

DISTRICT 10 - PRODUCTION

MUSKINGUM DRIVE, BOX 658, MARIETTA OHIO 45750

COUNTY: WAS ROUTE: 339 SECTION: 12.00



	<p><u>ITEM 202 - WEARINE COURSE REMOVED</u></p> $(117.47)(32) / 9 = 417.67 \text{ SY}$ $2(15)(27) / 9 = 90 \text{ SY}$ <hr style="width: 20%; margin-left: 0;"/> <p style="margin-left: 20px;">TOTAL = 507.67 SY</p>
	<p><u>CLASS R02 CONCRETE, SUPERSTRUCTURE, APP</u></p> $(127.93)(44)(2) / 27 = 416.96 \text{ CY}$
	$(3.81)(1.55)(2.25) / 27 = 0.49 \text{ CY}$
REAR	$\frac{1}{2}(3.81 + 4.01)(22.78)(2.25) / 27 = 7.42 \text{ CY}$
	$\frac{1}{2}(4.01 + 3.50)(22.78)(2.25) / 27 = 7.13 \text{ CY}$
	$(3.50)(1.55)(2.25) / 27 = 0.45 \text{ CY}$
	<p>DEDUCT AS SEAT : $(2)(45.55)(0.5) / 27 = 1.69 \text{ CY}$</p>
	$(3.50)(1.55)(2.25) / 27 = 0.45 \text{ CY}$
FWD	$\frac{1}{2}(3.50 + 3.88)(22.78)(2.25) / 27 = 7.00 \text{ CY}$
	$\frac{1}{2}(3.88 + 3.57)(22.78)(2.25) / 27 = 7.07 \text{ CY}$
	$(3.57)(1.55)(2.25) / 27 = 0.46 \text{ CY}$
	<p>DEDUCT AS SEAT : $(2)(45.55)(0.5) / 27 = 1.69 \text{ CY}$</p>
	<hr style="width: 20%; margin-left: 0;"/> <p>TOTAL = 444.05 CY</p>
	<p>PIERS : $(3.14)(1.6)^2(2) / 27 = 0.52 \text{ CY}$</p>
	$\frac{1}{2}(2 + 2.33)(20.54)(3) / 27 = 4.94 \text{ CY}$
	$\frac{1}{2}(2.33 + 2)(20.54)(3) / 27 = 4.94 \text{ CY}$
	<hr style="width: 20%; margin-left: 0;"/> <p>10.40</p>
	<p>TOTAL = 10.40 x 2 = 20.80 CY</p>

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<u>CLASS 001 CONCRETE ABUTMENT</u>	
REAR :	$(3')(3')(65')/27 = 21.67 \text{ CY}$ $\frac{1}{2}((3.23' + 5.97')(6.75')(2.25'))/27 = 2.58 \text{ CY}$ $(5.93')(2.05')(2.25')/27 = 1.01 \text{ CY}$ $(2.12')(48.83')(2.25')/27 = 8.63 \text{ CY}$ $(5.62')(1.37')(2.25')/27 = 0.64 \text{ CY}$ $\frac{1}{2}(5.62' + 3.22')(6')(2.25')/27 = 2.21 \text{ CY}$ <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right;">36.74 CY</p>
FORWARD :	$(3')(3')(65')/27 = 21.67 \text{ CY}$ $\frac{1}{2}(3.18' + 5.58')(6')(2.25')/27 = 2.19 \text{ CY}$ $(5.58')(2.18')(2.25')/27 = 1.01 \text{ CY}$ $(2.08')(48.83')(2.25')/27 = 8.46 \text{ CY}$ $(5.65')(1.49')(2.25')/27 = 0.70 \text{ CY}$ $\frac{1}{2}(5.65' + 3.05')(6.5')(2.25')/27 = 2.36 \text{ CY}$ <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right;">36.39 CY</p>
TOTAL = 36.74 + 36.39 = 73.13 CY	
<u>1/2" PREFORMED EXPANSION JOINT FILLER</u>	
REAR ABUTMENT :	$(0.75')(48.83') = 36.62 \text{ SF}$ FWD ABUTMENT: $(0.75')(48.83') = 36.62 \text{ SF}$ <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right;">73.24 SF</p>
<u>1" PREFORMED EXPANSION JOINT FILLER</u>	
REAR ABUTMENT :	$(0.67')(48.83') = 32.72 \text{ SF}$ $(2.33')(3.81') = 8.88 \text{ SF}$ $(2.33')(3.50') = 8.16 \text{ SF}$ <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right;">49.76 SF</p>
FWD ABUTMENT :	$(0.67')(48.83') = 32.72 \text{ SF}$ $(2.33')(3.50') = 8.16 \text{ SF}$ $(2.33')(3.57') = 8.32 \text{ SF}$ <hr style="width: 50%; margin-left: auto; margin-right: 0;"/> <p style="text-align: right;">49.20 SF</p>
TOTAL = 49.76 + 49.20 = 98.96 SF	

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SEALING OF CONCRETE SURFACES	
SUPER :	$(2' + 0.5')(127.95') / 9 \times 2 \text{ SIDES} = 71.07 \text{ SY}$
REAR ABUTMENT :	$(2.14')(2.25') / 9 = 0.54 \text{ SY}$
	$\frac{1}{2}(2.14' + 4.84')(6.75') / 9 = 2.62 \text{ SY}$
	$(4.84')(3.99') / 9 = 2.15 \text{ SY}$
	$\frac{1}{2}(2.84' + 3.04')(22.78') / 9 = 7.44 \text{ SY}$
	$\frac{1}{2}(3.04' + 2.53')(22.78') / 9 = 7.05 \text{ SY}$
	$(4.53')(2.71') / 9 = 1.36 \text{ SY}$
	$\frac{1}{2}(4.53' + 2.13')(6') / 9 = 2.22 \text{ SY}$
	$(2.13')(2.25') / 9 = 0.53 \text{ SY}$
	$(7.27' + 3.67')(2.25') / 9 = 2.74 \text{ SY}$
	$(10.14')(1') / 9 = 1.13 \text{ SY}$
	$(6.46' + 3.01')(2.25') / 9 = 2.37 \text{ SY}$
	$(9.31')(1') / 9 = 1.03 \text{ SY}$
	<u>31.18 SY</u>
FWD ABUTMENT :	$(2.10')(2.25') / 9 = 0.53 \text{ SY}$
	$\frac{1}{2}(2.10' + 4.50')(6') / 9 = 2.20 \text{ SY}$
	$(4.50')(4.12') / 9 = 2.06 \text{ SY}$
	$\frac{1}{2}(2.50' + 2.88')(22.78') / 9 = 6.81 \text{ SY}$
	$\frac{1}{2}(2.88' + 2.57')(22.78') / 9 = 6.90 \text{ SY}$
	$(4.57')(2.83') / 9 = 1.44 \text{ SY}$
	$\frac{1}{2}(4.57' + 1.97')(6.50') / 9 = 2.36 \text{ SY}$
	$(1.97')(2.25') / 9 = 0.49 \text{ SY}$
	$(6.46' + 3.82')(2.25') / 9 = 2.57 \text{ SY}$
	$(9.52')(1') / 9 = 1.06 \text{ SY}$
	$(7' + 3.13')(2.25') / 9 = 2.53 \text{ SY}$
	$(9.93')(1') / 9 = 1.10 \text{ SY}$
	<u>30.05</u>
	ABUTMENT TOTAL = $31.18 + 30.05 = 61.23 \text{ SY}$

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SEALING OF CONCRETE SURFACES

PIERS : $\frac{1}{2}(2.02' + 2.33')(20.54') / 9 \times 2 \text{ SIDES} = 9.93 \text{ SY}$

$\frac{1}{2}(2.33' + 2.02')(20.54') / 9 \times 2 \text{ SIDES} = 9.93 \text{ SY}$

$2\pi(1.5')(2') / 9 = 2.09 \text{ SY}$

$(41.08')(3') / 9 = 13.69 \text{ SY}$

$\pi(1.5')^2 / 9 = 0.79 \text{ SY}$

$36.43 \times 2 \text{ PIERS} = 72.86 \text{ SY}$

NYLON REINFORCED NEOPRENE SHEETING

REAR ABUTMENT : $(51.83')(3') = 155.49 \text{ SF}$

$(5.31')(3') = 15.93 \text{ SF}$

$(5')(3') = 15 \text{ SF}$

186.42 SF

FWD ABUTMENT : $(51.83')(3') = 155.49 \text{ SF}$

$(5')(3') = 15 \text{ SF}$

$(5.07')(3') = 15.21 \text{ SF}$

185.70

TOTAL = $186.42 + 185.70 = 372.12 \text{ SF}$

POROUS BACKFILL WITH GEOTEXTILE FABRIC

REAR ABUTMENT : $\frac{1}{2}(4.73' + 7.43')(6.75')(2') / 27 = 3.04 \text{ CY}$

$(7.43')(3.39')(2') / 27 = 1.87 \text{ CY}$

$(7.20')(45.65')(2') / 27 = 24.29 \text{ CY}$

$(7.12')(3.31')(2') / 27 = 1.75 \text{ CY}$

$\frac{1}{2}(7.12' + 4.72')(6')(2') / 27 = 2.63 \text{ CY}$

33.58 CY

FWD ABUTMENT : $\frac{1}{2}(4.68' + 7.08')(6')(2') / 27 = 2.61 \text{ CY}$

$(7.08')(3.52')(2') / 27 = 1.85 \text{ CY}$

$(6.95')(45.55')(2') / 27 = 23.11 \text{ CY}$

$(7.15')(3.43')(2') / 27 = 1.82 \text{ CY}$

$\frac{1}{2}(7.15' + 4.55')(6.5')(2') / 27 = 2.82 \text{ CY}$

32.21 CY

TOTAL = $33.58 + 32.21 = 65.79 \text{ CY}$

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