

Section XXXXXX- Vertical Living Walls

PART 1-GENERAL

1.1 SUMMARY

A. Scope

1. Work includes furnishing and installing the **Varden Vertical Living Wall System**; including all mounting components, carrier trays, **GardenSoxx®**, **Ellepots**, **AirTrays**, plants, and irrigation components, as designated on the construction drawings and as specified herein.

B. Description

1. The **Varden Vertical Living Wall System** is made of galvanized wire panels and sturdy planting trays to easily create custom vegetated vertical walls. Varden trays hold 5" diameter GardenSoxx units in typical 24" lengths and can be planted with edibles, ornamentals, or natives. The GardenSoxx mesh keeps weed seeds out, and added irrigation creates a completely low-maintenance growing system. Typical Varden wire panel dimensions are 4' wide x 4' tall with openings of 4" W x 6" T; however, panels can be easily cut to size. The Varden Living Wall System is designed to be installed in accordance with these specifications and the Varden installation manual. Varden Living Walls can be completely or partially covered in trays for full plant coverage.

1.2 SUBMITTALS

A. Shop Drawings

1. Vertical living wall design, and mounting details.

B. Product Data

1. Material description for all components including; composition, MSDS sheets, manufacturer certifications and installation information for each product specified as part of the system.

C. Planting and Irrigation Plan

1. Plant list with elevation views, approved suppliers, seasonal requirements for planting, fertilization, plant coverage targets, methods of measurement, maintenance agreements.

D. LEED Compliance

1. All information pertaining to categories, points and documentation.

1.3 DELIVERY, STORAGE, & HANDLING

- A. Check all materials upon delivery for any damage, and to assure the proper materials and quantities have been received.
- B. Protect the materials from damage, as damaged materials shall not be used in the project.

1.4 WARRANTY

- A. Verdant Technologies warrants its living wall system components. For installed walls, all warranties will be by project specific agreement regarding plants, stewardship and wall coverage targets established for each project with its installer.

1.5 MAINTENANCE

- A. Maintenance and care of the vegetated portions of the wall system is essential. The initial and continuing maintenance required will depend on the plantable unit infill, type of vegetation, local weather conditions, and exposure. Verdant Technologies or its named distributors may, at its discretion, provide maintenance review visits for the purpose of documenting the progress and condition of the completed system. At such regular visits within the first 24 months from completion, reports will be generated and shared with stakeholders as a tool to facilitate successful grow-out. Any provisions by and for the project owner, in addition to those listed above, such as %plant coverage by calendar date, shall be placed in a separate document and included with the plans and specifications of the project prior to bidding and selection of installer.

PART 2- PRODUCTS

2.1 LIVING WALL SYSTEM MANUFACTURER

- A. **Varden Vertical Living Wall System** as produced by **Verdant Technologies**:
<http://www.verdtech.com> phone: 314-279-8905 email: info@verdtech.com
1. Galvanized Steel Wire Panel product description 4x6 W4.0XW4.0 48" (+1 ½", 1 ½") X 8'-0 ½" (¼", ¼") meeting the following specifications:
 - a. Overall Dimensions: 96.5" (with 16 spaces @ 6") x 51" (with 12 spaces @ 4")
 - b. Galvanized in accordance with ASTM-A-123 or ASTM-A-153
 - c. Wire Size: 4.0 (0.226 in)
 - d. Wire Fy (Grade): 65 K.S.I (ASTM A1064)
 2. Removable Planting Trays
 - a. Injection molded BPA free Polypropylene (may contain recycled content)
 - b. Recyclable
 3. GardenSoxx Mesh
 - a. 5" diameter Polypropylene mesh
 - b. Recyclable and BPA free
 - c. Conforming to Filtrexx® patented mesh technology and specifications.

2.2 GROWTH MEDIA

- A. Use **Varden Growing Media** as supplied by Verdant Technologies in order to facilitate successful grow-out and long-term coverage of the completed wall system. Varden Growing Media is a specific blend of long fiber Horticultural Grade Canadian Sphagnum Peat Moss, Coarse Horticultural Grade Perlite, and Compost meeting or exceeding Filtrexx® GrowingMedia™ specifications as indicated in the Filtrexx Design Manual; Or be pre-approved custom growing media to meet the needs of the plants to be grown and the region of use.
- B. Varden Growing Media blend will meet the following parameters:
- | | |
|--------------------|---------------|
| 1. Total Porosity | 50-70% |
| 2. Air Space | ≥10% |
| 3. Available Water | 25-35% |
| 4. pH | 5.5-7.0 |
| 5. EC | <3.0 mmhos/cm |

- C. Nutrient additions (fertilization) shall be based on lab analysis of the growing media, the needs of the plants specified, and region to be grown.
- D. Material is to be delivered in bulk bags, or packaged in mesh socks for precise, modular placement within the Varden Vertical Living Wall System.

2.3 IRRIGATION

- A. Varden planting trays have been designed to allow for 1/4" drip irrigation tubing. See Verdtech website for details and specs at <https://verdtech.com/>

2.4 LIGHTING

- A. For plant survival, a minimum of 150 foot candles spread evenly throughout the face of the living wall for 10-12 hours daily. For supplemental lighting, typically with a linear LED fixture, outputting a minimum of 2100 lumens per foot with the color temperature between 4100-5500K (Kelvin). When using supplemental lighting provide an adjustable timer control.
- B. Recommended Lighting Supplier
 - 1. SunLite: <https://www.sunlitest.com/green-wall-lighting/>
phone: 800-605-BULB; email: info@sunshinelighting.com

PART 3- EXECUTION

3.1 INSTALLATION

- A. To be per Varden Installation Guides, upon request (314-279-8905 or info@verdtech.com) and install manual at <https://verdtech.com/>

3.2 PLANTING

- A. Varden Living Walls were designed to be pre-planted, grown-in prior to installation, and supplied by distributor/dealer, or planted onsite as specified by the designer. Always consult with the owner and/or their representatives early in the project to determine all responsible parties with regard to plants, planting, nursery time, quantity, design, maintenance, and fertilization.

3.3 IRRIGATION

- A. Install irrigation supply lines and drip emitters as required per plans and VerTexx specifications at: <https://verdtech.com/>

3.4 LIGHTING

- A. Install supplemental Lighting as required per plans and manufacturers specifications.

3.5 TECHNICAL SUPPORT

- A. Verdant Technologies and its distribution staff are available for specification assistance and jobsite review of various installation stages at 314-279-8905 or e-mail info@verdtech.com for information and technical advice. Distributor should be contacted at least 14 days prior to the start of construction if technical representatives are needed during the installation process.

END OF SECTION XXXXXX