

O:\2017\2017258\ProjectData\SUM\06002\Design\Roadway\Sheets\06002\_G6005.dgn Sheet 3/15/2021 11:56:23 AM pfr

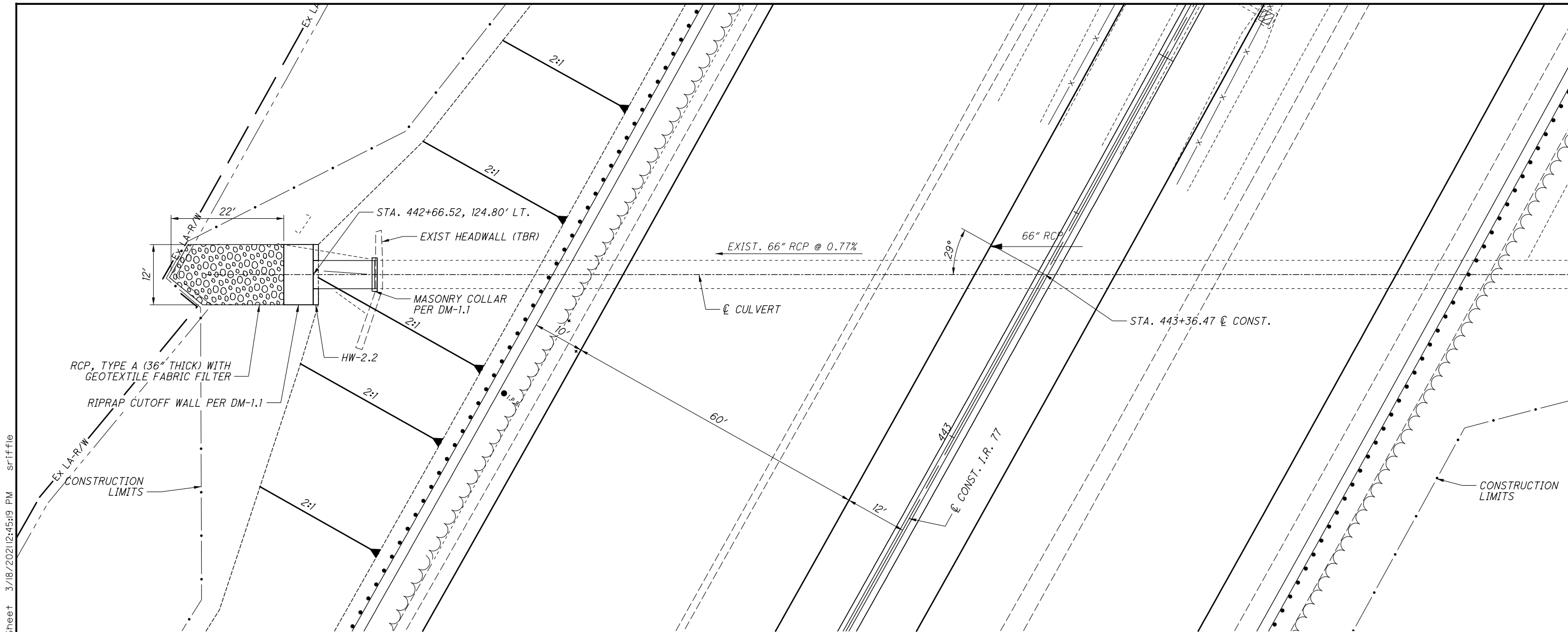
SHEET NUMBER									PARTICIPATION						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED LRK	CHECKED PJF				
1083	1092	1093		1102	1110	1112		1126	01/IMS/PV	02/IMS/PV	03/IMS/BR	04/IMS/BR	05/IMS/BR	06/IMS/BR												
																		LIGHTING								
																		FOR LIGHTING GENERAL SUMMARY			1040					
																		TRAFFIC SURVEILLANCE								
																		FOR TRAFFIC SURVEILLANCE GENERAL SUMMARY			1021					
																		TRAFFIC CONTROL								
																		FOR TRAFFIC CONTROL GENERAL SUMMARY			936-937					
																		RETAINING WALLS								
																		FOR RETAINING WALL 1 GENERAL SUMMARY			1136					
																		FOR RETAINING WALL 2 GENERAL SUMMARY			1147					
																		NOISE BARRIERS								
64584		43600		48504	42715	76855		41282		317540								SPECIAL	60610210	317540	SF	NOISE BARRIER (REFLECTIVE)	1080			
	5376									5376								SPECIAL	60610920	5376	SF	NOISE BARRIER (REFLECTIVE), INFINITY WALL	1080			
																		STRUCTURE 20 FOOT SPAN AND UNDER								
																		FOR 10' X 5' CONCRETE BOX CULVERT GENERAL SUMMARY			911					
																		STRUCTURE OVER 20 FOOT SPAN								
																		FOR SUM-077-0802L/R GENERAL SUMMARY			1158					
																		FOR SUM-077-0810L/R GENERAL SUMMARY			1184					
																		FOR SUM-077-0927R GENERAL SUMMARY			1228					
																		MAINTENANCE OF TRAFFIC								
																		FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY			85-86					
																		REVISIONS								
																		NO.	DATE	DESCRIPTION						
																		▲	03/15/21	FIELD OFFICE MONTHS REVISED						
																		INCIDENTALS								
																		LS	LS	108	10000	LS	CPM PROGRESS SCHEDULE			
																		LS	LS	614	11000	LS	MAINTAINING TRAFFIC			
																		32	4	619	16021	36	▲	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	67
																		LS	LS	623	10000	LS	CONSTRUCTION LAYOUT STAKES AND SURVEYING			
																		LS	LS	624	10000	LS	MOBILIZATION			

GENERAL SUMMARY

SUM-77 / 277 / 224  
VARIOUS

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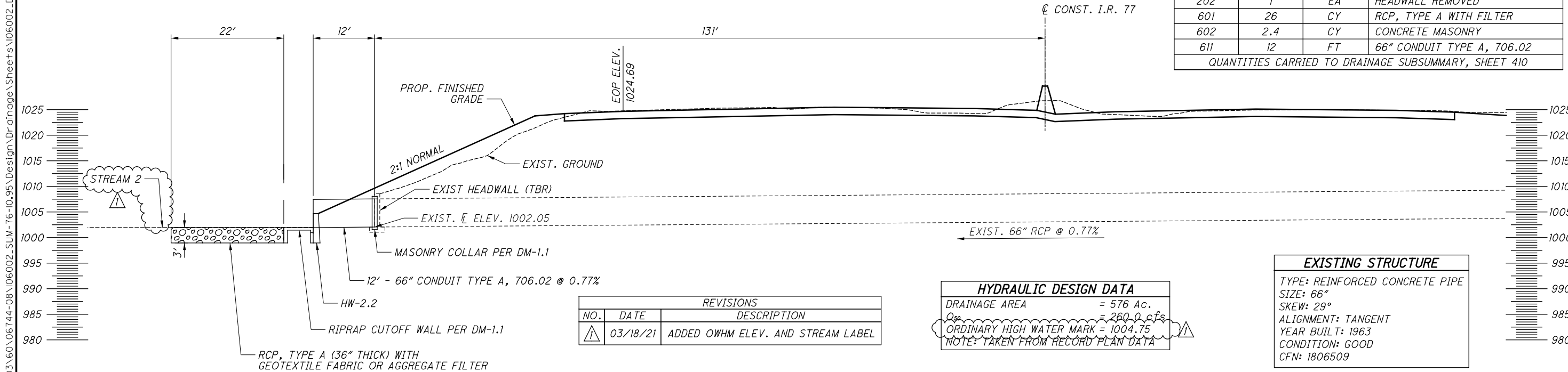
CALCULATED  
SSR  
CHECKED  
DLT



**CULVERT DETAIL**  
**177 STA. 443+36**

NOTES:  
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.

ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	26	CY	RCP, TYPE A WITH FILTER
602	2.4	CY	CONCRETE MASONRY
611	12	FT	66" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410			



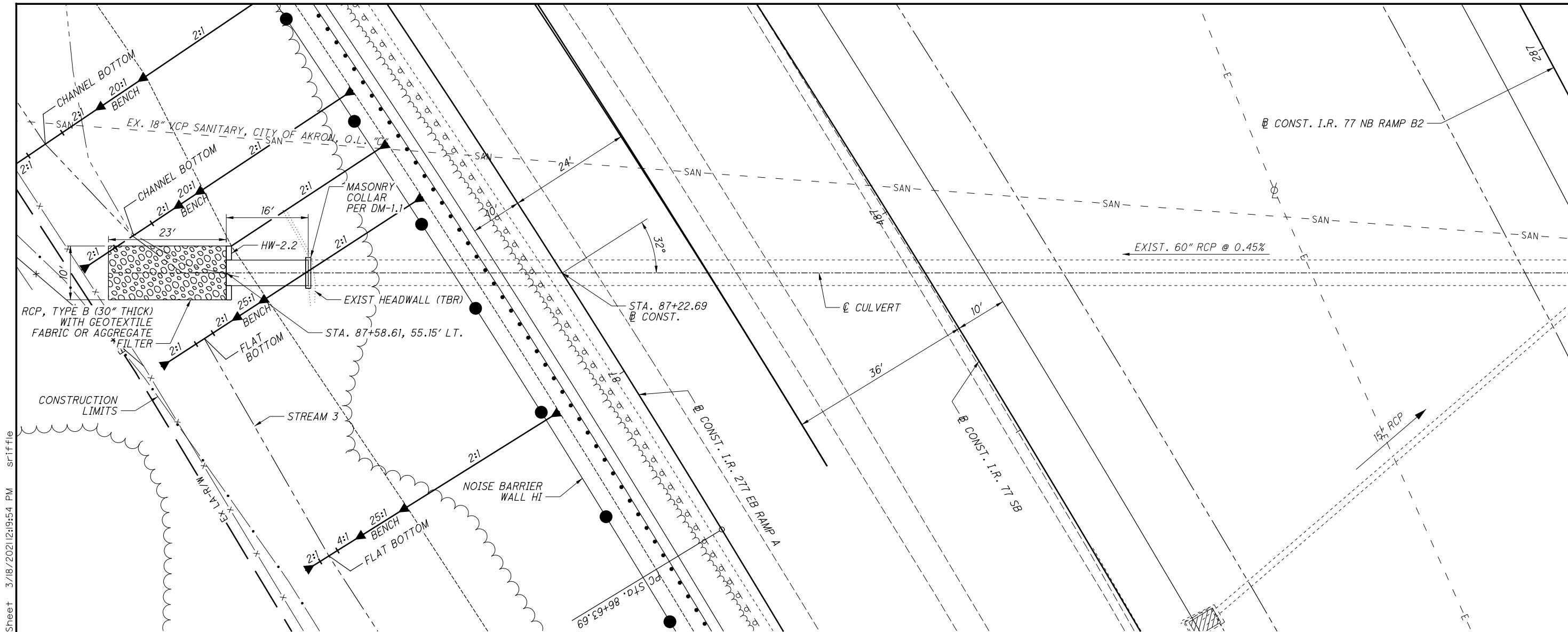
**SUM-77 / 277 / 224**  
**VARIOUS**

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV. AND STREAM LABEL

HYDRAULIC DESIGN DATA	
DRAINAGE AREA	= 576 Ac.
$Q_{50}$	= 2600 cfs
ORDINARY HIGH WATER MARK	= 1004.75
NOTE: TAKEN FROM RECORD PLAN DATA	

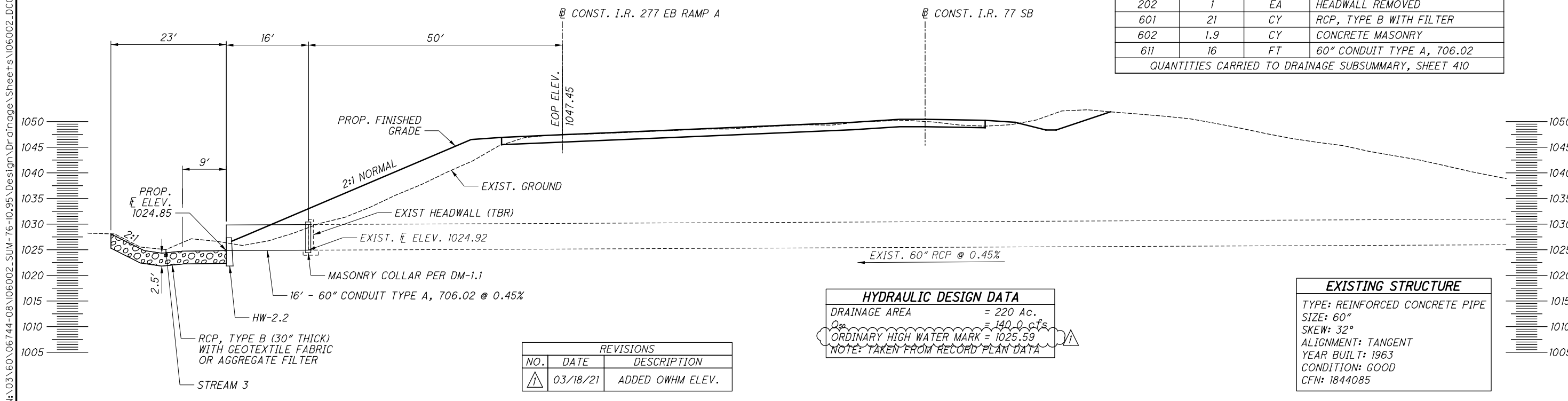
EXISTING STRUCTURE	
TYPE:	REINFORCED CONCRETE PIPE
SIZE:	66"
SKEW:	29°
ALIGNMENT:	TANGENT
YEAR BUILT:	1963
CONDITION:	GOOD
CFN:	1806509

908  
1288



NOTES:  
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.

ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	21	CY	RCP, TYPE B WITH FILTER
602	1.9	CY	CONCRETE MASONRY
611	16	FT	60" CONDUIT TYPE A, 706.02
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410			



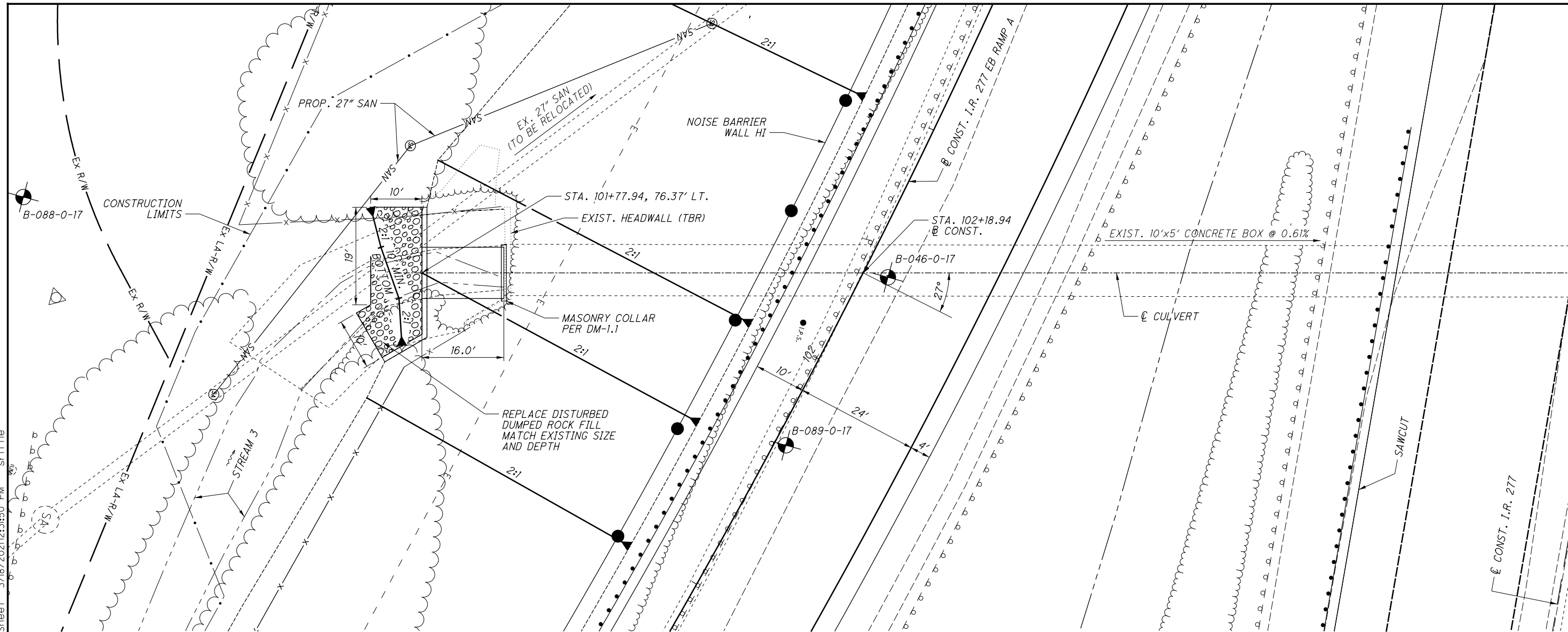
HYDRAULIC DESIGN DATA	
DRAINAGE AREA	= 220 Ac.
$Q_{50}$	= 140.0 cfs
ORDINARY HIGH WATER MARK	= 1025.59
NOTE: TAKEN FROM RECORD PLAN DATA	

EXISTING STRUCTURE
TYPE: REINFORCED CONCRETE PIPE
SIZE: 60"
SKEW: 32°
ALIGNMENT: TANGENT
YEAR BUILT: 1963
CONDITION: GOOD
CFN: 1844085

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV.

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CALCULATED  
SSR  
CHECKED  
DLT

0 5 10 15 20  
HORIZONTAL  
SCALE IN FEET

N

**CULVERT DETAIL  
RAMP A STA. 102+19**

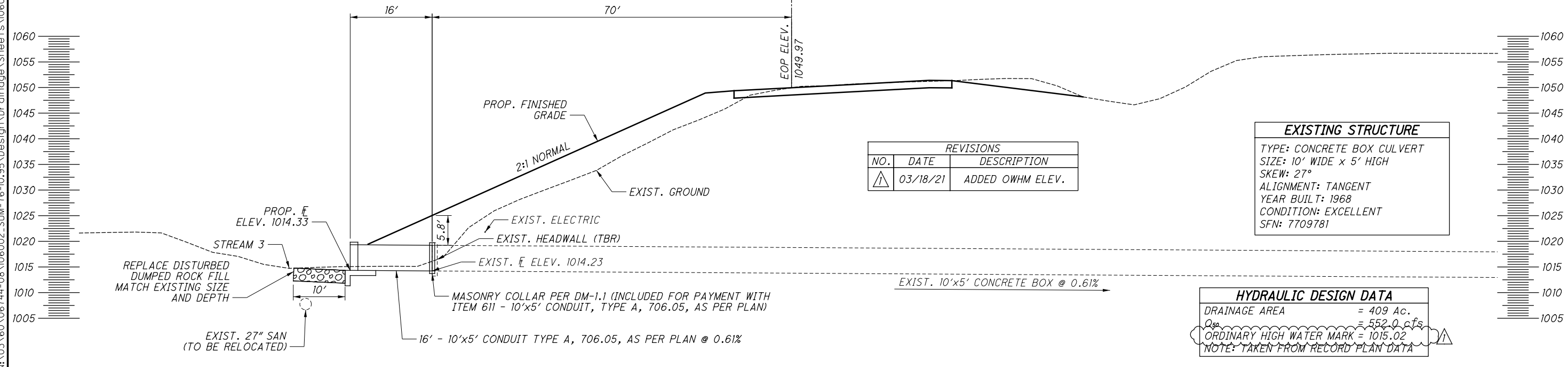
**SUM-77 / 277 / 224  
VARIOUS**

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NOTES:  
1. NO WORK IS PROPOSED FOR THE OUTLET SIDE OF THE EXISTING CULVERT.

2. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 611 EXCEPT THAT THE NEW CULVERT SHALL BE CAST-IN-PLACE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR ITEM 611 - 10'x5' CONDUIT TYPE A, 706.05, AS PER PLAN.

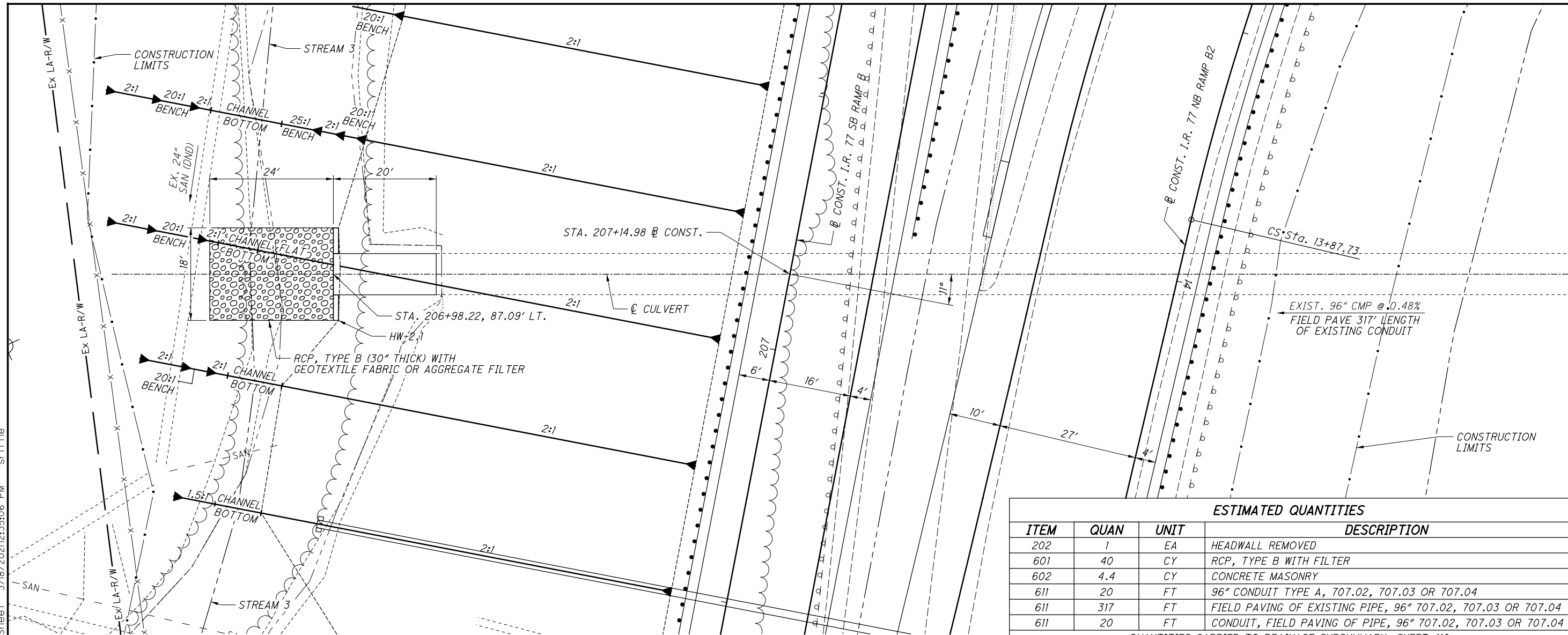
SEE SHEET 911 FOR ESTIMATED QUANTITIES  
SEE SHEETS 911 - 915 FOR HEADWALL DETAILS



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CALCULATED  
SSR  
CHECKED  
DLT

0 5 10 15 20  
HORIZONTAL SCALE IN FEET

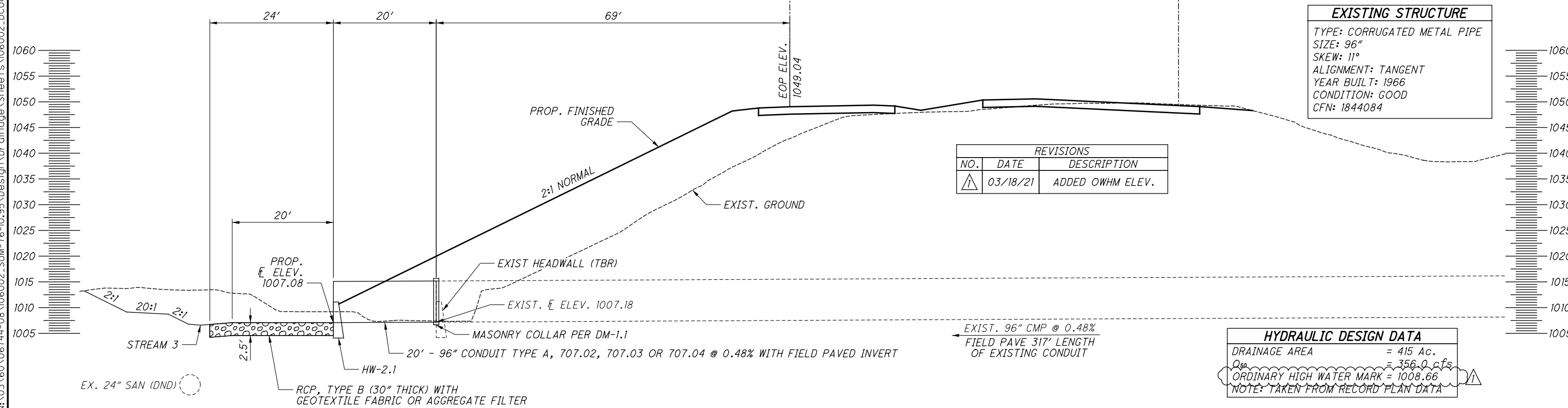


ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	1	EA	HEADWALL REMOVED
601	40	CY	RCP, TYPE B WITH FILTER
602	4.4	CY	CONCRETE MASONRY
611	20	FT	96" CONDUIT TYPE A, 707.02, 707.03 OR 707.04
611	317	FT	FIELD PAVING OF EXISTING PIPE, 96" 707.02, 707.03 OR 707.04
611	20	FT	CONDUIT, FIELD PAVING OF PIPE, 96" 707.02, 707.03 OR 707.04

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 410

CULVERT DETAIL  
RAMP B STA. 207+15

NOTES:  
1. NO WORK IS PROPOSED FOR THE INLET SIDE OF THE EXISTING CULVERT.



**EXISTING STRUCTURE**  
 TYPE: CORRUGATED METAL PIPE  
 SIZE: 96"  
 SKEW: 11°  
 ALIGNMENT: TANGENT  
 YEAR BUILT: 1966  
 CONDITION: GOOD  
 CFN: 1844084

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/21	ADDED OWHM ELEV.

**HYDRAULIC DESIGN DATA**  
 DRAINAGE AREA = 415 Ac.  
 $Q_{sp}$  = 356.0 cfs  
 ORDINARY HIGH WATER MARK = 1008.66  
 NOTE: TAKEN FROM RECORD PLAN DATA

SUM-77 / 277 / 224  
VARIOUS

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**ITEM 606 - SPECIAL - NOISE WALL BARRIER (REFLECTIVE)**

NOISE WALL CONSTRUCTION SHALL ADHERE TO ODOT STANDARD DRAWING NBS-1-09. UNLESS OTHERWISE NOTED HEREIN, ALL GENERAL NOTES LISTED IN THE STANDARD SHALL APPLY FOR THE DESIGN SPECIFICATIONS, DESIGN LOADS, MATERIALS, ETC. FOR THESE WALLS. THOSE ITEMS THAT DEVIATE FROM THE NOTES LISTED IN THE STANDARD ARE DESCRIBED BELOW.

MATERIAL SPECIFICATIONS:

**FOAM BACKER ROD:**  
THE BACKER ROD SHALL BE AN EXPANDED, CLOSED CELL POLYETHYLENE FOAM. THE BACKER ROD DIAMETER SHALL BE 1-1/4" φ. OTHER BACKUP MATERIALS (PAPER, ROPE AND OPEN CELL FOAM) ARE NOT ACCEPTABLE. FURNISH FOAM BACKER ROD MEETING ASTM D5249 TYPE 1 OR TYPE 3.

SHOP DRAWINGS:

PROVIDE SHOP DRAWINGS FOR ALL NOISE WALL COMPONENTS THAT REQUIRE SHOP FABRICATION. INCLUDE THE FABRICATION SCHEDULE FOR ALL NOISE BARRIER WALL COMPONENTS IN THE PROJECT PROGRESS SCHEDULE AS REQUIRED BY C&MS 108.02.

THE SHOP DRAWINGS SHALL BE SIGNED, SEALED AND DATED BY AN OHIO REGISTERED ENGINEER. ALL MODIFICATIONS TO THE STRUCTURAL DESIGN OF THE PANELS, POSTS, BASE PLATES OR ANCHORAGES PROVIDED BY THIS STANDARD DRAWING SHALL BE CLEARLY NOTED ON THE SHOP DRAWINGS AND BE ACCOMPANIED WITH SUPPORTING CALCULATIONS STAMPED BY TWO OHIO REGISTERED ENGINEERS. DEPARTMENT ACCEPTANCE OF THE SHOP DRAWINGS AND SUPPORTING CALCULATIONS DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS AND OMISSIONS FOUND AFTER ACCEPTANCE OF THE SUBMITTAL.

THE CONTRACTOR SHALL PROVIDE AN ELECTRONIC COPY OF A WRITTEN ACCEPTANCE LETTER THAT DOCUMENTS ACCEPTANCE OF THE SHOP DRAWINGS INCLUDING CONFIRMATION OF FIELD VERIFICATION, AS REQUIRED, AND DESCRIPTIONS OF ISSUES RESOLVED BETWEEN THE CONTRACTOR, THE FABRICATOR AND THE DEPARTMENT. BY ACCEPTING THESE DRAWINGS, THE CONTRACTOR REPRESENTS TO THE DEPARTMENT THAT ALL DIMENSIONS AND ELEVATIONS OF CONDITIONS SHOWN ON THE PLANS HAVE BEEN FIELD MEASURED AND VERIFIED, AND THAT THESE SHOP DRAWINGS COMPLY WITH ALL THE MATERIALS REQUIREMENTS, CONSTRUCTION REQUIREMENTS AND CONTRACT REQUIREMENTS. THE CONTRACTOR FURTHER REPRESENTS THAT THESE DRAWINGS HAVE BEEN COORDINATED AND VERIFIED WITH THE DETAILS OF THE WORK TO BE PERFORMED BY OTHER FABRICATORS AND ENTITIES ON THE PROJECT. DELAYS TO THE CONTRACTOR FOR INCORRECT FABRICATION AS A RESULT OF FAILURE TO COORDINATE OR PERFORM THIS ACCEPTANCE ARE NON-EXCUSABLE ACCORDING TO C&MS 108.06.E.

ALL ELECTRONIC DOCUMENTS SHALL BE IN PORTABLE DOCUMENT FORMAT (PDF). SHOP DRAWINGS SHALL BE SUBMITTED IN 11" X 17" SHEET SIZE AND ACCEPTANCE LETTERS SHALL BE SUBMITTED IN 8 1/2" X 11" SHEET SIZE.

CONCRETE NOISE BARRIER PANELS AND POSTS:

EVERY PRODUCER OF PRECAST CONCRETE NOISE BARRIER COMPONENTS SUPPLIED TO THE PROJECT SHALL BE CERTIFIED IN ACCORDANCE WITH SUPPLEMENT 1073. THE DEPARTMENT WILL NOT ACCEPT PRECAST COMPONENTS FROM NON-CERTIFIED PLANTS. THE CONCRETE SUPPLIED FOR CONCRETE POSTS AND PANELS SHALL MEET THE REQUIREMENTS SPECIFIED ABOVE UNDER SECTION 6, MATERIAL SPECIFICATIONS.

NOISE BARRIERS REQUIRE A REINFORCED INTEGRAL CAP (COPING) ON THE TOP OF THE TOP PANELS AND INTEGRAL REINFORCED CONCRETE CAP ON TOP OF THE POSTS.

REMOVE LEACHING OR EFFLORESCENCE THAT OCCURS PRIOR TO FINAL ACCEPTANCE OF THE ENTIRE PROJECT AND RESEAL THE AREA AT NO EXPENSE TO THE DEPARTMENT. THIS SHALL ALSO APPLY IN AREAS WHERE A PARTIAL ACCEPTANCE OF THE COMPLETED WALLS MAY HAVE BEEN GRANTED.

THE FOLLOWING REQUIREMENTS FOR THE CONCRETE MIX DESIGN FOR POSTS AND FINIALS IS REQUIRED:

- a. IN ADDITION TO THE SECTION 6. MATERIAL SPECIFICATIONS, CONCRETE, OF THE GENERAL NOTES FOR ITEM SPECIAL - NOISE BARRIERS, FROM THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF STRUCTURAL ENGINEERING STANDARD DRAWING NBS-1-09 - NOISE BARRIER SPECIFICATIONS FOR GROUND MOUNTED APPLICATIONS, THE CONCRETE MIX DESIGN FOR POSTS, AND FINIALS SHALL CONTAIN A PERMANENT, NON-SOLUBLE CRYSTALLINE CAPILLARY WATERPROOFING ADMIXTURE. PENETRON, BASF MASTERLITE 300D, SIKa WT-240P AND SIKa MIX AE-6 ARE ODOT APPROVED CONCRETE WATERPROOFING ADMIXTURES.

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE), INFINITY WALL

PANEL IDS 1-14 OF NOISE BARRIER E SHALL BE MANUFACTURED AND DELIVERED TO THE PROJECT SITE BY NOISE WALL BARRIER (NWB) LLC. THE CONTRACTOR IS DIRECTED TO CONTACT JIM THOMPSON OF NWB AT (614-429-7635) TO COORDINATE PROJECT SCHEDULES INCLUDING, BUT NOT LIMITED TO, MANUFACTURE AND DELIVERY OF NOISE BARRIER PANELS. NWB SHALL PROVIDE THE INFINITY NOISE BARRIER PANELS AT THE SAME COST AS ITEM - 606 NOISE BARRIER (REFLECTIVE). THE PROVIDED NOISE BARRIER PANELS SHALL MATCH DETAILS IN NBS-1-09. THE PANELS SHALL MATCH THE PANEL SIZES IN THE NOISE WALL SHOP DRAWINGS AND SHALL MATCH COLOR AND TEXTURE OF CONCRETE PANELS IN THE REMAINDER OF THE WALL SECTION. INSTALLATION OF THESE PANELS WILL BE PERFORMED BY THE PRIME CONTRACTOR. THE POSTS SHALL BE PROVIDED BY THE CONCRETE NOISE WALL SUPPLIER, NOT NWB.

PAYMENT FOR THESE SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE), INFINITY WALL, UNLESS OTHERWISE NOTED, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

REVISIONS		
NO.	DATE	DESCRIPTION
△	03/23/21	PHONE NUMBER REVISED

CALCULATED  
RFV  
CHECKED  
DGN

NOISE BARRIER GENERAL NOTES

SUM - 77 / 277 / 224

1080  
1288