

PROJECT MANUAL

**Clark Complex Accessibility  
Modifications**

**County of Humboldt**

3015 H Street  
Eureka, CA 95501

**BrokawDesign**

Clark Complex Accessibility Modifications  
County of Humboldt

TABLE OF CONTENTS

DIVISION 02 – EXISTING CONDITIONS

SECTION 024119 – SELECTIVE DEMOLITION

DIVISION 03 - CONCRETE

SECTION 024119 – CONCRETE TOPPING  
SEE A002 FOR OTHER CONCRETE SPECIFICATIONS

DIVISION 05 – METALS

SECTION 055213 – PIPE AND TUBE RAILINGS

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

SECTION 066400 – PLASTIC PANELING

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 071800 – TRAFFIC COATINGS

DIVISION 08 - OPENINGS

SECTION 081213 - HOLLOW METAL FRAMES  
SECTION 081416 - FLUSH WOOD DOORS

DIVISION 09 - FINISHES

SECTION 092900 - GYPSUM BOARD  
SECTION 096516 – RESILIENT SHEET FLOORING  
SECTION 099114 – EXTERIOR PAINTING (MPI STANDARDS)  
SECTION 099124 - INTERIOR PAINTING (MPI STANDARDS)

DIVISION 10 - SPECIALTIES

SECTION 101400 – SIGNAGE  
SECTION 101426 – POST AND PANEL/PYLON SIGNAGE  
SECTION 102113.13 – METAL TOILET COMPARTMENTS  
SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

DIVISION 14 – CONVEYING EQUIPMENT

SECTION 144200 – WHEELCHAIR LIFTS

DIVISION 22 - PLUMBING

SEE PLUMBING DRAWINGS FOR SPECIFICATIONS

Clark Complex Accessibility Modifications  
County of Humboldt

DIVISION 26 - ELECTRICAL

SEE ELECTRICAL DRAWINGS FOR SPECIFICATIONS

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 321726 – TACKTILE WARNING SURFACING

## SECTION 024119 - SELECTIVE DEMOLITION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Demolition and removal of selected site elements.

#### 1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

#### 1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

#### 1.4 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials:
  - 1. It is not expected that hazardous materials will be encountered in the Work.
    - a. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- D. Storage or sale of removed items or materials on-site is not permitted.

Clark Complex Accessibility Modifications  
County of Humboldt

- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.5 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
  - 1. Inventory and record the condition of items to be removed and salvaged.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

Clark Complex Accessibility Modifications  
County of Humboldt

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  5. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

Clark Complex Accessibility Modifications  
County of Humboldt

- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

## SECTION 035300 - CONCRETE TOPPING

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Patching and overlay of exterior horizontal surfaces with a rapid setting, Portland cement mortar/concrete.

#### 1.2 PREINSTALLATION MEETINGS

- ##### A. Preinstallation Conference:
- Conduct conference at Project site, including installing subcontractor, manufacture's technical representative, general contractor, and owner's representative. Meeting shall address technical details of installation, sequencing, and scheduling to limit disruption of owner's operations.

#### 1.3 ACTION SUBMITTALS

- ##### A. Product Data:
- For each type of product.

#### 1.4 QUALITY ASSURANCE

- ##### A. Manufacturing qualifications:
- The manufacturer of the specified product shall be ISO 9001 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- ##### B. Contractor qualifications:
- Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.
- ##### C. Install materials in accordance with all safety and weather conditions required by manufacturer or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- ##### A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage, mixing with other components, and application.
- ##### B. Store materials to comply with manufacturer's written instructions to prevent deterioration from moisture or other detrimental effects.



Clark Complex Accessibility Modifications  
County of Humboldt

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 45°F (7°C) and rising.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified material.
- C. Close areas to traffic during topping application and, after application, for time period recommended in writing by manufacturer.

1.7 WARRANTY

- A. Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design: SikaQuick 1000, as manufactured by Sika Corporation.

2.2 MATERIALS

- A. General:
  - 1. The material shall be a blend of selected portland cements, specially graded aggregates, admixtures for controlling setting time, water reducers for workability, and an organic accelerator.
  - 2. The materials shall be non-combustible, both before and after cure.
  - 3. The materials shall be supplied in a factory-blended bag.
  - 4. The rapid-setting cement mortar must be placeable from 1/4-in. to 1-in. in depth per lift for horizontal applications.
- B. To prepare a rapid-setting portland cement concrete: aggregate shall conform to ASTM C-33. The material shall be extended with 30-lb. of a 3/8 in. (No.8 distribution per ASTM C-33, Table II) clean, well-graded, saturated surface dry aggregate, having low absorption, high density and non-reactive (reference ASTM C1260, C227, C289).

2.3 PERFORMANCE CRITERIA

- A. Typical Properties of the material:
  - 1. Working Time: Approximately 30 minutes.
  - 2. Color: Concrete gray.
- B. Typical Properties of the cured material (mortar):

1. Compressive Strength (ASTM C-109)
  - a. 3 hours: 1,250 psi (8.6 MPa)
  - b. 1 day: 4,000 psi min. (27.6 MPa)
  - c. 7 day: 5,000 psi min. (34.5 MPa)
  - d. 28 day: 7,000 psi min. (48.2 MPa)
2. Flexural Strength (ASTM C-78) @ 28 days: 1,000 psi (6.9 MPa)
3. Splitting Tensile Strength (ASTM C-496) @ 28 days 500 psi (3.4 MPa)
4. Bond Strength (ASTM C-882 Modified) @ 28 days: 2,500 psi (17.2 MPa)
5. The portland cement mortar shall not produce a vapor barrier.
6. Density (wet mix): approximately 136 lbs. / cu. ft. (2.18 kg/l)
7. Permeability (ASTM C-1202) @ 28 days Approximately <1000 Coulombs
8. Drying Shrinkage, (ASTM C596) @ 28 days: 0.06%
9. Freeze/Thaw resistance (ASTM C666) @ 28 days: 98%

### PART 3 - EXECUTION

#### 3.1 SURFACE PREPARATION

- A. Areas to be repaired must be clean, sound, and free of contaminants. All loose and deteriorated concrete shall be removed by mechanical means. Mechanically prepare the concrete substrate to obtain a surface profile of +/- 1/8" (CSP 6 or greater as per ICRI Guidelines) with a new exposed aggregate surface. Area to be patched shall not be less than 1/4" in depth.
- B. Where reinforcing steel with active corrosion is encountered, sandblast the steel to a white metal finish to remove all contaminants and rust. Where corrosion has occurred due to the presence of chlorides, the steel shall be high pressure washed after mechanical cleaning. Prime steel with 2 coats of Sika Armatec 110 EpoCem as directed by manufacturer. (See Spec Component SC-201-0699).

#### 3.2 MIXING AND APPLICATION

- A. Mechanically mix in appropriate sized mortar mixer or with a Sika jiffy paddle and low speed (400-600 rpm) drill. Pour approximately 4-1/2 pints of water into the mixing container. Add the powder while continuing to mix. Mix to a uniform consistency for a maximum of three minutes. Add up to another 1/2 pint of water to mix if a greater flow is desired. Should smaller quantities be needed, be sure the proper water/powder ratio is maintained and that the dry material is uniformly blended before mixing the components together. Mix only that amount of material that can be placed in 30 minutes. Do not retemper material.
- B. Mixing of the rapid-setting portland cement concrete: Pour 4-1/2 to 5 pints of water into the mixing container. Add the powder while continuing to mix. Add correct amount of the pre-approved coarse aggregate, and continue mixing to a uniform consistency. Mixing time should be 3 minutes maximum.
- C. Placement Procedure: At the time of application, the substrate should be saturated surface dry with no standing water. Mortar and/or concrete must be scrubbed into substrate filling all pores

and voids. While the scrub coat is still plastic, force material against edge of repair, working toward center. After filling, consolidate, then screed. Allow mortar or concrete to set to desired stiffness, then finish with a trowel for a smooth surface. Broom or burlap drag for rough surface. Areas where the depth of the repair is less than 1-inch shall be repaired with the neat rapid setting portland cement mortar. In areas where the depth of the repair is greater than 1 inch, the repair shall be made with the rapid-setting portland cement concrete.

- D. As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water-based (pretesting of curing compound is recommended) compatible curing compound. Moist curing should commence immediately after finishing and continue for 48 hours. Protect newly applied material from rain, sun, and wind until compressive strength is 70% of the 28-day compressive strength. To prevent from freezing cover with insulating material. Setting time is dependent on temperature and humidity.
- E. Adhere to all procedures, limitations and cautions for this product in the manufacturers current printed technical data sheet and literature.

### 3.3 CLEANING

- A. The uncured material can be cleaned from tools with water. The cured cement mortar can only be removed mechanically.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

### 3.4 REPAIR

- A. Defective Topping: Repair and patch defective concrete floor topping areas, including areas that have not bonded to concrete substrate.

END OF SECTION 035300

## SECTION 055213 - PIPE AND TUBE RAILINGS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Steel railings at exterior stairs.
2. Stainless steel railings at interior drinking fountains.

#### 1.2 ACTION SUBMITTALS

- A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Protect mechanical finishes on exposed surfaces of railings from damage by applying a strippable, temporary protective covering before shipping.

#### 1.4 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Railings, including attachment to building construction, withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

- a. Uniform load of **50 lbf/ ft.** applied in any direction.
- b. Concentrated load of **200 lbf** applied in any direction.
- c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

- a. Concentrated load of **50 lbf** applied horizontally on an area of **1 sq. ft.**

- b. Infill load and other loads need not be assumed to act concurrently.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

## 2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
  - 1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

## 2.3 STEEL RAILINGS AT EXTERIOR STAIRS

- A. Tubing: ASTM A500/A500M (cold formed), or, ASTM A513/A513M, Type 5.
- B. Pipe: ASTM A53/A53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
  - 1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A36/A36M.

## 2.4 STAINLESS STEEL RAILINGS AT INTERIOR DRINKING FOUNTAINS

- A. Source Limitations: Obtain each type of railing from single source from single manufacturer.
- B. Pipe: ASTM A312/A312M, Grade TP 304.

## 2.5 FASTENERS

- A. Fastener Materials:
  - 1. Hot-Dip Galvanized Railing Components: Type 304 stainless steel or hot-dip zinc-coated steel fasteners complying with ASTM A153/A153M or ASTM F2329/F2329M for zinc coating.
  - 2. Stainless Steel Railing Components: Type 304 stainless steel fasteners.
  - 3. Finish exposed fasteners to match appearance, including color and texture, of railings.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and

class required to produce connections suitable for anchoring railings to other types of construction and capable of withstanding design loads.

- C. Fasteners for Interconnecting Railing Components:
  - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
- D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 or ICC-ES AC308.
  - 1. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless steel bolts, ASTM F593, and nuts, ASTM F594.

## 2.6 MISCELLANEOUS MATERIALS

- A. Handrail Brackets: Cast iron center of handrail 2-1/2 inches from face of railing.
- B. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.
- C. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint, complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- E. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout, complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- F. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
  - 1. Water-Resistant Product: At exterior locations, provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

## 2.7 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.

Clark Complex Accessibility  
Modifications  
County of Humboldt

1. Clearly mark units for reassembly and coordinated installation.
  2. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately.
1. Remove burrs and ease edges to a radius of approximately **1/32 inch** unless otherwise indicated.
  2. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that are exposed to weather in a manner that excludes water.
1. Provide weep holes where water may accumulate.
  2. Locate weep holes in inconspicuous locations.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  2. Obtain fusion without undercut or overlap.
  3. Remove flux immediately.
  4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Finish #2 welds; good appearance, completely sanded joint, some undercutting and pinholes okay.
- I. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- J. Form changes in direction as follows:
1. As detailed.
- K. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.
- L. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is **1/4 inch** or less.
- M. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work.
1. Fabricate anchorage devices capable of withstanding loads imposed by railings.
  2. Coordinate anchorage devices with supporting structure.

- N. Toe Boards: Where indicated, provide toe boards at railings around openings and at edge of open-sided floors and platforms. Fabricate to dimensions and details indicated.

## 2.8 STEEL AND IRON FINISHES

- A. Galvanized Railings:
  - 1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
  - 2. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.
- B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

## 2.9 STAINLESS STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
  - 1. Run grain with long dimension of each piece.
  - 2. When polishing is completed, passivate and rinse surfaces.
  - 3. Remove embedded foreign matter and leave surfaces chemically clean.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements are clearly marked for Installer. Locate reinforcements and mark locations if not already done.

### 3.2 INSTALLATION, GENERAL

- A. Perform cutting, drilling, and fitting required for installing railings.
  - 1. Fit exposed connections together to form tight, hairline joints.
  - 2. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
  - 3. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
  - 4. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  - 5. Set posts plumb within a tolerance of **1/16 inch in 3 feet**.
  - 6. Align rails so variations from level for horizontal members and variations from parallel



with rake of steps and ramps for sloping members do not exceed **1/4 inch in 12 feet**.

- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
  - 1. Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

### 3.3 RAILING CONNECTIONS

- A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws, using plastic cement filler colored to match finish of railings.
- B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article, whether welding is performed in the shop or in the field.

### 3.4 ANCHORING POSTS

- A. Form or core-drill holes not less than **5 inches** deep and **3/4 inch** larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, or, anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Anchor posts to metal surfaces with flanges, angle type, or floor type, as required by conditions, connected to posts and to metal supporting members as follows:
  - 1. For steel railings, weld flanges to post and bolt to metal supporting surfaces.
  - 2. For stainless steel railings, weld flanges to post and bolt to supporting surfaces.

### 3.5 ATTACHING RAILINGS

- A. Secure wall brackets and railing end flanges to building construction as follows:
  - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
  - 2. For wood stud partitions, use hanger or lag bolts set into studs or wood backing between studs. Coordinate with carpentry work to locate backing members.
- B. Install railing gates level, plumb, and secure for full opening without interference.

Clark Complex Accessibility  
Modifications  
County of Humboldt

1. Attach hardware using tamper-resistant or concealed means.
2. Adjust hardware for smooth operation.

3.6 CLEANING

- A. Clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.

3.7 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period, so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 055213

## SECTION 066400 - PLASTIC PANELING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Plastic sheet paneling.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For plastic paneling and trim accessories, in manufacturer's standard sizes.

#### 1.3 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install plastic paneling until spaces are enclosed and weathertight and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

### PART 2 - PRODUCTS

#### 2.1 SOURCE LIMITATIONS

- A. Obtain plastic paneling and trim accessories from single manufacturer.

#### 2.2 PLASTIC SHEET PANELING

- A. Glass-Fiber-Reinforced Plastic Paneling: Gelcoat-finished, glass-fiber-reinforced plastic panels complying with ASTM D5319.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Marlite, Inc., Standard FRP or comparable product by one of the following:
    - a. Crane Composites, Inc.
    - b. Glasteel
    - c. Newcourt, Inc.
    - d. Nudo
    - e. Parkland Plastics
  - 2. Surface-Burning Characteristics: As follows when tested by a qualified testing agency in

Clark Complex Accessibility Modifications  
County of Humboldt

accordance with ASTM E84. Identify products with appropriate markings of applicable testing agency.

- a. Flame-Spread Index: 25 or less.
  - b. Smoke-Developed Index: 450 or less.
3. Nominal Thickness: Not less than **0.09 inch**.
  4. Surface Finish: Molded pebble texture.
  5. Color: As selected by Architect from manufacturer's full range.

### 2.3 ACCESSORIES

- A. Trim Accessories: Manufacturer's standard one-piece vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners, and caps as needed to conceal edges.
  1. Color: As selected by Architect from manufacturer's full range.
- B. Exposed Fasteners: Nylon drive rivets recommended by panel manufacturer.
- C. Concealed Mounting Splines: Continuous, H-shaped aluminum extrusions designed to fit into grooves routed in edges of factory-laminated panels and to be fastened to substrate.
- D. Adhesive: As recommended by plastic paneling manufacturer.
  1. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- E. Sealant: Latex sealant recommended by plastic paneling manufacturer and complying with requirements in Section 079200 "Joint Sealants."
  1. Sealant shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

Clark Complex Accessibility Modifications  
County of Humboldt

3.2 PREPARATION

- A. Prepare substrate by sanding high spots and filling low spots as needed to provide flat, even surface for panel installation.
- B. Clean substrates of substances that could impair adhesive bond, including oil, grease, dirt, and dust.
- C. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.
- D. Lay out paneling before installing. Locate panel joints to provide equal panels at ends of walls not less than half the width of full panels.
  - 1. Mark plumb lines on substrate at panel joint locations for accurate installation.
  - 2. Locate panel joints to allow clearance at panel edges according to manufacturer's written instructions.

3.3 INSTALLATION

- A. Install plastic paneling according to manufacturer's written instructions.
- B. Install panels in a full spread of adhesive.
- C. Install panels with fasteners. Layout fastener locations and mark on face of panels so that fasteners are accurately aligned.
  - 1. Drill oversized fastener holes in panels and center fasteners in holes.
  - 2. Apply sealant to fastener holes before installing fasteners.
- D. Install trim accessories with adhesive.
- E. Fill grooves in trim accessories with sealant before installing panels, and bed inside corner trim in a bead of sealant.
- F. Maintain uniform space between panels and wall fixtures. Fill space with sealant.
- G. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

END OF SECTION 066400

## SECTION 071800 - TRAFFIC COATINGS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes: Traffic coatings and pavement markings for the following applications:
  - 1. Pedestrian traffic.

#### 1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: Traffic coatings and pavement markings for the following applications:
  - 1. Pedestrian traffic.
- B. Product Data Submittals: For each product.
  - 1. Include installation instructions and details, material descriptions, dry- or wet-film thickness requirements, and finish.
- C. Samples for Verification: For each type of exposed finish, prepared on rigid backing.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

#### 1.5 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Adhesive or cohesive failures.
    - b. Abrasion or tearing failures.
    - c. Surface crazing or spalling.
    - d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.

2. Warranty Period: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Material Compatibility: Provide primers; base coat, intermediate coat, and topcoat; and accessory materials that are compatible with one another and with substrate under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

### 2.2 TRAFFIC COATINGS

- A. Traffic Coating: Manufacturer's standard, traffic-bearing, seamless, high-solids-content, cold liquid-applied, elastomeric, water-resistant membrane system with integral wearing surface for pedestrian traffic service condition; according to ASTM C957/C957M.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide Sika Corporation, Sikalastic 720-One Shot, Integrally textured, fast curing, aliphatic polyurethane traffic system or comparable product by one of the following:
    - a. Advanced Polymer Technology Corp.
    - b. Crossfield Products Corp
    - c. Master Builders Solutions
    - d. Tremco
    - e. Urethane Polymers International, Inc. (UPI)
- B. Primer: Liquid primer as recommended in writing for substrate and conditions by traffic-coating manufacturer.
  1. Material: Polyurethane.
- C. Aggregate: Manufacturer's standard aggregate for each use indicated of particle sizes, shape, and minimum hardness recommended in writing by traffic-coating manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, surface smoothness, and other conditions affecting performance of traffic-coating work.
- B. Verify that substrates are visibly dry and free of moisture.
  1. Test for moisture according to ASTM D4263.
  2. Test for moisture content by measuring with an electronic moisture meter.

- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of traffic-coating work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Begin coating application only after substrate construction and penetrating work have been completed.
  - 2. Begin coating application only after minimum concrete-curing and -drying period recommended in writing by traffic-coating manufacturer has passed and after substrates are dry.
  - 3. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Clean and prepare substrates according to ASTM C1127 and manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application. Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating manufacturer.
- B. Priming: Unless manufacturer recommends in writing against priming, prime substrates according to manufacturer's written instructions.
  - 1. Limit priming to areas that will be covered by traffic-coating material on same day. Reprime areas exposed for more time than recommended by manufacturer.
- C. Schedule preparation work so dust and other contaminants from process do not fall on wet, newly coated surfaces.
- D. Mask adjoining surfaces not receiving traffic coatings to prevent overspray, spillage, leaking, and migration of coatings. Prevent traffic-coating materials from entering deck substrate penetrations and clogging weep holes and drains.
- E. Concrete Substrates: Mechanically abrade surface to a uniform profile acceptable to manufacturer, according to ASTM D4259. Do not acid etch.
  - 1. Remove grease, oil, paints, and other penetrating contaminants from concrete.
  - 2. Remove concrete fins, ridges, and other projections.
  - 3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents, and other incompatible materials that might affect coating adhesion.
  - 4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM D4258.

### 3.3 TERMINATIONS AND PENETRATIONS

- A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at expansion joints, drains, and sleeves according to ASTM C1127 and manufacturer's written instructions.



### 3.4 JOINT AND CRACK TREATMENT

- A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C1127 and manufacturer's written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to ASTM D4258.
  - 1. Comply with recommendations in ASTM C1193 for joint-sealant installation.

### 3.5 INSTALLATION OF TRAFFIC COATINGS

- A. Apply traffic coating according to ASTM C1127 and manufacturer's written instructions.
- B. Start traffic-coating application in presence of manufacturer's technical representative.
- C. Verify that wet-film thickness of each coat complies with requirements every 100 sq. ft..
- D. Cure traffic coatings. Prevent contamination and damage during coating application and curing.

### 3.6 PROTECTING AND CLEANING

- A. Protect traffic coatings from damage and wear during remainder of construction period.
- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 071800

## SECTION 081213 - HOLLOW METAL FRAMES

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Interior standard steel frames.

#### 1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

#### 1.3 ACTION SUBMITTALS

A. Product Data:

1. Interior standard steel frames.

B. Shop Drawings: Include the following:

1. Elevations of each frame type.
2. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
3. Locations of reinforcement and preparations for hardware.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

- C. Store hollow-metal frames vertically under cover at Project site with head up. Place on minimum **4-inch**- high wood blocking. Provide minimum **1/4-inch** space between each stacked door to permit air circulation.

## PART 2 - PRODUCTS

### 2.1 STANDARD STEEL FRAMES

- A. Construct hollow-metal frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Interior Standard Steel Frames: SDI A250.8..
  - 1. Materials: Uncoated steel sheet, minimum thickness of **0.042 inch**.
  - 2. Construction: Full profile welded.
  - 3. Exposed Finish: Prime.

### 2.2 FRAME ANCHORS

- A. Jamb Anchors:
  - 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
  - 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each **24 inches** of frame height above **7 feet**.
- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

### 2.3 FABRICATION

- A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
  - 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
  - 2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
    - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
- B. Hardware Preparation: Factory prepare hollow-metal frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule on Drawings, and templates.
  - 1. Reinforce frames to receive nontemplated, mortised, and surface-mounted door hardware.
  - 2. Comply with BHMA A156.115 for preparing hollow-metal frames for hardware.

### 2.4 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap frames to receive nontemplated, mortised, and surface-mounted door hardware.

#### 3.2 INSTALLATION

- A. General: Install hollow-metal frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions. Comply with SDI A250.11.
- B. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
  1. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
  2. Install frames with removable stops located on secure side of opening.
- C. Floor Anchors: Secure with postinstalled expansion anchors.
  1. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
- D. Solidly pack mineral-fiber insulation inside frames.
- E. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
  1. Squareness: Plus or minus **1/16 inch**, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  2. Alignment: Plus or minus **1/16 inch**, measured at jambs on a horizontal line parallel to plane of wall.
  3. Twist: Plus or minus **1/16 inch**, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  4. Plumbness: Plus or minus **1/16 inch**, measured at jambs at floor.

Clark Complex Accessibility Modifications  
County of Humboldt

3.3 CLEANING AND TOUCHUP

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

END OF SECTION 081213

## SECTION 081416 - FLUSH WOOD DOORS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Solid-core five-ply flush wood veneer-faced doors for transparent finish.

#### 1.2 ACTION SUBMITTALS

A. Product Data:

1. Solid-core five-ply flush wood veneer-faced doors and transom panels for transparent finish.

B. Product Data Submittals: For each product, including the following:

1. Door core materials and construction.
2. Door edge construction
3. Door face type and characteristics.
4. Factory- finishing specifications.

C. Shop Drawings: Indicate location, size, and hand of each door; elevation of each type of door; construction details not covered in Product Data; and the following:

1. Door schedule indicating door location, type, size, fire protection rating, and swing.
2. Door elevations, dimension and locations of hardware, lite and louver cutouts, and glazing thicknesses.
3. Clearances and undercuts.
4. Doors to be factory finished and application requirements.

D. Samples for Verification:

1. Factory finishes applied to actual door face materials, approximately **8 by 10 inches**, for each material and finish.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in cardboard cartons, and wrap bundles of doors in plastic sheeting.

C. Mark each door on bottom rail with opening number used on Shop Drawings.

1.4 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Delamination of veneer.
    - b. Warping (bow, cup, or twist) more than **1/4 inch** in a **42-by-84-inch** section.
    - c. Telegraphing of core construction in face veneers exceeding **0.01 inch in a 3-inch** span.
  - 2. Warranty also includes installation and finishing that may be required due to repair or replacement of defective doors.
  - 3. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 FLUSH WOOD DOORS AND FRAMES, GENERAL

- A. Quality Standard: In addition to requirements specified, comply with AWI/AWMAC/WT's "Architectural Woodwork Standards."

2.2 SOLID-CORE FIVE-PLY FLUSH WOOD VENEER-FACED DOORS FOR TRANSPARENT FINISH

- A. Interior Doors, Solid-Core Five-Ply Veneer-Faced Insert drawing designation:
  - 1. Architectural Woodwork Standards Quality Grade: Custom.
  - 2. Faces: Single-plywood veneer not less than **1/50 inch** thick.
    - a. Species: To match existing adjacent doors.
    - b. Cut: Rotary cut.
    - c. Match between Veneer Leaves: Random match.
    - d. Assembly of Veneer Leaves on Door Faces: Running match.
  - 3. Exposed Vertical and Top Edges: Same species as faces or a compatible species - Architectural Woodwork Standards edge Type A.
  - 4. Core for Non-Fire-Rated Doors:
    - a. ANSI A208.1, Grade LD-1 particleboard.
  - 5. Construction: Five plies, hot-pressed bonded (vertical and horizontal edging is bonded to core), with entire unit abrasive planed before veneering.

2.3 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated.

Clark Complex Accessibility Modifications  
County of Humboldt

1. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
- B. Factory machine doors for hardware that is not surface applied.
1. Locate hardware to comply with DHI-WDHS-3.
  2. Comply with final hardware schedules, door frame Shop Drawings, ANSI/BHMA-156.115-W, and hardware templates.
  3. Coordinate with hardware mortises in metal frames, to verify dimensions and alignment before factory machining.

2.4 FACTORY FINISHING

- A. Comply with referenced quality standard for factory finishing.
1. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
  2. Finish faces, all four edges, edges of cutouts, and mortises.
  3. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.
- B. Factory finish doors that are indicated on Drawings to receive transparent finish.
- C. Transparent Finish:
1. Architectural Woodwork Standards Grade: Custom.
    - a. System-11, Polyurethane, Catalyzed.
  2. Staining: None required.
  3. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames, with Installer present, before hanging doors.
1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
  2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.



Clark Complex Accessibility Modifications  
County of Humboldt

- B. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

## SECTION 092900 - GYPSUM BOARD

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.

#### 1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Gypsum board, Type X.

#### 1.3 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing agency.

#### 2.2 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

#### 2.3 INTERIOR GYPSUM BOARD

- A. Gypsum Board, Type X: ASTM C1396/C1396M.

1. Thickness: **5/8 inch.**
2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.

## 2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C475/C475M.
- B. Joint Tape:
  - 1. Interior Gypsum Board: Paper.
- C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.
  - 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
  - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
    - a. Use setting-type compound for installing paper-faced metal trim accessories.
  - 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
  - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.

## 2.5 AUXILIARY MATERIALS

- A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.
- B. Steel Drill Screws: ASTM C1002 unless otherwise indicated.
  - 1. Use screws complying with ASTM C954 for fastening panels to steel members from **0.033 to 0.112 inch** thick.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION AND FINISHING OF PANELS, GENERAL

- A. Comply with ASTM C840.

- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than **1/16 inch** of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
  - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than **8 sq. ft.** in area.
  - 2. Fit gypsum panels around ducts, pipes, and conduits.
  - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow **1/4- to 3/8-inch-** wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide **1/4- to 1/2-inch-** wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- I. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

### 3.3 INSTALLATION OF INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
  - 1. Type X: All locations.
  - 2. Ceiling Type: Ceiling surfaces.
- B. Single-Layer Application:
  - 1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
  - 2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end

joints.

- a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
- b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.

3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

### 3.4 FINISHING OF GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C840:
  1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
  2. Level 2: Panels that are substrate for FRP.
  3. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
    - a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

### 3.5 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
  1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  2. Indications that panels are mold damaged include, but are not limited to, fuzzy or blotchy surface contamination and discoloration.

END OF SECTION 092900

## SECTION 096516 - RESILIENT SHEET FLOORING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Vinyl sheet flooring with backing.

#### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

- B. Samples: For each exposed product and for each color, texture, and pattern specified, in manufacturer's standard size, but not less than **6-by-9-inch** sections.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient sheet flooring and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than **50 deg F** or more than **90 deg F**. Store rolls upright.

#### 1.4 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than **70 deg F** or more than **85 deg F**, in spaces to receive resilient sheet flooring during the following periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than **55 deg F** or more than **95 deg F**.

- C. Close spaces to traffic during resilient sheet flooring installation.

- D. Close spaces to traffic for 48 hours after resilient sheet flooring installation.

- E. Install resilient sheet flooring after other finishing operations, including painting, have been completed.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient sheet flooring, as determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

### 2.2 VINYL SHEET FLOORING WITH BACKING

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Tarkett; Acczent or comparable product.
- B. Product Standard: ASTM F1303.
  - 1. Type (Binder Content): Type I, minimum binder content of 90 percent.
  - 2. Wear-Layer Thickness: Grade 1.
  - 3. Overall Thickness: As standard with manufacturer.
  - 4. Backing Class: Class B (nonfoamed plastic).
- C. Wearing Surface: Smooth.
- D. Sheet Width: 6.6 feet.
- E. Seamless-Installation Method: Heat welded.
- F. Colors and Patterns: Concrete Grey Beige 25003.

### 2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient sheet flooring manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit resilient sheet flooring and substrate conditions indicated.
- C. Seamless-Installation Accessories:
  - 1. Heat-Welding Bead: Manufacturer's solid-strand product for heat welding seams.
    - a. Colors: Match flooring.
- D. Integral-Flash-Cove-Base Accessories:
  - 1. Cove Strip: 1-inch radius provided or approved by resilient sheet flooring manufacturer.
  - 2. Cap Strip: Square metal, vinyl, or rubber cap provided or approved by resilient sheet flooring manufacturer.

3. Corners: Metal inside and outside corners and end stops provided or approved by resilient sheet flooring manufacturer.
- E. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient sheet flooring manufacturer.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient sheet flooring.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Prepare substrates according to resilient sheet flooring manufacturer's written instructions to ensure adhesion of resilient sheet flooring.
- B. Concrete Substrates: Prepare according to ASTM F710.
1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by resilient sheet flooring manufacturer. Do not use solvents.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient sheet flooring until materials are the same temperature as space where they are to be installed.
1. At least 48 hours in advance of installation, move flooring and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient sheet flooring.

#### 3.3 RESILIENT SHEET FLOORING INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient sheet flooring.
- B. Unroll resilient sheet flooring and allow it to stabilize before cutting and fitting.



- C. Lay out resilient sheet flooring as follows:
  - 1. Maintain uniformity of flooring direction.
  - 2. Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches away from parallel joints in flooring substrates.
  - 3. Match edges of flooring for color shading at seams.
  - 4. Avoid cross seams.
- D. Scribe and cut resilient sheet flooring to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend resilient sheet flooring into toe spaces, door reveals, closets, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on resilient sheet flooring as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Adhere resilient sheet flooring to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- H. Seamless Installation:
  - 1. Heat-Welded Seams: Comply with ASTM F1516. Rout joints and heat weld with welding bead to fuse sections permanently into a seamless flooring installation. Prepare, weld, and finish seams to produce surfaces flush with adjoining flooring surfaces.
- I. Integral-Flash-Cove Base: Cove resilient sheet flooring 6 inches up vertical surfaces. Support flooring at horizontal and vertical junction with cove strip. Butt at top against cap strip.
  - 1. Install metal corners at inside and outside corners.

### 3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient sheet flooring.
- B. Perform the following operations immediately after completing resilient sheet flooring installation:
  - 1. Remove adhesive and other blemishes from surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient sheet flooring from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Floor Polish: Remove soil, adhesive, and blemishes from flooring surfaces before applying liquid floor polish.

Clark Complex Accessibility Modifications  
County of Humboldt

1. Apply two coat(s).
- E. Cover resilient sheet flooring until Substantial Completion.

END OF SECTION 096516

## SECTION 099114 - EXTERIOR PAINTING (MPI STANDARDS)

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Surface preparation and application of paint systems on the following exterior substrates:
  - a. Galvanized metal.

#### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include preparation requirements and application instructions.

B. Samples: For each type of topcoat product.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than **45 deg F**.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

#### 1.4 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between **50 and 95 deg F**.

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than **5 deg F** above the dew point; or to damp or wet surfaces.

### PART 2 - PRODUCTS

#### 2.1 PAINT PRODUCTS

A. Source Limitations: Obtain paint from single source from single manufacturer.

B. MPI Standards: Provide products complying with MPI standards indicated and listed in its

"MPI Approved Products List."

C. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

D. Colors: As selected by Architect from manufacturer's full range.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected.
  1. Application of coating indicates acceptance of surfaces and conditions.

#### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
- C. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- D. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

#### 3.3 INSTALLATION

- A. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."
  1. Use applicators and techniques suited for paint and substrate indicated.

- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

### 3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
  - 1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
  - 2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
  - 3. Allow empty paint cans to dry before disposal.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.5 EXTERIOR PAINTING SCHEDULE

- A. Galvanized-Metal Substrates:
  - 1. Latex System MPI EXT 5.3H:
    - a. Water-Based Prime Coat: Primer, galvanized, water based, MPI #134.
    - b. Gloss Topcoat: Latex, exterior, gloss (MPI Gloss Level 6), MPI #119.

END OF SECTION 099114

## SECTION 099124 - INTERIOR PAINTING (MPI STANDARDS)

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following interior substrates:
  - 1. Gypsum board.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

#### 1.4 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures of less than 5 deg F above the dew point; or to damp or wet surfaces.

### PART 2 - PRODUCTS

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

Clark Complex Accessibility Modifications  
County of Humboldt

1. Gypsum Board: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
  1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

### 3.3 INSTALLATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
  1. Use applicators and techniques suited for paint and substrate indicated.
  2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
  4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
  5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 INTERIOR PAINTING SCHEDULE

- A. Gypsum Board and Plaster Substrates:
  - 1. Alkyd over Latex Sealer System, MPI INT 9.2C:
    - a. Prime Coat: Primer sealer, latex, interior, MPI #50.
    - b. Intermediate Coat: Alkyd, interior, matching topcoat.
    - c. Topcoat:
      - 1) Alkyd, interior, semigloss (MPI Gloss Level 5), MPI #47.

END OF SECTION 099124



## SECTION 101400 - SIGNAGE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes:
  - 1. Room control signage.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for.
- B. Shop Drawings:
  - 1. Include plans, elevations, sections, and mounting details.
- C. Samples: For each exposed product and for each color and texture specified, in size.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acrylic Sign Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Architectural Sign Identity.
  - 2. ASI - Modulex.
  - 3. Best Manufacturing.
  - 4. Bravo Sign and Design.
  - 5. CA Signs.
  - 6. Mohawk Sign Systems.
  - 7. Neiman and Company.
  - 8. Signs and Lucite Products, Inc.
  - 9. Signtec.
  - 10. Southwell Complanly.

Clark Complex Accessibility Modifications  
County of Humboldt

2.2 MANUFACTURED UNITS

- A. Room Control Signage: Mohawk Sign Systems, Series 200A, Format D San Carved Process, with 1/32 inch raised border and letters with integral California round top contracted Grade 2 braille dots 1/10 inch on center with 2/10 inch between cells and raised a minimum of 1/40 inch. Material shall be 1/8 inch thick x6 inch high MP plastic plate of length required with 1 inch high Helvetica medium lettering; mechanical mounting with copy centered on plate. Provide one sign for each door on the drawings. Signage to be in compliance with the requirements of Article 703 of the ADA Standards for Accessible Design and CBC, California Building Code (CCR), Title 24, Part 2 Section 11B-703.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install true, plumb, level and adequately secured to substrate.
- C. Clean and polish.

END OF SECTION

## SECTION 101426 - POST AND PANEL/PYLON SIGNAGE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Nonilluminated post-and-panel signs.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For signage.
  - 1. Include fabrication and installation details and attachments to other work.
  - 2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.

#### 1.4 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering.
    - b. Deterioration of embedded graphic image.
    - c. Separation or delamination of sheet materials and components.
  - 2. Warranty Period: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 POST-AND-PANEL SIGNS

- A. Post-and-Panel Sign: Sign of single-panel configuration; with smooth, uniform surfaces and support assembly; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:
  - 1. Solid-Sheet Sign Panels: Aluminum sheet with finish specified in "Sign-Panel-Face Finish and Applied Graphics" Subparagraph and as follows:
    - a. Thickness: Manufacturer's standard for size of sign.
    - b. Surface-Applied Graphics: Applied baked enamel or powder coat.
  - 2. Posts: Steel.
    - a. Shape: Round.
    - b. Size: 3-inch (75-mm) diameter.
    - c. Installation Method: Direct burial.
    - d. Finish and Color: Mill.

### 2.2 MATERIALS

- A. Aluminum Sheet and Plate: ASTM B209 (ASTM B209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- B. Steel Materials:
  - 1. Steel Tubing or Pipe: ASTM A500/A500M, Grade B.
  - 2. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.
- C. Fiberglass Sheet: Multiple laminations of glass-fiber-reinforced polyester resin with UV-light stable, colorfast, nonfading, weather- and stain-resistant, colored polyester gel coat, and with manufacturer's standard finish.
- D. Paints and Coatings for Sheet Materials: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated.

### 2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following unless otherwise indicated:
  - 1. Use concealed fasteners and anchors unless indicated to be exposed.

Clark Complex Accessibility Modifications  
County of Humboldt

2. For exterior exposure, furnish stainless-steel or hot-dip galvanized devices unless otherwise indicated.
3. Exposed Metal-Fastener Components, General:
  - a. Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.

## 2.4 FABRICATION

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
  1. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in locations concealed from view after final assembly.
  2. Mill joints to tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
  3. Conceal fasteners and anchors unless indicated to be exposed; locate exposed fasteners where they will be inconspicuous.

## 2.5 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs.
- C. Verify that anchorage devices embedded in permanent construction are correctly sized and located to accommodate signs.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Install signs using installation methods indicated and according to manufacturer's written instructions.
  1. Install signs level, plumb, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
  2. Install signs so they do not protrude or obstruct according to the accessibility standard.

Clark Complex Accessibility Modifications  
County of Humboldt

3. Before installation, verify that sign components are clean and free of materials or debris that would impair installation.
4. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

### 3.3 INSTALLING POSTS

- A. Vertical Tolerance: Set posts plumb within a tolerance of **1/16 inch in 3 feet (2 mm in 1 m)**.
- B. Direct-Burial Method:
  1. Excavation: Excavate posthole to dimensions indicated. Reconstruct subgrade that is not firm, undisturbed, or compacted soil, or that is damaged by freezing temperatures, frost, rain, accumulated water, or construction activities by excavating an additional **12 inches (300 mm)**, backfilling with satisfactory soil or well-graded aggregate, and compacting to original subgrade elevation.
  2. Setting in Earth: Set post in position, support to prevent movement, and backfill with satisfactory soil or well-graded aggregate as recommended in writing by manufacturer. Place and compact backfill in **6-inch (150-mm)** lifts, compacting each lift.
  3. Setting in Cast-in-Place Concrete: Set post in position, support to prevent movement, and place concrete in posthole or for concrete foundation as indicated on Drawings.

### 3.4 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101426

## SECTION 102113.13 - METAL TOILET COMPARTMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Metal toilet compartments.

#### 1.2 ACTION SUBMITTALS

A. Product Data:

1. Metal toilet compartments.
  - a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings:

1. Include plans, elevations, sections, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.

C. Samples for Verification: Actual sample of finished product for each type of toilet compartment, hardware, and accessory.

1. Size: Manufacturers' standard size.

#### 1.3 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements, and coordinate before fabrication.

### PART 2 - PRODUCTS

#### 2.1 SOURCE LIMITATIONS

- A. Obtain metal toilet compartments from single source from single manufacturer.

## 2.2 METAL TOILET COMPARTMENTS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. All American Metal Corp
  2. ASI American Specialties, Inc.; ASI Group
  3. Bradley Corporation
  4. General Partitions Mfg. Corp
- B. Toilet-Enclosure Style: Overhead braced.
- C. Urinal-Screen Style: Wall hung, flat panel.
- D. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.
1. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of **1 inch** for doors and panels and **1-1/4 inches** for pilasters.
- E. Urinal-Screen Construction:
1. Flat-Panel Urinal Screen: Matching panel construction.
- F. Facing Sheets and Closures: Electrolytically coated steel sheet with nominal base-metal (uncoated) thicknesses as follows:
1. Pilasters, Braced at Both Ends: Manufacturer's standard thickness, but not less than **0.036 inch**.
  2. Panels: Manufacturer's standard thickness, but not less than **0.030 inch**.
  3. Doors: Manufacturer's standard thickness, but not less than **0.030 inch**.
  4. Flat-Panel Urinal Screens: Thickness matching panels.
- G. Pilaster Shoes: Formed from stainless steel sheet, not less than **0.031-inch** nominal thickness and **3 inches** high, finished to match hardware.
- H. Brackets (Fittings):
1. Stirrup Type: Ear or U-brackets; chrome-plated zamac.
- I. Steel Sheet Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on finish, including thermosetting, electrostatically applied, and powder coatings. Apply one color in each room.
1. Color: As selected by Architect from manufacturer's full range.



## 2.3 HARDWARE AND ACCESSORIES

- A. Door Hardware and Accessories: Manufacturer's operating hardware and accessories.
  - 1. Hinges:
    - a. Manufacturer's gravity-actuated, cam-action, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees, allowing emergency access by lifting door.
      - 1) Material, Gravity-Type Hinge: Chrome-plated zamac.
  - 2. Latch and Keeper: Manufacturer's surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at toilet enclosures designated as accessible.
    - a. Material: Chrome-plated zamac.
  - 3. Coat Hook: Manufacturer's combination hook and rubber-tipped bumper, sized to prevent inswinging door from hitting compartment-mounted accessories.
    - a. Material: Chrome-plated zamac.
  - 4. Door Bumper: Manufacturer's rubber-tipped bumper at outswinging doors.
    - a. Material: Manufacturer's standard.
  - 5. Door Pull: Manufacturer's unit at outswinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at toilet enclosures designated as accessible.
    - a. Material: Chrome-plated zamac.
- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel compatible with related materials.

## 2.4 MATERIALS

- A. Aluminum Castings: ASTM B26/B26M.
- B. Aluminum Extrusions: **ASTM B221**.
- C. Steel Sheet: Commercial steel sheet for exposed applications; mill phosphatized and selected for smoothness.

Clark Complex Accessibility Modifications  
County of Humboldt

1. Electrolytically Zinc Coated: ASTM A879/A879M, **01Z**.
- D. Stainless Steel Castings: ASTM A743/A743M.
- E. Zamac: ASTM B86, commercial zinc-alloy die castings, chrome plated.

## 2.5 FABRICATION

- A. Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories, and solid blocking within panel where required for attachment of toilet accessories.
- B. Overhead-Braced Units: Manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters and walls to suit floor and wall conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Door Size and Swings: Unless otherwise indicated, provide **24-inch-** wide, inswinging doors for standard toilet enclosures and **36-inch-** wide, outswinging doors with a minimum **32-inch-** wide, clear opening for toilet enclosures designated as accessible.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
  1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position indicated with manufacturer's recommended anchoring devices.
  1. Maximum Clearances:
    - a. Pilasters and Panels or Screens: **1/2 inch.**
    - b. Panels or Screens and Walls: **1 inch.**
  2. Stirrup Brackets: Secure panels or screens to walls and to pilasters with no fewer than two brackets attached near top and bottom of panel.
    - a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.
    - b. Align brackets at pilasters with brackets at walls.

Clark Complex Accessibility Modifications  
County of Humboldt

- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than **1-3/4 inches** into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware in accordance with hardware manufacturer's written instructions for proper operation. Set hinges on inswinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on outswinging doors to return doors to fully closed position.

END OF SECTION 102113.13

## SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.

#### 1.2 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

#### 1.3 ACTION SUBMITTALS

A. Product Data Submittals: For each product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.

#### 1.4 WARRANTY

- A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, visible silver spoilage defects.
2. Warranty Period: 10 years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Design accessories and fasteners to comply with the following requirements:

1. Grab Bars: Installed units are able to resist **250 lbf** concentrated load applied in any direction and at any point.

## 2.2 PUBLIC-USE WASHROOM ACCESSORIES

### A. Toilet Tissue (Jumbo-Roll) Dispenser:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Transcend Smart-Core Twin Jumbo Roll Tissue Dispenser, T370-B or comparable product.
2. Description: Two-roll unit with sliding panel to expose other roll.
3. Mounting: Surface mounted.
4. Capacity: **9- or 10-inch-** diameter rolls.
5. Material and Finish: ABS plastic, gray, with translucent front cover.
6. Lockset: Tumbler type.

### B. Paper Towel (Roll) Dispenser:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Transcend Mechanical Controlled Roll Towel Dispenser or comparable product.
2. Description: Pull-towel actuated mechanism permitting controlled delivery of paper rolls in preset lengths.
3. Mounting: Surface mounted.
4. Minimum Capacity: **8-inch-** wide, **800-foot-** long roll.
5. Material and Finish: ABS plastic, gray, with translucent front cover.
6. Lockset: Tumbler type.

### C. Soap Dispenser:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Gojo 800 Series, 9033-12 or comparable product by one of the following:
2. Description: Designed for manual operation and dispensing soap in liquid or lotion form.
3. Mounting: Vertically oriented, surface mounted.
4. Capacity: 800 ml.
5. Materials: Plastic.
6. Lockset: Tumbler type.
7. Refill Indicator: Window type.

### D. Grab Bar:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick B-5806 Series or comparable product.
2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, **0.05 inch** thick.
  - a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin).
4. Outside Diameter: **1-1/4 inches**.
5. Configuration and Length: As indicated on Drawings.

### E. Seat-Cover Dispenser:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick B-4221 or comparable product.
2. Mounting: Surface mounted.

Clark Complex Accessibility Modifications  
County of Humboldt

3. Minimum Capacity: 250 seat covers.
4. Exposed Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
5. Lockset: Tumbler type.

F. Mirror Unit:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick B-165 Series or comparable product.
2. Frame: Stainless steel channel.
  - a. Corners: Manufacturer's standard.
3. Size: As indicated on Drawings.
4. Hangers: Manufacturer's standard rigid, tamper and theft resistant.

2.3 MATERIALS

- A. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, **0.031-inch-** minimum nominal thickness unless otherwise indicated.
- B. Fasteners: Screws, bolts, and other devices of same material as accessory unit, unless otherwise recommended by manufacturer or specified in this Section, and tamper and theft resistant where exposed, and of stainless or galvanized steel where concealed.
- C. Mirrors: ASTM C1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories in accordance with manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
  1. Remove temporary labels and protective coatings.
- B. Grab Bars: Install to comply with specified structural-performance requirements.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Clean and polish exposed surfaces in accordance with manufacturer's written instructions.

END OF SECTION 102800

## SECTION 144200 - WHEELCHAIR LIFTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Vertical platform lifts.

#### 1.2 DEFINITIONS

- A. Definitions in ASME A18.1 apply to Work of this Section.

#### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components, and finishes for lifts.
2. Include rated capacities, operating characteristics, electrical characteristics, safety features, controls, finishes, and accessories.

B. Shop Drawings: For each lift.

1. Include plans, elevations, sections, attachment details, and required clearances.
2. Indicate dimensions, weights, loads, and points of load to building structure.
3. Include details of equipment assemblies, method of field assembly, components, and location and size of each field connection.
4. Include diagrams for power, signal, and control wiring.

#### 1.4 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of lifts that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in 2019 California Building Code.

Clark Complex Accessibility Modifications  
County of Humboldt

- B. Regulatory Requirements: Comply with ASME A18.1, "Safety Standard for Platform Lifts and Stairway Chairlifts."

2.2 VERTICAL PLATFORM LIFT

- A. Vertical Platform Lifts: Preengineered lift system.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Garaventa Lift Model GVL-EN-96 or comparable product.
- B. Number of Stops: Two.
- C. Platform Size: 37-1/4 by 54 inches.
- D. Door Operation and Clear Opening Width: Low-energy, power-operated doors that remain open for 20 seconds minimum; end door with minimum 32-inch clear opening width.
- E. Rated Speed: 17 fpm.
- F. Power Supply: Hydraulic.
  - 1. Electrical Characteristics:
    - a. Horsepower: 3.
    - b. Single-Phase AC Voltage: 115-V ac, single phase, 60 Hz.
- G. Emergency Operation: Provide battery power system to raise or lower unit to a landing in case of malfunction or power loss.
- H. Attendant Operation: Provide attendant call device at each landing at locations shown.
- I. Self-Supporting Unit: Support vertical loads of unit only at base, with lateral support only at landing levels.
- J. Platform:
  - 1. Steel sheet or galvanized-steel sheet with matte or primed finish suitable to accept flooring.
- K. Platform Enclosure and Door:
  - 1. Extruded-aluminum frame with flush aluminum-sheet panels.

2.3 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of



approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, critical dimensions, and other conditions affecting performance of the Work.
- B. Minimum Headroom Clearance, ADA: Verify that installed lift will have a minimum headroom of **80 inches** above any point on platform floor at any point of travel.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Comply with ASME A18.1 and manufacturer's written instructions for installation of lifts unless otherwise indicated.
- B. Secure lifts to building construction as follows unless otherwise indicated:
  - 1. For concrete and solid masonry anchorage, use post-installed anchors.
  - 2. For wood stud partitions, use hanger or lag bolts set into studs or wood backing between studs. Coordinate with carpentry work to locate backing members.
- C. Wiring Method: Conceal conductors and cables within housings of units or building construction. Do not install conduit exposed to view in finished spaces. Bundle, lace, and route conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.
- D. Coordinate runway doors with platform travel and positioning, for accurate alignment and minimum clearance between platforms, runway doors, sills, and door frames.
- E. Position sills accurately and fill space under sills solidly with nonshrink, nonmetallic grout.
- F. Coordinate platform doors with platform travel and positioning.
- G. Adjust stops for accurate stopping and leveling at each landing, within required tolerances.
  - 1. Leveling Tolerance: **1/4 inch** up or down, regardless of load and direction of travel.
- H. Lubricate operating parts of lift, including drive mechanism, guide rails, hinges, safety devices, and hardware.
- I. Test safety devices and verify smoothness of required protective enclosures and other surfaces.

Clark Complex Accessibility Modifications  
County of Humboldt

3.3 FIELD QUALITY CONTROL

- A. Acceptance Testing: On completion of lift installation and before permitting use of lifts, perform acceptance tests as required and recommended by ASME A18.1 and authorities having jurisdiction.
- B. Operating Test: In addition to acceptance testing, load lifts to rated capacity and operate continuously for 30 minutes between lowest and highest landings served. Readjust stops, signal equipment, and other devices for accurate stopping and operation of system.
- C. Advise Owner, Architect, and authorities having jurisdiction in advance of dates and times tests are to be performed on lifts.

3.4 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of lift Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper lift operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain lifts. Include a review of emergency systems and emergency procedures to be followed at time of operational failure and other building emergencies.
- B. Check operation of lifts with Owner's personnel present and before date of Substantial Completion. Determine that operating systems and devices are functioning properly.
- C. Check operation of lifts with Owner's personnel present not more than one month before end of warranty period. Determine that operating systems and devices are functioning properly.

END OF SECTION 144200

## SECTION 321726 - TACTILE WARNING SURFACING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Cast-in-place detectable warning tiles.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For tactile warning surfacing, to include in maintenance manuals.

#### 1.5 PROJECT CONDITIONS

- A. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

#### 1.6 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of tactile warning surfaces that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering and wear.
    - b. Separation or delamination of materials and components.
  - 2. Warranty Period: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 TACTILE WARNING SURFACING, GENERAL

- A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities, ICC A117.1, and California Building Code for tactile warning surfaces.

### 2.2 DETECTABLE WARNING TILES

- A. Cast-in-Place Detectable Warning Tiles: Accessible truncated-dome detectable warning tiles configured for setting flush in new concrete walkway surfaces, with slip-resistant surface treatment on domes and field of tile.
  - 1. Material: Cast-fiber-reinforced polymer concrete tile.
  - 2. Color: Safety yellow.
  - 3. Shapes and Sizes: As indicated on Drawings.
  - 4. Dome Spacing and Configuration: Manufacturer's standard compliant spacing, in manufacturer's standard pattern.
  - 5. Mounting:
    - a. Permanently embedded detectable warning tile wet-set into freshly poured concrete.

### 2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of tactile warning surfaces, noncorrosive and compatible with each material joined, and complying with the following:
  - 1. Furnish Type 304 stainless-steel fasteners for exterior use.
  - 2. Fastener Heads: For nonstructural connections, use flathead or oval countersunk screws and bolts with tamper-resistant heads, colored to match tile.
- B. Adhesive: As recommended by manufacturer for adhering tactile warning surfacing unit to pavement.
- C. Sealant: As recommended by manufacturer for sealing perimeter of tactile warning surfacing unit.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that pavement is in suitable condition to begin installation according to manufacturer's written instructions. Verify that installation of tactile warning surfacing will comply with accessibility requirements upon completion.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION OF DETECTABLE WARNING TILES

#### A. Cast-in-Place Detectable Warning Tiles:

1. Concrete Paving Installation: Comply with installation requirements in Section 321313 "Concrete Paving." Mix, place, and finish concrete to conditions complying with detectable warning tile manufacturer's written requirements for satisfactory embedment of tile.
2. Set each detectable warning tile accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. If necessary, temporarily apply weight to tiles to ensure full contact with concrete.
3. Set surface of tile flush with surrounding concrete and adjacent tiles, with variations between tiles and between concrete and tiles not exceeding plus or minus **1/8 inch (3 mm)** from flush.
4. Protect exposed surfaces of installed tiles from contact with wet concrete. Complete finishing of concrete paving surrounding tiles. Remove concrete from tile surfaces.
5. Clean tiles using methods recommended in writing by manufacturer.

### 3.3 CLEANING AND PROTECTION

- A. Remove and replace tactile warning surfacing that is broken or damaged or does not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Architect. Replace using tactile warning surfacing installation methods acceptable to Architect.
- B. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION 321726