ITEM 614, MAINTAINING TRAFFIC

TR-77

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON TR-77, EXCEPT FOR A PERIOD NOT TO EXCEED 150 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 12. A DISINCENTIVE SHALL BE ASSESSED ACCORDING TO THE LANE VALUE CONTRACT TABLE.

PAYMENT FOR THE ERECTION, MAINTENANCE AND REMOVAL FOR THE DETOUR SIGNING SHALL BE MADE PER ITEM 614- DETOUR SIGNING.

SR-48

A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON SR-48 BY USE OF THE EXISTING PAVEMENT EXCEPT AS NOTED IN THE PERMITTED LANE CLOSURE TIME NOTE.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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 TIMEFRAME, 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.

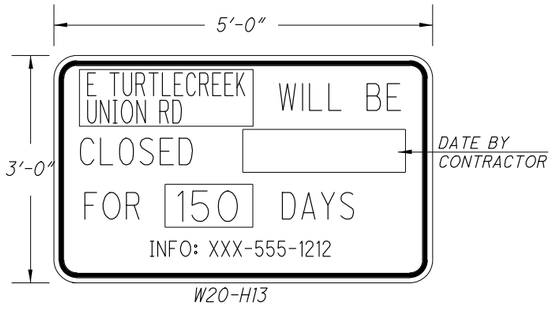
NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME-TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE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

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

NOTICE OF CLOSURE SIGN TIME TABLE

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

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



W20-H13

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS INCLUDING SUPPORTS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

ON NORTHBOUND TR-77 JUST WEST OF THE INTERSECTION WITH RAMPS A AND C.

ON SOUTHBOUND TR-77 JUST EAST OF THE INTERSECTION WITH DEERFIELD ROAD.

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

410, TRAFFIC COMPACTED SURFACE, TYPE B	6 CU. YD.
614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	10 CU. YD.
616, WATER	4 M. GAL.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SR-48 MEDIAN ACCESS

IF NECESSARY, MEDIAN ACCESS SHALL CONFORM TO ODOT SCD MT-103.10. THE COST TO CONSTRUCT AND MAINTAIN THIS ACCESS IS TO BE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC.

CLEARANCE NOTICE FOR SR-48 TRAFFIC

ANY WORK (FALSEWORK, TRAFFIC PROTECTION, CONTAINMENT, ETC.) OVER LIVE TRAFFIC BY THE CONTRACTOR THAT REDUCES THE EXISTING VERTICAL CLEARANCE IS PROHIBITED UNLESS 30 DAYS ADVANCED NOTICE IS PROVIDED WITH NEW PROPOSED VERTICAL CLEARANCES. THE CONTRACTOR SHALL PROVIDE FIELD MEASUREMENTS BEFORE ALLOWING TRAFFIC UNDERNEATH. IF ANY WORK IS TO OCCUR BELOW 14'-6", THEN SIGNS ON THE STRUCTURE AND ADVANCE WARNING SIGNS SHALL BE INSTALLED A MINIMUM OF 2 WEEKS PRIOR TO PERFORMING SUCH WORK. SIGNING SHALL BE IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD) AND THE OHIO "TRAFFIC ENGINEERING MANUAL" (TEM). NO WORK OVER TRAFFIC SHALL OCCUR WITH A VERTICAL CLEARANCE LESS THAN 14'-0". LOWERING THE VERTICAL CLEARANCE DURING CONSTRUCTION IS CONSIDERED THE CONTRACTOR'S MEANS AND METHODS OF ACCOMPLISHING THE WORK, AND THEREFORE THE STATE IS NOT RESPONSIBLE FOR ANY DAMAGE FROM VEHICULAR IMPACTS THAT MAY RESULT AS PER 107.10.

PERMITTED LANE CLOSURE TIMES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE PERMITTED LANE CLOSURE NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL ENGINEER. SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING THE TIMES SPECIFIED IN THE LANE VALUE CONTRACT TABLE INCLUDED IN THESE PLANS. NO LANE OR SHOULDER CLOSURE SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

SHORT TERM LANE CLOSURES ARE NOT PERMITTED ON SOUTHBOUND SR-48 FROM 6 AM TO 9 AM, ON NORTHBOUND SR-48 FROM 3 PM TO 7 PM, AND NORTH AND SOUTHBOUND UP AND OVER (@ TR-77 RAMPS) FROM 6 AM TO 9 PM.

SHORT DURATION CLOSURES OF 2 LANES ON SR-48 FOR THE ERECTION AND REMOVAL OF BEAMS SHALL BE PER ODOT SCD MT-99.60.

LANE VALUE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER TIME UNIT
NB SR-48 FROM MM 10 TO MM 11	3 PM TO 7 PM	1 MINUTE	$120
SB SR-48 FROM MM 11 TO MM 10	6 AM TO 9 AM	1 MINUTE	$120
SR-48 UP AND OVER @ TR-77 RAMPS	6 AM TO 9 PM	1 MINUTE	$120
TR-77 (ROAD CLOSURE)	120 DAYS	1 DAY	$3,700

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIMEFRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

EXTRA ADVANCE WARNING SIGNS

AN EXTRA ADVANCE WARNING SIGN GROUP CONSISTS OF TWO W20-1 (ROAD WORK AHEAD) SIGNS, TWO W20-5 (RIGHT /LEFT LANE CLOSED AHEAD) SIGNS WITH W16-3A DISTANCE PLATES, AND TWO W3-H7 (WATCH FOR STOPPED TRAFFIC) SIGNS AND REQUIRED WARNING LIGHTS.

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE EXTRA ADVANCE WARNING SIGN GROUPS AS SHOWN ON TRAFFIC SCD MT-95.50 AT THE FOLLOWING DISTANCES IN ADVANCE OF THE LANE TAPERS WITH THE APPROPRIATE W16-3A DISTANCE PLATES:

1) LANE TAPER AT STATION 537+76, PHASES 1A & 4; PROVIDE A SIGN GROUP AT 2 MILES.
2) LANE TAPER AT STATION 537+68, PHASES 2 & 5; PROVIDE A SIGN GROUP AT 2 MILES.

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING EXTRA ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED MDK CHECKED MWZ

MAINTENANCE OF TRAFFIC NOTES

WAR-48-11.54 PART 1

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONTINUED)

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

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

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

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

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

614,	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 5 PCMS FOR 4 MONTHS)	20 SIGN MONTHS

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

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 C&MS 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) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 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 THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN A 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).
- FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
  - ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
  - AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND
  - AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFICE CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
- THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
- OTHER LOCATION AS APPROVED BY THE ENGINEER.

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE) AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED 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 LEO'S DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING THE 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. 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.

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 GENERAL SUMMARY:

614,	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	1,100 HOURS

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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

DETECTION MAINTENANCE

IF THE VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFICE SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

AT THE KINGSVIEW DRIVE INTERSECTION, ADJUST RADAR DETECTION AS NECESSARY FOR THE SOUTHBOUND LEFT TURN PHASE DURING LEFT TURN LANE CLOSURES.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

DELINEATION OF PORTABLE AND PERMANENT BARRIER (CONTINUED)

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLESTACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

614,	BARRIER REFLECTOR, TYPE 1, ONE WAY	72 EACH
614,	OBJECT MARKER, ONE-WAY	48 EACH
614,	INCREASED BARRIER DELINEATION	431 FT

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

614,	BARRIER REFLECTOR, TYPE 3, ONE WAY	15 EACH
614,	OBJECT MARKER, ONE-WAY	7 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

CALCULATED MDK CHECKED MWZ

MAINTENANCE OF TRAFFIC GENERAL NOTES

WAR-48-11.54 PART 1

10 92

SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
28	29	30	57	58	63								01/S>2/BR	02/CMQ/OT						
																			PAVEMENT (CONTINUED)	
	40												40		301	46000	40	CY	ASPHALT CONCRETE BASE, PG64-22	
294	346												485	155	304	20000	640	CY	AGGREGATE BASE	
379	243												521	101	407	20000	622	GAL	NON-TRACKING TACK COAT	
103	71												145	29	441	50000	174	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
176	99												234	41	441	50200	275	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	
1,063	1,262												2,325		452	13010	2,325	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
		25											25		609	24510	25	FT	CURB, TYPE 4-C	
		748											748		609	26000	748	FT	CURB, TYPE 6	
																			TRAFFIC CONTROL	
			118										118		621	00100	118	EACH	RPM	
			80										80		621	54000	80	EACH	RAISED PAVEMENT MARKER REMOVED	
	21												21		626	00110	21	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
				216.5									216.5		630	03100	216.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				28									28		630	08004	28	FT	ONE WAY SUPPORT, NO. 3 POST	
				6									6		630	08600	6	EACH	SIGN POST REFLECTOR	
				100.5									100.5		630	80100	100.5	SF	SIGN, FLAT SHEET	
				25									25		630	84900	25	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				5									5		630	85100	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				21									21		630	86002	21	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
			0.35										0.35		642	00100	0.35	MILE	EDGE LINE, 4", TYPE 1, WHITE	
			0.15										0.15		642	00300	0.15	MILE	CENTER LINE, TYPE 1, 4", DOUBLE SOLID, YELLOW	
			62										62		642	00400	62	FT	CHANNELIZING LINE, 8", TYPE 1, WHITE	
			4										4		642	01300	4	EACH	LANE ARROW, TYPE 1	
			0.07										0.07		644	00104	0.07	MILE	EDGE LINE, 6", WHITE	
			0.09										0.09		644	00104	0.09	MILE	EDGE LINE, 6", YELLOW	
			0.54										0.54		644	00200	0.54	MILE	LANE LINE, 4", WHITE	
			266										266		644	00400	266	FT	CHANNELIZING LINE, 8", WHITE	
			33										33		644	00500	33	FT	STOP LINE	
			112										112		644	00600	112	FT	CROSSWALK LINE	
			2										2		644	01300	2	EACH	LANE ARROW	
			0.11										0.11		646	10000	0.11	MILE	EDGE LINE, 4", WHITE	
			0.06										0.06		646	10200	0.06	MILE	CENTER LINE, 4", DOUBLE SOLID, YELLOW	
																			STRUCTURE REPAIR (WAR-48-1154)	
					LS								LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	60
					134								134		202	22900	134	SY	APPROACH SLAB REMOVED	
					LS								LS		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
					LS								LS		503	21300	LS		UNCLASSIFIED EXCAVATION	
					131,994								119,840	12,154	509	10000	131,994	LB	EPOXY COATED REINFORCING STEEL	
					100								100		509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	61
					4,393								4,393		509	30020	4,393	FT	NO. 4 GFRP DEFORMED BARS	
					150								150		510	10001	150	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	61
					2								2		511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	61
					39								39		511	45712	39	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT	
					93								93		511	53014	93	CY	CLASS QC3 CONCRETE, MISC.:PARAPET CONCRETE WITH QC/QA, AS PER PLAN	61
					122									122	511	53014	122	CY	CLASS QC3 CONCRETE, MISC.:SIDEWALK CONCRETE WITH QC/QA, AS PER PLAN	61
					370								370		511	53014	370	CY	CLASS QC3 CONCRETE, MISC.:SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN	61
					530									530	512	10050	530	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
					1,053								1,053		512	10100	1,053	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
					121								121		512	10600	121	FT	CONCRETE REPAIR BY EPOXY INJECTION	
					13								13		512	33000	13	SY	TYPE 2 WATERPROOFING	
					151								151		512	74000	151	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
					3,276								3,276		513	10201	3,276	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	78
					2,628								2,628		513	20000	2,628	EACH	WELDED STUD SHEAR CONNECTORS	
					1								1		513	95000	1	FT	STRUCTURAL STEEL, MISC.:REPAIR OF DAMAGED MAIN MEMBER, COMPLETE PENETRATION WELDING	61

CALCULATED AKB
CHECKED MWZ

GENERAL SUMMARY

WAR-48-11.54
PART 1

SHEET NUM.										PART.			ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
8	9	10	11	12	63					01/S>2/BR	02/CMQ/OT	03/CMQ/OT	(X)		EXT	TOTAL			
																		STRUCTURE REPAIR (WAR-48-1154) (CONTINUED)	
					2,805					2,805				514	00050	2,805	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	61
					2,805					2,805				514	00056	2,805	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	60
					2,868					2,868				514	00060	2,868	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
					2,868					2,868				514	00066	2,868	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
					8					8				514	00504	8	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
					3					3				514	10000	3	EACH	FINAL INSPECTION REPAIR	
					LS					LS				514	21001	LS		FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN	61
					107					107				516	10000	107	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL	
					18					18				516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER	
					158					158				516	13900	158	SF	2" PREFORMED EXPANSION JOINT FILLER	
					107					107				516	14020	107	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
					12					12				516	44401	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	77
																		(11.5"X16"x3.75" PAD WITH 12.5"x17"x1.25" PLATE)	
					18					18				516	44401	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	78
																		(12"X19"x3.75" PAD WITH 13"x20"x1.25" PLATE)	
					LS					LS				516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	62
					110					110				518	21200	110	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
					172					172				518	40000	172	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
					65					65				518	40010	65	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
					22					22				519	11101	22	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	62
					256					256				526	25011	256	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN	61
					107					107				526	90010	107	FT	TYPE A INSTALLATION	
					412					412				601	20000	412	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
					45					45				846	00110	45	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
					LS					LS				849	10000	LS		DAMAGE ASSESSMENT	
					LS					LS				849	10500	LS		SURFACE PREPARATION	
					27					27				849	10600	27	HOUR	REPAIRING DAMAGED MEMBERS BY GRINDING	
					LS					LS				849	10700	LS		STRAIGHTENING DAMAGED MEMBERS	
																		STRUCTURE REPAIR (WAR-48-1154) ALTERNATES	
					242							242	X	517	76300	242	FT	RAILING, MISC.:DECORATIVE W/ CHAINLINK FENCE, 8-FT TALL (ALTERNATE 2)	62A
					285							285	X	517	76300	285	FT	RAILING, MISC.:DECORATIVE W/ CHAINLINK FENCE, 12-FT TALL (ALTERNATE 2)	62A
					242					242			X	607	39910	242	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC (ALTERNATE 1)	
					285					285			X	607	39930	285	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC (ALTERNATE 1)	
																		MAINTENANCE OF TRAFFIC	
6										6				410	11000	6	CY	TRAFFIC COMPACTED SURFACE, TYPE B	
		1,100								1,100				614	11110	1,100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		431								431				614	11630	431	FT	INCREASED BARRIER DELINEATION	
			12							12				614	12380	12	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
				LS						LS				614	12420	LS		DETOUR SIGNING	
	125									125				614	12600	125	EACH	REPLACEMENT DRUM	
10										10				614	13000	10	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		72								72				614	13310	72	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
		15								15				614	13314	15	EACH	BARRIER REFLECTOR, TYPE 3, ONE WAY	
		55								55				614	13350	55	EACH	OBJECT MARKER, ONE WAY	
		20								20				614	18601	20	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
	0.24									0.24				614	20010	0.24	MILE	WORK ZONE LANE LINE, CLASS I, 6", (WHITE)	
			0.6							0.6				614	22000	0.6	MILE	WORK ZONE EDGE LINE, CLASS I, 4", (WHITE)	
			0.9							0.9				614	22000	0.9	MILE	WORK ZONE EDGE LINE, CLASS I, 4", (YELLOW)	
			1,409							1,409				614	23000	1,409	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", (WHITE)	
			3,350							3,350				614	24000	3,350	FT	WORK ZONE DOTTED LINE, CLASS I, (WHITE)	
			3							3				614	30000	3	EACH	WORK ZONE ARROW, CLASS I	
	LS									LS				615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	9
			755							755				615	20000	755	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
4	14									18				616	10000	18	MGAL	WATER	
			2,998							2,998				622	41100	2,998	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
LS										LS				614	11000	LS		MAINTAINING TRAFFIC	
										LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS				624	10000	LS		MOBILIZATION	

CALCULATED AKB
CHECKED MWZ

GENERAL SUMMARY

WAR-48-11.54
PART 1

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	204 EXCAVATION OF SUBGRADE, 12"	204 GRANULAR MATERIAL, TYPE C, 12"	204 GEOTEXTILE FABRIC		254 PAVEMENT PLANING, ASPHALT CONCRETE, 3"		301 ASPHALT CONCRETE BASE, PG64-22, 9"		304 AGGREGATE BASE, 6"		407 NON-TRACKING TACK COAT		441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, 1.25"	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), 1.75"	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (VARIABLE)		452 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP
					FT	FT	SQ YD	SQ YD	SY	CY	CY	SY		SY		CY		CY		GAL		CY	CY	CY		SY
TR-77 - OVERLAY & WIDENING																										
42+15.00	TO	46+45.64	1	LT	430.64																					
		RESURFACING				9.74	466.00							466.00						55.92		16.18	22.65			
		FULL DEPTH				3.22	153.89		153.89									25.65		18.47		5.34	7.48			153.89
		+ AGG COURSE			322.83	1.00	35.87		35.87									5.98								
		SUP FULL DEPTH			310.00	10.00	344.44		344.44									57.41		41.33		11.96	16.74			
		+ AGG COURSE				1.00	34.44		34.44									5.74								
ADD INTERSECTION RAMP A				LT																						
		RESURFACING						203.81						203.81						36.69		7.08	9.91	16.98		
		FULL DEPTH						47.37	47.37									7.89		8.53		1.64	2.30	3.95		47.37
		+ AGG COURSE						10.32	10.32									1.72								
42+15.00	TO	46+45.64	1	RT	430.64																					
		RESURFACING				11.90	569.28							569.28						68.31		19.77	27.67			
		FULL DEPTH				3.32	158.84		158.84									26.47		19.06		5.52	7.72			158.84
		+ BASE COURSE			208.50	0.33	7.72		7.72									1.29								7.72
		+ AGG COURSE				0.50	11.58		11.58									1.93								
ADD INTERSECTION CORNETT RD.				RT																						
		RESURFACING						53.08						53.08						6.37		1.84	2.58			
		FULL DEPTH						12.71	12.71									2.12		1.53		0.44	0.62			12.71
		+ BASE COURSE						1.30	1.30									0.22								1.30
		+ AGG COURSE						1.94	1.94									0.32								
ADD INTERSECTION RAMP C				RT																						
		RESURFACING						81.63						81.63						14.69		2.83	3.97	6.80		
		FULL DEPTH						19.08	19.08									3.18		3.43		0.66	0.93	1.59		19.08
		+ BASE COURSE						1.37	1.37									0.23								1.37
		+ AGG COURSE						2.11	2.11									0.35								
TR-77-FULL DEPTH RECONSTRUCTION																										
46+45.64	TO	48+35.57	2	LT	189.93																					
		FULL DEPTH				12.79	269.97		269.97	89.99	89.99	269.97						44.99		32.40		9.37	13.12			269.97
		+ AGG COURSE			153.70	1.00	17.08		17.08	5.69	5.69	17.08						2.85								
		+ EXCAVATION & FILL				0.50	8.52		8.52	2.84	2.84	34.14														
		SUP FULL DEPTH			184.09	10.00	204.54		204.54									34.09		24.55		7.10	9.94			
		+ AGG COURSE				1.00	20.45		20.45									3.41								
ADD INTERSECTION RAMP A				LT																						
		FULL DEPTH						19.20	19.20	6.40	6.40	19.20						3.20		3.46		0.67	0.93	1.60		19.20
		+ AGG COURSE						4.31	4.31	1.44	1.44	4.31						0.72								
		+ EXCAVATION & FILL						2.11	2.11	0.70	0.70	8.38														
46+45.64	TO	48+35.57	2	RT	189.93																					
		FULL DEPTH				15.28	322.38		322.38	107.46	107.46	322.38						53.73		38.69		11.19	15.67			322.38
		+ BASE COURSE			140.60	0.33	5.21		5.21	1.74	1.74	5.21						0.87								5.21
		+ AGG COURSE			151.20	0.54	9.01		9.01	3.00	3.00	9.01						1.50								
		+ EXCAVATION & FILL				0.50	8.40		8.40	2.80	2.80	33.60														
ADD INTERSECTION RAMP C				RT																						
		FULL DEPTH						39.64	39.64	13.21	13.21	39.64						6.61		4.76		1.38	1.93			39.64
		+ BASE COURSE						1.38	1.38	0.46	0.46	1.38						0.23								1.38
		+ AGG COURSE						2.06	2.06	0.69	0.69	2.06						0.34								
		+ EXCAVATION & FILL						2.06	2.06	0.69	0.69	8.09														
								SUBTOTALS	1780	238	238	775		1374				294		379		103	145	31		1063
								TOTALS CARRIED TO GENERAL SUMMARY	1780	238	238	775		1374				294		379		103	176			1063

CALCULATED AKB
CHECKED MWZ

PAVEMENT SUBSUMMARY

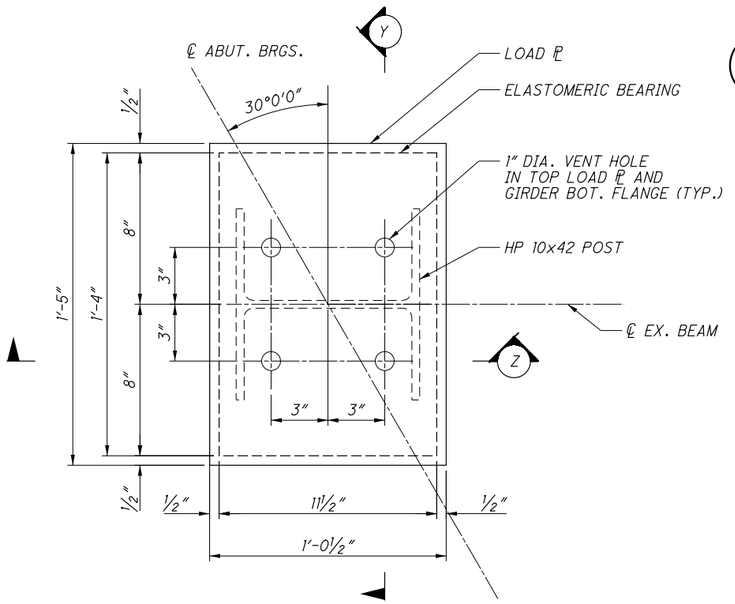
WAR-48-11.54
PART 1

STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	204 SUBGRADE COMPACTION	204 EXCAVATION OF SUBGRADE, 12"	204 GRANULAR MATERIAL, TYPE C, 12"	204 GEOTEXTILE FABRIC		254 PAVEMENT PLANING, ASPHALT CONCRETE, 3"		301 ASPHALT CONCRETE BASE, PG64-22, 9"		304 AGGREGATE BASE, 6"		407 NON-TRACKING TACK COAT		441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, 1.25"	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), 1.75"	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (VARIABLE)		452 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP
					FT	FT	SQ YD	SQ YD	SY	CY	CY	SY		SY		CY		CY		GAL		CY	CY	CY		SY
TR-77-FULL DEPTH RECONSTRUCTION																										
ADD TRANSITION TO APP. SLAB																										
48+35.57	TO	48+60.57	2	LT & RT	25.00																					
		FULL DEPTH				27.93	77.58		77.58	25.86	25.86	77.58				19.40		12.93		9.31		2.69	3.77			
		+ AGG COURSE				2.00	5.57		5.57	1.86	1.86	5.57						0.93								
		+EXCAVATION & FILL				1.00	2.76		2.76	0.92	0.92	6.93														
TR-77 - APPROACH SLAB																										
48+60.57	TO	48+85.57	3	LT & RT	25.00																					
		+AGG COURSE				46.33	128.70		128.70									21.45								
51+21.77	TO	51+46.77	3	LT & RT	25.00																					
		+AGG COURSE				46.33	128.70		128.70									21.45								
TR-77-FULL DEPTH RECONSTRUCTION																										
ADD TRANSITION TO APP. SLAB																										
51+46.77	TO	51+71.77	2	LT & RT	25.00																					
		FULL DEPTH				28.64	79.54		79.54	26.51	26.51	79.54				19.89		13.26		9.55		2.76	3.87			
		+ BASE COURSE			23.33	0.33	0.86		0.86	0.29	0.29	0.86				0.21		0.14								
		+ AGG COURSE			24.06	1.50	4.01		4.01	1.34	1.34	4.01						0.67								
		+EXCAVATION & FILL				1.00	2.69		2.69	0.90	0.90	6.85														
51+71.77	TO	53+07.76	4	LT	135.99																					
		FULL DEPTH				18.34	277.11		277.11	92.37	92.37	277.11						46.19		33.25		9.62	13.47			277.11
		+AGG COURSE			131.60	1.00	14.62		14.62	4.87	4.87	14.62						2.44								
		+ EXCAVATION & FILL				0.50	7.31		7.31	2.44	2.44	29.24						1.22								
		SUP FULL DEPTH			155.89	10.00	173.21		173.21									28.87		20.79		6.01	8.42			
		+ AGG COURSE				1.00	17.32		17.32									2.89								
51+71.77	TO	53+07.76	4	RT	135.99																					
		FULL DEPTH				17.90	270.49		270.49	90.16	90.16	270.49						45.08		32.46		9.39	13.15			270.49
		+ BASE COURSE			140.10	0.33	5.19		5.19	1.73	1.73	5.19						0.86								5.19
		+ AGG COURSE				0.50	7.78		7.78	2.59	2.59	7.78						1.30								
		+ EXCAVATION & FILL				0.50	7.78		7.78	2.59	2.59	31.13														
TR-77 - OVERLAY & WIDENING																										
53+07.76	TO	53+74.00	5	LT & RT	66.24																					
		RESURFACING						344.94						344.94						41.39		11.98	16.77			
		FULL DEPTH						25.19	25.19									4.20		3.02		0.87	1.22			25.19
		+ BASE COURSE						1.28	1.28									0.21								1.28
		+ AGG COURSE						3.20	3.20									0.53								
		SUP FULL DEPTH						118.86	118.86									19.81		14.26		4.13	5.78			
		+ AGG COURSE						9.74	9.74									1.62								
SR-48 - FULL DEPTH WIDENING																										
549+13.92	TO	552+43.00	6	RT	329.08																					
		FULL DEPTH						317.74	317.74									52.96		38.13		11.03	15.45			317.74
		+ BASE COURSE						11.78	11.78									1.96								11.78
		+ AGG COURSE						17.62	17.62									2.94								
549+03.03	TO	551+41.30	6	LT	238.27																					
		FULL DEPTH						339.30	339.30									56.55		40.72		11.78	16.49			339.30
		+ BASE COURSE						11.81	11.81									1.97								11.81
		+ AGG COURSE						17.67	17.67									2.94								
								SUBTOTALS	2086	255	255	817		345		40		346		243		71	99			1262
								TOTALS CARRIED TO GENERAL SUMMARY	2086	255	255	817		345		40		346		243		71	99			1262

CALCULATED AKB
CHECKED MWZ

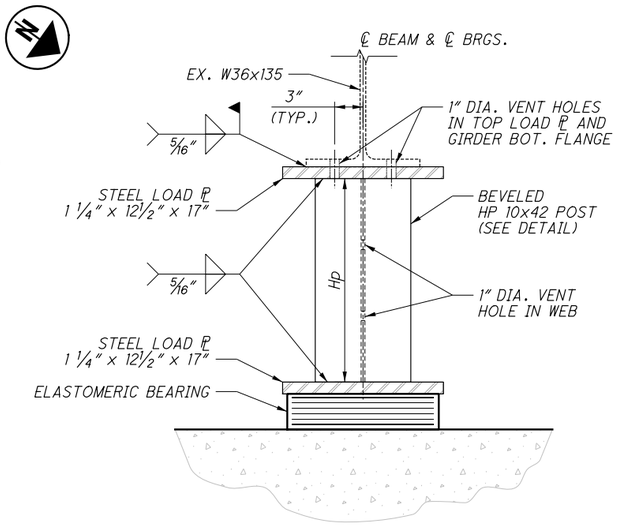
PAVEMENT SUBSUMMARY

WAR-48-11.54
PART 1

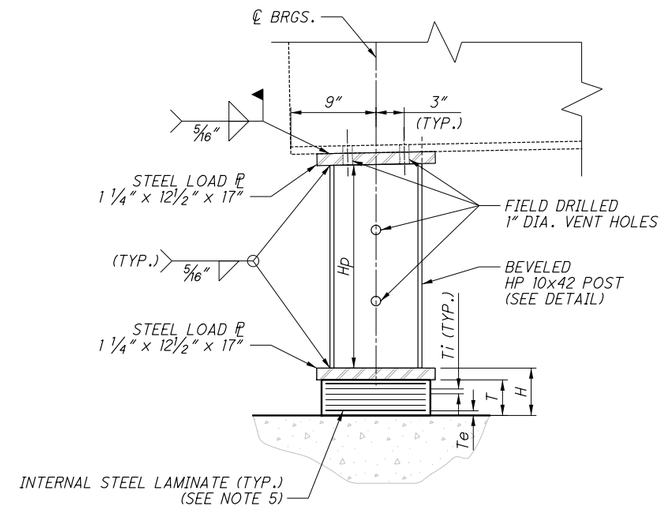


BEARING PLAN

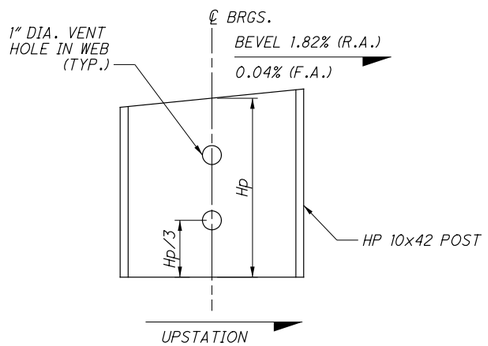
(ALL PLATES CENTERED ABOUT INTERSECTION OF ℄ BRG. & ℄ BEAM)



SECTION Y



SECTION Z



HP POST DETAIL

BEARING DATA																
SUBSTRUCTURE UNIT	BEAM	BEARING TYPE	BEARING DIMENSIONS								HP POST BEVEL	HEIGHT	SERVICE REACTIONS (KIPS)				DESIGN ROTATION (RAD)
			L	W	Ti	Te	Ni	Ne	T	H		Hp	DL	LLmax	LLmin	TOTAL	
REAR ABUTMENT	INTERIOR	EXP.	11 1/2"	1' - 4"	1/2"	5/16"	5	1	3 3/4"	5"	1.82%	1' - 11"±	85.39	46.72	-6.47	132.11	-0.022914
	EXTERIOR	EXP.	11 1/2"	1' - 4"	1/2"	5/16"	5	1	3 3/4"	5"	1.82%	1' - 11"±	66.50	48.58	-8.74	115.08	-0.022893
FORWARD ABUTMENT	INTERIOR	EXP.	11 1/2"	1' - 4"	1/2"	5/16"	5	1	3 3/4"	5"	0.04%	1' - 11"±	90.47	47.82	-5.55	138.29	0.008075
	EXTERIOR	EXP.	11 1/2"	1' - 4"	1/2"	5/16"	5	1	3 3/4"	5"	0.04%	1' - 11"±	70.11	50.42	-7.47	120.53	0.008524

LEGEND:

Ti = INTERIOR LAYER THICKNESS
Te = EXTERIOR LAYER THICKNESS
Ni = NUMBER OF INTERIOR LAYERS
Ne = NUMBER OF EXTERIOR LAYERS
DL = DEAD LOAD
LL = LIVE LOAD (WITHOUT IMPACT)

NOTES:

1. THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

2. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEAM, SUBSTRUCTURE LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

3. STEEL PLATES SHALL BE ASTM A709 GRADE 50 STRUCTURAL STEEL AND SHALL BE CLEANED AND COATED. SURFACE PREPARATION AND PRIMING SHALL BE PERFORMED IN THE SHOP. THE STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMERIC BEARING DURING THE MOLDING PROCESS.

4. THE BEARINGS, STEEL PLATES, POSTS, AND MISCELLANEOUS COMPONENTS SHALL BE PAID FOR UNDER ITEM 516 - ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

5. INTERNAL STEEL LAMINATE THICKNESS = 0.0747 INCHES (14 GAUGE).

6. CONTRACTOR'S ATTENTION IS DRAWN TO HEAT CONTROL REQUIREMENTS OF C&MS 516.07.

7. THE CONTRACTOR IS REQUIRED TO FIELD MEASURE THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS, AT ℄ BEARING, PRIOR TO DECK REMOVAL AND JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE FIELD MEASURED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS TO BE INCREASED BY THE AMOUNT THE BRIDGE IS TO BE RAISED OF 1.60 FT. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER. FOR BIDDING PURPOSES, THE HP SECTION HEIGHTS ARE ANTICIPATED TO VARY BETWEEN 23 INCHES AND 28 INCHES. USE AN HP SECTION HEIGHT OF 28 INCHES FOR BIDDING PURPOSES.

DESIGN AGENCY
ONE EASTON OVAL
SUITE 400
COLUMBUS, OH 43219
T 614-476-6000
F 614-476-6225
WOLPERT
DESIGN | GEOTECHNICAL | INFRASTRUCTURE

DESIGNED	DRAWN	REVIEWED	DATE
JYM	JYM	MAA	6/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		8301174	

ABUTMENT BEARING DETAILS
BRIDGE NO. WAR-48-1154
E. TURTLE CREEK-UNION RD. (TR-77) OVER SR-48

WAR-48-11.54
PART 1
PID No. 100816