



**EXISTING PLANS**

EXISTING PLANS ENTITLED TRU-I-80-8.90 (1963) MAY BE FOUND ON ODOT'S FTP SITE AT THE FOLLOWING ADDRESS:

<https://ftp.dot.state.oh.us/pub/contracts/Attach/>

**ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS (TRU-80-12.115)**

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

**ITEM 202 - REMOVAL MISC.: CHANNEL CLEANOUT (TRU-80-12.115)**

THIS WORK WILL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR CONDUIT TRU-80-12.115. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS WILL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

**ITEM SPECIAL - PIPE CLEANOUT, AS PER PLAN**

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

EXISTING FIELD PAVING WILL NEED TO BE PARTIALLY REMOVED TO ALLOW FOR A SNUG FIT OF LINER PIPE.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

**ITEM 503 - UNCLASSIFIED EXCAVATION**

THE FOLLOWING LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR ANY EXCAVATION OR EMBANKMENT THAT MIGHT BE NEEDED TO RECONSTRUCT THE DAMAGED HEADWALL, OUTLET APRON, AND CURRENT EROSION. ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION.

**ITEM 837 - LINER PIPE (48" DIA., 707.35, 707.75, 707.85)**

THIS WORK CONSISTS OF FURNISHING LINER PIPE, FILLING VOIDS AROUND EXISTING CONDUITS, INSTALLING LINER PIPE, AND GROUTING LINER PIPE INTO EXISTING CONDITIONS AS SHOWN ON THE PLANS.

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING (TRU-80-12.115)**

THIS ITEM IS FOR THE CONTRACTOR TO USE AS NEEDED. A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

**ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR**

THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE; PREPARING THE SURFACE; MIXING, PLACING, FINISHING AND CURING OF THE PATCHES IN THE AREAS SHOWN OR NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED UPON CONCRETE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

**CONDUIT IDENTIFICATION SIGNS**


CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

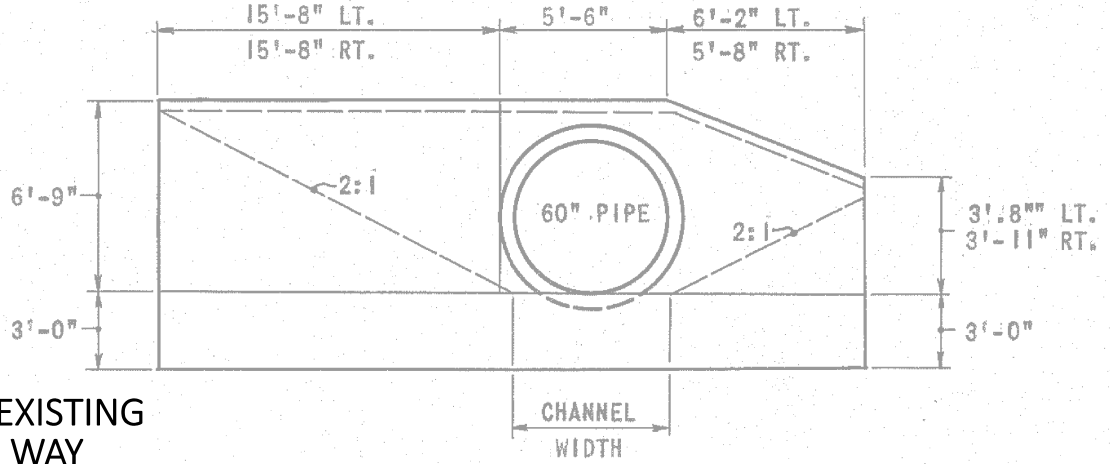
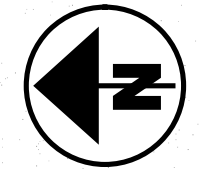
INSTALL SIGNS FOR THE FOLLOWING CONDUITS:  
TRU-80-12.115

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:  
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT  
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

REF NO.	SHEET NO.	STATION TO STATION			201 CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS, (TRU-80-12.115)	202 REMOVAL MISC.: CHANNEL CLEANOUT, (TRU-80-12.115)	SPECIAL PIPE CLEANOUT OVER 48" AS PER PLAN, (TRU-80-12.115)	503 UNCLASSIFIED EXCAVATION, (TRU-80-12.115)	837 LINER PIPE, 48", 707.35, 707.75, 707.85	837 BACKFILL FOR LINER PIPE	843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	601 ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	503 COFFERDAMS AND EXCAVATION BRACING, (TRU-80-12.115)	
														LS
			TO											
R1	P.11	646+42	RT	648+54	LT	LS								
R2	P.11	646+42	RT	648+54	LT		LS							
R3	P.11	646+53	RT	648+41	LT			304						
									304	304				
D1	P.11	646+53	RT	648+41	LT									
D2	P.11	648+31	LT	648+62	LT		LS			27				
D3	P.11	646+58	RT	646+65	RT		LS			27				
E1	P.11	646+16	LT	646+73	LT							LS		
E2	P.11	646+38	RT	646+56	RT						12			
TOTALS CARRIED TO GENERAL SUMMARY						LS	LS	304	LS	304	304	54	12	LS

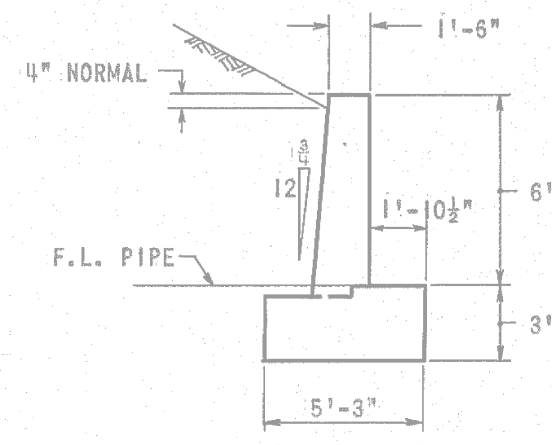
DESIGN AGENCY  
  
 DESIGNER  
**NKF**  
 REVIEWER  
**MJP 04-01-24**  
 PROJECT ID  
**119381**  
 SHEET TOTAL  
 P.10 | 20





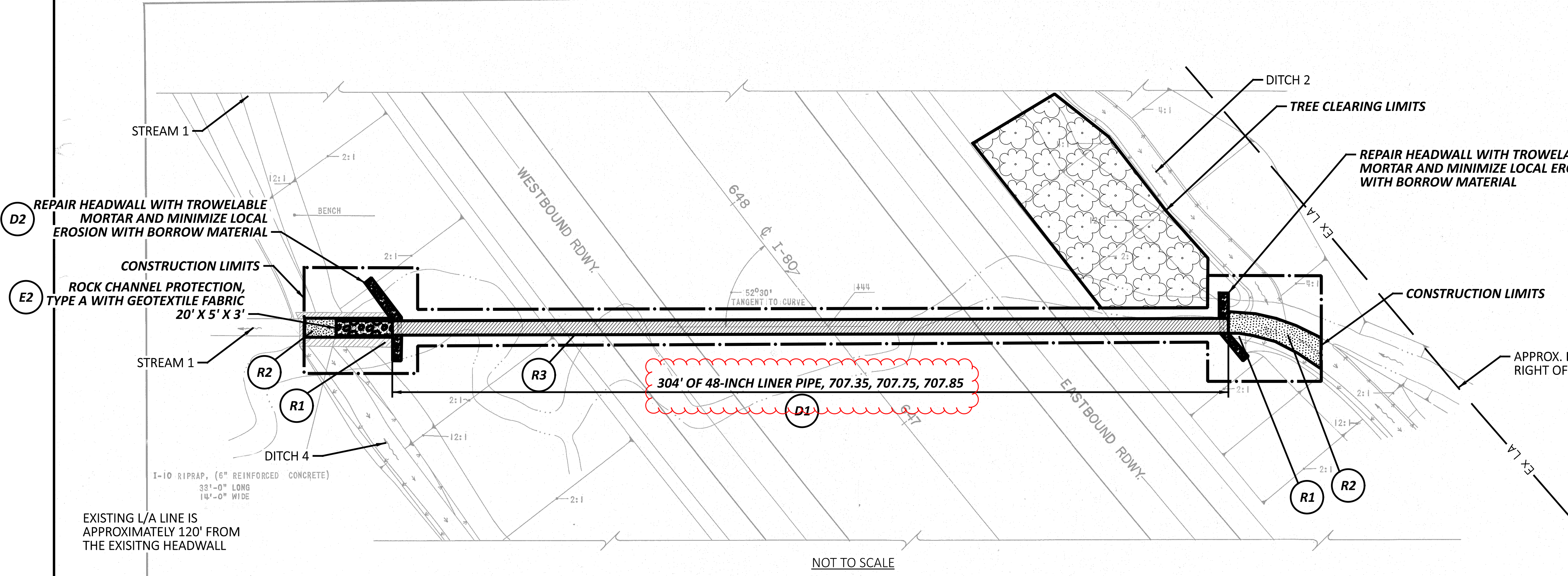
"B" HEADWALL Lt. & Rt.

FOR STEEL BAR SIZE & ARRANGEMENT SEE SHEET 297



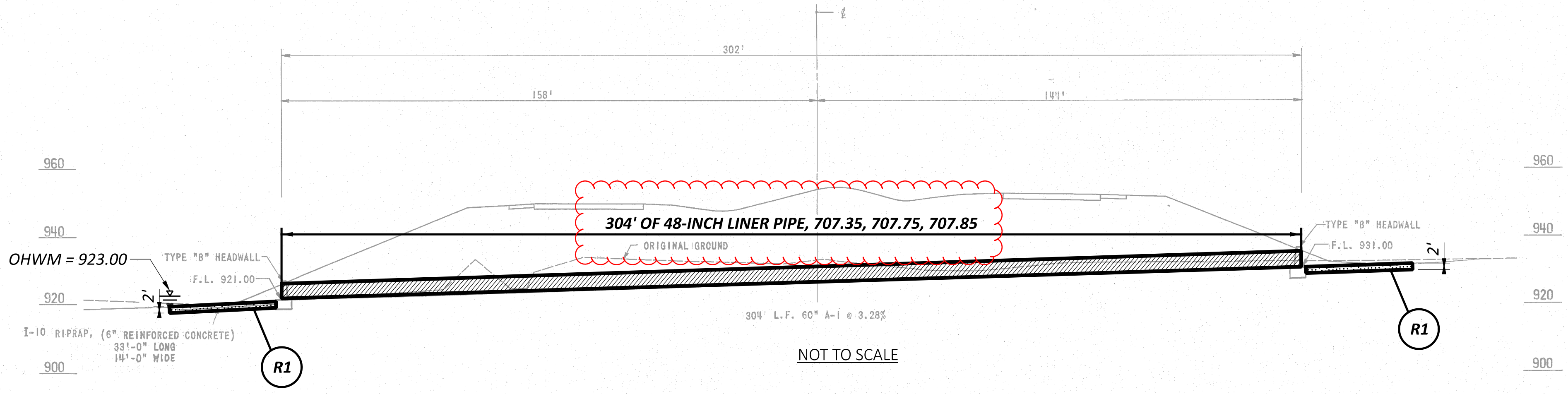
D. A. = 257 ACRES Q<sub>50</sub> = 203 C.F.S.

STRUCTURE NO. TRU -80-1197  
 Station 647+44  
 Skew 37° 30' L.F.



NOT TO SCALE

EXISTING L/A LINE IS APPROXIMATELY 120' FROM THE EXISTING HEADWALL



NOT TO SCALE

**LEGEND**

	CONDUIT RENEWAL LIMITS
	ROCK CHANNEL PROTECTION
	HEADWALL REPAIR/REPLACEMENT
	CHANNEL CLEANOUT

EXISTING CONDUIT
TYPE: CIRCULAR CORRUGATED METAL PIPE
SIZE: 60"
SKEW: 52° RT
ALIGNMENT: TANGENT
DATE BUILT: 1964
CONDITION: FIELD PAVED
CFN: 1800989

HYDRAULIC DATA
DRAINAGE AREA = 262 ACRES
Q (2%) = 168 CFS HW (2%) = 939.3 FT V (2%) = 23 FPS
Q (1%) = 203 CFS HW (1%) = 955.4 FT V (1%) = 19 FPS

D04-BH/CR-FY2025

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 1/10/2025 TIME: 10:34:46 AM USER: mpatagan pvc:\ohio\pwr-bentley.com\ohio\pwr-02\Documents\01 Active Projects\District 04\Ashland\119381\400-Engineering\Drainage\Sheets\119381\_DB200.dgn

SCHEMATIC PLAN - TRU-80-12.115

DESIGN AGENCY	
DESIGNER	NKF
REVIEWER	MJP
PROJECT ID	04-01-24
SHEET	119381
TOTAL	P.11   20



**EXISTING PLANS**

EXISTING PLANS ENTITLED TRU-82-13.47 (1977) MAY BE FOUND ON ODOT'S FTP SITE AT THE FOLLOWING ADDRESS:

<https://ftp.dot.state.oh.us/pub/contracts/Attach/>

**ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS (TRU-82-15.260)**

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

**ITEM 202 - REMOVAL MISC.: CHANNEL CLEANOUT (TRU-82-15.260)**

THIS WORK WILL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR CONDUIT TRU-82-15.260. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS WILL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

**ITEM SPECIAL - PIPE CLEANOUT, AS PER PLAN**

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

EXISTING FIELD PAVING WILL NEED TO BE PARTIALLY REMOVED TO ALLOW FOR A SNUG FIT OF LINER PIPE.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

**ITEM 503 - UNCLASSIFIED EXCAVATION**

THE FOLLOWING LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR ANY EXCAVATION OR EMBANKMENT THAT MIGHT BE NEEDED TO RECONSTRUCT THE DAMAGED HEADWALL, OUTLET APRON, AND CURRENT EROSION. ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION.

**ITEM 837 - LINER PIPE (84" DIA., 707.35, 707.75 707.85)**

THIS WORK CONSISTS OF FURNISHING LINER PIPE, FILLING VOIDS AROUND EXISTING CONDUITS, INSTALLING LINER PIPE, AND GROUTING LINER PIPE INTO EXISTING CONDITIONS AS SHOWN ON THE PLANS.

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (TRU-82-15.260)**

THIS ITEM IS FOR THE CONTRACTOR TO USE AS NEEDED. A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

PLEASE NOTE THIS LOCATION WILL NEED TO BE DEWATERED. THE CONDUIT IS PARTIALLY SUBMERGED AT ALL TIMES.

**ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR**

THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE; PREPARING THE SURFACE; MIXING, PLACING, FINISHING AND CURING OF THE PATCHES IN THE AREAS SHOWN OR NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED UPON CONCRETE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

**CONDUIT IDENTIFICATION SIGNS**


CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING CONDUITS:  
TRU-82-15.260

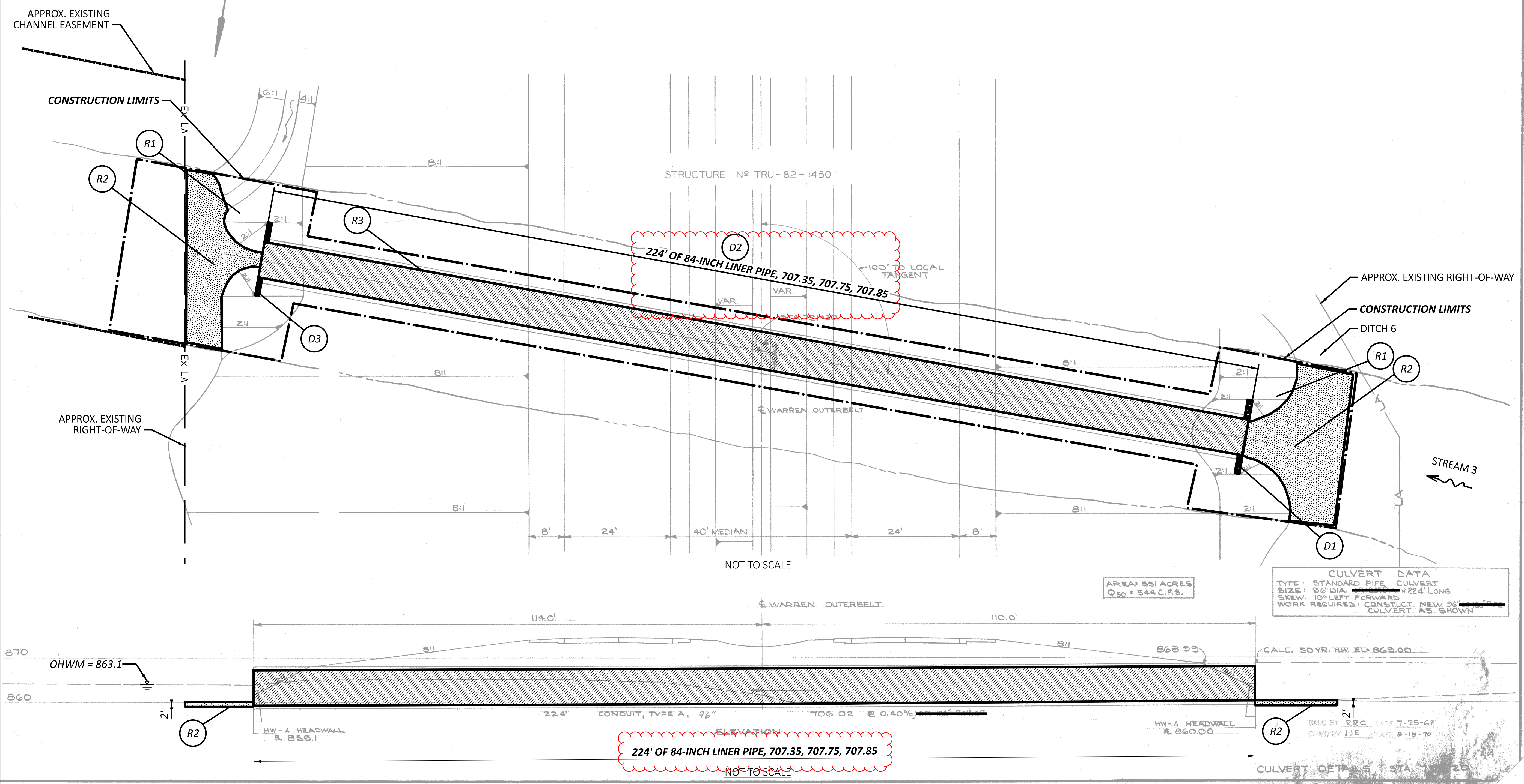
THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:  
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT  
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

REF NO.	SHEET NO.	STATION TO STATION	ITEMS											
			201	202	SPECIAL	503	837	837	503	843				
			LS	LS	FT	LS	FT	LS	LS	SF				
R1	P.13	790+85 RT 791+56 LT	LS											
R2	P.13	790+85 RT 791+56 LT		LS										
R3	P.13	790+96 RT 791+45 LT			224									
D1	P.13	790+92 RT 791+09 RT				LS					63			
D2	P.13	790+96 RT 791+45 LT												
D3	P.13	791+31 LT 791+49 LT				LS		224	224					
E1	P.13	790+85 RT 791+15 RT									LS			
TOTALS CARRIED TO GENERAL SUMMARY			LS	LS	224	LS	224	224	LS	126				

DESIGN AGENCY  
  
 DESIGNER  
**NKF**  
 REVIEWER  
**MJP 04-01-24**  
 PROJECT ID  
**119381**  
 SHEET TOTAL  
 P.12 | 20



NOTE: THE NORTH ARROW IS FACING DOWN  
 PLEASE BE AWARE THE WORK IS TO TAKE PLACE ON CFN 1800970 LOCATED AT (41.257954, -80.769602)



AREA: 551 ACRES  
 Q<sub>50</sub> = 544 C.F.S.

**CULVERT DATA**  
 TYPE: STANDARD PIPE CULVERT  
 SIZE: 96" DIA. x 224' LONG  
 SKEW: 10° LEFT FORWARD  
 WORK REQUIRED: CONSTRUCT NEW 96" CULVERT AS SHOWN

CALC. BY RRC DATE 7-25-67  
 CHK'D BY JJE DATE 8-15-70

CULVERT DETAILS STA 7+20

D04-BH/CR-FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 1/10/2025 TIME: 10:35:48 AM USER: mpatagan p:\vohodo-pw-bentley.com\ohio\pwr-02\Documents\01 Active Projects\District 04\Ashabula\119381\400-Engineering\Drainage\Sheets\119381\_DB300.dgn

- LEGEND**
- CONDUIT RENEWAL LIMITS
  - HEADWALL REPAIR/REPLACEMENT
  - CHANNEL CLEANOUT, AS PER PLAN

EXISTING CONDUIT
TYPE: CIRCULAR CORRUGATED METAL PIPE
SIZE: 96"
SKEW: 10° RT
ALIGNMENT: TANGENT
DATE BUILT: 1978
CONDITION: UNPROTECTED
CFN: 1800970

HYDRAULIC DATA
DRAINAGE AREA = 589 ACRES
Q (4%) = 151 CFS HW (4%) = 864.5 FT V (4%) = 9 FPS
Q (1%) = 201 CFS HW (1%) = 865.3 FT V (1%) = 11 FPS

SCHEMATIC PLAN - TRU-82-15.260

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-01-24

PROJECT ID

119381

SHEET TOTAL

P.13 | 20



**EXISTING PLANS**

EXISTING PLANS ENTITLED TRU-11-(15.35)(16.04) (1973) MAY BE FOUND ON ODOT'S FTP SITE AT THE FOLLOWING ADDRESS:

<https://ftp.dot.state.oh.us/pub/contracts/Attach/>

**ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS (TRU-305-16.860)**

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

**ITEM 202 - REMOVAL MISC.: CHANNEL CLEANOUT (TRU-305-16.860)**

THIS WORK WILL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR CONDUIT TRU-305-16.860. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS WILL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

**ITEM SPECIAL - PIPE CLEANOUT, AS PER PLAN**

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

EXISTING FIELD PAVING WILL NEED TO BE PARTIALLY REMOVED TO ALLOW FOR A SNUG FIT OF LINER PIPE.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

**ITEM 503 - UNCLASSIFIED EXCAVATION**

THE FOLLOWING LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR ANY EXCAVATION OR EMBANKMENT THAT MIGHT BE NEEDED TO RECONSTRUCT THE DAMAGED HEADWALL, OUTLET APRON, AND CURRENT EROSION. ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION.

**ITEM 837 - LINER PIPE (54" DIA., 707.35, 707.75, 707.85)**

THIS WORK CONSISTS OF FURNISHING LINER PIPE, FILLING VOIDS AROUND EXISTING CONDUITS, INSTALLING LINER PIPE, AND GROUTING LINER PIPE INTO EXISTING CONDITIONS AS SHOWN ON THE PLANS.

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING (TRU-305-16.860)**

THIS ITEM IS FOR THE CONTRACTOR TO USE AS NEEDED. A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

**ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR**

THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE; PREPARING THE SURFACE; MIXING, PLACING, FINISHING AND CURING OF THE PATCHES IN THE AREAS SHOWN OR NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED UPON CONCRETE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

**CONDUIT IDENTIFICATION SIGNS**

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING CONDUITS:  
 TRU-305-16.860

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:  
 ITEM 630 – SIGN, FLAT SHEET, 730.20, 1 SQ FT  
 ITEM 630 – GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

**AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS**

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 150 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERRECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.


FEDERAL AVIATION ADMINISTRATION  
 SOUTHWEST REGIONAL OFFICE  
 OBSTRUCTION EVALUATION GROUP  
 10101 HILLWOOD PARKWAY  
 FORT WORTH, TX 76177  
 FAX: (817) 222-5920  
 HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION  
 OFFICE OF AVIATION  
 2829 WEST DUBLIN-GRANVILLE ROAD  
 COLUMBUS, OHIO 43235  
 OHIO.AIRPORT.PROTECTION@DOT.OHIO.GOV

REF NO.	SHEET NO.	STATION TO STATION				201	202	SPECIAL	503	837	837	503	843	601
						LS	LS	FT	LS	FT	FT	LS	SF	CY
R1	P.15	25+03	LT	25+28	RT	LS								
R2	P.15	25+03	LT	25+28	LT		LS							
R3	P.15	25+15	LT	25+15	RT			132						
D1	P.15	25+11	LT	25+20	LT			LS				18		
D2	P.15	25+11	RT	25+20	RT							18		
D3	P.15	25+15	LT	25+15	RT				132	132				
E1	P.15	25+11	RT	25+20	RT								7	
E2	P.15	25+03	LT	25+26	LT						LS			
TOTALS CARRIED TO GENERAL SUMMARY						LS	LS	132	LS	132	132	LS	36	7

DRAINAGE NOTES - TRU-305-16.860

DESIGN AGENCY



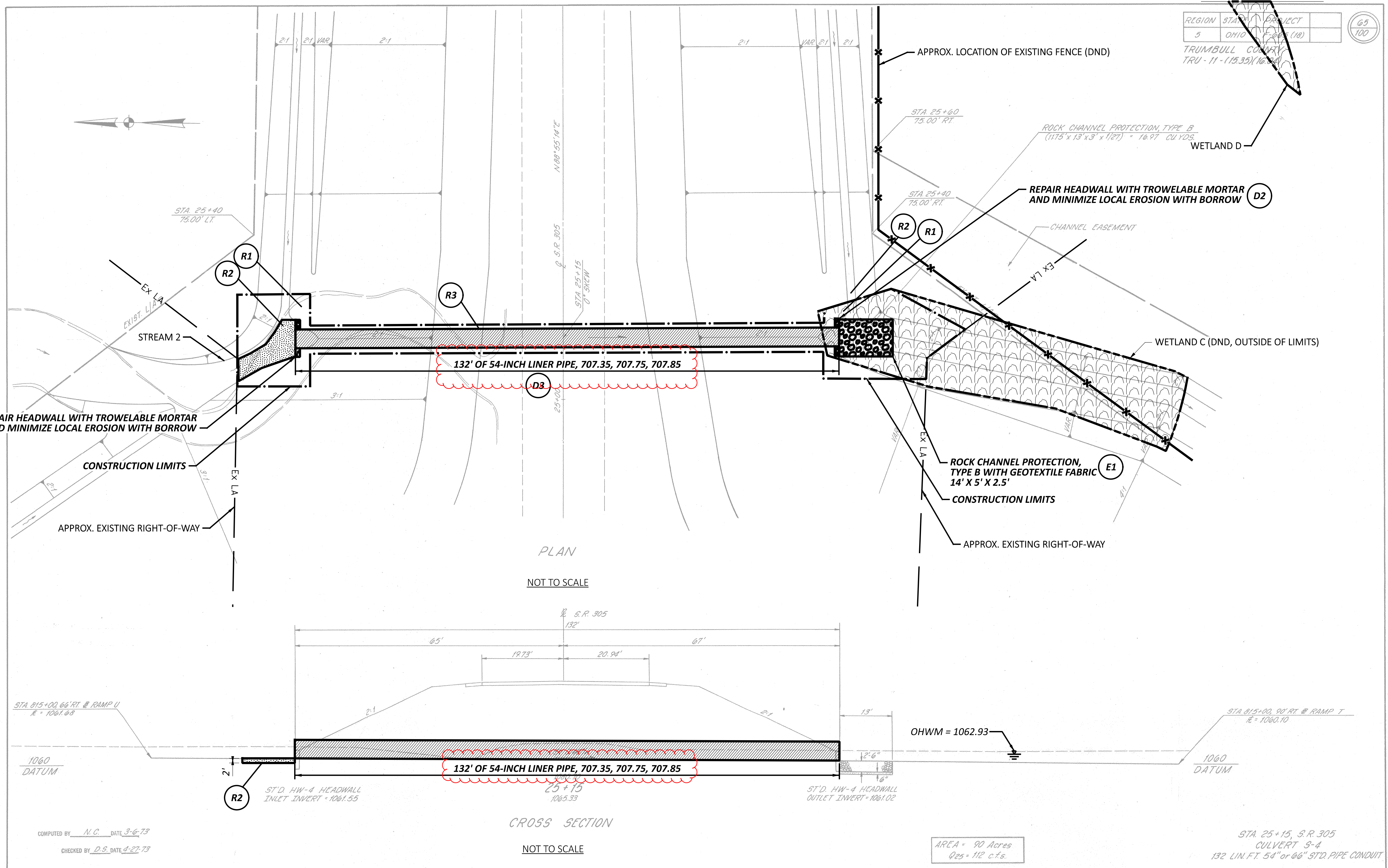
DESIGNER  
**NKF**

REVIEWER  
**MJP 04-01-24**

PROJECT ID  
**119381**

SHEET TOTAL  
 P.14 | 20





REGION	STATE	PROJECT
5	OHIO	TRU-305-16.860 (18)

TRUMBULL COUNTY  
 TRU-11-(15.35)(16.860)

SCHEMATIC PLAN - TRU-305-16.860

DESIGN AGENCY



DESIGNER	NKF
REVIEWER	MJP
PROJECT ID	04-01-24
	119381
SHEET	TOTAL
P.15	20

- LEGEND**
- CONDUIT RENEWAL LIMITS
  - ROCK CHANNEL PROTECTION
  - HEADWALL REPAIR/REPLACEMENT
  - CHANNEL CLEANOUT

EXISTING CONDUIT
TYPE: CIRCULAR CORRUGATED METAL PIPE
SIZE: 60"
SKREW: NONE
ALIGNMENT: TANGENT
DATE BUILT: 1973
CONDITION: UNPROTECTED
CFN: 1800939

HYDRAULIC DATA
DRAINAGE AREA = 86 ACRES
Q (4%) = 59 CFS HW (4%) = 1064.7 FT V (4%) = 8.2 FPS
Q (1%) = 82 CFS HW (1%) = 1065.4 FT V (1%) = 8.9 FPS

AREA = 90 Acres  
 Q<sub>25</sub> = 112 cfs.

STA 25+15, S.R. 305  
 CULVERT S-4  
 132 LIN. FT. 54" or 66" STD. PIPE CONDUIT

CULVERT DETAIL



**EXISTING PLANS**

EXISTING PLANS ENTITLED MAH-170-(5.94)(6.79) (1966) MAY BE FOUND ON ODOT'S FTP SITE AT THE FOLLOWING ADDRESS:

<https://ftp.dot.state.oh.us/pub/contracts/Attach/>

**ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS (MAH-170-5.903)**

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

**ITEM 202 - REMOVAL MISC.: CHANNEL CLEANOUT (MAH-170-5.903)**

THIS WORK WILL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR STRUCTURE MAH-170-5.903. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS WILL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

**ITEM SPECIAL - PIPE CLEANOUT, AS PER PLAN**

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

EXISTING FIELD PAVING WILL NEED TO BE PARTIALLY REMOVED TO ALLOW FOR A SNUG FIT OF LINER PIPE.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

**ITEM 503 - UNCLASSIFIED EXCAVATION**

THE FOLLOWING LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR ANY EXCAVATION OR EMBANKMENT THAT MIGHT BE NEEDED TO RECONSTRUCT THE DAMAGED HEADWALL, OUTLET APRON, AND CURRENT EROSION. ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION.

**ITEM 837 - LINER PIPE (96" DIA., 707.35, 707.75, 707.85)**

THIS WORK CONSISTS OF FURNISHING LINER PIPE, FILLING VOIDS AROUND EXISTING CONDUITS, INSTALLING LINER PIPE, AND GROUTING LINER PIPE INTO EXISTING CONDITIONS AS SHOWN ON THE PLANS.

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING (MAH-170-5.903)**

THIS ITEM IS FOR THE CONTRACTOR TO USE AS NEEDED. A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

**ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR**

THIS WORK CONSISTS OF REMOVING ALL LOOSE AND DISINTEGRATED CONCRETE; PREPARING THE SURFACE; MIXING, PLACING, FINISHING AND CURING OF THE PATCHES IN THE AREAS SHOWN OR NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED UPON CONCRETE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

**STRUCTURE IDENTIFICATION SIGNS**

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:  
 MAH-170-5.903

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT  
 ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

STRUCTURE GENERAL NOTES  
 MAH-170-5.903  
 OVER BURGESS RUN

SFN	
5003970	
DESIGN AGENCY	
DESIGNER	CHECKER
NKF	MJP
REVIEWER	
EMS 04-01-24	
PROJECT ID	
119381	
SUBSET	TOTAL
3	5
SHEET	TOTAL
P.18	20



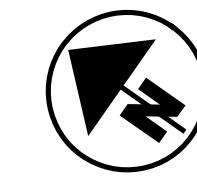
**STRUCTURE N° C-1**  
**MAH - 170-0594**  
 Sta. 4+75

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	STATE	

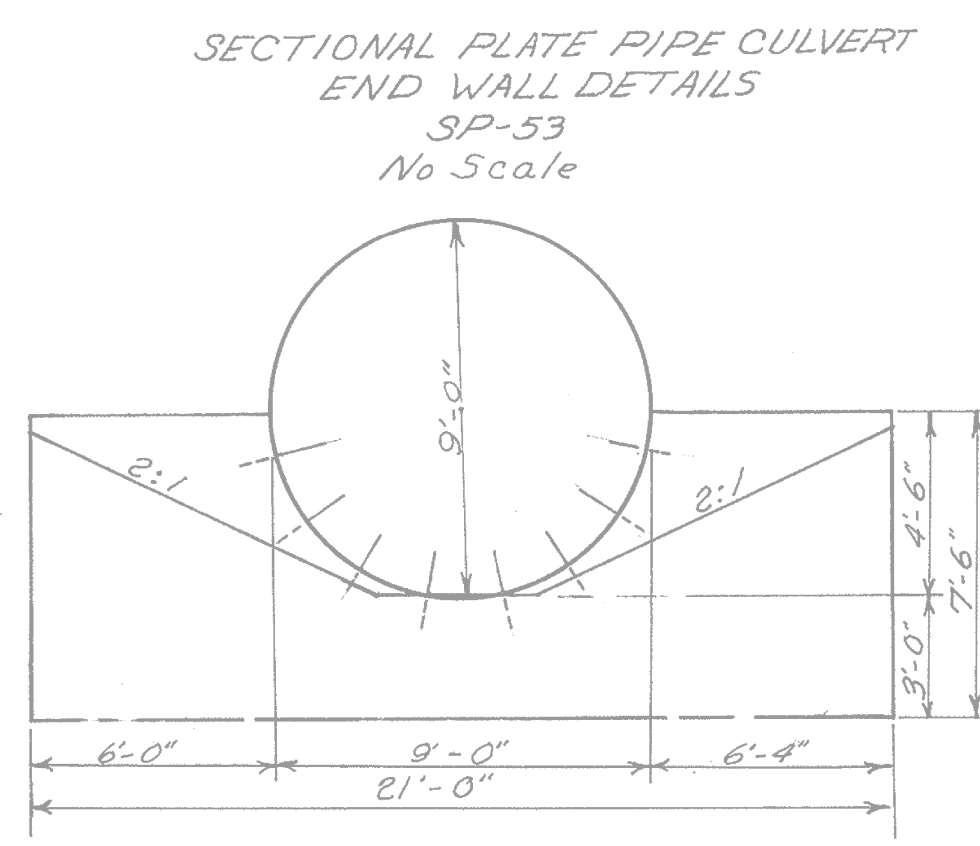
MAH-170-(5.94)(6.79)

9/19

NOT TO SCALE



*Proposed Structure Data*  
 Drainage Area: 620 Acres  $Q_{25} = 320$  cfs HW=6.4'  
 Type A Conduit Corrugated Metal Pipe  
 Size 108"  $707.03$  Gage 10.8V=9.6 for CMP  
 x110' Long Skew 30° L.F.



BURGESS RUN  
 ROCK CHANNEL PROTECTION,  
 TYPE B WITH GEOTEXTILE FABRIC  
 28' X 21' X 2.5'

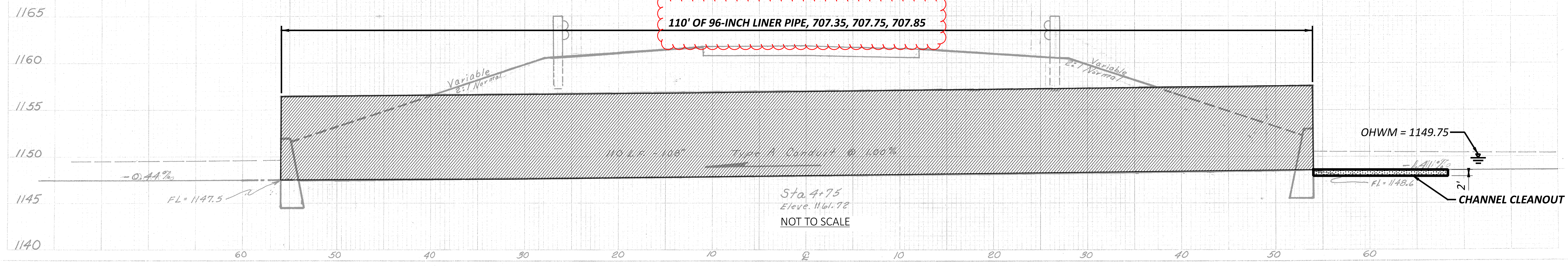
REPAIR HEADWALL WITH TROWELABLE MORTAR  
 AND MINIMIZE LOCAL EROSION WITH BORROW

DITCH 1  
 WETLAND A (DND)  
 CONSTRUCTION LIMITS

REPAIR HEADWALL WITH TROWELABLE MORTAR  
 AND MINIMIZE LOCAL EROSION WITH BORROW

CONSTRUCTION LIMITS  
 CHANNEL CLEANOUT  
 WETLAND A (DND, OUTSIDE OF LIMITS)

110' OF 96-INCH LINER PIPE, 707.35, 707.75, 707.85



- LEGEND**
- CONDUIT RENEWAL LIMITS
  - ROCK CHANNEL PROTECTION
  - HEADWALL REPAIR/REPLACEMENT
  - CHANNEL CLEANOUT

EXISTING STRUCTURE	
TYPE:	CORRUGATED METAL PIPE
SIZE:	108"
SKEW:	30° LT
ALIGNMENT:	TANGENT
DATE BUILT:	1967
CONDITION:	UNPROTECTED
SFN:	5003970

HYDRAULIC DATA	
DRAINAGE AREA = 620 ACRES	
Q (4%)	=344 CFS HW (4%) = 1155.8 FT V (4%) = 11.2 FPS
Q (1%)	=507 CFS HW (1%) = 1159.0 FT V (1%) = 13.1 FPS

FOR ESTIMATED QUANTITIES, SEE SHEET P.20

STRUCTURE GENERAL PLAN  
 MAH-170-5.903  
 OVER BURGESS RUN

SFN	5003970
DESIGN AGENCY	
DESIGNER	NKF
CHECKER	MJP
REVIEWER	
PROJECT ID	119381
SUBSET	TOTAL
4	5
SHEET	TOTAL
P.19	20




CALC: NKF DATE: 7/31/2024  
 CHECKED: MJP DATE: 8/14/2024

ESTIMATED QUANTITIES											
BRIDGE NO. / STRUCTURE FILE NO.							ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
ATB-307-16.531 0406007 04/STR/04	MAH-170-5.903 5003970 03/S>2/47						201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS, (ATB-307-16.531)	P.16
							201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS, (MAH-170-5.903)	P.18
		32					SPECIAL	20270110	FT	PIPE CLEANOUT, 24" AND UNDER, (ATB-307-16.531)	P.16
		206					SPECIAL	20270130	FT	PIPE CLEANOUT OVER 48", (ATB-307-16.531)	P.16
			110				SPECIAL	20270130	FT	PIPE CLEANOUT OVER 48", AS PER PLAN, (MAH-170-5.903)	P.18
		LS					202	98000	LS	REMOVAL MISC.: CHANNEL CLEANOUT, (ATB-307-16.531)	P.16
			LS				202	98000	LS	REMOVAL MISC.: CHANNEL CLEANOUT, (MAH-170-5.903)	P.18
		LS					503	11100	LS	COFFERDAMS AND EXCAVATION BRACING, (ATB-307-16.531)	P.16
			LS				503	11100	LS	COFFERDAMS AND EXCAVATION BRACING, (MAH-170-5.903)	P.18
		LS					503	21300	LS	UNCLASSIFIED EXCAVATION, (ATB-307-16.531)	P.16
			LS				503	21300	LS	UNCLASSIFIED EXCAVATION, (MAH-170-5.903)	P.18
		35					601	32004	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	P.16
			55				601	32104	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	P.18
		1					613	41200	CY	LOW STRENGTH MORTAR BACKFILL	P.16
		15					630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	P.16
			15				630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	P.18
		2					630	80100	SF	SIGN, FLAT SHEET, 730.20	P.16
			2				630	80100	SF	SIGN, FLAT SHEET, 730.20	P.18
		2					630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	P.16
		2					630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	P.16
		206					837	10000	FT	LINER PIPE, 11'-10" min. X 7'-5" min. RISE, 748.06	P.16
			110				837	10000	FT	LINER PIPE, 96", 707.35, 707.75, 707.85	P.18
		32					837	10001	FT	LINER PIPE, AS PER PLAN, 12", 707.85	P.16
		238					837	21000	FT	BACKFILL FOR LINER PIPE	P.16
			110				837	21000	FT	BACKFILL FOR LINER PIPE	P.18
		15					843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	P.16
			15				843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	P.18

STRUCTURE ESTIMATED QUANTITIES  
 ATB-307-16.531, MAH-170-5.903  
 OVER ASKUE RUN, BURGESS RUN

SFN  
 VARIES  
 DESIGN AGENCY



DESIGNER: NKF  
 CHECKER: MJP  
 REVIEWER:  
 EMS MM-DD-YY  
 PROJECT ID: 119381  
 SUBSET: 5 TOTAL: 5  
 SHEET: P.20 TOTAL: 20