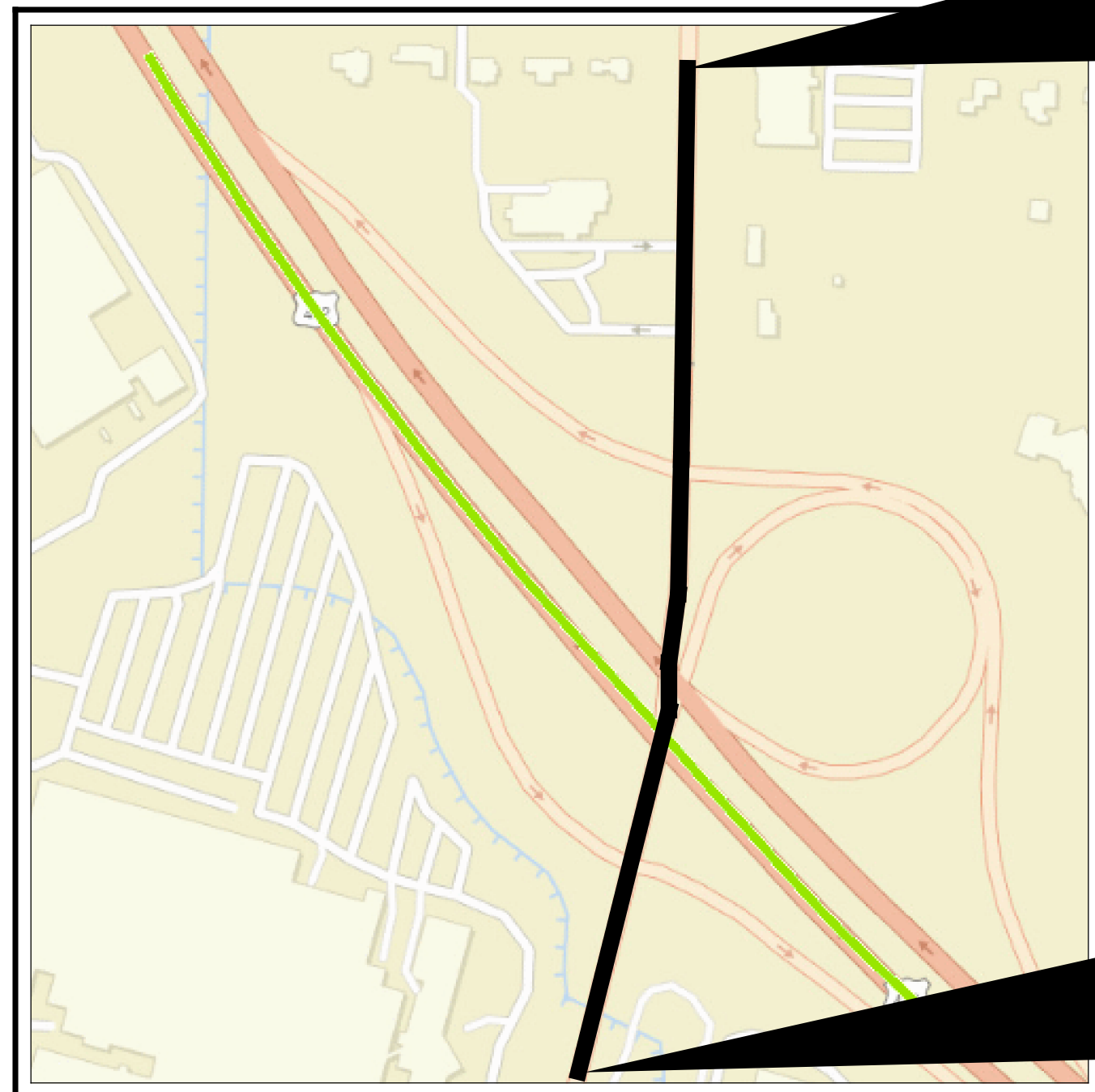


CUY-422-16.20 (HARPER ROAD)

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/16/2024 TIME: 10:00:19 AM USER: cluzler
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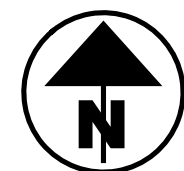


BEGIN PROJECT
STA. 57+35.00

END PROJECT
STA. 74+25.00

LOCATION MAP

LATITUDE: 41°24'22.04" LONGITUDE: 81°28'0.74"



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

DESIGN DESIGNATION

CURRENT YEAR ADT (2024)	28,950
DESIGN YEAR ADT (2044)	31,760
DESIGN HOURLY VOLUME (2044)	3,740
DIRECTIONAL DISTRIBUTION	73%
TRUCKS (24 HOUR B & C)	12%
TD	4%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	05 MAJOR COLLECTOR (URBAN)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
 Contact Two Working Days
 Before You Dig

OHIO811.org
 Before You Dig

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

PLAN PREPARED BY:



<p>ENGINEER'S SEAL</p> <p>BRIDGE CUY-422-1627L/R</p>	<p>ENGINEER'S SEAL</p> <p>ENTIRE PLAN EXCEPT SHEETS OTHERWISE NOTED</p>
--	---

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CUY-422-16.20
INTERCHANGE
 CITY OF SOLON
 CUYAHOGA COUNTY

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STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS		
BP-3.1	1/21/22	MGS-1.1	7/16/21	HW-2.1	7/15/22	MT-99.20	4/19/19	TC-41.40	10/18/13	800-2023	10/20/23	FLOOD HAZ DEV
BP-4.1	7/19/13	MGS-2.1	1/19/18	HW-2.2	7/20/18	MT-101.60	4/21/23	TC-41.50	10/18/13	804	1/20/23	10/7/22
BP-5.1	7/15/22	MGS-3.1	1/19/18			MT-101.70	4/21/23	TC-42.10	10/18/13	809	10/20/23	WATERWAY
BP-7.1	7/21/23	MGS-4.2	7/19/13	HL-10.11	7/21/23	MT-101.75	7/21/23	TC-42.20	10/18/13	813	7/21/23	6/8/23
BP-9.1	1/18/19	MGS-4.3	1/18/13	HL-10.12	7/21/23	MT-101.90	7/17/20	TC-51.11	1/15/16	816	10/18/19	
		MGS-5.2	7/15/16	HL-10.13	1/20/23	MT-102.10	7/21/23	TC-51.12	1/15/16	821	4/20/12	
CB-4	7/16/21	MGS-5.3	7/15/16	HL-20.11	7/21/23	MT-102.20	4/19/19	TC-52.10	10/18/13	825	4/21/23	
CB-5	7/16/21			HL-30.11	7/21/23	MT-105.10	1/17/20	TC-52.20	1/15/21	832	7/21/23	
CB-6	1/21/22	MH-1	7/15/22	HL-30.21	4/17/20	MT-110.10	7/19/13	TC-61.10	4/21/23	836	1/19/18	
		MH-3	7/21/23	HL-30.22	1/15/21			TC-65.10	1/17/14	904	7/15/22	
DM-1.1	7/17/20			HL-40.20	7/21/23	TC-9.31	7/21/23	TC-65.11	7/15/22	907	10/18/19	
DM-1.2	7/16/21	RM-1.1	1/20/23	HL-60.11	7/21/17	TC-15.116	7/21/23	TC-71.10	4/21/23	909	10/20/23	
DM-2.1	1/18/13	RM-3.1	7/20/18	HL-60.31	7/21/23	TC-16.22	7/21/23	TC-74.10	7/21/23	913	4/16/21	
DM-4.2	7/20/12	RM-4.2	4/17/20			TC-21.11	7/16/21	TC-81.22	7/21/23	916	7/21/23	
DM-4.3	1/15/16	RM-4.3	1/21/22	MT-95.31	7/19/19	TC-21.21	1/20/23	TC-83.10	1/17/20	921	4/20/12	
DM-4.4	1/15/16	RM-4.4	7/21/23	MT-95.32	4/19/19	TC-22.10	4/21/23	TC-83.20	7/15/22			
		RM-4.5	7/21/17	MT-95.45	7/21/23	TC-22.20	1/17/14	TC-85.10	10/21/22			
F-1.1	7/19/13	RM-4.6	7/19/13	MT-96.20	7/21/23	TC-41.10	7/19/13	TC-85.20	4/21/23			
F-3.3	7/19/13	RM-5.2	7/21/23	MT-96.26	1/18/19	TC-41.20	10/18/13					
				MT-98.29	1/17/20	TC-41.30	4/21/23					

FEDERAL PROJECT NUMBER

E220 (179)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

PROJECT CONSISTS OF THE RECONFIGURATION OF THE U.S. 422 / HARPER ROAD INTERCHANGE TO A DIVERGING DIAMOND INTERCHANGE. PROJECT ELIMINATES THE EXISTING NORTHBOUND TO WESTBOUND LOOP RAMP AND LENGTHENS THE EXISTING TURN LANES ON THE U.S. 422 WESTBOUND EXIT RAMP. PROJECT ALSO INCLUDES TRAFFIC SIGNAL, LIGHTING AND DRAINAGE IMPROVEMENTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	13.18 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	1.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	14.18 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 AND CHANGES LISTED IN 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 FOR HARPER RD. AND THE U.S. 422 RAMPS AS DESCRIBED ON SHEETS 40 -45 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

John Picuri
 John Picuri, P.E., S.I.
 District 12 Deputy Director

Jack Marchbanks
 Jack Marchbanks, PhD
 Director, Department of Transportation

TITLE SHEET

DESIGN AGENCY



DESIGNER

ATR

REVIEWER

CWL 09/02/21

PROJECT ID

113889

SHEET TOTAL

1 481

EROSION CONTROL

ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING CONCRETE PAVED GUTTER AS PER STANDARD CONSTRUCTION DRAWING DM-2.1 AND THE DETAILS AS SHOWN ON SHEET NO. 18 AT THE LOCATIONS SHOWN IN THE PLANS. THE GUTTER SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN IN THE DETAIL. PEJF (PERFORMED EXPANSION JOINT FILLER) SHALL BE PER CMS 516 AND IS INCLUDED IN THE COST OF THE PAVED GUTTER.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER FOOT FOR ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN.

ITEM 659 - SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, SOIL ANALYSIS TEST	2 EACH
ITEM 659, TOPSOIL	2890 CU. YD.
ITEM 659, SEEDING AND MULCHING, CLASS 1	14259 SQ. YD.
ITEM 659, SEEDING AND MULCHING	11775 SQ. YD.
ITEM 659, REPAIR SEEDING AND MULCHING	1302 SQ. YD.
ITEM 659, INTER-SEEDING	1302 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	3.64 TON
ITEM 659, LIME	5.38 ACRES
ITEM 659, WATER	145 M. GAL.
ITEM 659, MOWING	59 MSF.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT.

QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. ANY ADDITIONAL AREAS OUTSIDE OF THE AREAS IDENTIFIED THAT ARE DISTURBED BY CONTRACTOR TO FACILITATE CONSTRUCTION MUST BE RESTORED IN ACCORDANCE WITH C&MS 107.10 AND CONSIDERED INCIDENTAL TO THE WORK. ~~NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE AREAS.~~

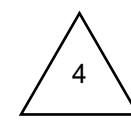
EARTHWORK SUBSUMMARY

THE FOLLOWING IS A SUMMARY OF ALL EARTHWORK QUANTITIES. EARTHWORK END AREA CALCULATIONS HAVE BEEN PROVIDED ON SHEETS 187A-187E FOR REFERENCE ONLY.

HARPER RD	
203, EXCAVATION	5180 CU. YD.
203, EMBANKMENT	1428 CU. YD.
204, EXCAVATION OF SUBGRADE	830 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	830 CU. YD.
204, GEOGRID	2491 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	4814 SQ. YD.
RAMP 1A	
203, EXCAVATION	543 CU. YD.
203, EMBANKMENT	129 CU. YD.
204, EXCAVATION OF SUBGRADE	189 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	189 CU. YD.
204, GEOGRID	566 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	2332 SQ. YD.
RAMP 1B	
203, EXCAVATION	1469 CU. YD.
203, EMBANKMENT	229 CU. YD.
204, EXCAVATION OF SUBGRADE	443 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	443 CU. YD.
204, GEOGRID	1329 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	861 SQ. YD.
659, SEEDING AND MULCHING	2608 SQ. YD.
RAMP 2A	
203, EXCAVATION	314 CU. YD.
203, EMBANKMENT	60 CU. YD.
204, EXCAVATION OF SUBGRADE	74 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	74 CU. YD.
204, GEOGRID	221 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	226 SQ. YD.
659, SEEDING AND MULCHING	601 SQ. YD.

EARTHWORK SUBSUMMARY - CONTINUED

RAMP 2B	
203, EXCAVATION	216 CU. YD.
203, EMBANKMENT	80 CU. YD.
204, EXCAVATION OF SUBGRADE	120 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	120 CU. YD.
204, GEOGRID	359 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	1289 SQ. YD.
RAMP 3A / EX. RAMP 5	
203, EXCAVATION	1670 CU. YD.
203, EMBANKMENT	794 CU. YD.
204, EXCAVATION OF SUBGRADE	318 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	318 CU. YD.
204, GEOGRID	955 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	314 SQ. YD.
659, SEEDING AND MULCHING	6580 SQ. YD.
RAMP 3B	
203, EXCAVATION	431 CU. YD.
203, EMBANKMENT	125 CU. YD.
204, EXCAVATION OF SUBGRADE	174 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	174 CU. YD.
204, GEOGRID	523 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	1953 SQ. YD.
RAMP 4A	
203, EXCAVATION	139 CU. YD.
203, EMBANKMENT	757 CU. YD.
204, EXCAVATION OF SUBGRADE	153 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	153 CU. YD.
204, GEOGRID	458 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	606 SQ. YD.
RAMP 4B	
203, EXCAVATION	251 CU. YD.
203, EMBANKMENT	337 CU. YD.
204, EXCAVATION OF SUBGRADE	136 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	136 CU. YD.
204, GEOGRID	408 SQ. YD.
659, SEEDING AND MULCHING, CLASS 1	1864 SQ. YD.
RAMP 4	
203, EXCAVATION	474 CU. YD.
203, EMBANKMENT	158 CU. YD.
204, EXCAVATION OF SUBGRADE	159 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	159 CU. YD.
204, GEOGRID	478 SQ. YD.
659, SEEDING AND MULCHING	1986 SQ. YD.
THE FOLLOWING GRAND TOTAL HAS BEEN CARRIED TO THE GENERAL NOTES SUBSUMMARY:	
203, EXCAVATION	10687 CU. YD.
203, EMBANKMENT	4097 CU. YD.
204, EXCAVATION OF SUBGRADE	2596 CU. YD.
204, GRANULAR MATERIAL, TYPE B AS PER PLAN	2596 CU. YD.
204, GEOGRID	7788 SQ. YD.



ENVIRONMENTAL

WETLAND AND ENVIRONMENTAL IMPACTS/AVOIDANCE

THIS PROJECT WILL IMPACT A TOTAL OF 0.20 ACRES OF WETLANDS, 0 LINEAR FEET OF STREAMS AND 0.00 ACRES OF IMPOUNDMENTS. THIS PROJECT WILL IMPACT WETLAND/STREAM/IMPOUNDMENTS AT THE FOLLOWING LOCATION:

WETLAND 1:
US 422 STA. 825+41 0.00 ACRES

WETLAND 2:
RAMP 1B STA. 441+54 0.00 ACRES

WETLAND 3:
RAMP 1B STA. 446+16 0.05 ACRES

WETLAND 4:
RAMP 3A STA. 650+67 0.00 ACRES

WETLAND 5:
RAMP 3A STA. 656+46 0.00 ACRES

WETLAND 6:
RAMP 4A STA. 351+00 0.15 ACRES
0.20 ACRES TOTAL

STREAM 1:
RAMP 2A STA. 646+15 0 LIN. FT.

STREAM 2:
RAMP 1B STA. 437+59 0 LIN. FT.

STREAM 3:
HARPER RD STA. 70+58 0 LIN. FT.
0 LIN. FT. TOTAL

IMPOUNDMENT 1:
HARPER RD STA. 57+02 0.00 ACRES
0.00 ACRES TOTAL

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS/STREAMS/IMPOUNDMENTS INDICATED ON THE PLAN. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS WITHIN THESE WETLANDS.

TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING REMAINING WETLANDS, TEMPORARY CONSTRUCTION FENCE AND FILTER FABRIC FENCE 1500 LINEAR FEET, PAYMENT FOR THIS ITEM WILL BE MADE UNDER ITEM 832, EROSION CONTROL) SHALL BE INSTALLED ALONG THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS AND ADJACENT AREA AND MAINTAINED BY CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION.

BEST MANAGEMENT PRACTICES/SOIL EROSION AND SEDIMENTATION CONTROL

ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE IN PLACE PRIOR TO ANY CLEARING AND GRUBBING EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

ENDANGERED BAT HABITAT REMOVAL

NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM MARCH 16 THROUGH NOVEMBER 14. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM NOVEMBER 15 THROUGH MARCH 15. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO FEDERALLY AND STATE LISTED BAT SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

WATER QUALITY

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIPS

THIS PLAN UTILIZES VEGETATED FILTER STRIPS FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND FORESLOPE AS SPECIFIED IN THE PLANS.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER IS TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

DESIGN AGENCY



DESIGNER

ATR

REVIEWER

CWL 09/02/21

PROJECT ID

113889

SHEET

TOTAL

24 481

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 26

CUY-422-16.20 (HARPER RD)

MODEL: Sheet PAPER: SIZE: 34x22 (in.) DATE: 2/16/2024 TIME: 10:25:35 AM USER: cluzier
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SHEET NO.	201			203	203	204	204	204		601		605		611	611	611	611		611		SPECIAL	
	CLEARING AND GRUBBING			EXCAVATION	EMBANKMENT	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE B, AS PER PLAN	GEOGRID		TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT		6" UNCLASSIFIED PIPE UNDERDRAINS, AS PER PLAN		6" CONDUIT, TYPE B	6" CONDUIT, TYPE C	6" CONDUIT, TYPE E	6" CONDUIT, TYPE F		PRECAST REINFORCED CONCRETE OUTLET		MISCELLANEOUS METAL	
	LS			CY	CY	CY	CY	SY		SY		FT		FT	FT	FT	FT		EACH		LB	
21	LS																					
23										8		40		200	200	200	240		4		500	
24				10687	4097	2596	2596	7788														
TOTALS CARRIED TO GENERAL SUMMARY	LS		△ 4	10687	4097	2596	2596	7788		8		40		200	200	200	240		4		500	
SHEET NO.	638	638				659	659	659	659	659	659	659	659	659	659			SPECIAL		623	623	623
	WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT FEES AND CHARGES	WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT AS-BUILT DRAWINGS				SEEDING AND MULCHING, CLASS 1	SEEDING AND MULCHING	SOIL ANALYSIS TEST	TOPSOIL	REPAIR SEEDING AND MULCHING	INTER-SEEDING	COMMERCIAL FERTILIZER	LIME	WATER	MOWING			SURVEY CONTROL VERIFICATION		MONUMENT ASSEMBLY, TYPE C, AS PER PLAN	REFERENCE MONUMENT, TYPE A	RIGHT-OF-WAY MONUMENT, TYPE B
	EACH	LS				SY	SY	EACH	CY	SY	SY	TON	ACRE	MGAL	MSF			LS		EACH	EACH	EACH
21																		LS		1	5	21
24						14259	11775	2	2890	1302	1302	3.64	5.38	145	59							
25	20000	LS																				
TOTALS CARRIED TO GENERAL SUMMARY	20000	LS				14259	11775	2	2890	1302	1302	3.64	5.38	145	59			LS		1	5	21

GENERAL NOTES SUBSUMMARY

DESIGN AGENCY



DESIGNER
NRB

REVIEWER
CWL 6-8-23

PROJECT ID
113889

SHEET TOTAL
26 481

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	26	167	187					01/SAF/21	02/NFP/21								
	LS							LS		201	11000	LS			ROADWAY	21	
		25,131						25,131		202	23000	25,131	SY		PAVEMENT REMOVED		
		7,489						7,489		202	30000	7,489	SF		WALK REMOVED		
		475						475		202	30600	475	SY		CONCRETE MEDIAN REMOVED		
		390						390		202	30800	390	SY		TRAFFIC ISLAND REMOVED		
		5,039						5,039		202	32000	5,039	FT		CURB REMOVED		
		32						32		202	32600	32	FT		GUTTER REMOVED		
		1,200						1,200		202	32800	1,200	SY		CONCRETE SLOPE PROTECTION REMOVED		
		1,866						686	1,180	202	35100	1,866	FT		PIPE REMOVED, 24" AND UNDER		
		1,018						18	1,000	202	35200	1,018	FT		PIPE REMOVED, OVER 24"		
		2,287						2,287		202	38000	2,287	FT		GUARDRAIL REMOVED		
		8							8	202	58000	8	EACH		MANHOLE REMOVED		
		26						23	3	202	58100	26	EACH		CATCH BASIN REMOVED		
		462						462		202	75000	462	FT		FENCE REMOVED		
		10,687						10,687		203	10000	10,687	CY		EXCAVATION		
		4,097						4,097		203	20000	4,097	CY		EMBANKMENT		
27,553		3,838		454				31,845		204	10000	31,845	SY		SUBGRADE COMPACTION		
		2,596						2,596		204	13000	2,596	CY		EXCAVATION OF SUBGRADE		
		2,596						2,596		204	30011	2,596	CY		GRANULAR MATERIAL, TYPE B, AS PER PLAN	22	
15								15		204	45000	15	HOUR		PROOF ROLLING		
		7,788						7,788		204	51000	7,788	SY		GEOGRID		
11								11		209	60201	11	STA		LINEAR GRADING, AS PER PLAN	22	
		375						375		606	15050	375	FT		GUARDRAIL, TYPE MGS		
		388						388		606	15051	388	FT		GUARDRAIL, TYPE MGS, AS PER PLAN	22	
		1						1		606	26050	1	EACH		ANCHOR ASSEMBLY, MGS TYPE B	22	
		3						3		606	26150	3	EACH		ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	22	
		2						2		606	26550	2	EACH		ANCHOR ASSEMBLY, MGS TYPE T		
		1						1		606	35002	1	EACH		MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1		
		2						2		606	60028	2	EACH		IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL) (35 MPH, 24" WIDTH)	22	
		223						223		607	23000	223	FT		FENCE, TYPE CLT		
		52						52		607	98000	52	FT		FENCE, MISC.:WOOD FENCE	22	
		12,199						12,199		608	10000	12,199	SF		4" CONCRETE WALK		
		15,682						15,682		608	13000	15,682	SF		6" CONCRETE WALK		
		500						500		608	13001	500	SF		6" CONCRETE WALK, AS PER PLAN	22	
		1,113						1,113		608	15001	1,113	SF		8" CONCRETE WALK, AS PER PLAN	22	
		4,322						4,322		608	52000	4,322	SF		CURB RAMP		
56								56		622	10140	56	FT		CONCRETE BARRIER, SINGLE SLOPE, TYPE C1		
605								605		622	10160	605	FT		CONCRETE BARRIER, SINGLE SLOPE, TYPE D		
1								1		622	24860	1	EACH		CONCRETE BARRIER END SECTION, TYPE C1		
2								2		622	25000	2	EACH		CONCRETE BARRIER END SECTION, TYPE D		
1								1		622	25014	1	EACH		CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1		
2								2		622	25050	2	EACH		CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D		
		1						1		623	38501	1	EACH		MONUMENT ASSEMBLY, TYPE C, AS PER PLAN	21	
		5						5		623	40500	5	EACH		REFERENCE MONUMENT, TYPE A		
		21						21		623	40520	21	EACH		RIGHT-OF-WAY MONUMENT, TYPE B		
				2				2		SPECIAL	69050100	2	EACH		MAILBOX SUPPORT SYSTEM, SINGLE	21	
	LS							LS		SPECIAL	69098400	LS			SURVEY CONTROL VERIFICATION	21	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
TMT

REVIEWER
CWL 6-8-23

PROJECT ID
113889

SHEET TOTAL
159 481

End Area Volume Report

HARPER ROAD

Alignment Name: CLP_C018

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Station Quantities								Mass Ordinate
	Factor	Area	Cut Volume		Fill Volume		Area	Adjusted	
55+00.0000000 R1	1	0	0	0	1	0	0	0	0
55+25.0000000 R1	1	5.205	2.41	2.41	1	0.368	0.17	0.17	2.239
55+50.0000000 R1	1	14.812	9.267	9.267	1	0.16	0.244	0.244	11.262
55+75.0000000 R1	1	16.813	14.641	14.641	1	0.948	0.513	0.513	25.391
56+00.0000000 R1	1	13.32	13.95	13.95	1	8.842	4.532	4.532	34.808
56+25.0000000 R1	1	14.281	12.778	12.778	1	7.584	7.605	7.605	39.982
56+50.0000000 R1	1	17.25	14.598	14.598	1	3.024	4.911	4.911	0
56+75.0000000 R1	1	21.413	17.9	17.9	1	2.004	2.327	2.327	15.572
57+00.0000000 R1	1	16.085	17.36	17.36	1	4.437	2.982	2.982	29.951
57+25.0000000 R1	1	18.491	16.007	16.007	1	0.057	2.081	2.081	43.877
57+35.0000000 R1	1	43.34	11.45	11.45	1	2.643	0.5	0.5	54.827
57+50.0000000 R1	1	53.714	26.96	26.96	1	0.14	0.773	0.773	81.014
57+75.0000000 R1	1	50.633	48.309	48.309	1	0.066	0.095	0.095	129.227
58+00.0000000 R1	1	48.743	46.007	46.007	1	0.431	0.23	0.23	175.005
58+25.0000000 R1	1	54.212	47.664	47.664	1	2.269	1.25	1.25	221.419
58+50.0000000 R1	1	54.289	50.232	50.232	1	4.472	3.121	3.121	268.53
58+75.0000000 R1	1	74.846	59.785	59.785	1	1.294	2.67	2.67	325.645
59+00.0000000 R1	1	81.726	72.487	72.487	1	5.04	2.933	2.933	395.199
59+25.0000000 R1	1	45.101	58.716	58.716	1	10.494	7.192	7.192	446.723
59+50.0000000 R1	1	34.426	36.818	36.818	1	12.393	10.596	10.596	472.946
59+75.0000000 R1	1	33.723	31.551	31.551	1	15.338	12.839	12.839	491.658
60+00.0000000 R1	1	33.926	31.319	31.319	1	15.245	14.159	14.159	508.818
60+25.0000000 R1	1	59.062	43.05	43.05	1	7.558	10.557	10.557	541.311
60+50.0000000 R1	1	53.469	52.098	52.098	1	8.905	7.622	7.622	585.787
60+75.0000000 R1	1	92.196	67.438	67.438	1	12.828	10.061	10.061	643.163
61+00.0000000 R1	1	175.455	123.913	123.913	1	6.251	8.833	8.833	758.244
61+25.0000000 R1	1	165.54	157.868	157.868	1	0	2.894	2.894	913.218
61+50.0000000 R1	1	178.334	159.201	159.201	1	10.015	4.637	4.637	1067.783
61+75.0000000 R1	1	111.362	134.118	134.118	1	11.706	10.056	10.056	1191.845
62+00.0000000 R1	1	102.616	99.064	99.064	1	9.276	9.714	9.714	1281.195
62+25.0000000 R1	1	70.502	80.147	80.147	1	5.609	6.891	6.891	1354.451
62+50.0000000 R1	1	50.391	55.969	55.969	1	0	2.597	2.597	1407.823
62+75.0000000 R1	1	32.57	38.408	38.408	1	0	0	0	1446.231
63+00.0000000 R1	1	29.403	28.691	28.691	1	0	0	0	1474.922
63+25.0000000 R1	1	45.814	34.823	34.823	1	0	0	0	1509.745
63+50.0000000 R1	1	71.012	54.086	54.086	1	3.589	1.662	1.662	1562.169
63+75.0000000 R1	1	82.498	71.069	71.069	1	11.93	7.184	7.184	1626.054
64+00.0000000 R1	1	194.78	128.369	128.369	1	14.733	12.344	12.344	1742.08
64+25.0000000 R1	1	158.781	163.686	163.686	1	41.828	26.186	26.186	1879.58
64+50.0000000 R1	1	140.234	138.433	138.433	1	35.341	35.727	35.727	1982.286
64+75.0000000 R1	1	125.473	123.012	123.012	1	29.635	30.081	30.081	2075.217
65+00.0000000 R1	1	106.483	107.387	107.387	1	48.086	35.982	35.982	2146.622
65+25.0000000 R1	1	79.23	85.978	85.978	1	51.245	45.987	45.987	2186.614
65+50.0000000 R1	1	73.102	70.524	70.524	1	69.692	55.99	55.99	2201.148
65+75.0000000 R1	1	74.628	68.394	68.394	1	82.325	70.378	70.378	2199.164
66+00.0000000 R1	1	64.893	64.593	64.593	1	72.502	71.679	71.679	2192.078
66+25.0000000 R1	1	71.637	63.208	63.208	1	59.811	61.256	61.256	2194.03
66+50.0000000 R1	1	77	68.813	68.813	1	48.661	50.219	50.219	2212.624
66+75.0000000 R1	1	75.947	70.808	70.808	1	49.604	45.493	45.493	2237.94
67+00.0000000 R1	1	86.756	75.325	75.325	1	48.464	45.402	45.402	2267.863
67+25.0000000 R1	1	78.258	76.396	76.396	1	69.598	54.659	54.659	2289.6
67+50.0000000 R1	1	72.633	69.857	69.857	1	45.918	53.48	53.48	2305.978
67+75.0000000 R1	1	82.904	72.008	72.008	1	43.735	41.506	41.506	2336.48
68+00.0000000 R1	1	122.759	95.214	95.214	1	27.821	33.127	33.127	2398.567
68+25.0000000 R1	1	148.156	125.423	125.423	1	11.876	18.378	18.378	2505.612
68+50.0000000 R1	1	157.884	141.685	141.685	1	12.182	11.138	11.138	2636.159
68+75.0000000 R1	1	100.369	119.561	119.561	1	9.372	9.979	9.979	2745.742
69+00.0000000 R1	1	77.02	82.125	82.125	1	0	4.339	4.339	2823.528

69+25.0000000 R1	1	42.201	55.195	55.195	1	0	0	0	2878.723
69+50.0000000 R1	1	28.136	32.564	32.564	1	0	0	0	2911.286
69+75.0000000 R1	1	29.703	26.777	26.777	1	0	0	0	2938.064
70+00.0000000 R1	1	38.035	31.36	31.36	1	0	0	0	2969.423
70+25.0000000 R1	1	117.4	71.961	71.961	1	3.588	1.661	1.661	3039.723
70+50.0000000 R1	1	107.892	104.302	104.302	1	14.961	8.587	8.587	3135.437
70+75.0000000 R1	1	134.447	112.194	112.194	1	24.281	18.167	18.167	3229.464
71+00.0000000 R1	1	121.595	118.538	118.538	1	211.817	109.304	109.304	3238.697
71+25.0000000 R1	1	124.21	113.799	113.799	1	36.882	115.138	115.138	3237.358
71+50.0000000 R1	1	109.353	108.131	108.131	1	12.318	22.778	22.778	3322.711
71+75.0000000 R1	1	65.892	81.132	81.132	1	22.538	16.137	16.137	3387.706
72+00.0000000 R1	1	80.782	67.905	67.905	1	11.73	15.865	15.865	3439.746
72+25.0000000 R1	1	74.695	71.98	71.98	1	11.548	10.777	10.777	3500.949
72+50.0000000 R1	1	68.638	66.358	66.358	1	8.888	9.461	9.461	3557.846
72+75.0000000 R1	1	46.536	53.321	53.321	1	14.573	10.861	10.861	3600.305
73+00.0000000 R1	1	45.866	42.778	42.778	1	20.858	16.403	16.403	3626.681
73+25.0000000 R1	1	40.63	40.045	40.045	1	25.586	21.502	21.502	3645.223
73+50.0000000 R1	1	44.311	39.325	39.325	1	22.428	22.229	22.229	3662.319
73+75.0000000 R1	1	41.682	39.812	39.812	1	21.399	20.29	20.29	3681.841
74+00.0000000 R1	1	29.895	33.138	33.138	1	22.357	20.257	20.257	3694.722
74+25.0000000 R1	1	10.332	18.624	18.624	1	0.439	10.554	10.554	3702.791

Grand Total: 5180.19 5180.19 1427.732 1427.732

CUY-422-16.20 (HARPER ROAD)

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/16/2024 TIME: 9:45:25 AM USER: dluizer
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EARTHWORK END AREA CALCULATIONS

DESIGN AGENCY



DESIGNER

NRB

REVIEWER

CWL 6-8-23

PROJECT ID

113889

SHEET TOTAL

187A 481

End Area Volume Report

RAMP 1A

Alignment Name: BLP_R0181A

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			Cut		Fill			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
343+59.8000000 R1	1	17.672	0	0	1	8.019	0	0
343+75.0000000 R1	1	10.005	7.791	7.791	1	10.973	5.346	5.346
344+00.0000000 R1	1	11.502	9.957	9.957	1	13.546	11.351	11.351
344+22.1494770 R1	1	11.702	10.663	10.663	1	12.393	11.873	11.873
344+25.0000000 R1	1	11.727	10.754	10.754	1	12.245	11.94	11.94
344+50.0000000 R1	1	9.709	9.924	9.924	1	18.294	14.138	14.138
344+57.0619150 R1	1	26.213	17.301	17.301	1	20.553	15.975	15.975
344+75.0000000 R1	1	68.135	36.039	36.039	1	26.292	20.641	20.641
345+00.0000000 R1	1	181.623	115.629	115.629	1	0	12.172	12.172
345+25.0000000 R1	1	180.025	167.43	167.43	1	27.506	12.734	12.734
345+50.0000000 R1	1	121.092	139.406	139.406	1	0	12.734	12.734
345+58.1200000 R1	1	0	18.209	18.209	1	0	0	0
Grand Total:			543.103	543.103			128.904	128.904

End Area Volume Report

RAMP 1B

Alignment Name: BLP_R0181B

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			Cut		Fill			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
437+66.6500000 R1	1	0	0	0	1	0	0	0
437+75.0000000 R1	1	7.269	3.365	3.365	1	0.143	0.066	0.066
438+00.0000000 R1	1	11.213	8.556	8.556	1	0.844	0.457	0.457
438+25.0000000 R1	1	15.333	12.29	12.29	1	1.239	0.964	0.964
438+50.0000000 R1	1	12.085	12.694	12.694	1	1.382	1.213	1.213
438+75.0000000 R1	1	17.997	13.927	13.927	1	1.122	1.159	1.159
439+00.0000000 R1	1	9.162	12.573	12.573	1	1.644	1.281	1.281
439+25.0000000 R1	1	18.801	12.946	12.946	1	1.113	1.277	1.277
439+50.0000000 R1	1	13.937	15.157	15.157	1	0.656	0.819	0.819
439+75.0000000 R1	1	22.349	16.799	16.799	1	0.535	0.551	0.551
440+00.0000000 R1	1	33.967	26.072	26.072	1	0.924	0.676	0.676
440+25.0000000 R1	1	33.638	31.299	31.299	1	0.01	0.432	0.432
440+50.0000000 R1	1	43.492	35.708	35.708	1	1.682	0.783	0.783
440+75.0000000 R1	1	50.2	43.376	43.376	1	0	0.779	0.779
441+00.0000000 R1	1	45.561	44.334	44.334	1	0.253	0.117	0.117
441+25.0000000 R1	1	81.872	58.997	58.997	1	0.053	0.142	0.142
441+50.0000000 R1	1	101.029	84.677	84.677	1	0.099	0.07	0.07
441+75.0000000 R1	1	37.986	64.359	64.359	1	3.883	1.843	1.843
442+00.0000000 R1	1	89.948	59.229	59.229	1	1.088	2.301	2.301
442+25.0000000 R1	1	88.53	82.629	82.629	1	2.64	1.726	1.726
442+50.0000000 R1	1	40.58	59.773	59.773	1	11.528	6.559	6.559
442+75.0000000 R1	1	67.396	49.989	49.989	1	16.424	12.941	12.941
443+00.0000000 R1	1	51.284	54.944	54.944	1	18.009	15.941	15.941
443+25.0000000 R1	1	34.233	39.591	39.591	1	17.003	16.21	16.21
443+50.0000000 R1	1	37.055	33.004	33.004	1	11.092	13.007	13.007
443+75.0000000 R1	1	21.895	27.292	27.292	1	5.077	7.486	7.486
444+00.0000000 R1	1	73.963	44.378	44.378	1	0.302	2.49	2.49
444+25.0000000 R1	1	17.201	42.205	42.205	1	16.139	7.611	7.611
444+50.0000000 R1	1	69.748	40.254	40.254	1	10.669	12.411	12.411
444+75.0000000 R1	1	31.412	46.834	46.834	1	25.757	16.864	16.864
445+00.0000000 R1	1	57.02	40.941	40.941	1	10.512	16.791	16.791
445+25.0000000 R1	1	48.569	48.884	48.884	1	20.112	14.178	14.178
445+50.0000000 R1	1	54.699	47.809	47.809	1	16.668	17.028	17.028
445+75.0000000 R1	1	56.077	51.285	51.285	1	27.975	20.668	20.668
446+00.0000000 R1	1	82.293	64.06	64.06	1	16.762	20.711	20.711
446+25.0000000 R1	1	95.435	82.282	82.282	1	4.167	9.689	9.689
446+41.7300000 R1	1	87.776	56.761	56.761	1	1.584	1.782	1.782
Grand Total:			1469.273	1469.273			229.023	229.023

CUY-422-16.20 (HARPER ROAD)

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/16/2024 TIME: 9:46:32 AM USER: aluzler
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EARTHWORK END AREA CALCULATIONS

DESIGN AGENCY



DESIGNER

NRB

REVIEWER

CWL 6-8-23

PROJECT ID

113889

SHEET TOTAL

187B 481

End Area Volume Report

End Area Volume Report

RAMP 2A

Alignment Name: BLP_R0182A

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

RAMP 2B

Alignment Name: BLP_R0182B

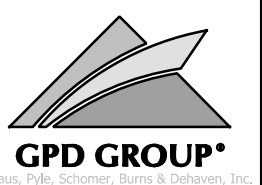
Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			----- Cut -----		----- Fill -----			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
647+32.8000000 R1	1	24.954	0	0	1	0	0	0
647+50.0000000 R1	1	27.316	12.646	12.646	1	0.74	0.343	0.343
647+75.0000000 R1	1	30.519	26.775	26.775	1	2.09	1.31	1.31
648+00.0000000 R1	1	42.198	33.665	33.665	1	2.188	1.98	1.98
648+25.0000000 R1	1	32.488	34.577	34.577	1	3.121	2.458	2.458
648+50.0000000 R1	1	5.343	17.514	17.514	1	1.09	1.949	1.949
648+75.0000000 R1	1	3.178	3.945	3.945	1	4.214	2.456	2.456
649+00.0000000 R1	1	2.958	2.841	2.841	1	7.058	5.219	5.219
649+25.0000000 R1	1	2.066	2.326	2.326	1	12.817	9.201	9.201
649+50.0000000 R1	1	4.513	3.046	3.046	1	10.233	10.671	10.671
649+75.0000000 R1	1	10.26	6.84	6.84	1	8.666	8.749	8.749
650+00.0000000 R1	1	21.494	14.701	14.701	1	7.237	7.363	7.363
650+25.0000000 R1	1	42.609	29.678	29.678	1	4.914	5.626	5.626
650+50.0000000 R1	1	54.188	44.814	44.814	1	0	2.275	2.275
650+75.0000000 R1	1	68.902	56.986	56.986	1	0	0	0
650+84.9100000 R1	1	62.014	24.026	24.026	1	0	0	0
Grand Total:			314.38	314.38			59.6	59.6

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			----- Cut -----		----- Fill -----			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
548+46.7500000 R1	1	26.724	0	0	1	4.054	0	0
548+50.0000000 R1	1	17.386	2.451	2.451	1	4.773	0.49	0.49
548+75.0000000 R1	1	10.553	12.935	12.935	1	3.12	3.655	3.655
549+00.0000000 R1	1	14.991	11.826	11.826	1	0.63	1.736	1.736
549+25.0000000 R1	1	33.074	22.252	22.252	1	14.208	6.869	6.869
549+50.0000000 R1	1	39.198	33.459	33.459	1	59.744	34.237	34.237
549+75.0000000 R1	1	67.863	49.565	49.565	1	4.537	29.76	29.76
550+00.0000000 R1	1	73.108	65.265	65.265	1	1.717	2.895	2.895
550+13.1200000 R1	1	0	17.763	17.763	1	0	0.417	0.417
Grand Total:			215.516	215.516			80.059	80.059



End Area Volume Report

RAMP 3A / EX. RAMP 5

Alignment Name: BLP_R0183A

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate		
			----- Cut -----		----- Fill -----				
			Volume	Adjusted	Factor	Area	Volume	Adjusted	
643+93.6900000	1	19.804	0	0	1	0.104	0	0	0
644+00.0000000	1	85.035	12.251	12.251	1	0.018	0.014	0.014	39.36
644+25.0000000	1	102.928	87.02	87.02	1	0.001	0.008	0.008	126.371
644+50.0000000	1	34.534	63.639	63.639	1	4.318	1.999	1.999	188.012
644+75.0000000	1	19.336	24.94	24.94	1	16.658	9.711	9.711	203.241
645+00.0000000	1	19.744	18.093	18.093	1	6.861	10.889	10.889	210.445
645+25.0000000	1	27.485	21.865	21.865	1	0.002	3.178	3.178	229.133
645+50.0000000	1	25.047	24.32	24.32	1	1.232	0.572	0.572	252.881
645+75.0000000	1	64.662	41.532	41.532	1	20.33	9.983	9.983	284.43
646+00.0000000	1	54.524	55.179	55.179	1	17.468	17.499	17.499	322.11
646+25.0000000	1	47.554	47.258	47.258	1	23.982	19.19	19.19	350.178
646+50.0000000	1	55.245	47.592	47.592	1	17.76	19.325	19.325	378.445
646+75.0000000	1	55.635	51.334	51.334	1	17.46	16.306	16.306	413.473
647+00.0000000	1	51.775	49.727	49.727	1	16.204	15.585	15.585	447.615
647+25.0000000	1	54.778	49.33	49.33	1	13.805	13.893	13.893	483.052
647+50.0000000	1	53.745	50.242	50.242	1	9.611	10.841	10.841	522.453
647+75.0000000	1	50.745	48.375	48.375	1	10.093	9.122	9.122	561.706
648+00.0000000	1	51.781	47.466	47.466	1	8.82	8.756	8.756	600.416
648+25.0000000	1	59.848	51.68	51.68	1	7.318	7.471	7.471	644.626
648+50.0000000	1	65.252	57.917	57.917	1	5.999	6.165	6.165	696.377
648+75.0000000	1	66.463	60.979	60.979	1	5.871	5.496	5.496	751.861
649+00.0000000	1	67.625	62.078	62.078	1	5.894	5.447	5.447	808.492
649+25.0000000	1	64.425	61.134	61.134	1	6.031	5.521	5.521	864.106
649+50.0000000	1	69.092	61.813	61.813	1	6.127	5.629	5.629	920.29
649+75.0000000	1	62.976	61.143	61.143	1	7.226	6.182	6.182	975.251
650+00.0000000	1	54.346	54.316	54.316	1	8.989	7.507	7.507	1022.06
650+25.0000000	1	39.586	43.487	43.487	1	13.274	10.307	10.307	1055.239
650+50.0000000	1	37.941	35.892	35.892	1	12.799	12.071	12.071	1079.06
650+75.0000000	1	28.292	30.664	30.664	1	19.331	14.875	14.875	1094.849
651+00.0000000	1	24.667	24.518	24.518	1	19.003	17.747	17.747	1101.62
651+25.0000000	1	26.168	23.535	23.535	1	25.627	20.662	20.662	1104.493
651+50.0000000	1	46.753	33.759	33.759	1	14.202	18.439	18.439	1119.814
651+75.0000000	1	51.514	45.494	45.494	1	7.42	10.01	10.01	1155.298
652+00.0000000	1	34.663	39.897	39.897	1	19.156	12.304	12.304	1182.891
652+25.0000000	1	30.609	30.219	30.219	1	20.547	18.381	18.381	1194.728
652+50.0000000	1	31.847	28.915	28.915	1	26.109	21.6	21.6	1202.043
652+75.0000000	1	31.861	29.494	29.494	1	40.828	30.989	30.989	1200.548
653+00.0000000	1	26.534	27.034	27.034	1	67.982	50.375	50.375	1177.207
653+25.0000000	1	23.998	23.394	23.394	1	37.042	48.622	48.622	1151.979
653+50.0000000	1	19.081	19.944	19.944	1	2.236	18.184	18.184	1153.739
653+75.0000000	1	13.594	15.127	15.127	1	0.396	1.218	1.218	1167.648
654+00.0000000	1	2.367	7.39	7.39	1	0	0.183	0.183	1174.855
Ex. Ramp 5 embankment							271.823	271.823	
Grand Total:			1669.986	1669.986			794.079	794.079	

End Area Volume Report

RAMP 3B

Alignment Name: BLP_R0183B

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate		
			----- Cut -----		----- Fill -----				
			Volume	Adjusted	Factor	Area	Volume	Adjusted	
544+00.6700000 R1	1	4.816	2.231	2.231	1	4.467	2.15	2.15	0
544+25.0000000 R1	1	104.355	48.345	48.345	1	16.188	9.304	9.304	37.265
544+50.0000000 R1	1	100.611	94.892	94.892	1	16.398	15.086	15.086	117.071
544+75.0000000 R1	1	100.376	93.05	93.05	1	19.532	16.634	16.634	193.486
545+00.0000000 R1	1	64.269	76.225	76.225	1	28.531	22.252	22.252	247.459
545+25.0000000 R1	1	48.449	52.185	52.185	1	20.506	22.703	22.703	276.941
545+50.0000000 R1	1	42.187	41.961	41.961	1	28.679	22.771	22.771	296.132
545+64.9000010 R1	1	39.079	22.423	22.423	1	22.091	14.009	14.009	304.546
Grand Total:			431.312	431.312			124.909	124.909	

DESIGN AGENCY



DESIGNER

NRB

REVIEWER

CWL 6-8-23

PROJECT ID

113889

SHEET TOTAL

187D | 481

End Area Volume Report

RAMP 4A

Alignment Name: BLP_R0184A

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			----- Cut -----		----- Fill -----			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
350+57.0100000 R1	1	33.025	0	0	1	60.158	0	0
350+75.0000000 R1	1	49.787	27.589	27.589	1	190.032	83.35	83.35
351+00.0000000 R1	1	22.968	33.683	33.683	1	248.8	203.163	203.163
351+25.0000000 R1	1	14.913	17.537	17.537	1	221.025	217.512	217.512
351+50.0000000 R1	1	37.033	24.049	24.049	1	98.344	147.856	147.856
351+75.0000000 R1	1	14.488	23.852	23.852	1	46.161	66.901	66.901
352+19.4500000 R1	1	0	11.926	11.926	1	0	37.998	37.998
Grand Total:			138.636	138.636			756.78	756.78

End Area Volume Report

RAMP 4

Alignment Name: BLP_R0184

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			----- Cut -----		----- Fill -----			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
852+19.4500000 R1	1	19.638	0	0	1	13.236	0	0
852+25.0000000 R1	1	19.451	4.018	4.018	1	18.912	3.304	3.304
852+50.0000000 R1	1	18.794	17.706	17.706	1	13.615	15.059	15.059
852+75.0000000 R1	1	21.286	18.555	18.555	1	7.312	9.688	9.688
853+00.0000000 R1	1	26.877	22.298	22.298	1	2.765	4.665	4.665
853+25.0000000 R1	1	27.246	25.057	25.057	1	2.121	2.262	2.262
853+50.0000000 R1	1	25.922	24.615	24.615	1	1.417	1.638	1.638
853+75.0000000 R1	1	29.323	25.576	25.576	1	1.111	1.17	1.17
854+00.0000000 R1	1	28.614	26.823	26.823	1	2.196	1.531	1.531
854+25.0000000 R1	1	28.133	26.272	26.272	1	2.084	1.982	1.982
854+50.0000000 R1	1	25.732	24.938	24.938	1	2.985	2.347	2.347
854+75.0000000 R1	1	26.009	23.954	23.954	1	2.709	2.636	2.636
855+00.0000000 R1	1	16.535	19.696	19.696	1	8.641	5.255	5.255
855+25.0000000 R1	1	15.669	14.909	14.909	1	9.122	8.224	8.224
855+50.0000000 R1	1	21.267	17.1	17.1	1	7.656	7.767	7.767
855+75.0000000 R1	1	23.195	20.584	20.584	1	7.778	7.145	7.145
856+00.0000000 R1	1	20.2	20.09	20.09	1	7.148	6.91	6.91
856+25.0000000 R1	1	19.014	18.155	18.155	1	8.446	7.219	7.219
856+50.0000000 R1	1	18.479	17.358	17.358	1	8.1	7.66	7.66
856+75.0000000 R1	1	17.702	16.75	16.75	1	11.597	9.119	9.119
857+00.0000000 R1	1	16.986	16.059	16.059	1	12.803	11.296	11.296
857+25.0000000 R1	1	14.272	14.471	14.471	1	10.934	10.99	10.99
857+50.0000000 R1	1	13.18	12.709	12.709	1	11.608	10.436	10.436
857+75.0000000 R1	1	16.418	13.703	13.703	1	7.66	8.92	8.92
858+00.0000000 R1	1	15.897	14.96	14.96	1	4.635	5.692	5.692
858+25.0000000 R1	1	11.384	12.63	12.63	1	4.763	4.351	4.351
858+37.0000000 R1	1	10.556	4.876	4.876	1	0	1.058	1.058
Grand Total:			473.862	473.862			158.324	158.324

End Area Volume Report

RAMP 4B

Alignment Name: BLP_R0184B

Input Grid Factor:

Note: All units in this report are in feet, square feet and cubic yards unless specified otherwise.

FOR REFERENCE ONLY

Baseline Station	Factor	Area	Station Quantities				Mass Ordinate	
			----- Cut -----		----- Fill -----			
			Volume	Adjusted	Factor	Area	Volume	Adjusted
450+13.6200000 R1	1	4.288	0	0	1	0	0	0
450+25.0000000 R1	1	94.757	43.869	43.869	1	0	0	43.869
450+50.0000000 R1	1	90.094	85.579	85.579	1	8.738	4.045	4.045
450+75.0000000 R1	1	18.041	50.062	50.062	1	85.099	43.443	43.443
451+00.0000000 R1	1	20.361	17.778	17.778	1	79.367	76.142	76.142
451+25.0000000 R1	1	12.334	15.137	15.137	1	70.495	69.381	69.381
451+38.0187720 R1	1	10.137	12.184	12.184	1	49.659	57.595	57.595
451+50.0000000 R1	1	8.116	9.468	9.468	1	30.483	46.749	46.749
451+75.0000000 R1	1	9.575	8.19	8.19	1	19.166	22.985	22.985
452+00.0000000 R1	1	9.004	8.602	8.602	1	17.103	16.791	16.791
452+19.4500000 R1	1	8.771	0	0	1	8.217	0	0
Grand Total:			250.869	250.869			337.131	337.131

EARTHWORK END AREA CALCULATIONS

CUY-422-16.20 (HARPER ROAD)

MODEL: Sheet PAPER: SIZE: 34x22 (in.) DATE: 2/16/2024 TIME: 9:49:16 AM USER: aluzler
C:\Clients\ORD\2020\2020338\113889\400-Engineering\Roadway\Sheets\113889_GC904.dgn

DESIGN AGENCY



DESIGNER

NRB

REVIEWER

CWL 6-8-23

PROJECT ID

113889

SHEET

187E

TOTAL

481