SECTION 41 67 19

INDUSTRIAL SAFETY EQUIPMENT

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\*\* NOTE TO SPECIFIER \*\* Omega Industrial Safety; products.
This section is based on the products of Omega Industrial Safety, which is located at:795 Progress Dr.Saukville, WI 53080Toll Free Tel: 800-521-8272Fax: 262-284-4199Email: [request info (sales@omegaindl.com)](https://arcat.com/rfi?action=email&company=Omega%252BIndustrial%252BSafety&message=RE%253A%2520Spec%2520Question%2520(11567oip)%253A%2520&coid=42113&spec=11567oip&rep=&fax=262-284-4199)
Web: <https://www.omegaindl.com>
 [ [Click Here](https://arcat.com/company/omega-industrial-safety-42113) ] for additional information.
Since 1987, Omega Industrial Products has been a leading supplier of products that increase workplace safety and productivity and reduce employee injuries. Our safety type barrier products were designed to protect people, machinery, building walls, shelving, racks, doors, finished products, and anything else that requires protection on site.
Made from the best and most durable materials, Omega's products are built to withstand heavy usage and busy environments, all while complying with job site codes and regulations.
Omega offers a wide online selection of industrial guardrails, pipe bollards, handrails, door guards, Roll Up Fence, industrial stairways, and more to help protect workers from injuries and hazardous working conditions. When used correctly, these products simultaneously keep workers feeling safe and comfortable while protecting equipment and minimizing maintenance costs.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Handrail.
		2. Column guards.
		3. Downspout / pipe guards.
		4. Downspout / pipe guards.
		5. Industrial guardrails / safety barriers.
		6. Pipe bollards.
		7. Overhead door track protection.
	1. RELATED SECTIONS

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

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
		2. Section 04 40 00 - Stone Assemblies.
		3. Section 05 10 00 - Structural Metal Framing.
		4. Section 05 50 00 - Metal Fabrications.
	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 36 - Standard Specification for Carbon Structural Steel.
		2. ASTM A 500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
		3. ASTM A 1011 - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
		4. OSHA 29 CFR 1910.23 - Guarding Floor and Wall Openings and Holes.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		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: Showing overall dimensions (width, height). Supporting construction requirements and equipment structural attachment. Operating range and required clearances.
		4. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	2. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Providing sole source for design, engineering, manufacturing and warranty claims handling. Company specializing in manufacturing products specified with a minimum 20 years experience.
		2. Installer Qualifications: Installer Qualifications: Trained, certified and approved by manufacturer, with documented experience on similar projects.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. Delete if not required. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
			4. Accepted mock-ups shall be comparison standard for remaining Work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
	2. SEQUENCING
		1. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
		2. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Omega Industrial Safety, which is located at:795 Progress Dr.Saukville, WI 53080Toll Free Tel: 800-521-8272Fax: 262-284-4199Email: [request info (sales@omegaindl.com)](https://arcat.com/rfi?action=email&company=Omega%252BIndustrial%252BSafety&message=RE%253A%2520Spec%2520Question%2520(11567oip)%253A%2520&coid=42113&spec=11567oip&rep=&fax=262-284-4199);Web: <https://www.omegaindl.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. HANDRAIL
		1. Description: Omega Handrails shall be a two-rail design with a 42 inches (1067 mm) top rail height, 21 inches (533 mm) midrail height with posts on maximum 8 ft (2438 mm) centers, with anchors and fittings. Handrail shall be assembled at the job-site to be assembled as a mechanically fastened system.
			1. Completed system of handrail, posts and framing of members shall be capable of withstanding a load of at least 200 lbs (90.7 kg) applied in any direction at any point on the top rail.
			2. System shall comply with OSHA-compliant barrier, and BOCA building code.
		2. Handrail shall fasten directly to the floor or platform framing to achieve maximum strength and rigidity. Steel handrail shall meet or exceed ASTM A 500, Grade B round or square tubing.
		3. Pipe railings, posts and top and intermediate railings shall be at least 1-1/2 inches (38 mm) nominal diameter.

\*\* NOTE TO SPECIFIER \*\* Select the size(s) required and delete the one not required

* + - 1. Size: 1-1/2 inch (38 mm) nominal.
			2. Size: 2 inches (51 mm).
		1. Provide a minimum of 4 inch (102 mm) high kick plate where required by OSHA 29 CFR 1910.23 Guarding floor and wall openings and holes.
		2. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is OSHA. approved Traffic Safety Yellow.
	1. COLUMN GUARDS
		1. Column Guards:
			1. Material: Omega Column Guards are constructed of hot rolled, cold formed 3/16 inch or 7 gage steel meeting the requirements of ASTM A 36 steel, modified to a minimum yield of 36 ksi (248.2 MPa).
			2. Description:
				1. Vertical portion is 42 inches (1067 mm) high with two 9/16 inch (14 mm) holes to accommodate 1/2 inch (13 mm) hardware to fasten 2 halves together. Base plates are manufactured of 1/2 inch (13 mm) ASTM A 36 steel plate, with eight 3/4 inch (19 mm) diameter base plate mounting holes to accommodate 5/8 inch (16 mm) diameter anchors.
			3. Size:

\*\* NOTE TO SPECIFIER \*\* Select the size(s) required and delete the one not required.

* + - * 1. Large: Two 12 x 22 inch (305 x 305 mm) half sections with a 15 x 15 inch (381 x 381 mm) opening.
				2. Small: Two 10 x 20 inch (254 x 508 mm) half sections with a 11 x 11 inch (279 x 279 mm) opening.
			1. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is Omega Yellow.
	1. DOWNSPOUT / PIPE GUARDS
		1. Downspout / Pipe Guards:
			1. Material: Omega Downspout/Pipe Guards constructed of hot rolled, cold formed 3/16 inch or 7 gage steel meeting the requirements of ASTM E 36 steel, modified to a minimum yield of 36 ksi (248.2 MPa).
			2. Description:
				1. Guard is 36 inches (914 mm) high with four 9/16 inch (14 mm) diameter mounting holes to accommodate suitable anchors.
			3. Type:

\*\* NOTE TO SPECIFIER \*\* Select the type(s) required and delete those not required.

* + - * 1. Column Mount.
				2. Wall Mount.
			1. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is Omega Yellow
	1. DOWNSPOUT / PIPE GUARDS
		1. Downspout / Pipe Guards:
			1. Material: Constructed of hot rolled, cold formed 3/16 inch (5 mm) or 7 gage steel meeting the requirements of ASTM E 36 steel, modified to a minimum yield of 36 ksi (248 MPa).
			2. Description:
				1. Vertical portion shall have four 9/16 inch (14 mm) holes to accommodate anchoring or bolting to a suitable surface.
			3. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is OSHA. approved Traffic Safety Yellow.
	2. INDUSTRIAL GUARDRAILS / SAFETY BARRIERS
		1. General: Omega Industrial Guardrails / Safety Barriers.
			1. Rail Sections: Rails shall be a two rib design minimum of 1.75 inches (44 mm) wide by 12 inches (305 mm) high by required lengths from 13 to 120 inch (330 to 3048 mm) in 12 inch (305 mm) increments. Rail section fabricated of hot rolled; cold formed 11-gauge steel meeting the requirements of ASTM A 1011, Grade 50 steel.
			2. Mounting Posts: Minimum HSS 4 x 4 x 3/16 inches (102 x 102 x 4.87 mm) upright, with a 10 x 10 x 0.50 inch (254 x 254 x 13 mm) base plate, constructed from cold formed structural steel tubing meeting the requirements of ASTM A 500 - Grade B, with a minimum yield of 46 ksi (317 MPa). Provide mounting posts types from the following as indicated on the Drawings.
				1. Guardrail Mounting Post: 18 inch (457 mm) Mounting Post.
				2. Guardrail Perimeter Mounting Post: 18 inch (457 mm) Offset Perimeter Mounting Post.
				3. Guardrail Corner Mounting Post: 18 inch (457 mm) Offset Corner Mounting Post
				4. Guardrail Mounting Post: 18 inch (457 mm) Guardrail Mounting Post, with no guardrail mounting holes.
				5. Guardrail Mounting Post: 44 inch (1118 mm) Double Guardrail Mounting Post
				6. Double Corner Guardrail Mounting Post: 44 inch (1118 mm) Offset Double Guardrail Mounting Post.
				7. Double Corner Guardrail Mounting Post: 44 inch (1118 mm) Offset Double Guardrail Corner Mounting Post.
				8. Guardrail Mounting Post: 44 inch (1118 mm) Guardrail Mounting Post, double rail with no guardrail mounting holes.
			3. Optional Accessories: Provide where indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* The following paragraphs are optional. Select the options required and delete those not required.

* + - * 1. Wrap-Around Flairs: Provide at the end of a run as indicated. Wraps around 180 degrees.
				2. Corner Caps: Provide at corner posts as indicated to provide a smooth transition.
				3. Vinyl Stripping and Post Caps: Provide at the top of rail edge and caps as indicated to eliminate sharp edges.
				4. 45 Degree Angle Guard Brackets.
				5. Inside Corner Guard Brackets.
				6. Guardrail Inline Mounting Brackets.

\*\* NOTE TO SPECIFIER \*\* The following swing gate paragraphs are optional. Select the type(s) required and delete those not required.

* + - 1. Swing Gates: Right, left or double as indicated on the Drawings.
				1. Swing Gates to mount to Guardrail Posts.
				2. Swing Gates to mount to Handrail Posts.

\*\* NOTE TO SPECIFIER \*\* The following removable guardrail paragraphs are optional. Select the options required and delete those not required.

* + - 1. Removable Guardrail:
				1. Removable Guardrail Lift Out Assembly:
				2. Removable Double Guardrail Lift Out Assembly
				3. Removable Guardrail Gate Assembly.
				4. Removable Double Guardrail Gate Assembly.
		1. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is O.S.H.A. approved Traffic Safety Yellow.
		2. Removable Guard Rail Lift Out Assembly:
			1. Description:
				1. Handrail Assembly 42 inch (1067 mm) High:

Two Horizontal Rail System.

Rails slide out from the top leaving a temporary opening to allow access.

All hardware included.

\*\* NOTE TO SPECIFIER \*\* The following swing gate paragraphs are optional. Select the type(s) required and delete those not required.

* + - * 1. Swing Gates: Right, left or double as indicated on the Drawings. 48 inch (1219 mm) wide gate requires an opening 53 inches (1346 mm) and Mounts to a Guard Rail Post.
	1. PIPE BOLLARDS
		1. Pipe Bollards: Omega Pipe Bollards.
			1. Material: Schedule 40 pipe or pipe sized steel tubing.
			2. Type:
				1. Surface Mounted with a 10 x 10 x 1/2 inch (254 x 254 x 13 mm) thick Hot Rolled Steel base plate conforming to ASTM A53 with four 3/4 inch (19 mm) diameter holes for anchoring to a minimum 3000 psi (2068 kPa) reinforced concrete a minimum of 4 inches (102 mm) thick.
				2. Core Mounted with Schedule 40 pipe or pipe sized steel tubing.
			3. Size:

\*\* NOTE TO SPECIFIER \*\* Select the sizes required and delete the one not required

* + - * 1. 4 inch (102 mm) diameter, 48 inches (1219 mm) high with a 0.237 inch (6.02 mm) wall thickness.
				2. 6 inch (152 mm) diameter, 48 inches (1219 mm) high with a 0.280 inch (7.11 mm) wall thickness.
			1. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is OSHA. approved Traffic Safety Yellow.
			2. Bollard Covers: Domed top, solid color of UV stabilized high density polyethylene. Standard color is OSHA. approved Traffic Safety Yellow.
		1. Bollard Guards: Omega Bollard Guards.
			1. Material: Schedule 40 pipe or pipe sized steel tubing.
			2. Type:

\*\* NOTE TO SPECIFIER \*\* Select the types required and delete the one not required

* + - * 1. Surface Mounted with a 10 x 10 x 1/2 inch (254 x 254 x 13 mm) thick Hot Rolled Steel base plate conforming to ASTM A53 with four 3/4 inch (19 mm) diameter holes for anchoring to a minimum 3000 psi (2068 kPa) reinforced concrete a minimum of 4 inches (102 mm) thick.
				2. Core Mounted with Schedule 40 pipe or pipe sized steel tubing.
			1. Size:
				1. 4-1/2 inch (114 mm) diameter, 48 inches (1219 mm) high with a 0.250 inches (6.35 mm) wall thickness.
			2. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is OSHA. approved Traffic Safety Yellow.
	1. OVERHEAD DOOR TRACK PROTECTION
		1. Omega Z-Guard.
			1. Material: Constructed of hot rolled, cold formed 3/16 inch (5 mm) or 7 gage steel meeting the requirements of ASTM E 36 steel, modified to a minimum yield of 36 ksi (248 MPa).
			2. Description:
				1. Z-Guard shall be a minimum of 5 inches (127 mm) wide with a minimum projection from the wall of 6 inches (152 mm) by 48 inches (1219 mm) tall. The vertical flange shall have two wall mounting holes to accommodate 1/2 inch (13 mm) anchors suitable for anchoring to the specific wall construction. Trak-Shield has a Z-Shaped configuration, with a flared inside edge and mitered inside corners to eliminate catch points.
			3. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. The standard color is OSHA approved Traffic Safety Yellow.
		2. Omega Track-Shield.
			1. Material: Constructed of hot rolled, cold formed 3/16 inch (5 mm) or 7 gage steel meeting the requirements of ASTM E 36 steel, modified to a minimum yield of 36 ksi (248 MPa).
			2. Description:
				1. Trak-Shield is a minimum of 5 inches (127 mm) wide with a minimum projection from the wall of 6 inches (152 mm) by 48 inches (1219 MM) tall. The vertical flange shall have two wall mounting holes to accommodate 1/2 inch (13 mm) anchors suitable for anchoring to the wall construction. Trak-Shield has a Z-Shaped configuration, with a flared inside edge and mitered inside top corner to eliminate catch points. Base plates shall be manufactured from 10 ix 10 inch x 3/8 inch (254 x 254 x 9.5 mm) ASTM A 36 steel and shall have three base plate mounting holes to accommodate 5/8 inch (16 mm) diameter anchors.
			3. Finish: Heat cured, polyester based powder coating with sea spray and ultraviolet enhancements. Standard color is OSHA. approved Traffic Safety Yellow.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until the substrates have been properly prepared.
		2. Examine the opening and conditions under which equipment is to be installed and notify the Architect and Contractor in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Before Substantial Completion, conduct a demonstration in the presence of the Owner's representative to ensure that all equipment operates properly in every aspect. Conduct a detailed user/operator training session at time and place agreed upon by Owner's representative.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION