



# GENERAL NOTES

JEF-151-(13.55) (14.49)

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

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WORK REQUIRED:

PROPOSED WORK JEF-151-1355:  
EXCAVATE BENEATH EXISTING STRUCTURE AND PLACE BEDDING FOR CONDUIT.  
INSTALL CONDUIT WITHIN EXISTING STRUCTURE.  
REMOVE PORTIONS OF EXISTING STRUCTURE, AS PER PLAN.  
BUILD HEADWALLS.  
BACKFILL AROUND CONDUIT, AS PER PLAN.  
COMPLETE EMBANKMENT WORK.  
EXTEND OUTLET END OF BOX CULVERT LOCATED AT STA. 715+02 (JEF-151-1354).  
INSTALL GUARDRAIL AND SEED AND MULCH.

PROPOSED WORK JEF-151-1449:  
ESTABLISH TRAFFIC CONTROL AND REMOVE EXISTING STRUCTURE AS REQUIRED.  
PERFORM CHANNEL WORK.  
BUILD CONCRETE FOOTER AND PLACE BOX SECTIONS.  
BUILD HEADWALLS, BACKFILL AND PERFORM OTHER EARTHWORK.  
PLACE NEW PAVEMENT AND REMOVE TEMPORARY RUNAROUND.  
INSTALL GUARDRAIL AND SEED AND MULCH.

DESIGN DATA:

DESIGN LOADING- HS20-44  
CONCRETE CLASS C- UNIT STRESS 1333 P.S.I.  
REINFORCING STEEL- ASTM A615, A616, A617- UNIT STRESS 24000 P.S.I.

202-PORCTIONS OF STRUCTURE REMOVED

ANY PORTIONS OF EXISTING STRUCTURES THAT INTERFER WITH PLACEMENT OF THE CULVERTS AND HEADWALLS SHALL BE REMOVED. THE REMAINING PORTIONS SHALL BE REMOVED AS PER 202.03. FOR BRIDGE NO. JEF-151-1355 THE EXISTING DECK IS TO REMAIN IN PLACE. AFTER BACKFILLING AROUND THE PIPE, THE RAILING AND CURBS SHALL BE REMOVED BELOW THE LEVEL OF THE SHOULDER MATERIAL. ALL OF THE ABOVE SHALL BE INCLUDED WITH THE LUMP SUM PRICE BID FOR ITEM 202-PORCTIONS OF STRUCTURE REMOVED.

REMOVAL OF TREES OR STUMPS

ALL TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201-CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.  
THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	1	0	1

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201-CLEARING AND GRUBBING.

GUARDRAIL OVER CULVERTS

WHEN SUFFICIENT POST DEPTH IS NOT AVAILABLE DUE TO A CULVERT THE GUARDRAIL POSTS DIRECTLY OVER THE CULVERT SHALL NOT BE DRIVEN, BUT SET IN HOLES. IF THE DISTANCE BETWEEN THE GROUND LINE AND THE TOP OF THE CULVERT IS LESS THAN 3FT. THE POST SHALL BE ENCASED IN A MINIMUM OF 4" THICKNESS OF CLASS C CONCRETE FOR THE FULL DEPTH OF THE POST, OR POST SHALL BE INLET MOUNTED POSTS AS PER STD. DWG. GR-1\*. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 606 GUARDRAIL, TYPE 5.  
\*POSTS SHALL BE W6x25 WITH A 3/8" WELD AT THE BASE.

LOCATION OF GUARDRAIL

THE LOCATION OF GUARDRAIL RUNS AS SHOWN ON THESE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER TO ASSURE THAT THE PLANNED INSTALLATION AFFORDS MAXIMUM PROTECTION TO TRAFFIC.

619-FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 150 SQ.FT. OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP PRICE BID FOR ITEM 619, FIELD OFFICE.

606 GUARDRAIL, TYPE 6, AS PER PLAN

A LIN.FT. QUANTITY OF TYPE 6 TEMPORARY BEAM RAIL HAS BEEN INCLUDED TO BE USED, AS DIRECTED BY THE ENGINEER, WHERE THE CONTRACT WORK FOR JEF-151-1355 AFFECTS THE TRAVELLED ROADWAY WIDTH. IT MAY BE NECESSARY TO RELOCATE THE TEMPORARY RAIL DURING THE COURSE OF THE WORK. COST SHALL BE INCLUDED IN THE PRICE BID PER LIN.FT. OF ITEM 606-GUARDRAIL, TYPE 6, AS PER PLAN.

RESHAPING BERMS JEF-151-1355

BERMS AT LOCATIONS WHERE NEW GUARDRAIL IS TO BE ERECTED SHALL BE RESHAPED AS DIRECTED BY THE ENGINEER TO ASSURE A SMOOTH SURFACE FREE OF IRREGULARITIES. EXCESS EXCAVATION SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER LIN. FT. FOR ITEM SPECIAL, RESHAPING BERMS.

RIGHT-OF-WAY:

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY AND TEMPORARY R/W AS INDICATED ON THE RIGHT-OF-WAY SHEET OF THIS PLAN.

ROUNDING OF CORNERS

THE ROUNDED CORNERS, AS SHOWN ON THE TYPICAL SECTION, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THE PLANS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C.M.S. SECTIONS 102.05, 105.02, AND 513.02.

CONTINGENCY QUANTITIES:

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES:

THE LOCATIONS OF UNDERGROUND UTILITIES ON THE PLAN ARE AS OBTAINED FROM OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ANY AREA WHICH MAY INVOLVE UNDERGROUND FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES AND THE OWNERS OF ALL UNDERGROUND UTILITY FACILITIES SHOWN IN THE PLANS.  
AFTER NOTICE IS RECEIVED, THE OWNER OF ANY UNDERGROUND UTILITY FACILITY THAT IS TO REMAIN IN SERVICE DURING AND/OR AFTER CONSTRUCTION SHALL WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.  
IN ADDITION TO THE ABOVE, THE CONTRACTOR SHALL NOTIFY, AT LEAST TWO WORKING DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING

UTILITY NOTIFICATION (CONTINUED)

PLAN NO. BR-66-84

WIRES, POLES, CONDUIT OR OTHER STRUCTURES, WHICH MAY BE AFFECTED BY THE OPERATION. HE SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER TO AVOID DAMAGES TO ANY AND ALL UTILITIES.  
FOLLOWING ARE OWNERS KNOWN TO BE WITHIN THE AREA OF THE PROJECT:

GENERAL TELEPHONE CO. OF OHIO  
715 COMMERCIAL PARKWAY  
P.O. BOX 399  
DOVER, OHIO 44622  
PHONE 216/364-0363

COLUMBIA GAS OF OHIO, INC.  
204 HIGHLAND AVE.  
CAMBRIDGE, OHIO 43725

PHONE 614/439-1306

STEUBENVILLE CABLE T.V. COMPANY  
2205 SUNSET BLVD.  
P.O. BOX 69  
STEUBENVILLE, OHIO 43952  
PHONE 614/264-3212

OHIO POWER COMPANY  
301 CLEVELAND AVE. S.W.  
P.O. BOX 400  
CANTON, OHIO 44701  
PHONE 216/438-7040

JEFFERSON COUNTY SEWER DISTRICT  
P.O. BOX 2579  
WINTERSVILLE, OHIO 43952  
PHONE 614/765-4943

SATRALLOY, INC.  
P.O. BOX 536  
STEUBENVILLE, OHIO 43952  
PHONE 614/283-3631

MAINTAINING TRAFFIC

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF 614. A MINIMUM OF ONE-WAY TRAFFIC SHALL BE MAINTAINED FOR BR. NO. JEF-151-1355 AND CONTROLLED AS SHOWN ON SHEET 12, "SIGNALIZED CLOSING 1 LANE OF A 2 LANE HIGHWAY". TRAFFIC SHALL BE MAINTAINED BY USE OF EXISTING PAVEMENT AND STRUCTURE AND TYPE 6 GUARDRAIL. TWO-WAY TRAFFIC SHALL BE MAINTAINED BY USE OF EXISTING PAVEMENT AND ITEMS 502 & 615 OF THE TEMPORARY RUN-AROUND FOR BRIDGE NO. JEF-151-1449. THE TEMPORARY RUN-AROUND SHALL BE IN ACCORDANCE WITH PLATE C-24 OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL". WHEN DEEMED NECESSARY BY THE ENGINEER, THE ROADWAY MAY BE CLOSED, DURING WORKING HOURS ONLY, TO ESTABLISH TRAFFIC CONTROL AND ONLY FOR SHORT DURATIONS APPROVED BY THE ENGINEER. IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN MAY BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR. PAYMENT FOR THE ABOVE, EXCEPT ITEMS 502, 606 AND 615 SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614-MAINTAINING TRAFFIC.

602 CONCRETE MASONRY, AS PER PLAN

THE BASIS OF PAYMENT FOR THIS ITEM SHALL BE AS PER ITEM 602, EXCEPT THAT THE QUANTITIES OF ITEM 503-ROCK EXCAVATION AND ITEM 509-REINFORCING STEEL SHALL BE PAID FOR UNDER THE RESPECTIVE PAY ITEMS. ALL OTHER WORK AS OUTLINED BY 602.03 SHALL BE INCLUDED FOR PAYMENT AT THE UNIT PRICE BID FOR ITEM 602-CONCRETE MASONRY, AS PER PLAN.

# GENERAL NOTES

JEF-151-(13.55) (14.49)

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

2A  
17

PLAN NO. BR-66-84

603-12'-6" X 7'-11" CONDUIT 707.03 OR 12'-11" X 7'-6" CONDUIT 707.23

THIS ITEM SHALL CONSIST OF CONSTRUCTING THE CONDUIT WITHIN THE EXISTING STRUCTURE (JEF-151-1355) IN ACCORDANCE WITH 603, THIS NOTE AND IN REASONABLY CLOSE CONFORMITY WITH THE LINE AND GRADE SHOWN ON THE PLANS. THE CONDUIT MAY BE ASSEMBLED INSIDE THE EXISTING STRUCTURE OR ASSEMBLED THEN MANEUVERED THROUGH THE EXISTING STRUCTURE IN SUCH A MANNER AS NOT TO DAMAGE THE ROOF OF THE EXISTING STRUCTURE, THE PAVEMENT OR THE CONDUIT. BEDDING SHALL BE CLASS B AS PER 603.04. BACKFILLING AS PER 603.08 WILL ONLY BE REQUIRED BEYOND THE LIMITS OF THE EXISTING CONCRETE DECK THAT IS TO REMAIN IN PLACE. PAYMENT FOR ALL LABOR, TOOLS, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 603-12'-6" X 7'-11" CONDUIT, TYPE A, 707.03 OR 12'-11" X 7'-6" CONDUIT, TYPE A, 707.23, AS PER PLAN.

FILLING INSIDE EXISTING STRUCTURE

THIS WORK SHALL CONSIST OF FILLING THE VOID AROUND THE CONDUIT WITHIN THE EXISTING STRUCTURE (JEF-151-1355). MATERIAL TO BE USED IS A GROUT WITH A 2:1 RATIO OF SAND TO CEMENT AND HAVING A MAXIMUM SLUMP OF 7". THE GROUT MATERIAL SHALL COMPLETELY FILL THE EXISTING STRUCTURE WITHIN THE VERTICAL PLANES OF THE EXISTING CONCRETE SLAB. AT THE CONTRACTOR'S OPTION, THE GROUT MAY BE CONTAINED WITHIN THE REQUIRED FILL BY USE OF BULKHEADS OF BRICK AND/OR CONCRETE MASONRY FORMING A 12" MINIMUM THICK SEAL WITH THE EXISTING STRUCTURE OR THE GROUT MAY EXTEND TO THE HEADWALLS AND WITHIN ONE FOOT OF PROPOSED EMBANKMENT. THE QUANTITY FOR PAYMENT HAS BEEN CALCULATED FOR THE VOLUME WITHIN THE EXISTING SLAB; NO ADDITIONAL PAYMENT WILL BE MADE FOR GROUT MATERIAL USED BEYOND THIS QUANTITY. THE REMAINDER OF THE BACKFILL SHALL BE AS PER 603.08. TO INSURE THAT THE VOID IS COMPLETELY FILLED, 2" MIN. DIAMETER HOLES PER 80 SQ.FT. OF DECK AREA AT APPROXIMATELY 8 FT. CENTERS SHALL BE CORED THROUGH THE DECK SLAB AND PUMPED FULL OF GROUT. PAYMENT FOR THE ABOVE INCLUDING FURNISHING AND PLACING ALL MATERIALS AND ALL LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL-FILLING INSIDE EXISTING STRUCTURE.

603 - 20' SPAN X 10' RISE PRECAST REINFORCED CONCRETE THREE SIDED CULERT (SEE PROPOSAL NOTE)

THE JOINTS SHALL BE SEALED WITH A FLEXIBLE PLASTIC MATERIAL CONFORMING TO AASHTO M-198 TYPE B. THE CROSS SECTION OF THE JOINT SEALING MATERIAL SHALL HAVE A MINIMUM HEIGHT OF TWICE THE ANNULAR SPACE OF THE JOINT AND A MINIMUM WIDTH OF 150% THE HEIGHT. THE CONCRETE JOINT SHALL BE PRIMED WITH A PRIMER AS RECOMMENDED BY THE MANUFACTURER BEFORE INSTALLATION. BOX SECTIONS SHALL BE FORCED TO A MINIMUM OF 1/2" GAP BETWEEN SECTIONS. THE EXTERIOR JOINT GAP ON THE TOP OF THE BOX SHALL BE FILLED WITH PORTLAND CEMENT MORTAR.

THE REINFORCING STEEL AREAS AS SHOWN IN FIGURE 1 OF THE PROPOSAL NOTE ARE AS FOLLOWS (SQ. IN./FT.):

As1 =0.43    As2 =0.43    As3 =0.43    As4 =0.95  
As5 =0.75    As6 =0.43    As7 =0.43    As8 =0.43

THE CONCRETE THICKNESSES ARE AS FOLLOWS:

ts=17"  
tw=14"

# 614 WORK ZONE PAVEMENT MARKINGS

## GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND WHEN NECESSARY, REMOVE WORK ZONE RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISUAL EFFECTIVENESS AND NIGHT VISIBILITY AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR SHALL, IN ADVANCE OF ANY SECTION OF ROADWAY LACKING OMTCD FULL PATTERN STANDARD DIMENSION EDGE LINE OR CENTER LINE MARKINGS, ERECT A "NO EDGE LINES" (OW-167) SIGN OR "UNMARKED NO PASSING ZONES" (OW-168) SIGN OR BOTH AS MAY BE APPROPRIATE. THESE SIGNS SHALL BE IN PLACE PRIOR TO EXPOSING THE ROADWAY TO TRAFFIC. THESE SIGNS SHALL BE REPEATED EVERY 1 TO 2 MILES AND AT OTHER LOCATIONS AS NECESSARY. THESE SIGNS SHALL BE REMOVED WHEN THEY NO LONGER APPLY. THE COST FOR FURNISHING AND ERECTING AND SUBSEQUENTLY REMOVING THESE SIGNS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC, UNLESS SPECIFICALLY ITEMIZED.

## TEMPORARY PAVEMENT MARKING MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE EITHER 621.02 PAINT OR 947.03 TYPE B OR C PREFORMED MATERIAL.

### PAINT

PAINTED MARKINGS SHALL BE IN ACCORDANCE WITH 621 EXCEPT THAT THE INCREASE OF 25 PERCENT IN THE APPLICATION RATE FOR NEW BITUMINOUS PAVEMENT AND PARAGRAPH 621.14 SHALL NOT APPLY.

### TYPE B AND TYPE C PREFORMED MATERIAL

PREFORMED MATERIAL SHALL COMPLY WITH 947.03 EXCEPT THAT NO PREFORMED MATERIAL CONTAINING METAL SHALL BE PLACED ON ANY SURFACE UNLESS IT WILL BE REMOVED LATER BY THE CONTRACTOR. TEMPORARY PAVEMENT MARKINGS OF 947.03 PREFORMED MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF 621 OR 847 SURFACE COURSE MARKINGS AT THAT LOCATION. PREFORMED MATERIAL SHALL BE APPLIED IN ACCORDANCE WITH 847 EXCEPT AS MODIFIED HEREIN.

## PLACEMENT

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS CONFLICT WITH THE TRAFFIC PATTERN, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134.

## TEMPORARY MARKING CLASSES

### CLASS I MARKINGS

CLASS I MARKINGS SHALL BE APPLIED TO THE FULL DIMENSIONS AS DEFINED IN 621 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

- 1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
- 2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
- 3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
- 4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

## CLASS II MARKINGS

CLASS II MARKINGS (ABBREVIATED) SHALL BE DEFINED AS FOLLOWS:

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 1.6 GALLONS PER MILE FOR LANE LINE AND CENTER LINE AND 16 GALLONS PER MILE FOR GORE MARKINGS.

## CONFLICTING EXISTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL CONFLICTING EXISTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC UNLESS SPECIFICALLY ITEMIZED.

THE CONTRACTOR SHALL ALSO REMOVE THE PRISMATIC RETRO-REFLECTOR WITHIN ANY RAISED PAVEMENT MARKER (RPM) WHICH IS IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. WHEN THE TEMPORARY PAVEMENT MARKINGS ARE REMOVED AND THE RPM IS NO LONGER IN CONFLICT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE RECESSED REFLECTOR ATTACHMENT AREA OF THE CASTING AND INSTALL A NEW PRISMATIC RETRO-REFLECTOR OF THE SAME KIND AND COLOR. THE COST FOR THIS WORK SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

## INTERIM MARKINGS

WITHIN 21 CALENDAR DAYS AFTER OPENING ANY LENGTH OF PAVEMENT TO TRAFFIC, THE 621 OR 847 PAVEMENT MARKINGS CALLED FOR IN THE PLANS OR EQUIVALENT 614 CLASS I, PAINT MARKINGS SHALL BE APPLIED. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO PLACE AND MAINTAIN 614 CLASS I PAINT MARKINGS AS PART OF THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC.

FOR EACH CALENDAR DAY BEYOND 21 DAYS THAT THIS WORK SHALL REMAIN UNCOMPLETED, THE PROVISIONS OF 108.07 WILL BE INVOKED, EXCEPT THAT BETWEEN NOVEMBER 15 AND APRIL 15 WEATHER CONDITIONS SHALL NOT BE AN ACCEPTABLE REASON FOR EXTENSION.

## METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

## BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

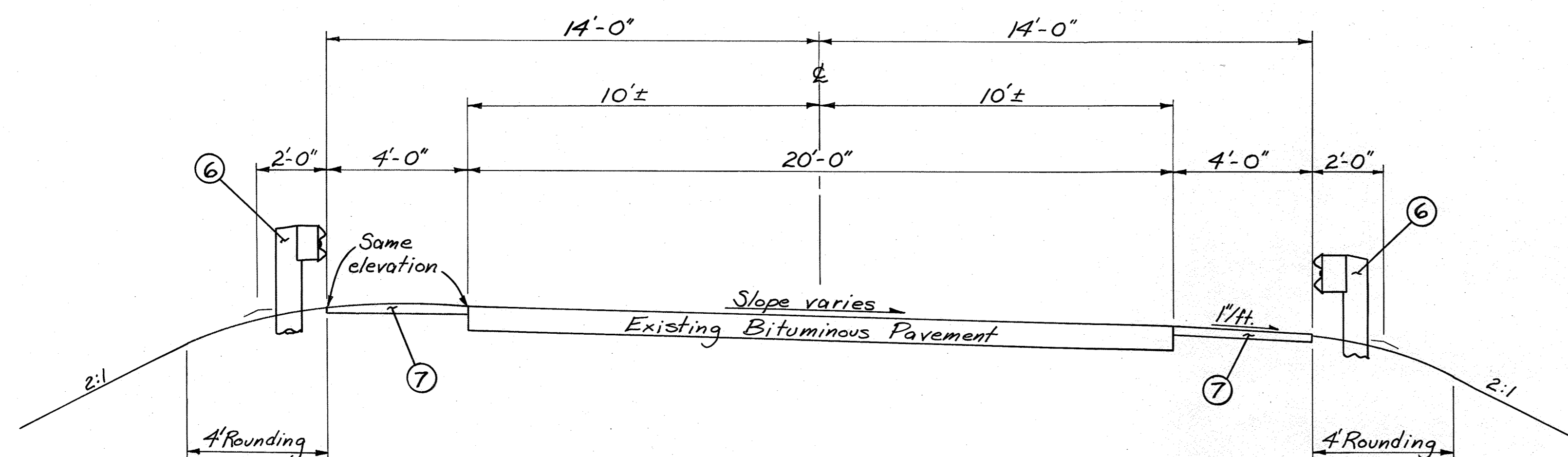
ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS _____, *
614	0.02 MILES	TEMPORARY CENTER LINES, CLASS II _____, *
614	0.07 MILES	TEMPORARY CENTER LINES, CLASS I, _____, *
614	0.13 MILES	TEMPORARY EDGE LINES, CLASS I, _____, *
614	LIN. FT.	TEMPORARY GORE MARKINGS, CLASS II, _____, *
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, _____, *
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, _____, *
614	EACH	TEMPORARY LANE ARROWS, CLASS I, _____, *
614	EACH	TEMPORARY RAILROAD SYMBOL MARKINGS, CLASS I, _____, *
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, _____, *
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, _____, *
614	LIN. FT.	TEMPORARY DOTTED LINES, CLASS I, _____, *
		*621 PAINT, 947.03 TYPE B OR 947.03 TYPE C
fh4		

NOTE: PERMANENT SIGNS AND PAVEMENT MARKINGS TO BE FURNISHED AND INSTALLED BY O.D.O.T. DISTRICT II, WITHIN 30 DAYS AFTER COMPLETION OF PROJECT.

QUANTITIES	
Calculated: JLO	Checked: WRG
Date: 3-17-84	Date: 3-17-84

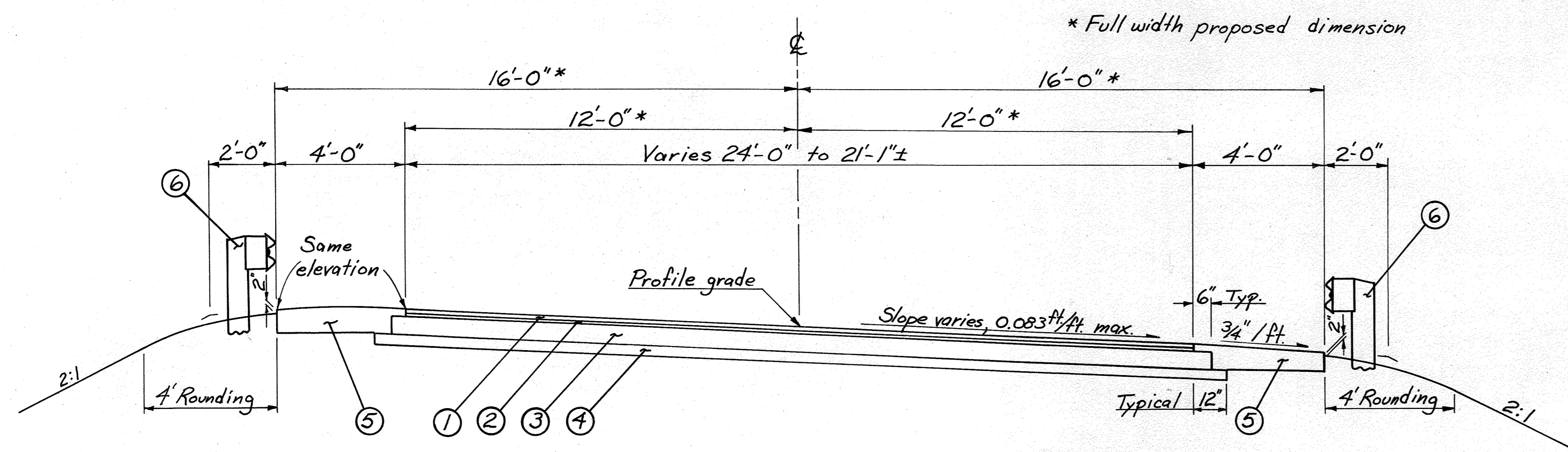
PAVEMENT CALCULATIONS FOR JEF-151-(14.49)

- ITEM 404- ASPHALT CONCRETE  
 Sta. 764+50 to Sta. 765+00 -  $\frac{(23.1+24.0)}{2} \times 50' = 1177.5'$   
 Sta. 765+00 to Sta. 765+33 -  $24.0' \times 33' = 792.0'$   
 Sta. 765+33 to Sta. 765+75 -  $\frac{(24.0+21.1)}{2} \times 42' = 947.1'$   
 $2916.6' \times 14' \div 12' = 27 = 11 \text{ Cu. yds.}$
- ITEM 402- ASPHALT CONCRETE  
 Sta. 764+50 to Sta. 765+75 - (from above)  $2916.6' \times 13\frac{3}{4}' \div 12' = 27 = 16 \text{ Cu. yds.}$
- ITEM 403- ASPHALT CONCRETE (over three sided box culvert)  
 Sta. 765+10.71 to Sta. 765+33.04 -  $22.33' \times 35' \times \frac{0.90'}{2} (\text{avg.}) \div 27 = 13 \text{ Cu. yds.}$
- ITEM 301- BITUMINOUS AGGREGATE BASE  
 Sta. 764+50 to Sta. 765+00 -  $\frac{(24.1+25.0)}{2} \times 50' = 1227.5'$   
 Sta. 765+00 to Sta. 765+33 -  $25.0' \times (33'-22.33') = 266.8'$   
 Sta. 765+33 to Sta. 765+75 -  $\frac{(25.0+22.1)}{2} \times 42' = 989.1'$   
 $2483.4' \times 7' \div 12' = 27 = 54 \text{ Cu. yds.}$
- ITEM 310- SUBBASE  
 Sta. 764+50 to Sta. 765+00 -  $\frac{(25.1+26.0)}{2} \times 50' = 1277.5'$   
 Sta. 765+00 to Sta. 765+33 -  $26.0' \times (33'-22.33') = 277.4'$   
 Sta. 765+33 to Sta. 765+75 -  $\frac{(26.0+23.1)}{2} \times 42' = 1031.1'$   
 $2586.0' \times 4' \div 12' = 27 = 32 \text{ Cu. yds.}$
- ITEM 203- SUBGRADE COMPACTION  
 Sta. 764+50 to Sta. 765+75 - (from above)  $2586.0' \div 9 = 287 \text{ Sq. yds.}$
- ITEM 304- AGGREGATE BASE  
 Sta. 764+50 to Sta. 765+10.71 - 60.71'  
 Sta. 765+33.04 to Sta. 765+75 - 41.96'  
 $2 \times 102.67' \times [(4' \times 3' \div 12') + (3.5' \times 6' \div 12')] \div 27 = 21 \text{ Cu. yds.}$



TYPICAL SECTION  
JEF-151-(13.55)

- LEGEND
- ① - Item 404 1/4" Asphalt concrete
  - ② - Item 402 1 3/4" Asphalt concrete
  - ③ - Item 301 7" Bituminous aggregate base
  - ④ - Item 310 4" Subbase
  - ⑤ - Item 304 8" Aggregate base
  - ⑥ - Item 606 Guardrail, Type 5
  - ⑦ - Item Special Reshaping berm



TYPICAL SECTION  
JEF-151-(14.49)

NOTE: For section over box culvert see  
General Plan & Elevation, sheet 11.

SUPERELEVATION TABLE							
JEF-151-(14.49)							
P.C. Sta. 763+85.05	D <sub>c</sub> = 27°-00'		STATION		Profile Grade		P.T. Sta. 765+01.22
P.C. Sta. 765+87.66	D <sub>c</sub> = 13°-40'		STATION		Profile Grade		P.T. Sta. 767+76.81
Left Edge	Super.	Width	STATION	Profile Grade	Width	Super.	Right Edge
Match existing	11.0±		764+50	890.74	12.1±		Match existing
891.06	+0.74	11.3'	+75	890.32	12.2'	-0.84	889.48
890.44	+0.60	12.0'	765+00	889.84	12.0'	-0.70	889.14
890.10	+0.47	12.0'	+10	889.63	12.0'	-0.60	889.03
889.62	+0.26	12.0'	+22	889.36	12.0'	-0.44	888.92
889.50	+0.21	12.0'	+25	889.29	12.0'	-0.39	888.90
889.18	+0.09	12.0'	+33	889.09	12.0'	-0.24	888.85
888.41	-0.19	11.4'	+50	888.60	11.4'	+0.09	888.69
Match existing	10.5±		765+75	887.78	10.6±		Match existing

GENERAL SUMMARY				*	**	*
ITEM	TOTAL	UNIT	DESCRIPTION	PART 1	PART 2	PART 3
201	LUMP	SUM	Clearing and grubbing	LUMP	-	-
202	LUMP	SUM	Portions of structures removed	LUMP	LUMP	LUMP
203	190	CU.YD.	Excavation not including embankment construction	8	182	-
203	263	CU.YD.	Embankment	115	148	-
203	3	CU.YD.	Embankment, using granular material	-	-	3
203	287	SQ.YD.	Subgrade compaction	-	287	-
301	54	CU.YD.	Bituminous aggregate base	-	54	-
304	21	CU.YD.	Aggregate base	-	21	-
310	32	CU.YD.	Subbase	-	32	-
402	16	CU.YD.	Asphalt concrete, AC-20	-	16	-
403	13	CU.YD.	Asphalt concrete, AC-20	-	13	-
404	11	CU.YD.	Asphalt concrete, AC-20	-	11	-
SPECIAL	325	LIN.FT.	Reshaping berms	325	-	-
502	LUMP	SUM	Temporary structure	-	LUMP	-
503	56	CU.YD.	Rock excavation	34	22	-
509	3,697	LBS.	Reinforcing steel	1,636	1,705	356
510	12	EACH	Dowel holes	-	-	12
614	0.02	MILES	Temporary center lines, Class II	-	0.02	-
614	0.07	MILES	Temporary center lines, Class I	-	0.07	-
614	0.13	MILES	Temporary edge lines, Class I	-	0.13	-
601	3	CU.YD.	Rock channel protection, Type B with filter	-	-	3
602	158	CU.YD.	Concrete masonry, as per plan	59	91	8
603	46.0	LIN.FT.	12'-6" x 7'-11" Conduit, Type A, 707.03 (0.168-0.188) or 12'-11" x 7'-6" Conduit, Type A, 707.23 (0.100-0.125) installed as per plan	46.0	-	-
603	37.33	LIN.FT.	20'-0" x 10'-0" Precast reinforced concrete three sided culvert (See Proposal Note)	-	37.33	-
606	600	LIN.FT.	Guardrail, Type 5	250	350	-
606	7	EACH	Anchor assembly, Type A	3	4	-
606	1	EACH	Anchor assembly, Type T	1	-	-
606	100	LIN.FT.	Guardrail, Type 6, as per plan	100	-	-
615	LUMP	SUM	Temporary roads	-	LUMP	-
615	520	SQ.YD.	Temporary pavement, class B	-	520	-
659	511	SQ.YD.	Seeding and mulching	308	203	-
659	0.05	TON	Commercial fertilizer	0.03	0.02	-
659	0.23	TON	Agricultural liming	0.14	0.09	-
SPECIAL	56	CU.YD.	Filling inside existing structure	56	-	-
614	LUMP	SUM	Maintaining traffic	LUMP	LUMP	LUMP
619	LUMP	SUM	Field office	LUMP	LUMP	LUMP
623	LUMP	SUM	Construction layout stakes	LUMP	LUMP	LUMP
624	LUMP	SUM	Mobilization	LUMP	LUMP	LUMP

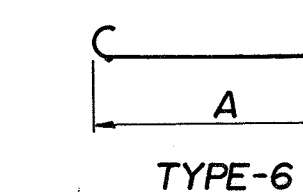
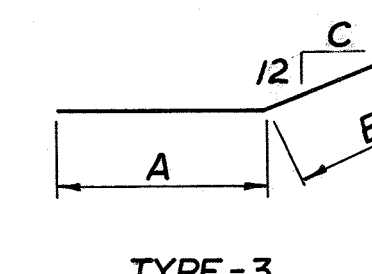
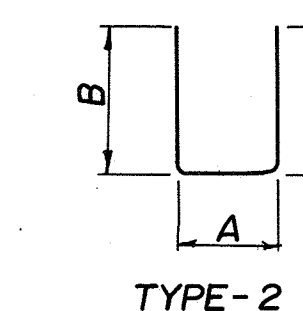
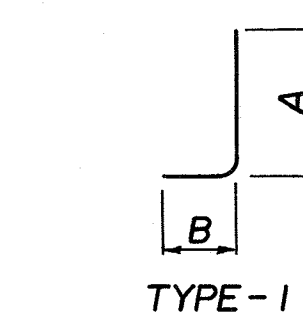
\*STATE AND VILLAGE OF  
NEW ALEXANDRIA

\*\* STATE

PART 1 = JEF-151-1355  
 PART 2 = JEF-151-1449  
 PART 3 = Culvert Extension  
 JEF-151-1354

REINFORCING STEEL LIST

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS		
	INLET	OUTLET	TOTAL				A	B	C
HEADWALLS (JEF-151-1355)									
F501	2	2	4	16'-0"	67	3	14'-6"	1'-6"	7
F502	2	2	4	16'-0"	67	ST.			
F601	10	10	20	8'-4"	250	1	6'-0"	2'-6"	
F602	7	7	14	6'-4"	133	1	4'-0"	2'-6"	
H501	6	6	12	7'-3"	91	1	6'-2"	1'-2 1/2"	
H502	4	4	8	6'-2"	51	ST.			
H503	4	-	4	8'-3"	34	ST.			
H504	-	4	4	10'-3"	43	ST.			
H505	4	4	8	14'-6"	121	3	8'-6"	6'-0"	2
H506	4	4	8	5'-6"	46	ST.			
H507	1	-	1	9'-3"	10	ST.			
H508	-	1	1	11'-3"	12	ST.			
H509	2 SERIES OF 6 = 12	-	12	VARIABLE FROM 9'-3" TO 7'-3"	103	ST.			
H510	2 SERIES OF 6 = 12	-	12	VARIABLE FROM 11'-3" TO 6'-5"	111	ST.			
H511	4	4	8	15'-3"	127	ST.			
H512	4	4	8	16'-0"	134	ST.			
H513	-	4	4	17'-5"	73	3	16'-0"	1'-5"	7
H514	4	-	4	16'-9"	70	3	15'-4"	1'-5"	7
H515	2	2	4	6'-5"	27	1	5'-1"	1'-5"	
H516	2	-	2	6'-4"	13	ST.			
H517	-	2	2	8'-4"	17	ST.			
H518	2	-	2	7'-6"	16	ST.			
H519	-	2	2	9'-6"	20	ST.			
HEADWALL (BOX CULVERT EXTENSION)									
		TOP	BOTTOM						
C401	19	19	38	4'-10"	123	6	3'-10"		
C402	5	5	14	5'-10"	55	1	5'-3"	8 1/2"	
	2	2							
		LEFT	RIGHT						
C403	6	6	12	4'-9"	38	2	3'-7"	8 1/2"	8 1/2"
C501			3	15'-10"	50	ST.			
C502			8	6'-6"	54	ST.			
C601*			12	2'-0"	36	ST.			
HEADWALLS (JEF-151-1449)									
		WING	X 4 =	TOTAL					
B501	2 SERIES OF 6 BARS = 12			48	VARIABLE FROM 8'-9" TO 10'-9"	488	ST.		
B502	6			24	15'-7"	390	ST.		
B503	5			20	15'-3"	318	ST.		
B504	2			8	15'-5"	129	ST.		
B601	11			44	5'-9"	380	1**	4'-3"	1'-8"



\*\* Bent 5/8" per ft. from vertical.  
 \* Denotes dowels

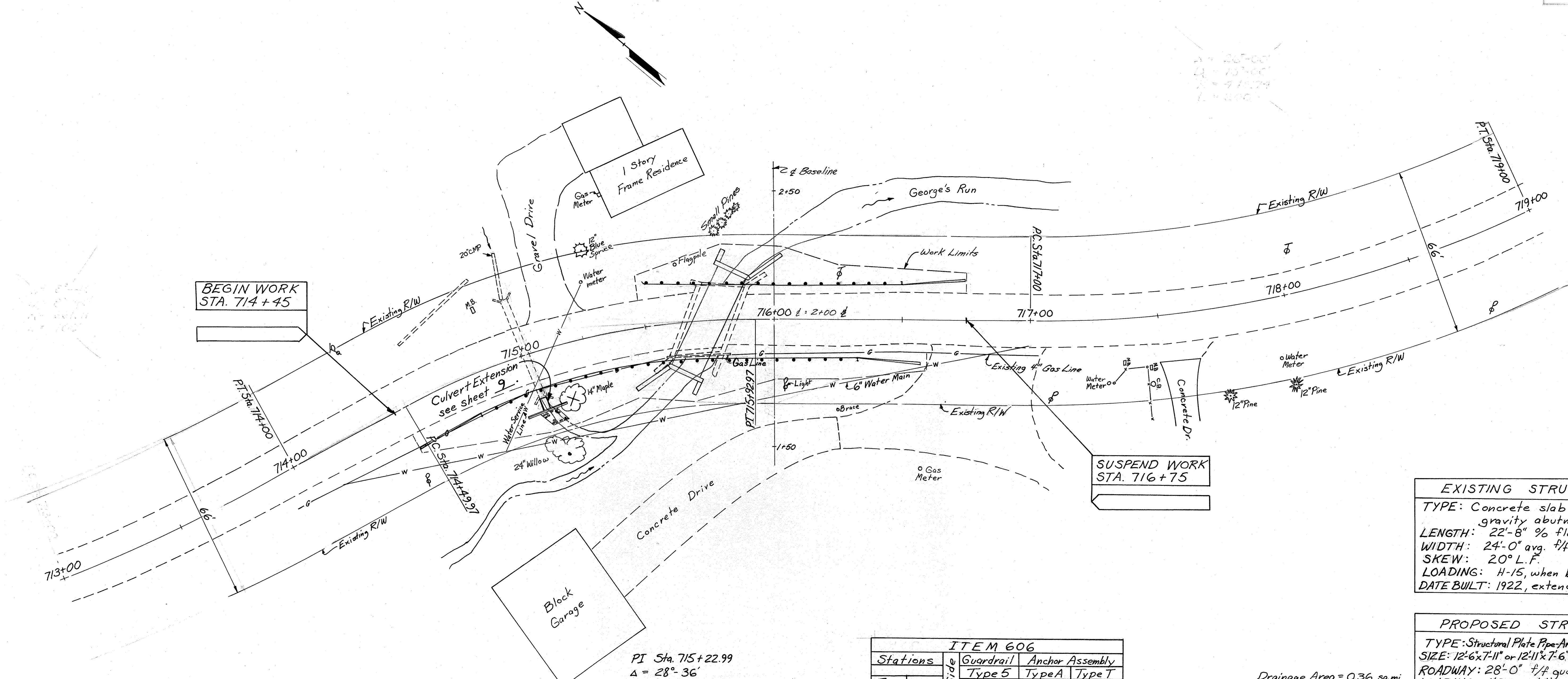
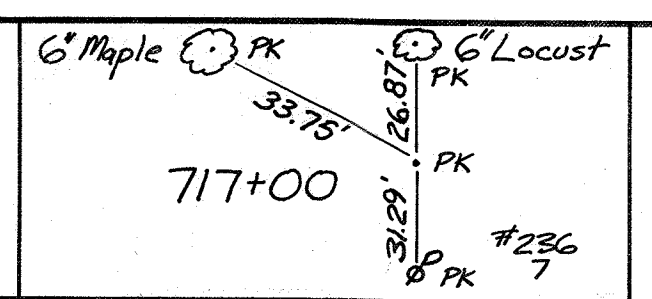
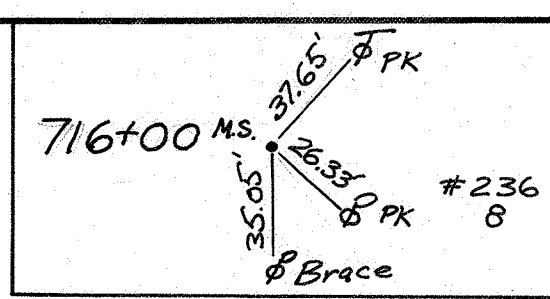
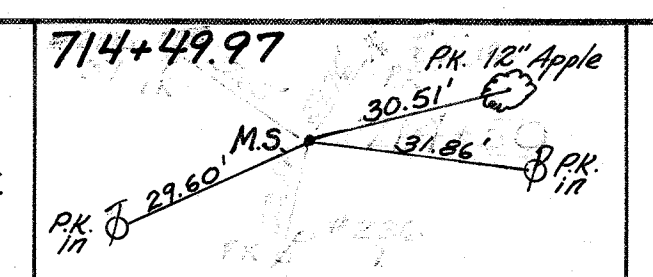
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 BUREAU OF MAINTENANCE

**GENERAL SUMMARY & REINFORCING STEEL LIST**

BRIDGE NO. JEF-151-1355 & JEF-151-1449  
 CULVERT NO. JEF-151-1354

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO	WRG					

B.M. - Minespike in Telephone Pole  
Sta. 714+38 - 30' Lt.  
Elev. = 1021.11



BEGIN WORK  
STA. 714+45

SUSPEND WORK  
STA. 716+75

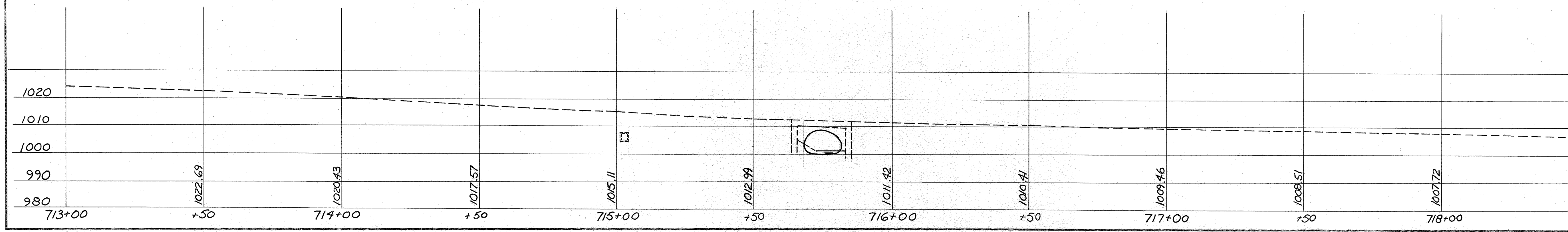
**EXISTING STRUCTURE**  
TYPE: Concrete slab with concrete, gravity abutments  
LENGTH: 22'-8" % floor  
WIDTH: 24'-0" avg. f/f curbs  
SKEW: 20° L.F.  
LOADING: H-15, when built  
DATE BUILT: 1922, extended 1939

**PROPOSED STRUCTURE**  
TYPE: Structural Plate Pipe Arch Conduit, Type A  
SIZE: 12'-6"x7'-11" or 12'-11"x7'-6", 46'-0" Long  
ROADWAY: 28'-0" f/f guardrail  
LOADING: HS 20-44  
WEARING SURFACE: Asphalt Concrete  
ALIGNMENT: 20° R.C.  
SKEW: 28°-0' L.F. Tangent to Curve

PI Sta. 715+22.99  
Δ = 28°-36'  
D<sub>c</sub> = 20°-00'  
R = 286.48'  
L = 143.00'  
T = 73.02'

Stations		ITEM 606		
From	To	Guardrail	Anchor Assembly	
		Type 5	Type A	Type T
		L'in. ft.	Each	Each
714+45	716+75	162.5	2	-
715+50	716+75	87.5	1	1
Carried to Summary		250.0	3	1

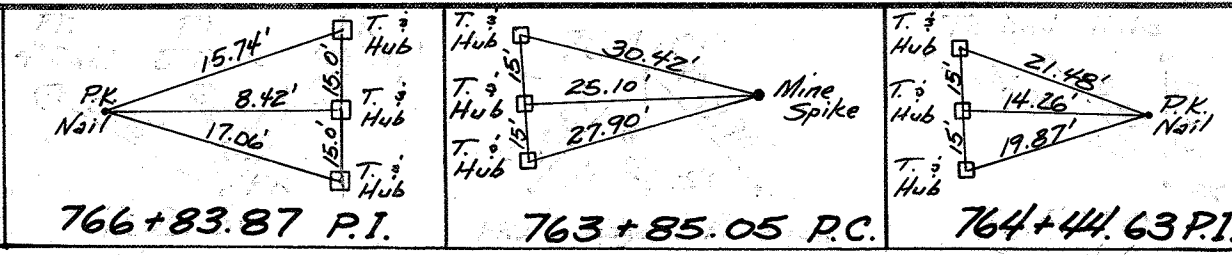
Drainage Area = 0.36 sq. mi.  
Q<sub>25</sub> = 358 cfs  
Q<sub>100</sub> = 491 cfs  
HW<sub>100</sub> = 1008.0



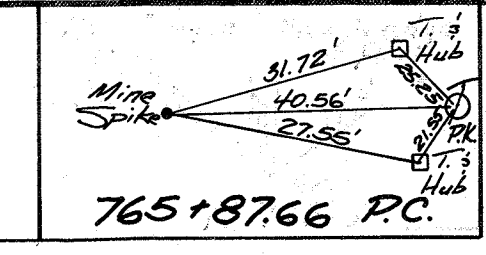
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
BUREAU OF MAINTENANCE

**SITE PLAN**  
BRIDGE NO. JEF-151-1355  
OVER GEORGE'S RUN  
JEFFERSON COUNTY

PRESENT TOPOGRAPHY	DESIGNED	PROPOSED WORK
SURVEYED	DRAWN	CHECKED
District II	District II	WRG



B.M. - Mine spike  
in Telephone pole  
Sta. 767+14 - 16' Rt.  
Elev. 885.76

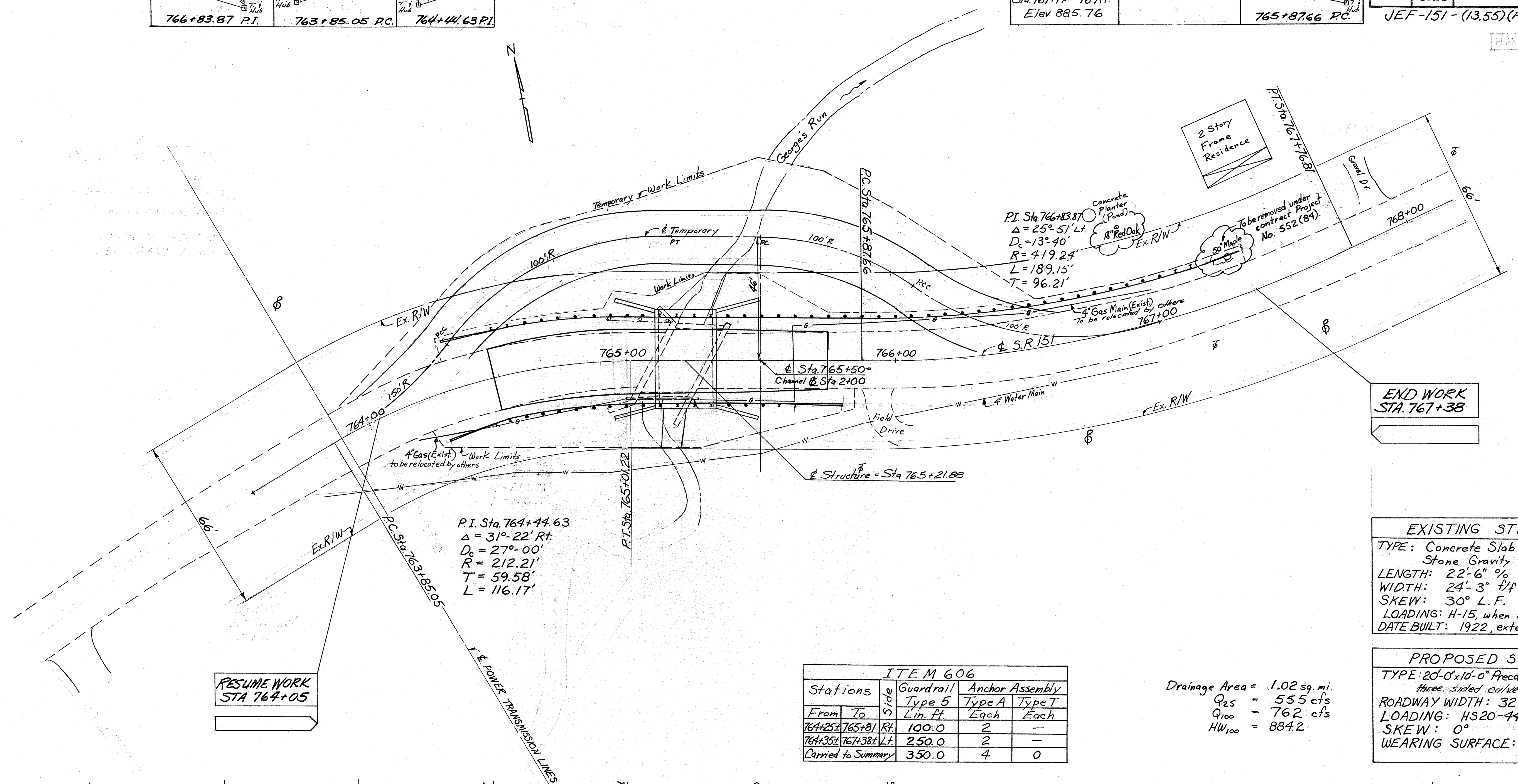


FHWA REGION	STATE	PROJECT
5	OHIO	

JEF-151 - (13.55) (14.49)

6  
17

PLAN NO. BR-66-84



END WORK  
STA 767+38

RESUME WORK  
STA 764+05

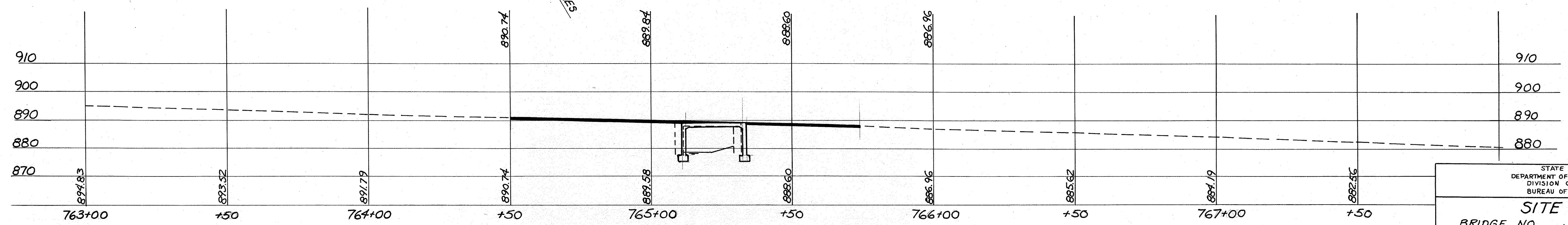
**EXISTING STRUCTURE**  
 TYPE: Concrete Slab with Concrete & Stone Gravity Abutments  
 LENGTH: 22'-6" % floor  
 WIDTH: 24'-3" +/- curbs  
 SKEW: 30° L.F.  
 LOADINGS: H-15, when built  
 DATE BUILT: 1922, extended 1939

**PROPOSED STRUCTURE**  
 TYPE: 20'-0"x10'-0" Precast reinforced concrete three sided culvert  
 ROADWAY WIDTH: 32'-0" +/- guardrail  
 LOADINGS: HS20-44  
 SKEW: 0°  
 WEARING SURFACE: Asphalt concrete

ITEM 606

Stations	Side	Anchor Assembly			
		Guardrail Type 5	Type A	Type T	
From	To	L'in. ft.	Each	Each	
764+25	765+81	Rt.	100.0	2	-
764+35	767+38	Lt.	250.0	2	-
Carried to Summary			350.0	4	0

Drainage Area = 1.02 sq. mi.  
 Q<sub>25</sub> = 555 cfs  
 Q<sub>100</sub> = 762 cfs  
 HW<sub>100</sub> = 884.2



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 BUREAU OF MAINTENANCE

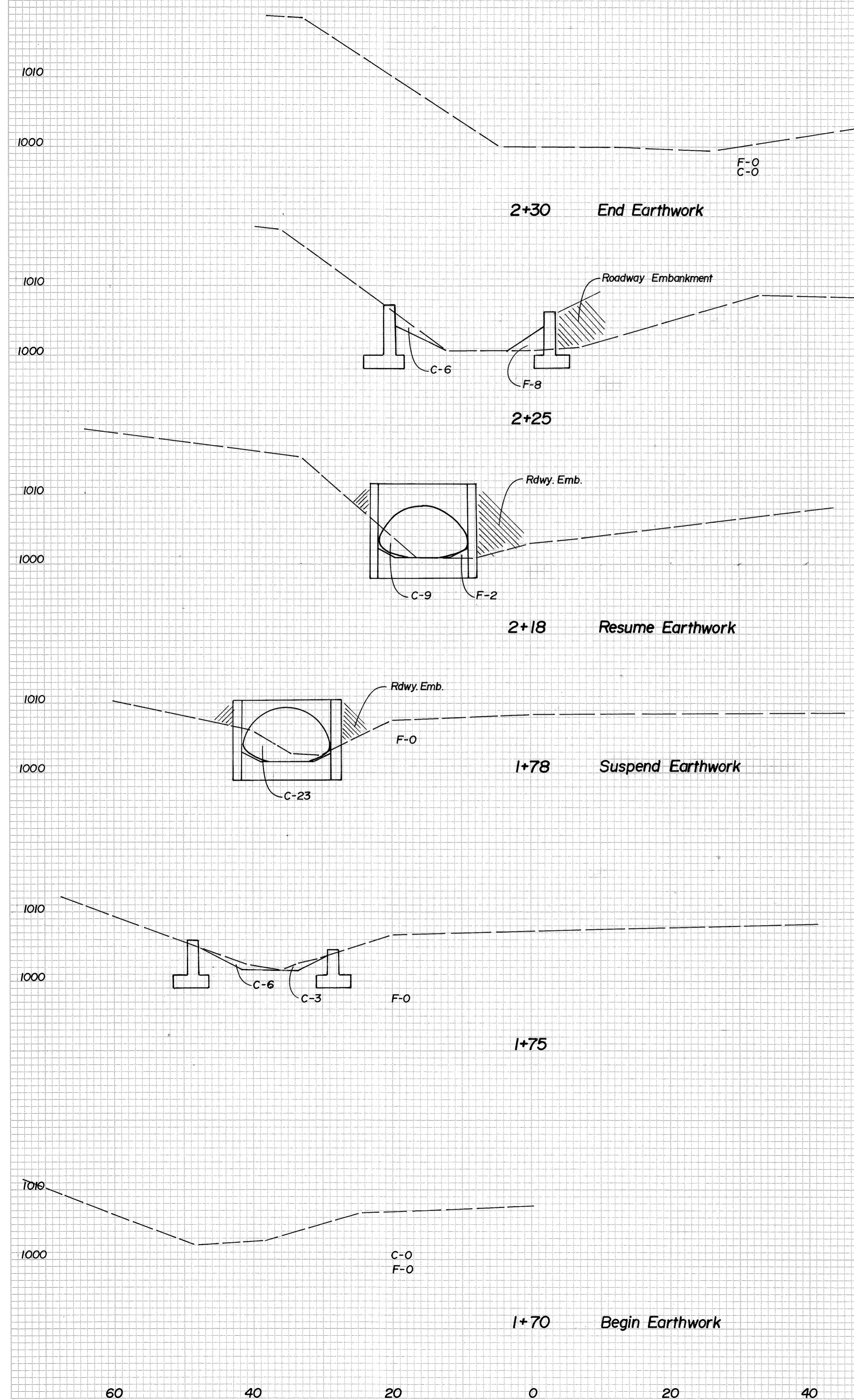
**SITE PLAN**  
 BRIDGE NO. JEF-151-1449  
 OVER GEORGE'S RUN  
 JEFFERSON COUNTY

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
District 11	District 11	JLO	H	WRG	



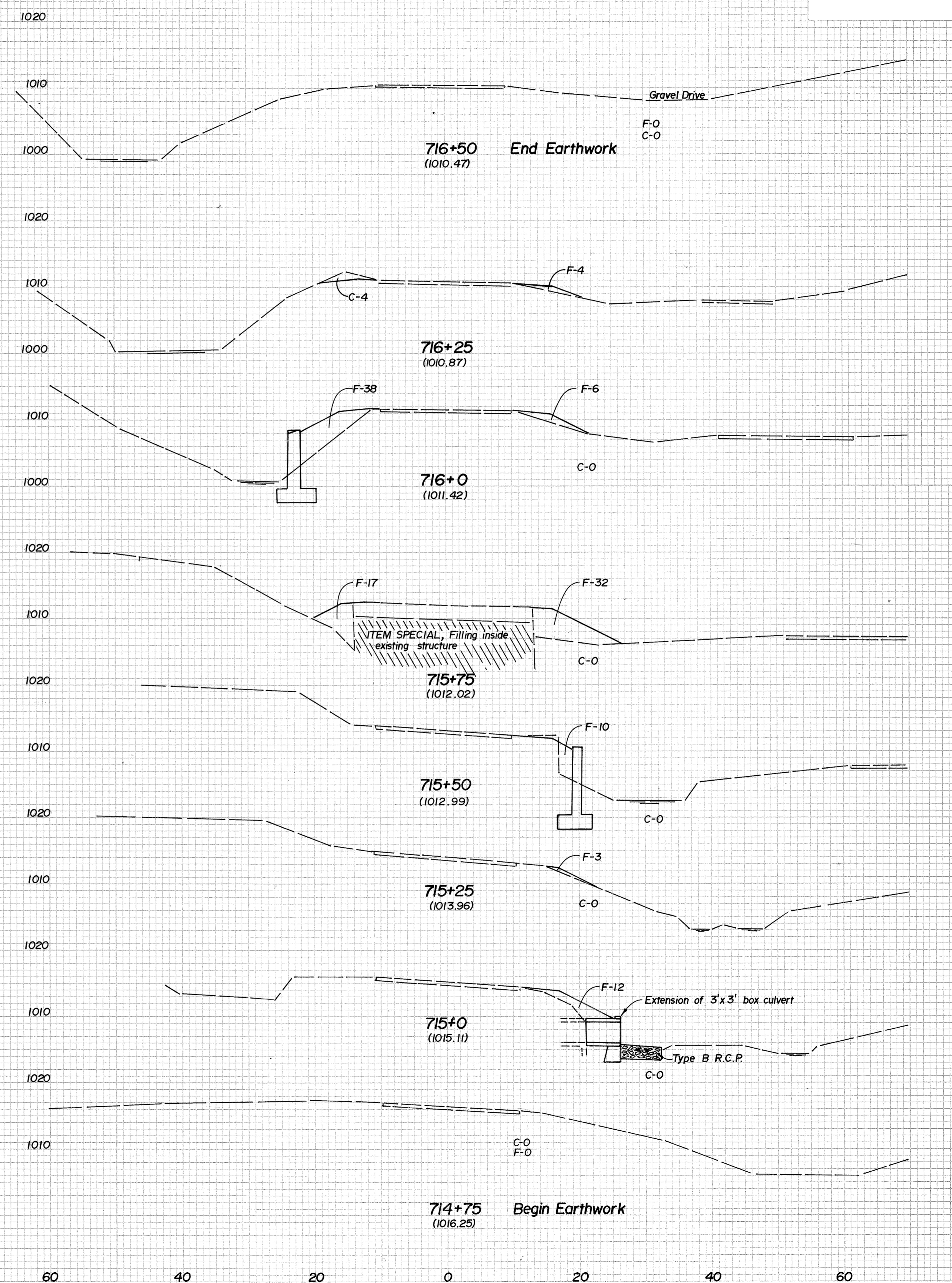
CALC. *WAG* DATE 3-14-84  
 CHK *JLO* DATE 3-15-84

CHANNEL CROSS SECTIONS



SEEDING WIDTH	END AREA SQ.YD.	END AREA		CU.YD.	
		CUT	FILL	EXC.	EMB.
0	0	0	0	0	0
4	4	1	1	1	1
14	14	6	8	6	8
8	8	2	1	2	1
6	6	9	2	9	2
6	6	23	0	23	0
3	3	2	0	2	0
12	12	9	0	9	0
3	3	1	0	1	0
0	0	0	0	0	0

ROADWAY CROSS SECTIONS



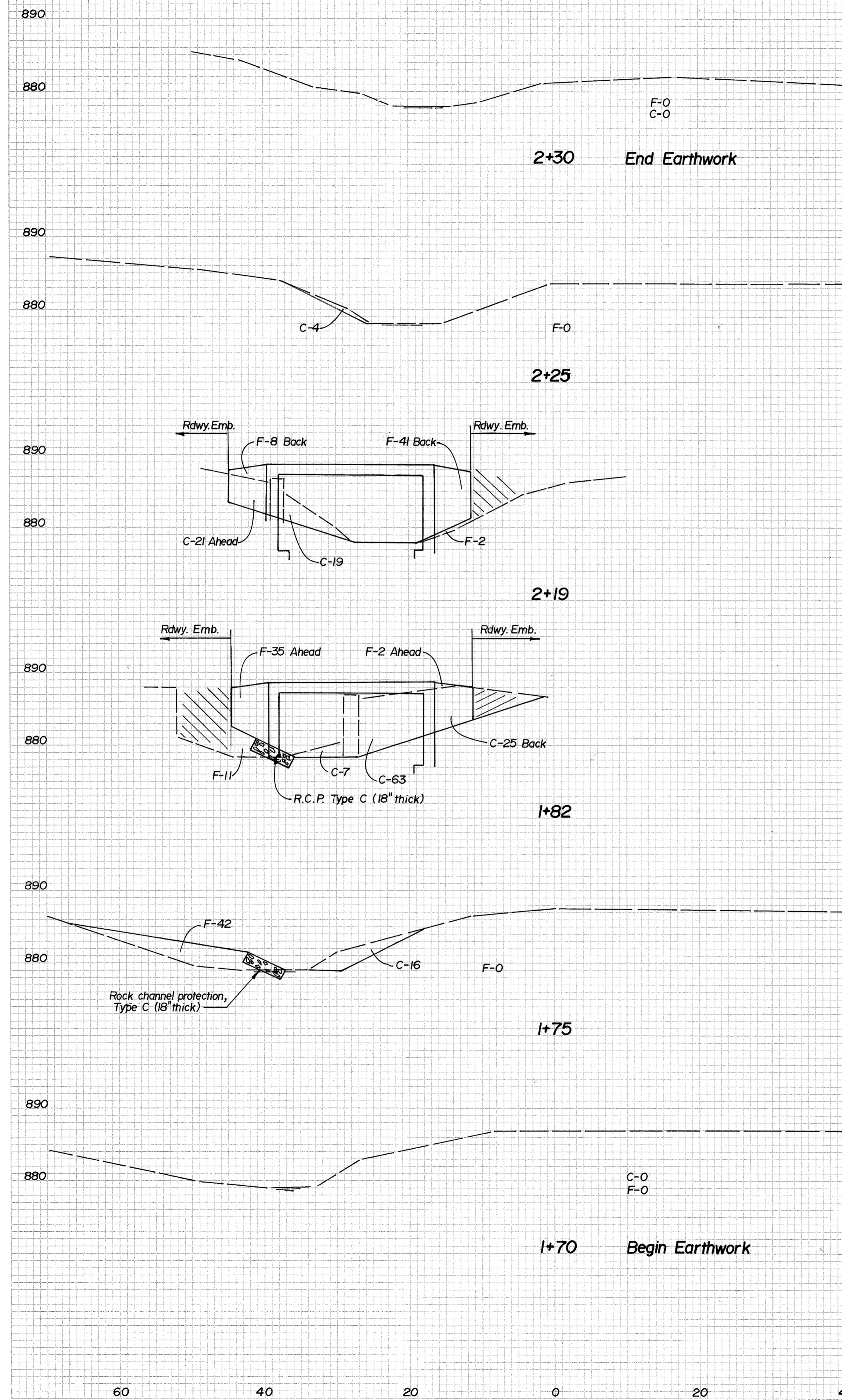
SEEDING WIDTH	END AREA SQ.YD.	END AREA		CU.YD.	
		CUT	FILL	EXC.	EMB.
0	0	0	0	0	0
8	8	1	1	1	1
20	20	4	4	4	4
63	63	1	22	1	22
25	25	0	44	0	44
71	71	0	43	0	43
26	26	0	49	0	49
50	50	0	27	0	27
10	10	0	10	0	10
25	25	0	6	0	6
8	8	0	3	0	3
32	32	0	7	0	7
15	15	0	12	0	12
21	21	0	6	0	6
0	0	0	0	0	0

FHWA REGION	STATE	PROJECT	7 17
5	OHIO		

JEF-151-(13.55)(14.49)      BR-66-84

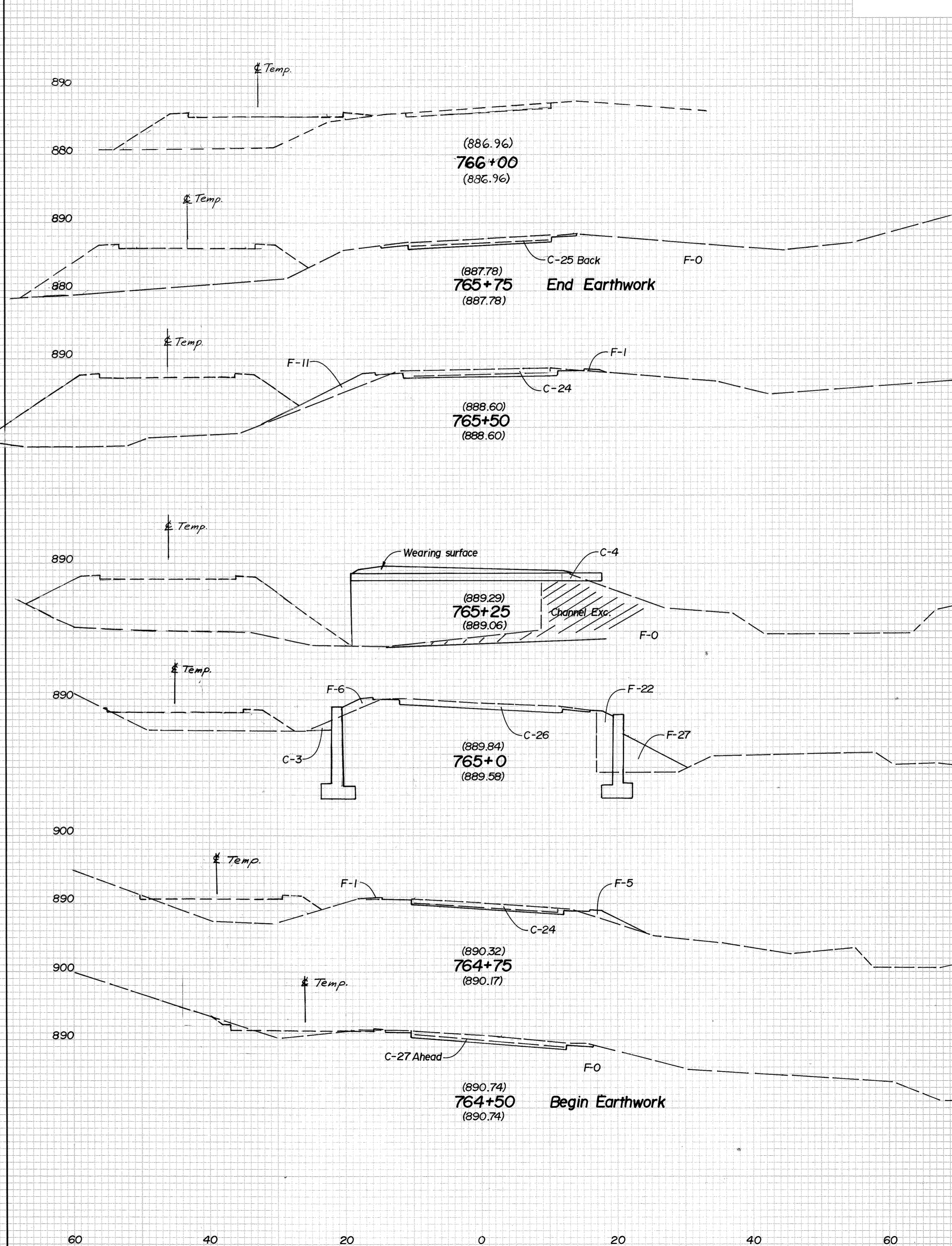
CALC. WRG DATE 3-17-84  
 CHK. JLO DATE 3-17-84

CHANNEL CROSS SECTIONS



SEEDING	END AREA		CU. YD.	
	WIDTH	SQ. YD.	CUT	FILL
0	0	0	0	0
1	1	1	0	0
13	4	0	0	0
4	5	1	0	0
27	Ahead 40 Back 19	Ahead 2 Back 49	0	0
36	61	59	0	0
25	Ahead 70 Back 95	37 11	0	0
8	14	7	0	0
38	16	42	0	0
4	1	4	0	0
0	0	0	0	0

ROADWAY CROSS SECTIONS

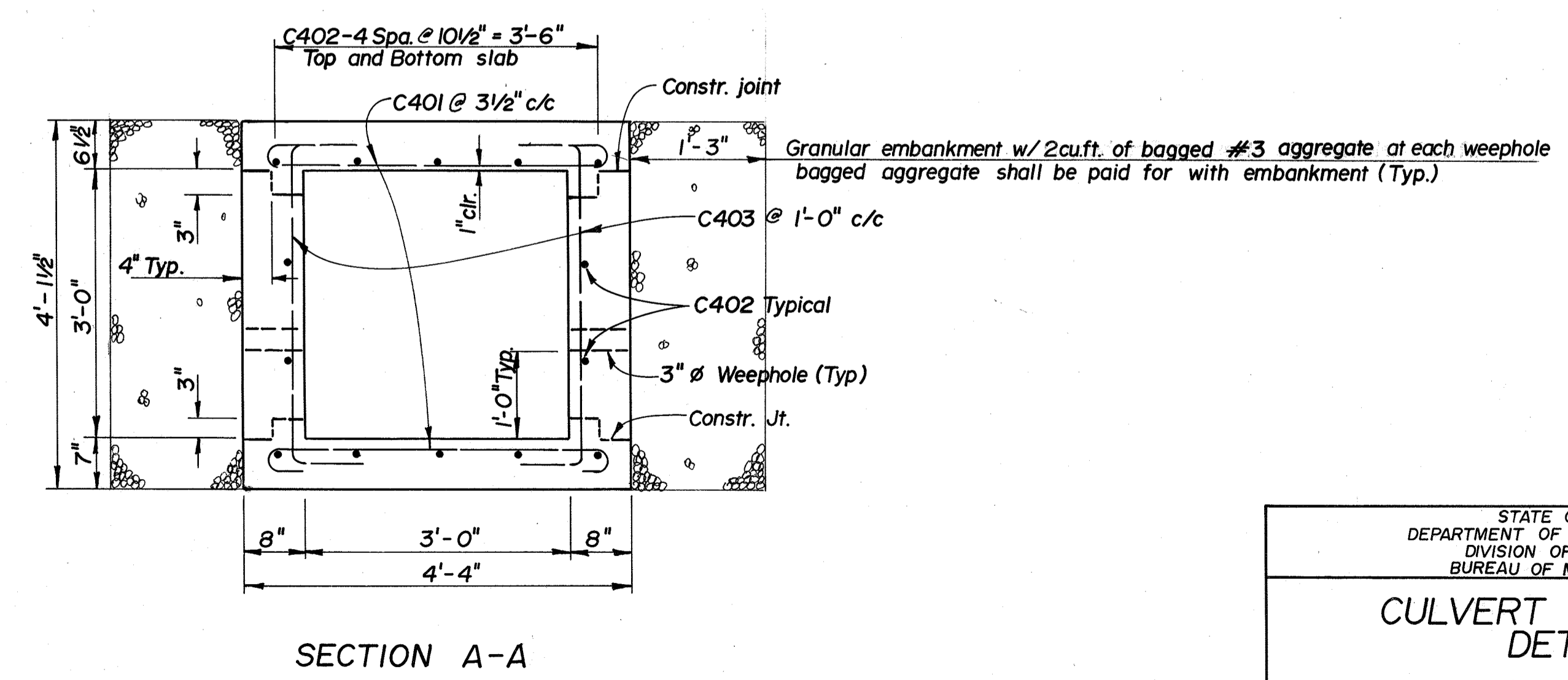
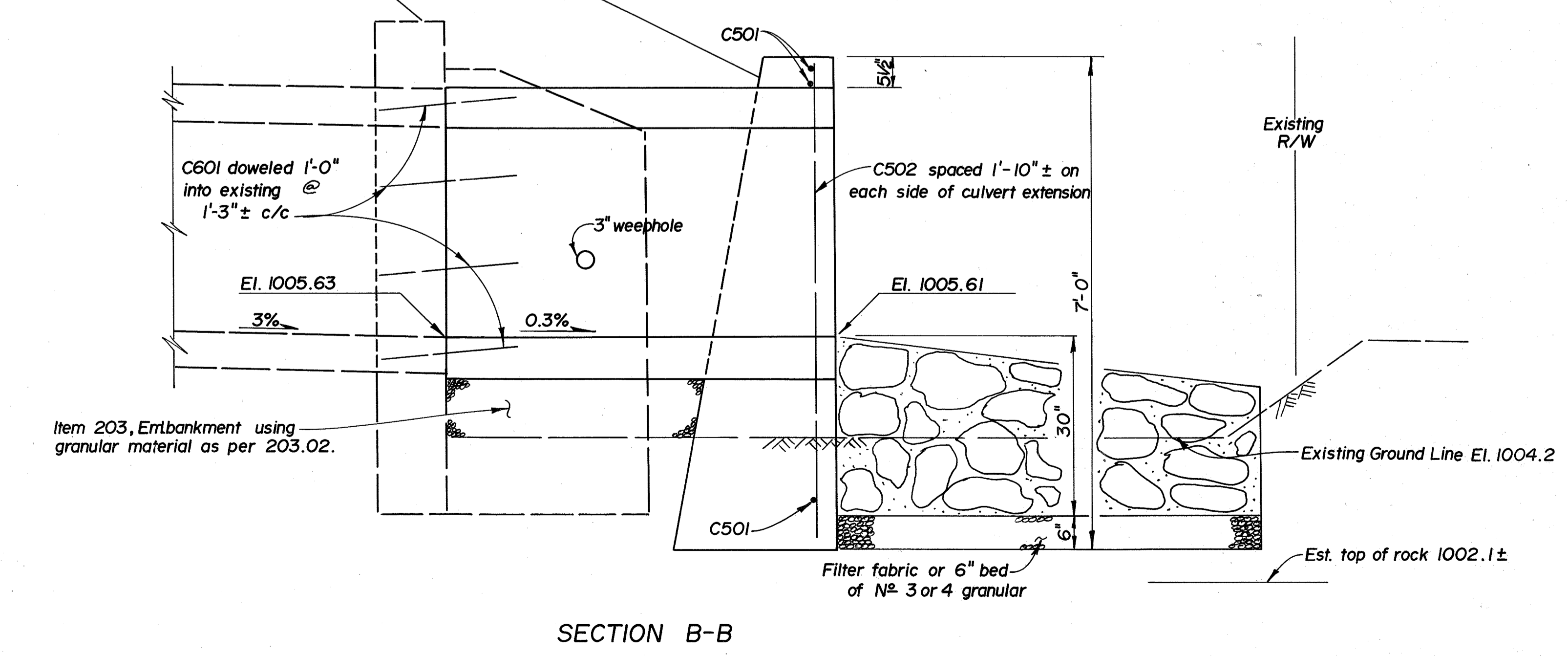
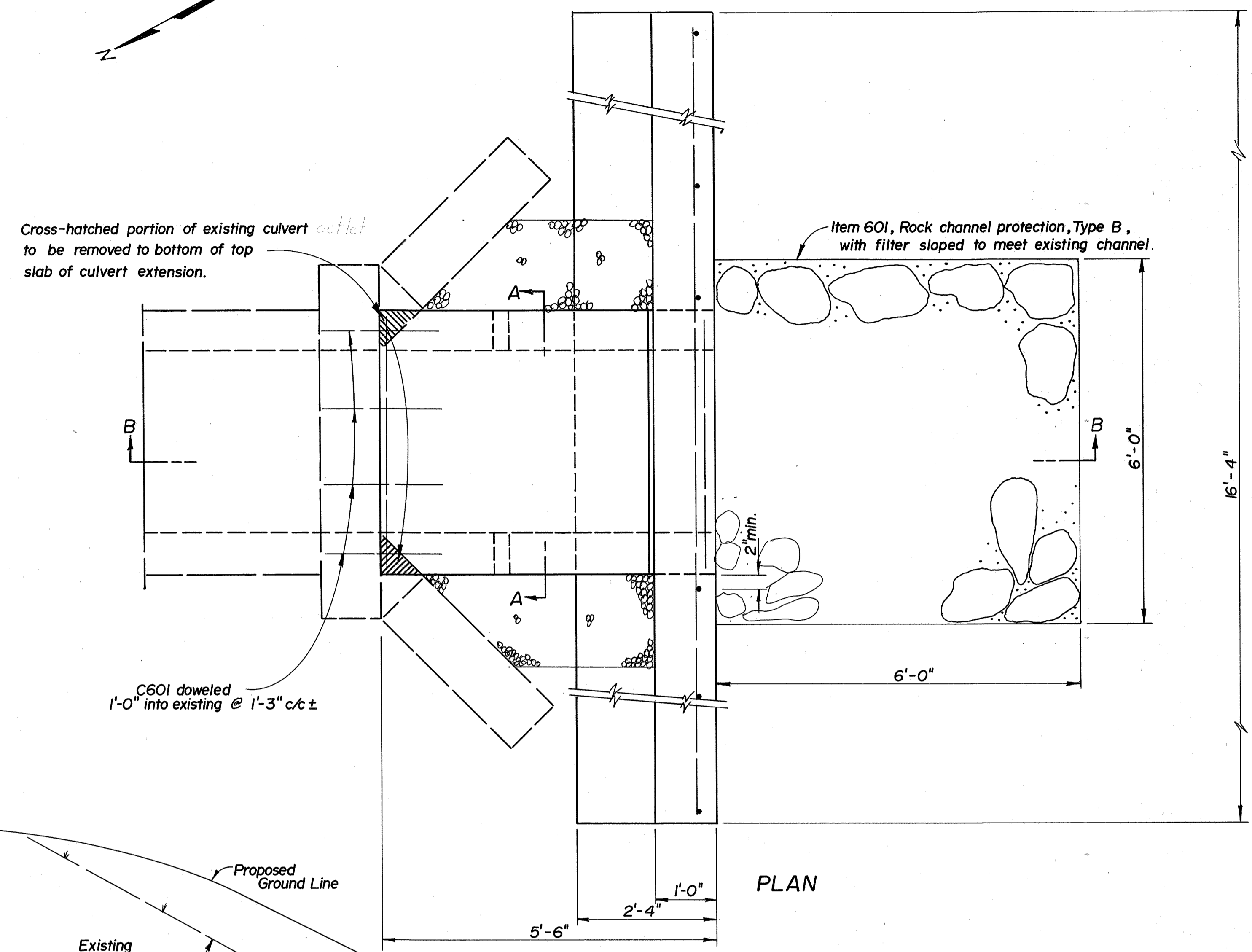


FHWA REGION	STATE	PROJECT	8 17
5	OHIO		

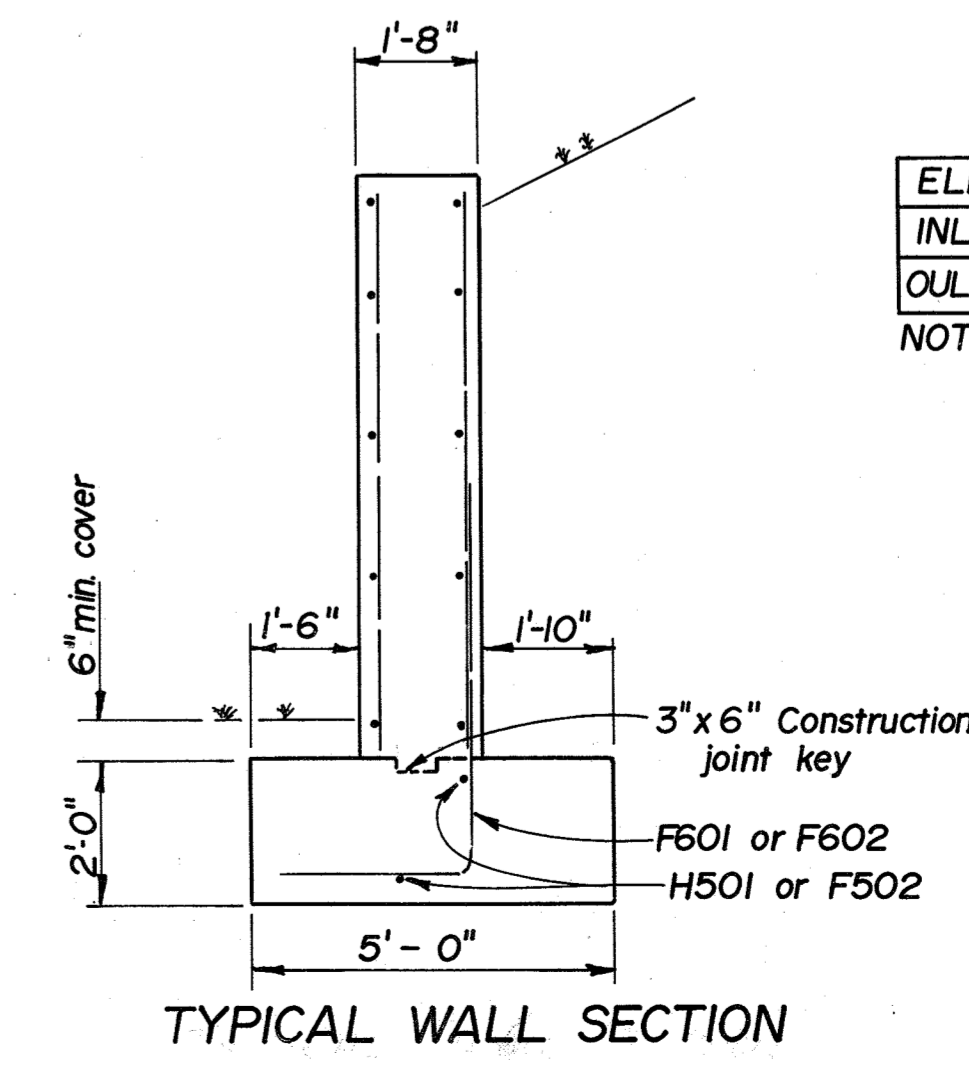
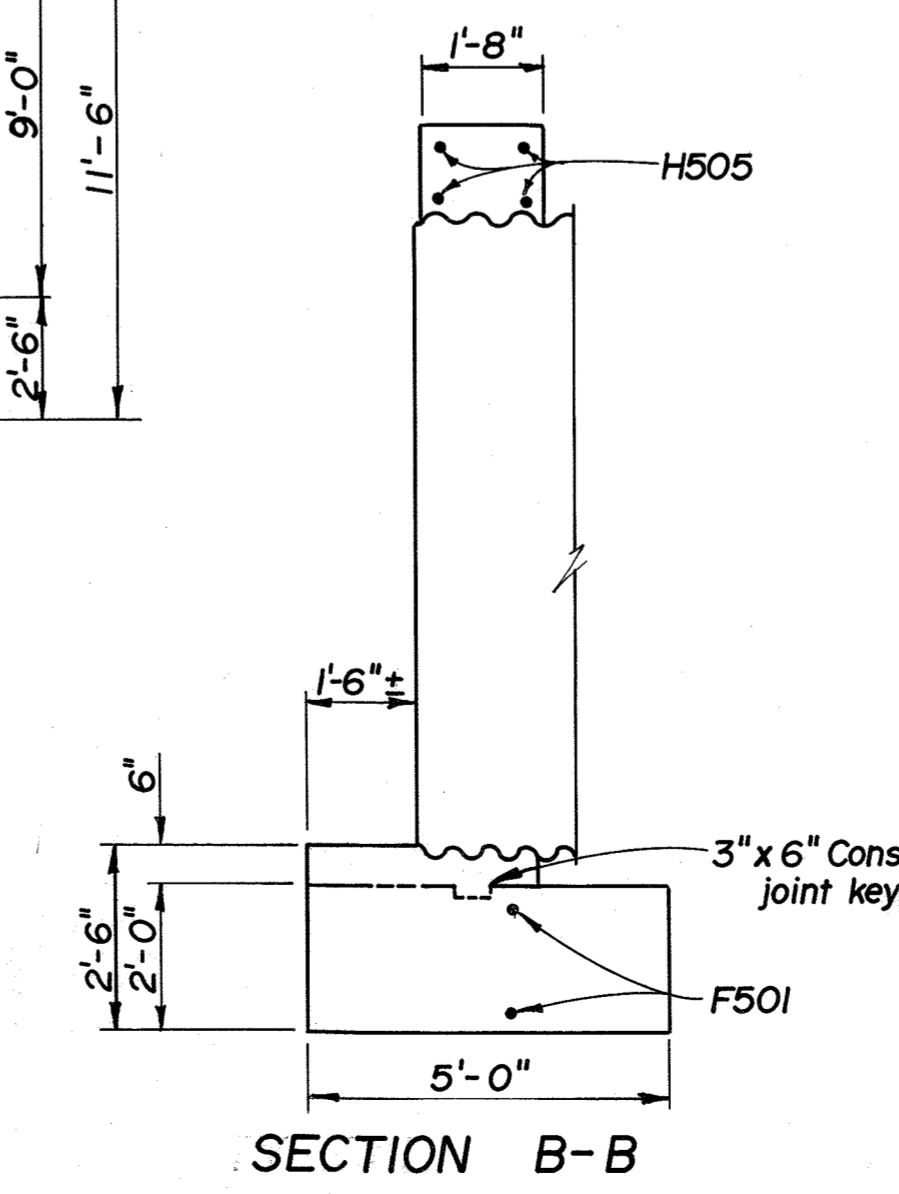
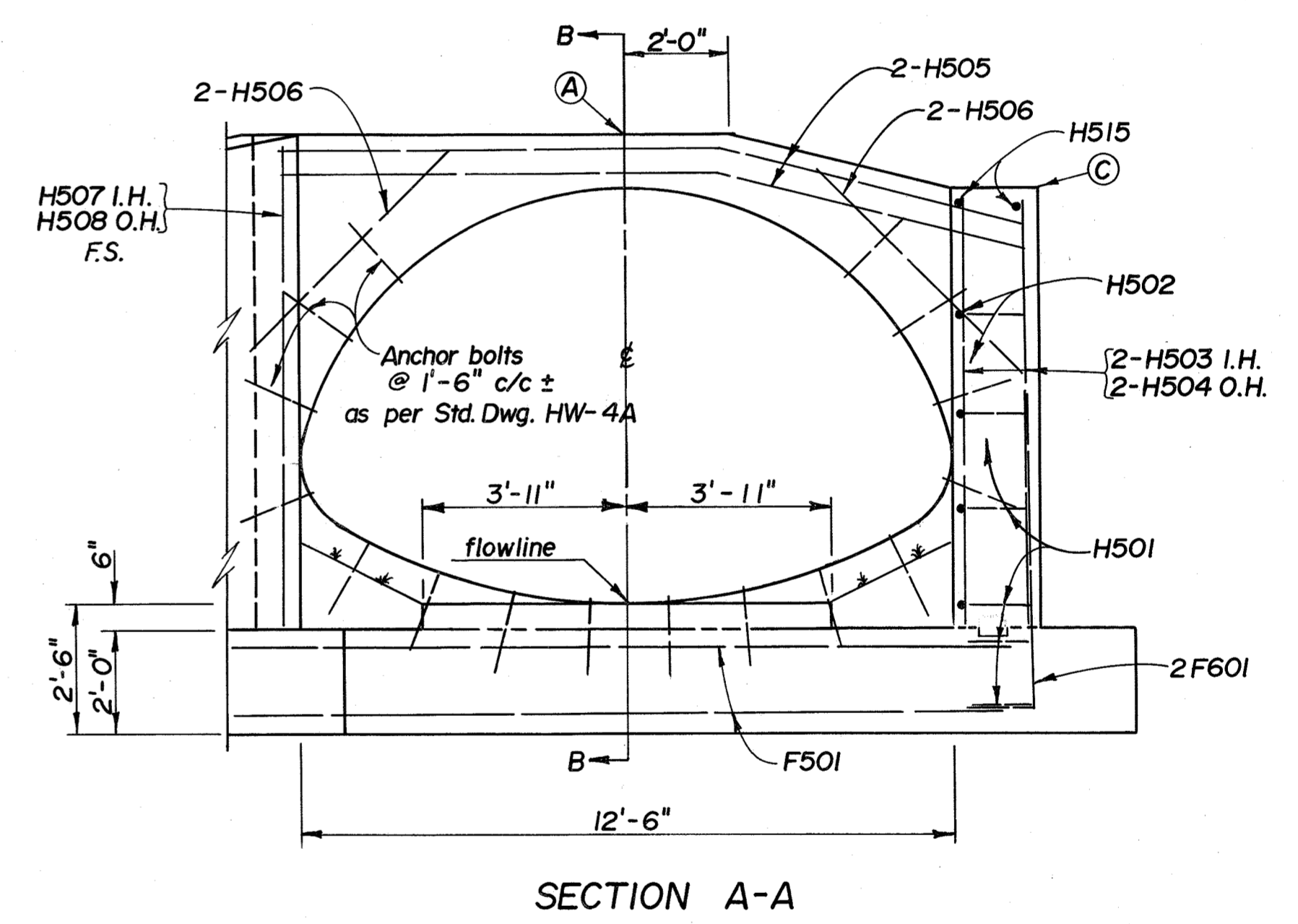
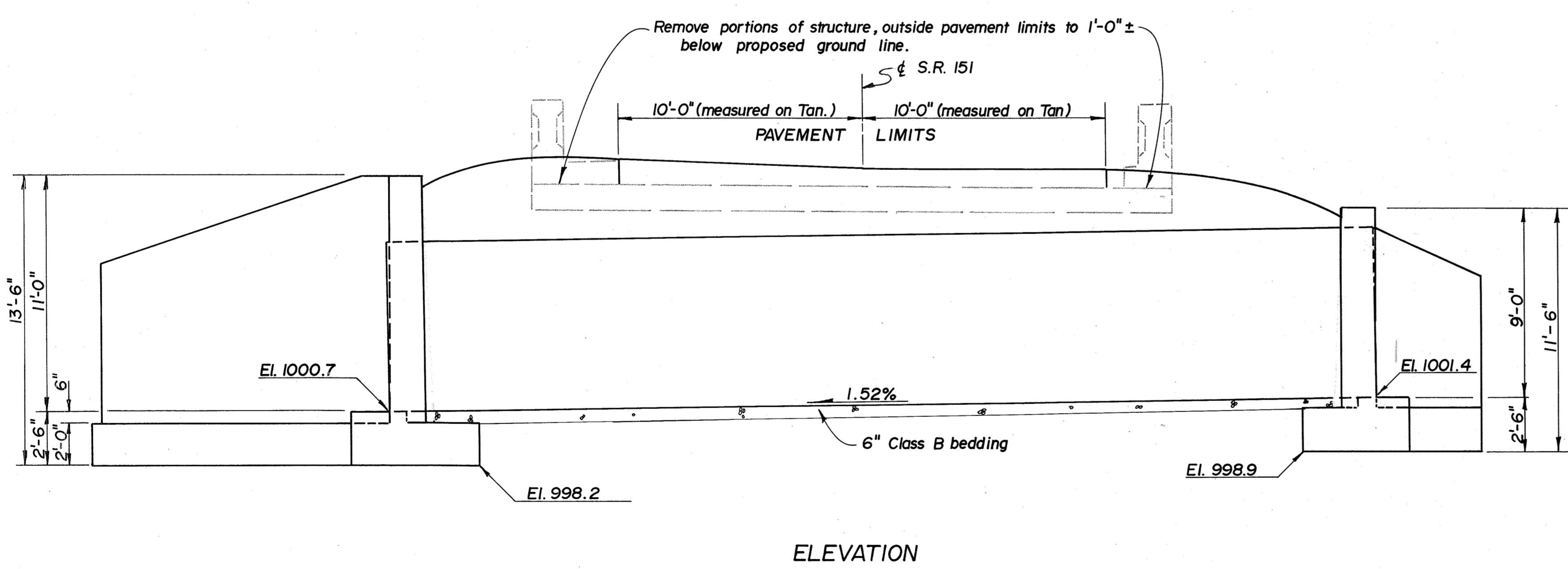
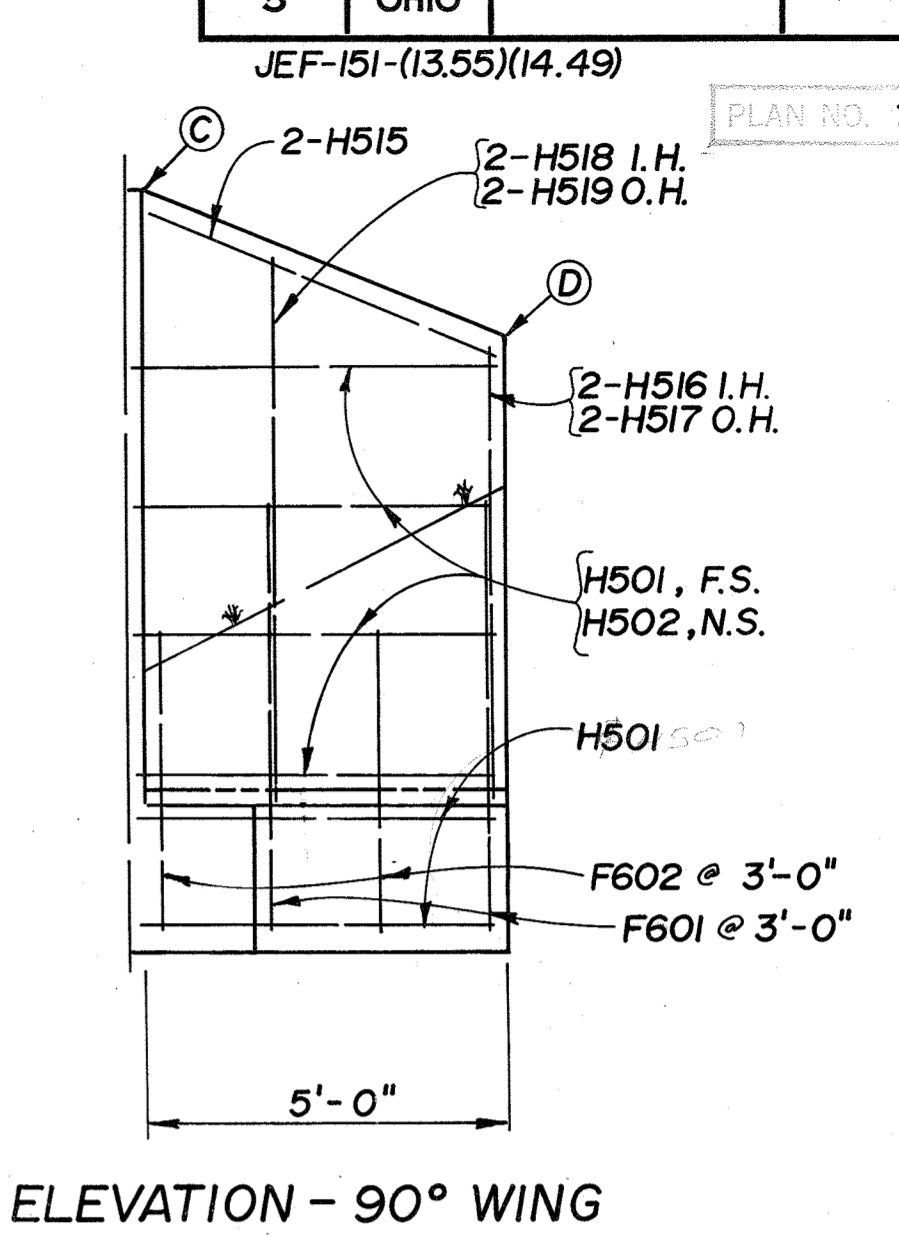
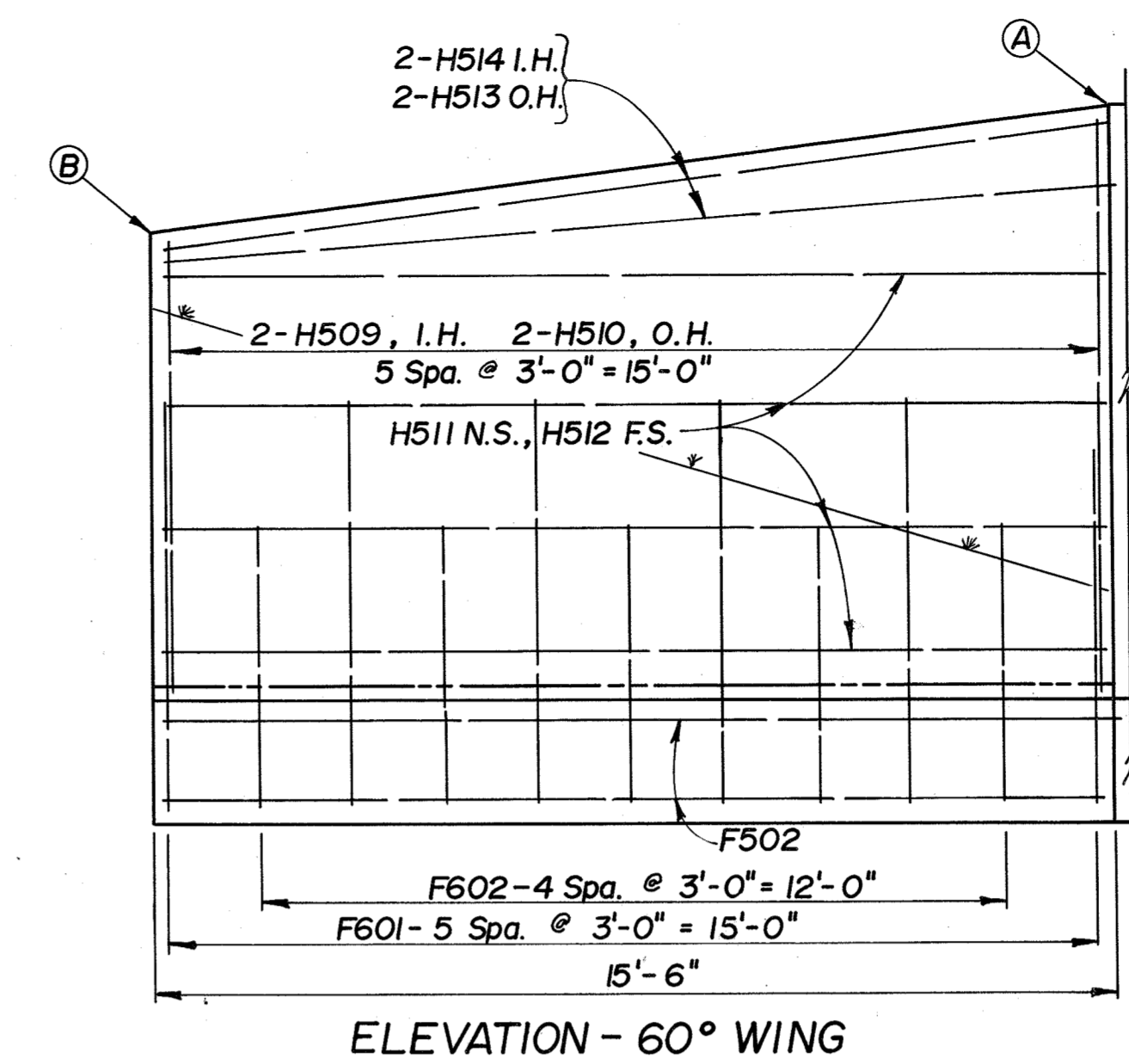
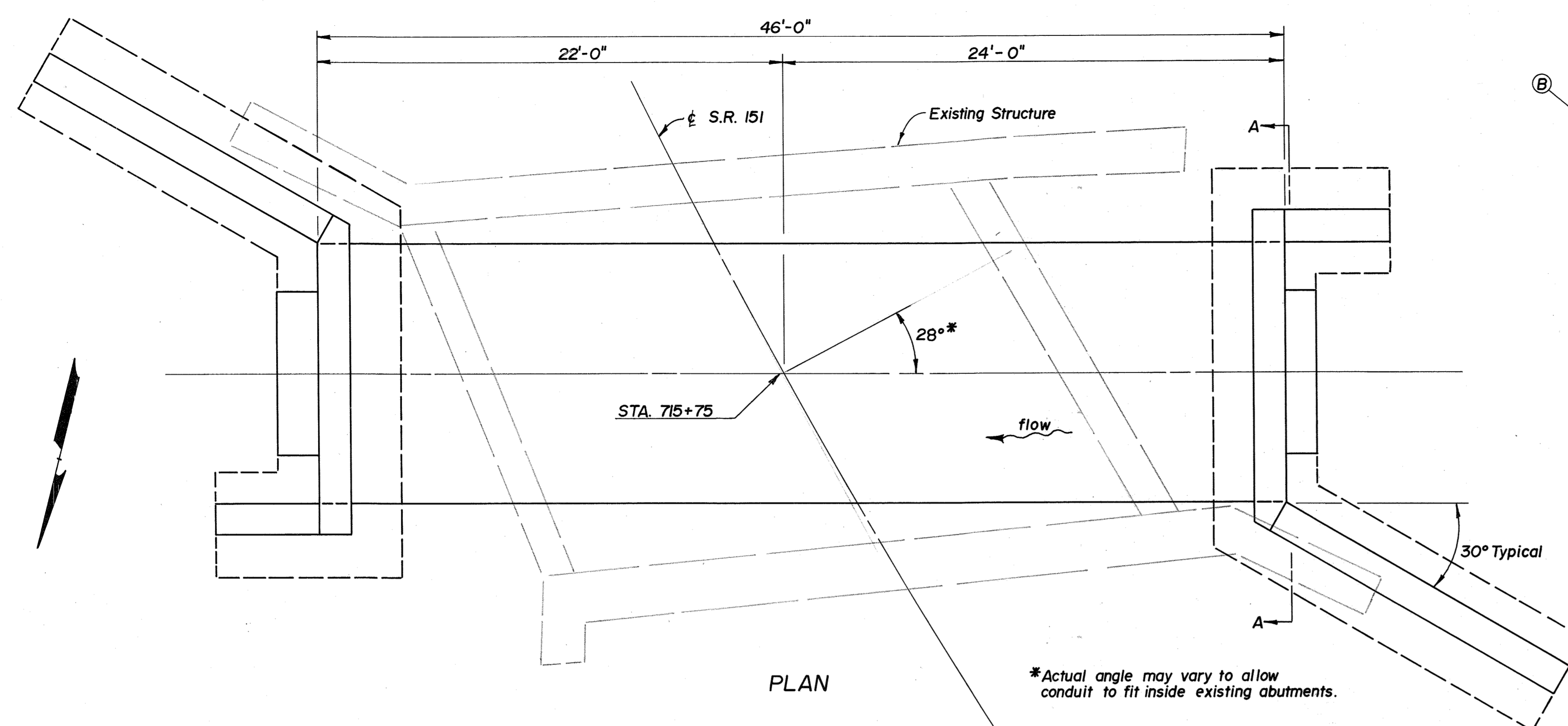
JEF-151-(13.55)(14.49)

PLAN NO. BR-66-84

SEEDING	END AREA		CU. YD.	
	WIDTH	SQ. YD.	CUT	FILL
0	0	0	0	0
0	0	25 Back	0	0
31	31	23	6	6
22	24	12	0	0
39	13	6	0	0
6	4	0	0	0
35	15	26	0	0
19	29	55	0	0
44	25	28	0	0
13	24	6	0	0
18	24	3	0	0
0	Ahead 27 Back 0	0	0	0



STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE						
<b>CULVERT EXTENSION DETAILS</b>						
CULVERT No JEF-151-1354 OVER BRANCH OF GEORGE'S RUN						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO	H	WRG				



ELEVATIONS	(A)	(B)	(C)	(D)
INLET HEADWALL	1010.4	1008.4	1009.4	1007.4
OUTLET HEADWALL	1011.7	1006.9	1010.7	1008.7

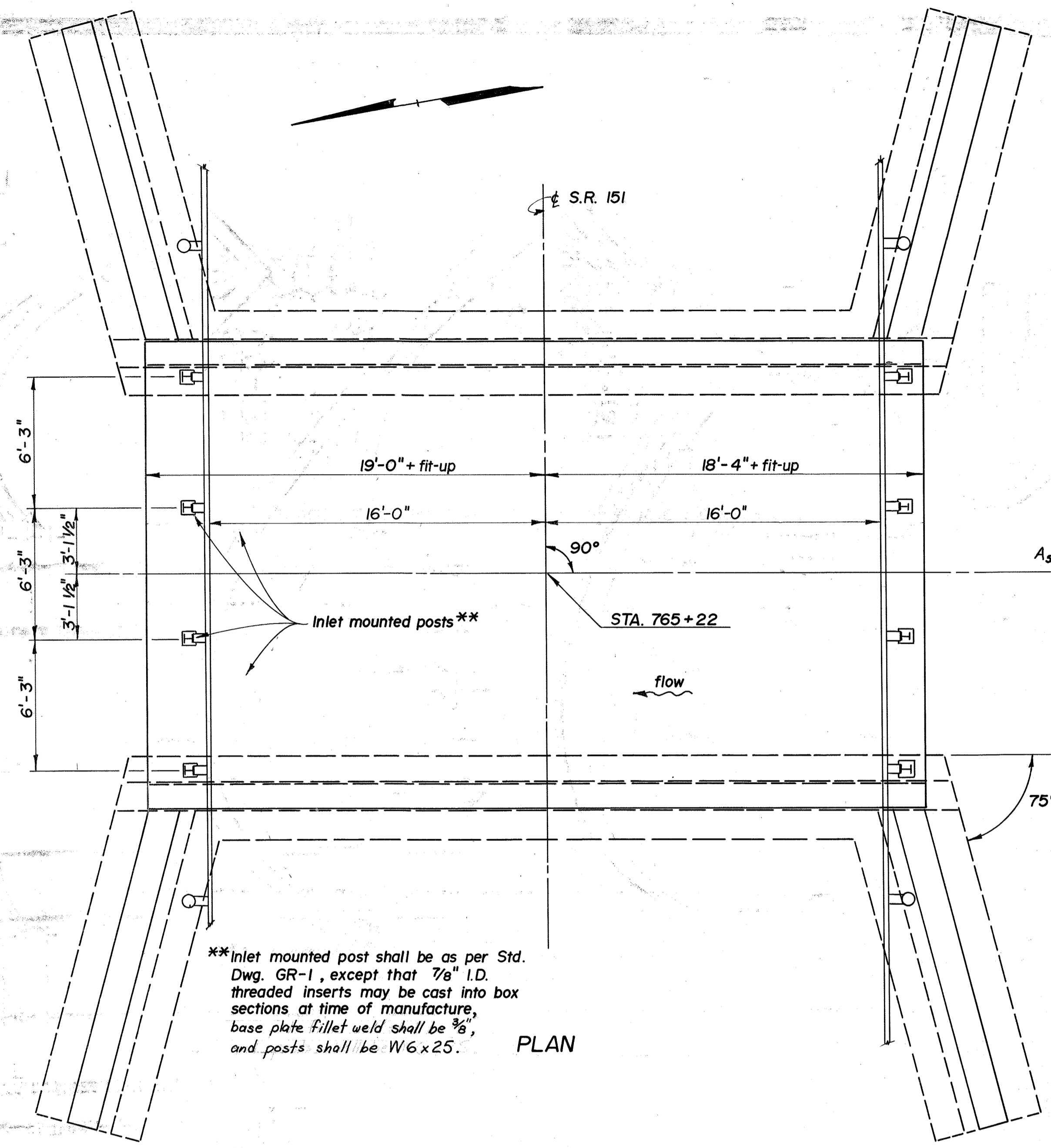
NOTE: I.H. = Inlet Headwall O.H. = Outlet Headwall  
F.S. = Far Side N.S. = Near Side

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
BUREAU OF MAINTENANCE

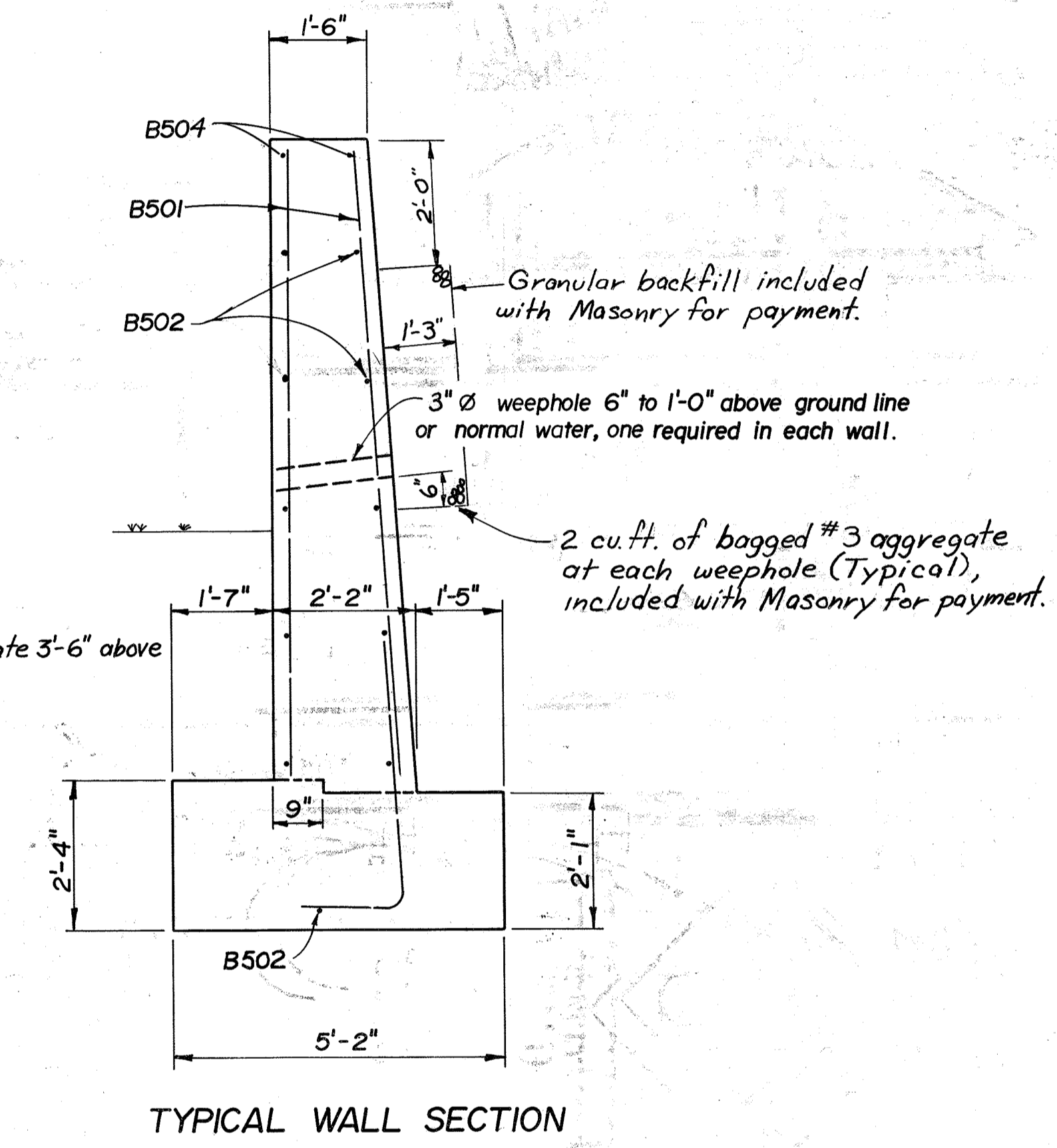
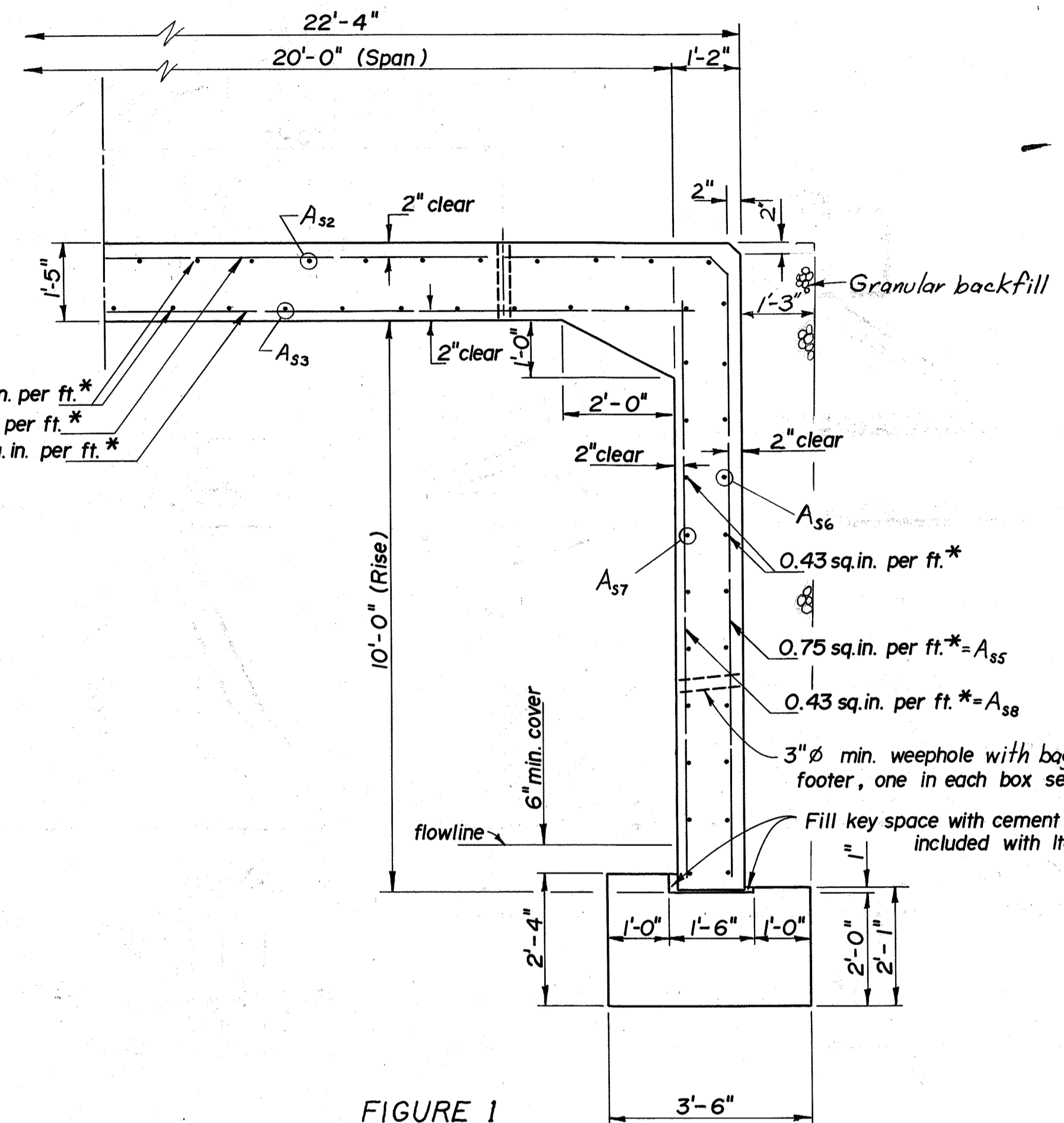
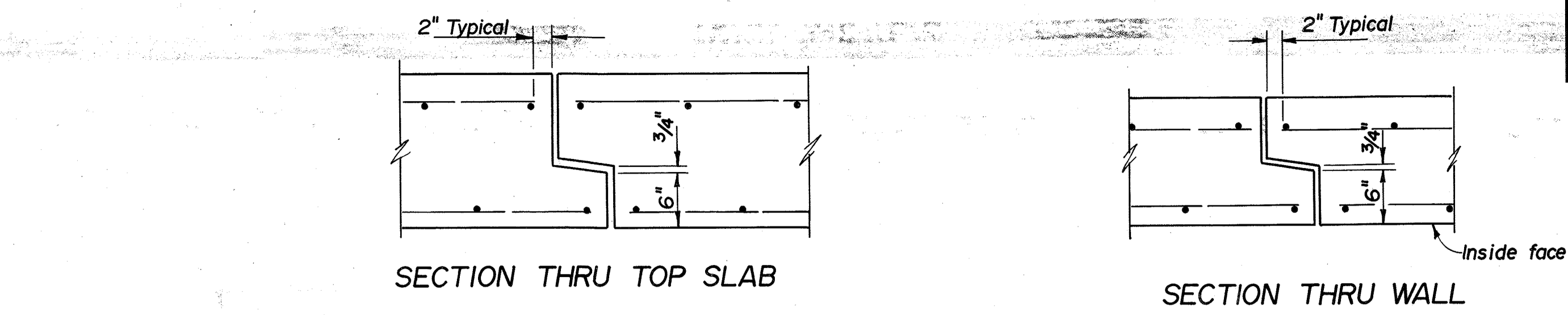
**GENERAL PLAN & ELEVATION**

BRIDGE No. JEF-151-1355  
OVER GEORGE'S RUN

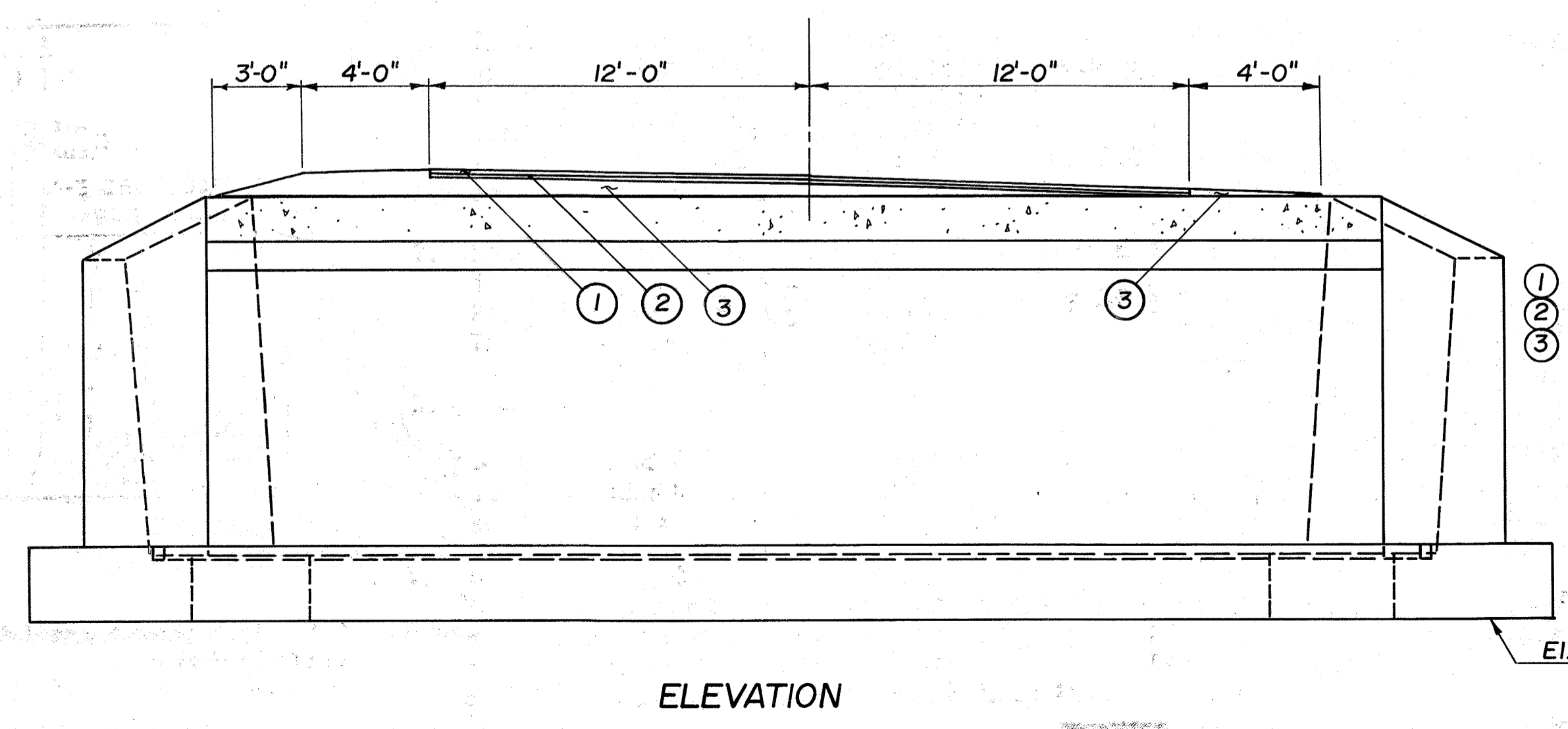
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Dist. 11	JLO	WFG				



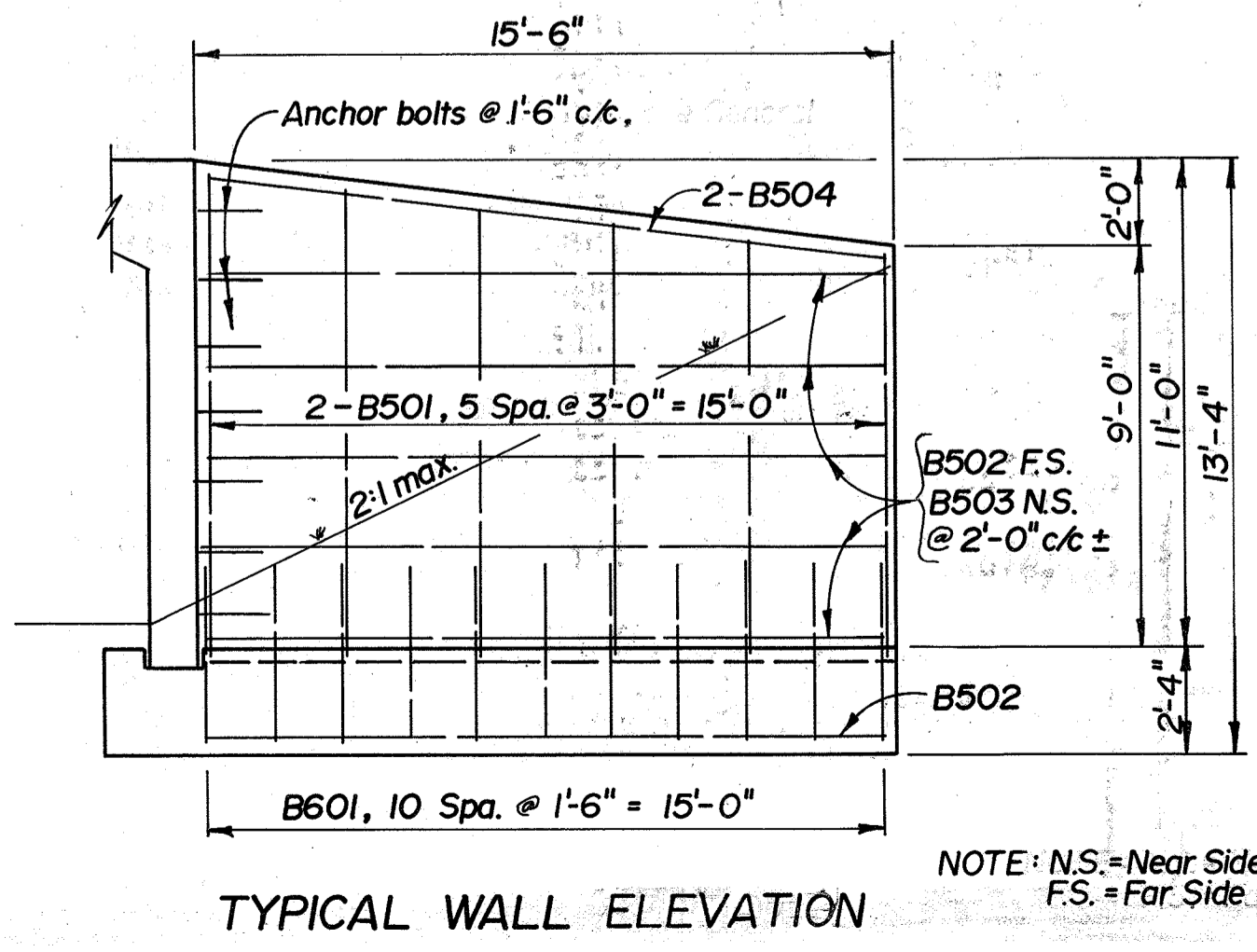
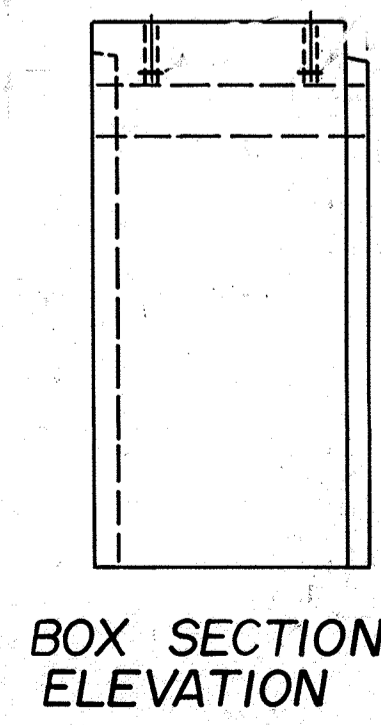
\*\*Inlet mounted post shall be as per Std. Dwg. GR-1, except that 7/8" I.D. threaded inserts may be cast into box sections at time of manufacture, base plate fillet weld shall be 3/8", and posts shall be W6 x 25.



\*Indicates minimum area of reinforcing steel required for box section per lineal foot of concrete section measured perpendicularly to reinforcing. Cost of all reinforcing steel shall be included with the unit price bid for Item 603, 20' x 10' Precast reinforced concrete three sided culvert.



LEGEND  
 ① Item 404 - 1 1/4" Asphalt concrete  
 ② Item 402 - 1 3/4" Asphalt concrete  
 ③ Item 403 - Variable Asphalt concrete

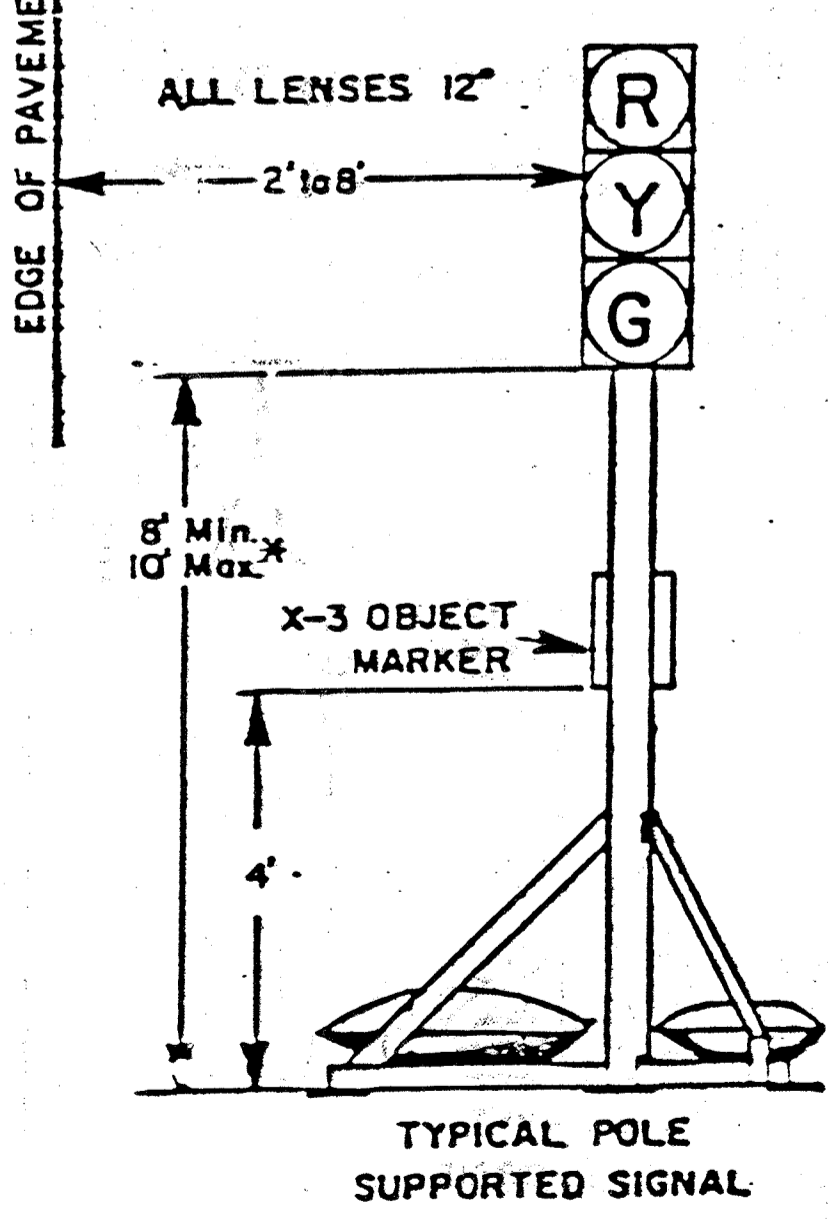
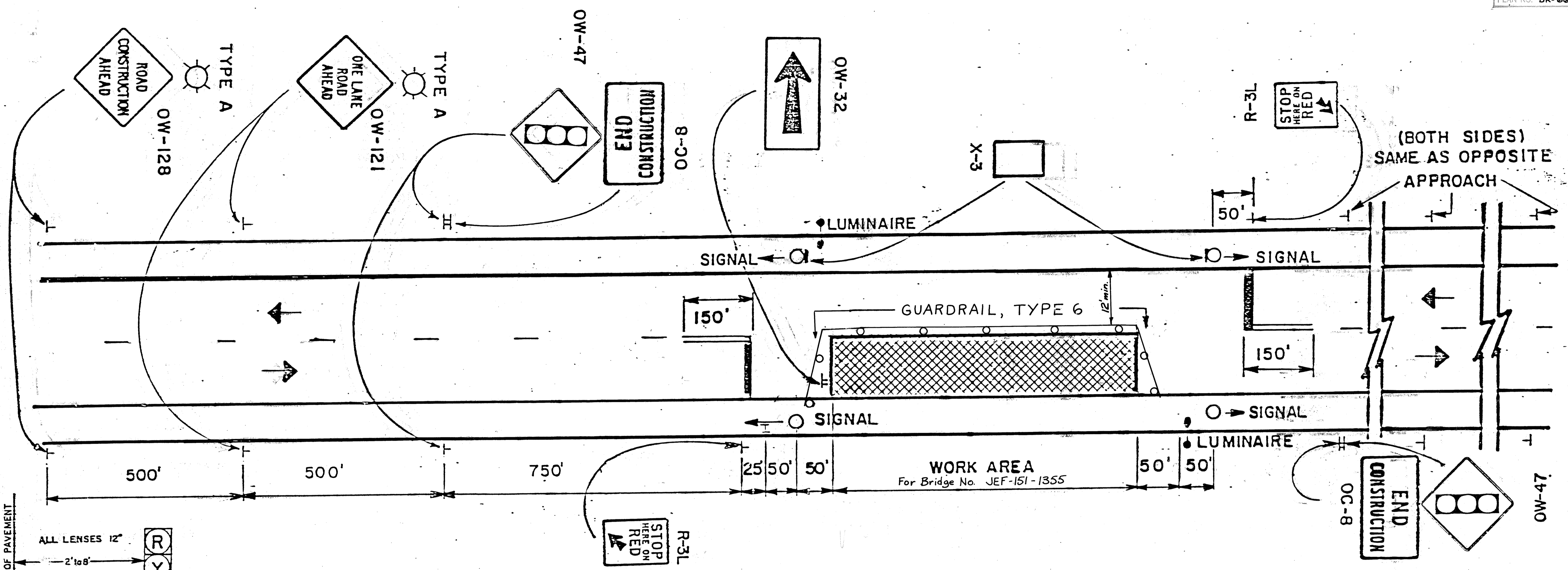


STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 BUREAU OF MAINTENANCE

**GENERAL PLAN & ELEVATION**

BRIDGE No JEF-151-1449  
 OVER GEORGE'S RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO		WRG				



**GENERAL NOTES:**

- The maximum length of work area for one way traffic signal control is determined by the capacity required to handle the peak hour demand. Practical maximum length is 400 feet. Signal timing shall be approved by the Engineer.
- Signals shall be installed and operated in accordance with the requirements of Part 6 of the Ohio Manual of Uniform Traffic Control Devices.
- Guardrail, Type 6, drums shall be spaced at 12'-6" center to center, maximum, within the work area. Drums or barricades on the advance and return tapers shall be spaced at 12.5' center to center.
- Adequate area illumination to clearly identify both ends of the work area at night for long term operations shall be provided by using 150 watt minimum high pressure sodium luminaires or 250 watt minimum mercury luminaires. Luminaires shall be located adjacent to one signal for each direction of traffic as shown above. The mounting height for temporary luminaires shall be a minimum of 27 feet above the pavement and the overhead conductor clearance shall be 20 feet above the pavement.
- Twenty-four (24) inch stop lines shall be installed and where no passing lines are not already in place they shall be added. Removable pavement markings may be used. Existing conflicting pavement markings and raised pavement marker reflectors between the work area and the stop line shall be removed. After completion of the work the stop lines and added no passing lines shall be removed in accordance with 621.134 and the raised pavement marker reflectors shall be replaced in kind.
- The Type A flashing barricade warning lights shown on the "Road Construction Ahead" and the "One Lane Road Ahead" signs are required whenever a night lane closure is necessary.
- Type C steady burning barricade warning lights shall be erected on drums for night lane closures. The maximum spacing shall be identical to the channelizing device spacing requirements described in Note 3.
- The horizontal or vertical alignment of the roadway may require adjustments in the location of the advance warning signs (the distances shown for advance warning sign spacings are minimums). The vertical alignment of the roadway may require adjustments in the height of the signal heads within the range specified in the Typical Pole Supported Signal Detail.
- All traffic signals and equipment used in this traffic signal installation, such as a signal cable and signal heads, shall be in conformance with Specifications 632 and 732. However, the performance test provision noted in Specification 632.27, paragraph 6 and the working drawing requirements of 632.03 are waived. The controller, flashers, load switches, conflict monitor and other controller accessories shall comply with Supplemental Specifications 861 and 961, except that the requirements of 861.03 and 861.05 are waived, as well as the requirements of 961.01 for expandible three dial units and twelve circuits for pretimed controllers. Used equipment meeting current ODOT Specifications is acceptable. Conflict monitors shall be furnished at all locations unless an electromechanical pretimed controller with cam shaft is provided.
- When the signal is changed to a flash condition either manually or automatically, red shall be flashed to both approaches.

OHIO DEPARTMENT OF TRANSPORTATION	
SIGNALIZED CLOSING 1 LANE OF A 2 LANE HIGHWAY	DATE 12/82 3/84
BRIDGE NO. JEF-151-1355	

UTILITIES

JEFFERSON COUNTY, OHIO  
CROSS CREEK TWP. SEC. 1, T-6-N, R-2-W

P.I. = 766+83.87  
 $\Delta = 25^{\circ}51'00''$  Lt.  
 $D_c = 13^{\circ}40'00''$   
 $L = 189.15'$   
 $T = 96.21'$   
 $R = 419.24'$   
 $E = 10.90'$

Calculated By: *SL*  
 8-9-84  
 Checked By: *SL*  
 8-16-84

FHWA REGION	STATE	STATE PROJECT NO.
5	OHIO	11595(0)

13  
17

JEF-151-(13.55)(14.49)  
RIGHT OF WAY PLAN

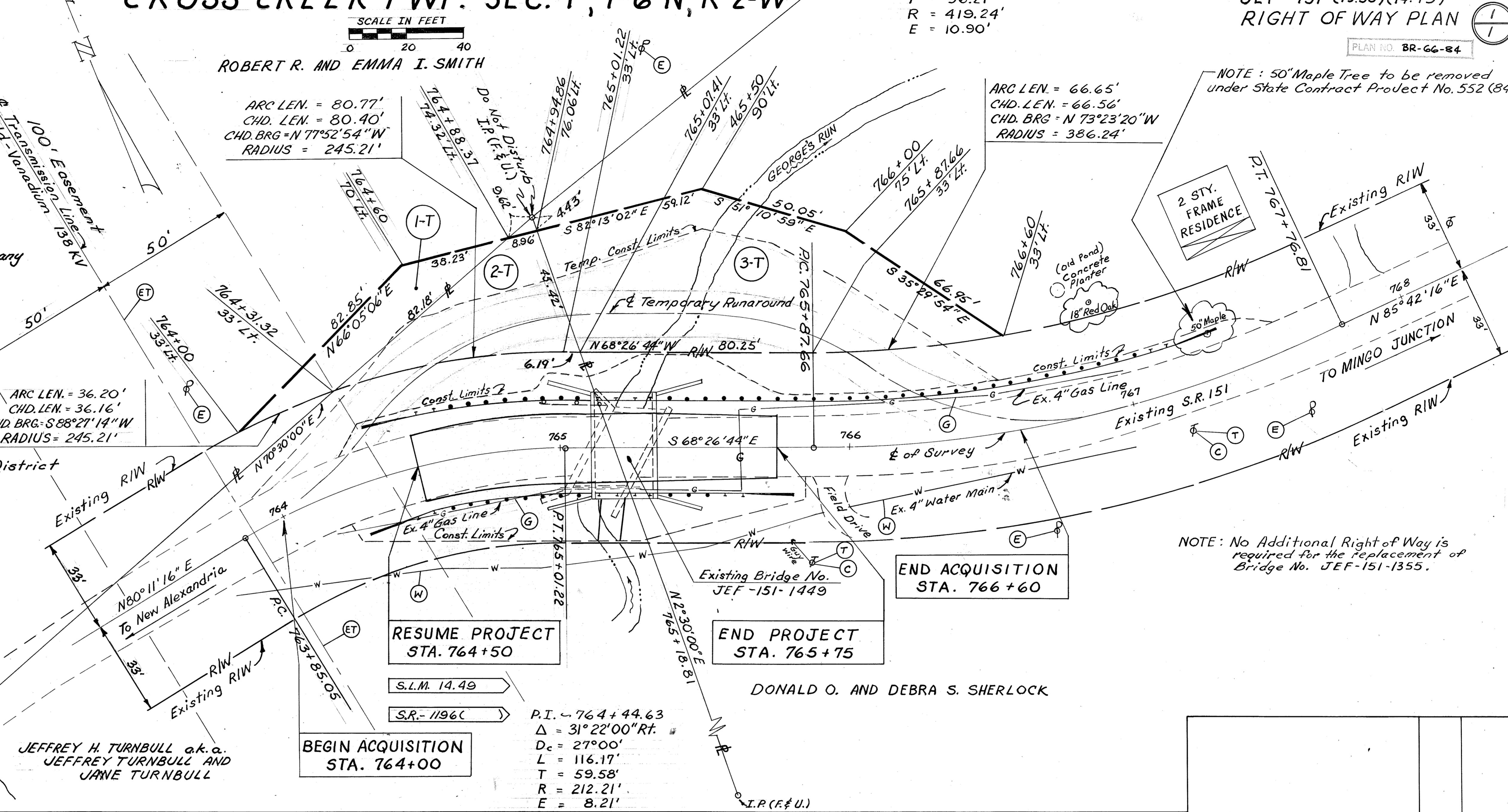
1  
1

PLAN NO. BR-66-84

UTILITY IDENTIFIER

OWNER

- (T) Telephone: General Telephone Co. of Ohio, 715 Commercial Parkway, P.O. Box 399, Dover, Ohio 44622, Phone 216/364-0363
- (G) Gas: Columbia Gas of Ohio, Inc., 204 Highland Ave., Cambridge, Ohio 43725, Phone 614/439-1306
- (C) TV. Cable: Steubenville Cable T.V. Company, 2205 Sunset Blvd., P.O. Box 69, Steubenville, Ohio 43952, Phone 614/264-3212
- (E) Electric: Ohio Power Company, 301 Cleveland Ave. S.W., P.O. Box 400, Canton, Ohio 44701, Phone 216/438-7040
- (W) Water: Jefferson County Sewer District, P.O. Box 2579, Wintersville, Ohio 43952, Phone 614/765-4943
- (ET) Electric (Transmission): Satralloy Inc., P.O. Box 536, Steubenville, Ohio 43952, Phone 614/283-3631



SUMMARY OF ADDITIONAL RIGHT OF WAY

TOTAL NUMBER OF:  
 3 OWNERSHIPS  
 0 TOTAL TAKES  
 0 OWNERSHIPS WITH STRUCTURES INVOLVED  
 0 OWNERSHIPS WITH "P" ITEMS

REVISION	BY	DATE
COMPLETED		8-31-84

PARCEL	OWNER	SHEET NO.	OWNERS RECORD		RECORD AREA	TOTAL P.R.O.	GROSS TAKE-AC.	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED	
			BOOK	PAGE							LEFT	RIGHT			BOOK	PAGE
1-T	ROBERT R. SMITH AND EMMA I. SMITH	1	445	509	8.925 Ac.		0.029 Ac.	0	0.029 Ac.			STATE	To Construct, Maintain and Remove Temporary Runaround			
2-T	JEFFREY H. TURNBULL a.k.a. JEFFREY TURNBULL AND JANE TURNBULL	1	515, 532	172, 196	12.97 Ac.		0.043 Ac.	0	0.043 Ac.				To Construct, Maintain and Remove Temporary Runaround			
3-T	DONALD O. SHERLOCK AND DEBRA S. SHERLOCK	1	594	612	9.433 Ac.		0.141 Ac.	0	0.141 Ac.				To Construct, Maintain and Remove Temporary Runaround			

**GEOLOGY OF THE SITE**

THE STRUCTURE SITE IS LOCATED IN THE HIGHLY DISSECTED UNGLACIATED PORTION OF THE FLUSHING ESCARPMENT REGION, IN AN AREA WHERE RELATIVELY THIN VALLEY AND ALLUVIAL DEPOSITS OVERLIE SANDSTONE BEDROCK, OF PENNSYLVANIAN AGE.

**EXPLORATION**

THE EXPLORATION CONSISTED OF ONE DRIVE SAMPLE BORING AND ONE DRIVE SAMPLE-CORE BORING MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED ON NOVEMBER 7 AND 8, 1983.

**INVESTIGATIONAL FINDINGS AND OBSERVATIONS**

THE BORINGS DISCLOSED THAT INTERVALS OF EXTREMELY LOOSE TO MEDIUM-DENSE UNSTRATIFIED BASIC SILTS AND CLAYS MODIFIED WITH SAND, GRAVEL AND VARYING AMOUNTS OF EACH OTHER THAT GRADUALLY INCREASE (ERRATIC AT TIMES) IN DENSITY WITH INCREASE IN DEPTH OVERLIE RELATIVELY FLAT-LYING BEDROCK SURFACE. BORING B-1 (IN THE GENERAL VICINITY OF THE REAR ABUTMENT) ENCOUNTERED BEDROCK AT 12.0-FOOT DEPTH, ELEVATION 1001.6 FEET AND WAS TERMINATED AT 17.5-FOOT DEPTH, ELEVATION 996.1 FEET, AFTER PENETRATING 5.5 FEET BELOW BEDROCK SURFACE. BORING B-2 (IN THE GENERAL VICINITY OF THE FORWARD ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 10.0-FOOT DEPTH, ELEVATION 1001.3 FEET AND WAS TERMINATED AT 11.0-FOOT DEPTH, ELEVATION 1000.3 FEET, AFTER PENETRATING 1.0 FOOT BELOW BEDROCK SURFACE.

FREE WATER WAS OBSERVED AND MEASURED IN BORING B-2 AT 7.5-FOOT DEPTH, ELEVATION 1003.8 FEET. NO FREE WATER OBSERVATIONS WERE MADE IN BORING B-1 DURING OR AT THE CONCLUSION OF DRILLING OPERATIONS.

**LEGEND**

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- 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.  
Z = Number of Blows for Third 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing  
Resistance "R" < 10,000 lbs.  
Resistance "R" > 10,000 lbs.
- Z Indicates Final Measurement of Penetration, in Inches.
- W Indicates Free Water Elevation.
- Indicates Static Water Elevation.

**SYMBOLS OF ROCK TYPES**

- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles

**GENERAL INFORMATION**

**Drive Rod Penetration Sounding Tests**

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

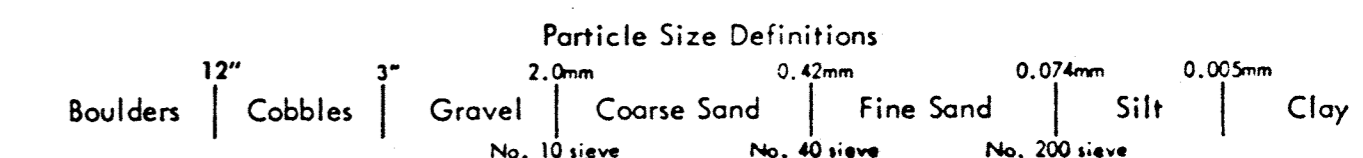
**Drive Sample Borings - Drive-Press Sample Borings**

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 18 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in three 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



**LOG OF BORING**

Date Started 11-7-83    Sampler Type SS    Dia 1 3/8"    Water Elev. \_\_\_\_\_  
 Date Completed 11-7-83    Casing Length \_\_\_\_\_    Dia \_\_\_\_\_  
 Boring No. B-1    Station & Offset 715+57    11' LT.    Surface Elev. 1013.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.	
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
1013.6	0																	
	2				GRAY AND BROWN SANDY SILT AND CLAY WITH GRAVEL													
1008.6	4																	
	6	3/4/3			BROWN AND BLACK GRAVELLY CLAY WITH COAL BLOSSOM	1	46	3	10	14	28	45	15	28				A-7-5
1006.1	8																	
	8	2/2/3			GRAY AND BLACK GRAVELLY CLAY WITH COAL BLOSSOM	2	77	3	8	20	52	51	20	30				A-7-5
1003.6	10																	
	10	1/1/2			GRAY SANDY SILT WITH COAL BLOSSOM	3	48	3	5	12	32	46	22	30				A-7-6
1001.6	12	2/3/11			GRAY GRAVELLY CLAY													
	12				TOP OF ROCK													
1001.1	14				GRAY SANDSTONE													
	14																	
	16		4.9	0.1	SANDSTONE, GRAY, MEDIUM FIRM, FINE GRAINED, CROSS BEDDED, MICACEOUS IN PART, BROKEN. CORE LOSS 2%.													
996.6	18				CLAY SHALE, GRAY, FINE, FINISILE, BROKEN. NO CORE LOSS													
996.1	18				BOTTOM OF BORING													

**LOG OF BORING**

Date Started 11-8-83    Sampler Type SS    Dia 1 3/8"    Water Elev. 1003.8'  
 Date Completed 11-8-83    Casing Length \_\_\_\_\_    Dia \_\_\_\_\_  
 Boring No. B-2    Station & Offset 715+93    9' RT.    Surface Elev. 1011.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.	
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
1011.3	0																	
1010.8	0				BLACKTOP													
	2																	
1006.3	4				GRAY SANDY SILT AND CLAY WITH GRAVEL													
	6	2/2/3			BLACK AND BROWN SANDY CLAY WITH COAL BLOSSOM	4	10	2	18	20	50	54	15	45				A-7-5
1003.8	8																	
	8	1/1/2			GRAY SANDY SILT WITH COAL BLOSSOM	5	10	6	11	41	32	33	9	32				A-4a
1001.3	10	50(0.1')			GRAY BROKEN SANDSTONE	6												VISUAL
1000.3	10				TOP OF ROCK													
	10				BOTTOM OF BORING													

NOTE - ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.

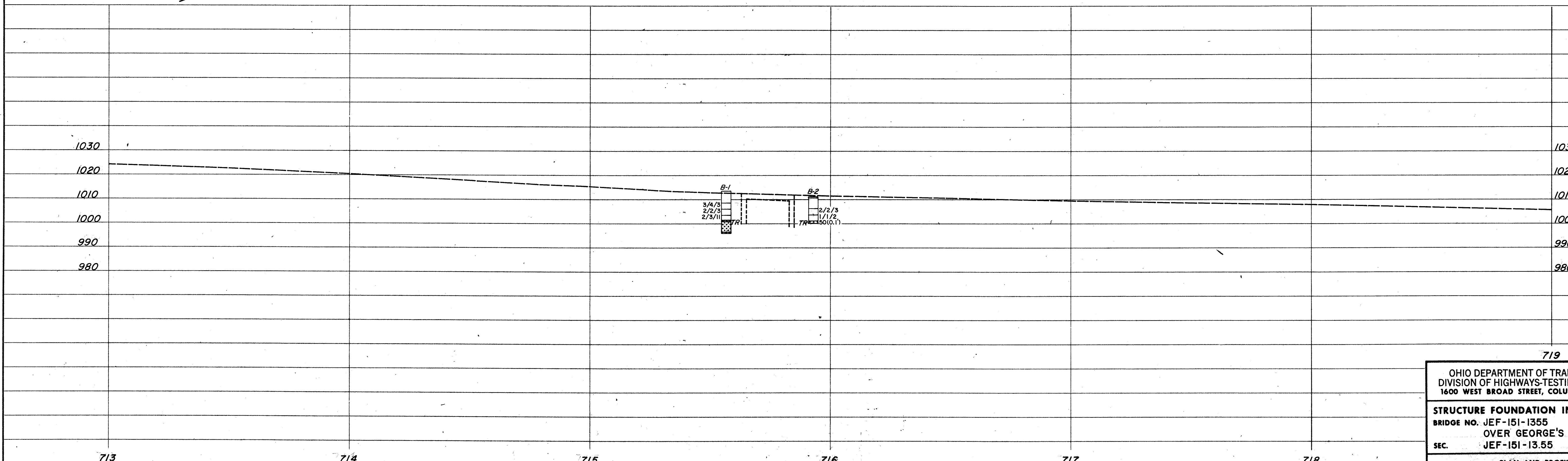
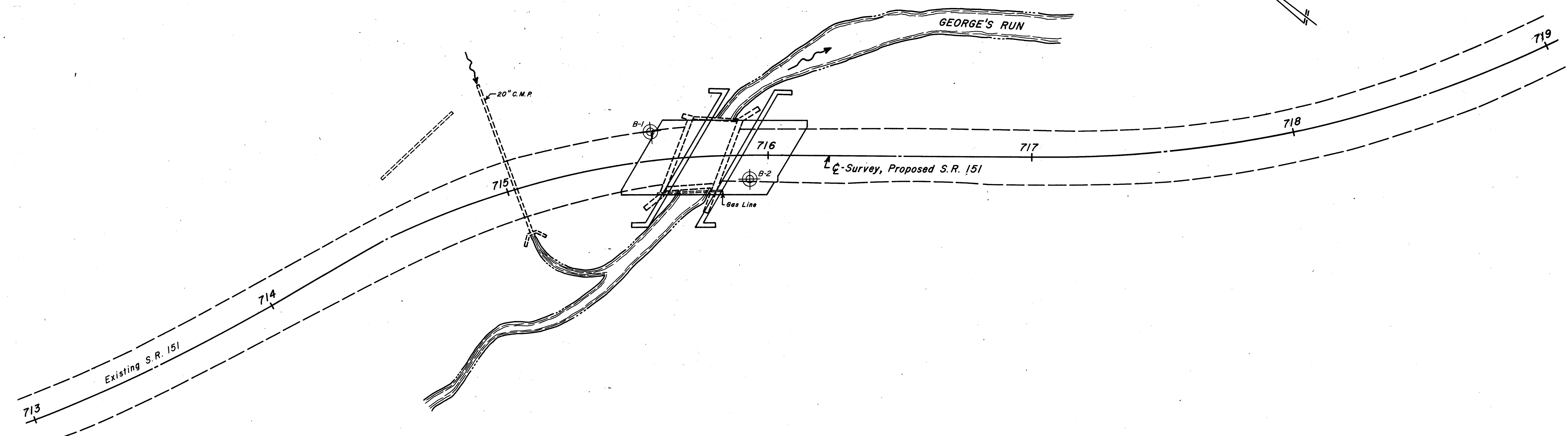
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS - TESTING LABORATORY  
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION  
BRIDGE NO. JEF-151-1355  
OVER GEORGE'S RUN  
SEC. JEF-151-13.55

CHECKED BY L. N. L.    REVIEWED BY R. D. R.    DATE 11/22/83





OHIO DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS-TESTING LABORATORY  
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

**STRUCTURE FOUNDATION INVESTIGATION**  
BRIDGE NO. JEF-151-1355  
OVER GEORGE'S RUN  
SEC. JEF-151-13.55

PLAN AND PROFILE

DRAWN BY L. W. K.	CHECKED BY L. N. L.	REVIEWED BY R. D. R.	DATE 11/22/83
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SCALE: 1" = 20'

**GEOLOGY OF THE SITE**

THE STRUCTURE SITE IS LOCATED IN THE HIGHLY DISSECTED UNGLACIATED PORTION OF THE FLUSHING ESCARPMENT REGION, IN AN AREA WHERE RELATIVELY THIN VALLEY AND ALLUVIAL DEPOSITS OVERLIE SANDSTONE BEDROCK, OF PENNSYLVANIAN AGE.

**EXPLORATION**

THE EXPLORATION CONSISTED OF ONE DRIVE SAMPLE BORING AND ONE DRIVE SAMPLE-CORE BORING MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED ON NOVEMBER 8, 1983.

**INVESTIGATIONAL FINDINGS AND OBSERVATIONS**

THE BORINGS DISCLOSED THAT INTERVALS OF EXTREMELY LOOSE TO MEDIUM-DENSE UNSTRATIFIED BASIC SILTS, CLAYS AND GRAVEL MODIFIED WITH SAND AND VARYING AMOUNTS OF EACH OTHER THAT GRADUALLY INCREASE (ERRATIC AT TIMES) IN DENSITY WITH INCREASE IN DEPTH OVERLIE GENTLY SLOPING BEDROCK SURFACE. BORING B-1 (IN THE GENERAL VICINITY OF THE REAR ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 12.5-FOOT DEPTH, ELEVATION 877.9 FEET AND WAS TERMINATED AT 18.0-FOOT DEPTH, ELEVATION 872.4 FEET, AFTER PENETRATING 5.5 FEET BELOW BEDROCK SURFACE. BORING B-2 (IN THE GENERAL VICINITY OF THE FORWARD ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 12.5-FOOT DEPTH, ELEVATION 876.8 FEET AND WAS TERMINATED AT 14.0-FOOT DEPTH, ELEVATION 875.3 FEET, AFTER PENETRATING 1.5 FEET BELOW BEDROCK SURFACE.

NO FREE WATER OBSERVATIONS WERE MADE IN EITHER OF THE TEST BORINGS PERFORMED, DURING OR AT THE CONCLUSION OF DRILLING OPERATIONS.

**LEGEND**

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- 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.  
Z = Number of Blows for Third 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z Indicates Final Measurement of Penetration, in Inches.
- W Indicates Free Water Elevation.
- Indicates Static Water Elevation.

**SYMBOLS OF ROCK TYPES**

- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles

**GENERAL INFORMATION**

**Drive Rod Penetration Sounding Tests**

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

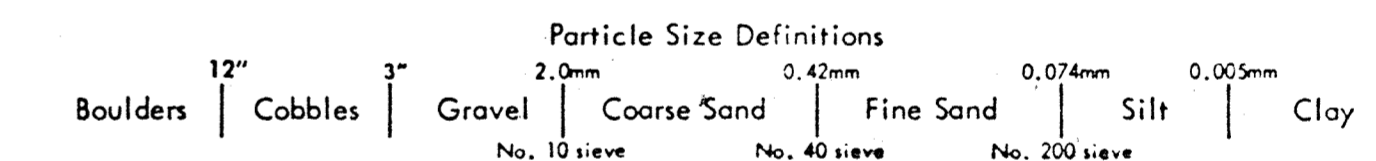
**Drive Sample Borings - Drive-Press Sample Borings**

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140.-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 18 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in three 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



**LOG OF BORING**

Date Started 11-8-83 Sampler Type SS Dia 1 3/8" Water Elev. \_\_\_\_\_  
 Date Completed 11-8-83 Casing Length \_\_\_\_\_ Dia \_\_\_\_\_  
 Boring No. B-1 Station & Offset 764+92 13' LT. Surface Elev. 890.4'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.	
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.
890.4	0				BERM MATERIAL										
887.9	2				BROWN CLAY AND SILT										
885.4	4				BROWN SILT AND CLAY	1	0	3	4	40	53	40	12	27	A-6a
882.9	6	2/2/4			GRAY GRAVELLY CLAY	2	53	6	7	13	21	39	12	19	A-2-4
880.4	8	3/5/5			BROWN SILTY SANDY GRAVEL	3	31	13	10	20	26	39	14	20	A-6a
877.9	10	2/2/4			GRAY BROKEN SANDSTONE										
877.4	12	50(0,1')			TOP OF ROCK										
877.4	14		2.8	2.2	SANDSTONE, BROWN, MEDIUM-FIRM, MEDIUM-GRAINED, CROSS-BEDDED WITH SCATTERED THIN CLAY SHALE SEAMS, MICACEOUS IN PART, BROKEN. CORE LOSS 44%.										
872.4	16				BOTTOM OF BORING										

**LOG OF BORING**

Date Started 11-8-83 Sampler Type SS Dia 1 3/8" Water Elev. \_\_\_\_\_  
 Date Completed 11-8-83 Casing Length \_\_\_\_\_ Dia \_\_\_\_\_  
 Boring No. B-2 Station & Offset 765+37 13' RT. Surface Elev. 889.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.	
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.
889.3	0				BERM MATERIAL										
886.8	2				BERM MATERIAL AND BOULDERS										
884.3	4				BROWN SANDY SILT WITH GRAVEL										
881.8	6	1/1/3			GRAY SANDY GRAVELLY SILT	5	24	8	13	26	29	35	10	27	A-4a
879.3	8	3/6/6			BROWN SILTY SANDY GRAVEL	6	69	8	10	6	7	NP	NP	12	A-1-a
876.8	10	5/6/6			BROWN SILTY SANDY GRAVEL	7	55	10	10	11	14	30	11	13	A-2-6
875.3	12				TOP OF ROCK										
875.3	14	7/21/50			GRAY BROKEN SANDSTONE	8	47	7	15	21	10	NP	NP	9	WISUAL
	16				BOTTOM OF BORING										

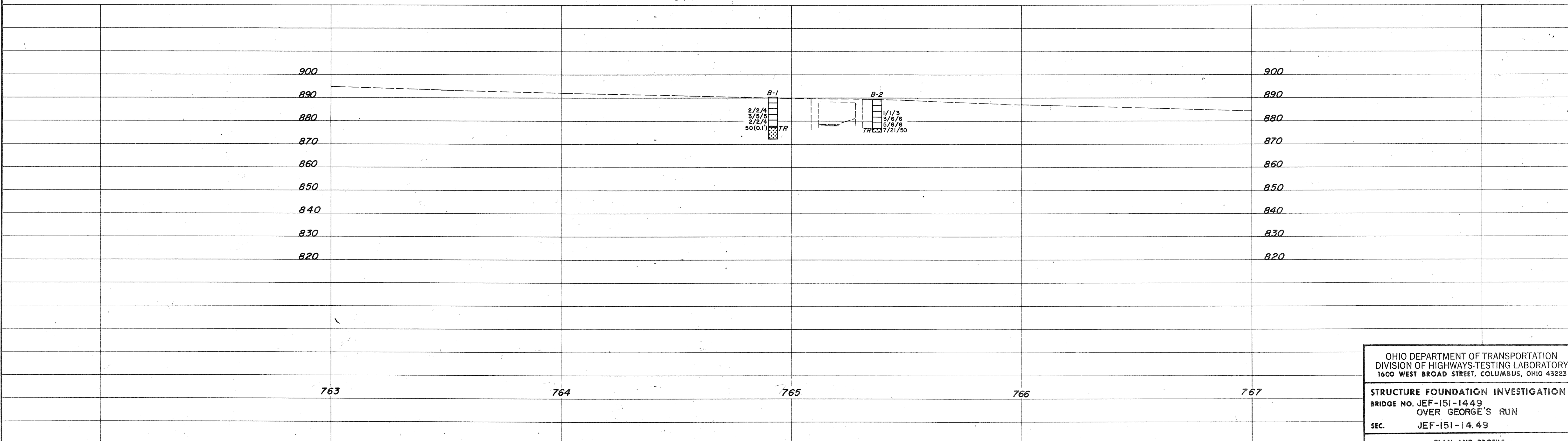
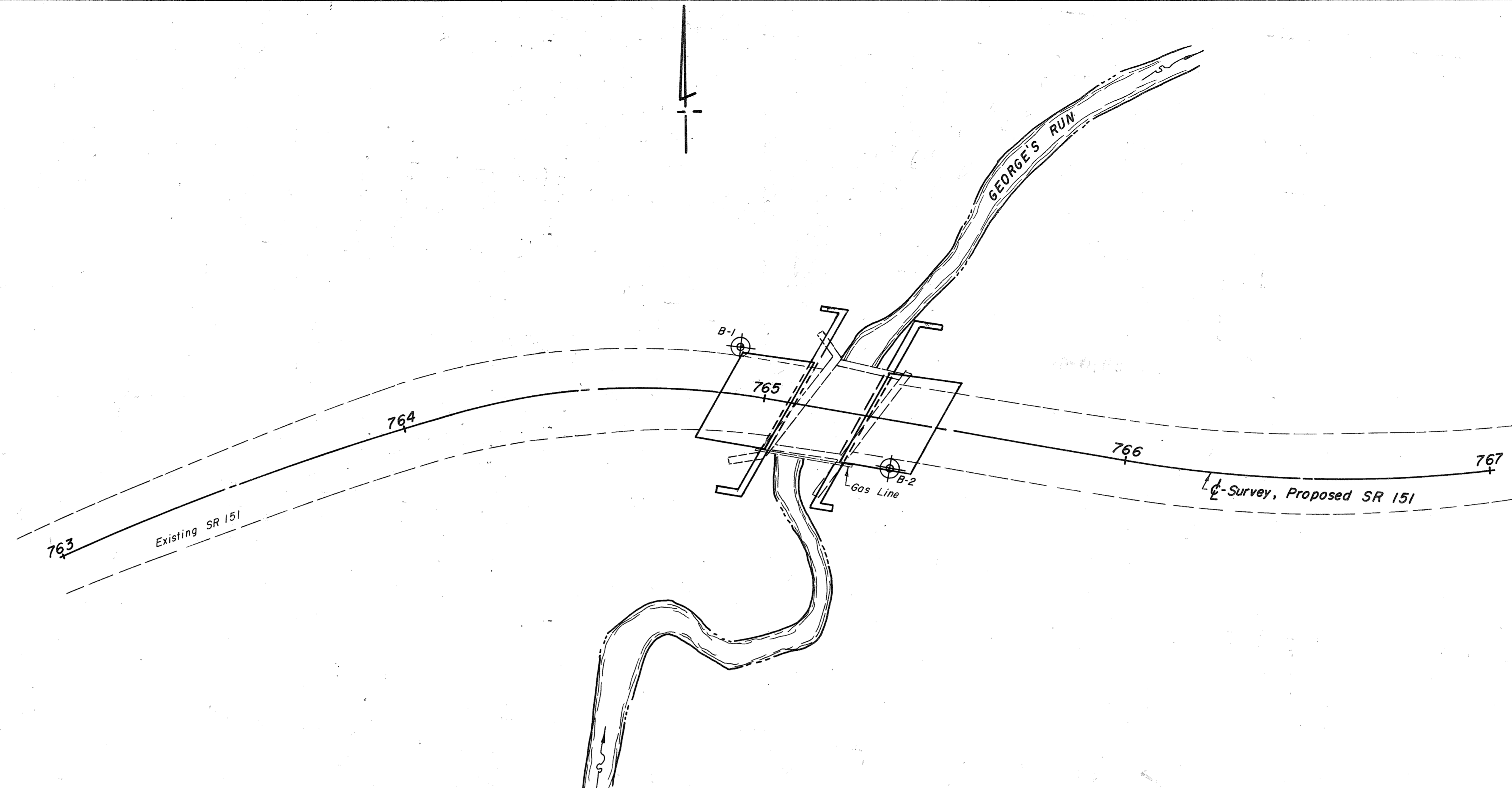
NOTE - ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - TESTING LABORATORY  
 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION  
 BRIDGE NO. JEF-151-1449  
 OVER GEORGE'S RUN  
 SEC. JEF-151-14.49

CHECKED BY L. N. L. REVIEWED BY R. D. R. DATE 11/28/83



OHIO DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS-TESTING LABORATORY  
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

**STRUCTURE FOUNDATION INVESTIGATION**  
BRIDGE NO. JEF-151-14.49  
OVER GEORGE'S RUN  
SEC. JEF-151-14.49

PLAN AND PROFILE

DRAWN BY A. F.	CHECKED BY L. N. L.	REVIEWED BY R. D. R.	DATE 11/28/83
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SCALE: 1" = 20'