Chapter 08

AESTHETICS (AES)
GROOVE DETAIL

Scale: None

Reinforcing steel (typ.)

$\frac{1}{8}''$

$2''$

$\frac{1}{4}''$

$2''$

$2''$ cl.

$2\frac{1}{2}''$

DATE:

STATE HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
STATE OF MARYLAND

SHEET OF APPROVAL
OFFICE OF STRUCTURES
DIRECTOR
OFFICE OF STRUCTURES

AESTHETICS

GROOVE DETAIL FOR SUBSTRUCTURE ELEMENTS

DETAIL NO. AES-101
VERSION 1.0

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

APPROVAL
Notes:
1. Special layouts may be necessary at certain locations. If details are shown on other Contract Drawings such limitations will take priority over these standards.
2. These striations shall only be used on bridge substructure elements and retaining walls, where specifically called for on Contract Drawings.
3. Cost of all striations, complete-in-place, to be included in other pertinent Contract items.
4. Contraction and expansion joints shall always be located in striated areas.
TRAPEZOIDAL STRIATION DETAILS FOR BRIDGE SUBSTRUCTURE UNITS AND RETAINING WALLS

**SECTION A-A**
Retaining Wall
Scale: 1/4" = 1'-0"

**SECTION B-B**
Bridge seat at abutments.

**SECTION C-C**
Retaining Wall at other locations
Scale: 1/4" = 1'-0"

**SECTION D-D**
Retaining Wall with Jersey Barrier
Top of Barrier
Scale: 1/4" = 1'-0"

**FORMBOARD PATTERN DETAIL**
Scale: 1/2" = 1'-0"

Finished Roadway
See Coping Detail.

Reinforcing Steel
Front face of wall. All dimensions taken to this face, unless otherwise noted.

Wall Thickness as required design.
Optional Constr. Jt.

Finished Groundline

**DATE:** 10-02-2003

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

STATEMENT OF STRUCTURE INVENTORY

DETAIL NO. AES-201

SHEET 2 OF 2
**BRIDGE SUBSTRUCTURE UNITS AND RETAINING WALLS**

For wing walls:
\[ S = \frac{4}{3} T = 2R \]

For abutments/piers:
\[ Q = 2P = 4M \]

For retaining walls:
\[ W = \frac{5}{4} V = \frac{5}{3} U \]

**Typ. at end of retaining wall.**

\[ S = \frac{1}{N} (L-1'-0''-T-(N-1)R) \]
\[ N = \text{Number of Plain Panels} \]
\[ R = \text{Intermediate Striated Panel Dimension} \]
\[ T = \text{End Striated Panel Dimension} \]
\[ S = \text{Plain Panel Dimension} \]
\[ L = \text{Adjusted Length of Abutment Face (See AES-203)} \]

\[ Q = \frac{1}{N} (L-2M-(N-1)P) \]
\[ N = \text{Number of Plain Panels} \]
\[ M = \text{End Striated Panel Dimension} \]
\[ P = \text{Intermediate Striated Panel Dimension} \]
\[ Q = \text{Plain Panel Dimension} \]
\[ L = \text{Adjusted Length of Abutment Face (See AES-203)} \]

\[ V = \frac{1}{N} (L-2W-(N-1)U) \]
\[ N = \text{Number of Plain Panels} \]
\[ W = \text{End Striated Panel Dimension} \]
\[ U = \text{Intermediate Striated Panel Dimension} \]
\[ V = \text{Plain Panel Dimension} \]
\[ L = \text{Adjusted Length of Retaining Wall Face} \]
$a' = x' + z' + \frac{1}{4}''$

$x' = \frac{1}{2}'' \cos \frac{\alpha}{2}$

$y' = \frac{1}{2}'' \sin \frac{\alpha}{2}$

$z' = (1\frac{1}{2}'' + y') \tan \frac{\alpha}{2}$

$d' = 2\frac{1}{2}'' \tan \frac{\alpha}{2}$

**SECTION BELOW COPING**

Scale: 1 $\frac{1}{2}''=1'-0''$

Note:
For dimensions Q, M and S see other plan sheets.

**SECTION THRU COPING**

Scale: 1 $\frac{1}{2}''=1'-0''$

Location

<table>
<thead>
<tr>
<th>Location</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$d'$</td>
<td></td>
</tr>
<tr>
<td>$d''$</td>
<td></td>
</tr>
</tbody>
</table>
\[ \beta = (90 + a) + 2 \]
\[ a = z + x + \frac{1}{4} \text{"} \]
\[ b = (9" + a) \times \tan \alpha \]
\[ c = (9" + a) \times \sin \alpha \]
\[ d = 2 \frac{1}{2} \text{"} \times \tan \beta \]
\[ x = \frac{1}{2} \text{"} \times \sin \beta \]
\[ y = \frac{1}{2} \text{"} \times \cos \beta \]
\[ z = (1\frac{1}{2} \text{"} + y) \times \tan \beta \]

Note:
For dimensions Q, M and S see other plan sheets.