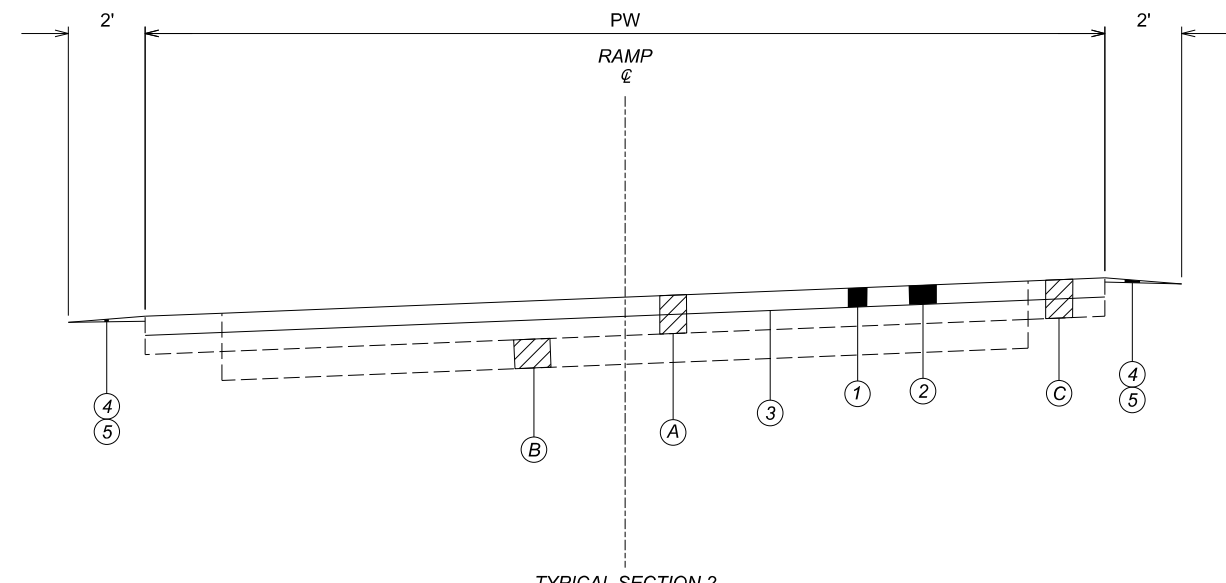


TYPICAL SECTION 1

COUNTY	ROUTE	SLM		PW1 (FEET)	PW2 (FEET)	LENGTH (MILES)
		FROM	TO			
SUM	480	0	4.34	39	39	4.34
SUM	480	4.34	4.72	25	25	0.38
SUM	480	4.72	8.67	39	39	3.95
CUY	480	29.69	29.89	39	39	0.2

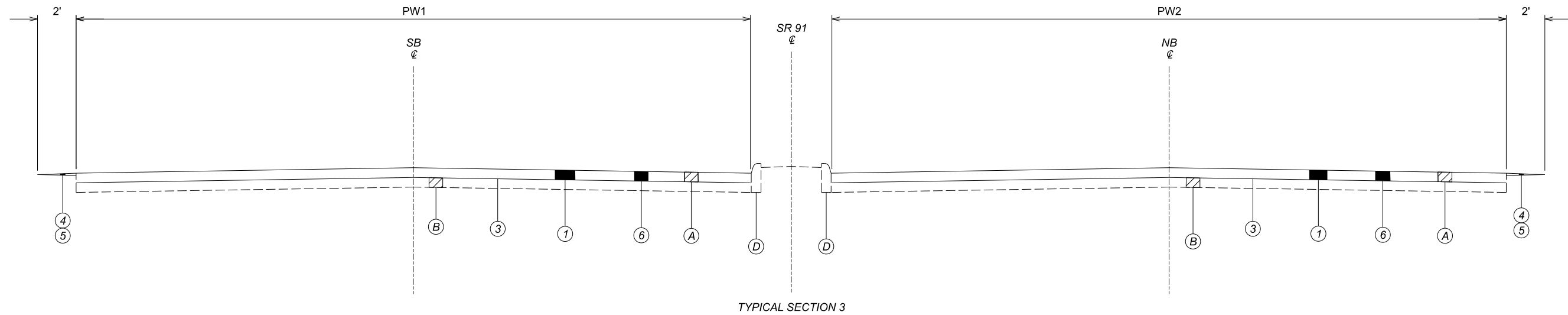
LEGEND

- (A) EXISTING ASPHALT PAVEMENT (T=7")
- (B) EXISTING REINFORCED CONCRETE BASE (T=9")
- (C) EXISTING ASPHALT SHOULDER
- (D) ESISTING CURB
- (E) EXISTING CURB AND GUTTER
- (F) EXISTING BRICK BASE
- (1) ITEM 254, PAVEMENT PLANING (T=1 1/2")
- (2) ITEM 442, ASPHALT CONCRETE SUFACE COURSE, 12.5MM, TYPE A, AS PER PLAN, (447), (T=1 1/2")
- (3) ITEM 407, NON TRACKING TACK COAT @ 0.09 GAL/SY
- (4) ITEM 408, PRIME COAT, AS PER PLAN @ 0.4 GAL/SY
- (5) ITEM 617, COMPACTED AGGREGATE, AS PER PLAN (T=2")
- (6) ITEM 442, ASPHALT CONCRETE SUFACE COURSE, 12.5MM, TYPE A, AS PER PLAN, (448), (T=1 1/2")



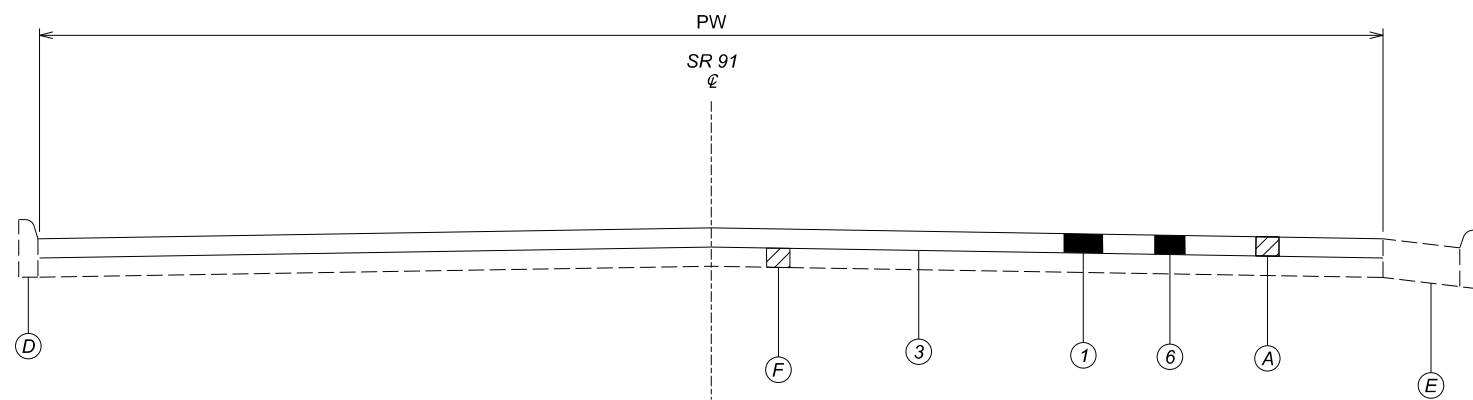
TYPICAL SECTION 2

RAMP	INTERCHANGE		PW (FEET)	LENGTH (FEET)
	FROM	TO		
A	82	480 WB	25	1400
B	480 WB	82	27	1000
C	82	480 EB	25	1500
D	480 EB	82	27	1300
E	480 WB	91	22	1100
F	91	480 EB	22	780
G	480EB	91	23	790
H	91	480 WB	22	900



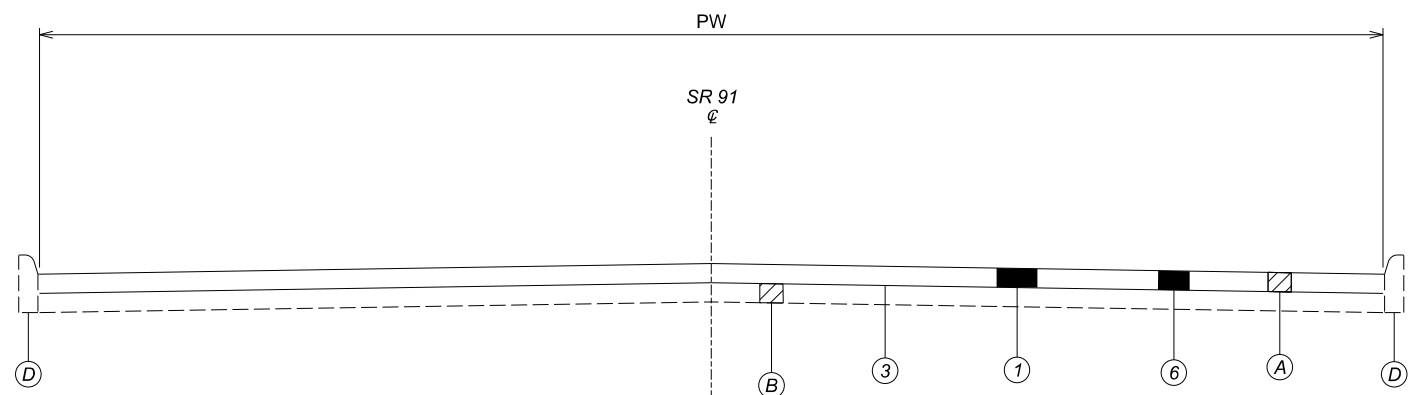
TYPICAL SECTION 3

ROUTE	SLM		PW1 (FEET)	PW2 (FEET)	LENGTH (MILES)
	FROM	TO			
91	19.13	19.14	30	50	0.01
91	19.14	19.28	40	40	0.14



TYPICAL SECTION 4

ROUTE	SLM		PW (FEET)	LENGTH (MILES)
	FROM	TO		
91	19.28	19.33	75	0.05



TYPICAL SECTION 5

ROUTE	SLM		PW (FEET)	LENGTH (MILES)
	FROM	TO		
91	19.07	19.13	70	0.06



UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER, OR ADJACENT TO, THE WORK AREA.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. FOR ANY LOCATIONS THAT PAVEMENT MARKING DETAILS HAVE NOT BEEN MADE AVAILABLE TO THE CONTRACTOR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PUT BACK NEW PAVEMENT MARKINGS IN THE ORIGINAL LOCATIONS.

ITEM SPECIAL - VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES:

- SUM-480-1.37 (SFN:7710208)
- SUM-480-2.42 (SFN:7710291)
- SUM-480-4.11 (SFN:7706960)
- SUM-480-6.72 (SFN:7710410)
- SUM-480-8.14 (SFN:7710569)
- SUM-480-4.81L (SFN: 7710356)
- SUM-480-4.81R (SFN: 7710380)

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - VERTICAL CLEARANCE, 7 EACH

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS [AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS]:

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
SUM 480	0.00 TO 8.67	12'
CUY 480	29.69 TO 30.00	12'
RAMPS	480	16'
SUM 91	19.07 TO 19.33	12'

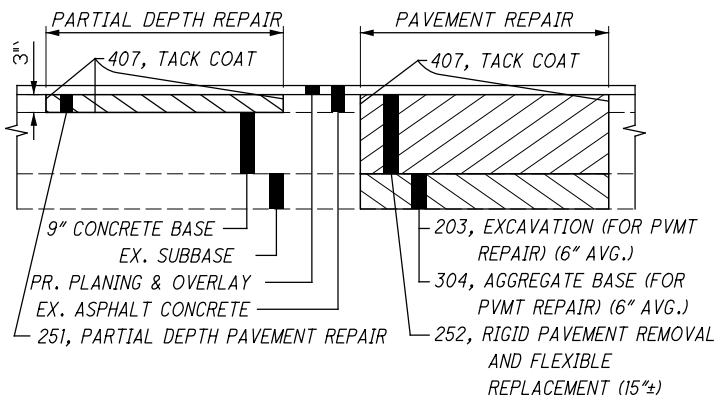
PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. PAVEMENT REPAIRS WILL BE MARKED IN THE FIELD BY THE PROJECT ENGINEER ACCORDING TO CMS 251.02. MINIMUM WIDTH IS 2'. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 4 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 4000 SQ. YD. (IR 480)
- 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 650 SQ. YD. (SR 91)



ITEM 252 - RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 15" 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 4 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 252, RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT, 1500 SQ YD
- 255, FULL DEPTH PAVEMENT SAWING, 7000 FT

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 203, EXCAVATION (FOR PAVEMENT REPAIR) 250 CU YD

ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 304, AGGREGATE BASE (FOR PAVEMENT REPAIR) 250 CU YD

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, TYPE A (447), AS PER PLAN

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, TYPE A (448), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

LINEAR GRADING

AREAS WHERE THE SHOULDER IS HIGHER THAN THE EDGE OF PAVEMENT WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE. THIS WORK WILL ONLY BE PERFORMED IN AREAS NECESSARY AND WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITTED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

- 209, LINEAR GRADING, 809 STA.
- 659, SEEDING AND MULCHING, 22473 SQ YD
- 659, COMMERCIAL FERTILIZER, 3.03 TON
- 659, LIME, 4.64 ACRES
- 659, WATER, 121.35 M. GAL.

DESIGN AGENCY



DESIGNER

RMK

REVIEWER

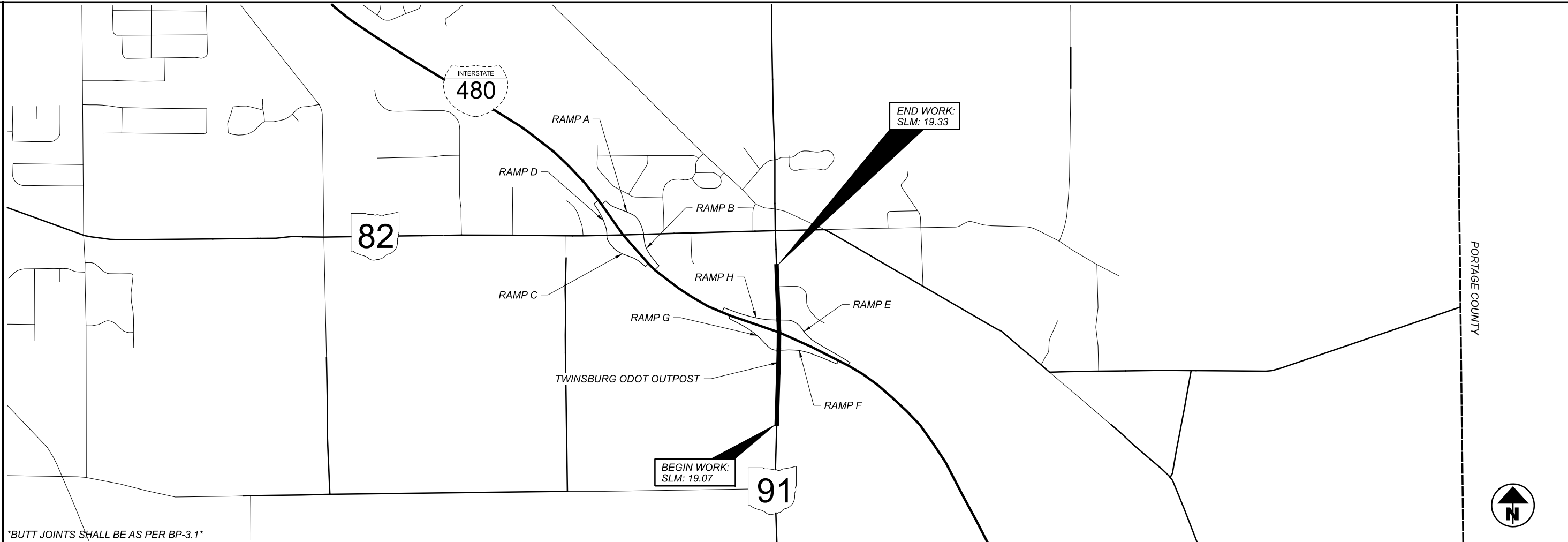
MAC 07/16/21

PROJECT ID

110698

SHEET TOTAL

P.4 29




BUTT JOINTS SHALL BE AS PER BP-3.1

SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	254	407	408	442	442	617	442										
							PAVEMENT PLANING ASPHALT CONCRETE (T=1 1/2')	NON-TRACKING TACK COAT @0.09 GAL/SY	PRIME COAT, AS PER PLAN @ 0.4 GAL/SY	ANTI-SEGREGATION EQUIPMENT	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, PG70-22M, (T=1 1/2')	COMPACTED AGGREGATE, AS PER PLAN (T = 2')	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M, (T=1 1/2')										
			FT	FT	SY	SY	SY	GAL	GAL	CY	CY	CY	CY	CY									
SR 91																							
19.07	TO	19.13	5	NB/SB	316.80	78.00	2745.60	2745.60	247.10		88.00		114.40										
19.13		19.14	3	NB	52.80	50.00	293.33	293.33	26.40		11.73		12.22										
19.14		19.28	3	NB	739.20	40.00	3285.33	3285.33	295.68		164.27		136.89										
19.13		19.14	3	SB	52.80	30.00	176.00	176.00	15.84		11.73		7.33										
19.14		19.28	3	SB	739.20	40.00	3285.33	3285.33	295.68		164.27		136.89										
19.28		19.33	4	NB/SB	264.00	76.00	2229.33	2229.33	200.64		58.67		92.89										
TURNAROUNDS																							
IR 480		SLM 0.88					478.00	478.00	43.02				19.92										
IR 480		SLM 2.87					570.00	570.00	51.30				23.75										
IR 480		SLM 5.56					456.00	456.00	41.04				19.00										
IR 480		SLM 7.33					461.00	461.00	41.49				19.21										
INTERSECTIONS																							
SR 91 INT		480 EB ON/OFF			56.00		146.00	146.00	13.14				6.08										
SR 91 INT		480 WB ON/OFF			60.00		102.00	102.00	9.18				4.25										
TWINSBURG ODOT OUTPOST																							
SR 91		SLM 19.10			50		3600.00	3600.00	324.00				150.00										
SUBTOTALS							0.00	17827.93	1604.51	0.00	0.00	498.67	0.00	81.88	0.00	0.00	660.96	0.00	0.00	0.00	0.00	0.00	
TOTALS CARRIED TO GENERAL SUMMARY							0	17828	1605	0	0	499	0	82	0	0	661	0	0	0	0	0	0

PAVEMENT CALCULATIONS

DESIGN AGENCY



DESIGNER
RMK

REVIEWER
MAJ 07/01/21

PROJECT ID
110698

SHEET TOTAL
P.14 29