SECTION 05550

STAIR TREADS AND NOSINGS

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\*\* NOTE TO SPECIFIER \*\* Wooster Products, Inc.; stair treads and nosings.
This section is based on the products of Wooster Products, Inc., which is located at:
1000 Spruce St.
P. O. Box 6005
Wooster, OH 44691
Toll Free: 800-321-4936
Phone: 330-264-2844
Fax: 330-262-4151
Email: info@wooster-products.com
Web Site: www.wooster-products.com
Why specify Wooster Safety Stair Treads and Walkway Products? Wooster Safety Treads and Safety Surfaces provide anti-slip protection for building occupants and pedestrians. The use of Safety Stair and Walkway Products can help protect the Building Owner, since pedestrians will have been provided with the latest available technology for making stairs and walkways safe. Wooster' Safety Treads and Safety Surfaces comply with OSHA and other Safety Surface Specifications for anti-slip safety surfaces.
Why specify 'Wooster'? A 'Wooster' specification exemplifies the finest in quality, dependability and service. We are Safety Stair and Walkway experts! Wooster Products Inc has been furnishing "state-of-the-art" anti-slip Safety Treads and Safety Surfaces continuously since 1921. And because we provide long-term solutions for you anti-skid needs.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Safety treads and nosings for stairs, including the following types:
			1. Extruded aluminum safety treads and nosings. (Spectra)
			2. Extruded aluminum safety treads and nosings for heavy use. (Supergrit)
			3. Photoluminescent aluminum safety treads and nosings. (Spectra NITEGLOW)
			4. Photoluminescent aluminum safety treads and nosings for heavy use. (Supergrit NITEGLOW)
			5. Renovation safety treads and nosings. (Flexmaster)
			6. Renovation safety treads and nosings for heavy use. (Stairmaster)
			7. Cast safety treads and nosings.
			8. Structural cast safety treads and nosings.
			9. Cast curb bar nosings.
	1. RELATED SECTIONS

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

* + 1. Section 03300 - Cast-In-Place Concrete.
		2. Section 05510 - Metal Stairs.
	1. REFERENCES

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

* + 1. Americans with Disabilities Act (ADA).
		2. ASTM International (ASTM):
			1. ASTM B 30 - Standard Specification for Copper Alloys in Ingot Form.
			2. ASTM D 635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
			3. ASTM D 4828 - Standard Test Methods for Practical Washability of Organic Coatings.
			4. ASTM D 3648 - Standard Practices for the Measurement of Radioactivity.
		3. International Standards Organization (ISO): ISO 17398 - Safety colors and safety signs -- Classification, performance and durability of safety signs.
		4. SMP 800C: Toxic gas sampling and analytical procedures.
		5. Pressure Sensitive Tape Council Standards (PSTC): PSTC101 Peel Adhesion of Pressure Sensitive Tape.
		6. Federal Test Method Standards: 501a - Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities.
		7. Military Specification: Mil-D-17951E; Deck Covering, Lightweight, Nonslip, Abrasive Particle Coated Fabric, Film, Or Composite And Sealing Compound.
		8. California Code of Regulations (CCR): California Title 24; Code for the Visually Impaired.
		9. New York City Building Code Reference Standards: RS 6-1 - Photoluminescent exit path markings.
	1. SUBMITTALS
		1. Submit under provisions of Section 01300.
		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.
			4. Cleaning and maintenance instructions.
		3. Shop Drawings: Provide shop drawings indicating details of construction and installation.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if selections have already been made.

* + 1. Selection Samples: Submit two sets of samples showing available colors, patterns, textures, and finishes.
		2. Verification Samples: For each product specified, two samples, representing actual materials.
	1. QUALITY ASSURANCE
		1. Slip Resistance: Provide units that comply with authorities having jurisdiction, including but not limited to ADA, OSHA and local building codes and accessibility codes.
	2. DELIVERY, STORAGE AND HANDLING
		1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards. Protect from damage.
		2. Store products in manufacturer's labeled packaging until ready for installation.
	3. SEQUENCING AND SCHEDULING
		1. Conference: Convene a pre-installation conference to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

\*\* NOTE TO SPECIFIER \*\* Warranty not available for new construction. Delete if not required.

* 1. WARRANTY
		1. Warranty for Safety Treads for Renovation: Manufacturer's standard limited warranty for materials and workmanship.

\*\* NOTE TO SPECIFIER \*\* Delete warranty period if not required.

* + - 1. Warranty Period: 3 years for Flexmaster Series.
			2. Warranty Period: 5 years for Stairmaster Series.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Wooster Products, Inc., which is located at: 1000 Spruce St. P. O. Box 6005; Wooster, OH 44691; Toll Free Tel: 800-321-4936; Tel: 330-264-2844; Fax: 330-262-4151; Email: [request info (sales@wooster-products.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Wooster+Products,+Inc.&coid=36612&rep=&fax=330-262-4151&message=RE:%20Spec%20Question%20(05550wpi):%20%20&mf=); Web: <http://www.woosterproducts.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 01600.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTRUDED ALUMINUM SAFETY TREADS AND NOSINGS

\*\* NOTE TO SPECIFIER \*\* Delete Spectra Stair Treads if not required.

* + 1. Extruded Aluminum Safety Treads and Nosings: Spectra Safety Treads as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: WP1; 3/4 inch (19 mm) width, 3/8 inch (9.5 mm) thickness.
			2. Type: WP1A; 3/4 inch (19 mm) width, 3/8 inch (9.5 mm) thickness.
			3. Type: WP2; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			4. Type: WP2C; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness.
			5. Type: WP2J; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			6. Type: WP2JT; 2-1/16 (5.25 mm) inches width, 3/8 inch (9.5 mm) thickness.
			7. Type: WP2T; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			8. Type: WP24; 2-1/16 inches (5.25 mm) width, 3/8 inches thickness.
			9. Type: WP24A; 2-1/16 inches (5.25 mm) width, 3/8 inches thickness.
			10. Type: WP3; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			11. Type: WP3C; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			12. Type: WP3J; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness.
			13. Type: WP3JT; WP3; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			14. Type: WP3SP; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness, nose 1-1/8 inches (28.5 mm) underside with sure hold anchors
			15. Type: WP3T; 3-1/16 inches (78 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			16. Type: WP4C; 4-1/16 inches (103 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			17. Type: WP4J; 4-1/16 inches (103 mm) width, 3/8 inch (9.5 mm) thickness.
			18. Type: WP4T; 4-1/16 inches (103 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside.
			19. Type: WP2003; with replaceable inserts, 4-1/16 inches (103 mm) width, 5/8 inch (16 mm) thickness.
			20. Type: WP-RN2-SP; 2 inches (51 mm) width, 1/2 inches (13 mm) thickness.
			21. Type: WP-RN3-SP; 2 inches (51 mm) width, 1/2 inches (13 mm) thickness.

\*\* NOTE TO SPECIFIER \*\* Black will be shipped if no color indicated. Delete tread colors not required.

* + - 1. Tread Color: RD-6 Red.
			2. Tread Color: RD-5 Brick Red.
			3. Tread Color: R-13 Burgundy.
			4. Tread Color: OR-18 Orange.
			5. Tread Color: BR-3 Dk. Brown.
			6. Tread Color: BR-21 Brown.
			7. Tread Color: G-21 Lt. Green.
			8. Tread Color: G-8 Dk. Green.
			9. Tread Color: WH-9 Off White.
			10. Tread Color: B-1 Lt. Buff.
			11. Tread Color: BU-17 LT Blue.
			12. Tread Color: BU-10 Blue.
			13. Tread Color: SSY-10 Safety Yellow.
			14. Tread Color: SSO-10 Safety Orange.
			15. Tread Color: YG-19 Gold
			16. Tread Color: GY-5 Blue Gray.
			17. Tread Color: CA-5 Silver Gray.
			18. Tread Color: BL-1 Black.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 10 ft (3048 mm), except for WP-RN2-SP and WP-RN3-SP which have a maximum single unit length of 8 ft (2438 mm). Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6 mm) from ends of steps.
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. General: Extruded aluminum base with abrasive filler.
				1. Materials: Type 6063-T5 extruded aluminum.
				2. Anti-Slip Filler: Contain approximately 60 percent virgin grain Aluminum Oxide (AL2O3) abrasive.
				3. Binder: Fully cured resilient type epoxy. Epoxy binder to filler ratio to be 13 percent minimum.
				4. Epoxy/Abrasive Filler:

Color: Extends uniformly throughout filler.

Securely bonded to the extruded aluminum base.

\*\* NOTE TO SPECIFIER \*\* Not applicable to Type WP1 and WP1A Delete if not required.

Extends over the curved front edge of nosing and shall be.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* Delete Supergrit Stair Treads if not required.

* + 1. Extruded Aluminum Safety Treads and Nosings for Heavy Use: Supergrit Stair Treads as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: 121; 1-7/8 inches (48 mm) width, 1/4 inch (6 mm) thickness, nose 1/4 inch (6 mm) underside.
			2. Type: 121BF; 1-7/8 inches (48 mm) width, 1/4 inch (6 mm) thickness,
			3. Type: 122; 1-7/8 inches (48 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			4. Type: 131; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose 1/4 inch (6 mm) underside.
			5. Type: 132; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			6. Type: 133; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness,

\*\* NOTE TO SPECIFIER \*\* Nose of Type 133 can be sheared at factory to achieve a nose smaller than 1-3/4 inches ( mm). Delete nose option not required.

* + - * 1. Nose: 1-3/4 inches (44 mm) underside.
				2. Nose: 1-1/2 inches (39 mm) underside.
				3. Nose: 1-1/4 inches (32 mm) underside.
			1. Type: 138; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			2. Type: 141; 4 inches (102 mm) width, 1/4 inch (6 mm) thickness, nose 1/4 inch (6 mm) underside.
			3. Type: 142; 4 inches (102 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			4. Type: 161; 6 inches (152 mm) width, 1/4 inch (6 mm) thickness, nose 1/4 inch (6 mm) underside, square back.
			5. Type: 231BF; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness.
			6. Type: 232; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			7. Type: 238; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			8. Type: 241BF; 4 inches (102 mm) width, 1/4 inch (6 mm) thickness.
			9. Type: 242; 4 inches (102 mm) width, 1/4 inch (6 mm) thickness, nose 1-1/8 inches (28.5 mm) underside.
			10. Type: 431; 3-1/2 inches (89 mm) width, 1/4 inch (6 mm) thickness, nose 1/4 inch (6 mm) underside.
			11. Type: 610; 1-3/8 inches (35 mm) width, 1/4 inch (6 mm) thickness.
			12. Type: 630A; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness.
			13. Type: WP-RN2-SG; 2 inches (51 mm) width, 1/2 inch (13 mm) thickness.
			14. Type: WP-RN3-SG; 3-1/8 inches (79 mm) width, 9/16 inches (14 mm) thickness.

\*\* NOTE TO SPECIFIER \*\* Delete treads colors not required.

* + - 1. Tread Color: LG-1 Light Green.
			2. Tread Color: LB-1 Light Brown.
			3. Tread Color: LR-1 Light Red.
			4. Tread Color: CG-1 Concrete Gray.
			5. Tread Color: DG-1 Dark Green.
			6. Tread Color: DB-1 Dark Brown.
			7. Tread Color: DR-1 Dark Red.
			8. Tread Color: BLU-1 Blue.
			9. Tread Color: SY-1 Safety Yellow.
			10. Tread Color: BLA-1 Black.
			11. Tread Color: W-1 White.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 12 ft (3658 mm) except for WP-RN2-SG and WP-RN3-SG which have a maximum single unit length of 8 ft (2438 mm). Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6 mm) from ends of steps.
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. General: Extruded aluminum base with abrasive filler.
				1. Materials: Type 6063-T5 extruded aluminum.
				2. Anti-Slip Filler: Contain approximately 65 percent virgin grain Aluminum Oxide (AL2O3) abrasive.
				3. Color: Extends uniformly throughout filler.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. PHOTOLUMINESCENT EXTRUDED ALUMINUM SAFETY TREADS AND NOSINGS

\*\* NOTE TO SPECIFIER \*\* High quality photoluminescent (glow-in-the-dark) anti-slip stair nosing providing exit path marking and safety egress system that meets NYC Local Law 26, 2009 IBC and 2009 IFC code compliance. These nosings can be used for exit markings, steps and leading edges of landings when finding pathways in the dark is a necessity. Delete Spectra NITEGLOW(tm) Stair Treads if not required.

* + 1. Photoluminescent Extruded Aluminum Safety Treads and Nosings: Spectra NITEGLOW Stair Treads as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: WP2-NG; 2 inches (51 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			2. Type: WP2C-NG; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			3. Type: WP2T-NG; 2 inches (51 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			4. Type: WP2J-NG; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			5. Type: WP2JT-NG; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			6. Type: WP24-NG; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			7. Type: WP24A-NG; 2-1/16 inches (5.25 mm) width, 3/8 inch (9.5 mm) thickness, nose 1/4 inch (6 mm) underside, 2 inches (51 mm) wide glow area.
			8. Type: WP-RN3SP-NG; 3-1/8 inches (79 mm) width, 9/16 inches (14 mm) thickness, nose, 1 inch (25 mm) wide glow area.

\*\* NOTE TO SPECIFIER \*\* Delete tread colors not required.

* + - 1. Tread Color: LG-1 Light Green.
			2. Tread Color: LB-1 Light Brown.
			3. Tread Color: LR-1 Light Red.
			4. Tread Color: CG-1 Concrete Gray.
			5. Tread Color: DG-1 Dark Green.
			6. Tread Color: DB-1 Dark Brown.
			7. Tread Color: DR-1 Dark Red.
			8. Tread Color: BLU-1 Blue.
			9. Tread Color: SY-1 Safety Yellow.
			10. Tread Color: BLA-1 Black.
			11. Tread Color: W-1 White.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 10 ft (3048 mm) except for WP-RN3SP-NG which has a maximum single unit length of 8 ft (2438 mm). Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6 mm) from ends of steps.
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. General: Extruded aluminum base with abrasive filler.
				1. Materials: Type 6063-T5 extruded aluminum.
				2. Anti-Slip Filler: Contain approximately 65 percent virgin grain Aluminum Oxide (AL2O3) abrasive.
				3. Binder: Fully cured resilient type epoxy. Epoxy binder to filler ratio to be 16 percent minimum.
				4. Epoxy/Abrasive Filler:

Photoluminescent Epoxy Filler: Free of hazardous and radioactive substances.

Color: Extends uniformly throughout filler.

Securely bonded to the extruded aluminum base.

Extends over the curved front edge of nosing and shall be.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* High quality photoluminescent (glow-in-the-dark) anti-slip stair nosing providing exit path marking and safety egress system that meets NYC Local Law 26, 2009 IBC and 2009 IFC code compliance. These nosings can be used for exit markings, steps and leading edges of landings when finding pathways in the dark is a necessity. Delete Supergrit NITEGLOW(tm) Stair Treads if not required.

* + 1. Photoluminescent Extruded Aluminum Safety Treads and Nosings for Heavy Use: Supergrit NITEGLOW Stair Treads as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: FT3-NG; 3 inches (76 mm) width, 3/16 inch (4.75 mm) thickness, nose, 1 inch (25 mm) wide glow area.
			2. Type: XT3-NG; 3 inches (76 mm) width, 3/16 inch (4.75 mm) thickness, nose, 1 inch (25 mm) wide glow area.
			3. Type: M231BF-NG; 3 inches (76 mm) width, 1/4 inch (6 mm) thickness, nose, 1 inch (25 mm) wide glow area.
			4. Type: WP-RN2-NG; 2 inches (51 mm) width, 1/2 inch (13 mm) thickness, nose, 1 inch (25 mm) wide glow area.
			5. Type: WP-RN3SG-NG; 3-1/8 inches (79 mm) width, 9/16 inches (14 mm) thickness, nose, 1 inch (25 mm) wide glow area.

\*\* NOTE TO SPECIFIER \*\* Delete tread colors not required.

* + - 1. Tread Color: LG-1 Light Green.
			2. Tread Color: LB-1 Light Brown.
			3. Tread Color: LR-1 Light Red.
			4. Tread Color: CG-1 Concrete Gray.
			5. Tread Color: DG-1 Dark Green.
			6. Tread Color: DB-1 Dark Brown.
			7. Tread Color: DR-1 Dark Red.
			8. Tread Color: BLU-1 Blue.
			9. Tread Color: SY-1 Safety Yellow.
			10. Tread Color: BLA-1 Black.
			11. Tread Color: W-1 White.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 12 ft (3658 mm) except for WP-RN2-NG and WP-RN3SG-NG which have a maximum single unit length of 8 ft (2438 mm). Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6 mm) from ends of steps.
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. General: Extruded aluminum base with abrasive filler.
				1. Materials: Type 6063-T5 extruded aluminum.
				2. Anti-Slip Filler: Contain approximately 65 percent virgin grain Aluminum Oxide (AL2O3) abrasive.
				3. Photoluminescent Epoxy Filler: Free of hazardous and radioactive substances.
				4. Photoluminescent Epoxy Binder: Fully cured resilient type epoxy; epoxy binder to filler ratio to be 16 percent minimum.
				5. Color: Extends uniformly throughout filler.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. RENOVATION SAFETY TREADS AND NOSINGS

\*\* NOTE TO SPECIFIER \*\* Delete Stairmaster Safety Renovation Treads if not required.

* + 1. Renovation Safety Treads and Nosings: Stairmaster as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: 162; 6 inches (152 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, square back.
			2. Type: 182; 8 inches (203 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, square back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 500; 9 inches (229 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, beveled back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 500SN; 9 inches (229 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, beveled back, for stairs with sloped risers.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 500NG; 9 inches (229 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, beveled back, 1-1/8 inches (28.5 mm) glow strip in front.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 511; 11 inch (279 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, beveled back, for stairs with sloped risers.
			2. Type: 511SN; 11 inch (279 mm) width, 9/32 inches (51 mm) thickness, nose 1-1/8 inches (28.5 mm) underside, beveled back, for stairs with sloped risers.
			3. Type: 540; 4 inches (102 mm) width, 9/32 inches (51 mm) thickness, no nose, beveled back

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 570; 7 inches (178 mm) width, 9/32 inches (51 mm) thickness, no nose, beveled back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 6100; 10 inches (254 mm) width, 9/32 inches (51 mm) thickness, no nose, square back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 630; 3 inches (76 mm) width, 9/32 inches (51 mm) thickness, no nose, square back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 660; 6 inches (152 mm) width, 9/32 inches (51 mm) thickness, no nose, square back.

\*\* NOTE TO SPECIFIER \*\* Delete end type not required.

* + - * 1. Ends: Beveled ends.
				2. Ends: Square ends.
			1. Type: 333-NG; 3 inches (76 mm) width, 5/32 inches (51 mm) thickness, nose 13/16 inches (20.5 mm) underside, beveled back, 1 inch (25 mm) glow strip in front.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 12 ft (3658 mm) except for the following: Type 511 and 511SN have a maximum single unit length 8 ft (2438 mm). Type 6100 has a maximum single unit length 10 ft (3048 mm) maximum. Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete tread colors not required.

* + - 1. Tread Color: LG-1 Light Green.
			2. Tread Color: LB-1 Light Brown.
			3. Tread Color: LR-1 Light Red.
			4. Tread Color: CG-1 Concrete Gray.
			5. Tread Color: DG-1 Dark Green.
			6. Tread Color: DB-1 Dark Brown.
			7. Tread Color: DR-1 Dark Red.
			8. Tread Color: BLU-1 Blue.
			9. Tread Color: SY-1 Safety Yellow.
			10. Tread Color: BLA-1 Black.
			11. Tread Color: W-1 White.
			12. General: Extruded aluminum base with abrasive filler.
				1. Materials: Type 6063-T5 extruded aluminum.
				2. Anti-Slip Filler: Contain approximately 65 percent virgin grain Aluminum Oxide (AL2O3) abrasive.
				3. Photoluminescent Epoxy Filler: Free of hazardous and radioactive substances.
				4. Photoluminescent Epoxy Binder: Fully cured resilient type epoxy; epoxy binder to filler ratio to be 16 percent minimum.
				5. Color: Extends uniformly throughout filler.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* Delete Flexmaster Stair Treads if not required.

* + 1. Renovation Safety Treads and Nosings for Heavy Use: Flexmaster Stair Treads as manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: 300; 9 inches (229 mm) width, 5/32 inches (51 mm) thickness, nose 1-1/16 inches (27 mm) underside, beveled back.
			2. Type: 311; 11 inch (279 mm) width, 5/32 inches (51 mm) thickness, nose 1-1/16 inches (27 mm) underside, beveled back.
			3. Type: 365; 6-1/2 inches (165 mm) width, 5/32 inches (51 mm) thickness, nose 1-1/16 inches (27 mm) underside, beveled back.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below with length of tread. Maximum length for single unit is 12 ft (3658 mm) for Type 300 and Type 365. Maximum length for single unit is 8 ft (2439 mm) for Type 311. Delete options for length not required.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Unless otherwise specified front and back anti-skid surface are standard flat black medium. Delete tread colors not required.

* + - 1. Tread Color: LG-1 Light Green.
			2. Tread Color: LB-1 Light Brown.
			3. Tread Color: LR-1 Light Red.
			4. Tread Color: CG-1 Concrete Gray.
			5. Tread Color: DG-1 Dark Green.
			6. Tread Color: DB-1 Dark Brown.
			7. Tread Color: DR-1 Dark Red.
			8. Tread Color: BLU-1 Blue.
			9. Tread Color: SY-1 Safety Yellow.
			10. Tread Color: BLA-1 Black.
			11. Tread Color: W-1 White.
			12. General: Extruded aluminum base with abrasive filler.

\*\* NOTE TO SPECIFIER \*\* Addition of holes must be specified. Consult manufacturer for details. Delete design not required.

* + - * 1. Design: Standard, tread design without drilled and countersunk holes.
				2. Design: Tread design with drilled and countersunk holes.

\*\* NOTE TO SPECIFIER \*\* Protective tape to protect surfaces of stair treads and nosings available upon request for no extra charge. Delete if not required.

* + - * 1. Protective Tape: Factory applied.
				2. Nosings: Finish flush with the top of the traffic surface.
			1. Coefficient of Friction: As per specification Mil-D-17951E; equal to or greater than 1.24 Dry and 1.02 Wet.
			2. Anti-Slip Surface: Level with all surfaces of the extrusion; chemically bonded with flexible polymeric binder onto extrusion with an adhesive matrix capable of 7.3 lbs per square inches peel strength in compliance with PSTC-1.
			3. Adhesive: Rubber based construction adhesive as recommended by manufacturer.
			4. Underside of Abrasive Surface: Uniform application of high tack permanent type acrylic pressure-sensitive adhesive.
			5. Materials: Type 6063-T5 extruded aluminum, 5/32 inch (4 mm) thickness minimum.
			6. Aluminum Finish: Satin finish, for all exposed surfaces.
			7. Anchoring Hardware: Provide manufacturer's recommended anchoring hardware to achieve best results for substrate and application.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. CAST STAIR TREADS AND NOSING

\*\* NOTE TO SPECIFIER \*\* Delete Cast Stair Nosings and Treads if not required.

* + 1. Cast Stair Nosings and Treads: Cast Stair Nosings and Treads manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Chief uses for Type 100 are as floor plates, trench covers, stair landing platforms, expansion joint covers. Delete types not required.

* + - 1. Type: 100; multi-use, 5/16 inch (8 mm) thickness, square edges.

\*\* NOTE TO SPECIFIER \*\* Delete options for size not required.

* + - * 1. Size: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
				2. Size: As indicated on Drawings.
			1. Type: 101; for poured concrete, 5/16 inch (8 mm) thickness, nose 1/4 inch (6 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 101 w/cast on anchors; for poured concrete, concealed integral anchor placed 3 inches (76 mm) from each end and 12 inches (305 mm) oc, 5/16 inch (8 mm) thickness, nose 1/4 inch (6 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 101 w/wing anchors, 5/16 inch (8 mm) thickness, nose 5/16 inch (8 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 101SP; for steel pan, 5/16 inch (8 mm) thickness, nose 3/8 inch (9.5 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 101SP w/wing anchors; for steel pan, anchor placed 3 inches (76 mm) from each end and 12 inches (305 mm) oc, 5/16 inch (8 mm) thickness, nose 3/8 inch (9.5 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 101SP w/cast on anchors; anchor placed 3 inches (76 mm) from each end and 12 inches (305 mm) oc, for steel pan, 5/16 inch (8 mm) thickness, nose 3/8 inch (9.5 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 102; for steel pan, 5/16 inch (8 mm) thickness, nose 1/2 inch (13 mm) x 3/8 inch (9.5 mm).

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 103; for steel pan, 5/16 inch (8 mm) thickness, nose 3/4 inch (19 mm) x 3/4 inch (19 mm).
			2. Type: 104; structural, 1 inch (25 mm) x 1 inch (25 mm) nose.
			3. Type: 105A; structural, 1 inch (25 mm) x 1-1/2 inch (39 mm) nose.
			4. Type: 110; 5/16 inch (8 mm) thickness, rounded edges.
			5. Type: 116; for poured concrete, 5/16 inch (8 mm) thickness, nose 1 inch (25 mm) underside.

\*\* NOTE TO SPECIFIER \*\* Delete widths not required.

* + - * 1. Width: 3 inches (76 mm).
				2. Width: 4 inches (102 mm).
				3. Width: 6 inches (152 mm).
			1. Type: 116A; for existing stair repair, 5/16 inch (8 mm) thickness, nose 1 inch (25 mm) underside.
			2. Type: 120; multi-use, 5/16 inch (8 mm) thickness, one rounded edge.

\*\* NOTE TO SPECIFIER \*\* Not all metal types are available for all types of stair treads and nosings. Structural treads are available only in Alumogrit and Ferrogrit. Delete cast metal types not required.

* + - 1. Cast Metal Type: Alumogrit (Abrasive cast aluminum); No. 43 prime ingot; low copper content; corrosion resistant.
			2. Cast Metal Type: Ferrogrit (Abrasive cast iron); Class 20 iron; high silicon; machinable; hyper eutectic.
				1. Ferrogrit Tread Finish: One coat shop-black paint.
			3. Cast Metal Type: Bronzogrit (Abrasive cast bronze); No 123; comp 81-3-7-9 semi-leaded red brass; ASTM B30 (844).
			4. Cast Metal Type: Nicklogrit (Abrasive cast nickel); No. 410; 20 percent Nickel silver; ASTM B30 (976).

\*\* NOTE TO SPECIFIER \*\* Delete if only specifying Type 100, as size is specified above. Fill in blank below or delete line as applicable.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6mm) from ends of steps;
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. Abrasive: #20 virgin grain Aluminum Oxide abrasive, integrally cast into the walking surface to a minimum depth of 1/32 inch (0.8 mm).
			4. Feature Strip: Safety nosings up to 6 inches (152 mm) deep with cross hatched surface being installed into wet concrete shall have a feature strip along back edge.
			5. Concealed Type Anchors: Slotted rivet type, integrally cast into the body of the nosing a minimum of 3/8 inch (9.5 mm).
			6. Holes and Countersinks: Machine made, allow screw heads not to protrude above tread surface; cored holes or countersinks are not acceptable.
			7. Surface Finish: Shot blasted finish for all metal types.
			8. Crosshatching and Fluting: 1/16 inch (1.6 mm) deep minimum and shall be clean and well defined.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. STRUCTURAL CAST STAIR TREADS AND NOSINGS

\*\* NOTE TO SPECIFIER \*\* Delete Cast Structural Treads and Nosings if not required.

* + 1. Structural Cast Treads and Nosings: As manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete types not required.

* + - 1. Type: 105; 1 inch (25 mm) x 1-1/2 inch (39 mm) nose, 1 inch (25 mm) toeplate.
			2. Type: 106; 3/4 inch (19 mm) x 3/4 inch (19 mm) double nose, with end lugs for bolting to stringers.
			3. Type: 106A; 3/4 inch (19 mm) x 3/4 inch (19 mm) double nose, to be fastened to carrier angles.
			4. Type: 107; 3/4 inch (19 mm) x 3/4 inch (19 mm) nose, 1 inch (25 mm) toeplate, with end lugs for bolting to stringers.
			5. Type: 107A; 3/4 inch (19 mm) x 3/4 inch (19 mm) nose, 1 inch (25 mm) toeplate, to be fastened to carrier angles.
			6. Type: 117; 1-1/2 inch (39 mm) x 1-1/2 inch (39 mm) nose, to be fastened to carrier angles.
			7. Type: 117A; 1-1/2 inch (39 mm) x 1-1/2 inch (39 mm) nose, to be fastened to carrier angles, treads bolt directly to stringer.

\*\* NOTE TO SPECIFIER \*\* Delete cast metal type not required.

* + - 1. Cast Metal Type: Alumogrit (Abrasive cast aluminum); No. 43 prime ingot; low copper content; corrosion resistant.
			2. Cast Metal Type: Ferrogrit (Abrasive cast iron); Class 20 iron; high silicon; machinable; hyper eutectic.
				1. Ferrogrit Tread Finish: One coat shop-black paint.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below or delete line as applicable.

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6mm) from ends of steps;
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. Abrasive: #20 virgin grain Aluminum Oxide abrasive, integrally cast into the walking surface to a minimum depth of 1/32 inch (0.8 mm).
			4. Feature Strip: Safety nosings up to 6 inches (152 mm) deep with cross hatched surface being installed into wet concrete shall have a feature strip along back edge.
			5. Concealed Type Anchors: Slotted rivet type, integrally cast into the body of the nosing a minimum of 3/8 inch (9.5 mm).
			6. Holes and Countersinks: Machine made, allow screw heads not to protrude above tread surface; cored holes or countersinks are not acceptable.
			7. Surface Finish: Shot blasted finish for all metal types.
			8. Crosshatching and Fluting: 1/16 inch (1.6 mm) deep minimum and shall be clean and well defined.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. CURB BAR CAST NOSINGS

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Curb Bar Cast Nosings: As manufactured by Wooster Products, Inc.

\*\* NOTE TO SPECIFIER \*\* Delete type not required.

* + - 1. Type: Curb Bar 150; 1-1/2 inches (39 mm) x 1-1/2 inches (39 mm) x 3/8 inch (9.5 mm).
			2. Type: Curb Bar 250; 2-1/2 inches (63.5 mm) x 2-1/2 inches (63.5 mm) x 1/2 inch (13 mm).

\*\* NOTE TO SPECIFIER \*\* Delete cast metal type not required.

* + - 1. Cast Metal Type: Alumogrit (Abrasive cast aluminum); No. 43 prime ingot; low copper content; corrosion resistant.
			2. Cast Metal Type: Ferrogrit (Abrasive cast iron); Class 20 iron; high silicon; machinable; hyper eutectic.
				1. Ferrogrit Tread Finish: One coat shop-black paint.

\*\* NOTE TO SPECIFIER \*\* Fill in blank below or delete line as applicable. Maximum unit length is 6 feet (1829 mm).

* + - 1. Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
			2. Length: As indicated on Drawings.
				1. For Poured Concrete Stairs: Nosings terminate not more than 4 inches (101.6mm) from ends of steps;
				2. For Concrete Filled Steel Pan Stairs: Nosings are full length of steps less 1/8 inch (3.05 mm) clearance.
			3. Abrasive: #20 virgin grain Aluminum Oxide abrasive, integrally cast into the walking surface to a minimum depth of 1/32 inch (0.8 mm).
			4. Feature Strip: Safety nosings up to 6 inches (152 mm) deep with cross hatched surface being installed into wet concrete shall have a feature strip along back edge.
			5. Concealed Type Anchors: Slotted rivet type, integrally cast into the body of the nosing a minimum of 3/8 inch (9.5 mm).
			6. Holes and Countersinks: Machine made, allow screw heads not to protrude above tread surface; cored holes or countersinks are not acceptable.
			7. Surface Finish: Shot blasted finish for all metal types.
			8. Crosshatching and Fluting: 1/16 inch (1.6 mm) deep minimum and shall be clean and well defined.
1. EXECUTION
	1. EXAMINATION AND PREPARATION
		1. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
		2. Do not proceed with installation until substrates have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Commencement of installation constitutes acceptance of conditions.
	2. INSTALLATION
		1. Install in accordance with manufacturer's written instructions and recommendations, including but not limited to the following.
			1. Schedule pours so as to install the metal safety nosings quickly before the ' initial set' of the concrete occurs.
			2. Puddle the concrete and tamp safety nosing to insure proper concrete formation around the anchors.
			3. Remove protective tape, if used, upon completion of installation.
			4. Close area after pour; permit no use for 24 hours.
	3. CLEANING AND PROTECTION
		1. Cleaning: Clean treads and nosings as recommended by manufacturer. Remove scuff and heel marks prior Substantial Completion.
		2. Protection: Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION