

**ADDENDUM #1**

**April 6, 2012**

**Jackson Township – Mile Road Improvements Phase 1 Project  
Jackson Township, Montgomery County, Ohio**

The following additions or modifications to the specifications for the Mile Road Improvements Phase 1 project shall become a part thereof. Where these items differ from the original specifications, THIS shall govern.

See attached revised plan sheets reflecting changes to quantities and specifications.

Please acknowledge receipt of Addendum #1 by signing in the space provided below and fax back a copy of the signed acknowledgement to Kramer & Associates, attn: Mindy Harry, (937) 456-6912.

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I have received Addendum #1 for the Jackson Township – Mile Road Improvements Phase 1 project.

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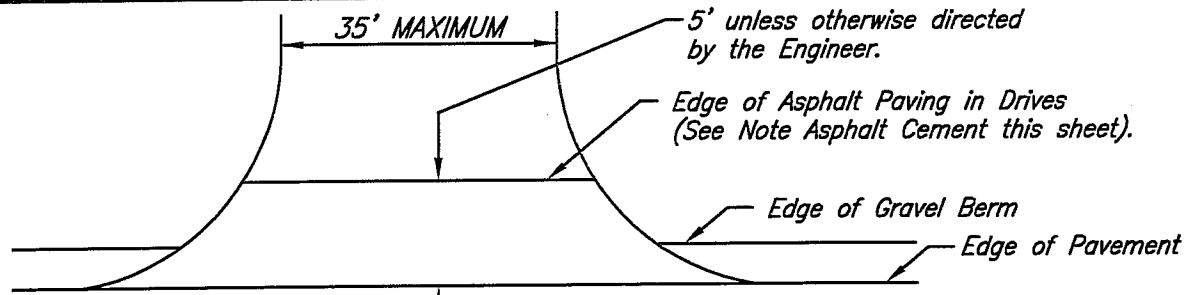
Signature

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Company Name

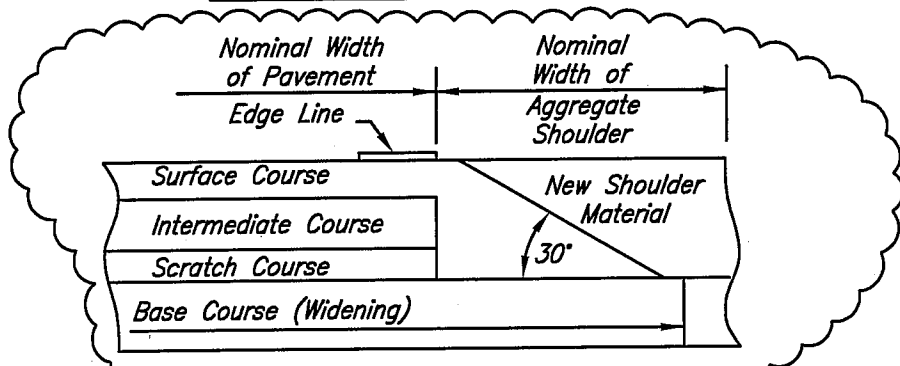
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Date



Gravel and Asphalt Driveway approaches are to be regraded, primed and paved, as directed by the Engineer. On Concrete Driveway Approaches Contractor is to pave only to the existing edge of concrete. Payment for the grading shall be included in the unit price bid for item 209, Linear Grading.

**DRIVEWAY DETAIL**



In addition to the requirements of 401.12, attach a device to the paver screed that confines the material at the end gate and extrudes the asphalt material in such a way that results in a compacted wedge shape pavement edge of approximately 30 degrees (not steeper than 35 degrees). Maintain contact between the device and the road shoulder surface, and allow for automatic transition to cross roads, driveways and obstructions. Use the device to constrain the asphalt head reducing the area by 10% to 15% increasing the density of the extruded profile. Do not use conventional single plate strike off.

Use the Transtech Shoulder Wedge Maker, or the Advant-Edger, or an approved equal device that produces the same wedge consolidation results. Contact information for these wedge shape compaction devices is the following:

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

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

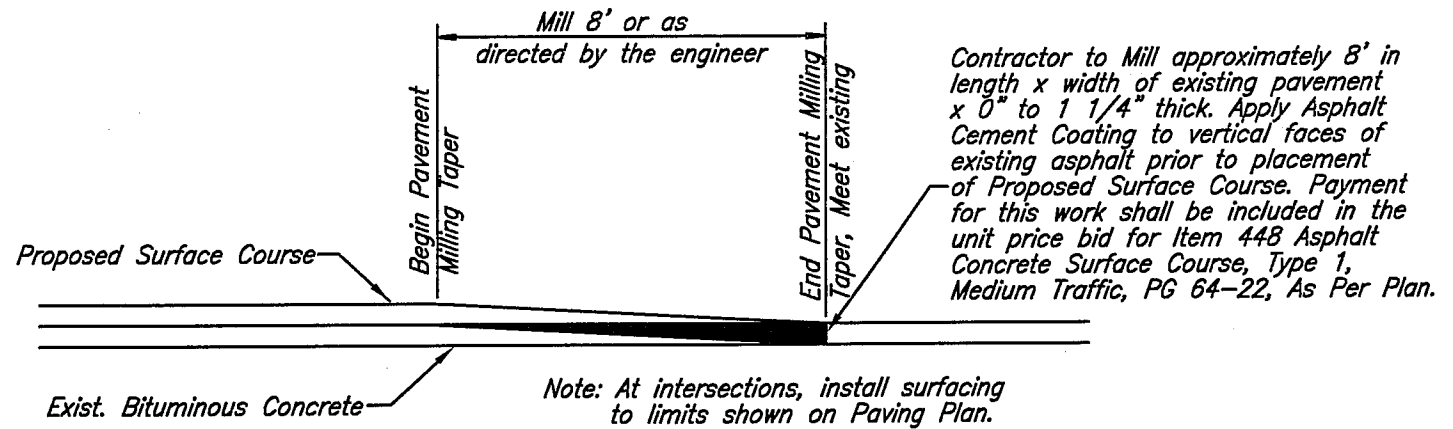
Equal device approval: provide proof that the device has been used on previous projects with acceptable results or construct a test section prior to the beginning of work and demonstrate wedge compaction to the satisfaction of the project engineer. Short sections of handwork will be allowed when necessary for transitions and turnouts or otherwise authorized by the engineer. The engineer must be notified when construction is to begin, so the treatment can be observed.

In addition to the requirements of 401.16, the first rolling pass on the freshly laid road should be made with the roller drum 8" to 12" away from the tapered edge of the lane. This will ensure that the tapered edge will not roll up due to outward pressure from the first pass. The roller should be driven straight up to the back of the paver and reversed without turning the roller so as to keep a constant distance from the edge. This should be done in vibratory mode.

Do not roll the taper. Attempting to roll the taper can result in damaging or destroying the taper area.

All work, materials, labor and equipment to complete the above described work shall be incidental to the placement and included in the cost of Item 448 Asphalt Concrete Surface Course, Type 1, Medium Traffic, PG 64-22, As Per Plan.

**ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, MEDIUM TRAFFIC, PG 64-22, AS PER PLAN (SAFETY EDGE TREATMENT)**



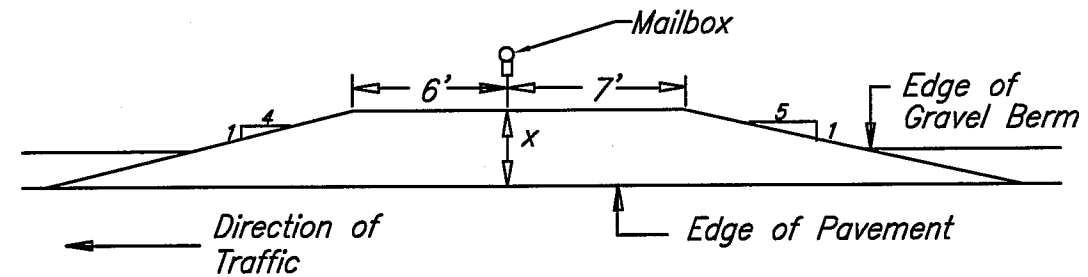
Contractor to Mill approximately 8' in length x width of existing pavement x 0" to 1 1/4" thick. Apply Asphalt Cement Coating to vertical faces of existing asphalt prior to placement of Proposed Surface Course. Payment for this work shall be included in the unit price bid for Item 448 Asphalt Concrete Surface Course, Type 1, Medium Traffic, PG 64-22, As Per Plan.

**TYPICAL SECTION AT BEGINNING AND END OF RESURFACING WITH EXISTING PAVEMENT**

**Asphalt Cement Sealer Strip**

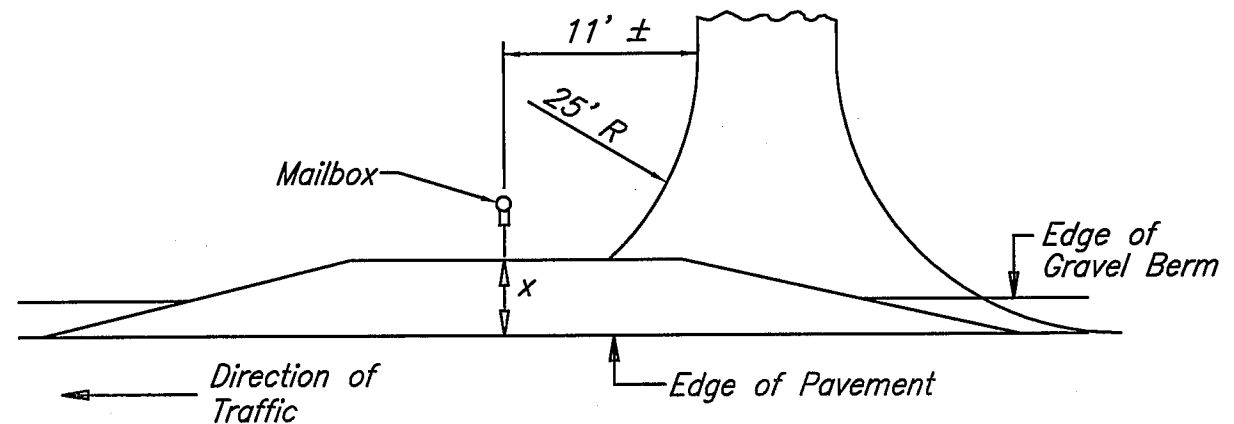
After completion of the asphalt surface course, all edges of asphalt at all drives shall be sealed with asphalt cement as directed by the engineer. The material shall be applied a uniform width of approximately 4", and at a rate sufficient to fill surface voids.

Payment for this work shall be included in the unit price bid for Item 448 Asphalt Concrete Surface Course, Type 1, Medium Traffic, PG 64-22, As Per Plan.



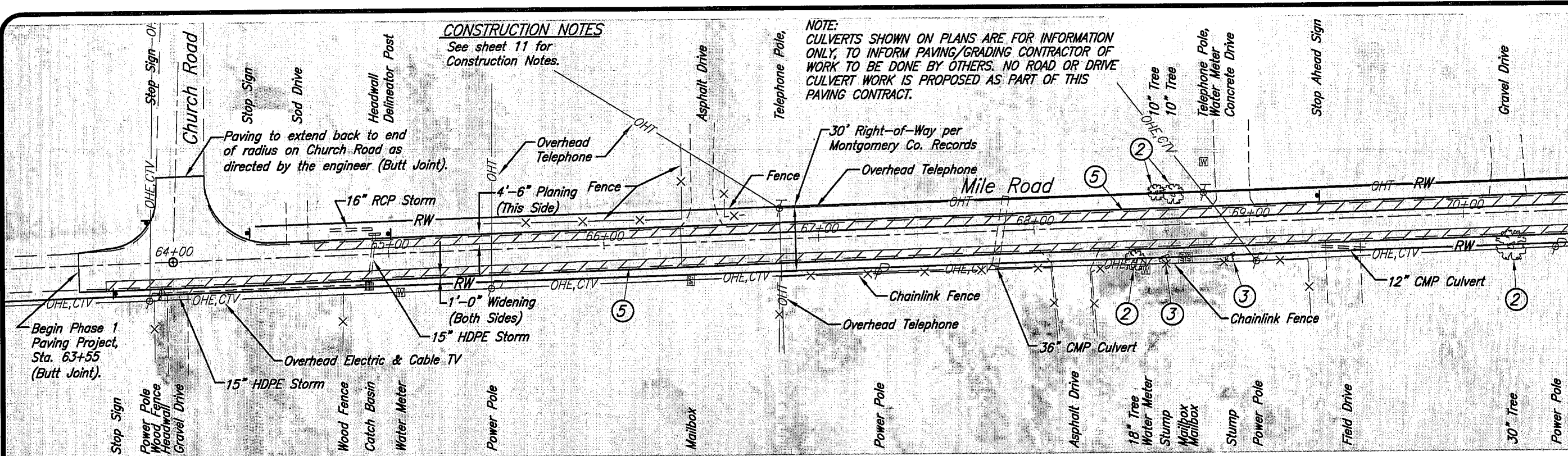
x = Edge of pavement to face of mailbox minus 1' with 6' maximum

**MAILBOX DETAIL**



**COMBINED DRIVEWAY & MAILBOX APPROACH DETAIL**

Mile Road Phase 1		Widening and Resurfacing		Paving Details	
Jackson Township Trustees		316 W. Walnut Street		Farmersville, Ohio 45325	
KRAMER & ASSOCIATES, LLC		Surveyors, Engineers, & Design Consultants		100 N. Perry St., Etna, Ohio 43021 (614) 655-8112	
Project No. 10-042	Date 01-31-12	Drawn By MPT	Checked By PMH	Revision No. B-1415	Sheet 2 of 20

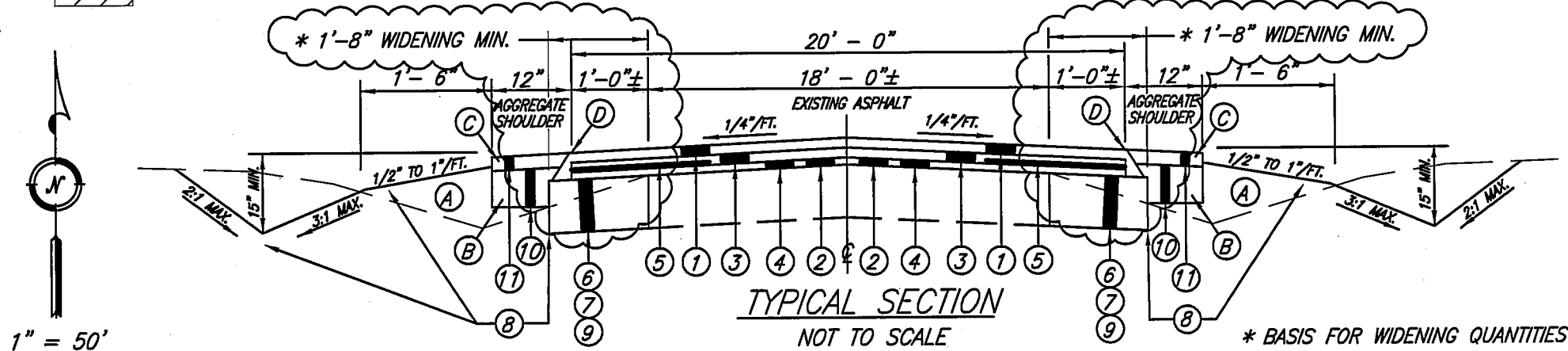


**CONSTRUCTION NOTES**  
See sheet 11 for Construction Notes.

**NOTE:**  
CULVERTS SHOWN ON PLANS ARE FOR INFORMATION ONLY, TO INFORM PAVING/GRADING CONTRACTOR OF WORK TO BE DONE BY OTHERS. NO ROAD OR DRIVE CULVERT WORK IS PROPOSED AS PART OF THIS PAVING CONTRACT.

- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
- (B) CUT OUT AND PLACEMENT OF 304 COMPACTED AGGREGATE SHOULDER AT FULL MINIMUM THICKNESS AND WIDTH PER TYPICAL SECTION, AFTER COMPLETION OF INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE.
- (C) 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- (D) CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.

= PLACEMENT OF INTERLAYER PAVEMENT REINFORCEMENT MATERIAL



**PAVEMENT DATA**

STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.	PROPOSED WIDTH SURFACE FEET	PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT														
									(4) 407 TACK COAT @ 0.075 gal./s.y.	(3) 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU.YDS.	(4) 407 TACK COAT @ 0.075 gal./s.y.	(2) 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU.YDS.	(1) 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU.YDS.	(5) SPEC INTERLAYER PAVEMENT REINFORCEMENT MATERIAL SQ. YDS.	(6) 203 EXCAVATION FOR BASE WIDENING 6" CU. YDS.	(7) 204 SUBGRADE COMPACTION FOR BASE WIDENING SQ. YDS.	(8) 209 LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT MILES	(9) 301 ASPHALT CONCRETE BASE WIDENING 6" THICK CU. YDS.	(10) 304 COMPACTED AGGREGATE SHOULDER BASE 8" AVG. THK. 6" MIN. THK. CU. YDS.	(11) 411 STABILIZED CRUSHED AGGREGATE AS PER PLAN 2" AVG. THK. FINAL TOP CU. YDS.			
63+55	64+48	93	—	297	—	19	—	316	24	1 3/4	15	24	3/4	7	1	9	44	6	35	0.04	7	5	1
64+48	70+50	602	18	1204	2	134	20	1338	100	1 3/4	65	100	3/4	28	1	37	659	37	224	0.23	37	30	8
7 DRIVES	128' x 5'	—	—	—	—	—	—	71	5	1 3/4	4	—	—	—	—	—	—	—	—	—	—	—	—
	128' x 10'	—	—	—	—	—	—	142	—	—	—	11	—	—	1	4	—	—	—	—	—	—	—
<b>TOTALS</b>		<b>695</b>						<b>1867</b>	<b>129</b>		<b>84</b>	<b>135</b>		<b>35</b>		<b>50</b>	<b>703</b>	<b>43</b>	<b>259</b>	<b>0.27</b>	<b>43</b>	<b>35</b>	<b>9</b>

QUANTITIES CARRIED TO GENERAL SUMMARY

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Match Line Sta. 70+50 See Sheet 5

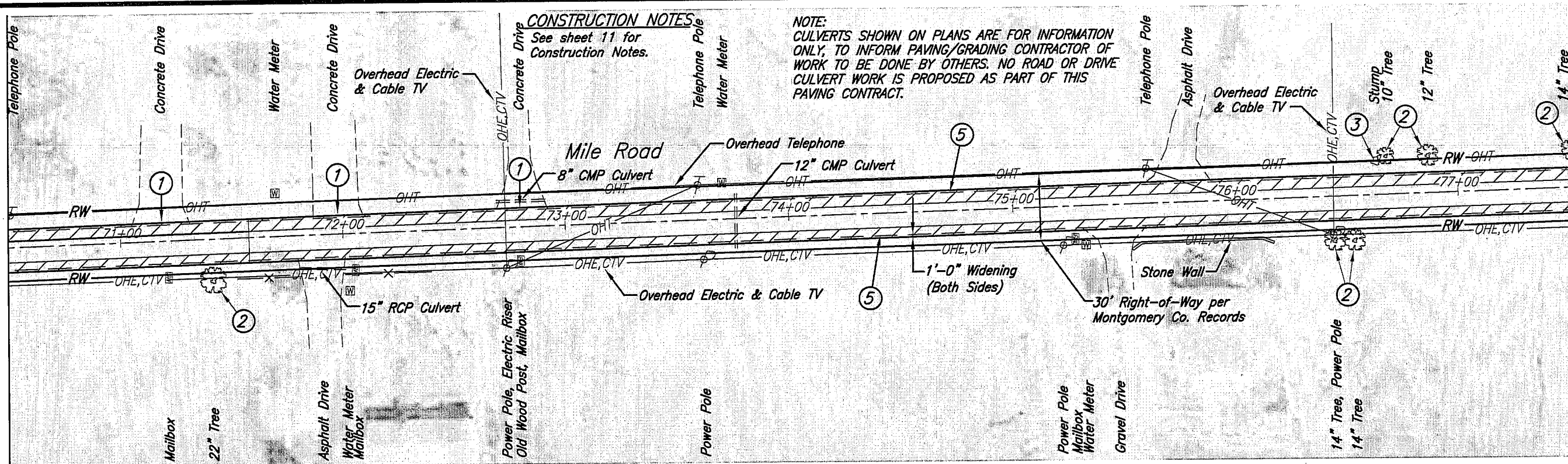
**Mile Road Phase 1**  
Widening and Resurfacing

Plan & Section  
Sta. 63+50 to Sta. 70+50

**KRAMER & ASSOCIATES, LLC**  
Engineers, Design Consultants  
316 W. Walnut Street  
Farmersville, Ohio 45325  
(614) 452-2800

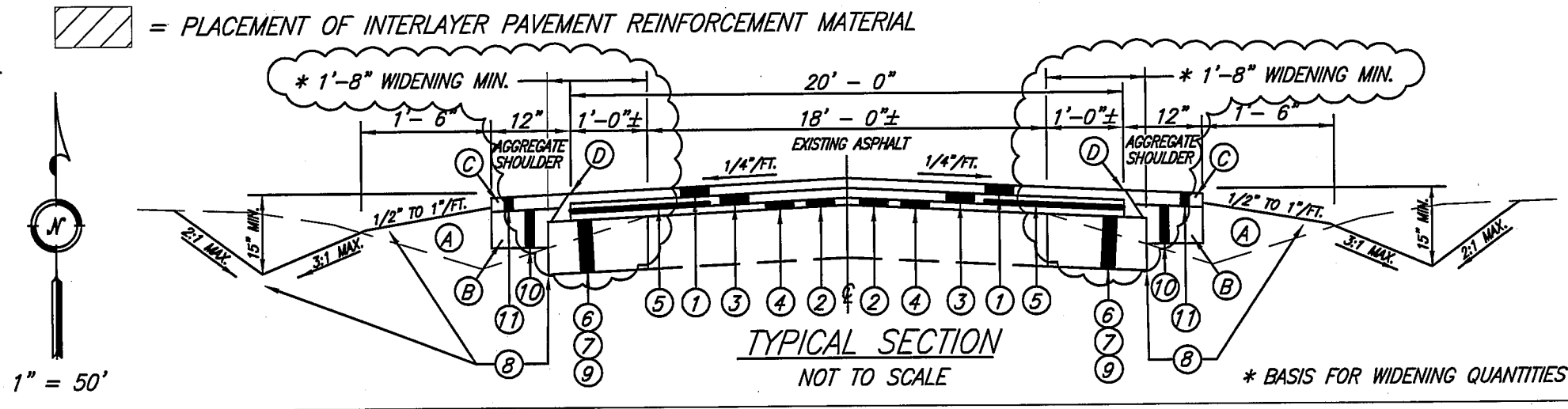
Project No. 10-042  
Date 01-31-12  
Drawn By MPT  
Checked By PMH  
Drawing No. B-1417

Match Line Sta. 70+50 See Sheet 4



Match Line Sta. 77+50 See Sheet 6

- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
- (B) CUT OUT AND PLACEMENT OF 304 COMPACTED AGGREGATE SHOULDER AT FULL MINIMUM THICKNESS AND WIDTH PER TYPICAL SECTION, AFTER COMPLETION OF INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE.
- (C) 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- (D) CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.



PAVEMENT DATA

STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.	PROPOSED WIDTH SURFACE FEET	PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT														
									(4) 407 TACK COAT @ 0.075 gal./s.y. GALS.	(3) 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU.YDS.	(4) 407 TACK COAT @ 0.075 gal./s.y. GALS.	(2) 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU.YDS.	(1) 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU.YDS.	(5) SPEC. INTERLAYER PAVEMENT REINFORCEMENT MATERIAL SQ. YDS.	(6) 203 EXCAVATION FOR BASE WIDENING 6\"/>								
70+50	77+50	700	18	1400	2	156	20	1556	117	1 3/4	76	117	3/4	32	1	43	778	43	260	0.27	43	35	9
6 DRIVES	152' x 5' 152' x 10'							85 170	6 13	1 3/4	4				1	5							
TOTALS		700						1811	123		80	130		32		48	778	43	260	0.27	43	35	9

QUANTITIES CARRIED TO GENERAL SUMMARY

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**Mile Road Phase 1**  
Widening and Resurfacing

**Plan & Section**  
Sta. 70+50 to Sta. 77+50

Jackson Township Trustees  
316 W. Walnut Street  
Farmersville, Ohio 45329

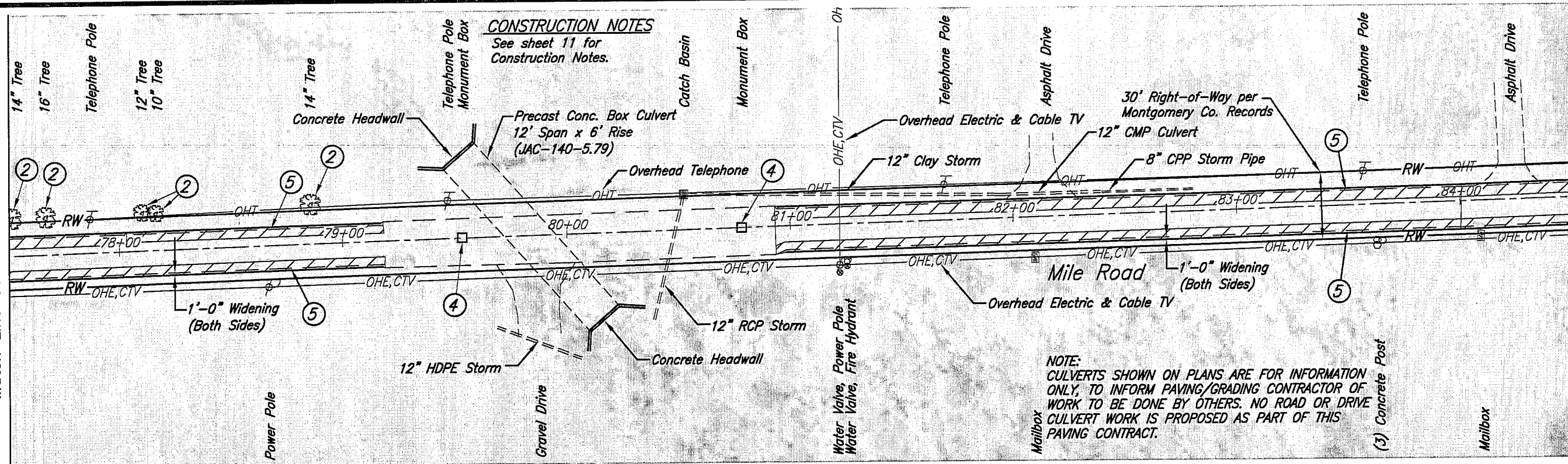
**KRAMER & ASSOCIATES, LLC**  
Engineers, & Design Consultants  
101 W. Main St., 2nd Floor, Columbus, OH 43260  
(614) 461-1117

Project No. 10-042  
Date 01-31-12  
Drawn by MPT  
Checked by PMH  
Quantity by B-1418

Sheet 5 of 20

Match Line Sta. 77+50 See Sheet 5

Match Line Sta. 84+50 See Sheet 7

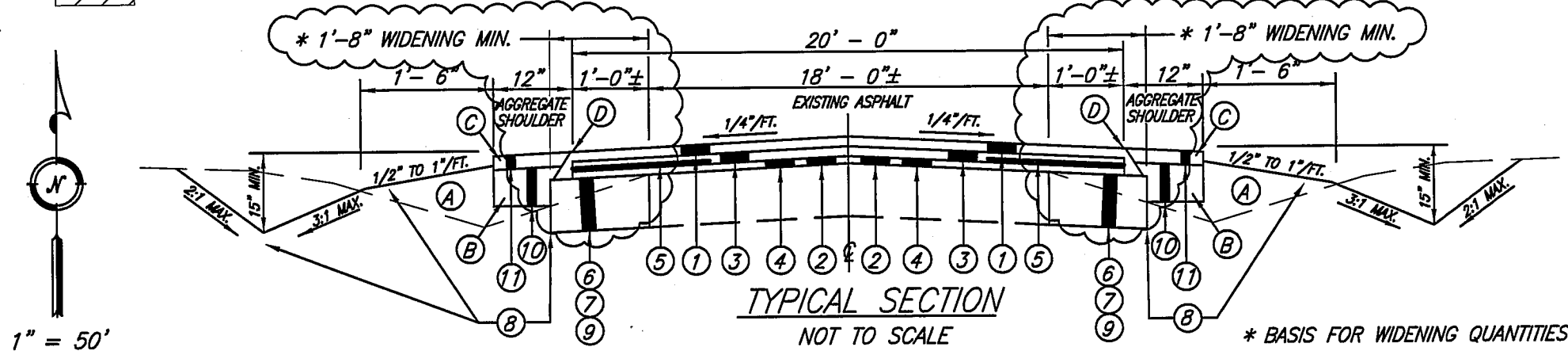


**CONSTRUCTION NOTES**  
See sheet 11 for Construction Notes.

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PAVEMENT DATA

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77+50	79+19	169	18	338	2	38	20	376	28	1 3/4	18	28	3/4	8	1	10	188	11	62	0.06	11	8	2
79+19	80+93	174	20	---	---	---	20	387	---	---	---	29	---	---	1	11	---	---	---	0.07	---	9	2
80+93	84+50	357	18	714	2	79	20	793	60	1 3/4	39	60	3/4	17	1	22	397	22	132	0.14	22	18	5
2 DRIVES	65' x 5'	---	---	---	---	---	---	36	3	1 3/4	2	---	---	---	---	---	---	---	---	---	---	---	---
	65' x 10'	---	---	---	---	---	---	72	---	---	---	5	---	---	1	2	---	---	---	---	---	---	---
TOTALS		700						1664	91		59	122		25		45	585	33	194	0.27	33	35	9

QUANTITIES CARRIED TO GENERAL SUMMARY

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**Mile Road Phase 1**  
Widening and Resurfacing  
Plan & Section  
Sta. 77+50 to Sta. 84+50

Jackson Township Trustees  
316 W. Walnut Street  
Farmersville, Ohio 45325

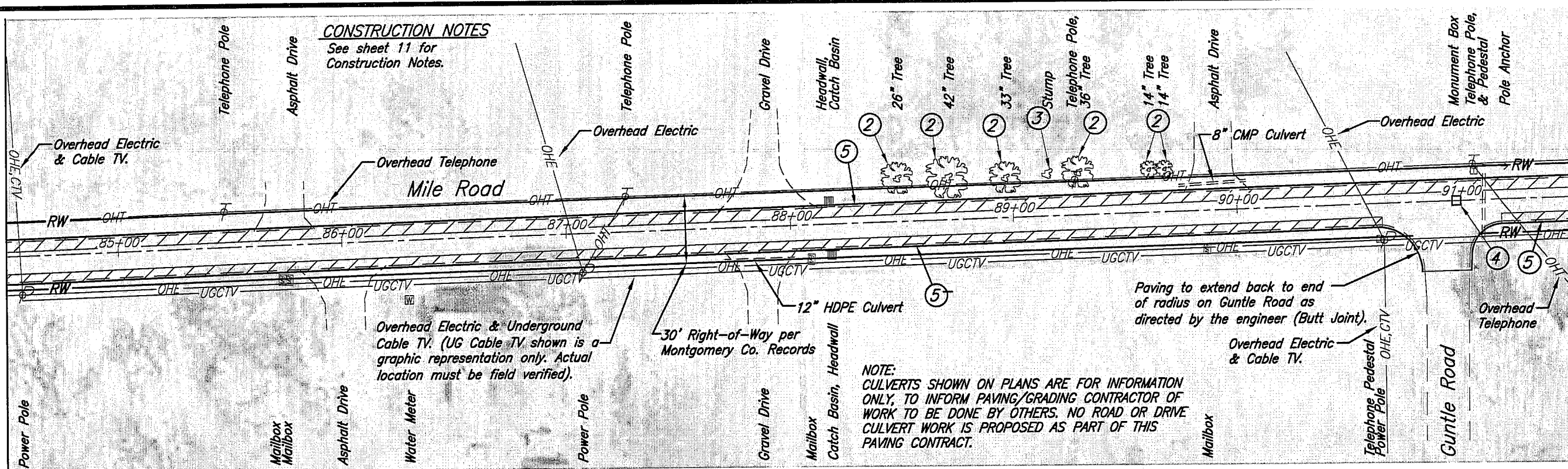
**KRAMER & ASSOCIATES, LLC**  
Surveyors, Engineers, & Design Consultants  
1000 Chester Blvd., Jackson, OH 45325  
(614) 885-3333

Project No. 10-042  
Date 01-31-12  
Drawn By MPT  
Checked By PMH  
Drawing No. B-1419

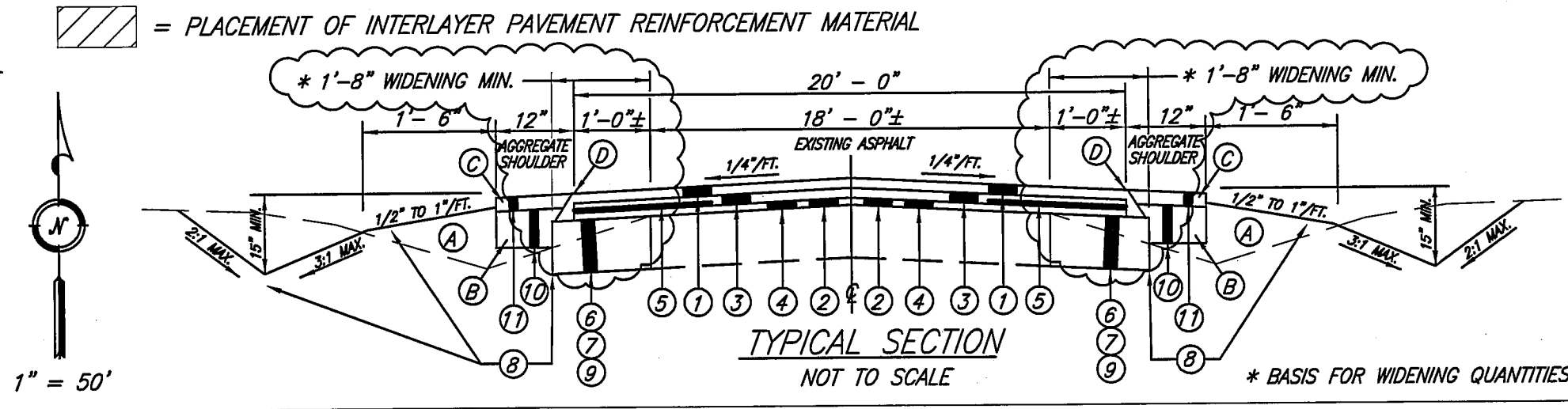
Sheet 6 of 20

Match Line Sta. 84+50 See Sheet 6

Match Line Sta. 91+50 See Sheet 8



- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
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- (C) 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- (D) CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.



STATION		LENGTH	EXISTING WIDTH SURFACE		PROPOSED WIDENING SURFACE		PROPOSED WIDTH SURFACE		PAVEMENT AREA SURFACE		PROPOSED PAVEMENT		SURFACE COURSE		INTERLAYER PAVEMENT REINFORCEMENT MATERIAL		EXCAVATION FOR BASE WIDENING		SUBGRADE COMPACTION FOR BASE WIDENING		LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT		ASPHALT CONCRETE BASE WIDENING		COMPACTED AGGREGATE SHOULDER		STABILIZED CRUSHED AGGREGATE	
STATION	STATION	LIN. FT.	FEET AVERAGE	SQ. YDS.	FEET AVERAGE	SQ. YDS.	FEET	SQ. YDS. TOTAL	TACK COAT @ 0.075 gal./s.y.	INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22	TACK COAT @ 0.075 gal./s.y.	INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH)	THICK INCHES AVE.	CU.YDS.	THICK INCHES AVE.	CU.YDS.	SQ. YDS.	CU. YDS.	SQ. YDS.	MILES	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	
84+50	90+64	614	18	1228	2	136	20	1364	102	1 3/4	66	102	3/4	28	1	38	682	38	228	0.24	38	30	8					
90+64	91+18	54	—	174	—	17	—	191	14	1 3/4	9	14	3/4	4	1	5	30	4	20	0.02	4	3	1					
91+18	91+50	32	18	64	2	7	20	71	5	1 3/4	4	5	3/4	2	1	2	36	2	12	0.01	2	2	1					
5 DRIVES	173' x 5'	—	—	—	—	—	—	96	7	1 3/4	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	173' x 10'	—	—	—	—	—	—	192	—	—	—	—	—	—	1	5	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS		700						1914	128		84	135		34		50	748	44	260	0.27	44	35	10					

QUANTITIES CARRIED TO GENERAL SUMMARY

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**KRAMER & ASSOCIATES, LLC**  
 Engineers, Architects, & Design Consultants  
 316 W. Walnut Street  
 Farmersville, Ohio 45325  
 (614) 877-6500

**Mile Road Phase 1**  
 Widening and Resurfacing  
 Plan & Section  
 Sta. 84+50 to Sta. 91+50

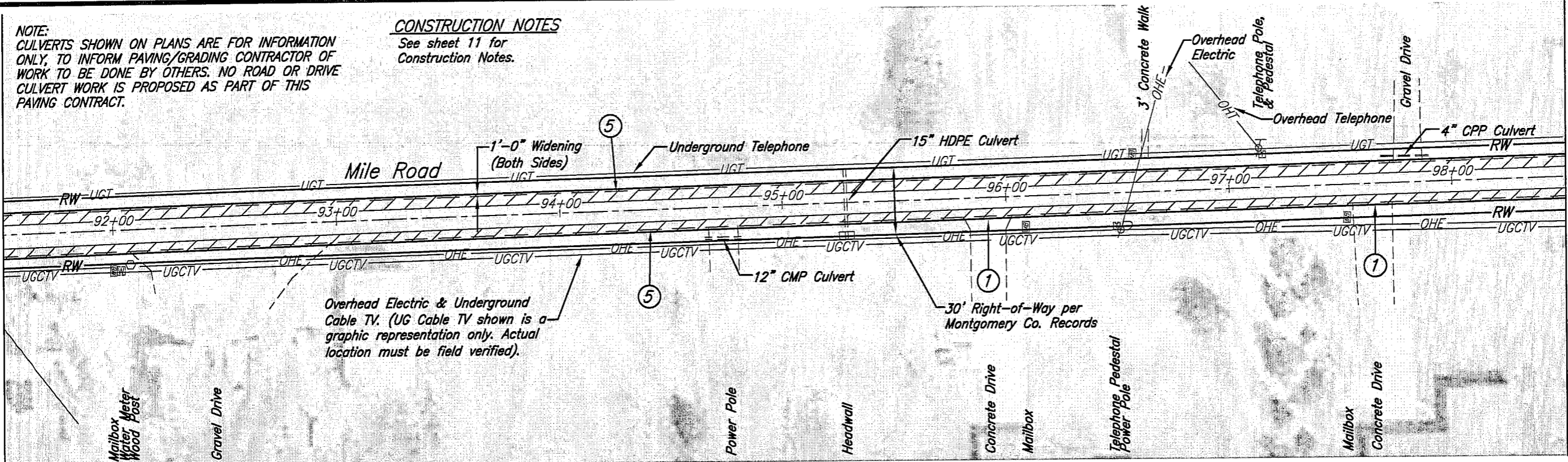
Project No. 10-042  
 Date 01-31-12  
 Drawn By MPT  
 Checked By PMH  
 Drawing No. B-1420

7 of 20

Match Line Sta. 91+50 See Sheet 7

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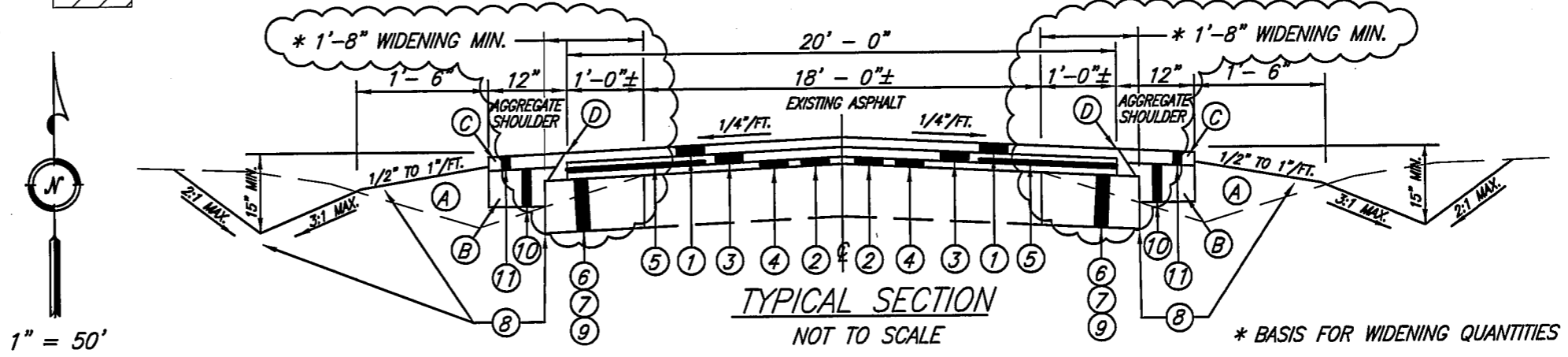
CONSTRUCTION NOTES  
See sheet 11 for Construction Notes.



Match Line Sta. 98+50 See Sheet 9

- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
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= PLACEMENT OF INTERLAYER PAVEMENT REINFORCEMENT MATERIAL



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STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.	PROPOSED WIDTH SURFACE FEET	PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT						(5) SPEC INTERLAYER PAVEMENT REINFORCEMENT MATERIAL SQ. YDS.	(6) 203 EXCAVATION FOR BASE WIDENING 6" CU. YDS.	(7) 204 SUBGRADE COMPACTION FOR BASE WIDENING SQ. YDS.	(8) 209 LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT MILES	(9) 301 ASPHALT CONCRETE BASE WIDENING 6" THICK CU. YDS.	(10) 304 COMPACTED AGGREGATE SHOULDER BASE 8" AVG. THK. 6" MIN. THK. CU. YDS.	(11) 411 STABILIZED CRUSHED AGGREGATE AS PER PLAN 2" AVG. THK. FINAL TOP CU. YDS.			
									(4) 407 TACK COAT @ 0.075 gal./s.y. GALS.	(3) 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU. YDS.	(4) 407 TACK COAT @ 0.075 gal./s.y. GALS.	(2) 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU. YDS.	(1) 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU. YDS.											
91+50	98+50	700	18	1400	2	156	20	1556	117	1 3/4	76	117	3/4	32	1	43	778	43	260	0.27	43	35	9	
5 DRIVES	156' x 5'							87	7	1 3/4	4	13			1	5								
	156' x 10'							174																
TOTALS		700						1817	124		80	130		32		48	778	43	260	0.27	43	35	9	

QUANTITIES CARRIED TO GENERAL SUMMARY

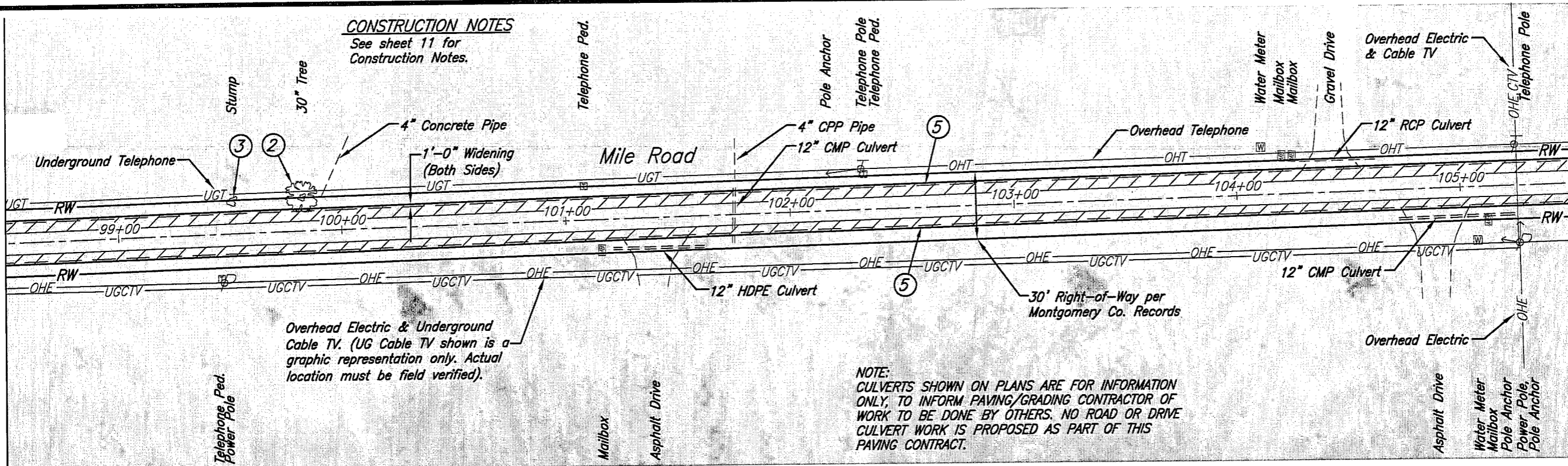
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**KRAMER & ASSOCIATES, LLC**  
 Surveyors, Engineers, & Design Consultants  
 2200 Chester Ave., Jackson, Ohio 45325  
 (614) 885-2800  
 Fax: (614) 885-2801

**Mile Road Phase 1**  
 Widening and Resurfacing  
 Plan & Section  
 Sta. 91+50 to Sta. 98+50

Project No. 10-042  
 Date 01-31-12  
 Drawn By MPT  
 Checked By PMH  
 Drawing No. B-1421  
 Sheet 8 of 20

Match Line Sta. 98+50 See Sheet 8



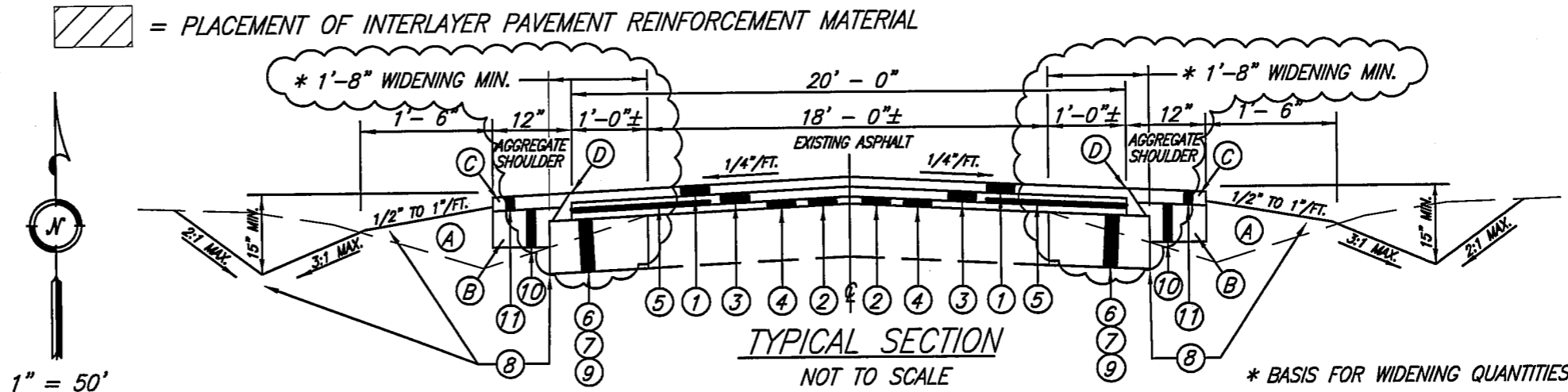
**CONSTRUCTION NOTES**  
See sheet 11 for Construction Notes.

Overhead Electric & Underground Cable TV. (UG Cable TV shown is a graphic representation only. Actual location must be field verified).

NOTE: CULVERTS SHOWN ON PLANS ARE FOR INFORMATION ONLY, TO INFORM PAVING/GRADING CONTRACTOR OF WORK TO BE DONE BY OTHERS. NO ROAD OR DRIVE CULVERT WORK IS PROPOSED AS PART OF THIS PAVING CONTRACT.

Match Line Sta. 105+50 See Sheet 10

- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
- (B) CUT OUT AND PLACEMENT OF 304 COMPACTED AGGREGATE SHOULDER AT FULL MINIMUM THICKNESS AND WIDTH PER TYPICAL SECTION, AFTER COMPLETION OF INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE.
- (C) 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- (D) CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.



PAVEMENT DATA

STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.	PROPOSED WIDTH SURFACE FEET	PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT														
									(4) 407 TACK COAT @ 0.075 gal./s.y.	(3) 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU.YDS.	(4) 407 TACK COAT @ 0.075 gal./s.y.	(2) 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU.YDS.	(1) 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU.YDS.	(5) SPEC. INTERLAYER PAVEMENT REINFORCEMENT MATERIAL	(6) 203 EXCAVATION FOR BASE WIDENING 6"	(7) 204 SUBGRADE COMPACTION FOR BASE WIDENING	(8) 209 LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT MILES	(9) 301 ASPHALT CONCRETE BASE WIDENING 6" THICK CU. YDS.	(10) 304 COMPACTED AGGREGATE SHOULDER BASE 8" AVG. THK. 6" MIN. THK. CU. YDS.	(11) 411 STABILIZED CRUSHED AGGREGATE AS PER PLAN 2" AVG. THK. FINAL TOP CU. YDS.			
98+50	105+50	700	18	1400	2	156	20	1556	117	1 3/4	76	117	3/4	32	1	43	778	43	260	0.27	43	35	9
3 DRIVES	87' x 5' 87' x 10'							48 97	4 7	1 3/4	2				1	3							
TOTALS		700						1701	121		78	124		32		46	778	43	260	0.27	43	35	9

QUANTITIES CARRIED TO GENERAL SUMMARY

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**Mile Road Phase 1**  
Widening and Resurfacing

**Plan & Section**  
Sta. 98+50 to Sta. 105+50

Jackson Township Trustees  
316 W. Walnut Street  
Farmersville, Ohio 45325

**KRAMER & ASSOCIATES, LLC**  
Design Consultants  
10000 State Rd. #100, Columbus, OH 43240  
(614) 881-1100

Project No. 10-042  
Date 01-31-12  
Drawn by MPT  
Checked by PMH  
Drawing No. B-1422

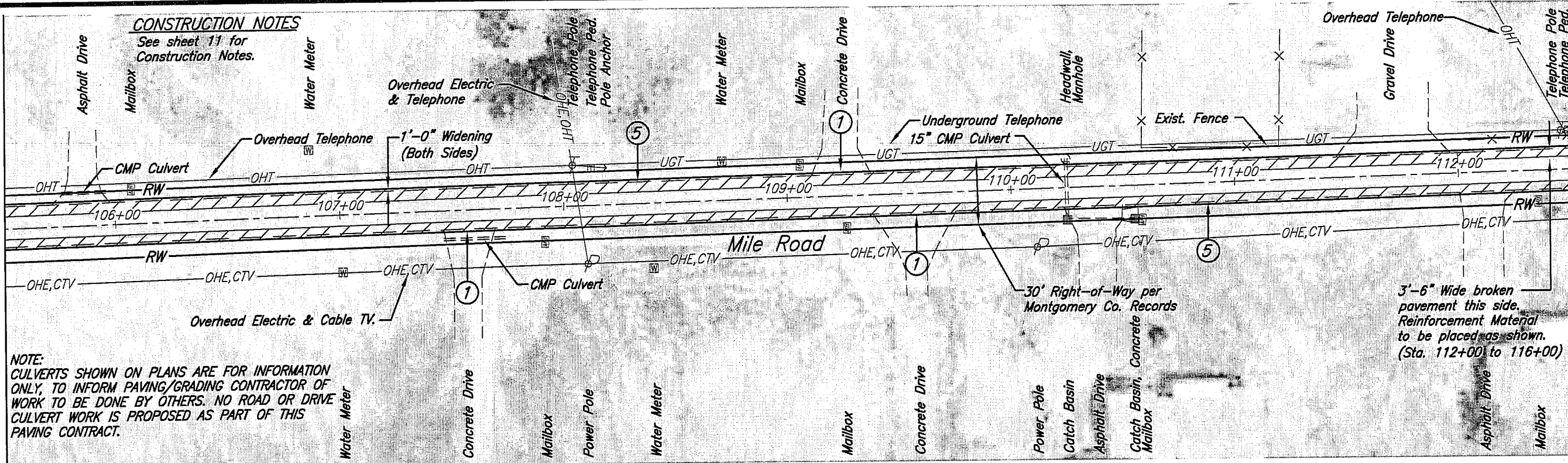
Revision  
1 4-6-12 Revised Per Montgomery County Review MPT  
No. Date

9 of 20



Match Line Sta. 105+50 See Sheet 9

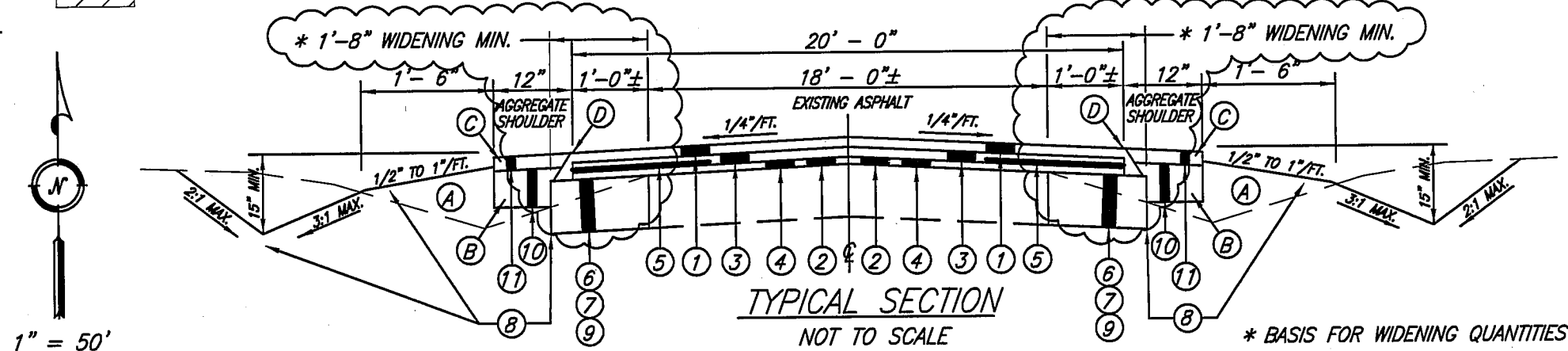
Match Line Sta. 112+50 See Sheet 11



NOTE: CULVERTS SHOWN ON PLANS ARE FOR INFORMATION ONLY, TO INFORM PAVING/GRADING CONTRACTOR OF WORK TO BE DONE BY OTHERS. NO ROAD OR DRIVE CULVERT WORK IS PROPOSED AS PART OF THIS PAVING CONTRACT.

- (A) CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
- (B) CUT OUT AND PLACEMENT OF 304 COMPACTED AGGREGATE SHOULDER AT FULL MINIMUM THICKNESS AND WIDTH PER TYPICAL SECTION, AFTER COMPLETION OF INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE.
- (C) 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- (D) CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.

= PLACEMENT OF INTERLAYER PAVEMENT REINFORCEMENT MATERIAL



PAVEMENT DATA

STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.	PROPOSED WIDTH SURFACE FEET	PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT														
									(4) 407 TACK COAT @ 0.075 gal./s.y.	(3) 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU.YDS.	(4) 407 TACK COAT @ 0.075 gal./s.y.	(2) 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU.YDS.	(1) 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU.YDS.	(5) SPES INTERLAYER PAVEMENT REINFORCEMENT MATERIAL SQ. YDS.	(6) 203 EXCAVATION FOR BASE WIDENING 6" CU. YDS.	(7) 204 SUBGRADE COMPACTION FOR BASE WIDENING SQ. YDS.	(8) 209 LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT MILES CU. YDS.	(9) 301 ASPHALT CONCRETE BASE WIDENING 6" THICK CU. YDS.	(10) 304 COMPACTED AGGREGATE SHOULDER BASE 8" AVG. THK. 6" MIN. THK. CU. YDS.	(11) 411 STABILIZED CRUSHED AGGREGATE AS PER PLAN 2" AVG. THK. FINAL TOP CU. YDS.			
105+50	112+50	700	18	1400	2	156	20	1556	117	1 3/4	76	117	3/4	32	1	43	778	43	260	0.27	43	35	9
7 DRIVES	222' x 5' 222' x 10'							123 247	9 19	1 3/4	6				1	7							
TOTALS		700						1926	128		82	136		32	50	778	43	260	0.27	43	35	9	

QUANTITIES CARRIED TO GENERAL SUMMARY

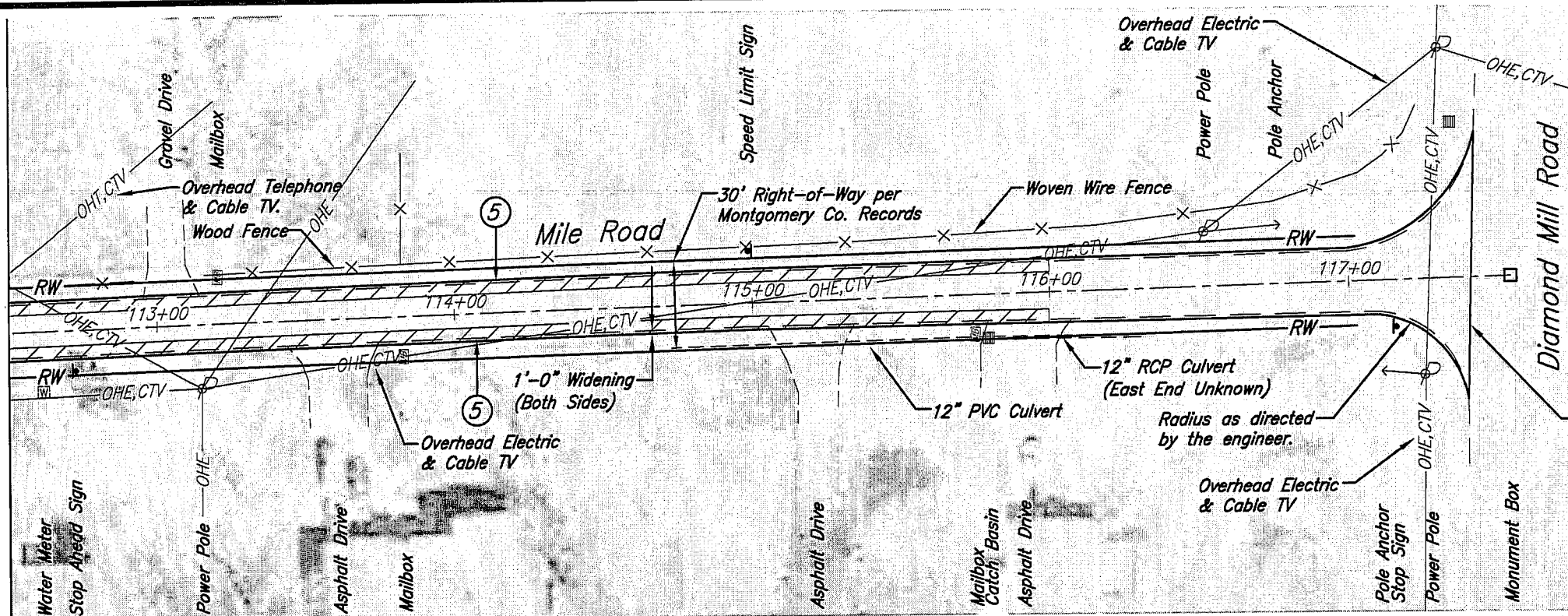
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**KRAMER & ASSOCIATES, LLC**  
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 316 W. Walnut Street  
 Farmersville, Ohio 45325  
 (614) 885-1117

**Mile Road Phase 1**  
 Widening and Resurfacing  
 Plan & Section  
 Sta. 105+50 to Sta. 112+50

Project No. 10-042  
 Date 01-31-12  
 Drawn by MPT  
 Checked by PMH  
 Drawing No. B-1423  
 Sheet 10 of 20

Match Line Sta. 112+50 See Sheet 10



**CONSTRUCTION NOTES**

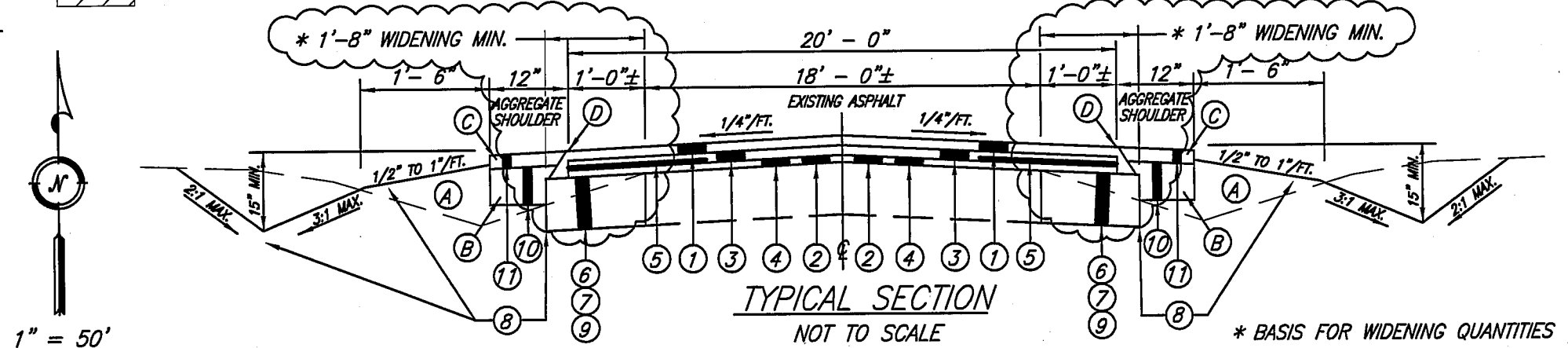
- ① At concrete drive, skip widening, then tack and overlay with surface course.
- ② Contractor to take care when working around tree not to damage it.
- ③ Stump to be removed during Clearing and Trimming operations by Township.
- ④ Monument Box to be adjusted to grade. See note on sheet 14.
- ⑤ Existing broken pavement along the edges. Contractor to place Interlayer Paving Material as shown using material and methods as specified in the alternate bids.

End Phase 1 Paving Project, Sta. 117+42 (Butt Joint).

**NOTE:**  
CULVERTS SHOWN ON PLANS ARE FOR INFORMATION ONLY, TO INFORM PAVING/GRADING CONTRACTOR OF WORK TO BE DONE BY OTHERS. NO ROAD OR DRIVE CULVERT WORK IS PROPOSED AS PART OF THIS PAVING CONTRACT.

- A CUT AND COMPACTED FILL MADE AS "LINEAR GRADING" WITH "BORROW" ADDED AS NEEDED TO GENERALLY WIDEN SHOULDER AND MOVE DITCH OUT AS SHOWN ON TYPICAL SECTION. FINAL GRADING TO BE COMPLETED AFTER INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE, TO ACHIEVE PROPER SHOULDER ELEVATION/GRADE.
- B CUT OUT AND PLACEMENT OF 304 COMPACTED AGGREGATE SHOULDER AT FULL MINIMUM THICKNESS AND WIDTH PER TYPICAL SECTION, AFTER COMPLETION OF INTERMEDIATE PAVEMENT COURSE BUT BEFORE FINAL SURFACE PAVEMENT COURSE.
- C 411 SHOULDER AGGREGATE TO BE PLACED AFTER FINAL SURFACE PAVEMENT COURSE.
- D CONTRACTOR TO PROVIDE SAFETY EDGE TREATMENT PER DETAIL ON SHEET 2.

= PLACEMENT OF INTERLAYER PAVEMENT REINFORCEMENT MATERIAL



**PAVEMENT DATA**

STATION	STATION	LENGTH LIN. FT.	EXISTING WIDTH SURFACE FEET AVERAGE	EXISTING PAVEMENT SURFACE SQ. YDS.	PROPOSED WIDENING SURFACE		PAVEMENT AREA SURFACE SQ. YDS. TOTAL	PROPOSED PAVEMENT					⑤ SPEC INTERLAYER PAVEMENT REINFORCEMENT MATERIAL SQ. YDS.	⑥ 203 EXCAVATION FOR BASE WIDENING 6" CU. YDS.	⑦ 204 SUBGRADE COMPACTION FOR BASE WIDENING SQ. YDS.	⑧ 209 LINEAR GRADING AS PER PLAN INCLUDING DITCH CLEANOUT MILES	⑨ 301 ASPHALT CONCRETE BASE WIDENING 6" THICK CU. YDS.	⑩ 304 COMPACTED AGGREGATE SHOULDER BASE 8" AVG. THK. 6" MIN. THK. CU. YDS.	⑪ 411 STABILIZED CRUSHED AGGREGATE AS PER PLAN 2" AVG. THK. FINAL TOP CU. YDS.					
					PROPOSED WIDENING SURFACE FEET AVERAGE	PROPOSED WIDENING SURFACE SQ. YDS.		④ 407 TACK COAT @ 0.075 gal./s.y. GALS.	③ 448 INTERMEDIATE COURSE TYPE 2, MED. TRAFFIC PG 64-22 THICK INCHES AVE. CU.YDS.	④ 407 TACK COAT @ 0.075 gal./s.y. GALS.	② 448 INTERMEDIATE COURSE TYPE 1, MED. TRAFFIC PG 64-22 (SCRATCH) THICK INCHES AVE. CU.YDS.	① 448 SURFACE COURSE TYPE 1, MED. TRAFFIC PG 64-22, AS PER PLAN THICK INCHES AVE. CU.YDS.												
112+50	116+00	350	18	700	2	78	20	778	58	1 3/4	38	58	3/4	16	1	22	389	22	130	0.13	22	17	4	
116+00	117+00	100	18	200	2	22	20	222	17	1 3/4	11	17	3/4	5	1	6	6	6	37	0.04	6	5	1	
117+00	117+42	42	—	170	—	11	—	181	14	1 3/4	9	14	3/4	4	1	5	3	3	16	0.02	3	2	1	
4 DRIVES	106' x 5'	—	—	—	—	—	—	59	5	1 3/4	3	—	—	—	—	—	—	—	—	—	—	—	—	—
	106' x 10'	—	—	—	—	—	—	118	—	—	—	9	—	—	1	3	—	—	—	—	—	—	—	—
<b>TOTALS</b>		<b>492</b>						<b>1358</b>	<b>94</b>		<b>61</b>	<b>98</b>		<b>25</b>		<b>36</b>	<b>389</b>	<b>31</b>	<b>183</b>	<b>0.19</b>	<b>31</b>	<b>24</b>	<b>6</b>	

QUANTITIES CARRIED TO GENERAL SUMMARY

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**KRAMER & ASSOCIATES, LLC**  
Surveyors, Engineers, & Design Consultants  
100 W. Walnut Street, Farmersville, Ohio 45325  
(614) 426-1424

**Mile Road Phase 1**  
Widening and Resurfacing  
Plan & Section  
Sta. 104+00 to Sta. 117+40

Project No. 10-042  
Date: 01-31-12  
Drawn By: MPT  
Checked By: PMH  
Drawing No.: B-1424  
Sheet: 11 of 20

## PETROMAT PAVING FABRIC (ALTERNATE BID 2)

### DESCRIPTION

This work shall consist of furnishing and placing an asphalt overlay geotextile (paving fabric) beneath a pavement overlay or between pavement layers to provide a moisture barrier membrane and a stress absorbing interlayer.

### MATERIAL REQUIREMENTS

#### Paving Fabric:

The paving fabric will be a staple fiber, needle-punched, nonwoven material consisting of at least 85 percent by weight polyolefins, polyesters or polyamides. The paving fabric shall be resistant to chemical attack, rot and mildew and shall have no tears or defects that will adversely alter its physical properties. The fabric shall be specifically designed for pavement applications and be heat-set on one side to reduce tack coat bleed-through and to minimize fabric pickup by construction equipment during installation. The fabric shall meet the physical requirements specified in

Table 1.

#### Tack Coat:

The tack coat used to impregnate the fabric and bond the fabric to the pavement is typically the same grade asphalt cement as used in the hot mix asphalt. A cationic or anionic emulsion may be used as approved by the Engineer. The Contractor shall follow the recommendations of the paving fabric manufacturer when an asphalt emulsion is used. The use of cutbacks or emulsions that contain solvents shall not be permitted.

### CONSTRUCTION AND INSTALLATION REQUIREMENTS\*

#### Shipping and Storage:

The paving fabric shall be kept dry and wrapped such that it is protected from the elements during shipping and storage. If stored outdoors, the fabric shall be elevated and protected with a waterproof cover. The paving fabric shall be labeled in accordance with ASTM D 4873-88, "Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls."

#### Weather Limitations:

The air and pavement temperatures shall be at least 50°F(10 °C) and rising for placement of asphalt cement and shall be at least 60°F(16 °C) and rising for placement of asphalt emulsion. Neither asphalt tack coat nor paving fabric shall be placed when weather conditions are not suitable, in the opinion of the Engineer.

#### Surface Preparation:

The pavement surface shall be dry and thoroughly cleaned of all dirt and oil to the satisfaction of the Engineer. Cracks 1/8" (3mm) wide or greater shall be cleaned and filled with suitable bituminous material or by a method approved by the Engineer. Crack-filling material shall be allowed to cure prior to placement of paving fabric. Potholes and other pavement distress shall be repaired. Repairs shall be performed as directed by the Engineer.

#### Tack Coat Application:

The tack coat shall be applied using a calibrated distributor spray bar. Hand spraying, squeegee and brush application may be used in locations where the distributor truck cannot reach. Every effort shall be made to keep hand application to a minimum. The tack coat shall be applied uniformly to the prepared, clean, dry pavement surface. The asphalt cement tack coat application rate must be sufficient to saturate the fabric and to bond the fabric to the existing pavement surface. The tack coat application rate shall be 0.22 to 0.28 gallons per square yard (1.0 to 1.3 liters per square meter) as required by the roadway surface and environmental conditions. When using emulsions, the application rate must be increased as directed by the Engineer to offset the water content of the emulsion. Within street intersections, on steep grades or in other zones where vehicle braking is common, the normal application rate shall be reduced by about 20 percent as directed by the Engineer, but to not less than 0.20 gallons per square yard (0.9 liters per square meter).

The temperature of the tack coat shall be sufficiently high to permit a uniform spray pattern. For asphalt cements, the minimum temperature shall be 290°F(143 °C). To avoid damage to fabric, distributor tank temperatures shall not exceed 325°F(163 °C). For asphalt emulsions, the distributor tank temperatures shall be maintained between 130°F(55 °C) and 160°F(71 °C). The target width of the tack coat application shall be equal to the paving fabric width plus 6"(15.2cm). Tack coat

application shall be wide enough to cover the entire width of fabric overlaps. The tack coat shall be applied only as far in advance of paving fabric installation as is appropriate to ensure a tacky surface at the time of paving fabric placement. Traffic shall not be allowed on the tack coat. Excess tack coat shall be cleaned from the pavement. Paving Fabric Placement: The paving fabric shall be placed onto the tack coat using mechanical or manual laydown equipment capable of providing a smooth installation with a minimum amount of wrinkling or folding. The paving fabric shall be placed before the asphalt cement tack coat cools and loses its tackiness. Paving fabric shall not be installed in areas where the overlay asphalt tapers to a minimum compacted thickness of less than 1.5"(3.8cm).

\*Note:

Additional instructions on paving fabric installation are available from Amoco Fabrics and Fibers Company in their Petromat® Installation Manual, which may be found at <http://www.geotextile.com>. PHYSICAL REQUIREMENTS OF PAVING FABRIC (Petromat® Style 4599), or approved equal.

PROPERTY	TEST METHOD	UNITS
<b>PHYSICAL</b>		
Mass/Unit Area	ASTM D-5261	4.1 oz/yd <sup>2</sup>
<b>MECHANICAL</b>		
Grab Tensile Strength	ASTM D-4632	101 lbs
Grab Elongation	ASTM D-4632	50%
Asphalt Retention	ASTM D-6140	0.20 gal/yd <sup>2</sup>
Melting Point	ASTM D-276	320°F
<b>ENDURANCE</b>		
UV Resistance % Retained @ 150 hrs	ASTM D-4355	70%

### NOTES

1. Certification of conformance from paving fabric manufacturer may be required.
2. All numerical values represent minimum average roll values (average of test results from any sampled roll in a lot shall meet or exceed the minimum values) in the weaker principal direction. Lot shall be sampled according to ASTM D 4354-89, "Practice for Sampling of Geosynthetics for Testing."
3. Conformance of paving fabrics to specification property requirements shall be determined in accordance with ASTM D 4759-88, "Practice for Determining the Specification Conformance of Geosynthetics."

Note:

Petromat is a registered trademark of paving fabrics manufactured by Amoco Fabrics and Fibers Company. When asphalt emulsions are used, the emulsion shall be allowed to cure properly such that essentially no water moisture remains prior to placing the paving fabric. Wrinkles severe enough to cause folds shall be slit and laid flat. Brooming and/or rubber-tire rolling will be required to maximize paving fabric contact with the pavement surface. Turning of the paver and other vehicles shall be done gradually and kept to a minimum to avoid movement and damage to the paving fabric. Abrupt starts and stops shall also be avoided. Damaged fabric shall be removed and replaced with same type of fabric and a tack coat. Joints and Overlaps: At joints fabric rolls shall overlap by 1" to 6"(2.5 to 15.2cm). End joints and joints from repair of wrinkles should be made to overlap or "shingle" in the direction that the pavement overlay will be placed. Overlaps of adjacent rolls may be as great as 6" to accommodate variations between the width of the roadway and paving fabric. Excess fabric shall be cut and removed to ensure that overlaps of adjacent rolls do not exceed 6"(15.2cm). Additional tack coat shall be applied between all fabric overlaps and repairs. Any locations that do not have additional tack for the overlaps shall be corrected by manual placement of tack coat prior to overlay construction. Unless otherwise approved by the Engineer, no traffic except necessary construction traffic will be allowed to drive on the paving fabric.

### Overlay Placement:

Asphalt overlay construction shall closely follow fabric placement. All areas in which paving fabric has been placed will be paved during the same day. Excess tack coat that bleeds through the paving fabric shall be removed by broadcasting sand on the paving fabric. Excess sand should be removed before beginning the paving operation. In the event of rainfall on the paving fabric prior to the placement of the asphalt overlay, the paving fabric must be allowed to dry before asphalt concrete is placed. Overlay asphalt thickness shall meet the requirements for the contract drawings and documents. The minimum compacted thickness of overlay asphalt shall not be less than 1.5"(3.8cm) in areas of paving fabric installation.

### METHOD OF MEASUREMENT

Paving Fabric: The paving fabric will be measured by the square yard.  
Tack Coat: Tack coat will be measured by the gallon.

### BASIS OF PAYMENT

Paving Fabric: The accepted quantities of paving fabric will be paid for at the contract unit price per square yard in place.  
Tack Coat: The accepted quantities of tack coat for the paving fabric will be paid for at the contract unit price per gallon complete in place.

Revised Per Montgomery County Review	MT
By	
Date	

**Mile Road Phase 1**  
Widening and Resurfacing  
Petromat Paving Fabric & Tack  
(Alternate Bid 2)

Jackson Township Trustees  
316 W. Walnut Street  
Farmersville, Ohio 45325

**KRAMER & ASSOCIATES, LLC**  
Surveyors, Engineers, & Design Consultants  
1011 East 12th Street, Ste. 200  
Farmersville, OH 45317 (614) 525-2500



Project No. 10-042  
Date 01-31-12  
Drawn By MPT  
Checked By PMH  
Drawing No. B-1430

Sheet  
17 of 20

# GENERAL SUMMARY

ITEM	SHEET 4	SHEET 5	SHEET 6	SHEET 7	SHEET 8	SHEET 9	SHEET 10	SHEET 11	SHEET 12	SHEET 13	SHEET 14	SHEET 15	ITEM	UNIT	QTY	DESCRIPTION
<i>ITEMS FOR UNIT PRICE BID</i>																
202											29		202	EACH	29	MAILBOX REMOVED AND REPLACED
203										200			203	C.Y.	200	BORROW (SHOULDER FILL)
203	43	43	33	44	43	43	43	31		130			203	C.Y.	453	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
204	259	260	194	260	260	260	260	183					204	S.Y.	1936	SUBGRADE COMPACTION
209	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.19					209	MILE	2.08	LINEAR GRADING, AS PER PLAN
253										130			253	C.Y.	130	PAVEMENT REPAIR
301	43	43	33	44	43	43	43	31					301	C.Y.	323	ASPHALT CONCRETE BASE, PG 64-22 (WIDENING)
304										130			304	C.Y.	130	COMPACTED AGGREGATE BASE (UNDER REPAIRS, IF NEEDED)
304	35	35	35	35	35	35	35	24					304	C.Y.	269	COMPACTED AGGREGATE BASE (SHOULDER WIDENING)
407	264	253	213	263	254	245	262	192					407	GAL.	1946	TACK COAT
411	9	9	9	10	9	9	9	6					411	C.Y.	70	STABILIZED CRUSHED AGGREGATE, AS PER PLAN
448										20			448	C.Y.	20	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, MEDIUM TRAFFIC, PG 64-22 (WEDGE)
448	35	32	25	34	32	32	32	25					448	C.Y.	247	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, MEDIUM TRAFFIC, PG 64-22 (SCRATCH)
448	84	80	59	84	80	78	82	61					448	C.Y.	608	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, MEDIUM TRAFFIC, PG 64-22
448	50	48	45	50	48	46	50	36					448	C.Y.	373	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, MEDIUM TRAFFIC, PG 64-22, AS PER PLAN
604											3		604	EACH	3	MONUMENT BOX ADJUSTED TO GRADE
614												1	614	LUMP	1	MAINTAINING TRAFFIC
642									1.02				642	MILE	1.02	CENTER LINE, TYPE 1
642									2.04				642	MILE	2.04	EDGE LINE, TYPE 1
659											6000		659	S.Y.	6000	SEEDING AND MULCHING
SPECIAL	703	778	585	748	778	778	778	389					SPECIAL	S.Y.	5537	INTERLAYER PAVEMENT REINFORCEMENT MATERIAL, AS PER PLAN (SEE ALTERNATE BIDS BELOW)
<i>ALTERNATE BID 1</i>																
SPECIAL													SPECIAL	S.Y.	5537	GLASGRID PAVEMENT REINFORCEMENT MESH (SEE SHEET 16 FOR SPECIFICATIONS)
<i>ALTERNATE BID 2</i>																
SPECIAL													SPECIAL	S.Y.	5537	PETROMAT PAVING FABRIC (SEE SHEET 17 FOR SPECIFICATIONS)
407													407	GAL.	1550	TACK COAT (APPLIED @ 0.28 GAL/S.Y.)
<i>ITEMS FOR TOWNSHIP</i>																
201											1		201	LUMP	1	CLEARING AND TRIMMING
202											1		202	LUMP	1	FENCE REMOVED
202											6		202	EACH	6	SIGN AND DELINEATOR POST REMOVED AND RE-SET
202											40		202	L.F.	40	EXISTING DRIVE CULVERT REMOVED
202											50		202	L.F.	50	EXISTING ROAD CULVERT REMOVED
603											60		603	L.F.	60	12" C.M.P. DRIVE CULVERT, TYPE 'A'
603											70		603	L.F.	70	C.M.P. ROADWAY CULVERT, TYPE 'A' (UNDER 24")

1-4-12 Revised Per Montgomery County Review 1-4-12 Date	MPT By
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**Mile Road Phase 1**  
 Widening and Resurfacing  
 Jackson Township Trustees  
 316 W. Walnut Street  
 Farmersville, Ohio 45325

**KRAMER & ASSOCIATES, LLC**  
 Surveyors, Engineers, & Design Consultants  
 8811 East 9th Ave, Ste. 100  
 (614) 885-1122

Project No. 10-042  
 Date 01-31-12  
 Drawn By MPT  
 Checked By PMH  
 Drawing No. B-1431