

**STARK COUNTY SANITARY ENGINEERING DEPARTMENT  
 GENERAL NOTE**

ALL APPENDICES, ITEMS, AND NOTES CALLED OUT IN THE FOLLOWING STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIAL ITEMS, CAN BE FOUND ON THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT'S WEBSITE BY GOING TO WWW.STARKCOUNTYOHIO.GOV/SANITARY-ENGINEERS.

PLEASE REFER TO THIS SITE AND CHECK FOR THE LATEST NOTES, APPENDICES, AND ITEMS AS INDICATED.

**ITEM 202 - MANHOLE ABANDONED, AS PER PLAN  
 ITEM 202 - ABANDON MISC.: PIPE ABANDONED,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT**

ALL WORK ASSOCIATED WITH THE ABANDONMENT OF SANITARY MANHOLES AND SEWERS SHALL COMPLY WITH STARK COUNTY SANITARY ENGINEERING DEPARTMENT ITEM 46 SEWER AND MANHOLE ABANDONMENT.

MANHOLE IRON LID AND FRAME WILL BE RETURNED TO THE STARK COUNTY'S SANITARY ENGINEER'S YARD AT 1701 MAHONING ROAD NE.

**ITEM 611 - MANHOLE, MISC.: SANITARY SEWER MANHOLE TYPE A,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT  
 ITEM 611 - MANHOLE, MISC.: SANITARY SEWER MANHOLE  
 SHALLOW PRECAST,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT**

ALL WORK AND PAYMENT ASSOCIATED WITH THIS ITEM SHALL CONFORM TO THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS FOR ITEM 16 - MANHOLES AND DETAILS DWG.NO. 9, 11, 12 AND 13A ON SHEET P.46.

PRIOR TO ACCEPTANCE, MANHOLES SHALL BE AIR/VACUUM TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF ASTM C-1244.

**ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT**

ALL WORK AND PAYMENT ASSOCIATED WITH THIS ITEM SHALL CONFORM TO THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS FOR ITEM 14 - PVC GRAVITY PIPE SEWERS. FOR TRENCH DETAILS REFERENCE STARK COUNTY DWG.NO. 1 AND 2 ON SHEET P.46.

PRIOR TO ACCEPTANCE, THE GRAVITY SANITARY SEWER SHALL BE AIR TESTED IN ACCORDANCE WITH APPENDIX B OF THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS AND ASTM F-1417, AND SHALL PASS DEFLECTION TESTING IN ACCORDANCE WITH APPENDIX C OF THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.

THE CONTRACTOR SHALL NOTE THAT IN ADDITION TO THE REQUIREMENTS FOR ACCEPTANCE SPECIFIED HEREIN THAT THE SEWER IS ALSO REQUIRED TO PASS AN INTERNAL TELEVISION INSPECTION WHICH SHALL PAID FOR UNDER A SEPARATE BID ITEM. THE WORK AND PAYMENT FOR THIS ITEM SHALL BE INCLUDED IN ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER VIDEO RECORDING & INSPECTION, STARK COUNTY SANITARY ENGINEERING DEPARTMENT.

**ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER VIDEO  
 RECORDING & INSPECTION,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT**

ALL WORK AND PAYMENT ASSOCIATED WITH THIS ITEM SHALL CONFORM TO THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS FOR ITEM 40 - NEW SEWER VIDEO RECORDING AND INSPECTION.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER VIDEO RECORDING & INSPECTION, STARK COUNTY SANITARY ENGINEERING DEPARTMENT.



**ITEM 611 - CONDUIT, MISC.: 14-INCH FORCE MAIN, DIP CLASS 52,  
 MECHANICAL JOINTS AND FITTING,  
 STARK COUNTY SANITARY ENGINEERING DEPARTMENT**

ALL WORK AND PAYMENT ASSOCIATED WITH THIS ITEM SHALL CONFORM TO THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS FOR ITEM 11 - DUCTILE IRON PIPE AND FITTINGS AND DETAILS DWG.NO. 27, 28A AND 32B ON SHEET P.47 AND DETAIL DWG.NO 28 THIS SHEET.

THE PROPOSED FORCE MAIN PIPING SHALL BE HYDROSTATICALLY TESTED UP TO, BUT EXCLUDING, TIE-IN CONNECTIONS IN ACCORDANCE WITH APPENDIX D OF THE STARK COUNTY SEWER ITEM SPECIFICATIONS. ALL LABOR AND MATERIALS NECESSARY TO PERFORM TESTING IN ACCORDANCE WITH APPENDIX D SHALL BE INCLUDED IN THE FORCE MAIN ITEM FOR BID. THE TIE-IN CONNECTIONS TO THE EXISTING FORCE MAIN SHALL BE ACCOMPLISHED WITH AN APPROVED HDPE/DIP TRANSITION AND BE VISUALLY INSPECTED BY THE COUNTY. THE EXISTING FORCE MAIN SHALL REMAIN IN SERVICE UNTIL TESTING OF THE PROPOSED FORCE MAIN AND A COORDINATED BYPASS FLOW PLAN IS ACCEPTED BY THE COUNTY

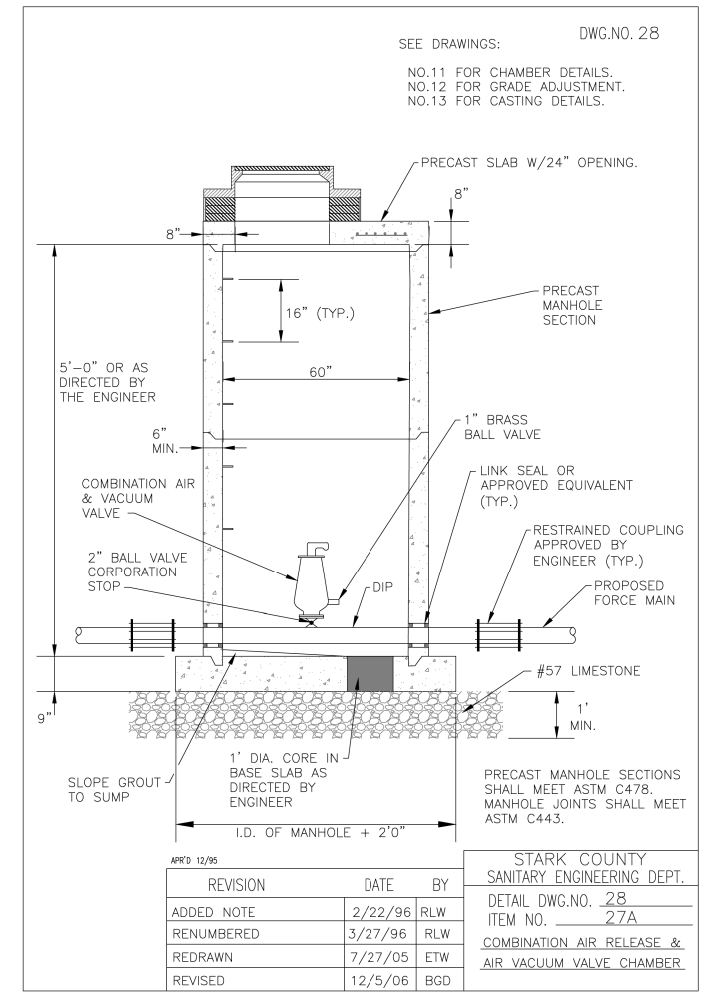
**ITEM 611 - CONDUIT, MISC.: MAINTAINING SANITARY FLOW  
 DURING CONSTRUCTION, STARK COUNTY SANITARY  
 ENGINEERING DEPARTMENT**

ALL WORK AND PAYMENT ASSOCIATED WITH THIS ITEM SHALL CONFORM TO THE STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS FOR ITEM 51 - BYPASS PUMPING/MAINTENANCE OF FLOW.

ACCORDING TO RECORD DATA THE EXISTING 14" SANITARY FORCE MAIN EXHIBITS PEAK ESTIMATED FLOWS OF APPROXIMATELY 1400 GPM.

THE EXISTING FORCE MAIN SHALL REMAIN IN SERVICE UNTIL THE PROPOSED FORCE MAIN IS TESTED AND ACCEPTED BY THE COUNTY UP TO THE CONNECTION LOCATIONS, AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE MAKING CONNECTIONS TO THE EXISTING FORCE MAIN WITH STARK COUNTY DURING LOW FLOW CONDITIONS. THE COUNTY HAS THE ABILITY TO BYPASS LOW FLOW CONDITIONS FOR A DURATION OF 2 HOURS AT THE EXISTING PUMP STATION TO A NEARBY ADJACENT FORCE MAIN. THE CONTRACTOR SHALL NOT BE PERMITTED TO STOP OR IMPEDE INFLUENT MAIN LINE FLOWS UNDER ANY CIRCUMSTANCES AT THE EXISTING PUMP STATION. ADDITIONAL STORAGE, SUCH AS STORAGE TANKS, SHALL BE CONSIDERED, AS NECESSARY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 611 - CONDUIT, MISC.: MAINTAINING SANITARY FLOW DURING CONSTRUCTION, STARK COUNTY SANITARY ENGINEERING DEPARTMENT.



SEE DRAWINGS: DWG.NO. 28  
 NO.11 FOR CHAMBER DETAILS.  
 NO.12 FOR GRADE ADJUSTMENT.  
 NO.13 FOR CASTING DETAILS.

GENERAL NOTES



DESIGNER	JDK
REVIEWER	WBH 07/16/21
PROJECT ID	110429
SHEET	P.7A
TOTAL	P.78

△ FORCEMAIN REVISED 3-11-22

SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7A	8	9	14	52	55	56				01/ENH/BR	02/ENH/OT	03/ENH/OT						
																	RETAINING WALL (FOR SUBSUMMARY SEE SHEET P.61)	
																	<b>SANITARY SEWER</b>	
LS												LS	611	97300	LS		CONDUIT, MISC.: 8-INCH SANITARY SEWER VIDEO RECORDING & INSPECTION, SCSED	7A
LS												LS	611	97300	LS		CONDUIT, MISC.: MAINTAINING SANITARY FLOW DURING CONSTRUCTION, SCSED	7A
			268									268	611	97400	268	FT	CONDUIT, MISC.: 8-INCH SANITARY SEWER, SCSED	7A
			236									236	611	97400	236	FT	CONDUIT, MISC.: 14-INCH FORCE MAIN, DIP CLASS 52, MECHANICAL JOINTS AND FITTINGS, SCSED	7A
			1									1	611	99690	1	EACH	MANHOLE, MISC.: SANITARY SEWER MANHOLE SHALLOW PRECAST, SCSED	7A
			1									1	611	99690	1	EACH	MANHOLE, MISC.: SANITARY SEWER MANHOLE TYPE A, SCSED	7A
			1									1	611	99690	1	EACH	MANHOLE, MISC.: SANITARY SEWER AIR RELEASE & AIR VACUUM CHAMBER, SCSED	7A
																	<b>LIGHTING</b>	
												6	625	00450	6	EACH	CONNECTION, FUSED PULL APART	
												12	625	00480	12	EACH	CONNECTION, UNFUSED PERMANENT	
												2	625	10503	2	EACH	LIGHT POLE (INSTALLATION ONLY), AS PER PLAN	55
												1,119	625	23302	1,119	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
												72	625	23400	72	FT	NO. 10 AWG POLE AND BRACKET CABLE	
												116	625	24321	116	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES, AS PER PLAN	55
												238	625	25300	238	FT	CONDUIT, 1-1/2", 725.04	
												65	625	25500	65	FT	CONDUIT, 3", 725.04	
												6	625	27503	6	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (IES-III, LED, 3,100-3,300 LUMENS)	55
												2	625	27561	2	EACH	LUMINAIRE, INSTALLATION ONLY, AS PER PLAN	55
												399	625	29002	399	FT	TRENCH, 24" DEEP	
												7	625	30700	7	EACH	PULL BOX, 725.08, 18"	
												1	625	31510	1	EACH	PULL BOX REMOVED	
												2	625	32000	2	EACH	GROUND ROD	
												1	625	34001	1	EACH	POWER SERVICE, AS PER PLAN	55
												399	625	36011	399	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	55
												1	625	37101	1	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	55
												3	625	75800	3	EACH	DISCONNECT CIRCUIT	
						1						1	625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL, (CC-'F')	
												2	625	98000	2	EACH	LIGHTING, MISC.: LIGHT POLE FOUNDATION, 20" X 5' DEEP	55
																	<b>TRAFFIC CONTROL</b>	
												26	630	02100	26	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
												31	630	03100	31	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
												28.5	630	80100	28.5	SF	SIGN, FLAT SHEET	
												1	630	84900	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
												2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
												0.05	644	00100	0.05	MILE	EDGE LINE, 4"	
												0.03	644	00200	0.03	MILE	LANE LINE, 4"	
												0.03	644	00300	0.03	MILE	CENTER LINE	
												87	644	00400	87	FT	CHANNELIZING LINE, 8"	
												235	644	00620	235	FT	CROSSWALK LINE, 12"	
												6	644	00700	6	FT	TRANSVERSE/DIAGONAL LINE	
												1	644	01300	1	EACH	LANE ARROW	
																	<b>MAINTENANCE OF TRAFFIC</b>	
												8	614	11110	8	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	LS		8									LS	614	12420	LS		DETOUR SIGNING	
	20											20	616	10000	20	MGAL	WATER	
																	STRUCTURE (20 FOOT SPAN AND UNDER) (FOR SUBSUMMARY SEE SHEET P.61)	
																	<b>INCIDENTALS</b>	
	LS											LS	614	11000	LS		MAINTAINING TRAFFIC	
												6	619	16010	6	MNTH	FIELD OFFICE, TYPE B	
												LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS	624	10000	LS		MOBILIZATION	
												LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	6

2

GENERAL SUMMARY

DESIGN AGENCY  
  
 ms consultants, inc.  
 DESIGNER: JDK  
 REVIEWER: WBH 07/16/21  
 PROJECT ID: 110429  
 SHEET TOTAL: P.12 P.78

REVIS 3/1/22  
 FORCEMAIN REVISED 3-11-22


STA-TR 211-1.91

MODEL SHEET PAPER SIZE: 17X11 (in.) DATE: 3/11/2022 TIME: 6:05:00 PM USER: jkuczynski  
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REF NO.	SHEET NO.	STATION TO STATION						602	605	611	611	611	611	611	611	611	611	611	611	670		
								CONCRETE MASONRY	6" BASE PIPE UNDERDRAINS		12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	30" CONDUIT, TYPE C	30" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE D	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 2-3	MANHOLE, NO. 3		CONDUIT, MISC.: 8-INCH SANITARY SEWER, SCSED	CONDUIT, MISC.: 14-INCH FORCE MAIN, DIP CLASS 52, MECHANICAL JOINTS AND FITTINGS, SCSED	MANHOLE, MISC.: SANITARY SEWER MANHOLE TYPE A, SCSED
						CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	FT	EACH	EACH	EACH	SY	
FULTON SHARED USE PATH																						
D1	16	7+75.00	LT	TO	10+00.00	LT															155	
D2	16	8+00.00	RT	TO	10+00.00	RT															176	
D3	16	10+03.67	RT	TO	9+89.00	RT			5		15	5			1							
D4	16	9+89.00	RT	TO	9+89.00	RT					43				1							
D5	16	9+89.00	RT	TO	9+89.00	LT								24								
D6	16	9+89.00	LT	TO	9+89.00	LT					47				1							
D7	16	9+89.00	LT	TO	10+03.74	LT					15											
D8	16	10+03.74	LT									5			1							
D9	17	10+95.00	LT	TO	11+70.00	LT															73	
D10	17	10+95.00	RT	TO	13+61.32	RT															202	
D11	17	11+02.00	LT	TO	11+05.00	RT																
D12	17	11+05.00	RT	TO	11+69.63	RT			41						1							
D13	17	11+69.63	RT									10			1							
D14	17	13+61.32	RT	TO	15+00.00	RT															110	
D15	17	14+66.50	RT	TO	14+66.50	LT	0.25				33				1							
CONNECTOR PATH																						
UD1	41	0+19.81	LT	TO	0+19.52	RT		30														
FULTON DRIVE																						
UD2	42	8+06.74	LT	TO	9+46.74	RT		140														
UD3	42	8+06.74	LT	TO	9+46.74	RT		140														
COMMUNITY PARKWAY																						
UD4	19	12+49.89	LT	TO	12+72.16	LT		23														
UD5	19	12+49.89	RT	TO	12+72.16	RT		23														
FULTON SHARED USE PATH																						
SS1	48	11+16.76	LT	TO	13+00.03	RT										268		1	1			
SS2	48	11+02.29	LT	TO	13+03.43	RT											236			1		
TOTALS CARRIED TO GENERAL SUMMARY							0.25	356	46	60	120	20	24	3	2	5	268	236	1	1	1	716

**DRAINAGE AND UTILITY SUBSUMMARY**

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DESIGN AGENCY  
  
 ms consultants, inc.

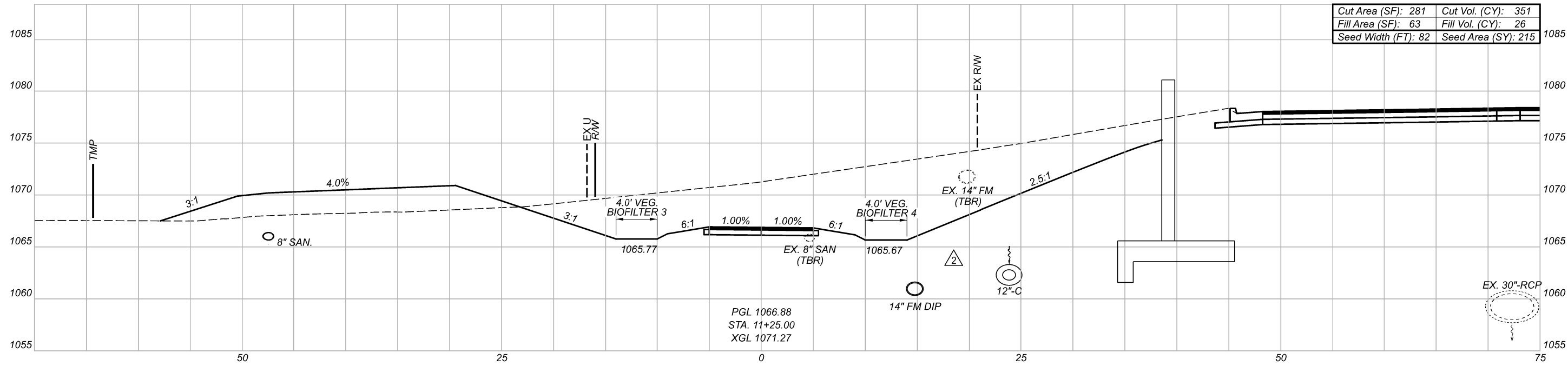
DESIGNER  
**JDK**

REVIEWER  
**WBH 07/16/21**

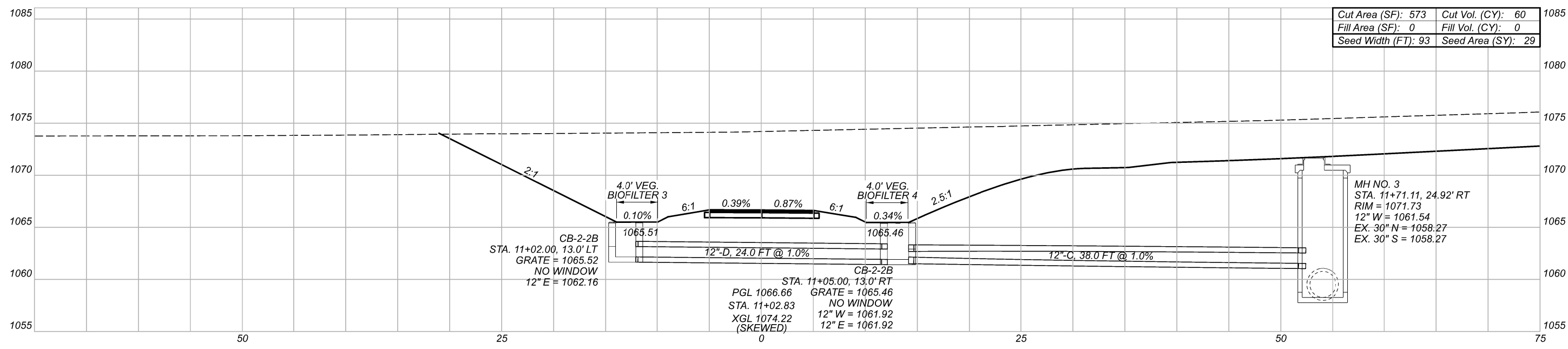
PROJECT ID  
**110429**

SHEET TOTAL  
**P.14 P.78**

FORCEMAIN REVISED 3-11-22




Cut Area (SF): 281	Cut Vol. (CY): 351
Fill Area (SF): 63	Fill Vol. (CY): 26
Seed Width (FT): 82	Seed Area (SY): 215



Cut Area (SF): 573	Cut Vol. (CY): 60
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT): 93	Seed Area (SY): 29

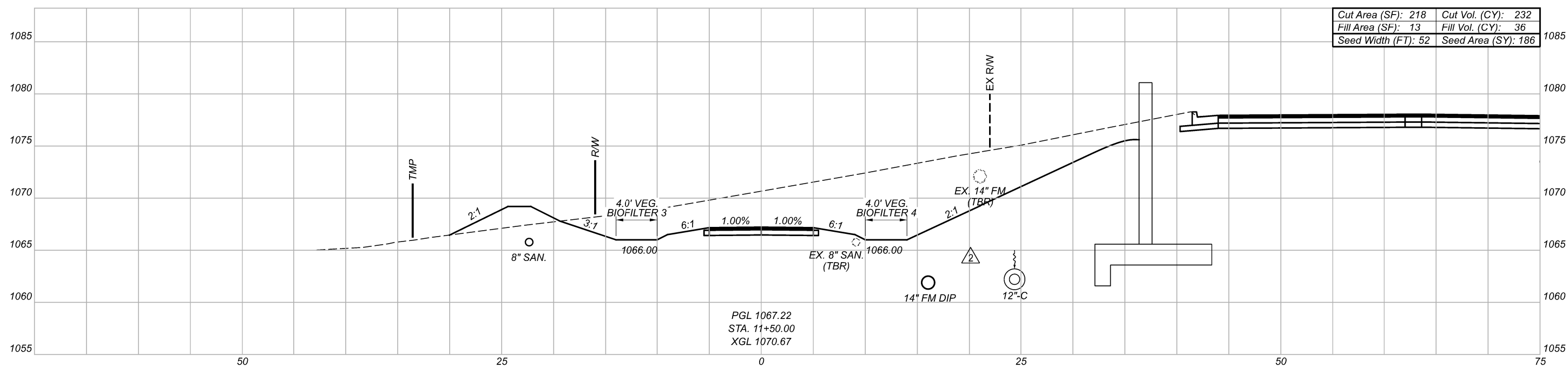
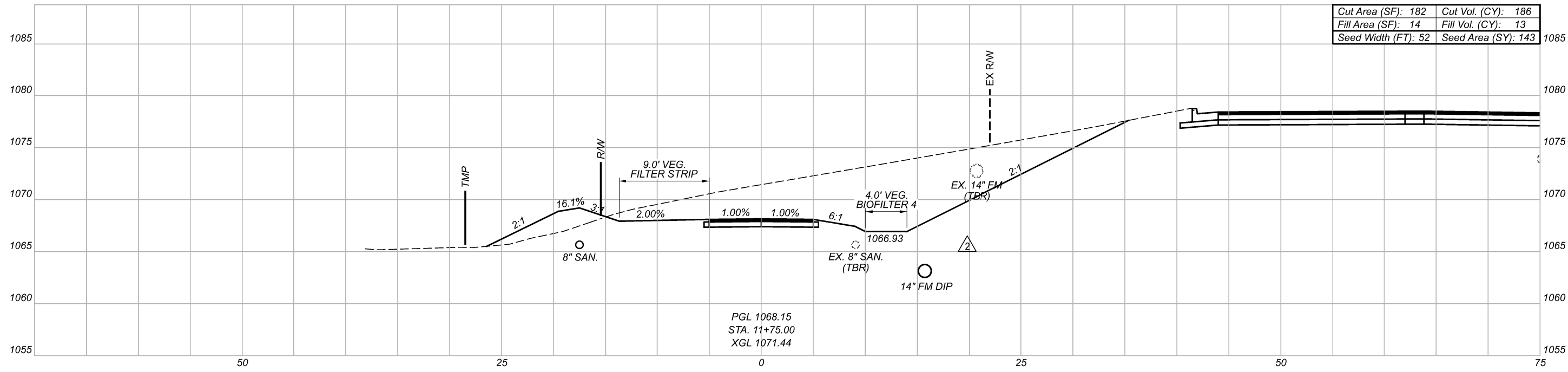
SHARED USE PATH CROSS SECTIONS  
 STA. 11+02.83 TO STA. 11+25

DESIGN AGENCY  
  
 ms consultants, inc.  
 DESIGNER  
 JDK  
 REVIEWER  
 WBH 07/16/21  
 PROJECT ID  
 110429


Sheet Totals			110429	
Seeding	Cut	Fill	SHEET	TOTAL
244	411	26	P.27	P.78

STA-TR 211-1.91

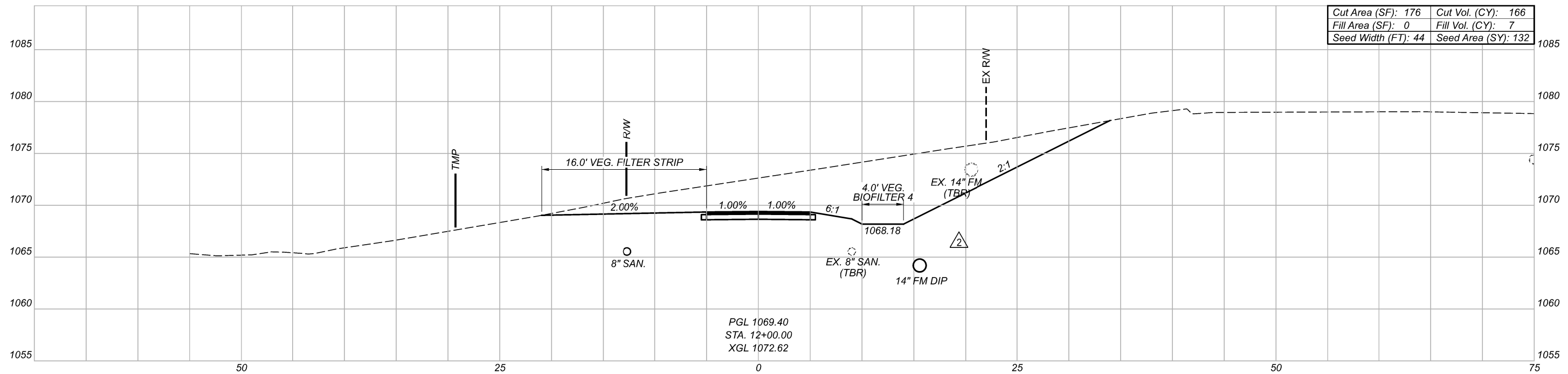
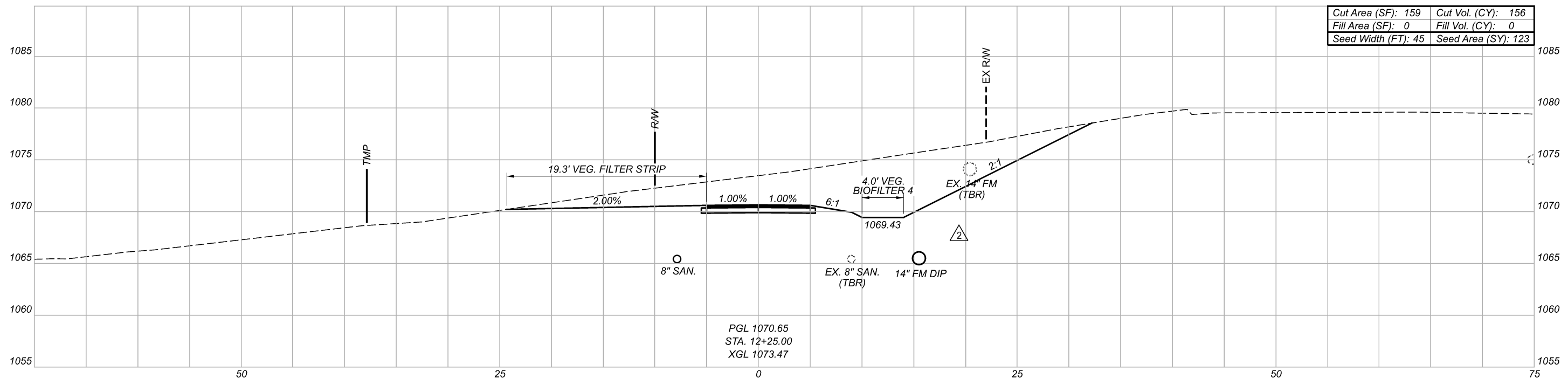
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SHARED USE PATH CROSS SECTIONS  
 STA. 11+50 TO STA. 11+75

DESIGN AGENCY  
  
 ms consultants, inc.  
 DESIGNER: JDK  
 REVIEWER: WBH 07/16/21  
 PROJECT ID: 110429

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.28	P.78
329	418	49		



STA-TR 211-1.91

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SHARED USE PATH CROSS SECTIONS  
 STA. 12+00 TO STA. 12+25

DESIGN AGENCY



DESIGNER

JDK

REVIEWER

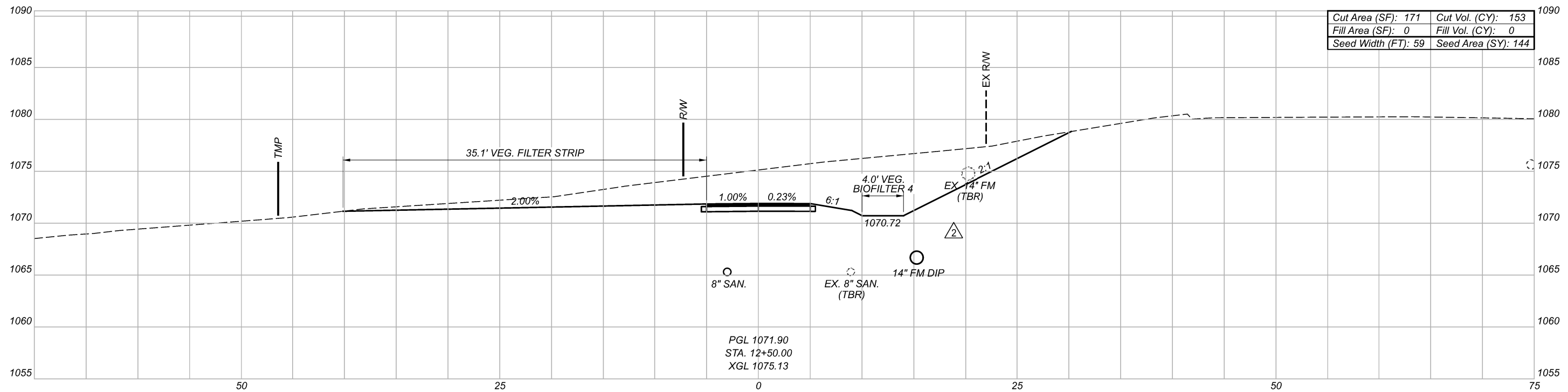
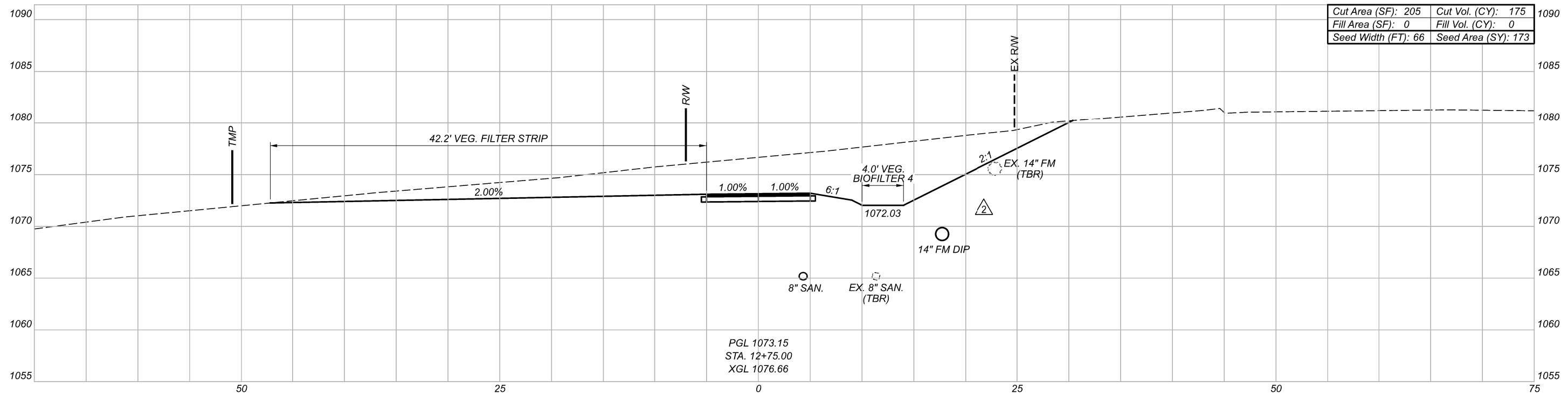
WBH 07/16/21

PROJECT ID

110429

Sheet Totals		
Seeding	Cut	Fill
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SHEET	TOTAL
P.29	P.78



STA-TR 211-1.91

MODEL: 12+50.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 3/11/2022 TIME: 6:02:37 PM USER: jkuczynski  
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SHARED USE PATH CROSS SECTIONS  
 STA. 12+50 TO STA. 12+75

DESIGN AGENCY



DESIGNER

JDK

REVIEWER

WBH 07/16/21

PROJECT ID

110429

Sheet Totals		
Seeding	Cut	Fill
317	328	0

SHEET	TOTAL
P.30	P.78

NOTE:  
TBR - TO BE REMOVED  
TBA - TO BE ABANDONED

X TREES TO BE REMOVED

ITEM 670 - DITCH EROSION PROTECTION (7.5' WIDE TYP.)

△ FORCEMAIN REVISED 3-11-22

A1 45° HORIZ. BEND  
Sta. 0+07.07

A2 45° HORIZ. BEND  
Sta. 2+25.57

SAN MH 1  
MH SHALLOW PRECAST  
WITH WATERTIGHT BOLT DOWN LID  
Sta. 11+16.76, 93.51' LT  
RIM = 1070.82  
EX. 8" N = ±1066.19  
8" E = 1065.94

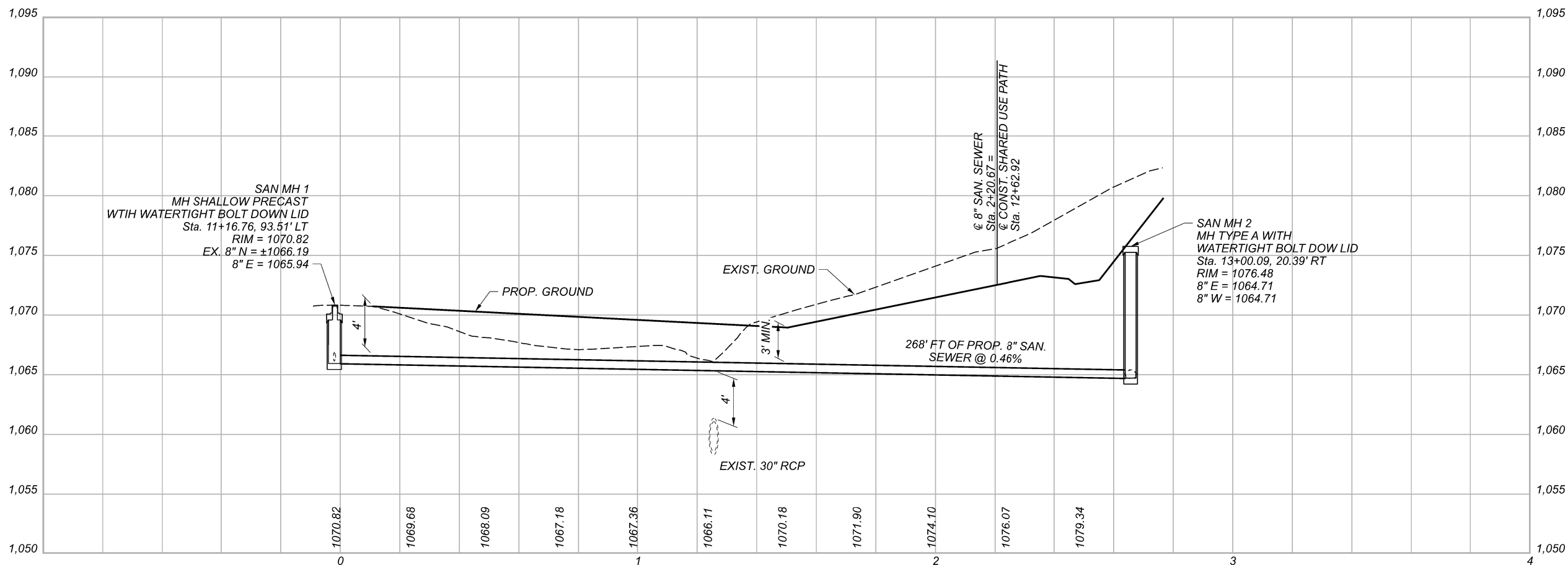
SANITARY MH 16-907R  
RIM = 1072.82  
8" N = 1065.92  
8" S = 1065.92 PLUGGED  
8" E = 1065.92

SAN MH 2  
MH TYPE A WITH  
WATERTIGHT BOLT DOWN LID  
Sta. 13+00.09, 20.39' RT  
RIM = 1076.48  
8" E = 1064.71  
8" W = 1064.71

BEGIN 14" DIP REMOVAL  
BEGIN 14" FORCE MAIN, DIP CLASS 52  
CONNECT TO EXIST.  
45° HORIZ. BEND  
@ CONST. SHARED USE PATH  
Sta. 11+02.30, 35.11' LT =  
@ 14" FORCE MAIN SEWER Sta. 0+00.00  
@ CONST. SHARED USE PATH Sta. 10+65.00 =  
@ CONST. & R/W FULTON DR. (TR 211) Sta. 8+72.74

END 14" DIP REMOVAL  
END 14" FORCE MAIN, DIP CLASS 52  
CONNECT TO EXIST.  
45° HORIZ. DEFLECTION  
@ CONST. SHARED USE PATH  
Sta. 12+97.91, 31.17' RT =  
@ 14" FORCE MAIN SEWER Sta. 2+32.48

@ CONST. & R/W FULTON DR. (TR 211) Sta. 11+69.48 =  
@ CONST. & R/W COMMUNITY PARKWAY Sta. 10+00.00



SHEET NO(S)	CROSS REFERENCES
P.49	14" FORCE MAIN PROFILE



SANITARY PLANS  
GRAVITY SEWER PROFILE

STA-TR 211-1.91

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DESIGN AGENCY



DESIGNER

JDK

REVIEWER

WBH 07/16/21

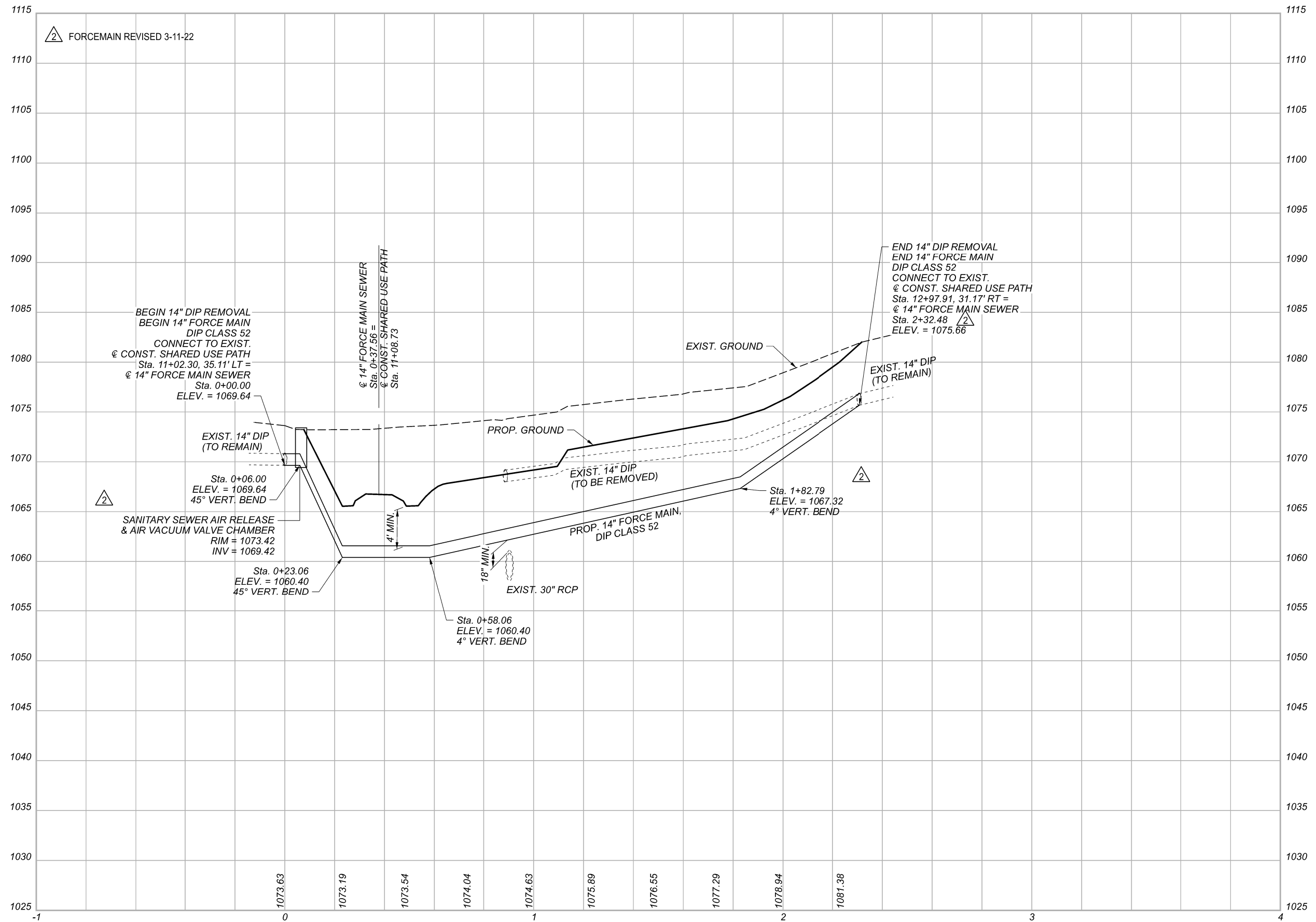
PROJECT ID

110429

SHEET TOTAL

P.48 P.78





SANITARY FORCE MAIN PROFILE

DESIGN AGENCY



DESIGNER	JDK
REVIEWER	WBH
PROJECT ID	110429
SHEET	P.49
TOTAL	P.78