N. — R.6W.

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

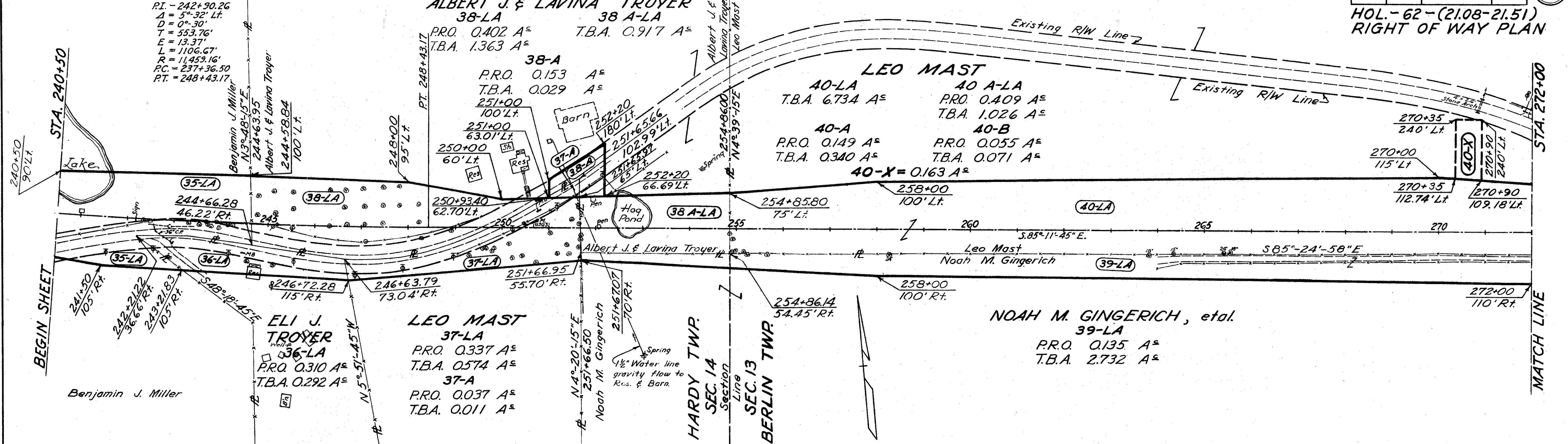
BENJAMIN J. MILLER
35-LA
P.R.O. 0.500 A^c
T.B.A. 5.360 A^c
35-A
P.R.O. 0.186 A^c
T.B.A. 0.147 A^c



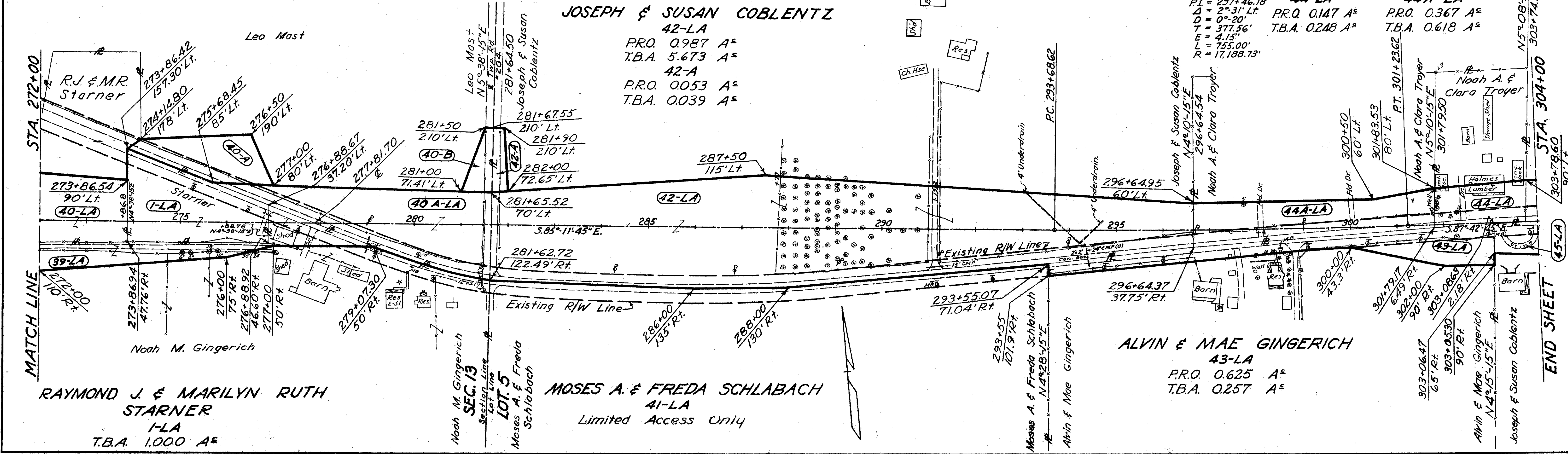
HARDY TWP. — SEC. 14 — T. 9N. — R. 6W. AND BERLIN TWP. — SEC. 13 — T. 9N. — R. 6W.

FED. RD. DIVISION	STATE	PROJECT	126 128
2	OHIO		

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



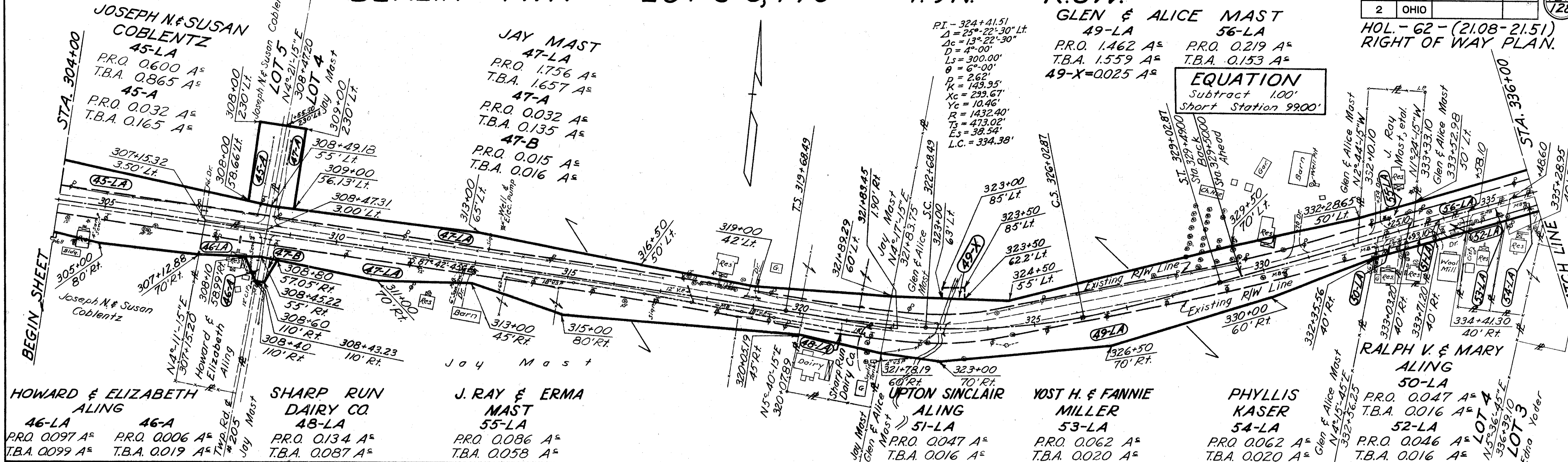
BERLIN TWP. — SEC. 13 & LOT 5 — T. 9N. — R. 6W.



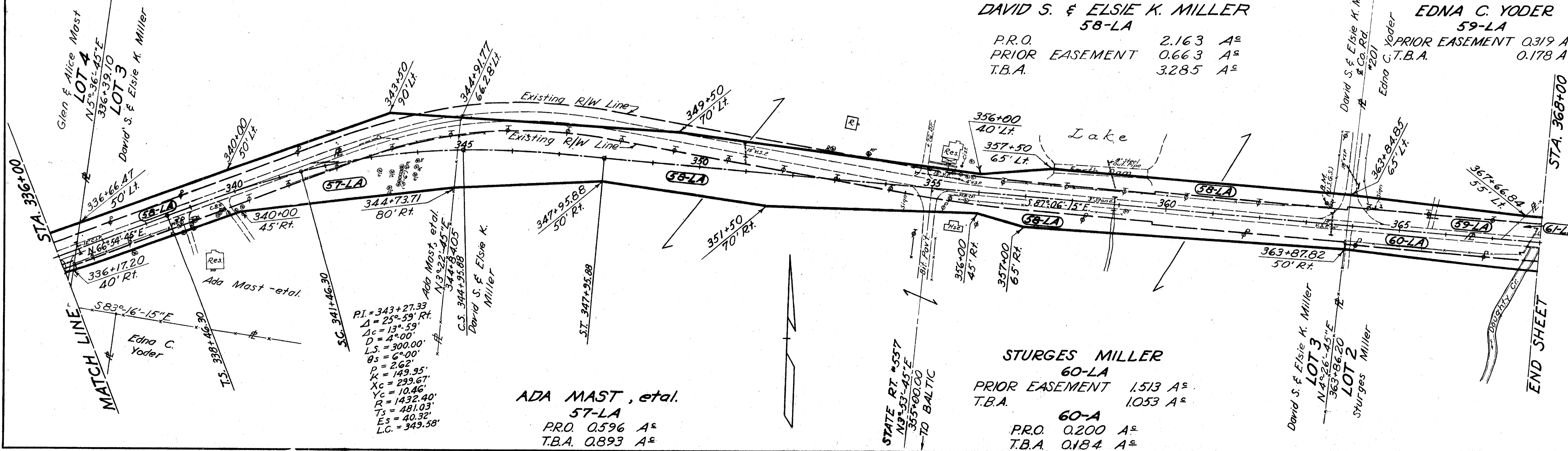
BERLIN TWP. — LOT'S 3,4 & 5 — T.9N. — R.6W.

FED. RD. DIVISION	STATE	PROJECT	127 128
2	OHIO		

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



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



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

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

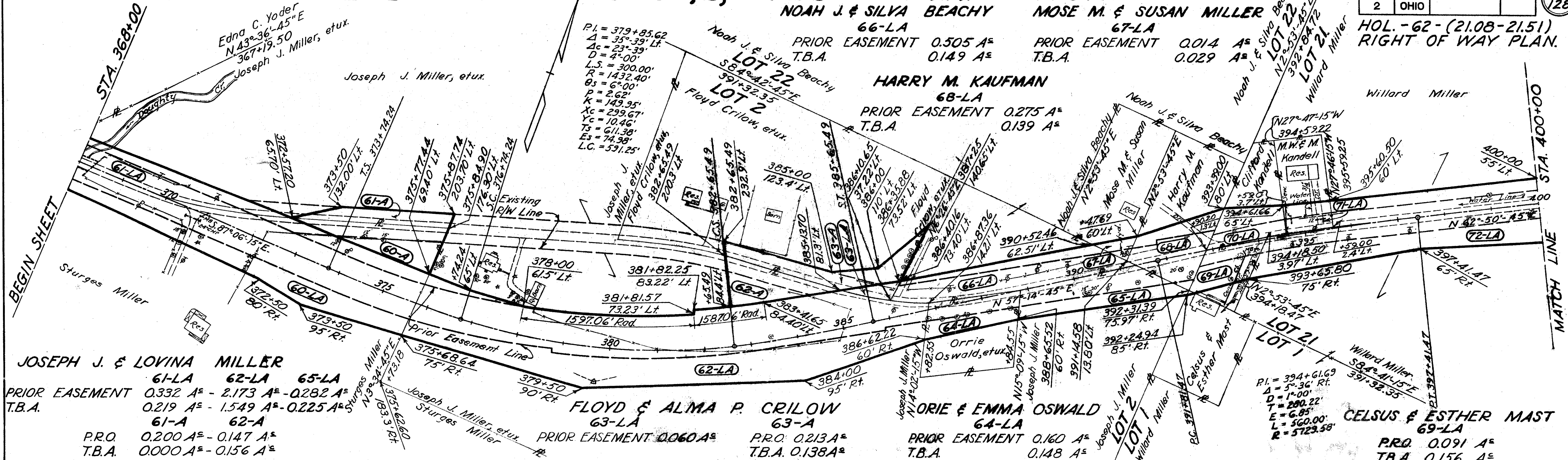
STURGES MILLER
60-LA
PRIOR EASEMENT 1.513 A^s
T.B.A. 1.053 A^s
60-A
P.R.O. 0.200 A^s
T.B.A. 0.184 A^s

ADA MAST, et al.
57-LA
P.R.O. 0.596 A^s
T.B.A. 0.893 A^s

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

FED. NO. DIVISION	STATE	PROJECT	128 128
2	OHIO		

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



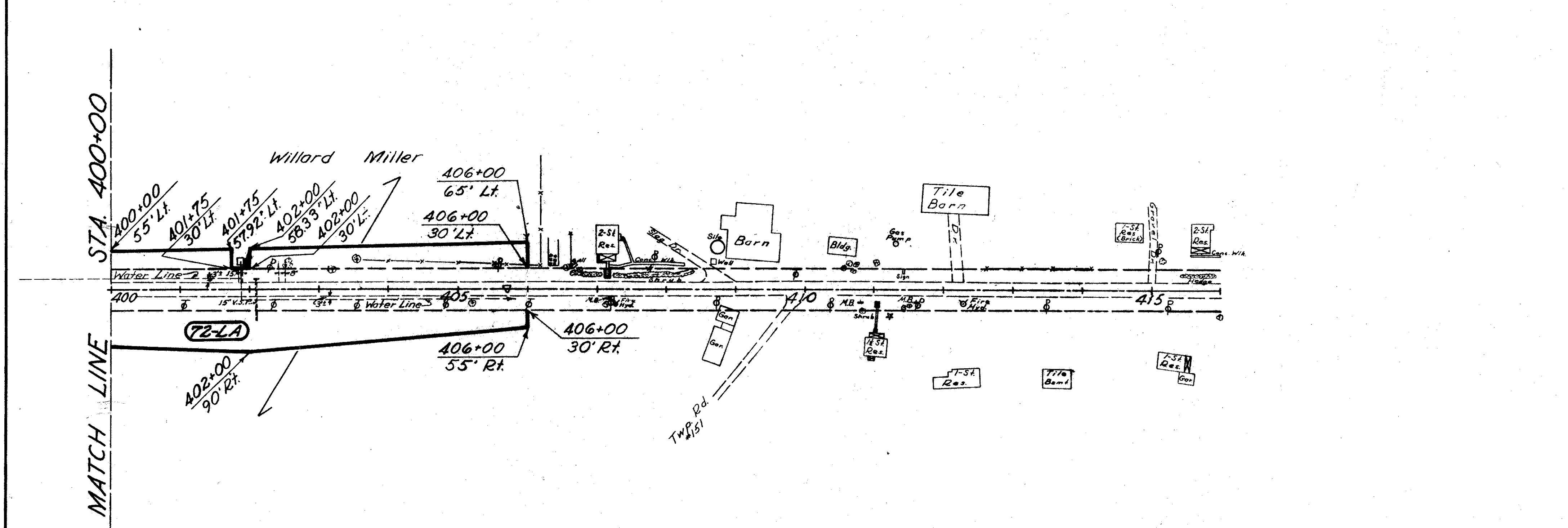
JOSEPH J. & LOVINA MILLER
 61-LA 62-LA 65-LA
 PRIOR EASEMENT 0.332 A² - 2.173 A² - 0.282 A²
 T.B.A. 0.219 A² - 1.549 A² - 0.225 A²
 P.R.O. 0.200 A² - 0.147 A²
 T.B.A. 0.000 A² - 0.156 A²

FLOYD & ALMA P. CRILOW
 63-LA 63-A
 PRIOR EASEMENT 0.060 A² P.R.O. 0.213 A²
 T.B.A. 0.138 A²

ORIE & EMMA OSWALD
 64-LA
 PRIOR EASEMENT 0.160 A²
 T.B.A. 0.148 A²

CELSUS & ESTHER MAST
 69-LA
 P.R.O. 0.091 A²
 T.B.A. 0.156 A²

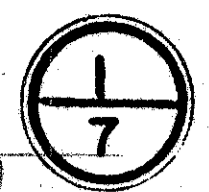
BERLIN TWP. — LOT 21 — T. 9 N. — R. 6 W.



CLIFFORD J. KANDELL
 70-LA
 P.R.O. 0.110 A²
 T.B.A. 0.126 A²

MARION W. & MARILYN KANDELL
 71-LA
 P.R.O. 0.073 A²
 T.B.A. 0.071 A²

WILLARD MILLER
 72-LA
 P.R.O. 1.534 A²
 T.B.A. 1.955 A²



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

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS - 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(0)	A-4b	5	3	8	60	24	29	7	20	38
Silt and clay	A-6(0)	A-6a	14	5	10	41	30	32	12	18	59
Silty clay	A-6(III)	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)											
Shale (Visual classification)											
Coal (Visual classification)											
Limestone (Visual classification)											
Sandstone (Visual classification)											

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

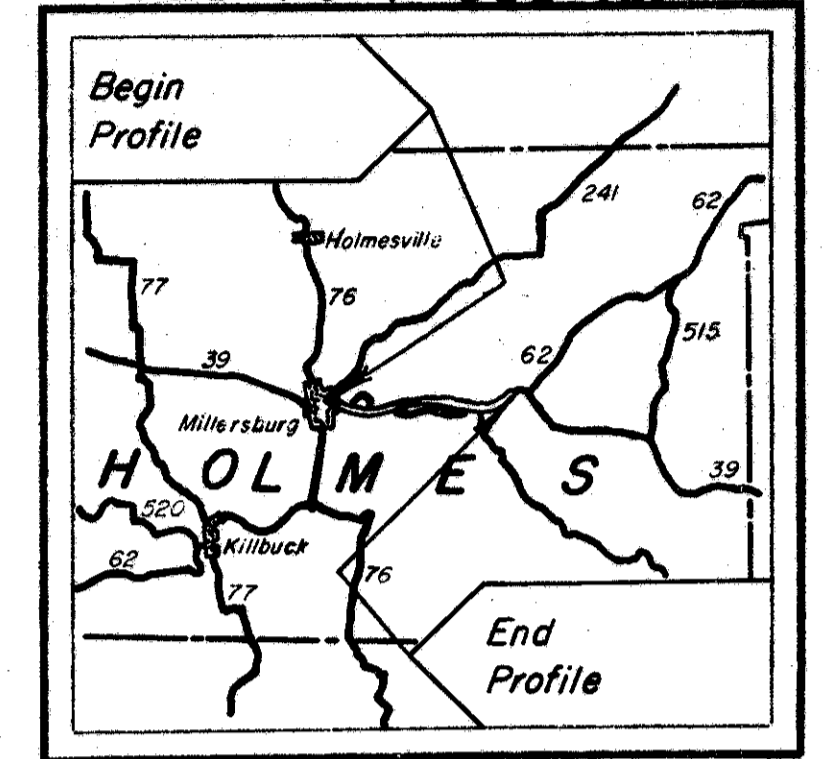
Moisture Density Samples
 Lab. Nos. So. 56432-56440 Incl.

--- 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

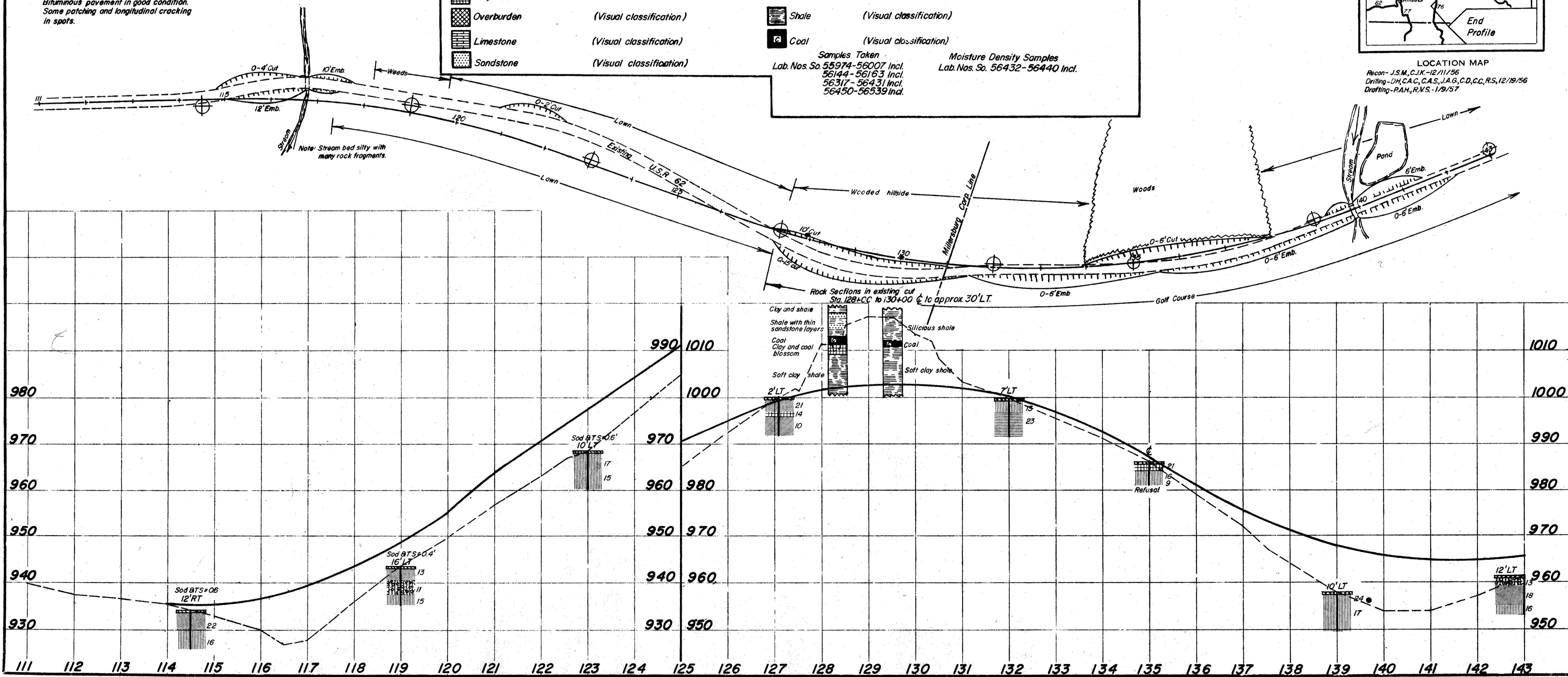
Note: Figures beside borings indicate water content in percent.

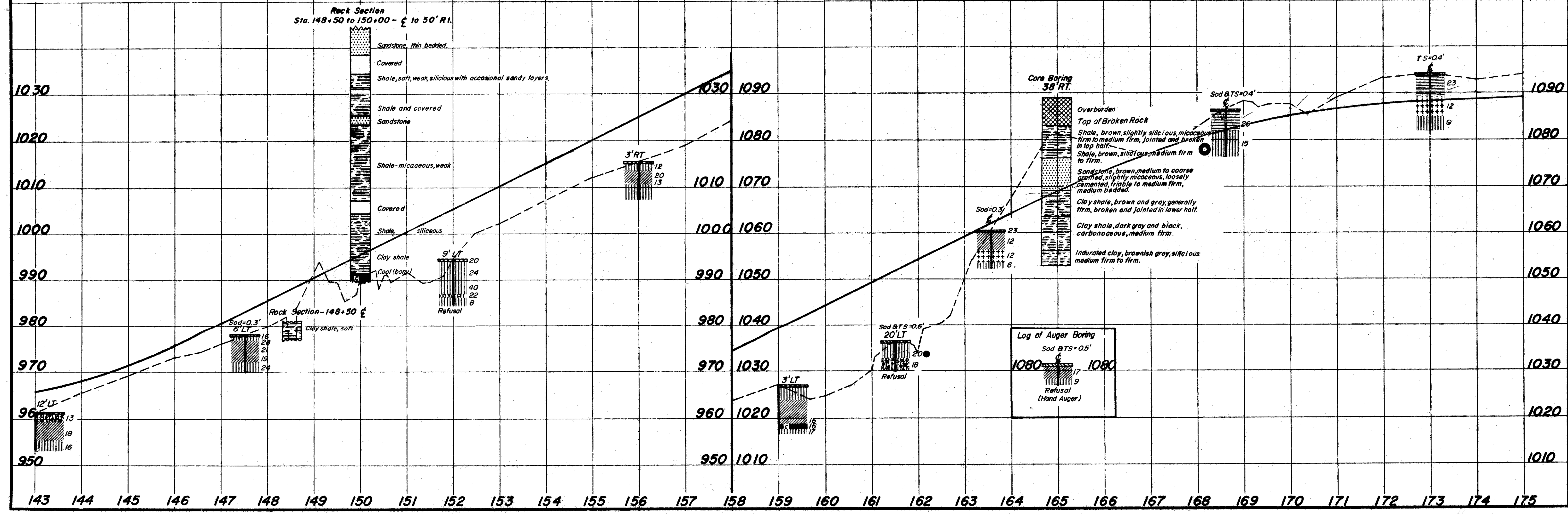
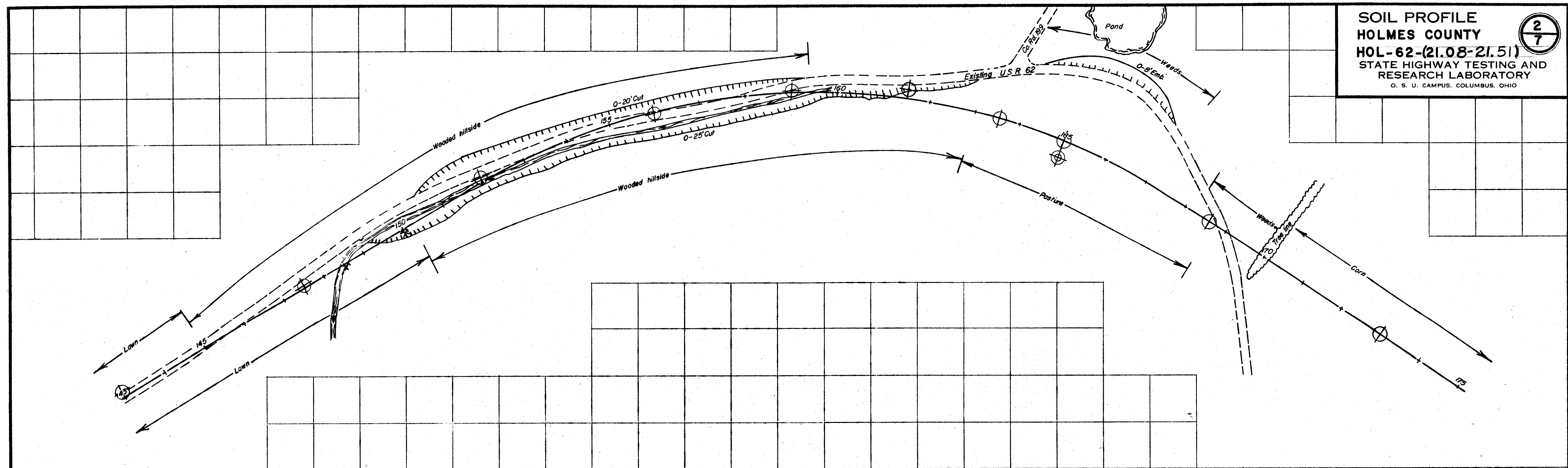
General Note
 Bituminous pavement in good condition.
 Some patching and longitudinal cracking in spots.

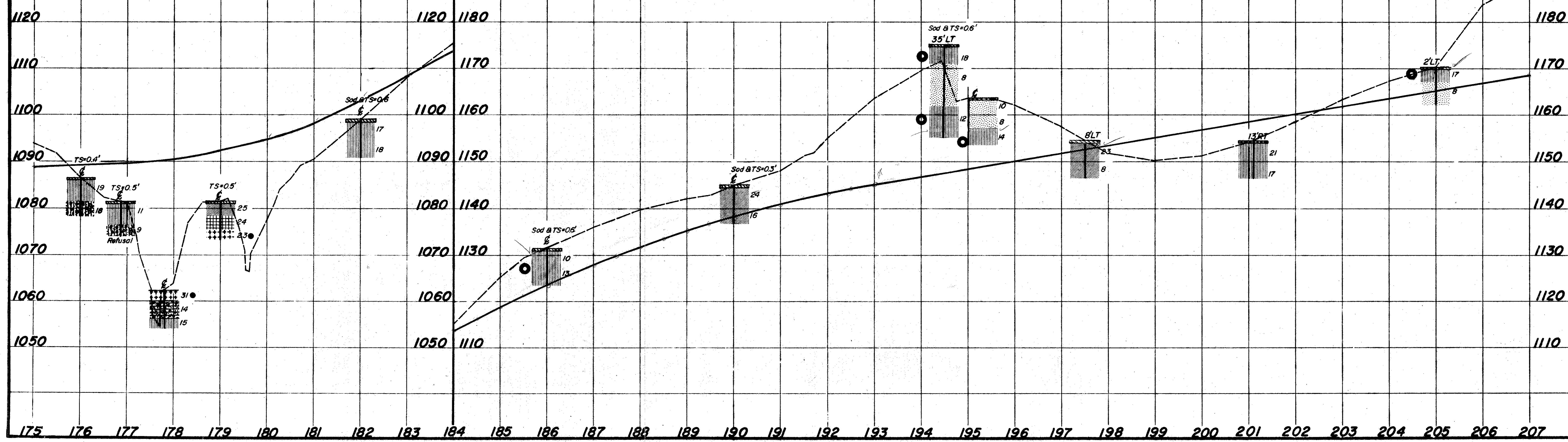
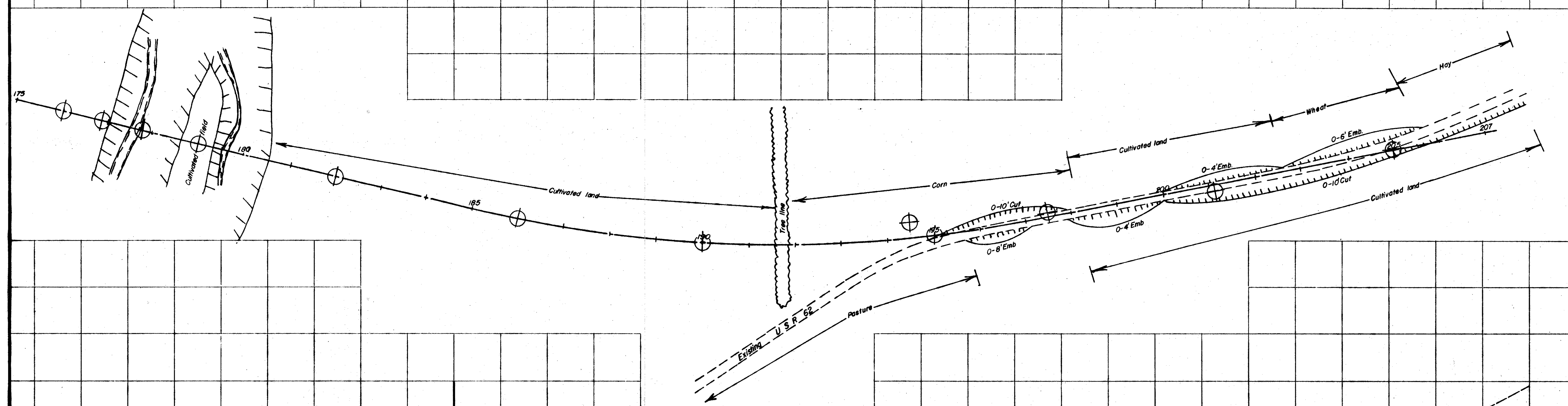
FED No F-668 (2)

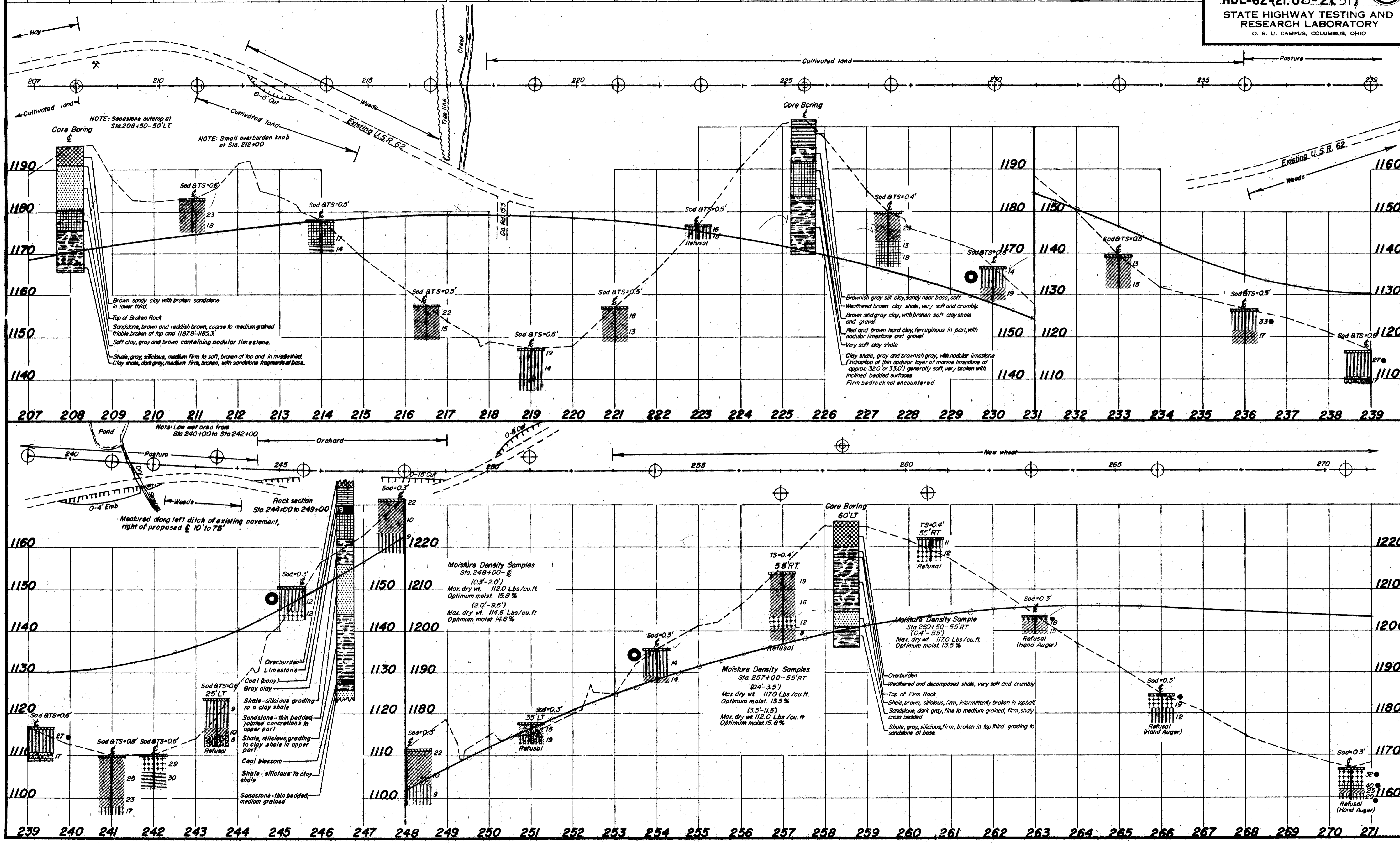


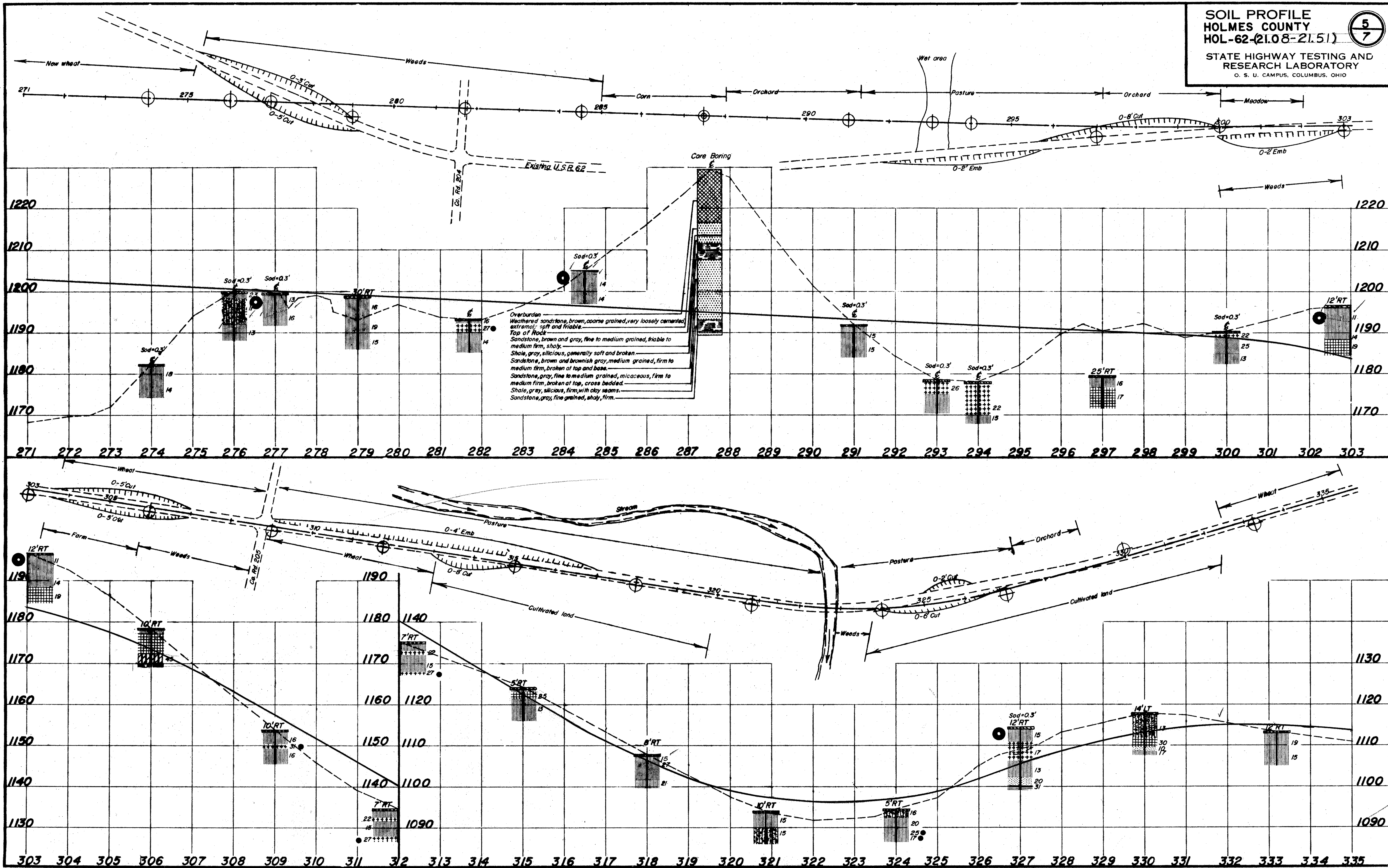
LOCATION MAP
 Recon - J.S.M., C.J.K. - 12/11/56
 Drilling - D.H., C.A.C., C.A.S., J.A.G., C.D., C.C., R.S. - 12/19/56
 Drafting - P.A.H., R.M.S. - 1/9/57

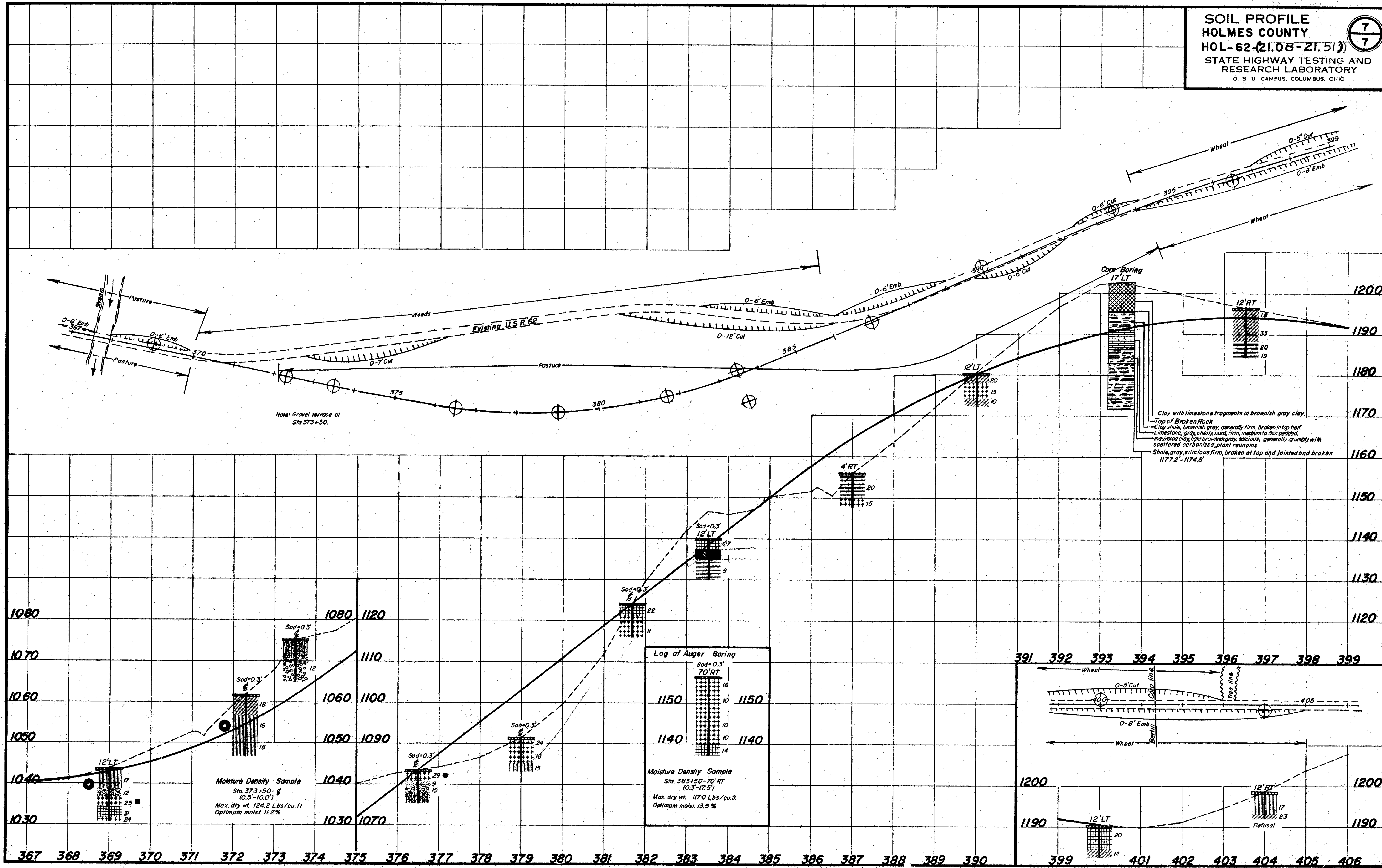












Note: Gravel terrace at Sta 373+50.

Log of Auger Boring
 Sod=0.3'
 70' RT

1150	1150
1140	1140
1130	1130
1120	1120
1110	1110
1100	1100
1090	1090
1080	1080
1070	1070
1060	1060
1050	1050
1040	1040
1030	1030

Moisture Density Sample
 Sta. 383+50-70' RT
 (0.3'-17.5')
 Max. dry wt. 117.0 Lbs/cu.ft.
 Optimum moist. 13.5%

Moisture Density Sample
 Sta. 373+50-6'
 (0.3'-10.0')
 Max. dry wt. 124.2 Lbs/cu.ft.
 Optimum moist. 11.2%

Clay with limestone fragments in brownish gray clay.
 Top of Broken Rock
 Clay shale, brownish gray, generally firm, broken in top half
 Limestone, gray, cherty, hard, firm, medium to thin bedded
 Indurated clay, light brownish gray, siliceous, generally crumbly with scattered carbonized plant remains.
 Shale, gray, siliceous, firm, broken at top and jointed and broken 1177.2-1174.8'

