

MED-18-12.99

RETAINING WALL NO. 3

Medina County

PID No. 92953

**WALL ESTIMATED QUANTITIES
Final Tracing Submittal**

for

Ohio Department of Transportation – District 3

Prepared by:



520 South Main Street
Suite 2531
Akron, Ohio 44311
(330) 572-2100

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ESTIMATED QUANTITIES

Job MED-18-12.99 - RETAINING WALL NO. 3

Sheet No. 1 of _____

Calculated by DJL Date 9/14/20

Checked by TJW Date 9/15/20

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

TOTAL = LUMP SUM = \$3000

ITEM 503 - UNCLASSIFIED EXCAVATION

TOTAL EXCAVATION LENGTH = 134.0' ; TOTAL EXCAVATION WIDTH = 6.25' + 2 x 1.0'
 AVG. HEIGHT = $\frac{1}{2} \times (8.3' + 5.3') = 6.8'$ = 8.25'

\therefore TOTAL = $\left[(134.0' \times 8.25' \times 6.8') + (1.0' \times 1.0' \times 132') \right] \div 27 = 283.3 \sim$ SAY 283 CY

ITEM 509 - EPOXY COATED REINFORCING STEEL

TOTAL = 11,236 LBS \Rightarrow FROM REBAR LIST

ITEM 511 - CLASS QC1 CONCRETE RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN

AVG. TOP OF WALL ELEV. = $\frac{1}{6} \times (989.10 + 988.72 + 988.34 + 987.72 + 987.10 + 986.85)$
 = 987.97

BOT. / FTG. ELEV. = 978.80 \therefore TOP OF FOOTING TOE ELEV. = 978.80 + 1.5 = 980.30

\therefore TOTAL = $\left[1.0' \times (987.97 - 980.30) \times 132.0' + 0.25' \times 0.50' \times 132.0' \right] \div 27$
 = 38.11 CY

\rightarrow SAY 38 CY

ITEM 511 - CLASS QC1 CONCRETE, FOOTING, AS PER PLAN

TOTAL = $132.0' \times \left[(2.25' \times 1.50') + (4.0' \times 1.25') + (1.0' \times 1.0') \right] \div 27$
 = 45.83 CY

\rightarrow SAY 46 CY



ESTIMATED QUANTITIES

Job MED-18-12.99 - RETAINING WALL NO. 3

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ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN
(PERMANENT GRAFFITI PROTECTION)

EXPOSED FACE (PARKING LOT SIDE) \Rightarrow CAVED AREA = 420 SF
TOP & BACK

$$\therefore \text{TOTAL} = [(0.5' + 1.0') \times 132.0' + 420 \text{ SF}] \div 9 = 68.67 \text{ SY} \sim \text{SAY } \underline{69 \text{ SY}}$$

ITEM 512 - TYPE 2 WATERPROOFING

$$\text{TOTAL} = 3.0' \times [(988.72 - 980.05) + (988.34 - 980.05) + (987.72 - 980.05) + (987.10 - 980.05)] \div 9 = 10.56 \text{ SY} \sim \text{SAY } \underline{11 \text{ SY}}$$

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER

$$\text{TOTAL} = 1.0' \times (988.34 - 980.05) = 8.29 \text{ SF} \sim \text{SAY } \underline{9 \text{ SF}}$$

ITEM 517 - RAILING, PIPE AS PER PLAN

$$\text{TOTAL} = 132.0' \text{ (LENGTH OF WALL)} \sim \text{SAY } \underline{132 \text{ FT.}}$$

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC

AVG. TOP OF WALL ELEV. = 987.97 (SEE PREVIOUS CALC SHEET)
 \nearrow TOP OF REEL

$$\therefore \text{TOTAL} = 2.0' \times 132.0' \times (987.97 + 0.5' - 1.0' - 980.05) \div 27 = 62.77 \text{ CY} \rightarrow \text{SAY } \underline{63 \text{ CY}}$$

ITEM 518 - 6" PERFORATED CORRUGATED PLASTIC PIPE

$$\text{LENGTH OF WALL} = 132.0' \Rightarrow \text{SAY } \underline{135 \text{ FT.}}$$

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

$$\text{TOTAL} = \text{SAME AS GRAFFITI ITEM AT TOP OF PAGE} = \underline{69 \text{ SY}}$$



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ITEM 530 - SPECIAL - FORM LINER

ASSUME 1.0' BELOW FINISHED GRADE

∴ CADD AREA FROM SEALING QUANTITY = 420 SF (EXPOSED FACE)

∴ TOTAL = 420 SF + $132.0' \times 1.0'$ = 552 SF

ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS

TOTAL = 100 FT. ⇒ TO OUTLET END OF PIPE INTO 11-129 CATCH BASIN
AT STA. 23+71.82, 20.31' RT.