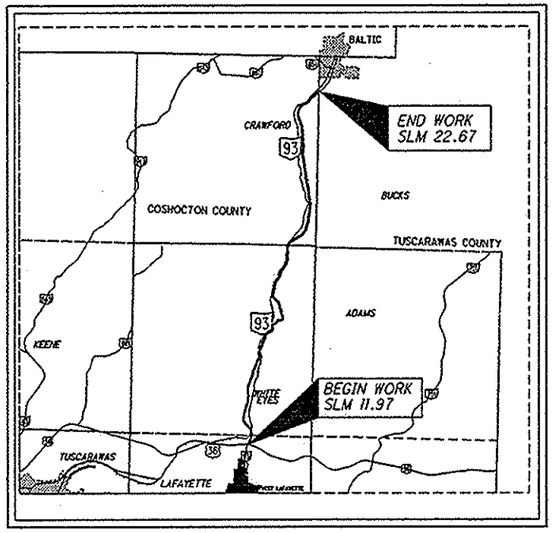


LOCATION MAP

LATITUDE: 40°21'46" LONGITUDE: 81°43'46"

PORTION TO BE IMPROVED _____

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
COS-93-11.97
CRAWFORD, LAFAYETTE AND WHITE EYES TOWNSHIPS
COSHOCTON COUNTY

PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING AND RELATED WORK ON S.R. 93 IN COSHOCTON COUNTY.

Project Earth Disturbed Area = N/A (Maintenance Project)
Estimated Contractor Earth Disturbed Area = N/A (Maintenance Project)
Notice of Intent Earth Disturbed Area = N/A (Maintenance Project)

LOCATION	COUNTY	ROUTE	BEGIN SLM	END SLM	LENGTH MILES	CITY/VILLAGE
1	COS	93	11.97	22.67	10.70	

INDEX OF SHEETS:

DESIGN DESIGNATION

CURRENT ADT (2012) 1500
DESIGN YEAR ADT (2024) 1600
DESIGN HOURLY VOLUME (2024) 176
DIRECTIONAL DISTRIBUTION 50%
TRUCKS (24 HOUR B&C) 13%
DESIGN SPEED 55mph
LEGAL SPEED 55mph
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

2010 SPECIFICATIONS

THE STANDARD 2010 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

DESIGN EXCEPTIONS: NONE

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PRODUCTION OFFICE

ENGINEER'S SEAL
STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER
SIGNED: Douglas N Morgan
DATE: 3-19-2012

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	1-20-12	TC-65.10	1-21-05	800	4-20-12
BP-4.1	7-16-04	TC-65.11	1-21-05	817	4-15-11
		TC-71.10	1-21-11	823	7-15-11
MT-97.10	10-15-10	TC-73.10	10-21-11	832	5-5-09
MT-97.12	10-15-10	TC-82.10	1-21-11		
MT-99.20	1-16-09				
MT-101.90	10-21-11				
MT-105.10	1-16-09			SPECIAL PROVISIONS	

APPROVED _____
DATE 3/19/12 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 4-2-12 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E07O(954)
PID NO. 82984
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT OHIO CENTRAL RAILROAD
COS-93-11.97
1/15

COS - SR-93-11.97
120404 PID - 82984
Dist 5 6/21/2012

Contract Proposal available @www.contracts.dot.state.oh.us/home

C093_MTS_001.dgn 12-18-07

CALCULATED LME CHECKED DNM

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.

PAVING AT RAILROAD CROSSINGS

WORK THE CROWN OUT OF THE PROPOSED PAVEMENT ON EACH SIDE OF THE RAILROAD CROSSING, BEGINNING 50 FEET FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE NEW PAVEMENT TO MEET THE PLATFORM ELEVATION.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 5 OFFICE.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT, SHALL EXCEED A HEIGHT OF 100 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 CONSTRUCTION ENGINEER WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE SUCH CLOSURE OR LANE RESTRICTIONS.

SEND NOTIFICATION TO:
DISTRICT 5 CONSTRUCTION ENGINEER
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

ITEM 209 LINEAR GRADING

IN ORDER TO 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 LINEAR GRADING.

SHOULDER PREPARATION SHALL BE PERFORMED PRIOR TO PLACING ITEM 617 AGGREGATE BASE AS PER CMS 617.04.

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 SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 209 LINEAR GRADING (11.97-22.67) x 2 = 21.4 MILES
LOCATION 1 – 21 MILE

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 THE PLANING OPERATION. 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 APPROXIMATELY 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 AS DIRECTED). 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, AS PER PLAN.

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

ITEM 253, PAVEMENT REPAIR
LOCATION 1 – 4,000 CU.YD.

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING SHALL BE 1.5" FULL WIDTH OF PAVEMENT, INCLUDING PAVED SHOULDERS, FOR THE LENGTH OF THE PROJECT. 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.

5,000 TONS OF GRINDINGS (RACP) SHALL BE DELIVERED TO THE OHIO DEPARTMENT OF TRANSPORTION - COSHOCTON COUNTY GARAGE 233 RIVERCREST DR. COSHOCTON, OHIO (CANAL LEWISVILLE) 43812.

HAULING OF THE RACP SHALL BE PAID FOR UNDER THE FOLLOWING ITEM:

ITEM 690 SPECIAL MISC.: HAULING RACP – 5,000 TONS

ITEM 407 TACK COAT

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 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

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

THE FOLLOWING QUANTITY OF PRIME COAT, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 1 –25,002 SQ.YD. x 0.40 GAL./SQ YD = 10,001 GAL

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 NEDESSARY, 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.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE DESCRIBED ABOVE:

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN – 21.00 MILE

CALCULATED LME CHECKED DNM

GENERAL NOTES

RESIDENTIAL AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 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 TYPICALLY EXTEND 4' INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THERE ARE 5 TYPES OF DRIVES: CONCRETE, ASPHALT, GRAVEL, GRAVEL WITH ASPHALT APRON AND FIELD/OIL WELL DRIVES. FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK 4' INTO THE DRIVE-WAY UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CONCRETE AND ASPHALT DRIVES SHALL HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4') AS DIRECTED BY THE ENGINEER SO AS TO PROVIDE A SMOOTH TRANSITION. GRAVEL DRIVES WITH ASPHALT APRONS SHALL ALSO HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4') BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER AS DIRECTED BY THE ENGINEER. 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.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED PURPOSE.

ITEM 448 ASPHALT CONCRETE INTERM. COURSE, TYPE 2, PG 64-22
LOCATION 1 - 40 CU.YD.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 - 28 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 – 810 SQ.YD.

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 GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM 448 ASPHALT CONCRETE INTERM. COURSE, TYPE 2, PG 64-22
LOCATION 1 – 30 CU.YD.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
LOCATION 1 - 21 CU.YD.

ITEM 202 WEARING COURSE REMOVED
LOCATION 1 – 610 SQ.YD.

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 INDEX SHALL BE WAIVED. IF SO PERMITTED, THE CONTRACTOR MAY USE ASPHALT CONCRETE PAVEMENT (RACP MEETING REQUIREMENTS OF 617.02) IN LIEU OF CRUSHED LIMESTONE.

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 632 DETECTOR LOOP, AS PER PLAN

ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWER HEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS CURRENTLY CALLED FOR IN THE PLANS. THE STOP LINE DETECTOR LOOPS SHALL NOT BE WIRED TO ANY OTHER LOOPS AND SHALL HAVE ITS OWN DETECTOR CHANNEL.

ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10.

ALL STOP LINE DETECTION SHALL BE TESTED FOR A BICYCLE TARGET AND ALL DILEMMA DETECTION ZONES SHALL BE TESTED FOR A MOTORCYCLE TARGET.

ALL DETECTOR LOOPS SHALL BE CUT INTO THE PLANED SURFACE OR THE PROPOSED INTERMEDIATE COURSE AT A DEPTH OF 4" FROM THE PROPOSED SURFACE ELEVATION. IF THE CONTRACTOR SO CHOOSES, THEY MAY CUT THE DETECTOR LOOPS INTO THE EXISTING ASPHALT BEFORE PLANING BUT SHALL MAKE SURE THE MATERIAL USED TO FILL THE SAW CUT IS LEFT FAR ENOUGH BELOW THE SURFACE COURSE THAT IT WILL NOT BE DISTURBED DURING THE PLANING OPERATION. THE CONTRACTOR SHALL TEST ALL LEAD-IN CABLES PRIOR TO MAKING THE FINAL SPLICE. PLACEMENT SHALL BE AS PER SPECIFICATION 632.10. FINAL LOCATIONS, SIZE AND ORIENTATION SHALL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

THE PROPOSED POWERHEAD DETECTOR LOOP LOCATED IN THE SOUTH BOUND LANE OF S.R. 93, PRIOR TO THE INTERSECTION WITH U.S. 36, SHALL INCLUDE APPROXIMATELY 60 FEET OF DETECTOR LOOP LEAD-IN CABLE TO REPLACE THE EXISTING LOOP DETECTOR LEAD-IN CABLE. THE CONTRACTOR SHALL RUN THE DETECTOR LOOP LEAD-IN CABLE FROM THE EXISTING 24" PULL BOX ADJACENT TO THE STOP BAR TO THE EXISTING 24" PULL BOX LOCATED NEXT TO THE SIGNAL POLE AND THEN UP TO THE POLE MOUNTED CONTROLLER. THE CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING LOOP DETECTOR LEAD-IN CABLE FROM THE CABINET AND CONNECT THE NEW LOOP DETECTOR LEAD-IN CABLE IN ITS PLACE.

ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, TRAFFIC CONTROL AND INCIDENTALS NECESSARY TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

S.R. 93 SOUTH BOUND @ U.S. 36 – 1(8'X25') STOP BAR

S.R. 93 SOUTH BOUND @ U.S. 36 – 2(6'x6') DILEMMA ZONE

LOCATION 1 – 3 EACH

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING 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.

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.

ONLY ITEM 614 WORK ZONE CENTER LINE, CLASS II HAS BEEN ITEMIZED IN THE PLAN. ALL OTHER WORK ZONE PAVEMENT MARKINGS NECESSARY SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC.

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.

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.
1	S.R. 93	BEGIN WORK	11.97	1.1
1	S.R. 93	RAILROAD	12.29	2.2
1	S.R. 93	BRIDGE: COS-93-1466	14.66	2.2
1	S.R. 93	RAILROAD	14.73	2.2
1	S.R. 93	BRIDGE: COS-93-1922	19.22	2.2
1	S.R. 93	END WORK	22.67	1.1
1	**S.R. 93**	**TOTAL**		**11**

THE GRINDING FOR BUTT JOINTS SHALL BE INCLUDED WITH ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

C093_MGN_002.DGN 2-27-12

COS-93-11.97

ITEM 614 WORK ZONE MARKING SIGN

IN ACCORDANCE WITH CMS SECTION 614.04, THE QUANTITY OF WORK ZONE MARKING SIGNS HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

W8-H12a (NO EDGE LINES): LOCATION 1 - 11 EACH
R4-1 (DO NOT PASS): LOCATION 1 - 17 EACH
R4-2 (PASS WITH CARE): LOCATION 1 - 9 EACH

ITEM 614, WORK ZONE MARKING SIGN
LOCATION 1 - 37 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. ENSURE THESE SIGNS ARE IN PLACE BEFORE OPENING THE ROADWAY TO TRAFFIC. ERECT THESE SIGNS AT INTERSECTIONS OF THROUGH ROUTES TO WARN TRAFFIC OF THIS SURFACE CONDITION. "GROOVED PAVEMENT" SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

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.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, TWO CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN LICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., 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. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) 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, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (cont'd)

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 2 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 UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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.

A TOTAL OF 2 PCMS SHALL BE REQUIRED FOR THIS PROJECT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO GENERAL SUMMARY:

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 100 DAY

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS WILL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT GENERALLY BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

- 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. 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 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 CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LIST OF THE APPROPRIATE LAW ENFORCEMENT AGENCY(S), INCLUDING ADDRESS AND TELEPHONE NUMBER.

THE LEO SHOULD REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING THE SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF THE SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHOULD 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 THE SHIFT.

LAW ENFORCEMENT OFFICERS (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).

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE - 50 HOURS

THE HOURS PAID SHALL INCLUDE 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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR.

CALCULATED LME CHECKED DNM

GENERAL NOTES

COS-93-11.97

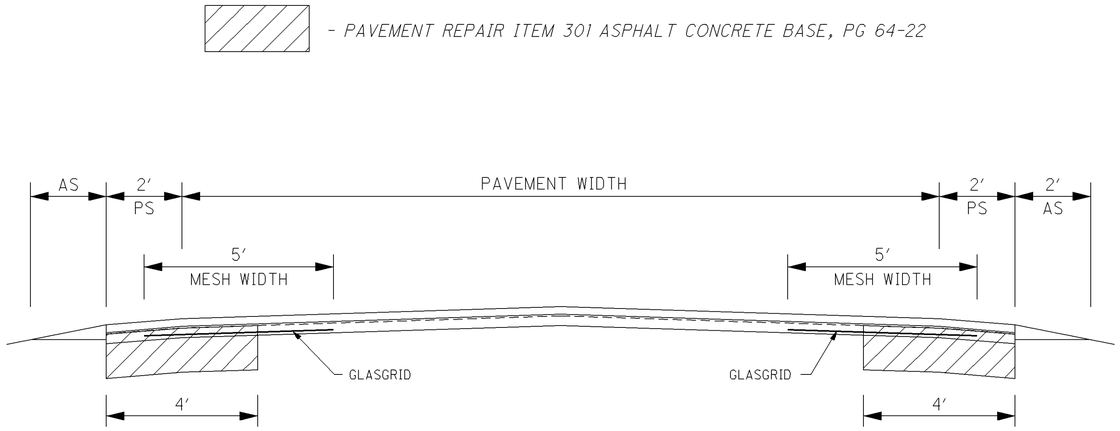
ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

THIS ITEM SHALL BE USED TO REINFORCE LONGITUDINAL CRACKS CREATED BY PAVEMENT REPAIR OPERATIONS ON SR 93. PLACE REINFORCED MESH 5.0' WIDE CENTERED OVER LONGITUDINAL JOINT CREATED BY PAVEMENT REPAIR OPERATIONS OR EXISTING LONGITUDINAL CRACK (ONCE ALL PAVEMENT REPAIRS HAVE BEEN COMPLETED). AFTER PLACING THE REINFORCING MESH, OVERLAY ENTIRE ROADWAY, INCLUDING PAVED SHOULDERS, WITH TOTAL OF 3.0" OF ASPHALT CONCRETE. THIS WORK WILL BE INTERMITTENT AND SPREAD THROUGH-OUT THE PROJECT. REINFORCING MATERIAL SHALL BE PLACED AT ALL LOCATIONS OF PAVEMENT REPAIR. THE ENGINEER SHALL DETERMINE WHERE TO USE ANY REMAINING MESH ONCE ALL OF THE REPAIRS HAVE BEEN COVERED. ALL OF THE MESH SHOWN BELOW SHALL BE USED ON THIS PROJECT.

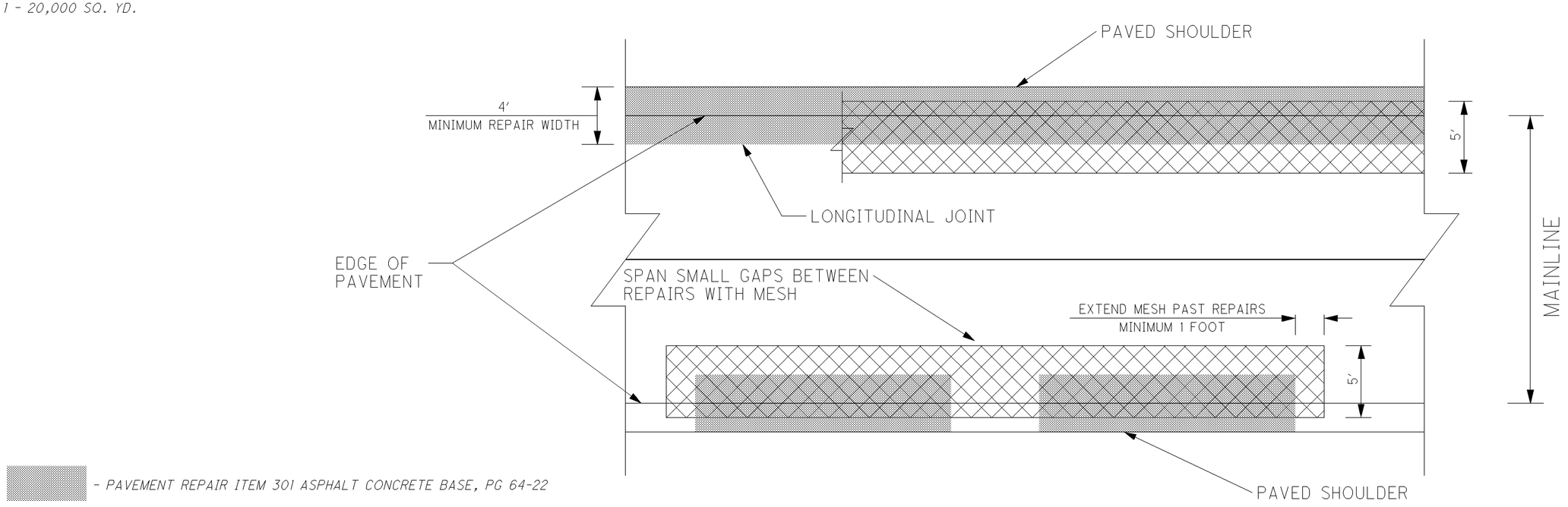
REINFORCING MATERIAL SHALL BE GLASGRID #8502 OR EQUIVALENT AND SHALL BE PLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. ALL MATERIALS, LABOR, EQUIPMENT, TRAFFIC CONTROL AND INCIDENTALS NECESSARY TO COMPLETE PLACING OF REINFORCING MESH SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS.

ITEM SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

LOCATION 1 - 20,000 SQ. YD.



PROFILE VIEW



PLAN VIEW

L013_MGN_004.DGN Dated 3-16-2012

CALCULATED LME
CHECKED DNM

GENERAL NOTES

COS-93-11.97

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

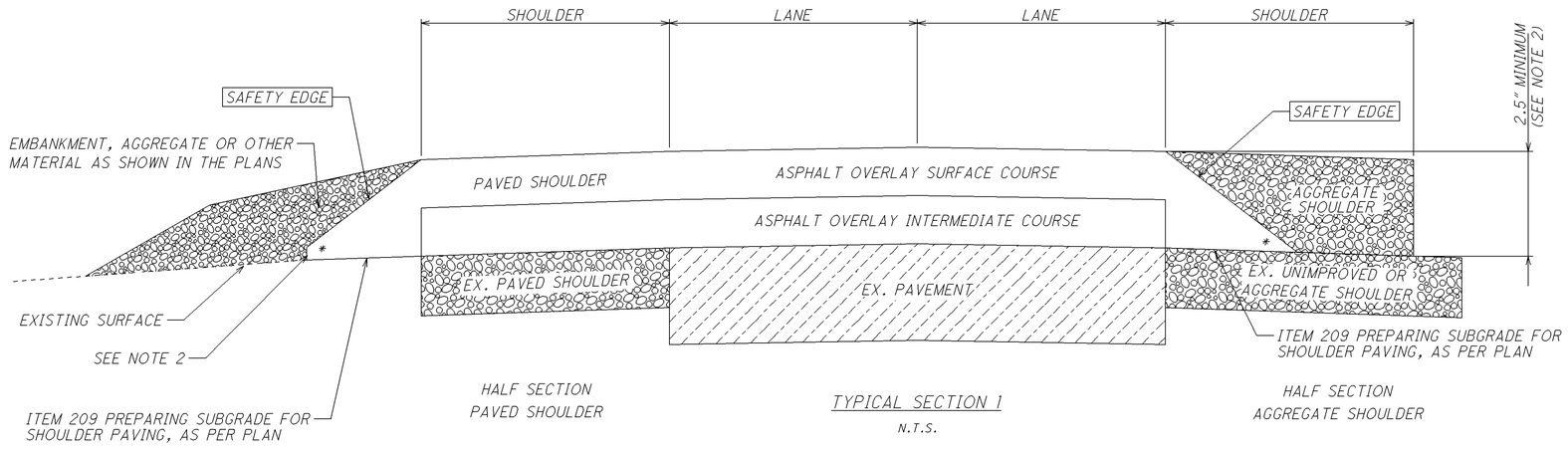
Troxler Electronics Laboratories, Inc.
3008 E. Cornwallis Rd.
Research Triangle Park, NC 27709
1-877-TROXLER
www.troxlerlabs.com

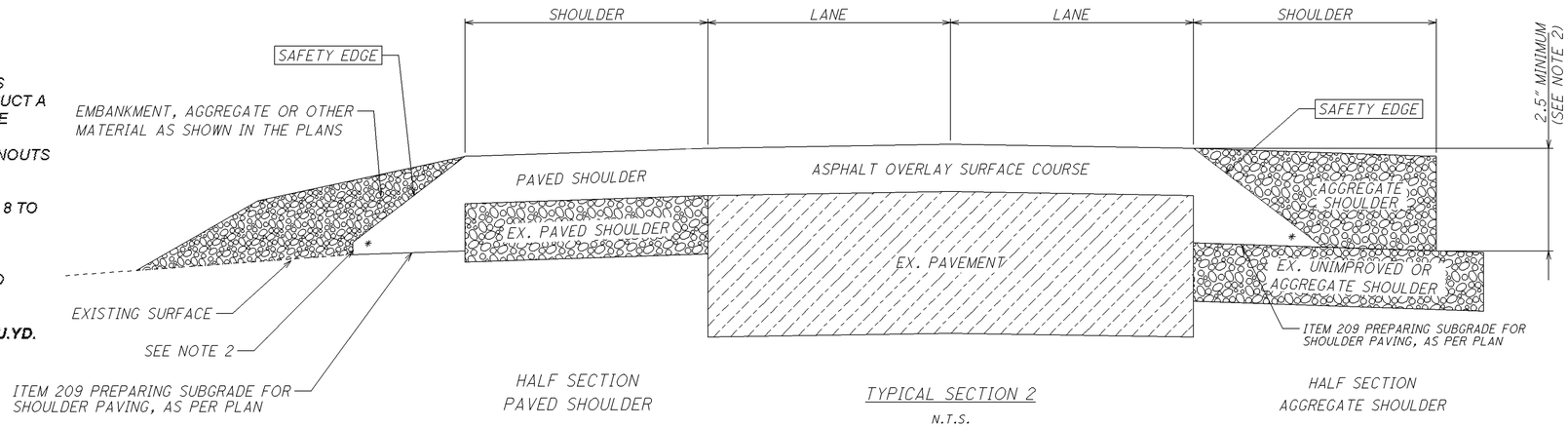
IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN 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 AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO PROVIDE EXTRA ASPHALT FOR CONSTRUCTION OF THE SAFETY EDGE:

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M – 222.3 CU.YD.





NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR 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" (150MM).

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

* 40° MAX

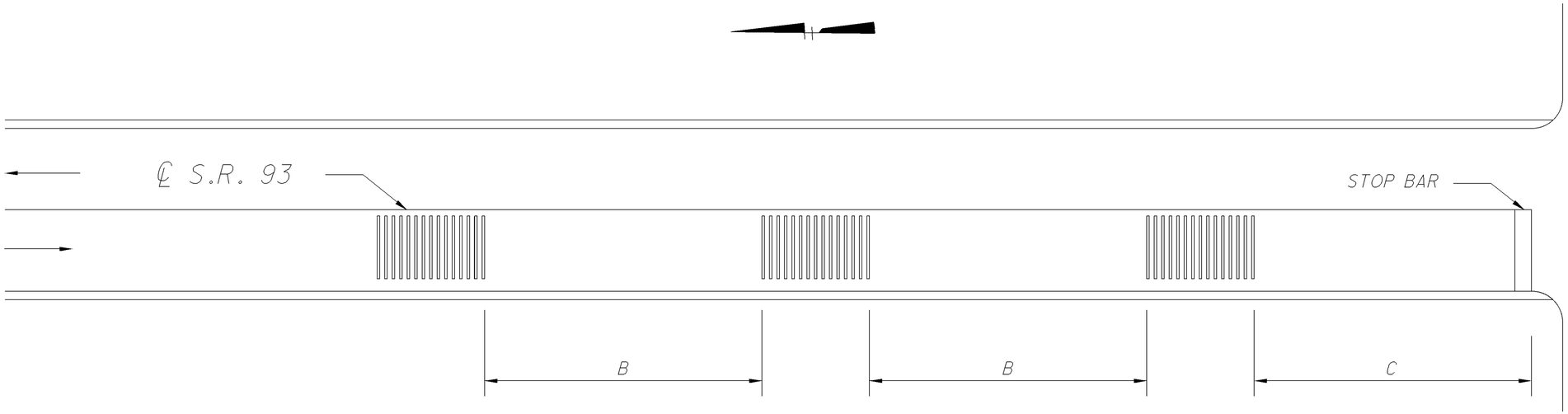
CALCULATED DNM
CHECKED DNM

SAFETY EDGE DETAIL

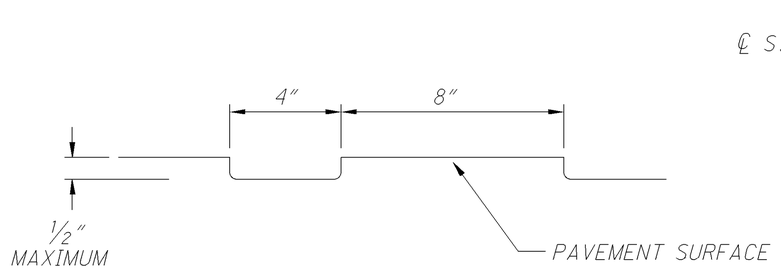
COS-93-11.97

5A
15

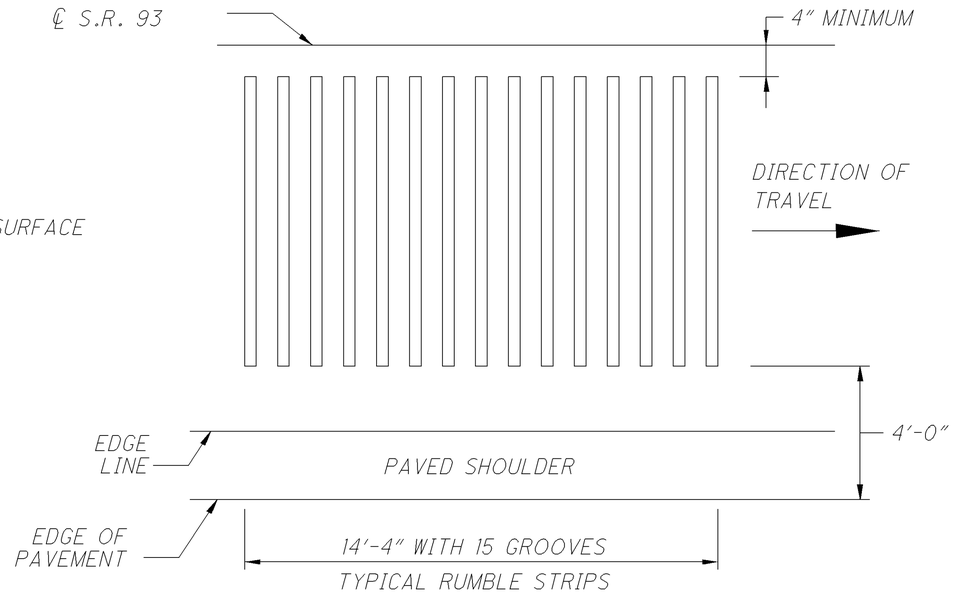
86719_SED_001.dgn dated 5/21/2012



SPEED LIMIT	DISTANCE (FEET)	
	B	C
50-55 MPH	160-320	300 MIN



TYPICAL GROOVE DETAIL



ITEM 618 RUMBLE STRIPS, (ASPHALT CONCRETE)

GENERAL NOTES

1. ALL PROPOSED RUMBLE STRIPS SHALL CONSIST OF PARALLEL GROOVES CUT AT ONE (1) FOOT INTERVALS.
2. EACH GROOVE SHALL BE CUT TO A DEPTH OF APPROXIMATELY 1/2 INCH, WITH ALLOWANCE FOR PAVEMENT SURFACE IRREGULARITIES AND VARIATIONS. WIDTH OF THE GROOVE AT THE PAVEMENT SURFACE IS TO BE 4 INCHES.
3. ALL DIMENSIONS SHOWN ARE NOMINAL AND SHOULD BE CONSIDERED TO BE ± 1/8 INCH.
4. THIS APPLICATION STANDARD WAS DEVELOPED FOR STOP APPROACHES. THE CONTROL AREA LENGTH SHALL BE A MINIMUM OF 300 FEET FOR ALL APPLICATIONS AND MAY BE EXTENDED AS NECESSARY.
5. THE ENGINEER SHALL DETERMINE THE DISTANCE BETWEEN THE GROUPS OF RUMBLE STRIPS (DIMENSION "B" IN THE TABLE).
6. RUMBLE STRIPS SHALL NOT BE PLACED IN FRONT OF ANY BUSINESS OR RESIDENCE.

ITEM 618 RUMBLE STRIPS, (ASPHALT CONCRETE)

CALCULATION:

SOUTH BOUND SR 93, NORTH OF U.S. 36 45(7.2′)= 324 LIN.FT.

ITEM 618 RUMBLE STRIPS, (ASPHALT CONCRETE) 324 LIN.FT.
(QUANTITY CARRIED TO GENERAL SUMMARY)

CALCULATED LME
CHECKED DNM

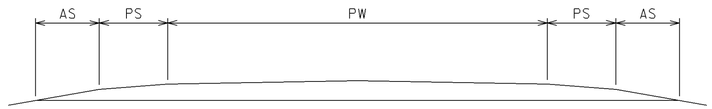
ITEM 618 RUMBLE STRIPS (ASPHALT CONCRETE)

COS-93-11.97

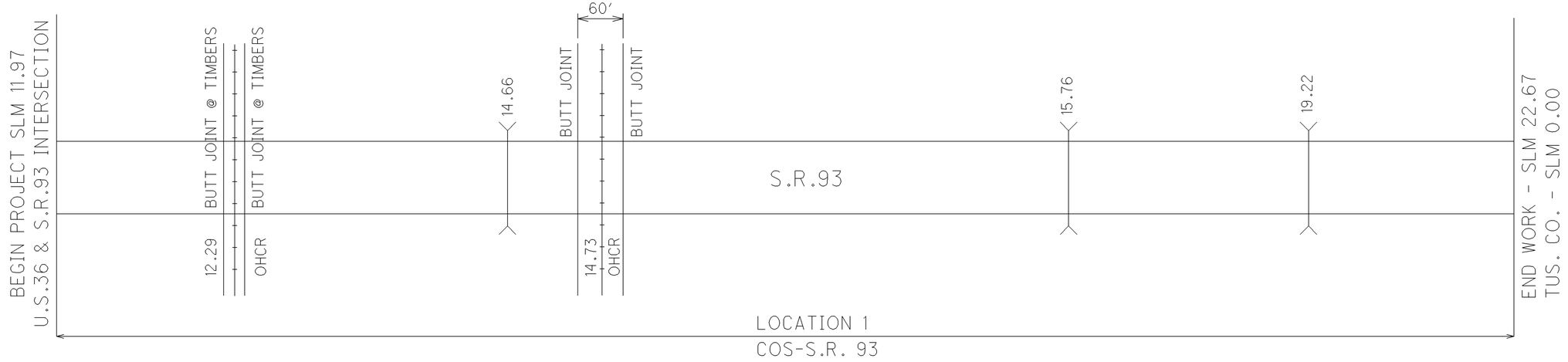
C093_RSD_001.DGN 2-29-12

NOTE:
THE PAVEMENT WIDTHS SHOWN IN THE "PAVEMENT DATA" TABLE BELOW ARE THE WIDTHS WHICH HAVE BEEN DETERMINED TO HAVE SUFFICIENT ROADWAY BASE FOR PAVING. IF ACTUAL ROADWAY WIDTHS DIFFER, THE ROADWAY SHALL BE PAVED ONLY THE WIDTH SHOWN IN THE AFOREMENTIONED TABLE. IF THE EXISTING ROADWAY IS WIDER THAN THAT WHICH IS SHOWN IN THE TABLE, PAVING SHALL BE CENTERED ABOUT THE FULL WIDTH OF THE ROADWAY AND ANY EXCESS EXISTING PAVEMENT ON THE EDGES SHALL BE COVERED WITH ITEM 617 COMPACTED AGGREGATE. PAVING IN CURBED ROADWAY SECTIONS SHALL BE FROM CURB TO CURB.

TYPICAL 1



PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER



PAVEMENT DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH (FEET)	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA	254	407		448 ASPHALT CONCRETE				614
					MILES	LIN. FT.					PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	WORK ZONE CENTER LINE, CLASS II
										SQ. YD.	SQ. YD.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	MILE
1	COS	S.R. 93	11.97	22.67	10.70	56,496.0	20.0	1	448	125,546.7	125,546.7	9,416.1	6,277.4	1.75	6,103.0	1.25	4,359.3	21.40
	DEDUCT FOR BRIDGES (FROM SHEET 10)									(712.3)	(712.3)	(53.4)	(35.6)	1.75	(34.6)	1.25	(24.7)	
LOCATION 1 TOTALS											**124,834.4**	**9,362.7**	**6,241.8**		**6,068.4**		**4,334.6**	**21.40**

CALCULATED LME
CHECKED DNM

ASPHALT CONCRETE DATA

COS-93-11.97

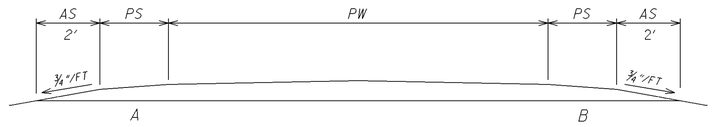
C093_MAC_001.DGN 2-27-12

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER

CALCULATED LME
CHECKED DNM

PAVED SHOULDER DATA

TYPICAL 1

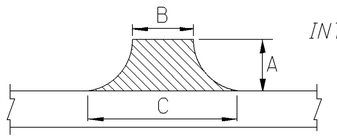


SHOULDER DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)		SHOULDER AREA	254	407		448 ASPHALT CONCRETE				617		
					MILES	LIN. FT.		A	B		PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)	SHOULDER PREPARATION (2' WIDTH)
										SQ. YD.	SQ. YD.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	INCHES	CU. YD.	CU. YD.
1	COS	S.R. 93	11.97	22.67	10.70	56496.0	1	2	2	25,109.3	25,109.3	1,883.2	1,255.5	1.75	1,220.6	1.25	871.9	2.00	1,395.0	25,109.4
	DEDUCT FOR BRIDGES (FROM SHEET 10)									(106.9)	(106.9)	(8.0)	(5.3)	1.75	(5.2)	1.25	(3.7)	2.00	(6.0)	(106.9)
LOCATION 1 TOTALS											**25,002.4**	**1,875.2**	**1,250.2**		**1,215.4**		**868.2**		**1,389.0**	**25,002.5**

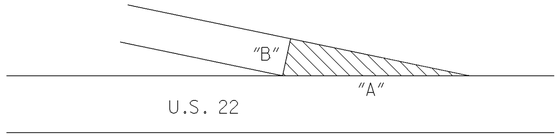
COS-93-11.97

C093_MPS_001.DGN 2-27-12

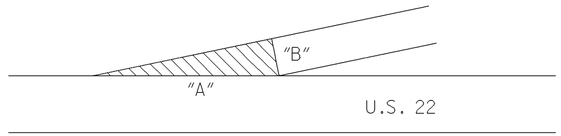


INTERSECTIONS

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



DETAIL 1



DETAIL 2

EXTRA AREAS

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A	B	C	AREA	202 WEARING COURSE REMOVED	407 TACK COAT @ 0.075 GAL./ SQ. YD.	407 TACK COAT FOR INTERMEDIATE COURSE@ 0.05 GAL./ SQ. YD.	448 ASPHALT CONCRETE THICKNESS	448 INTERMEDIATE COURSE, TYPE 2, PG 64-22	448 THICKNESS	448 SURFACE COURSE, TYPE 1, PG 64-22
					FT.	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	GAL.	IN.	CU. YD.	IN.	CU. YD.
1	COS	S.R. 93	LT	~~TWP. RD. 508~~	~~50~~	~~26~~	~~103~~	358.4	358.4	26.9				1.25	12.5
1	COS	S.R. 93	LT	~~TWP. RD. 170~~	~~49~~	~~21~~	~~98~~	324.0	324.0	24.3				1.25	11.3
1	COS	S.R. 93	RT	~~TWP. RD. 170~~	~~58~~	~~21~~	~~106~~	409.3	409.3	30.7				1.25	14.3
1	COS	S.R. 93	LT	~~TWP. RD. 177~~	~~42~~	~~20~~	~~100~~	280.0	280.0	21.0				1.25	9.8
1	COS	S.R. 93	RT	~~TWP. RD. 173~~	~~58~~	~~20~~	~~107~~	409.3	409.3	30.7				1.25	14.3
1	COS	S.R. 93	LT	~~CO. RD. 39~~	~~60~~	~~18~~	~~120~~	460.0	460.0	34.5				1.25	16.0
1	COS	S.R. 93	LT	~~CO. RD. 425~~	~~63~~	~~20~~	~~110~~	455.0	455.0	34.2				1.25	15.8
1	COS	S.R. 93	RT	~~TWP. RD. 172~~	~~58~~	~~24~~	~~103~~	409.3	409.3	30.7				1.25	14.3
1	COS	S.R. 93	LT	~~CO. RD. 171~~	~~75~~	~~41~~	~~92~~	554.2	554.2	41.6				1.25	19.3
1	COS	S.R. 93	RT	~~TWP. RD. 197~~	~~44~~	~~23~~	~~100~~	300.7	300.7	22.6				1.25	10.5
1	COS	S.R. 93	RT	~~CO. RD. 2~~	~~87~~	~~53~~	~~104~~	758.9	758.9	57.0				1.25	26.4
1	COS	S.R. 93	LT	~~TWP. RD. 404~~	~~35~~	17	88	204.2	204.2	15.4				1.25	7.1
1	COS	S.R. 93	LT	~~TWP. RD. 90~~	~~36~~	20	72	184.0	184.0	13.8				1.25	6.4
1	COS	S.R. 93	RT	~~TWP. RD. 90~~	~~25~~	~~30~~	~~60~~	125.0	125.0	9.4				1.25	4.4
1	COS	S.R. 93	RT	~~TWP. RD. 89~~	17	16	48	60.5	60.5	4.6				1.25	2.2
1	COS	S.R. 93	LT	~~TWP. RD. 89~~	~~23~~	20	~~45~~	83.1	83.1	6.3				1.25	2.9
1	COS	S.R. 93	LT	~~TWP. RD. 88~~	~~64~~	~~24~~	~~110~~	476.5	476.5	35.8				1.25	16.6
1	COS	S.R. 93	RT	~~CO. RD. 88~~	~~55~~	~~25~~	~~119~~	440.0	440.0	33.0				1.25	15.3
1	COS	S.R. 93	RT	~~NO NAME-ACCESS TO CO. RD. 88~~	50	16	~~70~~	238.9	238.9	18.0				1.25	8.3
1	COS	S.R. 93	LT	~~CO. RD. 236~~	~~53~~	~~21~~	~~102~~	362.2	362.2	27.2				1.25	12.6
1	COS	S.R. 93	RT	~~TWP. RD. 86~~ (1)	~~76~~	~~32~~		135.0	135.0	10.2				1.25	4.7
1	COS	S.R. 93	RT	~~TWP. RD. 87~~ (2)	~~60~~	~~37~~		123.0	123.0	9.3				1.25	4.3
1	COS	S.R. 93	LT	~~TWP. RD. 236~~	~~50~~	~~28~~	~~100~~	355.6	355.6	26.7				1.25	12.4
1	COS	S.R. 93	LT	~~TWP. RD. 85~~	~~50~~	~~16~~	~~100~~	322.3	322.3	24.2				1.25	11.2
LOCATION 1 TOTALS									**7,829.4**	**588.1**					**272.9**

CALCULATED LME
CHECKED DNM

EXTRA AREA DATA

COS-93-11.97

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CALCULATED LME
CHECKED DNM

BRIDGE DECK TREATMENT DATA

BRIDGE TREATMENT

LOCATION 1

DETAIL (2) COS-93-1260: MILL AND FILL SAME AS ROADWAY
DETAIL (2) COS-93-1430: MILL AND FILL SAME AS ROADWAY
DETAIL (1) COS-93-1466: MILL AND FILL APPROACH SLABS, BUTT JOINT AT BRIDGE DECK
DETAIL (3) COS-93-1576: REMOVE ASPHALT FROM DECK, WATERPROOF, PAVE SAME AS ROADWAY
DETAIL (2) COS-93-1736: MILL AND FILL SAME AS ROADWAY
DETAIL (1) COS-93-1922: MILL AND FILL APPROACH SLABS, BUTT JOINT AT BRIDGE DECK
DETAIL (2) COS-93-1942: MILL AND FILL SAME AS ROADWAY

DEDUCTIONS = PAVEMENT/SHOULDER WIDTHS X (BRIDGE LENGTH + APPROACH SLABS)

BRIDGE DATA

LOCATION	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS)	WIDTH	AREA	APPROACH SLAB LENGTH	APPROACH SLAB WIDTH	APPROACH SLAB AREA (INCLUDES BOTH APPROACH SLABS)	DETAILS (SHEET 11)	MAINLINE DEDUCTIONS (CARRIED TO SHEET 7)	SHOULDER DEDUCTIONS (CARRIED TO SHEET 8)	202	407		448 ASPHALT CONCRETE				512	516
											WEARING COURSE REMOVED	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, TYPE 2, PG 64-22	THICKNESS	SURFACE COURSE, TYPE 1, PG 70-22M	TYPE 3 WATERPROOFING	2" DEEP JOINT SEALER, AS PER PLAN
		LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.		SQ.YD.	SQ.YD.	SQ.YD.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	SQ. FT.	FEET
1	COS-93-1260	BOX CULVERT						2											
1	COS-93-1430	BOX CULVERT						2											
1	COS-93-1466	112	40	497.8	25.0	20.0	111.1	1	360.0	49.8	111.1		8.3			1.25	3.9		40.0
1	COS-93-1576	29.5	28	91.8				3	65.6	13.1	91.8	4.6	6.9	1.75	4.5	1.25	3.2	91.8	
1	COS-93-1736	BOX CULVERT						2											
1	COS-93-1922	99	36	396.0	15.0	20.0	66.7	1	286.7	44.0	66.7		5.0			1.25	2.3		40.0
1	COS-93-1942	BOX CULVERT						2											
	SUB-TOTALS	240.5			40				712.3	106.9									
	LOCATION 1 TOTALS										**269.6**	**4.6**	**20.2**		**4.5**		**9.4**	**91.8**	**80.0**

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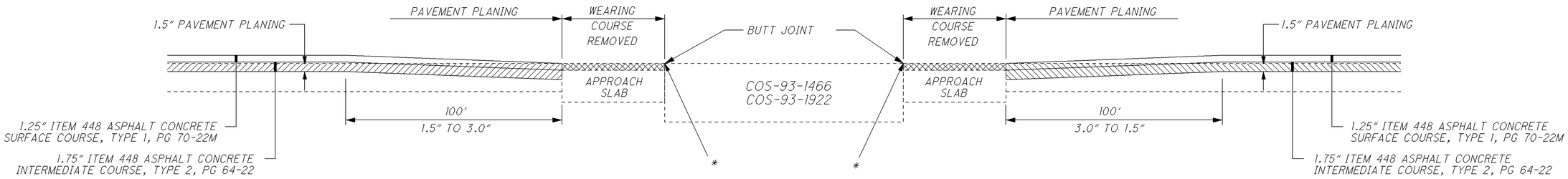
DETAILS NOT TO SCALE

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

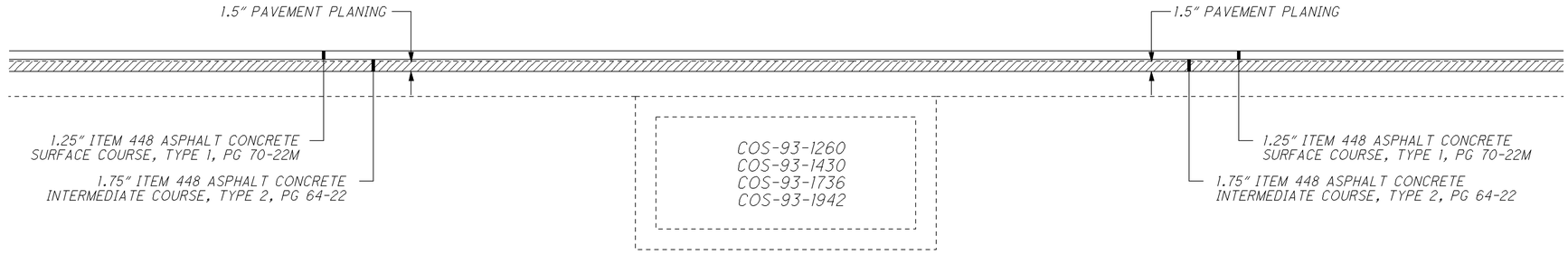
ITEM 202 WEARING COURSE REMOVED

DETAIL 1

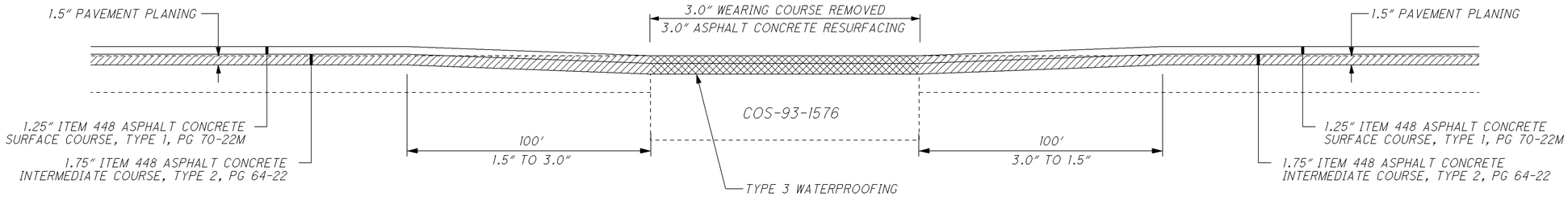


* 2.0" DEEP JOINT SEALER, AS PER PLAN

DETAIL 2



DETAIL 3



CALCULATED LME CHECKED DNM

BRIDGE DECK TREATMENT DATA

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ITEM 817 EDGE LINE										
LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY			TOTAL EDGE LINE MILES	REMARKS
						WHITE EDGE LINE QUANTITIES				
			FROM	TO		TOTAL MILES	HIGHWAY MILES	RAMP MILES		
1	COS	S.R. 93	11.97	22.67	10.70	21.40	21.40		21.40	
LOCATION 1 TOTALS									**21.40**	

ITEM 817 CENTER LINE										
LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY			TOTAL CENTER LINE MILES	REMARKS
						CENTER LINE QUANTITIES				
			FROM	TO		TOTAL MILES	EQUIVALENT SOLID LINE			
1	COS	S.R. 93	11.97	22.67	10.70	10.70	17.921		10.70	
LOCATION 1 TOTALS									**10.70**	

CALCULATED LME
CHECKED DNM

EDGE / CENTER LINE DATA

COS-93-11.97

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644 THERMOPLASTIC AUXILARY MARKING

LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	SLM	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	WORD ON PAVEMENT		LANE ARROWS				RAILROAD SYMBOL MARKING	REMARKS
										ONLY		COMBINATION		TURN			
						WHITE	YELLOW			72"	96"	LT./TH.	RT./TH.	LT.	RT.		
						FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
1	COS	S.R. 93	~~ON S.R. 93~~	CL				~~38~~									AS DIRECTED
1	COS	S.R. 93	~~TWP.RD. 508~~	LT				~~25~~									PLACE 24' FROM S.R.93 CL
1	COS	S.R. 93	~~ON S.R.93 @ S.L.M. 12.29~~													~~2~~	AS DIRECTED
1	COS	S.R. 93	~~TWP.RD. 170~~	LT				~~32~~									PLACE 19' FROM S.R.93CL
1	COS	S.R. 93	~~TWP.RD. 170~~	RT				~~26~~									PLACE 26' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 177~~	LT				~~22~~									PLACE 19' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 173~~	RT				~~33~~									PLACE 21' FROM S.R.93 CL
1	COS	S.R. 93	~~CO.RD. 39~~	LT				~~30~~									PLACE 20' FROM S.R.93 CL
1	COS	S.R. 93	~~CO.RD. 425~~	LT				~~38~~									PLACE 20' FROM S.R.93 CL
1	COS	S.R. 93	~~ON S.R.93 @ S.L.M. 14.73~~	CL												2	AS DIRECTED
1	COS	S.R. 93	~~TWP.RD. 172~~	RT				~~24~~									PLACE 21' FROM S.R.93 CL
1	COS	S.R. 93	~~CO.RD. 171~~	LT				~~25~~									PLACE 27' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 197~~	RT				~~22~~									PLACE 26' FROM S.R.93 CL
1	COS	S.R. 93	~~CO.RD. 2~~	RT				~~26~~									PLACE 26' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 404~~	LT				~~25~~									PLACE 18' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 90~~	LT				~~25~~									PLACE 18' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 90~~	RT				~~21~~									PLACE 15' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 89~~	RT				~~16~~									PLACE 16' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 89~~	LT				~~14~~									PLACE 15' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD.~~ 88	LT				48									PLACE 23' FROM S.R.93 CL
1	COS	S.R. 93	~~CO. RD.~~ 88	RT				39									PLACE 22' FROM S.R.93 CL
1	COS	S.R. 93	NO NAME - ACCESS TO CO. RD. 88	RT				19									PLACE 19' FROM S.R.93 CL
1	COS	S.R. 93	~~CO.RD. 236~~	LT				~~29~~									PLACE 17' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD. 86~~	RT				~~21~~									PLACE 16' FROM S.R.93 CL
1	COS	S.R. 93	~~TWP.RD.~~ 87	RT				~~16~~									PLACE 18' FROM S.R.93 CL
1	COS	S.R. 93	TWP.RD. 236	LT				31									PLACE 19' FROM S.R.93 CL
1	COS	S.R. 93	TWP.RD. 85	LT				30									PLACE 19' FROM S.R.93 CL
LOCATION 1 TOTALS								**675**								**4**	

CALCULATED LME
CHECKED DNM

AUXILARY MARKING DATA

COS-93-11.97

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DETAIL	SEE STD. DWG. TC-65.11
1	TAPERED ACCELERATION LANE
2	DECELERATION LANE
3	MULTILANE DIVIDED/ CONTROLLED ACCESS

DETAIL	SEE STD. DWG. TC-65.11
4	4 LANE DIVIDED TO 2 LANE TRANSITION
5	4 LANE UNDIVIDED TO 2 LANE TRANSITION
6	ONE LANE BRIDGE
7	STOP APPROACH
8	THRU APPROACH
9	TWO WAY LEFT TURN LANE

DETAIL	SEE STD. DWG. TC-65.11
10	APPROACH W/LT. TURN LANE
11	HORIZONTAL CURVE 40'
12	HORIZONTAL CURVE ALT.
GAP	CENTERLINE AT 80' TYP.

ITEM 621 RPM SUB-SUMMARY

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR COLORS INFORMATION ONLY					REMARKS
										ONE-WAY		TWO-WAY			
					MILES	LIN.FT.		EACH	EACH	WHITE	YELLOW	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	
1	COS	S.R. 93	11.97	12.13	0.16	845	7/GAP	27	27	16		11			BEGIN AT U.S.36 INTERSECTION
1	COS	S.R. 93	12.13	12.18	0.05	264	GAP	3	3			3			
1	COS	S.R. 93	12.18	12.27	0.09	475	11	12	12			12			PC 12.18 PT 12.27 L = 475' DEG 5
1	COS	S.R. 93	12.27	12.39	0.12	634	GAP	8	8			8			
1	COS	S.R. 93	12.39	12.48	0.09	475	11	12	12			12			PC 12.39 PT 12.48 L = 475' DEG 5
1	COS	S.R. 93	12.48	12.63	0.15	792	GAP	10	10			10			
1	COS	S.R. 93	12.63	12.87	0.24	1,267	11	32	32			32			PC 12.63 PT 12.87 L = 1267' DEG 5
1	COS	S.R. 93	12.87	14.46	1.59	8,395	GAP	105	105			105			
1	COS	S.R. 93	14.46	14.54	0.08	422	11	11	11			11			PC 14.46 PT 14.54 L = 422' DEG 5
1	COS	S.R. 93	14.54	15.13	0.59	3,115	GAP	39	39			39			
1	COS	S.R. 93	15.13	15.16	0.03	158	11	4	4			4			PC 15.13 PT 15.16 L = 158' DEG 9
1	COS	S.R. 93	15.16	15.32	0.16	845	12	27	27			27			PC 15.24 PT 15.28 L = 211' DEG 12
1	COS	S.R. 93	15.32	15.45	0.13	686	12	21	21			21			PC 15.32 PT 15.45 L = 422' DEG 17
1	COS	S.R. 93	15.45	15.58	0.13	686	12	25	25			25			PC 15.45 PT 15.51 L = 317' DEG 18
1	COS	S.R. 93	15.58	15.60	0.02	106	11	3	3			3			PC 15.58 PT 15.60 L = 106' DEG 9
1	COS	S.R. 93	15.60	15.75	0.15	792	12	23	23			23			PC 15.67 PT 15.70 L = 158' DEG 15
1	COS	S.R. 93	15.75	15.93	0.18	950	12	36	36			36			PC 15.75 PT 15.84 L = 475' DEG 18
1	COS	S.R. 93	15.93	16.18	0.25	1,320	GAP	17	17			17			
1	COS	S.R. 93	16.18	16.40	0.22	1,162	12	35	35			35			PC 16.27 PT 16.31 L = 211' DEG 12
1	COS	S.R. 93	16.40	16.63	0.23	1,214	12	41	41			41			PC 16.46 PT 16.54 L = 422' DEG 14
1	COS	S.R. 93	16.63	16.85	0.22	1,162	GAP	15	15			15			
1	COS	S.R. 93	16.85	16.92	0.07	370	11	9	9			9			PC 16.85 PT 16.92 L = 370' DEG 9
1	COS	S.R. 93	16.92	17.13	0.21	1,109	GAP	14	14			14			
1	COS	S.R. 93	17.13	17.35	0.22	1,162	12	35	35			35			PC 17.22 PT 17.26 L = 211' DEG 11
1	COS	S.R. 93	17.35	17.94	0.59	3,115	GAP	39	39			39			
1	COS	S.R. 93	17.94	18.03	0.09	475	11	12	12			12			PC 17.94 PT 18.03 L = 475' DEG 7
1	COS	S.R. 93	18.03	18.18	0.15	792	12	24	24			24			PC 18.12 PT 18.15 L = 158' DEG 16
1	COS	S.R. 93	18.18	18.29	0.11	581	12	17	17			17			PC 18.18 PT 18.20 L = 106' DEG 14
1	COS	S.R. 93	18.29	18.55	0.26	1,373	12	43	43			43			PC 18.39 PT 18.46 L = 370' DEG 11
1	COS	S.R. 93	18.55	20.51	1.96	10,349	GAP	129	129			129			
1	COS	S.R. 93	20.51	20.65	0.14	739	12	21	21			21			PC 20.60 PT 20.62 L = 106' DEG 14
1	COS	S.R. 93	20.65	20.78	0.13	686	12	23	23			23			PC 20.65 PT 20.69 L = 211' DEG 11
1	COS	S.R. 93	20.78	20.97	0.19	1,003	12	37	37			37			PC 20.84 PT 20.88 L = 211' DEG 14
1	COS	S.R. 93	20.97	21.12	0.15	792	12	22	22			22			PC 21.01 PT 21.03 L = 106' DEG 24
1	COS	S.R. 93	21.12	21.89	0.77	4,066	GAP	51	51			51			
1	COS	S.R. 93	21.89	21.95	0.06	317	11	12	12			12			PC 21.89 PT 21.95 L = 475' DEG 9
1	COS	S.R. 93	21.95	22.20	0.25	1,320	GAP	17	17			17			
1	COS	S.R. 93	22.20	22.26	0.06	317	11	8	8			8			PC 22.20 PT 22.26 L = 317' DEG 9
1	COS	S.R. 93	22.26	22.39	0.13	686	GAP	17	17			17			
1	COS	S.R. 93	22.39	22.42	0.03	158	11	4	4			4			PC 22.39 PT 22.42 L = 158' DEG 9
1	COS	S.R. 93	22.42	22.67	0.25	1,320	GAP	17	17			17			END TUSCARAWAS CO.
	SUB-TOTALS									16		1,041			
LOCATION 1 TOTALS								**1,057**	**1,057**						

CALCULATED LME CHECKED DNM

RAISED PAVEMENT MARKER DATA

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SHEET TOTALS													ITEM	ITEM EXT.	GRAND TOTALS	UNIT	DESCRIPTION	SEE SHEET
Sht. 2	Sht. 3	Sht. 4	Sht. 5	Sht. 5A	Sht. 6	Sht. 7	Sht. 8	Sht. 9	Sht. 10	Sht. 12	Sht. 13	Sht. 14						
	1,420							7,830	270				202	23500	9,520	SQ YD	WEARING COURSE REMOVED	
21.00													209	60500	21.00	MILE	LINEAR GRADING	
21.00													209	72051	21.00	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	2
4,000													253	02000	4,000	CU YD	PAVEMENT REPAIR	
						124.835	25,003						254	01000	149,838	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
						9,363	1,876	589	21				407	10000	11,849	GALLON	TACK COAT	
						6,242	1,251		5				407	14000	7,498	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
10,001													408	10001	10,001	GALLON	PRIME COAT, AS PER PLAN	2
	70					6,069	1,216		5				448	46050	7,360	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	
	49			223		4,335	869		10				448	46904	5,486	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
								273					448	47020	273	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	
									92				512	33010	92	SQ YD	TYPE 3 WATERPROOFING	
									80				516	31011	80	FT	2" DEEP JOINT SEALER, AS PER PLAN	3
		50											614	11110	50	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		37											614	12460	37	EACH	WORK ZONE MARKING SIGN	
	11.0												614	13000	11.0	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		100											614	18401	100	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	
						21.40							614	21400	21.40	MILE	WORK ZONE CENTER LINE, CLASS II	
							1,389						617	10101	1,389	CU YD	COMPACTED AGGREGATE, AS PER PLAN	3
							25,003						617	20000	25,003	SQ YD	SHOULDER PREPARATION	
					324								618	40100	324	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	
												1,057	621	00100	1,057	EACH	RPM	
												1,057	621	54000	1,057	EACH	RAISED PAVEMENT MARKER REMOVED	
	3												632	26501	3	EACH	DETECTOR LOOP, AS PER PLAN	3
											675		644	00500	675	FT	STOP LINE	
											4		644	01000	4	EACH	RAILROAD SYMBOL MARKING	
			20,000										690	12050	20,000	SQ YD	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	5
5,000													690	98800	5,000	TON	SPECIAL - MISC.: HAULING RACP	2
										21.40			817	00100	21.40	MILE	EDGE LINE	
										10.70			817	00300	10.70	MILE	CENTER LINE	
													103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
													614	11000	LUMP		MAINTAINING TRAFFIC	
													619	16000	2	MONTH	FIELD OFFICE, TYPE A	
													624	10000	LUMP		MOBILIZATION	
													823	10000	LUMP		CONSTRUCTION LAYOUT STAKES	

CALCULATED LME CHECKED DNM

GENERAL SUMMARY

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