

GREENscreen® provides endless possibilities for trellising, fencing, and other vertical landscaping applications. The main component of the system is a modular 3-D wire trellis panel. When the panel is combined with evergreen or climbing vines, GREENscreen® forms a beautiful landscaping system that defines or encloses space, provides privacy, and offers shading for more sustainable construction.

**DRAWING COORDINATION:** Show location and size of panels and, if used, posts and planters. In most projects, GREENscreen® can be installed in accordance with manufacturer's instructions and it is not necessary to locate or detail mounting hardware. If, however, location or configuration of mounting hardware is crucial to coordination with other work or to convey design concept, locations and details may be shown in construction documents.

**SPECIFICATION COORDINATION:** Edit this guide specification to meet project requirements. Remove language that is not applicable and add additional language as required. Coordinate work of this section with other sections of specifications.

**DESIGN ASSISTANCE:** Details in the GREENscreen® technical manual and at [www.greenscreen.com](http://www.greenscreen.com) describes design and installation requirements for most applications. For special requirements, please contact GREENscreen® at 800-450-3494 or [sales@greenscreen.com](mailto:sales@greenscreen.com).

## **SECTION 10 82 00 – TREILLAGE**

Section title and number above are recommended for data filing and for permanently mounted installations; those below are for optional usage. Titles and numbers comply with MasterFormat 2004.

### **SECTION 10 22 23 – PORTABLE TREILLAGE**

### **SECTION 32 31 00 – FENCES**

### **SECTION 32 35 00 – SCREENING DEVICES**

## **PART 1 GENERAL**

### **1.01 SUMMARY**

A. Section Includes: [Trellis] [Fence] [Screen] panels and accessories.

Choosing appropriate plant materials for GREENscreen® requires consideration of climate, sun and wind exposure, soil, size of container, feeding, adjacent plants, and desired visual effect. Twining, climbing, curling and tendril vines are more suitable than vines that cling by aerial roots or suckers. Less woody vines with flexible stems are most appropriate for weaving into panels. Some vines, such as wisteria, that tend to grow heavy and tree-like are better off in containers that prevent them from growing too large and heavy for trellis.

B. Related Sections:

[1. Section 03 30 00: Cast-in-Place Concrete: For setting fence posts.]

[2. Section 32 31 [ ] – Gates.]

3. Section 32 93 00: Plants.

### 1.02 REFERENCES:

- A. ASTM A500 – Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- B. ASTM A82 – Mechanical, Physical and Performance Properties of Carbon Steel Wire
- C. ASTM A641 – Zinc-Coated (Galvanized) Carbon Steel Wire
- D. ASTM A879 – Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface.
- E. ASTM B117 - Operating Salt Spray (Fog) Apparatus.
- F. RAL – German Institute for Quality Assurance and Indication.

### 1.03 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00. [Provide [two] [\_\_\_\_] sets of submittals.]
- B. Product Data: Submit manufacturer's product data, standard details, and installation instructions.

Shop drawings are not ordinarily required. However, text below may be retained for complex projects if required to coordinate dimensions and installation of treillage with adjacent work.

- C. Shop Drawings: Submit showing sizes critical dimensions, panel layout constraints using a 2 x 2 inch modular grid, and details and locations of accessories.

Color samples are not ordinarily required. However, text below may be retained below if required to verify appearance of custom colors.

- D. Color Submittals: Submit coupons 2 x 3-1/2 inches minimum showing color and texture to be provided.

### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from damage. Store panels flat. Provide edge protection when strapping is used. Do not apply loads to panel edges.

In addition to the sustainability factors below, GREENscreen® can reduce energy requirements for cooling; use a deciduous vine to shade your building against summer sun but allow it to be warmed by winter sun.

### 1.05. ENVIRONMENTAL REQUIREMENTS

Contact manufacturer before specifying recycled content to verify current raw material availability.

- A. Recycled Materials Content: Steel components shall contain not less than [\_\_\_\_\_] percent recycled materials content.

Panels are fabricated in Fontana, CA, located 50 miles east of Los Angeles, CA. If the project is located more 500 miles from the plant, delete the following.

- B. Panels shall be manufactured and fabricated within 500 miles of Project location.

## PART 2 PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURER

- A. GREENscreen®, Los Angeles, CA; phone 800-450-3494, fax 310-837-0523, [www.greenscreen.com](http://www.greenscreen.com).

### 2.02 PANELS

- A. Panels shall be rigid, three-dimensional welded wire grid fabricated of 14-gage ASTM A641 galvanized steel wire.
- B. Face Grid: Wires shall be welded at each intersection to form a 2 x 2 inch face grid on the front and back of panels,
- C. Trusses: Face grids shall be separated by bent wire trusses spaced at 2-inch centers and welded to front and back face grids at each truss apex.

2" thick panels should be used only at wall-mounted conditions. They take up less area and enable the two-inch module to be maintained around corners.

3" inch thick panels can be used at wall-mounted conditions, edge-mounted conditions with supports at up to 96 inches on center, and at horizontal or inclined (overhead) conditions with supports at up to 48 inches on center.

- D. Thickness: [2 inches.] [3 inches.] [As shown on Drawings.]
- E. Length and Width: Provide in 2-inch nominal increments.
- F. Tolerance: 1/8 inch in width and 1/4 inch in length.

**2.03 ACCESSORIES**

Trim is recommended adjacent to pedestrian traffic areas and where required visually or to provide an edge to which vines can be trimmed for maintenance. Do not use channel trim at bottom of panels where it could hold water and restrict plant growth.

**A. Trim:**

1. Fabricate from 20-gage ASTM A879 galvanized steel.
2. Types:
  - a. Channel Trim: Thickness of panel x 1/2 inch legs.
  - b. Angle Trim: 1/2 inch x 1/2 inch legs.

Omit following if locations are shown on drawings.

3. Locations:
  - a. Corners formed by intersections of panels: Angle type.
  - b. Top of Trelliage [where Exposed to Pedestrians]: [[Angle] [Channel] type.] [None.]
  - c. Side of Trelliage [where Exposed to Pedestrians]: [[Angle] [Channel] type.] [None.]
  - d. Bottom of Trelliage [where Exposed to Pedestrians]: [Angle type.] [None.]

If exterior face of panel is more than 18 inches in front of substrate, contact GREENscreen® for custom designed mounting brackets.

**B. Clips and Straps:** Provide manufacturer's standard types of clips and straps suitable for mounting conditions. Fabricate from ASTM A879 galvanized steel. Adjustable clips shall have 1/4 inch diameter 18-8 stainless steel bolt, washer, and nut.

Spacers are recommended when panels are mounted directly to a wall.

**C. Plastic Spacers:** Provide 1/2 inch thick black Ultra High Molecular Weight Polyethylene (UHMW) washers [to hold clips away from mounting surface].

Post imbed length and footing size should be determined based on overall height, spacing, wind load, soil conditions, and type of footing. Detail footing on drawings.

**D. Fence Posts:** 3-inch [diameter ASTM A500] [square ASTM A500B] steel tube. [Provide steel post caps.]

**E. Fasteners for Mounting Clips to Fence Posts:** Self drilling, self tapping hex washer head screws, Type 410 stainless steel, and free from rust when salt spray tested for 300 hours in accordance with ASTM B117.

Fasteners used for attachment to structure should have a minimum resistance of 550 lbs. pull out. Specify blocking between studs at locations where GREENscreen® is to be mounted to light gauge steel framing or wood framing.

F. Fasteners for Attachment to Structure:

1. To Concrete or Masonry: [550 lbs].
2. To Structural Steel: [550 lbs].
3. To Light-Gage Steel Framing: [550 lbs.]
4. To Wood Framing: [550 lbs].

Contact GREENscreen® for additional information on planters.

G. Planter: [\_\_\_\_\_].]

## 2.04 FABRICATION

A. Cut to size.

[B. Weld trim to panels and grind smooth exterior surfaces of welds.]

[C. Curve panels using either “crimp-to-curve” or “cut-to-curve” technique as recommended by manufacturer for diameter of curve and conditions of use.]

## 2.05 FINISHES

A. Metal components (except fasteners) shall be factory finished after fabrication

B. Finish System: Pretreat with general purpose, alkaline, water based cleaner / degreaser applied at 240 degrees F. Prime with zinc-rich epoxy powder coat. Topcoat with polyester or polyester-urethane powder coat.

C. Salt Spray Resistance: Finish shall remain rust free when tested 1680 hours in accordance with ASTM B117.

GREENscreen® offers six standard finishes including four gloss finishes and two matte textured finishes. RAL Colors are available at a slight premium, depending upon the size of an order. Contact factory for information on custom colors.

D. Color: [[Gloss] [Wrinkle-Textured] Green.] [[Gloss] [Wrinkle-Textured] Black.] [Gloss Silver.] [Gloss White.] [Color selected by [Architect] [\_\_\_\_\_] from manufacturer’s standards.] [RAL [Classic] [Design] color [\_\_\_\_\_].] [Custom color to match [\_\_\_\_\_].]

E. Touch-Up Paint: Provide high quality, exterior-grade spray paint suitable for conditions of use.

**PART 3 EXECUTION****3.01 EXAMINATION**

- A. Inspect substrates and conditions affecting work of Section. Do not proceed until unsatisfactory conditions have been corrected.

**3.02 PREPARATION**

- A. Fence Posts: Install posts as shown on Drawing.

**3.03 INSTALLATION**

- A. Install panels plumb and square, centered within area designated for panels, and aligned to maintain modular grid.
- C. Avoid cutting panels in field. Where field cutting is essential, apply touch-up paint to cut edges.
- D. Install securely with fasteners located [as shown on Drawings.] [to meet manufacturer's requirements.]
- E. Repair bent or damaged panels. If panels cannot be repaired to satisfaction of [Architect] [\_\_\_\_\_], remove from jobsite and replace with new panels.

**END OF SECTION**

Guide specification may be copied by qualified design and construction professionals for use in preparing project specifications or purchase orders for GREENscreen® products. ® © 2005, GREENscreen®. Issued 12/05

These specifications are subject to change without notice. Consult GREENscreen® to verify specifications release date for any changes. Issued 12/05.