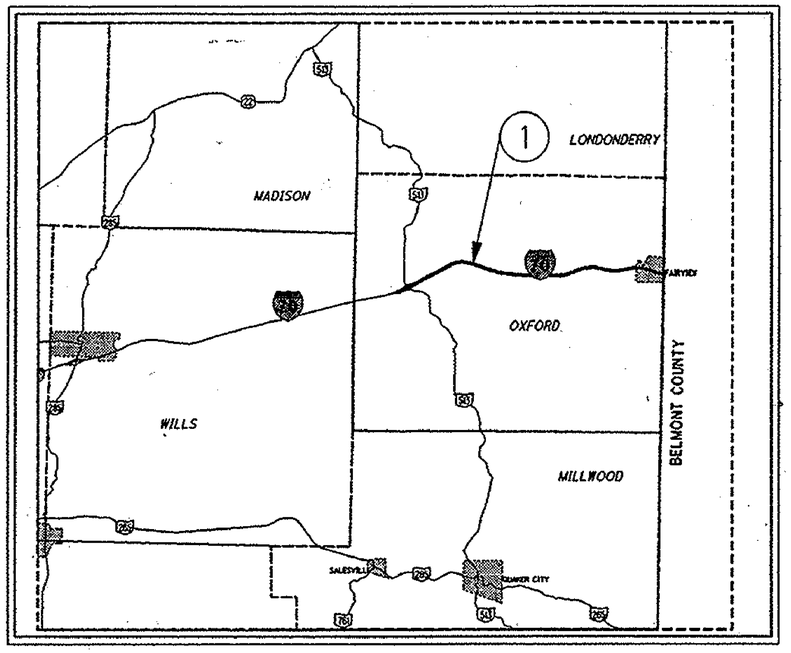

LOCATION MAP

LON/LAT: 81° 16' 57" / 40° 03' 20"

PORTION TO BE IMPROVED

DESIGN DESIGNATION	GUE-70 E.B. 22.80-28.50
Functional Classification	INTERSTATE
Opening Year ADT (2013)	26000
Design Year ADT (2025)	34000
Design Hourly Volume (2025)	3400
Directional Distribution	53%
Trucks (24 Hour B&C)	40%
Design Speed	75mph
Legal Speed	65mph

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 TRANSPORTAION
DISTRICT 5 PRODUCTION OFFICE

ENGINEER'S SEAL

STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Douglas N Morgan
DATE: 11-28-2012

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GUE-70-22.80

VILLAGE OF FAIRVIEW
OXFORD TOWNSHIP
GUERNSEY COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION:

4 LANE DIVIDED ASPHALT CONCRETE RESURFACING, AND RELATED WORK, ON IR 70 IN GUERNSEY 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	VILLAGE
1	GUE	I.R. 70	22.80	28.50	5.70	FAIRVIEW

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

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.

APPROVED _____
DATE 11/29/12 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 12-11-12 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-2.1	7-18-08	MT-98.22	7-20-12	800	1-18-13
BP-2.5	7-18-08	MT-98.28	7-20-12	832	5-5-09
BP-3.1	4-20-12	MT-98.29	7-20-12		
BP-9.1	4-15-05	MT-99.20	7-20-12		
		MT-101.90	10-19-12		
		MT-105.10	7-20-12		
MT-95.30	7-20-12				
MT-97.10	7-20-12	TC-65.10	4-20-12	SPECIAL PROVISIONS	
MT-97.12	7-20-12	TC-65.11	4-20-12		
MT-98.10	7-20-12	TC-71.10	10-19-12		
MT-98.11	7-20-12	TC-72.20	7-20-12		
MT-98.20	7-20-12	TC-73.10	4-20-12		

FEDERAL PROJECT NO. E100(064)
PID NO. 87595
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
GUE-70-22.80
1/19

GUE - IR-70-22.80
130124 PID - 87595
Dist 5 3/7/2013

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

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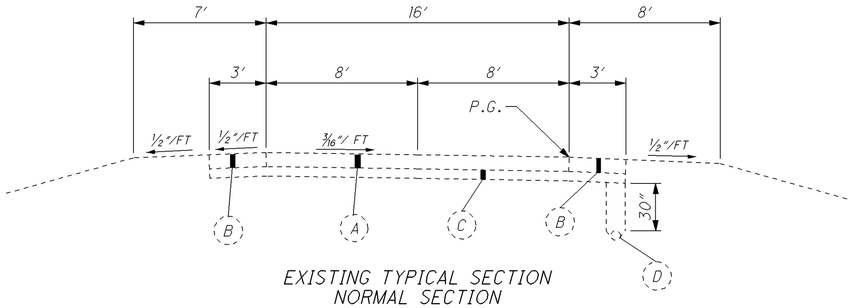
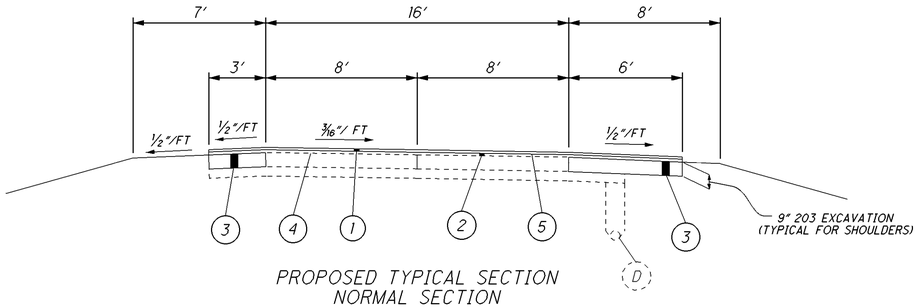


EXISTING TYPICAL SECTION
NORMAL SECTION

RAMP A - 5+51.28 TO 10+43.86
RAMP B - 11+28.15 TO 17+70.00
RAMP C - 11+17.87 TO 20+77.09
RAMP D - 4+34.00 TO 6+49.18
12+00.00 TO 15+00.00

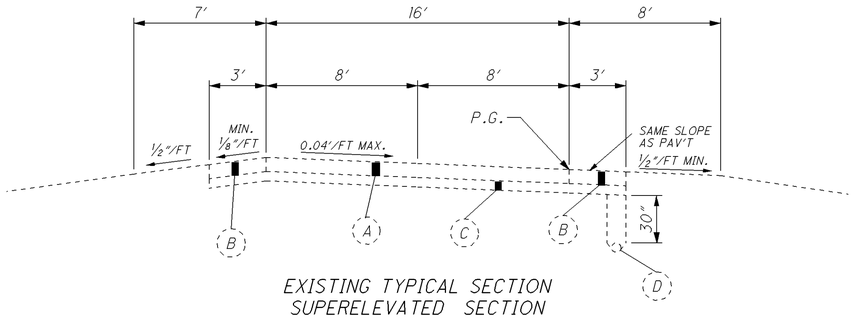


PROPOSED TYPICAL SECTION
NORMAL SECTION

RAMP A - Sta 5+51.28 TO 10+43.86
RAMP B - Sta 11+28.15 TO 17+70.00
RAMP C - Sta 11+17.87 TO 20+77.09
RAMP D - Sta 4+34.00 TO 6+49.18
Sta 12+00.00 TO 15+00.00

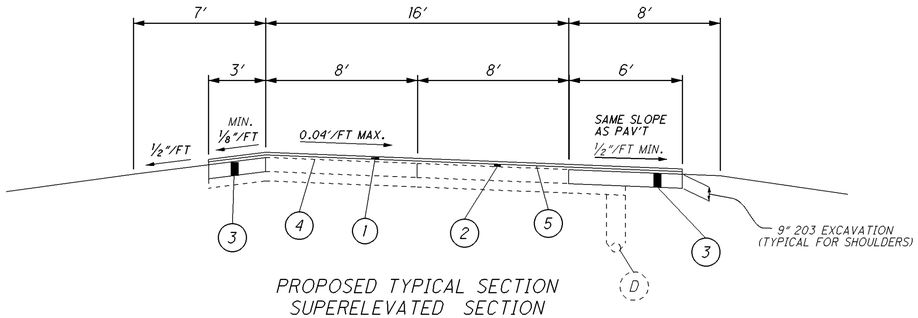
RAMP WIDTHS VARY THROUGHOUT
APRON AREAS:

RAMP A - Sta 4+43.54 TO 5+51.28 (25.73′ AVG.)
RAMP B - Sta 17+70.00 to 18+38.50 (34.18′ AVG.)
RAMP C - Sta 23+05.73 to 23+76.05 (34.66′ AVG.)
RAMP D - Sta 3+01.45 to 4+34.00 (29.05′ AVG.)



EXISTING TYPICAL SECTION
SUPERELEVATED SECTION

RAMP A - 10+43.86 TO 18+00.00
RAMP B - 9+46.00 TO 11+28.15
RAMP C - 10+94.00 TO 11+17.87
20+77.09 TO 23+05.73
RAMP D - 6+49.18 TO 12+00.00



PROPOSED TYPICAL SECTION
SUPERELEVATED SECTION

RAMP A - Sta 10+43.86 TO 18+00.00 (3′ SHOULDER LEFT ENDS AT STA 13+75)
RAMP B - Sta 9+46.00 TO 11+28.15
RAMP C - Sta 10+94.00 TO 11+17.87
Sta 20+77.09 TO 23+05.73
RAMP D - Sta 6+49.18 TO 15+00.00 (3′ SHOULDER LEFT ENDS AT STA 12+00)

(A) 9" REINFORCED CONCRETE PAVEMENT
(B) BITUMINOUS SURFACE MATERIAL
(C) 6" SUBBASE
(D) 6" PIPE UNDERDRAIN

(1) 1.5" 442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
(2) 1.75" 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
(3) 9" 301 ASPHALT CONCRETE BASE, PG64-22
(4) 407 TACK COAT, 702.13 @ 0.75 GAL/S.Y.
(5) 407 TACK COAT FOR INTERMEDIATE COURSE

CALCULATED LME
CHECKED DNM

EXISTING/PROPOSED S.R. 513 RAMP TYPICALS

GUE-70-22.80

2
19

P:\GUE\87595\Design\Roadway\Plan_Sheets\General\G070_TPS_001.dgn 29-NOV-2012 8:12AM dmorgan

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.

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 CONTRUCTION ENGINEER
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

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.

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.

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.

AREAS WITH GUARDRAIL SHALL NOT BE EXCLUDED FROM LINEAR GRADING.

ALL LINEAR GRADING WORK SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSES AND TO REPAIR EXISTING AGGREGATE SHOULDERS AS DIRECTED BY THE ENGINEER.

ITEM 209 LINEAR GRADING - 22 MILE

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE

DEPTH OF PLANING SHALL BE 1.75" FULL WIDTH OF PAVEMENT FOR MAINLINE, INCLUDING PAVED SHOULDERS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

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

ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS FS, AS PER PLAN

A QUANTITY OF ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN, HAS BEEN PROVIDED IN THE PLANS TO BE USED "AS DIRECTED BY THE ENGINEER" TO REPAIR THE EXISTING RIGID PAVEMENT ON RAMPS A, B, C & D.

PRIOR TO PLACING THE ASHPALT CONCRETE INTERMEDIATE COURSE ON RAMPS A, B, C & D, THE ENGINEER WILL LOCATE AREAS OF CONCRETE THAT SHALL BE REMOVED AND REPLACED.

THIS ITEM SHALL INCLUDE THE COST TO SAW CUT THE EXISTING RIGID PAVEMENT FULL DEPTH AT THE LIMITS OF THE AREA DESIGNATED BY THE ENGINEER USING A DIAMOND SAW BLADE.

ALL MATERIALS, LABOR, EQUIPMENT, FULL DEPTH PAVEMENT SAWING, TRAFFIC CONTROL AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN.

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 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 690 – SPECIAL- MISC.: REMOVAL AND STORAGE OF ROADWAY SENSOR
ITEM 690 – SPECIAL-MISC.: INSTALLATION OF ROADWAY WEATHER INFORMATION SENSOR

THE CONTRACTOR WILL CONTACT THE SENSOR MANUFACTURER'S REPRESENTATIVE, WHO WILL BE PRESENT WHILE THE SENSORS ARE BEING REMVOED AND RE-INSTALLED.

SENSOR MANUFACTURER'S REPRESENTATIVE
M.H. CORBIN, INC.
9042 HERITAGE DRIVE
PLAIN CITY, OH 43064
PHONE: (614)-873-5216

THE EXISTING SENSORS SHALL BE REMOVED PRIOR TO THE PLANING OF THE PAVEMENT. THE FOUR (4) SENSORS ARE LOCATED ON I.R. 70, ONE (1) SENSOR IN EACH LANE, AT THE FOLLOWING APPROXIMATE SLM'S:
I.R. 70 WB SLM 27.95 (NEAR MILE MARKER 198) – 2 SENSORS
I.R. 70 EB SLM 27.95 (NEAR MILE MARKER 198) – 2 SENSORS

THE REMOVAL AND STORAGE OF THE SENSORS WILL BE PAID FOR UNDER ITEM 690 SPECIAL- MISC.: REMOVAL AND STORAGE OF ROADWAY SENSOR, EACH. THE RE-INSTALLATION OF THE FOUR SENSORS WILL OCCUR AFTER THE COMPLETION OF THE PROJECT AND WILL BE PAID FOR UNDER ITEM 690 SPECIAL-MISC.: INSTALLATION OF RWIS SENSOR, EACH.

THE ABOVE SLM'S ARE NOT EXACT LOCATIONS FOR THE RE-INSTALLATION, BUT SHOULD BE ADJUSTED TO AVOID PLACING THE SENSORS DIRECTLY BENEATH HIGH POWER ELECTRICAL LINES, TO PROVIDE INSTALLATION IN SOUND PAVEMENT, AND TO MAINTAIN LINE OF SIGHT COMMUNICATION FROM THE SENSOR TO THE EQUIPMENT ENCLOSURE CABINET LOCATED ON THE WEST BOUND SIDE OF I.R. 70

THE CANISTERS WILL BE INSTALLED USING THE PROPER CANISTER INSTALLATION TOOLS AND INSTALLED PER THE DETAILS ON SHEETS 8-11.

THE SENSORS SHALL BE RE-INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS USING EPOXY AS RECOMMENDED BY THE SENSOR MANUFACTURER. THE PAVEMENT TEMPERATURE SHALL NOT BE LESS THAN FOURTY (40) DEGREEES FAHRENHEIT DURING SEALING AND THE CONTRACTOR SHALL ENSURE THAT COMPLETE CURING OF THE SEALANT TAKES PLACE PRIOR TO OPENING THE LANE TO TRAFFIC.

THE ODOT DISTRICT 5 CONSTRUCTION ENGINEER (KEITH GEIGER, 740-323-5241) SHALL BE NOTIFIED WHEN THE SENSORS ARE REMOVED FROM THE PAVEMENT AND WHEN THE RE-INSTALLATION IS COMPLETE. THE DISTRICT WILL MONITOR THE SENSORS PERFORMANCE FOR A MINIMUM OF FIVE WORKING DAYS TO VERIFY PROPER OPERATION. IF THE SENSORS DO NOT PERFORM PROPERLY WITHIN THIS TEST PERIOD, THE CONTRACTOR SHALL VERIFY THAT THE INSTALLATION IS CORRECT. IF A SENSOR FAILS AFTER IT IS REMOVED FROM THE PAVEMENT, THE CONTRACTOR SHALL REPLACE THE FAILED SENSOR UNIT WITH A NEW GROUNDHOG WIRELESS PAVEMENT/TRAFFIC SENSOR, MODEL G10.

A CONTINGENCY QUANTITY OF 1 EACH ITEM 690 SPECIAL – MISC.: ROAD WEATHER INFORMATION SYSTEM (RWIS) SENSOR IS INCLUDED IN THE GENERAL SUMMARY TO BE USED IF A SENSOR FAILS PRIOR TO REMOVAL. THE NEW SENSOR SHALL BE A GROUNDHOG WIRELESS PAVEMENT/TRAFFIC SENSOR, MODEL G10.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT EXISTING MARKING LOCATIONS (i.e. BY USE OF VIDEO, PICTURES) AND PLACE NEW PAVEMENT MARKINGS AS NEAR AS POSSIBLE TO THE EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS.

CALCULATED LME CHECKED DNM

GENERAL NOTES

GUE-70-22.80

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

THIS ITEM SHALL BE USED TO REINFORCE TRANSVERSE JOINT CRACKS. PLACE REINFORCING MESH ON PLANED SURFACE, 5.0' WIDE FROM EDGE LINE TO EDGE LINE (24' LENGTH) CENTERED OVER TRANSVERSE JOINT CRACK. THE ENTIRE ROADWAY SHALL BE OVERLAYED WITH 3.25" ASPHALT CONCRETE AFTER PLACING OF THE REINFORCING MESH. THIS WORK SHALL BE PERFORMED ON ALL JOINTS THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER SHALL SELECT TRANSVERSE JOINT CRACKS UNTIL ALL OF THE MATERIAL SHOWN BELOW HAS BEEN UTILIZED. REINFORCING MATERIAL SHALL BE GLASGRID CG100 OR EQUIVALENT AND SHALL BE PLACED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND THIS NOTE.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, TRAFFIC CONTROL AND INCIDENTALS NEEDED TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM SPECIAL – REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS.

4 LANE - SLM 22.80 TO SLM 28.50 = 30,096' / 60' SPACING = 502 JOINTS
502 JOINTS X 48' X 5' WIDE / 9 = 13,387 SQ.YD.

ITEM 690 SPECIAL – REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS
LOCATION 1 – 13,387 SQ.YD.

ITEM 614 MAINTAINING TRAFFIC

TWO LANES OF TRAFFIC IN EACH DIRECTION WILL BE MAINTAINED ON I.R. 70 AT ALL TIMES, EXCEPT AS NOTED BELOW:

LANE CLOSURES FOR THE PURPOSE OF PLACING DRUMS IN ORDER FOR THE CONTRACTOR TO COMPLETE THE WORK AS DESCRIBED IN THE PLANS WILL BE PERMITTED AS FOLLOWS:

LANE CLOSURES WILL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S WEB SITE, "PERMITTED LANE CLOSURE TIMES" SECTION, LOCATED AT THE ADDRESS SHOWN BELOW:

http://plcm.dot.state.oh.us/

THE PERMITTED CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE WILL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

THE WORK ZONE CLOSURES SHALL BE NO LONGER THAN 2 MILES OR AS DIRECTED BY THE ENGINEER IN CONSIDERATION OF THE TRAFFIC FLOW.

WHEN NECESSARY, LANE CLOSURES WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE STANDARD DRAWINGS.

IT IS THE INTENT TO RESTRICT LANE CLOSURES TO THE MINIMUM AMOUNT OF TIME NECESSARY TO PERFORM THE WORK AS DESCRIBED IN THE PLANS. THE CONTRACTOR WILL NOT COMMENCE ANY LANE CLOSURE BEFORE THE HOURS AS SPECIFIED OR COMMENCE ANY CLOSURE AT A TIME WHICH WILL NOT ALLOW COMPLETION OF THE WORK PRIOR TO THE HOURS SPECIFIED. SHOULD THE CONTRACTOR CLOSE THE LANES BEFORE THE ALLOWABLE TIME AND/OR FAIL TO RE-OPEN ALL LANES TO TRAFFIC BY THE ALLOWABLE TIME A DISINCENTIVE OF $50.00 PER MINUTE SHALL BE ASSESSED FOR EACH MINUTE OUTSIDE THE PERMITTED LANE CLOSURE.

THE CONTRACTOR WILL HAVE ON SITE AND IN WORKING AND OR SUITABLE CONDITION; ALL EQUIPMENT, TOOLS, LABORERS, LEO'S, TRAFFIC CONTROL DEVICES AND INCIDENTALS NECESSARY TO EFFICIENTLY PERFORM THE CLOSURE BEFORE INITIALIZING THE LANE CLOSURE.

ITEM 614 MAINTAINING TRAFFIC (CONTINUED)

THERE SHALL BE NO LANE CLOSURES ON HOLIDAYS OR HOLIDAY WEEKENDS. THE FOLLOWING ARE CONSIDERED HOLIDAYS:

MEMORIAL DAY, FOURTH OF JULY, LABOR DAY, THANKSGIVING, CHRISTMAS , NEW YEARS, EASTER.

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

DAY OF THE WEEK	TIMES ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 12:00N FRIDAY
FRIDAY	12:00N THURSDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $75 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

AREAS THAT ARE PLANED SHALL NOT BE OPENED TO TRAFFIC. ALL PLANED AREAS MUST BE INLAID WITH A PROPOSED COURSE OF ITEM 442 ASPHALT CONCRETE PRIOR TO BEING OPENED TO TRAFFIC.

OVERNIGHT CLOSURES MUST MEET SPECIFICATIONS AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. ROADWAY SHALL NOT BE OPENED TO TRAFFIC WITHOUT EITHER THE PERMANENT OR WORK ZONE MARKINGS IN PLACE.

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.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS TO PERFORM THIS WORK SHALL BE INCLUDED IN THE **LUMP SUM** BID FOR **ITEM 614, MAINTAINING TRAFFIC**.

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 WORK ZONE PAVEMENT MARKINGS

THE CONTRACTOR SHALL PLACE ALL WORK ZONE PAVEMENT MARKINGS IN ACCORDANCE WITH THE CURRENT CMS MANUAL AND STANDARD CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

WORK ZONE PAVEMENT MARKINGS HAVE NOT BEEN ITEMIZED IN THE PLAN AND SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 WORK ZONE MARKING SIGNS

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

W8-H12a (NO EDGE LINES) - 10 EACH

ITEM 614 WORK ZONE MARKING SIGN - LOCATION 1 – 10 EACH

IN ADDITION, THE CONTRACTOR SHALL ERECT A "GROOVED PAVEMENT" SIGN 250 FEET (75M) 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 ON EACH ENTRANCE RAMP AND 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.

ITEM 614 REPLACEMENT DRUM

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

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 50 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

CALCULATED LME CHECKED DNM

GENERAL NOTES

GUE-70-22.80

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. PAYMENT FOR GRINDING BUTT JOINTS SHALL BE INCLUDED WITH PAVEMENT PLANING.

MINIMUM 10' WEDGE LENGTH FOR ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC AT ALL BUTT JOINTS.

LOCATION	ROUTE	DESCRIPTION	S.L.M.	ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU. YD.
1	I.R. 70	BEGIN WORK	22.80	3.5
1	I.R. 70	BRIDGE: GUE-70-2529	25.29	3.5
1	I.R. 70	END WORK	28.50	3.5
1	**I.R. 70**	**TOTAL**		**10.5**

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, FOUR 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.

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.

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 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 4 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 LOCATION 1 - 480 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:

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

- 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.

- WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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 - 750 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 FOR ASSISTANCE.

CALCULATED LME CHECKED DNM

GENERAL NOTES

GUE-70-22.80

WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (55 SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE(S). THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK THAT CAUSES THE WARRANTING CONDITION(S) TO OCCUR. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING REMOVAL OF THE WARRANTING CONDITION(S), OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY REMOVAL OF WARRANTING CONDITION(S) SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE.

CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT THE TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED REDUCTION IN THE OPPOSITE DIRECTION. A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION, IN SUCH CASE, IS APPROPRIATE ONLY IF CONDITIONS ARE EXPECTED TO HAVE AN IMPACT ON THE DIRECTIONAL TRAFFIC FLOW, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF THE WARRANTING CONDITION, AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF A DIRECTIONAL ROADWAY OF DIVIDED HIGHWAYS. THE FIRST WORK ZONE SPEED LIMIT SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF THE LANE REDUCTION, SHIFT TAPER, OR OTHER ROADWAY OR SHOULDER RESTRICTION THAT WARRANTED THE WORK ZONE SPEED ZONE. ON UNDIVIDED HIGHWAYS THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, APPROXIMATELY 250 FEET IN ADVANCE OF SUCH RESTRICTIONS. THE SIGN SHALL BE REPEATED EVERY 1 MILE FOR 55 MPH ZONES AND EVERY ONE-HALF MILE FOR 50 MPH AND 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE.

THE SPEED LIMIT REDUCTION SHALL BE LIMITED TO ONLY THE PORTION OF THE PROJECT AND THE WORK THAT WARRANTED THE WORK ZONE SPEED LIMIT REDUCTION.

SPEED REDUCTION (SPEED ZONE AHEAD SYMBOL) SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 1250 FEET ON MULTI-LANE HIGHWAYS AND 500 FEET ON TWO-LANE HIGHWAYS.

A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD CONDITION, PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS, UNLESS MOUNTED ON A TEMPORARY SIGN SUPPORT PER SCD MT 105.10.

WORK ZONE SPEED LIMIT SIGN (CONTINUED)

WORK ZONE SPEED LIMIT AND RELATED SIGN SIZES, PLACEMENT, SUPPORTS, ETC. SHALL BE PER THE OMUTCD. WITH TWO EXCEPTIONS: 1) EXPRESSWAY SIZE SPEED LIMIT SIGNS MAY BE USED ON FREEWAYS AND EXPRESSWAYS, IF NECESSARY; 2) THE HEIGHT OF SIGNS MOUNTED ON PORTABLE SUPPORTS SHOULD BE THE HEIGHT REQUIRED FOR GROUND-MOUNTED SIGNS BUT SHALL NOT BE MORE THAN 1 FOOT LOWER THAN THE HEIGHT REQUIRED BY THE OMUTCD, OR AS DIRECTED BY THE ENGINEER. PORTABLE SUPPORTS SHOULD NOT BE USED FOR A DURATION OF MORE THAN 3 DAYS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND RE-ERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

*PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, SHALL BE INCLUDED IN THE **LUMP SUM** BID FOR **ITEM 614, MAINTAINING TRAFFIC**. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS. SPEED LIMIT SIGNING FOR THE POINT OF RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE PAID FOR AS WORK ZONE SPEED LIMIT SIGNS.*

THE FOLLOWING PROVIDES DETAILS ON WORK ZONE SPEED ZONES APPROVED FOR USE ON THIS PROJECT:

WZSZ REVISION NUMBER: WZ-30413

COUNTY-ROUTE: LIC-70

SLM FROM / TO: 22.80 TO 28.50

PHASE/PART & DIRECTION: ALL PHASES

APPROVED SPEED LIMIT (MPH): 55

SPECIFIC WARRANTING CONDITIONS AND FACTORS:
UNPROTECTED WORKERS WILL BE PRESENT FOR EXTENDED PERIODS (MORE THAN THREE HOURS) IN THE CLOSED LANE DURING PAVMEENT PLANING, PAVEMENT RESURFACING AND PAVEMENT MARKING OPERATIONS.

WORK ZONE SPEED ZONE TRACKING REPORT:
THE PROJECT ENGINEER OR DESIGNEE SHALL FILL OUT THIS REPORT WEEKLY AND SUBMIT IT TO THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM). THE FORM IS LOCATED IN ODOT'S TRAFFIC ENGINEERING MANUAL, SECTION 1296, FORMS INDEX, FORM 1296-18.

CALCULATED LME
CHECKED DNM

GENERAL NOTES

GUE-70-22.80

SEQUENCE OF OPERATIONS:

PHASE 1: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) FILL IN RUMBLE STRIPS ON OUTSIDE SHOULDER WITH ITEM 448 INTERMEDIATE COURSE TO ALLOW FOR MAINTAINING TRAFFIC ON SHOULDER.
(3) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 2: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) PERFORM PAVEMENT REPAIR
(3) PLANE INSIDE LANE AND SHOULDER, 1.75" DEEP AS DETAILED.
(4) PLACE JOINT/CRACK REINFORCING MATERIAL
(5) IMMEDIATELY PLACE 1.75" OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE FOR INSIDE LANE AND SHOULDER. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(6) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 3: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) PERFORM PAVEMENT REPAIR
(3) PLANE OUTSIDE LANE AND SHOULDER 1.75" DEEP AS DETAILED.
(4) PLACE JOINT/CRACK REINFORCING MATERIAL
(5) IMMEDIATELY PLACE 1.75" OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE FOR OUTSIDE LANE AND SHOULDER, RAMP AREAS WHERE APPLICABLE, COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(6) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 4: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON INSIDE LANE AND SHOULDER AS PER TYPICAL SECTION.
(3) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 5: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON OUTSIDE LANE, 10.0' WIDE PAVED SHOULDER AND RAMP AREAS, WHERE APPLICABLE, AS PER TYPICAL SECTION.
(3) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 6: BEGIN PROJECT TO END PROJECT

(1) INSTALL RUMBLE STRIPS, PLACE ALL PERMANENT PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS. OPEN ROADWAY TO UNRESTRICTED TRAFFIC.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC (SEE MAINTAINING TRAFFIC NOTE ON SHEET 3). IT MAY BE NECESSARY FOR THE CONTRACTOR TO ALTERNATE BETWEEN PHASES IN ORDER TO MEET WORK RESTRICTIONS FOUND IN ODOT'S "DROP-OFFS IN WORK ZONES" STANDARD DRAWING MT-101.90.

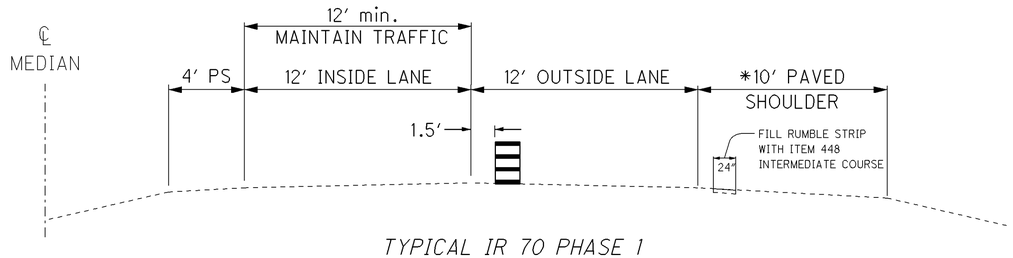
IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE ENGINEER.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

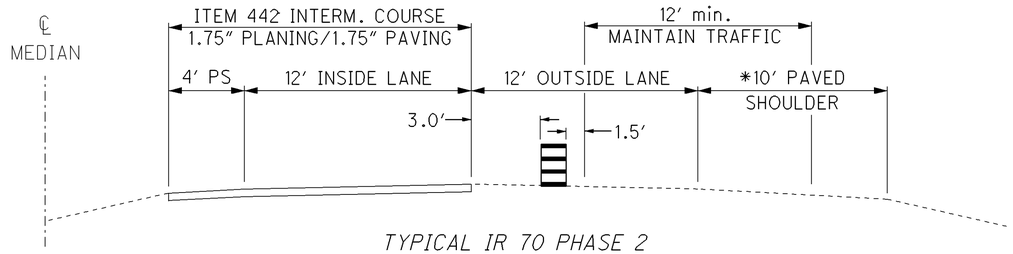
ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22

THIS ITEM SHALL BE USED TO FILL IN RUMBLE STRIPS FOR MAINTAINING TRAFFIC AS DESCRIBED IN PHASE 1 ABOVE. AVERAGE THICKNESS FOR CALCULATION PURPOSES IS 0.75". THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

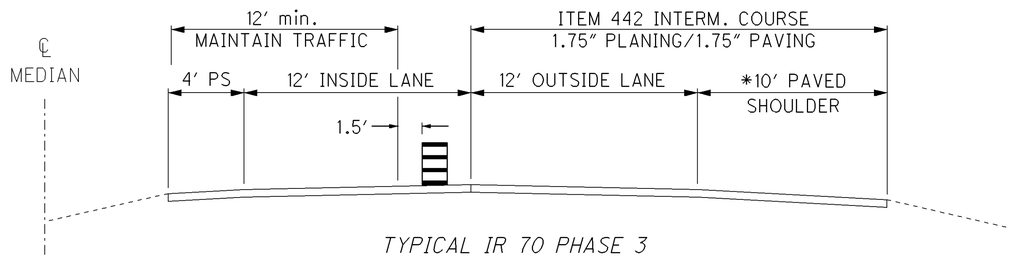
ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
LOCATION 1: (22.80 - 28.50) X 5280 = 30,096 FT - (2(30,096' X 2.0' X (0.75"/12)))/27 = 278.7 CU.YD.



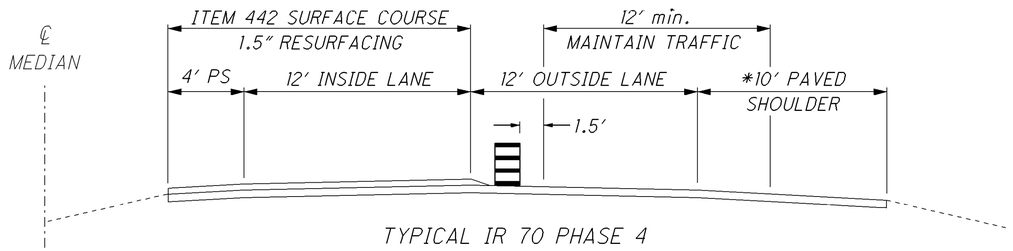
TYPICAL IR 70 PHASE 1



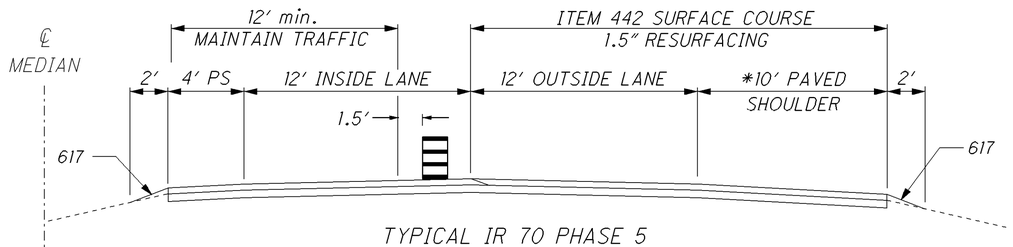
TYPICAL IR 70 PHASE 2



TYPICAL IR 70 PHASE 3



TYPICAL IR 70 PHASE 4



TYPICAL IR 70 PHASE 5

* SHOULDER WIDTH VARIES IN RAMP AREAS

CALCULATED LME
CHECKED DNM

GENERAL NOTES

GUE-70-22.80

7
19

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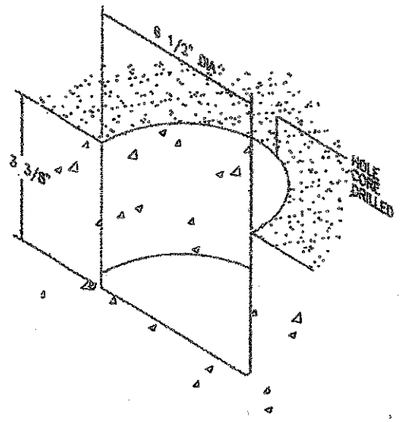
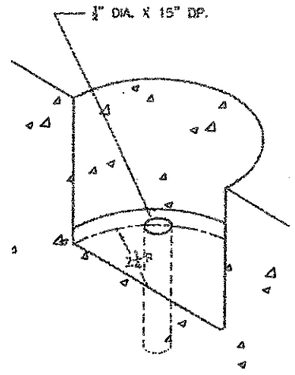
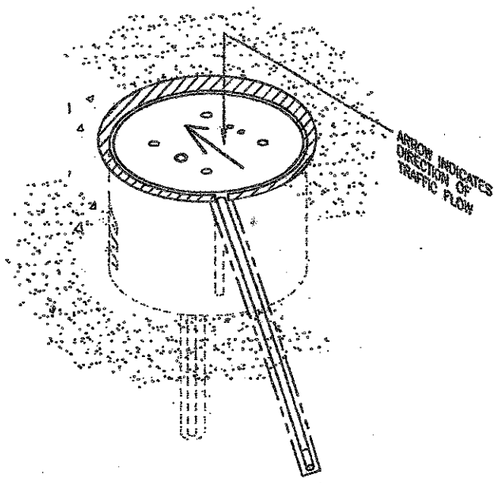


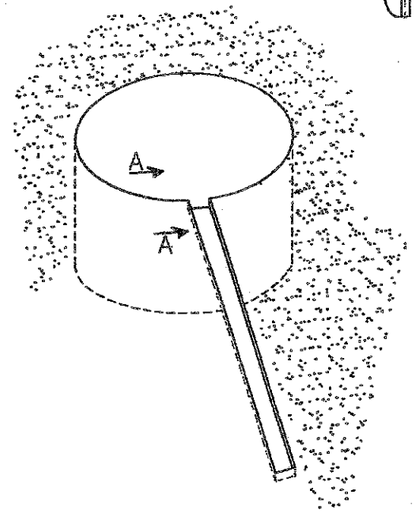
STEP 1. DRILL 6 1/2" DIA. HOLE TO A DEPTH OF 3 3/8"



STEP 2. POINT ARROW ON LID OF CANISTER IN DIRECTION OF TRAFFIC AND MARK WHERE THE PROBE HITS THE GROUND THEN DRILL 1/2" DIA. HOLE TO A DEPTH OF 15" ON RADIUS SHOWN.

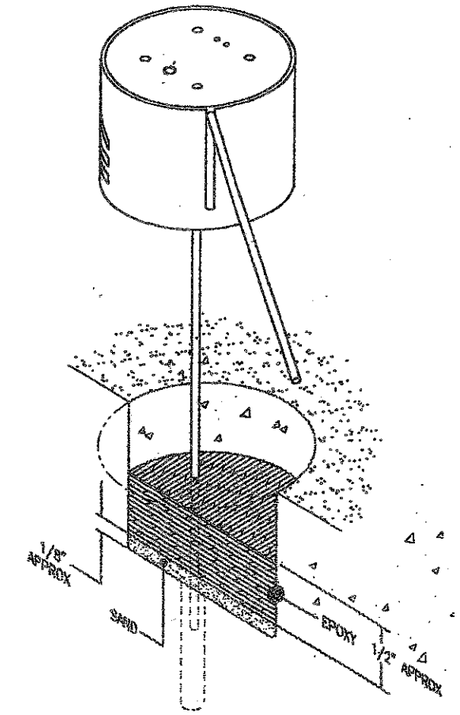


STEP 3. PLACE CANISTER IN HOLE, LABEL ON CANISTER OR ARROW ON LID SHOULD BE POINTING IN DIRECTION OF TRAFFIC FLOW. PLACE PROBE ON GROUND AND MARK OUTLINE FOR GROOVE.



STEP 4. REMOVE CANISTER FROM HOLE AND CUT OUT GROOVE FOR PROBE. (1/4" WIDE X 1" DP X 13" LG) CLEAN OUT HOLE AND GROOVE OF ALL DEBRIS. CLEAN AND DRY AREA AROUND HOLE USING SHOP-VAC OR EQ.

VIEW A-A



STEP 5. TAKE RUBBER ELECTRIC TAPE AND WRAP TWICE AROUND PROBE AT LOCATIONS SHOWN IN STEP 6 DWG. DOC222558 (2 OF 4). DO NOT USE BACKAROD.

STEP 6. HOLDING G10-ETP ASSEMBLY PLACE BOTTOM EXTERNAL TEMPERATURE PROBE INTO 1/2" HOLE. PLACE SAND IN BOTTOM OF HOLE TO LEVEL THE CANISTER. PLACE ENOUGH SAND IN THE BOTTOM OF THE HOLE SO THAT THE TOP OF THE CANISTER IS AT LEAST 1/16" (NO MORE THAN 1/8") BELOW THE ROAD SURFACE. (SEE FIG. 2)

STEP 7. FILL BOTTOM OF HOLE APPROXIMATELY 1/2" OF LORD EPOXY ENCAPSULATING COMPOUND 975-1154 A/B. MIX AT ROOM TEMPERATURE (70 DEG. +/- 5 DEG. F) ACCORDING TO "ENCAPSULATING EPOXY 20 OZ. MIXING INSTRUCTIONS". IT TAKES APPROXIMATELY 2 TUBES TO DO ONE G10-ETP.

REV	DESCRIPTION	DATE	APP'D.

"IT IS A VIOLATION OF THE PROFESSIONAL ENGINEER LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/ARCHITECT AS PROVIDED, THE ALTERED ENGINEER/ARCHITECT SHALL AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION."

DRAWN BY: AGL
ENGINEER: —
CHECKED BY: —
APP'D BY: —
SCALE: NTS

VAISALA

G10
VAISALA PERMANENT
TRAFFIC ANALYZER

DRAWING TITLE
G10 ETP
ROAD SENSOR INSTALLATION

CONTRACT NO. —
DRAWING NO. DOC222558 (1OF4)
SHEET 3 OF 5
DATE 10/29/2010
REVISION A

CALCULATED LME
CHECKED DWM

RWIS ROAD SENSOR DETAILS

GUE-70-22.80

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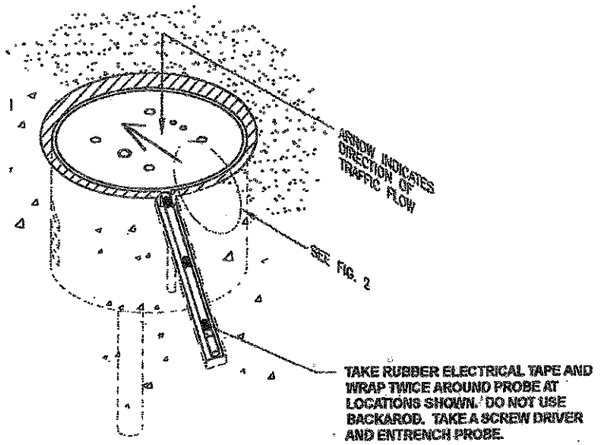
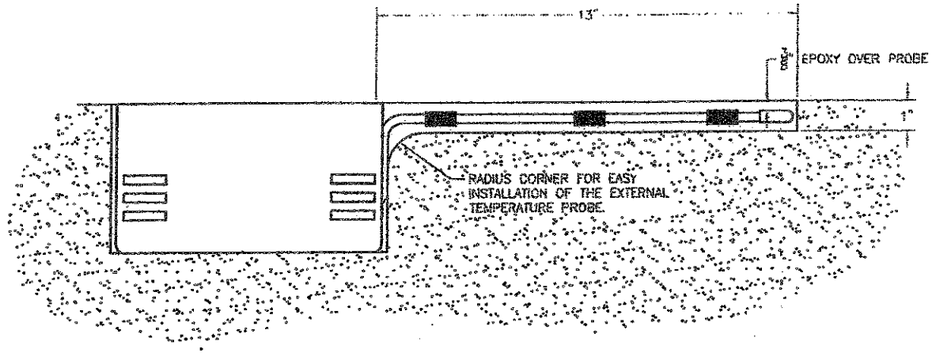


STEP 8. PLACE THE G10 ETP CANISTER (FIG. 1) IN THE EPOXY FILLED HOLE AND PROBE IN THESLOT WITH ARROW POINTED IN DIRECTION OF TRAFFIC FLOW AND AT DEPTH SHOWN (FIG. 2).



VIEW B-B

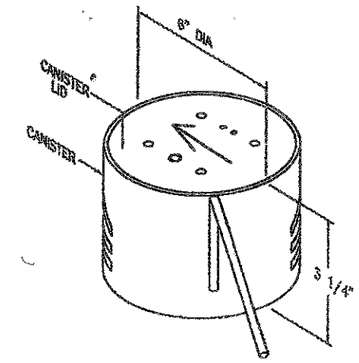
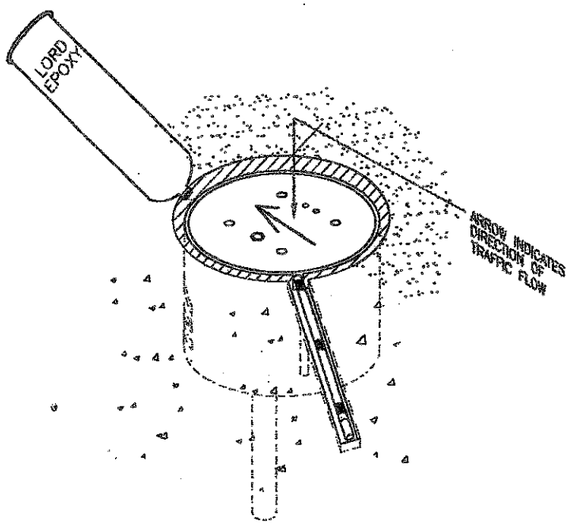


FIG. 1
GROUNDHOG G10 ETP



STEP 9. USING THE CANISTER INSTALLATION TOOL AS SHOWN IN STEP 10. TAKE THE LORD EPOXY ENCAPSULATING COMPOUND 975-1154 A/B ALREADY MIXED AT ROOM TEMPERATURE (70 DEGREES +/- 5 DEGREES F) ACCORDING TO "ENCAPSULATING EPOXY 28 OZ. MIXING INSTRUCTIONS". FILL AROUND THE CANISTER AND OVER THE PROBE, MAKING SURE THAT THE EPOXY FLOWS COMPLETELY AROUND THE CANISTER AND PROBE SO THAT THERE ARE NO AIR GAPS. THIS IS PARTICULARLY NECESSARY FOR THE AREA WHERE THE PROBE ENTERS THE CANISTER. NO PART OF THE PROBE OR ELECTRICAL TAPE SHOWN BE EXPOSED. SEE VIEW B-B.

STEP 10. USE CANISTER INSTALLATION TOOL TO APPLY PRESSURE AS NEEDED TO POSITION THE CANISTER AT DEPTH SHOWN (FIG 2.). IF NECESSARY, ADD ADDITIONAL EPOXY SO THAT THE PERIMETER AROUND CANISTER HAS NO SINK MARKS.

NOTE: DO NOT ATTEMPT TO REMOVE LID UNTIL EPOXY HAS HARDENED

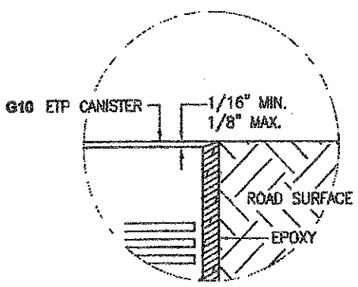


FIG. 2
GROUNDHOG G10 ETP

REV	DESCRIPTION	DATE	APP'D.

"IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER/ARCHITECT AS APPROPRIATE. THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION."

DRAWN BY: AGL
ENGINEER: ---
CHECKED BY: ---
APP'D BY: ---
SCALE: NTS

VAISALA

G10
VAISALA PERMANENT
TRAFFIC ANALYZER

DRAWING TITLE
G10 ETP
ROAD SENSOR INSTALLATION

CONTRACT NO. ---
DRAWING NO. DOC222558 (20F4)
SHEET 3 OF 5
DATE 10/28/2010
REVISION A

CALCULATED LME
CHECKED DNM

RWIS ROAD SENSOR DETAILS

GUE-70-22.80

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19

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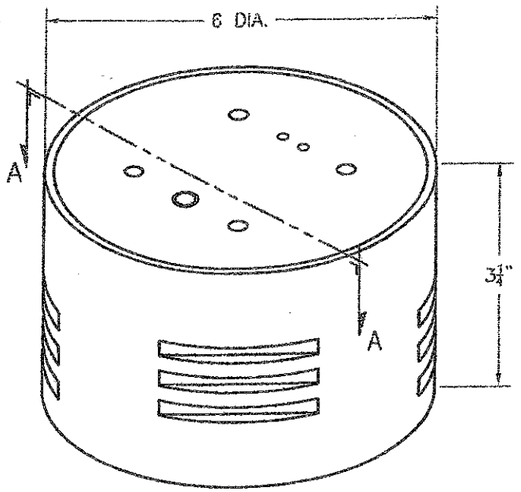
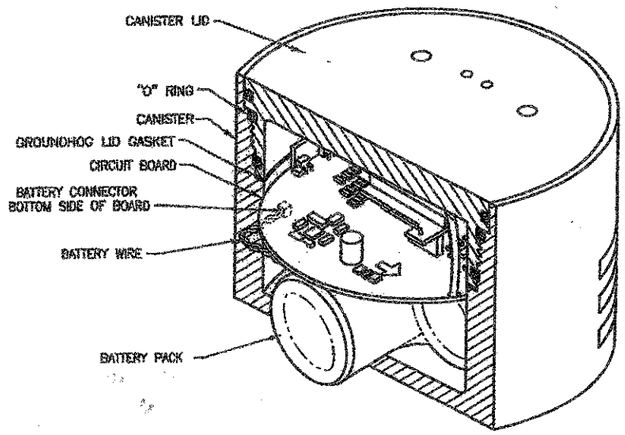
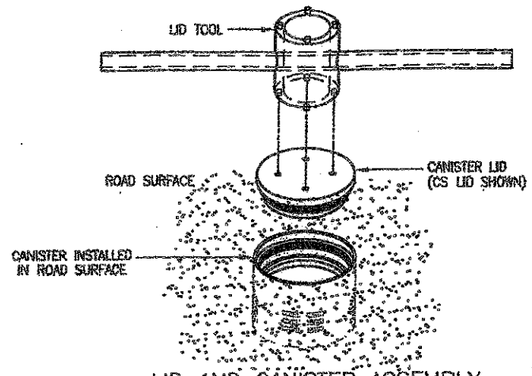


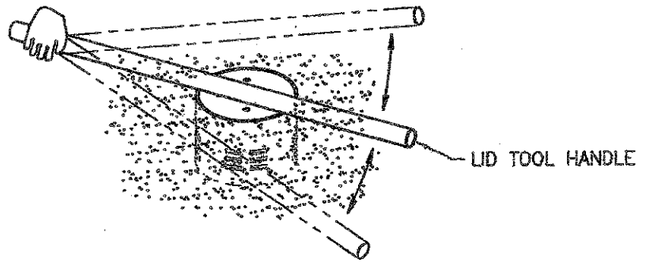
G10 GROUND HOG
SHOWN WITH WX LID



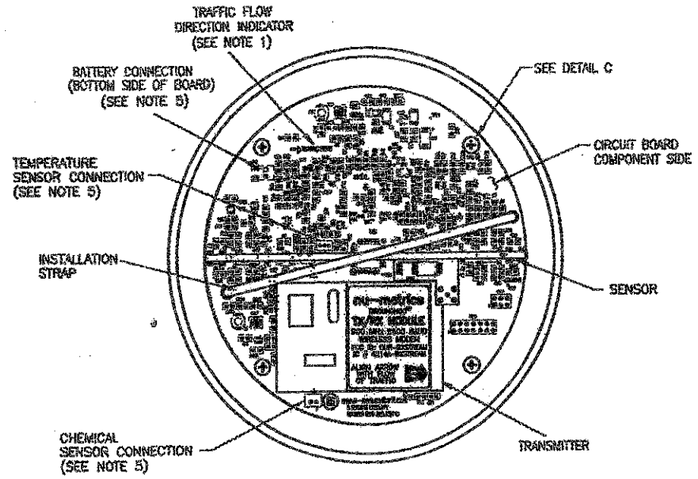
SECTION A–A



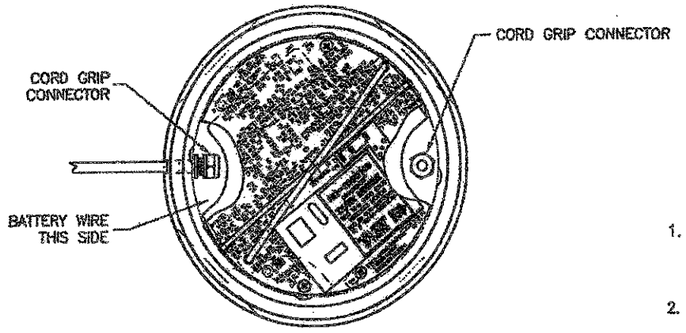
LID AND CANISTER ASSEMBLY



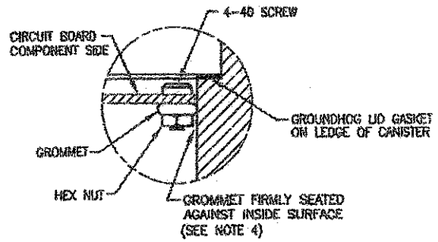
CANISTER ASSEMBLY IN GROUND
DETAIL D



VIEW OF CIRCUIT BOARD INSIDE CANISTER
(LID REMOVED)



VIEW B
SHOWN WITH EXTERNAL TEMPERATURE PROBES



DETAIL C
2X SCALE

NOTES:

1. PRIOR TO INSTALLATION, LOCATE THE "TRAFFIC FLOW DIRECTION INDICATOR" THAT IS PRINTED ON THE CIRCUIT BOARD, AND ALIGN THE INDICATOR WITH THE ACTUAL DIRECTION OF TRAFFIC FLOW.
2. REMOVE THE LID FROM THE INSTALLED CANISTER AND REMOVE ANY DIRT OR DEBRIS FROM CANISTER AND LID THREADS.
3. BEFORE INSTALLING CIRCUIT BOARD AND BATTERY PACK CONNECT THE BATTERY TO THE BOARD AND EXTERNAL TEMPERATURE PROBES (IF APPLICABLE).
4. USING THE INSTALLATION STRAP, PLACE THE CIRCUIT BOARD AND BATTERY PACK ASSEMBLY INTO THE CANISTER WITH THE "TRAFFIC FLOW DIRECTION INDICATOR" POINTED IN THE APPROPRIATE DIRECTION.
5. IF INSTALLING BOARD WITH EXTERNAL TEMPERATURE PROBES, MAKE SURE UNIT GOES INTO CANISTER AS SHOWN IN VIEW B.
6. PRESS THE CIRCUIT BOARD FIRMLY INTO THE CANISTER TO SECURE RUBBER GROMMETS AGAINST INSIDE SURFACE OF CANISTER (DETAIL C).
7. PLACE GROUNDHOG LID GASKET ON LEDGE OF CANISTER AS SHOWN IN DETAIL C AND SECTION A–A.
8. CONNECT TOP SENSORS WIRES (FROM LID IF APPLICABLE) TO APPROPRIATE CONNECTORS ON CIRCUIT BOARD
9. PLACE LID IN CANISTER AND HAND TIGHTEN.
10. SECURE LID BY TURNING WITH LID TOOL UNTIL LID SEATS FIRMLY WITH CANISTER.
11. AFTER INSTALLATING THE G10, TAKE THE LID TOOL HANDLE FROM THE TOOL LID, WAVE IT OVER G10 UNIT SEVERAL TIMES AS SHOWN IN DETAIL D. THEN VERIFY IF THE UNIT IS COUNTING AT THE SITE.

REV	DESCRIPTION	DATE	APP'D.

DRAWN BY: AGL
CHECKED: –
ENGINEERED BY: –
APP'D BY: –
SCALE: NTS

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VAISALA

G10
VAISALA PERMANENT
TRAFFIC ANALYZER

DRAWING TITLE: TYPICAL G10 ROAD SENSOR PCB AND CANISTER LID INSTALLATION

CONTRACT NO. –
DRAWING NO. DOC222558
SHEET 4 OF 5
DATE 10/26/2010
REVISION A

CALCULATED: LME
CHECKED: DNM

ROAD SENSOR DETAILS

RWIS ROAD

GUE-70-22.80

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19

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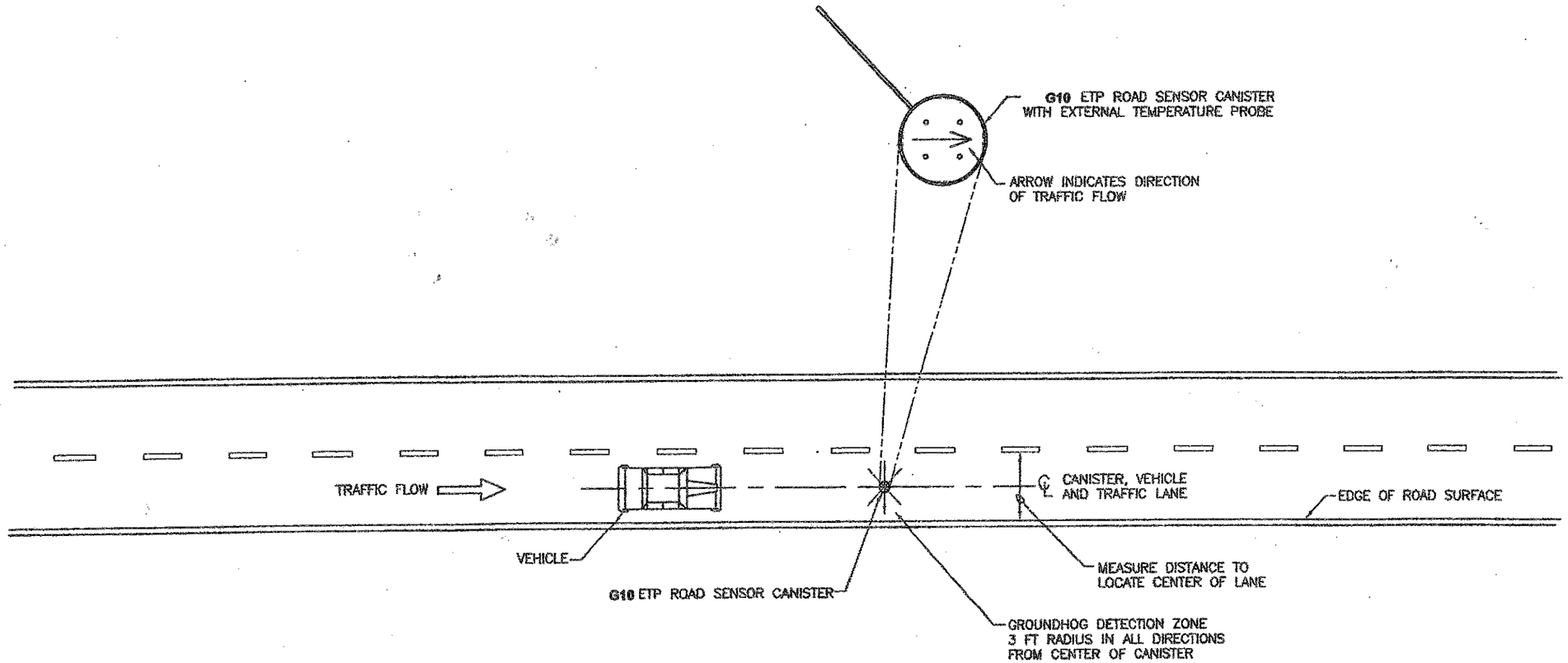

NOTE:

1. DO NOT PLACE CANISTER DIRECTLY UNDER HIGH POWER LINES.
2. DO NOT PLACE CANISTER NEAR UNDERGROUND CABLES OR POWER RUNS.

REV	DESCRIPTION	DATE	APP'D.

DRAWN BY: AGL
DESIGNED: –
CHECKED BY: –
APP'D BY: –
SCALE: NTS

VAISALA

G10
VAISALA PERMANENT
TRAFFIC ANALYZER

DRAWING TITLE
G10 ETP ROAD SENSOR
CANISTER PLACEMENT

CONTRACT NO. –
DRAWING NO. D0C222558
SHEET 5 OF 5
DATE 10/28/2010
REVISION A

CALCULATED LME
CHECKED DNM

RWIS ROAD SENSOR DETAILS

GUE-70-22.80

11
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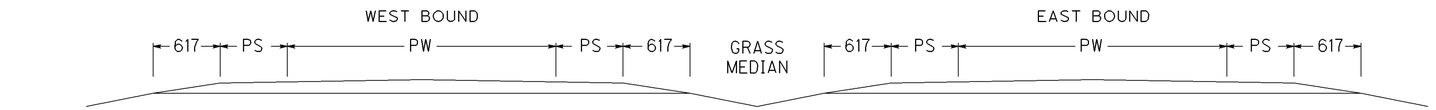
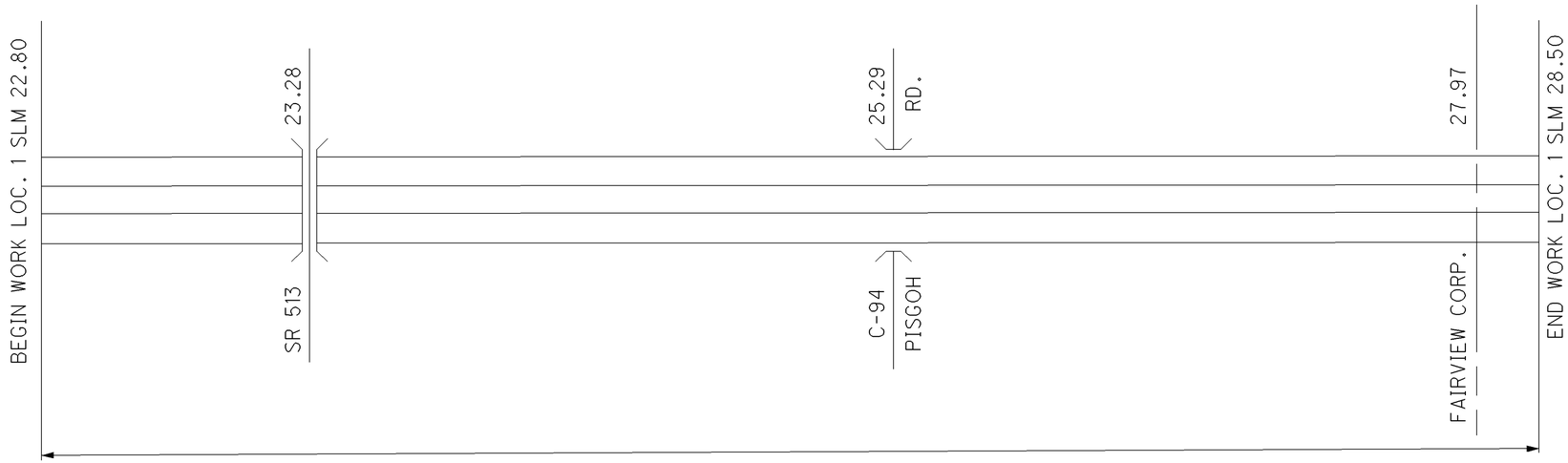
TYPICAL 1

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER





LOCATION 1
GUE - IR 70

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		442 ASPHALT CONCRETE			
					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, 19 MM, TYPE A (446)	THICKNESS	SURFACE COURSE, 12.5 MM, TYPE A (446)
										SQ. YD.	SQ. YD.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.
1	GUE	I.R. 70 E.B.	22.80	28.50	5.70	30,096.00	24.0	1	446	80,256.0	80,256.0	6,019.2	4,012.8	1.75	3,901.4	1.50	3,344.0
1	GUE	I.R. 70 W.B.	22.80	28.50	5.70	30,096.00	24.0	1	446	80,256.0	80,256.0	6,019.2	4,012.8	1.75	3,901.4	1.50	3,344.0
BRIDGE DEDUCTIONS (FROM SHEET 16)										(864.0)	(864.0)	(64.8)	(21.6)	1.75	(21.0)	1.50	(36.0)
LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)											**159,648.0**	**11,973.6**	**8,004.0**		**7,781.8**		**6,652.0**

CALCULATED LME
CHECKED DNM

ASPHALT CONCRETE DATA

GUE-70-22.80

CALCULATED LME
CHECKED DNM

PAVED SHOULDER DATA

TYPICAL 1

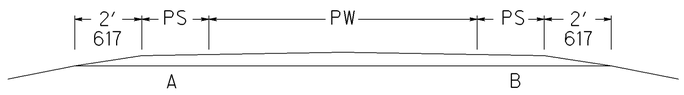
MAINLINE

PW = PAVEMENT WIDTH

PS = PAVED SHOULDER

TYPICAL 2

RAMP



RAMP LENGTH IN TABLE BELOW REFLECTS THE TOTAL RAMP LENGTH. SHOULDER AREA REFLECTS ACTUAL SHOULDER AREA AS PER TYPICAL SECTIONS SHOWN ON SHEET 2/19 OF THE PLAN. AS NOTED ON THE TYPICAL SECTION, THE 3′ SHOULDER ON RAMPS A AND D ARE SHORTER THAN THE TOTAL RAMP LENGTH.

SHOULDER DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)				SHOULDER AREA (see note)	203	254	301	407		442 ASPHALT CONCRETE				617			618
					MILES	LIN. FT.		A	B	C	D		EXCAVATION (9" DEPTH)	PAVEMENT PLANING, ASPHALT CONCRETE	ASPHALT CONCRETE BASE, PG64-22 (9" THICK)	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, 19 MM, TYPE A (446)	THICKNESS	SURFACE COURSE, 12.5 MM, TYPE A (446)	THICKNESS	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH)	SHOULDER PREPARATION (2' WIDTH)	RUMBLE STRIPS (ASPHALT CONCRETE)
												SQ. YD.	CU. YD.	SQ. YD.	CU. YD.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	INCHES	CU. YD.	SQ. YD.	MILE
1	GUE	I.R. 70 E.B.	22.80	28.50	5.70	30096.0	1			4	10	46,816.0		46,816.0		3,511.2	2,340.8	1.75	2,275.8	1.50	1,950.7	2.00	743.1	13376.0	11.40
	RAMP "C" - OFF RAMP TO S.R. 513					1282.05	2	3	6			1,282.1	320.5		320.5	96.2	64.2	1.75	62.4	1.50	53.5	3.50	55.4		
	RAMP "D" - ON RAMP FROM S.R. 513					1198.55	2	3	6			1,198.6	299.7		299.7	89.9	60.0	1.75	58.3	1.50	50.0	3.50	45.3		
1	GUE	I.R. 70 W.B.	22.80	28.50	5.70	30096.0	1	10	4			46,816.0		46,816.0		3,511.2	2,340.8	1.75	2,275.8	1.50	1,950.7	2.00	743.1	13376.0	11.40
	RAMP "B" - OFF RAMP TO S.R. 513					892.50	2	3	6			892.5	223.1		223.1	67.0	44.7	1.75	43.4	1.50	37.2	3.50	38.6		
	RAMP "A" - ON RAMP FROM S.R. 513					1356.48	2	3	6			1,356.5	339.1		339.1	101.8	67.9	1.75	66.0	1.50	56.6	3.50	49.4		
	DEDUCT FOR BRIDGES (FROM SHEET 16)											(504.0)		(504.0)		(37.8)	(12.6)	1.75	(12.2)	1.50	(21.0)	2.00	(8.0)	(144.0)	(0.06)
LOCATION 1 (CARRIED TO GENERAL SUMMARY)													**1,182.4**	**93,128.0**	**1,182.4**	**7,339.5**	**4,905.8**		**4,769.5**		**4,077.7**		**1,666.9**	**26,608.0**	**22.74**

GUE-70-22.80

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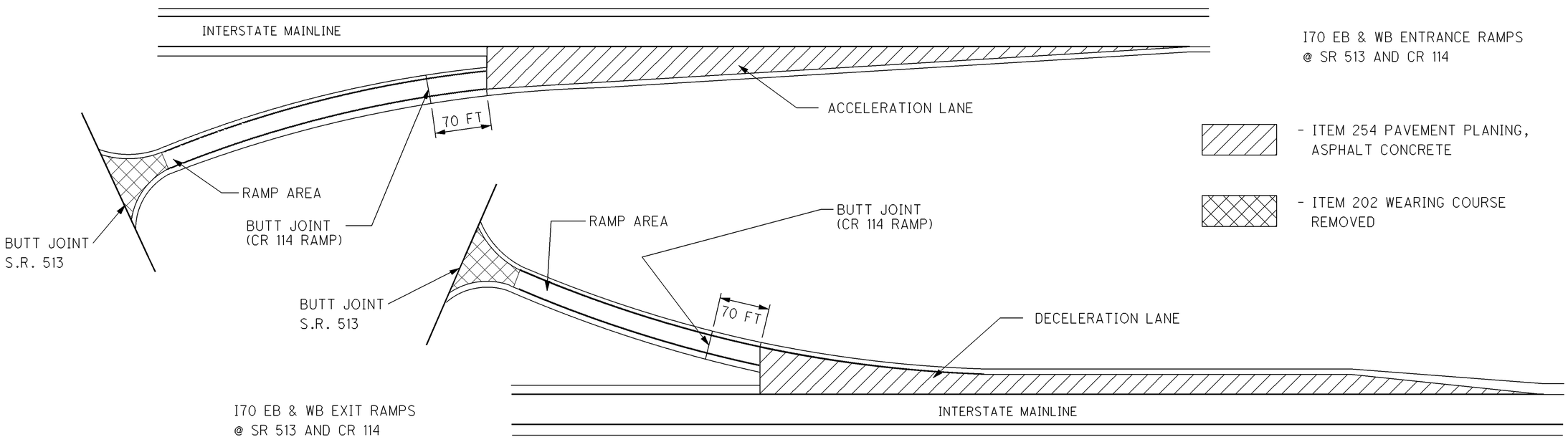
* - SEE SHEET 2 FOR RAMP APRON DIMENSIONS (LENGTH X AVERAGE WIDTH)

RAMP DATA																		
							202	254	255	407			442 ASPHALT CONCRETE			
LOCATION	COUNTY	ROUTE	DESCRIPTION	RAMP LENGTH	RAMP WIDTH	AREA	APRON AREA *	TOTAL AREA	WEARING COURSE REMOVED (FOR BUTT JOINT @ S.R. 513)	PAVEMENT PLANING, ASPHALT CONCRETE	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT,	TACK COAT @ 0.075 GAL./SQ. YD.	TACK COAT, 702.13 @ 0.075 GAL./SQ. YD.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./SQ. YD.	THICKNESS	INTERMEDIATE COURSE, 19 MM, TYPE A (446)	THICKNESS	SURFACE COURSE, 12.5 MM, TYPE A (446)
				FEET	FEET	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	GAL.	GAL.	GAL.	INCH	CU. YDS.	INCH	CU. YDS.
1	GUE	I.R. 70 E.B.	DECELERATION LANE TO S.R. 513					1600.0		1600		120		80	1.75	77.8	1.50	66.7
1	GUE	I.R. 70 E.B.	RAMP "C" - OFF RAMP TO S.R. 513	1211.73	16.0	2154.2	270.8	2425.0	271		64		182	122	1.75	117.9	1.50	101.1
1	GUE	I.R. 70 E.B.	RAMP "D" - ON RAMP FROM S.R. 513	1066.00	16.0	1895.1	427.8	2323.0	428		75		175	117	1.75	113.0	1.50	96.8
1	GUE	I.R. 70 E.B.	ACCELERATION LANE FROM S.R. 513					2000.0		2000		150		100	1.75	97.3	1.50	83.4
1	GUE	I.R. 70 E.B.	DECELERATION LANE TO CR 114 (FAIRVIEW)					1440.0		1440		108		72	1.75	70.0	1.50	60.0
1	GUE	I.R. 70 W.B.	ACCELERATION LANE FROM CR 114 (FAIRVIEW)					1650.0		1650		124		83	1.75	80.3	1.50	68.8
1	GUE	I.R. 70 W.B.	DECELERATION LANE TO S.R. 513					1600.0		1600		120		80	1.75	77.8	1.50	66.7
1	GUE	I.R. 70 W.B.	RAMP "B" - OFF RAMP TO S.R. 513	824.00	16.0	1464.9	260.1	1725.0	260		40		130	87	1.75	83.9	1.50	71.9
1	GUE	I.R. 70 W.B.	RAMP A" - ON RAMP FROM S.R. 513	1248.70	16.0	2219.9	308.0	2528.0	308		64		190	127	1.75	122.9	1.50	105.4
1	GUE	I.R. 70 W.B.	ACCELERATION LANE FROM S.R. 513					2000.0				150		100	1.75	97.3	1.50	83.4
LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)									**1267**	**8290**	**243.0**	**772.0**	**677.0**	**968.0**		**938.2**		**804.2**

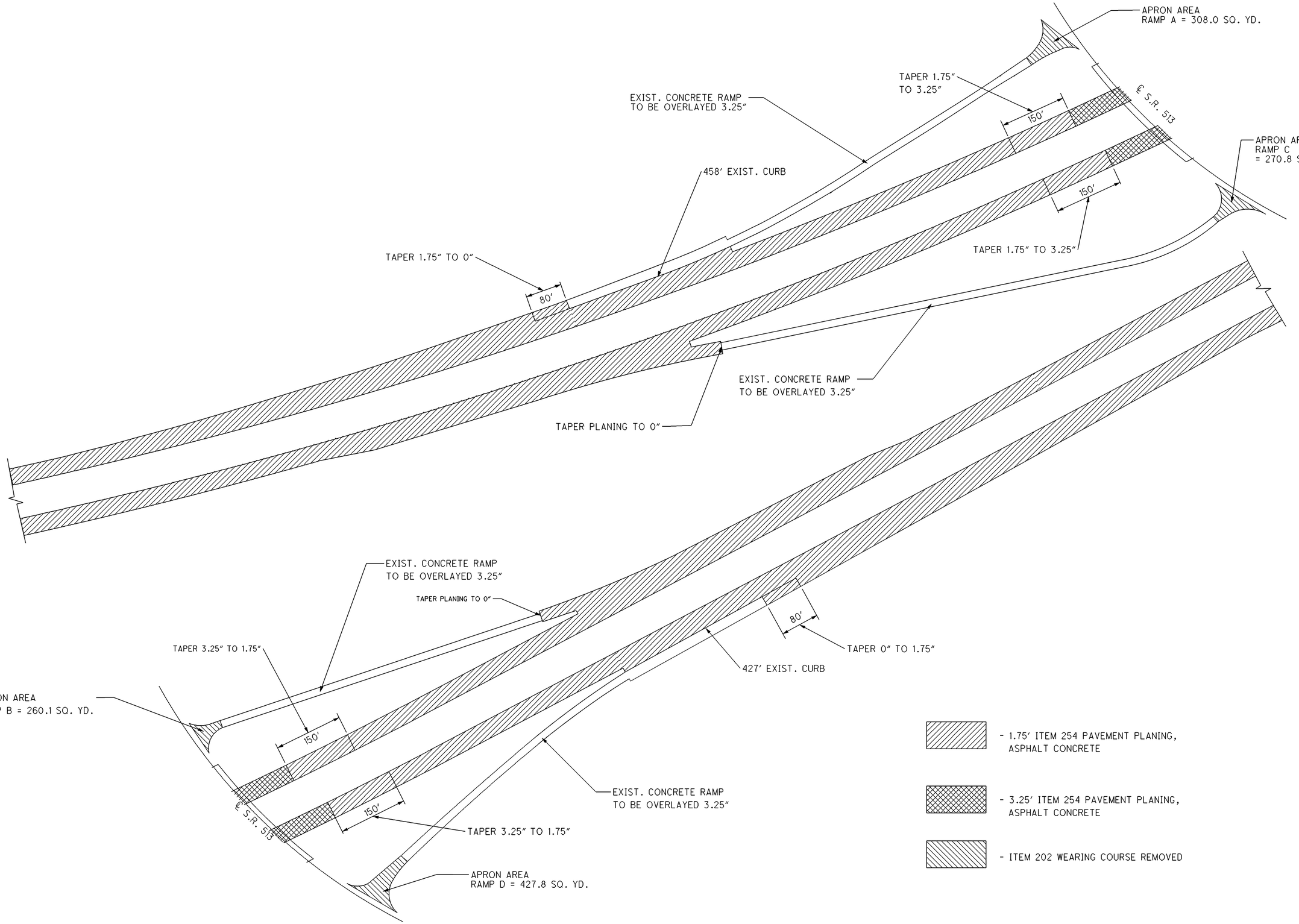
NOTE: PAVED SHOULDER QUANTITIES ARE INCLUDED WITH MAINLINE FOR ACCEL/DECEL LANES



CALCULATED LME
CHECKED DNM

GORE AND RAMP DATA

GUE-70-22.80



N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED LME
CHECKED DNM

S.R. 513 INTERCHANGE DETAILS

GUE-70-22.80

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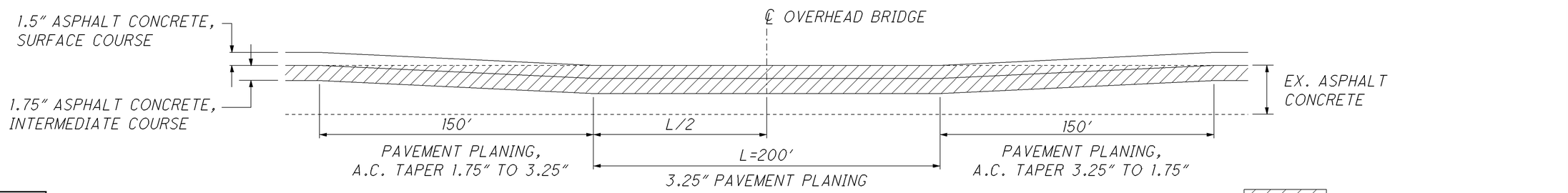
GUE-70-2328: OVERHEAD (MILL & FILL MAINLINE)
GUE-70-2529R: PAVE OVER WITH 3.25" ASPHALT CONCRETE
GUE-70-2529L: PAVE OVER WITH 3.25" ASPHALT CONCRETE

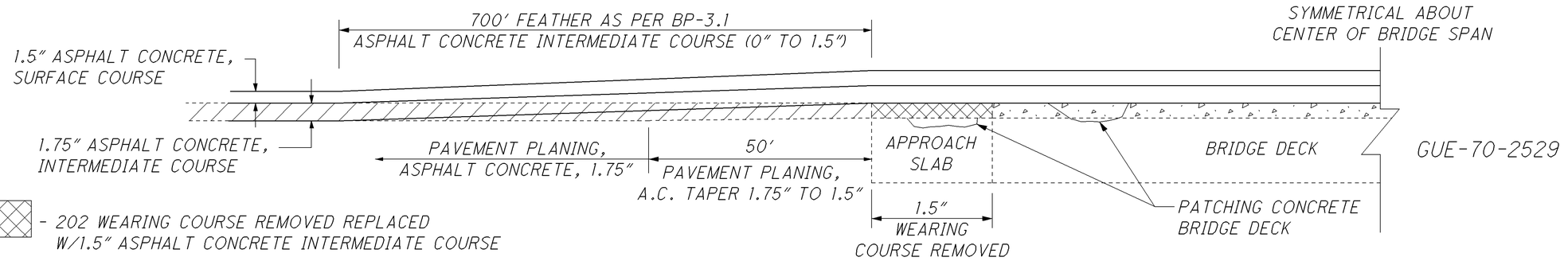
BRIDGE DEDUCTIONS = ROADWAY/SHOULDER WIDTH X (BRIDGE LENGTH + APPROACH SLAB LENGTHS)

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	MAINLINE DEDUCTIONS (CARRIED TO SHEET 12)	SHOULDERS DEDUCTIONS (CARRIED TO SHEET 13)	202	407			442 ASPHALT CONCRETE				519
											WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL./S.Y.	TACK COAT, 702.13 @ 0.075 GAL./S.Y.	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL./S.Y.	THICKNESS	INTERMEDIATE COURSE, 19 MM, TYPE A (446)	THICKNESS	SURFACE COURSE, 12.5 MM, TYPE A (446)	SPECAIL-PATCHING CONCRETE BRIDGE DECK
		LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.		SQ.YD.	SQ.YD.	SQ.YD.	GAL.	GAL.	GAL.	INCHES	CU. YD.	INCHES	CU. YD.	SQ.YD.
1	GUE-70-2328 (EB)	OVERHEAD						1											
1	GUE-70-2328 (WB)	OVERHEAD						1											
1	GUE-70-2529R	112	41	510.3	25	41.0	227.8	2	432	252			38.3	36.9	1.75	35.9	1.50	30.8	75
1	GUE-70-2529R				25	41.0	227.8	2			227.8		17.1		1.5	9.5			
1	GUE-70-2529R	700' FEATHERING EITHER SIDE OF BRIDGE						2				INCLUDED WITH MAIN LINE			.75 (AVG.)	123.1			
1	GUE-70-2529L	112	41	510.3	25	41.0	227.8	2	432	252			38.3	36.9	1.75	35.9	1.50	30.8	75
1	GUE-70-2529L				25	41.0	227.8	2			227.8		17.1		1.5	9.5			
1	GUE-70-2529L	700' FEATHERING EITHER SIDE OF BRIDGE						2				INCLUDED WITH MAIN LINE			.75 (AVG.)	123.1			
	BRIDGE DEDUCTIONS								864	504									
	LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)										**455.6**		**110.8**	**73.8**		**337.0**		**61.6**	**150.0**



DETAIL 1

GUE-70-2328



DETAIL 2

GUE-70-2529

CALCULATED LME
CHECKED DNM

BRIDGE TREATMENT DATA

GUE-70-22.80

16
19

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ITEM 817 EDGE LINE SUB-SUMMARY

LOCATION	COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	TOTAL LENGTH (MILES)	INFORMATION ONLY: WHITE EDGE LINE QUANTITIES TOTAL MILES	WHITE EDGE LINE QUANTITIES HIGHWAY MILES	WHITE EDGE LINE QUANTITIES RAMP MILES	YELLOW EDGE LINE QUANTITIES TOTAL MILES	YELLOW EDGE LINE QUANTITIES HIGHWAY MILES	YELLOW EDGE LINE QUANTITIES RAMP MILES	TOTAL EDGE LINE MILES	REMARKS
1	GUE	I.R. 70 E.B.	22.80	28.50	5.70	5.70	5.70		5.70	5.70		11.40	4-LANE DIVIDED
	RAMP "C" OFF RAMP TO SR 513					0.24		0.24	0.24		0.24	0.48	
	RAMP "D" ON RAMP FROM SR 513					0.23		0.23	0.23		0.23	0.46	
1	GUE	I.R. 70 W.B.	22.80	28.50	5.70	5.70	5.70		5.70	5.70		11.40	4-LANE DIVIDED
	RAMP "B" OFF RAMP TO SR 513					0.17		0.17	0.17		0.17	0.34	
	RAMP "A" ON RAMP FROM SR 513					0.26		0.26	0.26		0.26	0.52	
LOCATION 1 TOTAL (CARRIED TO GENERAL SUMMARY)						**12.30**			**12.30**			**24.60**	

ITEM 817 LANE LINE / ITEM 644 AUXILARY SUB-SUMMARY

LOCATION	COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	ITEM 817 LANE LINE QUANTITIES: TOTAL LANE LINE MILE	DASHED MILE	SOLID MILE	ITEM 644 AUXILARY MARKING QUANTITIES: CHANNELIZING LINE FEET	STOP LINE FEET	LANE ARROW "THRU" EACH	REMARKS
1	GUE	I.R. 70 E.B.	22.80	28.50	5.70	5.70					4-LANE DIVIDED
		RAMP "C" OFF RAMP TO SR 513			0.05	0.05		522	58	1	DECELERATION LANE
		RAMP "D" ON RAMP FROM SR 513			0.05	0.05		210			ACCELERATION LANE
		OFF RAMP TO CR 114 (FAIRVIEW)			0.04	0.04		647			DECELERATION LANE
1	GUE	I.R. 70 W.B.	22.80	28.50	5.70	5.70					4-LANE DIVIDED
		RAMP "B" OFF RAMP TO SR 513			0.05	0.05		477	62	1	DECELERATION LANE
		RAMP "A" ON RAMP FROM SR 513			0.05	0.05		194			ACCELERATION LANE
		ON RAMP FROM CR 114 (FAIRVIEW)			0.04	0.04		194			ACCELERATION LANE
LOCATION 1 TOTAL (CARRIED TO GENERAL SUMMARY)					**11.68**			**2244**	**120**	**2**	

CALCULATED LME CHECKED DNM

PAVEMENT MARKING DATA

GUE-70-22.80

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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		PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
								RPM	RAISED PAVEMENT MARKER REMOVED	INFORMATION ONLY					
										ONE-WAY		TWO-WAY			
					MILES	LIN.FT.		EACH	EACH	WHITE	YELLOW	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	
1	GUE	I.R. 70 E.B.	22.80	28.50	5.70	30,096	3	251	251	251					120' SPACING ON LANE LINE
	RAMP "C" OFF RAMP TO SR 513						2	47	47	16			15	16	GORE AREA AND RAMP
	RAMP "D" ON RAMP FROM SR 513						1	36	36	16			5	15	GORE AREA AND RAMP
	OFF RAMP TO CR 114 (FAIRVIEW)						2	17	17				17		GORE AREA
1	GUE	I.R. 70 W.B.	22.80	28.50	5.70	30,096	3	251	251	251					120' SPACING ON LANE LINE
	RAMP "B" OFF RAMP TO SR 513						2	40	40	16			13	11	GORE AREA AND RAMP
	RAMP "A" ON RAMP FROM SR 513						1	32	32	16			5	11	GORE AREA AND RAMP
	ON RAMP FROM CR 114 (FAIRVIEW)						1	5	5				5		GORE AREA
LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)								**679**	**679**	**566**			**60**	**53**	

CALCULATED LME CHECKED DNM

RAISED PAVEMENT MARKER DATA

GUE-70-22.80

SHEET TOTALS										ITEM	ITEM EXT.	GRAND TOTAL 01/IMS/PV/	UNIT	DESCRIPTION	SEE SHEET
3	4	5	7	12	13	14	16	17	18						
						1,267	456			202	23500	1,723	SQ YD	WEARING COURSE REMOVED	
					1,183					203	10000	1,183	CU YD	EXCAVATION	
22										209	60500	22	MILE	LINEAR GRADING	
				159,648	93,128	8,290				254	01000	261,066	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
						243				255	10101	243	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN	3
					1,183					301	46000	1,183	CU YD	ASPHALT CONCRETE BASE, PG64-22	
				11,974	7,340	772				407	10000	20,086	GALLON	TACK COAT	
						677	111			407	13900	788	GALLON	TACK COAT, 702.13	
				8,004	4,906	968	74			407	14000	13,952	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
				6,652	4,078	805	62			442	10000	11,597	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	
				7,782	4,770	939	337			442	10100	13,828	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	
			279							448	46020	279	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
							150			519	12300	150	SQ YD	SPECIAL - PATCHING CONCRETE BRIDGE DECK - TYPE B	
		750								614	11110	750	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	10									614	12460	10	EACH	WORK ZONE MARKING SIGN	
	50									614	12600	50	EACH	REPLACEMENT DRUM	
		11								614	13000	11	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		480								614	18401	480	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
					1,667					617	10101	1,667	CU YD	COMPACTED AGGREGATE, AS PER PLAN	3
					26,608					617	20000	26,608	SQ YD	SHOULDER PREPARATION	
					22.74					618	40600	22.74	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	
									679	621	00100	679	EACH	RPM	
									679	621	54000	679	EACH	RAISED PAVEMENT MARKER REMOVED	
								2,244		644	00404	2,244	FT	CHANNELIZING LINE, 12"	
								120		644	00500	120	FT	STOP LINE	
								2		644	01300	2	EACH	LANE ARROW	
	13,387									690	12050	13,387	SQ YD	SPECIAL - REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	4
4										690	98000	4	EACH	SPECIAL - MISC.: REMOVAL AND STORAGE OF ROADWAY SENSOR	3
4										690	98000	4	EACH	SPECIAL - MISC.: INSTALLATION OF ROADWAY WEATHER INFORMATION SENSOR	3
1										690	98000	1	EACH	SPECIAL - MISC.: ROAD WEATHER INFORMATION SYSTEM (RWIS) SENSOR	3
								24.60		817	00104	24.60	MILE	EDGE LINE, 6"	
								11.68		817	00204	11.68	MILE	LANE LINE, 6"	
										103	05000		LUMP	PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
										614	11000		LUMP	MAINTAINING TRAFFIC	
										619	16000	4	MONTH	FIELD OFFICE, TYPE A	
										624	10000		LUMP	MOBILIZATION	
										823	10000		LUMP	CONSTRUCTION LAYOUT STAKES	

CALCULATED LME
CHECKED DNM

GENERAL SUMMARY

GUE-70-22.80

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