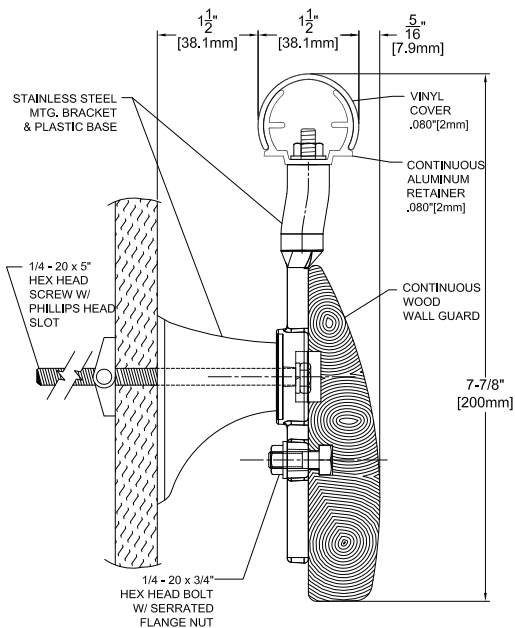


Silhouette Handrail



- IPC.664/REV.4

3500VW Silhouette Handrail

Suggested Specifications

PART 1 GENERAL

1.01 SUMMARY

- A. Handrail systems for pedestrian safety and wall protection

1.02 SECTIONS INCLUDES

- A. 3500VW Silhouette Handrail System, vinyl handrail with integrated wood wall guard

1.03 REFERENCES

- A. American National Standards Institute (ANSI)
B. American Society for Testing and Materials (ASTM)
C. American with Disabilities Act (ADA)
D. Environmental Protection Agency (EPA)
E. Kitchen Cabinets Manufacturers Association (KCMA)
F. National Emission Standards for Hazardous Air Pollutants (NESHAP)

- G. National Fire Protection Association (NFPA)

- H. Society of Automotive Engineers (SAE)

1.04 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide metal handrail systems with integrated wall guard that conform to the following requirements of regulatory agencies and the quality control of IPC Door and Wall Protection Systems, Inpro Corporation.
1. Fire Performance Characteristics: Provide UL Classified vinyl handrail components conforming with NFPA Class A fire rating. Surface burning characteristics, as determined by UL-723 (ASTM E-84), shall be flame spread of 10 and smoke development of 350 - 450. Provide ULC (Canada) listed handrails conforming to the requirements of the National Building Code of Canada 2010, Subsection 3.1.13. Surface burning characteristics, as determined by CAN/ULC102.2, shall be flame spread of 15 and smoke developed of 35.
2. Self Extinguishing: Provide handrails with a CC1 classification, as tested in accordance with the procedures specified in ASTM D-635-74, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position, as referenced in UBC 52-4-1988.
3. Impact Strength: Provide rigid vinyl profile materials that have an Impact Strength of 30.2 ft-lbs/ inch of thickness as tested in accordance with the procedures specified in ASTM D-256-90b, Impact Resistance of Plastics.
4. Chemical and Stain Resistance: Provide handrails that show resistance to stain when tested in accordance with applicable provisions of ASTM D-543.
5. Fungal and Bacterial Resistance: Provide rigid vinyl that does not support fungal or bacterial growth as tested in accordance with ASTM G-21 and ASTM G-22.
6. Color Consistency: Provide components matched in accordance with SAE J-1545 - (Delta E) with a color difference no greater than 1.0 units using CIE Lab, CIE CMC, CIE LCh, Hunter Lab or similar color space scale systems.
7. Cold, heat and chemical resistance: Provide handrail system with wood components that have a finish that complies with the applicable provisions of ANSI/KCMA A161.1- 1990 for cold check, heat and chemical resistance.
8. Environmental compliance: Provide handrail system with wood components that have a finish that does not off gas or emit any VOC, after a full cure, as tested in accordance to the EPA, NESHAP, Method 24, 40CFR, Volume 60, Appendix A.

9. Code Compliance: Provide handrails that comply with all current ANSI and ADA requirements.

1.05 SUBMITTALS

- A. Product Data: Manufacturer's printed product data for each product indicated in this section.
- B. Detail Drawings: Mounting details with appropriate fasteners for specific project substrates.
- C. Samples: Verification samples of handrail, 10" (254mm) long, in full size profiles with mounting brackets of each type indicated.
- D. Manufacturer's Installation Instructions: Printed installation instructions for each handrail.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in unopened factory packaging to the jobsite.
- B. Inspect materials at delivery to assure that specified products have been received.
- C. Store in original packaging in a climate controlled environment away from direct sunlight.

1.07 WARRANTY

- A. Standard IPC limited lifetime warranty against material and manufacturing defects.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: IPC Door and Wall Protection Systems, Inpro Corporation, PO Box 406, Muskego, WI 53150 USA;
Telephone 800-543-1729, Fax: 888-715-8407,
Internet address: www.inprocorp.com
- B. Substitutions: Not permitted
- C. Provide all handrails and wall protection from a single manufacturer.

2.02 LEED CRITERIA

- A. Provide handrail system with metal components that have recycled content.

1. MR CR4.1, 10% (post-consumer + 1/2 pre-consumer), 1 Credit

2. MR CR4.2, 20% (post-consumer + 1/2 pre-consumer), 1 Credit

2.03 MANUFACTURED UNITS

- A. Vinyl/Wood Handrail System

1. 3500VW Silhouette Handrail, 7-7/8" (200mm) height x 1-1/2" (38mm) gripping diameter, system extends 3-1/4" (83mm) from the wall. System includes 1-1/2" (38mm) diameter vinyl cover/aluminum retainer, top rail and an integrated 5" (127mm) wood wall guard.

2.04 MATERIALS

- A. Vinyl

1. Extruded Vinyl: Snap-on covers of .080" (2mm) thickness shall be extruded from chemical and stain resistant unplasticized polyvinyl chloride (uPVC) with the addition of impact modifiers. No plasticizers shall be added (plasticizers may aid in bacterial growth. Woodland patterns when used shall be of polyvinyl chloride (PVC).

2. Molded Vinyl: Returns and corners shall be made of injection mold grade, chemical and stain resistant polyvinyl chloride.

- B. Aluminum

1. Continuous aluminum retainer of .080" (2mm) thickness shall be fabricated from 6063-T5 aluminum with a mill finish.

- C. Wood

1. Wood shall be FAS grade, kiln dried, solid maple or red oak with moisture content of 5-9%.
2. Forest Stewardship Council® Certified Wood: Shall be kiln dried solid FSC® Certified Ash.

- D. Stainless Steel

1. Stainless steel brackets shall be #4 satin finish.

2.05 COMPONENTS

- A. Molded handrail returns, corners and brackets shall be made of injection molded thermoplastic.

- B. Wall guard returns and corners shall be fabricated of wood in a finish/color to match the wall guard.

- C. Stainless steel bracket shall be fabricated from cast stainless steel with a brushed finish or a solid color powder coat metal tone finish.

- D. Fasteners: All mounting systems accessories appropriate for substrates indicated on the drawings shall be provided.

2.06 FINISHES

- A. Vinyl Covers: Color of the handrail vinyl cover to be selected, by the architect, from the IPC finish selection. Surface shall have a pebble texture.

- B. Wood Stain: Color of the wall guard to be selected, by the architect, from the IPC stain selection.

- C. Wood Finish: Wall guard shall be finished with low-VOC water based UV finish.

- D. Stainless Steel Brackets

1. Color of the stainless steel bracket to be selected by the architect from the solid color metal tone color palette.

2. Color of stainless steel brackets shall be #4 satin finish stainless steel.

- E. Molded Components: Molded handrail returns and corners shall be of a color matching the handrail. Surface shall have a pebble texture.

- F. Molded bracket components shall be a color matching the wall guard. Surface shall have a pebble texture.

PART 3 EXECUTION

3.01 INSTALLERS

- A. Installer should be familiar with the installation of fine finished wood products.

3.02 EXAMINATION

- A. Examine areas and conditions in which handrail will be installed.

1. Complete all finishing operations, including painting, before beginning installation of handrail system materials.

2. Wall surface shall be dry and free from dirt, grease and loose paint.

3.03 PREPARATION

- A. General: Prior to installation, clean substrate to remove dust, debris and loose particles.

3.04 INSTALLATION

- A. General: Locate the handrail as indicated on the approved detail drawing for the appropriate substrate and in compliance with the IPC installation instructions. Install handrail level and plumb at the height indicated on the drawings.

3.05 CLEANING

- A. At completion of the installation, clean surfaces in accordance with the IPC clean-up and maintenance instructions.