

Guide Specification

Section 32 94 00 – Planting Accessories

Post & Vine Trellis System

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provision and installation of modular steel post and wire trellis panel system, including overhead Pergola and Cantilever frames, post-mounted benches, and planters where indicated.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete
- B. Section 05 50 00 - Metal Fabrications
- C. Section 12 93 00 - Site Furnishings
- D. Section 32 31 00 - Fences and Gates
- E. Section 32 93 00 - Plants
- F. Section 32 94 33 - Planters

1.3 PERFORMANCE & DESIGN REQUIREMENTS

- A. Engineer Stamped System: Standard configurations to be engineered and stamped by a Registered Professional Engineer in compliance with the 2024 IBC and ASCE 7-22 for 115 MPH basic wind speed (Exposure C), 1.5" radial ice, 5 psf plant load, and bench loads of 20 plf dead plus 200 plf live. Stamped engineering report and typical details available from manufacturer.
- B. Structural Performance: Design, size, and detail trellis assembly to withstand dead loads, live loads, plant loads, ice loads, and wind loads in accordance with the local Authority Having Jurisdiction (AHJ), IBC, and ASCE 7.
- C. Site-Specific Engineering: Provide calculations and details stamped by a Professional Engineer registered in the state of the Project for post heights exceeding 8'-6" above grade, trellis panels wider than 48", special wind or ice regions, poor soils, rooftop installations more than 150 feet above grade, or where required by the AHJ.
- D. Rooftop Applications: Structural capacity of existing or proposed roof structure shall be verified by the Project Structural Engineer of Record (SEOR).

1.4 SUBMITTALS

- A. Product Data: Manufacturer's standard catalog cut sheets and finish samples.
- B. Shop Drawings: Show layout, post locations, panel sizes, trim profiles, corner details, foundation and mounting details, and integration with adjacent work.
- C. Structural Submittals: Manufacturer's stamped engineering report and typical details. Where site-specific engineering is required, submit calculations and details signed and sealed by a Professional Engineer.

- D. Environmental Product Declarations (EPDs): Product-specific EPDs complying with ISO 14025.

1.5 QUALITY ASSURANCE & WARRANTY

- A. Welding: All welding shall be performed by experienced personnel in accordance with the manufacturer's established quality control standards and the general principles of AWS D1.1.
- B. Warranty: Manufacturer's standard 3-year limited warranty against defects in materials and workmanship. Plant material, plant growth damage, and installation not in accordance with manufacturer's structural details are excluded.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Post & Vine Trellis System by Tournesol Siteworks, LLC. (800) 542-2282 | tournesol.com
- B. Approved Substitutions: Under provisions of Division 01, with structural calculations stamped by a Professional Engineer demonstrating compliance with Article 1.3.

2.2 COMPONENTS

- A. Steel Posts & Beams: HSS 6" x 2" x 3/16" rectangular steel tubing, ASTM A500 Grade B, with welded top caps and ASTM A36 base plates as detailed.
- B. Trellis Panels: greenscreen® rigid, three-dimensional welded wire panels of 14 gage galvanized steel wire (ASTM A641), forming a 2" x 2" face grid front and back with internal wire trusses at 2" centers. 3" nominal thickness.
- C. Edge Trim: 20 gage galvanized steel (ASTM A879). #5104 channel trim at panel sides; #5105 edge trim at panel bottoms; top trim as indicated.
- D. Fasteners & Hardware: 304 stainless steel bolts and mounting hardware; 1/4" diameter bolts at panel connections. 7/8" UV-stabilized recycled plastic spacers at post-to-panel connections.
- E. Concrete Anchors: 1/2" diameter, ASTM F1554 Grade 36 minimum. Adhesive anchors: Simpson SET-3G epoxy or approved equal.
- F. Finish: Abrasive blast cleaning, zinc-rich primer coat (1-2 mils), and factory-applied architectural polyester powder coat topcoat. Color as selected by Architect.

2.3 SIZES

- A. Posts: 8'-6" standard height above grade, spaced 52" O.C.
- B. Trellis Panels: Standard 4' x 8'; available 48" to 96" L x 60" to 102" H.
- C. Pergola: Spans of 8', 10', 12', and 14'; 102" maximum height above grade.
- D. Cantilever: 4'-0" maximum projection.
- E. Custom sizes and configurations available; subject to site-specific engineering.

2.4 ACCESSORIES (OPTIONAL)

- A. Integrated Benches: Thermally Modified Oak (other wood species or recycled plastic lumber available) slats mounted to 3/8" laser-cut steel brackets designed for direct attachment to trellis posts. 50" L x 22" W x 22" H with 18" seat height, complying with 2010 ADA Standards, Section 903. LED lighting ready.
- B. Integrated Planters: Freestanding Wilshire planters in aluminum, mild steel, weathering steel, FRP, or GFRC, configured to align with trellis runs per layout drawings. Maintain 4" to 6" between top of planter and bottom of trellis panel.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify field dimensions and site conditions prior to fabrication.
- B. Ensure foundations, slabs, embed plates, and substrate preparations are complete and cured, and are ready to accept posts per structural engineering requirements.

3.2 INSTALLATION

- A. Install system plumb, level, and true to line, with posts at 52" O.C., in accordance with manufacturer's written instructions and approved shop drawings.
- B. Mounting Options:
 - 1. Embedded Posts: Set posts a minimum of 18" into concrete footings, typically 18" diameter x 48" deep with (5) #5 vertical bars and #3 ties at 10" O.C., per structural details.
 - 2. Surface Mounted: Anchor base plates to concrete slab using (4) 1/2" diameter expansion anchors per base plate; use adhesive anchors at Cantilever frames with benches, per structural engineering calculations.
 - 3. On Structure: Anchor to roof curb slab with cast-in embed plate, or directly to structural concrete with expansion anchors, per structural details. Coordinate with roofing and waterproofing work.
- C. Assemble Pergola and Cantilever overhead beams to posts with manufacturer-supplied mechanical fasteners.
- D. Secure trellis panels to posts using manufacturer-supplied fasteners and spacers. Install panels plumb and square.
- E. Install bench brackets and planters per manufacturer's instructions and layout drawings.
- F. Touch up damaged factory finishes with manufacturer-approved touch-up paint.