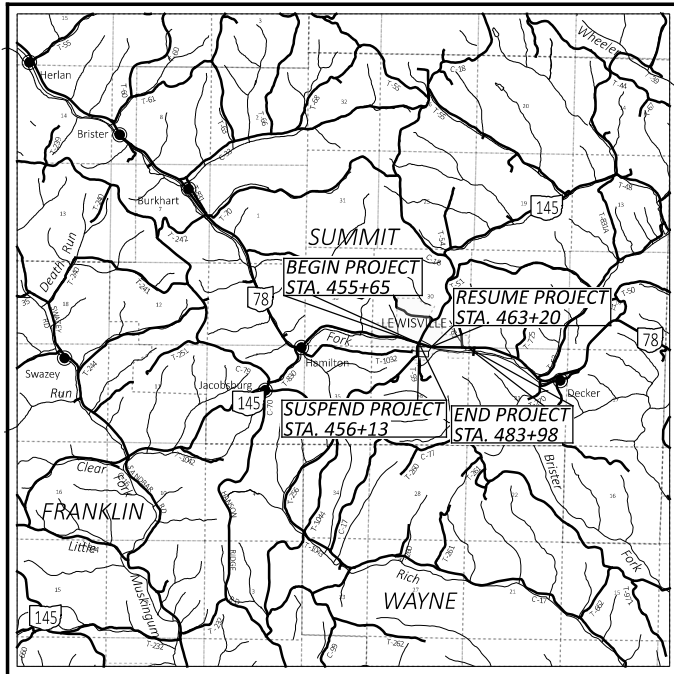


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

MOE - 78 - 8.63

VILLAGE OF LEWISVILLE MONROE COUNTY



LOCATION MAP

LATITUDE: N39°45'53" LONGITUDE: W81°12'54"



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

DESIGN DESIGNATION

CURRENT ADT (2023)	2100
DESIGN YEAR ADT (2043)	2500
DESIGN HOURLY VOLUME (2043)	11%
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	8%
DESIGN SPEED	35 mph
LEGAL SPEED	35 mph
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN ARTERIAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

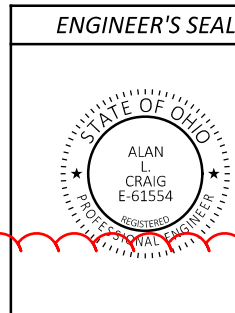
NONE REQUIRED

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:
OHIO DEPARTMENT OF
TRANSPORTATION - DISTRICT 10
338 MUSKINGUM DR., MARIETTA, OHIO



INDEX OF SHEETS:

TITLE SHEET	1	CALCULATIONS & SUB-SUMMARY	11
TYPICAL SECTIONS	2	PLAN SHEETS	12-17
GENERAL NOTES	3-4	CURB RAMP DETAILS	18
MAINTENANCE OF TRAFFIC	5-7	CULVERT DETAIL	19
GENERAL SUMMARY	8-9	TRAFFIC FLASHER REPLACEMENT	20-22
REFERENCES & BENCHMARKS	10		

FEDERAL PROJECT NUMBER

NON-FEDERAL

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACING AND DRAINAGE STRUCTURE REPAIR ON STATE ROUTE 78 IN THE VILLAGE OF LEWISVILLE. THE TRAFFIC FLASHER AT THE INTERSECTION OF STATE ROUTE 145 WILL ALSO BE REPLACED. TOTAL PROJECT LENGTH IS 0.40 MILES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.14 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.10 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	NA (NOI NOT REQUIRED)

2019 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 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Rich Oster
District 10 Deputy Director

Jack Marchbanks, PhD
Director, Department of Transportation

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	MT-96.11	4/16/21	800-2019 SEE PROPOSAL	WATERWAY
BP-5.1	7/15/22	MT-96.20	7/15/16	832 7/15/22	PERMITS
BP-7.1	1/21/22	MT-97.10	4/19/19		CONDITIONS
					12/5/22
CB-2-2A, 2B, 2C	1/20/23	MT-97.11	1/20/17		
CB-3	7/16/21	MT-105.10	1/17/20		
CB-3A	7/16/21	MT-110.10	7/19/13		
CB-6	1/21/22	TC-21.21	1/20/23		
		TC-41.20	10/18/13		
DM-1.1	7/17/20	TC-42.20	10/18/13		
DM-4.4	1/15/16	TC-74.10	1/21/22		
		TC-81.11	1/20/23		
RM-4.2	4/17/20	TC-83.10	1/17/20		
		TC-84.20	10/18/13		
HW-1.1	7/20/18				

MOE-78-8.63

MODEL: Sheet PAPER: 17x11 (in.) DATE: 4/25/2023 TIME: 3:00:21 PM USER: acraig pwc:\ohio-dot-pw-bentley.com\shahid-cpw-02\Documents\01 Active Projects\District 10\Monroe\115950\400-Engineering\Roadway\Sheets\115950_GT001.dgn

TITLE SHEET

DESIGN AGENCY	
DESIGNER	ALC
REVIEWER	ALC 04-25-23
PROJECT ID	115950
SHEET TOTAL	P.1 22


MOE-78-8.63

MODEL: Sheet PAPER: 17x11 (in.) DATE: 4/25/2023 TIME: 2:23:02 PM USER: acralg
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SHEET NUM.										PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	6	7	11	19	21	01/STR/05			ITEM	EXT	TOTAL					
ROADWAY																	
LS							LS			201	11000	LS				CLEARING AND GRUBBING	
					2					202	20010	2	EACH			HEADWALL REMOVED	
				209						202	23000	209	SY			PAVEMENT REMOVED	
				632						202	30000	632	SF			WALK REMOVED	
				214						202	32000	214	FT			CURB REMOVED	
30				52						202	35100	82	FT			PIPE REMOVED, 24" AND UNDER	
				59						202	35200	59	FT			PIPE REMOVED, OVER 24"	
				5						202	58201	5	EACH			INLET REMOVED, AS PER PLAN	3
				1						202	58400	1	EACH			INLET ABANDONED	
				343						SPECIAL	20270110	343	FT			PIPE CLEANOUT, 24" AND UNDER	11
20										202	98200	20	FT			REMOVAL MISS- CONDUIT	3
				230						204	10000	230	SY			SUBGRADE COMPACTION	
				15						209	98300	15	SY			LINEAR GRADING, MISC.: RESHAPING GRAVEL PAVEMENT	3
				233						608	10000	233	SF			4" CONCRETE WALK	
				427						608	52000	427	SF			CURB RAMP	
				8						608	53020	8	SF			DETECTABLE WARNING	
EROSION CONTROL																	
				21						601	32100	7	EY			ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
										601	37500	21	FT			PAVED GUTTER, TYPE 1-2	
				417						659	10000	417	SY			SEEDING AND MULCHING	
				21						659	14000	21	SY			REPAIR SEEDING AND MULCHING	
				0.04						659	20000	0.04	TON			COMMERCIAL FERTILIZER	
				0.09						659	31000	0.09	ACRE			LIME	
										832	30000	5,000	EACH			EROSION CONTROL	
DRAINAGE																	
					LS					503	11100	LS				COFFERDAMS AND EXCAVATION BRACING	
					26.8					602	20000	26.8	CY			CONCRETE MASONRY	
				24						605	31100	24	FT			AGGREGATE DRAINS	
30										611	04400	30	FT			12" CONDUIT, TYPE B	
				6						611	04600	6	FT			12" CONDUIT, TYPE C	
				51						611	07600	51	FT			18" CONDUIT, TYPE C	
					52					611	23600	52	FT			60" CONDUIT, TYPE A, 706.02, 707.33, 707.35, 707.65, 707.75 OR 707.85	
20										611	97400	20	FT			CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	3
				4						611	98151	4	EACH			CATCH BASIN, NO. 3, AS PER PLAN	3
				1						611	98181	1	EACH			CATCH BASIN, NO. 3A, AS PER PLAN	3
				2						611	98371	2	EACH			CATCH BASIN, NO. 6, AS PER PLAN	3
				2						611	98470	2	EACH			CATCH BASIN, NO. 2-2B	
				1						611	98634	1	EACH			CATCH BASIN RECONSTRUCTED TO GRADE	
				47	131					613	41300	178	CY			LOW STRENGTH MORTAR BACKFILL (TYPE 2)	
PAVEMENT																	
				76						253	02000	76	CY			PAVEMENT REPAIR	
				5,503						254	01000	5,503	SY			PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
				57						301	56000	57	CY			ASPHALT CONCRETE BASE, PG64-22, (449)	
				38						304	20000	38	CY			AGGREGATE BASE	
				454						407	20000	454	GAL			NON-TRACKING TACK COAT	
				237						442	22100	237	CY			ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449)	
				17						452	12010	17	SY			8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
				151						609	26000	151	FT			CURB, TYPE 6	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
ALC

REVIEWER
ALC

PROJECT ID
04-25-23

PROJECT ID
115950

SHEET TOTAL
P.8 | 22

ESTIMATED QUANTITIES

REFERENCE NUMBER	SEE SHEET NUMBER	STATION TO STATION	SIDE	202	202	202	202	202	202	204	209	301	304	452	601	608	608	608	609	611	611	611	611	611	611	611	613	630	630
				PAVEMENT REMOVED	WALK REMOVED	CURB REMOVED	PIPE REMOVED, 24" & UNDER	INLET REMOVED, AS PER PLAN	INLET ABANDONED	SUBGRADE COMPACTION	LINEAR GRADING, MISC.: RESHAPING GRAVEL PAVEMENT	ASPHALT CONCRETE BASE, (449), PG64-22	AGGREGATE BASE	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	PAVED GUTTER, TYPE 1-2	4" CONCRETE WALK	CURB RAMP	DETECTABLE WARNING	CURB, TYPE 6	12" CONDUIT, TYPE C	18" CONDUIT, TYPE C	CATCH BASIN, NO. 3, AS PER PLAN	CATCH BASIN, NO. 3A, AS PER PLAN	CATCH BASIN, NO. 6, AS PER PLAN	CATCH BASIN, NO. 2-2B	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	LOW STRENGTH MORTAR BACKFILL (TYPE 2)	REMOVAL OF GROUND MOUNTED SIGN AND REELECTION	REMOVAL OF GROUND MOUNTED POST SUP. PORT AND REELECTION
				SY	SF	FEET	FEET	EACH	EACH	SY	SY	CY	CY	SY	FEET	SF	SF	SF	FEET	FEET	FEET	EACH	EACH	EACH	EACH	EACH	EACH	CY	EACH
D-1	13	463+41.41	RT	4			2			6		1.3																	
D-2	13	463+40.84	LT																										
D-3	13	463+48	LT	5						7		1.3								6		1							
D-4	14	469+36.67	LT	4		8			1	5		1.0	0.6		21														
D-5	14	469+36.68	RT	5	38	13				4		1.6	0.5			58			13			1				4			
D-6	16	477+17	LT	8		20			1	6		2.4	0.8						20			1				5			
D-7	16	477+17	RT	10					1	3		1.6	0.5	6												7			
D-8	17	480+40.5	LT	8		20			1	6		2.4	0.8						20			1				6			
D-9	17	480+40.5	RT	8		20			1	6		2.5	0.9						20			1				7			
D-10	17	481+55	RT				50																						
D-11	17	481+96.13	RT																										
SW-1	13	463+25.28 TO 463+73.00	RT		224	51										86	182		18										
SW-2	13	463+23.55 TO 463+72.08	LT		180	38										64	177		20										
SW-3	13	464+58 TO 464+98	LT		160	40				15		2	11		16	68		40											
SW-4	15	473+17.6 TO 473+19.6	RT		9											9		8											
S-1	13	463+34	LT																									2	1
S-2	13	463+36	RT																									2	1
TOTALS TO GENERAL SUMMARY				52	631	214	52	5	1	43	15	15	7	17	21	233	427	8	151	6	51	4	1	2	2	1	47	4	2

ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449)
 STA. 463+20 TO STA. 464+63: AREA BY CAD = 3616 SF
 STA. 464+63 TO STA. 480+96: 1633' x 24' = 39192 SF
 STA. 480+96 TO STA. 481+72: 76' x 25' = 1900 SF
 STA. 481+72 TO STA. 482+20: 48' x 32' = 1536 SF
 STA. 482+20 TO STA. 483+98: 178' x 25' = 4450 SF
 ADDITIONAL AREA TO RESURFACE TEMPORARY PAVEMENT BEING INCORPORATED AS PERMANENT PAVEMENT: AREA BY CAD = 362 SF
 GRAND TOTAL AREA = 51056 SF
 ITEM 441 = 51056 SF x 1.5"/12 x 1 CY/27 CF = 237 CY

ITEM 407, NON-TRACKING TACK COAT
 GRAND TOTAL QUANTITY FROM 441 CALCULATION: 51056 SF
 ITEM 407 = 51056 SF x 0.08 GAL/SY x 1 SY/9 SF = 454 GAL

ITEM 254, PAVEMENT PLANNING, ASPHALT CONCRETE, 1.5"
 GRAND TOTAL QUANTITY FROM 441 CALCULATION MINUS THE 1536 SF FULL DEPTH PAVEMENT REPLACEMENT: 51056 - 1536 = 49520 SF
 ITEM 254 = 49520 SF x 1 SY/9 SF = 5503 SY

ITEM 204, SUBGRADE COMPACTION
 STA. 481+72 TO STA. 482+20: 48' x 35' = 1680 SF
 ITEM 204 = 1680 SF x 1 SY/9 SF = 187 SY

ITEM 304, AGGREGATE BASE
 STA. 481+72 TO STA. 482+20: 48' x 34' = 1632 SF
 ITEM 304 = 1632 SF x 6"/12 x 1 CY/27 CF = 31 CY

ITEM 301, ASPHALT CONCRETE BASE, (449), PG62-22
 STA. 481+72 TO STA. 482+20: 48' x 33' = 1584 SF
 ITEM 301 = 1584 SF x 8.5"/12 x 1 CY/27 CF = 42 CY

ITEM 605, AGGREGATE DRAINS
 STA. 481+72 TO STA. 482+20: 4 EACH AT 6' = 24 FT

ITEM 202, PAVEMENT REMOVED
 FOR CULVERT REPLACEMENT AREA = 1406 SF x 1 SY/9 SF = 157 SY

ITEM 659, SEEDING AND MULCHING
 ESTIMATED AREA = 3746 SF x 1 SY/9 SF = 417 SY

ITEM 659, REPAIR SEEDING AND MULCHING
 ESTIMATED AREA = 3746 SF x 1 SY/9 SF x 5% = 21 SY

ITEM 659, COMMERCIAL FERTILIZER
 ESTIMATED WEIGHT = 3746 SF x 20 LBS/1000 SF x 1 TON/2000 LBS = 0.04 TONS

ITEM 659, LIME
 ESTIMATED AREA = 3746 SF x 1 ACRE/43560 SF = 0.09 ACRES

ITEM 642, CENTER LINE, TYPE 1
 STA. 463+30 TO STA. 483+98, DOUBLE SOLID, LEAVE GAPS AT SIDE ROAD INTERSECTIONS AND AT THE CROSSWALK = 0.40 MILES

ITEM 642, EDGE LINE, 6", TYPE 1
 STA. 480+96 TO STA. 483+98, LEFT AND RIGHT = 0.12 MILES

ITEM 645, CROSSWALK LINE, 12", TYPE A2
 STA. 463+62 = 49 FEET

ITEM 614, WORK ZONE CENTER LINE, CLASS 1
 STA. 463+25 TO STA. 482+00, DOUBLE SOLID, 2 APPLICATIONS FOR CATCH BASIN WORK
 STA. 463+30 TO STA. 483+98, DOUBLE SOLID, 2 APPLICATIONS FOR MILLING AND PAVING
 STA. 480+20 TO STA. 483+20, DOUBLE SOLID, 1 APPLICATION FOR USE AFTER CULVERT REPLACEMENT = 1.57 MILES

ITEM 614, WORK ZONE EDGE LINE, CLASS 1, 4"
 STA. 463+25 TO STA. 482+00, ONE SIDE, 2 APPLICATIONS FOR CATCH BASIN WORK
 STA. 480+96 TO STA. 483+98, LEFT AND RIGHT, 2 APPLICATIONS FOR MILLING AND PAVING
 STA. 480+96 TO STA. 483+20, LEFT AND RIGHT, 1 APPLICATION FOR CULVERT REPLACEMENT = 0.87 MILES

ITEM 653, PAVEMENT REPAIR
 PERFORM PARTIAL DEPTH PAVEMENT REPAIRS WHERE FAILING ASPHALT CONCRETE IS FOUND. IT SHALL BE REPAIRED TO A DETH OF 3" AND A MINIMUM WIDTH OF 4' UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE REPLACEMENT MATERIAL SHALL CONFORM TO ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (449). REPAIR LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER.

653, PAVEMENT REPAIR = 76 CY

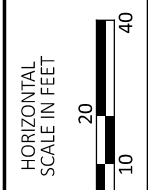
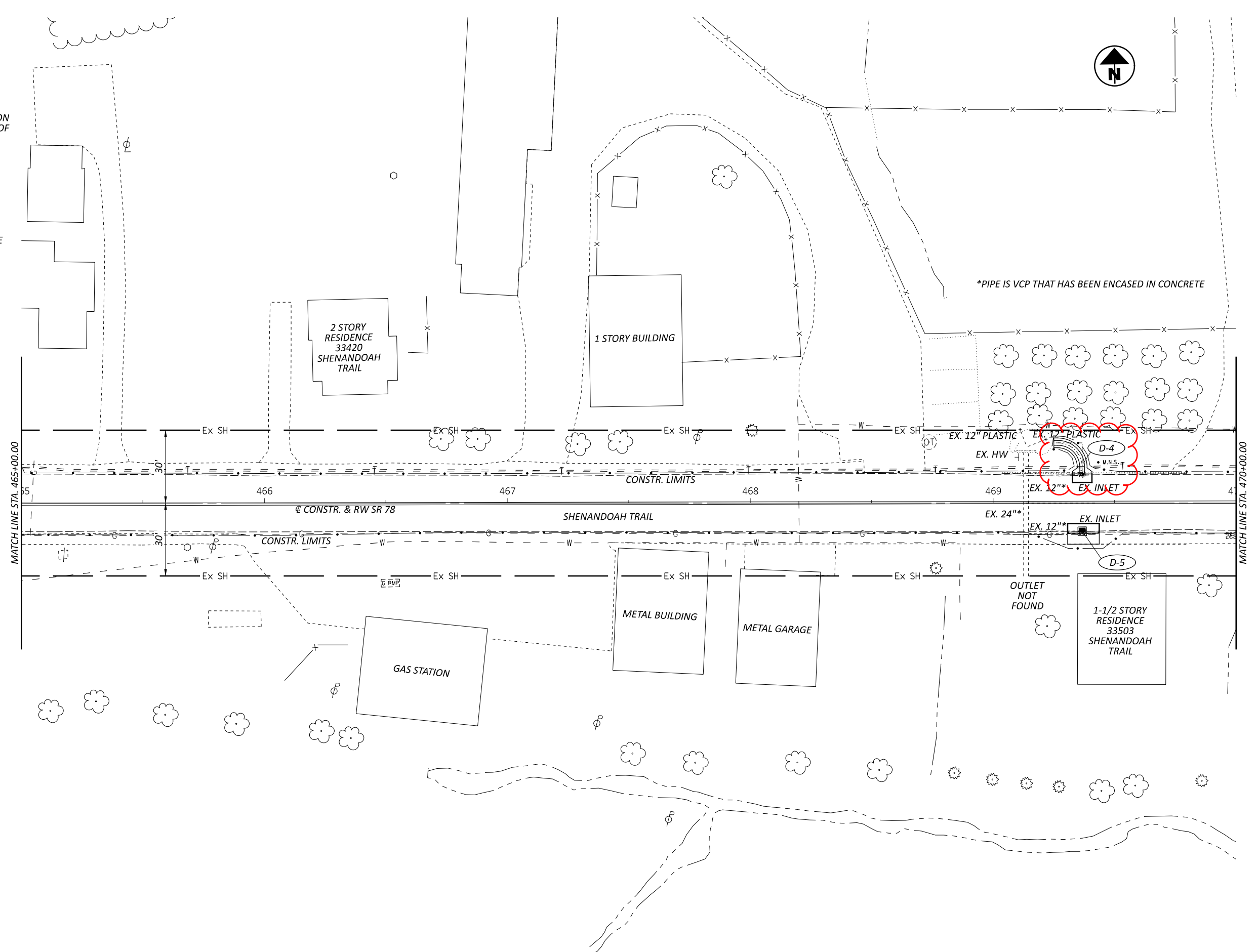
ITEM SPECIAL - PIPE CLEANOUT
 THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

CLEANOUT THE 12" DIAMETER PIPE BETWEEN STA. 473+74 TO STA. 477+17 LEFT = 343'

D-4
 BEGIN GUTTER AT STA.
 469+36.67, 12.04' LT
 SIDE SLOPES TO BE FLAT
 AT STREET AND TRANSITION
 TO 2:1 OVER A DISTANCE OF
 2.5'
 GUTTER CURVE PI AT
 STA. 469+36.67, 24.77' LT
 R=10', D=90°, L=15.71'
 END GUTTER AT STA.
 469+24.97, 24.77' LT

D-5
 STA. 469+36.68, 11.97' RT
 CB NO. 3A
 CURB PLATE HEIGHT TO BE
 SET FOR DROPPED CURB
 FOR DRIVEWAY ACCESS
 GRATE EL. = 1175.01
 EX. 12" OUT = 1172.76

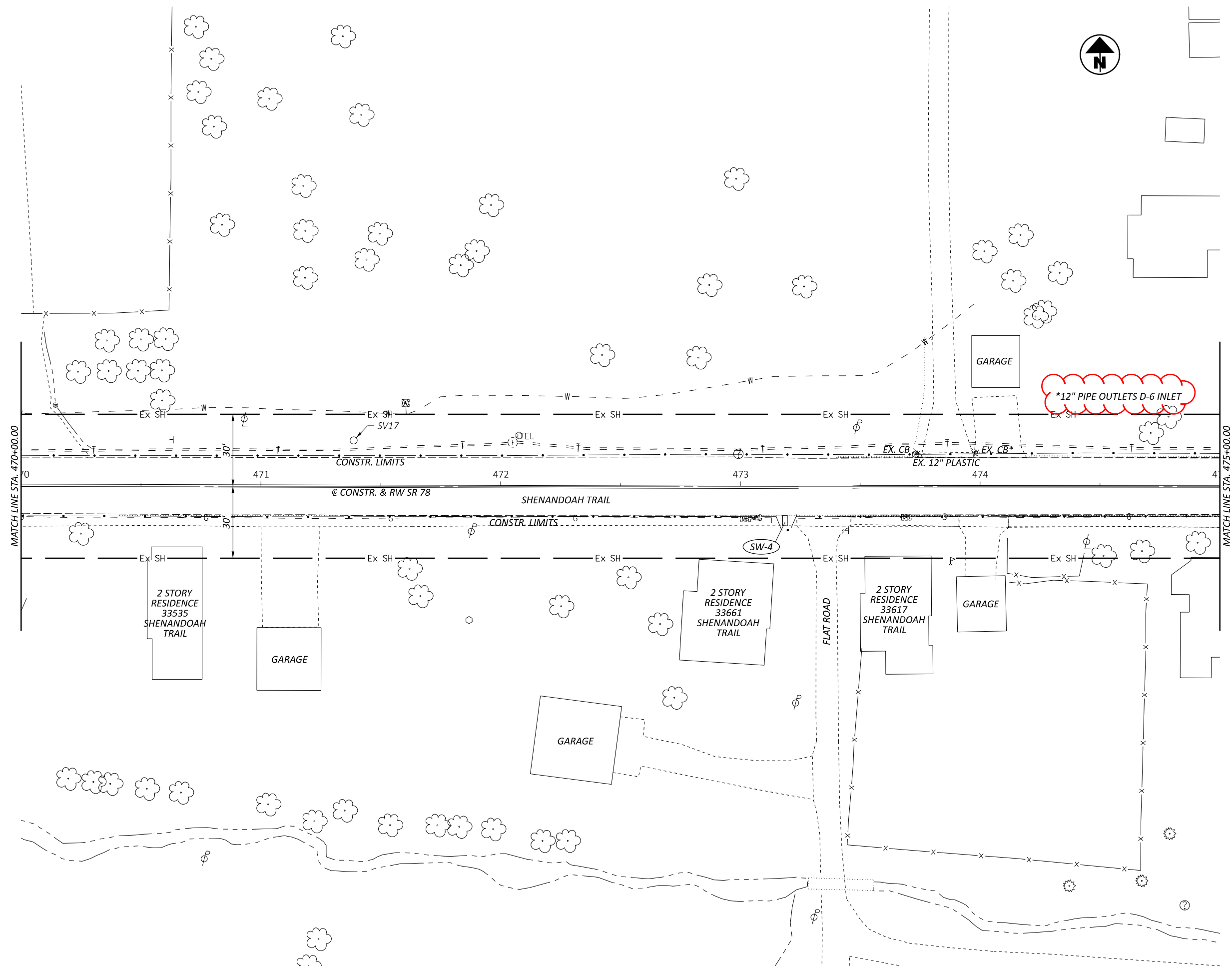


SR 78 PLAN
 STA. 465+00 TO STA. 470+00

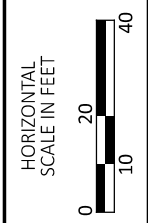
DESIGN AGENCY



DESIGNER	ALC
REVIEWER	ALC
PROJECT ID	04-25-23
SHEET	115950
TOTAL	P.14 / 22



*12" PIPE OUTLETS D-6 INLET



SR 78 PAN
STA. 470+00 TO 475+00

DESIGN AGENCY

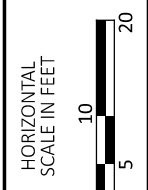
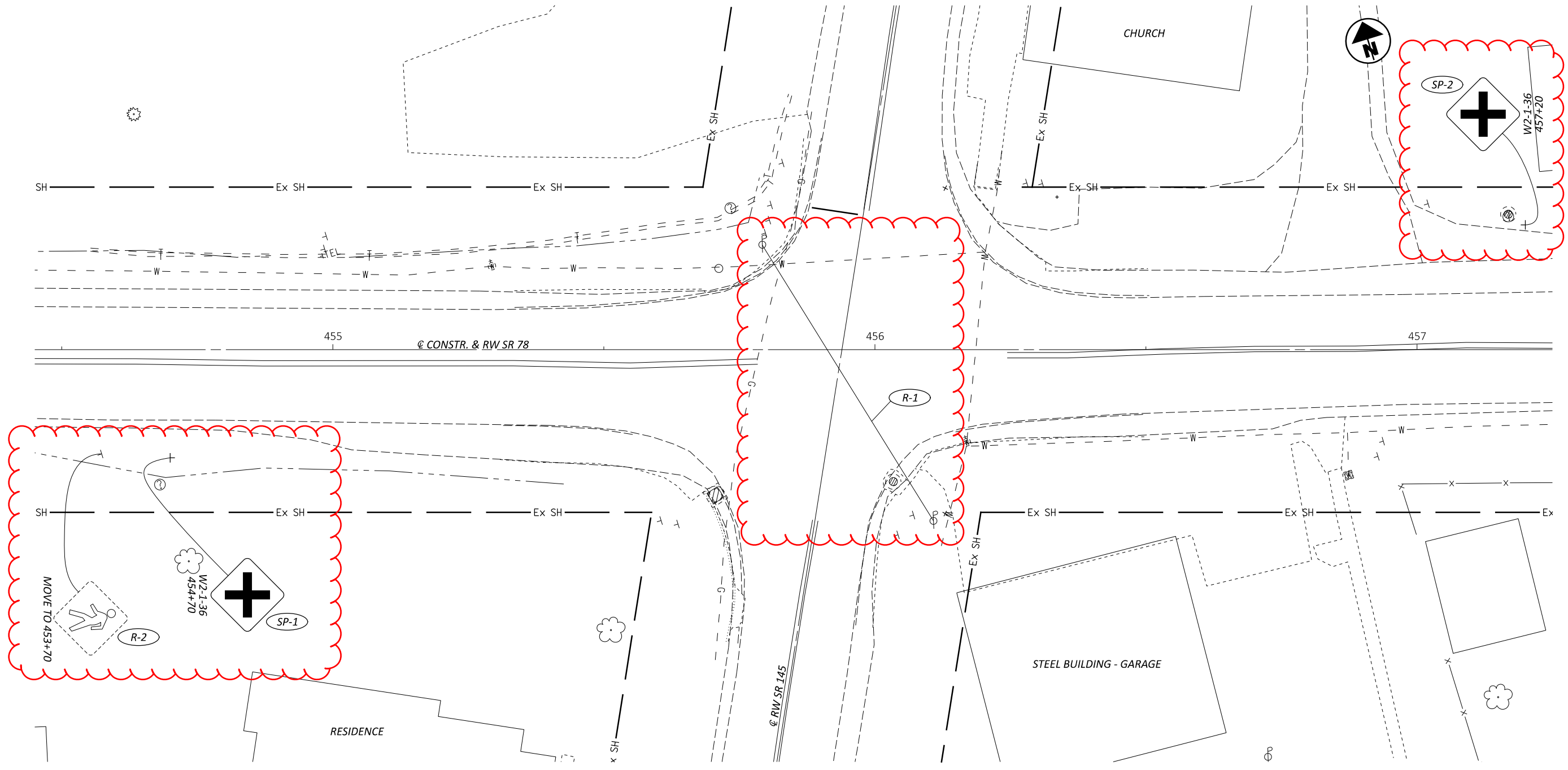


DESIGNER
ALC

REVIEWER
ALC 04-25-23

PROJECT ID
115950

SHEET	TOTAL
P.15	22



TRAFFIC FLASHER PLAN
SR 78 & SR 145 INTERSECTION

DESIGN AGENCY

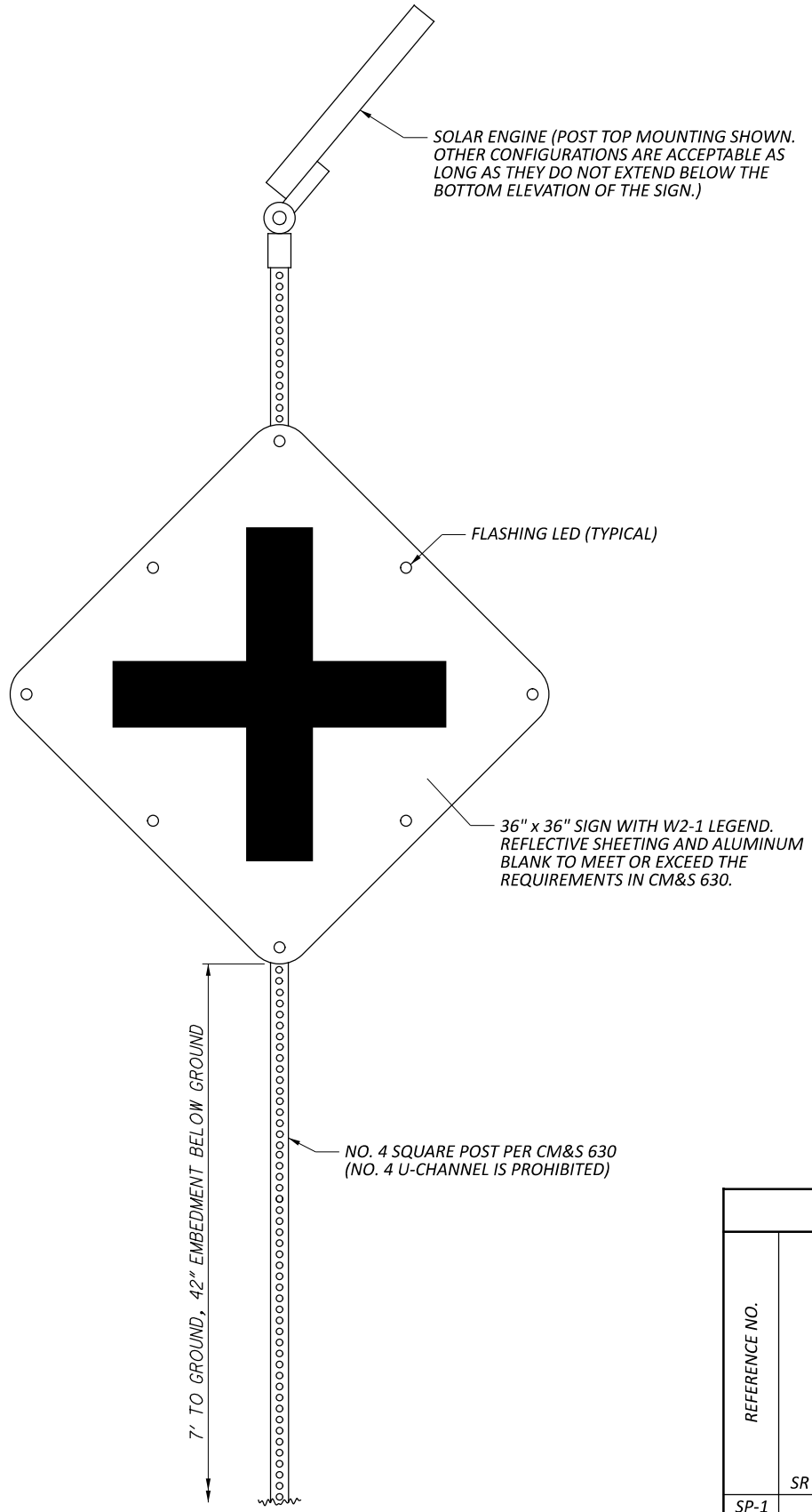


DESIGNER	ALC
REVIEWER	ALC
PROJECT ID	115950
SHEET	TOTAL
P.20	22

630, SIGNING, MISC.: FLASHING LED WARNING SIGN ASSEMBLY
 EACH FLASHING LED WARNING SIGN SHALL BE A COMPLETE ASSEMBLY INCLUDING THE FLASHING SIGN, SIGN SUPPORT, ELECTRICITY GENERATING AND STORAGE SOLAR SYSTEM, AND ALL MOUNTING HARDWARE.

THE SOLAR POWER SYSTEM SHALL BE CAPABLE OF POWERING THE LED FLASHERS 24 HOURS A DAY, EVERY DAY FOR THE SOLAR CONDITIONS EXPECTED AT THE INSTALLATION SITE IN LEWISVILLE, OHIO.

THE LED AND SOLAR POWER SYSTEM SHALL HAVE A TWO YEAR MINIMUM WARRANTY.



ESTIMATED QUANTITIES											
REFERENCE NO.	STATION TO STATION	SIDE	630	630	630	632					632
			SIGNING, MISC.: FLASHING LED WARNING SIGN ASSEMBLY	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION	COVERING OF VEHICULAR SIGNAL HEAD					REMOVAL OF TRAFFIC SIGNAL INSTALLATION
	SR 78 STATIONING		EACH	EACH	EACH	EACH					EACH
SP-1	454+70	RT	1								
SP-2	457+20	LT	1								
R-1	455+78 TO 456+00	L&R				4					1
R-2	454+57 => 453+70	RT		1	1						
TOTALS TO GENERAL SUMMARY			2	1	1	4					1

LED SIGN - FLASHER ACTIVATION

PRIOR TO ACTIVATING THE NEW LED FLASHER SIGNS AND/OR REMOVING THE EXISTING FLASHER FROM SERVICE, ALL ITEMS IN THE PROPOSED FLASHER PLAN SHALL BE FULLY COMPLETED.

ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED PRIOR TO FINAL ACCEPTANCE. VILLAGE FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE LED SIGNS AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

THE EXISTING FLASHER INSTALLATION, EXCEPT FOR THE SUPPORT POLE AT THE SOUTHEAST CORNER THAT HAS A STREET LIGHT ATTACHED TO IT, SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND DISPOSED OF BY THE CONTRACTOR. THE STREET LIGHT SHALL BE LEFT IN PLACE AND OPERATING AFTER REMOVAL OF THE EXISTING FLASHER.

DESIGN AGENCY



DESIGNER
ALC

REVIEWER
ALC 04-13-23

PROJECT ID
115950

SHEET TOTAL
P.22 | 22