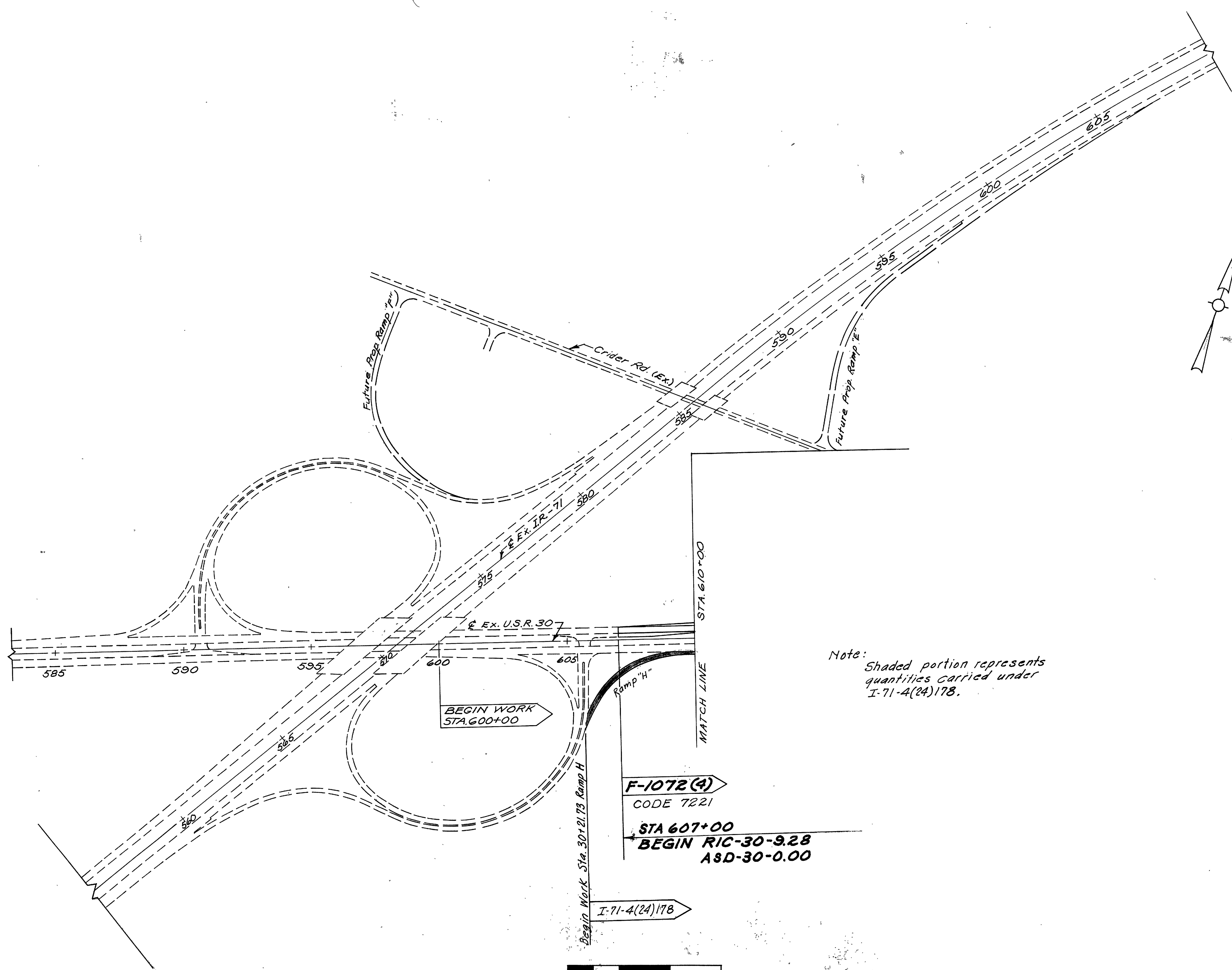


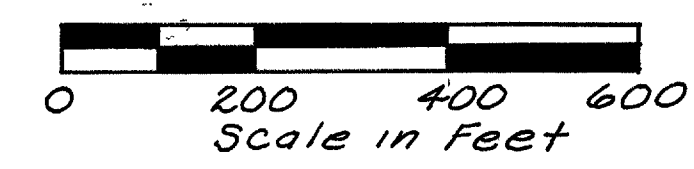
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(A) I-71-4(24)178

2
325

RIC-30-9.28
ASD-30-0.00



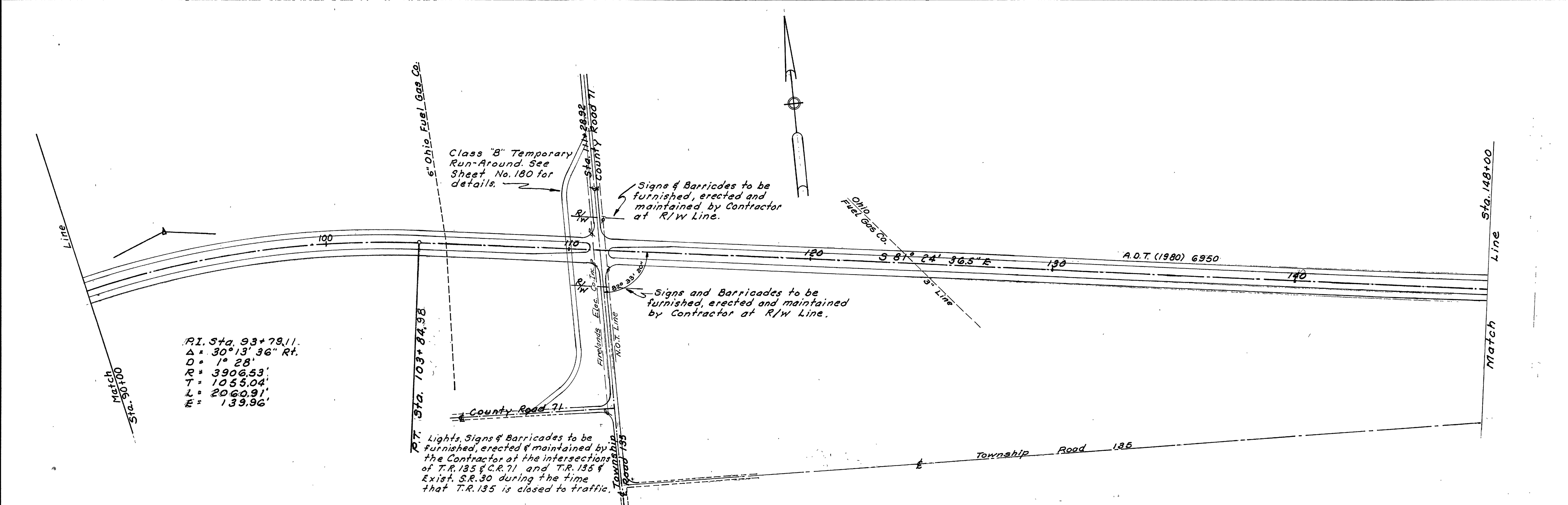
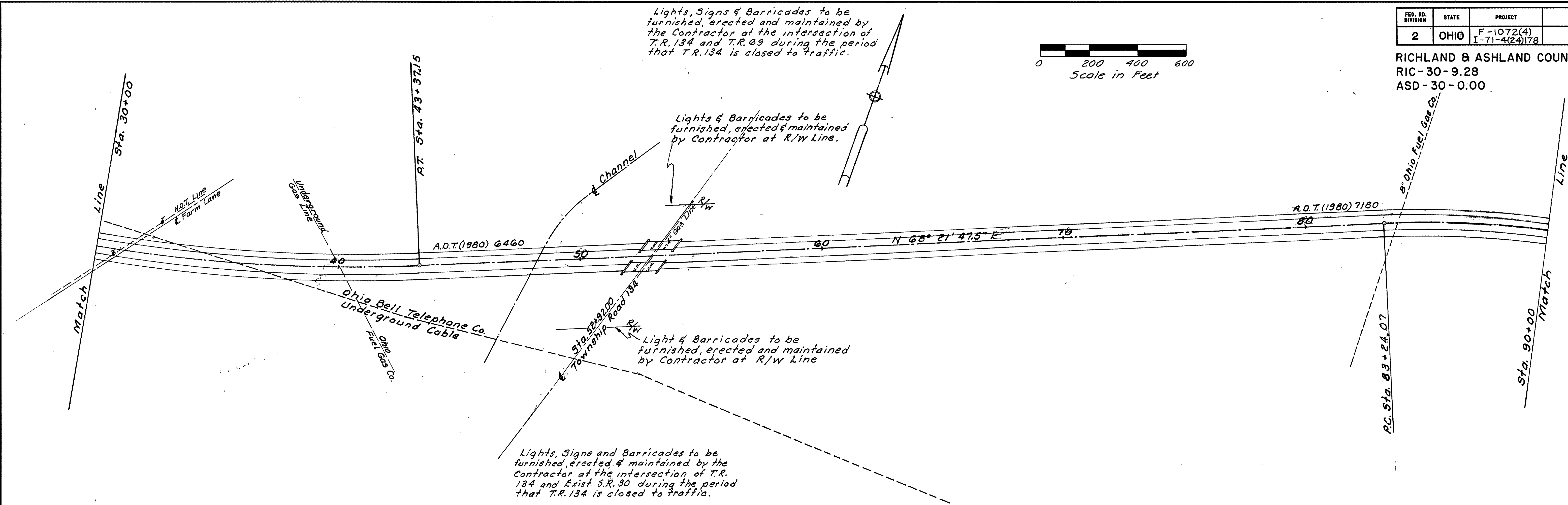
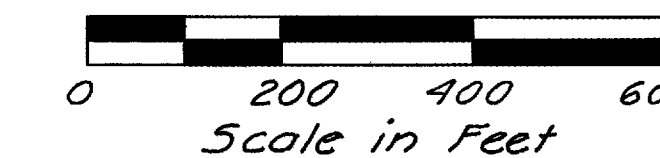
Note: Shaded portion represents quantities carried under I-71-4(24)178.



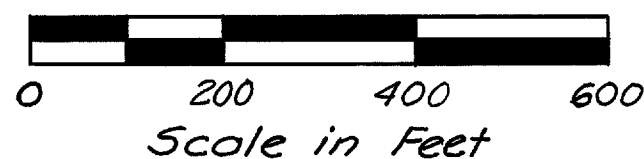
SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT	4 325
2	OHIO	F-1072(4) I-71-4(24)178	

RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00



RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00



Lights, Signs and Barricades to be furnished, erected and maintained by the Contractor at the intersection of C.R. 138 and T.R. 68 during the period that C.R. 138 is closed to traffic.

Lights & Barricades to be furnished, erected and maintained by Contractor at R/W Line

Lights & Barricades to be furnished, erected & maintained by Contractor at R/W Line.

Lights, Signs and Barricades to be furnished, erected and maintained by the Contractor at the intersection of C.R. 138 and Exist. S.R. 30 during the period that C.R. 30 is closed to traffic.

P.I. STA 176+44.15
 $\Delta = 6^\circ 47' 55.6''$
 $D = 0^\circ 28' 00''$
 $R = 12277.667'$
 $T = 729.2964'$
 $L = 1456.88'$
 $E = 21.63'$

CODE 7221

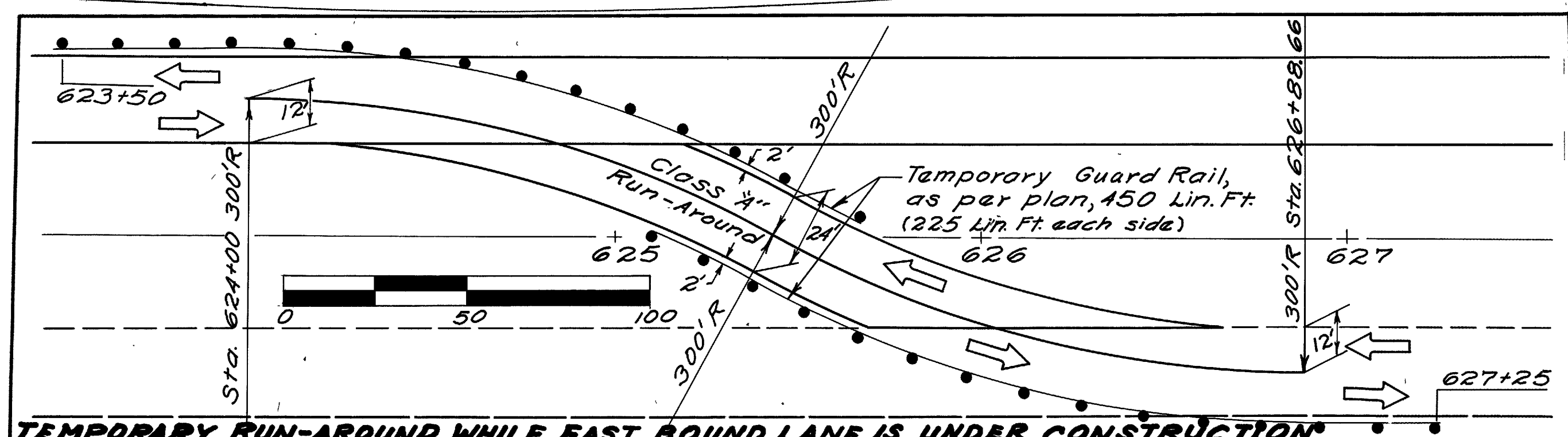
Lights & Barricades to be furnished, erected and maintained by Contractor at R/W Line.

Lights & Barricades to be furnished, erected and maintained by Contractor at R/W Line.

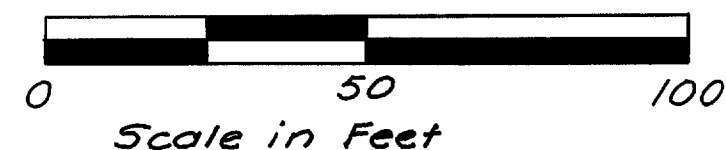
F-1072(4) F-1072(5)
 S.L.M. = 3.92 Bk. & Aft.

STA. 207+00
 END RIC-30-928
 ASD-30-000

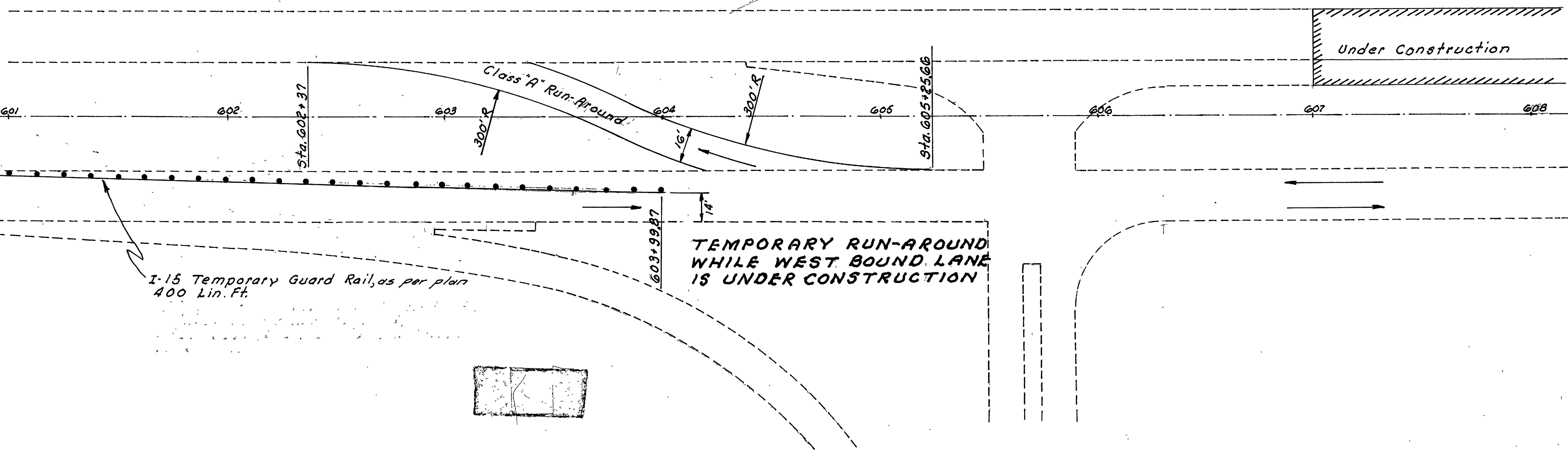
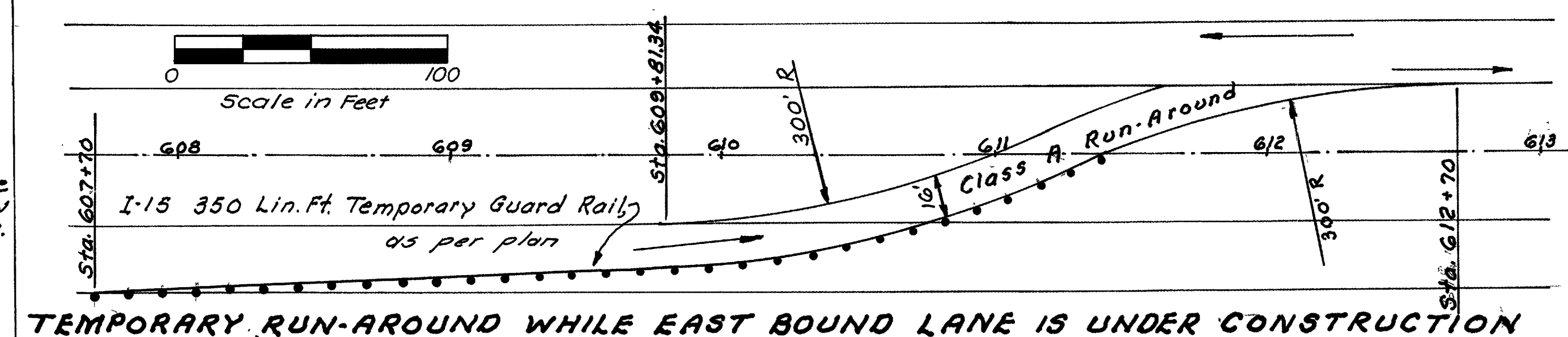
STA. 208+00
 END WORK



LENGTH OF WORK FOR SIDE ROADS		
KOOGLE ROAD		
Station 18+82 to Sta. 37+29.64		1847.64 Lin. Ft.
STATE ROUTE 603		
Station 247+00 to Sta. 251+35.00	435.00	
Station 15+63.50 to Sta. 18+00	236.50	671.50
TOWNSHIP ROAD 69		
Station 6+00 to Sta. 14+25.48	825.48	
Station 15+41.38 to Sta. 21+00	558.62	1384.10
TOWNSHIP ROAD 134		
Station 12+00 to Sta. 19+00	700.00	
COUNTY ROAD 71		
Sta. 5+00 to Sta. 14+45.54 & Sta. 15+54.46 to Sta. 20+00	1391.08	
COUNTY ROAD 138		
Sta. 8+50 to Sta. 21+50	1300.00	
STATE ROUTE 511		
Sta. 9+00 to Sta. 14+45.99	545.99	
Sta. 15+54.01 to Sta. 21+00	545.99	1091.98
Total		8,386.30



Note - All Traffic Control Signs necessary during time that the Temporary Run-Arounds are in use will be erected and maintained by The Ohio Department of Highways.



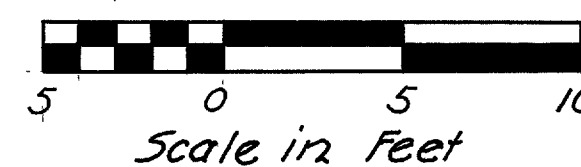
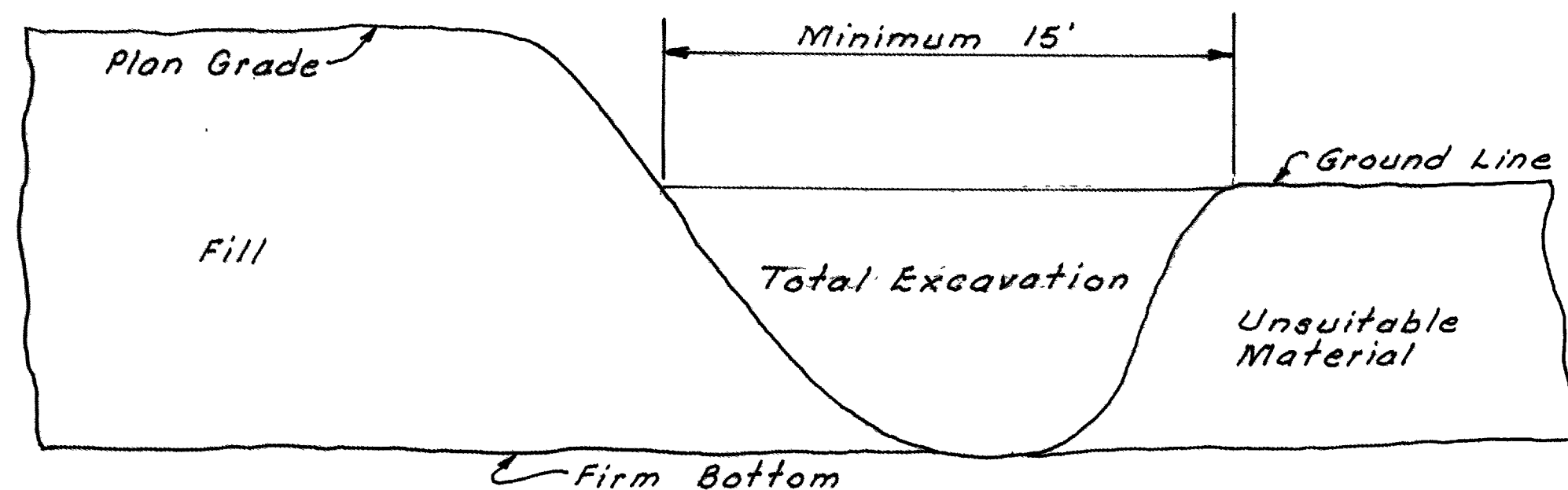
TYPICAL SECTION

SHOWING GRANULAR BORROW

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(24)178

9
325

RIC-30-9.28
ASD-30-0.00



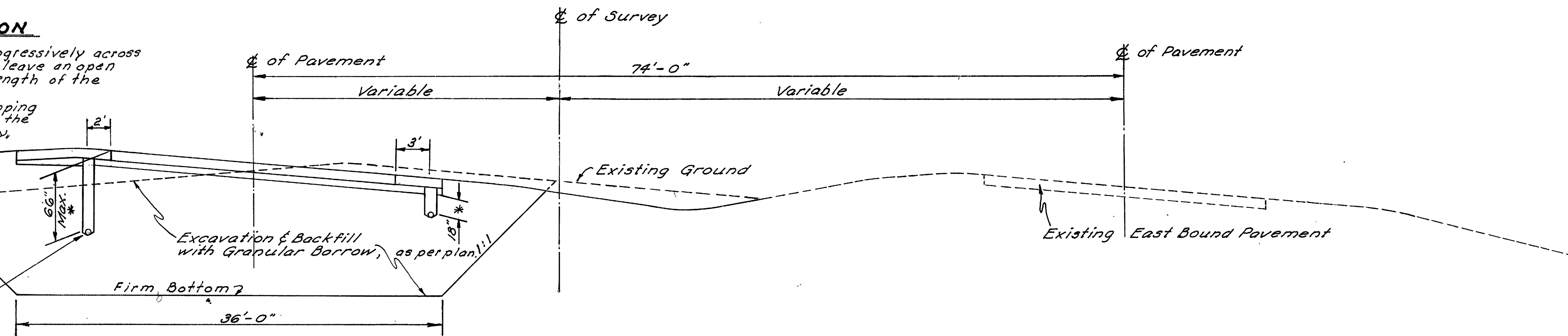
LONGITUDINAL SECTION

TRENCHING & BACKFILLING shall be constructed progressively across the area (Sta. 654+00 to Sta. 657+00) and so coordinated as to leave an open trench not to exceed in length, at any time, the working length of the equipment for excavation of this area.

FILL shall be constructed by the method of End Dumping using Granular Material up to the elevation designated on the Plans. Embankment required above this elevation, if any, shall be constructed in accordance with Sec. E-108 of The Construction and Material Specifications.

* Unless otherwise shown

Deep I-1, Class I-3 drain with porous backfill shall be added to the high side of Super-elevated Sections between Stations 648+53 and 657+97



STA. 654+00 To STA. 657+50

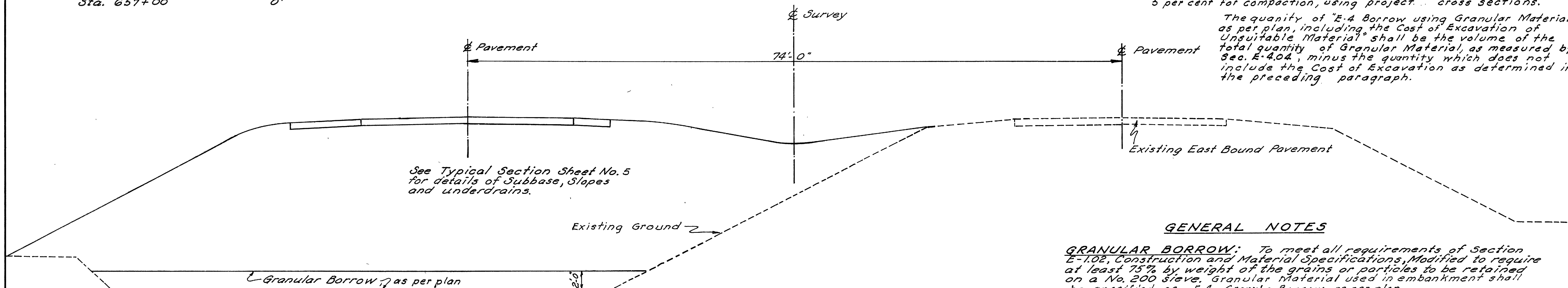
Note: For details of Pavement and Slopes see Typical Section Sheet No. 6 and Cross Section Sta. 656+00 to Sta. 657+50

Depth of Excavation

Sta. 654+50	0'
Sta. 655+00	11.5'
Sta. 656+00	17.0'
Sta. 656+50	5.6'
Sta. 657+00	0'

E-4 BORROW USING GRANULAR MATERIAL, as per plan. The quantity of "E-4 Borrow using Granular Material, as per plan" which does not include the Cost of Excavation shall be the volume measured in final position by the end area method plus 5 per cent for compaction, using project cross sections.

The quantity of "E-4 Borrow using Granular Material, as per plan, including the Cost of Excavation of Unsuitable Material" shall be the volume of the total quantity of Granular Material, as measured by Sec. E-4.04, minus the quantity which does not include the Cost of Excavation as determined in the preceding paragraph.



See Typical Section Sheet No. 5 for details of Subbase, Slopes and Underdrains.

STA. 637+50 To STA. 642+50
STA. 660+50 To STA. 664+50

See Cross Sections Sta. 637+50 to Sta. 642+50 and Sta. 660+50 to Sta. 664+50 for details of Granular Borrow in embankment areas.

EXCAVATED UNSUITABLE MATERIAL which is used adjacent to fills for flattening slopes or which is piled adjacent to the fill, to be disposed of later, in accordance with Sec. E-106 shall be shaped to its final position or removed from the area at least two weeks prior to paving operations of the fill.

EQUIPMENT used for excavation of unsuitable material shall be located ahead of the excavation unless otherwise authorized by the Director.

GENERAL NOTES

GRANULAR BORROW: To meet all requirements of Section E-102, Construction and Material Specifications, Modified to require at least 75% by weight of the grains or particles to be retained on a No. 200 sieve. Granular Material used in embankment shall be specified as E-4 Granular Borrow, as per plan.

SCALPING & EMBANKMENT FOUNDATION COMPACTION: Scalping and embankment foundation compaction specifications shall be waived in all embankment areas where granular borrow is used.

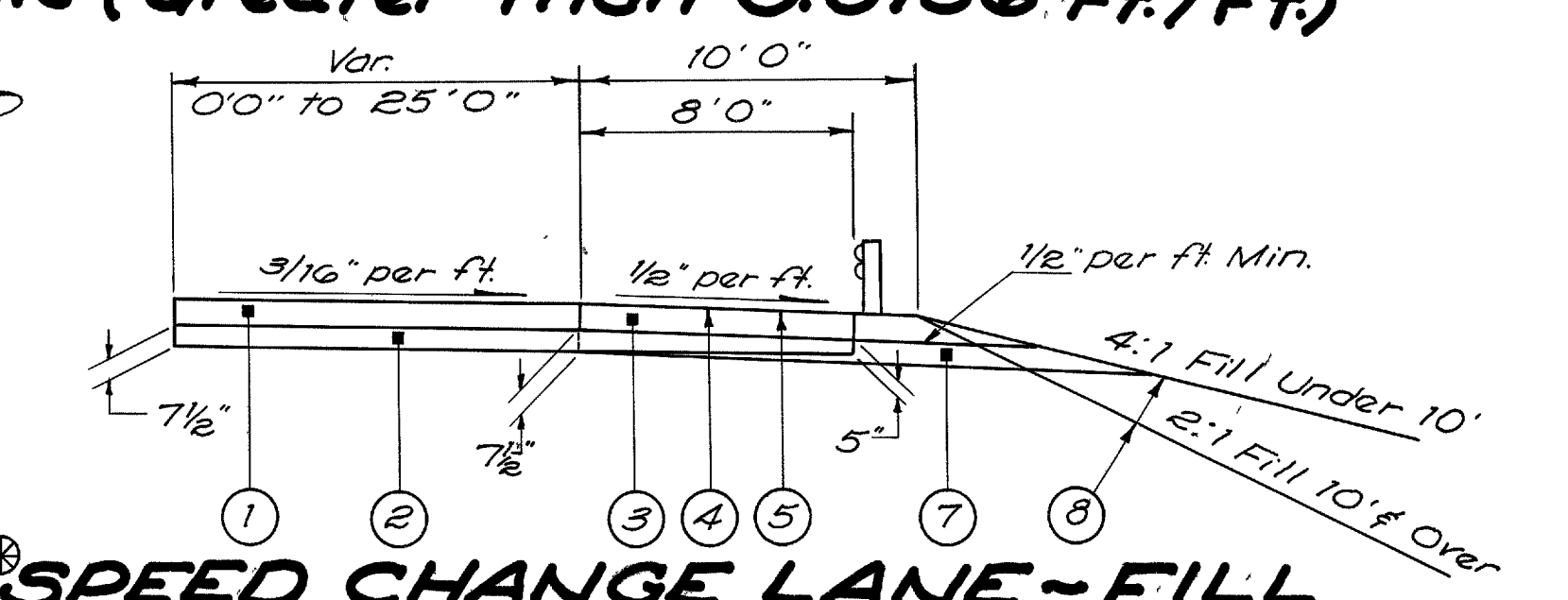
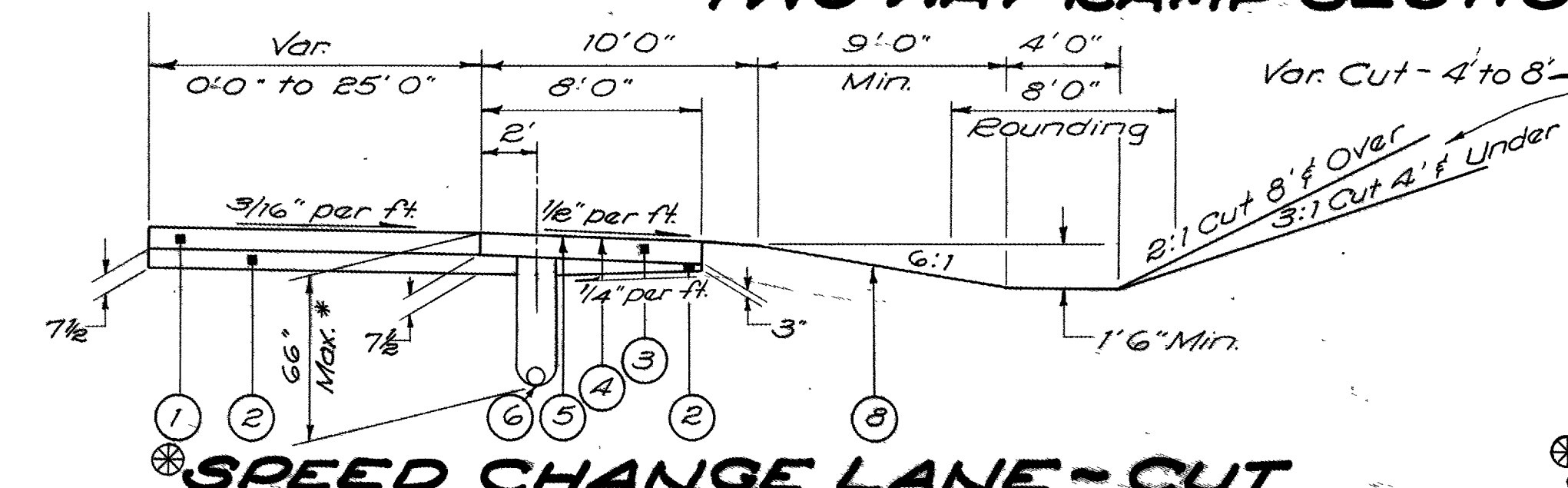
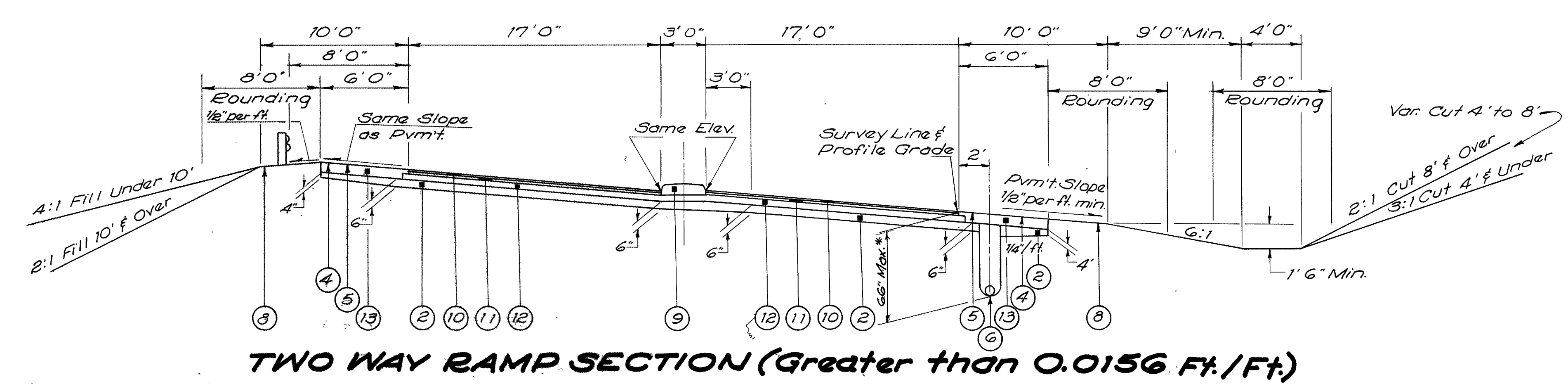
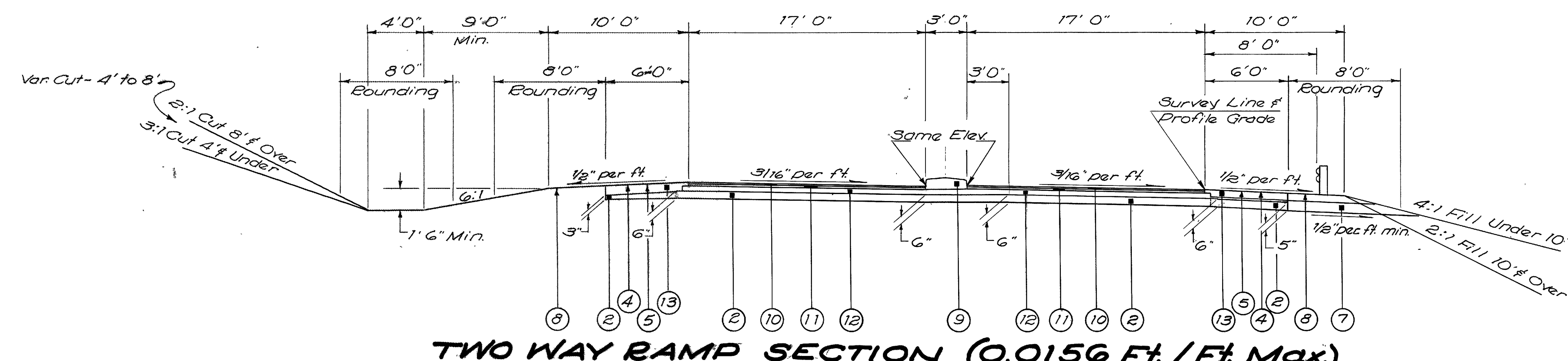
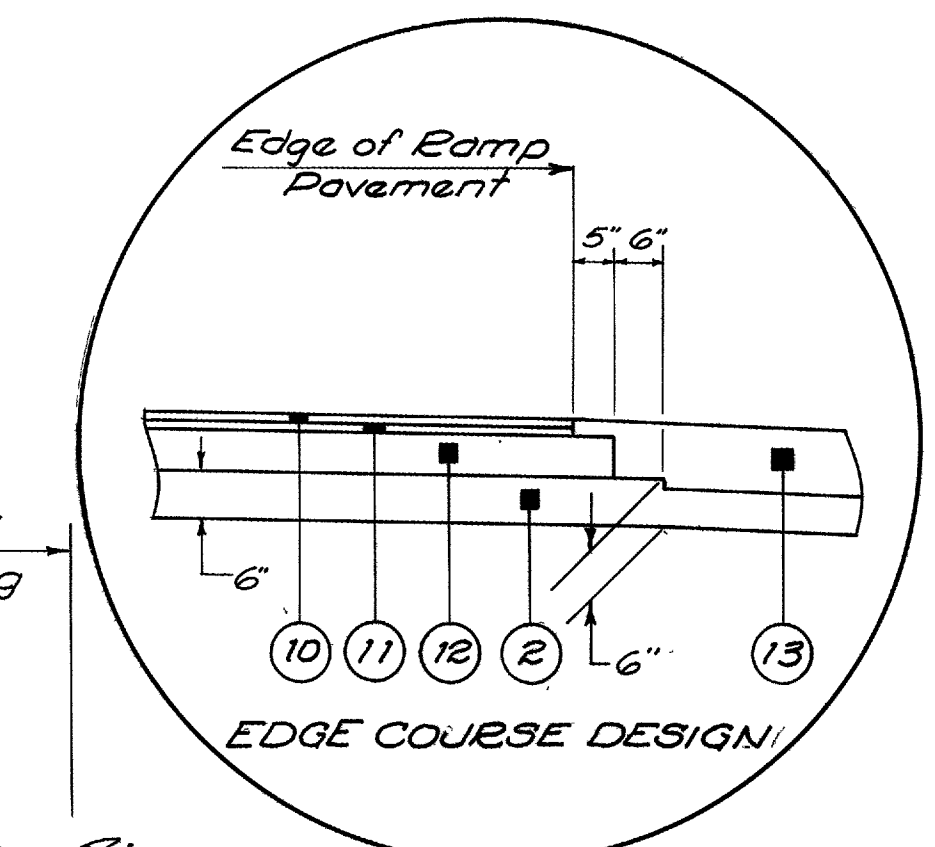
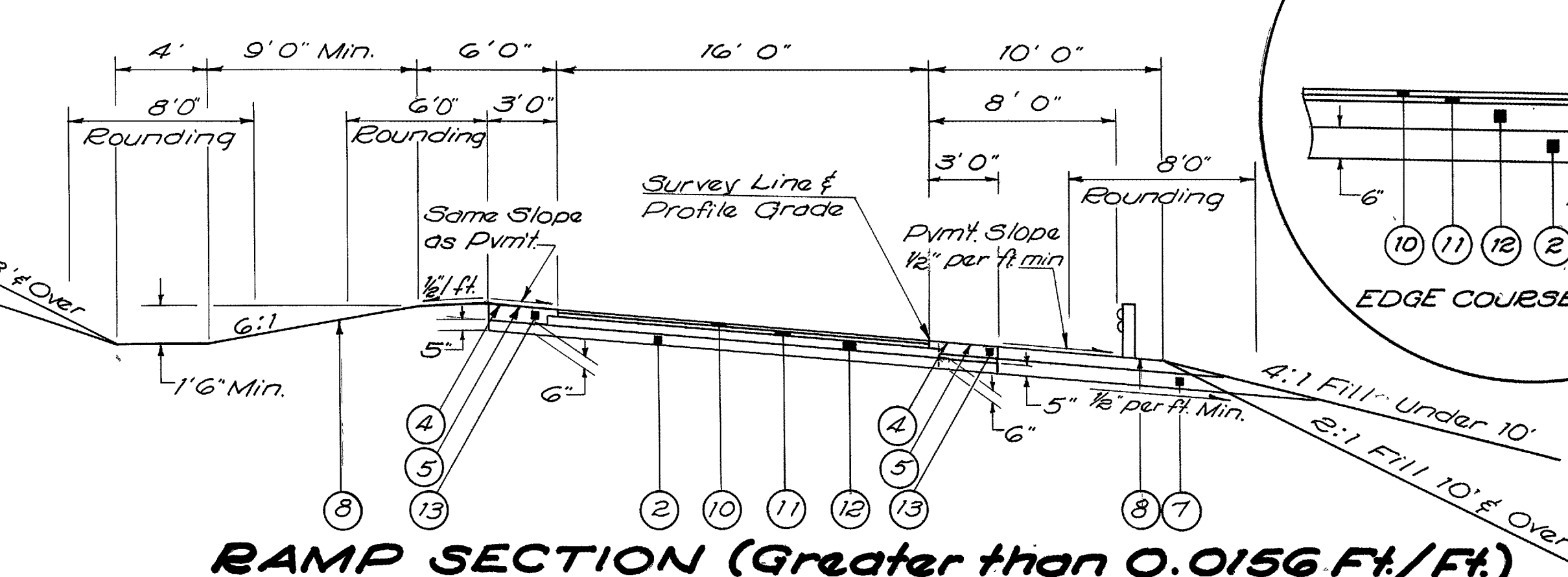
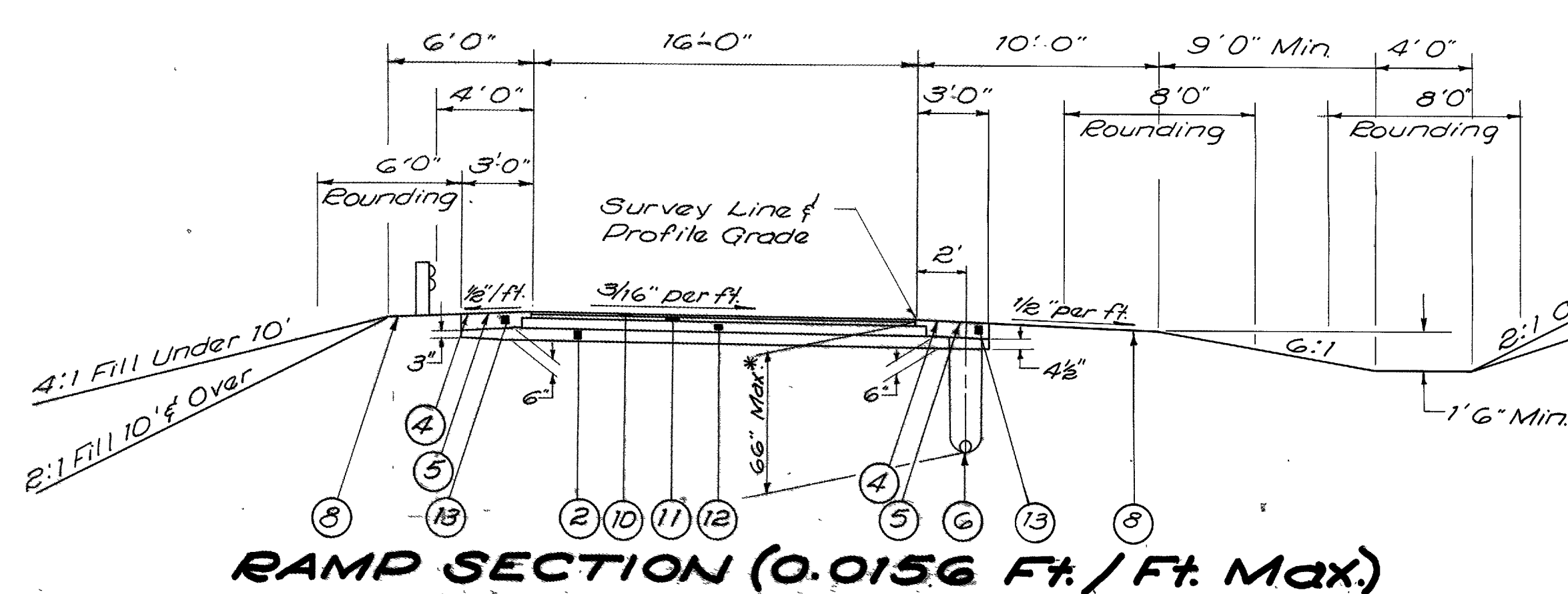
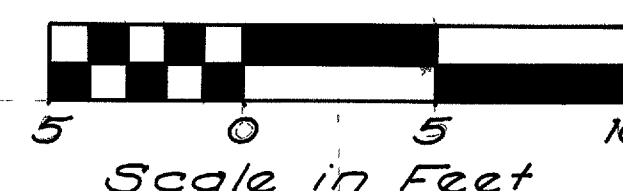
EXCAVATION: Wherever it is necessary to excavate unsuitable material, the area beneath the pavement and paved shoulders shall be excavated to depths shown in table and backfilled with Granular Borrow. The Unit Price Bid for E-4 Granular Borrow shall include the cost of removing unsuitable material. Excavation of unsuitable material ahead of the fill and dumping of Granular Material across the Bog Area shall be advanced in a straight line for the full embankment width to avoid the entrapment of unsuitable material beneath any portion of the fill.

TYPICAL SECTIONS

RIC-30-9.28
ASD-30-0.00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(A) F-71-4(24)178

10
325

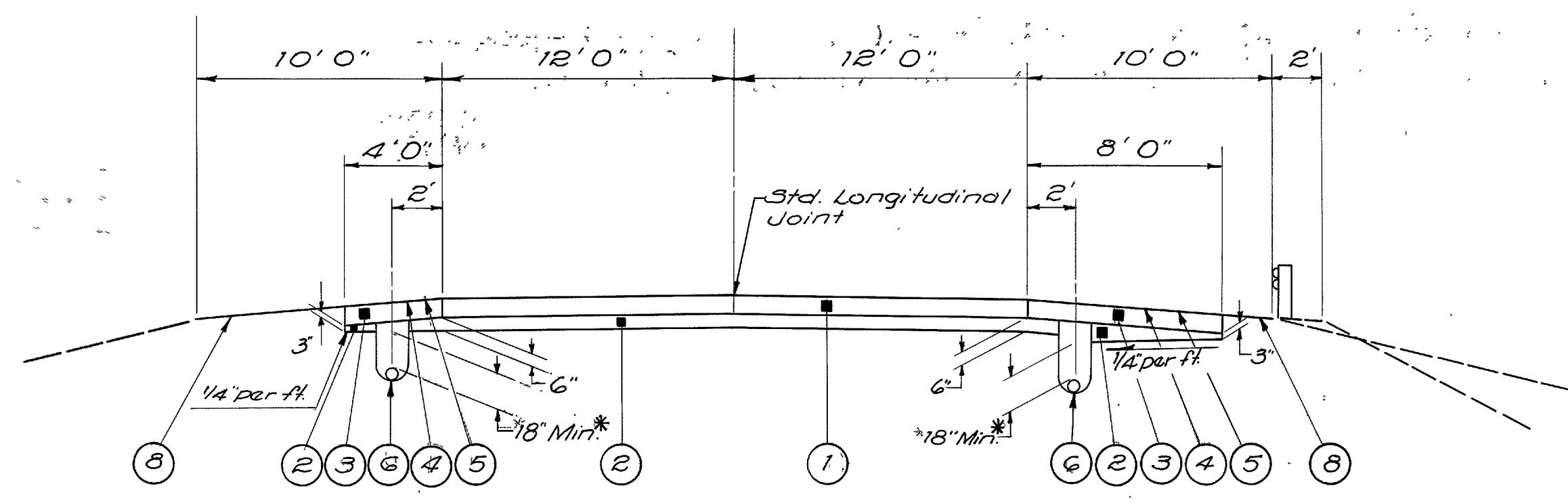
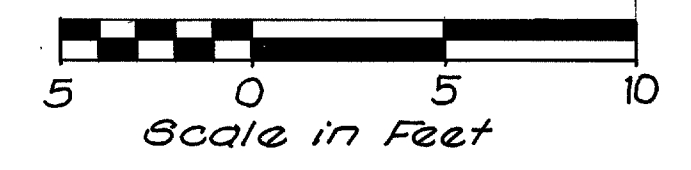


- ### LEGEND
- ① T-71 9" Reinforced Portland Cement Concrete Pavement
 - ② I-22 Subbase, Grading "A" or "B", as per plan
 - ③ B-19 9" Aggregate Base Course
 - ④ T-31 Bituminous Surface Treatment consisting of one application as follows: 0.008 Cubic Yards No. 6 Aggregate and 0.30 Gallon Bituminous Material per Square Yards; Sec. M-5.7, ET-8 or ET-9 or Sec. M-5.12 CBAE-3.
 - ⑤ T-30 Bituminous Prime Coat, 0.40 Gallon per Square Yards; Sec. M-5.7, ET-2 or ET-3.
 - ⑥ I-1 6" Class I-3 Pipe
 - ⑦ I-9 Stone Underdrains No. 2
 - ⑧ L-9 Seeding & Protecting, as per plan
 - ⑨ I-21 Portland Cement Concrete Median Pavement
 - ⑩** T-35 1" Asphaltic Concrete Surface Course Type "C" (85-100)
 - ⑪** B-35 1 1/2" Asphaltic Concrete Leveling Course (85-100)
 - ⑫** B-21 5" Waterproofed Aggregate Base Course
 - ⑬ B-19 8" Aggregate Base Course

- ### NOTES
- See Standard Drawing B1-1 for details not shown.
 - *Depth unless otherwise shown.
 - **Thickness shown is design thickness as described in Sec. T-35.01, B-35.01, and B-21.01.
 - Combination Speed Change Lane shoulder design is shown on Sheet No. 159.
 - ⊗ Speed Change Lane Typical shown applies to the westbound lanes. Where Speed Change Lane abuts existing or replaced eastbound lanes, the subbase is 6" in depth instead of 7 1/2" as shown.

For typical section of Ramp "H" see Sheet No. 159

TYPICAL SECTIONS



PAVEMENT REPLACEMENT SECTION (Eastbound Lanes)

Sta. G12 + 98.50	to	Sta. G13 + 60.30	=	61.80 Lin. Ft.
Sta. G15 + 52.42	to	Sta. G16 + 37.50	=	85.08 Lin. Ft.
Sta. G18 + 74.18	to	Sta. G22 + 94.17	=	419.99 Lin. Ft.
		Total Length	=	566.87 Lin. Ft.

NOTE: The 8 foot bituminous treated berm, shown above, shall be constructed from Sta. G17+27.17 to Sta. G18+74.18 & Sta. G22+94.17 to Sta. G25+05 on the right of the eastbound lanes.

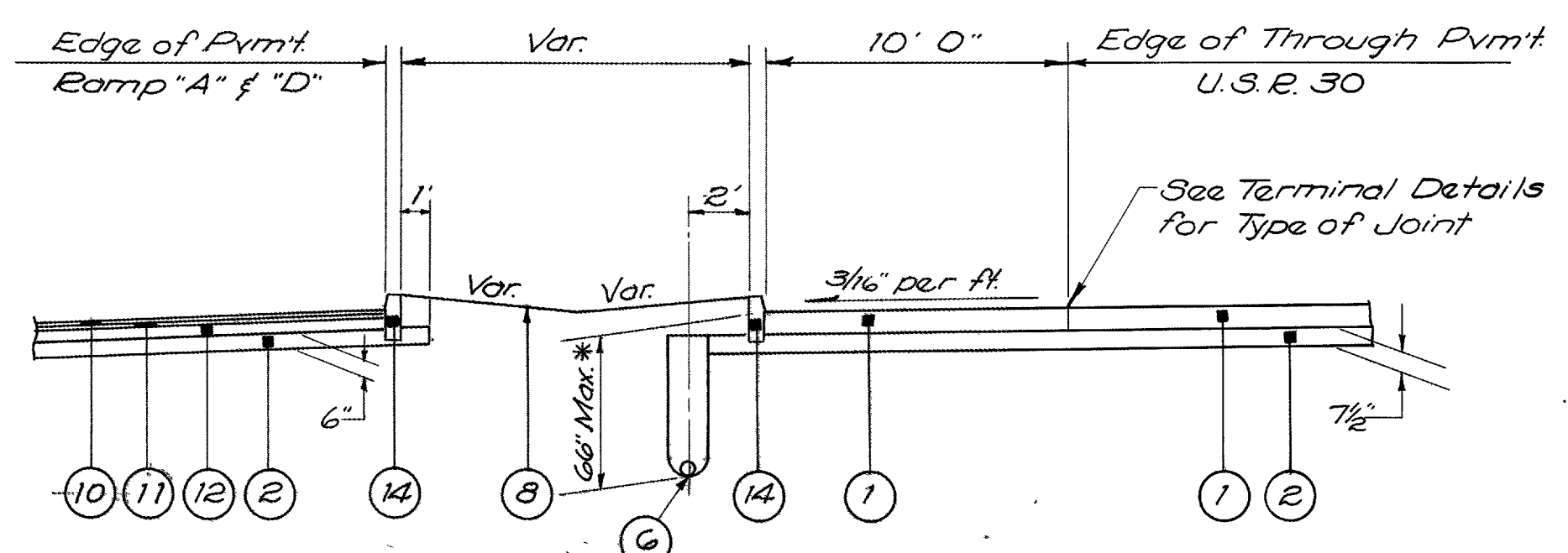
The 4 foot bituminous treated berm, shown above, shall be constructed from Sta. G11+67 to Sta. G13+34.18 & Sta. G15+74.18 to Sta. G18+74.18 on the left of the eastbound lanes.

LEGEND

- ① 7-71 9" Reinforced Portland Cement Concrete Pavement
- ② I-22 Subbase, Grading "A" or "B", as per plan
- ③ B-19 9" Aggregate Base Course
- ④ T-31 Bituminous Surface Treatment consisting of one application as follows: 0.008 Cubic Yards No. 6 Aggregate and 0.30 Gallon Bituminous Material per Square Yards; Sec. M-5.7, ET-8 or ET-9 or Sec. M-5.12 CBAE-3.
- ⑤ T-30 Bituminous Prime Coat, 0.40 Gallon per Square Yds; Sec. M-5.7, ET-2 or ET-3.
- ⑥ I-1 6" Class I-3 Pipe
- ⑦ I-9 Stone Underdrains No. 2
- ⑧ L-9 Seeding and Protecting, as per plan.
- ⑩**T-35 1" Asphaltic Concrete Surface Course Type "C" (85-100)
- ⑪**B-35 1 1/4" Asphaltic Concrete Leveling Course (85-100)
- ⑫**B-21 5" Waterproofed Aggregate Base Course
- ⑬ B-19 8" Aggregate Base Course
- ⑭ I-12 6" Standard Type 6 Curb
- ⑮ I-12 Standard Type 7 Curb
- ⑯ I-12 Standard Type 8 Curb

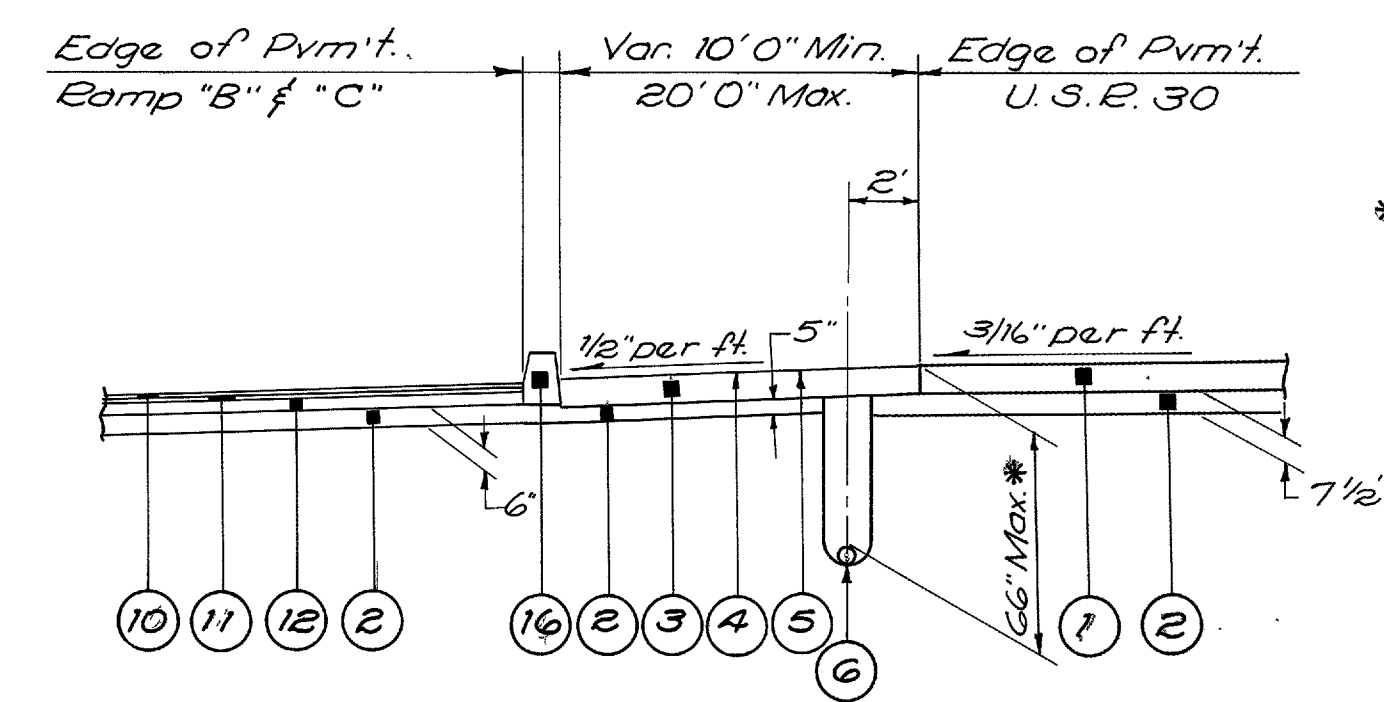
NOTES

- See Standard Drawing for details not shown.
- *Depth unless otherwise shown.
- **Thickness shown is design thickness as described in Sec. T-35.01, B-35.01 and B-21.01.



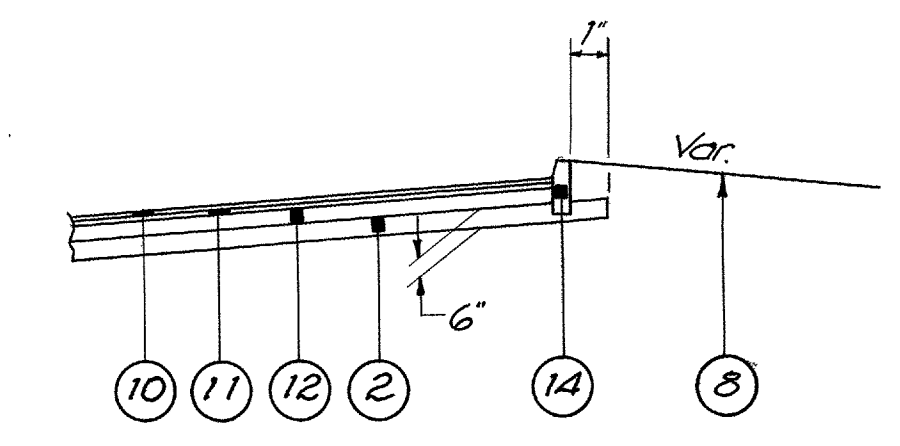
RAMP "A" & "D" EXIT TERMINAL

NOTE: U.S.E. 30 shown applies to the westbound lanes adjacent to Ramp "C". U.S.E. 30 adjacent to Ramp "B" is existing and the edge of U.S.E. 30 to the underdrain is to be 6" in depth.

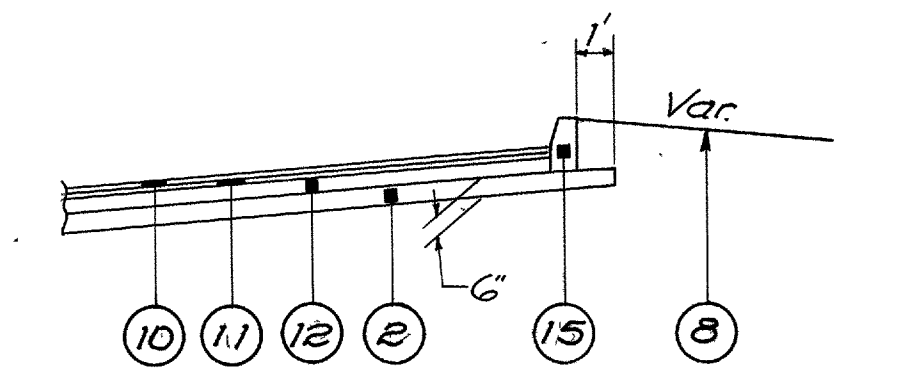


RAMP "B" & "C" ENTRANCE TERMINAL

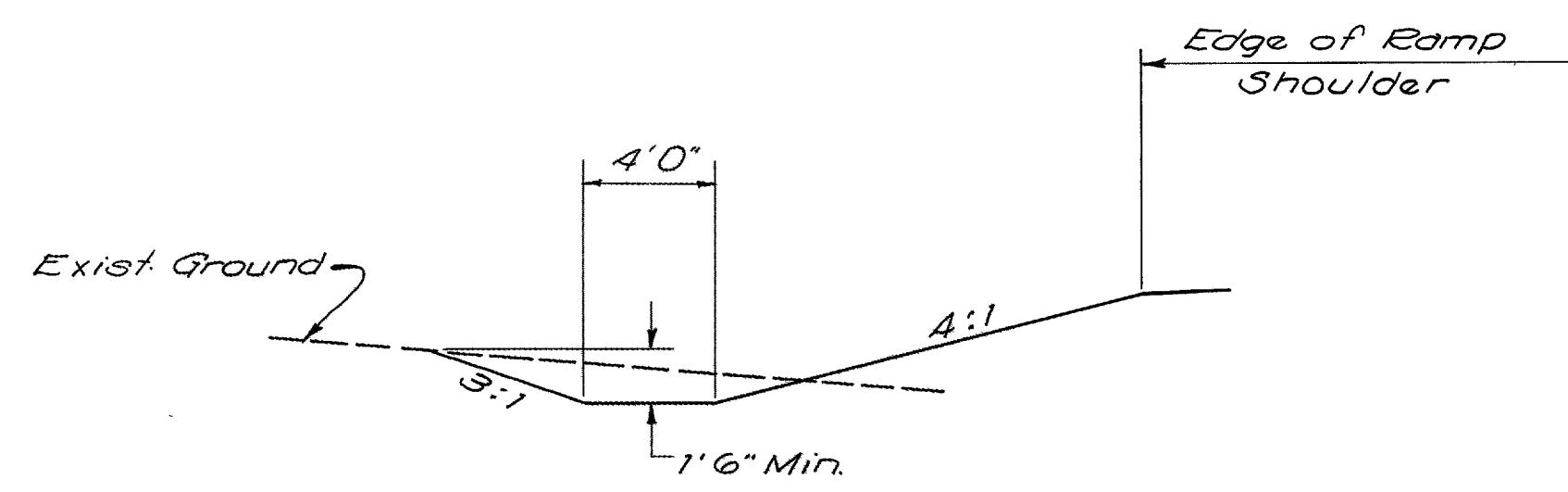
NOTE: U.S.E. 30 shown applies to the westbound lanes adjacent to Ramp "C". U.S.E. 30 adjacent to Ramp "B" is existing and the subbase from the edge of U.S.E. 30 to the underdrain is to be 6" in depth.



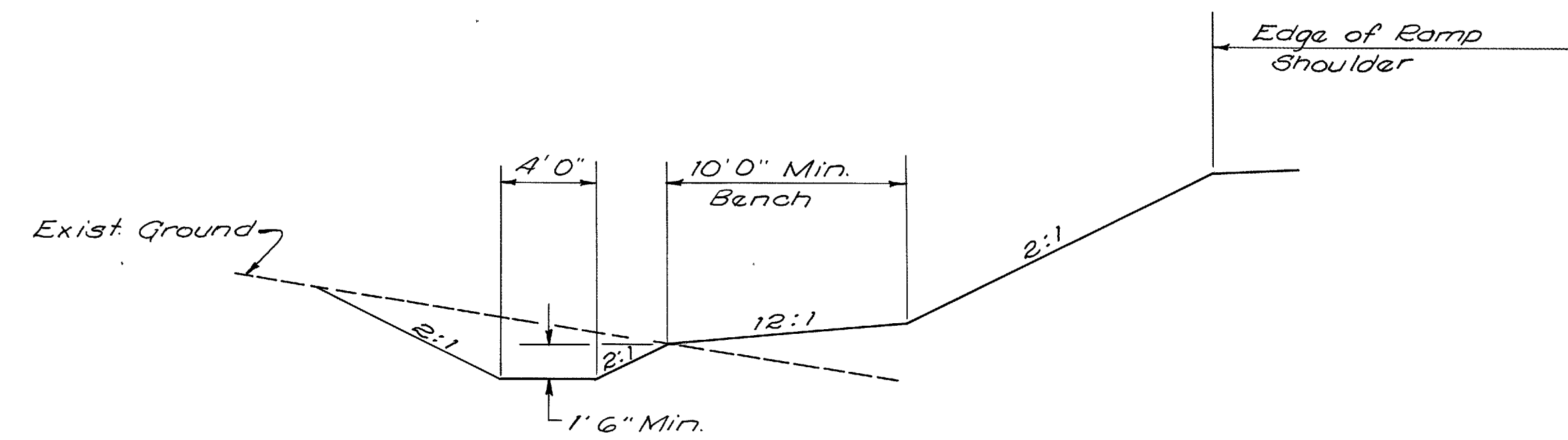
RAMP WITH TYPE 6 CURB



RAMP WITH TYPE 7 CURB



SPECIAL DITCH SECTION



SPECIAL DITCH SECTION

GENERAL NOTES

NO. IN DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(2A)178

12
325

RIC. - 30 - 9.28
ASD. - 30 - 0.00

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE OFFICE FOR THE EXCLUSIVE USE OF THE STATE EMPLOYEES IN ACCORDANCE WITH SEC. 2-0-01 (B), HAVING A MINIMUM OF 500 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THE FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING TO OFFICE EQUIPMENT, AND PROVIDE THE VOLT ALTERNATING CURRENT SUPPLY FOR THE CONSTRUCTION OF THIS PROJECT.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

UTILITIES

THE CONTRACTOR SHALL NOTIFY, AT LEAST 2 WORKING DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE, CONDUITS, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

ROUNDING OF CORNERS ON CROSS SECTIONS

THE ROUNDED CORNERS, SHOWN ON STANDARD DRAWING 2111, AS MODIFIED BY THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

MONUMENTS, FEDERAL PROJECT MARKERS, AND SECTION MARKERS

EXISTING BENCH MONUMENTS, BENCH MARKS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AND RE-SET SECTION 6-7.09 UNTIL THEY CAN BE WITNESSED, REFERENCED AND RESET BY THE CONSTRUCTION CREW.

ELEVATION DATA

ALL ELEVATIONS ARE BASED ON U.S.C.S. DATUM.

REPLACEMENT

THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE ANY ITEM NOT SPECIFICALLY LISTED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY HIS OPERATION.

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE CROWN.

NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTHERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

Item I-15 Temporary Guard Rail, as per plans.

See Note in Proposal for description of Temporary Guard Rail.

GUARD RAIL ADJACENT TO BRIDGE PARAPET

ONE ADDITIONAL GUARD RAIL POST SHALL BE PROVIDED IN THE CENTER OF EACH END OF GUARD RAIL ADJACENT TO THE PARAPET. PAYMENT FOR WHICH SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-15 GUARD RAIL.

Item 3.5 CE-101.04 Compaction Using Heavy Pneumatic-Tired Roller

An estimated quantity of 103 hours has been provided in the General Summary for use in proof rolling of all subgrade on the main line and ramp pavements as directed by the engineer. Proof rolling will not be required where rock or shale occurs in subgrade and in areas where subbase has been thickened to replace frost susceptible silts. In lieu of the requirements of CE-101.04, a minimum of one coverage will be required to check the subgrade. Moisture content of the top 12" of subgrade shall not exceed optimum at the time of proof rolling. Tire pressure and total load shall be varied as directed by the Engineer within the limits provided in Supplemental Specification No. CE-101.04.

Item I-9 Stone Underdrains No. 2 (U.S.R. 30 & Speed Change Lanes)

Stone Underdrains shall be placed at 30 foot intervals on the outside of normal crowned sections and the low side of super-elevated sections, so placed that every other one is adjacent to a transverse pavement joint. A stone underdrain shall be placed at the low point of each sag vertical curve. Where Item I-1 Pipe Underdrains have been provided, the stone underdrains shall not be used.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS AS MARKED BY THE STATE FORCES LOCATED WITHIN 10' OF THE CONSTRUCTION LIMITS OR WITHIN 50' OF THE PAVEMENT EDGE; ALL ELM TREES AND STUMPS WITHIN THE RIGHT-OF-WAY; ALL DEAD OR PARTIALLY DEAD TREES.

SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9 REMOVAL OF TREES AND STUMPS. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE TREES AND STUMPS TO BE REMOVED:

NUMBER & SIZES OF TREES & STUMPS IS ESTIMATED BELOW							
	12" TO 18"	18" TO 24"	24" TO 30"	30" TO 36"	36" TO 42"	42" TO 48"	OVER 48"
TREES	698	194	70	30	14	1	
STUMPS	189	222	74	36	7		

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

CENTER LINE REFERENCE MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE 8 INCHES IN DIAMETER AND 44 INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH 2 INCHES BELOW GROUND LEVEL AND THE UPPER 6 INCH PORTION OF THE CONCRETE SHALL BE FORMED. A 16-D NAIL SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK CENTER LINE AND STATION. FOR DETAILS SEE SHEET NO. 299

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

SEEDING AND PROTECTION

QUANTITIES FOR SEEDING ITEM L-9 ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE LINES 10 FEET OUTSIDE THE WORK LIMITS AS SHOWN ON THE CROSS-SECTIONS, OR THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN 10 FEET FROM THE WORK LIMITS. ALL AREAS OUTSIDE THESE LIMITS WHERE THE VEGETATIVE GROWTH HAS BEEN INJURIOUSLY DISTURBED OR DESTROYED BY THE CONTRACTOR SHALL BE RESTORED AND SEEDING IN ACCORDANCE WITH THE PROVISIONS OF SEC. 6-7.09 BY THE CONTRACTOR AT HIS OWN EXPENSE. SEED SHALL BE SOWN AT THE RATE OF 3 POUNDS PER 1000 SQUARE FEET EXCEPT AS OTHERWISE NOTED IN THE PLANS. THE FOLLOWING SEED MIXTURE SHALL BE USED THROUGHOUT THE LIMITS OF THE PROJECT IN LIEU OF THE MIXTURE LISTED IN SECTION L-9.11:

75 % KENTUCKY 31 FESCUE
20 % KENTUCKY BLUEGRASS
5 % ALSIKE CLOVER

L-9 COMMERCIAL FERTILIZER

ALL AREAS TO BE SEEDING UNDER ITEM L-9 OR SODDED UNDER ITEM L-10 SHALL HAVE COMMERCIAL FERTILIZER (12-12-12), APPLIED AT THE RATE OF 20 POUNDS PER 1,000 SQUARE FEET.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

Item I-15, Guard Rail Removed and Stored, as per plans.

This item shall include storage only of the rail elements and incidental hardware. The posts shall become the property of the contractor and be disposed of by him.

Item I-9 Stone Underdrains, No. 2 (Koogle Rd & Interchange Ramps)

Stone Underdrains shall be placed at 50 foot intervals on each side of normal crowned sections and at 25 foot intervals on the low side only of super-elevated sections and ramp sections. Underdrains shall be constructed prior to placing the Asphaltic Concrete Surface or Leveling Courses.

PIPE FOR SUBGRADE DRAINAGE

10 LIN. FT. OF 6" CLASS F-4 PIPE SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR, IN MANHOLES, CATCH BASINS AND INLETS FOR EACH SUBGRADE DRAIN, WHERE, AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR EACH SHALL BE MADE AT THE PRICE BID PER LINEAR FOOT OF CLASS F-4 PIPE.

Item E-1, Compacted Subgrade

The B-19 shoulders treated with T-31 shall be considered to be "paved shoulders" for the purpose of computing the area of subgrade to be compacted 12" in depth and paid for under Item E-1, Compacted Subgrade.

LOCATION AND SIZE OF PIPE

THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEARLY EXACT AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

REMOVAL OF ALL EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED EXCAVATION ITEMS, SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

PLUGGING PIPE ENDS

THE UPSTREAM ENDS OF PIPE LINES OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN PIECES AND PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE LENGTH IS ENCOUNTERED, WHICH SHALL BE BLOCKED WITH CONCRETE, FLAT STONE OR BRICK LAID IN MORTAR, PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1.

FIELD DRAINS

ALL FARM TILES WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY A PIPE ONE SIZE LARGER THAN THE EXISTING PIPE. THE NEW PIPE SHALL BE ITEM I-1 CLASS J-1 PIPE. EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOW-LINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM I-1 CLASS H-2 PIPE AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING. THE LOCATION, TYPE, SIZE, AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION, AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

I-1	6"	CLASS J-1 PIPE	500 LIN. FT.
I-1	8"	CLASS J-1 PIPE	500 LIN. FT.
I-1	12"	CLASS J-1 PIPE	1300 LIN. FT.
I-1	6"	CLASS H-2 PIPE	300 LIN. FT.
I-1	12"	CLASS H-2 PIPE	300 LIN. FT.
I-1	8"	PIPE OUTLETS CLASS F-4, Sec. M-6.4E	100 LIN. FT.
I-1	12"	PIPE OUTLETS CLASS F-4	100 LIN. FT.
I-5	6"	PIPE SPECIALS FOR CLASS J-1 PIPE	5 EACH
I-5	8"	PIPE SPECIALS FOR CLASS J-1 PIPE	5 EACH
I-5	12"	PIPE SPECIALS FOR CLASS J-1 PIPE	5 EACH
I-5	8"	PIPE SPECIALS FOR CLASS H-2 PIPE	5 EACH
I-5	12"	PIPE SPECIALS FOR CLASS H-2 PIPE	5 EACH
I-10		DUMPED ROCK CHANNEL PROTECTION	25 CU. YD.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE CONNECTED TO EXISTING PIPES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE, BOTH AS TO LINE AND GRADE, BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

EROSION CONTROL

ITEMS I-10, I-11, I-12 & I-10 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS.

THE ENGINEER SHALL CHECK AND NONPERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS, WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

PRIVATE SEWER TAPS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW PRIVATE DRAINAGE TO THE NEW HIGHWAY DRAINAGE SYSTEM WHEN SUCH PRIVATE DRAINS CARRY EFFLUENT OR DRAINAGE FROM LEACHING BED OUTLETS, CELLAR DRAINS, OR SINK DRAINS, OR POLLUTED WATER OF ANY KIND. CONNECTIONS MAY BE MADE TO THE EXISTING OR NEW HIGHWAY DRAINAGE SYSTEM WHEN THE WATER CARRIED TO THE PROJECT DRAINAGE SYSTEM DOES NOT COME WITHIN THE CATEGORY OUTLINED ABOVE.

ACCEPTABLE WATER INCLUDES FLOW FROM ROOF DRAINS, FIELD DRAINS, AND ENCLOSED NATURAL DRAINAGE SOURCES WHICH WOULD REACH THE ROAD THROUGH NATURAL CHANNELS IF SUCH WATER WAS NOT CONDUCTED ARTIFICIALLY. EXISTING SEWER TAPS WHICH DO NOT CARRY ACCEPTABLE WATER, AS DEFINED ABOVE, SHALL BE PLUGGED AT THE RIGHT-OF-WAY LINE. PLUGGING SPECIFIED SHALL BE BY MEANS OF CLASS "E" CONCRETE, AND PAYMENT THEREFOR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, IN MAKING THE ABOVE DESCRIBED CONNECTIONS:

ITEM I-1	8"	CLASS E-4 PIPE	100 LIN. FT.
ITEM I-5	8"	PIPE SPECIALS FOR CLASS "E" PIPE	3 EACH

Cut Off Walls For Item I-10 Riprap
The cut off walls for Item I-10 Riprap, using 6" reinforced concrete shall be included in the unit price bid for Item I-10 Riprap, using 6" reinforced concrete.

GENERAL NOTES

RIC. - 30 - 9.28
ASD. - 30 - 0.00

SCARIFICATION OF EXISTING FLEXIBLE PAVEMENT
WITHIN THE LIMITS OF CONSTRUCTION WHERE THE EXISTING FLEXIBLE PAVEMENT WILL HAVE LESS THAN 6 INCHES OF FULL PLACED LUMP, THE PAVEMENT SHALL BE THOROUGHLY SCARIFIED FOR ITS FULL DEPTH, MIXED WITH SUFFICIENT SOIL AND PROPERLY RECOMPACTED TO INSURE THE ELIMINATION OF ANY PLACES OF SEPARATION BETWEEN IT AND THE EMBANKMENT PLACED THEREON. PAYMENT FOR SCARIFICATION AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

NON-RIGID PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS
AFTER THE EXISTING PAVEMENT HAS BEEN REMOVED, UNDER ITEM E-8, THE OLD ROADWAY SHALL BE FLOORED, HARROWED, AND DRAUGHT TO A SMOOTH GRADE, THE OLD DITCHES FILLED, AS DIRECTED BY THE ENGINEER, AND THE ENTIRE AREA SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT REMOVAL, ITEM E-8. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM L-8.

FINISH OF BASE MATERIAL
WHERE THE BASE MATERIAL IS DRAINED BY 1-9 STONE UNDERDRAINS OR BY EXTENSIONS OF THE SUBBASE THROUGH THE SHOULDERS TO THE FILL SLOPE OR THE DITCH LINE, THE CONTRACTOR SHALL FINISH, SEED, AND MULCH THE SLOPES SO AS NOT TO IMPED DRAINAGE OF THE BASE MATERIAL. THE ACTUAL AREA OF THE SURFACE OF THE SUBBASE MATERIAL OF THE 1-9 STONE UNDERDRAINS SHALL NOT BE SEEDED.

1-9 STONE UNDERDRAINS, NO. 2 (Side Roads excluding Koogle Road)
STONE UNDERDRAINS SHALL BE PLACED AT 100 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT 50 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. WHERE STONE UNDERDRAINS ARE USED TO DRAIN AN ASPHALTIC CONCRETE TYPE PAVEMENT, THEY SHALL BE CONSTRUCTED PRIOR TO PLACING THE ASPHALTIC CONCRETE SURFACE OR BASE COURSE.

WORK WITH CONSTRUCTION
BECAUSE OF THE NECESSITY OF BUILDING CERTAIN CROSS ROADS UNDER TRAFFIC AND CONSTRUCTING THE PAVEMENT PART AT A TIME, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A RIGID JOINT OR CENTERLINE IN THE 8-19 AND I-22 COURSES. THIS SHALL BE ACCOMPLISHED BY BUILDING THE 8-19 AND I-22 COURSES PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST 18 INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN 18 INCHES TO THE EDGE OF THE ABOVE COURSE. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST 12 INCHES OF THESE PROJECTING COURSES SHALL BE BROKEN DOWN AND THOROUGHLY KEPT IN WITH THE NEWLY PLACED CORRESPONDING COURSE IN THE SECOND PORTION OF THE PAVEMENT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PAVEMENT ITEMS.

SPRING DRAINS
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND USE AS DIRECTED BY THE ENGINEER IN DRAINING SPRINGS ENCOUNTERED DURING CONSTRUCTION.

ITEM 1-9 STONE UNDERDRAINS, NO. 2 AS PER PLAN
ITEM 1-11 6" CLASS 1-3 PIPE, SEC. M-6.4.1, as per plan

FOR DETAILS OF PROPOSED TREATMENT OF SPRING DRAINAGE SEE SHEET NO. 234

SOD AT HEADWALLS
AN 18" WIDE STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH HEADWALL, AROUND INLETS AND ALONG BOTH SIDES OF PAVED CUTTER TO PREVENT EROSION. THE ABOVE ITEM HAS BEEN INCLUDED IN QUANTITIES OF ITEM L-10 SODDING.

DUMPED ROCK CHANNEL PROTECTION
DUMPED ROCK CHANNEL PROTECTION SHALL BE PLACED AT THE OUTLET OF ALL CLASS A-1 PIPES, AND CLASS J-1 PIPES OF 24" DIAMETER AND OVER, IMMEDIATELY AFTER THE PIPE HAS BEEN BEACED AND THE CURBLET CHANNEL IS CUT. THIS APPLIES ONLY WHERE DUMPED ROCK CHANNEL PROTECTION IS CALLED FOR.

GUARD RAIL FLARES
Where proposed guard rail flares are constructed of rail elements which have not been fabricated exactly to fit the curvature shown on the plans, the two end posts of each flared section shall be encased in a minimum 4 inch thickness of Class "E" concrete for the full depth of the post below the ground line. Payment for encasement, if required, shall be included in the unit price bid for the guard rail.

CHANNEL RELOCATION
THE CHANNEL RELOCATION RIGHT AND LEFT OF STATION 42+25 SHALL BE PERFORMED BY THE CONTRACTOR DURING THE INITIAL STAGES OF CONSTRUCTION OF THIS PROJECT.

ITEM I-5 PIPE SPECIALS
Pipe without perforations will be permitted for use on this project for all Item I-5 Pipe Specials.

Contraction and Expansion Joints
Although specific locations of certain expansion and contraction joints have been detailed on this plan, no waiver of the specifications is intended. Provision for expansion joints at all major structures and the maximum spacing between contraction joints shall in all cases be in accordance with Standard Drawing T-1.

PAYMENT FOR TEMPORARY ROADWAYS
PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHEREVER REQUIRED, OF TEMPORARY ROADWAYS NOT SEPARATELY ITEMIZED UNDER ITEM S-15, EXCEPT FOR FURNISHING AND PLACING OF ITEMS I-4 AND S-15, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC."

TEMPORARY CULVERTS
PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL OF TEMPORARY CULVERTS AND SEWER EXTENSIONS REQUIRED FOR CONSTRUCTION OF ITEM S-15 RUN-AROUNDS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR RUN-AROUNDS.

ROCK SUBGRADE
THE CONTRACTOR SHALL BE PAID FOR THE THICKNESS OF I-22 MATERIAL SHOWN ON THE TYPICAL SECTIONS IN ROCK EXCAVATION AREAS. ANY POCKETS IN THE ROCK BELOW THE PLAN SUBGRADE ELEVATION SHALL DRAIN EITHER LONGITUDINALLY OR Laterally AND ALL IRREGULARITIES IN THE ROCK BELOW THIS ELEVATION SHALL BE FILLED WITH I-22 MATERIAL AT NO ADDITIONAL COST TO THE STATE.

I-22 UNDER APPROACH SLABS
THE AREA BETWEEN THE BOTTOM SURFACE OF THE SUBGRADE AND THE BOTTOM OF THE APPROACH SLAB SHALL BE BACK FILLED WITH ITEM I-22 SUBBASE.

I-22 SUBBASE GRADING A AND B AS PER PLAN
MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS of grading "A" or "B" Sec. I-22.02 except that for either grading, no more than 10% of the material shall pass a No. 200 sieve at the time of incorporation into the work.

MAINTENANCE OF TRAFFIC
STA. 607 TO S. R. 603. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. TEMPORARY RUN-AROUNDS SHALL BE PROVIDED AS DETAILED ON SHEET 5 OF THE PLANS.

S. R. 603. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES SOUTH OF U. S. R. 30 AND A TEMPORARY RUN-AROUND WILL BE CONSTRUCTED AS DETAILED ON SHEET 198 OF THE PLANS.

ONE-WAY TRAFFIC TO BE MAINTAINED THROUGH THE S. R. 603 INTERSECTION DURING ACTUAL CONSTRUCTION.

KOOGLE ROAD. Two-way traffic shall be maintained north of U.S.R. 30 to the Service Area at all times using existing pavement, S-15 and I-4. Koogle Rd. south of U.S.R. 30 shall be closed to through traffic during construction.

CRIDER ROAD. ONE-WAY TRAFFIC TO BE MAINTAINED DURING THE PERIOD THAT THE CULVERTS ARE INSTALLED THROUGH CRIDER ROAD. A TEMPORARY RUN-AROUND WILL BE CONSTRUCTED AS DETAILED ON SHEET 26 OF THESE PLANS, USING I-4 AND S-15 MATERIAL.

BEFORE CONSTRUCTION OF THIS RUN-AROUND, THE TWO-FOOT LAYER OF GRANULAR BORROW SHALL BE PLACED, AND THE TEMPORARY-RUN-AROUND SHALL BECOME A PART OF THE EMBANKMENT FOR THIS AREA AFTER IT IS NO LONGER REQUIRED FOR TRAFFIC.

TOWNSHIP ROAD 69. TWO-WAY TRAFFIC TO BE MAINTAINED AT ALL TIMES EXCEPT FOR THE PERIOD THAT THE RELOCATED TOWNSHIP ROAD 69 IS UNDER CONSTRUCTION. DURING THE CONSTRUCTION OF THIS ROAD, TOWNSHIP ROAD 69 WILL BE CLOSED TO TRAFFIC FOR A TIME, NOT LONGER THAN FOUR (4) CONSECUTIVE WEEKS.

TOWNSHIP ROAD 134. TWO-WAY TRAFFIC SHALL BE MAINTAINED ON TOWNSHIP ROAD 134 AT ALL TIMES EXCEPT DURING THE TIME THAT THE U. S. R. 30 STRUCTURE IS UNDER CONSTRUCTION.

THIS ROAD WILL BE CLOSED TO TRAFFIC DURING CONSTRUCTION OF THE STRUCTURE, FOR A PERIOD OF NOT LONGER THAN (3) CONSECUTIVE MONTHS.

COUNTY ROAD 71. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITH A CLASS "B" RUN-AROUND BEING CONSTRUCTED AS SHOWN ON SHEET 216 OF THE CONSTRUCTION PLANS.

COUNTY ROAD 138. TWO-WAY TRAFFIC SHALL BE MAINTAINED ON COUNTY ROAD 138 UNTIL SUCH TIME AS THE RECONSTRUCTION OF THIS ROAD IS UNDER WAY. THE RECONSTRUCTION OF COUNTY ROAD 138 AND THE CONSTRUCTION OF THE U. S. R. 30 STRUCTURE SHALL BE CARRIED ON SIMULTANEOUSLY, IN ORDER THAT COUNTY ROAD 138 WILL NOT BE CLOSED TO TRAFFIC FOR A PERIOD OF NOT LONGER THAN THREE (3) CONSECUTIVE MONTHS.

STATE ROUTE 511. TWO-WAY TRAFFIC IS TO BE MAINTAINED AT ALL TIMES EXCEPT DURING THE ACTUAL CONSTRUCTION AT THE S. R. 511 INTERSECTION AND U.S.R. 30.

DURING THIS CONSTRUCTION PERIOD, ONE-WAY TRAFFIC SHALL BE MAINTAINED.

TOWNSHIP ROAD 135. TOWNSHIP ROAD 135 WILL BE CLOSED TO TRAFFIC UNTIL THE COMPLETION OF CONSTRUCTION ON TOWNSHIP ROAD 135 AND COUNTY ROAD 71.

PRIVATE DRIVES. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE TEMPORARY DRIVES, IF NEEDED, TO ALLOW ACCESS TO ALL PROPERTY OWNERS DURING CONSTRUCTION. QUANTITIES OF S-15 (TRAFFIC BOUND SURFACE COURSE) AND I-4 (CALCIUM CHLORIDE) HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER IN MAINTENANCE OF LOCAL TRAFFIC PER SEC. G-4.05

MAINTENANCE OF TRAFFIC CONTINUED

FLAGMAN. DURING THE HOURS OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH FLAGMAN, AS OUTLINED IN GENERAL REQUIREMENTS OF ITEM I-3, MAINTAINING TRAFFIC, AT ALL LOCATIONS WHERE ONE-WAY TRAFFIC IS BEING MAINTAINED.

LIGHTS, SIGNS, AND BARRICADES
THE CONTRACTOR SHALL, IN CONJUNCTION WITH THE GENERAL REQUIREMENTS OF ITEM I-3, MAINTAINING TRAFFIC, PERFORM THE FOLLOWING ON THIS PROJECT:

- (a) FURNISH, ERECT AND MAINTAIN MOVEABLE GATES ON INTERSECTING ROADS CLOSED TO TRAFFIC AT ALL POINTS, WHERE LOCAL TRAFFIC MOVEMENT TERMINATES.
- (b) FURNISH, ERECT AND MAINTAIN LIGHTS, SIGNS AND BARRICADES AT THE WORK LIMITS ON ALL INTERSECTING ROADS WHICH REMAIN OPEN TO TRAFFIC.
- (c) FURNISH, ERECT AND MAINTAIN STANDARD 48" x 30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.
 1. Koogle Road at locations indicated on sheet no. 3
 2. TOWNSHIP ROAD 69 AT ITS INTERSECTION WITH TOWNSHIP ROAD 68 AND COUNTY ROAD 239.
 3. TOWNSHIP ROAD 134 AT ITS INTERSECTION WITH S. R. 30 AND TOWNSHIP ROAD 69.
 4. COUNTY ROAD 138 AT ITS INTERSECTION WITH TOWNSHIP ROAD 68 AND S. R. 30.
 5. TOWNSHIP ROAD NO. 135 AT ITS INTERSECTION WITH S. R. 30 AND COUNTY ROAD 71.

LIGHTS, BARRICADES AND DANGER AND WARNING SIGNS SHALL BE PROVIDED AT LOCATIONS SHOWN ABOVE IN ACCORDANCE WITH ITEM I-3. BARRICADES AND GATES SHALL BE AS DETAILED ON STANDARD CONSTRUCTION DRAWING G-7.07. SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". PAYMENT FOR FURNISHING, ERECTING, MAINTAINING AND REMOVING BARRICADES, GATES, LIGHTS, SIGNS AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM I-3, MAINTAINING TRAFFIC.
AN ESTIMATED AMOUNT OF S-15 (TRAFFIC COMPACTED SURFACE COURSE) AND I-4 (CALCIUM CHLORIDE) HAS BEEN PROVIDED FOR THE MAINTENANCE OF TRAFFIC.

ROAD	S-15	I-4
KOOGLE ROAD	113 CU. YDS.	2.3 TONS
S. R. 603	25 CU. YDS.	1.0 TONS
S. R. 511	25 CU. YDS.	1.0 TONS
PRIVATE DRIVES	50 CU. YDS.	1.0 TONS
	213 CU. YDS.	5.3 TONS

Reinforced Ends on Corrugated Metal Pipe
Reinforced ends will be required on all corrugated metal Class F-4, Sec. M-6.4(G) pipe for driveways and underdrains if the pipe ends are unprotected by headwalls, catch basins, or manholes.

Sealing of Pipe Joints
Where connections are made between rigid and flexible pipe sections or between pipe sections of different kind or type of end fabrication whether required by the plans, arising from permissible use of optional materials, or encountered in connection to existing facilities, the joint shall be sealed by means of a Class "E" concrete collar having a minimum thickness of 6 inches and a minimum length of 12 inches. Payment for sealing as described above shall be included in the unit price bid for the pertinent pipe item.

Federal Aid Construction Identification Signs
The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid Construction Identification Signs at each of the following locations:

1. Right of Sta. 607+00 U.S.R. 30
2. Right of Sta. 9+00 S.R. 511
3. Left of Sta. 21+00 S.R. 511

Sign details shall be as specified on Standard Drawing FAGI-1, "Code N-54(1)-96(2)".

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

CALCULATIONS

U.S.R. 30 & SIDE ROADS EXCLUDING KOOGLER ROAD INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	14 325
2	OHIO	F-1072(4) I-71-4(24)178	

RIC-30-9.28
ASD-30-0.00

	TOTAL	UNIT
T-71 9" REINFORCED P.C. CONCRETE PAVEMENT		
LEFT PAVEMENT		
Sta. 607+00 To Sta. 613+77.08 = 677.08 Lin. Ft.		
Sta. 613+77.08 To Sta. 676+08.55 Bk. = 6039.35 " "		
Sta. 670+00 Ah. To Sta. 695+31.75 = 2531.75 " "		
Sta. 1+04.25 To Sta. 4+95.43 Bk. = 391.18 " "		
Sta. 4+89.07 Ah. To Sta. 52+31.68 = 4742.61 " "		
Sta. 54+17.36 To Sta. 149+28.95 = 9511.59 " "		
Sta. 151+30.96 To Sta. 207+00 = 5563.04 " "		
RIGHT PAVEMENT		
Sta. 4+48.16 To Sta. 4+95.43 Bk. = 47.27 Lin. Ft.		
Sta. 4+89.07 Ah. To Sta. 51+57.64 = 4668.57 " "		
Sta. 53+60.36 To Sta. 149+28.95 = 9568.59 " "		
Sta. 151+53.90 To Sta. 207+00 = 5546.10 " "		
Total Length = 49,282.08		
Area = (49,282.08 x 24) ÷ 9 = 131,418.88 Sq. Yds.		
Right Pavt. ~ Sta. 612+98.51 to Sta. 613+60.30 + Sta. 615+52.42 to Sta. 616+37.5 = (146.88 x 24) ÷ 9 = 391.68 " "		
Right Pavt. Sta. 618+74.18 to Sta. 622+94.17 = (419.99 x 24) ÷ 9 = 1119.97 " "		
Deceleration Lane (See Sheet No. 196) = 341.33 " "		
TOTAL AREA For U.S.R. 30 133,272.00 " " Use 133,272 Sq. Yds.		
B-19 9" AGGREGATE BASE COURSE		
RIGHT PAVEMENT, Right Shoulder		
Sta. 611+27.11 To Sta. 623+05 = 777.83 Lin. Ft.		
Sta. 623+05 To Sta. 624+76.05 = 1355.89 " "		
Sta. 26+06.03 To Sta. 51+70.58 = 2564.55 " "		
Sta. 53+23.30 To Sta. 110+79.98 = 5756.68 " "		
Sta. 112+05.04 To Sta. 149+50.12 = 3745.08 " "		
Sta. 151+30.13 To Sta. 203+43.92 = 5213.79 " "		
Sta. 204+58.11 To Sta. 207+00 = 241.89 " "		
Total Length = 20,155.71 Lin. Ft.		
RIGHT PAVEMENT, Left Shoulder		
Sta. 611+27.11 To Sta. 613+27 = 220.99 Lin. Ft.		
Sta. 613+27 To Sta. 623+94.17 = 1773.85 " "		
Sta. 26+06.03 To Sta. 51+53.19 = 2547.16 " "		
Sta. 53+45.91 To Sta. 108+23.32 = 5477.41 " "		
Sta. 111+34.72 To Sta. 149+47.83 = 3713.11 " "		
Sta. 151+27.84 To Sta. 199+00.09 = 4772.25 " "		
Sta. 205+60 To Sta. 207+00 = 140.00 " "		
Total Length = 19,445.69		
LEFT PAVEMENT, Right Shoulder		
Sta. 607+00 To Sta. 613+98.00 = 698.00 Lin. Ft.		
Sta. 615+42.00 To Sta. 659+53.00 + Sta. 663+13.00 To Sta. 676+08.55 Bk. = 5706.55 Lin. Ft.		
Sta. 670+00 Ah. To Sta. 695+36.25 = 2542.67 " "		
Sta. 0+79.75 To Sta. 2+07.75 = 128.00 " "		
Sta. 4+89.08 To Sta. 25+12.91 = 2023.83 " "		
Sta. 28+86.89 To Sta. 52+46.09 = 2359.20 " "		
Sta. 53+81.81 To Sta. 110+63.12 = 5681.31 " "		
Sta. 114+34.52 To Sta. 149+55.02 = 3520.50 " "		
Sta. 151+13.03 To Sta. 202+55.74 = 5142.71 " "		
Total Length = 27,802.77 Lin. Ft.		
LEFT PAVEMENT, Left Shoulder		
Sta. 618+16.00 To Sta. 623+53.21 = 542.21 Lin. Ft.		
Sta. 632+58.21 To Sta. 676+08.55 Bk. = 4350.34 " "		
Sta. 670+00 Ah. To Sta. 695+31.75 = 2520.61 " "		
Sta. 0+79.75 To Sta. 2+35.87 = 155.62 " "		
Sta. 4+18.65 To Sta. 4+25.43 Bk. + Sta. 4+89.07 Ah. To Sta. 25+53.60 = 2,140.31 Lin. Ft.		
Sta. 26+85.86 To Sta. 52+88.60 = 2572.74 " "		
Sta. 54+04.42 To Sta. 110+52.80 = 5648.38 " "		
Sta. 111+77.86 To Sta. 149+52.73 = 3774.87 " "		
Sta. 151+10.74 To Sta. 203+57.63 = 5246.89 " "		
Sta. 204+71.82 To Sta. 207+00 = 228.18 " "		
Total Length = 27,180.15		
Area of 8' Shoulders (20,155.71 + 27,180.15) x 8 ÷ 9 = 42,076.32 Sq. Yds.		
Area of 4' Shoulders (19,445.69 + 27,802.77) x 4 ÷ 9 = 20,999.32 Sq. Yds.		
Total Area = 63,075.64 Sq. Yds. x 9 = 567,680.76 Cu. Yds.		
Volume = 63,075.64 x 9 ÷ 36 = 15,768.91 Cu. Yds.		
TOTAL VOLUME For U.S.R. 30 15,768.91 Cu. Yds. Use 15,769 Cu. Yds.		

	TOTAL	UNIT
T-30 BITUMINOUS PRIME COAT (Rate of Application = 0.40 Gal per Sq. Yd.)		
AREA OF 8' SHOULDERS		
(47,335.86 x 8) ÷ 9 = 42,076.32 Sq. Yds.		
AREA OF 4' SHOULDERS		
(47,248.46 x 4) ÷ 9 = 20,999.32 Sq. Yds.		
AREA OF EXIST. 4' SHOULDERS		
(15,184 x 4) ÷ 9 = 6,748.44 Sq. Yds.		
TOTAL AREA = 69,824.08 Sq. Yds.		
Volume = 69,824.08 x 0.40 = 27,929.63 Gals.		
Total Volume = For U.S.R. 30 27,929.63 Gals. Use 27,930 Gals.		
T-31 BITUMINOUS SURFACE TREATMENT		
BITUMINOUS MATERIAL (Rate of Application = 0.30 Gal. per Sq. Yd.)		
69,824.08 Sq. Yds. x 0.30 = 20,947.22 Gals.		
Total Volume = For U.S.R. 30 20,947.22 Gals. Use 20,947 Gals.		
NO. 6 AGGREGATE (Rate of Application = 0.008 Cu. Yd. per Sq. Yd.)		
69,824.08 Sq. Yds. x 0.008 = 558.59 Cu. Yds.		
Total Volume = For U.S.R. 30 558.59 Cu. Yds. Use 559 Cu. Yds.		
I-22 SUBBASE, GRADING "A" or "B" AS PER PLAN		
RIGHT PAVEMENT ~ RIGHT SHOULDER		
Normal ~ Total Length = 14,272.79 Lin. Ft.		
Volume = 14,272.79 x 4.1668 (End Area) ÷ 27 = 2,202.66 Cu. Yds.		
Deduct for I-1's = 8,978.84 x 0.3440 (End Area) ÷ 27 = -114.40 Cu. Yds.		
Superelevated (High Side) ~ Total Length = 3,632.01 Lin. Ft.		
Volume = 3,632.01 x 3.4702 (End Area) ÷ 27 = 466.81 Cu. Yds.		
Superelevated (Low Side) ~ Total Length = 2,250.91 Lin. Ft.		
Volume = 2,250.91 x 3.7234 (End Area) ÷ 27 = 310.91 Cu. Yds.		
RIGHT PAVEMENT ~ LEFT SHOULDER		
Normal ~ Total Length = 13,686.07 Lin. Ft.		
Volume = 13,686.07 x 1.0000 (End Area) ÷ 27 = 506.89 Cu. Yds.		
Superelevated ~ Total Length = 5,759.62 Lin. Ft.		
Volume = 5,759.62 x 2.0000 ÷ 27 = 426.67 Cu. Yds.		
LEFT PAVEMENT ~ RIGHT SHOULDER		
Normal ~ Total Length = 17,838.78 Lin. Ft.		
Volume = 17,838.78 x 1.0000 ÷ 27 = 660.70 Cu. Yds.		
Superelevated ~ Total Length = 9,964.00 Lin. Ft.		
Volume = 9,964.00 x 2.0000 ÷ 27 = 738.07 Cu. Yds.		
LEFT PAVEMENT ~ LEFT SHOULDER		
Normal ~ Total Length = 16,553.63 Lin. Ft.		
Volume = 16,553.63 x 4.1668 (End Area) ÷ 27 = 2,554.65 Cu. Yds.		
Deduct for I-1's = 11,738.91 x 0.3440 (End Area) ÷ 27 = -149.56 Cu. Yds.		
Superelevated (High Side)		
Length = 2,613.11 Lin. Ft.		
Volume = 2,613.11 x 3.8537 (End Area) ÷ 27 = 373.55 Cu. Yds.		
Length = 2,250.91 Lin. Ft.		
Volume = 2,250.91 x 3.6133 (End Area) ÷ 27 = 301.23 Cu. Yds.		
Superelevated (Low Side)		
Length = 1,954.41 Lin. Ft.		
Volume = 1,954.41 x 4.0000 (End Area) ÷ 27 = 289.54 Cu. Yds.		
Add for I-1's = 1,382.44 x 0.0300 (End Area) ÷ 27 = 1.54 Cu. Yds.		
Length = 3,808.09 Lin. Ft.		
Volume = 3,808.09 x 4.0000 (End Area) ÷ 27 = 567.16 Cu. Yds.		
Deduct for I-1's = 6,198.35 x 0.2706 (End Area) ÷ 27 = -62.12 Cu. Yds.		
LEFT PAVEMENT		
Normal ~ Total Length = 18,697.50 Lin. Ft.		
Volume = 18,697.50 x 12.75 (End Area) ÷ 27 = 8,829.38 Cu. Yds.		
Superelevated ~ Total Length = 10,759.10 Lin. Ft.		
Volume = 10,759.10 x 12.00 (End Area) ÷ 27 = 4,781.82 Cu. Yds.		
Volume for Deceleration Lane (See Sheet No. 196) = 61.52 Cu. Yds.		
Volume under Approach Slabs = 53.25 Cu. Yds.		
RIGHT PAVEMENT		
Normal ~ Total Length = 13,655.14 Lin. Ft. ~ Volume = 13,655.14 x 12.75 (End Area) ÷ 27 = 6,448.26 Cu. Yds.		
Superelevated ~ Total Length = 6,170.34 Lin. Ft. ~ Volume = 6,170.34 x 12.00 (End Area) ÷ 27 = 2,742.37 Cu. Yds.		
Replacement Pavement = 467.87 Lin. Ft.		
Volume = 467.87 x 12.00 (End Area) ÷ 27 = 207.94 Cu. Yds.		
Volume under Approach Slabs = 31.98 Cu. Yds.		
Total Volume For U.S.R. 30 32,227.79 Cu. Yds. Use 32,228 Cu. Yds.		

U.S.R. 30 & SIDE ROADS EXCLUDING KOOGLE ROAD INTERCHANGE

CALCULATIONS CONTINUED		TOTAL	UNIT
E-1 COMPACTED SUBGRADE			
Sta. 607+00 to Sta. 676+08.55 BK. (Left Pavt.)	= 6908.55 Lin. Ft. - 142.12' (Bridge) = 6766.43'		
Sta. 670+00 Ah. to Sta. 695+31.75	" " = 2851.75		
Sta. 0+19.88 to Sta. 4+48.16	" " = 368.01		
Total Length	= 9667.09		
Area = (9667.09 x 36) ÷ 9 =	38,668.36	Sq. Yds.	
Pavement Replacement (Right Pavt.)	616.87 Lin. Ft.		
Area = (616.87 x 24) ÷ 9 =	1644.99	Sq. Yds.	
Sta. 4+48.16 to Sta. 4+95.43 BK. (Right Pavt.)	= 47.27 Lin. Ft.		
Sta. 4+89.07 Ah. to Sta. 7+75	" " = 285.93		
Sta. 7+25 to Sta. 52+19.64	" " = 3494.64		
Sta. 53+63.86 to Sta. 107+50	" " = 5386.14		
Sta. 129+50 to Sta. 149+51.23	" " = 2001.43		
Sta. 151+20.43 to Sta. 184+75	" " = 3354.57		
Sta. 192+25 to Sta. 207+00	" " = 1475.00		
Total Length	= 16044.98		
Area = (16044.98 x 22) ÷ 9 =	128359.84	Sq. Yds.	
Area for Ramp "H"	2510.89		
Area Deceleration Lane (Sta. 601+00 to Sta. 610+81) Left Lane =	341.33		
Extra Area in Intersections	9816.00		
Deduct for Koogle Rd. Interchange (W.B. Lanes)	-1665.67		
Right Pvmt Right Shoulder - Sta. 617+27.17 to Sta. 625+05+777.83 x 8 ÷ 9 =	691.40		
Right Pvmt Left Shoulder - Sta. 613+34.13 to Sta. 613+87 = (32.82 x 4) ÷ 9 =	23.48		
Sta. 615+31 to Sta. 615+74 = (43.00 x 4) ÷ 9 =	19.11		
Sta. 618+74.18 to Sta. 622+94.17 = (419.99 x 4) ÷ 9 =	186.66		
TOTAL AREA FOR U.S.R. 30	178,085.50	Sq. Yds.	
FOR Ramp "H"	2,510.89	Sq. Yds.	
E-11 WATER			
	I-71-4(24)178 Ramp "H"	45	M. Gal.
	For U.S.R. 30	6,275	M. Gal.
L-9 SEEDING AND PROTECTING			
Sta. 607+00 to Sta. 207+00 (U.S.R. 30)	563,172	Sq. Yds.	
Side Roads	49,721		
Channels	17,254		
Total	630,147		
Deduct for Sod	31,337		
Net Total U.S.R. 30	598,810	Sq. Yds.	
	I-71-4(24)178	10,161	Sq. Yds.
L-9 COMMERCIAL FERTILIZER			
U.S.R. 30 - (598,810 + 31,337) x 20/1000 x 20/2000 =	56.71	Tons	
I-71-4(24)178 - (10,161 + 410) x 20/1000 x 20/2000 =	0.95	Tons	
I-9 STONE UNDERDRAINS NO. 2			
Length of Right Pavement Right Shoulder after deductions for I-1, Bridges, Intersections = 4,440 Lin. Ft.			
Number required = 4,440 ÷ 30 = 148 Each			
Length = 148 x 15.75 (Avg. Length) =	2,332.04	Lin. Ft.	
Length of Left Pavement Left Shoulder after deductions for I-1, Bridges, Intersections = 8,280 Lin. Ft.			
Number required = 8,280 ÷ 30 = 276 Each			
Length = 276 x 15.84 (Avg. Length) =	4,371.84	Lin. Ft.	
Total Length For U.S.R. 30	= 6,699.88	Lin. Ft.	
	Use	6,700	Lin. Ft.

I-7 REINFORCED CONCRETE APPROACH SLABS

Number of Approach Slabs = 10 Each
 Area of one Approach Slab = 24 x 25 ÷ 9 = 66.67 Sq. Yds.
 Area = 66.67 x 10 = 666.70 Sq. Yds.
 Number of Modified Approach Slabs = 4 Each
 Area = 117.71 + 129.86 + 125.69 + 100.00 = 473.26 Sq. Yds.
TOTAL AREA = 1,139.96 Sq. Yds.

RIC. - 30 - 9.28
ASD. - 30 - 0.00

CALCULATIONS

KOOGLE ROAD INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072 (A) T-71-A(24)178	16 325

RIC-30-9.28
ASD-30-0.00

<p>T-71 9" REINFORCED CONCRETE PAVEMENT</p> <p>RAMP "A" ACCELERATION LANE SURFACE AREA = 7,318 SQ. FT. RAMP "B" ACCELERATION LANE SURFACE AREA = 7,318 SQ. FT. RAMP "C" ACCELERATION LANE SURFACE AREA = 7,318 SQ. FT. RAMP "D" DECELERATION LANE SURFACE AREA = 7,318 SQ. FT. TOTAL = 29,272 SQ. FT.</p>	<p>T-35 ASPHALT DRIVE COURSE (AS PER PLAN)</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.10 = 121.17 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>T-31 BITUMINOUS SURFACE TREATMENT (CONTINUED)</p> <p>RAMP "A" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "B" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "C" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "D" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. TOTAL = 19,285.24 CU. YDS.</p>	<p>E-11 WATER</p> <p>EMBANKMENT = 77,682 CU. YDS. S-13 = 1,625 CU. YDS. I-22 = 4,094 CU. YDS. VOLUME = 83,401 X 5 + 1000 = 417.01 M. GAL TOTAL = 417.01 M. GALS USE 417 M. GALS</p>
<p>T-35 ASPHALT DRIVE COURSE (AS PER PLAN)</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.10 = 121.17 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>T-30 BITUMINOUS DRIVE COURSE (AS PER PLAN)</p> <p>DRIVE "A" VOLUME = 8,398.00 X 0.40 = 3,359.20 CU. YDS. RAMP "A" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "B" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "C" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. RAMP "D" VOLUME = 12,053.27 X 0.40 = 4,821.31 CU. YDS. TOTAL = 29,836.14 CU. YDS.</p>	<p>L-9 SEEDING AND PROTECTING, AS PER PLAN</p> <p>TOTAL AREA OF SEEDING = 61,409 SQ. YDS. SUBJECT FOR SOD = 3,590 SQ. YDS. NET TOTAL SEEDING = 57,819 SQ. YDS. TOTAL = 57,819 SQ. YDS. USE 57,819 SQ. YDS.</p>	<p>COMMERCIAL FERTILIZER</p> <p>RATE OF APPLICATION = 100 LBS. PER 1000 SQ. FT. TOTAL AREA OF SEEDING AND SODDING = 61,409 SQ. YDS. WEIGHT = 61,409 X 100 X 20 = 1,228,180 LBS. = 5.53 TONS TOTAL = 5.53 TONS USE 5.53 TONS</p>
<p>B-21 WATERPROOFING AND BASE COURSE</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.475 = 577.27 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.475 = 1,543.83 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.475 = 1,543.83 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.475 = 1,543.83 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.475 = 1,543.83 CU. YDS. TOTAL = 6,258.59 CU. YDS.</p>	<p>ITEM 1 - 30 UNDERBENS</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.10 = 121.17 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>ITEM 1 - 30 UNDERBENS</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.10 = 121.17 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>ITEM 1 - 30 UNDERBENS</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.10 = 121.17 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>
<p>I-22 SUBBASE (AS PER PLAN)</p> <p>KOOGLE RD. AREA = 1,211.71 SQ. FT. X 0.5000 = 605.86 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.5000 = 1,624.88 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.5000 = 1,624.88 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.5000 = 1,624.88 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.5000 = 1,624.88 CU. YDS. TOTAL = 6,510.38 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>
<p>B-15 AGGREGATE PAVEMENT</p> <p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>	<p>DRIVE "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "A" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "B" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "C" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. RAMP "D" AREA = 3,249.75 SQ. FT. X 0.10 = 324.98 CU. YDS. TOTAL = 1,446.09 CU. YDS.</p>

INTERCHANGE SUB-SUMMARY

ED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(24)178

17
325

RIC - 30 - 9.28
ASD - 30 - 0.00

ITEM	SHEET NUMBER												ITEM	QUANT.	UNIT	DESCRIPTION	
	16	171	172	178	179	183	186	189	192								
ROADWAY																	
E-1														E-1	78,790	Cu.Yds.	Roadway Excavation, Method "B", as per plan
E-1														E-1	77,682	Cu.Yds.	Embankment
E-1														E-1	93,218	Cu.Yds.	Embankment + 20%
E-1														E-1	24,968	Sq.Yds.	Compacted Subgrade
E-8														E-8	1,005	Sq.Yds.	Removal & Disposal of Existing Pavement as per plan
E-8														E-8	100	Lin.Ft.	Removal & Disposal of Existing Paved Gutter
E-11														E-11	417	M.Gals.	Water
I-15														I-15	3,987.5	Lin.Ft.	Guard Rail, Steel Beam, Standard Type Deep
L-9														L-9	57,819	Sq.Yds.	Seeding and Protecting, as per plan
L-9														L-9	5.53	Tons	Commercial Fertilizer 12-12-12
L-10														L-10	3,590	Sq.Yds.	Grading
DRAINAGE																	
E-3														E-3	789	Cu.Yds.	Channel Excavation
E-12														E-12	158	Lin.Ft.	Pipe Removed, Over 15"
I-1														I-1	146	Lin.Ft.	15" Pipe, Class A-1, Sec.M-6.6(c)
I-1														I-1	96	Lin.Ft.	18" Pipe, Class A-1, Sec.M-6.6(c)
I-1														I-1	112	Lin.Ft.	18" Pipe, Class A-1, Sec.M-6.6(d)
I-1														I-1	158	Lin.Ft.	24" Pipe, Class A-1, Sec.M-6.6(d) or Sec.M-6.8(b)
I-1														I-1	82	Lin.Ft.	24" Pipe, Class A-1, Sec.M-6.6(c)
I-1														I-1	120	Lin.Ft.	24" Pipe, Class A-1, Sec.M-6.6(d)
I-1														I-1	106	Lin.Ft.	42" Pipe, Class A-1, Sec.M-6.6(d)
I-1														I-1	60	Lin.Ft.	8" Pipe, Class F-4, Sec.M-6.4(c)
I-1														I-1	92	Lin.Ft.	12" Pipe, Class F-4
I-1														I-1	72	Lin.Ft.	15" Pipe, Class F-4
I-1														I-1	57	Lin.Ft.	18" Pipe, Class F-4
I-1														I-1	28	Lin.Ft.	8" Pipe, Class H-2
I-1														I-1	998	Lin.Ft.	6" Pipe, Class I-3
I-1														I-1	288	Lin.Ft.	12" Pipe, Class J-1
I-1														I-1	206	Lin.Ft.	15" Pipe, Class J-1
I-1														I-1	100	Lin.Ft.	18" Pipe, Class J-1, Sec.M-6.6(b) or Sec.M-6.8(b)
I-1														I-1	196	Lin.Ft.	21" Pipe, Class J-1
I-1														I-1	62	Lin.Ft.	27" Pipe, Class J-1
I-2														I-2	55.2	Cu.Yds.	Masonry
I-5														I-5	4	Each	6" Pipe Specials, Class I-3
I-5														I-5	1	Each	8" Pipe Specials, Class H-2
I-8														I-8	2	Each	Standard No. 2-6 Median Inlets
I-8														I-8	1	Each	Standard No. 2-8 Median Inlet
I-8														I-8	1	Each	Standard No. 2-10 Median Inlet
I-8														I-8	8	Each	Standard No. 2-2-A Catch Basins
I-8														I-8	1	Each	Standard No. 2-3 Catch Basin, Modified as per plan
I-8														I-8	1	Each	Standard No. 2-4 Catch Basin, Modified as per plan
I-8														I-8	2	Each	Standard No. 6 Catch Basins
I-8														I-8	2	Each	Standard No. 1 Manholes
I-8														I-8	1	Each	Standard No. 1-A Manhole
I-9														I-9	2,670	Lin.Ft.	Stone Underdrains No. 2
I-10														I-10	99	Cu.Yds.	Dumped Rock Channel Protection
I-10														I-10	103	Sq.Yds.	Riprap, Using 6" Reinforced Concrete, as per plan
I-14														I-14	120	Lin.Ft.	Standard Type 1 Paved Gutter, Modified, Type C, as per plan
I-14														I-14	40	Lin.Ft.	Standard Type 1 Paved Gutter, Modified, Type G, as per plan
I-14														I-14	10	Lin.Ft.	Standard Type 1 Paved Gutter, Modified, Type H, as per plan
I-14														I-14	10	Lin.Ft.	Standard Type 1 Paved Gutters, Modified, Type I, as per plan
PAVEMENT																	
B-19														B-19	1625	Cu.Yds.	Aggregate Base Course
B-21														B-21	2031	Cu.Yds.	Waterproofed Aggregate Base Course
B-35														B-35	479	Cu.Yds.	Asphaltic Concrete Leveling Course (85-100)
T-30														T-30	2,744	Gals.	Bituminous Prime Coat, Sec.M-5.7, RT-2 or RT-3
T-30														T-30	5	Gals.	Bituminous Tack Coat, Sec.M-5.5, M-5.2 or RS-1 or Sec.M-5.2, PC-1 or PC-2, as per Sec.T-30.02
T-31														T-31	1778	Gals.	Bituminous Surface Treatment, Bituminous Material, Sec.M-5.7, RT-8 or RT-9, or Sec.M-5.12 CBAE-3
T-31														T-31	48	Cu.Yds.	Bituminous Surface Treatment, No. 6 Aggregate
T-35														T-35	436	Cu.Yds.	Asphaltic Concrete Surface Course Type "C" (85-100)
T-71														T-71	4028	Sq.Yds.	3" Reinforced Portland Cement Concrete Pavement
I-12														I-12	676	Lin.Ft.	Standard Type 6 Concrete Curb
I-12														I-12	214	Lin.Ft.	Standard Type 7 Concrete Curb
I-12														I-12	252	Lin.Ft.	Standard Type 8 Concrete Curb
I-21														I-21	287.3	Sq.Yds.	Portland Cement Concrete Median Pavement
I-22														I-22	4,094	Cu.Yds.	Subbase, Grading "A" or "B", as per plan

SUMMARY OF TABLES

RIC-30-9.28
ASD-30-0.00

From Sheet No.	I-1 Pipe, Class A-1										I-1 Pipe, Class J-1										I-1 Pipe, Class C-1										I-1 Pipe, Class E-1										I-1 Pipe, Class F-1										I-1 Pipe, Class F-4										I-2										I-5 Pipe Specials										I-1										I-7										I-8										From Sheet No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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"		4404"		4410"		4416"		4422"		4428"		4434"		4440"		4446"		4452"		4458"		4464"		4470"		4476"		4482"		4488"		4494"		4500"		4506"		4512"		4518"		4524"		4530"		4536"		4542"		4548"		4554"		4560"		4566"		4572"		4578"		4584"		4590"		4596"		4602"		4608"		4614"		4620"		4626"		4632"		4638"		4644"		4650"		4656"		4662"		4668"		4674"		4680"		4686"		4692"		4698"		4704"		4710"		4716"		4722"		4728"		4734"		4740"		4746"		4752"		4758"		4764"		4770"		4776"		4782"		4788"		4794"		4800"		4806"		4812"		4818"		4824"		4830"		4836"		4842"		4848"		4854"		4860"		4866"		4872"		4878"		4884"		4890"		4896"		4902"		4908"		4914"		4920"		4926"		4932"		4938"		4944"		4950"		4956"		4962"		4968"		4974"		4980"		4986"		4992"		4998"		5004"		5010"		5016"		5022"		5028"		5034"		5040"		5046"		5052"		5058"		5064"		5070"		5076"		5082"		5088"		5094"		5100"		5106"		5112"		5118"		5124"		5130"		5136"		5142"		5148"		5154"		5160"		5166"		5172"		5178"		5184"		5190"		5196"		5202"		5208"		5214"		5220"		5226"		5232"		5238"		5244"		5250"		5256"		5262"		5268"		5274"		5280"		5286"		5292"		5298"		5304"		5310"		5316"		5322"		5328"		5334"		5340"		5346"		5352"		5358"		5364"		5370"		5376"		5382"		5388"		5394"		5400"		5406"		5412"		5418"		5424"		5430"		5436"		5442"		5448"		5454"		5460"		5466"		5472"		5478"	

GENERAL

SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072(4) I-71-4(24)178	21 325

RIC. -30-9.28
ASD. -30-0.00

TYPE CODE 7221

ITEM No.	I-71-4 (24-178) STATE	100% QUANT.	TOTAL QUANT.	UNIT	DESCRIPTION
ROADWAY					
E-1	7,689	1,597,887	1,604,975	Cu.Yds.	Roadway Excavation, Method "B", as per plan
E-1	2,511	206,809	206,809	Sq.Yds.	Compacted Subgrade
E-4	2,100	206,709	206,709	Cu.Yds.	Borrow using Granular Material, as per plan.
E-4		6,409	6,409	Cu.Yds.	Borrow using Granular Material, as per plan, including the Cost of Excavation
E-8		7,274	7,274	Sq.Yds.	Removal & Disposal of Existing Pavement, as per plan.
E-8		259	259	Lin.Ft.	Removal & Disposal of Existing Curb and Gutter
E-8		100	100	Lin.Ft.	Removal & Disposal of Existing Paved Gutter
E-9		Lump	Lump	Lump	Removal of Trees and Stumps
E-11	45	6,692	6,737	M. Gal.	Water
E-12		207	207	Lin.Ft.	Pipe Removed, 15" and under
E-12		220	220	Lin.Ft.	Pipe Removed, over 15"
I-8		36	36	Each	Centerline Reference Monuments, as per plan
I-8		42	42	Each	Standard Monument Assemblies
I-15	50	2883	2,933	Lin.Ft.	Guard Rail Removed and Stored, as per plan.
I-15	275	700	975	Lin.Ft.	Guard Rail Removed and Rebuilt
I-15		2,110.14	2,110.14	Lin.Ft.	Guard Rail, Steel Beam, Standard Type (Deep)
I-15		325	325	Lin.Ft.	Guard Rail, Steel Beam, Barrier Type (Deep)
I-15		650	650	Lin.Ft.	Guard Rail, Wire Cable Type, Three Cables
I-15		1,200	1,200	Lin.Ft.	Temporary Guard Rail, as per plan
I-16		2	2	Each	Catch Basins Abandoned
I-1		12,615	12,615	Cu.Yds.	Topsoil Stockpiled
I-3		16,733	16,733	Cu.Yds.	Placing Stockpiled Topsoil
L-9	9,370	665,420	666,790	Sq.Yds.	Seeding and Protecting, as per plan
L-9	0.95	63.19	63.19	Tons.	Commercial Fertilizer, (12-12-12)
L-10	470	34,434	34,738	Sq.Yds.	Sodding
L-10		539	539	Sq.Yds.	Sodding for Special Berm and Slope Protection
L-120		9,469	9,469	Sq.Yds.	Jute Matting
S-25	37		37	Lin.Ft.	4" Asbestos Cement Conduit, Sec. M-206.14
S-66-RA-1		102	103	Hours	Compaction using Heavy Pneumatic Tired Roller
S-15		Lump	Lump	Lump	Temporary Run-around Roads, Class "A"
S-15		Lump	Lump	Lump	Temporary Run-around Roads, Class "B"
S-15		Lump	Lump	Lump	Temporary Run-around Road
S-15		308	308	Cu.Yds.	Furnishing and Placing Aggregate for Traffic Compacted Surface Course
I-4		6.3	6.3	Tons.	Calcium Chloride for Dust Control
DRAINAGE					
I-1		106	106	Lin.Ft.	42" Class A-1 Pipe, Sec. M-6.6 (d)
I-1		57	57	Lin.Ft.	18" Class F-4 Pipe
I-1		100	100	Lin.Ft.	18" Class J-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-1		196	196	Lin.Ft.	21" Class J-1 Pipe
I-1		62	62	Lin.Ft.	27" Class J-1 Pipe

TYPE CODE 7221

ITEM No.	I-71-4 (24-178) STATE	100% QUANT.	TOTAL QUANT.	UNIT	DESCRIPTION
DRAINAGE CONTINUED					
I-1		96	96	Lin.Ft.	78" Class A-1 Pipe, Sec. M-6.6 (c)
I-1		112	112	Lin.Ft.	18" Class A-1 Pipe, Sec. M-6.6 (d)
E-3		10,255	10,255	Cu.Yds.	Channel Excavation
I-1		43	43	Lin.Ft.	15" Class A-1 Pipe
I-1		158	158	Lin.Ft.	24" Class A-1 Pipe, Sec. M-6.6 (a) or Sec. M-6.8 (b)
I-1		78	78	Lin.Ft.	24" Class A-1 Pipe, Class A-1, Sec. M-6.6 (c)
I-1		200	200	Lin.Ft.	24" Class A-1 Pipe, Class A-1, Sec. M-6.6 (c)
I-1		210	210	Lin.Ft.	24" Class A-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-1		422	422	Lin.Ft.	30" Class A-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-1		296	296	Lin.Ft.	30" Class A-1 Pipe, Class A-1, Sec. M-6.6 (d) 10 Gage
I-1		258	258	Lin.Ft.	30" Class A-1 Pipe, Sec. M-6.6 (a) or Sec. M-6.8 (b)
I-1		120	120	Lin.Ft.	24" Class A-1 Pipe, Sec. M-6.6 (d)
I-1		160	160	Lin.Ft.	36" Class A-1 Pipe, Sec. M-6.6 (a) or Sec. M-6.8 (b)
I-1		146	146	Lin.Ft.	15" Class A-1 Pipe, Sec. M-6.6 (c)
I-1		210	210	Lin.Ft.	42" Class A-1 Pipe, Class A-1, Sec. M-6.6 (a)
I-1		282	282	Lin.Ft.	42" Class A-1 Pipe, Class A-1, Sec. M-6.6 (d) 8 Gage
I-1		192	192	Lin.Ft.	42" Class A-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (d)
I-1		11,118	11,118	Lin.Ft.	6" Class I-3 Pipe, Sec. M-6.4 (h)
I-1		40	40	Lin.Ft.	48" Class A-1 Pipe, Class A-1, Sec. M-6.6 (b)
I-1		298	298	Lin.Ft.	72" Class A-1 Pipe, Class A-1, Sec. M-6.4 (g) 10-8 Gage
I-1	126		126	Lin.Ft.	15" Class J-1 Pipe, Sec. M-6.6 (c)
I-1	32		32	Lin.Ft.	72" Class A-1 Pipe, Class A-1, Sec. M-6.6 (d)
I-1		136	136	Lin.Ft.	96" Class A-1 Pipe, Class A-1, Sec. M-6.4 (g) 10-8 Gage
I-1		360	360	Lin.Ft.	120" Class A-1 Pipe, Class A-1, Sec. M-6.4 (g) 1-1 Gage
I-1		346	346	Lin.Ft.	144" Class A-1 Pipe, Class A-1, Sec. M-6.4 (g) 3-1 Gage
I-1		649	649	Lin.Ft.	6" Class J-1 Pipe
I-1		774	774	Lin.Ft.	12" Class J-1 Pipe
I-1		1,911	1,911	Lin.Ft.	15" Class J-1 Pipe
I-1		500	500	Lin.Ft.	8" Class J-1 Pipe
I-1		198	198	Lin.Ft.	18" Class J-1 Pipe
I-1		66	66	Lin.Ft.	24" Class J-1 Pipe
I-1		80	80	Lin.Ft.	42" Class J-1 Pipe
I-1		90	90	Lin.Ft.	15" Class J-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-1		440	440	Lin.Ft.	36" Class J-1 Pipe, Sec. M-6.6 (d)
I-1		52	52	Lin.Ft.	30" Class C-1 Pipe
I-1		60	60	Lin.Ft.	36" Class C-1 Pipe, Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-1		266	266	Lin.Ft.	36" Class E-1 Pipe, Sec. M-6.6 (a) or Sec. M-6.8 (a)
I-1		941	941	Lin.Ft.	12" Class E-1 Pipe
I-1		2,828	2,828	Lin.Ft.	15" Class E-1 Pipe
I-1		100	100	Lin.Ft.	8" Class E-4 Pipe
I-1		280	280	Lin.Ft.	6" Class F-4 Pipe
I-1		456	456	Lin.Ft.	8" Class F-4 Pipe, Sec. M-6.4 (c)
I-1		192	192	Lin.Ft.	12" Class F-4 Pipe
I-1		624	624	Lin.Ft.	15" Class F-4 Pipe
I-1		98	98	Lin.Ft.	24" Class F-4 Pipe
I-1		44	44	Lin.Ft.	42" Class F-4 Pipe
I-1		52	52	Lin.Ft.	36" x 28" Pipe, Class G-1, Sec. M-6.4 (i)(d)
I-1	830	150	150	Lin.Ft.	24" x 38" Pipe, Class G-1, Sec. M-6.7 (a)
I-1	946	34,274	35,225	Lin.Ft.	6" Class I-3 Pipe
I-1	34,395	250	250	Lin.Ft.	6" Class I-3 Pipe, Sec. M-6.4 (h), as per plan.
I-1		328	328	Lin.Ft.	8" Class H-2 Pipe
I-1		300	300	Lin.Ft.	12" Class H-2 Pipe
I-2	28	433	461	Cu.Yds.	Masonry
I-5		6	6	Each	6" Pipe Specials, Class J-1
I-5		57	57	Each	6" Pipe Specials, Class I-3
I-5		1	1	Each	36" Pipe Special, Class A-1 Sec. M-6.6 (b) or Sec. M-6.8 (b)
I-5		6	6	Each	6" Pipe Specials, Class I-3, Sec. M-6.4 (h)
I-5		8	8	Each	15" Pipe Specials, Class F-4
I-5		5	5	Each	8" Pipe Specials, Class J-1
I-5		5	5	Each	12" Pipe Specials, Class H-2
I-5		5	5	Each	8" Pipe Specials, Class E-4
I-5		5	5	Each	6" Pipe Specials, Class H-2
I-5		5	5	Each	12" Pipe Specials, Class J-1

GENERAL SUMMARY

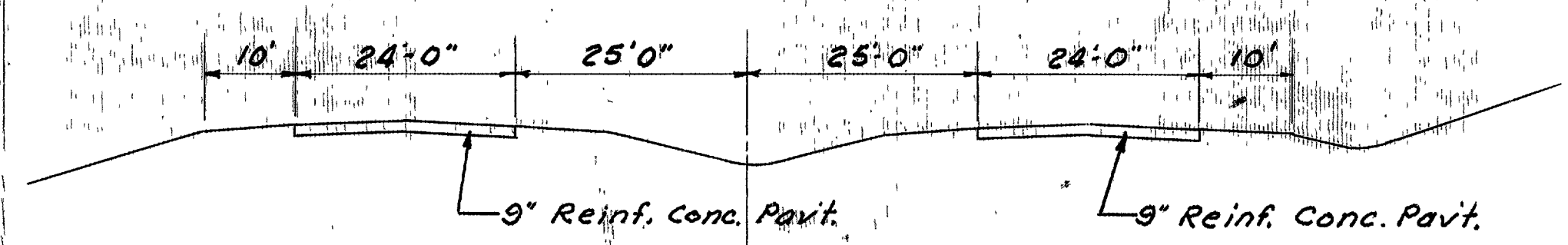
RIC.-30-9.28
ASD.-30-0.00

TYPE CODE 7221										
ITEM No.	I-71-4 (24)178	100% STATE	F-1072(4)	TOTAL QUANT.	UNIT	DESCRIPTION				
DRAINAGE CONT'D.										
I-8			18	18	Each	Standard No. 2-2A Catch Basins				
I-8	1			1	Each	Standard No. 2-2B Catch Basins				
I-8			3	3	Each	Standard No. 2-4 Catch Basins, Modified, as per plan				
I-8			1	1	Each	Standard No. 5 Catch Basins				
I-8			47	47	Each	Standard No. 8 Catch Basins				
I-8			5	5	Each	Standard No. 1 Manholes				
I-8			1	1	Each	Standard No. 2 Manhole, without Drop Pipe				
I-8			2	2	Each	Standard No. 2-6 Median Inlets				
I-8			1	1	Each	Standard No. 2-8 Median Inlet				
I-8			1	1	Each	Standard No. 2-10 Median Inlet				
I-9			15	15	Lin. Ft.	Stone Underdrains No. 1, as per plan				
I-9			10,141	10,141	Lin. Ft.	Stone Underdrains No. 2				
I-10			839	839	Sq. Yds.	Riprap, Using 6" Reinforced Concrete Slab, as per plan				
I-8			1	1	Each	Standard No. 1-A Manhole				
I-10	42		6,802	6,844	Cu. Yds.	Dumped Rock Channel Protection				
I-8			1	1	Each	Standard No. 2-3 Catch Basin, Modified, as per plan				
I-8			2	2	Each	Standard No. 6 Catch Basins				
I-14			589	589	Lin. Ft.	Standard Type 1 Paved Gutter				
I-14			200	200	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "G", as per plan				
I-14			445	445	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "A", as per plan				
I-14			533	533	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "B", as per plan				
I-14	92		1,389	1,481	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "C", as per plan				
I-14			703	703	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "D", as per plan				
I-14			1,049	1,049	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "E", as per plan				
I-14			448	448	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "F", as per plan				
I-14			10	10	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "H", as per plan				
I-14			10	10	Lin. Ft.	Standard Type 1 Paved Gutter, modified, Type "I", as per plan				
S-22	1			1	Cu. Yds.	Removal of Portions of Existing Structure				
PAVEMENT										
B-19	138		20,264	20,264	Cu. Yds.	Aggregate Base Course				
B-21	166		2,037	2,107	Cu. Yds.	Waterproofed Aggregate Base Course				
B-35	2,059		665	665	Cu. Yds.	Asphaltic Concrete Leveling Course (B5-100)				
B-70			5,020	5,020	Sq. Yds.	8" Portland Cement Concrete Base Course				
T-30			511	511	Gal.	Bituminous Tack Coat, Sec. M-5.5, MS-2 or RS-1, or Sec. M-5.2, RS-1 or RS-2, as per Sec. T-30.02				
T-30			34,842	34,842	Gal.	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3				
T-31	18		626	637	Cu. Yds.	Bituminous Surface Treatment, No. 6 Aggregate				
T-35			817	817	Cu. Yds.	Asphaltic Concrete Surface Course, Type C, (B5-100)				
T-70			3,358	3,358	Sq. Yds.	9" Portland Cement Concrete Pavement				
T-71	161		137,309	138,781	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement				
I-7			1,140	1,140	Sq. Yds.	Reinforced Concrete Approach Slabs (T-13)				
I-12			347	347	Lin. Ft.	Standard Type 3-A Curb, modified, as per plan				
I-12	37		252	289	Lin. Ft.	Standard Type 6 Concrete Curb				
I-12	77		217	297	Lin. Ft.	Standard Type 7 Concrete Curb				
I-12	78		676	676	Lin. Ft.	Standard Type 6 Concrete Curb				
I-18	59		51	132	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches				
T-31	250		25,908	25,908	Gal.	Bituminous Surface Treatment - Bituminous Material, Sec. M-5.7, RT-8 or BT-9, or Sec. M-5.12, CBAE-3				
I-22	177		33,785	39,202	Cu. Yds.	Subbase, Grading "A" or "B", as per plan				
I-21	344		288	288	Sq. Yds.	Portland Cement Concrete Median Pavement				

TYPE CODE 7221										
ITEM No.	I-71-4 (24)178	100% STATE	F-1072(4)	TOTAL QUANT.	UNIT	DESCRIPTION				
STRUCTURES, OVER 20 FOOT SPAN										
						RIC-30-1103 L For Quantities See Sheet 274				
						ASD-30-0098 L&R For Quantities See Sheet 281				
						ASD-30-0283 L&R For Quantities See Sheet 291				
						RIC-30-0941 L&R For Quantities See Sheet 270				
					Lump	Lump	Construction Layout Stakes.			
I-3					Lump	Lump	Maintaining Traffic			

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00

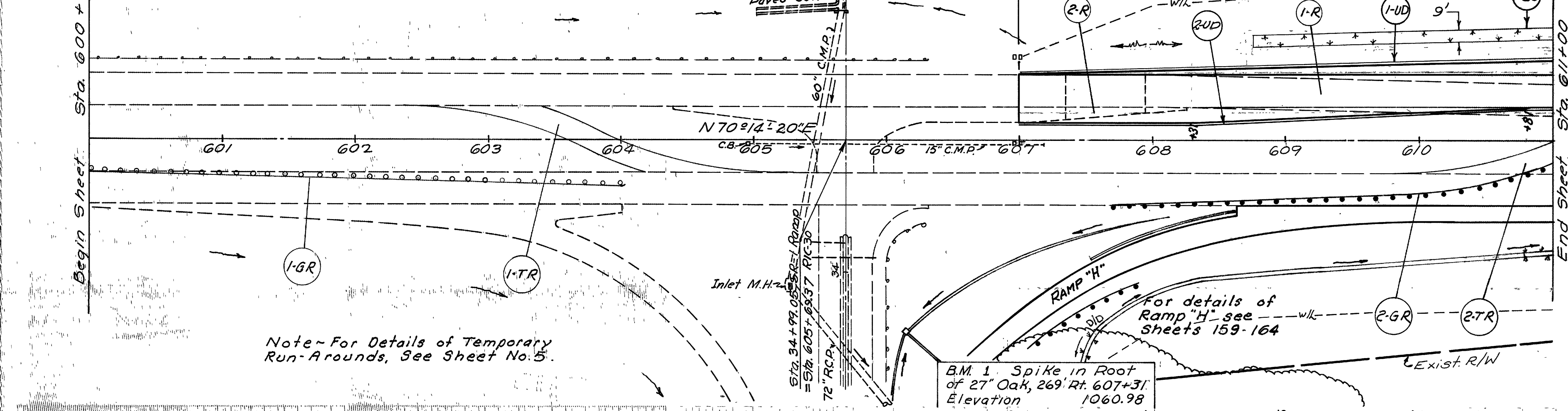
**TYPICAL SECTION
ADJOINING PAVEMENT**



STA. 607+00
BEGIN PROJECT

F-1072(4)

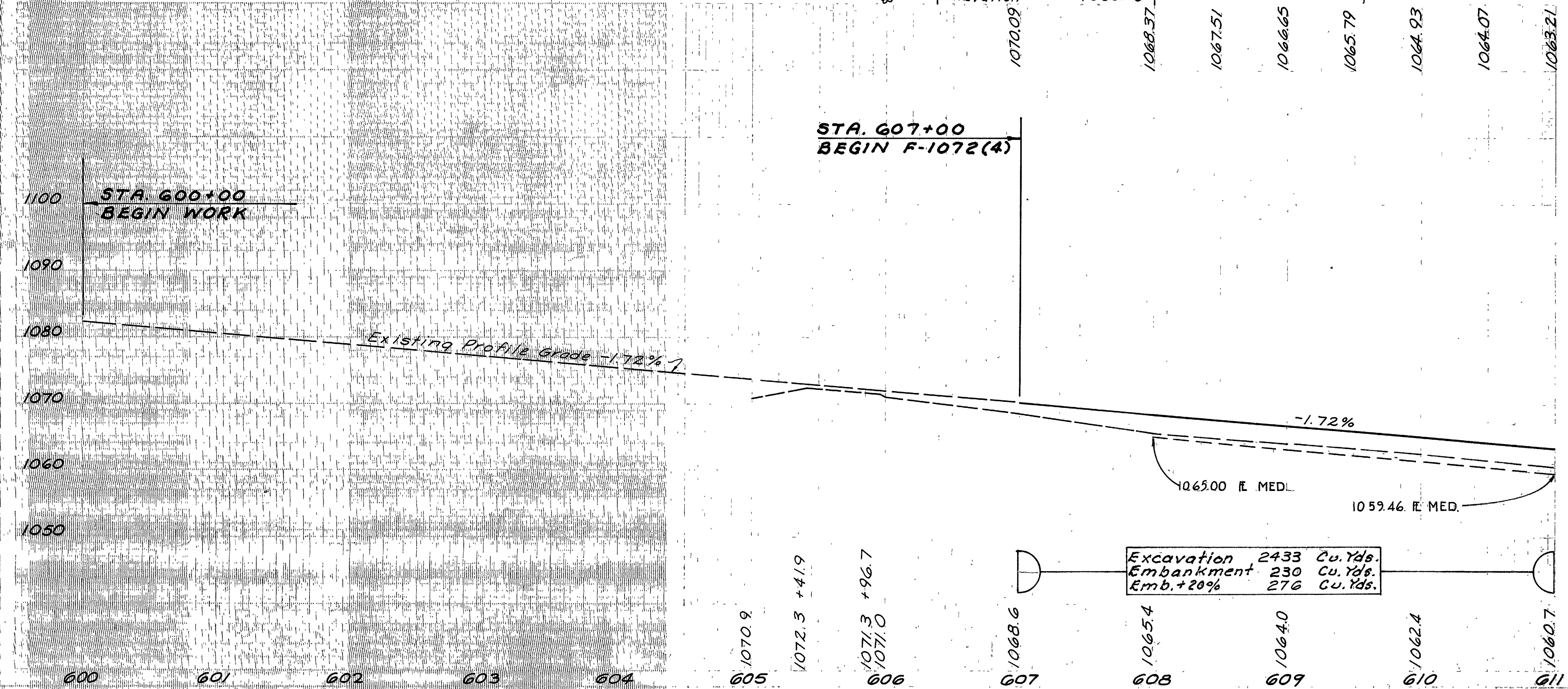
STA. 600+00
BEGIN WORK



For detail of
Deceleration Lane
See Sheet No. 234

Note - For Details of Temporary
Run-Arounds, See Sheet No. 5.

B.M. 1 Spike in Root
of 27" Oak, 269' Rt. 607+31.
Elevation 1060.98



STA. 607+00
BEGIN F-1072(4)

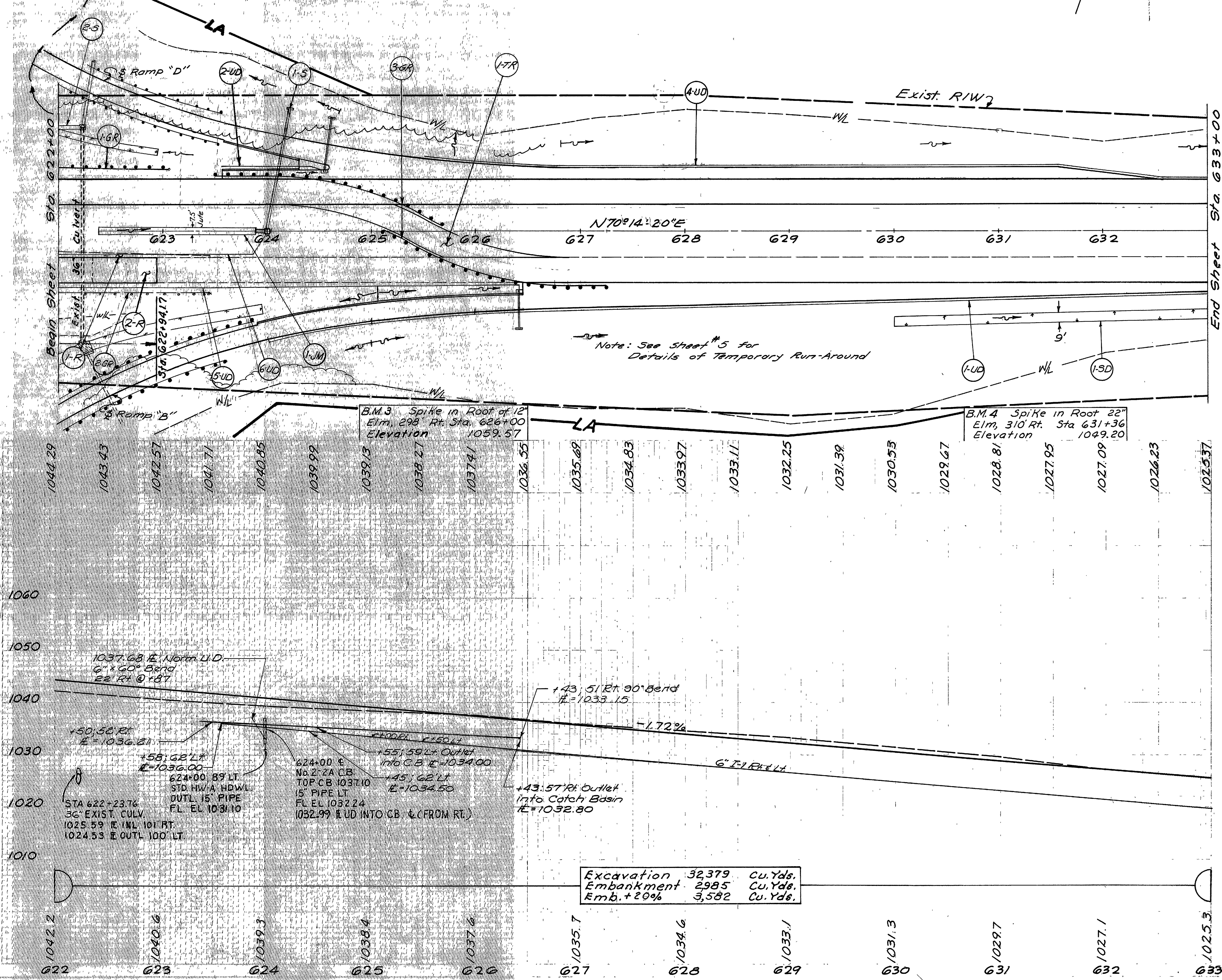
Reference No.	Station		side	E-B	L-10	I-1	I-1
	From	To					
1-R	607+00	611+00	Rt.	1067			
2-R	607+00	608+26	Rt.	98			
1-SD	608+75	611+00	Lt.		225		
1-UD	607+00	611+00	Lt.			400	
2-UD	607+00	611+00	Lt.				400
Sub Total						400	400
Totals				1165	225		800

* As per plan

Reference No.	Side	Station		I-15	S-15
		From	To		
1-GR	Rt	600+00	603+99.87	400	
2-GR	Rt	607+70	611+20	350	
1-TR		602+37	605+25.66		Lump
2-TR		609+81.34	612+70		Lump
Totals				750	Lump

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00

Note: For Ramp "B" & "D"
 Terminal Details See
 Sheet No. 194 & 195



Excavation 32,379 Cu.Yds.
 Embankment 2,985 Cu.Yds.
 Emb. +20% 3,582 Cu.Yds.

Reference No.	Side	Station		Remove & Dispose Exist. Pavt.	I-15	L-10	L-120	I-14	I-8	I-1	I-2
		From	To								
		Sq. Yds.	Lin. Ft.								
1-GR	Lt.	622+00	623+00		100						
1-R	Rt.	622+00	623+50	22							
2-R	Rt.	622+00	622+94.7	251							
1-JM	E	622+38	623+88.3			125					
1-S	Lt.	624+00				3	10	1	118	3.23	
1-SD	Rt.	630+00	633+00	300							
Totals				273	400	3	125	10	1	118	3.23

Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-1	I-15	I-15	S-15	I-1
		From	To									
		Lin. Ft.	Lin. Ft.									
2-GR	Rt.	622+00	623+50									
3-GR	Rt.	623+50	627+25								450	
1-TR	Rt.	624+00	626+88.4									Lump
4-UD	Lt.	625+50	633+00		750							
5-UD	Rt.	622+00	626+43	443		6	1					
6-UD	Rt.	622+00	624+00	201			1	10				
2-S	Lt.	622+00	622+23.76					10				24
2-UD	Lt.	623+50	624+55		77	10		10				
1-UD	Rt.	625+00	633+00		800							
SUB TOTALS				644	1627	16	2	20	150	450	LUMP	24
TOTALS				644	1627	16	2	20	150	450	LUMP	24

Sta. 622+00 to Sta. 633+00

B.M. 5 Spike in Twin Maple, 63' Lt. 635+78 Elevation 1023.43

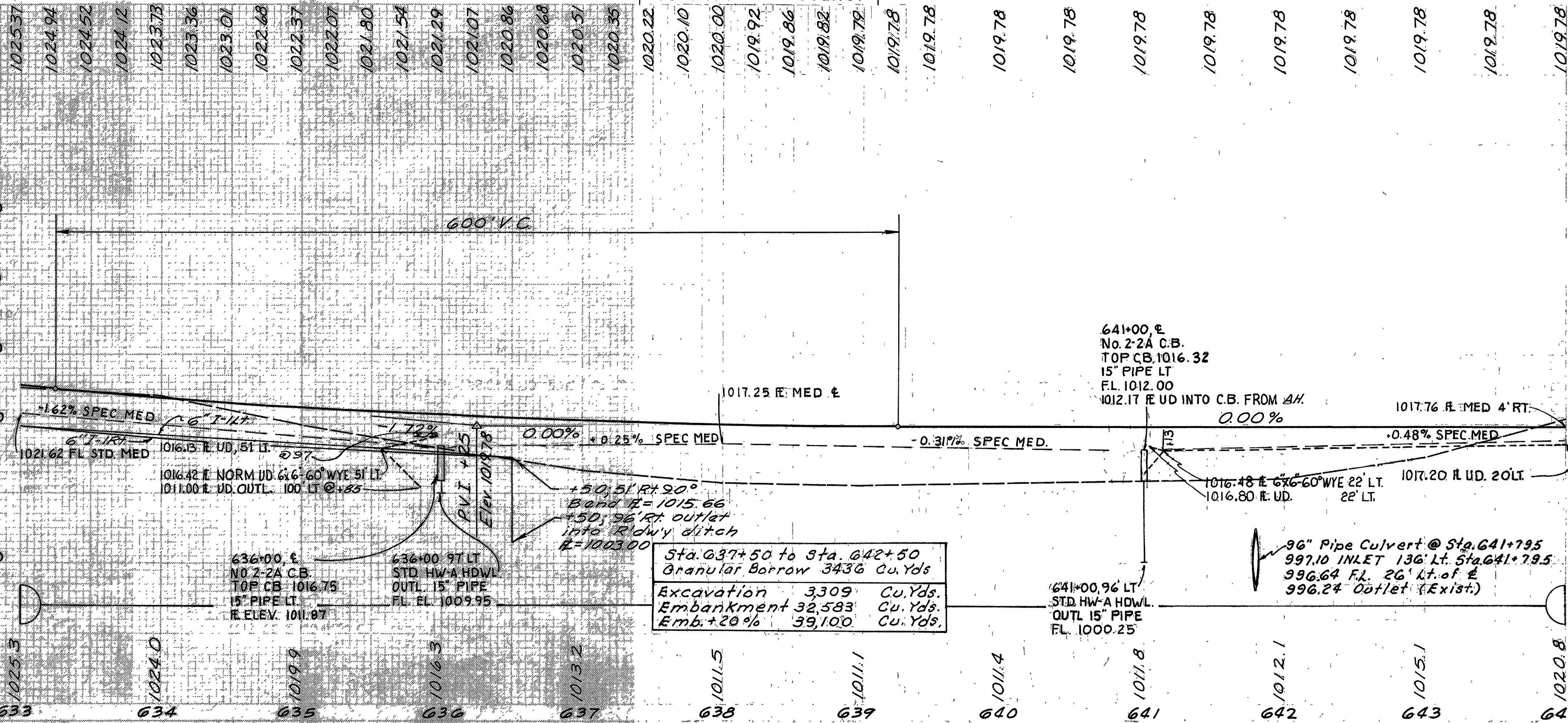
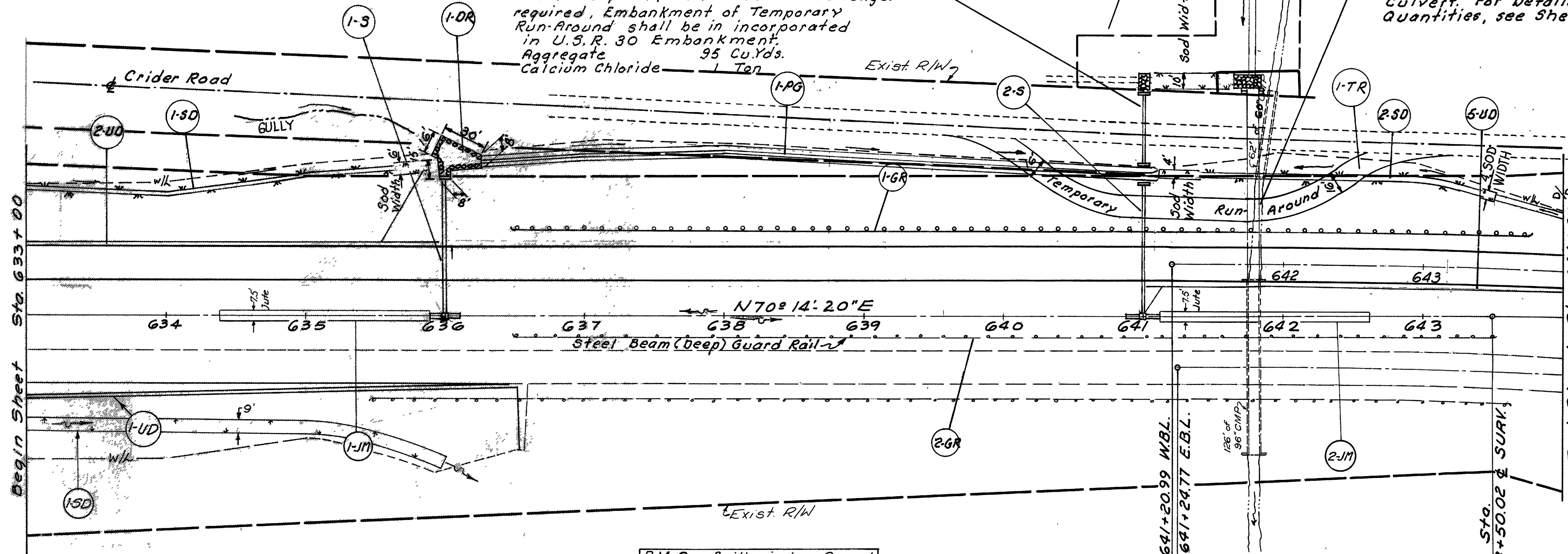
TEMPORARY RUN-AROUND

As soon as Contractor has laid 30" x 96" Pipe to Crider Road, The Contractor shall construct Temporary Run-Around by first placing 2' Blanket of Granular Borrow and then necessary Embankment. After Temporary Run-Around is no longer required, Embankment of Temporary Run-Around shall be incorporated in U.S.R. 30 Embankment. Aggregate 95 Cu.Yds. Calcium Chloride 1 Ton

C-2 Structure Sta. 641+00 Construct 30" x 52' Pipe Culvert, For Details & Quantities, see Sheet 249

C-3 Structure RIC-30-0993 Sta. 641+79.5 Construct 96" x 136' Pipe Culvert, For Details & Quantities, see Sheet 249

RICHLAND & ASHLAND CO.
RIC - 30-928
ASD-30-0.00



B.M. 6 Spike in top Guard Rail Post, 15' Rt. 638+50 Elevation 1021.07

Sta. 637+50 to Sta. 642+50
Granular Borrow 3436 Cu.Yds
Excavation 3309 Cu.Yds.
Embankment 32,583 Cu.Yds.
Emb.+20% 39,100 Cu.Yds.

* As per plan

Reference No.	Side	Station		I-15	I-15	L-10	I-14	I-1	I-14	I-8	I-1	I-2	I-5
		From	To	Guard Rail Steel Beam Deep, Lin.Ft.	Guard Rail Removed & Stored * Lin.Ft.	Sodding Sq.Yds.	Std. Paved Gutter Type 1 Mod. Type 5" Lin.Ft.	Pipe, Class F-4 Lin.Ft.	Paved Gutter Std. Type 1, Mod. Type 5" Lin.Ft.	Catch Basin Std. No. 2-24 Each	Pipe Class J-1 15" Lin.Ft.	Masonry Cu.Yds.	Pipe Special Class F-4 15'-25' Bend Each
1-GR	Lt.	636+50	643+75	725									
2-GR	Rt.	636+50	643+50	700									
1-SD	Lt.	633+00	635+95			202							
2-SD	Lt.	641+10	643+50			167							
1-RG	Lt.	636+25	641+10			162	485						
1-5	Lt.	636+00				6		20	1	97	3.23		
2-5	Lt.	641+00				6		29	20	1	70	3.23	2
1-SD	Rt.	633+00	636+00			300							
Totals				725	700	843	485	29	40	2	167	6.46	2

Reference No.	Side	Station		I-120	I-1	I-1	I-5	I-10	S-15	I-4	S-15	I-1	
		From	To	Jute Matting Sq.Yds.	Pipe, Class I-3 (Deep) 6" Lin.Ft.	6" PIPE Outlet CLASS F-4 Lin.Ft.	Pipe Special Class F-4 6" Bend Each	Dump Rock Channel Protection Cu.Yds.	Furnishing and Placing Aggregate for Traffic Bound Surface Course Cu.Yds.	Calcium Chloride for Dust Control Tons	Runaround Using Traffic Compacted Surface Course Lump	6" Pipe Sec. M.G.(C) Class F-4 Lin. Ft.	
1-UD	Rt.	633+00	636+50	385								10	
2-UD	Lt.	633+00	636+00	344								10	
5-UD	Lt.	641+03	644+00		3/3	10	1						
1-JM	Lt.	634+38.3	635+88.3	125									
2-JM	Lt.	641+11.7	642+61.7	125									
1-DR	Lt.	635+95	636+25					34					
1-TR	Lt.	639+60	643+15						95	1	Lump		
Totals				250	1042	10	2	1	34	95	1	Lump	10

Construction Curve Data

P.I. Sta. 655+43.82
 $\Delta = 64^{\circ}01'00''$ Rt.
 $D_c = 3^{\circ}00'$
 $R = 1909.86'$
 $T = 1193.60'$
 $L = 2133.89'$
 $E = 342.41'$

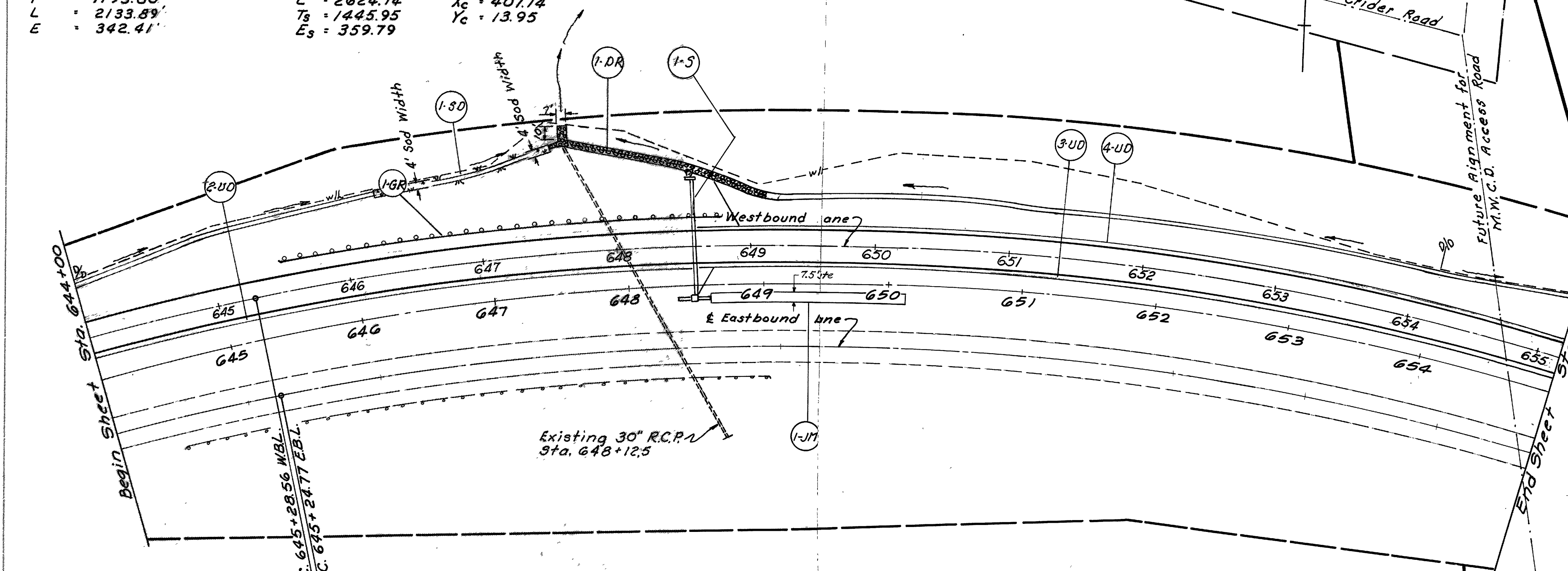
West Bound Lanes Curve Data

P.I. Sta. 655+66.94
 $\Delta = 64^{\circ}01'00''$ Rt.
 $D_c = 2^{\circ}53'17''$
 $R = 1983.86'$
 $L = 2624.14'$
 $T_s = 1445.95'$
 $E_s = 359.79'$
 $L_c = 1809.00'$
 $L_s = 407.57'$
 $\theta_s = 5^{\circ}53'08''$
 $\chi_c = 407.14'$
 $\gamma_c = 13.95'$

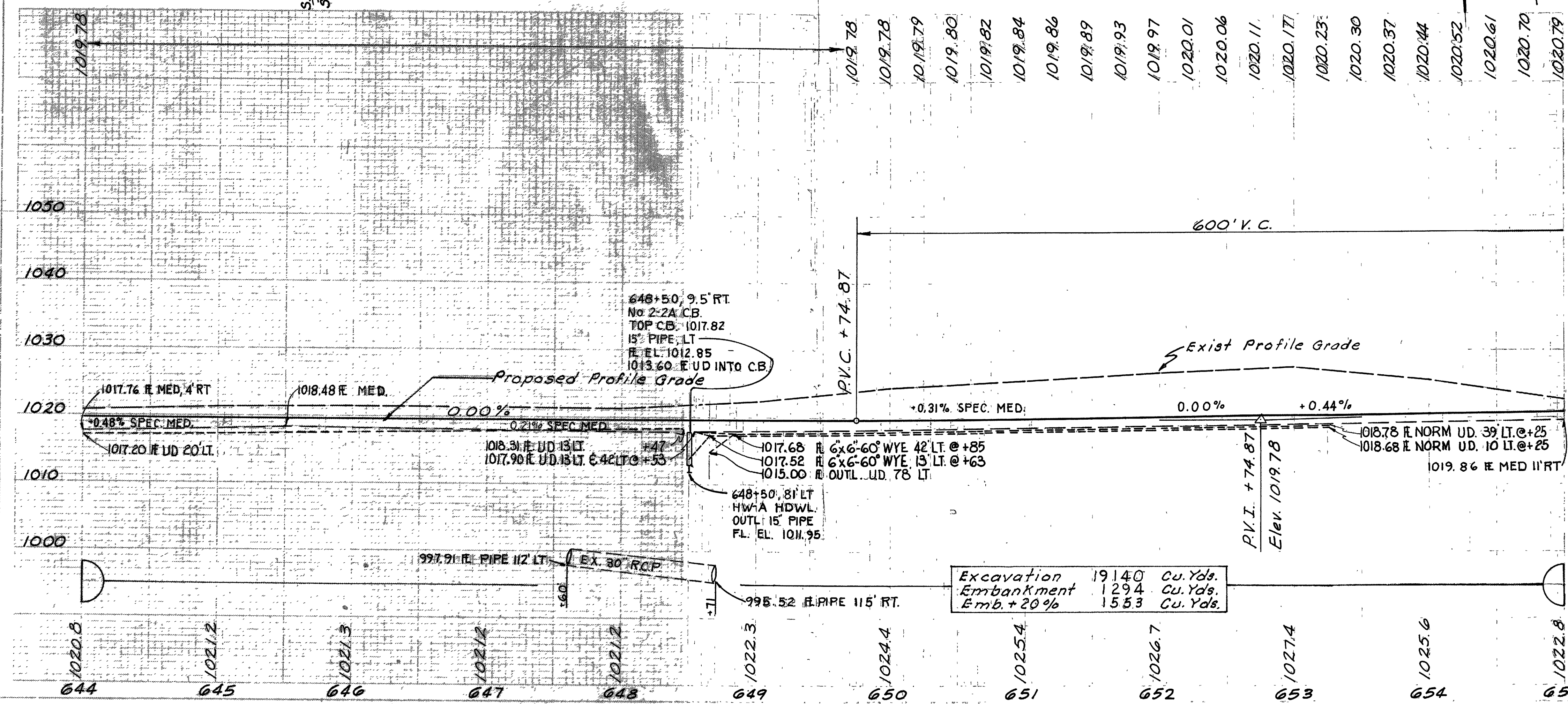
B.M. 8 Spike in 10" I.M.
 258 Lt. Sta. 646+0
 Elevation 101.41

B.M. 9 Spike in Tele. Pole
 257 Lt. Sta. 650+50.5
 Elevation 1031.22

RICHLAND & ASHLAND CO.
 RIC-30-9.28
 ASD-30-0.00



Reference No.	Side	Station		I-15	L-10	I-10	L-120	I-14	I-8	I-1	I-2
		From	To	Guard Rail Steel Beam Deep.	Sodding	Dump Rock Channel Protection	Jute Matting	Paved Gutter Std. Type 1, Mod. Type 'S'	Catch Basin Std. No. 2-24	15" Pipe Class J-1 See Material Specs	Masonry
				Lin. Ft.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Lin. Ft.	Each	Lin. Ft.	Cu. Yds.
1-GR	Lt.	645+50	648+21.4	375							
1-SD	Lt.	646+25	647+50		69						
1-DR	Lt.	647+50	649+00			60					
1-5	Rt-Lt	648+50			6			20	1	90	3.23
1-JM	Rt.	648+61.7	650+11.7				125				
Totals				375	75	60	125	20	1	90	3.23



Reference No.	Side	Station		I-1	I-1	I-5	I-1
		From	To	Pipe Class I-3 (Deep)	8" Pipe Outlet Class F-4	Pipe Spec. Class I-3	8" Pipe Sec. M-4(C) Class F-4
				Lin. Ft.	Lin. Ft.	Each	Lin. Ft.
2-UD	Lt.	644+00	648+47	447			
3-UD	Lt.	648+50	655+00	677	10	1	
4-UD	Lt.	648+53	655+00	663			10
Totals				1787	10	2	10

RICHLAND & ASHLAND CO.
RIC - 30-9.28
ASD - 30-0.00

Construction Curve Data

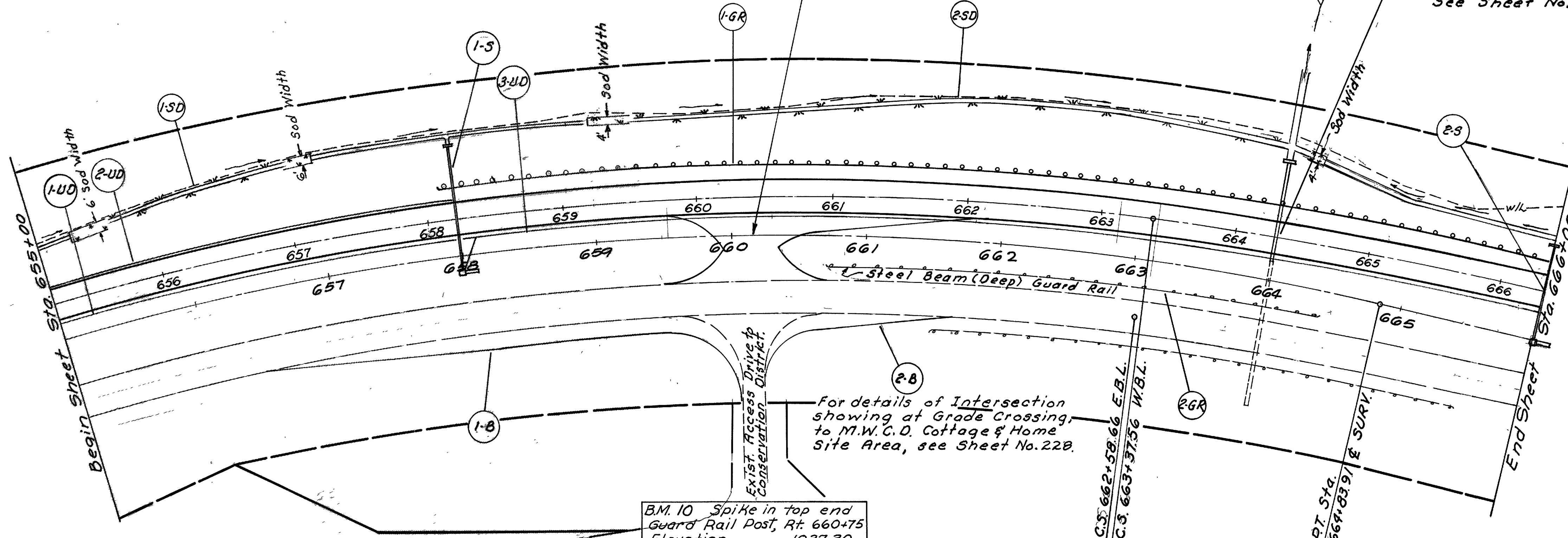
P.I. Sta. 655+43.82
 $\Delta = 64^{\circ}01'00''$ Rt.
 $D = 3^{\circ}00'$
 $R = 1909.86'$
 $T = 1193.80'$
 $L = 2133.89'$
 $E = 342.41'$

West Bound Lanes Curve Data

P.I. Sta. 655+66.94
 $\Delta = 64^{\circ}01'00''$ Rt.
 $D_c = 2^{\circ}53'17''$
 $R_c = 1983.86'$
 $L = 2624.14'$
 $T_s = 1445.95'$
 $E_s = 359.79'$
 $L_c = 1809.00'$
 $L_s = 407.57'$
 $G_s = 5^{\circ}53'08''$
 $X_c = 407.14'$
 $Y_c = 13.95'$

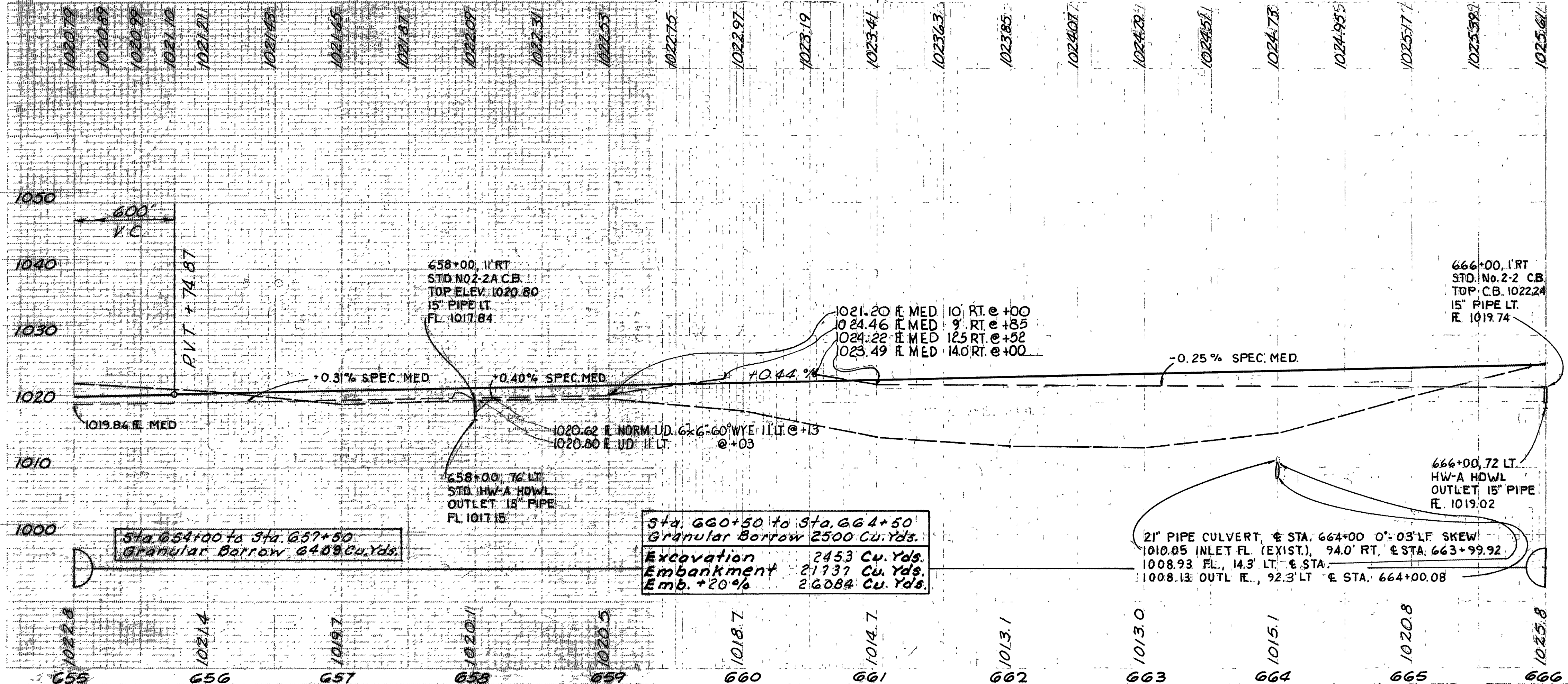
Sta. 660+16.50 & Construction U.S.R. 30
 = Sta. 15+00, M.W.C.D. Access Road.

Structure RIC-30-1035
 Sta. 664+00
 Construct 21" x 78' Pipe Culvert
 For Details and Quantities
 See Sheet No. 250



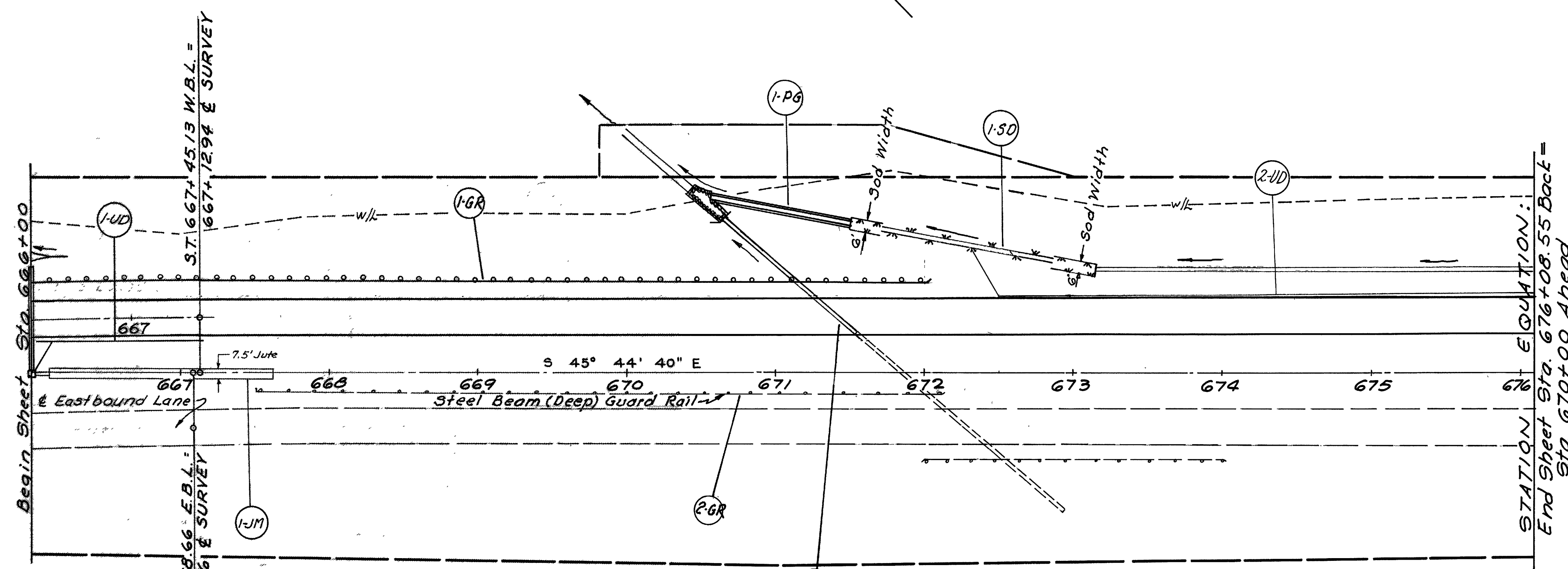
* As per plan

Reference No.	Side	Station		I-15	I-15	I-10	I-18	I-14	I-8	I-1	I-2
		From	To	Guard Rail Steel Beam Deep.	Guard Rail Removed & Stored	Sodding	Stabilized Agg. Shoulders and Approach	Raised Gutter Std. Type / Med. Type	Catch Basin Std. No. 2-2A	PIPE Class U-1 15"	Masonry
				Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Each	Lin. Ft.	Cu. Yds.
1-6R	Lt.	657+90	666+00	825							
2-6R	Rt.	660+75	664+53.3		375						
1-3D	Lt.	655+25	657+00			124					
2-5D	Lt.	659+00	664+25			316					
1-5	Rt-Lt.	658+00						10	1	76	3.23
2-5	Rt-Lt.	666+00				3		10	1	73	3.23
1-8	Rt.	655+50	660+09.8				34				
2-8	Rt.	660+23.3	662+00				9				
Totals				825	375	443	43	20	2	149	6.46



Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-1
		From	To	Pipe Class I-3 (Shallow)	Pipe Class I-3 (Deep)	G' PIPE outlet CLASS F-4	Pipe Special Class I-3	G' Pipe Class I-3 Sec. M-2-A(1)
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	
1-UD	Lt.	655+00	657+97	297				
2-UD	Lt.	655+00	657+97		297			
3-UD	Lt.	658+00	665+97	600		10	1	230
Totals				897	297	10	1	230

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00

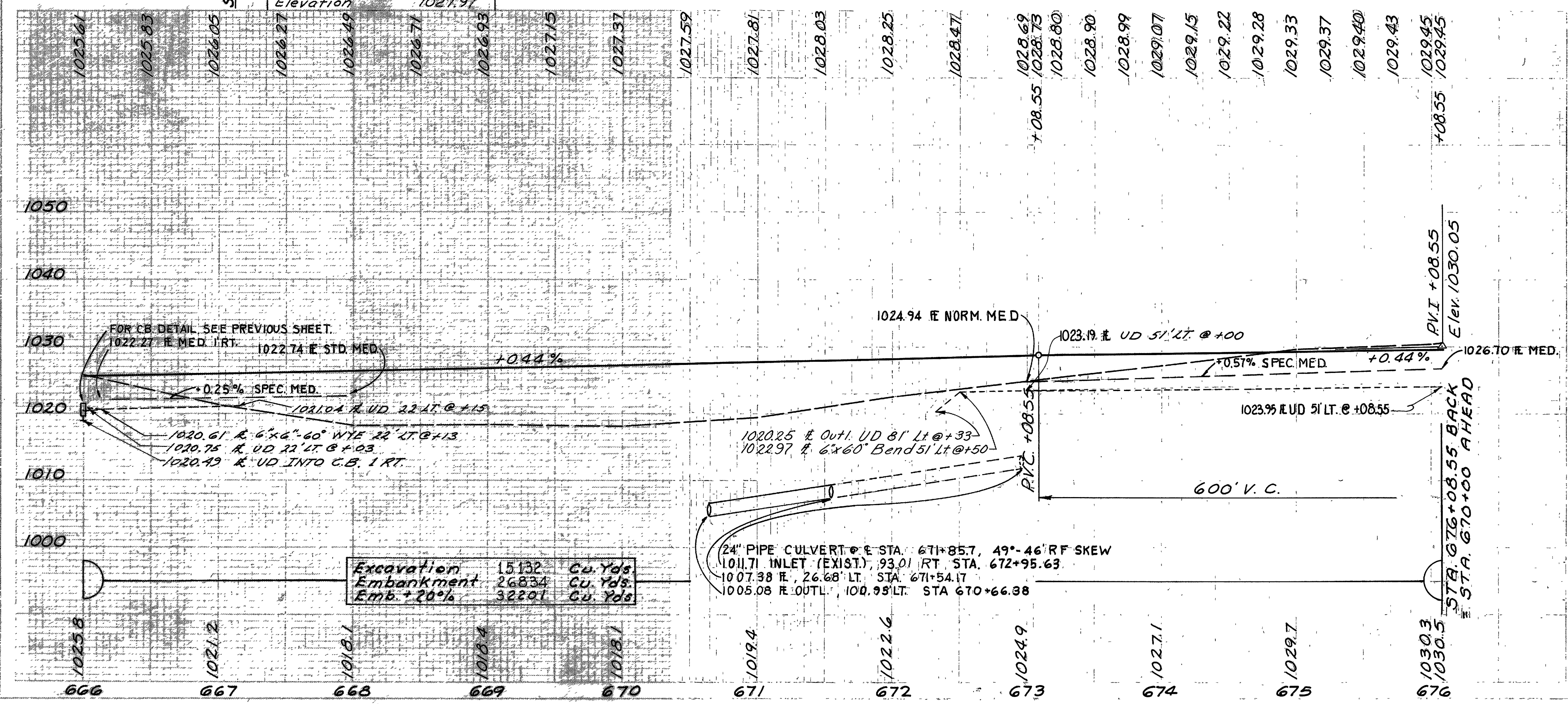


B.M. 11 Spike in top end
 Guard Rail Post Rt 667+60
 Elevation 1027.97

C-5
 Structure RIC-30-1050
 Sta. 671+85.7
 Construct 24" x 118' Pipe Culvert
 For Details & Quantities -
 see Sheet No. 250

* As per plan

Reference No.	Side	Station		I-15	I-15	L-10	I-14	L-120		
		From	To	Guard Rail Steel Beam Deep.	Guard Rail * Removed & Stored	Sodding	Sta. Paved Grutter Type 1	Jerse Matting	Lin. Ft.	Sq. Yds.
1-GR	Lt.	666+00	672+00	600						
2-GR	Rt.	667+50	672+00		450					
1-5D	Lt.	671+51	673+08			125				
1-PG	Lt.	670+51	671+51			34	100			
1-M	Rt.	666+11.7	667+61.7					125		
Totals				600	450	159	100	125		



Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-1		
		From	To	Pipe Class I-3 (Shallow)	Pipe Class I-3 (Deep)	8" PIPE CLASS F-1 Section 10' @ 6" x 60" Bend	Pipe Spec's Class I-3	6" x 6" Wye	6" Pipe Outlet Class F-4	Lin. Ft.
1-UD	Lt.	666+03	667+15	127			1		10	
2-UD	Lt.	672+33	676+08.55		383	10	1			
Totals				127	383	10	1	1	10	

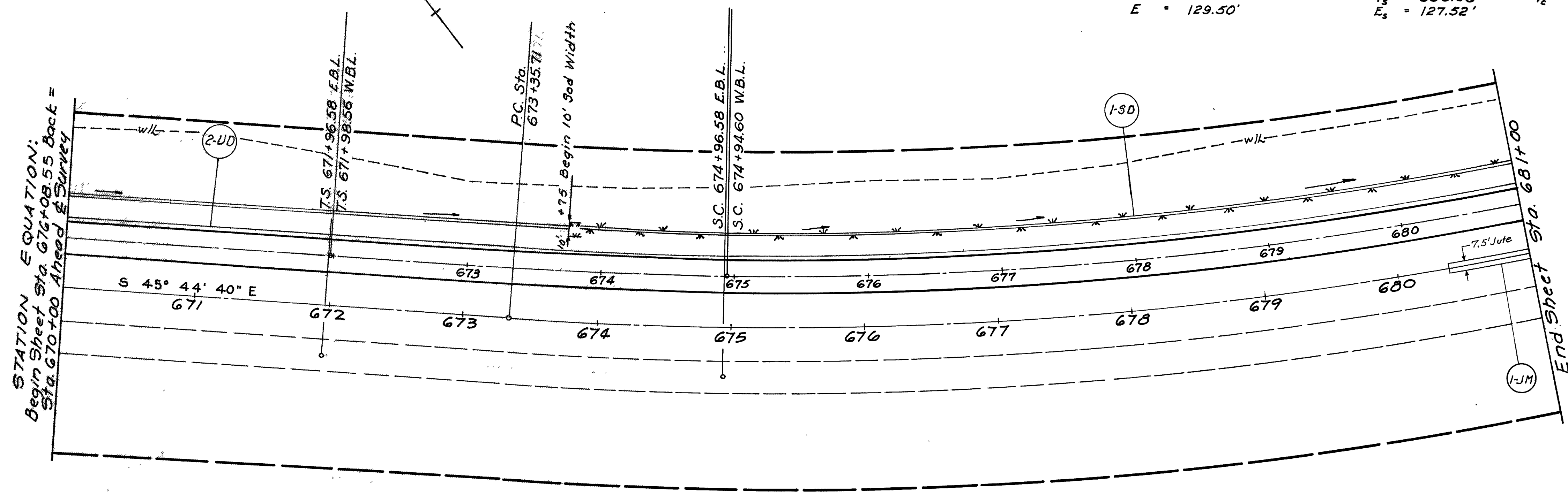
Construction Curve Data

P.I. = Sta. 682+06.78
 Δ = 33°-49'-30" Lt.
 D_c = 2°-00'
 R = 2864.79'
 L = 1691.25'
 T = 871.07'
 E = 129.50'

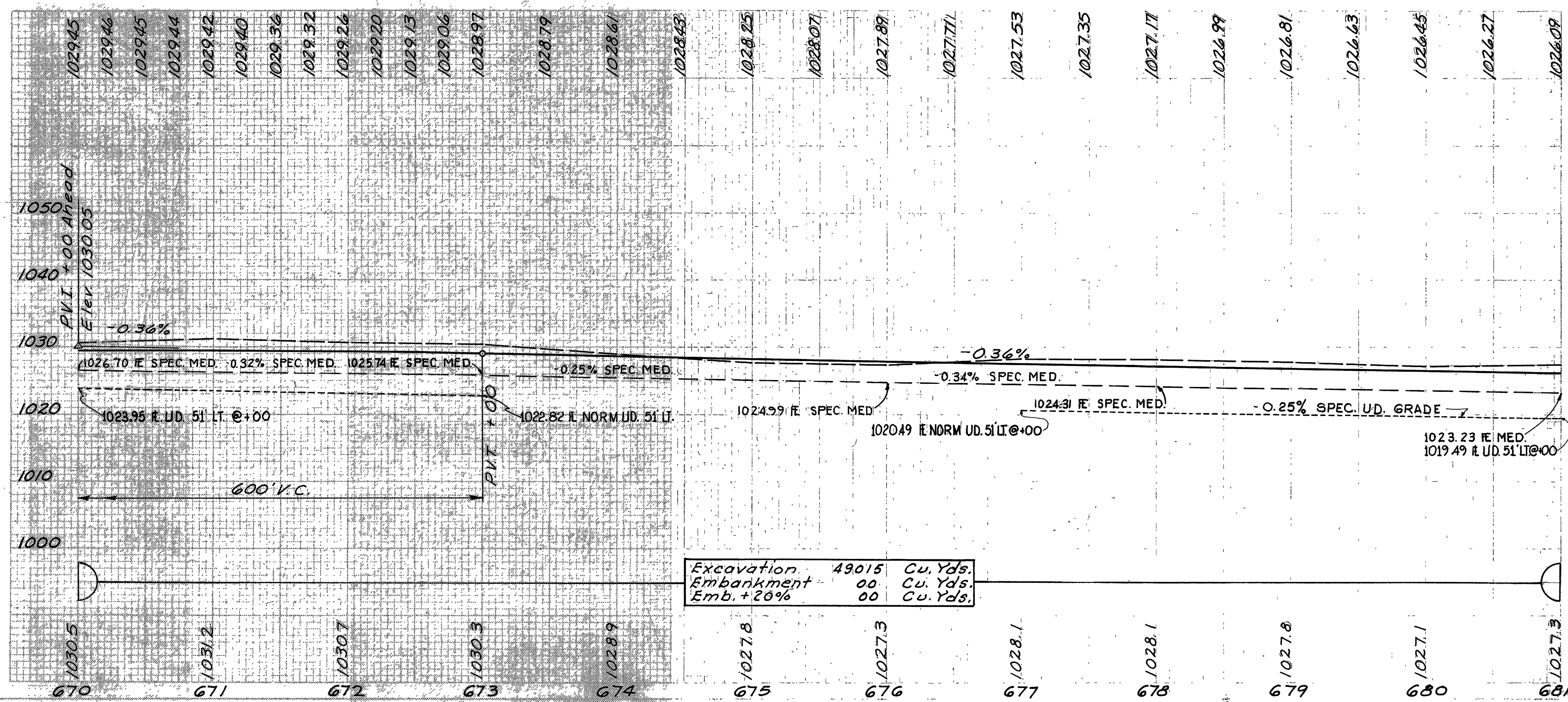
West Bound Lane Curve Data

P.I. Sta. 681+95.54
 Δ = 33°-49'-30" Lt. L_c = 1351.52'
 D_c = 2°-03'-11" L_c = 296.04'
 R_c = 2790.79' θ_s = 3°-02'-20"
 L_s = 1943.60' Y_c = 295.96'
 T_s = 996.98' Y_s = 5.23'
 E_s = 127.52'

RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00



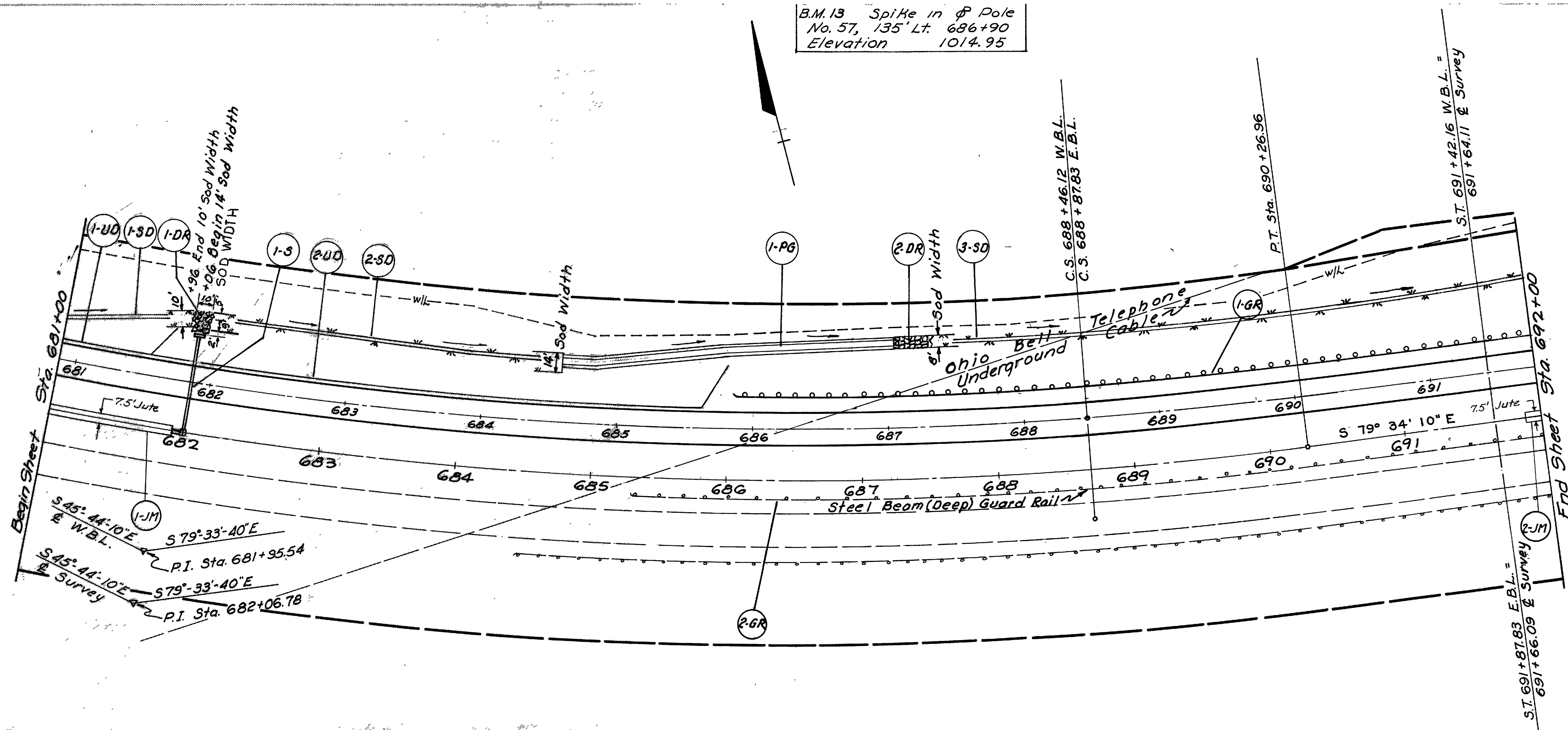
Reference No.	Side	Station		L-10	L-120		
		From	To	Sodding	Jute Matting	Sq.Yds.	Sq.Yds.
I-5D	Lt.	673+75	681+00	832			
I-JM	Et.	680+38.3	681+00		51		
Totals				832	51		



Reference No.	Side	Station		I-1
		From	To	Pipe Class I-3 (Deep) Lin. Ft.
2UD	Lt.	670+00	681+00	1100
Totals				1100

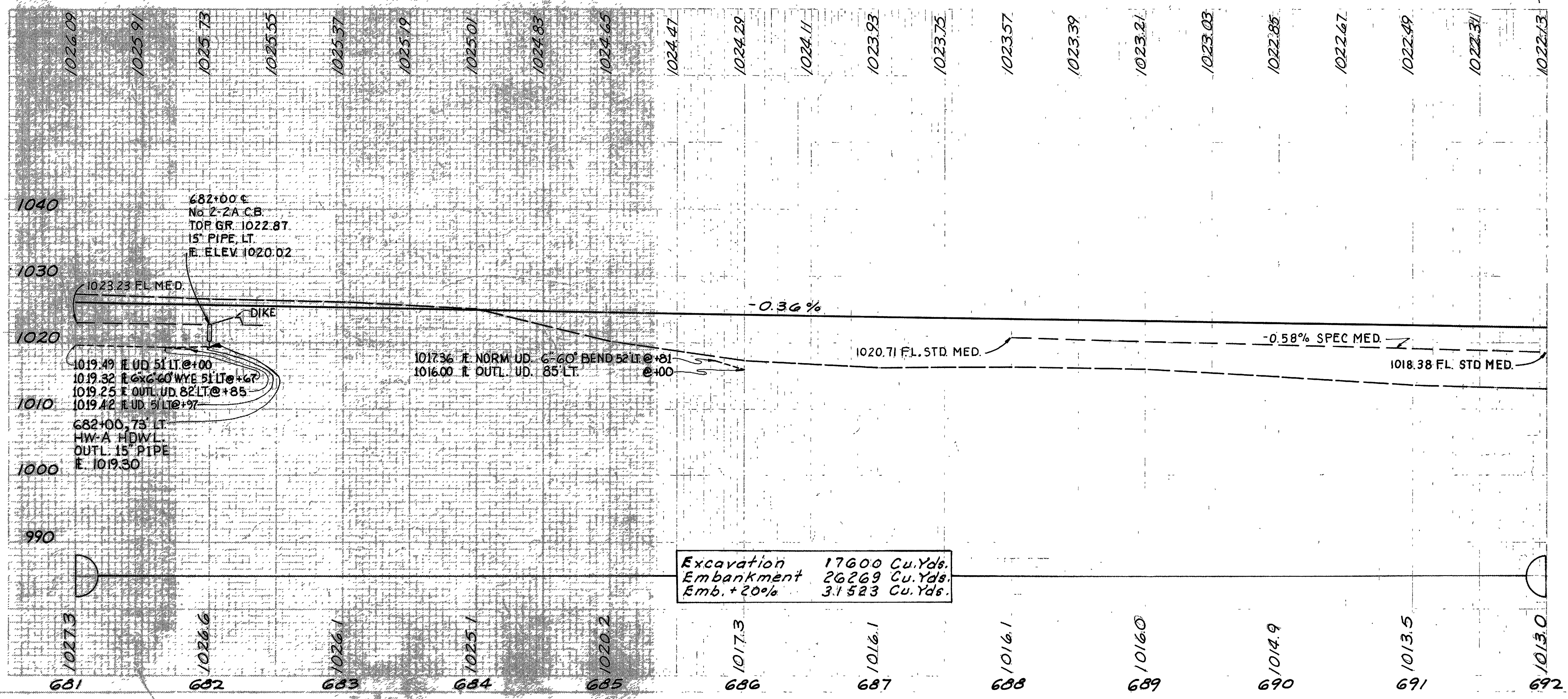
B.M. 13 Spike in Pole
No. 57, 135' Lt. 686+90
Elevation 1014.95

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



* As per plan

Reference No.	Side	Station		I-15	I-15	L-10	I-10	I-14	I-14	I-8	I-1	I-2	L-120
		From	To	Guard Rail Steel Beam Deep	Guard Rail Removed & Stored *	Sodding	Dumped Rock Channel Protection	Steel Bar Gutter Type 1, Mod. Type 1/4	Paved Gutter Steel Type 1, Mod. Type 5	Catch Basin Steel No. 2-E-A	PIPE CLASS I-1 15"	Masonry	Jute Matting
				Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Each	Lin. Ft.	Cu. Yds.	Sq. Yds.
1-GR	Lt.	685+93.65	692+00	594.0									
2-GR	Rt.	685+91.96	692+00		681.5								
1-SD	Lt.	681+00	681+96			110							
2-SD	Lt.	682+06	684+75			370							
3-SD	Lt.	687+50	692+00			435							
1-PG	Lt.	684+75	687+25			82		245					
1-5	Lt.	682+00				3			10	1	73	3.23	
1-DR	Lt.	681+96	682+06				9						
2-DR	Lt.	687+25	687+50				9						
1-JM	E	681+00	681+88.3										74
2-JM	E	691+89.3	692+00										9
Totals				594	681.5	1000	18	245	10	1	73	3.23	83

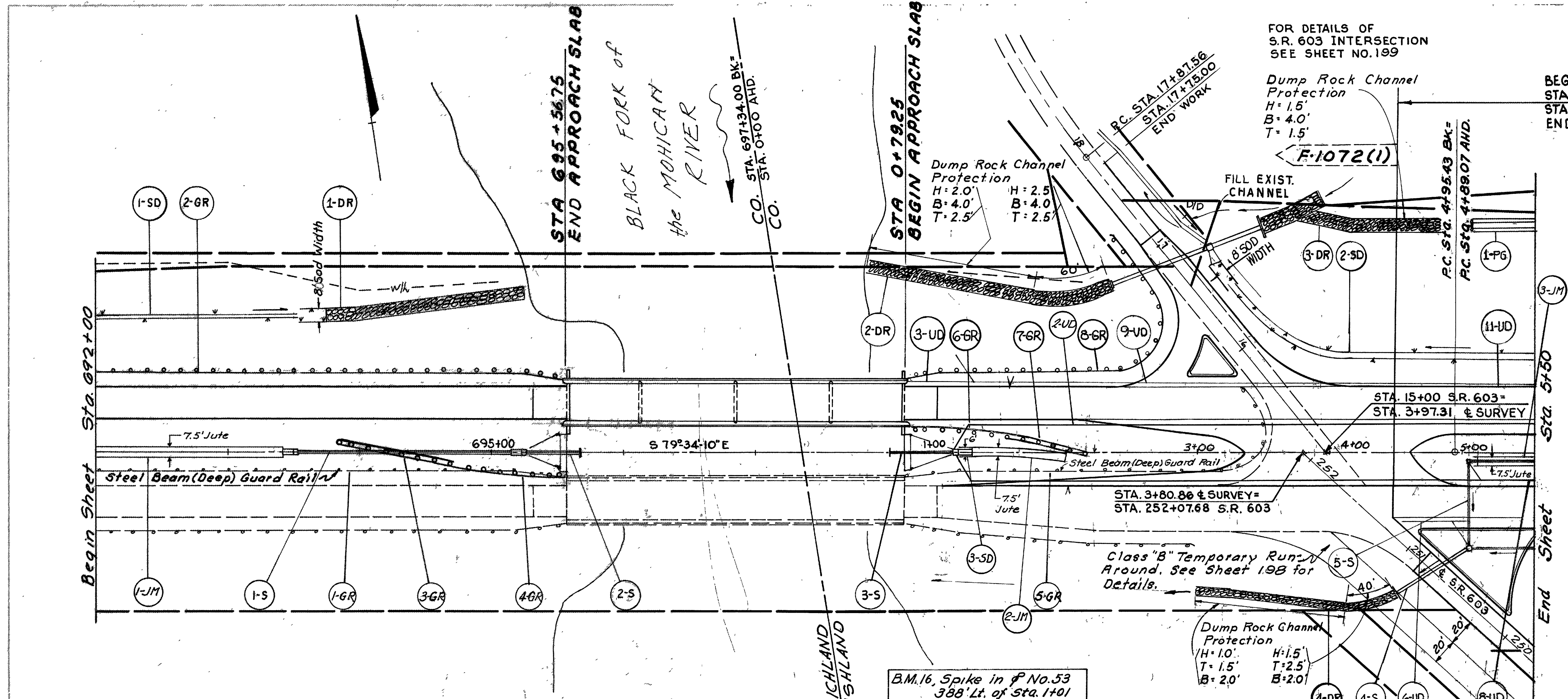


Reference No.	Side	Station		I-1	I-1	I-5
		From	To	Pipe Class I-3 (Deep)	8" Pipe Sec. No. 1(c) Class I-3 6x60' Bend	Pipe Spec. Class I-3
				Lin. Ft.	Lin. Ft.	Each
1-UD	Lt.	681+00	681+97	123	10	1
2-UD	Lt.	682+03	686+00	406	10	1
Totals				529	20	1/1

Sta. 681+00 to Sta. 692+00

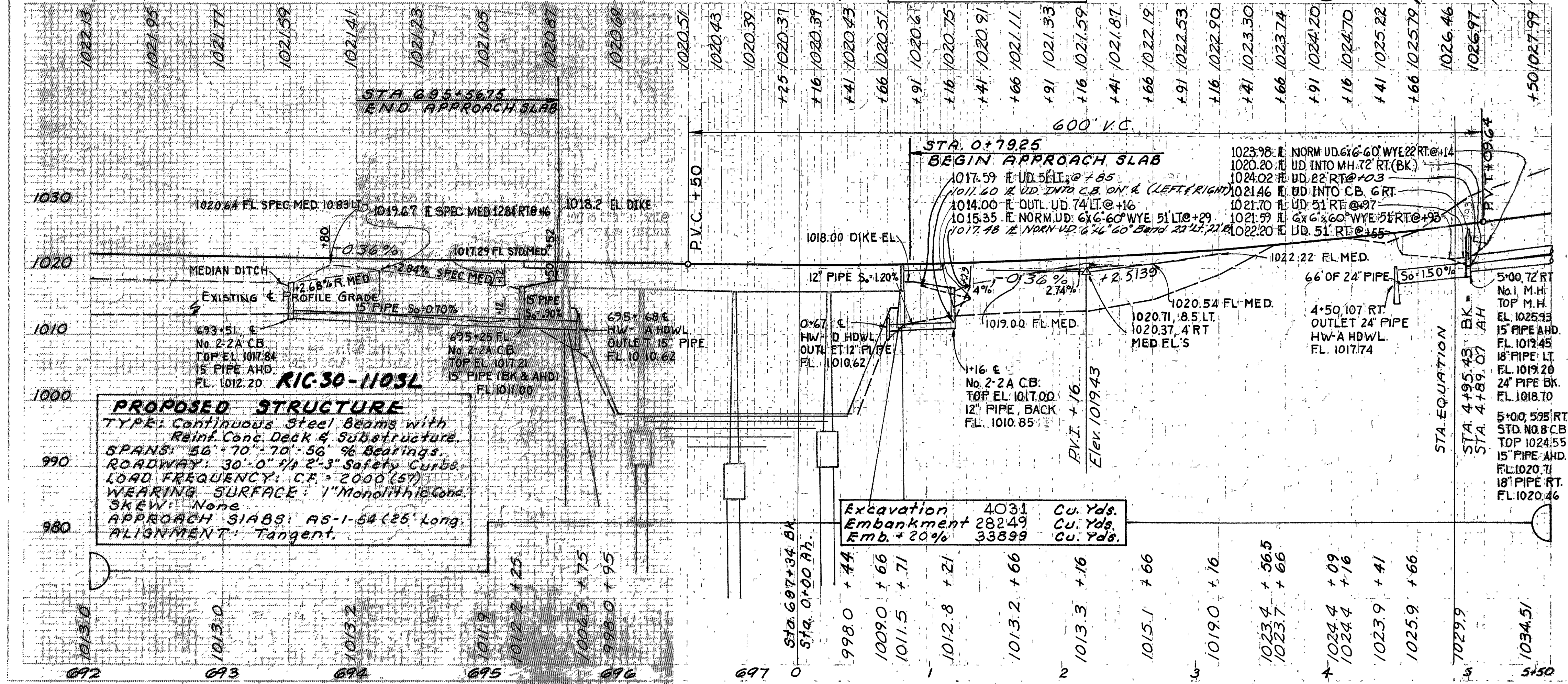
FOR DETAILS OF S.R. 603 INTERSECTION SEE SHEET NO. 189

BEGIN EAST BOUND PAVT. STA. 4+48.16 (F-1072(4)) = STA. 701+83.04 END OF F-1072(1)



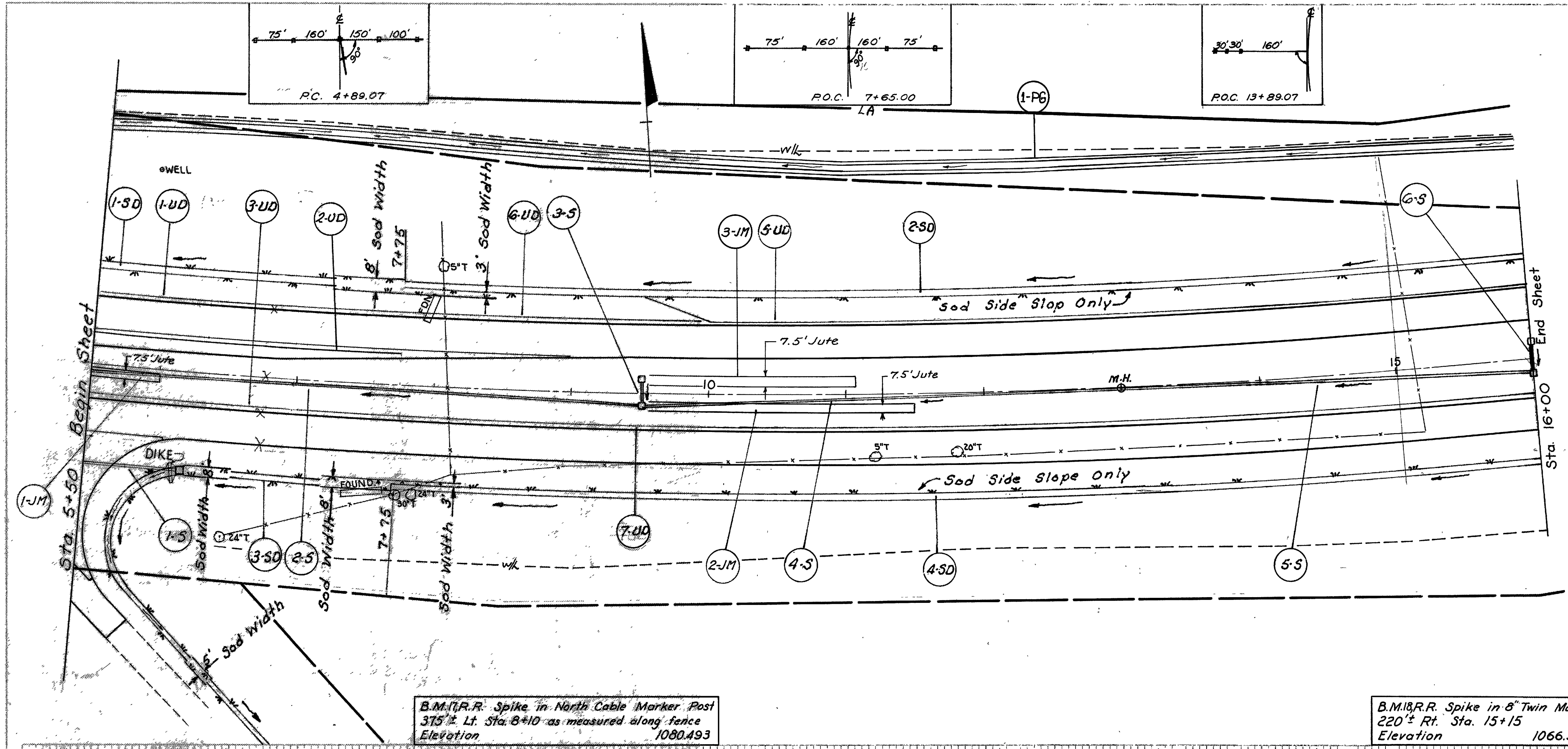
* As per plan

Reference No.	Side	Station		I-15		I-10/120		I-10		I-14		I-1		I-5	
		From	To	Guard Rail Removed & Stored	Guard Rail Steel Beam Deep.	Guard Rail Steel Beam Deep. Design	Sodding	Jute Matting	Dumped Rock Channel Protection	Std. Pav. Guard Type-1 Mag. Type B	6" PIPE CLASS F-4	PIPE SPECIAL CLASS I-5 5/8" x 6" WYE	6" PIPE CLASS F-4	PIPE SPECIAL CLASS I-5 5/8" x 6" WYE	
		Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	
1-GR	RT.	692+00	695+56	356											
2-GR	LT.	692+00	695+56	356											
3-GR	RT.	693+79	694+66.5		87.5										
4-GR	RT.	694+66.5	695+54		87.5										
5-GR	RT.	0+80	3+53	320											
6-GR	LT.	0+82	1+57		75.0										
7-GR	LT.	1+57	2+19.5		62.8										
8-GR	LT.	0+80	177+83.3		275.0										
1-SD	LT.	692+00	693+75			170									
2-SD	LT.	4+00	5+50			138									
1-P6	LT.	5+02	5+50			16									
1-DR	LT.	693+75	695+25					73		48					
2-DR	LT.	0+50	2+34					236							
3-DR	LT.	3+85	5+02					76							
4-DR	RT.	3+00	4+50					74							
6-UD	RT.	4+55	5+00									10	1		
2-UD	LT.	1+16	5+50									10			
8-UD	RT.	1+16	5+50									20			
1-JM	E	692+00	693+39.3			116									
3-SD	E-RT	1+17.7	1+27.7			2									
2-JM	E-RT	1+27.7	2+00			60									
3-JM	RT.	5+07	5+50			36									
Totals						676	793.5	150	326	212	459	48		40	1



Reference No.	Side	Station		I-14		I-8		I-1		I-1		I-1		I-5						
		From	To	Paved Gutter Std. Type 1, Med. Type B	Std. No. 24 Catch Basin	MANHOLE STD. NO. 1	SODDING	MW-A	MW-D	PIPE CLASS I-3 (DEEP)	8" PIPE CLASS F-4	PIPE SPECIAL CLASS I-5 5/8" x 6" WYE	8" PIPE CLASS F-4	PIPE SPECIAL CLASS I-5 5/8" x 6" WYE						
		Lin. Ft.	Lin. Ft.	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each						
1-S	E	693+51	695+25	10	1	174														
2-S	E	695+25	695+68	10	1	43														
3-S	E	0+67	1+16	10	1	49														
4-S	RT.	4+50	5+00					66	1	503										
5-S	RT.	5+00						66												
6-UD	RT.	4+55	5+00							65										
2-UD	LT.	1+16	5+50							330	111									
3-UD	LT.	0+85	2+35									160	10	1						
8-UD	RT.	1+16	5+50							330	116			1						
9-UD	LT.	1+35	4+20							185										
11-UD	LT.	4+20	5+50									136								
Totals						30	3	1	49	217	66	66	1	12	829	910	227	296	10	2

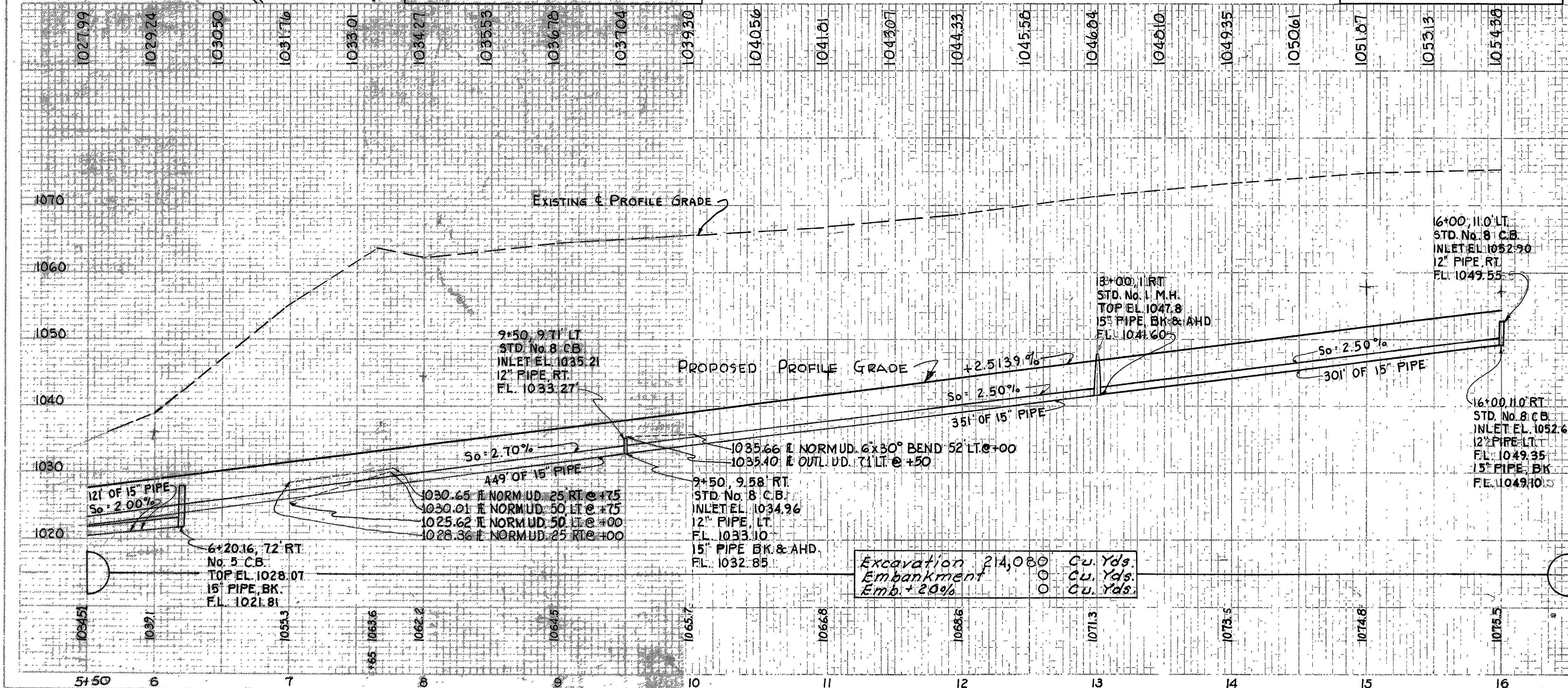
RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



REFERENCE NO.	SIDE	STATION		Sodding SQ.YDS	I-14 Std. Paved Gutters Type I, Mod. Type E LIN. FT.	L-120 Jute Matting Sq. Yds.	I-8 Std. No. 5 Catch Basin Ea.	I-8 Manhole Std. No. 1 Ea.	I-1 PIPE Class J-1 15" Lin. Ft.	I-1 PIPE Class E-1 12" 15"			
		FROM	TO										
1-SD	LT.	5+50	7+75	204									
2-SD	LT.	7+75	16+00	280									
3-SD	RT.	6+20	7+75	141									
4-SD	RT.	7+75	16+00	880									
1-P6	LT.	5+50	16+00	342	1024								
1-5	RT.	5+00	6+20.16				1		121				
2-5	RT.	5+00	9+50							449			
3-5	LT-RT.	9+50								18			
4-5	RT.	9+50	13+00					1		351			
5-5	RT.	13+00	16+00					1		301			
6-5	LT-RT.	16+00								22			
1-JM	RT.	5+50	6+00			42							
2-JM	RT.	9+57	11+50			161							
3-JM	LT.	9+57	11+07			125							
Totals					1847	1024	328	1	4	1	121	40	1101

B.M. (R.R. Spike in North Cable Marker Post
375' Lt. Sta. 8+10 as measured along fence
Elevation 1080.493

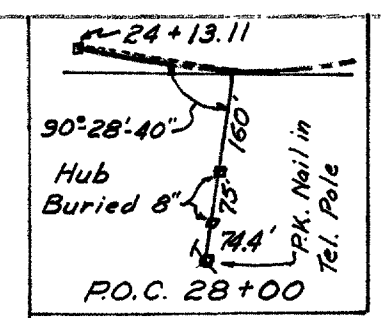
B.M. (R.R. Spike in 8" Twin Maple
220' Lt. Sta. 15+15
Elevation 1066.590



REFERENCE NO.	SIDE	Station		I-1 PIPE CLASS I-3 (SHALLOW) 6" LIN. FT.	I-1 PIPE CLASS I-3 (DEEP) 6" LIN. FT.	I-1 8" Pipe, M-4(h) CLASS F-4 6" 30' BEND LIN. FT. EACH	I-5 Pipe Specials Class I-3	I-1 6" Pipe I-3 Class I-3 Sec. M-6.4(h)
		FROM	TO					
1-UD	LT.	5+50	7+75		225			
2-UD	LT.	5+50	7+75					225
3-UD	RT.	5+50	7+75	225				
5-UD	LT.	9+50	15+98			10	1	644
6-UD	LT.	7+75	9+96					225
7-UD	RT.	7+75	15+98					823
Totals				225	225	10	1	1917

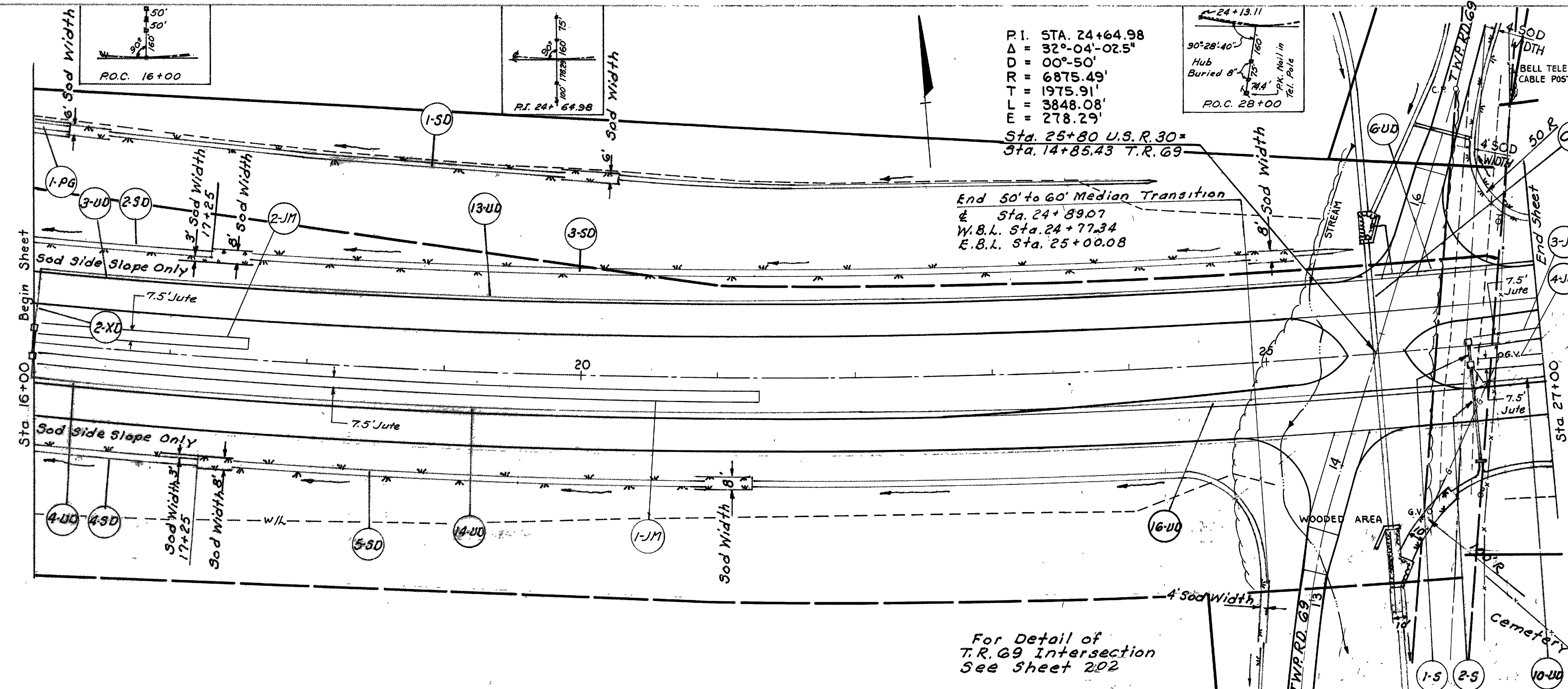
Excavation 214,080 Cu. Yds.
Embankment 0 Cu. Yds.
Emb. + 20% 0 Cu. Yds.

P.I. STA. 24+64.98
Δ = 32°-04'-02.5"
D = 00°-50'
R = 6875.49'
T = 1975.91'
E = 3848.08'
L = 278.29'



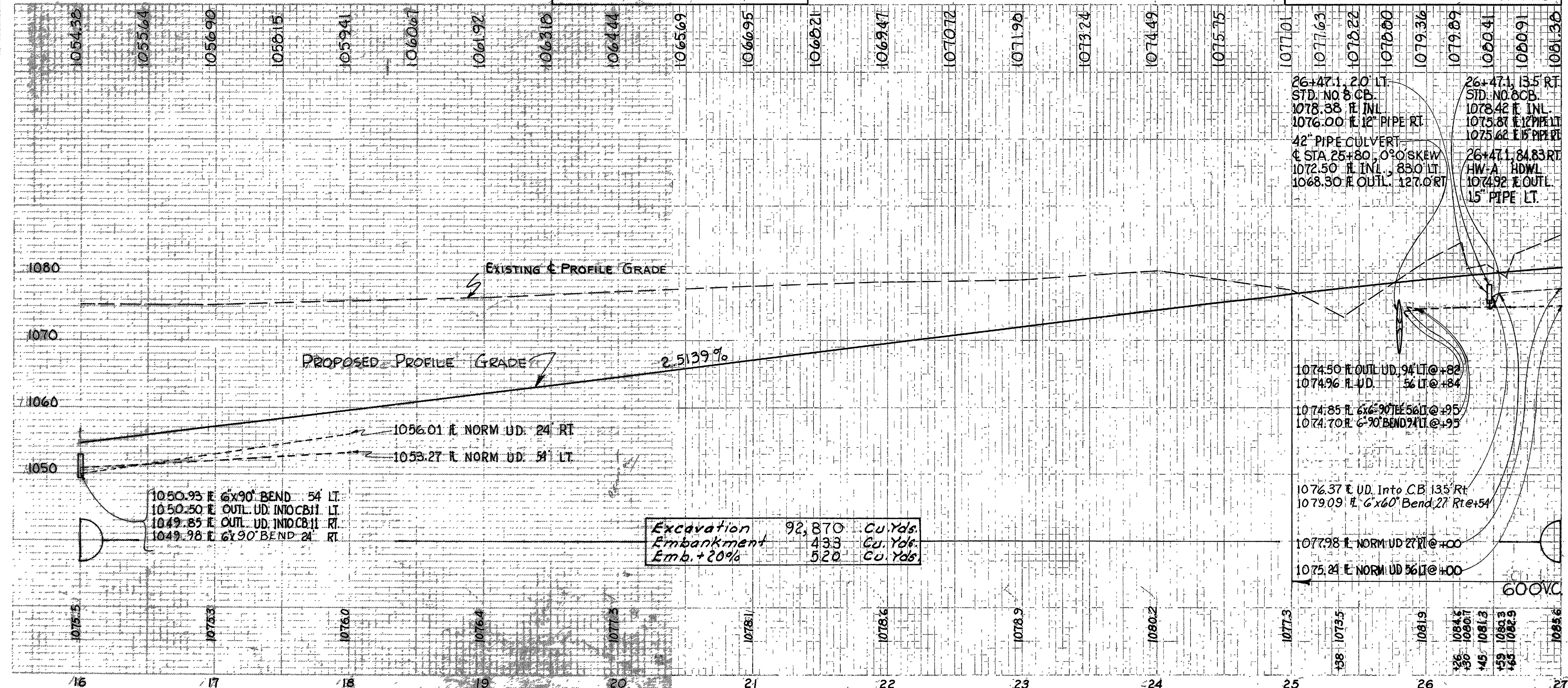
Structure ASD-30-0048
Sta. 25+80
Construct 42" x 210' Pipe
Culvert. For Details &
Quantities, see Sheet No. 251.

REFERENCE NO.	SIDE	STATION		L-10	I-14	L-120	I-8	I-1	I-1	I-2
		FROM	TO	SODDING	STD. PAVED GUTTER TYPE 1 MOD. Type 2	Jute Matting	Catch Basin Stds. No. 8	Pipe Class F-1	Pipe Class J-1	Masonry
				SQ. YDS.	LIN. FT.	Sq. Yds.	Each	Lin. Ft.	Lin. Ft.	Cu. Yds.
1-PG	LT.	16+00	16+25	27	25					
1-SD	LT.	16+25	20+25	285						
2-SD	LT.	16+00	17+25	43						
3-SD	LT.	17+25	25+25	710						
4-SD	RT.	16+00	17+25	43						
5-SD	RT.	17+25	21+25	389						
1-5	LT-RT	26+47.1					1	15		
2-5	RT	26+47.1					1		71	3.23
1-JM	LT.	16+07	17+57			125				
2-JM	RT.	16+07	21+30			436				
3-JM	LT.	26+54.1	27+00			38				
4-JM	RT.	26+54.1	27+00			38				
Total				1497	25	637	2	15	71	3.23



B.M. 19 Spike in 21" Walnut (West Side)
218.5' Rt. Sta. 20+00
Elevation 1067.867

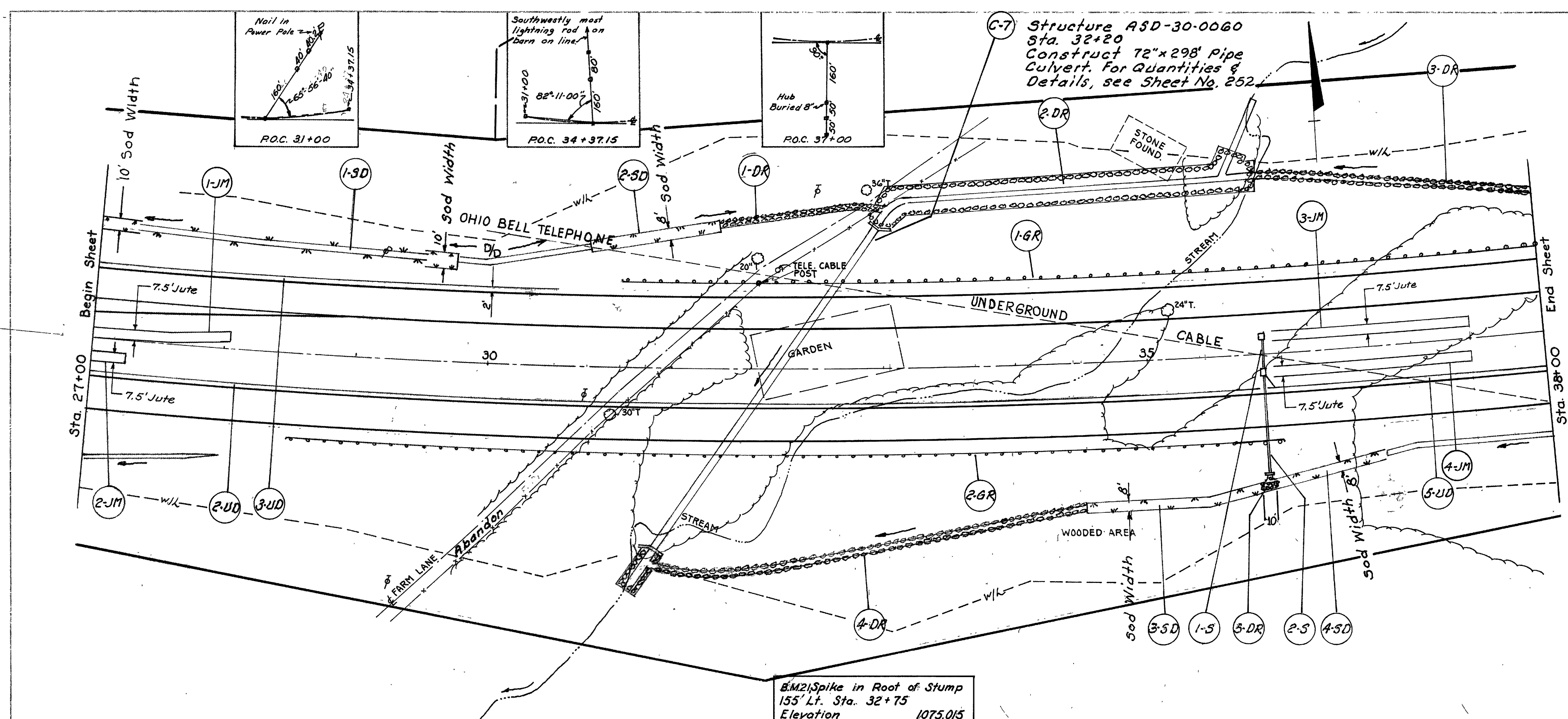
B.M. 20 Spike in Drive Gate to Cemetery
South of Proposed @ 210' Rt. Sta. 26+28'
Elevation 1075.149



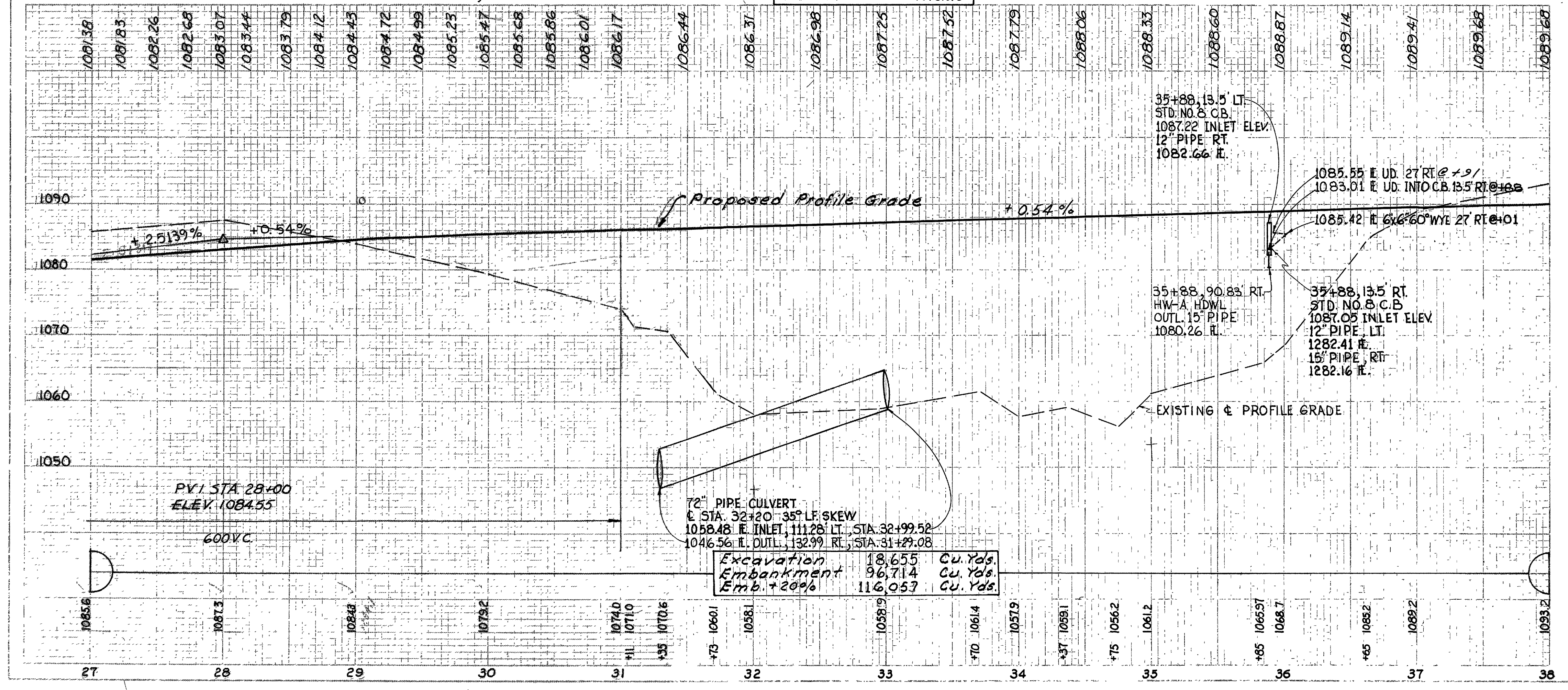
*Close To Sec. M-64(h)

Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-5	I-1	I-1	
		FROM	TO	Pipe Class I-3 (Shallow) 6"	Pipe Class I-3 (Deep) 6"	Pipe Class F-4	PIPE SPECIALS Class I-3 6x60' BEND	PIPE SPECIALS Class I-3 6x90' BEND 24x50' Tee	6" Pipe Class I-3 Sec. M-64(h)	6" Pipe Class J-1	
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	
2-XD	LT.	16+00				10				33	
3-UD	LT.	16+00	17+75				1		175		
4-UD	RT.	16+00	17+75				1		175		
6-UD	LT.	25+82	27+00		25	10		1	132		
10-UD	RT.	26+47	27+00	50		10		1			
13-UD	LT.	17+75	25+76		801						
14-UD	RT.	17+75	22+64	489							
16-UD	RT	22+64	26+44			10				370	
Totals				539	826	40	1	3	1	852	33

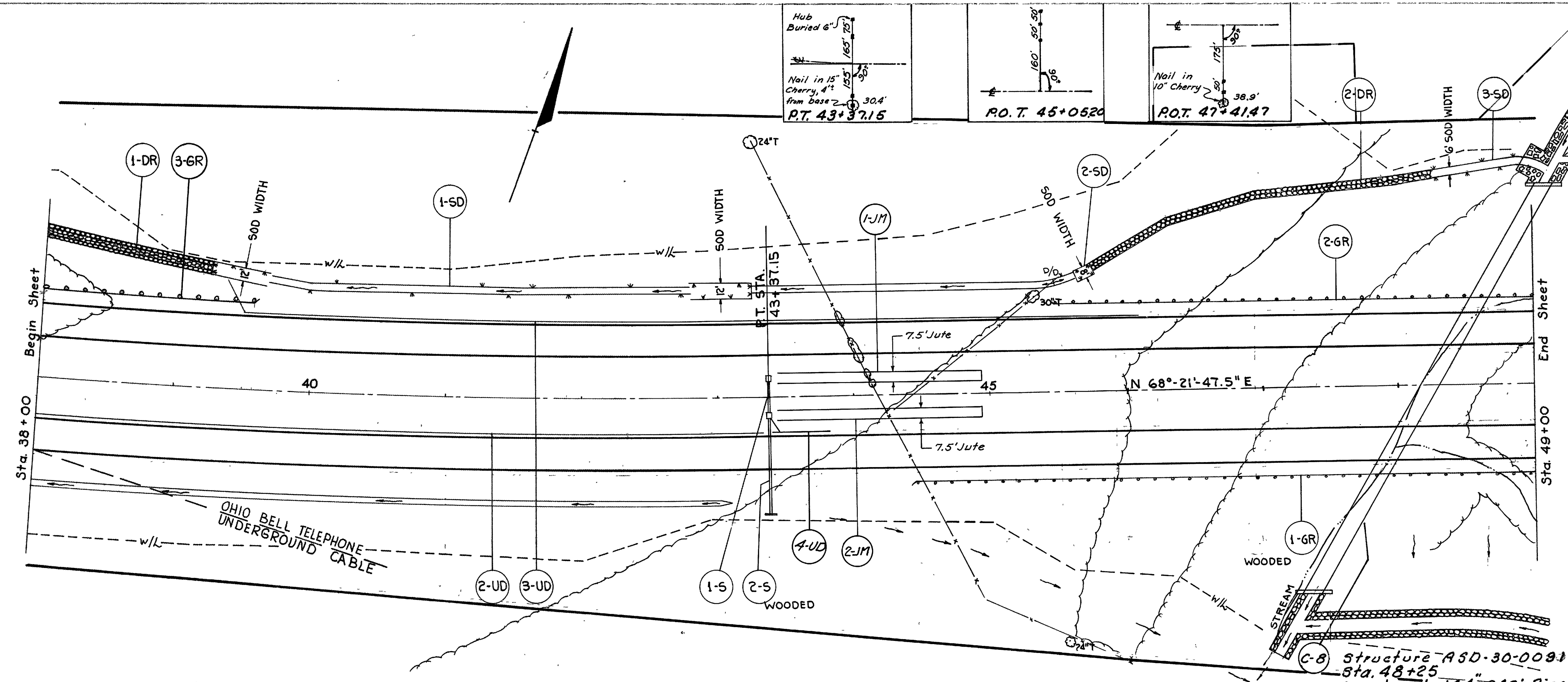
RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



REFERENCE NO.	SIDE	STATION		I-15 Guard Rail Steel Beam Type (Deep)	L-10 Sodding	L-120 Jute Matting	I-8 Catch Basin Std. No. 8	I-1 PIPE Class E-1 12"	I-1 PIPE Class J-1 15"	I-2 Masonry
		FROM	TO							
1-GR	Lt.	31+00	38+00	700						
2-GR	Rt.	28+50	36+00	762.5						
1-SD	Lt.	27+00	29+75		335					
2-SD	Lt.	30+75	31+75		91					
3-SD	Rt.	34+50	35+82		120					
4-SD	Rt.	35+92	36+75		75					
1-S	Lt.-Rt.	35+88					1	26		
2-S	Rt.	35+88					1	77	3.23	
1-JM	Lt.	27+00	28+04.1			87				
2-JM	Rt.	27+00	27+25			21				
3-JM	Lt.	35+95	37+45			125				
4-JM	Rt.	35+95	37+45			125				
Totals				1462.5	621	358	2	26	77	3.23



Reference No.	Side	Station		I-3 Pipe Class I-3 (Shallow)	I-1 Pipe Class I-1 (Deep)	I-5 Pipe Spec. Class I-5 6"x6" wye	I-1 6" Pipe Class F-1	I-10 Dumped Rock Churn Protection
		From	To					
2-UD	Rt.	27+00	35+85	885				
3-UD	Lt.	27+00	30+50		350			
5-UD	Rt.	35+88	38+00	215		1	10	
1-DR	Lt.	31+75	33+05					49
2-DR	Lt.	32+95	35+88					393
3-DR	Lt.	35+88	38+00					87
4-DR	Rt.	31+20	34+50					149
5-DR	Rt.	35+82	35+92					6
Totals				1100	350	1	10	684

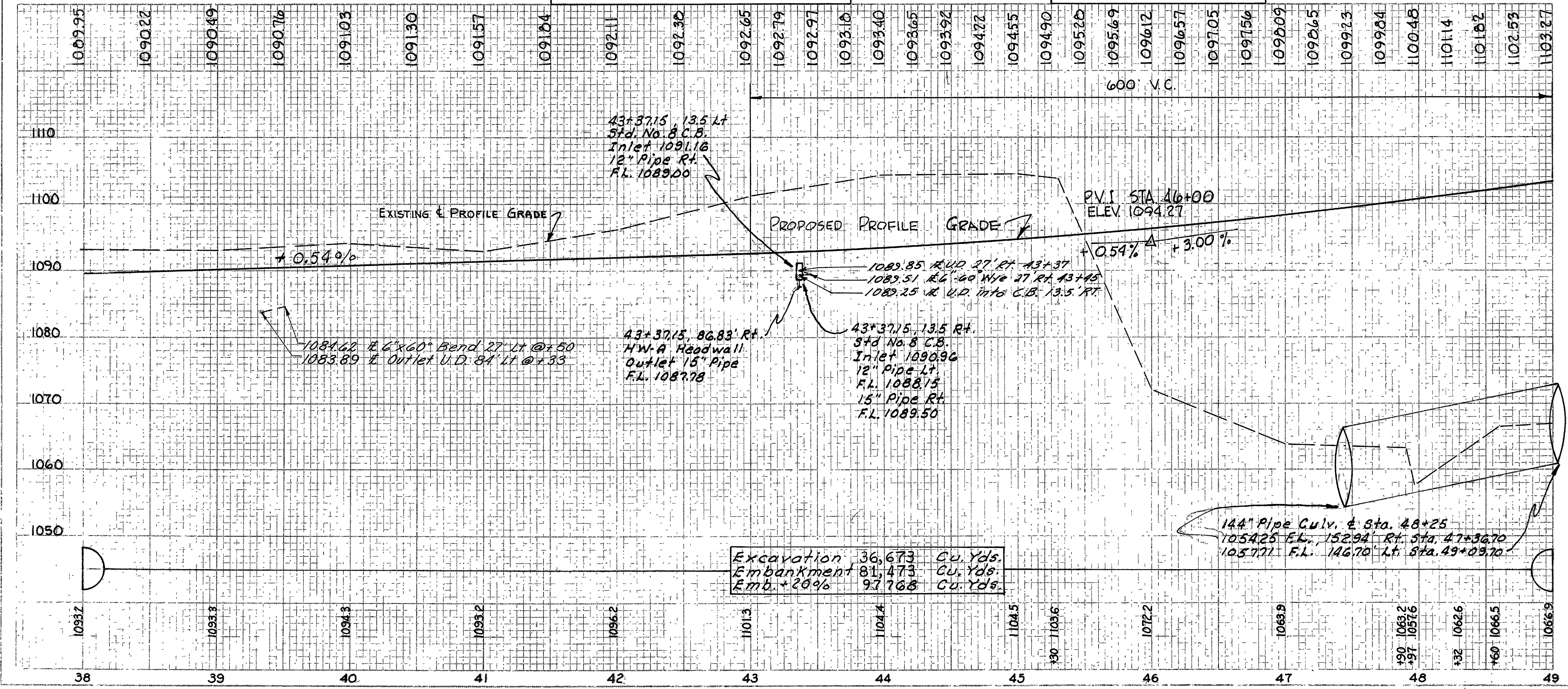


REFERENCE No.	SIDE	STATION		STEEL BEAM TYPE (DEEP)	L-15	L-10	L-120	I-10	I-8	I-1	I-1	I-2
		FROM	TO									
1-GR	RT.	44+3.92	49+00	486.08								
2-GR	LT.	45+47.33	49+00	452.67								
3-6R	LT.	38+00	39+56.11	150								
1-5D	LT.	39+25	43+25	505								
2-5D	LT.	45+65	45+75	10								
3-3D	LT.	48+25	49+00	31								
1-5	LT. RT.	43+37							1	26		
2-5	RT.	43+37							1		73	3.23
1-DR	LT.	38+00	39+25					52				
2-DR	LT.	45+75	48+25					104				
1-5	LT.	43+44.2	44+94.2				125					
2-5	RT.	43+44.2	44+94.2				125					
Totals					1088.75	626	250	156	2	26	73	3.23

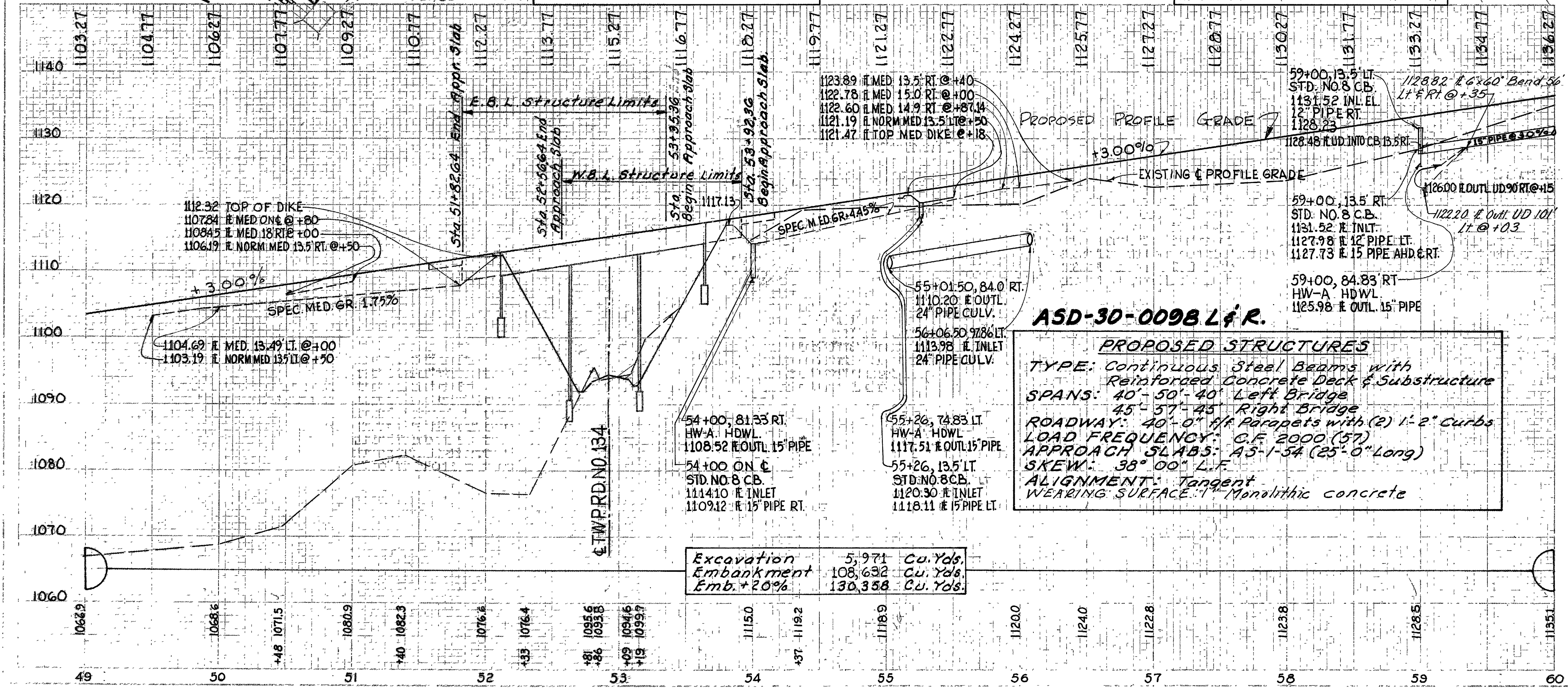
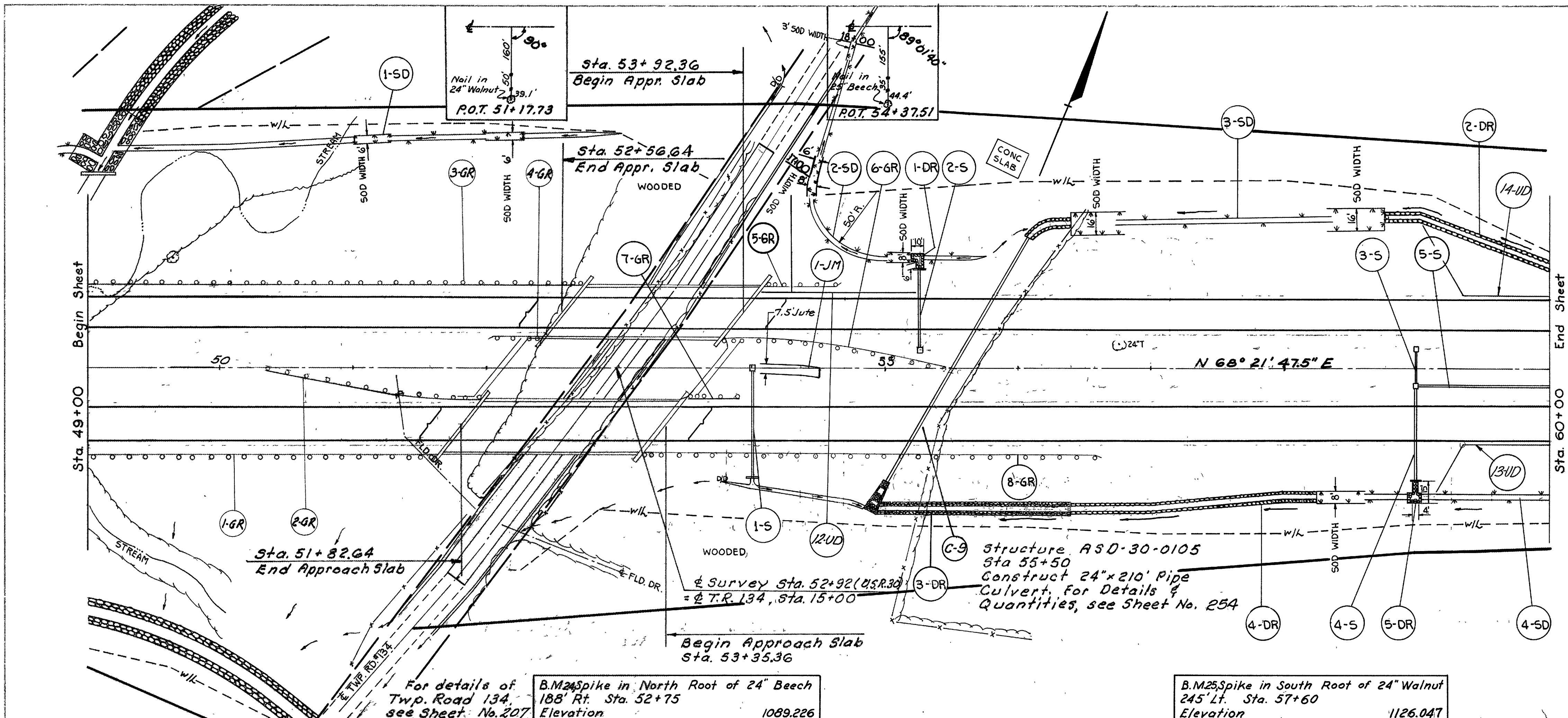
B.M.23 Spike in South Root of 24" Wild Cherry
 200' Lt. Sta. 43+25
 Elevation 1101.689

B.M.23 Spike in 24" Walnut
 in Fence Line Rt. Sta. 45+65
 Elevation 1066.645

Structure ASD-30-0091
 Sta. 48+25
 Construct 144"x346" Pipe
 Culvert. For Details &
 Quantities, see sheet 253



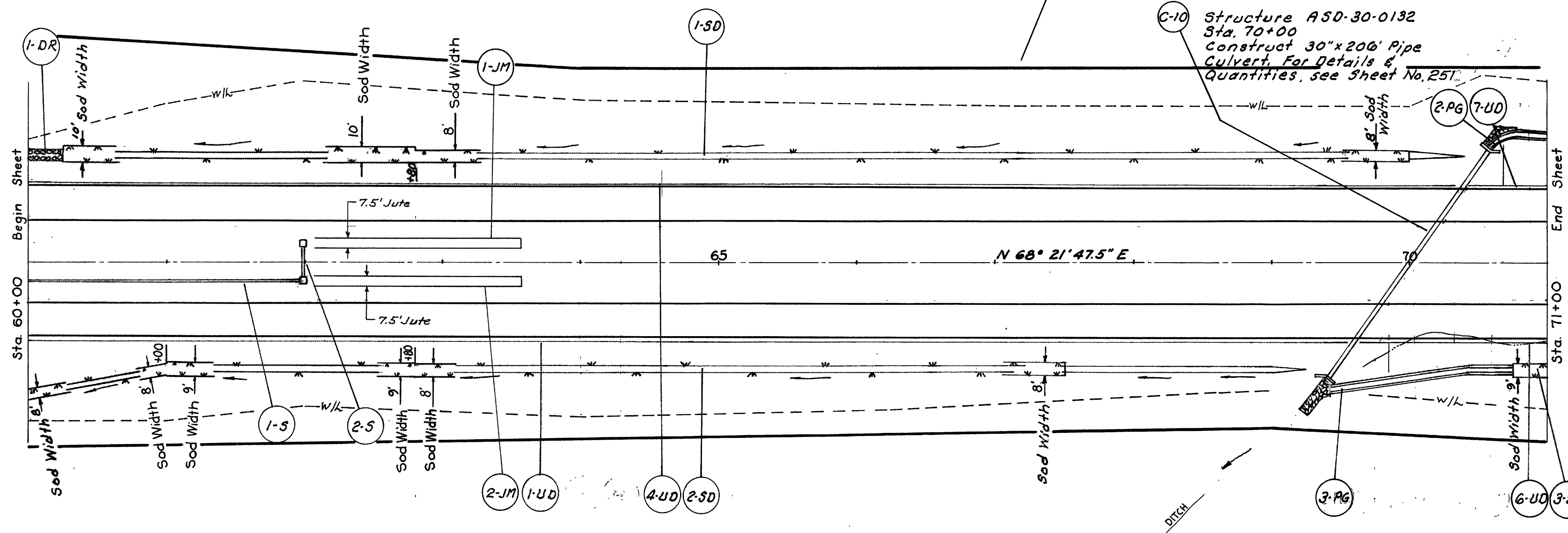
Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-1
		From	To					
2-UD	RT.	38+00	43+34	534				
3-UD	LT.	39+37	46+09	683	10	1		
4-UD	RT.	43+37	43+83	48		1		10
Totals				582	683	10	1	10



REFERENCE NO.	SIDE	STATION		I-15 GUARD RAIL		SODDING	I-10	I-1	I-1	I-8	I-2	I-10
		FROM	TO	STEEL BEAM TYPE (DEEP)	LIN. FT.							
1-GR	RT.	49+00	51+63.92	263.92								
2-GR	RT.	50+38.86	51+98.29	162.5								
3-GR	LT.	49+00	52+72.33	372.33								
4-GR	LT.	52+03.45	52+40.95	37.5								
5-GR	LT.	54+12.08	54+62.08	50.0								
6-GR	LT.	53+77.71	55+37.14	162.5								
7-GR	RT.	53+51.05	53+88.55	37.5								
8-GR	RT.	53+19.80	56+57.30	337.5								
1-SD	LT.	51+00	52+25			87						
2-SD	LT.	54+46	55+50			95						
3-SD	LT.	56+40	58+75			428						
4-SD	RT.	58+25	60+00			149						
1-DR	LT.	55+20	55+30									17
2-DR	LT.	58+75	60+00									72
3-DR	RT.	54+90	56+40									90
4-DR	RT.	56+40	58+25									106
5-DR	RT.	58+94	59+04									8
1-5	E+RT.	54+00						81	1		3.23	
2-5	LT.	55+26							61	1	3.23	
3-5	LT-RT.	59+00					26			1		
4-5	RT.	59+00							71	1	3.23	
5-5	RT.	59+00	60+00					100				
Total				1423.75			759	26100	213	4	9.69	293

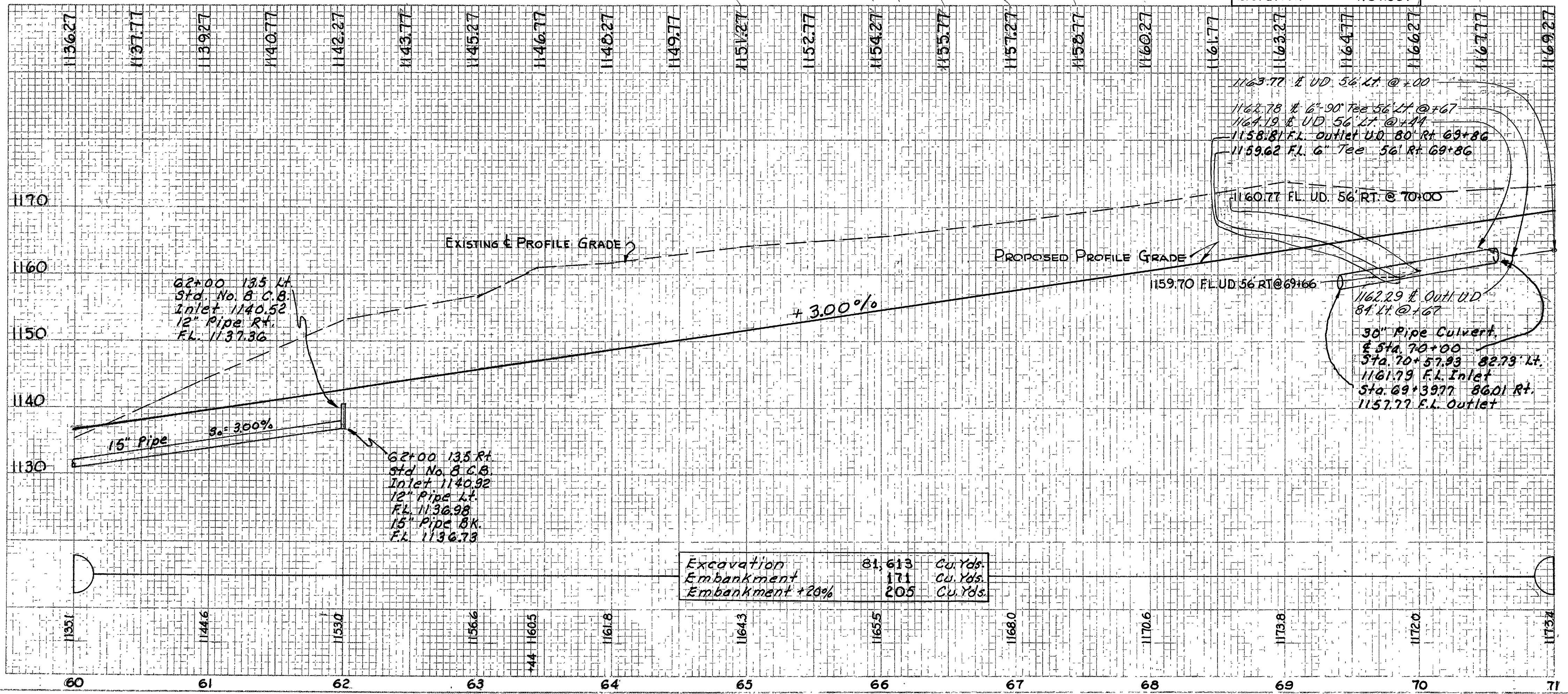
Reference No.	Side	Station		I-1	I-1	I-5	L-120
		From	To				
				Pipe Class I-3 (Deep)		8" Pipe Class E-1	
				Lin. Ft.	Lin. Ft.	Each	Sq. Yds.
12-UD	LT.	54+08	55+23	178		10	1
13-UD	RT.	59+15	60+00	93		10	1
14-UD	RT.	59+03	60+00	119		10	1
1-JM	E+RT.	54+07	54+50				36
Total				390		30	21

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



Reference No.	Side	Station		L-10 SODDING Sq.Yds.	I-14 STD. RAISED GUTTER TYPE I MOD. Type "C" LIN.FT.	I-14 STD. RAISED GUTTER TYPE I MOD. Type "D" LIN.FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU.YDS.	I-1 PIPE CLASS E-1 L.F.L.F.	I-8 CATCH BASIN STD. No. 8 EACH	L-120 Jute Matting Sq.Yds.	
		From	To								
1-5D	LT.	60+25	70+00	885							
2-5D	RT.	60+00	67+50	721							
3-3D	RT.	70+75	71+00	24							
1-DR	LT.	60+00	60+25				14				
2-PG	LT.	70+34.5	71+00	17		49					
3-PG	RT.	69+39.5	70+75	46	136						
1-5	RT.	60+00	62+00					200	1		
2-5	LT.-RT.	62+00						26	1		
1-JM	LT.	62+07	63+57							125	
2-JM	RT.	62+07	63+57							125	
Totals				1693	136	49	14	26	200	2	250

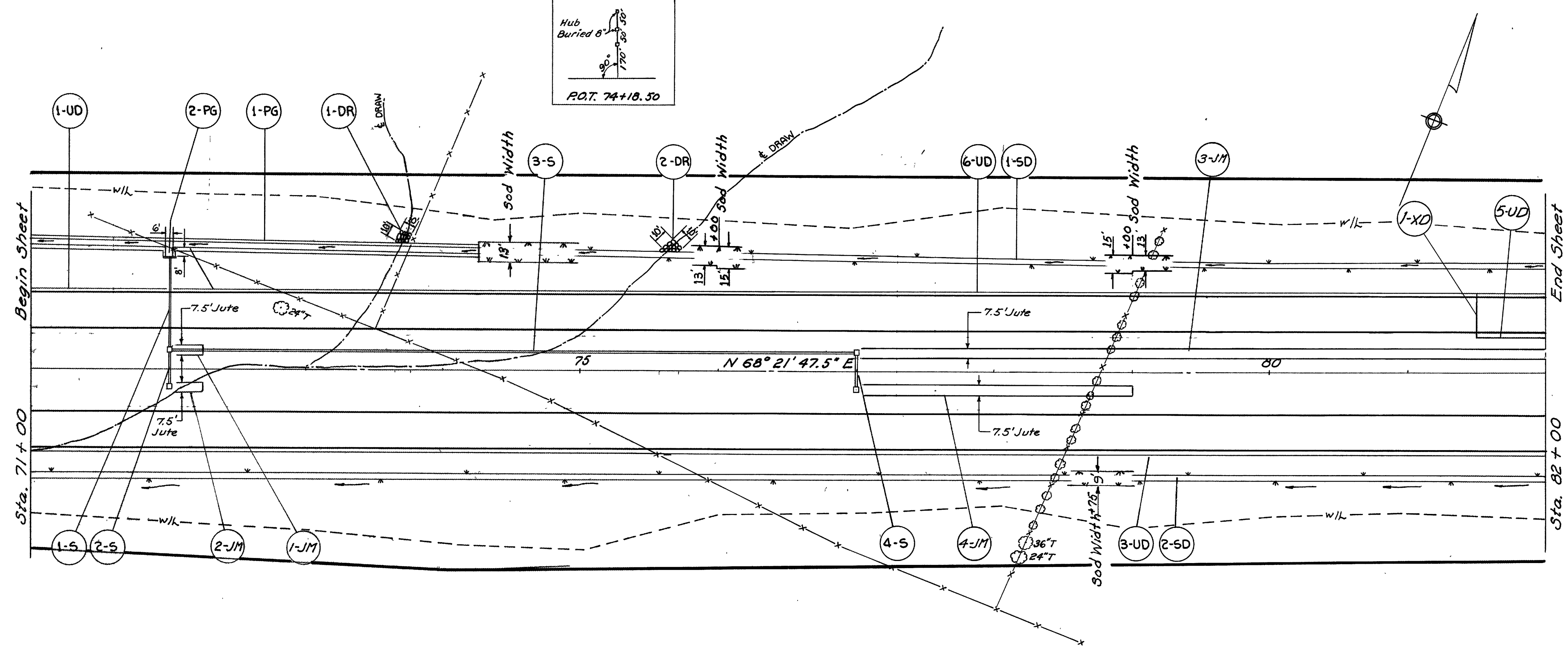
B.M. Spike in 20" Stump
 210' Lt. Sta. 69+10
 Elevation 1184.984



Reference No.	Side	Station		I-1 Pipe Class I-3 (Sleep) Lin. Ft.	I-1 8 PIPE CLASS F-4 SEE M-64(G) Lin. Ft.	I-5 Pipe Specials Class I-3 Each
		From	To			
1-UD	RT.	60+00	69+56	956		
4-UD	LT.	60+00	70+34	1034		
6-UD	RT.	69+66	71+00	148	10	1
7-UD	LT.	70+44	71+00	74	10	1
Totals				2212	20	2

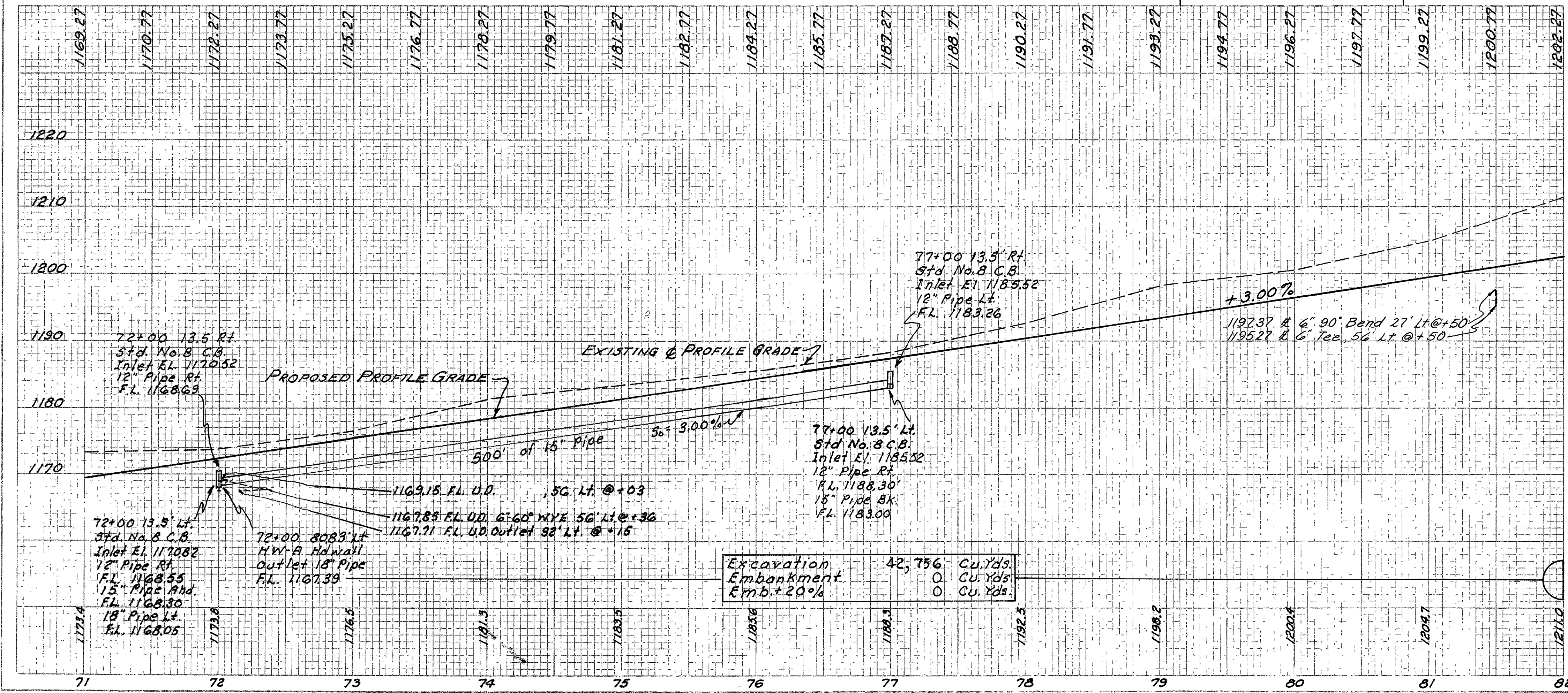
Excavation	81,613	Cu. Yds.
Embankment	171	Cu. Yds.
Embankment +20%	205	Cu. Yds.

RIC-30-9.28
ASD-30-0.00



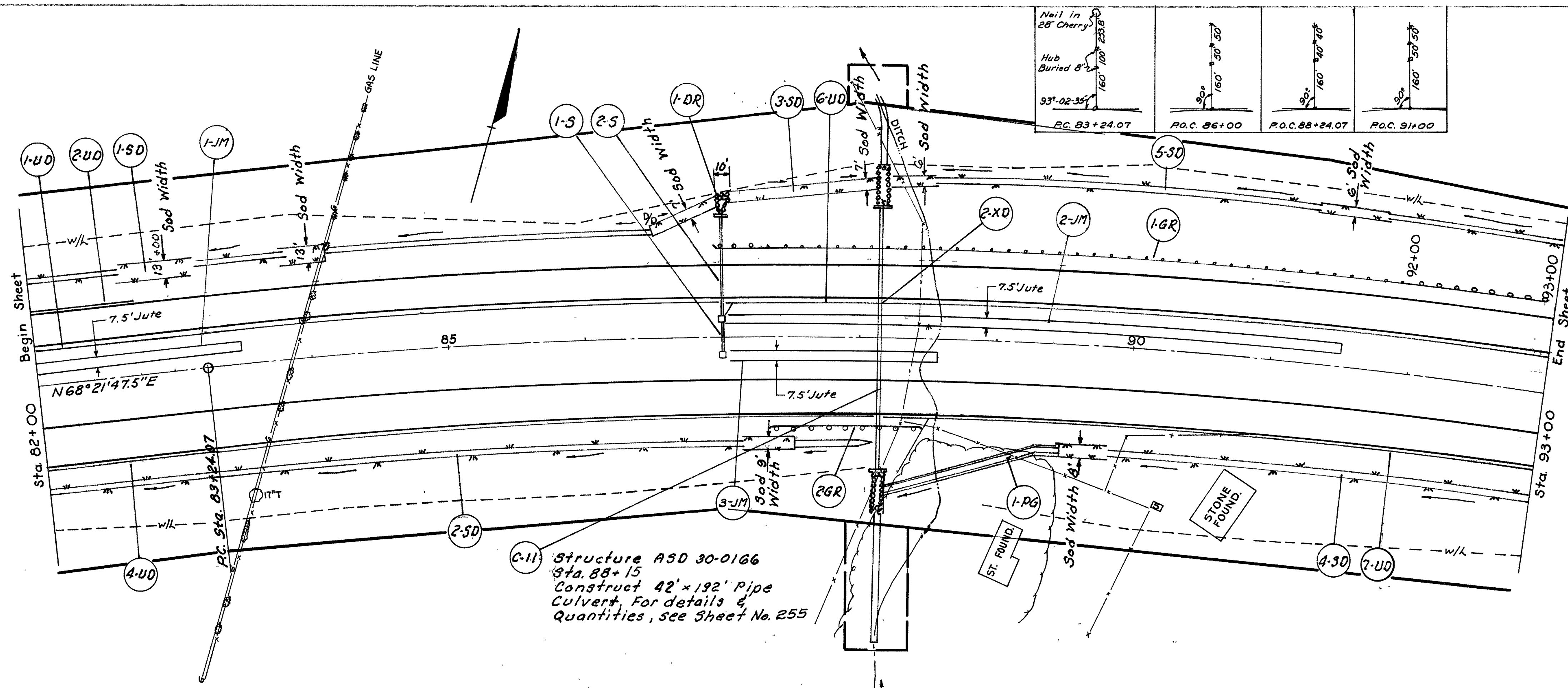
Reference No.	Side	STATION		L-10	I-14	I-10	I-8	I-1	I-1	I-2	L-120		
		From	To	SODDING	STD. PAVED BUTTER TYPE I MOD. Type D	Dumped Rock Channel Protection	CATCH BASIN STD. No. 8	PIPE CLASS E-1	PIPE CLASS J-1	Masonry	Jute Matting	Sq. Yds.	Sq. Yds.
1-SD	LT.	74+25	82+00	1143									
2-SD	RT.	71+00	82+00	1114									
1-PG	LT.	71+00	74+25	109	325								
2-PG	LT.	72+00		3	8								
1-S	LT.	72+00											
2-S	RT-LT	72+00											
3-S	LT.	72+00	77+00										
4-S	RT-LT	77+00											
1-DR	LT.	71+00	71+75										
2-DR	LT.	71+00	71+12										
1-JM	LT.	72+07	72+25										15
2-JM	RT.	72+07	72+25										15
3-JM	LT.	77+07	82+00										411
4-JM	RT.	77+07	79+00										161
Totals				2369	333	12	4	52	500	67	3.18	602	

BM.27 Spike in 8" Beech root
275' Rt. Sta. 79+65
Elevation 1202.891



Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-5	I-1		
		From	To	Pipe Class I-3 (Shallow)	Pipe Class I-3 (Deep)	8" PIPE CLASS FA (Specials)	6" x 6" Tee	6" Pipe Class J-1	Lin. Ft.	Lin. Ft.	
1-UD	LT.	71+00	71+97								97
3-UD	RT.	71+00	82+00								1100
5-UD	LT.	81+50	82+00	50							
6-UD	LT.	72+03	82+00								1029
1-XD	LT.	81+50									29
Totals				50	2226	10	1	1	1	29	

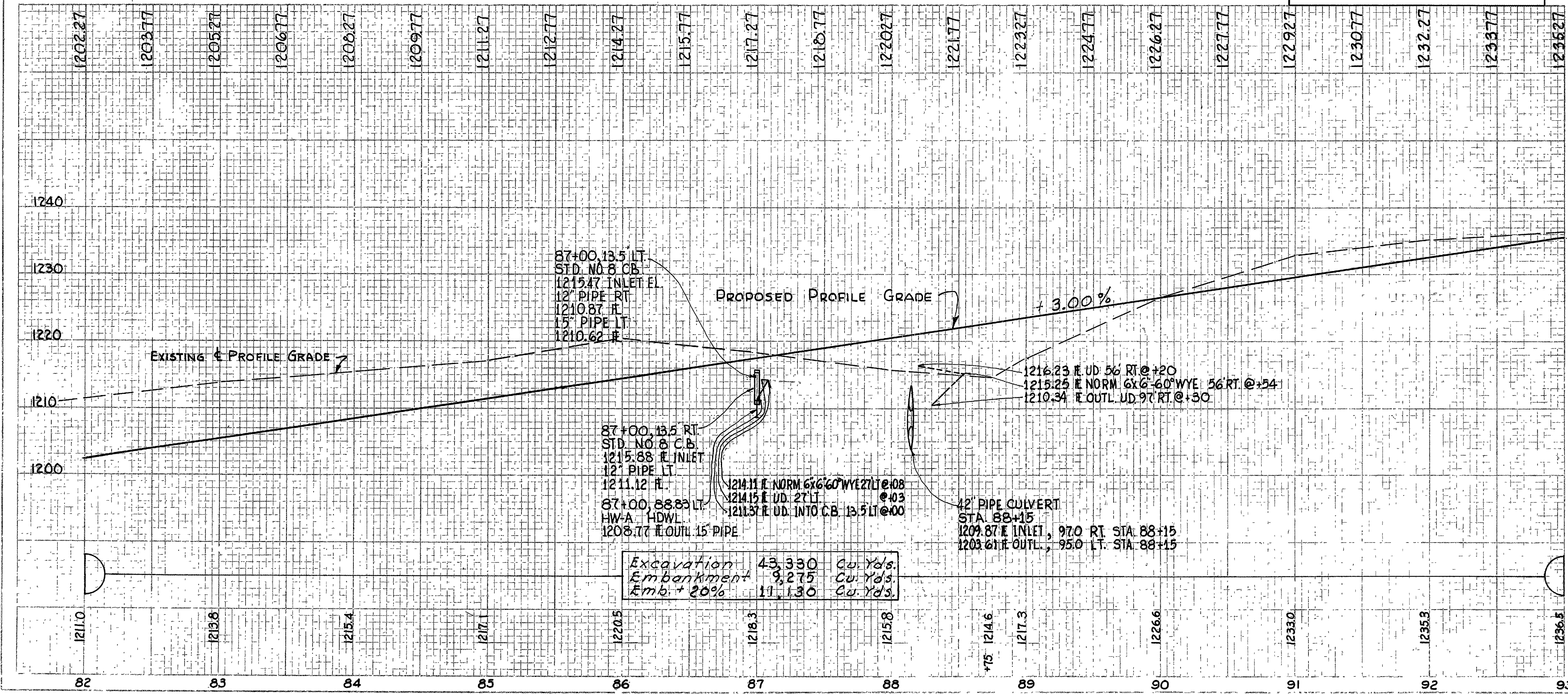
RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



C-11 Structure ASD 30-0166
 Sta. 88+15
 Construct 42'x192' Pipe
 Culvert. For details &
 Quantities, see Sheet No. 255

B.M. 28 Top of Ring on Press Tank of
 Gas Well 250' Lt. Sta. 92+10
 Elevation 1224.008

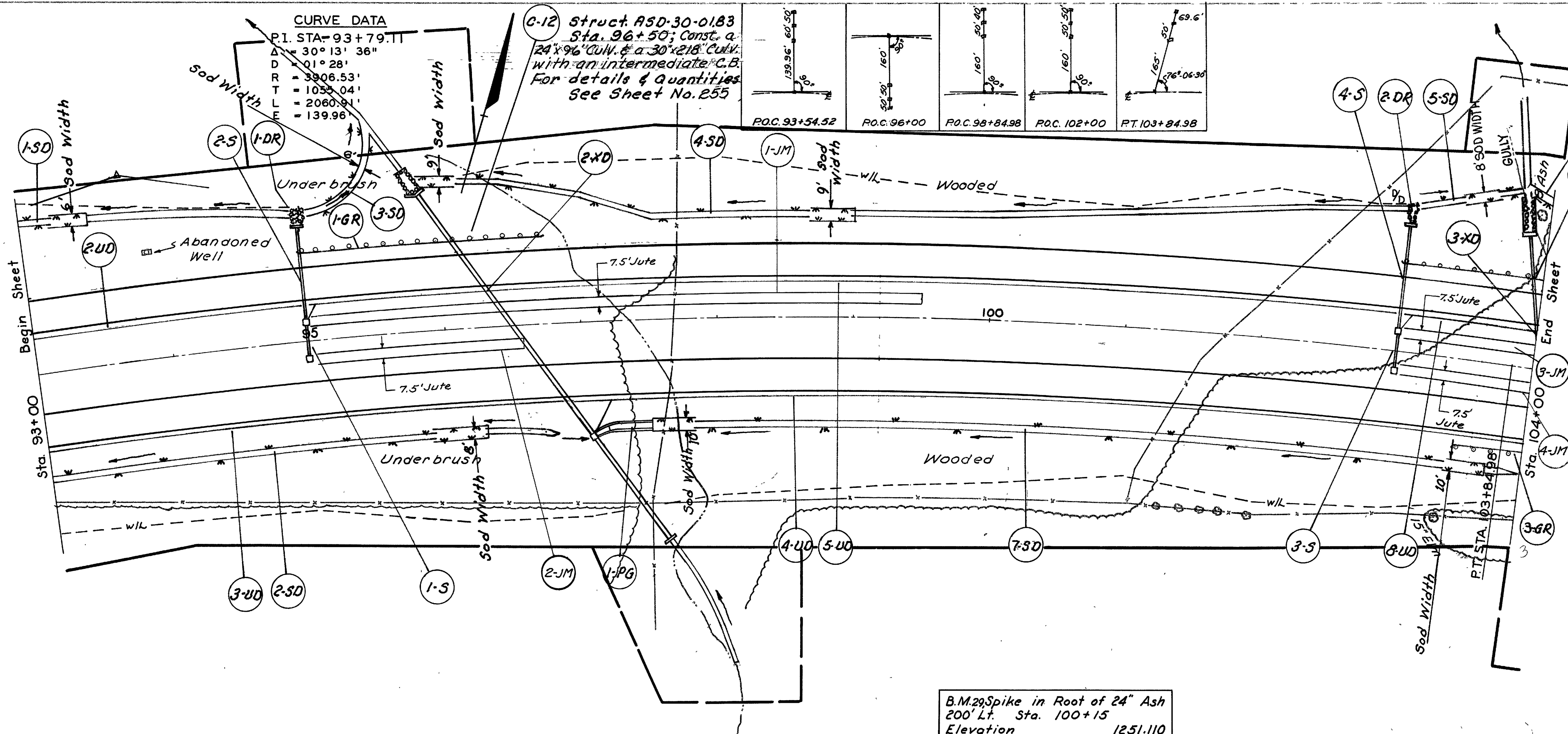
Reference No.	Side	Station		I-15 Steel Beam Type (Deep) Lin. Ft.	L-10 Sodding Sq. Yds.	I-14 Std. Paved Gutter Type I, Mod. Type C Lin. Ft.	L-120 Jute Matting Sq. Yds. Each	I-8 Catch Basin Std. No. 8 Each	I-1 Pipe Class E-1 Lin. Ft.	I-1 Pipe Class J-1 Lin. Ft.	I-2 Masonry Cu. Yds.
		From	To								
1-GR	Lt.	87+00	92+92.34	600							
2-GR	Rt.	87+40	88+40	100							
1-SD	Lt.	82+00	84+15		325						
2-SD	Rt.	82+00	87+50		545						
3-SD	Lt.	86+50	88+13		166						
4-SD	Rt.	89+50	93+00		330						
5-SD	Lt.	88+17	93+00		349						
1-PG	Rt.	88+17	89+50		38	114					
1-5	Rt-Lt	87+00						1	26		
2-5	Lt.	87+00						1		75	3.23
1-JM	Lt.	82+00	83+50				125				
2-JM	Lt.	87+07	91+50				369				
3-JM	Rt.	87+07	88+57				125				
Totals				700	1753	114	619	2	26	75	3.23



Excavation	43,330	Cu. Yds.
Embankment	9,275	Cu. Yds.
Emb. + 20%	11,130	Cu. Yds.

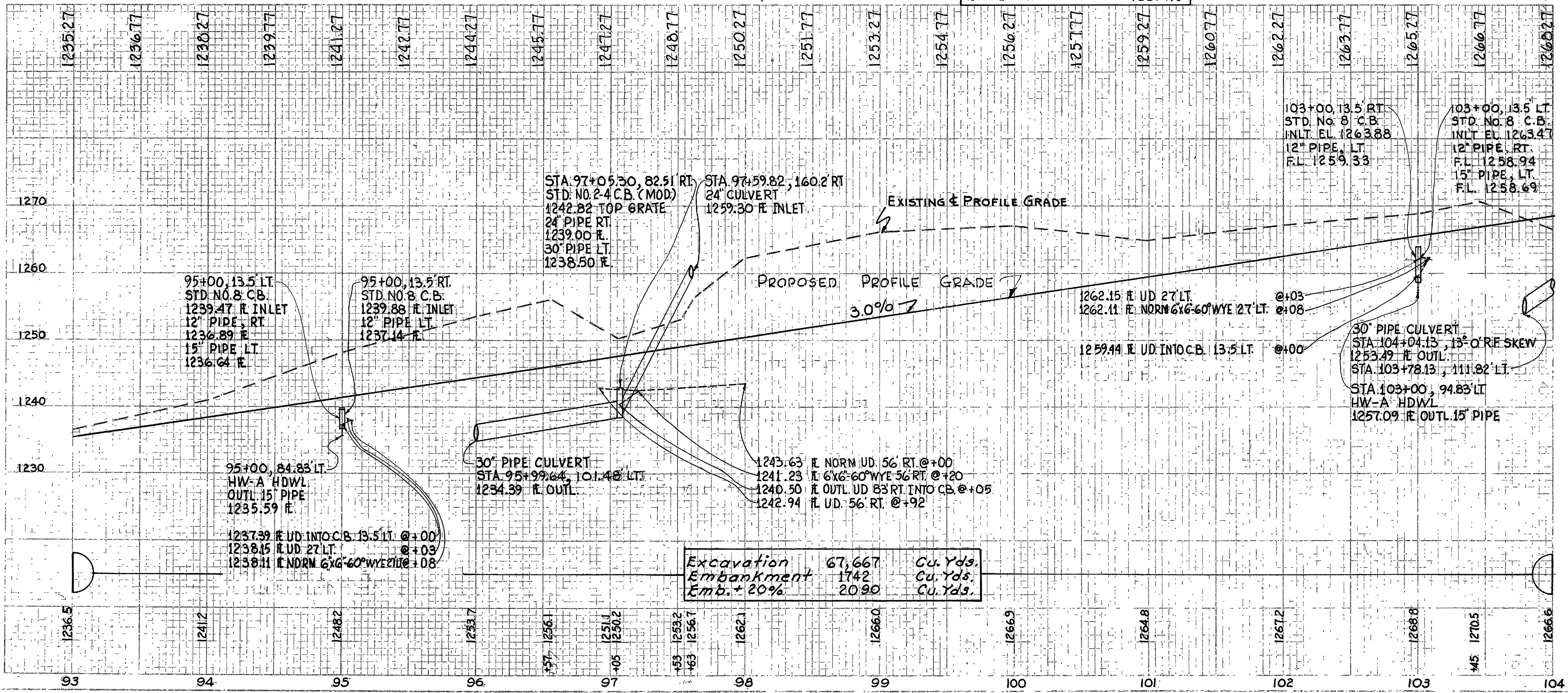
Reference No.	Side	Station		I-3 Pipe Class I-3 (Shallow) Lin. Ft.	I-1 Pipe Class I-3 (Deep) Lin. Ft.	I-1 Pipe Class F-1 6" G Lin. Ft.	I-1 8" PIPE CLASS F-1 SEC. W/ 6" 6"x6" WYE Each	I-5 Pipe Spec. Class F-3 Each	I-10 Dumped Rock Channel Protection Cu. Yds.
		From	To						
1-UD	Lt.	82+00	86+97	497					
2-UD	Lt.	82+00	82+75		75				
4-UD	Rt.	82+00	88+10		610				
6-UD	Lt.	87+00	93+00	593		10	1		
7-UD	Lt.	88+20	93+00		518		10	1	
1-DR	Lt.	86+96	87+06						5
2-XD	Lt.	88+10	88+20			10			5
Totals				1090	1203	20	10	2	5

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



B.M. 29 Spike in Root of 24" Ash
 200' Lt. Sta. 100+15
 Elevation 1251.10

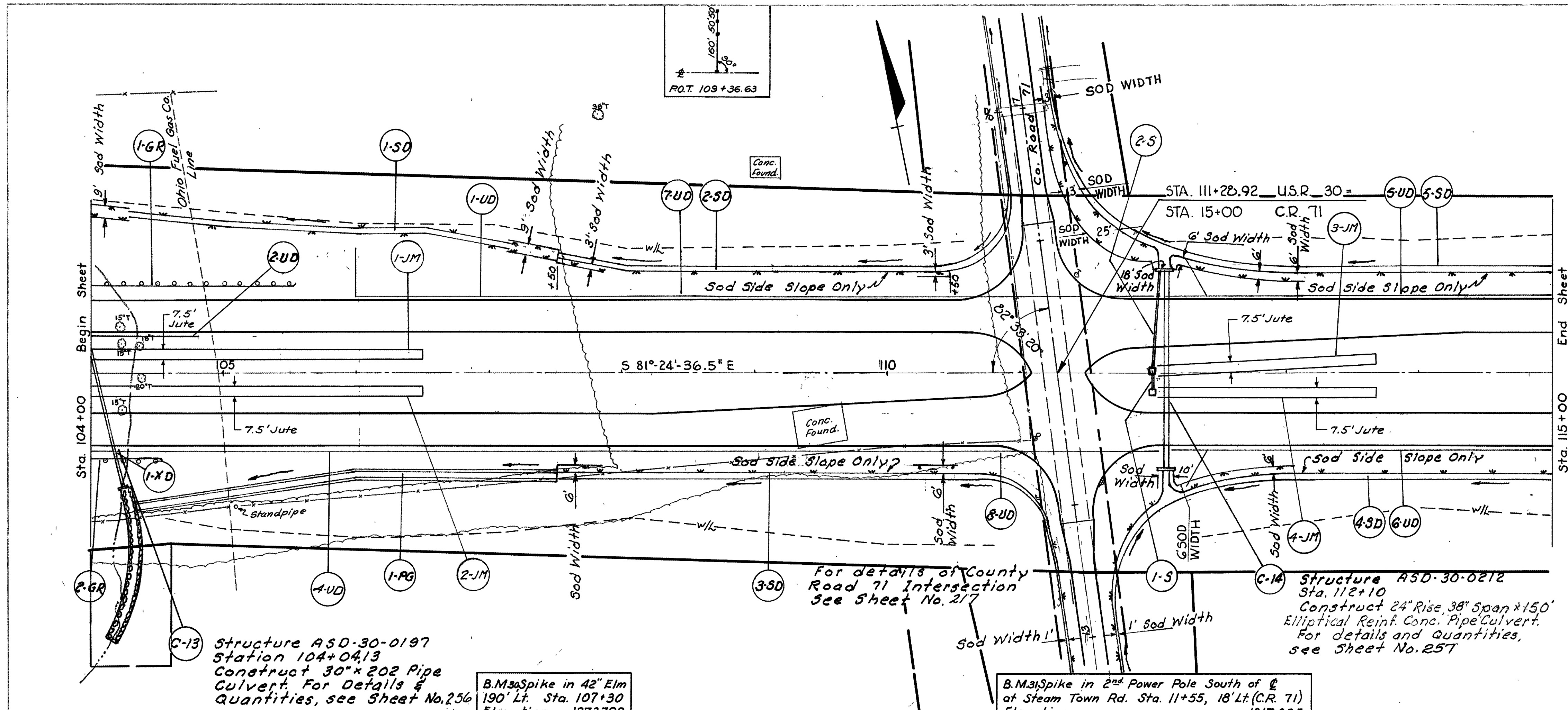
Reference No.	Side	Station		Sodding Sq. Yds.	Std. Paved Gutter Type 1, Mod. Type C Lin. Ft.	Jute Matting Sq. Yds.	Catch Basin Std. No. 8 Each	Pipe Class J-1 15" Lin. Ft.	Pipe Class F-1 12" Lin. Ft.	Masonry Cu. Yds.	Dumped Rock Channel Protection Cu. Yds.	I-10	I-15
		From	To										
1-SD	Lt.	93+00	93+50	40									
2-SD	Rt.	93+00	96+25	292									
3-SD	Lt.	95+06	95+50	107									
4-SD	Lt.	96+00	99+00	284									
5-SD	Lt.	103+06	103+72	72									
6-SD	Lt.	103+76	104+00	19									
7-SD	Rt.	97+50	103+75	747									
1-PR	Rt.	97+15	97+50	12	35								
1-DR	Lt.	94+96	95+06									5	
2-DR	Lt.	102+96	103+06									5	
1-5	Rt.-Lt.	95+00											
2-5	Lt.	95+00						71		26		3.23	
3-5	Rt.-Lt.	103+00							26				
4-5	Lt.	103+00							81			3.23	
1-6R	Lt.	95+00	96+75										175
2-6R	Lt.	103+00	104+00										100
3-6R	Rt.	103+50	104+00										50
1-1M	Lt.	95+07	99+50			369							
2-1M	Rt.	95+07	96+57			125							
3-1M	Lt.	103+07	104+00			78							
4-1M	Rt.	103+07	104+00			78							
Totals				1573	35	650	3	152	52	6.46	10		925



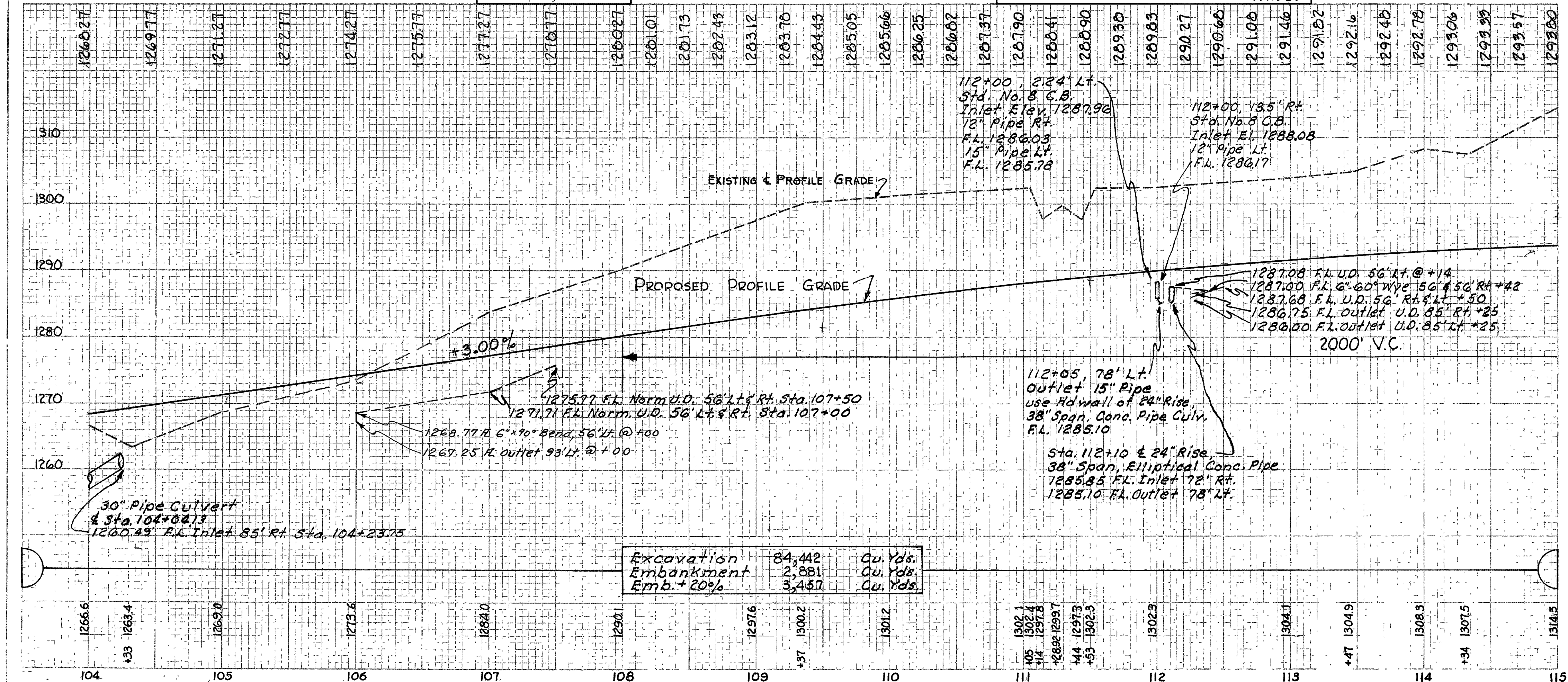
Excavation 67,667 Cu. Yds.
 Embankment 1742 Cu. Yds.
 Emb. + 20% 2090 Cu. Yds.

Reference No.	Side	Station		Pipe Class I-3 (Shallow) Lin. Ft.	Pipe Class I-3 (Deep) Lin. Ft.	6" Pipe Class F-4 Lin. Ft.	8" PIPE CLASS F-4 Sec. Me. 4(C) 18"x60" Wye Each	Pipe Specials Class I-3 Each
		From	To					
2-UD	Lt.	93+00	94+97	197				
3-UD	Rt.	93+00	96+81		381			
4-UD	Rt.	96+92	104+00		723	10	1	
5-UD	Lt.	95+00	102+97	800		10	1	
8-UD	Lt.	103+00	104+00	103		10	1	
2-XD	Lt.	96+28	96+38			10		
3-XD	Lt.	103+86	103+96			10		
Totals -				1100	1104	40	10	3

RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00

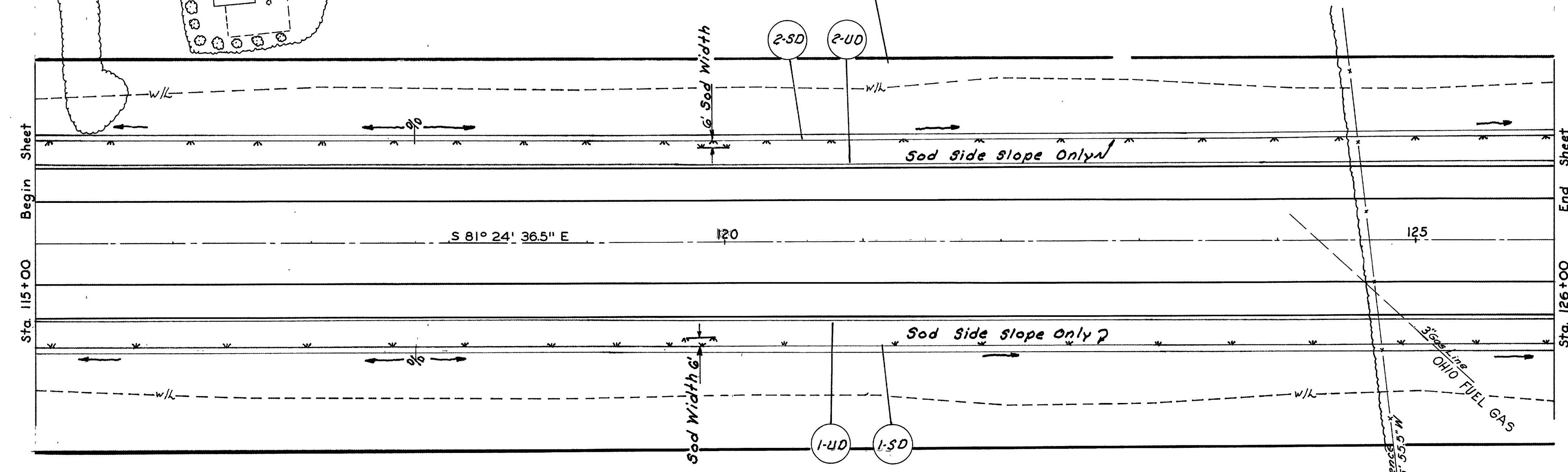
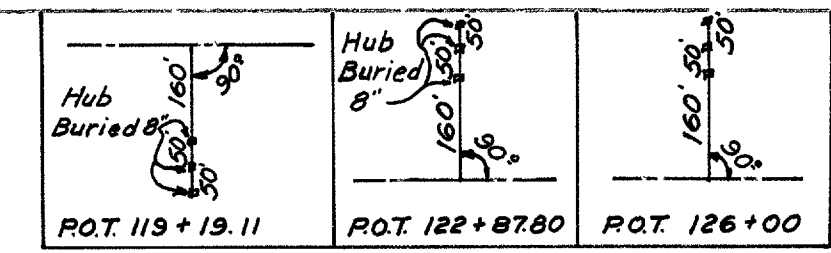


Reference No.	Side	Station		SODDING SQ.YDS.	I-14 STD. PAVED GUTTER TYPE I MOD. Type D LIN. FT.	I-120 Jute Matting Sq.Yds.	I-8 CATCH BASIN STA. No. & C.B. Each	I-1 PIPE CLASS E-1 12" LIN. FT.	I-1 PIPE CLASS J-1 15" LIN. FT.	I-15 Guard Rail Steel Beam Lin. Ft.	
		From	To								
1-SO	LT.	104+00	107+50	317							
2-SO	LT.	107+50	110+50	102							
3-SO	RT.	107+50	110+80	112							
4-SO	RT.	112+12	115+00	202							
5-SO	LT.	112+12	115+00	202							
1-PG	RT.	104+30	107+50	107	321						
1-S	RT-LT.	112+00					1	15			
2-S	LT.	112+00	112+05				1		76		
1-GR	LT.	104+00	105+50							150	
2-GR	RT.	104+00	104+50							50	
1-JM	LT.	104+00	106+50			208					
2-JM	RT.	104+00	106+50			208					
3-JM	LT.	112+07	113+57			125					
4-JM	RT.	112+07	113+57			125					
Totals				1042	321	666	2	15	76		200



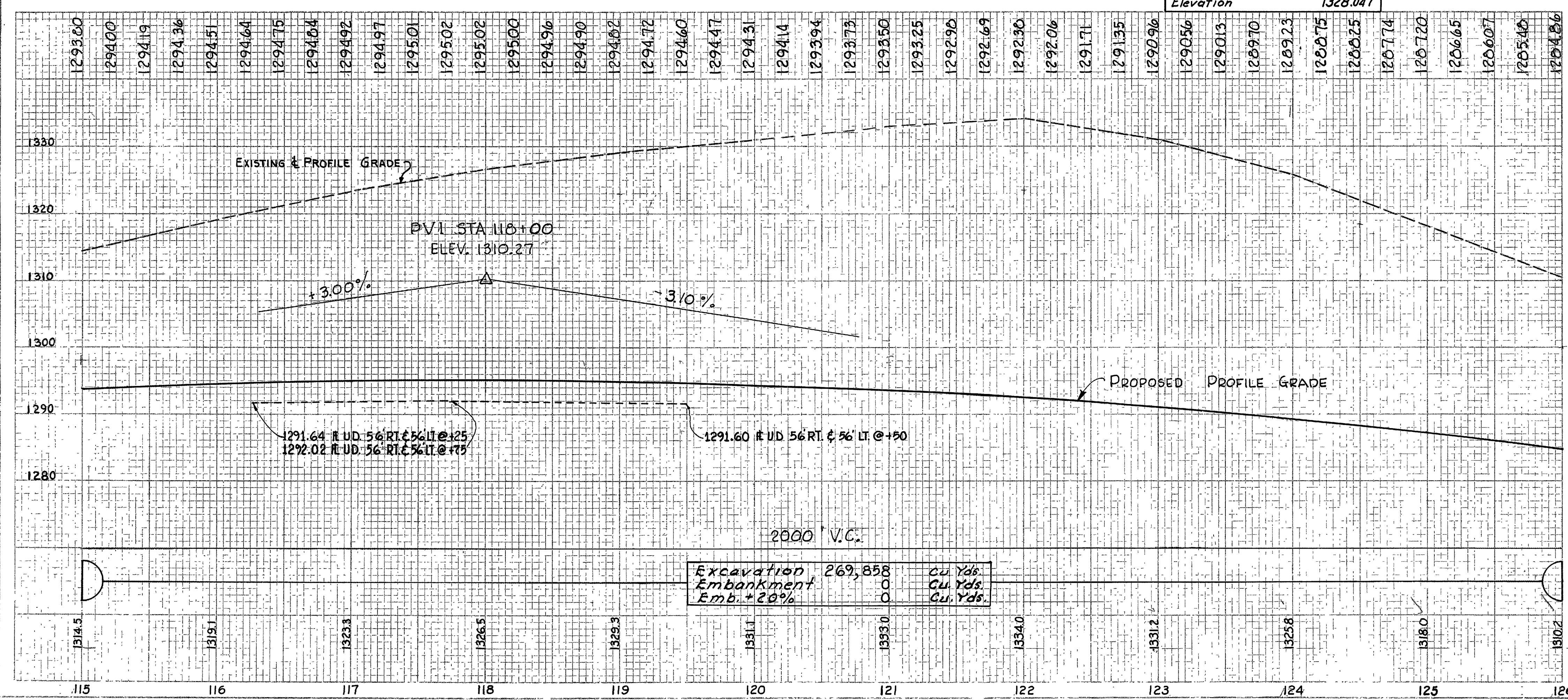
Reference No.	Side	Station		Pipe Class I-3 (Shallow) Lin. Ft.	Pipe Class I-3 (Deep) Lin. Ft.	Pipe Class I-3 Section 64(n) Lin. Ft.	I-1 8" PIPE M-6-4(C) CLASS F-4 Lin. Ft.	I-5 Pipe Specials Class I-3 Each	I-1 6"x6" Wye 6"x90" Bend	I-1 6" Pipe Class F-4 Lin. Ft.	
		From	To								
1-UD	LT.	106+00	107+50								
2-UD	LT.	104+00	104+80	80							
4-UD	RT.	104+00	107+50		350						
5-UD	LT.	112+14	115+00			310	10	1			
6-UD	RT.	112+14	115+00			310	10	1			
1-XD	RT.	104+05	104+15							10	
7-UD	LT.	107+50	112+00			450					
8-UD	RT.	107+50	112+06			456					
Totals				80	527	1526	30	2	1		10

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



REFERENCE NO.	SIDE	STATION		Sq. Yds.
		FROM	TO	
1-SD	RT.	115+00	126+00	744
2-SD	LT.	115+00	126+00	744
Total				1488

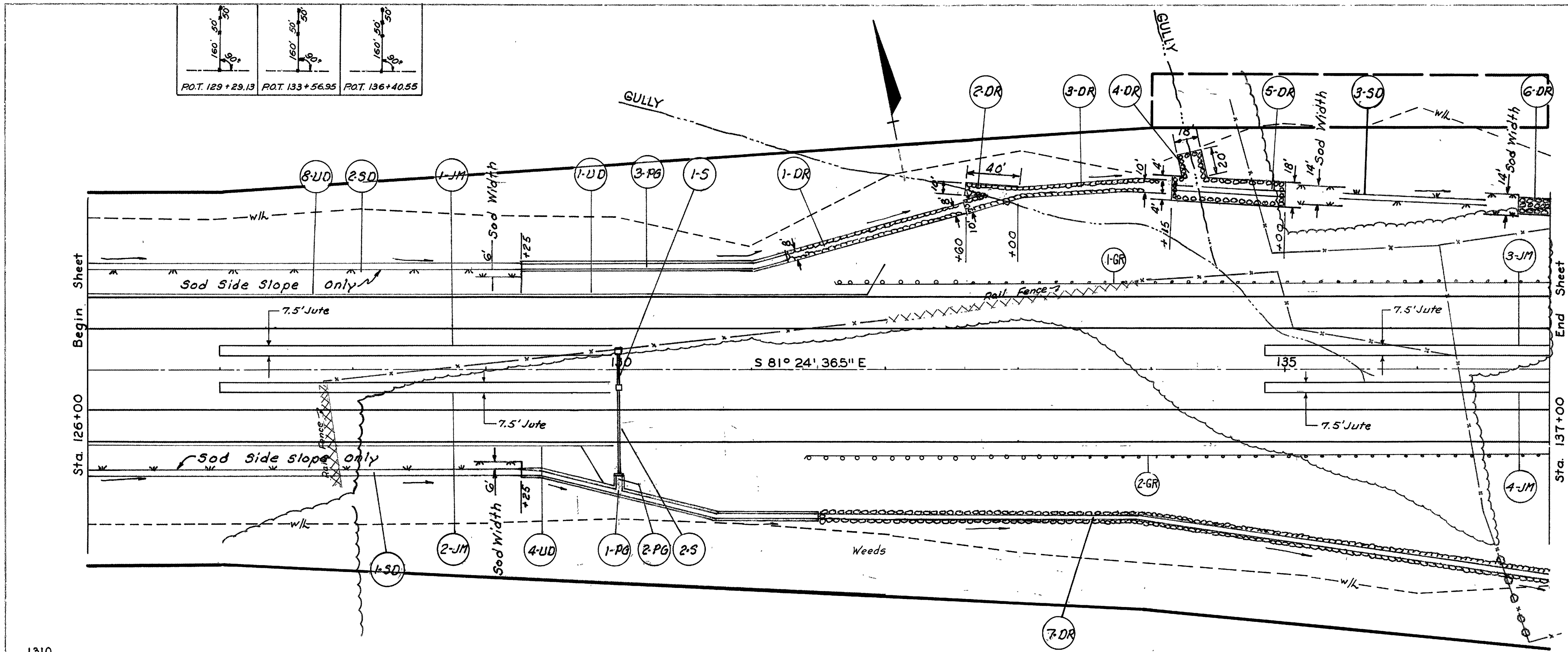
B.M. 32 Spike in 20" Hickory in
Fence Line 310' Lt. Sta. 123+50
Elevation 1328.047



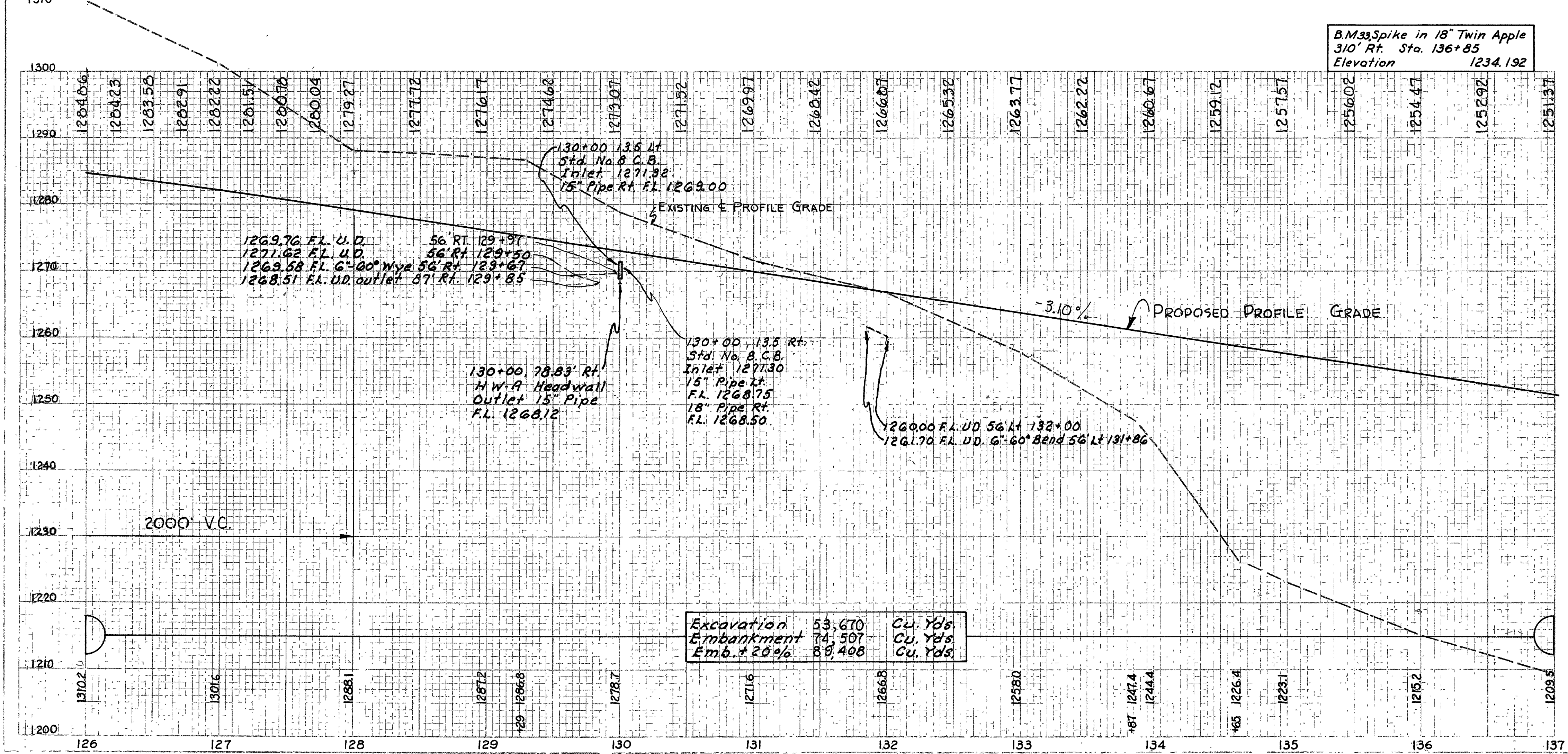
Excavation	269,858	Cu. Yds.
Emb. +20%	0.0	Cu. Yds.
		Cu. Yds.

Reference No.	Side	Station		Pipe Class I-3 Sec. M. 64(h) G. Lin. Ft.
		From	To	
1-UD	RT.	115+00	126+00	1100
2-UD	LT.	115+00	126+00	1100
Total				2200

RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00



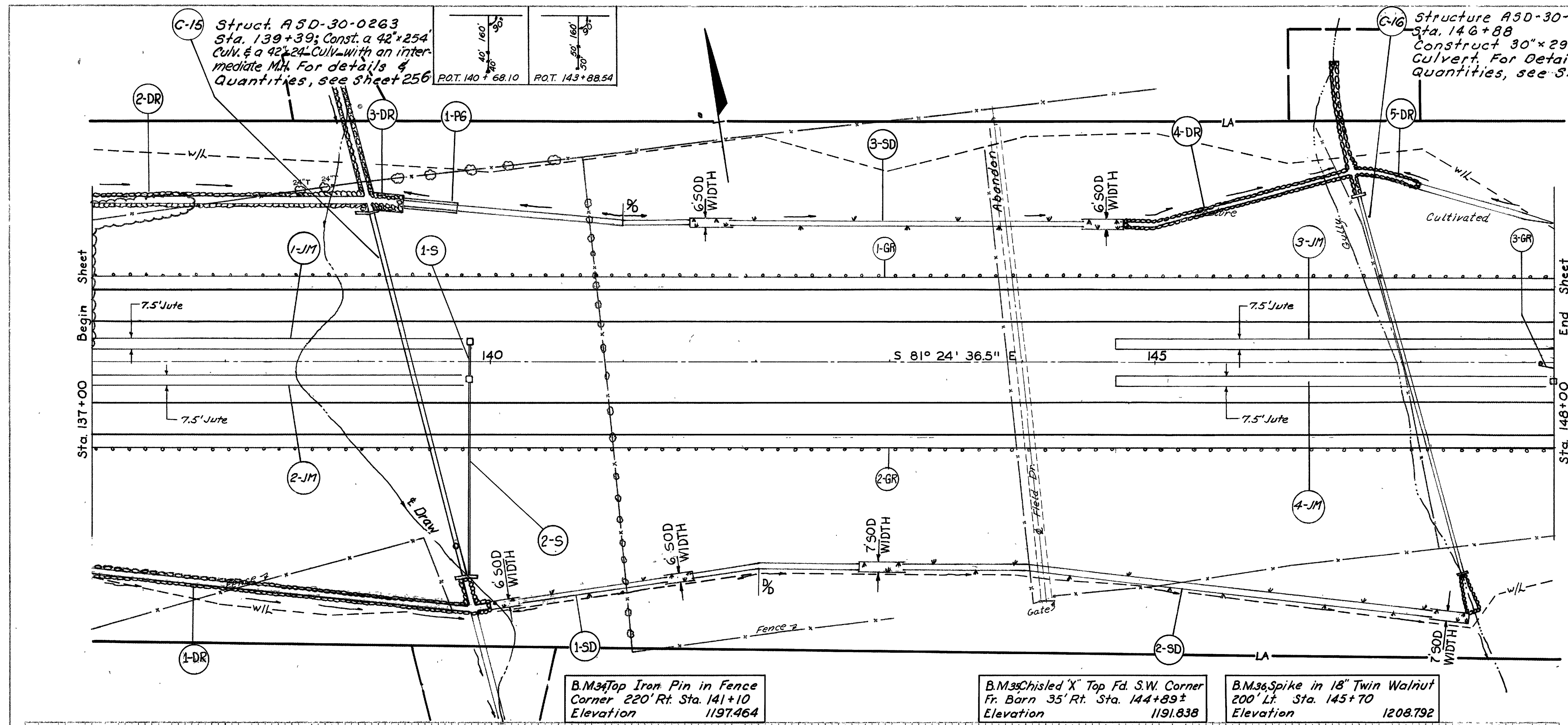
Reference No.	Side	Station		I-15	L-10	I-14	I-8	I-1	I-1	I-2	I-10
		From	To	Steel Beam Guard Rail Deep, Lin. Ft.	Sodding Sq. Yds.	Std. Paved Gutter Std. Type, Med. Type, C, Lin. Ft.	Catch Basin Std. No. 8 Each	Pipe Class E-1 15\"	Pipe Class U-1 18\"	Masonry Cu. Yds.	Dumped Rock Channel Protection CU YDS.
1-GR	Lt.	131+66.37	137+00	533.63							
2-GR	Rt.	131+39.08	137+00	560.92							
1-SD	RT.	126+00	129+25		220						
2-SD	LT.	126+00	129+25		220						
3-SD	LT.	126+00	136+75		292						
1-PG	RT.	129+25	131+50		75	225					
2-PG	RT.	130+00			4	10					
3-PG	LT.	129+25	131+25		67	200					
1-5	Lt-Rt.	130+00					1	26			
2-5	Rt.	130+00					1		65	3.18	
1-DR	Lt.	131+25	132+60								66
2-DR	Lt.	132+60	133+00								20
3-DR	Lt.	132+60	134+15								93
4-DR	Lt.	134+40									20
5-DR	Lt.	134+15	135+00								93
6-DR	Lt.	136+75	137+00								18
7-DR	Rt.	131+50	137+00								227
Totals				1084.55	878	435	2	26	65	3.18	537



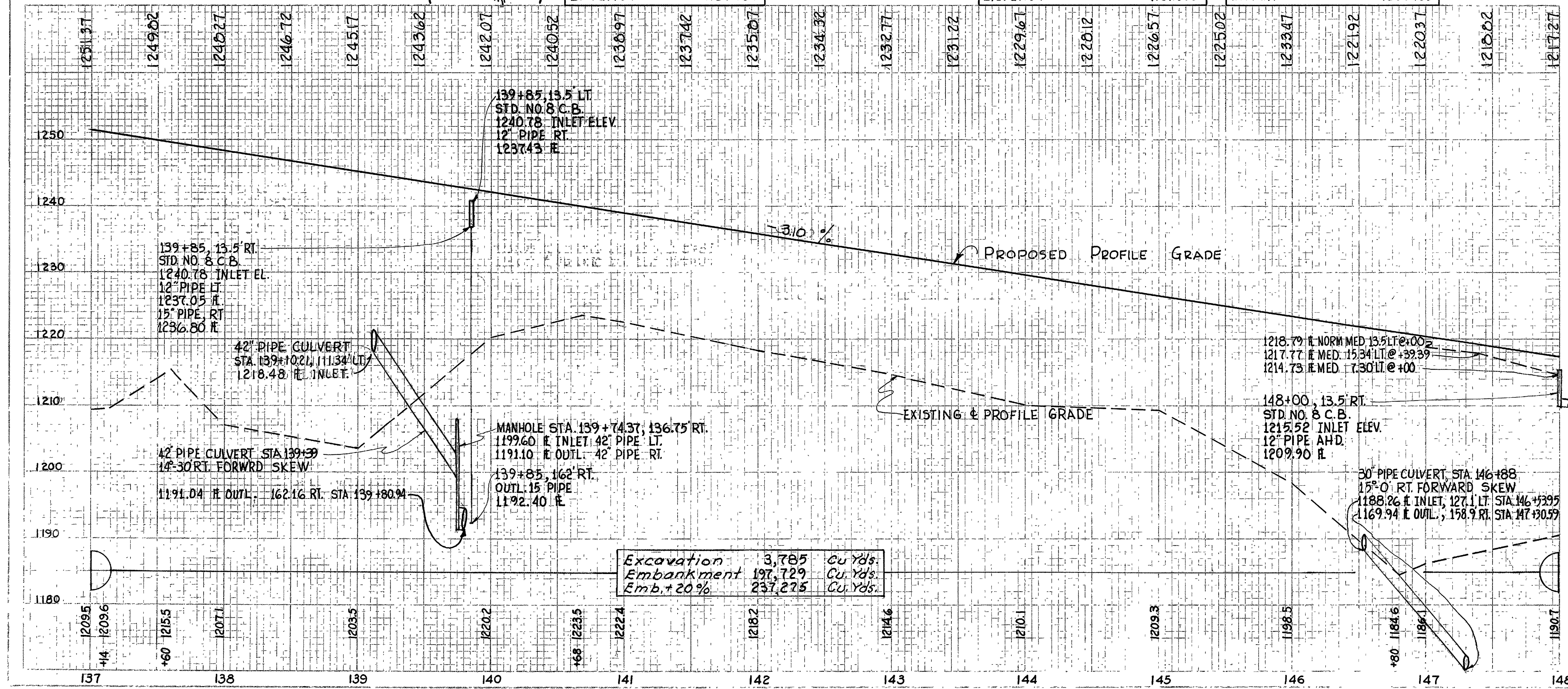
Reference No.	Side	Station		I-1	I-1	I-1	I-5	I-1	I-120
		From	To	Pipe Class I-3 (Shallow) 6\"	Pipe Class I-3 (Deep) 6\"	8\" Pipe M-6(1c) CLASS F-4	Pipe Spec. Class I-3 6\"x6\" Wye 56\" Bend 18\" M-6(4H)	Pipe Class I-3 Sec. M-6(4H)	Jute Matting Sq. Yds.
1-UD	Lt.	129+50	132+00		263	10	1		
4-UD	Rt.	126+00	129+97	63		10	1	350	
8-UD	Lt.	126+00	129+50					350	
1-JM	LT	127+00	129+93						244
2-JM	RT	127+00	129+93						244
3-JM	LT	134+85	137+00						179
4-JM	RT	134+85	137+00						179
Totals				63	263	20	1	700	846

Excavation 53,670 Cu. Yds.
 Embankment 74,507 Cu. Yds.
 Emb. + 20% 89,408 Cu. Yds.

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00

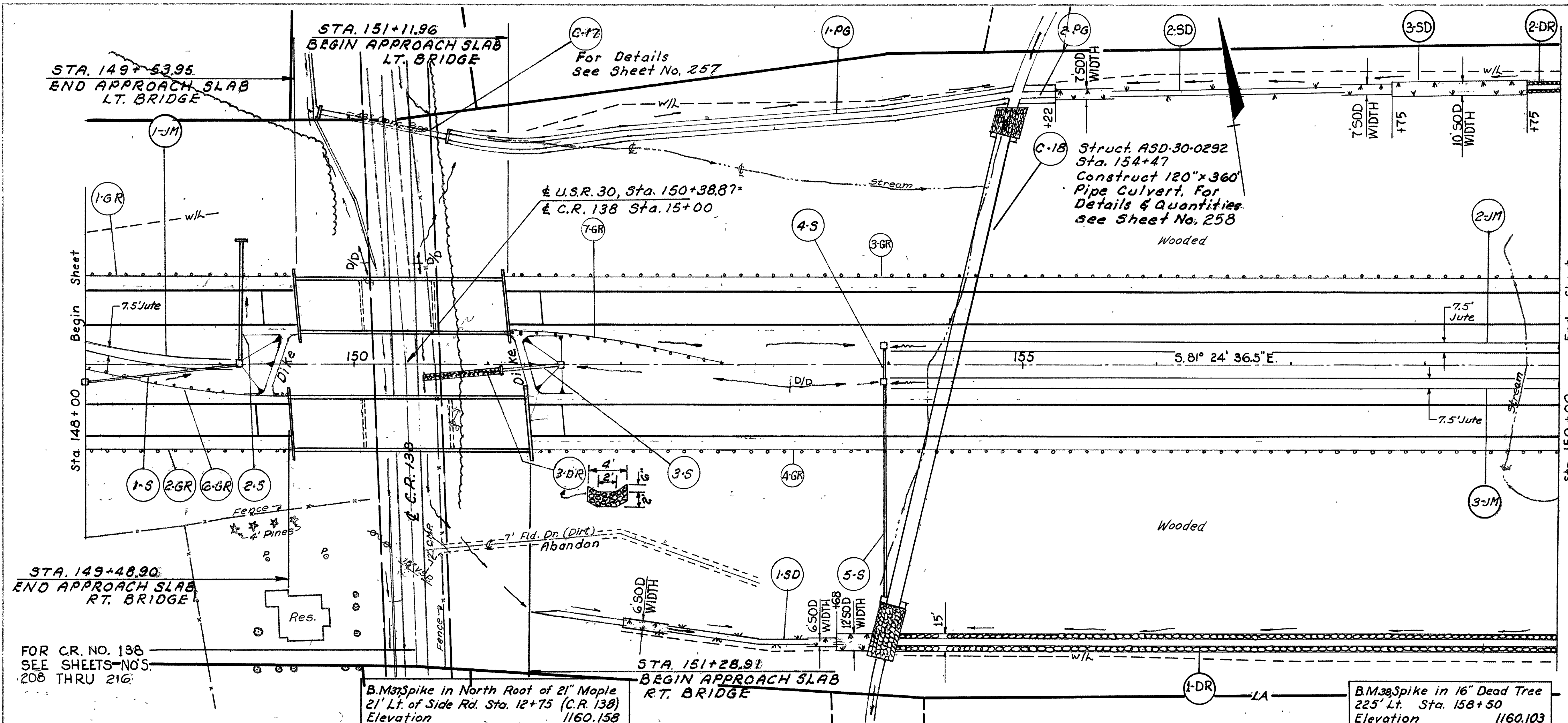


Reference No.	Side	Station		Type	Lin. Ft.	Sq. Yds.	Lin. Ft.	Cu. Yds. Each	Lin. Ft.	Lin. Ft.	Each			
		From	To											
1-GR	Lt.	137+00	148+00	1100										
2-GR	Rt.	137+00	148+00	1100										
3-GR	Rt.	147+89.39	148+00	13.68										
1-SD	Rt.	139+87	141+50			121								
2-SD	Rt.	142+75	147+36			382								
3-SD	Lt.	141+50	144+75			226								
1-P6	Lt.	139+36	139+75				13	39						
1-DR	Rt.	137+00	139+94						139					
2-DR	Lt.	137+00	139+07						149					
3-DR	Lt.	139+11	139+36						18					
4-DR	Lt.	144+75	146+49						61					
5-DR	Lt.	146+53	147+00						17					
1-S	Lt.-Rt.	139+85							1	26				
2-S	Rt.	139+85							1	56	103			
Totals						2213.68	742	39	384	2	26	56	103	2

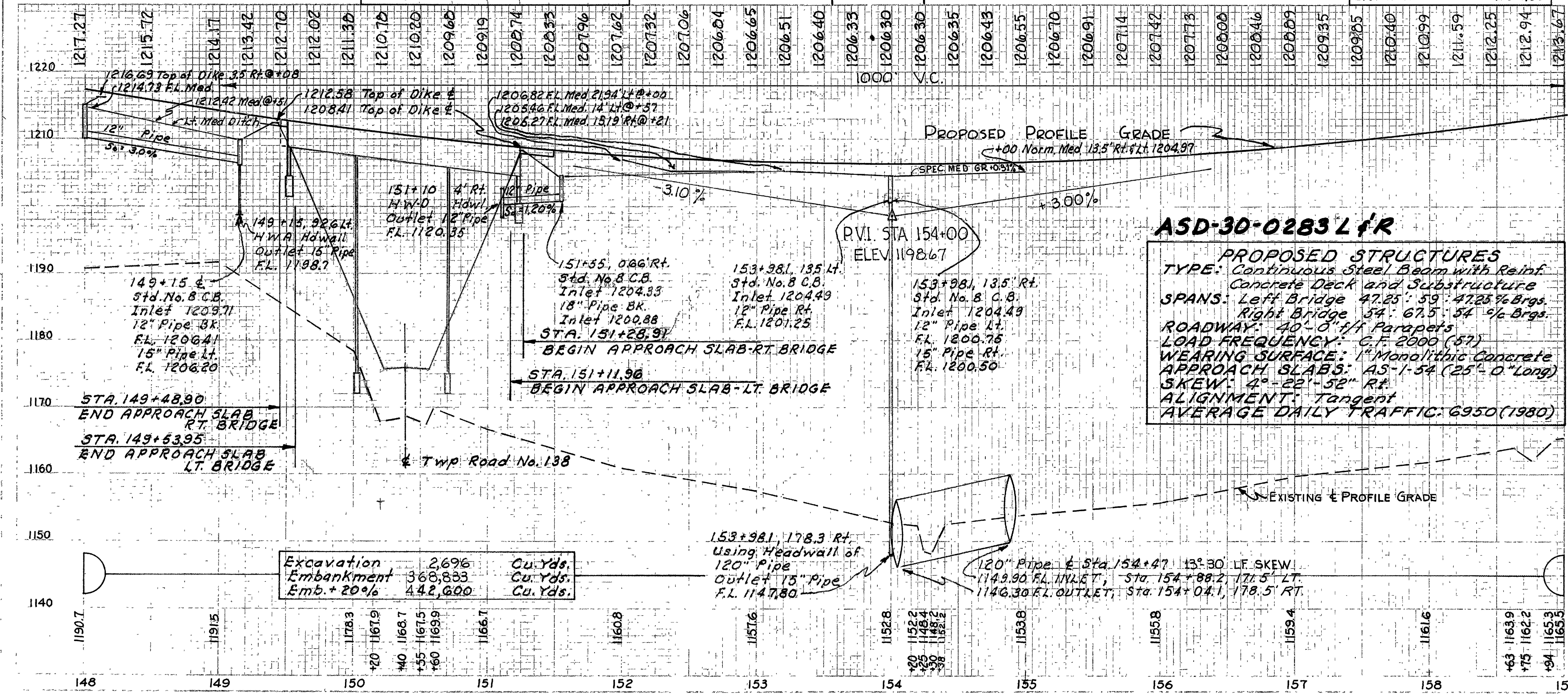


Reference No.	Side	Station		Type	Sq. Yds.
		From	To		
1-JM	Lt.	137+00	139+78		232
2-JM	Rt.	137+00	139+78		232
3-JM	Lt.	144+70	148+00		276
4-JM	Rt.	144+70	147+93		269
Totals					1009

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



Reference No.	Side	Station		Steel Beam Type (Deep)	Saddling	DUMPED ROCK CHANNEL PROTECTION	Start Revee Quarter Type I Mod. Type II	Catch Basin Sta. No. 8	Pipe Class J-1 12"	Pipe Class J-1 15"	Pipe Special Class F-1 15"-25° Bend	Std. HW-A	Std. HW-D		
		From	To												
1-GR	Lt.	148+00	149+53.87	153.87											
2-GR	Rt.	148+00	149+51.38	151.58											
3-GR	Lt.	151+08.28	159+00	790.72											
4-GR	Rt.	151+28.99	159+00	768.65											
6-GR	Rt.	148+00	149+48.82	148.82											
7-GR	Lt.	151+12.04	152+71.47	162.50											
1-SD	Rt.	152+00	153+93		153										
2-SD	Lt.	155+22	157+75		207										
3-SD	Lt.	157+75	158+75		119										
1-PG	Lt.	150+71	154+94		141		423								
2-PG	Lt.	154+97	155+22		9		25								
1-DR	Rt.	154+09	159+00			742									
2-DR	Lt.	158+75	159+00			12									
1-S	Rt.	148+00						1	115						
2-S	Lt.	149+15								76	19	2	323		
3-S	Rt.	151+10	151+55							45			0.65		
4-S	Lt.	153+98.1								26					
5-S	Rt.	153+98.1								56	12	2			
Totals					2176.74	629	754	448	5	186	132	140	4	323	0.65



ASD-30-0283 L & R

PROPOSED STRUCTURES

TYPE: Continuous Steel Beam with Reinf. Concrete Deck and Substructure

SPANS: Left Bridge 42.25'; 59'-47.25' Brgs.

Right Bridge 54'-67.5'; 54'-5/6 Brgs.

ROADWAY: 40'-0" / 11' Parapets

LOAD FREQUENCY: C.F. 2000 (57)

WEARING SURFACE: 1" Monolithic Concrete

APPROACH SLABS: AS-1-54 (25'-0" Long)

SKEW: 4°-22'-52" Rt.

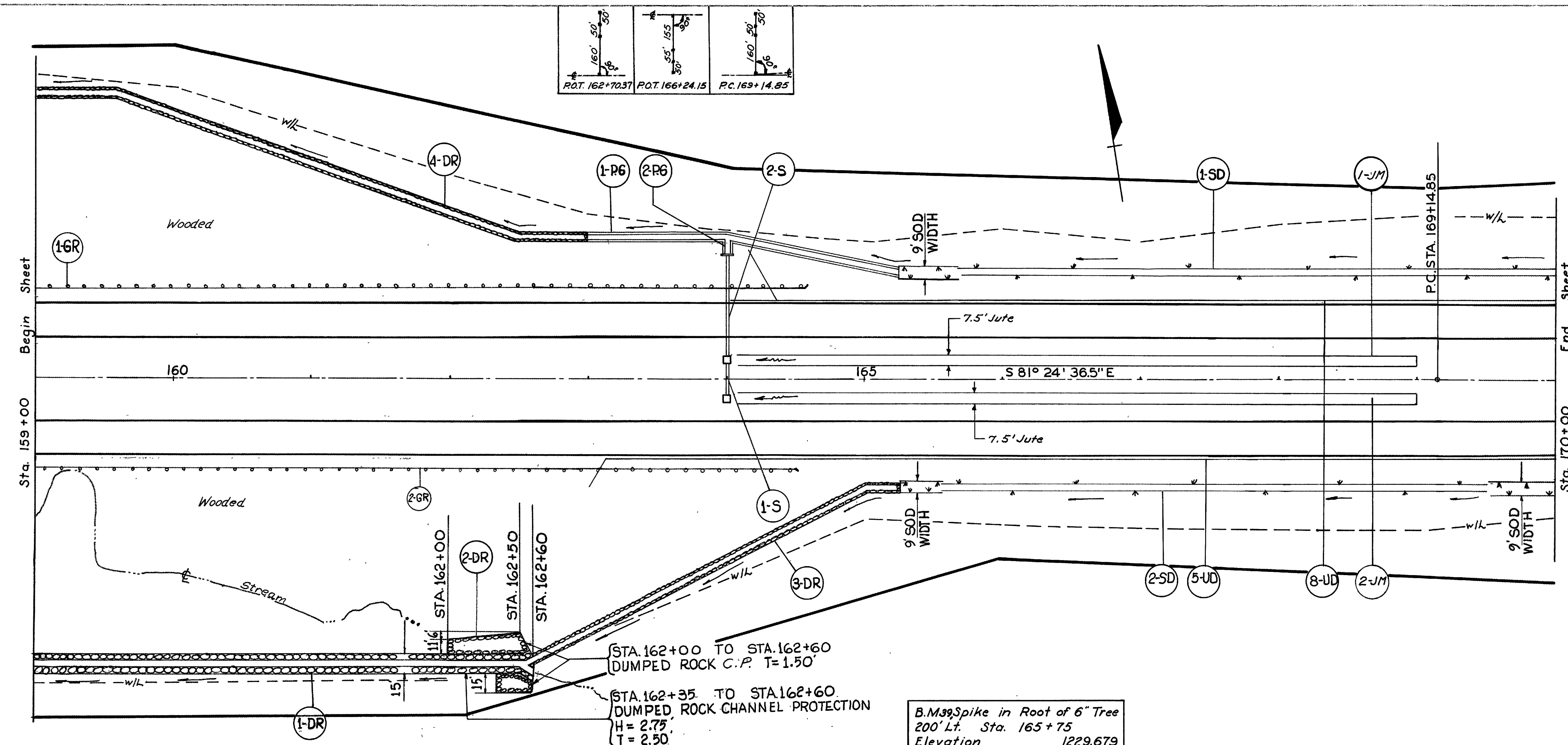
ALIGNMENT: Tangent

AVERAGE DAILY TRAFFIC: 6950 (1980)

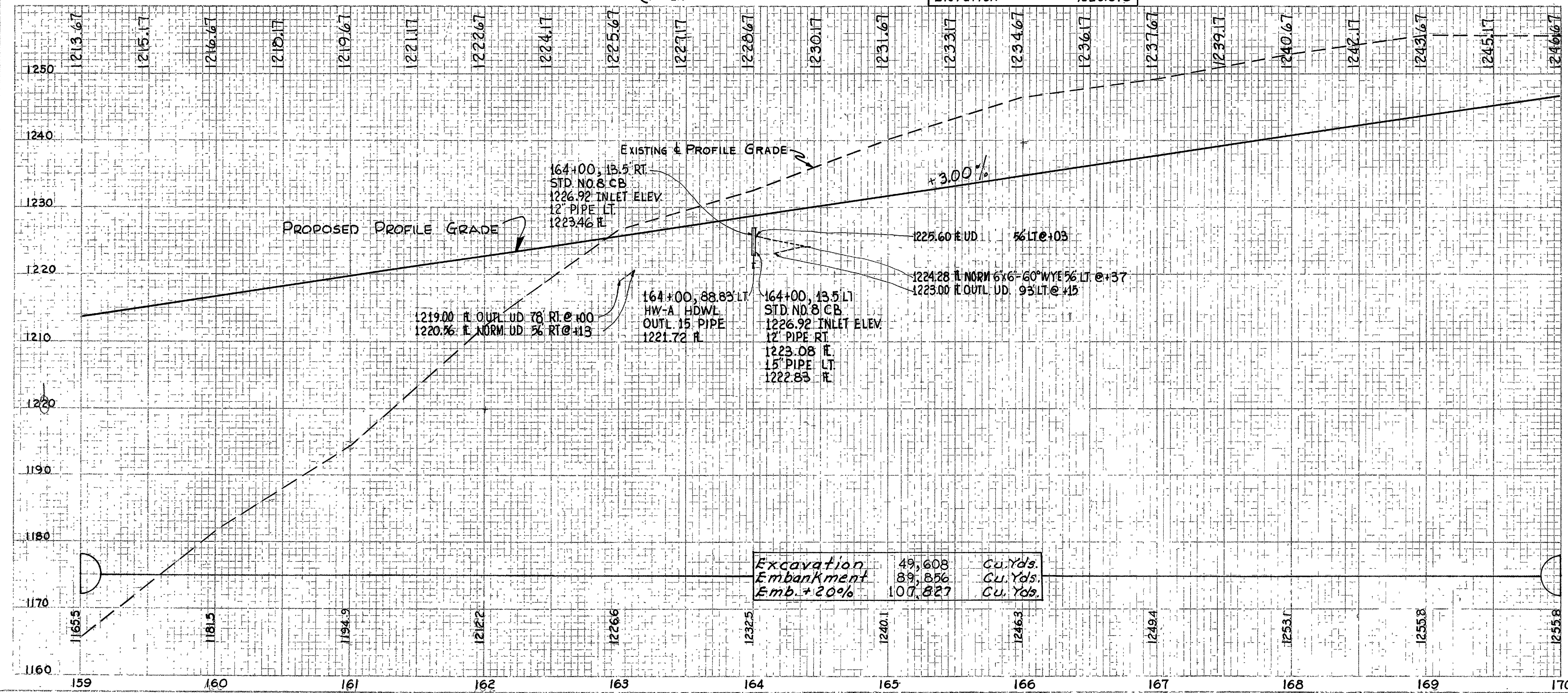
Reference No.	Side	Station		Dumped Rock Channel Protection	Slope Molding
		From	To		
3-DR	Rt.	150+53	151+10	19	
1-JM	Lt.	148+00	149+08		92
2-JM	Lt.	154+05.1	159+00		412
3-JM	Rt.	154+05.1	159+00		412
Totals				19	916

Excavation	2,696	Cu. Yds.
Embankment	368,833	Cu. Yds.
Emb. + 20%	442,600	Cu. Yds.

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



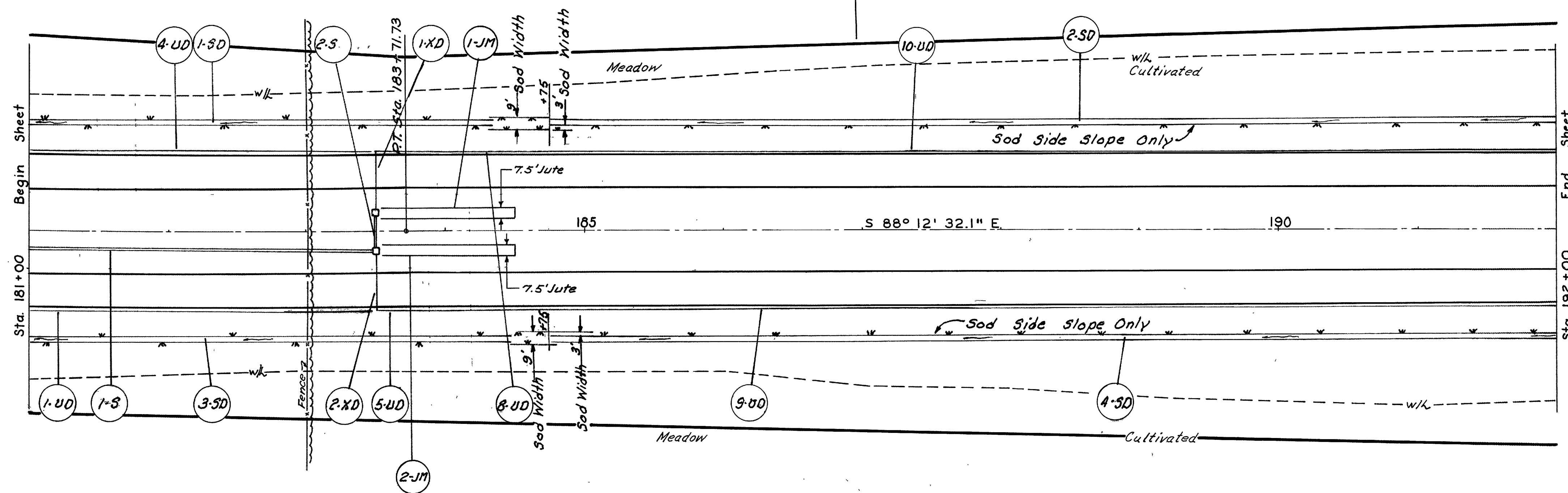
Reference No.	Side	Station		I-15	I-14	L-120	I-10	L-10	I-8	I-1	I-1	I-2
		From	To	Steel Beam Type (Deep)	Std. Raved Gutter Type 1-Mod. Type C	Jute Matting	Dumped Rock Channel Protection	Sodding	Catch Basin Std. No. 8	Pipe Class E-1 12"	Pipe Class J-1 15"	Masonry
		Lin. Ft.	Lin. Ft.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Each	Lin. Ft.	Lin. Ft.	Cu. Yds.		
1-GR	Lt.	159+00	168+59.28	559.28								
2-GR	Rt.	159+00	168+53.99	553.99								
1-SD	Lt.	165+25	170+00			455						
2-SD	Rt.	165+25	170+00			455						
1-DR	Rt.	159+00	162+35				506					
2-DR	Rt.	162+00	162+60				92					
3-DR	Rt.	162+60	165+25				106					
4-DR	Lt.	159+00	163+00				146					
1-S	Rt-Lt	164+00							1	26		
2-S	Lt.	164+00							1		75	3.23
1-P6	Lt.	163+00	165+25		228				76			
2-P6	Lt.	164+00			11				4			
1-JM	Lt.	164+07	169+00			411						
2-JM	Rt.	164+07	169+00			411						
Totals				1113.27	239	822	850	990	2	26	75	3.23



Reference No.	Side	Station		I-1	I-1	I-5
		From	To	Pipe Class I-3 (Deep)	8\"/>	
		Lin. Ft.	Lin. Ft.	Each	Each	Each
5-UD	Rt.	163+00	170+00	703	10	1
8-UD	Lt.	164+03	170+00	630	10	1
Totals				1333	20	1

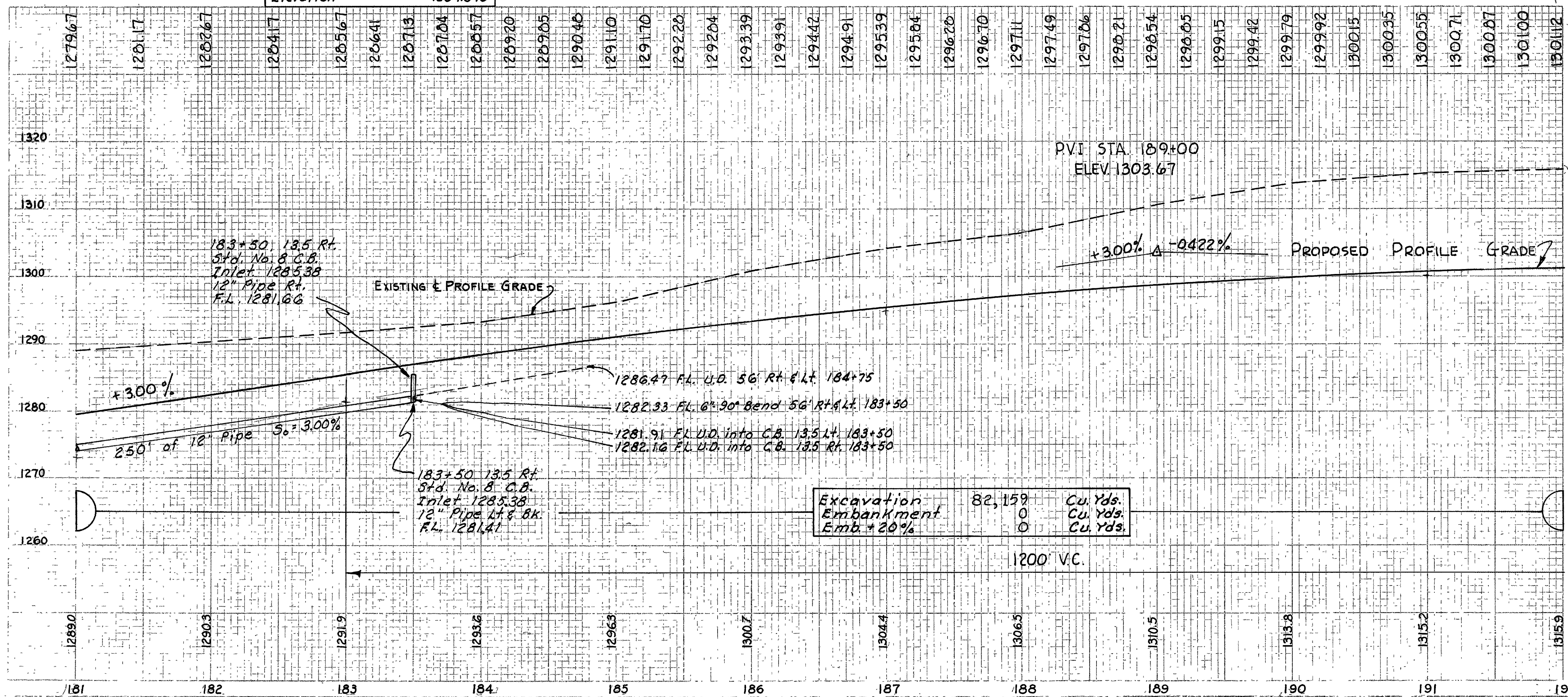
Excavation	49,608	Cu. Yds.
Embankment	89,856	Cu. Yds.
Emb. + 20%	107,827	Cu. Yds.

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



Reference No.	Side	Station		L-10	L-120	I-8	I-1		
		From	To	Sodding	Jute Matting	Catch Basin Std. No. 8	Pipe Class E-1	Each	Lin. Ft.
1-3D	Lt.	181+00	184+75	360					
2-5D	Lt.	184+75	192+00	246					
3-5D	Rt.	181+00	184+75	360					
4-5D	Rt.	184+75	192+00	246					
1-JM	Lt.	183+57	184+50		78				
2-JM	Rt.	183+57	184+50		78				
1-5	Rt.	181+00	183+50				1	250	
2-5	Lt.-Rt.	183+50					1	26	
Totals-				1212	156		2	276	

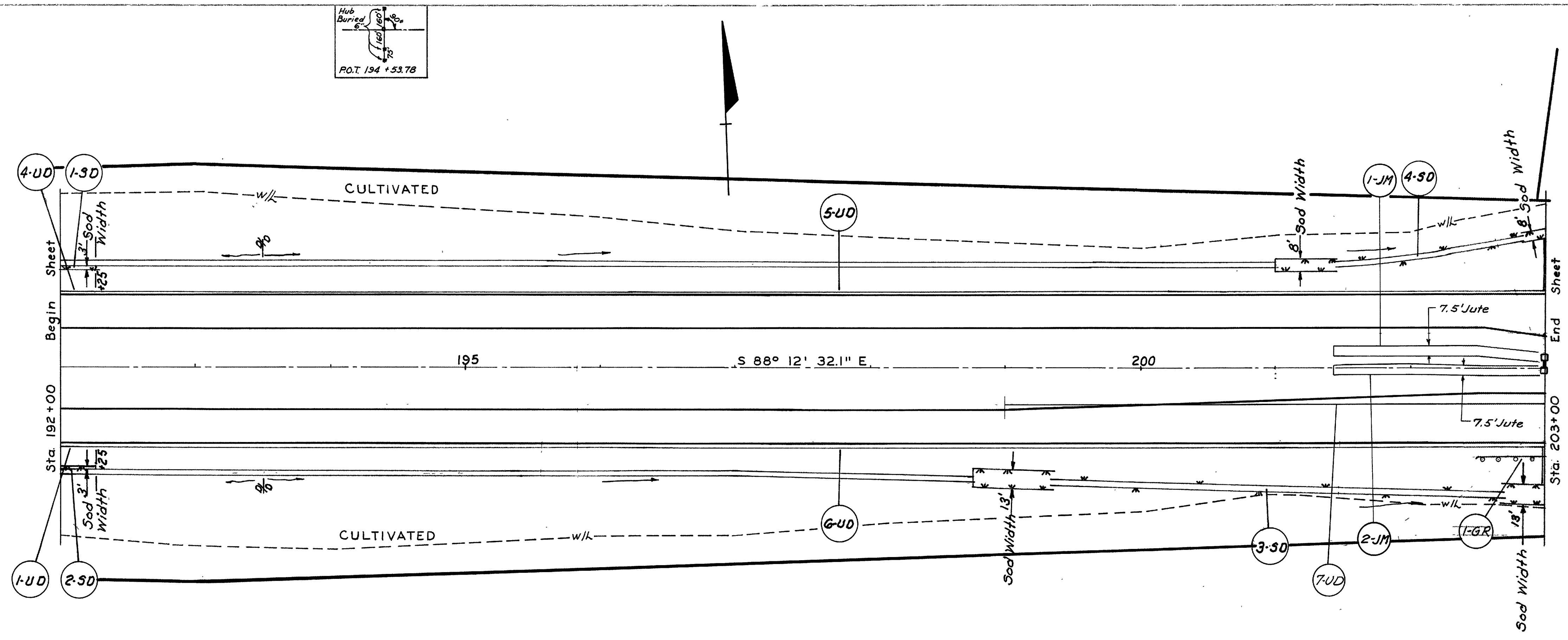
B.M. Spike in East Root 24" Maple
 215' Rt. Sta. 182+90
 Elevation 1294.949



Excavation	82,159	Cu. Yds.
Embankment	0	Cu. Yds.
Emb + 20%	0	Cu. Yds.

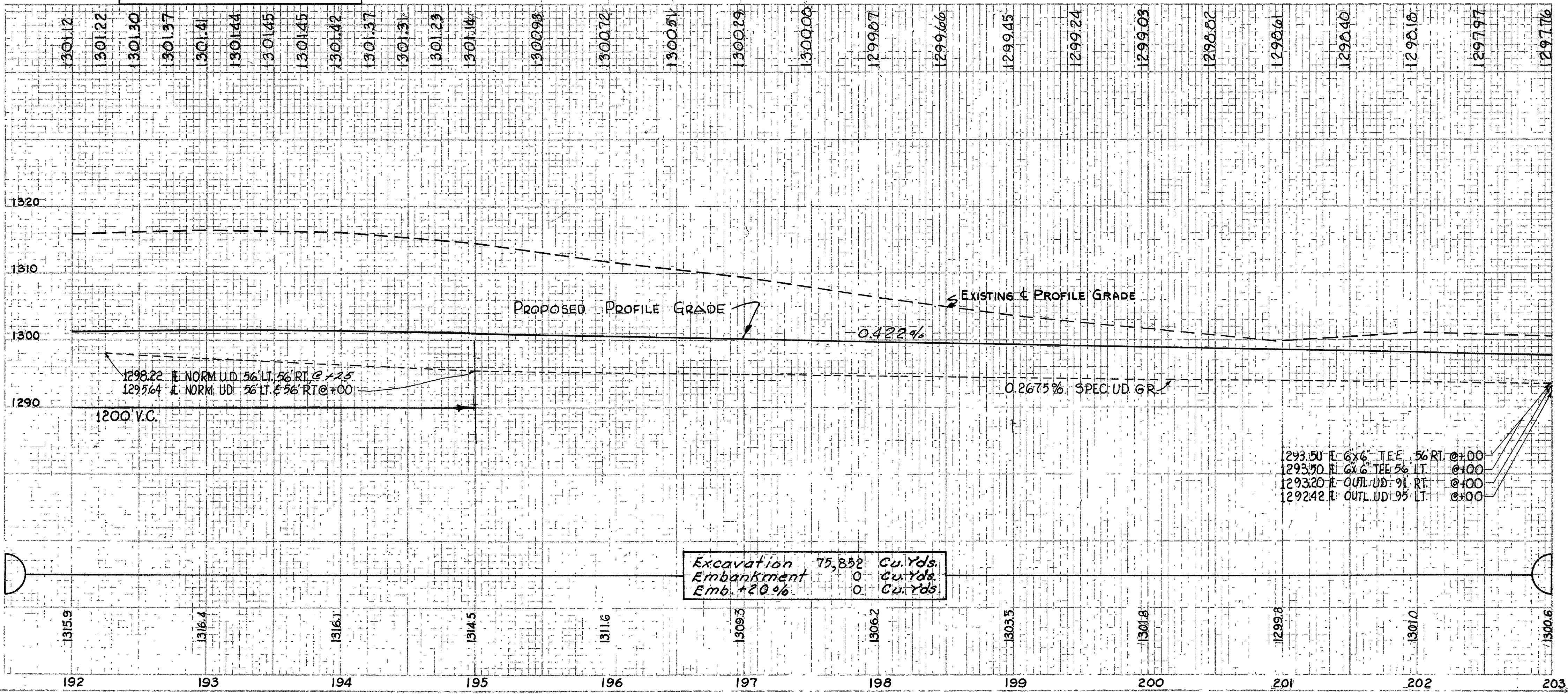
Reference No.	Side	Station		I-1	I-1	I-1	I-1	I-5	I-1
		From	To	Pipe Class I-3 (Shallow)	Pipe Class I-3 (Deep)	6" PIPE CLASS F-4	Pipe Class J-1 6"	Pipe Spec. Class I-3 6" 90° Bend	6" Pipe Class I-3 Sec. M.G.M.
1-UD	Rt.	181+00	183+47		247				
4-UD	Lt.	181+00	183+46	246					
5-UD	Rt.	183+50	184+75		125				
8-UD	Lt.	183+50	184+75		125				
1-XD	Lt.	183+50			4	10	29	1	
2-XD	Rt.	183+50			4	10	29	1	
9-UD	Rt.	184+75	192+00						725
10-UD	Lt.	184+75	192+00						725
Totals-				246	505	20	58	2	1450

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



Reference No.	Side	Station		L-10	L-120	I-15					
		From	To	Sodding Sq. Yds.	Jute Matting Sq. Yds.	Guard Rail Steel Beam Deep. Lin. Ft.					
1-SD	Lt.	192+00	192+25	9							
2-SD	Rt.	192+00	192+25	9							
3-SD	Rt.	198+75	203+00	626							
4-SD	Lt.	201+00	203+00	192							
1-GR	Lt.	202+52.5	203+00			47.5					
1-JM	Lt.	201+43	202+93		125						
2-JM	Rt.	201+43	202+93		125						
Total -				836	250	47.5					

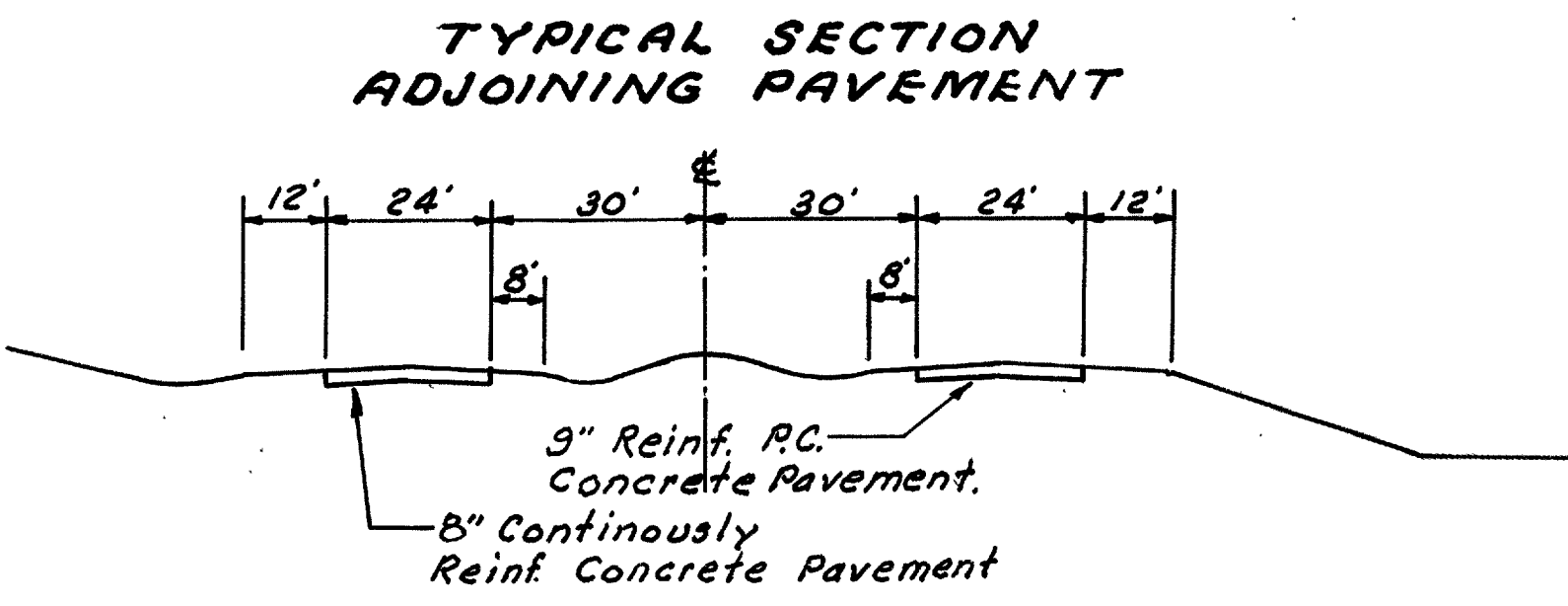
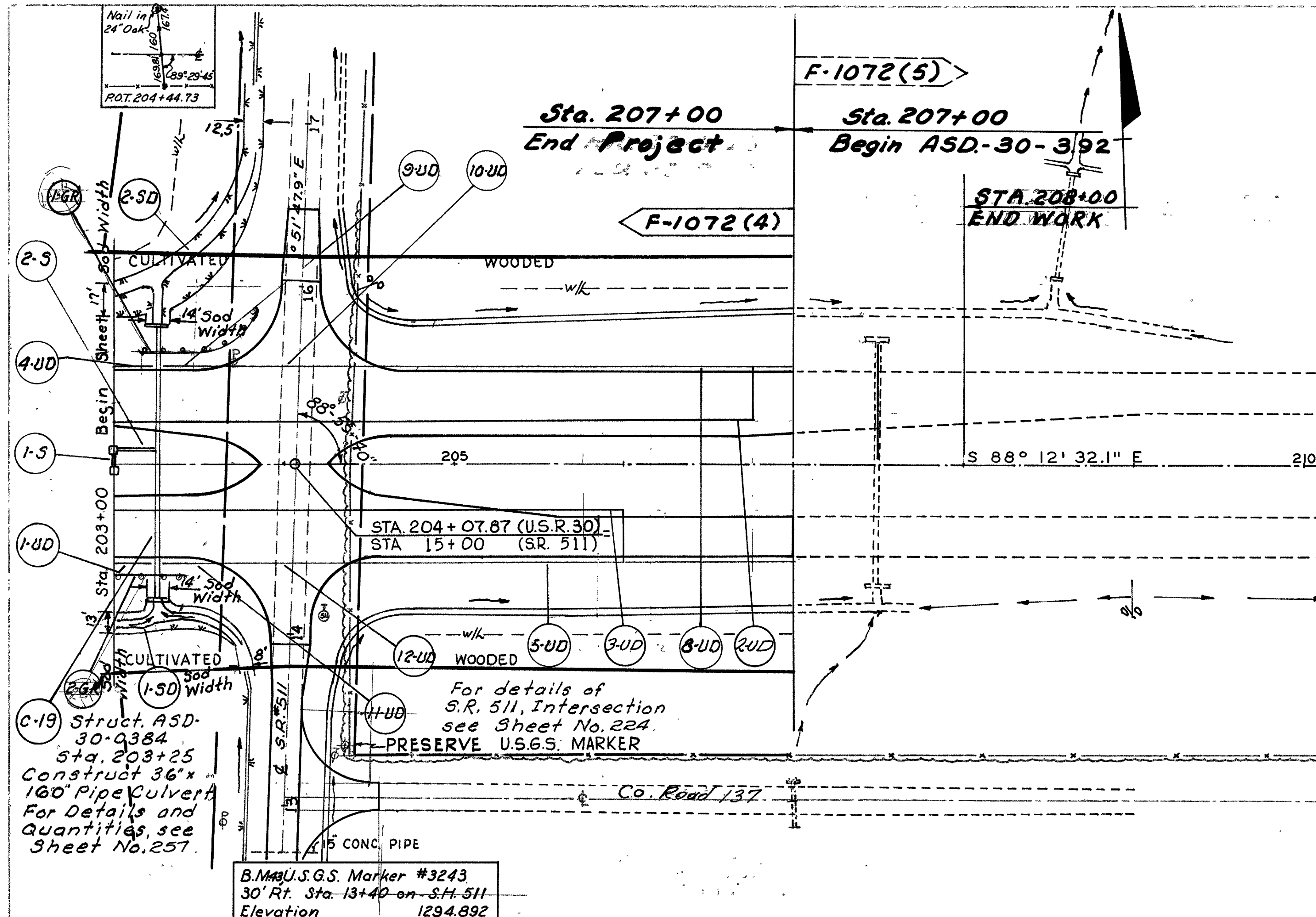
B.M. Spike in South Side 15' Maple
 375' Lt. Sta. 192+70
 Elevation 1314.823



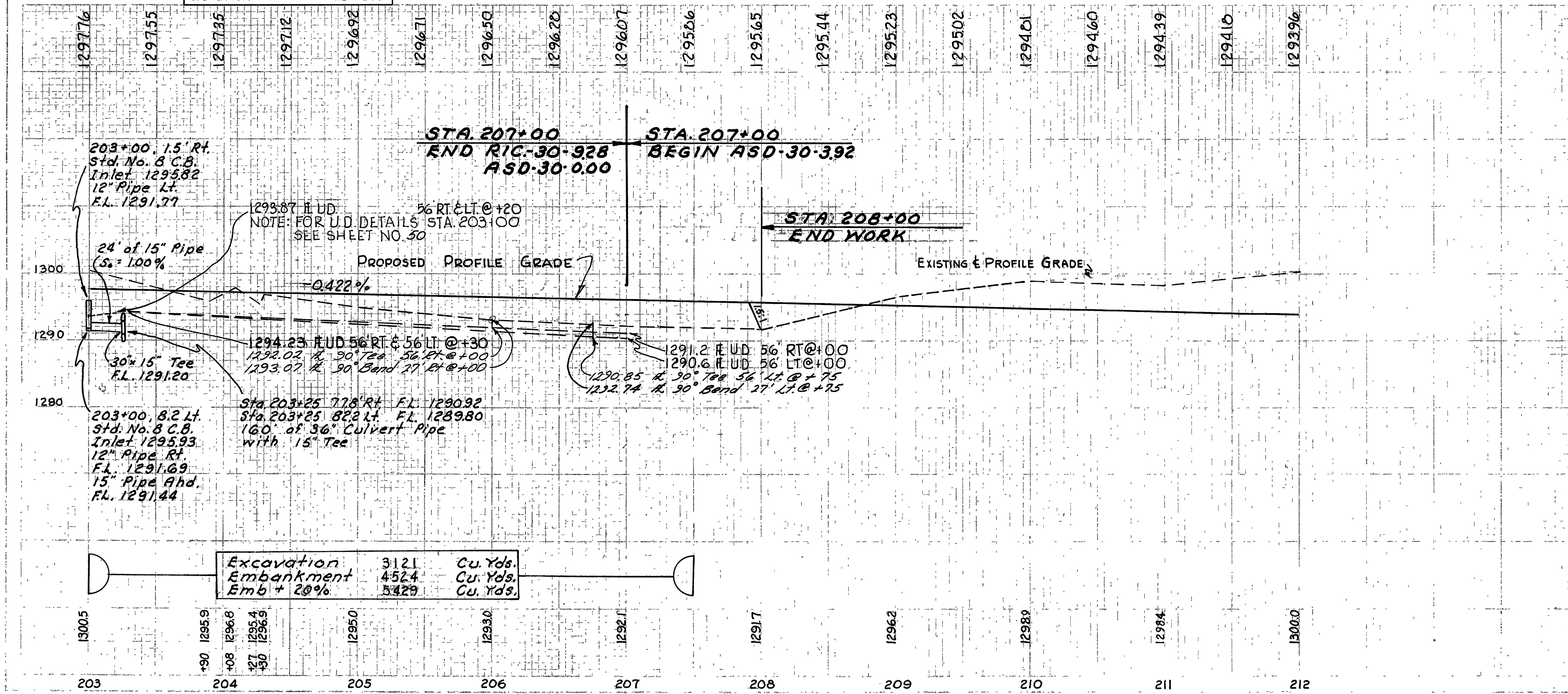
Excavation 75,852 Cu. Yds.
 Embankment 0 Cu. Yds.
 Emb. +20%

Reference No.	Side	Station		I-1	I-1	I-5	I-1				
		From	To	Pipe Class I-3 (Deep) 6"	8" PIPE CLASS I-3 Sec. M-2, 4(C) 6"x6" Tee	Pipe Specials Class I-3	6" Pipe Class I-3 Sec. M-2, 4(H)				
1-UD	Rt.	192+00	192+25				25				
4-UD	Lt.	192+00	192+25				25				
5-UD	Rt.	192+25	203+00	1104	10	1					
6-UD	Rt.	192+25	203+00	1100	10	1					
7-UD	Rt.	199+00	203+00				400				
Total -				2204	20	2	450				

RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00



Reference No.	Side	Station		Sodding Sq. Yds.	I-8 Catch Basin Std. No. 8 Each	I-1 Pipe Class I-1 12\"/>	
		From	To				I-15 Steel Beam Type (Deep) Guard Rail Lin. Ft.
1-5D	Rt.	203+00	203+60	89			
2-5D	Lt.	203+00	203+27	114			
1-5	Rt.-Lt.	203+00			1	8	
2-5	Lt.	203+00	203+25		1	24	
1-GR	Lt.	203+17	203+84.63			75	
2-GR	Rt.	203+00	203+40			40	
Totals				203	2	8 24	115



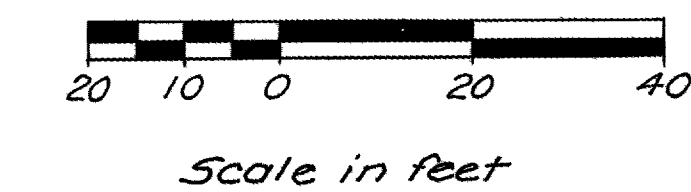
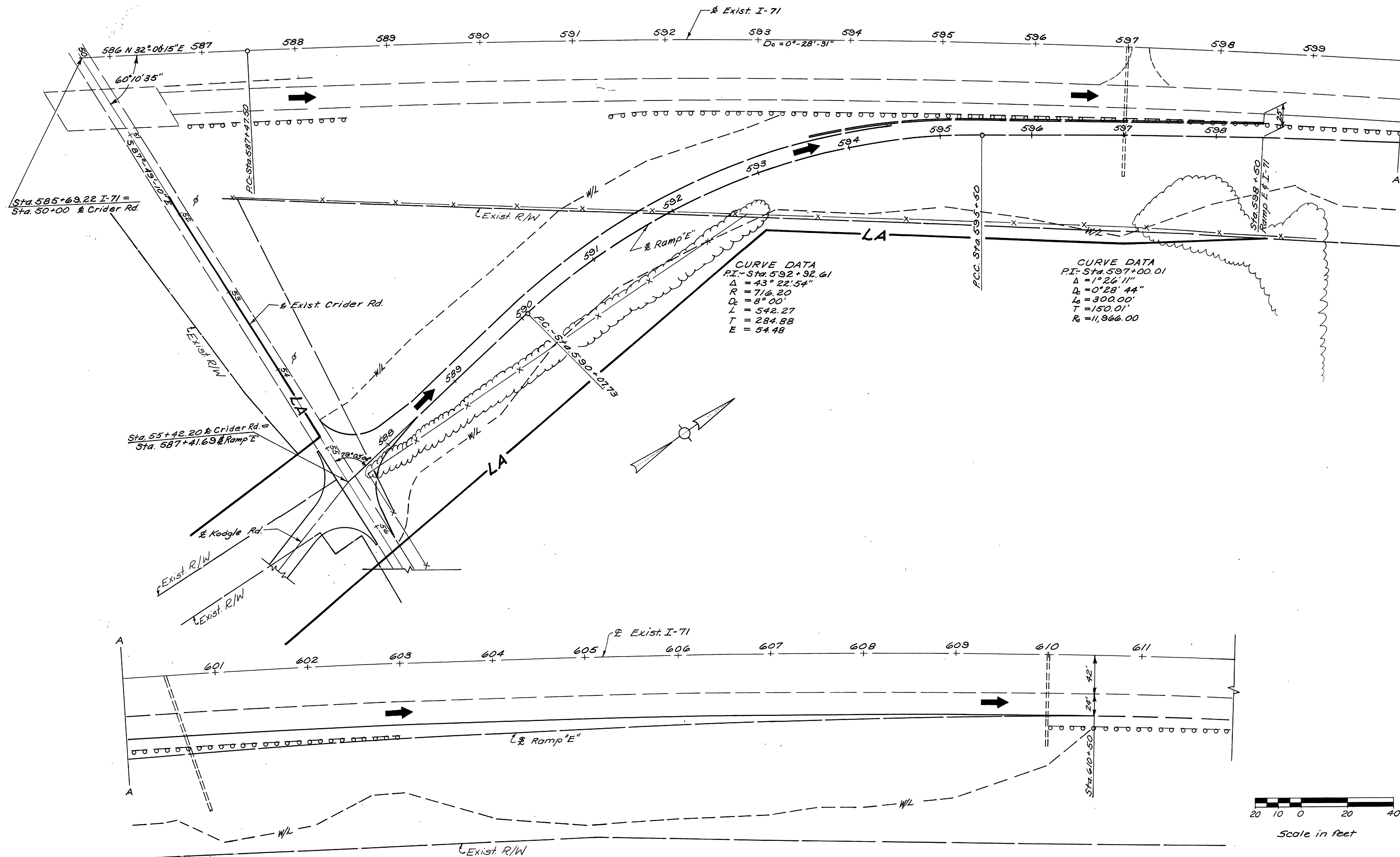
Reference No.	Side	Station		I-1 Pipe Class I-1 (Shallow) 6\"/>					
		From	To		I-1 Pipe Class I-1 (Deep) 6\"/>				
1-UD	Rt.	203+00	203+20	20					
2-UD	Lt.	203+00	206+75		104	1			
3-UD	Rt.	203+00	206+00	70	259	1			
4-UD	Lt.	203+00	203+20	20					
5-UD	Rt.	204+65	207+00		235				
8-UD	Lt.	204+65	207+00		235	1			
9-UD	Lt.	203+30	203+55	25					
10-UD	Lt.	203+55	204+65		110				
11-UD	Rt.	203+30	203+55	25					
12-UD	Rt.	203+55	204+65		110				
Totals				110	520	883	1	1	2

Excavation	3121	Cu. Yds.
Embankment	4524	Cu. Yds.
Emb + 20%	5329	Cu. Yds.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-11072(A) I-71-4(23)110

52
325

RIC-30-9.28
ASD-30-0.00

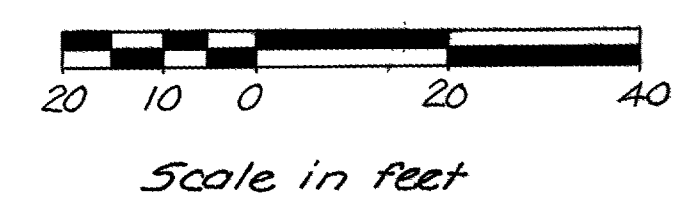
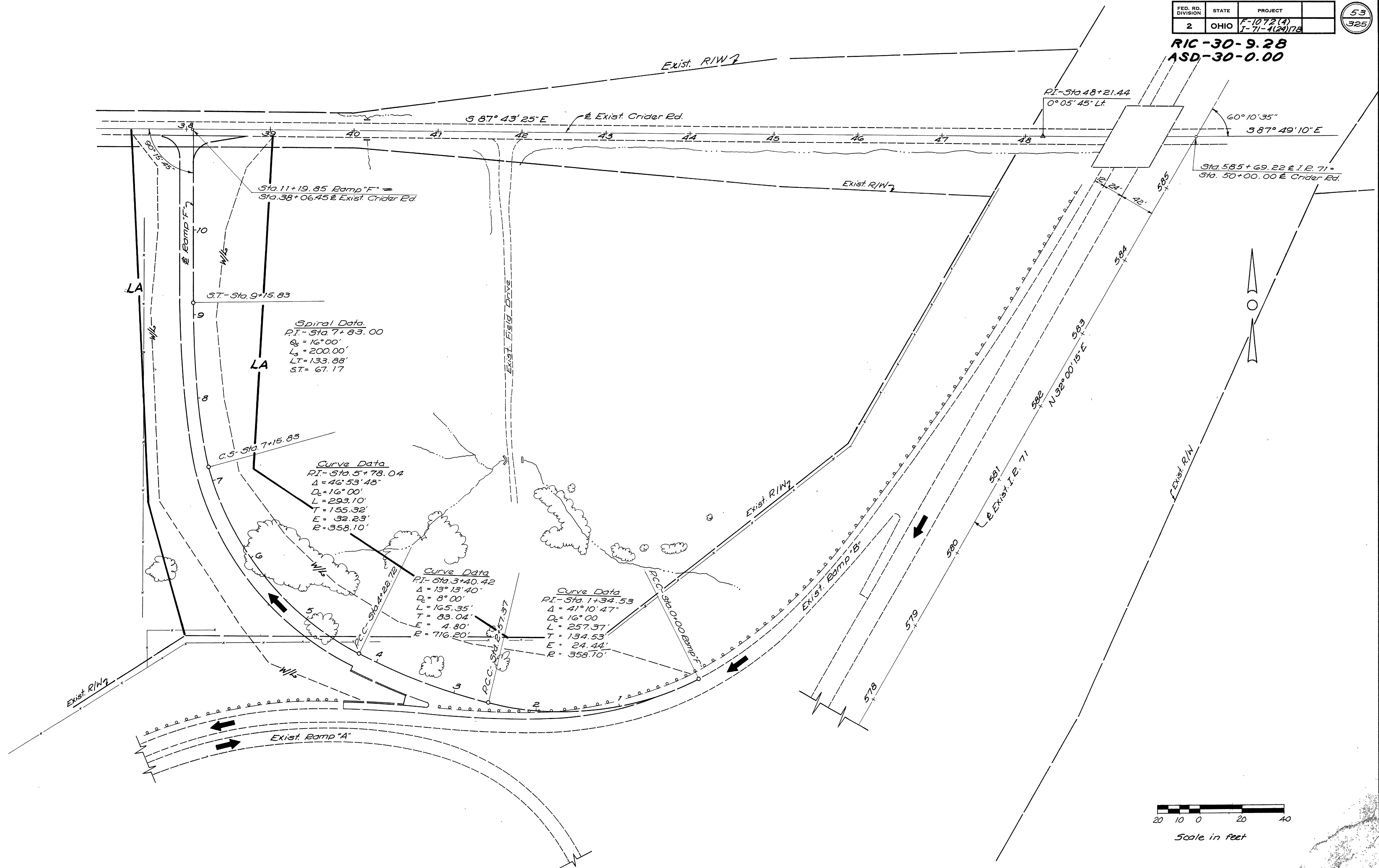


FUTURE PROPOSED RAMP "E" ~ STA. 587+41.69 TO STA. 610+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(1) T-71-4(24)72

53
325

RIC-30-9.28
ASD-30-0.00



FUTURE PROPOSED RAMP "F" - Sta. 0+00 to Sta. 11+19.85

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(24)178

54
325

RIC. - 30 - 9.28
ASD. - 30 - 0.00

STA. 638 + 00 TO STA. 669 + 75

WEST BOUND LANES		ADD TO PROFILE GRADE		PROFILE GRADE	STATION
PAV'T.	LEFT EDGE	ADD TO RT. EDGE	RIGHT EDGE		
			1020.00	1020.00	638+00
			1019.92	1019.92	+25
			1019.87	1019.86	+50
			1019.84	1019.81	+75
			1019.83	1019.79	639+00
			1019.83	1019.78	+25
			1019.84		+50
			1019.87		+75
			1019.89		640+00
			1019.92		+25
			1019.95		+45+99
			1019.95		+50
			1019.99		+70
			1020.03		641+00
			1020.07		+20+99
			1020.07		+25
			1020.12		+50
			1020.17		+75
			1020.22		+95+99
			1020.22		642+00
			1020.29		+25
			1020.34		+50
			1020.40		+75
			1020.48		643+00
			1020.55		+25
			1020.62		+50
			1020.70		+75
			1020.78		644+00
			1020.85		+20
			1020.86		+25
			1020.94		+50
			1021.01		+75
			1021.08		645+00
			1021.16		+25
			1021.17		+28+56
			1021.19		+37
			1021.22		+50
			1021.27		+75
			1021.27		646+00
			1021.39		+25
			1021.44		+50
			1021.49		+75
			1021.53		647+00
			1021.57		+25
			1021.61		+50
			1021.64		+75
			1021.67		648+00
			1021.69		+25
			1021.72		+50
			1021.74		+75
			1021.75		649+00
			1021.76		+25
			1021.77		+50
			1021.78		+75
			1021.78		650+00
			1021.78		+25
			1021.79		+50
			1021.80		+75
			1021.82		651+00
			1021.84		+25
			1021.87		+50
			1021.89		+67
			1021.90		+75
			1021.93		652+00
			1021.97		+25
			1022.02		+50
			1022.07		+75
			1022.12		653+00
			1022.18		+25
			1022.25		+50
			1022.32		+75

STA. 638 + 00 TO STA. 669 + 75 (CONT'D.)

WEST BOUND LANES		ADD TO PROFILE GRADE		PROFILE GRADE	STATION
PAV'T.	LEFT EDGE	ADD TO RT. EDGE	RIGHT EDGE		
			1024.39	1024.44	654+00
			1024.39	1024.52	+25
			1024.56	1024.61	+50
			1024.65	1024.70	+75
			1024.74	1024.79	655+00
			1024.84	1024.89	+25
			1024.94	1024.99	+50
			1025.05	1025.10	+75
			1025.16	1025.21	655+00
			1025.27	1025.32	+25
			1025.39	1025.43	+50
			1025.50	1025.54	+75
			1025.62	1025.65	657+00
			1025.73	1025.76	+25
			1025.85	1025.87	+50
			1025.96	1025.98	+75
			1026.08	1026.09	658+00
			1026.19	1026.20	+25
			1026.31	1026.31	+50
			1026.42	1026.42	+75
			1026.54	1026.53	659+00
			1026.65	1026.64	+25
			1026.76	1026.75	+50
			1026.87	1026.86	+75
			1026.97	1026.97	660+00
			1027.06	1027.06	+25
			1027.18	1027.19	+50
			1027.17	1027.20	+50
			1027.25	1027.30	+75
			1027.34	1027.41	661+00
			1027.43	1027.52	+25
			1027.50	1027.63	+50
			1027.58	1027.74	+75
			1027.64	1027.85	662+00
			1027.71	1027.96	+25
			1027.77	1028.07	+50
			1027.83	1028.18	+75
			1027.88	1028.29	663+00
			1027.93	1028.40	+25
			1027.95	1028.46	+37+56
			1027.91	1028.51	+50
			1027.83	1028.62	+75
			1027.74	1028.73	664+00
			1027.65	1028.84	+25
			1027.56	1028.95	+50
			1027.47	1029.06	+75
			1027.37	1029.17	665+00
			1027.26	1029.28	+25
			1027.16	1029.39	+50
			1027.06	1029.50	+75
			1026.96	1029.61	666+00
			1026.86	1029.72	+25
			1026.78	1029.83	+50
			1026.72	1029.92	+70+13
			1026.71	1030.04	+75
			1026.68	1030.15	667+00
			1026.67	1030.26	+25
			1026.69	1030.37	+50
			1026.75	1030.48	+75
			1026.82	1030.59	668+00
			1026.88	1030.70	+20+13
			1026.89	1030.81	+25
			1026.96	1030.92	+50
			1027.06	1031.03	+75
			1027.15	1031.14	669+00
			1027.24	1031.25	+25
			1027.34	1031.36	+50
			1027.38	1031.47	+60
			1027.45	1031.58	+75

STA. 671 + 21.96 TO STA. 692 + 17.16

WEST BOUND LANES		FROM RT. EDGE		STATION
PAV'T.	LEFT EDGE	ED. DEDUCT.	P. GRADE	
			1029.40	671+21.96
			1029.39	+25
			1029.28	+50
			1029.25	+75
			1029.08	672+00
			1029.06	+25
			1028.89	+50
			1028.78	+40+22
			1028.71	+50
			1028.52	+75
			1028.32	673+00
			1028.11	+25
			1027.91	+50
			1027.71	+75
			1027.51	674+00
			1027.30	+25
			1027.09	+50
			1026.89	+75
			1026.75	+94+60
			1026.61	675+00
			1026.62	+25
			1026.53	+50
			1026.44	+75
			1026.35	676+00
			1026.26	+25
			1026.17	+50
			1026.08	+75
			1025.99	677+00
			1025.90	+27
			1025.81	+50
			1025.72	+75
			1025.63	678+00
			1025.54	+25
			1025.45	+50
			1025.36	+75
			1025.27	679+00
			1025.18	+25
			1025.09	+50
			1025.00	+75
			1024.91	680+00
			1024.82	+25
			1024.73	+50
			1024.64	+75
			1024.55	681+00
			1024.46	+25
			1024.37	+50
			1024.28	+75
			1024.19	682+00
			1024.10	+25

STA. 671 + 21.96 TO STA. 692 + 17.16 (CONT'D.)

WEST BOUND LANES		FROM RT. EDGE		STATION
PAV'T.	LEFT EDGE	ED. DEDUCT.	P. GRADE	
			1023.92	+50
			1023.83	683+00
			1023.74	+25
			1023.65	+50
			1023.56	+75
			1023.47	684+00
			1023.38	+25
			1023.29	+50
			1023.20	+75
			1023.11	685+00
			1023.02	+25
			1022.93	+50
			1022.84	+75
			1022.75	686+00
			1022.66	+25
			1022.57	+50
			1022.48	+75
			1022.39	687+00
			1022.30	+25
			1022.21	+50
			1022.12	+75
			1022.03	688+00
			1021.94	+25
			1021.85	+46+12
			1021.86	+50
			1021.89	+75
			1021.92	689+00
			1021.94	+25
			1021.96	+50
			1021.99	+75
			1022.01	690+00
			1022.04	+25
			1022.06	+50
			1022.08	+75
			1022.11	691+00
			1022.11	690+00
			1022.13	+25
			1022.15	+42+16
			1022.14	+50
			1022.11	+75
			1022.09	692+00
			1022.07	+17+16

SUPERELEVATION TABLES

RIC - 30 - 9.28
ASD - 30 - 0.00

STA. 3 + 75.43 TO STA. 44 + 57.15 (CONT'D.)

STA. 81 + 54.07 TO STA. 105 + 54.98

STA. 81 + 54.07 TO STA. 105 + 54.98 (CONT'D.)

WESTBOUND PAV'T.				EASTBOUND PAV'T.				
℄ PAV'T. ELEV.	LEFT EDGE ELEV.	DEDUCT FROM RT. EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	ADD TO, OR DEDUCT FR. LT. EDGE	RIGHT EDGE ELEV.	℄ PAV'T. ELEV.
1088.81	-0.64		1089.45	37+07	1089.45	+0.64	1090.09	
1088.91			1089.55	+25	1089.55		1090.19	
1088.98			1089.62	+39	1089.62		1090.26	
1089.04			1089.68	+50	1089.68		1090.32	
1089.18			1089.82	+75	1089.82		1090.46	
1089.31			1089.95	38+00	1089.95		1090.59	
1089.45			1090.09	+25	1090.09		1090.73	
1089.58			1090.22	+50	1090.22		1090.86	
1089.65			1090.29	+63	1090.29		1090.93	
1089.72			1090.36	+75	1090.36		1091.00	
1089.85			1090.49	39+00	1090.49		1091.13	
1089.99			1090.63	+25	1090.63		1091.27	
1090.12			1090.76	+50	1090.76		1091.40	
1090.26			1090.90	+75	1090.90		1091.54	
1090.39			1091.03	40+00	1091.03		1091.67	
1090.53			1091.17	+25	1091.17		1091.81	
1090.66			1091.30	+50	1091.30		1091.94	
1090.80			1091.44	+75	1091.44		1092.08	
1090.93			1091.57	41+00	1091.57		1092.21	
1091.07			1091.71	+25	1091.71		1092.35	
1091.20			1091.84	+50	1091.84		1092.48	
1091.32			1091.96	+75	1091.96		1092.60	
1091.34			1091.98	+75	1091.98		1092.62	
1091.47			1092.11	42+00	1092.11		1092.75	
1091.61			1092.25	+25	1092.25		1092.89	
1091.74			1092.38	+50	1092.38		1093.02	
1091.88			1092.52	+75	1092.52		1093.16	
1091.97	-0.64		1092.61	+92.15	1092.61	+0.64	1093.25	
1092.03	0.60		1092.65	43+00	1092.65	0.60	1093.25	
1092.31	0.48		1092.79	+25	1092.79	0.48	1093.27	
1092.47	0.41		1092.88	+37.15	1092.88	0.41	1093.29	
1092.74	1092.55	0.38	1092.93	+44.15	1092.93	0.38	1093.31	1093.12
1092.81	1092.62	0.35	1092.97	+50	1092.97	0.35	1093.32	1093.13
1093.14	1092.95	0.23	1093.18	+75	1093.18	0.23	1093.41	1093.22
1093.23	1093.04	0.19	1093.23	+82.15	1093.23	0.19	1093.42	1093.22
1093.45	1093.26	0.14	1093.40	44+00	1093.40	0.14	1093.54	1093.59
1093.60	1093.41	0.11	1093.52	+12.15	1093.52	0.11	1093.63	1093.71
1093.65	1093.46	0.10	1093.56	+16	1093.56	0.10	1093.66	1093.75
1093.76	1093.57	0.08	1093.65	+25	1093.65	0.08	1093.73	1093.84
1094.04	1093.85	0.03	1093.88	+46	1093.88	0.03	1093.91	1094.07
1094.09	1093.90	0.02	1093.92	+50	1093.92	0.02	1093.94	1094.11
1094.20	1094.01	-0.00	1094.01	+57.15	1094.01	+0.00	1094.01	1094.20

WESTBOUND PAV'T.				EASTBOUND PAV'T.				
℄ PAV'T. ELEV.	LEFT EDGE ELEV.	ADD TO RIGHT EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	DEDUCT FROM LT. EDGE	RIGHT EDGE ELEV.	℄ PAV'T. ELEV.
1201.08	1200.89	+0.00	1200.89	81+54.07	1200.89	-0.00	1200.89	1201.08
1201.71	1201.57	0.05	1201.58	+75	1201.58	0.05	1201.47	1201.66
1202.46	1202.39	0.12	1202.27	82+00	1202.27	0.11	1202.16	1202.35
1202.76	1202.71	0.14	1202.57	+10.00	1202.57	0.14	1202.43	1202.62
1203.21	1203.20	0.18	1203.02	+25	1203.02	0.18	1202.84	1203.03
1203.33	1203.33	0.19	1203.14	+29.07	1203.14	0.19	1202.95	1203.14
1203.96	1204.07	0.30	1203.77	+50	1203.77	0.30	1203.47	1203.57
1204.47	1204.66	0.38	1204.28	+67.07	1204.28	0.38	1203.90	1204.09
	1204.94	0.42	1204.52	+75	1204.52	0.42	1204.10	
	1205.82	0.55	1205.27	83+00	1205.27	0.55	1204.72	
	1206.66	0.665	1205.99	+24.07	1205.99	0.665	1205.32	
	1206.69	0.67	1206.02	+25	1206.02	0.67	1205.35	
	1207.57	0.80	1206.77	+50	1206.77	0.80	1205.97	
	1208.44	0.92	1207.52	+75	1207.52	0.92	1206.60	
	1208.90	0.99	1207.91	+88	1207.91	0.99	1206.92	
	1209.32	1.05	1208.27	84+00	1208.27	1.05	1207.22	
	1209.98	1.14	1208.84	+19.07	1208.84	1.14	1207.70	
	1210.16		1209.02	+25	1209.02		1207.88	
	1210.91		1209.77	+50	1209.77		1208.63	
	1211.66		1210.52	+75	1210.52		1209.38	
	1212.41		1211.27	85+00	1211.27		1210.13	
	1213.16		1212.02	+25	1212.02		1210.88	
	1213.91		1212.77	+50	1212.77		1211.63	
	1214.66		1213.52	+75	1213.52		1212.38	
	1215.41		1214.27	86+00	1214.27		1213.13	
	1216.16		1215.02	+25	1215.02		1213.88	
	1216.91		1215.65	+46	1215.65		1214.51	
	1217.66		1216.52	+75	1216.52		1215.38	
	1218.41		1217.27	87+00	1217.27		1216.13	
	1219.16		1218.02	+25	1218.02		1216.88	
	1219.91		1218.77	+50	1218.77		1217.63	
	1220.66		1219.49	+74	1219.49		1218.35	
	1221.41		1220.27	88+00	1220.27		1219.13	
	1222.16		1221.02	+25	1221.02		1219.88	
	1222.91		1221.77	+50	1221.77		1220.63	
	1223.00		1221.86	+53	1221.86		1220.72	
	1223.66		1222.52	+75	1222.52		1221.38	
	1223.99		1222.85	+86	1222.85		1221.71	
	1224.41		1223.27	89+00	1223.27		1222.13	
	1225.16		1224.02	+25	1224.02		1222.88	
	1225.31		1224.17	+30	1224.17		1223.03	
	1225.91		1224.77	+50	1224.77		1223.63	
	1226.66		1225.52	+75	1225.52		1224.38	
	1227.41		1226.27	90+00	1226.27		1225.13	
	1228.16		1227.02	+25	1227.02		1225.88	
	1228.91		1227.77	+50	1227.77		1226.63	
	1229.21		1228.07	+60	1228.07		1226.93	
	1229.66		1228.52	+75	1228.52		1227.38	
	1230.41		1229.27	91+00	1229.27		1228.13	
	1231.16		1230.02	+25	1230.02		1228.88	
	1231.40		1230.26	+33	1230.26		1229.12	
	1231.91		1230.77	+50	1230.77		1229.63	
	1232.66		1231.52	+75	1231.52		1230.38	
	1232.78		1231.64	+79	1231.64		1230.50	
	1233.41		1232.27	92+00	1232.27		1231.13	
	1234.16		1233.02	+25	1233.02		1231.88	
	1234.91		1233.77	+50	1233.77		1232.63	
	1235.24		1234.10	+61	1234.10		1232.96	
	1235.66		1234.52	+75	1234.52		1233.38	
	1236.41		1235.27	93+00	1235.27		1234.13	
	1237.16		1236.02	+25	1236.02		1234.88	
	1237.22		1236.08	+27	1236.08		1234.94	
	1237.91		1236.77	+50	1236.77		1235.63	
	1238.66		1237.52	+75	1237.52		1236.38	
	1239.41		1238.27	94+00	1238.27		1237.13	
	1240.16		1239.02	+25	1239.02		1237.88	
	1240.91		1239.77	+50	1239.77		1238.63	
	1241.48		1240.34	+69	1240.34		1239.20	
	1242.41		1241.27	95+00	1241.27		1240.13	
	1243.16		1242.02	+25	1242.02		1240.88	

WESTBOUND PAV'T.				EASTBOUND PAV'T.				
℄ PAV'T. ELEV.	LEFT EDGE ELEV.	ADD TO RIGHT EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	DEDUCT FROM LT. EDGE	RIGHT EDGE ELEV.	℄ PAV'T. ELEV.
	1243.31	+1.14	1242.77	95+50	1242.77	-1.14	1241.63	
	1243.66		1243.52	+25	1243.52		1242.38	
	1245.41		1244.27	96+00	1244.27		1243.13	
	1246.16		1245.02	+25	1245.02		1243.88	
	1246.76		1245.62	+45	1245.62		1244.48	
	1246.91		1245.77	+50	1245.77		1244.63	
	1247.51		1246.37	+70	1246.37		1245.23	
	1247.66		1246.52	+75	1246.52		1245.38	
	1248.41		1247.27	97+00	1247.27		1246.13	
	1248.77		1247.63	+12	1247.63		1246.49	
	1249.16		1248.02	+25	1248.02		1246.88	
	1249.52		1248.38	+37	1248.38		1247.24	
	1249.91		1248.77	+50	1248.77		1247.63	
	1250.03		1248.89	+54	1248.89		1247.75	
	1250.39		1249.25	+62	1249.25		1248.11	
	1250.68		1249.52	+75	1249.52		1248.38	
	1251.41		1250.27	98+00	1250.27		1249.13	
	1252.16		1251.02	+25	1251.02		1249.88	
	1252.19		1251.05	+26	1251.05		1249.91	
	1252.91		1251.77	+50	1251.77		1250.63	
	1253.66		1252.52	+75	1252.52		1251.38	
	1254.41		1253.27	99+00	1253.27		1252.13	
	1255.16		1254.02	+25	1254.02		1252.88	
	1255.91		1254.77	+50	1254.77		1253.63	
	1256.66		1255.52	+75	1255.52		1254.38	
	1257.41							

SUPERELEVATION TABLES

RIC - 30 - 9.28
ASD - 30 - 0.00

STA. 3 + 75.43 TO STA. 44 + 57.15

STA. 3 + 75.43 TO STA. 44 + 57.15 (CONT'D.)

STA. 3 + 75.43 TO STA. 44 + 57.15 (CONT'D.)

WESTBOUND PAV'T.				EASTBOUND PAV'T.			
STATION	LEFT EDGE ELEV.	DEDUCT FROM RT. EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	ADD TO OR DEDUCT FROM RT. EDGE	RIGHT EDGE ELEV.
1024.09	1023.90	0.00	1023.90	3+75.43	1023.90	0.07	1023.97
1024.12	1023.93	0.00	1023.93	+76.70	1024.00	0.07	1023.98
1024.19	1024.00	0.01	1024.01	+80.86	1024.08	0.07	1024.01
1024.19	1024.00	0.01	1024.01	+81.36	1024.09	0.07	1024.02
1024.26	1024.07	0.02	1024.09	+84.94	1024.15	0.07	1024.08
1024.35	1024.16	0.04	1024.20	+91	1024.27	0.07	1024.20
1024.41	1024.26	0.05	1024.33	+97.26	1024.40	0.07	1024.33
1024.47	1024.26	0.05	1024.33	+97.31	1024.40	0.07	1024.33
1024.47	1024.27	0.06	1024.33	+97.36	1024.40	0.07	1024.33
1024.51	1024.32	0.06	1024.38	+100	1024.44	0.07	1024.35
1024.62	1024.43	0.08	1024.51	+106.36	1024.55	0.07	1024.51
1024.65	1024.46	0.08	1024.54	+108.20	1024.62	0.07	1024.55
1024.79	1024.60	0.10	1024.70	+116	1024.72	0.00	1024.72
1024.88	1024.69	0.11	1024.80	+121.32	1024.82	0.02	1024.84
1024.90	1024.71	0.12	1024.83	+122.36	1024.84	0.02	1024.86
1024.95	1024.76	0.12	1024.88	+125	1024.90	0.04	1024.94
1025.07	1024.88	0.14	1025.02	+131.36	1024.99	0.10	1025.09
1025.12	1024.93	0.15	1025.08	+134.44	1025.05	0.10	1025.15
1025.25	1025.06	0.16	1025.22	+141	1025.15	0.14	1025.28
1025.37	1025.18	0.18	1025.36	+147.36	1025.26	0.14	1025.40
				+148.16	1025.29	0.14	1025.43
1025.41	1025.22	0.19	1025.41	+150	1025.31	0.17	1025.48
1025.43	1025.24	0.19	1025.43	+150.43	1025.32	0.17	1025.49
1025.52	1025.33	0.22	1025.55	+156.36	1025.42	0.20	1025.69
1025.64	1025.45	0.25	1025.70	+162.84	1025.55	0.23	1025.78
1025.70	1025.51	0.27	1025.78	+166	1025.63	0.23	1025.86
1025.75	1025.56	0.28	1025.84	+169.08	1025.69	0.23	1025.93
1025.82	1025.63	0.30	1025.93	+172.36	1025.77	0.23	1026.00
1025.86	1025.67	0.31	1025.98	+175	1025.82	0.24	1026.06
1025.87	1025.73	0.33	1026.07	+179.12	1025.92	0.26	1026.18
1025.98	1025.78	0.35	1026.13	+181.36	1025.97	0.28	1026.25
1025.99	1025.80	0.35	1026.15	+182.07	1025.99	0.28	1026.27
1026.03	1025.84	0.36	1026.20	+184.33	1026.04	0.28	1026.32
1026.11	1025.92	0.38	1026.30	+188.45	1026.12	0.32	1026.44
				BK 95.43			
				AL 89.07			
1026.04	1026.46	0.42	1026.46		1026.32	0.32	1026.64
1026.08	1026.51	0.43	1026.51	+91	1026.38	0.32	1026.70
1026.25	1026.72	0.47	1026.72	+99.46	1026.60	0.34	1026.94
1026.26	1026.73	0.47	1026.73	+100	1026.61	0.35	1026.96
1026.50	1027.03	0.53	1027.03	+111.82	1026.95	0.36	1027.31
1026.58	1027.13	0.55	1027.13	+116	1026.98	0.37	1027.45
1026.67	1027.36	0.59	1027.36	+125	1027.32	0.40	1027.72
1026.81	1027.49	0.62	1027.49	+130	1027.46	0.42	1027.88
1026.95	1027.59	0.64	1027.59	+134.07	1027.57	0.43	1028.00
1027.35	1027.99	0.50	1027.99	+150	1027.99	0.49	1028.48
1027.90	1028.54	0.72	1028.54	+172	1028.54	0.61	1029.15
1027.96	1028.62	0.75	1028.62	+175	1028.62	0.61	1029.28
1028.60	1029.24	1.00	1029.24	+100	1029.24	0.64	1029.88
1029.24	1029.88	0.25	1029.88	+125	1029.88		
1029.71	1030.35	0.44	1030.35	+144	1030.35		
1029.86	1030.50	0.50	1030.50	+150	1030.50		
1030.49	1031.13	0.75	1031.13	+175	1031.13		
1030.85	1031.49	0.8909	1031.49	+189.09	1031.49		
1031.12	1031.76	1.00	1031.76	+100	1031.76		
1031.75	1032.39	0.25	1032.39	+125	1032.39		
1031.27	1032.91	0.46	1032.91	+146	1032.91		
1032.37	1033.01	0.50	1033.01	+150	1033.01		
1032.75	1033.39	0.65	1033.39	+165	1033.39		
1033.01	1033.65	0.75	1033.65	+175	1033.65		
1033.63	1034.27	0.800	1034.27	+100	1034.27		
1033.26	1034.90	0.25	1034.90	+125	1034.90		
1034.89	1035.53	0.50	1035.53	+150	1035.53		
1035.52	1036.16	0.75	1036.16	+175	1036.16		
1036.14	1036.78	1.00	1036.78	+100	1036.78		
1036.78	1037.42	0.25	1037.42	+125	1037.42		
1037.13	1037.77	0.3907	1037.77	+139.07	1037.77		
1037.40	1038.04	0.50	1038.04	+150	1038.04		
1038.03	1038.67	0.75	1038.67	+175	1038.67		
1038.66	1039.30	1.00	1039.30	+100	1039.30		
1039.29	1039.93	0.25	1039.93	+125	1039.93		
1039.92	1040.56	0.50	1040.56	+150	1040.56		

WESTBOUND PAV'T.				EASTBOUND PAV'T.			
STATION	LEFT EDGE ELEV.	DEDUCT FROM RT. EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	ADD TO OR DEDUCT FROM RT. EDGE	RIGHT EDGE ELEV.
1040.34	1041.18	-0.64	1041.18	10+75	1041.18	+0.64	1041.82
1041.17	1041.81		1041.81	11+00	1041.81		1042.45
1041.80	1042.44	+25	1042.44		1042.44		1043.08
1042.43	1043.07	+50	1043.07		1043.07		1043.71
1043.06	1043.70	+75	1043.70		1043.70		1044.34
1043.69	1044.33	+12+00	1044.33		1044.33		1044.97
1044.31	1044.95	+25	1044.95		1044.95		1045.59
1044.94	1045.58	+50	1045.58		1045.58		1046.22
1045.57	1046.21	+75	1046.21		1046.21		1046.85
1046.20	1046.84	+13+00	1046.84		1046.84		1047.48
1046.82	1047.46	+25	1047.46		1047.46		1048.10
1047.46	1048.10	+50	1048.10		1048.10		1048.74
1048.08	1048.72	+75	1048.72		1048.72		1049.36
1048.71	1049.35	+14+00	1049.35		1049.35		1049.99
1049.34	1049.98	+25	1049.98		1049.98		1050.62
1049.97	1050.61	+50	1050.61		1050.61		1051.25
1050.59	1051.23	+75	1051.23		1051.23		1051.87
1051.23	1051.87	+15+00	1051.87		1051.87		1052.51
1051.85	1052.49	+25	1052.49		1052.49		1053.13
1052.49	1053.13	+50	1053.13		1053.13		1053.77
1053.11	1053.75	+75	1053.75		1053.75		1054.39
1053.74	1054.38	+16+00	1054.38		1054.38		1055.02
1054.37	1055.01	+25	1055.01		1055.01		1055.65
1055.00	1055.64	+50	1055.64		1055.64		1056.28
1055.63	1056.27	+75	1056.27		1056.27		1056.91
1056.26	1056.90	+17+00	1056.90		1056.90		1057.54
1056.88	1057.52	+25	1057.52		1057.52		1058.16
1057.51	1058.15	+50	1058.15		1058.15		1058.79
1058.14	1058.78	+75	1058.78		1058.78		1059.42
1058.77	1059.41	+18+00	1059.41		1059.41		1060.05
1059.40	1060.04	+25	1060.04		1060.04		1060.68
1060.03	1060.67	+50	1060.67		1060.67		1061.31
1060.65	1061.29	+75	1061.29		1061.29		1061.93
1061.28	1061.92	+19+00	1061.92		1061.92		1062.56
1061.91	1062.55	+25	1062.55		1062.55		1063.19
1062.54	1063.18	+50	1063.18		1063.18		1063.82
1063.17	1063.81	+75	1063.81		1063.81		1064.45
1063.80	1064.44	+20+00	1064.44		1064.44		1065.08
1064.42	1065.06	+25	1065.06		1065.06		1065.70
1065.05	1065.69	+50	1065.69		1065.69		1066.33
1065.68	1066.32	+75	1066.32		1066.32		1066.96
1066.31	1066.95	+21+00	1066.95		1066.95		1067.59
1066.94	1067.58	+25	1067.58		1067.58		1068.22
1067.57	1068.21	+50	1068.21		1068.21		1068.85
1068.20	1068.84	+75	1068.84		1068.84		1069.48
1068.83	1069.47	+22+00	1069.47		1069.47		1070.11
1069.45	1070.09	+25	1070.09		1070.09		1070.73
1070.08	1070.72	+50	1070.72		1070.72		1071.36
1070.71	1071.35	+75	1071.35		1071.35		1071.99
1071.34	1071.98	+23+00	1071.98		1071.98		1072.62
1071.97	1072.61	+25	1072.61		1072.61		1073.25
1072.60	1073.24	+50	1073.24		1073.24		1073.88
1073.22	1073.86	+75	1073.86		1073.86		1074.50
1073.85	1074.49	+24+00	1074.49		1074.49		1075.13
1074.48	1075.12	+25	1075.12		1075.12		1075.76
1074.61	1075.25	+30	1075.25		1075.25		1075.89
1075.11	1075.75	+50	1075.75		1075.75		1076.39
1075.66	1076.30	+72	1076.30		1076.30		1076.94
1075.73	1076.37	+75	1076.37		1076.37		1077.01
1076.24	1076.88	+95	1076.88		1076.88		1077.52
1076.37	1077.01	+25+00	1077.01		1077.01		1077.65
1076.63	1077.27	+10.50	1077.27		1077.27		1077.91
1076.80	1077.44	+17.50	1077.44		1077.44		1078.08
1076.99	1077.63	+25	1077.63		1077.63		107

SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072(4) I-71-4(24)75	

58
325

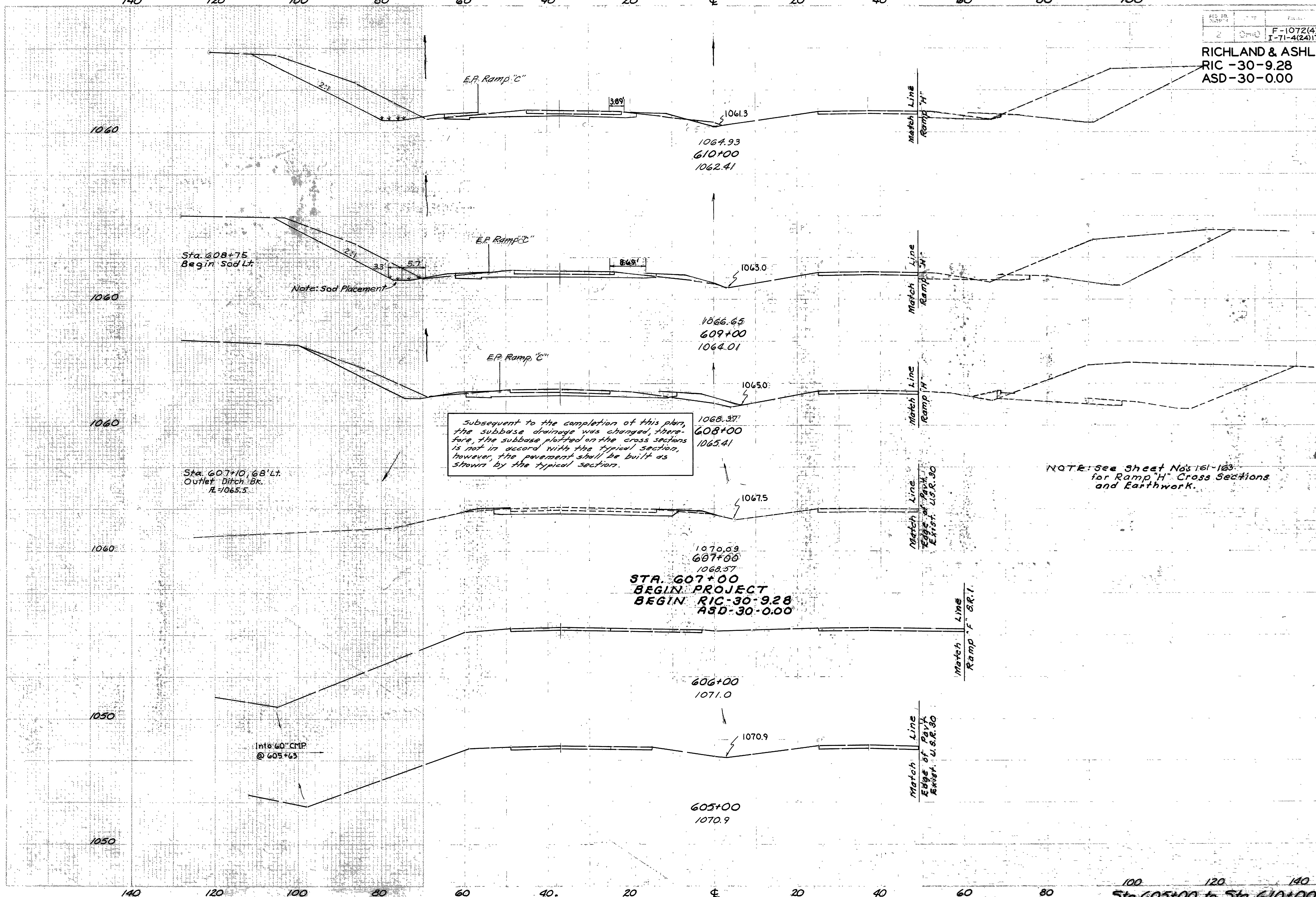
RIC-30-9.28
ASD-30-0.00

KOOGLE ROAD				
STA 22+25 TO STA 35+25				
STATION	PROFILE ELEVATION	LT. EDGE ELEVATION	C. ELEVATION	RT. EDGE ELEVATION
22+25	1048.98	1048.29	1048.48	1048.29
22+50	1048.94	1048.25	1048.44	1048.29
22+75	1048.36	1048.17	1048.36	1048.28
23+00	1048.24	1048.05	1048.24	1048.22
23+25	1048.07	1047.88	1048.07	1048.15
23+50	1047.85	1047.66	1047.86	1048.06
23+75	1047.59	1047.40	1047.66	1047.92
24+00	1047.28	1047.09	1047.42	1047.74
24+25	1046.93	1046.74	1047.13	1047.51
24+50	1046.53	1046.34	1046.79	1047.24
24+75	1046.08	1045.89	1046.34	1046.91
25+00	1045.59	1045.40	1045.98	1046.55
25+25	1045.05	1044.87	1045.51	1046.14
25+50	1044.48	1044.29	1044.99	1045.69
25+75	1043.85	1043.66	1044.42	1045.17
26+00	1043.20	1043.01	1043.77	1044.52
26+25	1042.55	1042.36	1043.12	1043.87
26+50	1041.90	1041.71	1042.47	1043.22
26+75	1041.25	1041.06	1041.82	1042.57
27+00	1040.60	1040.41	1041.17	1041.92
27+25	1039.95	1039.76	1040.52	1041.27
27+50	1039.30	1039.11	1039.87	1040.62
27+75	1038.65	1038.46	1039.22	1039.97
28+00	1038.00	1037.81	1038.57	1039.32
28+25	1037.35	1037.16	1037.92	1038.67
28+50	1036.70	1036.51	1037.27	1038.02
28+75	1036.05	1035.86	1036.62	1037.37
29+00	1035.40	1035.21	1035.97	1036.72
29+25	1034.75	1034.56	1035.32	1036.07
29+50	1034.10	1033.91	1034.67	1035.42
29+75	1033.45	1033.26	1034.02	1034.77
30+00	1032.80	1032.61	1033.37	1034.12
30+25	1032.15	1031.96	1032.72	1033.47
30+50	1031.50	1031.31	1032.07	1032.82
30+75	1030.85	1030.66	1031.42	1032.17
31+00	1030.20	1030.01	1030.77	1031.52
31+25	1029.55	1029.36	1030.12	1030.87
31+50	1028.90	1028.71	1029.47	1030.22
31+75	1028.25	1028.06	1028.82	1029.57
32+00	1027.60	1027.41	1028.17	1028.92
32+25	1026.95	1026.76	1027.52	1028.27
32+50	1026.30	1026.11	1026.87	1027.62
32+75	1025.65	1025.46	1026.22	1026.97
33+00	1025.00	1024.81	1025.57	1026.32
33+25	1024.35	1024.16	1024.92	1025.67
33+50	1023.70	1023.51	1024.27	1025.02
33+75	1023.05	1022.86	1023.62	1024.37
34+00	1022.40	1022.21	1022.97	1023.72
34+25	1021.75	1021.56	1022.32	1023.07
34+50	1021.10	1020.91	1021.67	1022.42
34+75	1020.45	1020.26	1021.02	1021.77
35+00	1019.80	1019.61	1020.37	1021.12
35+25	1019.15	1018.96	1019.72	1020.47

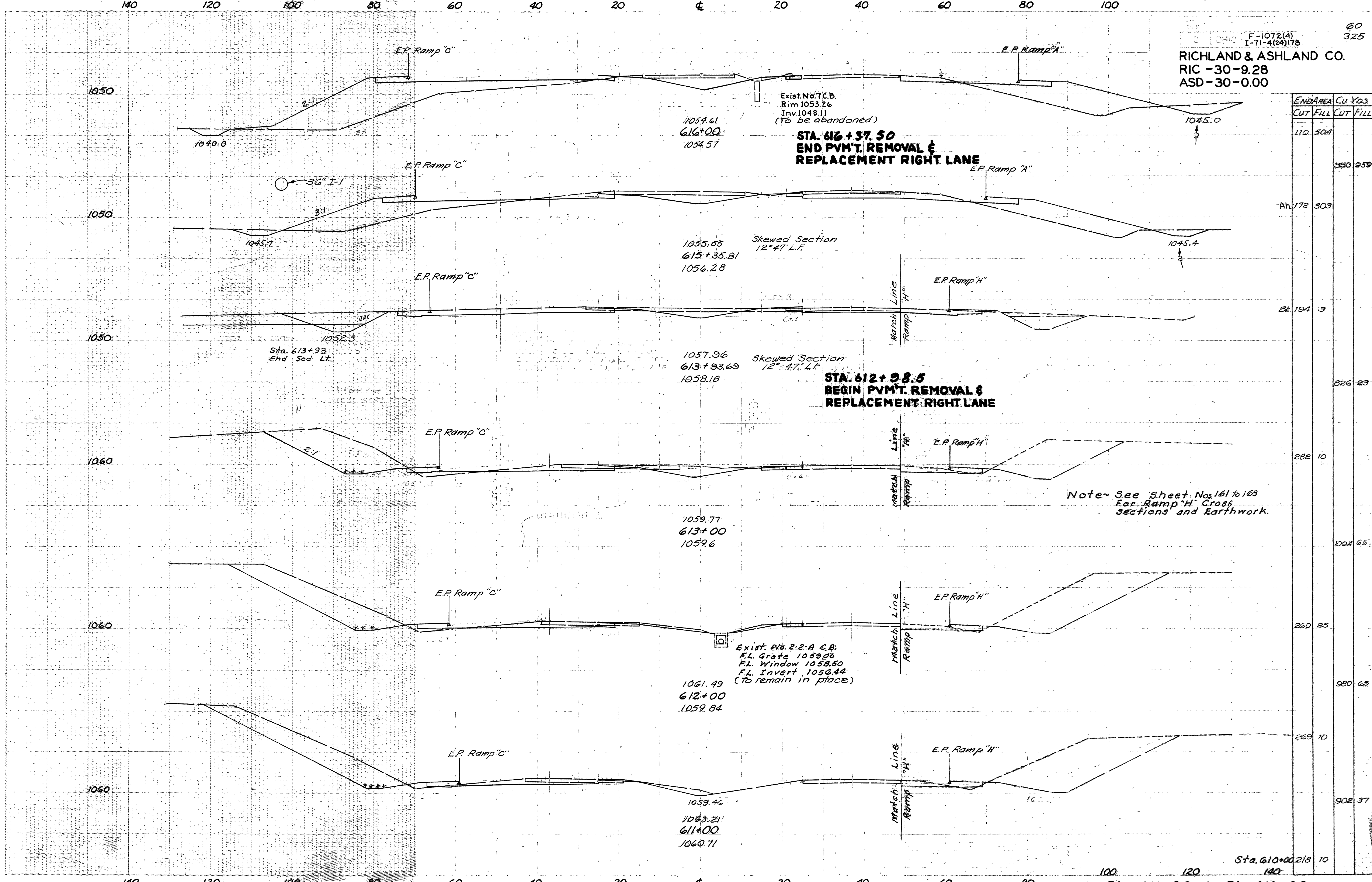
RAMP "A"			
STA 616+24.79 TO STA 627+00			
STATION	RT. EDGE PROFILE ELEVATION	WIDTH	LT. EDGE ELEVATION
616+24.79	1052.99	19.00	1053.88
616+25	1052.99	19.00	1053.88
616+30	1052.61	18.50	1053.63
616+75	1052.24	18.00	1053.37
617+00	1051.86	17.50	1053.16
617+25	1051.49	16.00	1052.74
617+50	1051.11		1052.44
617+75	1050.74		1052.07
618+00	1050.36		1051.69
618+25	1049.99		1051.32
618+50	1049.61		1050.94
618+75	1049.24		1050.57
619+00	1048.86		1050.19
619+25	1048.49		1049.82
619+50	1048.11		1049.44
619+75	1047.77		1049.10
620+00	1047.50		1048.83
620+25	1047.30		1048.63
620+50	1047.16		1048.58
620+75	1047.10		1048.52
621+00	1047.10		1048.52
621+25	1047.17		1048.59
621+50	1047.31		1048.73
621+75	1047.49		1048.91
621+97	1047.64		1049.06
622+00	1047.66		1049.08
622+25	1047.84		1049.26
622+50	1048.01		1049.43
622+75	1048.19		1049.61
623+00	1048.26		1049.78
623+25	1048.54		1049.96
623+50	1048.71		1050.17
623+75	1048.88		1050.34
624+00	1049.06		1050.51
624+25	1049.24		1050.69
624+50	1049.41		1050.87
624+75	1049.58		1051.05
625+00	1049.75		1051.23
625+25	1049.92		1051.41
625+50	1050.09		1051.59
625+75	1050.26		1051.77
626+00	1050.43		1051.95
626+25	1050.60		1052.13
626+50	1050.77		1052.31
626+75	1050.94		1052.49
627+00	1051.11		1052.67
627+25	1051.28		1052.85
627+50	1051.45		1053.03
627+75	1051.62		1053.21
628+00	1051.79		1053.39

MEDIAN EDGE	WIDTH	LT. EDGE
1049.06	17.00	1049.77
1049.08		1049.80
1049.26		1050.09
1049.43		1050.38
1049.61		1050.67
1049.78		1050.95
1049.96		1051.24
1050.17		1051.53
1050.34		1051.82
1050.51		1052.11
1050.69		1052.40
1050.87		1052.69
1050.96		1052.98
1051.17		1053.27
1051.34		1053.56
1051.51		1053.85
1051.69		1054.14
1051.87		1054.43
1052.04		1054.72
1052.21		1055.01
1052.39		1055.30
1052.56		1055.59
1052.74		1055.88
1052.91		1056.17
1053.09		1056.46
1053.26		1056.75
1053.44		1057.04
1053.61		1057.33
1053.79		1057.62
1053.96		1057.91
1054.14		1058.20
1054.31		1058.49
1054.49		1058.78
1054.66		1059.07
1054.84		1059.36
1055.01		1059.65
1055.19		1059.94
1055.36		1060.23
1055.54		1060.52
1055.71		1060.81
1055.89		1061.10
1056.06		1061.39
1056.24		1061.68
1056.41		1061.97
1056.59		1062.26
1056.76		1062.55
1056.94		1062.84
1057.11		1063.13
1057.29		1063.42
1057.46		1063.71
1057.64		1064.00
1057.81		1064.29
1057.99		1064.58
1058.16		1064.87
1058.34		1065.16
1058.51		1065.45
1058.69		1065.74
1058.86		1066.03
1059.04		1066.32
1059.21		1066.61
1059.39		1066.90
1059.56		1067.19
1059.74		1067.48
1059.91		1067.77
1060.09		1068.06
1060.26		1068.35
1060.44		1068.64
1060.61		1068.93
1060.79		1069.22
1060.96		1069.51
1061.14		1069.80
1061.31		1070.09
1061.49		1070.38
1061.66		1070.67
1061.84		1070.96
1062.01		1071.25
1062.19		1071.54
1062.36		1071.83
1062.54		1072.12
1062.71		1072.41
1062.89		1072.70
1063.06		1072.99
1063.24		1073.28
1063.41		1073.57
1063.59		1073.86
1063.76		1074.15
1063.94		1074.44
1064.11		1074.73
1064.29		1075.02
1064.46		1075.31
1064.64		1075.60
1064.81		1075.89
1064.99		1076.18
1065.16		1076.47
1065.34		1076.76
1065.51		1077.05
1065.69		1077.34
1065.86		1077.63
1066.04		1077.92
1066.21		1078.21
1066.39		1078.50
1066.56		1078.79
1066.74		1079.08
1066.91		1079.37
1067.09		1079.66
1067.26		1079.95
1067.44		1080.24
1067.61		1080.53
1067.79		1080.82
1067.96		1081.11
1068.14		1081.40
1068.31		1081.69
1068.49		1081.98
1068.66		1082.27
1068.84		1082.56
1069.01		1082.85
1069.19		1083.14
1069.36		1083.43
1069.54		1083.72
1069.71		1084.01
1069.89		1084.30
1070.06		1084.59
1070.24		1084.88
1070.41		1085.17
1070.59		1085.46
1070.76		1085.75
1070.94		1086.04
1071.11		1086.33
1071.29		1086.62
1071.46		1086.91
1071.64		1087.20
1071.81		1087.49
1071.99		1087.78
1072.16		1088.07
1072.34		1088.36
1072.51		1088.65
1072.69		1088.94
1072.86		1089.23
1073.04		1089.52
1073.21		1089.81
1073.39		1090.10
1073.56		1090.39
1073.74		1090.68
1073.91		1090.97
1074.09		1091.26
1074.26		1091.55
1074.44		1091.84
1074.61		1092.13
1074.79		1092.42
1074.96		1092.71
1075.14		1093.00
1075.31		1093.29
1075.49		1093.58
1075.66		1093.87
1075.84		1094.16
1076.01		1094.45
1076.19		1094.74
1076.36		1095.03
1076.54		1095.32
1076.71		1095.61
1076.89		1095.90
1077.06		1096.19
1077.24		1096.48
1077.41		1096.77
1077.59		1097.06
1077.76		1097.35
1077.94		1097.64
1078.11		1097.93
1078.29		1098.22
1078.46		1098.51
1078.64		1098.80
1078.81		1099.09
1078.99		1099.38
1079.16		1099.67
1079.34		1099.96
1079.51		1100.25
1079.69		1100.54
1079.86		1100.83
1080.04		1101.12
1080.21		1101.41
1080.39		1101.

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



END AREA	Cu Yds	
CUT	FILL	
218	10	
		715
		46
167	15	
		520
		81
114	29	
		235
		66
0	0	

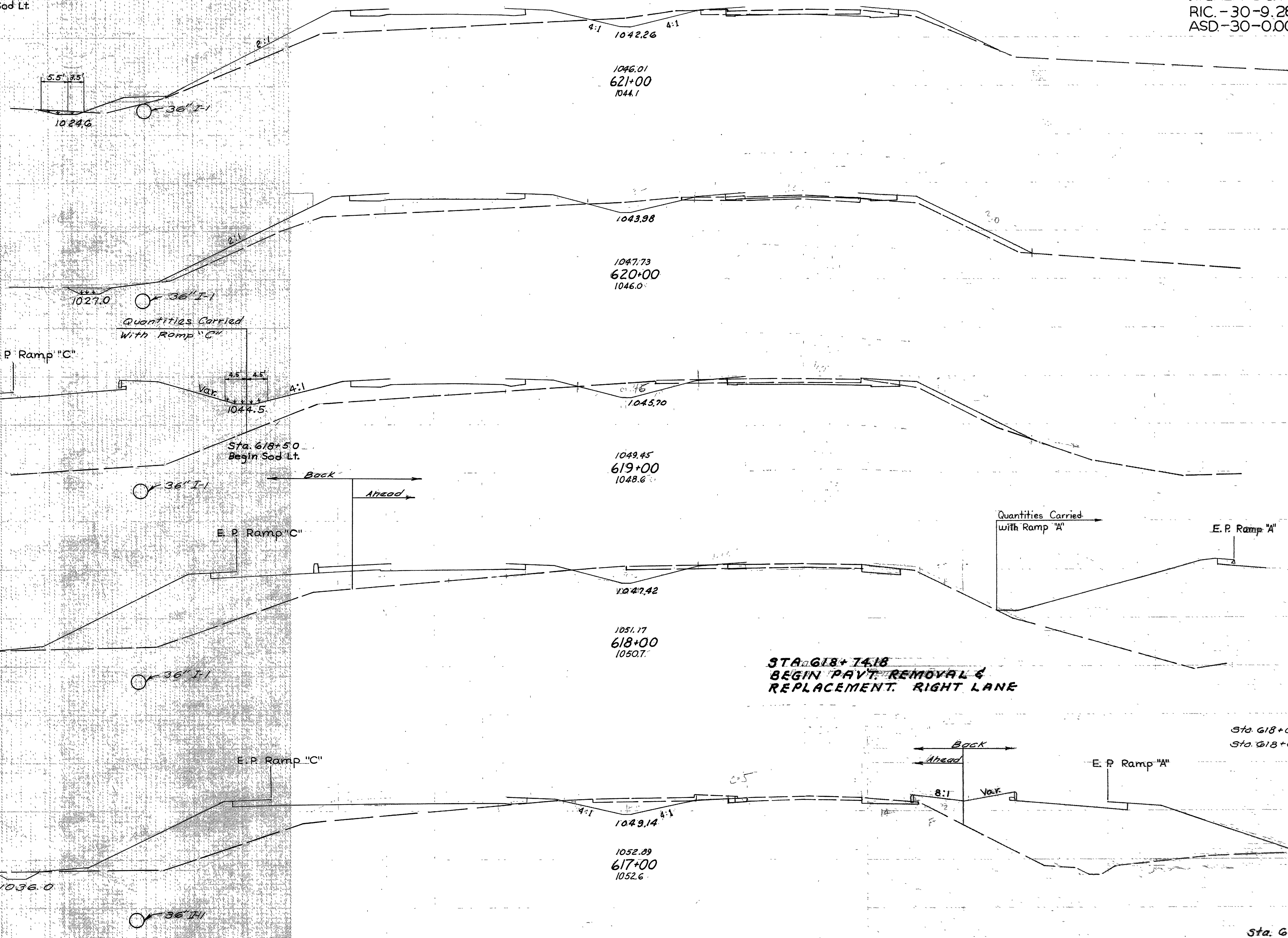


END AREA	CUT	FILL	CU. YDS.
CUT	FILL	CUT	FILL
110	504		
		350	959
Ah	172	303	
Bk	194	3	
		326	23
		282	10
		1004	65
		260	25
		980	65
		269	10
		902	37
		10	

Sta. 610+00 218 10
Sta. 611+00 to Sta. 616+00

RICHLAND & ASHLAND CO.
RIC. - 30-9.28
ASD. - 30-0.00

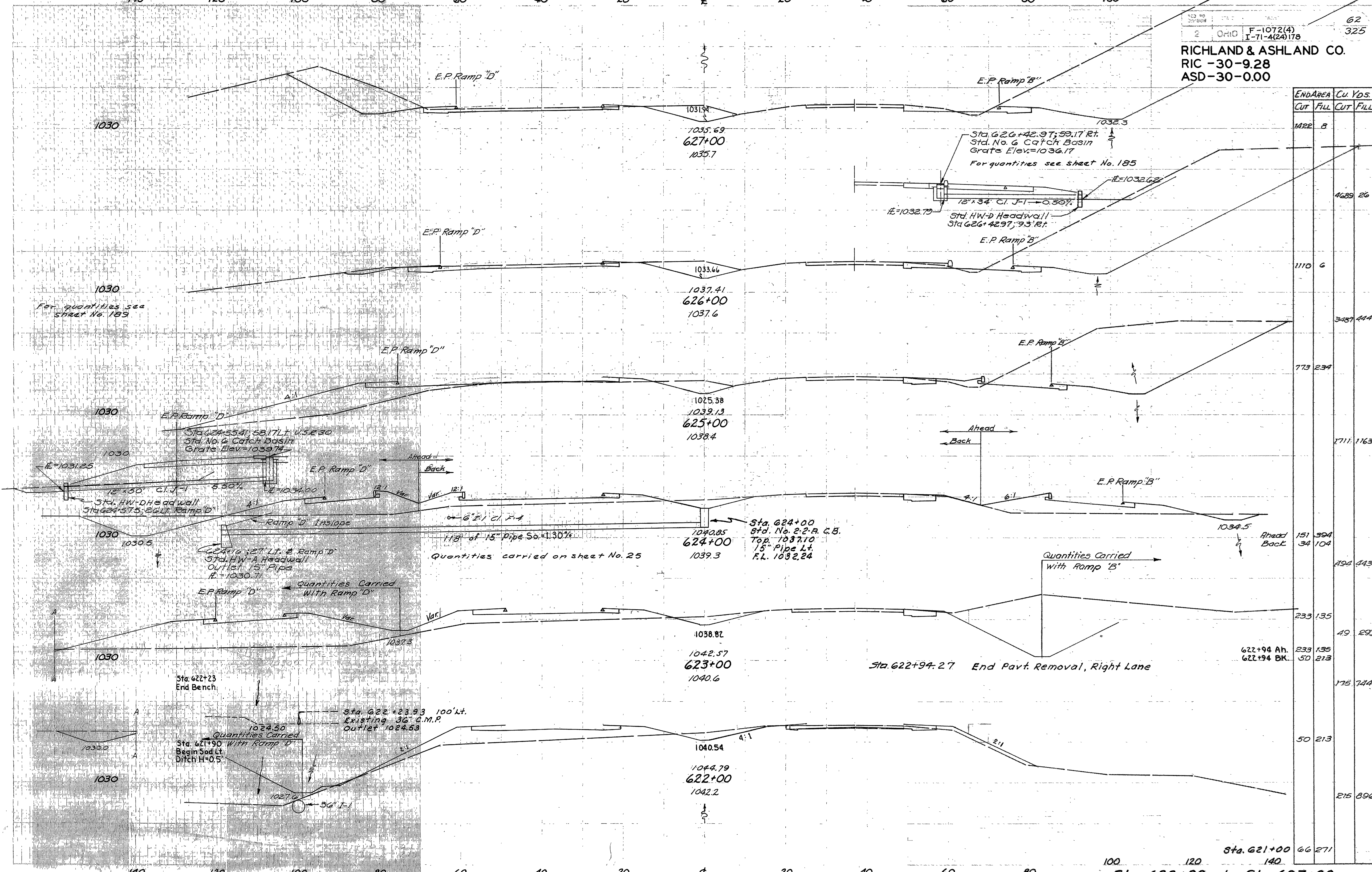
Sta. 621+47
End Sod Lt.



END AREA	Cu. Yds.	
	CUT	FILL
66	271	
		226 922
56	227	
		263 831
86	222	
		278 596
		302 1870
Ah. 92	430	
Bk. 114	1064	
		415 2904
		Sta. 616+00 770 504

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140
Sta. 617+00 to Sta. 621+00

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
1422	8	
4689	26	
1110	6	
3487	444	
773	234	
1711	1163	
151	394	
34	104	
494	443	
233	135	
49	290	
233	135	
50	213	
175	744	
50	213	
215	896	
66	271	

Sta. 622+94.27 End Pavt. Removal, Right Lane

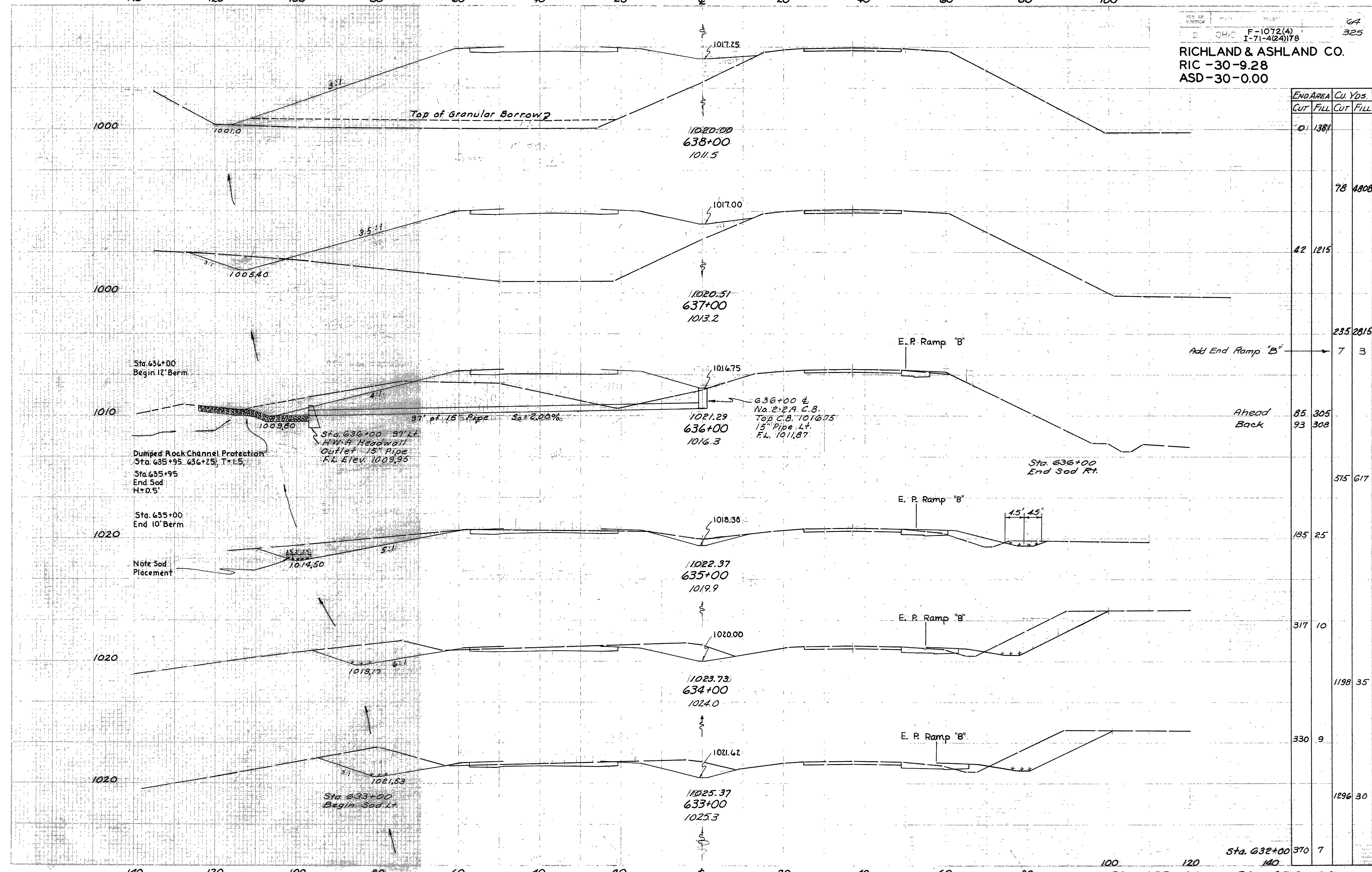
Quantities Carried with Ramp 'B'

Quantities carried on sheet No. 25

Quantities Carried with Ramp 'D'

Quantities Carried with Ramp 'D'

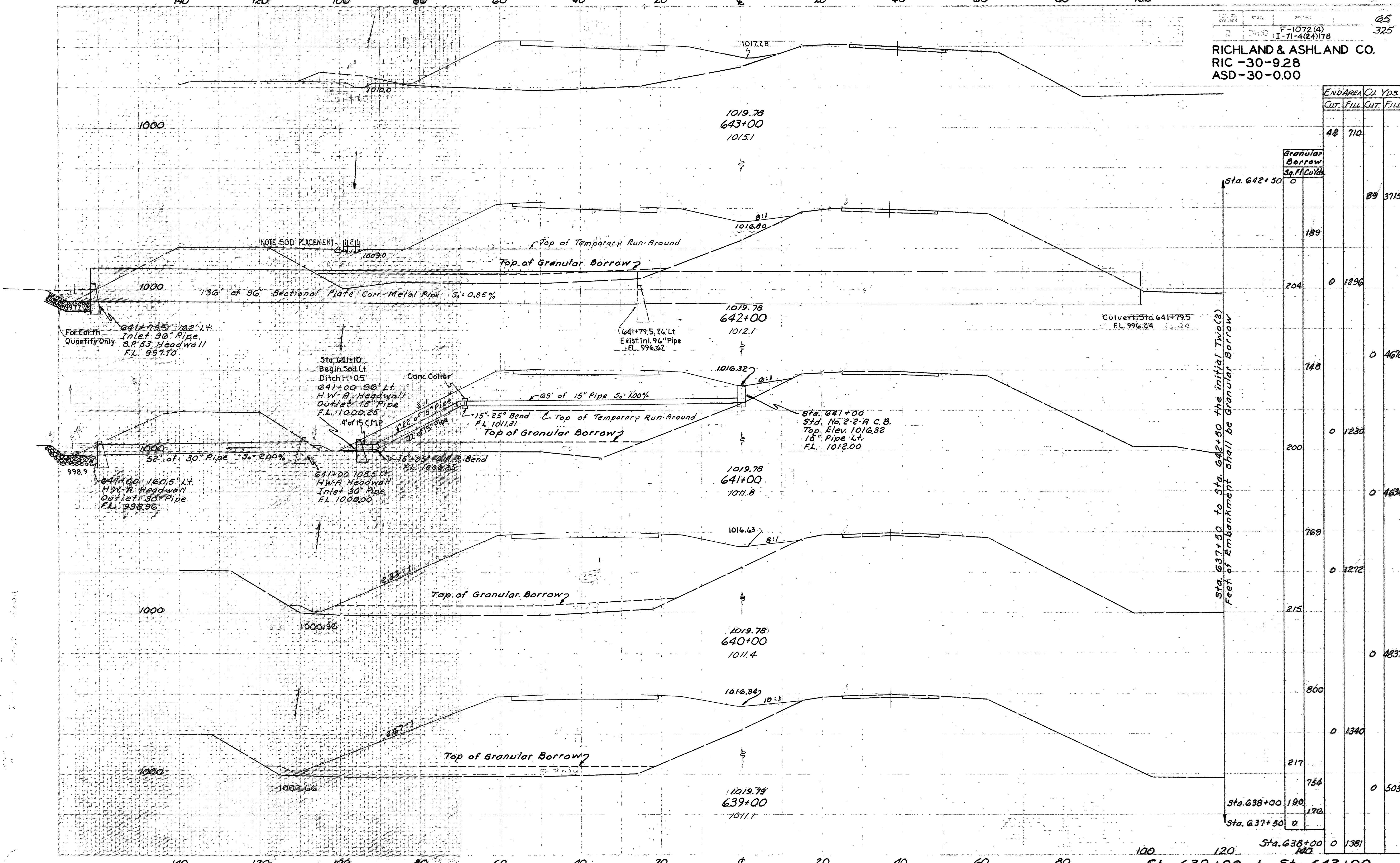
Sta. 621+00 to Sta. 627+00



END AREA	CU. YDS.	
	CUT	FILL
0	1381	
42	1215	78 4806
235	2815	
7	3	
85	305	
93	308	
515	617	
185	25	
317	10	
1198	35	
330	9	
1296	30	
370	7	

Sta. 633+00 to Sta. 638+00

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00

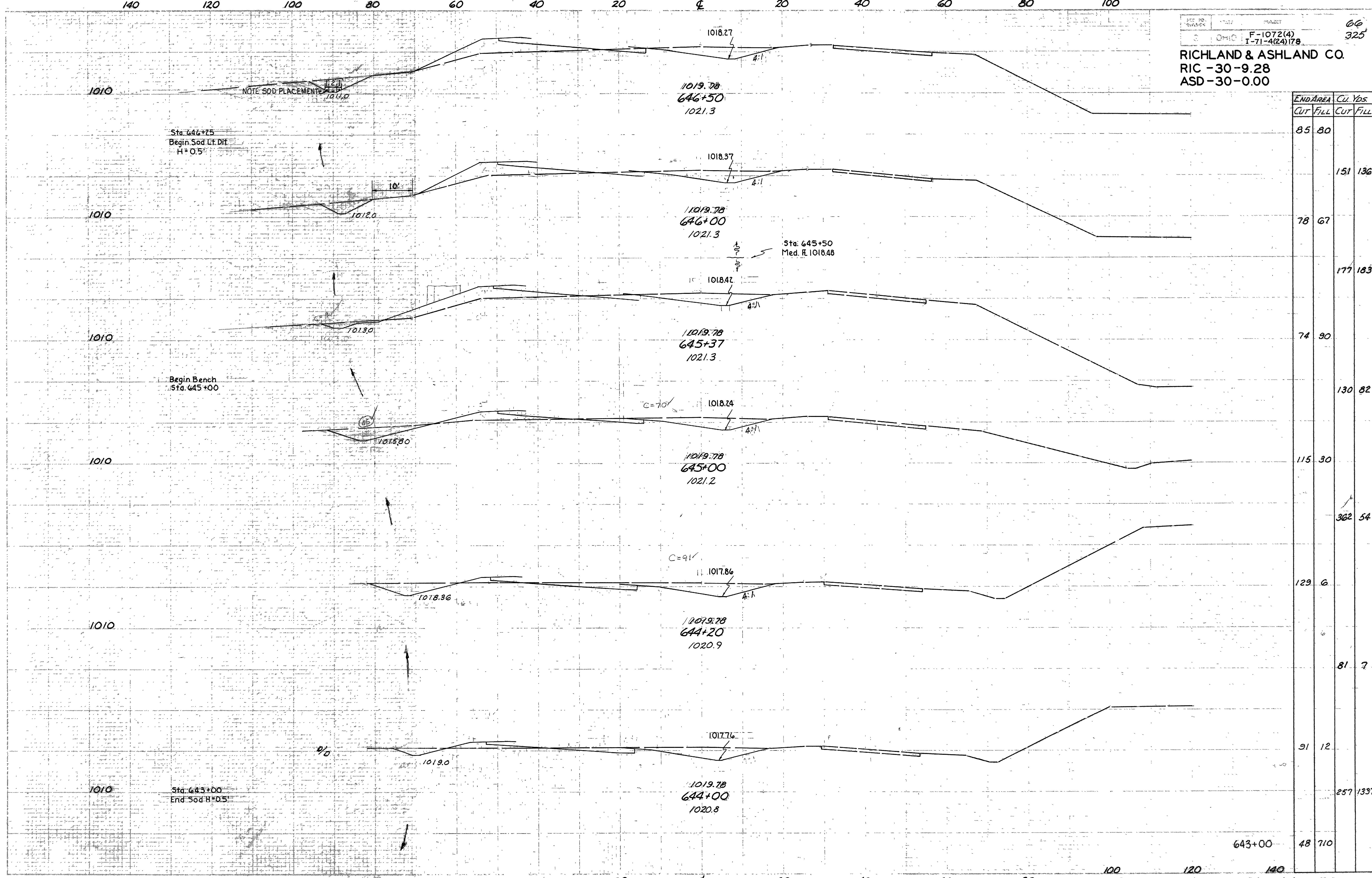


Sta.	END AREA		Cu. Yds.	
	CUT	FILL	CUT	FILL
643+00	48	710		
642+50	0	189	89	3715
642+00	0	204	0	1296
641+50	0	748	0	4678
641+00	0	200	0	1230
640+50	0	769	0	4634
640+00	0	215	0	1272
639+50	0	800	0	4837
639+00	0	217	0	1340
638+50	190	176	0	5039
638+00	190	176	0	1381

Sta. 637+50 to Sta. 642+50 the initial two (2) feet of Embankment shall be Granular Borrow

Sta. 639+00 to Sta. 643+00

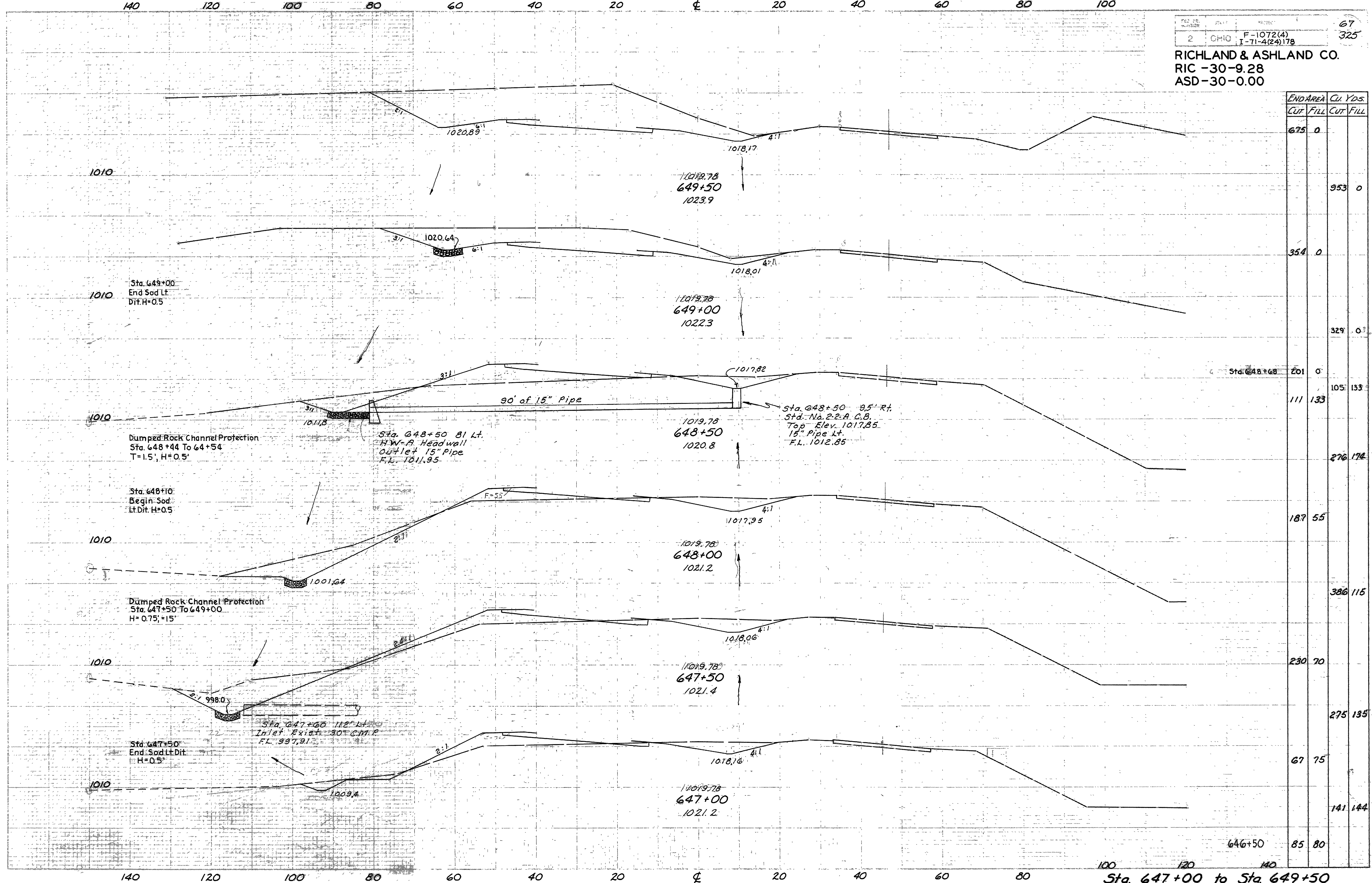
RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
85	80		
		151	136
78	67		
		177	183
74	90		
		130	82
115	30		
		362	54
129	6		
		81	7
91	12		
		257	1337
48	710		

Sta. 644+00 to Sta. 646+50

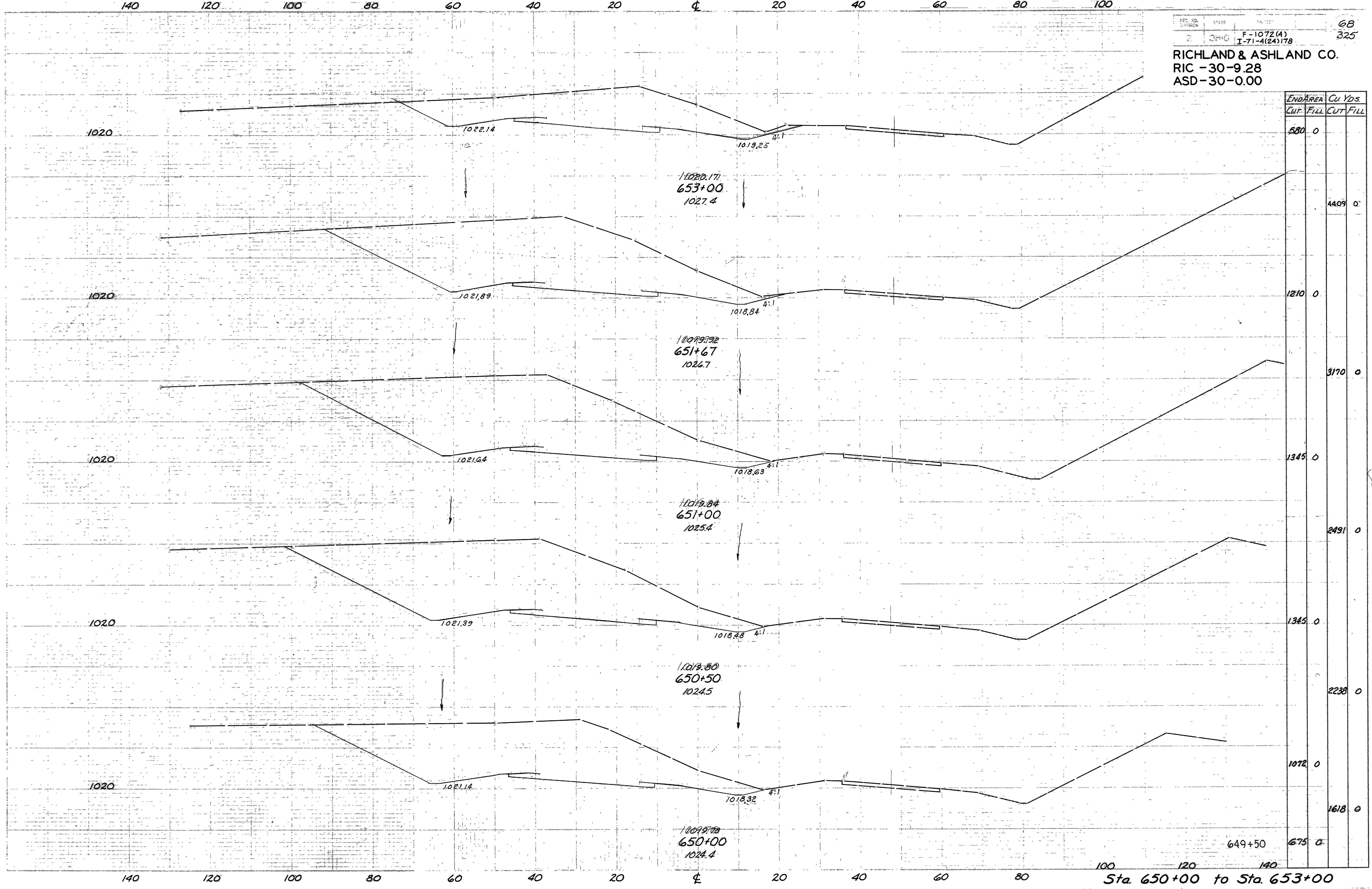
RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
675	0		
		953	0
354	0		
		329	0
201	0		
		105	133
111	133		
		276	174
		187	55
		386	115
230	70		
		275	135
67	75		
		141	144
		85	80

Sta. 647+00 to Sta. 649+50

RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00



From Sta. 649+50 to Sta. 653+00
 100' 120' 140'

Sta. 650+00 to Sta. 653+00

RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00

Profile Median Pavt.

Taper
 12' Lane
 For Dirt
 Quantities
 only

Sta. 659+77.50 to Sta. 633+41.78
 West Bound Lanes - Drain I-22
 Sub-base Under Intersection
 and Tapers to Under drain
 3' off the Rt Edge of the
 West Bound Lanes.

NOTE: SOD PLACEMENT

Sta. 659+00 Lt. Ditch
 Begin Bench Begin
 Sod H=0.5'

658+00 76' Lt.
 H.W. A Headwall
 Outlet 15" Pipe
 F.L. 1017.15

658+00 11' Rt
 Std. No. 2-2A C.B.
 Top Elev. 1020.80
 15" Pipe Lt.
 F.L. 1017.84

Excavate and Backfill with Granular Borrow

Sta. 657+00
 End Sod Lt. Ditch
 H=0.5'

Note Sod Placement

Sta. 655+25
 Begin Sod Lt.
 Ditch H=0.5'

Excavate and Backfill with Granular Borrow

Sta. 655+65.08 to Sta. 661+21.97
 East Bound Lanes, Drain I-22
 Sub-base Under Right Tapers and
 Deceleration Lane to Right Ditch.

Excavate Peat and Granular Borrow

Excavate and Backfill with Granular Borrow

Sta.	END AREA		CU. Yds.	
	CUT	FILL	CUT	FILL
660+00	138	521		
659+00	210	335	644	1585
658+00				559
657+00	92	331		1233
656+00				
655+00				
654+00				
653+00				

Granular Borrow

Sq. Ft. Cu. Yds.

0

213

230

57

2144

224

928

228

64

2885

630

59

1167

441

179

4

1406

7

580

0

1406

7

580

0

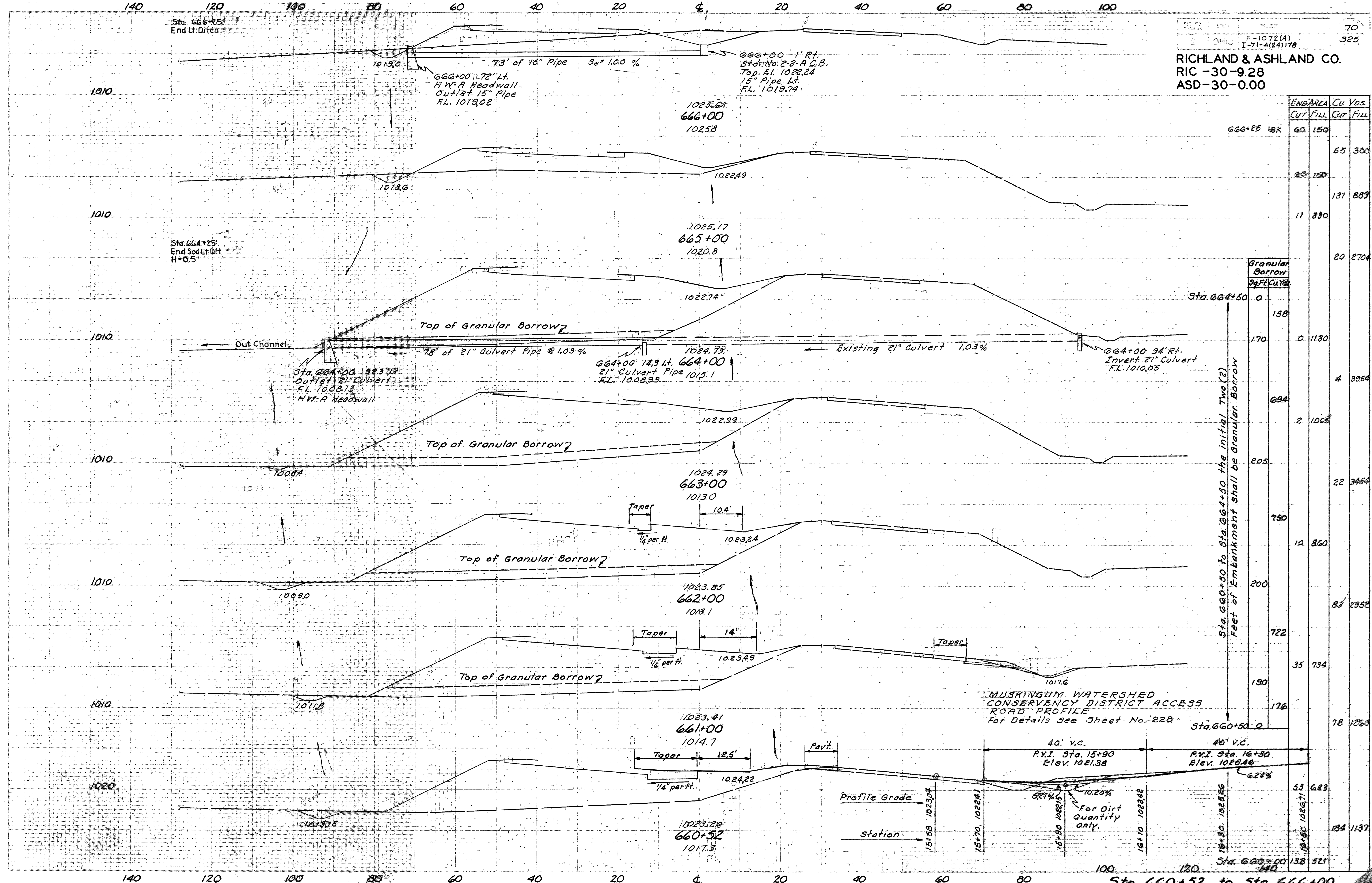
1406

7

580

0

Sta. 654+00 to Sta. 660+00



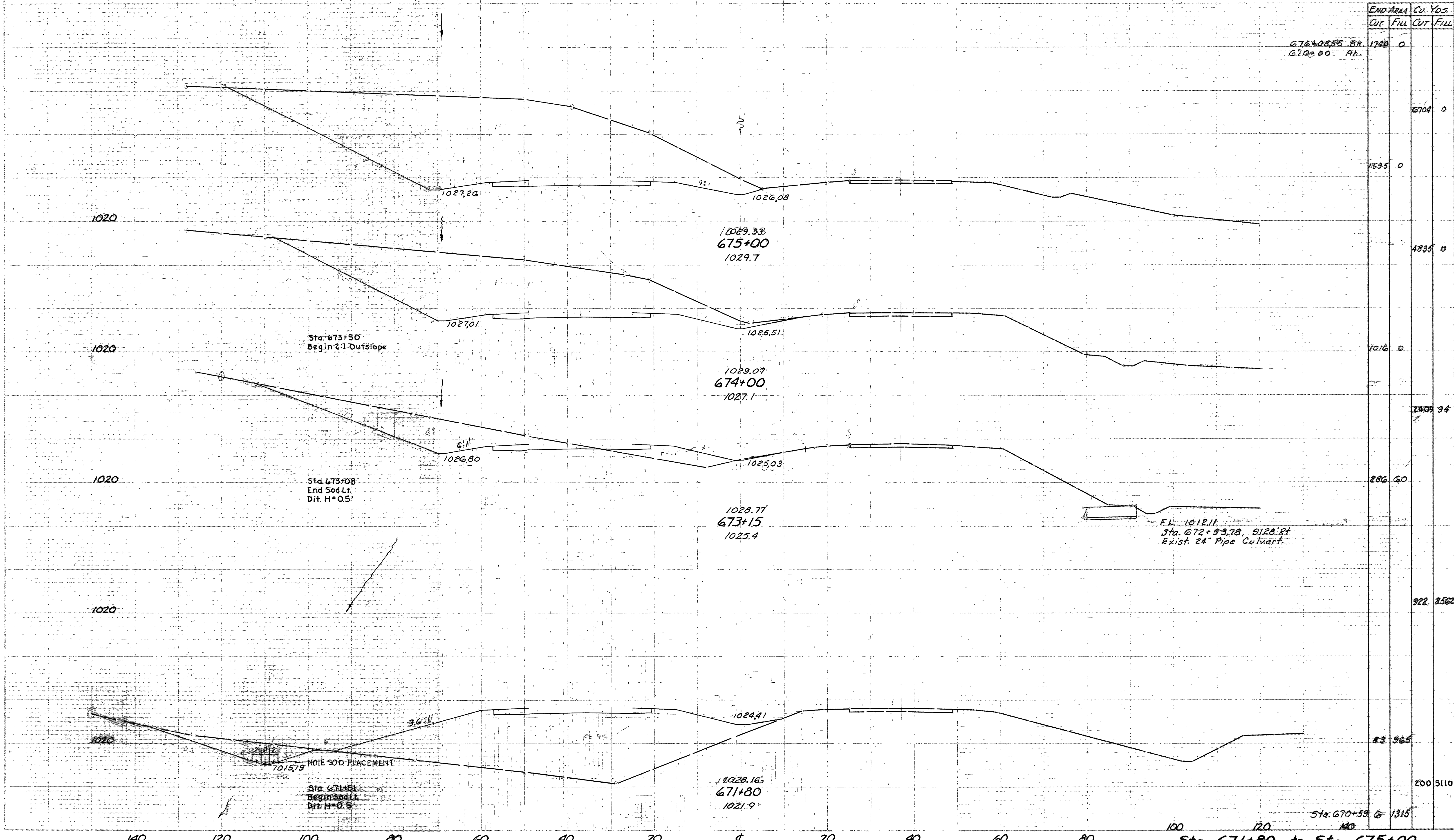
END AREA	Cu Yds.
CUT	FILL
60	180
	5.5
60	150
	131
11	330
	20
20	270
	0
158	
170	0
	1130
694	4
	3964
2	1008
	22
205	
	3454
750	10
	860
200	
	83
	2952
722	35
	734
190	
176	78
	1260
53	688
184	1137
138	521

Sta. 660+52 to Sta. 666+00

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

RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD -30-0.00

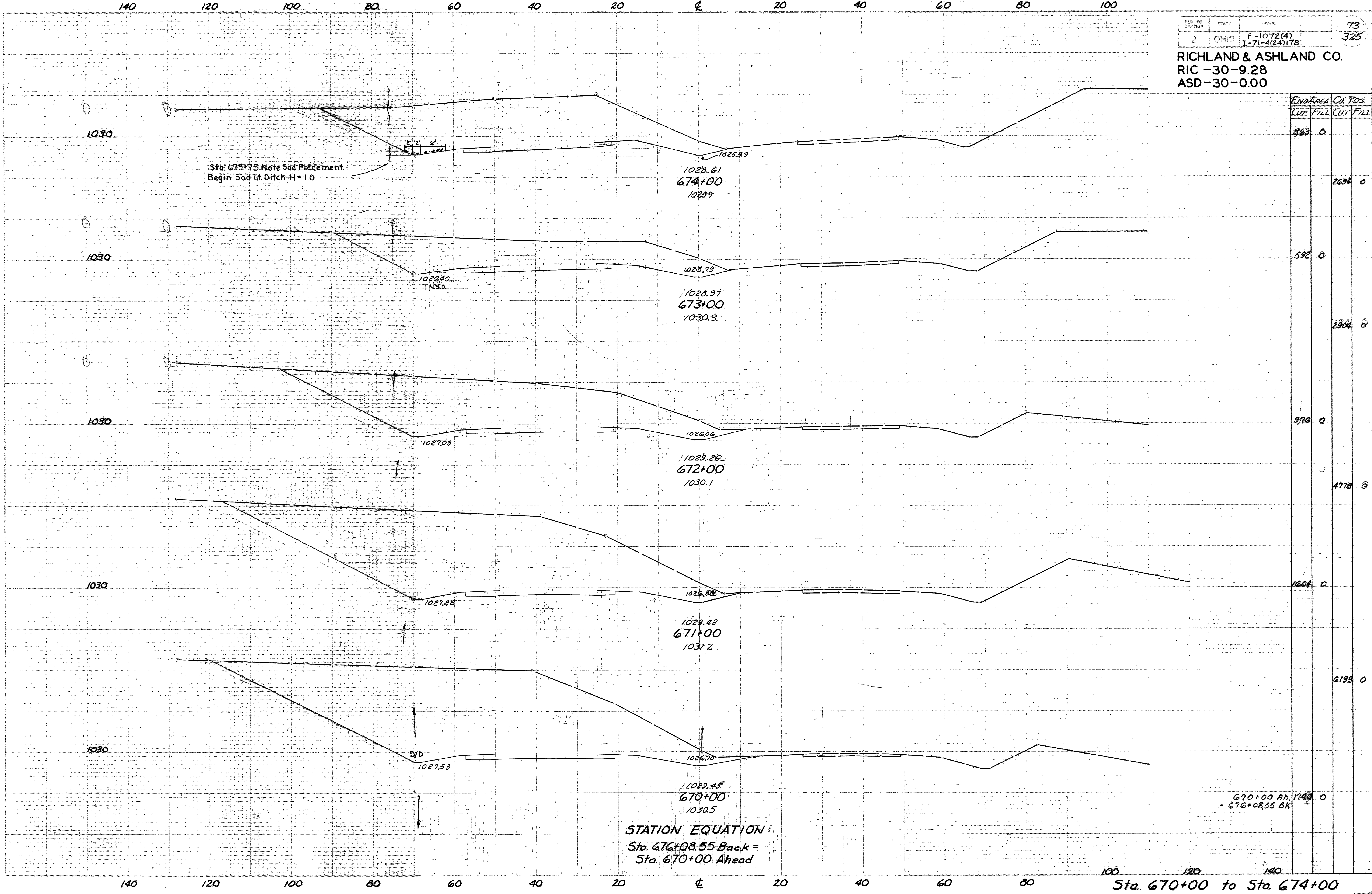
STATION EQUATION:
 Sta. 676+08.55 Back =
 Sta. 670+00 Ahead



END AREA	Cu. Yds.	
	Cut	Fill
676+08.55 BK 670+00 Fd.	1740	0
	6704	0
	1535	0
	4835	0
	1016	0
	2409	94
	286	60
	922	2562
	83	965
	200	5110
Sta. 670+59	6	1315

Sta. 671+80 to Sta. 675+00

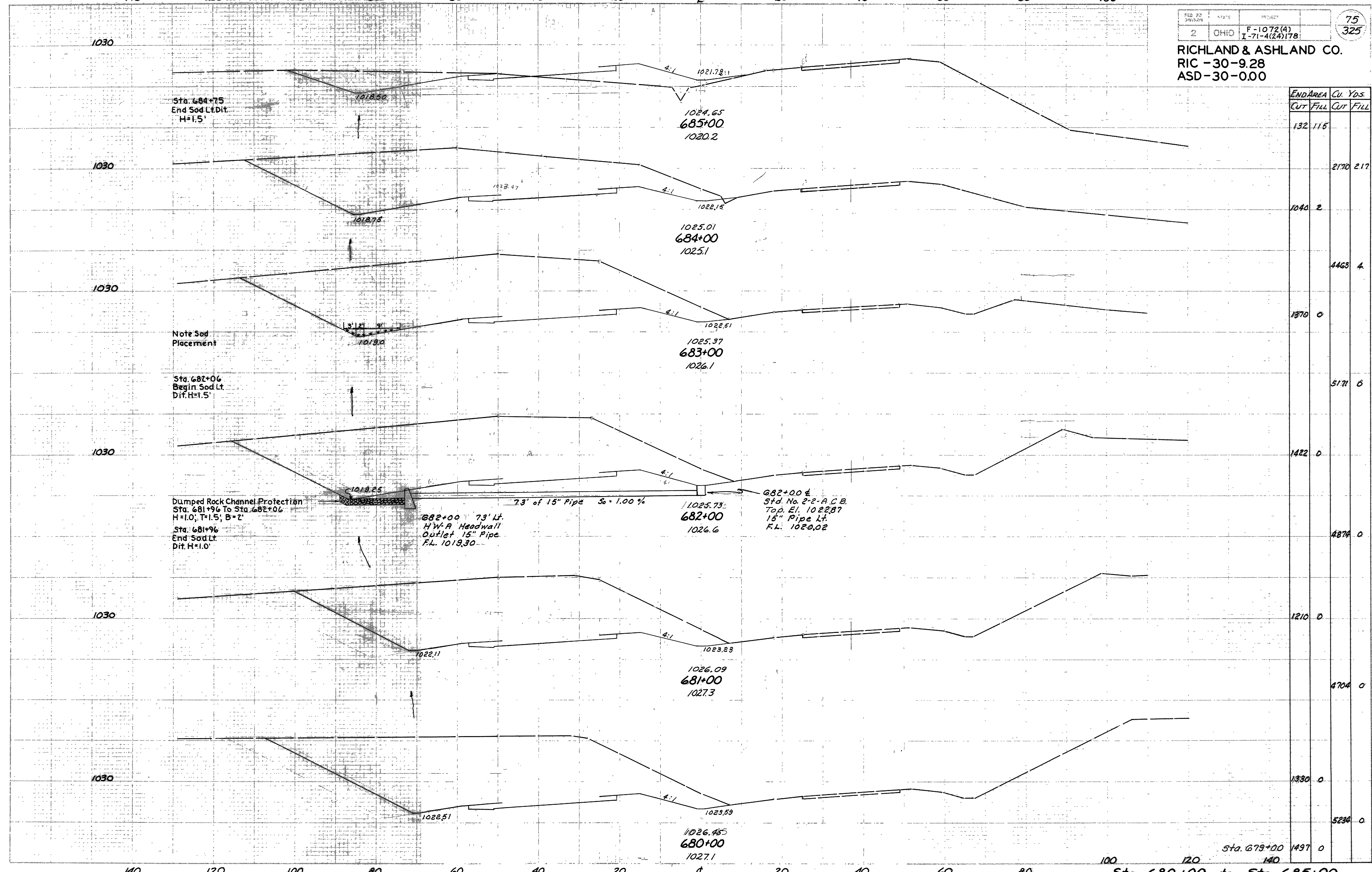
RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
863	0	
		2694
592	0	
		2904
976	0	
		4776
1604	0	
		6193

Sta. 670+00 to Sta. 674+00

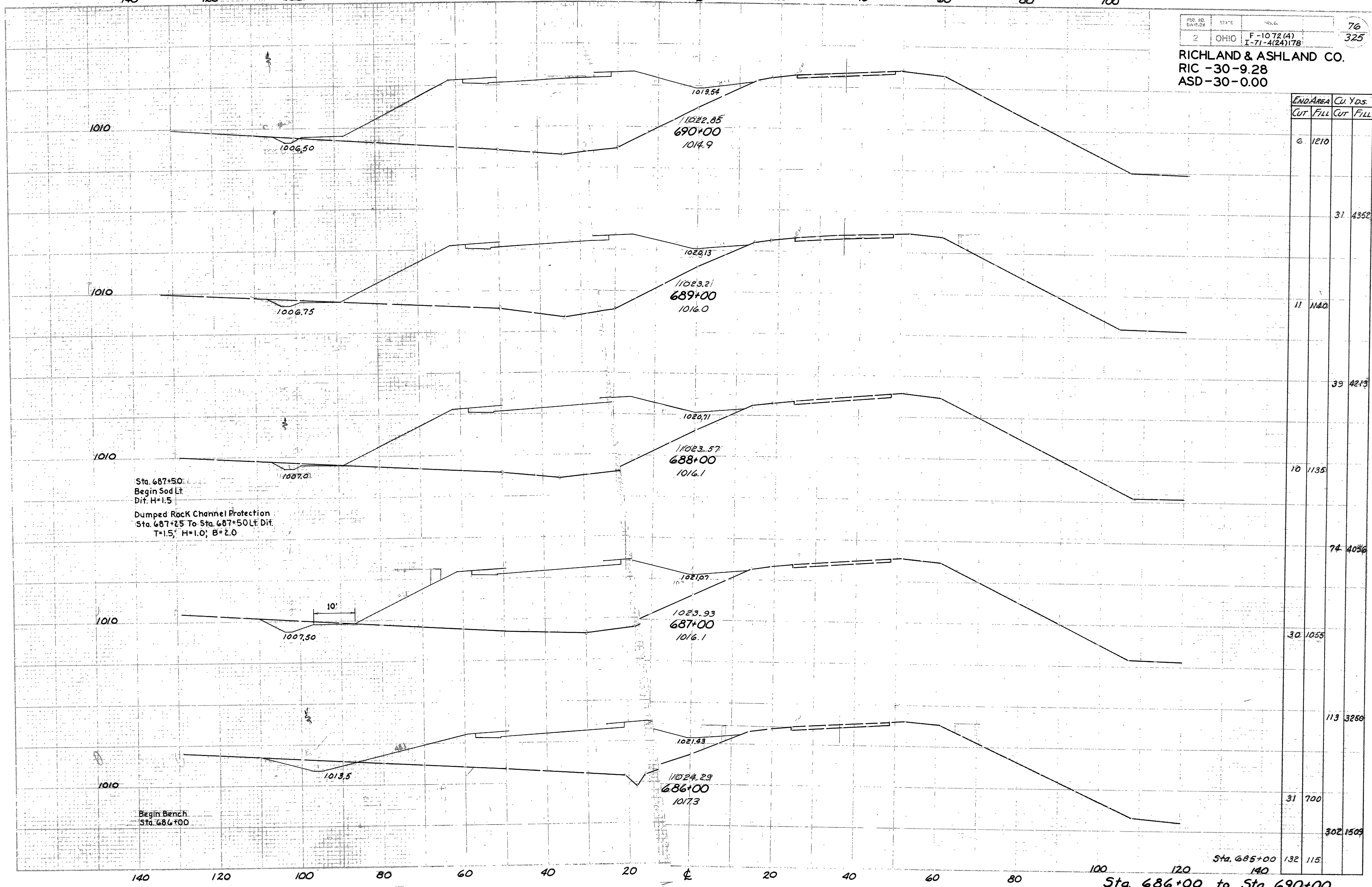
RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
132	116		
		2170	217
1040	2		
		4463	4
1370	0		
		5171	6
1422	0		
		4874	0
1210	0		
		4704	0
1330	0		
		5234	0
		1497	0

Sta. 680+00 to Sta. 685+00

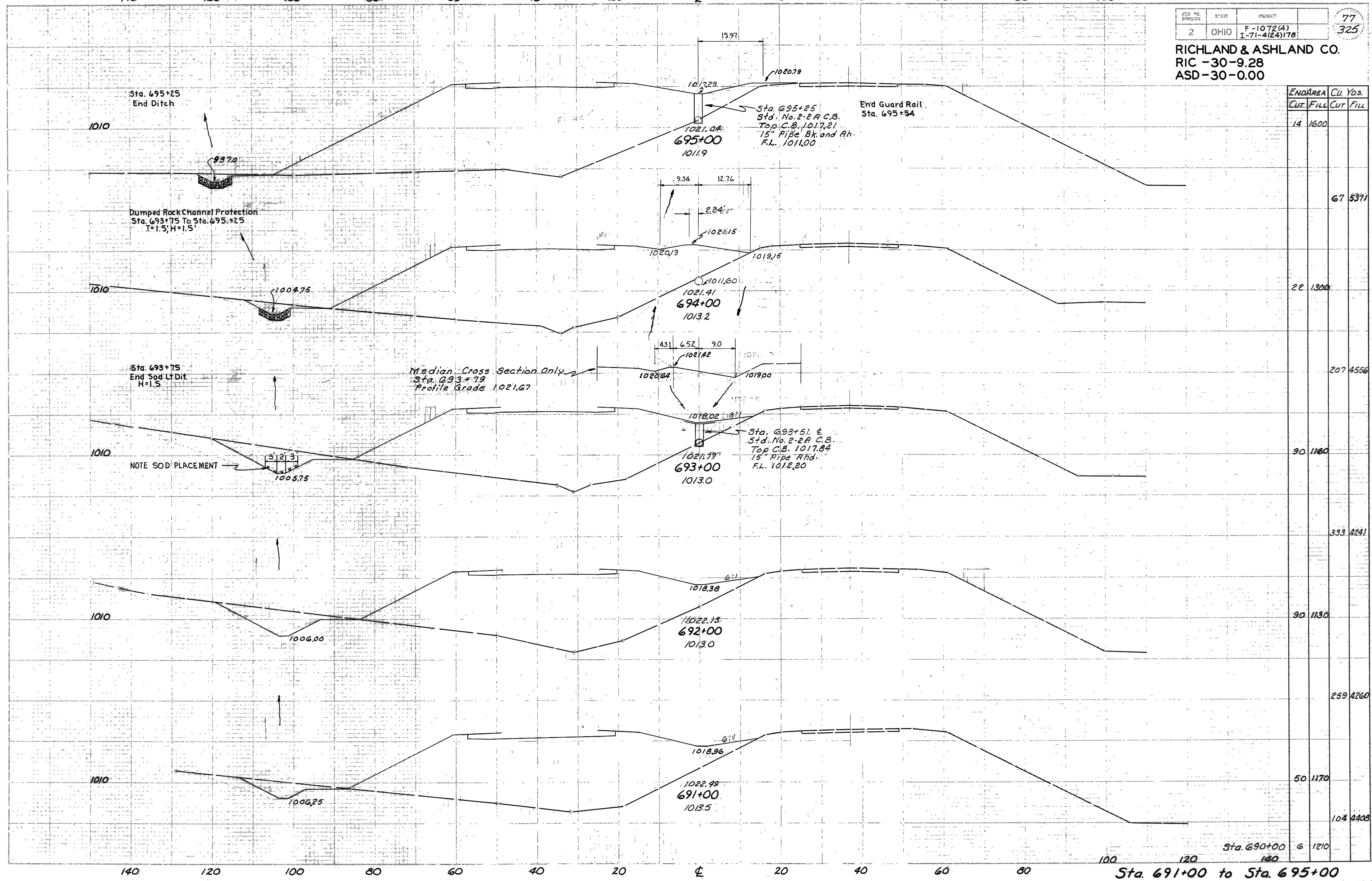
RICHLAND & ASHLAND CO.
 RIC -30-9.28
 ASD-30-0.00



Sta.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
6	1210			
31			4352	
11	1140			
39			4213	
10	1135			
74			4056	
30	1055			
113			3250	
31	700			
302	1509			
132	115			

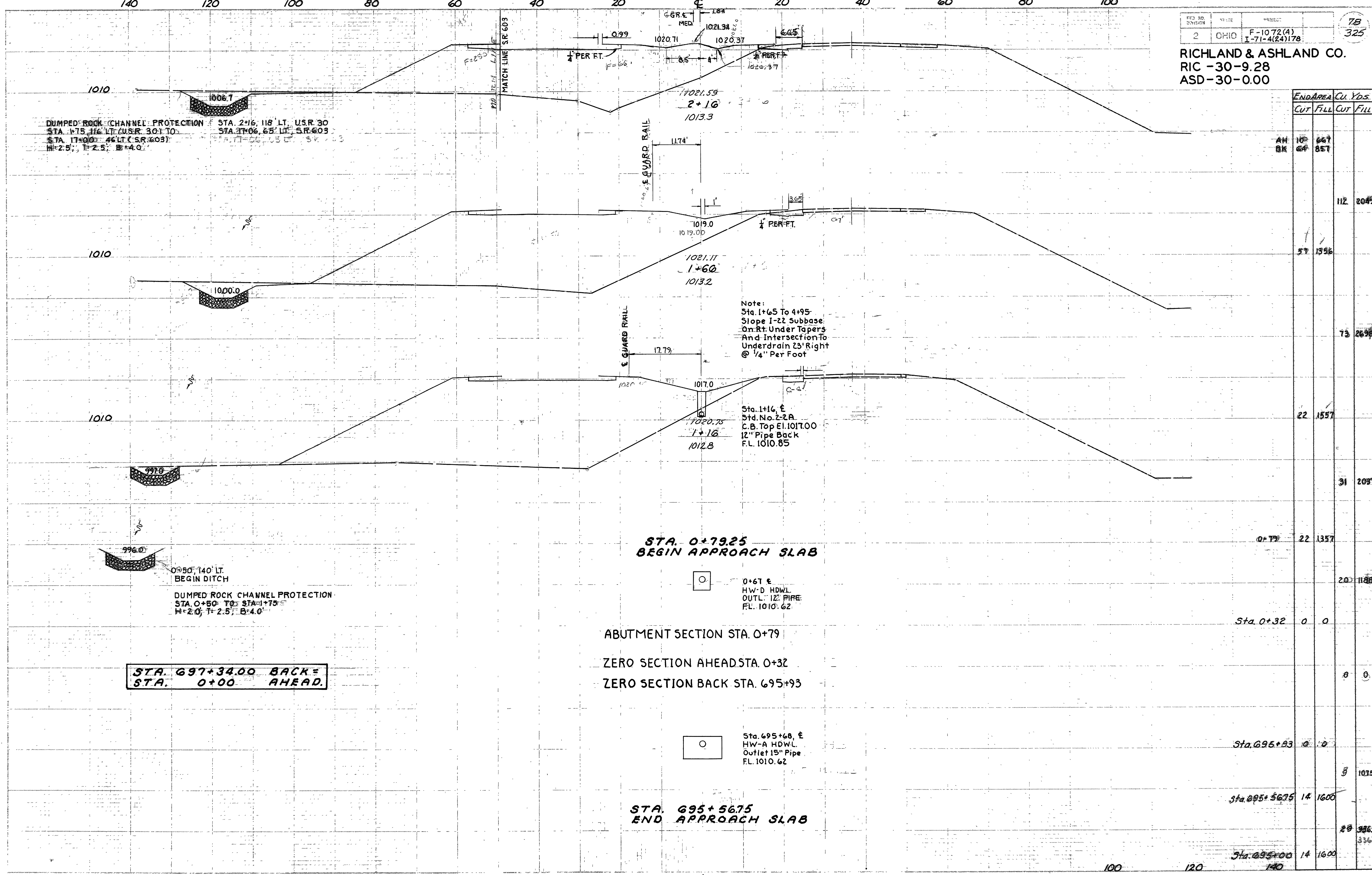
Sta. 685+00 to Sta. 690+00

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



Sta.	END AREA		Cu. Yds.	
	CUT	FILL	CUT	FILL
695+00	14	1600		
694+00	22	1300	67	5371
693+00	90	1160	207	4556
692+00	90	1130	333	4241
691+00	50	1170	259	4260
690+00	6	1210	104	4408

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



DUMPED ROCK CHANNEL PROTECTION
 STA. 1+75, 116' LT. (U.S.R. 301 TO
 STA. 17+00, 46' LT. (S.R. 603)
 H=2.5', T=2.5', B=4.0'

STA. 2+16, 118' LT. U.S.R. 30
 STA. 37+06, 65' LT. S.R. 603

0+50, 140' LT.
 BEGIN DITCH
 DUMPED ROCK CHANNEL PROTECTION
 STA. 0+50 TO STA. 1+75
 H=2.0', T=2.5', B=4.0'

STA. 697+34.00 BACK =
STA. 0+00 AHEAD.

Note:
 Sta. 1+65 To 4+95
 Slope 1-22 Subbase
 On Rt. Under Tapers
 And Intersection To
 Underdrain 23' Right
 @ 1/4" Per Foot

Sta. 1+16, E
 Std. No. 2-2A
 C.B. Top El. 1017.00
 12" Pipe Back
 F.L. 1010.85

STA. 0+79.25
BEGIN APPROACH SLAB

0+67 E
 HW-D HDWL
 OUTL. 12" PIPE
 FL. 1010.62

ABUTMENT SECTION STA. 0+79

ZERO SECTION AHEAD STA. 0+32

ZERO SECTION BACK STA. 695+93

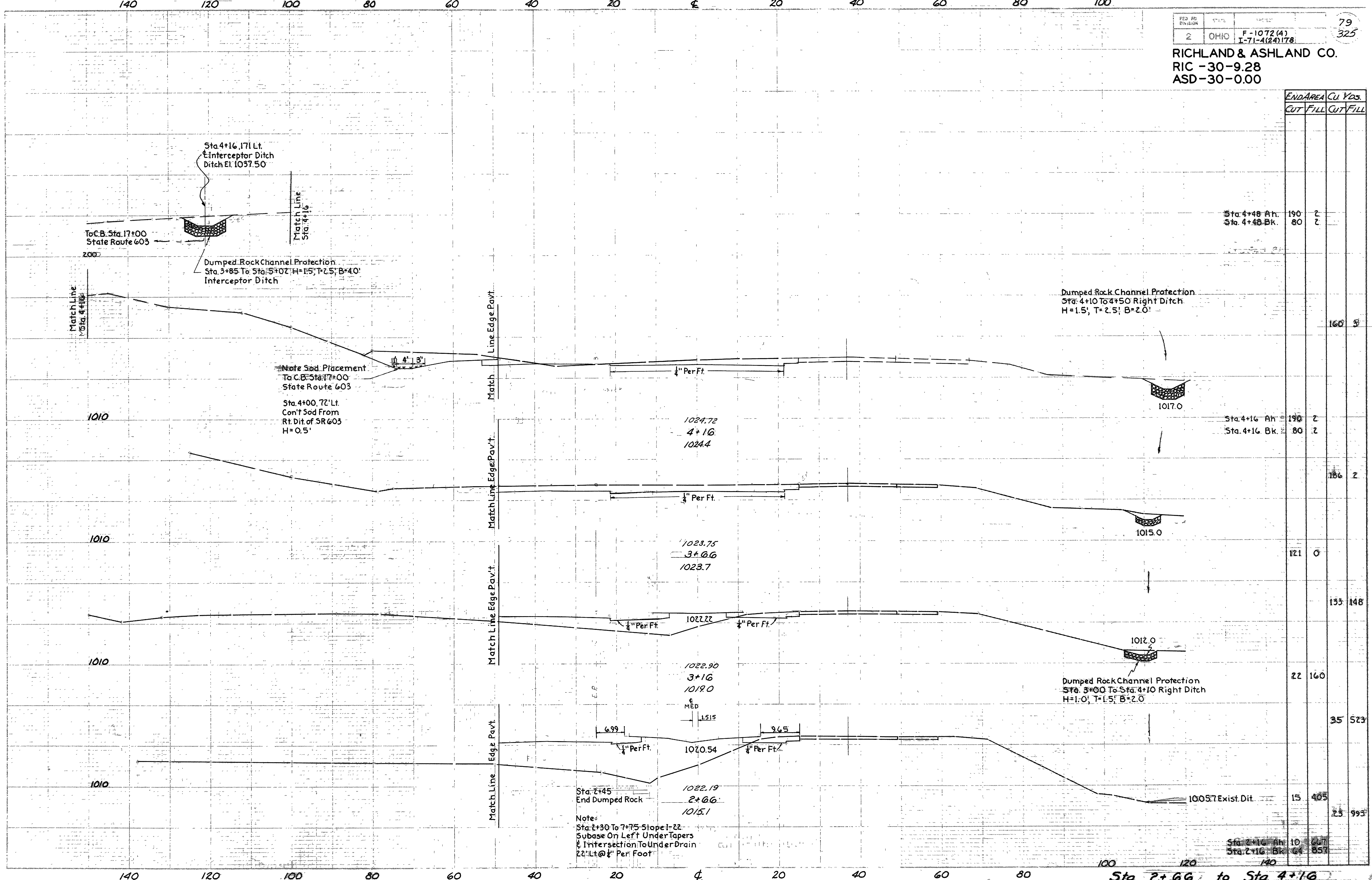
Sta. 695+68, E
 HW-A HDWL
 Outlet 15" Pipe
 FL. 1010.62

STA. 695+56.75
END APPROACH SLAB

END AREA	CU. YDS.	
	CUT	FILL
10	667	
64	857	
		112
57	1356	
		73
22	1557	
		31
0+79	22	1357
		20
Sta. 0+32	0	0
		8
Sta. 695+93	0	0
		8
Sta. 695+56.75	14	1600
		28
Sta. 695+00	14	1600
		33

Sta. 695+56.75 to Sta. 2+16

RICHLAND & ASHLAND CO.
RIC -30-9.28
ASD-30-0.00



END AREA	CU Yds.	
	CUT	FILL
190	2	2
80		
160	5	
190	2	2
80		
166	2	
121	0	
135	148	
22	160	
35	523	
15	405	
25	993	
10	607	
64	857	

Checked by: P. J. ...
 Date: 7/17/50
 Drawn by: ...

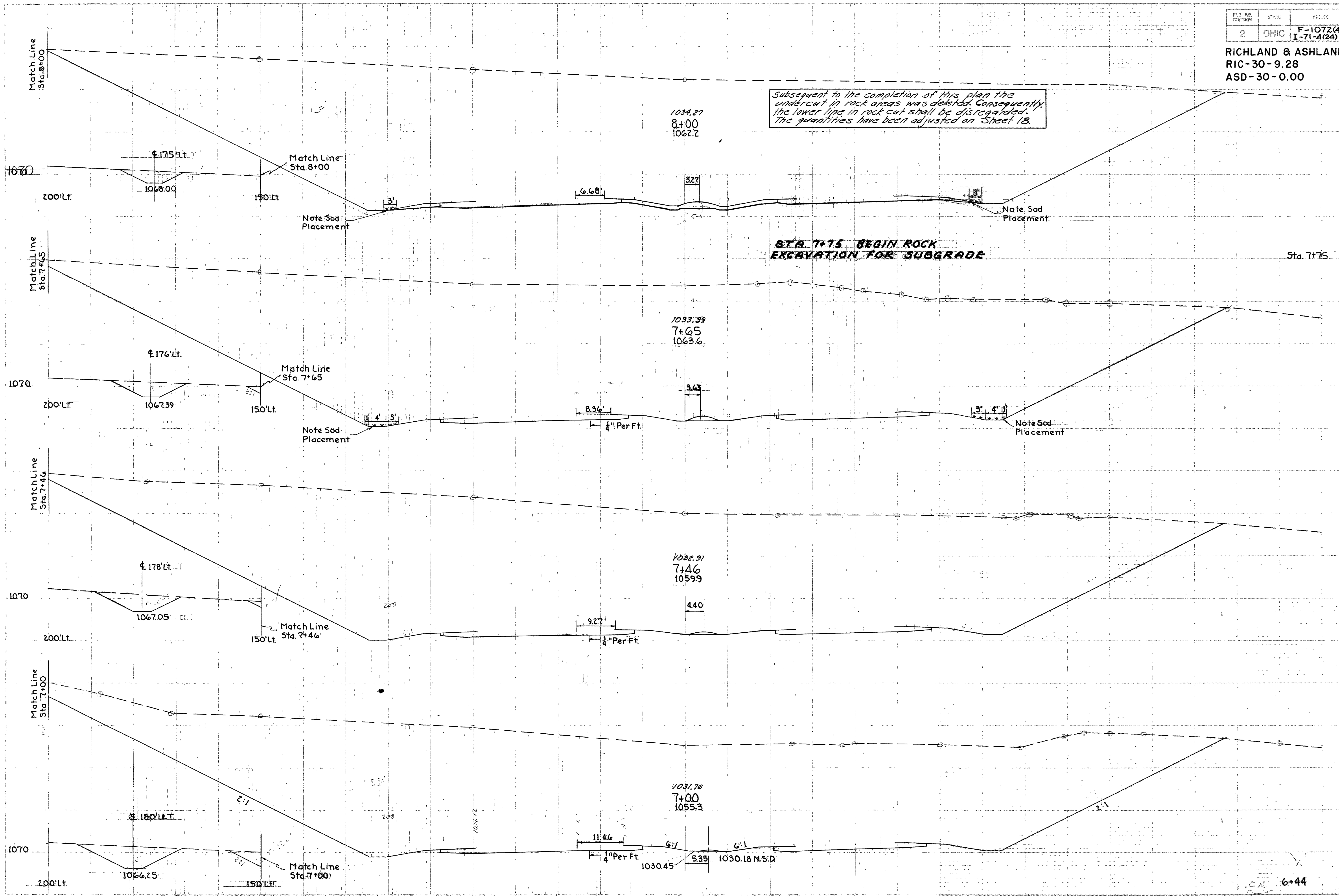
Sta. 2+45
 End Dumped Rock

Note:
 Sta. 2+30 To 7+75 Slope 1:22
 Subbase on Left Under Tapers
 & Intersection to Under Drain
 22' Lt @ 1/4" Per Foot

Sta. 2+66 to Sta. 4+16

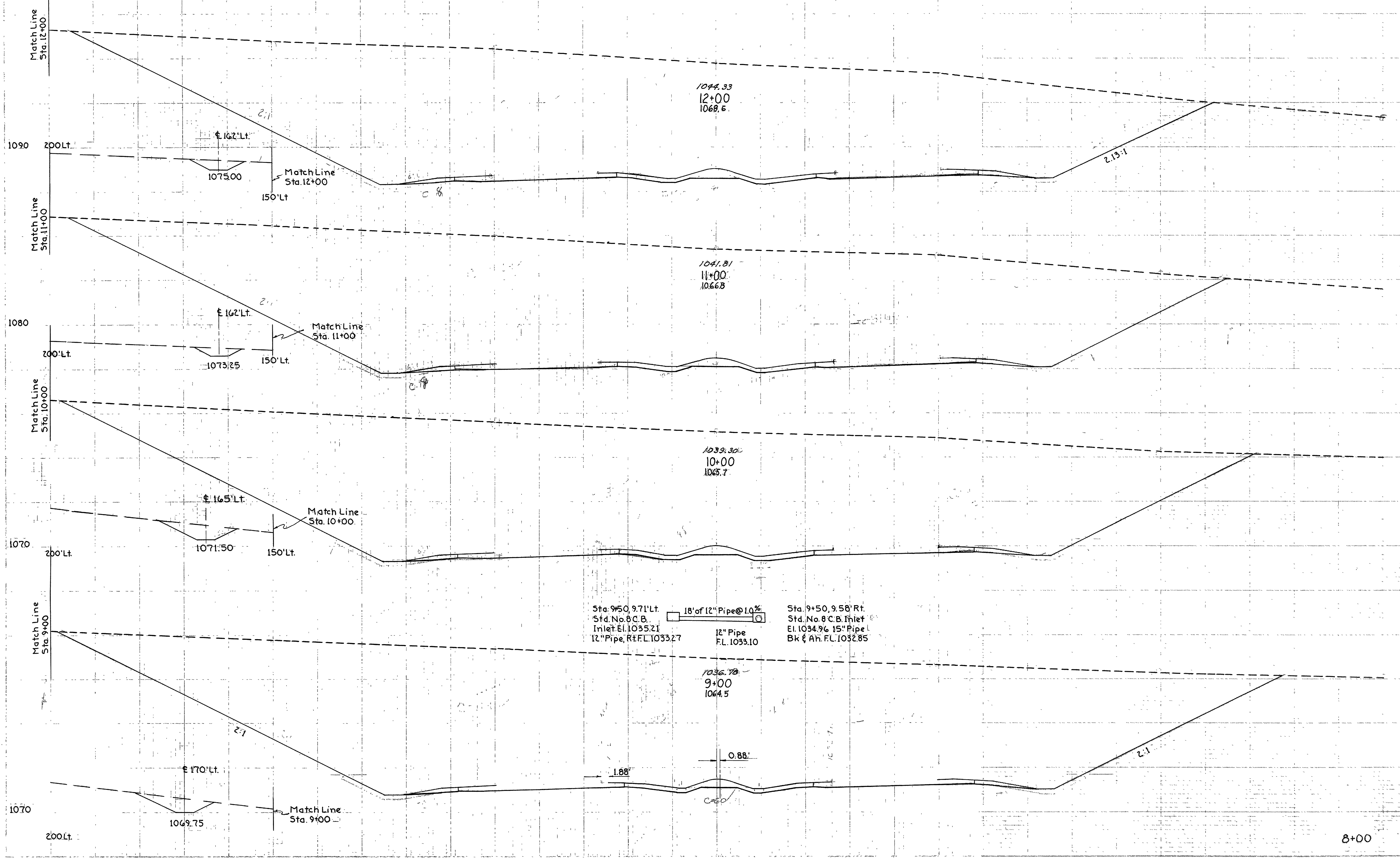
RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00

Subsequent to the completion of this plan the undercut in rock areas was deleted. Consequently, the lower line in rock cut shall be disregarded. The quantities have been adjusted on Sheet 18.



END AREA		CU YDS	
CUT	FILL	CUT	FILL
6675	0	6252	0
6828	0	2541	0
6889	0	4724	0
6534	0	10566	0
5869	0	10804	0
4067	0		

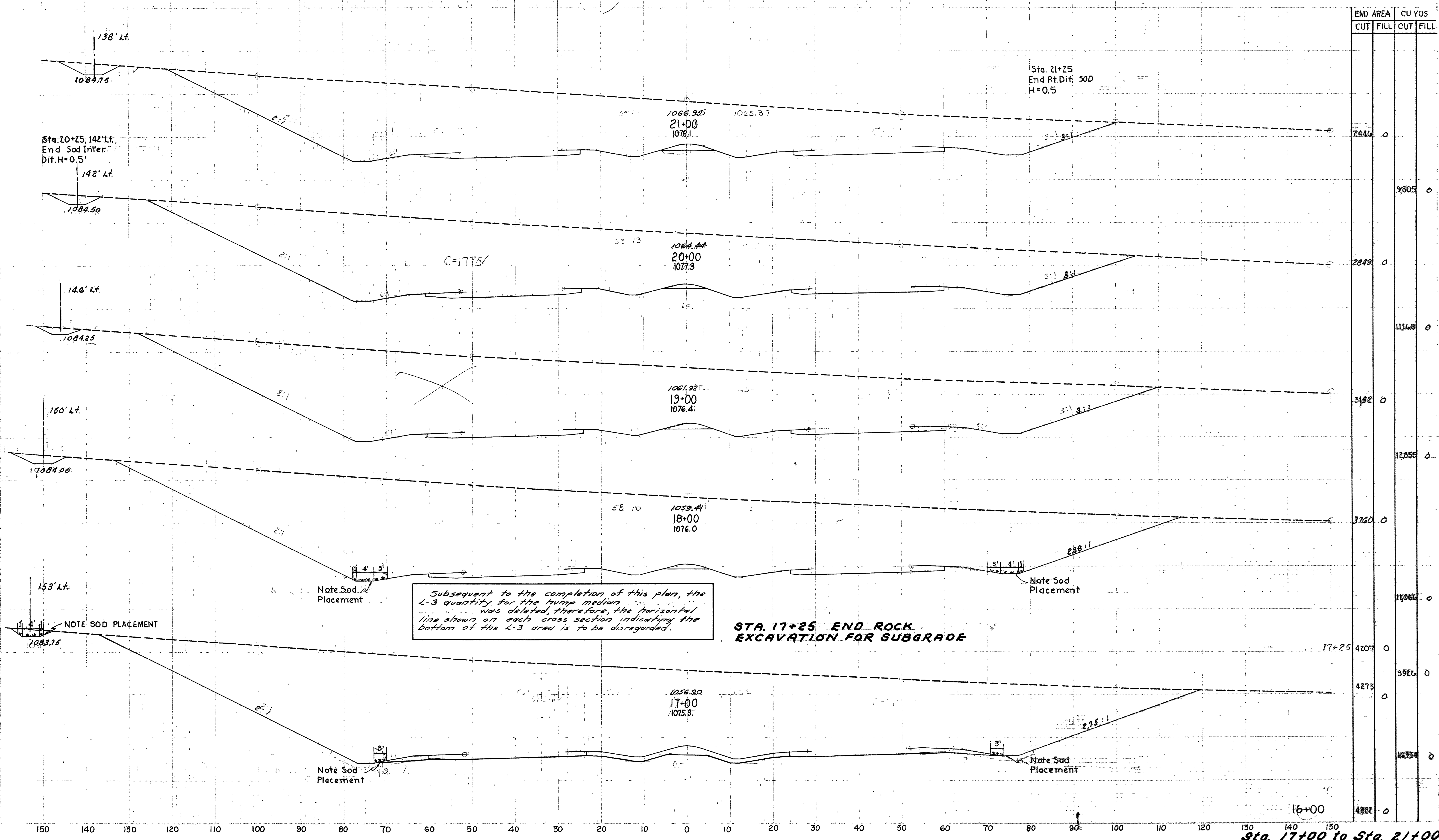
RIC.-30-9.28
ASD.-30-0.00



END AREA		CU YDS	
CUT	FILL	CUT	FILL
5486	0	20760	0
5724	0	21899	0
6101	0	23323	0
6493	0	24384	0
6675	0		

Sta. 9+00 to Sta. 12+00

RIC.-30 -9.28
ASD.-30 -0.00



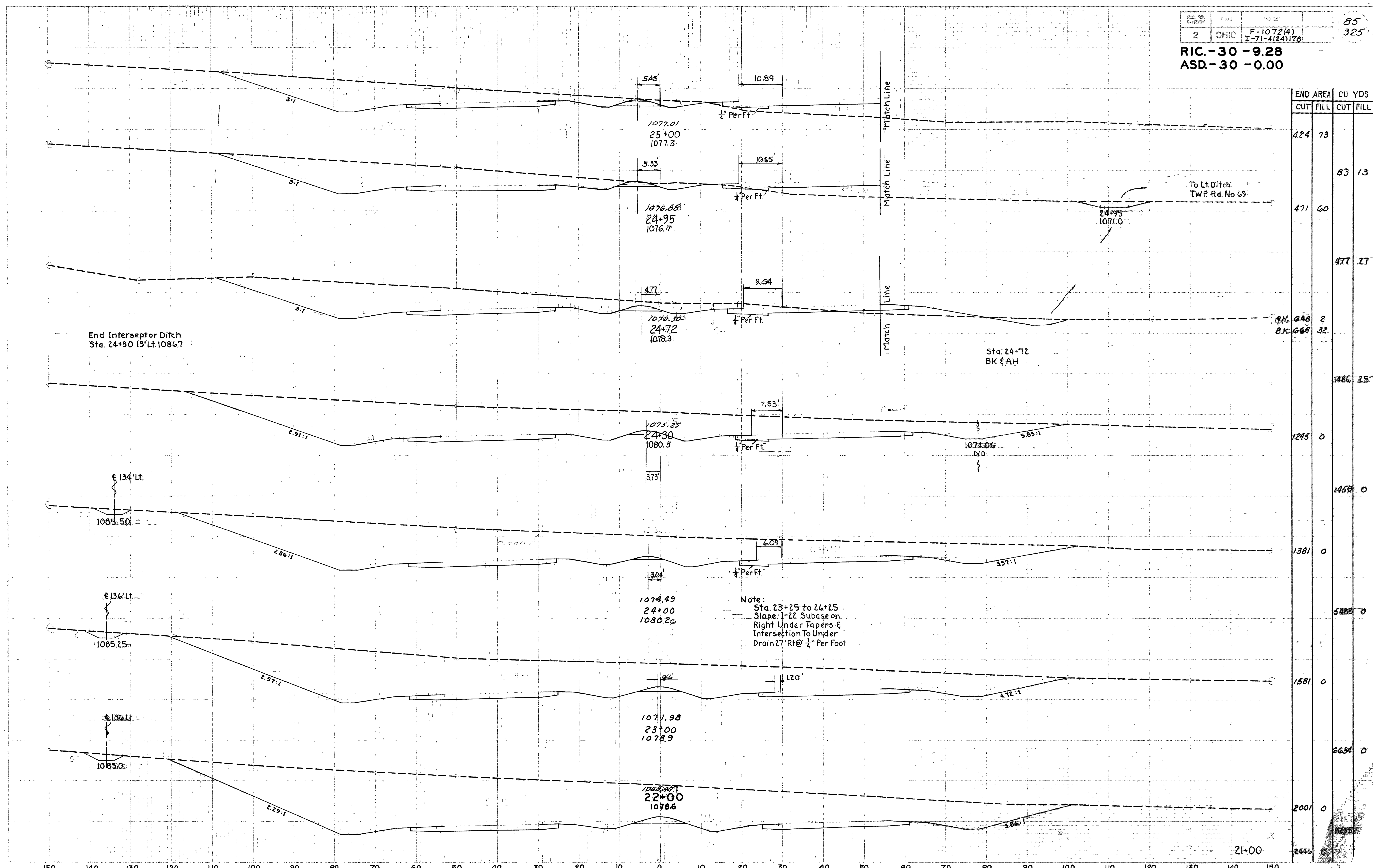
STATION	END AREA		CU YDS	
	CUT	FILL	CUT	FILL
21+25	2446	0	0	0
20+25	2649	0	9805	0
19+00	3182	0	11168	0
18+00	3760	0	12855	0
17+25	4207	0	3760	0
17+00	4273	0	3526	0
16+00	4882	0	16954	0

Subsequent to the completion of this plan, the L-3 quantity for the turn median was deleted, therefore, the horizontal line shown on each cross section indicating the bottom of the L-3 area is to be disregarded.

STA. 17+25 END ROCK EXCAVATION FOR SUBGRADE

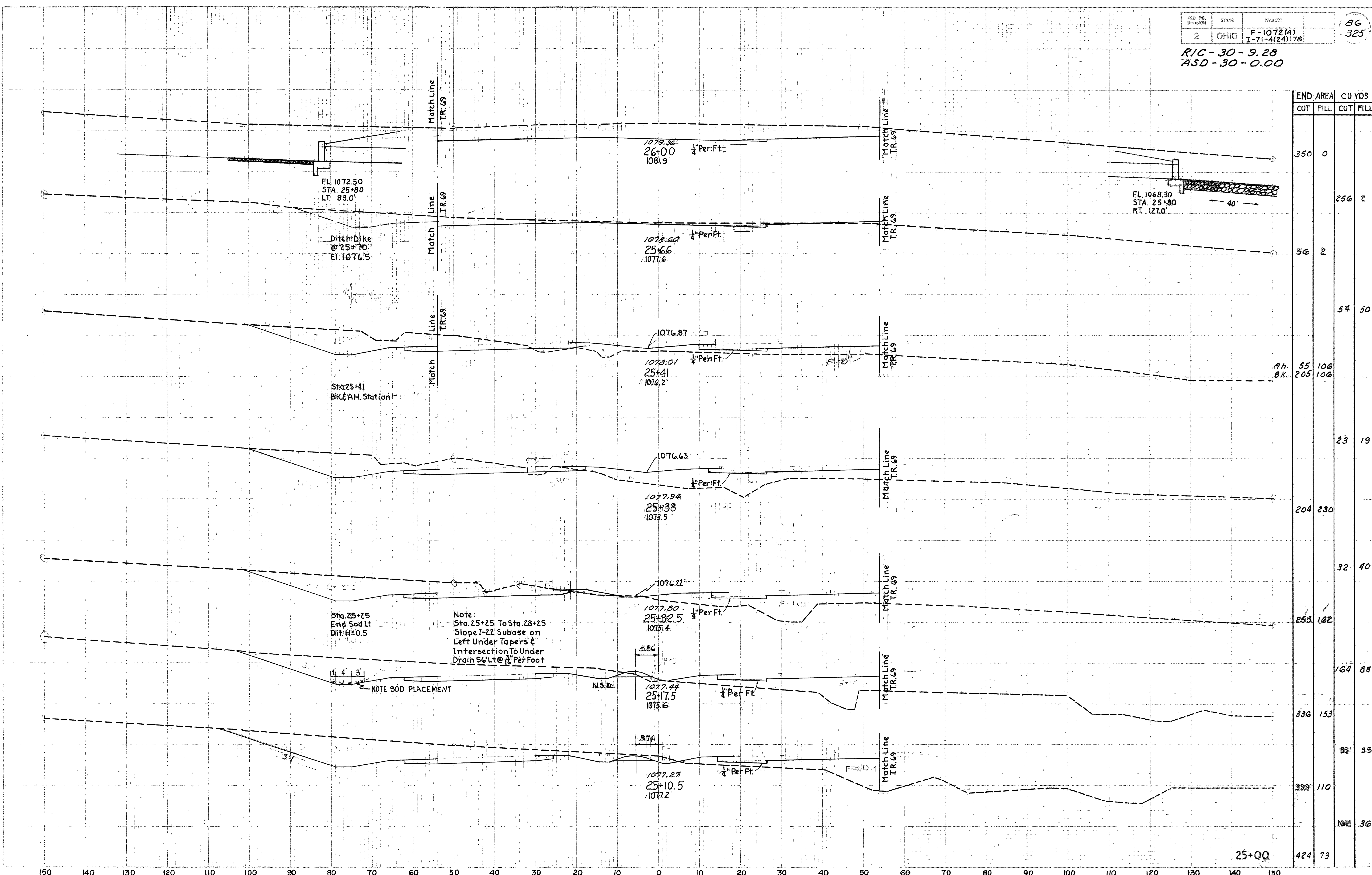
Sta. 17+00 to Sta. 21+00

RIC.-30 -9.28
ASD-30 -0.00



STATION	END AREA		CU YDS	
	CUT	FILL	CUT	FILL
25+00	424	73		
24+95			83	13
24+72	471	60		
24+72			471	27
24+72	A.H. 648			
24+72	B.K. 666	32		
24+30			1486	25
24+30	1245	0		
24+00			1459	0
24+00	1381	0		
23+25			5485	0
23+00				
23+00	1581	0		
22+00			6634	0
22+00	2001	0		
21+00			8235	0
21+00	2446	0		

RIC-30-9.28
ASD-30-0.00

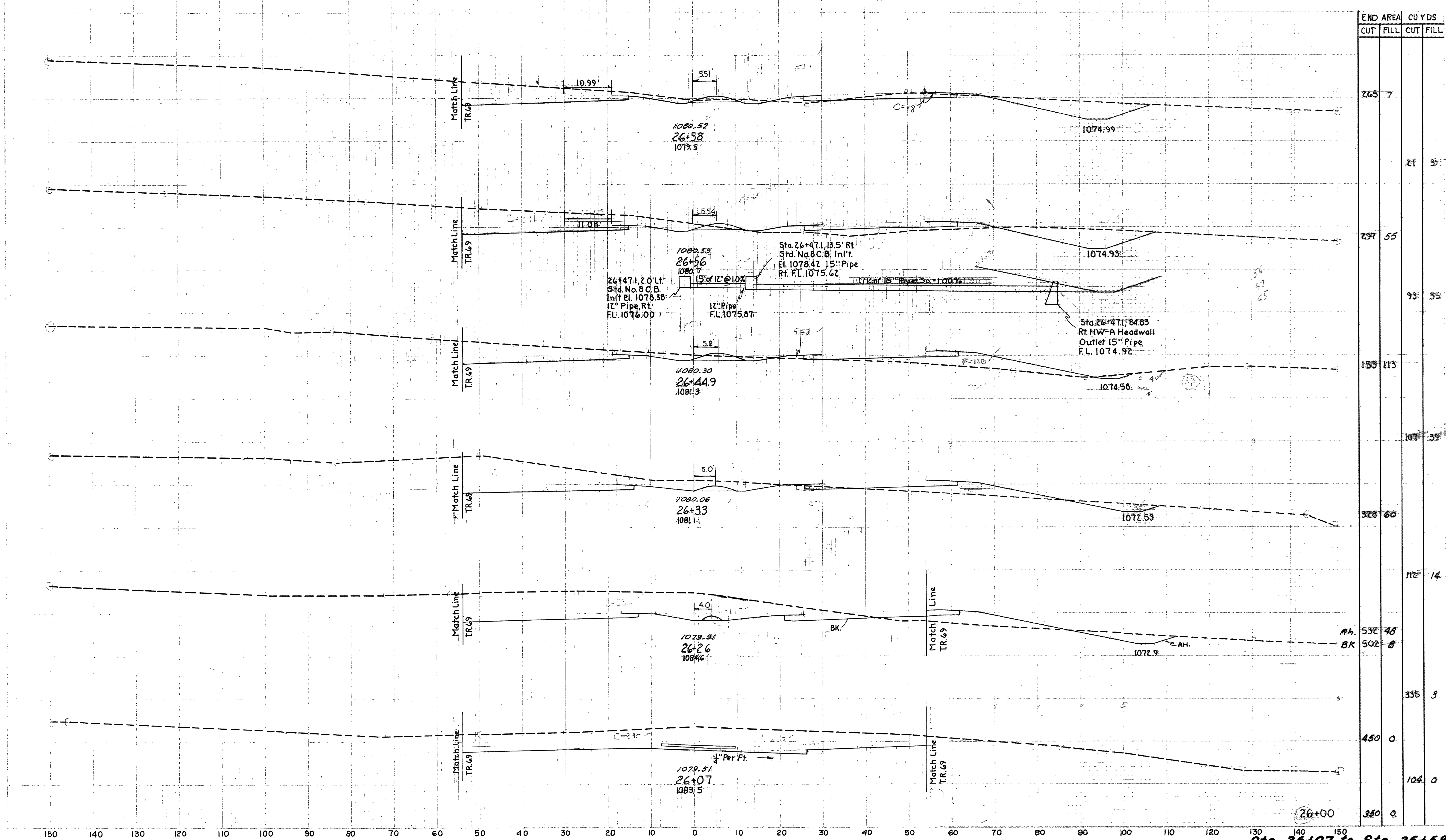


END AREA		CU YDS	
CUT	FILL	CUT	FILL
350	0		
56	2	256	2
54	2		
55	106	54	50
205	106		
23	19		
204	230		
32	40		
255	162		
164	88		
336	153		
83	35		
399	110		
164	36		
424	73		

BEGIN MEASUREMENT AT 150+00
 STA. 25+10.5 NOV 6, 1960

Sta. 25+10.5 to Sta. 26+00

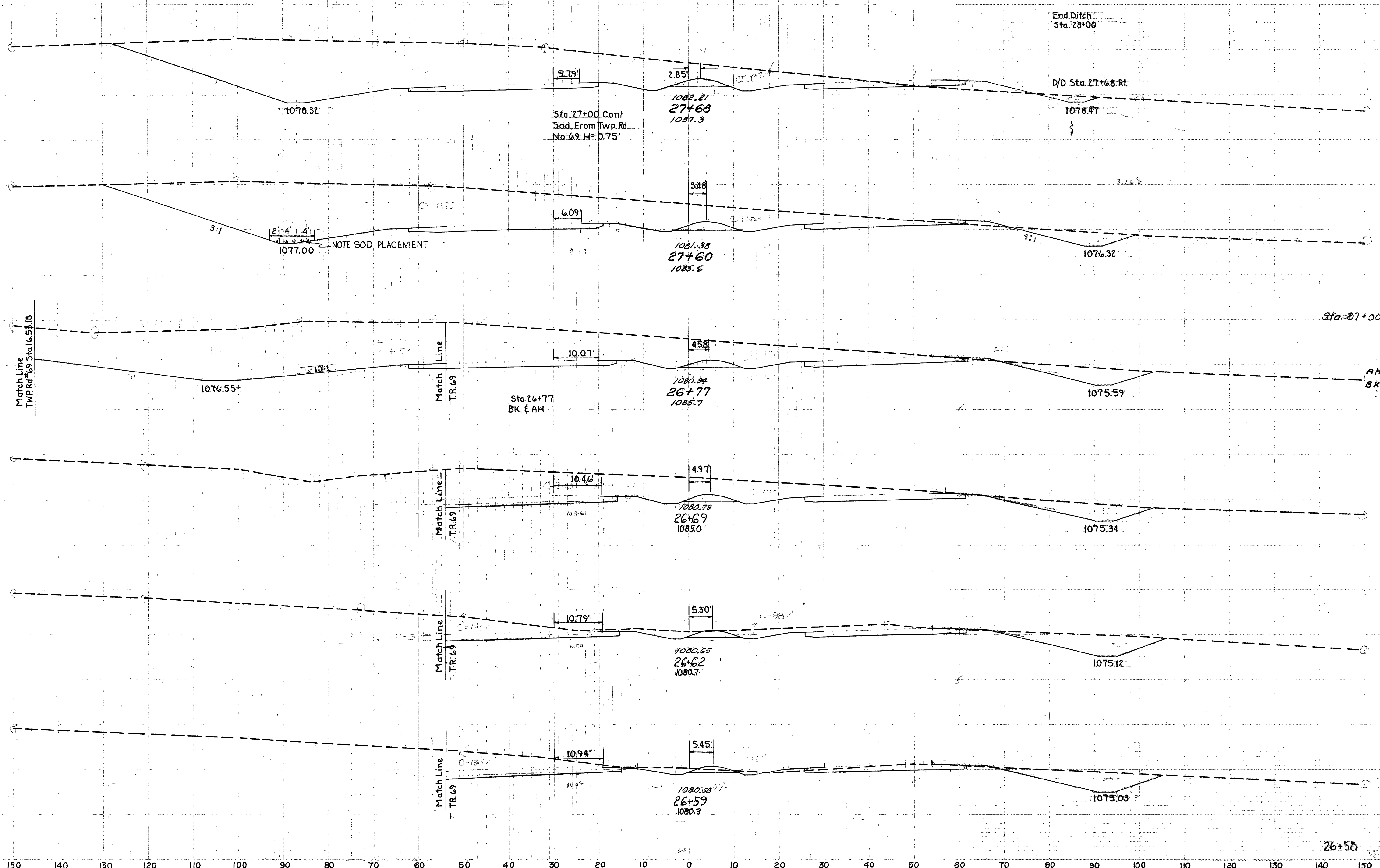
RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
265.7		
297.55	21	35
153.115	93	35
107.39		
328.60		
112.14		
Ah. 532.48		
Bk. 502.8		
335.3		
450.0		
104.0		
350.0		

Sta. 26+07 to Sta. 26+58

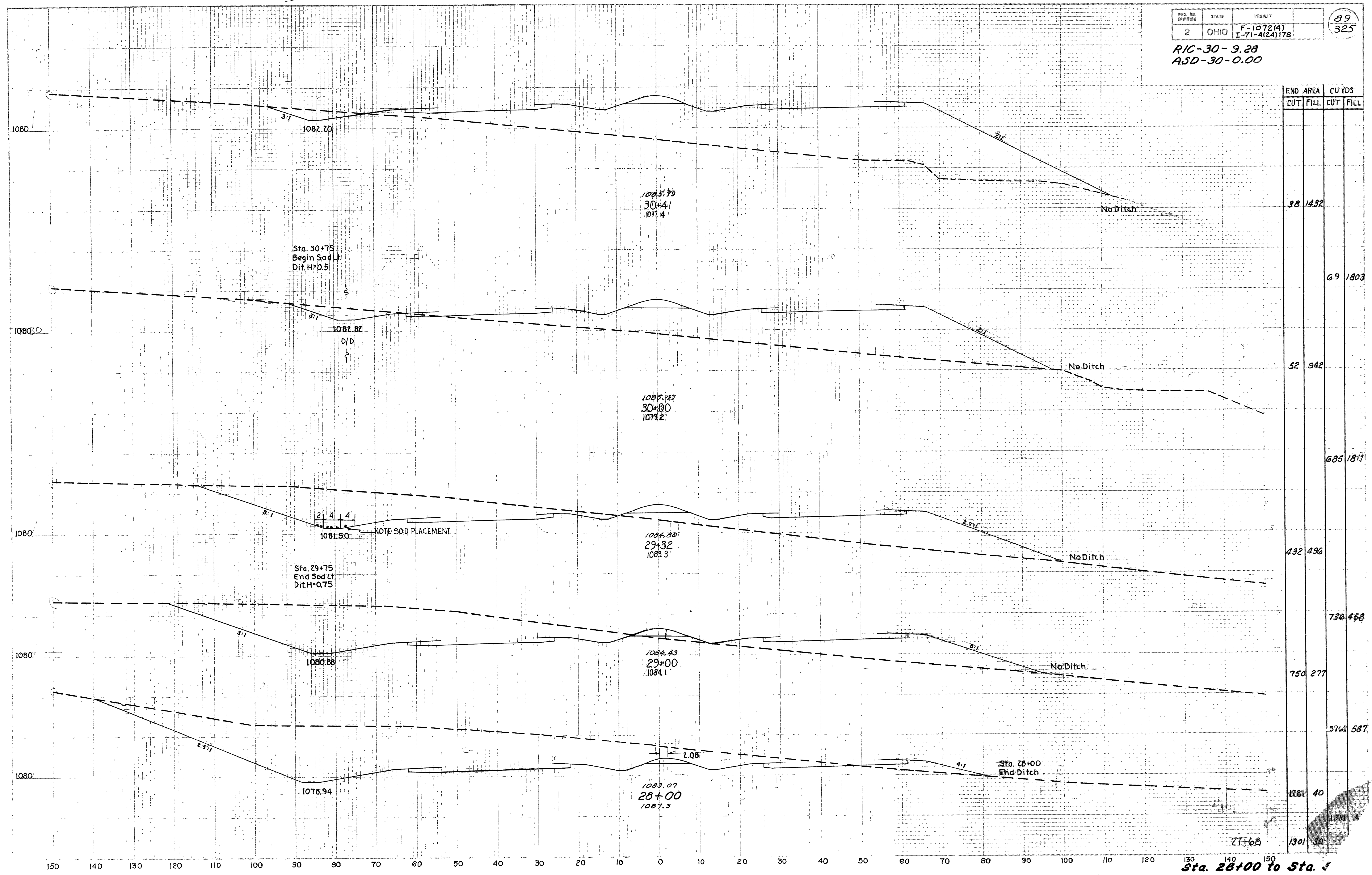
RIC-30-9.28
ASD-30-0.00



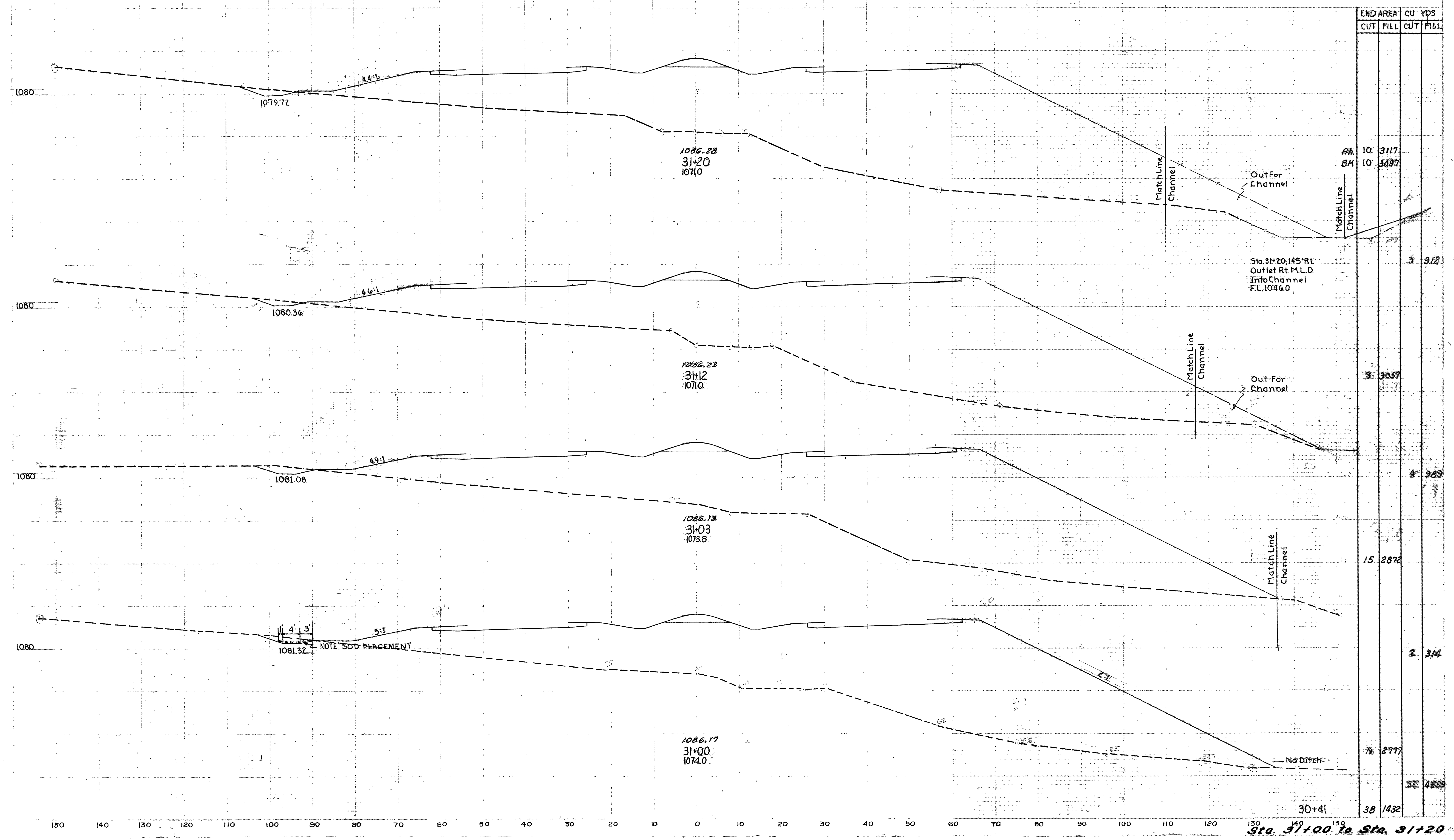
END AREA	CU. YDS.	
	CUT	FILL
1301	30	
1113	5	358
1467	2	2867
1605	1	
700	1	
197	1	
628	0	
126	0	
340	0	
34	0	
272	0	
265	7	

Sta. 26+59 to Sta. 27+68

RIC-30-9.28
ASD-30-0.00



RIC-30-9.28
ASD-30-0.00



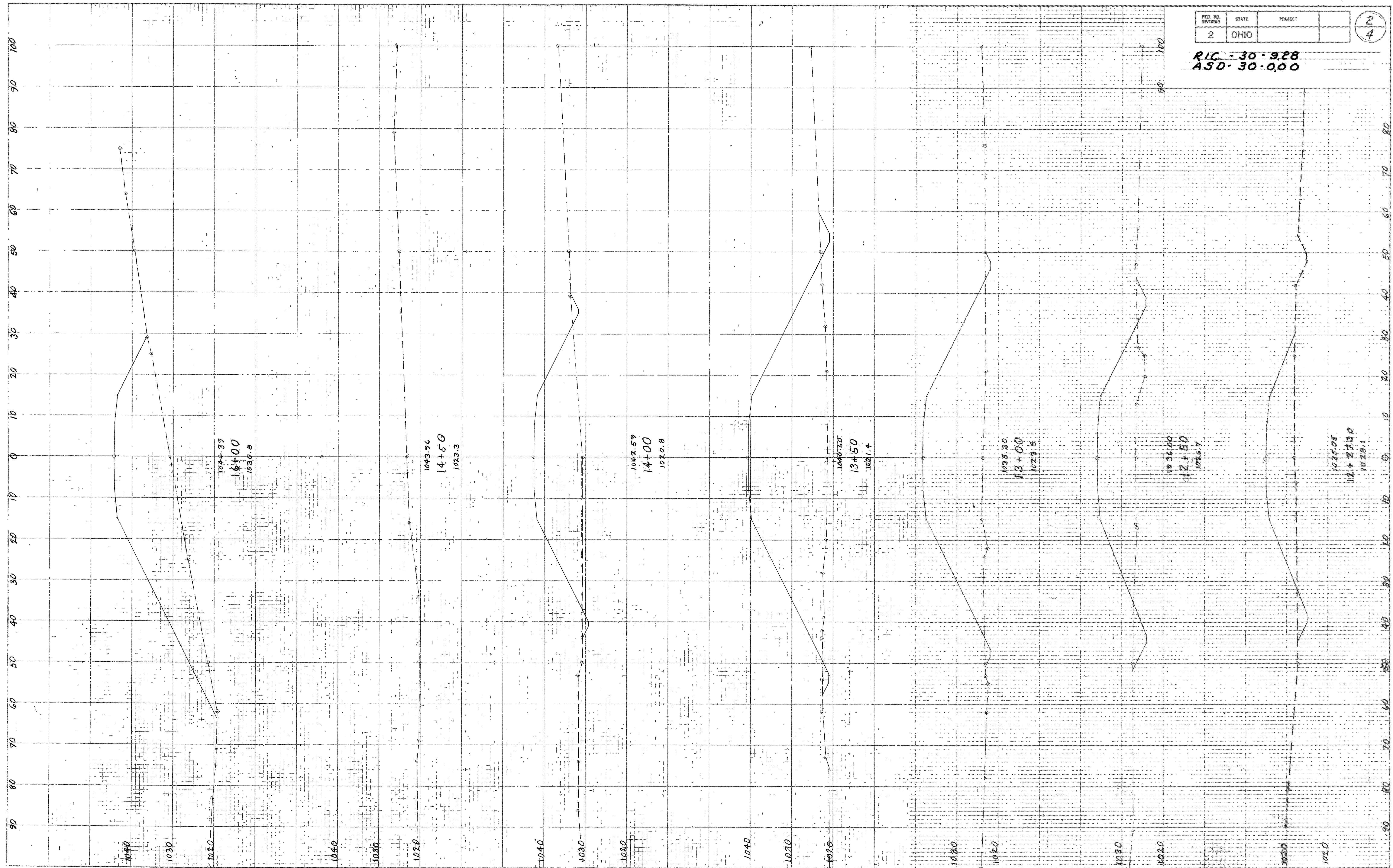
STATION	END AREA		CU YDS	
	CUT	FILL	CUT	FILL
31+20	10	10	3117	3097
31+12	9	9	3037	3112
31+03	15	15	2872	3103
31+00	9	9	2777	1074.0
30+41	38	38	1432	

Sta. 31+00 to Sta. 31+20

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

2
4

RIC - 30 - 9.28
ASD - 30 - 0.00

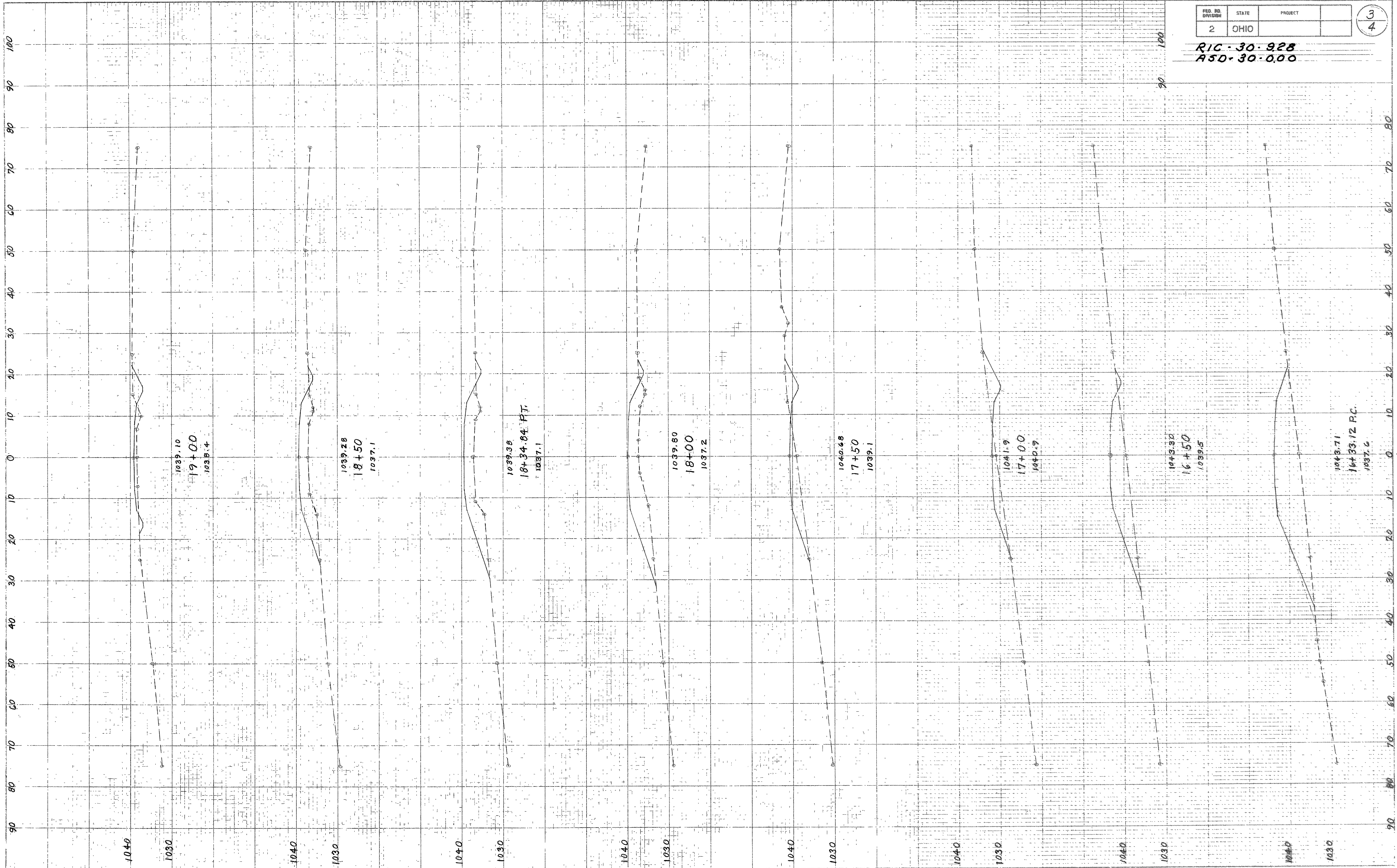


GRADE SEPARATION, U.S. 30 WITH M.W.C.D. ACCESS ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3
4

RIC-30-928
ASD-30-000

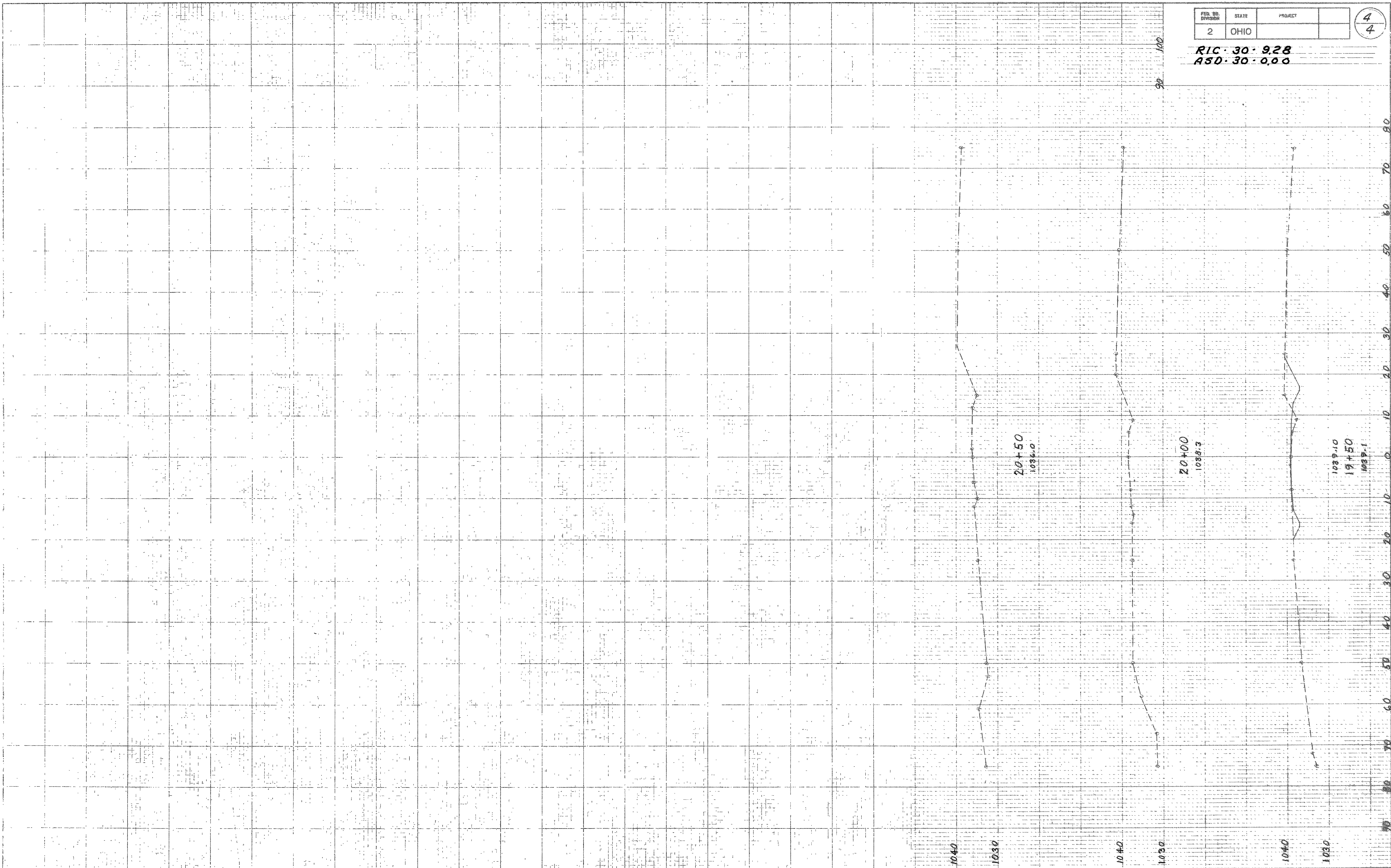


GRADE SEPARATION, U.S.R. 30 WITH M.W.C.D. ACCESS ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4
4

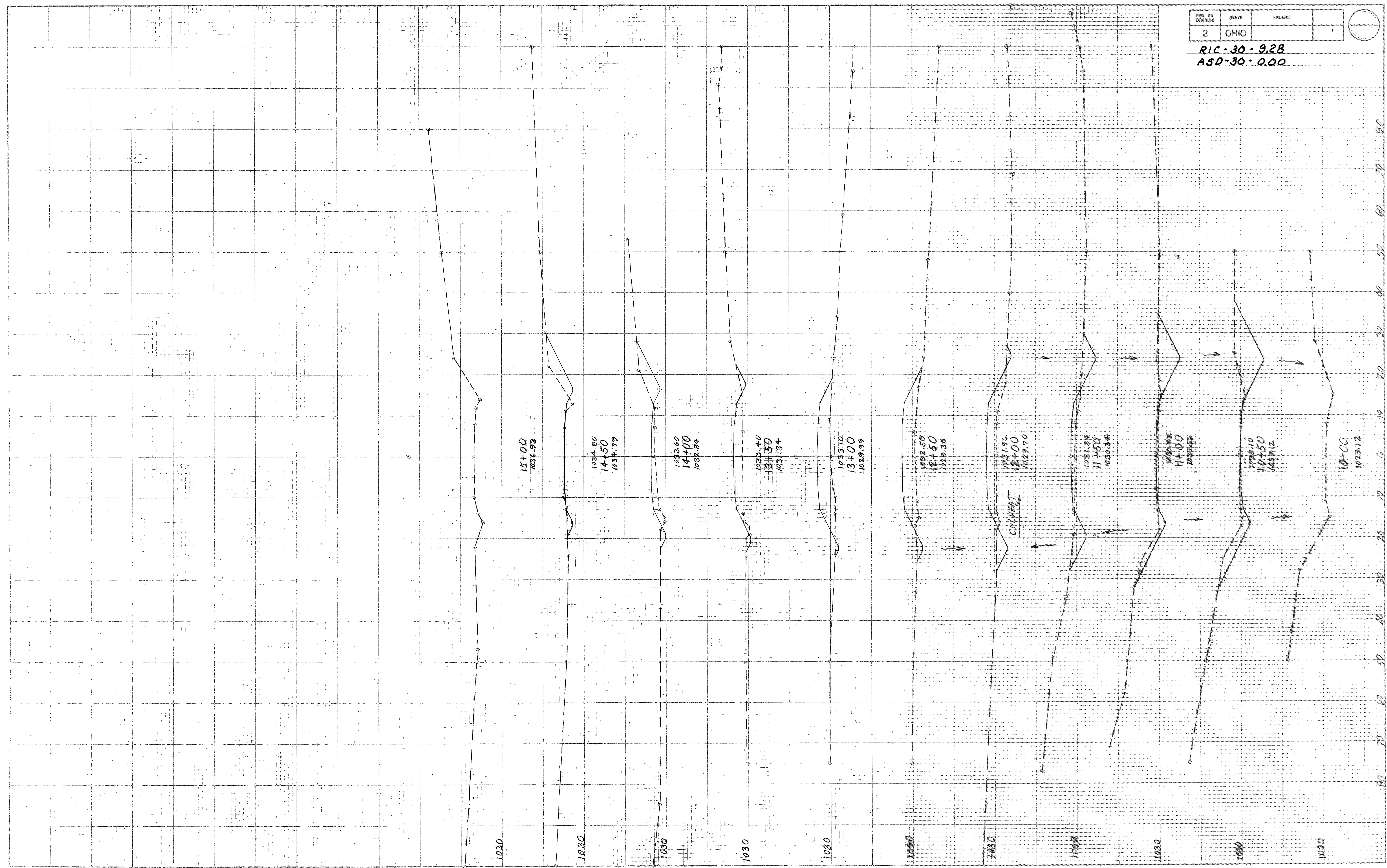
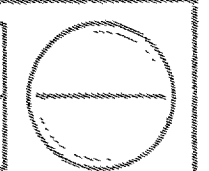
RIC · 30 · 9.28
ASD · 30 · 0.00



GRADE SEPARATION, U.S.R.30 WITH M.W.C.D. ACCESS ROAD

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-30-9.28
ASD-30-0.00

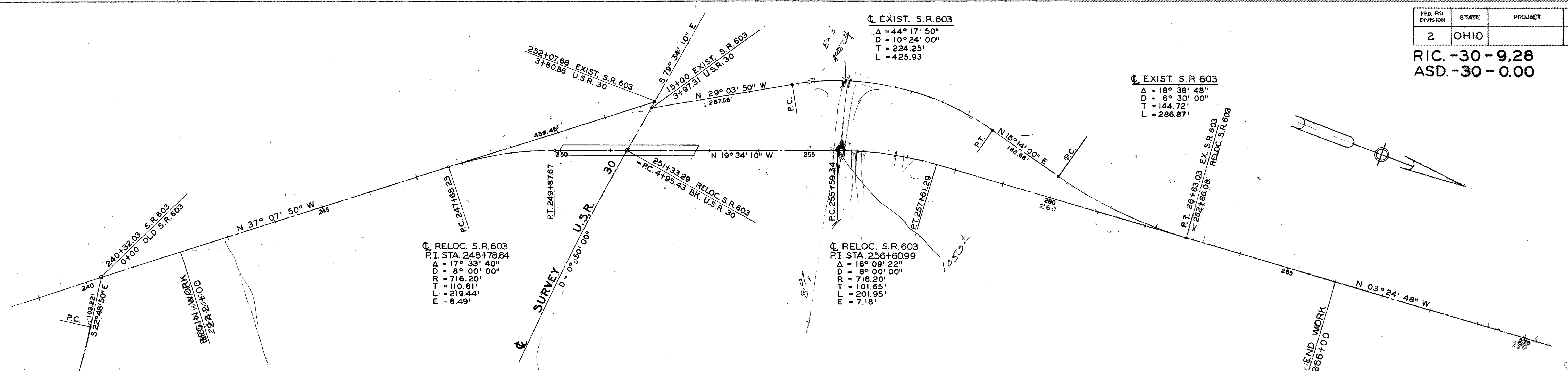


CRIDER RD. & M.W.C.D. ACCESS ROAD

RIC. -30-9.28
ASD.-30-0.00

FINAL SURVEY DATE
SURVEYED BY
NOTE BOOK NO.
TEMPLATE AREAS CHECKED

ORIGINAL SURVEY DATE
SURVEYED BY
NOTE BOOK NO.
TEMPLATE AREAS CHECKED



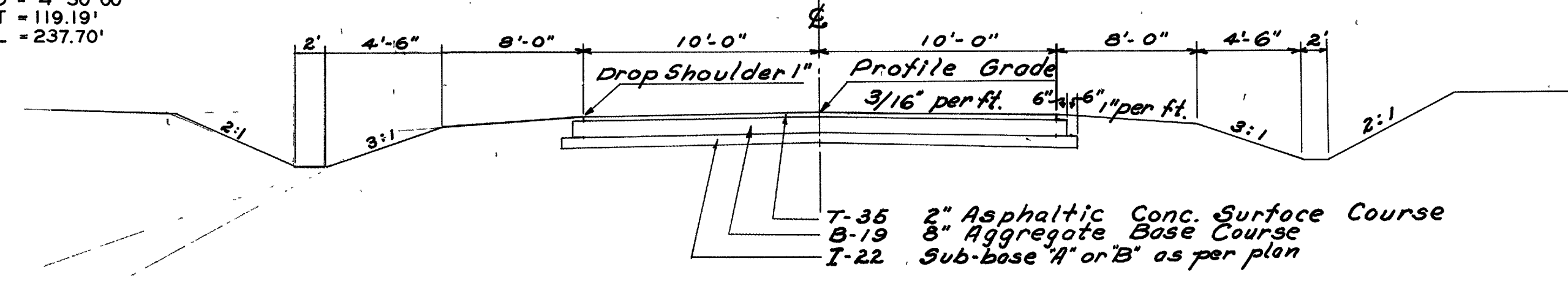
OLD S.R. 603
 Δ = 10°41'47"
 D = 4°30'00"
 T = 119.19'
 L = 237.70'

RELOC. S.R. 603
 P.I. STA. 248+78.84
 Δ = 17°33'40"
 D = 8°00'00"
 T = 716.20'
 L = 219.44'
 E = 8.49'

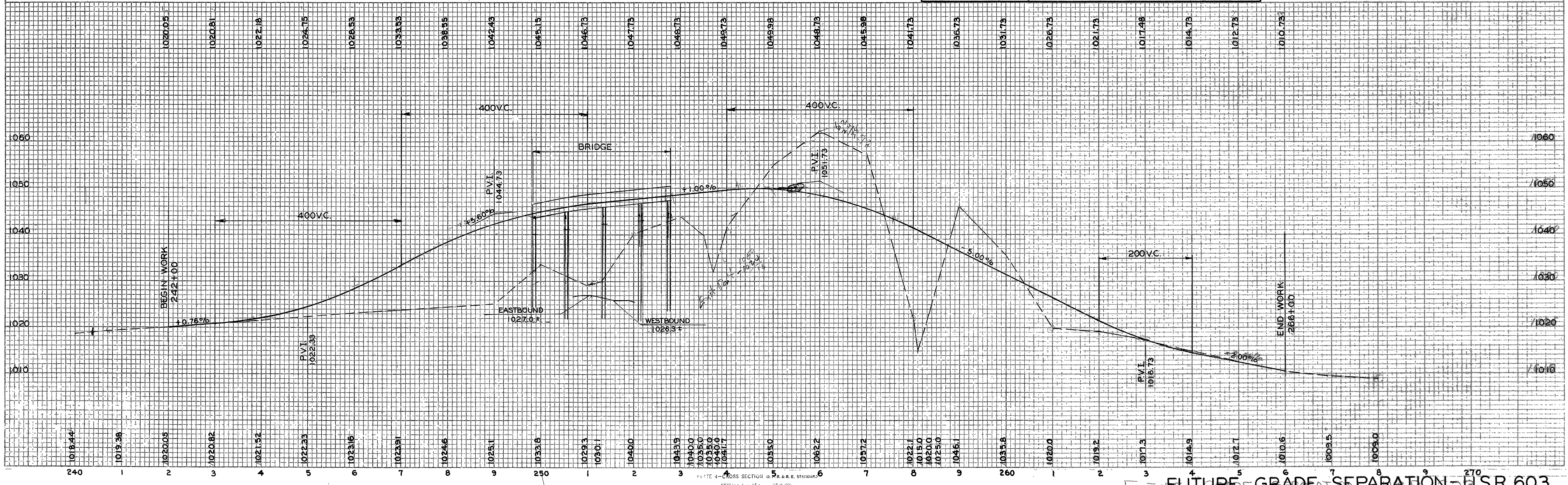
RELOC. S.R. 603
 P.I. STA. 256+60.99
 Δ = 18°09'22"
 D = 8°00'00"
 T = 101.65'
 L = 201.95'
 E = 7.18'

EXIST. S.R. 603
 Δ = 18°38'48"
 D = 6°30'00"
 T = 144.72'
 L = 286.87'

PROPOSED TYPICAL SECTION



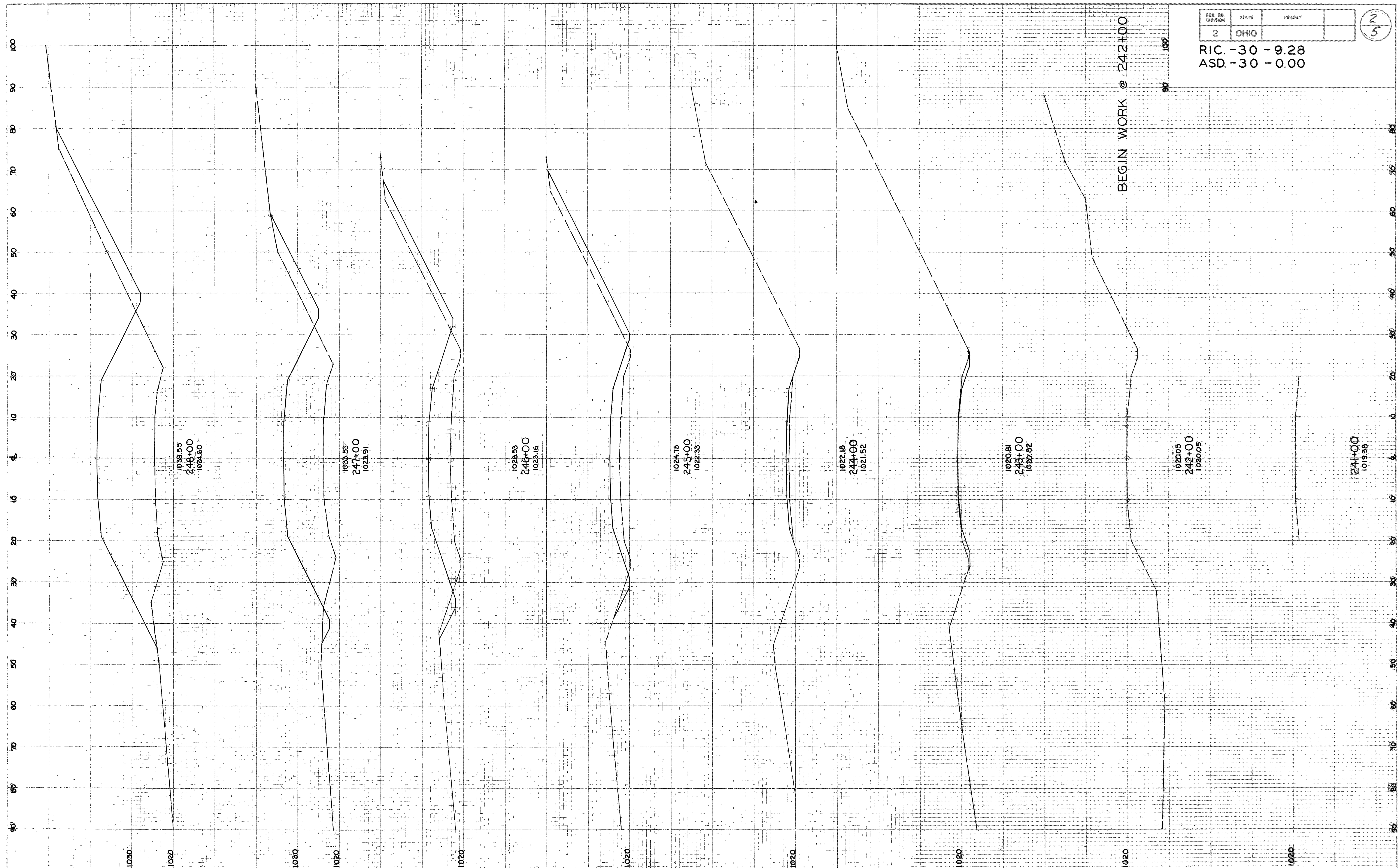
PROPOSED STRUCTURE
 TYPE - Continuous Steel Beams with Reinforced Concrete Deck & Substructure.
 SPANS - 64', 80', 80', 64' % Brge.
 ROADWAY - 30'-0" 1/2 2'-3" Safety Curb
 LOAD FREQUENCY - C.F. 130(57)
 WEARING SURFACE - 3/4" Monolithic Concrete
 APPROACH SLABS - AS-1-54 (25' Long)
 SKEW - 30° 00' L.F.
 ALIGNMENT - Tangent
 A.D.T. - 108 (1980)



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

2
5

RIC. -30 -9.28
ASD. -30 -0.00



1030

1020

1038.55
248+00
1024.60

1030

1020

1030.93
247+00
1023.91

1020

1028.93
246+00
1023.16

1020

1024.75
245+00
1022.35

1020

1022.18
244+00
1021.52

1020

1020.81
243+00
1020.82

1020

1020.05
242+00
1020.05

1020

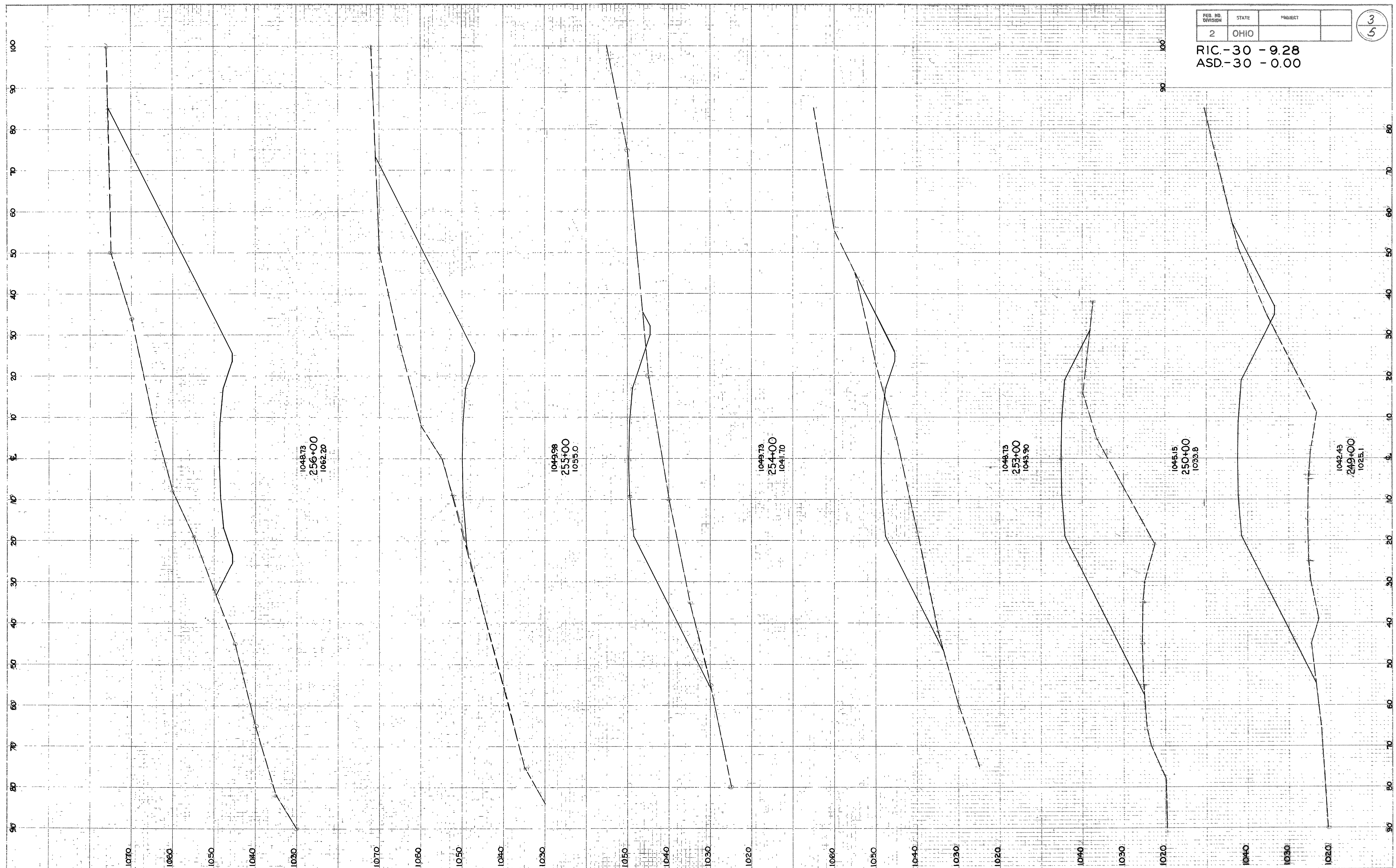
241+00
1019.36

BEGIN WORK @ 242+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

3
5

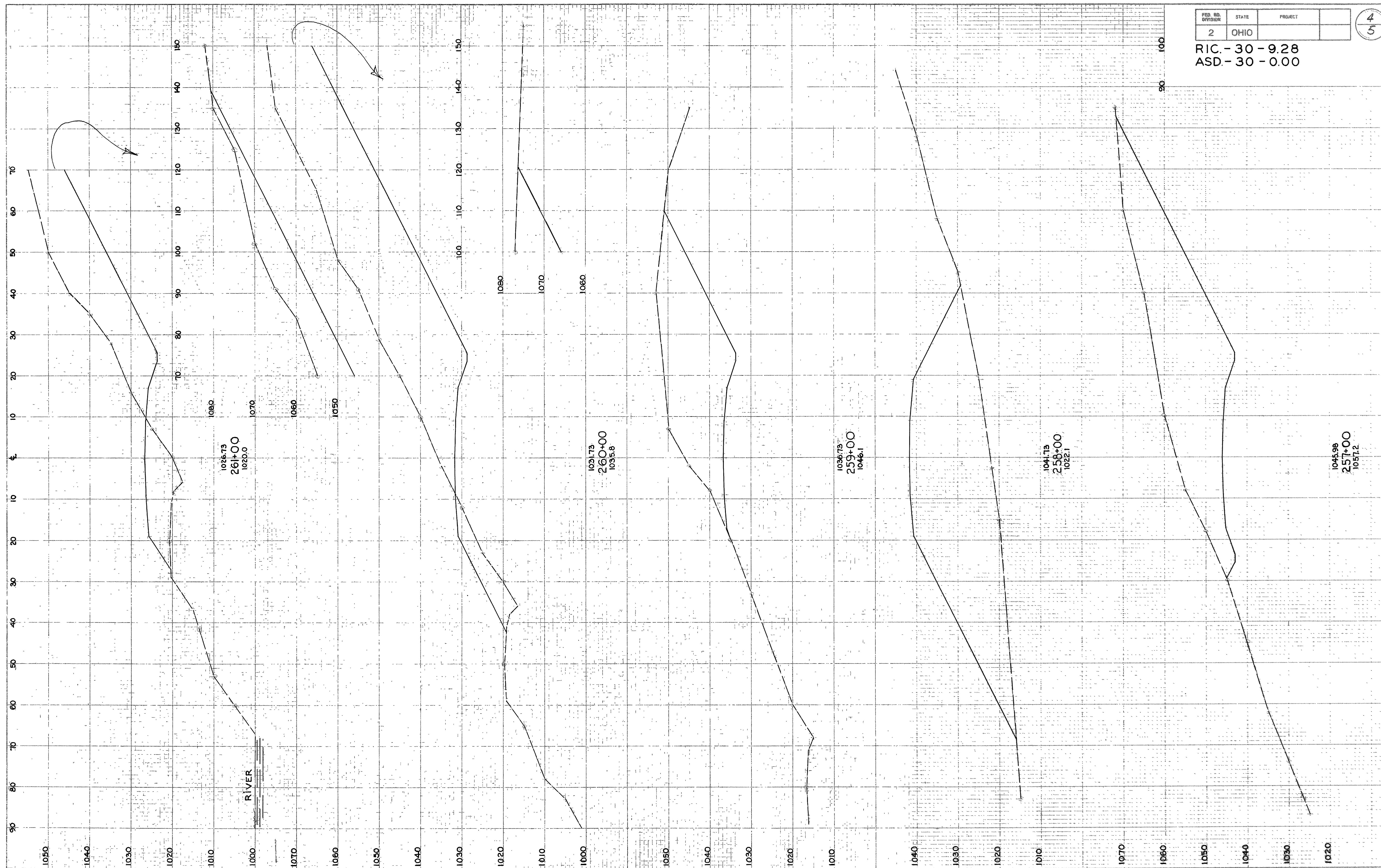
RIC.-30 - 9.28
ASD.-30 - 0.00



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

4
5

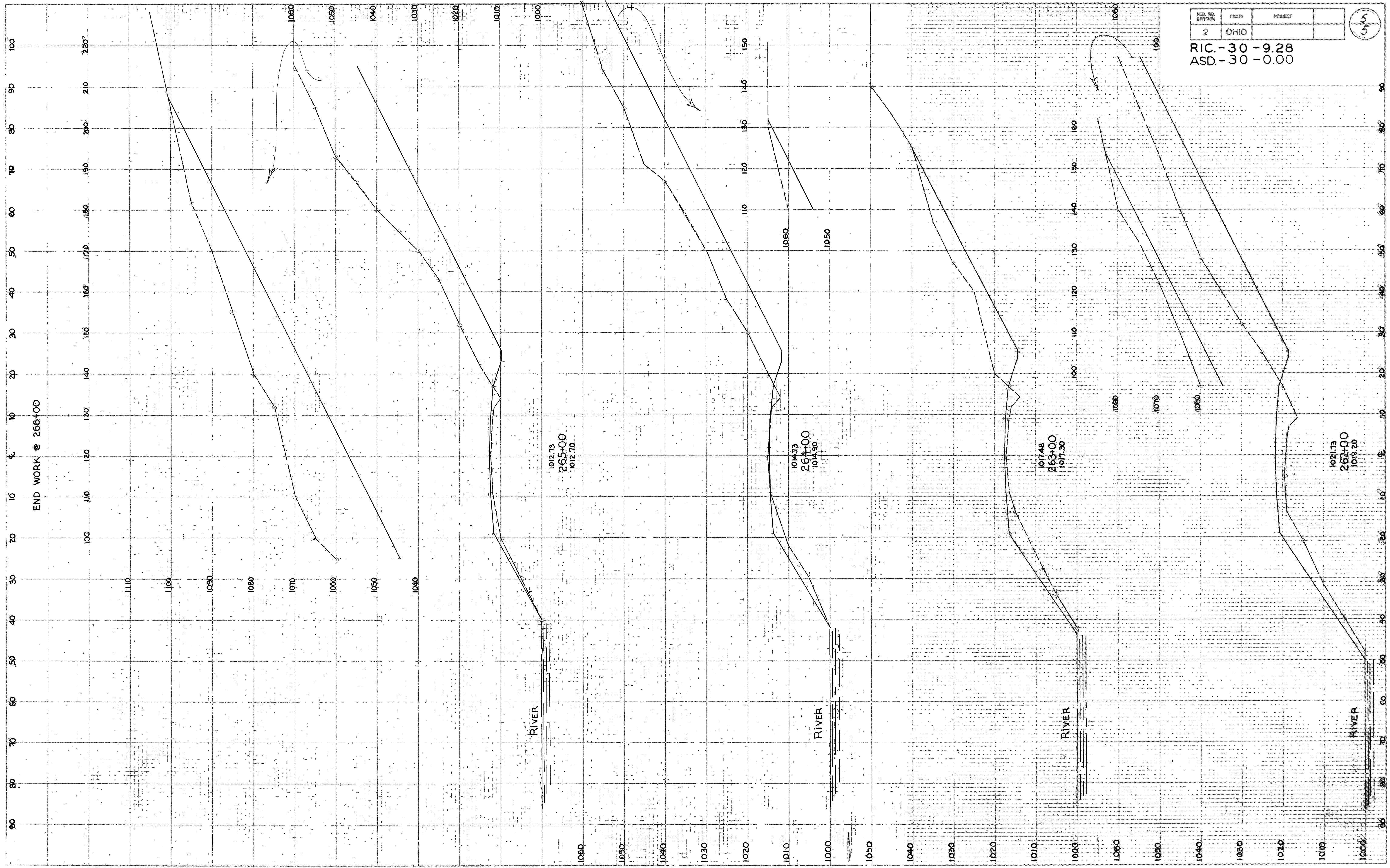
RIC - 30 - 9.28
ASD - 30 - 0.00



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

5
5

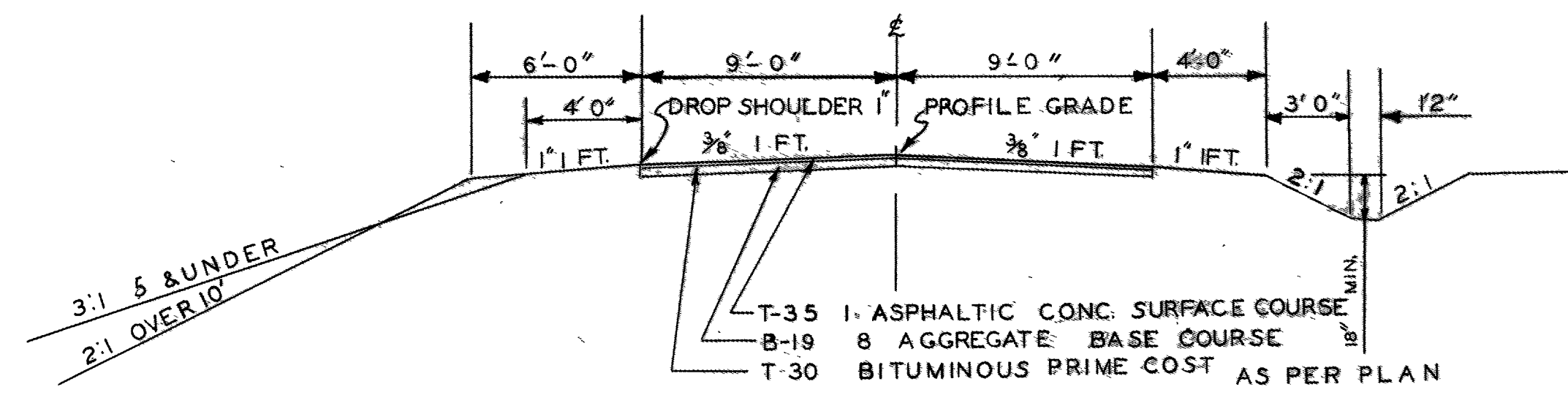
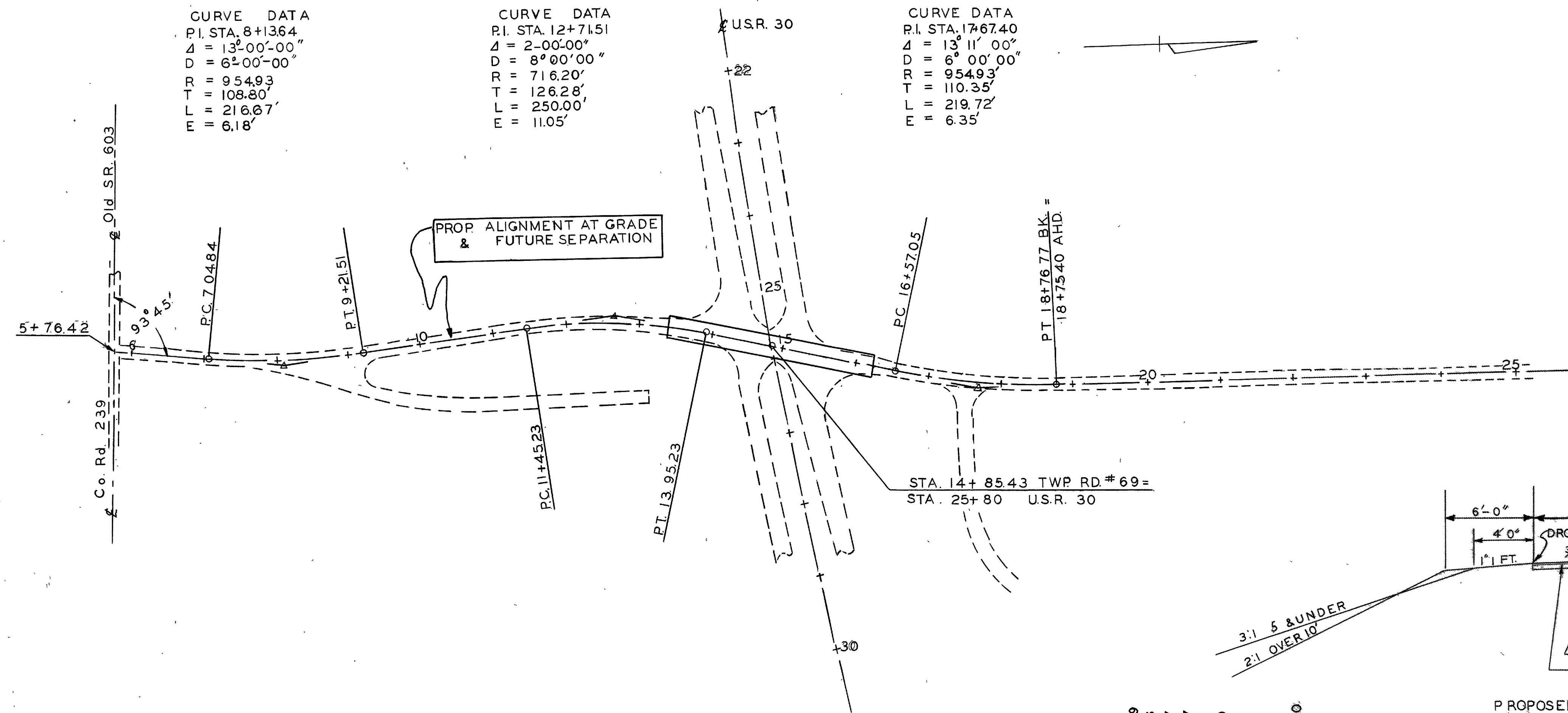
RIC.-30-9.28
ASD.-30-0.00



CURVE DATA
P.I. STA. 8+1364
Δ = 13°00'00"
D = 6°00'00"
R = 954.93
T = 108.80'
L = 216.67'
E = 6.18'

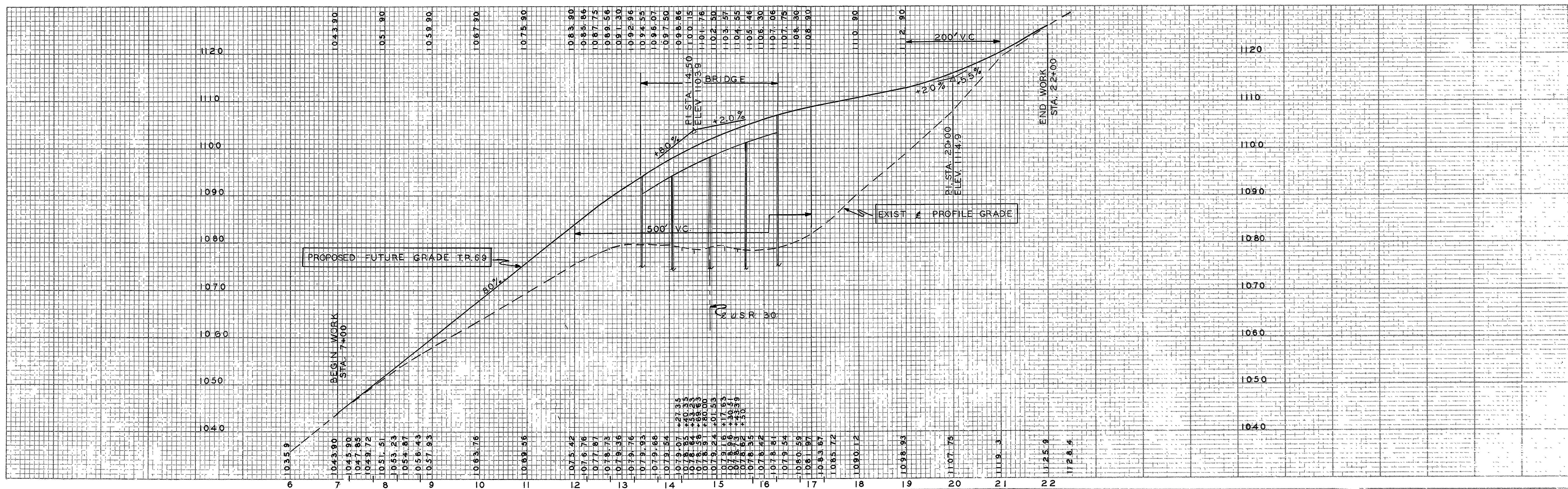
CURVE DATA
P.I. STA. 12+71.51
Δ = 2°00'00"
D = 8°00'00"
R = 716.20'
T = 126.28'
L = 250.00'
E = 11.05'

CURVE DATA
P.I. STA. 17+67.40
Δ = 13°11'00"
D = 6°00'00"
R = 954.93
T = 110.35'
L = 219.72'
E = 6.35'



PROPOSED TYPICAL SECTION

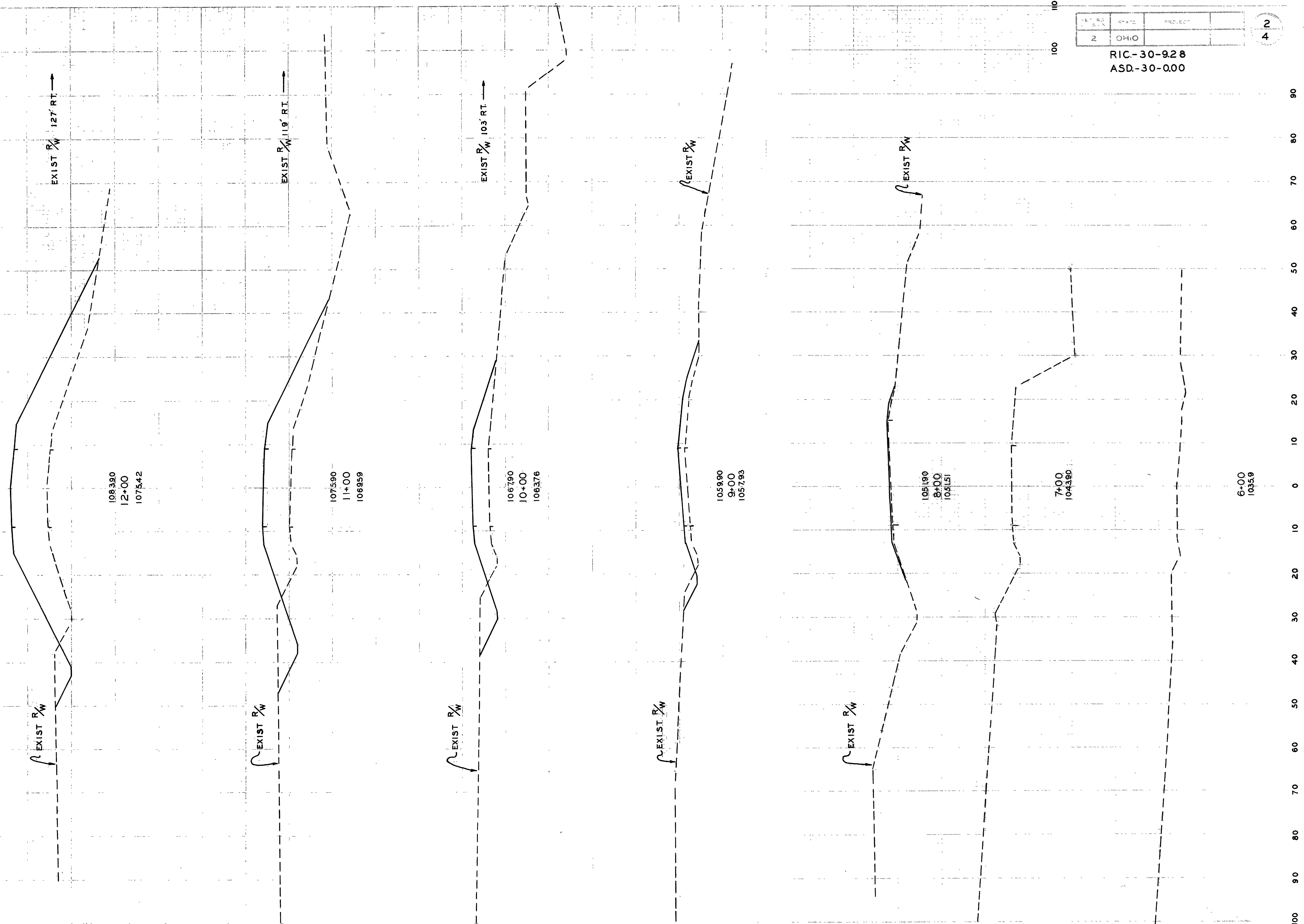
- 1113.45
- 1114.12
- 1114.89
- 1114.78
- 1116.77
- 1117.87
- 1119.08
- 1120.40
- 1125.90



NO. RD.	STATE	PROJECT	
2	OHIO		

2
4

RIC-30-928
ASD-30-000



108390
12+00
107542

107590
11+00
106959

106790
10+00
106376

105990
9+00
105793

105190
8+00
105151

7+00
104390

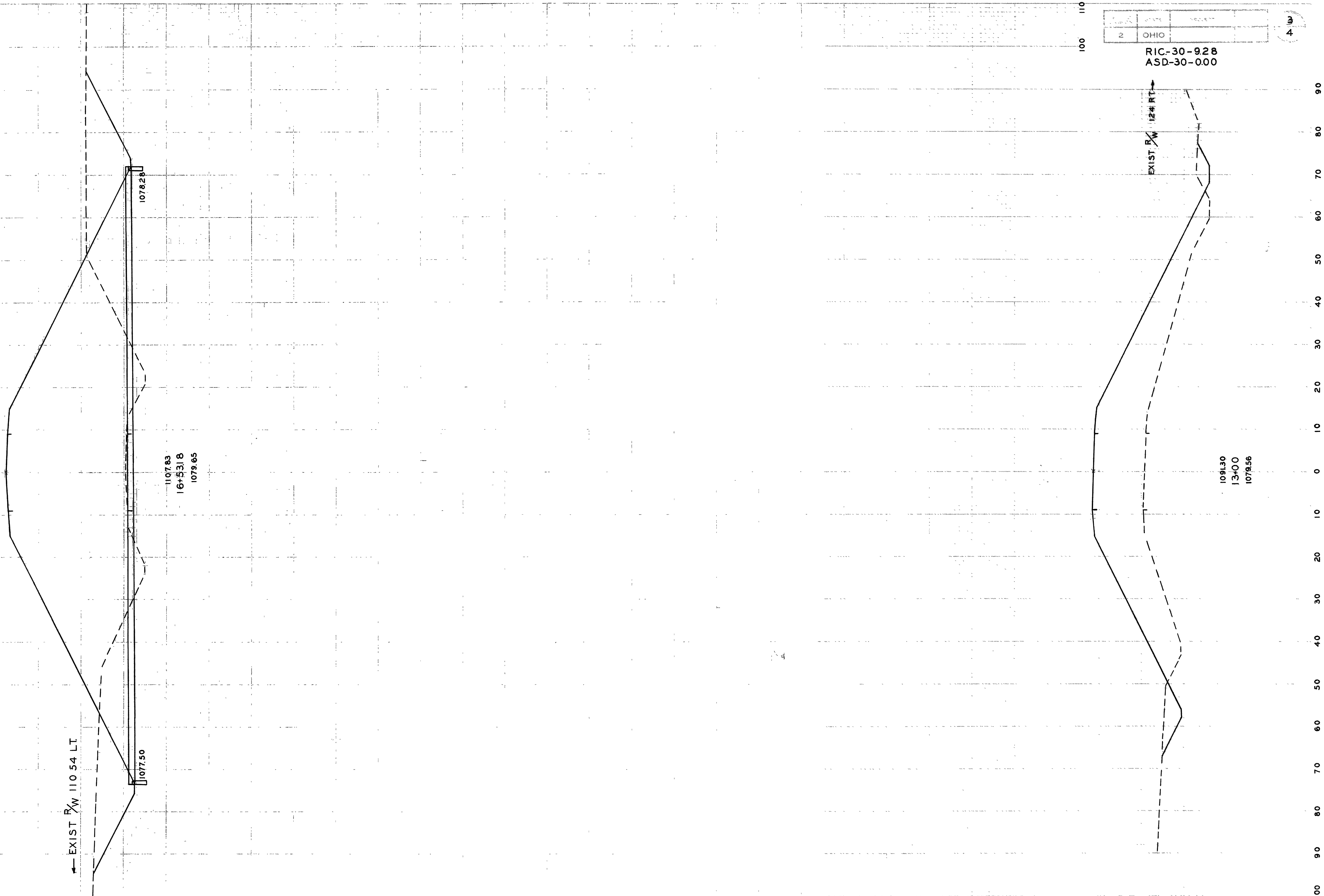
6+00
10359

FUTURE SEPARATION MIFFLIN TWP. RD. NO 69 STA. 6+00 TO STA. 12+00

DATE	PROJECT	SCALE
2	OHIO	

3
4

RIC-30-928
ASD-30-000

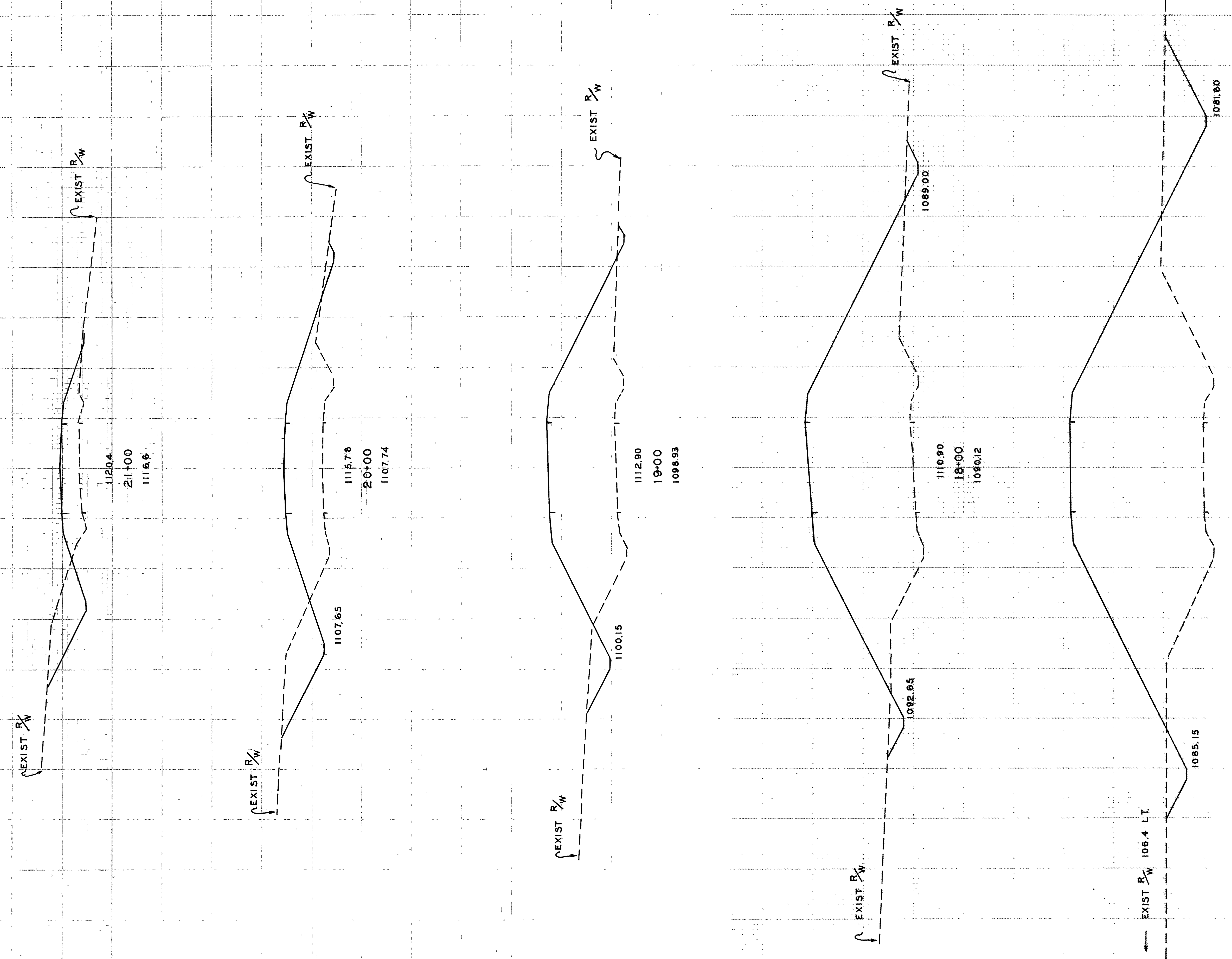


SECTION	STATE	PROJECT
2	OHIO	

RIC-30-92 B
ASD-30-0.00

4
4

END WORK STA.
22+00

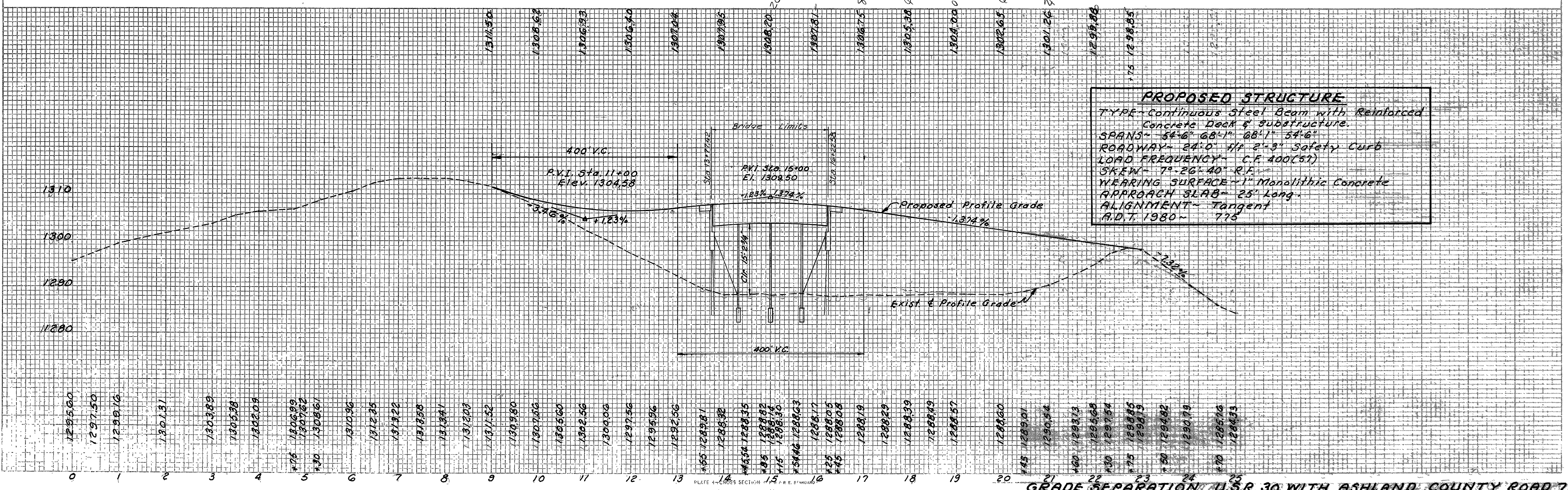
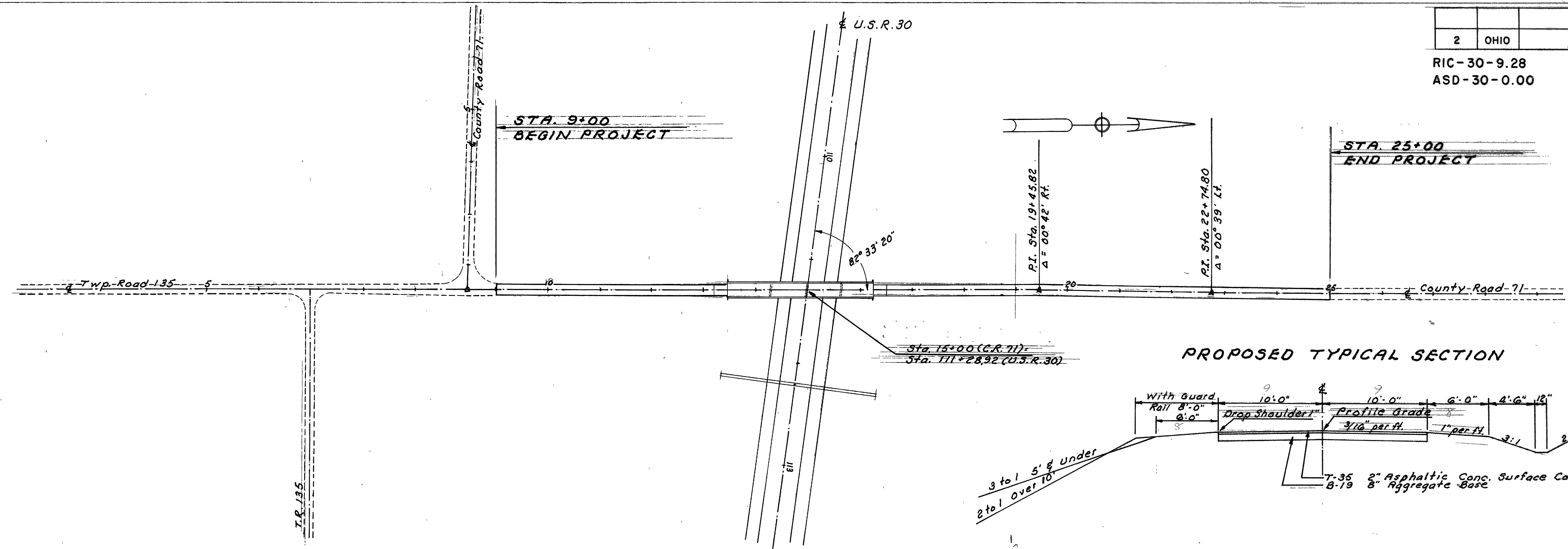


FUTURE SEPARATION MIFFLIN TWP RD. NO. 69 STA. 17+00 TO STA. 21+00

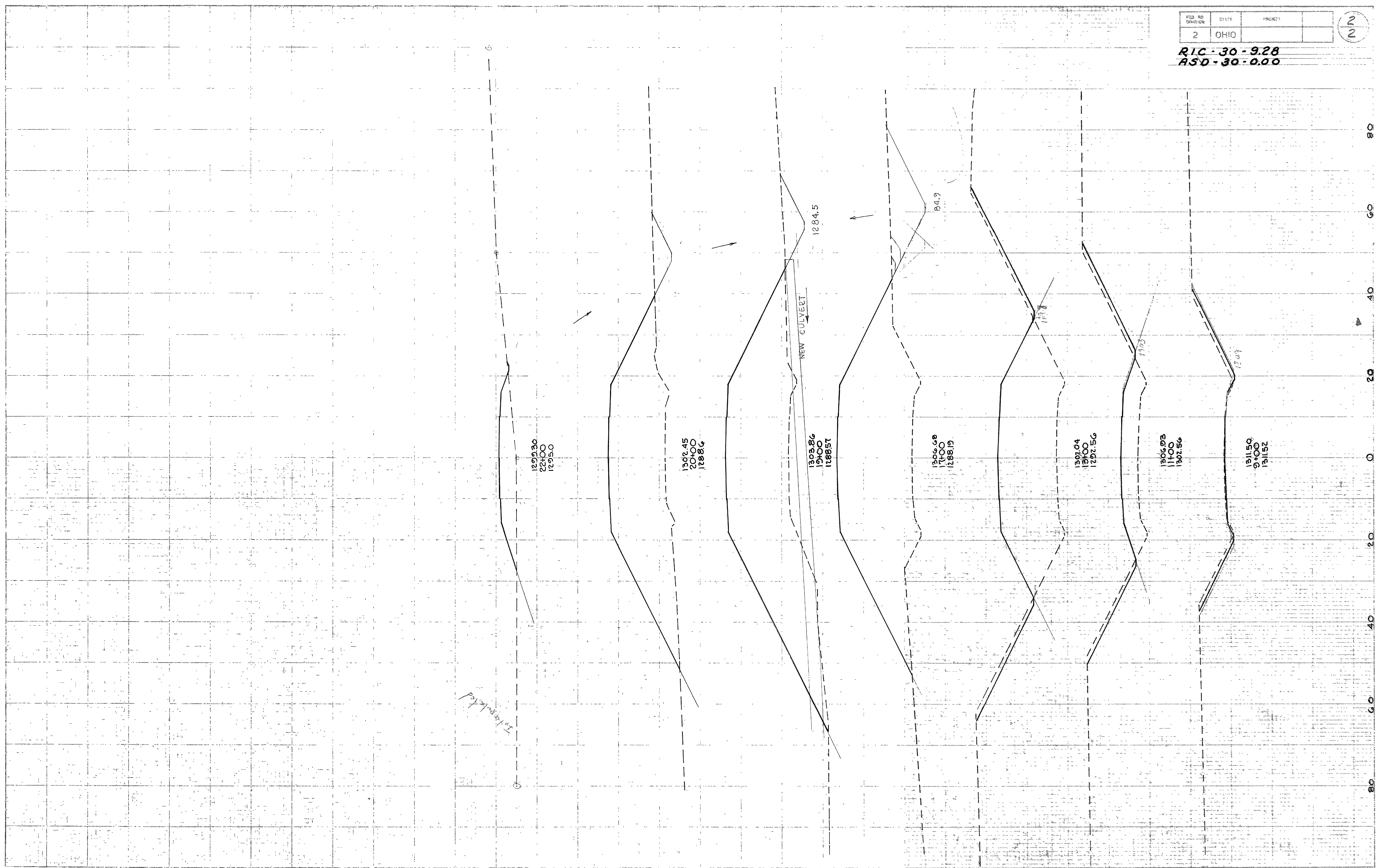
RIC-30-9.28
ASD-30-0.00

FINAL SURVEY PLOTTED
NOTE BOOK NO. _____
AREAS CHECKED _____

ORIGINAL SURVEY PLOTTED
NOTE BOOK NO. _____
AREAS CHECKED _____

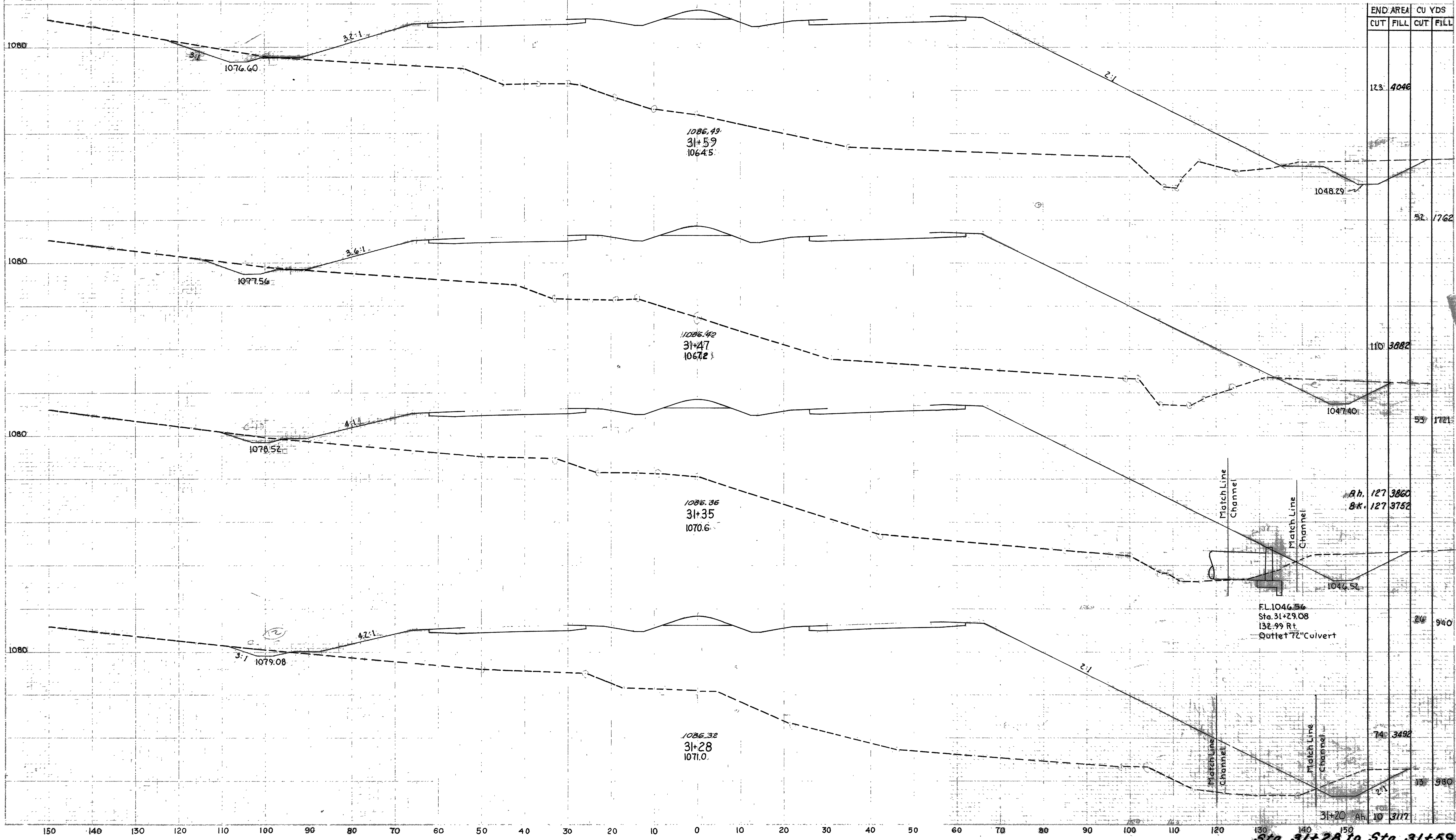


RIC-30-928
ASD-30-000

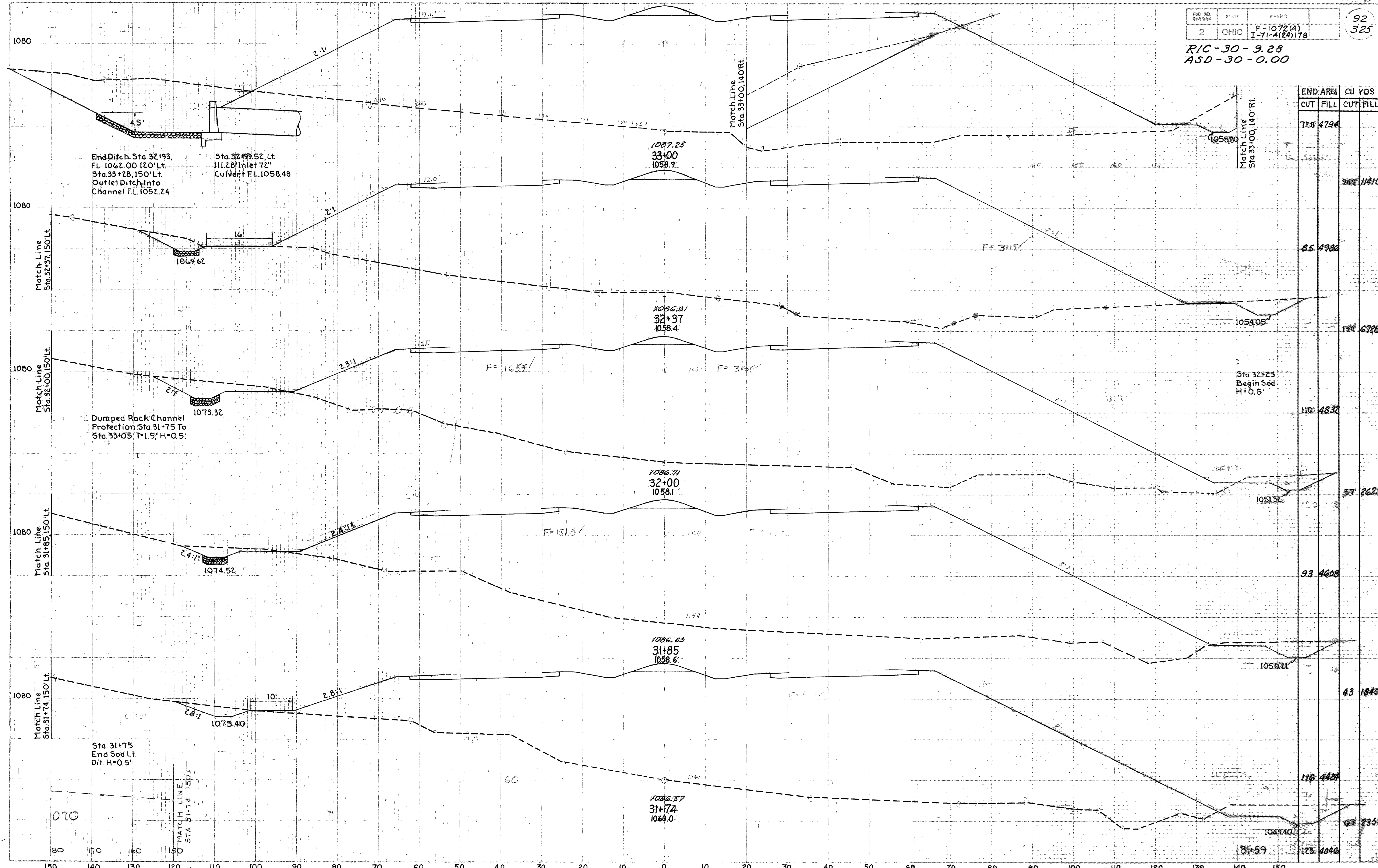


GRADE SEPARATION U.S.R. 30 WITH ASHLAND COUNTY ROAD 71

RIC-30-9.28
ASD-30-0.00



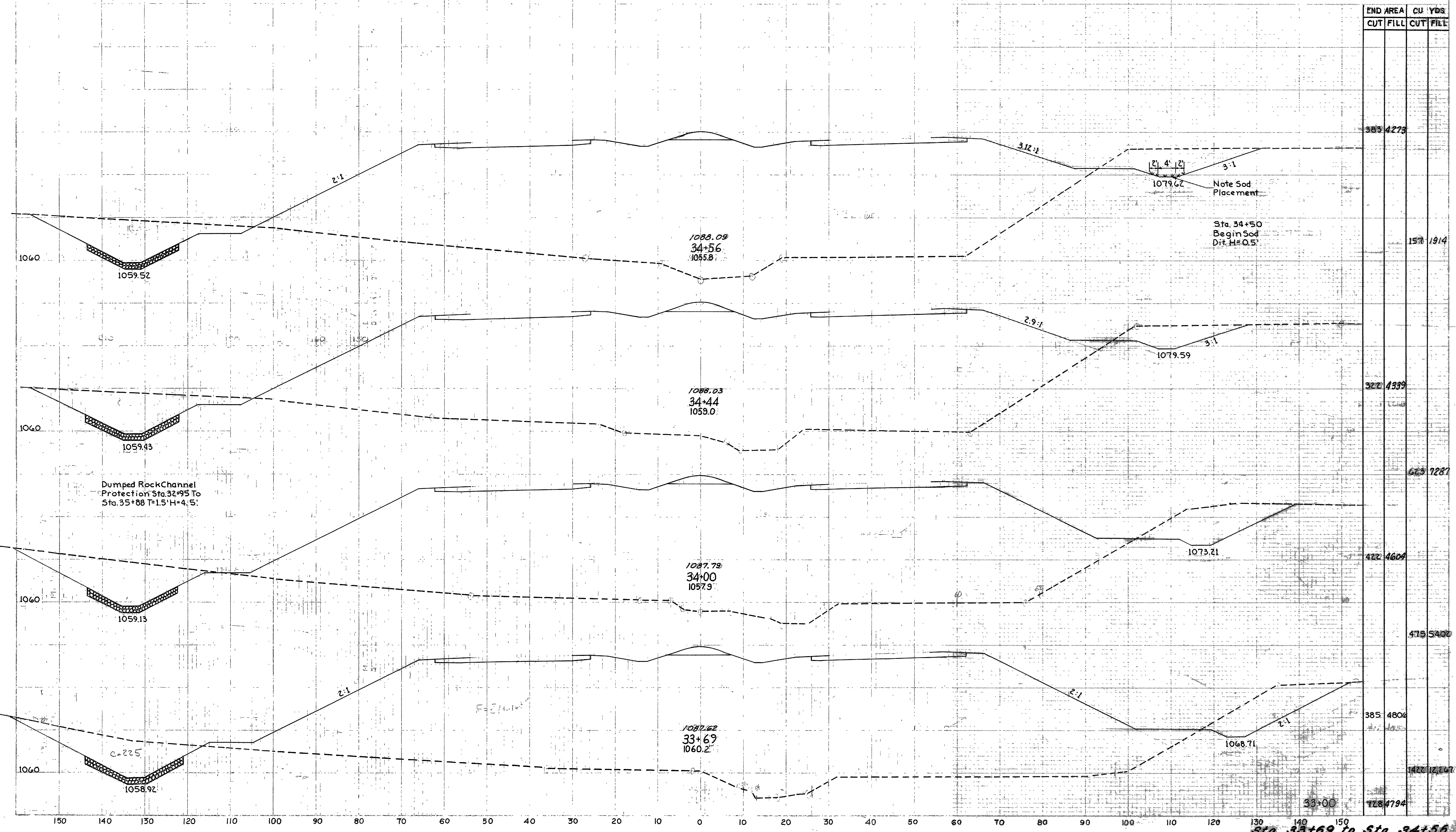
RIC-30-9.28
ASD-30-0.00



STATION	END AREA		CU YDS	
	CUT	FILL	CUT	FILL
33+00	72.8	479.4		
32+99.52			94.9	1141.0
32+37	85	498.6		
32+25			134	672.0
32+00	110	483.2		
31+85			57	262.3
31+74	93	460.8		
31+74			43	184.0
31+59	116	442.4		
31+59	173	404.6	67	235.3

Sta. 31+74 to Sta. 33+00

RIC-30-9.28
ASD-30-0.00



1059.52

1088.09
34+56
1055.8

1079.62

Note Sod Placement

Sta. 34+50
Begin Sod
Dit. H=0.5'

1059.43

1088.03
34+44
1059.0

1079.59

Dumped Rock Channel
Protection Sta. 32+95 To
Sta. 35+88 T=1.5' H=4.5'

1087.79
34+00
1057.9

1073.21

1059.13

1087.62
33+69
1060.2

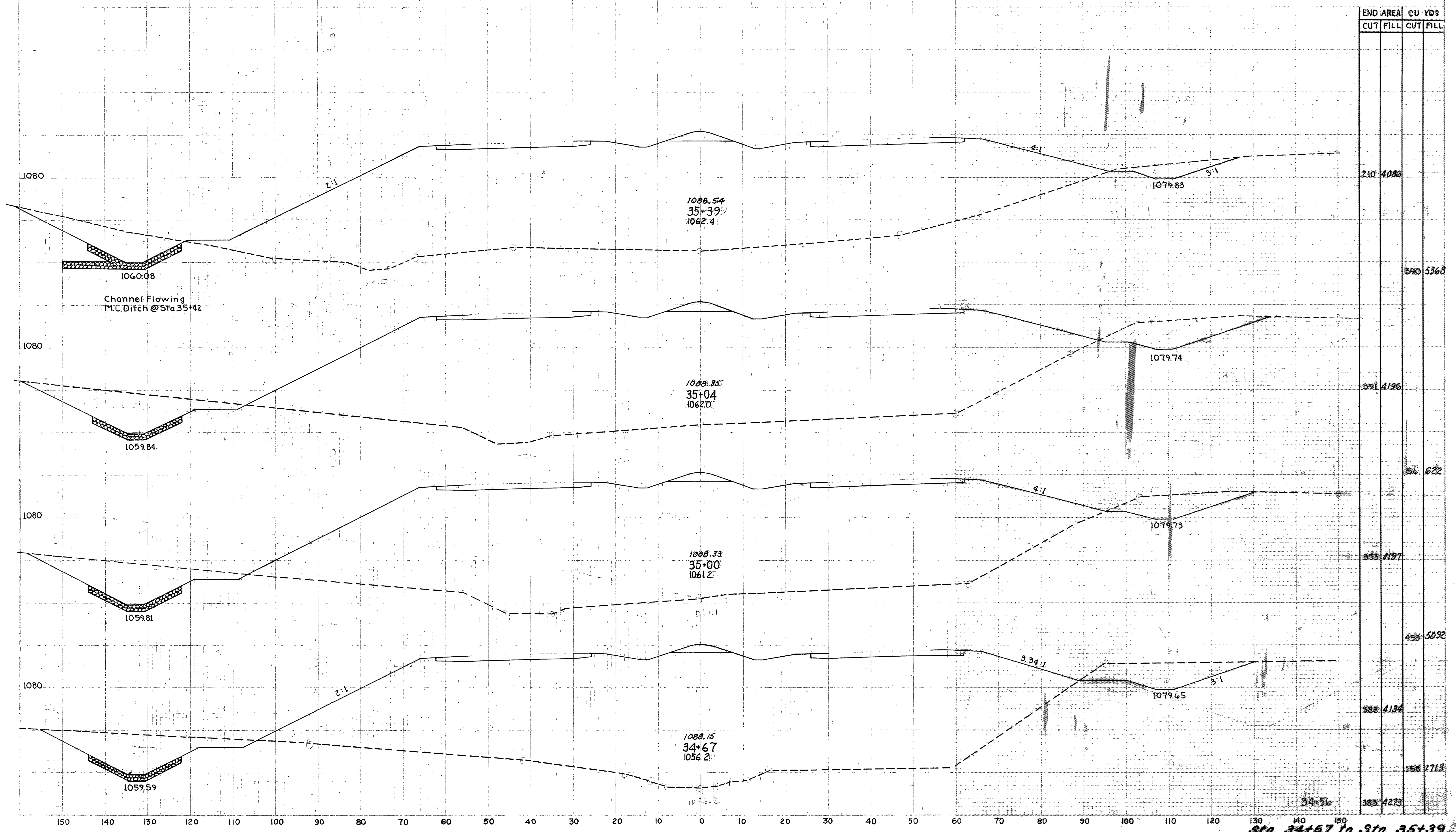
1068.71

1058.92

33+00

Sta. 33+69 to Sta. 34+56

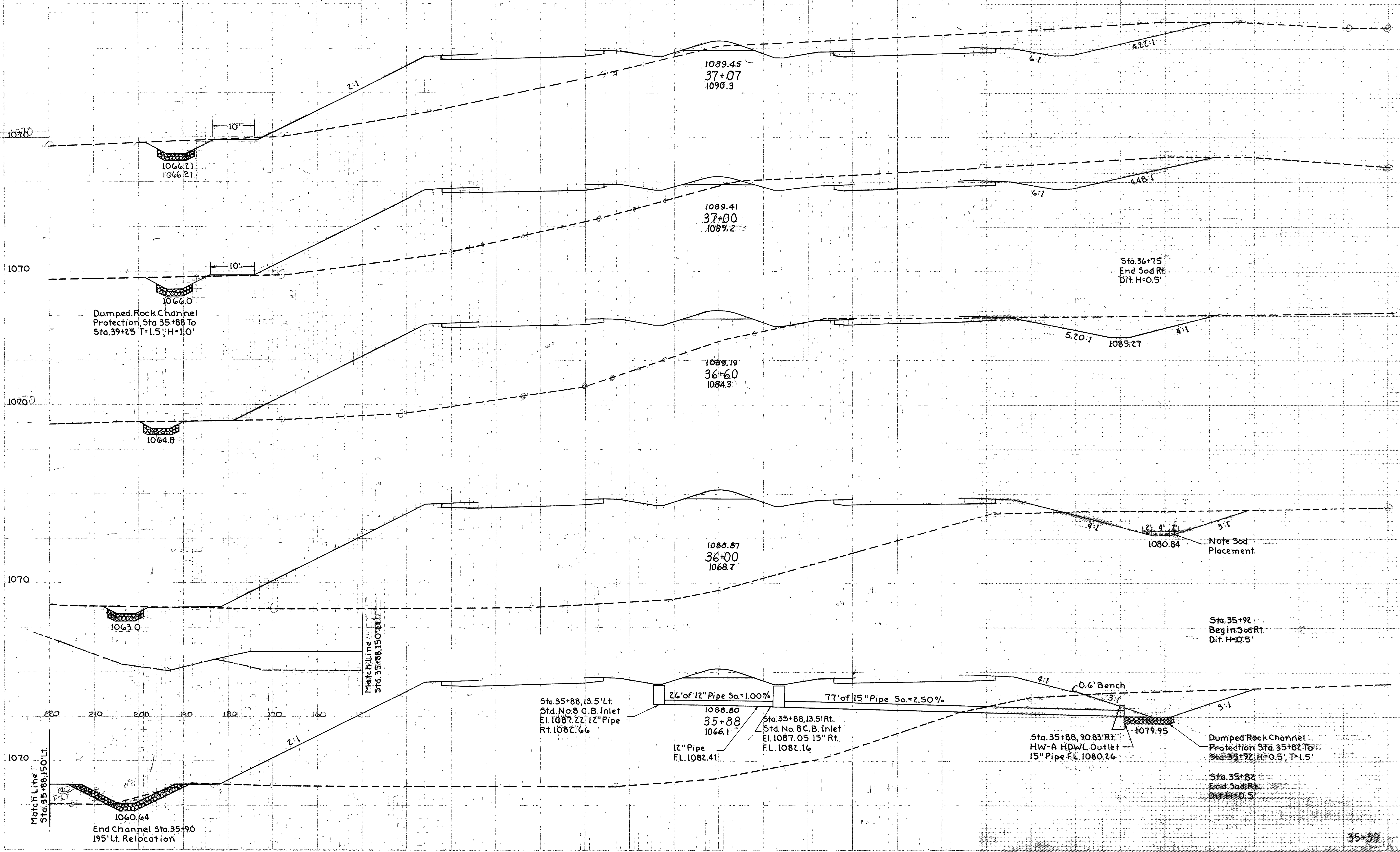
RIC-30-9.28
ASD-30-0.00



END AREA		CU YDS	
CUT	FILL	CUT	FILL
210	4086		
		390	5368
391	4196		
		56	622
353	4197		
		453	5092
388	4134		
		158	1713
383	4273		

Sta. 34+67 to Sta. 35+39

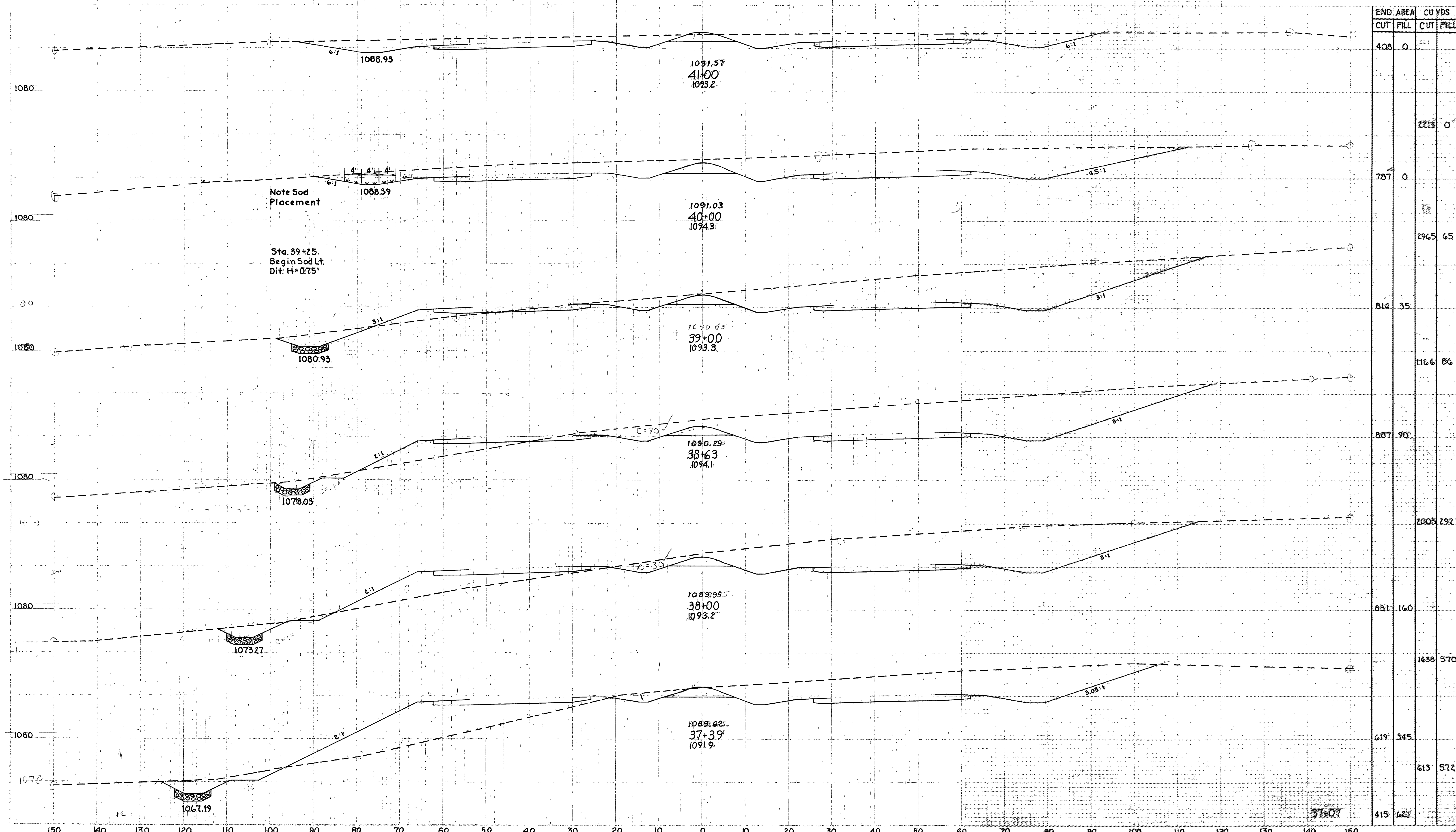
RIC-30-9.28
ASD-30-0.00



END AREA		CU YDS.	
CUT	FILL	CUT	FILL
415	621		
		103	184
379	792		
		406	1584
169	1347		
		334	4651
131	2749		
		58	1277
128	2994		
		307	6425
		210	4086

Sta. 35+88 to Sta. 37+07

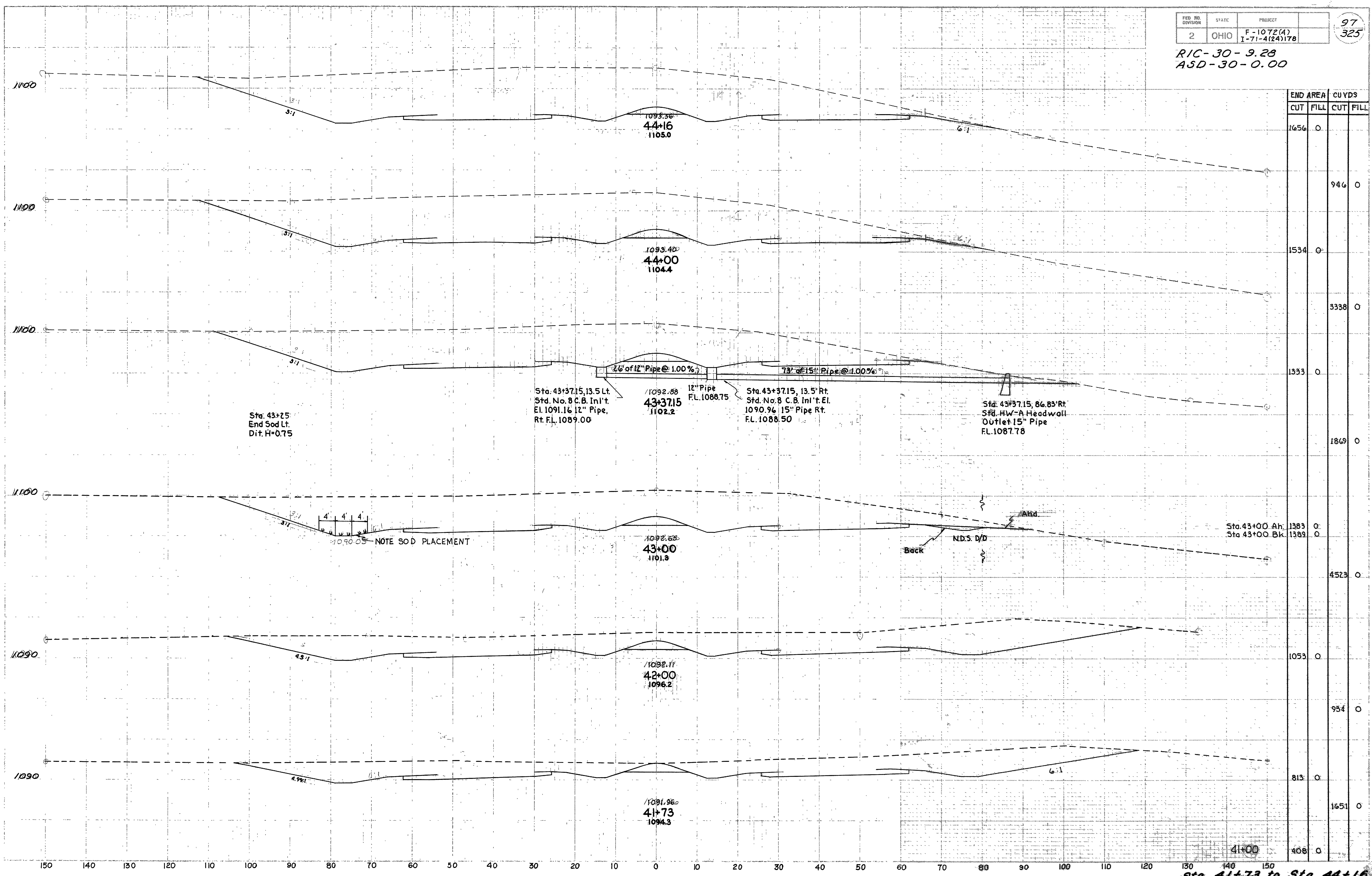
RIC-30-9.28
ASD-30-0.00



END AREA		CU YDS	
CUT	FILL	CUT	FILL
408	0		
		2213	0
787	0		
		2965	65
814	35		
		1166	86
887	90		
		2005	292
831	160		
		1638	570
619	345		
		613	572
415	621		

Sta. 37+39 to Sta. 41+00

RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
1656	0	
		946
1534	0	
		3338
1333	0	
		1869
1383	0	
1389	0	
		4523
1053	0	
		954
813	0	
		1651
406	0	

Sta. 43+25
End Sod Lt.
Dit. H=0.75

Sta. 43+37.15, 13.5 Lt.
Std. No. 8 C.B. In't.
El. 1091.16 12" Pipe.
Rt. FL. 1089.00

1092.88
12" Pipe
FL. 1088.75
43+37.15
1102.2

Sta. 43+37.15, 13.5 Rt.
Std. No. 8 C.B. In't. El.
1090.96 15" Pipe Rt.
FL. 1088.50

Sta. 43+37.15, 66.83 Rt.
Std. HW-A Headwall
Outlet 15" Pipe
FL. 1087.78

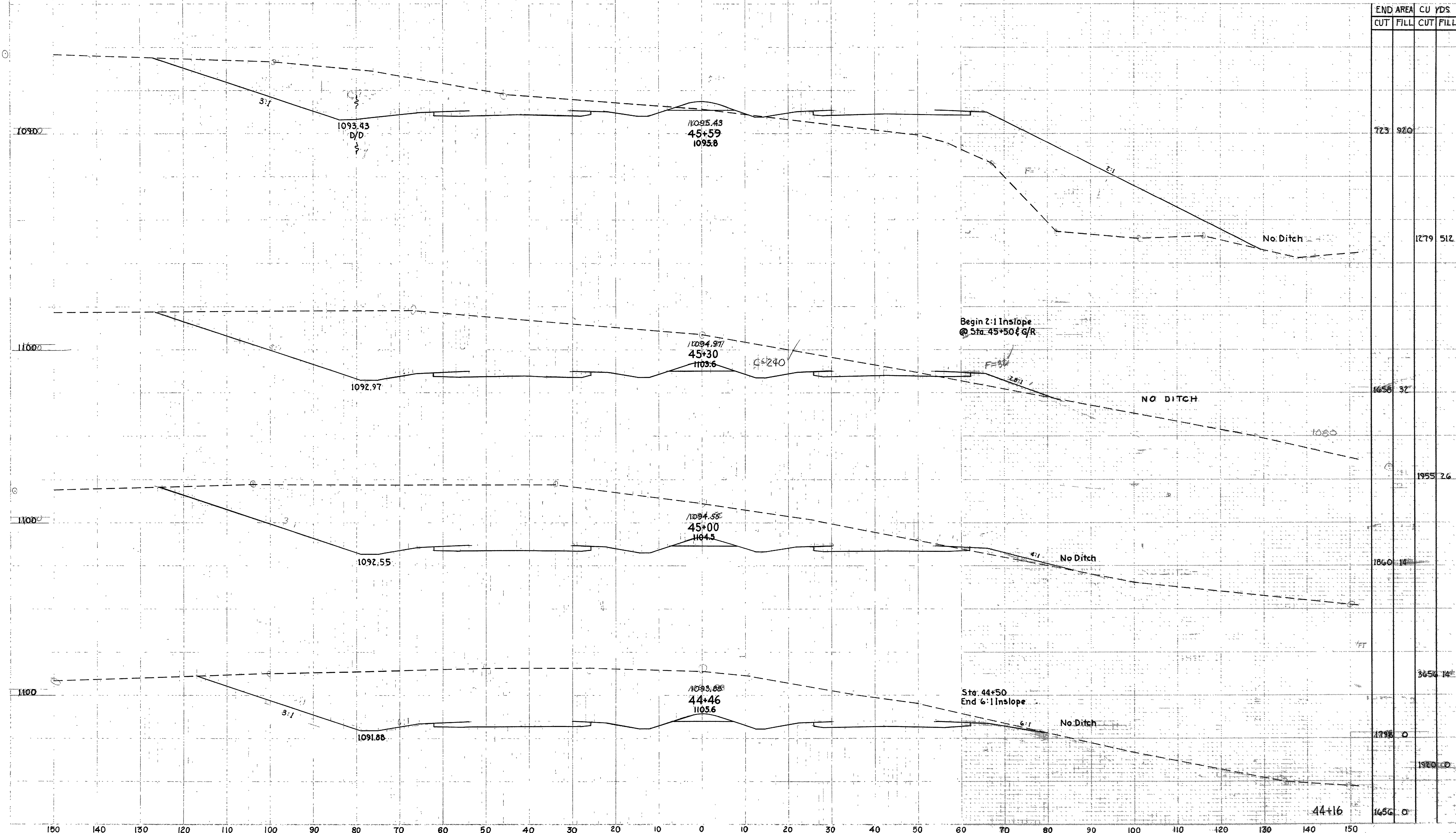
NOTE SOD PLACEMENT

Back N.D.S. D/D

Sta. 41+73 to Sta. 44+16

RIC-30-9.28
ASD-30-0.00

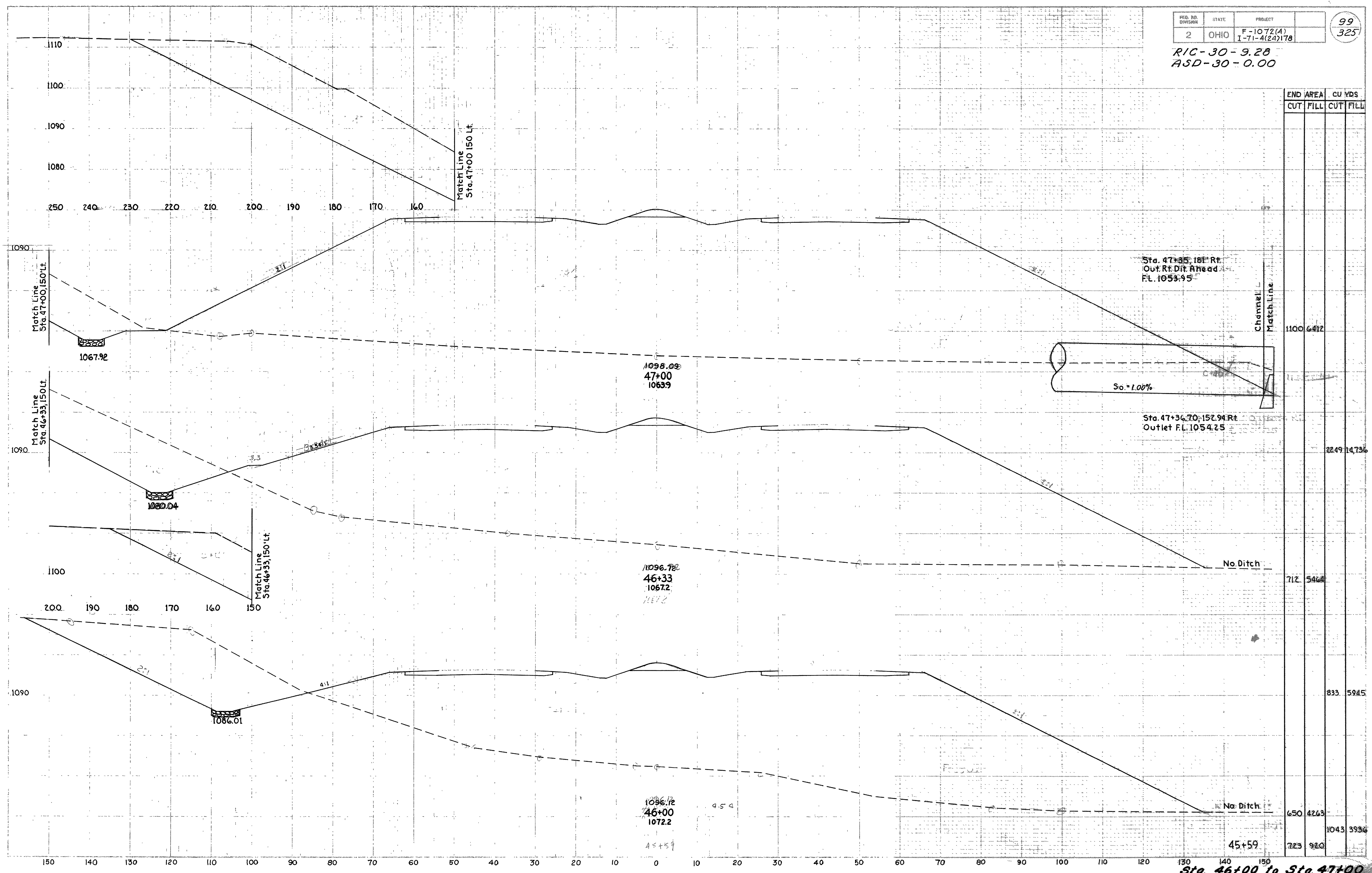
Sta. 45+65 To Sta.
45+75 Sod Lt. Dit.
H=0.5'



END AREA		CU YDS	
CUT	FILL	CUT	FILL
723	920		
		1279	512
1658	37		
		1955	26
1860	14		
		3656	14
1798	0		
		1920	0
		1656	0

44+16
Sta. 44+46 to Sta. 45+59

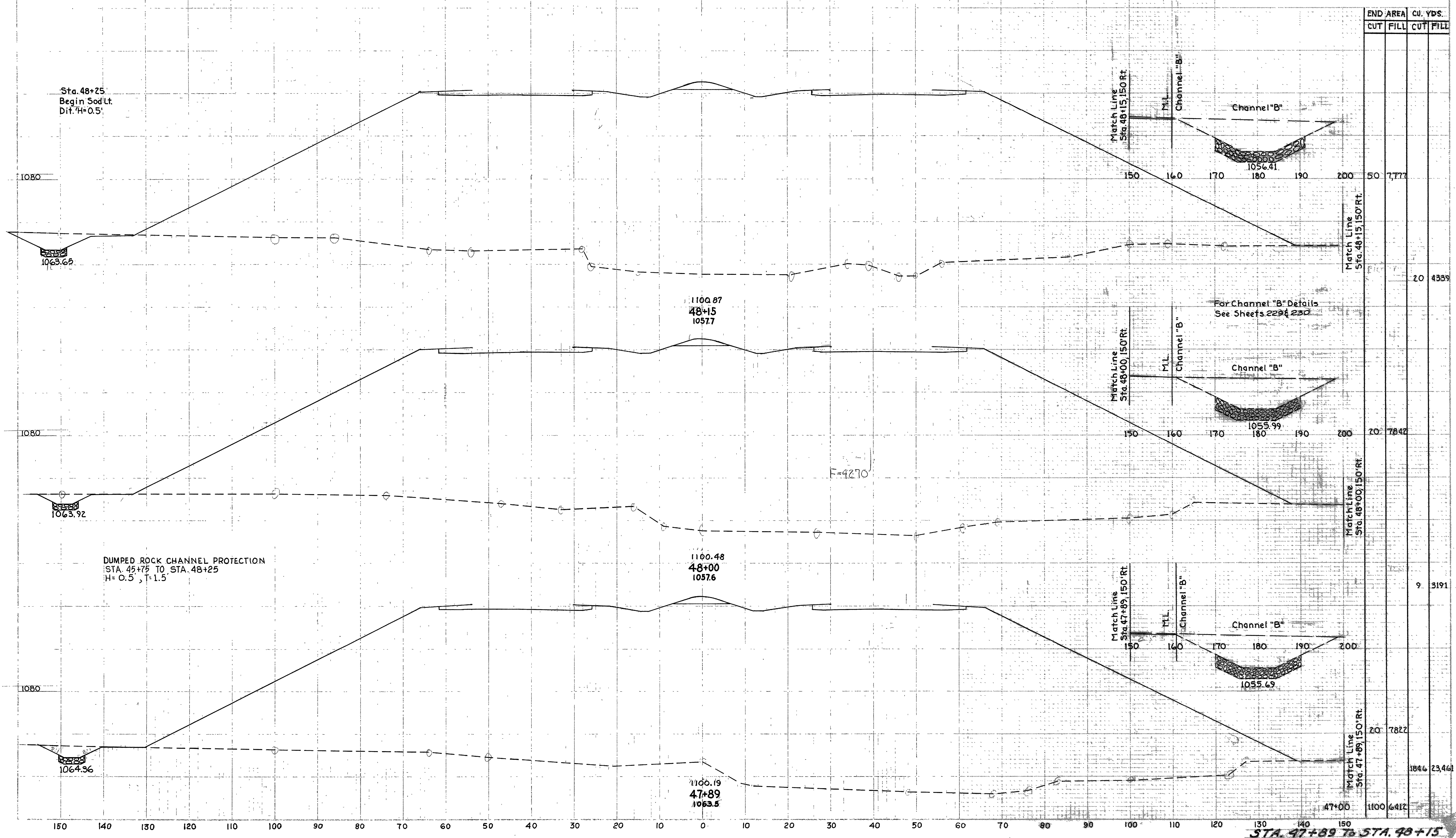
RIC-30-9.28
ASD-30-0.00



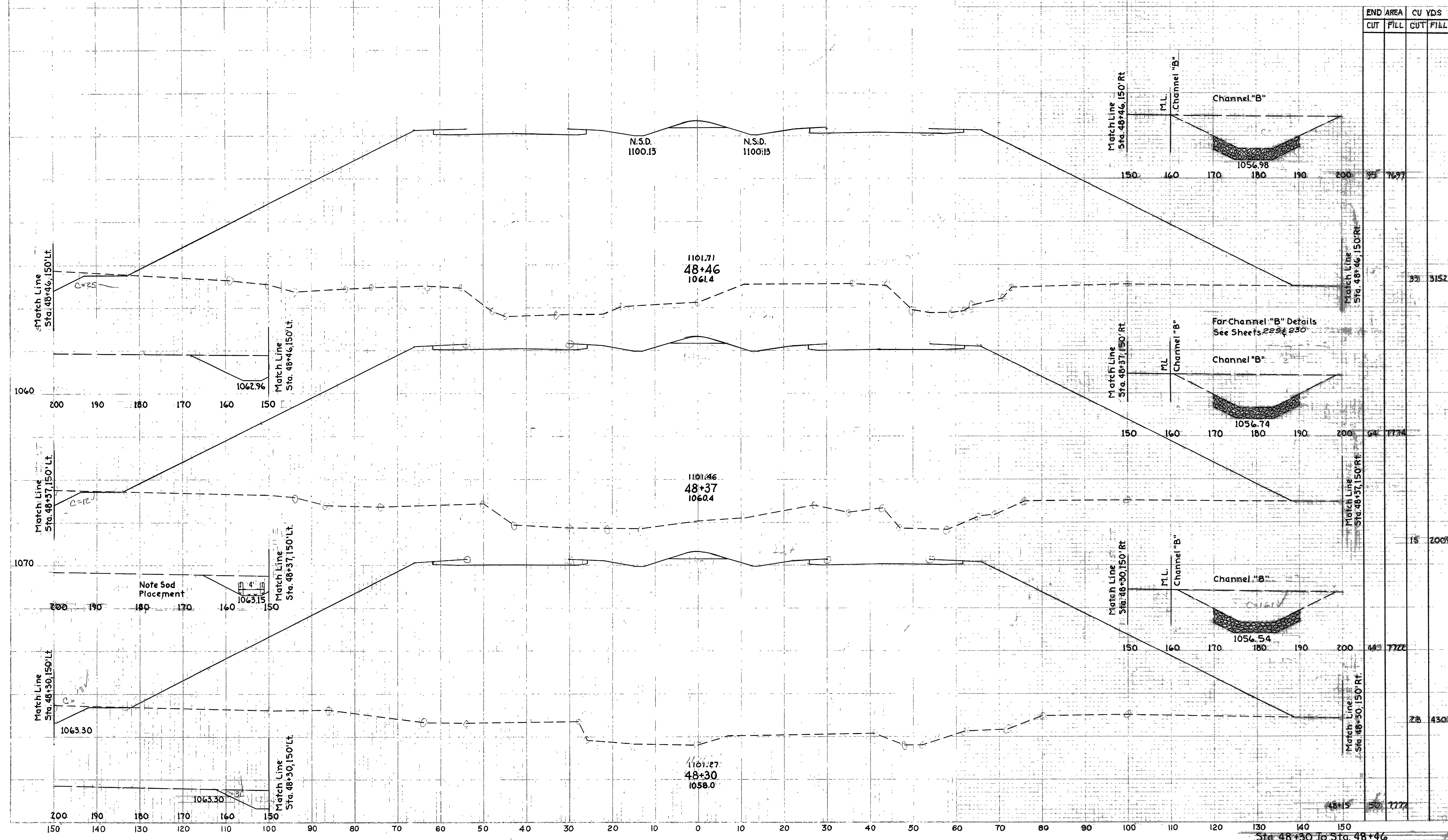
END	AREA		CU YDS.	
	CUT	FILL	CUT	FILL
1100	6412			
2249	14736			
712	5460			
833	5945			
650	4263			
1043	3936			
723	920			

Sta. 46+00 to Sta. 47+00

RIC-30-9.28
ASD-30-0.00



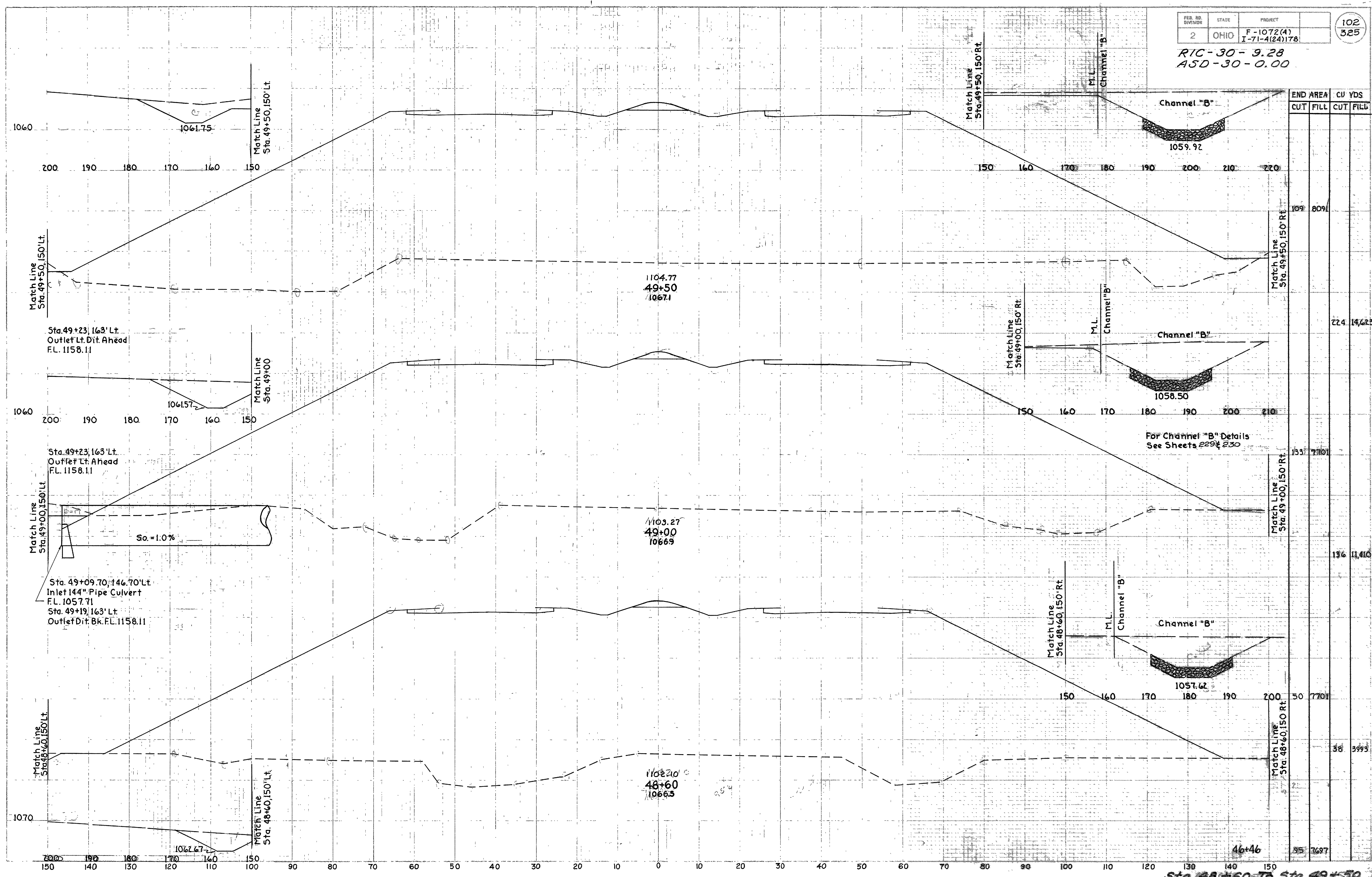
RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
95	7697	
32	3152	
64	1774	
15	2009	
43	7722	
28	4306	
50	1774	

Sta. 48+30 to Sta. 48+46

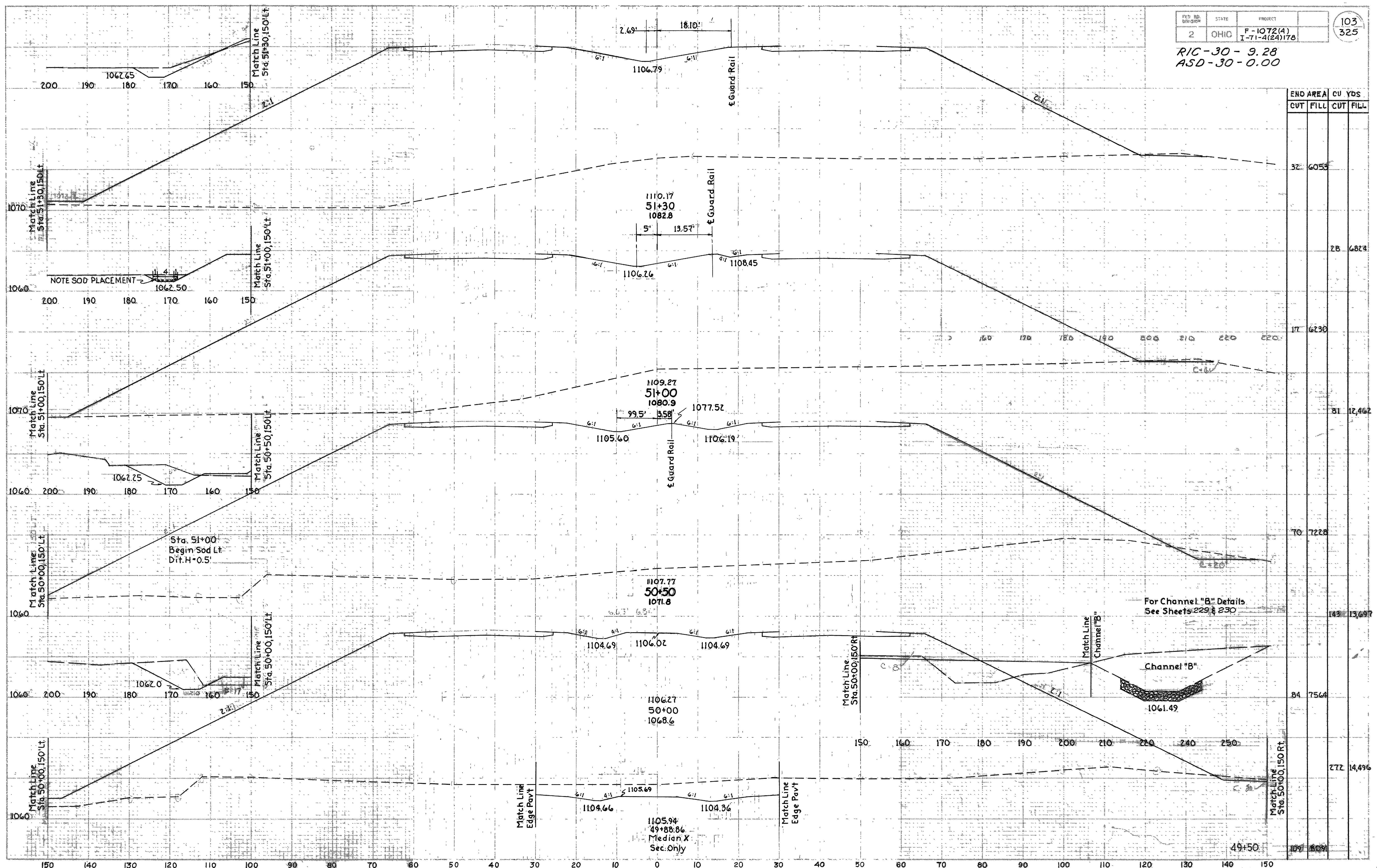
RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
109	8091	
224	14,623	
133	7701	
136	11,410	
50	7701	
38	3993	
95	2697	

46+46
Sta. 48+60 To Sta. 49+50

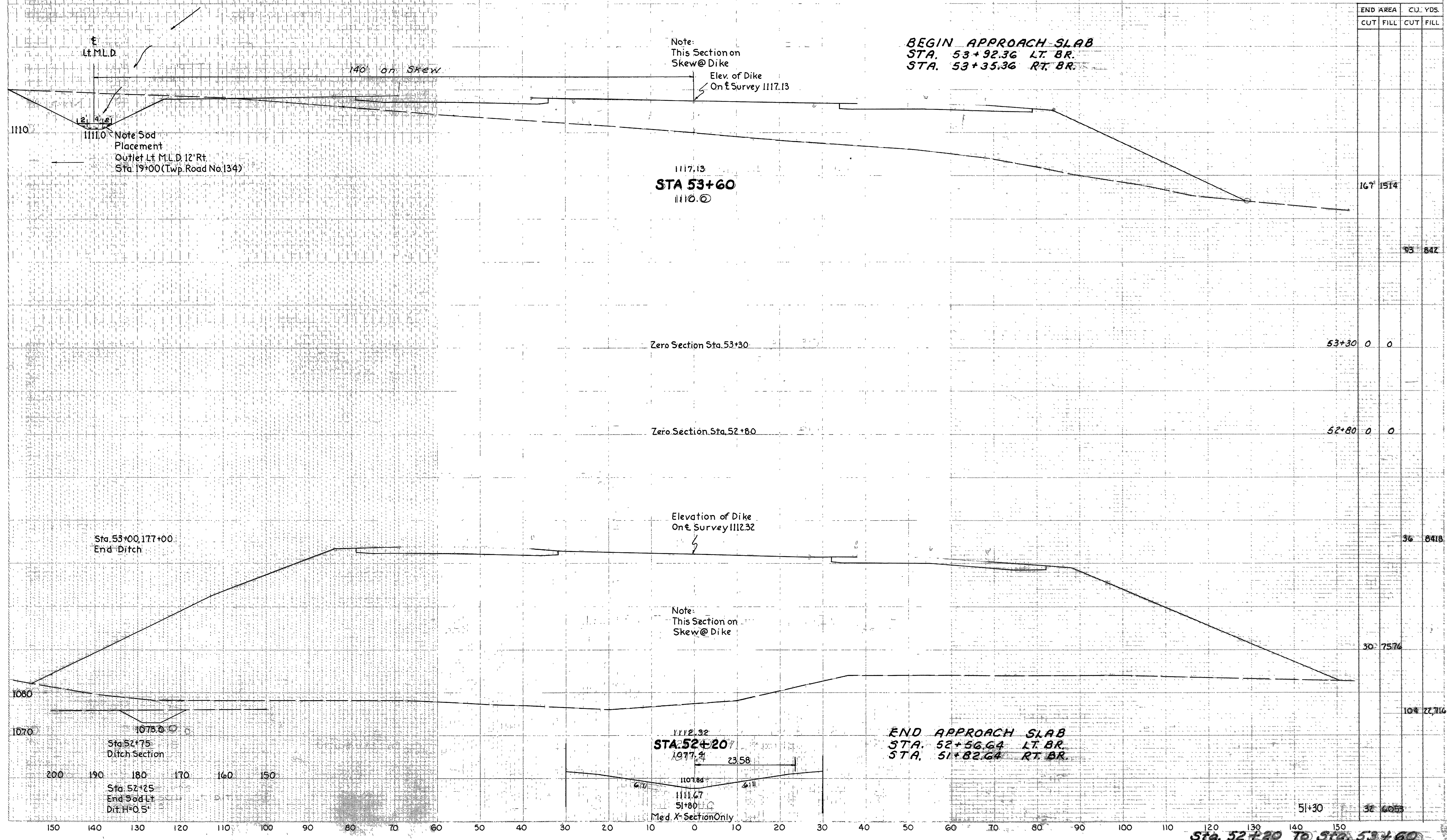
RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
32	6053	
28	6824	
17	6230	
81	12,462	
70	7228	
143	13,697	
84	7564	
772	14,496	
109	8091	

Sta. 50+00 to Sta. 51+30

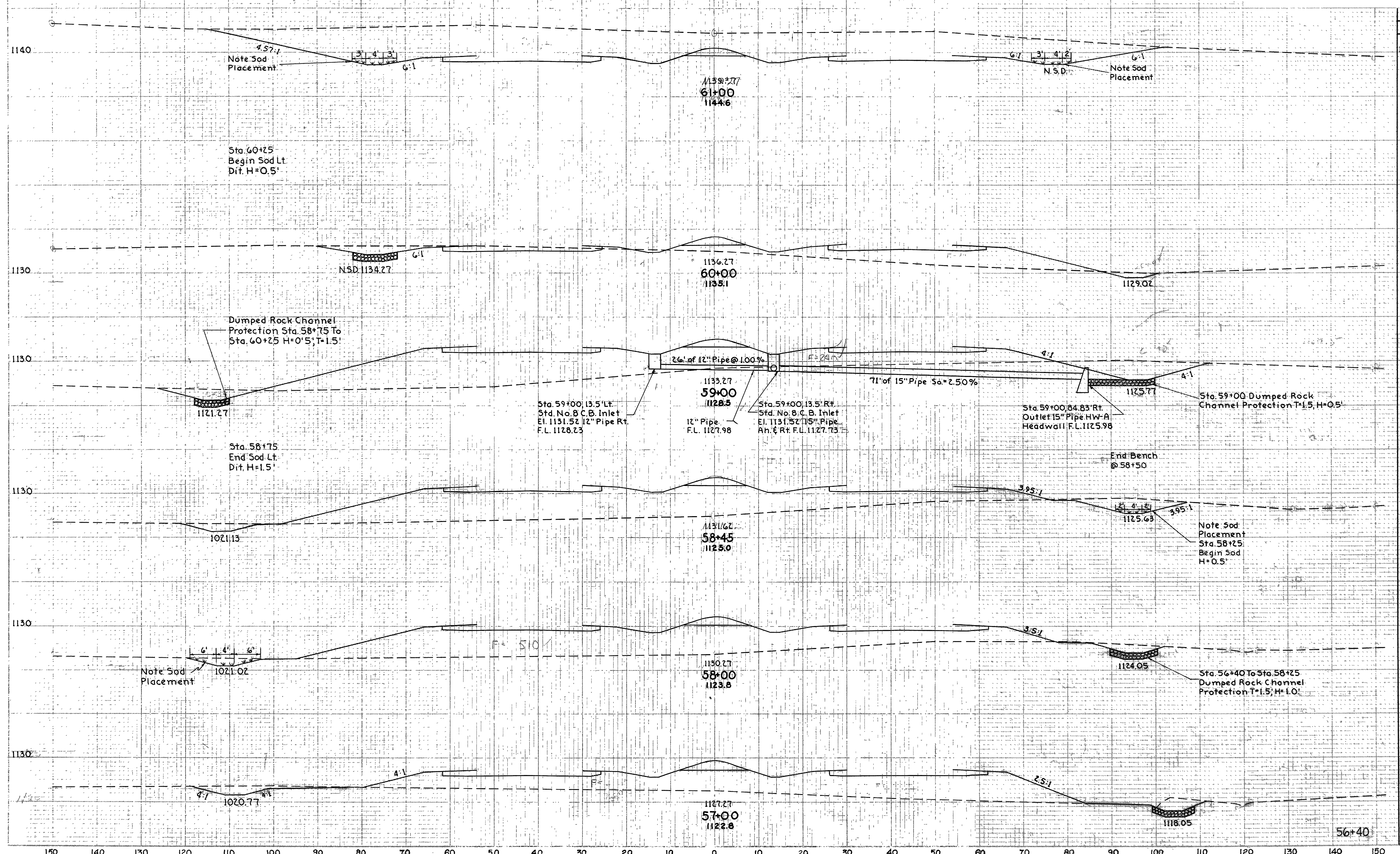
RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
167	1514	
		93 842
53+30	0	0
52+80	0	0
		36 8418
30	7576	
		108 22,716
51+30	32	6055

Sta. 52+20 To Sta. 53+60

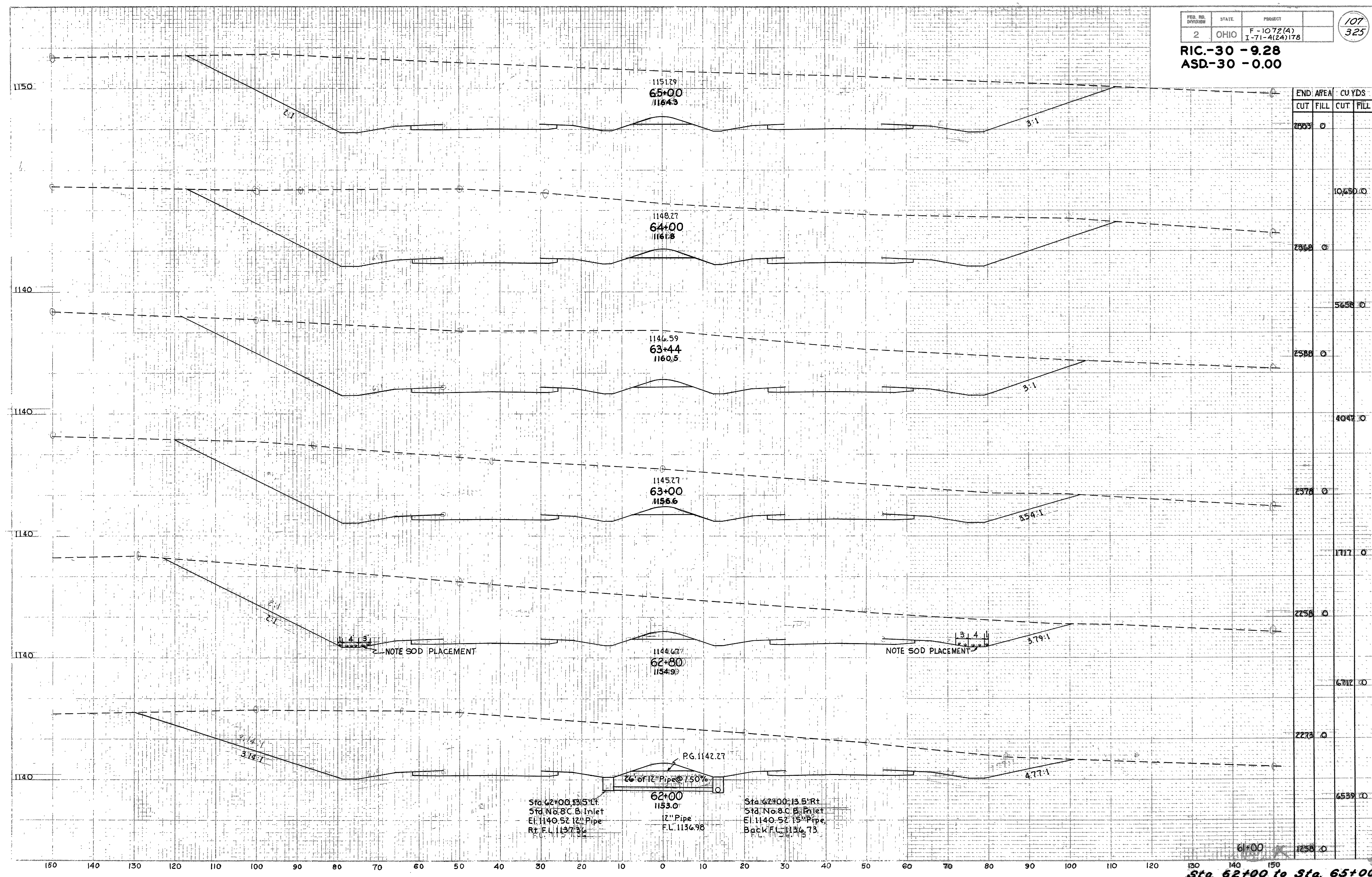
RIC-30-9.28
ASD-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1258	0		
		2483	66
83	222		
		372	1948
116	830		
		296	1688
72	827		
		97	1353
44	772		
		178	2443
52	647		
		126	1211
61	442		

Sta. 57+00 to Sta. 61+00

RIC.-30 -9.28
ASD-30 -0.00



END	AREA		CU YDS	
	CUT	FILL	CUT	FILL
2863	0			
			10650	0
2868	0			
			5658	0
2588	0			
			4047	0
2378	0			
			1717	0
2258	0			
			672	0
2273	0			
			6539	0
1258	0			

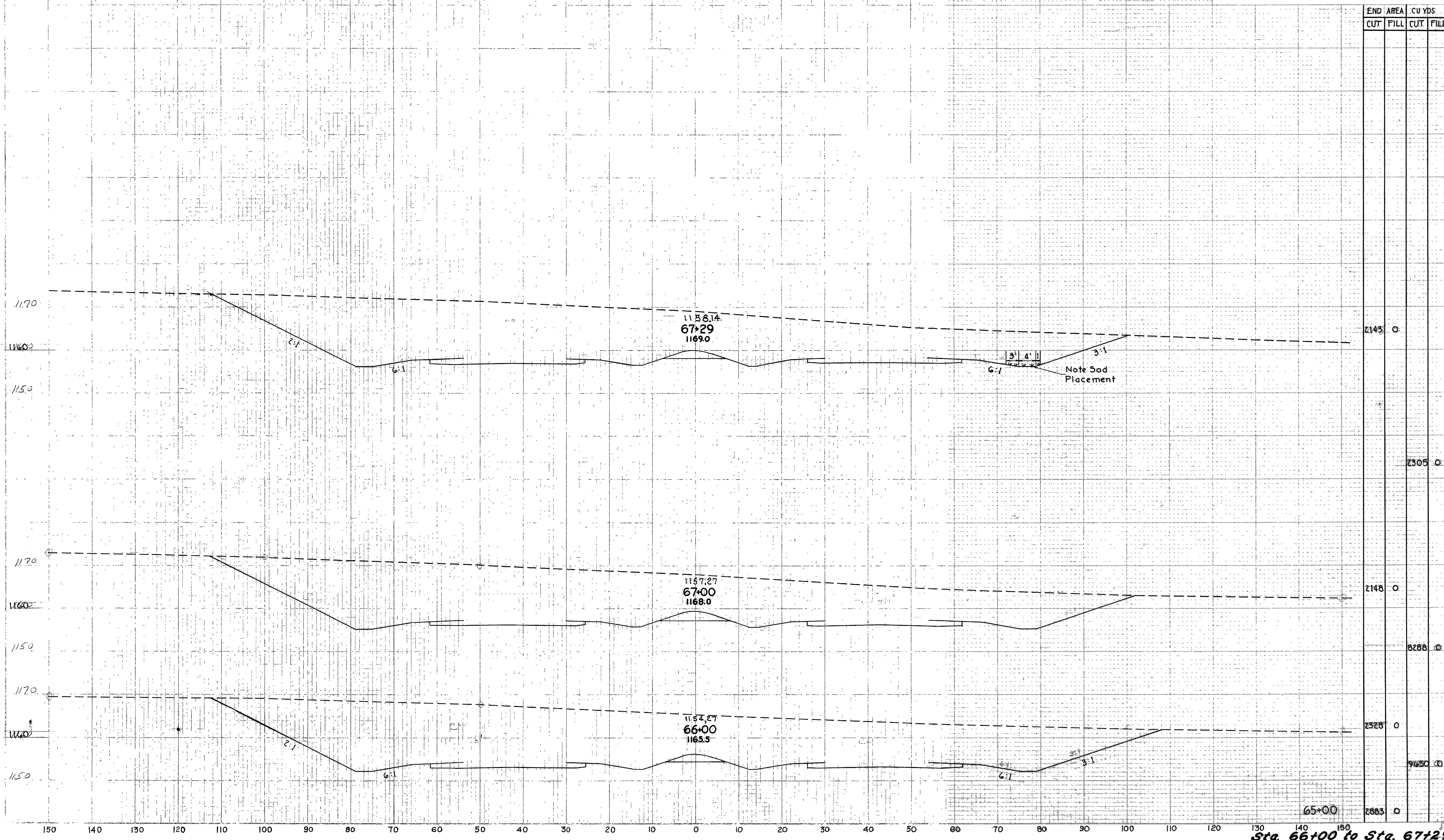
Sta. 62+00, 13.5' Lt.
Std. No. 8 C. B. Inlet
12" Pipe
Rt. F.L. 1137.36

PG. 1142.27
26' of 12" Pipe @ 1.50%
12" Pipe
F.L. 1136.98

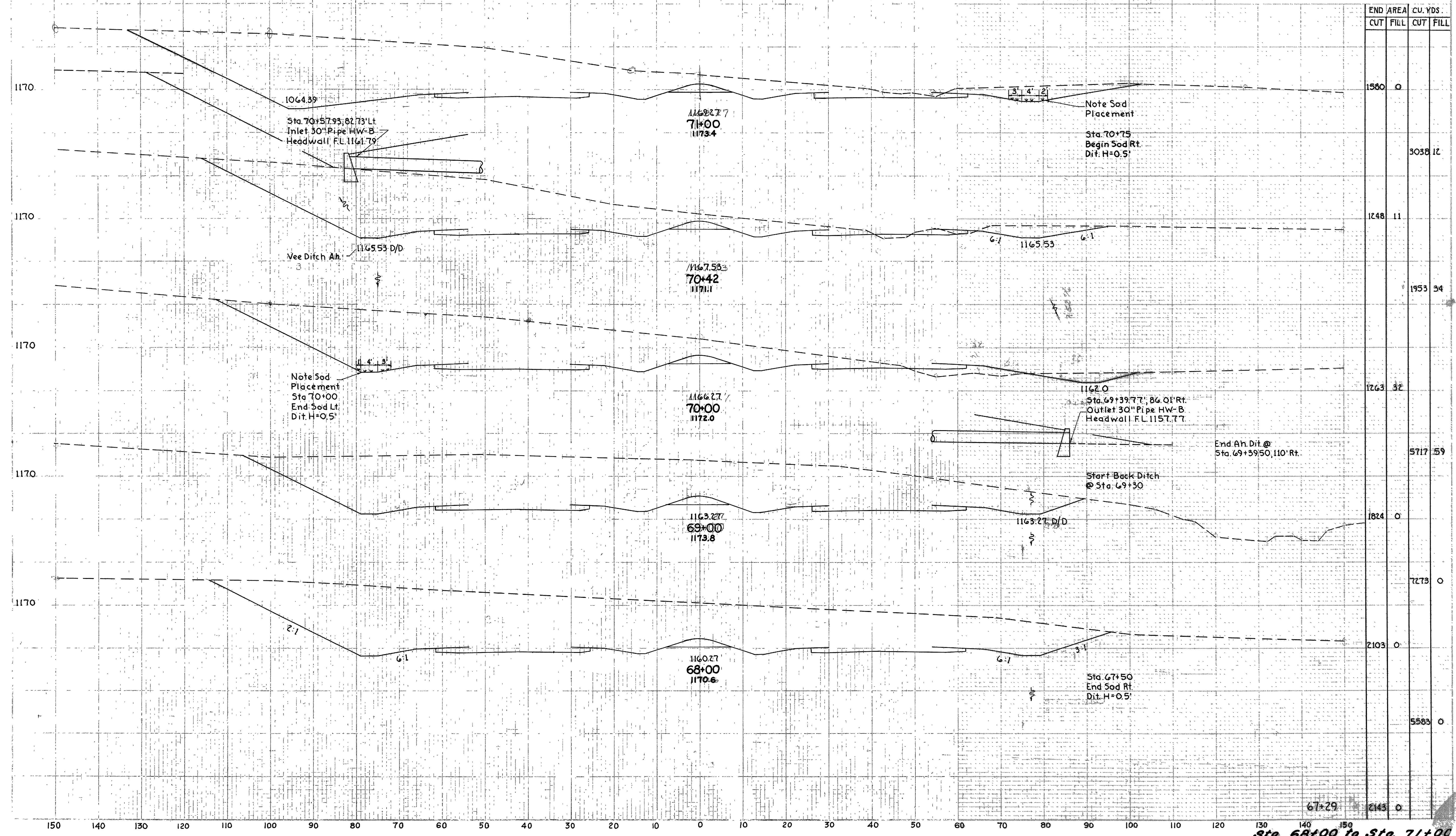
Sta. 62+00, 13.5' Rt.
Std. No. 8 C. B. Inlet
El. 1140.52 15" Pipe
Back F.L. 1136.73

Sta. 62+00 to Sta. 65+00

RIC.-30-9.28
ASD.-30-0.00



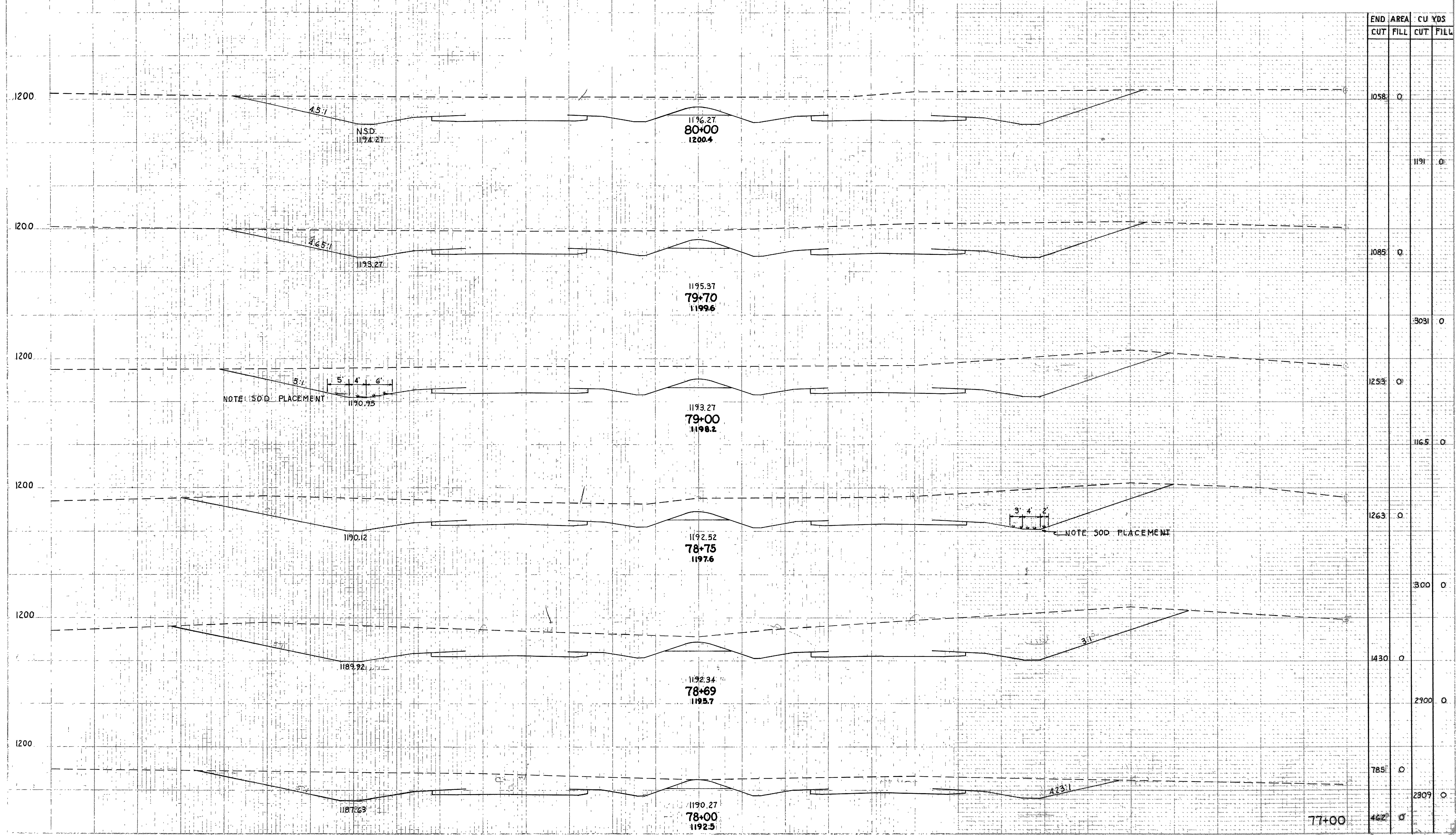
RIC-30 -9.28
ASD-30 -0.00



END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
1580	0			
1248	11		3038	12
1953			34	
1263	32			
5717			59	
1824	0			
7273			0	
2103	0			
5583			0	
2143	0			

Sta. 68+00 to Sta. 71+00

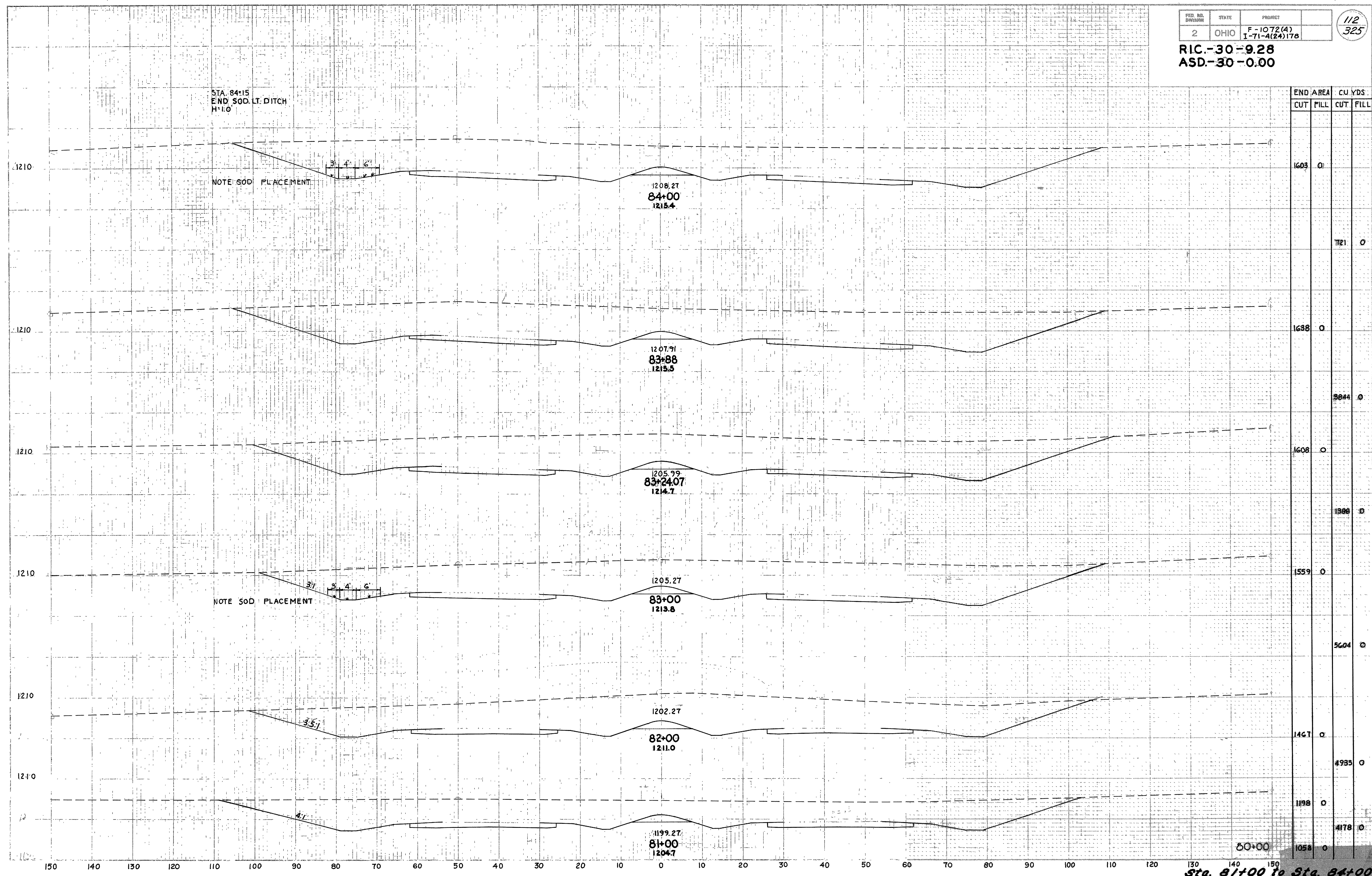
RIC.-30-9.28
ASD.-30-0.00



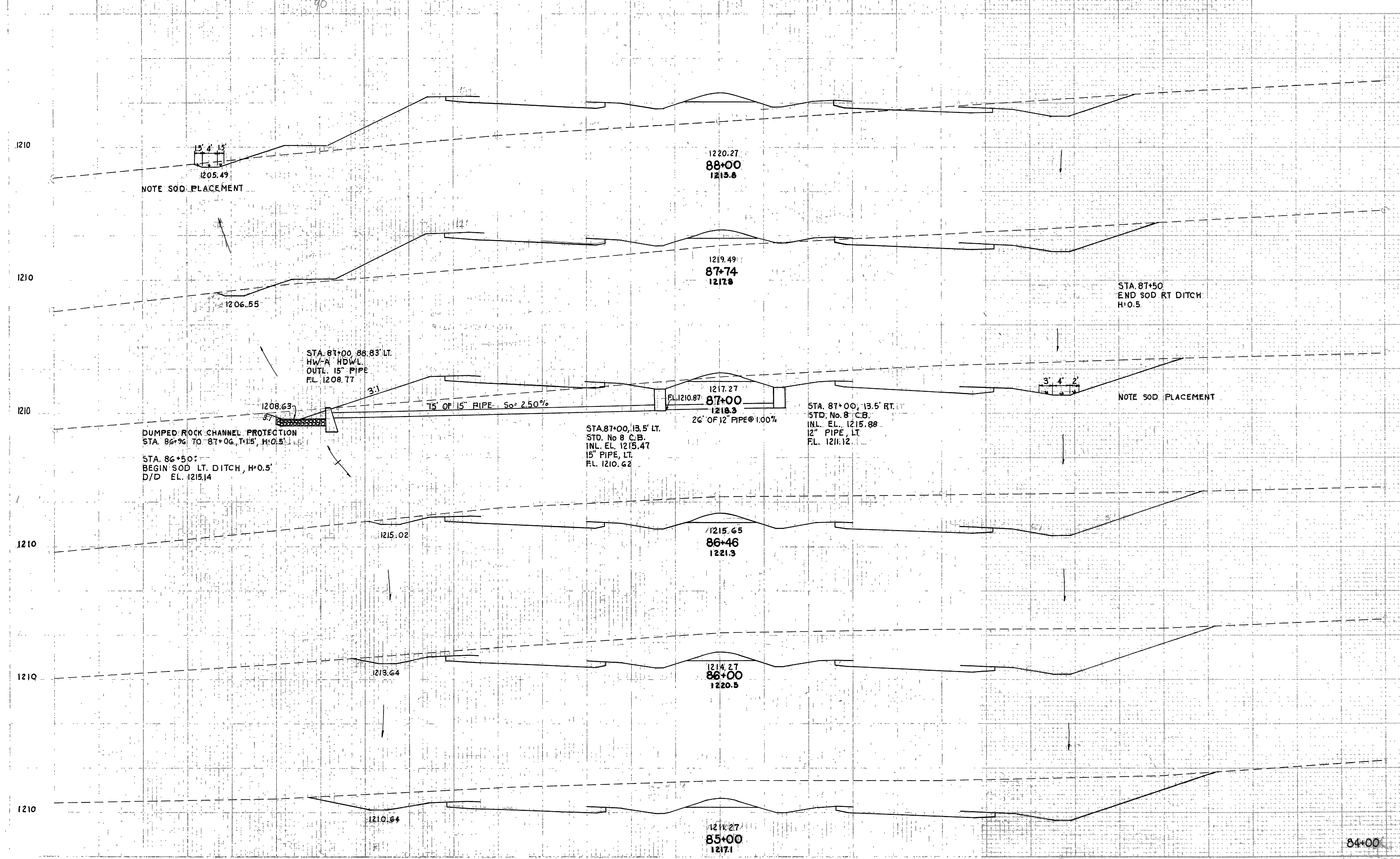
END STA.	AREA		CU YDS	
	CUT	FILL	CUT	FILL
1058	0			
1085	0			
1253	0			
1263	0			
1430	0			
785	0			
462	0			

Sta. 78+00 to Sta. 80+00

RIC.-30-9.28
ASD-30-0.00



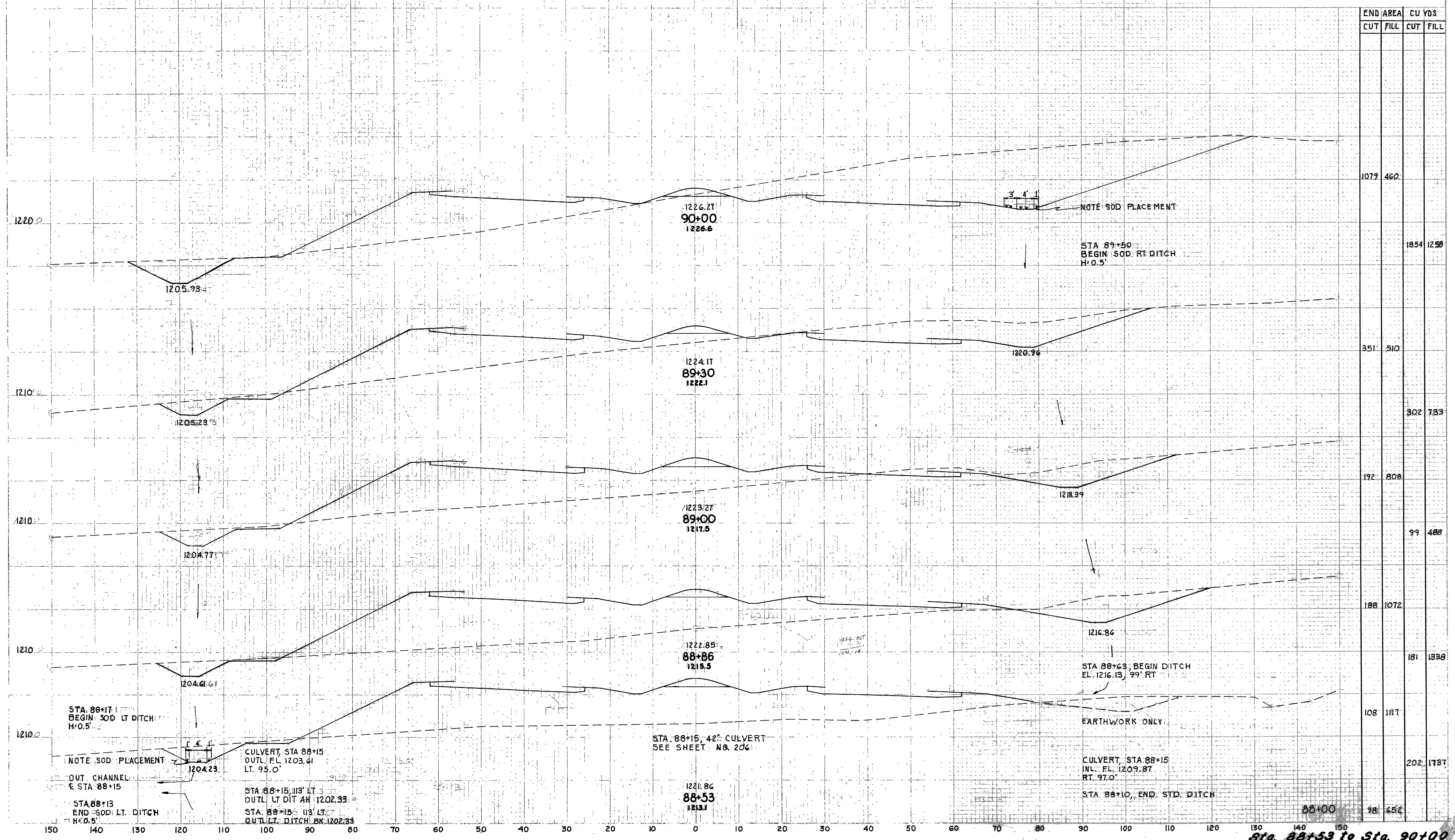
RIC-30 -9.28
ASD-30 -0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
98	652		
		202	1737
232	428		
		956	587
465	140		
		1478	0
1013	0		
		1811	0
1133	0		
		4117	0
1110	0		
		5024	0
1603	0		

Sta. 85+00 to Sta. 88+00

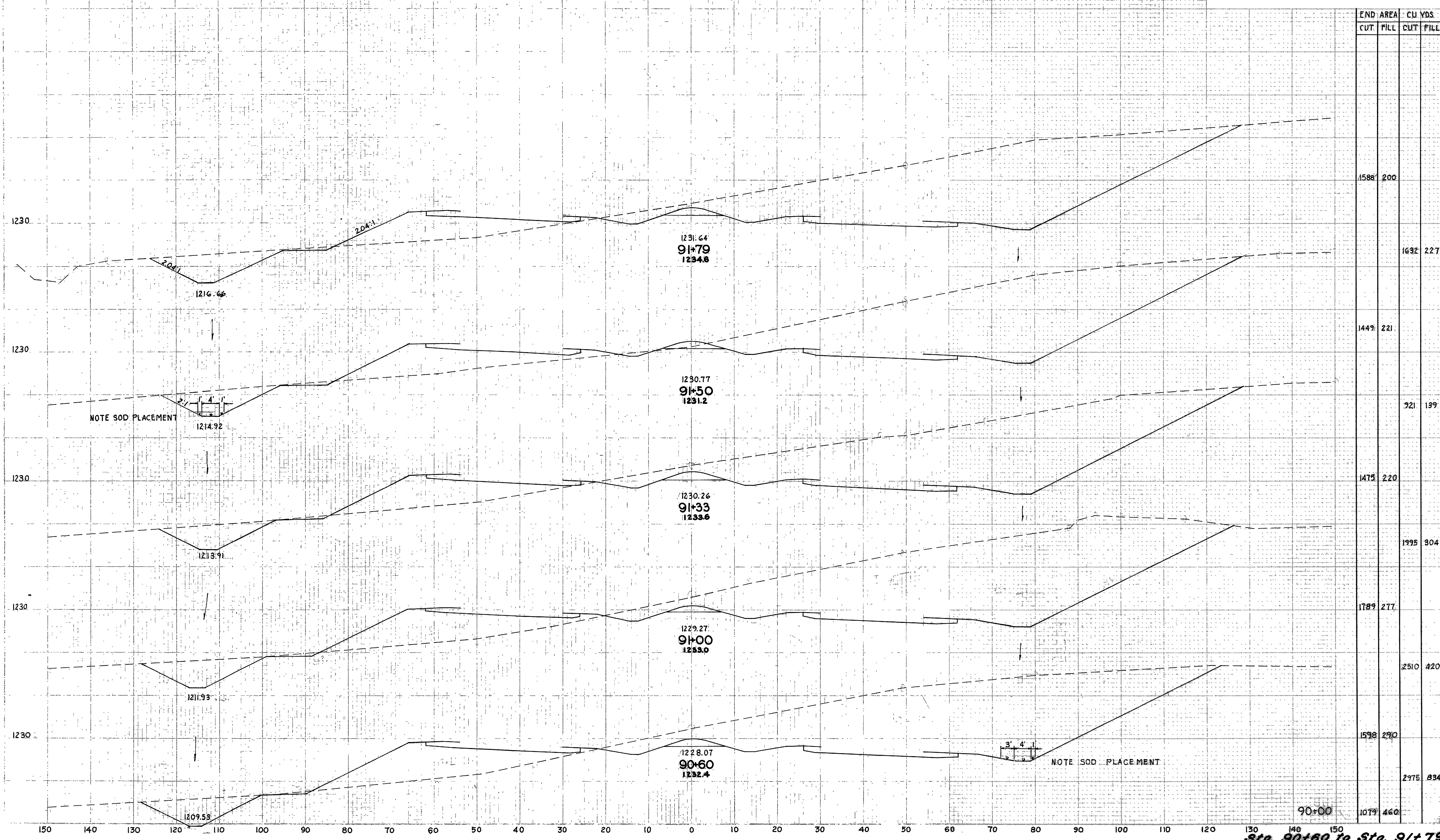
RIC-30-928
ASD-30-000



END AREA		CU YDS	
CUT	FILL	CUT	FILL
1079	460		
		1854	1258
351	510		
		302	733
192	808		
		99	488
188	1072		
		181	1338
108	1117		
		202	1737
98	652		

Sta. 88+53 to Sta. 90+00

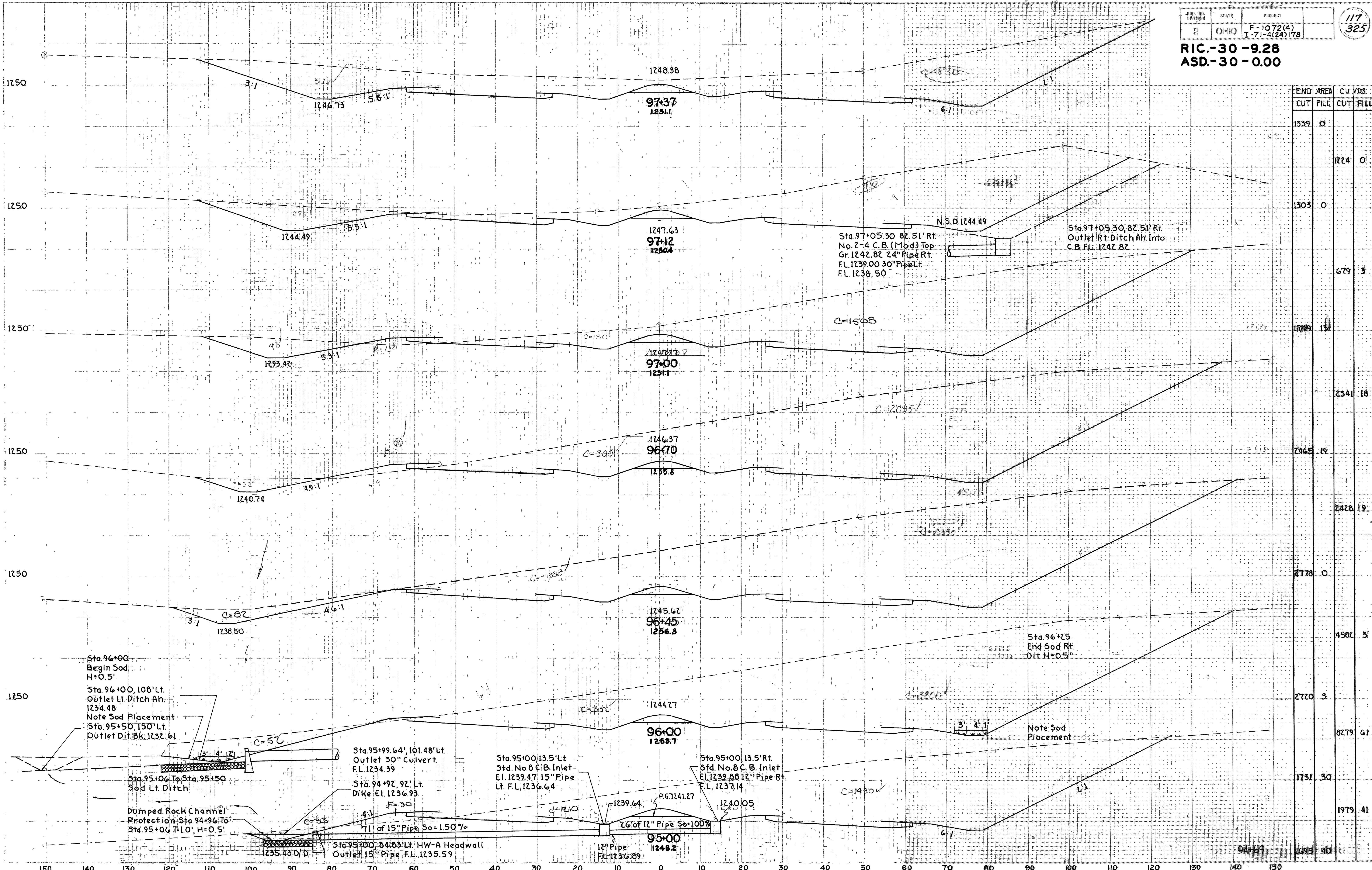
RIC.-30-9.28
ASD.-30-0.00



END STA	AREA		CU YDS.	
	CUT	FILL	CUT	FILL
150	1588	200		
140			1632	227
130	1449	221		
120			321	199
110	1475	220		
100			1995	304
90	1789	277		
80			2510	420
70	1598	290		
60			2975	834
50	1079	460		

Sta. 90+60 to Sta. 91+79

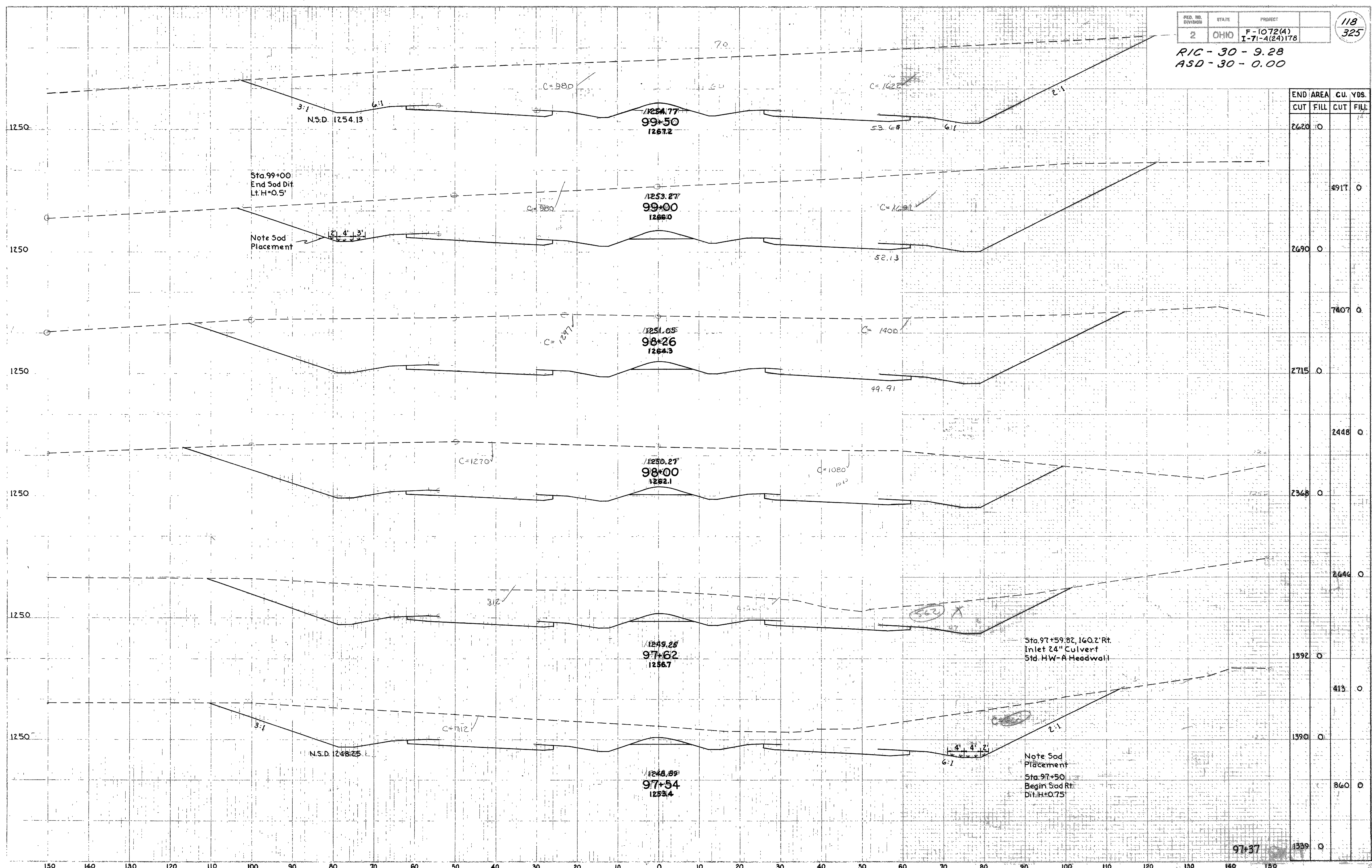
RIC.-30-9.28
ASD.-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1339	0		
		1224	0
		1303	0
			679
		1749	13
			2341
		2465	18
			2428
		2778	9
			2778
		2720	0
			4582
		2720	3
			8279
		1751	30
			1979
		1695	41
			94+69
		1695	40

Sta. 95+00 to Sta. 97+37

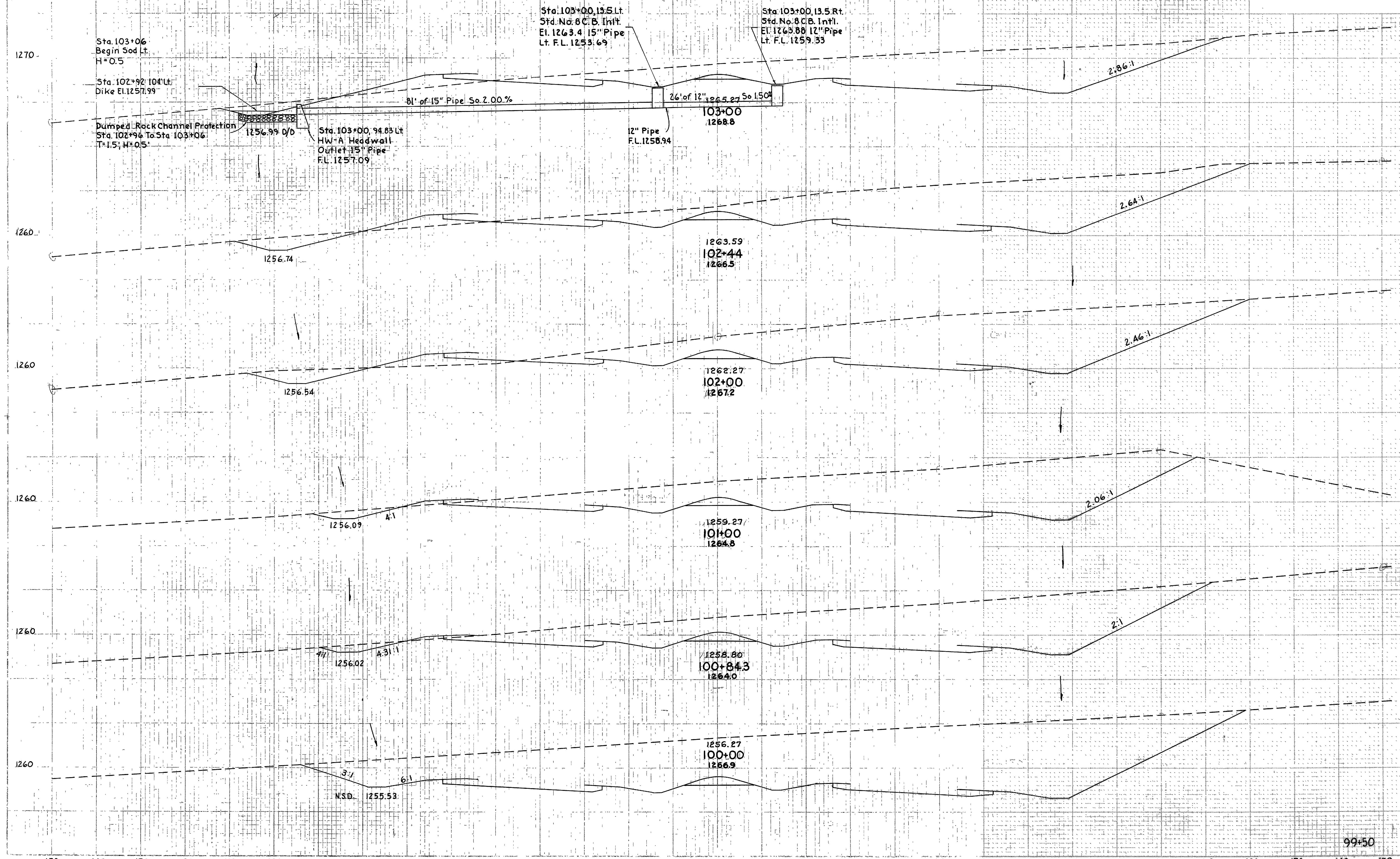
RIC - 30 - 9.28
ASD - 30 - 0.00



END AREA	CU. YDS.	
	CUT	FILL
2620	0	16
2690	0	4917
2715	0	7407
2715	0	2448
2368	0	2646
1392	0	413
1390	0	860
1339	0	

Sta. 97+54 to Sta. 99+50

RIC-30-9.28
ASD-30-0.00

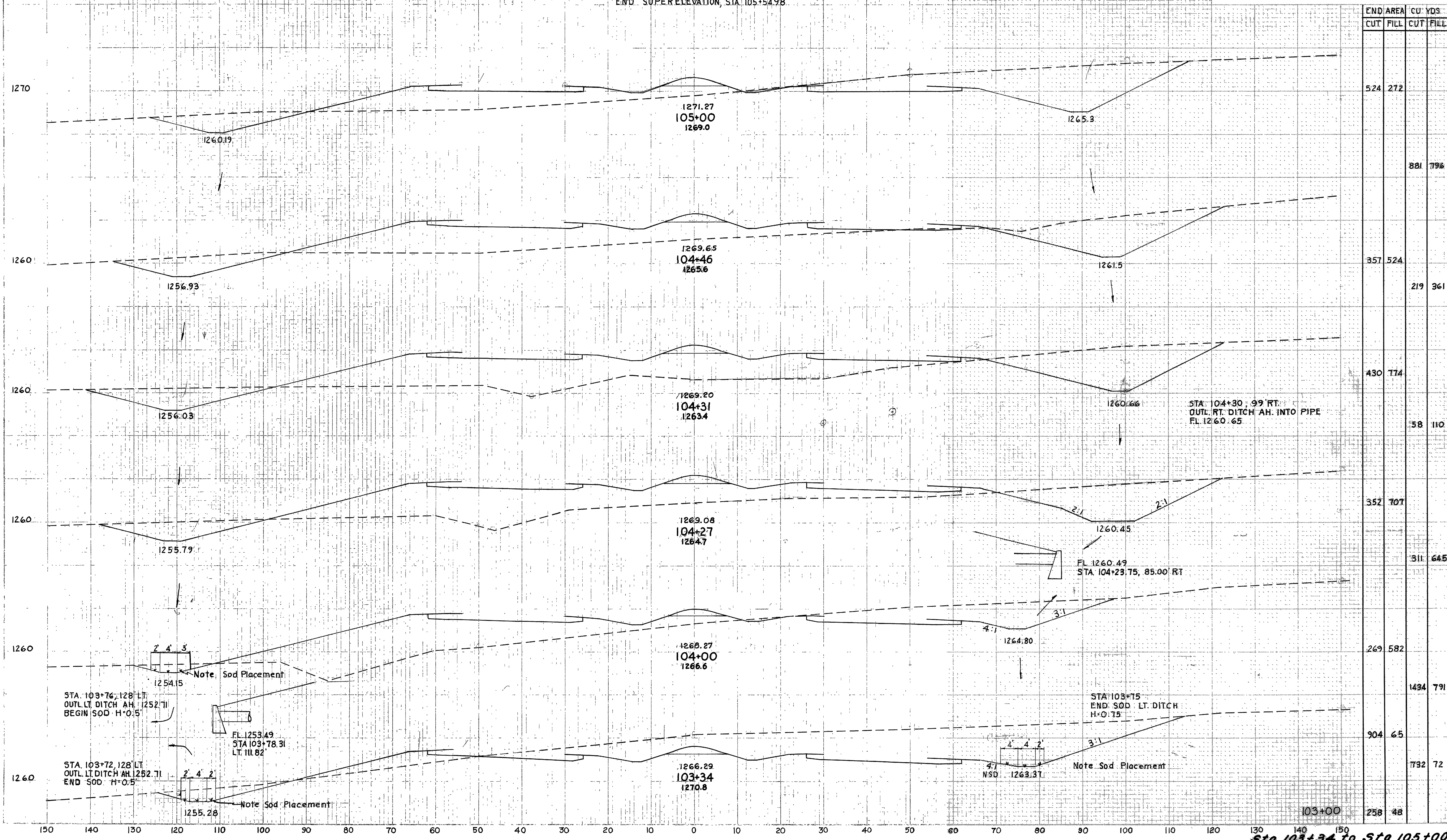


END STA.	AREA		CU YDS	
	CUT	FILL	CUT	FILL
103+00	258	48		
102+94			1365	83
102+80	1058	32		
102+44			1893	63
102+00	1265	45		
101+00			4535	91
100+84.3	1184	4		
100+00			689	2
99:50	1184	3		
99:00			5206	6
98:00	2150	0		
97:00			4417	0
96:00	2620	0		

Sta. 100+00 to Sta. 103+00

RIC-30-9.28
ASD-30-0.00

END SUPERELEVATION, STA. 105+54.98

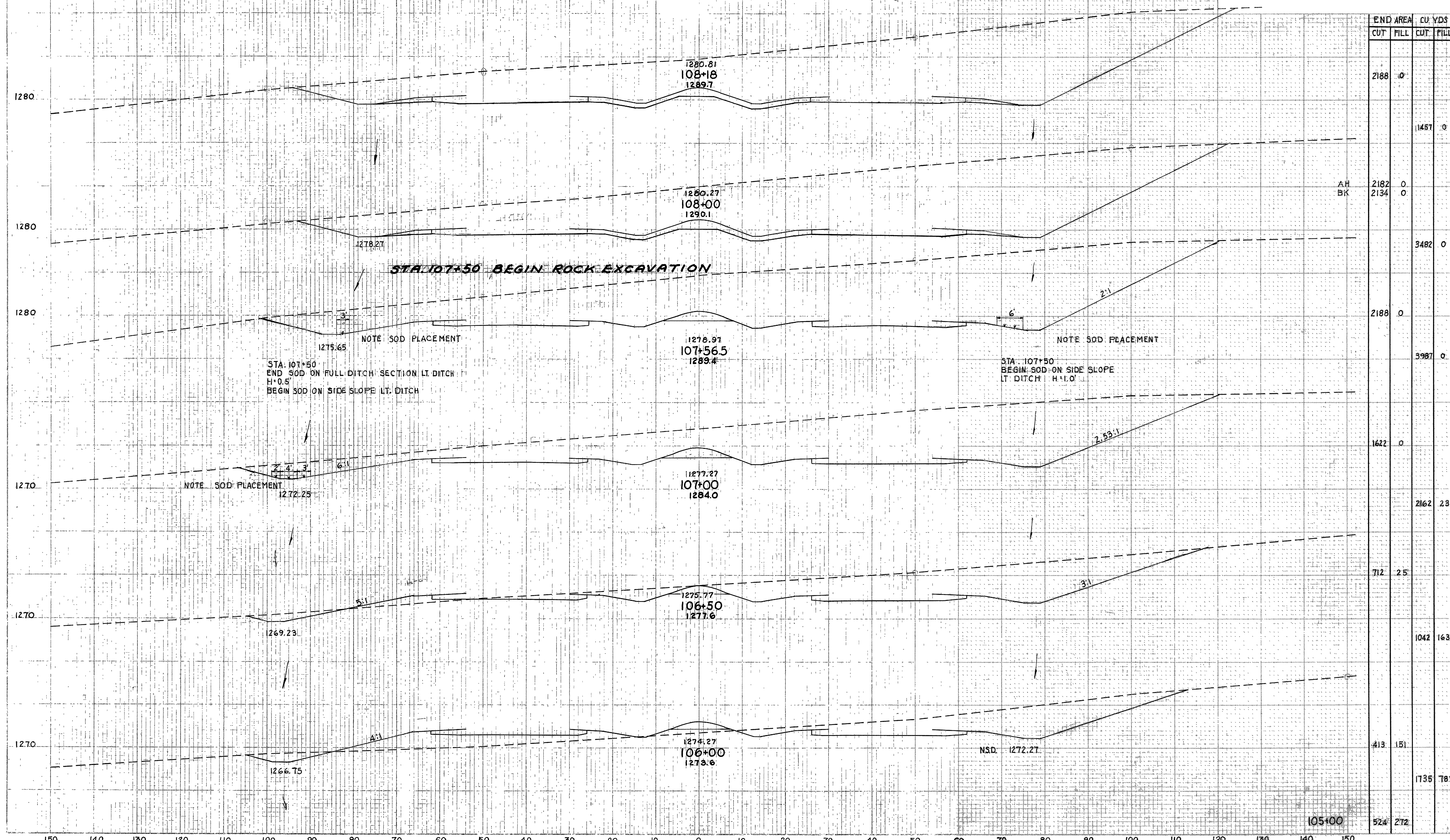


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
524	272		
		881	796
357	524		
		219	361
430	774		
		58	110
352	707		
		311	645
269	582		
		1434	791
904	65		
		732	72
258	48		

Sta. 103+34 to Sta. 105+00

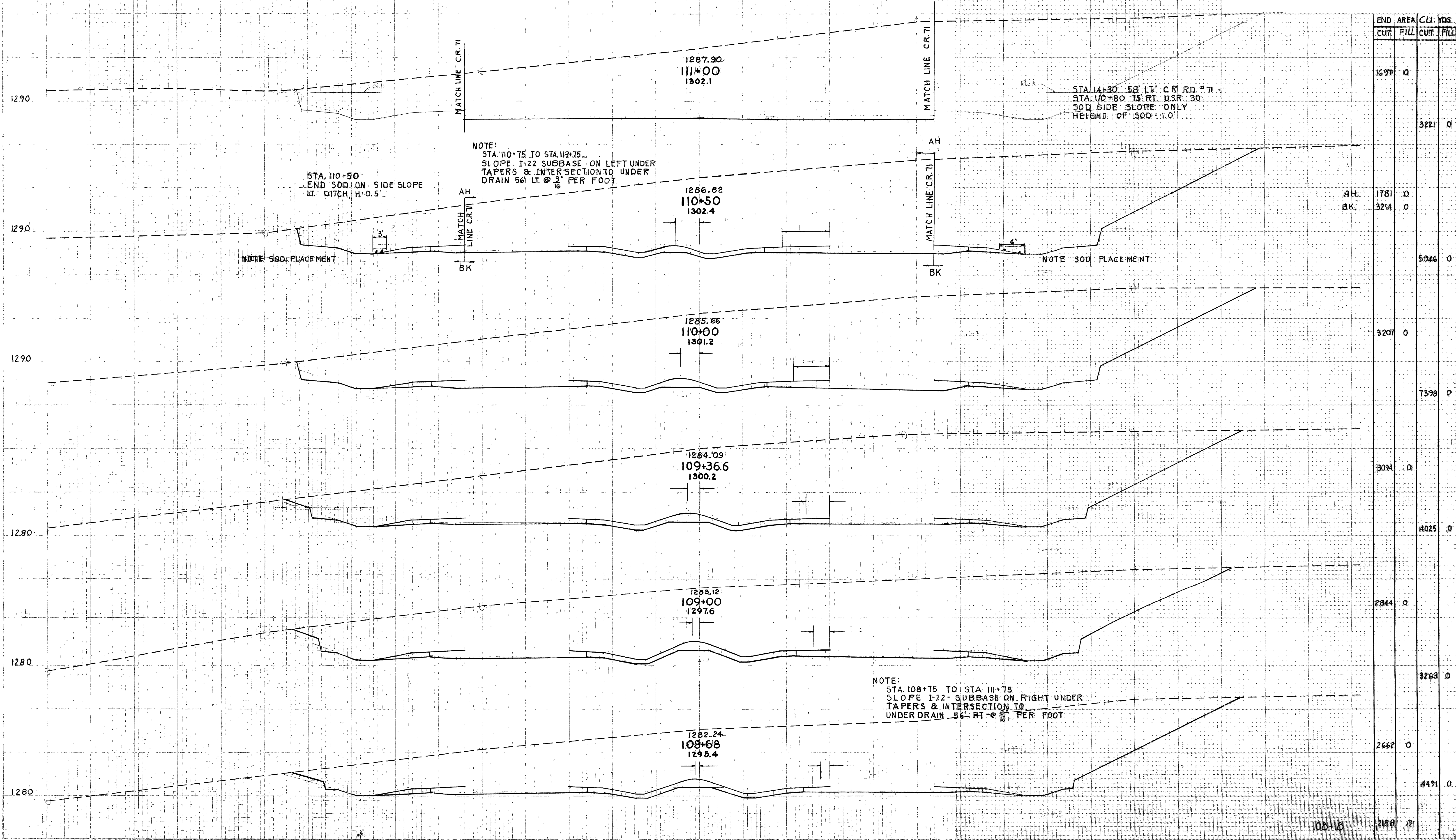
Subsequent to the completion of this plan the undercut in rock areas was deleted. Consequently, the lower line in rock cut shall be disregarded. The quantities have been adjusted on Sheet 78.

RIC-30-9.28
ASD-30-0.00



STATION	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
108+18	2188	0	0	0
108+00	2182	0	1487	0
107+56.5	2188	0	3482	0
107+00	2162	23	3987	0
106+50	1622	0	2162	23
106+00	712	25	2162	23
105+00	413	151	1042	163
105+00	524	272	1735	783

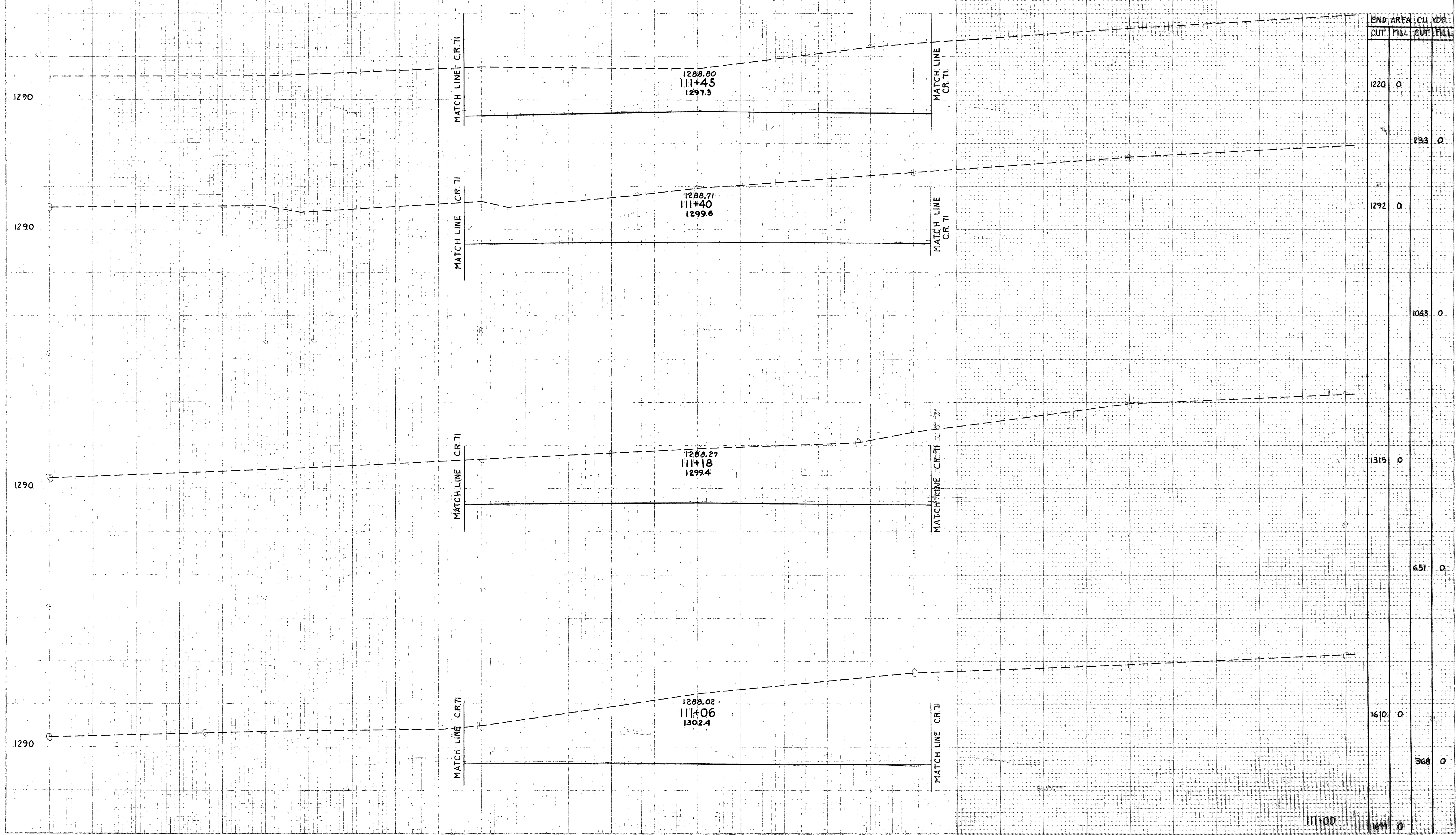
RIC - 30 - 9.28
ASD - 30 - 0.00



END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
111+00	1697	0	0	0
110+75	1781	0	0	0
110+50	3214	0	0	0
110+25			5946	0
110+00	3207	0	0	0
109+75			7398	0
109+50			3094	0
109+25			4025	0
109+00	2844	0	0	0
108+75			3263	0
108+50			2662	0
108+25			4491	0
108+00	2188	0	0	0

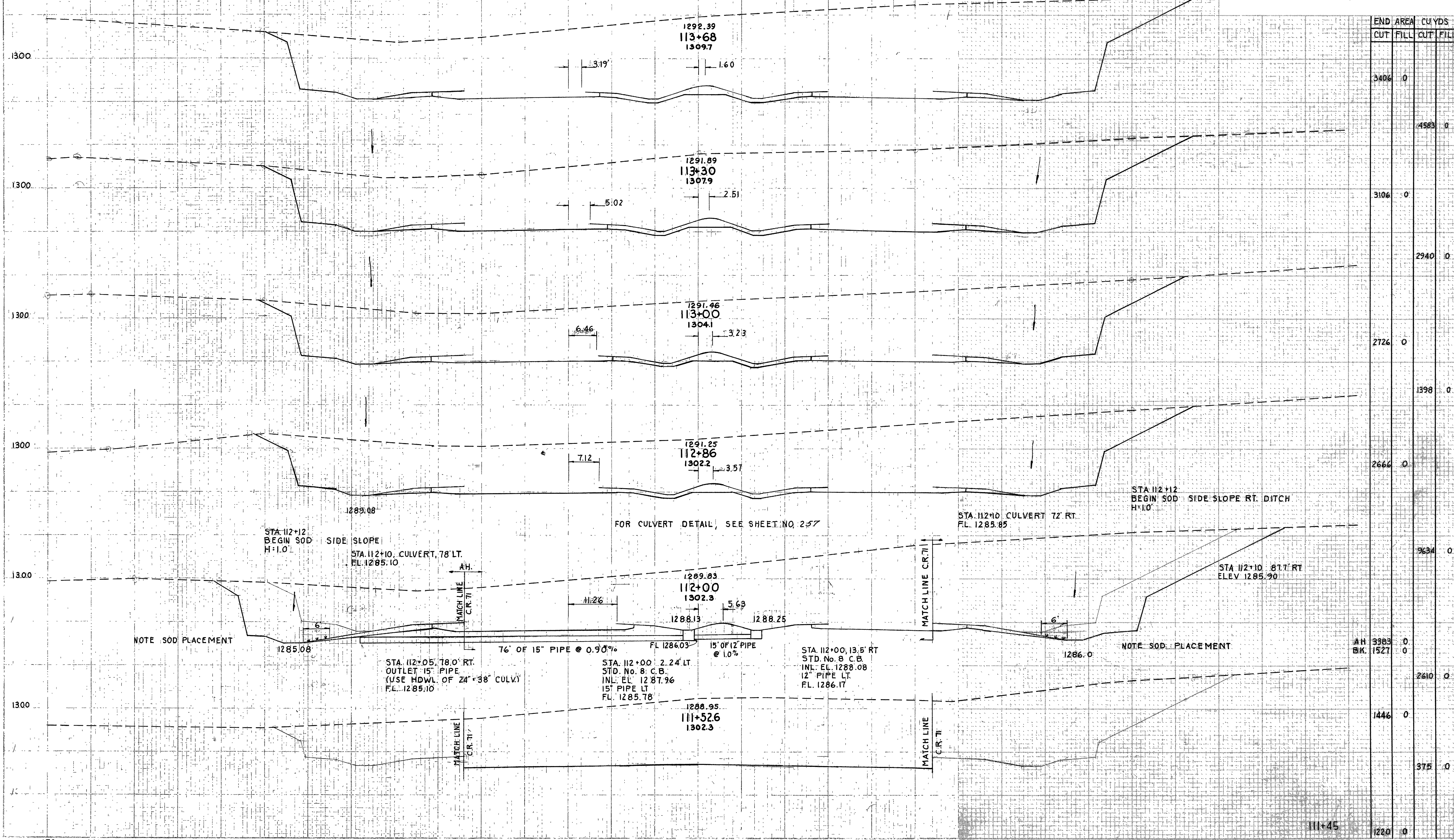
Sta. 108+68 to Sta. 111+00

RIC-30-9.28
ASD-30-0.00



END STA.	AREA		CU YDS.	
	CUT	FILL	CUT	FILL
1220	0			
			233	0
1292	0			
			1063	0
1315	0			
			651	0
1610	0			
			368	0
1697	0			

RIC-30-9.28
ASD-30-0.00



END AREA		CUYDS	
CUT	FILL	CUT	FILL
		3406	0
		4583	0
		3106	0
		2940	0
		2726	0
		1398	0
		2666	0
		3634	0
AH	3383	0	0
BK	1527	0	0
		2610	0
		1446	0
		375	0
		1220	0

Sta. 111+52.6 to Sta. 113+68

RIC-30-9.28
ASD-30-0.00



1294.51
116+00
1319.1

1293.80
115+00
1314.5

1293.32
114+70
1312.5

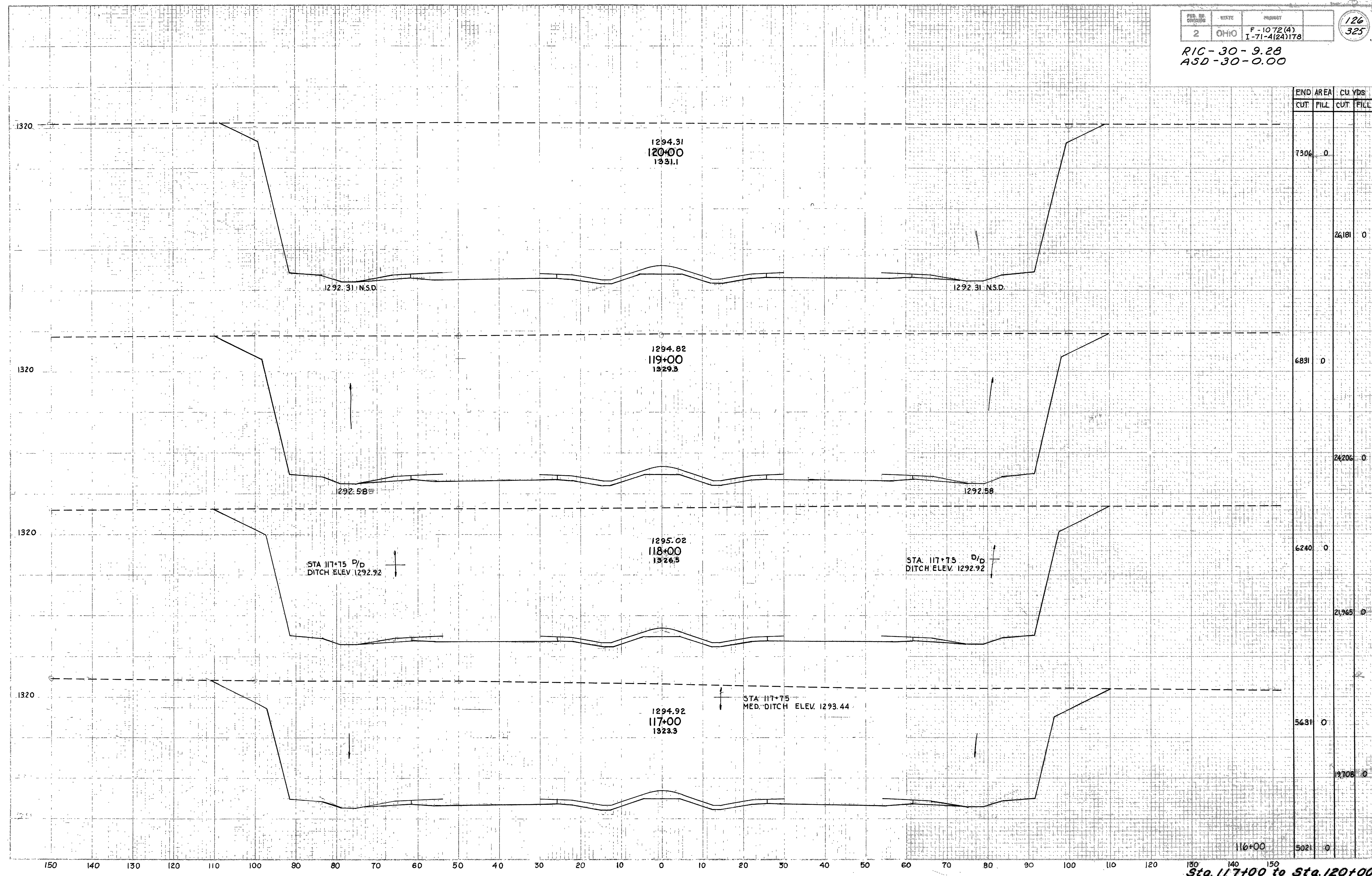
1293.11
114+29
1307.7

0.21'

0.13'

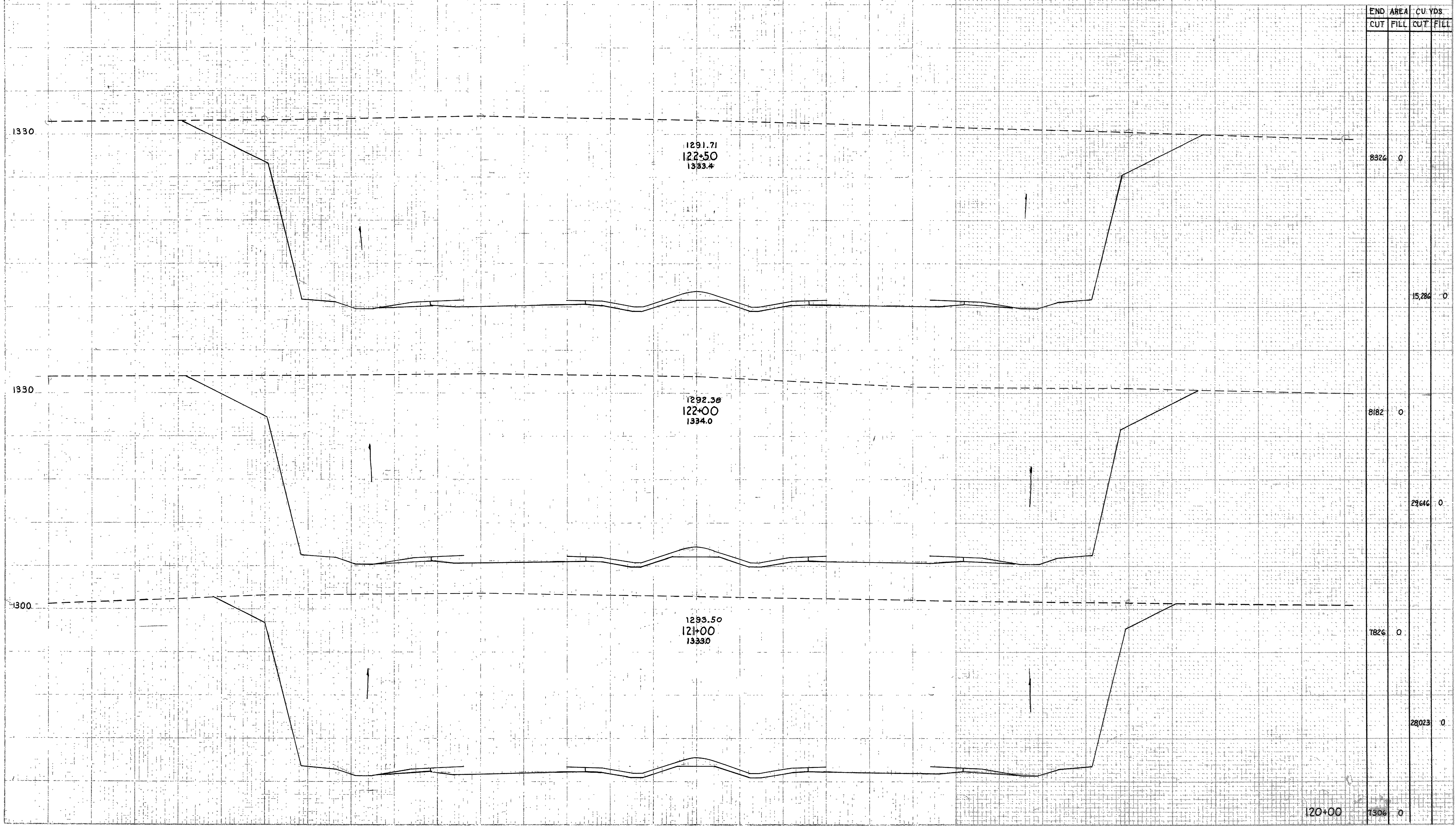
113+60
Sta. 114+29 to Sta. 116+00

RIC-30-9.28
ASD-30-0.00



END STA	AREA		CU YDS	
	CUT	FILL	CUT	FILL
120+00	7306	0		
119+00	6831	0	26181	0
118+00	6240	0	24206	0
117+00	5631	0	21765	0
116+00	5021	0	19708	0

RIC-30-9.28
ASD-30-0.00

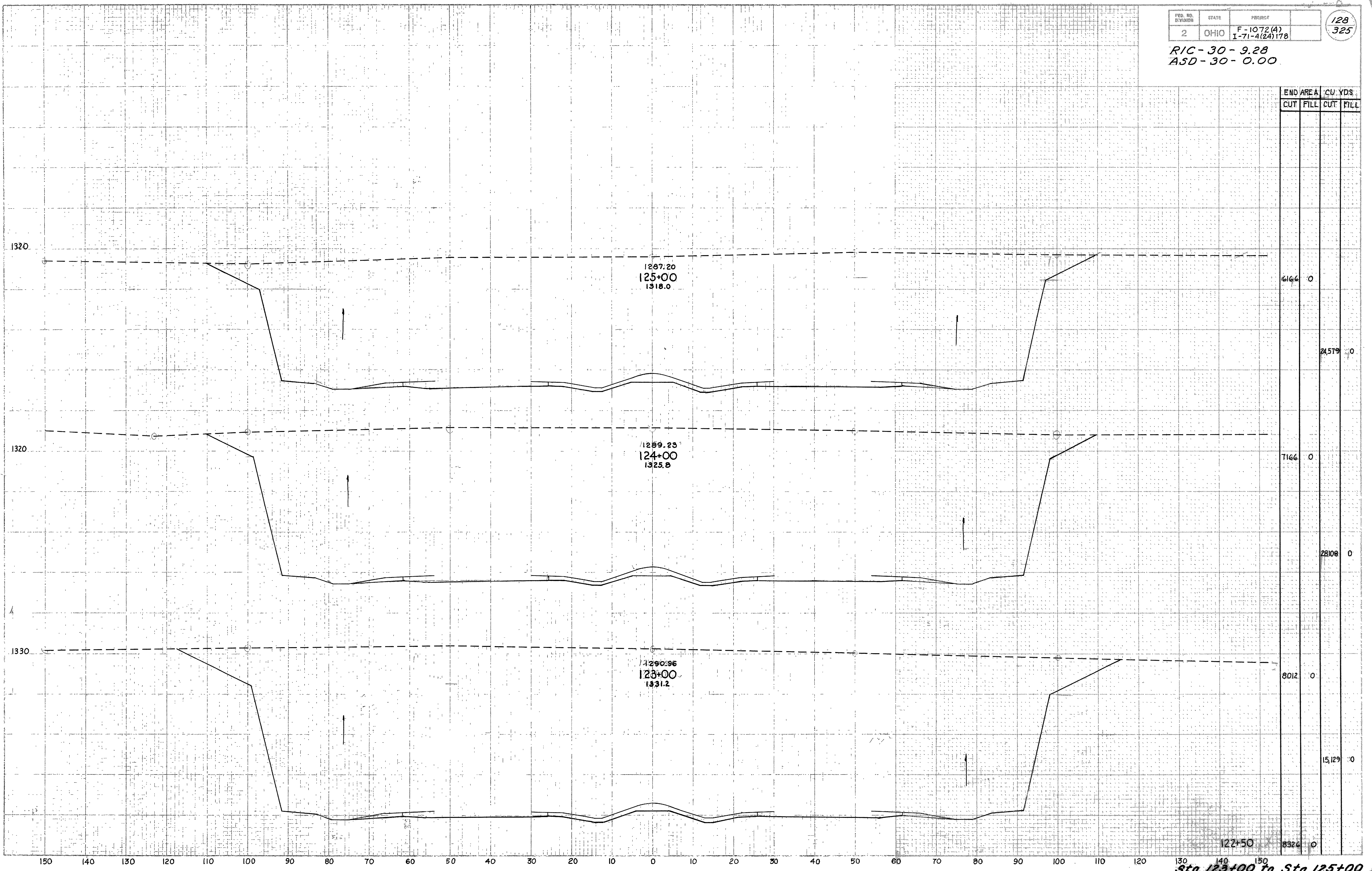


END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
122+50	8326	0		
122+00	8182	0	15,284	0
121+00	1826	0	29,646	0
120+00	1306	0	28,023	0

Sta. 121+00 to Sta. 122+50

RIC-30-9.28
ASD-30-0.00

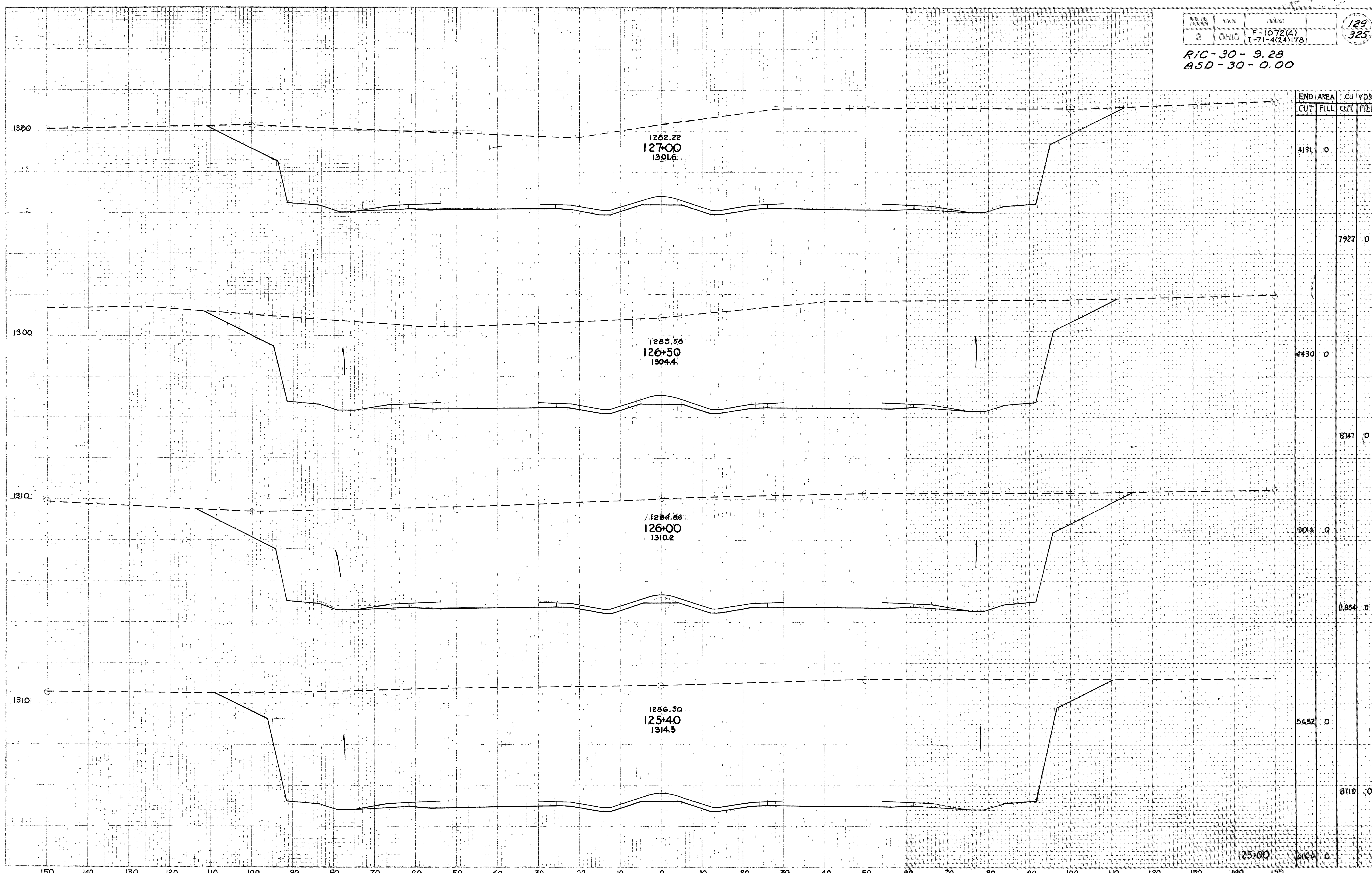
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
6166	0		
		24579	0
7166	0		
		28108	0
8012	0		
		15129	0
8324	0		

125+50
Sta. 123+00 to Sta. 125+00

RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS	
	CUT	FILL
4131	0	7927
4430	0	8747
5016	0	11854
5652	0	8710
6166	0	

1262.22
127+00
1301.6

1283.56
126+50
1304.4

1284.86
126+00
1310.2

1286.30
125+40
1314.5

125+00

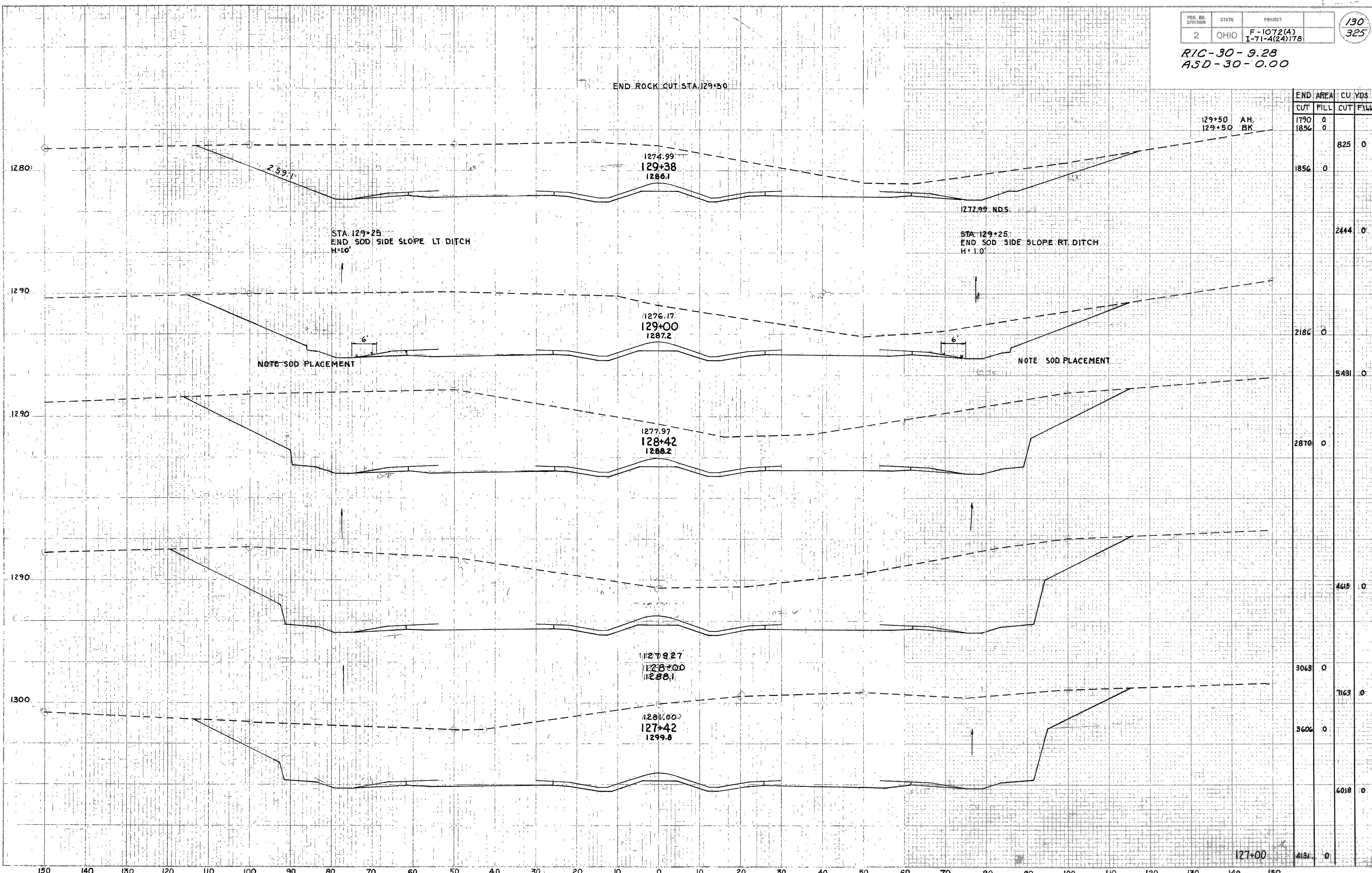
Sta. 125+40 to Sta. 127+00

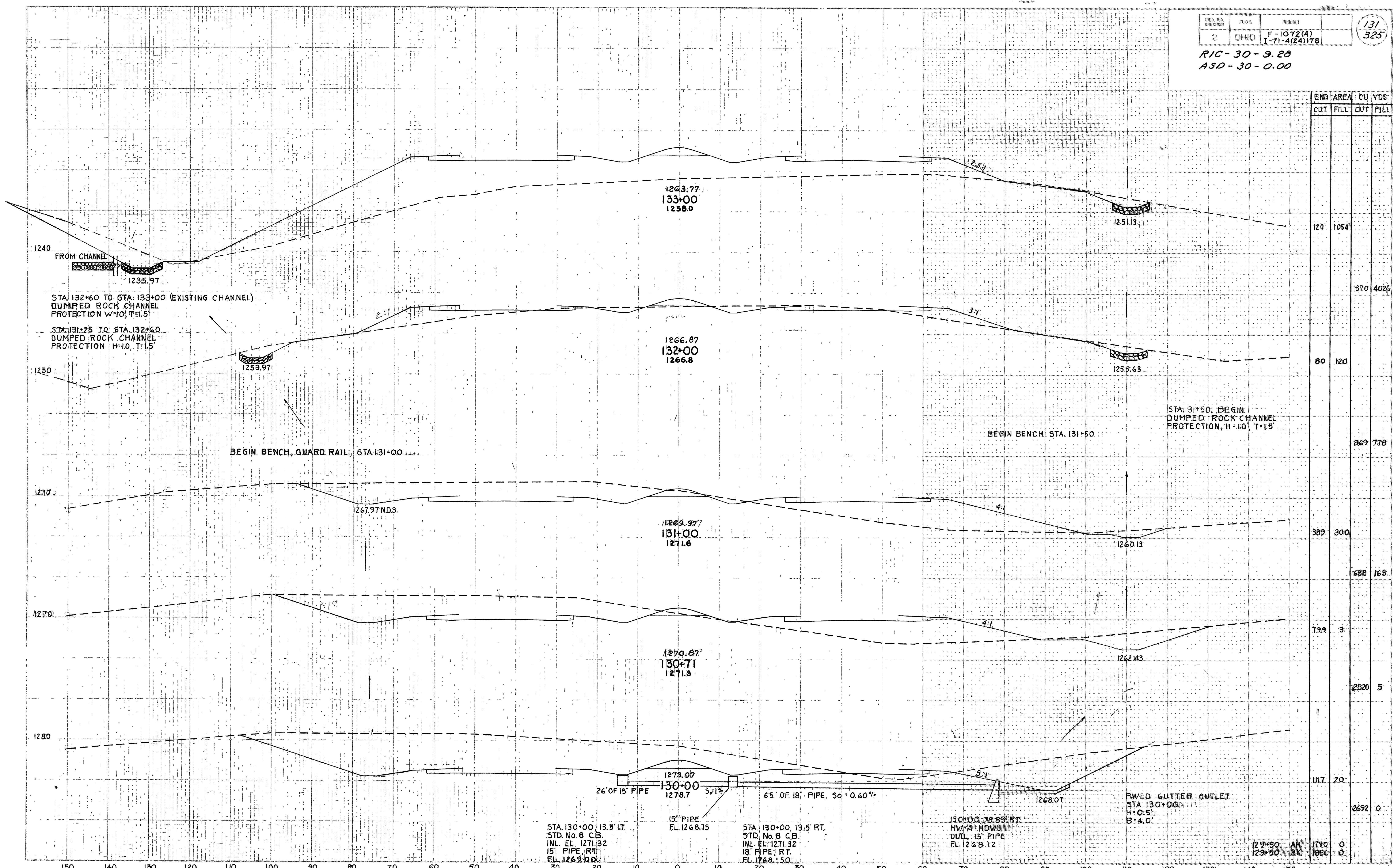
RIC-30-9.28
ASD-30-0.00

END ROCK CUT STA. 129+50

129+50 A.H.
129+50 BK

END STA.	AREA		CU YDS	
	CUT	FILL	CUT	FILL
1790	0	0	0	0
1856	0	0	825	0
				2444
				2186
				5431
				2870
				4615
				3063
				7163
				3606
				4018
127+00	4131	0		

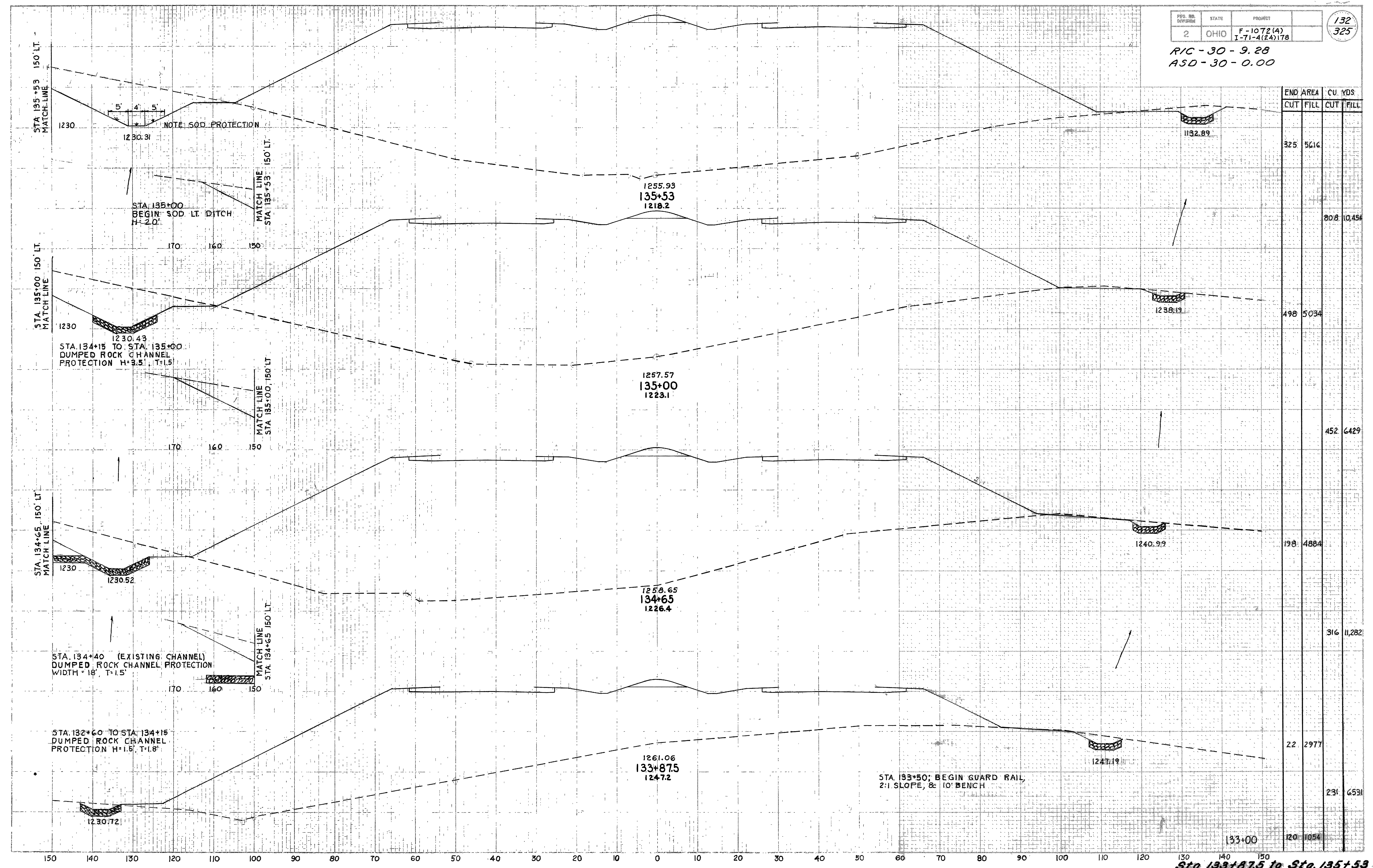




END	AREA		CU YDS	
	CUT	FILL	CUT	FILL
120		1054		
			370	4026
80		120		
			869	778
1270			389	300
			638	163
1270			799	3
			2520	5
1280			1117	20
			2692	0

Sta. 130+00 to Sta. 133+00

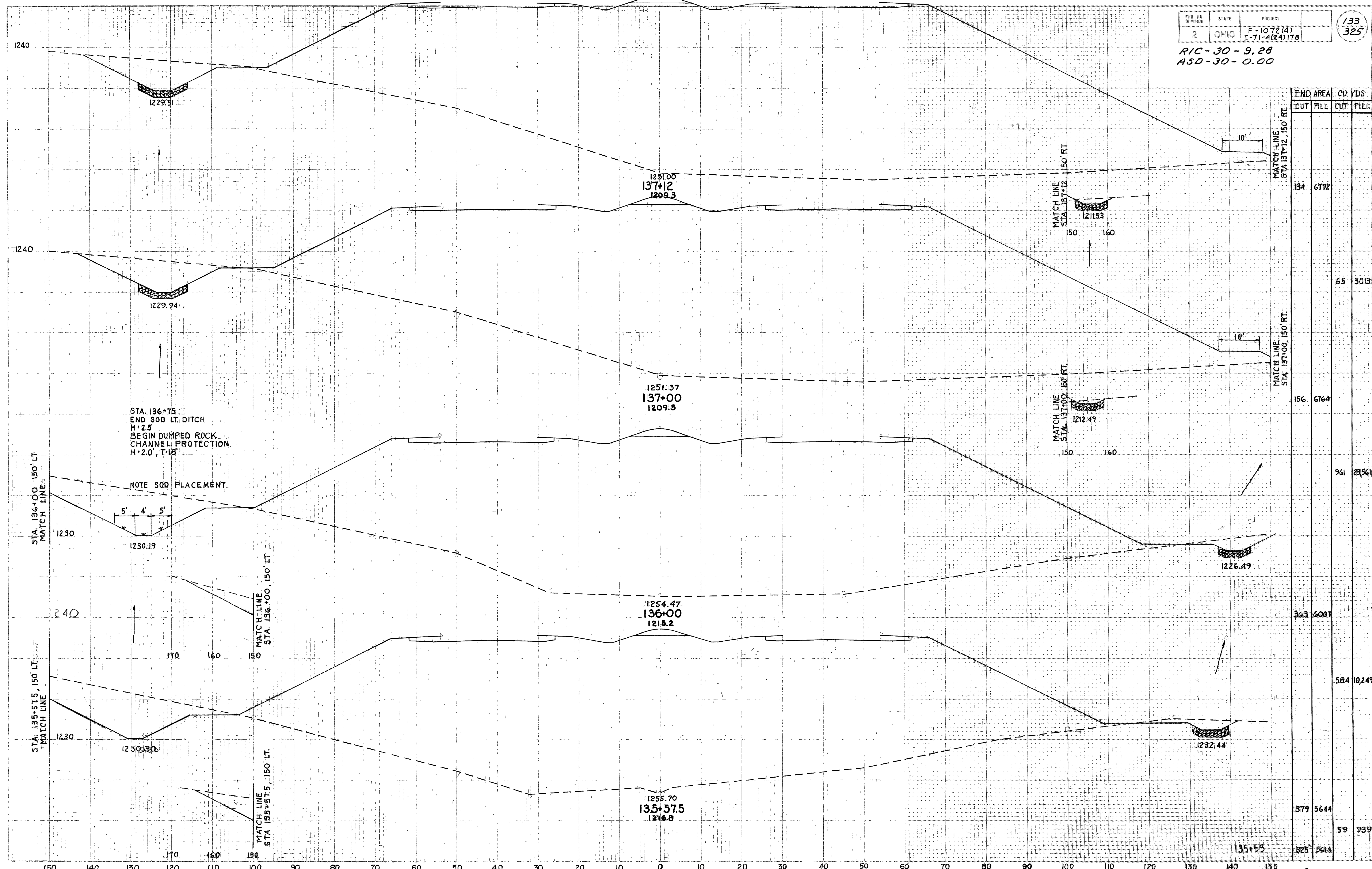
RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
325	5616	
498	5034	808 10,454
452	6429	
198	4884	
316	11,282	
22	2977	
231	6531	
120	1054	

Sta. 133+87.5 to Sta. 135+53

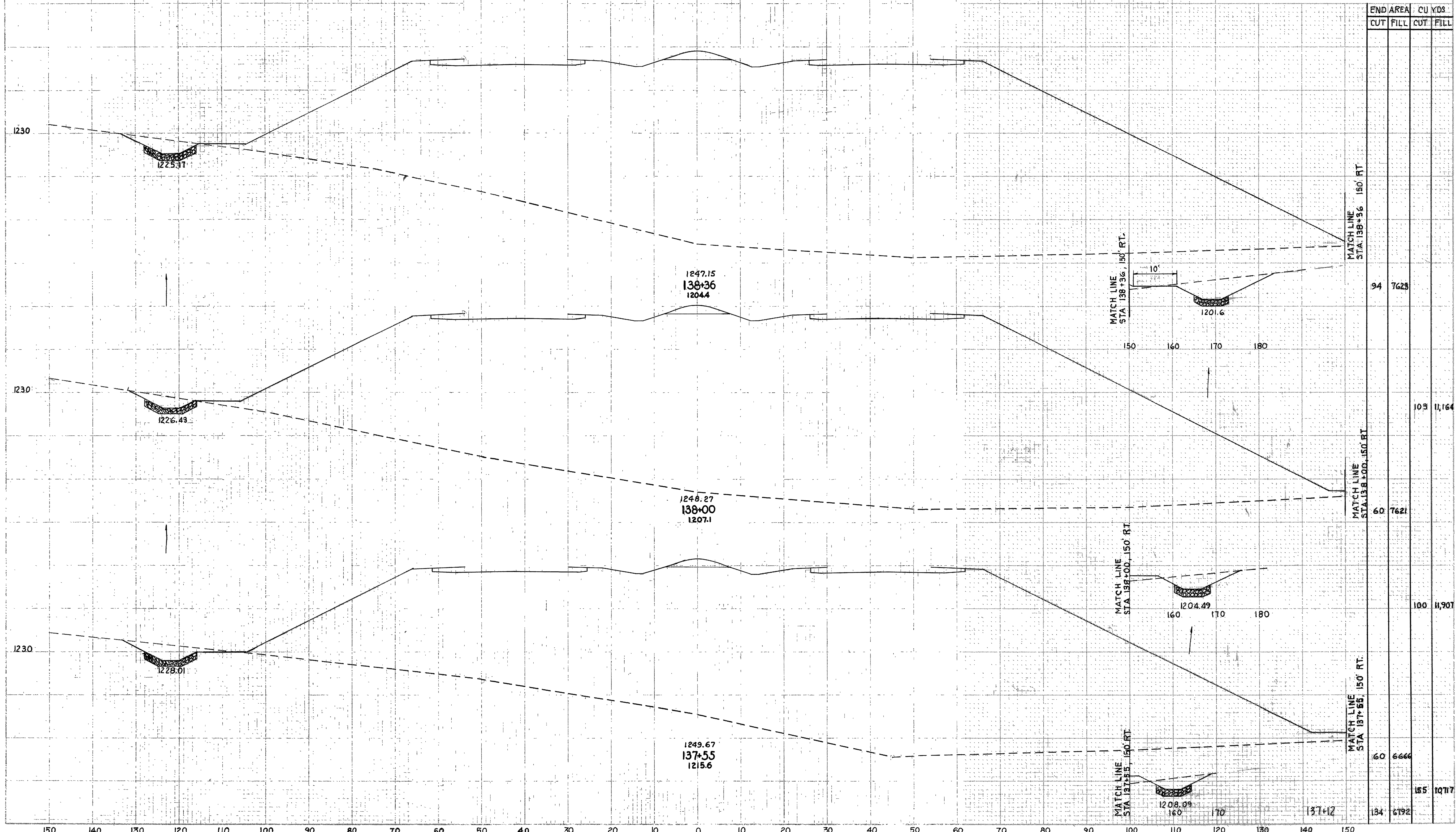
RIC-30-9.28
ASD-30-0.00



STATION <th colspan="2">END AREA</th> <th colspan="2">CU YDS.</th>	END AREA		CU YDS.	
	CUT	FILL	CUT	FILL
134		6792		
150		65		3013
156		6764		
161		961		23561
163		6007		
1584		10249		
379		5644		
59		939		
325		5616		

Sta. 135+57.5 to Sta. 137+12

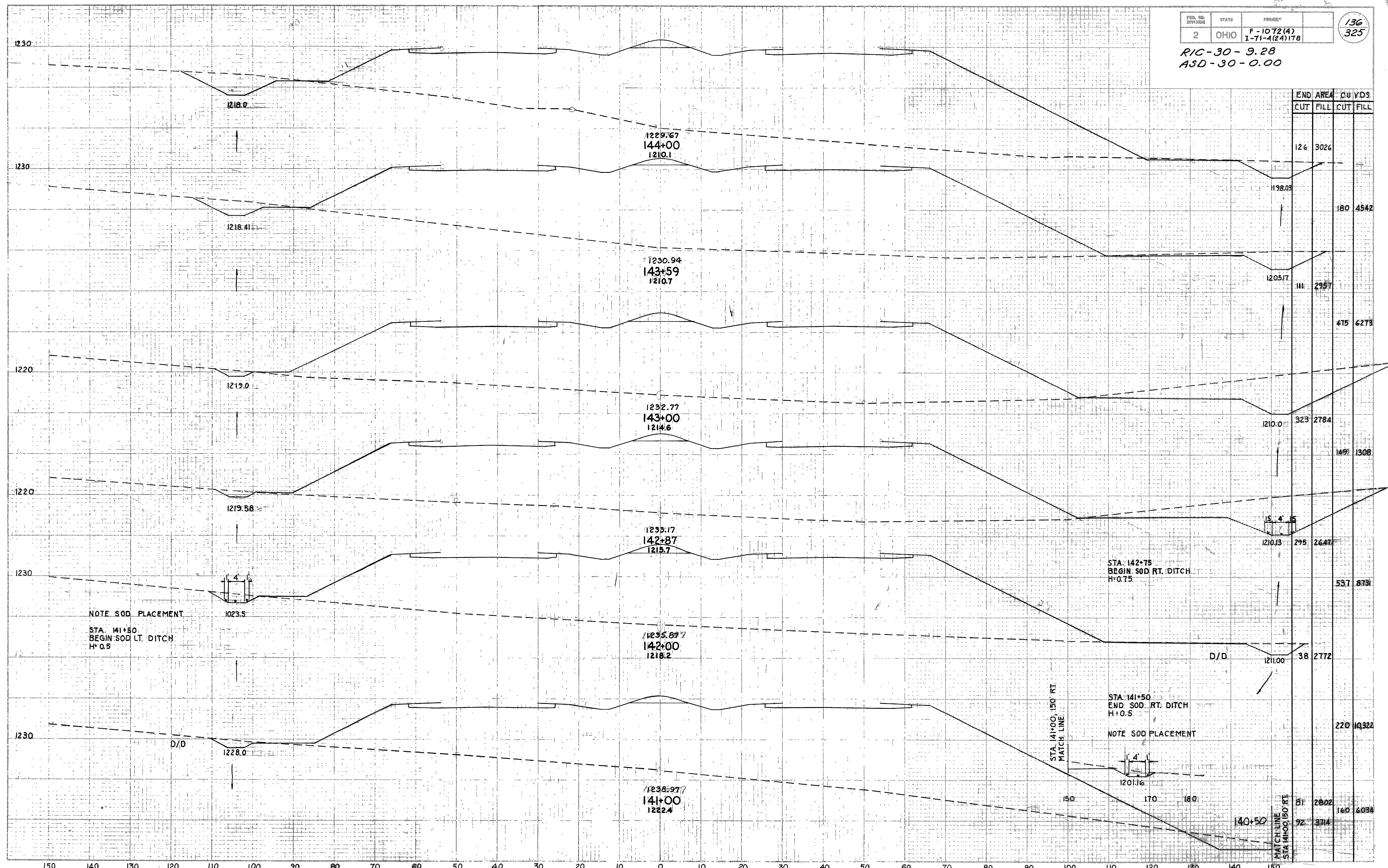
RIC-30-9.28
ASD-30-0.00



END STA.	END AREA		CU YDS.	
	CUT	FILL	CUT	FILL
138+36	94	7623		
138+00	60	7621	103	11,164
137+55	60	6666	100	11,907
137+12	134	6192	155	10,717

Sta. 137+55 to Sta. 138+36

RIC-30-9.28
ASD-30-0.00



STATION	END AREA		CU YDS.	
	CUT	FILL	CUT	FILL
144+00	126	3026		
143+59		180	4542	
143+59	111	2957		475
143+00		475	6273	
143+00	323	2784		1497
142+87		15	1308	
142+87	295	2647		537
142+00		38	2772	
141+50		220	10322	
141+00	81	2802		160
141+00	92	3714		6034

NOTE SOD PLACEMENT
STA. 141+50
BEGIN SOD LT. DITCH
H=0.5

STA. 142+75
BEGIN SOD RT. DITCH
H=0.75

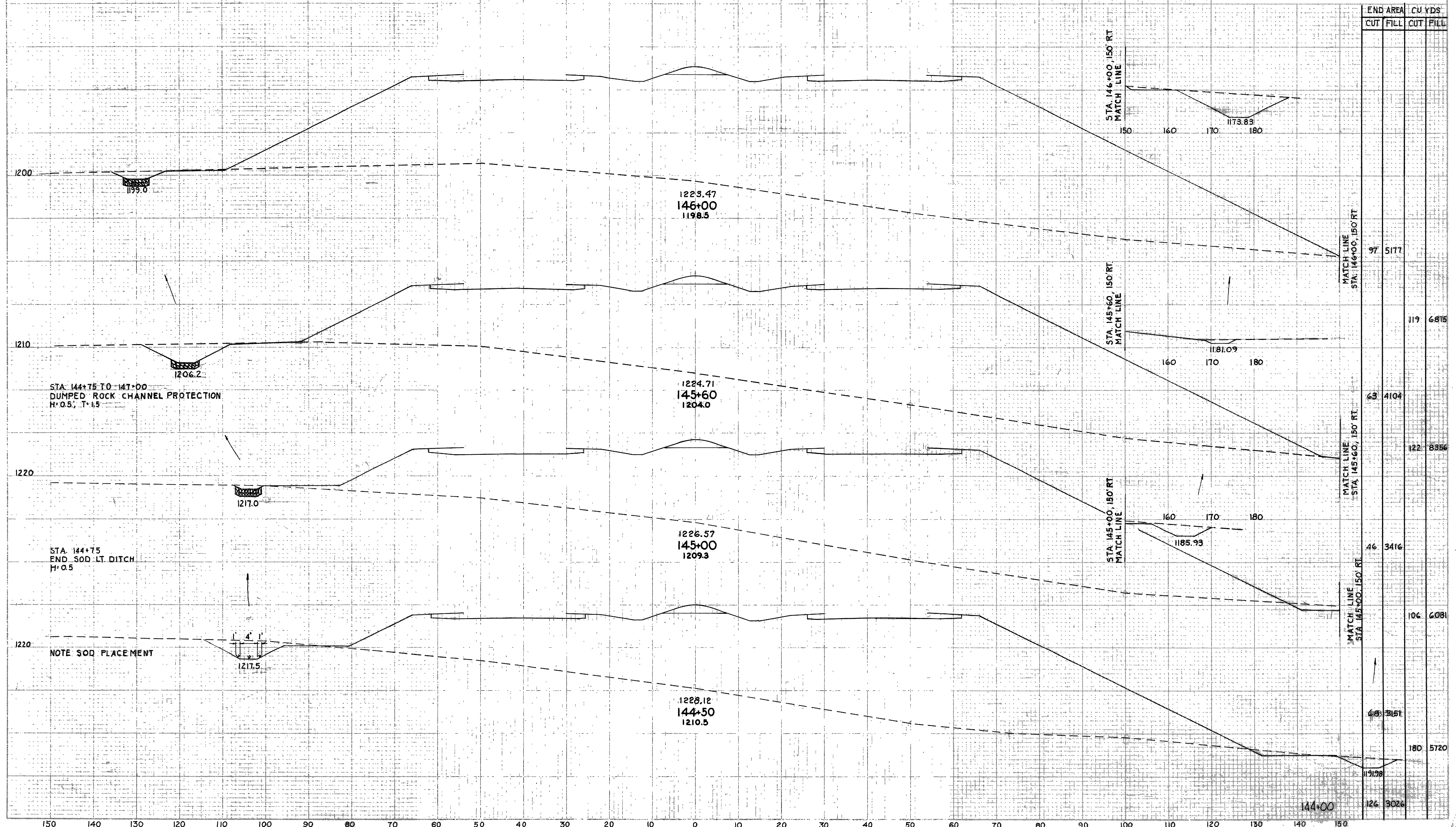
STA. 141+50
END SOD RT. DITCH
H=0.5

STA. 141+00, 150 RT.
MATCH LINE

STA. 140+50, 150 RT.
MATCH LINE

Sta. 141+00 to Sta. 144+00

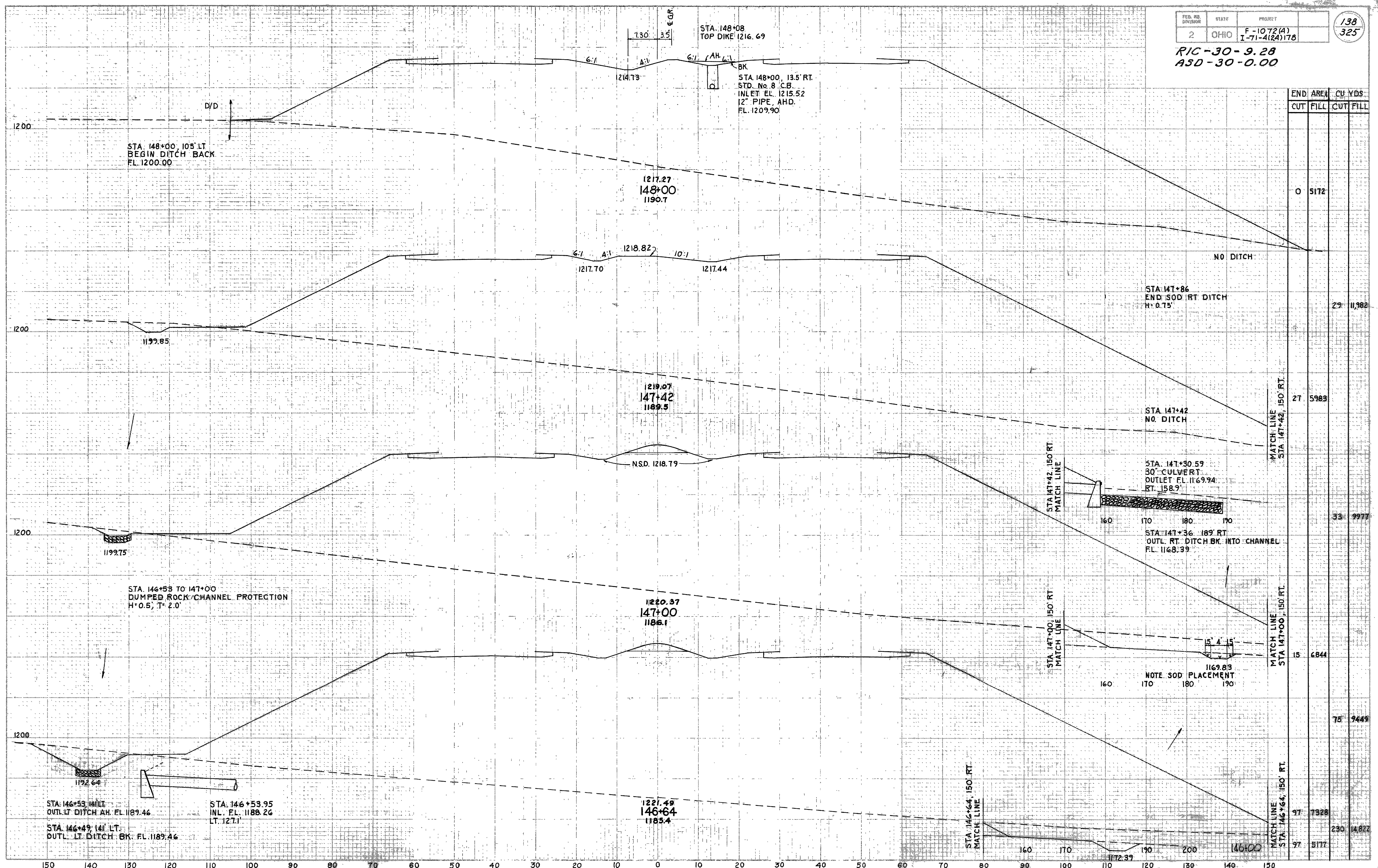
RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
97	5177	
119	6815	
63	4104	
122	8356	
46	3416	
106	6081	
68	3151	
180	5720	
126	3026	

Sta. 144+50 to Sta. 146+00

RIC-30-9.28
ASD-30-0.00



END STA	AREA		CU YDS
	CUT	FILL	
148+00	0	5172	
147+86		29	11,982
147+42	27	5983	
147+30.59		33	9977
147+00	15	6844	
146+64	75	9449	
146+64	97	7328	
146+64	230	14,822	
146+64	97	5177	

Sta. 146+64 to Sta. 148+00

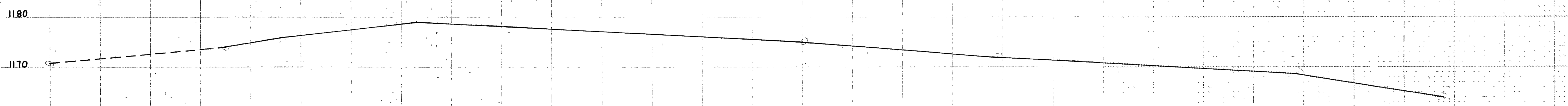
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(A) I-71-4(24)178

140
325

RIC-30-9.28
ASD-30-0.00

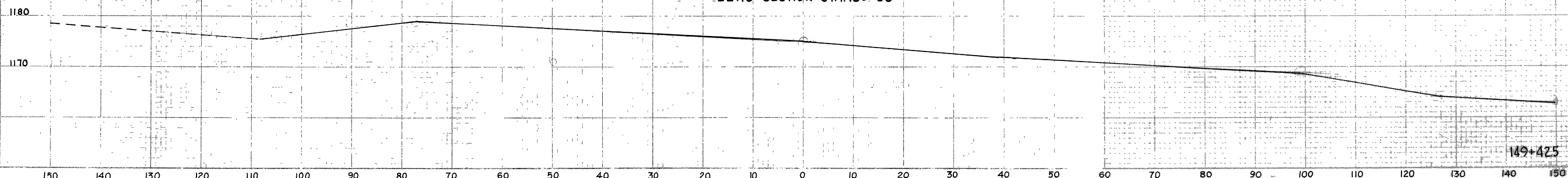
END AREA		CU YDS.	
CUT	FILL	CUT	FILL

ZERO SECTION STA. 150+56



0	0		
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ZERO SECTION STA. 150+23

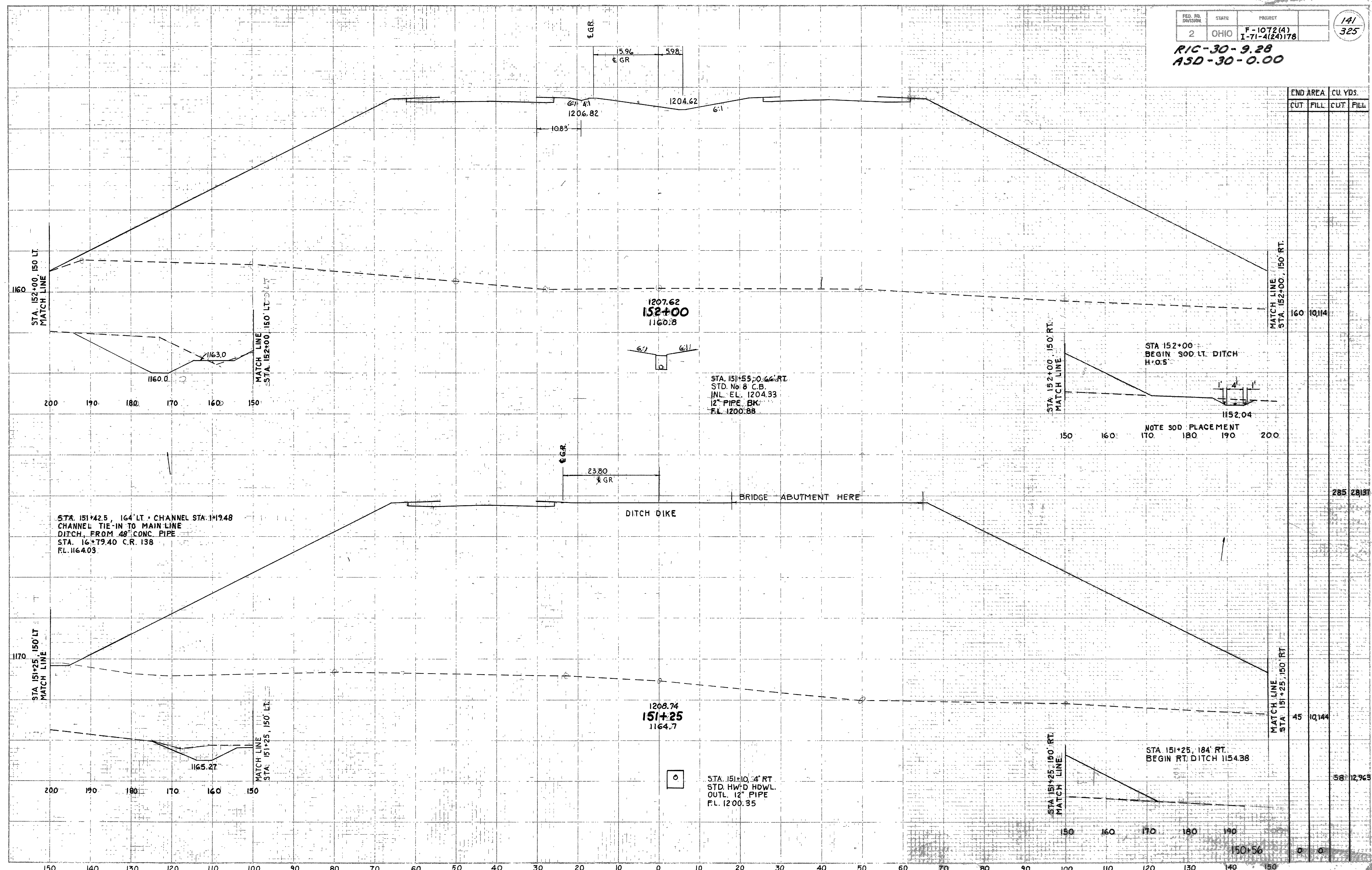


0	0		
0	5537		
4	5199		

149+425

Sta. 150+23 to Sta. 150+56

RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
160	10,114	
285	28,371	
45	10,144	
58	12,963	

STA. 151+42.5, 164' LT. CHANNEL
CHANNEL TIE-IN TO MAIN LINE
DITCH, FROM 48" CONC. PIPE
STA. 16+79.40 C.R. 138
FL. 1164.03

STA. 151+55+0.66 RT.
STD. No 8 C.B.
JNL. EL. 1204.33
12" PIPE BK.
FL. 1200.88

STA. 151+10.4 RT.
STD. HW'D HDWL.
OUTL. 12" PIPE
FL. 1200.35

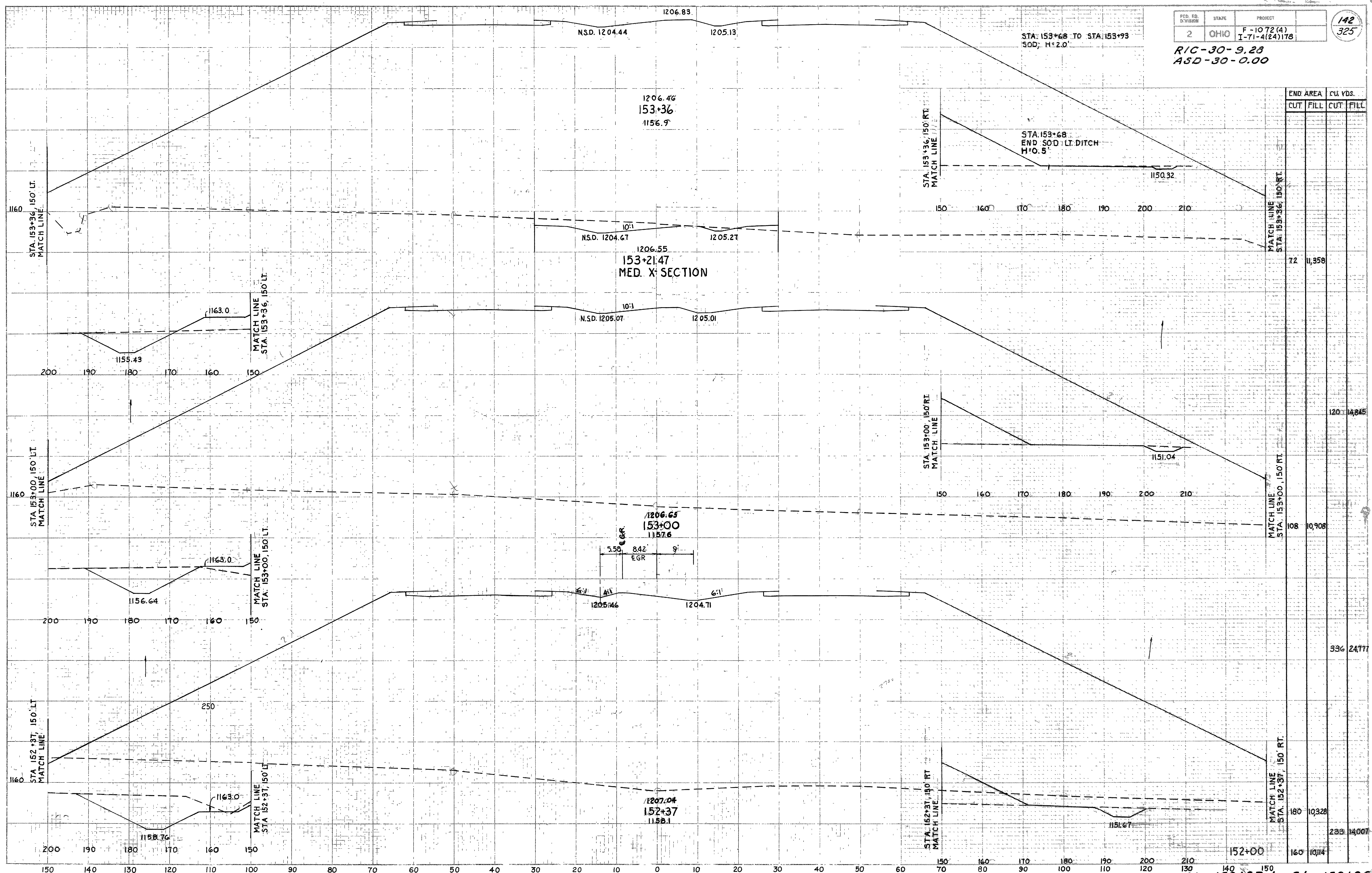
STA 152+00
BEGIN 300' LT. DITCH
H=0.5

NOTE SOD PLACEMENT
170 180 190 200

STA 151+25, 184' RT.
BEGIN RT. DITCH 1154.38

Sta. 151+25 to Sta. 152+00

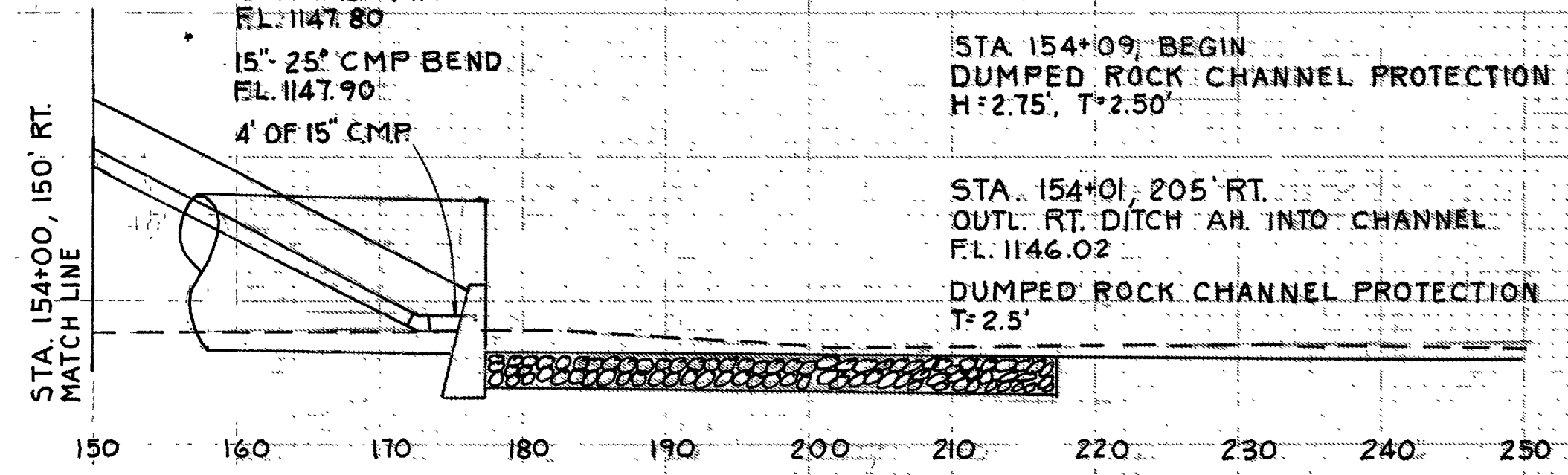
RIC-30-9.28
ASD-30-0.00



END STA.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
72		11,358		
108		10,908		
180		10,328		
160		10,114		
120	14,845			
336	24,777			

RIC-30-9.28
ASD-30-0.00

STA 154+04.1, 178.5 RT.
OUTL. 12" PIPE
FL. 1146.30
STA 153+98.1, 178.5 RT.
OUTL. 15" PIPE
FL. 1147.80
15'-25" CMP BEND
FL. 1147.90
4' OF 15" CMP



STA 154+09, BEGIN
DUMPED ROCK CHANNEL PROTECTION
H=2.75', T=2.50'

STA 154+01, 205' RT.
OUTL. RT. DITCH AN. INTO CHANNEL
FL. 1146.02
DUMPED ROCK CHANNEL PROTECTION
T=2.5'

STA 153+94, 205' RT.
OUTL. RT. DITCH BK. INTO CHANNEL
FL. 1146.02

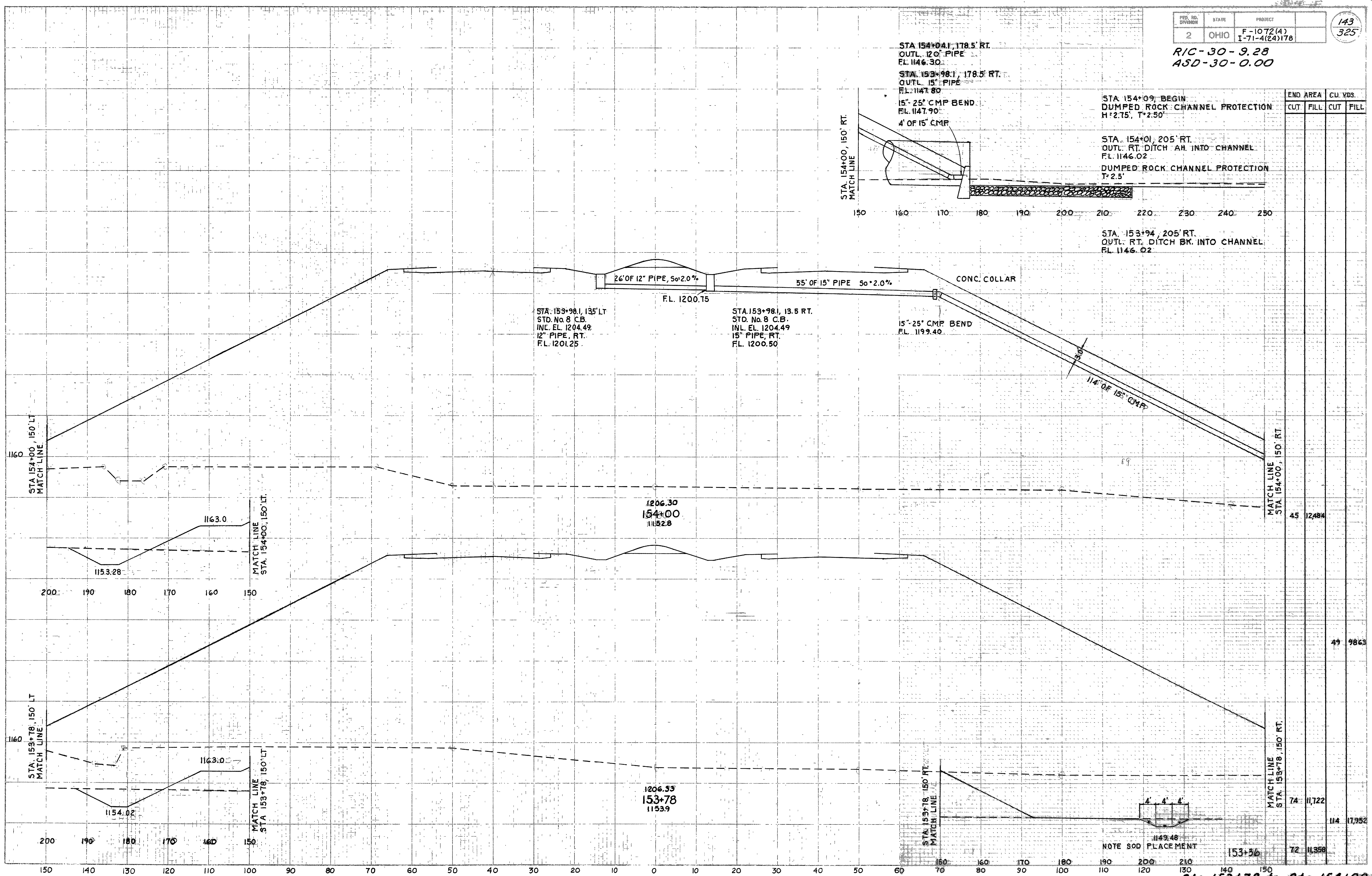
END AREA	CU. YDS.	
	CUT	FILL
45	12484	
49	9863	
74	11722	114
72	11398	

STA 153+98.1, 135' LT
STD. No. 8 C.B.
INL. EL. 1204.49
12" PIPE, RT.
FL. 1201.25

STA 153+98.1, 13.5 RT.
STD. No. 8 C.B.
INL. EL. 1204.49
15" PIPE, RT.
FL. 1200.50

15'-25" CMP BEND
FL. 1199.40

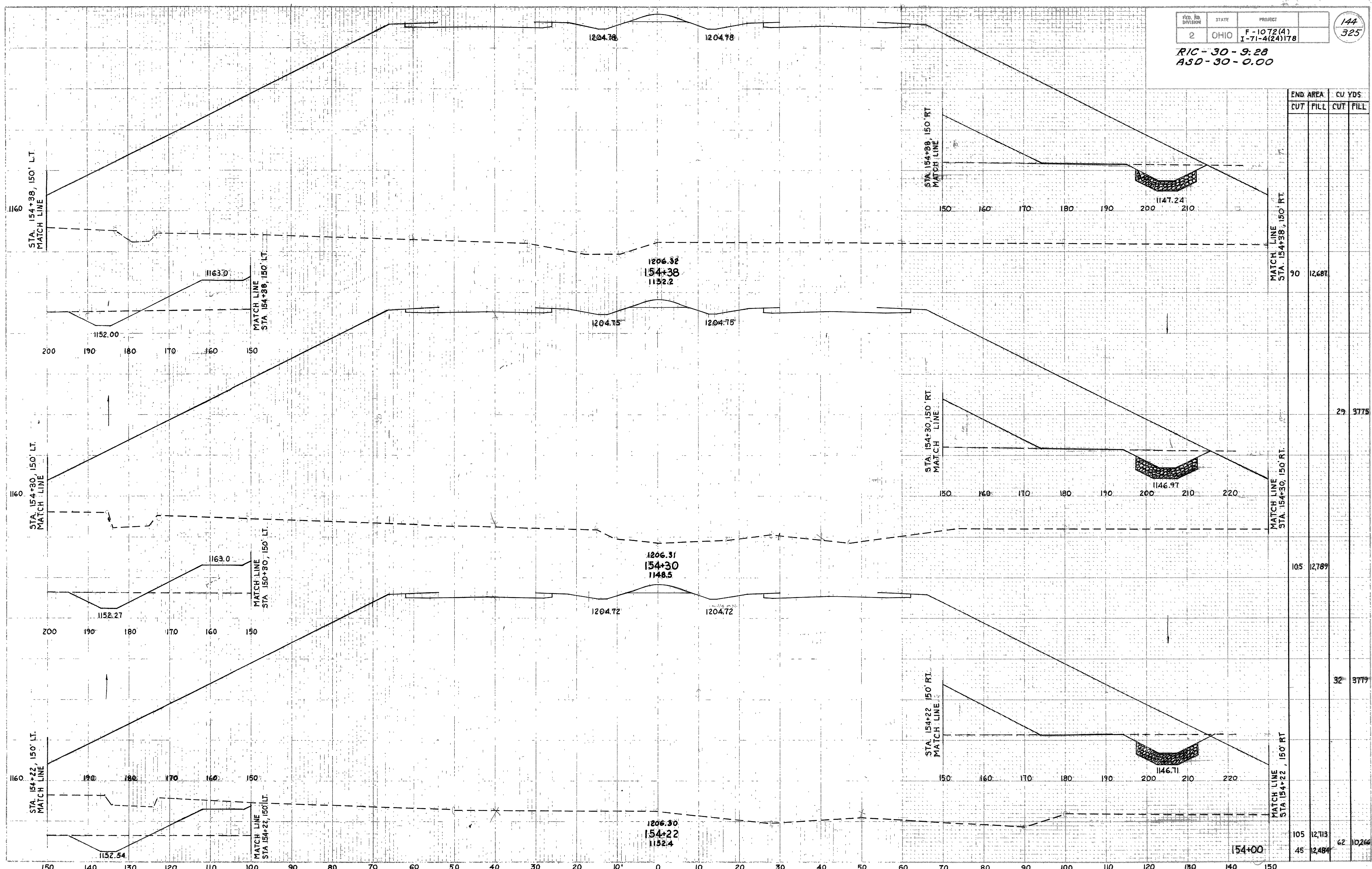
26' OF 12" PIPE, 5.0% SLOPE
F.L. 1200.15
55' OF 15" PIPE 5.0% SLOPE
CONC. COLLAR



NOTE SOD PLACEMENT

Sta. 153+78 to Sta. 154+00

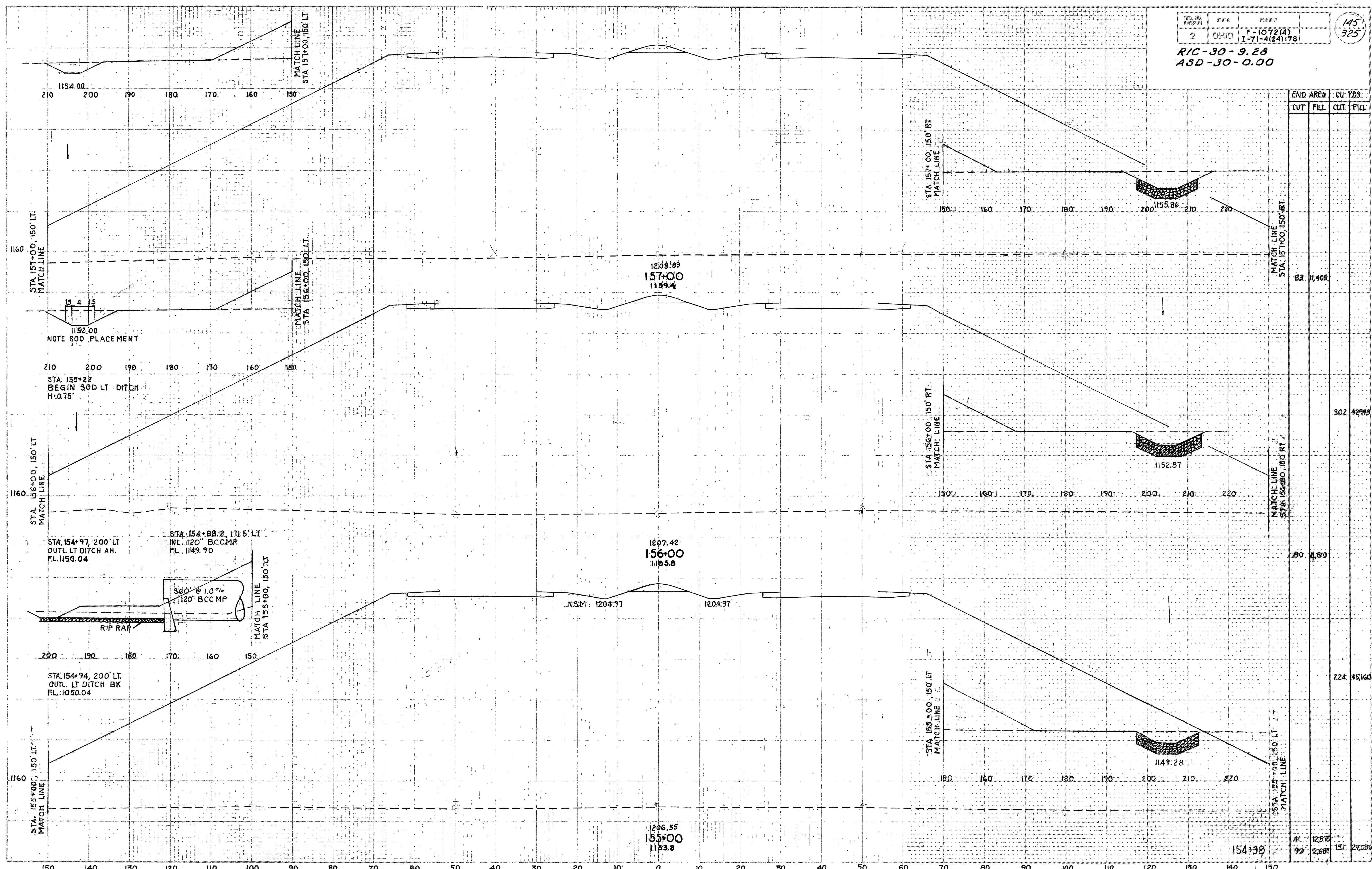
RIC-30-9.28
ASD-30-0.00



END AREA	CU YDS.	
	CUT	FILL
90	12,687	
29	3,775	
105	12,789	
32	3,777	
105	12,713	
45	12,484	62

Sta. 154+22 to Sta. 154+38

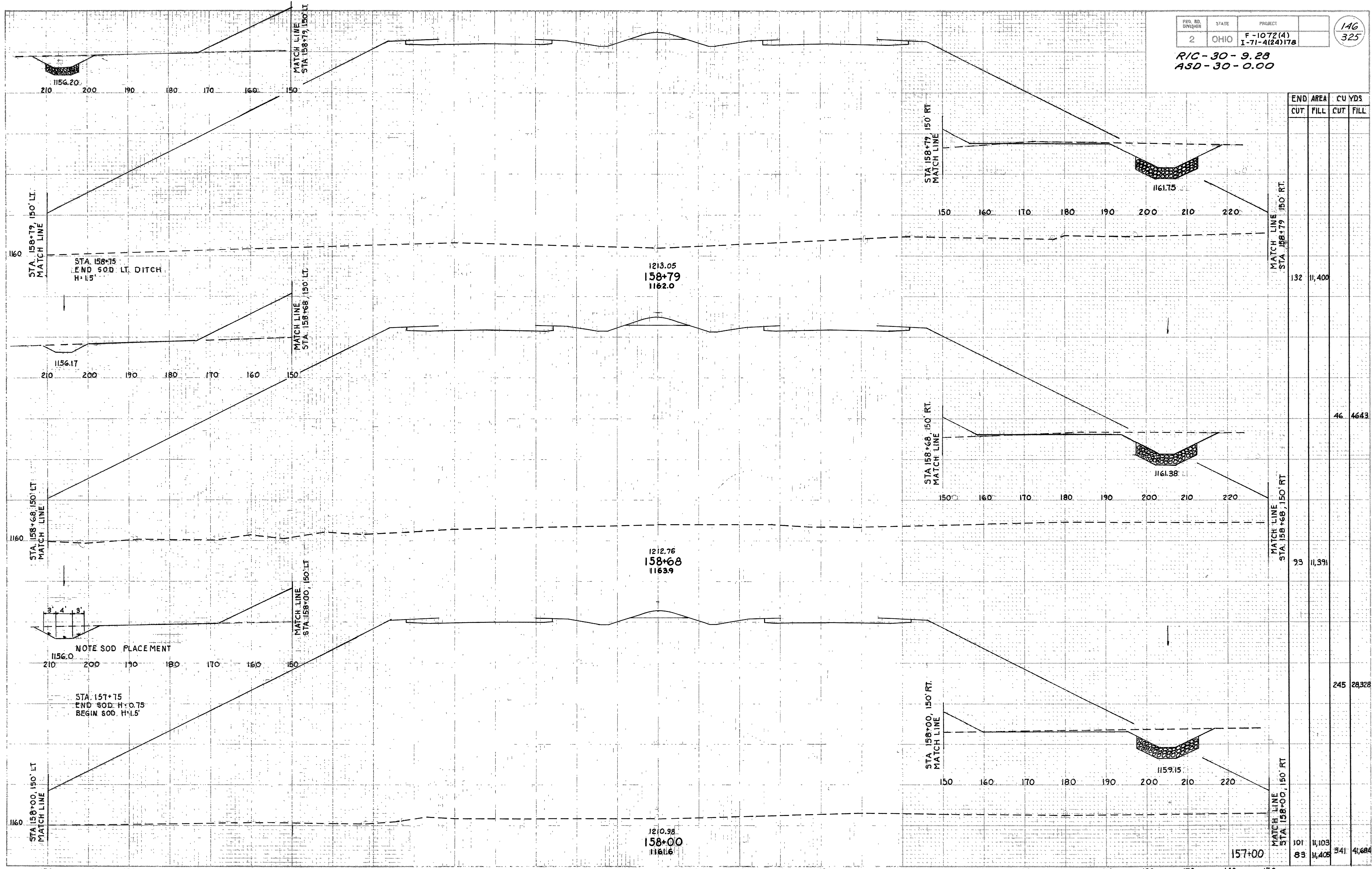
RIC-30-9.28
ASD-30-0.00



END STA	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
157+00	83	11,405		
156+00	302	42,993		
155+00	80	11,810		
154+38	41	12,575	151	29,004

Sta. 155+00 to Sta. 157+00

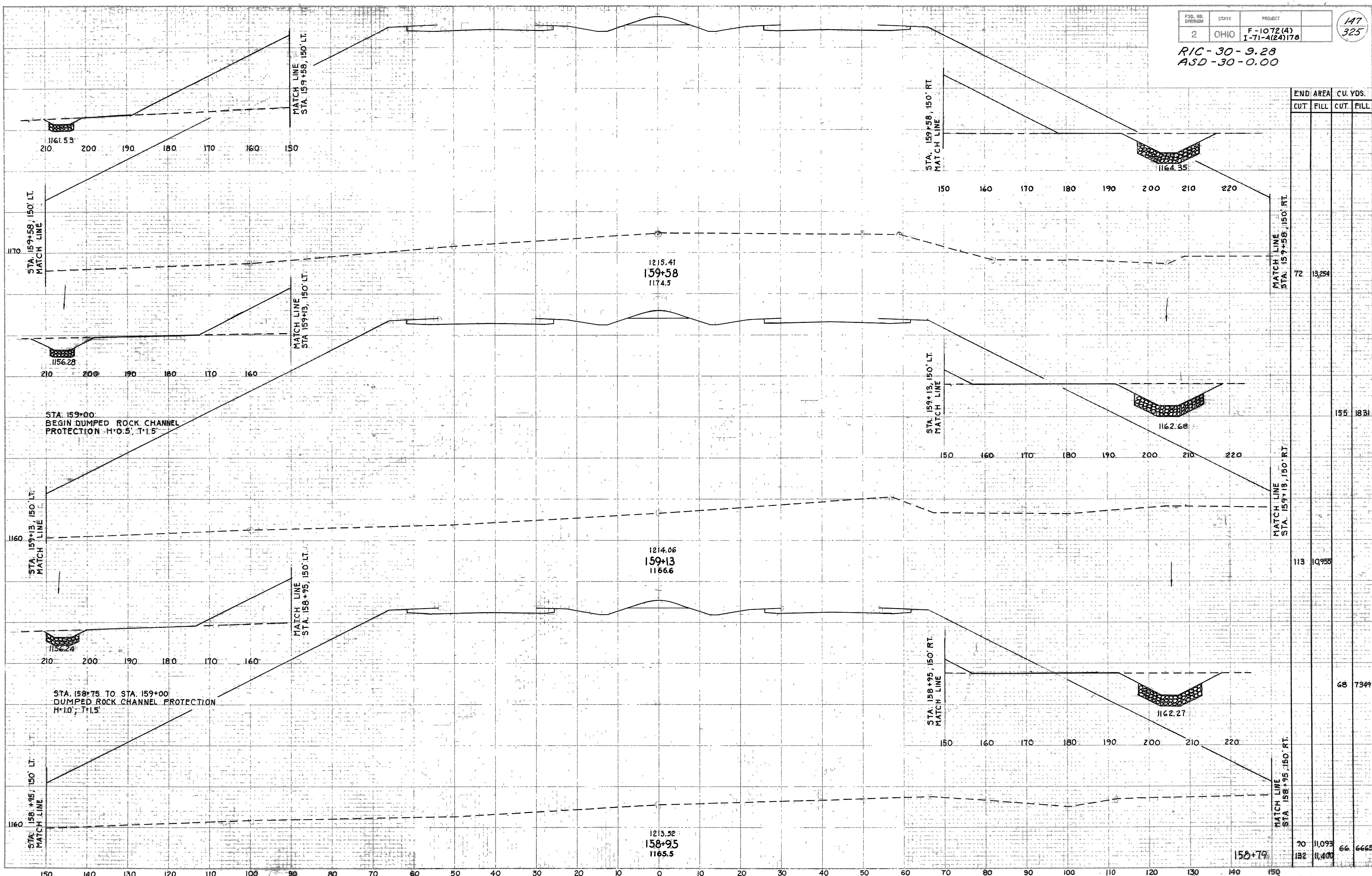
RIC-30-9.28
ASD-30-0.00



END STA	AREA		CU YDS	
	CUT	FILL	CUT	FILL
132		11,400		
46		4643		
73		11,391		
245		28,328		
101	11,103			
83	11,405	341	4,684	

Sta. 158+00 to Sta. 158+79

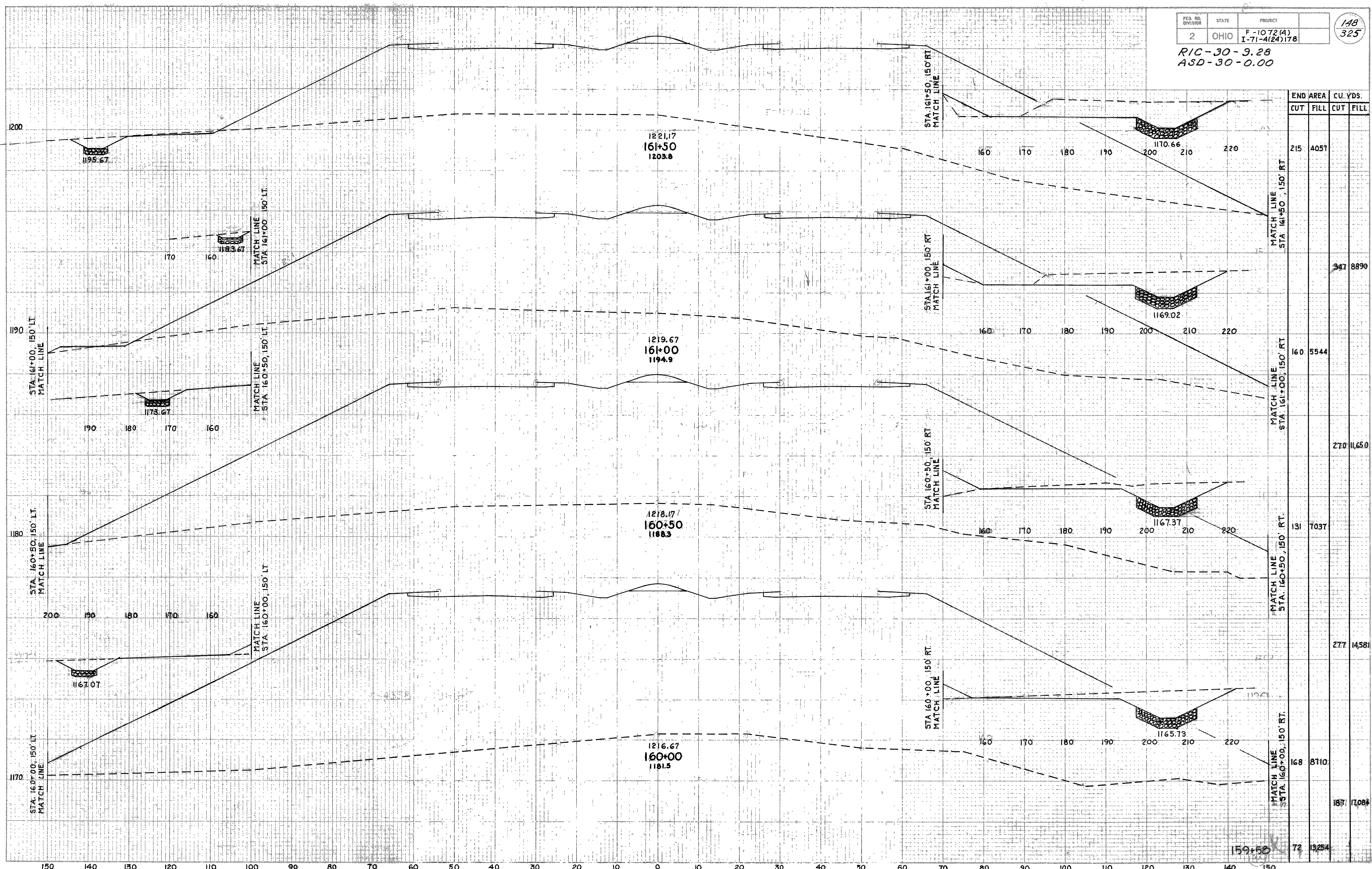
RIC-30-9.28
ASD-30-0.00



END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
158+95	90	11,093	66	6665
158+75	132	11,400	66	6665
159+00	113	10,950		
159+58	72	13,254		

Sta. 158+95 to Sta. 159+58

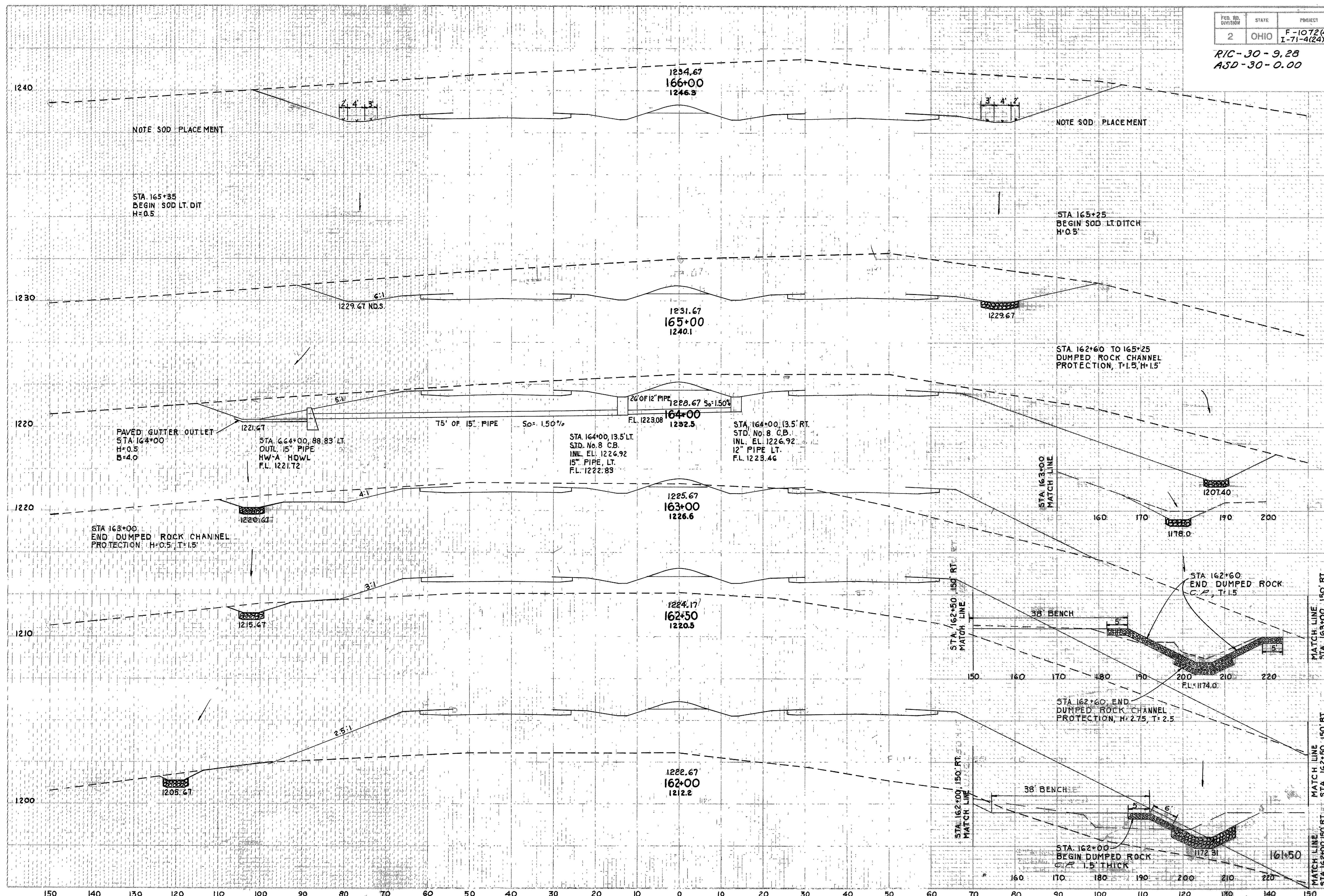
RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
215	4057	
		347 8890
160	5544	
		270 11,650
131	7037	
		277 14,581
168	8710	
		187 17,084
72	13,254	

Sta. 160+00 to Sta. 161+50

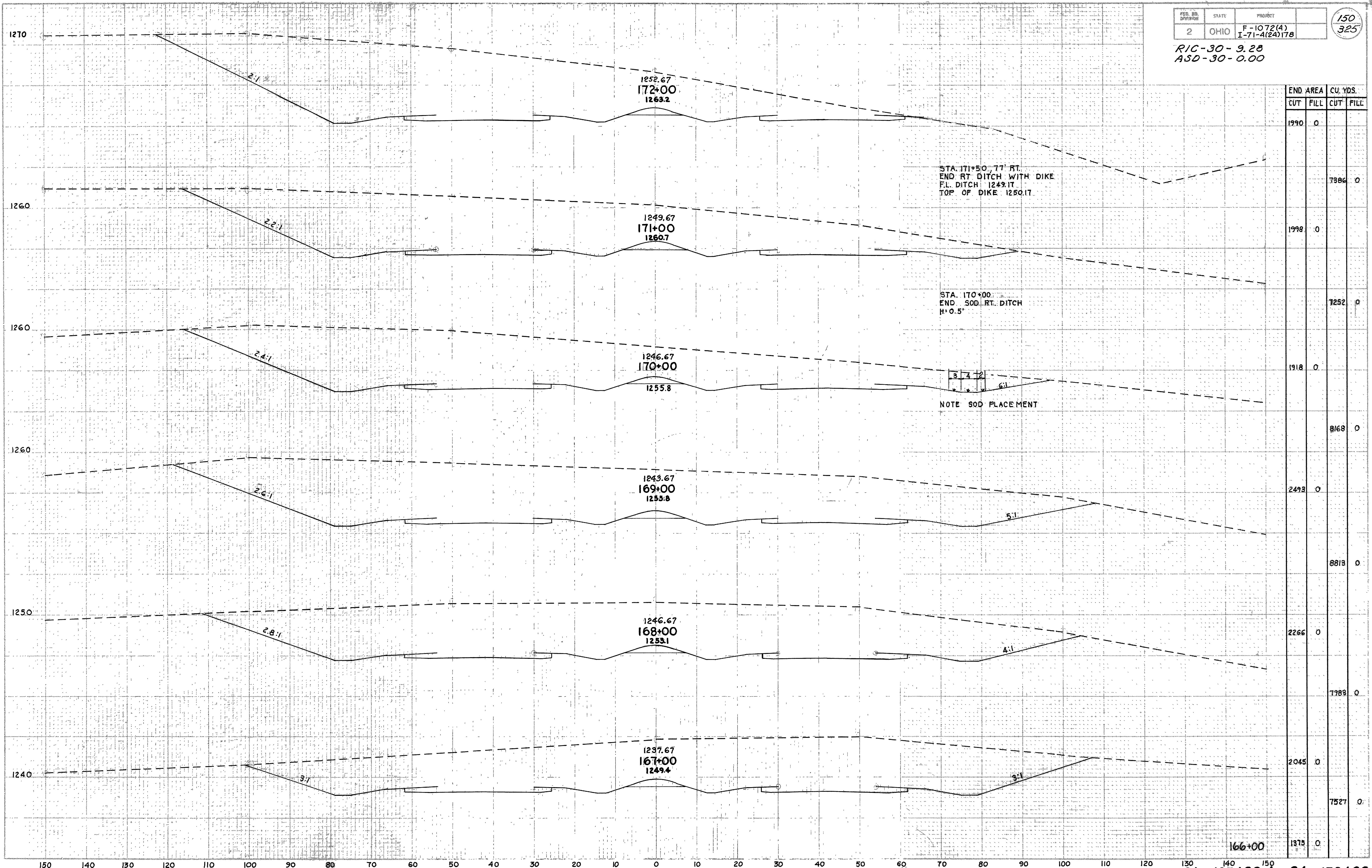
RIC-30-9.28
ASD-30-0.00



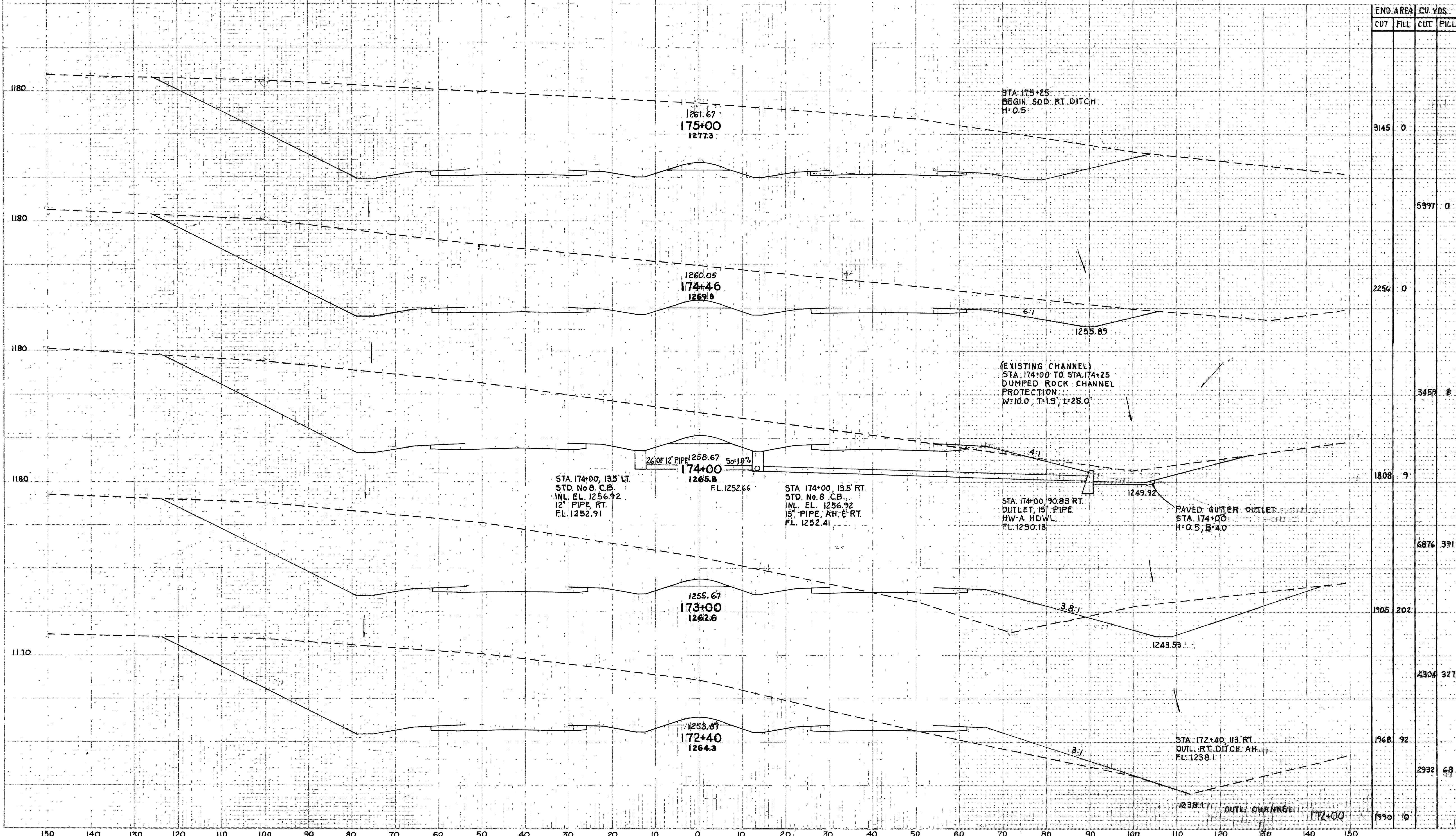
END AREA	CU. YDS.	
	CUT	FILL
2020	0	
1375	0	6287
1090	0	4565
232	728	4300
42	1123	254
123	9181	1964
91	2512	1123
215	4057	284

Sta. 162+00 to Sta. 166+00

RIC-30-9.28
ASD-30-0.00



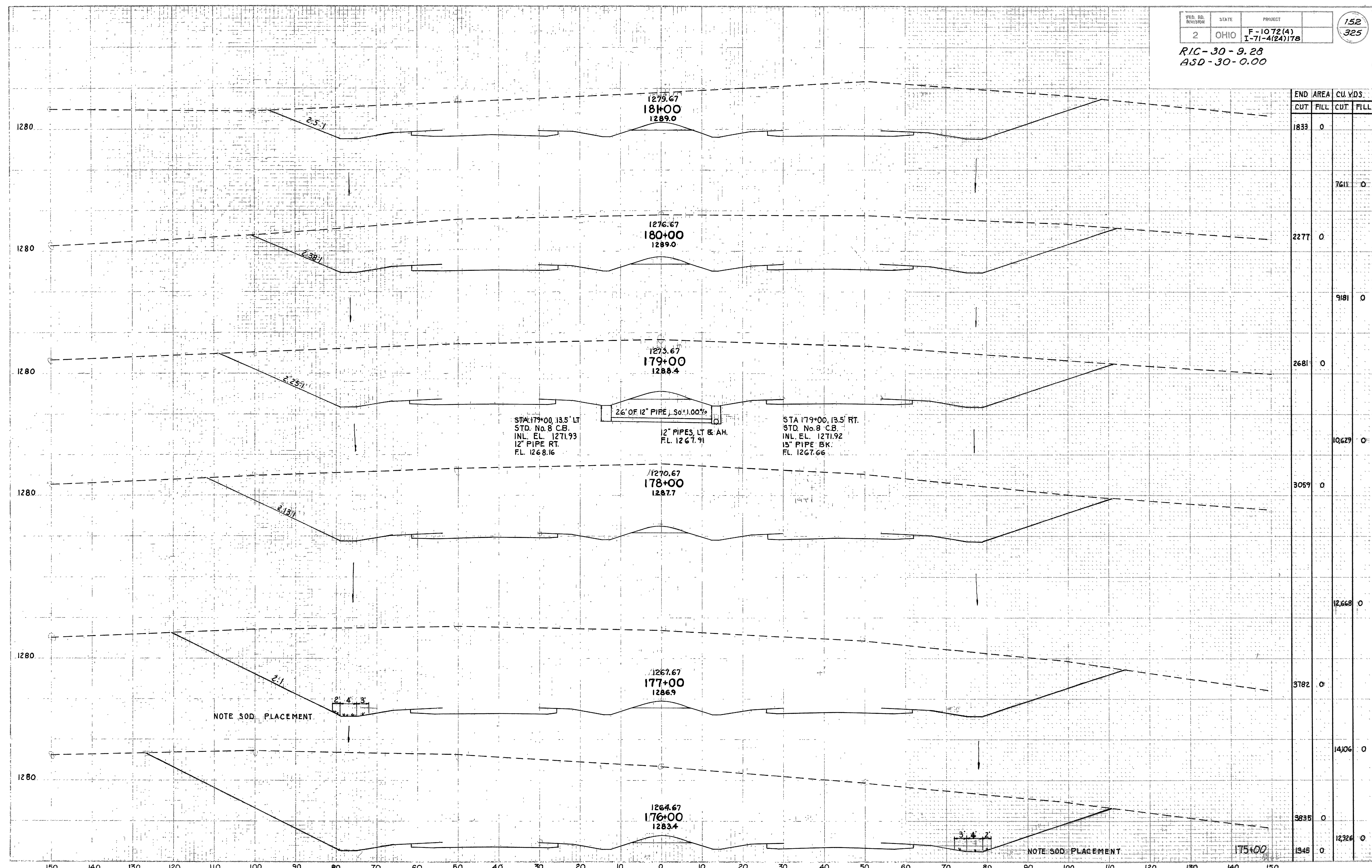
RIC-30-9.28
ASD-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
3145	0		
2256	0		5397
1808	9		3459
1905	202		6876
4304	327		391
1968	92		202
1990	0		2932
			68

Sta. 172+40 to Sta. 175+00

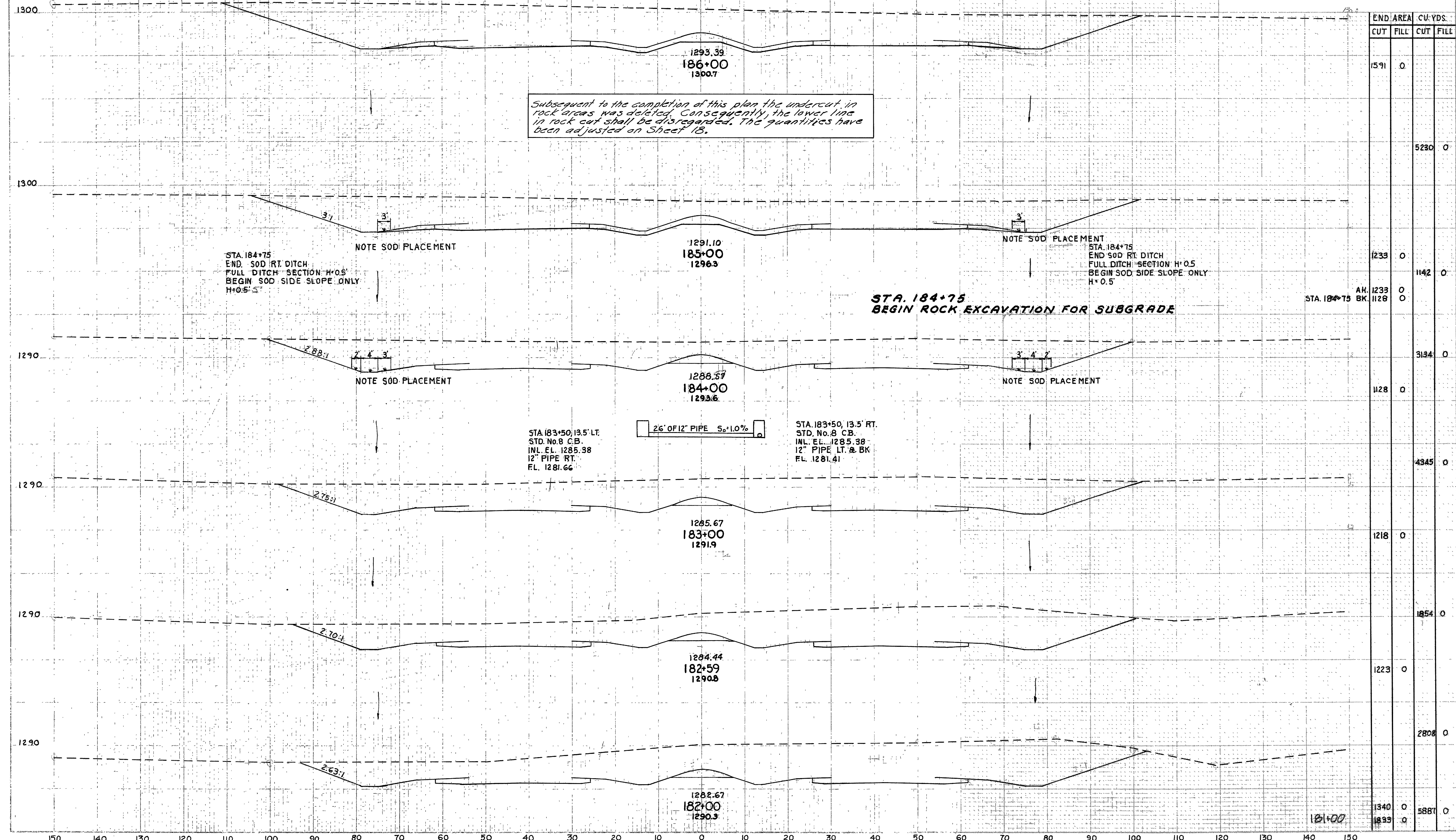
RIC-30-9.28
ASD-30-0.00



END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
181+00	1833	0		
180+00			7611	0
179+00	2277	0		
178+00			9181	0
177+00	2681	0		
176+00			10,629	0
175+00	3059	0		
174+00			12,668	0
173+00	3782	0		
172+00			14,106	0
171+00	3835	0		
170+00			12,226	0
169+00	1345	0		

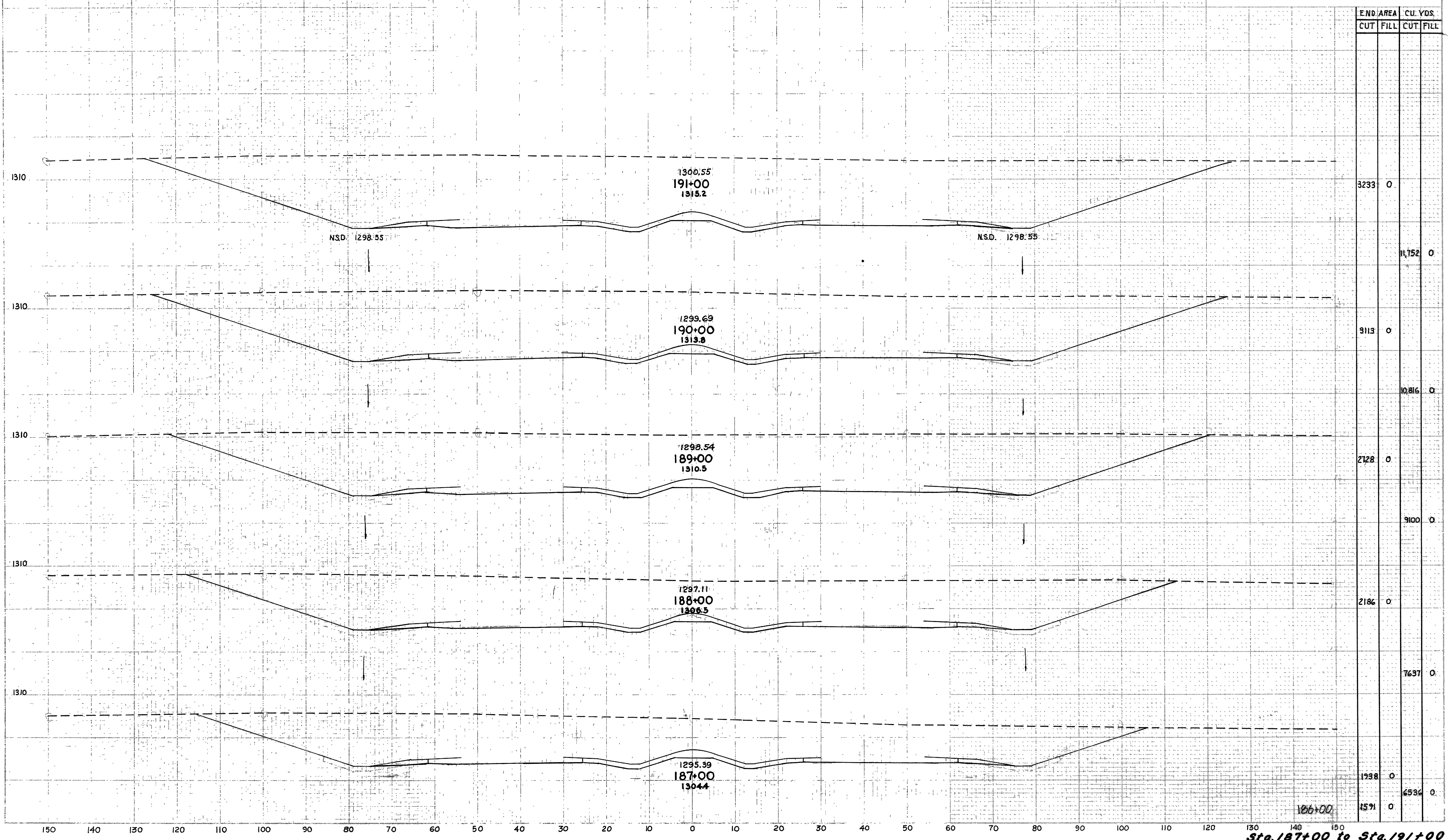
Sta. 176+00 to Sta. 181+00

RIC-30-9.28
ASD-30-0.00

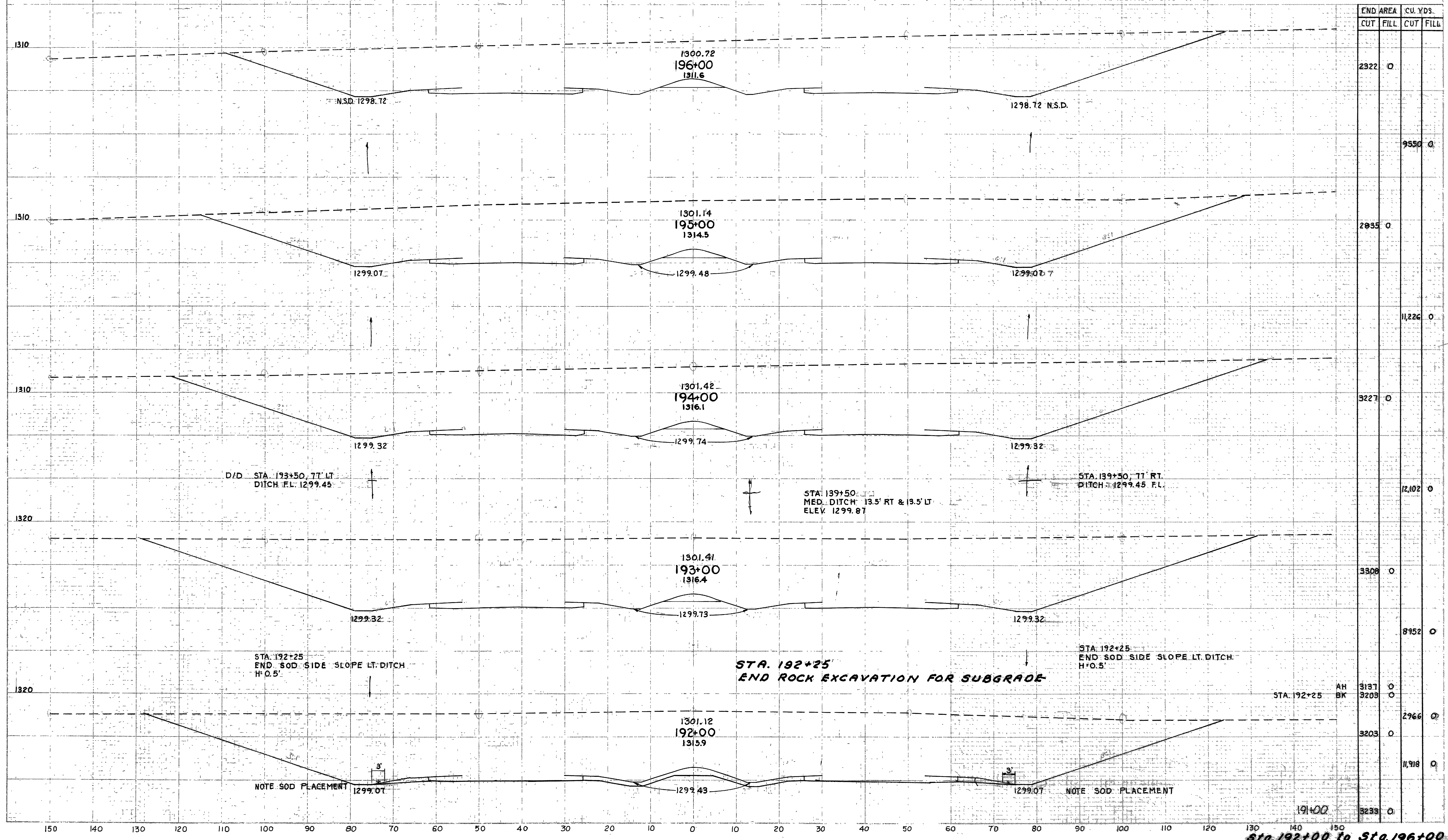


END STA.	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
1591	0			
			5230	0
1233	0			
			1142	0
1233	0			
			3134	0
1128	0			
			4345	0
1218	0			
			1854	0
1223	0			
			2808	0
1340	0			
			5887	0

RIC-30-9.28
ASD-30-0.00



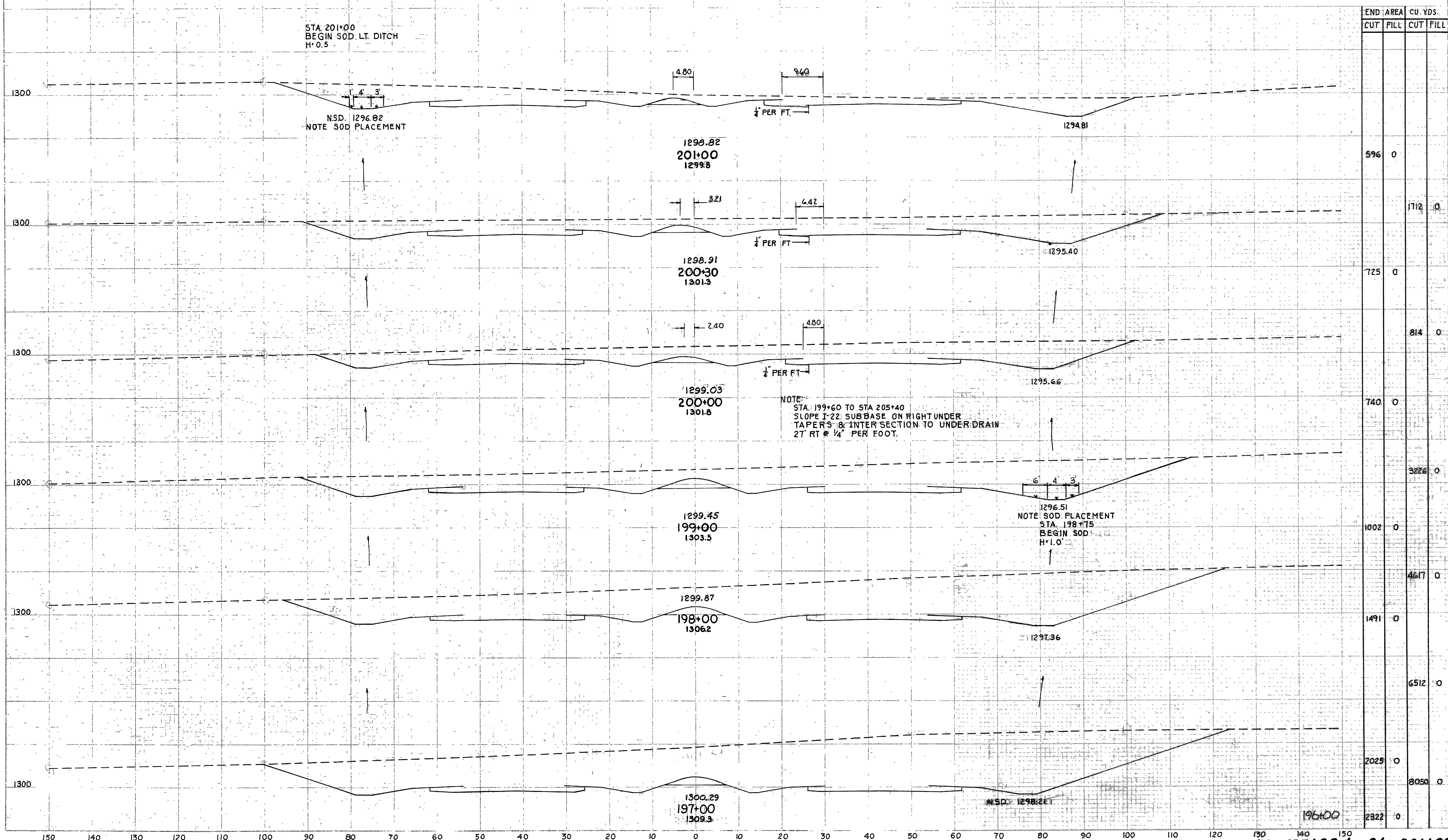
RIC-30-9.28
ASD-30-0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
2322	0		
		9550	0
2935	0		
		11226	0
3227	0		
		12102	0
3308	0		
		8952	0
		3137	0
		3203	0
		2966	0
		3203	0
		11918	0
		3233	0

Sta. 192+00 to Sta. 196+00

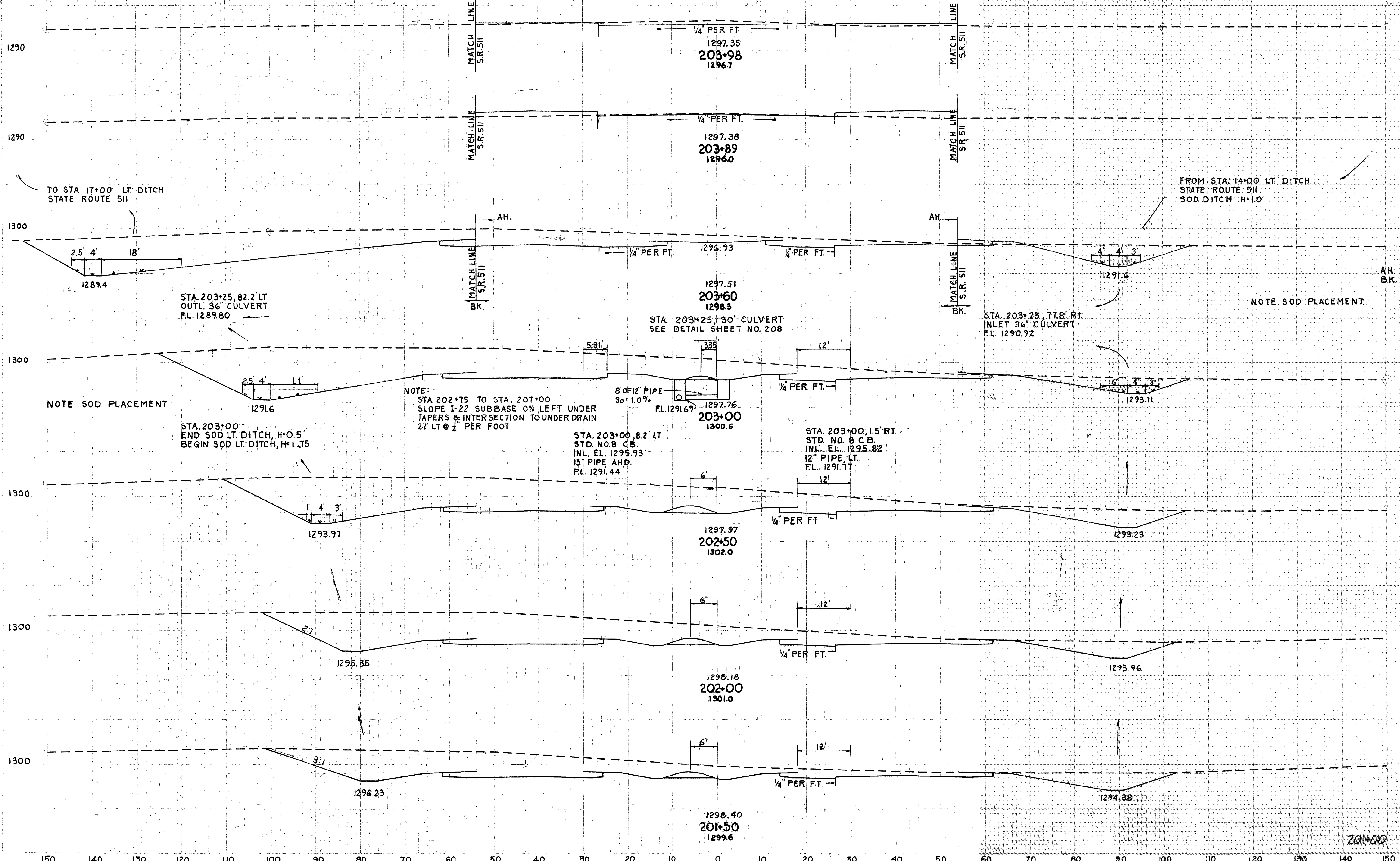
RIC-30-9.28
ASD-30-0.00



END	AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
197+00	2025	0	8050	0
197+30	1491	0	6512	0
198+00	198+00 13062	0	4617	0
199+00	1299.45 199+00 1303.5	0	1002	0
200+00	1299.03 200+00 1301.8	0	740	0
200+30	1298.91 200+30 1301.3	0	725	0
201+00	1298.82 201+00 1299.8	0	596	0

Sta. 197+00 to Sta. 201+00

RIC-30-9.28
ASD-30-0.00



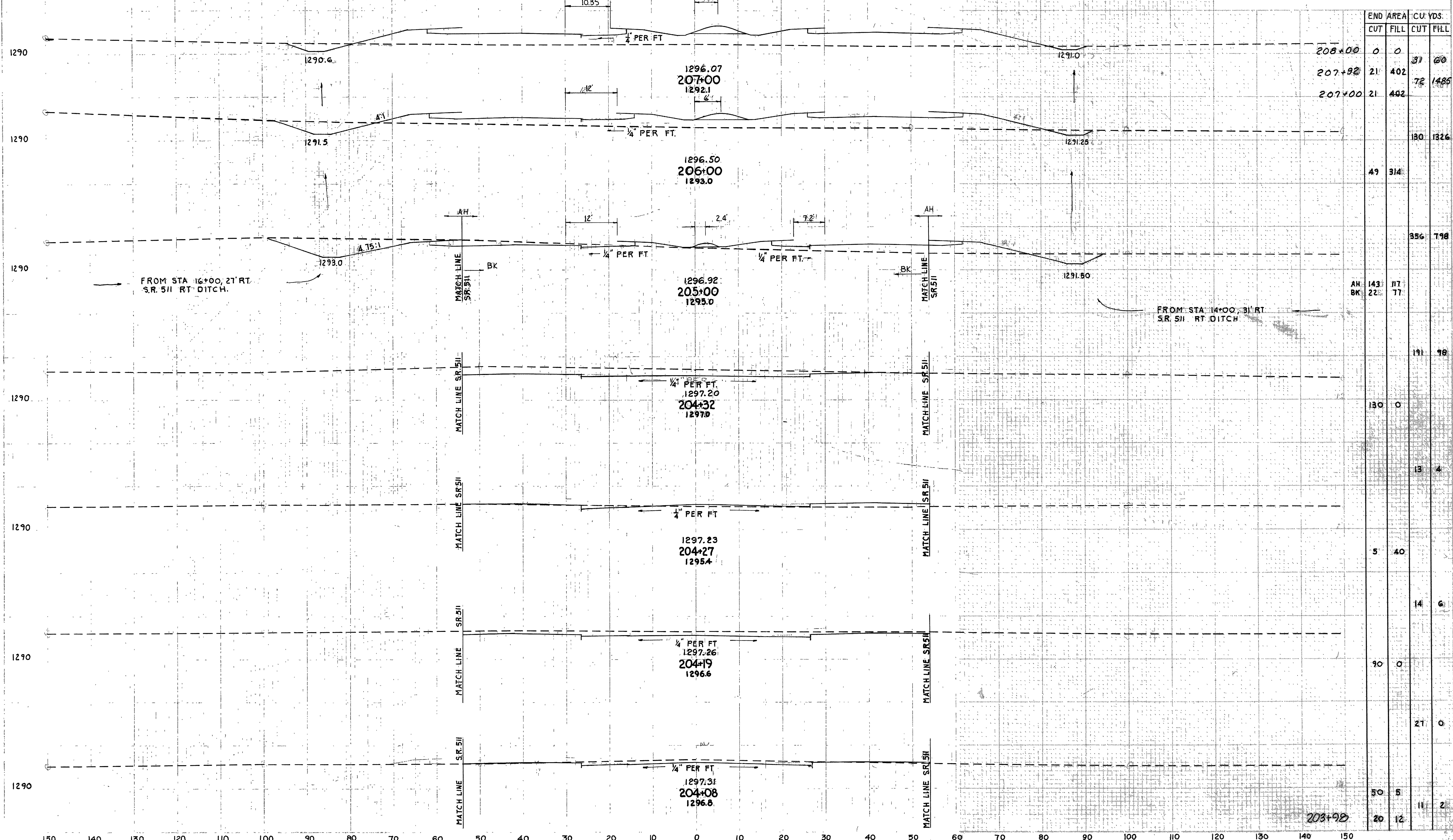
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
20	12		
		4	14
0	67		
		114	36
AH BK	212	0	3
	878		
		2139	4
		1047	0
		1939	0
		1047	0
		1746	0
		638	0
		1332	0
		600	0
		596	0
		1108	0

Sta. 201+50 to Sta. 203+98

STA. 208+00 END WORK
 STA. 207+00 END RIC-30-928
 ASD-30-0.00

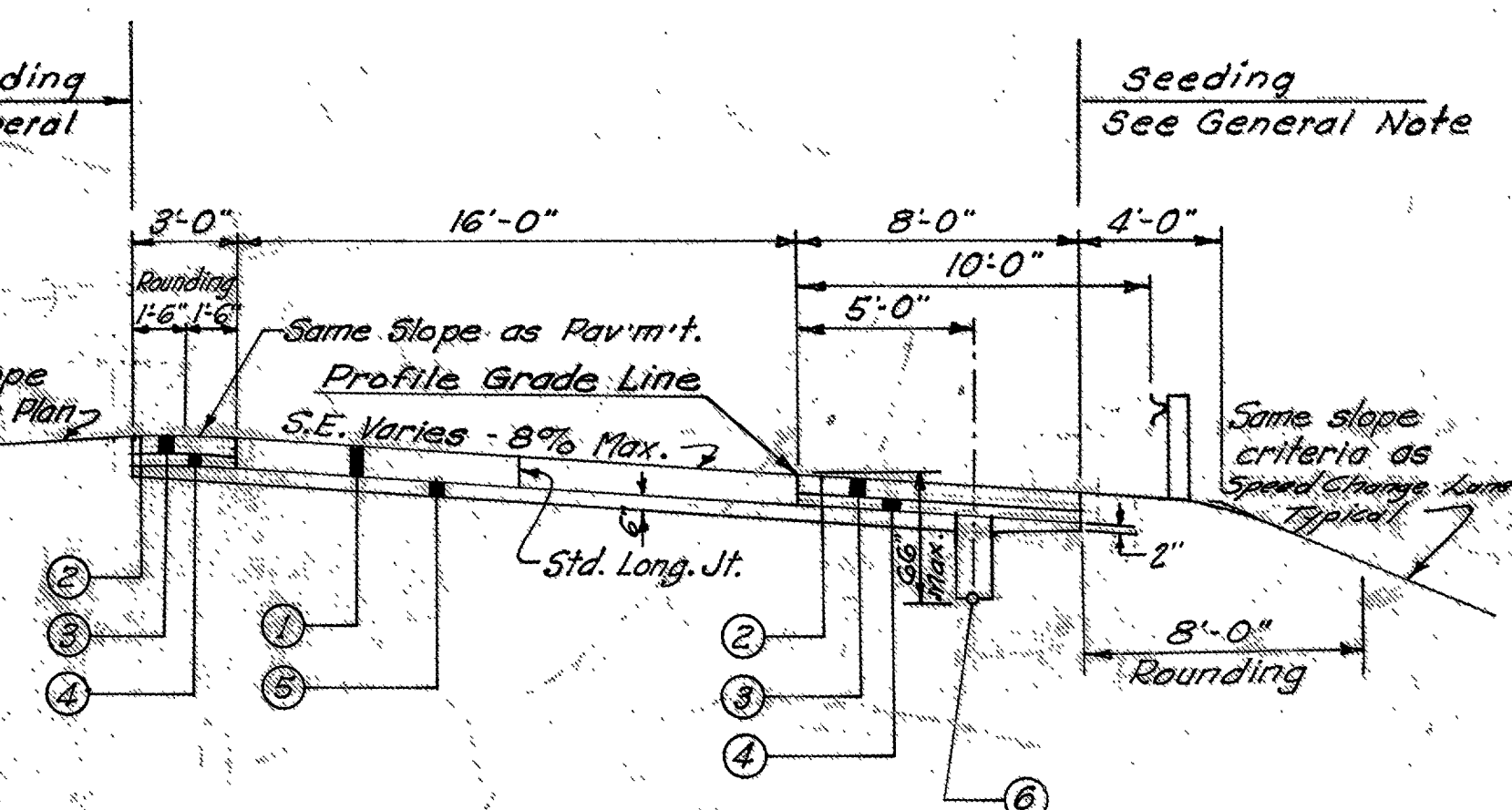
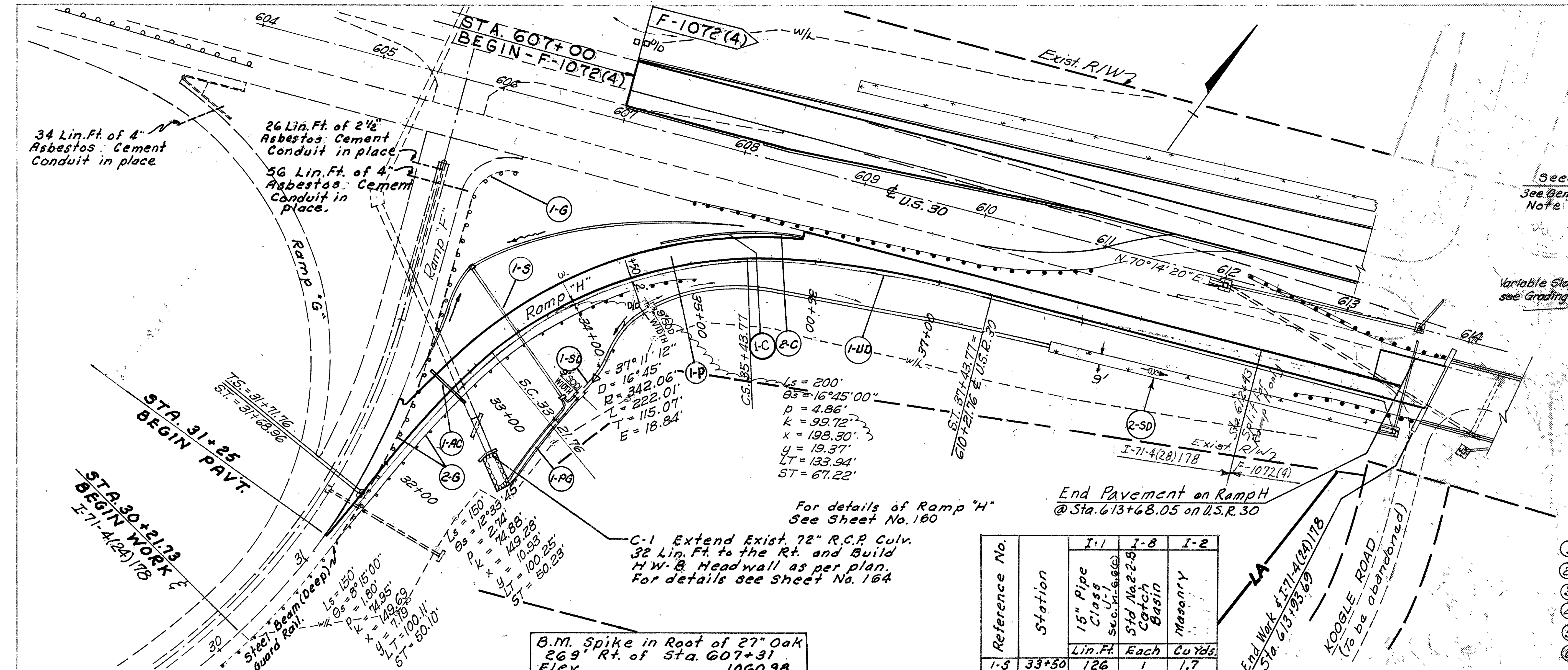
FED. RD. DIVISION	STATE	PROJECT	158 325
2	OHIO	F-1072(4) I-71-4(24)178	

RIC-30-9.28
 ASD-30-0.00



STATION	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
208+00	0	0	31	60
207+92	21	402	72	1485
207+00	21	402		
			180	1326
	49	314		
			356	798
	AH 143	BK 117		
			191	98
	130	0		
			13	4
	5	40		
			14	6
	90	0		
			21	0
	50	5		
203+92	20	12	11	2

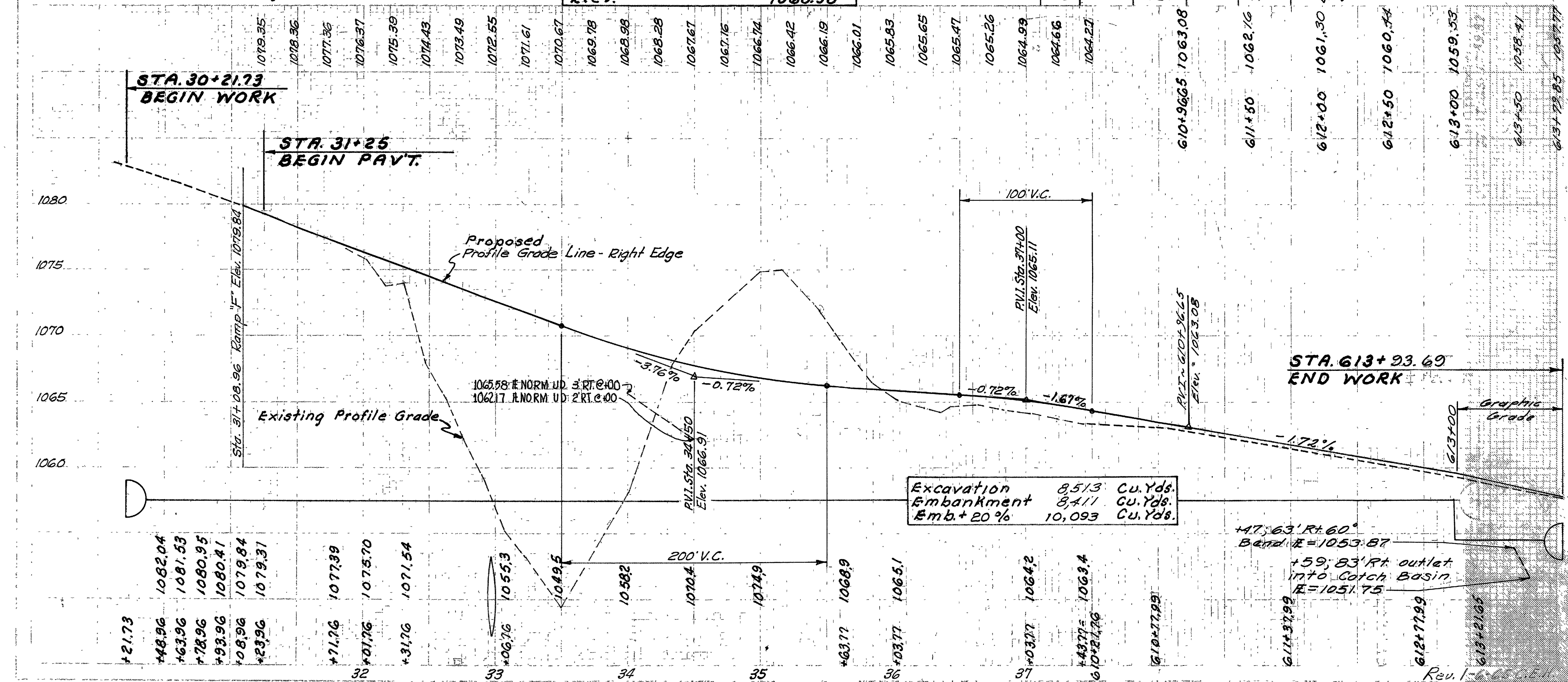
Sta 204+08 to Sta. 207+00



TYPICAL SECTION

- LEGEND**
- ① T-71 3" Reinforced Portland Cement Concrete Pavement
 - ② T-31 Bituminous Surface Treatment 0.008 Cu. Yd. No. 6 Aggregate 0.25 Gal. Bit. Material per Sq. Yd.
 - ③ ★ B-21 6" Waterproofed Aggregate Base Course
 - ④ I-18 3" Stabilized Crushed Aggregate Shoulders
 - ⑤ I-22 Subbase (Variable Depth) Grading A or B as per plan
 - ⑥ I-1 6" Class I-3 Pipe
- See Note in Proposal
- Thickness Shown is Design Thickness
- ★ Type "A" T-35 or T-335 material may be used in construction of this course - See note in Proposal.
- * As per plan

Reference No.	Station	I-1	I-8	I-2
		15" Pipe Class I-1	Std. No. 2, 3 Catch Basin	Masonry
1-3	33+50	Lin. Ft. 126	Each 1	Cu. Yds. 1.7

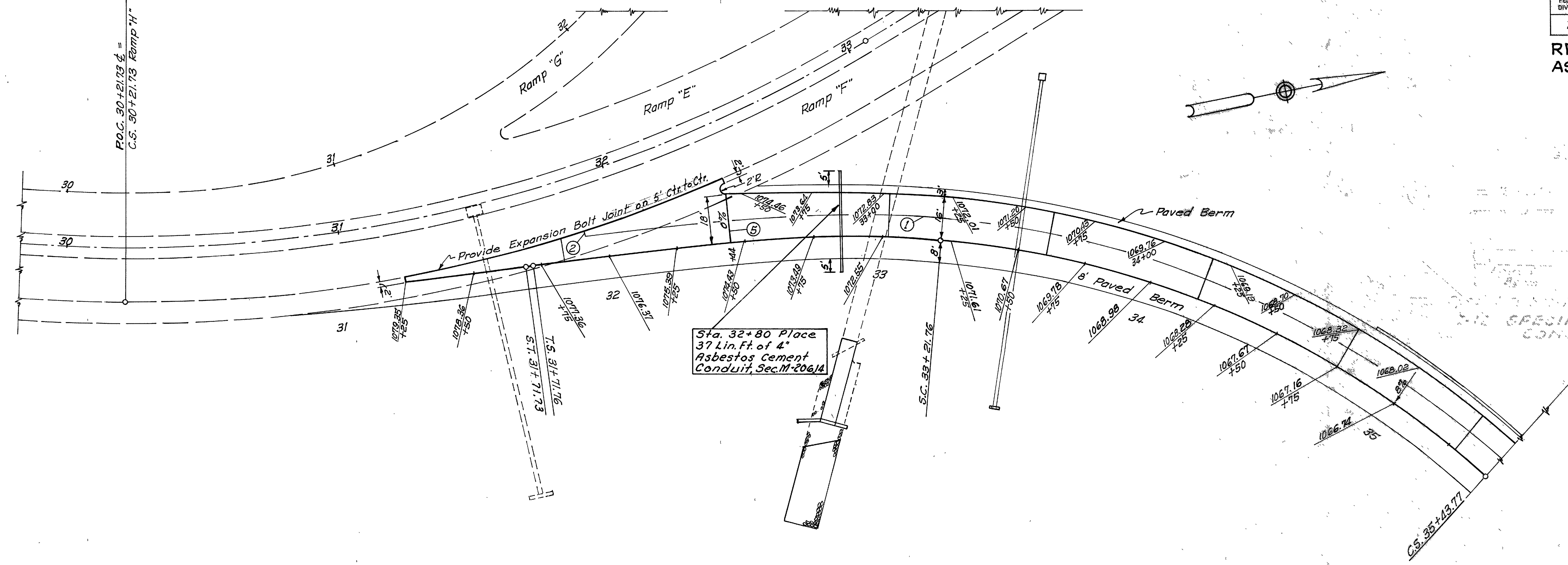


Reference No.	Station	From	To	Side	I-15	I-15	T-71	B-21	T-31	I-22	I-18	S-25	
					Guard Rail * (Steel Beam) Removed & Stored	Guard Rail Steel Beam (Deep) Removed & Rebuilt	9" Reinf. P.C. Concrete Pavement	6" Waterproofed Aggregate Base Course	Bituminous Surface Treatment	No. 6 Aggregate	Subbase Grading for as per plan	Stabilized Crushed Aggregate Shoulders	4" Asbestos Cement Conduit Sec. M-206.4
					Lin. Ft.	Lin. Ft.	Sq. Yd.	Cu. Yd.	Gal.	Cu. Yd.	Cu. Yd.	Lin. Ft.	
1-G	33+96	34+40		Rt.	50								
2-G	31+25	34+00		Rt.		275							
1-P	31+25	613+23.69					1481.4	166	250	8	417	89	
1-AC	32+00											37	
Totals					50	275	1481.4	166	250	8	417	89	

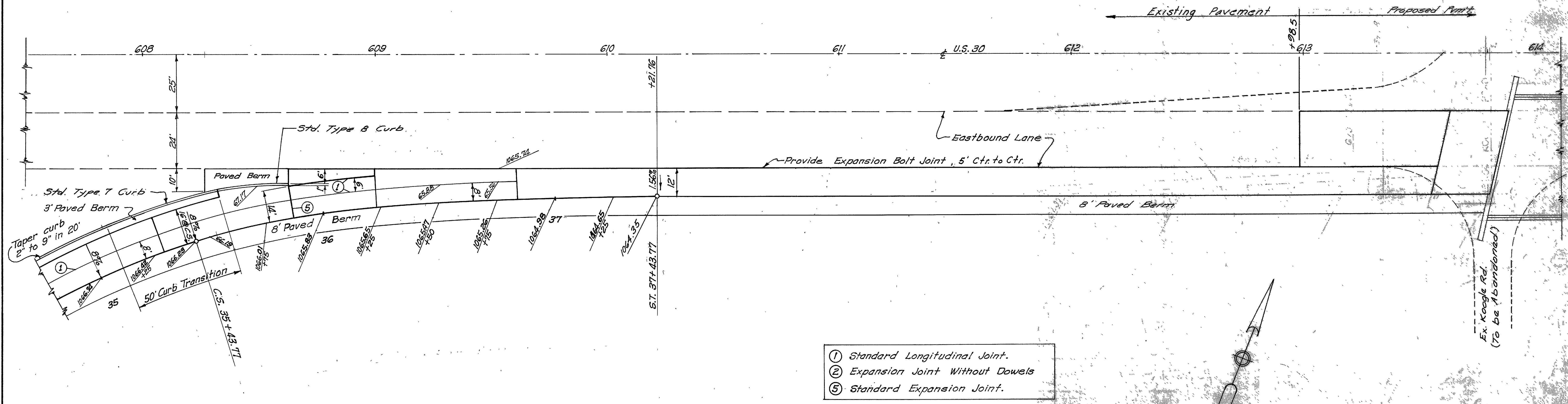
Reference No.	Station	From	To	Side	I-12	I-12	I-14	L-10	I-1	I-1
					Standard Type 7 Conc. Curb	Standard Type 7 Conc. Curb	Std. Paved Gutter Type 1 (Mod.) Type 1 "C"	Sodding	Pipe Class I-3 (Shallow)	Pipe Class I-3 (Deep)
					Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Lin. Ft.	Lin. Ft.
2-C	35+53	35+57		Lt.	37					
1-C	34+00	35+53		Lt.		77				
1-PG	32+68	33+60		Rt.			92	31		
1-S0	33+60	34+50		Rt.				100		
2-S0	610+75	613+49		Rt.				167.2	273	
1-U0	31+00	613+59		Rt.					275	671
Totals					37	77	92	404	275	671

PLAN & PROFILE RAMP "H"

RIC-30-9.28
ASD-30-0.00



Sta. 32+80 Place
37 Lin. Ft. of 4"
Asbestos Cement
Conduit, Sec. M-20614



- ① Standard Longitudinal Joint.
- ② Expansion Joint Without Dowels
- ⑤ Standard Expansion Joint.

Scale: 1" = 20'

RIC-30-9.28
ASD-30-0.00

Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
9	330			
11			320	
10	245			
20			405	
12	210			
6			106	
9	170			
25			237	
9	0			
2			0	
Sta. 30+21.73	0		0	

Edge Pavement, Ramp "F"

1076.30
32+01.76
1075.7

2:1

Edge Pavement
Ramp "F"

1077.49
31+71.76
1077.39

STA. 31+25 BEGIN PAV'T.

Edge Pavement
Ramp "F"

1079.39
31+23.96
1079.31

Edge Pavement
Ramp "F"

1079.84
31+03.96
1079.84

Edge Pavement
Ramp "F"

1082.61
30+33.96
1082.61

2:1

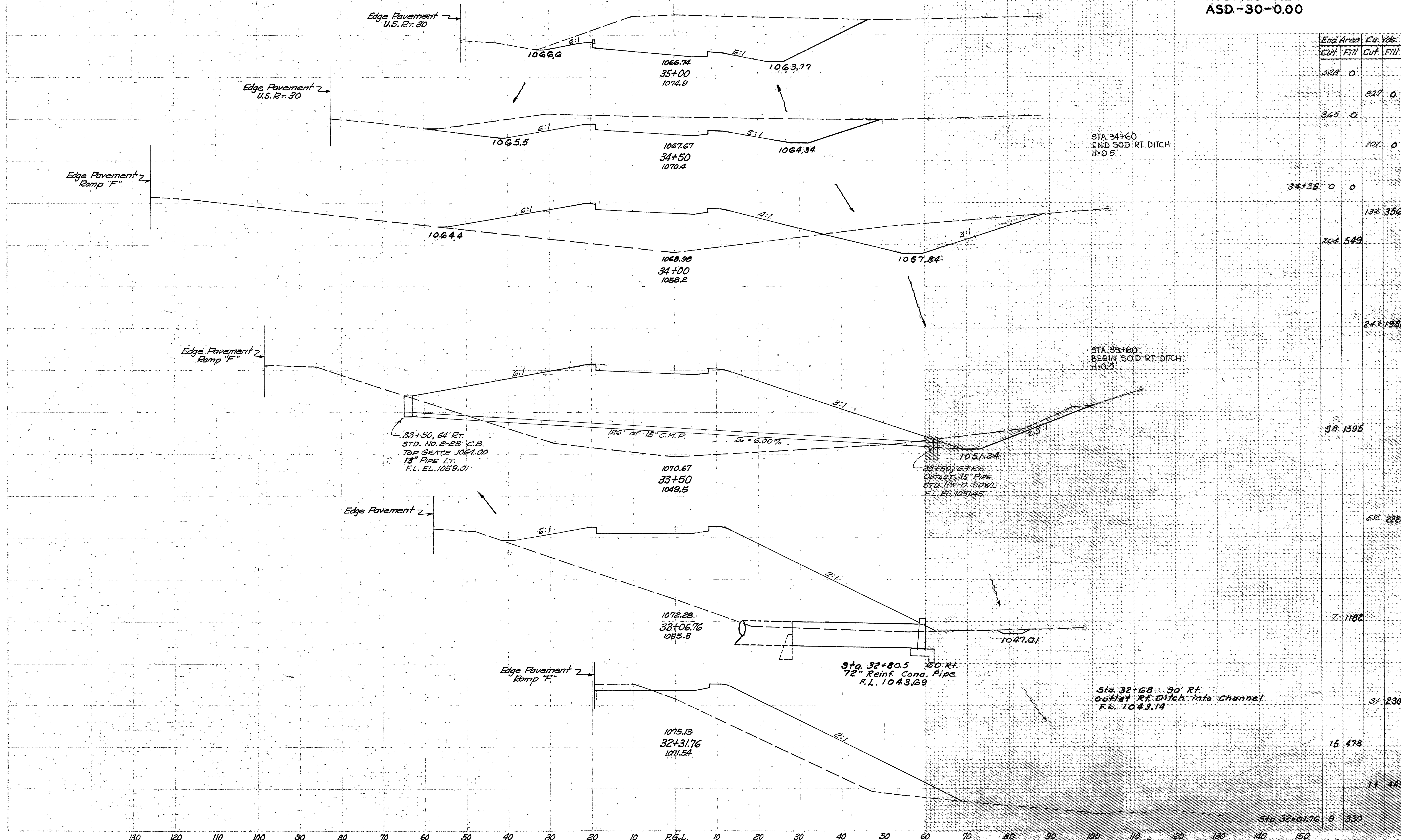
STA. 30+21.73 BEGIN WORK

Sta. 30+21.73

X SECT. RAMP "H" STA. 30+21.73 TO STA. 32+01.76

60 50 40 30 20 10 P.G.L. 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

RIC.-30-9.28
ASD.-30-0.00



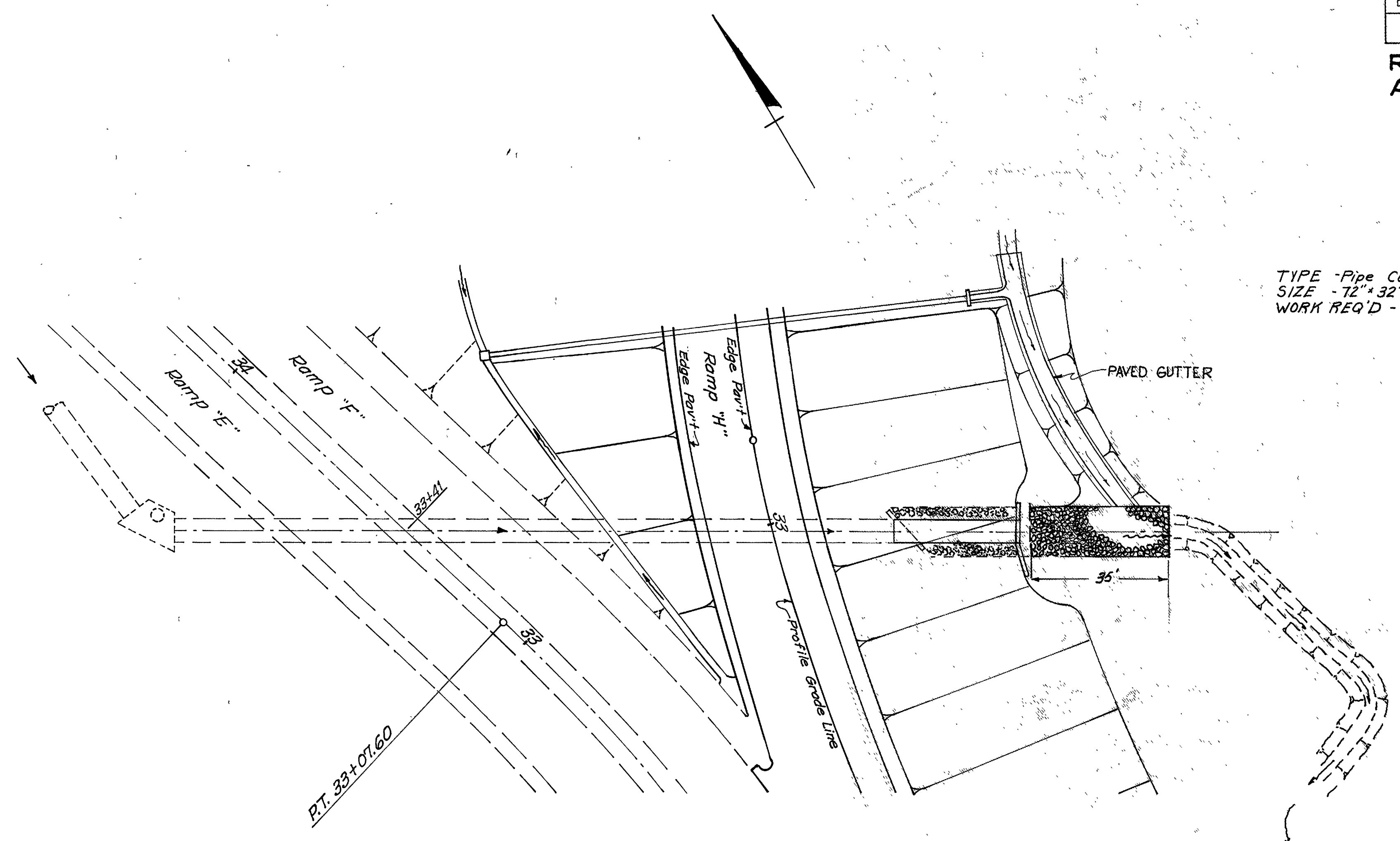
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
528	0	827	0
365	0	121	0
34+36	0	0	0
204	549	132	356
		243	1986
		58	1595
		52	2224
		7	1182
		31	2306
		15	478
		14	449
		9	330

X SECT. RAMP "F" STA. 32+31.76 TO STA. 35+00

RIC-30-9.28
ASD-30-0.00

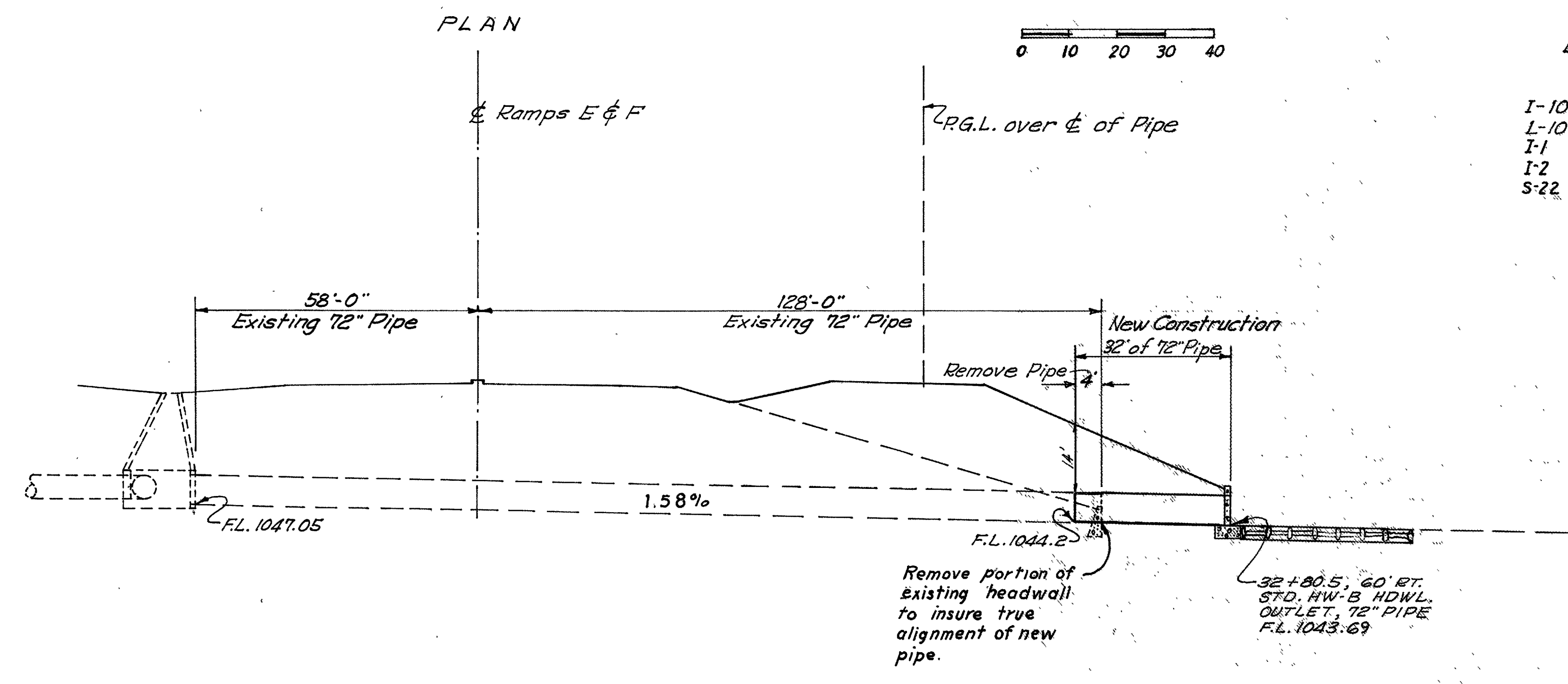
CULVERT DATA

TYPE - Pipe Culvert, Std. Drawing Nos. I-1, HW-A&B
 SIZE - 72" x 32", Section M-6.6(d)
 WORK REQ'D - Channel Protection, Removal of portion of existing structure, and construct headwall, HW-B as per plan.



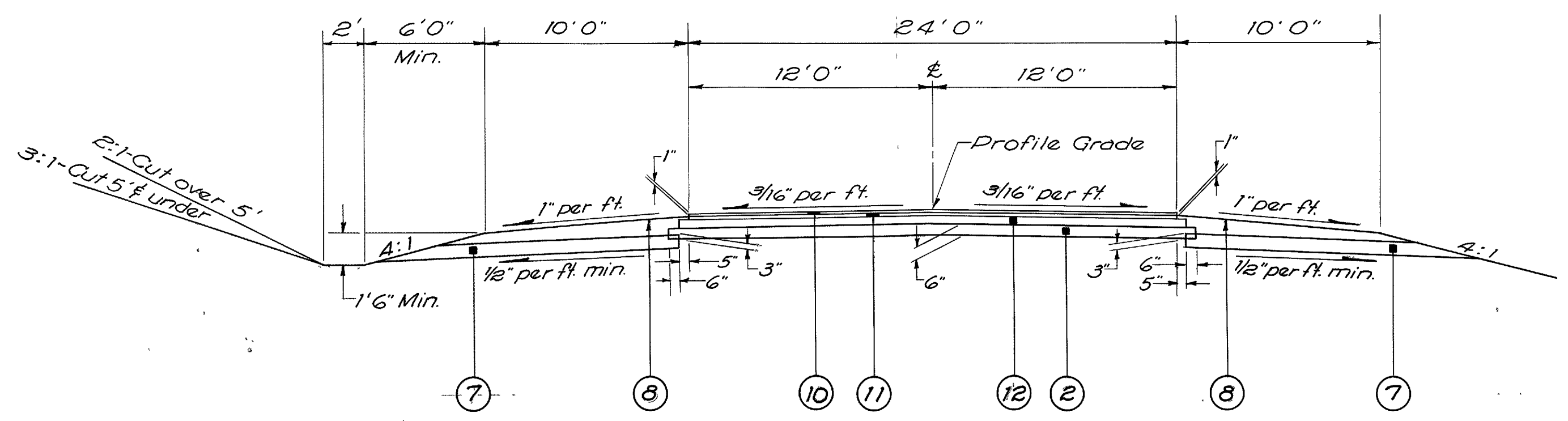
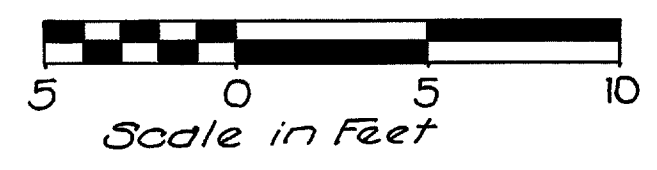
ESTIMATED QUANTITIES

I-10 Dumped Rock Channel Protection	42 Cu. Yds.
L-10 Sodding	6 Sq. Yds.
I-1 72" Pipe Culvert, Class A-1, Sec. M-6.6(d)	32 Lin. Ft.
I-2 Masonry	258 Cu. Yds.
S-22 Removal of Portion of Existing Structure	1 Cu. Yd.



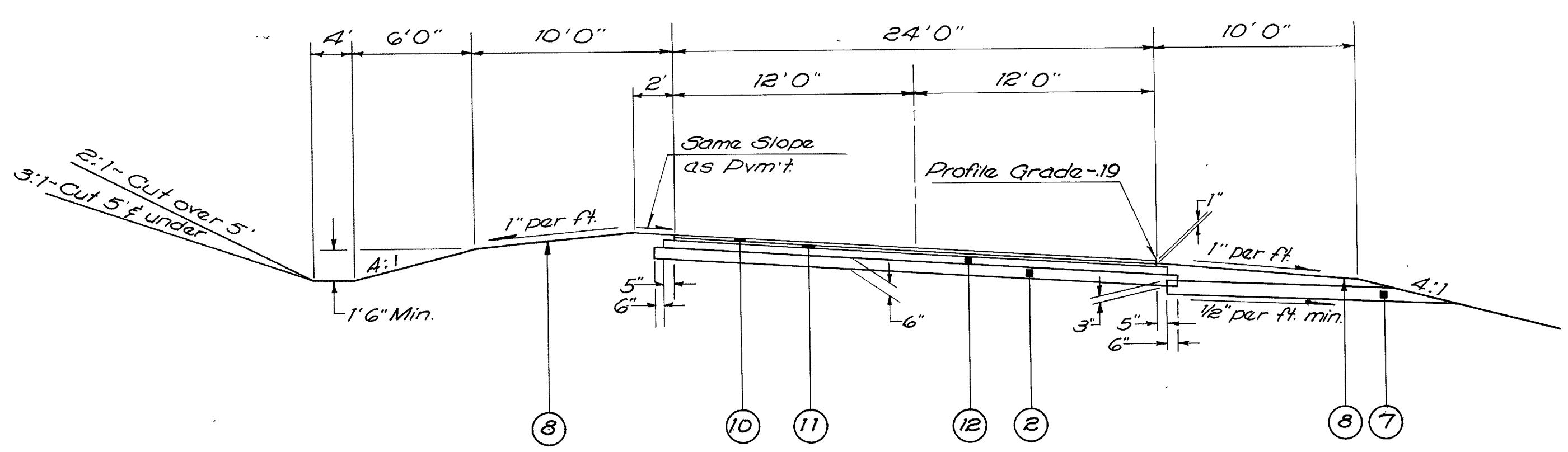
C-1
 STA. 33+41
 RAMP "H" & "E"
 RAMP "H" 72" CULVERT

TYPICAL SECTIONS



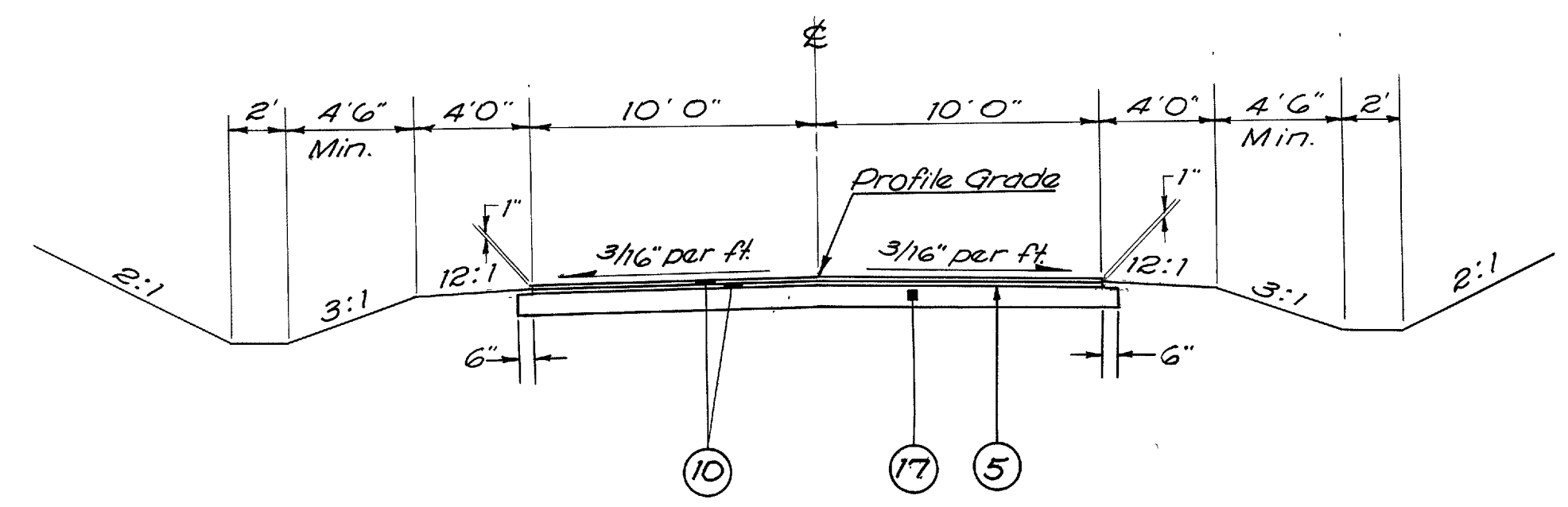
KOOGLE ROAD Normal Section

Sta. 20+00.00 to Sta. 23+00.00*
Sta. 34+25.00 to Sta. 37+29.64*



KOOGLE ROAD Superelevated Section

Sta. 23+00.00 to Sta. 34+25.00



DRIVE "R"

LEGEND

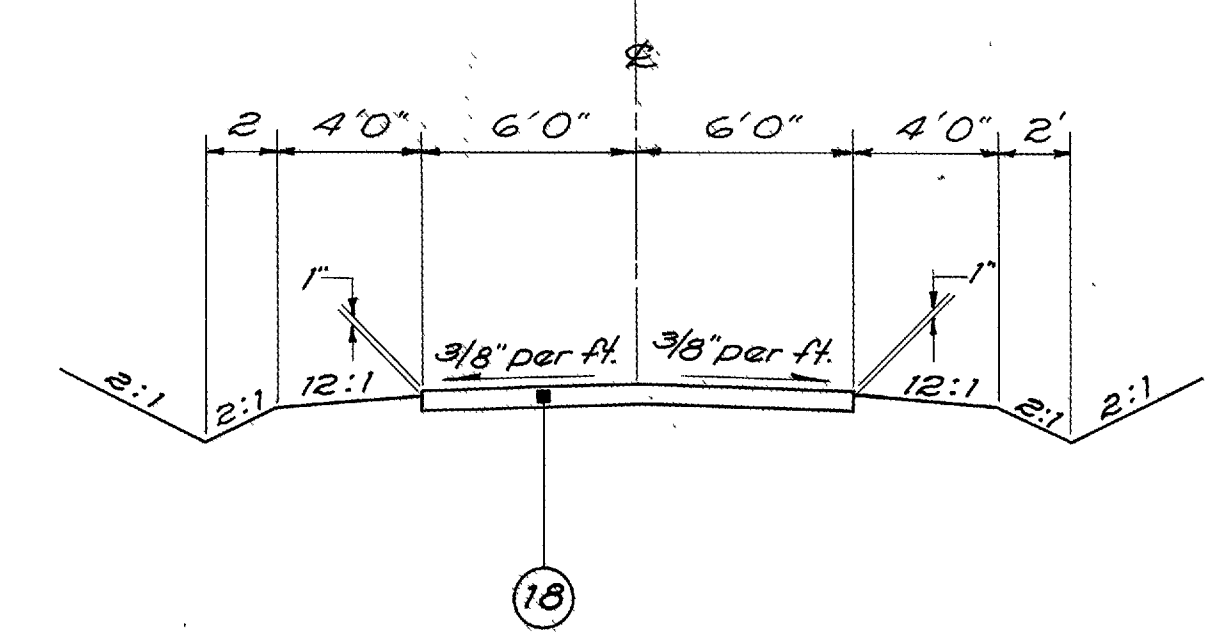
- 2 I-22 Subbase, Grading "A" or "B", as per plan
- 7 I-9 Stone Underdrains No. 2
- 8 L-9 Seeding and Protecting, as per plan
- 10 T-35 1" Asphaltic Concrete Surface Course Type "C" (85-100)
- 11 B-35 1 1/4" Asphaltic Concrete Leveling Course (85-100)
- 12 B-21 5" Waterproofed Aggregate Base Course
- 17 B-19 7" Aggregate Base Course
- 18 B-19 6" Aggregate Base Course
- 5 T-30 Bituminous Prime Coat, 0.40 Gal. per Sq. Yd., Sec. M-5.7, RT-2 or RT-3.

NOTES

**Thickness shown is Design Thickness as described in Sec. T-35.01, B-35.01 & B-21.01

*From Sta. 20+00 to Sta. 21+00 and from Sta. 36+67 to Sta. 37+29.64 the pavement width varies. See Detail for widths and elevations.

See Standard Drawing RI-1 for Details not shown.



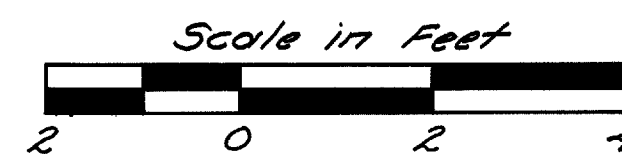
TYPE 2 FIELD DRIVE

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(24)178

166
325

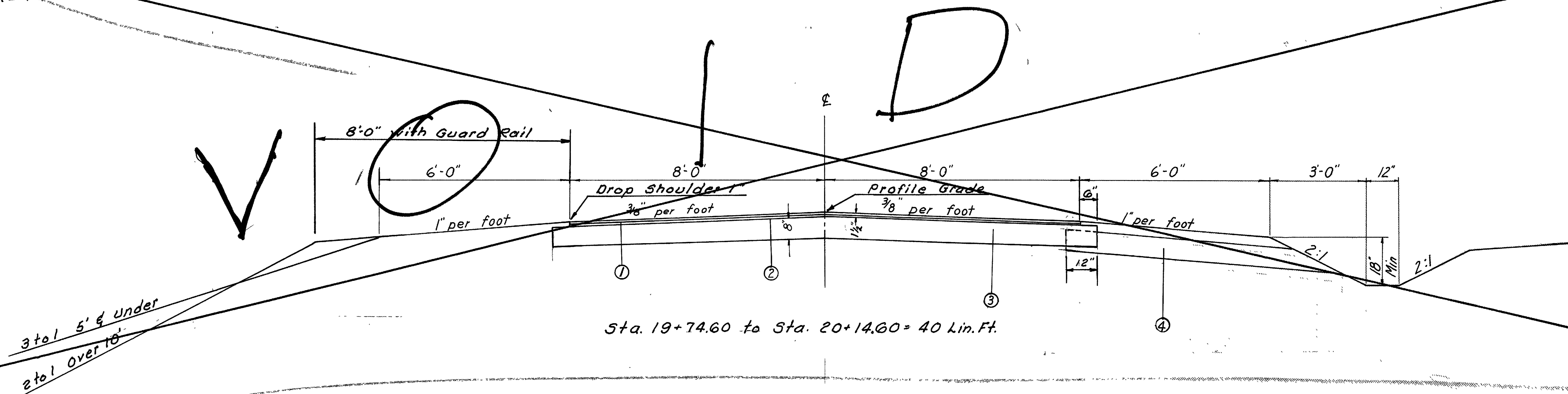
RIC - 30 - 928
ASD - 30 - 0.00

TYPICAL SECTION



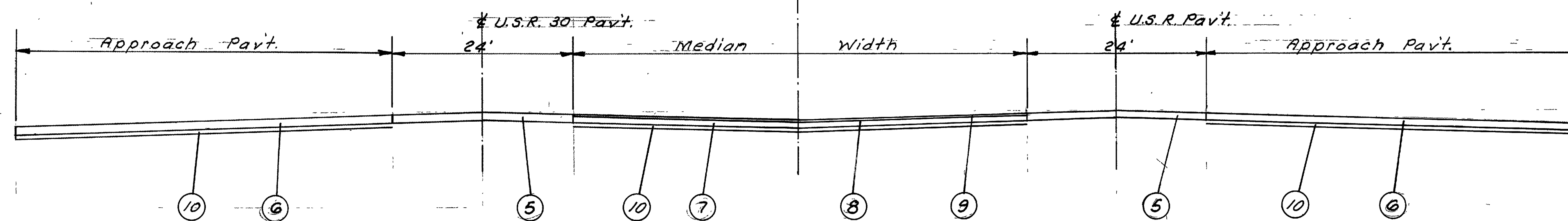
TYPE T-35 RICHLAND COUNTY ROAD NO. 291

Note - For Details Not Shown,
See Std. Drwg. RI-1



TYPICAL SECTION ACROSS INTERSECTIONS

(No Scale)
Median



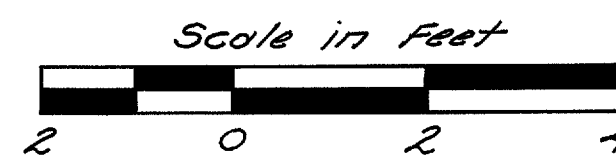
Note: Above Section shows Typical Construction for all Intersections. The Approach Pavement to be 89% of T-70, while the Pavement in the Median Area will be 8" Surface of T-35 on 8" B-70 Base.

- ⑤ T-71 9" Reinf. P.C. Concrete Pavt.
- ⑥ T-70 9" P.C. Concrete Pavt.
- ⑦ B-70 8" P.C. Concrete Base Course
- ⑧ T-30 Bituminous Tack Coat, 0.10 Gal. per Sq. Yd., Sec. M-5.5, MS-2 or RS-1, or Sec. M-5.2, RC-1 or RC-2, as per Sec. T-30.02
- ⑨ T-35 1" Asphaltic Concrete Surface Course, Type "C", 85-100
- ⊗ Thickness Shown is Design Thickness
- ⑩ I-22 6" Subbase, Grading "A" or "B", as per plan

- ① T-35 3/4" Asphaltic Concrete Surface Course, Type "C" (85-100)
- ② T-30 Bituminous Prime Coat, 0.4 Gal. per Sq. Yd., Sec. M-5.7 RT-2 or RT-3
- ③ B-19 Aggregate Base Course
- ④ I-9 Stone Underdrains, No. 2, Staggered at 50' intervals, as directed by the Engineer.
- ⊗ Thickness Shown is Design Thickness

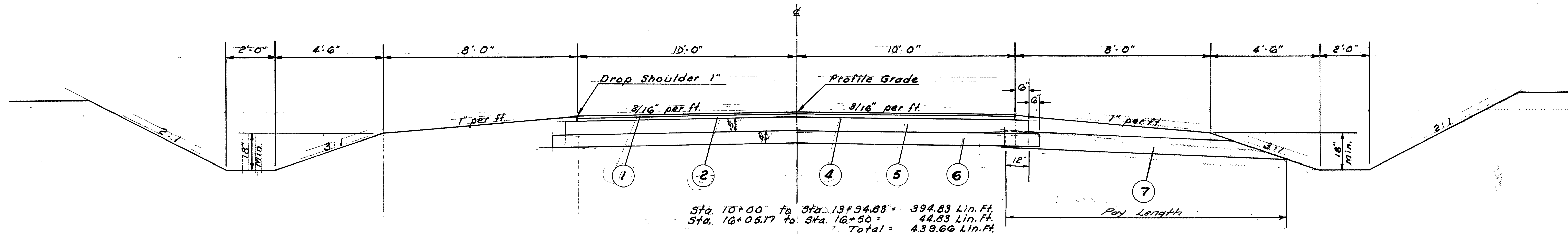
RIC-30-928
ASD-30-000

TYPICAL SECTIONS

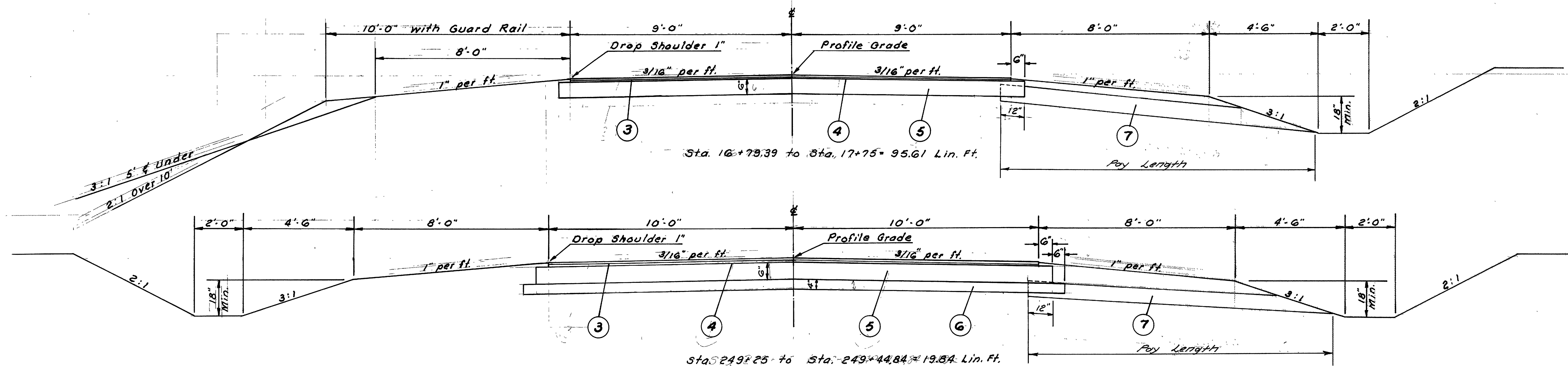


Note - For Details not Shown,
See Std. Drwg. RI-1

STATE ROUTE 511 TYPE T-35



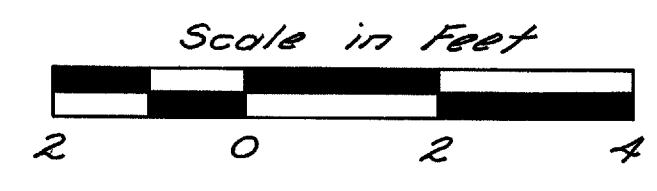
STATE ROUTE 603 TYPE T-35



- ① T-35 1 1/4" Asphaltic Concrete Surface Course, Type "C" (85-100)
 - ② B-35 1 3/4" Asphaltic Concrete Leveling Course (85-100)
 - ③ T-35 1" Asphaltic Concrete Surface Course, Type "C" (85-100)
1" Asphaltic Concrete Leveling Course (85-100)
 - ④ T-80 Bituminous Prime Coat (0.4 Gal. per Sq. Yd.) Sec. M-5.7 RT-2 or RT-3
 - ⑤ B-19 Aggregate Base Course
 - ⑥ I-22 Sub-base, Grading "A" or "B", as per plan
 - ⑦ I-9 Stone Underdrain No. 2, Staggered at 50' intervals,
as directed by the Engineer.
- * Thickness Shown are Design Thickness

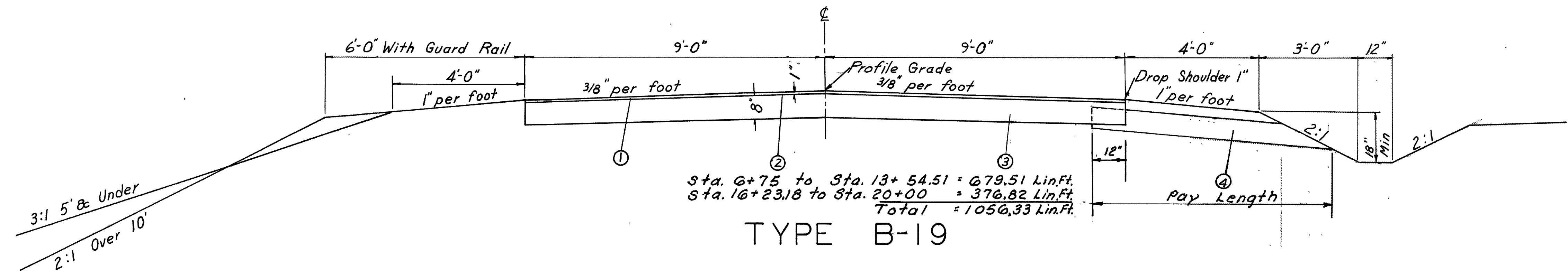
Note - For Details not Shown
See Std. Drwg. RI-1

TYPICAL SECTIONS

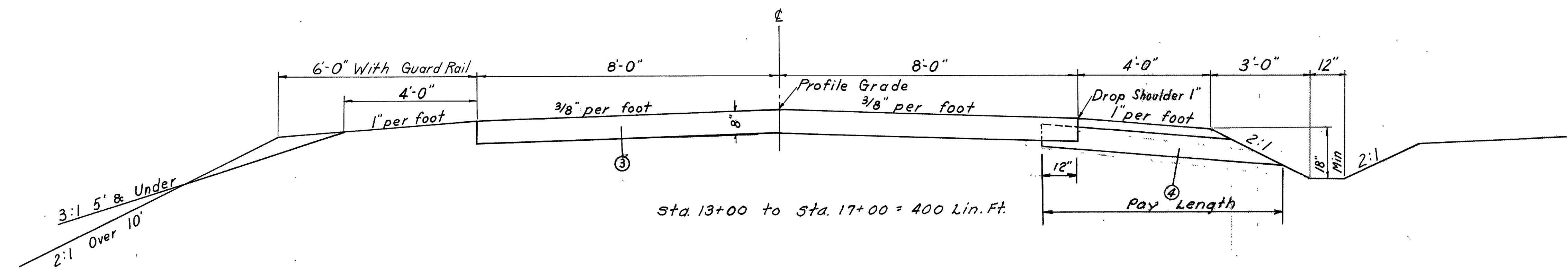


TYPE T-35

MIFFLIN TOWNSHIP ROAD 69



MIFFLIN TOWNSHIP ROAD 134

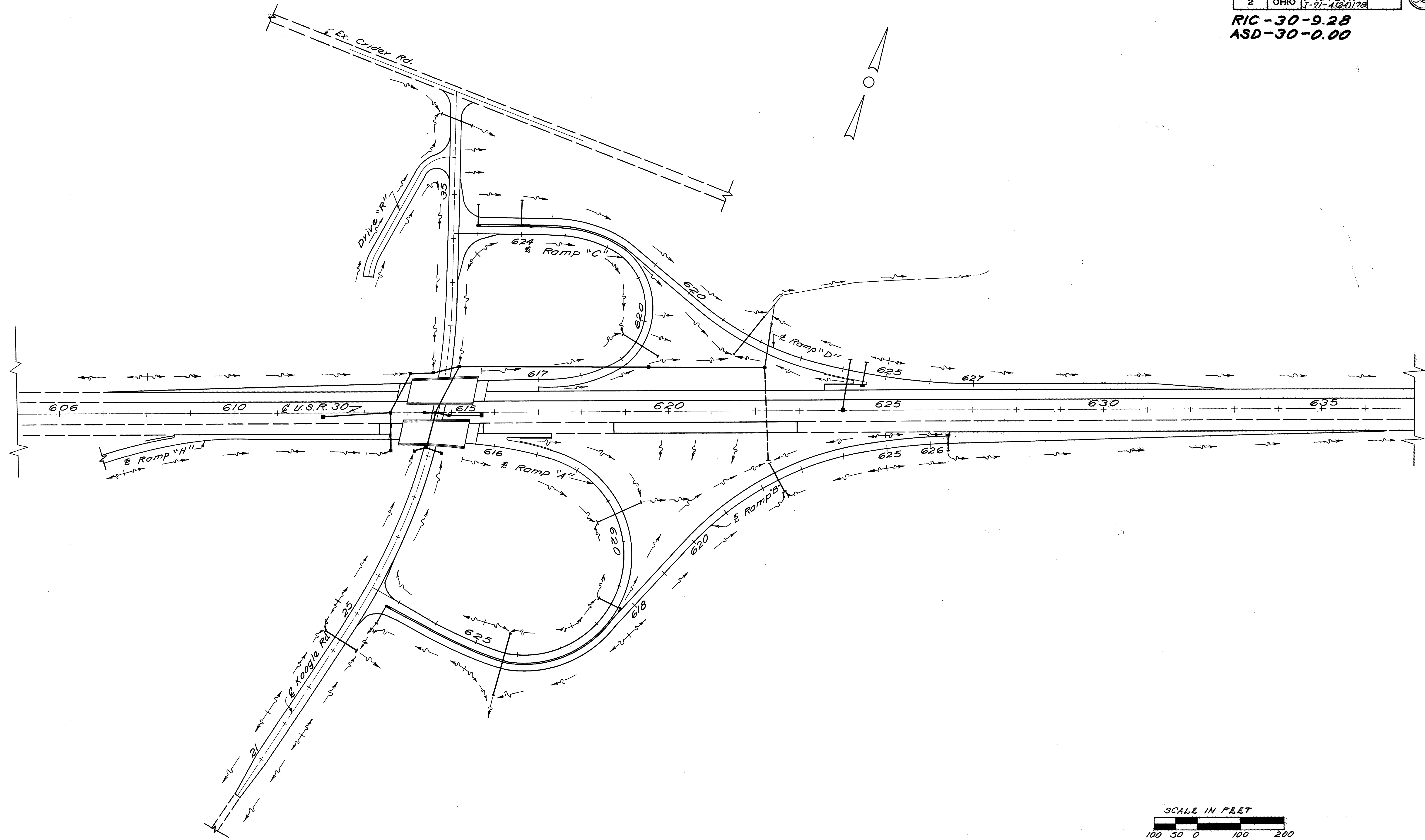


- ① T-35 1" Asphaltic Concrete Surface Course, Type C (95-100)
 - ② T-30 Bituminous Prime Coat, 0.4 Gal. per Sq. Yd. Sec. M-5.7 R.T. 2 or R.T. 3
 - ③ B-19 Aggregate Base Course
 - ④ I-9 Stone Underdrains, No. 2, Staggered at 50' intervals, as directed by the Engineer.
- ⊗ Thickness Shown is Design Thickness.

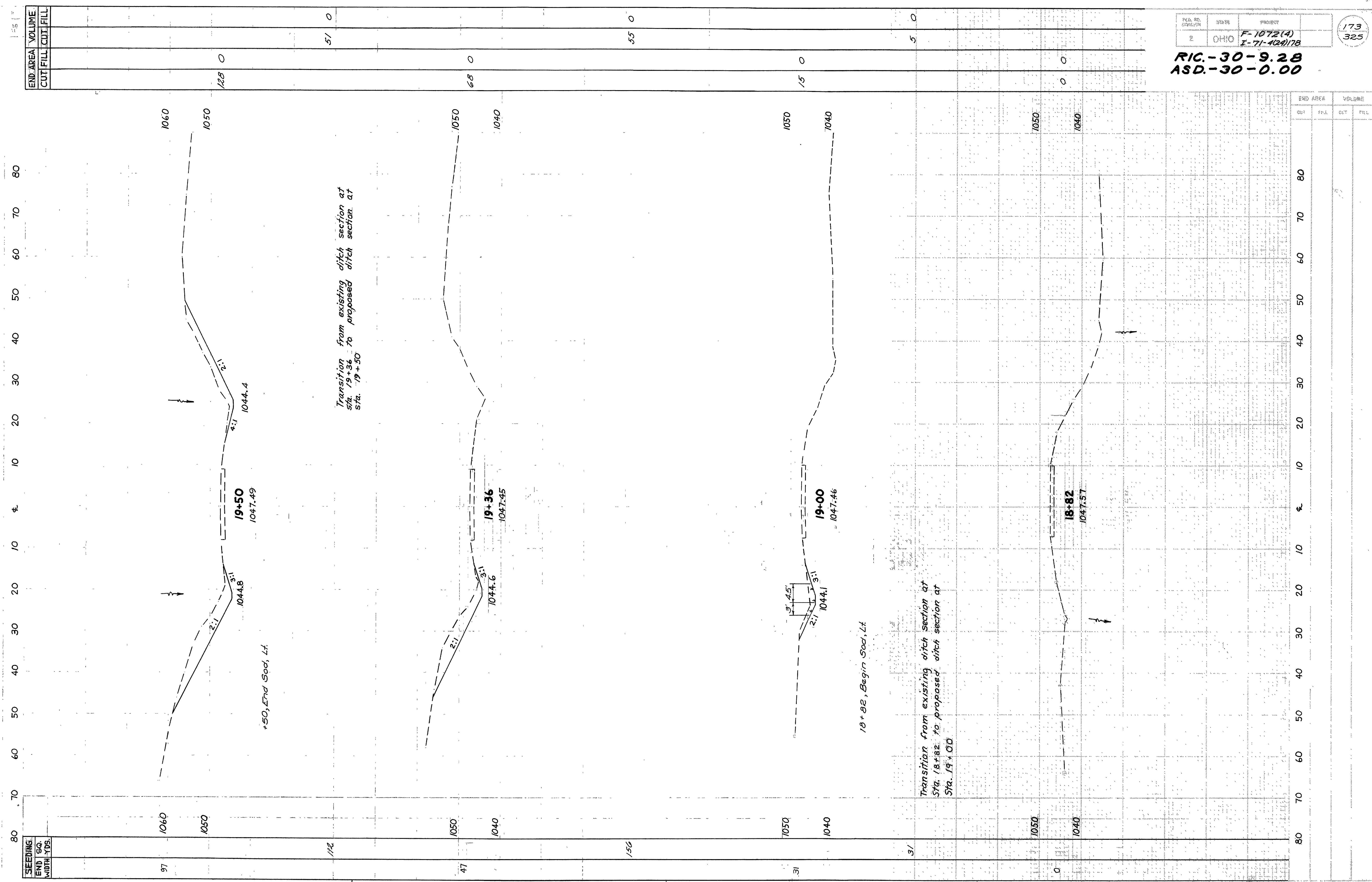
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072(4) T-71-4(24)178	

170
325

RIC-30-9.28
ASD-30-0.00

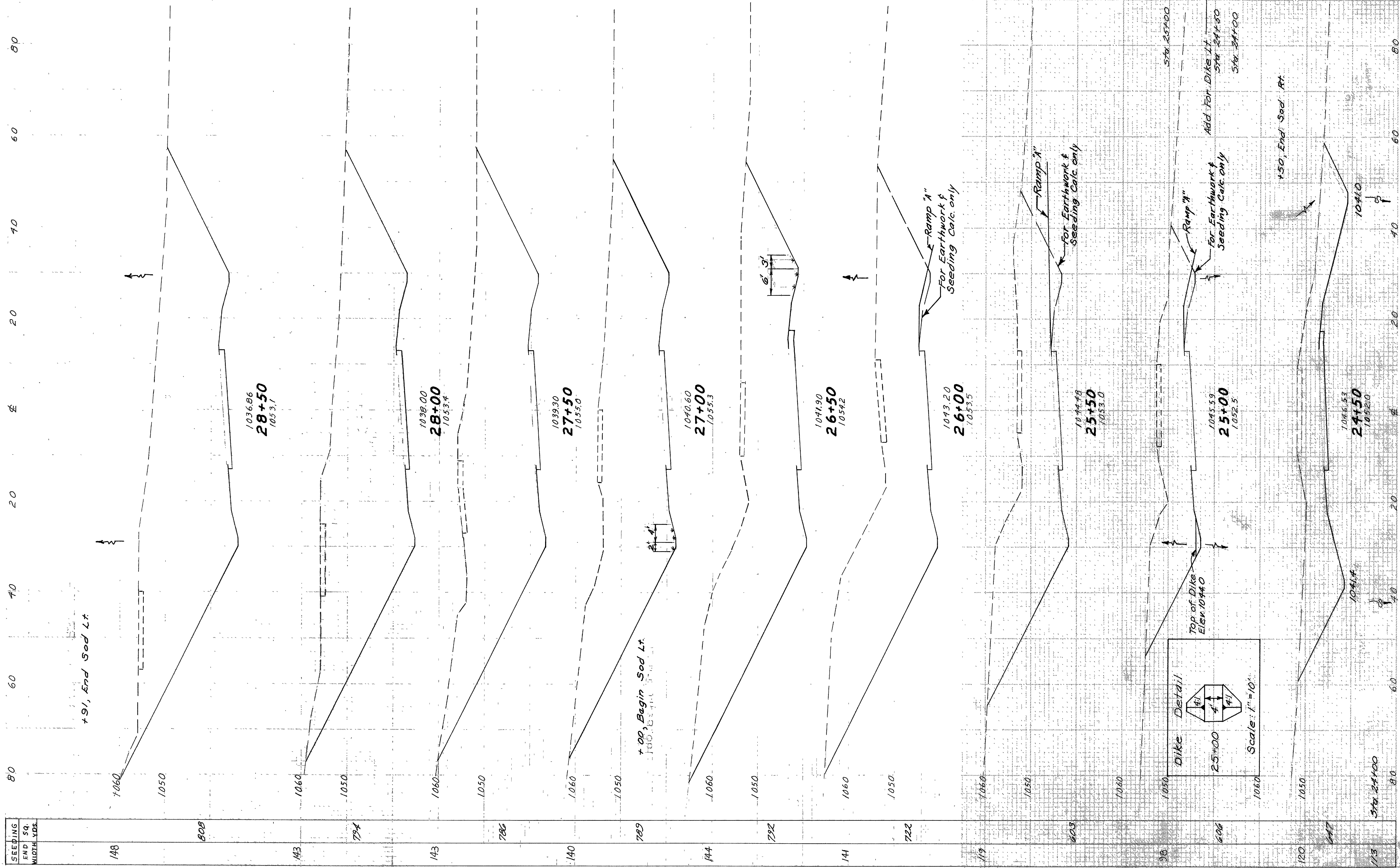


KOOGLE ROAD INTERCHANGE



KOOGLE RD. ~ STA. 18+82 TO STA. 19+50

SEEDING END SQ. WIDTH YDS.	END AREA	VOLUME	CUT	FILL
148	1713	0	0	0
143	1654	0	0	3118
143	1551	0	0	2368
140	1469	0	0	2126
144	1438	0	0	2082
141	1364	0	0	2354
119	970	0	0	2161
120	605	0	0	1458
113	601	0	0	1117
120	440	0	0	364



KOOGLE RD. Sta. 24+50 to Sta. 28+50

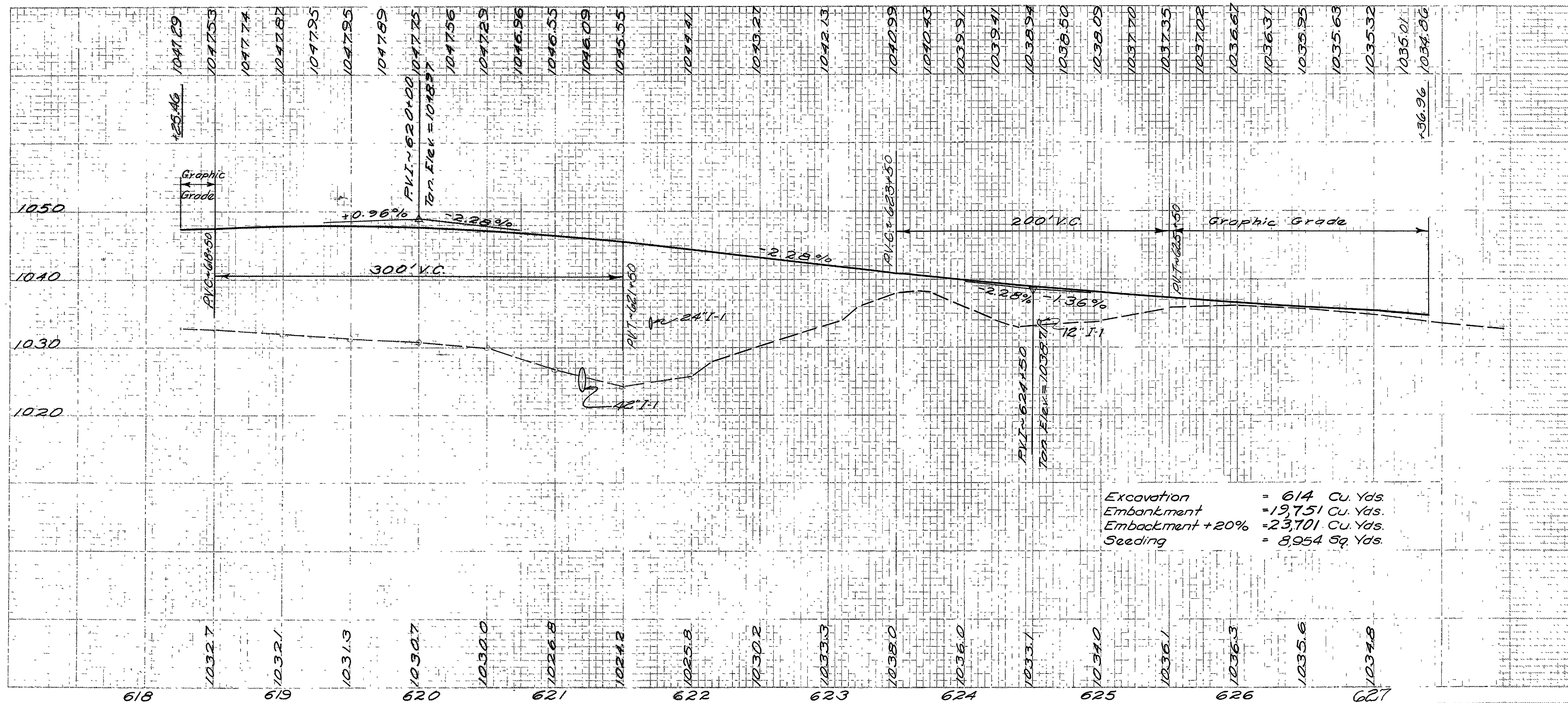
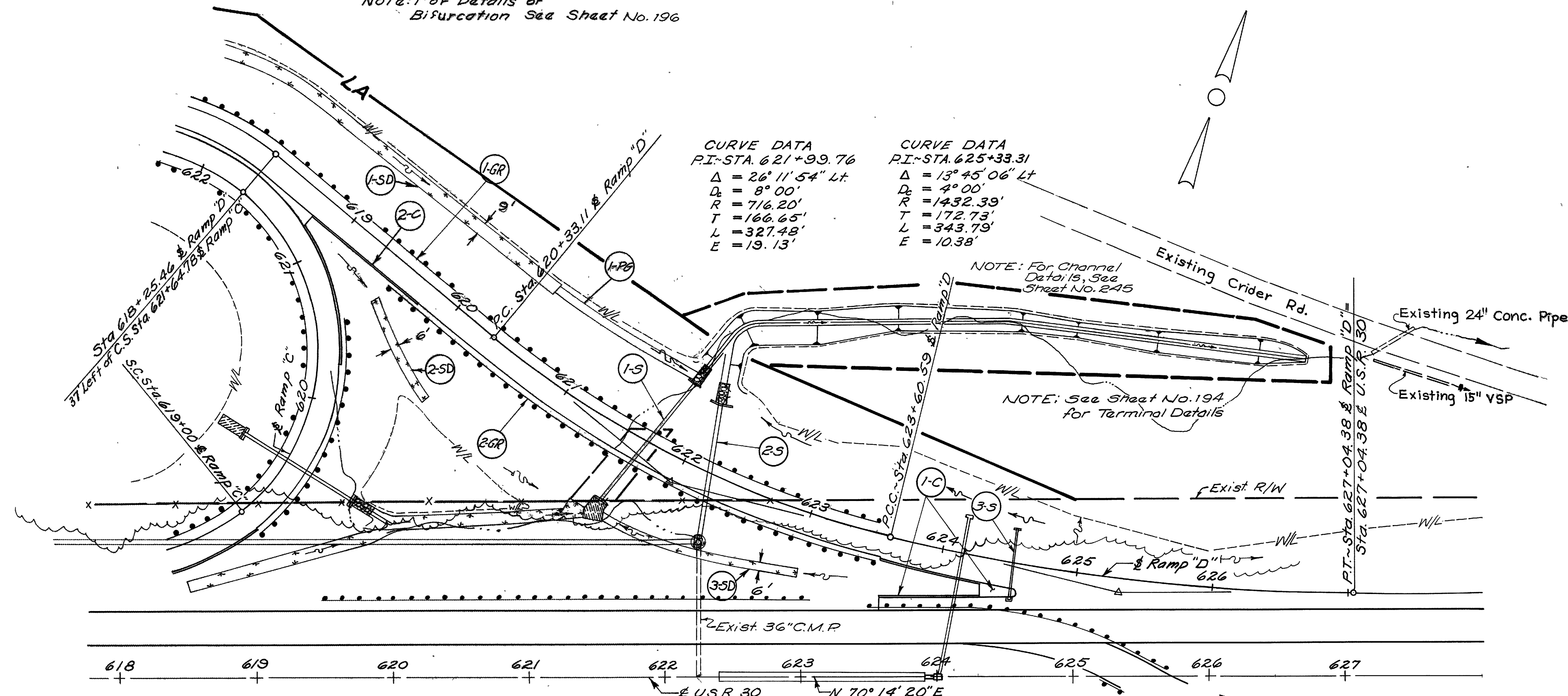
STA.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
28+50	1713	0	0	0
28+00	1654	0	0	3118
27+50	1551	0	0	2368
27+00	1469	0	0	2126
26+50	1438	0	0	2082
26+00	1364	0	0	2354
25+50	970	0	0	2161
25+00	605	0	0	1458
24+50	601	0	0	1117
24+00	440	0	0	364

Note: For Details of
Bifurcation See Sheet No. 196

RIC-30-9.28
ASD-30-0.00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1072 (4) I-71-4(20)178	

189
325



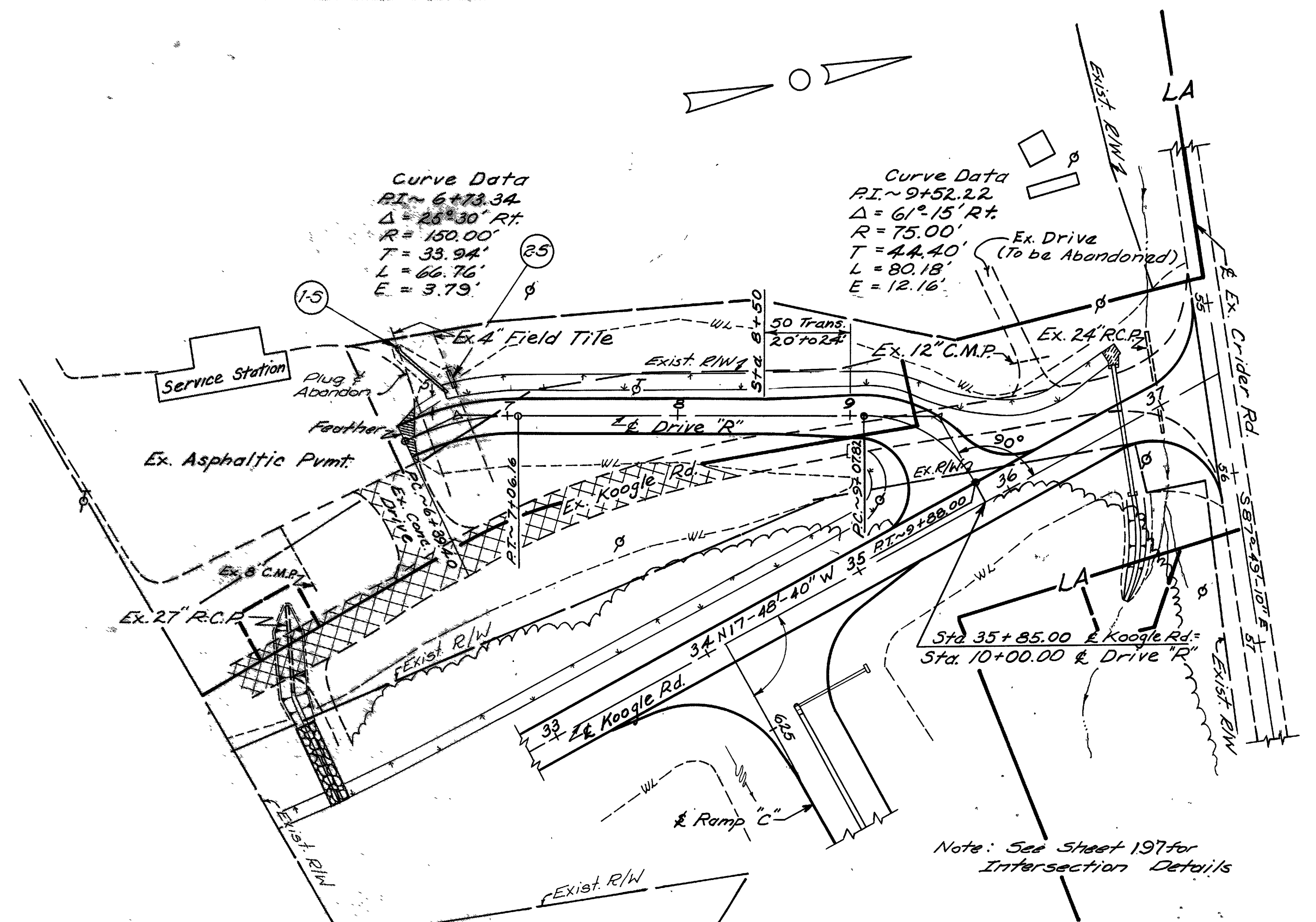
SEE SHEET NO.	244	246	682
ESTIMATED QUANTITIES			
E-3	441	2	51
E-12	120	106	51
F-1	120	106	51
F-2	10.4	10.2	1.3
F-3	10.4	10.2	1.3
F-4	10.4	10.2	1.3
F-5	10.4	10.2	1.3
F-6	10.4	10.2	1.3
F-7	10.4	10.2	1.3
F-8	10.4	10.2	1.3
F-9	10.4	10.2	1.3
F-10	10.4	10.2	1.3
F-11	10.4	10.2	1.3
F-12	10.4	10.2	1.3
F-13	10.4	10.2	1.3
F-14	10.4	10.2	1.3
F-15	10.4	10.2	1.3
F-16	10.4	10.2	1.3
F-17	10.4	10.2	1.3
F-18	10.4	10.2	1.3
F-19	10.4	10.2	1.3
F-20	10.4	10.2	1.3
F-21	10.4	10.2	1.3
F-22	10.4	10.2	1.3
F-23	10.4	10.2	1.3
F-24	10.4	10.2	1.3
F-25	10.4	10.2	1.3
F-26	10.4	10.2	1.3
F-27	10.4	10.2	1.3
F-28	10.4	10.2	1.3
F-29	10.4	10.2	1.3
F-30	10.4	10.2	1.3
F-31	10.4	10.2	1.3
F-32	10.4	10.2	1.3
F-33	10.4	10.2	1.3
F-34	10.4	10.2	1.3
F-35	10.4	10.2	1.3
F-36	10.4	10.2	1.3
F-37	10.4	10.2	1.3
F-38	10.4	10.2	1.3
F-39	10.4	10.2	1.3
F-40	10.4	10.2	1.3
F-41	10.4	10.2	1.3
F-42	10.4	10.2	1.3
F-43	10.4	10.2	1.3
F-44	10.4	10.2	1.3
F-45	10.4	10.2	1.3
F-46	10.4	10.2	1.3
F-47	10.4	10.2	1.3
F-48	10.4	10.2	1.3
F-49	10.4	10.2	1.3
F-50	10.4	10.2	1.3
F-51	10.4	10.2	1.3
F-52	10.4	10.2	1.3
F-53	10.4	10.2	1.3
F-54	10.4	10.2	1.3
F-55	10.4	10.2	1.3
F-56	10.4	10.2	1.3
F-57	10.4	10.2	1.3
F-58	10.4	10.2	1.3
F-59	10.4	10.2	1.3
F-60	10.4	10.2	1.3
F-61	10.4	10.2	1.3
F-62	10.4	10.2	1.3
F-63	10.4	10.2	1.3
F-64	10.4	10.2	1.3
F-65	10.4	10.2	1.3
F-66	10.4	10.2	1.3
F-67	10.4	10.2	1.3
F-68	10.4	10.2	1.3
F-69	10.4	10.2	1.3
F-70	10.4	10.2	1.3
F-71	10.4	10.2	1.3
F-72	10.4	10.2	1.3
F-73	10.4	10.2	1.3
F-74	10.4	10.2	1.3
F-75	10.4	10.2	1.3
F-76	10.4	10.2	1.3
F-77	10.4	10.2	1.3
F-78	10.4	10.2	1.3
F-79	10.4	10.2	1.3
F-80	10.4	10.2	1.3
F-81	10.4	10.2	1.3
F-82	10.4	10.2	1.3
F-83	10.4	10.2	1.3
F-84	10.4	10.2	1.3
F-85	10.4	10.2	1.3
F-86	10.4	10.2	1.3
F-87	10.4	10.2	1.3
F-88	10.4	10.2	1.3
F-89	10.4	10.2	1.3
F-90	10.4	10.2	1.3
F-91	10.4	10.2	1.3
F-92	10.4	10.2	1.3
F-93	10.4	10.2	1.3
F-94	10.4	10.2	1.3
F-95	10.4	10.2	1.3
F-96	10.4	10.2	1.3
F-97	10.4	10.2	1.3
F-98	10.4	10.2	1.3
F-99	10.4	10.2	1.3
F-100	10.4	10.2	1.3
TOTALS	441	2	51

RAMP "D" ~ STA. 618+25.46 TO STA. 627+04.38

RIC-30-9.28
ASD-30-0.00

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1072 (4) F-71-4 (26A) 178	

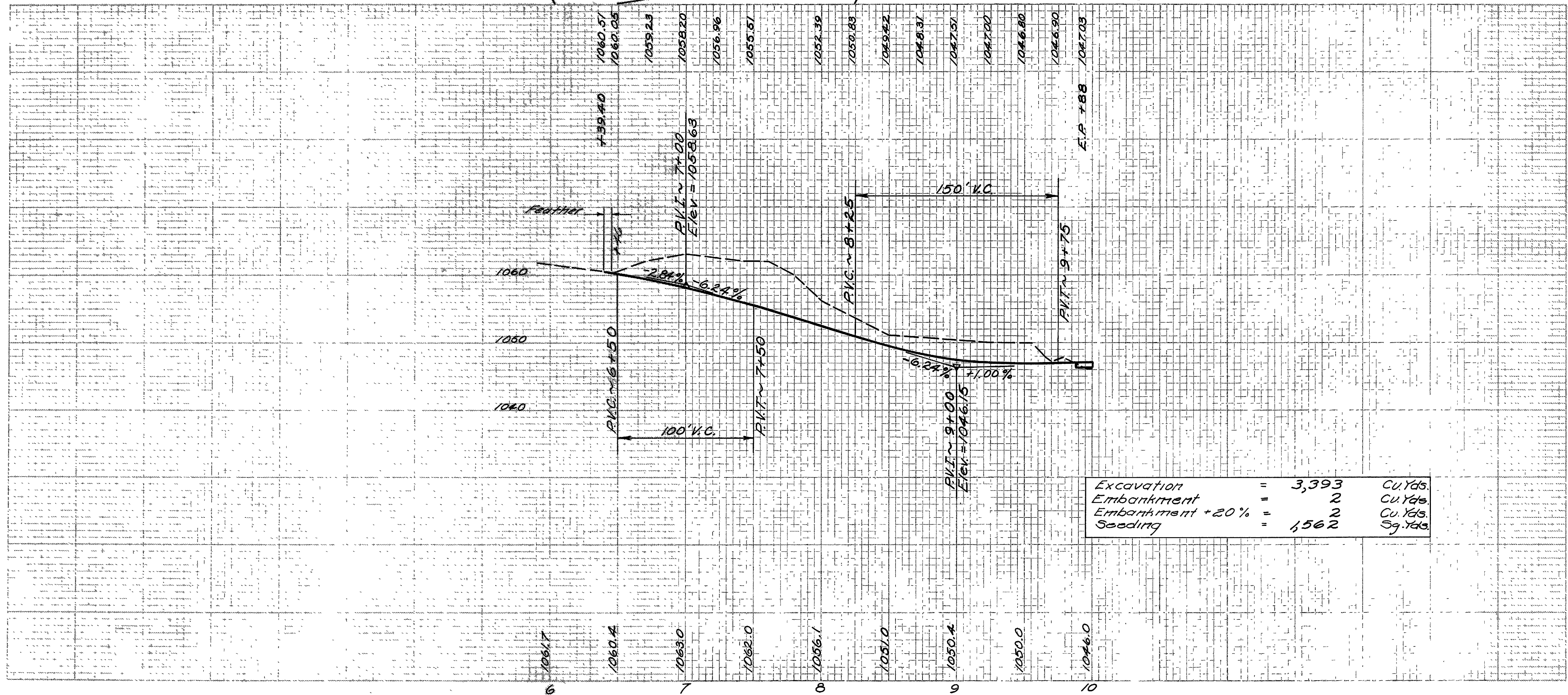
192
325



Curve Data
P.I. ~ 6+73.34
Δ = 26° 30' R+
R = 150.00'
T = 33.94'
L = 66.76'
E = 3.79'

Curve Data
P.I. ~ 9+52.22
Δ = 61° 15' R+
R = 75.00'
T = 44.40'
L = 80.18'
E = 12.16'

Note: See Sheet 197 for Intersection Details



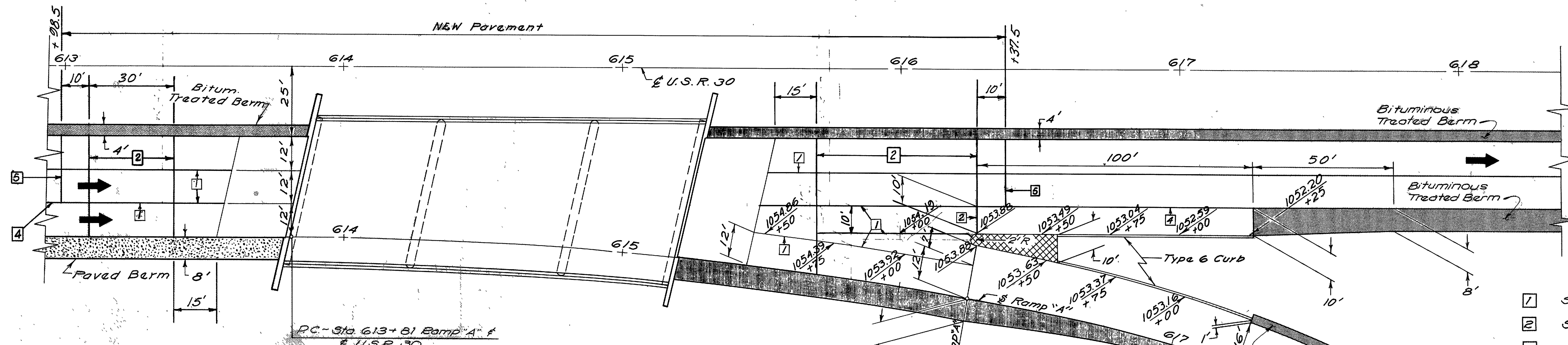
Excavation	=	3,393	Cu. Yds.
Embankment	=	2	Cu. Yds.
Embankment + 20%	=	2	Cu. Yds.
Seeding	=	1,562	Sq. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	CLASS	QTY	UNIT	TOTALS
1-3	Sta. 6+70	L	Excavation	10	Cu. Yds.	20
2-5	Sta. 6+76	L	Excavation	10	Cu. Yds.	
					SEEDING	1
					TOTALS	21

DRIVE "R" ~ STA. 6+39.40 TO STA. 10+00

RIC -30-9.28
ASD -30-0.00

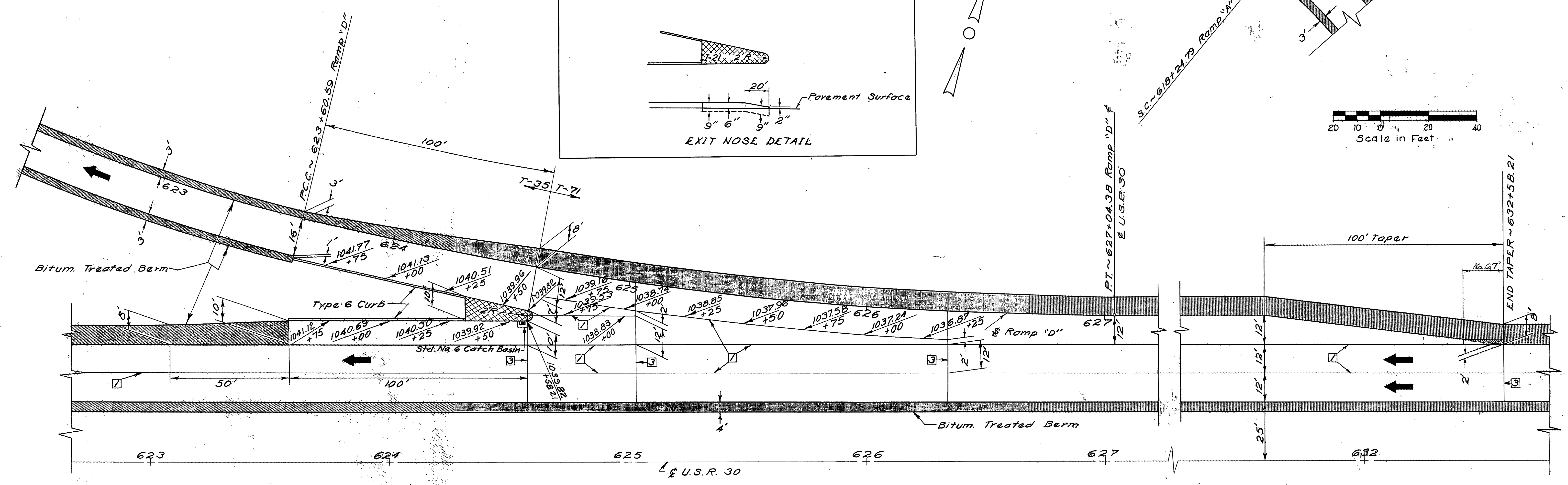
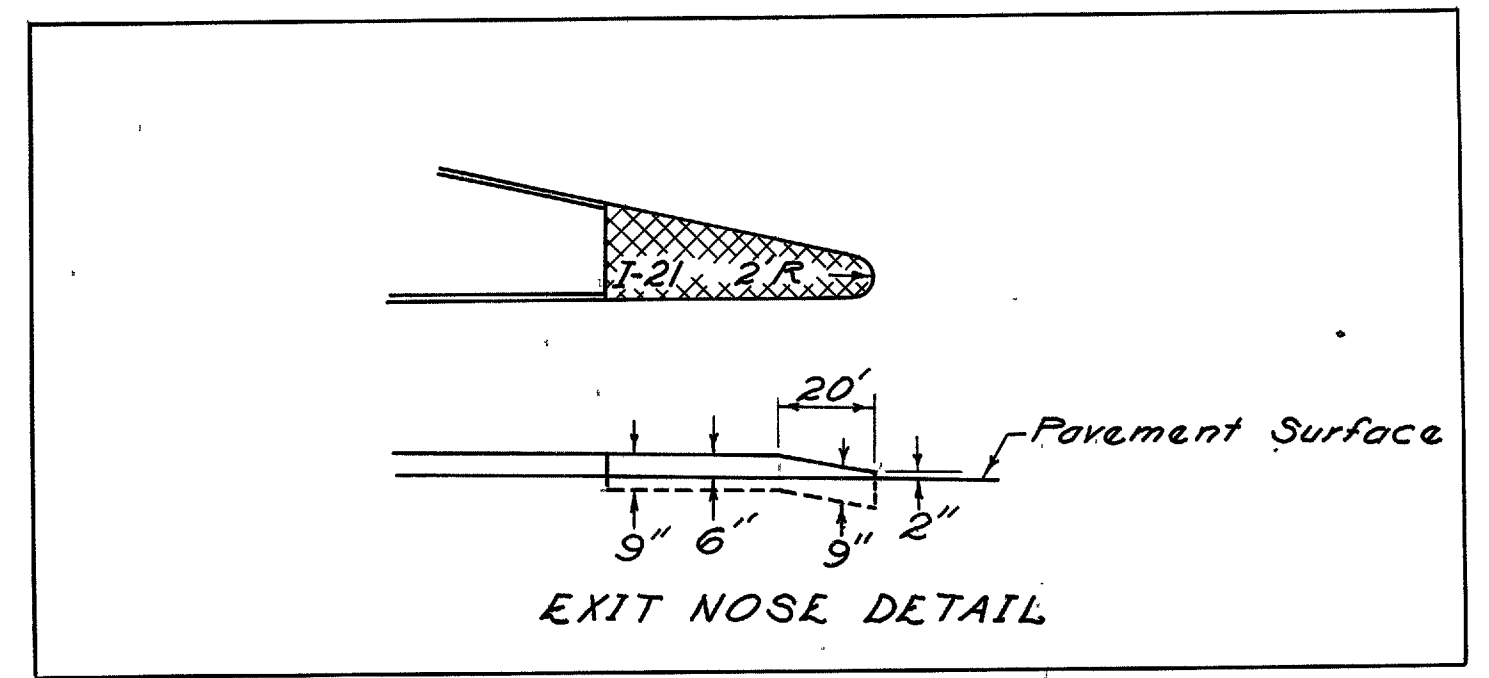


NOTES

The cross hatched area indicates I-21

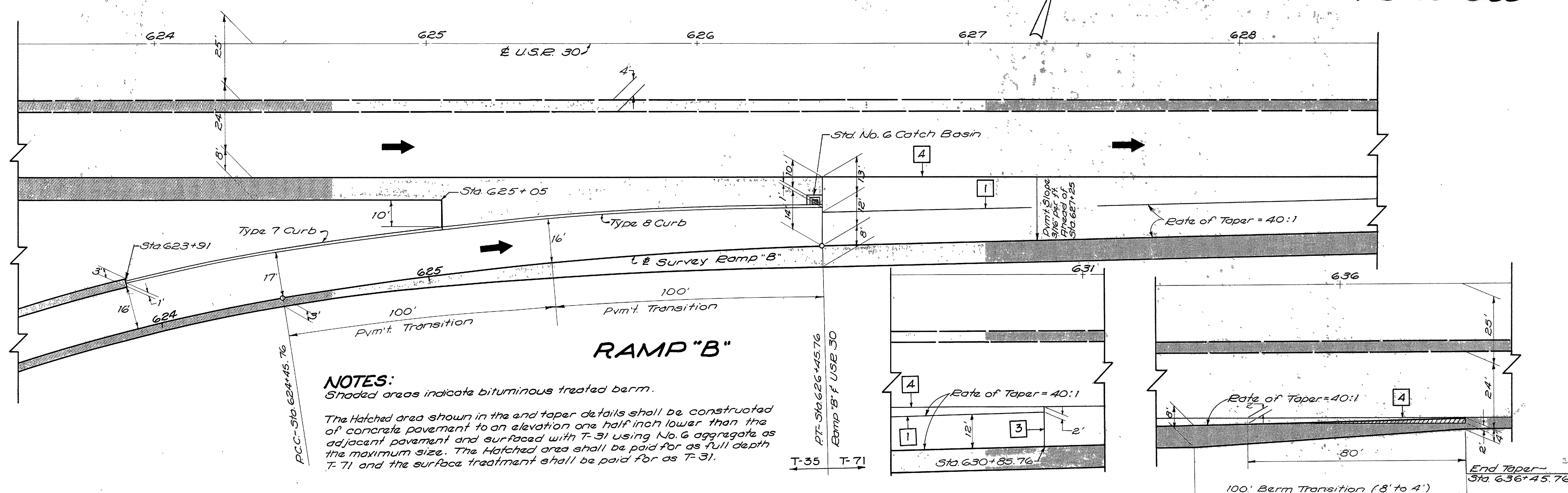
The hatched area shown in the end taper details shall be constructed of concrete pavement to an elevation one half inch lower than the adjacent pavement and surfaced with T-31 using No. 6 aggregate as the maximum size. The hatched area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.

- LEGEND**
- 1 Standard Longitudinal Joint
 - 2 Standard Expansion Joint
 - 3 Standard Contraction Joint
 - 4 Standard Expansion Bolt Joint
 - 5 Standard Construction Joint



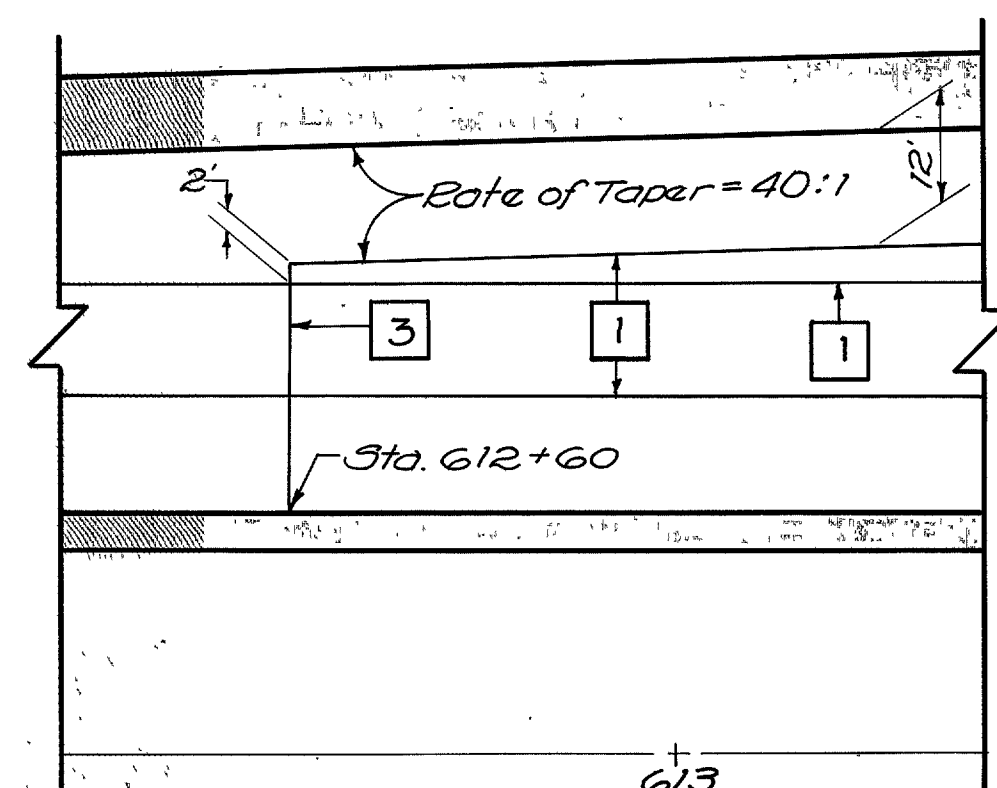
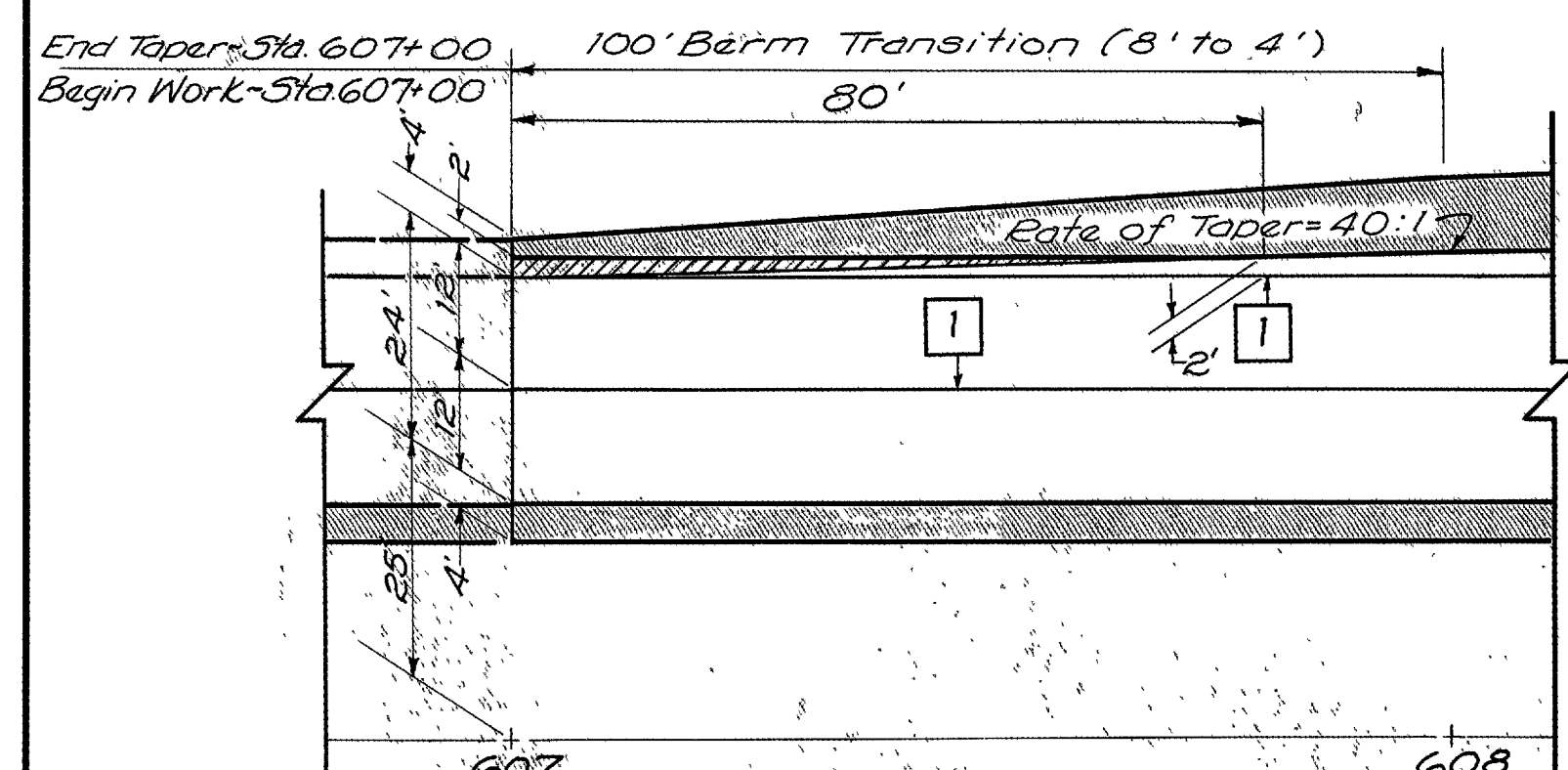
EXIT TERMINAL DETAILS

RIC-30-9.28
ASD-30-0.00

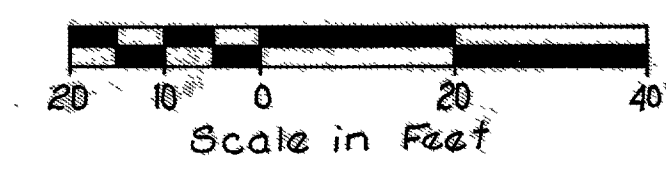
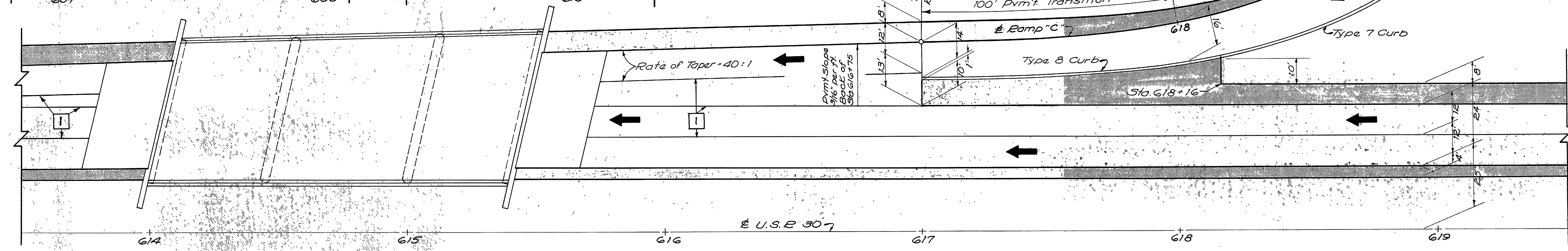


NOTES:
Shaded areas indicate bituminous treated berm.

The Hatched area shown in the end taper details shall be constructed of concrete pavement to an elevation one half inch lower than the adjacent pavement and surfaced with T-31 using No. 6 aggregate as the maximum size. The Hatched area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.



- LEGEND**
- 1 Standard Longitudinal Joint
 - 2 Standard Expansion Joint
 - 3 Standard Contraction Joint
 - 4 Standard Expansion Bolt Joint

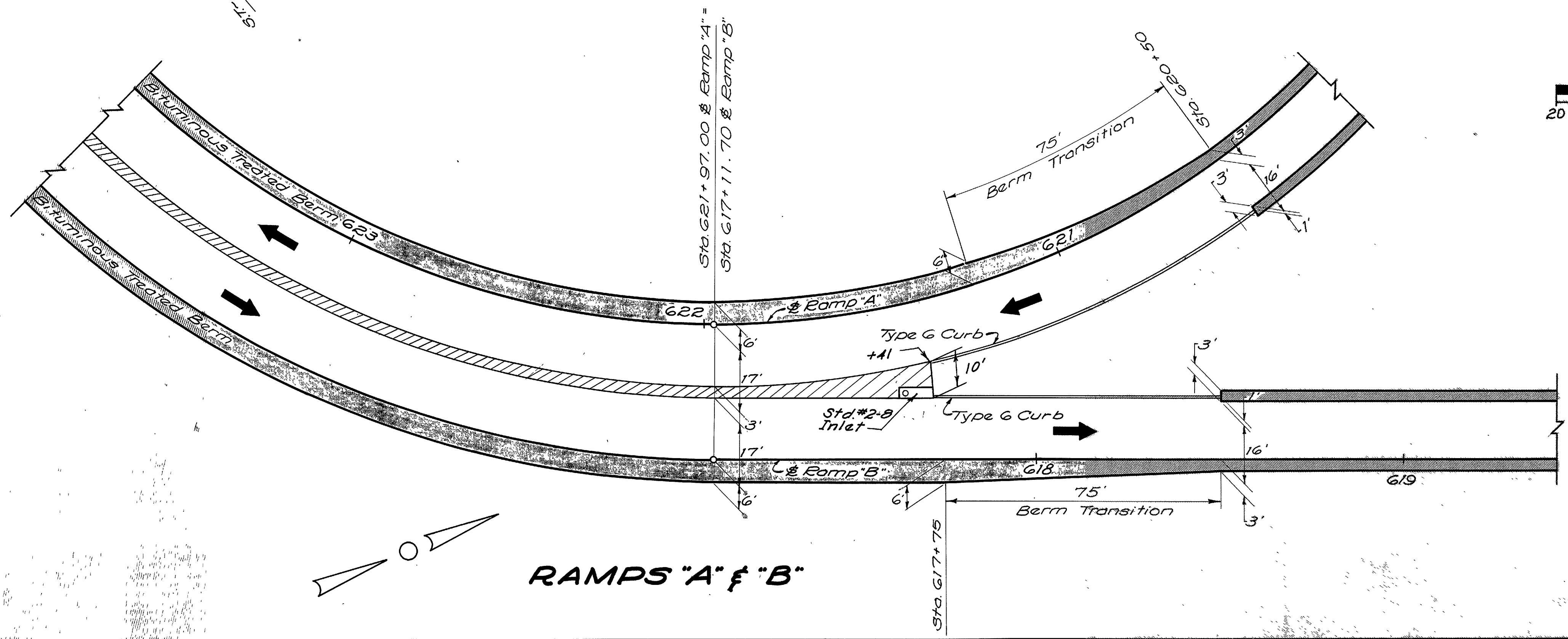
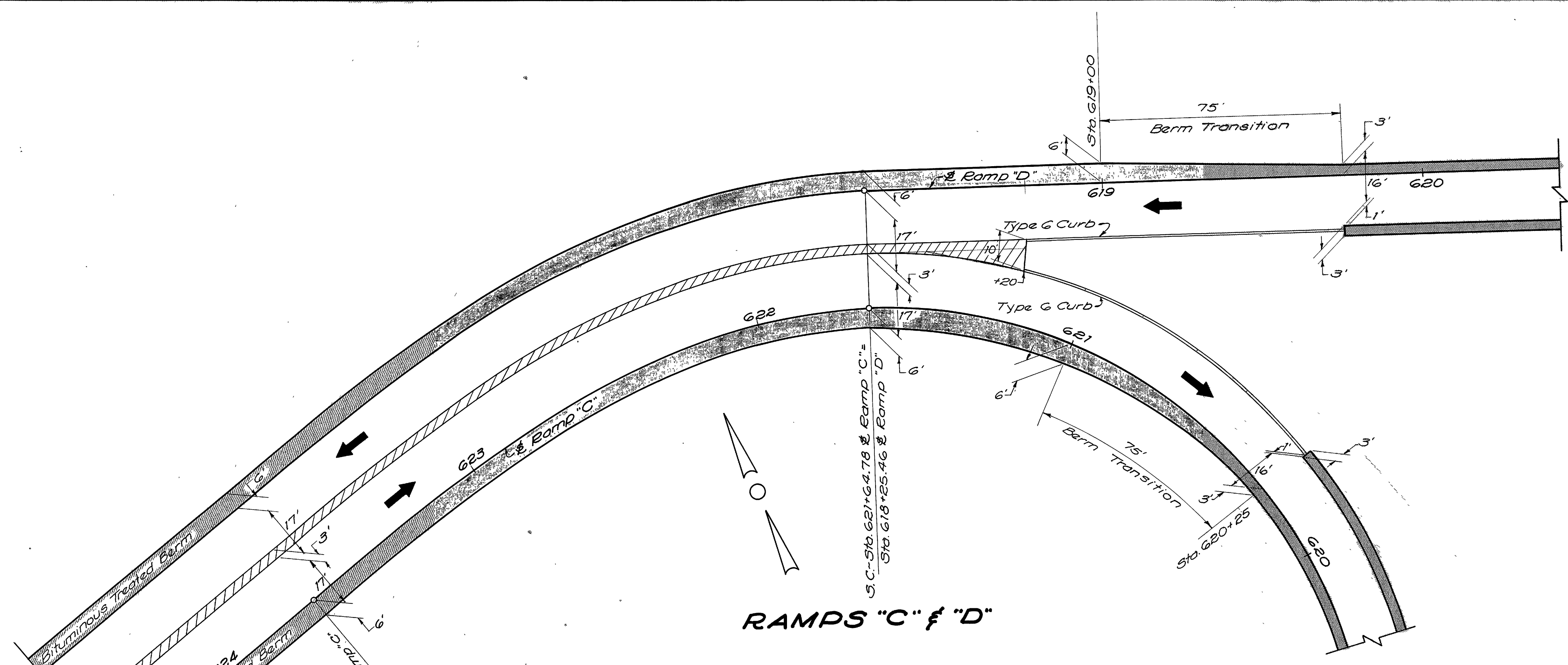


ENTRANCE RAMP DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072 (4) I-71-4(24)78	

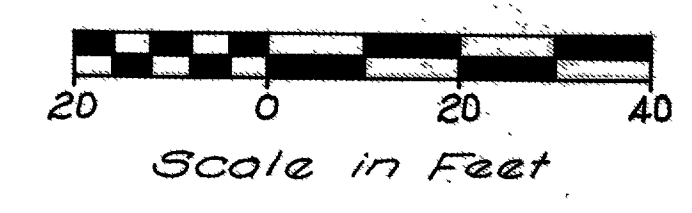
196
325

RIC-30-9.28
ASD-30-0.00



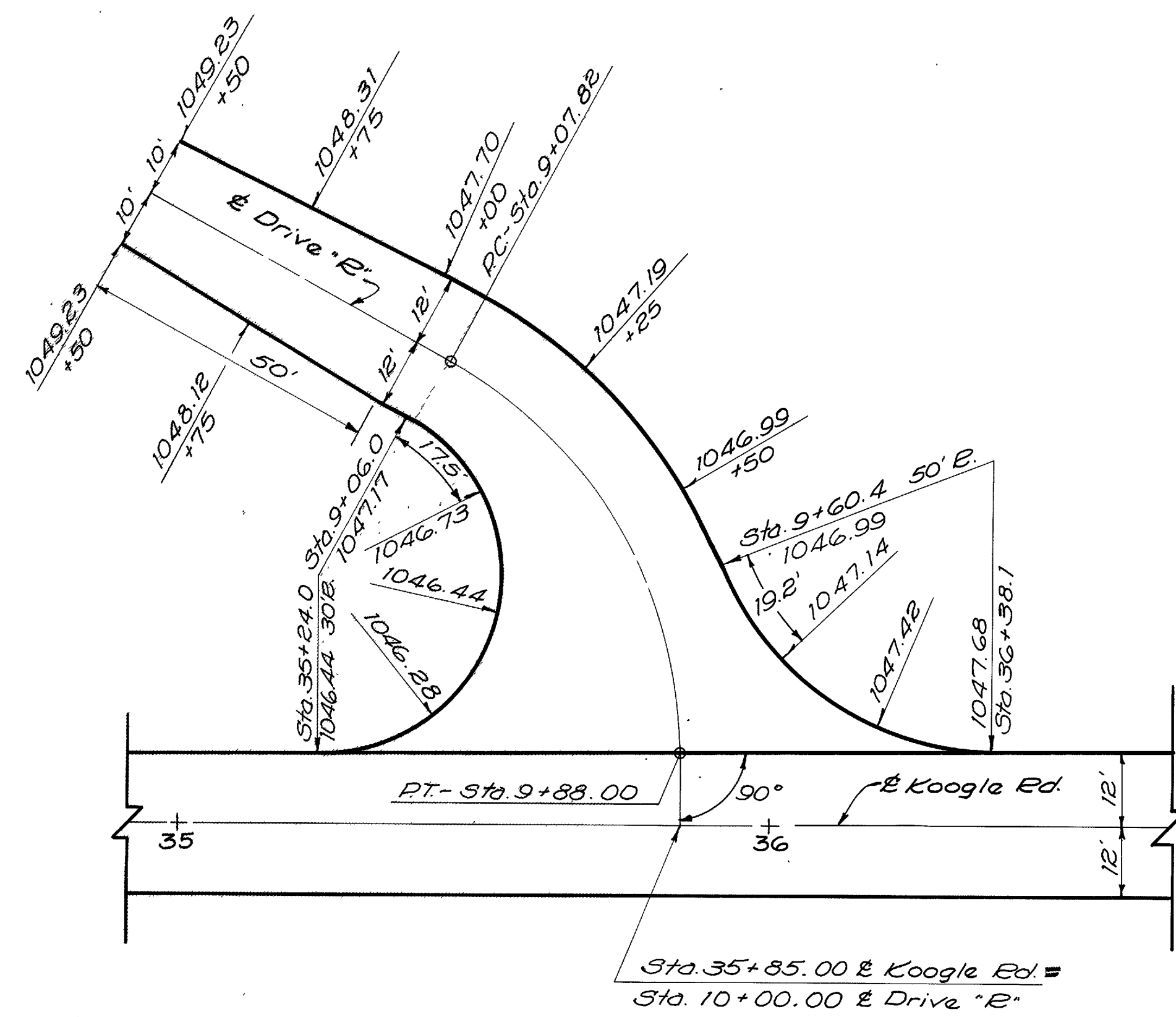
NOTES

Transition Type G Curb on Ramp "A" from 2" at Sta. 620+50 to 6" at Sta. 620+60 and on Ramp "D" from 6" at Sta. 619+65 to 2" at Sta. 619+75.
Hatched area indicates I-21.



DETAILS OF RAMP BIFURCATION

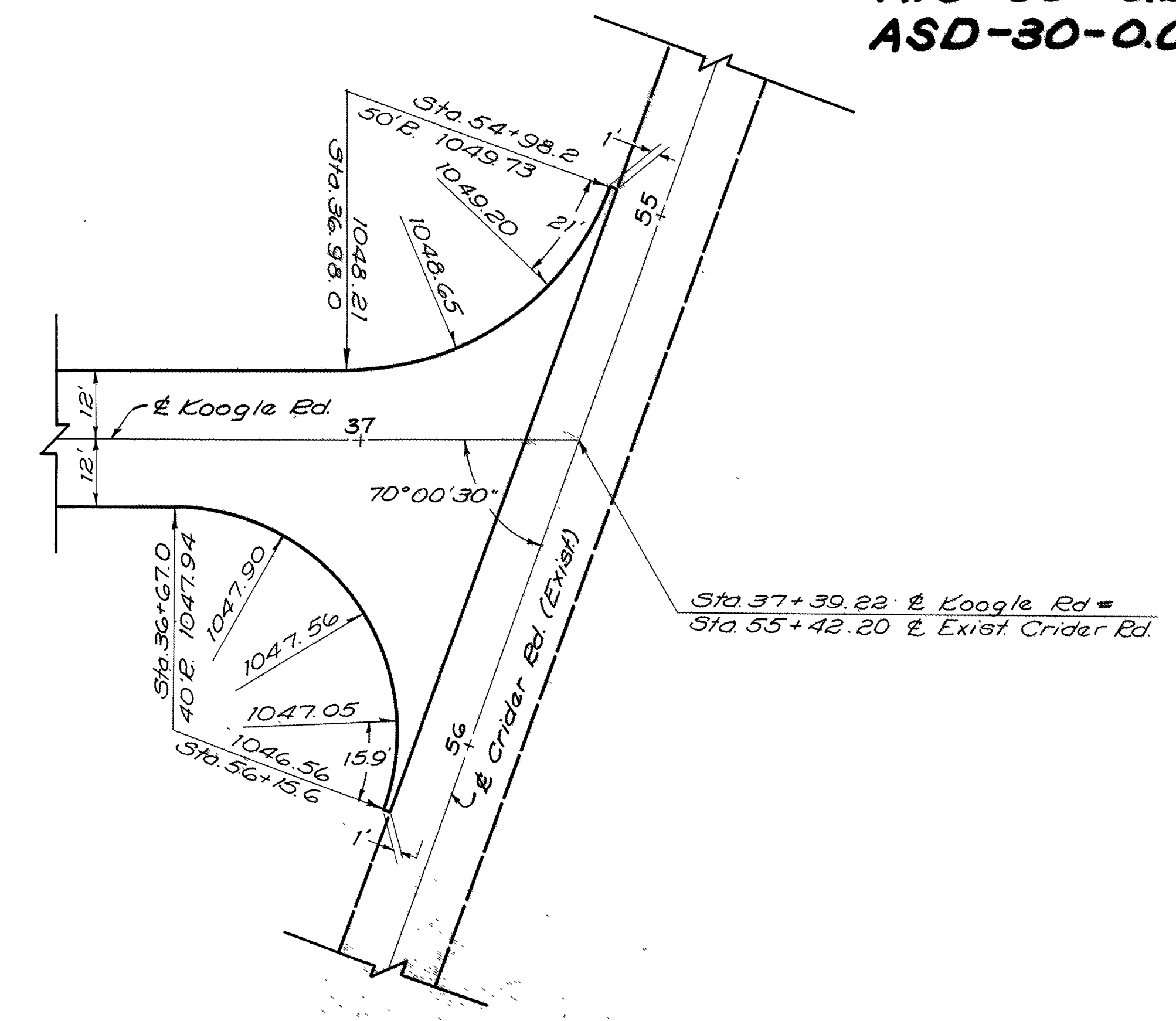
RIC-30-9.28
ASD-30-0.00



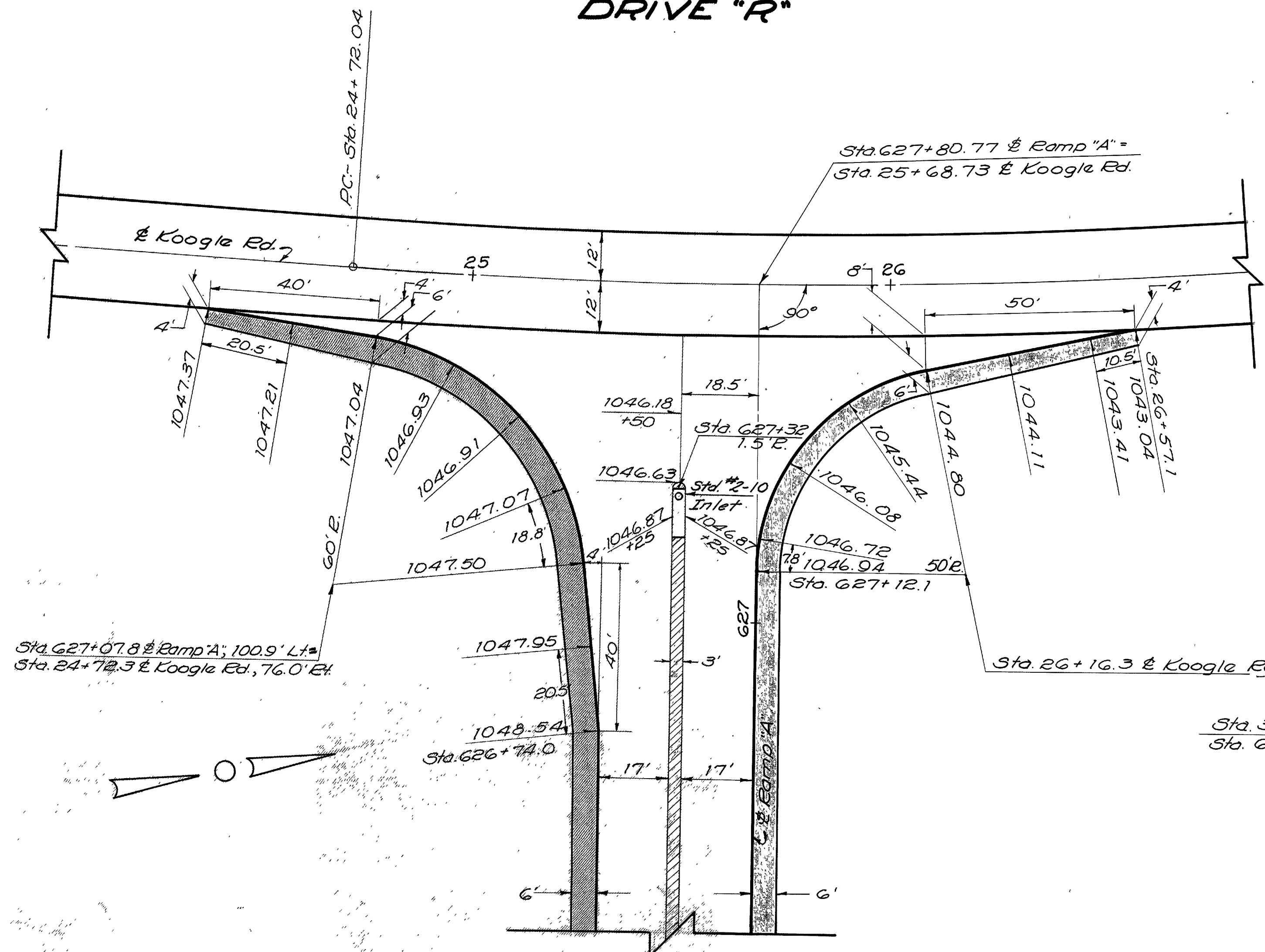
DRIVE "R"

NOTES

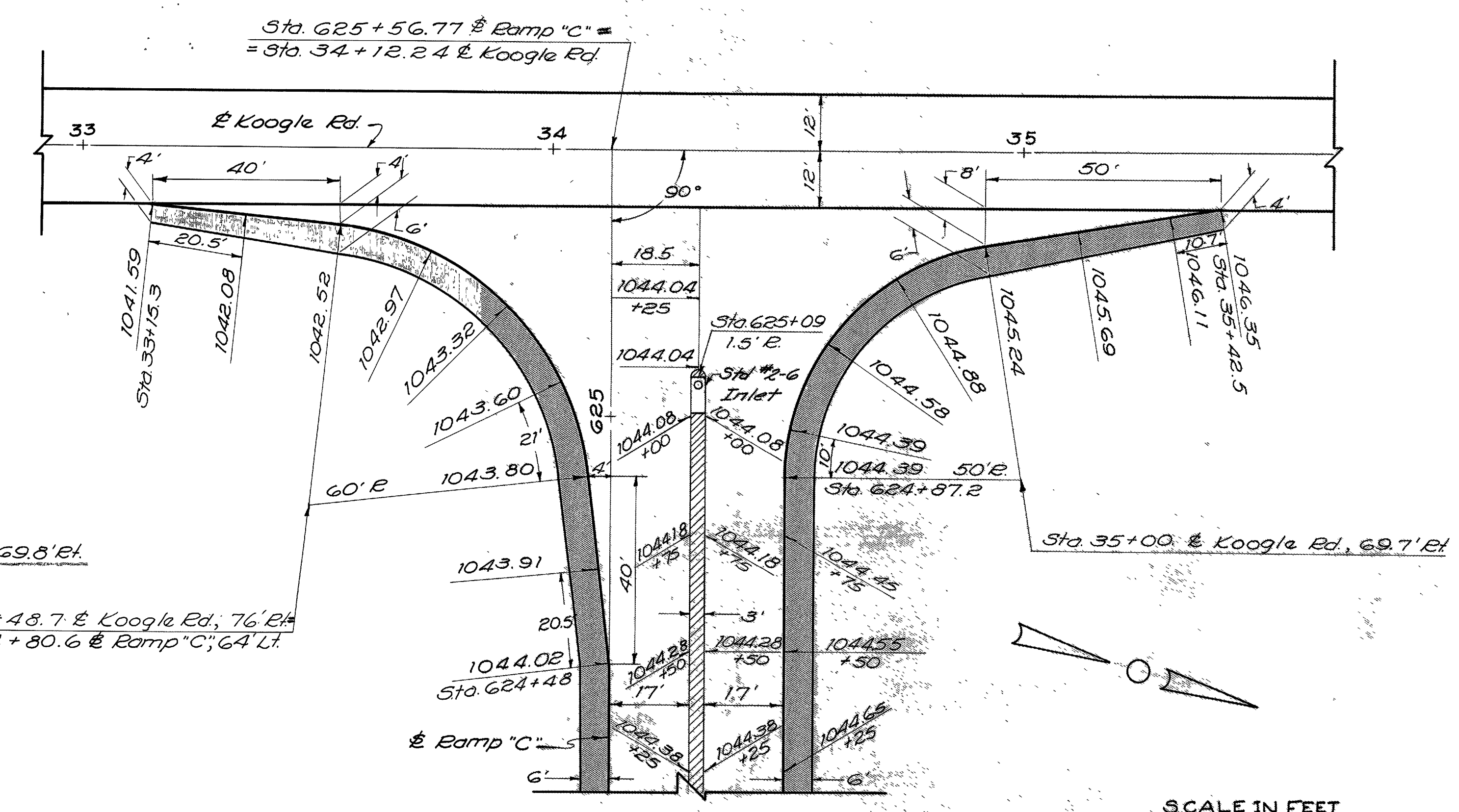
Hatched area indicates I-21
Shaded area indicates Bituminous Treated BERM.
Return elevations are spaced at 20 Ft intervals unless otherwise indicated.



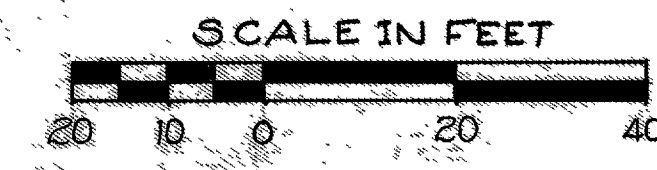
KOOGLE ROAD



RAMP "A"

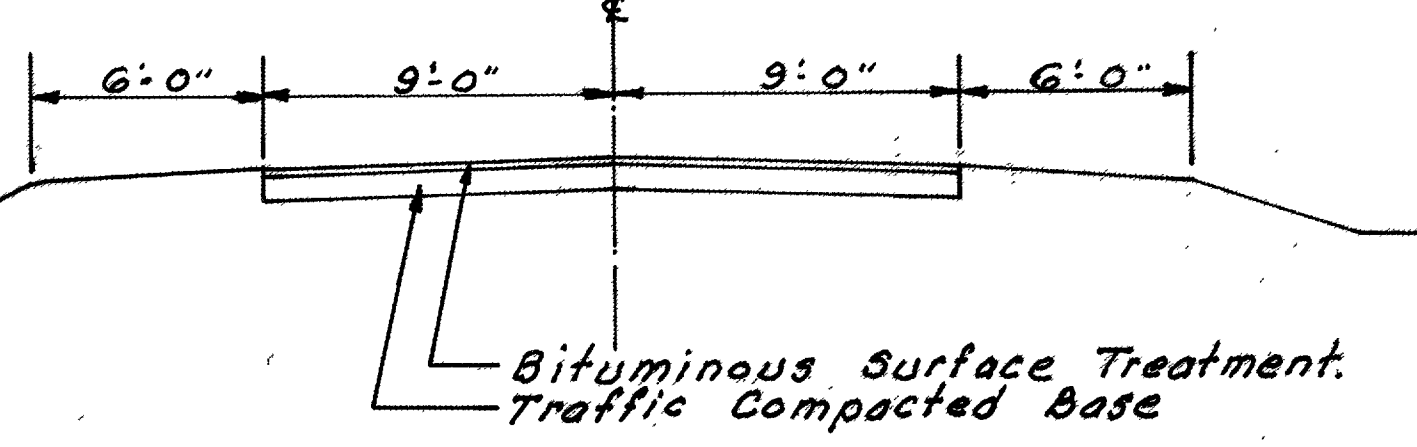


RAMP "C"

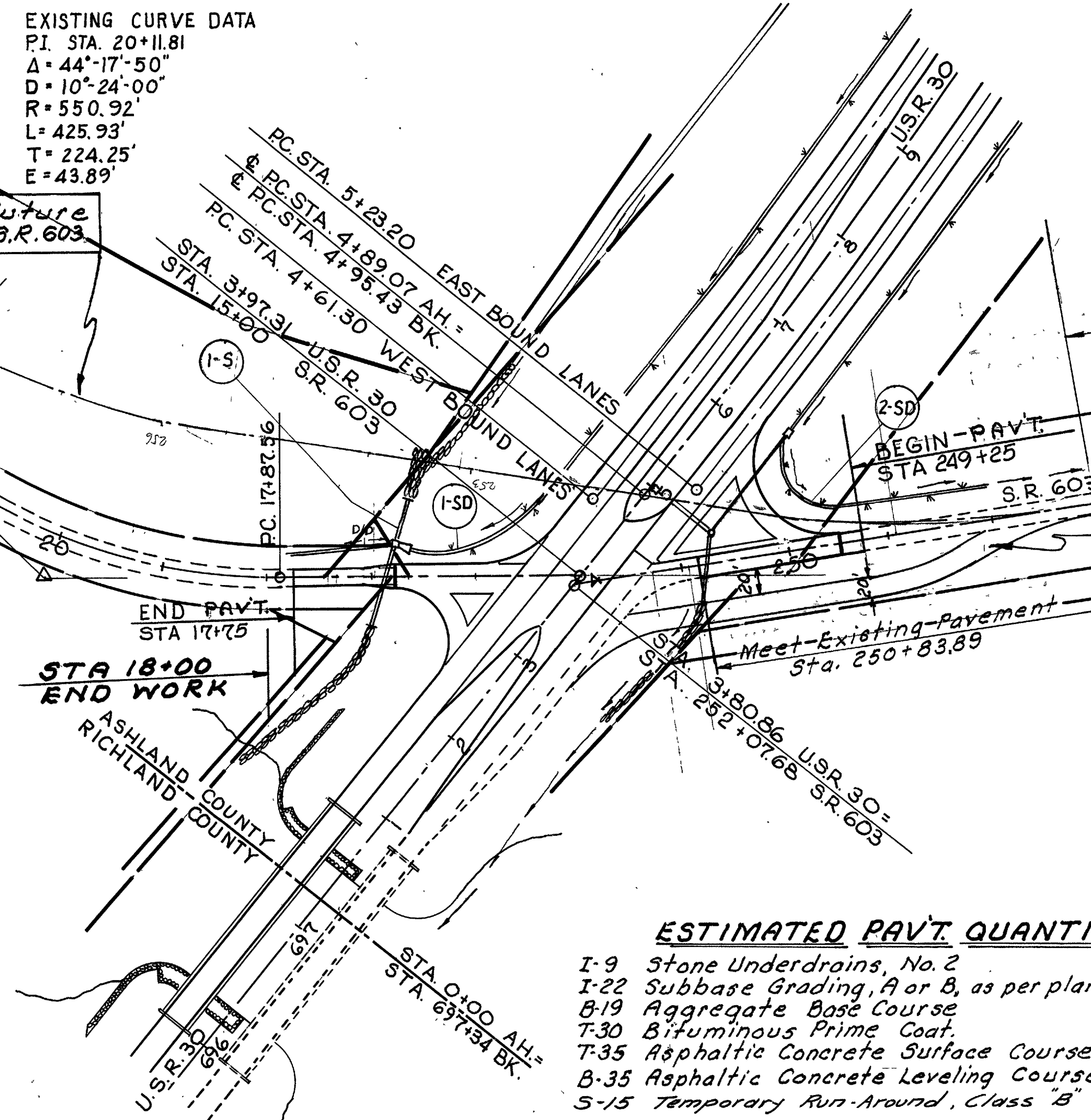
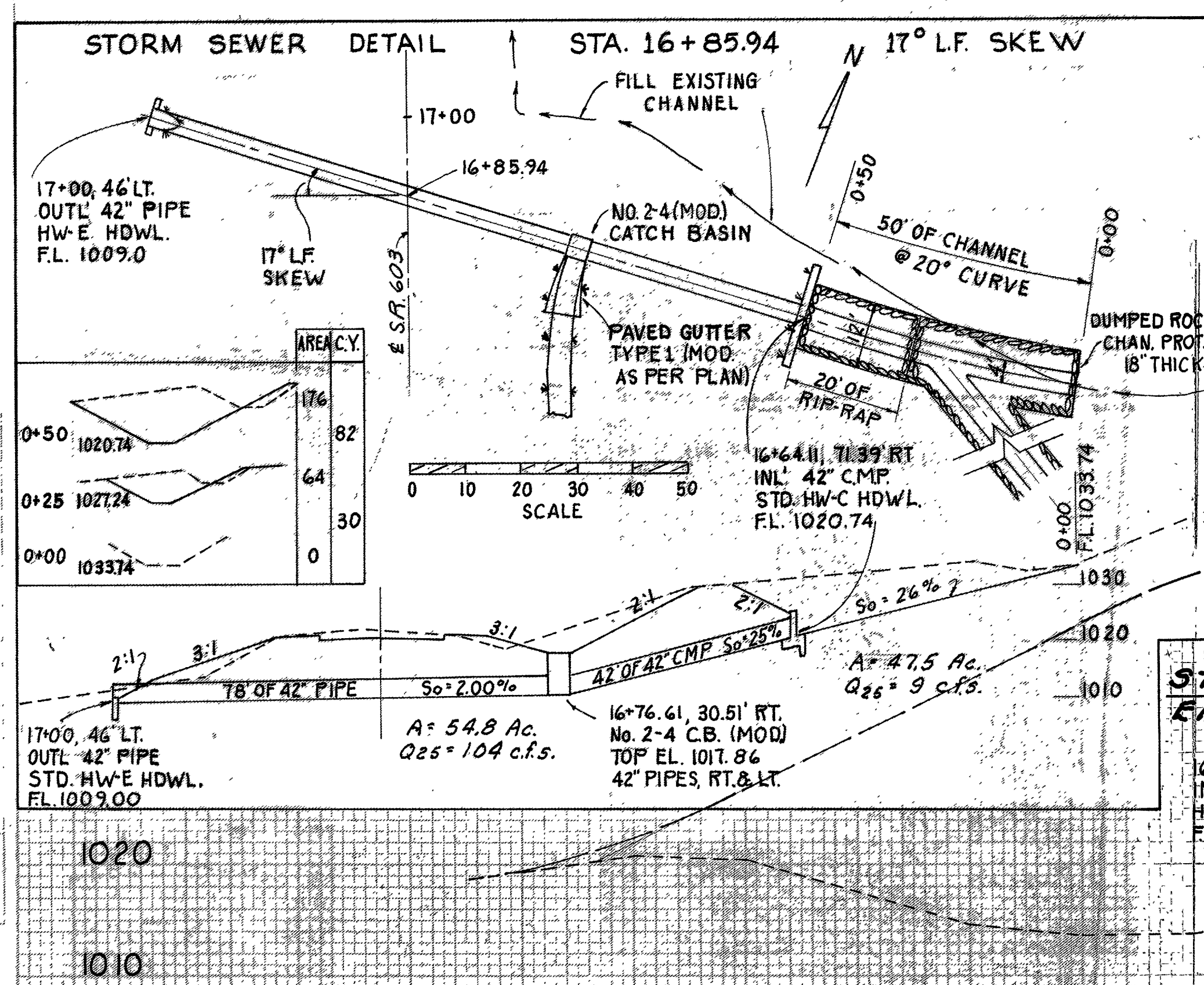
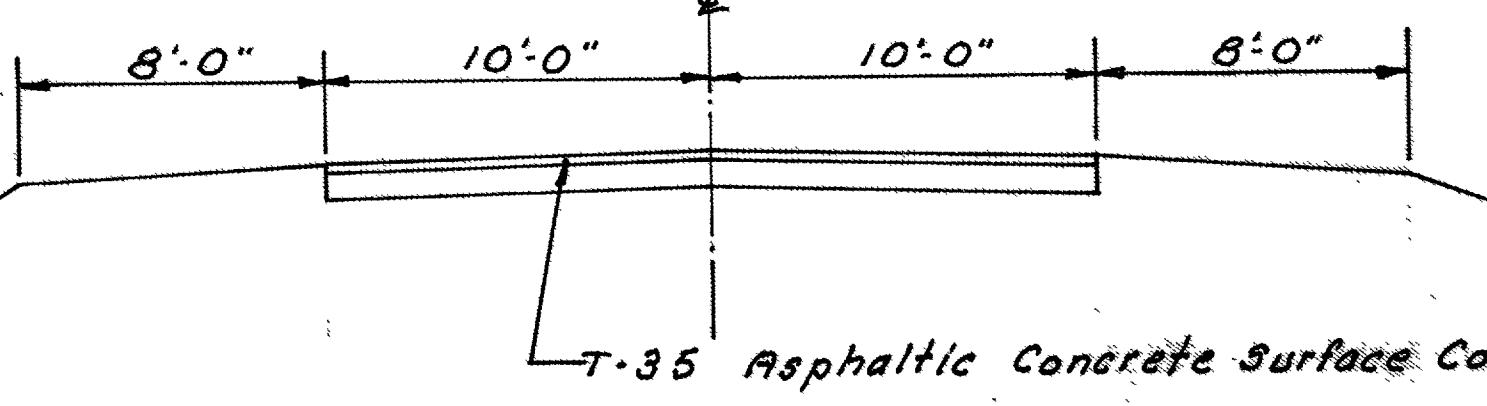


RIC-30-9.28
A5D-30-000

EXISTING TYPICAL SECTION
STATE ROUTE 603, NORTH OF U.S.R. 30



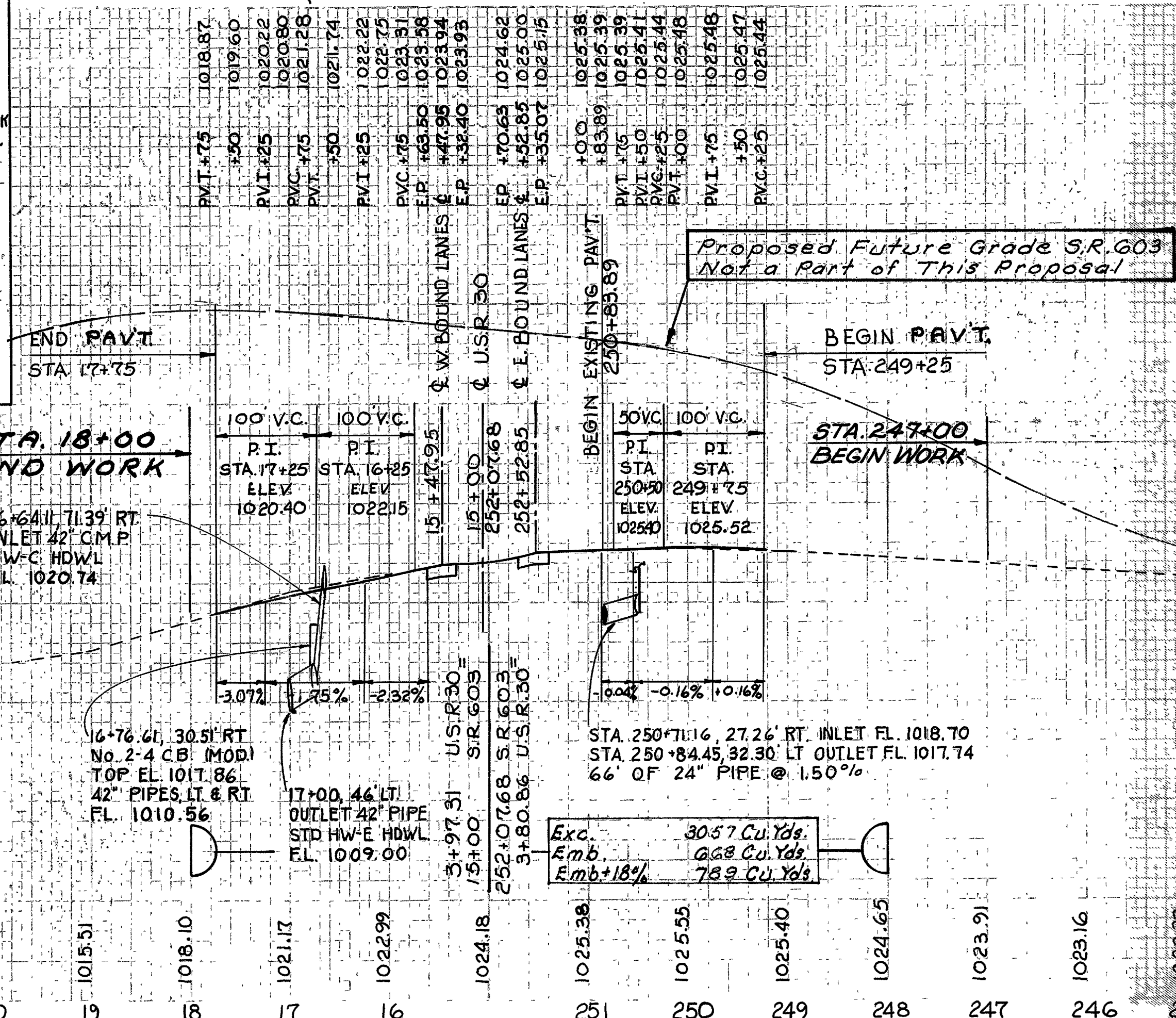
EXISTING TYPICAL SECTION
STATE ROUTE 603, SOUTH OF U.S.R. 30



ESTIMATED PAVT QUANTITIES

- 1-9 Stone Underdrains, No. 2
- 1-22 Subbase Grading, A or B, as per plan
- 8-19 Aggregate Base Course
- 7-30 Bituminous Prime Coat
- 7-35 Asphaltic Concrete Surface Course
- 8-35 Asphaltic Concrete Leveling Course
- 5-15 Temporary Run-Around, Class "B"

- 38 Lin. Ft. 6 Cu. Yds.
- 414 Cu. Yds. 94 Gals.
- 6.5 Cu. Yds. 6.5 Cu. Yds. Lump



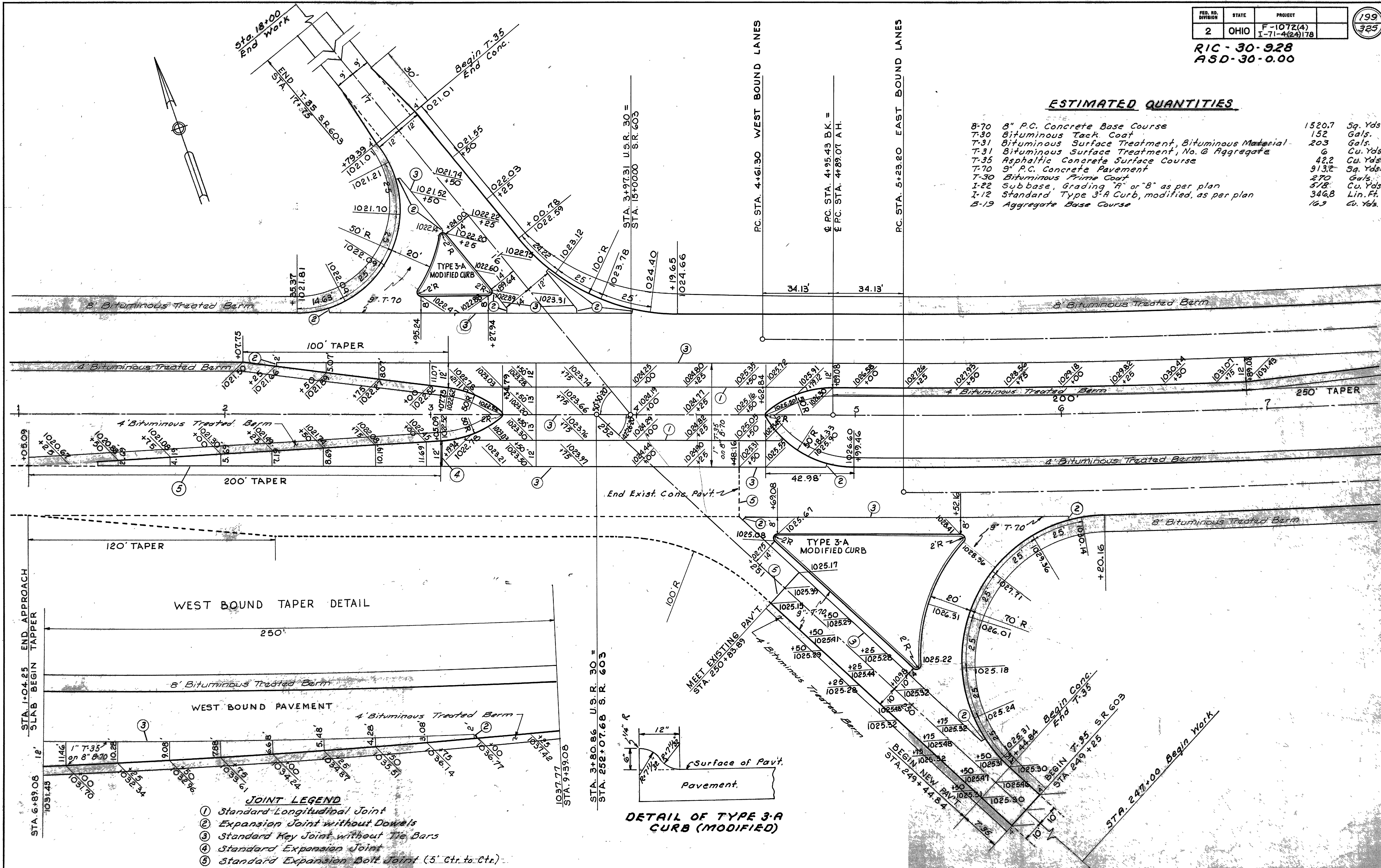
REFERENCE NO.	SIDE	STATION		SODDING	PAVED GUTTER TYPE 1 (MOD)	CATCH BASIN STD. No. 2-4 (MODIFIED)	PIPE CLASS F-4	PIPE CLASS J-1	CURB WALL	SIDEWALL	CHANNEL EXCAVATION	RIP-RAP 6" RETN. CONC.	DUMPED ROCK CHANNEL PROTECTION	
		FROM	TO											
1-SD	RT.	15+54	16+64	93										
2-SD	RT.	248+50	250+79	103										
1-S	LT-RT	16+85.94		16	10	1	44	80	11	0.76	112	40	22	
Totals					212	10	1	44	80	11	0.76	112	40	22

Exc. 3057 Cu. Yds.
Emb. 663 Cu. Yds.
Emb. 18%

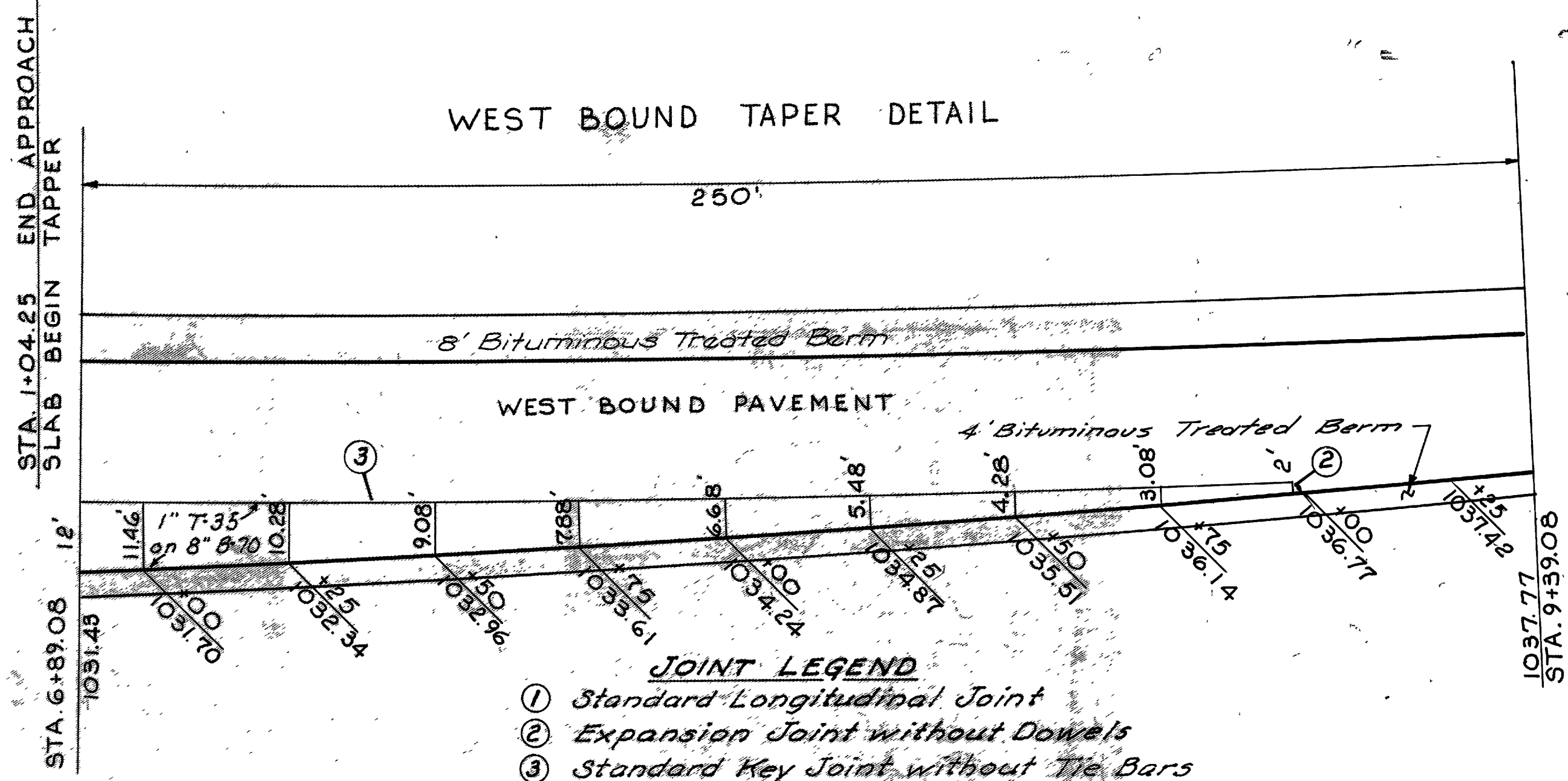
RIC-30-928
ASD-30-0.00

ESTIMATED QUANTITIES

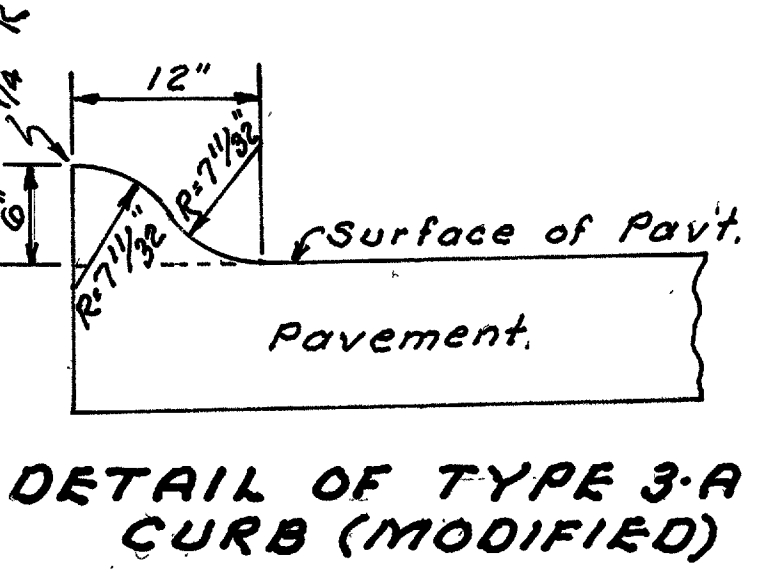
B-70	8" P.C. Concrete Base Course	1520.7	Sq. Yds.
T-30	Bituminous Tack Coat	152	Gals.
T-31	Bituminous Surface Treatment, Bituminous Material	203	Gals.
T-31	Bituminous Surface Treatment, No. 6 Aggregate	6	Cu. Yds.
T-35	Asphaltic Concrete Surface Course	42.2	Cu. Yds.
T-70	9" P.C. Concrete Pavement	913.2	Sq. Yds.
T-30	Bituminous Prime Coat	270	Gals.
I-22	Subbase, Grading "A" or "B" as per plan	578	Cu. Yds.
I-12	Standard Type 3-A Curb, modified, as per plan	346.8	Lin. Ft.
B-19	Aggregate Base Course	163	Cu. Yds.



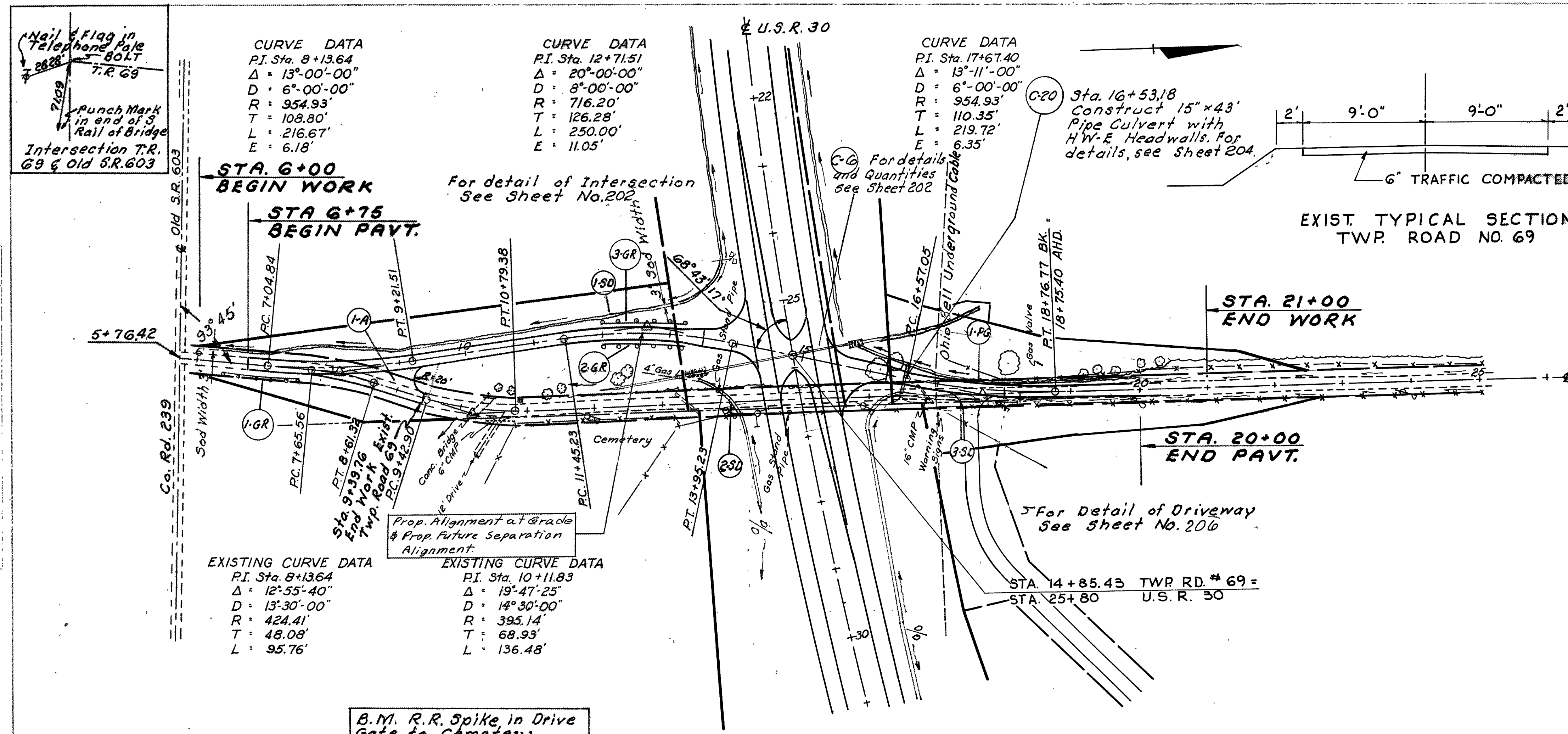
WEST BOUND TAPER DETAIL



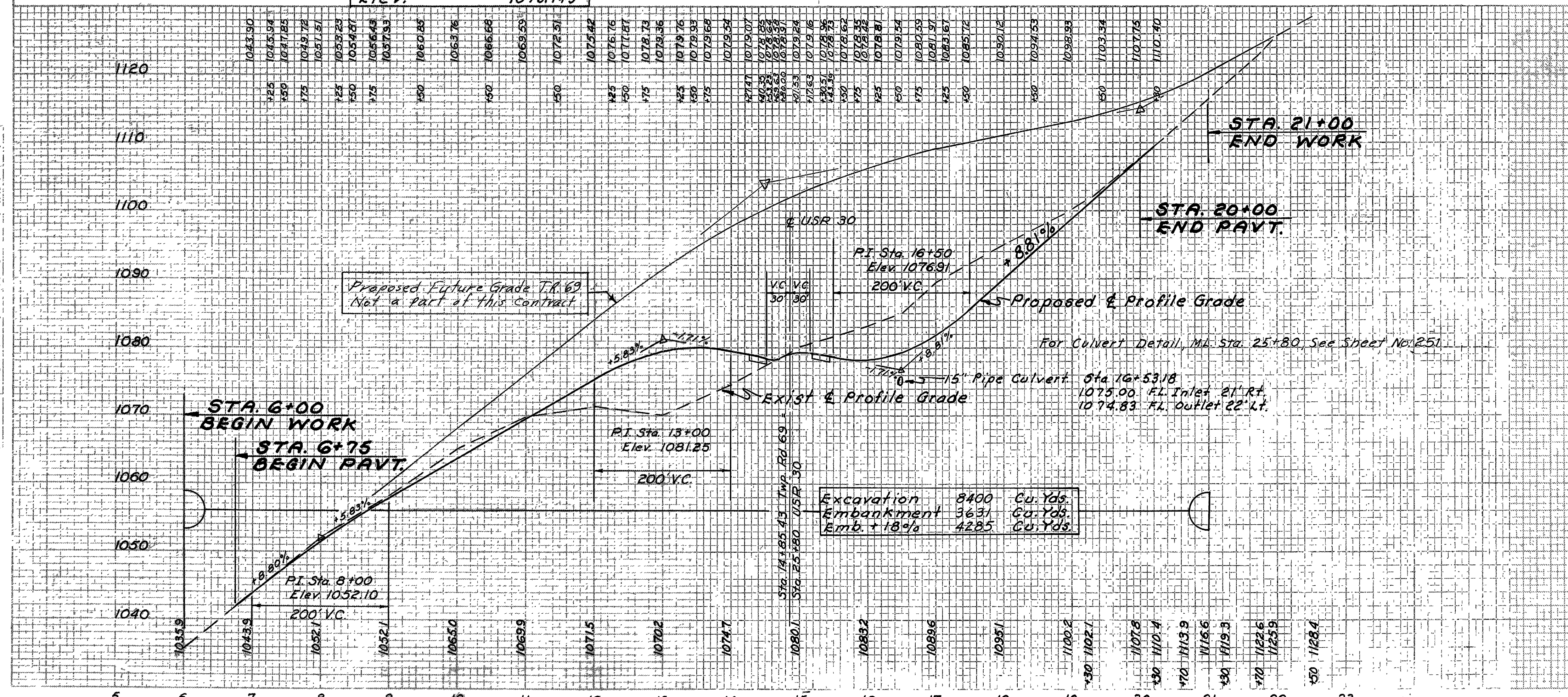
- JOINT LEGEND**
- ① Standard Longitudinal Joint
 - ② Expansion Joint without Dowels
 - ③ Standard Key Joint without Tie Bars
 - ④ Standard Expansion Joint
 - ⑤ Standard Expansion Bolt Joint (5' Ctr. to Ctr.)



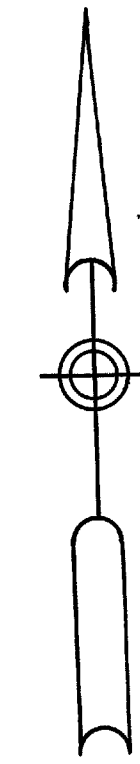
RIC-30-9.28
ASD-30-0.00



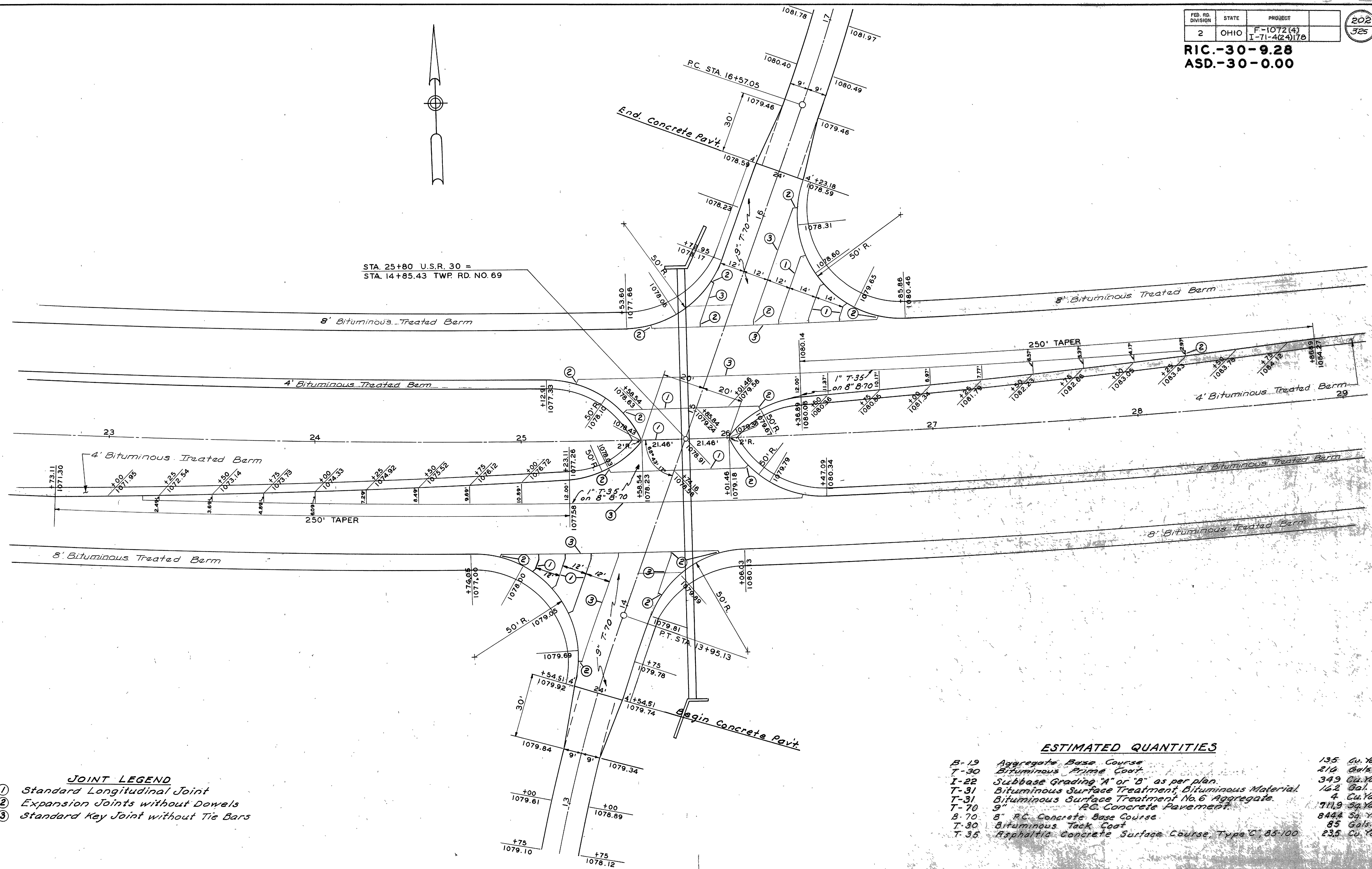
REFERENCE NO.	SIDE	STATION FROM TO	MATERIALS											
			AGGREGATE BASE COURSE	NO. 8 STONE UNDERDRAINS	BITUMINOUS PRIME COAT	ASPHALTIC CONC. SURFACE COURSE	SODDING	STD. DINED GUTTER TYPE 1	15" Class A-1 Pipe	Masonry	Guard Rail Wire Cable Type Three Cables			
	Lt & Rt.	6+00 21+00	474	148.77	853.0	59								
1-SD	Lt.	6+00 13+25					363							
2-SD	Rt.	13+00 14+05					80							
3-SD	Rt.	16+18 20+00					257							
1-PG	Lt.	15+83 20+00					140	420						
1-A	Rt.	7+60 9+39.76	27		49.0	5								
C-20		16+53.18								43	0.52			
1-GR	Rt.	6+50 7+50											100	
2-GR	Rt.	12+00 13+25											125	
3-GR	Lt.	12+00 13+25											125	
Totals					501	149	902	64	840	420	43	0.52	350	



RIC.-30-9.28
ASD.-30-0.00



STA. 25+80 U.S.R. 30 =
STA. 14+85.43 TWP. RD. NO. 69



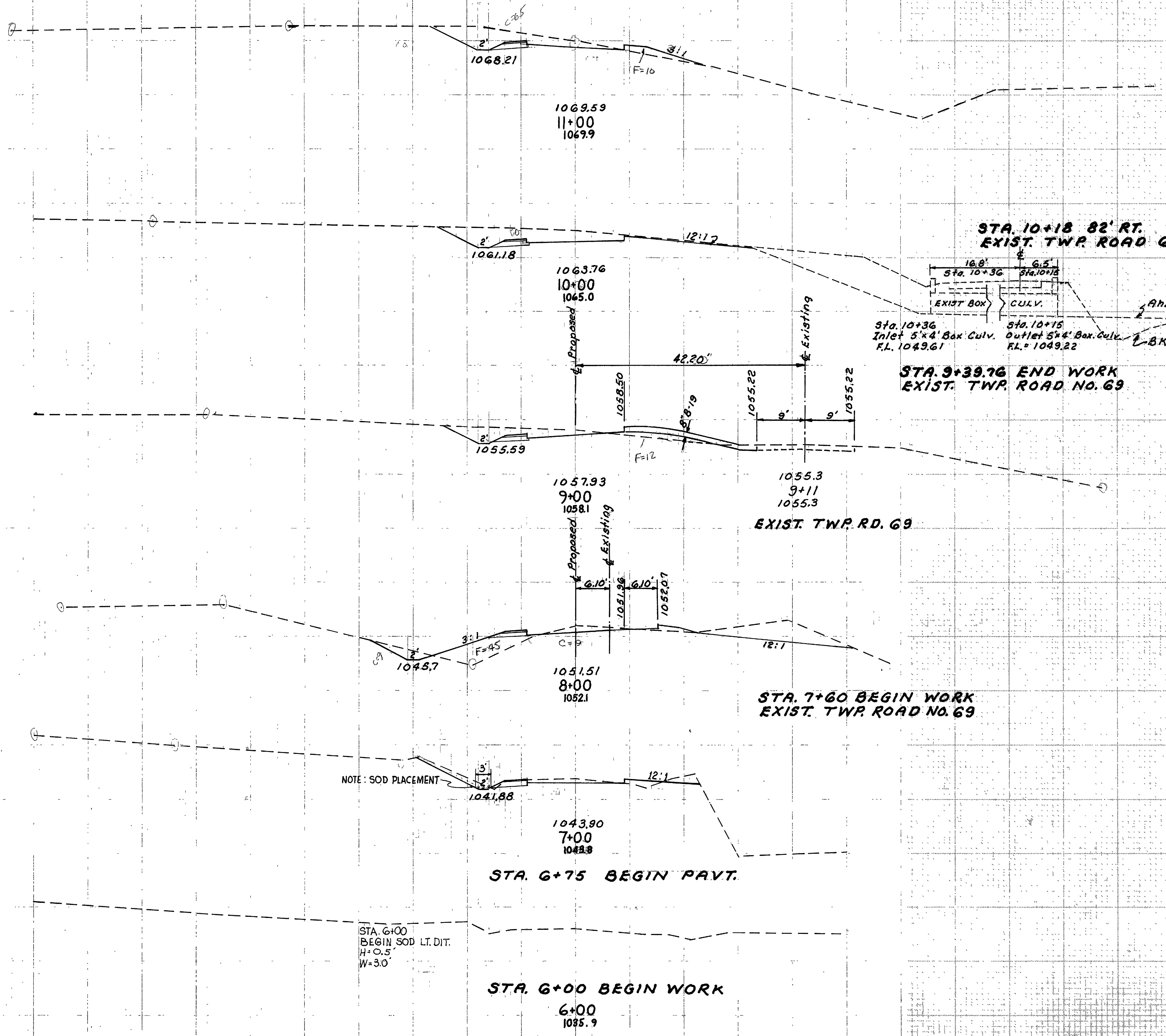
JOINT LEGEND

- ① Standard Longitudinal Joint
- ② Expansion Joints without Dowels
- ③ Standard Key Joint without Tie Bars

ESTIMATED QUANTITIES

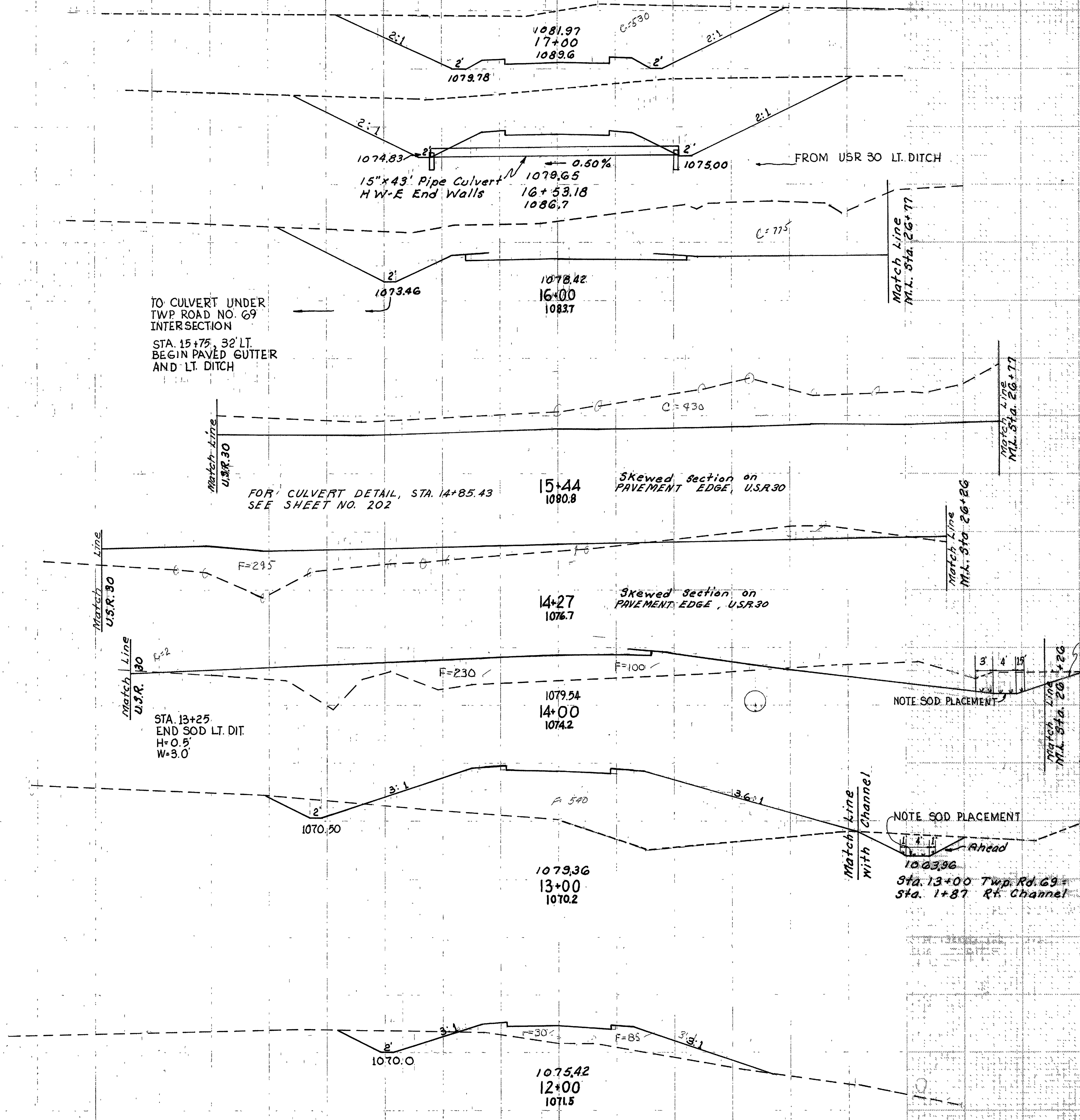
B-19	Aggregate Base Course	135 Cu. Yds.
T-30	Bituminous Prime Coat	216 Gal.
I-22	Subbase Grading "A" or "B" as per plan.	349 Cu. Yds.
T-31	Bituminous Surface Treatment, Bituminous Material	162 Gal.
T-31	Bituminous Surface Treatment No. 6 Aggregate	4 Cu. Yds.
T-70	9" P.C. Concrete Pavement	711.9 Sq. Yds.
B-70	8" P.C. Concrete Base Course	844.4 Sq. Yds.
T-30	Bituminous Tack Coat	85 Gal.
T-35	Raphtalic Concrete Surface Course, Type "C", 85-100	235 Cu. Yds.

RIC-30-328
ASD-30-000



Sta.	End Area		Cu Yds	
	Cut	Fill	Cut	Fill
6+00	0	0	0	0
Sta. 6+75	15	4	15	5
7+60	55	12	135	111
EXIST. RD. STA. 9+39.76	20	0	250	0
EXIST. RD. STA. 7+60	55	0	18	48
9+00	55	12	65	98
10+18	64	0	220	22
10+18 82' RT. EXIST. TWP. ROAD 69	64	0	237	19
11+00	64	10	64	10

RIC-30-928
ASD-30-000



STA. 16+18 TWP RD NO. 69, 78 RT. =
STA. 27+00 USR 30, 78 LT. =
CONT. SOD. FROM USR 30 LT. DITCH
H=0.75
W=5.0

TO CULVERT UNDER
TWP ROAD NO. 69
INTERSECTION
STA. 15+75, 32' LT.
BEGIN PAVED GUTTER
AND LT. DITCH

FOR CULVERT DETAIL, STA. 14+85.43
SEE SHEET NO. 202

FOR EARTHWORK ONLY

NOTE SOD PLACEMENT

STA. 13+26 TO STA. 14+05
SOD RT. DITCH
H=0.5

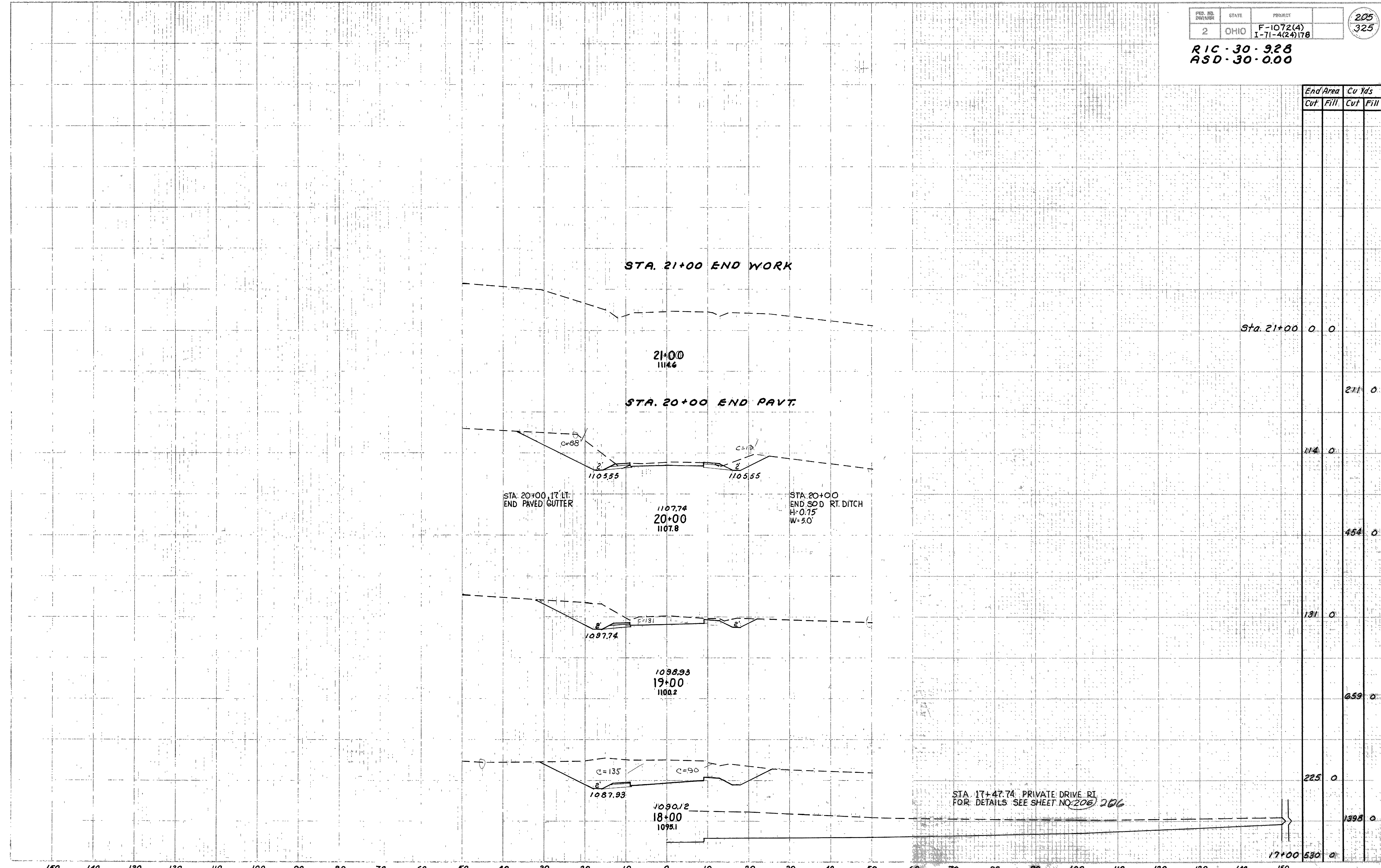
Sta. 13+00 Twp. Rd. 69 =
Sta. 1+87 Rt. Channel

STA. 13+00 TO STA. 13+16
SOD RT. DITCH
H=0.5

Sta.	End Area		Cu Yds	
	Cut	Fill	Cut	Fill
17+00	630	0		
16+53.18	680	0		1050 0
				1433 0
	775	0		1432 0
				605 0
	52	297		
				30 315
	Ah. 127	Bk. 136	330	330
				391 1611
	Ah. 75	Bk. 33	540	540
				133 1213
	42	115		
				200 231
11+00	64	10		

RIC-30-928
ASD-30-000

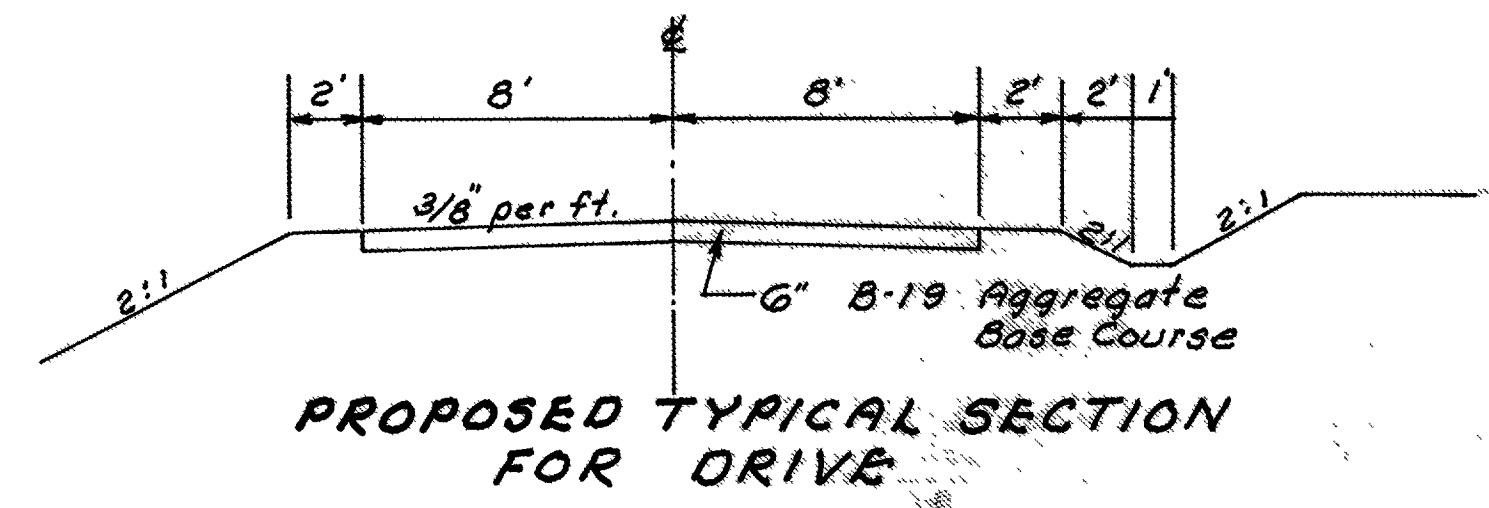
End Area		Cu Yds	
Cut	Fill	Cut	Fill



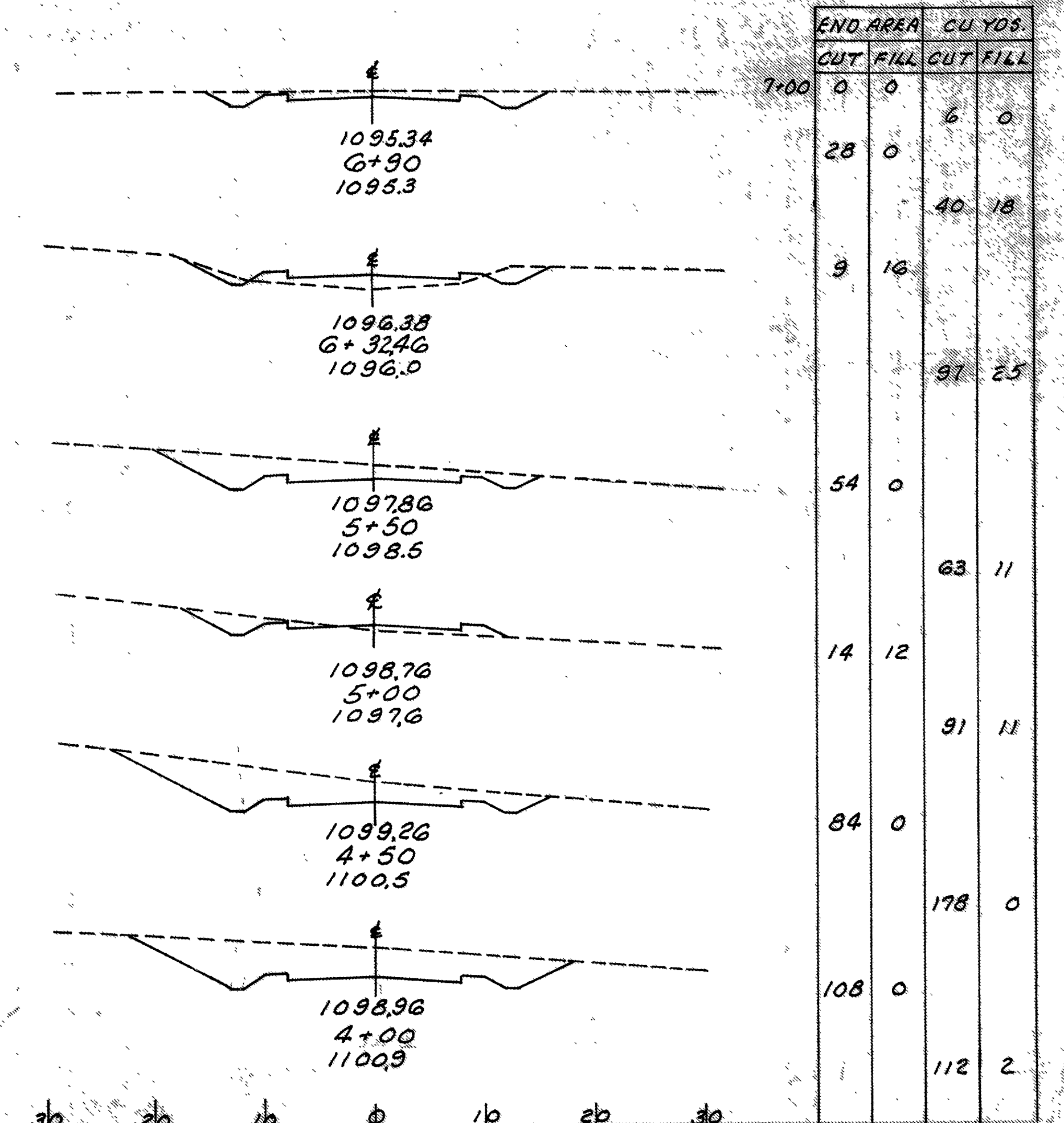
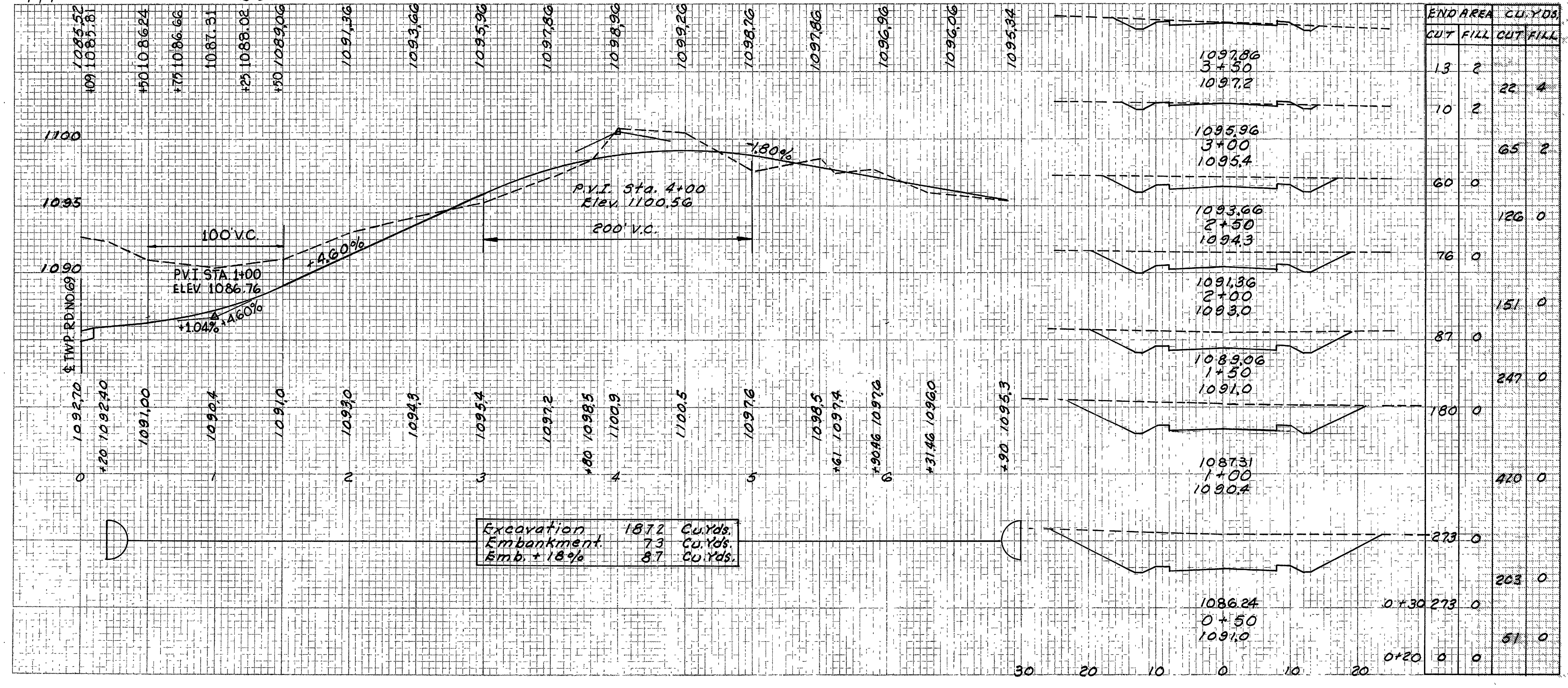
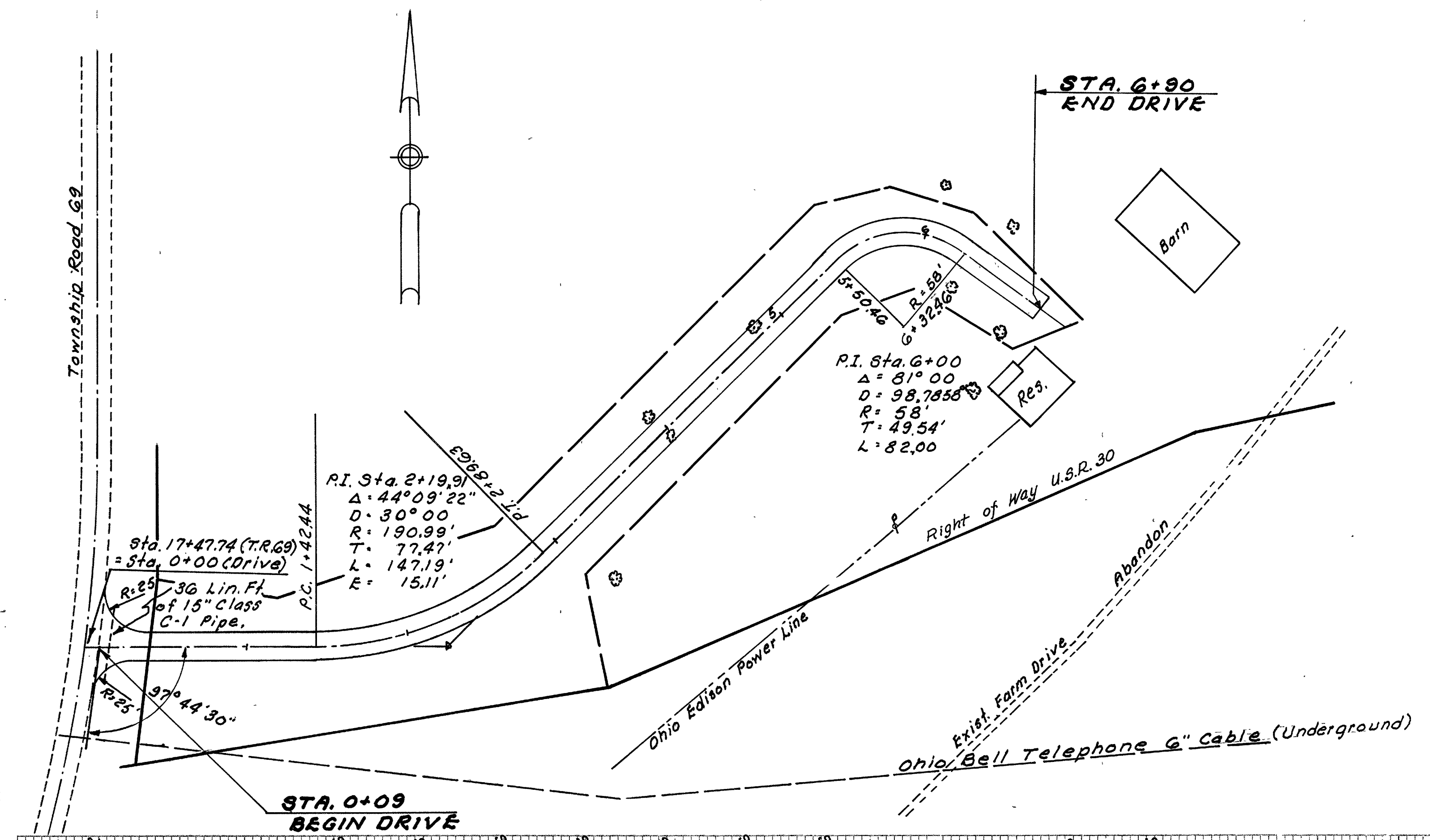
Sta. 21+00	0	0	0	0
			211	0
	114	0		
			454	0
	131	0		
			659	0
	225	0		
			1398	0
17+00	530	0		

STA. 17+47.74 PRIVATE DRIVE RI
FOR DETAILS SEE SHEET NO. 206 206

RIC-30-928
ASD-30-000



ESTIMATED QUANTITIES
 B-19 Aggregate Base Course 202 Cu.Yds.
 E-1 Roadway Excavation, Method "B" 1872 Cu.Yds.
 I-1 15" Class F-4 Pipe 36 Lin.Ft.

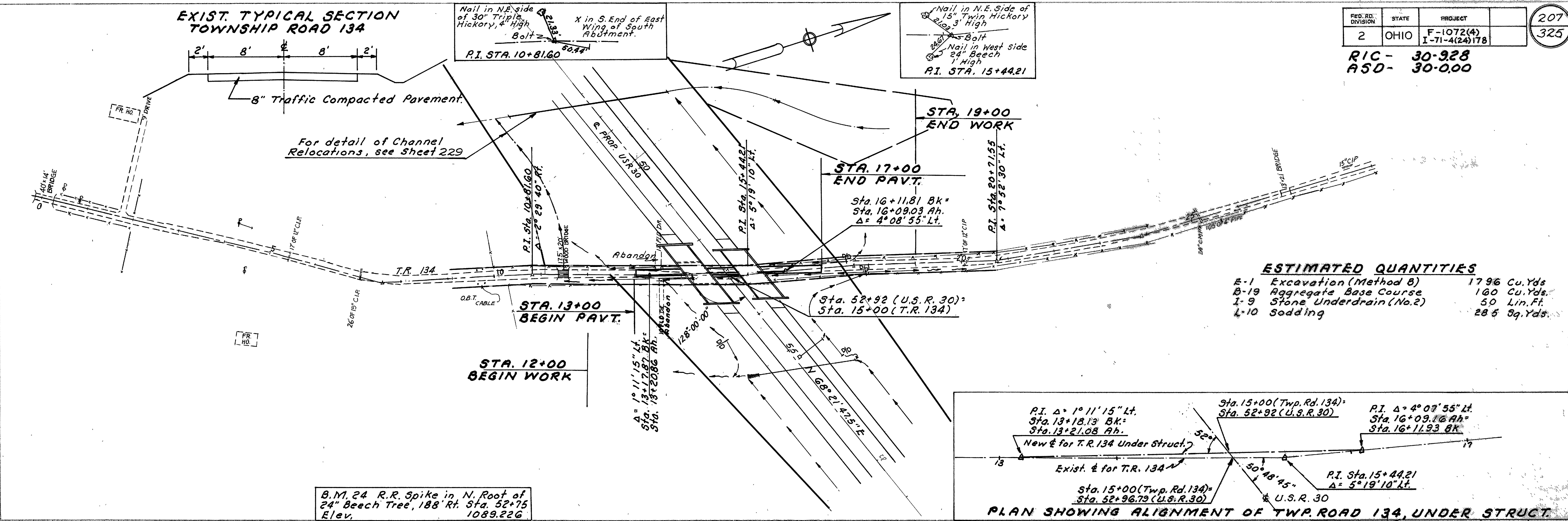


**EXIST. TYPICAL SECTION
TOWNSHIP ROAD 134**

**RIC - 30-928
ASD - 30-000**

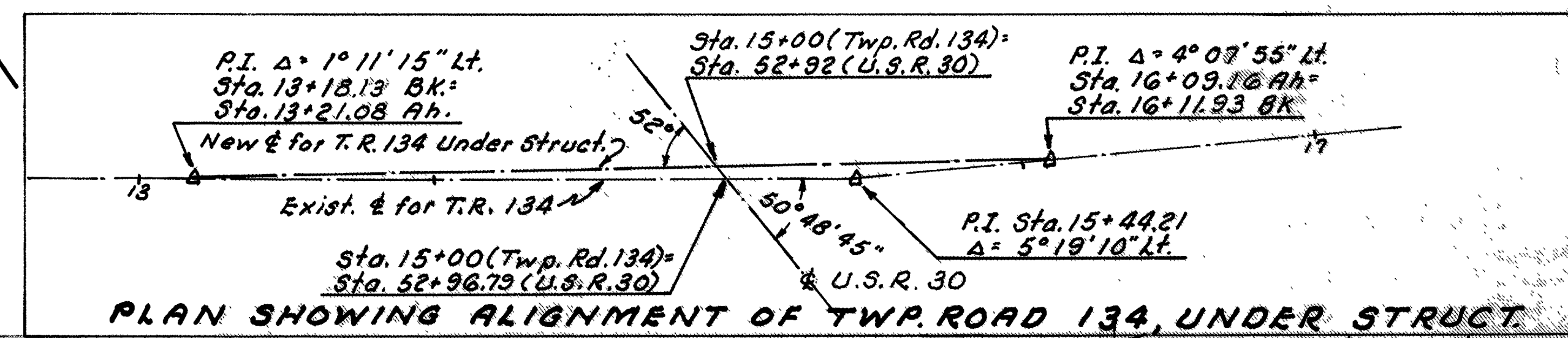
FINAL SURVEY	NO.
SURVEY	DATE
PLOTTED	BY
REPLATE	DATE
REVISIONS	
DATE	
BY	
DATE	
BY	
DATE	

ORIGINAL SURVEY	NO.
SURVEY	DATE
PLOTTED	BY
REPLATE	DATE
REVISIONS	
DATE	
BY	
DATE	
BY	
DATE	

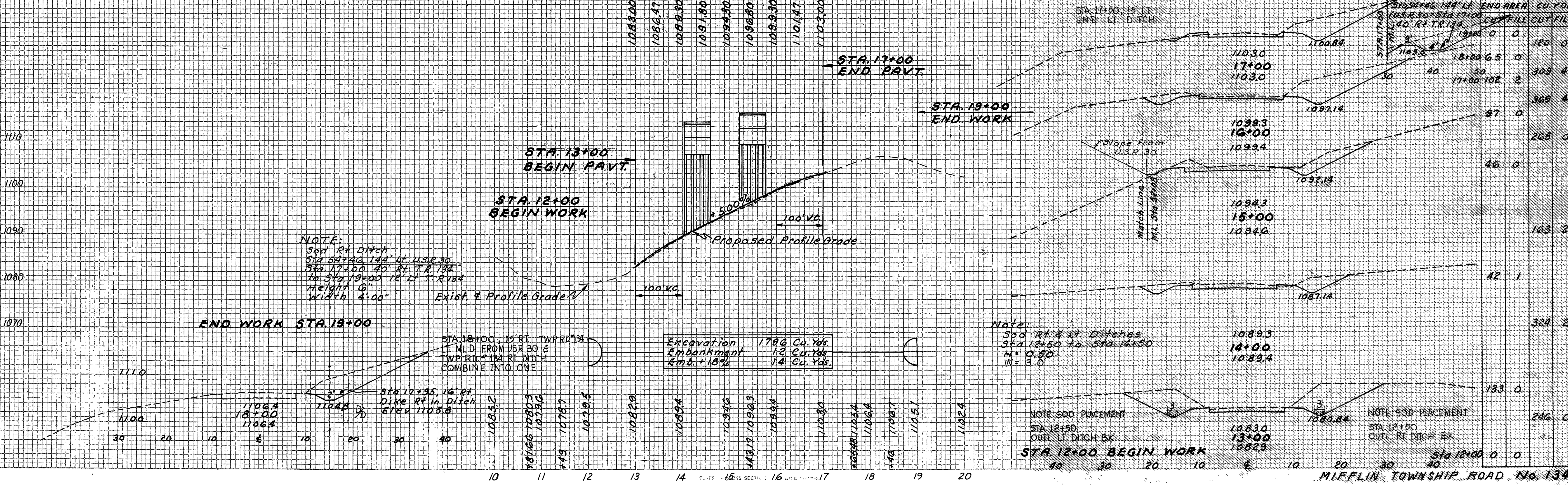


ESTIMATED QUANTITIES

E-1	Excavation (Method B)	1796 Cu. Yds.
B-19	Aggregate Base Course	160 Cu. Yds.
I-9	Stone Underdrain (No. 2)	50 Lin. Ft.
L-10	Sodding	285 Sq. Yds.



B.M. 24 R.R. Spike in N. Root of 24" Beech Tree, 188 Rt. Sta. 52+75 Elev. 1089.226



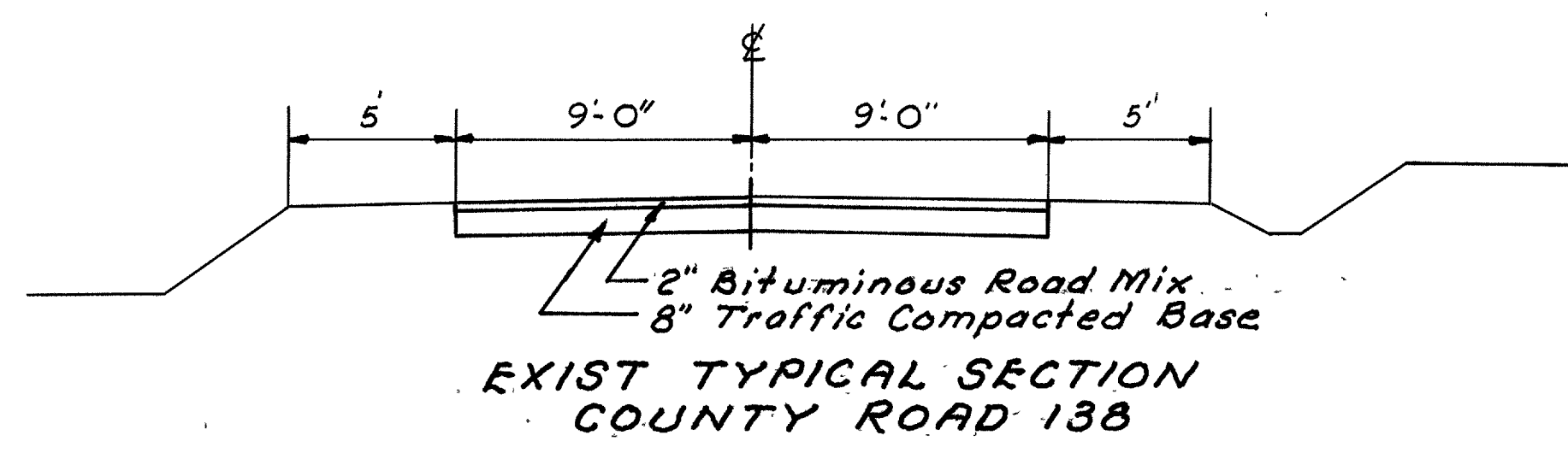
NOTE:
Sod Rt. Ditch
Sta. 54+40, 144' Lt. U.S.R. 30
Sta. 17+00, 40' Rt. T.R. 134
to Sta. 19+00, 12' Lt. T.R. 134
Height 6"
Width 4'-00"

Excavation 1796 Cu. Yds.
Embankment 12 Cu. Yds.
Emb. + 18%

NOTE:
Sod Rt. & Lt. Ditches
Sta. 12+50 to Sta. 14+50
HL = 0.50
W = 3.0

NOTE: SOD PLACEMENT
STA. 12+50
OUTL. LT. DITCH BK

NOTE: SOD PLACEMENT
STA. 12+50
OUTL. RT. DITCH BK

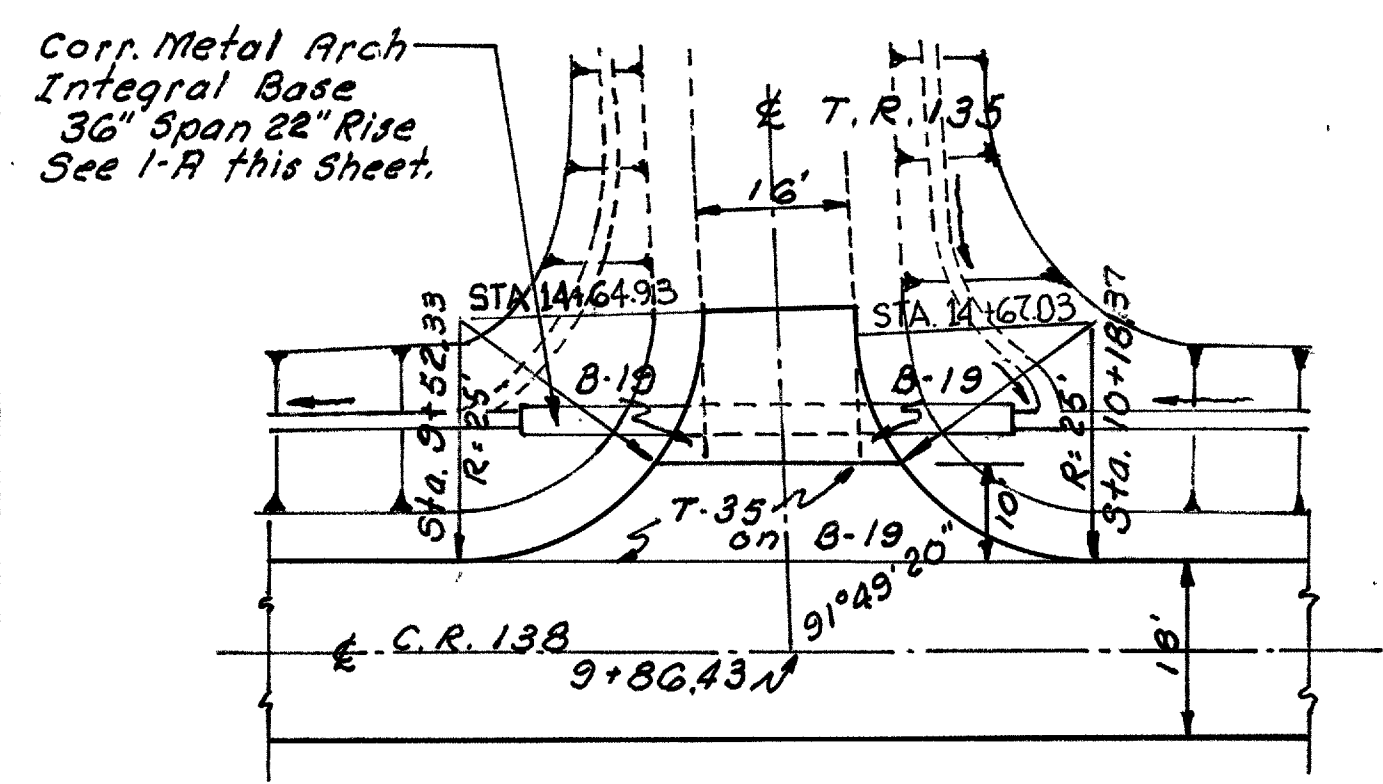
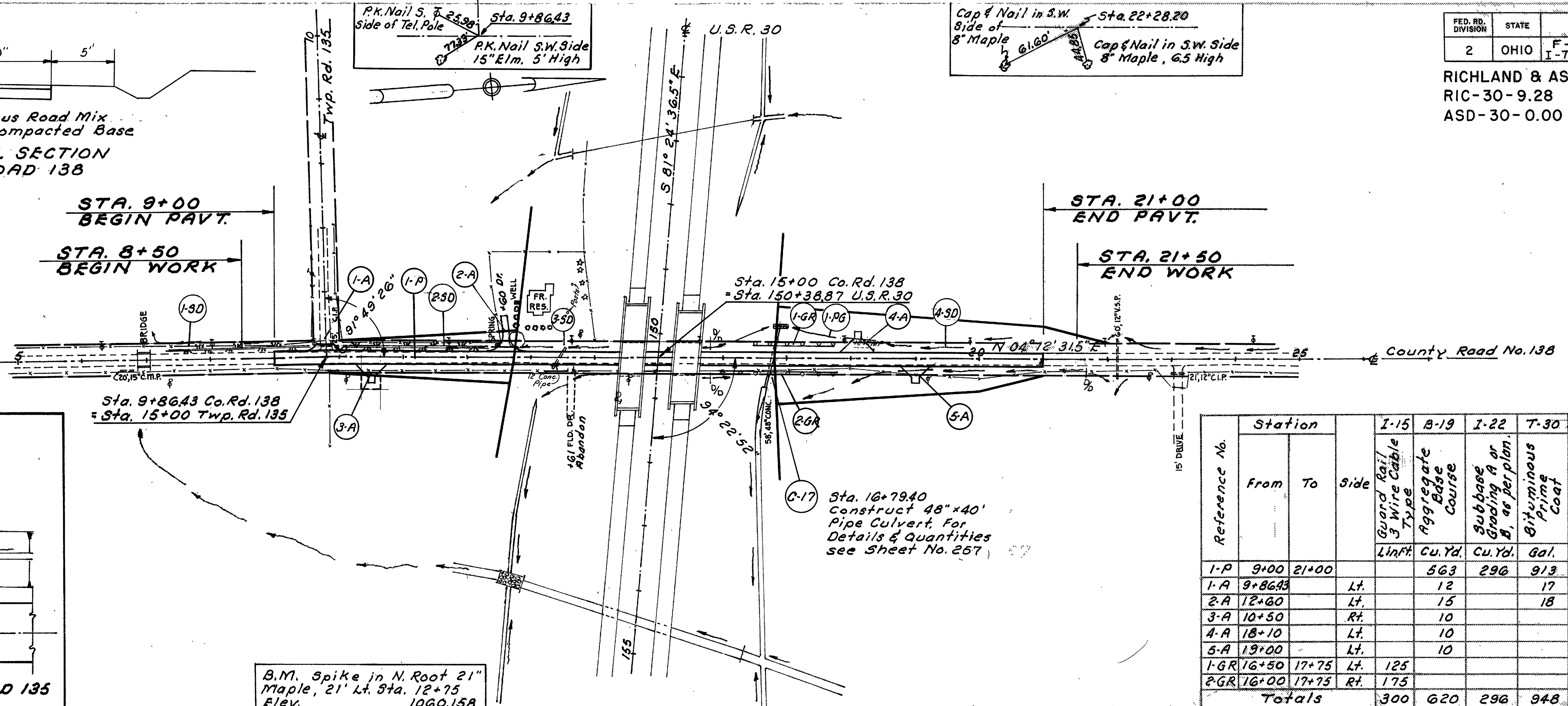


STA. 9+00
BEGIN PAVT.

STA. 8+50
BEGIN WORK

STA. 21+00
END PAVT.

STA. 21+50
END WORK



ESTIMATED QUANTITIES

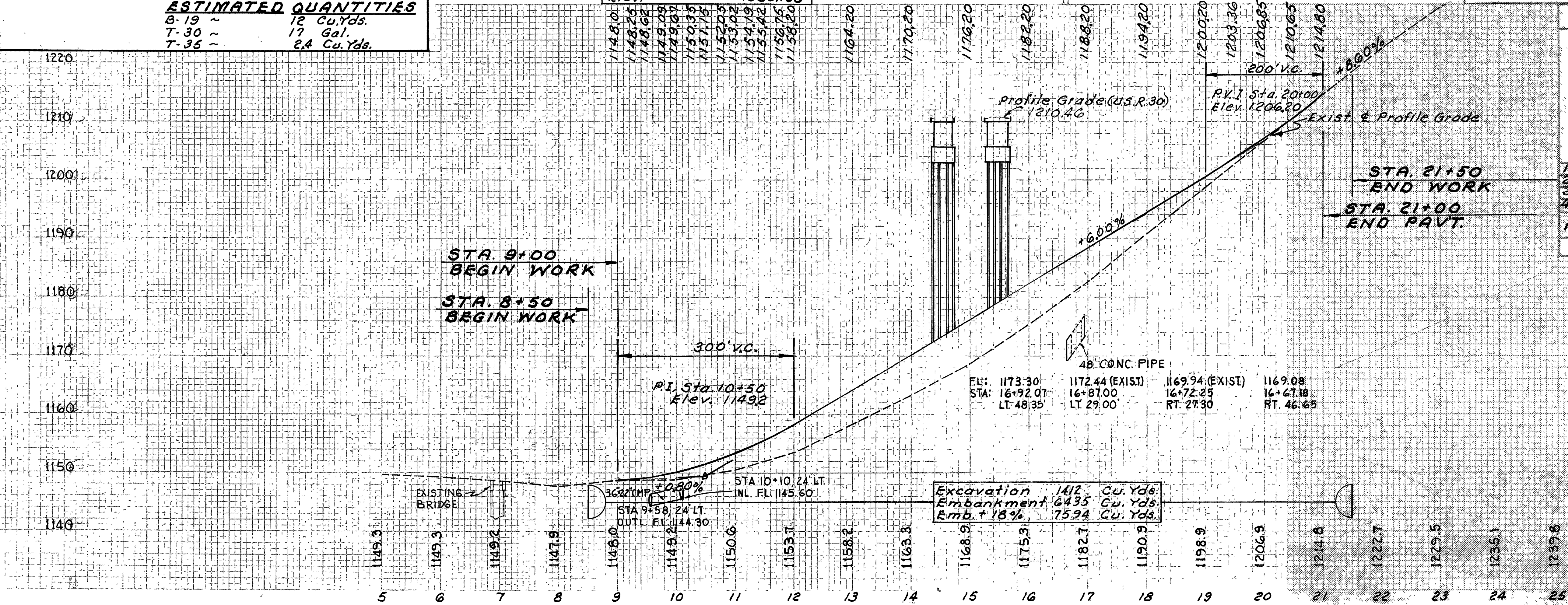
B-19 ~	12 Cu. Yds.
T-30 ~	17 Gal.
T-35 ~	2.4 Cu. Yds.

B.M. Spike in N. Root 21" Maple, 21' Lt. Sta. 12+75
 Elev. 1060.158

Sta. 16+79.40
 Construct 48" x 40' Pipe Culvert. For Details & Quantities see Sheet No. 267.

Reference No.	Station		Side	I-15	B-19	I-22	T-30	T-35	I-9	I-1	I-1	
	From	To		Guard Rail / 3 Wire Cable Type	Aggregate Edge Course	Subbase Grading A or B, as per plan.	Bituminous Prime Coat	Asph. Conc. Leveling Course	Asph. Conc. Surface Course	Stone Underdrain No. 2	15" Pipe Class F-4	Corp. Metal Arch Integral Base 36" Span 22" Rise See Sheet No. 267
1-P	9+00	21+00			563	296	913	667	170			
1-A	9+86.43		Lt.		12		17	24			52	
2-A	12+60		Lt.		15		18	25			42	
3-A	10+50		Rt.		10						62	
4-A	18+10		Lt.		10						44	
5-A	13+00		Lt.		10						50	
1-GR	16+50	17+75	Lt.	125								
2-GR	16+00	17+75	Rt.	175								
Totals				300	620	296	948	716	667	170	198	52

Reference No.	STATION		Side	I-10	I-14
	From	To		Sodding	Standard Raved Gutter Type 1
1-30	7+20	9+58	Lt.	290	
2-30	10+10	12+39	Lt.	139	
3-30	12+15	14+00	Lt.	60	
4-30	18+24	21+00	Lt.	132	
1-PG	17+12	17+80		23	69
Totals				644	69



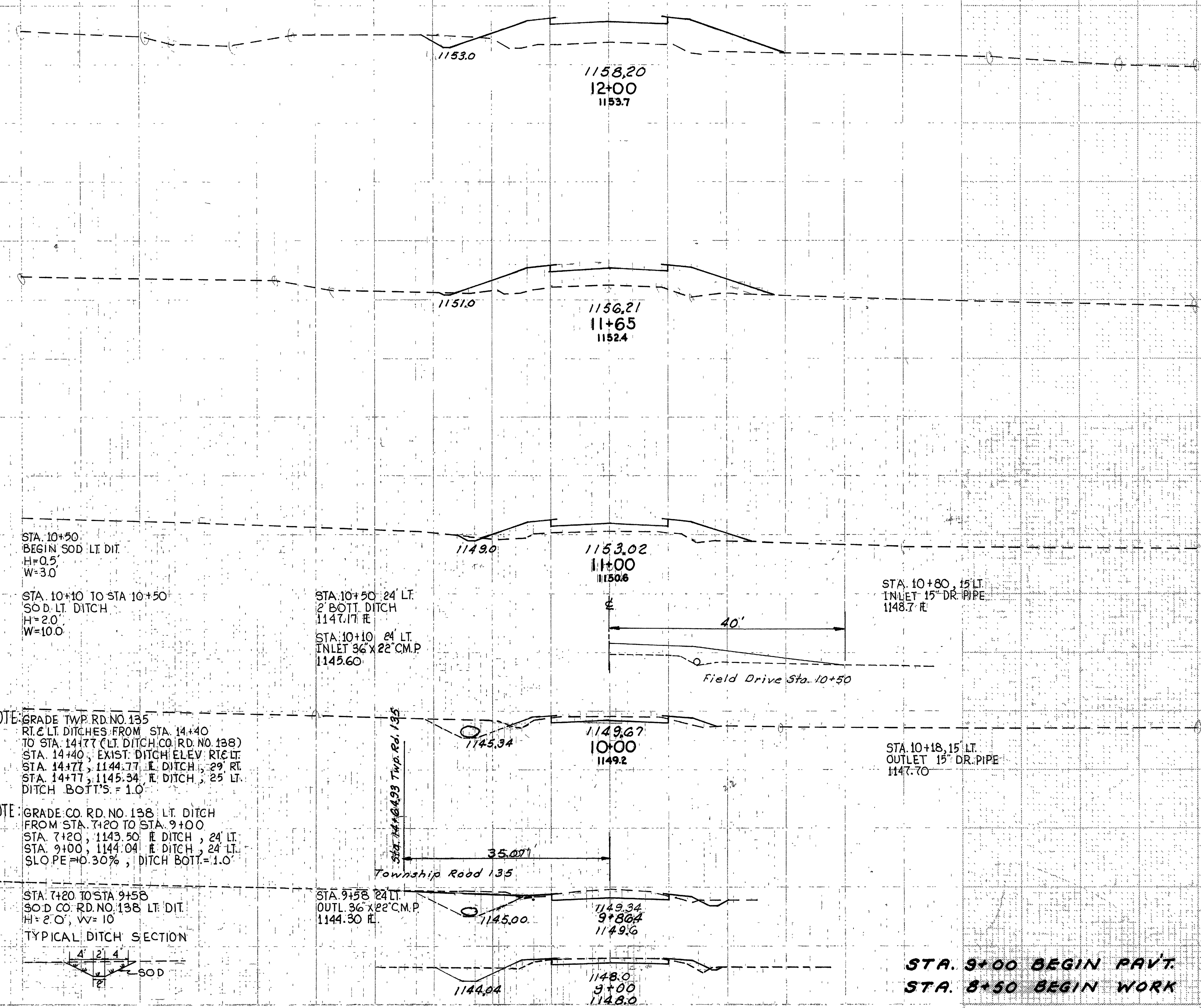
48" CONC. PIPE

FL: 1173.30	1172.44 (EXIST)	1169.94 (EXIST)	1169.08
STA: 16+92.07	16+87.00	16+72.25	16+67.18
LT: 48.35	LT: 29.00	RT: 27.30	RT: 46.65

Excavation 1412 Cu. Yds.
 Embankment 6435 Cu. Yds.
 Emb + 18% 7594 Cu. Yds.

RIC-30-9.28
ASD-30-0.00

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
10	190		
		7	211
1	135		
		4	235
2	60		
		30	130
			20
14	10		
		10	4
		58	58
22	6		
		63	23
17	8		
		16	8
		0	0
		103	



STA. 10+50
BEGIN SOD LT. DIT.
H=0.5'
W=3.0

STA. 10+10 TO STA. 10+50
SOD LT. DITCH
H=2.0'
W=10.0'

STA. 10+50 24' LT.
2" BOTT. DITCH
1147.17 E

STA. 10+10 24' LT.
INLET 36" X 22" C.M.P.
1145.60

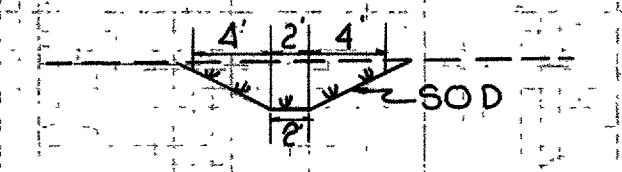
STA. 10+80, 15' LT.
INLET 15" DR. PIPE
1148.7 E

NOTE: GRADE TWP. RD. NO. 135
RT. & LT. DITCHES FROM STA. 14+40
TO STA. 14+77 (LT. DITCH CO. RD. NO. 138)
STA. 14+40, EXIST. DITCH ELEV. RT. & LT.
STA. 14+77, 1144.77 E. DITCH, 29' RT.
STA. 14+77, 1145.34 E. DITCH, 25' LT.
DITCH BOTTS. = 1.0'

NOTE: GRADE CO. RD. NO. 138, LT. DITCH
FROM STA. 7+20 TO STA. 9+00
STA. 7+20, 1143.50 E. DITCH, 24' LT.
STA. 9+00, 1144.04 E. DITCH, 24' LT.
SLOPE = 0.30%, DITCH BOTTS. = 1.0'

STA. 7+20 TO STA. 9+58
SOD CO. RD. NO. 138 LT. DIT.
H=2.0', W=10'

TYPICAL DITCH SECTION

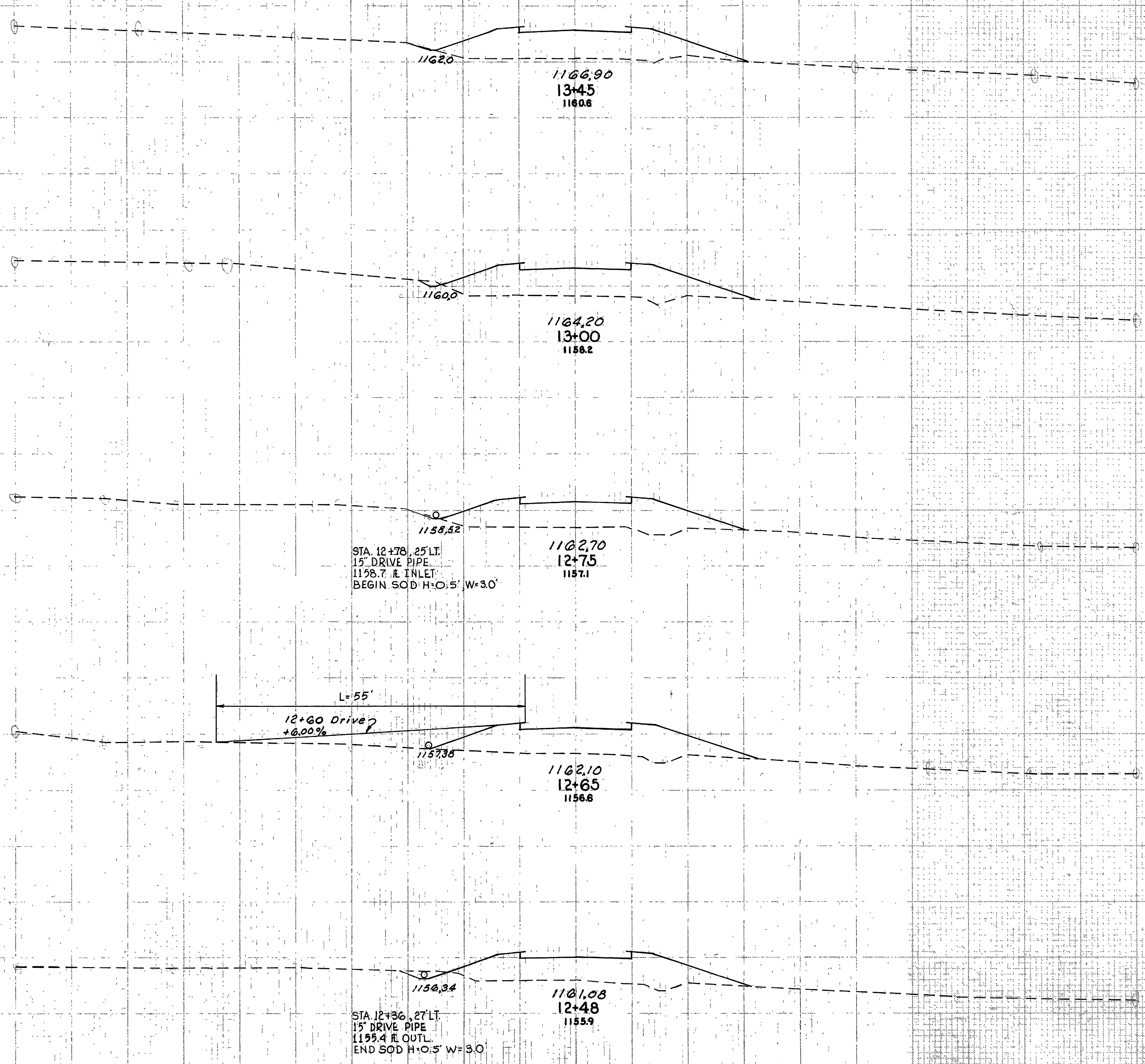


STA. 9+00 BEGIN PAVT.
STA. 8+50 BEGIN WORK

Lt. Ditch Sta. 7+00 to 9+00
Sta. 8+50

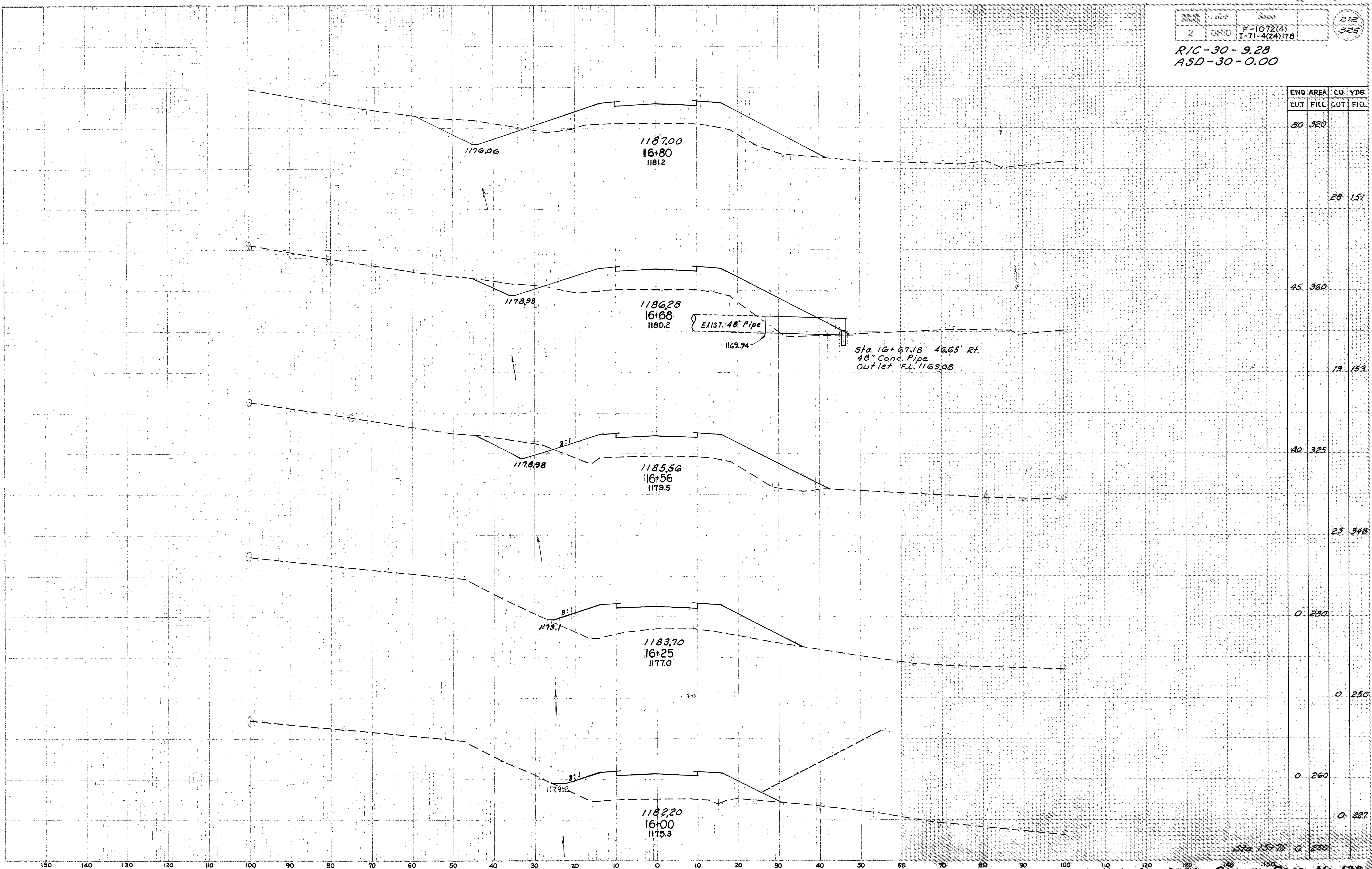
Sta. 9+86.4 to Sta. 12+00 COUNTY ROAD NO. 138

RIC-30-9.28
ASD-30-0.00

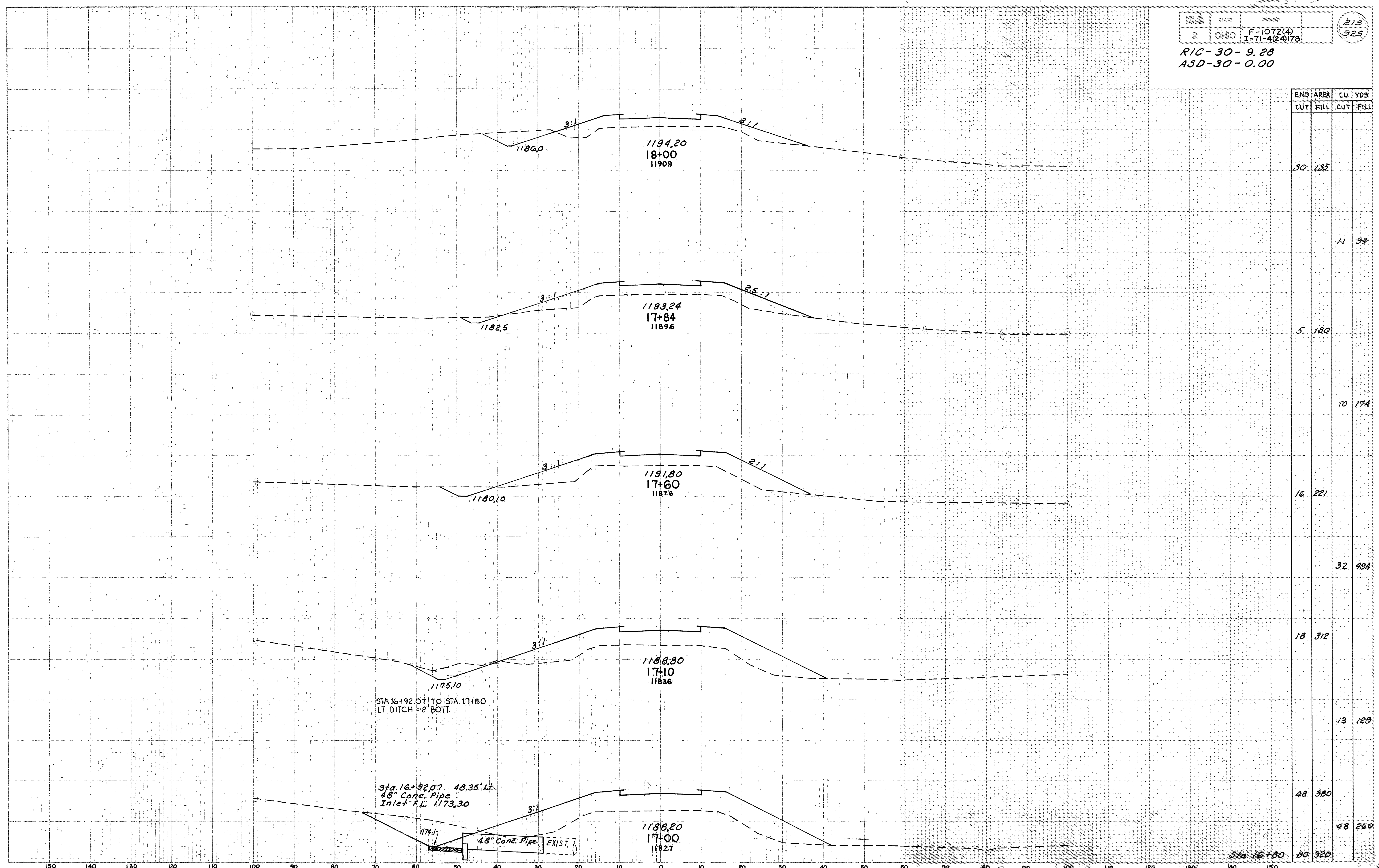


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	190		
		2	355
2	235		
		2	202
2	200		
		1	75
0	12+60		60
0	200		
		2	92
7	180		
		15	329
Sta. 12+00	10	190	

R/C-30-9.28
ASD-30-0.00



RIC-30-9.28
ASD-30-0.00



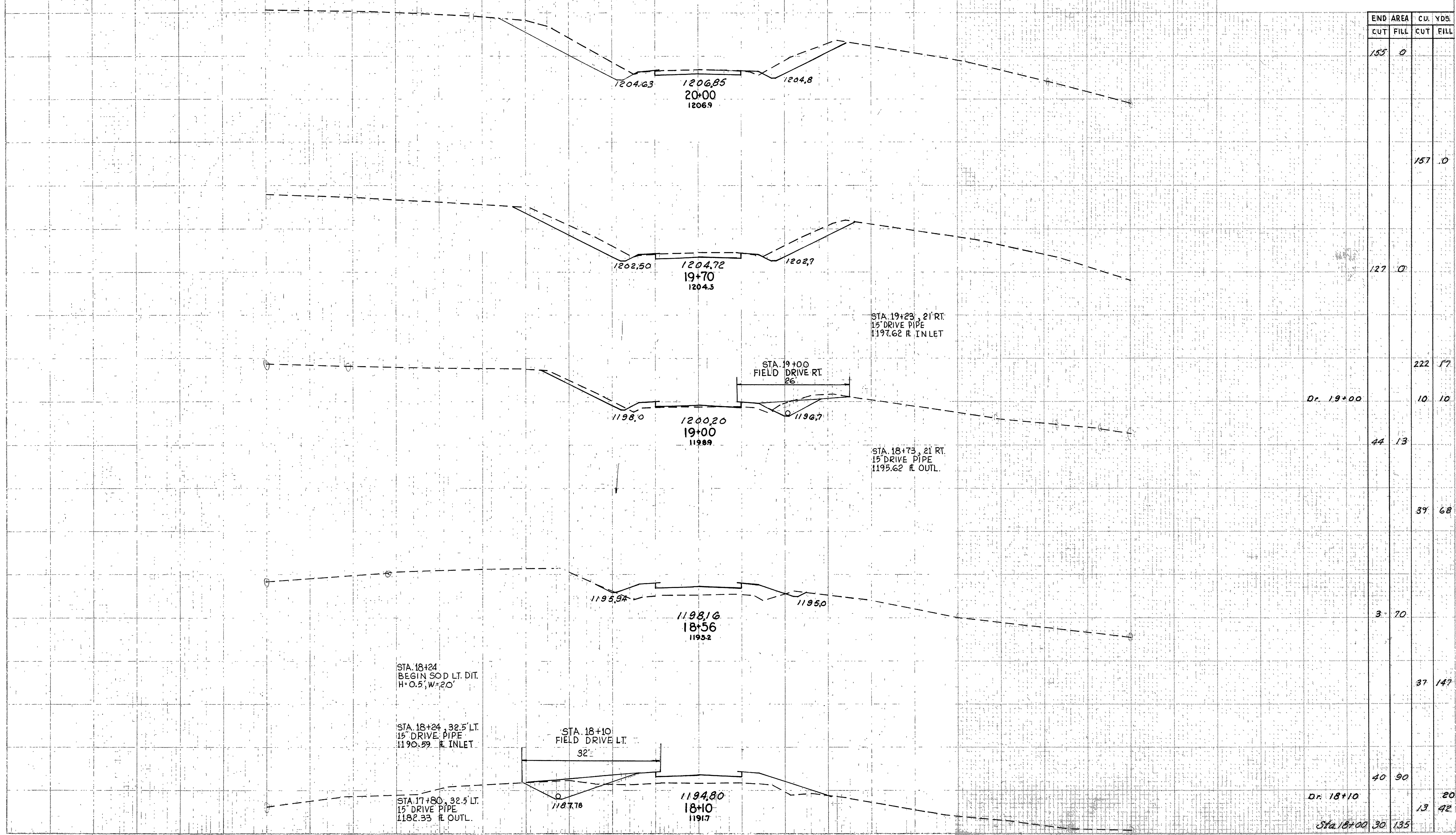
Sta. 16+92.07 TO STA. 17+80
LT. DITCH - 2' BOTT.

Sta. 16+92.07 48.35' LT.
48" Conc. Pipe
Inlet F.L. 1173.30

48" Conc. Pipe EXIST.

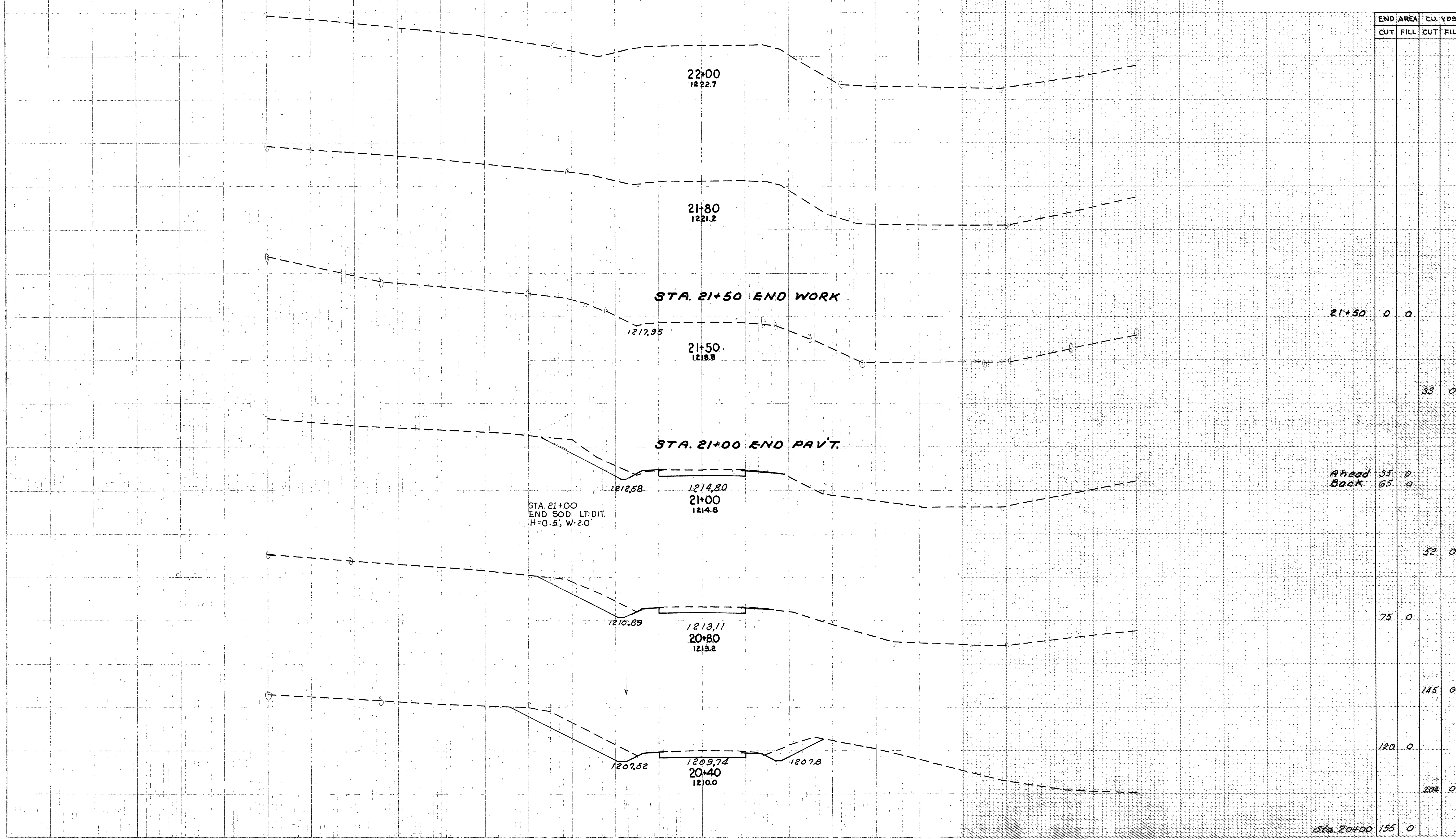
Sta. 17+00 to Sta. 18+00 COUNTY ROAD No. 136

RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
155	0	
		157 .0
127	0	
		222 .77
		Dr. 19+00
		10 .10
44	13	
		39 .68
3	70	
		37 .147
40	90	
		Dr. 18+10
		13 .42
		Sta. 18+00
30	135	

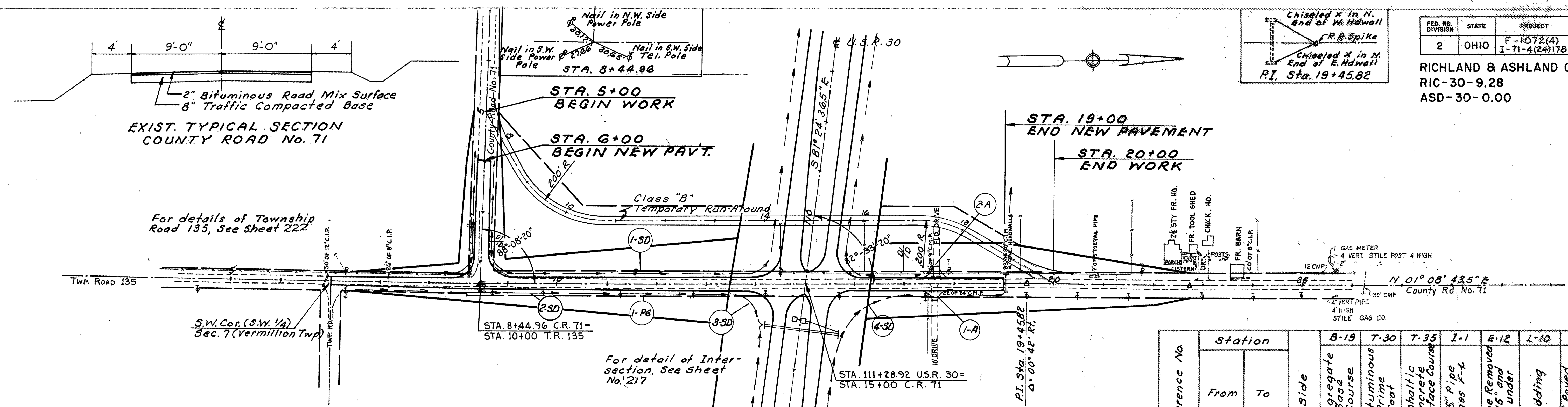
RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
21+50	0	0
Ahead	35	0
Back	65	0
		52
	75	0
		145
	120	0
		204
Sta. 20+00	155	0

Sta. 20+40 to Sta. 22+00 County Road No. 138

RICHLAND & ASHLAND COUNTIES
RIC-30-9.28
ASD-30-0.00



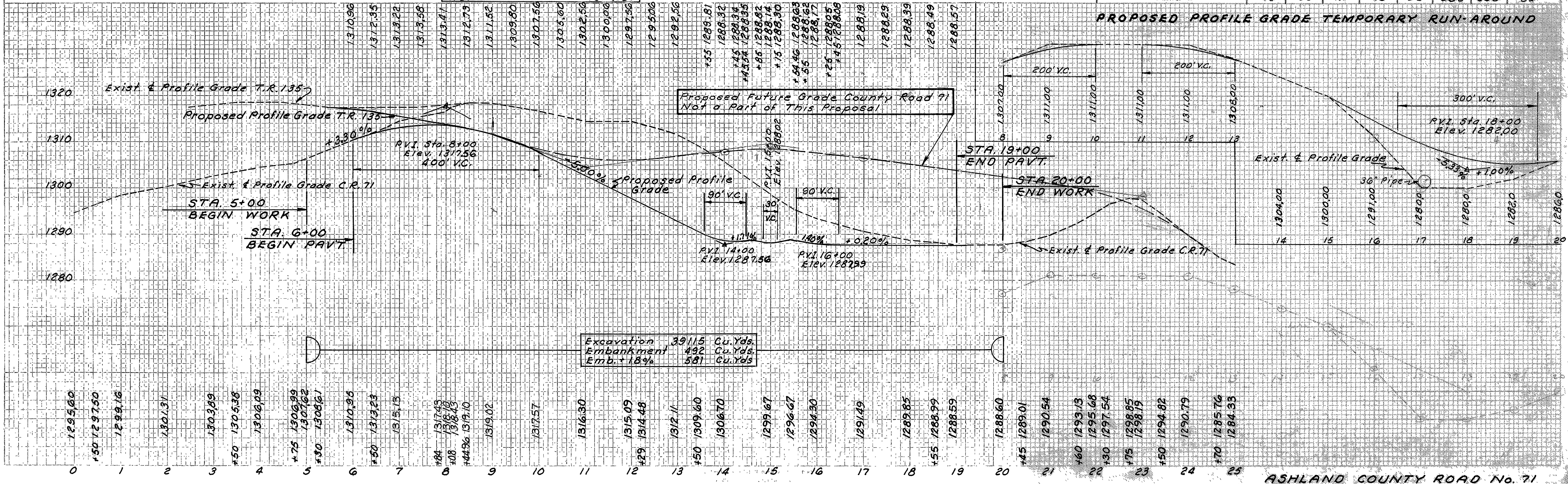
TEMPORARY RUN-AROUND
The Contractor shall start construction of County Road 71 as one of his first operations on this project. He shall use his best efforts to complete the construction of County Road 71 as soon as possible, in order that grading on U.S.R. 30 can be started in this area. The Temporary Run-Around will remain in use only, until such time, that traffic can again be routed over County Road 71.

ESTIMATED QUANTITIES

B-19 Aggregate Base Course	513	Cu.Yds.
T-30 Bituminous Prime Coat	879	Gal.
T-35 Asphaltic Concrete Surface Course	61	Cu.Yds.
I-9 Stone Underdrains, No. 2	252	Lin.Ft.
I-22 Subbase, Grading A or B, as per plan	270	Cu.Yds.
B-35 Asphaltic Concrete Leveling Course	61	Cu.Yds.
S-13 Temporary Runaround Class B	Lump	

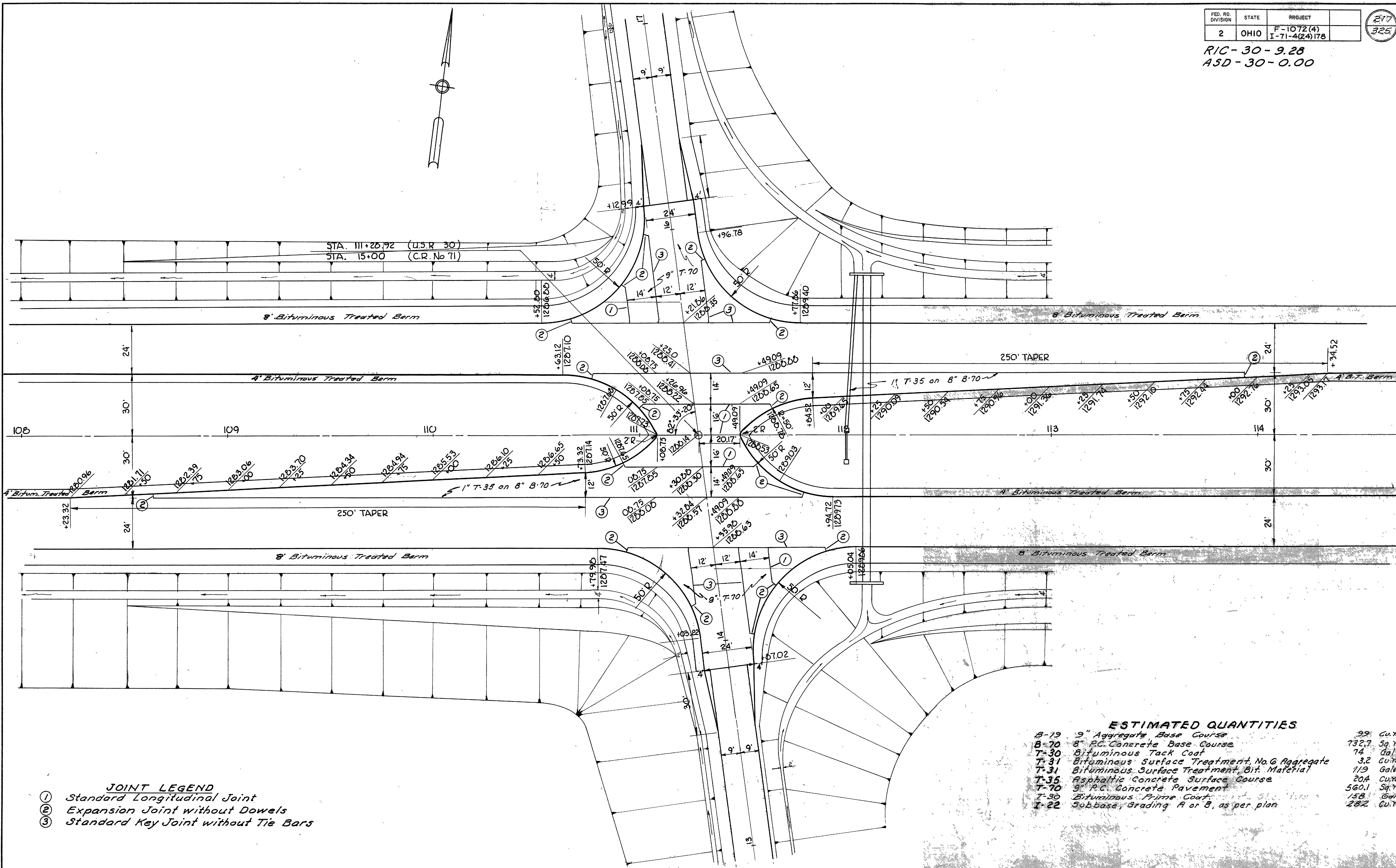
Reference No	Station		Side	B-19	T-30	T-35	I-1	E-12	L-10	I-14	I-1
	From	To		Aggregate Base Course	Bituminous Prime Coat	Asphaltic Concrete Surface Course	15" Pipe Class I-1	Pipe Removed 15" and under	Sodding	Std Paved Curbs Type I Modified, as per plan, Type A	30" Pipe Class C-1
1-A	17+63		Rt.	11	30	4	22				52
2-A	17+62		Lt.	9	25	3.5	46	16			
1-3D	9+00	14+30	Lt.						193		
2-3D	8+45	10+00	Rt.						73		
3-3D	12+00	14+17	Rt.						103		
4-3D	15+69	17+00	Rt.						152		
1-PG	10+00	12+00	Rt.						67	200	
Totals				20	55	7.5	46	38	588	200	52

B.M. 224 Power Pole South of Sta. 15+00, 18' Lt. Sta. 11+55
Elev. 1317.085



FINAL SURVEY

RIC-30-9.28
ASD-30-0.00

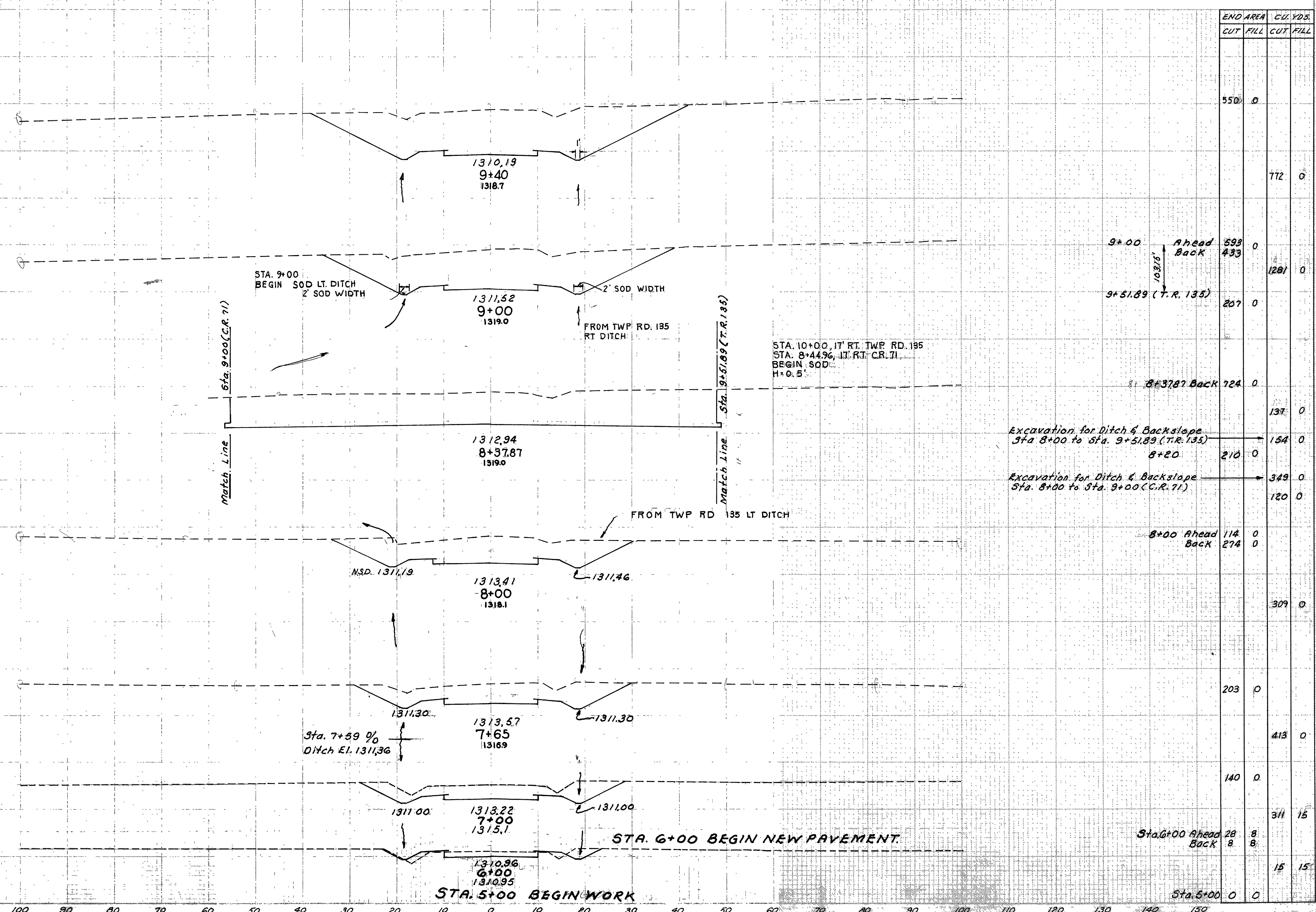


- JOINT LEGEND**
- ① Standard Longitudinal Joint
 - ② Expansion Joint without Dowels
 - ③ Standard Key Joint without Tie Bars

ESTIMATED QUANTITIES

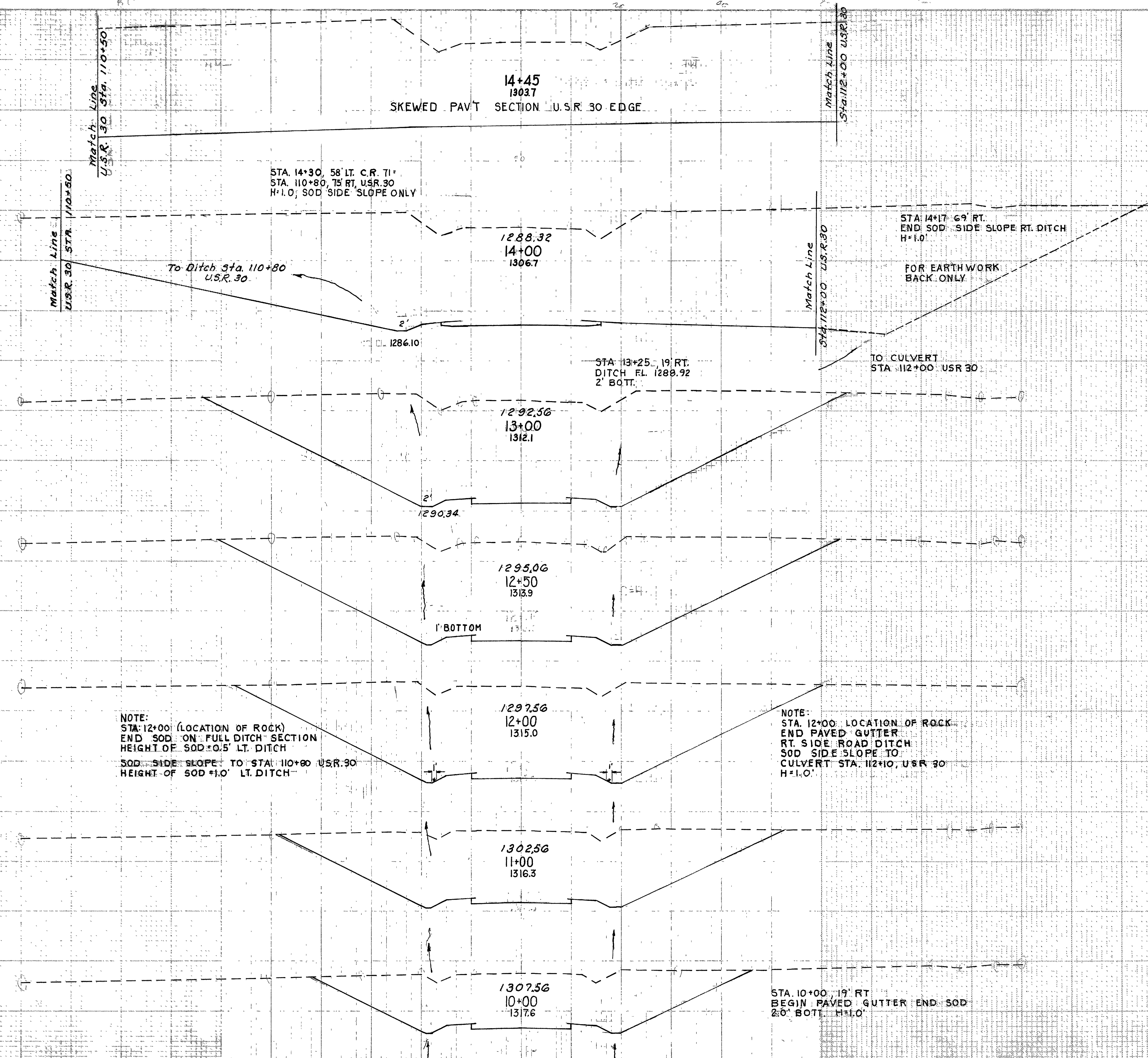
B-19	9" Aggregate Base Course	22	Cu. Yds.
B-70	8" P.C. Concrete Base Course	732.7	Sq. Yds.
T-30	Bituminous Tack Coat	74	Gal.
T-31	Bituminous Surface Treatment, No. 6 Aggregate	3.2	Cu. Yds.
T-31	Bituminous Surface Treatment, Bit. Material	119	Gal.
T-35	Asphaltic Concrete Surface Course	204	Cu. Yds.
T-70	9" P.C. Concrete Pavement	560.1	Sq. Yds.
T-30	Bituminous Prime Coat	158	Gal.
T-22	Subbase, Grading A or B, as per plan	282	Cu. Yds.

RIC-30-928
ASD-30-000



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		550	0
			772
		593	0
		433	0
			1281
		207	0
			724
			137
			154
		210	0
			349
			120
			114
			274
			309
		203	0
			413
		140	0
			311
			8
			8
			15
		15	15
		0	0

14+45
1903.7
SKEWED PAV'T SECTION U.S.R. 30 EDGE

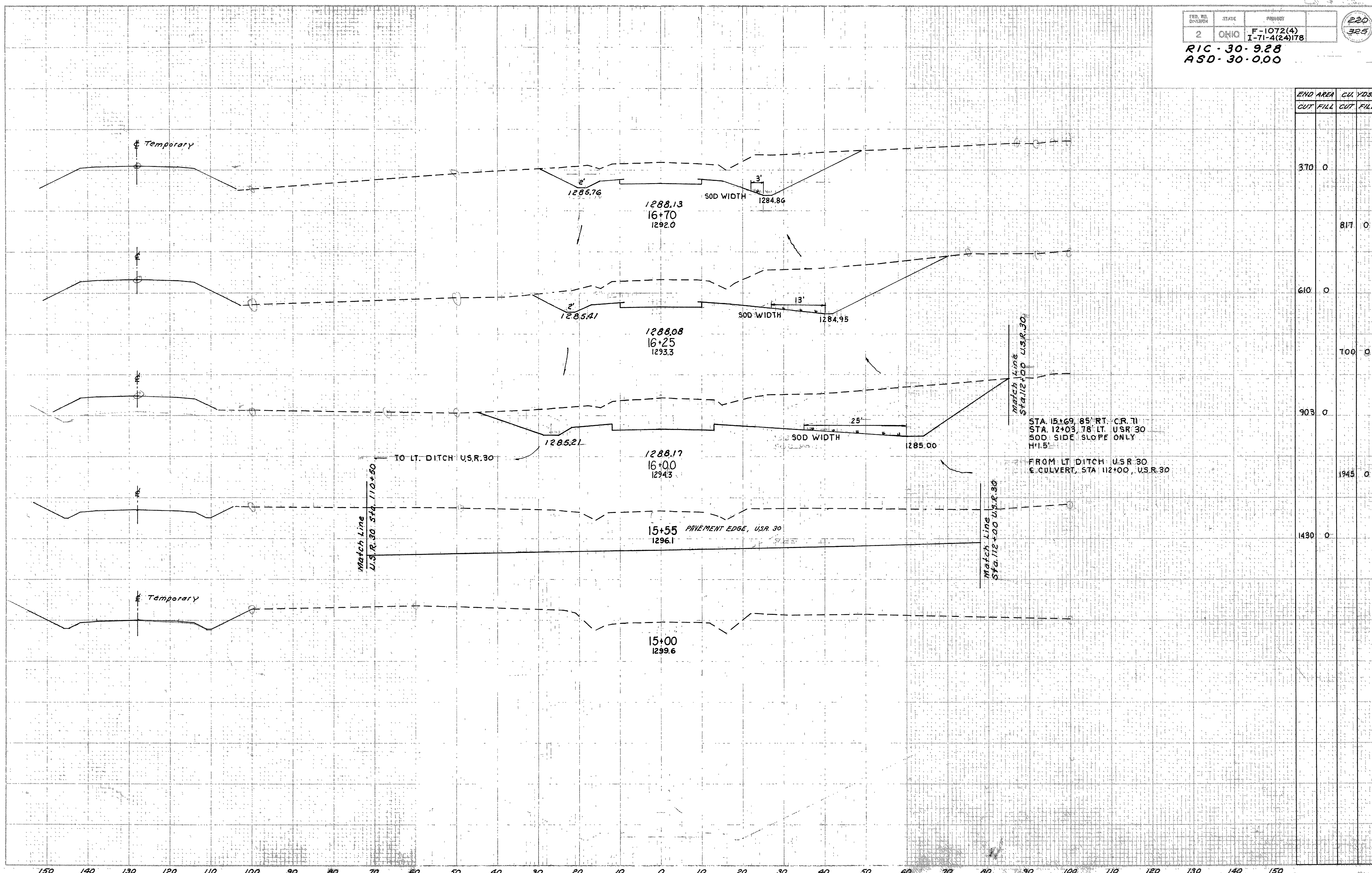


NOTE:
 STA. 12+00 (LOCATION OF ROCK)
 END SOD ON FULL DITCH SECTION
 HEIGHT OF SOD=0.5' LT. DITCH
 SOD SIDE SLOPE TO STA. 110+80 U.S.R. 30
 HEIGHT OF SOD=1.0' LT. DITCH

NOTE:
 STA. 12+00, LOCATION OF ROCK
 END PAVED GUTTER
 RT. SIDE ROAD DITCH
 SOD SIDE SLOPE TO
 CULVERT STA. 112+10, U.S.R. 30
 H=1.0'

END AREA	CUT	FILL	CUL. YDS.	CUT	FILL
2840	0				
			4739	0	
			2847		3837
			10439	0	
			1800	0	
			3172	0	
			1625	0	
			2850	0	
			1452	0	
			4550	0	
			1005	0	
			3135	0	
			688	0	
			1376	0	
9440	550	0			

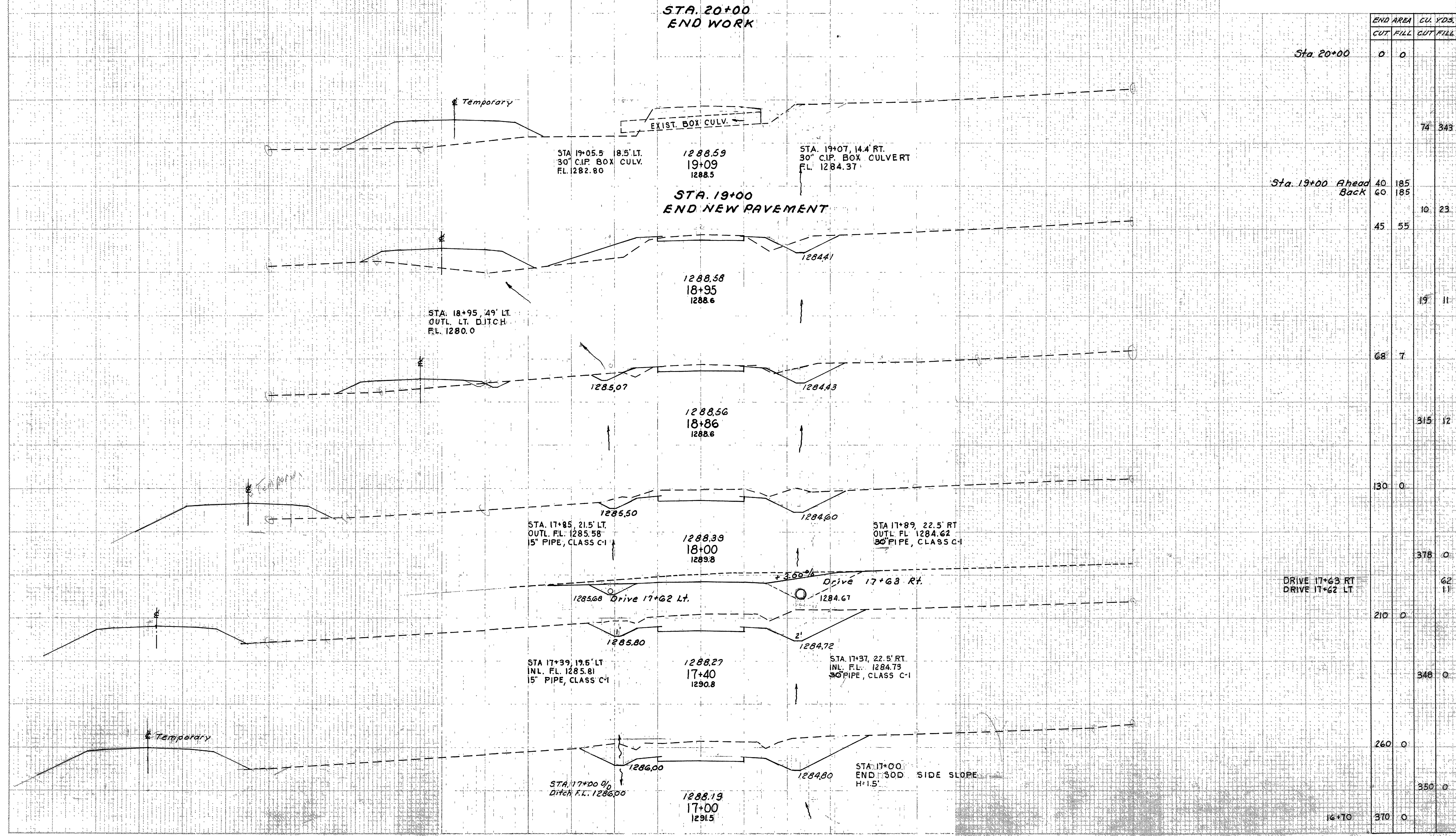
RIC - 30 - 9.28
ASD - 30 - 0.00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		370	0
		610	0
		903	0
		1430	0
		1945	0
		817	0
		100	0

STA. 15+69.85' RT. C.R. 71
STA. 12+03.78' LT. U.S.R. 30
SOD SIDE SLOPE ONLY
H:1.5'

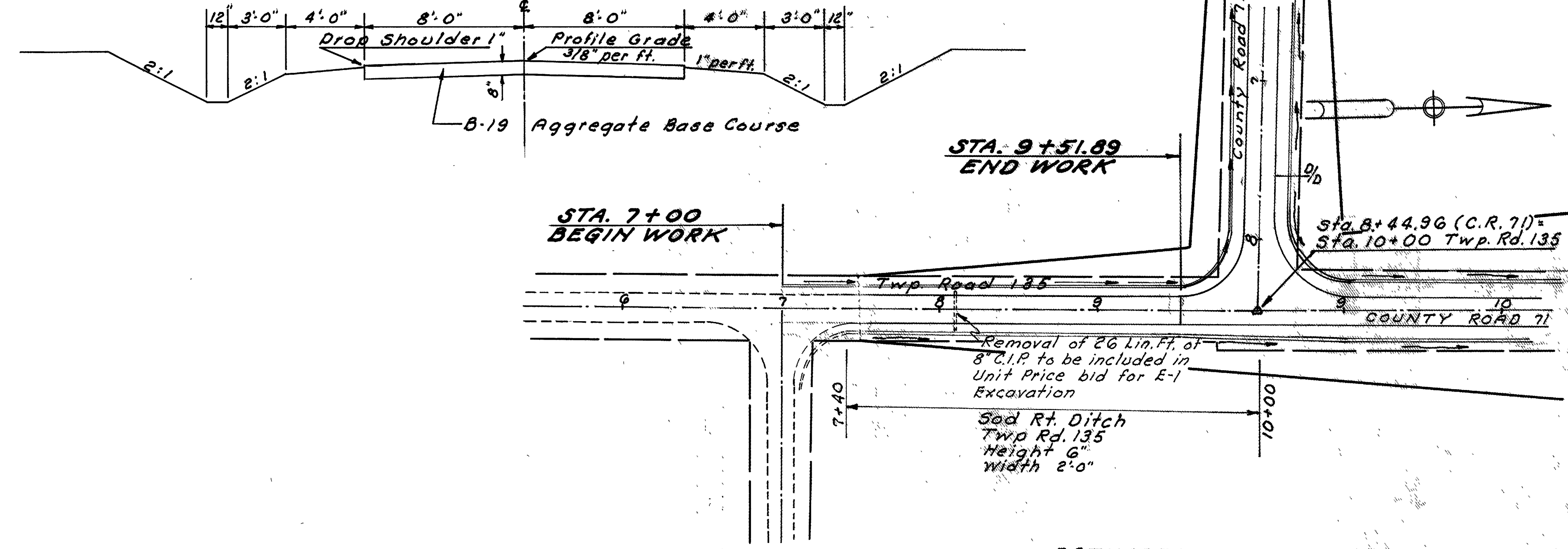
FROM LT. DITCH U.S.R. 30
C. CULVERT, STA. 112+00, U.S.R. 30



Sta	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Sta 20+00	0	0		
			74	343
Sta 19+00 Ahead	40	185		
Back	60	185	10	23
	45	55		
			19	11
	68	7		
			315	12
	130	0		
			378	0
DRIVE 17+63 RT				62
DRIVE 17+62 LT				11
	210	0		
			346	0
	260	0		
			350	0
17+70	370	0		

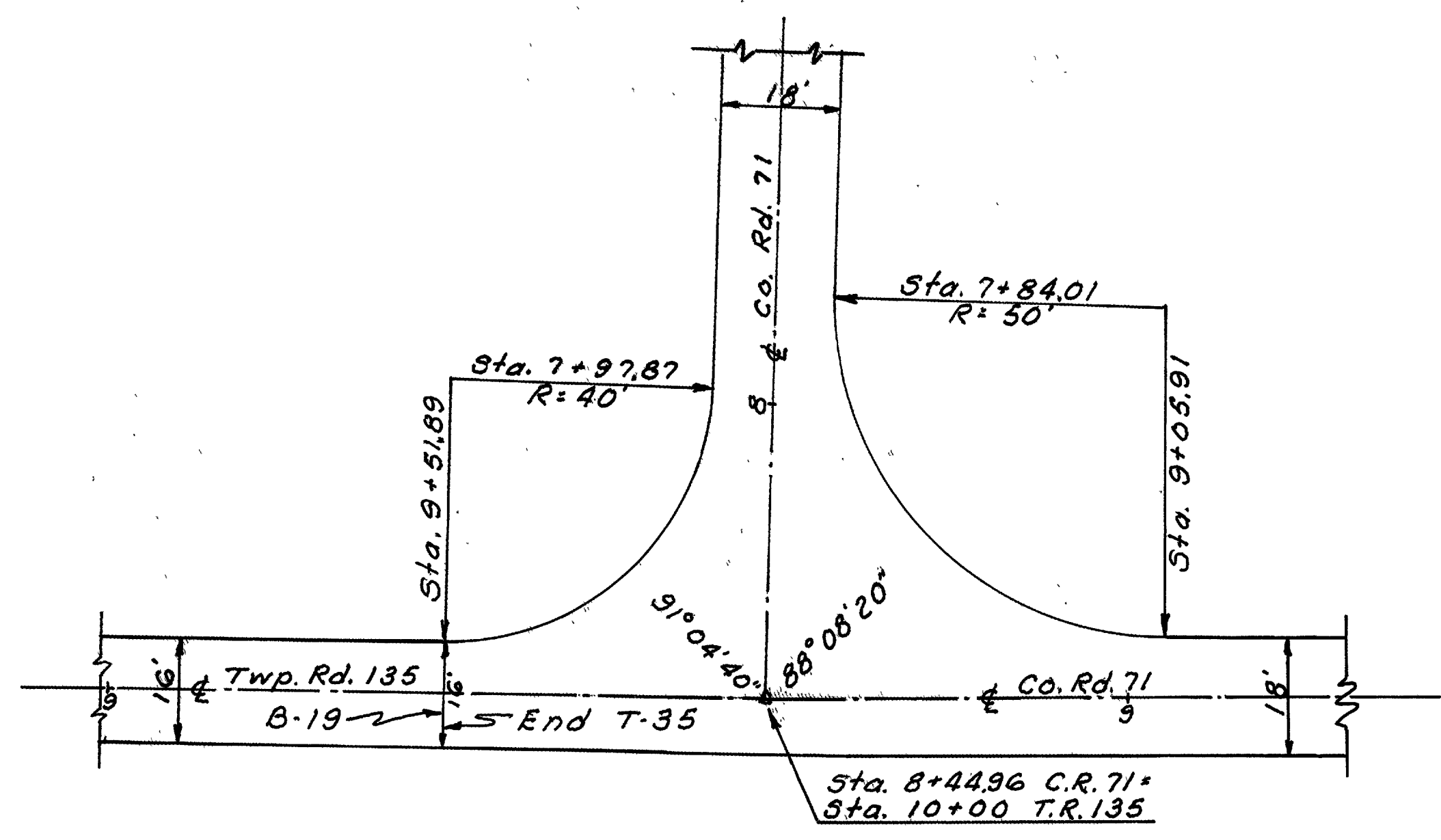
RIC-30-9.28
ASD-30-0.00

PROPOSED TYPICAL SECTION
TOWNSHIP ROAD 135

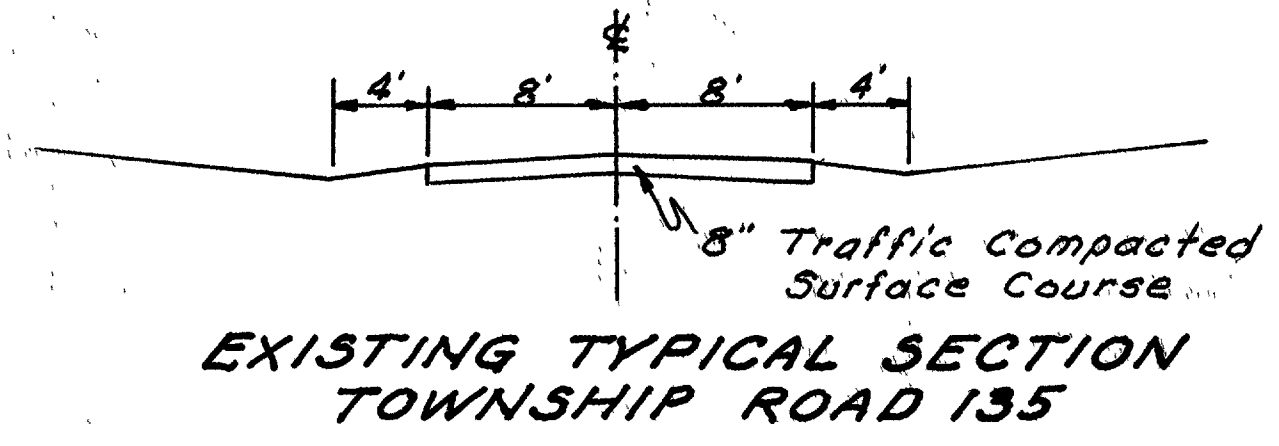


ESTIMATED QUANTITIES

E-1	Roadway Excavation (Method B)	1242 Cu.Yds.
B-19	Aggregate Base Course	100 Cu.Yds.
L-10	Sodding	94 Sq.Yds.

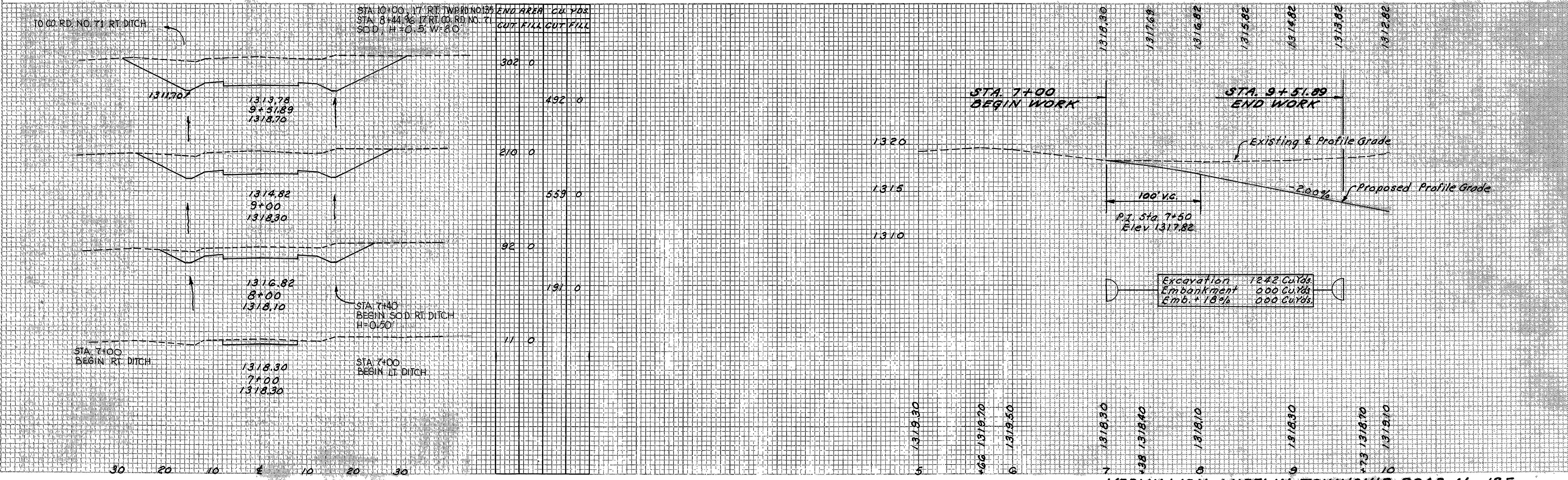


INTERSECTION OF TWP. ROAD 135 WITH CO. ROAD 71.
Scale 1"=20'

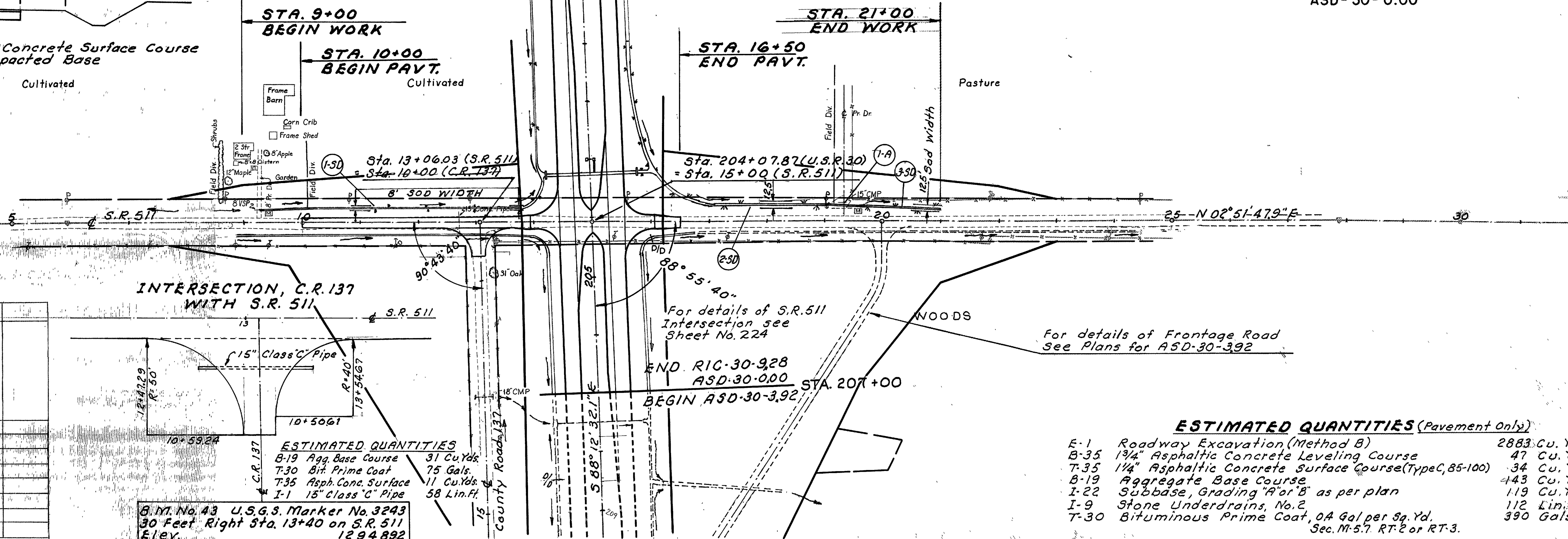
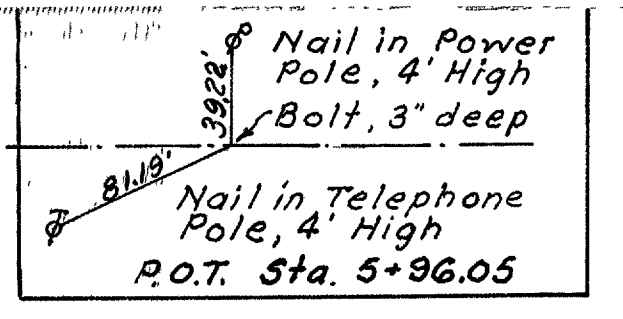
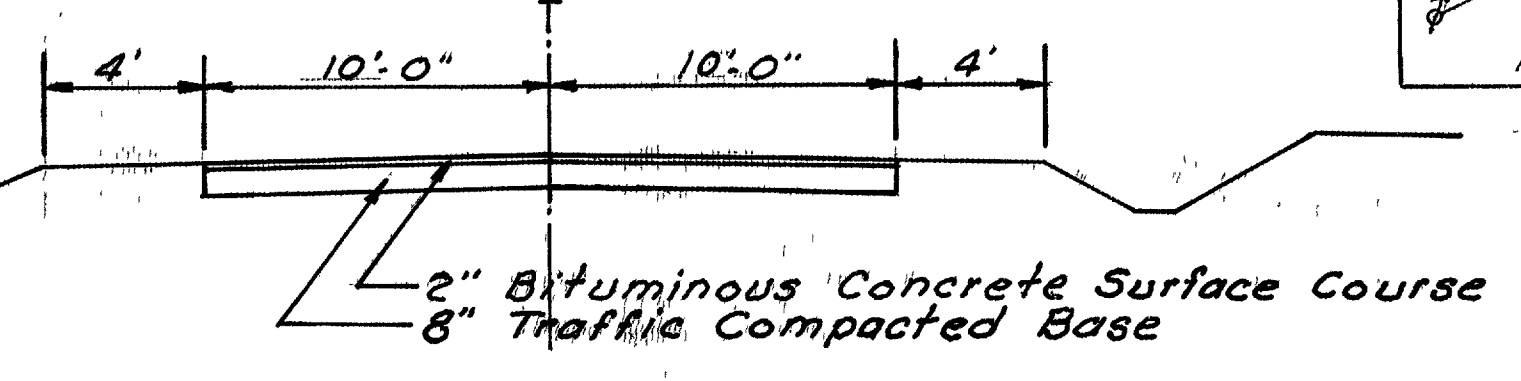


FINAL SURVEY
SURVEY PLOTTED
NOTES BOOK NO. 1000

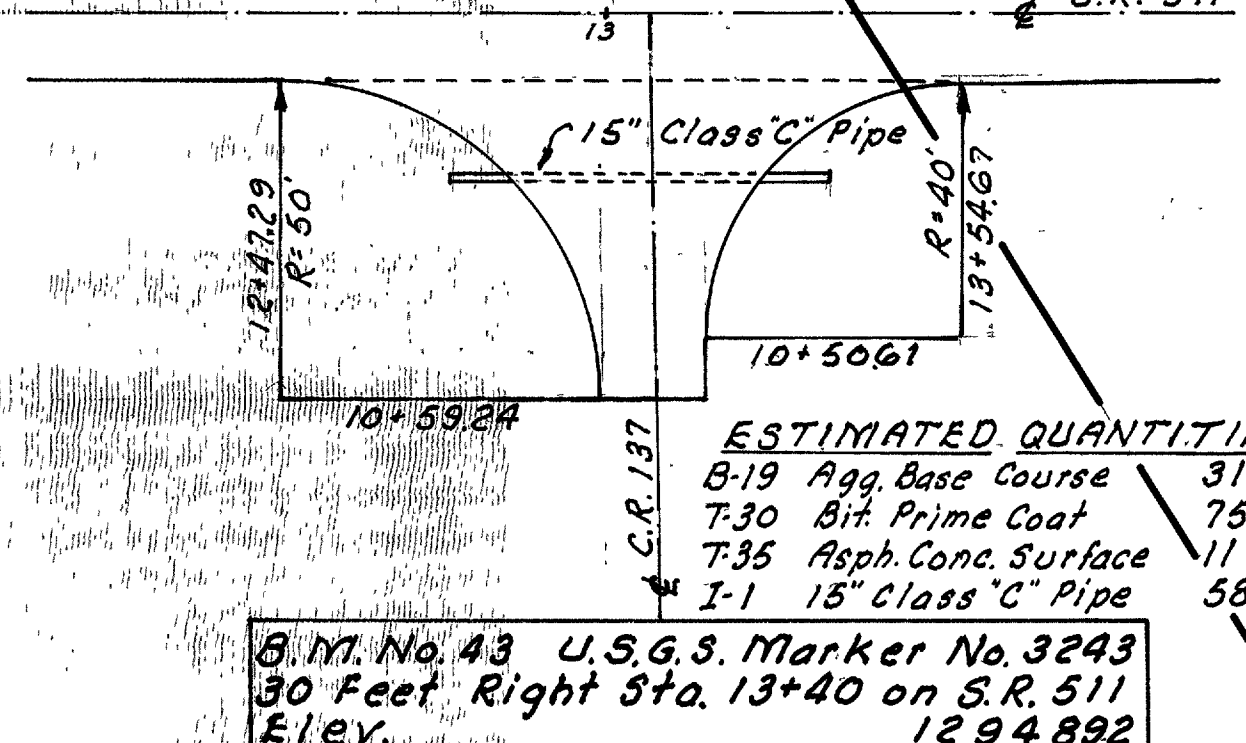
ORIGINAL SURVEY
SURVEY PLOTTED
NOTES BOOK NO. 1000



TYPICAL SECTION EXIST. S.R. 511



INTERSECTION, C.R. 137 WITH S.R. 511

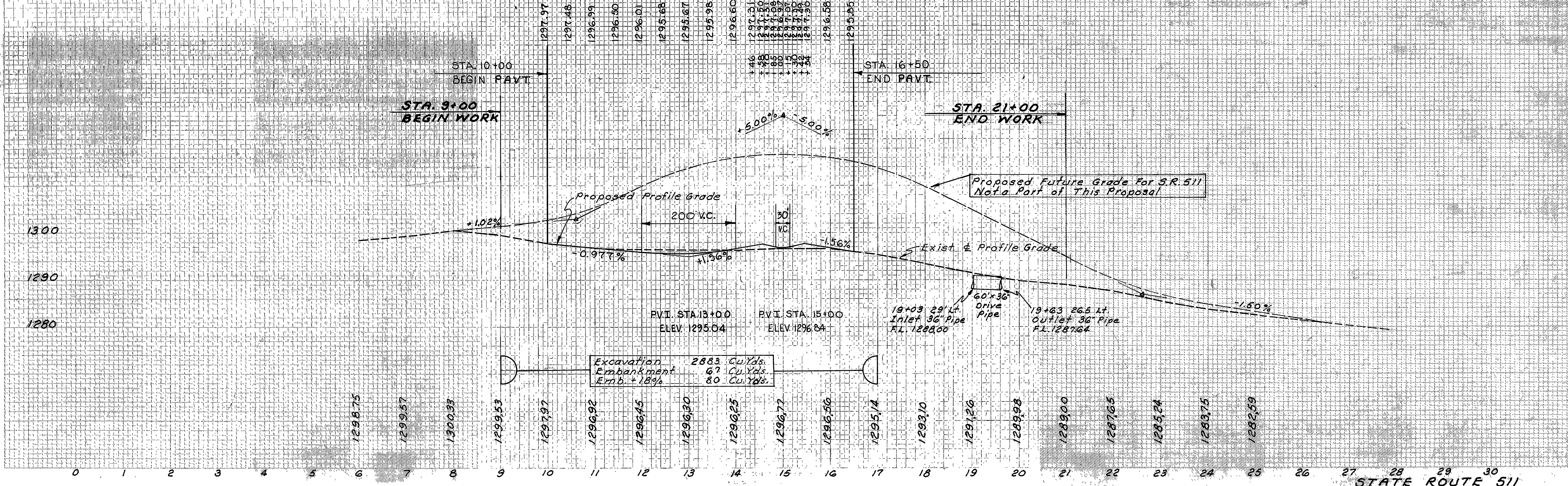


Reference No.	Station		Side	I-1 36" Class C-1 Pipe Sec. M. 5.7 (b) or Sec. M. 5.7 (a)	L-10 Sodding	B-19 Aggregate Base Course	E-12 Pipe Removed 15' and Under
	From	To					
1-50	10+75	14+00	Lt.		267		
2-50	16+00	19+03	Lt.		480		
1-A	19+03	19+63	Lt.	60		2	30
3-50	19+63	21+00	Lt.		150		
Totals				60	897	2	30

ESTIMATED QUANTITIES
 B-19 Agg. Base Course 31 Cu. Yds.
 T-30 Bit. Prime Coat 75 Gals.
 T-35 Asph. Conc. Surface 11 Cu. Yds.
 I-1 15" Class "C" Pipe 58 Lin. Ft.

ESTIMATED QUANTITIES (Pavement Only)
 E-1 Roadway Excavation (Method B) 2883 Cu. Yds.
 B-35 1 3/4" Asphaltic Concrete Leveling Course 47 Cu. Yds.
 T-35 1 1/4" Asphaltic Concrete Surface Course (Type C, 85-100) 34 Cu. Yds.
 B-19 Aggregate Base Course 443 Cu. Yds.
 I-22 Subbase, Grading "A" or "B" as per plan 119 Cu. Yds.
 I-9 Stone Underdrains, No. 2 112 Lin. Ft.
 T-30 Bituminous Prime Coat, 0A Gal per Sq. Yd. 390 Gals.
 Sec. M. 5.7, RT. 2 or RT. 3.

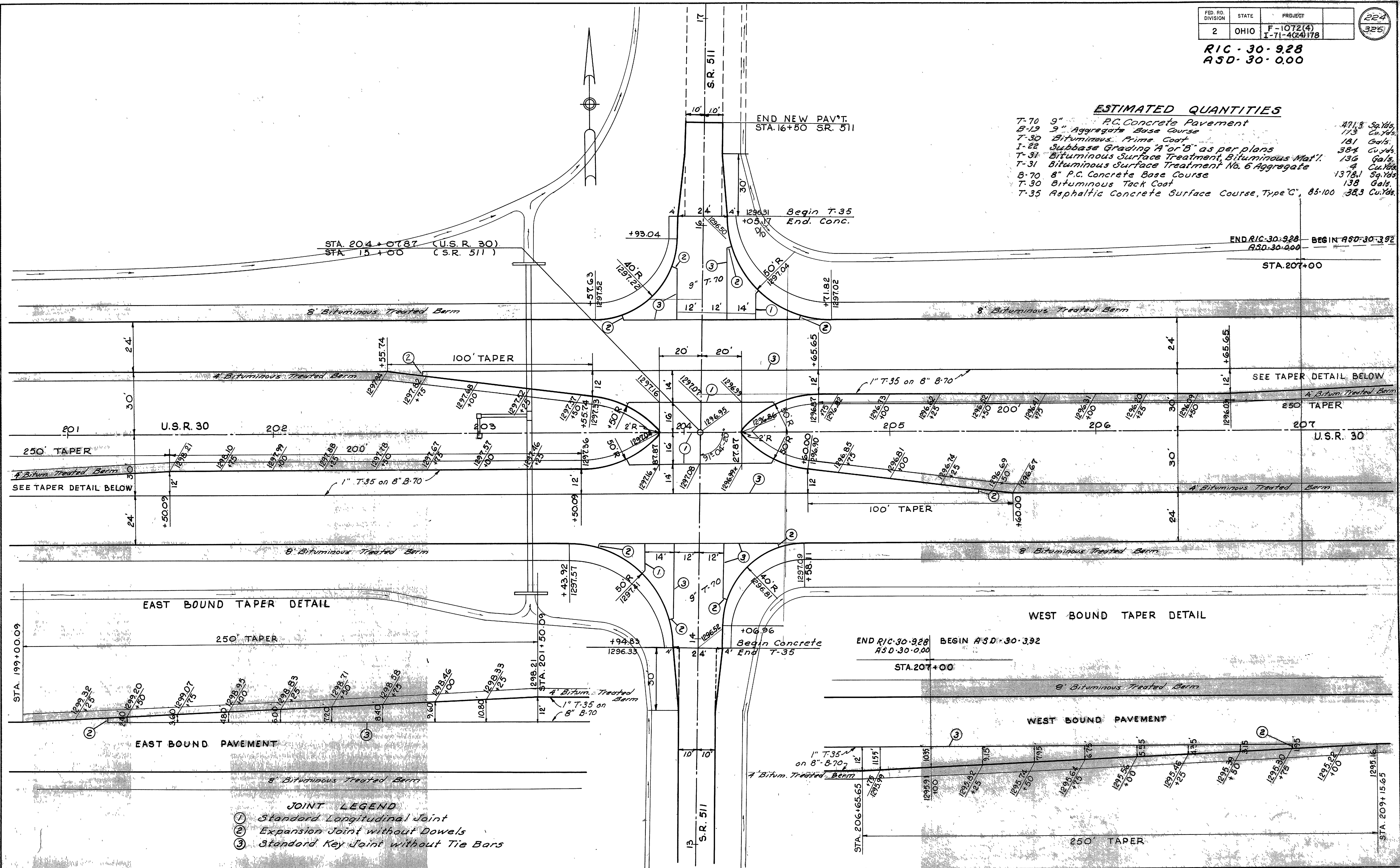
B.M. No. 43 U.S.G.S. Marker No. 3243
 30 Feet Right Sta. 13+40 on S.R. 511
 Elev. 1294.892



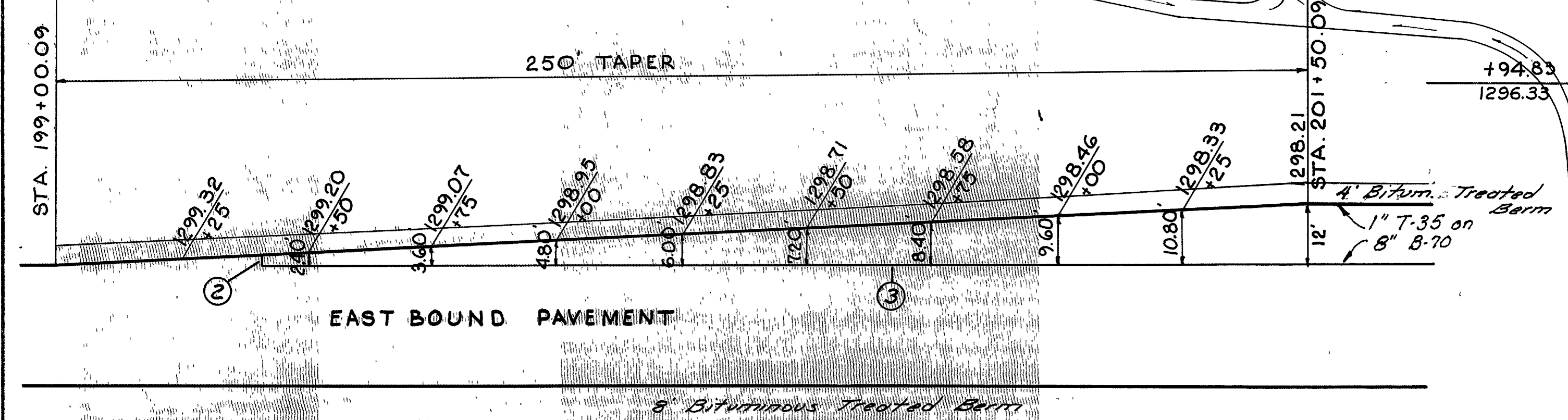
RIC-30-928
ASD-30-000

ESTIMATED QUANTITIES

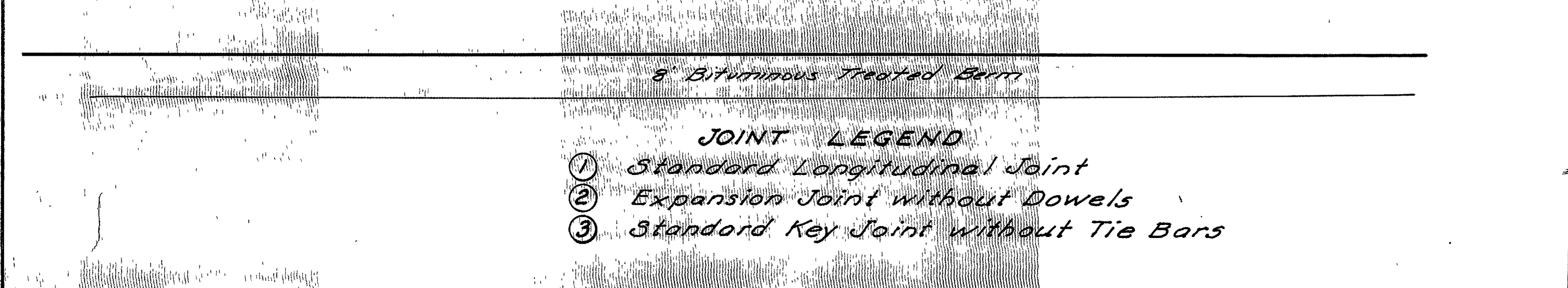
T-70	9" P.C. Concrete Pavement	471.3	Sq. Yds.
B-19	9" Aggregate Base Course	173	Cu. Yds.
T-30	Bituminous Prime Coat	181	Gals.
I-22	Subbase Grading "A" or "B" as per plans	384	Cu. Yds.
T-31	Bituminous Surface Treatment, Bituminous Mat'l.	136	Gals.
T-31	Bituminous Surface Treatment No. 6 Aggregate	4	Cu. Yds.
B-70	8" P.C. Concrete Base Course	1378.1	Sq. Yds.
T-30	Bituminous Tack Coat	138	Gals.
T-35	Asphaltic Concrete Surface Course, Type "C", 85-100	38.3	Cu. Yds.



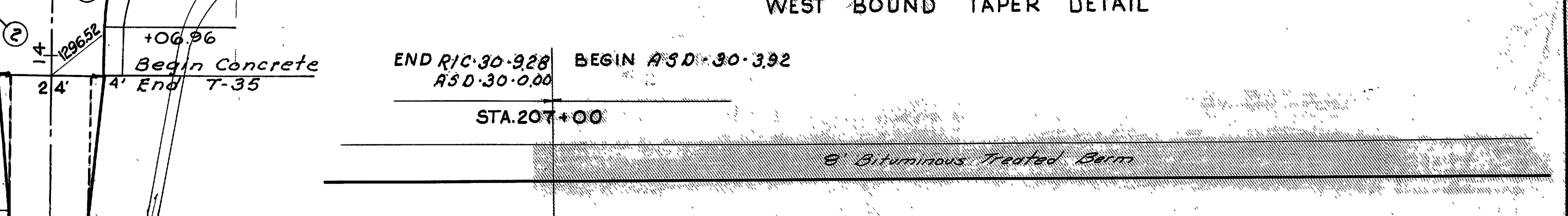
EAST BOUND TAPER DETAIL



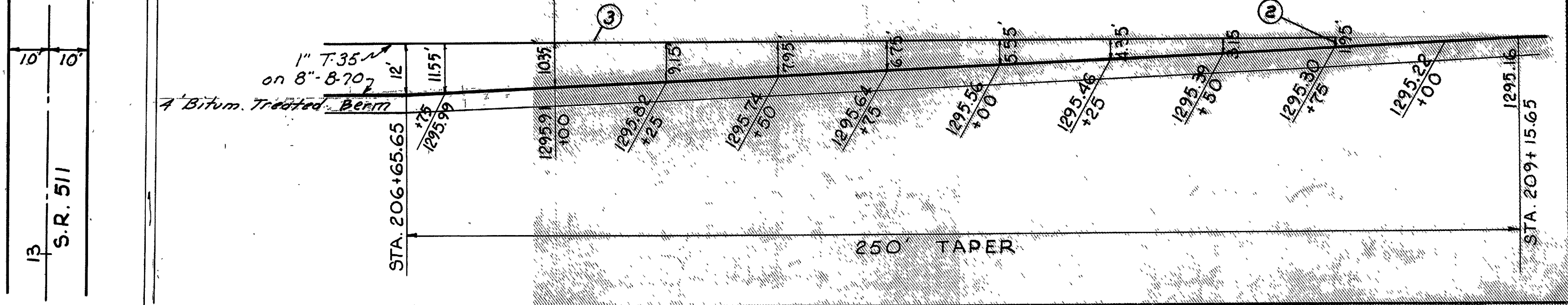
EAST BOUND PAVEMENT



WEST BOUND TAPER DETAIL



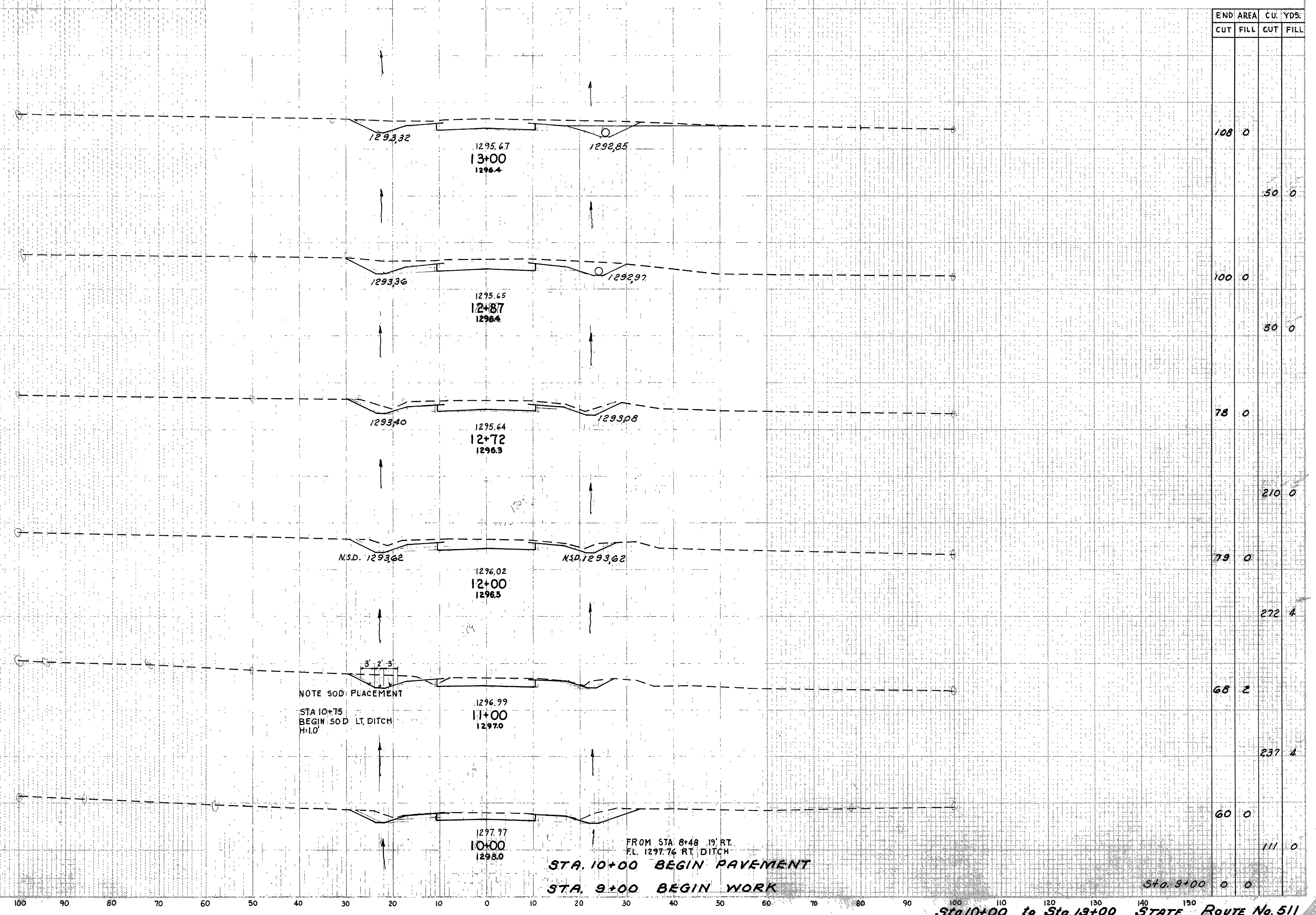
WEST BOUND PAVEMENT



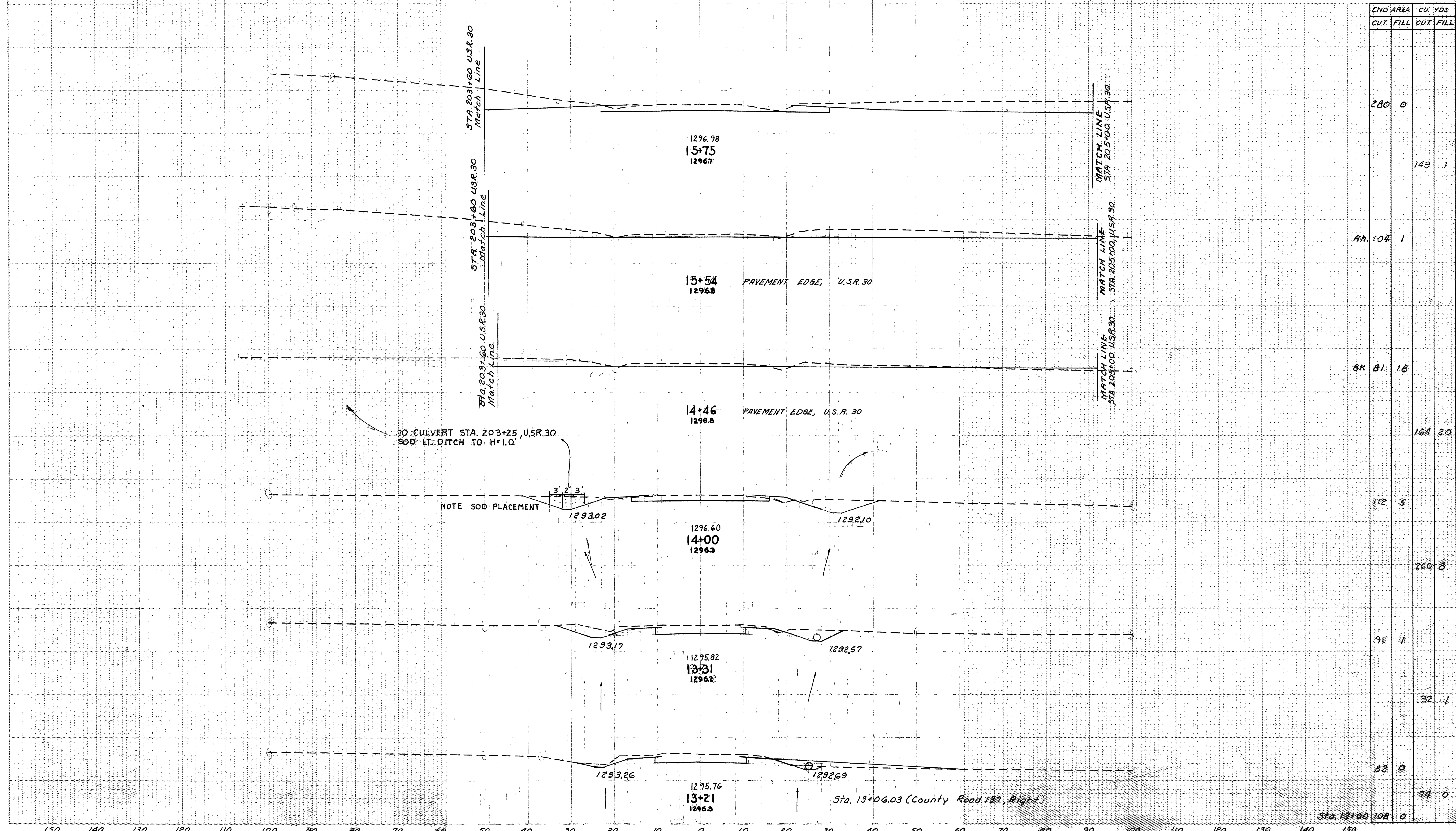
JOINT LEGEND

- ① Standard Longitudinal Joint
- ② Expansion Joint without Dowels
- ③ Standard Key Joint without Tie Bars

RIC-30-9.28
ASD-30-0.00



RIC-30-9.28
ASD-30-0.00



END AREA	CU. YDS.	
	CUT	FILL
280	0	
	149	1
Ab. 104	1	
8K 81	18	
	164	20
112	5	
	260	8
91	7	
	32	1
82	0	
	74	0
Sta. 13+00	108	0

RIC-30-9.28
ASD-30-0.00

STA. 21+00, END WORK

STA 21+00
END DITCH FL. 1286.8
END SOD H=1.75

NOTE SOD PLACEMENT
STA. 19+63
BEGIN SOD LT. DITCH
H=1.75

STA. 19+03
END SOD LT. DITCH
H=1.75

NOTE SOD PLACEMENT
STA. 17+00
END SOD LT. DITCH
H=1.75

FROM STA 203+27
Sod Lt. Ditch H=1.75

Match Line U.S.R. 30
Sta. 203+60

END PAVT. STA. 16+50

TO STA. 205+00, 72 LT.
L.M.D. USR 30

END AREA	CU. YDS.	
	CUT	FILL
21+00	0	0
		28 0
15	0	
		177 0
48	0	
		132 0
70	0	
		104 0
70	0	
		250 6
Ah. 17+00 Lt. Ditch	65	3
Bk. 17+00 Rt. Ditch	0	0
		46 3
16+50 Ah. Back	50	10
		597 14
Sta. 15+75	280	0

RIC-30-928
ASD-30-000

CURVE DATA

€ EAST BOUND LANES

PI. STA. 655+20.68
 $\Delta = 64^{\circ}01'00''$ RT.
 $D = 3^{\circ}00'00''$
 $L_s = 400.00'$
 $R = 1909.86'$
 $L_c = 1733.89'$
 $L = 2533.89'$
 $T_s = 1395.91'$
 $E_s = 346.52'$

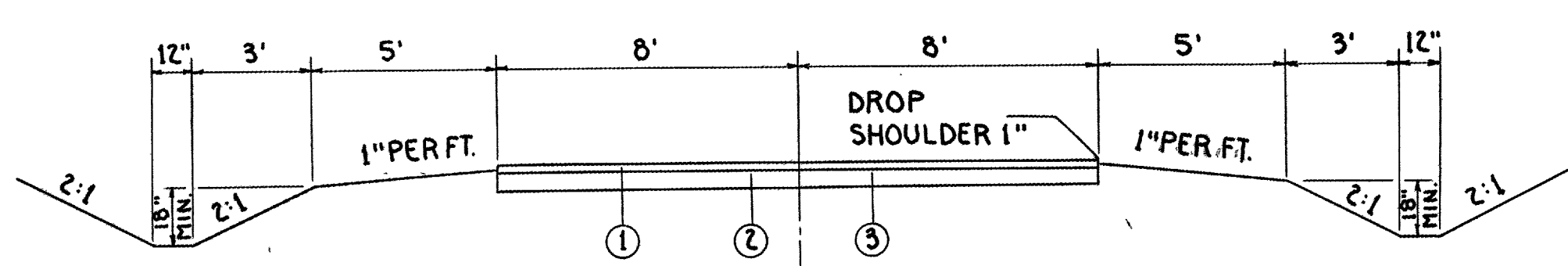
€ CONSTRUCTION

PI. STA. 655+43.82
 $\Delta = 64^{\circ}01'00''$ RT.
 $D = 3^{\circ}00'00''$
 $R = 1909.86'$
 $T = 1193.80'$
 $L = 2133.89'$
 $E = 342.41'$

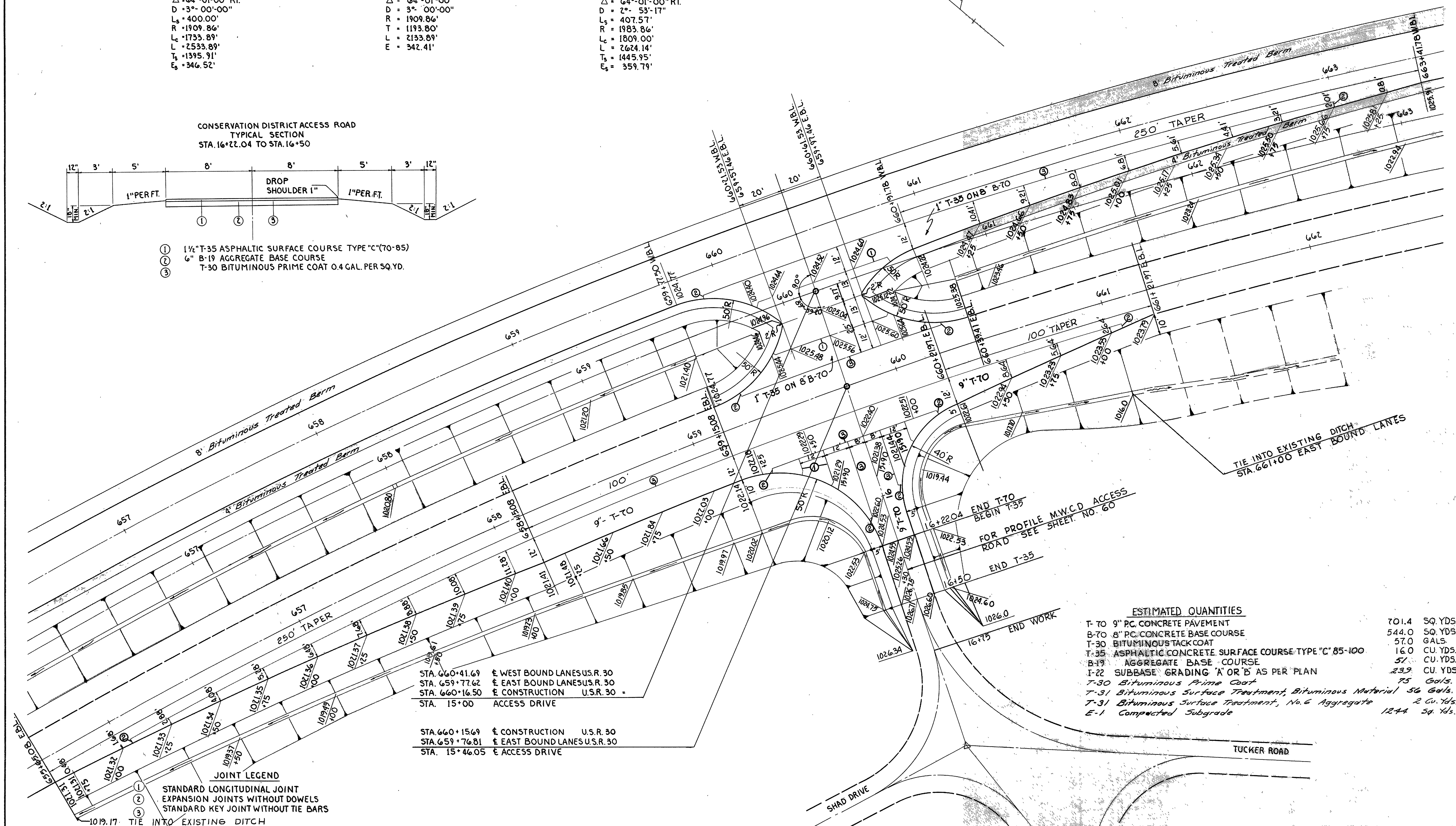
€ WEST BOUND LANES

PI. STA. 655+66.94
 $\Delta = 64^{\circ}01'00''$ RT.
 $D = 2^{\circ}53'17''$
 $L_s = 407.57'$
 $R = 1983.86'$
 $L_c = 1809.00'$
 $L = 2624.14'$
 $T_s = 1445.95'$
 $E_s = 359.79'$

CONSERVATION DISTRICT ACCESS ROAD
 TYPICAL SECTION
 STA. 16+22.04 TO STA. 16+50



- ① 1 1/2" T-35 ASPHALTIC SURFACE COURSE TYPE "C" (70-85)
- ② 6" B-19 AGGREGATE BASE COURSE
- ③ T-30 BITUMINOUS PRIME COAT 0.4 GAL. PER SQ. YD.



ESTIMATED QUANTITIES

T-70 9" PC. CONCRETE PAVEMENT	701.4	SQ. YDS.
B-70 8" PC. CONCRETE BASE COURSE	544.0	SQ. YDS.
T-30 BITUMINOUS TACK COAT	57.0	GALS.
T-35 ASPHALTIC CONCRETE SURFACE COURSE TYPE "C" 85-100	16.0	CU. YDS.
B-19 AGGREGATE BASE COURSE	51	CU. YDS.
I-22 SUBBASE GRADING "A" OR "B" AS PER PLAN	239	CU. YDS.
T-30 Bituminous Prime Coat	75	Gals.
T-31 Bituminous Surface Treatment, Bituminous Material 56 Gals.		
T-31 Bituminous Surface Treatment, No. 6 Aggregate	2	CU. Yds.
E-1 Compacted Subgrade	1244	Sq. Yds.

STA. 660+41.69 € WEST BOUND LANES U.S.R. 30
 STA. 659+77.62 € EAST BOUND LANES U.S.R. 30
 STA. 660+16.50 € CONSTRUCTION U.S.R. 30
 STA. 15+00 ACCESS DRIVE

STA. 660+15.69 € CONSTRUCTION U.S.R. 30
 STA. 659+76.81 € EAST BOUND LANES U.S.R. 30
 STA. 15+46.05 € ACCESS DRIVE

JOINT LEGEND

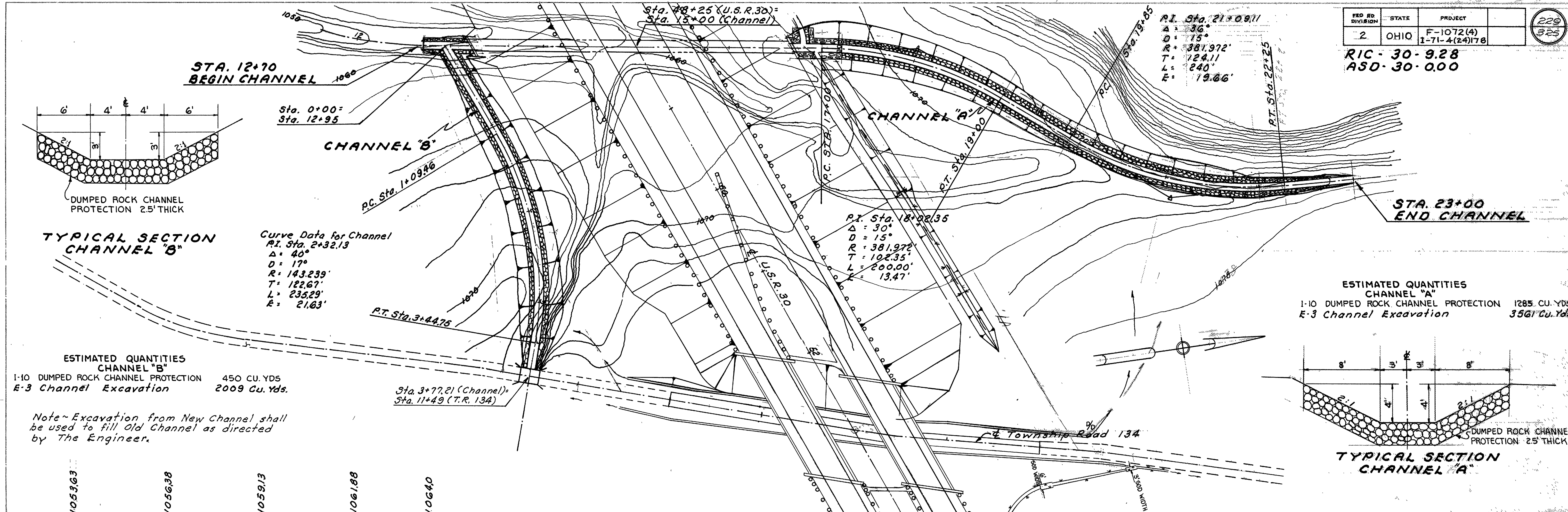
- ① STANDARD LONGITUDINAL JOINT
- ② EXPANSION JOINTS WITHOUT DOWELS
- ③ STANDARD KEY JOINT WITHOUT TIE BARS

1019.17 TIE INTO EXISTING DITCH

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) 1-71-4(24)178

229
325

RIC-30-928
ASD-30-000

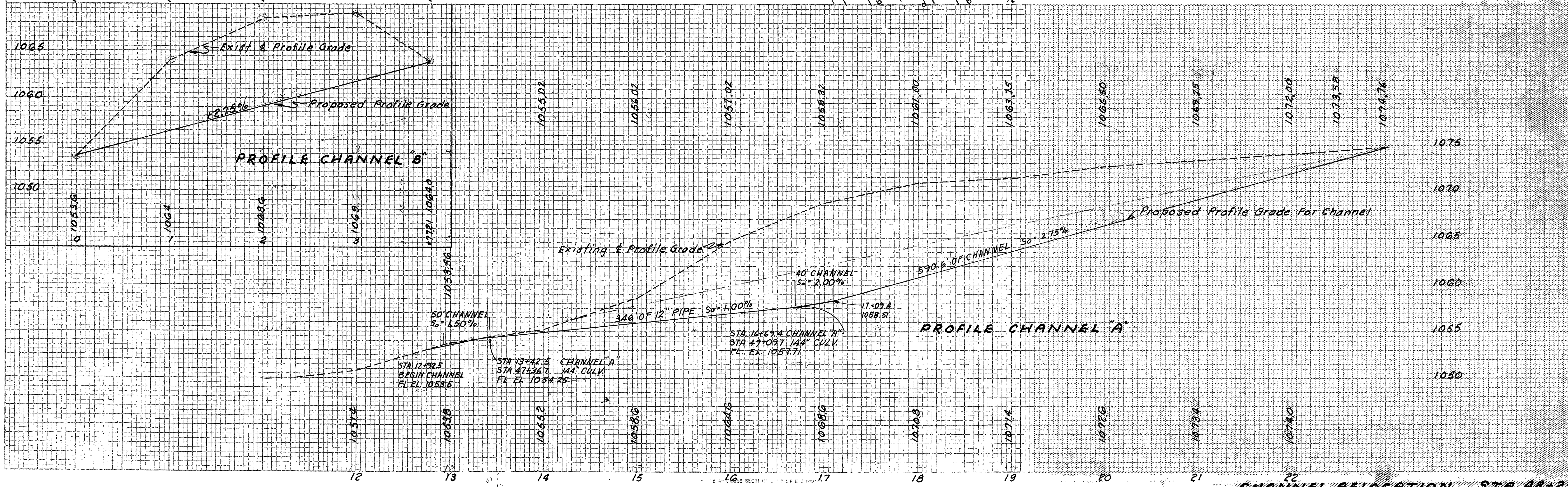


TYPICAL SECTION CHANNEL "B"

ESTIMATED QUANTITIES CHANNEL "B"
 1-10 DUMPED ROCK CHANNEL PROTECTION 450 CU. YDS
 E-3 Channel Excavation 2009 Cu. Yds.

ESTIMATED QUANTITIES CHANNEL "A"
 1-10 DUMPED ROCK CHANNEL PROTECTION 1285 CU. YDS
 E-3 Channel Excavation 3561 Cu. Yds.

Note - Excavation from New Channel shall be used to fill Old Channel as directed by The Engineer.

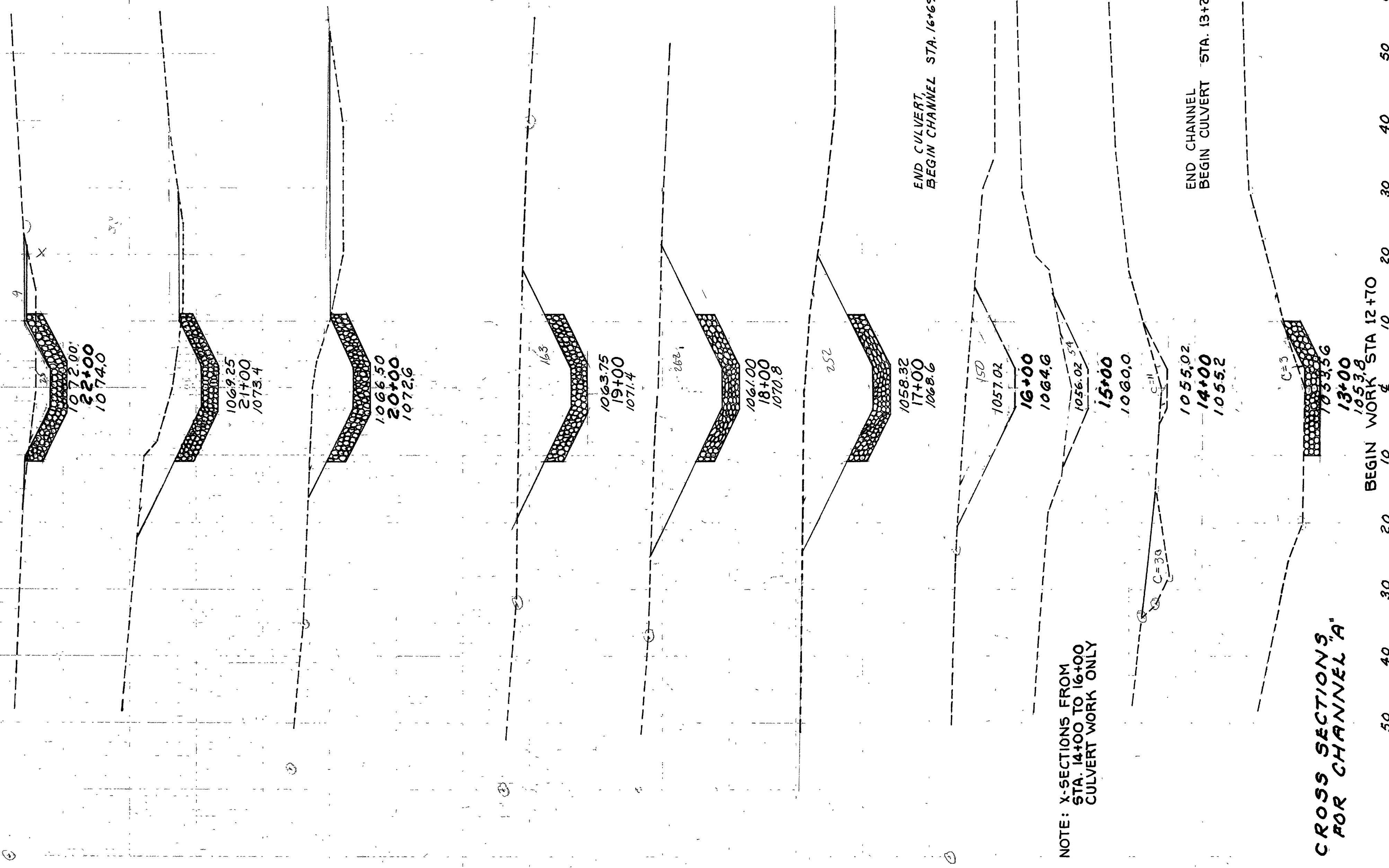


FINAL SURVEY...
NO. 1000...
DATE...

ORIGINAL SURVEY...
NO. 1000...
DATE...

STA	END AREA CU YDS	
	CUT	FILL
Sta. 23+00	0	0
	25	9
	115	9
	105	51
	163	0
	262	0
	252	0
	221	0
	952	0
	608	0
	4	0
	3	0
	0	0

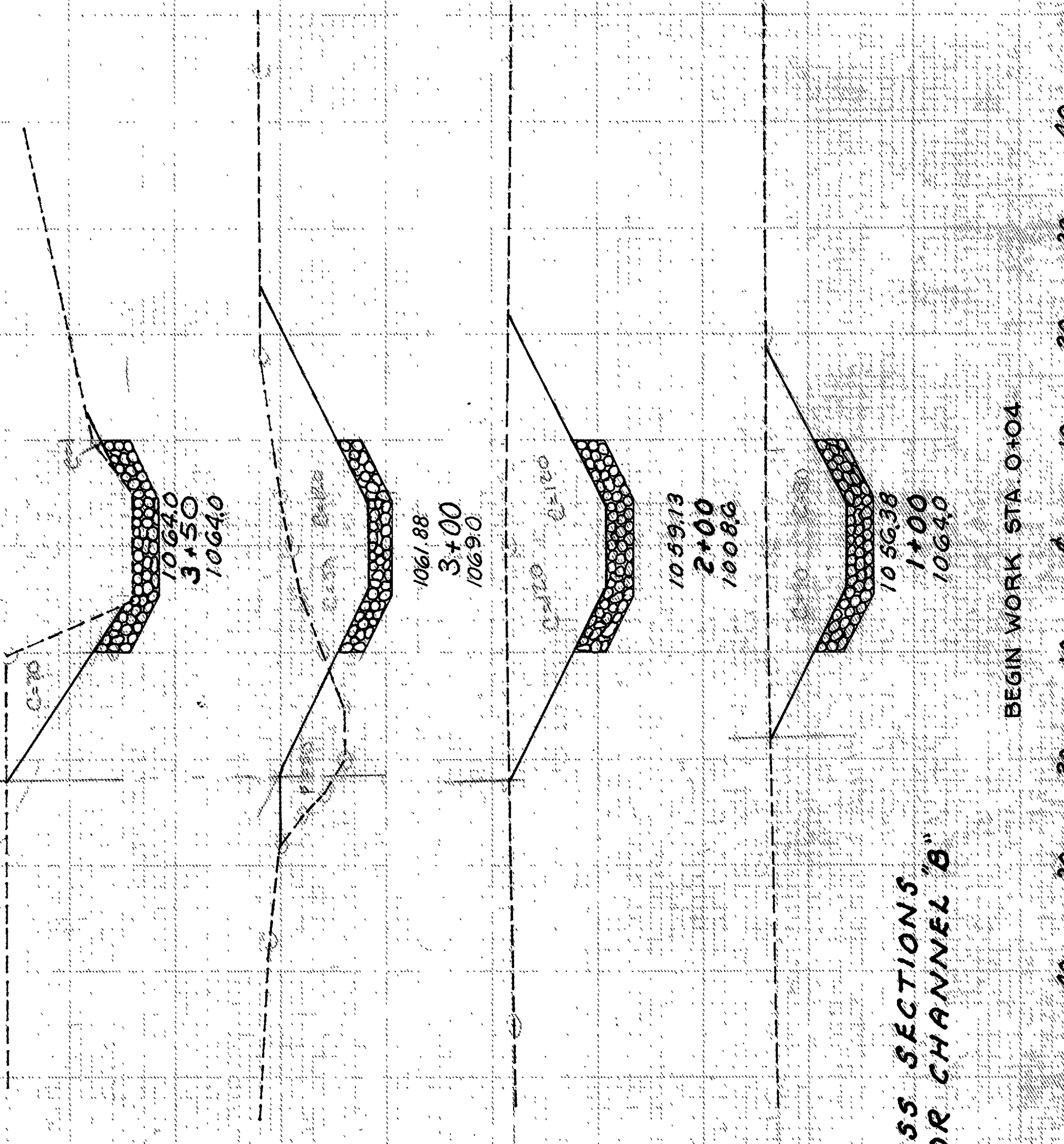
END WORK STA. 23+00



NOTE: X-SECTIONS FROM STA. 14+00 TO 16+00, CULVERT WORK ONLY

CROSS SECTIONS FOR CHANNEL "A"

END WORK STA. 3+77.21

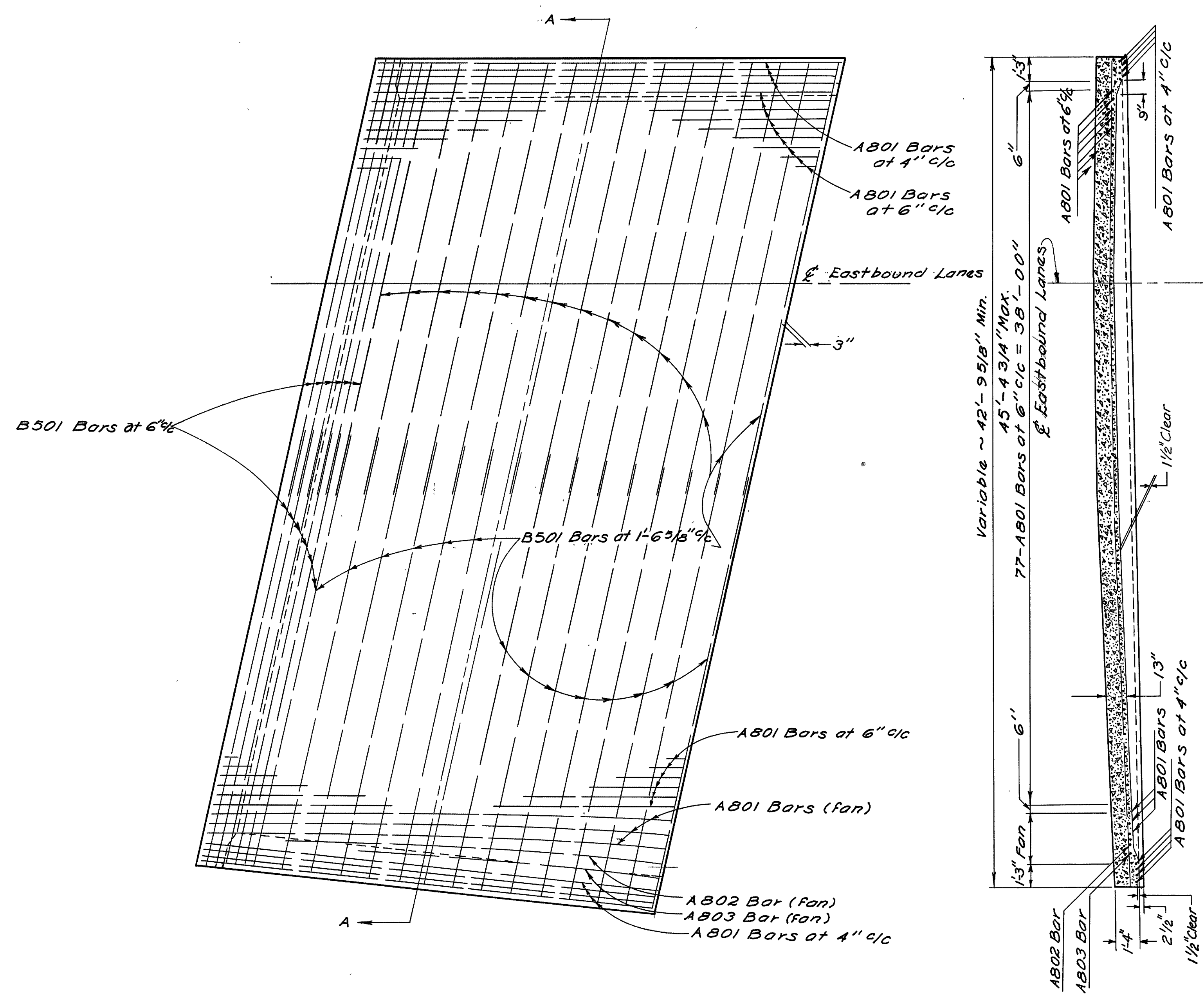


CROSS SECTIONS FOR CHANNEL "B"

STA	END AREA CU YDS	
	CUT	FILL
Sta. 3+77.21	0	0
	71	0
	170	50
	240	0
	759	93
	170	0
	42	0
	0	0
	225	0
	4	0
	0	0

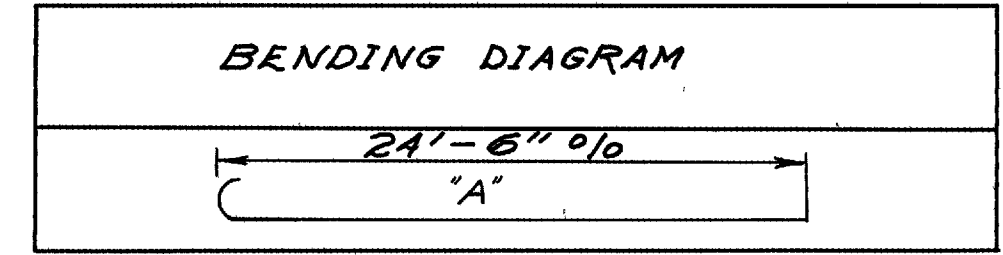
2 OHIO F-1072(A)
 1-71-4(24)178
 RIC-30-928
 ASD-30-000

RIC-30-9.28
ASD-30-0.00

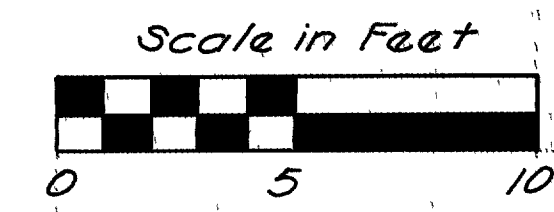


REINFORCING STEEL LIST FOR FORWARD APPROACH SLAB

MARK	NO.	LENGTH	WEIGHT	SHAPE
A801	88	25'-7"	Included with approach slab for payment	BENT
A802	1	20'-00"		STRAIGHT
A803	1	16'-00"		STRAIGHT
B501	40	23'-6"		STRAIGHT

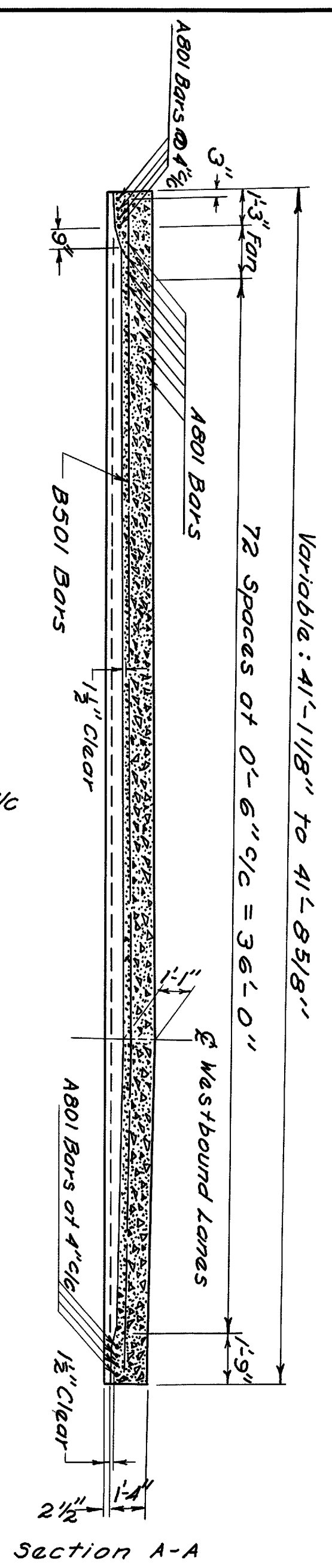
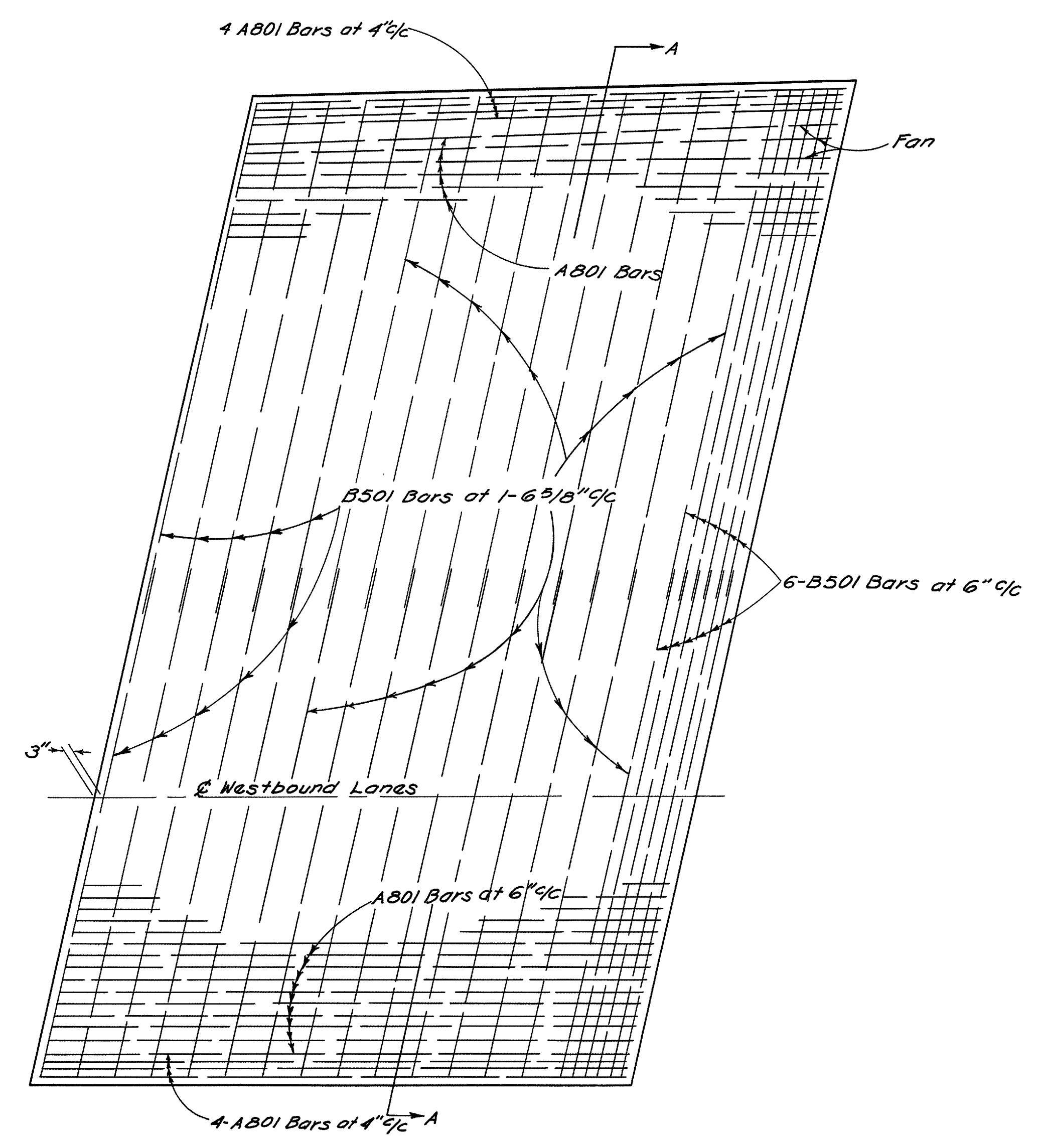


NOTES
For details not shown, see Standard Drawing AS-1-54

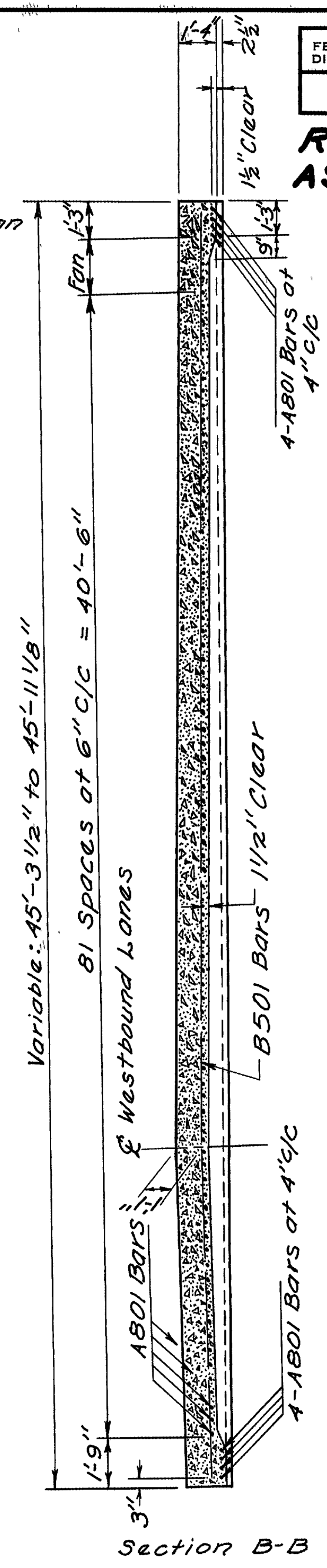
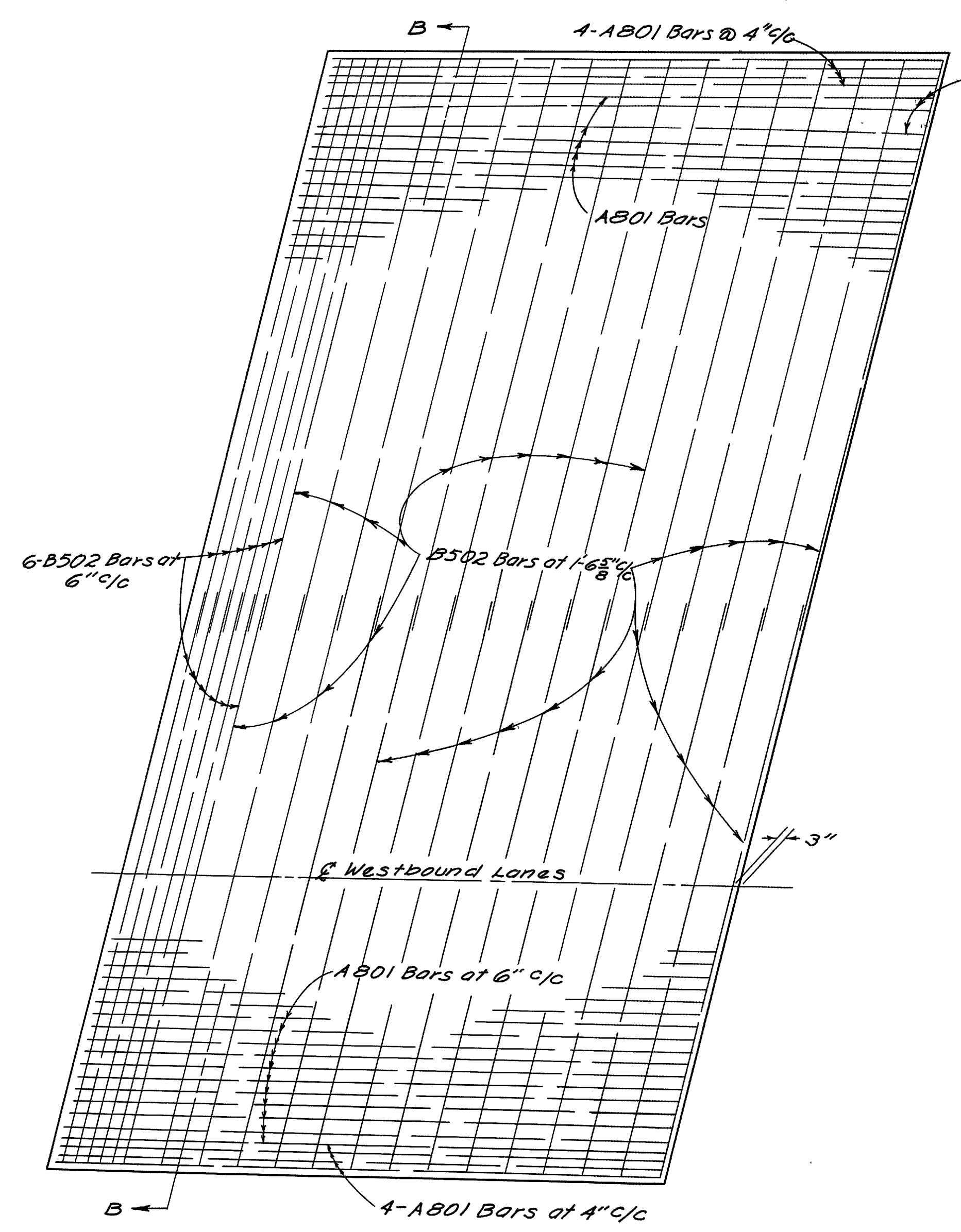


FORWARD APPROACH SLAB DETAIL

RIC-30-9.28
ASD-30-0.00



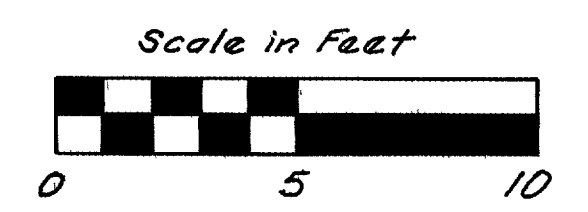
REAR APPROACH SLAB



FORWARD APPROACH SLAB

REINFORCING STEEL				
Mark	No.	Length	Shape	Bending Diagram
A801	177	25'-7"	Bent	
B501	40	21'-9"	Straight	
B502	40	23'-11"	Straight	

Notes:
For details not shown see Standard Drawing No. AS-1-54.
Weight of bars is included with approach slab for payment.



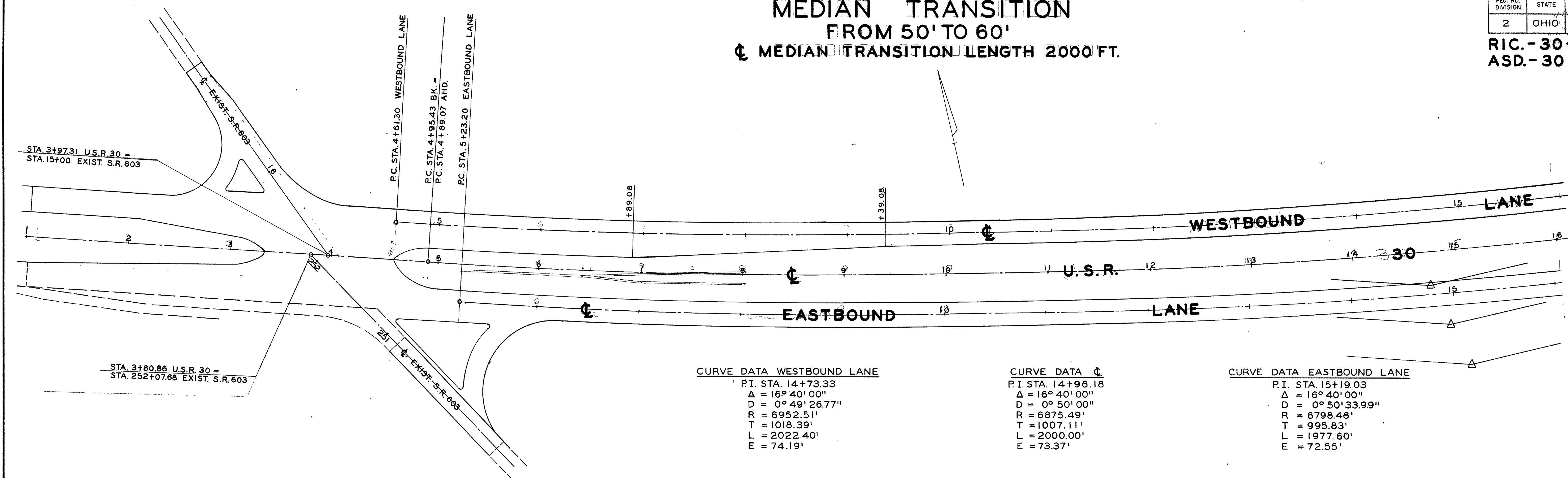
MEDIAN TRANSITION FROM 50' TO 60'

☉ MEDIAN TRANSITION LENGTH 2000 FT.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) T-71-4(24)178

235
325

RIC. - 30 - 9.28
ASD. - 30 - 0.00



CURVE DATA WESTBOUND LANE

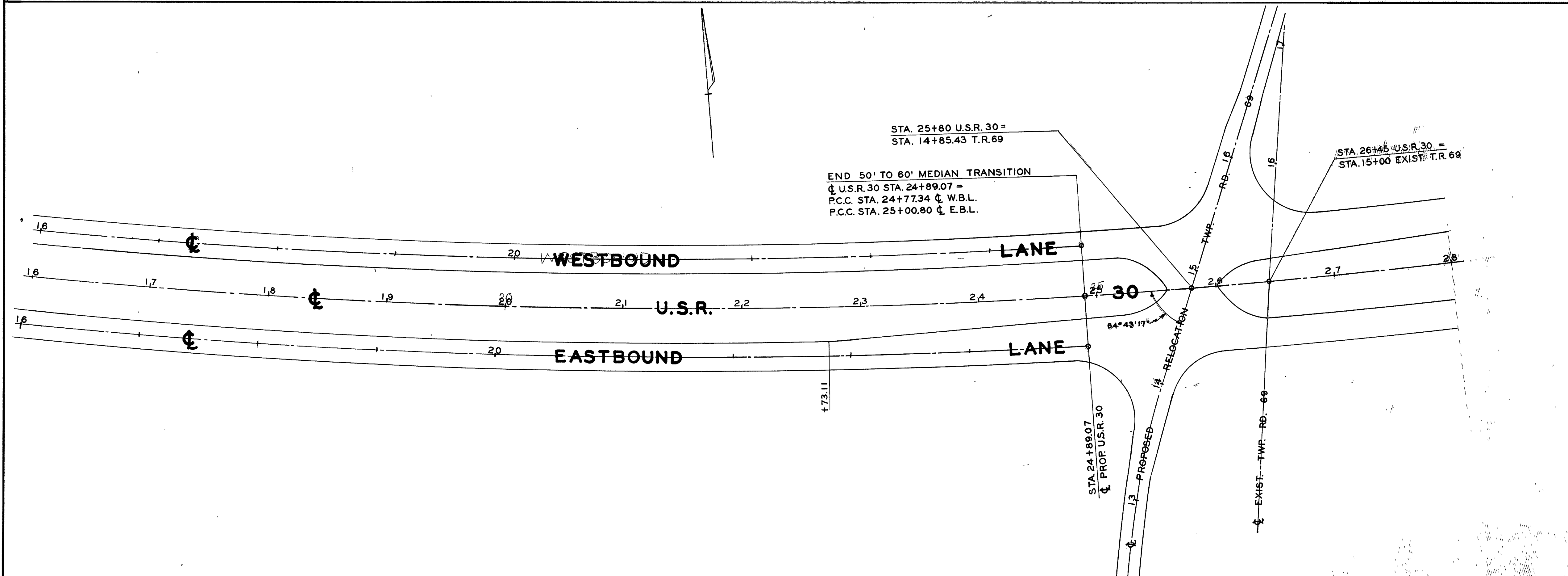
P.I. STA. 14+73.33
 $\Delta = 16^\circ 40' 00''$
 $D = 0^\circ 49' 26.77''$
 $R = 6952.51'$
 $T = 1018.39'$
 $L = 2022.40'$
 $E = 74.19'$

CURVE DATA ☉

P.I. STA. 14+96.18
 $\Delta = 16^\circ 40' 00''$
 $D = 0^\circ 50' 00''$
 $R = 6875.49'$
 $T = 1007.11'$
 $L = 2000.00'$
 $E = 73.37'$

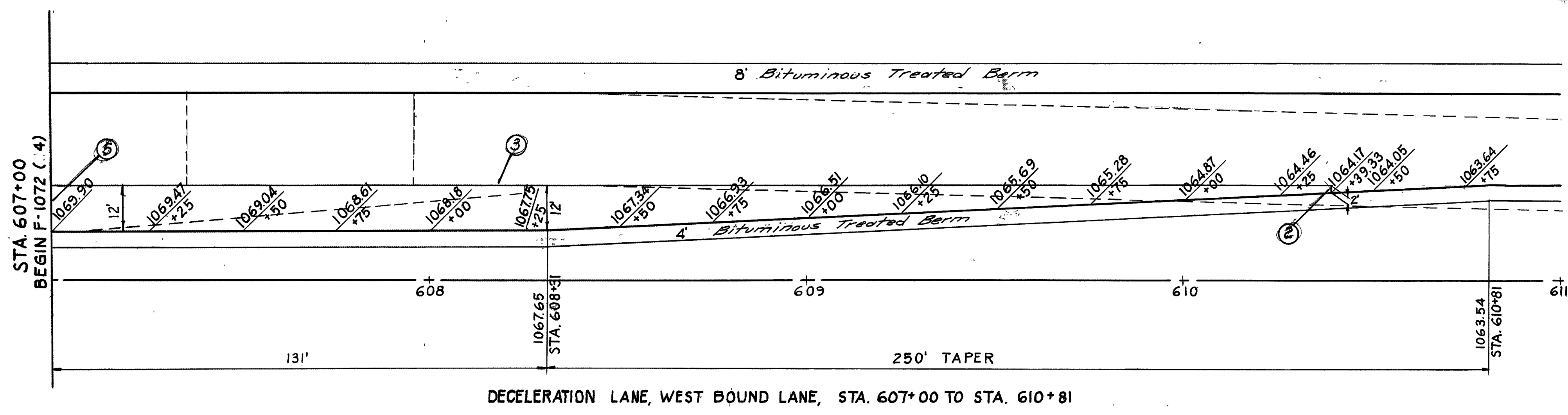
CURVE DATA EASTBOUND LANE

P.I. STA. 15+19.03
 $\Delta = 16^\circ 40' 00''$
 $D = 0^\circ 50' 33.99''$
 $R = 6798.48'$
 $T = 995.83'$
 $L = 1977.60'$
 $E = 72.55'$



DIST. TO LT. EDGE	INCREASE IN DIST.	STATION	INCREASE IN DIST.	DIST. TO RT. EDGE
25.00'	0.00'	4+81.30	0.00'	25.00'
25.02'	0.02'	4+82.84	"	"
		☉ P.C.		
25.09'	0.09'	4+95.43 BK.	"	"
25.09'	0.09'	4+89.07 AH.	"	"
25.11'	0.11'	5+00.00	"	"
25.18'	0.18'	5+23.20	"	"
25.33'	0.33'	5+89.67	0.17'	25.17'
25.36'	0.36'	6+00.00	0.20'	25.20'
25.59'	0.59'	6+89.08	0.44'	25.44'
25.60'	0.60'	7+00.00	0.45'	25.45'
25.85'	0.85'	8+00.00	0.70'	25.70'
26.09'	1.09'	9+00.00	0.96'	25.96'
26.21'	1.21'	9+39.08	1.07'	26.07'
26.34'	1.34'	10+00.00	1.21'	26.21'
26.58'	1.58'	11+00.00	1.47'	26.47'
26.83'	1.83'	12+00.00	1.72'	26.72'
27.08'	2.08'	13+00.00	1.98'	26.98'
27.32'	2.32'	14+00.00	2.23'	27.23'
27.57'	2.57'	15+00.00	2.48'	27.48'
27.81'	2.81'	16+00.00	2.74'	27.74'
28.06'	3.06'	17+00.00	2.99'	27.99'
28.31'	3.31'	18+00.00	3.25'	28.25'
28.55'	3.55'	19+00.00	3.50'	28.50'
28.80'	3.80'	20+00.00	3.76'	28.76'
29.04'	4.04'	21+00.00	4.01'	29.01'
29.29'	4.29'	22+00.00	4.28'	29.28'
29.35'	4.35'	22+73.11	4.35'	29.35'
29.54'	4.54'	23+00.00	4.52'	29.52'
29.78'	4.78'	24+00.00	4.77'	29.77'
30.00'	5.00'	24+89.07	5.00'	30.00'

RIC-30-9.28
ASD-30-0.00



- JOINT LEGEND**
- ② Expansion Joint without Dowels
 - ③ Standard Key Joint without Tie Bars
 - ⑤ Standard Expansion Bolt Joint, 12" Centers.

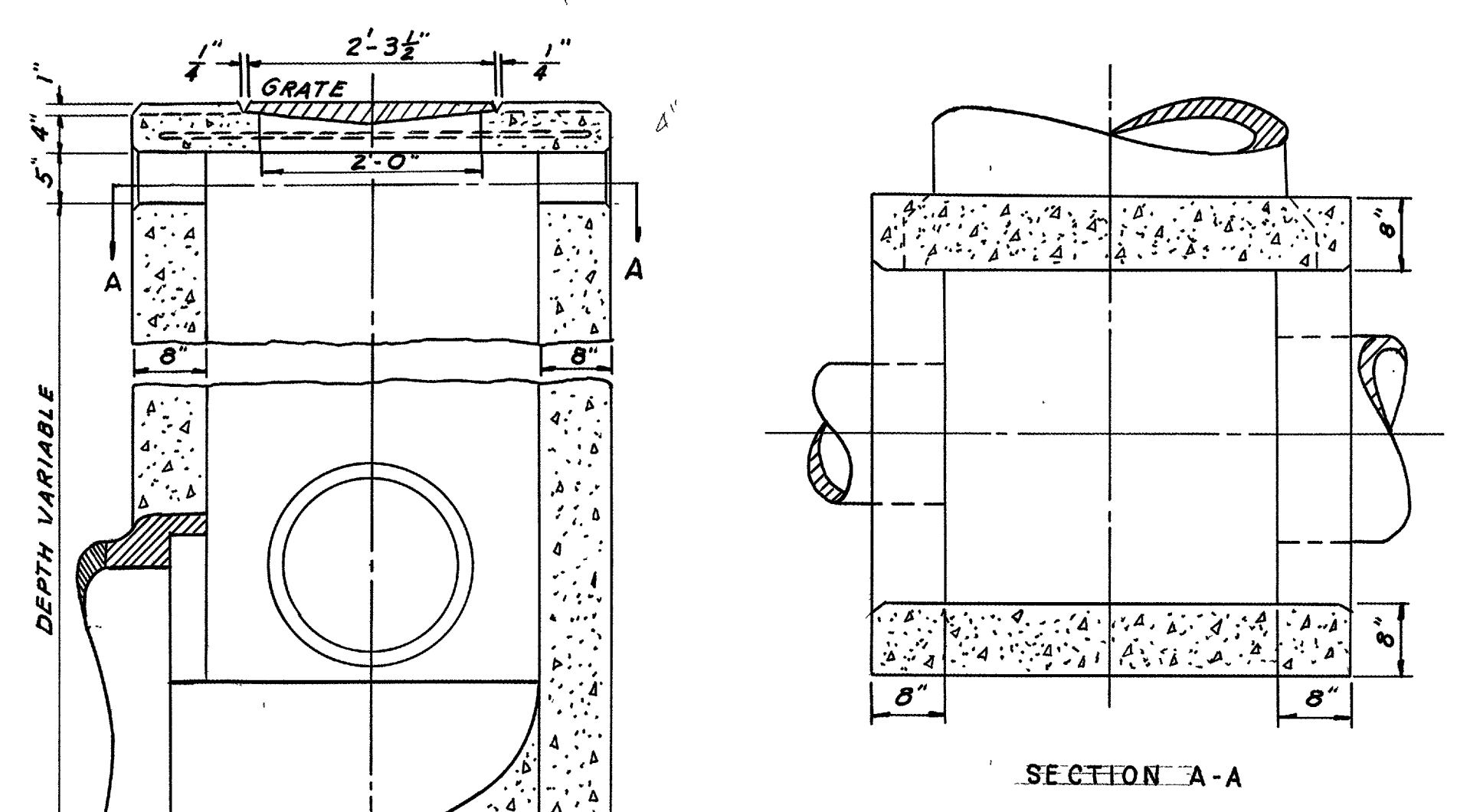
ESTIMATED QUANTITY

T-71 9" Reinf. PC. Concrete Pavement *341,33 Sq. Yds.
*Carried to Calculation Sheet No. 11

I-22 Subbase Grading "A" or "B", as per plan = *61.52 cu. Yds.

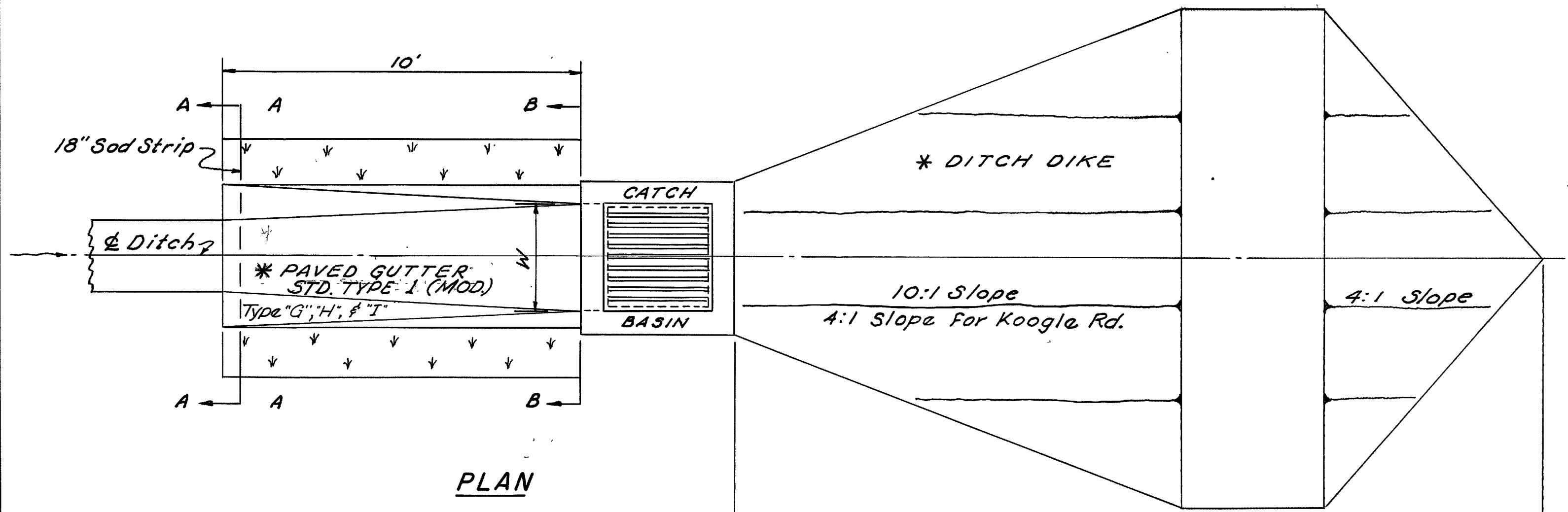
DECELERATION LANE, WEST BOUND LANE, STA. 607+00 TO STA. 610+81

I-8 CATCH BASIN 2-3 & 2-4 (MODIFIED)*

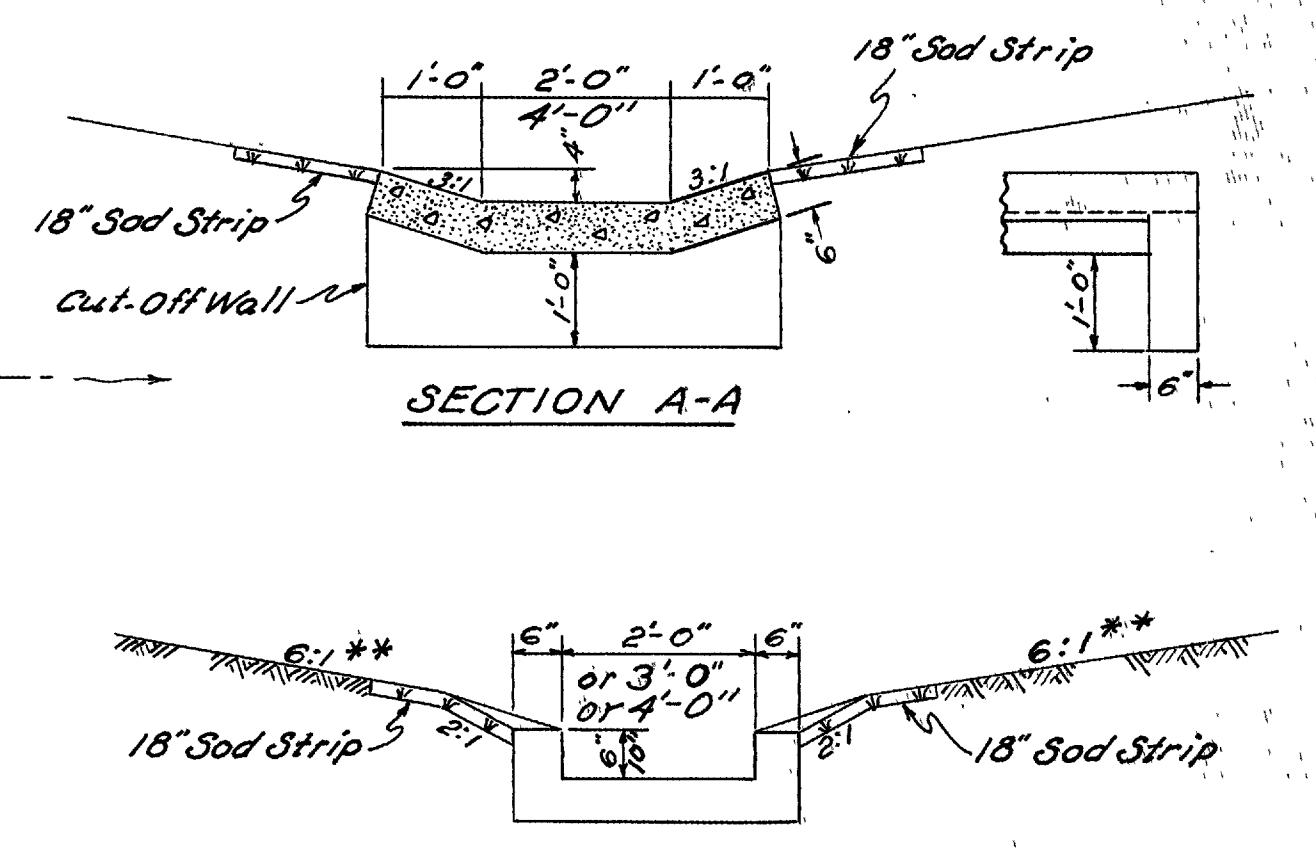


*** NOTE:**
The modifications consist of widening the side inlet to the full width of the Catch Basin and making the depth of the inlet 5' instead of 9", also, omitting the 1/2" iron bars in the inlet. Refer to Std. Drawing I-8 Catch Basin No. 2-3 & 2-4 For other details.

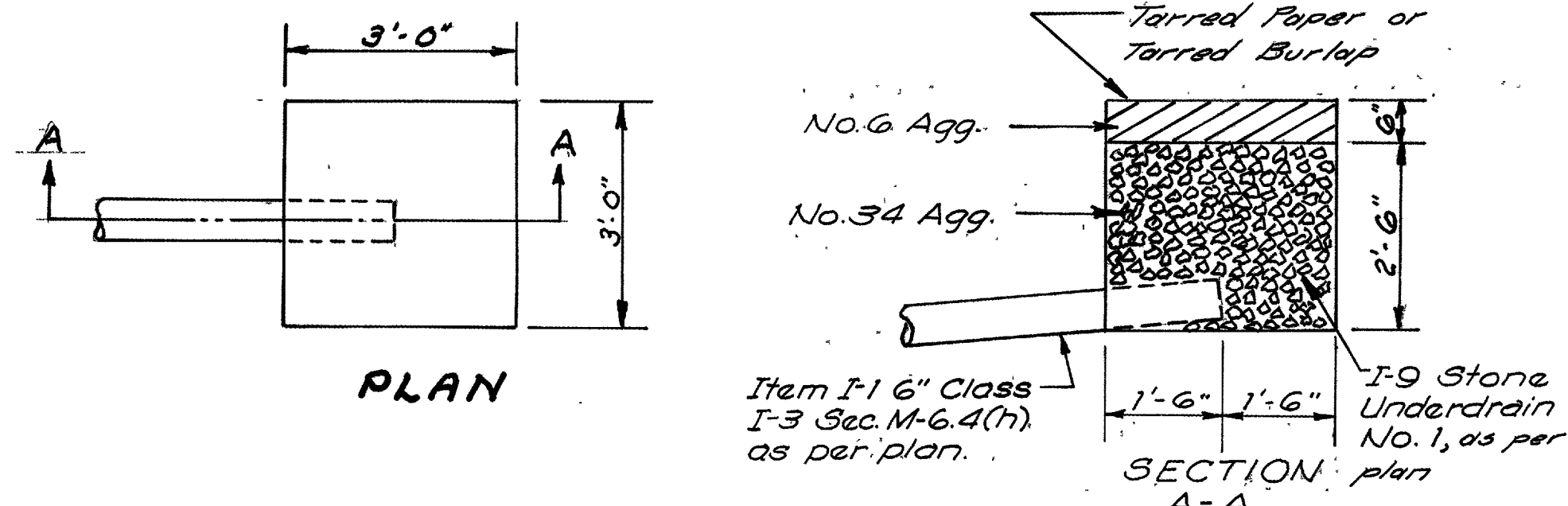
W
Type "G" 2' for #2-2-A C.B.
Type "H" 3' for #3 C.B.
Type "I" 4' for #4 C.B.



PLAN



SECTION B-B



PLAN

SECTION A-A

No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sides with tarred paper or tarred burlap.

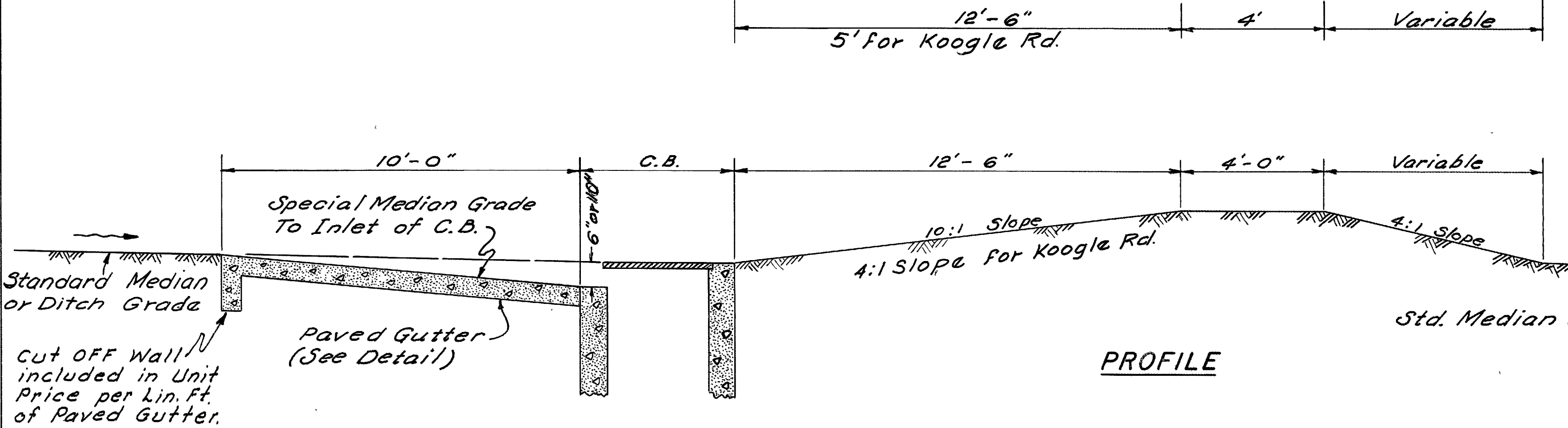
Aggregates, Bituminous Material and necessary excavation for Spring Drains shall be paid for at the unit price bid per Lin. Ft. of Item I-9 Stone Underdrains No. 1, as per plan. Spring Drains will be placed at locations designated by the Engineer.

The Class I-3 Pipe for Spring Drainage shall be covered with Class 3 Porous Backfill Material to a height of one (1) foot above the top of the pipe. The remainder of the backfill for this item shall meet the specification requirements for Type B Backfill.

Estimated Quantities of 15 Lin. Ft. of I-9 Stone Underdrains No. 1, as per plan, and 250 Lin. Ft. of "G" Pipe, Sec. M-6.4 (n), Class I-3, as per plan, are carried in the General Notes for draining springs. This item shall be non-performed in the event that none are encountered.

Payment shall be based on final measurement.

DETAIL SECTION SPRING DRAIN



PROFILE

*** Paved Gutter**
This paved gutter is to be used on the Std. No. 2-2A & Std. No. 2-3 & 2-4 (Mod) Catch Basins. Day Item is I-14, Paved Gutter, Std. Type 1 (Modified) as per plan.

*** Median or Roadway Ditch Dike**
This dike is to be placed on the downstream side of the above C.B.'s. However, if inlets are placed on each side of the catch basin, the dike will not be required. The cost of the dike is to be included in the unit price bid for Roadway Excavation.

**** Slope**
Unless otherwise shown.

MEDIAN & ROADWAY DITCH DIKE AND PAVED GUTTER DETAILS

TYPICAL APPROACH SLAB EROSION CONTROL

RIC.-30-9.28
ASD.-30-0.00

SPECIAL BERM AND SLOPE PROTECTION

Prior to placement of sod on the berm and slope, galvanized poultry fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes at four foot intervals, and alternated in rows four feet apart.

Stakes shall be 1"x1"x8" wood stakes and shall be perpendicular to the ground and flush with the top of the sod.

The fence shall be Straight Line Poultry Fence or equivalent with strand width of four feet having a two inch mesh and all wires No. 20 Gauge.

The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings.

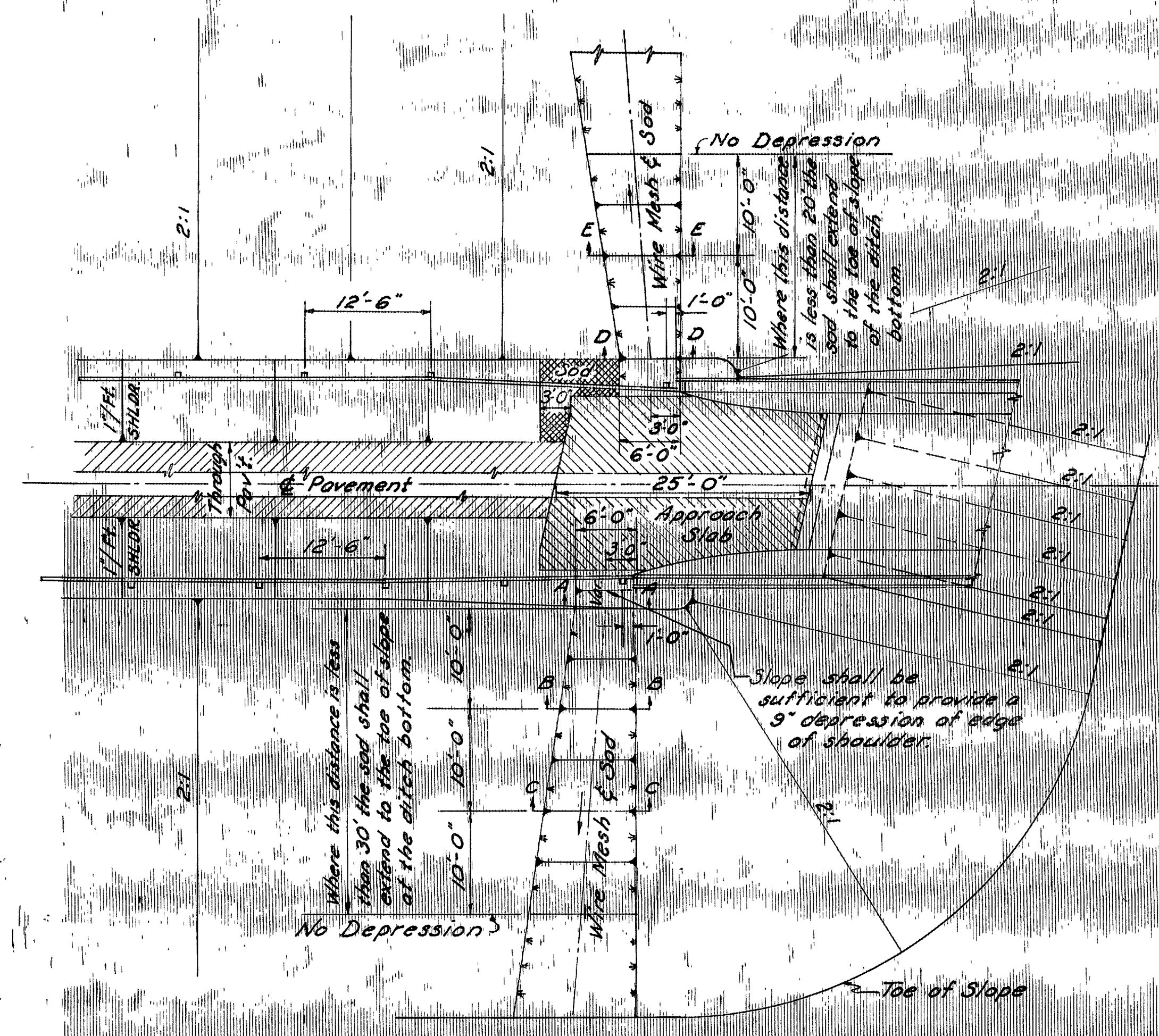
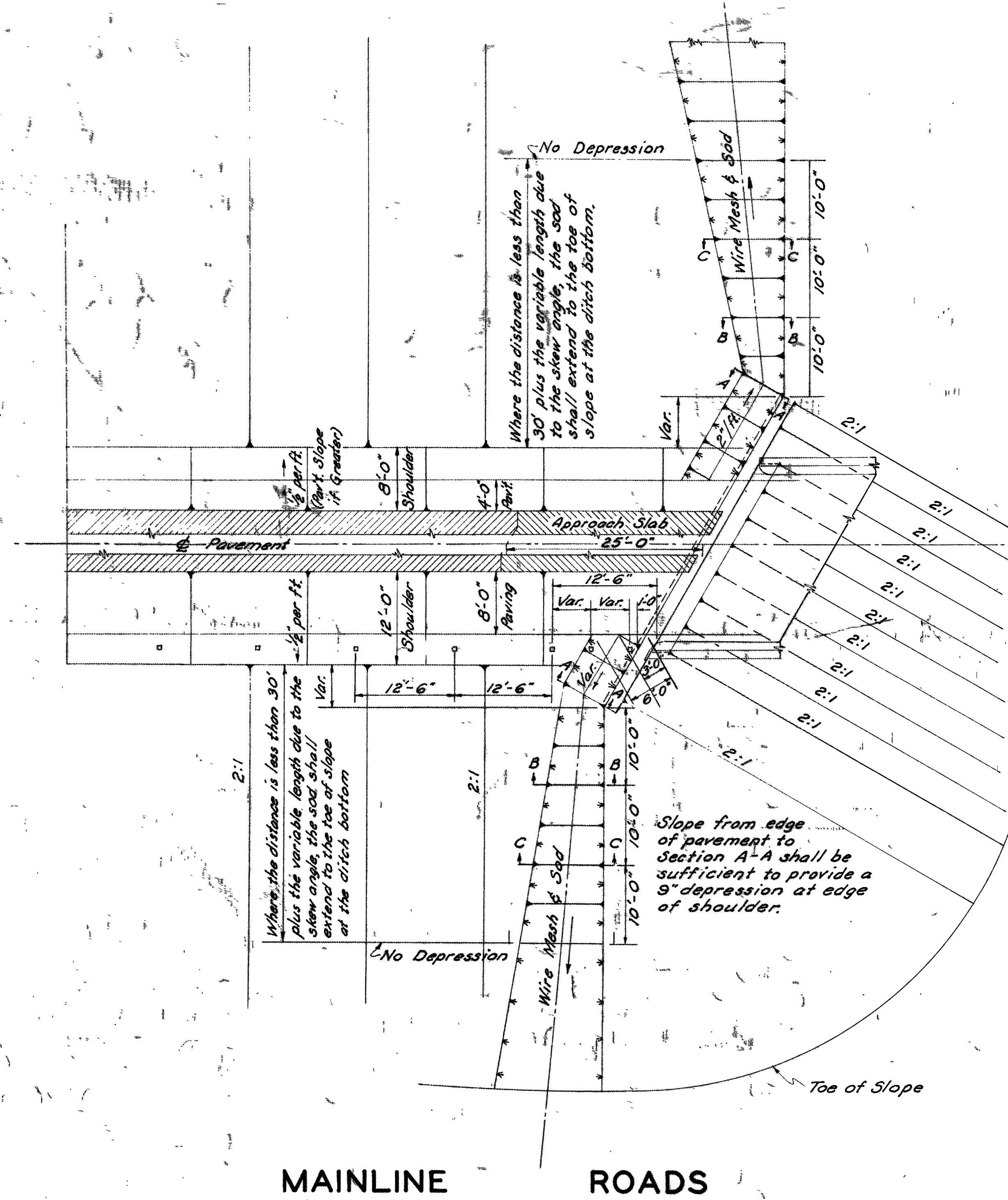
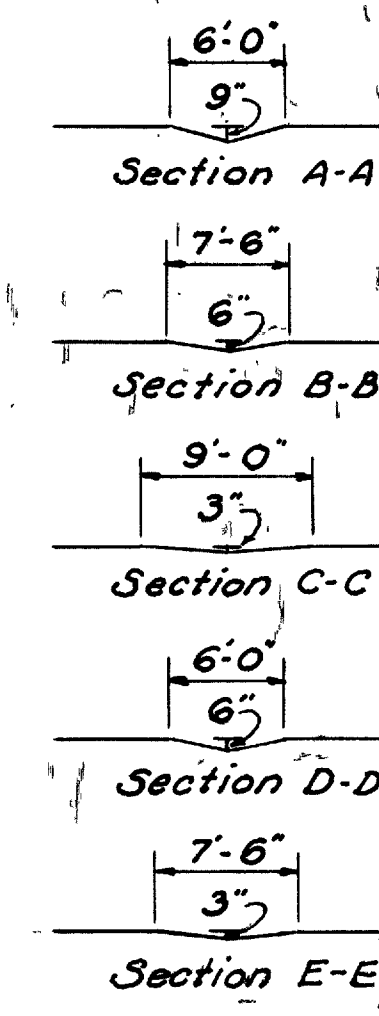
The fence shall be secured to the wood stakes by metal staples.

Sod shall be laid in accordance with Construction and Materials Specifications Section L-10.07

This item is required only where rate of side slope is steeper than 6 to 1.

Payment for all the above shall be included in the unit price bid for Item L-10 Sodding for Special Berm and Slope Protection.

STATION	DISTANCE	SQ. YDS. SOD
0+82.5	60.5' LT.	47
51+56.0	69.0' RT.	99
52+75.5	71.5' LT.	112
151+13.0	71.0' RT.	110
151+35.0	71.0' LT.	175
615+14.0	79.0' RT.	33
615+50.0	79.0' LT.	23
	TOTAL	599

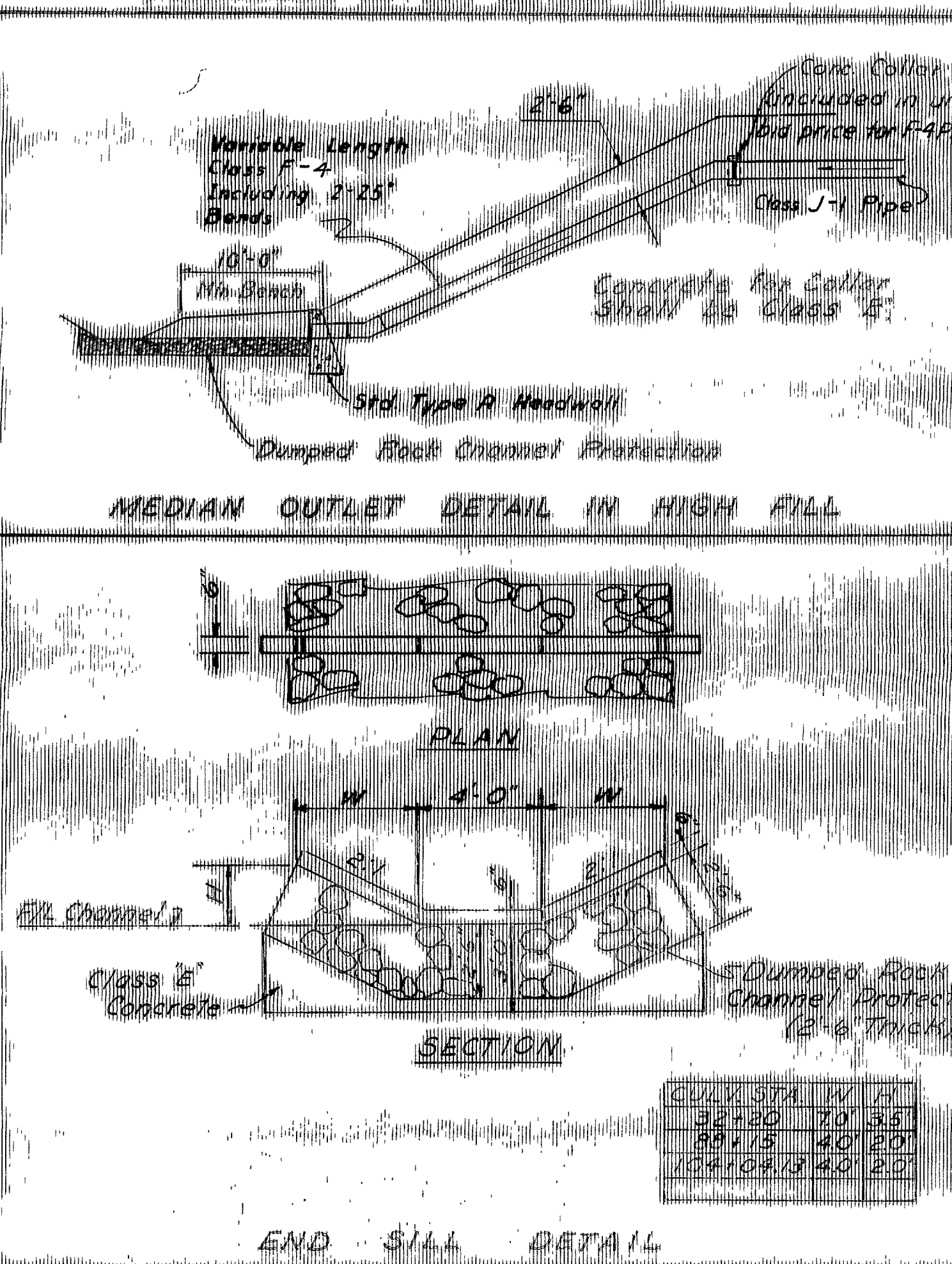
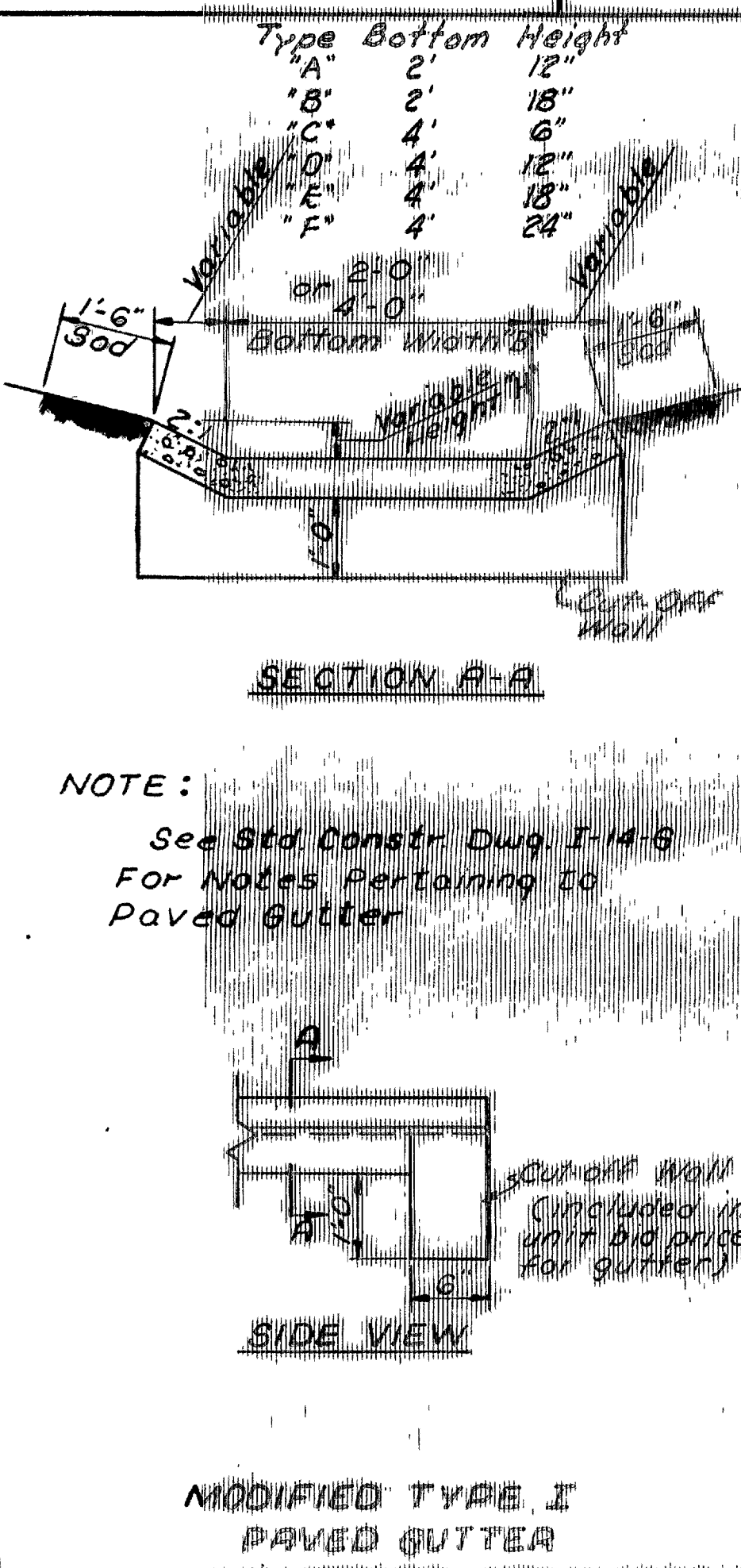
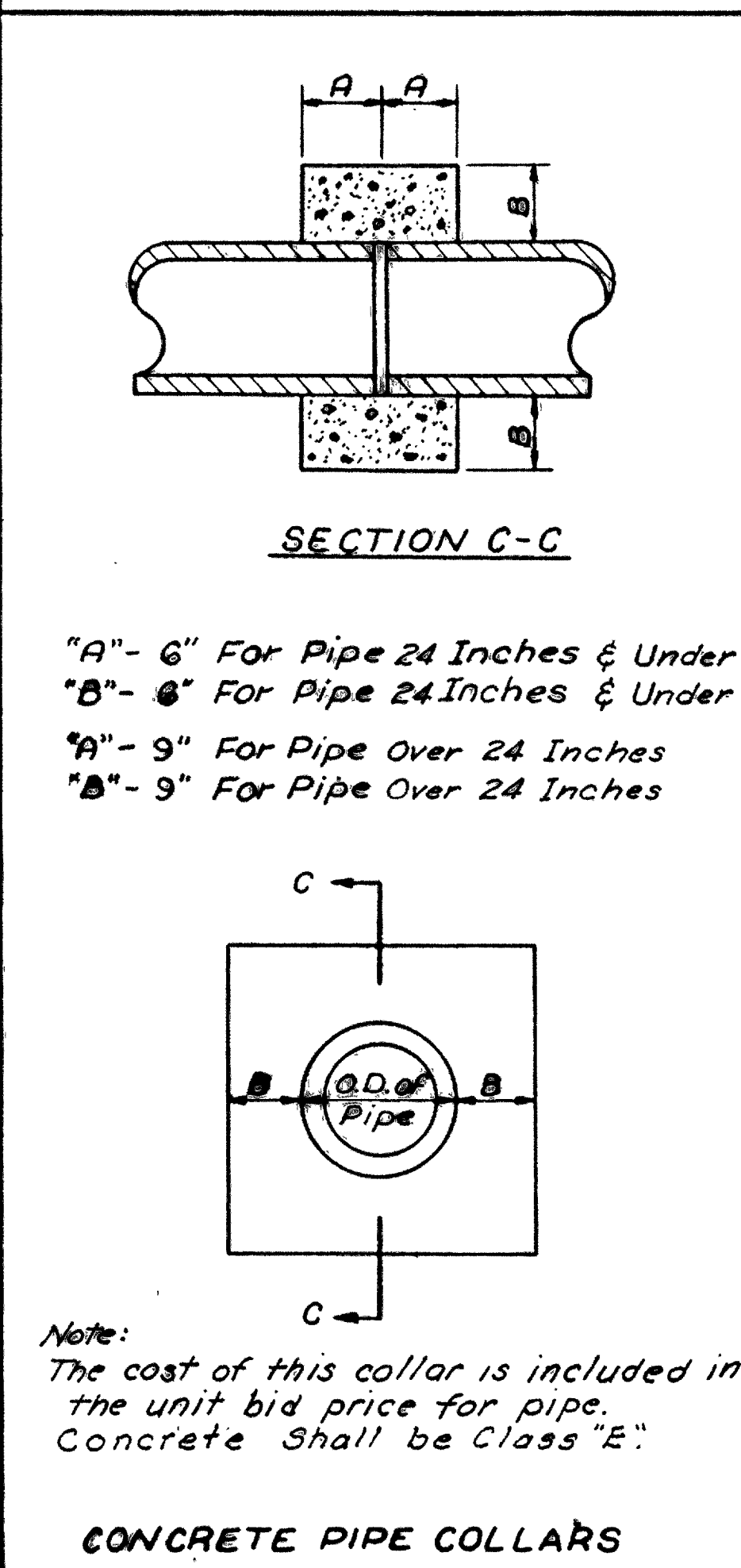
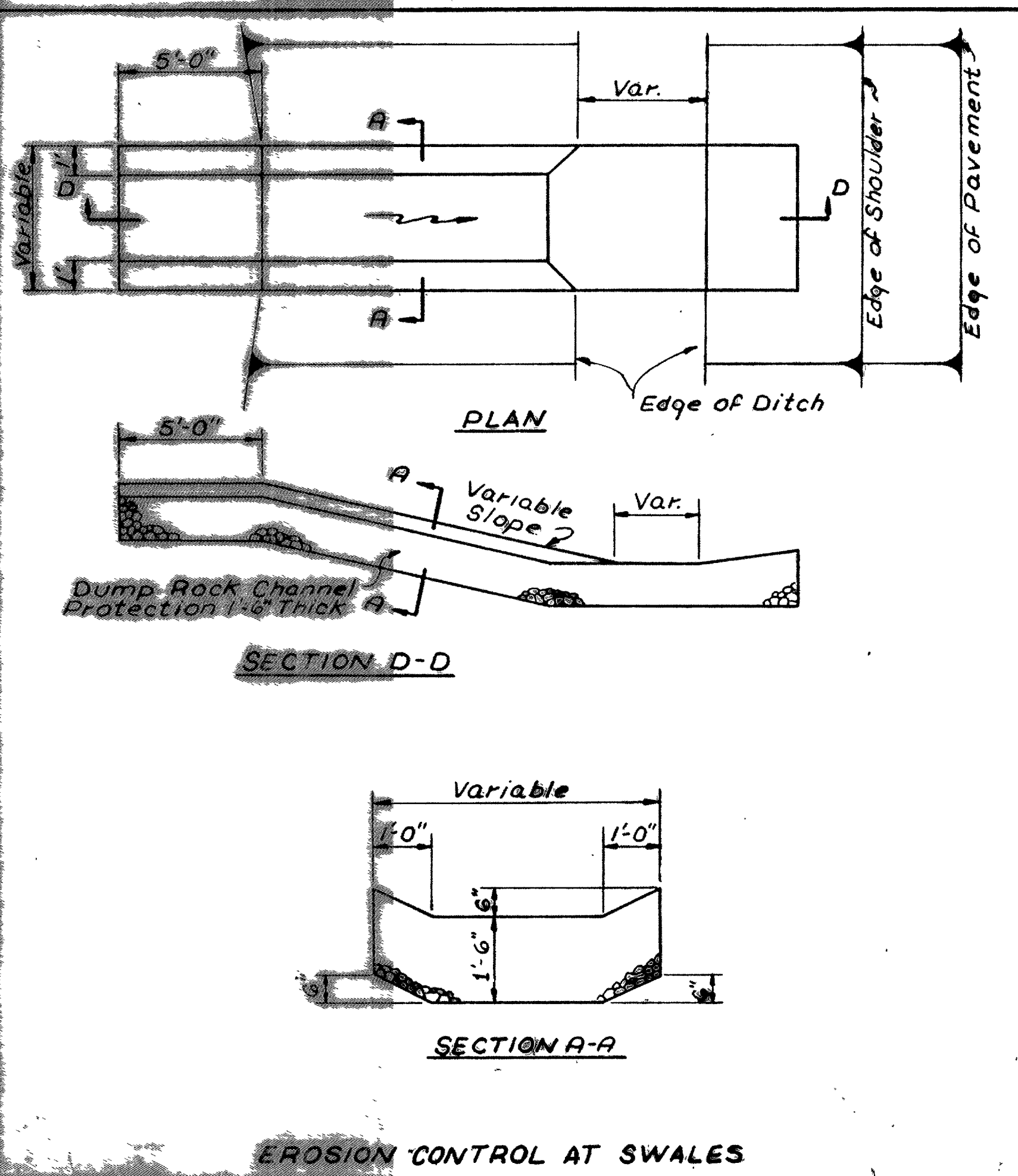
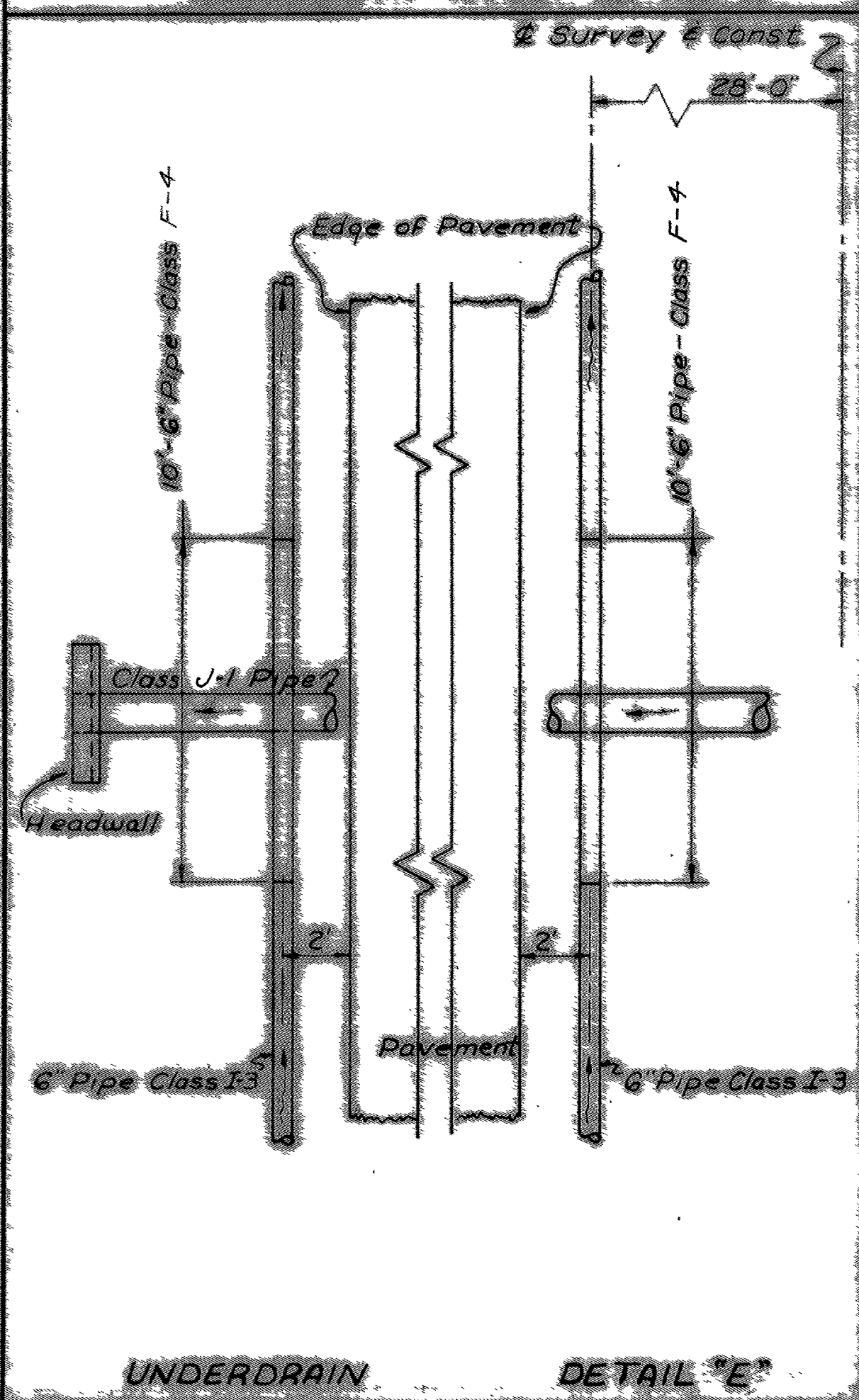
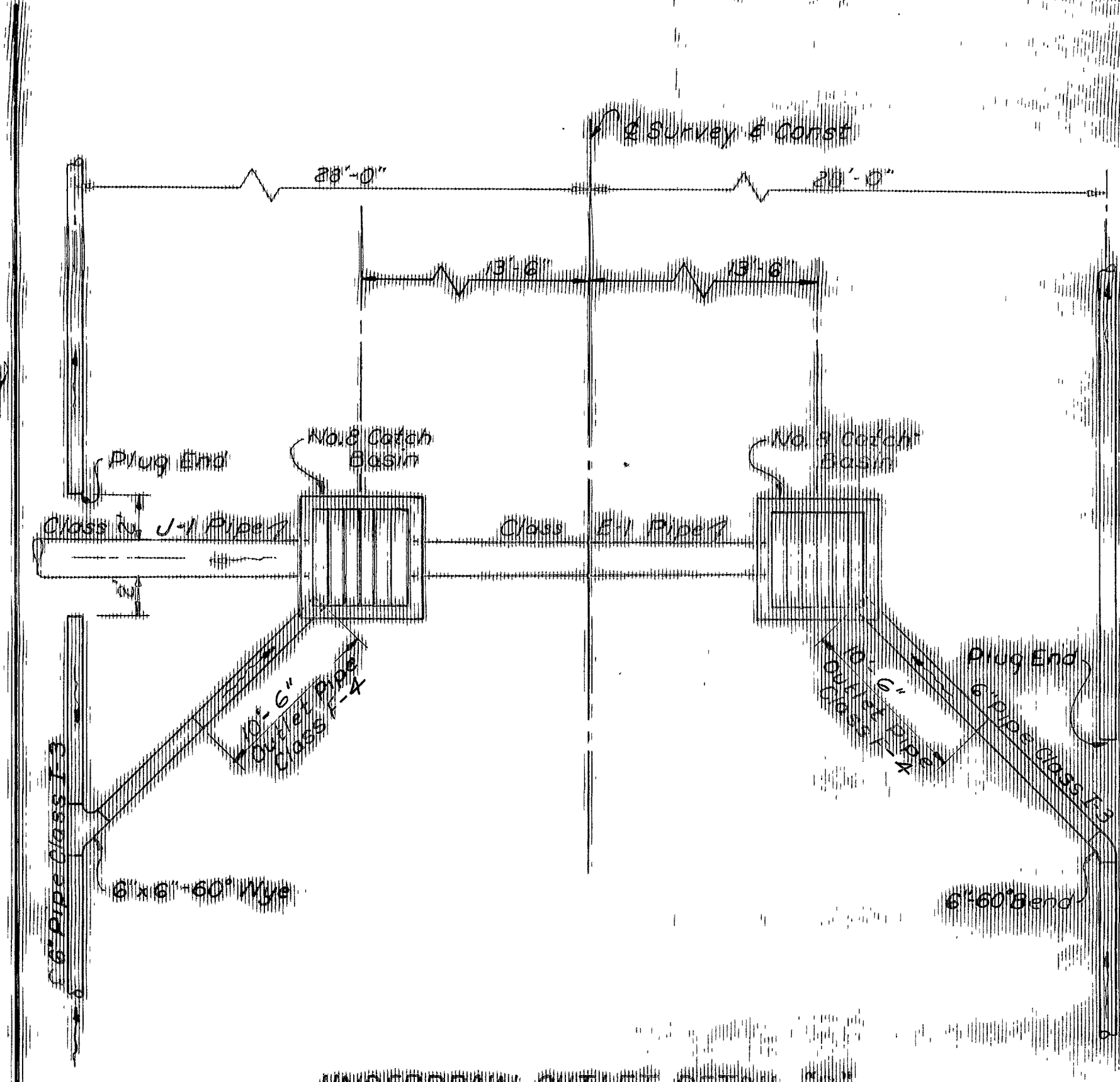
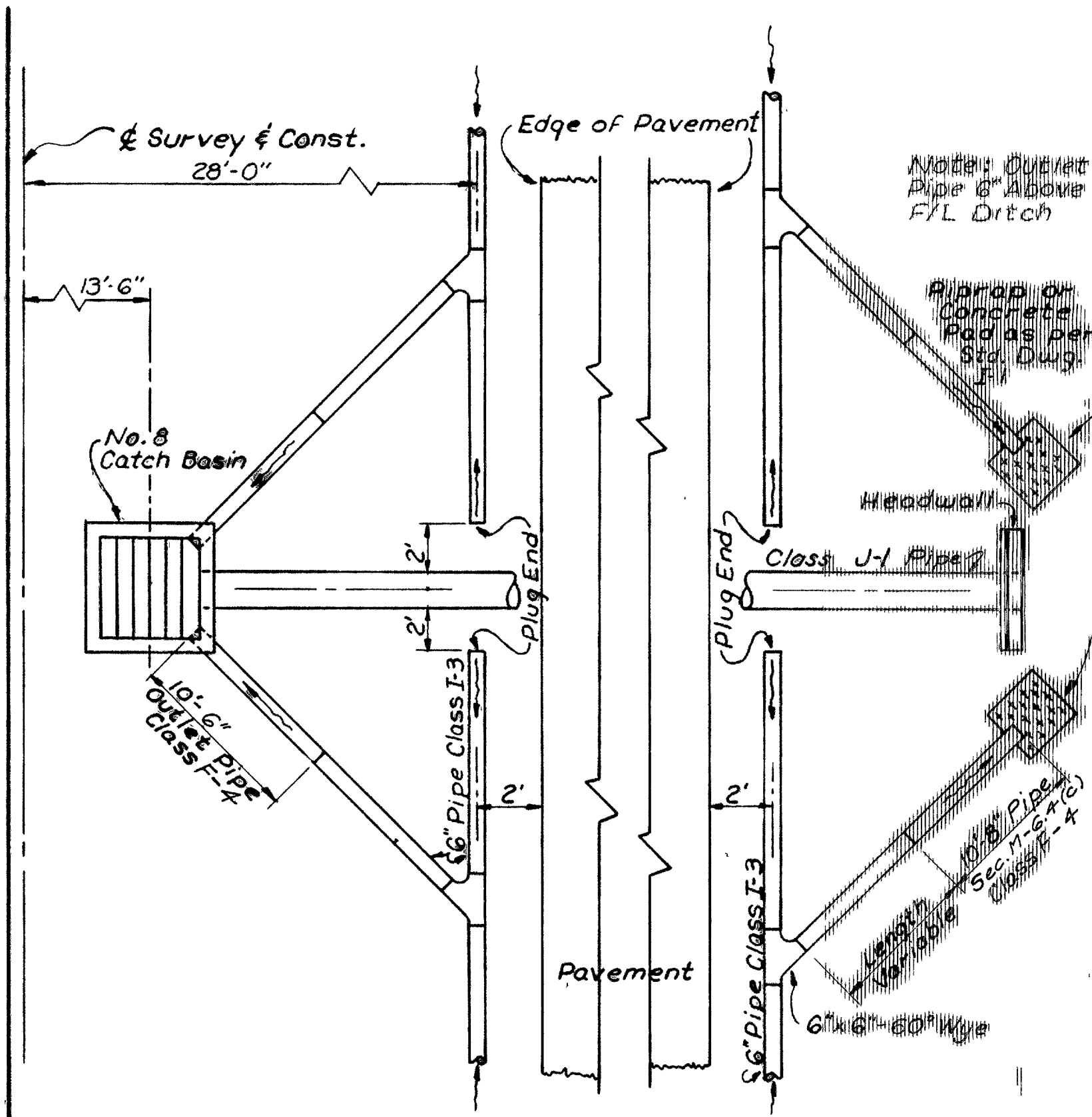
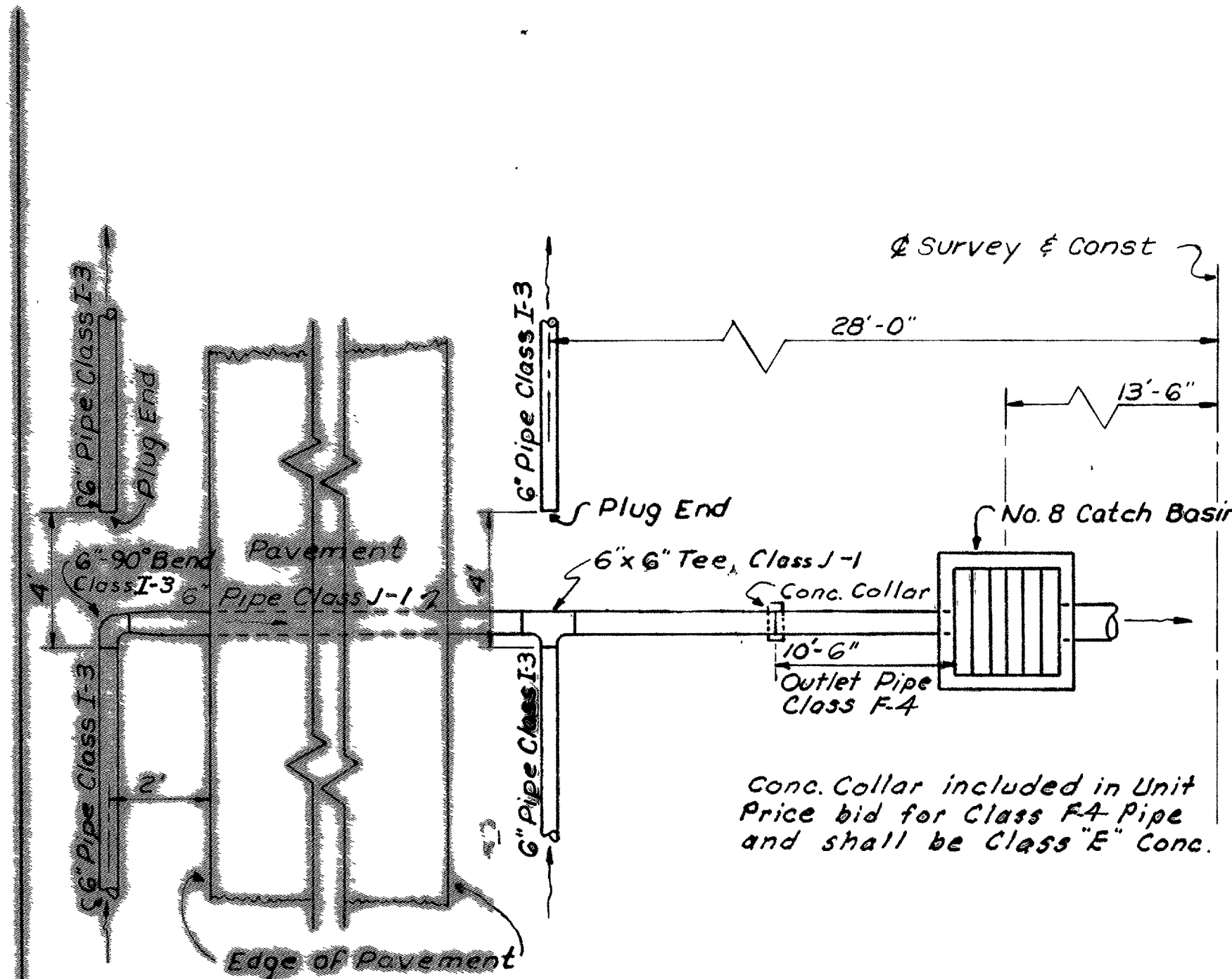
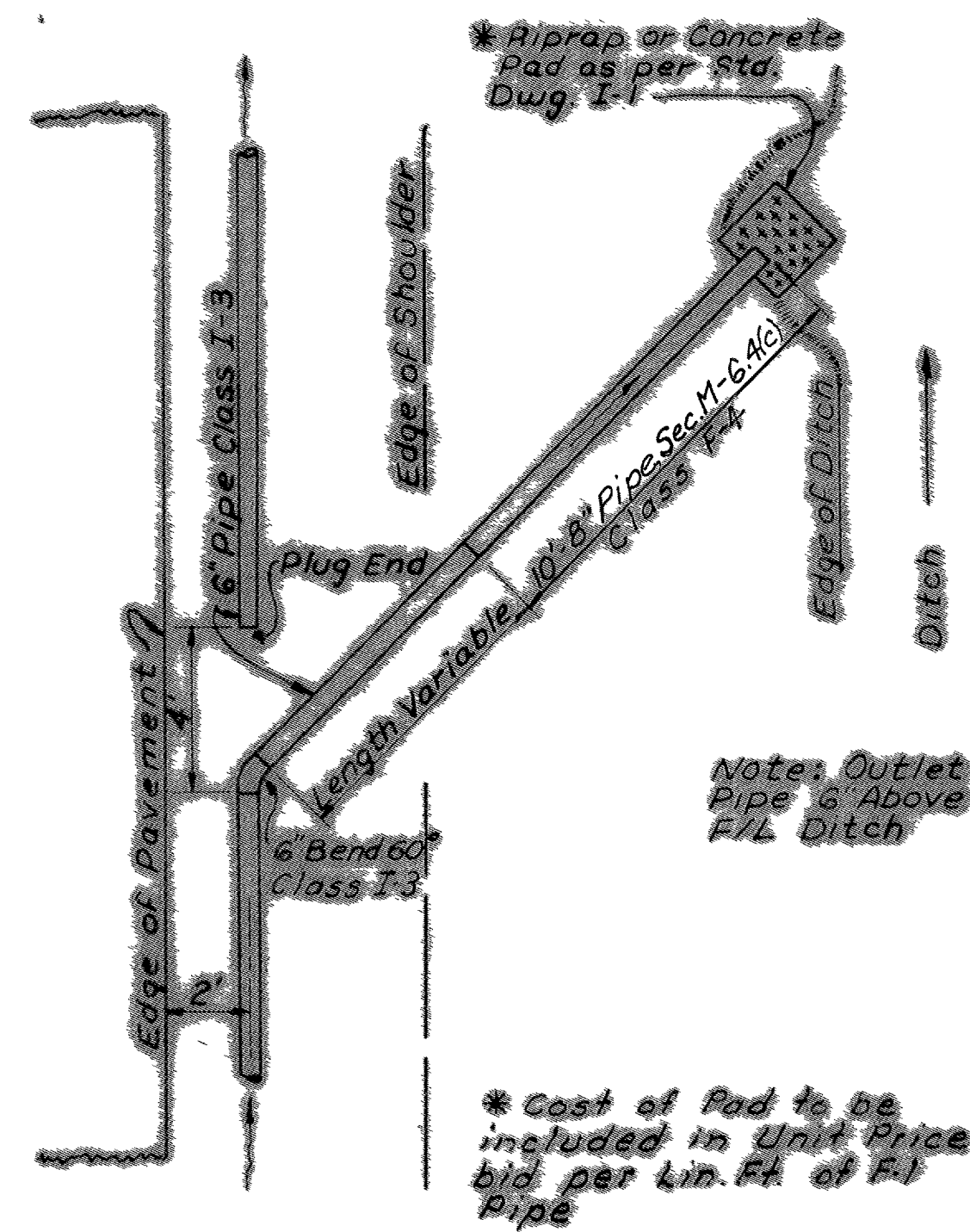


SPECIAL CONSTRUCTION DETAILS

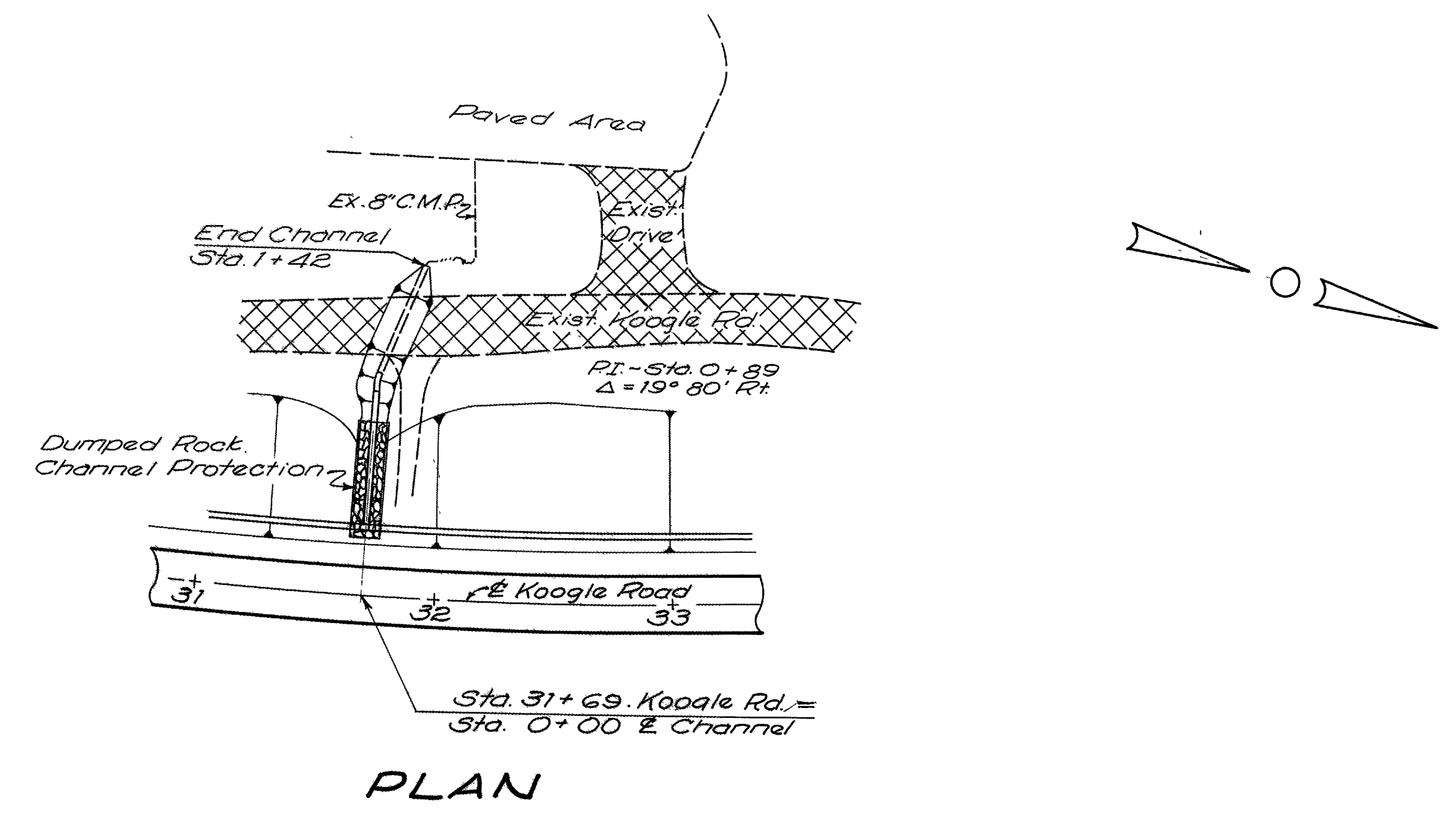
2	OHIO	F-1072(4) I-71-4(24)178
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237
325

RIC-30-9.28
ASD-30-0.00

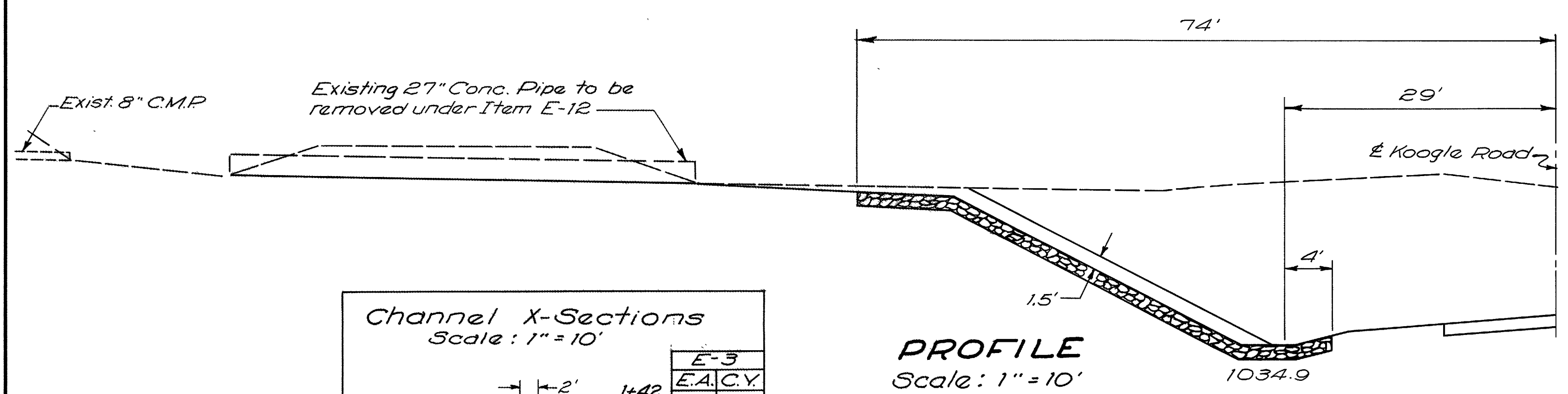


RIC - 30 - 9.28
ASD - 30 - 0.00



PLAN

ESTIMATED QUANTITIES
 E-3 Channel Excavation 90 Cu. Yds.
 I-10 Dumped Rock Chan Prot. 37 Cu. Yds.
 E-12 Pipe Removed, Over 15" 48 Lin. Ft.
 NOTE: Quantities carried on Sheet No. 172

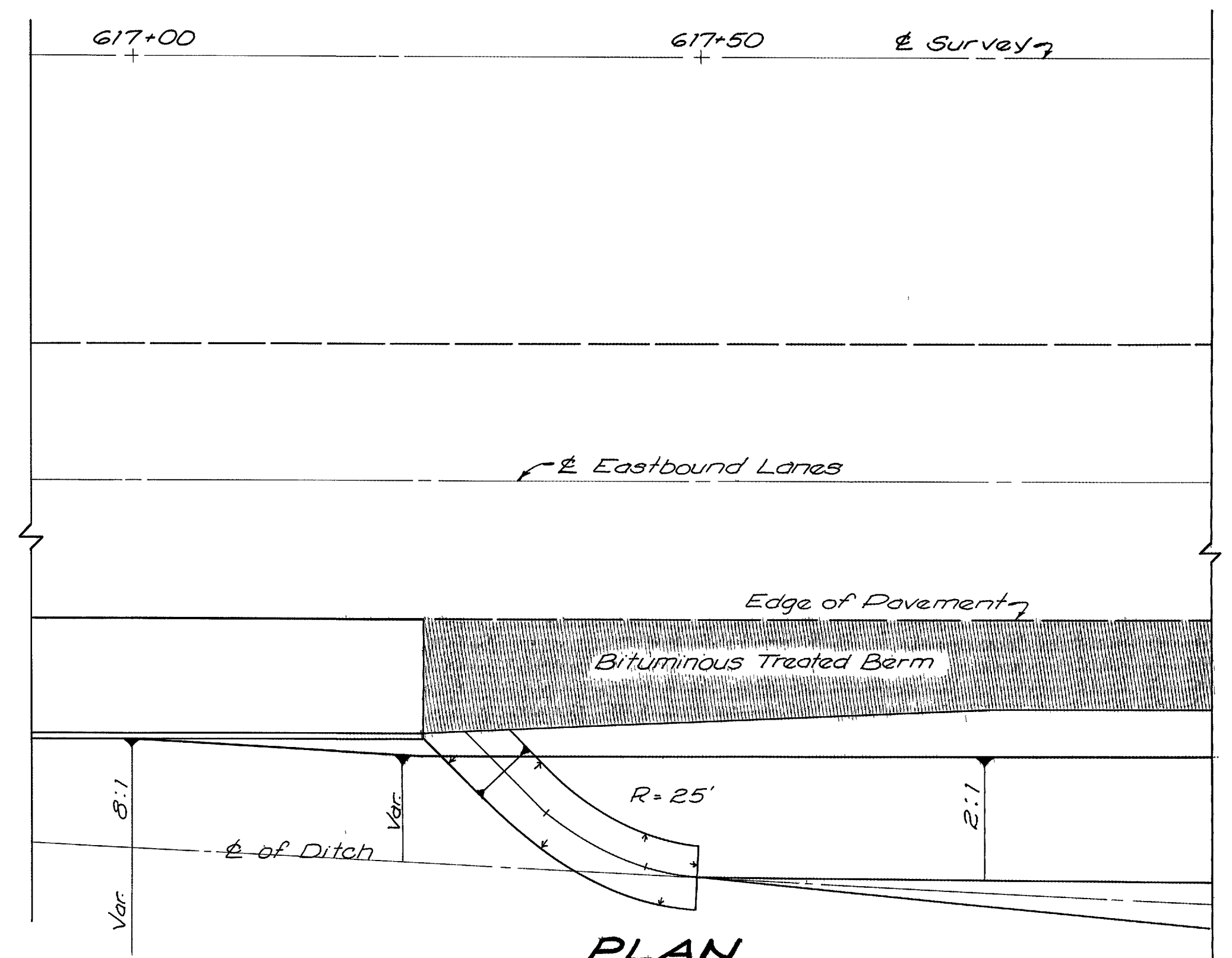


PROFILE
Scale: 1" = 10'

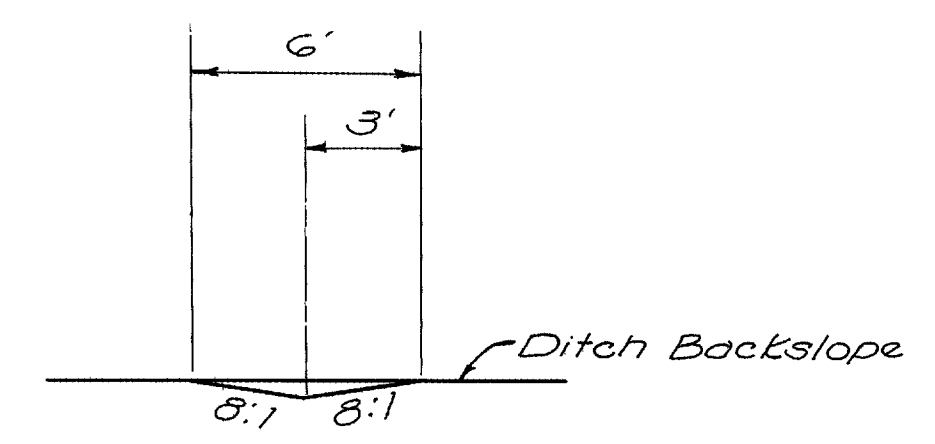
Channel X-Sections
Scale: 1" = 10'

Station	Top Elevation	Bottom Elevation	Channel Depth	Channel Width	Channel Slope	Channel Protection	Quantity
1+42	1052.80	1056.0	3.2	12'	2:1	None	5
1+32	1052.40	1056.0	3.6	12'	2:1	None	29
1+03	1052.35	1052.4	0.05	12'	2:1	None	8
0+92	1050.60	1053.0	2.4	12'	2:1	None	5
0+65	1050.60	1053.0	2.4	12'	2:1	None	19
0+34	1050.60	1053.0	2.4	12'	2:1	None	32
0+30	1050.60	1053.0	2.4	12'	2:1	None	25
0+34	1050.60	1053.0	2.4	12'	2:1	None	12
0+34	1050.60	1053.0	2.4	12'	2:1	None	1
TOTAL							90

CHANNEL DETAIL
Sta. 31+69 KOOGLE ROAD



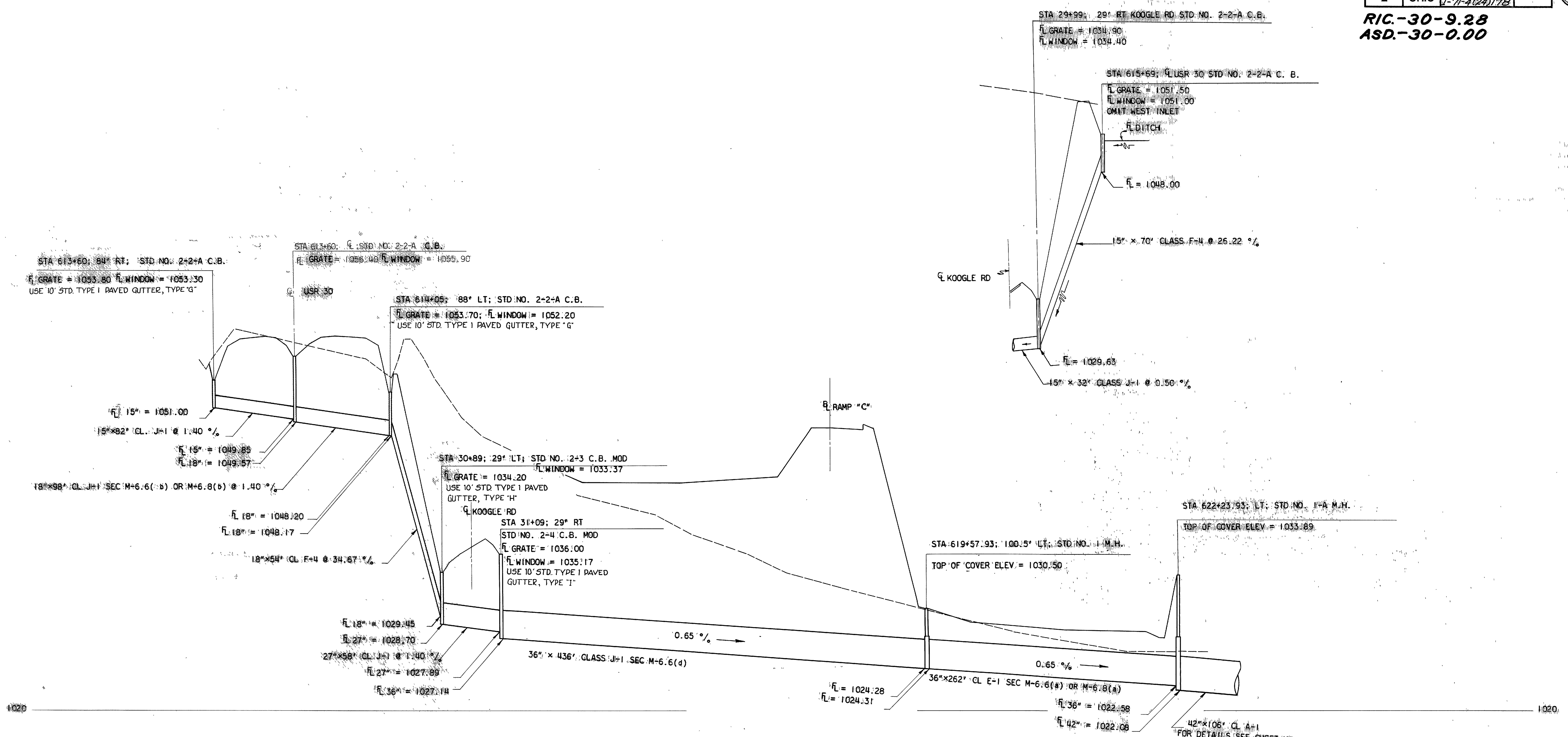
PLAN
Scale: 1" = 10'



TYPICAL SECTION
Scale: 1" = 5'

Sta. 617+25
SOD FLUME DETAIL

RIC-30-9.28
ASD-30-0.00



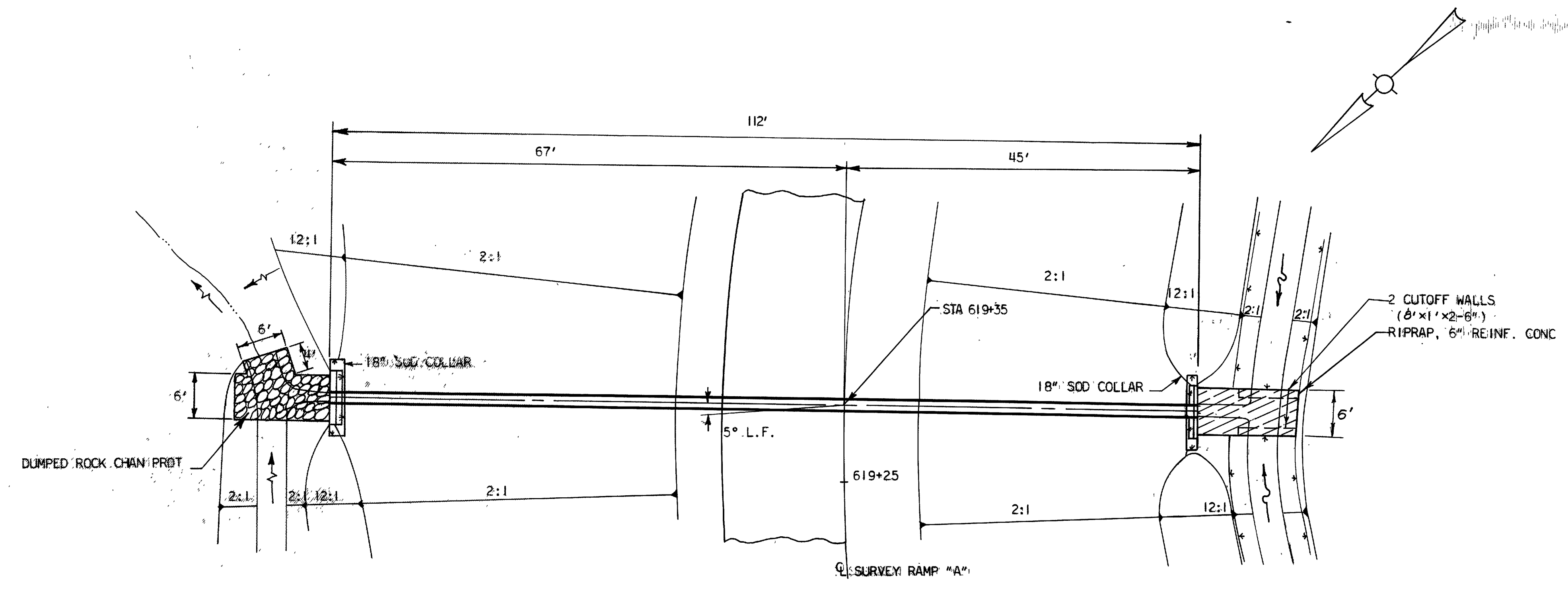
PROFILE
SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'

FOR DETAILS SEE SHEET NO. 246

Designed	Checked	Inked
P.M.G.	J.H.W.	P.A.L.
8-7-64	8-19-64	8-20-64

STORM SEWER DETAIL - Sta. 613+60 to Sta. 622+23.93 U.S.R. 30

RIC - 30 - 9.28
RIC - 30 - 0.00



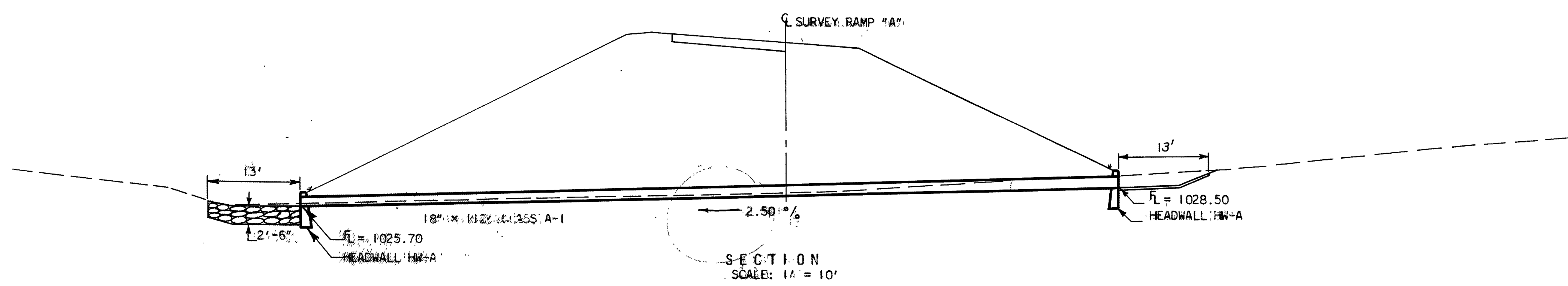
DRAINAGE AREA = 2.5 AC
Q25 = 11.2 CFS

P L A N

ESTIMATED QUANTITIES

1-1 18" PIPE, CLASS A-1, SEC. M-6.6(B)	112 LIN FT
1-2 MASONRY, CLASS "C"	6.4 CU YDS
1-10 DUMPED ROCK CHANNEL PROTECTION	9 CU YDS
1-10 RIPRAP, 6" REINFORCED CONCRETE	9 SQ YDS
1-10 SODDING	5 SQ YDS

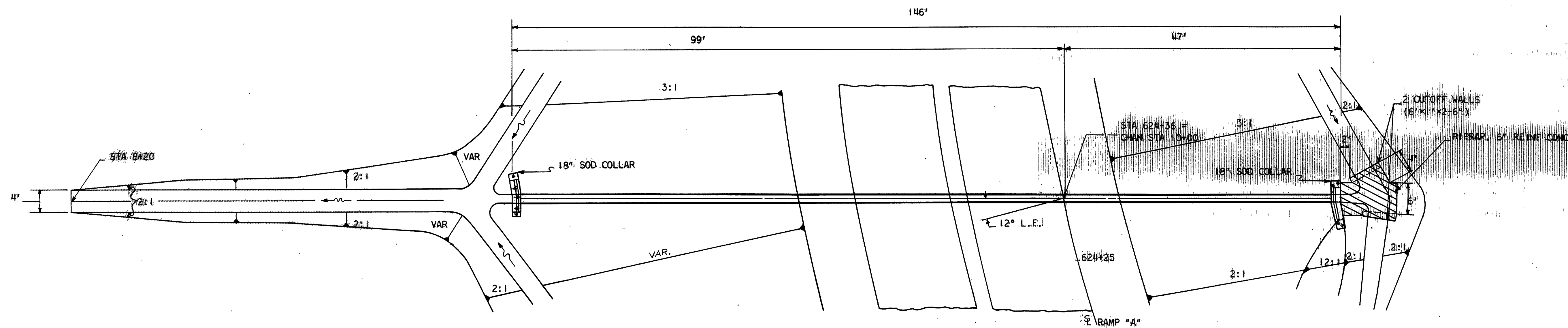
STD. DRNGS: 1-1; HW. A AND B



S E C T I O N
SCALE: 1" = 10'

Designed	Checked	Inked
J. H. W.	G. D. H.	D. W. R.
8-3-64	8-17-64	8-19-64

RIC-30-9.28
ASD-30-0.00



PLAN

CHANNEL CROSS SECTIONS	C.Y.	E.A.
STA 8+91	0	2
1033.25 8+86 1035.5	22	
1033.15 8+60 1034.0	7	14
1033.08 8+40 1033.9	6	5
STA 8+20	0	2
TOTALS	35	23

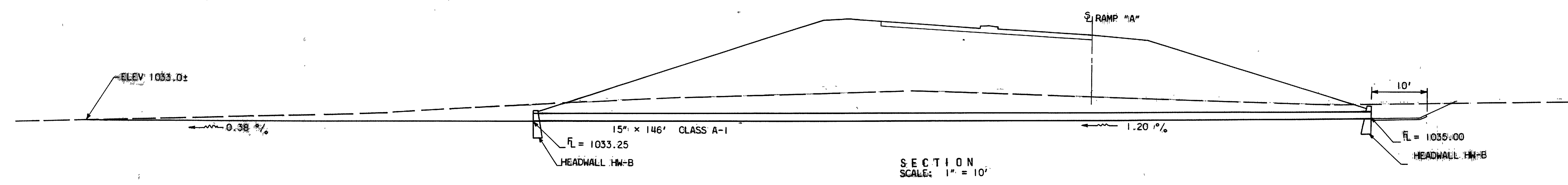
SCALE: 1" = 10'

DRAINAGE AREA = 1.1 AC
Q25 = 5.6 CFS.

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	23	CU. YDS
I-1 15" PIPE CLASS A-1 SEC M-6.6(c)	146	LIN. FT
I-2 MASONRY, CLASS "C"	6.4	CU. YDS
I-10 RIPRAP, 6" REINFORCED CONCRETE	9	SQ. YDS
L-10 SODDING	4	SQ. YDS

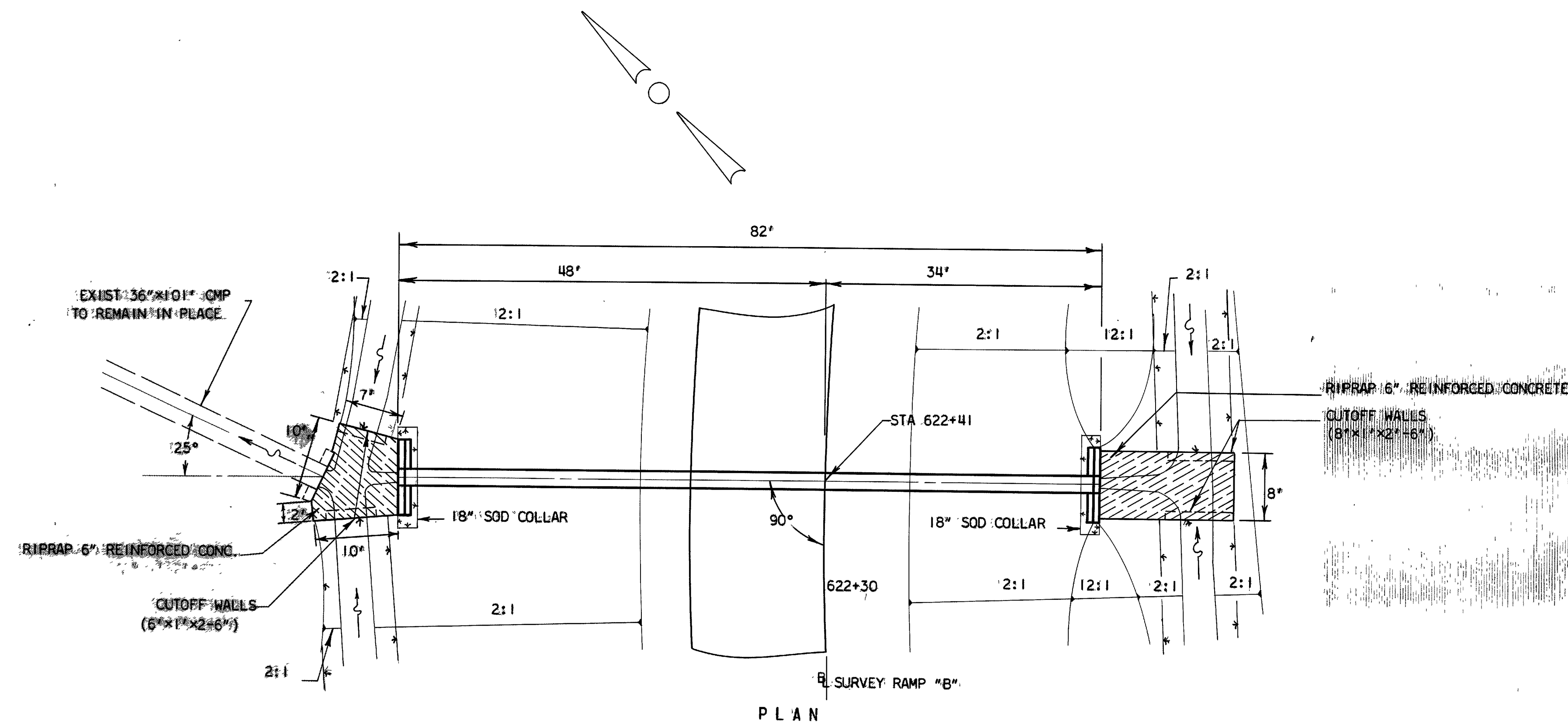
STD. DRWGS: I-1; HW A AND B
NOTE: FOR DETAILS OF HW-B HEADWALL SEE SHEET NO. 235



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J. H. W. 8-5-64	G. D. H. 8-14-64	J. D. L. 8-19-64

RIC-30-9.28
ASD-30-0.00



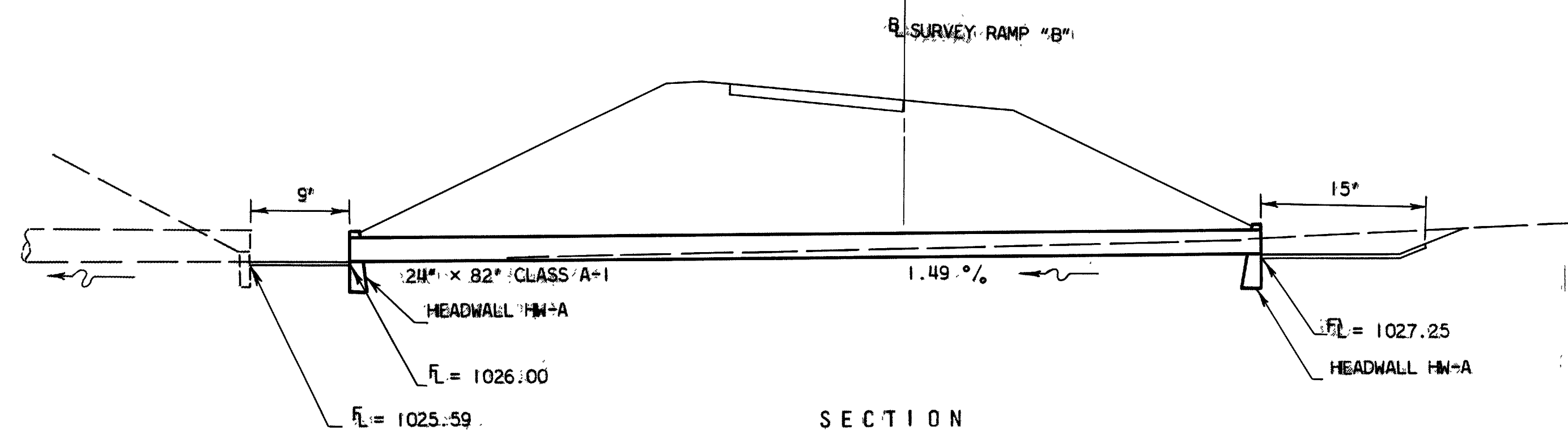
PLAN

DRAINAGE AREA = 7.0 AC
Q25 = 26.4 CFS

ESTIMATED QUANTITIES

1-1. 24" PIPE, CLASS A-1, SEC M-6, B(2)	82	LIN FT
1-2. MASONRY, CLASS "C"	0.4	CU YDS
1-10. RIPRAP 6" REINFORCED CONCRETE	23	SQ YDS
1-10. SODDING	5	SQ YDS

STD. DRNGS: 1-1, HW-A AND B

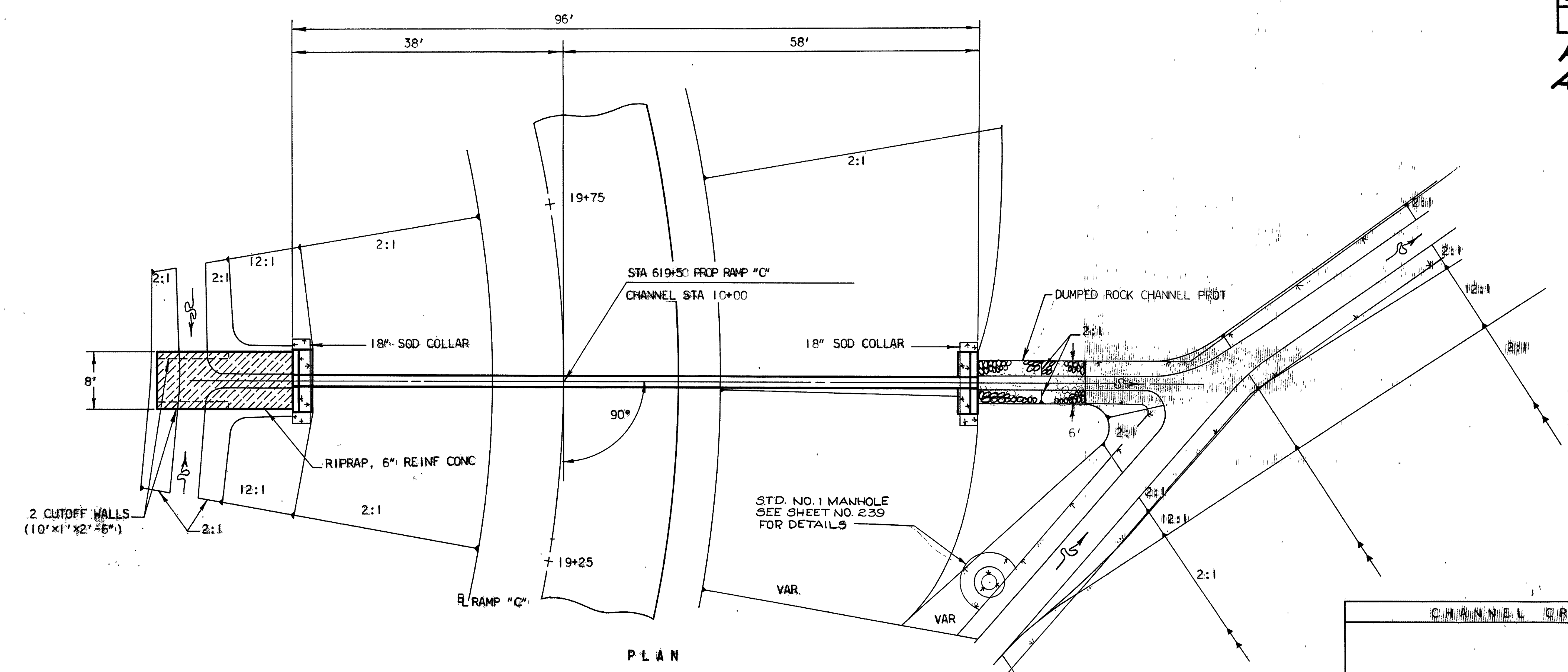


SECTION

SCALE: 1" = 10'

Designed	Checked	In Rd
J. H. W.	D. F. H.	A. W. T.
8-7-64	9-18-64	9-20-64

RIC - 30 - 9.28
ASD - 30 - 0.00



PLAN

ESTIMATED QUANTITIES

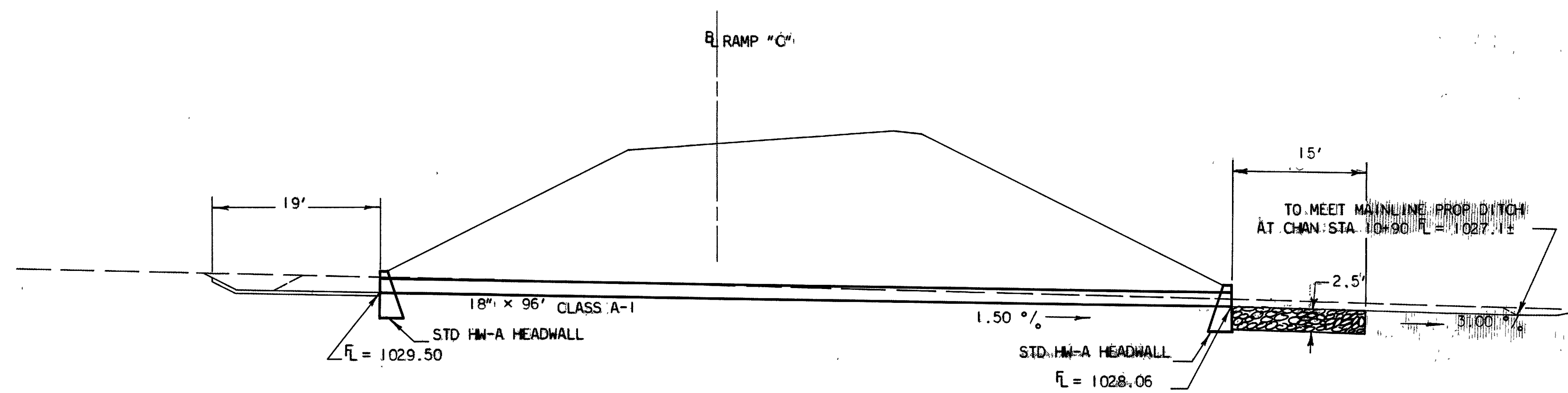
E-3 CHANNEL EXCAVATION	11 CU YDS
I-1 18" PIPE CLASS A-1, SEC. M-6.6(c)	96 LIN FT
I-2 MASONRY CLASS "C"	6.4 CU YDS
I-10 RIPRAP, 6" REINFORCED CONCRETE	18 SQ YDS
L-10 SODDING	5 SQ YDS
I-10 DUMPED ROCK CHANNEL PROTECTION	8 CU YDS

STD DRGGS: HW-A

DRAINAGE AREA	=	3.3 AC
Q25	=	15.0 CFS

CHANNEL CROSS SECTIONS

STATION	RIGHT ELEVATION	LEFT ELEVATION	DEPTH	DETAIL	CULVERT
10+90	1027.6	1028.0	0.4		
10+50	1027.70	1028.7	1.0		
10+50	1029.65	1030.6	1.0		
TOTAL			2.4		1-1



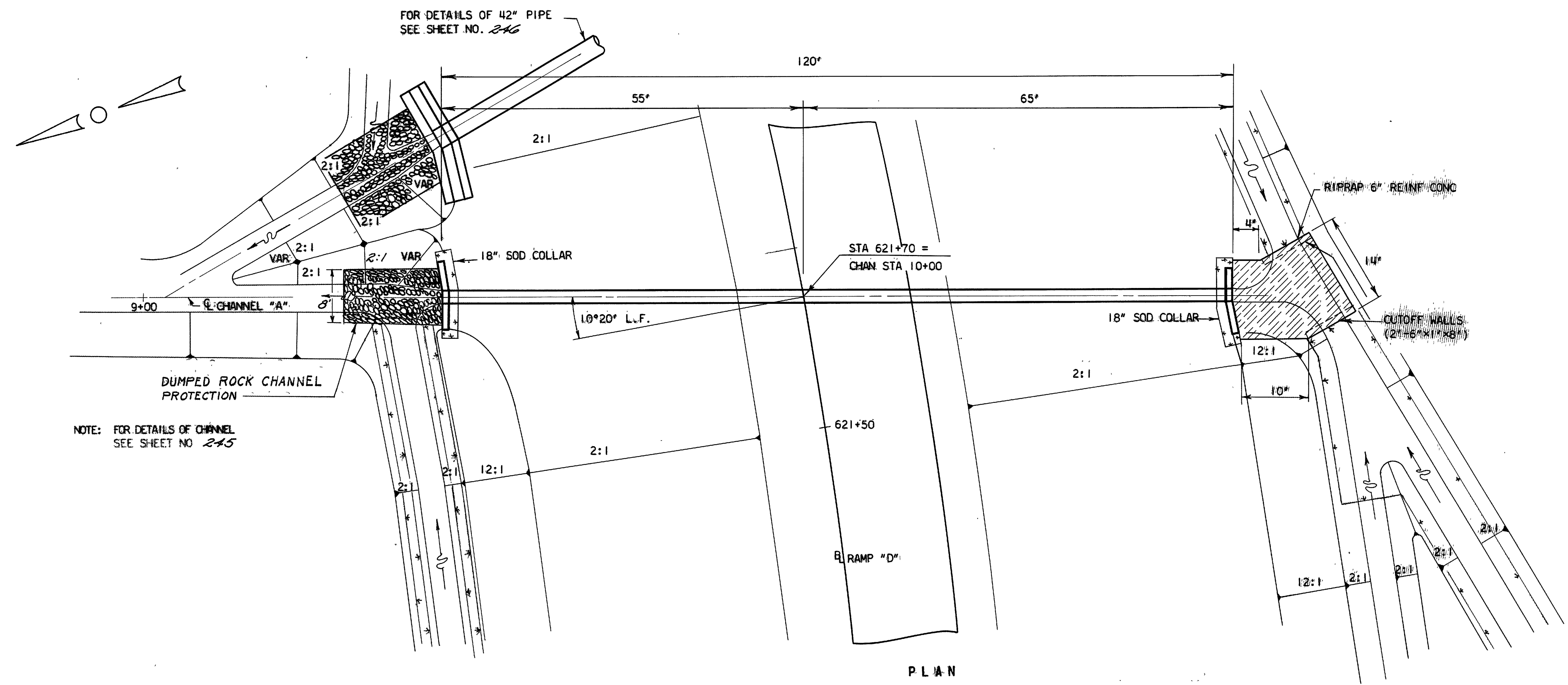
SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
G. D. H. 8-10-64	D. F. H. 8-14-64	B. A. D. 8-18-64

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072(4) I-71-4(24)178

244
323

RIC - 30 - 9.28
ASD - 30 - 0.00



NOTE: FOR DETAILS OF CHANNEL SEE SHEET NO. 245

FOR DETAILS OF 42" PIPE SEE SHEET NO. 246

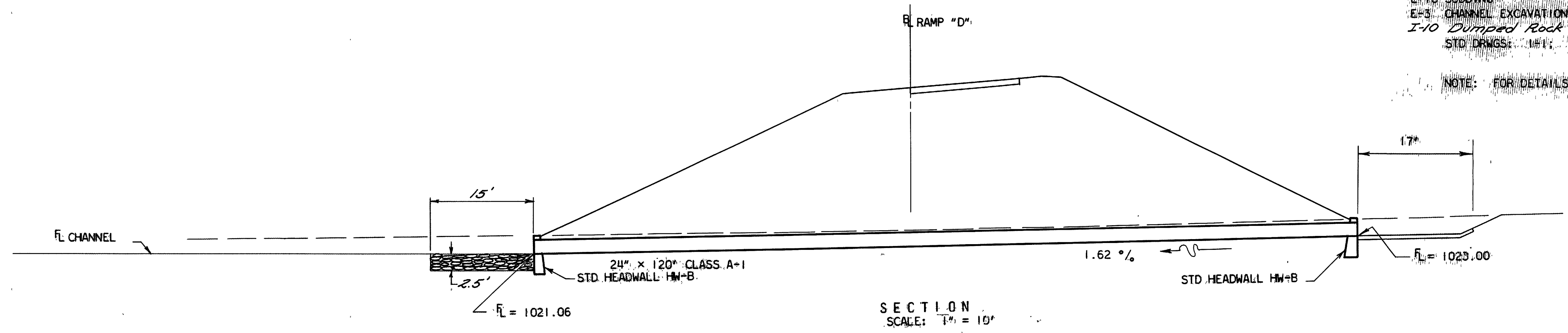
DRAINAGE AREA = 6 AC
Q₂₅ = 23.2 CFS

ESTIMATED QUANTITIES

I-1. 24" PIPE CLASS A-1, SEC M-6.6(B)	120. LIN/FT
I-2. MASONRY CLASS 'C'	10.4 CU YD
I-10. RIPRAP 6" REINFORCED CONCRETE	27.00 YDS
L-10. SODDING	5.00 YDS
E-3. CHANNEL EXCAVATION	441.00 YDS
I-10 Dumped Rock Channel Protection	11.00 YDS

STD. DRWS: 1111, HW-A AND B

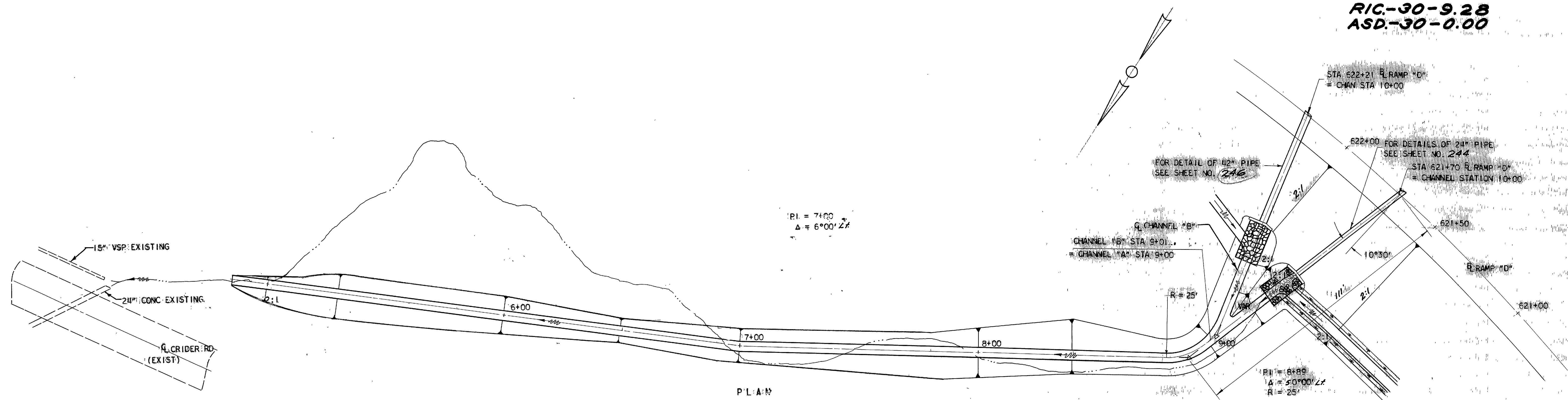
NOTE: FOR DETAILS OF HW-B HEADWALL SEE SHEET NO. 235



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
D.F.H.	J.H.W.	C.P.T.
8-12-64	8-17-64	8-19-64

RIC-30-9.28
ASD-30-0.00



CHANNEL CROSS SECTIONS

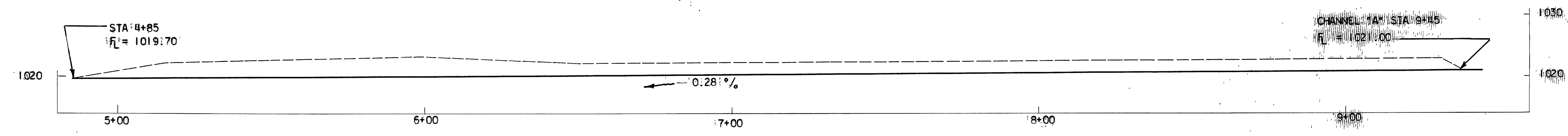
ELEVATION	E - 3		CHANNEL	E - 3	
	E.A.	C.Y.		E.A.	C.Y.
1020.29	15	19	CHANNEL "B"	0	3
1022.0			CHANNEL "A"	25	12
1020.17	10			0	0
1021.5		52		32	4
1019.98	30			35	112
1023.0		76		29	71
1019.80	33				74
1023.0		18			
	0		TOTAL		441

SCALE: 1"=10'

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION 441 CU YDS

SEE CHANNEL EXCAVATION QUANTITY CARRIED TO PIPE DETAIL SHEET NO. 244

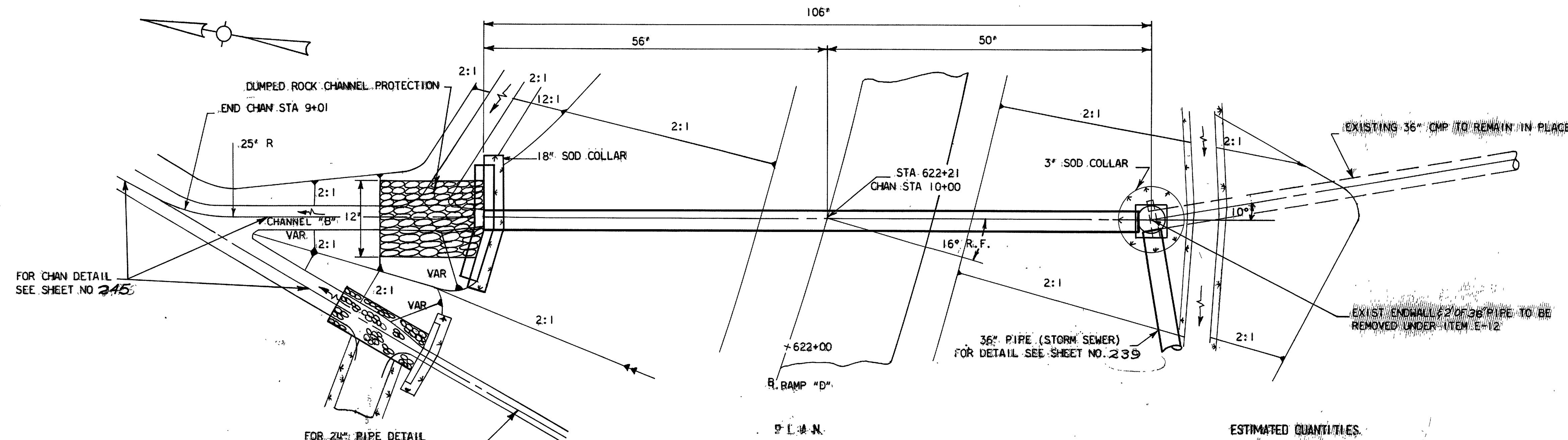


PROFILE
SCALE: HORIZ. 1"=20'
VERT. 1"=10'

Designed	Checked	Inked
D.F.H.	J.H.W.	P.A.L.
8-14-64	8-18-64	8-19-64

CHANNEL RELOCATION - STA 621+70 - RAMP "D"

RIC-30-9.28
ASD-30-0.00



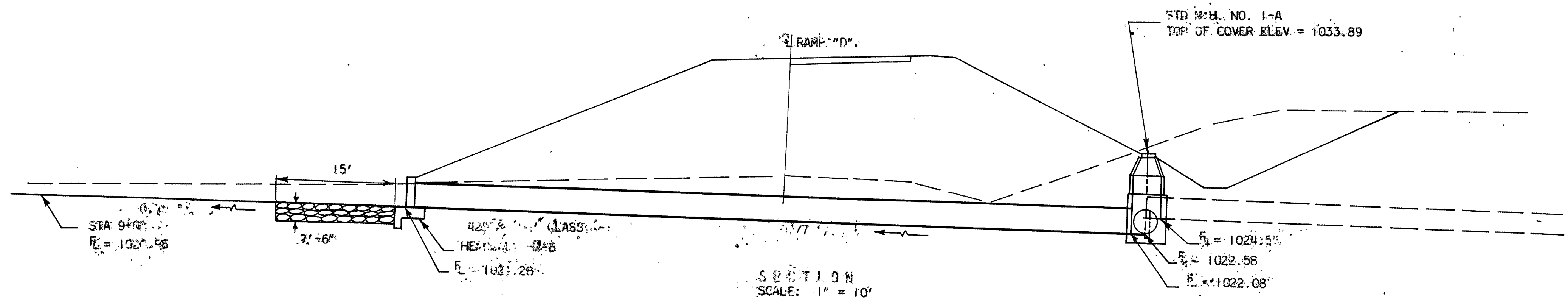
PLAN

ESTIMATED QUANTITIES

E-12	PIPE REMOVED OVER 15"	2	LIN. FT.
I-1	42" PIPE, CLASS A-1, SEC M.E. 6(d)	106	LIN. FT.
I-2	MASONRY, CLASS "C"	10.2	CU. YDS.
I-8	STANDARD NO. 1-A MANHOLE	1	EACH
I-10	DUMPED ROCK CHANNEL PROTECTION	17	CU. YDS.
L-10	SODDING	12	SQ. YDS.

STD. DRWGS: 1-1; M.A. AND B. 1-8 M.H. 1-A

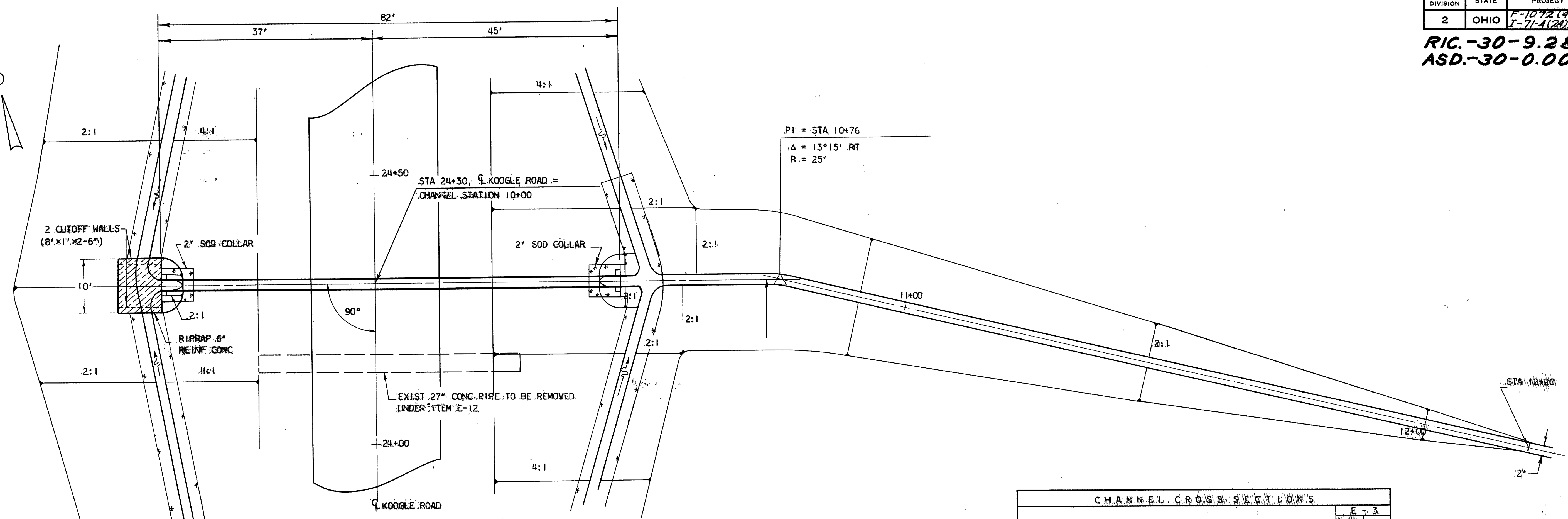
NOTE: FOR DETAILS OF HW-B HEADWALL SEE SHEET NO. 235



SECTION
SCALE: 1" = 10"

Designed	Checked	Inked
J. H. W.	D. F. H.	D. W. R.
8-19-64	8-19-64	8-18-64

RIC.-30-9.28
ASD.-30-0.00



P L A N

ESTIMATED QUANTITIES

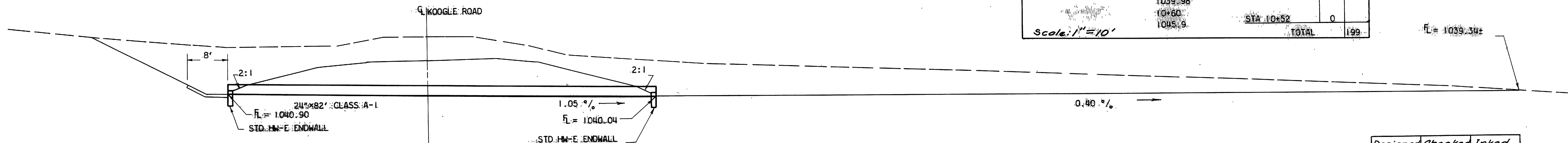
E-3 CHANNEL EXCAVATION	499 CU YDS
E-12 PIPE REMOVED OVER 15"	49 LIN FT
I-1 24" PIPE CLASS A-1 SEC M-6.6(a) OR M-6.8(b)	82 LIN FT
I-2 MASONRY CLASS "C"	0.8 CU YDS
I-10 RIPRAP 6" REINFORCED CONCRETE	9 SQ YDS
I-10 SODDING	6 SQ YDS

DRAINAGE AREA = 3.9 AC
Q25 = 17 CFS

CHANNEL CROSS SECTIONS

STA	Top	Bottom	Depth	Area	C.Y.
12+20	1050	1040	10	0	2
12+00	1050	1039.12	10.88	1040.2	89
11+00	1050	1039.82	10.18	1044.2	43
10+52	1040	1039.98	0.02	1045.9	15
TOTAL					199

Scale: 1" = 10'



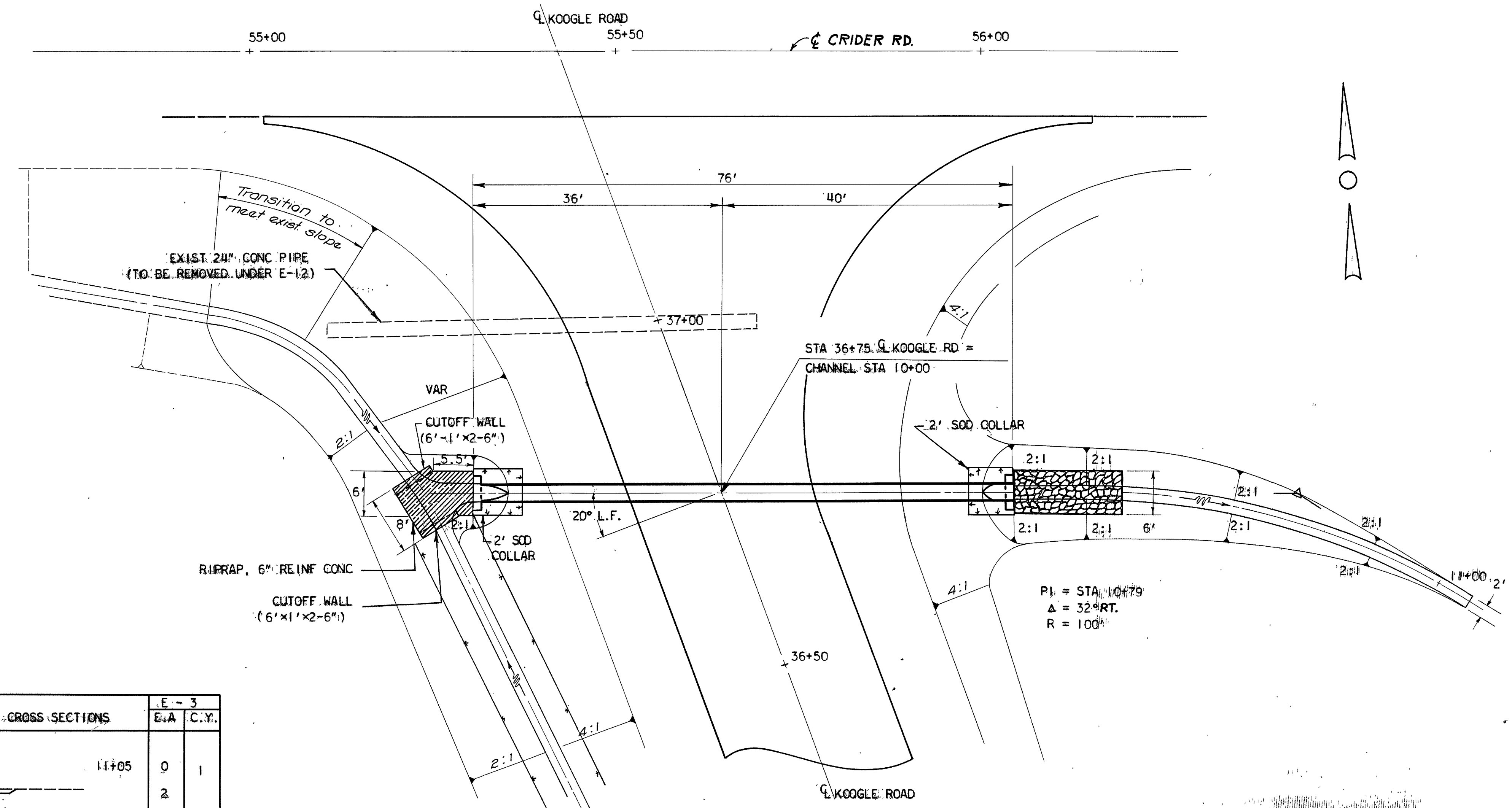
SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
G.D.H.	J.H.W.	R.W.F.
8-5-64	8-15-64	8-18-64

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072 (4) I-71-4(28)178

248
325

RIC - 30 - 9.28
ASD - 30 - 0.00



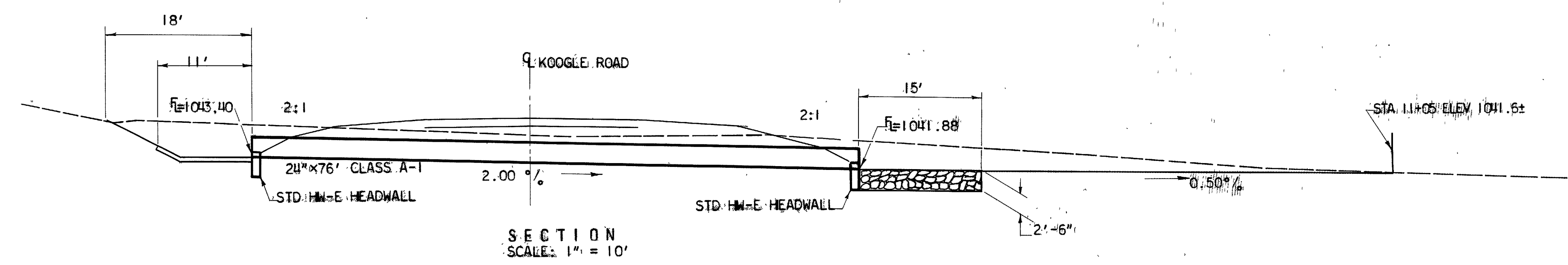
CHANNEL CROSS SECTIONS	E - 3	
	E.A.	C.Y.
11+05	0	1
1041.60 10+90 1042.1	2	16
1041.85 10+50 1044.9	20	8
1041.88 10+40 1045.5	24	
SCALE: 1" = 10'	TOTAL	25

DRAINAGE AREA = 6.78 AC
Q25 25 CFS

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	25	CU YDS
E-12 PIPE REMOVED OVER 15"	59	LIN FT
24" PIPE CLASS A-1, SEC M-6.6(a) OR SEC M-6.8(b)	76	LIN FT
H-2 MASONRY CLASS "C"	0.8	CU YDS
H-10 DUMPED ROCK CHANNEL PROTECTION	9	CU YDS
I-10 RIPRAP 6" REINFORCED CONCRETE	8	SQ YDS
L-10 SODDING	6	SQ YDS

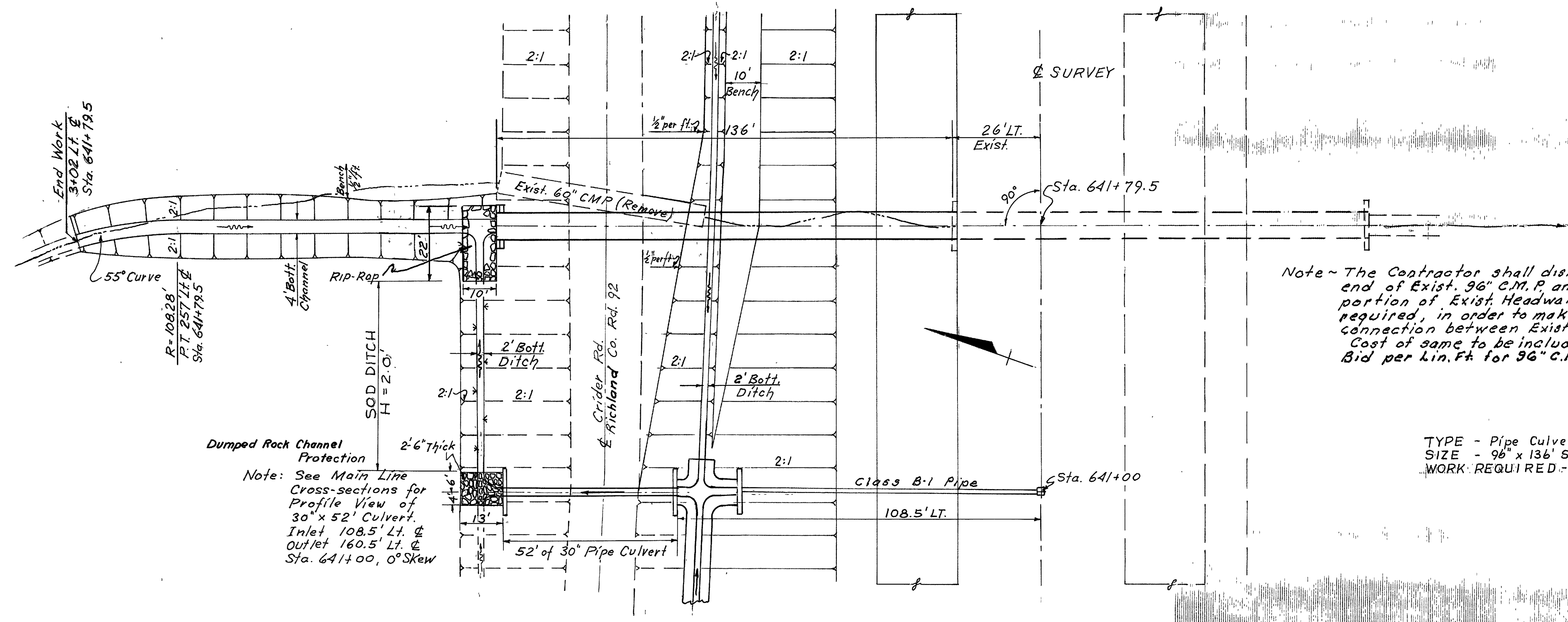
STD. DRWG. 11-1; HW-E



Designed	Checked	In Chg
D.A.H.	G.D.H.	P.A.L.
8-11-64	8-12-64	8-19-64

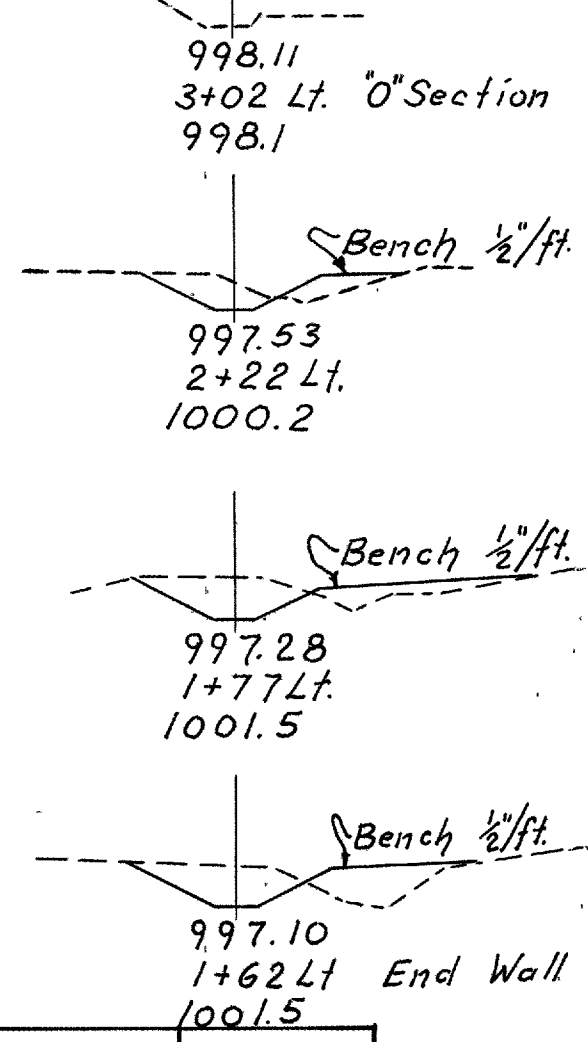
PIPE DETAIL - Sta. 36+75 - KOOGLE ROAD

RIC - 30 - 9.28
ASD - 30 - 0.00



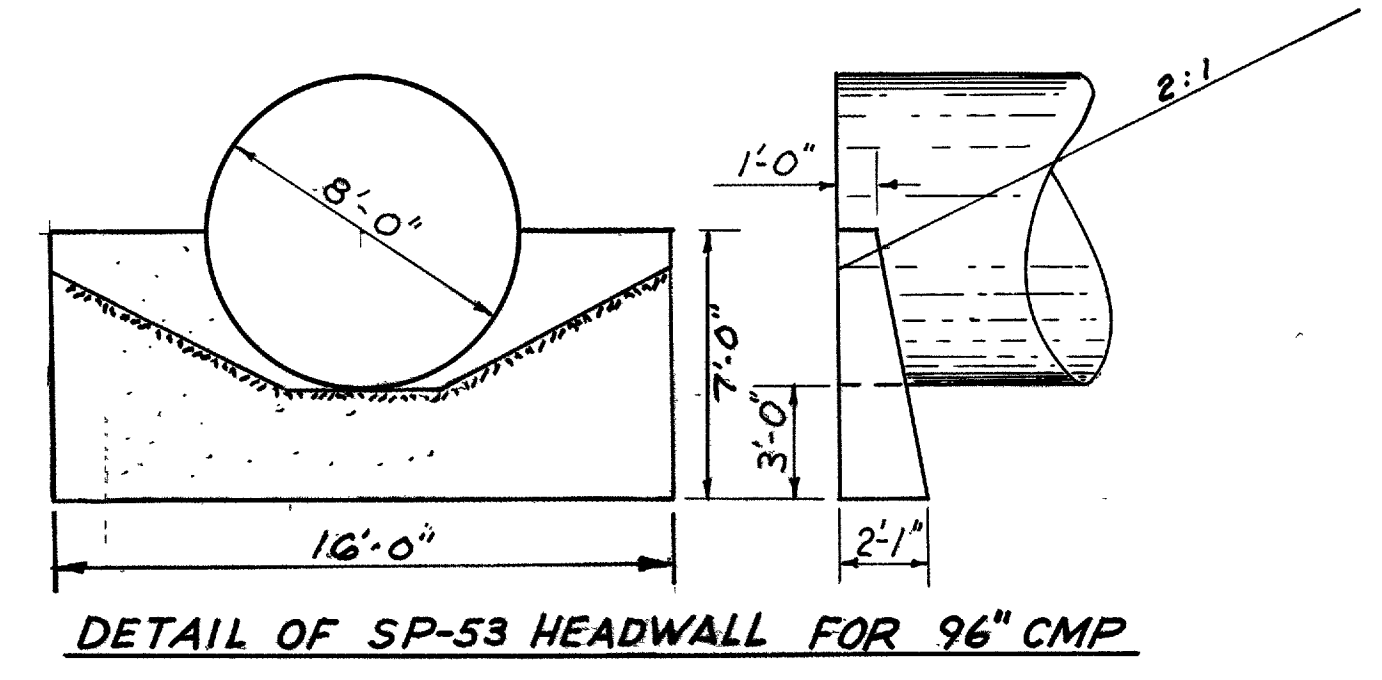
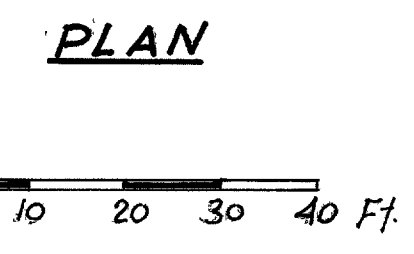
Note - The Contractor shall dismantle the left end of Exist. 96" C.M.P. and remove any portion of Exist. Headwall, that will be required, in order to make a satisfactory connection between Exist. and new pipe. Cost of same to be included in Unit Price Bid per Lin. Ft. for 96" C.M.P., Class A-1

CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, SP-53, & HW-A & B
 SIZE - 96" x 136' Sec. M-6.4(g), & 30" x 52' Sec. M-6.6(b) or Sec. M-6.8(b)
 WORK REQUIRED - Channel excavation, channel protection and construct headwalls as per plan.



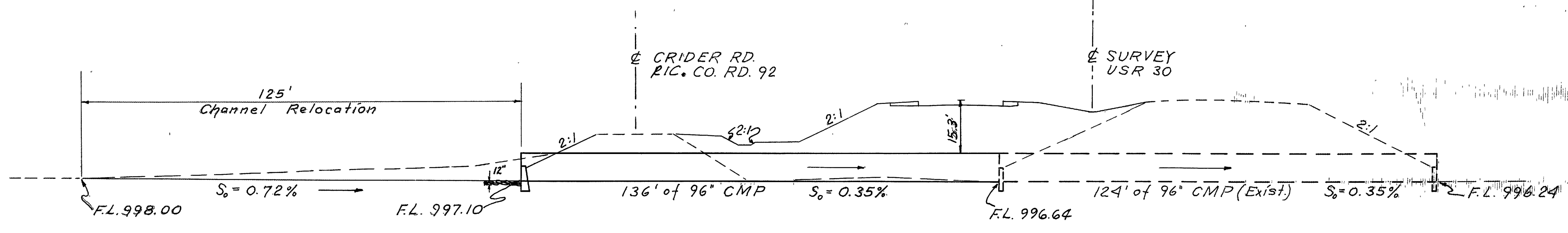
End Area	Cu Yds		
Cut	Fill	Cut	Fill
3+02	0	0	
2+22	28	12	42 18
1+77	44	16	60 24
1+62	48	24	26 11

Dumped Rock Channel Protection
 Note: See Main Line Cross-sections for Profile View of 30" x 52' Culvert. Inlet 108.5' Lt. & Outlet 160.5' Lt. & Sta. 641+00, 0° Skew



ESTIMATED QUANTITIES

E-3	Channel Excavation	128	Cu. Yds.
I-1	96" Pipe Culvert "Class A-1" Sectional Plate Corrugated Metal Pipe, Sec. M-6.4(g) (10-8 gage)	136	Lin. Ft.
I-1	30" Pipe Culvert "Class A-1" Sec. M-6.6(a) or Sec. M-6.8(b)	52	Lin. Ft.
I-2	Headwalls, Std. S.P.-53	5.21	Cu. Yds.
I-2	Headwalls, Std. HW-A	10.28	Cu. Yds.
I-10	Dumped Rock Channel Protection	15	Cu. Yds.
L-10	Sodding	71	Sq. Yds.
I-10	Rip-Rap, 6" Rein. Conc.	30	Sq. Yds.
E-12	Pipe Removed, over 15"	62	Lin. Ft.



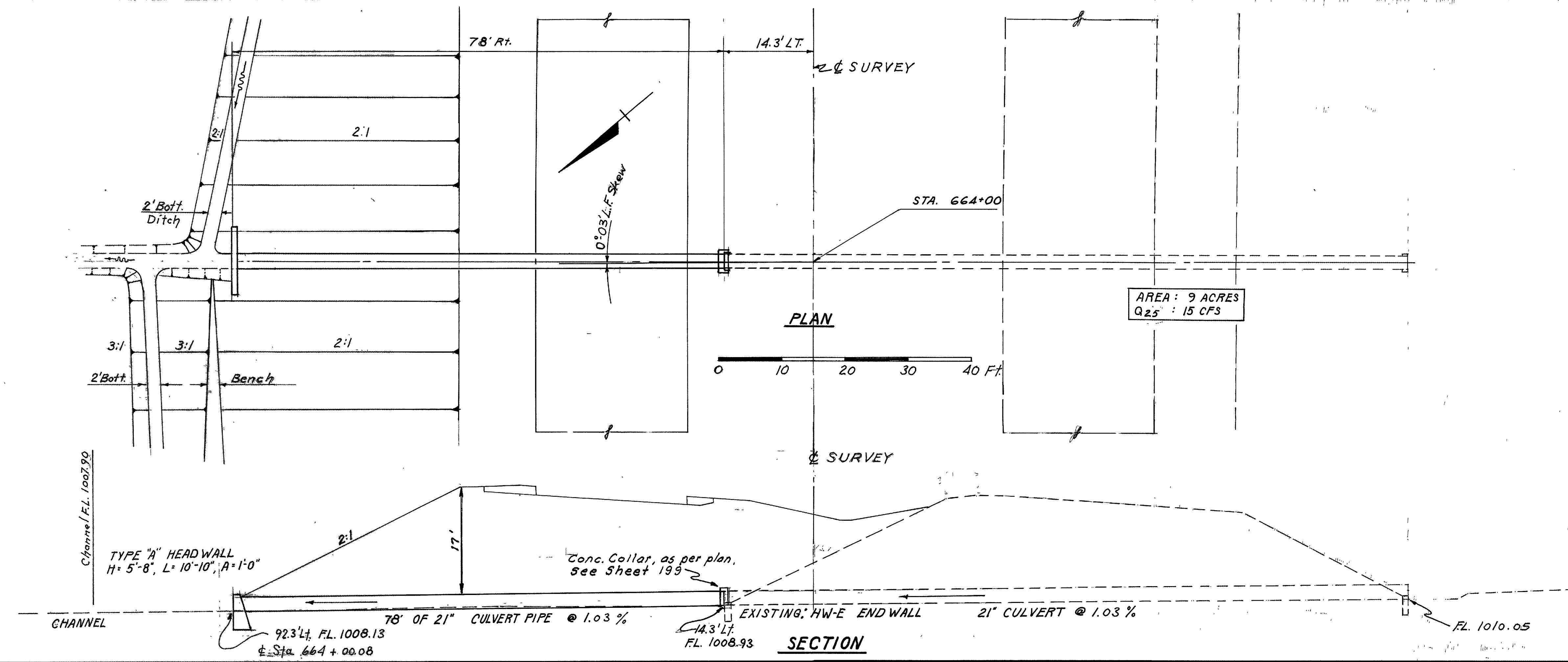
SECTION

Area = 730 Acres	Area = 23 Acres
Q25 = 450 CFS	Q10 = 480 CFS

C-2 STA. 641+00
 C-3 STA. 641+79.5 RIC-30-0.993

CULV. STA. 641+00
 CULV. STA. 641+79.5

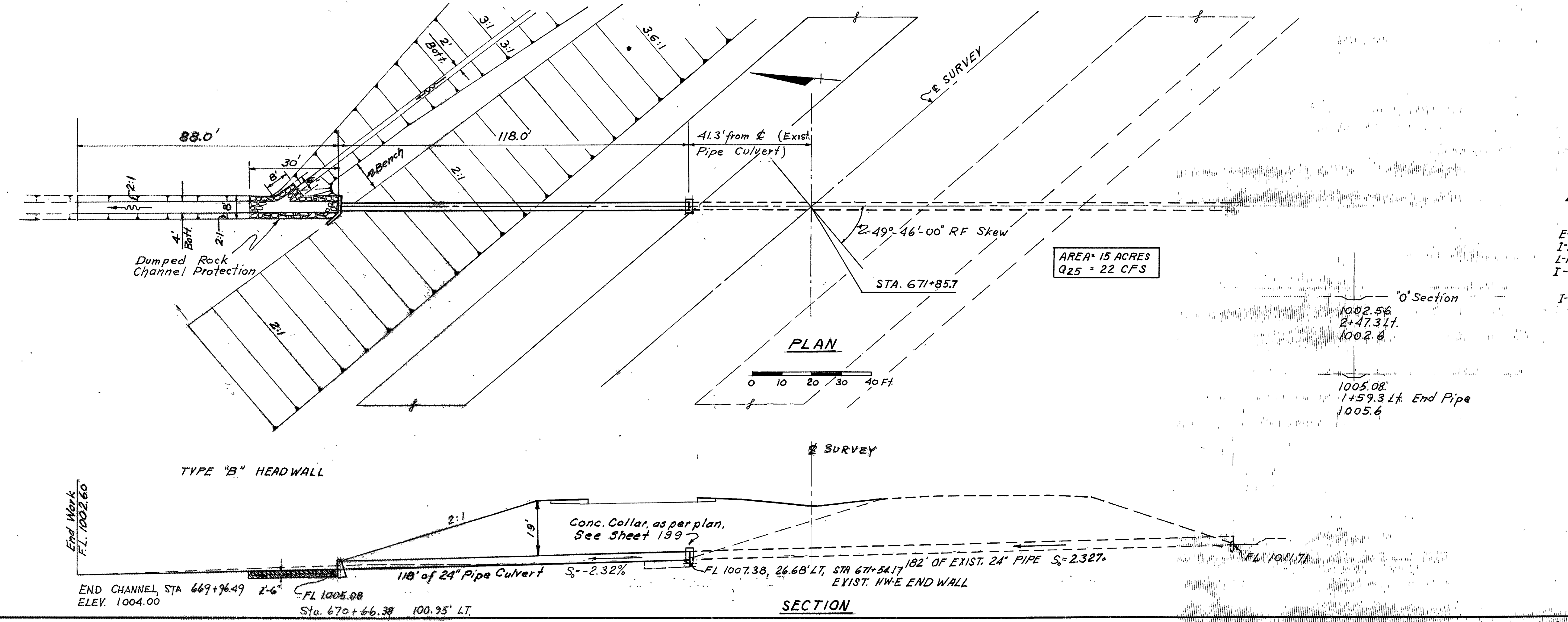
RIC-30-928
ASD-30-0.00



CULVERT DATA
 TYPE: PIPE Culvert Std. DWG.
 Nos. I-1 HW-A & B
 SIZE: 21" x 78", Sec. M-6.6(c)
 WORK REQ'D:
 Construct pipe culvert with headwalls (HW-A)

ESTIMATED QUANTITIES
 L-10 SODDING 3 Sq. Yds.
 I-1 21" REINF. CONC. PIPE 78 LF.
 SEC. M-6.6(c) CLASS A-1
 I-2 HEADWALL STD HW-A 4.2 Cu. Yds.

C-4
 STA. 664+00
 RIC-30-1035



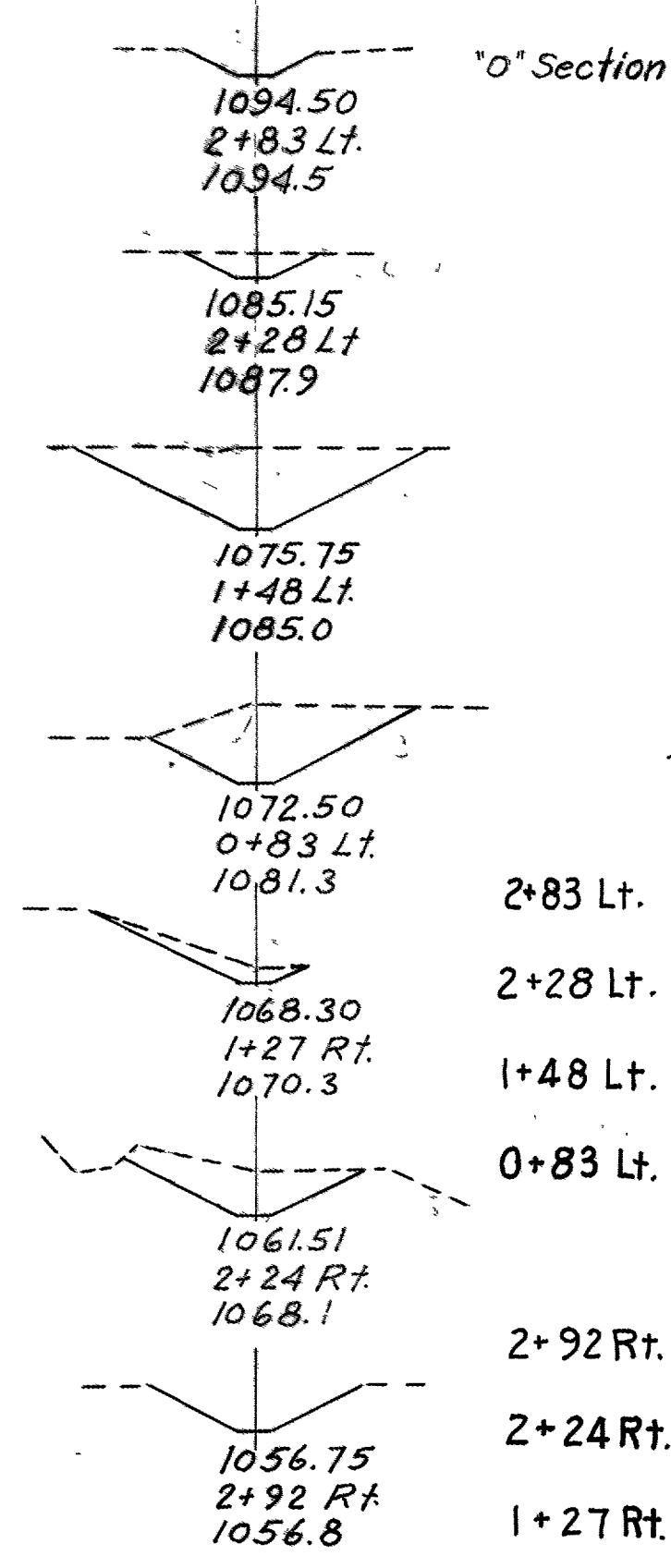
CULVERT DATA
 TYPE: PIPE CULVERT, STD. DRAWG.
 NOS. I-1 HW-A & B
 SIZE: 24" x 118" Sec. M-6.6(c)
 WORK REQ'D: CHANNEL EXCAVATION,
 CHANNEL PROTECTION,
 CONSTRUCT PIPE
 CULVERT WITH
 HEADWALL (H.W.B)

ESTIMATED QUANTITIES
 E-3 CHANNEL EXCAVATION 20 Cu. Yds.
 I-10 DUMP ROCK CHANNEL PROTECTION 20 Cu. Yds.
 L-10 SODDING 20 Sq. Yds.
 I-1 24" REINFORCED CONCRETE PIPE 118 LF.
 SEC. M-6.6(c) CLASS A-1
 I-2 HEADWALL, STD. HW-B 4.9 Cu. Yds.

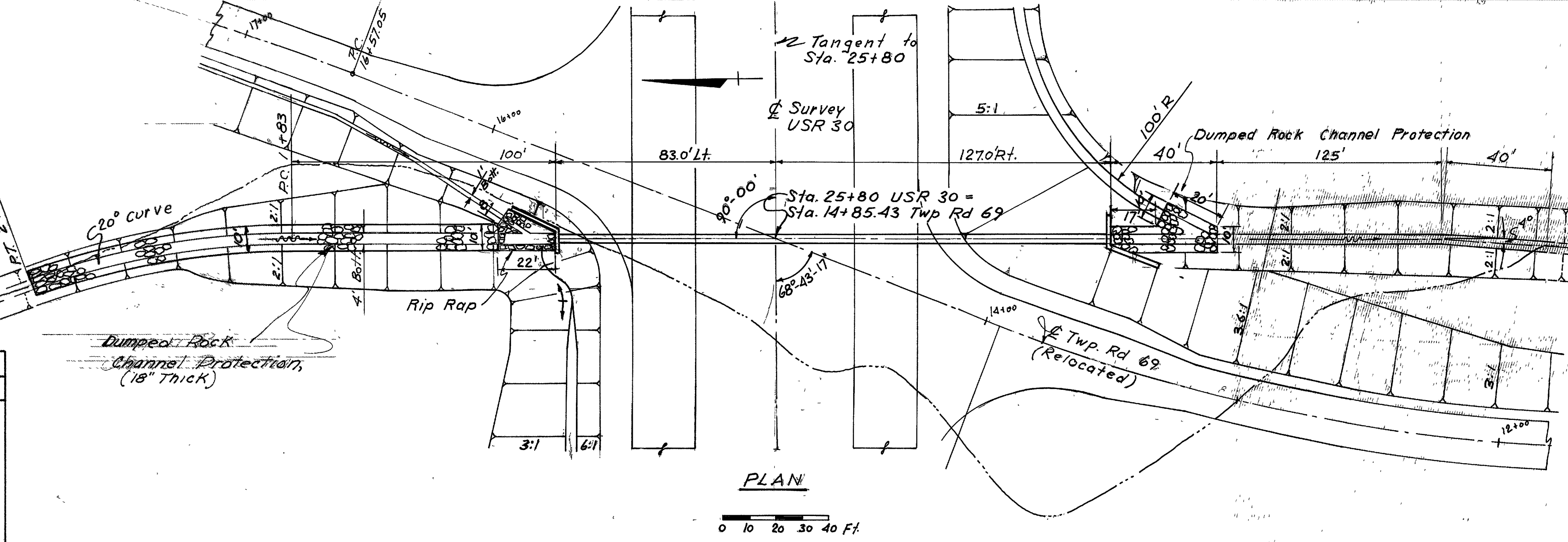
C-5 RIC-30-1050
 STA. 671+85.7 BK.

PIPE CULVERTS STA 664+00 & STA 671+85.7 BK.

RIC.-30-9.28
ASD.-30-0.00



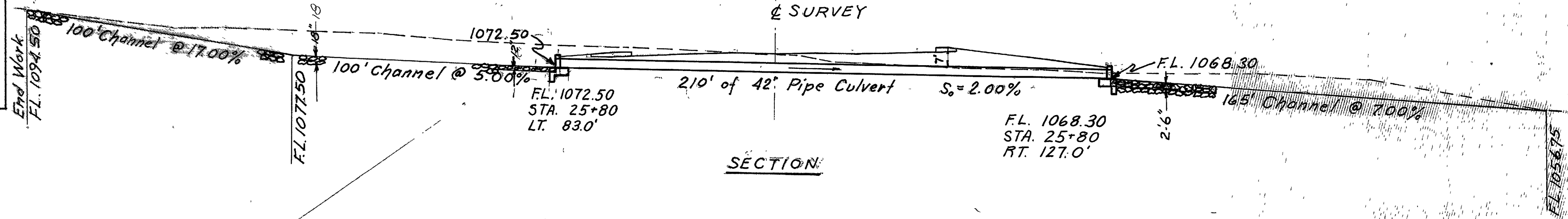
End Area	Cu. Yds.	
	Cut	Fill
2+83 Lt.	0	0
2+28 Lt.	36	0
1+48 Lt.	192	0
0+83 Lt.	148	0
2+92 Rt.	0	0
2+24 Rt.	100	0
1+27 Rt.	40	0



CULVERT DATA
TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A & B.
SIZE - 42" x 210" Pipe Culvert, Sec. M-6.6(b)
WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

ESTIMATED QUANTITIES

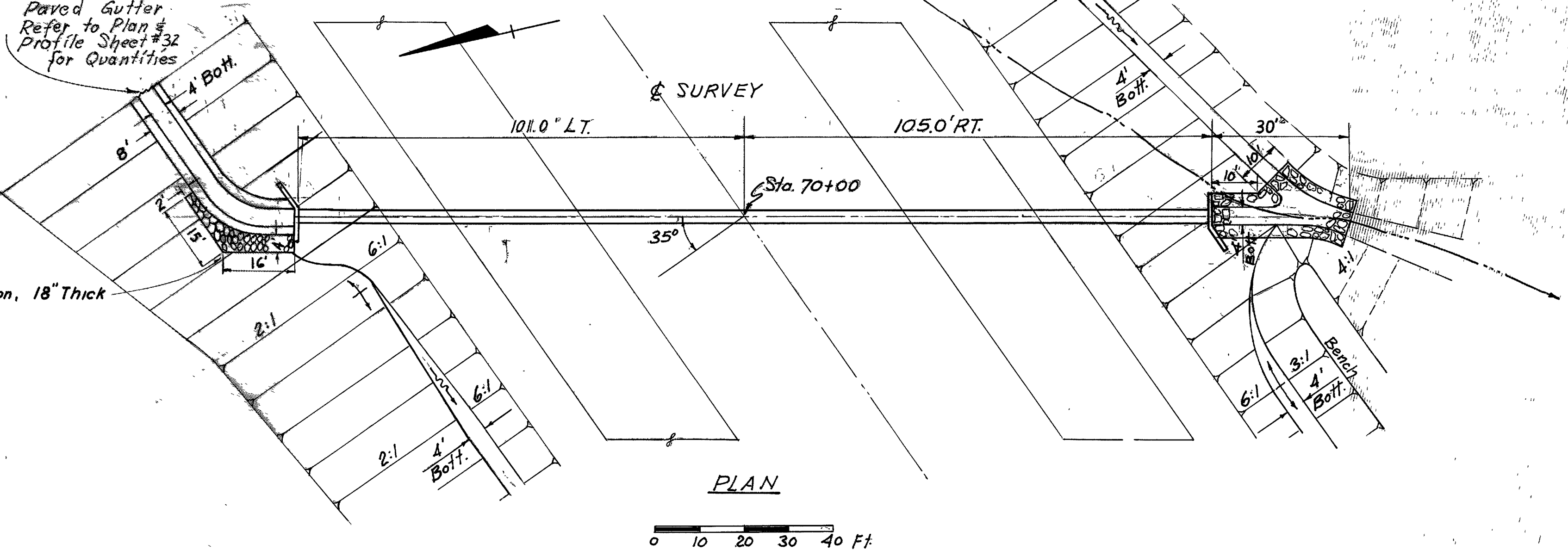
Channel Excavation	1162 Cu. Yds.
42" Pipe Culvert, Class A-1"	
Reinforced Concrete Pipe, Sec. M-6.6(a)	210 Lin. Ft.
Headwalls, Std. HW-B as per plan	35.9 Cu. Yds.
Sodding	12 Sq. Yds.
Dumped Rock Channel Protection	148 Cu. Yds.
Rip-Rap, 6" Rain Conc.	27 Sq. Yds.



Area = 27.4 Acres
Q25 = 64.0 C.F.S.

C-6
STA. 25+80
ASD-30-0048

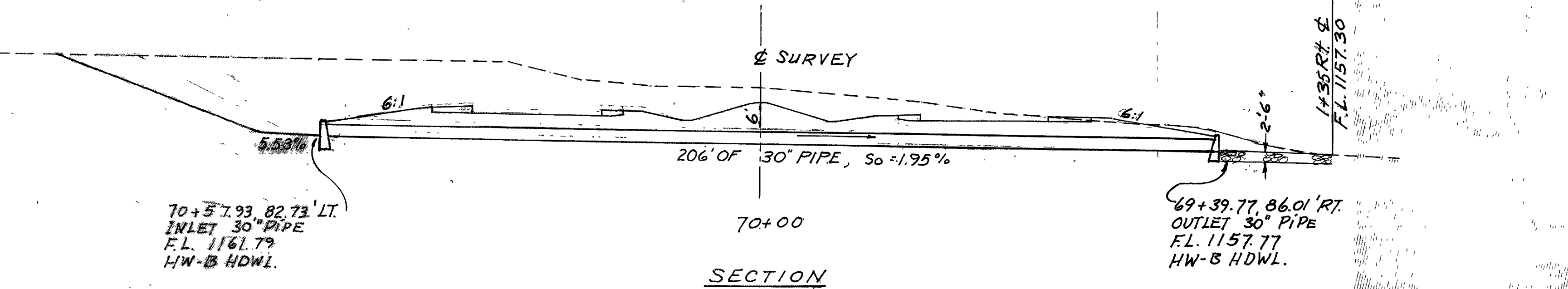
End Area	Cu. Yds.	
	Cut	Fill
1+35 Rt.	0	0
1+05 Rt.	76	0



CULVERT DATA
TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A & B.
SIZE - 30" x 206" of Sec. M-6.6(b) or Sec. M-6.8(b)
WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

ESTIMATED QUANTITIES

Channel Excavation	42 Cu. Yds.
Headwalls, Std. HW-B as per plan	13.9 Cu. Yds.
30" Pipe Culvert, Class A-1", Sec. M-6.6(a) or Sec. M-6.8(b)	206 Lin. Ft.
Sodding	6 Sq. Yds.
Dumped Rock Channel Protection	40 Cu. Yds.



Area = 18.0 Acres
Q25 = 38.4 C.F.S.

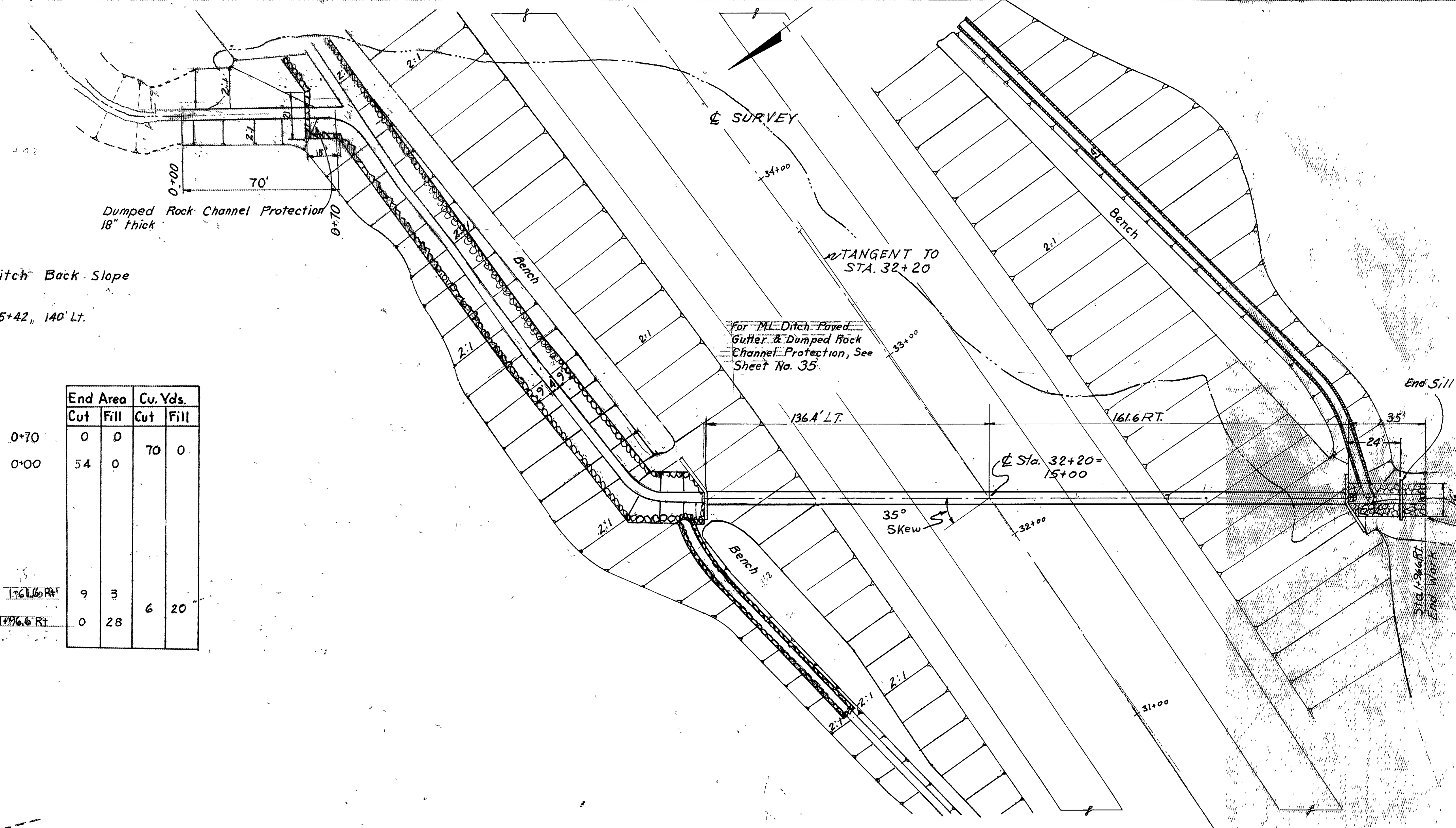
C-10
STA. 70+00
ASD-30-0132

RIC - 30 - 9.28
ASD - 30 - 0.00

CULVERT DATA
 TYPE - Pipe Culvert Std. Drwg Nos. I-1, HW-A & B
 SIZE - 298' of 72" CMP, Sec. M-6.4(g)
 WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

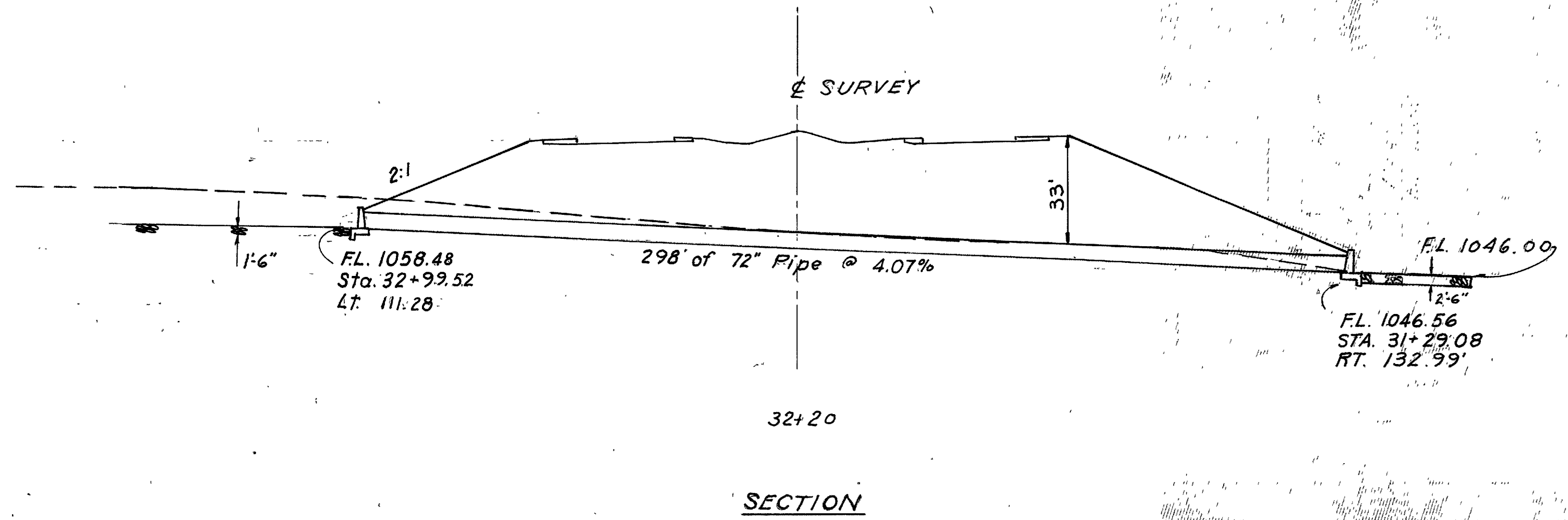
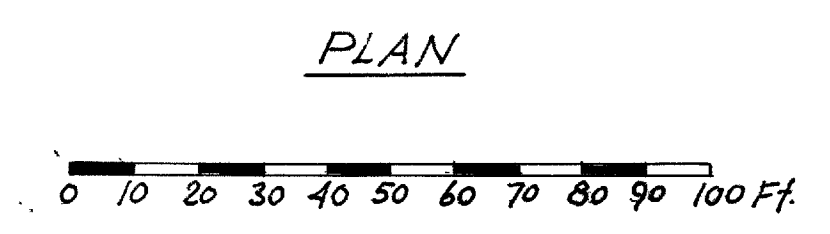
ESTIMATED QUANTITIES

E-3	Channel Excavation	76 Cu Yds
I-2	Headwalls, Std. HW-B as per plan	53.2 Cu. Yds
I-1	72" Pipe Culvert, "Class A-1" Sectional Plate Corrugated Metal Pipe, Sec. M-6.4(g) (10-8 gage)	298 Lin. Ft.
L-10	Sodding	12 Sq Yds.
I-10	Dumped Rock Channel Protection	61 Cu. Yds.
I-2	Class "E" Concrete for End Sill	1.40 Cu. Yds.



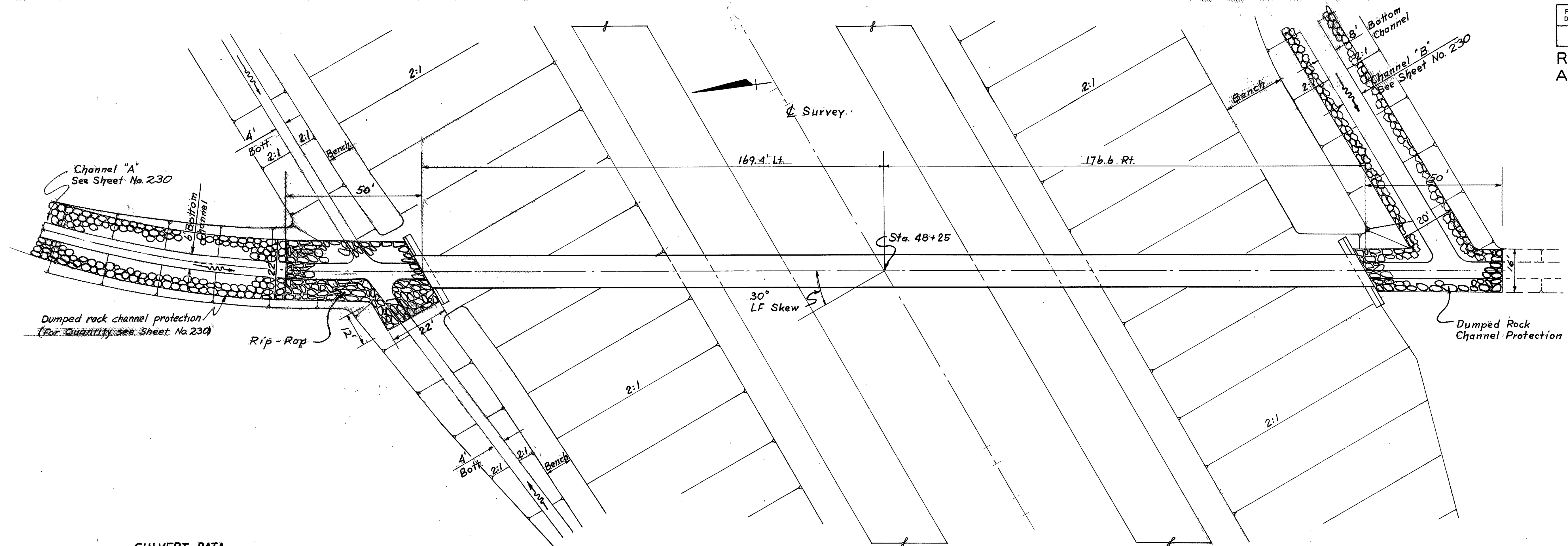
End Area	Cu. Yds.	
	Cut	Fill
0+70	0	0
0+00	54	0
1+61.6 RT	9	3
1+96.6 RT	0	28

Match Line
 1047.20
 1+61.6 Rt.
 1048.4
 Match Line
 SR 30
 1046.00
 1+96.6 Rt
 1046.0



Area = 307 Acres
 Q25 = 256 CFS.
 C-7
 STA. 32+20
 ASD-30-0060

RIC. - 30 - 9.28
 ASD. - 30 - 0.00



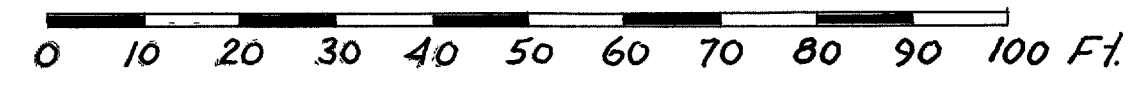
CULVERT DATA

TYPE - Pipe Culvert, Std. Drwg. No. I-1, S.P. 53
 SIZE - 144" x 346', Sec. M-6.4(g) 3-1 gage
 WORK REQUIRED - Channel protection, and construct pipe culvert with headwalls as per plan.

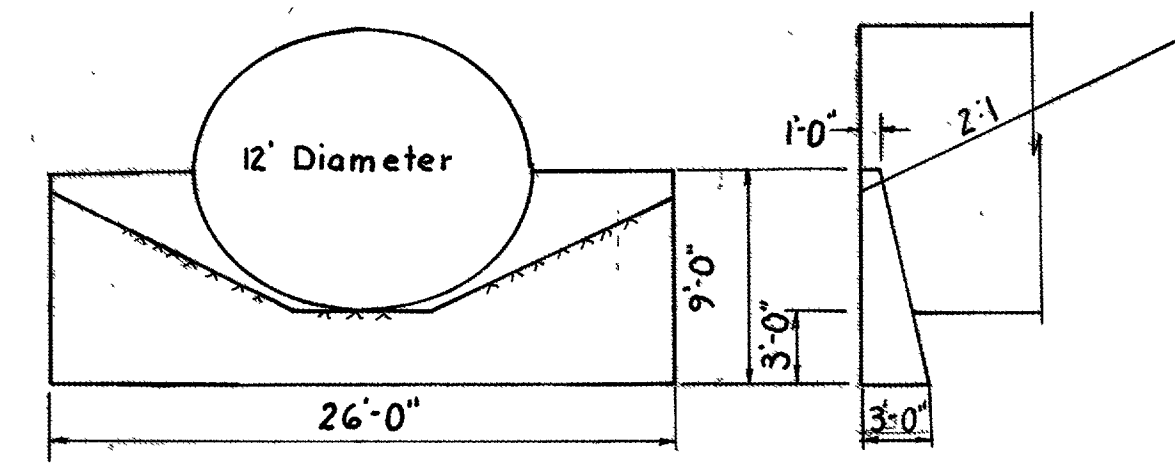
ESTIMATED QUANTITIES

I-1	144" Pipe Culvert, Sectional Plate	346 Lin. Ft.
I-2	Corrugated Metal Pipe, Sec. M 6.4(g) 3-1 gage	23.8 Cu Yds.
I-10	Headwalls, Std. S.P. - 53	90 Cu Yds.
I-10	Dumped Rock Channel protection	3 Sq. Yds.
I-10	Sodding	161 Sq. Yds.
I-10	Rip-Rap, 6" Rain Conc.	161 Sq. Yds.

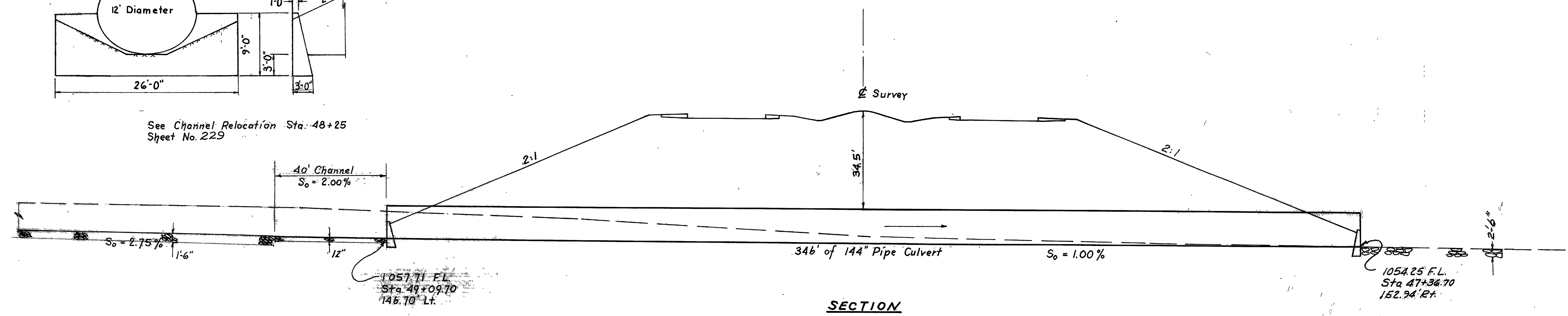
PLAN



DETAIL OF S.P.-53 HEADWALL FOR 144" CMP



See Channel Relocation Sta. 48+25
 Sheet No. 229

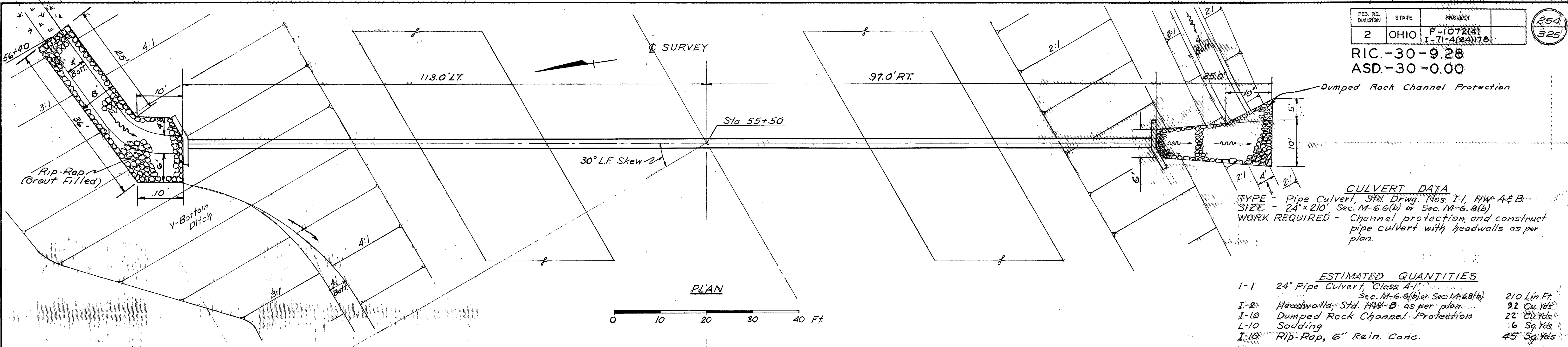


SECTION

Area = 1,360 Acres
 Q25 = 800 C.F.S.

C-8
STA. 48+25
ASD-30-0091

RIC-30-9.28
ASD-30-0.00



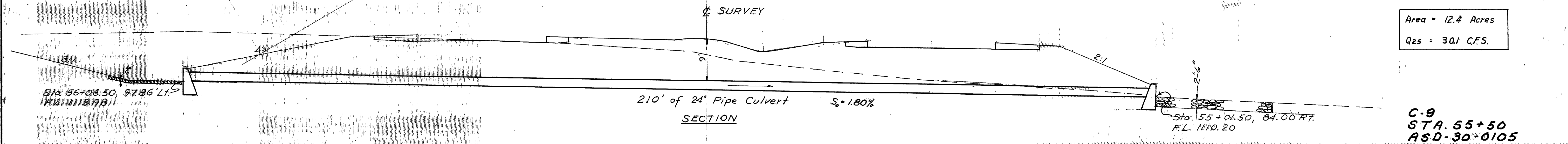
PLAN
0 10 20 30 40 Ft

CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A&B
 SIZE - 24"x210", Sec. M-6.6(b) or Sec. M-6.8(b)
 WORK REQUIRED - Channel protection, and construct pipe culvert with headwalls as per plan.

ESTIMATED QUANTITIES

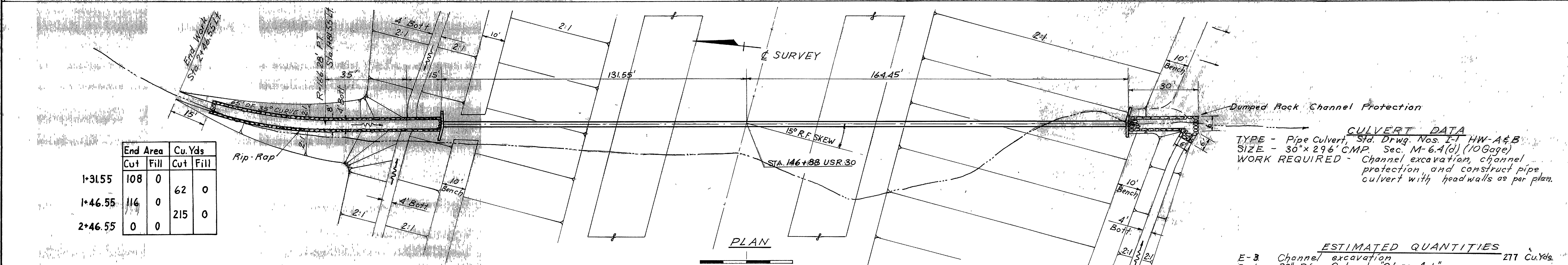
I-1	24" Pipe Culvert, Class A-1	210 Lin Ft
I-2	Headwalls, Std. HW-B as per plan	9.2 Cu. Yds
I-10	Dumped Rock Channel Protection	22 Cu. Yds
L-10	Sodding	6 Sq. Yds
I-10	Rip-Rap, 6" Rain. Conc.	45 Sq. Yds

Area = 12.4 Acres
Q25 = 30.1 CFS.



SECTION

C-9
STA. 55+50
ASD-30-0105



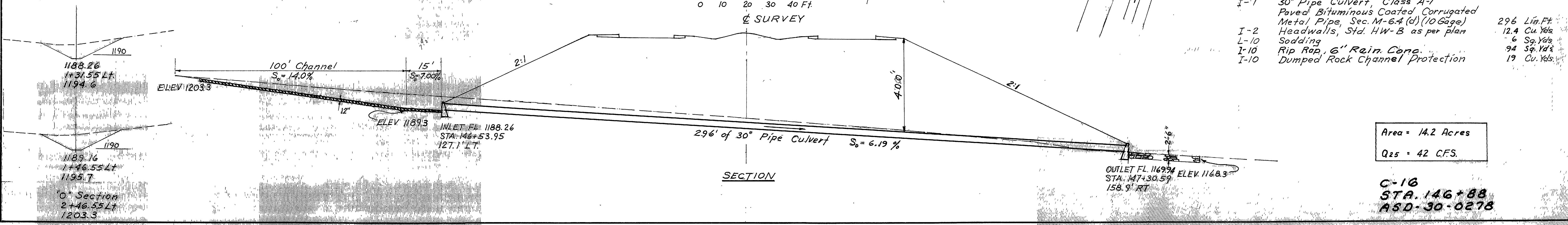
PLAN
0 10 20 30 40 Ft

CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1 HW-A&B
 SIZE - 30"x296" CMP, Sec. M-6.4(d) (10 Gage)
 WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with head walls as per plan.

ESTIMATED QUANTITIES

E-3	Channel excavation	277 Cu. Yds
I-1	30" Pipe Culvert, Class A-1	
	Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d) (10 Gage)	296 Lin. Ft
I-2	Headwalls, Std. HW-B as per plan	12.4 Cu. Yds
L-10	Sodding	6 Sq. Yds
I-10	Rip Rap, 6" Rain. Conc.	94 Sq. Yds
I-10	Dumped Rock Channel Protection	19 Cu. Yds

Area = 14.2 Acres
Q25 = 42 CFS.



SECTION

C-16
STA. 146+88
ASD-30-0278

End Area	Cu. Yds		Cu. Yds	
	Cut	Fill	Cut	Fill
1+31.55	108	0	62	0
1+46.55	116	0	215	0
2+46.55	0	0		

CULVERT DATA
 TYPE - PIPE CULVERT, STD DRWG. NOS. I-1, HWC
 SIZE - 42" x 192' OF SEC'S M-6.6(b) OR M-6.4(d)
 WORK REQ'D - CHANNEL EXCAVATION, CHANNEL PROTECTION AND CONSTRUCT PIPE CULVERT WITH HEADWALLS

ESTIMATED QUANTITIES

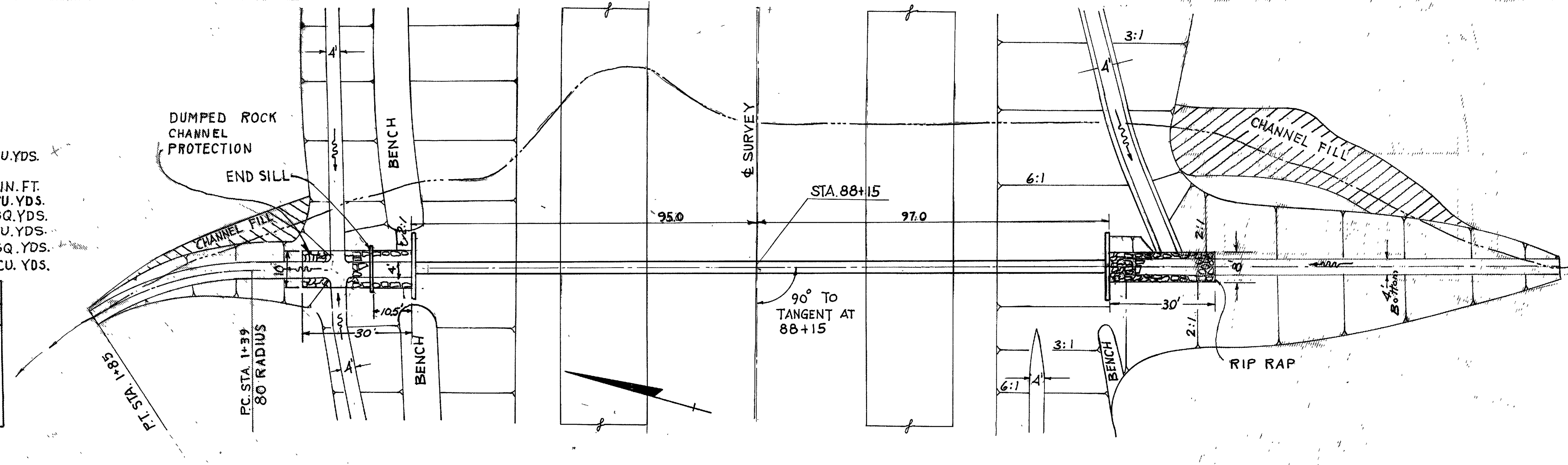
E-3	CHANNEL EXCAVATION	770 CU.YDS.
I-1	42" PIPE CULVERT, CLASS "A-1" SEC'S M-6.6(b) OR M-6.4(d)	192 LIN. FT.
I-2	HEADWALLS, STD HW-C	218 CU.YDS.
L-10	SODDING	7 SQ.YDS.
I-10	DUMP ROCK CHANNEL PROTECTION	30 CU.YDS.
I-10	RIP RAP, 6" REM. CONC.	26 SQ.YDS.
I-2	CLASS "E" CONCRETE FOR END SILL	0.78 CU.YDS.

Sta	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
I+21.5	52	32	33	22
I+46.0	20	16	15	11
I+85.0	0	0		

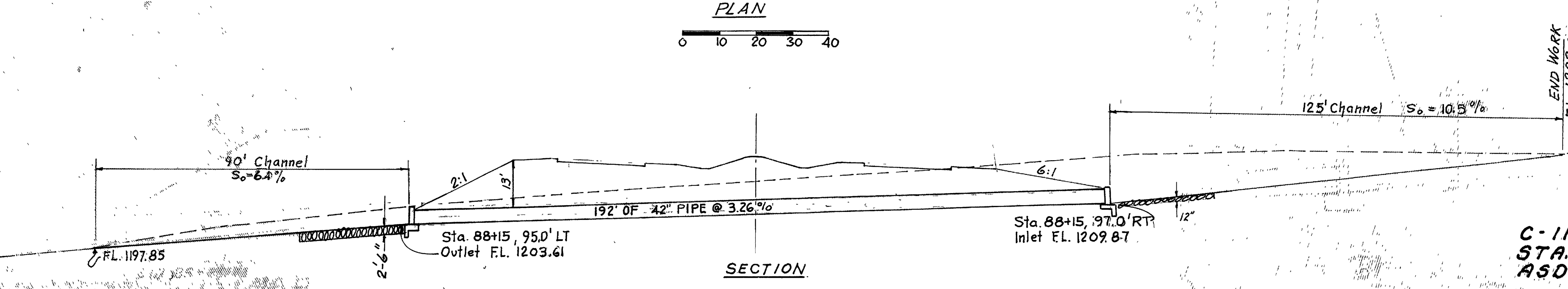
FED. RD. DIVISION	STATE	PROJECT	255
2	OHIO	F-1072(4) I-71-A(24)176	325

RIC.-30-9.28
 ASD.-30-0.00

Sta	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
0+97.0 Lt	204	0	312	0
I+45.5 Lt	144	0		
I+25.0 Rt	140	48	87	40
I+45.5 Rt	88	56		
I+45.5	232	56	323	78
2+20.5	0	0		



PLAN
 0 10 20 30 40



SECTION

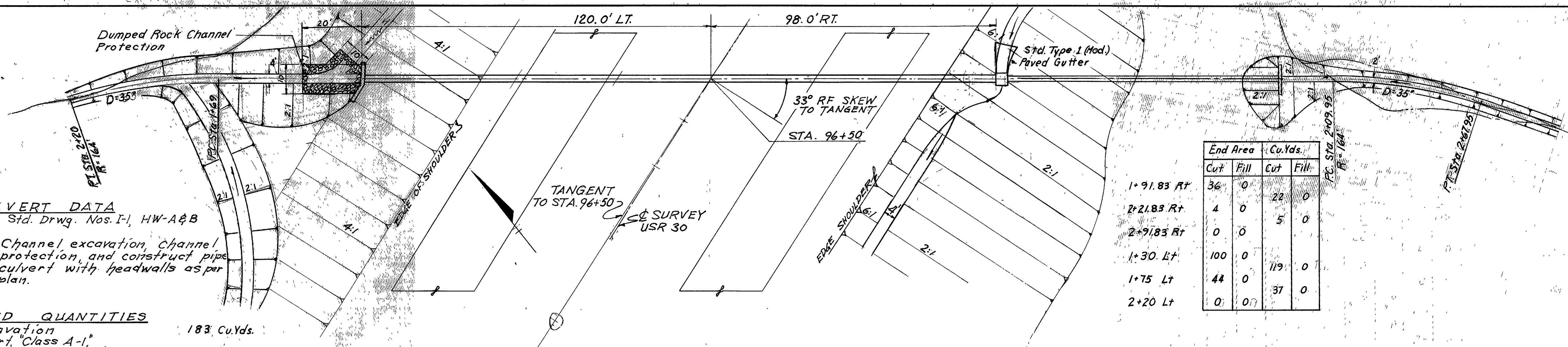
Area = 42 Acres
 Q25 = 82 C.F.S.

C-11
 STA. 88+15
 ASD-30-0166

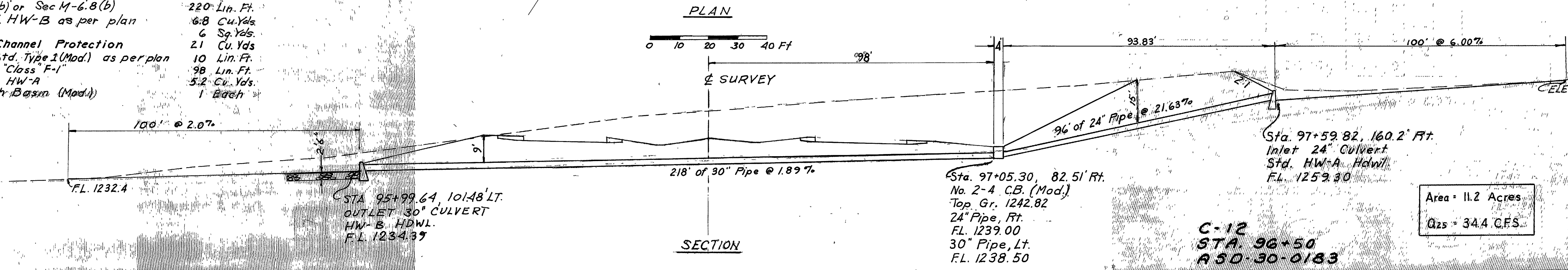
CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A&B
 SIZE - 30" x 220'
 WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

ESTIMATED QUANTITIES

E-3	Channel Excavation	183 Cu.Yds.
I-1	30" Pipe Culvert, Class A-1, Sec. M-6.6(b) or Sec M-6.8(b)	220 Lin. Ft.
I-2	Headwalls, Std. HW-B as per plan	6.8 Cu.Yds.
L-10	Sodding	6 Sq.Yds.
I-10	Dumped Rock Channel Protection	21 Cu.Yds.
I-14	Paved Gutter, Std. Type 1 (Mod.) as per plan	10 Lin. Ft.
I-4	24" Pipe Culvert, Class F-1	98 Lin. Ft.
I-2	Headwalls, Std. HW-A	5.2 Cu.Yds.
I-8	Std. No. 24 Catch Basin (Mod.)	1 Each



PLAN
 0 10 20 30 40 Ft



SECTION

Sta	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
I+91.83 Rt	36	0	22	0
2+21.83 Rt	4	0	5	0
2+91.83 Rt	0	0		
I+30 Lt	100	0	119	0
I+75 Lt	44	0	37	0
2+20 Lt	0	0		

Area = 11.2 Acres
 Q25 = 34.4 C.F.S.

C-12
 STA. 96+50
 ASD-30-0183

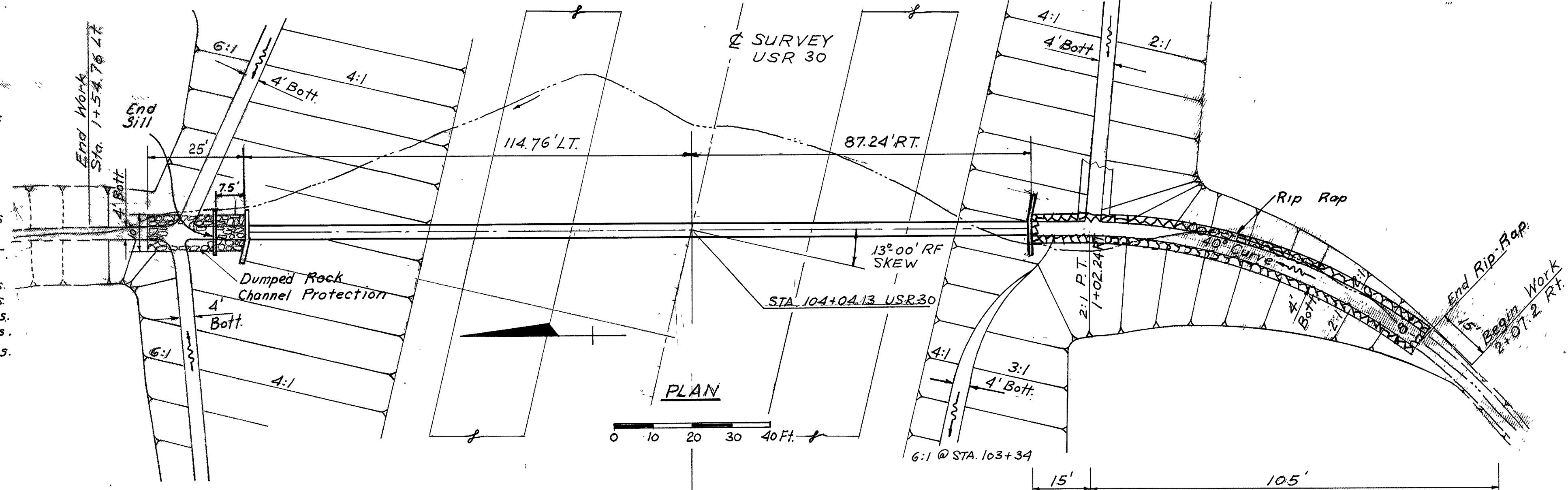
CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A&B
 SIZE - 30" x 202"
 WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

RIC - 30 - 9.28
 ASD - 30 - 0.00

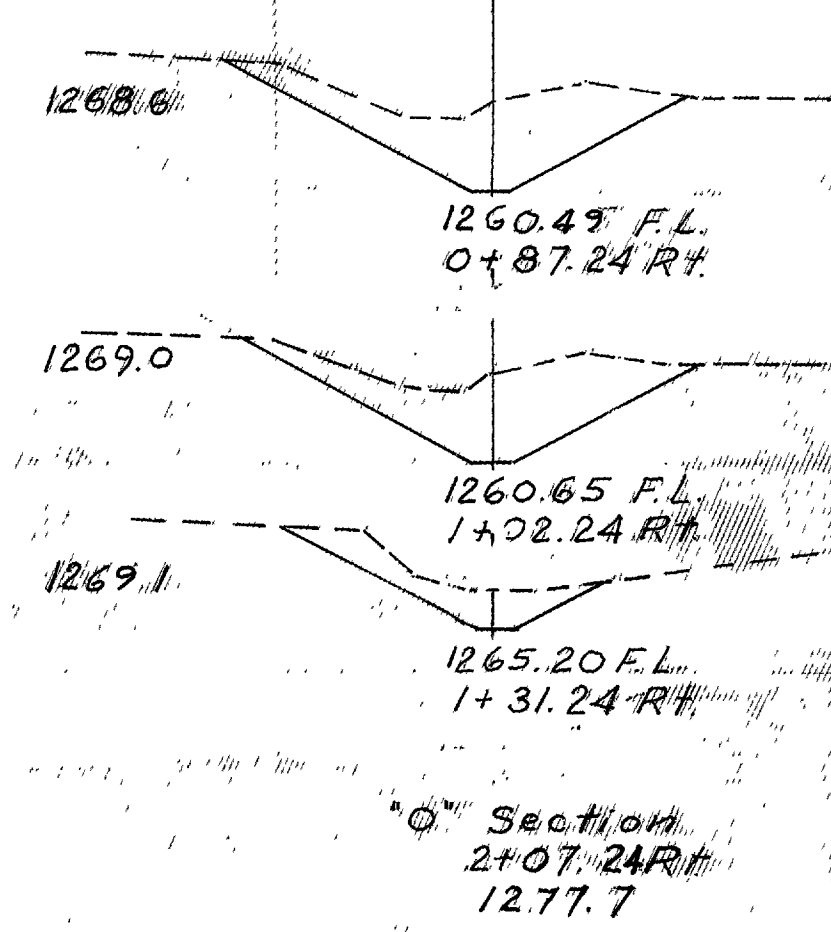
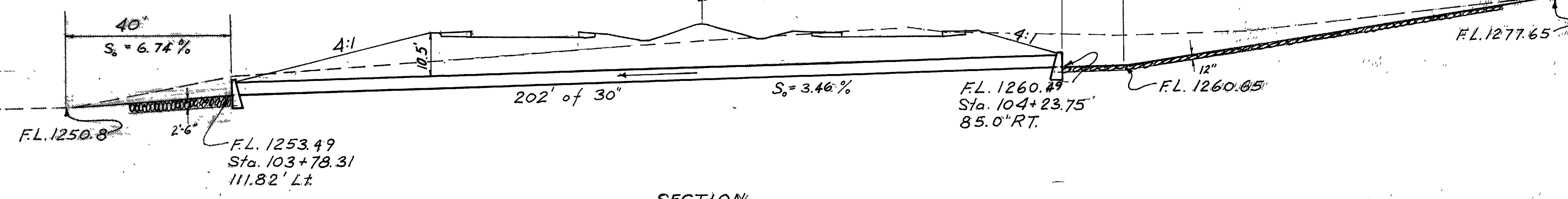
ESTIMATED QUANTITIES

E-3 Channel Excavation	482 Cu.Yds
I-1 30" Pipe Culvert "Class A-1" Sec. M.6.6(b) or Sec. M.6.8(b)	202 Lin Ft.
I-2 Headwalls, Std. HW-B	131 Cu. Yds.
L-10 Sodding	6 Sq. Yds.
I-10 Rip Rap, 6" Reinf. Conc.	113 Sq. Yds.
I-10 Dumped Rock Channel Protection	25 Cu. Yds.
I-2 Class "E" Concrete for End Sill	0.78 Cu. Yds.

End Area	Cu. Yds	End Area	Cu. Yds
Cut	Fill	Cut	Fill
0+87.24	224 0	126 0	0
1+02.24	228 0	166 0	0
1+31.24	80 0	113 0	0
2+07.24	0 0		



End Area	Cu Yds	End Area	Cu Yds
Cut	Fill	Cut	Fill
1+14.76	44 32	77 24	
1+54.76	60 0		

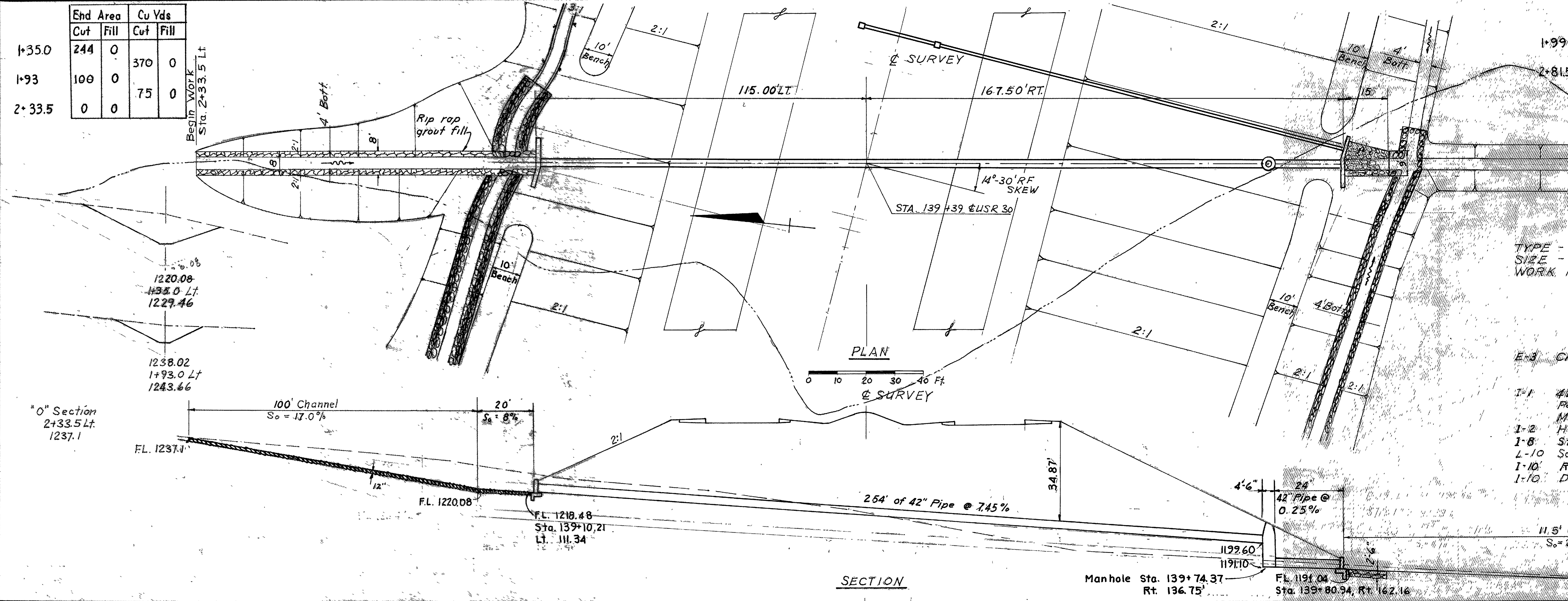


Area = 14.5 Acres
 Q₂₅ = 42.8 CFS.

C-13
 STA. 104+04.13
 ASD-30-0197

End Area	Cu Yds	End Area	Cu Yds
Cut	Fill	Cut	Fill
1+35.0	244 0	370 0	
1+93	100 0	75 0	
2+33.5	0 0		

End Area	Cu Yds	End Area	Cu Yds
Cut	Fill	Cut	Fill
1+99	32 0	49 0	
2+81.5	0 0		



CULVERT DATA
 TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, HW-A&B
 SIZE - 42" x 282" Sec. M-6A(d), 8 Gage
 WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

ESTIMATED QUANTITIES

E-3 Channel Excavation	494 Cu.Yds
I-1 42" Pipe Culvert "Class A-1" Reveal Bituminous Coated Corrugated Metal Pipe Sec. M-6A(d), 8 Gage	282 Lin Ft.
I-2 Headwalls, Std. HW-B as per plan	203 Cu. Yds.
I-8 Std. No. 2 Manhole, without Drop Pipe	1 Each
L-10 Sodding	8 Sq. Yds.
I-10 Rip Rap, 6" Reinf. Conc.	108 Sq. Yds.
I-10 Dumped Rock Channel Protection	17 Cu. Yds.

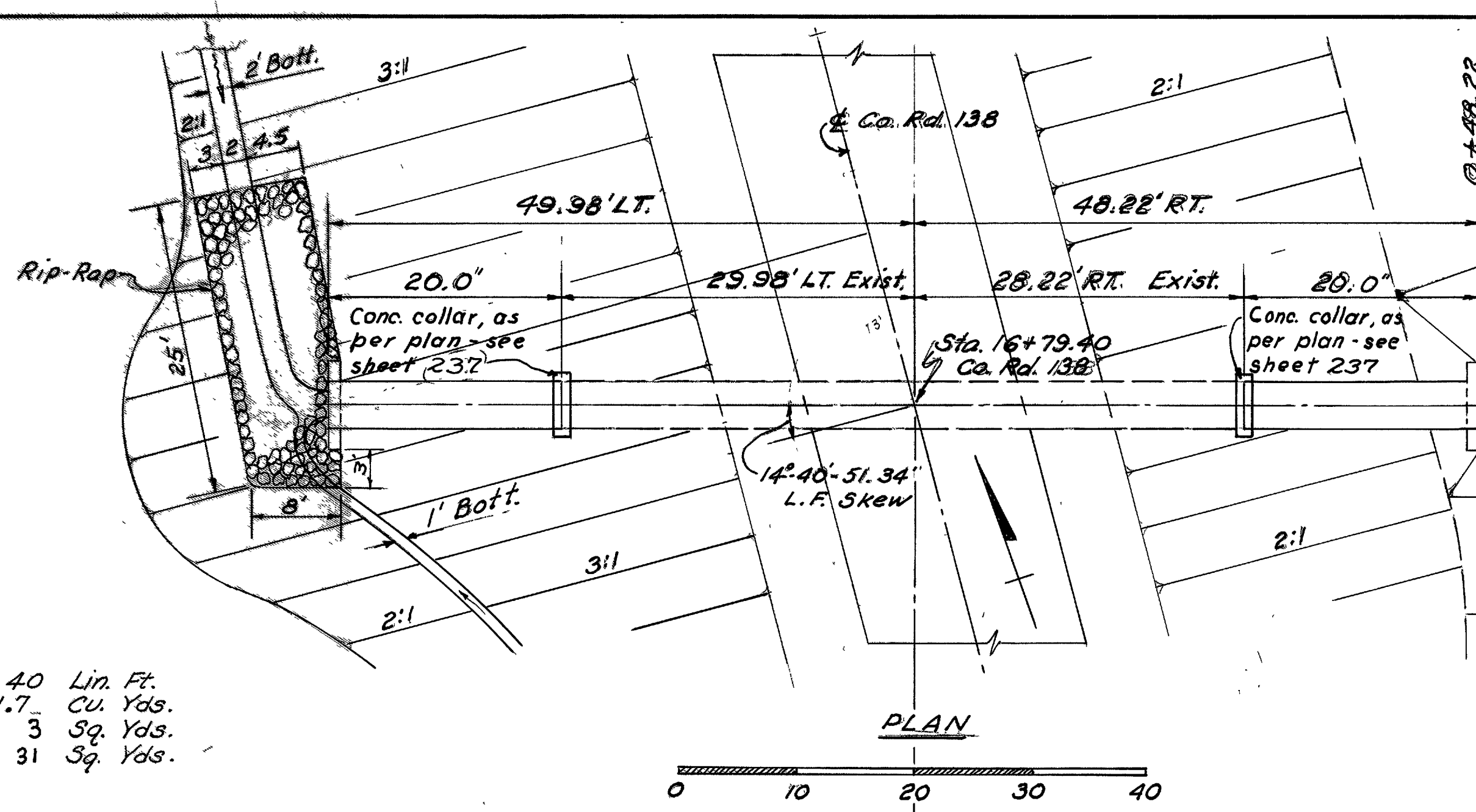
Area = 42.6 Acres
 Q₂₅ = 88.0 CFS.

C-15
 STA. 139+39
 ASD-30-0263

CURVE DATA
 P.I. STA. 1+01
 $\Delta = 18^{\circ}38'37''$
 $R = 114.59'$
 $T = 18.81'$
 $L = 37.29'$

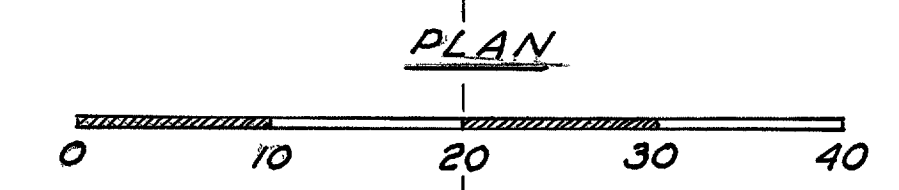
RIC. - 30-9.28
ASD - 30-0.00

CULVERT DATA
 TYPE - Pipe Culvert Std. Drwg. No's I-1, HW-E
 SIZE - 48" X 40" Conc. Pipe, Sec. M-6.6(b)
 WORK REQUIRED - Channel protection, and construct pipe culvert with headwalls



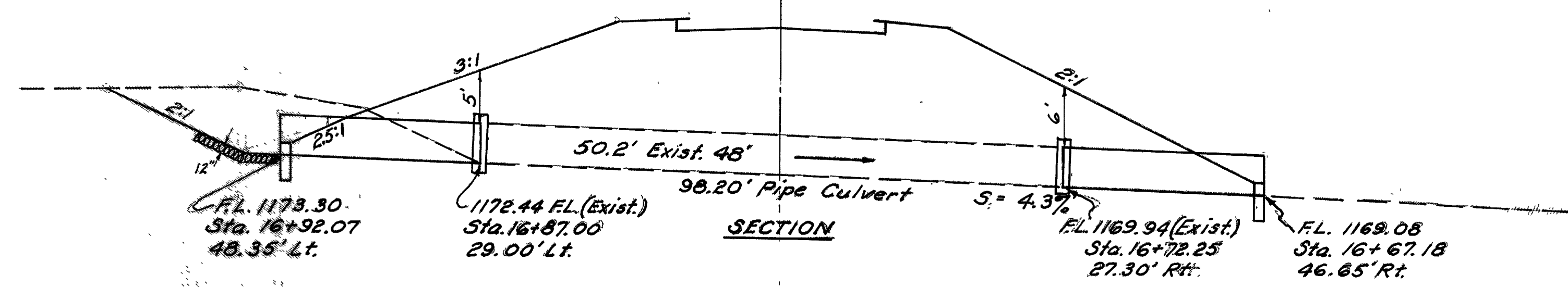
ESTIMATED QUANTITIES

I-1	48 Pipe Culvert, Class A-1	4.0	Lin. Ft.
I-2	Reinforced Concrete Pipe Sec. M-6.6(b)	1.7	Cu. Yds.
L-10	Headwalls, Std. HW-E (End Wall) as per plan	3	Sq. Yds.
I-10	Sodding	31	Sq. Yds.
I-10	Rip-Rap, 6" Rein. Conc.		



PLAN

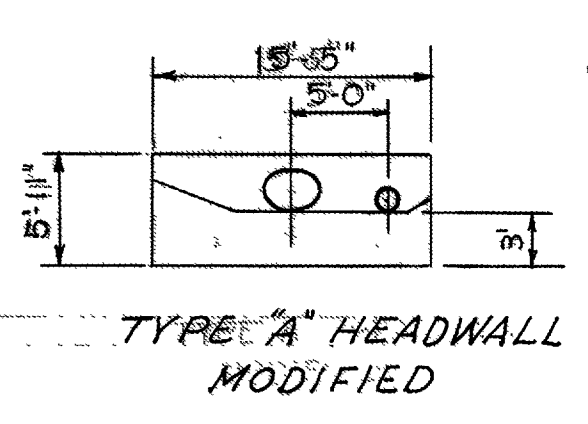
± SURVEY



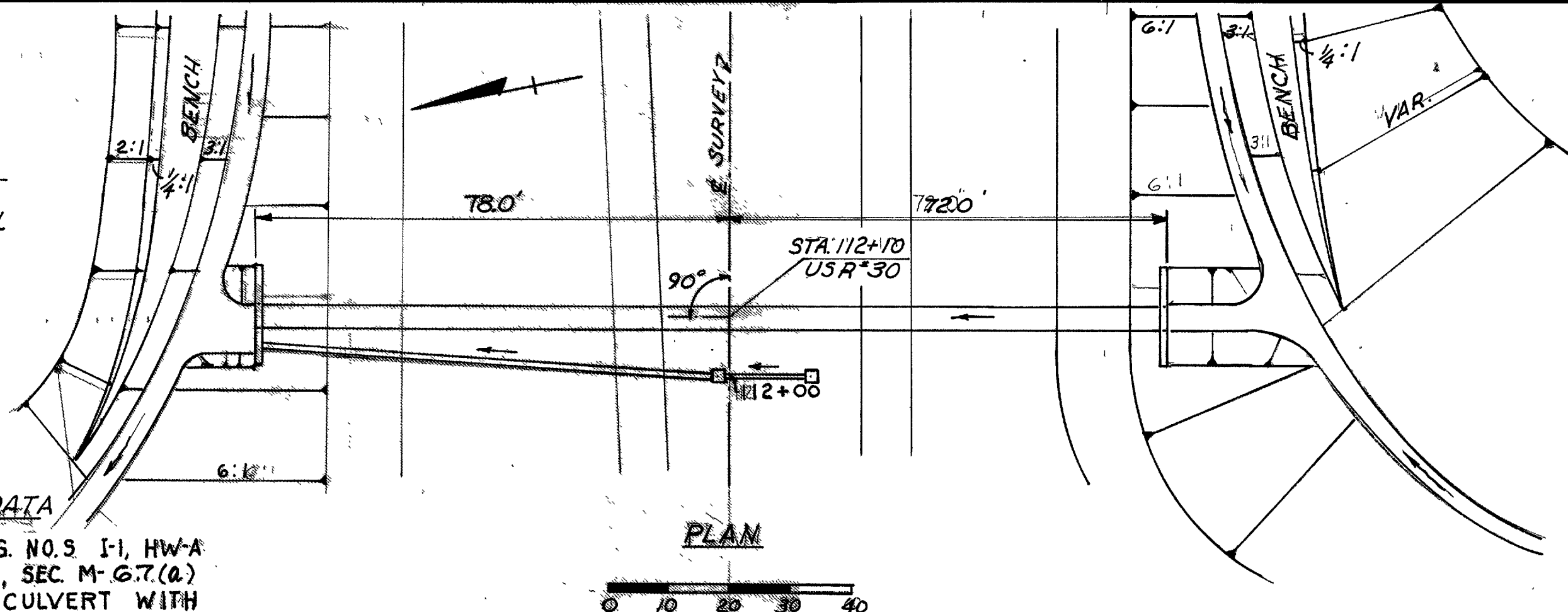
SECTION

Area = 47.1 Acres
 $Q_{25} = 92.0$ C.F.S.

C-17
STA. 16+7940
COUNTY ROAD 138



TYPE "A" HEADWALL MODIFIED



CULVERT DATA

TYPE - PIPE CULVERT, STD. DRWG. NO'S I-1, HW-A
 SIZE - 24" X 38" CONC. PIPE, SEC. M-6.7(a)
 WORK REQ'D - CONSTRUCT PIPE CULVERT WITH HEADWALLS

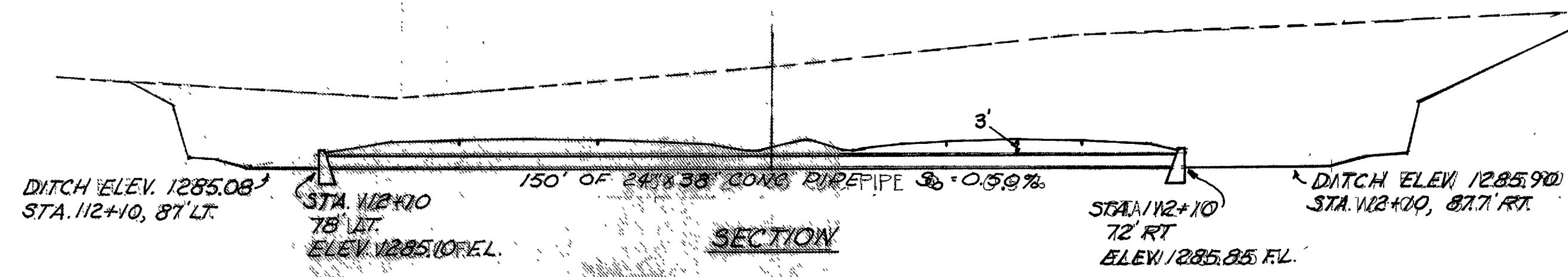
CULVERT QUANTITIES

I-1	24" X 38" PIPE CULVERT, CLASS G-1	150	LIN. FT.
I-2	REINFORCED CONC. PIPE, SEC. M-6.7(a)	12.3	CU. YDS.
L-10	HEADWALLS, HW-A	6	SQ. YDS.
L-10	SODDING		



PLAN

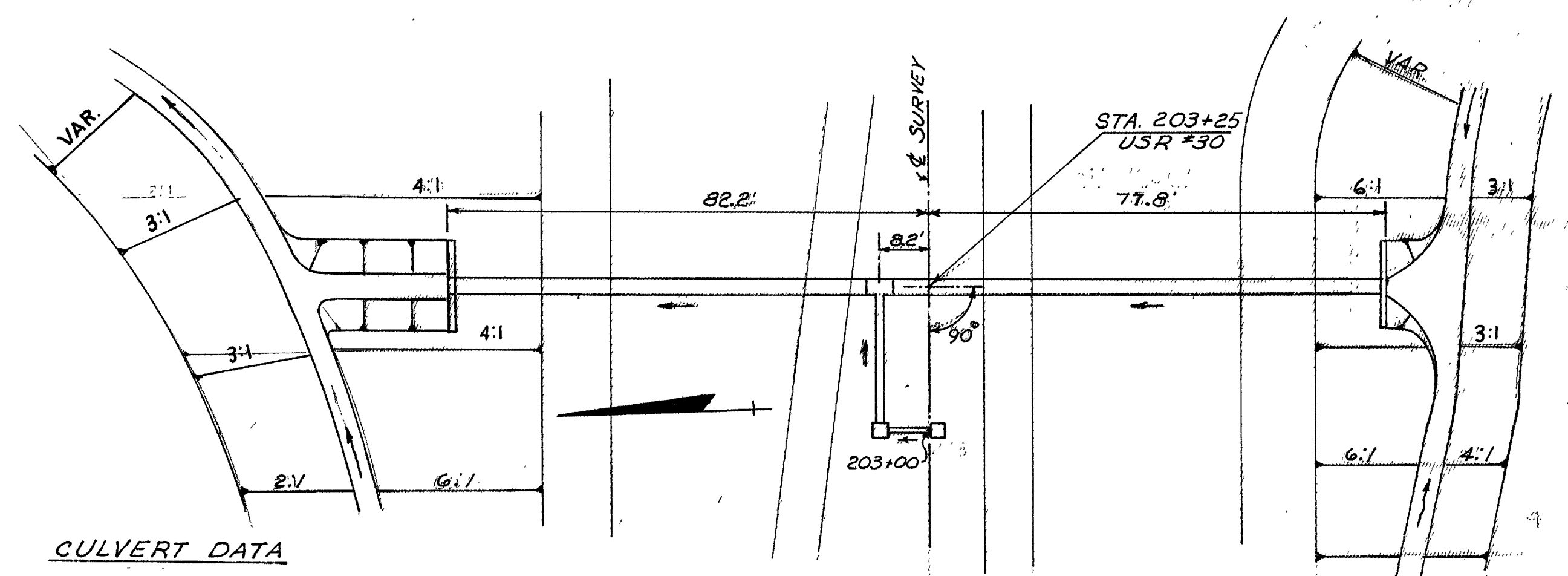
± SURVEY



SECTION

Area = 12.2 Acres
 $Q_{25} = 25.8$ C.F.S.

C-14
STA. 112+10
ASD-30-0212



CULVERT DATA

TYPE - PIPE CULVERT, STD. DRWG. NO'S I-1, HW-G
 SIZE - 30" X 160" CULV. PIPE, SEC. M-6.6(b) OR SEC. M-6.8(b)
 WORK REQ'D - CONSTRUCT PIPE CULVERT WITH HEADWALLS

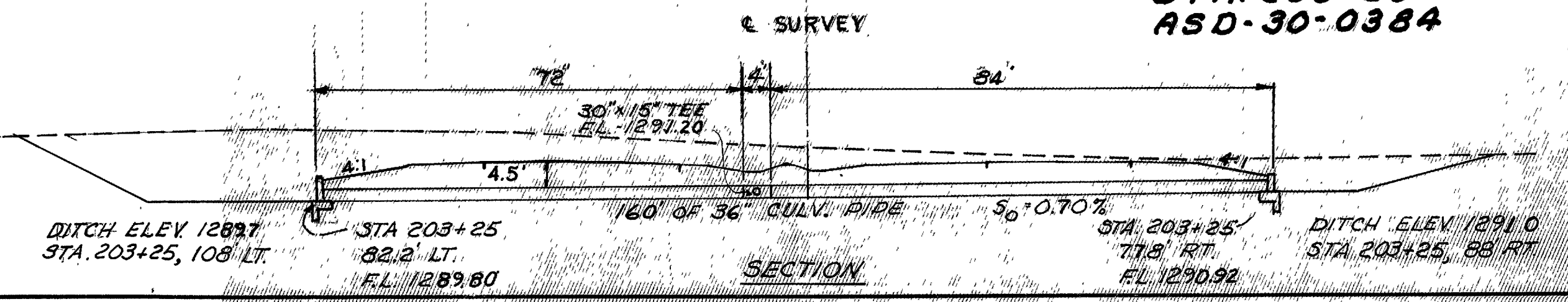
CULVERT QUANTITIES

I-1	30" PIPE CULVERT, CLASS A-1	160	LIN. FT.
I-2	SEC. M-6.6(b) OR SEC. M-6.8(b)	16.0	CU. YDS.
I-5	HEADWALLS HW-C	1	EACH
L-10	PIPE SPECIAL, CLASS A-1, 36" X 15" TEE	6	SQ. YDS.
L-10	SODDING		



PLAN

± SURVEY



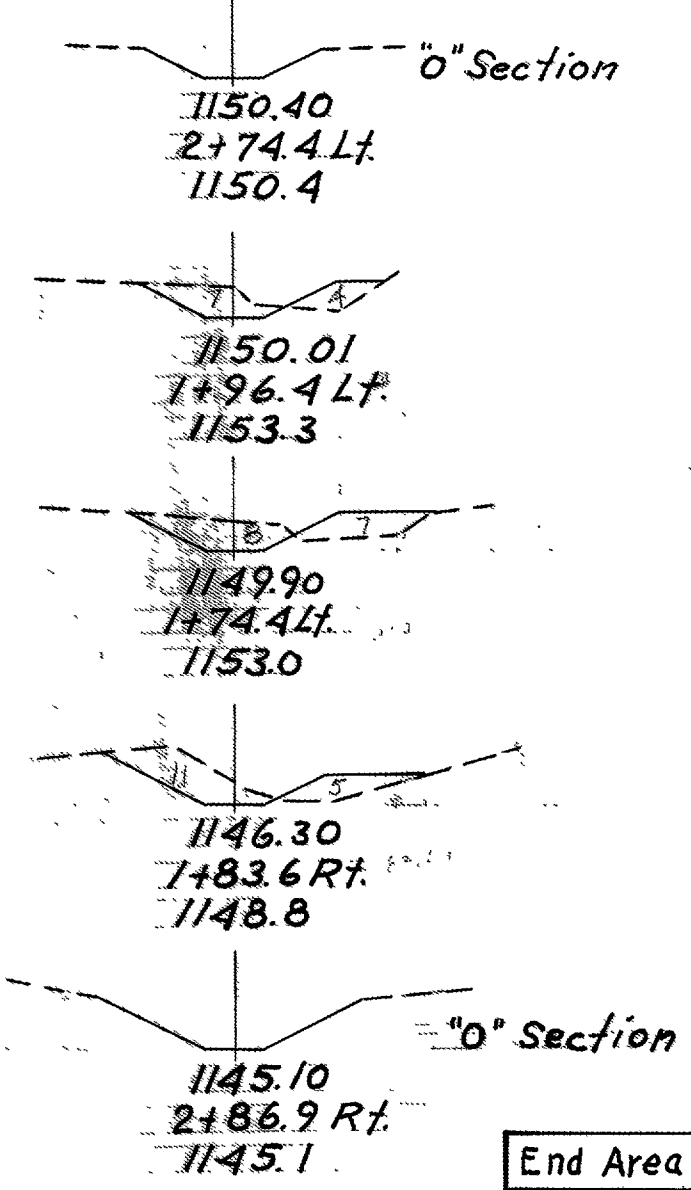
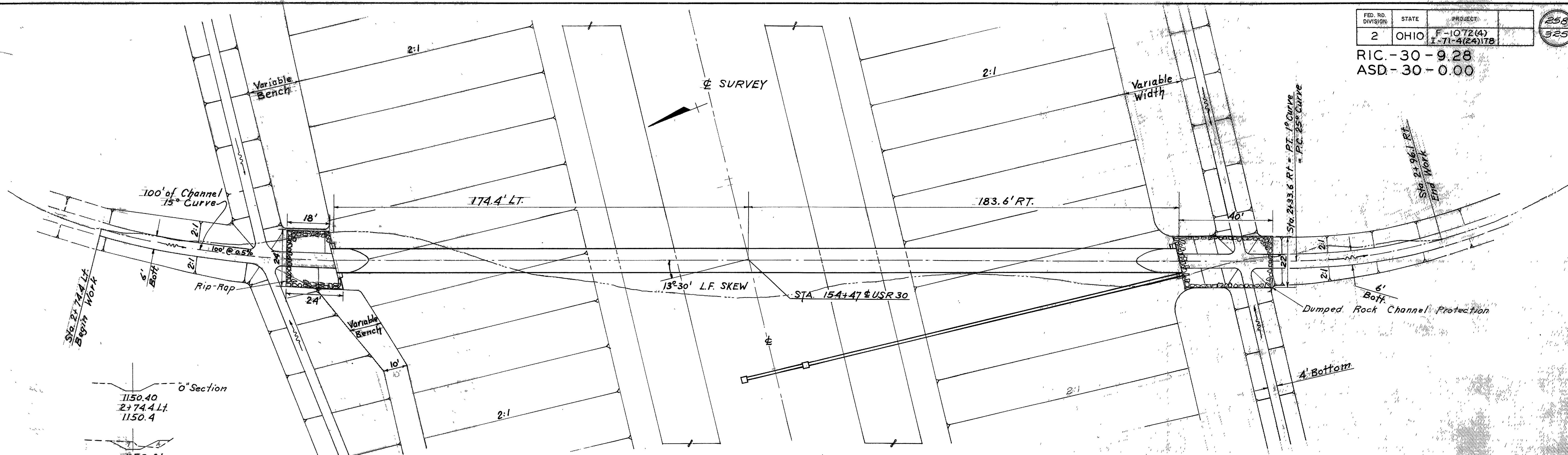
SECTION

Area = 15.8 Acres
 $Q_{25} = 35.1$ C.F.S.

C-19
STA. 203+25
ASD-30-0384

Culverts: Sta. 16+7940 (CR 138), Sta. 112+10, Sta. 203+25

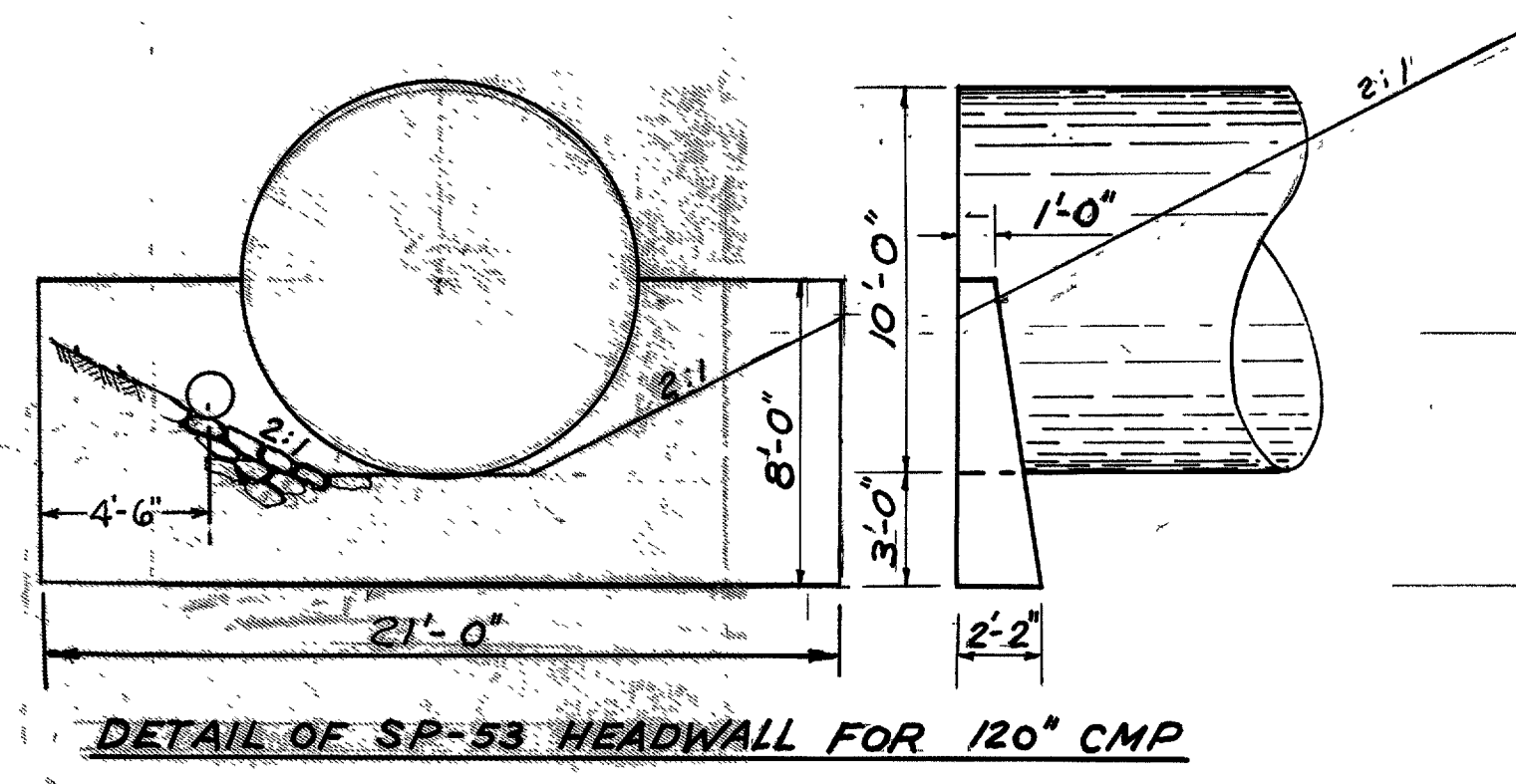
RIC - 30 - 9.28
ASD - 30 - 0.00



PLAN
0 10 20 30 40 Ft.

CULVERT DATA
TYPE - Pipe Culvert, Std. Drwg. Nos. I-1, SP 53
SIZE - 120" x 360" Pipe Culvert, Sec. M-6.4(g)
WORK REQUIRED - Channel excavation, channel protection, and construct pipe culvert with headwalls as per plan.

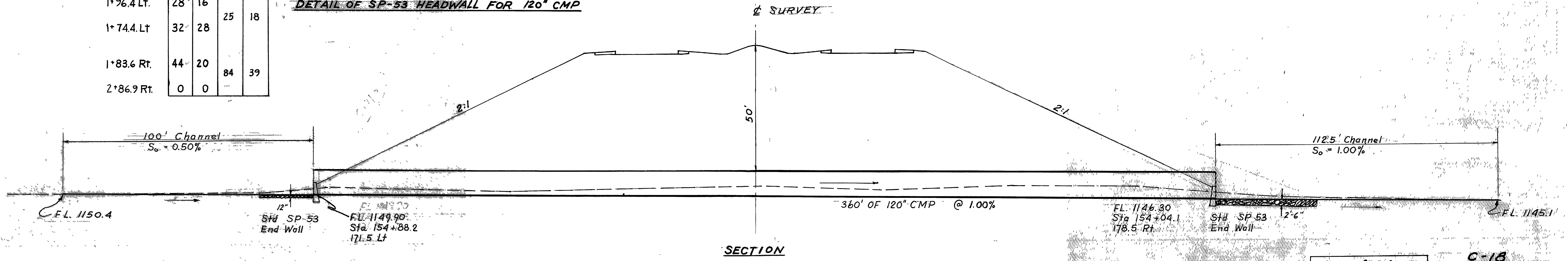
Station	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
2+74.4 Lt.	0	0	41	24
1+96.4 Lt.	28	16	25	18
1+74.4 Lt.	32	28	84	39
1+83.6 Rt.	44	20		
2+86.9 Rt.	0	0		



DETAIL OF SP-53 HEADWALL FOR 120" CMP

ESTIMATED QUANTITIES

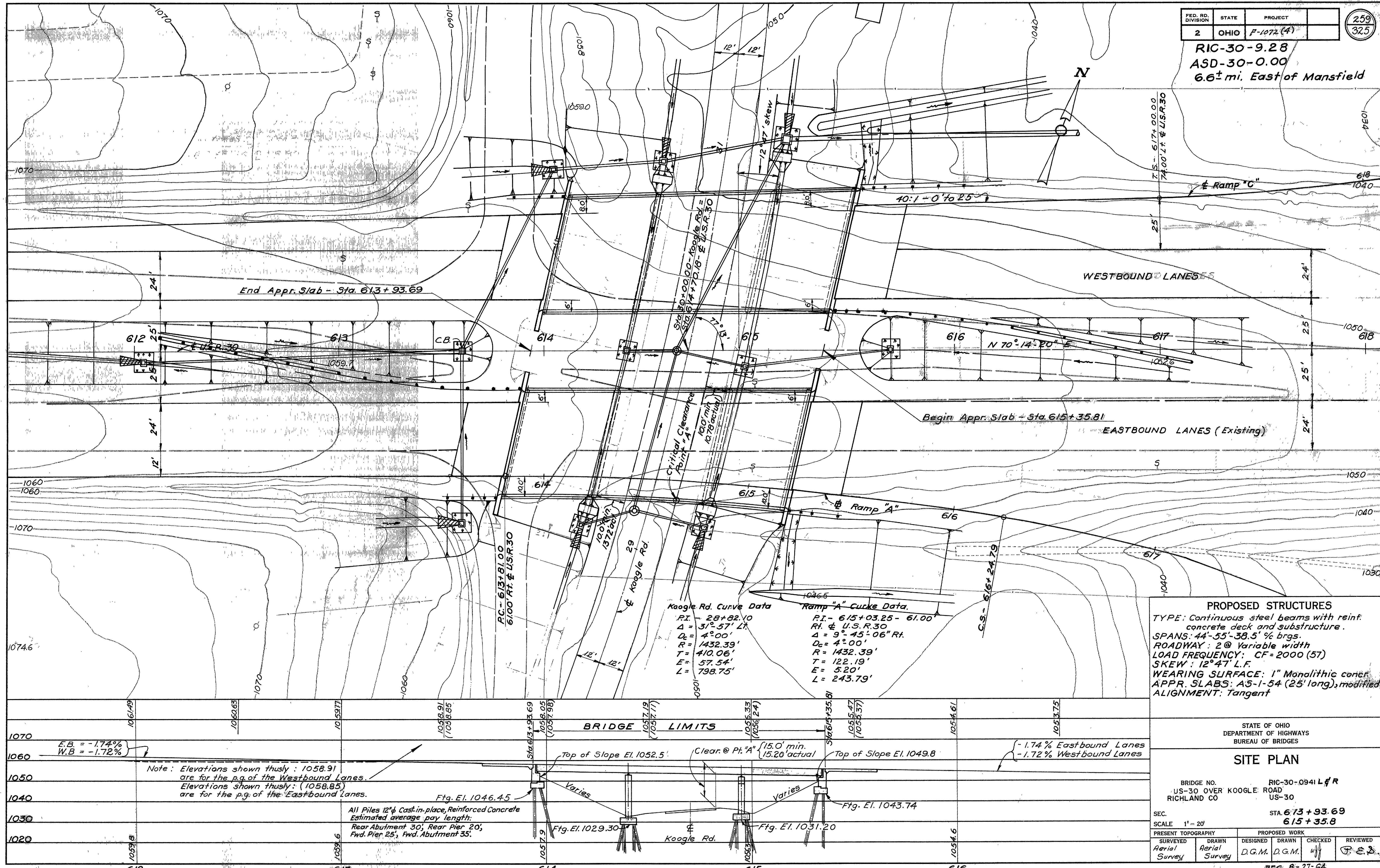
E-3	Channel Excavation	150	Cu. Yds.
I-1	120" Pipe Culvert "Class A" 1" Sectional Plate Corrugated Metal Pipe, Sec. M-6.4(g) (1-1 gage)	360	Lin. Ft.
I-2	Headwall, S.P.-53 as per plan	1	Sq. Yds.
L-10	Sodding	2	Sq. Yds.
I-10	Dumped Rock Channel Protection	89	Cu. Yds.
I-10	Rip-Rap, 6" Rein. Conc.	61	Sq. Yds.



SECTION

Area = 804 Acres
Q25 = 600 CFS
C-18
STA. 154+47
ASD - 30 - 0292
CULVERT STA 154+47

RIC-30-9.28
ASD-30-0.00
6.6± mi. East of Mansfield



Koogle Rd. Curve Data
 P.I. = 28+82.10
 $\Delta = 31^{\circ} 57' L$
 $D_c = 4^{\circ} 00'$
 $T = 1432.39'$
 $E = 57.54'$
 $L = 798.75'$

Ramp "A" Curve Data
 P.I. = 615+03.25 - 61.00
 Rt. $\&$ U.S.R.30
 $\Delta = 9^{\circ} 45' 06" Rt.$
 $D_c = 4^{\circ} 00'$
 $R = 1432.39'$
 $T = 122.19'$
 $E = 5.20'$
 $L = 243.79'$

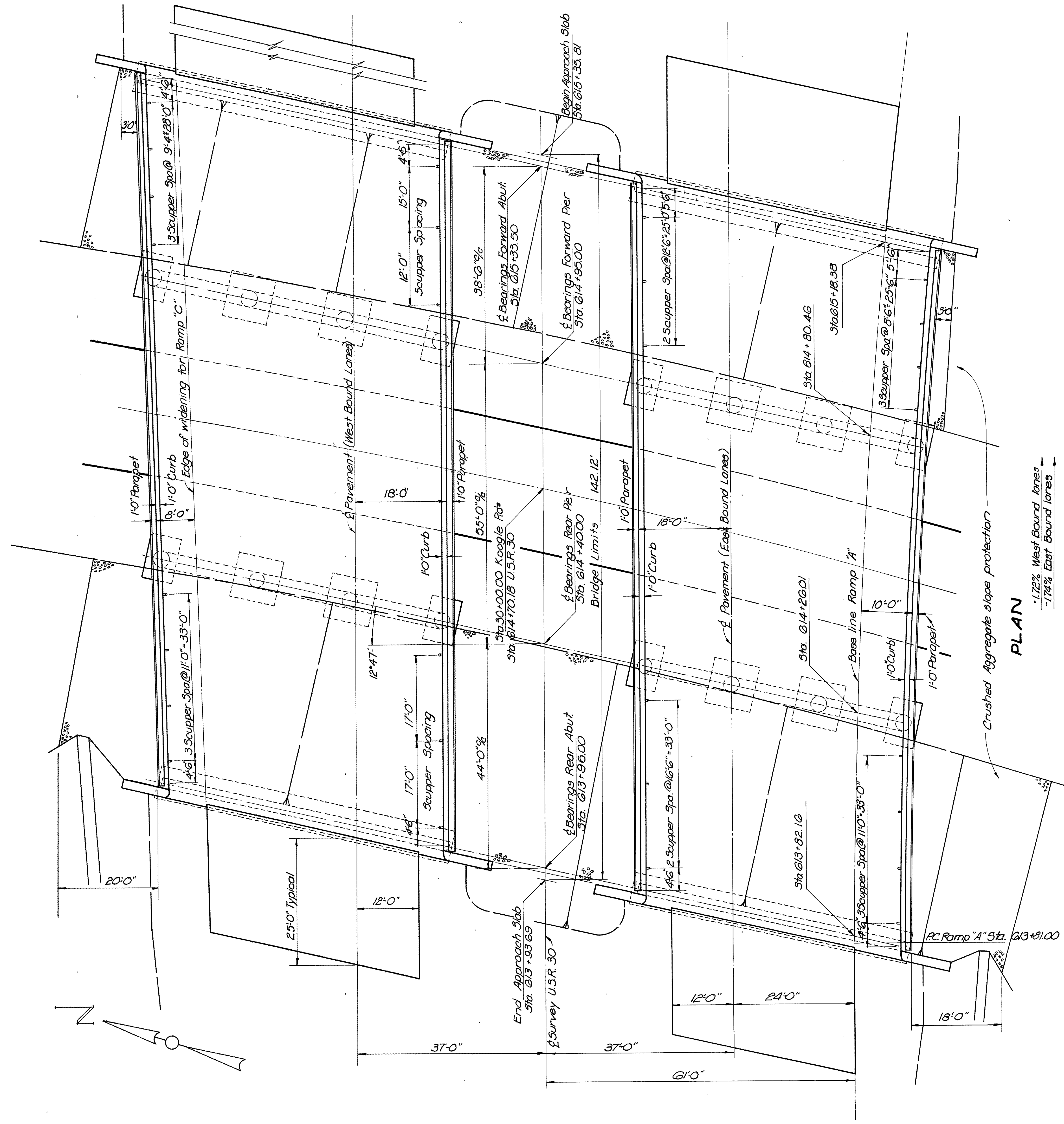
PROPOSED STRUCTURES
 TYPE: Continuous steel beams with reinf. concrete deck and substructure.
 SPANS: 44'-55'-38.5' % brgs.
 ROADWAY: 2 @ Variable width
 LOAD FREQUENCY: CF=2000 (57)
 SKEW: 12° 47' L.F.
 WEARING SURFACE: 1" Monolithic coner.
 APPR. SLABS: A5-1-54 (25' long), modified
 ALIGNMENT: Tangent

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

SITE PLAN
 BRIDGE NO. RIC-30-0941 L&R
 US-30 OVER KOOGLE ROAD
 RICHLAND CO US-30

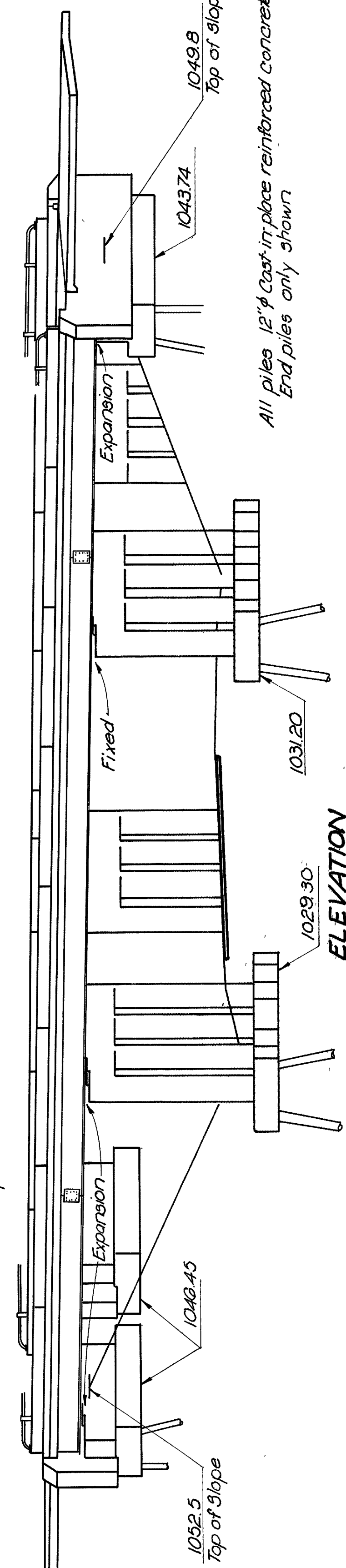
SEC.	SCALE 1" = 20'		STATIONING	
			613 + 93.69	615 + 35.81
PRESENT TOPOGRAPHY	DRAWN	DESIGNED	DRAWN	CHECKED
Aerial Survey	Aerial Survey	D.G.M.	D.G.M.	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072 (4)



PLAN

-1.12% West Bound lanes
-1.74% East Bound lanes



ELEVATION

GENERAL NOTES

BASIC STRESSES
Concrete Class C-basic unit stress 1,353 psi
Concrete Class E-basic unit stress 1,135 psi.
Structural Steel-A57M A36-basic unit stress 20,000 psi (A57M A7 and A373 steel not permitted)
Reinforcing Steel-ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except spiral reinforcement may be plain, structural grade, with basic unit stress of 18,000 psi.
PILES shall be driven to minimum bearing capacity of 35 tons per pile.
FIRST TEST PILE: Pilement will be made for either the right or left bridge

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.
SURFACE FINISH OF CONCRETE: The requirements of Sec-122, Rubbed Finish, shall apply to all exposed concrete surfaces on the super-structure except the top and bottom surfaces of curbs and roadways, and on the piers and abutments except bridge seats, backwalls and the face of spill-through abutments between

REFERENCE shall be made to Standard Drawing: SD-1-63, Sheets 1 thru 10 dated 11-12-63; FS-B-1-62, revised 1-15-63; AR-1-57, revised 4-2-62 and "to Supplemental Specification No. 5-101, dated 7-12-62, and S-307 dated 10-1-64.
DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions therof.
DESIGN LOADING CF-2000(57)

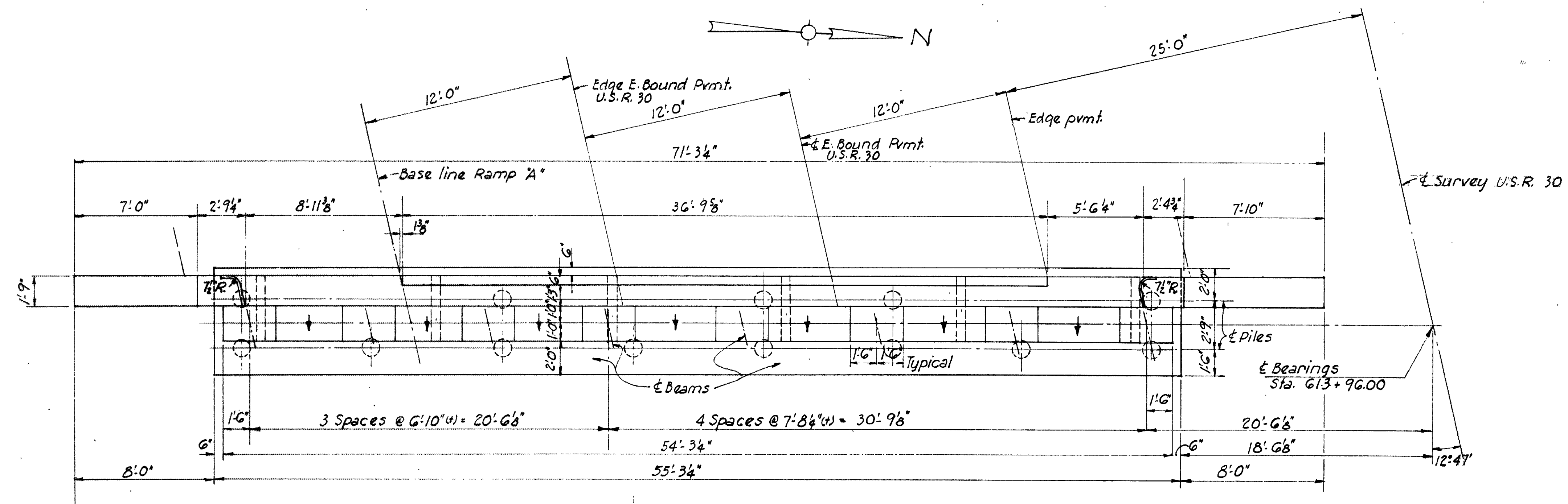
MACHINE FINISH: At the Contractor's option the concrete bridge deck slab may be machine finished in accordance with Sec 5-123.
In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts; and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit after which all bolts shall be tightened completely by calibrated drift pins wrenches or by the turn-of-nut method. Drift pins shall be replaced with bolts, tightened in the same manner."

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

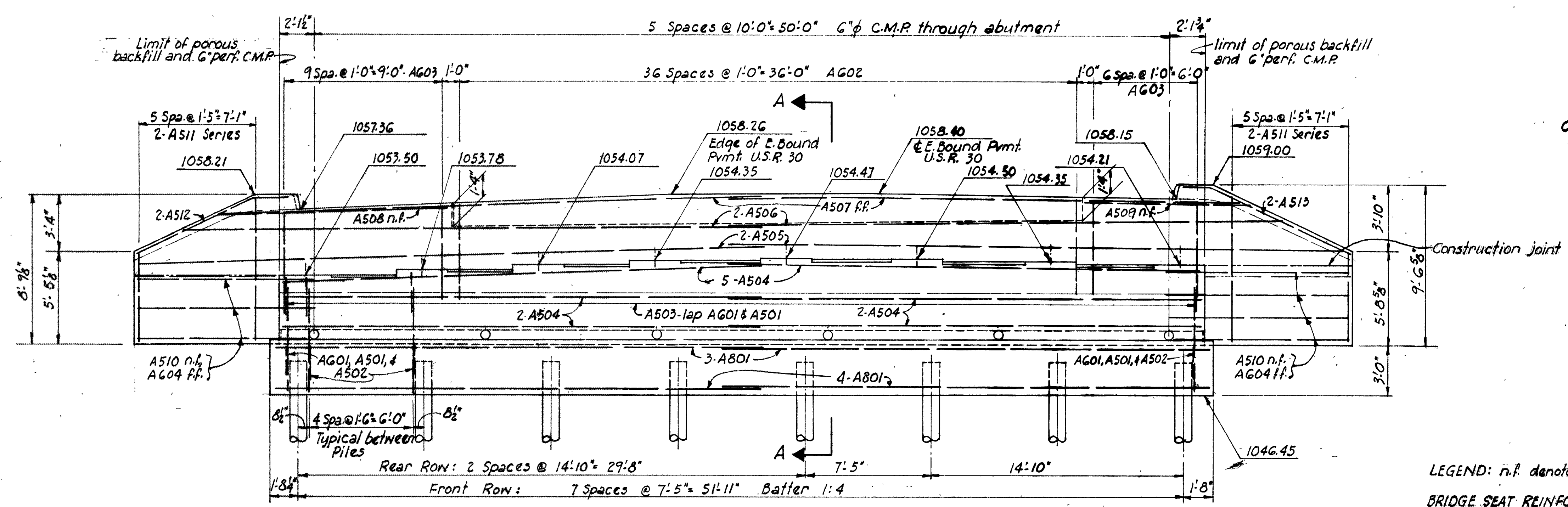
GENERAL PLAN & ELEVATION AND GENERAL NOTES
BRIDGE NO. R1C-30-0941 R & L
OVER KOOGLE ROAD
RICHLAND CO. STA. 613+93.69 to STA. 615+35.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
J.D.R.	J.D.R.	CAM	WCK	BFG	8-27-64	

RIC-30-928
ASD-30-000

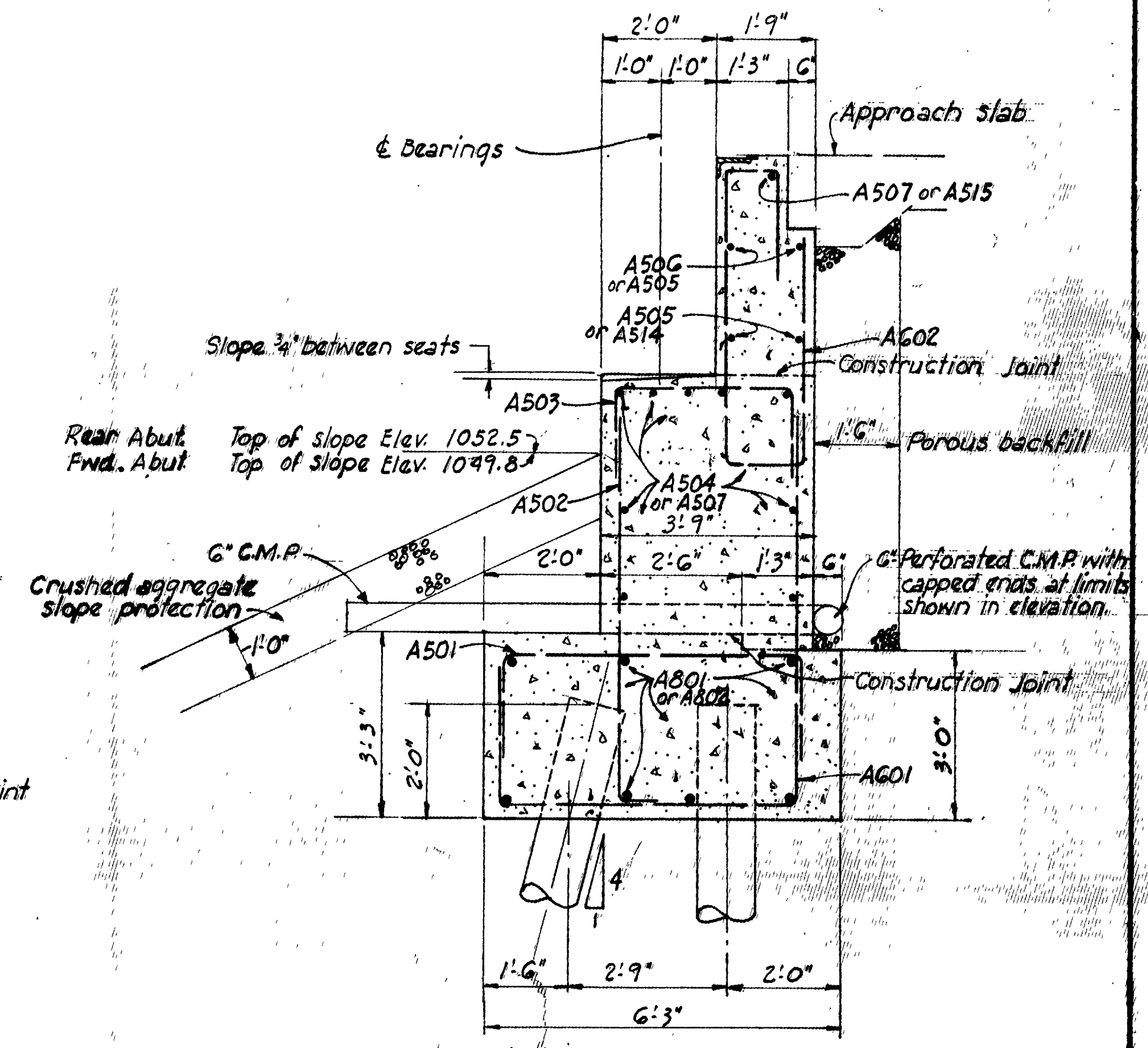


PLAN



ELEVATION

All Piles 12" Cast-in-place reinforced concrete



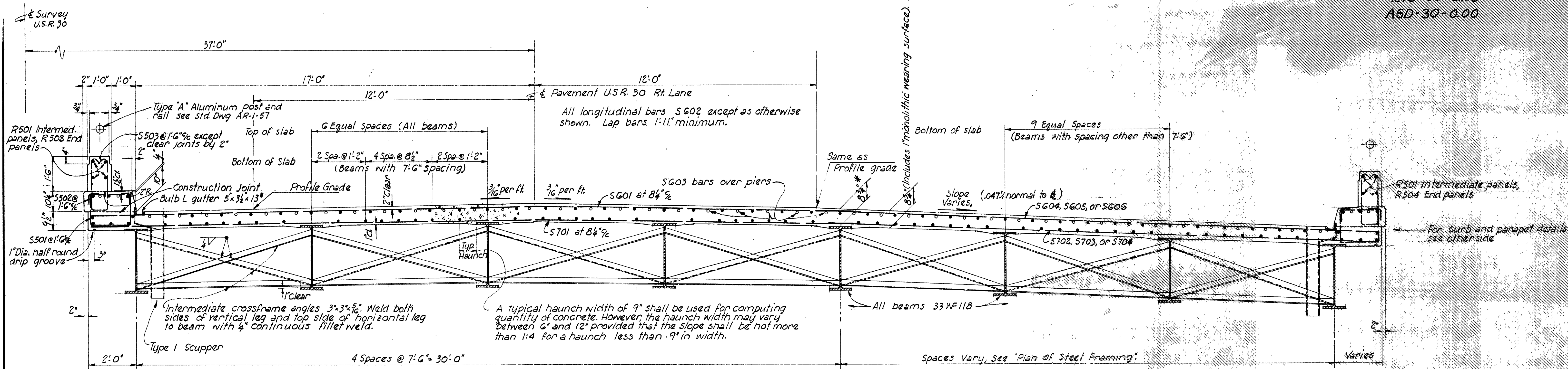
SECTION A-A

LEGEND: n.f. denotes near face; f.f. denotes far face

BRIDGE SEAT REINFORCING: Special care shall be taken in placing the reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

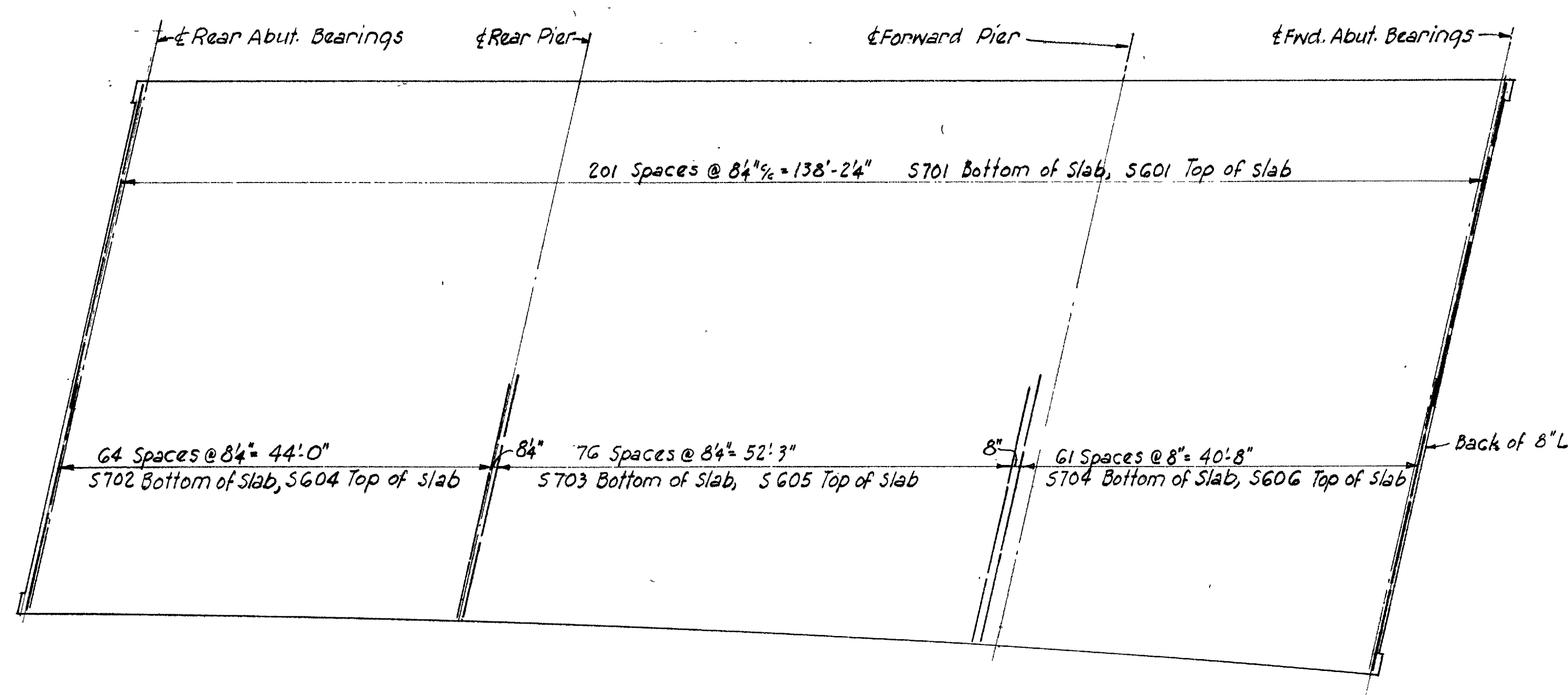
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
REAR ABUTMENT DETAILS					
BRIDGE NO. RIC-30-0941-R					
OVER KOOGLE ROAD					
RICHLAND CO. Sta. 613+93.69 to Sta. 618+35.81					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.D.R.	J.D.R.		WCK	BFG	8-27-64

RIC-30-928
ASD-30-000



TRANSVERSE SECTION

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



DECK PLAN SHOWING TRANSVERSE REINFORCING STEEL

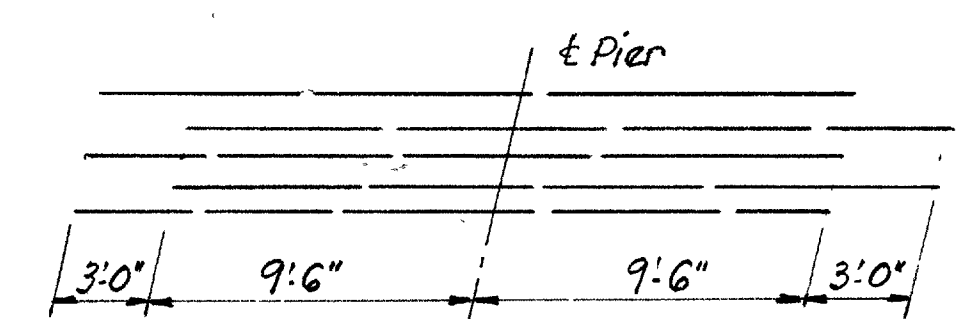
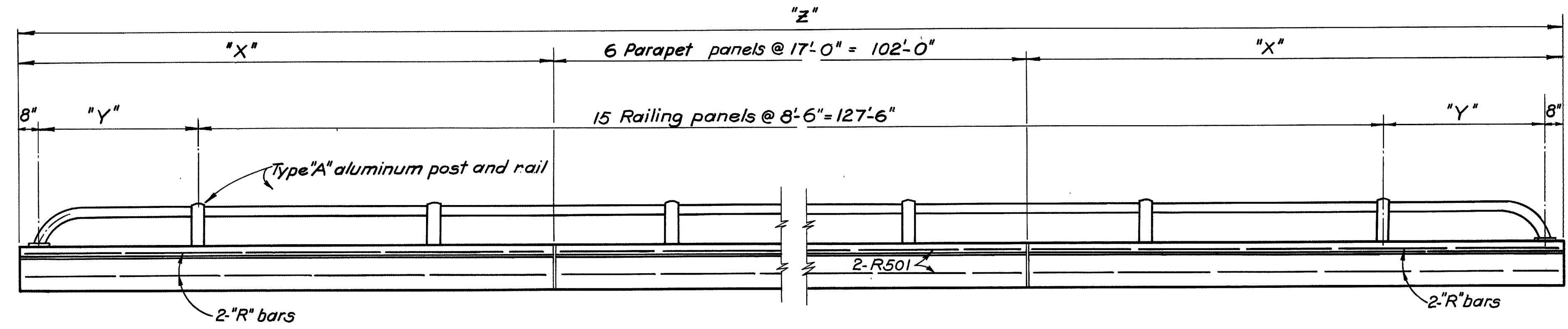


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SUPERSTRUCTURE DETAILS						
BRIDGE NO. RIC-30-0941 R						
OVER KOOGLE ROAD						
RICHLAND CO. Sta. 613+ 73.69 to						
Sta. 615+ 35.81						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.D.R.	J.D.R.		W.C.K.	B.F.G.	8-27-64	

RIC-30-9.28
ASD-30-0.00

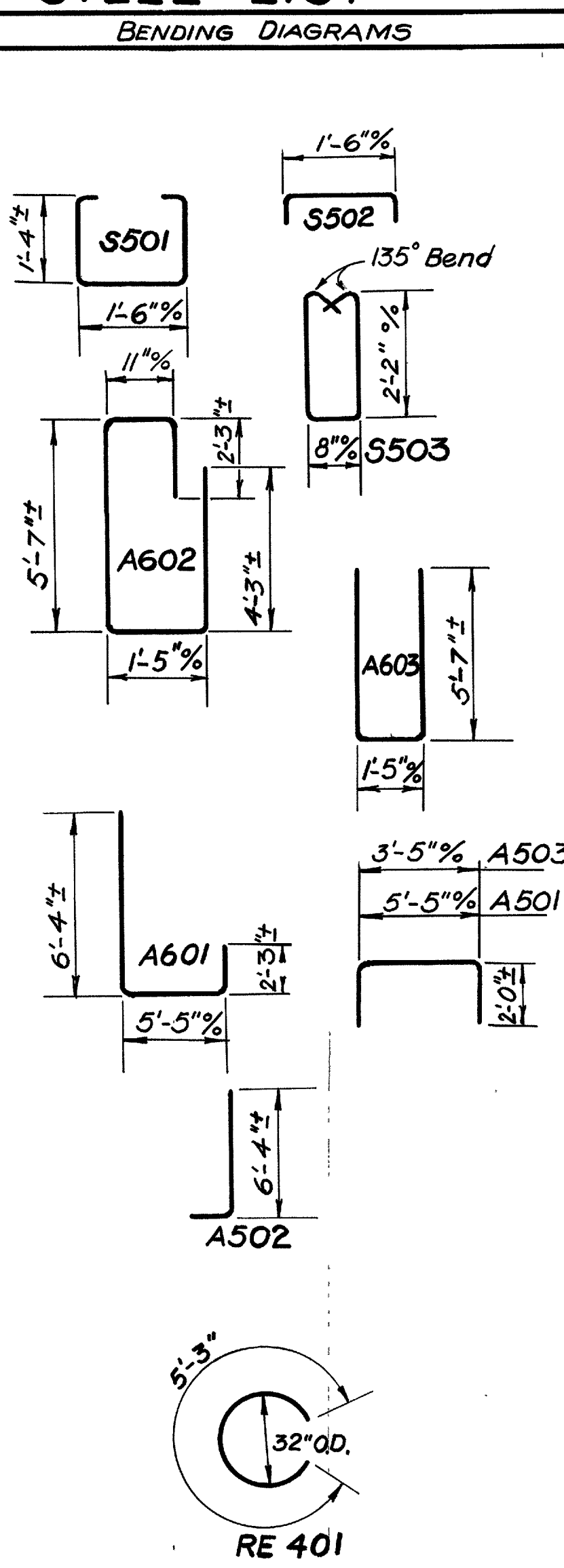


RAILING DIMENSIONS					
		Dim. X"	Dim. Y"	Dim. Z"	R-bar
Left Structure	Left Railing	18'-9 1/4"	5'-4 1/4"	139'-6 1/2"	R502
	Right Railing	18'-4 1/4"	4'-11 1/4"	138'-8 1/2"	R503
Right Structure	Left Railing	17'-9 3/8"	4'-4 3/8"	137'-6 3/8"	R504
	Right Railing				

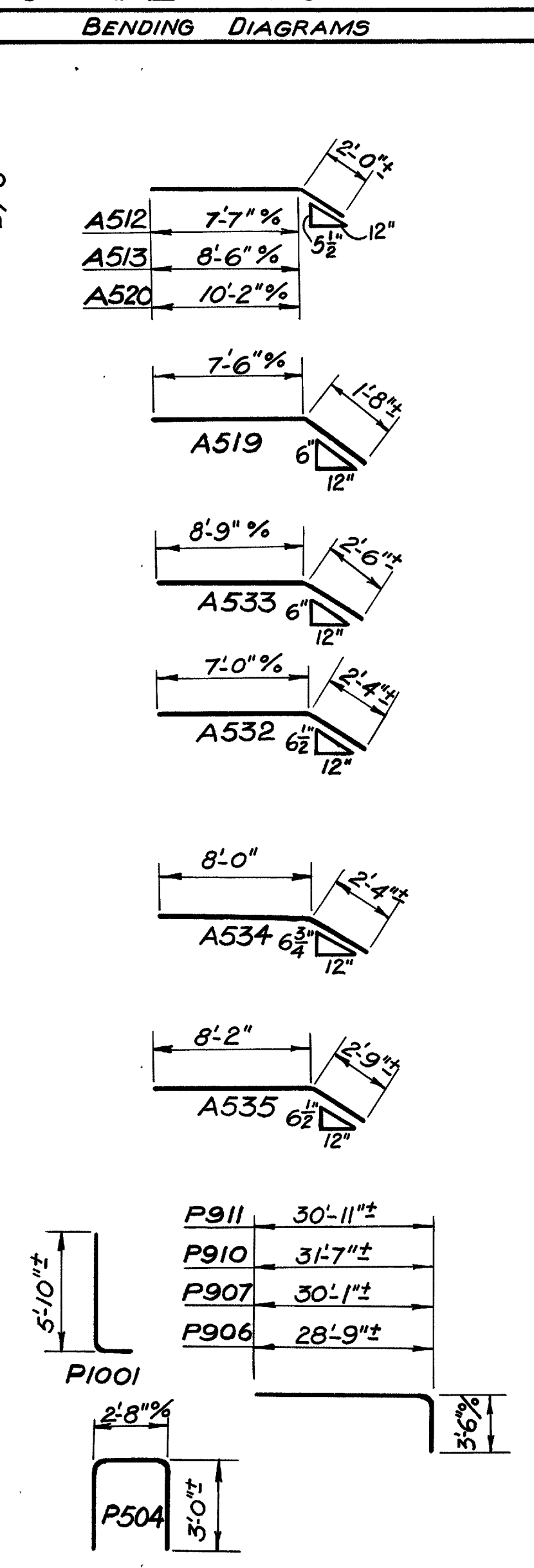
* Along curve

RAILING ELEVATION

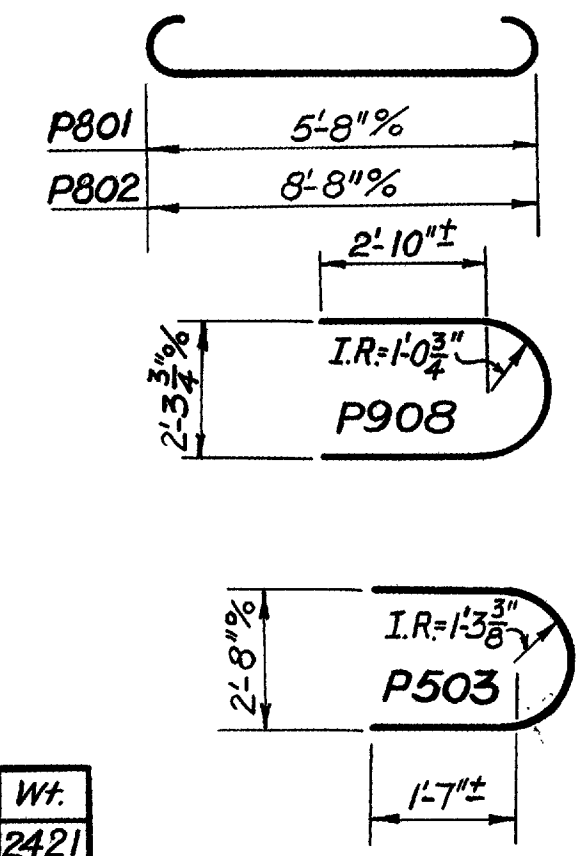
REINFORCING STEEL LIST						
Right Str.	Left Str.	MARK	No.	LENGTH	WEIGHT	SHR.
Superstructure						
202		S701	202	33'-11"	14,004	S
65		S702	65	23'-10"	3,166	S
77		S703	77	26'-9"	4,210	S
62		S704	62	29'-11"	3,791	S
208		S705	208	36'-6"	15,518	S
67		S706	67	25'-9"	3,526	S
83		S707	83	27'-2"	4,609	S
58		S708	58	28'-2"	3,339	S
202		S601	202	33'-10"	10,265	S
436	424	S602	860	35'-10"	46,286	S
92	92	S603	184	22'-0"	6,080	S
65		S604	65	23'-9"	2,319	S
77		S605	77	26'-8"	3,084	S
62		S606	62	29'-10"	2,778	S
208		S607	208	36'-5"	11,377	S
67		S608	67	25'-7"	2,575	S
83		S609	83	27'-0"	3,366	S
58		S610	58	28'-0"	2,439	S
186	186	S501	372	4'-11"	1,908	B
186	186	S502	372	2'-6"	970	B
186	186	S503	372	5'-7"	2,166	B
48	8	R501	96	16'-8"	Included with Railing for Payment	S
8	8	R502	8	18'-5"		S
8	8	R503	16	18'-0"		S
8	8	R504	8	17'-5"		S
Abutments						
14		A801	14	28'-9"	1,075	S
14		A802	14	33'-3"	1,243	S
14		A803	14	31'-7"	1,181	S
14		A804	14	33'-7"	1,255	S
81	88	A601	169	13'-8"	3,469	B
81	90	A602	171	13'-9"	3,532	B
34	30	A603	64	12'-3"	1,178	B
7	3	A604	10	10'-6"	158	S
3	3	A605	6	9'-6"	86	S
4		A606	4	13'-6"	81	S
6		A607	6	11'-8"	105	S
81	88	A501	169	9'-2"	1,616	B
79	79	A502	158	6'-10"	1,126	B
79	79	A503	158	7'-2"	1,181	B
18	6	A504	24	27'-9"	695	S
8		A505	8	36'-3"	302	S
4		A506	4	33'-3"	139	S



REINFORCING STEEL LIST						
Right Str.	Left Str.	MARK	No.	LENGTH	WEIGHT	SHR.
Abutments (Cont'd)						
20		A507	20	31'-3"	652	S
1		A508	1	13'-10"	14	S
1	2	A509	3	10'-0"	31	S
7	3	A510	10	10'-2"	106	S
8	8	A511	16	5'-1"	676	S
			6	8'-5"		
2		A512	2	9'-6"	20	B
2		A513	2	10'-5"	22	B
6		A514	6	26'-6"	166	S
2		A515	2	34'-3"	72	S
3	3	A516	6	9'-6"	60	S
2		A517	2	8'-8"	18	S
2		A518	2	9'-3"	19	S
2		A519	2	9'-1"	19	B
2		A520	2	12'-1"	25	B
4		A521	4	12'-7"	52	S
18		A522	18	29'-9"	559	S
8		A523	8	38'-4"	320	S
4		A524	4	35'-6"	148	S
1		A525	1	32'-6"	34	S
2		A526	2	15'-3"	32	S
2		A527	2	9'-9"	20	S
4		A528	4	12'-0"	50	S
6		A529	6	11'-8"	73	S
18		A530	18	31'-6"	591	S
1		A531	1	37'-6"	39	S
2		A532	2	9'-3"	19	B
2		A533	2	11'-2"	23	B
2		A534	2	10'-3"	21	B
2		A535	2	10'-10"	23	B
Piers						
64	64	P1001	128	6'-11"	3,810	B
32	32	P1002	64	19'-7"	5,393	S
32	32	P1003	64	16'-6"	4,544	S
8		P901	8	20'-0"	544	S
8		P902	8	37'-4"	1,015	S
8		P903	8	20'-11"	569	S
8		P904	8	39'-2"	1,065	S
8	10	P905	18	32'-0"	1,958	S
10		P906	10	32'-0"	1,088	B
10		P907	10	33'-4"	1,133	B
8	8	P908	16	9'-3"	503	B
10		P909	10	34'-10"	1,184	B
10		P910	10	34'-2"	1,162	B



REINFORCING STEEL LIST						
Right Str.	Left Str.	MARK	No.	LENGTH	WEIGHT	SHR.
Piers (Cont'd)						
8		P911	8	40'-2"	1,093	S
8		P912	8	21'-5"	583	S
8		P913	8	41'-2"	1,120	S
8		P914	8	21'-11"	596	S
32	36	P801	68	7'-10"	1,422	B
128	128	P802	256	10'-10"	7,405	B
4		P501	4	26'-9"	112	S
4		P502	4	28'-2"	118	S
4	4	P503	8	7'-3"	60	B
152	172	P504	324	8'-5"	2,844	B
4		P505	4	29'-0"	121	S
4		P506	4	29'-8"	124	S
Spiral Reinforcing						
		Mark	No.	Core Dia.	Length	Pitch
4	4	SP401	8	32"	16'-5"	4 1/2"
4	4	SP402	8	32"	13'-4"	4 1/2"
Replacement Bars						
		RE1001	1	7'-2"		S
		RE901	1	6'-10"		S
		RE801	1	6'-6"		S
		RE701	3	6'-2"		S
		RE601	5	5'-11"		S
		RE501	1	5'-7"		S
		RE401	1	5'-3"		B
<p>SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.</p> <p>The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1/2 closed coils shall be provided at the ends of each spiral unit.</p> <p>Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.</p> <p>BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.</p>						



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

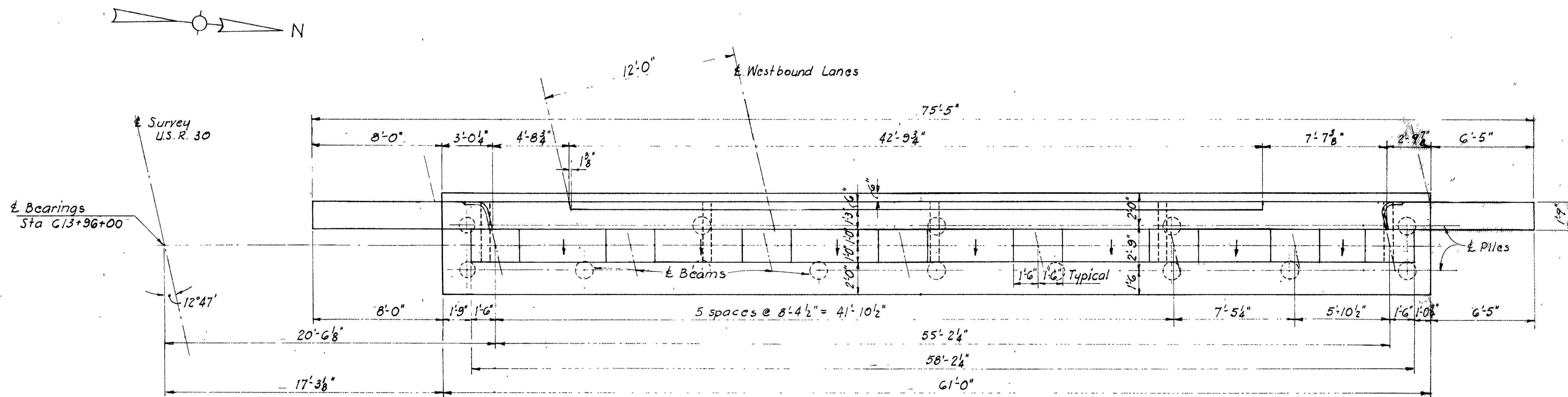
**RAILING DETAILS AND
REINFORCING STEEL LIST**

BRIDGE NO. RIC-30-0941 RFL
OVER KOOGLE ROAD
RICHLAND COUNTY

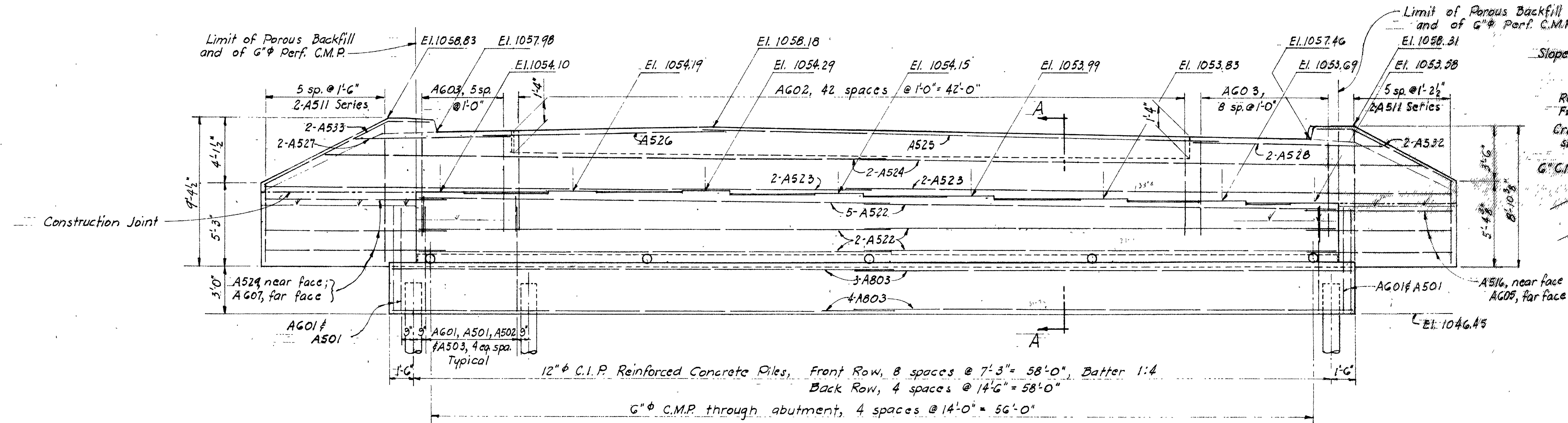
Sta. 613+35.69 to
Sta. 615+35.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.D.R.	J.D.R.	W.C.K.	W.C.K.	BFG	8-27-64	

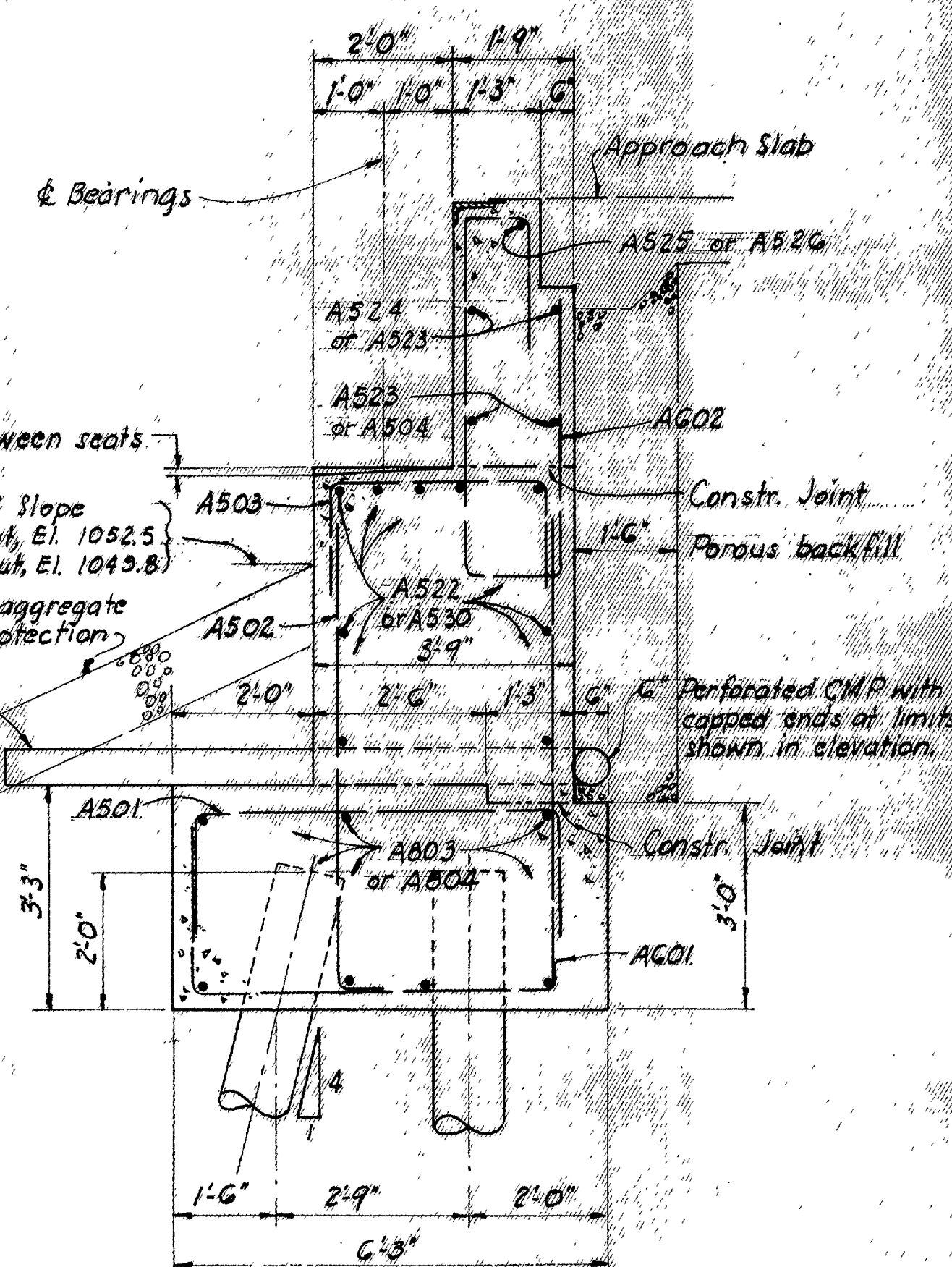
RIC-30-928
ASD-30-000



PLAN



ELEVATION

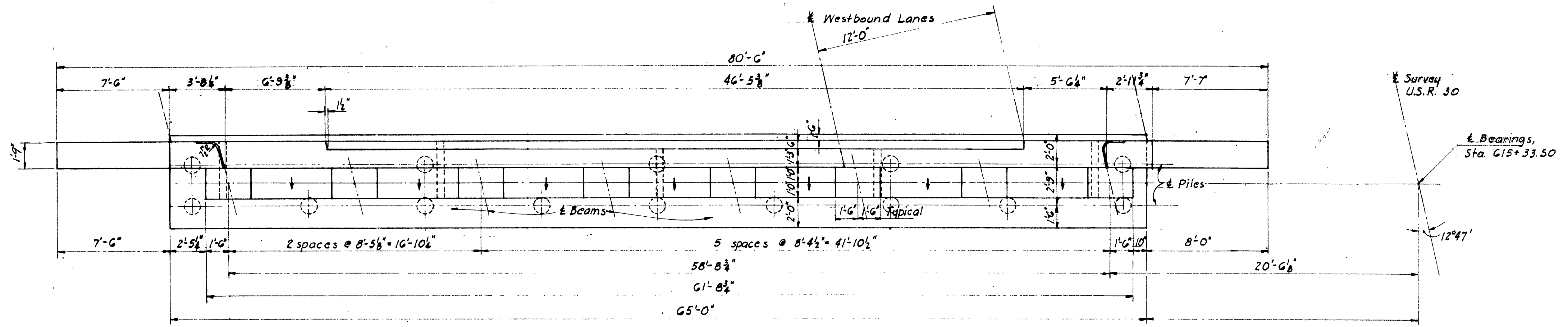
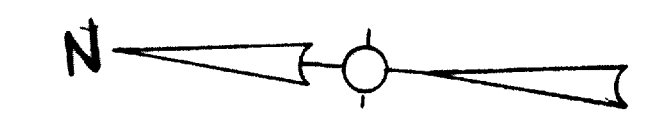


SECTION A-A

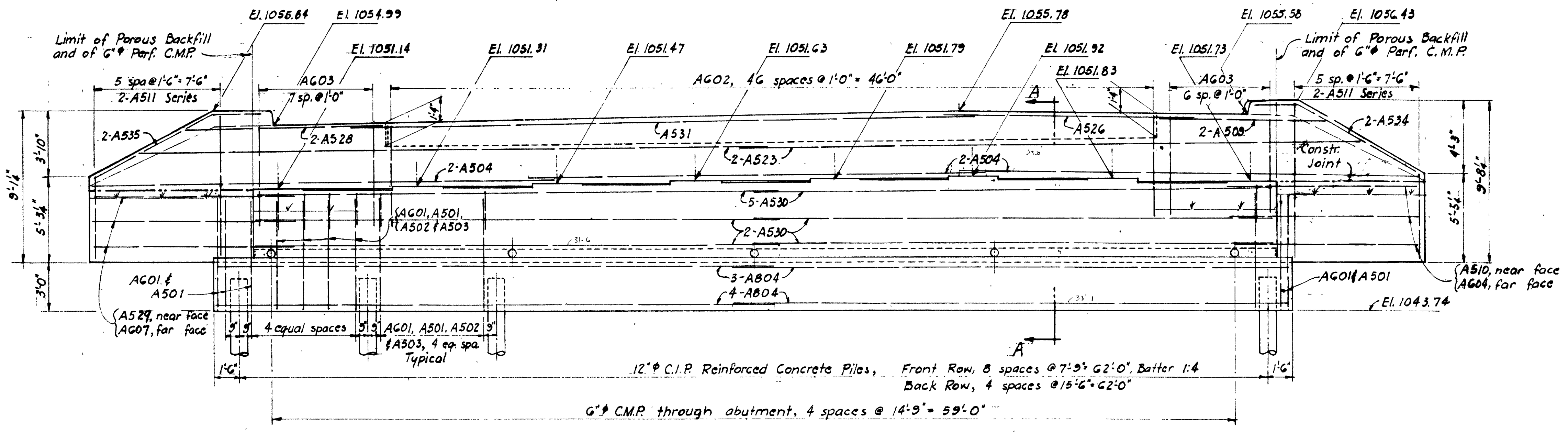
BRIDGE SEAT REINFORCING: Special care shall be taken in placing the reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
REAR ABUTMENT DETAILS						
BRIDGE NO. RIC-30-0941 L OVER KOOGLE ROAD						
RICHLAND COUNTY					STA G13+93.69 STA G15+35.81	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD		WCK	BFG	8-27-64	

RIC-30-0.28
A5D-30-0.00



PLAN



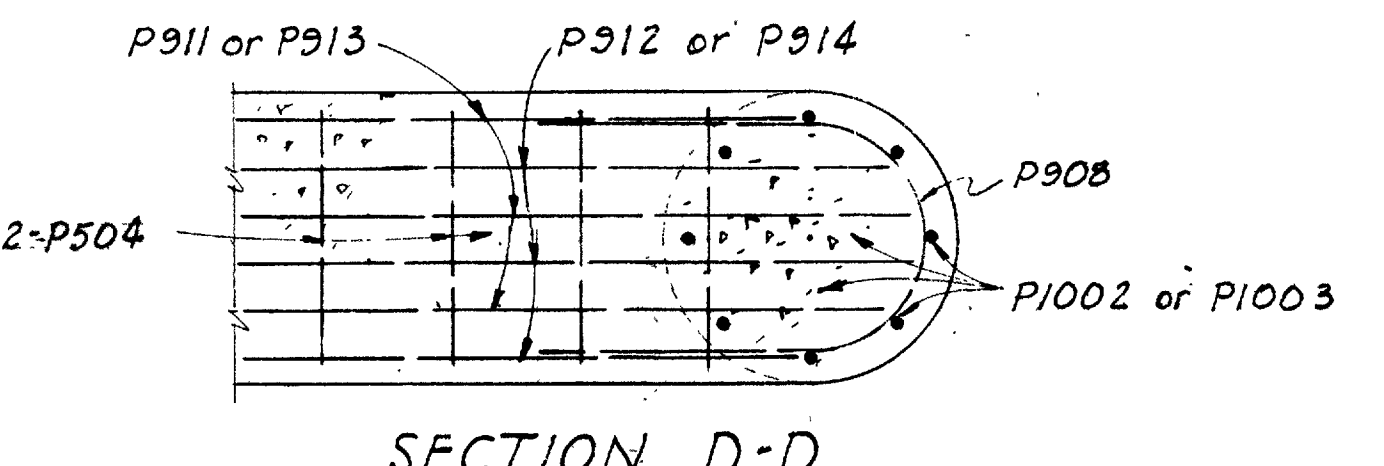
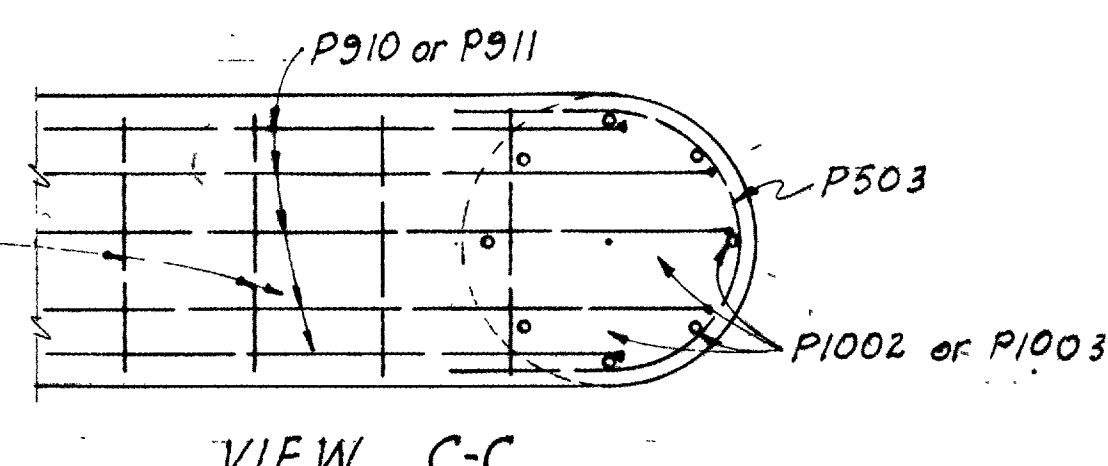
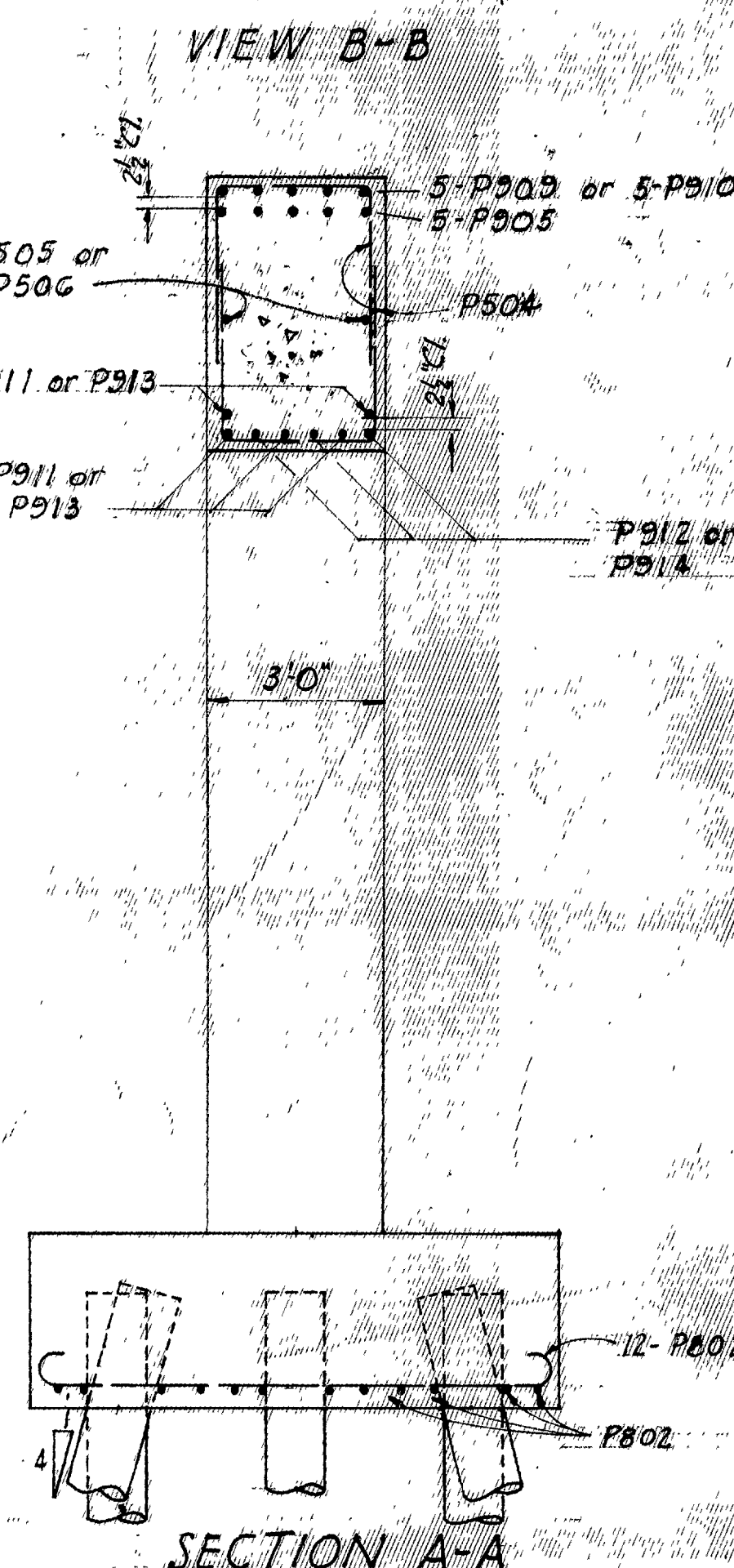
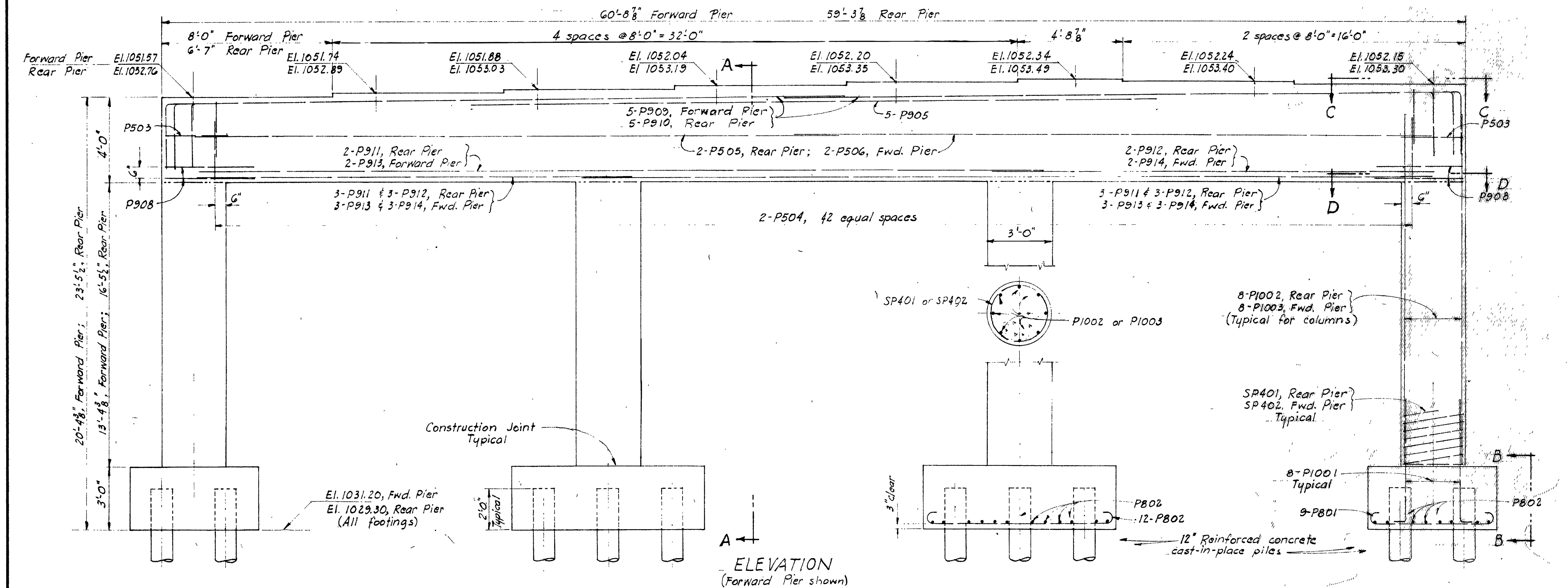
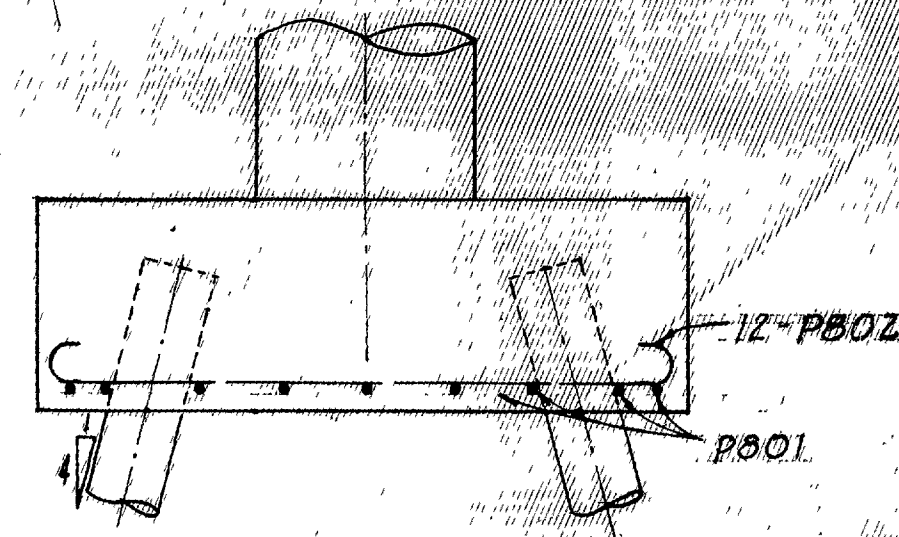
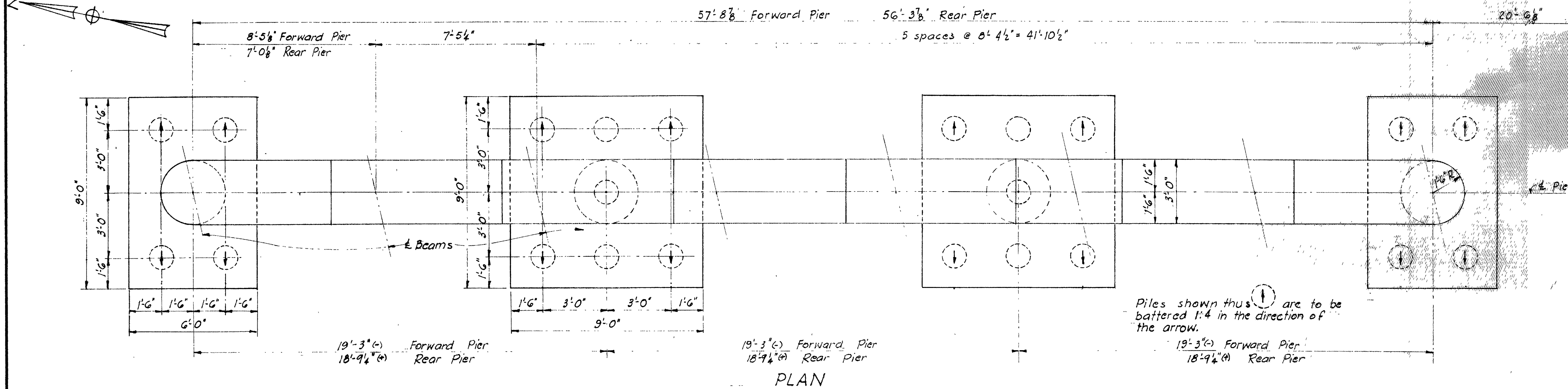
ELEVATION

See Sheet No. 267 for Sections A-A

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
FORWARD ABUTMENT DETAILS						
BRIDGE N ^o RIC-30-0941 L OVER KOOGLE ROAD						
RICHLAND COUNTY					STA 613+93.69	
					STA 615+35.01	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
CPD	CPD		WCK	BFG	8-27-64	

RIC-30-028
A50-30-000

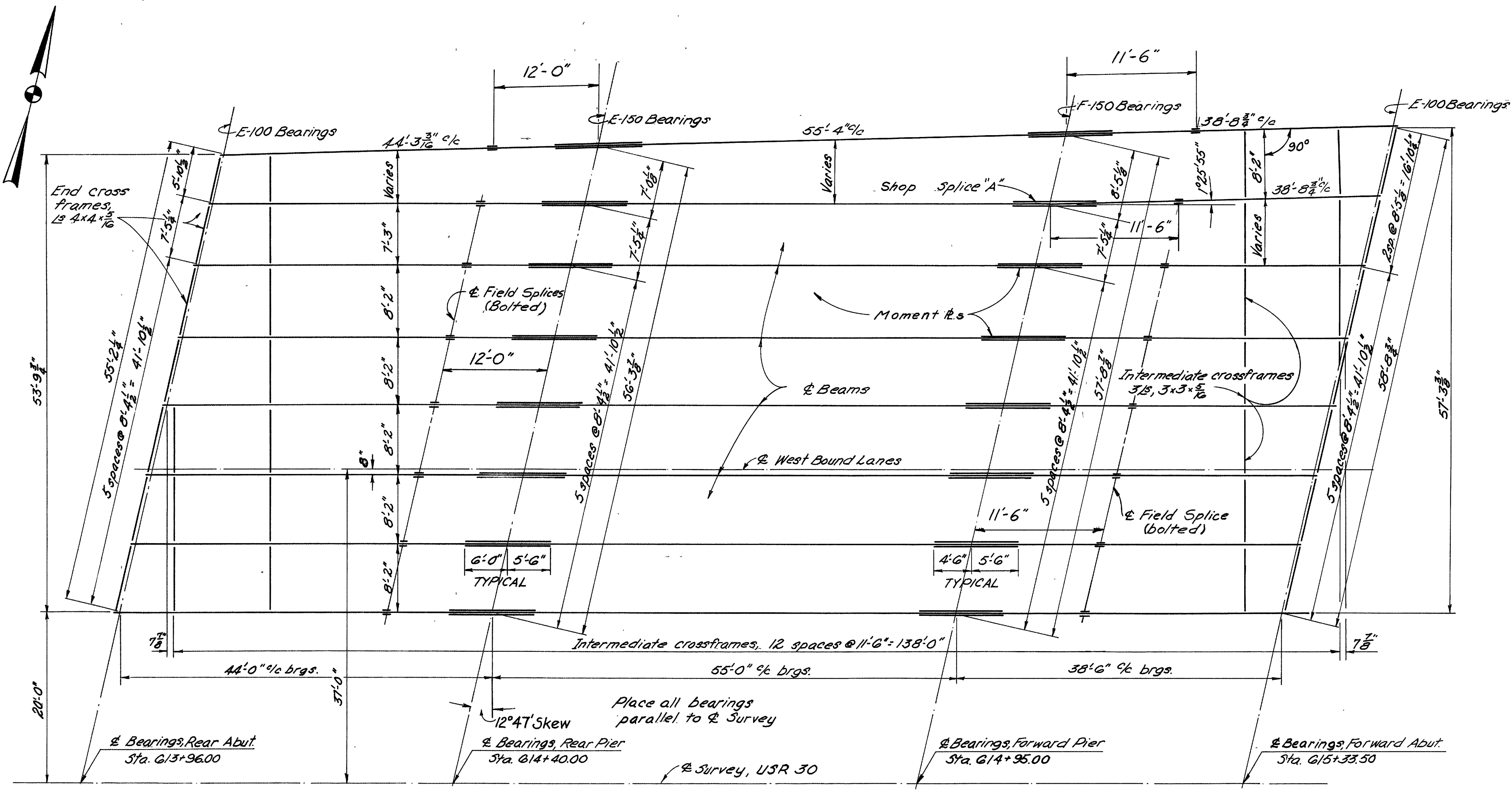
Rear Pier
Sta. 614+40.00
Forward Pier
Sta. 614+55.00
Survey
U.S.R. 30



BRIDGE SEAT REINFORCING: Special care shall be taken in placing the reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
PIER DETAILS					
BRIDGE N ^o RIC-30-0941 L OVER KOOGLE ROAD					
Sta. 613+33.69 Sta. 615+35.61					
RICHLAND COUNTY					
DESIGNED	DRAWN	TRACES	CHECKED	REVIEWED	DATE
CPD	CPD		WCK	BFG	8-27-64

RIC-30-9.28
ASD-30-0.00



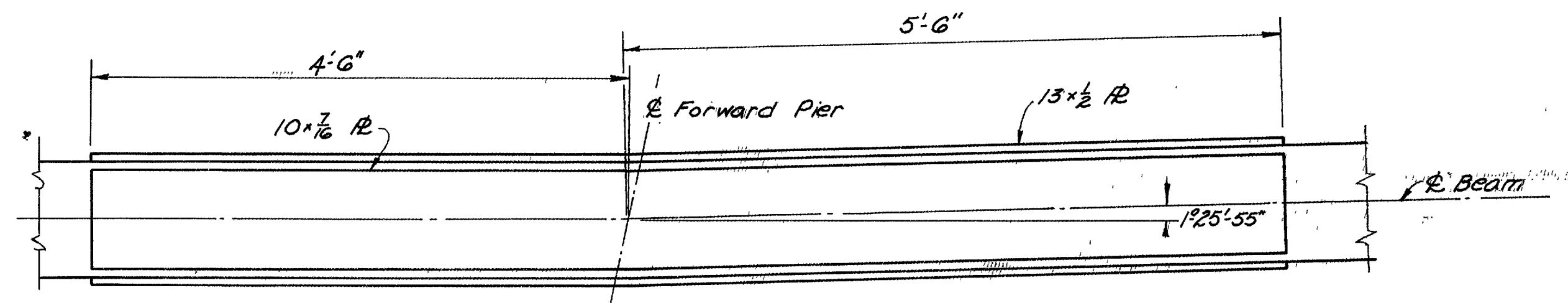
DEFLECTION TABLE

	REAR SPAN	CENTER SPAN	FORWARD SPAN
Deflection due to weight of steel	1/32"	1/16"	-
Deflection due to remaining dead load	5/32"	7/32"	3/32"
Total deflection	3/16"	9/32"	3/32"
Required Camber	0	0	0

- REFER TO STANDARD DRAWING 5D-1-G3 for the following:
1. Beam end preparation.
 2. Beam splice welding procedure, at Shop Splice "A", delete step 1 and 4.
 3. End crossframes and end dam details.
 4. Scuppers and gutter supports.
 5. Curb plate details.

PLAN OF STEEL FRAMING - LEFT BRIDGE

ALL BEAMS 33W130, Top Moment R 10"x1 1/2", Bottom R 13"x1 1/2"
Moment Rs Shop welded to beam.



DETAIL OF SHOP SPLICE "A"
See 5D-1-G3, for additional details

See Sheet 264 for bolted field splices

ESTIMATED QUANTITIES			LEFT BRIDGE		RIGHT BRIDGE		Genl.	As-Built
Item	Total	Unit	Super.	Abuts. Piers	Super.	Abuts. Piers		
E-2	656	Cu.Yds.		278	156	266	156	
S-1	480	Cu.Yds.	245		235			
S-1	176	Cu.Yds.		89		87		
S-1	422	Cu.Yds.	215		207			
S-1	116	Cu.Yds.		58		58		
S-4	214,092	Lbs.	75,131	11,389	22,404	72,645	10,937	21,586
S-7	369,100	Lbs.	192,700			176,400		
S-8	369,100	Lbs.	192,700			176,400		
S-14	554.52	Lin.Ft.	278.25			276.27		
S-16	Lump	Sum						Lump
S-18	3680	Lin.Ft.		910	930		880	900
S-29	99	Cu.Yds.		50		49		
S-29	28	Ea.	14		14			
S-29	107	Lin.Ft.		84		107		
S-29	235	Lin.Ft.		120		115		
F-10	1675	Sq.Yds.					1675	
S-101	480	Ea.	245		235			

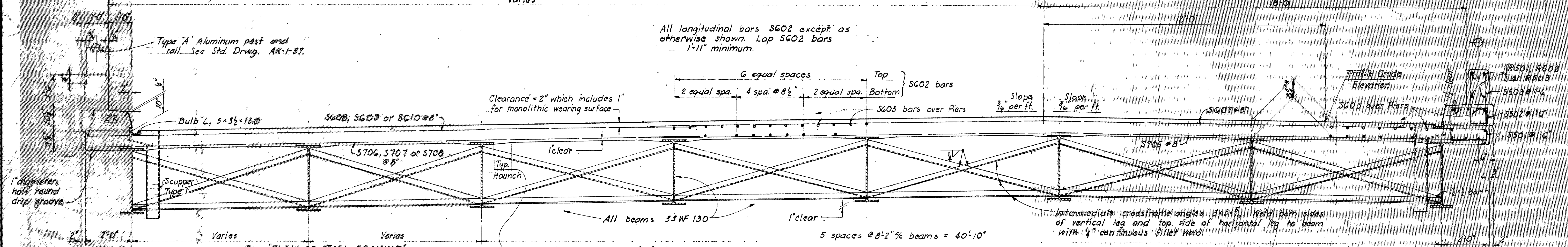
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

STRUCTURAL DETAILS AND ESTIMATED QUANTITIES
BRIDGE NO RIC-30-0941 L & R
OVER KOOGLE ROAD

STA. 613+93.69
613+35.81

RICHLAND COUNTY

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	WCK	BFG	8-27-64	



TRANSVERSE SECTION

All longitudinal bars SG02 except as otherwise shown. Lap SG02 bars 1'-11" minimum.

Clearance = 2" which includes 1" for monolithic wearing surface

SG02 bars: 2 equal spa., 4 spa. @ 8 1/2", 2 equal spa. Bottom

SG03 bars over Piers

Slope 3/4 per ft. Slope 1/4 per ft.

Profile Grade Elevation

SG03 over Piers

SG07 @ 8"

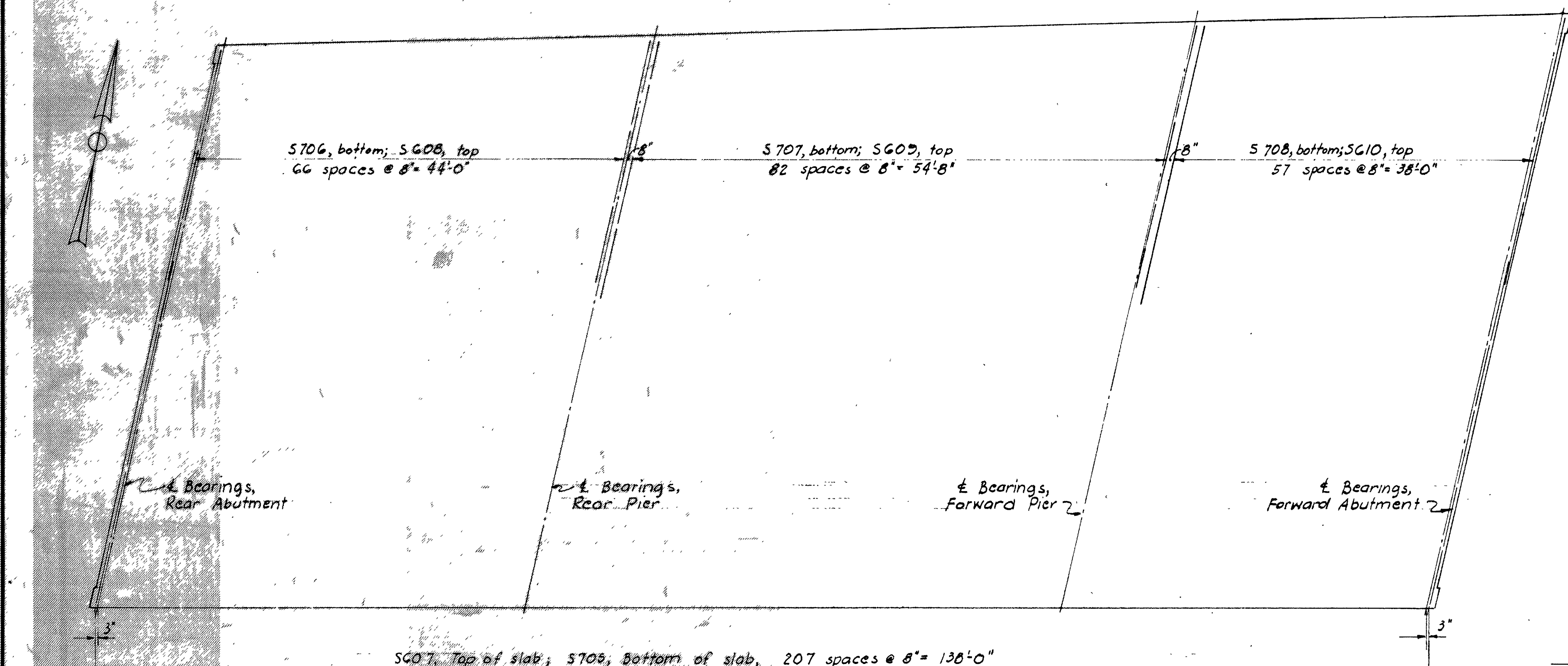
S705 @ 8"

Intermediate cross frame angles 3x3x5. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/2" continuous fillet weld.

All beams 33WF 130

5 spaces @ 8'-2 1/4" beams = 40'-10"

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



PLAN OF TRANSVERSE REINFORCING

S706, bottom; SG08, top
66 spaces @ 8" = 44'-0"

S707, bottom; SG09, top
82 spaces @ 8" = 54'-8"

S708, bottom; SG10, top
57 spaces @ 8" = 38'-0"

SG07, Top of slab; S708, Bottom of slab, 207 spaces @ 8" = 130'-0"

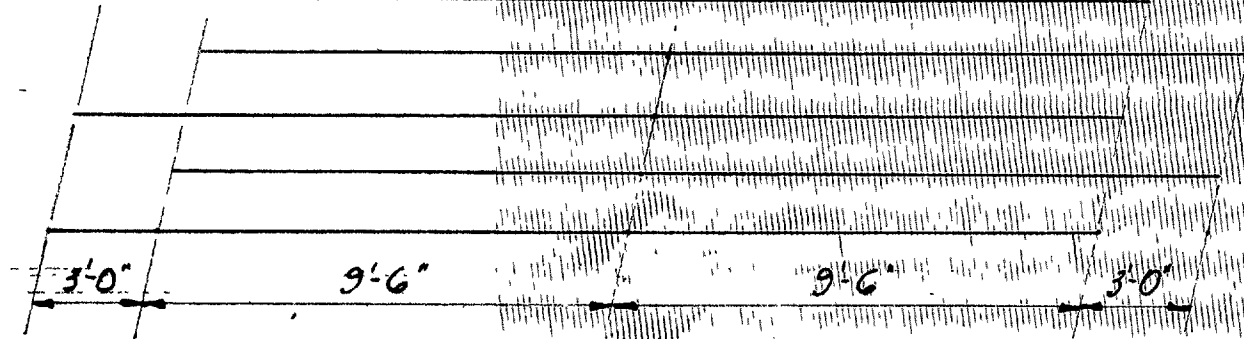
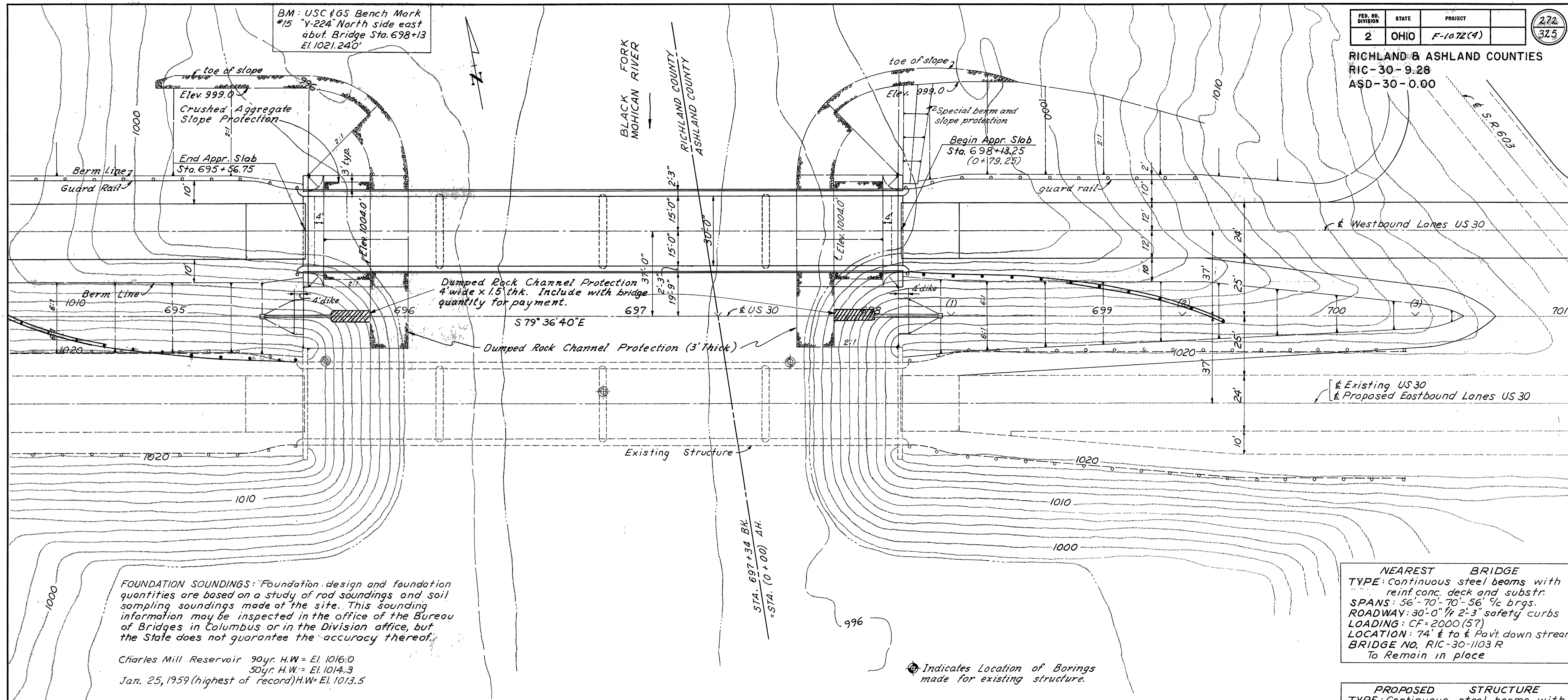


DIAGRAM SHOWING STAGGER OF SG03 BARS OVER PIERS

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SUPERSTRUCTURE DETAILS BRIDGE NO. RIC-30-0941 L OVER KOOGLE ROAD						
RICHLAND COUNTY						STA 615+51.03 618+55.81
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD		WCK	BFG	8-27-64	

File-224-R

RICHLAND & ASHLAND COUNTIES
 RIC-30-9.28
 ASD-30-0.00



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

Charles Mill Reservoir 90yr. H.W. = El. 1016.0
 50yr. H.W. = El. 1014.3
 Jan. 25, 1959 (highest of record) H.W. = El. 1013.5

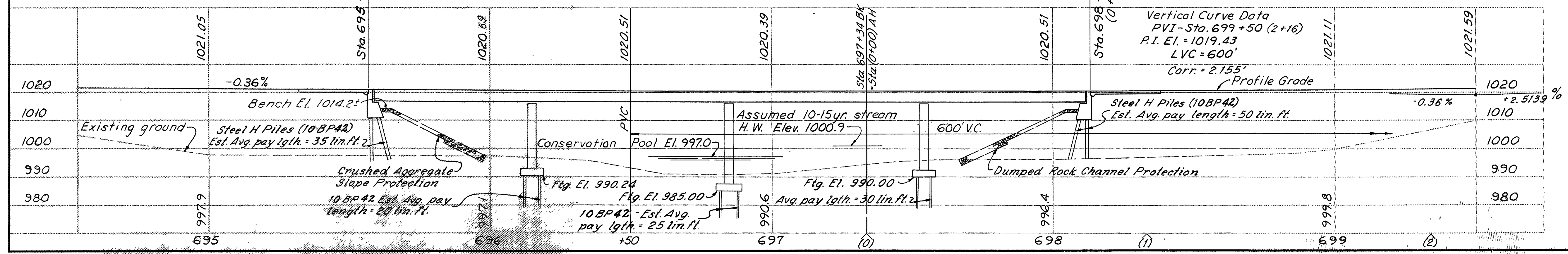
NEAREST BRIDGE
 TYPE: Continuous steel beams with reinf. conc. deck & subtr.
 SPANS: 56'-70'-70'-56' 1/2 brgs.
 ROADWAY: 30'-0" ft 2'-3" safety curbs
 LOADING: CF = 2000 (57)
 LOCATION: 74' E to E Pavt. down stream
 BRIDGE NO. RIC-30-1103 R
 To Remain in place

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinf. concrete deck & subtr.
 SPANS: 56'-70'-70'-56' 1/2 brgs.
 ROADWAY: 30'-0" ft 2'-3" safety curbs.
 LOAD FREQUENCY: CF = 2000 (57) - adequate for AASHO alternate loading.
 SKEW: None
 APPR. SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent
 WEARING SURFACE: 1" Monolithic Concrete

Bridge Limits 256.50'

Clears assumed 10-15yr. stream H.W. 15.2±

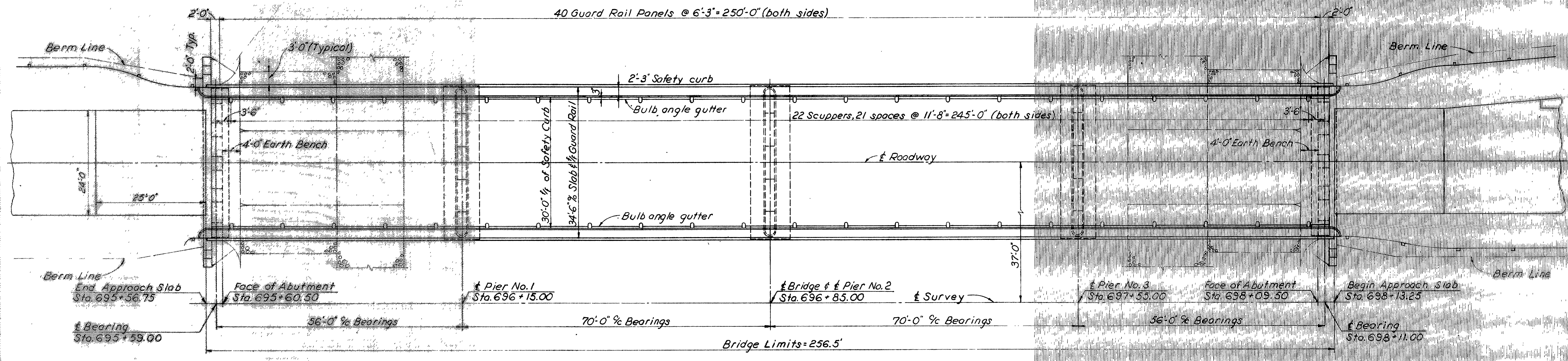
Drainage Area 202 Sq. Miles



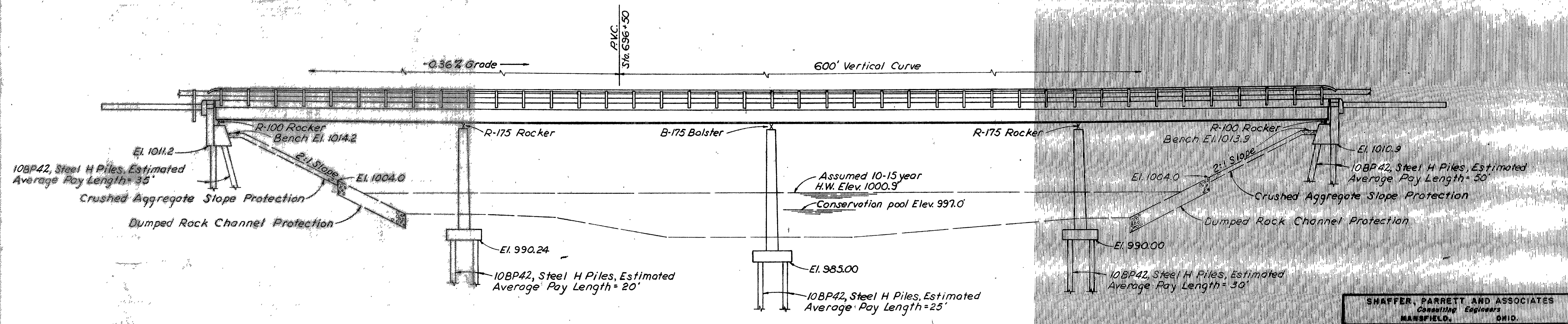
SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SITE PLAN
 BRIDGE No. RIC-30-1103L
 OVER BLACK FORK OF MOHICAN RIVER
 RICHLAND COUNTY U.S.R. 30
 STA. 695 + 56.75 TO STA. 698 + 13.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DHT	DGC	DGC	JWC			



PLAN



ELEVATION

SHAFER, FARRETT AND ASSOCIATES
Consulting Engineers
MANFIELD, OHIO

GENERAL PLAN & ELEVATION
BRIDGE No. RIC-30-1103 L
OVER BLACK FORK OF MOHICAN RIVER
RICHLAND COUNTY, OHIO U.S.R. 30
STA. 695 + 56.75 TO STA. 698 + 13.25

DESIGNED	DRAWN	CHECKED	APPROVED	DATE	REVISED
DHT	DGC	DGC	JWC		

GENERAL NOTES

RIC-30-9.28
ASD-30-0.00

FED. RD. DIVISION	STATE	PROJECT	274
2	OHIO	F-1022 (A)	325

REFERENCE shall be made to Standard Drawings RB-1-55 revised 2-2-59, CSB-2-56 (Sheet 1 of 6) revised 2-2-59, SD-1-63 (Sheets 2, 3, and 4 of 4) dated 11-12-63 and Supplemental Specifications S-101 and S-307 dated 7-12-67 and 10-1-64, respectively.

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

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

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles -

- 35 tons per pile using a 7,000 ft. lb. hammer
- 25 tons per pile using a 11,000 ft. lb. hammer
- 25 tons per pile using a 15,000 ft. lb. or greater hammer

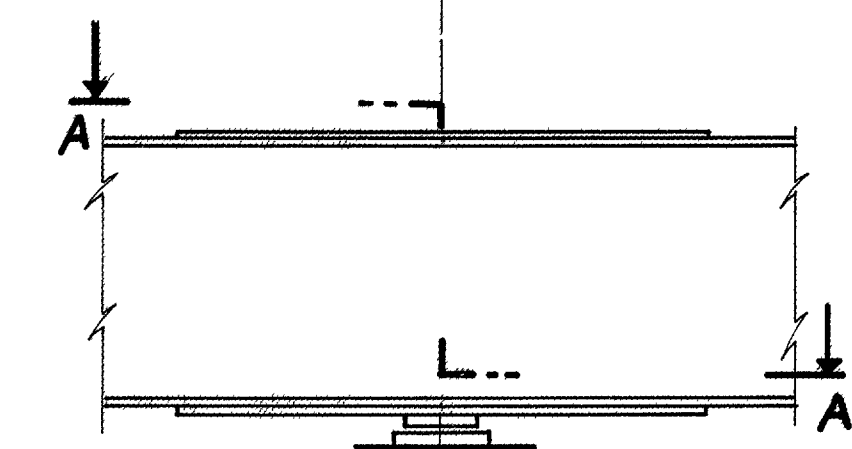
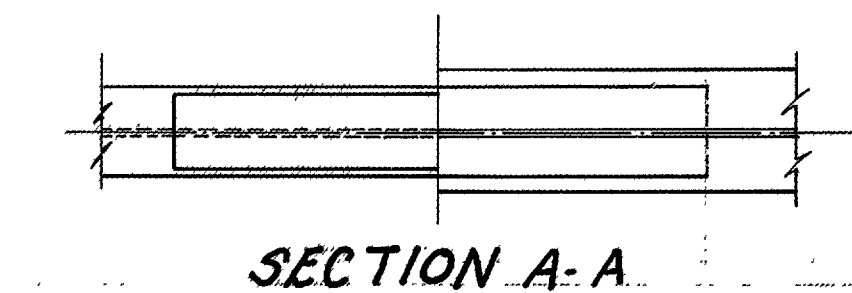
For the pier piles -

- 55 tons per pile using a 7,000 ft. lb. hammer
- 45 tons per pile using a 11,000 ft. lb. hammer
- 35 tons per pile using a 15,000 ft. lb. or greater hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 25 tons per pile for the abutment piles and 32 tons per pile for the pier piles.

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

- DESIGN LOADING - CF 2000 (57)
- CONCRETE CLASS C - basic unit stress 1333 p.s.i.
- CONCRETE CLASS E - basic unit stress 1133 p.s.i.



SHOP WELDED MOMENT PLATE
For Welding details see
St. Dwg. C.S.B. - 2-56

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

CLEARANCE from face of concrete to reinforcing steel shall be 2" except where otherwise shown.

STRUCTURAL STEEL-ASTM 36 - basic unit stress 20,000 p.s.i. (except piling) (ASTM A7 and A737 steel not permitted)

REINFORCING STEEL-ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

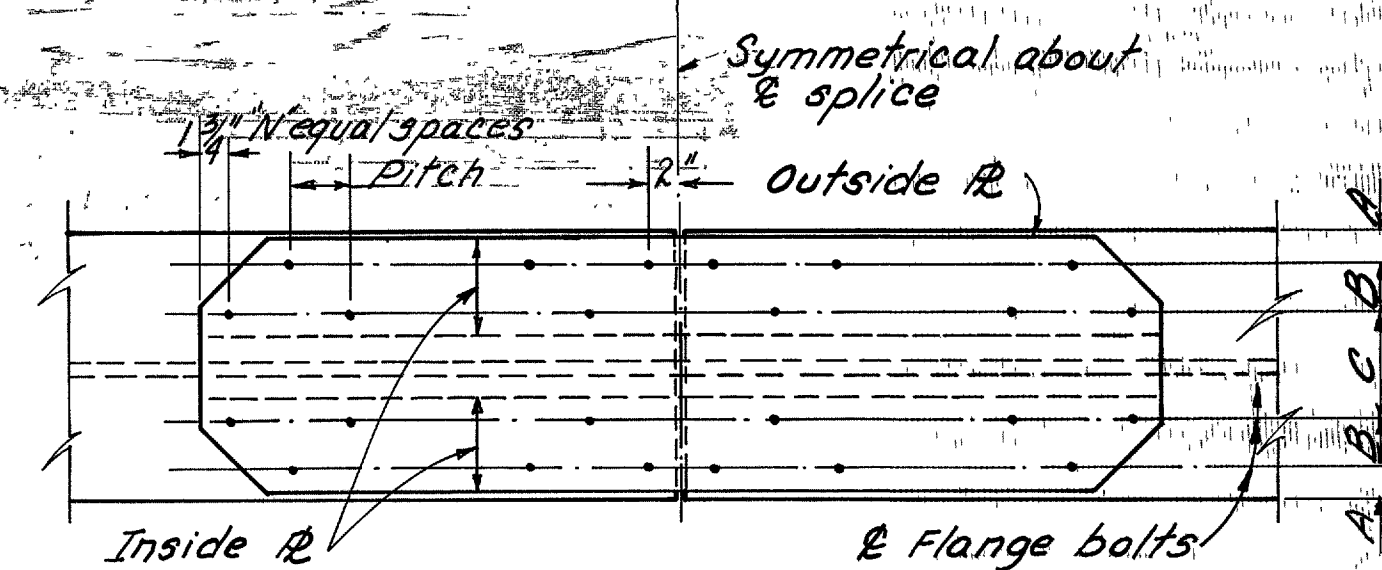
HIGH STRENGTH STEEL BOLT: Under Sec. 8-7.10, High-Strength Steel Bolts, Nuts and Washers, paragraph two(2), shall be completely revised and the last sentence of paragraph four(4), revised to read as follows:

"In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner."

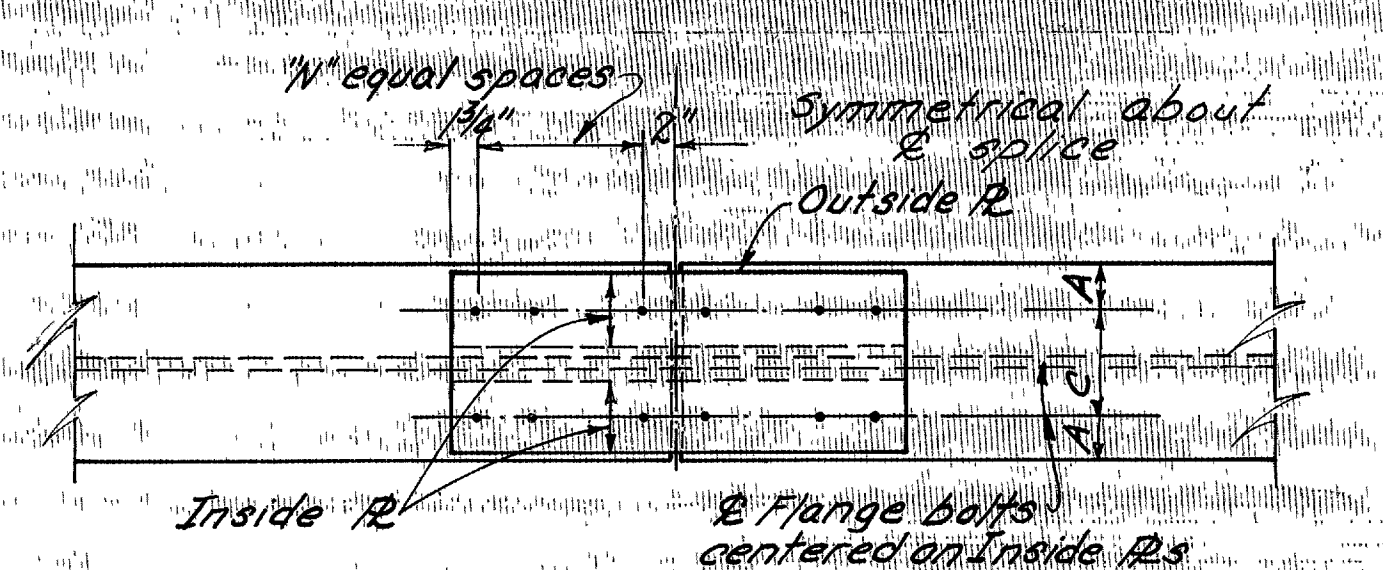
"Bolt lengths determined by the use of Table No.1 shall be adjusted to the next 1/4-inch length increment."

USE 1" diameter High Strength Steel Bolts in accordance with Sec. 8-7 and Sec. M-7.2.

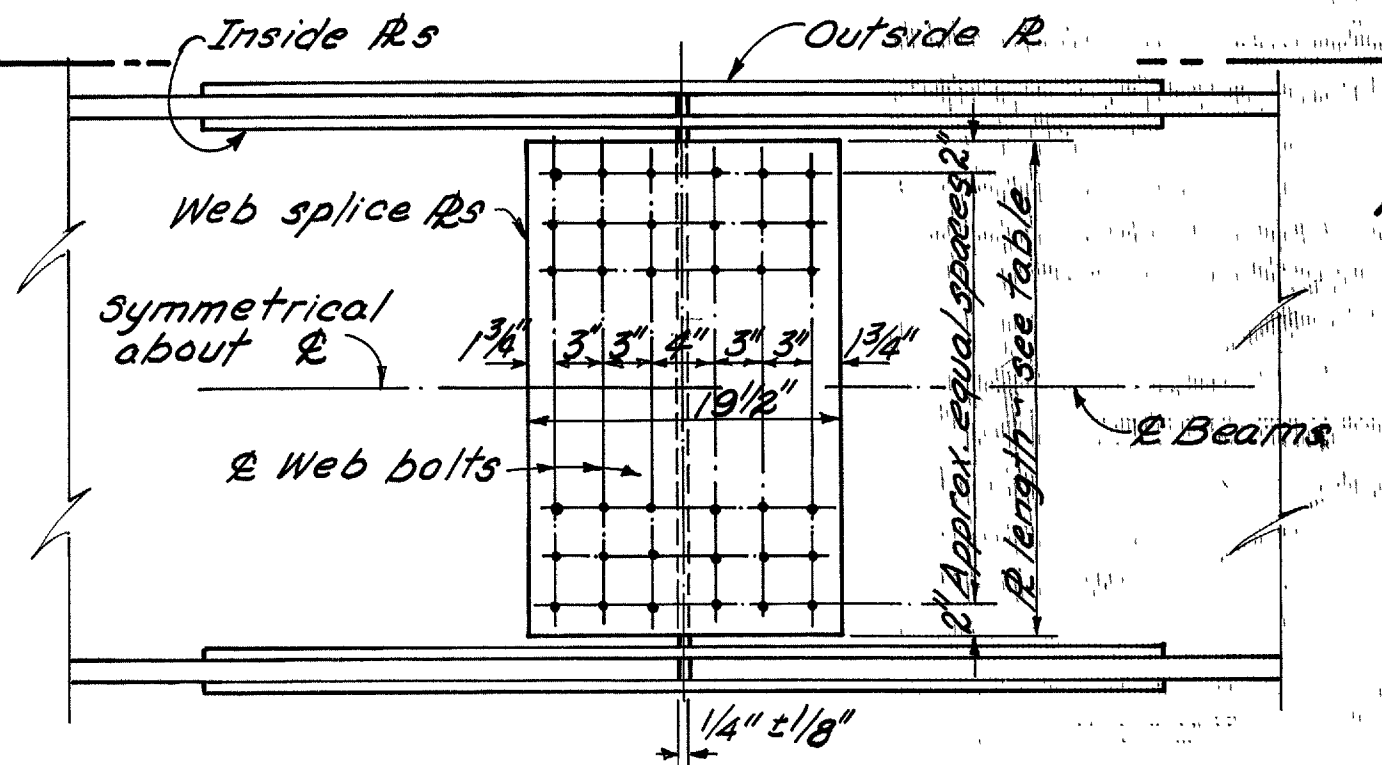
BEAM SPLICE DATA														
DETAILS														
Beam	Type	Flange Splice						Web Splice		Weight of Splice material				
		Flange Plates		Flange Bolts				Web Plates	Web Bolts					
		Outside Required	Inside Required	Number	Dimensions (inches)									
				Spa	Pitch	A	B	C	Required	No.	Lbs.			
30	170	A	11x1/2x2-1/2	11x1/2x2-1/2	40	4	3 1/2	2 1/2	-	7	B	19 1/2x3/8x21"	48	460
30	160	A	11x1/2x2-1/2	11x1/2x2-1/2	32	3	3 1/2	2 1/2	-	7	B	19 1/2x3/8x21"	48	400
33	14	A	10 1/2x1/2x2-1/2	10 1/2x1/2x2-1/2	32	3	3 1/2	2 1/2	-	6 1/2	A	13 1/2x3/8x21"	36	320
33	130	A	10 1/2x1/2x2-1/2	10 1/2x1/2x2-1/2	32	3	3 1/2	2 1/2	-	6 1/2	A	13 1/2x3/8x21"	32	310
30	124	A	10 1/2x1/2x2-1/2	10 1/2x1/2x2-1/2	32	3	3 1/2	2 1/2	-	6	B	17 1/2x3/8x21"	32	300



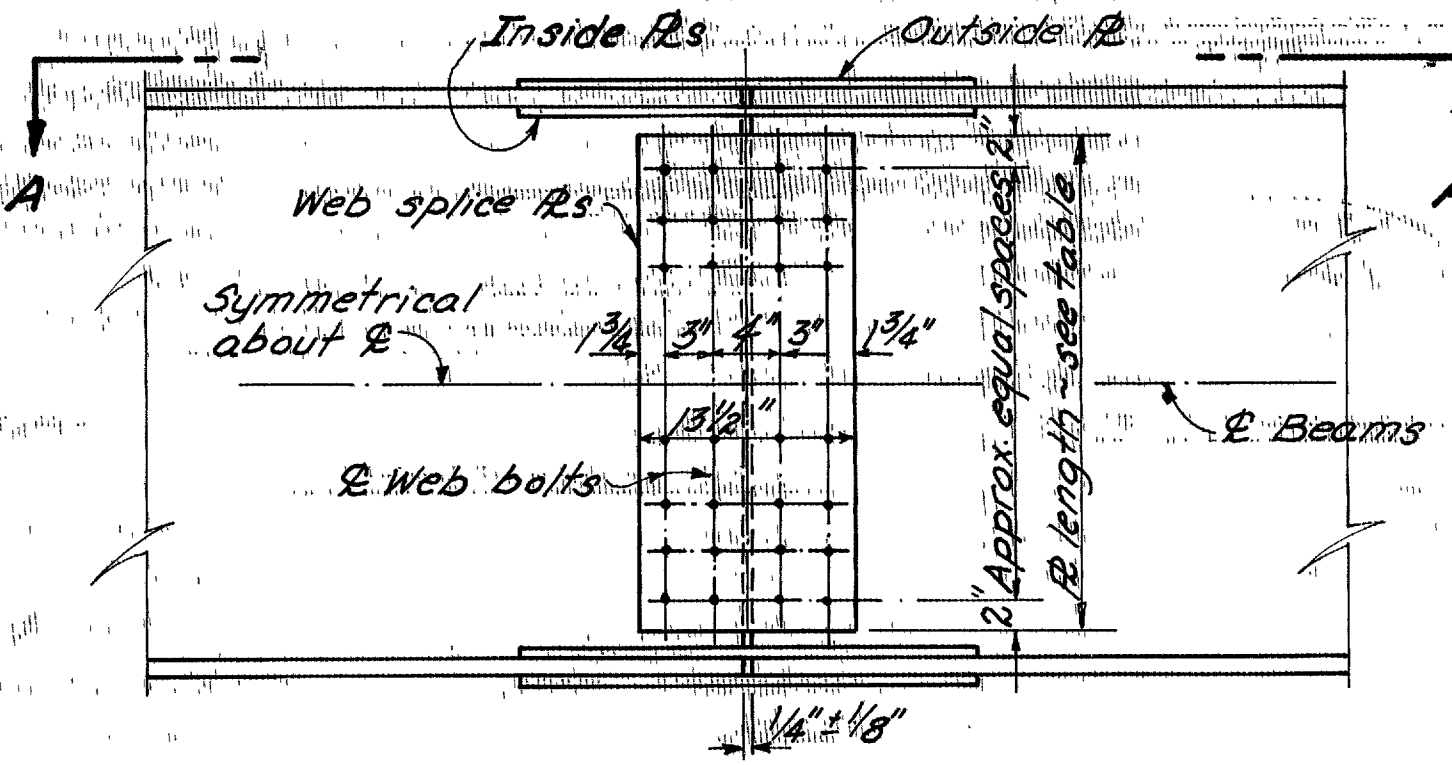
VIEW A-A
Flange Splice Type B



VIEW A-A
Flange Splice Type A



BEAM SPLICE
Web Splice Type B



BEAM SPLICE DETAIL
Web Splice Type A

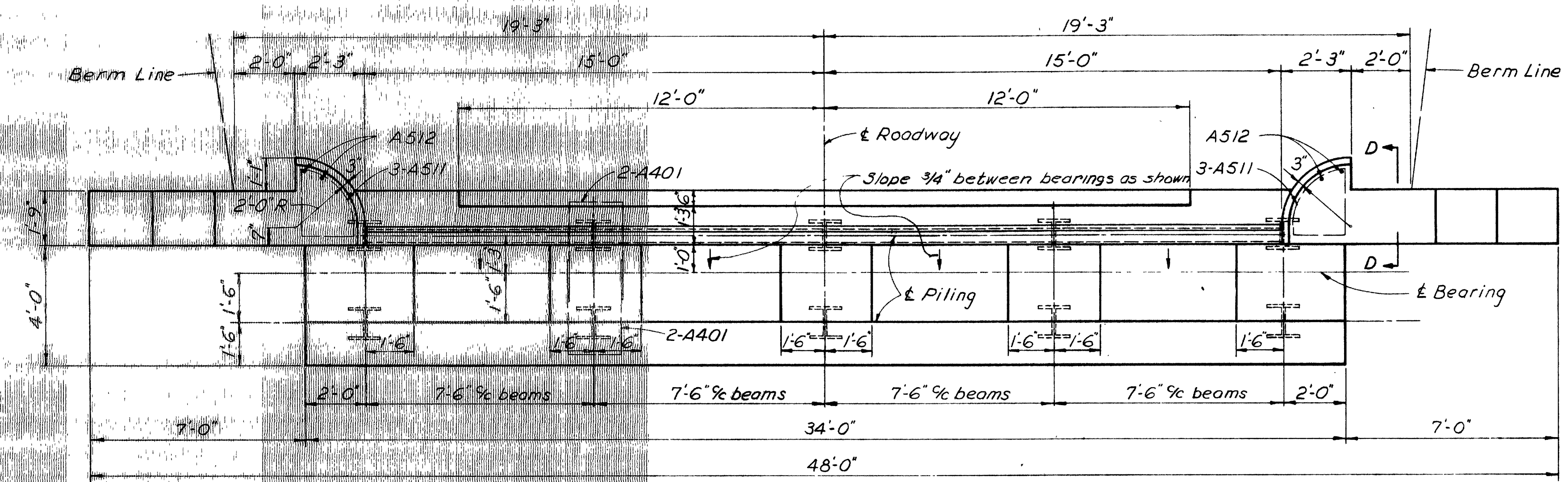
ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	QUANTITIES			
				SUPER	ABUTS.	PIERS	GENERAL
E-2	Lump Sum		Cofferdams, Cribbs and Sheeting				Lump
E-2	317	Cu. Yds.	Unclassified Excavation		74	243	
S-1	275	Cu. Yds.	Class "C" Concrete, Superstructure	275			
S-1	201	Cu. Yds.	Class "E" Concrete, Pier Walls			201	
S-1	82	Cu. Yds.	Class "E" Concrete, Pier Footings			82	
S-1	100	Cu. Yds.	Class "E" Concrete, Abutments		100		
S-4	88,827	Lbs.	Reinforcing Steel	73,534	5,829	9,384	80
S-7	272,600	Lbs.	Structural Steel	272,600			
S-8	272,600	Lbs.	Field Painting of Structural Steel	272,600			
S-14	513	Lin. Ft.	Railing (Type I-15.11 with handrail & galv. steel post & bolts)	513			
S-16	Lump Sum		First Test Pile				Lump
S-18	2,065	Lin. Ft.	Steel Piles, 10BP42		715	1,350	
S-29	27	Cu. Yds.	Porous Backfill		27		
B-29	44	Each	Stoppers, including supports	44			
I-10	120	Sq. Yds.	Crushed Aggregate Slope Protection				120
I-10	415	Cu. Yds.	Dumped Rock Channel Protection				415
S-101	275	Each	Water reducing set-retarding admixture	275			

SHAFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

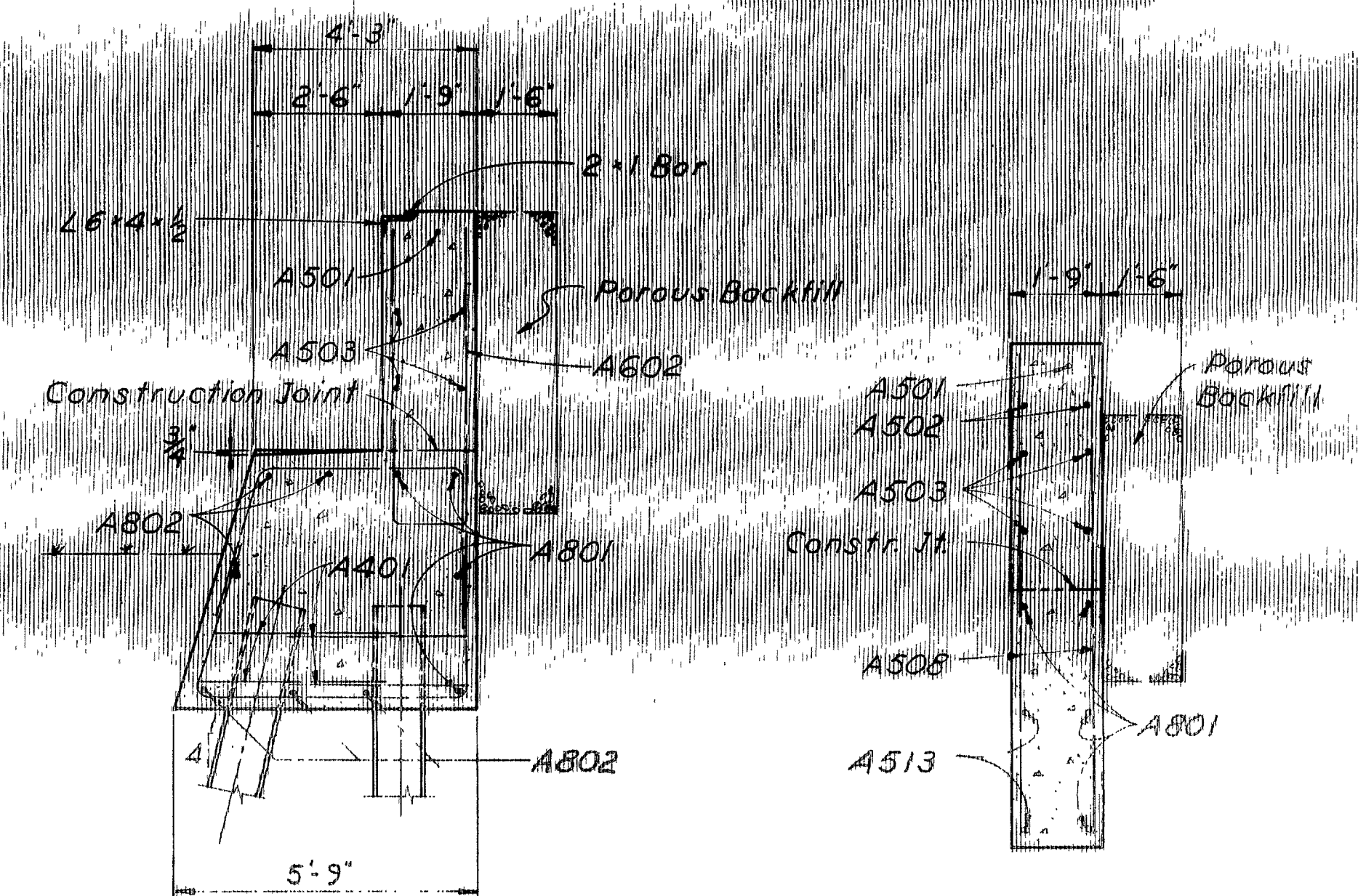
GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. RIC-30-1103L
OVER BLACK FORK OF MOHICAN RIVER
RICHLAND COUNTY U.S.R. 30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.G.C.	R.H.O.	CA	D.H.T.			

RIC-30-9.28
ASD-30-0.00

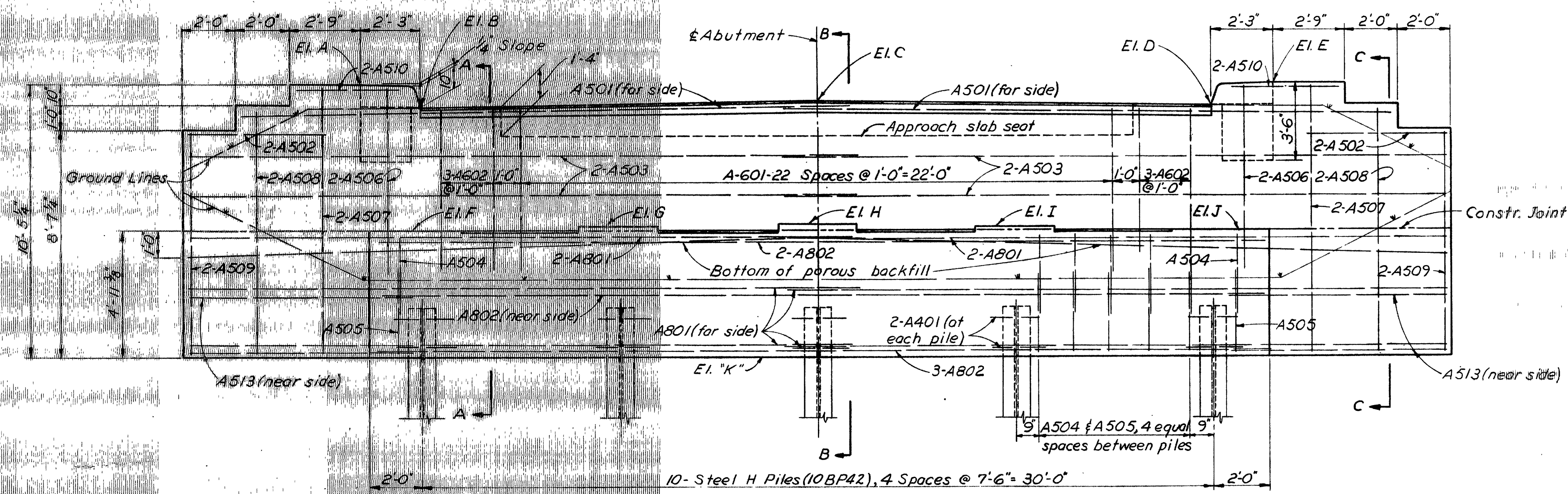


PLAN

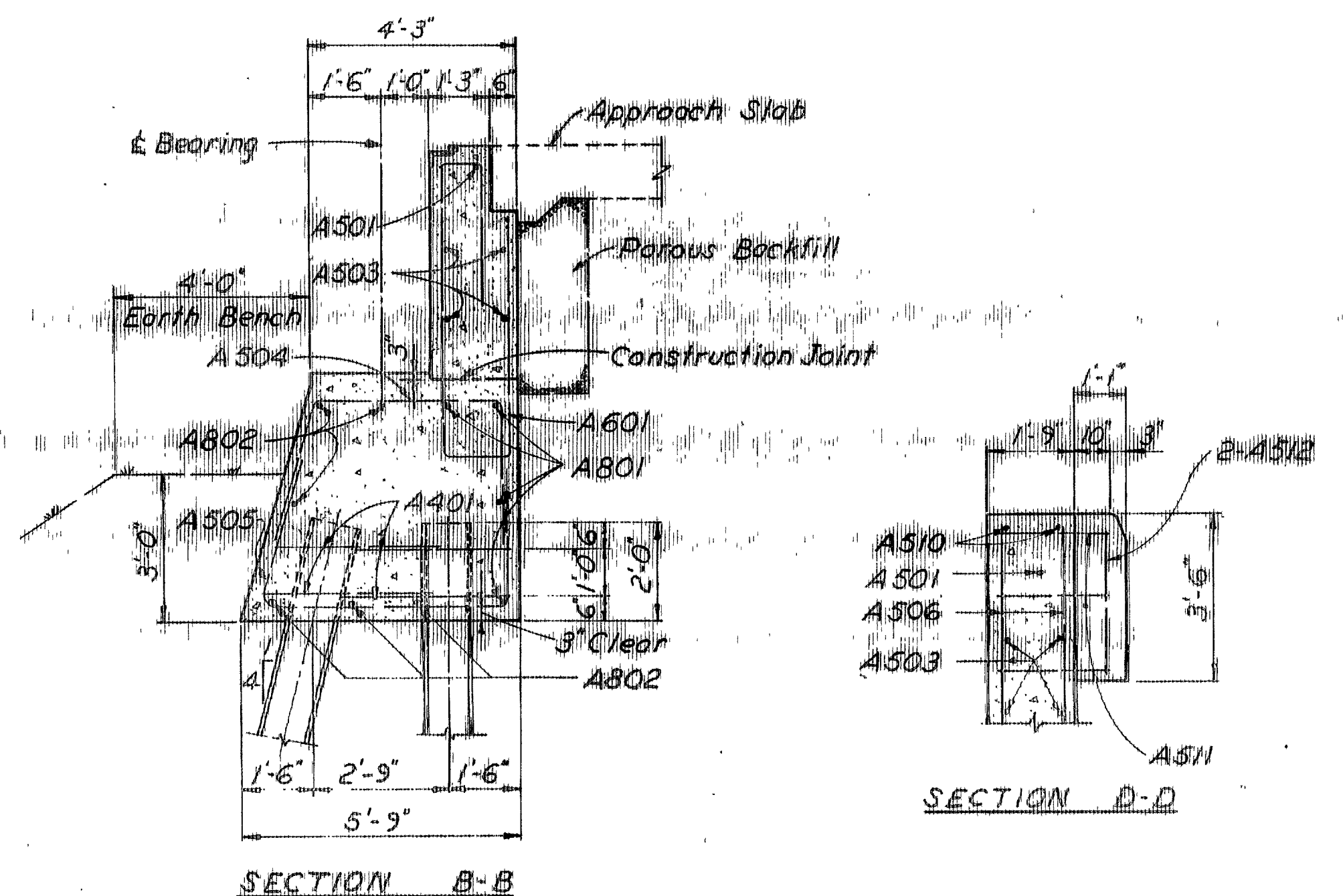


SECTION A-A

SECTION C-C



ELEVATION



SECTION B-B

SECTION D-D

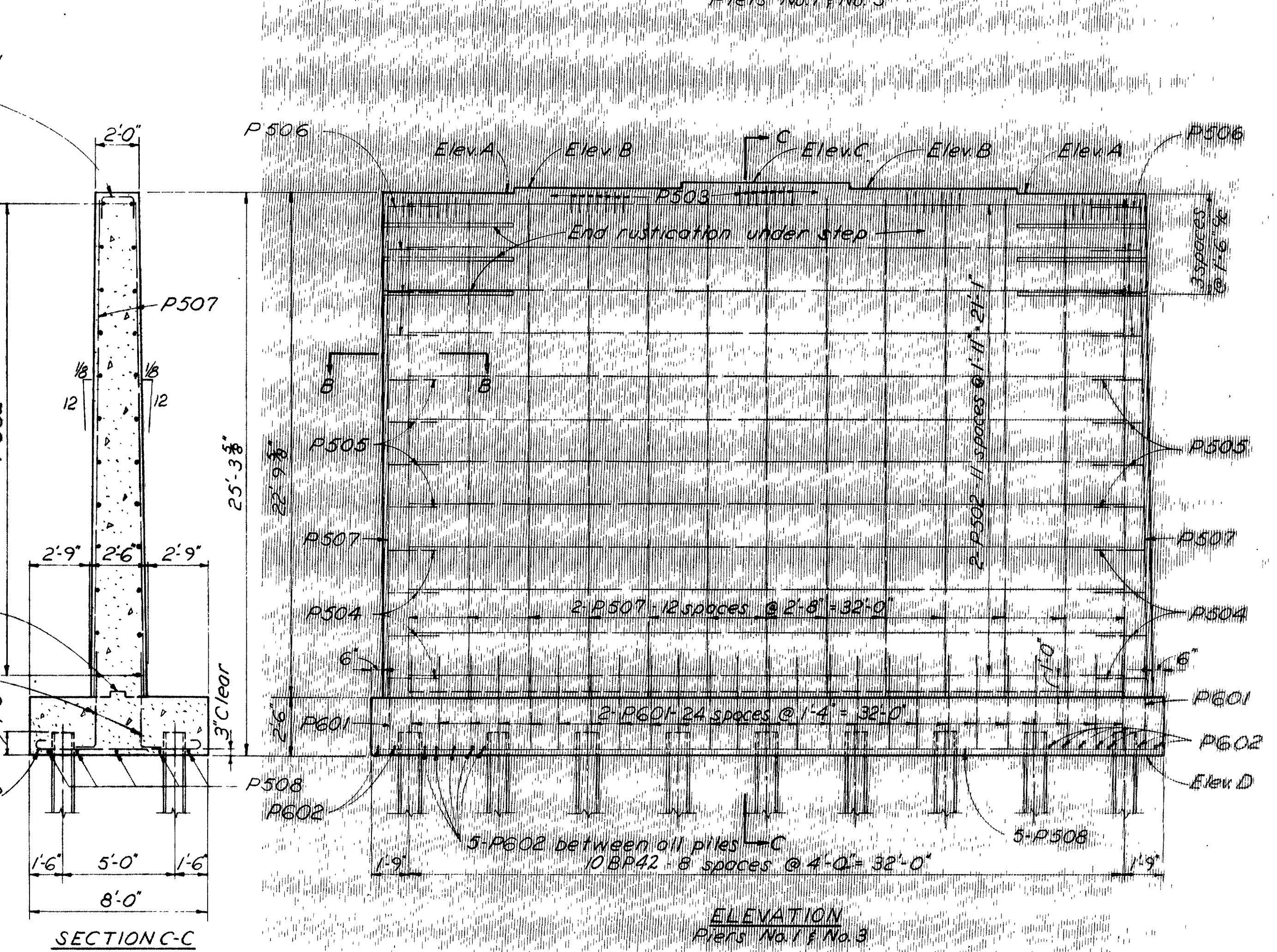
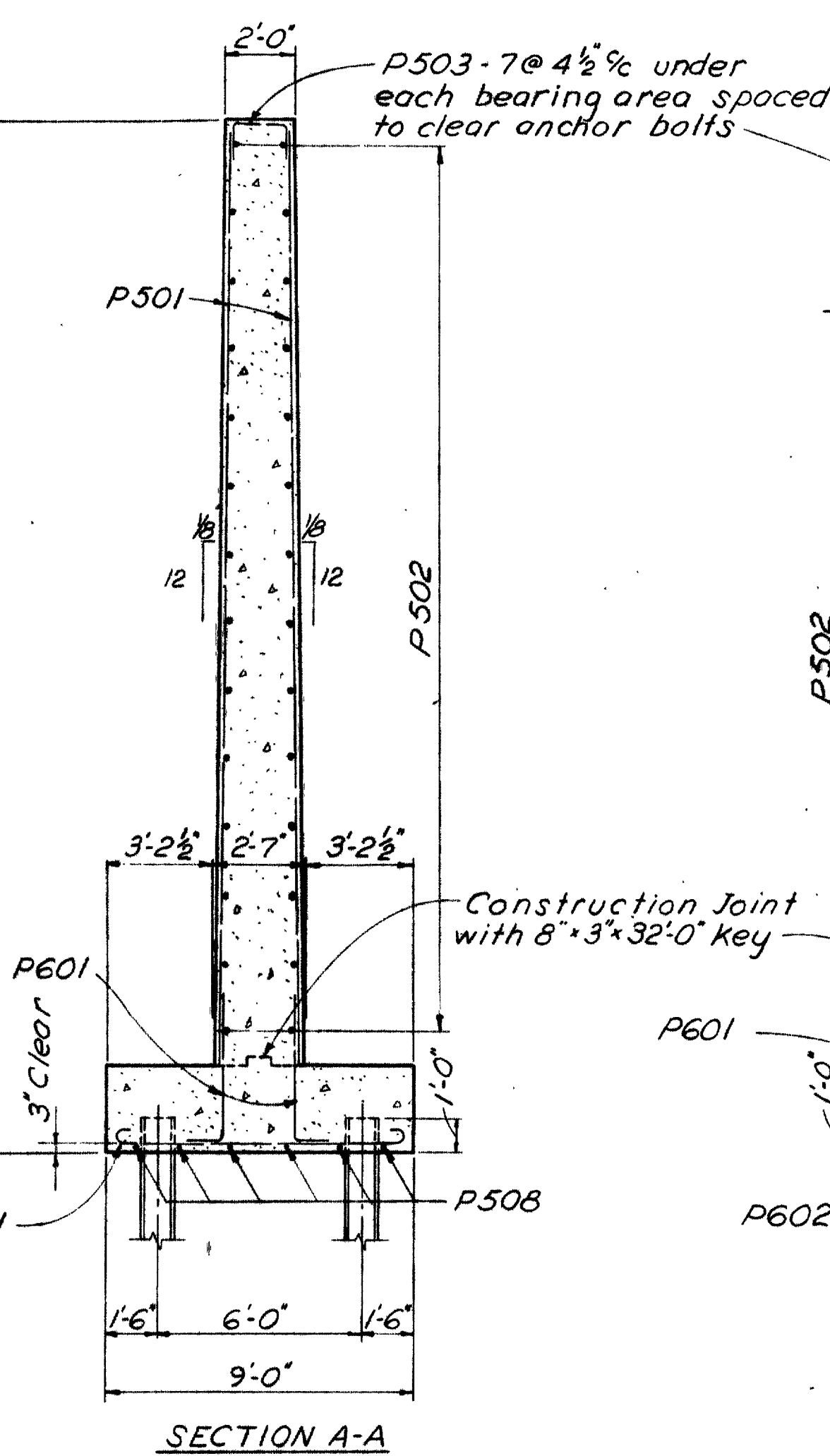
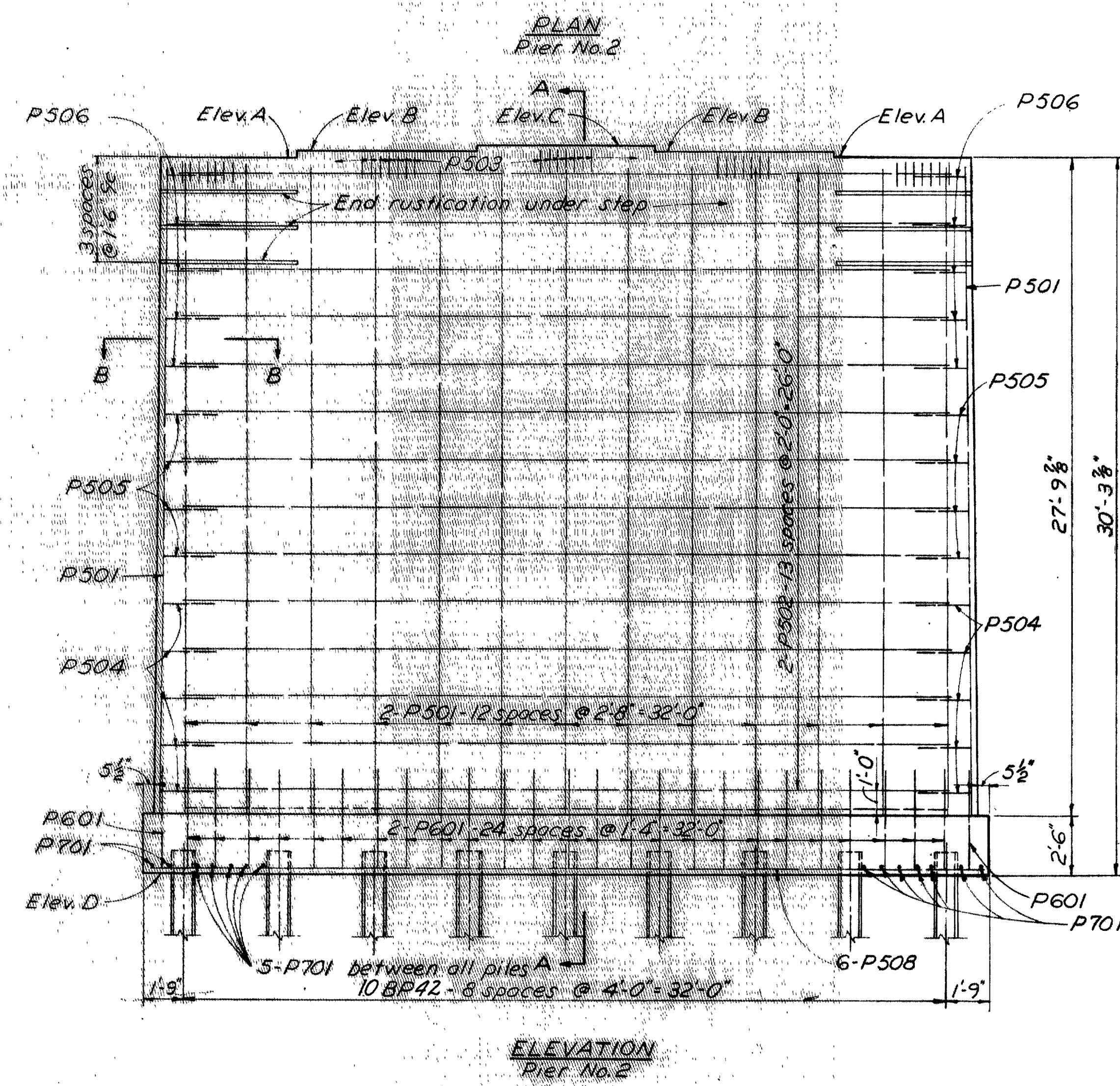
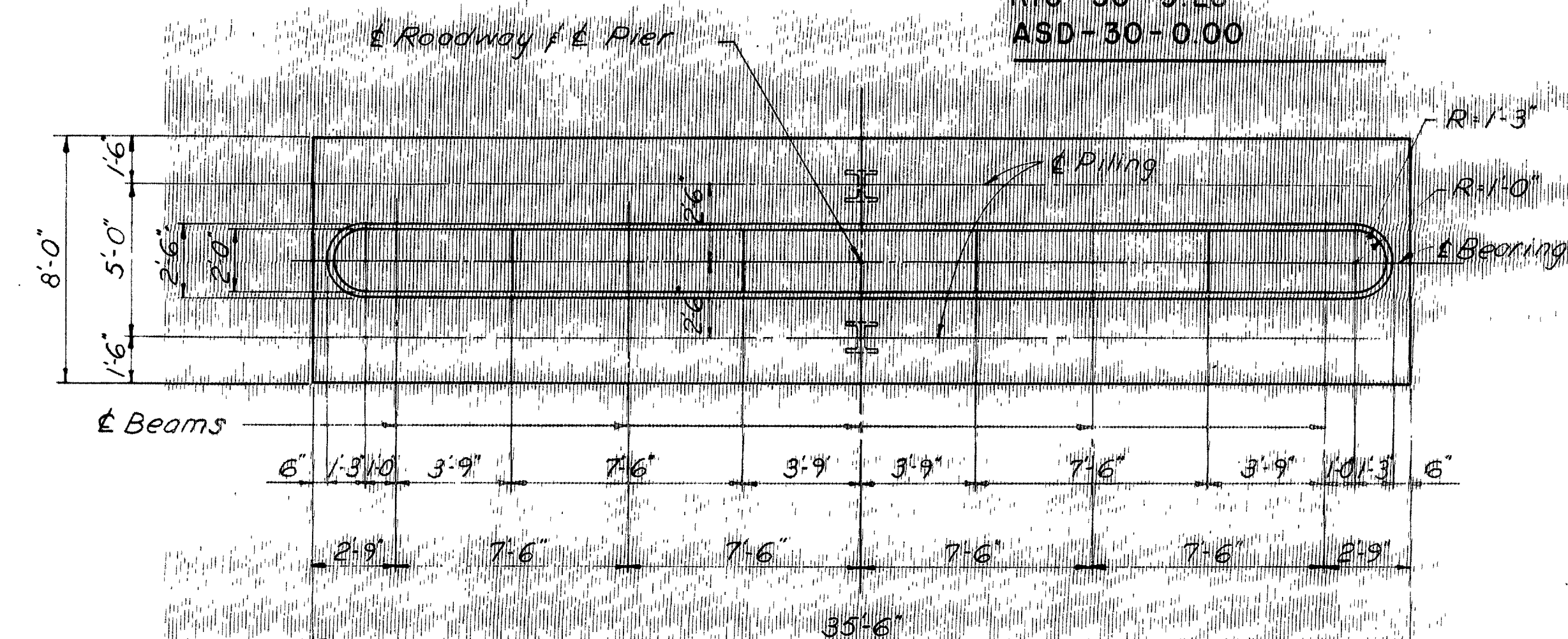
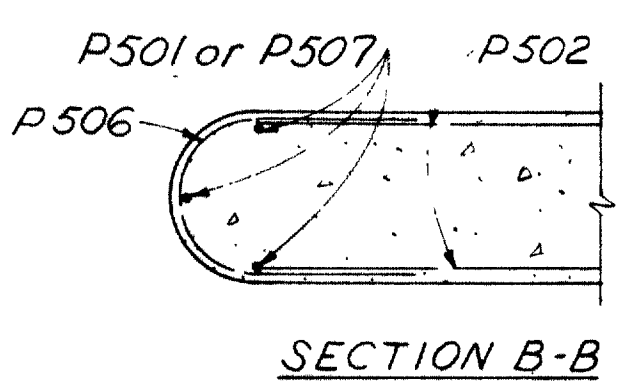
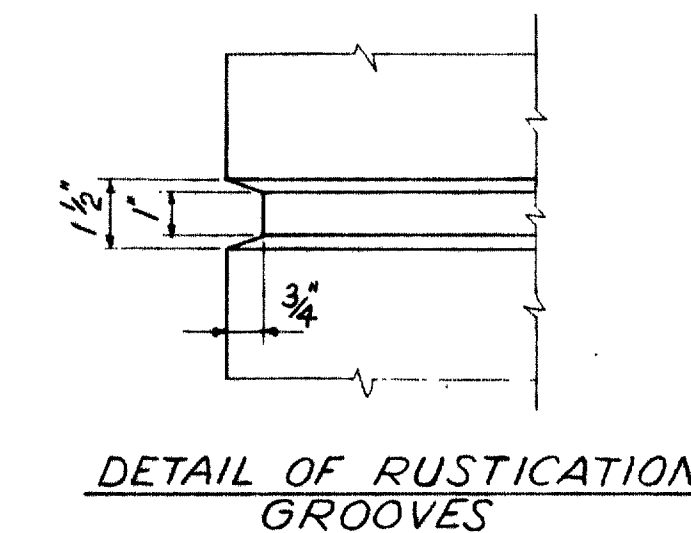
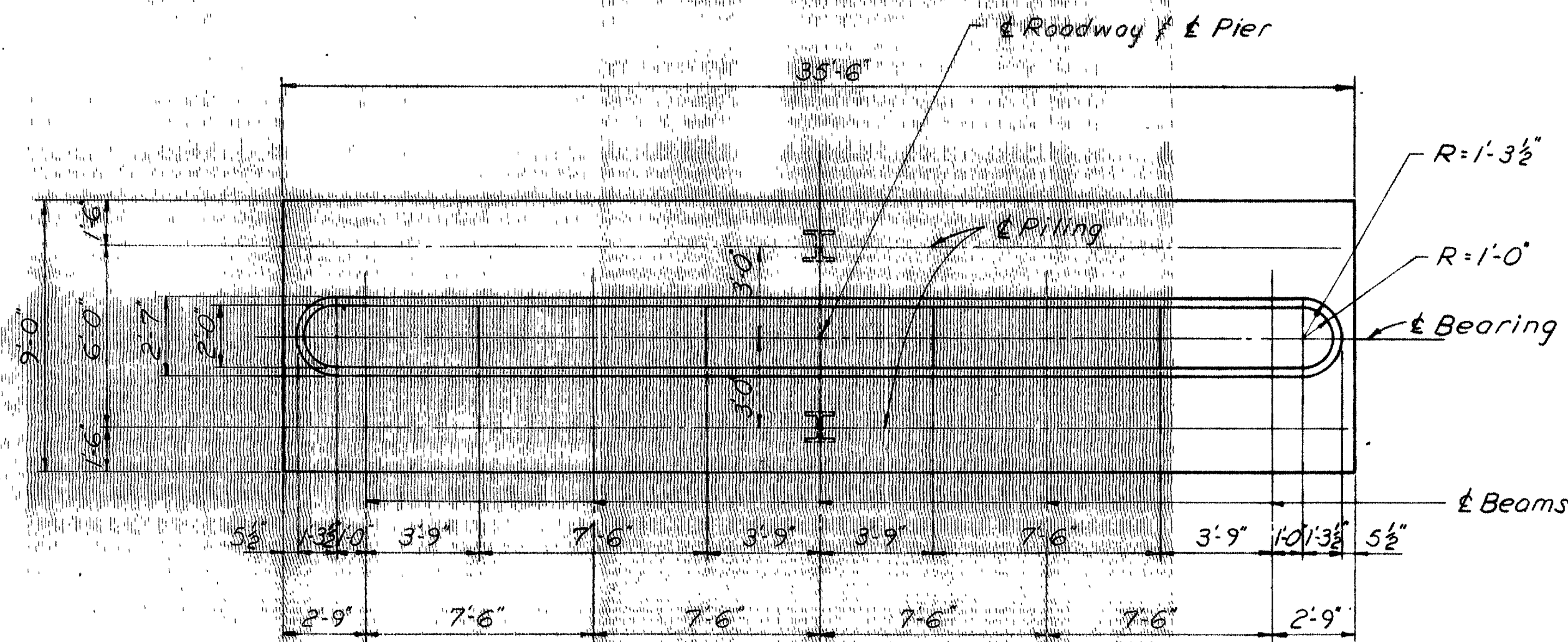
	ABUTMENT			ELEVATIONS						
	A	B	C	D	E	F	G	H	I	J
Rear Abutment	1021.64	1020.79	1021.03	1020.79	1021.64	1016.15	1016.27	1016.39	1016.27	1016.15
Forward Abutment	1021.36	1020.51	1020.74	1020.51	1021.36	1015.87	1015.99	1016.11	1015.99	1015.87
	K.									
Rear Abutment	1011.2									
Forward Abutment	1010.9									

NOTES:
PROCEDURE: The embankment shall be placed and compacted to the level of the earth bench after which excavation shall be made for the abutment and piles driven.
POROUS BACKFILL: shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

SHAFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 Mansfield, Ohio

ABUTMENT DETAILS
 BRIDGE No. RIC-30-1103 L.
 OVER BLACK PORT OF MONROE RIVER
 HAMILTON COUNTY, OHIO

DATE: 10/15/50
 DRAWN BY: JAVG
 CHECKED BY: JAVG
 APPROVED BY: JAVG



PIER	ELEVATIONS		
	Pier No. 1	Pier No. 2	Pier No. 3
A	1015.54	1015.32	1015.30
B	1015.66	1015.43	1015.42
C	1015.77	1015.55	1015.53
D	990.24	985.00	990.00

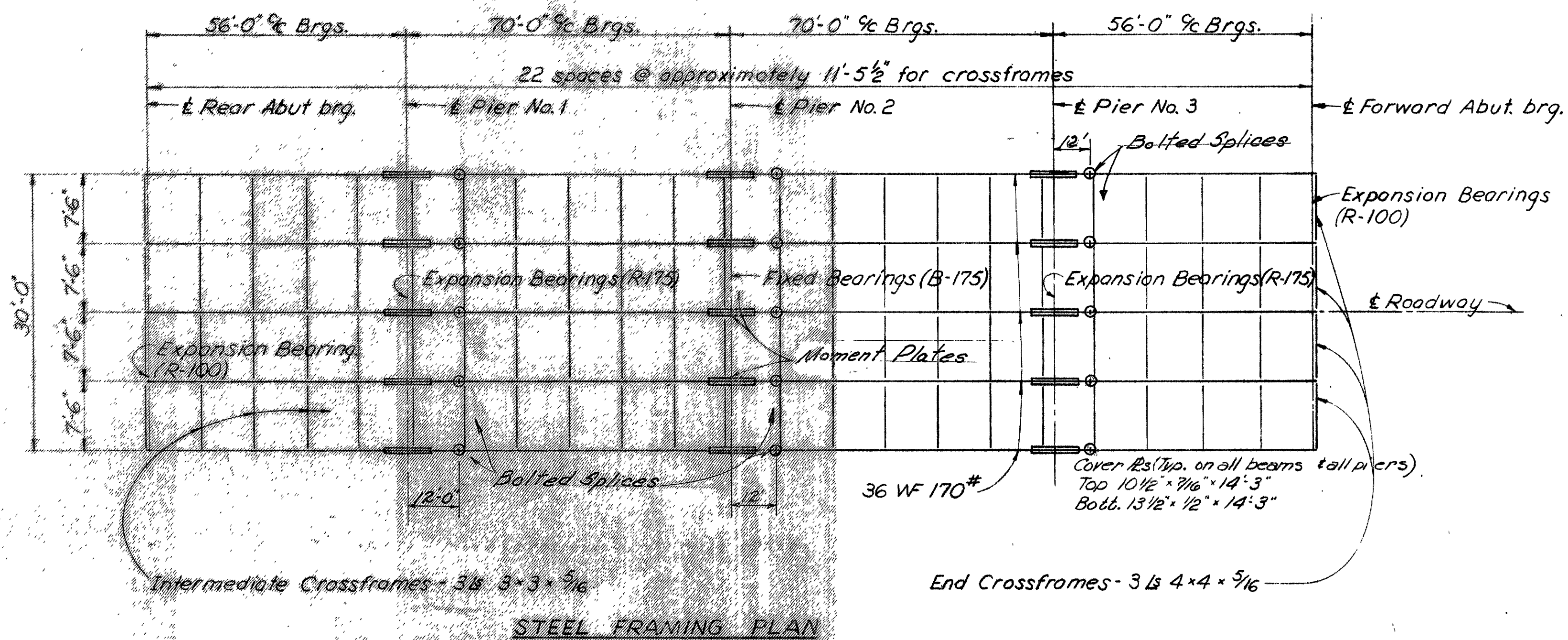
NOTE: All reinforcing steel shall be 2" clear unless otherwise shown.

SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANFIELD, OHIO

PIER DETAILS
 BRIDGE No. RIC-30-1103L
 OVER BLACK FORK OF MOHICAN RIVER
 RICHLAND COUNTY U.S.R. 30
 STA. 695 + 36.75 TO STA. 698 + 15.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DHT	DGC	DGC	JWC			

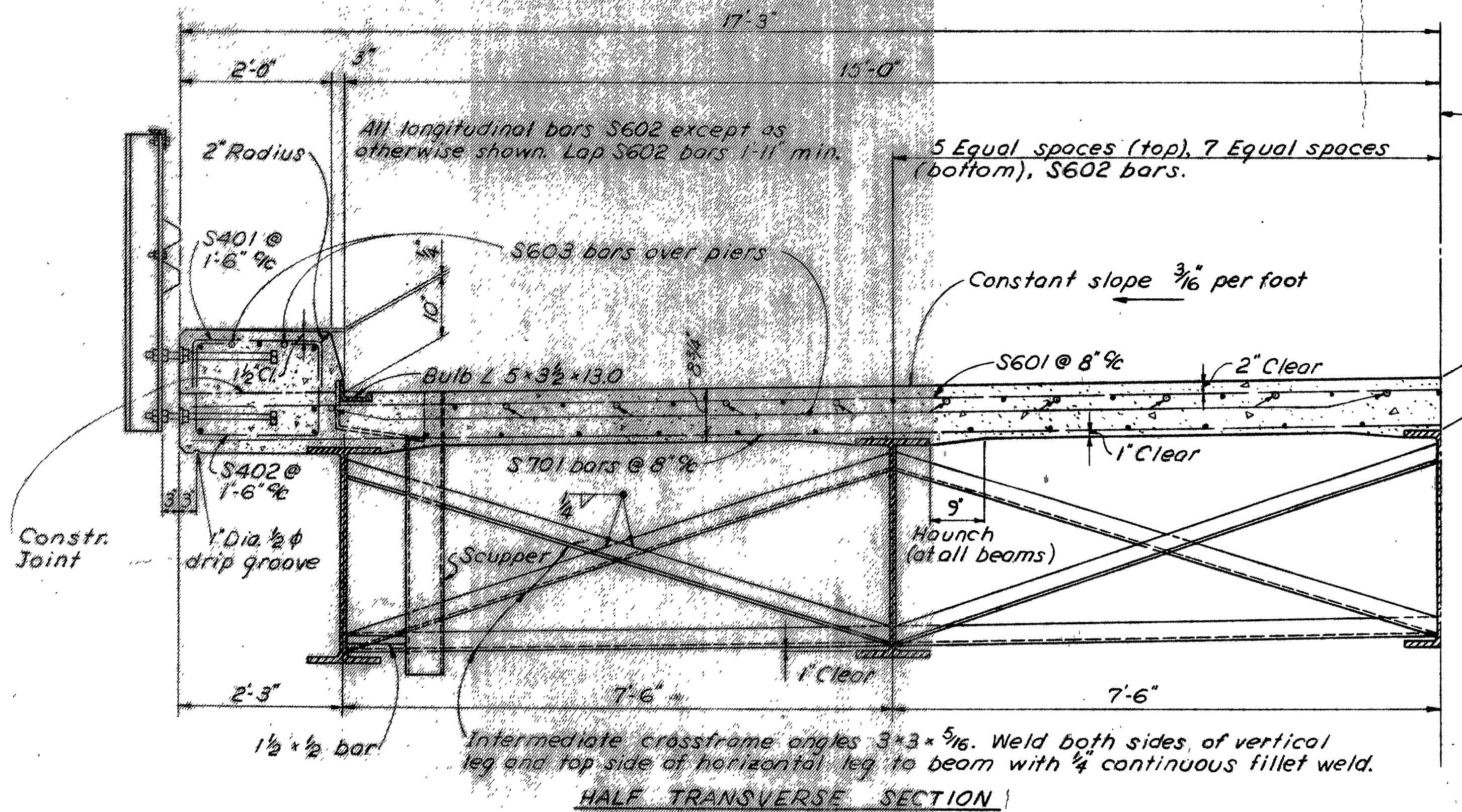
RIC-30-9.28
ASD-30-0.00



STEEL FRAMING PLAN

See Sheet 214 for BOLTED BEAM SPlice 36 WF 170 MOMENT PLATE DETAILS and BOLT NOTE.

NOTES:
See Standard Drawing SD-1-63, Sheets 23 and 4 of 4 for Superstructure Details and Notes.
Scupper spacing, railing post spacing and guard rail treatment are shown on the General Plan.
8 3/4" Deck slab includes 1 inch monolithic wearing surface.
No camber of beams will be required.
See Standard Drawing CSB-2-56, sheet 1 of 6, for Railing Details.



REINFORCING		STEEL		LIST					TYPES		
MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT		
Abutments											
A801	16	25'-1"	Str.						1071	A	C
A802	12	33'-8"	Str.						1079		
A601	46	16'-7"	3	3'-0"	0'-11"	6'-3"	1'-5"	5'-0"	1145	A	C
A602	12	13'-11"	1	6'-3"	1'-5"	6'-3"			251	B	
A501	4	22'-8"	Str.						95	TYPE 1	
A502	8	5'-6"	Str.						46	D	D
A503	16	24'-8"	Str.						412	A	C
A504	44	10'-3"	5	3'-3"	3'-11"	3'-1"	0'-3 1/2"		470		
A505	44	11'-8"	6	3'-3"	5'-4"	3'-1"	0'-3 1/2"		535		
A506	8	7'-0"	Str.						53	B	
A507	8	10'-0"	Str.						63	TYPE 2	
A508	8	9'-2"	Str.						77		
A509	8	8'-2"	Str.						68	B	
A510	8	4'-5"	Str.						37		
A511	12	6'-6"	7						81	A	
A512	8	3'-2"	Str.						26		
A513	8	8'-5"	Str.						70	C	E
A401	40	8'-5"	1	3'-4"	1'-9"	3'-4"			225		
Piers											
P501	28	27'-7"	Str.						806	D	
P502	76	32'-0"	Str.						2537	TYPE 3	
P503	105	3'-8"	1	1'-0"	1'-8"	1'-0"			402	B	
P504	26	6'-4"	4	1'-7"	3'-2"	1'-7"	1'-0"		172	D	
P505	24	6'-1"	4	1'-7"	2'-11"	1'-7"	0'-11"		152		
P506	26	5'-10"	4	1'-7"	2'-8"	1'-7"	0'-10"		158	A	C
P507	56	22'-7"	Str.						1319		
P508	16	35'-0"	Str.						584		
P601	156	5'-0"	1	0'-10"	4'-2"				1172	TYPE 4	
P602	88	8'-0"	8	0'-8"	7'-6"	0'-8"			1168		
P701	44	10'-2"	8	0'-10"	8'-6"	0'-10"			914	A	C
Superstructure											
S701	380	34'-2"	Str.						26,538	B	
S601	380	34'-2"	Str.						19,501	TYPE 5	
S602	399	37'-9"	Str.						22,623	A	C
S603	72	28'-0"	Str.						3,028	D	B
S401	338	3'-0"	1	0'-8"	1'-8"	0'-8"			677	TYPE 6	
S402	338	5'-2"	2	1'-3"	1'-8"	1'-5"	0'-4"		1167		
Replacement Steel											
RE801	1	6'-6"							17		
RE701	2	6'-2"							26		
RE601	3	5'-11"							27		
RE501	1	5'-7"							6		
RE401	1	5'-3"							4		

BAR SIZE is indicated in the bar mark. The first digit indicates the bar size number. For example, P501 is a number 5 size bar.

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Consulting Engineers
MANSFIELD, OHIO.

SUPERSTRUCTURE DETAILS & REINFORCING LIST
BRIDGE No. RIC-30-1103 L
OVER BLACK FORK OF MOHICAN RIVER
RICHLAND COUNTY U.S.R. 30

STA. 698 + 66.75 TO STA. 698 + 15.25

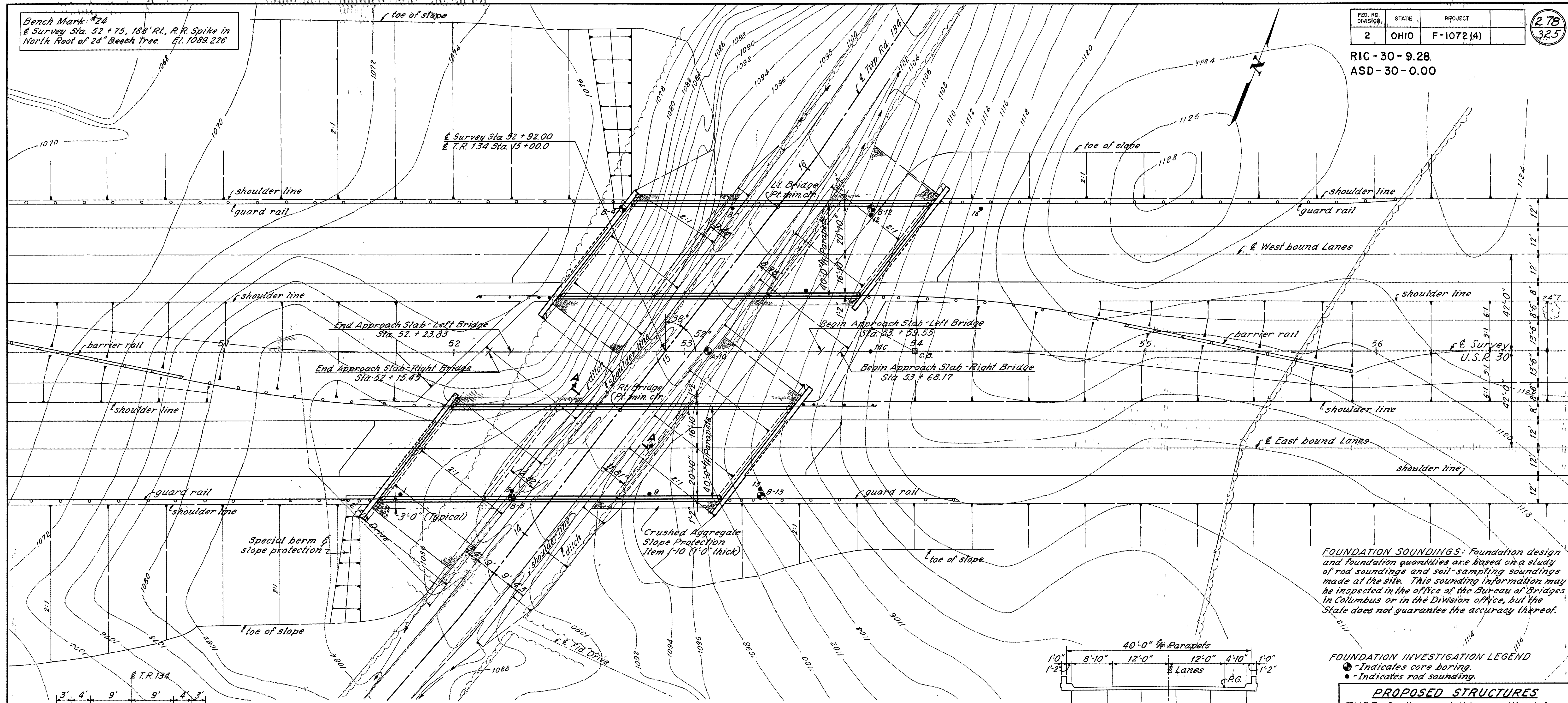
DESIGNED	DHT	DGC	FRACED	DGC	CHECKED	JMC	REVIEWED	DATE	REVISED
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Bench Mark #24
 @ Survey Sta. 52 + 75, 188' Rt., R.R. Spike in
 North Foot of 24" Beech Tree. E.I. 1089.226

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-1072 (4)

278
325

RIC-30-9.28
 ASD-30-0.00



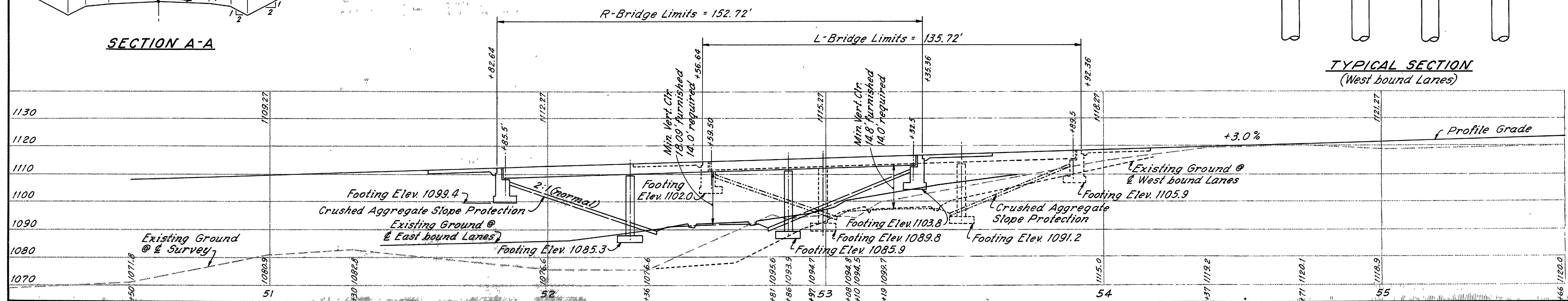
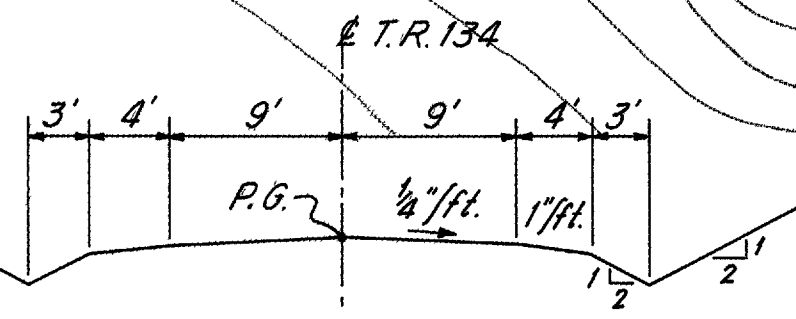
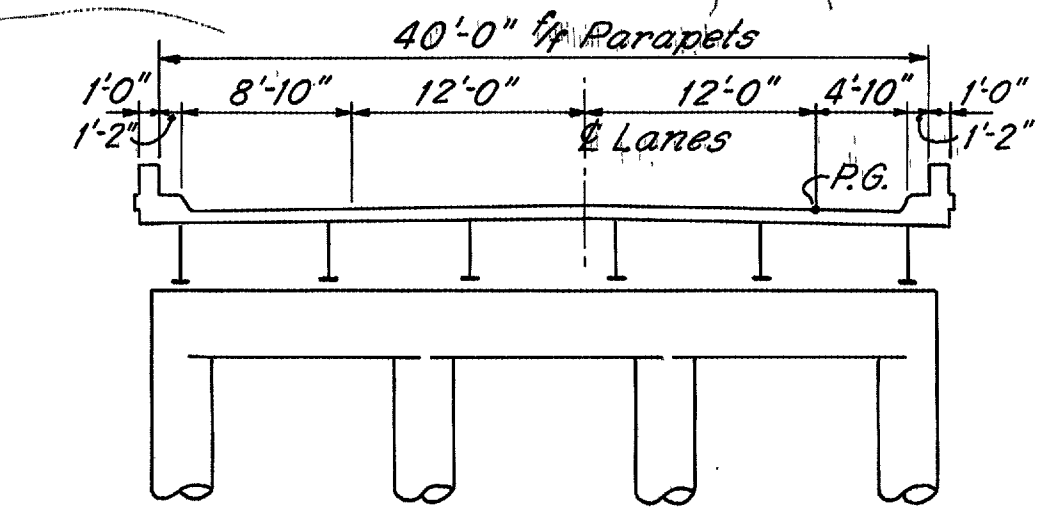
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

FOUNDATION INVESTIGATION LEGEND

- Indicates rod boring.
- Indicates core sounding.

PROPOSED STRUCTURES

TYPE: Continuous steel beams with reinforced concrete deck and substructure.
SPANS: 40'; 50'; 40' L-Bridge; 45'; 57'; 45' R-Bridge.
ROADWAY: 40'-0" Parapets with (2) 1'-2" curbs.
LOAD FREQUENCY: CF 2000 (57)
WEARING SURFACE: 1" Monolithic concrete.
APPROACH SLABS: AS-1-54 (25'-0" Long)
SKIEW: 38°-00' L.F.
ALIGNMENT: Tangent
AVERAGE DAILY TRAFFIC: 6950 (1980)

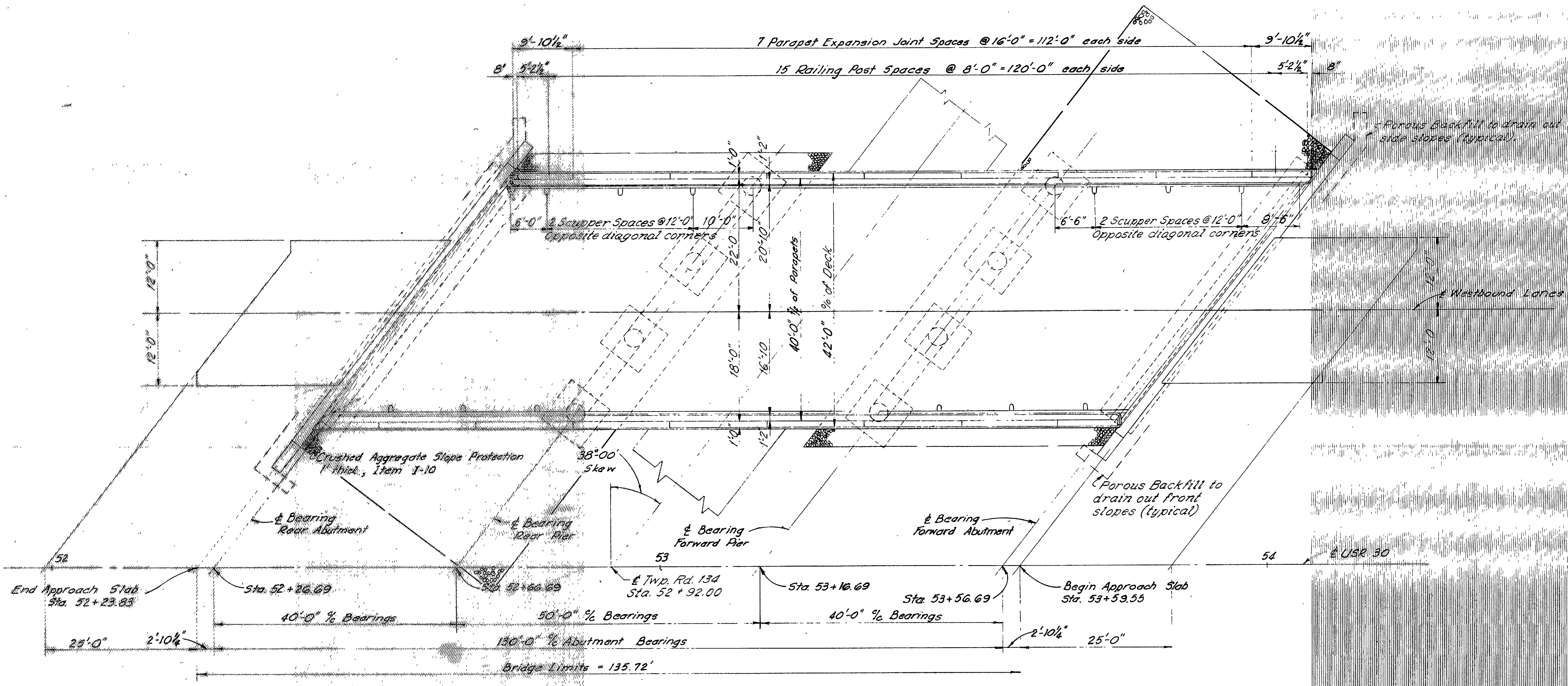


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 Consulting Engineers
 MANSFIELD, OHIO.

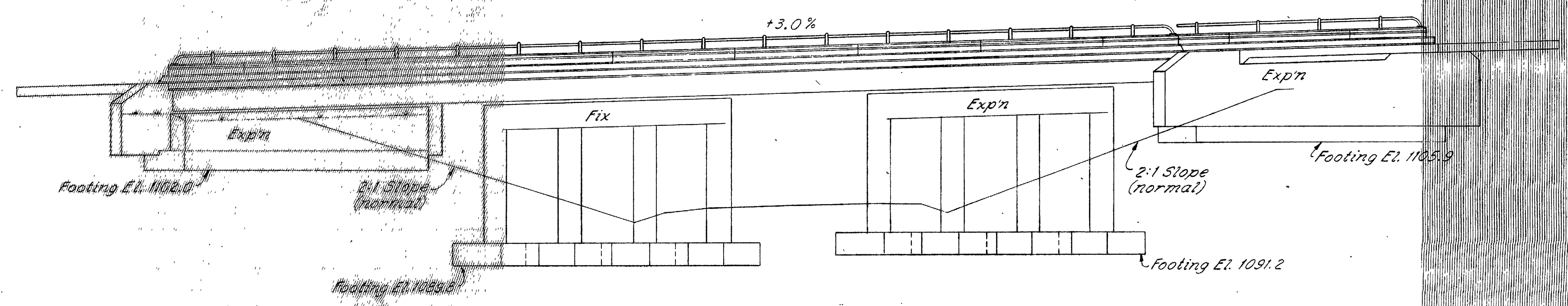
SITE PLAN

BRIDGE No ASD-30-0098 L&R
OVER MIFFLIN TOWNSHIP ROAD #134
 ASHLAND COUNTY U.S.R. 30
 STA. 52 + 23.83 TO STA. 53 + 59.55 L-BRIDGE
 STA. 52 + 15.45 TO STA. 53 + 68.17 R-BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.A.K.	Bob	UL	R.A.K.			



PLAN



ELEVATION

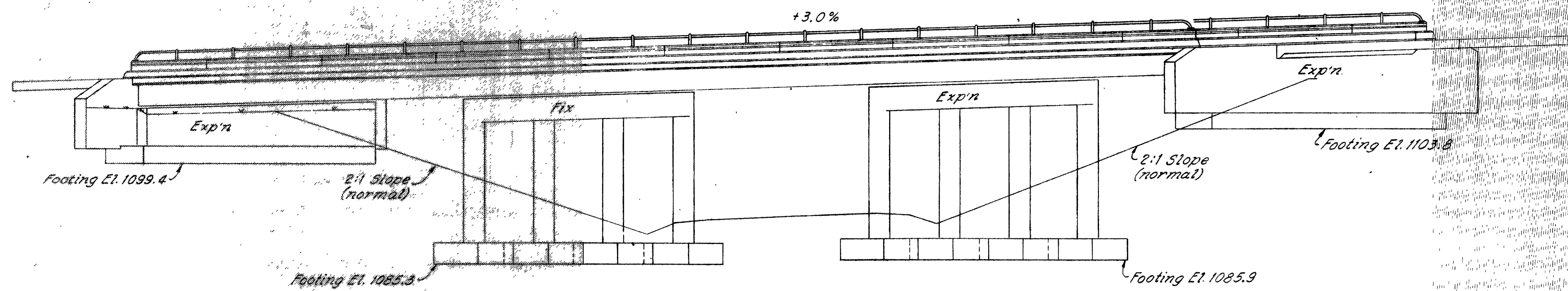
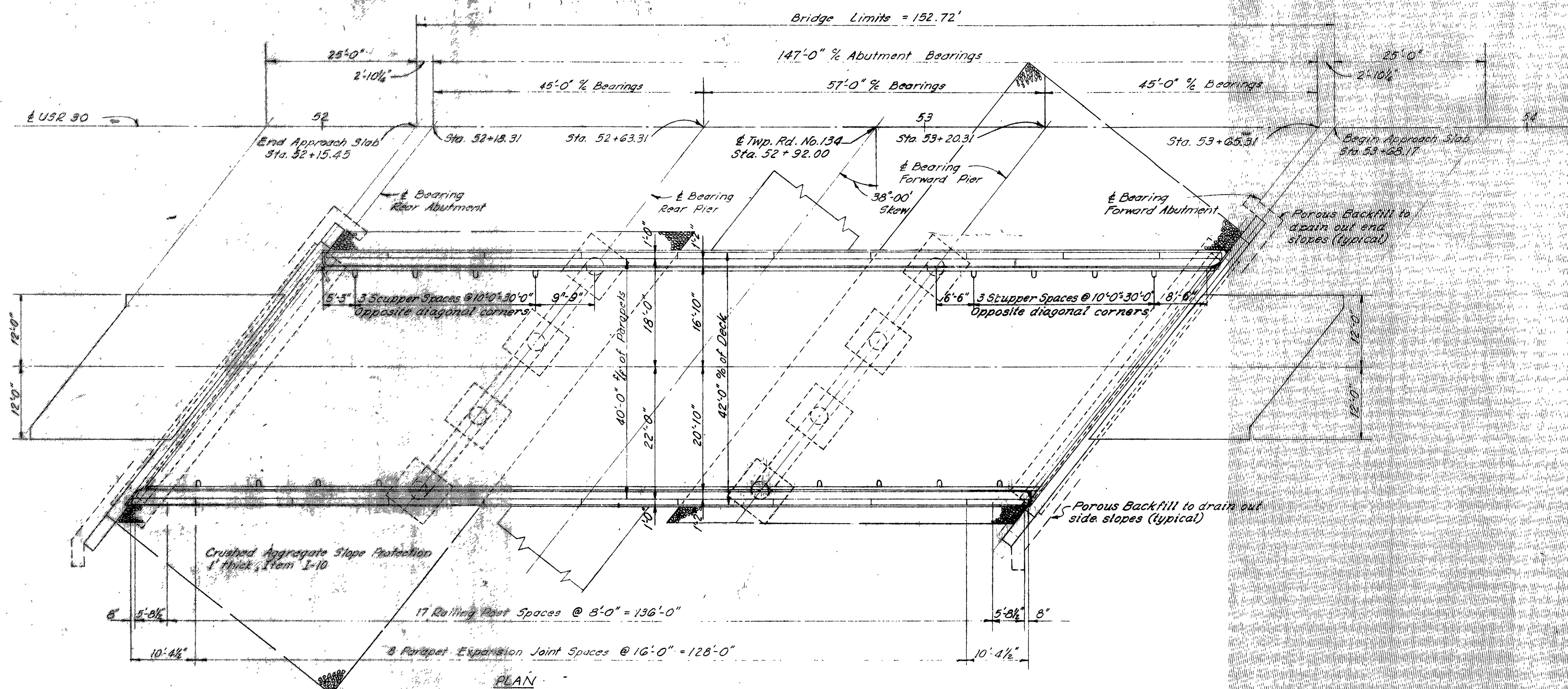
GENERAL NOTES: See sheet 281

SHAFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 Mansfield, Ohio.

GENERAL PLAN - LEFT BRIDGE
 BRIDGE No. ASD-30-0098 L&R
 OVER MIFFLIN TOWNSHIP ROAD #134
 ASHLAND COUNTY U.S.R. 30
 STA. 52 + 23.83 TO STA. 53 + 59.55 L. BRIDGE
 STA. 52 + 15.45 TO STA. 53 + 68.17 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JEG	EL	JEG	R.A.K.			

RIC-30-9.28
ASD-30-0.00



GENERAL NOTES: See sheet 281

SHARPER, FARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO

GENERAL PLAN - RIGHT BRIDGE
BRIDGE No. ASD-30-0098 L&R
OVER MIFFLIN TOWNSHIP ROAD #134
ASHLAND COUNTY U.S.R. 30

STA. 52+25.82 TO STA. 53+59.55 L BRIDGE
STA. 52+15.45 TO STA. 53+60.17 R BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
JEG	Ed	JE	PAK			

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	BRIDGE NO. ASD-30-0098L				BRIDGE NO. ASD-30-0098R			
				SUPER.	ABUTS.	PIERS	GEN'L	SUPER.	ABUTS.	PIERS	GEN'L
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump				
E-2	920	Cu. Yds.	Unclassified Excavation		249	198			253	220	
S-1	364	Cu. Yds.	Class "C" concrete, superstructure	171				193			
S-1	150	Cu. Yds.	Class "C" concrete, piers above footings			72				78	
S-1	367	Cu. Yds.	Class "E" concrete, abutments		181				186		
S-1	114	Cu. Yds.	Class "E" concrete, pier footings			57				57	
S-4	161,440	Lbs.	Reinforcing steel	48,787	9329	18,497		54,911	9485	20,431	
S-7	277,013	Lbs.	Structural steel	129,654				145,559			
S-8	277,013	Lbs.	Field painting of structural steel	129,654				145,559			
S-14	562	Lin. Ft.	Railing (aluminum rail, supports, & concrete parapets)	264				298			
S101	364	Each	Water reducing set-retarding admixture	171				193			
S-29	28	Each	Scuppers, including supports	12				16			
S-29	74	Cu. Yds.	Porous backfill		36				38		
I-10	1689	Sq. Yds.	Crushed aggregate slope protection				758				931

277,013

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 (revised T-5-62), AR-1-57 (revised A-2-62), CSB-2-56, sheets 1, 3, 4, 5, 6 of 6 (revised 2-2-59), SD-1-63 Sheets 2, 3, 4 of 4 dated 11-12-63 and Supplemental Specs. S-101 of T-12-62 and S-307 of 10-1-64.

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

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and for piers that are set in the filled area.


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

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade, after which excavation shall be made for the abutments and for piers that are set in the filled area. Such embankment shall be carried for a distance of at least 200 feet back of the rear abutments.

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

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:
a) The entire superstructure except and bottom surfaces of side-walks and roadways.
b) The entire surface of piers and abutments except bridge seats, blackwalls and the face of spill-through abutments between outside beams.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between the transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop. Class "B" welds are shown as 

BRIDGE SEATS: Special care must be taken in placing bars in the bridge seats so that they will not interfere with the drilling of holes for anchor bolts.

PARAPETS: R502 thru R504 reinforcing bars and concrete above the parapet construction joint shall be included in the price per linear foot of railing for payment.

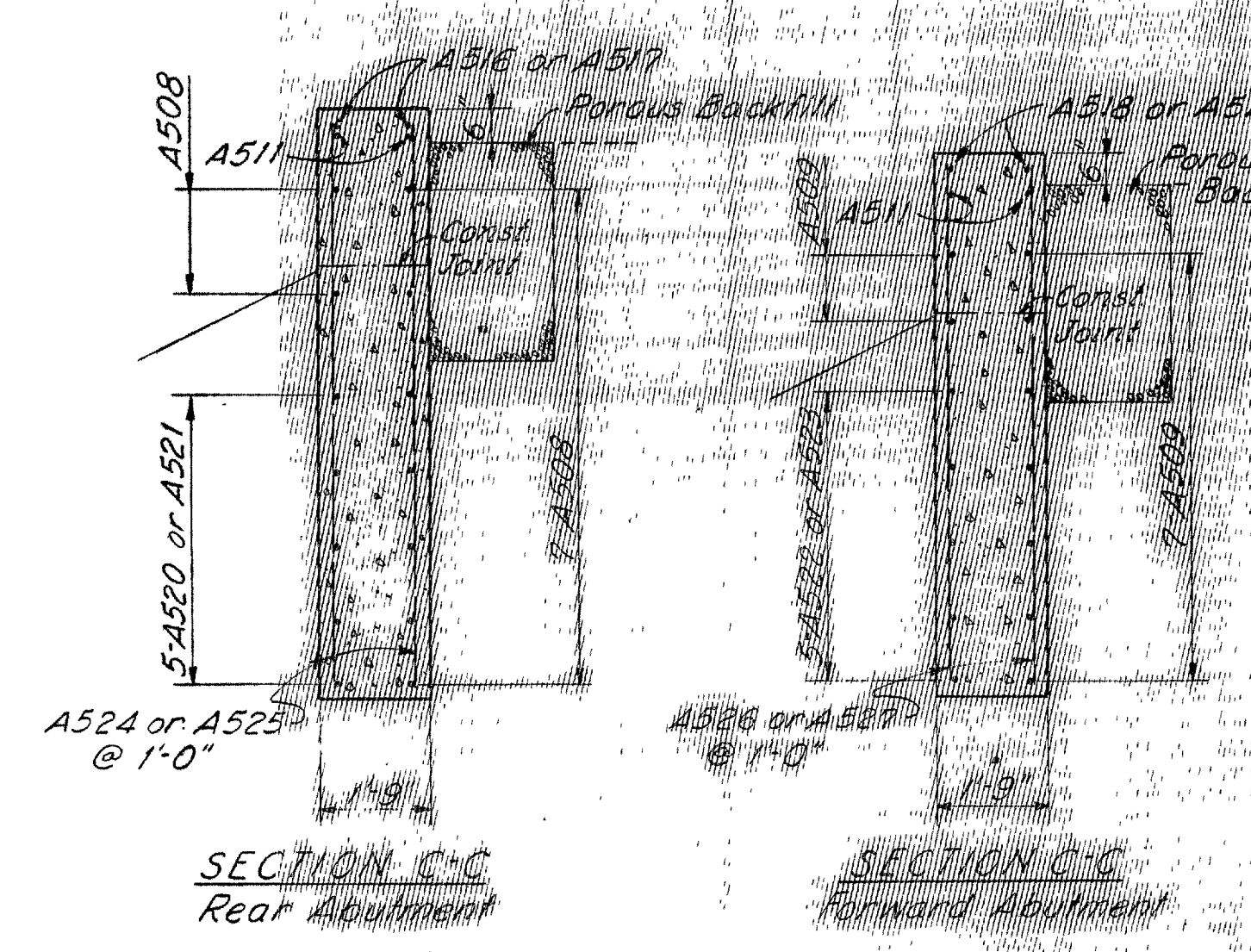
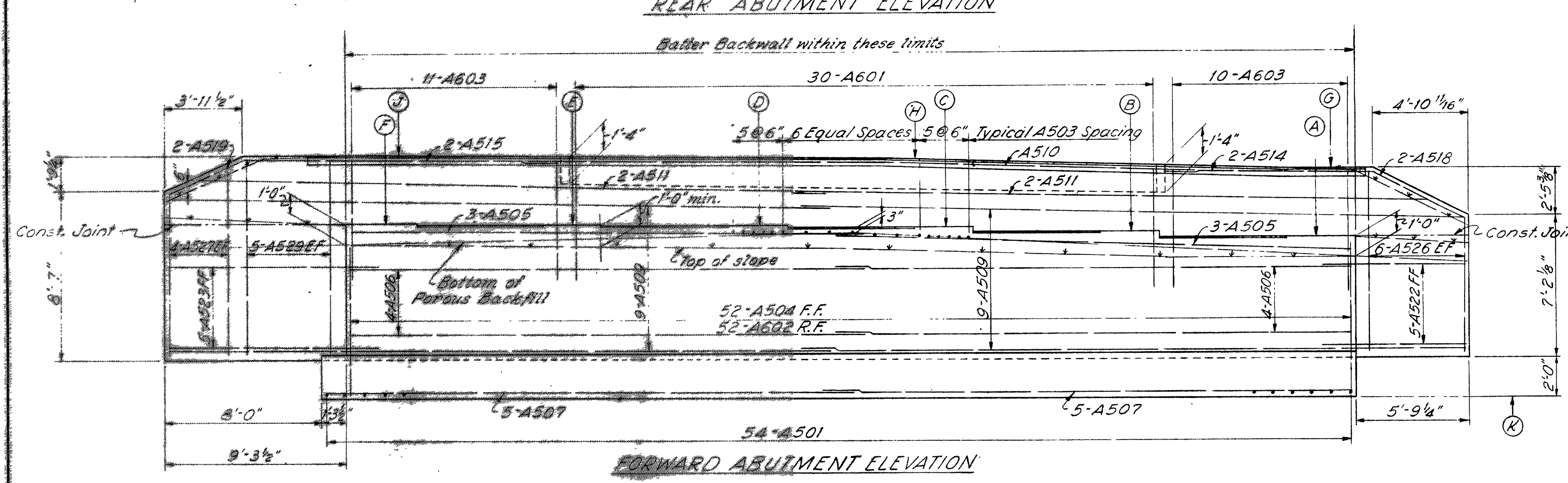
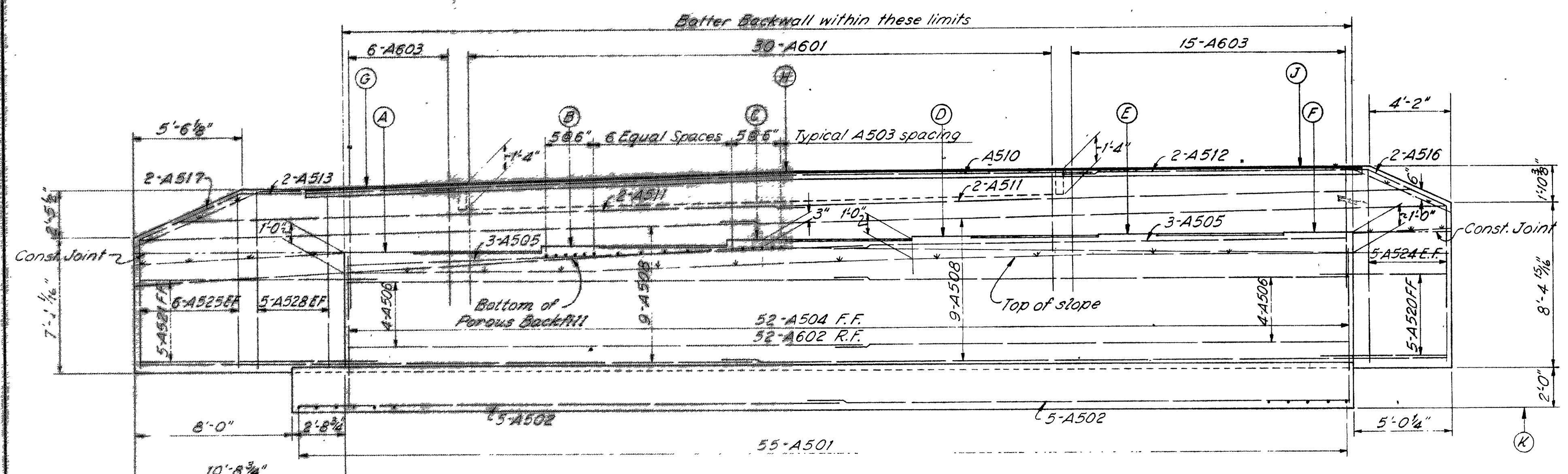
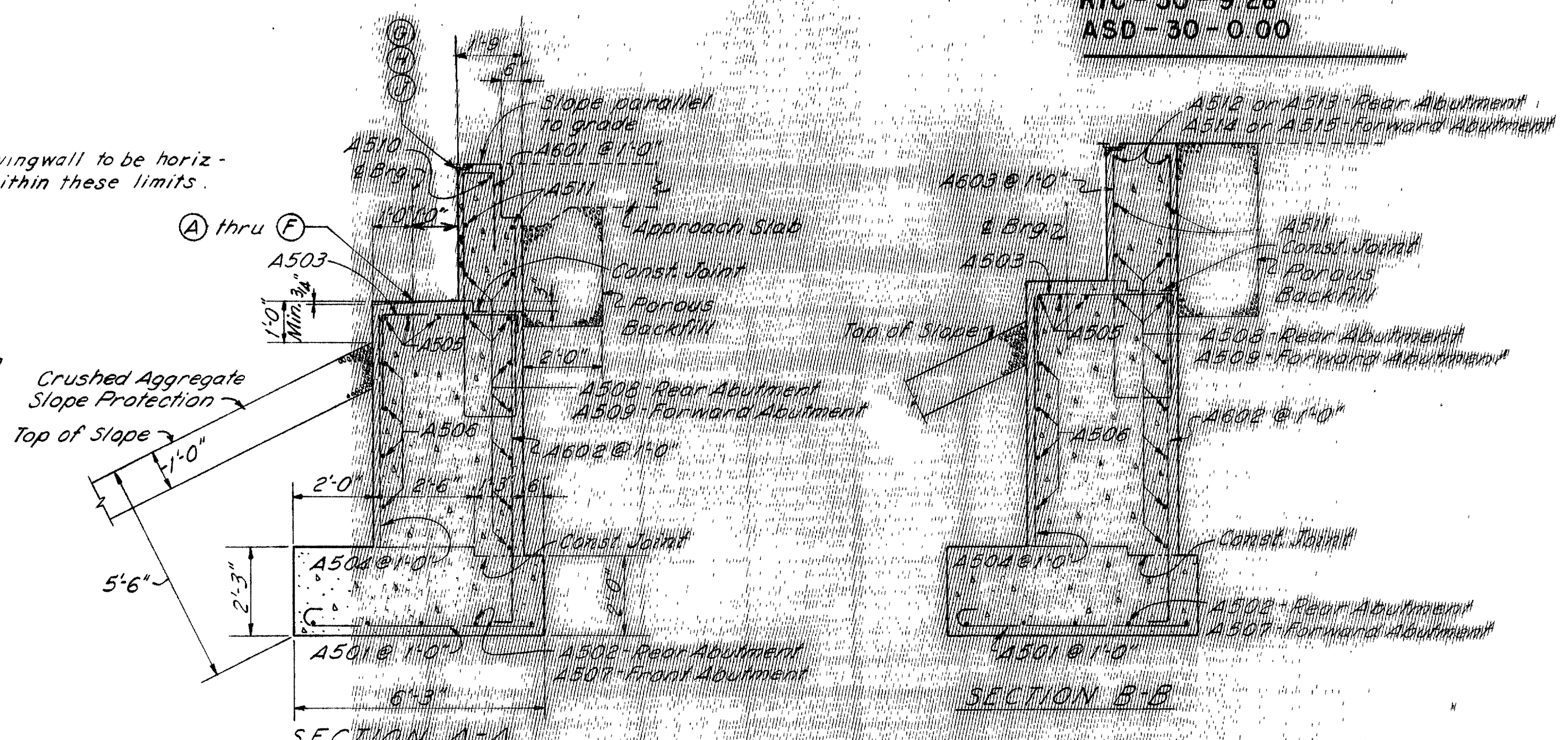
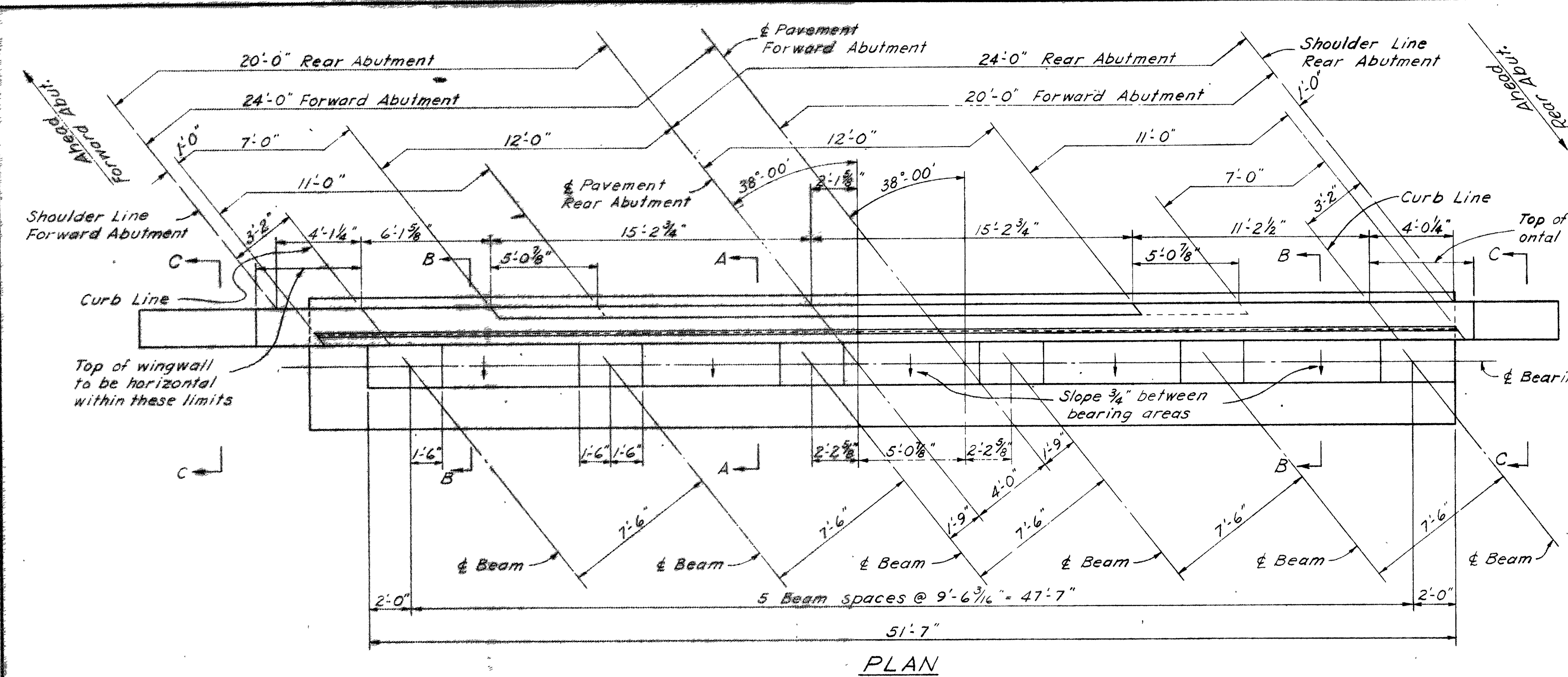
DESIGN LOADING - CF 2000 (57)
CONCRETE CLASS C - basic unit stress 1333 p.s.i.
CONCRETE CLASS E - basic unit stress 1133 p.s.i.
STRUCTURAL STEEL - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 and A373 steel not permitted)

REINFORCING STEEL - ASTM A15, A16, A160, Deformed, Intermediate or HARD GRADE. Basic unit stress 20,000 p.s.i. Except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. ASD-30-0098 L & R
OVER MIFFLIN TOWNSHIP ROAD #134
ASHLAND COUNTY U.S.R. 30
STA. 52 + 23.83 TO STA. 53 + 59.55 L. BRIDGE
STA. 52 + 19.43 TO STA. 53 + 68.17 R. BRIDGE
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
R.A.K. R.H.U. U. R.A.K.

RIC-30-928
ASD-30-000



NOTES:

POROUS BACKFILL: See Sheets 279 & 281

FOUNDATION BEARING PRESSURE: Allow bearing loadings are designed for a maximum of the bearing pressure of 1.8 tons per square foot.

CONCRETE: All abutment concrete shall be Class II.

NOTATIONS:

F.F. Front Face
R.F. Rear Face
E.F. Each Face

GENERAL NOTES: See Sheet 281

TABLE OF ELEVATIONS

LOCATION	A	B	C	D	E	F	G	H	I	J	K
Rear Abutment	110.769	110.462	110.785	110.868	110.926	110.945	111.543	114.200	114.363	1102.0	
Forward Abutment	114.089	114.362	114.656	114.768	114.881	114.985	117.519	118.177	118.339	1105.0	

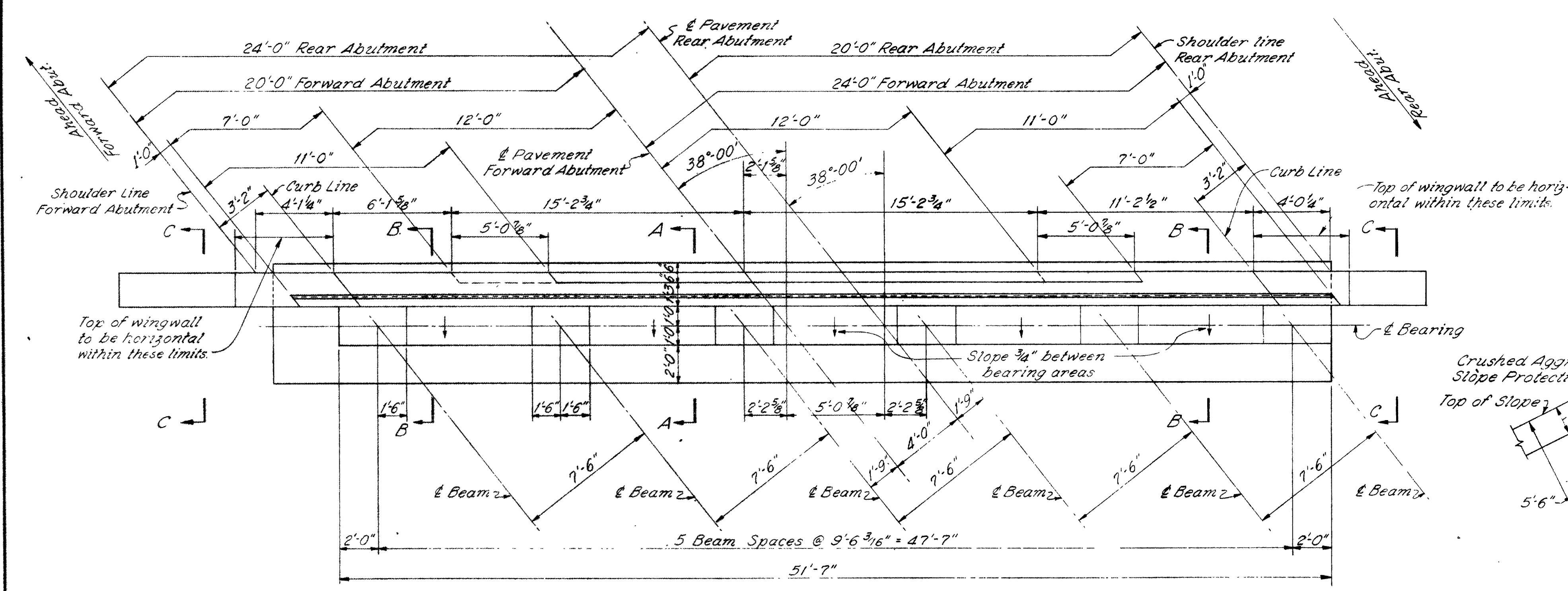
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Consulting Engineers
MANSFIELD, OHIO

ABUTMENTS - LEFT BRIDGE
BRIDGE No. ASD-30-0098 L/97
OVER MIFFLIN TOWNSHIP ROAD # 12/A
ASHLAND COUNTY U.S.P.S.

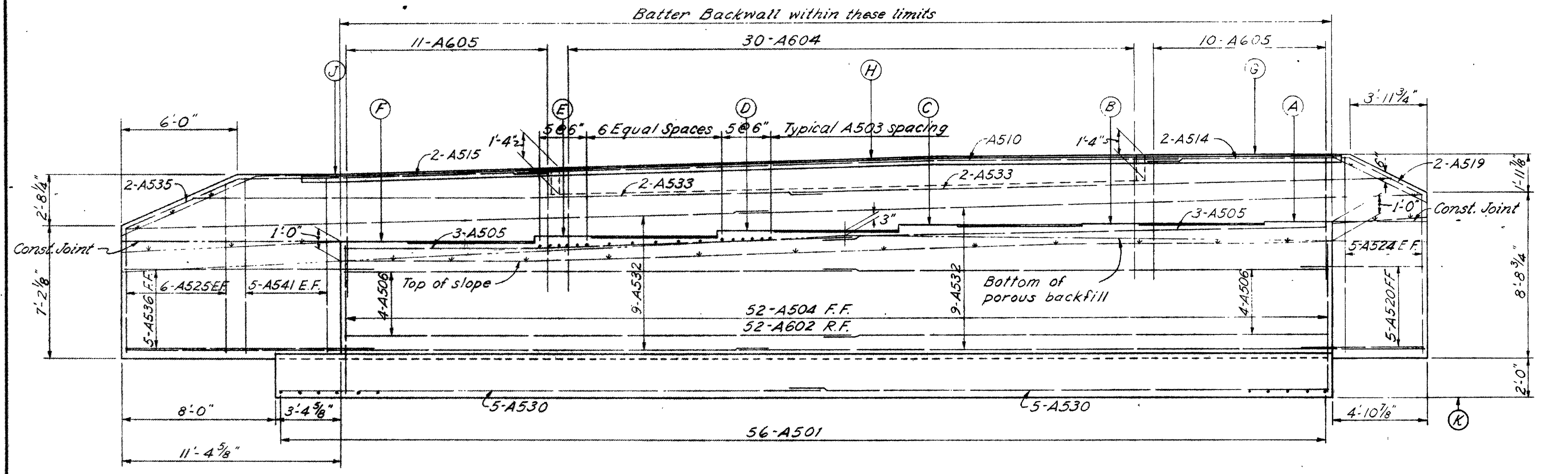
STA. 52 + 23.83 TO STA. 53 + 59.54 L. BRIDGE
STA. 52 + 12.45 TO STA. 53 + 64.17 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
RAK	RAK	SL	JEG			

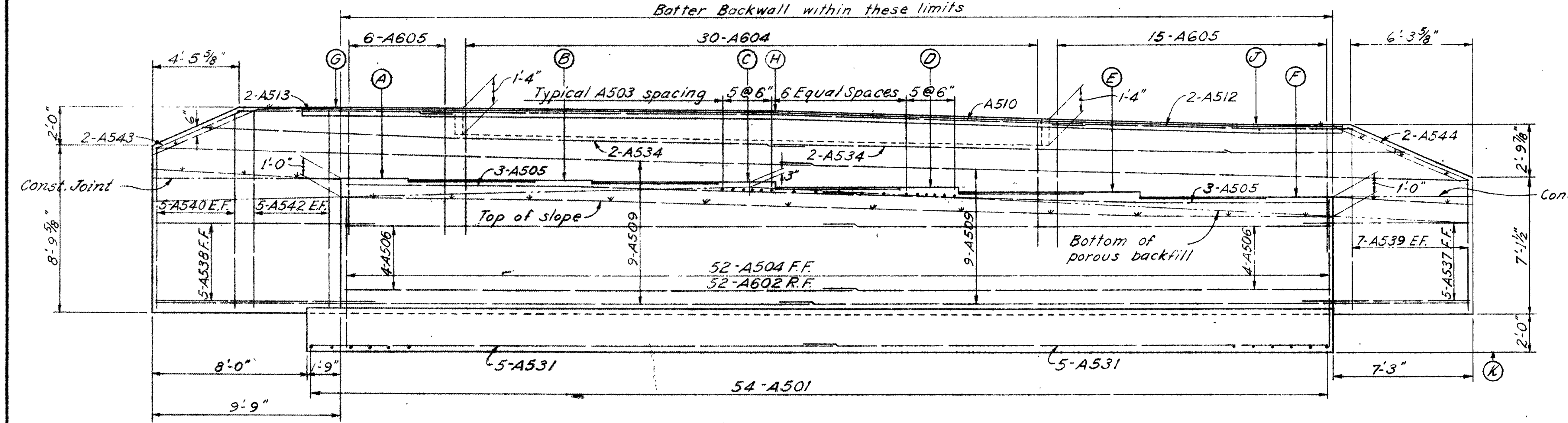
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ASD-30-0.00



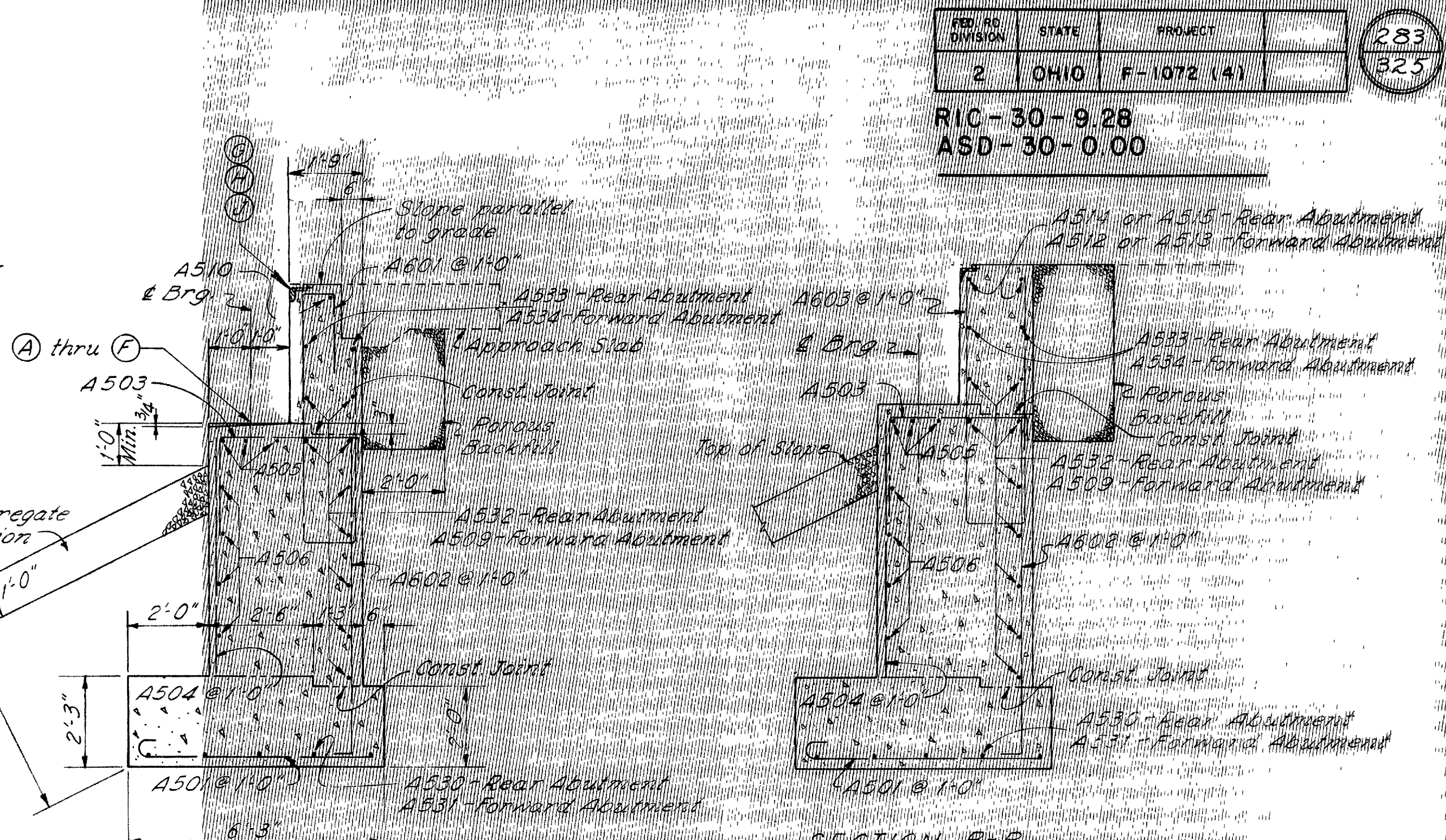
PLAN



REAR ABUTMENT ELEVATION

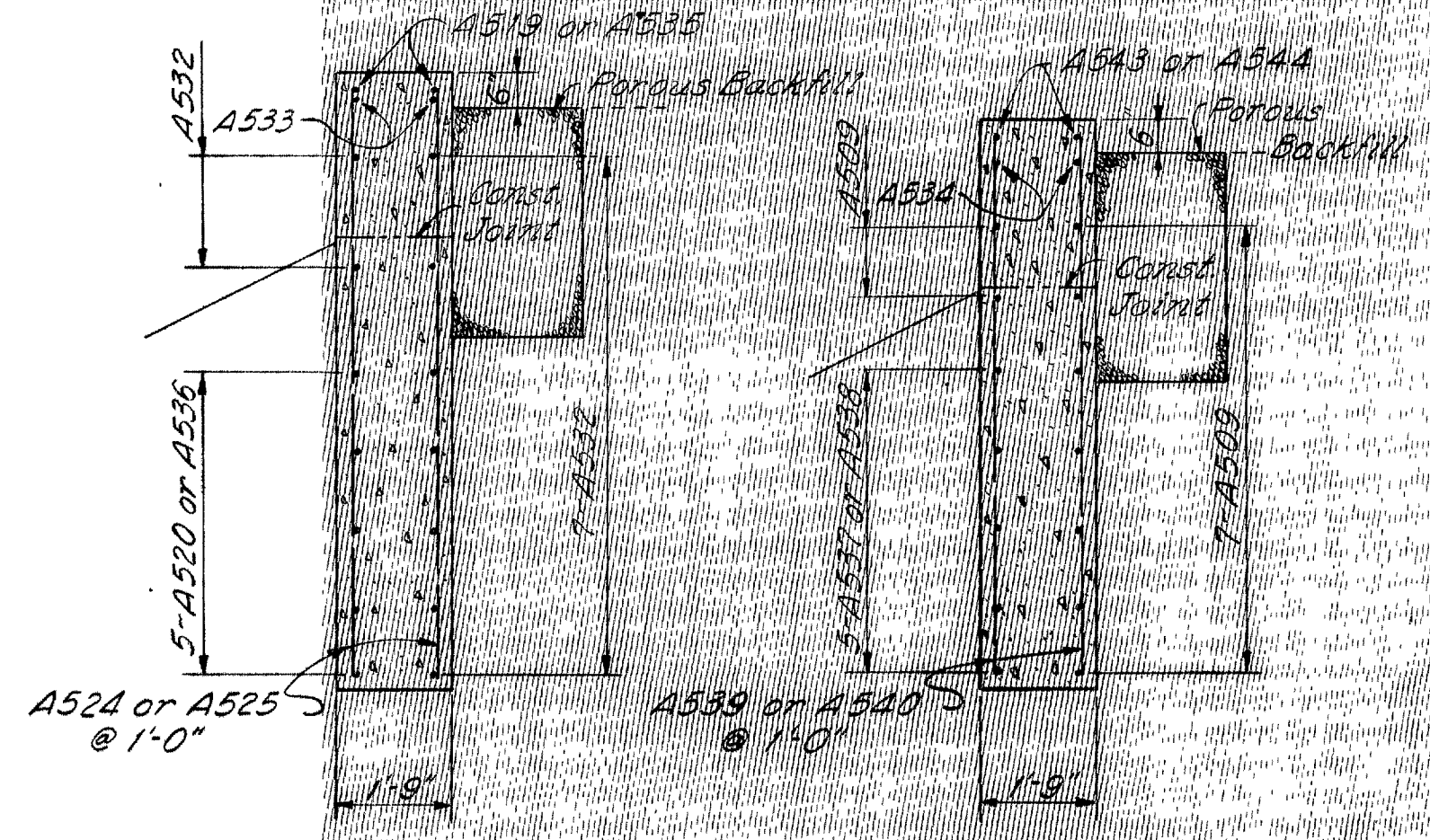


FORWARD ABUTMENT ELEVATION



SECTION A-A

SECTION B-B



SECTION C-C
Rear Abutment

SECTION C-C
Forward Abutment

NOTES:
POROUS BACKFILL: See sheets 280 & 281
FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 2.0 tons per square foot.
CONCRETE: All abutment concrete shall be Class F.
NOTATIONS:
 F.F. - Front Face
 R.F. - Rear Face
 E.F. - Each Face
GENERAL NOTES: See Sheet 281

LOCATION	A	B	C	D	E	F	G	H	I	J	K
Rear Abutment	1102.459	1102.430	1102.372	1102.133	1107.840	1107.547	1112.112	1111.981	1111.167	1099.4	
Forward Abutment	1112.899	1112.840	1112.782	1112.543	1112.230	1111.957	1116.598	1116.467	1115.653	1103.8	

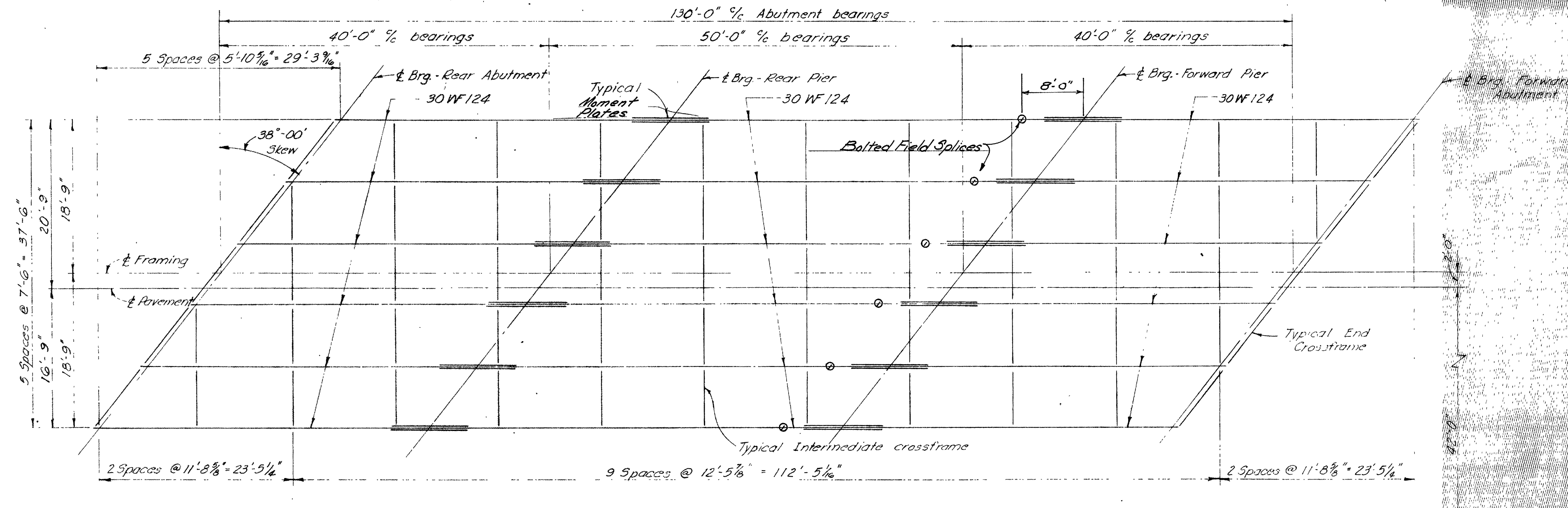
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Consulting Engineers
MANSFIELD, OHIO

ABUTMENTS - RIGHT BRIDGE
 BRIDGE No. ASD-30-0098 L&R
 OVER MIFFLIN TOWNSHIP ROAD #134
 ASHLAND COUNTY, U.S.R. 30

STA 22 + 23.93 TO STA 55 + 59.55 L BRIDGE
 STA 56 + 15.45 TO STA 63 + 68.17 R BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	W	JEG			

RIC-30-9.28
ASD-30-0.00

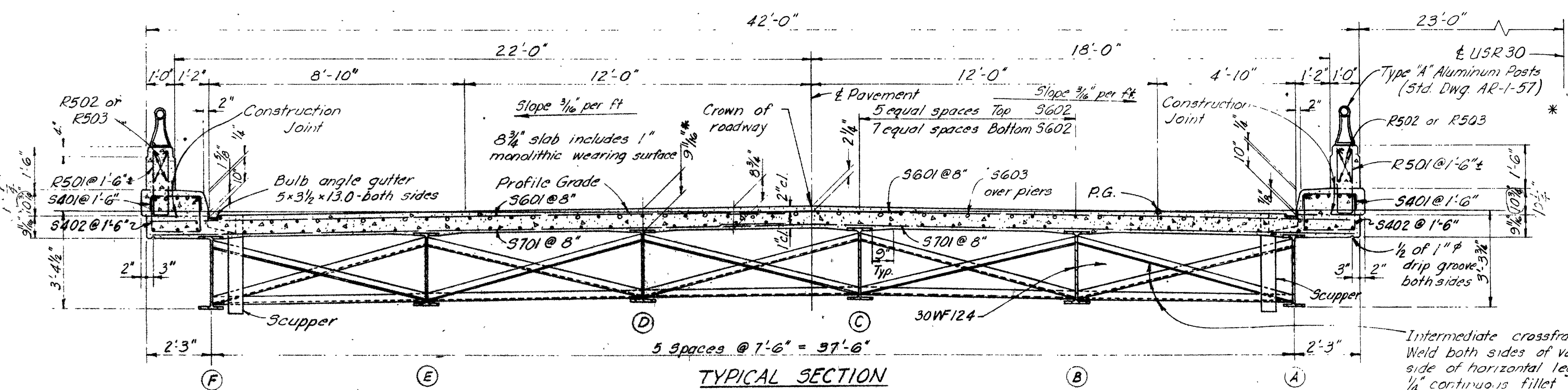
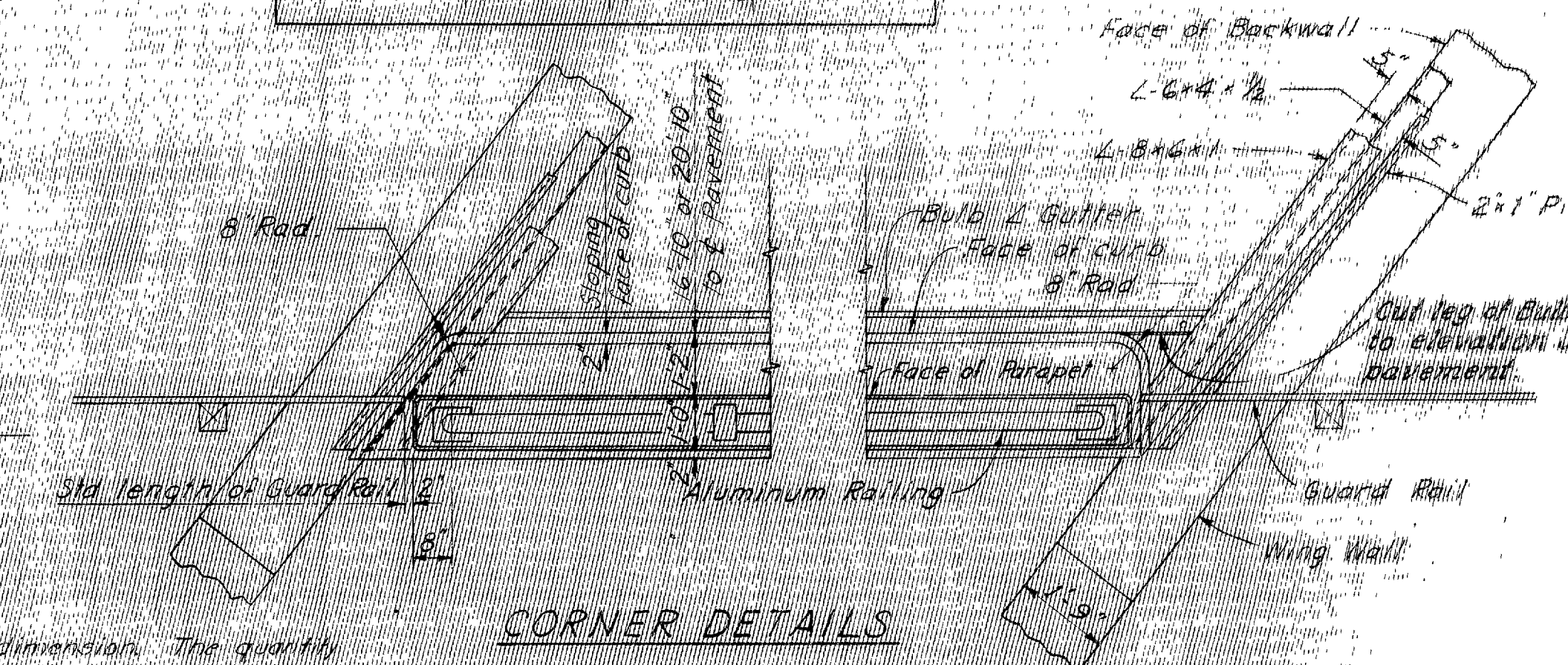


MOMENT PLATE SIZE

TOP PLATE	3" x 1/2" x 9'-6"
BOTTOM PLATE	12" x 1/2" x 9'-6"

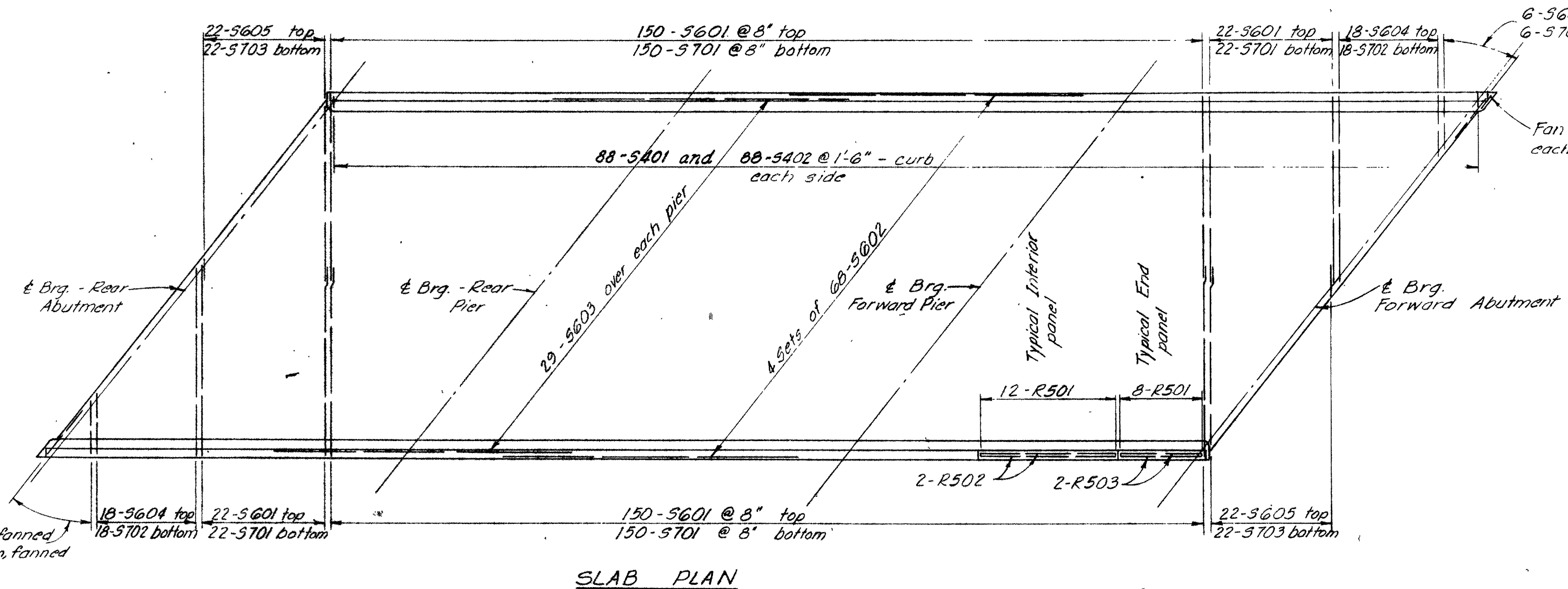
30 WF 124 30 WF 124

2'-9" 2'-9"



* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

- NOTES
- END CROSSFRAMES, END FINISH GUTTERS, SCUPPERS: See SD-1-63 sheets 2, 3 and 4 of A
 - RAILING: See Std. Dwg. AR-1-57
 - RAILING POST, PARAPET EXPANSION JOINT AND SCUPPER SPACING: See Sheet 279
 - CONCRETE: All superstructure concrete shall be Class "C"
 - BEARING PLATES: See CSB-2-56, sheet 3 of 6.
 - GENERAL NOTES: See Sheet 281
 - SEE Sheet 274 for Moment Plate, Bolted Beam Splice 30 WF 124 and Bolt Notes



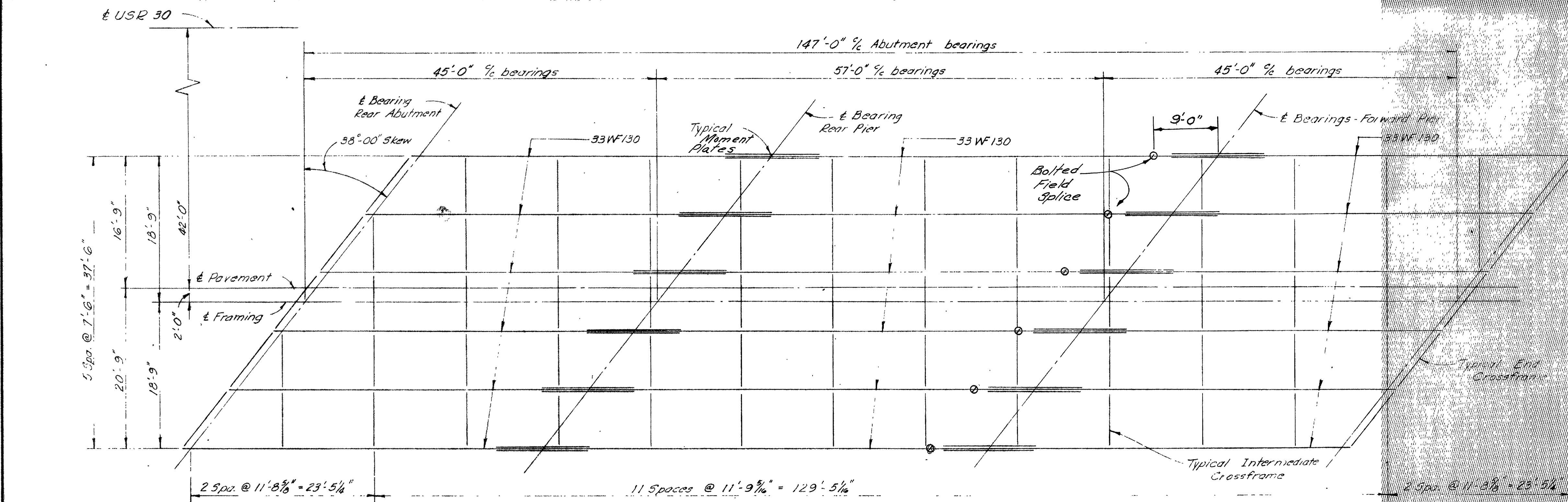
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12" except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.

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Consulting Engineers
MANSFIELD, OHIO

SUPERSTRUCTURE - LEFT BRIDGE
BRIDGE No. ASD-30-0098 L&R
OVER MIFFLIN TOWNSHIP ROAD #134
ASHLAND COUNTY U.S.R. 30
STA 52 + 25.83 TO STA 53 + 59.55 L. BRIDGE
STA 52 + 15.45 TO STA 53 + 59.17 R. BRIDGE

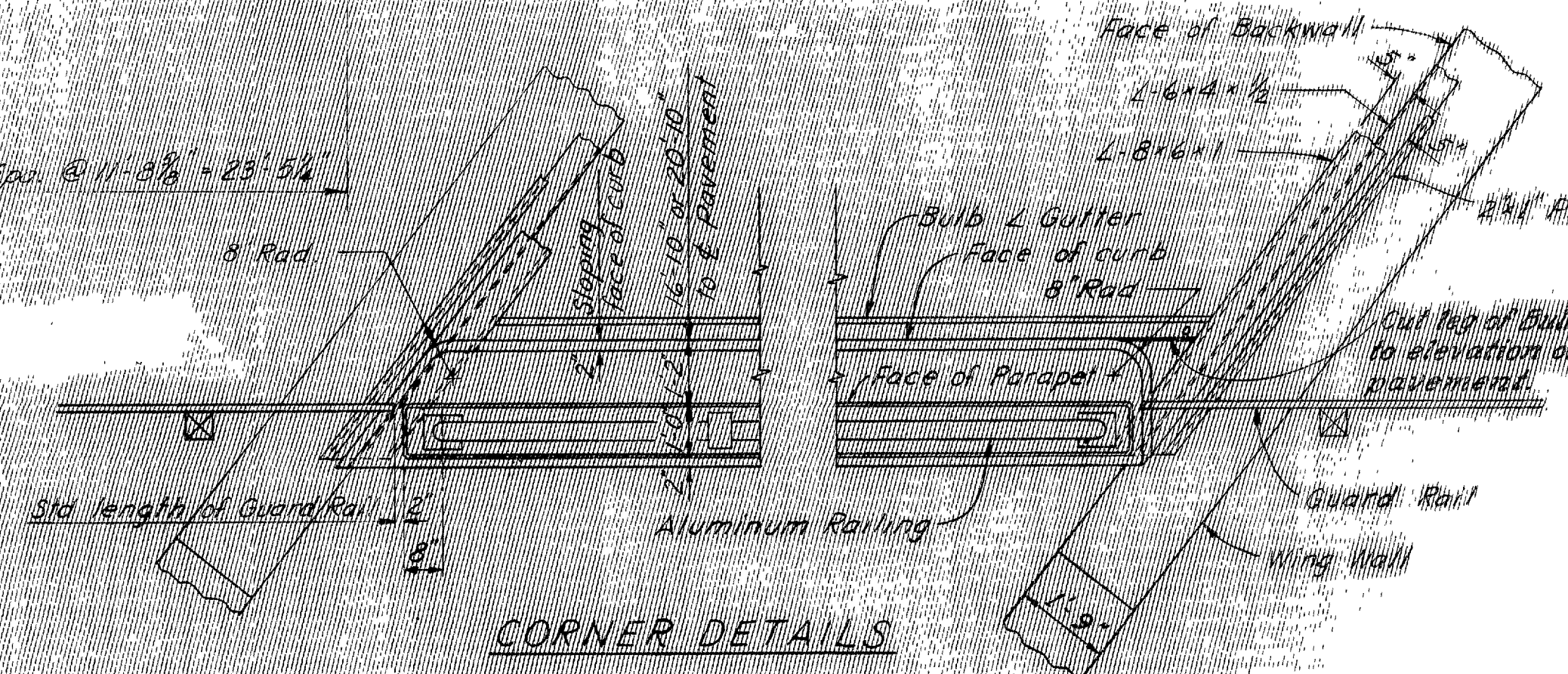
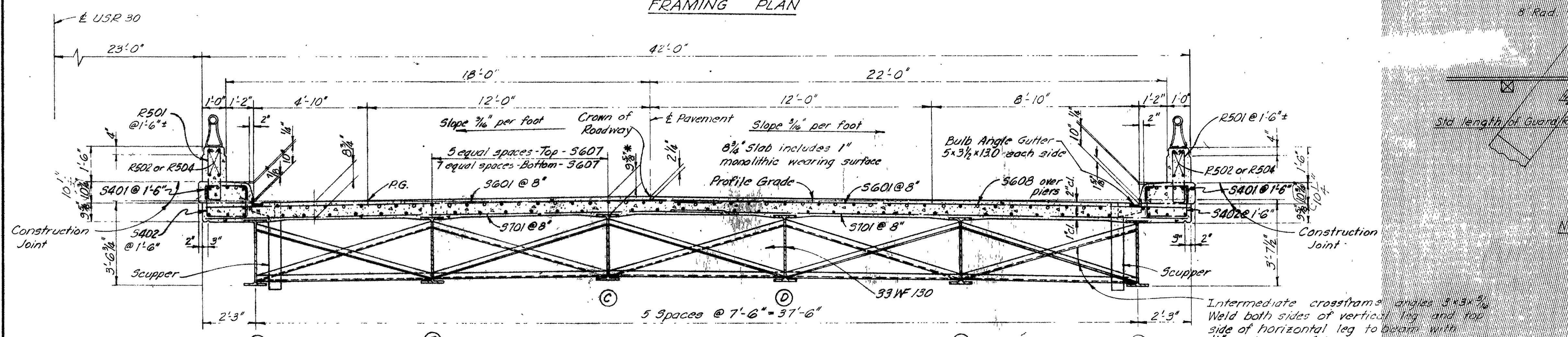
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	INITIALS
RAK	RAK	JES	J.M.C.			

RIC-30-928
ASD-30-000



MOMENT PLATE SIZE	
TOP PLATE	10" x 6" x 2" 0
BOTTOM PLATE	13" x 6" x 2" 0

33WF130	33WF130
0'-0"	6'-0"



NOTES

END CROSSFRAMES, END FINISH, GUTTERS, SCUPPERS, BEAM PLATES: See SD-1-63, Sheets 2, 3 and 4 of 4.

RAILING: See Std Dwg. AR-1-67.

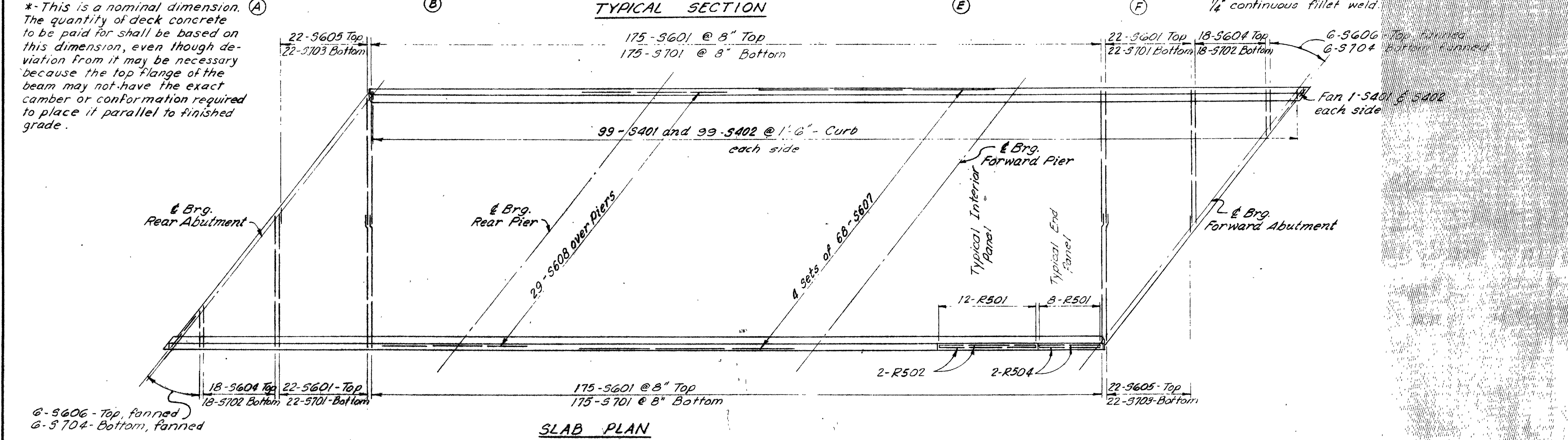
RAILING POST, PARAPET EXPANSION JOINT AND SCUPPER SPACING: See Sheet 280.

CONCRETE: All superstructure concrete shall be Class "C".

GENERAL NOTES: See Sheet 281.

See Sheet 274 for Bolted Beam Splice 33WF130, Moment Plate Details and Bolt Note.

BEARING PLATES: See CSB-2-36, sheet 3 of 6. For Deck Slab Haunch note see sheet 285.



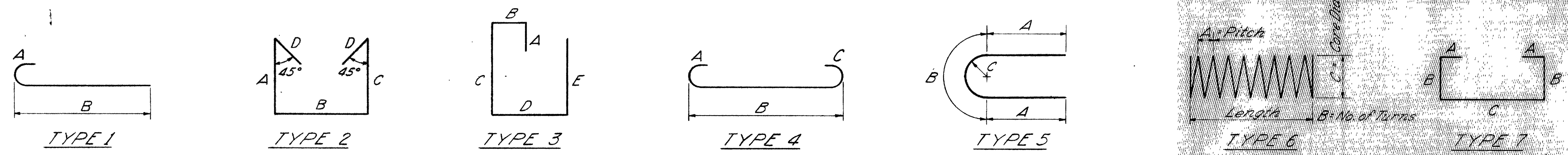
*-This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to finished grade.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO

SUPERSTRUCTURE - RIGHT BRIDGE
BRIDGE No. ASD-30-0098 L&R
OVER MIFFLIN TOWNSHIP ROAD #134

ASHLAND COUNTY U.S.R. 30
STA 52 + 23.93 TO STA 53 + 59.55 L. BRIDGE
STA 52 + 15.45 TO STA 53 + 66.17 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
PAK	PAK	LEP	JWC			



ABUTMENTS													
MARK	LENGTH	BRIDGE NO. ASD-30-0098L		BRIDGE NO. ASD-30-0098R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
A501	6'-4"	109	720	110	727	219	1447	1	7"	5'-9"			
A502	27'-8"	10	289			10	289	Str.					
A503	6'-3"	126	822	126	822	252	1644	3	0	0	2'-5"	3'-4"	6"
A504	5'-8"	104	615	104	615	208	1230	Str.					
A505	26'-4"	12	330	12	330	24	660	Str.					
A506	29'-8"	16	495	16	495	32	990	2	26'-4"	3'-4"	0	0	
A507	27'-0"	10	282			10	282	Str.					
A508	34'-3"	18	643			18	643	Str.					
A509	33'-11"	18	637	18	637	36	1274	Str.					
A510	34'-1"	2	71	2	71	4	142	Str.					
A511	32'-4"	8	270			8	270	Str.					
A512	15'-6"	2	33	2	33	4	66	Str.					
A513	11'-0"	2	23	2	23	4	46	Str.					
A514	10'-8"	2	23	2	23	4	46	Str.					
A515	16'-1"	2	34	2	34	4	68	Str.					
A516	4'-6"	2	9			2	9	Str.					
A517	5'-10"	2	12			2	12	Str.					
A518	5'-3"	2	11			2	11	Str.					
A519	4'-3"	2	9	2	9	4	18	Str.					
A520	6'-6"	5	34	5	34	10	68	Str.					
A521	12'-2"	5	63			5	63	Str.					
A522	7'-4"	5	38			5	38	Str.					
A523	10'-9"	5	58			5	58	Str.					
A524	Varies	10	94	10	94	20	188	Str.	8'-1" to 9'-11"		Vary 4 each by 5 1/2"		
A525	Varies	12	98	12	98	24	196	Str.	6'-8" to 8'-11"		Vary 4 each by 5 1/2"		
A526	Varies	12	101			12	101	Str.	6'-10" to 9'-4"		Vary 2 each by 6"		
A527	Varies	8	76			8	76	Str.	8'-5" to 9'-9"		Vary 2 each by 5 1/2"		
A528	9'-1"	10	95			10	95	Str.					
A529	10'-0"	10	104			10	104	Str.					
A530	28'-0"			10	292	10	292	Str.					
A531	27'-3"			10	284	10	284	Str.					
A532	34'-6"	18	648	18	648	36	1296	Str.					
A533	32'-1"	4	134	4	134	8	268	Str.					
A534	31'-3"	4	130	4	130	8	260	Str.					
A535	6'-5"	2	14	2	14	4	28	Str.					
A536	13'-0"	5	68	5	68	10	136	Str.					
A537	8'-8"	5	45	5	45	10	90	Str.					
A538	11'-2"	5	58	5	58	10	116	Str.					
A539	Varies	14	120	14	120	28	240	Str.	6'-9" to 9'-6"		Vary 2 each by 5 1/2"		
A540	Varies	10	98	10	98	20	196	Str.	8'-6" to 10'-4"		Vary 2 each by 5 1/2"		
A541	9'-5"	10	98	10	98	20	196	Str.					
A542	10'-4"	10	108	10	108	20	216	Str.					
A543	4'-10"	2	10	2	10	4	20	Str.					
A544	6'-10"	2	14	2	14	4	28	Str.					
A601	14'-0"	60	1262			60	1262	3	2'-0"	11"	5'-6"	1'-5"	4'-2"
A602	8'-1"	104	1263	104	1263	208	2526	2	7'-7"	6"	0	0	
A603	12'-5"	42	783			42	783	2	5'-6"	1'-5"	5'-6"	0	
A604	14'-6"			60	1307	60	1307	3	2'-0"	11"	5'-9"	1'-5"	4'-5"
A605	12'-11"			42	815	42	815	2	5'-9"	1'-5"	5'-9"	0	
TOTAL WEIGHT		9,395		9,551		18,946							

SUPERSTRUCTURE													
MARK	LENGTH	BRIDGE NO. ASD-30-0098L		BRIDGE NO. ASD-30-0098R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
R501	5'-6"	200	1149	224	1287	424	2436	2	2'-2"	6"	2'-2"	3"	
R502	15'-8"	56	*	64	*	120	*	Str.					
R503	9'-6"	16	*		*	16	*	Str.					
R504	10'-0"			16	*		*	Str.					
S401	3'-0"	178	357	200	401	378	758	7	0	8"	1'-8"		
S402	5'-1"	178	604	200	678	378	1282	7	3 1/2"	1'-5"	1'-8"		
S601	21'-9"	344	11,238	394	12,871	738	24,109	Str.					
S602	34'-3"	272	13,993			272	13,993	Str.					
S603	20'-0"	58	1742			58	1742	Str.					
S604	Varies	36	798	36	798	72	1596	Str.	7'-6" to 22'-0"		Vary 2 each by 10 1/2"		
S605	Varies	44	791	44	791	88	1582	Str.	3'-0" to 20'-11"		Vary 2 each by 10 1/2"		
S606	6'-8"	12	120	12	120	24	240	Str.					
S607	38'-5"			272	15,695	272	15,695	Str.					
S608	23'-0"			58	2004	58	2004	Str.					
S701	21'-11"	344	15,410	394	17,650	738	33,060	Str.					
S702	Varies	36	1,086	36	1,086	72	2,172	Str.	7'-6" to 22'-0"		Vary 2 each by 10 1/2"		
S703	Varies	44	1,091	44	1,091	88	2,182	Str.	3'-2" to 21'-1"		Vary 2 each by 10 1/2"		
S704	6'-8"	12	164	12	164	24	328	Str.					
TOTAL WEIGHT			48,753		54,872		103,625						

* These railing bars are included in Item 5-14 for payment.

PIERS													
MARK	LENGTH	BRIDGE NO. ASD-30-0098L		BRIDGE NO. ASD-30-0098R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
P401	7'-6"	96	481	96	481	192	962	Str.					
P501	24'-7"	12	308	12	308	24	616	Str.					
P502	7'-10"	48	392	48	392	96	784	2	2'-7"	2'-8"	2'-7"	0	
P503	7'-1"	10	74	10	74	20	148	5	1'-7"	4'-2"	1'-4"		
P504	7'-0"	4	29	4	29	8	58	2	2'-7"	1'-10"	2'-7"	0	
P505	7'-8"	4	32	4	32	8	64	2	2'-7"	2'-6"	2'-7"	0	
P801	9'-8"	96	2478			96	2478	4	1'-1"	7'-6"	1'-1"		
P901	10'-0"			96	3264	96	3264	4	1'-3"	7'-6"	1'-3"		
P902	6'-0"	96	1958	96	1958	192	3916	2	6"	5'-6"	0	0	
P903	18'-5"	96	6011			96	6011	Str.					
P904	20'-4"			48	3318	48	3318	Str.					
P905	21'-5"			48	3495	48	3495	Str.					
P1001	26'-9"	12	1381	12	1381	24	2762	1	1'-5"	25'-4"			
P1002	21'-8"	8	746	8	746	16	1492	1	1'-5"	20'-3"			
P1003	20'-5"	12	1054	12	1054	24	2108	Str.					
P1004	12'-1"	16	832	16	832	32	1664	2	9'-4"	2'-9"	0	0	
P1005	9'-6"	8	327	8	327	16	654	Str.					
SP401	15'-7"	8	2394			8	2394	6	4 1/2"	45	32"		
SP402	17'-7"			4	1330	4	1330	6	4 1/2"	50	32"		
SP403	18'-8"			4	1410	4	1410	6	4 1/2"	53	32"		
TOTAL WEIGHT			18,497		20,431		38,928						

REPLACEMENT BARS					
MARK	LENGTH	BRIDGE NO. ASD-30-0098L		BRIDGE NO. ASD-30-0098R	
		NUMBER	NUMBER	NUMBER	NUMBER
RE400	5'-3"	1		1	
RE500	5'-7"	1		1	
RE600	5'-11"	4		4	
RE700	6'-3"	2		2	
RE800	6'-6"	1		0	
RE900	6'-10"	2		2	
RE1000	7'-2"	1		1	

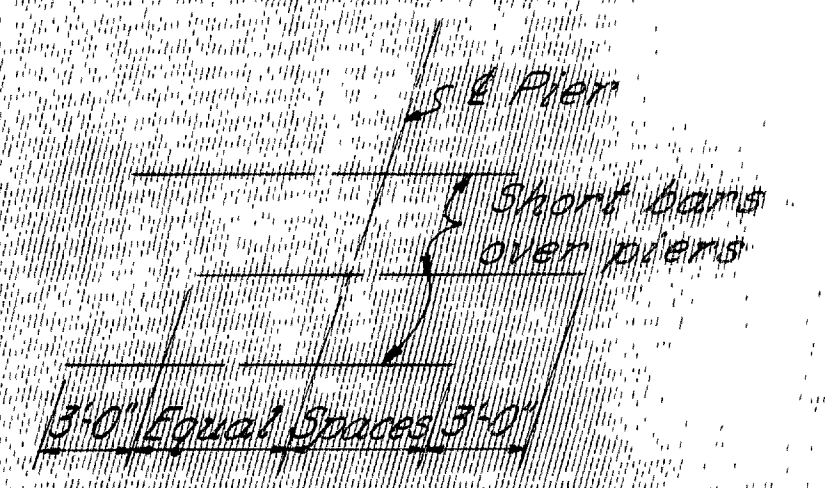


DIAGRAM SHOWING STAGGER OF SHORT BARS OVER PIERS

NOTES:

BAR SIZE is indicated on the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A101 is a No. 7 size bar and A1014 is a No. 10 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4. 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 688 lb. per 100 ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 688 lb. per 100 ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

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Consulting Engineers
MANSFIELD, OHIO

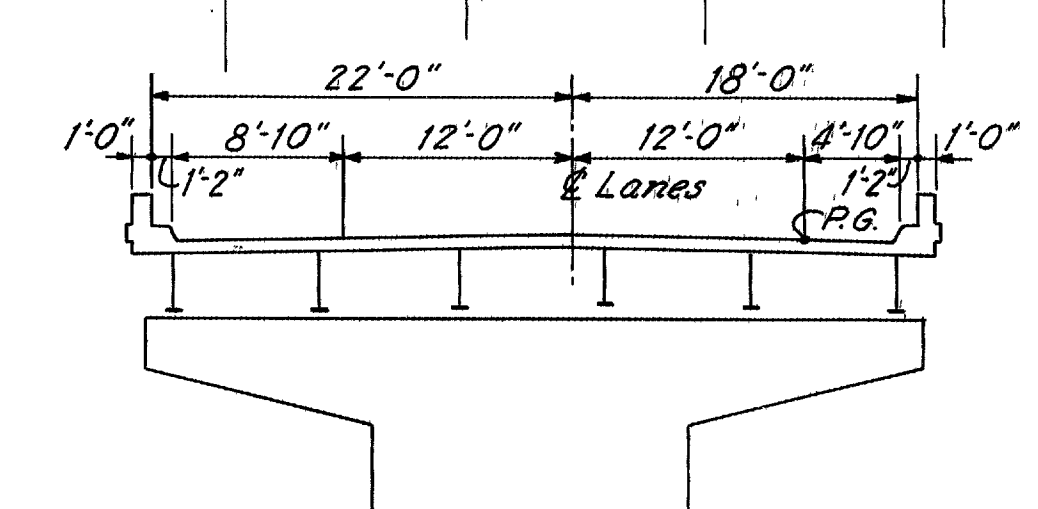
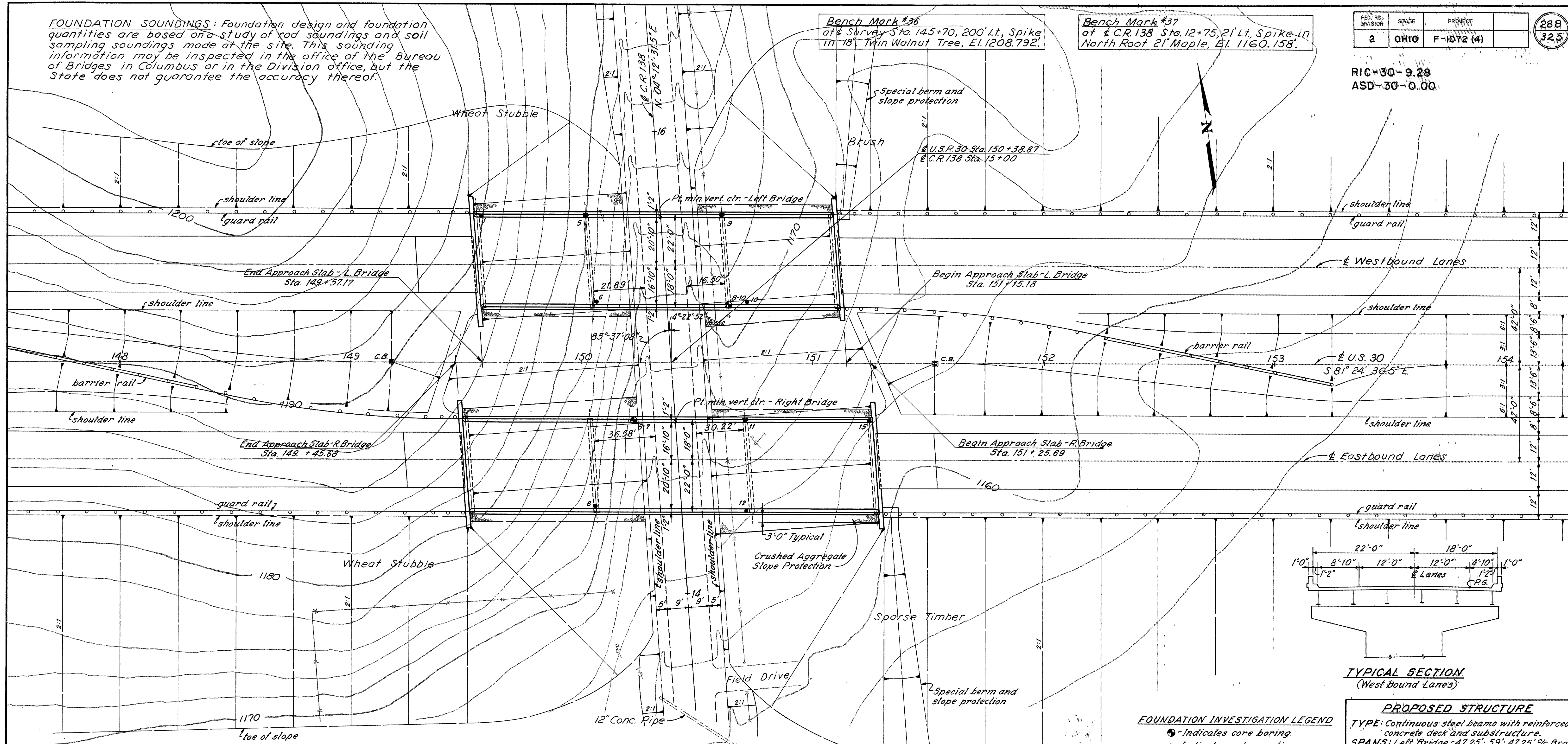
REINFORCING STEEL
BRIDGE No. ASD-30-0098 L&R
OVER MIFFLIN TOWNSHIP ROAD #134
ASHLAND COUNTY U.S.R. 30
STA. 52 + 23.65 TO STA. 53 + 59.55 L BRIDGE
STA. 52 + 15.45 TO STA. 53 + 59.17 R BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAL	PKH	JK	JWC			

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

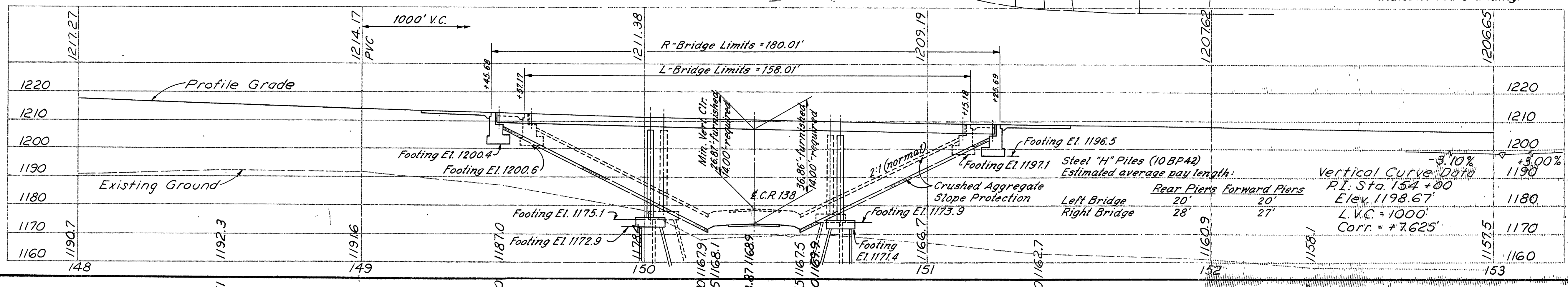
FED. RD. DIVISION	STATE	PROJECT	288 325
2	OHIO	F-1072 (4)	

RIC-30-9.28
ASD-30-0.00



FOUNDATION INVESTIGATION LEGEND
 ● - Indicates core boring
 ○ - Indicates rod sounding

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and substructure.
 SPANS: Left Bridge - 47.25'; 59'; 47.25' % Brgs.
 Right Bridge - 54'; 67.5'; 54' % Brgs.
 ROADWAY: 40'-0" fl. parapets.
 LOAD FREQUENCY: CF 2000 (57)
 WEARING SURFACE: 1" Monolithic concrete.
 APPROACH SLABS: AS-1-54 (25'-0" long)
 SKEW: 4°-22'-52" R.F.
 ALIGNMENT: Tangent
 AVERAGE DAILY TRAFFIC: 6950 (1980)



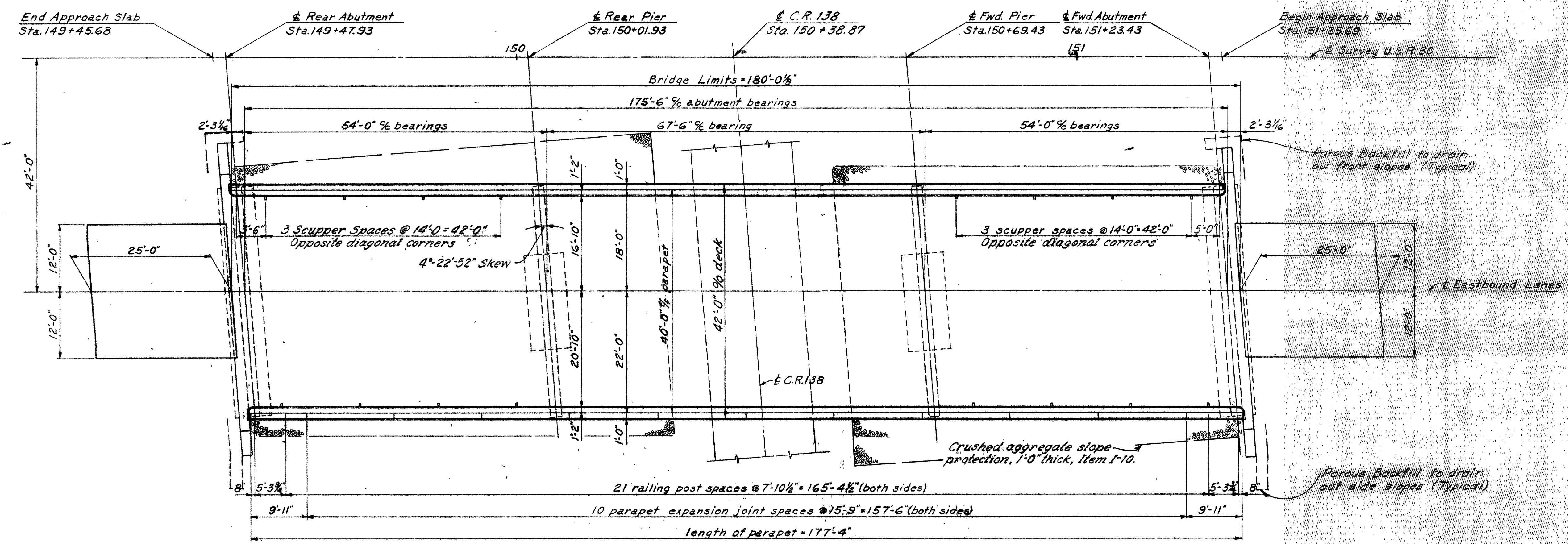
SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO

SITE PLAN
 BRIDGE No. ASD-30-0283 L&R
 OVER COUNTY ROAD 138

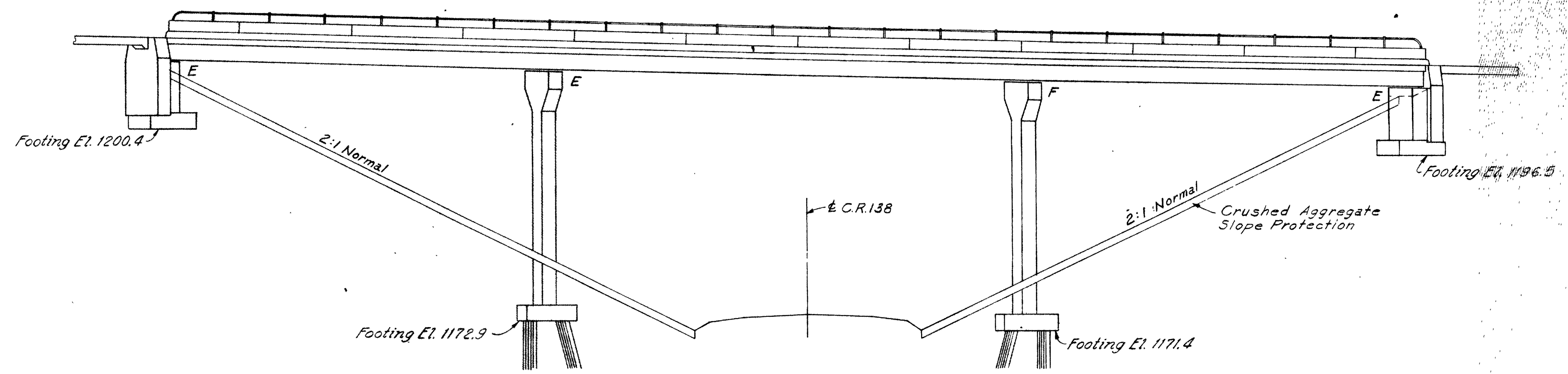
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BAK	BAK	DL	BAK			

ASHLAND COUNTY
 STA. 149+57.17 TO STA. 151+15.18 L BRIDGE
 STA. 149+45.68 TO STA. 151+25.69 R BRIDGE
 U.S.R. 30
 STA. 149+57.17 TO STA. 151+15.18 L BRIDGE
 STA. 149+45.68 TO STA. 151+25.69 R BRIDGE

RIC-30-9.28
ASD-30-0.00



GENERAL PLAN



ELEVATION

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

GENERAL PLAN - RIGHT BRIDGE
BRIDGE No. ASD-30-0283 L&R
OVER COUNTY ROAD 138

ASHLAND COUNTY U.S.R. 30
STA. 149 + 45.68 TO STA. 151 + 25.69 L BRIDGE
STA. 149 + 45.68 TO STA. 151 + 25.69 R BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAK	PAK	J.C.F.	PAK			

RIC-30-9.28
ASD-30-0.00

ESTIMATED QUANTITIES				BRIDGE NO. ASD-30-0283L				BRIDGE NO. ASD-30-0283R			
				SUPER	ABUTS	PIERS	GEN'L	SUPER	ABUTS	PIERS	GEN'L
E-2	Lump	Sum	Cofferdams, cribs, and sheeting				Lump				Lump
E-2	784	Cu. Yds.	Unclassified excavation		200	203			197	184	
S-1	431	Cu. Yds.	Class "C" concrete, superstructure	201				230			
S-1	231	Cu. Yds.	Class "E" concrete, piers above footings			113				118	
S-1	292	Cu. Yds.	Class "E" concrete, abutments		144				148		
S-1	88	Cu. Yds.	Class "E" concrete, pier footings			44				44	
S-4	166,961	Lbs.	Reinforcing steel	57,037	7,814	13,753		65,507	8,010	14,840	
S-7	369,239	Lbs.	Structural steel	163,523				205,716			
S-8	369,239	Lbs.	Field painting of structural steel	163,523				205,716			
S-14	666	Lin. Ft.	Railings (Type A aluminum rail, supports, and concrete parapets)	311				355			
S-16	Lump	Sum	First test pile				Lump				
S-18	1524	Lin. Ft.	Steel Piles, 10BP42			645				879	
S-101	431	Each	Water reducing set-retarding admixture	201				230			
S-29	32	Each	Scuppers, including supports	16				16			
S-29	64	Cu. Yds.	Porous backfill		31				33		
I-10	1605	Sq. Yds.	Crushed aggregate slope protection				730				875

FIRST TEST PILE: Payment will be made for only one first test pile. it may be driven for either the Right or Left bridge.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 (revised 7-5-62), AR-1-57 (revised 4-2-62), SD-1-63 sheets 2,3,4 dated 11-12-63 and CSB-2-56, sheet 3 of 6 dated 2-2-59 and Sup. Specs. S-101 and S-307 dated 7-12-62 and 10-1-64.

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

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

PILES shall be driven with a hammer of not less than 11,000 ft.-lb per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered attained when the capacity according to the formula in Sec. S-18.05 is not less the following value for a pile hammer of the indicated energy rating:

	11,000 ft.-lb hammer	15,000 ft.-lb hammer
Left Bridge - Rear Pier	47 tons per pile	40 tons per pile
Left Bridge - Forward Pier	47 tons per pile	40 tons per pile
Right Bridge - Rear Pier	45 tons per pile	38 tons per pile
Right Bridge - Forward Pier	45 tons per pile	38 tons per pile

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 33 tons per pile for the left bridge piers and 35 tons per pile for the right bridge piers.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of the concrete shall progress up grade. The slab may be placed in sections between the transverse construction joints which are parallel to transverse reinforcing and are located near the center of any span.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may at the option of the contractor, be made in the shop. Class "B" welds are shown as



BRIDGE SEATS: Special care must be taken in placing bars in the bridge seats so that they will not interfere with the drilling of holes for anchor bolts.

PARAPETS: R502 thru R505 reinforcing bars and concrete above the parapet construction joint shall be included in the price per lineal foot of railing for payment.

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

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutment and for piers that are set in the filled area.

DESIGN LOADING-CF 2000(57)
CONCRETE CLASS C-basic unit stress 1333 ps.i.
CONCRETE CLASS E-basic unit stress 1133 ps.i.
STRUCTURAL STEEL-ASTM A36-basic unit (except stress 20,000 psi. (ASTM A7 and piling) A373 steel not permitted)
REINFORCING STEEL-ASTM A15, A16, A16a Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 ps.i.

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

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

a) The entire superstructure except the top and bottom surfaces of sidewalks and roadways.

b) The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside beams.

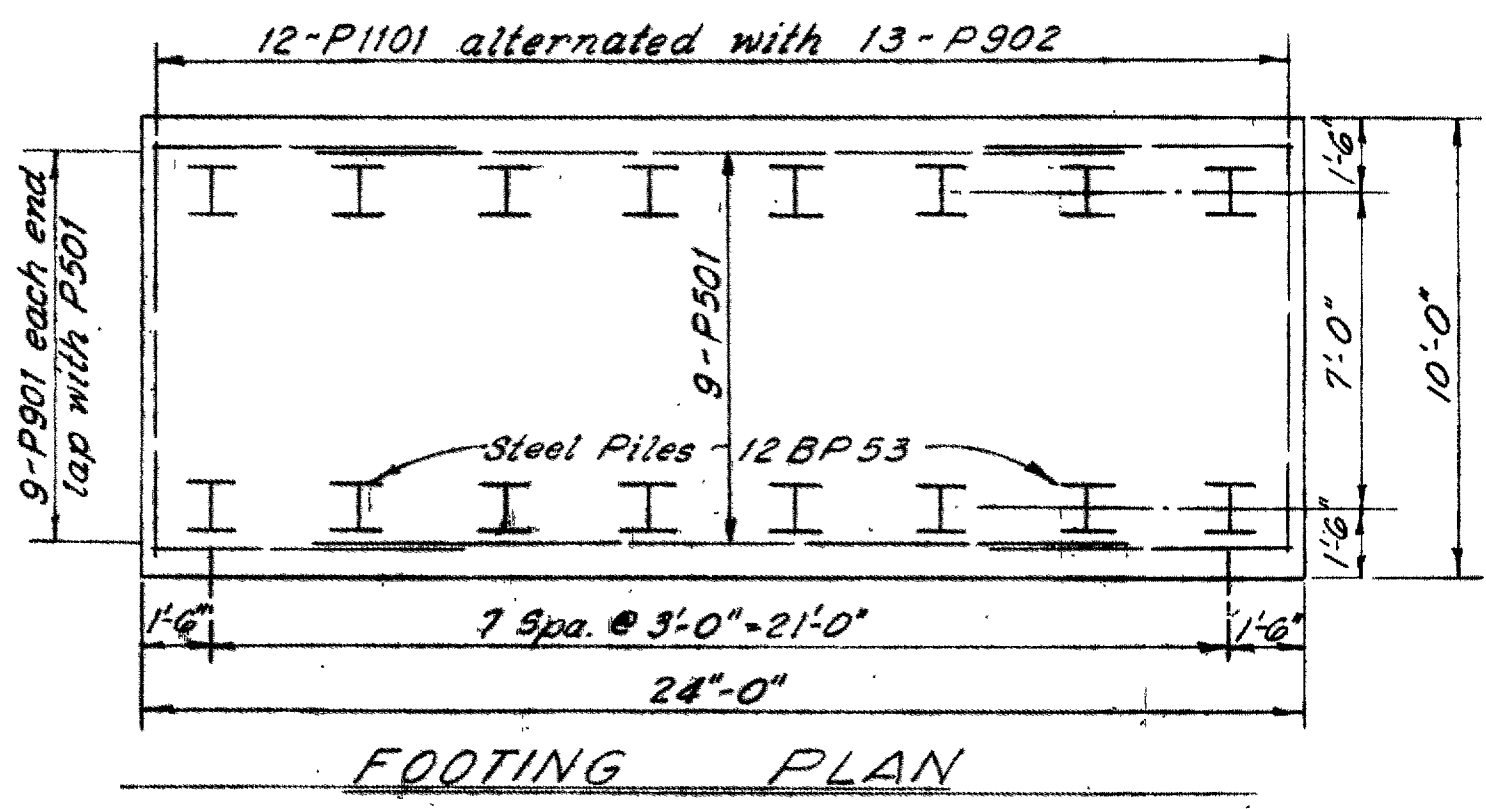
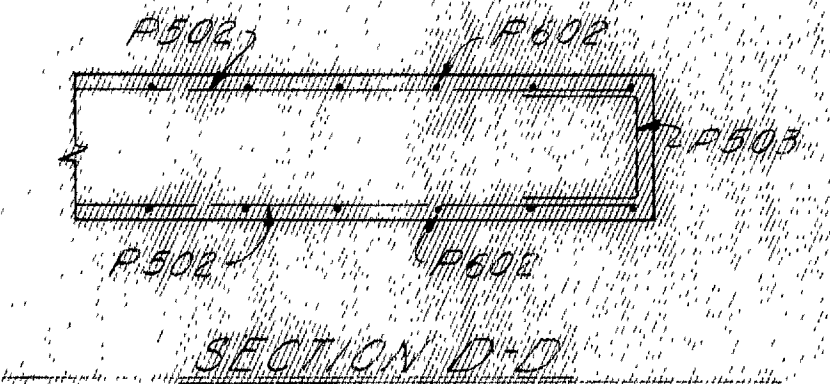
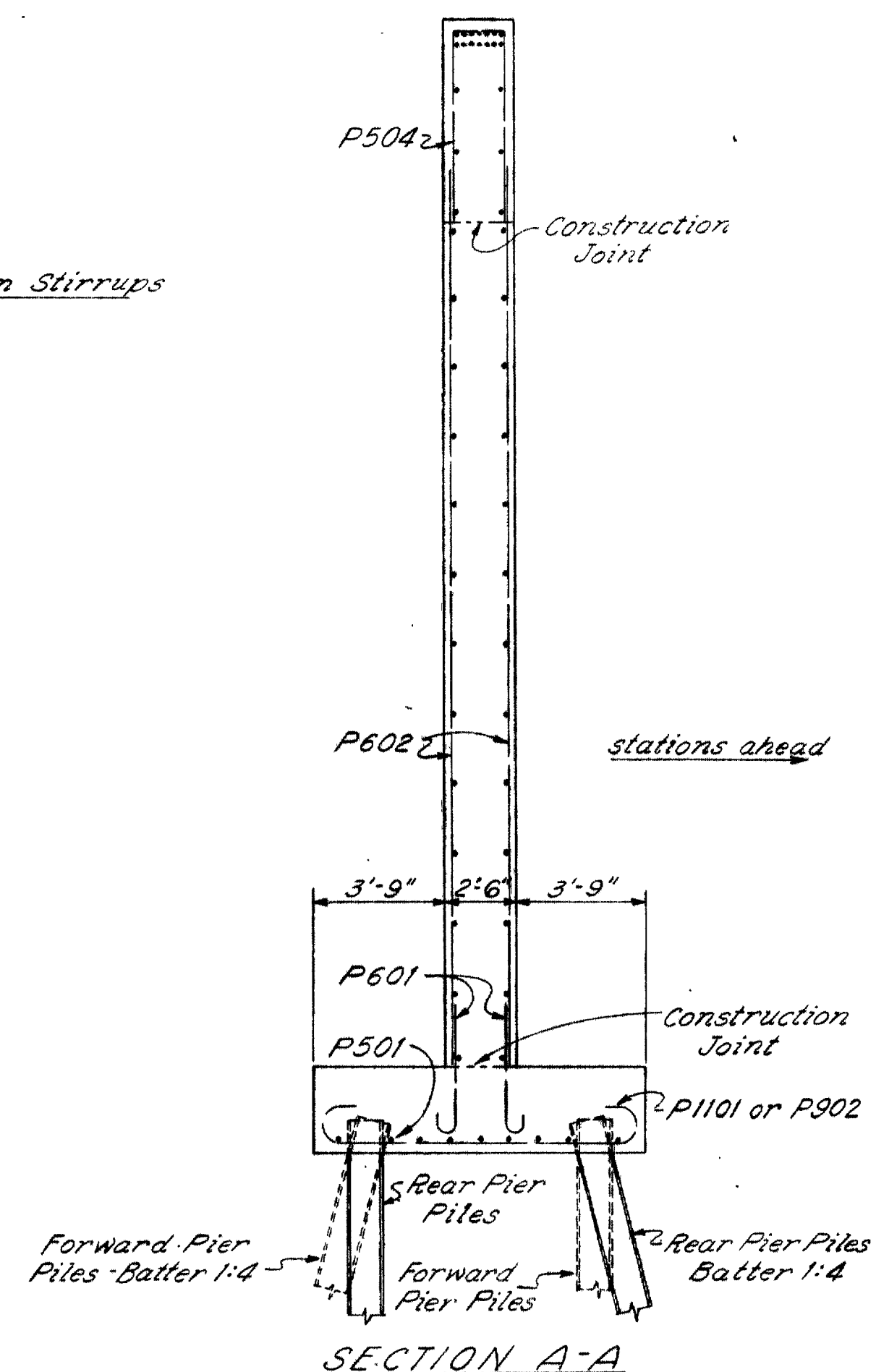
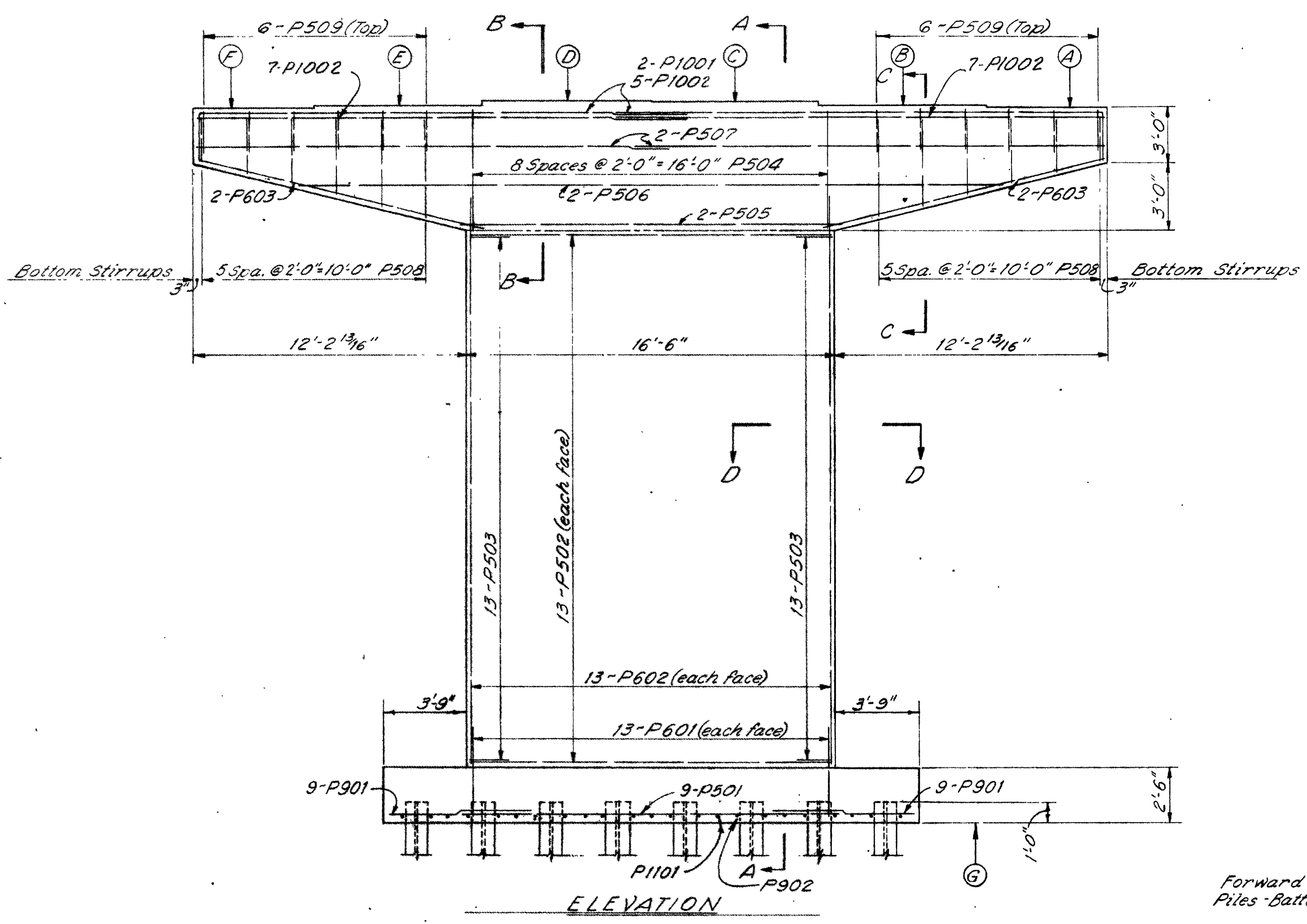
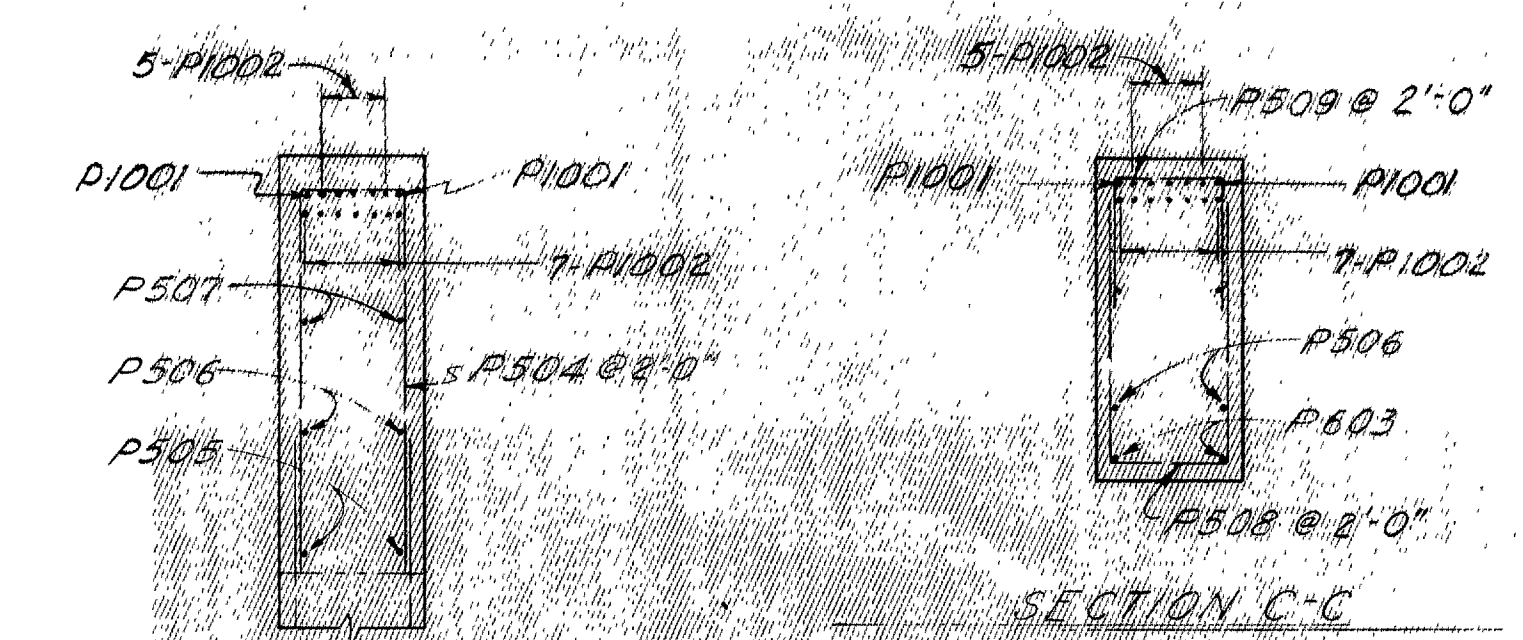
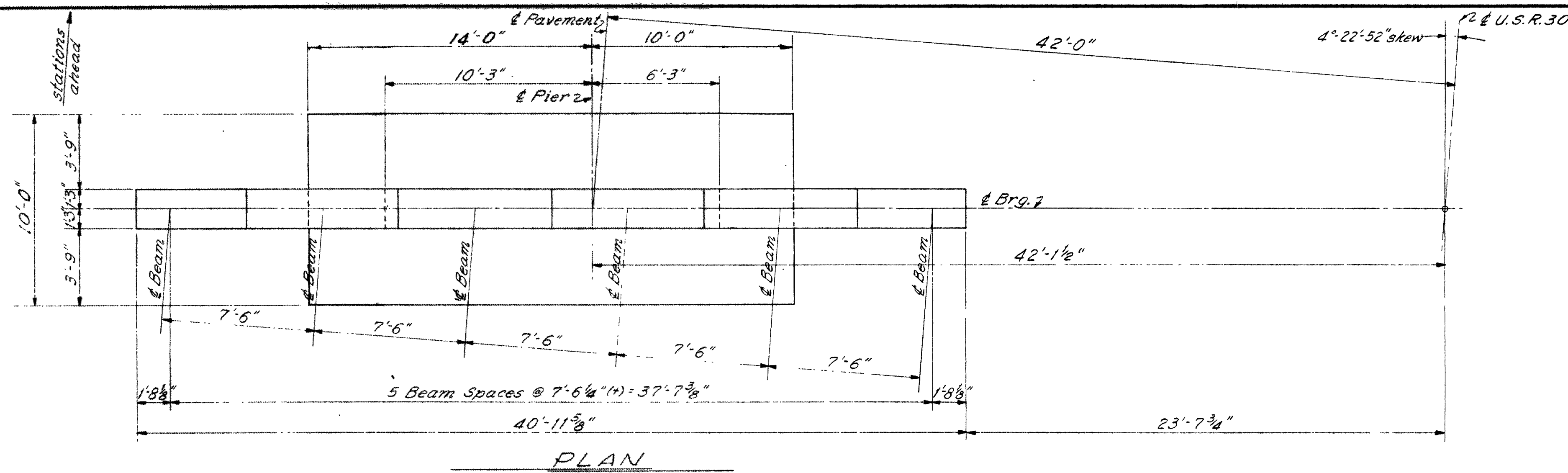
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Consulting Engineers
MANSFIELD, OHIO

GENERAL NOTES AND
ESTIMATED QUANTITIES
BRIDGE No ASD-30-0283 L & R
OVER COUNTY ROAD 138

ASHLAND COUNTY U.S.R. 30
STA. 49 + 57.17 TO STA. 151 + 15.18 L. BRIDGE
STA. 49 + 48.88 TO STA. 151 + 25.89 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	OK	RAK			

RIC-30-9.28
ASD-30-0.00



NOTES
CONCRETE: All concrete for pier footings, stems and caps shall be Class "E".
GENERAL NOTES: See Sheet 291

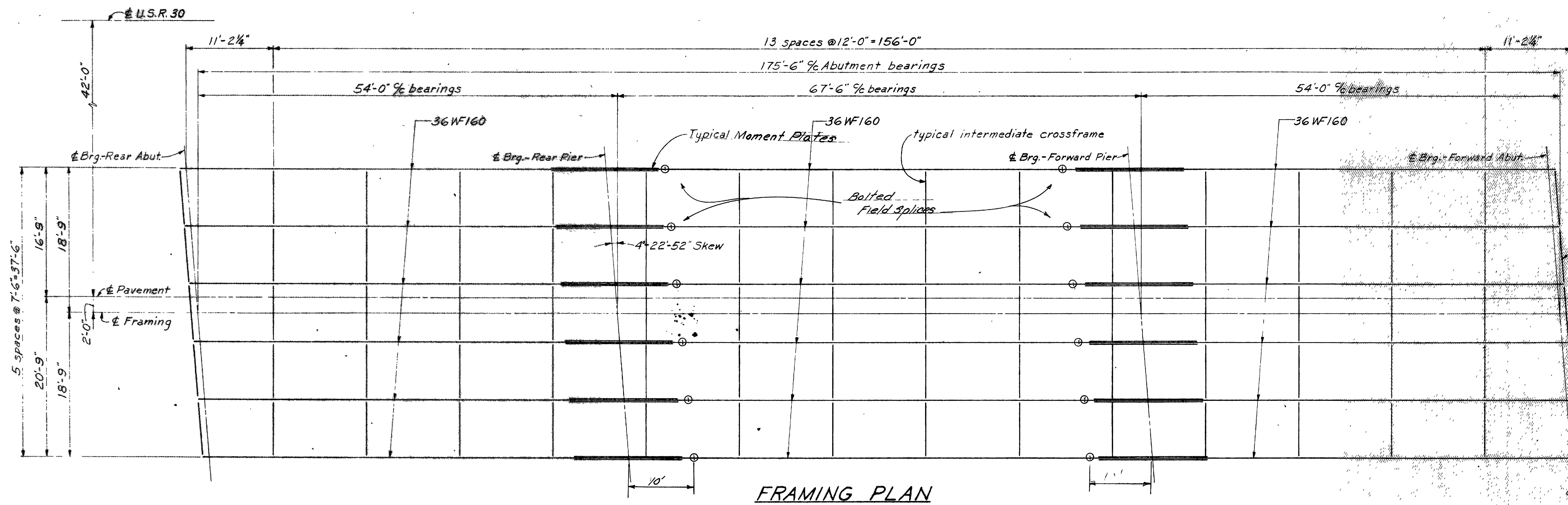
LOCATION	A	B	C	D	E	F	G
LEFT BRIDGE Rear Pier	1207.433	1207.570	1207.701	1207.693	1207.590	1207.447	1175.1
LEFT BRIDGE Forward Pier	1205.176	1206.306	1206.435	1206.394	1206.279	1206.174	1173.9
RIGHT BRIDGE Rear Pier	1207.236	1207.359	1207.443	1207.566	1207.234	1207.103	1172.9
RIGHT BRIDGE Forward Pier	1205.794	1205.699	1205.604	1205.930	1205.801	1205.672	1171.4

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MANSFIELD, OHIO.

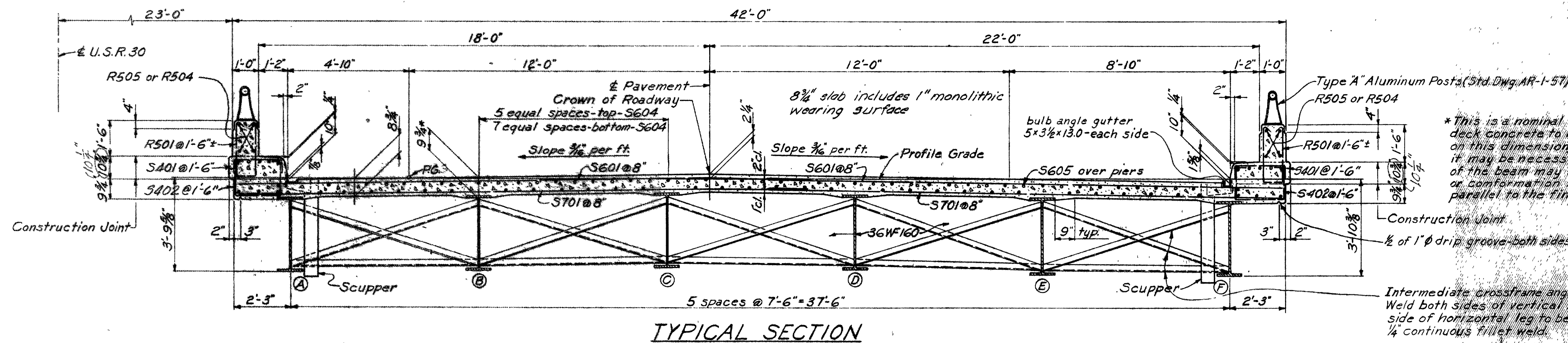
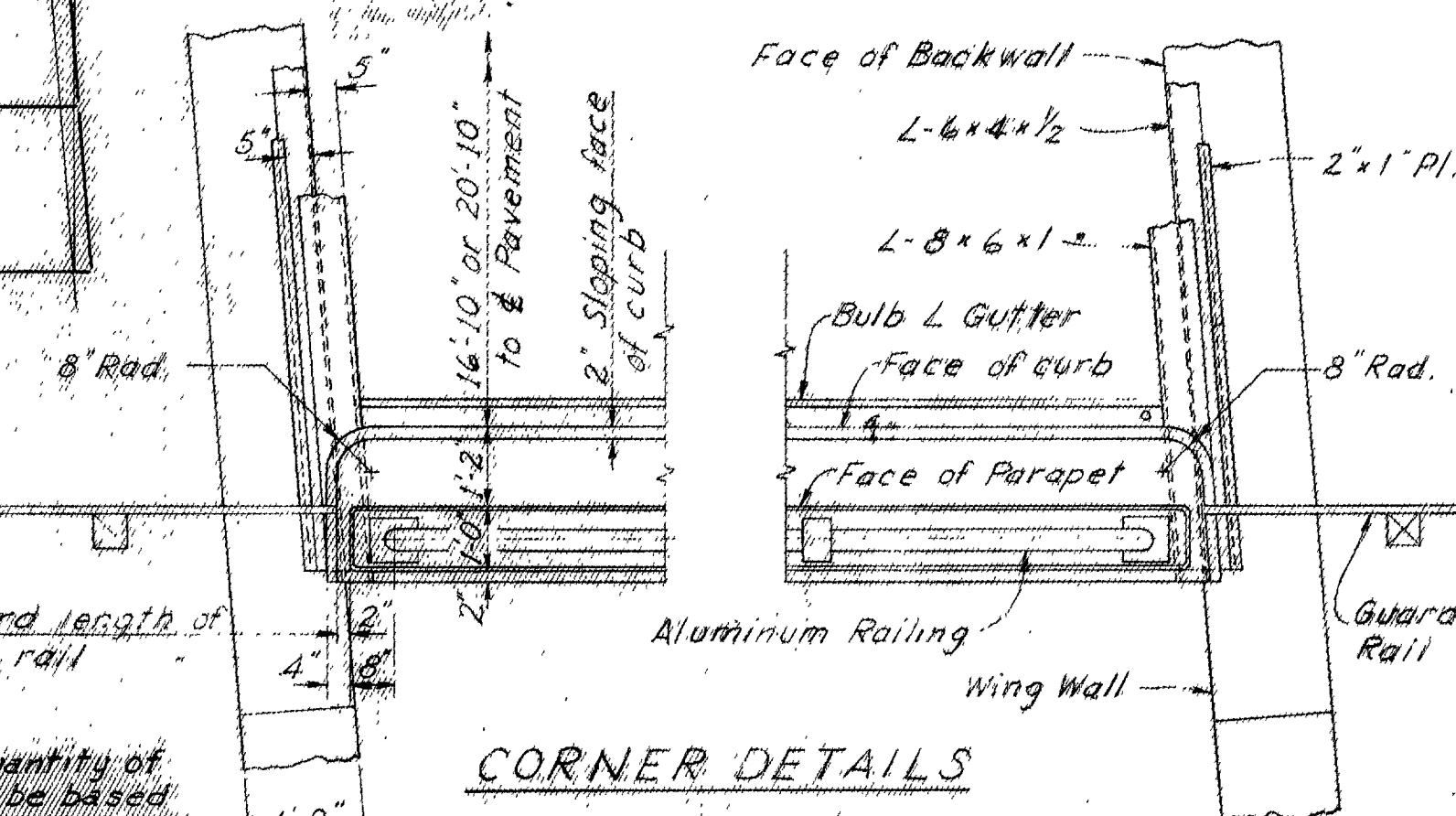
PIERS - LEFT BRIDGE
BRIDGE No. ASD-30-0283 L&R
OVER COUNTY ROAD 138

ASHLAND COUNTY U.S.R. 30
STA. 148 + 57.17 TO STA. 151 + 15.18 L. BRIDGE
STA. 149 + 45.69 TO STA. 151 + 25.69 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	JK	EAK			



MOMENT PLATE SIZE					
TOP PLATE	10 1/2 x 7 1/2 x 14'-0"				
BOTTOM PLATE	13 1/2 x 7 1/2 x 14'-0"				
<table border="1"> <tr> <td>36WF160</td> <td>36WF160</td> </tr> <tr> <td>7'-0"</td> <td>7'-0"</td> </tr> </table>		36WF160	36WF160	7'-0"	7'-0"
36WF160	36WF160				
7'-0"	7'-0"				



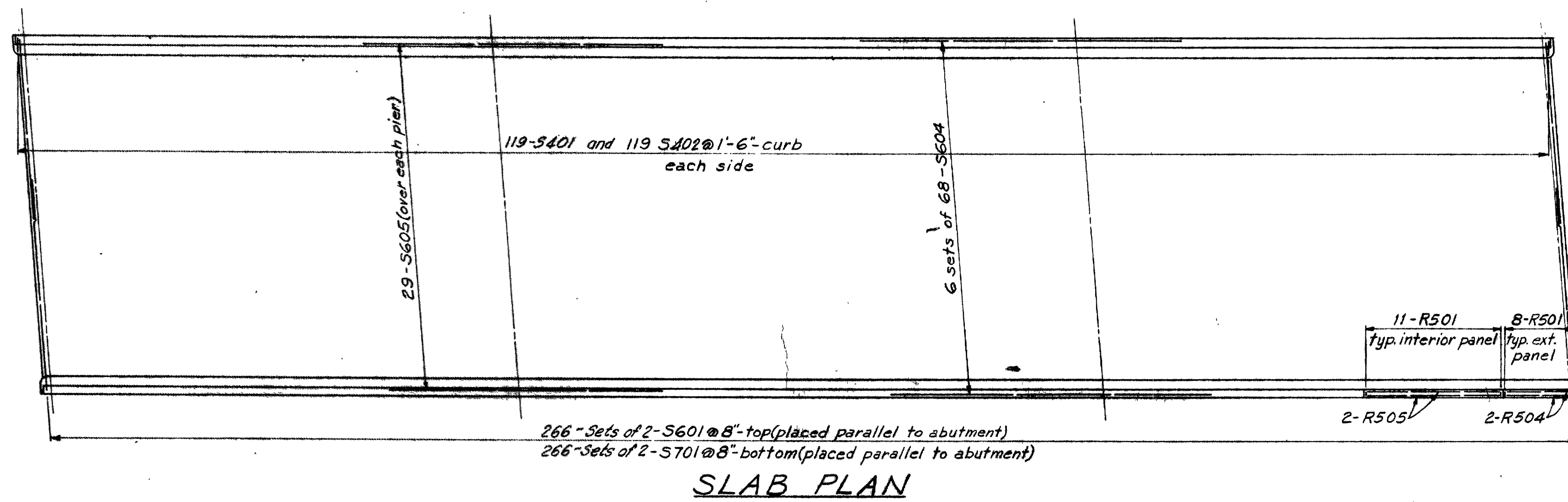
*This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

NOTES

- END CROSSFRAMES, END FINISH, GUTTERS, SCUPPERS: See SD-1-63, sheet 2, 3 & 4 of 4
- RAILING: See Std. Dwg. AR-1-57
- RAILING POST, PARAPET EXPANSION JOINT, AND SCUPPER SPACING: See sheet 2.90
- CONCRETE: All superstructure concrete shall be Class "C"
- BEARING PLATES: See CSB-2-56, sheet 3 of 6.
- DECK SLAB HAUNCH: See sheet 2.96.

GENERAL NOTES: See sheet 2.91.

See Sheet 274 for Bolted Beam Splice 36WF160, Moment Plate Details, and Bolt Notes.



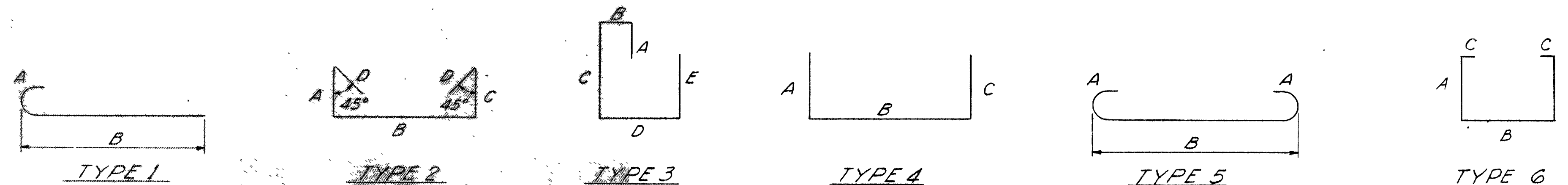
SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

SUPERSTRUCTURE - RIGHT BRIDGE
BRIDGE No. ASD-30-0283 L&R
OVER COUNTY ROAD 138

ASHLAND COUNTY U.S.R. 30
STA. 149 + 57.17 TO STA. 151 + 15.18 L BRIDGE
STA. 149 + 45.68 TO STA. 151 + 25.69 R BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAK	JL	JCE	GA			

RIC-30-9.28
ASD-30-0.00



ABUTMENTS													
MARK	LENGTH	BRIDGE NO. ASD-30-0283L		BRIDGE NO. ASD-30-0283R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
A501	6'-4"	84	555	84	555	168	1110	1	7"	5'-9"			
A502	21'-4"	32	712	32	712	64	1424	Str.					
A503	3'-9"	126	756	126	756	252	1512	4	1'-10"	3'-5"	6"		
A504	5'-8"	84	497	84	496	168	993	Str.					
A505	28'-10"	18	541			18	541	Str.					
A506	24'-9"	16	414	16	414	32	828	4	3'-5"	21'-4"			
A507	8'-8"	5	44			5	44	Str.					
A508	9'-6"	5	50	10	100	15	150	Str.					
A509	9'-1"	5	47	5	48	10	95	Str.					
A510	7'-4"	5	38			5	38	Str.					
A511	5'-0"	4	21			4	21	Str.					
A512	5'-6"	4	23	4	23	8	46	Str.					
A513	27'-7"	2	58	2	58	4	116	Str.					
A514	26'-9"	4	112	4	112	8	224	Str.					
A515	26'-0"	4	108	4	108	8	216	Str.					
A516	8'-10"	2	18	2	18	4	36	Str.					
A517	13'-9"	2	29	2	29	4	58	Str.					
A518	8'-10"	2	17	2	17	4	34	Str.					
A519	13'-0"	2	27	2	27	4	54	Str.					
A520	Varies	20	172			2	172	Str.	7'-3" to 9'-3"	Vary 4 each by 6"			
A521	Varies	20	169			20	169	Str.	7'-1" to 9'-1"	Vary 4 each by 6"			
A522	9'-5"	12	118			12	118	Str.					
A523	28'-0"	18	525			18	525	Str.					
A524	28'-3"			18	530	18	530	Str.					
A525	29'-1"			18	546	18	546	Str.					
A526	8'-3"			5	43	5	43	Str.					
A527	6'-0"			4	25	4	25	Str.					
A528	9'-8"			14	141	14	141	Str.					
A529	Varies			48	426	48	426	Str.	7'-3" to 9'-9"	Vary 8 each by 6"			
A601	14'-6"	48	1045			48	1045	3	2'-0"	11"	5'-9"	1'-5"	4'-5"
A602	8'-1"	84	1020	84	1020	168	2040	4	7'-7"	6"	0		
A603	12'-11"	36	698			36	698	4	5'-9"	1'-5"	5'-9"		
A604	15'-0"			48	1081	48	1081	3	2'-0"	11"	6'-0"	1'-5"	4'-8"
A605	13'-5"			36	725	36	725	4	6'-0"	1'-5"	6'-0"		
TOTAL WEIGHT			7,814		8,010		15,824						

SUPERSTRUCTURE													
MARK	LENGTH	BRIDGE NO. ASD-30-0283L		BRIDGE NO. ASD-30-0283R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
R501	5'-4"	226	1257	252	1402	478	2659	2	2'-1"	8"	2'-1"	3"	
R502	14'-10"		*		*	72	*	Str.					
R503	9'-1"		*		*	16	*	Str.					
R504	9'-7"		*		*	16	*	Str.					
R505	15'-5"		*		*	80	*						
S401	3'-0"	208	417	238	477	446	894	4	8"	1'-8"	8"		
S402	5'-1"	208	706	238	806	446	1514	6	1'-5"	1'-8"	3/8"		
S601	21'-10"	462	15,151	532	17,446	994	32,597	Str.					
S602	32'-7"	340	16,640			340	16,640	Str.					
S603	24'-0"	58	2091			58	2,091	Str.					
S604	31'-2"			408	19,099	408	19,099	Str.					
S605	27'-0"			58	2352	58	2352	Str.					
S701	22'-0"	462	20,775	532	23,923	994	32,597	Str.					
TOTAL WEIGHT			57,097		65,507		122,544						

* These railing bars are included in Item S-14 for payment.

REPLACEMENT BARS			
MARK	LENGTH	BRIDGE NO. ASD-30-0283L	BRIDGE NO. ASD-30-0283R
		NUMBER	NUMBER
RE400	5'-3"	1	1
RE500	5'-7"	1	1
RE600	5'-11"	2	2
RE700	6'-3"	2	2
RE900	6'-10"	1	1
RE1000	7'-2"	1	0
RE1100	7'-6"	1	1

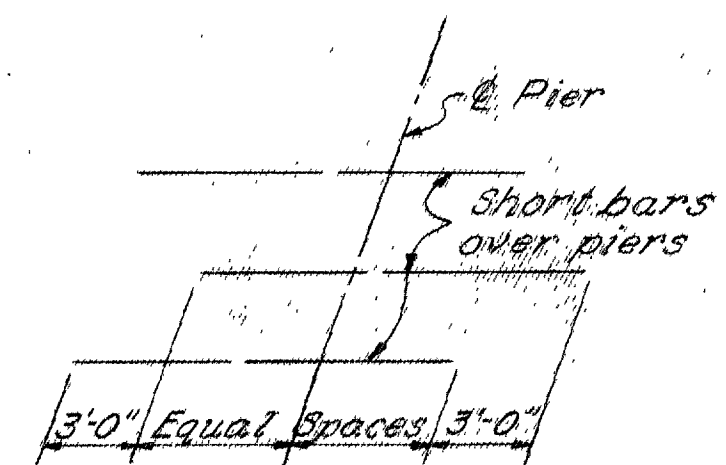


DIAGRAM SHOWING STAGGER OF SHORT BARS OVER PIERS

PIERS													
MARK	LENGTH	BRIDGE NO. ASD-30-0283L		BRIDGE NO. ASD-30-0283R		TOTAL NO.	TOTAL WEIGHT	TYPE	A	B	C	D	E
		NO.	WEIGHT	NO.	WEIGHT								
P501	16'-6"	18	310	18	310	36	620	Str.					
P502	16'-2"	52	877	56	945	108	1822	Str.					
P503	5'-4"	52	289	56	312	108	601	4	1'-7"	2'-2"	1'-7"		
P504	12'-10"	18	241	18	241	36	482	4	5'-4"	2'-2"	5'-4"		
P505	17'-0"	4	71	4	71	8	142	Str.					
P506	31'-3"	4	130	4	130	8	260	Str.					
P507	21'-2"	8	177	8	177	16	354	Str.					
P508	②	24	463	24	463	48	926	4	①	2'-2"	①		
P509	5'-8"	24	142	24	142	48	284	4	1'-9"	2'-2"	7'-9"		
P601	4'-9"	52	371	52	371	104	742	1	8"	4'-1"			
P602	25'-11"	52	2024			52	2024	Str.					
P603	13'-0"	8	156	8	156	16	312	Str.					
P604	27'-10"			52	2174	52	2174	Str.					
P901	6'-5"	36	786	36	786	72	1572	Str.					
P902	10'-9"	26	950	28	1023	54	1973	5	1'-3"	9'-6"			
P903	21'-9"			16	1183	16	1183	Str.					
P1001	24'-8"	8	843			8	843	4	2'-8"	21'-10"			
P1002	21'-10"	48	4510			48	4510	Str.					
P1101	11'-1"	24	1413	26	1531	50	2944	5	1'-7"	9'-6"			
P1102	22'-2"			32	3769	32	3769	Str.					
P1103	24'-10"			8	1056	8	1056	4	2'-8"	22'-2"			
TOTAL WEIGHT			13,753		14,840		28,593						

① 2'-6" to 4'-9", Vary 8 each by 5"
② 7'-2" to 11'-8", Vary 8 each by 10"

BAR SIZE is indicated on the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A701 is a No. 7 size bar and A1014 is a No. 10 size bar.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

REINFORCING STEEL
BRIDGE No. ASD-30-0283 L&R
OVER COUNTY ROAD 138

ASHLAND COUNTY U.S.R. 30
STA. 149 + 57.17 TO STA. 151 + 15.18 L. BRIDGE
STA. 149 + 45.69 TO STA. 151 + 25.69 R. BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.A.K.	E.H.U.	U.L.	E.A.L.			

LOCATION PLAT

DEPARTMENT OF HIGHWAYS

RIC.-30-9.28 & ASD.-30-0.00

RICHLAND COUNTY MIFFLIN TOWNSHIP

ASHLAND COUNTY MIFFLIN & VERMILLION TOWNSHIPS

LIMITED ACCESS HIGHWAY

This improvement has been declared a limited access highway or freeway by action of the Director of Highways and Recorded in Volume 41 & 46, Page 224 & 634, of the Director's Journal in accordance with the provisions of Section 5511.02 Revised Code (117B.21), General Code of Ohio and dated 12/14/56 & 6/19/61.



Transfer Not Necessary
Aug. 7-1961
Norman L. Wolfe
N.C.

TRANSFER NOT NECESSARY
NORMAN L. WOLFE, County Auditor
N.C. 11/5/65

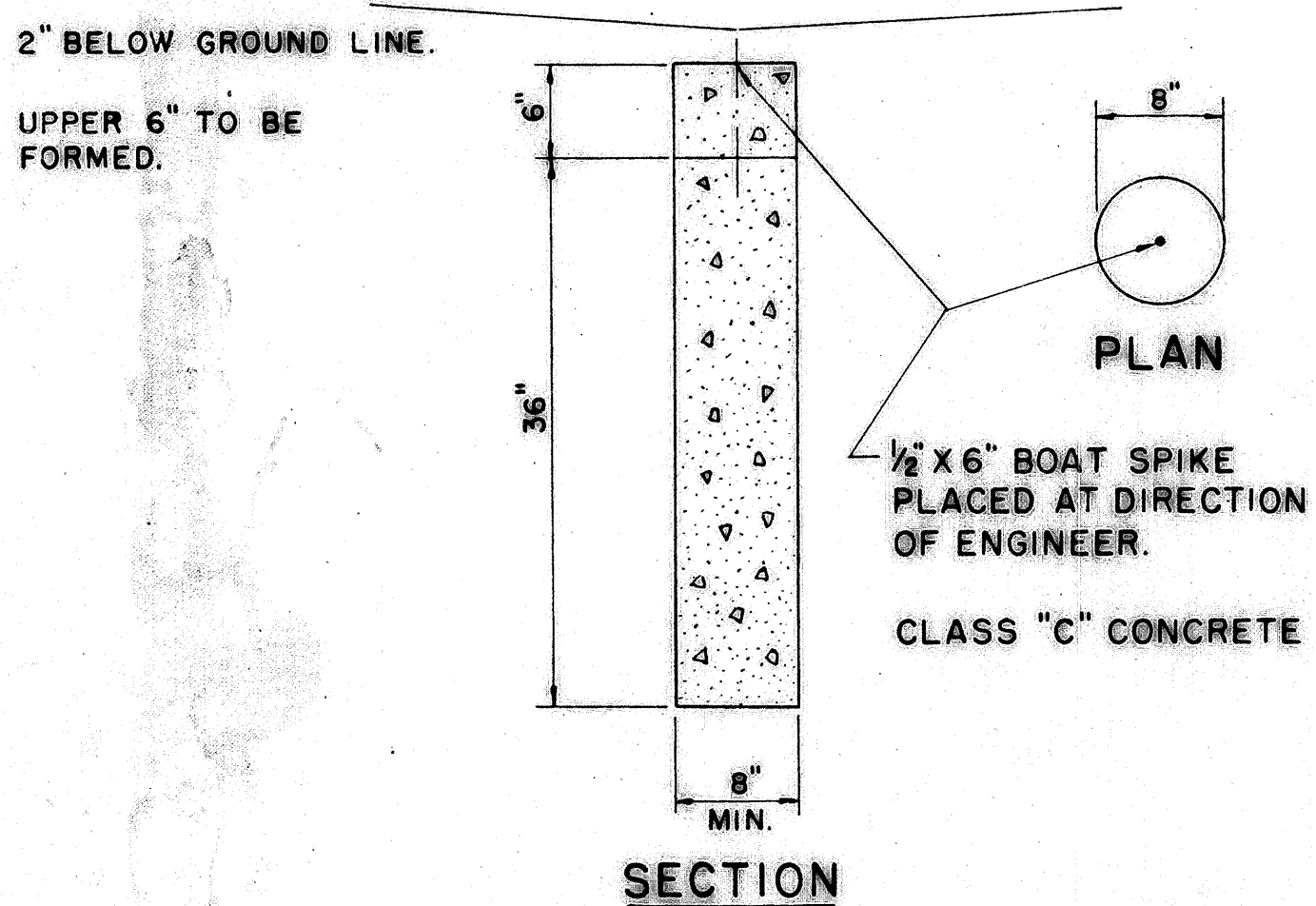
34642

RECEIVED August 7, 1961 AT 8:10 A.M.
RECORDED August 7, 1961
PLAT BOOK 20 PAGE 129-130-131-132
SIGNED S.D. Quander RECORDER, RICHLAND COUNTY
FEE 4.00
APPROVED: C. L. Johnson P.E. No. 6311

DATE June 28, 1961 DIVISION DEPUTY DIRECTOR.
Re Record 73365 DIV. No. 3
RECORDED January 15, 1965 AT 10:30 A.M.
PLAT BOOK 84-85-86
SIGNED S.D. Quander RECORDER, RICHLAND COUNTY
FEE 3.50
APPROVED: D.H. Brown P.E. No. 24400
DATE 12-1-64 DIVISION DEPUTY DIRECTOR.
DIV. No. 3

THIS PLAT WAS PREPARED BY
SHAFFER, PARRETT & ASSOCIATES
CONSULTING ENGINEERS, MANSFIELD, OHIO

Kenneth P. Shaffer
KENNETH P. SHAFFER,
REGISTERED SURVEYOR, No. 2172



MONUMENT REFERENCE			
QUAN.	STATION	LOCATION	REMARKS
NOTE: EXISTING REFERENCE MONUMENTS LOCATED AS SHOWN ON SHEET NO. 1 OF THE LOCATION PLAN ON RECORD IN PLAT BOOK NO. 18, PAGE NO. 268 OF THE RICHLAND COUNTY PLAT RECORDS ARE TO BE PRESERVED.			
1	4+95.43 BK + 4+89.07 AH.	CL SURVEY	P.C.
1	11+00	"	P.O.C.
1	19+00	"	"
1	25+00	"	"
1	32+00	"	"
1	38+00	"	"
1	43+37.15	"	P.T.
1	51+00	"	P.O.T.
1	63+00	"	"
1	73+00	"	"
1	83+24.07	"	P.C.
1	90+00	"	P.O.C.
1	97+00	"	"
1	103+84.98	"	P.T.
1	121+00	"	P.O.T.
1	131+00	"	"
1	141+00	"	"
1	160+00	"	"
1	169+14.85	"	P.C.
1	176+00	"	P.O.C.
1	176+44.15	P.I.	P.O.T.
1	183+71.73	CL SURVEY	P.T.
1	194+00	"	P.O.T.
1	55+00	"	"
STATE ROAD NO. 603			
1	256+60.99	P.I.	P.I.
2	266+00	CL SURVEY	P.O.T.
TOWNSHIP ROAD NO. 135			
2	7+00 TR #135	LT. OF CL	P.O.T.
COUNTY ROAD NO. 137			
2	15+94.53	LT. OF CL	P.T.
MUSKINGUM WATERSHED CONSERVANCY DIST. ACCESS ROAD			
2	12+27.30	LT. OF CL	P.I.
2	17+43.76	RT. OF CL	P.I.
1	21+00	CL SURVEY	P.O.T.

MONUMENT ASSEMBLIES			
QUAN.	STATION	LOCATION	REMARKS
1	111+28.92	CL SURVEY	P.O.T.
1	204+07.87	"	"
KOOGLE ROAD			
1	20+00	CL SURVEY	P.O.T.
1	24+72.04	"	P.C.
1	30+00	"	P.O.C.
1	32+70.79	"	P.T.
TOWNSHIP ROAD NO. 69			
1	7+04.84	CL SURVEY	P.C.
1	9+21.51	"	P.T.
1	11+45.23	"	P.C.
1	13+95.23	"	P.T.
1	17+67.40	P.I.	P.I.
1	18+76.77 BK + 18+75.40 AH.	CL SURVEY	P.T.
COUNTY ROAD NO. 71			
1	6+00	CL SURVEY	P.O.T.
1	8+44.96	"	P.I.
1	19+45.82	"	"
1	22+74.80	"	"
1	25+00	"	P.O.T.
COUNTY ROAD NO. 138			
1	9+85.83	CL SURVEY	P.O.T.
1	15+00	"	"
1	20+00	"	"
STATE ROAD NO. 511			
1	8+00	CL SURVEY	P.O.T.
1	13+06.03	"	"
1	20+00	"	"
1	26+00	"	"
STATE ROAD NO. 603			
1	242+00	SURVEY	P.O.T.
1	248+78.84	P.I.	P.I.
CRIDER ROAD			
1	38+06.45	SURVEY	P.O.T.
1	48+21.44	"	P.I.
1	55+42.20	"	P.O.T.

MONUMENT ASSEMBLIES, AS SHOWN ON STANDARD CONSTRUCTION DRAWING R.I.-1 (REVISED 7-15-58) OF THE DEPARTMENT OF HIGHWAYS, ARE TO BE PLACED DURING CONSTRUCTION. ALL OTHER MONUMENTS AS SHOWN ON SHEETS 2, 3, 4 & 5 OF THE LOCATION PLAT ARE TO BE PLACED AFTER CONSTRUCTION.

MONUMENT SYMBOL ●

QUANTITIES
36* MONUMENT REFERENCE
42 MONUMENT ASSEMBLIES

12/1/64

RECEIVED August 7, 1961 AT 9:22 A.M.
RECORDED August 7, 1961
PLAT BOOK 8 PAGE 47 & 47A
SIGNED C. L. Johnson RECORDER, ASHLAND COUNTY
FEE \$4.00
APPROVED: C. L. Johnson P.E. No. 6311
DATE June 28, 1961 DIVISION DEPUTY DIRECTOR.
DIV. No. 3

RE RECORDED

NO. _____
RECEIVED _____ AT _____
RECORDED _____ PLAT BOOK _____ PAGE _____
FEE _____ SIGNED _____ RECORDER, RICHLAND CO.
TRANSFER NOT NECESSARY DATE _____
SIGNED _____ AUDITOR, RICHLAND CO.
APPROVED: _____
SIGNED _____ P.E. No. 24400
DATE _____ DIVISION DEPUTY DIRECTOR DIV. NO. 3

Revised
8-31-64
5-18-65

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

300
325
2
5

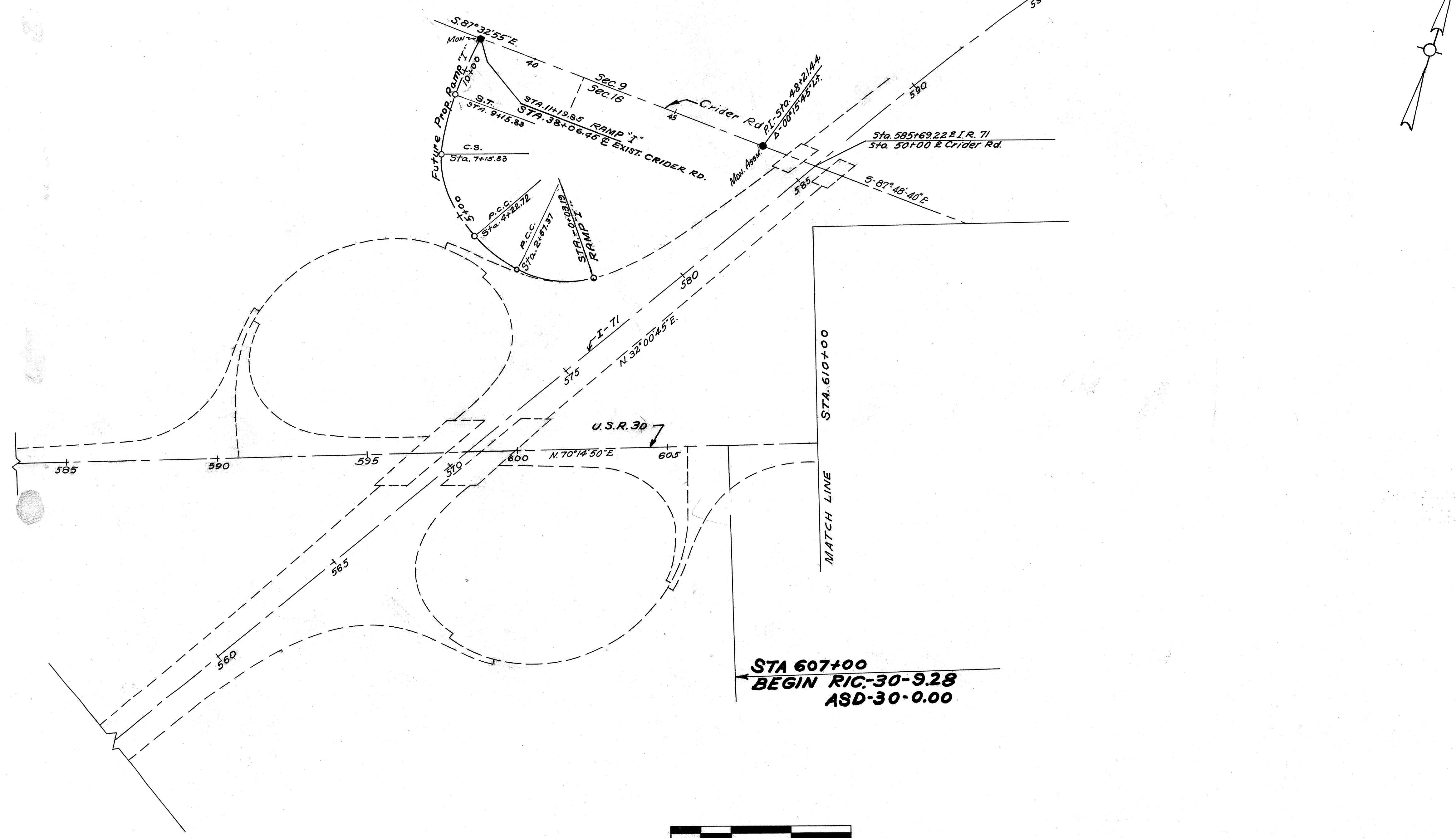
RIC. 30-9.28
ASD. 30-0.00

TRANSFER NOT NECESSARY
NORMAN L. WOLFE, County Auditor
N.C. 1/15/65

73365
RECEIVED FOR RECORD
January 15, 1965
At 10:30 A.M.
Recorded Jan 15 1965
IN RICHLAND COUNTY RECORDS
Volume 85
Richland County Recorder

**CURVE DATA FOR FUTURE PROPOSED
"RAMP I"**

SPIRAL DATA	CURVE DATA	CURVE DATA	CURVE DATA
$\theta_s = 16^\circ 00'$	P.I. \sim Sta. 5+78.04	P.I. \sim Sta. 3+90.42	P.I. \sim Sta. 1+36.05
L.S. = 200.00'	$\Delta \sim 46^\circ 53' 48''$	$\Delta \sim 13^\circ 13' 40''$	$\Delta \sim 41^\circ 10' 47''$
L.T. = 133.88'	$D_c \sim 16^\circ 00'$	$D_c \sim 8^\circ 00'$	$D_c \sim 16^\circ 12' 02.4''$
S.T. = 67.17'	$L \sim 293.10'$	$L \sim 165.35'$	$L \sim 254.18'$
	$T \sim 155.32'$	$T \sim 83.04'$	$T \sim 132.86'$
	$E \sim 32.23'$	$E \sim 4.80'$	$E \sim 24.13'$
	$R \sim 358.10'$	$R \sim 716.20'$	$R \sim 353.66'$



STA 607+00
BEGIN RIC-30-9.28
ASD-30-0.00

MIFFLIN TOWNSHIP RICHLAND COUNTY
SECTION 9 §16, TOWN 23 N., RANGE 17 W.

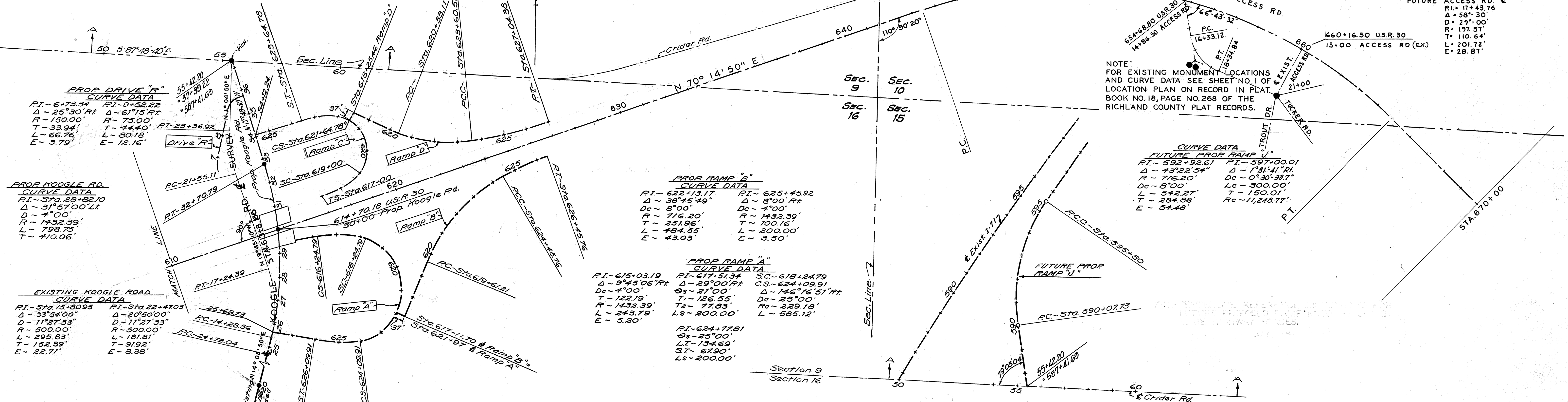
REVISED
8-31-64
5-18-65

PROPOSED RAMP "C"

SPIRAL DATA	CURVE DATA	SPIRAL DATA
PI-618+36.54	SC-619+00	PI-622+34.37
Δ = 38° 00' Lt	CS-621+64.78	CS-3800 Lt
LS-200.00	Δ = 100° 37' 04" Lt	LS-200.00
LT-136.54	Dc-38' 00"	LT-136.54
ST-69.59	R-150.78	ST-69.59
	L-264.78	

PROPOSED RAMP "D"

CURVE DATA	CURVE DATA
PI-624+99.76	PI-625+33.31
Δ = 26° 11' 54" Lt	Δ = 13° 45' 06" Lt
Dc-8' 00"	Dc-4' 00"
R-716.20'	R-1432.39'
T-166.65'	T-172.73'
L-327.48'	L-343.79'
E-19.13'	E-10.38'



NOTE:
FOR EXISTING MONUMENT LOCATIONS
AND CURVE DATA SEE SHEET NO. 1 OF
LOCATION PLAN ON RECORD IN PLAT
BOOK NO. 18, PAGE NO. 268 OF THE
RICHLAND COUNTY PLAT RECORDS.

NOTE:
FOR EXISTING MONUMENT LOCATIONS
AND CURVE DATA SEE SHEET NO. 1 OF
LOCATION PLAN ON RECORD IN PLAT
BOOK NO. 18, PAGE NO. 268 OF THE
RICHLAND COUNTY PLAT RECORDS.

NOTE:
FOR EXISTING MONUMENT LOCATIONS
AND CURVE DATA SEE SHEET NO. 1 OF
LOCATION PLAN ON RECORD IN PLAT
BOOK NO. 8, PAGE NO. 19 OF THE
ASHLAND COUNTY PLAT RECORDS.

TRANSFER NOT NECESSARY
NORMAN L. WOLFE, County Auditor
N.C. 1/15/65

RECEIVED FOR RECORD
Jan 15 1965
73365

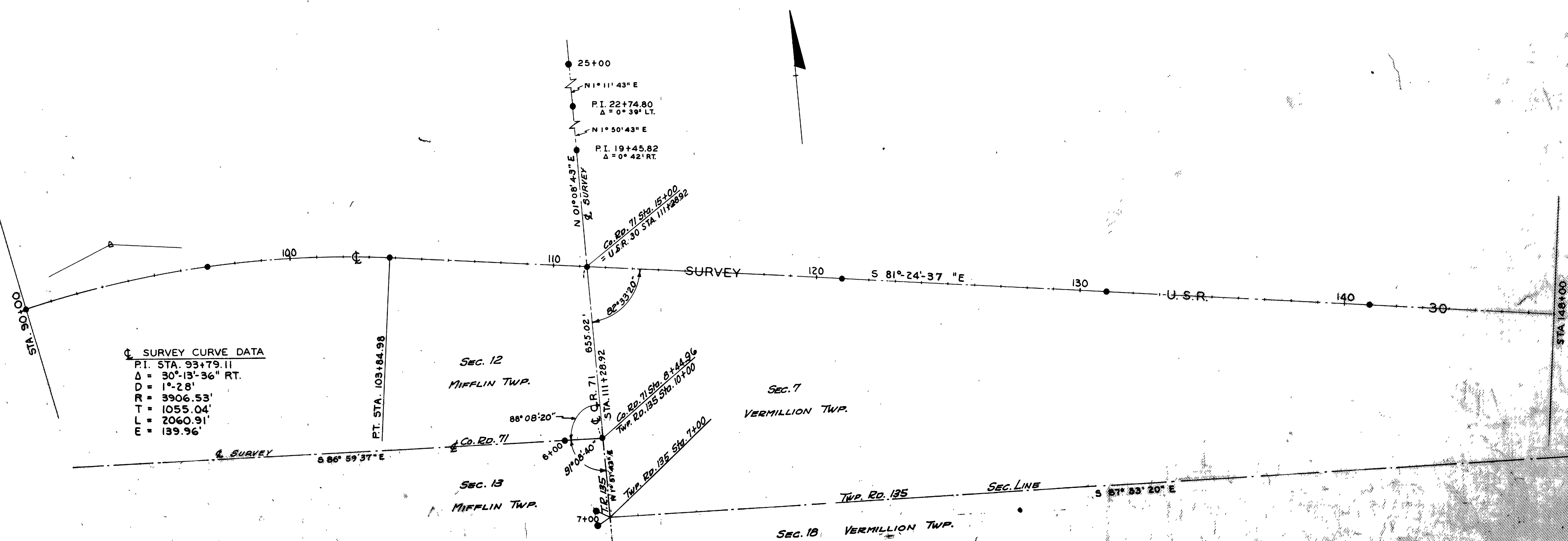
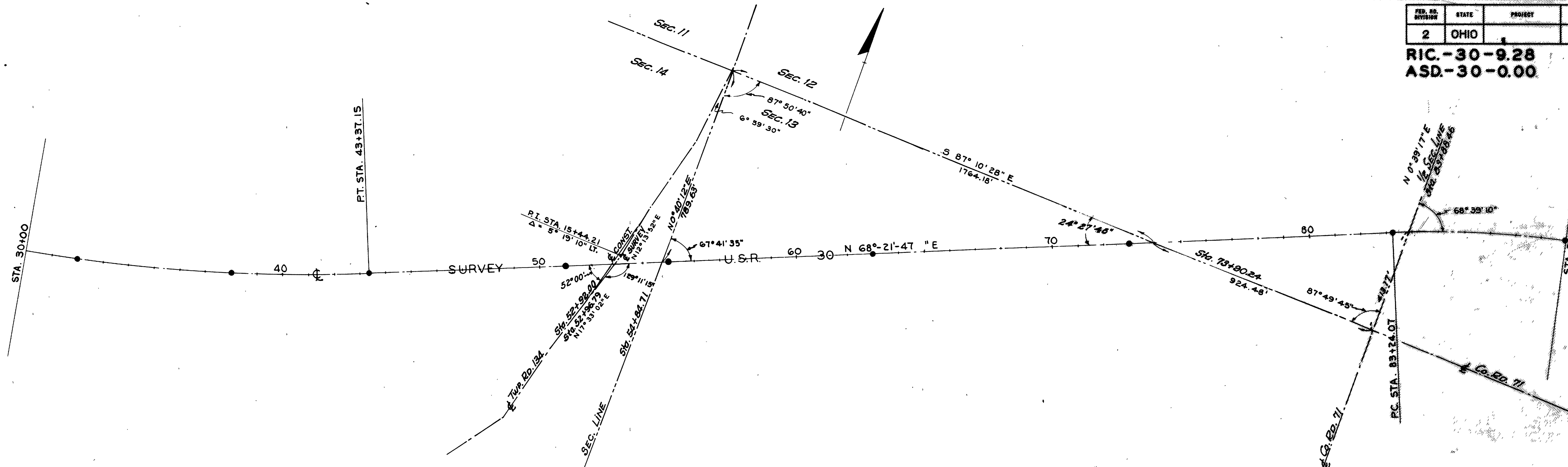
REVISED
8-31-69
5-18-65

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

302
325

RIC-30-9.28
ASD-30-0.00

4
5



☉ SURVEY CURVE DATA
 P.I. STA. 93+79.11
 $\Delta = 30^{\circ} 13' 36''$ RT.
 D = 1°-28'
 R = 3906.53'
 T = 1055.04'
 L = 2060.91'
 E = 139.96'

NO.	STATE	PROJECT
2	OHIO	

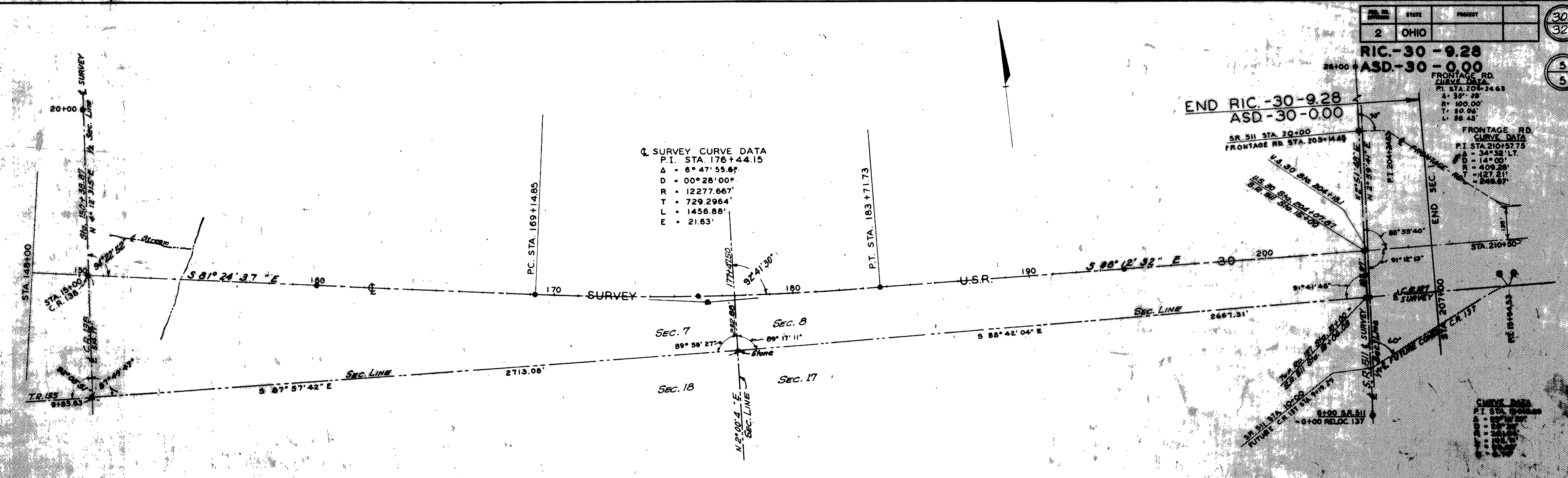
303
325

5
5

RIC-30-9.28
ASD-30-0.00

END RIC-30-9.28
ASD-30-0.00

Q SURVEY CURVE DATA
P.I. STA. 176+44.15
Δ = 6° 47' 55.6"
D = 00° 28' 00"
R = 12277.667'
T = 729.2964'
L = 1456.88'
E = 21.63'



 P.O.T. 7+00 TWP. ROAD #135	 P.T. 15+94.53 COUNTY ROAD #137	 P.I. 12+27.30 MUSKINGUM WATERSHED CONSERVANCY DISTRICT - ACCESS RD.	 P.I. 17+43.76 MUSKINGUM WATERSHED CONSERVANCY DISTRICT - ACCESS RD.	 P.O.T. 266+00 STATE ROAD #603
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SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

S.R. 30 SEC. RIC.-30-9.28 RICHLAND ASHLAND COUNTIES OHIO TOTAL NO. OF OWNERS 23
ASD.-30-0.00

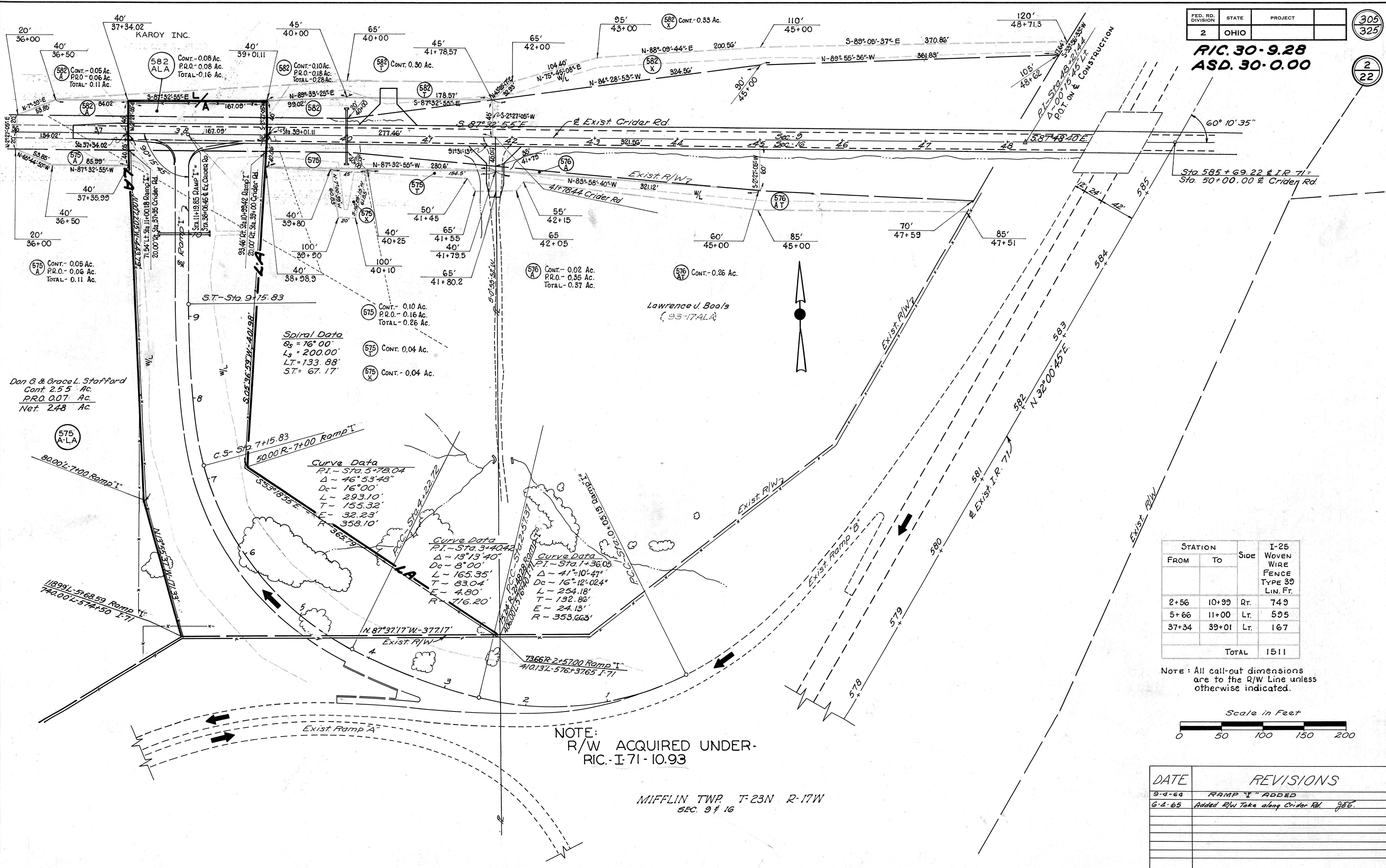
PARCEL NO.	OWNER	RECORDED		DEED AREA	TO BE ACQ'D		RESIDUE		SHEET NO.	REMARKS As Acquired
		BOOK	PAGE		LAND	BLDG	LEFT	RIGHT		
RICHLAND COUNTY										
576ALA	LAWRENCE J. BOALS	394	460	3088	0.11			45.23		EXCLUSIVE OF PRESENT RIGHT OF WAY
576B	PAL INC.	496	53	11037	0.10					
	"	480	599							
576CLA	JEAN U. SAUTER	496	56	11.62	1.35			6.940		
576C	"	"	"		0.37					
576ELA	"	"	"		1.04			1.591		
576E	"	"	"		0.03					
577B	SHIRLEY B. & GRETCHEN BOALS	263	599	113.9	0.03				5	VOL 509 Pg 473
" X	"	"	"		0.04				3	VOL 12 Pg 266
577CLA	"	"	"		0.54			17.84	3	VOL 509 Pg 473
* 578 X	MUSKINGUM WATERSHED CONSERVANCY DISTRICT	209	558	145.7	0.21				8	VOL 12 Pg 283
" WA	"	"	"		0.32				6 & 7	signed 12-12-1961
" WA-1	"	"	"		0.17				9	"
578A	"	213	25	41.5	0.33				22	VOL 512 Pg 417
578B	"	"	"		0.75				"	"
579	EMIL & LINDA F. HESS	187	558	153.6	0.03				7	VOL 510 Pg 623
" X	"	"	"		0.30				"	VOL 12 Pg 272
579LA	"	"	"		0.79				4	"
580	SAMUEL J. & JESSIE R. HARLAN	208	476	80.74	0.08				22	"
ASHLAND COUNTY										
1A	MUSKINGUM WATERSHED CONSERVANCY DISTRICT	180	435	7.4	5.08				9 & 21	VOL 289 Pg 51
IWA	"	188	415	29.0	0.05				"	"
IWA-1	"	"	"		0.34				21	"
* 2ALA	SAMUEL C. ANDRESS & JANET I. WINKLER	259	334	2409	3.85	78	24		9 & 10	PRESENT 2LA 14.25 AC
2A	"	"	"		0.39				9 & 21	VOL 319 Pg 25
2B	"	"	"		0.89				10 & 20	"
2C	"	"	"		1.51				"	"
2T	"	"	"		0.04				20	"
2E	"	"	"		0.17				21	VOL 319 Pg 25
2D	ASHLAND COUNTY	219	338	0.71	0.17				20	"
3LA	MARTIN L. BRIGHT	267	457	9255	14.49	23	155		10 & 11	VOL 309 Pg 356
"	"	186	538						"	"
3	"	"	"		0.48				10 & 20	VOL 309 Pg 356
3-7	"	"	"		1.05				"	"
4LA	ROBERT E. AMEND ETAL.	231	271	12535	22.08				10, 11	VOL 315 Pg 64
4X	"	"	"		1.46				17	"
4WA	"	"	"		0.19				11	"
5LA	TRENT M. & JANICE L. OSWALT	281	620	9327	6.35	85	1.6		11 & 12	VOL 309 Pg 353
6LA	JOSEPH B. & MARY C. MONTGOMERY	252	118	35.16	6.13	0.00	2886		12 & 13	VOL 280 Pg 517
6	"	"	"		0.61				13 & 18	"
6X	"	"	"		0.11				12	VOL 280 Pg 503
6Y	"	"	"		0.33				"	VOL 280 Pg 501
6Z	"	"	"		0.12				13	VOL 280 Pg 505
6T	"	"	"		1.26				13 & 18	"
6A	OLMA FAYE STAUFFER	251	572	80	0.14				18	VOL 280 Pg 365
		254	582							
7LA	GRACE STILLWAGON GONGWER ETAL.	251	208	225+	22.03	180	22		12 & 13	VOL 280 Pg 453
7	"	225	336	80	0.40				13 & 18	"
7A	"	"	"		0.40				"	"
7B	"	"	"		0.44				"	"
7X	"	"	"		0.04				12	VOL 280 Pg 465
7Y	"	"	"		0.34				"	VOL 280 Pg 462
* 7Z	"	"	"		0.11				"	VOL 280 Pg 467

PARCEL NO.	OWNER	RECORDED		DEED AREA	TO BE ACQ'D		RESIDUE		SHEET NO.	REMARKS As Acquired
		BOOK	PAGE		LAND	BLDG	LEFT	RIGHT		
ASHLAND COUNTY										
8	ORLO H. WOLF	245	459	11.0	0.21				17	VOL 280 Pg 440
		243	125							
9LA	JESSE I. & FLORENCE M. MANN	226	523	78.76	21.21	YES	27	30	13 & 14	VOL 289 Pg 138
9	"	"	"		0.05				14 & 17	"
9A	"	"	"		0.41				"	"
9X	"	"	"		0.11				14	signed 2-26-1962 289/18
9Y	"	"	"		0.16				"	" 289/15
9Z	"	"	"		0.16				"	" 289/19
9WA	"	"	"		0.28				"	"
10LA	RAYMOND D. & BEATRICE V. SCHIBLEY	263	114	80	22.91		46	10.5	14 & 15	VOL 280 Pg 511
10	"	"	"		0.05				14 & 17	"
10A	"	"	"		0.25				"	"
10X	"	"	"		0.08				14	VOL 280 Pg 507
10Y	"	"	"		0.13				"	VOL 280 Pg 509
10WA	"	"	"		0.01				17	signed 11-18-1961
11LA	JAMES & THELMA HANNA <small>NELLIE E. SHENBERGER LIFE ESTATE</small>	245	480	3683	16.55		69.0	50	15 & 16	VOL 292 Pg 456
11	"	216	495		0.69				16 & 19	"
11A	"	"	"		0.41				16	"
11B	LLOYD E. & EDNA V. LOWE	248	12	4.0	0.12				19	VOL 280 Pg 482
12	LAWRENCE M. & FLORENCE B. PINSKI	216	260	26.66	0.05				19	VOL 280 Pg 426
13LA	CALLIE MARKLEY	137	594	26.66	7.36		11.5	1.5	16	VOL 280 Pg 444
13	"	"	"		5.42				16 & 19	"
13A	"	"	"		0.70				"	"
13X	"	"	"		0.21				19	"
13B	RAY A. HELBERT	143	18	80	2.22				19	VOL 280 Pg 418
1T	MUSKINGUM WATERSHED CONSERVANCY DISTRICT	180	435	7.4	0.31				9, 21	"
1ALA	"	"	"		0.01				9	VOL 289 Pg 51
7T	GRACE STILLWAGON GONGWER				0.37				18	SEE DEED FOR 7LA VOL 280 Pg 469
575-ALA	DON G. & GRACE L. STAFFORD	249	311	6799	2.48				2	"
576BLA	PAL INC.	480	599	11037	0.21				3	VOL 556 Pg 78
576B-T	"	"	"		0.34				3	"
* 577DLA	SHIRLEY B. & GRETCHEN BOALS	263	599	113.44	4.63				3	VOL 554 Pg 325
577ELA	"	"	"		5.74				5	"
577	"	"	"		0.20				5	"
577-Y	"	"	"		0.55				3	"
577-T	"	"	"		0.01				5	"
576CLA	JEAN U. SAUTER	496	56	11.62	5.21				5	VOL 574 Pg 514
576ELA	"	"	"		1.81				3	"
576C	"	"	"		0.16				5	"
576C-T	"	"	"		0.02				"	"
576E-T	"	"	"		0.04				3	"
582 LA	KAROY INC.	505	227	666.36	1.81				4	VOL 564 Pg 352
582 ALA	"	"	"		0.88				2	"

RIC. 30-9.28
ASD. 30-0.00

305
325

2
22



Spiral Data
 $G_s = 76.00'$
 $L_s = 200.00'$
 $L.T. = 133.88'$
 $S.T. = 67.17'$

Curve Data
 P.I. - Sta. 5+78.04
 $\Delta = 46^\circ 53' 48''$
 $D_c = 16^\circ 00'$
 $L = 293.10'$
 $T = 155.32'$
 $E = 32.23'$
 $R = 358.10'$

Curve Data
 P.I. - Sta. 3+40.42
 $\Delta = 13^\circ 13' 40''$
 $D_c = 8^\circ 00'$
 $L = 165.35'$
 $T = 83.04'$
 $E = 4.80'$
 $R = 716.20'$

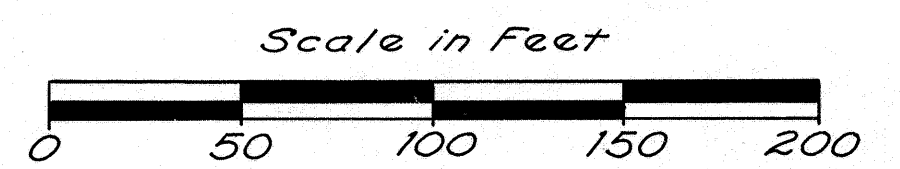
Curve Data
 P.I. - Sta. 1+36.05
 $\Delta = 41^\circ 10' 47''$
 $D_c = 16^\circ 12' 02.4''$
 $L = 254.18'$
 $T = 132.86'$
 $E = 24.13'$
 $R = 353.663'$

NOTE:
R/W ACQUIRED UNDER
RIC. I-71-10.93

MIFFLIN TWP T-23N R-17W
SEC. 9 & 16

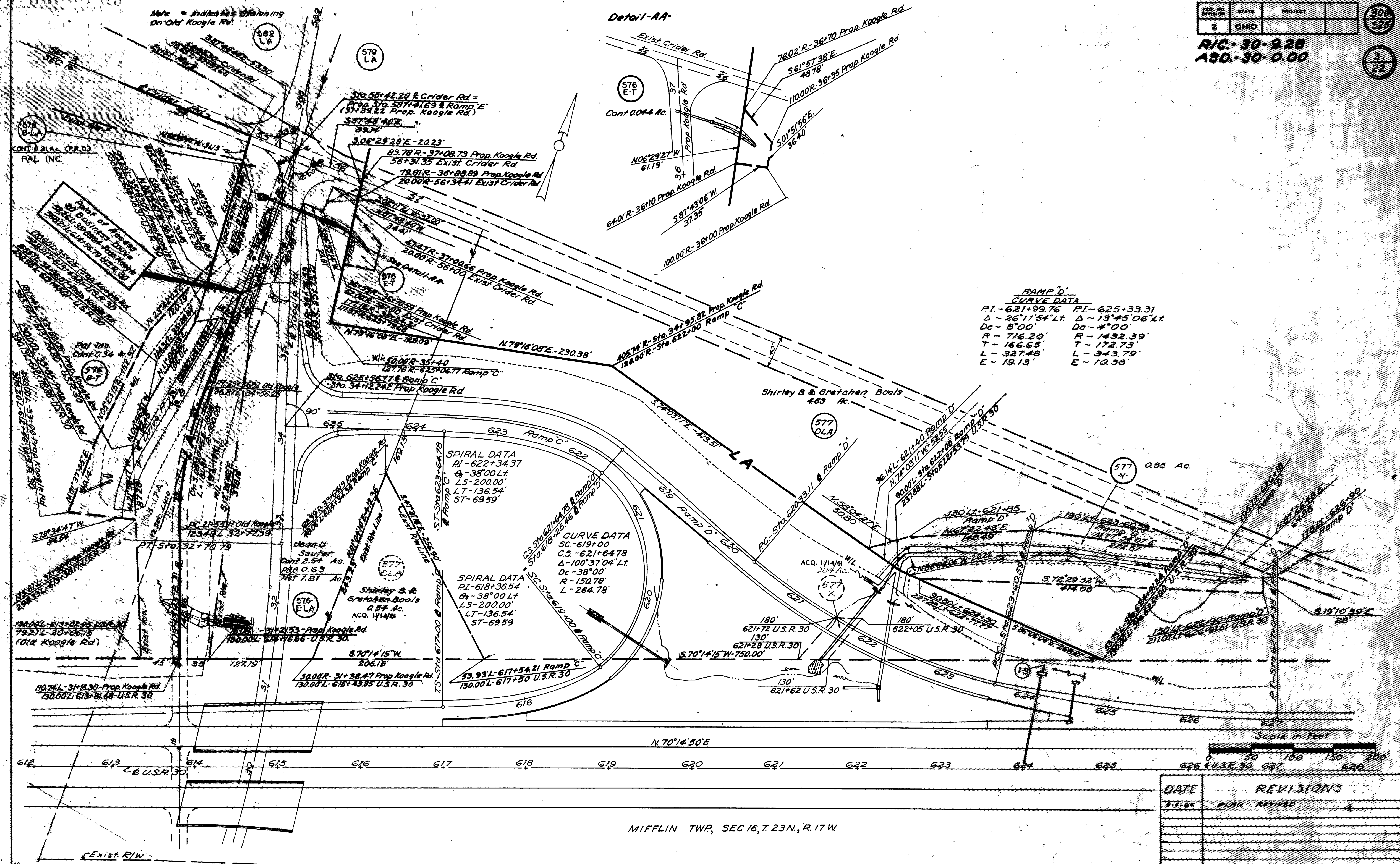
STATION FROM	STATION TO	Side	I-25 WOVEN WIRE FENCE TYPE 39 LIN. FT.
2+56	10+99	Rt.	749
5+66	11+00	Lt.	595
37+34	39+01	Lt.	167
TOTAL			1511

NOTE: All call-out dimensions are to the R/W Line unless otherwise indicated.



DATE	REVISIONS
9-4-64	RAMP "I" ADDED
6-4-65	Added R/W Take along Crider Rd. 956.

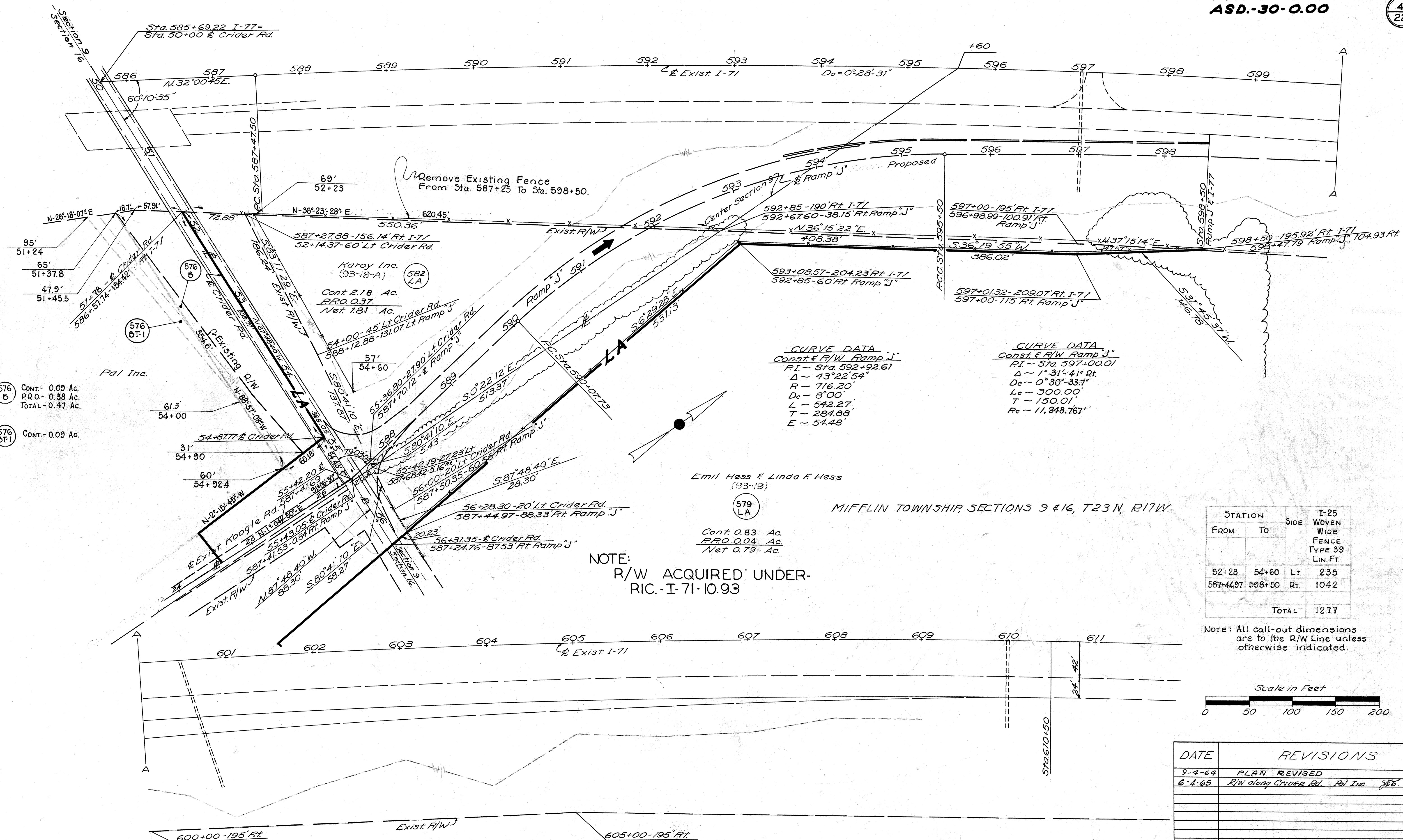
Detail-AA



DATE	REVISIONS
9-4-64	PLAN REVISED

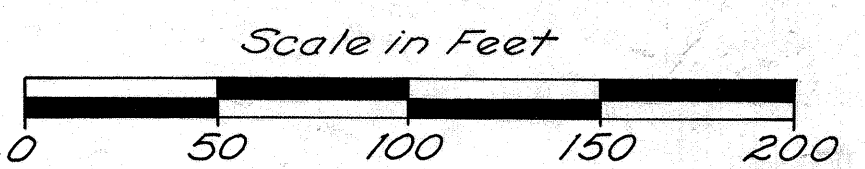
MIFFLIN TWP, SEC. 16, T. 23N, R. 17W

RIC-30-9.28
ASD-30-0.00

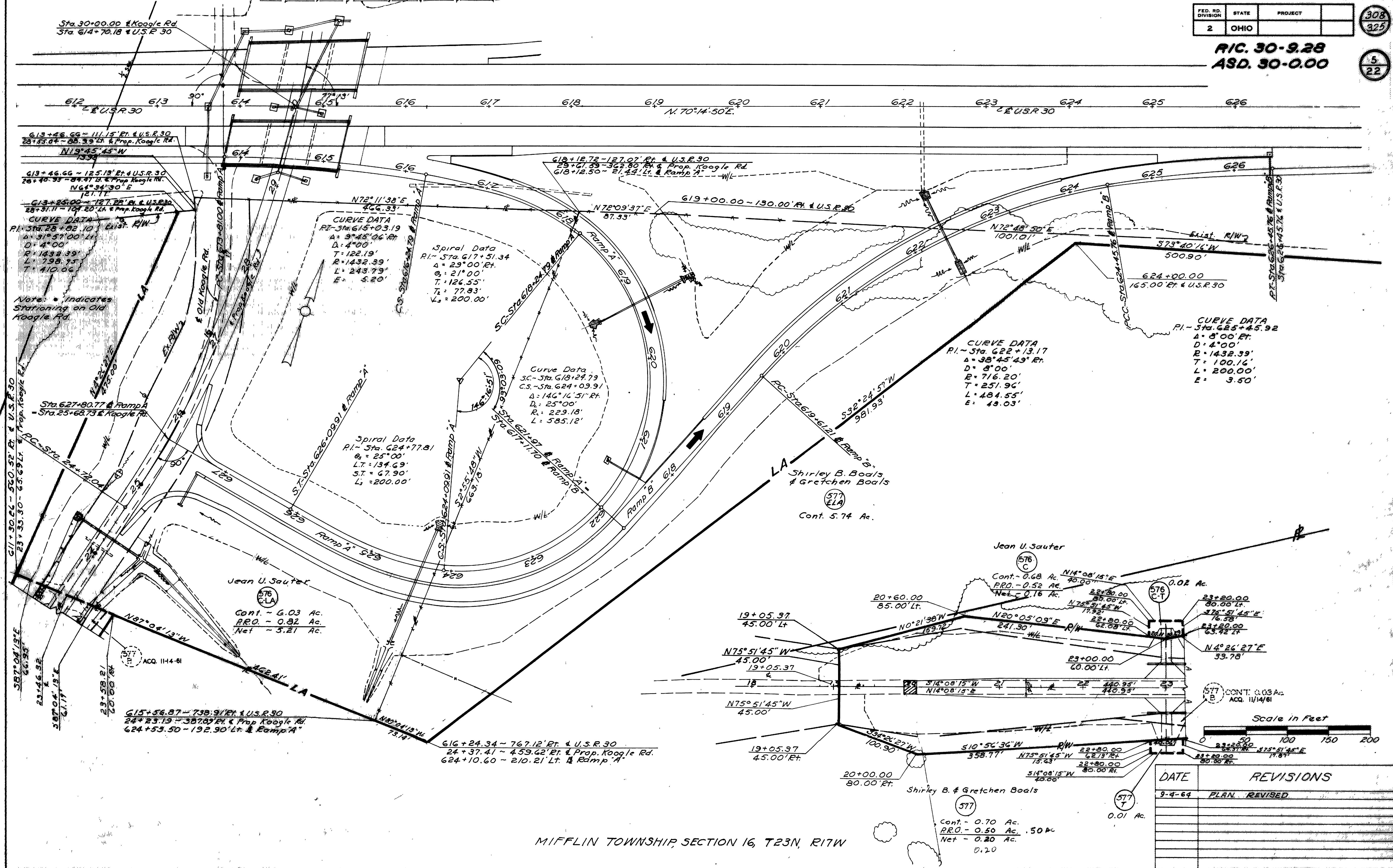


STATION FROM	STATION TO	SIDE	I-25 WOVEN WIRE FENCE TYPE 39 LIN. FT.
52+23	54+60	Lt.	235
587+44.97	598+50	Rt.	1042
TOTAL			1277

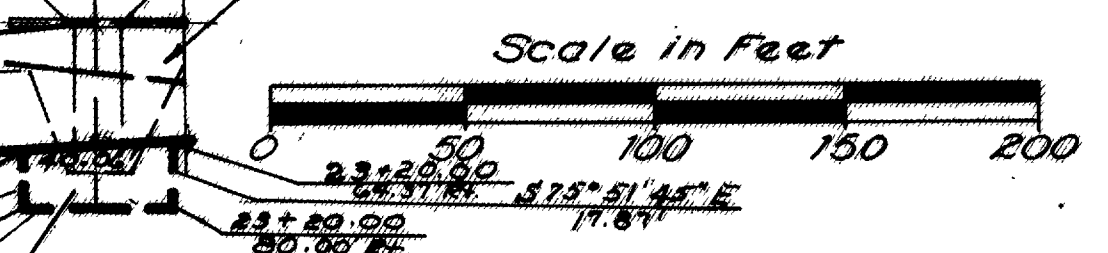
Note: All call-out dimensions are to the R/W Line unless otherwise indicated.



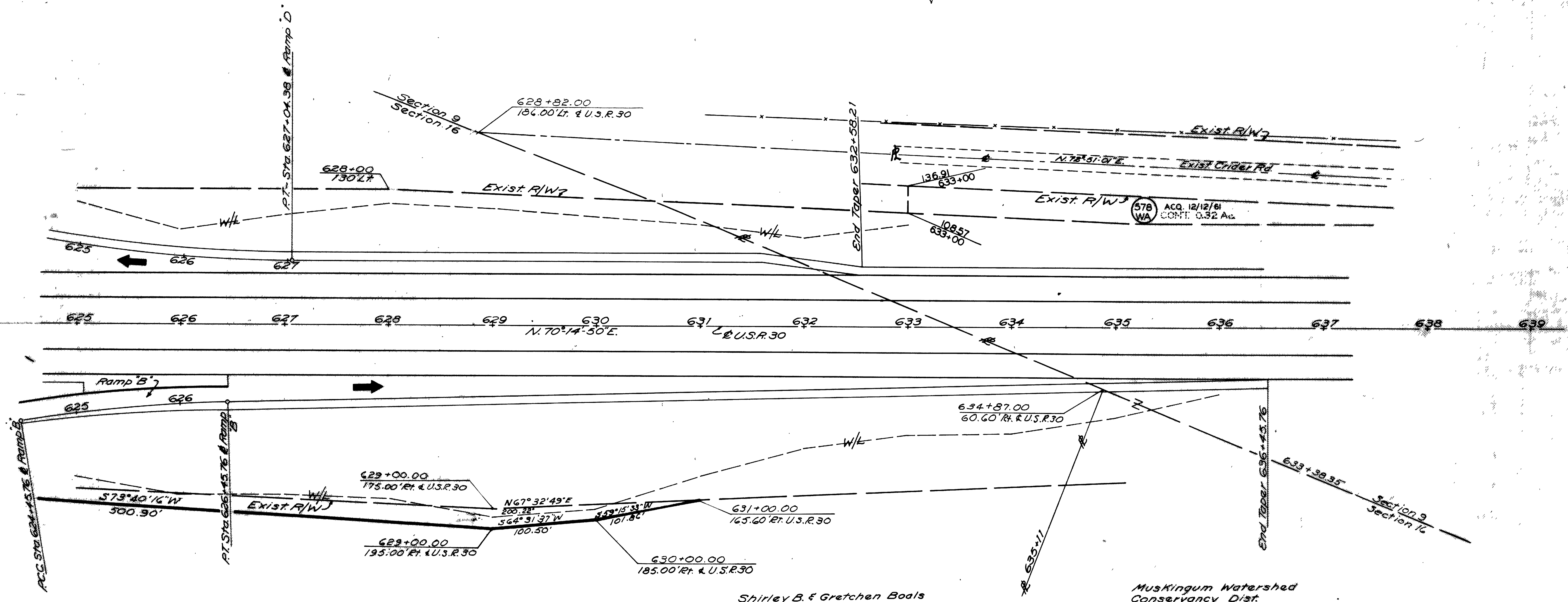
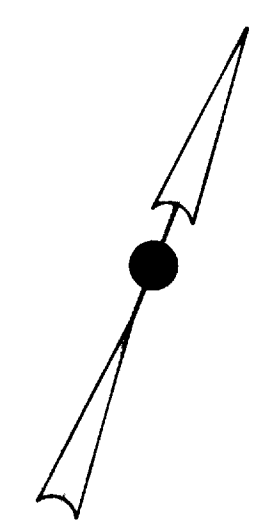
DATE	REVISIONS
9-4-64	PLAN REVISED
6-4-65	R/W along CRIDER RD. Pal Inc. 3/6



MIFFLIN TOWNSHIP, SECTION 16, T23N, R17W



DATE	REVISIONS
9-4-64	PLAN. REVISED



CURVE DATA
 Construction & R.O.W.
 P.I. - Sta. 625+43.92
 Δ - $8^{\circ}00'$ Rt.
 D_c - $4^{\circ}00'$
 R - $1432.39'$
 T - $100.16'$
 L - $200'$
 E - $3.50'$



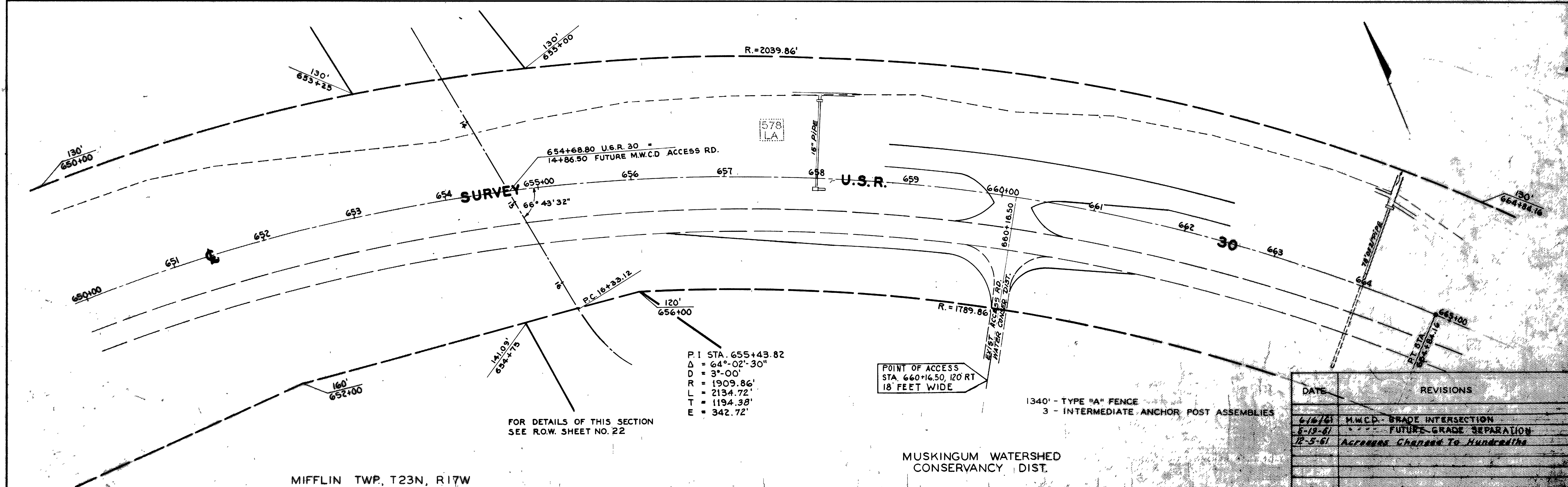
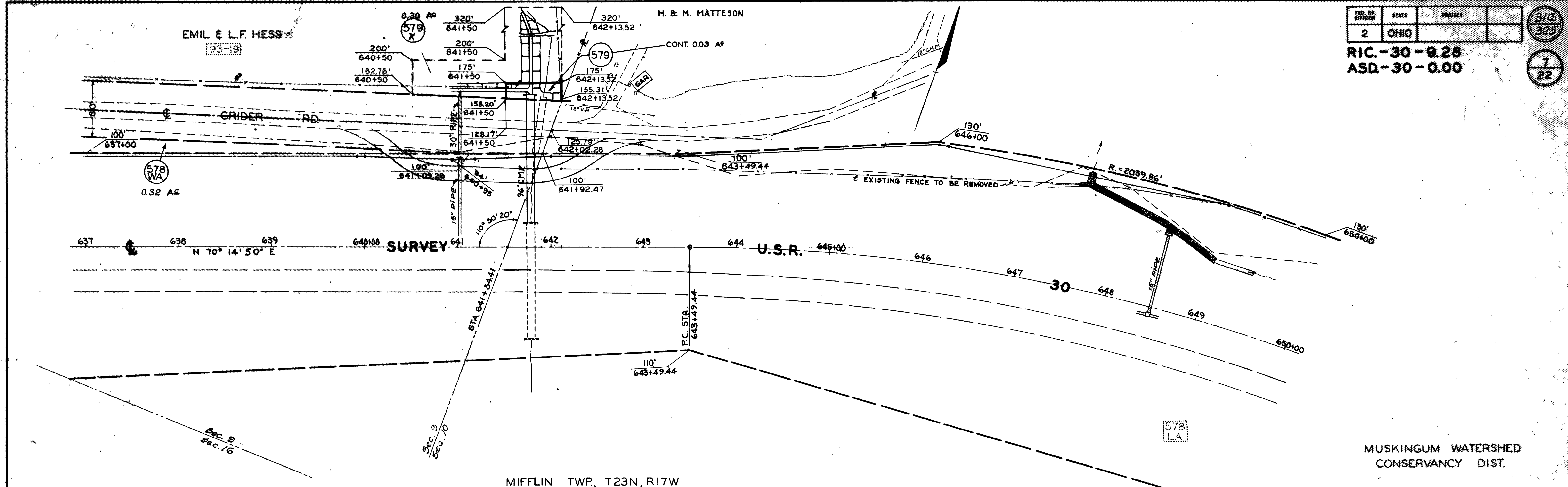
DATE	REVISIONS
9-4-64	PLAN REVISED

MIFFLIN TOWNSHIP, SECTIONS 9 & 16, T23N, R17W

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

3/2
325
1
22

RIC-30-9.28
ASD-30-0.00

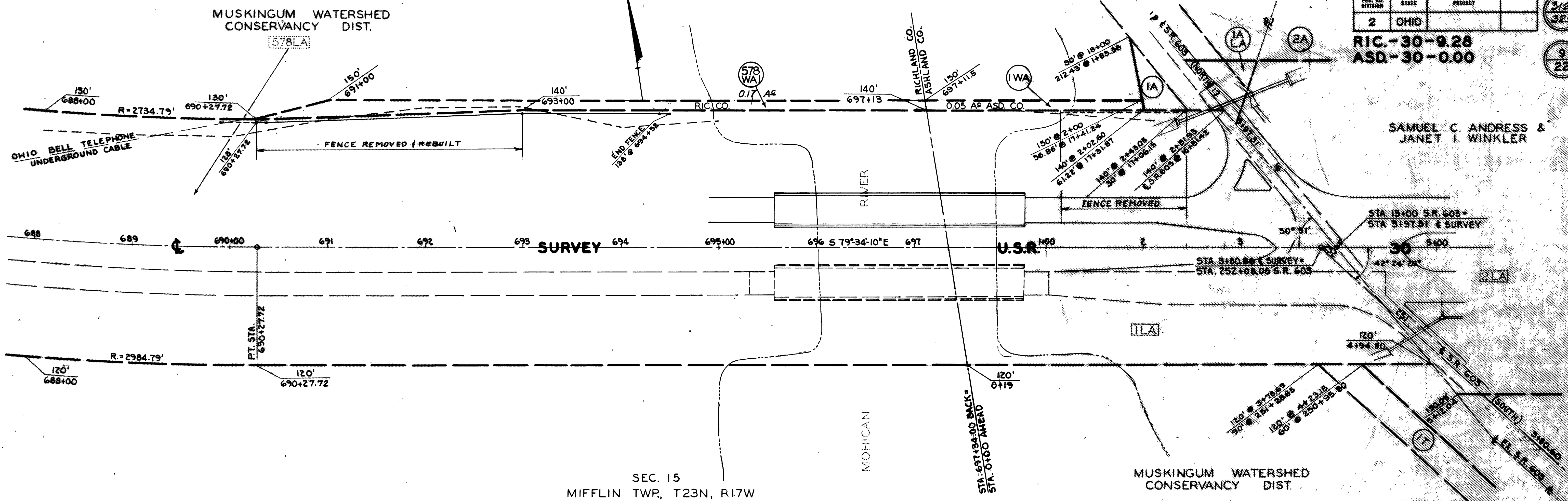


P.I STA. 655+43.82
 $\Delta = 64^{\circ} 02' 30''$
 $D = 3^{\circ} 00'$
 $R = 1909.86'$
 $L = 2134.72'$
 $T = 1194.38'$
 $E = 342.72'$

FOR DETAILS OF THIS SECTION
SEE ROW SHEET NO. 22

1340 - TYPE "A" FENCE
3 - INTERMEDIATE ANCHOR POST ASSEMBLIES

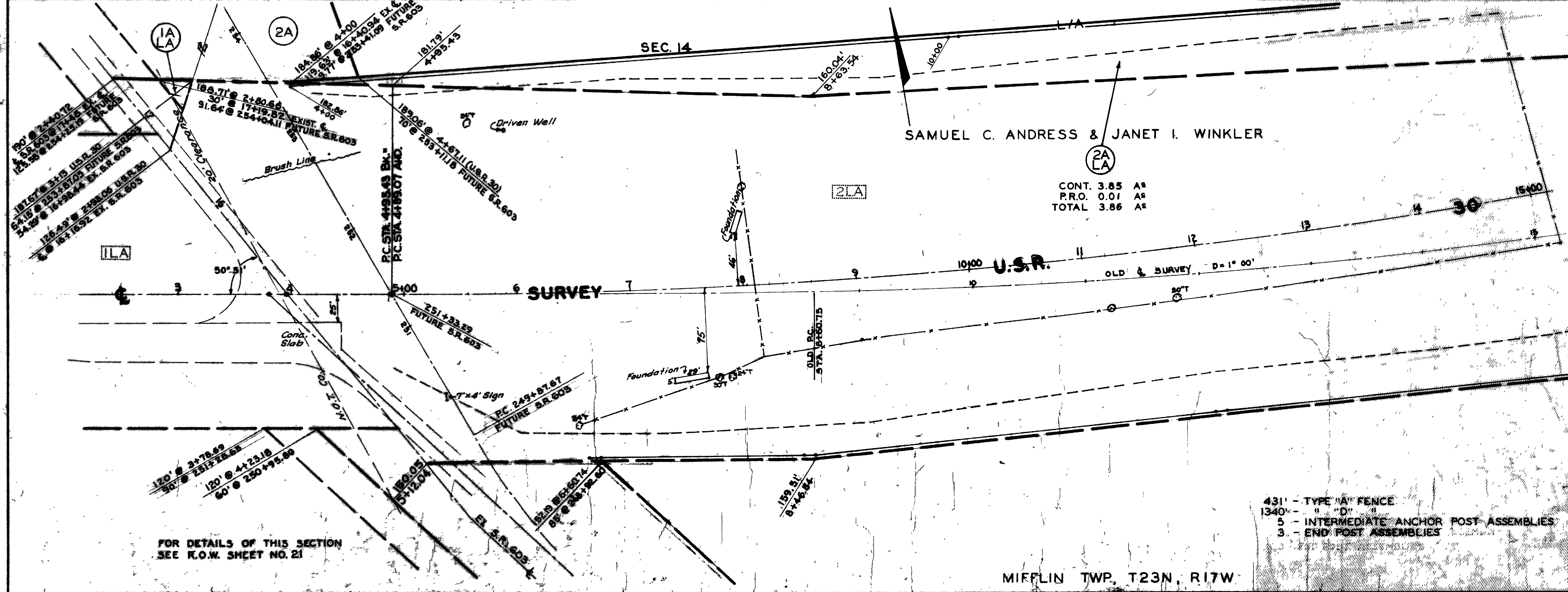
DATE	REVISIONS
6-16-61	M.W.C.D. GRADE INTERSECTION
6-19-61	FUTURE GRADE SEPARATION
12-5-61	Accesses Changed To Hundreds



SAMUEL C. ANDRESS &
JANET I. WINKLER

SEC. 15
MIFFLIN TWP, T23N, R17W

MUSKINGUM WATERSHED
CONSERVANCY DIST.



P.I. STA. 24+64.98
Δ = 32°-04'-02.5"
D = 00°-50'
R = 6875.45'
T = 1975.91'
L = 3848.08'
E = 278.29'

CONT. 3.85 A#
P.R.O. 0.01 A#
TOTAL 3.86 A#

MIFFLIN TWP, T23N, R17W

FOR DETAILS OF THIS SECTION
SEE R.O.W. SHEET NO. 21

- 431' - TYPE "A" FENCE
- 1340' - " " " " "
- 5 - INTERMEDIATE ANCHOR POST ASSEMBLIES
- 3 - END POST ASSEMBLIES

DATE	REVISIONS
6-19-61	
12-5-61	Accretions changed to boundaries

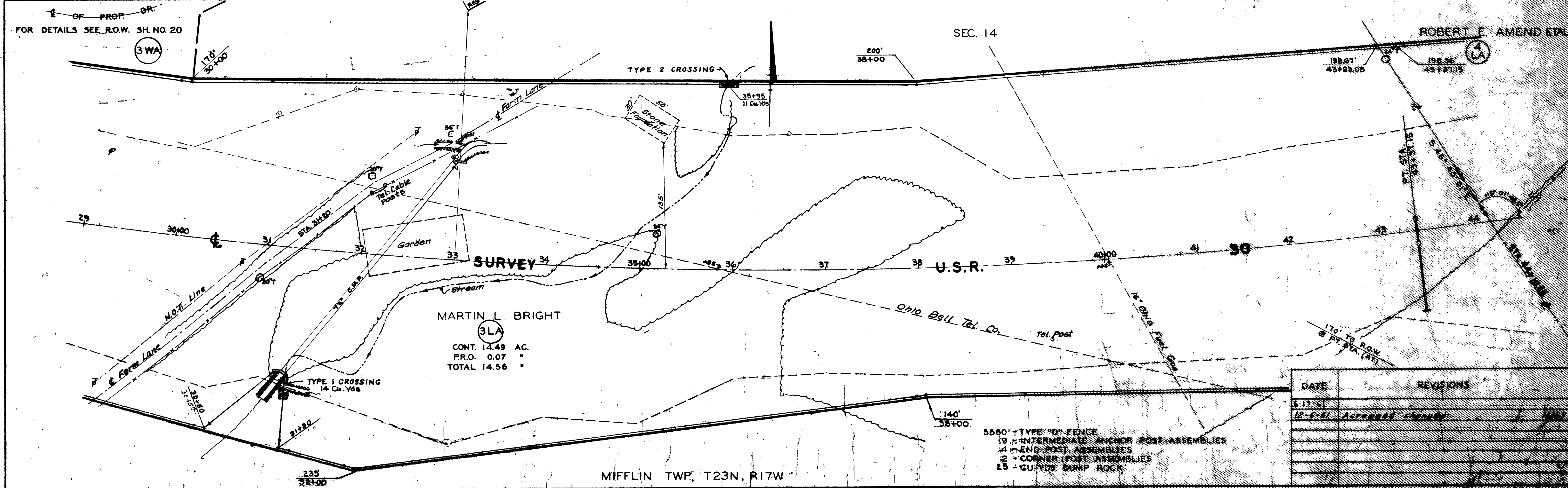
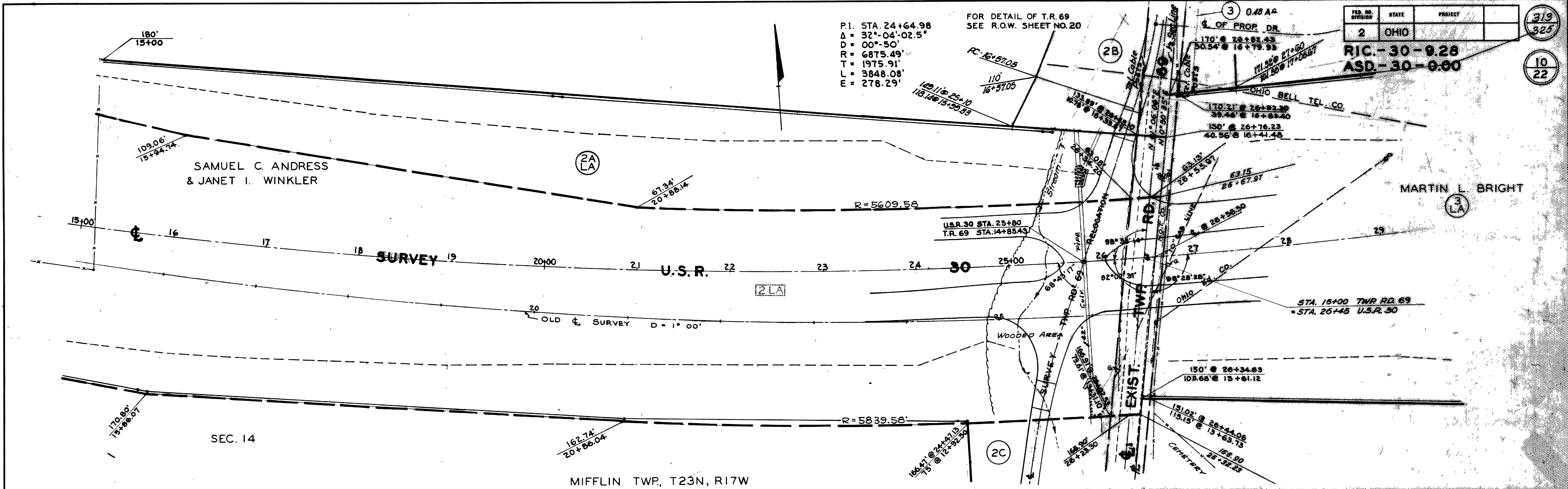
P.I. STA. 24+64.98
 $\Delta = 32^{\circ}-04'-02.5''$
 $D = 00^{\circ}-50'$
 $R = 6875.49'$
 $T = 1975.91'$
 $L = 3848.08'$
 $E = 278.29'$

FOR DETAIL OF T.R. 69
 SEE R.O.W. SHEET NO. 20

FED. NO.	STATE	PROJECT
2	OHIO	

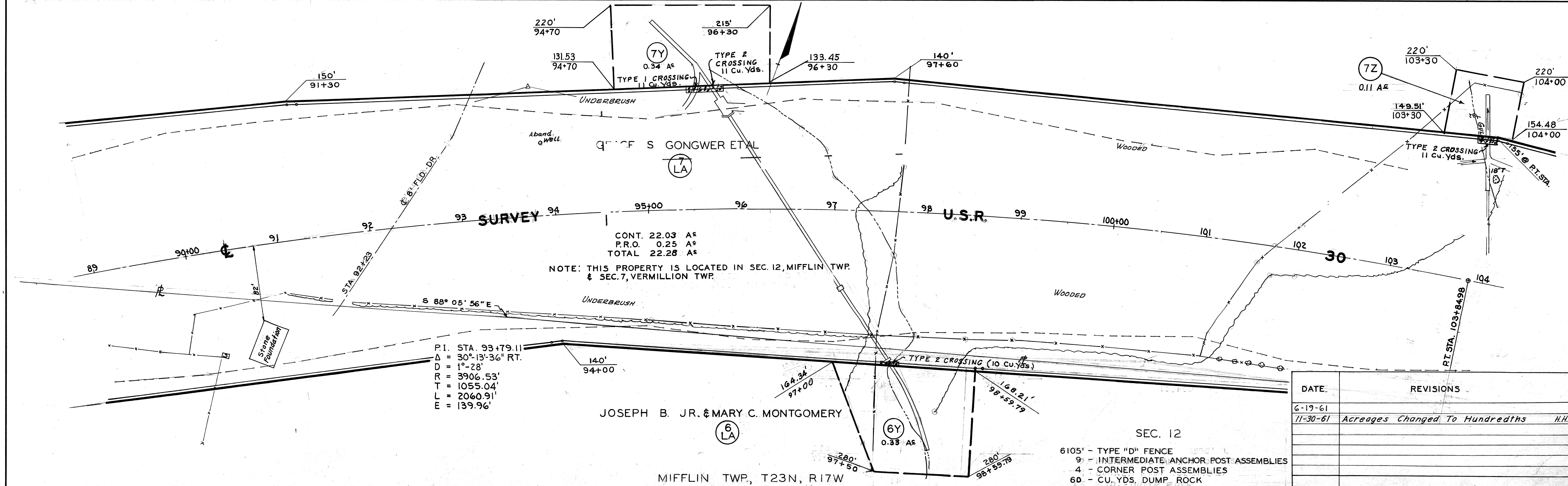
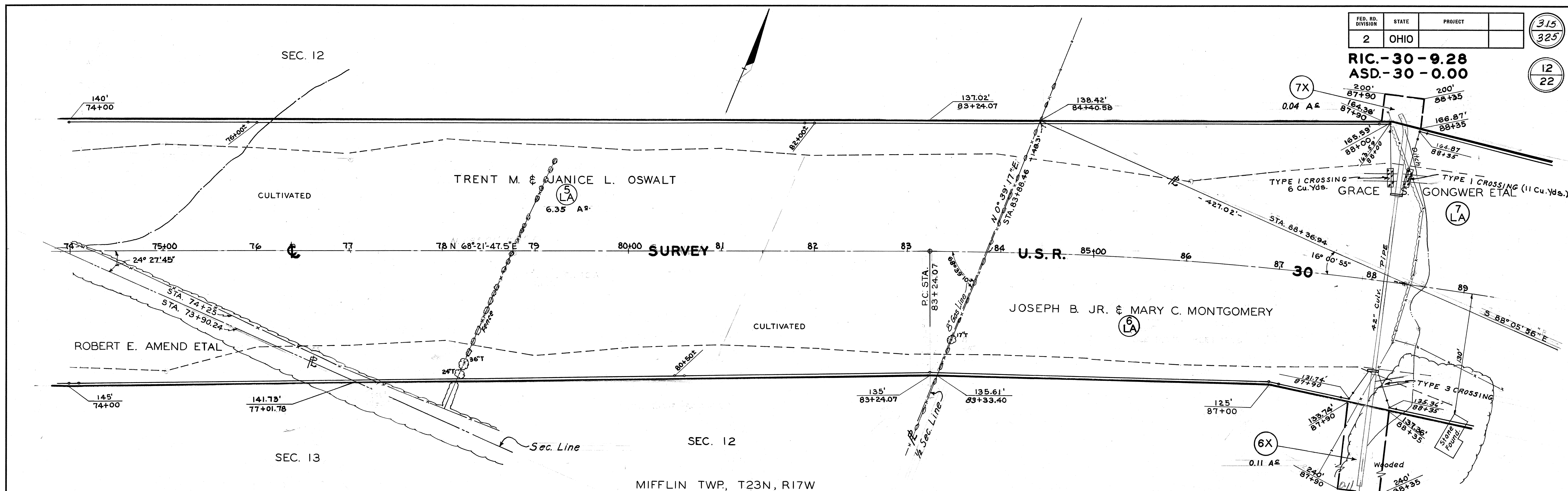
RIC-30-9.28
 ASD-30-0.00

319
 325
 10
 22



DATE	REVISIONS
6-13-61	
12-5-61	Accretion changed

- 5580 TYPE "D" FENCE
- 19 INTERMEDIATE ANCHOR POST ASSEMBLIES
- 4 END POST ASSEMBLIES
- 2 CORNER POST ASSEMBLIES
- 25 CU. YDS DUMP ROCK



DATE	REVISIONS
6-19-61	
11-30-61	Acresages Changed To Hundredths H.H.S.

- 6105' - TYPE "D" FENCE
9 - INTERMEDIATE ANCHOR POST ASSEMBLIES
4 - CORNER POST ASSEMBLIES
60 - CU. YDS. DUMP ROCK

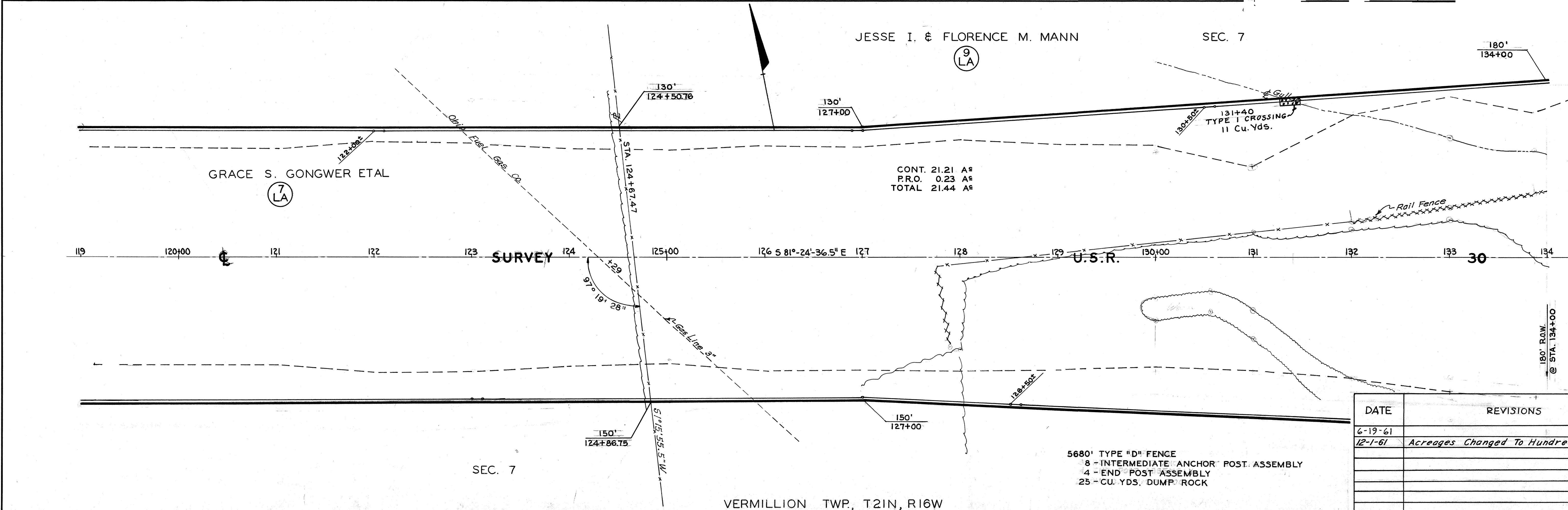
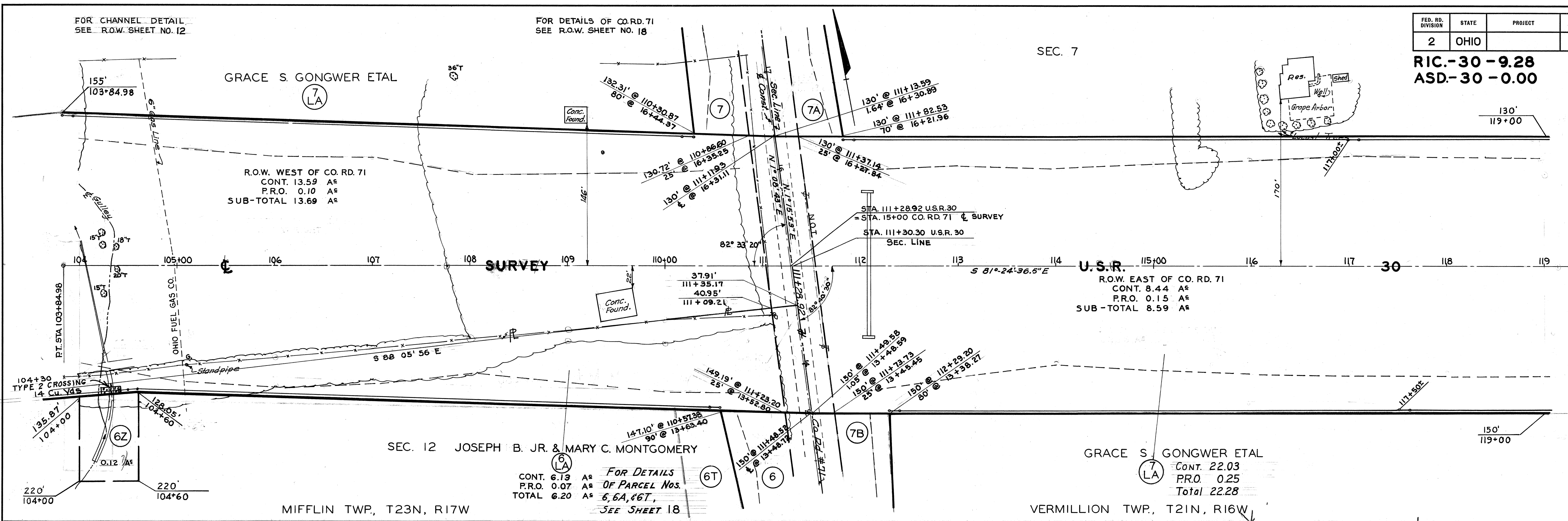
FOR CHANNEL DETAIL
SEE R.O.W. SHEET NO. 12

FOR DETAILS OF CO. RD. 71
SEE R.O.W. SHEET NO. 18

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

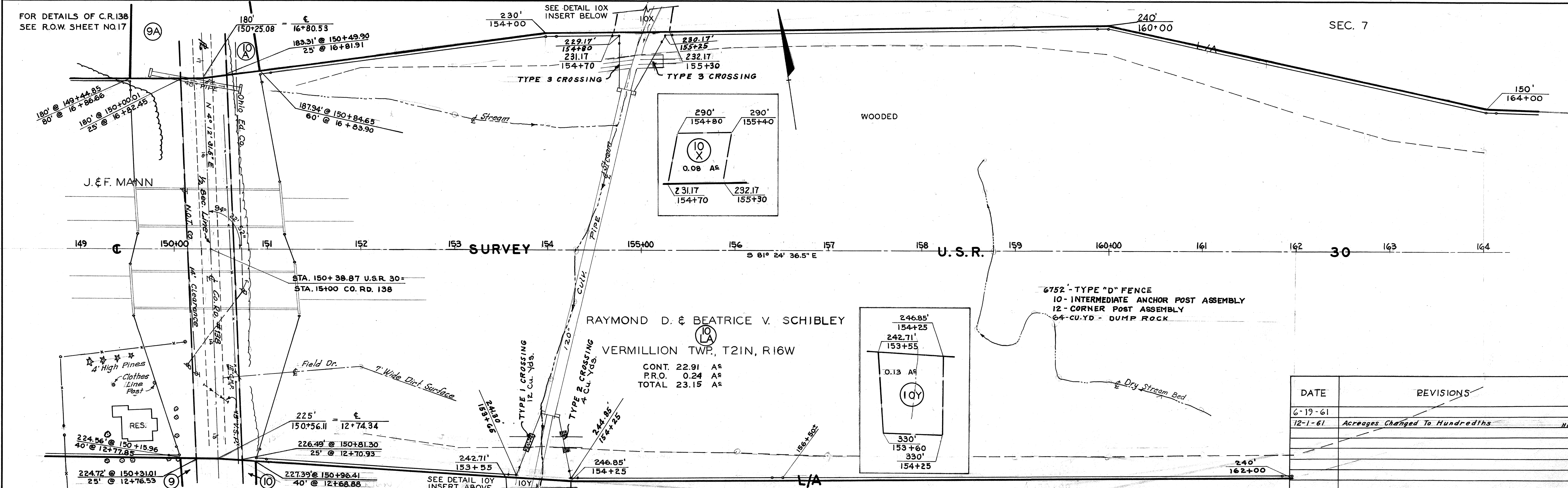
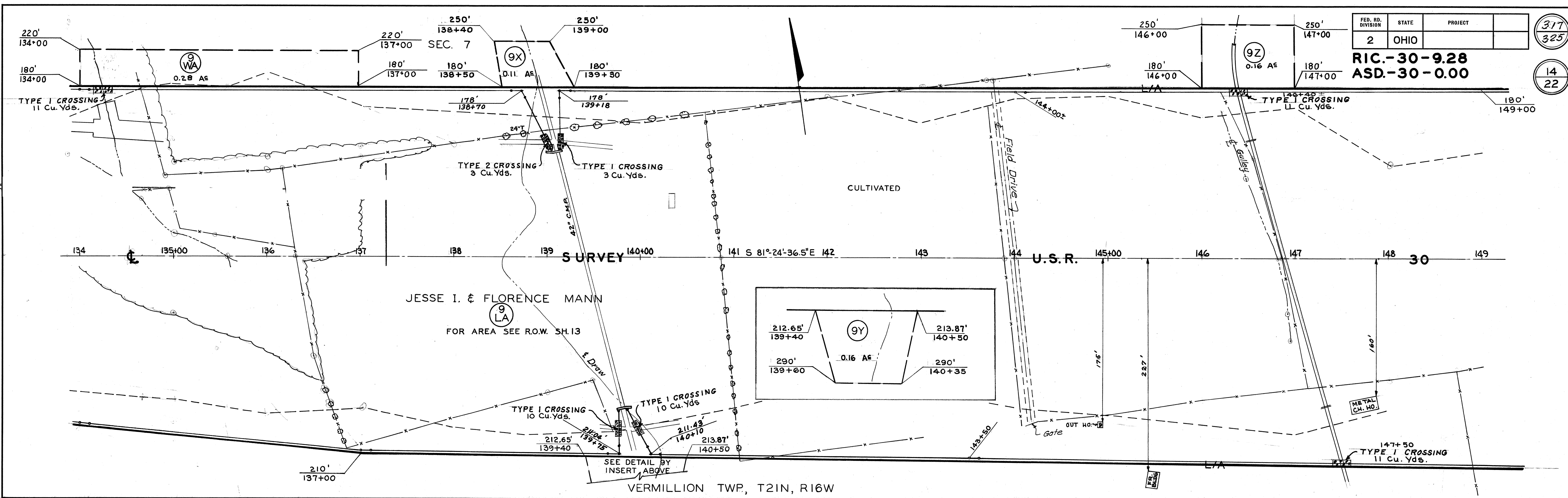
3/6
325
13
22

RIC-30-9.28
ASD-30-0.00



DATE	REVISIONS
6-19-61	
12-1-61	Acres Changed To Hundredths H.H.S.

5680' TYPE "D" FENCE
8 - INTERMEDIATE ANCHOR POST ASSEMBLY
4 - END POST ASSEMBLY
25 - CU. YDS. DUMP ROCK



RAYMOND D. & BEATRICE V. SCHIBLEY
VERMILLION TWP, T21N, R16W
CONT. 22.91 A^c
P.R.O. 0.24 A^c
TOTAL 23.15 A^c

6752 - TYPE "D" FENCE
10 - INTERMEDIATE ANCHOR POST ASSEMBLY
12 - CORNER POST ASSEMBLY
64 - CU. YD - DUMP ROCK

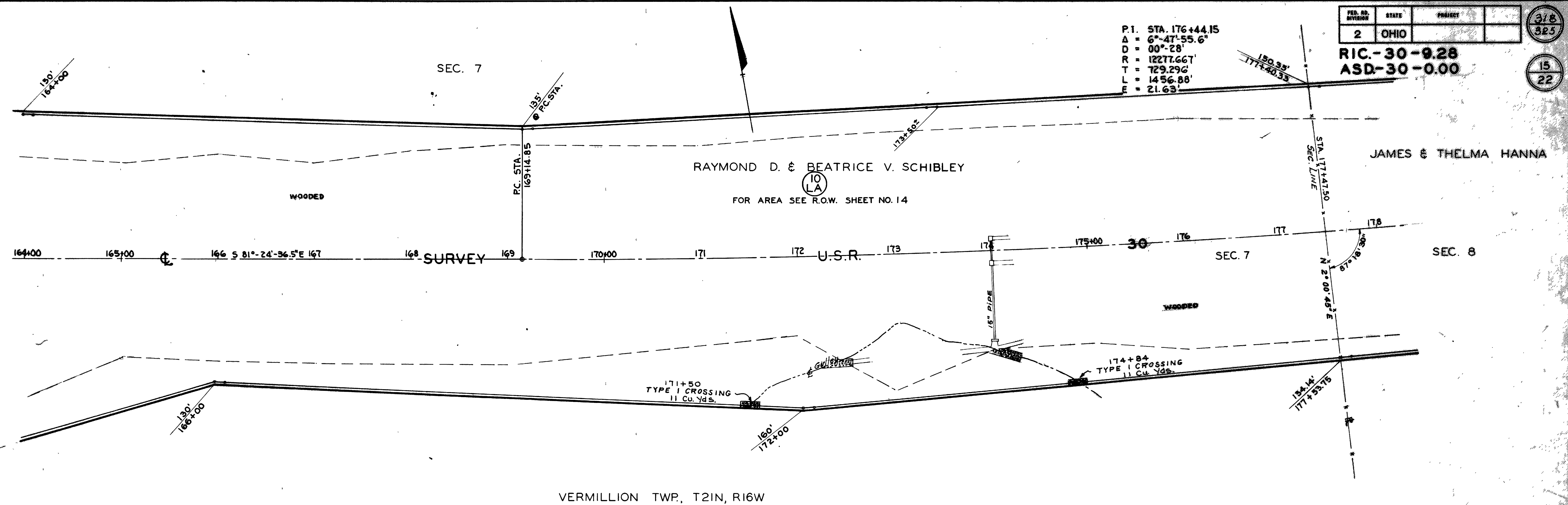
DATE	REVISIONS
6-19-61	
12-1-61	Acresages Changed To Hundredths

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

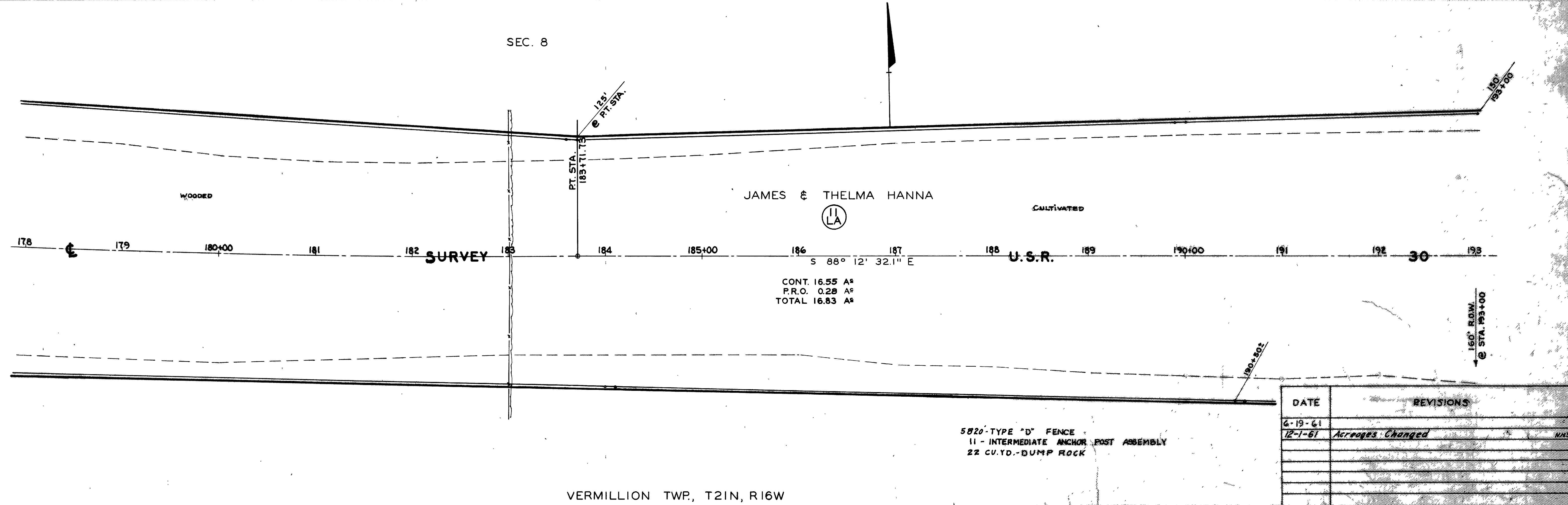
318
325
15
22

RIC-30-9.28
ASD-30-0.00

P.I. STA. 176+44.15
Δ = 6°-47'-55.6"
D = 00°-28'
R = 12277.667'
T = 729.296'
L = 1456.88'
E = 21.63'



VERMILLION TWP., T21N, R16W



VERMILLION TWP., T21N, R16W

CONT. 16.55 AF
P.R.O. 0.28 AF
TOTAL 16.83 AF

5820-TYPE "D" FENCE
11 - INTERMEDIATE ANCHOR POST ASSEMBLY
22 CU. YD. - DUMP ROCK

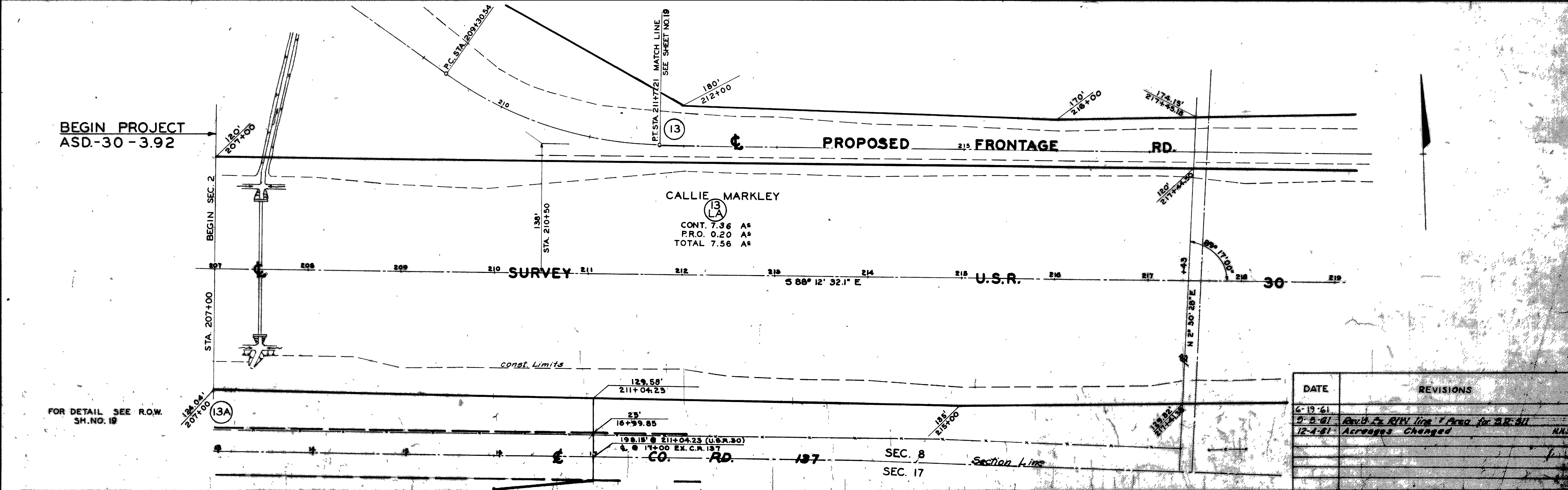
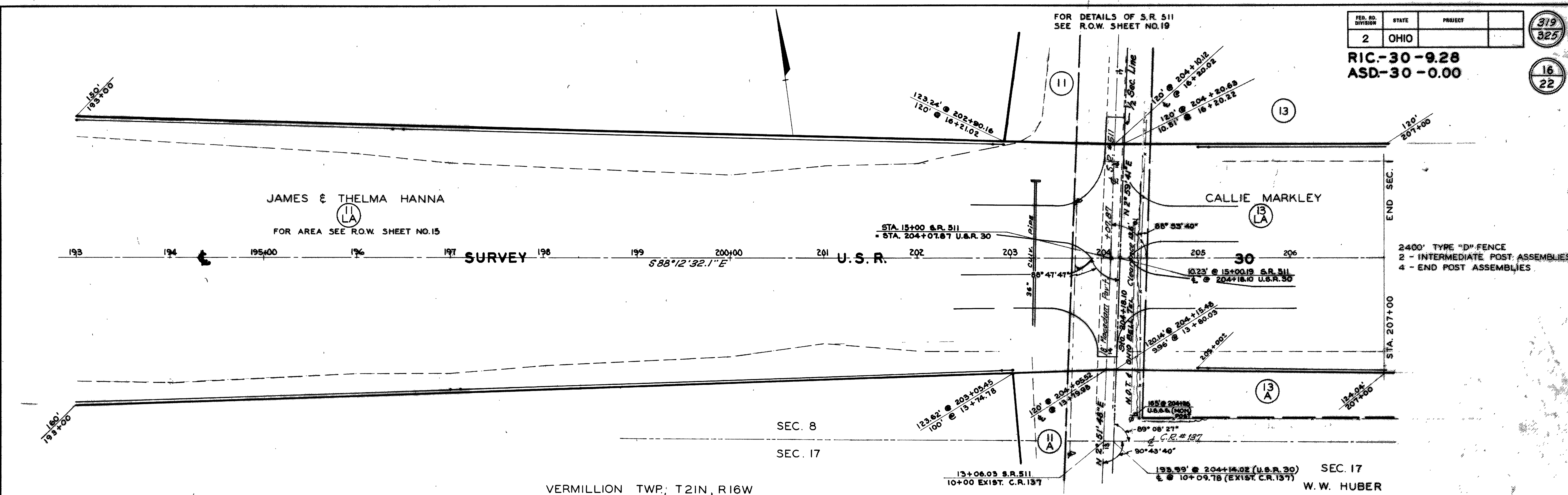
DATE	REVISIONS
6-19-61	
12-1-61	Acresages Changed

FOR DETAILS OF S.R. 511
SEE R.O.W. SHEET NO.19

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-30-9.28
ASD-30-0.00

319
325
16
22



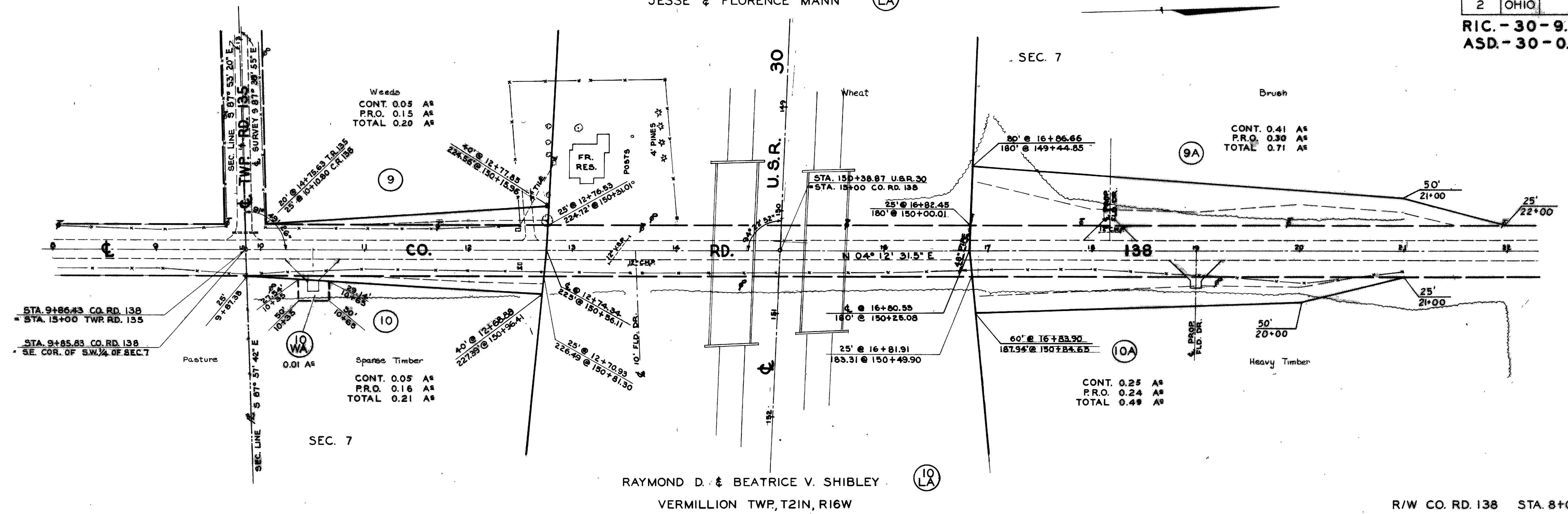
JESSE & FLORENCE MANN (9 LA)

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC - 30-9.28
ASD - 30-0.00

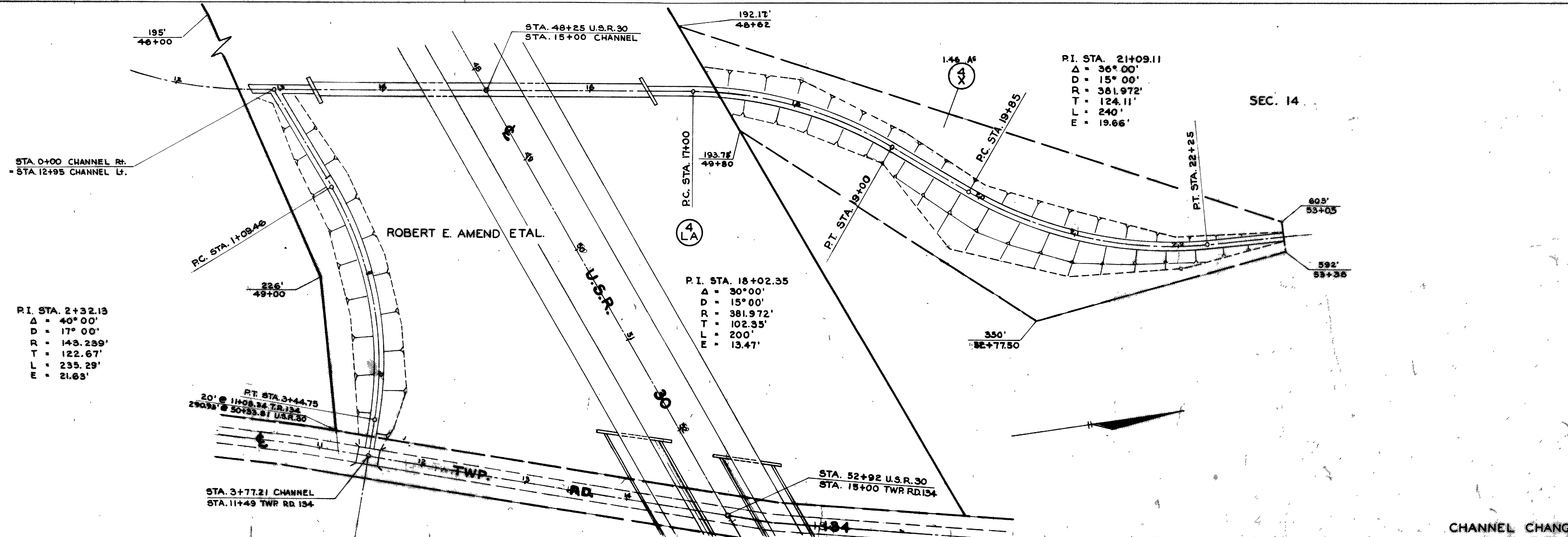
320
325

17
22



RAYMOND D. & BEATRICE V. SHIBLEY
VERMILLION TWP, T21N, R16W

R/W CO. RD. 138 STA. 8+00 TO STA. 22+00



P.I. STA. 2+32.13
Δ = 40° 00'
D = 17° 00'
R = 143.239'
T = 122.67'
L = 235.29'
E = 21.63'

P.I. STA. 18+02.35
Δ = 30° 00'
D = 15° 00'
R = 381.972'
T = 102.35'
L = 200'
E = 13.47'

P.I. STA. 21+09.11
Δ = 36° 00'
D = 15° 00'
R = 381.972'
T = 124.11'
L = 240'
E = 19.66'

DATE	REVISIONS
6-19-61	ACREAGES CHANGED TO HUNDRETHS
10-11-61	

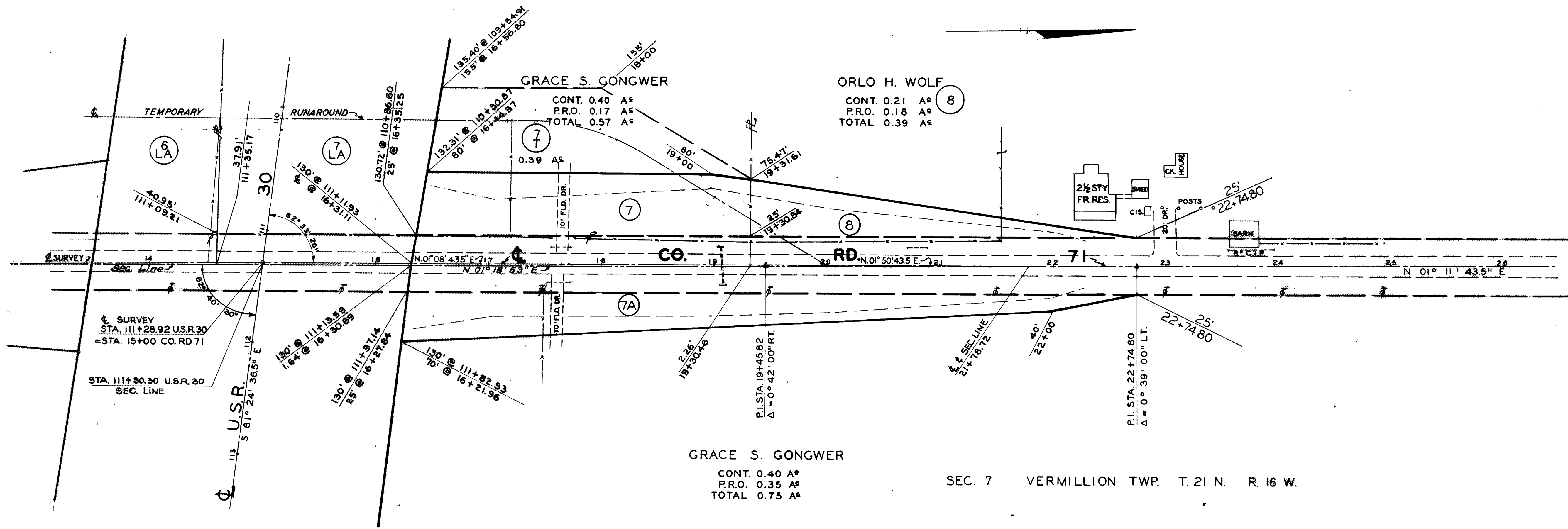
CHANNEL CHANGE STA. 48+25

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

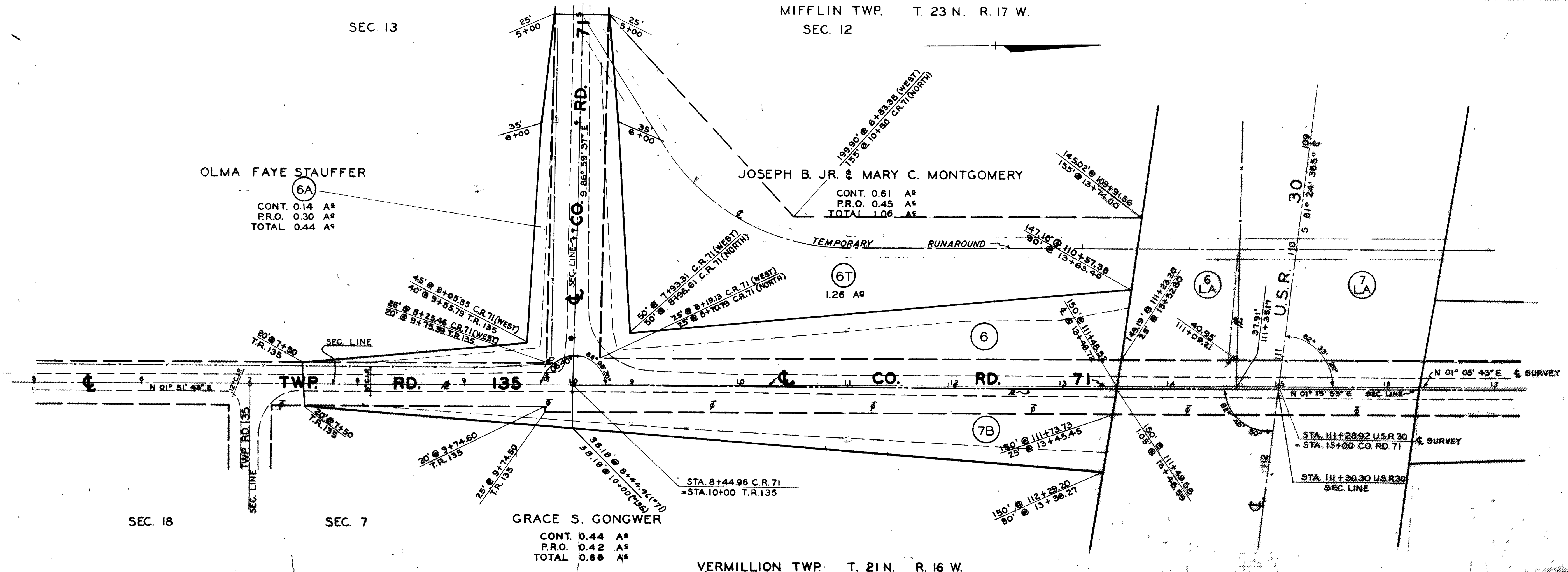
321
325

RIC - 30-9.28
ASD - 30-0.00

18
22



R/W CO. RD. 71 STA. 7+00 TO STA. 23+00



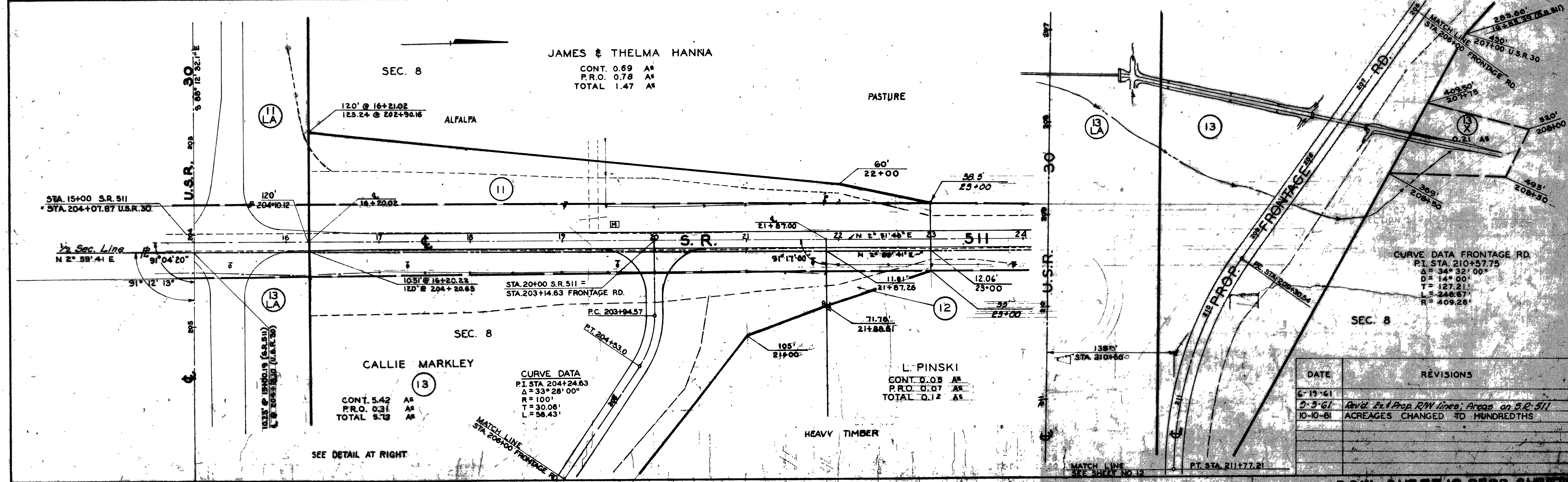
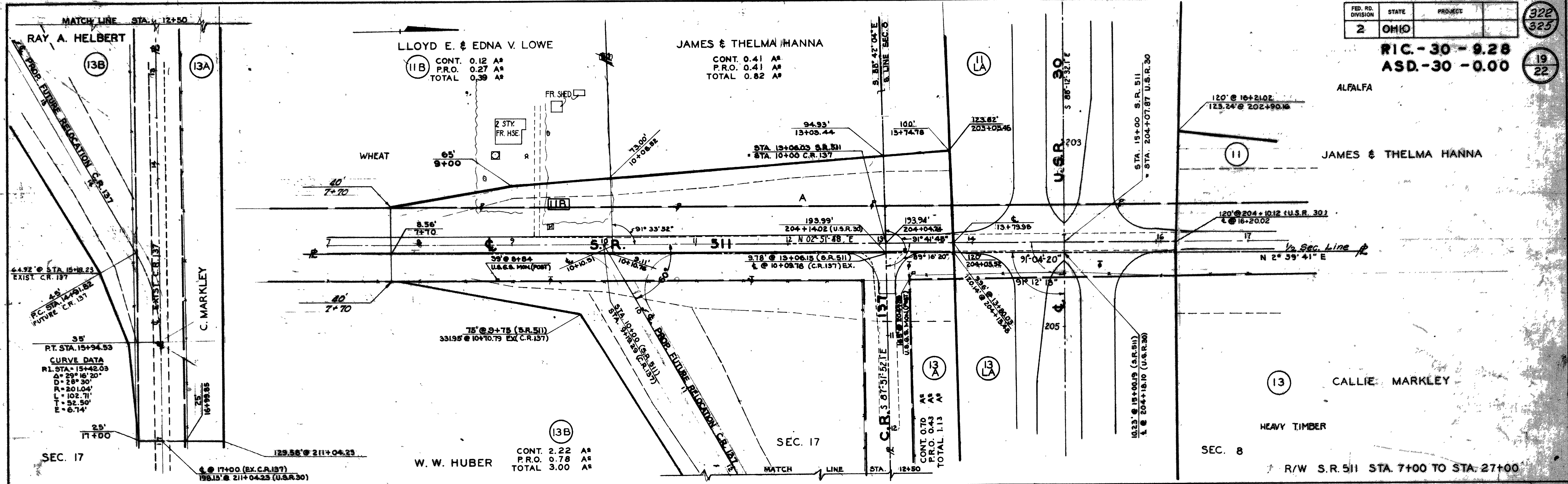
DATE	REVISIONS
6-19-61	
6-27-61	R/W lines changed on Parcel Nos. 7, 6 & 8
8-11-61	ACREAGES CHANGED TO HUNDRETHS
	M.H.S.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

322
325

RIC-30-9.28
ASD-30-0.00

19
22



DATE	REVISIONS
6-19-61	
2-3-61	Rev'd. Ex. Prop. R/W Lines; Areas on S.R. 511
10-10-61	ACREAGES CHANGED TO HUNDREDTHS

☉ SURVEY CURVE DATA
P.I. STA. 8+13.64
Δ = 13° 00' 00"
D = 6° 00' 00"
R = 954.93'
T = 108.80'
L = 216.67'
E = 6.18'

CONT. 1.51 A^s
P.R.O. 0.31 A^s
TOTAL 1.82 A^s
SAMUEL C. ANDRESS & JANET I. WINKLER

☉ SURVEY CURVE DATA
P.I. STA. 12+71.51
Δ = 20° 00' 00"
D = 8° 00' 00"
R = 716.20'
T = 126.28'
L = 250.00'
E = 11.05'

☉ SURVEY CURVE DATA
P.I. STA. 17+67.40
Δ = 13° 11' 00"
D = 6° 00' 00"
R = 954.93'
T = 110.85'
L = 219.72'
E = 6.35'

SAMUEL C. ANDRESS & JANET I. WINKLER

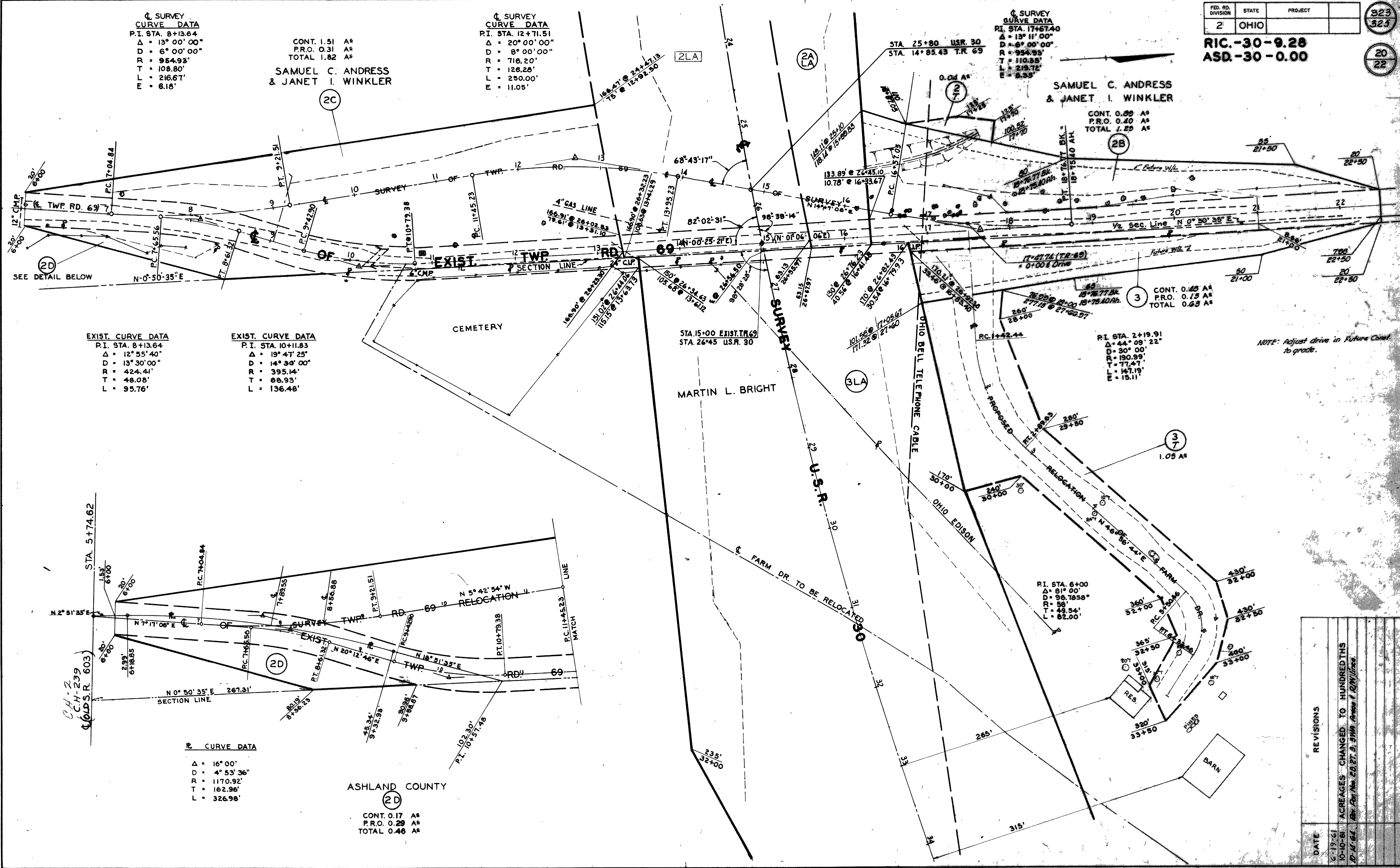
CONT. 0.89 A^s
P.R.O. 0.40 A^s
TOTAL 1.29 A^s

EXIST. CURVE DATA
P.I. STA. 8+13.64
Δ = 12° 55' 40"
D = 13° 30' 00"
R = 424.41'
T = 48.08'
L = 95.76'

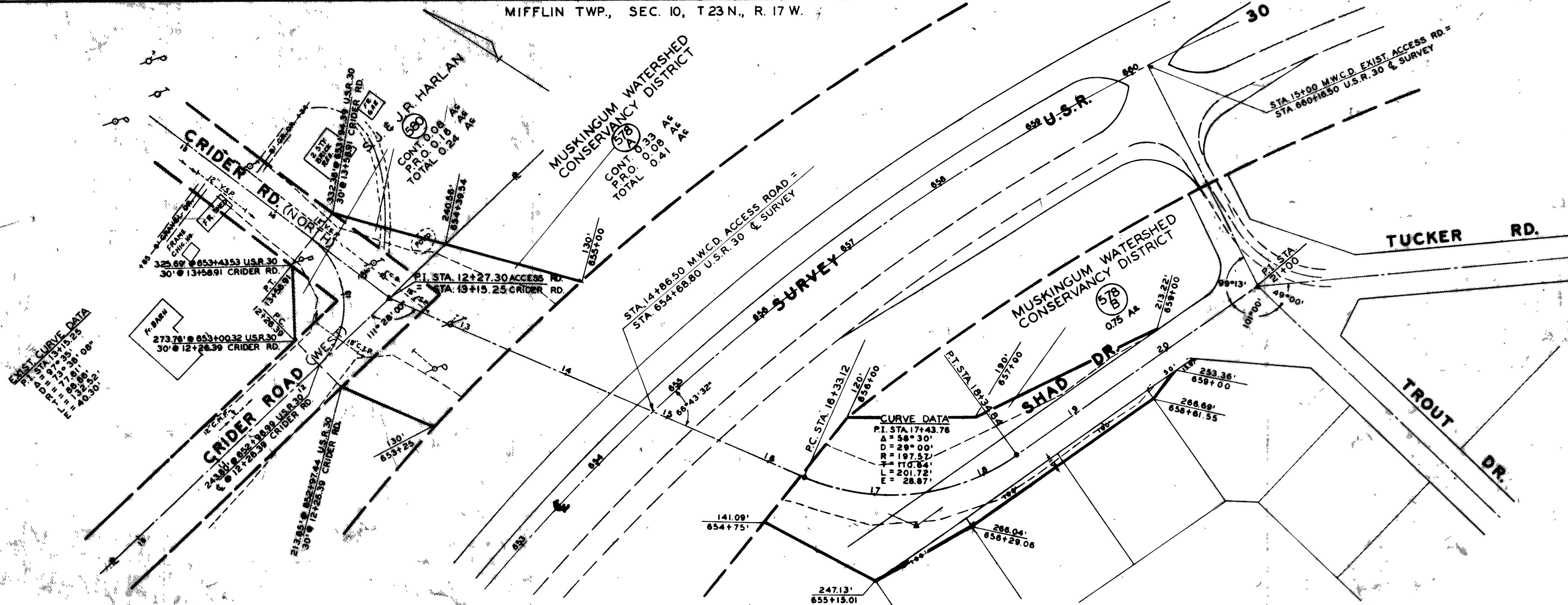
EXIST. CURVE DATA
P.I. STA. 10+11.83
Δ = 19° 47' 25"
D = 14° 30' 00"
R = 395.14'
T = 68.93'
L = 136.48'

CONT. 0.45 A^s
P.R.O. 0.13 A^s
TOTAL 0.63 A^s
P.I. STA. 2+19.91
Δ = 44° 09' 22"
D = 30° 00'
R = 190.99'
T = 77.47'
L = 147.19'
E = 15.11'

NOTE: Adjust drive in Future Const. to grade.

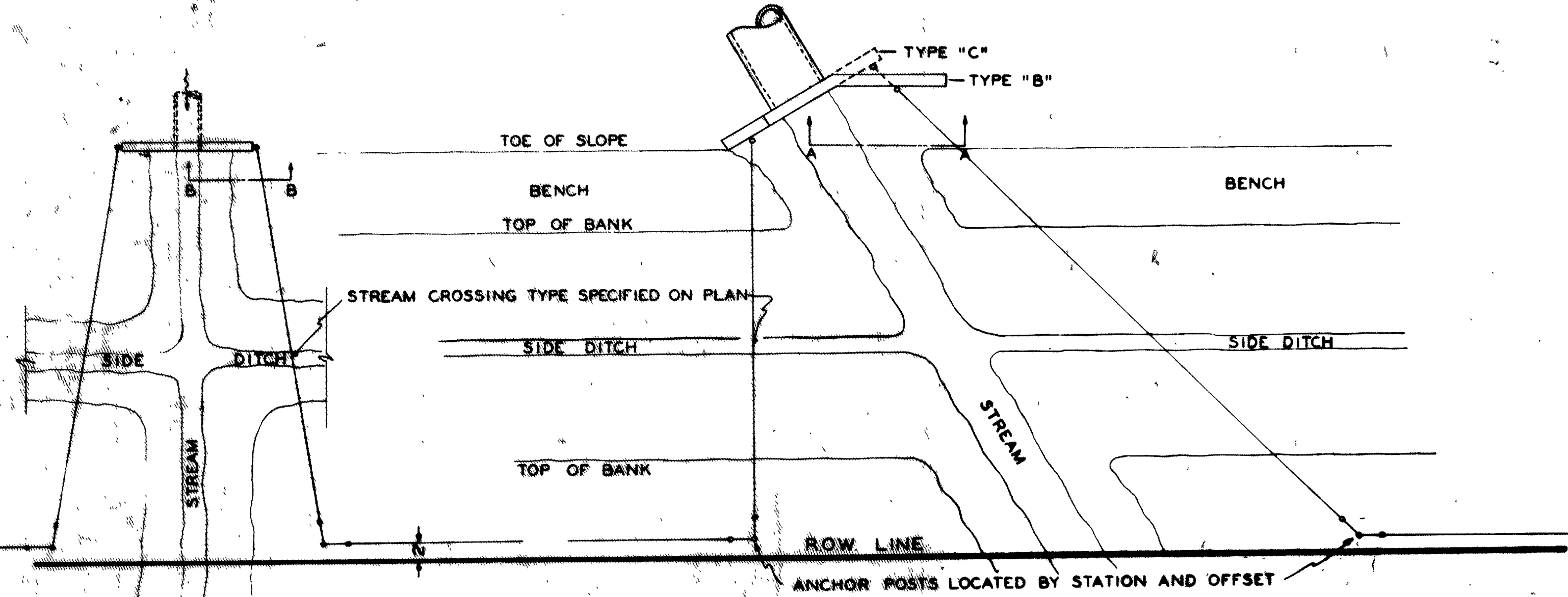


DATE	REVISIONS
6-19-61	
10-10-61	ACREAGES CHANGED TO HUNDRETHS
10-11-61	By: [Signature]



TYPE "E" & SP-53 HEADWALLS
PIPE CULVERTS 42" RISE OR OVER

TYPE "B" & TYPE "C" HEADWALLS
PIPE CULVERTS 42" RISE OR OVER

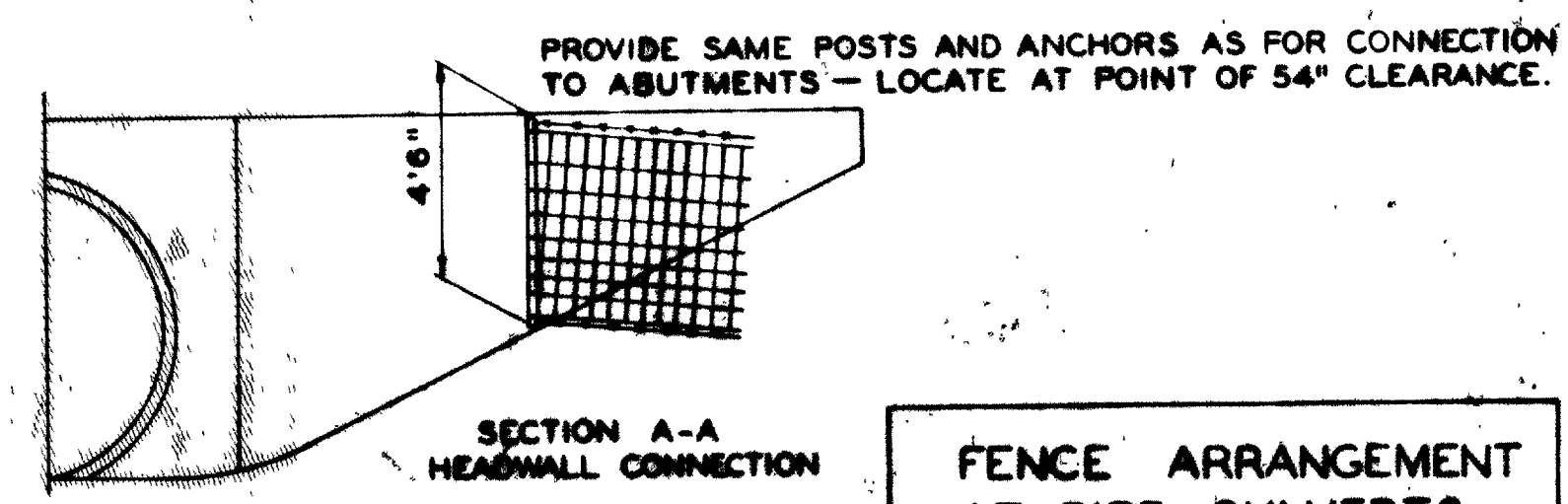
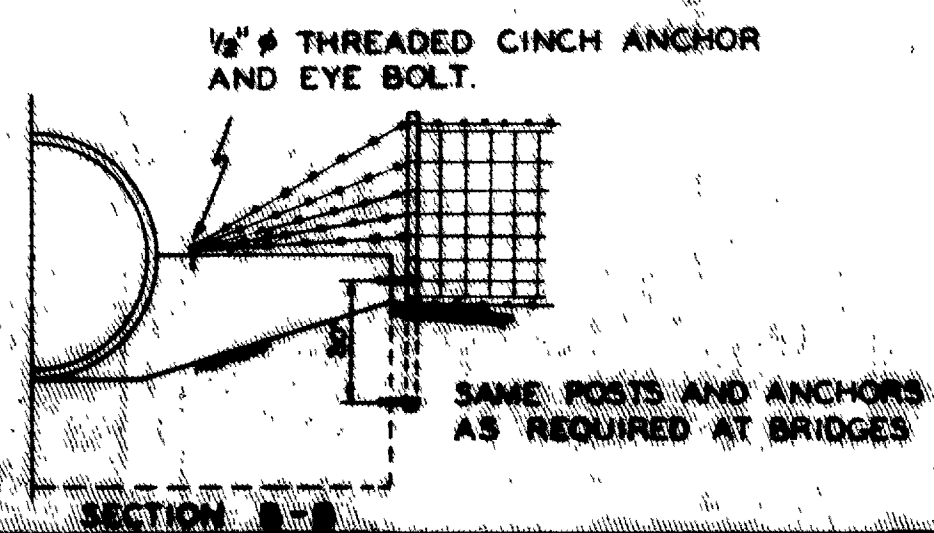


NOTE: TYPE "D" FENCE INCLUDING 258 CU. YDS. OF DUMP ROCK FOR FENCE STREAM CROSSINGS NOT TO BE BUILT UNDER THIS CONTRACT AND SHALL BE WITHHELD FOR FUTURE CONSTRUCTION.

RIGHT OF WAY FENCE		SUMMARY				
STATION	LIN. FT.	TYPE	END POST ASSEMBLY	CORNER PO ASSEMBLY	INTERMEDIATE ANCHOR PO ASSEMBLY	SHEET
607+00 TO 637+00	224	A	1		1	2
637+00 " 665+00	134.0	A			3	3
665+00 " 688+00	320	A			1	4
688+00 " 3+97.31	431	A	1		1	5
3+97.31 " 15+00	1340	D	2		4	5
15+00 " 44+00	5580	D	4	2	9	6
44+00 " 74+00	6654	D		8	8	7
74+00 " 104+00	6105	D		4	9	8
104+00 " 134+00	5680	D	4		8	9
134+00 " 164+00	6752	D		12	10	10
164+00 " 193+00	5820	D			11	11
193+00 " 207+00	2400	D	4		2	12
TOTAL	2315	A	2		6	
TOTAL	40,331	D	14	26	51	

NOTE: 258 CU. YDS. DUMP ROCK FOR FENCE STREAM CROSSINGS SEE LOCATION PLAT SHEET NO. 4 FOR CROSSING DETAILS

END POST ASSEMBLY
 INTERMEDIATE ANCHOR POST ASSEMBLY
 CORNER POST ASSEMBLY



DATE	REVISIONS
6-19-61	
10-8-61	AGREAGES CHANGED TO HUNDREDTHS

GENERAL INFORMATION

INTRODUCTION

The project is a total length of 5.2 miles, beginning 0.5 mile east of Millin and extending eastward to 2.0 miles east of Millin. The first 1.2 miles consists of the addition of two lanes north of the existing pavement for westbound traffic. The final 4.0 miles consists of major realignment, generally paralleling existing USR 30 approximately 1.0 mile to the north.

The proposed grade indicates cuts, ranging from 0 to 46 feet in depth, and fill embankment, as much as 32 feet in height.

GEOLOGY OF THE PROJECT

The alignment traverses the glaciated, moderately dissected Allegheny Plateau, in a region where drifts range from 1 to 31 feet in thickness, and valley fill in the immediate area of the Charles Hill Reservoir reportedly ranges from 21 to at least 33 feet in thickness. Local bedrock consists of shales and sandstones, of Mississippian age.

EXPLANATION

Exploratory borings were made by means of truck mounted mechanical earth auger, between September 10 and 20, 1960, and by rotary-type drill rig, between October 5 and 10, 1960. These are supplemented by auger borings made for the RIC-30-5.70 soil profile report, between stations 651+00 and 657+50, and between stations 671+75 and 681+00.

INVESTIGATIONAL DISCLOSURES

Borings disclose the materials immediately below grade to consist predominantly of silts, in the A-4 classification, generally considered frost susceptible within 3 feet below grade, as well as shale and sandstone bedrock. Wet silts and silty clays, ranging in thickness from 2 to 10 feet, were encountered from 50 to 100 feet left of centerline between stations 653+00 and 654+15, and at centerline at station 70+50 (1 foot thick). It is expected bedrock will be encountered in the excavations at the following locations:

Stations 6+00 to 17+00 - shale with minor amounts of sandstone at or very near grade and both ditches in the through cut

Stations 100+00 to 129+00 - sandstone in the through cut at grade, ditches, and back slopes.

Stations 133+00 to 133+00 - sandstone, at or close to, grade and both ditches, in the through cut.

In the embankment foundation areas, materials consist predominantly of silts, silt clays, and elastic clays in the A-4, A-6, and A-7-5 classifications, respectively. Very compressible, soft, wet materials occur in the following approximate areas: stations 657+00 to 663+00, stations 655+00 to 657+00, and stations 661+00 to 664+50. Wet gravels, sands, and slightly compressible silts and silt clay occur between stations 137+00 and 139+00, and stations 150+00 and 153+00.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 108 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel and/or stone fragments	A-1-a(0)	A-1-a	70	9	6	12	MP	MP	MP	17	22
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	60	11	11	12	MP	MP	MP	14	30
Coarse and fine sand	---	A-3a	11	14	52	15	MP	MP	MP	14	3
Gravel and/or stone fragments with sand and silt	A-2-1(0)	A-2-1	53	8	11	19	9	26	1	14	34
Gravel and/or stone fragments with sand, silt and clay	A-2-6(0)	A-2-6	51	14	8	13	11	27	12	10	9
Sandy silt	A-4(1)	A-4a	24	6	14	36	20	24	5	15	158
Silt	A-4(6)	A-4b	3	2	10	59	26	27	5	25	30
Silt and clay	A-6(8)	A-6a	19	4	9	30	30	30	12	16	80
Silty clay	A-6(11)	A-6b	6	2	5	17	10	37	17	25	9
Elastic clay with organic material, unless otherwise noted	A-7-5(20)	A-7-5	2	3	9	15	10	76	34	51	8
Clay	A-7-6(16)	A-7-6	1	11	4	19	13	50	24	114	5
Weathered shale											4
Sandstone											16

VISUAL CLASSIFICATION	
Shale	Peat
Various other materials	Fibrous Peat
Bouldery zone	

Auger boring - plan view. Auger boring from RIC-30-5.70(Oct 56)

Core boring - plan view. Drive sample-core boring - plan view. Press sample boring from RIC-30-570(Oct 56) B Indicates broken rock interval.

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

⊖ Indicates a non-plastic material with high water content.

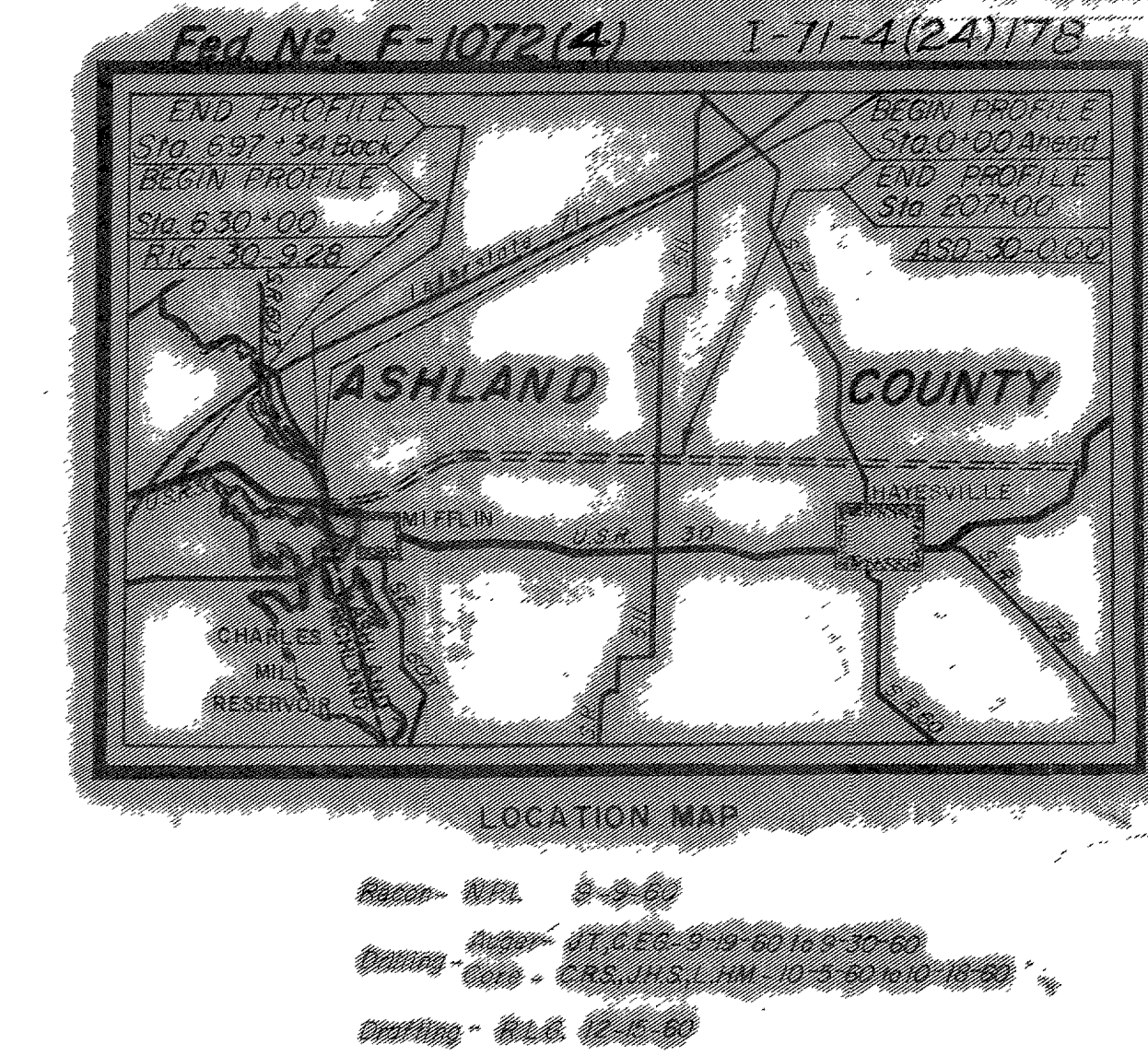
—W Free water.

NOTE: Small vertical figures beside borings indicate loss on ignition, e.g., 15%.

NOTE: Figures beside borings indicate water content in percent, e.g., 75.

SOIL PROFILE
 RICHLAND-ASHLAND COS.
 RIC-ASD-30-(9.28)(0.00)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 O. S. U. CAMPUS, COLUMBUS, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.



SUMMARY OF SOIL TEST DATA

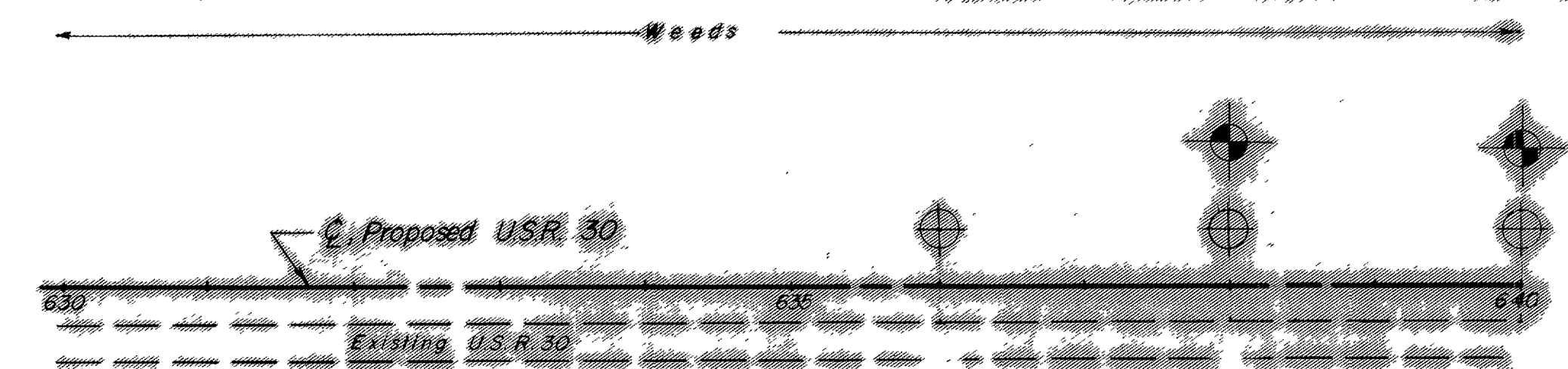
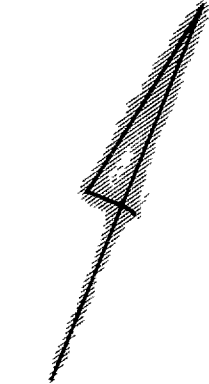
NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic. *Denotes sample taken at or near grade.

STATION & OFFSET	DEPTH FROM-TO	RICHLAND COUNTY										L.L.	P.I.	W.C.	CLASS.	
		ACC.	C.S.	F.S.	SILT	CLAY	SHTL									
626+00 10'LT	0.0-5.0	7	3	22	31	27	11	13	A-6a							
	5.0-10.0	7	5	13	16	23	11	15	A-4a							
	10.0-13.0	10	7	13	14	21	11	15	A-4a							
	13.0-15.0	12	7	12	14	16	11	15	A-4a							
630+00 10'LT	0.0-3.0	0	2	17	13	23	27	10	A-7-5							
	3.0-6.0	0	2	15	57	26	7	10	A-6b							
	6.0-11.0	0	1	1	56	43	36	16	A-6a							
	11.0-16.0	0	0	0	56	40	16	31	A-6a							
640+00 10'LT	0.0-5.0	0	1	9	57	33	11	12	A-7-5							
	5.0-7.0	0	0	1	61	35	11	12	A-6b							
	7.0-12.0	0	0	1	46	31	11	13	A-6a							
	12.0-16.0	0	0	0	71	23	24	1	A-6a							
646+00 10'LT	0.0-4.0	0	1	1	57	33	11	12	A-7-5							
	4.0-6.0	0	0	1	16	30	30	16	A-6a							
	6.0-11.0	13	1	10	30	23	12	12	A-6a							
	11.0-15.0	12	1	0	30	37	31	12	A-6a							
648+00 10'LT	0.0-5.0	0	16	37	28	10	11	10	A-6a							
	5.0-10.0	31	23	18	18	18	11	12	A-6a							
	10.0-17.0	19	18	18	18	18	11	12	A-6a							
	17.0-20.0	0	0	0	0	0	0	0	A-6a							
655+00 10'LT	0.0-4.0	0	0	0	0	0	0	0	A-6a							
	4.0-6.0	0	0	0	0	0	0	0	A-6a							
	6.0-10.0	0	0	0	0	0	0	0	A-6a							
	10.0-17.0	0	0	0	0	0	0	0	A-6a							
656+00 10'LT	0.0-3.0	0	0	2	28	23	11	11	A-6a							
	3.0-6.0	0	10	12	26	23	11	11	A-6a							
	6.0-11.0	2	6	11	10	10	11	11	A-6a							
	11.0-16.0	2	6	11	10	10	11	11	A-6a							
667+00 10'LT	0.0-4.0	5	8	14	21	20	11	11	A-6a							
	4.0-7.0	2	2	7	21	20	11	11	A-6a							
	7.0-13.0	6	6	11	20	20	11	11	A-6a							
	13.0-17.0	11	1	11	16	16	11	11	A-6a							
667+00 10'LT	0.0-4.0	13	7	11	17	15	11	11	A-6a							
	4.0-6.0	15	0	11	17	15	11	11	A-6a							
	6.0-11.0	10	15	21	15	27	9	21	A-6a							
	11.0-15.0	10	15	21	15	27	9	21	A-6a							
674+00 10'LT	0.0-4.0	13	7	11	17	15	11	11	A-6a							
	4.0-6.0	15	0	11	17	15	11	11	A-6a							
	6.0-11.0	10	15	21	15	27	9	21	A-6a							
	11.0-15.0	10	15	21	15	27	9	21	A-6a							
687+00 10'LT	0.0-4.0	13	7	11	17	15	11	11	A-6a							
	4.0-6.0	15	0	11	17	15	11	11	A-6a							
	6.0-11.0	10	15	21	15	27	9	21	A-6a							
	11.0-15.0	10	15	21	15	27	9	21	A-6a							

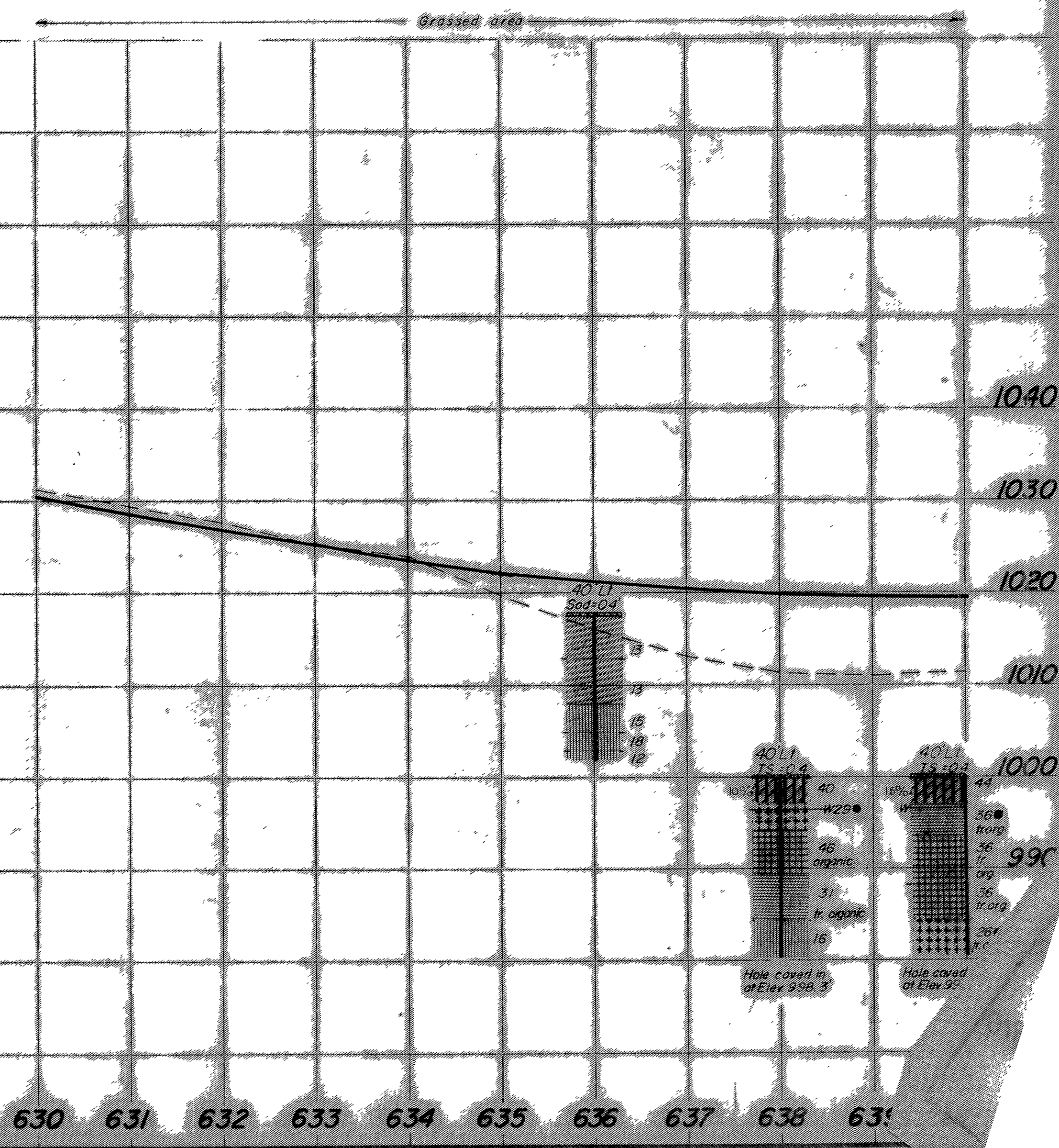
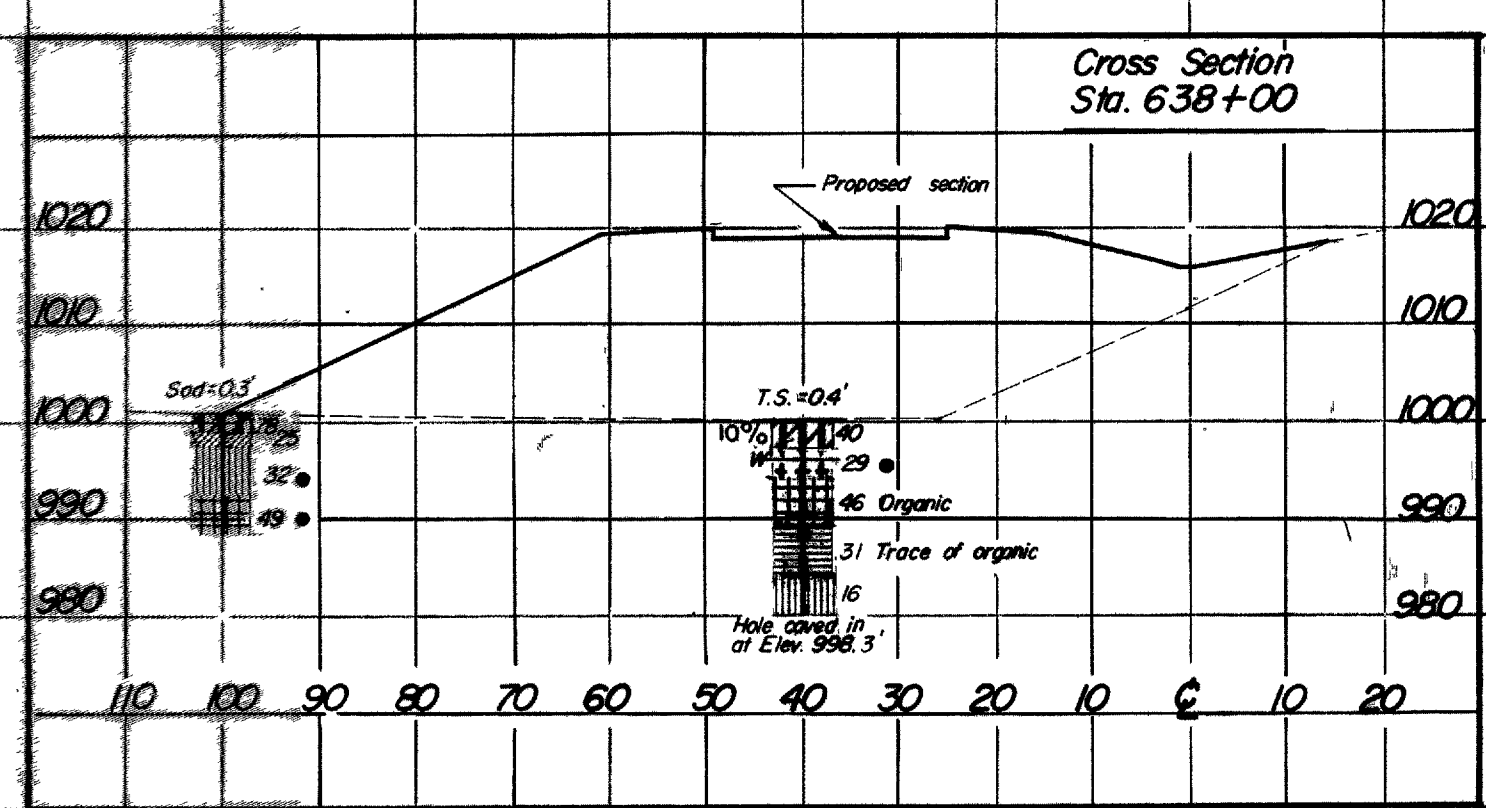
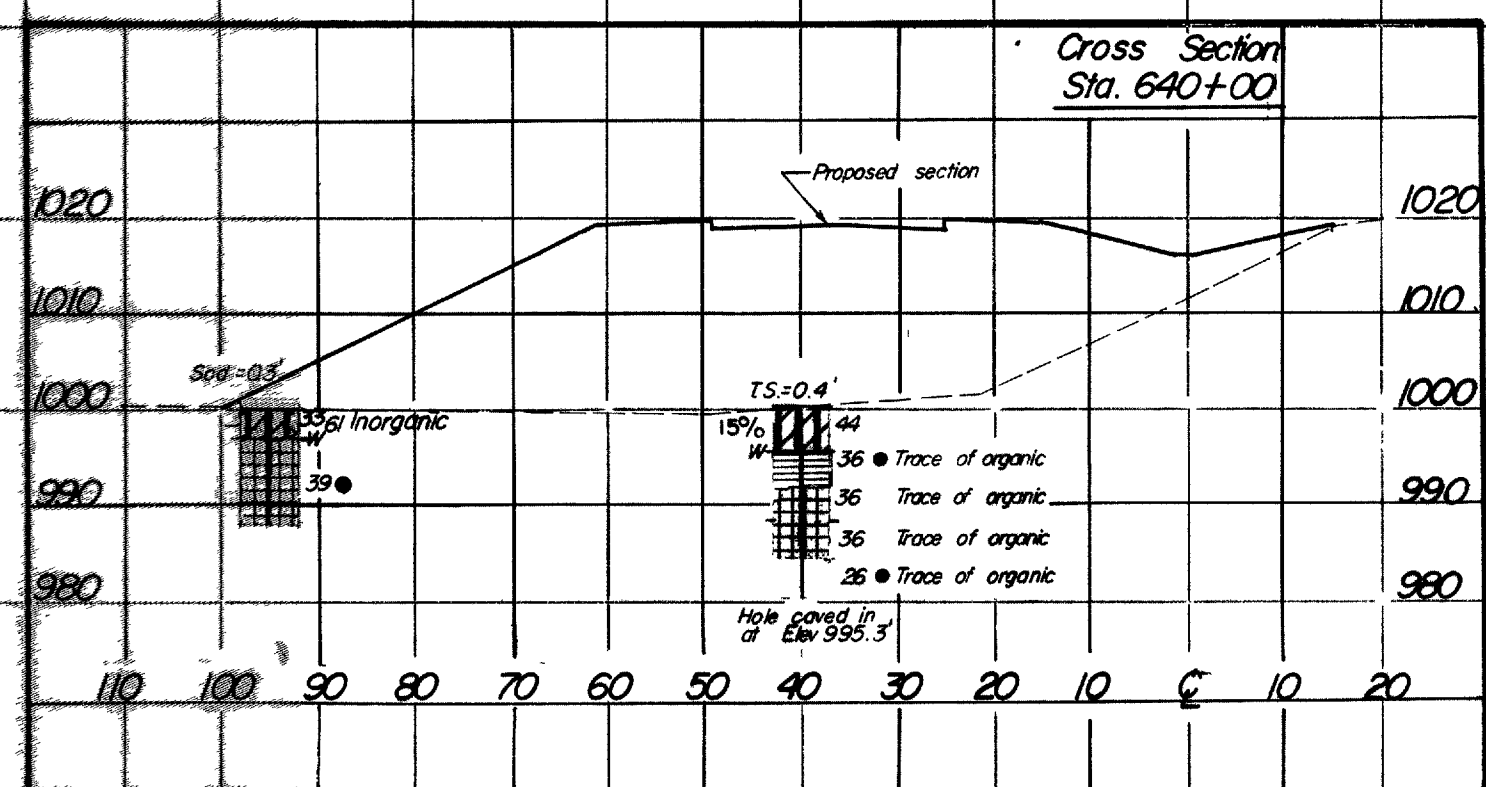
STATION & OFFSET	DEPTH FROM-TO	RICHLAND COUNTY (Cont'd)										L.L.	P.I.	W.C.	CLASS.	
		ACC.	C.S.	F.S.	SILT	CLAY	SHTL									
690+00 10'LT	0.0-4.0	0	1	5	56	38	17	20	A-6a							
	4.0-5.0	10	10	17	15	27	10	16	A-6a							
	5.0-6.0	32	13	30	17	0	0	0	A-6a							
	6.0-10.0	0	1	13	30	22	11	11	A-6a							
691+00 10'LT	0.0-4.0	10	0	5	32	22	11	11	A-6a							
	4.0-6.0	0	0	3	55	22	11	11	A-6a							
	6.0-10.0	0	7	8	10	11	11	11	A-6a							
	10.0-15.0	0	3	7	55	30	13	21	A-6a							
694+00 10'LT	0.0-5.0	57	35	4	11	11	11	11	A-6a							
	5.0-7.0	11	1	6	51	11	11	11	A-6a							
	7.0-10.0	9	2	13	30	19	11	11	A-6a							
	10.0-15.0	33	5	11	31	28	11	11	A-6a							
695+75 10'LT	0.0-3.0	24	14	21	19	31	12	12	A-6a							
	3.0-7.0	0	0	12	58	31	11	11	A-6a							
	7.0-12.0	0	0	9	58	33	11	11	A-6a							
	12.0-17.0	22	2	38	25	13	11	11	A-6a							
0+00 10'LT	0.0-3.0	0	0	18	55	23	11	11	A-6a							
	3.0-6.0	0	0	31	10	10	11	11	A-6a							
	6.0-11.0	0	0	0	57	10	11	11	A-6a							
	11.0-16.0	0	0	0	47	11	11	11	A-6a							
2+65 10'LT	0.0-5.0	7	3	23	46	16	11	11	A-6a							
	5.0-10.0	66	14	5	10	10	11	11	A-6a							
	10.0-15.0	17	3	3	30	10	11	11	A-6a							
	15.0-20.0	50	3	3	21	10	11	11	A-6a							
3+00 10'LT	0.0-4.0	0	2	16	67	15	11									

SUMMARY OF SOIL TEST DATA (cont'd)
 NOTE: NP shown in Liquid Limit and Plastic Index columns indicate that the material is non plastic
 * Denotes sample taken at or near grade

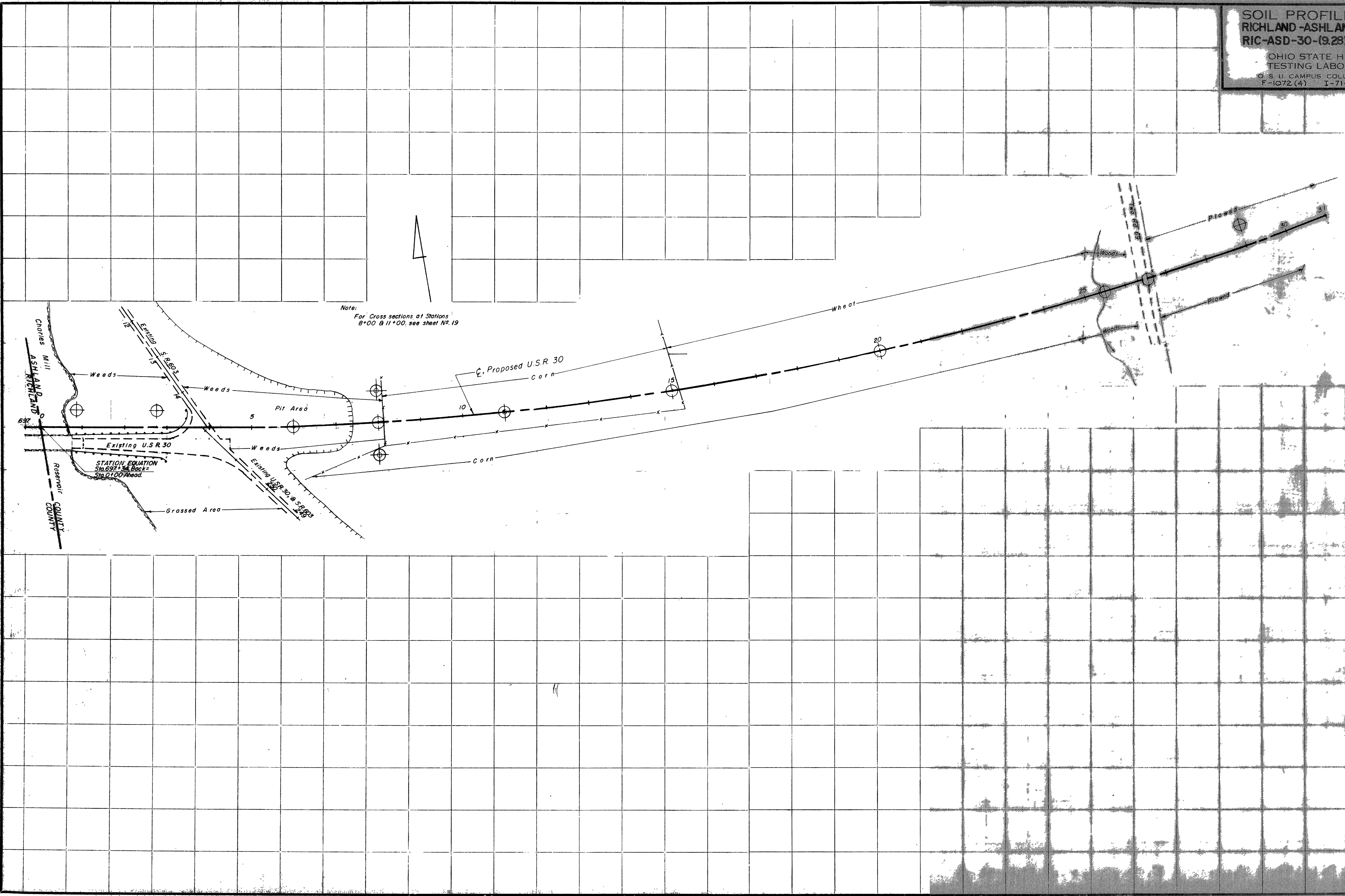
Station & Offset	Depth From-To	% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class
36+00	75'RT	0.4-3.0	35	8	17	26	14	NP	9	A-4a
		3.0-6.0	47	12	15	17	9	NP	8	A-2-4
		6.0-11.0	0	2	38	45	15	NP	18	A-4a
		11.0-15.0	43	10	14	21	12	19	4	A-2-4
41+00	CL	0.4-5.0	3	4	9	53	31	28	7	A-4b
		5.0-10.0	7	3	23	48	19	22	3	A-4a
		10.0-12.0	40	4	10	26	20	29	9	A-4a
44+00	CL	0.4-5.0	5	3	15	44	33	26	11	A-6a
		5.0-10.0	15	2	11	42	30	25	11	A-6a
		10.0-15.0	71	5	14	-10	NP	NP	9	A-1-a
47+00	CL	0.4-3.0	68	2	9	13	8	25	7	A-2-4
49+00	CL	0.4-2.0	60	6	12	16	6	NP	NP	A-1-b
		2.0-4.0	71	7	9	8	5	NP	NP	A-1-a
51+00	CL	0.4-5.0	33	3	12	29	23	27	11	A-6a
		5.0-10.0	11	6	14	48	21	25	6	A-4a
		10.0-12.0	40	6	13	30	11	NP	NP	A-4a
52+00	75'LT	0.4-3.0	52	7	14	19	8	NP	NP	A-2-4
		3.0-6.0	50	7	16	15	12	NP	NP	A-2-4
		6.0-9.0	47	2	4	27	20	11	11	A-6a
		9.0-12.0	34	4	5	36	21	30	11	A-6a
53+10	CL	0.6-2.0	18	6	15	42	19	27	8	A-4e
61+60	CL	0.8-5.0	9	7	15	42	27	27	11	A-6a
		5.0-10.0	30	6	11	37	16	27	6	A-4a
		10.0-13.0	21	8	20	33	18	20	4	A-4a
		13.0-15.0	25	6	12	34	23	21	8	A-4a
		15.0-18.0	16	12	15	25	32	33	11	A-6a
64+00	CL	0.8-4.0	20	4	14	34	28	24	8	A-4a
		4.0-9.0	18	7	13	36	26	21	5	A-4a
		9.0-17.0	19	4	13	45	19	22	5	A-4a
		13.0-17.0	19	4	13	45	19	22	5	A-4a
		17.0-18.0	69	15	7	59	NP	NP	10	A-1-a
		18.0-23.0	0	4	7	59	NP	NP	12	A-4b
		21.0-22.0	0	3	20	65	31	NP	NP	A-4b
		22.0-23.0	27	5	13	39	16	NP	NP	A-4a
68+00	CL	0.8-4.0	10	8	14	35	33	29	11	A-6a
		4.0-8.0	18	8	13	38	23	25	9	A-4a
		8.0-13.0	15	7	12	42	24	23	9	A-4a
		13.0-15.0	22	7	13	39	19	22	7	A-4a
		15.0-20.0	31	7	13	32	17	NP	NP	A-4a
72+00	CL	0.8-5.0	34	8	12	29	17	25	8	A-4a
		5.0-11.0	24	12	16	27	21	22	7	A-4a
		11.0-12.0	12	7	14	45	22	20	5	A-4a
76+00	CL	0.8-5.0	12	8	12	45	23	23	7	A-4a
		5.0-10.0	12	8	18	38	24	24	6	A-4a
		10.0-12.0	18	10	15	39	18	19	4	A-4a
78+50	CL	0.8-5.0	0	3	6	57	34	33	13	A-6a
		5.0-6.0	10	10	20	37	23	23	7	A-4a
		6.0-12.0	18	9	15	38	20	20	2	A-4a
82+00	CL	0.8-5.0	28	4	10	32	26	28	7	A-4a
		5.0-10.0	14	7	13	41	25	27	5	A-4a
		10.0-15.0	19	9	14	36	22	NP	NP	A-4a
		15.0-18.0	23	7	11	41	18	NP	NP	A-4a
		18.0-19.0	71	5	5	14	5	NP	NP	A-1-b
83+50	CL	0.8-5.0	27	5	11	35	22	25	7	A-4a
		5.0-10.0	24	6	13	39	18	25	7	A-4a
		10.0-13.0	25	8	13	33	21	24	6	A-4a
		13.0-16.0	13	10	14	35	28	22	4	A-4a
88+50	CL	0.3-4.0	52	8	11	16	13	26	8	A-4a
		4.0-9.0	48	5	9	22	16	28	8	A-4a
		9.0-12.0	34	4	10	32	28	26	8	A-4a
		12.0-15.0	48	3	8	28	13	23	6	A-4a
91+00	CL	0.8-5.0	26	4	11	36	23	26	8	A-4a
		5.0-10.0	38	5	9	31	17	23	7	A-4a
		10.0-14.0	40	4	7	30	19	24	7	A-4a
91+30	100'RT	0.8-5.0	30	4	10	33	23	26	5	A-4a
		5.0-10.0	40	4	10	29	15	23	4	A-4a
		10.0-13.0	15	13	13	41	21	26	8	A-4a
		15.0-19.0	31	9	9	36	18	24	8	A-4a
		19.0-24.0	18	5	12	43	22	NP	NP	A-4a
96+00	CL	0.8-5.0	28	3	13	29	27	26	11	A-6a
		5.0-11.0	25	11	17	37	22	24	7	A-4a
		11.0-17.0	21	9	9	36	31	25	11	A-6a
		17.0-18.0	71	8	8	5	NP	NP	17	A-1-a
		18.0-20.0	42	5	8	29	16	20	6	A-4a
96+00	50'RT	0.6-5.0	31	4	10	33	22	22	4	A-4a
		5.0-10.0	23	4	10	41	22	25	11	A-6a
		10.0-17.0	30	5	10	33	22	25	11	A-6a
		17.0-23.0	27	4	10	39	20	21	6	A-4a
		23.0-28.0	32	5	10	34	19	21	5	A-4a
99+00	CL	0.3-6.0	25	5	11	36	23	25	6	A-4a
		6.0-9.0	26	9	17	34	14	NP	NP	A-4a
		9.0-13.0	42	4	11	29	14	NP	NP	A-4a
		13.0-18.0	0	9	15	43	33	23	6	A-4a
		18.0-23.0	30	4	11	34	21	23	7	A-4a
103+00	CL	0.8-5.0	31	4	10	34	21	26	8	A-4a
		5.0-10.0	27	4	10	37	22	26	7	A-4a
		10.0-14.0	34	5	12	29	20	25	5	A-4a
106+00	CL	0.6-5.0	28	3	10	34	25	29	11	A-6a
		5.0-10.0	26	6	10	35	23	28	11	A-6a
109+50	CL	0.5-5.0	22	2	9	46	21	30	11	A-6a
		5.0-10.0	27	4	10	38	21	24	5	A-4a
		10.0-13.0	24	6	13	37	20	NP	NP	A-4a
		13.0-18.0	Brown Broken Sandstone							Visual
111+40	CL	0.5-3.0	27	3	12	37	21	24	11	A-6a
		3.0-10.0	Brown Broken Sandstone							Visual
115+00	CL	0.8-5.0	40	3	11	29	17	24	4	A-4a
		5.0-10.0	Brown Broken Sandstone							Visual
		10.0-15.0	Brown Broken Sandstone							Visual
		15.0-17.0	Brown Broken Sandstone							Visual
124+50	CL	0.8-4.0	30	2	10	38	20	26	10	A-4a
		4.0-9.0	Brown Broken Sandstone							Visual
		9.0-14.0	Brown Broken Sandstone							Visual
		14.0-18.0	Brown Broken Sandstone							Visual
128+00	10'RT	0.3-4.0	41	1	3	31	24	32	15	A-6a
		4.0-9.0	Brown Broken Sandstone							Visual
		9.0-14.0	Brown Broken Sandstone							Visual
131+00	50'RT	0.8-3.0	0	2	15	58	25	22	6	A-4b
		3.0-7.0	64	1	2	24	9	NP	NP	A-2-4
		7.0-10.0	29	6	1	42	22	27	7	A-4a
133+00	CL	0.8-3.0	29	4	9	37	21	25	8	A-4a
		3.0-8.0	39	4	8	31	18	23	8	A-4a
		8.0-12.0	43	4	7	30	16	24	11	A-6a
135+00	CL	0.5-4.0	0	1	4	67	28	27	8	A-4b
		4.0-6.0	71	5	7	9	8	21	6	A-1-b
		6.0-10.0	0	2	10	70	18	NP	NP	A-4b
		10.0-15.0	57	4	9	20	10	31	5	A-2-4
		15.0-17.0	74	4	5	10	7	26	6	A-1-b
		17.0-22.0	59	20	4	13	4	NP	NP	A-1-b
		22.0-24.0	21	11	39	21	8	NP	NP	A-3a
137+00	75'RT	0.8-5.0	42	5	10	28	15	NP	NP	A-4a
		5.0-6.0	29	1	13	43	14	NP	NP	A-4a
		6.0-11.0	63	10	9	10	8	23	8	A-2-4
		11.0-16.0	61	16	5	10	8	20	18	A-2-4
		16.0-18.0	57	14	7	13	9	28	10	A-2-4
		18.0-20.0	41	7	12	27	13	20	2	A-4a
		20.0-25.0	47	4	13	21	15	23	7	A-4a
		25.0-28.0	0	23	46	21	10	NP	NP	

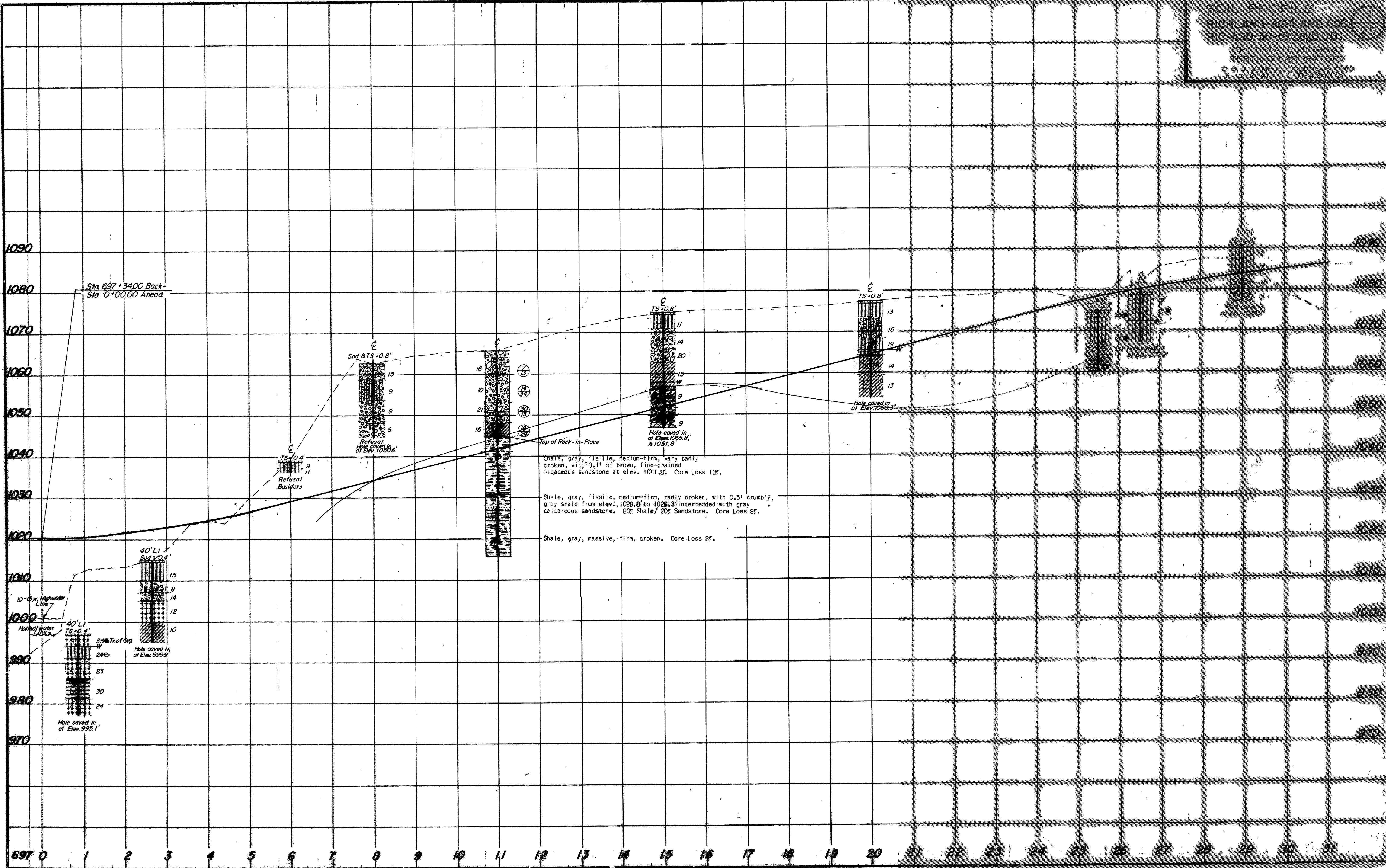


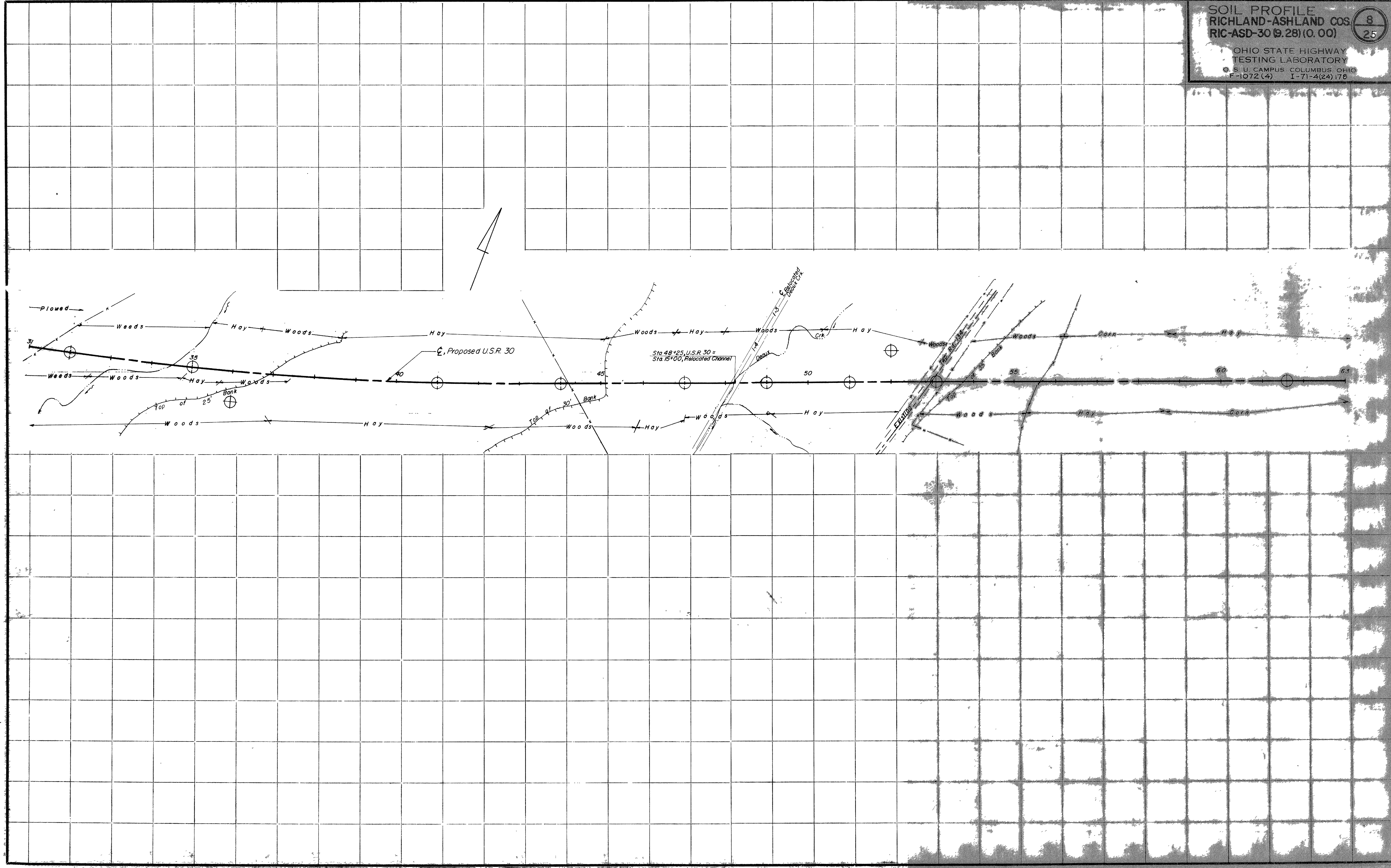
Note: For cross sections of Stations
 638+00 and 640+00, see this sheet.

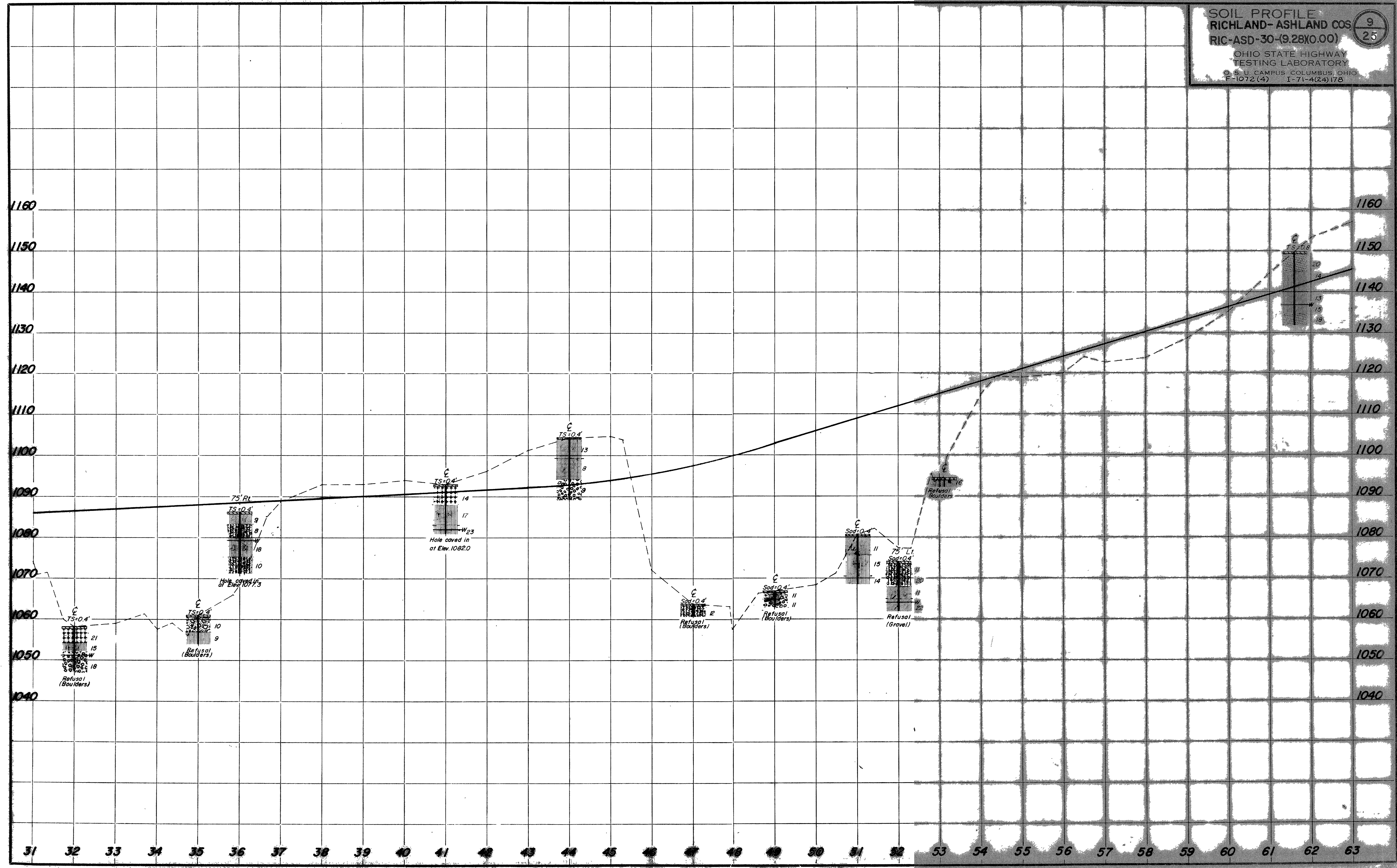


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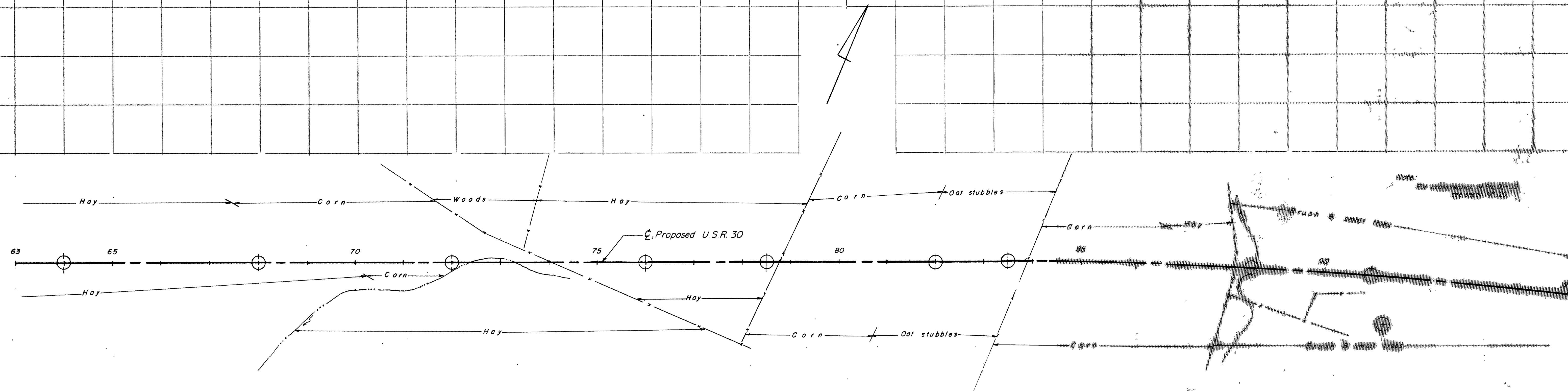


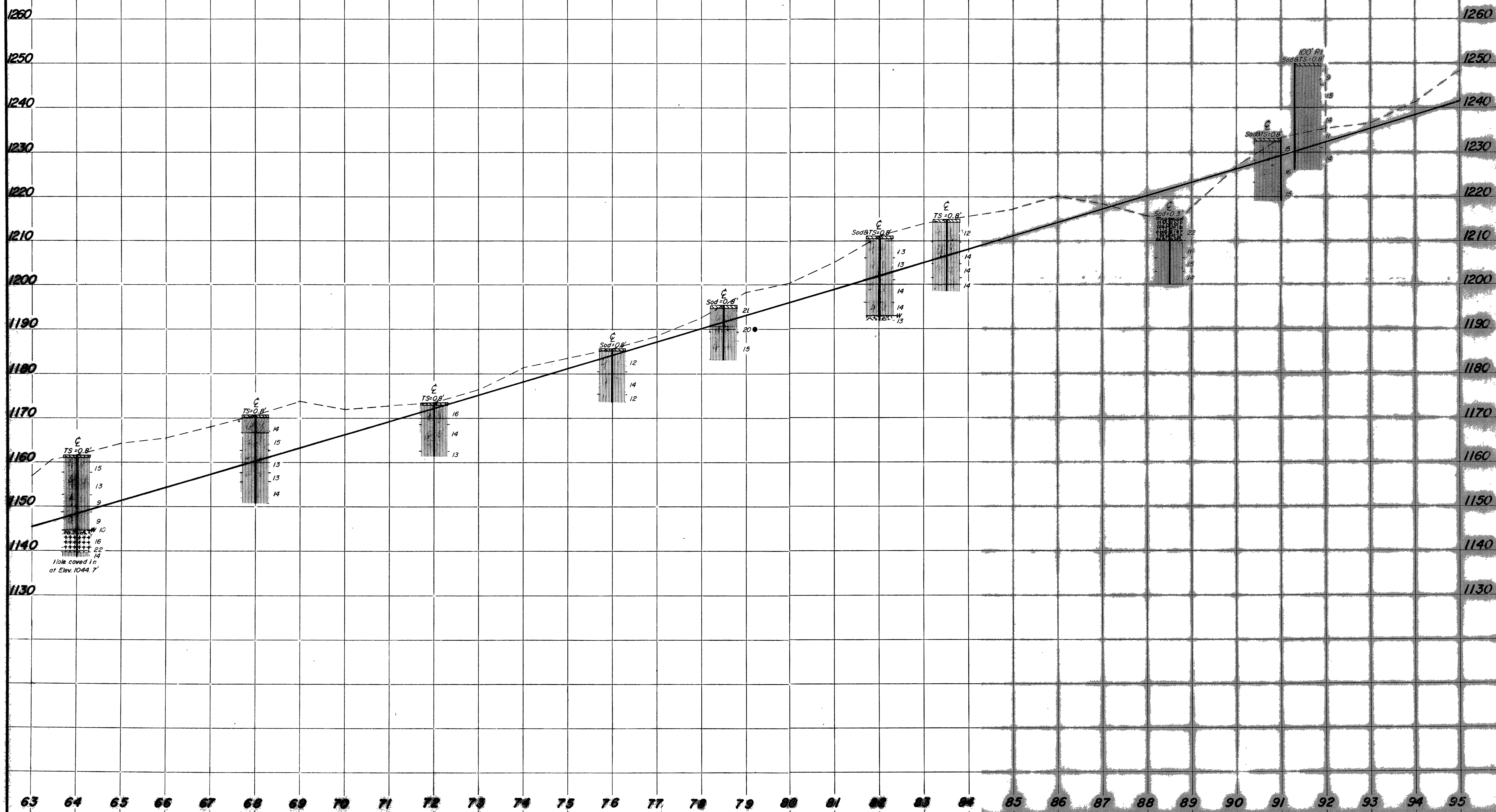






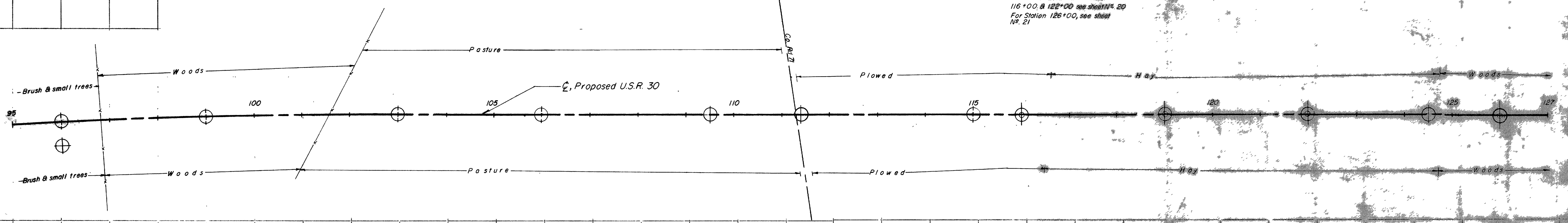
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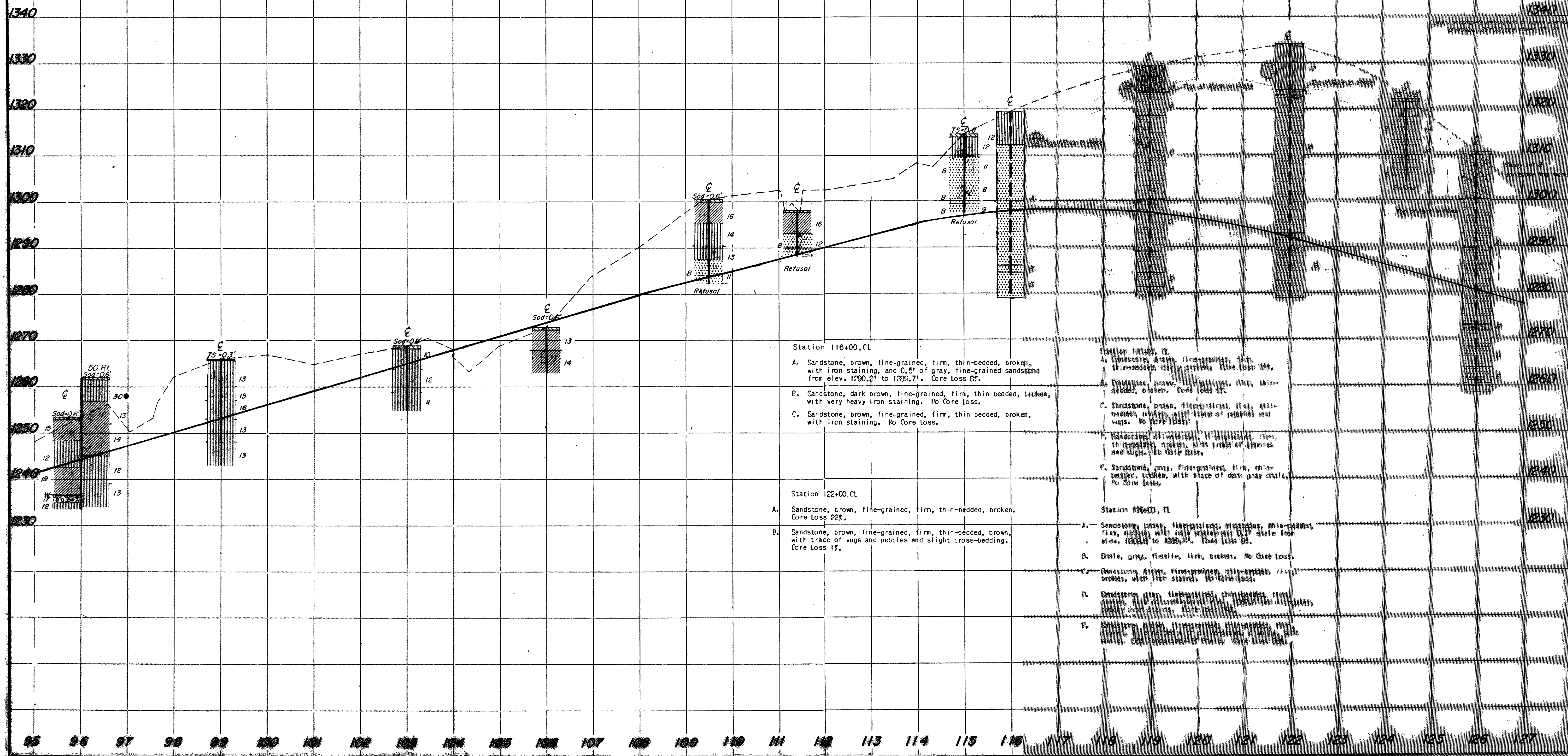






Note: For cross-section at Stations
116+00, & 122+00 see sheet
No. 20
For Station 126+00, see sheet
No. 21





Note: For complete description of cored intervals at station 126+00, see sheet 13-21.

Station 116+00, CL

- A. Sandstone, brown, fine-grained, firm, thin-bedded, broken, with iron staining, and 0.5' of gray, fine-grained sandstone from elev. 1290.2' to 1289.7'. Core Loss 0%.
- B. Sandstone, dark brown, fine-grained, firm, thin bedded, broken, with very heavy iron staining. No Core Loss.
- C. Sandstone, brown, fine-grained, firm, thin bedded, broken, with iron staining. No Core Loss.

Station 122+00, CL

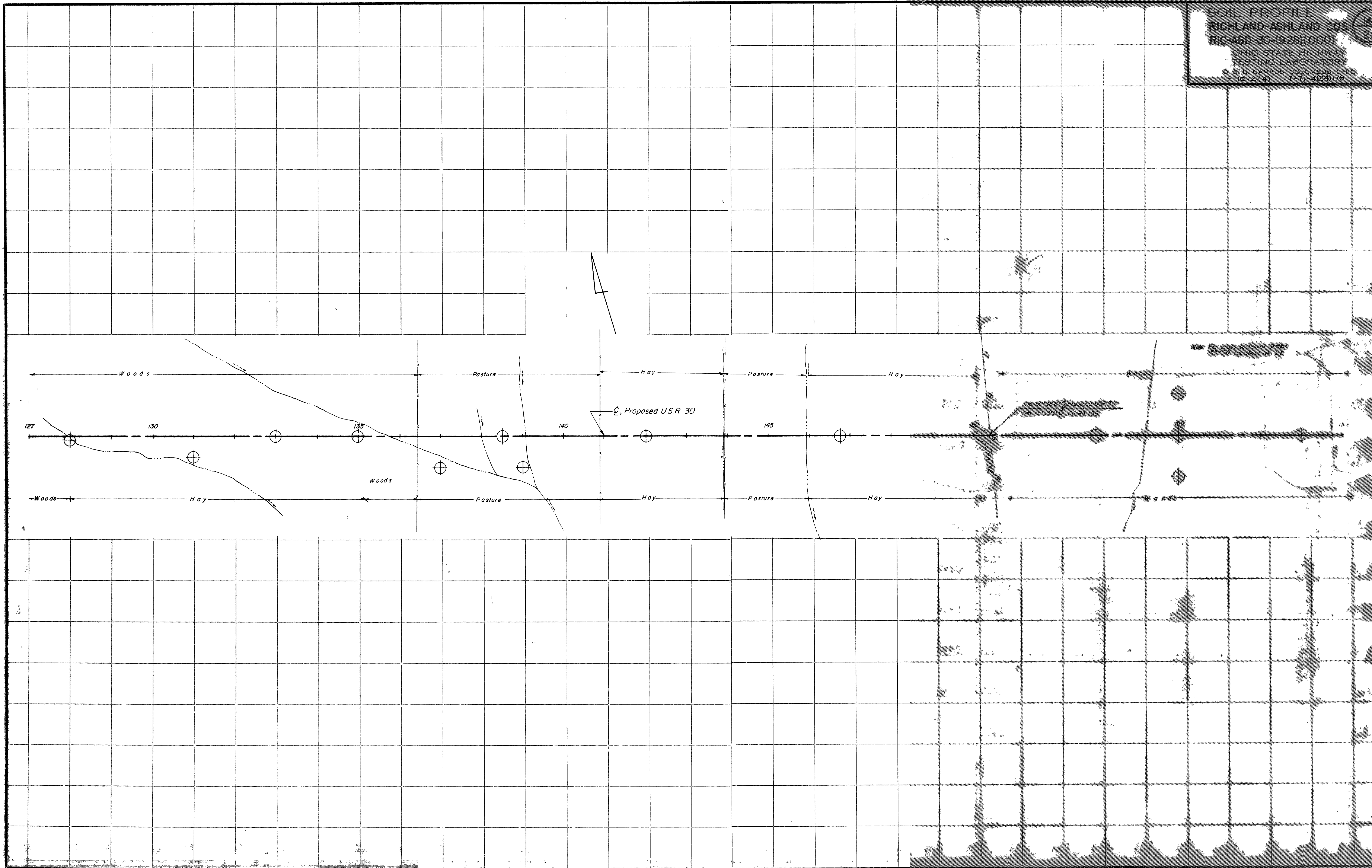
- A. Sandstone, brown, fine-grained, firm, thin-bedded, broken. Core Loss 22%.
- B. Sandstone, brown, fine-grained, firm, thin-bedded, brown, with trace of vugs and pebbles and slight cross-bedding. Core Loss 1%.

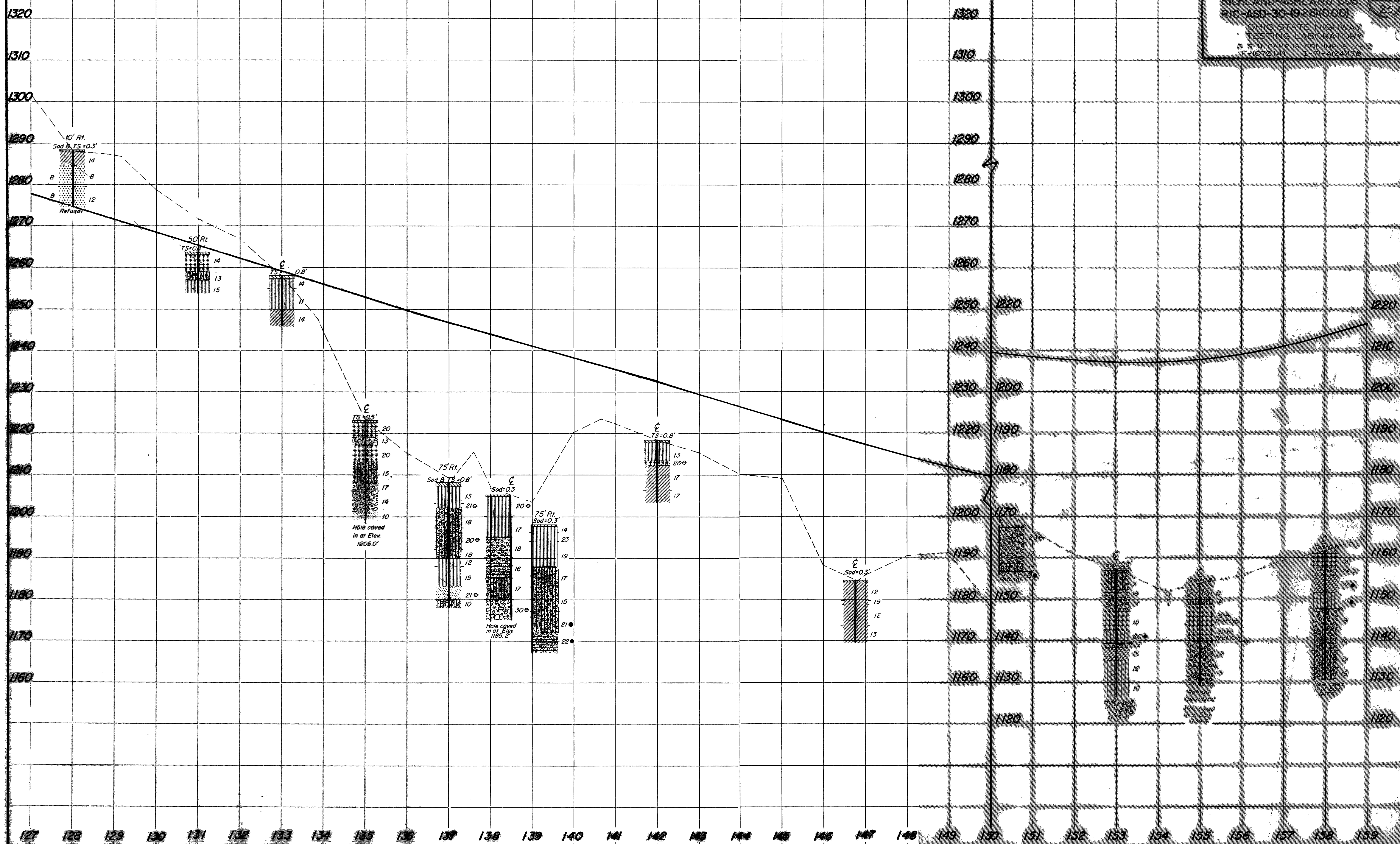
Station 118+00, CL

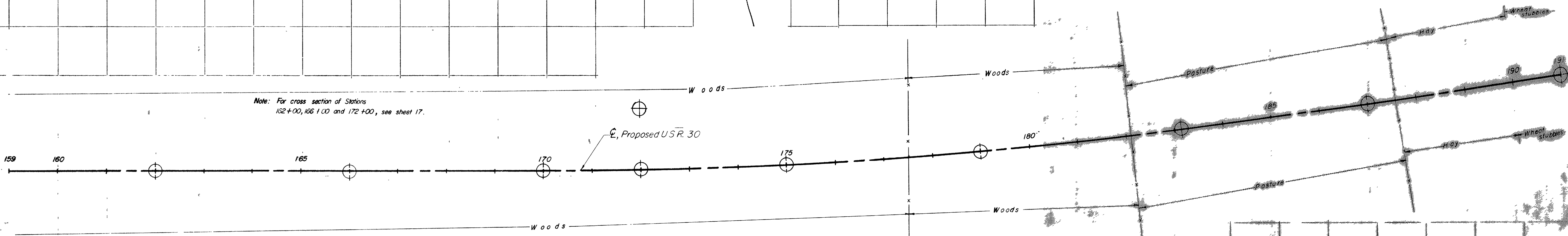
- A. Sandstone, brown, fine-grained, firm, thin-bedded, badly broken. Core Loss 72%.
- B. Sandstone, brown, fine-grained, firm, thin-bedded, broken. Core Loss 0%.
- C. Sandstone, brown, fine-grained, firm, thin-bedded, broken, with trace of pebbles and vugs. No Core Loss.
- D. Sandstone, olive-brown, fine-grained, firm, thin-bedded, broken, with trace of pebbles and vugs. No Core Loss.
- E. Sandstone, gray, fine-grained, firm, thin-bedded, broken, with trace of dark gray shale. No Core Loss.

Station 126+00, CL

- A. Sandstone, brown, fine-grained, micaceous, thin-bedded, firm, broken, with iron stains and 0.2' shale from elev. 1269.6 to 1269.1'. Core Loss 0%.
- B. Shale, gray, fissile, firm, broken. No Core Loss.
- C. Sandstone, brown, fine-grained, thin-bedded, firm, broken, with iron stains. No Core Loss.
- D. Sandstone, gray, fine-grained, thin-bedded, firm, broken, with concretions at elev. 1267.4' and irregular, patchy iron stains. Core Loss 2%.
- E. Sandstone, brown, fine-grained, thin-bedded, firm, broken, interbedded with olive-brown, crumbly, soft shale. 55% Sandstone/45% Shale. Core Loss 30%.







**Cross Section
Sta. 15+00**

1080

1070

1060

1050

1040

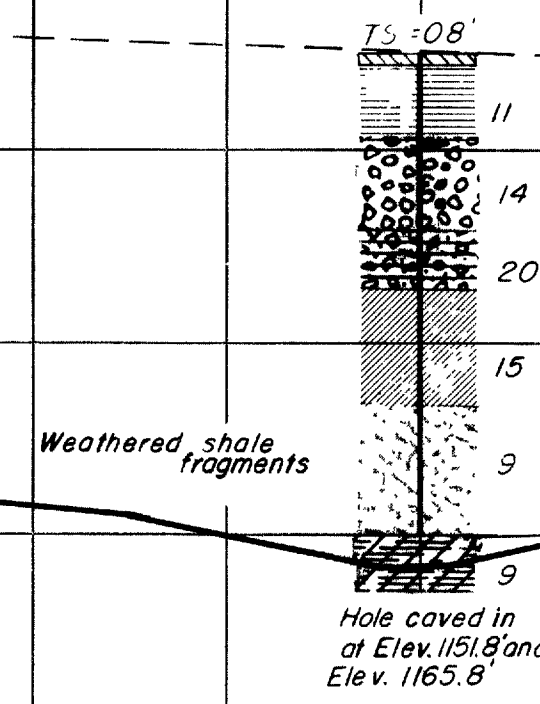
1080

1070

1060

1050

1040



**Cross Section
Sta. 11+00**

1080

1070

1060

1050

1040

1030

1020

1010

1080

1070

1060

1050

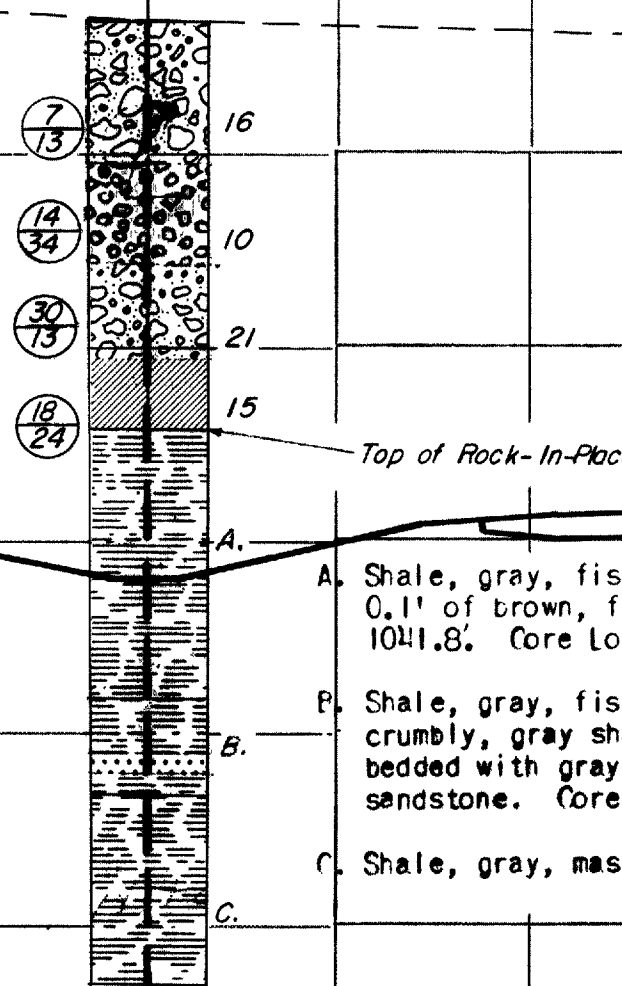
1040

1030

1020

1010

Proposed section



**Cross Section
Sta. 8+00**

1060

1050

1040

1030

1020

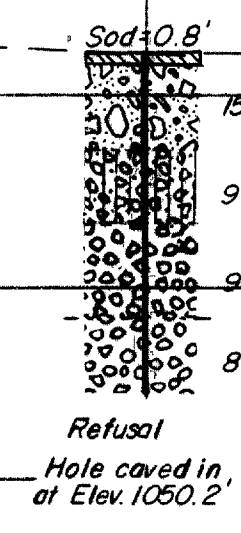
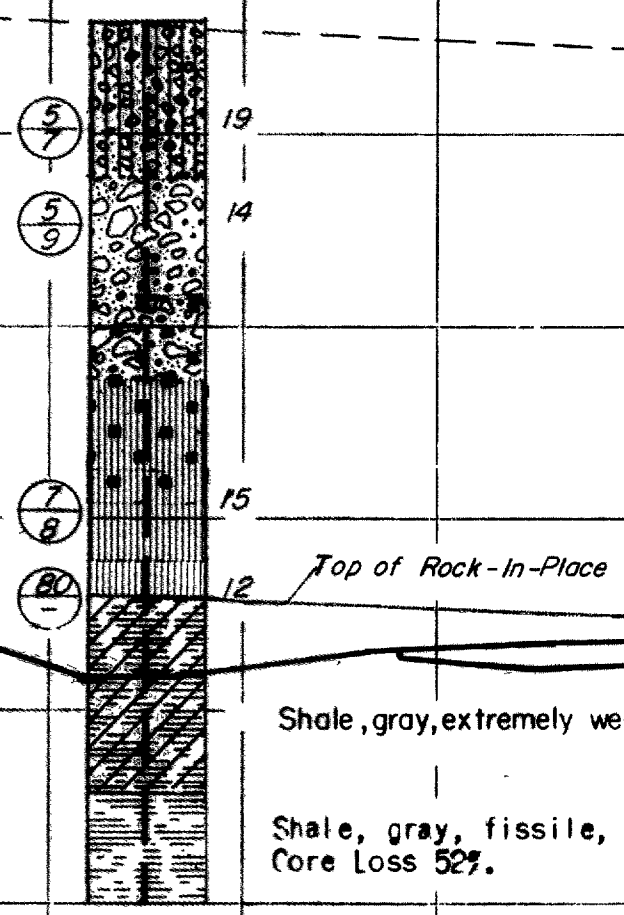
1060

1050

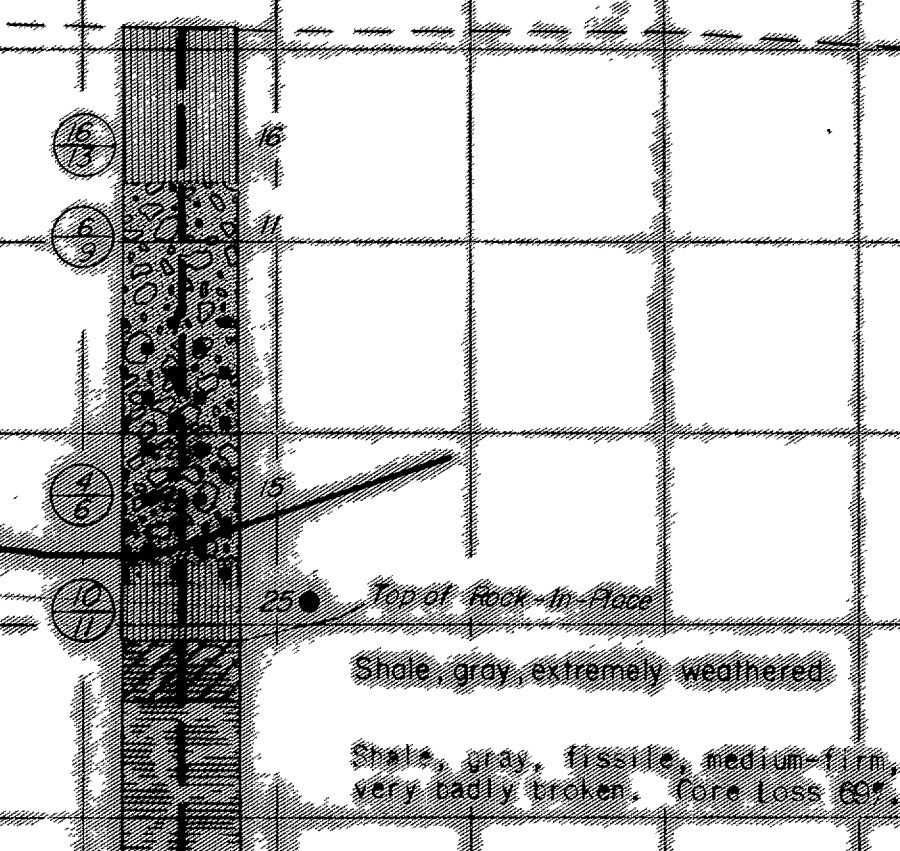
1040

1030

1020

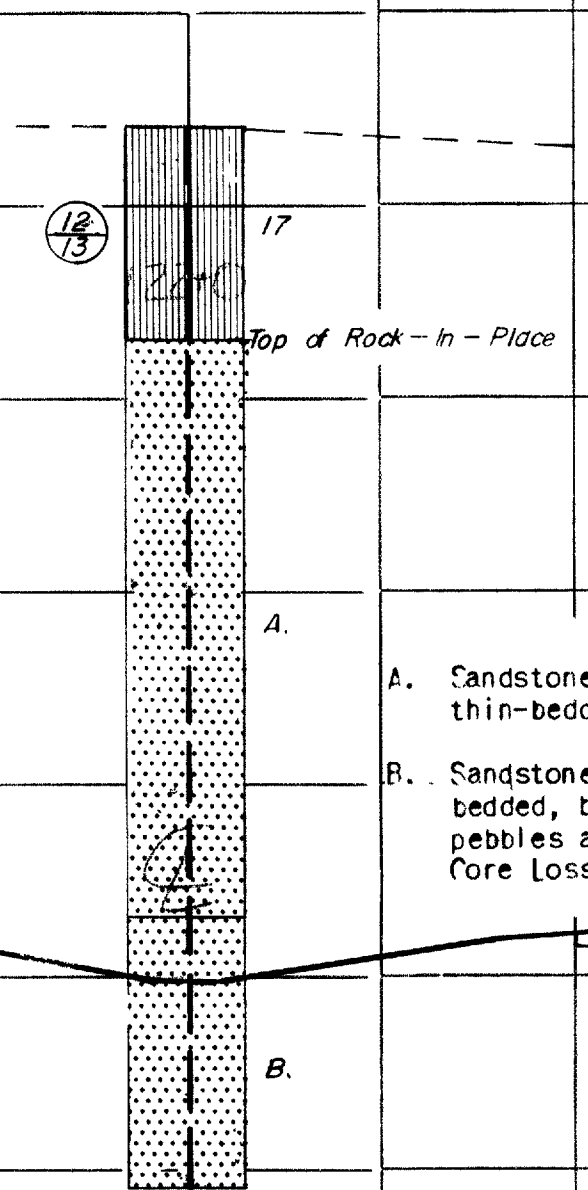


Proposed section



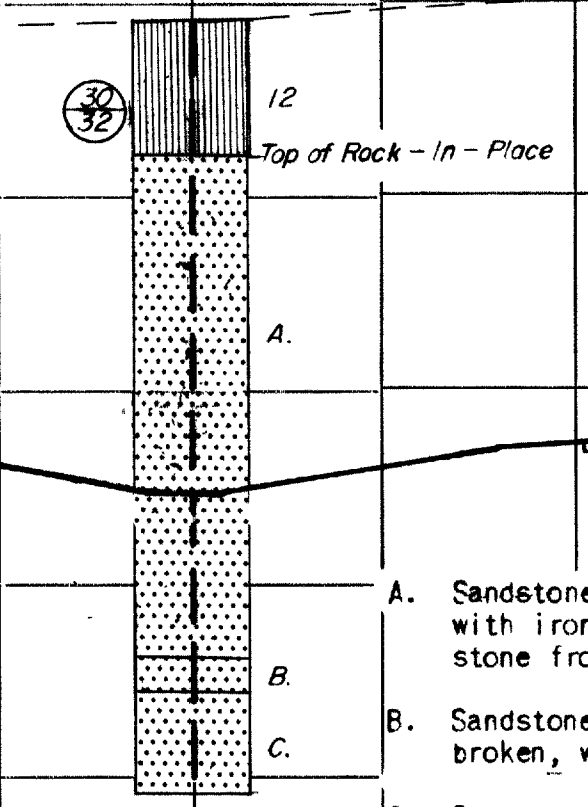
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**Cross Section
Sta. 122+00**



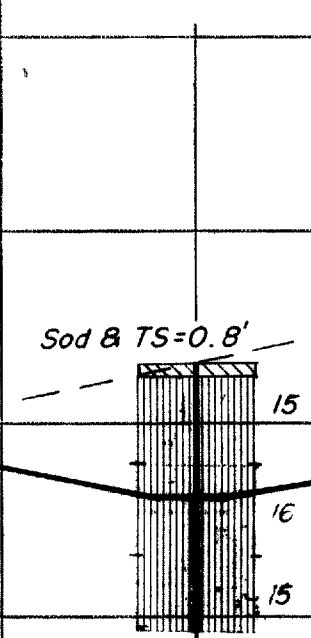
- A. Sandstone, brown, fine-grained firm, thin-bedded, broken. Core Loss 27.
- B. Sandstone, brown, fine-grained, firm, thin-bedded, broken, with trace of vugs and pebbles and slight cross-bedding. Core Loss 15.

**Cross Section
Sta. 116+00**

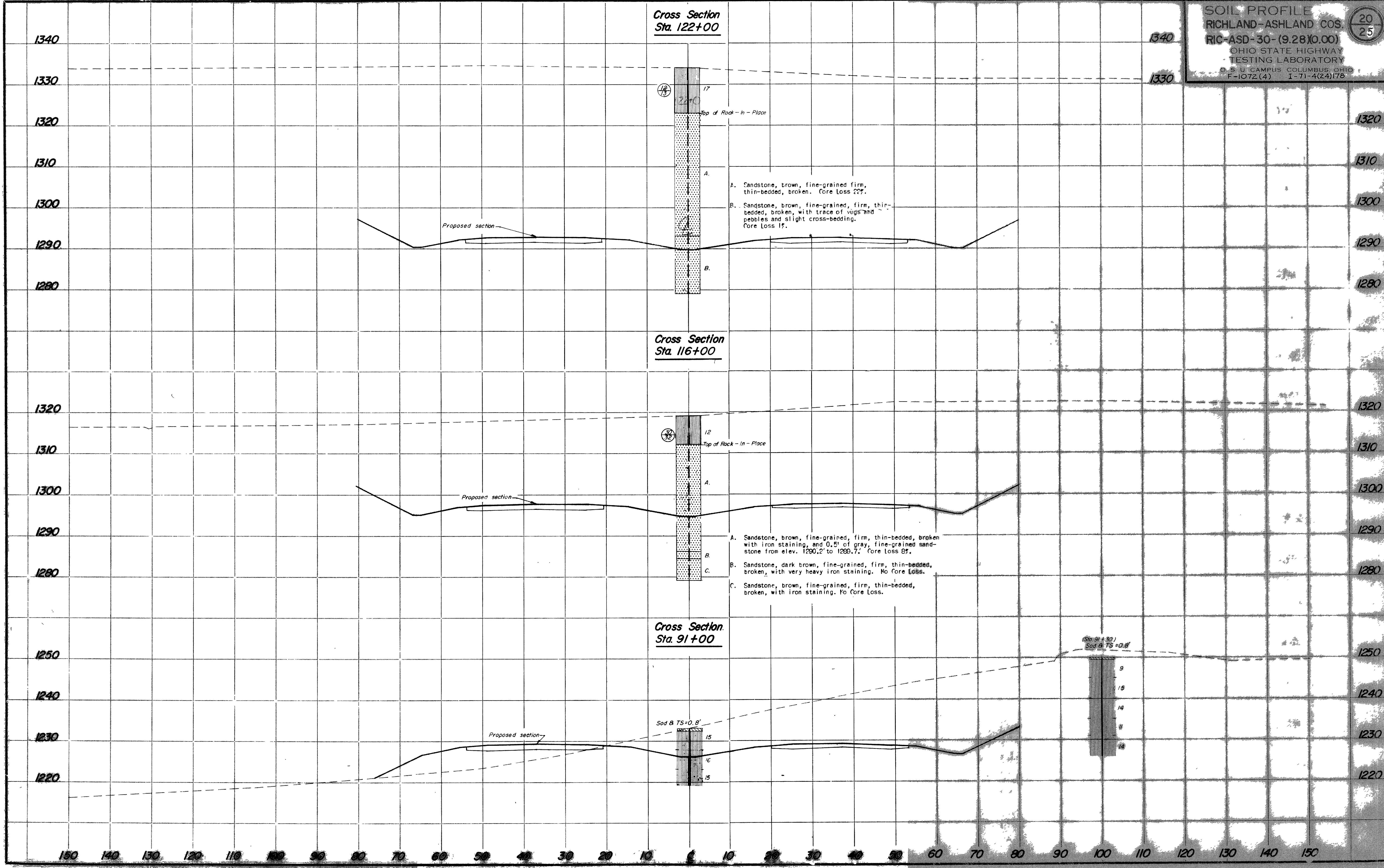
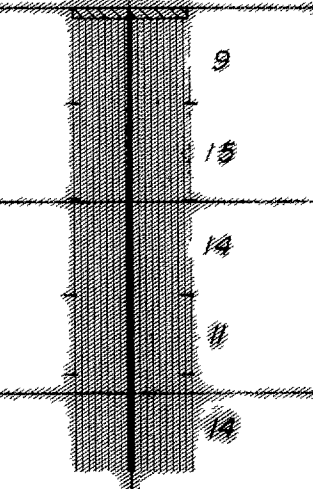


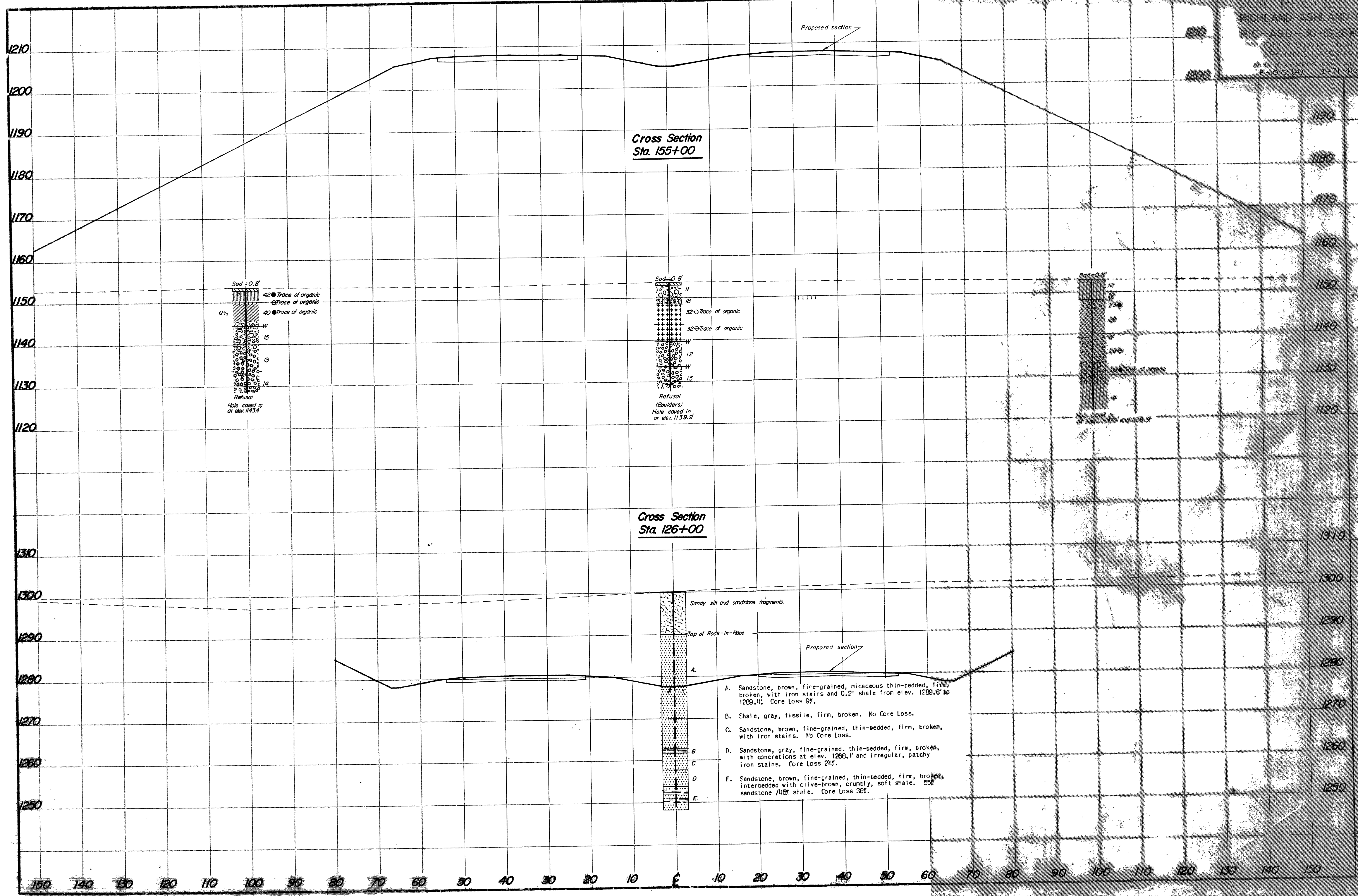
- A. Sandstone, brown, fine-grained, firm, thin-bedded, broken with iron staining, and 0.5' of gray, fine-grained sandstone from elev. 1290.2' to 1289.7'. Core Loss 87.
- B. Sandstone, dark brown, fine-grained, firm, thin-bedded, broken, with very heavy iron staining. No Core Loss.
- C. Sandstone, brown, fine-grained, firm, thin-bedded, broken, with iron staining. No Core Loss.

**Cross Section
Sta. 91+00**



(Sta. 91+30)
Sod B TS=0.8'





**Cross Section
Sta. 155+00**

**Cross Section
Sta. 126+00**

Sod - 0.8'
 42 ● Trace of organic
 ⊙ Trace of organic
 40 ● Trace of organic
 6%
 11
 15
 13
 14
 Refusal
 Hole covered in
 at elev. 1143.4

Sod - 0.8'
 11
 18
 32 ⊙ Trace of organic
 32 ⊙ Trace of organic
 12
 15
 Refusal
 (Boulders)
 Hole covered in
 at elev. 1139.9

Sod - 0.8'
 12
 19
 23 ●
 28
 25 ●
 26 ● Trace of organic
 16
 Hole covered in
 at elev. 1147.9 and 1138.9

Sandy silt and sandstone fragments.
 Top of Rock-In-Place
 A.
 B.
 C.
 D.
 E.

- A. Sandstone, brown, fine-grained, micaceous thin-bedded, firm, broken, with iron stains and 0.2' shale from elev. 1288.6' to 1289.1'. Core Loss 0%.
- B. Shale, gray, fissile, firm, broken. No Core Loss.
- C. Sandstone, brown, fine-grained, thin-bedded, firm, broken, with iron stains. No Core Loss.
- D. Sandstone, gray, fine-grained, thin-bedded, firm, broken, with concretions at elev. 1288.1' and irregular, patchy iron stains. Core Loss 24%.
- E. Sandstone, brown, fine-grained, thin-bedded, firm, broken, interbedded with olive-brown, crumbly, soft shale. 55% sandstone / 45% shale. Core Loss 36%.

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1 3/8-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drilling, employing a 1 3/8" I.D. sampler, at 2-1/2 and/or 5 foot depth intervals, driven by means of a 122-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drilling, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests, blow count increments, depth of press samples, field sample number, sample description, based on laboratory tests and the Casagrande AC classification system and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler cannot be driven, a push sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions		
2.0mm	0.425mm	0.075mm
boulders	Coables	Gravel
		Coarse Sand
		Fine Sand
		Silt
		Clay
No. of tests	No. of tests	No. of tests

LEGEND

- Auger Boring Location - Plan View
- Press and/or Drive Sample and/or Core Boring Location - Plan View
- Drive Rod Penetration Resistance Sounding Location - Plan View
- Electrical Resistivity Probe Location - Plan View
- Footing
- Capped Pile
- Footing on Pile
- Electrical Resistivity Probe - Profile
- Top of Rock
- Interval of Relatively High Moisture
- Total Depth

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Calcumite
- Dolomite
- Leached Limestone
- Limestone

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken
- Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test.
X: Number of Blows for First 6 Inches
Y: Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance "R" < 10,000 lbs
- Resistance "R" > 10,000 lbs
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

GEOLOGY OF THE SITE

The site is located in the glaciated moderately dissected Allegheny Plateau Region, adjacent to the Charles Hill Reservoir, in an area of poor surface drainage, where moderately deep alluvium and glacial-derived soils overlie shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of one drive sample boring, one drive sample-core boring and eight drive rod penetration tests, made between July 7 and 16, 1964.

INVESTIGATIONAL FINDINGS

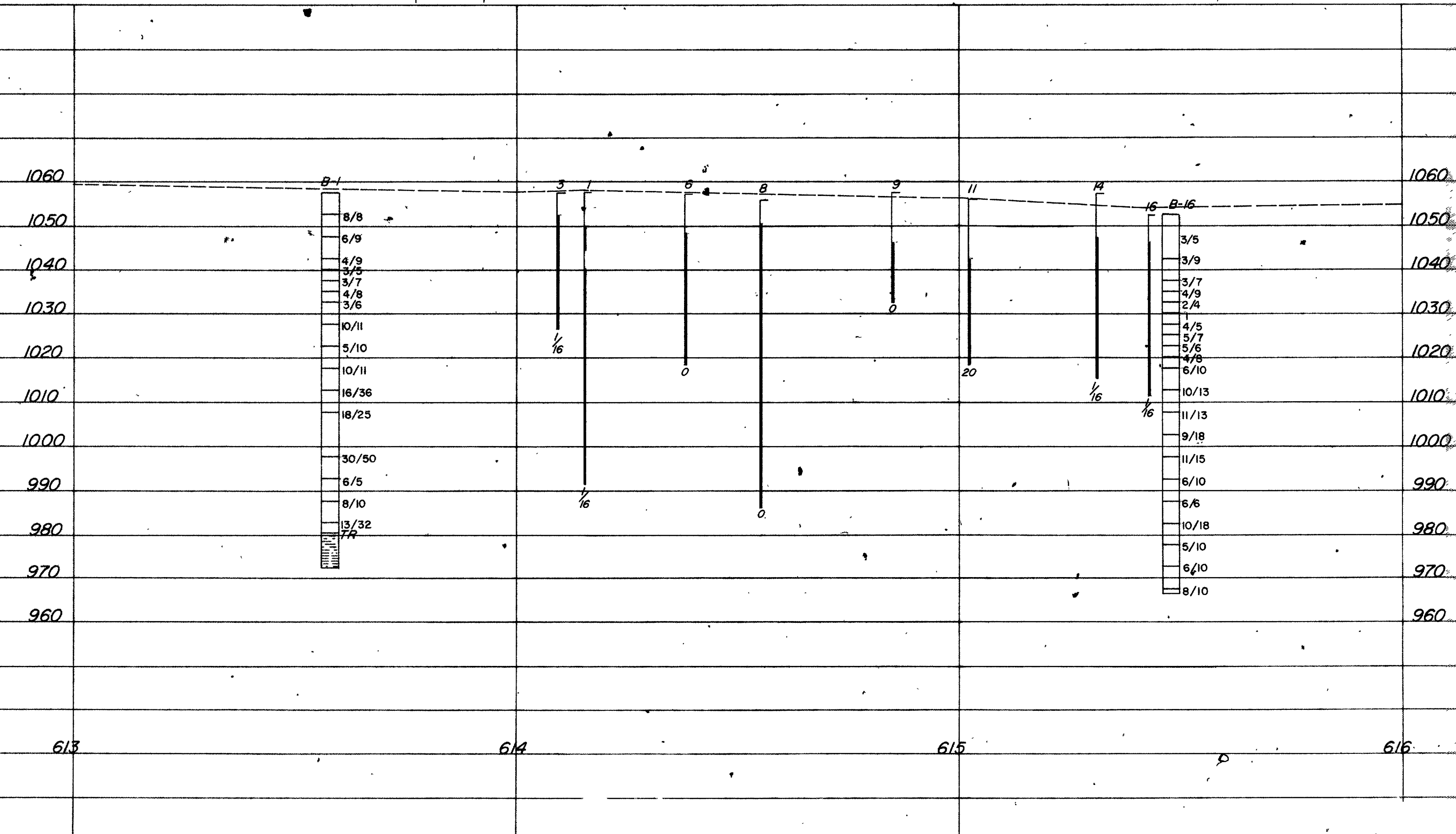
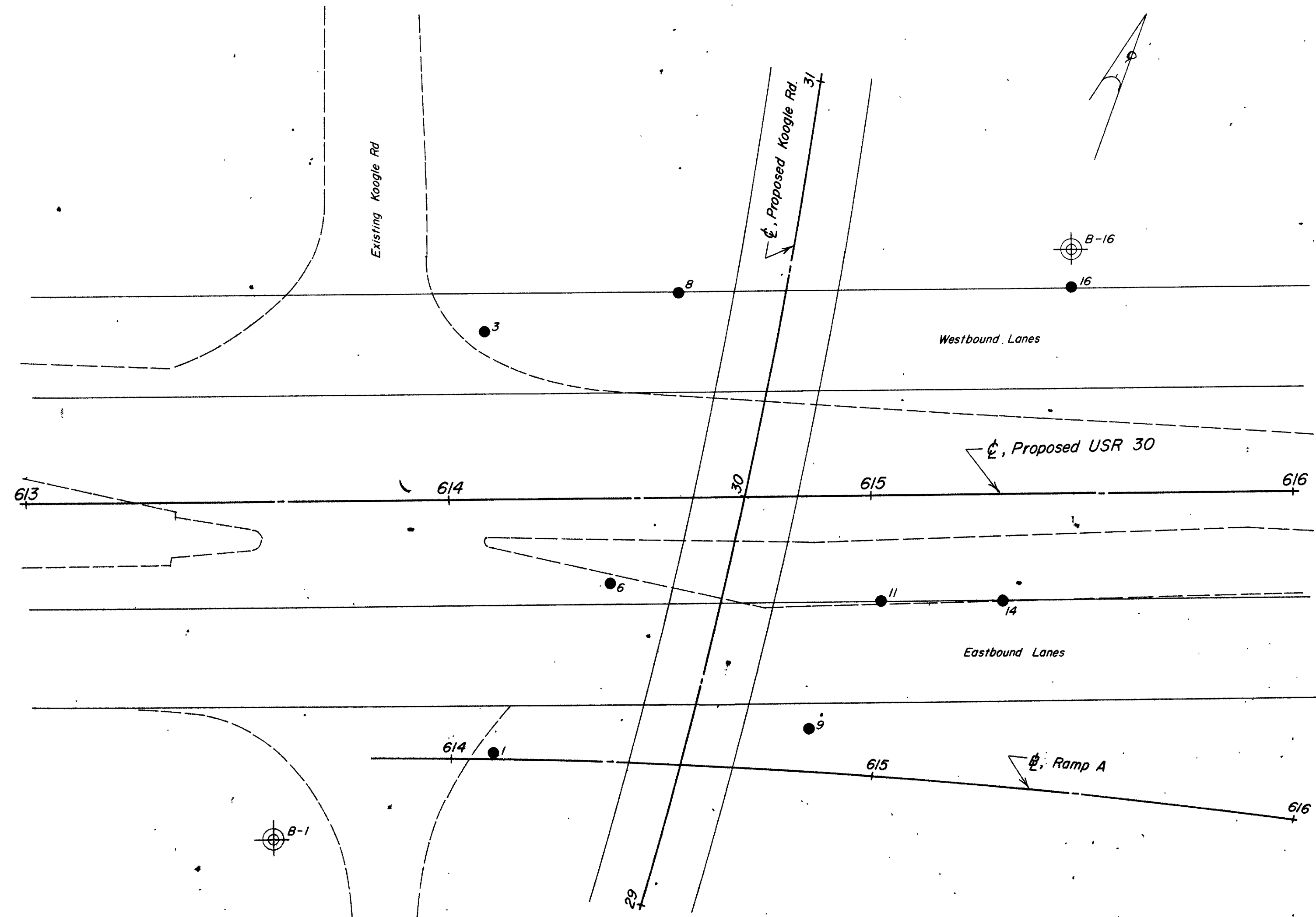
Borings encountered unstratified loose and dense, very soft and medium-stiff sands and silts and clays, occasionally containing various amounts of organic material. Boring B-1 was terminated at elevation 973 feet, 8 feet below bedrock surface, encountered at 77-foot depth, elevation 981 feet. Boring B-16, was terminated at 85-foot depth, elevation 967 feet, in dense sand.

Rod soundings met gradual increase in penetration resistance with increase in depth, occasionally erratic, considered indicative of dense and medium-stiff intervals, and were terminated upon encounter with near-refusal and refusal to penetration at 25 to 69-foot depths, elevations 1032 to 988 feet, considered to be in dense or medium-stiff sands, silts, and clays, as revealed by the borings.

No free water was encounter in any of the rod sounding holes.

NOT TO BE USED FOR THE CONSTRUCTION OF THIS STRUCTURE UNLESS THE DESIGNER HAS BEEN ADVISED BY THE CLIENT OF THE DESIGNER'S INTENT TO USE THE DATA FOR THIS PROJECT. THE STATE OF OHIO HAS NOT REVIEWED THE DATA AND THEREFORE CANNOT BE HELD RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT.

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS, OHIO
STRUCTURE FOUNDATION INVESTIGATION
PROJECT NO. RIC-30-0941 - L & R
USR 30 OVER KOOGLE ROAD
RIC-ASD-30-(928)(000)



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-30-0941 L&R
USR 30 OVER KOOGLE ROAD
SEC. RIC-ASD-30-(9-28)(0.00)

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
LNL	RDR	GPH	7/24/64

SCALE: 1"=20'

LOG OF BORING

Date Started 7-9-64 Sampler Type SS Dia. 1 3/8" Water Elev. _____
 Date Completed 7-14-64 Casing Length 75' Dia. 1 1/2"
 Boring No. R-1 Station & Offset 613+58, 80' Rk (REAR ABUTMENT) Surface Elev. 1027.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	Pl.	W.C.						
1027.5	0																			
1022.5	5	8/8			Brown and Gray Sandy Gravelly Silt	1	28	9	15	34	14	NP	NP	18						
1017.5	10	6/9			Gray Silty Sandy Gravel	2	36	15	21	-2	6-	NP	NP	9						
1012.5	15	4/9			Gray Gravelly Silt	3	23	5	9	50	13	NP	NP	14						
1006.0	18	3/5			Gray Sandy Gravelly Silt	4	22	6	10	34	28	23	6	17						
1007.5	20	3/7			No Sample Recovered - Gray Sandy Gravelly Silt		V	I	S	U	A	L								
1005.0	22	4/8			Gray Gravelly Sandy Clay	5	V	I	S	U	A	L		20						
1002.5	26	3/6			Gray Gravelly Sandy Silt	6	27	11	22	26	14	NP	NP	16						
1007.5	30	10/11			Brown and Gray Silty Sandy Gravel	7	V	I	S	U	A	L		16						
1002.5	36	5/10			Gray Sandy Silt	8	12	5	13	41	29	23	5	16						
1007.5	40	18/11			Gray Sandy Gravelly Silt	9	34	8	16	22	20	18	4	13						
1012.5	44	16/36			Gray Gravel	10	91	6	1	-2		NP	NP	10						
1007.5	50	18/25			Brown and Gray Silty Sandy Gravel (Sand Heaved 5' in Casing)	11	45	17	21	10	7	NP	NP	12						
1002.5	54				No Sample Recovered - Brown Sand (Sand Heaved in Casing)		V	I	S	U	A	L								
997.5	60	30/50			Brown and Gray Sand	12	0	60	27	-1	3-	NP	NP	26						
992.5	64	6/5			Gray Silty Sand	13	0	12	61	15	12	NP	NP	12						
987.5	70	8/10			Gray Silty Sand	14	0	0	84	6	10	NP	NP	6						
982.5	74	13/32			Gray Silty Sandy Gravel	15	45	8	11	21	15	21	4	19						
980.5	76																			
	78		3.0	0.0	TOP OF ROCK															
	80				Shale, gray, very siliceous, non-fissile, with few thin clay shale seams, firm. Core loss 7%.															
	82		4.4	0.6																
972.5	84				BOTTOM OF BORING															

LOG OF BORING

Date Started 7-15-64 Sampler Type SS Dia. 1 3/8" Water Elev. _____
 Date Completed 7-15-64 Casing Length 55' Dia. 1 1/2"
 Boring No. R-16 Station & Offset 615+48, 58' Ls (FORWARD ABUTMENT) Surface Elev. 1022.6'

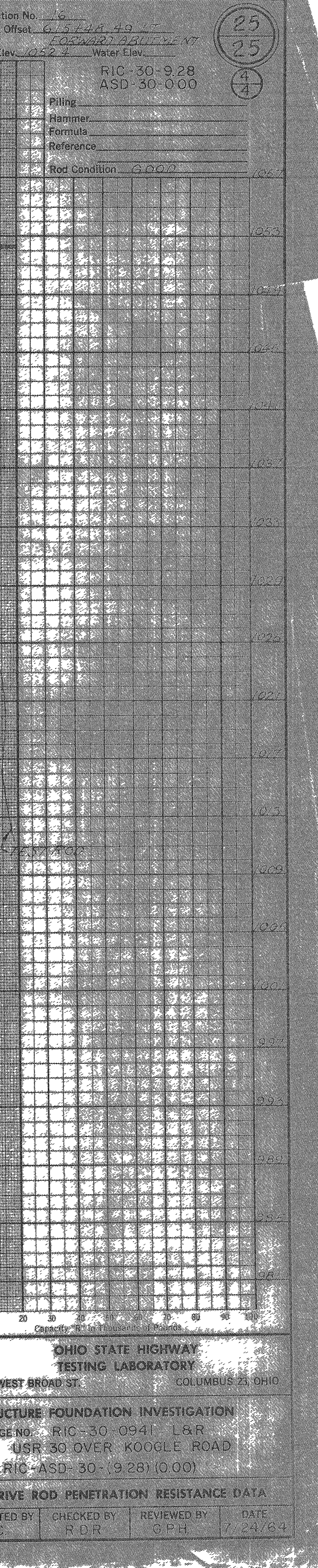
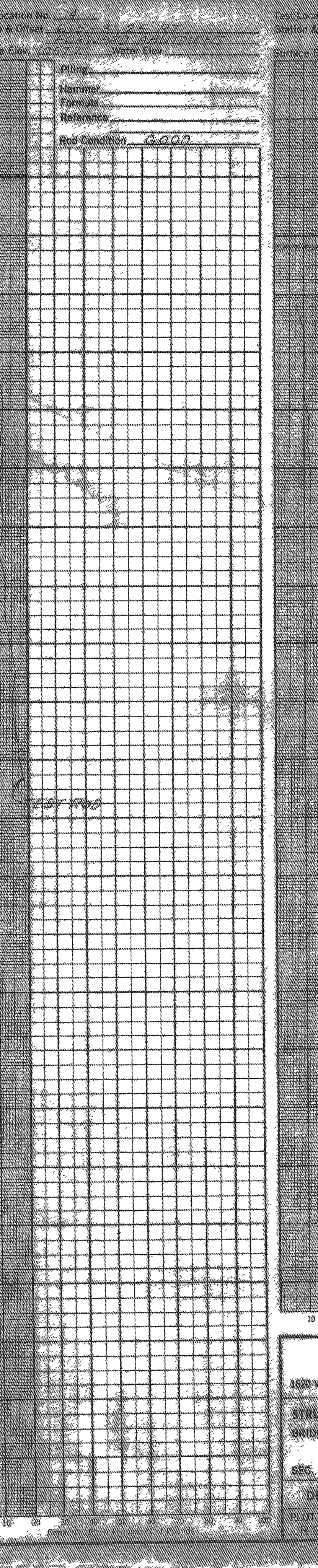
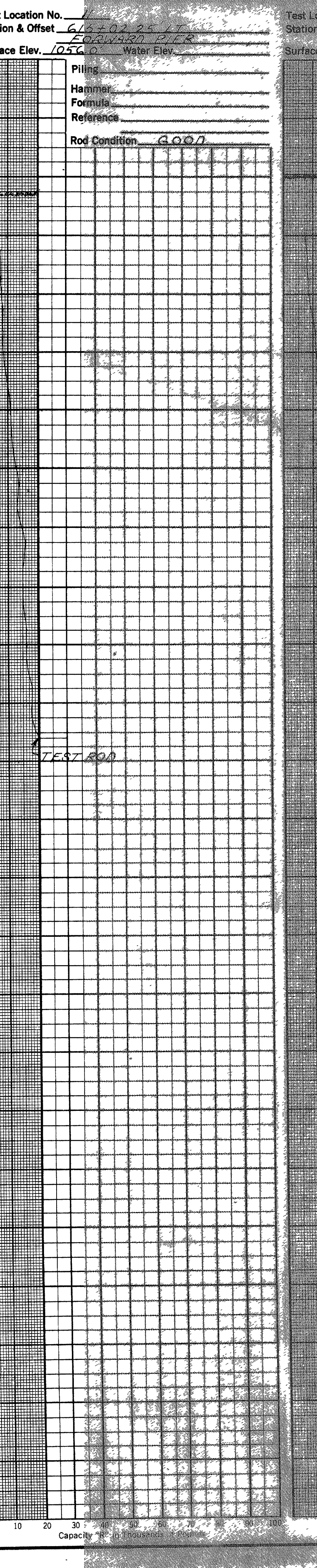
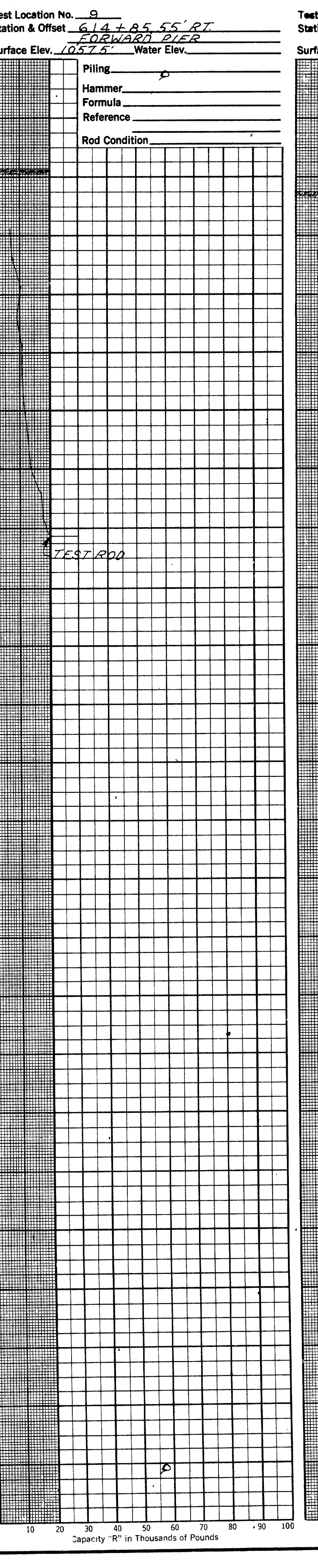
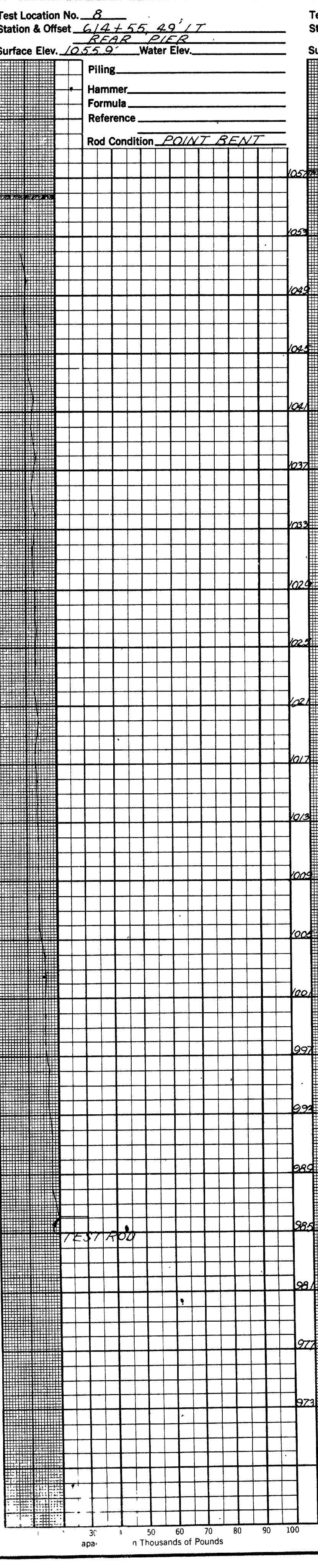
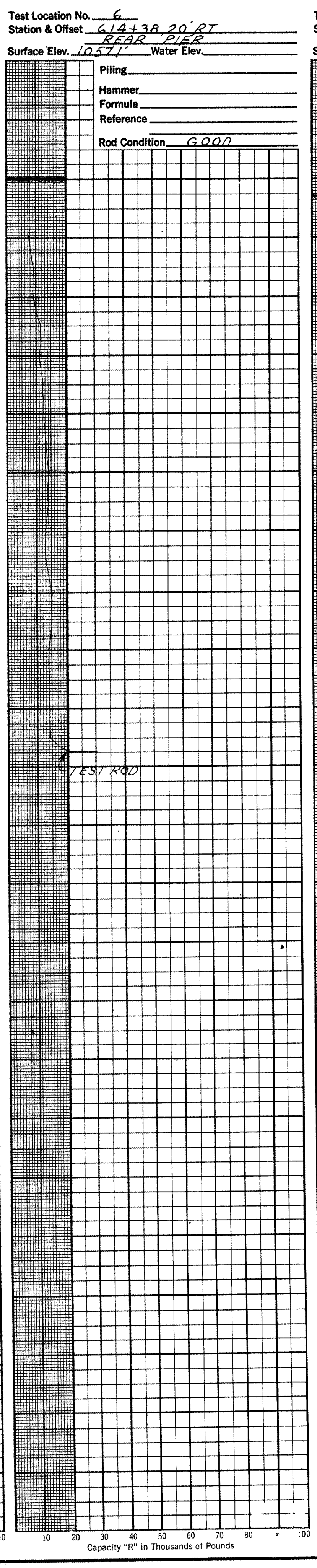
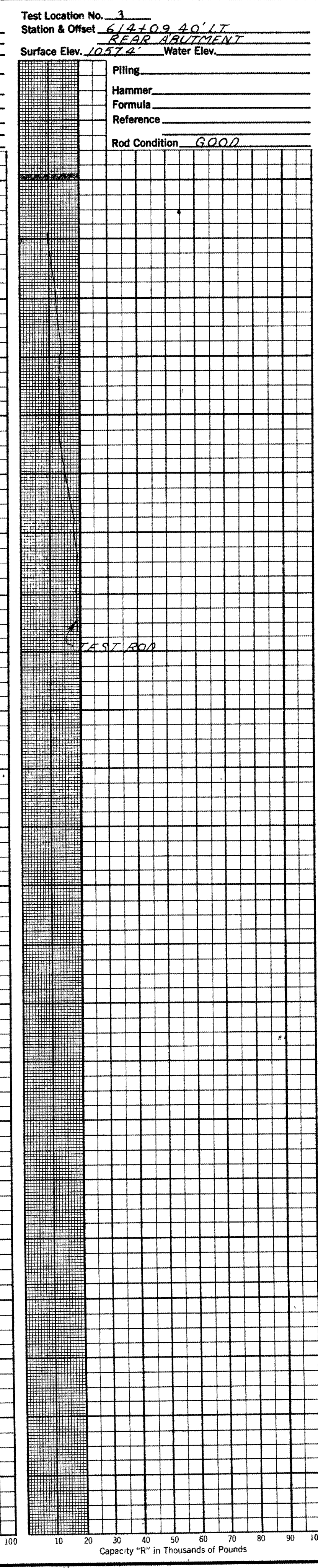
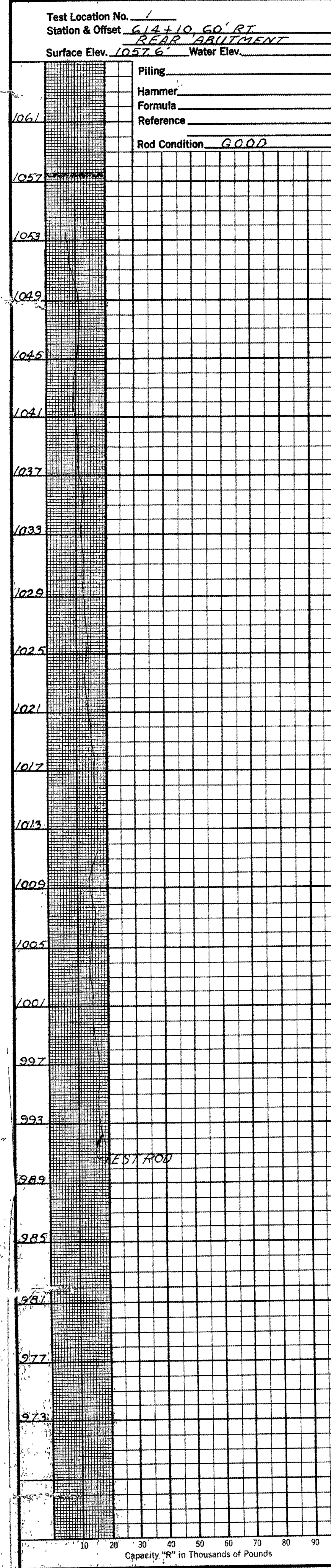
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	Pl.	W.C.						
1022.6	0																			
1017.6	5	3/5			Brown and Gray Silt and Clay	1	0	6	10	39	45	30	11	14						
1012.6	10	3/9			Gray and Brown Sandy Gravelly Clay	2	27	4	12	31	26	34	12	27						
1007.6	15	3/7			Brown Gravelly Clay	3	V	I	S	U	A	L		43	20	43				
1005.1	18	4/9			No Sample Recovered - Brown Gravelly Clay		V	I	S	U	A	L								
1002.6	20	2/4			Brown Clay	4	V	I	S	U	A	L		33	19	38				
1000.1	22	1/0			Gray and Black Organic Silt and Clay	5	0	1	18	48	35	35	11	31						
1007.6	26	4/5			Gray Gravelly Silt, Slightly Organic	6	28	4	7	34	27	38	6	19						
1005.1	28	5/7			Brown Sandy Gravelly Silt	7	25	6	11	31	27	29	8	19						
1002.6	30	5/6			Brown Gravelly Silt	8	14	6	8	40	30	28	9	21						
1000.1	32	4/8			Brown Gravelly Silt	9	17	6	8	36	19	25	6	17						
1017.6	36	6/10			Gray Gravelly Silt	10	21	5	8	34	35	26	9	17						
1012.6	40	10/13			No Sample Recovered - Gray Sandy Gravelly Silt		V	I	S	U	A	L								
1007.6	44	11/13			Gray Gravelly Silt	11	18	5	7	35	35	24	7	19						
1002.6	50	9/18			Gray Gravelly Silt	12	43	6	7	22	22	26	9	17						
997.6	54	11/15			Gray Sandy Gravelly Silt	13	36	7	12	24	21	20	4	14						
992.6	60	6/10			Gray Sandy Gravelly Silt	14	29	5	14	31	20	21	6	12						
987.6	64	6/6			No Sample Recovered - Gray Sandy Gravelly Silt		V	I	S	U	A	L								
982.6	70	10/18			Brown and Gray Silty Gravelly Sand	15	25	27	24	16	6	NP	NP	12						
977.6	76	5/10			Gray Sandy Silt	16	12	7	32	28	21	NP	NP	15						
972.6	80	6/10			Gray Silty Sand	17	0	8	72	11	9	NP	NP	19						
967.6	84	8/10			Gray Silty Sand	18	14	26	46	-1	4-	NP	NP	7						

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGING RIC-30, 94, 11, 13, 15
R/SR 30 OVER KOOGLE ROAD
SP. RIC-ASD-30-928(0.00)

BORING DATA

DATE: _____ CHECKED BY: _____ REVIEWED BY: _____
 BORING NO. _____ G.P.H. _____



25
 25
 4
 4