

CALCULATIONS

BY DATE
 CALC. EDV 2/88
 CHECKED BRS 3/88

FHWA REGION	STATE	PROJECT
5	OHIO	

8
32

LAKE COUNTY
LAK-20-19.39

ITEM 203 SUBGRADE COMPACTION

FROM STA. 97 + 50.00 TO STA. 98 + 42.09 = 92.09' x 53.00' ÷ 9 = 542 S.Y.
 FROM STA. 101 + 09.75 TO STA. 102 + 00.00 = 90.25' x 53.00' ÷ 9 = 532 S.Y.
TOTAL 1074 S.Y.

ITEM 310 SUBBASE, TYPE I, GRADING A

FROM STA. 97 + 50.00 TO STA. 98 + 42.09 = 92.09' x 53.00' x (6"/12) ÷ 27 = 90 C.Y.
 FROM STA. 101 + 09.75 TO STA. 102 + 00.00 = 90.25' x 53.00' x (6"/12) ÷ 27 = 89 C.Y.
TOTAL 179 C.Y.

ITEM 404 ASPHALT CONCRETE, AC-20

FROM STA. 97 + 00.00 TO STA. 97 + 50.00 = 50.00' x 43.00' x (1.25"/12) ÷ 27 = 8 C.Y.
 FROM STA. 102 + 00.00 TO STA. 102 + 75.00 = 75.00' x 37.00' x (1.25"/12) ÷ 27 = 11 C.Y.
 FROM STA. 96 + 50.00 TO STA. 97 + 00.00 = 50.00' x 3.00' x (1.25"/12) ÷ 27 = 1 C.Y.
 FROM STA. 102 + 75.00 TO STA. 109 + 50.00 = 675.00' x 3.00' x (1.25"/12) ÷ 27 = 8 C.Y.
TOTAL 28 C.Y.

ITEM 407 TACK COAT

FROM STA. 96 + 50.00 TO STA. 97 + 00.00 = 50.00' x (2x0.50') ÷ 9 x 0.10 GAL/SY = 1 GAL.
 FROM STA. 97 + 00.00 TO STA. 97 + 50.00 = 50.00' x 43.00' ÷ 9 x 0.10 GAL/SY = 24 GAL.
 FROM STA. 102 + 00.00 TO STA. 102 + 75.00 = 75.00' x 37.00' ÷ 9 x 0.10 GAL/SY = 31 GAL.
 FROM STA. 102 + 75.00 TO STA. 109 + 50.00 = 675.00' x (2x0.50') ÷ 9 x 0.10 GAL/SY = 8 GAL.
TOTAL 64 GAL.

ITEM 451 9" REINFORCED CONCRETE PAVEMENT

FROM STA. 97 + 50.00 TO STA. 98 + 17.09 = 67.09' x 52.00' ÷ 9 = 388 S.Y.
 FROM STA. 101 + 34.75 TO STA. 102 + 00.00 = 65.25' x 52.00' ÷ 9 = 377 S.Y.
 DEDUCT PRESSURE RELIEF JOINTS: 2 EA. x 52.00' x 4.00' ÷ 9 = - 46 S.Y.
 AT MEDIAN:
 STA. 96 + 50.00 TO STA. 97 + 50.00 = 100.00' x 2.00' ÷ 9 = 22 S.Y.
 STA. 102 + 00.00 TO STA. 109 + 50.00 = 750.00' x 2.00' ÷ 9 = 167 S.Y.
TOTAL 908 S.Y.

ITEM 608 4" CONCRETE WALK

FROM STA. 97 + 50.00 TO STA. 98 + 01.67, LT. = 51.67' x 4.50' = 233 S.F.
 FROM STA. 97 + 50.00 TO STA. 98 + 80.81, RT. = 130.81' x 4.50' = 589 S.F.
 FROM STA. 100 + 71.03 TO STA. 102 + 00.00, LT. = 128.97' x 4.50' = 580 S.F.
 FROM STA. 101 + 50.17 TO STA. 102 + 00.00, RT. = 49.83' x 4.50' = 224 S.F.
TOTAL 1626 S.F.

ITEM 603 6" CONDUIT, TYPE F

UNDERDRAIN OUTLETS, 8' IN LENGTH, TO MANHOLE AT STA. 97+68, LT. :
 1 EA. x 8.00' = 8 L.F.

ITEM 609 CURB, TYPE 2-A

FROM STA. 97 + 50.00 TO STA. 97 + 84.06, LT. = 34.06 L.F.
 FROM STA. 97 + 50.00 TO STA. 98 + 50.12, RT. = 100.12 L.F.
 FROM STA. 101 + 01.72 TO STA. 102 + 00.00, LT. = 98.28 L.F.
 FROM STA. 101 + 67.78 TO STA. 102 + 00.00, RT. = 32.22 L.F.
 DEDUCT PRESSURE RELIEF JOINTS: 4.00 L.F. x 4 EA. = -16.00 L.F.
TOTAL 249 L.F.

ITEM 609 ASPHALT CONCRETE CURB, TYPE I

FROM STA. 97 + 00.00 TO STA. 97 + 50.00, LT. & RT. = 50.00' x 2 = 100 L.F.
 FROM STA. 96 + 00.00 TO STA. 97 + 00.00, RT. = 100 L.F.
TOTAL 200 L.F.

ITEM 611 REINFORCED CONCRETE APPROACH SLABS, T = 15"

FROM STA. 98 + 17.09 TO STA. 98 + 42.09 = 25.00' x 53.00' ÷ 9 = 147 S.Y.
 FROM STA. 101 + 09.75 TO STA. 101 + 34.75 = 25.00' x 53.00' ÷ 9 = 147 S.Y.
TOTAL 294 S.Y.

ITEM 615 TEMPORARY PAVEMENT CLASS A, AS PER PLAN

FROM STA. 97 + 00.00 TO STA. 97 + 50.00, LT. & RT. = 50.00' x 7.00' ÷ 9 = 39 S.Y.
 FROM STA. 102 + 00.00 TO STA. 102 + 75.00, LT. & RT. = 75.00' x 10.00' ÷ 9 = 83 S.Y.
TOTAL 122 S.Y.

ITEM 659 SEEDING AND MULCHING

AROUND NEW PIERS: $\pi \times ((10' + 1.5')^2 - (1.5')^2) \times 4 \text{ EA.} \div 9 = 182 \text{ S.Y.}$

ITEM 659 COMMERCIAL FERTILIZER

((182+425+133+200+629) x 9 x 0.02 LBS/S.F. ÷ 2000 = .14 T.

ITEM 659 AGRICULTURAL LIMING

((182+425+133+200+629) x 9 x 0.10 LBS/S.F. ÷ 2000 = 0.7 T.

ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION

FOR PLACING ASPHALT CONCRETE AT MEDIAN:
 FROM STA. 96 + 50.00 TO STA. 97 + 50.00 = 100.00' x 2' WIDE x 1' DEEP ÷ 27 = 7 C.Y.
 FROM STA. 102 + 00.00 TO STA. 109 + 50.00 = 750.00' x 2' WIDE x 1' DEEP ÷ 27 = 56 C.Y.
TOTAL 63 C.Y.