AND TRAP
COLO CANAL
\[ a = a = 5 \times 0.7071 \]
\[ \frac{5}{3.5355} \]
\[ 2.46 \]
\[ 3.54 \]
\[ 10.162 \]
\[ 5.04 \]
\[ 3.54 \]
\[ 3.54 \]
\[ 1.693 \]
\[ 7.06 \]
\[ 4.62 \]
\[ 6.1697 \]
\[ 6.317 \]
\[ 10.162 \]
\[ 6.00 \]
\[ 4.62 \]
\[ 1.927 \]
Ripple-Vertex Sand Trap
for Colorado Canal near Broomfield,
Twin Lakes Canal &
Archway A Co.

U.S. Dept. of Agric., Division of Agric.,
Fort Collins
November 1930
Letter to Smith for more details
10/7
VAC24 11=ORDWAY COLO 3 615P
R L PARSHALL=
FTCOLLINS COLO=

WILL YOU SET TIME FOR MEETING WEDNESDAY UPON ARRIVAL IN VALLEY=
O R SMITH...
Factor = 0.0394
Rain factor = 0.00121

<table>
<thead>
<tr>
<th>Week</th>
<th>Initial Flow</th>
<th>Final Flow</th>
<th>Diff</th>
<th>Area</th>
<th>Loss by Flow</th>
<th>Loss by Percent</th>
<th>Total Loss</th>
<th>Average Loss per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-21</td>
<td>33.5</td>
<td>26.8</td>
<td>6.7</td>
<td>79.9</td>
<td>1.18</td>
<td>24.8</td>
<td>0.979</td>
<td>0.224</td>
</tr>
</tbody>
</table>

Area of 8" dia. is 1/9th of 24" dia.

Area 24" dia. = 452.4 sq. in. = 2918.64 sq. cm.

1 sq. in. = 0.04516 sq. cm.

8" dia. = \( 4 \times \pi \times 2 = 50.2656 \) sq. in.

\[ \frac{4 \times \pi \times 2}{\pi} = 2 \times 2 \times \pi = 50.2656 \] sq. in.

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<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>15&quot;</td>
<td>48&quot;</td>
<td>8</td>
</tr>
<tr>
<td>15&quot;</td>
<td>44&quot;</td>
<td>2</td>
</tr>
<tr>
<td>15&quot;</td>
<td>144&quot;</td>
<td>138</td>
</tr>
</tbody>
</table>

5" Point on 21"
\[ M = \frac{W L}{2} \]

\[
\begin{align*}
M_1 & = 6.36 \times 8.7 = 55.3 \\
2 & = 6.00 \times 8.3 = 49.8 \\
3 & = 5.63 \times 7.7 = 43.48 \\
4 & = 5.12 \times 7.2 = 36.94 \\
5 & = 4.93 \times 7.1 = 35.11 \\
6 & = 4.55 \times 6.1 = 28.16 \\
7 & = 4.18 \times 5.7 = 23.90 \\
8 & = 3.81 \times 5.3 = 20.22 \\
9 & = 3.45 \times 4.9 = 16.20 \\
10 & = 3.09 \times 4.3 = 13.30 \\
11 & = 2.73 \times 3.7 = 10.11 \\
12 & = 2.36 \times 3.3 = 7.80 \\
13 & = 2.00 \times 2.7 = 5.30 \\
14 & = 1.64 \times 2.3 = 3.75 \\
15 & = 1.27 \times 1.7 = 2.16 \\
\end{align*}
\]

\[ F = \frac{625 \times 3^2}{144 \times 3^2} \cdot A \]

\[ F_1 = K \times 5.2^{\frac{1}{2}} \]

\[
\begin{align*}
1 & = 6.34 \\
F_2 & = 6.00 \\
F_3 & = 5.63 \\
F_4 & = 5.27 \\
5 & = 4.93 \\
6 & = 4.55 \\
7 & = 4.18 \\
8 & = 3.81 \\
9 & = 3.45 \\
10 & = 3.09 \\
11 & = 2.73 \\
12 & = 2.36 \\
13 & = 2.00 \\
14 & = 1.64 \\
15 & = 1.27 \\
16 & = 1.272 \\
\end{align*}
\]

\[ M = 55.3 \quad \frac{1}{8} \text{st.} \]

\[
\begin{align*}
M & = \frac{55.3}{16000} \times \frac{1000}{25} \times 3 \\
& = 16000 \times \frac{1000}{0.0625} \times \frac{1}{0.0625} \\
& = 6000 \times 96
\end{align*}
\]
\[ F_1 = 17.45 \]
\[ F_2 = 43.60 \]
\[ M = W_1 L_1 + W_2 L_2 \]
\[ = 17.45 \times 15 + 43.60 \times 8 \]
\[ = 262 + 348.8 \]
\[ M = 375.8 \]

\[ \frac{x}{6.25 - x} \]
\[ 17.45 \times 6.25 \]
\[ x = 4.75 \]
\[ \frac{1}{1.5} \]

\[ \frac{1}{8} \text{ steel} \]
\[ M = 16000 \times 48 \times \frac{1}{10000} \times 0.00125 \]
\[ = 16 \times 48 \times 2 = 1536 \text{ not correct on account of material } 2^\circ \text{ wide} \]

\[ M = 55.3 \]
\[ M = \frac{55.3}{2} = 16000 \times 10000 \times 0.125 \times 3 \]
\[ = 961 \]
\[ F_1 = 17.45 \]
\[ F_2 = 52.3 \]
\[ M = Wl_1 + Wl_2 \]
\[ = 17.45 \times 1.5 + 52.3 \times 9 \]
\[ = 26.2 + 470.7 \]
\[ = 496.9 \]

\[ M = 69.75 \times x \times 7.14 \]
\[ = 497.5 \text{ check} \]

\[ F = \frac{W \times x^2}{2} = 7.65 \]
\[ 17.45 \times x = 25 \times 52.3 = 52.3 \times 52.3 \times 69.75 \times x = 393 \]
\[ x = \frac{5.64}{1.5} = 3.76 \]

\[ \frac{1}{8} \text{ steel} \]

\[ \text{Sec of material} \]
\[ M = \frac{\Theta E}{c} = \frac{16000 \times 1000000 \times 0.00125 \times 0.0625}{100} \]
\[ = 96 \text{ OK.} \]
\[ M = \frac{Wl}{2} = 7.65 \times 10.5 = 80.3 \]
18" I.D.

\[
\frac{18"}{8\text{ fl}} \times \frac{10\text{ in}}{6\text{ fl}} = 5\text{ fl}
\]

Twist to gain \( \frac{1}{4} \) on diameter

\[
M = WL \text{ con. load}
\]

\[
M = \frac{WL}{2} \text{ uniform load}
\]

\[
M = \frac{WL}{2} = \frac{62.5 \times 18}{2} \text{ area} = 558\"^2
\]

\[
M = \frac{66}{8}\frac{1}{g}
\]

4/ft per sec.

\[
f = \frac{Wv^2}{2} = \frac{62.5}{62.5 \times 504 \times 3^2}{144 \times 32}{32\times 16}
\]

\[
F = \frac{Ma}{g}
\]

\[
W = 62.5\text{ ft}
\]

\[
a = \text{max. in eq. in}\n\]

\[
v = \text{vel. per sec.}
\]
Cost of wood riffle
6 pc. ft. B.M.
$40.00 = $.04 each ft.
8 x .04 = $ .32
strap iron = .10
1/2" cut & holes in wood = .25
3/8" holes in iron = .50
large square drive = .15
washers & screws = .15
1.47
Cost of steel Riffle

4" wide 20.40 lbs per ft.

$\frac{1}{8}$" steel

Area = 672 sq in.

or $48 \times 14$

Weight = $1.1666 \times 20.40$

23.8 lb each

@ $0.375$ each = $8.00$

Cut, punch, & flange

$.35$

$1.15$ ea

$\frac{1}{8}$" steel

Area = 600 sq in.

or $46 \times 12.5$

Weight = $1.64 \times 20.40 = 21.2$ lb

@ $0.375$ each = $7.70$

Cut, punch, & flange

$.35$

$1.15$ ea

$\frac{1}{8}$" steel

Area = 528.1 sq in.

or $48 \times 11$

Weight = $18.6$ lb @ $.0375 = .70$

each $.95$

$12$"

$.95$

$.15$

$.05$

$.25$

$.35$

$.65$

18.75

17.25

15.75

14.25

$66.00$
To dailies Oct. 15, 1930

HOMECOMING TO
BE HELD NOV. 1

Released on receipt

Fort Collins, Colo., Oct.——Great preparations are being made for the Colorado Aggie Homecoming celebration Saturday Nov. 1, which will be featured by the annual football game with the University of Utah on Colorado Field.

A huge student rally will be held far into the night before the game, and many of the "old grads" are expected to return in time to participate in the rally.

Returning alumni will register at Ammons hall in the morning and gather at noon for a "dutch" lunch, after which they will go in a body to the game. A large block of grandstand seats has been reserved until Oct. 24 especially for former Aggie students.

After the football game, tea will be served at Ammons hall, fraternities and sororities will entertain at dinners and a big Homecoming dance will be held in the men's gymnasium.

Special homecoming committees have just been appointed by the alumni association directors, and are announced by C. W. Ferguson, president of the organization, as follows:

Reception: J. Carroll (Casey) Hale, Colorado Springs, chairman; Mrs. Hale, Colorado Springs; L. L. Stimson and Mr. and Mrs. Henry Sandusky, Greeley; Robert Fuller, Mr. and Mrs. Ward Kemp, Henry Mitchell, Harold K. Brickey, Edward Gaylord and J. B. Tiffany, Denver; Mr. and Mrs. R. A. Maxfield and F. N. Jordan, Laporte; V. J. Ayres, Mr. and Mrs. J. E. Morrison, Sterling; Mrs. Margaret Patterson and George R. Smith, Longmont; J. R. Sargent, Fort Morgan; (more) --2071--