

**SECTION 077216**

**ROOFTOP [EQUIPMENT] SUPPORTS AND PLATFORMS**

**Display hidden notes to specifier in Word 2003 by using "Tools"/"Options"/"View"/"Hidden Text".**

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This section is based on the products of RoofScreen Mfg., Inc., which is located at:

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Santa Cruz, CA 95060

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 RoofScreen Mfg. Inc. designs, manufactures and distributes rooftop equipment screens, watertight roof attachment hardware, acoustical panel systems and architectural aluminum louvers.

 This specification is for our DryStand Rooftop Platform System, including support posts, sleeves, caps, saddles and channels. For information and specifications for our other products, please see [www.roofscreen.com](http://www.roofscreen.com).

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1. **GENERAL**
	1. SECTION INCLUDES
		1. Manufactured [equipment] rooftop supports and platforms.
	2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 051200 - Structural Steel: Metal Framing.
		2. Section 052100 - Steel Joist Framing.
		3. Section 053100 - Steel Decking.
		4. Section 055000 - Metal Fabrications: Frames and supports.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM A 500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
		2. ASTM A 501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
		3. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
		4. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
	1. COORDINATION
		1. Coordinate Work with other operations and installation of support framing to avoid damage to installed materials.
	2. ACTION SUBMITTALS
		1. Submit under provisions of Section 013300.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Layout and erection drawings showing typical cross sections and dimensioned locations of all base supports. Include erection drawings, elevations, fastener requirements and details where applicable.
	3. INFORMATIONAL SUBMITTALS
		1. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
		2. Warranties: 3 signed copies.
	4. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Manufacturer with a minimum five years documented experience in producing supports and platforms.
		2. Pre-Installation Meeting:
			1. Convene at job site, at least seven calendar days prior to scheduled beginning of construction activities of this section, to review requirements of this section.
			2. Require attendance by representatives of the installing subcontractor (who will represent the system manufacturer) and other entities affected by construction activities of this section.
			3. Notify Architect four calendar days in advance of scheduled meeting date.
		3. Source Limitations for Supports and Platforms: Obtain supports and platforms from one source with resources to provide products of consistent quality in appearance and physical properties.
		4. Comply with all laws, ordinances, rules and regulations and orders of any public authority having jurisdiction over this part of the work.
	5. DELIVERY, STORAGE AND HANDLING
		1. Deliver components to the project site clearly marked for proper identification.
		2. Receive, handle and store materials in conformance with the manufacturers printed instructions.
		3. Store products under cover, in manufacturer's unopened packaging until ready for installation.
		4. Protect materials from exposure to moisture.
		5. Store materials in a dry, warm, ventilated weathertight location.
		6. Handling: Use a forklift or crane to move material. Do not lift the bundles by the metal bands.
			1. Fork Lift: Spread the forks as far as possible to balance the load. Drive slowly when moving long bundles over uneven surfaces to avoid tipping the load
			2. Crane: Position the canvas sling straps so that the space between the straps is at least 1/3 the length of the bundle. Use sling straps with looped ends running one end of the strap through the loop at the other end to cinch the bundle when lifted. When setting the load on the roof, put wood blocks under it to protect the roof and allow space to remove the sling straps.
	6. PROJECT CONDITIONS
		1. Field Measurements: Verify substrate dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
			1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating supports and platforms without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.
	7. WARRANTY
		1. Provide manufacturer's written limited warranty stating that the support system installation is to be free of faults and defects, except the warranty period is to be for twenty (20) years from the date of final acceptance by owner.
		2. The above warranties are in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.
1. **PRODUCTS**
	1. PERFORMANCE REQUIREMENTS
		1. Design Loads: Comply with Building Code for site location and building height.
			1. Design to resist ASCE 7 - Minimum Design Loads for Buildings and Other Structures, using the latest published ASCE version.
			2. Design all materials, assembly and attachments to resist snow, wind, seismic, suction and uplift loading at any point without damage or permanent set.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph if structural engineering calculations are required.

* + 1. Structural Design: Prepare structural design calculations for supports and platform assemblies including post supports, channels, fasteners, and attachment to structure.
			1. Design and provide supports and platform assemblies to withstand superimposed vertical loads and wind loads with a deflection in both vertical and horizontal members not to exceed L/180.
		2. Anchors and Connections:
			1. Anchors, connections and assemblies connecting the supports, platforms, and associated fabrications to the supporting construction are shown on the Drawings as suggested locations for the support and platform manufacturer/installer's information. The support and platform manufacturer/installer is responsible for the structural design and placement of the connections and anchors, including all connecting hardware, accessories and reinforcing necessary for fabrication, and installation of the supports, platforms, and associated fabrications.
			2. The support and platform manufacturer is to notify the Architect in writing prior to the submittal of shop drawings of any changes in the proposed locations of connections and anchors.
			3. The Architect's review of shop drawings is not to be construed as removing responsibility from the support and platform manufacturer/installer for structural failures related to design, fabrication, installation, and fabrication services.
	1. MANUFACTURERS
		1. Acceptable Manufacturer: RoofScreen Mfg., which is located at: 347 Coral St.; Santa Cruz, CA 95060; Toll Free Tel: 866-766-3727; Tel: 831-421-9230; Fax: 866-253-0738; Email: request info (info@roofscreen.com); Web: www.roofscreen.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 01 section on product options and substitutions.

* + 1. Substitutions: Not permitted.

\*\* NOTE TO SPECIFIER \*\* Select one of the two sections referenced in paragraph below.

* + 1. Requests for substitutions will be considered in accordance with provisions of Section [012500, Substitutions Procedures][016000, Product Requirements and Substitutions].
	1. MATERIALS
		1. Round Post Supports: 12 inch (305 mm) tall weldments fabricated from steel tube conforming to ASTM A 500 and cold rolled steel conforming to ASTM A 36, fabricated with pre-punched holes in base plate for fastening to roof structure. After fabrication, apply minimum 2 to 4 mil baked on powder coat primer. Provide height adjustment with galvanized tube sleeve conforming to ASTM A 500, sized to telescope over outside of round post tube and fastened at desired height with self-drilling, self-tapping screws.
		2. Round Post Cap: Weldments fabricated from AISI Type 304 stainless steel with mill finish fabricated to slip over 2‑1/2” sleeve tube allowing adjustable height when used with Round Post Support.
		3. Channels and Connectors: Span members, cross members and connector saddles formed from G90 galvanized cold rolled steel, ASTM A 653.
	2. FASTENERS
		1. Fabricating and installing contractor is responsible for anchorage and fastening the support system to the building structure or supporting construction for the sizes and types of supports shown on the Drawings and specified herein as required for each condition and type of installation. This responsibility includes determining the locations, quantities, capacity and design for anchors, fasteners and or welds used in the installation subject to review by the Architect.
		2. Show and describe all such anchors, fasteners and or welds on shop drawings. Furnish all bolts, nuts, screws, clips, washers, welding materials and other fasteners and accessories necessary to secure and assemble the specified fabrications.
	3. FABRICATION
		1. Fabricate components in largest practical sections possible for delivery and field assembly.
		2. Supply components required for anchorage of supports and platform assemblies. Fabricate anchors and related components of same material and finish, except where specifically noted otherwise.
		3. Galvanize components in accordance with ASTM A 653, Coating G90.
1. **EXECUTION**
	1. INSPECTION
		1. Examine all surfaces to receive the supports and accessories. Verify all dimensions of in-place and subsequent construction. Installation of the supports and accessories constitutes acceptance of the related construction.
	2. INSTALLATION
		1. Install supports and platforms in accordance with manufacturer’s printed instructions.
		2. Supports shall be level and plumb to accept equipment being supported.
	3. CLEANING AND PROTECTION
		1. Upon completion of the work remove all unused materials, debris, containers and equipment form the project site. Clean and repair finished surfaces that have been marked or otherwise damaged by work under this Section.
		2. Protect supports and platforms during construction period so that they will be without any indication of deterioration or damage at the time of acceptance by Owner.
		3. Remove and replace any supports and platforms damaged or stained at no additional cost to the Owner.

END OF SECTION