

WORK REQUIRED

EXCAVATE BENEATH EXISTING STRUCTURE AND PLACE BEDDING FOR CONDUIT.
INSTALL CONDUIT WITHIN EXISTING STRUCTURE.
BUILD HEADWALLS.
FILL INSIDE EXISTING STRUCTURE, AS PER PLAN.
REMOVE PORTIONS OF EXISTING STRUCTURE, AS PER PLAN.
COMPLETE EMBANKMENT WORK.
INSTALL GUARDRAIL AND SEED AND MULCH.
CLEAN-UP.

DESIGN DATA:

DESIGN LOADING- HS20-44
CONCRETE CLASS C- UNIT STRESS 1333 P.S.I.

202-PORTIONS OF STRUCTURE REMOVED

ANY PORTIONS OF EXISTING STRUCTURES THAT INTERFERE WITH PLACEMENT OF THE CULVERTS AND HEADWALLS SHALL BE REMOVED. THE REMAINING PORTIONS SHALL BE REMOVED AS PER 202.03. FOR BRIDGE NO. TUS-250-2481 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-PORTIONS OF STRUCTURE REMOVED.

603-16'-7" X 10'-9" CONDUIT 707.03 OR 16'-4" X 10'-6" CONDUIT 707.23, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING THE CONDUIT WITHIN THE EXISTING STRUCTURE (TUS-250-2481) 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 603-16'-7" X 10'-1" CONDUIT, TYPE A, 707.03 OR 16'-4" X 10'-6" CONDUIT, TYPE A, 707.23, AS PER PLAN.

FILLING INSIDE EXISTING STRUCTURE, AS PER PLAN

THIS WORK SHALL CONSIST OF FILLING THE VOID AROUND THE CONDUIT WITHIN THE EXISTING STRUCTURE (TUS-250-2481). 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.

LOCATION OF GUARDRAIL

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

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.

BRIDGE IDENTIFICATION SIGNS

THE EXISTING BRIDGE IDENTIFICATION SIGNS SHALL BE REMOVED FOR REUSE BY THE CONTRACTOR. IF EXISTING SIGNS ARE DETERMINED TO BE UNSUITABLE FOR REUSE BY THE ENGINEER, NEW SIGNS WILL BE PROVIDED BY THE STATE. AFTER THE NEW RAIL HAS BEEN ERECTED, THE CONTRACTOR SHALL DRILL HOLES AND INSTALL THE SIGN(S) AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606-GUARDRAIL, TYPE 5, AS PER 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.

ITEM SPECIAL-RESHAPING BERMS

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. THE LOCATION WHERE THE BERMS ARE TO BE RESHAPED EXTEND FROM STA.10+50 TO STA.16+62.5 ON THE LEFT AND FROM STA. 10+50 TO STA.14+62.5 ON THE RIGHT. PAYMENT SHALL BE INCLUDED IN CONTRACT BID PRICE PER LIN.FT. FOR ITEM SPECIAL-RESHAPING BERMS.

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 SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

RIGHT-OF-WAY

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY AND AREAS INDICATED ON THE SITE PLAN TO BE COVERED BY A MAINTENANCE WORK AGREEMENT SIGNED WITH THE RESPECTIVE OWNERS. AREAS COVERED BY THE WORK AGREEMENT(S) SHALL BE GRADED TO MEET THE LINE OF THE CHANNEL CROSS SECTIONS, OR SHALL BE RESTORED TO ORIGINAL CONDITION UNDER ITEM 203, EXCAVATION FOR PAYMENT, AFTER OTHER WORK HAS BEEN COMPLETED.

MAINTAINING TRAFFIC

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 614. ONE WAY TRAFFIC AS REQUIRED. THE WORK SHALL BE HELD TO A MINIMUM AND SHALL ONLY OCCUR DURING WORKING HOURS. DURING NON-WORKING HOURS BOTH LANES OF U.S. 250 SHALL BE OPEN TO TRAFFIC. ALL SIGNS, DRUMS, BARRICADES AND FLAGMEN SHALL BE UTILIZED IN CONFORMANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" CURRENT ADDITION, LATEST REVISION. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 601 - ROCK CHANNEL PROTECTION WITH FILTER

PLAN NO. BR-15-85

WHERE THIS ITEM IS CALLED FOR IN THE PLANS, THE QUANTITIES SHOWN ARE BASED ON THE DIMENSIONS OF THE ROCK ONLY AND DO NOT INCLUDE THE VOLUME OF A SIX INCH (6") STONE FILTER BED. THE COST OF THE FILTER (EITHER FABRIC OR STONE) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM 601 -ROCK CHANNEL PROTECTION WITH FILTER". WHERE THE FABRIC FILTER OPTION IS USED THE FABRIC SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPEC. 939 TYPE B. THE SURFACE TO RECEIVE THE FABRIC SHALL BE PREPARED TO A RELATIVELY SMOOTH SURFACE FREE OF OBSTRUCTION AND DEBRIS. THE FABRIC SHALL BE PLACED WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID LOOSELY BUT WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A TWELVE INCH (12") MINIMUM OVERLAP WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP. SECURING PINS WITH WASHERS SHALL BE PLACED AT TWO FOOT (2') MINIMUM INTERVALS ALONG JOINTS AND AT (2', 3', OR 5')** INTERVALS ELSEWHERE TO PREVENT SLIPPAGE OF THE FABRIC. THE SECURING PINS SHALL BE 3/16" DIAMETER OF STEEL POINTED AT ONE END AND FABRICATED WITH A HEAD TO RETAIN A STEEL WASHER HAVING AN OUTSIDE DIAMETER NOT LESS THAN 1-1/2". PIN LENGTHS SHALL BE GREATER THAN OR EQUAL TO 18".

** 2' FOR FLOW DIRECTION SLOPES STEEPER THAN 3:1, 3' FOR SLOPES 3:1 TO 4:1 AND 5' FOR SLOPES LESS STEEP THAN 4:1.

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.

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 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:

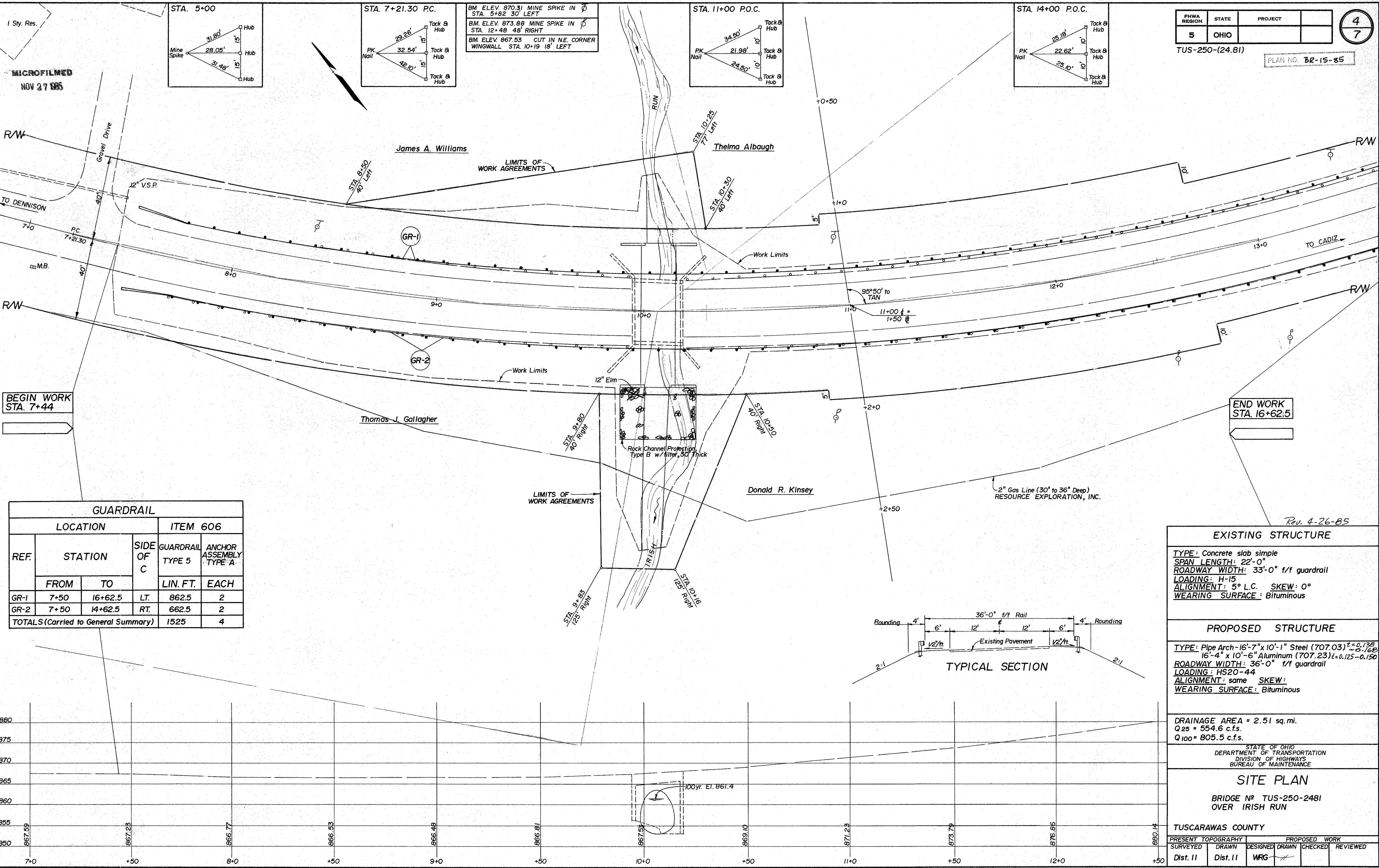
RESOURCE EXPLORATION, INC.
P.O. BOX 149
DENNISON, OHIO 44621
PHONE 614/922-4698

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

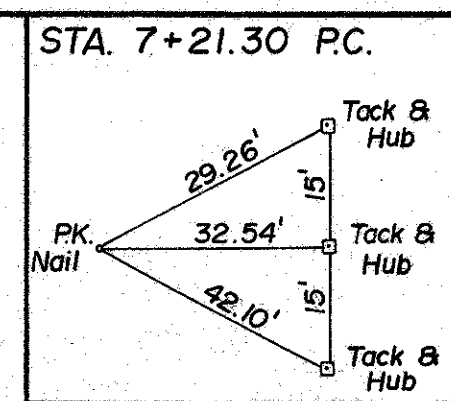
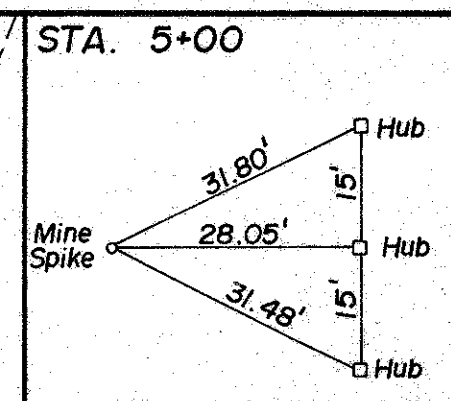
OHIO BELL TELEPHONE CO.
53055 HIGH RIDER ROAD
BRIDGEPORT, OHIO 43912
PHONE 614/695-6138

GENERAL SUMMARY

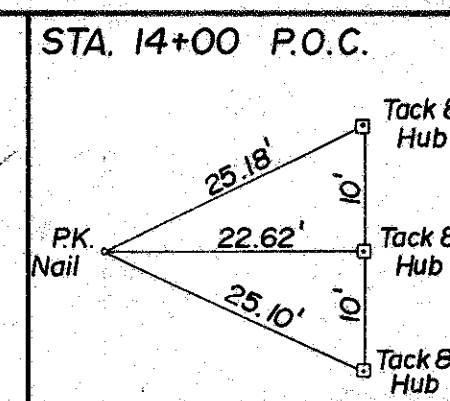
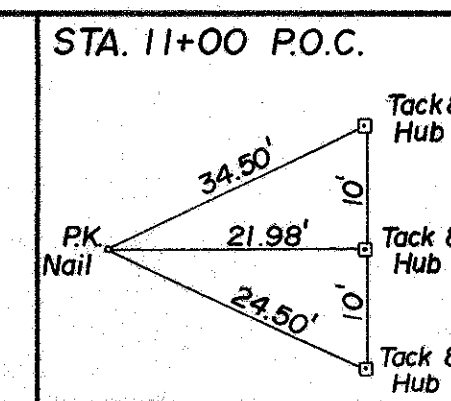
ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP	SUM	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	1209	LIN.FT.	GUARDRAIL REMOVED
203	169	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203	840	CU.YDS.	EMBANKMENT
601	93	CU.YDS.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER (30" THICK)
602	46.1	CU.YDS.	CONCRETE MASONRY
603	70	LIN.FT.	16'-7" X 10'-1" CONDUIT, TYPE A 707.03 $t=0.138-0.168$ 16'-4" X 10'-6" CONDUIT, TYPE A 707.23, $t=0.125-0.150$ AS PER PLAN
606	1525	LIN.FT.	GUARDRAIL, TYPE 5
606	4	EACH	ANCHOR ASSEMBLY, TYPE A
659	1432	SG.YDS.	SEEDING AND MULCHING
659	0.13	TONS	COMMERCIAL FERTILIZER
659	0.64	TONS	AGRICULTURAL LIMING
SPECIAL	1025	LIN.FT.	RESHAPING BERMS
SPECIAL	174	CU.YDS.	FILLING INSIDE EXISTING STRUCTURE
201	LUMP	SUM	CLEARING AND GRUBBING
614	LUMP	SUM	MAINTAINING TRAFFIC
619	LUMP	SUM	FIELD OFFICE
623	LUMP	SUM	CONSTRUCTION LAYOUT STAKES
624	LUMP	SUM	MOBILIZATION



1 Sty. Res.
MICROFILMED
NOV 27 1985



BM. ELEV. 870.31 MINE SPIKE IN ϕ
STA. 5+82.30' LEFT
BM. ELEV. 873.88 MINE SPIKE IN ϕ
STA. 12+48.48' RIGHT
BM. ELEV. 867.53 CUT IN NE. CORNER
WINGWALL STA. 10+19.18' LEFT



FHWA REGION	STATE	PROJECT	
5	OHIO		

TUS-250-(24.81)

PLAN NO. BR-15-85

4
7

BEGIN WORK
STA. 7+44

END WORK
STA. 16+62.5

GUARDRAIL					
REF.	LOCATION		ITEM 606		
	STATION	SIDE OF C	GUARDRAIL TYPE 5	ANCHOR ASSEMBLY TYPE A	
			LIN. FT.	EACH	
GR-1	7+50	16+62.5	LT.	862.5	2
GR-2	7+50	14+62.5	RT.	662.5	2
TOTALS (Carried to General Summary)				1525	4

EXISTING STRUCTURE

TYPE: Concrete slab simple
SPAN LENGTH: 22'-0"
ROADWAY WIDTH: 33'-0" f/f guardrail
LOADING: H-15
ALIGNMENT: 5° L.C. SKEW: 0°
WEARING SURFACE: Bituminous

PROPOSED STRUCTURE

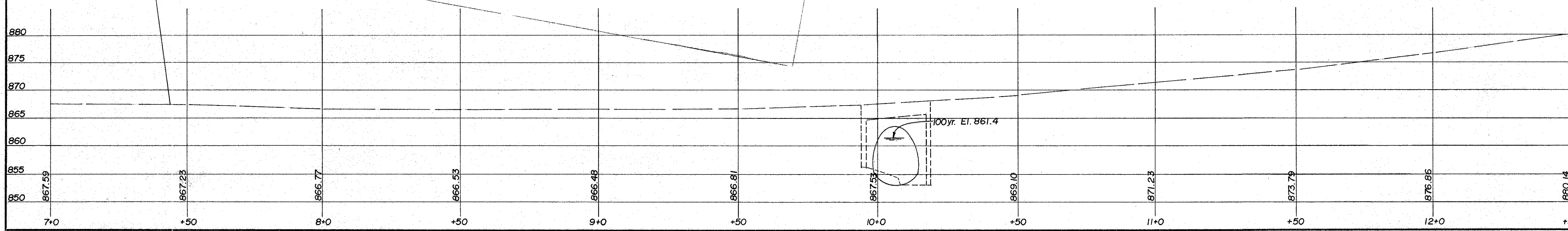
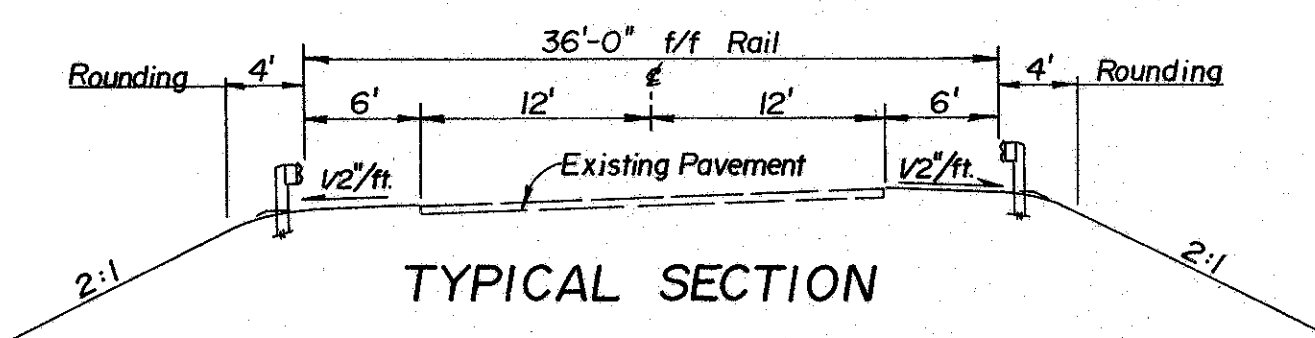
TYPE: Pipe Arch - 16'-7" x 10'-1" Steel (707.03)² = 0.139
16'-4" x 10'-6" Aluminum (707.23)² = 0.125 - 0.150
ROADWAY WIDTH: 36'-0" f/f guardrail
LOADING: HS20-44
ALIGNMENT: same SKEW:
WEARING SURFACE: Bituminous

DRAINAGE AREA = 2.51 sq. mi.
Q₂₅ = 554.6 c.f.s.
Q₁₀₀ = 805.5 c.f.s.

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

SITE PLAN
BRIDGE # TUS-250-2481
OVER IRISH RUN

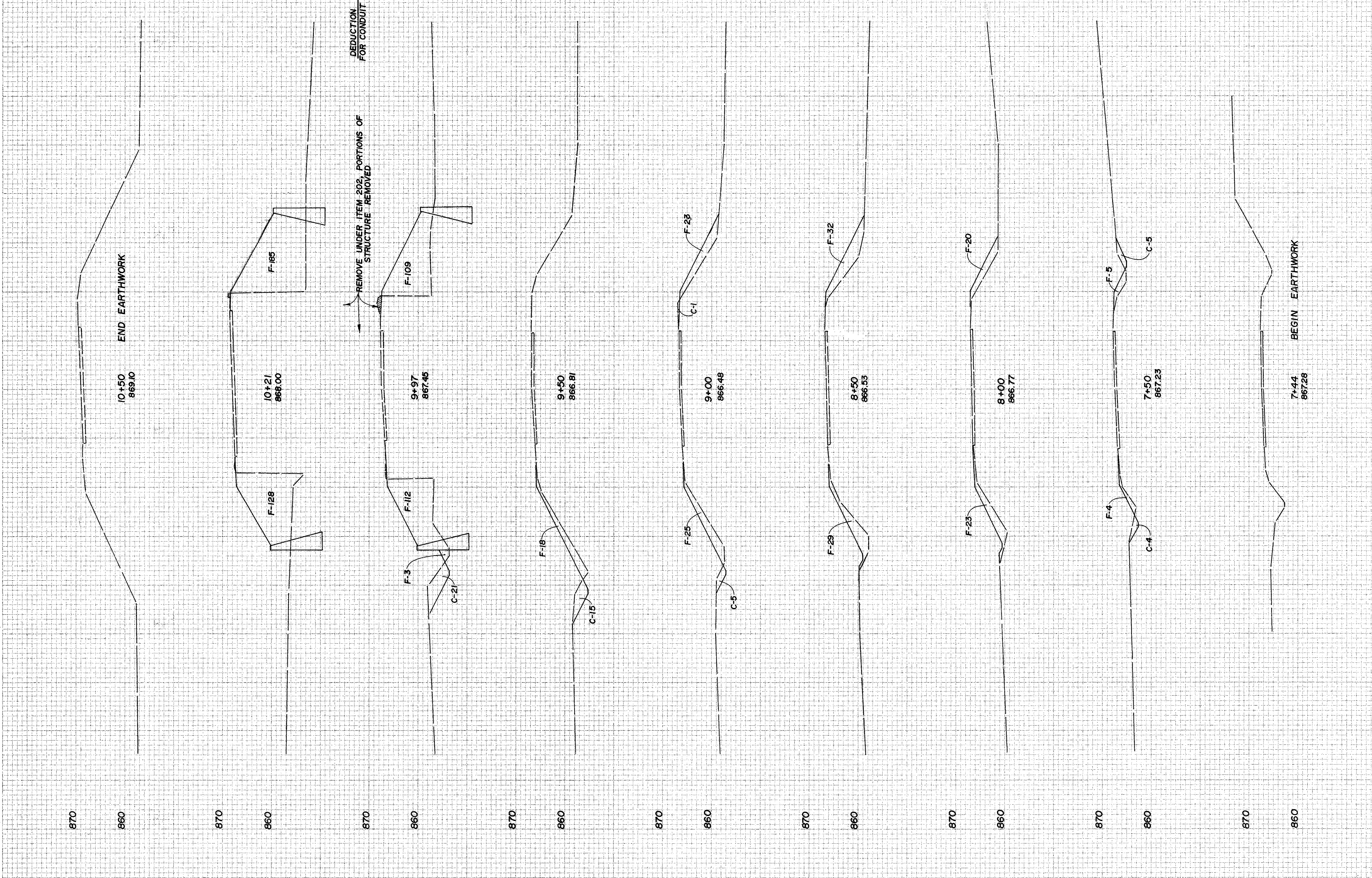
PRESENT TOPOGRAPHY		PROPOSED WORK		
SURVEYED	DRAWN	DESIGNED DRAWN	CHECKED	REVIEWED
Dist. II	Dist. II	WRG		



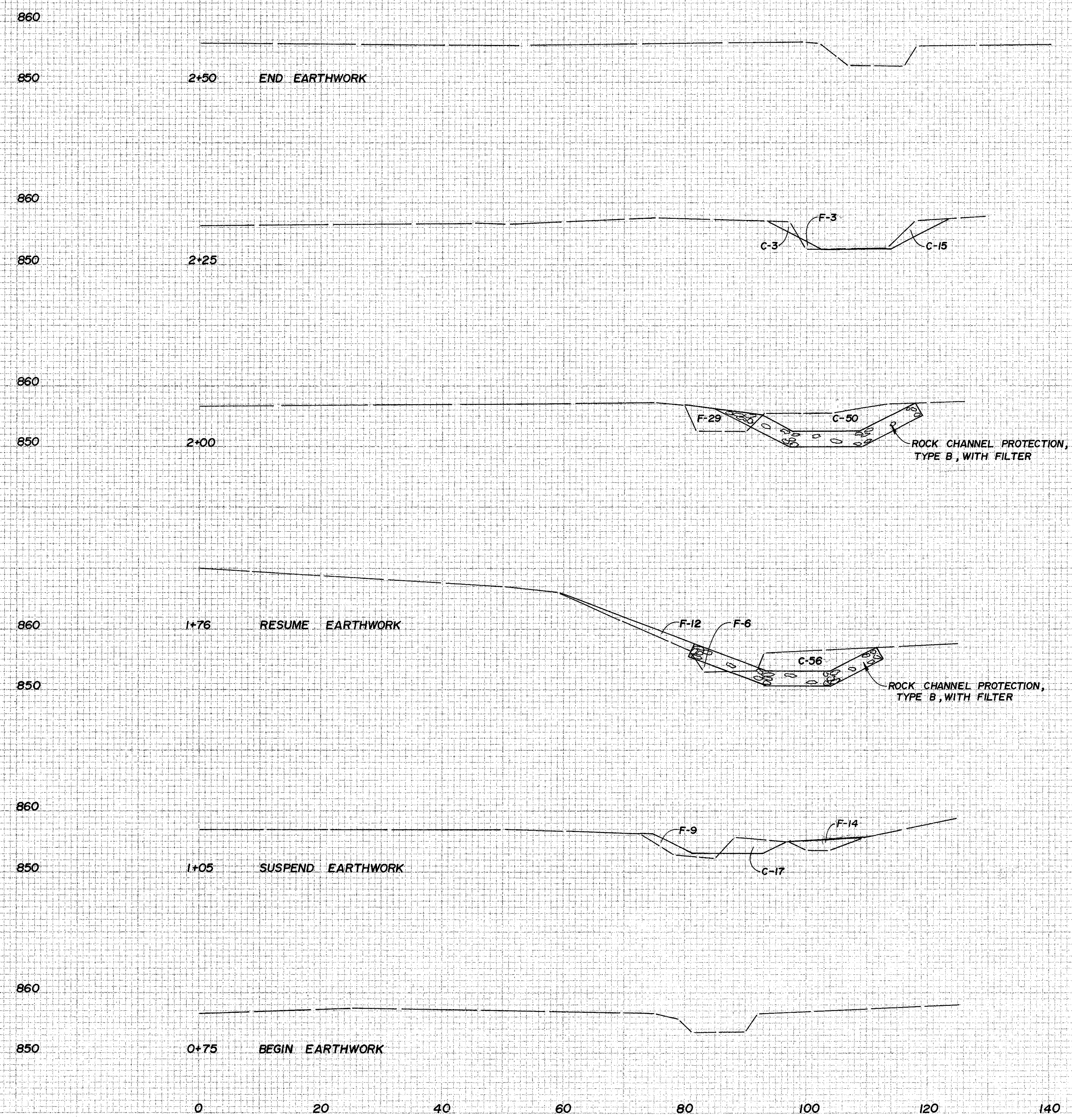
SEEDING	END AREA	CU YDS.	WIDTH(SQ. FT.)	CUT	FILL	EXC.	EMB.
0	0	0	0	0	0	0	0
63	0	168	0	0	0	0	0
39	0	313	0	0	0	0	0
120	9	239	9	239	0	0	0
51	21	224	51	224	0	0	0
235	31	211	235	211	0	0	0
39	15	78	39	78	0	0	0
236	19	61	236	61	0	0	0
46	6	48	46	48	0	0	0
239	6	101	239	101	0	0	0
208	0	96	208	96	0	0	0
35	0	43	35	43	0	0	0
181	8	48	181	48	0	0	0
30	9	9	30	9	0	0	0
10	1	1	10	1	0	0	0
0	0	0	0	0	0	0	0

FEDERAL REGION STATE PROJECT
 6 OHIO
 TUS-250-(24.81)
 PLAN NO. BR-15-85
 CALC. WAG DATE 1-3-85
 CHK. JLO DATE 1-9-85

5
6



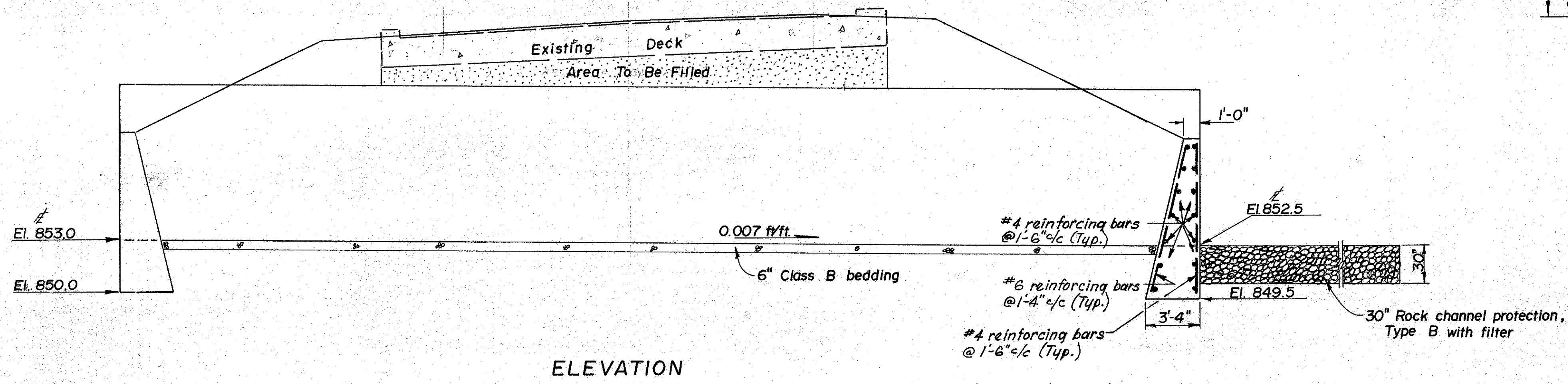
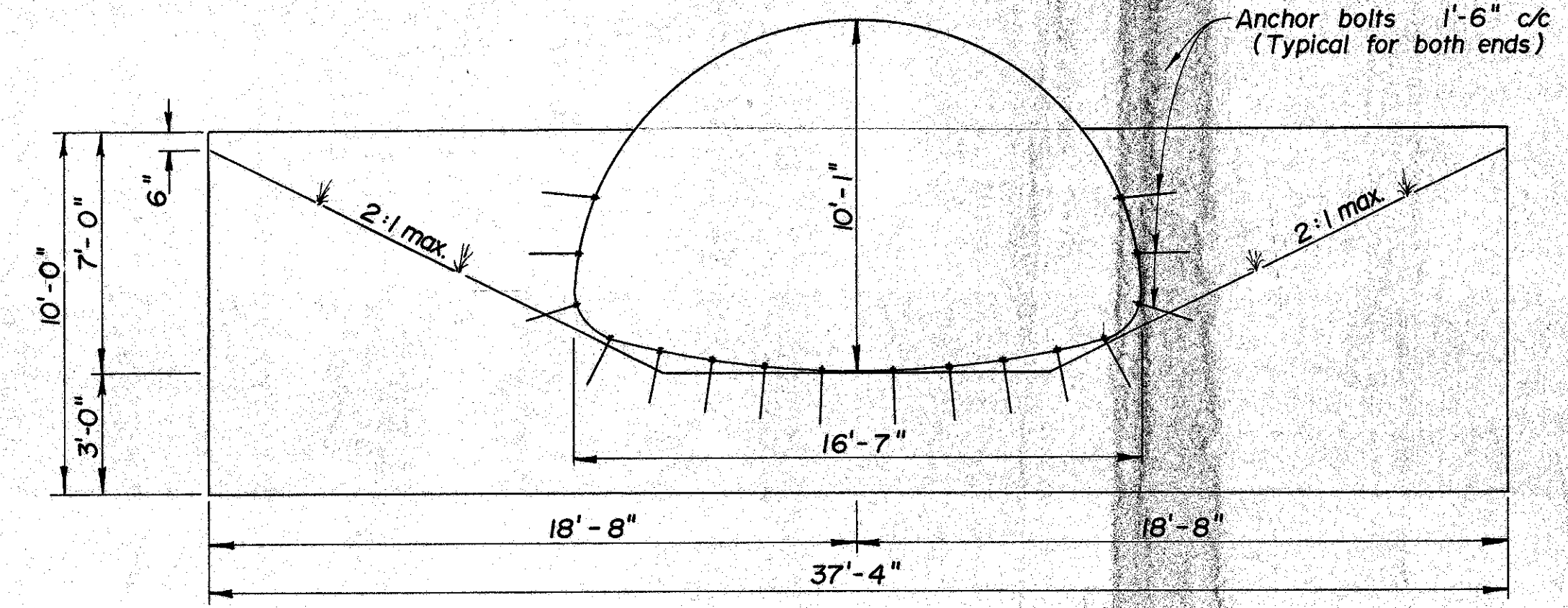
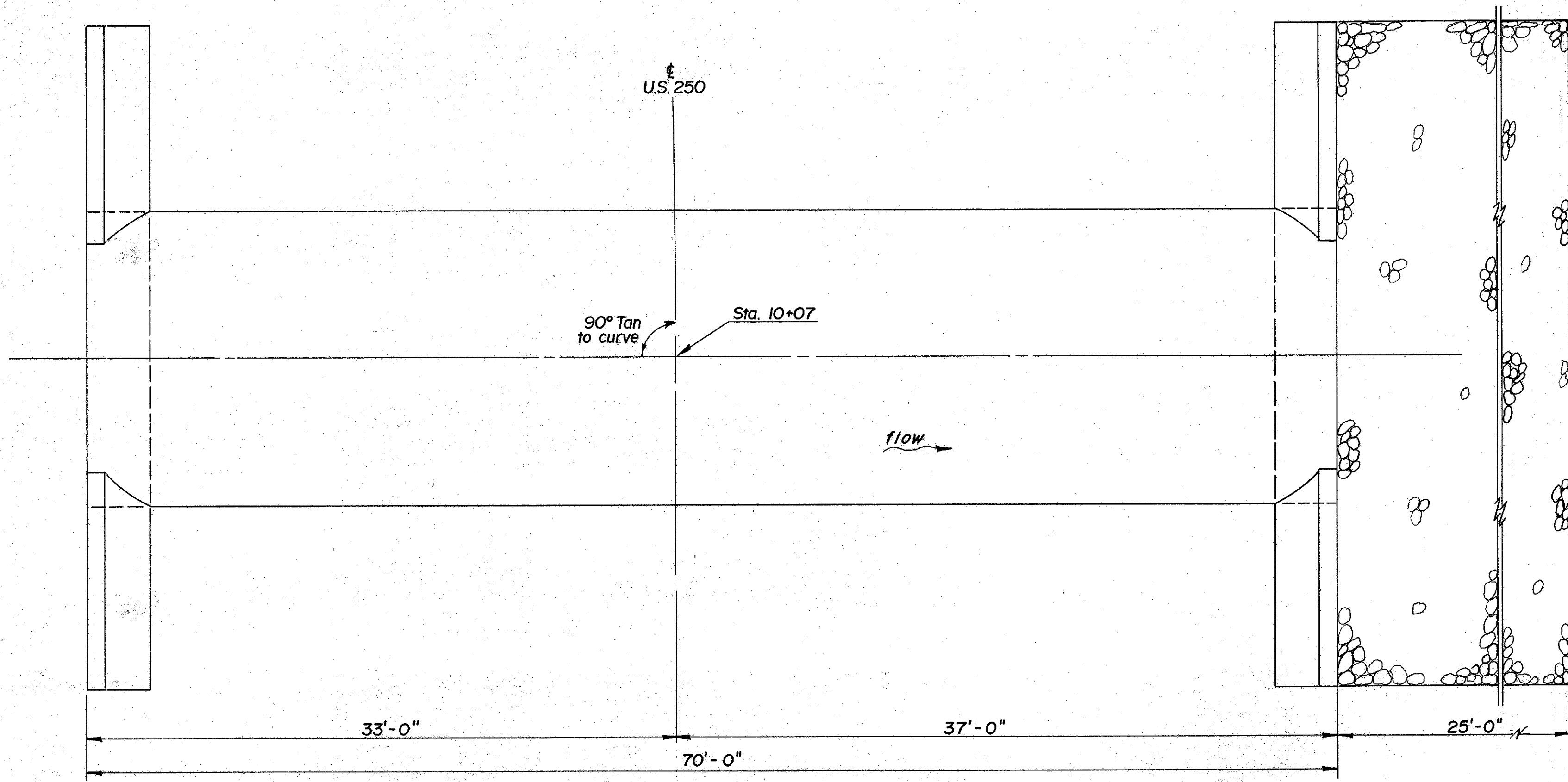
60
40
20
0
20
40
60
80



SEEDING WIDTH	END AREA		CU. YDS.	
	SQ. YD.	CUT	FILL	EXC. EMB.
0	0	0	0	
26			8	1
19	18	3		
33			31	15
5	50	29		
39			47	21
24	56	18		
25	17	23		
42			9	13
0	0	0		

CHANNEL CROSS SECTIONS

MICROFILMED
NOV 27 1985



Note: all reinforcing steel included for payment in Item 602 - Concrete Masonry.

NOTE: All drawings show 16'-7" x 10'-1" Steel pipe arch (707.03). The 16'-4" x 10'-6" Aluminum pipe arch (707.23) is not shown.

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

GENERAL PLAN OF STRUCTURE

BRIDGE No TUS-250-2481
OVER IRISH RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WRG						