



Note: 3" space between sidewalk and bottom rail, tree box flush with grade, and street sign outside of tree box. Ornamental O-rings are optional.

### **Ornamental Iron Fence for Street Tree Boxes DDOT/Urban Forestry Administration (revised 8/31/10)**

The 18" high ornamental iron fence w/top row of rings shall meet or exceed the following specifications: ASTM A-787, ASTM A-653, ASTM A-607

#### **Materials:**

- **Posts – above grade:** 1" x 1" x 1/8" tubing, 18" in length
- **Posts – below grade:** 3/4" solid steel bars, 18" in length
- **Top rail embellishment:** 1" x 1/8" flat steel channel
- **Top rail:** 2" molded steel bars
- **Mid rail:** 1" x 1/2" x 1/8" steel channel punched to accept pickets
- **Bottom rail:** 1" x 1/2" x 1/8" steel channel punched to accept pickets
- **Pickets:** 1/2" x 1/2" solid steel bars
- **O-Rings:** 4 1/2" tubing

**Finish:** all materials are welded and primed with 1 coat of Red Oxide primer and 1 coat of Black Satin paint (Sumter Coating) mixed with primer

**Fabrication and Installation:**

1. Fence shall be 3-sided unless otherwise specified, open side facing the curb
2. Top-to-mid rail spacing – 5.75” o.c.
3. Mid-to-bottom rail spacing – 8” o.c.
4. Bottom rail shall sit approx. 3” above grade surface
5. Post-to-picket spacing – 5.25” o.c.
6. Picket-to-picket spacing – 5” o.c.
7. Space O-ring tubing according to picket and post locations; all O-rings shall be welded to adjacent pickets, posts, and rails
8. Weld 1” x 1” x 0.125” post tubing at ends and corners and weld an additional post along the length at mid-point. If tree box length exceeds 12’, posts should be welded every 4’ along length
9. To provide below grade support in concrete, weld ¾” solid steel bars to all 1” x 1” x 0.125” post tubing
10. To deter seating, weld 1” x 0.125” flat steel channel to 2” top rail
11. For existing tree boxes, openings must be measured prior to fabrication to ensure that fences will fit just inside the boxes and side panels must be fabricated with a minimum setback of 6” and 10” from back edge of existing standard curb and narrow curb respectively, to allow sufficient room for car doors to swing
12. For new tree boxes installations, fence dimensions shall be standardized based on length and width of proposed openings (e.g. 4’ x 9’, 6’ x 10’, etc.), however, the setback for the side panels shall remain consistent at 6” and 10” from back edge of existing standard curb and narrow curb respectively, to allow sufficient room for car doors to swing
13. **Use Sonotube forms as per manufacturer’s specifications to set concrete for footings.** Concrete footings shall be approx. 10” wide by 24” deep. Concreting shall be performed in accordance with the manufacturer’s specifications.

**Requirements:**

Strength: 3000 psi with a slump of 3

Air entrainment: 5% to 8%

Aggregate size: ¾” max.

Mortar compressive strength at 28 days: 32 MPa

Meets ASTM C 150, Type 1

Finished concrete shall be two (2) inches below existing grade and pitched to direct water away from posts.