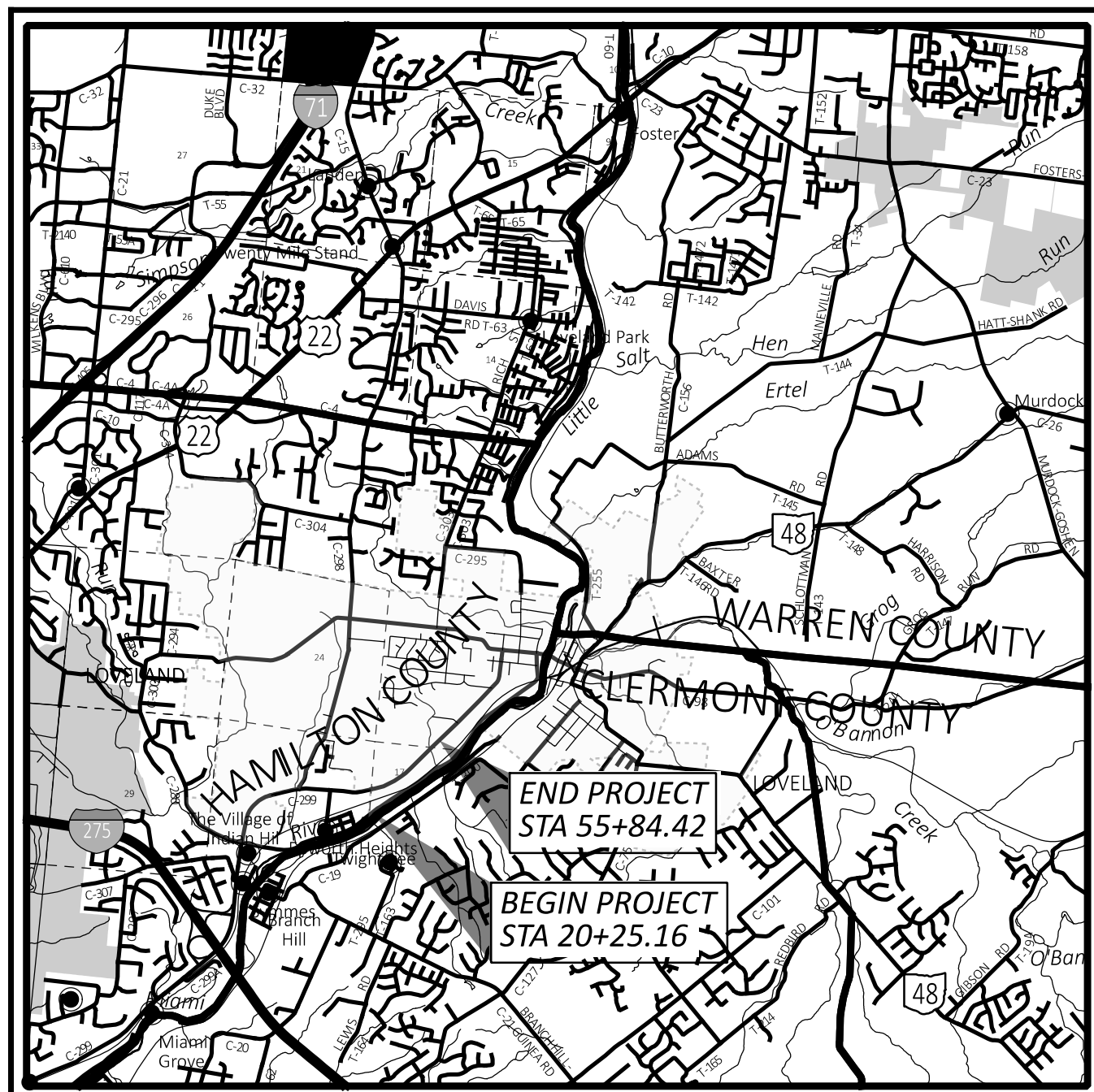


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

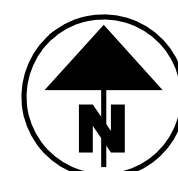
## HAM-CR299-5.78 LOVELAND MADEIRA ROAD

CITY OF LOVELAND  
HAMILTON COUNTY



**LOCATION MAP**

LATITUDE: 39°15'31" LONGITUDE: 84°16'32"



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

**DESIGN DESIGNATION**

CURRENT ADT (2026)	12,000
DESIGN YEAR ADT (2046)	12,000
DESIGN HOURLY VOLUME (2046)	1,600
DIRECTIONAL DISTRIBUTION	59%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	35 mph
LEGAL SPEED	25 mph & 35 mph
DESIGN FUNCTIONAL CLASSIFICATION:	
04 MINOR ARTERIAL ROADS (URBAN)	
NHS PROJECT	NO

**DESIGN EXCEPTIONS**

NOT REQUIRED

**ADA DESIGN WAIVERS**

NOT 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:  
BURGESS & NIPLÉ  
525 VINE ST. STE. 1300  
CINCINNATI, OHIO 45202

ENGINEER'S SEAL

STEVEN CHARLES SMITH  
E-54439  
REGISTERED PROFESSIONAL ENGINEER

**INDEX OF SHEETS:**

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TRAFFIC CONTROL	P.81 - P.89
GEOTECHNICAL PROFILES - RETAINING WALLS	P.90 - P.103
RIGHT OF WAY	RW01-RW16

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	MT-105.10	1/17/20	800-2023	1/17/25
BP-4.1	7/19/13	MT-110.10	7/19/13	832	7/19/24
BP-5.1	1/17/25			839	7/16/21
BP-7.1	1/17/25	TC-41.20	10/18/13	851	1/17/25
		TC-42.20	10/18/13	870	1/17/25
DM-2.1	1/18/13	TC-52.10	10/18/13	878	1/21/22
DM-4.3	1/15/16	TC-52.20	1/15/21	921	7/19/24
DM-4.4	1/15/16	TC-71.10	4/21/23	939	1/17/20
		TC-74.10	7/21/23		
MT-95.60	4/19/19				
MT-95.61	4/19/19	TC-87.10	7/18/25		
MT-96.11	7/21/23				
MT-96.20	1/17/25				
MT-96.26	1/17/25				
MT-101.90	7/17/20				

**FEDERAL PROJECT NUMBER**

E240188

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

INSTALLATION OF SIDEWALK ALONG A PORTION OF LOVELAND MADEIRA RD WITHIN THE CITY OF LOVELAND.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA:	0.99 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.03 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	1.02 ACRES

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

**DISTRICT DEPUTY DIRECTOR**

Douglas A. Gruver, P.E.

**DIRECTOR, DEPARTMENT OF TRANSPORTATION**

Pamela Boratyn

HAM-CR299-5.78

MODEL: Sheet\_SurvFl\_PAPER SIZE: 34x22 (in.) DATE: 12/1/2025 TIME: 11:01:31 AM USER: JWright P:\PR61908\119757400-Engineering\Roadway\Sheets\119757\_GT001.dgn

TITLE SHEET

DESIGN AGENCY



DESIGNER

SDC

REVIEWER

SCS 04/15/25

PROJECT ID

119757

SHEET TOTAL

P.01 | 103

F. TO MINIMIZE EXCESSIVE GLARE DURING NIGHTTIME CONDITIONS, AN AUTOMATIC SIGNAL DIMMING DEVICE SHALL BE USED TO REDUCE THE BRILLIANCE OF THE RRFB INDICATIONS.

G. AN LED PEDESTRIAN CONFIRMATION LIGHT DIRECTED AT AND VISIBLE TO PEDESTRIANS IN THE CROSSWALK SHALL BE INSTALLED INTEGRAL TO THE RRFB OR PUSHBUTTON TO GIVE CONFIRMATION THAT THE RRFB IS IN OPERATION.

H. THE PEDESTRIAN CONFIRMATION LIGHT SHALL HAVE A MINIMUM AREA OF 0.5 SQUARE INCHES AND BE CONSPICUOUS TO PEDESTRIANS AT ALL DISTANCES FROM THE BEGINNING OF THE CONTROLLED CROSSWALK TO A POINT 10 FEET FROM THE END OF THE CONTROLLED CROSSWALK DURING BOTH DAY AND NIGHT.

2. SIGNS

A. ALL SIGN ASSEMBLIES SHALL USE ANTI-VANDAL FASTENERS TO MOUNT COMPONENTS TO SIGN AND SIGN TO FIXTURE.

B. PEDESTRIAN PUSHBUTTONS SIGNS SHALL BE PROVIDED AND INCLUDE THE LEGEND "PUSH BUTTON TO TURN ON WARNING LIGHTS." SIGNS SHOULD BE MOUNTED ADJACENT TO OR INTEGRAL WITH EACH PEDESTRIAN PUSHBUTTON.

C. TWO SETS OF SIGNS SHALL BE REQUIRED PER UNIT FOR VIEW FROM EACH APPROACH.

D. ASSURE SIGN MEETS THE REQUIREMENTS OF C&MS 630

3. CONTROL CIRCUIT

A. THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF INDEPENDENTLY FLASHING UP TO TWO INDEPENDENT OUTPUTS. THE LED LIGHT OUTPUTS AND FLASH PATTERN SHALL BE COMPLETELY PROGRAMMABLE.

B. THE CONTROL CIRCUIT SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS.

C. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURE AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS

4. BATTERY AND SOLAR PANELS

A. BATTERY UNIT SHALL BE A 12VDC, 35 AHR MINIMUM, SEALED GEL OR AGM LEAD ACID BATTERY. BATTERIES SHALL HAVE A WRITTEN TWO YEAR FULL REPLACEMENT WARRANTY.

B. THE SOLAR PANEL SHALL PROVIDE A MINIMUM OF 40 WATTS PEAK TOTAL OUTPUT.

C. THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45 DEGREES - 60 DEGREES TO PROVIDE MAXIMUM OUTPUT.

D. ALL FASTENERS USED SHALL BE ANTI-VANDAL.

5. WIRELESS RADIO

A. RADIO CONTROL SHALL OPERATE ON A 900 MHZ FREQUENCY HOPPING SPREAD SPECTRUM NETWORK, WI-FI OR APPROVED EQUAL.

B. RADIO SHALL INTEGRATE COMMUNICATION OF RRFB CONTROL CIRCUIT TO ACTIVATE SIGN FROM PUSHBUTTON INPUT.

C. THE RADIO SHALL BE SYNCHRONIZED SO ALL OF THE REMOTE RRFB LIGHT INDICATIONS WILL TURN ON WITHIN 120 MSEC OF EACH OTHER AND REMAIN SYNCHRONIZED THROUGH-OUT THE DURATION OF THE FLASHING CYCLE.

6. PUSHBUTTON

A. THE PUSHBUTTON SHALL BE CAPABLE OF CONTINUOUS OPERATION OVER A TEMPERATURE RANGE OF -30 DEGREES F TO +165 DEGREES F.

B. PUSHBUTTON SHALL BE ADA COMPLIANT.

C. THE PUSH BUTTON SHOULD INCLUDE AN AUDIBLE INFORMATION DEVICE THAT PLAYS AN AUDIBLE SPEECH MESSAGE THAT SAYS, "WARNING LIGHTS ARE FLASHING". THE AUDIBLE MESSAGE SHOULD BE SPOKEN TWICE.

7. PEDESTAL SHAFT AND BASE - MOUNT ON A STANDARD 4.5 INCH OD ALUMINUM PEDESTAL POLE WITH BREAKAWAY BASE. A 14 FOOT POLE SHALL BE PROVIDED AND FIELD ADJUSTED AND CAPPED TO MAINTAIN THE PROPER SIGN MOUNTING HEIGHTS, UNLESS SPECIFIED OTHERWISE IN THE PLANS. POLE AND BASE MANUFACTURER SHALL BE LISTED ON ODOT'S QUALIFIED PRODUCTS LIST.

CONSTRUCTION-

E-016,14,14;THE RRFB SHALL BE ASSEMBLED AND CONSTRUCTED BY THE CONTRACTOR AS SHOWN AND SPECIFIED ON THE PLANS.

WARRANTY-

WARRANTY SHALL BE TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.

MEASUREMENT-

THE DEPARTMENT WILL MEASURE THE ITEM COMPLETE IN PLACE, INCLUDING ALL MATERIALS, TESTING, LABOR AND SOFTWARE FOR A FULLY FUNCTIONAL UNIT.

PAYMENT-

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 630 "SIGNING MISC.: SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY".

DESIGN AGENCY



DESIGNER

MDH

REVIEWER

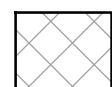






SCS 10/18/24

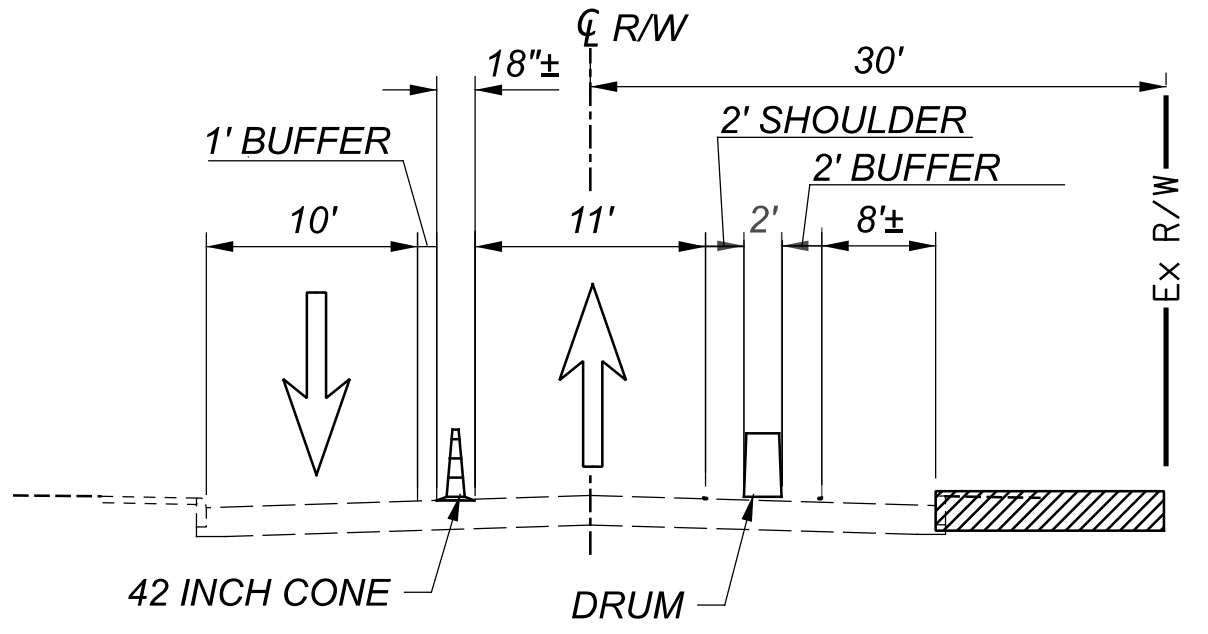
PROJECT ID

119757

SHEET TOTAL

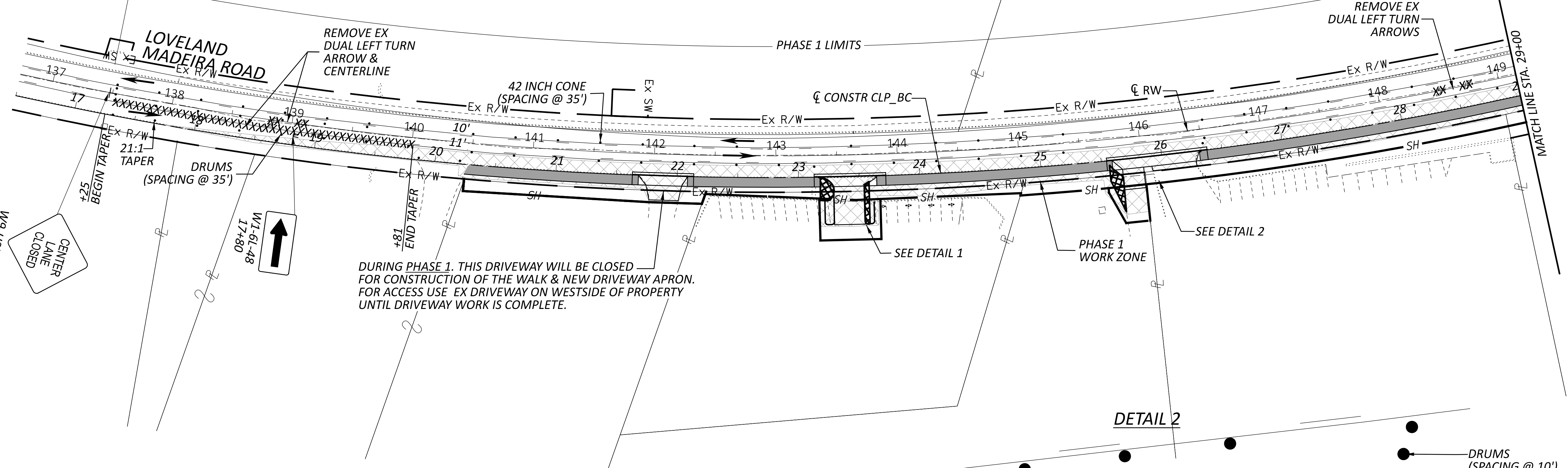
P.06B 103

- LEGEND**
-  WORK ZONE AREA
  -  TEMPORARY PAVEMENT
  -  DRUMS (SPACING AS NOTED)
  -  TRAFFIC FLOW ARROW
  -  PROPOSED SIGN
  -  LA LANE ARROW
  -  SL STOP LINE

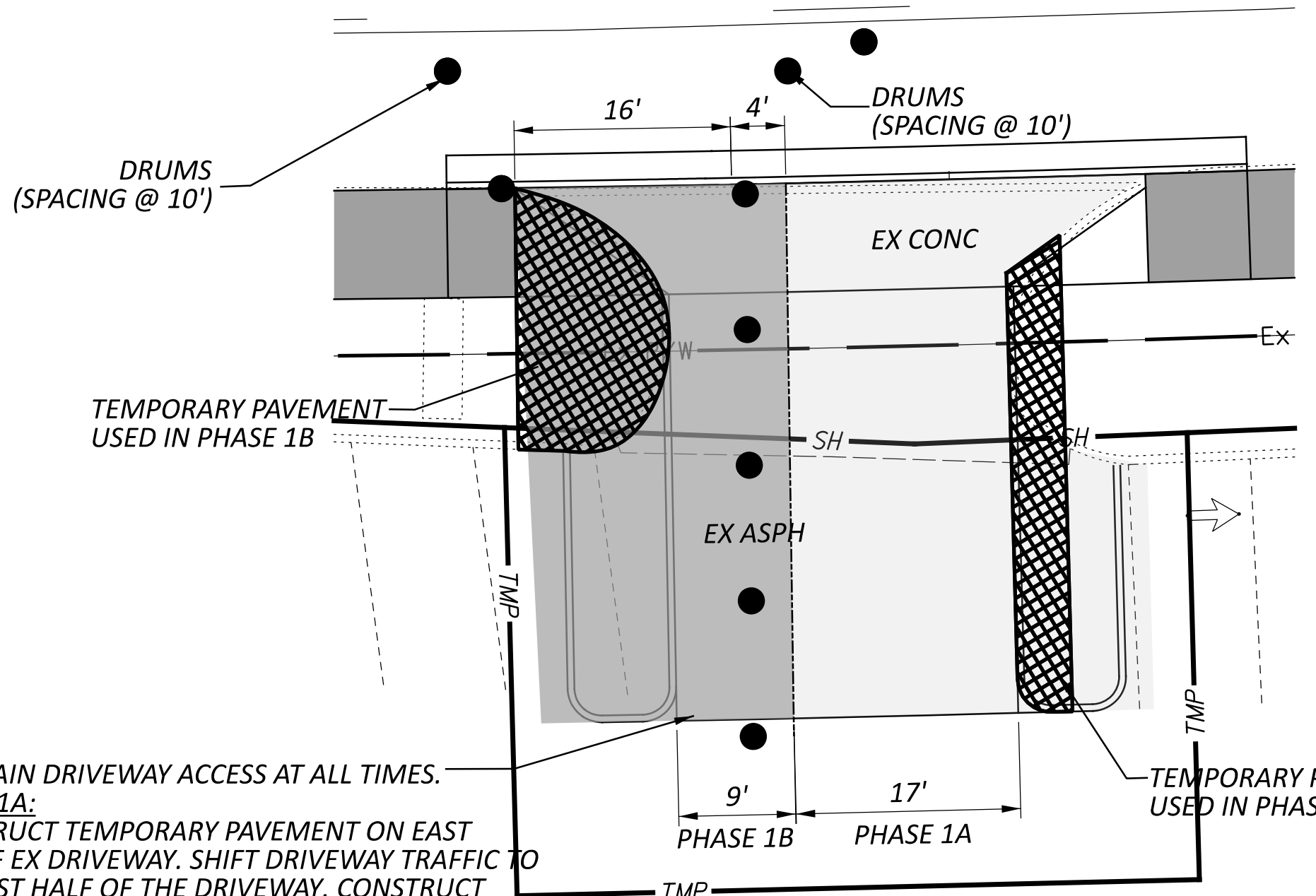


**TEMPORARY PAVEMENT COMPOSITION**  
 1.25" ITEM 441 AC SURFACE COURSE, TYPE 1, 449 (DRIVEWAYS)  
 ITEM 407 TACK COAT  
 1.75" ITEM 441 AC INTERMEDIATE COURSE, TYPE 2,449,(DRIVEWAYS)  
 8" ITEM 304 AGGREGATE BASE

- NOTES:**
- FOR ADVANCED WARNING SIGNS AND ADDITIONAL INFORMATION SEE STANDARD DRAWING MT-95.60 & MT-95.61.
  - AFTER COMPLETION OF PHASE, RETURN ALL PAVEMENT MARKINGS AND LANE ARROWS TO EXISTING CONDITIONS

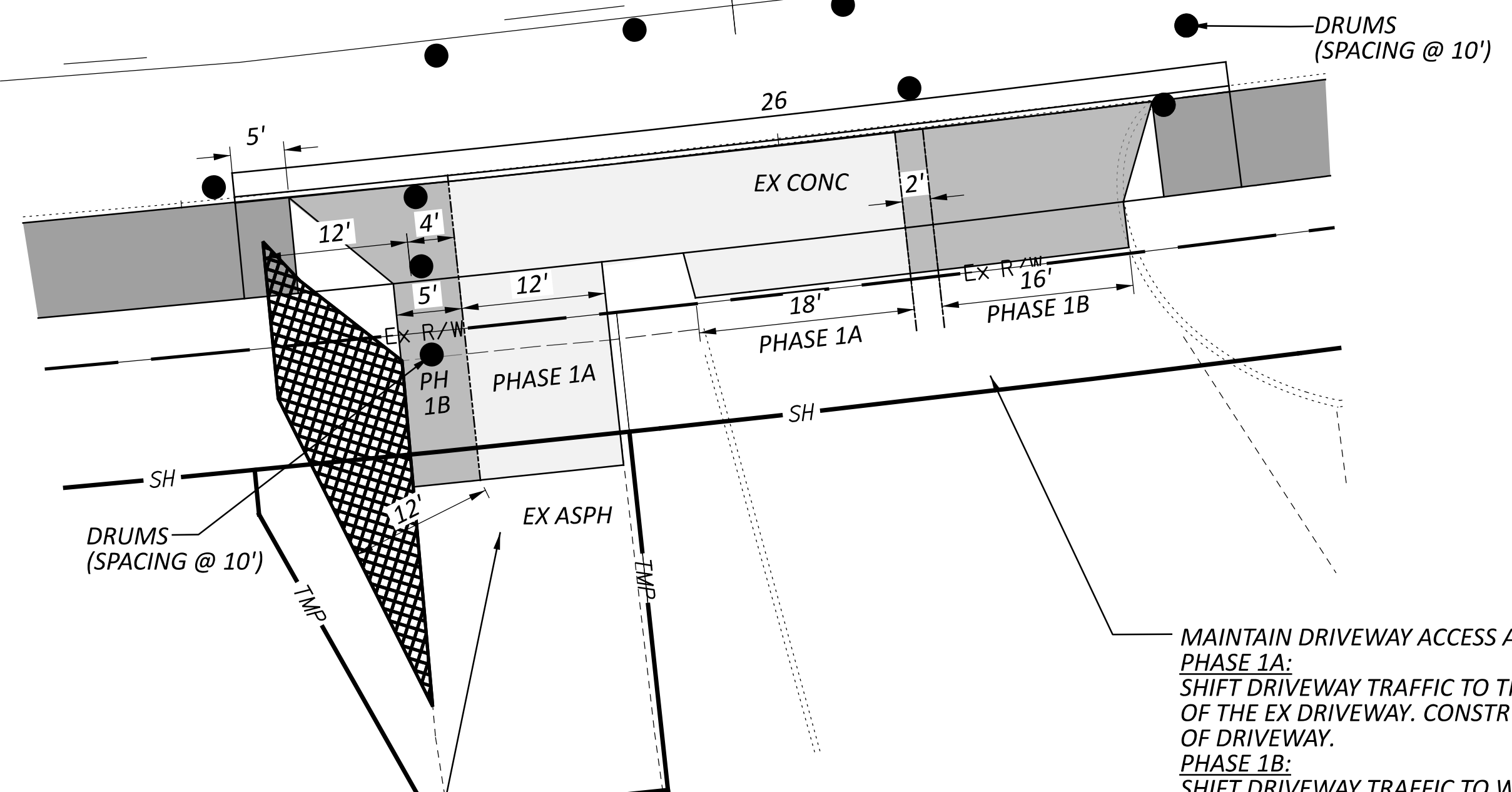


**DETAIL 1**



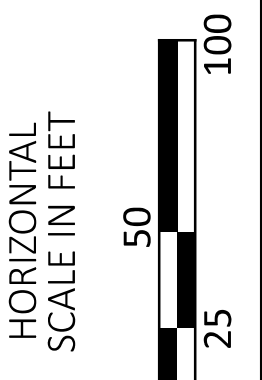
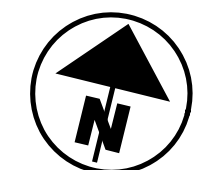
MAINTAIN DRIVEWAY ACCESS AT ALL TIMES.  
**PHASE 1A:**  
 CONSTRUCT TEMPORARY PAVEMENT ON EAST SIDE OF EX DRIVEWAY. SHIFT DRIVEWAY TRAFFIC TO THE EAST HALF OF THE DRIVEWAY. CONSTRUCT NEW SIDEWALK AND WEST HALF OF DRIVEWAY.  
**PHASE 1B:**  
 CONSTRUCT TEMPORARY PAVEMENT ON WEST SIDE OF NEW DRIVEWAY. SHIFT DRIVEWAY TRAFFIC TO WEST HALF OF DRIVEWAY. CONSTRUCT NEW SIDEWALK AND EAST HALF OF DRIVEWAY.

**DETAIL 2**



MAINTAIN DRIVEWAY ACCESS AT ALL TIMES.  
**PHASE 1A:**  
 CONSTRUCT TEMPORARY PAVEMENT ON WEST SIDE OF EX DRIVEWAY. SHIFT DRIVEWAY TRAFFIC TO THE TEMPORARY PAVEMENT ON WEST HALF OF THE DRIVEWAY. CONSTRUCT NEW SIDEWALK AND EAST HALF OF DRIVEWAY.  
**PHASE 1B:**  
 SHIFT DRIVEWAY TRAFFIC TO EAST HALF OF DRIVEWAY. CONSTRUCT NEW SIDEWALK AND WEST HALF OF DRIVEWAY.

MAINTAIN DRIVEWAY ACCESS AT ALL TIMES.  
**PHASE 1A:**  
 SHIFT DRIVEWAY TRAFFIC TO THE EAST HALF OF THE EX DRIVEWAY. CONSTRUCT WEST HALF OF DRIVEWAY.  
**PHASE 1B:**  
 SHIFT DRIVEWAY TRAFFIC TO WEST HALF OF DRIVEWAY. CONSTRUCT NEW SIDEWALK AND EAST HALF OF DRIVEWAY.




**MAINTENANCE OF TRAFFIC - PHASE 1, 1A & 1B**  
 STA. 17+25 TO STA. 29+00.00

DESIGN AGENCY	<b>B&amp;N</b> burgessniple.com
DESIGNER	SDC
REVIEWER	SCS 04/15/25
PROJECT ID	119757
SHEET TOTAL	P.08   103

SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	15	16	17	18	19	60	67	70			01/SAF	ITEM	EXT	TOTAL			
<b>ROADWAY</b>																		
LS		1		686								LS	201	11000	LS		CLEARING AND GRUBBING	
		228										1	202	11004	1	EACH	STRUCTURE REMOVED	
		33		473								686	202	23000	686	SY	PAVEMENT REMOVED	
												228	202	30000	228	SF	WALK REMOVED	
				145								506	202	32000	506	FT	CURB REMOVED	
		114										145	202	32500	145	FT	CURB AND GUTTER REMOVED	
		339										114	202	35100	114	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
		1										339	202	38000	339	FT	GUARDRAIL REMOVED	
		1										1	202	42010	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
		1										1	202	42040	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
		2										2	202	53100	2	EACH	MAILBOX REMOVED	
		1										1	202	98100	1	EACH	REMOVAL MISC.: REFLECTOR POST	
							64	9				73	203	10000	73	CY	EXCAVATION	
							384	29				413	203	20000	413	CY	EMBANKMENT	
				655								655	204	10000	655	SY	SUBGRADE COMPACTION	
				486								486	608	52000	486	SF	CURB RAMP	
		26,569										26,569	608	10000	26,569	SF	4" CONCRETE WALK	
		2										2	608	53020	2	SF	DETECTABLE WARNING	
		2										2	SPECIAL	69050000	2	EACH	MAILBOX SUPPORT	
<b>EROSION CONTROL</b>																		
				2								2	601	32200	2	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
				265								265	601	37500	265	FT	PAVED GUTTER, TYPE 1-2	
				111								111	601	37501	111	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	
				9								9	601	40000	9	FT	PAVED GUTTER, MISC.: OUTLET	
106												106	659	00300	106	CY	TOPSOIL	
951												951	659	10000	951	SY	SEEDING AND MULCHING	
0.13												0.13	659	20000	0.13	TON	COMMERCIAL FERTILIZER	
0.20												0.20	659	31000	0.20	ACRE	LIME	
5												5	659	35000	5	MGAL	WATER	
34,650												34,650	832	30000	34,650	EACH	EROSION CONTROL	
LS												LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
LS												LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
LS												LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
<b>DRAINAGE</b>																		
				554								554	605	14000	554	FT	6" BASE PIPE UNDERDRAINS	
				33								33	611	00510	33	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				1								1	611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
				2								2	611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
				1								1	611	99654	1	EACH	MANHOLE ADJUSTED TO GRADE	
				20								20	839	29100	20	FT	TRENCH DRAIN, TYPE A WITH PEDESTRIAN GRATE	
<b>PAVEMENT</b>																		
				66								66	252	01500	66	FT	FULL DEPTH PAVEMENT SAWING	
				51								51	253	02001	51	CY	PAVEMENT REPAIR, AS PER PLAN	
				67								67	254	01000	67	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
				19								19	301	56000	19	CY	ASPHALT CONCRETE BASE, PG64-22, (449) (DRIVEWAYS)	
				8								8	407	10000	8	GAL	TACK COAT @ 0.06 (GAL/SY)	
				22								22	441	50000	22	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
				5								5	441	70500	5	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
				428								428	452	19200	428	SY	8" NON-REINFORCED CONCRETE PAVEMENT, MISC: HIGH EARLY STRENGTH	
				119								119	609	12000	119	FT	COMBINATION CURB AND GUTTER, TYPE 2	
				646								646	609	26000	646	FT	CURB, TYPE 6	
				111								111	609	26001	111	FT	CURB, TYPE 6, AS PER PLAN	
				41								41	609	72000	41	SY	CONCRETE MEDIAN	
LS												LS	SPECIAL	69098400	LS		SPECIAL- CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	

GENERAL SUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 MDH  
 REVIEWER  
 SCS 04/15/25  
 PROJECT ID  
 119757  
 SHEET TOTAL  
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