### TABLE 1 - RAILING MEMBERS

<table>
<thead>
<tr>
<th>MEMBER</th>
<th>DESIGNATION</th>
<th>DIMENSION</th>
<th>THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posts (Type &quot;A&quot; &amp; &quot;B&quot;)</td>
<td>6061-T6 RT (2x2)x0.250</td>
<td>2&quot; x 2&quot;</td>
<td>0.25&quot;</td>
</tr>
<tr>
<td>Posts (Type &quot;C&quot;)</td>
<td>6061-T6 Extrusion (3x2)x0.125</td>
<td>3&quot; x 2&quot;</td>
<td>0.125&quot;</td>
</tr>
<tr>
<td>Top Plate (Type &quot;C&quot;)</td>
<td>6061-T6 Extrusion (See Details)</td>
<td>3&quot; x 3&quot;</td>
<td>Varies</td>
</tr>
<tr>
<td>Top Rail</td>
<td>2&quot; NPS (Sch. 40)</td>
<td>2&quot; Round Top Cap Rail</td>
<td>2.00&quot;</td>
</tr>
<tr>
<td></td>
<td>3.00 OD x 0.125 Wall</td>
<td>Top Cap Rail Inner Sleeve</td>
<td>2.800&quot;</td>
</tr>
<tr>
<td></td>
<td>1.00 OD x 0.125 Wall</td>
<td>Intermediate &amp; Bottom Rail</td>
<td>2.00&quot;</td>
</tr>
<tr>
<td></td>
<td>1.50 OD x 0.125 Wall</td>
<td>Top Rail Joint/Splice Sleeves</td>
<td>2.50&quot;</td>
</tr>
<tr>
<td></td>
<td>3.00 OD x 0.125 Wall</td>
<td>Intermediate &amp; Bottom Rail</td>
<td>2.00&quot;</td>
</tr>
<tr>
<td>Handrail Joint/Splice Sleeves</td>
<td>2.00 OD x 0.125 Wall</td>
<td>Top Cap Rail Inner Sleeve</td>
<td>2.800&quot;</td>
</tr>
<tr>
<td>Handrail Support Bar</td>
<td>2.00 OD x 0.125 Wall</td>
<td>Intermediate &amp; Bottom Rail</td>
<td>2.00&quot;</td>
</tr>
<tr>
<td>Pickets (Type 1 Infill Panel)</td>
<td>2.00 OD x 0.125 Wall</td>
<td>Top Cap Rail Inner Sleeve</td>
<td>2.800&quot;</td>
</tr>
<tr>
<td>Infill Panel Members (Types 2 - 5)</td>
<td>2.00 OD x 0.125 Wall</td>
<td>Intermediate &amp; Bottom Rail</td>
<td>2.00&quot;</td>
</tr>
</tbody>
</table>

### TABLE 1 NOTES:

1. Alloy 6061-T6 or 6063-T5 may be substituted for Alloy 6063-T5.
2. Wall thickness permitted for rails with post spacings less than 5'-0".
3. 1" NPS (Sch. 40) non-slit rail sleeves may be substituted when welded connection Detail "K" is utilized.

### CROSS REFERENCES:

- Detail "A", Sheet 4
- Detail "B", Sheet 4
- Detail "K", Sheet 3
Handrail required for ramps (Handrail continuous at landings between runs)
Handrail: 1½ NPS Sch. 40

**NOTES:**

* Keyed construction joints in Index 400-011 Gravity Wall are not considered to be expansion joints.
** Contraction joints (Tooled or Saw Cut) in sidewalks do not require a 6" minimum offset.

**Rail expansion joints to be located in panels above structure expansion joints ** (35'-0" maximum spacing).

---

**RAMP REQUIREMENTS**

For slopes greater than 5%:
Max. ramp slope = 8.33%
Max. ramp cross-slope = 2.0%

**LANDING REQUIREMENTS**

Max. landing slope = 2%
Max. landing cross slope = 3%

---

**RAILINGS ON GRADES STEEPER THAN 5%**

*(Type 1 - Picket Railing Shown, Other Types Similar)*

---

**EXPANDED ELEVATION AT CORNERS**

**DETAIL FOR NON-CONTINUOUS RAILING AT CORNERS**

See Plans for continuation or termination limits of railing.

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**TYPICAL RAILING DETAILS & RAILINGS ON GRADES 0% TO 5%**

*(Type 1 - Picket Railing Shown, Other Types Similar)*

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**ELEVATION**

(Showing Outside Face of Railing with Type "A" Posts)

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**RAMP REQUIREMENTS**

For slopes greater than 5%:
Max. ramp slope = 8.33%
Max. ramp cross-slope = 2.0%

---

**LANDING REQUIREMENTS**

Max. landing slope = 2%
Max. landing cross slope = 3%

---

**RAILINGS ON GRADES STEEPER THAN 5%**

*(Type 1 - Picket Railing Shown, Other Types Similar)*

---

**ELEVATION**

(Showing Inside Face of Railing with Type "A" Posts)

---

**NOTES:**

* Keyed construction joints in Index 400-011 Gravity Wall are not considered to be expansion joints.
** Contraction joints (Tooled or Saw Cut) in sidewalks do not require a 6" minimum offset.

---

**RAMP REQUIREMENTS**

For slopes greater than 5%:
Max. ramp slope = 8.33%
Max. ramp cross-slope = 2.0%

---

**LANDING REQUIREMENTS**

Max. landing slope = 2%
Max. landing cross slope = 3%
RAILINGS ON STEPS & STAIRS

DETAIL "J" - ELEVATION VIEW
TOP RAIL TERMINATION

RAIL TERMINATION DETAILS

DETAIL "K" - ELEVATION VIEW
BOTTOM RAIL CONNECTION
(Intermediate Rail Similar)

RAILING CONTINUATION BEYOND STEPS OR STAIRS
(Bottom shown, Top similar)

ELEVATION
(At-Grade Steps shown, Elevated Stairs similar)

ALTERNATE HANDRAIL END TREATMENT OR
MOUNTING LOCATION FOR SLOPED WALLS

LEVELING CHANNEL
(Typ.) See Detail, Sheet 4

Concrete sidewalk to extend 6" min. behind railing
BASE PLATE DETAILS FOR TYPE "C" POST

SECTION "H-H"
(Screws Not Shown for Clarity)

TOP PLATE DETAILS FOR TYPE "C" POST
(Screws Not Shown For Clarity)

Notes:
†     See Sheet 4 for Notes.
††    See Sheet 4 for Notes.
†††   Length varies for beveled posts on grades. Holes must be drilled plumb to align with screw slot.
**SECTION A-A**

Picket Spacing *

(Typ.)

**DETAIL "1A"**

(Top of Picket Connection)

Intermediate Rail

Post

Picket Spacing *

(Shown dashed)

Post & Anchor Bolt

Intermediate Rail

Post

Picket Spacing *

(Shown dashed)

Base Plate

Anchor Bolt

**DETAIL "1B"**

(Bottom of Picket Connection)

**SECTION A-A**

3" Nominal Opening

Equal Clear Openings at Posts

2½" min. ~ 5½" max. (Typ.)

Optional Welded Connection at end picket

**NOTES:**

1. See Plans for Infill Panel option required.

**COMPONENT INFORMATION**

- **COMPONENT**
  - Chain-Link Fence Fabric (2" mesh with twisted bottom and knuckled top selvage)
  - Polyvinyl Chloride (PVC) Coated Steel - No. 9 gage Zinc-Coated Wire (metallic-coated core wire diameter)
  - Zinc-Coated Steel Wire - No. 9 gage with coating to match Chain-Link Fence Fabric.
  - Tie Wires
  - Tension Bars
  - Miscellaneous Fence Components

- **ASTM**
  - A392
  - A491
  - F668
  - F628
  - 5/8" (min. thickness) x 8½" (min. width) x 2'-3" (min. height) Steel Bars

- **COMPONENT INFORMATION**
  - Zinc-Coated Steel - No. 9 gage (coated wire diameter), Class 2 Coating
  - Polyester (PVC) Coated Steel - No. 9 gage Zinc-Coated Wire (metallic-coated core wire diameter) - See Plans for specified color of PVC.
  - Zinc-Coated Steel Wire - No. 9 gage with coating to match Chain-Link Fence Fabric.

**CHAIN-LINK PANEL NOTE:**

Chain-Link Fence Fabric shall be continuous along limits of railing. Splicing of Chain-Link panels using Tension Bars at 20'-0" minimum increments is permitted.
NOTE:
1. See Plans for Infill Panel Option required.

TYPE 3 - SUNSHINE INFILL PANEL

* Arc, Rays and Sun Segment may be formed in a single panel from 5/8" plate (ASTM B209 Alloy 6061-T6 or T651) pattern cut with laser or plasma CNC, welded to a 1x1½ Angle Border or the 3½x3½ Channel Border shown.

TYPE 4 - BROADWAY INFILL PANEL

NOTES:
1. See Plans for Infill Panel Option required.

PEDESTRIAN/BICYCLE RAILING (ALUMINUM)

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515-062

FY 2018-19
STANDARD PLANS

DESCRIPTION:

REV 3
01/01/16

REV 2
11/01/16

REV 1
7/1/16

REV 0
11/11/15

SHEET

PEDESTRIAN/BICYCLE RAILING (ALUMINUM)

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01/01/16

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PEDESTRIAN/BICYCLE RAILING (ALUMINUM)

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515-062

FY 2018-19
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01/01/16

REV 2
11/01/16

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REV 0
11/11/15

SHEET

PEDESTRIAN/BICYCLE RAILING (ALUMINUM)

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515-062

FY 2018-19
STANDARD PLANS

DESCRIPTION:
TYPE 5 - PERFORATED INFILL PANEL

SECTION A-A

PERFORATED PANEL (0.04" Min.)
Panel Mullion
Channel 3½x3½x½

SECTION C-C

PANEL/SPLICE CONNECTION

Inside Face of Rail

PERFORATED PANEL (0.04" Min.)

 bufio
BufWriter

DETAIL "5A"

PANEL/RAIL CONNECTION
(Top Shown, Bottom Similar)

DETAIL "5B"

PANEL END CONNECTION
(Expansion Joint Shown, Sides Similar)

Seal welding mitered corners is permitted

REPEATING PATTERN DETAIL FOR PERFORATED PANEL

DETAIL "5A"

PANEL/RAIL CONNECTION
(Top Shown, Bottom Similar)

DETAIL "5B"

PANEL END CONNECTION
(Expansion Joint Shown, Sides Similar)

#10x½ Pan Head Screws
@ 2'-0" sp.

#:½ Strip (Typ.)

#10x½ Pan Head Screws
@ 1'-0" sp.

#:½ Strip (Typ.)

REPEATING PATTERN DETAIL FOR PERFORATED PANEL

SECTION C-C

PANEL/SPLICE CONNECTION

#10x½ Pan Head Screws
@ 3'-0" Max.

#:½ Strip (Typ.)