

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
17	18	121	122	127	128	139	415	26		Office Calc	01/NHS/21							02/S>2/04
LS											LS	LS	201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	17	
		2									2		202	20010	2	EACH	HEADWALL REMOVED	
		21,917					861			52,338	40,346	12,853	202	23000	53,199	SY	PAVEMENT REMOVED	
		11									11,740	10,177	202	30000	21,917	SF	WALK REMOVED	
		278									6	5	202	30200	11	FT	STEPS REMOVED	
											246	32	202	30600	278	SY	CONCRETE MEDIAN REMOVED	
		490									490		202	30700	490	FT	CONCRETE BARRIER REMOVED	
		7,071					125				4,082	3,114	202	32000	7,196	FT	CURB REMOVED	
		112									112		202	32800	112	SY	CONCRETE SLOPE PROTECTION REMOVED	
		2,379									1,345	1,034	202	35100	2,379	FT	PIPE REMOVED, 24" AND UNDER	
		630									160	470	202	35200	630	FT	PIPE REMOVED, OVER 24"	
		4,346									4,346		202	38000	4,346	FT	GUARDRAIL REMOVED	
		11									11		202	42206	11	EACH	ANCHOR ASSEMBLY REMOVED	
		2									2		202	42210	2	EACH	ANCHOR ASSEMBLY REMOVED, BARRIER DESIGN	
		6									6		202	47000	6	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
		1									1		202	47800	1	EACH	IMPACT ATTENUATOR REMOVED	
		12									4	8	202	58000	12	EACH	MANHOLE REMOVED	
		29									15	14	202	58100	29	EACH	CATCH BASIN REMOVED	
		22										22	SPECIAL	20270000	22	FT	FILL AND PLUG EXISTING CONDUIT, 10"	18
		124										124	SPECIAL	20270000	124	FT	FILL AND PLUG EXISTING CONDUIT, 12"	18
			1,417								1,417		202	75000	1,417	FT	FENCE REMOVED	
		2										2	202	98100	2	EACH	REMOVAL MISC.: BOLLARD	
		22									14	8	202	98100	22	EACH	REMOVAL MISC.: SPRINKLER HEAD	18
		191									145	46	202	98200	191	FT	REMOVAL MISC.: DECORATIVE WALL	18
	781			73,650							70,462	3,969	203	10000	74,431	CY	EXCAVATION	
	781			82,491							82,316	956	203	20000	83,272	CY	EMBANKMENT	
9,610											9,610		203	20001	9,610	CY	EMBANKMENT, AS PER PLAN	§CN101
										137		137	203	98000	137	CY	ROADWAY, MISC.:SOIL MIX A	19
										33		33	203	98000	33	CY	ROADWAY, MISC.:SOIL MIX B	19
							451			27,435	13,221	14,665	204	10000	27,886	SY	SUBGRADE COMPACTION	
				4,388				411		1,880	4,799	1,880	204	13000	6,679	CY	EXCAVATION OF SUBGRADE	
				1,464				411			1,875		204	30010	1,875	CY	GRANULAR MATERIAL, TYPE B	
				2,926							2,926		204	30030	2,926	CY	GRANULAR MATERIAL, TYPE D	
										1,880		1,880	204	30020	1,880	CY	GRANULAR MATERIAL, TYPE C	
	20									10	28	2	204	45000	30	HOUR	PROOF ROLLING	
								827		2,819	827	2,819	204	50000	3,646	SY	GEOTEXTILE FABRIC	
										2,819		2,819	204	51000	2,819	SY	GEOGRID	
										789	789		206	10500	789	TON	CEMENT	
										30,490	30,490		206	11000	30,490	SY	CURING COAT	
								827		30,490	31,317		206	15010	31,317	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
										LS	LS		206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
										3,434	3,434		606	15050	3,434	FT	GUARDRAIL, TYPE MGS	
										1,000	1,000		606	15150	1,000	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
										3	3		606	26050	3	EACH	ANCHOR ASSEMBLY, MGS TYPE B	17
										8	8		606	26150	8	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	17
										7	7		606	26550	7	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
										11	11		606	35002	11	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
										3	3		606	35102	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
										1	1		606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (70 mph) (28" WIDE)	17
										2	2		606	60040	2	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL (70 mph) (90" WIDE)	17
										530		607	23000	530	FT	FENCE, TYPE CLT		
										361		607	23001	361	FT	FENCE, TYPE CLT, AS PER PLAN	17	
										891		607	70000	891	FT	FENCELINE SEEDING AND MULCHING		
				40							40		607	98000	40	FT	FENCE, MISC.:WOOD FENCE, WITH 5' RAILS	18
				16,209							4,096	12,113	608	10000	16,209	SF	4" CONCRETE WALK	
				14,013							14,013		608	13000	14,013	SF	6" CONCRETE WALK	
				1,639							571	1,068	608	52000	1,639	SF	CURB RAMP	
				1,145	152	173					1,297	173	609	24000	1,470	FT	CURB, TYPE 4-A	

GENERAL SUMMARY

DESIGN AGENCY
ARCADIS
 1975 HUNTINGTON PARK BLVD, STE 100
 COLUMBIA, MO 65203
 616 882 9100
 www.arcadis.com

DESIGNER
 TT

REVIEWER
 SMG

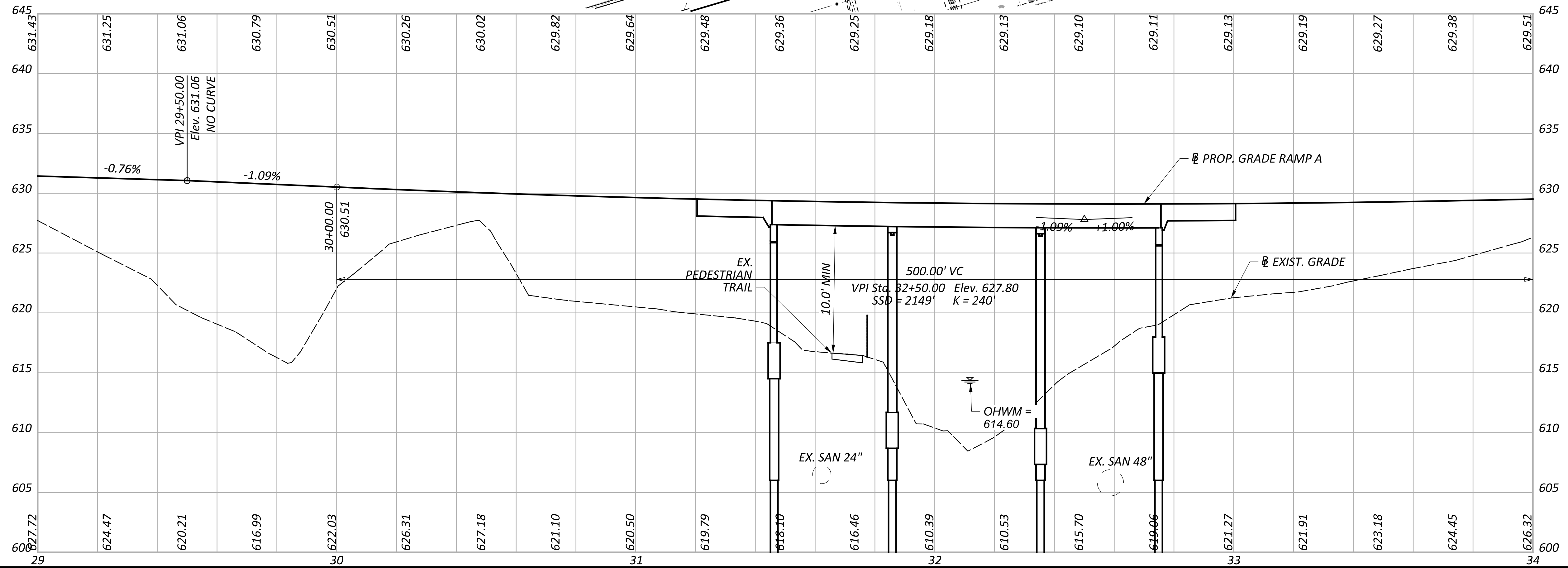
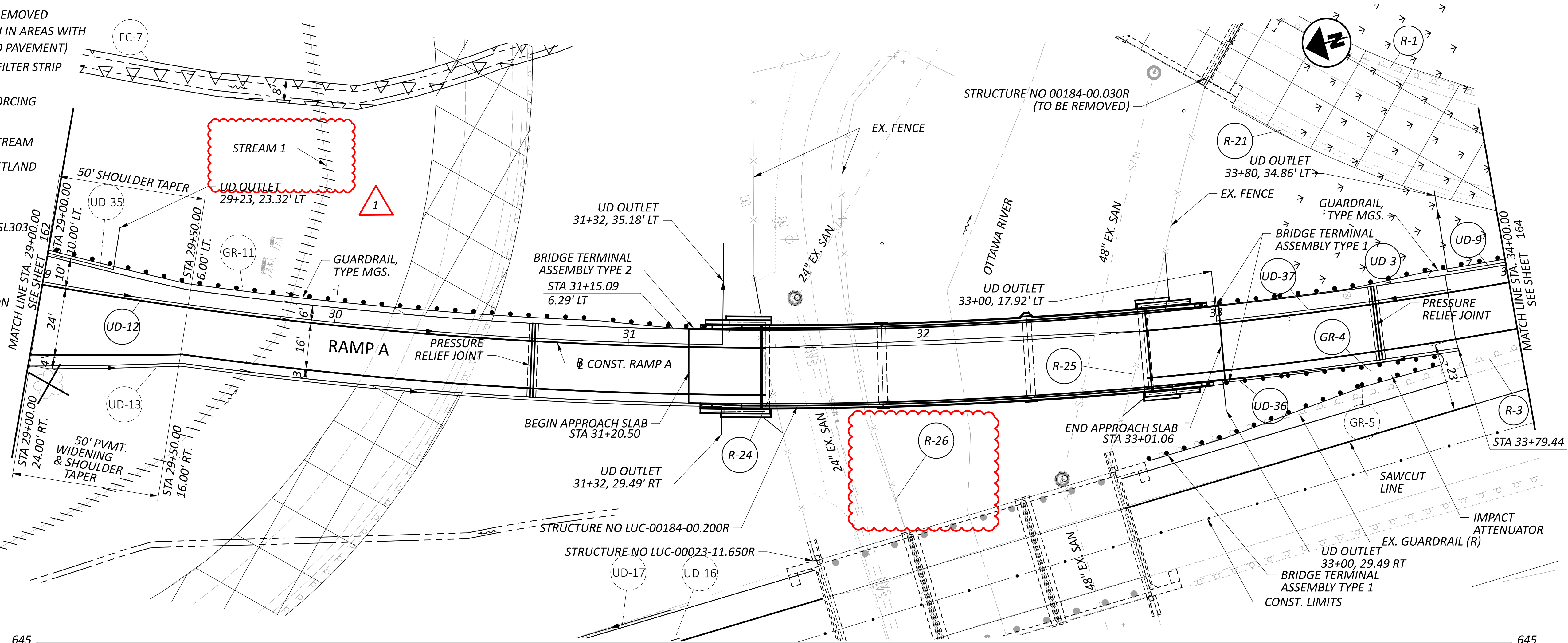
PROJECT ID
 09/13/24

SHEET TOTAL
 108 607

- LEGEND**
- (DND) - DO NOT DISTURB
 - (RBO) - RELOCATED BY OTHERS
 - ☒ - PAVEMENT REMOVED (ONLY SHOWN IN AREAS WITH NO PROPOSED PAVEMENT)
 - ☒ - VEGETATED FILTER STRIP
 - ☒ - TURF REINFORCING MAT, TYPE 1
 - /// - IMPACTED STREAM
 - - EXISTING WETLAND

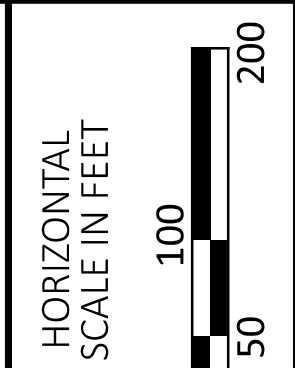
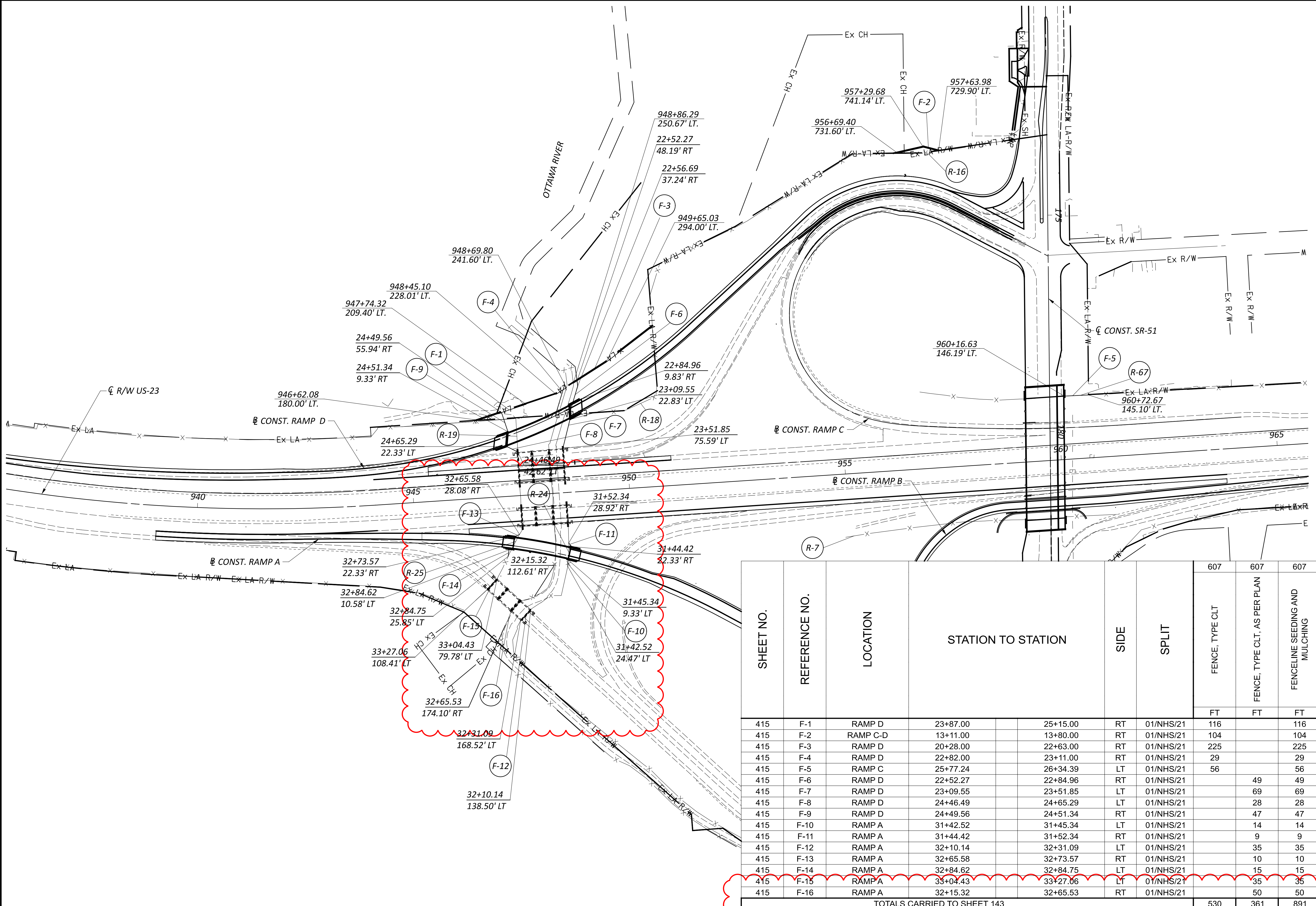
FOR ADDITIONAL BRIDGE DETAILS, SEE SHEETS 482 - \$D\$SL303.00
 FOR PAVEMENT JOINT DETAIL SEE SHEETS 324 - 331
 FOR SUPERELEVATION DETAILS SEE SHEETS 285 - 288
 FOR INTERCHANGE DETAILS SEE SHEET 289

CONST. RAMP A CURVE DATA
 P.I. = STA. 30+97.91
 $\Delta = 26^{\circ}19'37''$ LT
 $D_c = 04^{\circ}00'04''$
 $R = 1,432.00'$
 $T = 334.91'$
 $L = 658.00'$
 $E = 38.64'$



PLAN & PROFILE - RAMP A
STA. 29+00 TO STA. 34+00

DESIGN AGENCY	
ARCADIS 1111 SUPERIOR AVENUE SUITE 1300 CLEVELAND, OHIO 44114 (216) 781-4517 www.arcadis.com	
DESIGNER	TB
REVIEWER	SMG 09/13/24
PROJECT ID	105889
SHEET	TOTAL
163	607



FENCING PLAN

SHEET NO.	REFERENCE NO.	LOCATION	STATION TO STATION		SIDE	SPLIT	607			
			FT	FT			FENCE, TYPE CLT	FENCE, TYPE CLT, AS PER PLAN	FENCELINE SEEDING AND MULCHING	
415	F-1	RAMP D	23+87.00	25+15.00	RT	01/NHS/21	116		116	
415	F-2	RAMP C-D	13+11.00	13+80.00	RT	01/NHS/21	104		104	
415	F-3	RAMP D	20+28.00	22+63.00	RT	01/NHS/21	225		225	
415	F-4	RAMP D	22+82.00	23+11.00	RT	01/NHS/21	29		29	
415	F-5	RAMP C	25+77.24	26+34.39	LT	01/NHS/21	56		56	
415	F-6	RAMP D	22+52.27	22+84.96	RT	01/NHS/21		49	49	
415	F-7	RAMP D	23+09.55	23+51.85	LT	01/NHS/21		69	69	
415	F-8	RAMP D	24+46.49	24+65.29	LT	01/NHS/21		28	28	
415	F-9	RAMP D	24+49.56	24+51.34	RT	01/NHS/21		47	47	
415	F-10	RAMP A	31+42.52	31+45.34	LT	01/NHS/21		14	14	
415	F-11	RAMP A	31+44.42	31+52.34	RT	01/NHS/21		9	9	
415	F-12	RAMP A	32+10.14	32+31.09	LT	01/NHS/21		35	35	
415	F-13	RAMP A	32+65.58	32+73.57	RT	01/NHS/21		10	10	
415	F-14	RAMP A	32+84.62	32+84.75	LT	01/NHS/21		15	15	
415	F-15	RAMP A	33+04.43	33+27.06	LT	01/NHS/21		35	35	
415	F-16	RAMP A	32+15.32	32+65.53	RT	01/NHS/21		50	50	
TOTALS CARRIED TO SHEET 143								530	361	891

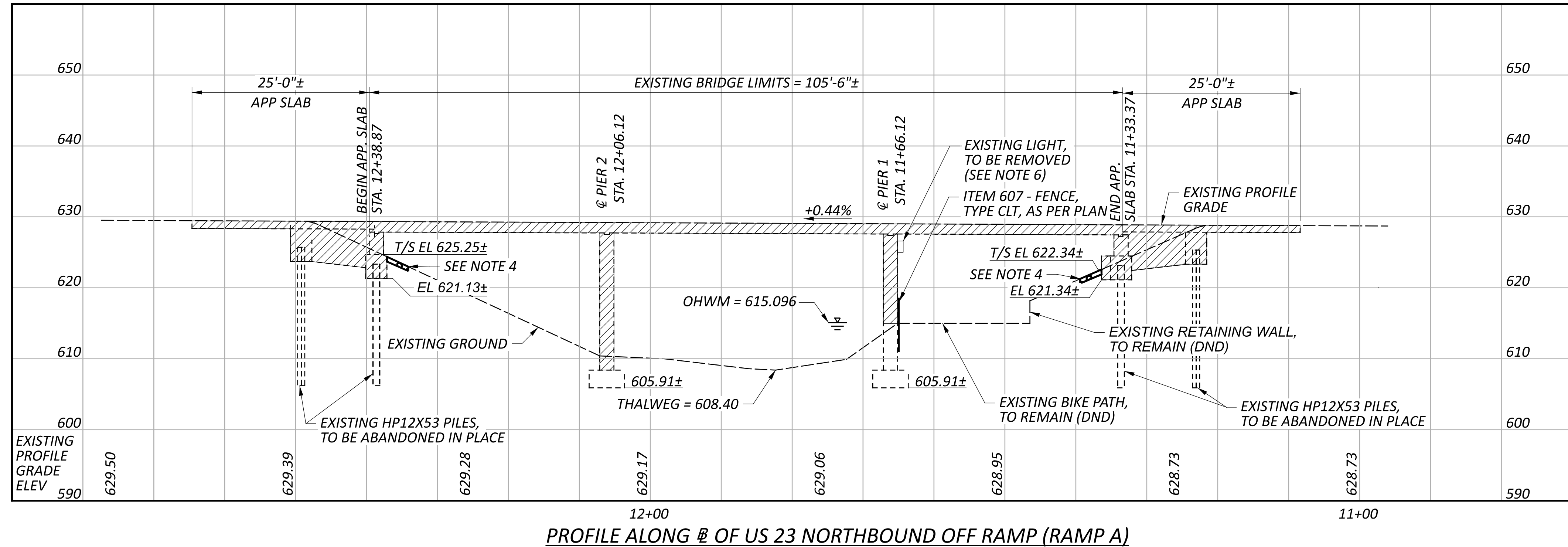
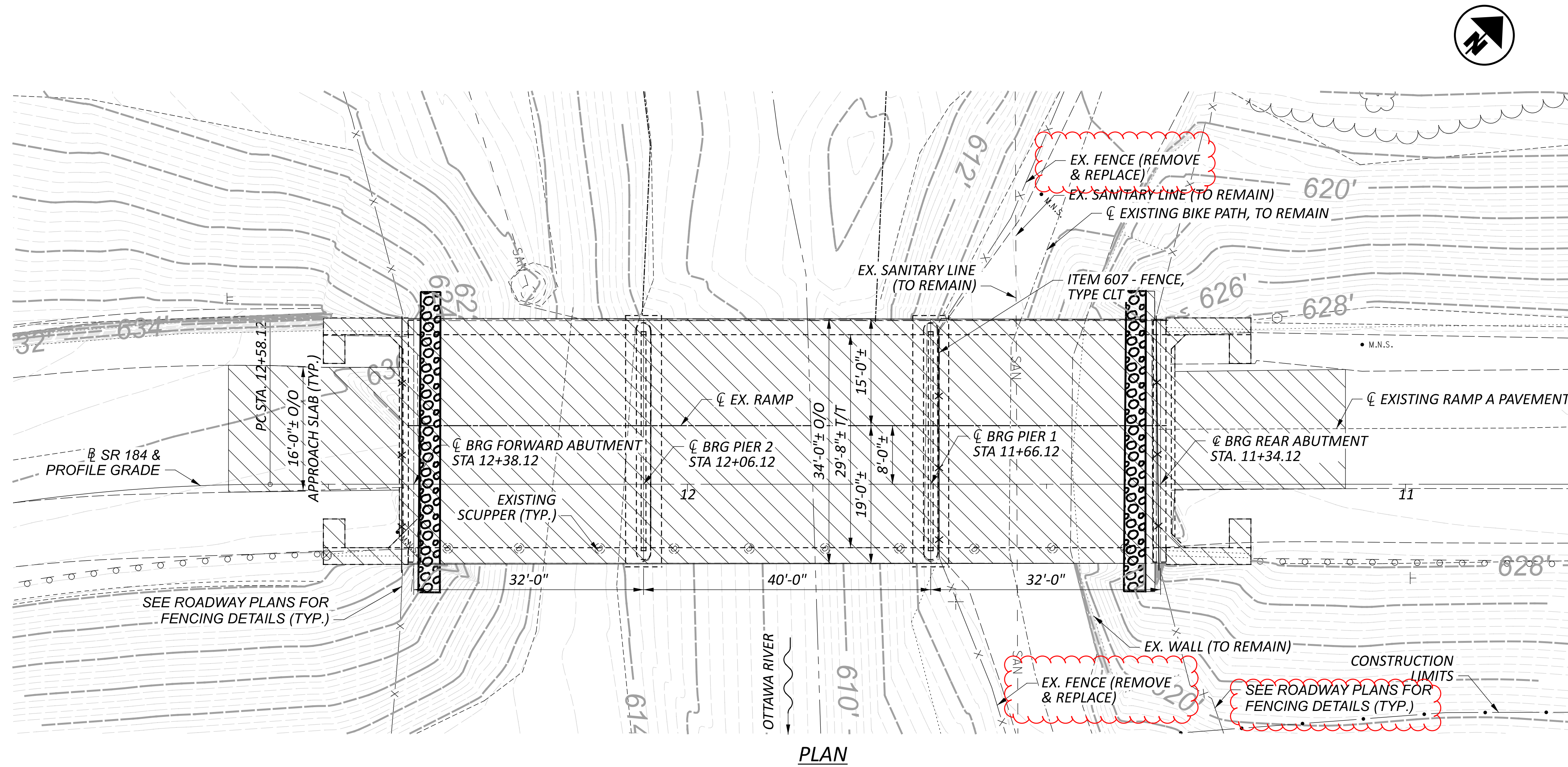
DESIGN AGENCY
ARCADIS
 1111 SUPERIOR AVENUE SUITE 1300
 CLEVELAND, OHIO 44114
 (216) 781-9177
 www.arcadis.com

DESIGNER
 TB

REVIEWER
 SMG 09/13/24

PROJECT ID
 105889

SHEET TOTAL
 415 607



BENCHMARK DATA

BM #1 STA.	946+49.55,	ELEV.	629.62,	OFFSET	203.30,	RT.
DESCRIPTION "XCUT CURB"						
BM #2 STA.	948+52.57,	ELEV.	627.76,	OFFSET	102.82,	LT.
DESCRIPTION "COR WINGWALL"						
BM #3 STA.	949+62.69,	ELEV.	620.40,	OFFSET	299.97,	RT.
DESCRIPTION "XCUT TOP 48IN RCP"						

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 18 B

- NOTES**
- BRIDGE PARAPETS, DECK, AND APPROACH SLABS SHALL BE REMOVED IN THEIR ENTIRETY.
 - BRIDGE ABUTMENTS, PIERS, AND WINGWALLS SHALL BE REMOVED AS SHOWN IN THESE PLANS, WITH MINIMUM REMOVAL TO 1'-0" BELOW GRADE.
 - AREAS OF STRUCTURAL REMOVAL SHALL BE REGRADED TO MATCH SURROUNDING TERRAIN.
 - REPLACE AGGREGATE SLOPE PROTECTION AS DIRECTED BY THE ENGINEER IF EXISTING IS DISTURBED DURING REMOVAL OPERATIONS.
 - ALL ELEVATION ARE CONSIDERED +/- AND ARE FROM SURVEY INFORMATION OR DATUM CORRECTED AND FROM EXISTING PLANS.
 - REFER TO LIGHTING PLANS FOR REMOVAL OF LIGHTING AT PIER 1.
 - CENTERLINE BASED OFF OF EXISTING PLAN INFORMATION AND IS FOR INFORMATION ONLY.

LEGEND

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

HYDRAULIC DATA

DRAINAGE AREA = 125 SQ. MILES

Q (50) = 5510 CFS V (50) = 8.0 FT/S

Q (100) = 6190 CFS V (100) = 7.8 FT/S

STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 5.04 FEET.

PROPOSED WORK

REMOVE EXISTING STRUCTURE

- REMOVAL OF EXISTING BRIDGE DECK
- REMOVAL OF EXISTING ABUTMENTS TO 1'-0" BELOW GRADE
- REMOVAL OF EXISTING PIERS TO ELEVATION SHOWN IN THESE PLANS
- REMOVAL OF EXISTING APPROACH SLABS
- REGRADE EXISTING GROUND
- INSTALL FENCING ALONG REMAINING PORTION OF PIER 2 ADJACENT TO PATH TO CONNECT EXISTING FENCING

EXISTING STRUCTURE

TYPE: 3-SPAN CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: 32.0' ± - 40.0' ± - 32.0' ± C/C BRGS

ROADWAY: 29'-8" ± T/T SAFETY CURB

LOADING: CF-2000 (57)

SKEW: NONE

WEARING SURFACE: LATEX CONCRETE OVERLAY

APPROACH SLABS: AS-1-54 (25'-0" LONG)

ALIGNMENT: TANGENT

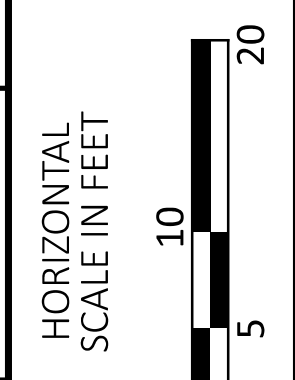
CROWN: 0.016 ± FT/FT

STRUCTURE FILE NUMBER: 4805135

DATE BUILT: 1960

DISPOSITION: REMOVED

COORDINATES: LATITUDE 41°42'42.73" LONGITUDE 83°41'13.92"



SITE PLAN
 BRIDGE NO. LUC-00184-00.030R NORTHBOUND RAMP
 OVER OTTAWA RIVER

SFN	4805135
DESIGN AGENCY	2LMN
DESIGNER	RFS
CHECKER	JAH
REVIEWER	
AMT	09/09/24
PROJECT ID	105889
SUBSET	1
TOTAL	7
SHEET	P.489
TOTAL	607