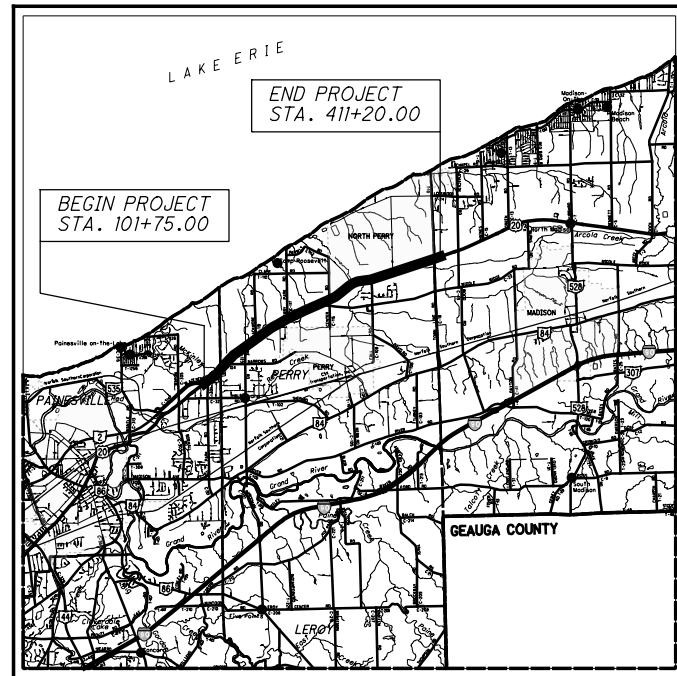


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LOCATION MAP

LATITUDE: 41°45'58.7" LONGITUDE: 81°10'51.7"



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

DESIGN DESIGNATION: LAK-US-20-19.59

CURRENT ADT (2022)	25,000
DESIGN YEAR ADT (2042)	31,850
DESIGN HOURLY VOLUME (2042)	3,185
DIRECTIONAL DISTRIBUTION	62%
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN PRINCIPAL ARTERIAL	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED



PLAN PREPARED BY:



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
LAK-US-20-19.59
PART 1
PAINESVILLE TWP., PERRY TWP.,
NORTH PERRY VILLAGE, MADISON TWP.
LAKE COUNTY, OHIO
FOR PART 2, SEE LAK-20-24.99

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TYPICAL SECTIONS	8-20, 20A, 21-22	DRIVEWAY PROFILES - U.S. 20	762-847
GENERAL NOTES	23-27, 27A	DRIVEWAY PROFILES - SIDEROADS	848-853
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SUPERELEVATION TABLES	735-740		

PROJECT DESCRIPTION

MAJOR REHABILITATION OF 5.4 MILES OF NORTH RIDGE ROAD (US-20) FROM SR. 2 TO TOWNLINE ROAD IN PERRY TOWNSHIP. WORK WILL INCLUDE ROADWAY WIDENING, RESURFACING AND SIDEWALK, DRAINAGE AND TRAFFIC SIGNAL IMPROVEMENTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	55.1 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	56.1 ACRES

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

DISTRICT DEPUTY DIRECTOR

John Picuri
John Picuri, P.E., S.I.
12

DIRECTOR, DEPARTMENT OF TRANSPORTATION

John M. ...

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS					
BP-2.1	1-21-22	CB-1	7-16-21	DM-3.1	1-18-13	MT-101.75	1-17-20	TC-42.20	10-18-13	800	SEE PROPOSAL	WATERWAY PERMIT
BP-2.2	1-15-21	CB-2-2ABC	1-20-23	DM-4.3	1-15-16	MT-101.90	7-17-20	TC-51.11	1-15-16	809	1-20-23	4/10/2023
BP-3.1	1-21-22	CB-2-34	1-20-23	DM-4.4	1-15-16	MT-102.10	1-17-20	TC-52.10	10-18-13	815	4-16-21	
BP-4.1	7-19-13	CB-3	7-16-21			MT-102.20	4-19-19	TC-52.20	1-15-21	821	4-20-12	
BP-5.1	7-15-22	CB-3A	7-16-21	HW-2.1	7-20-18	MT-103.10	1-21-22	TC-65.10	1-17-14	832	7-15-22	
BP-7.1	1-21-22	CB-6	1-21-22	HW-2.2	7-20-18	MT-105.10	1-17-20	TC-65.11	7-15-22	870	10-21-22	
								TC-71.10	7-15-22	878	1-21-22	
MGS-1.1	7-16-21	I-2	7-16-21	HL-30.11	1-15-21	TC-12.31	4-15-22	TC-72.20	7-20-18	895	4-18-14	
MGS-2.1	1-19-18	I-2A	7-16-21	HL-30.22	1-15-21	TC-15.116	7-16-21	TC-74.10	1-20-23	906	10-15-10	
MGS-3.1	1-19-18			MT-095.31	7-19-19	TC-16.22	7-16-21	TC-81.22	7-15-22	909	10-21-22	
MGS-4.2	7-19-13	MH-1	7-15-22	MT-095.32	4-19-19	TC-21.11	7-16-21	TC-83.20	7-15-22	921	4-20-12	
		MH-2	7-16-21	MT-095.41	1-17-20	TC-21.21	1-20-23	TC-83.20	7-15-22	938	1-19-18	
RM-1.1	1-15-21	MH-3	7-16-21	MT-097.12	1-20-17	TC-22.10	4-17-20	TC-84.20	10-18-13	995	7-17-15	
RM-3.1	7-20-18			MT-099.20	4-19-19	TC-22.20	1-17-14	TC-85.10	4-17-20			
RM-4.2	4-17-20	DM-1.1	7-17-20	MT-101.60	1-17-20	TC-41.20	10-18-13	TC-85.20	7-20-18			
		DM-1.2	7-16-21	MT-101.70	1-17-20	TC-41.30	10-18-13					

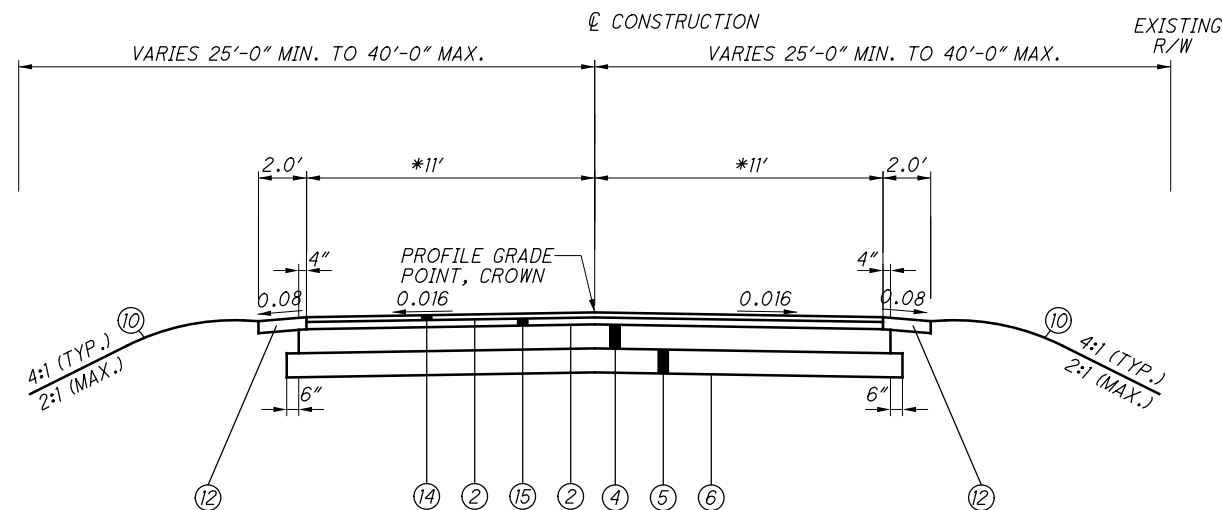
ENGINEER'S SEAL



FEDERAL PROJECT NO. **E191(584)**
 PID NO. **108665**
 CONSTRUCTION PROJECT NO. **NONE**
 RAILROAD INVOLVEMENT **NONE**
LAK-US-20-19.59
PART 1
 1/1088

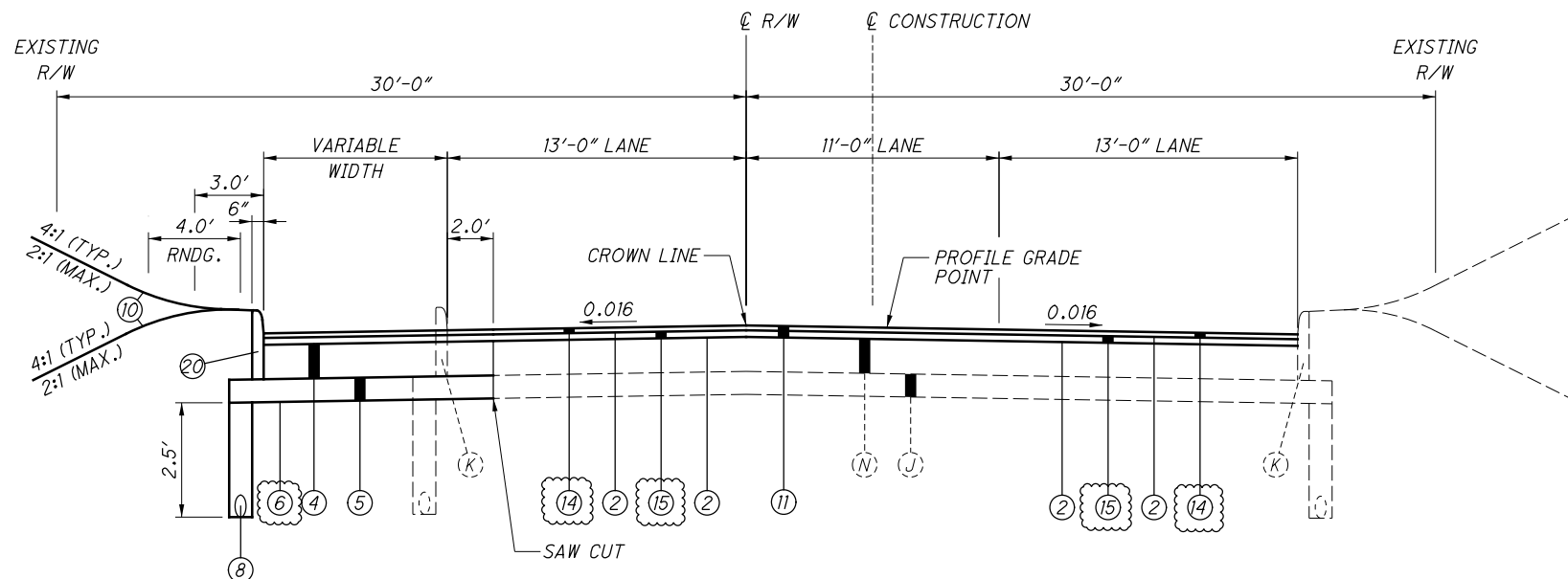
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NOTE: ROADWAY TYPICAL SECTIONS INDICATE THE FINAL CONDITION OF 1.5 INCHES ASPHALT SURFACE COURSE PLACED UPON AN INTERMEDIATE COURSE. DURING MOT PHASES 1, 2, 3, 4, 5 AND 6, 3.25 INCHES OF ASPHALT INTERMEDIATE COURSE WILL TEMPORARILY BE PLACED. DURING MOT PHASE 7, 1.5 INCHES OF THE INTERMEDIATE COURSE WILL BE MILLED AND 1.5 INCHES OF ASPHALT SURFACE COURSE WILL BE PLACED. SEE MAINTENANCE OF TRAFFIC GENERAL NOTES AND TYPICAL SECTIONS.



* VARIES IN CUL-DE-SAC, SEE INTERSECTION DETAIL FOR REFERENCE

MIDDLE RIDGE ROAD
STA. 11+24.00 TO STA. 13+50.00



LANE ROAD WIDENING
STA. 18+15.09 TO STA. 19+78.87

* VARIES 12.0' TO 0.0' STA 109+00.00 TO STA 109+25.89

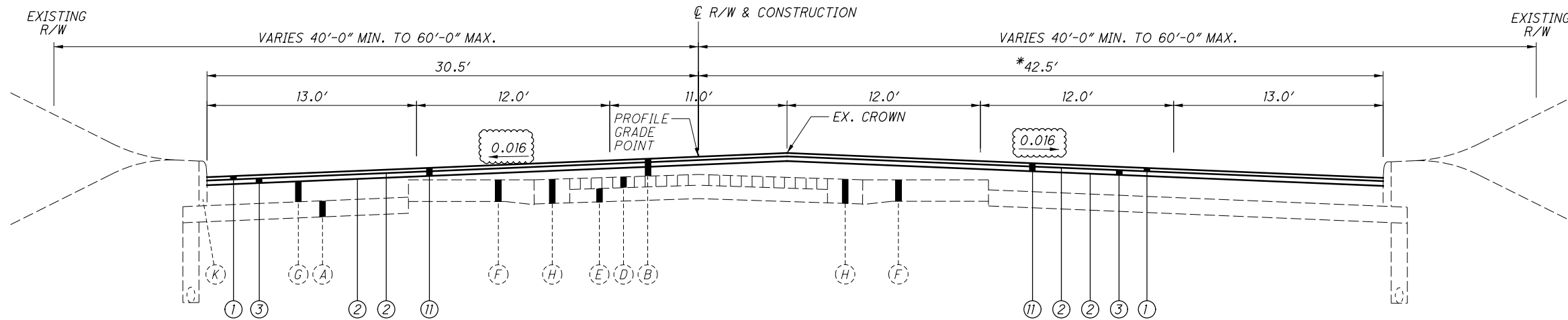
LEGEND

- ① ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (446), AS PER PLAN, PG76-22M
- ② ITEM 407 - NON-TRACKING TACK COAT
- ③ ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A, (446), AS PER PLAN, PG64-28
- ④ ITEM 301 - 6" ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG 64-22
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- ⑧ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑨ ITEM 606 - GUARDRAIL, TYPE MGS
- ⑩ ITEM 659 - SEEDING AND MULCHING, CLASS 1
- ⑪ ITEM 254 - 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE
- ⑫ ITEM 617 - 3 1/4" COMPACTED AGGREGATE
- ⑬ ITEM 608 - 4" CONCRETE WALK
- ⑭ ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
- ⑮ ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
- ⑯ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449)
- ⑰ ITEM 609 - CURB, TYPE 3A
- ⑱ ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP
- ⑲ ITEM 609 - CONCRETE MEDIAN
- ⑳ ITEM 609 - CURB, TYPE 6
- ㉑ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
- ㉒ ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN

LEGEND

- | | |
|--------------------|----------------------------|
| (A) 3"-5" ASPHALT | (H) 9" CONCRETE |
| (B) 6"-8" ASPHALT | (I) 9" REINFORCED CONCRETE |
| (C) 12" ASPHALT | (J) AGGREGATE BASE |
| (D) 4" BRICK | (K) CONCRETE CURB |
| (E) 4"-6" CONCRETE | (L) MEDIAN |
| (F) 7"-8" CONCRETE | (M) SANDSTONE CURB |
| (G) 8" CONCRETE | (N) 9" ASPHALT |

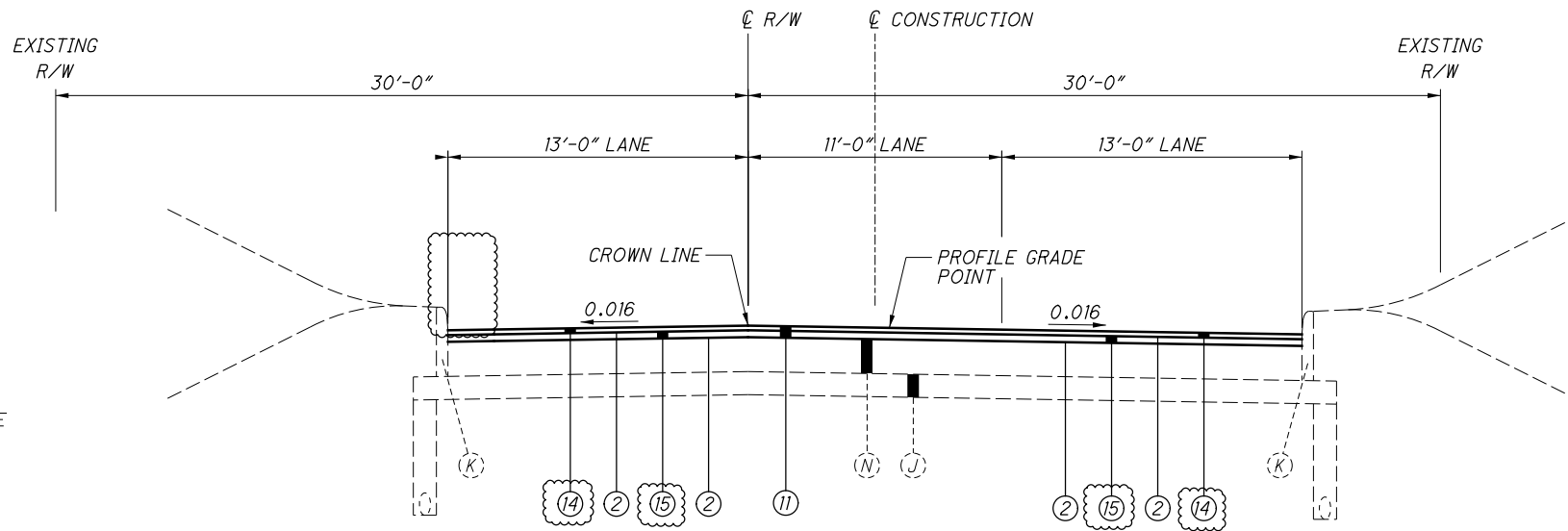
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U.S. 20 - RESURFACING 6 LANE SECTION

STA. 174+35.39 TO STA. 177+82.31

* VARIES 30.50' TO 42.50'
STA. 174+35.39 TO 174+87.13
* VARIES 42.50' TO 30.5'
STA. 177+51.64 TO 177+82.31



LANE ROAD RESURFACING

STA. 17+50 TO STA. 18+15.09

CENTER ROAD RESURFACING

STA. 8+84.09 TO STA. 9+66.73

TOWNLINER ROAD RESURFACING

STA. 9+01.54 TO STA. 9+67.42

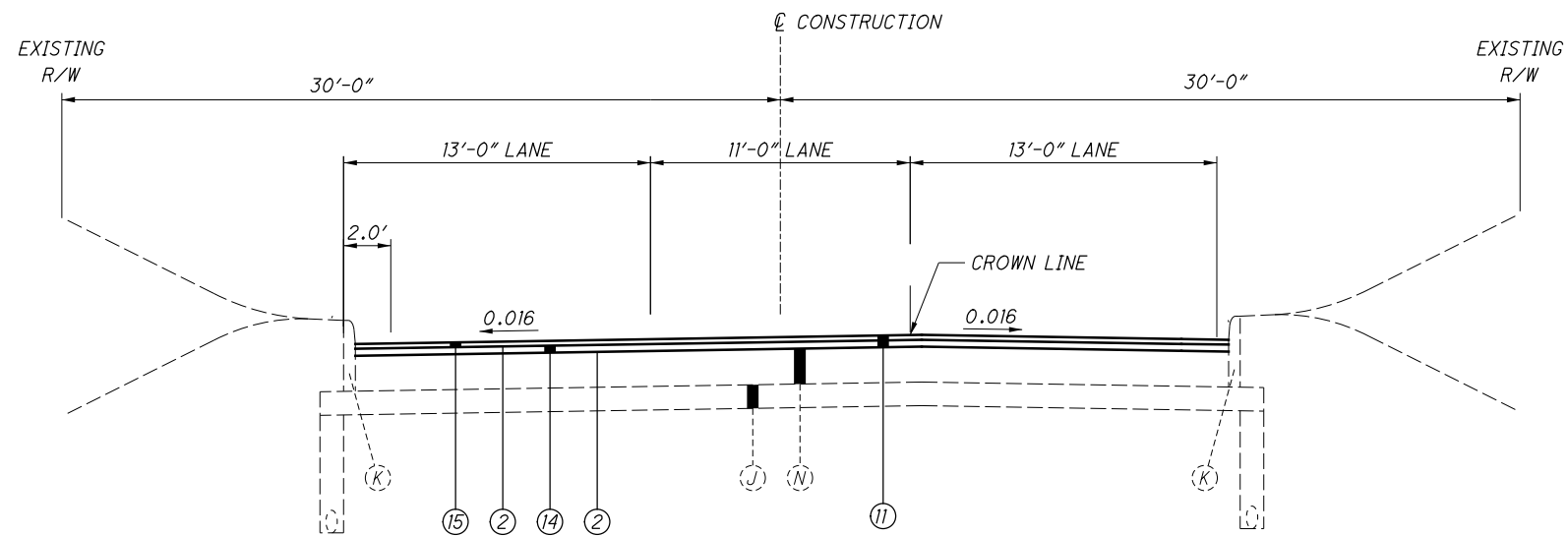
LEGEND

- | | |
|--------------------|----------------------------|
| (A) 3"-5" ASPHALT | (H) 9" CONCRETE |
| (B) 6"-8" ASPHALT | (I) 9" REINFORCED CONCRETE |
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| (D) 4" BRICK | (K) CONCRETE CURB |
| (E) 4"-6" CONCRETE | (L) MEDIAN |
| (F) 7"-8" CONCRETE | (M) SANDSTONE CURB |
| (G) 8" CONCRETE | (N) 9" ASPHALT |

LEGEND

- | | |
|---|---|
| ① ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (446), AS PER PLAN, PG76-22M | ⑫ ITEM 617 - 3 1/4" COMPACTED AGGREGATE |
| ② ITEM 407 - NON-TRACKING TACK COAT | ⑬ ITEM 608 - 4" CONCRETE WALK |
| ③ ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A, (446), AS PER PLAN, PG64-28 | ⑭ ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 |
| ④ ITEM 301 - 6" ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG 64-22 | ⑮ ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449) |
| ⑤ ITEM 304 - 6" AGGREGATE BASE | ⑯ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449) |
| ⑥ ITEM 204 - SUBGRADE COMPACTION | ⑰ ITEM 609 - CURB, TYPE 3A |
| ⑦ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2 | ⑱ ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P |
| ⑧ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC | ⑲ ITEM 609 - CONCRETE MEDIAN |
| ⑨ ITEM 606 - GUARDRAIL, TYPE MGS | ⑳ ITEM 609 - CURB, TYPE 6 |
| ⑩ ITEM 659 - SEEDING AND MULCHING, CLASS 1 | ㉑ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN |
| ⑪ ITEM 254 - 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE | ㉒ ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN |

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TOWNLIN ROAD RESURFACING
 STA. 10+32.58 TO STA. 11+02.86

LEGEND

- | | |
|--------------------|----------------------------|
| (A) 3"-5" ASPHALT | (H) 9" CONCRETE |
| (B) 6"-8" ASPHALT | (I) 9" REINFORCED CONCRETE |
| (C) 12" ASPHALT | (J) AGGREGATE BASE |
| (D) 4" BRICK | (K) CONCRETE CURB |
| (E) 4"-6" CONCRETE | (L) MEDIAN |
| (F) 7"-8" CONCRETE | (M) SANDSTONE CURB |
| (G) 8" CONCRETE | (N) 9" ASPHALT |

LEGEND

- | | |
|---|--|
| (1) ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (446), AS PER PLAN, PG76-22M | (12) ITEM 617 - 3 1/4" COMPACTED AGGREGATE |
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| (3) ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A, (446), AS PER PLAN, PG64-28 | (14) ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 |
| (4) ITEM 301 - 6" ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG 64-22 | (15) ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449) |
| (5) ITEM 304 - 6" AGGREGATE BASE | (16) ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449) |
| (6) ITEM 204 - SUBGRADE COMPACTION | (17) ITEM 609 - CURB, TYPE 3A |
| (7) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2 | (18) ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P |
| (8) ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC | (19) ITEM 609 - CONCRETE MEDIAN |
| (9) ITEM 606 - GUARDRAIL, TYPE MGS | (20) ITEM 609 - CURB, TYPE 6 |
| (10) ITEM 659 - SEEDING AND MULCHING, CLASS 1 | (21) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN |
| (11) ITEM 254 - 3 1/4" PAVEMENT PLANING, ASPHALT CONCRETE | (22) ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN |

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ROADWAY

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

WHERE MGS GUARDRAIL CONNECTS TO EXISTING TYPE 5 GUARDRAIL, A LENGTH OF 25' OF GUARDRAIL REBUILT HAS BEEN PROVIDED TO MAKE THE HEIGHT TRANSITION BETWEEN THE DISSIMILAR GUARDRAIL TYPES.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 203 - EMBANKMENT

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ADDITIONAL EMBANKMENT REQUIRED BETWEEN THE BOTTOM OF THE EXISTING PAVEMENT AND THE TOP OF THE PROPOSED SUBGRADE WHICH WAS IS NOT QUANTIFIED IN THE CROSS SECTIONS OR EARTHWORK CALCULATION SHEETS. THIS EMBANKMENT QUANTITY IS REQUIRED FOR AREAS OF THE PROJECT WHERE THE BOTTOM OF EXISTING PAVEMENT IS BELOW THE PROPOSED SUBGRADE.

ITEM 203, EMBANKMENT, 5938 CY

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCIDENTAL TO ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

- 1. SET GUARDRAIL POSTS
- 2. PLACE ITEM 441

METHOD B:

- 1. PLACE ITEM 441
- 2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
- 3. SET GUARDRAIL POSTS
- 4. PATCH AROUND POSTS. THE MATERIALS USED FOR

PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

ITEM 202 REMOVAL MISC.: LIGHT POLE

REMOVE THE LUMINAIRE, SUPPORT, FOUNDATION AND ANY ASSOCIATED WIRING AS INDICATED FOR REMOVAL. REMOVE FOUNDATIONS TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

LIGHT POLES REMOVED WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: LIGHT POLE, EACH

EXISTING WEATHER STATION (STA 310+75. LT) REMOVAL COORDINATION AND FOUNDATION REMOVAL

CONTACT HEATHER KRANNITZ (HEATHER.KRANNITZ@DOT.OHIO.GOV, TEL. 614-397-1882) 2 MONTHS PRIOR TO THE PAVEMENT WIDENING/EARTHWORK AT THIS LOCATION TO ENSURE THAT THE STATION CAN BE REMOVED.

AFTER THE WEATHER STATION HAS BEEN REMOVED BY OTHERS, REMOVE THE FOUNDATION TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR REMOVAL OF THE FOUNDATION REMOVED AND ALL OF THE ABOVE WORK:

ITEM 202 REMOVAL MISC.: WEATHER STATION FOUNDATION, LUMP SUM

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

ITEM 202 REMOVAL MISC.: BUSINESS SIGN

REMOVE THE SIGN, SUPPORT, FOUNDATION AND ANY ASSOCIATED WIRING AS INDICATED FOR REMOVAL WITHIN THE LIMITS OF THE RIGHT OF WAY OR TEMPORARY RIGHT-OF-WAY. CUT AND CAP THE EXISTING WIRING AT THE RIGHT OF WAY LINE. REMOVE FOUNDATIONS TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

DELIVER THE EXISTING SIGN TO THE PROPERTY OWNER OR DISPOSE OF IF THE OWNER DOES NOT WANT TO SALVAGE THE REMOVED MATERIALS. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER REGARDING THIS PROPOSED WORK FOR THE DISCONNECTION OF THE CIRCUIT AND TO DETERMINE THE PROPERTY OWNERS INTENT TO SALVAGE THE EXISTING BUSINESS SIGN.

THE ABOVE NOTED WORK SHALL BE COMPLETED AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE NOTED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BUSINESS SIGN, EACH

ITEM 202 REMOVAL MISC.: BOULDER

REMOVE THE BOULDERS AS INDICATED FOR REMOVAL IN THEIR ENTIRETY. BACKFILL ANY CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

BOULDERS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BOULDER, EACH

ITEM 202 REMOVAL MISC.: CONCRETE BLOCK

REMOVE THE CONCRETE BLOCKS (MEASURING APPROXIMATELY 2.5' X 2.5' X 6') AS INDICATED FOR REMOVAL IN THEIR ENTIRETY. BACKFILL ANY CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

CONCRETE BLOCKS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: CONCRETE BLOCK, EACH

**ITEM 202 REMOVAL MISC.: BOLLARD
ITEM 202 REMOVAL MISC.: POST**

REMOVE THE BOLLARD OR POST AND FOUNDATION AS INDICATED FOR REMOVAL. REMOVE FOUNDATIONS TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

BOLLARDS AND POSTS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BOLLARD, EACH
ITEM 202 REMOVAL MISC.: POST, EACH

ITEM 202 REMOVAL MISC.: LANDSCAPE LIGHTS

REMOVE THE LIGHTS AND ANY ASSOCIATED WIRING AS INDICATED FOR REMOVAL.

LANDSCAPE LIGHTS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: LANDSCAPE LIGHT, EACH

**ITEM 202 REMOVAL MISC.: STONE WALL
ITEM 202 REMOVAL MISC.: CONCRETE WALL**

REMOVE THE WALL AND FOUNDATION TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

WALLS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: STONE WALL, FOOT
ITEM 202 REMOVAL MISC.: CONCRETE WALL, FOOT

ITEM 202 REMOVAL MISC.: BUILDING FOUNDATION

REMOVE THE FOUNDATION AS INDICATED FOR REMOVAL TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BREAK UP BASEMENT FLOORS TO REMAIN IN PLACE AND SEAL REMAINING DRAINS WITH MASONRY. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

FOUNDATIONS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BUILDING FOUNDATION, EACH

ITEM SPECIAL - PARKING BLOCK REMOVED

REMOVE THE PARKING BLOCKS AND STAKES AS INDICATED FOR REMOVAL.

PARKING BLOCKS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM SPECIAL - PARKING BLOCK REMOVED, EACH

CALCULATED
TLS
CHECKED
JMP

GENERAL NOTES

LAK-US-20-19.59
PART 1

ITEM 614. MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON NORTH RIDGE ROAD (U.S. 20) BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON NARROWS ROAD, BLACKMORE ROAD, PERRY PARK ROAD, PARMLY ROAD, RED MILL VALLEY ROAD, CALL ROAD AND ANTIOCH ROAD, EXCEPT FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 34-40. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$300 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES AND THE QUANTITIES IN THE TABLE BELOW HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 608 TEMPORARY ASPHALT CONCRETE WALK, (AS PER PLAN) 45,200 SF

ITEM 615 ROADS FOR MAINTAINING TRAFFIC LUMP SUM

ITEM 616, WATER 100 M. GAL.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGN

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED SIDE STREET CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 4 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER. THESE REQUIREMENTS APPLY TO ALL PERMANENT AND TEMPORARY PAVEMENT NOT PROTECTED BY BARRIER.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 19204 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 2681 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED. ANY UNDERCUT SHALL BE FILLED THE SAME DAY AS THE EXCAVATION.

WORK ZONE MARKINGS (WINTER APPLICATION)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11. MARKINGS SHALL BE APPLIED ON ROADWAY AFFECTED BY PHASE 1, PHASE 2, PHASE 3 AND PHASE 4 CONSTRUCTION:

WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT 11.18 MILE
WORK ZONE CENTER LINE, CLASS I, 642 PAINT 6.62 MILE
WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT 1.28 MILE
WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT 3156 FT
WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT 742 FT
WORK ZONE STOP LINE, CLASS I, 642 PAINT 693 FT
WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT 2665 FT
WORK ZONE ARROW, CLASS I, 642 PAINT 72 EACH

WORK ZONE MARKINGS (PRE-FINAL APPLICATION)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11. MARKINGS SHALL BE APPLIED AFTER PAVEMENT PLANING AND AFTER PLACEMENT OF THE SURFACE COURSE PRIOR TO THE FINAL PAVEMENT MARKINGS BEING APPLIED:

WORK ZONE LANE LINE, CLASS III, 4" 642 PAINT 21.26 MILE
WORK ZONE CENTER LINE, CLASS III, 642 PAINT 12.78 MILE
WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT 5.06 MILE
WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT 8926 FT
WORK ZONE DOTTED LINE, CLASS III, 4", 642 PAINT 1600 FT
WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT 1142 FT
WORK ZONE STOP LINE, CLASS III, 642 PAINT 1144 FT
WORK ZONE CROSSWALK LINE, CLASS III, 12", 642 PAINT 4068 FT
WORK ZONE ARROW, CLASS III, 642 PAINT 120 EACH
WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT 74 SF
CHEVRON MARKING, TYPE I 450 FEET

ITEM 614. WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL. WORK ZONE TRAFFIC SIGNAL

THE ADDITION OF TEMPORARY TRAFFIC SIGNALS AND EQUIPMENT AND MODIFICATIONS TO EXISTING TRAFFIC SIGNALS AND EQUIPMENT SHALL BE PAID FOR UNDER THE UNIT PRICE BID FOR ITEM 614 WORK ZONE TRAFFIC SIGNAL AT THE FOLLOWING INTERSECTIONS:

PHASE 1: CENTER ROAD, TOWNLINE ROAD

PHASE 2: CENTER ROAD, TOWNLINE ROAD

PHASE 5: LANE ROAD

PHASE 6: LANE ROAD

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK:

ITEM 614, WORK ZONE TRAFFIC SIGNAL 24 EACH

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 1000 M. GAL.

ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET 30 OF THE PLANS. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 6 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 180 SIGN MONTH
(ASSUMING 5 PCMS SIGNS FOR 36 MONTH(S))

CALCULATED
JDC
CHECKED
EJT

MAINTENANCE OF TRAFFIC GENERAL NOTES

LAK-US-20-19.59
PART 1

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MAINTAINING DRIVEWAY ACCESS

COMMERCIAL AND HANDICAP PROPERTIES: ACCESS TO ALL COMMERCIAL AND HANDICAP PROPERTY SHALL BE MAINTAINED AT ALL TIMES, AS FOLLOWS:

FOR PROPERTIES WITH MULTIPLE DRIVEWAYS: DRIVEWAY CONSTRUCTION WILL BE SCHEDULED SO THAT AT LEAST ONE ACCESS DRIVEWAY IS OPEN AND CLEAR WHILE THE OTHER DRIVEWAY(S) ARE BEING CONSTRUCTED.

FOR PROPERTIES WITH ONLY ONE ACCESS AND PROPERTIES WITH ONE WAY DIRECTIONAL DRIVEWAYS: DRIVEWAY CONSTRUCTION SHALL BE SCHEDULED OUTSIDE OF NORMAL BUSINESS HOURS. IF THE PROPERTY CANNOT BE WITHOUT ACCESS TEMPORARILY (SUCH AS OUTSIDE OF NORMAL BUSINESS HOURS OR OVER THE WEEKEND), ACCESS TO THE PROPERTY SHALL BE MAINTAINED AS FOLLOWS:

THE PAVEMENT IN FRONT OF THE DRIVEWAY SHALL BE REMOVED AND TRAFFIC COMPACTED SURFACE FURNISHED, INSTALLED, AND COMPACTED ON TOP OF THE EXPOSED SUBGRADE. THIS WORK SHALL BE PERFORMED IN ONE OPERATION SO THAT THE DISRUPTION TO THE PROPERTY IS KEPT AT AN ABSOLUTE MINIMUM. THE CONTRACTOR WILL MAINTAIN THE RAMP AND REPLACE MATERIAL AS NECESSARY.

THE INSTALLATION OF THE PROPOSED DRIVEWAY AND THE CONCRETE PAVEMENT IN FRONT OF THE DRIVEWAY SHALL BE PERFORMED AS ONE OPERATION UNLESS APPROVED BY THE ENGINEER IN ORDER TO MINIMIZE THE DURATION OF A REQUIRED OUTAGE. IF THE DRIVEWAY IS MORE THAN 20 FEET WIDE, CONSTRUCTION ON THE DRIVEWAY AND PAVEMENT SHALL BE IN TWO (2) PHASES, WITH ONE HALF OF THE DRIVE REMAINING OPEN WHILE THE OTHER HALF IS CLOSED AND BEING CONSTRUCTED. THE CONTRACTOR SHALL PROVIDE ACCESS IMMEDIATELY AFTER ANY MINIMUM REQUIRED TIME TO PERFORM DRIVEWAY RECONSTRUCTION WORK. THE CONTRACTOR SHALL ALSO PROVIDE ACCESS TO THE PROPERTY DURING THE CURE PERIOD.

IN LOCATIONS WHERE A DRIVEWAY TO A PARKING LOT IS CLOSED TO TRAFFIC, THE DRIVE SHALL HAVE PROPER PROTECTION, SUCH AS SIGNS, FENCING, BARRICADES, AND DRUMS, PLACED AND MAINTAINED AROUND IT.

WHERE DIRECTED BY THE ENGINEER, ONE (1) BUSINESS ENTRANCE SIGN (M4-H15) SIGN SHALL BE PROVIDED, INSTALLED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR AT AFFECTED COMMERCIAL DRIVEWAYS. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING AND BE MOUNTED ON TWO #3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING MT-105.10. THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND, EXCEPT THAT THE ACTUAL BUSINESS NAME SHALL BE SUBSTITUTED FOR THE WORD "BUSINESS."

RESIDENTIAL PROPERTIES: THE CONTRACTOR SHALL MAKE REASONABLE PROVISIONS TO ALLOW RESIDENTIAL ACCESS AT ALL TIME OR OTHERWISE ALLOW RESIDENTS TO PARK SAFELY WITHIN THE PROJECT LIMITS WHEN ACCESS IS NOT POSSIBLE. THE MAXIMUM OUT OF SERVICE TIME FOR ANY RESIDENTIAL DRIVE SHALL BE ONE (1) DAY. RESIDENTIAL ACCESS SHALL BE MAINTAINED USING THE FOLLOWING PROCEDURES, AS DIRECTED BY THE ENGINEER:

AFTER THE EXISTING PAVEMENT AND CURB HAVE BEEN REMOVED, THE CONTRACTOR SHALL IMMEDIATELY MAINTAIN VEHICULAR ACCESS TO THE DRIVEWAY USING ITEM 410, TRAFFIC COMPACTED SURFACE, BETWEEN THE PAVEMENT AND THE DRIVEWAY. STEEL PLATES MAY ALSO BE USED.

WHILE THE CONCRETE PAVEMENT AND CURB IS BEING INSTALLED AND IS CURING, THE CONTRACTOR SHALL PROVIDE PARKING AREAS SAFELY WITHIN THE PROJECT WORK LIMITS OR ALONG ADJACENT SIDE STREETS. DURING THIS TIME, THE EXISTING SIDEWALKS BETWEEN THE SIDE STREETS SHALL REMAIN IN SERVICE FOR ACCESS FROM THE PARKING AREA TO THE PROPERTY.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN, FOR THE APPROVAL OF THE ENGINEER, WHICH OUTLINES HIS/HER STRATEGY FOR THE MAINTENANCE OF SAFE ACCESS TO COMMERCIAL, HANDICAP AND RESIDENTIAL PROPERTY AND/OR FOR ALLOWING RESIDENTS TO PARK SAFELY WITHIN THE PROJECT LIMITS WHEN ACCESS IS NOT POSSIBLE.

THE PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO MAINTAIN COMMERCIAL, HANDICAP AND RESIDENTIAL ACCESS AND/OR SAFE PARKING AREAS FOR RESIDENTS, INCLUDING TRAFFIC COMPACTED SURFACE AND ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC; EXCEPT FOR THE SEPARATELY ESTIMATED ITEMS/QUANTITIES ADDITIONALLY PROVIDED IN THE PLANS FOR MAINTAINING TRAFFIC (ACCESS).

EXISTING SIGNS

IN ANY PHASE, WHEN A MAINTENANCE OF TRAFFIC SIGN CONTRADICTS AN EXISTING SIGN, THE EXISTING SIGN SHALL BE COVERED. ALL OTHER SIGNS SHALL BE MAINTAINED DURING CONSTRUCTION AND RELOCATED NEARBY IF NECESSARY.

LAKETRAN BUS STOPS

LAKETRAN BUS STOPS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. EXISTING BUS STOP SIGNS SHALL BE MOVED TO A NEARBY LOCATION IF NECESSARY. ALL BUS STOP SIGNS SHALL BE MAINTAINED AND RELOCATED AS NECESSARY.

MAIL BOXES

MAIL BOXES SHALL BE CAREFULLY RELOCATED AS NECESSARY BY THE CONTRACTOR DURING CONSTRUCTION SO THAT THEY ARE ACCESSIBLE TO MAIL DELIVERY TRUCKS. ANY DAMAGE TO THE MAILBOX SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DAMAGED MAILBOXES SHALL BE REPLACED BY THE CONTRACTOR IN KIND.

ITEM 611 CATCH BASIN. NO. 6. AS PER PLAN

THE CATCH BASIN SHALL BE AS PER ITEM 611, EXCEPT THAT THE GRATE SHALL BE WELDED TO THE FRAME WHEN CALLED FOR IN THE PLANS. THE CATCH BASIN SHALL BE TEMPORARILY USED DURING PHASES 1, 3, AND 5 AND REMOVED IN PHASES 2, 4, AND 6. THE CATCH BASINS CAN BE USED ELSEWHERE IN THE PROJECT FOR MAINTENANCE OF TRAFFIC IF APPLICABLE. ANY CATCH BASINS LEFT OVER AFTER COMPLETION OF THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

THE REQUIREMENTS OF 611.04.D AND 611.14 DO NOT APPLY TO DRAINAGE STRUCTURES USED FOR MAINTENANCE OF TRAFFIC.

**ITEM 611 12" CONDUIT. TYPE B. AS PER PLAN
ITEM 611 15" CONDUIT. TYPE B. AS PER PLAN
ITEM 611 24" CONDUIT. TYPE B. AS PER PLAN**

THIS ITEM INCLUDES THE REMOVAL OF THE CONDUIT, OR ABANDONMENT OF THE CONDUIT IF THE CONDUIT HAS BEEN PLACED UNDER PERMANENT PAVEMENT, AFTER THE MAINTENANCE OF TRAFFIC PHASE IN WHICH IT IS USED HAS BEEN COMPLETED. THE ABANDONED CONDUIT SHALL BE FILLED AND PLUGGED AS PER THE ITEM SPECIAL-FILL AND PLUG EXISTING CONDUIT NOTE SHOWN ON SHEET 24.

THE REQUIREMENTS OF 611.04.D, 611.12 AND 611.13 DO NOT APPLY TO CONDUIT USED FOR MAINTENANCE OF TRAFFIC.

**ITEM 611 CATCH BASIN RECONSTRUCTED TO GRADE. AS PER PLAN
ITEM 611 INLET RECONSTRUCTED TO GRADE. AS PER PLAN**

WHEN RECONSTRUCTING CATCH BASINS AND INLETS TO GRADE FOR THE PURPOSE OF MAINTAINING TRAFFIC, FOLLOW THE PROCEDURE BELOW.

- CAREFULLY REMOVE AND CLEAN THE EXISTING CASTINGS.
- REMOVE EXISTING WALLS OF CATCH BASINS AND INLETS BELOW THE GRATES TO THE DEPTH NECESSARY FOR PLACEMENT OF TEMPORARY PAVEMENT, OR ANY POINTS OF WALL FAILURE.
- INSTALL A 1-1/4 INCH MINIMUM STEEL ROAD PLATE AS SHOWN IN THE TEMPORARY DRAINAGE DETAIL.
- WHERE EXISTING BASINS WILL NOT BE REMOVED IN A LATER PHASE OF THE CONTRACT, REMOVE THE ROAD PLATE AND USING THE SALVAGED CASTING, RECONSTRUCT THE STRUCTURE TO THE ORIGINAL PLAN GRADE, CONFORMING AS NEARLY AS PRACTICABLE TO THE EXISTING DIMENSION AND TYPE OF CONSTRUCTION.

**ITEM 606 - GUARDRAIL. TYPE MGS. AS PER PLAN
ITEM 606 - ANCHOR ASSEMBLY. MGS TYPE E. AS PER PLAN (MASH 2016)
ITEM 606 - ANCHOR ASSEMBLY. MGS TYPE T. AS PER PLAN**

GUARDRAIL AND ANCHOR ASSEMBLIES INSTALLED FOR MAINTAINING TRAFFIC SHALL BE REMOVED AND DISPOSED OF AFTER COMPLETION OF THE PHASE IN WHICH THEY WERE CONSTRUCTED AND USED.

ITEM 614 - DETOUR SIGNING

SIZE AND PLACEMENT OF DETOUR SIGNS (M4-9) SHOULD FOLLOW THE REQUIREMENTS OF THE ODOT SECTION 6F.03, SECTION 2A.11 AND TABLE 6F.01.

DETOUR SIGNING SHALL PROVIDE DRIVERS ADEQUATE TIME TO CLEARLY READ THE SIGNS AND MAKE THE PROPER DECISIONS AT EACH REQUIRED TURNING MOVEMENT. THE DESIGNATED DETOUR ROUTE SHALL BE SIGNED IN ACCORDANCE WITH THE REQUIREMENTS BELOW:

- APPROXIMATELY 1500 FEET PRIOR TO TIP OF THE PAINTED GORE AT AN INTERCHANGE WHEN EXITING A HIGH SPEED (45 MPH OR HIGHER) FACILITY.
- AT OR NEAR THE EXISTING SIGN IN THE GORE OF AN INTERCHANGE RAMP.
- AT OR NEAR THE FIRST EXISTING LANE ASSIGNMENT SIGN ON AN INTERCHANGE EXIT RAMP.
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT THE END OF AN EXIT RAMP.
- APPROXIMATELY 500 FEET PRIOR TO A REQUIRED TURN AT AN INTERSECTION NOT CONTROLLED BY A STOP SIGN (FOR 45 MPH OR HIGHER ONLY).
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT AN INTERSECTION.
- EVERY TWO MILES ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS OUTSIDE A CITY.
- EVERY TWO BLOCKS ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS WITHIN A CITY.
- AT ANY OTHER INTERSECTION OR DECISION POINT WHERE THE DETOUR ROUTE IS CONTRARY TO THE NORMAL, EXPECTED TURNING MANEUVER OR OTHERWISE UNCLEAR.

DETOUR SIGNS SHALL BE PLACED, WHEN POSSIBLE, NEXT TO BUT NOT BLOCKING EXISTING ROUTE MARKERS OR LANE ASSIGNMENT SIGNS. DETOUR SIGNS SHALL NOT OBSCURE OR BE OBSCURED BY OTHER EXISTING OR TEMPORARY SIGNS.

DETOUR SIGNS SHALL BE ERECTED AND/OR UNCOVERED PRIOR TO THE ROAD OR RAMP BEING CLOSED TO TRAFFIC BUT NO EARLIER THAN FOUR HOURS PRIOR TO THE CLOSURE. DETOUR SIGNS SHALL BE COVERED AND/OR REMOVED NO LATER THAN FOUR HOURS FOLLOWING THE ROAD OR RAMP RE-OPENING TO TRAFFIC.

PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, PROPER SIGN PLACEMENT AND SIZING, TIMELY ERECTING AND/OR UNCOVERING OF SIGNS, MAINTAINING SIGNS, AND TIMELY COVERING AND/OR REMOVING SIGNS AND SUPPORTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.
ITEM 614 - DETOUR SIGNING LUMP SUM

ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC. CLASS A. AS PER PLAN

ANY ASPHALT OR CONCRETE CURBS THAT ARE CONSTRUCTED ON TOP OF THE TEMPORARY PAVEMENT OR INTEGRAL TO THE TEMPORARY PAVEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

ANTI-SEGREGATION IS NOT REQUIRED FOR ITEM 302 USED IN THE FLEXIBLE PAVEMENT OPTION.

ADJUSTMENT OF VALVE BOXES AND SERVICE BOXES NECESSARY FOR THE PLACEMENT OF THIS ITEM SHALL BE CONSIDERED INCIDENTAL TO THIS WORK.

690E98000 - ITEM SPECIAL - REIMBURSEMENT FOR MOT ITEMS PERMANENTLY DAMAGED BY TRAFFIC

THIS ITEM OF WORK PROVIDES A FIXED UNIT COST OF 18 PER EACH FOR THE REPAIR OR REPLACEMENT OF PERMANENTLY DAMAGED TEMPORARY MAINTENANCE OF TRAFFIC ITEMS ELIGIBLE UNDER C&MS 614.16.C AND C&MS 107.15.

IF THE ENGINEER DETERMINES THAT THE REQUIREMENTS OF C&MS 614.16.C AND C&MS 107.15 HAVE BEEN MET, THE DEPARTMENT WILL REIMBURSE THE CONTRACTOR UPON RECEIPT AND ACCEPTANCE OF THE COSTS IN ACCORDANCE WITH C&MS 109.05. THE PAYMENT DUE WILL BE DEDUCTED FROM ITEM SPECIAL - REIMBURSEMENT FOR MOT ITEMS PERMANENTLY DAMAGED BY TRAFFIC. C&MS TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO COMPLETE THIS ITEM OF WORK:

ITEM SPECIAL - REIMBURSEMENT FOR MOT ITEMS PERMANENTLY DAMAGED BY TRAFFIC 250,000 EACH

ITEM 614. REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECAME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

LAK-US-20-19.59
PART 1

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MAINTENANCE OF TRAFFIC NARRATIVE

THIS PROJECT HAS BEEN DIVIDED INTO TWO PARTS: PART 1 AND PART 2. PART 2 (LAK-US-20-24.99) IS A TWO YEAR PROJECT AND SHALL BE BUILT FIRST. PART 1 (LAK-US-20-19.59) IS A THREE YEAR PROJECT AND SHALL BE BUILT SECOND. WITHIN EACH OF THESE PARTS, PHASES SHALL BE CONSTRUCTED FROM EAST TO WEST PER THE CONSTRUCTION SEQUENCES. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL ONLY OCCUR IN THE PHASE WHERE IT IS IMMEDIATELY NEEDED UNLESS APPROVED BY THE ENGINEER. NO CONSTRUCTION SHALL OCCUR DURING THE WINTER MONTHS, BETWEEN NOVEMBER 1 TO APRIL 1, UNLESS APPROVED BY THE ENGINEER.

SEQUENCE OF CONSTRUCTION

UTILITY RECONSTRUCTION

UTILITY RECONSTRUCTION (BY OTHERS) IS TO OCCUR IN 2023.

PRE-PHASE 1A:

1. CONSTRUCT THE TEMPORARY PAVEMENT BETWEEN STA. 250+00 TO STA. 257+00, RT. WORK SHALL BE COMPLETED USING DAILY LANE CLOSURES.

2. CONSTRUCT THE LEFT HALF OF THE CULVERT AT STA. 253+86.

3. CONSTRUCTION OF PRE-PHASE 1A SHALL OCCUR IN 2025.

PRE-PHASE 1B:

1. CONSTRUCT THE TEMPORARY PAVEMENT BETWEEN STA. 247+00 TO STA. 260+50, LT. WORK SHALL BE COMPLETED USING SHORT TERM LANE CLOSURES.

2. CONSTRUCT THE RIGHT HALF OF THE CULVERT AT STA. 253+86.

3. CONSTRUCTION OF PRE-PHASE 1B SHALL OCCUR IN 2025.

PRE-PHASE 1C:

CONSTRUCT THE TEMPORARY PAVEMENT FROM STA. 283+46.3 TO STA. 402+72.3, LT. WORK SHALL BE COMPLETED BY APRIL 1, 2026.

THE CONTRACTOR MAY UTILIZE A LONG TERM CLOSURE OF THE WESTBOUND OUTSIDE LANE FOR A DURATION OF FOURTEEN (14) CALENDAR DAYS IN ORDER TO INSTALL THE TEMPORARY PAVEMENT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,500 FOR EACH CALENDAR DAY THAT THE WESTBOUND OUTSIDE LANE REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED LIMIT.

PHASE 1:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE SOUTH SIDE OF U.S. 20 FROM CENTER ROAD (STA. 286+00) TO TOWNLINE ROAD (STA. 399+90). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE CONTRACTOR SHALL BE ALLOWED TO CLOSE EACH SIDE STREET FOR FOURTEEN (14) CONSECUTIVE CALENDAR DAYS. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$300 FOR EACH CALENDAR DAY THAT THE SIDE STREET REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED TIME LIMIT.

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CLOSED DURING THIS PHASE:

CALL ROAD STA. 332+79 RT SIDE STREET

THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE TWO (2) ADJACENT SIDE STREETS AT THE SAME TIME. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

CONSTRUCT THE TEMPORARY PAVEMENT AND TEMPORARY DRAINAGE BETWEEN STA. 283+46.3 AND STA. 402+72.3. PRIOR TO SHIFTING TRAFFIC.

PHASE 2:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE NORTH SIDE OF U.S. 20 FROM CENTER ROAD (STA. 286+00) TO TOWNLINE ROAD (STA. 399+90). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE CONTRACTOR SHALL BE ALLOWED TO CLOSE EACH SIDE STREET FOR FOURTEEN (14) CONSECUTIVE CALENDAR DAYS. LIQUIDATED DAMAGES SHALL BE ASSESSED IN THE AMOUNT OF \$300 FOR EACH CALENDAR DAY THAT THE SIDE STREET REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED TIME LIMIT.

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CLOSED DURING THIS PHASE:

PARMLY ROAD STA. 309+94 LT SIDE STREET
RED MILL VALLEY ROAD STA. 318+50 LT SIDE STREET
ANTIOCH ROAD STA. 357+71 LT SIDE STREET

THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE TWO (2) ADJACENT SIDE STREETS AT THE SAME TIME.

PLACE TEMPORARY STRIPING AS PER THE STRIPING PLAN AFTER CONSTRUCTION IS COMPLETE.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 2 SHALL BE COMPLETED BY OCTOBER 15, 2026.

TRAFFIC TO RETURN TO NORMAL FOR WINTER BY NOV. 1, 2026

PRE-PHASE 3 (TO BE COMPLETED CONCURRENTLY WITH PHASE 2):

CONSTRUCT THE CULVERT EXTENSION AT STA. 199+57.52, LT.

CONSTRUCT THE TEMPORARY PAVEMENT AND TEMPORARY DRAINAGE BETWEEN STA. 182+20 AND STA. 273+30. THE CONTRACTOR MAY UTILIZE A LONG TERM CLOSURE OF THE WESTBOUND OUTSIDE LANE FOR A DURATION OF FOURTEEN (14) CALENDAR DAYS IN ORDER TO INSTALL THE TEMPORARY PAVEMENT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,500 FOR EACH CALENDAR DAY THAT THE WESTBOUND OUTSIDE LANE REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED LIMIT.

PRE-PHASE 3 SHALL BE COMPLETED BY APRIL 1, 2027.

PHASE 3:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE SOUTH SIDE OF U.S. 20 FROM LANE ROAD (STA. 182+20) TO CENTER ROAD (STA. 273+30). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CONSTRUCTED UTILIZING PART-WIDTH CONSTRUCTION:

OHIO STREET STA. 219+68 RT

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 4:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE NORTH SIDE OF U.S. 20 FROM LANE ROAD (STA. 182+20) TO CENTER ROAD (STA. 273+30). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE CONTRACTOR SHALL BE ALLOWED TO CLOSE EACH SIDE STREET FOR FOURTEEN (14) CONSECUTIVE CALENDAR DAYS. LIQUIDATED DAMAGES SHALL BE ASSESSED IN THE AMOUNT OF \$300 FOR EACH CALENDAR DAY THAT THE SIDE STREET REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED TIME LIMIT.

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CLOSED DURING THIS PHASE:

BLACKMORE ROAD STA. 188+06 LT SIDE STREET
PERRY PARK ROAD STA. 229+21 LT SIDE STREET

THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE TWO (2) ADJACENT SIDE STREETS AT THE SAME TIME.

AFTER CONSTRUCTION IS COMPLETE, PLACE TEMPORARY STRIPING AS PER THE STRIPING PLAN.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 4 SHALL BE COMPLETED BY OCTOBER 15, 2027.

TRAFFIC TO RETURN TO NORMAL FOR WINTER BY NOV. 1, 2027

PRE-PHASE 5 (TO BE COMPLETED CONCURRENTLY WITH PHASE 4)

CONSTRUCT THE CULVERT EXTENSION AT STA. 149+38, LT.

CONSTRUCT THE TEMPORARY PAVEMENT AND TEMPORARY DRAINAGE BETWEEN STA. 101+50 AND STA. 170+88.8. THE CONTRACTOR MAY UTILIZE A LONG TERM CLOSURE OF THE WESTBOUND OUTSIDE LANE FOR A DURATION OF FOURTEEN (14) CALENDAR DAYS IN ORDER TO INSTALL THE TEMPORARY PAVEMENT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,500 FOR EACH CALENDAR DAY THAT THE WESTBOUND OUTSIDE LANE REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED LIMIT.

PRE-PHASE 5 SHALL BE COMPLETED BY APRIL 1, 2028.

PHASE 5:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE SOUTH SIDE OF U.S. 20 FROM BRIDGE OVER S.R. 2 EASTBOUND (STA. 101+75) TO LANE ROAD (STA. 168+10). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE FOLLOWING IS A LIST OF RAMPS TO BE CONSTRUCTED UTILIZING PART-WIDTH CONSTRUCTION:

S.R. 2 (EASTBOUND) STA. 108+07 RT

THE CONTRACTOR SHALL BE ALLOWED TO CLOSE EACH SIDE STREET FOR FOURTEEN (14) CONSECUTIVE CALENDAR DAYS. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$300 FOR EACH CALENDAR DAY THAT THE SIDE STREET REMAINS CLOSED TO TRAFFIC BEYOND THIS SPECIFIED TIME LIMIT.

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CLOSED DURING THIS PHASE:

NARROWS RD. STA. 144+89 RT SIDE STREET

THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE TWO (2) ADJACENT SIDE STREETS AT THE SAME TIME.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 6:

THIS PHASE WILL INVOLVE THE RECONSTRUCTION OF THE NORTH SIDE OF U.S. 20 FROM BRIDGE OVER S.R. 2 EASTBOUND (STA. 101+75) TO LANE ROAD (STA. 168+10). ONE (1) LANE OF WESTBOUND TRAFFIC AND ONE (1) LANE OF EASTBOUND TRAFFIC WILL BE MAINTAINED AT ALL TIMES ALONG THIS SECTION OF U.S. 20.

THE FOLLOWING IS A LIST OF RAMPS TO BE CONSTRUCTED UTILIZING PART-WIDTH CONSTRUCTION:

S.R. 2 (WESTBOUND) STA. 105+16 LT

THE FOLLOWING IS A LIST OF SIDE STREETS TO BE CONSTRUCTED UTILIZING PART-WIDTH CONSTRUCTION:

BLASE NEMETH ROAD STA. 119+99 LT

AFTER CONSTRUCTION IS COMPLETE, PERFORM THE FOLLOWING WORK:

1. CONSTRUCT CONCRETE MEDIAN FROM STA. 109+50 TO STA. 119+00 PER THE PLANS.

2. PLACE TEMPORARY STRIPING AS PER THE STRIPING PLAN.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 6 SHALL BE COMPLETED BY SEPTEMBER 15, 2028.

PHASE 7:

MILL OFF 1.5 INCHES OFF THE TOP COURSE OF PAVEMENT AND THEN FILL WITH ITEM 441 OR 442 ASPHALT CONCRETE SURFACE COURSE PER THE FINAL PAVEMENT BUILDUP SHOWN IN THE TYPICAL SECTIONS WHILE MAINTAINING TRAFFIC USING SCD MT-97.12 OVER THE ENTIRE PROJECT (NEWLY CONSTRUCTED PAVEMENT AND RESURFACING AREA). AFTER RESURFACING THE ENTIRE PROJECT SHALL BE RESTRIPEDED PER THE STRIPING PLAN.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED.

PHASE 7 SHALL BE PERFORMED IN CONJUNCTION WITH PART 2, PHASE 5.

DISINCENTIVE TABLE			
LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
PRE-PHASE 1C	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$1,500
CALL ROAD STA. 332+79 RT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
PARMLY ROAD STA. 309+94 LT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
RED MILL VALLEY ROAD STA. 318+50 LT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
ANTIOCH ROAD STA. 357+71 LT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
PHASE 2	OCTOBER 15, 2026	DAY	\$1,500
BLACKMORE ROAD STA. 188+06 LT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
PERRY PARK ROAD STA. 229+21 LT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
PRE-PHASE 3	APRIL 1, 2027	DAY	\$1,500
PHASE 4	OCTOBER 15, 2027	DAY	\$1,500
NARROWS ROAD STA. 173+57 RT	FOURTEEN (14) CONSECUTIVE CALENDAR DAYS	DAY	\$300
PRE-PHASE 5	APRIL 1, 2028	DAY	\$1,500
PHASE 6	SEPTEMBER 15, 2028	DAY	\$1,500

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MAINTENANCE OF TRAFFIC GENERAL NOTES

LAK-US-20-19.59
PART 1

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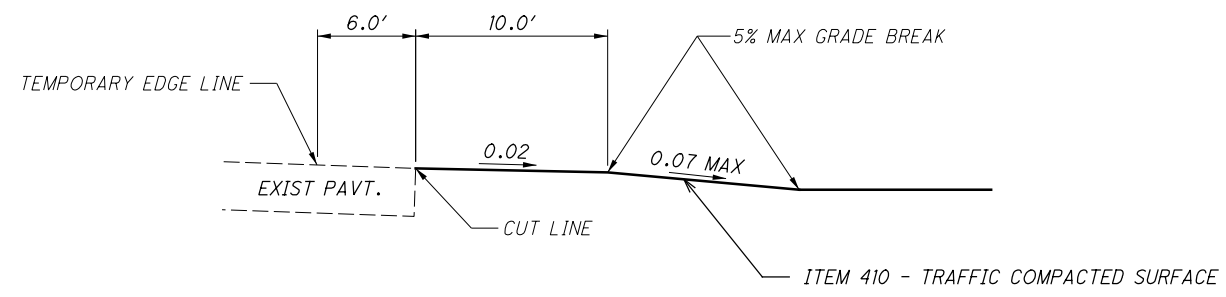
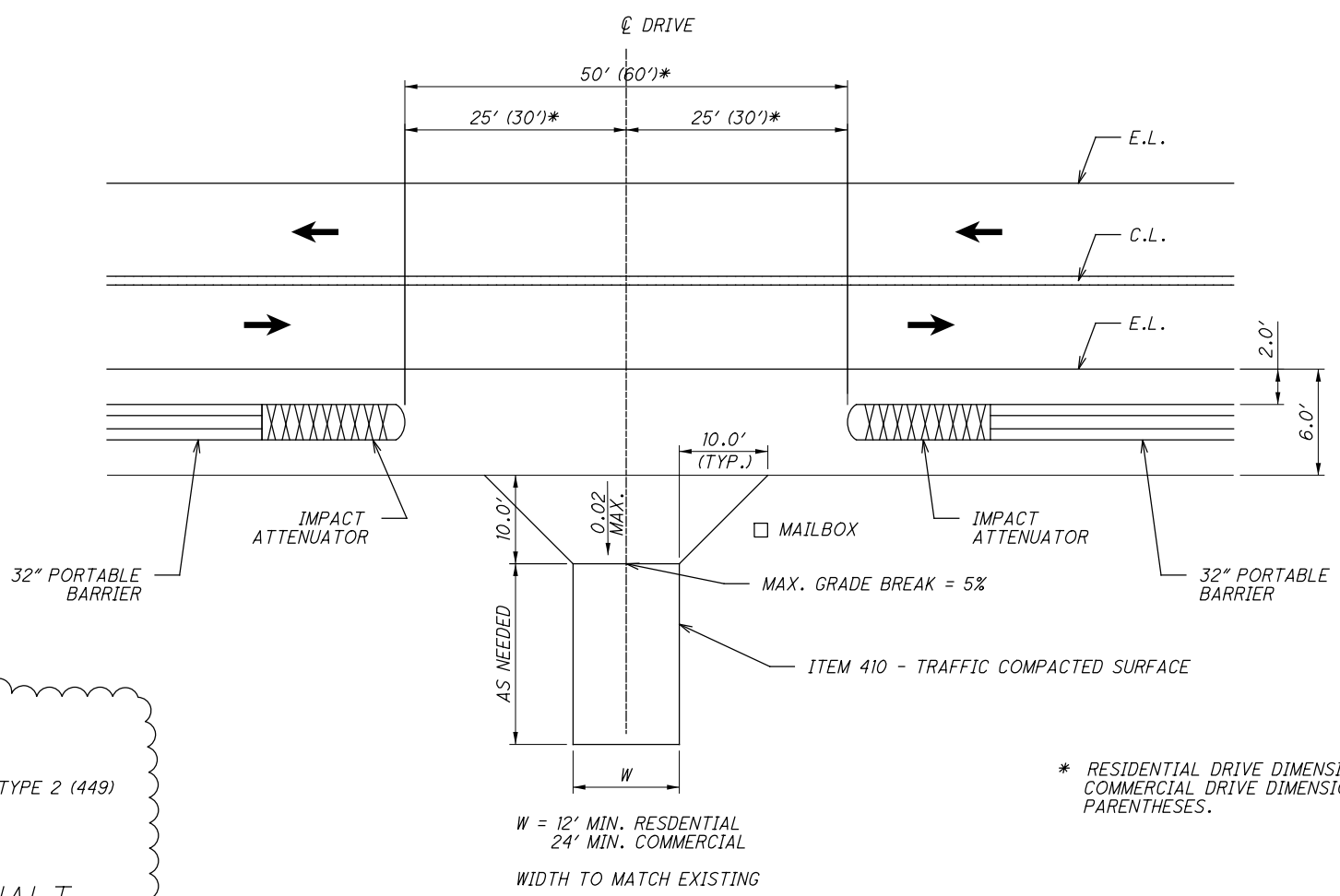
MAINTENANCE OF TRAFFIC MISCELLANEOUS DETAILS

**LAK-US-20-19.59
PART 1**

LEGEND

① 2" - ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)
 ② 3" - ITEM 304 AGGREGATE BASE

ITEM 608 - TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN DETAIL



* RESIDENTIAL DRIVE DIMENSIONS SHOWN.
COMMERCIAL DRIVE DIMENSIONS ARE IN PARENTHESES.

W = 12' MIN. RESIDENTIAL
24' MIN. COMMERCIAL
WIDTH TO MATCH EXISTING

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REF NO.	SHEET NO.	STATION TO STATION		SIDE	611	611	611	611	614	614	614	614	614	614	614	614	614	615	614	614	622	
					12" CONDUIT, TYPE B, AS PER PLAN FT	CATCH BASIN, NO. 6, AS PER PLAN EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN EACH	INLET RECONSTRUCTED TO GRADE, AS PER PLAN EACH	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT MILE	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT FT	WORK ZONE DOTTED LINE, CLASS I, 4", 642 PAINT FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT FT	WORK ZONE ARROW, CLASS I, 642 PAINT EACH	WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT SF	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO WAY EACH
PRE- PHASE 5																						
EL-1	288	146+75		148+50	LT																	
PB-1	288	148+50		148+50	LT																	
EL-1	289	148+50		153+50	LT																	
PB-1	289	148+50		150+70	LT																	
EL-1	290	153+50		156+00	LT																	
PHASE 5 - SUBPHASE 1																						
EL-1	297	887+50	S.R.2	890+50	LT																	
EL-2	297	887+50	S.R.2	890+50	RT																	
PB-1	297	890+10	S.R.2	890+50	RT																	
CH-1	298	893+56	S.R.2	111+06	LT								177									
EL-1	298	890+50	S.R.2	893+56	LT								0.058									
EL2	298	890+50	S.R.2	111+58	RT								0.101									
LL-1	298	111+06		111+28	RT				0.004													
PB-2	298	890+50	S.R.2	112+00	RT																	
EL-1	299	112+00		117+50	LT								0.104									
PB-3	299	112+00		117+50	LT																	
EL-1	300	117+50		123+00	LT								0.104									
PB-4	300	117+50		118+50	LT																	
D1	300	119+25		119+57	LT	44	1															
EL-1	301	123+00		123+80	LT								0.015									
PHASE 5 - SUBPHASE 2																						
EL-1	305	887+50	S.R.2	890+50	LT								0.057									
EL-2	305	887+50	S.R.2	890+50	RT								0.057									
PB-1	305	890+00	S.R.2	890+50	LT																	
EL-1	306	890+50	S.R.2	112+00	LT								0.106									
EL-2	306	890+50	S.R.2	112+00	RT								0.106									
EL-3	306	109+27		112+00	RT								0.052									
PB-2	306	890+50	S.R.2	112+00	RT																	
PB-3	306	107+67		112+00	LT																	
EL-1	307	112+00	S.R.2	117+50	RT								0.104									
EL-2	307	112+00	S.R.2	117+50	RT								0.104									
EL-3	307	112+00		117+50	LT								0.104									
PB-4	307	112+00	S.R.2	115+50	RT																	
PB-5	307	112+00		115+50	LT																	
EL-1	308	117+50		117+75	LT								0.005									
EL-2	308	117+50	S.R.2	117+75	LT								0.005									
EL-3	308	117+50		123+00	RT								0.104									
LL-1	308	117+75		120+80	LT				0.058													
EL-1	309	123+00		123+80	LT								0.015									
SUBTOTAL SHEET 64																						
					44	1			0.060		1.490	177						6		34	34	3243

MAINTENANCE OF TRAFFIC SUBSUMMARY




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**LAK-US-20-19.59
PART 1**













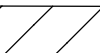

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LEGEND

-  MAINTENANCE OF TRAFFIC SIGN
-  MAINTENANCE OF TRAFFIC SIGN INSTALLED IN PREVIOUS PHASE
-  EXISTING TRAFFIC SIGN

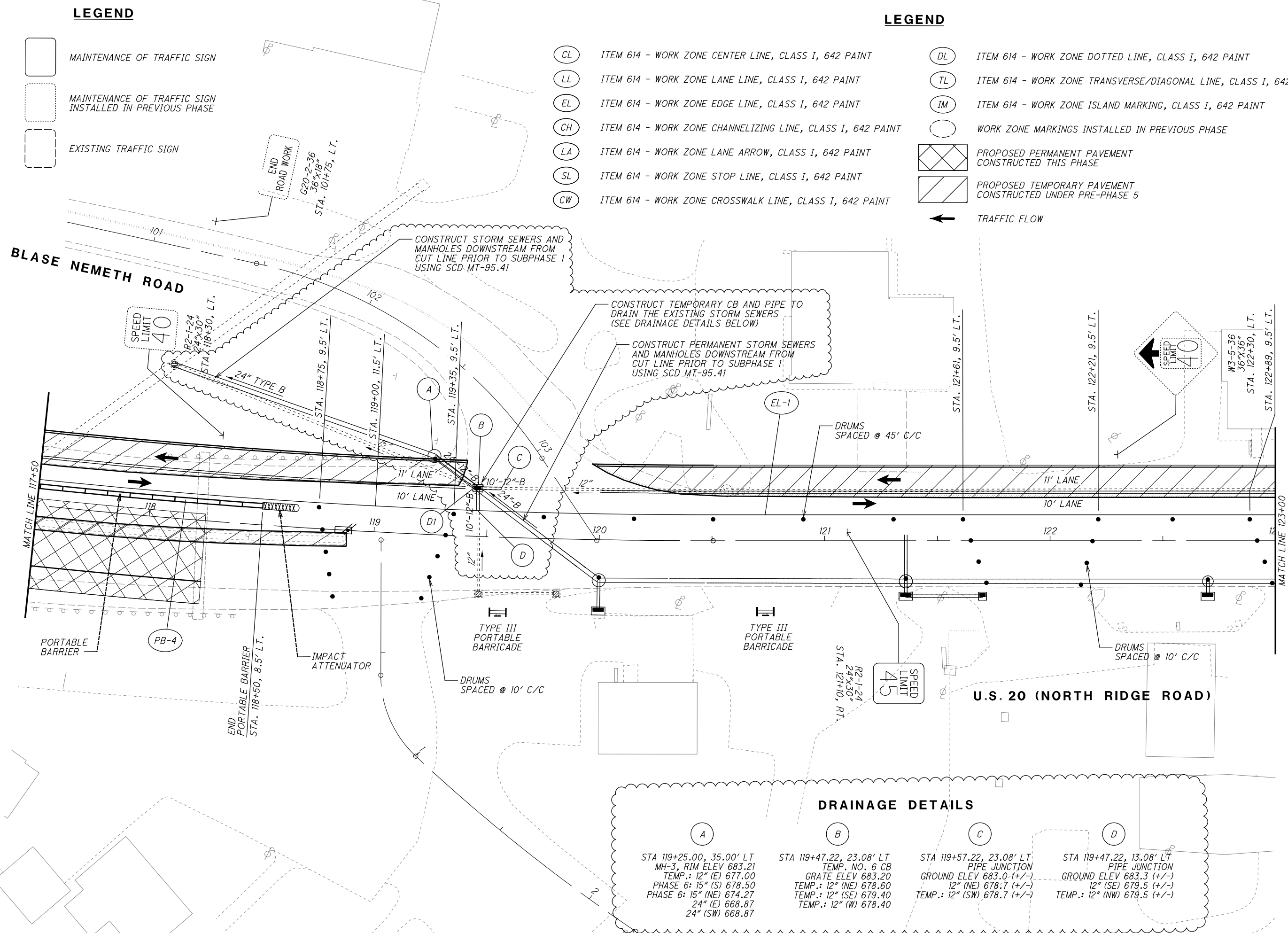
LEGEND

-  ITEM 614 - WORK ZONE CENTER LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE LANE LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE LANE ARROW, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT
-  ITEM 614 - WORK ZONE ISLAND MARKING, CLASS I, 642 PAINT
-  WORK ZONE MARKINGS INSTALLED IN PREVIOUS PHASE
-  PROPOSED PERMANENT PAVEMENT CONSTRUCTED THIS PHASE
-  PROPOSED TEMPORARY PAVEMENT CONSTRUCTED UNDER PRE-PHASE 5
-  TRAFFIC FLOW



BLASE NEMETH ROAD

U.S. 20 (NORTH RIDGE ROAD)



CONSTRUCT STORM SEWERS AND MANHOLES DOWNSTREAM FROM CUT LINE PRIOR TO SUBPHASE 1 USING SCD-MT-95.41

CONSTRUCT TEMPORARY CB AND PIPE TO DRAIN THE EXISTING STORM SEWERS (SEE DRAINAGE DETAILS BELOW)

CONSTRUCT PERMANENT STORM SEWERS AND MANHOLES DOWNSTREAM FROM CUT LINE PRIOR TO SUBPHASE 1 USING SCD-MT-95.41

DRUMS SPACED @ 45' C/C

DRUMS SPACED @ 10' C/C

DRUMS SPACED @ 10' C/C

R2-1-24
24"x30"
STA. 121+10, RT.

W3-5-36
36"x36"
STA. 122+30, LT.

DRAINAGE DETAILS

A	B	C	D
STA 119+25.00, 35.00' LT	STA 119+47.22, 23.08' LT	STA 119+57.22, 23.08' LT	STA 119+47.22, 13.08' LT
MH-3, RIM ELEV 683.21	TEMP. NO. 6 CB	PIPE JUNCTION	PIPE JUNCTION
TEMP.: 12" (E) 677.00	GRATE ELEV 683.20	GROUND ELEV 683.0 (+/-)	GROUND ELEV 683.3 (+/-)
PHASE 6: 15" (S) 678.50	TEMP.: 12" (NE) 678.60	12" (NE) 678.7 (+/-)	12" (SE) 679.5 (+/-)
PHASE 6: 15" (NE) 674.27	TEMP.: 12" (SE) 679.40	TEMP.: 12" (SW) 678.7 (+/-)	TEMP.: 12" (NW) 679.5 (+/-)
24" (E) 668.87	TEMP.: 12" (W) 678.40		
24" (SW) 668.87			

LAK-US-20-19.59
PART 1
MAINTENANCE OF TRAFFIC PLAN - PHASE 5
SUBPHASE 1 - S.R. 2 EASTBOUND RAMP

CALCULATED JDC
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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
23	24	25	26		397	398	399	414	418	761	862	01/NHS/PV	EXT	TOTAL			NO.	
												LS	201	11000	LS	CLEARING AND GRUBBING		
LS																ROADWAY		
					1							1	202	20010	1	EACH	HEADWALL REMOVED	
									130,060	14,662		144,722	202	23001	144,722	SY	PAVEMENT REMOVED, AS PER PLAN	26
							55,804					55,804	202	30000	55,804	SF	WALK REMOVED	
					589							589	202	30600	589	SY	CONCRETE MEDIAN REMOVED	
							449		1,544			1,993	202	32000	1,993	FT	CURB REMOVED	
					20,871							20,871	202	35100	20,871	FT	PIPE REMOVED, 24" AND UNDER	
					2,090							2,090	202	35200	2,090	FT	PIPE REMOVED, OVER 24"	
					5,001							5,001	202	38000	5,001	FT	GUARDRAIL REMOVED	
					8							8	SPECIAL	20252990	8	EACH	PARKING BLOCK REMOVED	24
					128							128	202	53100	128	EACH	MAILBOX REMOVED	
					5							5	202	58000	5	EACH	MANHOLE REMOVED	
					148							148	202	58300	148	EACH	CATCH BASIN OR INLET REMOVED	
					10							10	202	60010	10	EACH	MONUMENT ASSEMBLY REMOVED	
					945							945	SPECIAL	20270000	945	FT	FILL AND PLUG EXISTING CONDUIT, 12" TO 36" DIA.	25
										100		100	SPECIAL	20270000	100	FT	FILL AND PLUG EXISTING CONDUIT, 4' x 3' BOX	25
								4,400				4,400	SPECIAL	20270110	4,400	FT	PIPE CLEANOUT, 24" AND UNDER	26
					275							275	SPECIAL	20270120	275	FT	PIPE CLEANOUT, 27" TO 48"	26
					989							989	202	75000	989	FT	FENCE REMOVED	
	LS											LS	202	98000	LS		REMOVAL MISC.: WEATHER STATION FOUNDATION	24
					1							1	202	98100	1	EACH	REMOVAL MISC.: BUILDING FOUNDATION	24
					24							24	202	98100	24	EACH	REMOVAL MISC.: BOULDER	24
					48							48	202	98100	48	EACH	REMOVAL MISC.: BUSINESS SIGN	24
					2							2	202	98100	2	EACH	REMOVAL MISC.: LIGHT POLE	24
					24							24	202	98100	24	EACH	REMOVAL MISC.: CONCRETE BLOCK	24
					9							9	202	98100	9	EACH	REMOVAL MISC.: BOLLARD	24
					77							77	202	98100	77	EACH	REMOVAL MISC.: POST	24
					14							14	202	98100	14	EACH	REMOVAL MISC.: LANDSCAPE LIGHT	24
					112							112	202	98200	112	FT	REMOVAL MISC.: CONCRETE WALL	24
					181							181	202	98200	181	FT	REMOVAL MISC.: STONE WALL	24
								34,907		1,353		36,260	203	10000	36,260	CY	EXCAVATION	
								12,275				18,213	203	20000	18,213	CY	EMBANKMENT	
										167,723	12,582	180,305	204	10000	180,305	SY	SUBGRADE COMPACTION	
10,050												10,050	204	13000	10,050	CY	EXCAVATION OF SUBGRADE	
10,050												10,050	204	30010	10,050	CY	GRANULAR MATERIAL, TYPE B	
												60	204	45000	60	HOUR	PROOF ROLLING	
18,100												18,100	204	50000	18,100	SY	GEOTEXTILE FABRIC	
18,100												18,100	204	51000	18,100	SY	GEOGRID	
						5,088						5,088	606	15050	5,088	FT	GUARDRAIL, TYPE MGS	
					25							25	606	16000	25	FT	GUARDRAIL REBUILT	
					50							50	606	17360	50	FT	GUARDRAIL, TYPE MGS, LONG-SPAN	
												17	606	26150	17	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	24
												12	606	26550	12	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
												2	606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							49,452					49,452	608	10000	49,452	SF	4" CONCRETE WALK	
							2,022					2,022	608	52000	2,022	SF	CURB RAMP	
												34	623	38500	34	EACH	MONUMENT ASSEMBLY, TYPE C	
34												3	623	39500	3	EACH	MONUMENT ASSEMBLY ADJUSTED TO GRADE	
												128	SPECIAL	69050100	128	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	24
												8,200	SPECIAL	69065016	8,200	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	25
												4,100	SPECIAL	69065022	4,100	GAL	WORK INVOLVING NON-REGULATED WATER	25
												4,100	SPECIAL	69065024	4,100	GAL	WORK INVOLVING REGULATED WATER	25

GENERAL SUMMARY

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PART 1

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SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
25	26	27	398	399	400	408	411	418	761		01/NHS/PV	EXT	TOTAL		SHEET		
DRAINAGE																	
	45										45	611	98631	45	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	25
	5										5	611	98634	5	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
		5									5	611	98700	5	EACH	INLET, SIDE DITCH	
								2			2	611	98710	2	EACH	INLET, NO. 2-6	
								134			134	611	99574	134	EACH	MANHOLE, NO. 3	
								6			6	611	99586	6	EACH	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	
17											17	611	99655	17	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	25
5											5	611	99660	5	EACH	MANHOLE RECONSTRUCTED TO GRADE	
										5	5	611	99710	5	EACH	PRECAST REINFORCED CONCRETE OUTLET	
		10									10	611	99720	10	EACH	INSPECTION WELL	
		10,000									10,000	SPECIAL	61199820	10,000	LB	MISCELLANEOUS METAL	26
								6			6	895	10040	6	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	
PAVEMENT																	
		1,400									1,400	251	01000	1,400	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
								1,177	3,273		4,450	252	01500	4,450	FT	FULL DEPTH PAVEMENT SAWING	
								143,528			143,528	254	01000	143,528	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	
								28,075			28,075	254	01000	28,075	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=3.25")	
		110						784			894	301	56000	894	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
								23,164			23,164	301	56001	23,164	CY	ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22	26
									477		477	301	56100	477	CY	ASPHALT CONCRETE BASE, PG64-22, (449), (DRIVEWAYS)	
		110						27,440	886		28,436	304	20000	28,436	CY	AGGREGATE BASE	
								20,447	212		20,659	407	20000	20,659	GAL	NON-TRACKING TACK COAT	
								273			273	441	70000	273	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
								519			519	441	70300	519	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	
									123		123	441	70500	123	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
			271								271	441	70801	271	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	24
								20,575			20,575	442	00100	20,575	CY	ANTI-SEGREGATION EQUIPMENT	
								6,814			6,814	442	10001	6,814	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	26
								13,761			13,761	442	10101	13,761	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN, PG64-28	26
									1,944		1,944	452	10050	1,944	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
									3,632		3,632	452	12050	3,632	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
								475			475	452	13010	475	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
								44,398			44,398	609	12000	44,398	FT	COMBINATION CURB AND GUTTER, TYPE 2	
								4,372			4,372	609	12001	4,372	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	18
								199			199	609	20000	199	FT	CURB, TYPE 3-A	
				400				1,550			1,950	609	26000	1,950	FT	CURB, TYPE 6	
								423			423	609	72000	423	SY	CONCRETE MEDIAN	
								104			104	617	10100	104	CY	COMPACTED AGGREGATE	
WATER WORK																	
		10									10	638	11101	10	EACH	METER AND CHAMBER REMOVED AND RESET, AS PER PLAN	27
		10									28	SPECIAL	63820500	28	EACH	VALVE BOX ADJUSTED TO GRADE, LCDU STANDARD	27
											42	SPECIAL	63820750	42	EACH	6" FIRE HYDRANT, LCDU STANDARD	27
											42	SPECIAL	63820752	42	EACH	FIRE HYDRANT REMOVED FOR STORAGE, LCDU STANDARD	27
		3,500									3,500	SPECIAL	63820770	3,500	FT	1" COPPER WATER SERVICE LINE, LCDU STANDARD	27
		20									20	SPECIAL	63820902	20	EACH	SERVICE BOX ADJUSTED TO GRADE, LCDU STANDARD	27

GENERAL SUMMARY

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REF NO.	SHEET NO.	STATION TO STATION		SIDE	202	202	202	202	202	SPECIAL	202	202	202	202	202	202	202	202	202	202	202	202	SPECIAL	SPECIAL				
					HEADWALL REMOVED EACH	CONCRETE MEDIAN REMOVED SY	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	GUARDRAIL REMOVED FT	PARKING BLOCK REMOVED EACH	MAILBOX REMOVED EACH	MANHOLE REMOVED EACH	CATCH BASIN OR INLET REMOVED EACH	MONUMENT ASSEMBLY REMOVED EACH	FENCE REMOVED FT	REMOVAL MISC.:POST EACH	REMOVAL MISC.:BUSINESS SIGN EACH	REMOVAL MISC.:BOULDER EACH	REMOVAL MISC.:BOLLARD EACH	REMOVAL MISC.:CONCRETE BLOCK EACH	REMOVAL MISC.:LANDSCAPE LIGHT EACH	REMOVAL MISC.:LIGHT POLE EACH	REMOVAL MISC.:BUILDING FOUNDATION EACH	REMOVAL MISC.:STONE WALL FT	REMOVAL MISC.:CONCRETE WALL FT	FILL AND PLUG EXISTING CONDUIT, 12" TO 36" DIA. FT	MAILBOX SUPPORT SYSTEM, SINGLE EACH	
R396	480		TO	384+37.24	RT						1													1				
R397	480			385+99.49	RT		40					1																
R398	480	383+44.36		385+98.13	LT			254				1																
R399	480			386+29.65	RT										1													
R400	480			388+48.94	RT		40					1																
R401	480	385+98.13		388+49.86	LT		252					1																
R402	481			389+08.32	RT						1													1				
R403	481			389+51.99	LT						1													1				
R404	481			390+08.39	RT						1													1				
R405	481			391+23.88	RT		40					1																
R406	481	388+49.86		391+25.39	LT		276					1																
R407	481			391+27.90	RT						1													1				
R408	481			391+70.49	LT						1													1				
R409	481			393+27.39	LT						1													1				
R410	481			393+57.73	RT										1													
R411	482			395+24.42	RT										1													
R412	482			397+00.41	RT		40					1																
R413	482	391+25.39		396+98.81	LT		574					1																
R414	482			397+95.79	RT						1													1				
R415	482	396+98.81		398+29.18	LT		129					1																
R416	482			398+39.03	RT		40					1																
R417	482	398+29.18		398+38.80	LT		7					1																
R418	482			398+50.00	RT						1													1				
R419	482			398+51.29	RT								9															
R420	482			398+80.25	RT								9															
R421	482			398+96.33	RT									1						3								
R422	482			398+87.72	LT						1													1				
R423	483	NOT USED																										
R424	483			399+49.96	LT						1													1				
R425	483			399+90.00	RT		40						1															
R426	483	398+29.18		399+90.00	LT		157																					
R427	483			400+00.24	RT																							
R428	483	399+90.42		400+90.23	LT																		100					
R429	483			400+99.92	RT						1													1				
R430	483			401+27.74	LT						1													1				
R431	483			401+90.19	LT/RT		50																					
R432	483			401+94.71	LT						1													1				
SUBTOTALS THIS SHEET							1685	254			14	1	12		18		5						100	14				
SUBTOTALS FROM SHEET 389						589	2443		2172		6	1	14	2	210	7	12	4	1					6				
SUBTOTALS FROM SHEET 390							1854				13	2	15	1	73	3	5	9					70	13				
SUBTOTALS FROM SHEET 391							2057		549		16		13		147	6		2	4	24	3			16				
SUBTOTALS FROM SHEET 392						1	2063				15		11	2	329	5	7	3	2		8	1	1		15			
SUBTOTALS FROM SHEET 393							2756		724	8	10		19	1	40	42	5	2	2					10				
SUBTOTALS FROM SHEET 394							3171		1556		17	1	20	2	152	5	4					96	112	17				
SUBTOTALS FROM SHEET 395							3311				23		19	1	20	4	5	4			1		85	275	23			
SUBTOTALS FROM SHEET 396							1531	1836			14		25	1		5	5						500	14				
TOTALS CARRIED TO GENERAL SUMMARY						1	589	20871	2090	5001	8	128	5	148	10	989	77	48	24	9	24	14	2	1	181	112	945	128

ROADWAY SUBSUMMARY
LAK-US-20-19.59
PART 1

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SHEET NO.	REFERENCE NO.	STATION		SIDE	CFN	MATERIALS																							995										
		FROM	TO			601	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611		611	611	611	611	611	611	611	611	611	611
330	D305	199+58.00	199+66.20	RT																																			
330	D306	199+56.62	199+57.39	LT																																			
		<i>DRAINAGE OUTLET</i>																																					
853	D307	11+05.00	14+00.00																																				
		<i>MIDDLE RIDGE</i>																																					
479	D308	12+86.00	13+10.00	LT																																			

SUBTOTALS THIS SHEET						13	3	3.26	24																															
SUBTOTALS FROM SHEET 401								0.21		249	674	30	604	522		225	920																							
SUBTOTALS FROM SHEET 402										607	10	482		475	220	548	595	542	215	58																				
SUBTOTALS FROM SHEET 403										486	607	180	724	680	260	505	313	209																						
SUBTOTALS FROM SHEET 404										304	988	414	305	1683		336	700																							
SUBTOTALS FROM SHEET 405											729	56				744	129																							
SUBTOTALS FROM SHEET 406											940	66																												
SUBTOTALS FROM SHEET 407											741	109				46		200		800	1095	1385	190																	
TOTALS CARRIED TO GENERAL SUMMARY						13	3	3.5	24	1646	4689	1337	1633	3360	480	1614	3318	880	415	353	800	1095	1385	3816	1474	48	2	98	119	6	2	134	6	6						

DRAINAGE SUBSUMMARY	LAK-US-20-19.59	PART 1	CALCULATED CWH CHECKED JMP
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STATION		SIDE	LENGTH	AVERAGE WIDTH	CALCULATED SURFACE AREA	CADD GENERATED SURFACE AREA	202	203	204	252	254	254	301	301	304	407	441	441	442	442	442	452	609	609	609	609	609	617							
FROM	TO						SY	CY	SY	FT	SY	SY	CY	CY	CY	GAL	CY	CY	CY	CY	CY	CY	CY	CY	SY	FT	FT	FT	FT	SY	CY				
PARMLY																																			
10+23.00	10+62.59	L	39.59	18.80		744.1	60.3		108.9																										
10+62.59	11+00.00	L	37.41	10.00	374.1		41.6		58.2	9	41.6																								
10+23.00	10+62.59	R	39.59	24.55		972.0	108.0		139.3		108.0																								
10+62.59	11+00.00	R	37.41	13.58		507.9	56.4		71.2	11	56.4																								
RED MILL WEST																																			
10+16.82	11+11.50	L/R	94.68	20.94		1982.9	234.9				20	220.3																	1.8						
RED MILL WEST																																			
10+27.63	10+90.00	L	62.4	16.33		1018.3	91.9		140.9			113.1																							
10+90.00	11+15.00	L	25.0	9.25	231.3		22.2		36.8			25.7																	0.5						
10+27.63	10+90.00	R	62.4	12.38		771.9	85.8		113.5			85.8																							
10+90.00	11+15.00	R	25.0	10.00	250.0		27.8		38.9			27.8																							
CALL ROAD																																			
8+25.00	9+25.42	L	100.4	11.26		1131.1	125.7				12	125.7																		1.9					
9+25.42	9+76.52	L	51.1	22.28		1138.7	98.3					126.5																							
8+25.00	9+47.19	R	122.2	11.79		1441.1	160.1				12	160.1																		2.3					
9+47.19	9+76.52	R	29.3	23.51		689.5	55.8					12.8																							
ANTIOCH																																			
10+24.00	11+00.00	L	76.00	23.54		1788.8	198.8				19	198.8																							
10+24.00	11+00.00	R	76.00	32.64		2480.5	275.6				19	275.6																							
TOWNLINE																																			
9+01.54	9+67.42	L/R	65.88	54.98		3621.8																													
10+32.58	11+02.86	L/R	70.28	55.71		3915.3																													
TRENCH REPAIR																																			
285+95.00	286+00.00	L/R	5.00	38.60		193.0	21.4		21.4	39			3.6																						
399+90.00	399+95.00	L/R	5.00	37.00		185.0	20.6		20.6	37			3.4																						
400+10.00	402+65.00	L/R				1821.0	202.3	176.9	202.3	296			33.7																	176.9					
							1887.5	176.9	952.0	474.0	1648.1	837.4	251.2		381.5	275.2	87.1	40.7	134.9			474.4	739.8		176.9	198.2		6.5							
SUBTOTALS THIS SHEET							1888	177	952	474	1649	838	252		382	276	88		176					475	740		177	199		7					
SUBTOTALS FROM SHEET 415							60165	1326	79111	126	67224	12532		11213	12863	9571						3323		6677		10000		21896	2125	1208	423	26			
SUBTOTALS FROM SHEET 416							61557	41	80105	126	68121	12755		11363	13012	9705							3370		6769		10139		21128	2247			28		
SUBTOTALS FROM SHEET 417							6450		7555	451	6534	1950	532	588	1183	895	185					343			315		436		634		165		43		
TOTALS CARRIED TO GENERAL SUMMARY							130060	1544	167723	1177	143528	28075	784	23164	27440	20447	273					519		6814		13761		20575	475	44398	4372	1550	199	423	104

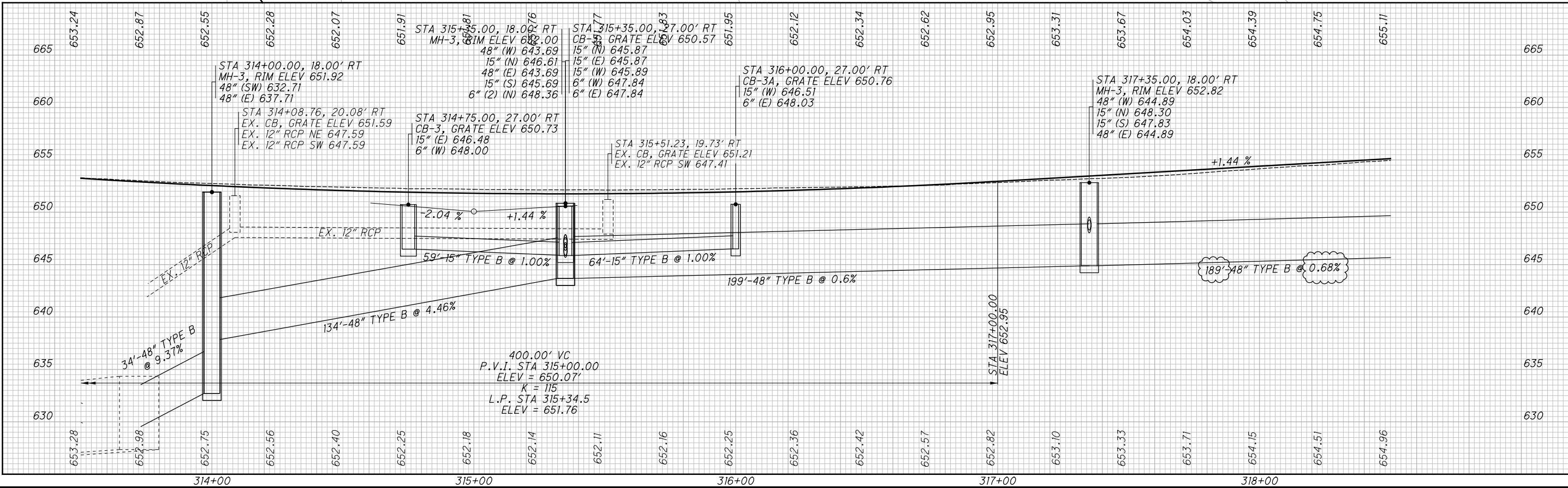
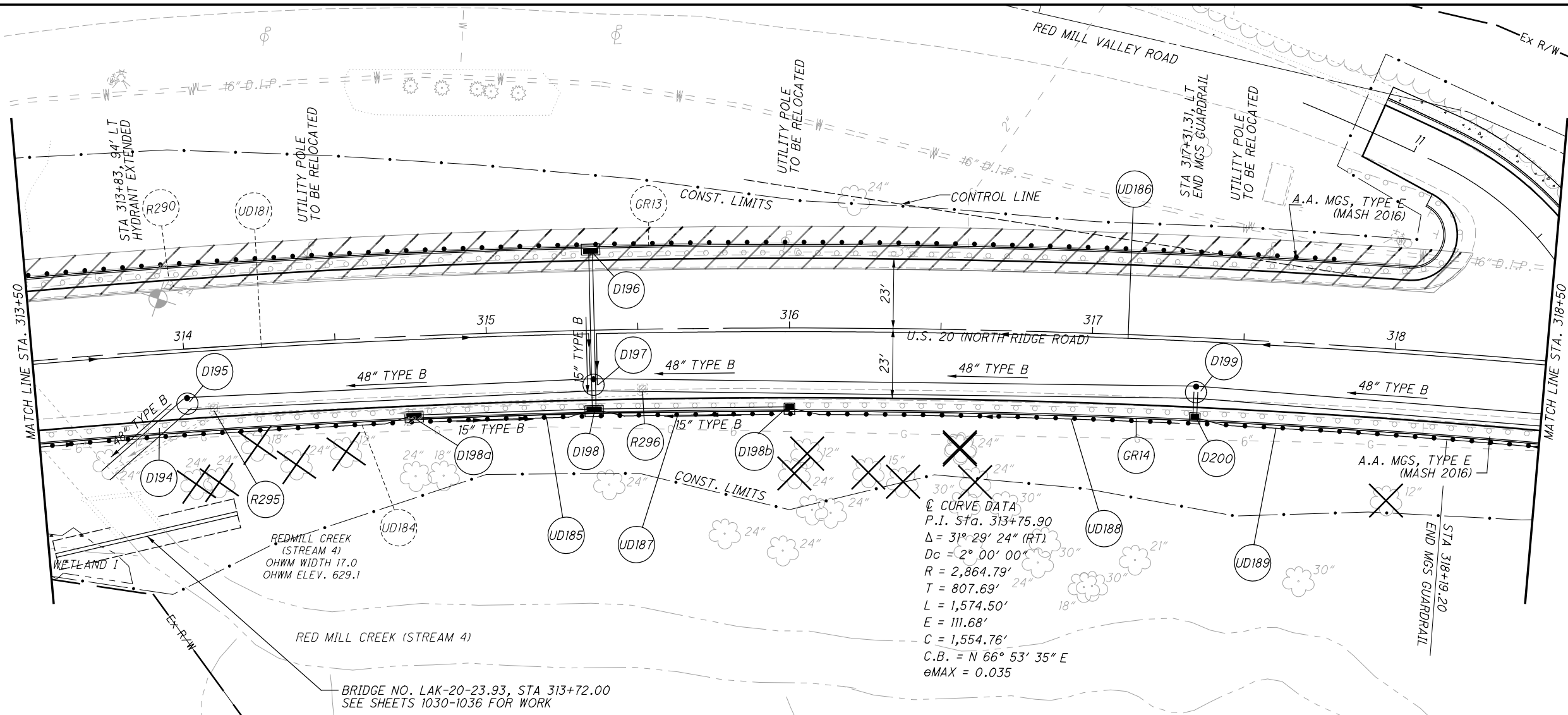
PAVEMENT SUBSUMMARY

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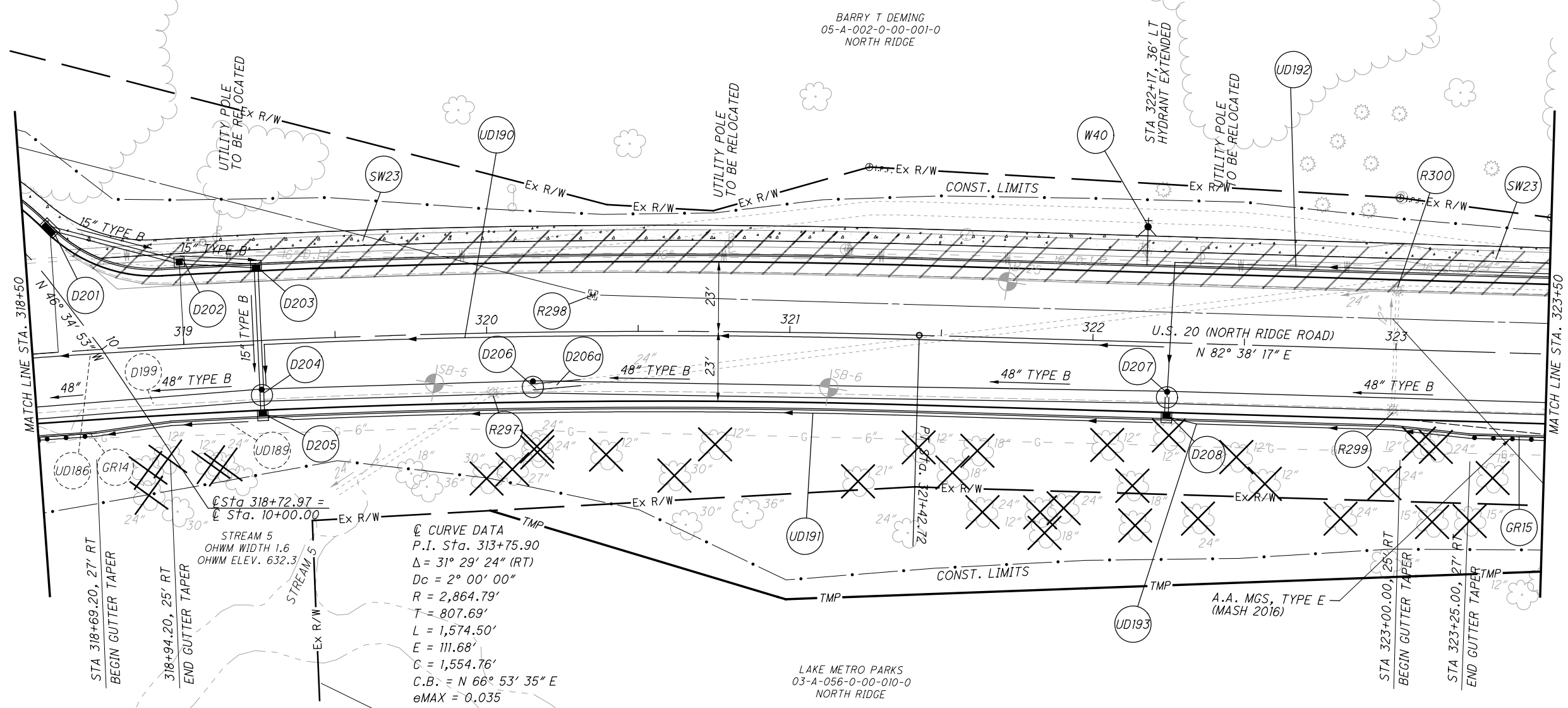


**PLAN AND PROFILE U.S. 20
STA. 313+50 TO STA. 318+50**

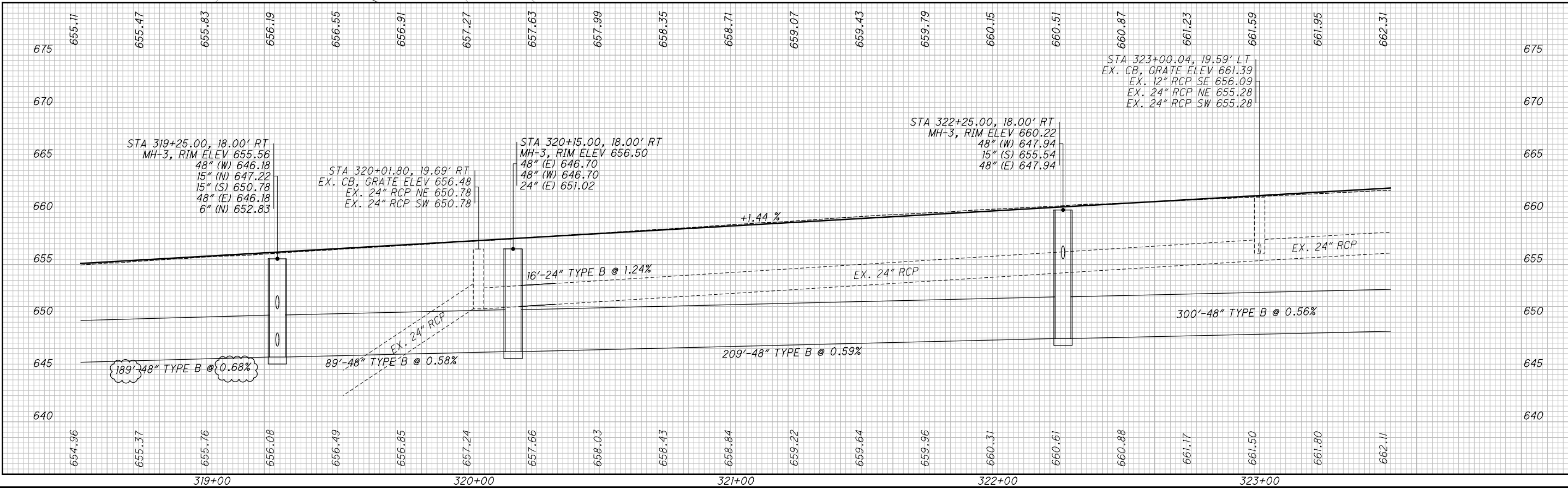
**LAK-US-20-19.59
PART 1**

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@ Sta 318+72.97 =
 @ Sta. 10+00.00
 STREAM 5
 OHWM WIDTH 1.6
 OHWM ELEV. 632.3
 EX R/W
 CURVE DATA
 P.I. Sta. 313+75.90
 $\Delta = 31^\circ 29' 24''$ (RT)
 $D_c = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 807.69'$
 $L = 1,574.50'$
 $E = 111.68'$
 $C = 1,554.76'$
 $C.B. = N 66^\circ 53' 35'' E$
 $e_{MAX} = 0.035$



BARRY T DEMING
05-A-002-0-00-001-0
NORTH RIDGE

STA 322+17, 36' LT
HYDRANT EXTENDED

LAKE METRO PARKS
03-A-056-0-00-010-0
NORTH RIDGE

TEMPORARY PAVEMENT



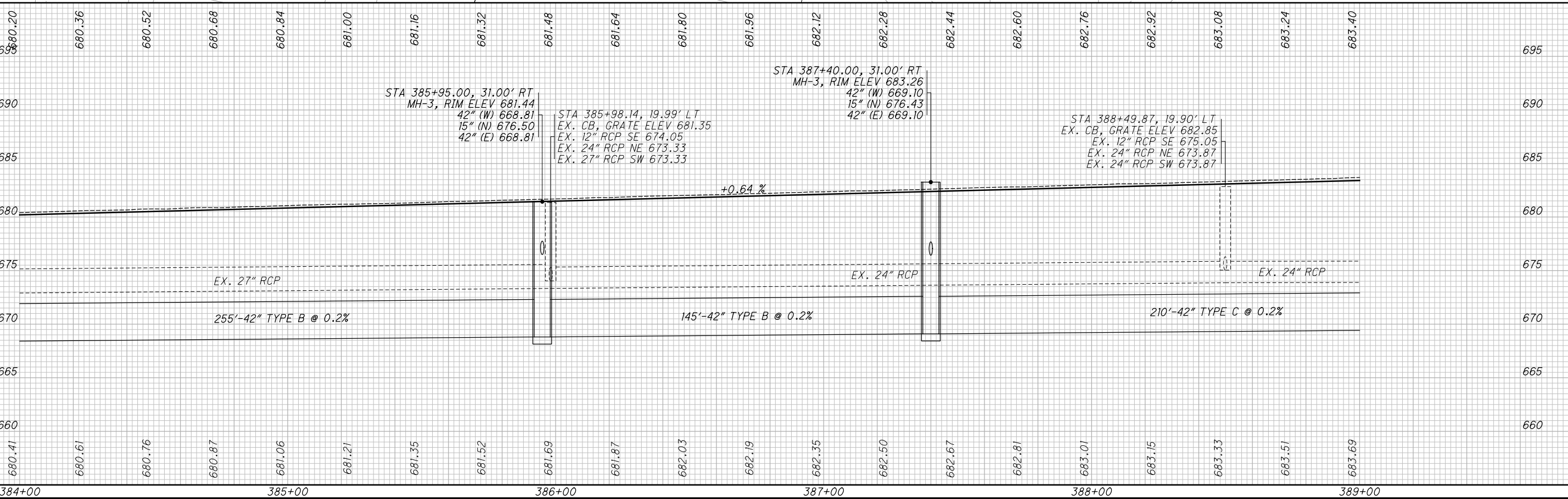
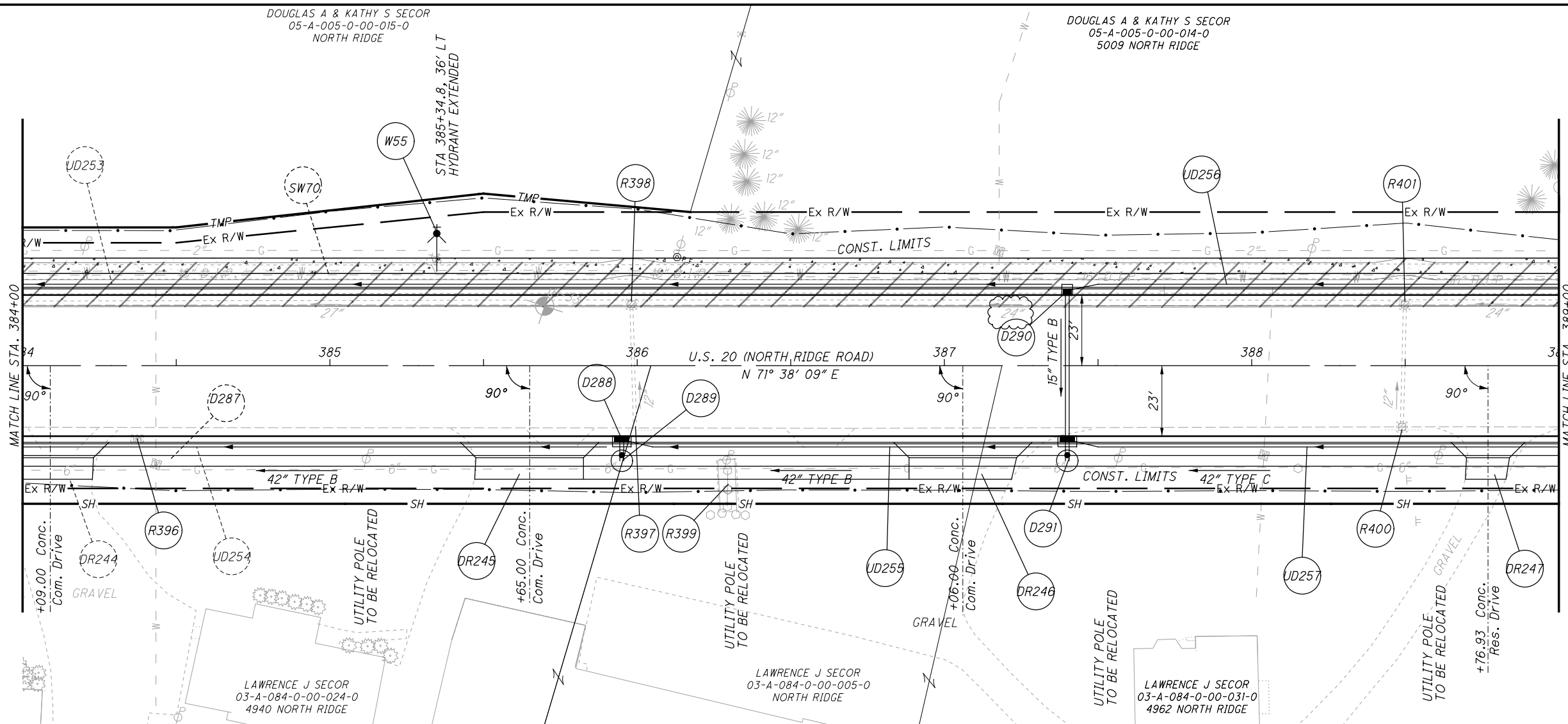
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PLAN AND PROFILE - U.S. 20
STA. 318+50 TO STA. 323+50

LAK-US-20-19.59
PART 1

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CALCULATED TJS CHECKED JMP

**PLAN AND PROFILE - U.S. 20
STA. 384+00 TO STA. 389+00**

**LAK-US-20-19.59
PART 1**



GENERAL NOTES:

REFERENCE TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 10-15-21
 870 DATED 04-16-21
 878 DATED 04-16-21

ITEM 870 - PREFABRICATED MODULAR RETAINING WALL, AS PER PLAN:

THE DESIGN, FABRICATION, AND CONSTRUCTION OF EACH PREFABRICATED MODULAR RETAINING WALL (PMRW) SHALL BE PER ODOT SUPPLEMENTAL SPECIFICATION 870 AND THE ODOT BDM. THE WALL SYSTEM SUPPLIER IS RESPONSIBLE FOR THE INTERNAL STABILITY DESIGN OF THE PREFABRICATED MODULAR RETAINING WALL. THE DESIGN SHALL ASSUME A BACKFILL UNIT WEIGHT OF 120 PCF AND A BACKFILL DRAINED FRICTION ANGLE OF 30 DEGREES. ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO DESIGN, FABRICATE, AND CONSTRUCT THE PMRW SHALL BE INCLUDED WITH THE UNIT BID PRICE FOR ITEM 870 PREFABRICATED MODULAR RETAINING WALL, AS PER PLAN.

FOUNDATION BEARING RESISTANCE:

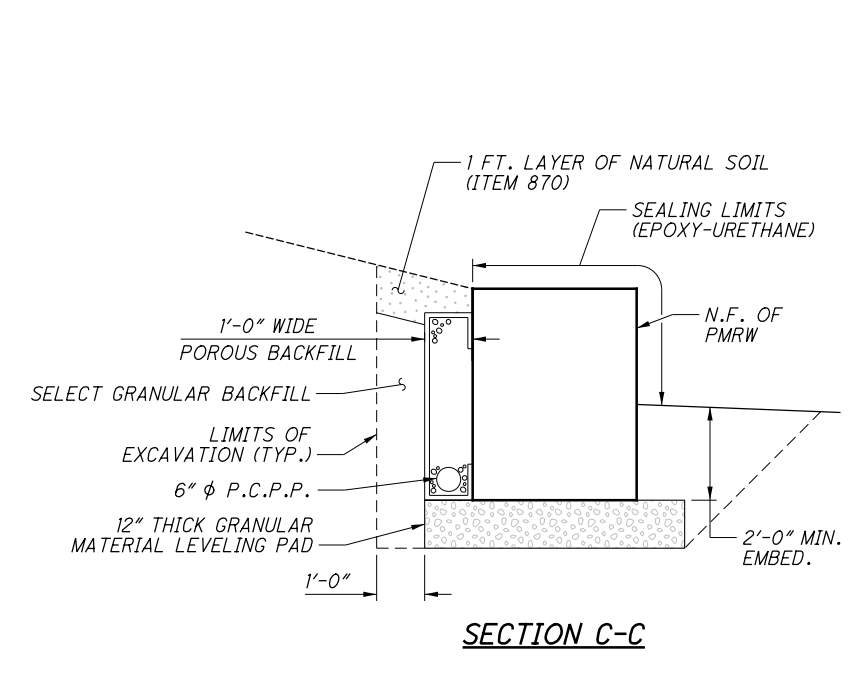
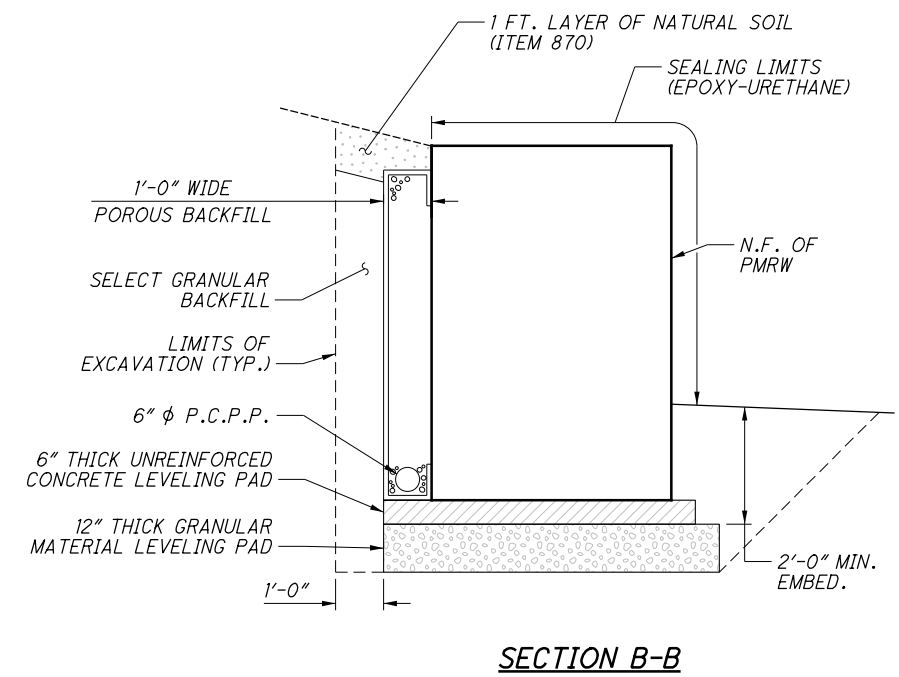
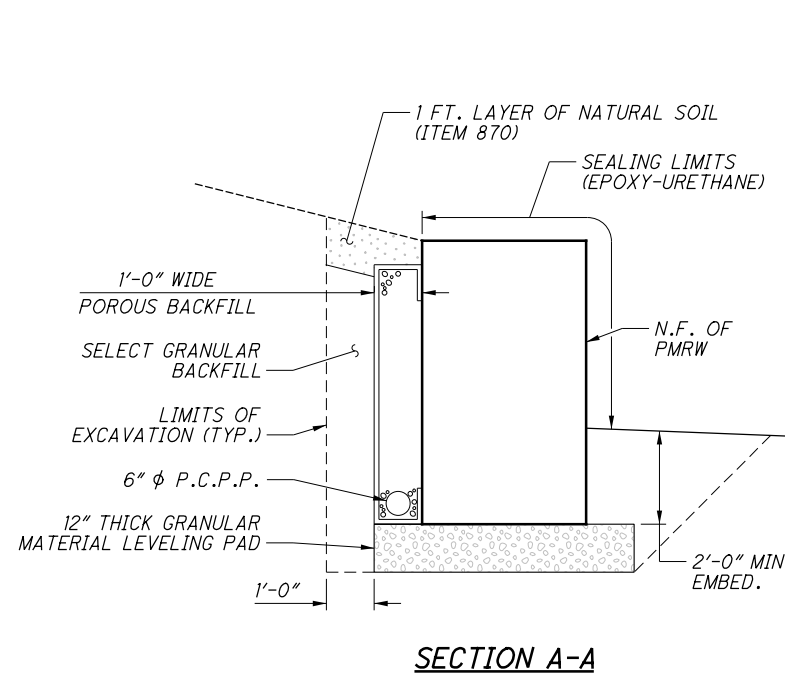
THE THREE RETAINING WALLS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 4.5 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 4.5 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 4.5 KIPS PER SQUARE FOOT.

ABBREVIATIONS:

- CL - CENTERLINE
- φ - DIAMETER
- B/W - BOTTOM OF WALL
- EL. - ELEVATION
- EMBED. - EMBEDMENT
- EX. - EXISTING
- F.F. - FAR FACE
- MIN. - MINIMUM
- N.F. - NEAR FACE
- N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
- P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
- PMRW - PREFABRICATED MODULAR RETAINING WALL
- PROP. - PROPOSED
- RT. - RIGHT
- STA. - STATION
- TBR - TO BE RELOCATED
- T/W - TOP OF WALL

ESTIMATED QUANTITIES							CALC. BY: MLF ; CHKD. BY: TAB	
ITEM	ITEM EXT.	WALL 1	WALL 2	WALL 3	TOTAL	UNIT	DESCRIPTION	SHEET REF.
512	10100	71	76	80	227	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
870	10001	600	645	683	1928	SF	PREFABRICATED MODULAR RETAINING WALL, AS PER PLAN	1/4
870	11000	169	198	226	593	CY	WALL EXCAVATION	
870	11100	12	14	15	41	CY	NATURAL SOIL	
870	12000	100	104	104	308	FT	6" DRAINAGE PIPE, PERFORATED	
870	12100	12	8	9	29	FT	6" DRAINAGE PIPE, NON-PERFORATED	
870	14000				2	DAY	ON-SITE ASSISTANCE	
870	15000					LS	PMRW INSPECTION AND COMPACTION TESTING	

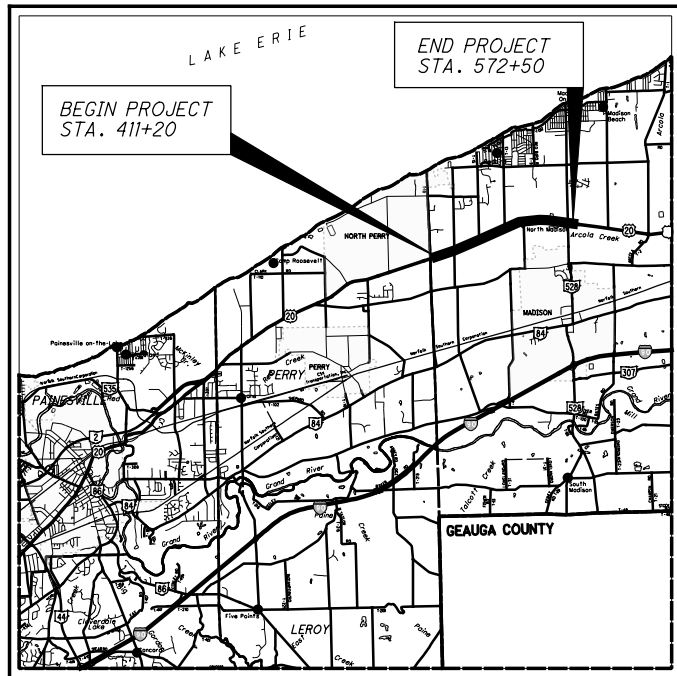
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NOTES:

1. FOR LOCATION OF SECTIONS A-A, B-B, & C-C, SEE INDIVIDUAL WALL PLAN AND ELEVATION ON SHEETS 2 TO 4 OF 4.

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LOCATION MAP

LATITUDE: 41°45'58.7" LONGITUDE: 81°10'51.7"



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

DESIGN DESIGNATION: LAK-US-20-24.99

CURRENT ADT (2022)	17,500
DESIGN YEAR ADT (2042)	22,300
DESIGN HOURLY VOLUME (2042)	2,230
DIRECTIONAL DISTRIBUTION	58%
TRUCKS (24 HOUR B&C)	7%
DESIGN SPEED	45 MPH
LEGAL SPEED	25,35,45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN PRINCIPAL ARTERIAL	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED



PLAN PREPARED BY:



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

LAK-US-20-24.99

PART 2

MADISON TWP.

LAKE COUNTY, OHIO

FOR PART 1, SEE LAK-20-19.59

INDEX OF SHEETS:

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SCHEMATIC PLAN	2-5
TYPICAL SECTIONS	6, 6A, 7-9, 9A, 10-12, 12A, 13-15
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CALCULATIONS	232-236
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SOIL PROFILES	SEE PART 1
RIGHT OF WAY	RW.1 - RW.99

PROJECT DESCRIPTION

MAJOR REHABILITATION OF 3.06 MILES OF NORTH RIDGE ROAD (U.S. 20) FROM TOWNLINE ROAD TO HUBBARD ROAD IN MADISON TOWNSHIP. WORK WILL INCLUDE ROADWAY WIDENING, RESURFACING, SIDEWALK, DRAINAGE, AND TRAFFIC SIGNAL IMPROVEMENTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 28.4 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: 29.4 ACRES

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

DISTRICT DEPUTY DIRECTOR

John Picuri
 John Picuri, P.E., S.I.
 12

DIRECTOR, DEPARTMENT OF TRANSPORTATION

John M. ...

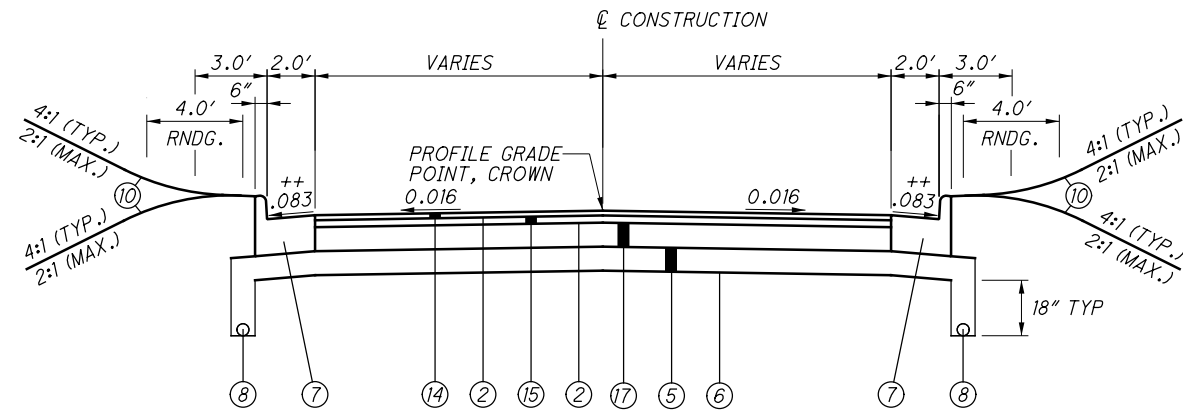
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
		SEE PART 1		SEE PART 1	SEE PART 1

ENGINEER'S SEAL

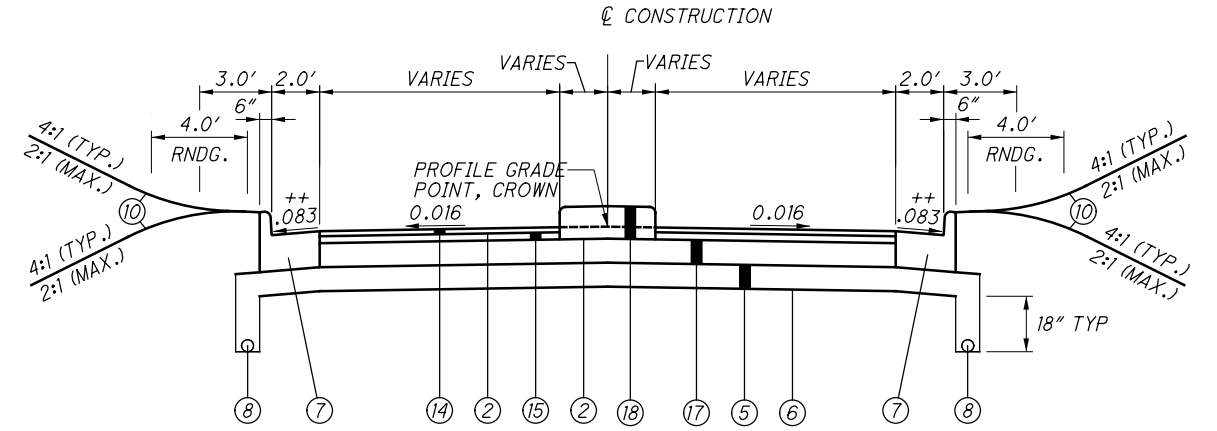


FEDERAL PROJECT NO. **E191(584)**
 PID NO. **108665**
 CONSTRUCTION PROJECT NO. **NONE**
 RAILROAD INVOLVEMENT **NONE**
LAK-US-20-24.99
PART 2
 1/599

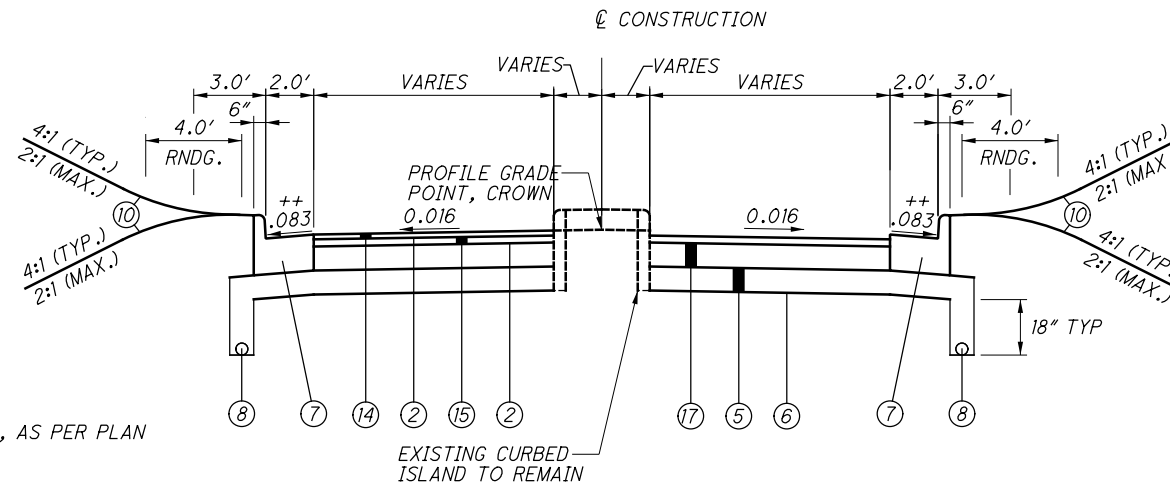
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STONERIDGE
 STA. 10+22.77 TO STA. 10+62.77
MORNINGSTAR
 STA. 10+23.70 TO STA. 10+59.02
SOUTH DERUBERTIS RD.
 STA. 9+45.00 TO STA. 9+77.00



WALMART
 STA. 10+22.77 TO STA. 10+62.77
SHOP AT STA. 556+02
 STA. 9+08.00 TO STA. 9+77.00
SHOP AT STA. 558+31
 STA. 9+45.00 TO STA. 9+77.00



SHOP AT STA. 556+02
 STA. 10+23.29 TO STA. 10+79.97

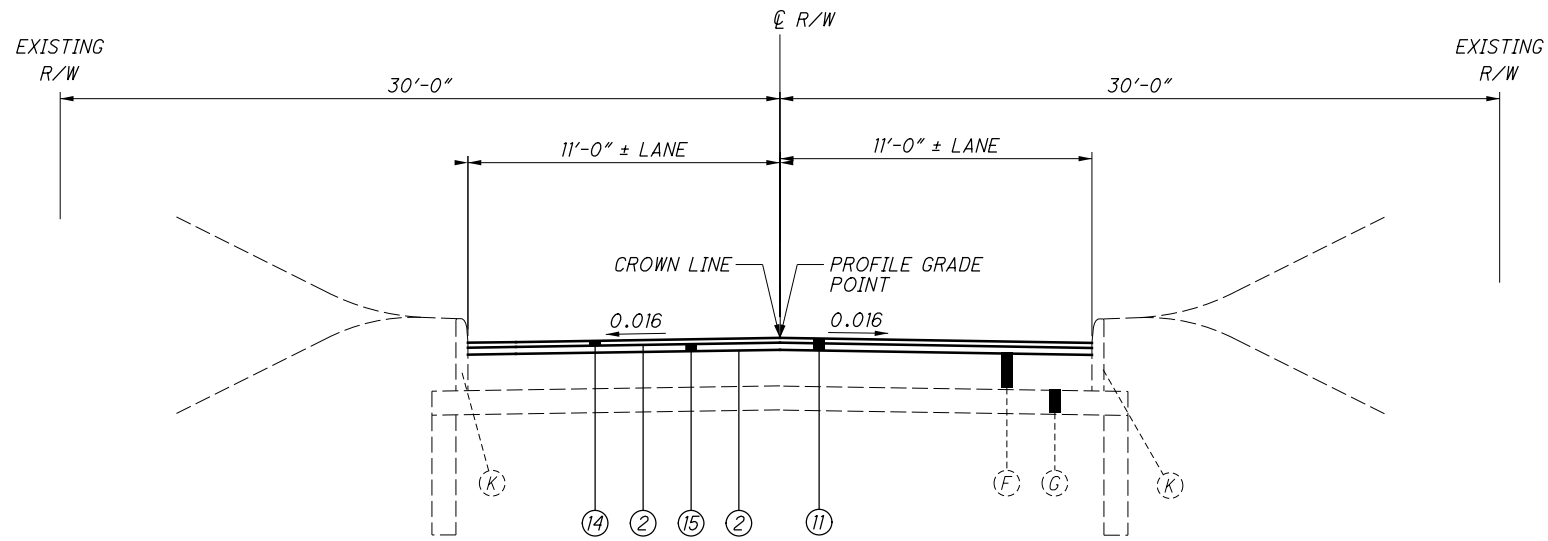
LEGEND

- ① ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M, AS PER PLAN
- ② ITEM 407 - NON-TRACKING TACK COAT
- ③ ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- ④ ITEM 301 - 6" ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- ⑧ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑨ ITEM 606 - GUARDRAIL, TYPE MGS
- ⑩ ITEM 659 - SEEDING AND MULCHING, CLASS 1
- ⑪ ITEM 254 - 3" PAVEMENT PLANING, ASPHALT CONCRETE
- ⑫ ITEM 617 - 3" COMPACTED AGGREGATE
- ⑬ ITEM 608 - 4" CONCRETE WALK
- ⑭ ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- ⑮ ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- ⑯ ITEM 609 - CURB, TYPE 6
- ⑰ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449)
- ⑱ ITEM 609 - CONCRETE TRAFFIC ISLAND

NOTE: ROADWAY TYPICAL SECTIONS INDICATE THE FINAL CONDITION OF 1.25 INCHES ASPHALT SURFACE COURSE PLACED UPON AN INTERMEDIATE COURSE. DURING MOT PHASES 1, 2, 3, AND 4, 3.0 INCHES OF ASPHALT INTERMEDIATE COURSE WILL TEMPORARILY BE PLACED. DURING MOT PHASE 5, 1.25 INCHES OF THE INTERMEDIATE COURSE WILL BE MILLED AND 1.25 INCHES OF ASPHALT SURFACE COURSE WILL BE PLACED. SEE MAINTENANCE OF TRAFFIC GENERAL NOTES AND TYPICAL SECTIONS.

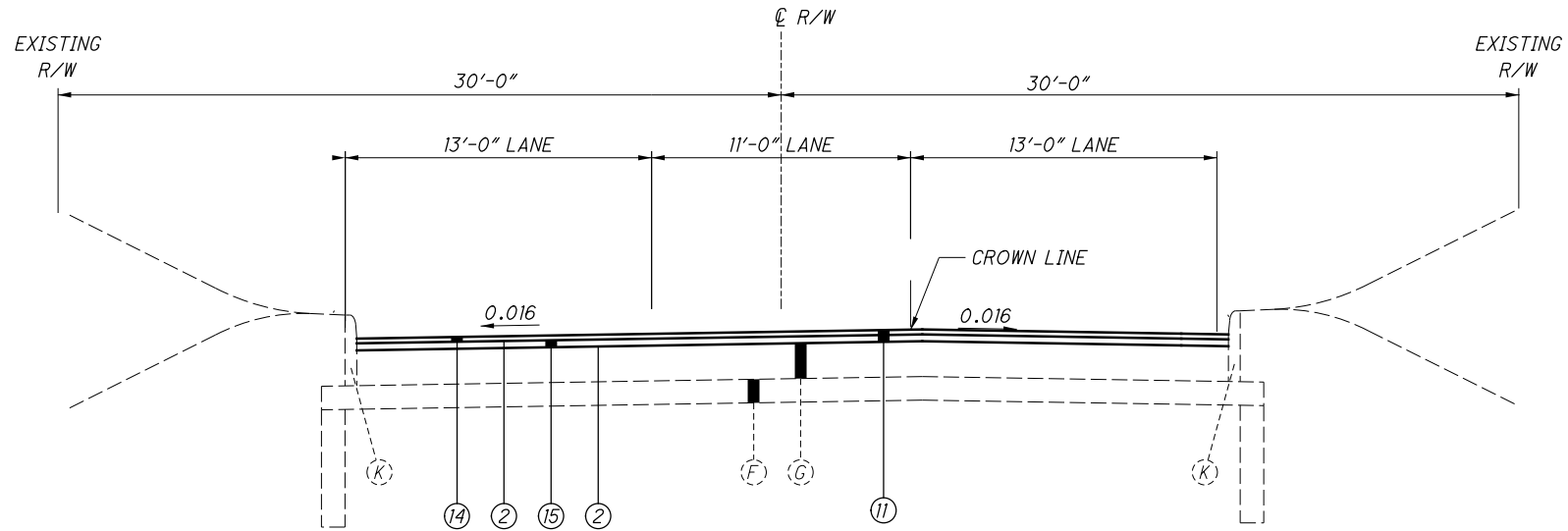
++ FLATTEN GUTTER CROSS SLOPE TO 0.016 WHERE INDICATED ON THE PLANS TO MATCH EXISTING PAVEMENT

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MCMACKIN ROAD RESURFACING

STA. 9+20.95 TO STA. 9+64.92
STA. 10+27.20 TO STA. 10+25.75



GREEN ROAD RESURFACING

STA. 10+33.66 TO STA. 11+03.00

LEGEND

- | | |
|-------------------------|-----------------------------|
| (A) 3"-5" ASPHALT | (G) 6" AGGREGATE BASE |
| (B) 6"-8" ASPHALT | (H) 9" CONCRETE |
| (C) 4" BRICK | (I) 4" BASE PIPE UNDERDRAIN |
| (D) 4"-6" CONCRETE | (J) 4" CONCRETE WALK |
| (E) 7"-8" CONCRETE | (K) CONCRETE CURB |
| (F) 9" ASPHALT CONCRETE | |

LEGEND

- ① ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M, AS PER PLAN
- ② ITEM 407 - NON-TRACKING TACK COAT
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- ⑰ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449)

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ROADWAY

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCIDENTAL TO ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

ITEM 203 - EMBANKMENT

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ADDITIONAL EMBANKMENT REQUIRED BETWEEN THE BOTTOM OF THE EXISTING PAVEMENT AND THE TOP OF THE PROPOSED SUBGRADE WHICH WAS IS NOT QUANTIFIED IN THE CROSS SECTIONS OR EARTHWORK CALCULATION SHEETS. THIS EMBANKMENT QUANTITY IS REQUIRED FOR AREAS OF THE PROJECT WHERE THE BOTTOM OF EXISTING PAVEMENT IS BELOW THE PROPOSED SUBGRADE.

ITEM 203, EMBANKMENT, 2398 CY

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

ITEM 202 REMOVAL MISC.: BUSINESS SIGN

REMOVE THE SIGN, SUPPORT, FOUNDATION AND ANY ASSOCIATED WIRING AS INDICATED FOR REMOVAL WITHIN THE LIMITS OF THE RIGHT OF WAY OR TEMPORARY RIGHT-OF WAY. CUT AND CAP THE EXISTING WIRING AT THE RIGHT OF WAY LINE. REMOVE FOUNDATIONS TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

DELIVER THE EXISTING SIGN TO THE PROPERTY OWNER OR DISPOSE OF IF THE OWNER DOES NOT WANT TO SALVAGE THE REMOVED MATERIALS. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER REGARDING THIS PROPOSED WORK FOR THE DISCONNECTION OF THE CIRCUIT AND TO DETERMINE THE PROPERTY OWNERS INTENT TO SALVAGE THE EXISTING BUSINESS SIGN.

THE ABOVE NOTED WORK SHALL BE COMPLETED AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE NOTED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BUSINESS SIGN, EACH

ITEM 202 REMOVAL MISC.: BOULDER

REMOVE THE BOULDERS AS INDICATED FOR REMOVAL IN THEIR ENTIRETY. BACKFILL ANY CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

BOULDERS REMOVED AND ALL OF THE ABOVE WORK WILL BE PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: BOULDER, EACH

ITEM 202 REMOVAL MISC.: LIGHT POLE

REMOVE THE LUMINAIRE, SUPPORT, FOUNDATION AND ANY ASSOCIATED WIRING AS INDICATED FOR REMOVAL WITHIN THE LIMITS OF THE RIGHT OF WAY OR TEMPORARY RIGHT OF WAY. CUT AND CAP THE EXISTING WIRING AT THE RIGHT OF WAY LINE. REMOVE FOUNDATIONS TO A MINIMUM OF 1 FOOT BELOW THE PROPOSED GROUND SURFACE OR REMOVE ENTIRE FOUNDATION IF NECESSARY FOR THE COMPLETION OF OTHER WORK IN THE CONTRACT. BACKFILL THE CAVITY CREATED BY THE REMOVAL ITEM ACCORDING TO 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

DELIVER THE EXISTING LUMINAIRE AND SUPPORT TO THE PROPERTY OWNER OR DISPOSE OF IF THE OWNER DOES NOT WANT TO SALVAGE REMOVED MATERIALS. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER REGARDING THIS PROPOSED WORK FOR THE DISCONNECTION OF THE CIRCUIT AND TO DETERMINE THE PROPERTY OWNERS INTENT TO SALVAGE THE EXISTING LUMINAIRE AND SUPPORT.

THE ABOVE NOTED WORK SHALL BE COMPLETED AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE NOTED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: LIGHT POLE, EACH

ITEM 202 REMOVAL MISC.: SHED

REMOVE AND DISPOSE OF THE SHED IN ITS ENTIRETY AS INDICATED.

THE ABOVE NOTED WORK SHALL BE COMPLETED AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE NOTED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR:

ITEM 202 REMOVAL MISC.: SHED, EACH

ITEM 623 - MONUMENT ASSEMBLIES

THE FOLLOWING SUMMARY OF SURVEY MONUMENT WORK AS SHOWN ON THE RIGHT OF WAY PLANS HAS BEEN CARRIED TO THE GENERAL SUMMARY.

SHEET NO.	STATION TO STATION		623	MONUMENT ASSEMBLY, TYPE C
			EACH	
		TO		
601	405+83.06	431+47.75	2	
602	431+47.75	457+00.00	5	
603	457+00.00	485+00.00	4	
604	485+00.00	510+00.00	2	
605	510+00.00	536+00.00	4	
606	536+00.00	560+00.00	2	
607	560+00.00	588+00.00	1	
TOTALS CARRIED TO GENERAL SUMMARY			20	

EROSION CONTROL

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	7161 CU. YD.
659, SEEDING AND MULCHING, CLASS 1	64508 SQ. YD.
659, REPAIR SEEDING AND MULCHING	3226 SQ. YD.
659, INTER-SEEDING	3226 SQ. YD.
659, COMMERCIAL FERTILIZER	9.0 TON
659, LIME	13.33 ACRES
659, WATER	367 M. GAL.

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 LIMITS IDENTIFIED AS NECESSARY IN THE CROSS-SECTIONS. ANY ADDITIONAL AREAS OUTSIDE OF THE AREAS IDENTIFIED IN THE CROSS-SECTIONS THAT ARE DISTURBED BY THE 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.

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GENERAL NOTES

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DRAINAGE DISCHARGE CONTINUANCE

FURNISH A DRAINAGE DISCHARGE CONTINUANCE FOR ANY DRAINAGE DISCHARGE DISTURBED BY THE WORK AND NOT SHOWN IN THE PLANS. THE LOCATION, TYPE (CONDUIT OR SWALE), SIZE AND GRADE OF THE DRAINAGE DISCHARGE CONTINUANCE WILL BE AGREED TO BY THE ENGINEER

FURNISH AN INSPECTION WELL AT THE RIGHT OF WAY LINE IN ACCORDANCE WITH SCD DM-3.1 FOR EACH DRAINAGE DISCHARGE THAT OUTLETS THROUGH A CURB OPENING, OR INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST IS INCLUDED IN ITEM 611, INSPECTION WELL.

FURNISH A DRILLED HOLE OR A CURB SECTION WITH A HOLE WHEN OUTLETING A CONDUIT THROUGH A CURB OPENING. THE COST OF DRILLING, OR FURNISHING THE CURB SECTION WITH HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE - FOR DRAINAGE DISCHARGE CONTINUANCE.

FURNISH A DRILLED CORE HOLE WHEN OUTLETING INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST OF THE DRILLED CORE HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE - FOR DRAINAGE DISCHARGE CONTINUANCE.

DOCUMENTATION: THE CONTRACTOR SHALL FURNISH WRITTEN DOCUMENTATION TO THE ENGINEER AND TO THE DISTRICT R/W PERMIT OFFICE. THE DOCUMENTATION INCLUDES THE CONSTRUCTION PROJECT NUMBER, PID, COUNTY, ROUTE, SECTION, LATITUDE AND LONGITUDE OF THE DRAINAGE DISCHARGE AT THE R/W, THE NAME OF PROPERTY OWNER WITH ADDRESS, THE DATE THE DRAINAGE DISCHARGE WAS LOCATED, THE DATE THE DRAINAGE DISCHARGE CONTINUANCE WAS FURNISHED, A DETAILED DESCRIPTION OF THE WORK AND PICTURES OF THE DRAINAGE DISCHARGE CONTINUANCE (IN PDF OR JPEG FORMAT). THE DOCUMENTATION IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE - FOR DRAINAGE DISCHARGE CONTINUANCE.

CONDUIT MATERIAL TYPES THE FOLLOWING CONDUIT MATERIAL TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, AND 707.52 SDR35.

PAY ITEMS: EACH OF THE PAY ITEMS LISTED BELOW FOR CONDUIT MISCELLANEOUS TYPES B, C, E AND F FOR DRAINAGE DISCHARGE CONTINUANCE INCLUDE CONDUIT SIZES 2 INCH TO 10 INCH. THERE IS NO COST DIFFERENTIATION FOR SIZE IN THESE PAY ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE DRAINAGE DISCHARGE CONTINUANCE:

ITEM 611, INSPECTION WELL 10 EACH
ITEM 611, CONDUIT, MISC TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE 500 FEET
ITEM 611, CONDUIT, MISC TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE 500 FEET

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 10000 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM 611 CATCH BASIN RECONSTRUCTED TO GRADE

THE FOLLOWING QUANTITY IS PROVIDED TO RECONSTRUCT EXISTING CATCH BASINS TO GRADE IN RESURFACING AREAS OF THE PROJECT, AS DIRECTED BY THE DEPARTMENT.

ITEM 611 CATCH BASIN RECONSTRUCTED TO GRADE, 5 EACH

ITEM 611 INLET, SIDE DITCH

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO ADDRESS LOW AREAS INADVERTENTLY CREATED WITHIN THE PROJECT LIMITS, AS DIRECTED BY THE DEPARTMENT.

ITEM 611 INLET, SIDE DITCH 5 EACH
ITEM 611 12" CONDUIT, TYPE C 500 FEET

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT, 24" AND UNDER 1300 FEET
SPECIAL, PIPE CLEANOUT, 27" TO 48" 750 FEET

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

WATER QUALITY

POST CONSTRUCTION STORM WATER TREATMENT

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

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4.

PAVEMENT

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449) 100 CU. YDS.
ITEM 304 - AGGREGATE BASE 100 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 611, DRAINAGE STRUCTURES.

ITEM 301, ASPHALT CONCRETE BASE, PG64-22, (449) 10 CU. YDS.
ITEM 304 - AGGREGATE BASE 10 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 AND 304 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE DRAINAGE STRUCTURE.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF ALL INTEGRAL CURB AND ALL TYPES OF EXISTING PAVEMENT, INCLUDING ASPHALT, CONCRETE AND BRICK.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PARTIAL DEPTH PAVEMENT REPAIR:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441) 900 SY.

REMOVAL DEPTH SHALL BE 3 INCHES OR AS DIRECTED BY THE ENGINEER.

ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG 70-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL CONSIST OF A BLEND OF 60% MIN. AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

ITEM 301 - ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22

FOR THE PLACEMENT OF 301 ASPHALT BASE, USE ANTI-SEGREGATION EQUIPMENT CONFORMING TO THE REQUIREMENTS OF 401.03.C EXCLUDING THE USE OF REMIXING PAVERS. ALL COSTS ASSOCIATED WITH THIS PROVISION SHALL BE INCIDENTAL TO ITEM 301 - ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22.

ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS

THE FOLLOWING QUANTITY OF NON-REINFORCED CONCRETE PAVEMENT HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRIVE APRON RESTORATION ALONG HUBBARD ROAD AND DERUBERETIS DEIVE AFTER MAINTENANCE OF TRAFFIC OPERATIONS ARE COMPLETE.

ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS, 130 SY

ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS, 920 SY

ITEM 609 - CURB, TYPE 6, 80 FT

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GENERAL NOTES

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ITEM 614. MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON NORTH RIDGE ROAD (U.S. 20) BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON HAINES ROAD AND BURNS ROAD, EXCEPT FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 25-26. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$800 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 608, TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN	86000 SQ. FT.
ITEM 615, ROADS FOR MAINTAINING TRAFFIC, TYPE A LUMP	
ITEM 616, WATER	50 M. GAL.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGN (SIDE ROADS)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED SIDE ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. (AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.)

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER. THESE REQUIREMENTS APPLY TO ALL PERMANENT AND TEMPORARY PAVEMENT NOT PROTECTED BY BARRIER.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC	7100 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	240 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED. ANY UNDERCUTS SHALL BE FILLED THE SAME DAY AS EXCAVATION.

WORK ZONE MARKINGS (WINTER APPLICATION)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11. MARKINGS SHALL BE APPLIED ON ROADWAY AFFECTED BY PHASE 1 AND PHASE 2 CONSTRUCTION:

WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	3.61 MILE
WORK ZONE CENTER LINE, CLASS I, 642 PAINT	2.71 MILE
WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	1.33 MILE
WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	1506 FT
WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	648 FT
WORK ZONE STOP LINE, CLASS I, 642 PAINT	566 FT
WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT	1582 FT
WORK ZONE ARROW, CLASS I, 642 PAINT	23 EACH
WORK ZONE ISLAND MARKING, CLASS I	51 SF

WORK ZONE MARKINGS (PRE-FINAL APPLICATION)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11. MARKINGS SHALL BE APPLIED AFTER PAVEMENT PLANING AND AFTER PLACEMENT OF THE SURFACE COURSE PRIOR TO THE FINAL PAVEMENT MARKINGS BEING APPLIED:

WORK ZONE LANE LINE, CLASS III, 642 PAINT	12.38 MILE
WORK ZONE CENTER LINE, CLASS III, 642 PAINT	8.66 MILE
WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	4.26 MILE
WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	4032 FT
WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	1676 FT
WORK ZONE STOP LINE, CLASS III, 642 PAINT	1338 FT
WORK ZONE CROSSWALK LINE, CLASS III, 12", 642 PAINT	3390 FT
WORK ZONE ARROW, CLASS III, 642 PAINT	62 EACH
WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT	102 SF

ITEM 614. WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL. WORK ZONE TRAFFIC SIGNAL

THE ADDITION OF TEMPORARY TRAFFIC SIGNALS AND EQUIPMENT AND MODIFICATIONS TO EXISTING TRAFFIC SIGNALS AND EQUIPMENT SHALL BE PAID FOR UNDER THE UNIT PRICE BID FOR ITEM 614 WORK ZONE TRAFFIC SIGNAL AT THE FOLLOWING INTERSECTIONS:

PHASE 1: GREEN ROAD, BURNS ROAD, DERUBERTIS DRIVE, SERVICE ROADS, HUBBARD ROAD

PHASE 1A: HUBBARD ROAD
PHASE 1B: HUBBARD ROAD

PHASE 2: GREEN ROAD, BURNS ROAD, DERUBERTIS DRIVE, SERVICE ROADS, HUBBARD ROAD

PHASE 2A: HUBBARD ROAD
PHASE 2B: HUBBARD ROAD

PHASE 3: TOWNLINE ROAD, McMACKIN ROAD, GREEN ROAD

PHASE 4: TOWNLINE ROAD, McMACKIN ROAD, GREEN ROAD

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK:

ITEM 614, WORK ZONE TRAFFIC SIGNAL	20 EACH
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DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER	500 M. GAL.
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ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) 23 OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 6 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	120 SIGN MONTH
	ASSUMING 5 PCMS SIGNS FOR 24 MONTHS

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MAINTENANCE OF TRAFFIC GENERAL NOTES

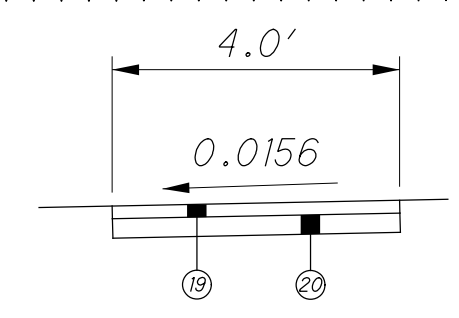
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MAINTENANCE OF TRAFFIC MISCELLANEOUS DETAILS

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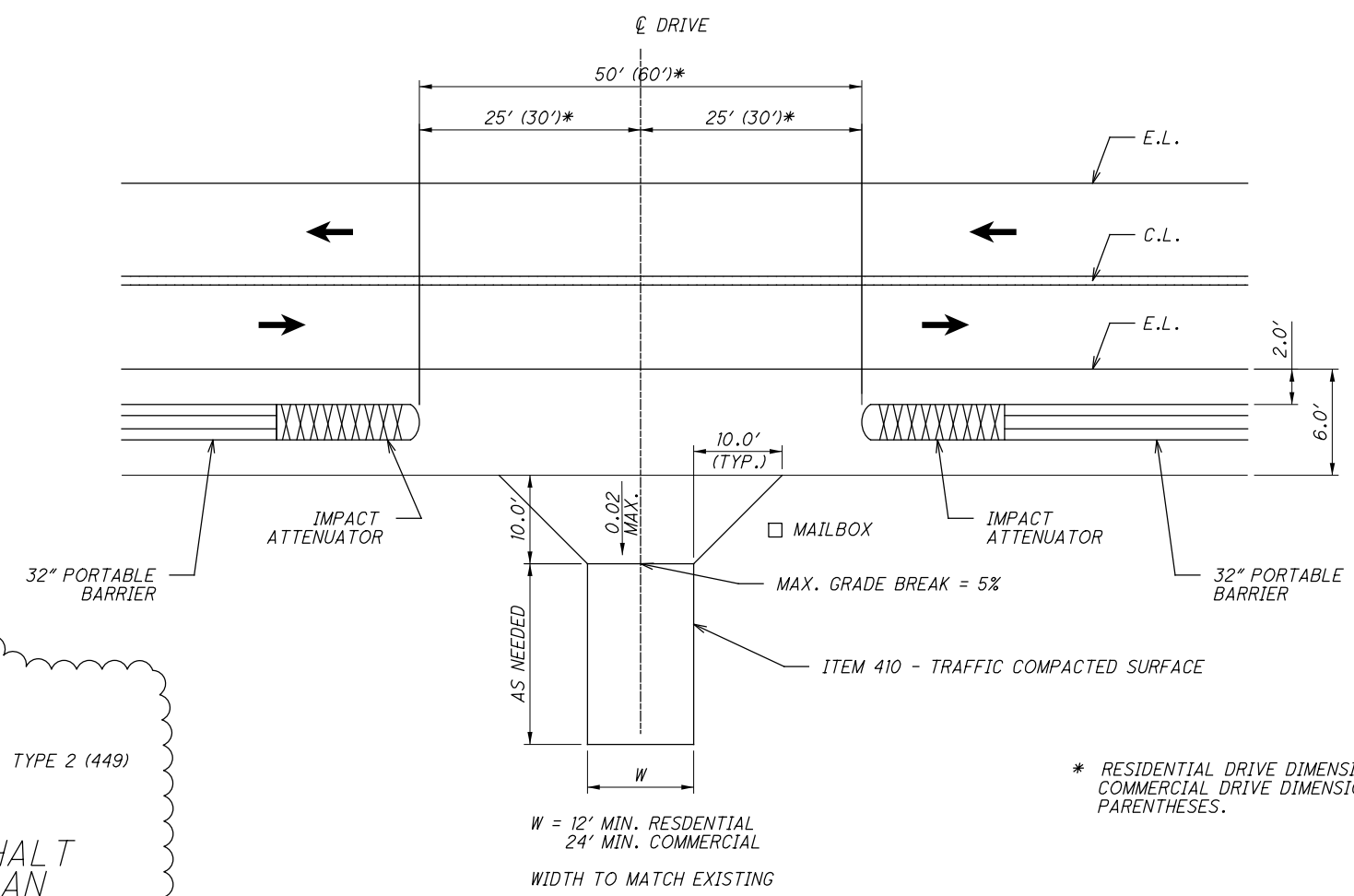


LEGEND

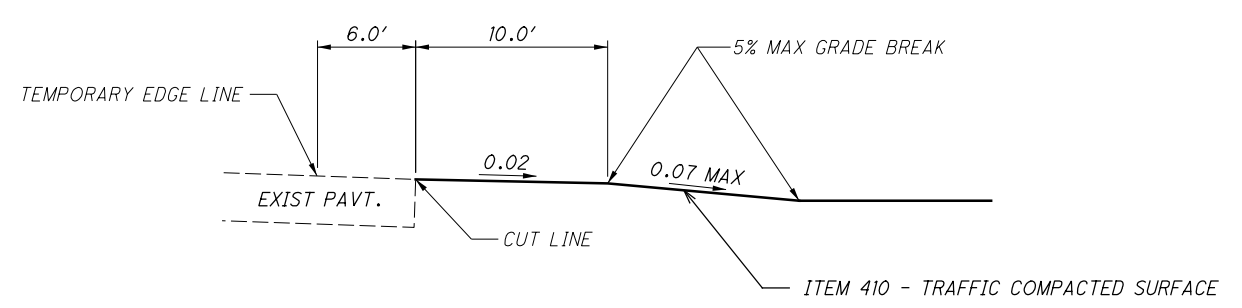
① 2" - ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)

② 3" - ITEM 304 AGGREGATE BASE

ITEM 608 - TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN DETAIL



TEMPORARY DRIVE DETAIL



TEMPORARY DRIVE PROFILE

* RESIDENTIAL DRIVE DIMENSIONS SHOWN.
COMMERCIAL DRIVE DIMENSIONS ARE IN PARENTHESES.

REF NO.	SHEET NO.	STATION TO STATION		SIDE	MAINTENANCE ITEMS																			615	622
					12" CONDUIT, TYPE B, AS PER PLAN	CATCH BASIN, NO. 6, AS PER PLAN	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	WORK ZONE LANE LINE, CLASS I, 642 PAINT	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6" 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 8" 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 4" 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE CROSSWALK LINE, CLASS I, 24" 642 PAINT	WORK ZONE ARROW, CLASS I, 642 PAINT	WORK ZONE ISLAND MARKING, CLASS I	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	OBJECT MARKER, TWO WAY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED			
		TO			FT	EACH	EACH	MILE	MILE	MILE	FT	FT	FT	FT	FT	EACH	SF	EACH	EACH	EACH	SY	FT			
D-10	72	564+88	565+05	RT	28																				
P-15	72	564+00	569+00	LT																	130				
CL-1	73	569+00	574+00	LT					0.095																
CL-2	73	573+00	574+00	LT					0.019																
EL-1	73	569+00	574+00	LT						0.095															
EL-2	73	569+00	574+00	LT						0.095															
D-11	73	569+00	569+29	LT&RT	45	1	1																		
D-12	73	571+50	571+50	LT&RT	5	1	1																		
P-16	73	569+00	574+00	LT																	380				
CL-1	74	574+00	579+00	C/L					0.095																
CL-2	74	574+00	579+00	LT					0.095																
EL-1	74	574+00	577+78	RT						0.072															
EL-2	74	574+00	577+06	LT						0.058															
LL-1	74	577+78	579+00	RT				0.023																	
P-17	74	574+00	577+06.4	LT																	138				
CL-1	75	579+00	583+49	C/L					0.085																
CL-2	75	579+00	581+59	LT					0.049																
LL-1	75	579+00	583+49	RT				0.085																	
LL-2	75	581+59	583+49	LT				0.036																	
DL-1	75	579+28	581+59	LT									231												
BURNS ROAD																									
CL-1	82	516+23	517+72	RT					0.028																
EL-1	82	516+38	517+87	RT					0.028																
HUBBARD ROAD, PHASE 1A																									
CL-1	86	89+00	92+50	C/L					0.066																
EL-1	86	89+00	92+50	LT						0.066															
EL-2	86	89+00	92+50	RT						0.066															
P-19	86	92+42.5	92+50	RT																	3				
CL-1	86	92+50	97+50	RT					0.095																
EL-1	86	92+50	97+50	RT						0.095															
EL-2	86	92+50	97+50	RT						0.095															
P-20	86	92+50	97+50	RT																	702				
SUBTOTAL SHEET 36					78	2	2	0.144	0.655	0.642			231									1353			

MAINTENANCE OF TRAFFIC SUBSUMMARY

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Table with columns: SHEET NUM., PART., ITEM, ITEM EXT, GRAND TOTAL, UNIT, DESCRIPTION, SEE SHEET NO.

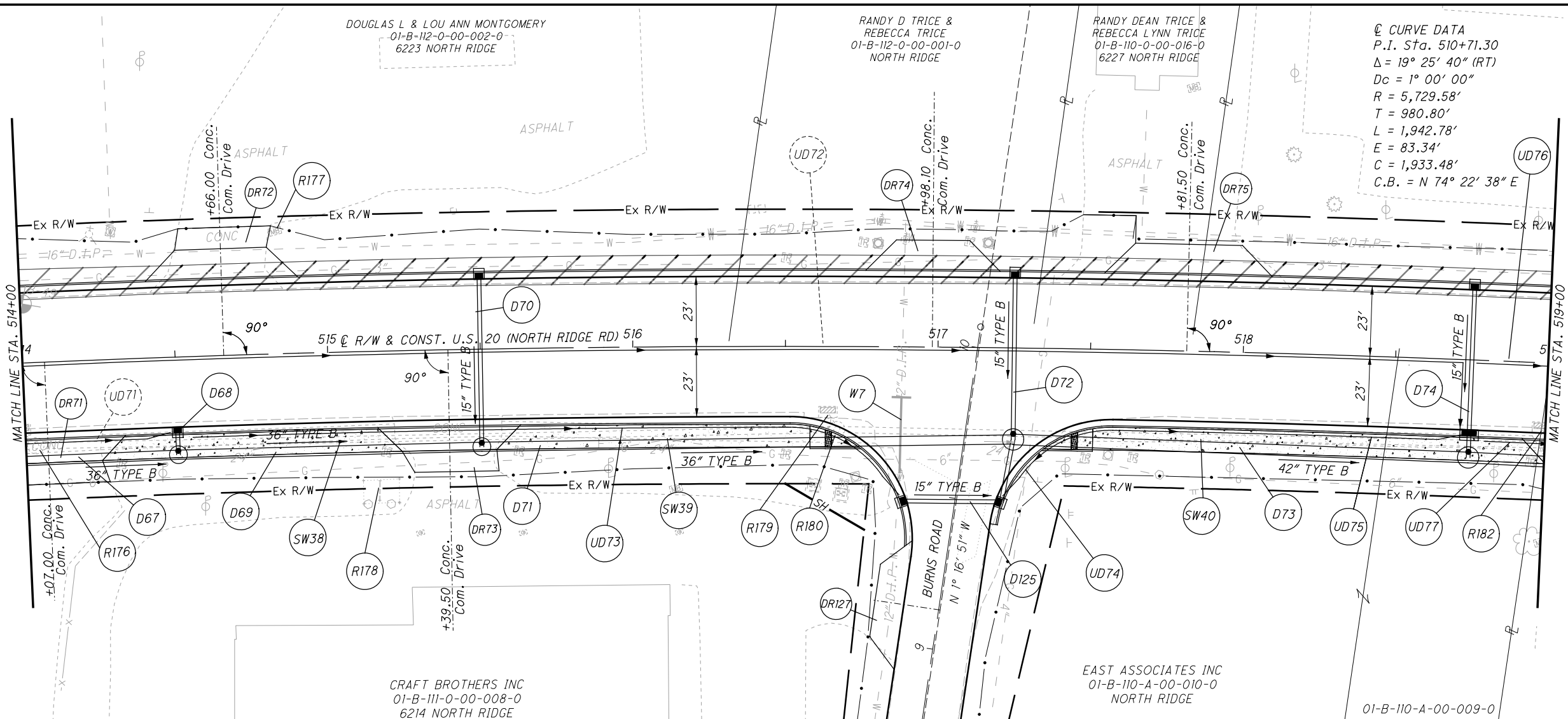
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PAVEMENT

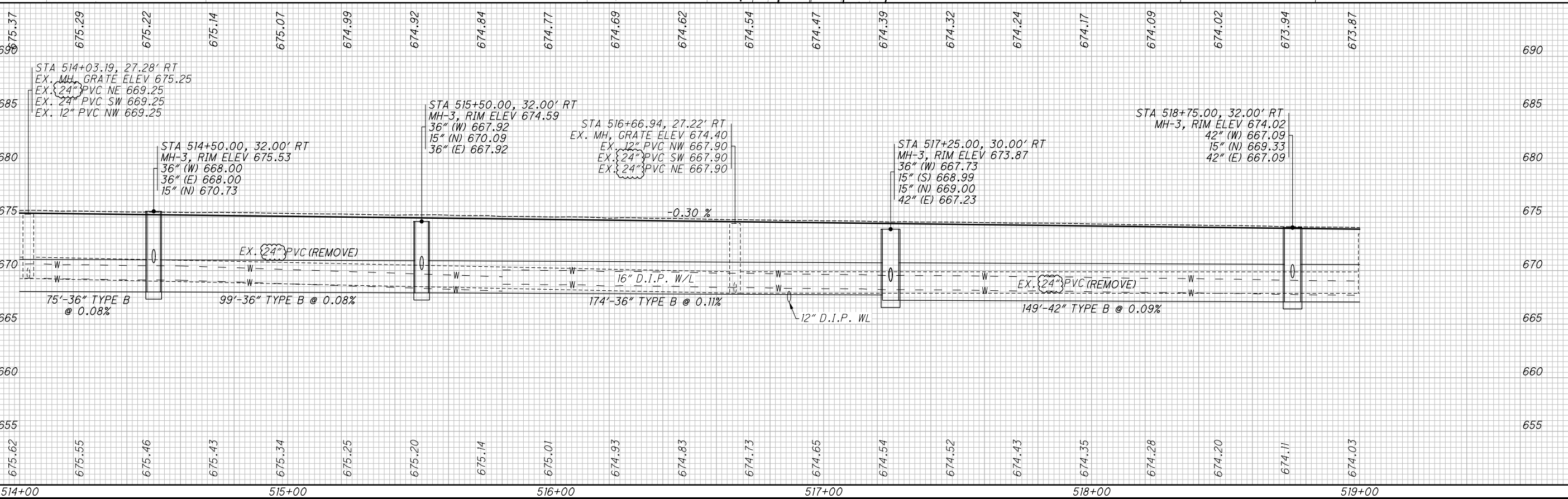
GENERAL SUMMARY

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ϕ CURVE DATA
 P.I. Sta. 510+71.30
 $\Delta = 19^\circ 25' 40''$ (RT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 980.80'$
 $L = 1,942.78'$
 $E = 83.34'$
 $C = 1,933.48'$
 $C.B. = N 74^\circ 22' 38'' E$



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 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 980.80'$
 $L = 1,942.78'$
 $E = 83.34'$
 $C = 1,933.48'$
 $C.B. = N 74^\circ 22' 38'' E$

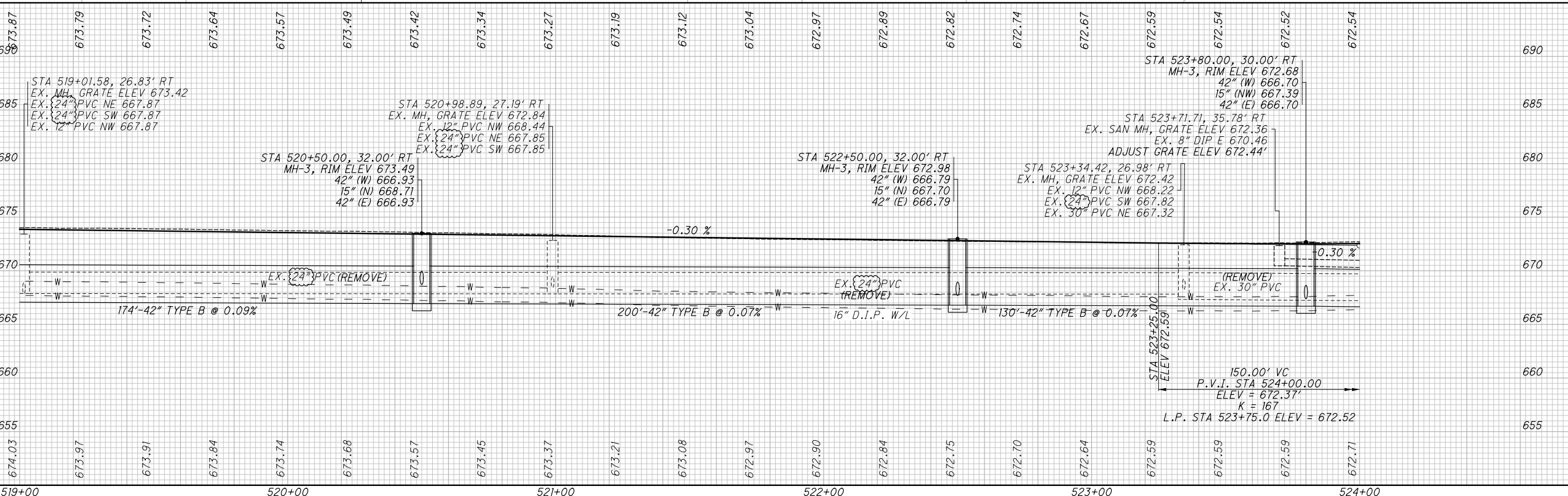
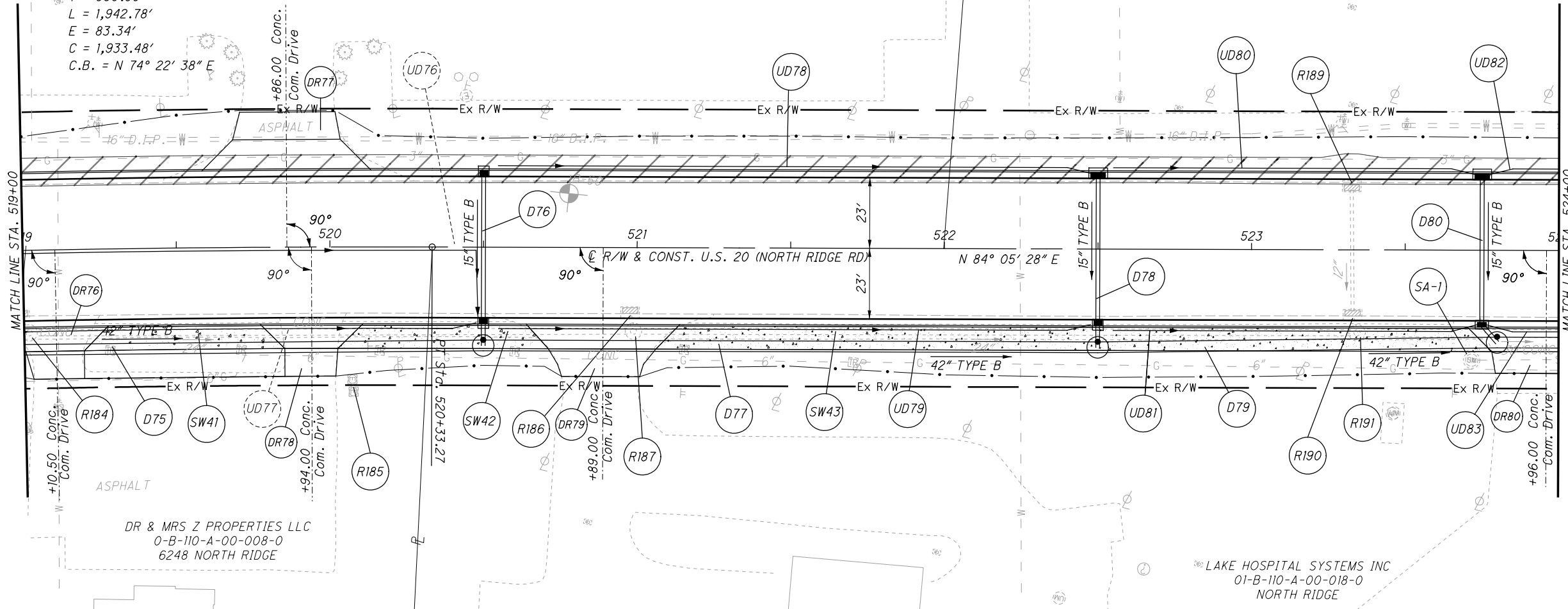
⊕ MADISON ROUTE 20 PROPERTIES LLC
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 6251 NORTH RIDGE

MADISON ROUTE 20 PROPERTIES LLC
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 6277 NORTH RIDGE

DR & MRS Z PROPERTIES LLC
 0-B-110-A-00-008-0
 6248 NORTH RIDGE

LAKE HOSPITAL SYSTEMS INC
 01-B-110-A-00-018-0
 NORTH RIDGE

TEMPORARY PAVEMENT



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