PER - SR 669-0.00
160250 PID - 92986
Dist 5 4/21/2016

Contract Proposal Available @ www.
Contracts.dot.state.oh.us/home

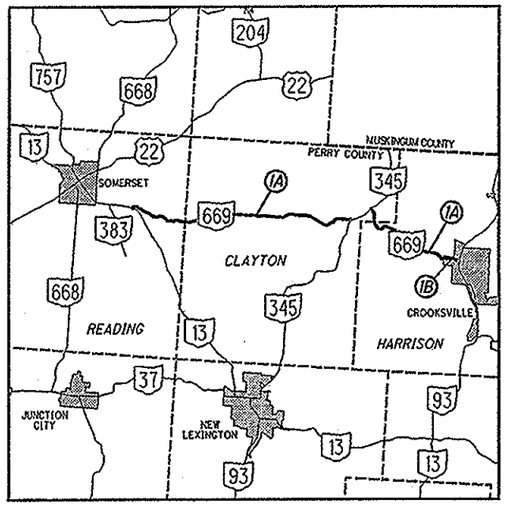
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

PER-669-0.00

VILLAGE OF CROOKSVILLE

READING, CLAYTON, AND HARRISON TOWNSHIPS

PERRY COUNTY



LOCATION MAP

LATITUDE: 39° 47′ 30″ LONGITUDE: 82° 09′ 30″

PORTION TO BE IMPROVED ----------

DESIGN DESIGNATION	S.R. 669 (IA)	S.R. 669 (IB)
FUNCTIONAL CLASSIFICATION	RMC	UC
OPENING YEAR ADT (2016)	1,300	1,300
DESIGN YEAR ADT (2028)	1,400	1,400
DESIGN HOURLY VOLUME (2028)	140	140
DIRECTIONAL DISTRIBUTION	56%	56%
TRUCKS (24 HOUR B&C)	5%	5%
DESIGN SPEED	55 MPH	35 MPH
LEGAL SPEED	55 MPH	35 MPH

RMC = RURAL MAJOR COLLECTOR
UC = URBAN COLLECTOR

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE — *Call Before You Dig* 1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PLANNING & ENGINEERING

INDEX OF SHEETS

PROJECT DESCRIPTION

ASPHALT CONCRETE RESURFACING ON S.R. 669 IN PERRY COUNTY.

PROJECT EARTH DISTURBED AREA = N/A (MAINT.)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = N/A (MAINT.)
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (MAINT.)

LOCATION	PLAN SPLIT	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/VILLAGE
IA	1	PER	669	0.00	6.34	6.34	
		PER	669	6.34	6.97	0.63	NO WORK (S.R. 345 OVERLAP)
IA	1	PER	669	6.97	9.72	2.75	
IB	2	PER	669	9.72	10.15	0.43	CROOKSVILLE

2013 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS 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 THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Dave Ray
DATE 1-25-16 *DISTRICT DEPUTY DIRECTOR*

APPROVED Jerry Wray
DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

ENGINEER'S SEAL

STATE OF OHIO ★ JASON SCOTT LUTZ E-77397 ★ REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jason A. Lutz
DATE: 1-25-16

STANDARD CONSTRUCTION DRAWINGS

						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	TC-65.10	1/17/14			800	1/15/16
BP-4.1	7/19/13	TC-65.11	7/18/14			832	1/17/14
		TC-71.10	1/17/14				
MT-97.10	7/18/14						
MT-97.12	7/18/14						
MT-101.90	7/17/15						
MT-105.10	7/19/13						
						SPECIAL PROVISIONS	

FEDERAL PROJECT NO. E120(950)
PID NO. 92986
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
PER-669-0.00
1/15

P:\PER\92986\Design\Roadway\Plan_Sheets\

CALCULATED JLS CHECKED JSL

GENERAL NOTES

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.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT D05.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. THE CONTRACTOR SHALL DOCUMENT ALL OF THE EXISTING PAVEMENT MARKING LOCATIONS THAT WILL BE REMOVED/OBLITERATED DURING THIS PROJECT. THE CONTRACTOR SHALL PLACE NEW PAVEMENT MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS. THE METHOD OF DOCUMENTATION SHALL BE APPROVED BY THE ENGINEER IN ORDER TO PROVIDE AN ACCEPTABLE TOLERANCE BETWEEN THE EXISTING AND PROPOSED PAVMENT MARKINGS.

ITEM 621, RAISED PAVEMENT MARKER REMOVED

RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ITEM 253, PAVEMENT REPAIR

AN ESTIMATED QUANTITY FOR PAVEMENT REPAIR HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER. REPAIRS SHALL TAKE PLACE PRIOR TO ANY PLANING OPERATIONS. THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF PAVEMENT WHICH HAVE COMPLETELY FAILED (PUMPING OF SUB-BASE MATERIAL) AND NOT TO CORRECT SURFACE IRREGULARITIES. DEPTH OF EXCAVATION SHALL BE 7". THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 7" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED AND COMPACTED IN TWO LIFTS).

REPAIR QUANTITIES MAY BE USED ON THE MAINLINE PAVEMENT OR ON PAVED SHOULDERS. ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE PAID FOR UNDER ITEM 253, PAVEMENT REPAIR.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 253, PAVEMENT REPAIR
LOCATION 1A: 1,200 CY
LOCATION 1B: 150 CY

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING ON S.R. 669 SHALL BE 1.25", AS SHOWN ON THE ASPHALT CONCRETE DATA SHEET. PLANING SHALL BE FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS.

THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

ITEM 407, TACK COAT & TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 AND 0.05 GALLONS PER SQUARE YARD FOR TACK COAT AND TACK COAT FOR INTERMEDIATE COURSE, RESPECTIVELY, FOR ESTIMATING PURPOSES ONLY.

ITEM 408, PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN

THE CONTRACTOR SHALL PLACE A 1" X 2.0" DEEP BEAD OF JOINT SEALER (AS PER 705.04) AT THE LOCATIONS SHOWN IN PLANS. THE CONTRACTOR SHALL SAW CUT A CHANNEL FOR THE JOINT SEALER. THE COST FOR SAW CUTTING THE CHANNEL FOR THE JOINT SEALER SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516, 2" DEEP JOINT SEALER, AS PER PLAN.

ITEM 617, COMPACTED AGGREGATE, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE. ALL QUALITY REQUIREMENTS EXCEPT SHALE SHALL BE WAIVED. OTHER GRADATION REQUIREMENTS SHALL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX SHALL BE WAIVED. IF SO PERMITTED, THE CONTRACTOR MAY USE RECYCLED ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

ITEM 617, SHOULDER PREPARATION SHALL BE PERFORMED ON ALL AREAS BEFORE PLACING COMPACTED AGGREGATE. AGGREGATE SHOULDERS SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE FROM ROADWAY.

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.

IN ADDITION TO PREPARING THE SHOULDER FOR PAVING, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, THE EXISTING ROADWAY SHOULDERS SHALL BE GRADED AND SHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER.

ALL EXCESS MATERIAL REMAINING AROUND GUARDRAIL AND OTHER AREAS AFTER THE GRADER WORK IS COMPLETED AND NOT DISPOSED OF ON THE SITE, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL EQUIPMENT, LABOR, OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

THIS WORK MAY BE INTERMITTENT AND SPREAD THROUGHOUT THE PROJECT LIMITS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL ONLY BE PAID FOR INTERSECTIONS AND GAPS IF THEY ARE WITHIN THE LIMITS OF A SECTION MARKED BY THE ENGINEER FOR GRADING.

ALL LINEAR GRADING WORK BEYOND THE 10 INCH WIDE STRIP FOR THE SAFETY EDGE, SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE.

PER-669-0.00

GENERAL NOTES

RESIDENTIAL AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 441 ASPHALT CONCRETE, HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL EXTEND AN AVERAGE OF 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THE ENGINEER MAY EXTEND PAVING DISTANCE FOR ASPHALT DRIVEWAYS IN ORDER TO PROVIDE A SMOOTH TRANSITION AND/OR ELIMINATE SHORT DISTANCES OF UNDESIRABLE PROFILE. ABRUPT CHANGES IN DRIVEWAY PROFILE ARE NOT PERMITTED, THEREFORE, A QUANTITY OF ITEM 304 AGGREGATE BASE HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER TO PROVIDE A SMOOTH TRANSITION FOR AGGREGATE DRIVES.

FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK AN AVERAGE OF 4' WITHOUT CREATING A BUTT JOINT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CREATE A BUTT JOINT FOR EXISTING ASPHALT/CONCRETE DRIVES/APRONS. GRAVEL DRIVES WITH ASPHALT APRONS SHALL NOT HAVE BUTT JOINTS, BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER. IF THE ASPHALT APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4' INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

BUTT JOINT AT THE END OF ALL DRIVEWAYS SHALL BE 1.25" IN DEPTH TO ACCOMMODATE 1.25" SURFACE COURSE. NO WORK SHALL BE PERFORMED ON DRIVEWAYS LOCATED IN CURB SECTIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 202, WEARING COURSE REMOVED
LOCATION 1A: 1,280 SY
LOCATION 1B: 130 SY

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M
LOCATION 1A: 45 CY
LOCATION 1B: 5 CY

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN-OUTS. TURN-OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-4.1. ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES FOR THE ABOVE PURPOSES.

ITEM 202, WEARING COURSE REMOVED
LOCATION 1A: 790 SY
LOCATION 1B: 30 SY

ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)
LOCATION 1A: 22 CY
LOCATION 1B: 1 CY

ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M
LOCATION 1A: 28 CY
LOCATION 1B: 2 CY

SAFETY EDGE PLAN NOTE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CAMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANS TECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TransTech Systems, Inc.
1594 State Street
Schenectady, NY 12304
1-800-724-6306
www.transtechsys.com

Advant-Edge Paving Equipment, LLC.
P.O. Box 9163
Niskayuna, NY 12309-0163
518-280-6090
www.advantaedgepaving.com

Carlson Safety Edge End Gate
18425 50th Avenue East
Tacoma, WA 98446
253-875-8000

Troxler Electronics Laboratories, Inc.
3008 E. Cornwallis Rd.
Research Triangle Park, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 mm) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M
LOCATION 1A: 130 CY
LOCATION 1B: 7 CY

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON S.R. 13 AND S.R. 95 BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-97.10 OR MT-97.12

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 INCLUDING REPAIRS.

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC. THIS RULE DOES NOT APPLY TO PLANING AT BRIDGES OR ACROSS BRIDGES UNLESS THE BRIDGE IS BEING TREATED THE SAME AS THE ADJACENT ROADWAY.

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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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.

DROPOFFS IN WORK ZONES

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

COOPERATION BETWEEN CONTRACTORS

THE STATE OF OHIO HAS CONTRACTED PROJECT **PER-669-1.22; PID 92431**, WHICH MAY BE CONSTRUCTED CONCURRENTLY WITH THIS PROJECT. IT IS IMPERATIVE THAT THE CONTRACTORS COOPERATE FULLY WITH EACH OTHER AS OUTLINED IN SECTION 105.08 OF THE CMS MANUAL. ALL MAINTENANCE OF TRAFFIC SHALL BE COORDINATED BETWEEN PROJECTS AND NOT CONFLICT WITH ONE ANOTHER.

ITEM 614, WORK ZONE MARKING SIGN

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITIES OF WORK ZONE MARKING SIGN HAVE BEEN CARRIED TO THE SUB-SUMMARIES TO BE USED AS DIRECTED BY THE ENGINEER.

W8-H12a (NO EDGE LINES):
LOCATION 1A: 29 EACH
LOCATION 1B: 1 EACH

R4-1 (DO NOT PASS):
LOCATION 1A: 30 EACH
LOCATION 1B: 2 EACH

R4-2 (PASS WITH CARE):
LOCATION 1D: 6 EACH
LOCATION 3: 2 EACH

ITEM 614, WORK ZONE MARKING SIGN
LOCATION 1A: 65 EACH
LOCATION 1B: 5 EACH

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT THE EXTRA AREAS WITH WEARING COURSE REMOVED.

BUTT JOINTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-3.1 UNLESS OTHERWISE SHOWN IN THE PLANS.

MINIMUM LENGTH FOR ASPHALT WEDGE AT BUTT JOINTS SHALL BE 10'.

LOCATION	ROUTE	DESCRIPTION	S.L.M.	ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU. YD.
1A	S.R. 669	BEGIN WORK	0.00	0.8
1A	S.R. 669	SUSPEND WORK @ S.R. 345	6.34	0.8
1A	S.R. 669	SUSPEND WORK @ S.R. 345	6.97	0.8
1A	S.R. 669	BRIDGE: PER-669-0702	7.02	1.6
		TOTAL		**4.0**
1B	S.R. 669	END WORK	10.15	**0.8**

GRINDING FOR BUTT JOINTS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE WHERE APPLICABLE.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH ANOFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS **UPON APPROVAL BY THE ENGINEER**:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. **THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.**

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE.

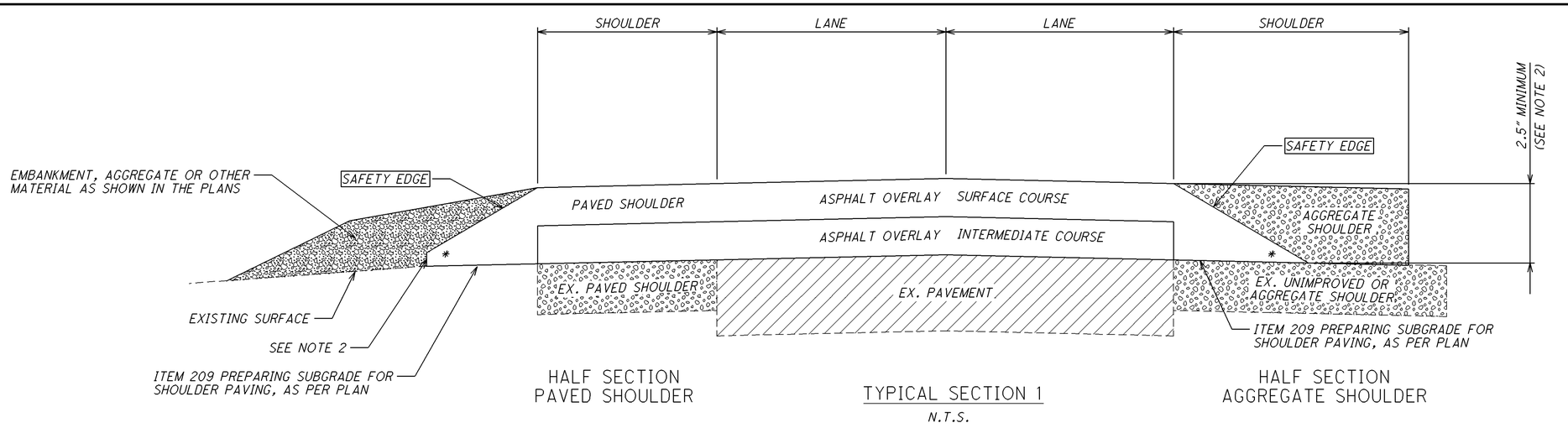
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE SUB-SUMMARIES.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
LOCATION 1A: 25 HOUR, LOCATION 1B: 25 HOUR

CALCULATED JLS CHECKED JSL

GENERAL NOTES

PER-669-0.00

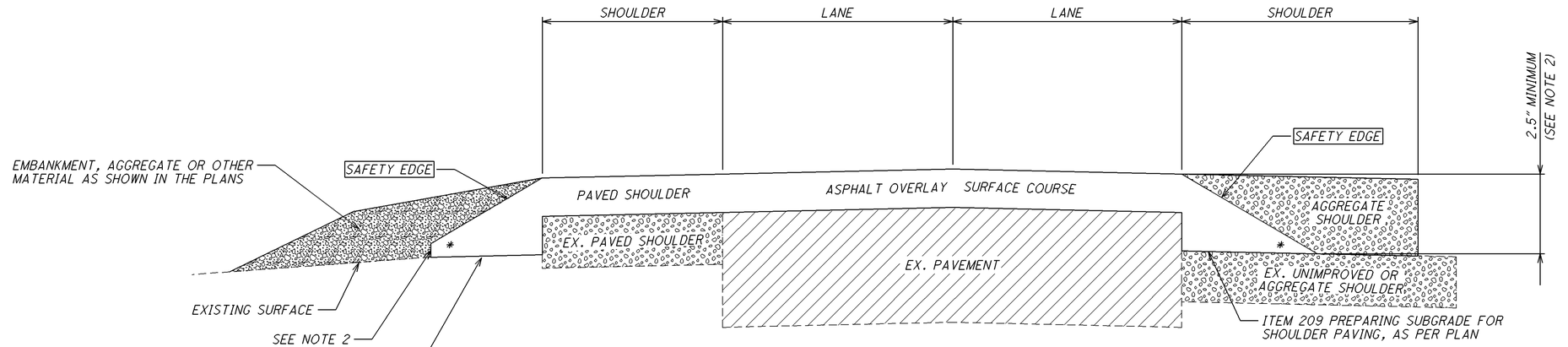


HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 1

N.T.S.

HALF SECTION
AGGREGATE SHOULDER



HALF SECTION
PAVED SHOULDER

TYPICAL SECTION 2

N.T.S.

HALF SECTION
AGGREGATE SHOULDER

NOTES:

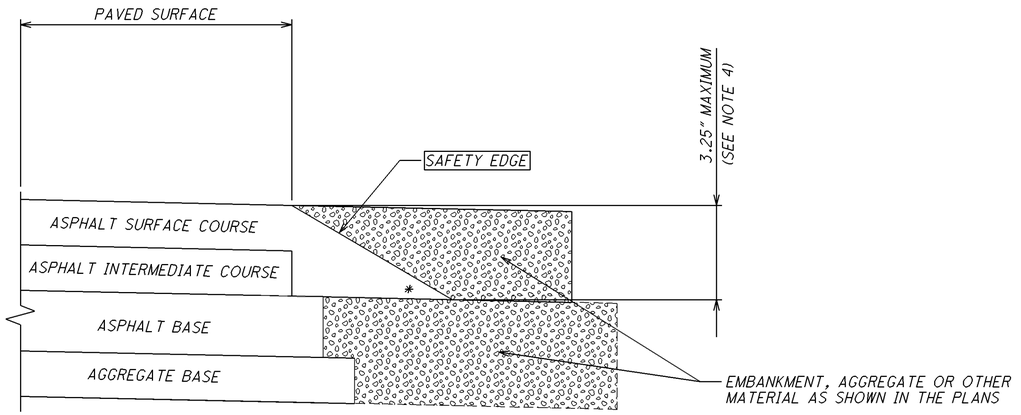
1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" (63MM) WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6" (150MM). CONSTRUCT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6" (150 MM).

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

4.) FOR NEW PAVEMENT CONSTRUCT THE SAFETY EDGE THE FULL THICKNESS OF THE SURFACE AND INTERMEDIATE COURSES, NOT TO EXCEED 3.25" (82 MM).

* 40° MAX



HALF SECTION
NEW CONSTRUCTION

TYPICAL SECTION 3

N.T.S.

CALCULATED JLS
CHECKED JSL

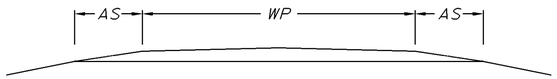
SAFETY EDGE DETAIL

PER-669-0.00

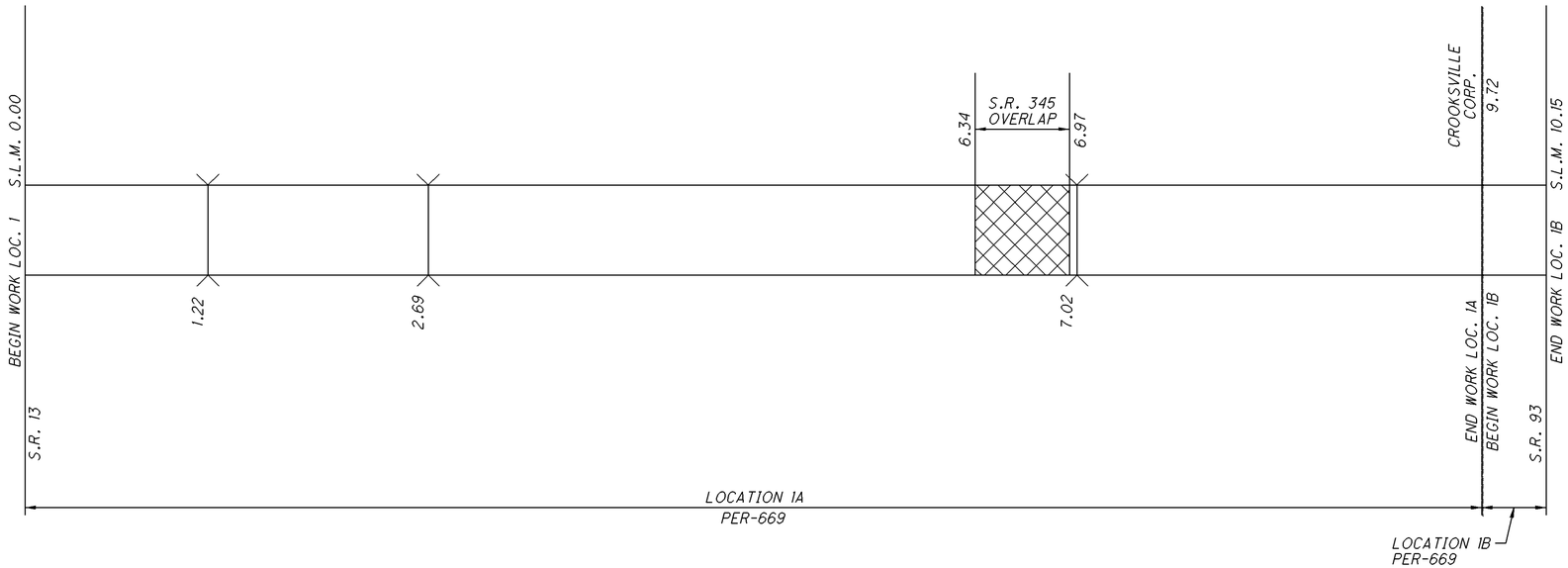
NOTE:

THE PAVEMENT WIDTHS SHOWN IN THE "PAVEMENT DATA" TABLE ON THE NEXT SHEET ARE THE WIDTHS WHICH HAVE BEEN DETERMINED TO HAVE SUFFICIENT ROADWAY BASE FOR PAVING. IF THE ACTUAL ROADWAY WIDTH IS GREATER THAN WHAT THE PAVEMENT DATA SHEET SHOWS, THE CONTRACTOR SHALL PAVE ONLY THE WIDTH SHOWN IN THE AFOREMENTIONED TABLE, UNLESS THE WIDER PAVEMENT IS IN A CURVED ROADWAY SECTION. DO NOT REDUCE THE WIDTH OF WIDENED PAVEMENT IN CURVED ROADWAY SECTIONS. PAVING SHALL BE CENTERED ABOUT THE FULL WIDTH OF THE ROADWAY AND ANY EXCESS EXISTING PAVEMENT ON THE EDGES SHALL BE REMOVED WITH SHOULDER PREPARATION BEFORE PLACING ITEM 617, COMPACTED AGGREGATE. PAVING IN CURBED ROADWAY SECTIONS SHALL BE FROM CURB TO CURB.

TYPICAL 1



WP = WIDTH OF PAVEMENT
AS = AGGREGATE SHOULDER



Asphalt Concrete Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Pavement Width (FT)	Typical	Existing Pavement Type	Pavement Area (SY)	254		407		441				614	
					Miles	Lin. Ft.					Thickness	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT (@ 0.075 Gal/SY)	TACK COAT FOR INTERMEDIATE COURSE (@ 0.05 Gal/SY)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	Thickness	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M	WORK ZONE CENTER LINE, CLASS II	WORK ZONE CENTER LINE, CLASS III, 642 PAINT
											Inches	SY	GAL	GAL	Inches	CY	Inches	CY	MILE	MILE
1A	Per	S.R. 669	0.00	1.20	1.20	6,336.0	20.0	1	448	14,080.0	1.25	14,080.0	1,056.0	704.0	1.00	391.2	1.25	488.9	1.20	1.20
			1.20	1.24	0.04	211.2	20.0	1	448	469.3			35.2				1.25	16.3		0.04
			1.24	6.34	5.10	26,928.0	20.0	1	448	59,840.0	1.25	59,840.0	4,488.0	2,992.0	1.00	1,662.3	1.25	2,077.8	5.10	5.10
			6.34	6.97	0.63	3,326.4	20.0	1	448	7,392.0	Suspend/Resume Work (S.R. 345 Overlap)									
			6.97	9.72	2.75	14,520.0	20.0	1	448	32,266.7	1.25	32,266.7	2,420.1	1,613.4	1.00	896.3	1.25	1,120.4	2.75	2.75
			Bridge Deductions (Bridge Length x Pavement Width)							(663.2)		(663.20)	(49.7)	(33.1)	1.00	(18.42)	1.25	(23.03)	(0.13)	(0.13)
Location 1A Totals (Carried to Sub-Summary)												**105,524.0**	**7,950.0**	**5,277.0**		**2,932.0**		**3,681.0**	**8.92**	**8.96**
1B	Per	S.R. 669	9.72	10.15	0.43	2,270.40	20.0	1	448	5,045.3	1.25	5,045.3	378.4	252.3	1.00	140.2	1.25	175.2	0.43	0.43
Location 1B Totals (Carried to Sub-Summary)												**5,046.0**	**379.0**	**253.0**		**141.0**		**176.0**	**0.43**	**0.43**

CALCULATED JLS CHECKED JSL

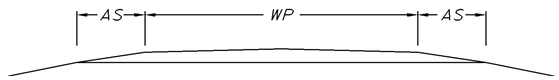
ASPHALT CONCRETE DATA

PER-669-0.00

CALCULATED JLS
CHECKED JSL

SHOULDER DATA

TYPICAL 1

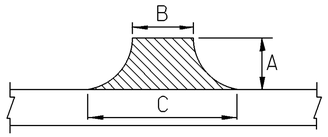


WP = WIDTH OF PAVEMENT
AS = AGGREGATE SHOULDER

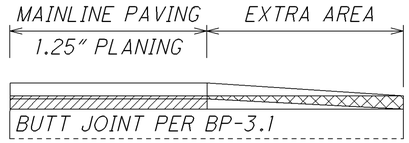
Shoulder Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Typical	Shoulder Width (FT.) (Widths are Average Throughout Section)				Shoulder Area (SY)	209	408	617		
					Miles	Lin. Ft.		A	B	C	D		PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	PRIME COAT, AS PER PLAN (@ 0.4 Gal/SY)	Thickness	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)	SHOULDER PREPARATION
													MILE	GAL	Inches	CY	SY
1A	Per	S.R. 669	0.00	6.34	6.34	33,475.2	1	2	2			14,877.9	12.68	5,951.2	2.0 Avg.	826.6	14,877.9
			6.34	6.97	0.63	3,326.4									S.R. 345 Overlap		
			6.97	9.72	2.75	14,520.0	1	2	2			6,453.3	5.50	2,581.4	2.0 Avg.	358.6	6,453.4
Location 1A Totals (Carried to Sub-Summary)													**18.18**	**8,533.0**		**1,186.0**	**21,332.0**
1B	Per	S.R. 669	9.72	10.15	0.43	2,270.40	1	2	2			1,009.1	0.86	403.7	2.0 Avg.	56.1	1,009.1
Location 1B Totals (Carried to Sub-Summary)													**0.86**	**404.0**		**57.0**	**1,010.0**

PER-669-0.00



$$AREA = \left[A \frac{(B + C)}{2} \right] / 9$$



Extra Area Data

Location	County	Route	Description	Side	Intersections (FT)			Extra Area (SY)	202	407		441			
					A	B	C		WEARING COURSE REMOVED	TACK COAT (@ 0.075 Gal/SY)	TACK COAT FOR INTERMEDIATE COURSE (@ 0.05 Gal/SY)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	Thickness	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22
									SY	GAL	GAL	Inches	CY	Inches	CY
1A	Per	S.R. 669	at S.R. 13	CL	65	25	135	577.8	577.8	43.4	28.9	1.00	16.1	1.25	20.1
			Co. Rd. 35 (Wilson Rd.)	Lt.	50	22	100	338.9	338.9	25.5	17.0	1.00	9.5	1.25	11.8
			Co. Rd. 5 (Buckeye Valley Rd.)	Rt.	50	18	100	327.8	327.8	24.6	16.4	1.00	9.2	1.25	11.4
			Co. Rd. 5 (Buckeye Valley Rd.)	Lt.	50	22	120	394.5	394.5	29.6	19.8	1.00	11.0	1.25	13.7
			Twp. Rd. 117	Rt.	25	19	60	109.8	109.8	8.3	5.5	1.00	3.1	1.25	3.9
			Co. Rd. 47 (Wesley Chapel Rd.)	Lt.	45	28	124	380.0	380.0	28.5	19.0	1.00	10.6	1.25	13.2
			Natural Resources Rd.	Rt.	55	30	165	595.9	595.9	44.7	29.8	1.00	16.6	1.25	20.7
			Twp. Rd. 29 (Chapel Rd.)	Lt.	40	19	100	264.5	264.5	19.9	13.3	1.00	7.4	1.25	9.2
			Twp. Rd. 154 (Oak Rd.)	Rt.	20	16	55	78.9	78.9	6.0	4.0	1.00	2.2	1.25	2.8
			Park St.	Rt.	15	16	36	43.4	43.4	3.3	2.2	1.00	1.3	1.25	1.6
			Twp. Rd. 29 (Buckeye Rd.)	Rt.	15	18	40	48.4	48.4	3.7	2.5	1.00	1.4	1.25	1.7
			Twp. Rd. 442	Rt.	75	20	50	291.7	291.7	21.9	14.6	1.00	8.2	1.25	10.2
			Twp. Rd. 165	Lt.	35	14	80	182.8	182.8	13.8	9.2	1.00	5.1	1.25	6.4
			Twp. Rd. 161 (Burley Run Rd.)	Rt.	80	17	128	644.5	644.5	48.4	32.3	1.00	18.0	1.25	22.4
Location 1A Totals (Carried to Sub-Summary)									**4,279.0**	**322.0**	**215.0**		**120.0**		**150.0**
1B	Per	S.R. 669	Bennet St.	Lt.	20	13	40	58.9	58.9	4.5	3.0	1.00	1.7	1.25	2.1
			Bennet St.	Rt.	20	11	32	47.8	47.8	3.6	2.4	1.00	1.4	1.25	1.7
			W. Brown St.	Lt.	20	11	39	55.6	55.6	4.2	2.8	1.00	1.6	1.25	2.0
			W. Brown St.	Rt.	20	13	46	65.6	65.6	5.0	3.3	1.00	1.9	1.25	2.3
			Pine St.	Lt.	30	23	60	138.4	138.4	10.4	7.0	1.00	3.9	1.25	4.9
			Pine St.	Rt.	30	25	60	141.7	141.7	10.7	7.1	1.00	4.0	1.25	5.0
			at S.R. 93	CL	40	25	77	226.7	226.7	17.1	11.4	1.00	6.3	1.25	7.9
			at S.R. 93	CL	58	26	118	464.0	464.0	34.8	23.2	1.00	12.9	1.25	16.2
			Twp. Rd. 197	Lt.	20	15	33	53.4	53.4	4.1	2.7	1.00	1.5	1.25	1.9
Location 1B Totals (Carried to Sub-Summary)									**1,253.0**	**95.0**	**63.0**		**36.0**		**44.0**

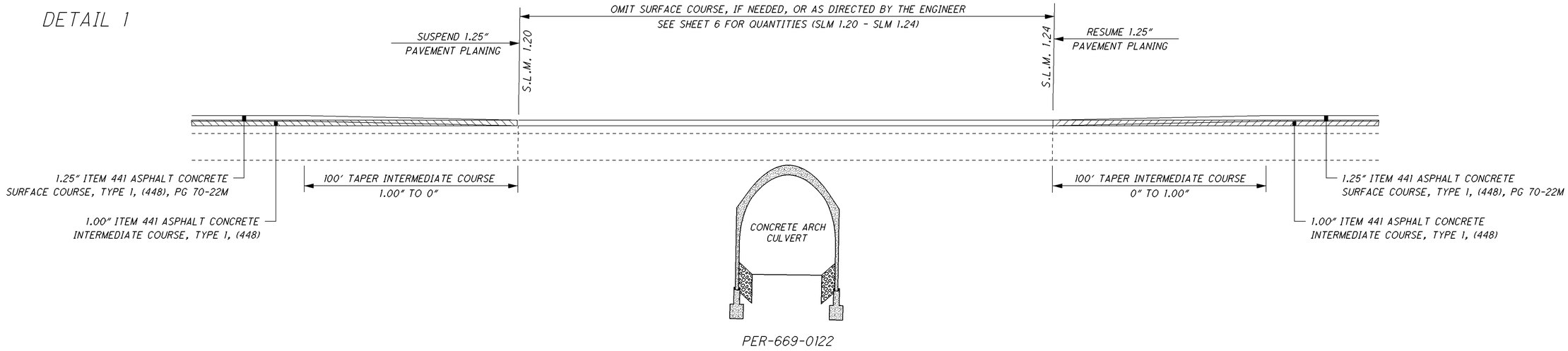
CALCULATED JLS CHECKED JSL

EXTRA AREA DATA

PER-669-0.00

CALCULATED JLS CHECKED JSL

DETAIL 1



PER-669-0122

DETAIL 2

PER-669-0702

BUTT JOINT AT APPROACH SLABS

ITEM 254 PAVEMENT PLANING

* - ITEM 516 2" DEEP JOINT SEALER, AS PER PLAN

DETAILS NOT TO SCALE

Bridge Deck Treatment Data

Location	Bridge No.	Bridge Length (FT)	Bridge Width (FT)	Bridge Area (SY)	Approach Slab Length (FT)	Approach Slab Width (FT)	Approach Slab Area (SY) (Includes both Approach Slabs)	Detail	Mainline Deductions (SY) (Carried to Sheet 6)	Shoulder Deductions (SY) (Carried to Sheet 7)	254		407		441				516
											Thickness	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT (@ 0.075 Gal/SY)	TACK COAT FOR INTERMEDIATE COURSE (@ 0.05 Gal/SY)	Thickness	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	Thickness	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 70-22M	2" DEEP JOINT SEALER, AS PER PLAN
											Inches	SY	GAL	GAL	Inches	CY	Inches	CY	FT
1A	Per-669-0122	(Replacing in 2016) (Coordinate with PID 92431) (See Detail Above)									(See Sheet 6 for Quantities)								
	Per-669-0269	31	36.5	125.8	15	30.0	100.0		225.8		1.25	225.8	17.0	11.3	1.00	6.3	1.25	7.9	
	Per-669-0702	76	36	304.0	20	30.0	133.4	1	437.4										40.0
		Bridge Deductions							663.2										
Location 1A Totals (Carried to Sub-Summary)												**226.0**	**17.0**	**12.0**		**7.0**		**8.0**	**40.0**

BRIDGE DECK TREATMENT DATA

PER-669-0.00

P:\PER\92986\Design\Roadway\Plan_Sheets\General\92986_G0004.dgn 21-JAN-2016 3:16PM jlutz1

Edge Line Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length (Miles)	Information Only: White Edge Line (Quantities) Total Miles	White Edge Line (Quantities) Highway Miles	White Edge Line (Quantities) Ramp Miles	Yellow Ege Line (Quantities) Total Miles	Yellow Ege Line (Quantities) Highway Miles	Yellow Ege Line (Quantities) Ramp Miles	648 EDGE LINE, 4" MILE	Remarks
1A	Per	S.R. 669	0.00	6.34	6.34	12.68	12.68					12.68	
			6.34	6.97	0.63	S.R. 345 Overlap							No Work
			6.97	9.72	2.75	5.50	5.50					5.50	
Location 1A Total (Carried to Sub-Summary)												**18.18**	
1B	Per	S.R. 669	9.72	10.15	0.43	0.86	0.86					0.86	
Location 1B Total (Carried to Sub-Summary)												**0.86**	

Center Line Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length (Miles)	Information Only: Center Line (Quantities) Total Miles	Center Line (Quantities) Equivalent Solid Line	648 CENTER LINE MILE	Remarks
1A	Per	S.R. 669	0.00	6.34	6.34	6.34	12.120	6.34	
			6.34	6.97	0.63	S.R. 345 Overlap			No Work
			6.97	9.72	2.75	2.75	5.662	2.75	
Location 1A Total (Carried to Sub-Summary)								**9.09**	
1B	Per	S.R. 669	9.72	10.15	0.43	0.43	0.318	0.43	
Location 1B Total (Carried to Sub-Summary)								**0.43**	

CALCULATED JLS CHECKED JSL

PAVEMENT MARKING DATA (LONG LINE)

PER-669-0.00

Auxilary Marking Data

Location	County	Route	Description	Side	644												Remarks
					CHANNELIZING LINE, 8"	STOP LINE (24")	CROSSWALK LINE (12")	TRANSEVERSE/ DIANGONAL LINES (24")		SCHOOL SYMBOL MARKING		LANE ARROW		WORD ON PAVEMENT			
														"Only"			
								White	Yellow	72"	96"	LT.	RT.	72"	96"		
					FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH		
1A	Per	S.R. 669	at S.R. 13	CL		26											Place 24' from S.R 669 Centerline
			Co. Rd. 35 (Wilson Rd.)	Lt.		47											Place 18' from S.R 669 Centerline
			Co. Rd. 5 (Buckeye Valley Rd.)	Rt.		33											Place 17' from S.R 669 Centerline
			Co. Rd. 5 (Buckeye Valley Rd.)	Lt.		47											Place 15' from S.R 669 Centerline
			Twp. Rd. 117	Rt.		18											Place 15' from S.R 669 Centerline
			Co. Rd. 47 (Wesley Chapel Rd.)	Lt.		40											Place 17' from S.R 669 Centerline
			Natural Resources Rd.	Rt.		50											Place 18' from S.R 669 Centerline
			Twp. Rd. 29 (Chapel Rd.)	Lt.		32											Place 16' from S.R 669 Centerline
			Twp. Rd. 154 (Oak Rd.)	Rt.		16											Place 15' from S.R 669 Centerline
			Park St.	Rt.		13											Place 15' from S.R 669 Centerline
			Twp. Rd. 29 (Buckeye Rd.)	Rt.		14											Place 15' from S.R 669 Centerline
			Twp. Rd. 442	Rt.		40											Place 16' from S.R 669 Centerline
			Twp. Rd. 165	Lt.		25											Place 16' from S.R 669 Centerline
			Twp. Rd. 161 (Burley Run Rd.)	Rt.		48											Place 18' from S.R 669 Centerline
Location 1A Totals (Carried to Sub-Summary)						**449**											
1B	Per	S.R. 669	Bennet St.	Lt.		16											Place 15' from S.R 669 Centerline
			Bennet St.	Rt.		14											Place 15' from S.R 669 Centerline
			W. Brown St.	Lt.		12											Place 15' from S.R 669 Centerline
			W. Brown St.	Rt.		15											Place 15' from S.R 669 Centerline
			Pine St.	Lt.		20											Place 18' from S.R 669 Centerline
			Pine St.	Rt.		25											Place 17' from S.R 669 Centerline
			at S.R. 93	CL		15											Place 30' from S.R 669 Centerline
			at S.R. 93	CL		35											Place 28' from S.R 669 Centerline
			Twp. Rd. 197	Lt.		10											Place 18' from S.R 669 Centerline
Location 1B Totals (Carried to Sub-Summary)						**162**											

CALCULATED JLS CHECKED JSL

PAVEMENT MARKING DATA (AUXILARY)

PER-669-0.00

11
15

Detail	
1	Tapered Acceleration Lane
2	Deceleration Lane
3	Multilane Divided/Controlled Access
4	4 Lane Divided to 2 Lane Transition
5	4 Lane Undivided to 2 Lane Transition
6	One Lane Bridge
7	Stop Approach

Detail	
8	Thru Approach
9	Two-Way Left Turn Lane
10	Approach with Left Turn Lane
11	Horizontal Curve 40' Spacing (Note 2)
12	Horizontal Curve Alt. (Note 3)
Gap	Center Line at 80' Typical Spacing

Raised Pavement Marker Data

Location	County	Route	Begin Log Point (SLM)	End Log Point (SLM)	Length		Detail	621		Prismatic Retro-Reflector Colors					Remarks
								RAISED PAVEMENT MARKER REMOVED	RPM	Information Only					
										One-Way		Two-Way			
					Miles	Lin. Ft.		EACH	EACH	White	Yellow	Yellow/ Yellow	White/ Red	Yellow/ Red	
1A	Per	S.R. 669	0.00	0.15	0.15	792.0	7	27	27	16		11			Begin/S.R. 13 Intersection
			0.15	0.64	0.49	2,587.2	Gap	33	33			33			
			0.64	0.68	0.04	211.2	11	7	7			7			PC 0.64, PT 0.68, L = 211', 9 Deg. Curve
			0.68	0.88	0.20	1,056.0	12	33	33			33			PC 0.75, PT 0.78, L = 158', 13 Deg. Curve
			0.88	0.93	0.05	264.0	11	8	8			8			PC 0.88, PT 0.93, L = 264', 9 Deg. Curve
			0.93	1.06	0.13	686.4	12	22	22			22			PC 0.95, PT 0.97, L = 106', 14 Deg. Curve
			1.06	1.23	0.17	897.6	12	28	28			28			PC 1.09, PT 1.14, L = 264', 15 Deg. Curve
			1.23	1.52	0.29	1,531.2	Gap	20	20			20			
			1.52	1.72	0.20	1,056.0	12	29	29			29			PC 1.61, PT 1.63, L = 106', 12 Deg. Curve
			1.72	1.86	0.14	739.2	12	20	20			20			PC 1.76, PT 1.77, L = 53', 21 Deg. Curve
			1.86	4.25	2.39	12,619.2	Gap	158	158			158			
			4.25	4.48	0.23	1,214.4	12	37	37			37			PC 4.34, PT 4.39, L = 264', 11 Deg. Curve
			4.48	4.99	0.51	2,692.8	Gap	34	34			34			
			4.99	5.20	0.21	1,108.8	12	32	32			32			PC 5.08, PT 5.11, L = 158', 13 Deg. Curve
			5.20	5.48	0.28	1,478.4	Gap	19	19			19			
			5.48	5.66	0.18	950.4	12	35	35			35			PC 5.57, PT 5.61, L = 211', 12 Deg. Curve
			5.66	5.70	0.04	211.2	11	7	7			7			PC 5.66, PT 5.70, L = 211', 9 Deg. Curve
			5.70	5.73	0.03	158.4	Gap	2	2			2			
			5.73	5.89	0.16	844.8	12	22	22			22			PC 5.82, PT 5.84, L = 106', 23 Deg. Curve
			5.89	5.98	0.09	475.2	12	17	17			17			PC 5.89, PT 5.92, L = 158', 18 Deg. Curve
			5.98	6.09	0.11	580.8	12	17	17			17			PC 5.98, PT 6.00, L = 106', 20 Deg. Curve
			6.09	6.19	0.10	528.0	Gap	7	7			7			
			6.19	6.34	0.15	792.0	7	27	27	16		11			S.R. 345 Intersection/Suspend Work
			6.34	6.97	0.63	3,326.4		S.R. 345 Overlap							No Work
			6.97	7.06	0.09	475.2	7/Gap	27	27	16		11			S.R. 345 Intersection/Resume Work
			7.06	7.20	0.14	739.2	11	20	20			20			PC 7.06, PT 7.20, L = 739', 6 Deg. Curve
			7.20	7.58	0.38	2,006.4	Gap	26	26			26			
			7.58	7.75	0.17	897.6	12	23	23			23			PC 7.67, PT 7.70, L = 158', 11 Deg. Curve
			7.75	7.88	0.13	686.4	12	23	23			23			PC 7.75, PT 7.79, L = 211', 26 Deg. Curve
			7.88	8.07	0.19	1,003.2	Gap	13	13			13			
			8.07	8.28	0.21	1,108.8	12	32	32			32			PC 8.16, PT 8.19, L = 158', 15 Deg. Curve
			8.28	8.51	0.23	1,214.4	Gap	16	16			16			
			8.51	8.74	0.23	1,214.4	12	32	32			32			PC 8.60, PT 8.65, L = 264', 18 Deg. Curve
			8.74	9.14	0.40	2,112.0	Gap	27	27			27			
			9.14	9.18	0.04	211.2	11	7	7			7			PC 9.14, PT 9.18, L = 211', 7 Deg. Curve
			9.18	9.49	0.31	1,636.8	Gap	21	21			21			
			9.49	9.53	0.04	211.2	11	7	7			7			PC 9.49, PT 9.53, L = 211', 9 Deg. Curve
			9.53	9.72	0.19	1,003.2	12	36	36			36			PC 9.63, PT 9.72, L = 475', 11 Deg. Curve
															Stop/Crooksville Corp. Limit
Sub-Totals										48		903			
Location 1A Totals (Carried to Sub-Summary)								**951**	**951**						

CALCULATED JLS CHECKED JSL

RAISED PAVEMENT MARKER DATA

PER-669-0.00

12
15

LOCATION 1A SHEET TOTALS										ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
2	3	4	6	7	8	9	10	11	12					
	2,070				4,279					202	23500	6,349	SY	WEARING COURSE REMOVED
				18.18						209	72051	18.18	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
1,200										253	02000	1,200	CY	PAVEMENT REPAIR
			105,524			226				254	01000	105,750	SY	PAVEMENT PLANING, ASPHALT CONCRETE
			7,950		322	17				407	10000	8,289	GAL	TACK COAT
			5,277		215	12				407	14000	5,504	GAL	TACK COAT FOR INTERMEDIATE COURSE
				8,533						408	10001	8,533	GAL	PRIME COAT, AS PER PLAN
					150					441	50000	150	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
	203		3,681			8				441	50100	3,892	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
	22		2,932		120	7				441	50200	3,081	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)
						40				516	31011	40	FT	2" DEEP JOINT SEALER, AS PER PLAN
		25								614	11110	25	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
		65								614	12460	65	EACH	WORK ZONE MARKING SIGN
		4								614	13000	4	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			8.92							614	21400	8.92	MILE	WORK ZONE CENTER LINE, CLASS II
			8.96							614	21550	8.96	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT
				1,186						617	10101	1,186	CY	COMPACTED AGGREGATE, AS PER PLAN
				21,332						617	20000	21,332	SY	SHOULDER PREPARATION
									951	621	00100	951	EACH	RPM
									951	621	54000	951	EACH	RAISED PAVEMENT MARKER REMOVED
								449		644	00500	449	FT	STOP LINE
							18.18			648	00100	18.18	MILE	EDGE LINE, 4"
							9.09			648	00300	9.09	MILE	CENTER LINE

CALCULATED JLS
CHECKED JSL

LOCATION 1A SUB-SUMMARY

PER-669-0.00

LOCATION 1B SHEET TOTALS								ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION
2	3	4	6	7	8	10	11					
	160				1,253			202	23500	1,413	SY	WEARING COURSE REMOVED
				0.86				209	72051	0.86	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
150								253	02000	150	CY	PAVEMENT REPAIR
			5,046					254	01000	5,046	SY	PAVEMENT PLANING, ASPHALT CONCRETE
			379		95			407	10000	474	GAL	TACK COAT
			253		63			407	14000	316	GAL	TACK COAT FOR INTERMEDIATE COURSE
				404				408	10001	404	GAL	PRIME COAT, AS PER PLAN
					44			441	50000	44	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
	14		176					441	50100	190	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
	1		141		36			441	50200	178	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)
		25						614	11110	25	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
		5						614	12460	5	EACH	WORK ZONE MARKING SIGN
		1						614	13000	1	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			0.43					614	21400	0.43	MILE	WORK ZONE CENTER LINE, CLASS II
			0.43					614	21550	0.43	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT
				57				617	10101	57	CY	COMPACTED AGGREGATE, AS PER PLAN
				1,010				617	20000	1,010	SY	SHOULDER PREPARATION
							162	644	00500	162	FT	STOP LINE
						0.86		648	00100	0.86	MILE	EDGE LINE, 4"
						0.43		648	00300	0.43	MILE	CENTER LINE

CALCULATED JLS CHECKED JSL

LOCATION 1B SUB-SUMMARY

PER-669-0.00

LOCATION TOTALS		FUNDING PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
LOC. 1A	LOC. 1B	01/STR/PV	02/S<2/PV						
								ROADWAY	
6,349	1,413	6,349	1,413	202	23500	7,762	SY	WEARING COURSE REMOVED	
18.18	0.86	18.18	0.86	209	72501	19.04	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
								PAVEMENT	
1,200	150	1,200	150	253	02000	1,350	CY	PAVEMENT REPAIR	
105,750	5,046	105,750	5,046	254	01000	110,796	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
8,289	474	8,289	474	407	10000	8,763	GAL	TACK COAT	
5,504	316	5,504	316	407	14000	5,820	GAL	TACK COAT FOR INTERMEDIATE COURSE	
8,533	404	8,533	404	408	10001	8,937	GAL	PRIME COAT, AS PER PLAN	2
150	44	150	44	441	50000	194	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
3,892	190	3,892	190	441	50100	4,082	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	
3,081	178	3,081	178	441	50200	3,259	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
40		40		516	31011	40	FT	2" DEEP JOINT SEALER, AS PER PLAN	2
1,186	57	1,186	57	617	10101	1,243	CY	COMPACTED AGGREGATE, AS PER PLAN	2
21,332	1,010	21,332	1,010	617	20000	22,342	SY	SHOULDER PREPARATION	
								TRAFFIC CONTROL	
951		951		621	00100	951	EACH	RPM	
951		951		621	54000	951	EACH	RAISED PAVEMENT MARKER REMOVED	
449	162	449	162	644	00500	611	FT	STOP LINE	
18.18	0.86	18.18	0.86	648	00100	19.04	MILE	EDGE LINE, 4"	
9.09	0.43	9.09	0.43	648	00300	9.52	MILE	CENTER LINE	
								MAINTENANCE OF TRAFFIC	
25	25	25	25	614	11110	50	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
65	5	65	5	614	12460	70	EACH	WORK ZONE MARKING SIGN	
4	1	4	1	614	13000	5	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
8.92	0.43	8.92	0.43	614	21400	9.35	MILE	WORK ZONE CENTER LINE, CLASS II	
8.96	0.43	8.96	0.43	614	21550	9.39	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
								INCIDENTALS	
		LUMP	LUMP	103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
		LUMP	LUMP	614	11000	LUMP		MAINTAINING TRAFFIC	
		LUMP	LUMP	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
		LUMP	LUMP	624	10000	LUMP		MOBILIZATION	

CALCULATED JLS
CHECKED JSL

GENERAL SUMMARY

PER-669-0.00