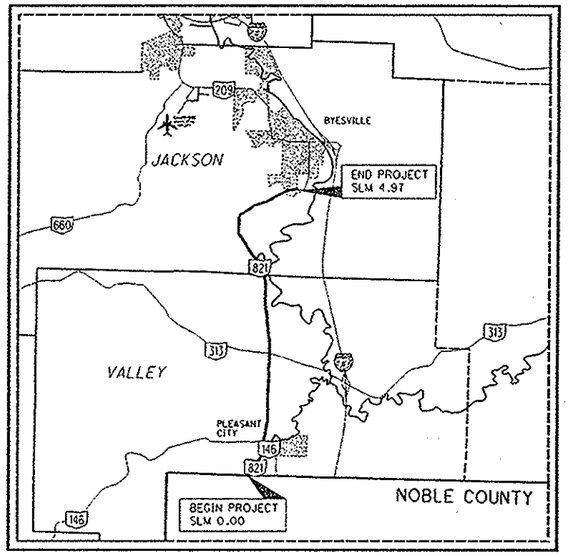


LOCATION MAP

LON/LAT: 81° 32' 58" / 39° 55' 53"

PORTION TO BE IMPROVED

DESIGN DESIGNATION	LOC. 1 (9.86-9.99)	LOC. 2 (0.00-4.20)	LOC. 3 (4.20-4.97)
Functional Classification	RMC	RMC	UMC
Current ADT (2010)	2300	2700	2700
Design Year ADT (2022)	2400	2900	2900
Design Hourly Volume (2022)	264	319	319
Directional Distribution	55%	55%	55%
Trucks (24 Hour B&C)	4%	3%	3%
Design Speed	55mph	55mph	55mph
Legal Speed	55mph	55mph	55mph

UMC = URBAN MAJOR COLLECTOR
RMC = RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS: NONE

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

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

ENGINEER'S SEAL
STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER
SIGNED: Douglas N. Morgan
DATE: 6-14-2010

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GUE-146-9.86
GUE-821-0.00/4.20

VILLAGE OF BYESVILLE

VALLEY AND JACKSON TOWNSHIPS

GUERNSEY COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION:

ASPHALT CONCRETE RESURFACING, AND RELATED WORK, ON S.R. 146 & S.R. 821 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*	*CITY/VILLAGE*
1	GUE	146	9.86	9.99	0.13	
2	GUE	821	0.00	4.20	*4.07	
3	GUE	821	4.20	4.97	0.77	BYESVILLE

** DEDUCTED 0.13 MILE FOR S.R. 146 OVERLAP*

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.

STANDARD CONSTRUCTION DRAWINGS				*SUPPLEMENTAL SPECIFICATIONS*	
BP-3.1	10-19-07	TC-65.10	1-21-05	800	4-16-10
BP-4.1	7-16-04	TC-65.11	1-21-05	832	5-5-09
		TC-71.10	1-15-10		
		TC-73.10	1-19-01		
MT-97.10	4-17-09				
MT-97.12	4-17-09				
MT-99.20	1-16-09				
MT-101.90	1-16-09			*SPECIAL PROVISIONS*	
MT-105.10	1-16-09				

APPROVED K D M
DATE 6-15-10 *DISTRICT DEPUTY DIRECTOR*

APPROVED Gene M. Molitoris II
DATE 6-25-10 *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

FEDERAL PROJECT NO. E091 (287)
PID NO. 87416
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT BYESVILLE SCENIC RAILWAY
GUE-146-9.86
GUE-821-0.00/4.20
1/14

GUE - 146 - 9.86
108053
PID 87416
DIST 05
8/12/2010

G146_MTS_001.DGN 4-22-10

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT SHOULD 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 HIGHWAY MANAGEMENT ADMINISTRATOR 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 HIGHWAY MANAGEMENT ADMINISTRATOR
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

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) : LOCATION 2 - 10 EACH, LOCATION 3 - 2 EACH
W8-H15 (GROOVED PAVEMENT) : LOCATION 1 - 2 EACH, LOCATION 2 - 18 EACH, LOCATION 3 - 4 EACH
R4-1 (DO NOT PASS) : LOCATION 2 - 14 EACH, LOCATION 3 - 2 EACH
R4-2 (PASS WITH CARE) : LOCATION 2 - 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.

ITEM 614 WORK ZONE MARKING SIGN
LOCATION 1 - 2 EACH
LOCATION 2 - 52 EACH
LOCATION 3 - 8 EACH

ITEM 621 RAISED PAVEMENT MARKER REMOVED

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS TO REMOVE RAISED PAVEMENT MARKERS FOR DISPOSAL BY THE CONTRACTOR. 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.

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

ITEM 621 RAISED PAVEMENT MARKER REMOVED
LOCATION 1 - 9 EACH
LOCATION 2 - 324 EACH
LOCATION 3 - 54 EACH

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.

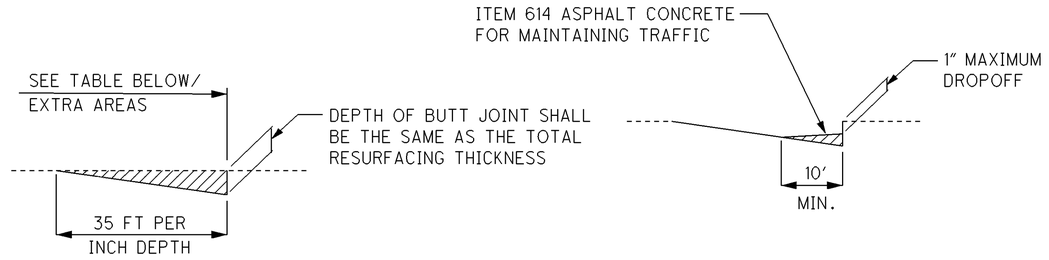
ITEM 408 PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GALLON PER SQUARE YARD TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS. THE FOLLOWING QUANTITY OF PRIME COAT, AS PER PLAN HAS BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM THE ABOVE MENTIONED WORK.

ITEM 408 PRIME COAT, AS PER PLAN
LOCATION 1 - (571 FT x 4.0 FT)/9 x 0.40 GAL./SQ YD = 102 GAL.
LOCATION 2 - (21490 FT x 4.0 FT)/9 x 0.40 GAL./SQ YD = 3821 GAL.
LOCATION 3 - (4066 FT x 4.0 FT)/9 x 0.40 GAL./SQ YD = 723 GAL.

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT EXTRA AREAS WITH WEARING COURSE REMOVED.
BUTT JOINTS SHALL BE AS PER SCD BP-3.1, 10-19-07 UNLESS OTHERWISE SHOWN IN THE PLANS.



MINIMUM BUTT JOINT FOR EXTRA AREAS SHALL BE 10'

LOCATION	ROUTE	DESCRIPTION	SLM	202 WEARING COURSE REMOVED SQ.YD.	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU.YD.
2	S.R. 821	BEGIN WORK	0.00	107	0.30
2	S.R. 821	RR CROSSING	0.91	224	0.60
3	S.R. 821	END WORK	4.97	107	0.30

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.

CALCULATED LME CHECKED DNM

GENERAL NOTES

GUE-146-9.86
GUE-821-0.00/4.20

G146_MGN_001.DGN 4-16-10

RESIDENCE AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 ASPHALT CONCRETE HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL TYPICALLY EXTEND 4′ INTO THE DRIVEWAY (MEASURED FROM THE EDGE OF PAVEMENT OR PAVED SHOULDER IF PRESENT). THERE ARE 5 TYPES OF DRIVES: CONCRETE, ASPHALT, GRAVEL, GRAVEL WITH ASPHALT APRON, AND FIELD/OIL WELL DRIVES. FIELD DRIVES AND OIL WELL DRIVES SHALL NOT BE PAVED. GRAVEL DRIVES SHALL BE PAVED BACK 4′ INTO THE DRIVEWAY UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CONCRETE AND ASPHALT DRIVES SHALL HAVE BUTT JOINTS OR AS SHORT AN ASPHALT TAPER AS POSSIBLE (PREFERRED 4′) AS DIRECTED BY THE ENGINEER SO AS TO PROVIDE A SMOOTH TRANSITION. GRAVEL DRIVES WITH ASPHALT APRONS SHALL ALSO HAVE BUTT JOINTS OR AS SHORT A ASPHALT TAPER AS POSSIBLE (PREFERRED 4′) BUT ONLY IF THE EXISTING ASPHALT APRON IS IN AN ACCEPTABLE CONDITION TO BE PAVED OVER AS DIRECTED BY THE ENGINEER. IF THE ASPHALT APRON CANNOT BE PAVED OVER (FOR EXAMPLE, BROKEN INTO SMALL PIECES) AS DETERMINED BY THE ENGINEER, IT SHALL BE REMOVED BEFORE BEING PAVED BACK 4′ INTO THE DRIVEWAY. ALL GRADING, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEMS LISTED BELOW.

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

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M

LOCATION 2 - 27 CU.YD.
LOCATION 3 - 6 CU.YD.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 50 FT.. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

Express Processing Center
The Federal Aviation Administration
Southwest Regional Office
Air Traffic Airspace Branch ASW-520
2601 Meachan Blvd.
Fort Worth, TX 76137-4298

Ohio Department of Transportation
Office of Aviation
2829 West Dublin-Granville Road
Columbus, Ohio 43235
614-387-2346

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.

MAIL BOX TURN OUTS

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

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M

LOCATION 2 - 14 CU.YD.
LOCATION 3 - 4 CU.YD.

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. ALL LINEAR GRADING WORK SHALL BE DONE BEFORE PLACING THE ASPHALT SURFACE COURSE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE SUB-SUMMARY FOR THE ABOVE PURPOSES.
ITEM 209 LINEAR GRADING

LOCATION 2 - 4 MILE
LOCATION 3 - 1 MILE

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.

BYESVILLE SCENIC RAILWAY

THE RAILROAD CROSSING LOCATED AT SLM 0.91 IS UTILIZED BY THE BYESVILLE SCENIC RAILWAY. THE BYESVILLE SCENIC RAILWAY CONDUCTS TRAIN TOURS THAT UTILIZE THIS CROSSING AT VARIOUS TIMES THROUGHOUT THE WEEK, EACH YEAR, FROM APRIL TO DECEMBER. THE CONTRACTOR SHALL NOT WORK NEAR THIS RAILROAD CROSSING DURING TIMES THAT THE BYESVILLE SCENIC RAILWAY IS CONDUCTING TOURS.

IN ORDER TO MAKE SURE THERE ARE NO CONFLICTS, THE CONTRACTOR SHALL NOTIFY (IN WRITING) TIM BROWN (THE PRESIDENT OF THE BYESVILLE SCENIC RAILWAY), WITH COPIES TO THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR AND PROJECT ENGINEER NOT LESS THAN 14 DAYS BEFORE PAVING BEGINS IN THE AREA ADJACENT TO THIS RAILROAD CROSSING.

PLEASE CONTACT TIM BROWN AT (740)-680-4646 OR SEND AN EMAIL TO tim@bsrw.org TO OBTAIN CONTACT INFORMATION AND TRAIN SCHEDULES.

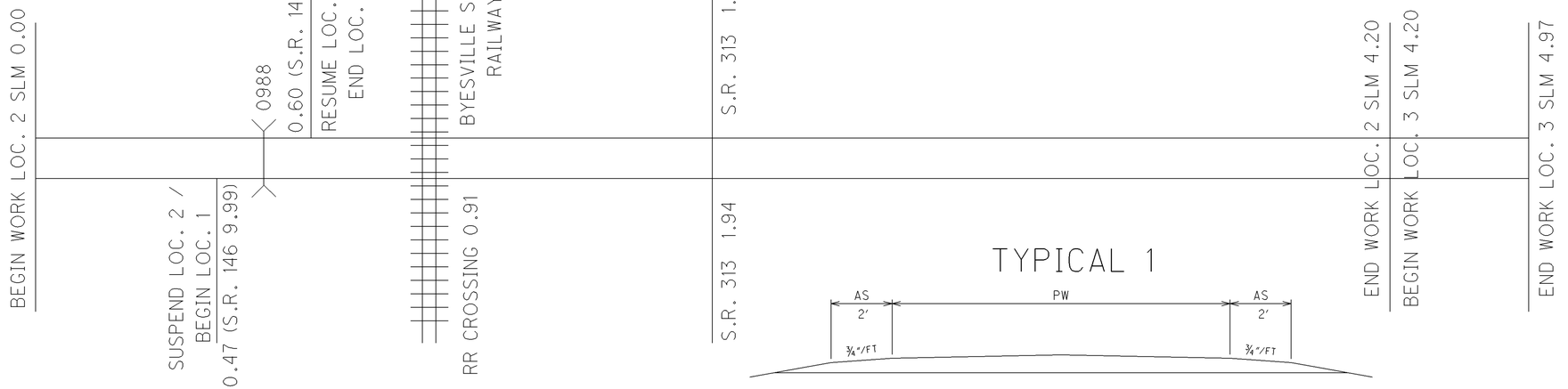
CALCULATED LME
CHECKED DNM

GENERAL NOTES

GUE-146-9.86
GUE-821-0.00/4.20

NOTE: LOCATION 1 IS AN OVERLAP OF S.R. 146 WITH S.R. 821

PW = PAVEMENT WIDTH
AS = AGGREGATE SHOULDER



PAVEMENT DATA

LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH MILES	LENGTH LIN. FT.	PAVEMENT WIDTH (FEET)	TYPICAL	EXISTING PAVEMENT TYPE	PAVEMENT AREA SQ. YD.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.	448 THICKNESS INCHES	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.	614 WORK ZONE CENTER LINE, CLASS II MILE
1	GUE	S.R. 146	9.86	9.99	0.13	686.40	24.0	1	448	1,830.4	137.3	1.25	63.6	0.13
	DEDUCT FOR BRIDGES (FROM SHEET 7)									(309.3)	(23.2)	1.25	(10.8)	
LOCATION 1 (TOTALS CARRIED TO SUB-SUMMARY)											**114.1**		**52.8**	**0.13**
2	GUE	S.R. 821	0.00	0.47	0.47	2,481.60	22.0	1	448	6,066.1	455.0	1.25	210.7	0.47
2	GUE	S.R. 821	0.60	0.91	0.31	1,636.80	24.0	1	448	4,364.8	327.4	1.25	151.6	0.31
2	GUE	S.R. 821	0.91	4.20	3.29	17,371.20	22.0	1	448	42,462.9	3,184.8	1.25	1,474.5	3.29
LOCATION 2 (TOTALS CARRIED TO SUB-SUMMARY)											**3,967.2**		**1,836.8**	**4.07**
3	GUE	S.R. 821	4.20	4.97	0.77	4,065.60	22.0	1	448	9,938.1	745.4	1.25	345.1	0.77
LOCATION 3 (TOTALS CARRIED TO SUB-SUMMARY)											**745.4**		**345.1**	**0.77**

CALCULATED LME
CHECKED DNM

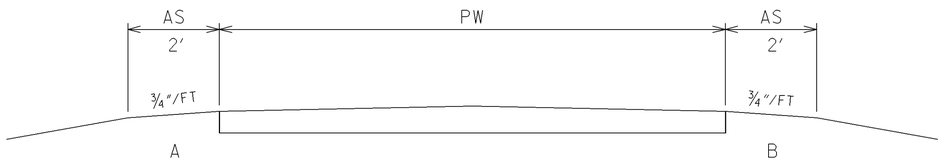
ASPHALT CONCRETE DATA

GUE-146-9.86
GUE-821-0.00/4.20

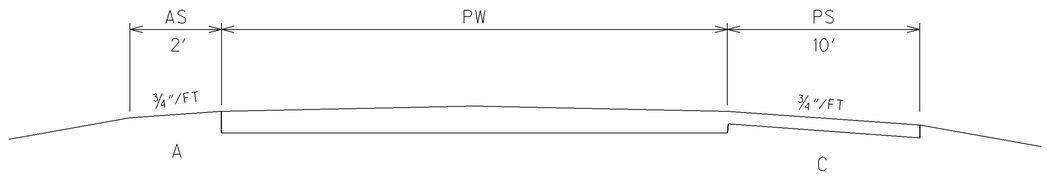
G146_MAC_001.DGN 4-16-10

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

TYPICAL 1



TYPICAL 2



NOTE: ONLY PAVE THREE (3) FOOT OF THE TEN (10) FOOT PAVED SHOULDER IN TYPICAL 2. FEATHER PAVMENT ON SHOULDER FROM 1.25″ TO 0″.

SHOULDER DATA

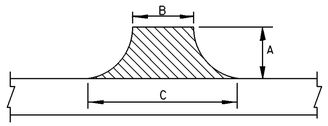
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)			AGGREGATE SHOULDER AREA	ASPHALT PAVED SHOULDER AREA	407	448		617	
					MILES	LIN. FT.		A	B	C	SQ. YD.	SQ. YD.	TACK COAT @ 0.075 GAL./S.Y. GAL.	THICKNESS INCHES	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M CU. YD.	THICKNESS INCHES	COMPACTED AGGREGATE, AS PER PLAN (2' WIDTH) CU. YD.
1	GUE	S.R. 146	9.86	9.99	0.13	686.4	1	2	2		305.1					2.00	17.0
	DEDUCT FOR BRIDGES (FROM SHEET 7)										(51.6)					2.00	(2.9)
LOCATION 1 (TOTALS CARRIED TO SUB-SUMMARY)																	**14.1**
2	GUE	S.R. 821	0.00	0.47	0.47	2481.6	1	2	2		1,102.9					2.00	61.3
2	GUE	S.R. 821	0.60	0.72	0.12	633.6	1	2	2		281.6					2.00	15.7
2	GUE	S.R. 821	0.72	0.85	0.13	686.4	2	2		3	152.5	228.8	17.2	1.25	4.0	2.00	8.5
2	GUE	S.R. 821	0.85	4.20	3.35	17688.0	1	2	2		7,861.3					2.00	436.8
LOCATION 2 (TOTALS CARRIED TO SUB-SUMMARY)													**17.2**		**4.0**		**522.3**
3	GUE	S.R. 821	4.20	4.97	0.77	4065.6	1	2	2		1,806.9					2.00	100.4
LOCATION 3 (TOTALS CARRIED TO SUB-SUMMARY)																	**100.4**

CALCULATED LME
CHECKED DNM

PAVED SHOULDER DATA

GUE-146-9.86
GUE-821-0.00/4.20

G146_MPS_001.DGN 4-16-10



INTERSECTIONS

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

EXTRA AREAS

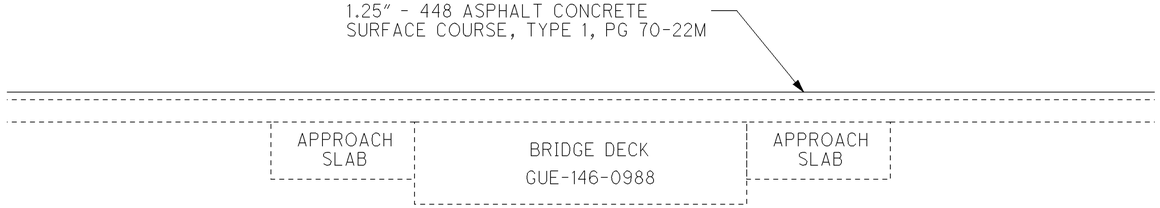
LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	INTERSECTIONS DETAIL DIMENSION A	B	C	AREA	202 WEARING COURSE REMOVED	407 TACK COAT @ 0.075 GAL./ SQ. YD.	448 THICKNESS	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
					FT.	FT.	FT.	SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.
1	GUE	S.R. 821	RT.	S.R. 146	55	45	112	479.8	479.8	36.0	1.25	16.7
1	GUE	S.R. 821	LT.	S.R. 146	47	29	118	383.9	383.9	28.8	1.25	13.4
1	**GUE**	**S.R. 146**		**TOTALS**					**863.7**	**64.8**		**30.1**
2	GUE	S.R. 821	LT.	CUMBERLAND RD - TR 328	54	15	68	249.0	249.0	18.7	1.25	8.7
2	GUE	S.R. 821	LT.	PLEASANT RD	70	23	135	614.5	614.5	46.1	1.25	21.4
2	GUE	S.R. 821	LT.	BANNER RD - TR 237	27	18	60	117.0	117.0	8.8	1.25	4.1
2	GUE	S.R. 821	RT.	LINWOOD RD - TR 237	25	16	40	77.8	77.8	5.9	1.25	2.8
2	GUE	S.R. 821	LT.	NOVEMBER LN - TR 2364	20	19	52	78.9	78.9	6.0	1.25	2.8
2	GUE	S.R. 821	LT.	S.R. 313	30	27	80	178.4	178.4	13.4	1.25	6.2
2	GUE	S.R. 821	RT.	S.R. 313	48	25	98	328.0	328.0	24.6	1.25	11.4
2	GUE	S.R. 821	RT.	MILLER RD - TR 2386	30	14	51	108.4	108.4	8.2	1.25	3.8
2	GUE	S.R. 821	RT.	CHESTNUT ST - TR 2388	22	14	40	66.0	66.0	5.0	1.25	2.3
2	GUE	S.R. 821	LT.	ROLLER RD - TR 233	34	16	46	117.2	117.2	8.8	1.25	4.1
2	GUE	S.R. 821	RT.	SENECA LN	44	26	90	283.6	283.6	21.3	1.25	9.9
2	GUE	S.R. 821	LT.	ELEMENTARY SCHOOL DR	30	20	56	126.7	126.7	9.6	1.25	4.4
2	GUE	S.R. 821	LT.	HIGH SCHOOL DR	34	26	73	187.0	187.0	14.1	1.25	6.5
2	GUE	S.R. 821	RT.	HARRY WATSON LN	27	18	50	102.0	102.0	7.7	1.25	3.6
2	GUE	S.R. 821	LT.	LUCASBURG RD	38	27	86	238.6	238.6	17.9	1.25	8.3
2	GUE	S.R. 821	LT.	COUNTRY CLUB RD - CR 345	150	23	220	615.0	615.0	46.2	1.25	21.4
2	**GUE**	**S.R. 821**		**TOTALS**					**3488.1**	**262.3**		**121.7**
3	GUE	S.R. 821	LT.	MEADOWBROOK HEIGHTS	22	18	45	77.0	77.0	5.8	1.25	2.7
3	GUE	S.R. 821	RT.	BARTHALOW LN - TR 3443	28	24	65	138.5	138.5	10.4	1.25	4.9
3	**GUE**	**S.R. 821**		**TOTALS**					**215.5**	**16.2**		**7.6**

CALCULATED LME CHECKED DNM

EXTRA AREAS DATA

GUE-146-9.86
GUE-821-0.00/ 4.20

G146_MEA_001.DGN 4-16-10



DETAIL 1

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)	DETAIL (THIS SHEET)	MAINLINE DEDUCTIONS (CARRIED TO SHEET 4)	SHOULDER DEDUCTIONS (CARRIED TO SHEET 5)	202	407	448	
											WEARING COURSE REMOVED	TACK COAT @ 0.075 GAL./S.Y.	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
		LIN. FT.	LIN. FT.	SQ. YD.	LIN. FT.	LIN. FT.	SQ. YD.		SQ.YD.	SQ.YD.	SQ.YD.	GAL.	INCHES	CU. YD.
1	GUE-146-0988	116	44	567.2	25	24.0	133.4	1	309.3	51.6		42.5	1.25	19.7
	LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)													
2	GUE-821-0010	BOX CULVERT												
2	GUE-821-0076	BOX CULVERT												
2	GUE-821-0186	BOX CULVERT												
2	GUE-821-0388	BOX CULVERT												
2	GUE-821-0490	BOX CULVERT												

CALCULATED LME
CHECKED DNM

BRIDGE DECK TREATMENT

BRIDGE

GUE-146-9.86
GUE-821-0.00/ 4.20

7
14

G146_MBT_001.dgn 4-16-10

ITEM 642 EDGE LINE, TYPE 1

LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY			TOTAL EDGE LINE MILES	REMARKS
						WHITE EDGE LINE QUANTITIES				
			FROM	TO		TOTAL MILES	HIGHWAY MILES	RAMP MILES		
1	GUE	S.R. 146	9.86	9.99	0.13	0.26	0.26		0.26	
LOCATION 1 (TOTAL CARRIED TO SUB-SUMMARY)									**0.26**	
2	GUE	S.R. 821	0.00	0.47	0.47	0.94	0.94		0.94	
2	GUE	S.R. 821	0.60	4.20	3.60	7.20	7.20		7.20	
LOCATION 2 (TOTAL CARRIED TO SUB-SUMMARY)									**8.14**	
3	GUE	S.R. 821	4.20	4.97	0.77	1.54	1.54		1.54	
LOCATION 3 (TOTAL CARRIED TO SUB-SUMMARY)									**1.54**	

ITEM 642 CENTER LINE, TYPE 1

LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH (MILES)	INFORMATION ONLY			TOTAL CENTER LINE MILES	REMARKS
						CENTER LINE QUANTITIES				
			FROM	TO		TOTAL MILES	EQUIVALENT SOLID LINE			
1	GUE	S.R. 146	9.86	9.99	0.13	0.13	0.260		0.13	
LOCATION 1 (TOTAL CARRIED TO SUB-SUMMARY)									**0.13**	
2	GUE	S.R. 821	0.00	0.47	0.47	0.47	0.750		0.47	
2	GUE	S.R. 821	0.60	4.20	3.60	3.60	5.707		3.60	
LOCATION 2 (TOTAL CARRIED TO SUB-SUMMARY)									**4.07**	
3	GUE	S.R. 821	4.20	4.97	0.77	0.77	1.540		0.77	
LOCATION 3 (TOTAL CARRIED TO SUB-SUMMARY)									**0.77**	

CALCULATED LME CHECKED DNM

EDGE/CENTER LINE DATA

GUE-146-9.86
GUE-821-0.00/4.20

G146_PMS_001.DGN 4-16-10

644 THERMOPLASTIC AUXILARY MARKING

LOCATION	COUNTY	ROUTE	SIDE	DESCRIPTION	SLM	TRANSEVERSE/ DIANGONAL LINES (24")		STOP LINE (24")	12" CROSSWALK LINE	8" CHANNELIZING LINE	WORD ON PAVEMENT ONLY		SCHOOL SYMBOL MARKING		LANE ARROW	ISLAND MARKING	RAILROAD MARKING SYMBOL	REMARKS
						WHITE	YELLOW				72"	96"	72"	96"	LEFT			
						FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	SQ. FT.	EACH	
1	GUE	S.R. 146	RT.	S.R. 146				48										PLACE 20' FROM SR 821 CENTER LINE
1	GUE	S.R. 146	LT.	S.R. 146				35										PLACE 30' FROM SR 821 CENTER LINE
1	**GUE**	**S.R. 146**		**TOTALS**				**83**										
2	GUE	S.R. 821	LT.	CUMBERLAND RD - TR 328				16										PLACE 25' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	PLEASANT RD				50										PLACE 19' FROM SR 821 CENTER LINE
2	GUE	S.R. 821		ON S.R. 821	0.91												2	PLACED AS PER STANDARD DRAWING
2	GUE	S.R. 821	LT.	BANNER RD - TR 237				12										PLACE 17' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	LINWOOD RD - TR 237				12										PLACE 19' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	NOVEMBER LN - TR 2364				12										PLACE 16' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	S.R. 313				18										PLACE 23' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	S.R. 313				24										PLACE 19' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	MILLER RD - TR 2386				12										PLACE 13' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	CHESTNUT ST - TR 2388				10										PLACE 14' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	ROLLER RD - TR 233				14										PLACE 14' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	SENECA LN				30										PLACE 17' FROM SR 821 CENTER LINE
2	GUE	S.R. 821		ON S.R. 821	3.76									1				PLACE AS DIRECTED
2	GUE	S.R. 821	LT.	ELEMENTARY SCHOOL DR				14										PLACE 21' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	HIGH SCHOOL DR				25										PLACE 17' FROM SR 821 CENTER LINE
2	GUE	S.R. 821		ON S.R. 821	4.21									1				PLACE AS DIRECTED
2	GUE	S.R. 821	RT.	HARRY WATSON LN				12										PLACE 18' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	LUCASBURG RD				26										PLACE 18' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	COUNTRY CLUB RD - CR 345				10										PLACE AS DIRECTED
2	GUE	S.R. 821	LT.	MEADOWBROOK HEIGHTS				12										PLACE 15' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	BARTHALOW LN - TR 3443				16										PLACE 22' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	S. 7TH ST				13										PLACE 18' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	SOUTH ACRES DR				17										PLACE 18' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	LAKE VIEW DR				15										PLACE AS DIRECTED
2	GUE	S.R. 821	LT.	S. 5TH ST				20										PLACE 20' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	LT.	CARNEGIE ST - TR 4310				10										PLACE AS DIRECTED
2	GUE	S.R. 821	RT.	SOUTH ACRES DR				17										PLACE AS DIRECTED
2	GUE	S.R. 821	LT.	CARNEGIE ST - TR 4310				10										PLACE 16' FROM SR 821 CENTER LINE
2	GUE	S.R. 821	RT.	BROWN AVE				15										PLACE 16' FROM SR 821 CENTER LINE
2	**GUE**	**S.R. 821**		**TOTALS**				**442**						**2**			**2**	
3	GUE	S.R. 821	LT.	MEADOWBROOK HEIGHTS				12										PLACE 15' FROM SR 821 CENTER LINE
3	GUE	S.R. 821	RT.	BARTHALOW LN - TR 3443				16										PLACE 22' FROM SR 821 CENTER LINE
3	**GUE**	**S.R. 821**		**TOTALS**				**28**										

CALCULATED LME CHECKED DNM

AUXILARY MARKING DATA

GUE-146-9.86
GUE-821-0.00/ 4.20

G146_PMS_002.DGN 4-16-10

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 RPM	PRISMATIC RETRO-REFLECTOR COLORS INFORMATION ONLY					REMARKS
									ONE-WAY		TWO-WAY			
					MILES	LIN.FT.		EACH	WHITE	YELLOW	YELLOW YELLOW	WHITE RED	YELLOW RED	
1	GUE	S.R. 146	9.86	9.99	0.13	686	GAP	9			9			OVERLAP ON S.R. 821
	SUB-TOTALS										9			
LOCATION 1 (TOTAL CARRIED TO SUB-SUMMARY)								**9**						
2	GUE	S.R. 821	0.00	0.11	0.11	581	11	15			15			PC 0.00 PT 0.11 L=581' DEG 5
2	GUE	S.R. 821	0.11	0.47	0.36	1,901	GAP	24			24			SLM TO BEGIN S.R. 146 OVERLAP
2	GUE	S.R. 821	0.60	1.78	1.18	6,230	GAP	78			78			END S.R. 146 OVERLAP TO SLM
2	GUE	S.R. 821	1.78	1.94	0.16	845	7	27	16		11			STOP AT S.R. 313
2	GUE	S.R. 821	1.94	2.10	0.16	845	7	27	16		11			STOP AT S.R. 313
2	GUE	S.R. 821	2.10	3.35	1.25	6,600	GAP	83			83			
2	GUE	S.R. 821	3.35	3.43	0.08	422	11	11			11			PC 3.35 PT 3.43 L=422' DEG 7
2	GUE	S.R. 821	3.43	3.49	0.06	317	11	8			8			PC 3.45 PT 3.49 L=211' DEG 6
2	GUE	S.R. 821	3.49	3.84	0.35	1,848	GAP	23			23			
2	GUE	S.R. 821	3.84	3.90	0.06	317	11	8			8			PC 3.84 PT 3.90 L=317' DEG 7
2	GUE	S.R. 821	3.90	4.20	0.30	1,584	GAP	20			20			
	SUB-TOTALS								32		292			
LOCATION 2 (TOTAL CARRIED TO SUB-SUMMARY)								**324**						
3	GUE	S.R. 821	4.20	4.63	0.43	2,270	GAP	28			28			
3	GUE	S.R. 821	4.63	4.68	0.05	264	11	7			7			PC 4.63 PT 4.68 L=264' DEG 6
3	GUE	S.R. 821	4.68	4.97	0.29	1,531	GAP	19			19			END AT SLM 4.97
	SUB-TOTALS										54			
LOCATION 3 (TOTAL CARRIED TO SUB-SUMMARY)								**54**						

CALCULATED LME CHECKED DNM

RAISED PAVEMENT MARKER DATA

GUE-146-9.86
GUE-821-0.00/4.20

G146_TRM_001.DGN 4-16-10

LOCATION 1 - SHEET NUMBERS								ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	4	5	6	7	8	9	10					
			864					202	23500	864	SQ YD	WEARING COURSE REMOVED
	115		65	43				407	10000	223	GALLON	TACK COAT
102								408	10001	102	GALLON	PRIME COAT, AS PER PLAN
	53		31	20				448	46904	104	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
2								614	12460	2	EACH	WORK ZONE MARKING SIGN
								614	13000		CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
	0.13							614	21400	0.13	MILE	WORK ZONE CENTER LINE, CLASS II
		15						617	10101	15	CU YD	COMPACTED AGGREGATE, AS PER PLAN
							9	621	00100	9	EACH	RPM
9								621	54000	9	EACH	RAISED PAVEMENT MARKER REMOVED
					0.26			642	00100	0.26	MILE	EDGE LINE, TYPE 1
					0.13			642	00300	0.13	MILE	CENTER LINE, TYPE 1
						83		644	00500	83	FT	STOP LINE

CALCULATED LME CHECKED DNM

LOCATION 1 SUB-SUMMARY

GUE-146-9.86
GUE-821-0.00/ 4.20

G146_LSS_001.DGN 4-21-10

LOCATION 2 - SHEET NUMBERS								ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	6	8	9	10					
331				3,489				202	23500	3,820	SQ YD	WEARING COURSE REMOVED
	4							209	60500	4	MILE	LINEAR GRADING
		3,968	18	263				407	10000	4,249	GALLON	TACK COAT
3,821								408	10001	3,821	GALLON	PRIME COAT, AS PER PLAN
	41	1,837	4	122				448	46904	2,004	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
52								614	12460	52	EACH	WORK ZONE MARKING SIGN
0.9								614	13000	0.9	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		4.07						614	21400	4.07	MILE	WORK ZONE CENTER LINE, CLASS II
			523					617	10101	523	CU YD	COMPACTED AGGREGATE, AS PER PLAN
							324	621	00100	324	EACH	RPM
324								621	54000	324	EACH	RAISED PAVEMENT MARKER REMOVED
					8.14			642	00100	8.14	MILE	EDGE LINE, TYPE 1
					4.07			642	00300	4.07	MILE	CENTER LINE, TYPE 1
						442		644	00500	442	FT	STOP LINE
						2		644	01000	2	EACH	RAILROAD SYMBOL MARKING
						2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"

CALCULATED LME CHECKED DNM

LOCATION 2 SUB-SUMMARY

GUE-146-9.86
GUE-821-0.00/ 4.20

G146_LSS_002.DGN 4-21-10

LOCATION 3 - SHEET NUMBERS								ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
2	3	4	5	6	8	9	10					
107				216				202	23500	323	SQ YD	WEARING COURSE REMOVED
	1							209	60500	1	MILE	LINEAR GRADING
		746		17				407	10000	763	GALLON	TACK COAT
723								408	10001	723	GALLON	PRIME COAT, AS PER PLAN
	10	346		8				448	46904	364	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M
8								614	12460	8	EACH	WORK ZONE MARKING SIGN
0.3								614	13000	0.3	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
		0.77						614	21400	0.77	MILE	WORK ZONE CENTER LINE, CLASS II
			101					617	10101	101	CU YD	COMPACTED AGGREGATE, AS PER PLAN
							54	621	00100	54	EACH	RPM
54								621	54000	54	EACH	RAISED PAVEMENT MARKER REMOVED
					1.54			642	00100	1.54	MILE	EDGE LINE, TYPE 1
					0.77			642	00300	0.77	MILE	CENTER LINE, TYPE 1
						28		644	00500	28	FT	STOP LINE

CALCULATED LME CHECKED DNM

LOCATION 3 SUB-SUMMARY

GUE-146-9.86
GUE-821-0.00/ 4.20

13
14

G146_LSS_003.DGN 4-21-10

LOCATIONS			80% FED / 20% STATE RURAL	80% FED / 20% STATE URBAN	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
1	2	3								
864	3,820	323	4,684	323	202	23500	5,007	SQ YD	WEARING COURSE REMOVED	
	4	1	4	1	209	60500	5	MILE	LINEAR GRADING	
223	4,249	763	4,472	763	407	10000	5,235	GALLON	TACK COAT	
102	3,821	723	3,923	723	408	10001	4,646	GALLON	PRIME COAT, AS PER PLAN	2
104	2,004	364	2,108	364	448	46904	2,472	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M	
2	52	8	54	8	614	12460	62	EACH	WORK ZONE MARKING SIGN	
	1.0	1.0	1.0	1.0	614	13000	2.0	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
0.13	4.07	0.77	4.20	0.77	614	21400	4.97	MILE	WORK ZONE CENTER LINE, CLASS II	
15	523	101	538	101	617	10101	639	CU YD	COMPACTED AGGREGATE, AS PER PLAN	2
9	324	54	333	54	621	00100	387	EACH	RPM	
9	324	54	333	54	621	54000	387	EACH	RAISED PAVEMENT MARKER REMOVED	
0.26	8.14	1.54	8.40	1.54	642	00100	9.94	MILE	EDGE LINE, TYPE 1	
0.13	4.07	0.77	4.20	0.77	642	00300	4.97	MILE	CENTER LINE, TYPE 1	
83	442	28	525	28	644	00500	553	FT	STOP LINE	
	2		2		644	01000	2	EACH	RAILROAD SYMBOL MARKING	
	2		2		644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
					103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
					614	11000	LUMP		MAINTAINING TRAFFIC	
					623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
					624	10000	LUMP		MOBILIZATION	

CALCULATED LME
CHECKED DNM

GENERAL SUMMARY

GUE-146-9.86
GUE-821-0.00/ 4.20

G146_MGS_001.DGN 4-22-10