20’ X 40’ PORTABLE CATTLE SHADE
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Construction Notes and Comments

• Runners and posts are constructed from 2½-inch structural steel pipe.

• Post/runner angle braces are 2” x 2” x ¼” structural steel angle.

• End braces (between posts) are 1½-inch structural steel pipe.

• Other structural members are constructed of 1¼-inch structural steel pipe.

• Members ⑤ and ⑥ are 1¼-inch structural steel pipe braces that extend from a point on the posts approximately 6-foot above ground level to the outside corners of the steel top that supports the shade cloth.

• Cover with shade cloth.

• Cap steel pipe ends that would allow water to accumulate in the tubing. The runner ends would be an example.

• The recommended capacity of the shade is 16 – 24 head.

• Width of the shade is 9 feet up to a 6-foot vertical height to facilitate movement of the shade through gates.

• Structural steel tubing could be substituted for the steel pipe in the shade construction.

1-1/4” Structural Steel Pipe Stock

A. Roof Structure
   ① 4 – 40’ sections
   ② 5 – 20’ sections

B. Angled Supports
   ③ 8 – 10’ sections
   ④ 8 – 5’ sections

C. Support Members
   ⑤ 4 – 11’8” sections *
   *(Note: Cut from 12’ sections)
   ⑥ 4 – 11’9” sections *
   *(Note: Cut from 12’ sections)

1-1/2” Structural Steel Pipe Stock

A. Horizontal End Support Members
   ⑦ 6 – 8’ 9½” sections*
   *(Note: cut from 10’ sections)

B. Diagonal End Support Members
   ⑧ 4 – 10’ sections

2” x 2” x ¼” Angle Stock

A. Post/Runner Angle Braces
   ⑨ 4 – 2’ sections

2-1/2” Structural Steel Pipe Stock

A. Supporting Post
   4 – 9’ 2-¼” sections*
   *(Note: cut from 10’ sections)

B. Runners
   2 – 22’ sections*

* Note: 10-¾” sections on each end of runner bent at 30° to provide for smooth transport of shade.

TOTAL PIPE REQ’D

<table>
<thead>
<tr>
<th>Stock Des.</th>
<th>Length (Lineal ft.)</th>
<th>Total (Lineal ft.)</th>
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<tbody>
<tr>
<td>1-1/4”</td>
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<tr>
<td>①</td>
<td>160</td>
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<tr>
<td>②</td>
<td>100</td>
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<td>③</td>
<td>80</td>
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<td>④</td>
<td>40</td>
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<tr>
<td>⑤</td>
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<tr>
<td>⑥</td>
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<td>476</td>
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<tr>
<td>1-1/2”</td>
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<tr>
<td>⑦</td>
<td>54</td>
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<tr>
<td>⑧</td>
<td>40</td>
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<td>2”x2”x½”</td>
<td>⑨ 8</td>
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</tr>
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Note: If you print drawing on 11”x17” paper, the drawing will be to scale.