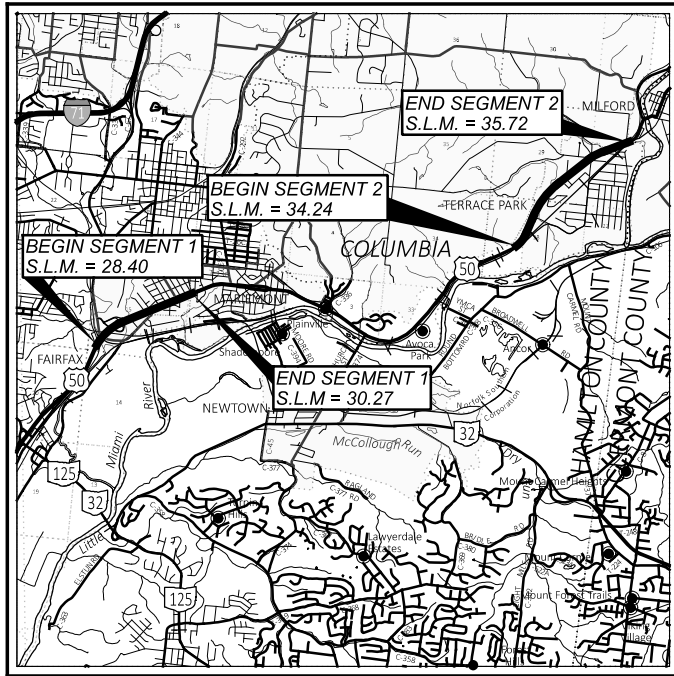


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## HAM-US 50-29.00

VILLAGE OF FAIRFAX  
VILLAGE OF MARIEMONT  
VILLAGE OF TERRACE PARK  
HAMILTON COUNTY



**LOCATION MAP**

LATITUDE: 39°08'18" N LONGITUDE: 84°24'06" W



PORTION TO BE IMPROVED	=====
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	-----

DESIGN DESIGNATION	SLM	28.47-29.28	29.28-29.38	29.38-29.86	29.86-34.11	34.11-36.04
CURRENT ADT (2024)		32,500	33,000	15,500	16,500	10,500
DESIGN YEAR ADT (2044)		40,833	44,667	23,833	18,167	14,667
DESIGN HOURLY VOLUME (2044)		4,962	5,479	3,038	1,873	1,506
DIRECTIONAL DISTRIBUTION		60%	52%	52%	60%	56%
TRUCKS (24 HOUR B&C)		3.0%	3.0%	4.0%	5.0%	3.0%
DESIGN SPEED		50	50	35	35	35
LEGAL SPEED		50	50	35	35	35
DESIGN FUNCTIONAL CLASSIFICATION		03	03	04	04	04
[03] PRINCIPAL ARTERIAL OTHER (URBAN) / [04] MINOR ARTERIAL (URBAN)						
NHS PROJECT						NO

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
SHOULDER WIDTH	03/20/2023	P.006, P.152 - P.153

**ADA DESIGN WAIVERS**

NONE REQUIRED

**UNDERGROUND UTILITIES**

Contact Two Working Days  
Before You Dig

Before You Dig

**OHIO811, 8-1-1, or 1-800-362-2764**  
(Non members must be called directly)

PLAN PREPARED BY:  
**TRANSYSTEMS**  
1100 SUPERIOR AVE., STE 1000  
CLEVELAND, OHIO 44114

**INDEX OF SHEETS:**

TITLE SHEET	P.001
SCHEMATIC PLANS	P.002 - P.004
TYPICAL SECTIONS	P.005 - P.010
GENERAL NOTES	P.011 - P.013
MAINTENANCE OF TRAFFIC	P.014 - P.053
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ESTIMATED QUANTITIES	P.058 - P.063
PROJECT SITE PLAN	P.064
PLAN AND PROFILES	P.065 - P.071
CROSS SECTIONS	P.072 - P.086
SUPERELEVATION TABLES	P.087
STORM SEWER PROFILES	P.088 - P.089
DRAINAGE DETAILS	P.090
RETAINING WALL	P.091 - P.092
BARRIER DETAILS	P.093 - P.097
PLAN INSERT SHEETS	P.098 - P.099
TRAFFIC CONTROL	P.100 - P.109
LIGHTING PLAN	P.110 - P.114
STRUCTURES OVER 20 FOOT SPAN	
HAM-00050-29.100	P.115 - P.164
HAM-00050-29.280	P.165 - P.208

FEDERAL PROJECT NUMBER

E191 (891)

RAILROAD INVOLVEMENT

NORFOLK SOUTHERN RY - NS MIDWEST DIVISION, MILE POST CV-112.40 & INDIANA & OHIO RY

PROJECT DESCRIPTION

REHABILITATE TWO BRIDGES (HAM-50-29.100 & 29.280) BY REMOVING AND REPLACING THE EXISTING DECK WITH A NEW COMPOSITE, REINFORCED CONCRETE DECK; UPGRADE BRIDGES TO MEET CURRENT DESIGN REQUIREMENTS; ADD WOOD LAGGING TO THE EXISTING RETAINING WALL ALONG US-50 EASTBOUND; MINOR PAVEMENT APPROACH WORK. LOWER THE RAMPS TO RED BANK ROAD UNDER THE 29.280 BRIDGE TO INCREASE THE VERTICAL CLEARANCE; REPAIR AND RESURFACE THE US-50 PAVEMENT IN THE VILLAGES OF FAIRFAX AND TERRACE PARK. REPAIR SLOPE FAILURE ALONG US-50 EASTBOUND NEAR RED BANK RD.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.75 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.35 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	2.10 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET P.014, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Tammy K. Campbell, P.E.  
District 08 Deputy Director

Jack Marchbanks, PhD  
Director, Department of Transportation

**ENGINEER'S SEAL**

SLOPE FAILURE REPAIR

STANDARD CONSTRUCTION DRAWINGS													SUPPLEMENTAL SPECIFICATIONS		
BP-2.1	1/21/22	I-3C, 3C1	7/15/22	RM-4.6	7/19/13	HL-30.11	7/21/23	MT-95.70	7/21/23	MT-101.80	1/17/20	TC-71.10	4/26/23	800-2023	7/21/23
BP-3.1	1/21/22					HL-30.21	4/17/20	MT-97.10	4/19/19	MT-101.90	7/17/20	TC-72.20	7/21/23	807	1/21/22
BP-5.1	7/15/22	MGS-1.1	7/16/21	AS-1-15	1/20/23	HL-30.22	1/15/21	MT-97.12	1/20/17	MT-102.10	7/21/23	TC-82.10	7/19/19	821	4/20/12
CB-6	1/21/22	MGS-2.1	1/19/18	AS-2-15	7/21/23	HL-30.31	7/21/23	MT-98.10	1/17/20	MT-102.20	4/19/19			829	1/20/17
CB-3A	7/16/21	MGS-3.2	1/18/13	EXJ-4-87	1/20/23	HL-40.20	7/21/23	MT-98.11	1/17/20	MT-103.10	1/21/22			832	7/21/23
DM-1.1	7/17/20	MGS-4.2	7/19/13	SBR-1-20	7/21/23	HL-50.21	7/15/22	MT-98.20	4/19/19	MT-104.10	4/26/23			836	1/19/18
DM-1.2	7/16/21	MGS-4.3	1/18/13	SBR-2-20	7/21/23	HL-60.11	7/21/17	MT-98.21	7/21/23	MT-105.10	1/17/20			850	7/21/23
DM-4.1	7/17/20	MGS-5.3	7/15/16	SICD-2-14	1/15/21	HL-60.31	7/21/23	MT-98.29	1/17/20					872	1/21/22
DM-4.2	7/20/12	MGS-6.1	1/19/18	VPF-1-90	7/21/23	MT-95.30	7/19/19	MT-99.20	4/19/19	TC-41.20	10/18/13			929	7/21/23
DM-4.3	1/15/16					MT-95.31	7/19/19	MT-99.30	1/17/20	TC-42.20	10/18/13				
DM-4.4	1/15/16	MH-3	7/21/23	HL-10.11	7/21/23	MT-95.40	7/21/23	MT-99.60	7/15/16	TC-52.10	10/18/13				
HW-2.1	7/15/22			HL-10.12	7/21/23	MT-95.45	7/21/23	MT-100.00	7/16/21	TC-52.20	1/15/21			878	4/17/20
F-1.1	7/19/13	RM-4.2	4/17/20	HL-10.13	1/20/23	MT-95.50	7/21/17	MT-101.60	4/26/23	TC-61.30	7/19/19			905	4/20/12
F-3.1	7/19/13	RM-4.3	1/21/22	HL-20.11	7/21/23	MT-95.60	4/19/19	MT-101.70	4/26/23	TC-65.10	1/17/14			921	1/20/17
F-3.4	7/19/13	RM-4.5	7/21/17	HL-20.14	4/17/20	MT-95.61	4/19/19	MT-101.75	7/21/23	TC-65.11	7/15/22				

**ENGINEER'S SEAL**

ROAD, BRIDGE, WALLS, MOT,  
LIGHTING FOR TRANSYSTEMS

**ENGINEER'S SEAL**

SEGMENT 2 ROADWAY  
& MOT FOR 21LMN

DESIGN AGENCY	TRANSYSTEMS
DESIGNER	MSW
REVIEWER	GHM 08/22/23
PROJECT ID	110570
SHEET	P.001
TOTAL	208

HAM-US 50-29.00

MODEL: Sheet PAPER: 34x22 (in.) DATE: 1/31/2024 TIME: 1:53:45 PM USER: gfreeman pwc:\ohio\dot-pw-bentley.com\zhdoto-pw-02\Documents\01 Active Projects\District 08\Hamilton\110570400-Engineering\Roadway\Sheets\110570\_GT001.dgn

TITLE SHEET



**CONTINGENCY QUANTITIES**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DIRECTION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THE PROJECT.

**ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE**

THE SEGMENT 1 PAVEMENT PLANING SHALL BE SCHEDULED TO BE COVERED BY THE SURFACE COURSE PRIOR TO REOPENING THE LANE TO TRAFFIC, EXCEPT THE CONTRACTOR IS PERMITTED TO MILL AHEAD 1000 FEET BEYOND THE PLACED SURFACE COURSE. THE MILLED AHEAD SURFACE SHALL BE COVERED BY THE SURFACE COURSE ASPHALT WITHIN 72 HOURS OF BEING OPEN TO TRAFFIC. ADDITIONALLY, THE MILLED AHEAD SURFACE SHALL NOT BE LOCATED WITHIN AN INTERSECTION OR RAMP. THE MILLED AHEAD SURFACE SHALL BE SMOOTH, FREE OF DEBRIS, AND FREE OF POTHOLES.

THE SEGMENT 2 PAVEMENT PLANING SHALL BE SCHEDULED SUCH THAT THE MILLED SURFACE SHALL BE COVERED BY THE SURFACE COURSE ASPHALT WITHIN 72 HOURS OF BEING OPEN TO TRAFFIC. THE MILLED SURFACE SHALL BE SMOOTH, FREE OF DEBRIS, AND FREE OF POTHOLES.

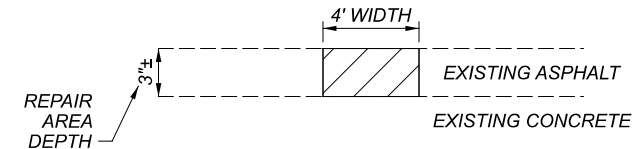
A DISINCENTIVE IN THE AMOUNT OF \$9,300 SHALL BE ASSESSED FOR EACH DAY THE CONTRACTOR FAILS TO MEET ANY OF THESE REQUIREMENTS.

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)**

THIS OPERATION SHALL BE PERFORMED BEFORE RESURFACING OF ROADWAY.

THE FOLLOWING QUANTITY IS GENERATED ON SHEETS P.007 & P.009 AND CARRIED TO THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PARTIAL DEPTH PAVEMENT REPAIR:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) 341 CY

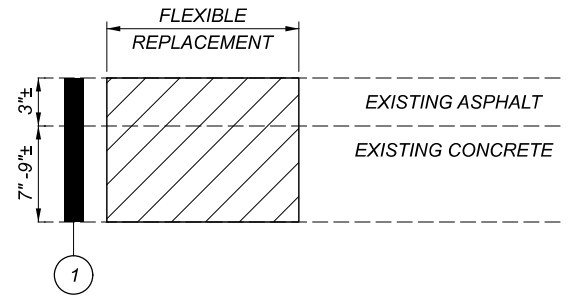


EXISTING DETERIORATED ASPHALT SHALL BE REMOVED TO A DEPTH OF 3"± AND MINIMUM WIDTH OF 4' OR AS DIRECTED BY THE ENGINEER. THIS WORK CONSISTS OF PARTIAL DEPTH REMOVAL OF EXISTING PAVEMENT IN AREAS EXHIBITING DETERIORATION AT THE SURFACE, APPLYING TACK COAT, AND PLACING AND COMPACTING ASPHALT CONCRETE. THE LOCATION AND SIZE OF THE REPAIR SHALL BE DETERMINED BY THE ENGINEER. THE EXISTING CONCRETE SURFACE SHALL NOT BE DISTURBED.

PLACE ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (449) INTO THE REPAIR.

**ITEM 252 - FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 10"-12"± ITEM 252 - FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE BEGINNING OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER.



1 ITEM 252 - PAVEMENT REPAIR (10"-12"±)

PLACE ITEM 301 - ASPHALT CONCRETE BASE (449) INTO THE REPAIR.

**BENCHING OF FOUNDATION SLOPES**

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

**ITEM 203 - GRANULAR MATERIAL, TYPE E, AS PER PLAN**

PROVIDE AND INSTALL CRUSHED CARBONATE STONE WITH A NO. 57 GRADATION FOR THE BLANKET DRAIN AGGREGATE. PLACE THE NO. 57 STONE IN MAXIMUM 12 INCH LIFTS AND COMPACT WITH A VIBRATORY PLATE COMPACTOR. COMPACT THE NO. 57 STONE WITH A MINIMUM OF SIX PASSES OF A MECHANICAL TAMPER OR PLATE COMPACTOR THAT APPLIES AN IMPACT OR CENTRIFUGAL FORCE BETWEEN 1/2 AND 2 TONS. DO NOT PERFORM COMPACTION TESTING ON THE NO. 57 STONE. COMPLETELY WRAP THE NO. 57 STONE WITH A TYPE D GEOTEXTILE FABRIC METTING THE SPECIFICATIONS OF ITEM 204 GEOTEXTILE FABRIC, AS PER PLAN.

**ITEM 204 - GEOTEXTILE FABRIC, AS PER PLAN**

PROVID AND PLACE TYPE D GEOTEXTILE FABRIC TO WRAP NO. 57 STONE AS ILLUSTRATED IN THE PLANS. OVERLAP ADJACENT SECTIONS OF GEOTEXTILE FABRIC A MINIMUM OF 18 INCHES.

SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.011	P. 023	P.058	P.059	P.063	P.080	P.086				01/NHS/13	02/S>2/13	03/S>2/05						
<b>ROADWAY</b>																		
LS										LS	LS		201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	P.011
	610	5,646								3,704	1,942		202	23000	5,646	SY	PAVEMENT REMOVED	
		777								658	729		202	30700	1,387	FT	CONCRETE BARRIER REMOVED	
		642								642			202	35100	642	FT	PIPE REMOVED, 24" AND UNDER	
		1,435								861	574		202	38000	1,435	FT	GUARDRAIL REMOVED	
		1								1			202	42000	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
		1								1			202	42010	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
		9								6	3		202	47000	9	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
		2								2			202	58000	2	EACH	MANHOLE REMOVED	
		2								2			202	58100	2	EACH	CATCH BASIN REMOVED	
		2								2			202	58200	2	EACH	INLET REMOVED	
		36									36		202	75000	36	FT	FENCE REMOVED	
					1,788	1,212				2,601	399		203	10000	3,000	CY	EXCAVATION	
					1,702	86				1,730	58		203	20000	1,788	CY	EMBANKMENT	
				974						518	456		204	10000	974	SY	SUBGRADE COMPACTION	
				1,978						1,306	672		204	13000	1,978	CY	EXCAVATION OF SUBGRADE (12" DEEP)	
				1,978						1,306	672		204	30020	1,978	CY	GRANULAR MATERIAL, TYPE C	
				4						2	2		204	45000	4	HOUR	PROOF ROLLING	
				5,856						3,919	1,937		204	50000	5,856	SY	GEOTEXTILE FABRIC	
			1,062.5							525	537.5		606	15050	1,062.5	FT	GUARDRAIL, TYPE MGS	
			3							3			606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E [MASH 2016]	
			1								1		606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			7							5	2		606	35002	7	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			4							2	2		606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			36								36		607	23000	36	FT	FENCE, TYPE CLT	
			36								36		607	70000	36	FT	FENCELINE SEEDING AND MULCHING	
			78							1.5	76.5		622	10140	78	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
			20								20		622	10141	20	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	P.093
			212							212			622	10160	212	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
			4							2	2		622	10200	4	EACH	BARRIER TRANSITION	P.099
			2							2			622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			7							4	3		622	25014	7	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
			1								1		622	25015	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN A	P.093
			1							1			622	25015	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN B	P.093
			2							2			622	25050	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
	950		385							899	436		622	90000	1,335	FT	BARRIER, MISC.: MC-9.3, TYPE A	P.098
										LS	LS		SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	P.012
										LS	LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

GENERAL SUMMARY

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
**MSW**

REVIEWER  
**GHM 08/22/23**

PROJECT ID  
**110570**

SHEET TOTAL  
 P.054 | 208







REF NO.	SHEET NO.	ALIGNMENT	STATION TO STATION		SIDE	PLANIMETERED AREAS	202	202	202	202	202	202	202	202	202	202	202									
			PAVEMENT REMOVED	CONCRETE BARRIER REMOVED			PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE E	ANCHOR ASSEMBLY REMOVED, TYPE A	MANHOLE REMOVED	CATCH BASIN REMOVED	INLET REMOVED	FENCE REMOVED	SY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT
			FROM	TO																						
R-1	P.065	US-50	93+00.00	94+17.80	LT	3,940.70	438																			
R-2	P.065	US-50	93+00.00	94+17.80	RT	3,831.36	426																			
R-3	P.065	US-50	93+00.00	94+17.80	LT/RT	1,496.52	166																			
R-4	P.065	US-50	90+38.13	94+25.04	RT				381	1																
R-5	P.065	US-50	93+00.00	94+44.35	CL			124.4																		
R-13	P.067	US-50	98+74.00	99+98.00	CL			124.0																		
R-14	P.067	US-50	98+67.73	98+77.21	RT																	36				
R-15	P.067	US-50	99+01.12	99+98.00	LT	3,126.85	347																			
R-16	P.067	US-50	99+01.12	99+98.00	RT	3,132.95	348																			
R-17	P.067	US-50	99+01.12	99+98.00	LT/RT	1,250.50	139																			
R-18	P.067	US-50	99+98.00	100+70.00	RT	711.00	79																			
R-21	P.067	US-50	98+98.32	100+69.44	LT				174	1																
R-22	P.067	US-50	98+99.80	101+12.54	RT				211	2																
R-23	P.067	US-50	100+90.64	103+38.73	LT				253	1																
R-24	P.067	US-50	101+93.30	103+82.32	RT				186	2																
R-33	P.069	US-50	103+05.00	103+77.68	CL			52.7																		
R-37	P.069	US-50	103+05.00	103+48.80	LT	1,551.86	172																			
R-38	P.069	US-50	103+05.00	103+73.07	RT	2,557.07	284																			
R-39	P.069	US-50	103+05.00	103+55.47	LT/RT	1,189.98	132																			
R-40	P.069	US-50	105+63.24	106+15.00	LT	1,887.41	210																			
R-41	P.069	US-50	105+93.07	106+48.00	RT	1,935.27	215																			
R-42	P.069	US-50	105+84.77	106+48.00	LT/RT	1,387.62	154																			
R-43	P.069	US-50	105+54.92	106+82.74	LT				125	1	1															
R-44	P.069	US-50	103+66.00	103+66.00	CL				40												1					
R-45	P.069	US-50	105+67.00	105+57.00	LT				63												1					
R-46	P.069	US-50	105+88.00	105+67.00	CL				22												1					
R-47	P.069	US-50	105+98.00	106+48.00	CL			50.0																		
R-53	P.071	RAMPS M & L	1+96.31	3+02.76	RT																					
R-54	P.071	RAMPS M & L	3+00.00	4+49.00	LT																					
R-55	P.071	RAMPS M & L	0+25.00	3+00.00	LT																					
R-56	P.071	RAMPS M & L	2+35.00	3+00.00	LT																					
R-57	P.071	RAMPS M & L	0+25.00	4+50.00	CL			425.0																		
R-58	P.071	RAMPS M & L	0+25.00	4+50.00	LT/RT	22,822.77	2536																			
TOTALS CARRIED TO GENERAL SUMMARY							5646	777	642	1435	9	1	1	2	2	2	36									



REF NO.	SHEET NO.	ALIGNMENT	STATION TO STATION		SIDE	ITEM DESCRIPTION																			
			FROM	TO		606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E [MASH 2016]	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	607 FENCE, TYPE CLT	607 FENCE LINE SEEDING AND MULCHING	609 CURB, TYPE 4-C	609 CURB, TYPE 6	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 BARRIER TRANSITION	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN A	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN B	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	622 BARRIER, MISC.: MC-9.3, TYPE A	
						FT	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	
BR-1	P.063	US-50	93+00.00	93+99.83	CL																				
GR-1	P.063	US-50	92+99.95	94+16.97	RT	112.5			1								49.8		1				2		
GR-2	P.063	US-50	93+70.76	94+20.06	LT	37.5		1		1															
C-1	P.063	US-50	93+99.06	94+17.44	RT										18.15										
F-1	P.065	US-50	98+67.73	98+77.21	RT						36	36													
BR-2	P.065	US-50	99+01.12	99+98.00	CL												26.9	20.0		1			1	1	
C-5	P.067	US-50	99+01.12	100+54.84	RT									155											
GR-3	P.065	US-50	98+99.51	99+27.00	RT	187.5			1	1															
GR-4	P.065	US-50	99+00.12	103+33.18	LT	412.5			1	1															
GR-5	P.065	US-50	101+90.53	103+74.21	RT	125.0			1	1															
C-2	P.065	US-50	99+00.70	99+18.61	LT										18.15										
BR-3	P.067	US-50	103+05.00	103+55.67	CL												0.7		1			2			
BR-4	P.067	US-50	105+65.40	106+48.00	CL														1			2			
GR-6	P.067	US-50	105+62.98	106+84.90	LT	87.5	1		1														1		
C-3	P.067	US-50	103+50.68	103+69.18	RT										18.15										
C-4	P.067	US-50	105+62.99	105+80.80	LT										18.15										
GR-7	P.069	RAMPS M & L	1+99.03	2+88.02	RT	50.0	1		1																
GR-8	P.069	RAMPS M & L	4+49.41	5+35.67	LT	50.0	1		1																
BR-5	P.069	RAMPS M & L	0+25.00	4+50.00	LT/RT																			385.0	
BR-6	P.069	RAMPS M & L	2+87.17	4+27.68	RT													109.0		1			1		
BR-7	P.069	RAMPS M & L	3+20.23	4+50.00	LT													102.9		1			1		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>						1062.5	3	1	7	4	36	36	73	155	78	20	212	4	2	7	1	1	2	385	

ROADWAY ESTIMATED QUANTITIES

REF NO.	SHEET NO.	ALIGNMENT	STATION TO STATION		SIDE	601	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	670	
			FROM	TO		TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	12" CONDUIT, TYPE B FT	12" CONDUIT, TYPE B, 706.02 FT	12" CONDUIT, TYPE B, 707.42 FT	15" CONDUIT, TYPE B FT	24" CONDUIT, TYPE B FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21 FT	CATCH BASIN, NO. 3A EACH	CATCH BASIN, NO. 6 EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN A EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN B EACH	INLET ADJUSTED TO GRADE, AS PER PLAN EACH	INLET, MISC.:1:3A EACH	MANHOLE, NO. 3 EACH	MANHOLE ADJUSTED TO GRADE EACH	PRECAST REINFORCED CONCRETE OUTLET EACH
D-1	P.063	US 50	94+10		CL																		
D-2	P.067	US 50	100+40		RT	0.5																	
D-6	P.067	US 50	100+50		RT		1	0.27															
D-7	P.067	US 50	100+54		RT	45																	
D-3	P.067	US 50	103+66		CL					40													
D-4	P.067	US 50	105+67		LT					58													
D-5	P.067	US 50	105+88		CL						22												
D-11	P.069	RAMPS M & L	0+25	2+00	RT																		146
D-12	P.069	RAMPS M & L	0+25	2+35	LT																		
D-13	P.069	RAMPS M & L	2+35	3+10	LT																		
D-14	P.069	RAMPS M & L	2+35	2+35	LT																		
D-15	P.069	RAMPS M & L	3+07	3+10	LT																		
D-16	P.069	RAMPS M & L	3+10	4+49	LT																		
D-17	P.069	RAMPS M & L	3+18		LT	5																	
D-18	P.069	RAMPS M & L	3+20	3+10	CL																		
D-19	P.069	RAMPS M & L	3+20	3+20	RT																		
D-20	P.069	RAMPS M & L	3+50	4+00	RT																		
D-21	P.069	RAMPS M & L	4+49		LT																		
TOTALS CARRIED TO GENERAL SUMMARY						50.5	1	0.27	371	98	22	14	141	52	1	2	1	1	1	2	3	1	188

DRAINAGE ESTIMATED QUANTITIES

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
**NLD**

REVIEWER  
**MHT 08/22/23**

PROJECT ID  
**110570**

SHEET TOTAL  
 P.060 208

REF NO.	SHEET NO.	CHAIN	STATION TO STATION		SIDE	OUTLET ELEVATION	FOR INFORMATION ONLY																
							BEND AND BRANCHES				* DENOTES TO CONNECT TO EXISTING UD												
							6" CONSTRUCTION UNDERDRAINS 707.31 (PERFORATED)	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	6" X 11.25" BEND	6" X 22.50" BEND	6" X 90" BEND	6" X 6" TEE									
FROM	TO	FT	FT	FT	FT	EACH	EACH	EACH	EACH														
UD-1	P.063	US 50	93+00	94+03	LT			105	35					1	1								
UD-2	P.063	US 50	93+00	94+03	LT				104														
UD-3	P.063	US 50	93+00	94+10	LT	544.23			99	10				2		1							
UD-4	P.063	US 50	93+00	94+10	RT				110														
UD-5	P.063	US 50	93+00	94+10	RT				110					2									
UD-6	P.063	US 50	93+00	94+10	RT	544.23				135	10				1	2							
UD-7	P.065	US 50	99+01	99+93	LT				94	39					1	1							
UD-8	P.065	US 50	99+01	99+93	LT				93														
UD-9	P.065	US 50	99+01	99+98	LT	EX UD			87	10						1							
UD-10	P.065	US 50	99+01	99+93	RT				91	17					1	1							
UD-11	P.065	US 50	99+01	99+93	RT				91														
UD-12	P.065	US 50	99+02	100+70	RT	EX UD			163	10					1	1							
UD-37	P.067	US 50	99+65	100+40	RT	529.50				75													
UD-38	P.067	US 50	99+70	100+40	RT	521.75		70															
UD-39	P.067	US 50	99+75	100+40	RT	516.00		65															
UD-40	P.067	US 50	100+40	100+40	RT	515.61					75												
UD-13	P.067	US 50	103+05	103+46	LT/RT					25	110				1	6							
UD-14	P.067	US 50	103+05	103+47	LT					33													
UD-15	P.067	US 50	103+05	103+38	LT					42													
UD-16	P.067	US 50	103+05	103+47	RT					42	3				2								
UD-17	P.067	US 50	103+05	103+47	RT					41													
UD-18	P.067	US 50	103+05	103+47	RT					41				2									
UD-19	P.067	US 50	103+05	103+54	RT	EX UD				40	13				1								
UD-20	P.067	US 50	106+15	105+88	LT	532.93				27	51				1	2							
UD-21	P.067	US 50	106+15	105+88	LT					27													
UD-22	P.067	US 50	106+15	105+88	LT					27													
UD-23	P.067	US 50	106+48	105+88	LT	532.93				50	13				2								
UD-24	P.067	US 50	106+48	106+17	RT	EX UD				31	39				1	2							
UD-25	P.067	US 50	106+48	106+17	RT					31													
UD-26	P.067	US 50	106+48	106+17	RT					30													
UD-27	P.069	RAMPS M & L	0+25	2+35	LT	511.55				205	10				3								
UD-28	P.069	RAMPS M & L	0+25	2+35	CL	510.68				200	10												
UD-29	P.069	RAMPS M & L	0+25	3+08	RT					280				4		1	2						
UD-30	P.069	RAMPS M & L	0+25	3+08	RT					280	28												
UD-31	P.069	RAMPS M & L	2+42	3+10	LT	511.17				59	10				1								
UD-32	P.069	RAMPS M & L	2+47	3+20	CL	509.04				62	10												
UD-33	P.069	RAMPS M & L	4+45	3+20	LT	511.17				126	10												
UD-34	P.069	RAMPS M & L	4+40	3+20	CL	509.04				110	10			1									
UD-35	P.069	RAMPS M & L	4+33	3+34	RT					100													
UD-36	P.069	RAMPS M & L	4+32	3+34	RT					97	28					1	2						
TOTALS CARRIED TO GENERAL SUMMARY														5	10	15	22						
							135	3363	476	75													

UNDERDRAIN ESTIMATED QUANTITIES

PAV'T AREA	STATION RANGE		SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	CADD GENERATED AREA SF	204	204	204	204	204	254	254	301	304	407	442	442		872			
	FROM	TO					SUBGRADE COMPACTION SY	EXCAVATION OF SUBGRADE (12" DEEP) CY	GRANULAR MATERIAL, TYPE C CY	PROOF ROLLING HOUR	GEOTEXTILE FABRIC SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEEP) SY	PATCHING PLANED SURFACE SY	ASPHALT CONCRETE BASE, PG64+22, (449) CY	AGGREGATE BASE CY	NON-TRACKING TACK COAT GAL	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446) CY		VOID REDUCING ASPHALT MEMBRANE (VRAM) FT			
	US-50																						
RESURFACING FOR MOT	82+08.00	93+00.00	LT	1,092.00	28.0	30,578						3397.5	339.8			305.8	141.6					3,276.0	
RESURFACING FOR MOT	65+19.00	93+00.00	RT	2,781.00	28.8	80,183						8909.3	890.9			801.8	371.2					8,343.0	
FULL DEPTH ASPHALT +ASPH. EDGE COURSE	93+00.00	94+17.80	LT	118.09	38.4	4,530		167.8	167.8	0.25	503.3			125.8	83.9	60.4	21.0	24.5				236.2	
	93+00.00	94+17.80	LT	119.78				6.7	6.7	0.01	20.0			1.7	2.2								
FULL DEPTH ASPHALT +ASPH. EDGE COURSE	93+00.00	94+17.80	RT	117.47	37.5	4,408		163.3	163.3	0.24	489.8			122.4	81.6	58.8	20.4	23.8				234.9	
	93+00.00	94+17.80	RT	97.78				5.4	5.4	0.01	16.3			1.4	1.8								
+CURB, TYPE 4C	93+00.00	94+17.80	RT	18.15				1.0	1.0	0.002	3.0				0.5								
MEDIAN BARRIER AREA	93+00.00	94+17.80	LT/RT	117.69	2.8	335		12.4	12.4	0.02	37.2			9.3	6.2	4.5		1.8				235.4	
APPROACH SLAB	94+17.80	94+44.96	LT	27.53	37.2	1,023	113.7				0.06					19.0							
APPROACH SLAB	94+17.80	94+44.96	RT	26.97	38.2	1,031	114.5				0.06					19.1							
APPROACH SLAB	98+73.95	99+01.12	LT	27.18	37.7	1,024	113.7				0.06					19.0							
APPROACH SLAB	98+73.95	99+01.12	RT	27.16	37.7	1,023	113.7				0.06					18.9							
FULL DEPTH ASPHALT +CURB, TYPE 4C	99+01.12	99+98.00	LT	97.17	37.6	3,649		135.1	135.1	0.20	405.4			101.4	67.6	48.7	16.9	19.7				291.5	
	99+01.12	99+98.00	LT	18.15				1.0	1.0	0.002	3.0				0.5							18.1	
+ASPH. EDGE COURSE	99+01.12	99+98.00	LT	80.52				4.5	4.5	0.01	13.4			1.1	1.5								
FULL DEPTH ASPHALT +ASPH. EDGE COURSE	99+01.12	99+98.00	RT	96.60	37.1	3,582		132.7	132.7	0.20	398.0			99.5	66.3	47.8	16.6	19.3				193.2	
	99+01.12	99+98.00	RT	95.26				5.3	5.3	0.01	15.9			1.3	1.8								
FULL DEPTH ASPHALT FOR SLIDE REPAIR	99+98.00	100+70.00	RT	72.00	12.0	722		26.8	26.8	0.04	80.3			20.1	13.4	9.6	3.3	3.9				39.0	
MEDIAN BARRIER AREA	99+01.12	99+98.00	LT/RT	97.10	3.0	289		10.7	10.7	0.02	32.1			8.0	5.3	3.8		1.6				194.2	
SUBTOTALS THIS SHEET							455.7	672.6	672.6	1.24	2017.7	12306.8	1230.7	492	408.6	1341.1	590.9	94.6			13061.6		

PAVEMENT ESTIMATED QUANTITIES

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
**MSW**

REVIEWER  
**GHM 08/22/23**

PROJECT ID  
**110570**

SHEET TOTAL  
 P.062 208

PAV'T AREA	STATION RANGE		SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	CADD GENERATED AREA SF	204	204	204	204	204	254	254	301	304	407	442	442	872				
	FROM	TO					SUBGRADE COMPACTION SY	EXCAVATION OF SUBGRADE (12" DEEP) CY	GRANULAR MATERIAL, TYPE C CY	PROOF ROLLING HOUR	GEOTEXTILE FABRIC SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEEP) SY	PATCHING PLANED SURFACE SY	ASPHALT CONCRETE BASE, PG64+22, (449) CY	AGGREGATE BASE CY	NON-TRACKING TACK COAT GAL	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446) CY	VOID REDUCING ASPHALT MEMBRANE (VRAM) FT				
	US-50																						
RESURFACING	99+98.00	103+05.00	LT	307.00	44.1	13,549						1505.4	150.5			135.5	62.7					921.0	
RESURFACING	99+98.00	103+05.00	RT	307.00	40.9	11,833						1314.8	130.92			118.3	54.8					921.0	
FULL DEPTH ASPHALT +ASPH. EDGE COURSE	103+05.00 103+05.00	103+51.45 103+31.22	LT LT	43.62 26.82	43.2	1,886		69.9 1.5	69.9 1.5	0.10 0.002	209.6 4.5			52.4 0.4	34.9 0.5	25.1	8.7	10.2				130.8	
MEDIAN BARRIER AREA	103+05.00	103+52.57	LT/RT	46.81	2.7	126		4.7	4.7	0.01	14.0			3.5	2.3	1.7		0.7				93.6	
FULL DEPTH ASPHALT +ASPH. EDGE COURSE +CURB, TYPE 4C	103+05.00 103+05.00 103+55.71	103+73.59 103+55.71 103+73.59	RT RT RT	50.27 49.89 18.15	52.2	2,622		97.1 2.8 1.0	97.1 2.8 1.0	0.15 0.004 0.002	291.3 8.3 3.0			72.8 0.7	48.6 0.9 0.5	35.0	12.1	14.2				150.8 18.1	
APPROACH SLAB FULL DEPTH APPROACH APPROACH MEDIAN BARRIER FULL DEPTH APPROACH APPROACH SLAB	103+31.22 103+48.54 103+51.45 103+52.57 103+55.42	103+73.46 103+76.43 103+75.69 103+80.50 103+99.84	LT LT LT/RT RT RT	25.00 25.00 25.00 25.00 25.00	46.5 7.2 3.0 7.0 46.8	1,163 179 76 176 1,169	129.3 6.6 2.8 6.5 129.9			0.06 0.01 0.004 0.01 0.06				21.5 6.6 2.8 6.5 21.6	15.5 2.4 1.0 2.3 15.6	5.4 0.8 0.4 0.8 5.4	6.3 1.0 0.4 1.0 6.3					125.0 50.0 125.0	
APPROACH SLAB FULL DEPTH ASPH. APPROACH APPROACH MEDIAN BARRIER FULL DEPTH ASPH. APPROACH APPROACH SLAB	105+37.79 105+59.76 105+65.39 105+64.83 105+68.16	105+84.65 105+88.15 105+89.73 105+93.24 106+16.01	LT LT LT/RT RT RT	25.00 25.00 25.00 25.00 25.00	46.5 6.9 3.3 6.9 46.8	1,164 173 84 173 1,170	129.3 6.4 3.1 6.4 130.0			0.06 0.01 0.005 0.01 0.07				21.5 6.4 3.1 6.4 21.7	15.5 2.3 1.1 2.3 15.6	5.4 0.8 0.5 0.8 5.4	6.3 0.9 0.5 0.9 6.3					125.0 50.0 125.0	
FULL DEPTH ASPHALT +CURB, TYPE 4C +ASPH. EDGE COURSE FULL DEPTH ASPHALT	105+62.98 105+62.98 105+80.81 105+84.65	106+15.00 105+80.81 106+15.00 106+48.00	LT LT LT LT	48.35 18.15 34.84 63.50	39.3	1,900 449	70.4 1.0 1.9 16.6	70.4 1.0 1.9 16.6	0.11 0.002 0.003 0.02	211.1 3.0 5.8 49.9			52.8 0.5 0.6 12.5	35.2 0.5 0.6 8.3	25.3	8.8	10.3					145.0 18.1	
MEDIAN BARRIER AREA	105+88.15	106+48.00	LT/RT	58.70	2.7	161		6.0	6.0	0.01	17.9			4.5	3.0	2.2		0.9				117.4	
FULL DEPTH ASPHALT +ASPH. EDGE COURSE	105+89.73 106+16.61	106+48.00 106+48.00	RT RT	54.59 31.41	42.8	2,338		86.6 1.7	86.6 1.7	0.13 0.003	259.8 5.2			65.0 0.4	43.3 0.6	31.2	10.8	12.6				163.8	
	RAMPS M & L																						
FULL DEPTH ASPHALT +ASPH. EDGE COURSE +CONC. BAR. TYPE D +ASPH. EDGE COURSE +CURB, TYPE 4C +CONC. BAR. TYPE D +ASPH. EDGE COURSE	0+25.00 0+25.00 3+20.22 0+25.00 2+68.96 2+87.42 4+27.77	4+50.00 3+20.22 4+50.00 2+68.96 2+87.42 4+50.00	LT/RT LT LT RT RT RT RT	425.00 300.00 131.88 239.87 18.15 137.99 21.86	54.0	22,934	849.4 16.7 15.5 13.3 1.0 16.2 1.2	849.4 16.7 15.5 13.3 1.0 16.2 1.2	1.27 0.03 0.02 0.02 0.002 0.02 0.002	2,548.2 50.0 46.4 40.0 3.0 48.6 3.6			637.0 4.2 9.77 3.3 10.22 0.3	424.7 5.6 7.7 4.4 8.1 0.4	305.8 1.9	106.2	123.9					2,550.0 131.9 18.1 138.0	
<b>SUBTOTALS THIS SHEET</b>							518.5	1306.3	1306.3	2.2	3918.8	2820	281	930.2	749.0	764	291	208.1	6117.8				
<b>SUBTOTALS FROM PREVIOUS SHEET</b>							455.7	645.8	645.8	1.2	1937.4	12306.8	1230.7	471.9	408.6	1331.5	587.6	94.2	13061				
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>							974	1952	1952	3	5856	15126	1512	1422	1144	2096	880	302.3	19178				

PAVEMENT ESTIMATED QUANTITIES

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
**MSW**

REVIEWER  
**GHM 08/22/23**

PROJECT ID  
**110570**

SHEET TOTAL  
**P.063 208**

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 10/27/2023 TIME: 12:04:42 PM USER: rjoreve  
 pw:\hqp\p\hnt\01-a-e-transyscorp.com\transyscorp\Projects\2020\CL402\402200084\Agency\_Folders\400-Engineering\Drainage\_Sheets\110570\_DE001.dgn

USGS MAP: CINCINNATI EAST

LONGITUDE: -84° 24' 06"  
 LATITUDE: 39° 08' 18"

\*LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT

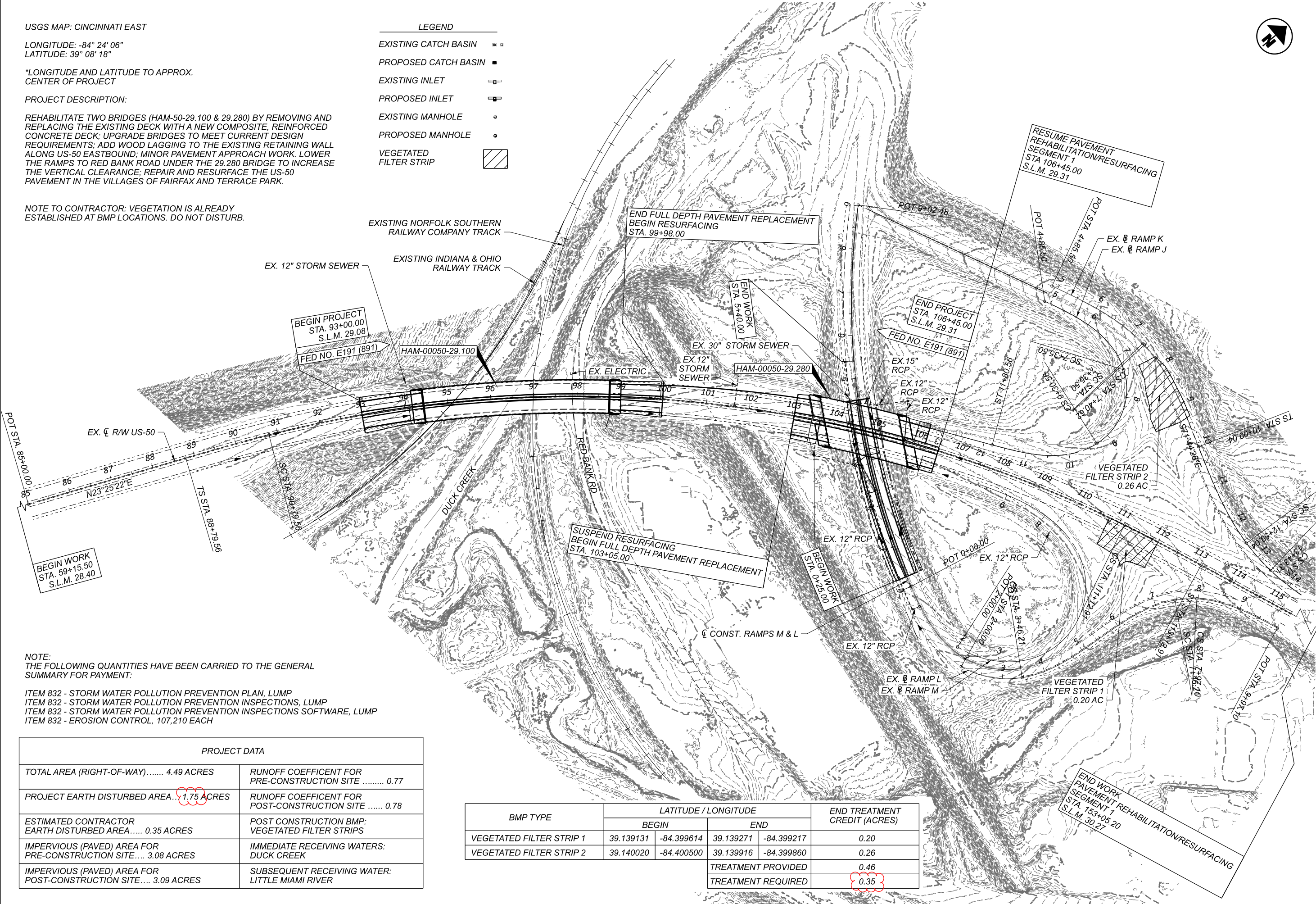
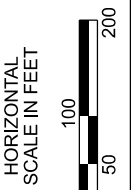
PROJECT DESCRIPTION:

REHABILITATE TWO BRIDGES (HAM-50-29.100 & 29.280) BY REMOVING AND REPLACING THE EXISTING DECK WITH A NEW COMPOSITE, REINFORCED CONCRETE DECK; UPGRADE BRIDGES TO MEET CURRENT DESIGN REQUIREMENTS; ADD WOOD LAGGING TO THE EXISTING RETAINING WALL ALONG US-50 EASTBOUND; MINOR PAVEMENT APPROACH WORK. LOWER THE RAMPS TO RED BANK ROAD UNDER THE 29.280 BRIDGE TO INCREASE THE VERTICAL CLEARANCE; REPAIR AND RESURFACE THE US-50 PAVEMENT IN THE VILLAGES OF FAIRFAX AND TERRACE PARK.

NOTE TO CONTRACTOR: VEGETATION IS ALREADY ESTABLISHED AT BMP LOCATIONS. DO NOT DISTURB.

LEGEND

- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING INLET
- PROPOSED INLET
- EXISTING MANHOLE
- PROPOSED MANHOLE
- VEGETATED FILTER STRIP



NOTE:  
 THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR PAYMENT:

- ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN, LUMP
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS, LUMP
- ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS SOFTWARE, LUMP
- ITEM 832 - EROSION CONTROL, 107,210 EACH

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY).....	4.49 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE .....	0.77
PROJECT EARTH DISTURBED AREA... 1.75 ACRES	
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE .....	0.78
ESTIMATED CONTRACTOR EARTH DISTURBED AREA.....	0.35 ACRES
POST CONSTRUCTION BMP: VEGETATED FILTER STRIPS	
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE.....	3.08 ACRES
IMMEDIATE RECEIVING WATERS:	DUCK CREEK
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE.....	3.09 ACRES
SUBSEQUENT RECEIVING WATER:	LITTLE MIAMI RIVER

BMP TYPE	LATITUDE / LONGITUDE				END TREATMENT CREDIT (ACRES)
	BEGIN		END		
VEGETATED FILTER STRIP 1	39.139131	-84.399614	39.139271	-84.399217	0.20
VEGETATED FILTER STRIP 2	39.140020	-84.400500	39.139916	-84.399860	0.26
TREATMENT PROVIDED					0.46
TREATMENT REQUIRED					0.35

PROJECT SITE PLAN  
 US-50

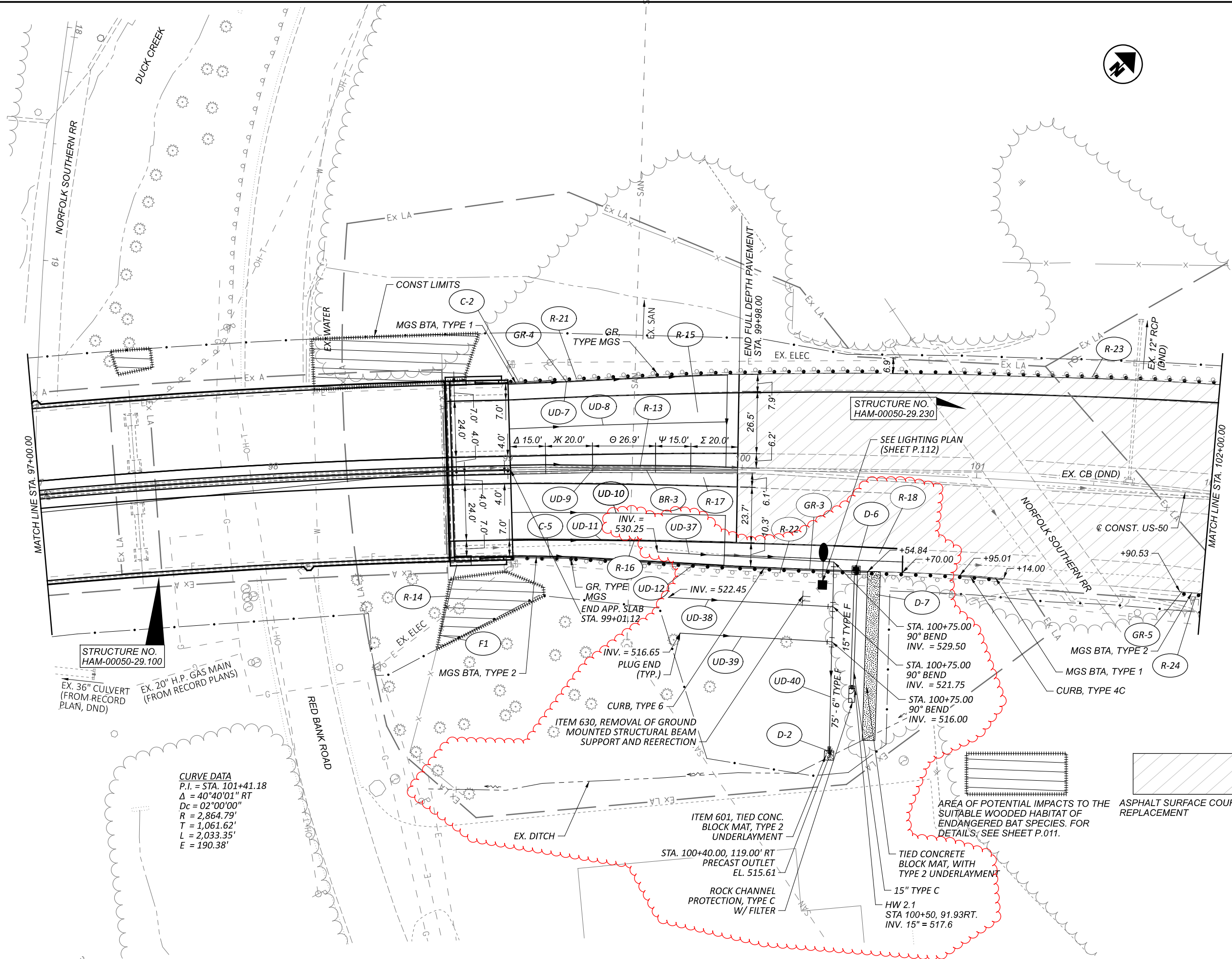
DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
 NLD

REVIEWER  
 MHT 08/22/23

PROJECT ID  
 110570

SHEET TOTAL  
 P.064 208



STRUCTURE NO.  
HAM-00050-29.100

EX. 36" CULVERT  
(FROM RECORD  
PLAN, DND)

EX. 20" H.P. GAS MAIN  
(FROM RECORD PLANS)

**CURVE DATA**  
P.I. = STA. 101+41.18  
 $\Delta = 40^{\circ}40'01''$  RT  
 $D_c = 02^{\circ}00'00''$   
 $R = 2,864.79'$   
 $T = 1,061.62'$   
 $L = 2,033.35'$   
 $E = 190.38'$

STRUCTURE NO.  
HAM-00050-29.230

SEE LIGHTING PLAN  
(SHEET P.112)

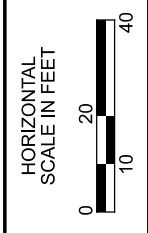
ITEM 630, REMOVAL OF GROUND  
MOUNTED STRUCTURAL BEAM  
SUPPORT AND REERECTION

ITEM 601, TIED CONC.  
BLOCK MAT, TYPE 2  
UNDERLAYMENT

AREA OF POTENTIAL IMPACTS TO THE  
SUITABLE WOODED HABITAT OF  
ENDANGERED BAT SPECIES. FOR  
DETAILS, SEE SHEET P.011.

TIED CONCRETE  
BLOCK MAT, WITH  
TYPE 2 UNDERLAYMENT

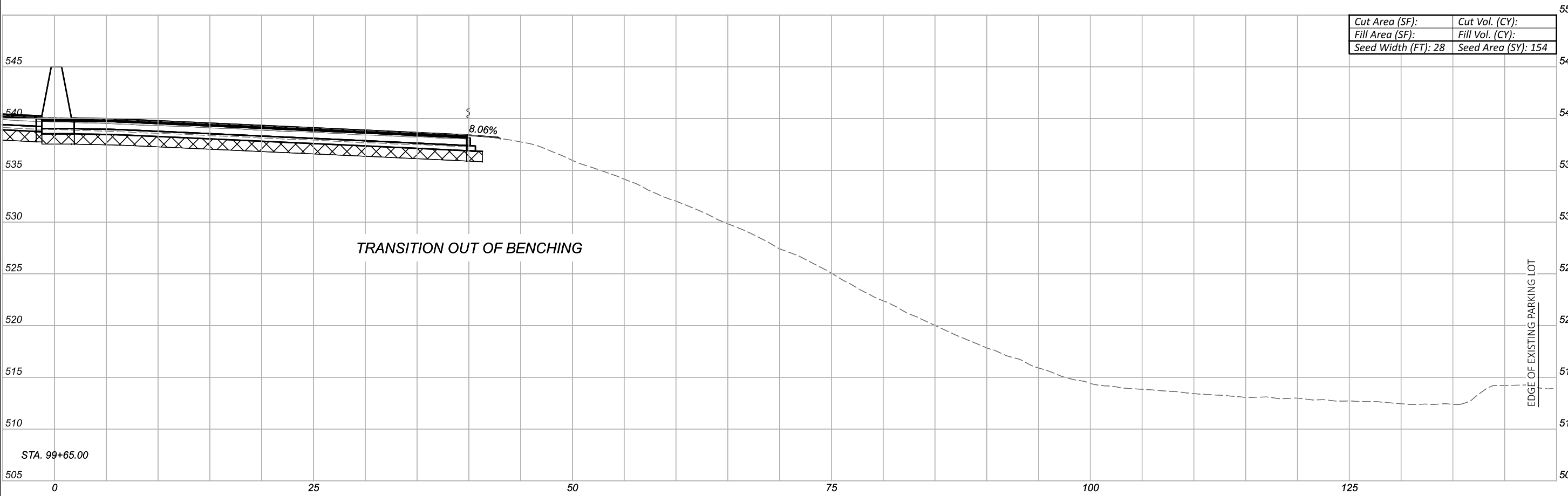
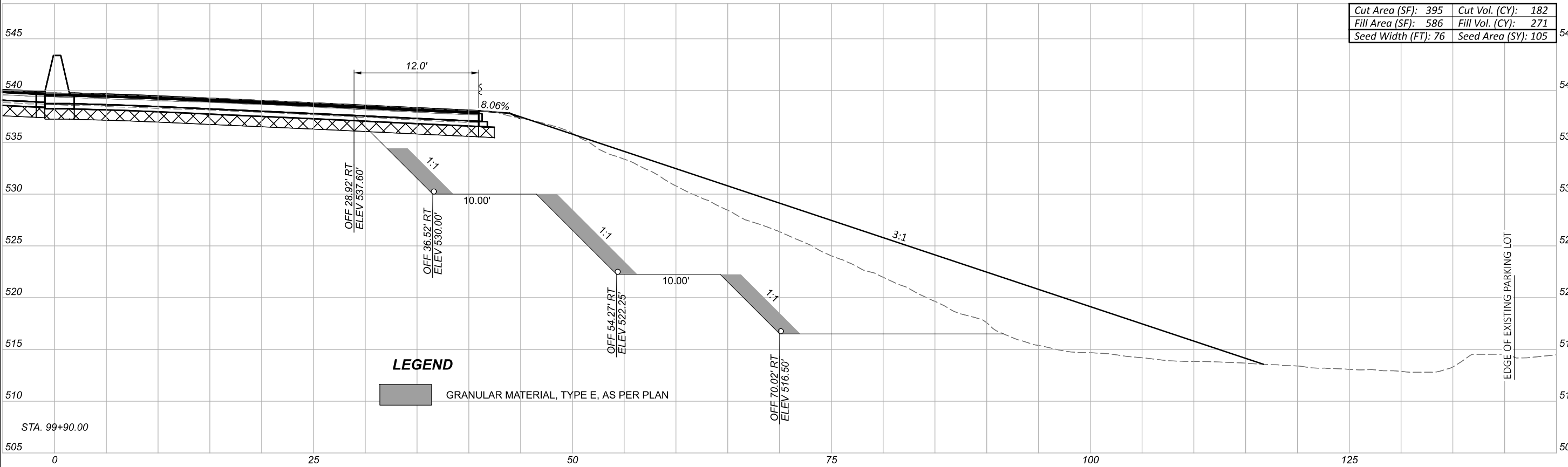
ASPHALT SURFACE COURSE  
REPLACEMENT



**PLAN AND PROFILE - US-50**  
STA. 97+00 TO STA. 102+00

DESIGN AGENCY	
<b>TRANSYSTEMS</b> 1100 SUPERIOR AVE., STE 1000 CLEVELAND, OHIO 44114	
DESIGNER	MSW
REVIEWER	GHM 08/22/23
PROJECT ID	110570
SHEET	TOTAL
P.067	208

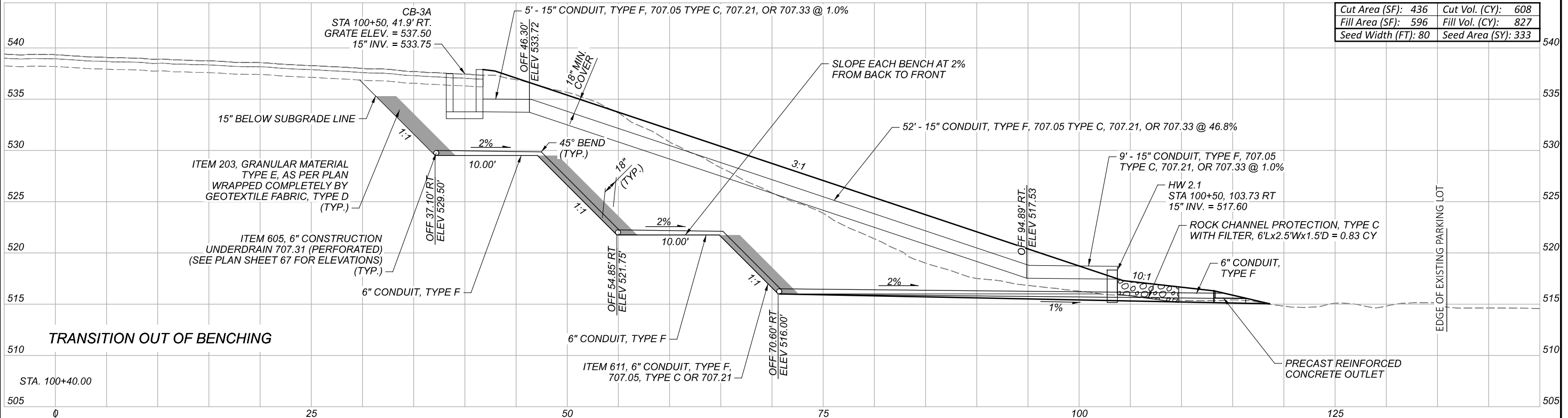
MODEL: CLR\W\J - 99+65.00 [Sheet] PAPER SIZE: 34x22 (in) DATE: 2/2/2024 TIME: 1:31:12 PM USER: gfreeman  
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C:\shredder\w\2024\active projects\110570\110570.dwg



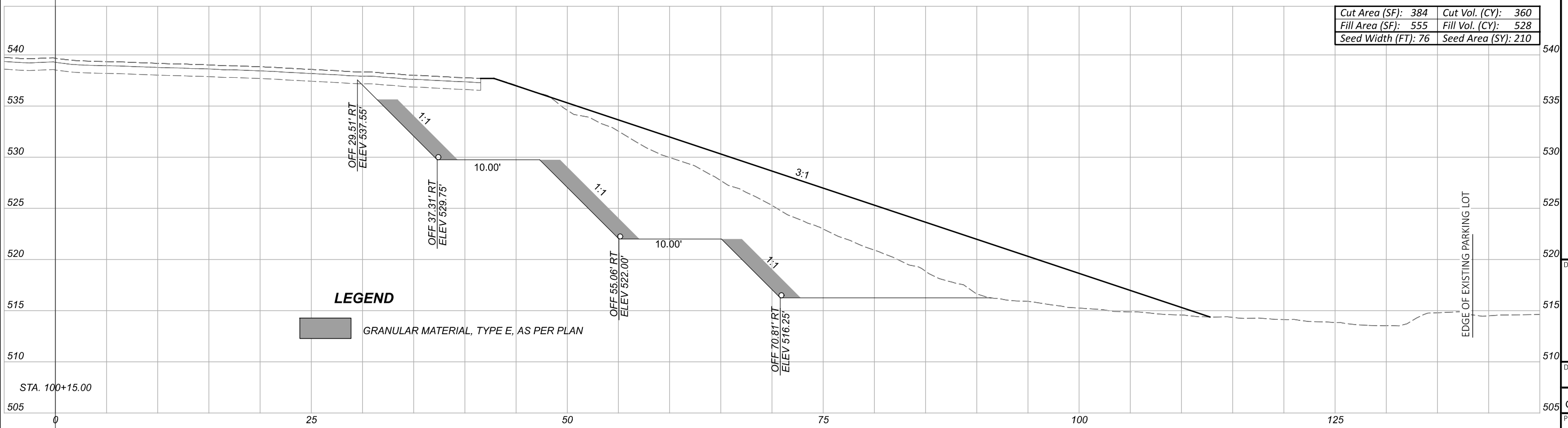
CROSS SECTIONS - U.S. 50  
STA. 99+65.00 TO STA. 99+99.00

DESIGN AGENCY  
  
 DESIGNER  
**GAT**  
 REVIEWER  
 GTF 2-01-24  
 PROJECT ID  
**110570**  
 SHEET TOTAL  
 P.76A | 208





Cut Area (SF): 436	Cut Vol. (CY): 608
Fill Area (SF): 596	Fill Vol. (CY): 827
Seed Width (FT): 80	Seed Area (SY): 333



Cut Area (SF): 384	Cut Vol. (CY): 360
Fill Area (SF): 555	Fill Vol. (CY): 528
Seed Width (FT): 76	Seed Area (SY): 210

**LEGEND**

GRANULAR MATERIAL, TYPE E, AS PER PLAN

CROSS SECTIONS - U.S. 50  
STA. 100+15.00 TO STA. 100+40.00

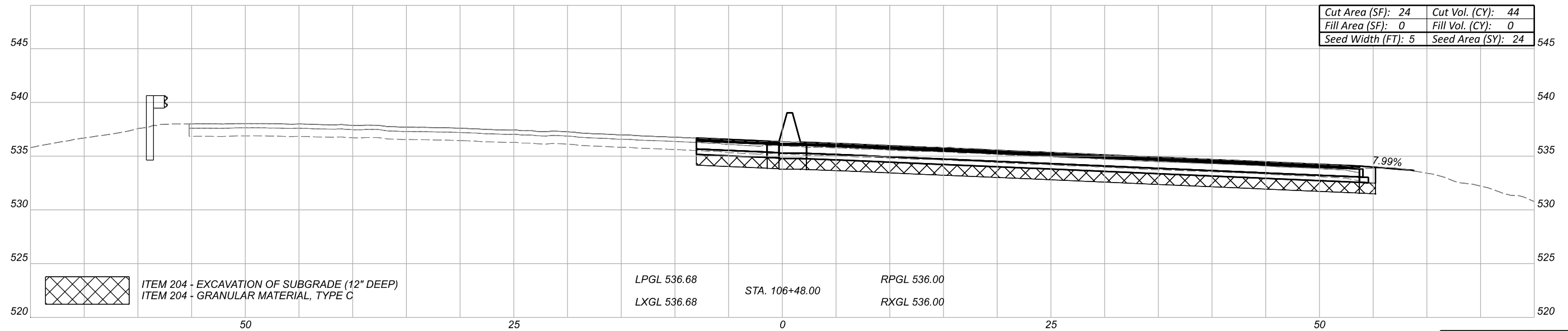
DESIGN AGENCY

DESIGNER  
GAT

REVIEWER  
GTF 2-01-24

PROJECT ID  
110570

SHEET TOTAL  
P.76B | 208



CROSS SECTIONS - US-50  
 STA 106+48.00

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
 MSW

REVIEWER  
 GHM 08/22/23

PROJECT ID  
 110570

Sheet Totals			US-50 Totals		
Seeding	Cut	Fill	Seeding	Cut	Fill
24	44	0	1006	1788	1702

REF NO.	SHEET NO.	ALIGNMENT	STATION TO STATION		SIDE	ITEMS																				
			FROM	TO		625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	
BRIDGE NO. HAM-00050-29.100						EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	
L1	P.112	US-50	PB-5	LP-8			3			270		80												1		
L2	P.112	US-50	LP-8	LP-9		3		1		705	30	225		1			1			1			1			
L3-L4	P.112	US-50	LP-9	PB-4		3		1		645	30	205		1			1			1			1			
L5	P.112	US-50	PB-2	LP-3			3			555		175												1		
L6	P.112	US-50	LP-3	LP-2		3		1		690	30	220		1			1			1			1			
L7	P.112	US-50	LP-2	PB-1		3		1		990	30	320		1			1		1	1			1			
L8	P.112	US-50	PB-1	CC-1			3			100									1		1					
L9	P.112	US-50	96+50																		1					
L9A	P.112	US-50	PB-1	CC-1						240			70													
L23	P.112	US-50	LP-1	PB-1		3		1		440	30		131	1		131				1			1	131	1	
BRIDGE NO. HAM-00050-29.280																										
L10	P.113	US-50	PB-3	LP-23			3			240			70	70									70	1		
L11-12	P.113	US-50	LP-23	PB-5		3	3	1		630	30	200		1	10		1	1		1			1	1		
L13	P.113	US-50	PB-2	LP-22			3			360			110	110									110	1		
L14-15	P.113	US-50	LP-22	PB-6		3	3	1		435	30	135		1	10		1	1		1			1	1		
L16	P.113	US-50	104+68																	1						
L20	P.113	RAMPS M & L	LP-40				3		1	645	30		205	1		205				1			1	205	1	
L21	P.113	RAMPS M & L	LP-41				3		1		30			1						1			1		1	
L22	P.113	RAMPS M & L	UP-A-2-14											1												
TOTALS CARRIED TO GENERAL SUMMARY						21	27	6	2	6945	270	1560	406	10	200	516	6	3	1	9	2	1	9	516	6	3

LIGHTING SUBSUMMARY

DESIGN AGENCY  
**TRANSYSTEMS**  
 1100 SUPERIOR AVE. E., STE 1000  
 CLEVELAND, OH 44114

DESIGNER  
**HB**

REVIEWER  
**SS 08/22/23**

PROJECT ID  
**110570**

SHEET TOTAL  
 P.111 | 208