CALCULATIONS

Pavement Area.

Sta. 46+50 to Sta. 48+50 = 200 Lin. Ft. $\times \frac{(17.6+24)}{2}$ = 4160 Sq. Ft.
Sta. 48+50 to Sta. 48+94.09 = 44.09 Lin. Ft. x 24' = 1058.16
Sta. 51+12.85 to Sta. 53+00 = 187.15 Lin. Ft. x 24' = 4491.60
Sta. 53+00 to Sta. 54+25 = $\frac{125 \text{ Lin. Ft.}}{556.24 \text{ Lin. Ft.}} \times \left(\frac{24+17.7}{2}\right)$ = 2606.25 Sq. Ft.
12316.01 ÷ 9 Sf/Sy = 1369 Sq. Yds.

404 Asphalt Concrete

1369 S.Y. X 1.25" ÷ 36"/Yd. = 48
Feather 25' $\frac{(17.6+17.7')}{9 \text{ Sf/Sy}} \times \frac{1.25"}{36"/\text{Yd.}} \times 3/4$ = 3
51 Cu. Yds.

402 Asphalt Concrete

1369 S.Y. X 1.75" ÷ 36"/Yd. = 67
Feather 25' $\frac{(17.6+17.7')}{9 \text{ Sf/Sy}} \times \frac{1.75"}{36"/\text{Yd.}} \times 1/4$ = 2
69 Cu. Yds.

301 Bituminous Aggregate Base

1369 S.Y. X 6" ÷ 36"/Yd. = 229
Edge Course 556.24 $\frac{\text{L.F.} \times 0.5}{9 \text{ Sf/Sy}} \times \frac{6"}{36"/\text{Yd.}}$ = 6
235 Cu. Yds.

203 Subgrade Compaction

Pavement Area	1369 Sq. Yd.
Shoulder Area	487 Sq. Yd.
TOTAL =	1856 Sq. Yds

Shoulder Area
Length = 2 X 556.24 = 1112.48 Lin. Ft.
deduct for driveways & mailbox turnouts = -323.00 Lin. Ft.
Add Feather length 2 X 2 X 25' = +100.00 Lin. Ft.
889.5 Lin. Ft. x 4' = 3558 Sq. Ft. Total 889.48 Lin. Ft.

Add for curb area off bridge
3 X 26' X 6' = 468 Sq. Ft.
S.E. Corner 44 x 8 = 352 Sq. Ft.
4378 L.F. ÷ 9 = 487 Sq. Yds.

408 Bituminous Prime Coat

487 S.Y. X 0.4 Gal/S.Y. = 195 Gal.

409 Seal Coat

Bituminous Material
487 S.Y. X 0.3 Gal/S.Y. = 146 Gal.
Cover Aggregate
487 S.Y. X 0.008 C.Y./S.Y. = 4 Cu. Yds.

304 Aggregate Base

4' Shoulders 889.5 x 4.0 x .25 ÷ 27 = 32.94 C.Y.
889.5 x 3.75 x .42 ÷ 27 = 51.89 C.Y.
6' Shoulders 78 x 6.0 x .25 ÷ 27 = 4.33 C.Y.
78 x 5.75 x .42 ÷ 27 = 6.98 C.Y.
S.E. Corner 44 x 8.0 x .25 ÷ 27 = 3.26 C.Y.
44 x 7.75 x .42 ÷ 27 = 5.30 C.Y.
TOTAL = 104.70 Cu. Yds

	203 Excavation	203 Embankment	659 Seeding
Sta. 46+25 to Sta 50+00	1256 Cu. Yds.	384 Cu. Yds.	1127 Sq. Yds.
Sta. 50+00 to Sta. 54+50	1298 Cu. Yds.	1293 Cu. Yds.	2274 Sq. Yds.
Total	2554 Sq. Yds.	1682 Cu. Yds.	3401 Sq. Yds.

659 Seeding & Mulching

From Table = 3401 S.Y.
Deduct Sodding = -130 S.Y. = 3271 Sq. Yds.

659 Commercial Fertilizer

3401 S.Y. X 9 Sf/S.Y. $\times \frac{20\#}{1000 \text{ S.F.}} \times \frac{1 \text{ Ton}}{2000\#}$ = 0.3 Tons

659 Agricultural Liming

3401 S.Y. X 9 Sf/S.Y. $\times \frac{100\#}{1000 \text{ S.F.}} \times \frac{1 \text{ Ton}}{2000\#}$ = 1.5 Tons

CALC WGY 10-18-99
CKD JL 11-9-99

GENERAL SUMMARY

FHWA REGION	STATE	PROJECT	
5	OHIO		

3/32

LAKE COUNTY
LAK-608-03.35

ITEM NO.	SHEET NUMBERS 3	4	5	6	15	GRAND TOTAL	UNIT	ITEM NO.	DESCRIPTION
									~ ROADWAY ~
201		Lump				Lump	Lump	201	Clearing and Grubbing
202				102		102	Lin.Ft.	202	Pipe Removed 24" and Under
202			253	358		611	Lin.Ft.	202	Guard Rail Removed
203	2554					2554	Cu.Yd.	203	Excavation Not Including Embankment Construction
203	1682					1682	Cu.Yd.	203	Embankment
203	1856					1856	Sq. Yd.	203	Subgrade Compaction
606			100	275		375	Lin.Ft.	606	Guard Rail Type 5
606			1	2		3	Each	606	Anchor Assembly
606			1	2		3	Each	606	Bridge Terminal Assembly Type A
607			140			140	Lin.Ft	607	Fence, Type CL, Removed and Reset
607			1			1	Each	607	Gate, Type CL, Removed and Reset
609			26	52		78	Lin.Ft.	609	Curb Type 6
616		2				2	M.Gal.	616	Water
616		2				2	Ton	616	Calcium Chloride
									~ EROSION CONTROL ~
659	3271					3271	Sq.Yd.	659	Seeding and Mulching
659	0.3					0.3	Ton	659	Commercial Fertilizer (12-12-12)
659	1.5					1.5	Ton	659	Agricultural Liming
660			22	41		63	Sq.Yd.	660	Reinforced Sodding
660				67		67	Sq.Yd.	660	Sodding
601					30	30	Cu.Yd.	601	Rock Channel protection, Type "B", with Bedding
									~ DRAINAGE ~
602					0.6	0.6	Cu.Yd.	602	Concrete Masonry
603					584	584	Lin.Ft.	603	12" Conduit, Type C
603					136	136	Lin.Ft.	603	12" Conduit, Type B
603		50				50	Lin.Ft.	603	4" Conduit, Type "C"
604					4	4	Each	604	Standard No. 2-2B Catch Basin
604					2	2	Each	604	Standard No. 6 Catch Basin
									~ PAVEMENT ~
404	51					51	Cu.Yd.	404	Asphalt Concrete (AC-20)
404			11	5		16	Cu.Yd.	404	Asphalt Concrete (AC-20) Driveways
402	69					69	Cu.Yd.	402	Asphalt Concrete (AC-20)
301	235					235	Cu.Yd.	301	Bituminous Aggregate Base 702.01 AC-20 or 702.09 (RT-11 or RT-12)
304	105		28	30		163	Cu.Yd.	304	Aggregate Base
408	195		67	33		295	Gal.	408	Bituminous Prime Coat 702.02 (MC-30 or MC-70); 702.03 Primer 20); or 702.09 (RT-2 or RT-3)
409	4					4	Cu.Yd	409	Seal Coat Cover Aggregate No. 8
409	146					146	Gal.	409	Seal Coat Bituminous Material 702.02 (MC-800 or MC-3000), 702.03 (CBAE-800), 702.04 (RS-1, RS-2, CRS-2) or 702.09 (RT-9 or RT-10), CRS-1
410		100				100	Cu.Yd.	410	Traffic Compacted Surface, Type C
									For Bridge Quantities see Sheet 17
619		Lump				Lump	Lump	619	Field Office
623						Lump	Lump	623	Construction Layout Stakes
614		Lump				Lump	Lump	614	Maintaining Traffic