

- O. Substitutions: Under provisions of Section 01600.
- P. Substitutions: Under provisions of Section 01600.
- 1.17 KEYING
  - A. Door Locks: Coordinate Masterkeying requirements with Owner's existing master keying code system and record actual locations of installed cylinders and their keying code. Meet with Owner's masterkey hardware department. Contact Owner for masterkey System requirements.
  - B. Supply keys in the following quantities: Consult Owner.
- 1.18 FINISHES
  - A. Finishes: Stainless Steel.
- 2 PART 3 EXECUTION
- 2.1 EXAMINATION
  - A. Verify site conditions under provisions of Section 01039.
  - B. Verify that doors and frames are ready to receive work and dimensions are as indicated on shop drawings.
- 2.2 INSTALLATION
  - A. Install hardware in accordance with manufacturer's instructions.
  - B. Use templates provided by hardware item manufacturer.
  - C. Mounting heights for hardware from finished floor to center line of hardware item:
    - 1. Locksets: 39-3/8 A.F.F.
    - 2. Push & Kick Plates: See door schedule dwg for Dimensions
    - 3. Hospital Latches: 45-1/4" A.F.F.
- 2.3 FIELD QUALITY CONTROL
  - A. Field inspection will be performed under provisions of Section 01400.
  - B. Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's written instructions and as specified.
- 2.4 ADJUSTING
  - A. Adjust work under provisions of Section 01700.
  - B. Adjust hardware for smooth operation.
- 2.5 PROTECTION OF FINISHED WORK
  - A. Protect finished Work under provisions of Section 01500.

SECTION 08800

GLAZING

1PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Glass and glazing for glazed sidelights and doors.

1.2 RELATED SECTIONS

- A. Section 08112 - Standard Steel Frames
- B. Section 08211 - Flush Wood Doors: Glazed doors.
- C. Section 10800 - Toilet and Bath Accessories: Mirrors.

1.3 REFERENCES

- A. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Used in Buildings.
- B. ASTM C1048 - Heat-Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass.
- C. FGMA - Glazing Manual.
- D. FGMA - Sealant Manual.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data on Glass and Plastic Types Specified: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
- D. Samples: Submit two samples, 6 x 6 inch in size, illustrating glass and plastic units, coloration and design.
- E. Manufacturer's Installation Instructions: Indicate special precautions required.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with FGMA Glazing Manual and FGMA Sealant Manual for glazing installation methods.
- B. Maintain one copy of each document on site.

1.6 PRE-INSTALLATION CONFERENCE

- A. Convene one week prior to commencing work of this Section, under provisions of Section 01039.

- A. Verify prepared openings under provisions of Section 01039.
- B. Verify that openings for glazing are correctly sized and within tolerance.
- C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

### 3.2 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.

### 3.3 INTERIOR - DRY METHOD (TAPE AND TAPE)

- A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.
- B. Place setting blocks at 1/3 points with edge block no more than 3 inches from corners.
- C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.
- D. Place glazing tape on free perimeter of glazing in same manner described above.
- E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.
- F. Knife trim protruding tape.

### 3.4 INSTALLATION - MIRRORS

- A. Set mirrors with adhesive, applied in accordance with adhesive manufacturer's instructions and clips. Anchor rigidly to wall construction.
- B. Place plumb and level.

### 3.5 QUALITY CONTROL

- A. Field inspection will be performed under provisions of Section 01400.
- B. Inspection will monitor quality of glazing.

### 3.6 CLEANING

- A. Clean work under provisions of 01700.
- B. Remove glazing materials from finish surfaces.
- C. Remove labels after work is complete.
- D. Clean glass and mirrors.

SECTION 09111

METAL STUD FRAMING SYSTEM

1PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Formed metal stud framing at interior locations.
- B. Framing accessories.

1.2 PRODUCTS INSTALLED AND FURNISHED UNDER THIS SECTION

- A. Section 09111: Blocking and Anchors for support of toilet & lavatory fixtures, toilet accessories, grab bars, shelving, pre-fabricated millwork, TV systems, bulletin boards, mirrors, drapery track, and other fixtures.

1.3 RELATED SECTIONS

- A. Section 04320 - Veneer Masonry System: Veneer masonry supported by stud wall metal framing.
- B. Section 07213 - Batt and Blanket Insulation: Insulation within framing members.
- C. Section 07900 - Joint Sealers.
- D. Section 09260 - Gypsum Board Systems: Metal studs for partitioning.

1.4 REFERENCES

- A. ASTM C645 - Non-Load (Axial) Bearing Steel Studs, Runners (Track) and Rigid Furring Channels for Screw Application of Gypsum Board.
- B. ASTM C754 - Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board, or Water-Resistant Backing Board.
- C. Metal Framing Manufacturers Association (MFMA) - Guidelines for the Use of Metal Framing.

1.5 SYSTEM DESCRIPTION

- A. Metal stud framing system for interior walls, with batt type acoustic insulation specified in Section 07213, interior gypsum board specified in Section 09260.
- B. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

1.6 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Shop Drawings: Indicate prefabricated work, component details, stud layout, framed openings, anchorage to structure, type and location of fasteners, and accessories or items required of other related work.

## 2.3 FINISHES

- A. Studs: Galvanize to G60 coating class.
- B. Tracks and Headers: Galvanize to G60 coating class.
- C. Accessories: Same finish as framing members. ASTM A123, hot dip galvanized to 1.25 oz/sqft.

## 3 PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify site conditions under provisions of Section 01039.
- B. Verify that conditions are ready to receive work.
- C. Verify that rough-in utilities are in proper location.

### 3.2 ERECTION

- A. Align and secure top and bottom runners with fasteners at 24 inches oc.
- B. Place two beads of sealant between runners and substrate, studs and adjacent construction to achieve an air tight seal.
- C. Place two beads of sealant between studs and adjacent vertical surfaces to achieve an air tight seal.
- D. Fit runners under and above openings; secure intermediate studs to same spacing as wall studs.
- E. Install studs vertically at 16 inches oc.
- F. Align stud web openings horizontally.
- G. Secure studs to tracks using crimping method. Do not weld.
- H. Stud splicing not permissible.
- I. Fabricate corners using a minimum of three studs.
- J. Double stud at wall openings, door and window jambs, not more than 2 inches from each side of openings.
- K. Brace stud framing system rigid.
- L. Coordinate erection of studs with requirements of door frames, and other openings; install supports and attachments.
- M. Coordinate installation of wood bucks, anchors, and wood blocking with electrical and mechanical work to be placed within or behind stud framing.
- N. Blocking: Secure wood blocking to studs. Install blocking for support of toilet & lavatory fixtures, toilet accessories, grab bars, shelving, pre-fabricated millwork, TV systems, bulletin boards, mirrors, drapery track, and other fixtures.
- O. Refer to Drawings for indication of partitions extending to finished ceiling only and for partitions extending through the ceiling to the structural floor above. Maintain clearance of 3/4" with slip track installation under structural building

SECTION 09260

GYPSUM BOARD SYSTEMS

1PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Gypsum board.

1.2 RELATED SECTIONS

- A. Section 07213 - Batt & Blanket Insulation: Acoustical Attenuation Blankets.
- B. Section 08112 - Standard Steel Frames.
- C. Section 09111 - Wood Blocking and Curbing: Wood blocking for support of toilet & lavatory fixtures, toilet accessories, grab bars, shelving, pre-fabricated millwork, TV systems, bulletin boards, mirrors, drapery track, and other fixtures.
- D. Section 09111 - Metal Stud Framing System.
- E. Section 09900 - Painting: Surface finish.

1.3 REFERENCES

- A. ASTM C36 - Gypsum Wallboard.
- B. ASTM C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
- C. ASTM C630 - Water Resistant Gypsum Backing Board.
- D. ASTM C645 - Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
- E. ASTM C754 - Installation of Framing Members to Receive Screw Attached Gypsum Wallboard, Backing Board, or Water Resistant Backing Board.
- F. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board.
- G. ASTM E90 - Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- H. ASTM E119 - Fire Tests of Building Construction and Materials.

1.4 SYSTEM DESCRIPTION

- A. Acoustical Attenuation for Interior Partitions STC rating in accordance with ASTM E90 as follows:
  - Public Corridors to Offices STC 55
  - Public Corridors to Resident Room STC 55

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.

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- B. Verify that site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.

### 3.2 CEILING FRAMING INSTALLATION

- A. Install in accordance with ASTM C754 and manufacturer's written instructions.
- B. Coordinate location of hangers with other work.
- C. Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.
- D. Laterally brace entire suspension system.

### 3.3 ACOUSTICAL ACCESSORIES INSTALLATION

- A. Place acoustical insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- B. Install acoustical sealant at gypsum board perimeter at
  - 1. Metal Framing: Two beads.
  - 2. Existing abutted walls and other surfaces
  - 3. Caulk all penetrations of partitions by conduit, pipe, duct work, and rough-in boxes.

### 3.4 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with GA-600 and manufacturer's written instructions.
- B. Erect single layer standard gypsum board horizontal, with ends and edges occurring over firm bearing.
- C. Erect single layer fire rated gypsum board according to UL listing to meet specified fire barrier assembly rating. Locate edges and ends occurring over firm bearing.
- D. Use screws when fastening gypsum board to metal furring or framing.
- E. Treat cut edges and holes in moisture resistant gypsum board with sealant.
- F. Place corner beads at external corners. Use single piece lengths. Place edge trim where gypsum board abuts a dissimilar materials.

### 3.5 JOINT TREATMENT

- A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
- B. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.
- C. Taping, filling, and sanding is required at surfaces behind adhesive applied ceramic tile.

### 3.6 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

- B. Acoustical Unit Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

#### 1.7 REGULATORY REQUIREMENTS

- A. Conform to NFPA-101: Life Safety Code, latest Edition for combustibility requirements for materials.

#### 1.8 ENVIRONMENTAL REQUIREMENTS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent or less prior to, during, and after acoustical unit installation.

#### 1.9 SEQUENCING

- A. Sequence work under the provisions of Section 01010.
- B. Sequence work to ensure acoustical ceilings are not installed until dust generating activities have terminated, mechanical ductwork and overhead work is completed, tested, and approved.
- C. Install acoustical units after interior wet work is dry.

#### 1.10 EXTRA MATERIALS

- A. Furnish under provisions of Section 01700.

### 1 PART 2 PRODUCTS

#### 1.1 MANUFACTURERS - SUSPENSION SYSTEM

- A. Armstrong Product Prelude 15/16 lay-in exposed tee system.
- B. Substitutions: Under provisions of Section 01600.

#### 1.2 SUSPENSION SYSTEM MATERIALS

- A. Non-fire Rated Grid: ASTM C635, intermediate duty, exposed T; components die cut and interlocking.
- B. Grid Materials: Commercial quality cold rolled steel with baked polyester finish.
- C. Exposed Grid Surface Width: 15/16 inch with reveal.
- D. Grid Finish: White.
- E. Accessories: Stabilizer bars, splices, and edge moldings required for suspended grid system.
- F. Support Channels and Hangers: Galvanized steel, size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

#### 1.3 MANUFACTURERS - ACOUSTICAL UNITS

- A. Armstrong Product Fissured Minaboard lay-in panel for Print Shop and all other rooms unless specified otherwise. (See Room Finish Schedule: Dwg. A-802 & A-803 )



- I. Do not eccentrically load system, or produce rotation of runners.
- J. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions.
- K. Install light fixture boxes constructed of gypsum board above light fixtures in accordance with UL assembly requirements.

### 2.3 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Lay Fissured Minaboard Ceiling directional patterned units one way with pattern parallel to longest room axis in new ceiling areas. Fit border trim neatly against abutting surfaces.
- C. Install units after overhead mechanical and electrical work is complete.
- D. Install acoustical units level, in uniform plane, and free from twist, warp and dents.
- E. Cut panels to fit irregular grid and perimeter edge trim.
- F. Where round or irregular obstructions occur, provide preformed closers to match edge molding.

### 2.4 ERECTION TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

- A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- B. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.

#### 1.8 MAINTENANCE DATA

- A. Submit under provisions of Section 017700.
- B. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

### PART 2 PRODUCTS

#### 2.1 MATERIALS - SHEET FLOORING

- A. Linoleum:
  - 1. Backing: Jute canvas
  - 2. Total Thickness: 3.2 mm
  - 3. Sheet Width: 72 inch
  - 4. Manufacturers:
    - a) Gilbert LTD.  
P.O. Box 4944, High Street  
Lancaster, PA. 17603  
(717) 299-5035

- B. Vinyl Composition Tile: ASTM E648:
    - 1. Size: 12 x 12 inch
    - 2. Thickness: 1/8 inch
    - 3. Design: marbled
    - 4. Manufacturers:
      - a) Armstrong Style: Imperial Texture.
- #### 2.2 MATERIALS - BASE

- A. Base: Rubber, top set covered, preformed external corners:
  - 1. Height: 4 inch
  - 2. Thickness: 1/8 inch thick
  - 3. Length: Roll.
  - 4. Manufacturers:
    - a) Azrock
- B. Base Accessories: Preformed end stops and external corners of same material, size, and color as base.

#### 2.3 ACCESSORIES

- A. Subfloor Filler: White pre-mix latex; type recommended by adhesive material manufacturer.
- B. Primers and Adhesives: Waterproof, types recommended by flooring manufacturer.
- C. Cant Strip: Rubber.

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- C. Install base on solid backing. Bond tight to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

### 3.5 CLEANING

- A. Clean work under provisions of 01700.
- B. Remove access adhesive from floor, base, and wall surfaces without damage.
- C. Clean, seal, and wax floor and base surfaces in accordance with manufacturer's instructions.

### 3.6 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 01500.
- B. Prohibit traffic on floor finish for 48 hours after installation.

END OF SECTION

B. Maintain minimum 70 degrees F (21 degrees C) ambient temperature 24 hours prior to, during and 24 hours after installation.

#### 1.7 MAINTENANCE DATA

A. Submit under provisions of Section 01700.

B. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

#### 1.8 EXTRA MATERIAL

A. Furnish under provisions of Section 01700.

#### PART 2 PRODUCTS

##### 2.1 MATERIALS - CARPET

A. Carpet: All new carpet shall be Nylon or Olefin loop as manufactured by Philadelphia PHD; color and pattern to be selected by owner.

1. Roll Width: 12 ft
2. Color: As selected by Owner.
3. Pattern: Level loop
4. Pile Fiber: 100% Ultral 1000 SD Solution Dyed Nylon
5. Construction: Ultra Point Level Loop
6. Tufted Pile Weight: 32 oz/Sq. Yd.
7. Pile Height: 0.2 inches
8. Machine Gage: 1/10
9. Stitch Count: 9.25 S.P.I.
10. Density Factor: 5760
11. Yarn Construction: Solution Dyed Nylon with Anti-Microbial Protection in liquid melt-4350 DTEX/26Dtex per filament
12. Flammability: ASTM E-648-84 Avg. critical radiant flux Class I
13. Static Generation: Under 3.0 kvolts.
14. Light Fastness: 16 or better.
15. Resistance to Change on wet cleaning: Grey Scale 5.
16. Primary Backing: Woven Synthetic.
17. Laminate: Latex with Anti-Microbial additive 33 oz/Sq. Yd.
18. Secondary Backing: ActionBac®
19. Total Weight: 72 oz/Sq. Yd.
20. Commercial Guarantee Classification: Class III, Extra Heavy 10 Year Wear.
21. Approx. Random Pattern Repeat: 2-1/2 inch width X 2-1/4 inch long. Dry lay and adjust to obtain best visual match.

##### 2.2 ACCESSORIES

A. Sub-Floor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Adhesive: Recommended by carpet manufacturer.

C. Edge Strips: Resilient type, matte finish, color as selected by Owner.

#### PART 3 EXECUTION

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### 3.1 EXAMINATION

- A. Verify that surfaces are smooth and flat with maximum variation of 1/4 inch in 10 ft, and are ready to receive work.
- B. Verify concrete floors are dry to a maximum moisture content of 7 percent and exhibit negative alkalinity, carbonization, or dusting.

### 3.2 PREPARATION

- A. Remove sub-floor ridges and burrps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
- B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.
- C. Vacuum clean substrate.

### 3.3 INSTALLATION

- A. Apply carpet and adhesive in accordance with manufacturers' instructions.
- B. Verify carpet match before cutting to ensure minimal variation between dye and pattern lots.
- C. Locate seams in area of least traffic.
- D. Join seams by hot adhesive tape method. Form seams straight, not overlapped or peaked, and free of gaps.
- E. Lay carpet tight and flat on subfloor, well fastened at edges, with a uniform appearance. Provide monolithic color, pattern, and texture match within any one area.
- F. Do not change run of pile in any room where carpet is continuous through a wall opening into another room. Locate change of color or pattern between rooms under door centerline.
- G. Cut and fit carpet around interruptions.
- H. Conceal carpet terminations with resilient edge strips.
- I. Fit carpet tight to intersection with vertical surfaces without gaps.
- J. Where wall bases are scheduled, cut carpet tight to walls. Fit carpet tight to vertical interruptions, leaving no gaps.

### 3.4 CLEANING

- A. Clean work under provisions of 01700.
- B. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- C. Clean and vacuum carpet surfaces.

END OF SECTION

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 01600.
- B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- C. Container label to include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- D. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior, unless required otherwise by manufacturer's instructions.
- D. Minimum Application Temperature for Varnish and Acrylic Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.10 EXTRA MATERIALS

- A. Furnish under provisions of Section 01700.

2 PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers - Paint

For New Concrete Block Walls

- 1. Muralo Paint Universal Primer #2205.
- 2. Muralo Paint Ultra Water Borne #457.

- B. Manufacturers - Transparent Finishes

- 1. Pratt & Lambert Paint Urethane Satin.

- C. Manufacturers - Stain

- 1. Pratt & Lambert Paint Alkyd Tonic Wood Stain to match existing.

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### 3.2 PREPARATION

- A. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- B. Correct defects and clean surfaces which affect work of this section. Remove existing coatings that exhibit loose surface defects.
- C. Seal with shellac and seal marks which may bleed through surface finishes.
- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Concrete Floors: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
- F. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.
- G. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- H. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- I. Existing Concrete Joist and Slab Ceiling Scheduled to Receive Paint Finish: Pressure Wash entire ceiling, remove dirt, loose concrete, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- J. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- K. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by power tool; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.
- L. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Prime metal items including shop primed items.
- M. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.
- N. Wood and Metal Doors Scheduled for Painting: Seal top and bottom edges with primer.

### 3.3 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.

SECTION 10441

PLASTIC SIGNS

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Raised and Brailled Character and Pictorial Symbol Plastic Signs.

1.2 ALLOWANCES

- A. This allowance includes purchase, delivery, and installation of signs and letters.

1.3 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01300.
- B. Submit shop drawings listing sign styles, lettering and locations and overall dimensions of each.
- C. Submit samples under provisions of Section 01300.
- D. Submit one samples illustrating full size sample sign, of type, style and color specified including method of attachment
- E. Submit manufacturer's installation instructions under provisions of Section 01300.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.
- C. Package signs, labeled in name and or number groups.
- D. Store adhesive tape backed signs at ambient room temperatures.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Do not install signs when ambient temperature is below 70 degrees F. Maintain this minimum during and after installation of signs.

1.6 MATERIALS

- A. Raised and Brailled Character Signs: Laminated colored plastic; total thickness of 0.125 inch; 2 x X inches wide; square edges; rounded corners; 1/32 inch raised lettering of 5/8 to 2 inches high in San Serif or Simple Serif style. Sign and lettering finish shall be matte finish and mounted as indicated on drawings. Room Name and Room Number signs shall be provided for every door with Grade 2 raised braille on Room Names only. Provide and install 8 x 7 inch signs with Room Name, and international symbol of accessibility Pictogram with grade 2 braille for showers, accessible toilets and other rooms as required by ADAAG requirements.
- B. Sign Face Color: Matte White.
- C. Lettering Color: Matte Black



SECTION 10522

FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

1PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fire extinguishers.

1.2 REFERENCES

- A. ANS/NFPA 10 - Portable Fire Extinguishers.

2.1 SUBMITTALS

- A. Submit under provisions of Section 01300.
- A. Shop Drawings: Indicate extinguisher physical dimensions, wall bracket mounting measurements and location.
- B. Product Data: Provide extinguisher operational features, color and finish and anchorage details.
- C. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
- D. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.

2.2 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 01700.
- B. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

2.3 QUALITY ASSURANCE

- A. Provide units conforming with ANS/UL 711.
- B. Maintain copies of each document on site.

2.4 REGULATORY REQUIREMENTS

- A. Conform to NFPA 101 - 1993 code requirements for extinguishers.

2.5 ENVIRONMENTAL REQUIREMENTS

- A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

2.6 EXTINGUISHERS

- A. Dry Chemical Type: UL 299, Stainless steel tank, with pressure gage; Class A:B:C, Size 10 located as indicated on drawings.

SECTION 10800

TOILET AND BATH ACCESSORIES

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Toilet and bath accessories.
- B. Attachment hardware.

1.2 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

- A. Section 09111 - Metal Stud Framing System: Installation of solid blocking.

1.3 RELATED SECTIONS

- A. Section 09111 - Metal Stud Framing System: Above ceiling framing for support of accessories.
- B. Section 08800 - Glazing: Wall mirrors.
- C. Section 09312 - Ceramic Tile Wall Finish: Ceramic accessories.

1.4 REFERENCES

- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible To and Usable by Physically Handicapped People.
- B. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.

1.5 SUBMITTALS

- A. Submit product data under provisions of Section 01300.
- B. Provide product data on accessories describing size, finish, details of function, attachment methods.
- C. Submit samples under provisions of Section 01300.
- D. Submit manufacturer's installation instructions under provisions of Section 01300.

1.6 KEYING

- A. Supply keys for each accessory to Owner.

1.7 REGULATORY REQUIREMENTS

- A. Conform to ADAAAG - American Disability Act Accessibility Guidelines for installing work in conformance with the American with Disability Act ADA-Title III.

1.8 SEQUENCING AND SCHEDULING

- A. Verify that site conditions are ready to receive work and dimensions are as indicated on shop drawings.
- B. Beginning of installation means acceptance of existing conditions.

### 3.2 PREPARATION

- A. Deliver inserts and rough-in frames to site at appropriate time for building-in.
- B. Provide templates and rough-in measurements as required.
- C. Verify exact location of accessories for installation.

### 3.3 INSTALLATION

- A. Install fixtures, accessories and items in accordance with manufacturers' instructions.
- B. Install plumb and level, securely and rigidly anchored to substrate.

END OF SECTION

- E. ANSI/JL 10B - Fire Tests of Door Assemblies.
- F. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

#### 1.5 SYSTEM DESCRIPTION

- A. Hydraulic Elevator System: One unit; buried cylinder and casing; with motor and pump adjacent approximately 50 feet distant from the hoistway.
- B. Characteristics of elevator are as follows:
  - 1. Rated Net Capacity: 3000 lbs.
  - 2. Rated Speed: 150 ft/min.
  - 3. Clear Net Platform Size: 5'-8" x 4'-3" inches.
  - 4. Cab Height: 84 inch.
  - 5. Hoistway and Cab Entrance Frame Opening Sizes: 36 x 84 inches.
  - 6. Door Type: Single leaf.
  - 7. Door Operation: Side opening.
  - 8. No. of Stops: 3.
  - 9. No. of Openings: 3 Front.
- C. Door Control Features:
  - 1. Program door control to open doors automatically when car arrives at floor.
  - 2. Render "Door Close" button inoperative when car is standing at dispatching terminal with doors open.
  - 3. If doors are prevented from closing for approximately ten seconds because of an obstruction, automatically disconnect door reopening devices, close doors more slowly until obstruction is cleared. Sound buzzer.
  - 4. Door Safety Devices: Moveable, retractable safety edges, quiet in operation; equip with photo-electric light rays.
- D. Interconnect elevator control system with building fire alarm, smoke alarm and fire suppression system.
- E. Temporary Elevator Use During Construction: Not Permitted
- F. Seismic Design: In accordance with applicable BOCA 1993 code.

#### 1.6 TWO-STOP AUTOMATIC OPERATION

- A. Set system operation so that upon momentary pressure of a hall button from another landing, dispatch car to that landing.
- B. Allow call registered by momentary pressure of hall button at any time, to remain registered until car stops in response to that call at that landing.
- C. If hoistway door is not opened within a short interval after car has stopped at terminal, allow car to respond to any call from the other landing.

#### 1.7 FIREFIGHTER'S SERVICE

- A. Provide "Firefighter's Operation" in accordance with ANSI/ASME A17.1.
- B. Designated Landing: Ground Floor

#### 1.8 SUBMITTALS

Custom House Wharf - Marine Use Facility

1.11 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum ten years documented experience.

B. Installer: Employees and supervisor on payroll of elevator equipment manufacturer.

1.12 REGULATORY REQUIREMENTS

A. Conform to applicable State of Maine Elevator code for manufacture and installation of elevator system.

B. Conform to ANSI A117.1 - 1986 for provisions for the physically handicapped.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

1.13 PRE-INSTALLATION CONFERENCE

A. Convene one week prior to commencing work of this section, under provisions of Section 01039.

B. Require attendance of Owners Administrator and General Contractor and other persons directly involved with the work of this section.

C. Review schedule of installation, installation procedures and conditions, and coordination with related work.

2 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on shop drawings.

2.1 SCHEDULING

A. Schedule work under the provisions of Section 01300.

2.2 WARRANTY

A. Provide one year manufacturer's warranty under provisions of Section 01700.

B. Warranty: Include coverage for elevator operating equipment and devices.

2.3 MAINTENANCE SERVICE

A. Furnish service and maintenance of elevator system and components for three months from date of Substantial Completion.

B. Examine system components biweekly for the first month of operations and monthly thereafter. Clean, adjust, and lubricate equipment.

C. Include systematic examination, adjustment, and lubrication of elevator equipment; maintain hydraulic fluid levels. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original equipment. Replace wire ropes when necessary to maintain the required factor of safety.

D. Perform work without removing cars during peak traffic periods.

- A. Electrical Characteristics:
  - 1. 30 hp rated at 78 load amperes.
  - 2. 230 volts, three phase, 60 Hz.
  - 3. 100 amperes maximum overcurrent protection.
  - 4. Refer to Section 16180. By Others; Not in This Contract

- B. Motor: Refer to Section 15170. By Others. Not in This Contract.

- C. Disconnect Switch: Factory mount disconnect switch on equipment under provisions of Section 16180.

### 3.6 ELECTRICAL COMPONENTS

- A. Boxes, Conduit, Wiring, and Devices: Required by ANSIN/FPA 70. See Section 16000. Not in This Contract

### 3.7 LUBRICATION

- A. Grease Fittings: For lubricating bearings requiring periodic lubrication.

- B. Grease Cups: Automatic feed type.

- C. Lubrication Points: Visible and easily accessible.

### 3.8 CAR FABRICATION

- A. Frame: Rigid and braced, rolled or formed steel sections, mounted on resilient isolators.

- B. Platform: Steel frame, with fireproofed plywood subflooring assembly, ready to receive floor finish.

### 3.9 CAB FABRICATION

- A. Flooring: Carpet, 28 oz loop olefin as selected and installed by owner.

- B. Walls: # 316 Stainless Steel with #10 finish.

- C. Front Return Panel: #316 Stainless steel with #10 finish.

- D. Base: Resilient rubber cove, of type selected by owner.

- E. Ceiling: Translucent plastic panel.

- F. Light Fixtures: Fluorescent

- G. Ventilation: Two speed fan, grille in ceiling; perforations in base.

- H. Control Panel and Face Plate: Stainless steel with call buttons.

- I. Pad Hooks: Stainless steel type, mounted at 72 inches high, in cab.

- J. Indicator Panel: Above door with illuminating position indicators.

- K. Hand Rail: Stainless steel flat bar stock spaced from wall 3 inches; placed at rear wall and side walls.

corresponding to floors served, in car alarm button, and DOOR OPEN, DOOR CLOSE buttons.

- B. Position alarm button where it is unlikely to be accidentally actuated; not more than 48 inches above cab floor.
- C. Include service cabinet, with hinged door in car.

#### 3.15 LANDING CONTROLS

- A. Landing Buttons: Stainless Steel type, one for originating UP and one for originating DOWN calls, one button only at terminating landings; marked with arrows, including type II Braille indications required by ANSI A117.1 - 1986.
- B. Landing Position Indicators: Illuminating white.
- C. Car Direction Indicators: Illuminating white.

#### 3.16 PROVISION FOR HANDICAPPED

- A. Comply with ANSI A117.1 - 1986.
- B. Provide indicators near controls in conformance with ANSI A117.1 - 1986.
- C. Landing Buttons: Stainless steel type, one for originating UP and one for originating DOWN calls, one button only at terminating landings; marked with arrows, including Type II Braille indications required by ANSI A117.1 - 1986.
- D. Locate highest button in elevator cab control panel and the center of the telephone handset, not more than 48 inches above floor level.
- E. Hand Rails: Round profile of 1 1/4 inch x 1 1/4 inch thick stainless steel; position on three sides of cab with ends returned to car wall.
- F. Sound audible tone signal in car when car is stopping at a floor or passing a floor.
- G. Include with illuminated landing indicators, audible tone signals; once for UP stops and twice for DOWN stops.
- H. In each cab provide Arabic numerals 5/8 inch in height raised 0.03 inch and Braille numerals immediately to left of floor buttons to identify each floor.
- I. At each floor landing provide 2 inch floor numerals raised 0.03 inch on door frame jamb.

#### 4 PART 3 EXECUTION

##### 4.1 EXAMINATION

- A. Verify that hoistway, pit, and machine room are ready for work of this section.
- B. Verify hoistway shaft and openings are of correct size and within tolerance.
- C. Verify location and size of machine foundation and position of machine foundation bolts.
- D. Verify that electrical power is available and of the correct characteristics.

##### 4.2 PREPARATION

vibration.

#### 4.6 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400.
- B. Perform tests required by ANSI/ASME A17.2.
- C. Provide two weeks written notice of date and time of tests.
- D. Supply instruments and execute specific tests.
- E. Perform the following tests in the presence of the Owner:
  - 1. Test elevator system by transporting at least 5 persons up from main floor during a five minute period.
  - 2. At an agreed time during the contract warranty period, and with the building normally occupied using normal building traffic, conduct tests to verify performance. Furnish event recording of all hall call registrations, time initiated, and response time throughout entire normal working day.
  - 3. Time elevator travel between typical floors at not more than 20 seconds. Measure time from moment doors start to close until car has stopped level at next floor and doors are opening.

#### 4.7 TESTS BY REGULATORY AGENCIES

- A. Testing by regulatory agencies will be performed at their discretion; documented by the Contractor under provisions of Section 01400.
- B. Obtain required permits to perform tests. Perform tests required by regulatory agencies.
- C. Schedule tests with agencies and Owner and Contractor present.
- D. Furnish test and approval certificates issued by jurisdictional authorities.

#### 4.8 ADJUSTING

- A. Adjust work under provisions of Section 01700.
- B. Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort.
- C. Adjust automatic floor levelling feature at each floor to achieve 1/8 inch from flush.

#### 4.9 CLEANING

- A. Clean work under provisions of 01700.
- B. Remove protective coverings from finished surfaces.
- C. Clean surfaces and components ready for inspection.



SECTION 15010

BASIC MECHANICAL REQUIREMENTS

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Basic Mechanical Requirements specifically applicable to Division 15 Sections, in addition to Division 1 - General Requirements.

1.2 OWNER FURNISHED PRODUCTS

- A. All existing Products and equipment currently installed and designated for alteration, relocation, or removal shall be refurbished and reinstalled to the greatest degree possible to meet the current project requirements

1.3 CONTRACTOR FURNISHED SERVICES

The General Contractor shall include in his/her bid Design/Build services for the following systems.

- A. Mechanical Contractors shall provide complete Design-Build Proposals for the following systems.
  - i. HVAC and exhaust systems renovation for Limit of Work area. Existing, New and relocated HVAC system components including but not limited to diffusers, R.A. Grilles, and exhaust grille locations are schematically indicated only on the drawings. It is sole responsibility of the the respective system designer's to meet all applicable code, governing authority and regulatory requirements for system design.
  - ii. Fire Protection: Approved Automatic Sprinkler System.
  - iii. Domestic Potable Water Distribution and Wastewater Piping Systems. Existing, New and relocated plumbing equipment are schematically indicated only on the drawings. It is sole responsibility of the respective system designer's to meet all applicable code, governing authority and regulatory requirements for functional system design.

1.4 WORK SEQUENCE

- A. Install work in stages to accommodate Owner's ongoing business operation and occupancy requirements. During the construction period, coordinate mechanical alteration schedule and operations with the Architect.

1.5 UNIT PRICES

- A. Provide Unit Prices for this section of the work as follows:
  - 1. Unit price for purchase, delivery and, installation of ductwork, insulation, anemostats, diffusers, Return Air Grilles, turning vanes, duct lining, controls, fire dampers and other required materials to complete work of the HVAC system.
  - 2. Unit price for removal, storage, refurbishing, protection and reinstallation of ductwork, insulation, anemostats, diffusers, Return Air Grilles, turning vanes, duct lining, controls, fire dampers and other required materials to complete work of the HVAC system.

## 1.8 REGULATORY REQUIREMENTS

- A. HVAC: Conform to American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE); Handbook of Fundamentals, NFPA 90B - Standard for Installation of Warm Air Heating and Air Conditioning Systems.
- B. Fire Protection: Conform to NFPA 13, Latest edition.
- C. Plumbing: Conform to State of Maine - Plumbing Code.
- D. Electrical: Conform to NFPA 101; Life Safety Code, NFPA 70; National Electric Code, NFPA 72; National Fire Alarm Code, NFPA 110; Standard for Emergency and Standby Power Systems; Latest Edition.
- E. Fire Extinguishers: Conform to NFPA 10; Standard for portable fire extinguishers.
- F. Obtain permits, and request inspections from the respective Authority Having Jurisdiction.

## 1.9 PROJECT/SITE CONDITIONS

- A. Install Work in locations shown on Drawings, unless prevented by Project conditions. Contact Architect immediately if project conditions differ from those schematically indicated on drawings.
  - B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work indicated schematically on drawings. Review with and obtain permission from the Architect before proceeding.
- 1.10 SEQUENCING AND SCHEDULING
- A. Construct Work in sequence under provisions of Section 01010.

## 2 PART 2 PRODUCTS

Not Used

## 3 PART 3 EXECUTION

Not Used

END OF SECTION

G. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds code requirements.

#### 1.7 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700.
- B. Record actual locations of sprinkler heads and deviations of piping from drawings. Indicate drain and test locations.

#### 1.8 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 01700.
- B. Maintenance Data: Include components of system, servicing requirements, Record Drawings, inspection data, replacement part numbers and availability, and location and numbers of service depot.

#### 1.9 QUALITY ASSURANCE

- A. Perform Work in accordance with NFPA 13.
- B. Equipment and Components: Bear UL label or marking.
- C. Maintain one copy of document on site.

#### 1.10 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this Section with minimum five years experience.
- B. Design sprinkler system under direct supervision of a Professional Engineer experienced in design of this work and licensed in the State of Maine.

#### 1.11 REGULATORY REQUIREMENTS

- A. Hydraulic Calculations, Product Data, Shop Drawings: Bear stamp of approval of authority having jurisdiction and Owner's insurance underwriter.

#### 1.12 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and protect products to site under provisions of Section 01600.
- B. Store products in shipping containers and maintain in place until installation. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

#### 1.13 EXTRA MATERIALS

- A. Furnish under provisions of Section 01700.
- B. Provide extra sprinkler heads under provisions of NFPA 13.
- C. Provide suitable wrenches for each head type.
- D. Provide metal storage cabinet in location designated.

- H. Center heads in two directions in suspended ceilings and open spaces.
- I. Apply masking tape or paper cover to ensure concealed sprinkler head cover plates do not receive field paint finish.
- J. Install and connect fire pumps in accordance with NFPA 13 if required by design.
- K. Pipe receiver tank drain to nearest floor drain.
- L. Flush entire piping system in area undergoing renovation of foreign matter.
- M. Hydrostatically test entire system.
- N. Require test be witnessed by Fire Marshall and Owner's insurance underwriter.

3.3 SYSTEM SCHEDULE

Location, System Type/Hazard

Entire 3 story facility: Ordinary Hazard

END OF SECTION

BI. NCPWB - Procedure Specifications for Pipe Welding.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

1.6 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700.
- B. Record actual locations of valves.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 01700.
- B. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.8 QUALITY ASSURANCE

- A. Valves: Manufacturer's name and pressure rating marked on valve body.
- B. Welding Materials and Procedures: Conform to ASME Code and applicable state labor regulations.
- C. Welders Certification: In accordance with ASME Sec 9.
- D. Maintain one copy of each document on site.

1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
  - B. Installer: Company specializing in performing the work of this section with minimum five years documented experience.
- 1.10 REGULATORY REQUIREMENTS
- A. Perform Work in accordance with State of Maine Plumbing Code and other applicable codes and regulations identified in Section 15010: Basic Mechanical Requirements.
  - B. Conform to Municipal and State code for installation of backflow prevention devices.
  - C. Provide certificate of compliance from authority having jurisdiction indicating approval of installation of backflow prevention devices.

2 PART 3 EXECUTION

2.1 EXAMINATION

Custom House Wharf - Marine Use Facility

- G. Provide flow controls in water recirculating systems where indicated.

#### 2.5 ERECTION TOLERANCES

- A. Establish invert elevations, slopes for drainage to 1/4 inch per foot minimum. Maintain gradients.
- B. Slope water piping and arrange to drain at low points.

#### 2.6 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Ensure PH of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- C. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual.
- D. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.
- E. Maintain disinfectant in system for 24 hours.
- F. If final disinfectant residual tests less than 25 mg/L, repeat treatment.
- G. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.
- H. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

END OF SECTION

- B. Accept fixtures on site in factory packaging. Inspect for damage.
- C. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

### 1.8 FIELD MEASUREMENTS

- A. Verify that field measurements are as instructed by the manufacturer.
- B. Confirm that millwork is constructed with adequate provision for the installation of countertop lavatories and sinks.

### 1.9 WARRANTY

- A. Provide one year warranty on relocated plumbing fixtures under provisions of Section 017700.
- 2. Provide five year warranty on new fixtures under provisions of Section 017700.

### 2.1 EXTRA MATERIALS

- A. Furnish under provisions of Section 017700.

### 3 PART 2 PRODUCTS

#### 3.1 WATER CLOSETS

- A. Bowl
  - 1. Manufacturer: Kohler "Highline" ADA compliant.
  - 2. ANSI/ASME A112.19.2; tank type, siphon jet vitreous china closet bowl, with elongated rim, 2-5/8" passageway, lever type flush, china bolt caps.

- B. Seat
  - 1. Manufacturer: Bemis Model elongated.
  - 2. Solid white plastic, open front, extended back, self-sustaining hinge, brass bolts, without cover.

#### 3.2 LAVATORY

- A. Basin
  - 1. Manufacturer: Kohler Model "Greenwich" Wall Hung.
  - 2. ANSI/ASME A112.19.2; vitreous china wall-hung lavatory 19 x 17-1/4 inch minimum, with 2 inch high back, drillings on 4 inch centers, drilled for concealed arm carrier, rectangular basin with splash lip, front overflow, and soap depression.

- B. Trim
  - 1. Manufacturer: Kohler Model Finesse with High Country Spout
  - 2. ASME A112.18.1; chrome plated combination supply fitting with pop-up waste, water economy aerator, indexed handles, chrome plated 17 gage brass P-trap with clean-out plug and arm with escutcheon.

#### 3.3 UNIT SINK

- A. Bowl
  - 1. Manufacturer: Kohler Model "Lynric" Single Basin Stainless Steel Sink
  - 2. ANSI/ASME A112.19.3; single compartment 25L x 22W x 7-1/2D inch outside dimensions, 18 gage thick, Type

4.6 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 01500.
- B. Do not permit use of fixtures.

4.7 FIXTURE HEIGHTS

- A. Install fixtures to heights above finished floor as indicated.
- B. Water-Closet
  - 1. Institutional and Handicapped 18 inches to top of seat.
- C. Lavatory
  - 1. Standard 30 inches to top of basin rim.
- D. SS Sink
  - 1. Standard 36 inches to top of basin self rimming.

END OF SECTION



- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Indicate duct fittings, particulars such as gages, sizes, welds, and configuration prior to start of work for medium and high pressure systems.

- C. Submit manufacturer's installation instructions for glass fiber ducts under provisions of Section 01300.

- D. Submit manufacturer's certificate under provisions of Section 01400 that installation of glass fiber ducts meets or exceeds recommended fabrication and installation requirements.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.

- B. Store and protect products under provisions of Section 01600.

### 2 PART 2 PRODUCTS

#### 2.1 MATERIALS

- A. General: Non-combustible or conforming to requirements for Class 1 air duct materials, or UL 181.

- B. Steel Ducts: ASTM A525 or ASTM A527 galvanized steel sheet, lock-forming quality, having zinc coating of 1.25 oz per sq ft for each side in conformance with ASTM A90.

- C. Flexible Ducts: Interlocking spiral of galvanized steel or aluminum construction; rated to 2 inches WG (500 Pa) positive and 1.5 inches WG (375 Pa) negative for low pressure ducts and 15 inches WG (3.75 kPa) positive or negative for medium high pressure ducts.

- D. Insulated Flexible Ducts: Flexible duct wrapped with flexible glass fiber insulation, enclosed by seamless aluminum pigmented plastic vapor barrier jacket, maximum 0.23 K value at 75 degrees F (0.034 KSI at 24 degrees C).

- E. Sealant: Non-hardening, water resistant, fire resistive, compatible with mating materials; liquid used alone or with tape, or heavy mastic.

- F. Hanger Rod: Steel, galvanized; threaded both ends, threaded one end, or continuously threaded.

#### 2.2 MEDIUM AND HIGH PRESSURE DUCTS

- A. Fabricate and support in accordance with SMACNA High Pressure Duct Construction Standards and ASHRAE handbooks, except as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.

- B. Construct T's, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows are used, provide air foil turning vanes. Where acoustical lining is required, provide turning vanes of perforated metal with glass fiber insulation. Weld in place.

- C. Transform duct sizes gradually, not exceeding 15 degrees divergence and 30 degrees convergence.

- D. Fabricate continuously welded medium and high pressure round and oval duct fittings two gages heavier than duct gages indicated in SMACNA Standard. Joints shall be minimum 4 inch (100 mm) cemented slip joint, brazed or electric welded. Prime coat welded joints.

SECTION 15990

TESTING, ADJUSTING, AND BALANCING

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Testing, adjustment, and balancing of air systems.
- 1.2 Testing, adjustment, and balancing of hydronic systems.
  - A. Testing and certification of Essential Electrical, emergency electrical and fire detection systems.
  - B. Measurement of final operating condition of HVAC systems.
  - C. Sound measurement of equipment operating conditions.
  - D. Vibration measurement of equipment operating conditions.

2 GENERAL CONTRACTOR'S RESPONSIBILITY

- A. The Mechanical Contractor shall secure and pay for certification and testing services for all of the new HVAC system.

2.1 RELATED SECTIONS

- A. Section 01400 - Quality Control: Testing laboratory services: Employment of testing agency and payment for services.
- B. Section 15890 - Ductwork.

2.2 REFERENCES

- A. ASHRAE - 1984 Systems Handbook: Chapter 37, Testing, Adjusting and Balancing.
- A. NFPA 99 (1996 Edition) - Gas and Vacuum Systems
- B. NFPA 99 (1996 Edition) - Electrical Systems
- C. NFPA 99 (1996 Edition) - Electrical Equipment

2.3 SUBMITTALS

- A. Submit nname of Adjusting and balancing agency for approval within 30 days after award of Contract.
- B. Submit test reports as a submittal under provisions of Section 01300.
- C. Submit test reports under provisions of Section 01400.
- D. Prior to commencing work, submit draft reports indicating adjusting, balancing, and equipment data required.
- E. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect and for

- C. Promptly report abnormal conditions in mechanical systems or conditions which prevent system balance.
- D. If, for design reasons, system cannot be properly balanced, report as soon as observed.
- E. Beginning of work means acceptance of existing conditions.

#### 4.2 PREPARATION

- A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to the Architect to facilitate spot checks during testing.
- B. Provide additional balancing devices as required.

#### 4.3 INSTALLATION TOLERANCES

- A. Adjust air handling systems to plus or minus 5 percent for supply systems and plus or minus 10 percent for return and exhaust systems from figures indicated.
- B. Adjust hydronic systems to plus or minus 10 percent of design conditions indicated.

#### 4.4 ADJUSTING

- A. Adjust work under provisions of Section 01600.
- B. Recorded data shall represent actually measured, or observed condition.
- C. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.
- D. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.
- E. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.
- F. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner.
- G. Check and adjust systems approximately six months after final acceptance and submit report.

END OF SECTION

- A. Provide Unit Prices for this section of the work as follows:
  - 1. Unit price for purchase, delivery and, installation of smoke detectors, magnetic hold devices, fire pull stations, and fire horns, Luminaires, Emergency lighting, Exit Lighting, receptacles, switches, and emergency electrical system components and other required materials to complete work of the Electrical and Fire Detection and Alarm system.

#### 1.7 REFERENCES

- A. NFPA 70 - National Electric Code; Latest Edition.
- B. NFPA 72 - National Fire Alarm Code; Latest Edition.
- C. NFPA 101 - Life Safety Code; Latest Edition.

#### 1.8 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Proposed Products List Include Products required for completion of work in this Section:
  - 1. Interior Luminaires
  - 2. Emergency Lighting System components
  - 3. Fire Detection, Initiation, and Alarm System components
  - 4. Cable TV system
- C. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittals.
- D. Mark dimensions and values in units to match those specified.

#### 1.9 REGULATORY REQUIREMENTS

- A. Electrical: Conform to NFPA 70: National Electric Code, Latest edition.
- B. Fire Alarm: Conform to NFPA 72: National Fire Alarm Code, Latest edition .
- C. Obtain required permits, and request inspections from the State of Maine: Office of the State Fire Marshall and other Governing Authorities having jurisdiction.

#### 1.10 PROJECT/SITE CONDITIONS

- A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of the Architect before proceeding.

#### 1.11 SEQUENCING AND SCHEDULING

- A. Construct Work in sequence under provisions of Section 01010.

### 2 PART 2 PRODUCTS

Custom House Wharf - Marine Use Facility

SECTION 16510

INTERIOR LUMINAIRES

1 PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Interior luminaires and accessories.
- B. Emergency lighting units.
- C. Exit signs.
- D. Ballasts.
- E. Fluorescent lamp emergency power supply.
- F. Lamps.
- G. Relocated and or reused existing luminaires.

1.2 RELATED SECTIONS

- A. Section 09511 - Suspended Acoustical Ceilings.

1.3 REFERENCES

- A. ANSI C78.379 - Electric Lamps - Incandescent and High-Intensity Discharge Reflector Lamps - Classification of Beam Patterns.
- B. ANSI C82.1 - Ballasts for Fluorescent Lamps -Specifications.
- C. ANS/NFPA 70 - National Electrical Code.
- D. ANS/NFPA 101 - Life Safety Code.
- E. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Shop Drawings: Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
- C. Product Data: Provide dimensions, ratings, and performance data.
- D. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements.

- J. Ballast: Manufacturer's standard energy efficient electronic, matched to lamp characteristics, rated 120 volts.
- K. Lamp: Four each.

## 2.2 INCANDESCENT EMERGENCY LIGHTING UNITS

- A. Description: Remote head emergency lighting unit.
- B. Lamps: 12 watt minimum, sealed beam type in nickel or chrome plated steel housing.
- C. Housing: White plastic.
- D. Indicators: Provide lamps to indicate AC ON and RECHARGING.
- E. Provide TEST switch to transfer unit from external power supply to integral battery supply.
- F. Electrical Connection: Conduit connection.
- G. Input Voltage: 120 volts.

## 2.3 EXIT SIGNS

- A. Description: Exit sign fixture.
- B. Housing: Sheet steel.
- C. Face: Steel stencil face with red letters.
- D. Directional Arrows: Universal type for field adjustment.
- E. Mounting: Universal, for field selection.
- F. Battery: Connected to emergency egress lighting system.
- G. Lamps: Manufacturer's standard.
- H. Input Voltage: 120 volts.

## 2.4 BALLASTS

- A. Fluorescent Ballast:
  - 1. Description: ANSI C82.1, energy saving type electromagnetic ballast
  - 2. Voltage: 120 volts.
  - 3. Source Quality Control: Certify ballast design and construction by Certified Ballast Manufacturers, Inc.

## 3 PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine substrate and supporting grids for luminaires.
- B. Examine each luminaire to determine suitability for lamps specified.

Custom House Wharf - Marine Use Facility

D. Clean finishes and touch up damage.

### 3.7 DEMONSTRATION

A. Provide minimum of two hours demonstration of luminaire operation and emergency condition operation.

END OF SECTION

## 1.7 SYSTEM DESCRIPTION

- A. Fire Alarm System: NFPA 72 automatic electrically supervised fire alarm system meeting code and regulatory requirements for specific use. Design system and secure permit from the Authority Having Jurisdiction.
- B. System Supervision: Provide electrically-supervised system, with supervised alarm initiating and alarm signaling circuits. Occurrence of single ground or open condition in initiating or signaling circuit places circuit in TROUBLE mode. Component or power supply failure places system in TROUBLE mode. Occurrence of single ground or open condition on alarm initiating circuit does not disable that circuit from transmitting in ALARM. Occurrence of single ground or open condition on signaling circuit does not disable that circuit from transmitting in ALARM.
- C. Zoning: As required by Authority Having Jurisdiction.

## 1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in smoke detection and fire alarm systems with five years documented experience.
- B. Installer: Company specializing in smoke detection and fire alarm systems with five years documented experience.

## 1.9 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01300.
- B. Provide wiring diagrams, data sheets, and equipment ratings, layout, dimensions, and finishes.
- C. Submit manufacturer's installation instructions under provisions of Section 01300.
- D. Submit manufacturer's certificate under provisions of Section 01400 that system meets or exceeds specified requirements.

## 1.10 PROJECT RECORD DRAWINGS

- A. Submit documents under the provisions of Section 01700.
- B. Include location of end-of-line devices.

## 1.11 OPERATION AND MAINTENANCE DATA

- A. Submit data under provisions of Section 01700.
- B. Include operating instructions, and maintenance and repair procedures.
- C. Include manufacturer representative's letter stating that system is operational.

## 1.12 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.

## 2 PART 2 PRODUCTS

Custom House Wharf - Marine Use Facility



- B. Remote Annunciator: If not existing, provide supervised remote annunciator including audible and visual indication of fire alarm by zone, and audible and visual indication of system trouble. Install in surface wall-mounted enclosure.
- C. Devices to be suitable for operation on existing control panel and power supply.

#### 2.4 AUXILIARY DEVICES

- A. Door Release: Magnetic door holder with integral diodes to reduce buzzing, compatible with system type and voltage.

#### 2.5 FIRE ALARM WIRE AND CABLE

- A. Fire Alarm Power Branch Circuits: As specified by system designer and approved by Authority Having Jurisdiction.
- B. Initiating and Signal Circuits: As specified by system designer and approved by Authority Having Jurisdiction.

### 3 PART 3 EXECUTION

#### 3.1 INSTALLATION

- A. Install system in accordance with manufacturer's written instructions.
- B. Install manual station with operating handle at Reception area in secure but readily visible location. Install audible and visual signal devices 84 inches above floor.
- C. Use 14 AWG minimum size conductors for fire alarm detection and signal circuit conductors. Install wiring in conduit.
- D. Mount outlet box for electric door holder to withstand 80 pounds pulling force.
- E. Make conduit and wiring connections to door release devices, sprinkler flow switches, sprinkler valve tamper switches, fire suppression system control panels, duct smoke detectors, and control and annunciator panel(s).
- F. Automatic Detector Installation: NFPA 72E.

#### 3.2 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400.
- B. Test in accordance with NFPA 72H and State and local fire department requirements.

#### 3.3 MANUFACTURER'S FIELD SERVICES

- A. Provide manufacturer's field services under provisions of Section 01400.

END OF SECTION

**Marine Use Facility  
Custom House Wharf  
Portland, Maine**

Made for  
Architectural Associates  
14 Sunset Road  
Falmouth, Maine

**Erosion Control Narrative**

Prepared by

**SJR ENGINEERING INC.  
21 Mayflower Road  
Augusta, Maine 04330  
Tel/Fax: 622-1676**

Submittal October 12, 1999

the sections pertaining to fall and winter seeding since the project will overlap into the 2000 construction season.

The principal erosion control devices will be silt sacks in the catch basin, stabilized construction entrance, silt fences, mulch, and seed to protect existing trees, buildings, and drainage paths from the regions undergoing construction. Also, a Vortechs oil/grit chamber is to be incorporated in to the facility to remove grits and oils prior to the outlet into the Atlantic Ocean. Features such as graveled parking and landscaping will be constructed as permanent erosion controls.

### Structural Measures

1. **Silt fencing** shall be installed along the contour and perpendicular to the predominant slope of the land just beyond the downslope limits of clearing and grubbing and/or just above any adjacent property line and streams where indicated on the plan to protect against construction related erosion. Installation shall be as shown on the plans or approved equal.
2. **Silt Sacks** shall be installed into the existing catch basin to capture eroded gravel prior to finished gravel surfacing of the parking area. The sacks are a temporary erosion control device and are to be removed prior to job completion.
3. **Floating Silt curtains** (or oil booms) shall be installed around the perimeter of all water construction areas to contain floating debris that may fall into the Ocean.
4. **Stabilized construction entrance** is to be placed during construction, where traffic is entering or leaving construction site. This will reduce or eliminate the tracking or flowing of sediment onto public rights of way. A 8" thick layer of 1 1/2"-3" crushed stone 50' in length has been designed and shown on the plan. (See typical detail)
5. **Riprap materials** shall be placed as shown in all inlets/outlets of pipe culverts. These aprons will prevent scour at stormwater outlets and minimize the potential for downstream erosion by reducing

Mulch will be applied with seeding according to mulch table. If it is not possible to seed 45 days or more prior to frost, than dormant seeding and anchored mulch shall be applied. The application of mulch shall be such that the bare ground is barely visible.

3. Permanent seedings of grass cover shall be applied to all disturbed areas. All surface water control measures and final land grading in the vicinity should be completed. Ground preparation shall include tilling to a minimum 3" depth of fine but friable soil free of clods or stones. Permanent seed shall be selected according to its final destination. (See permanent seed mixture table)

4. All seeding will require mulch. Mulch provides several benefits: conserves moisture, prevents surface compaction, improves water quality, reduces runoff and erosion, controls weeds, and helps establish plant cover. Mulch shall be applied according to the following tables:

Permanent Seed Mix	Application Rate	
	Parks & Lawns lbs/1000 sf	Roadside Areas ditches, basins lbs/1000 sf
Kentucky Bluegrass	.46	
Creeping Red Fescue	.46	.46
Perennial Ryegrass	.11	
Redtop		.05
Tall Fescue		.46
Total Seed Rate	<u>1.03</u>	<u>0.97</u>

Note: 1. The contractor may wish to final seed from 10/1 to 11/1 with the same soil preparations, seeding mixes

## MULCH ANCHORING GUIDE

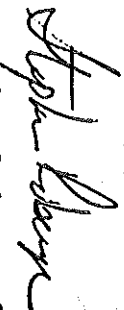
Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
A. For Critical Erosion Areas (Slopes > 15%; waterways; disturbed areas within 100 ft. of lakes, streams, wetlands; fall & winter erosion control).		
1. Mulch netting	Hay or straw, wood shavings, compost.	Staple with light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations.
2. Peg and twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq yd in size. Drive 4-6 pegs per block to within 2-3 in. of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure around each peg with two or more turns. Drive pegs flush with soil where mowing is planned.
B. For non-critical erosion areas.		
1. Wood cellulose fiber	Hay or s. aw	Apply with hydroseeder immediately after mulching. Use 750 lbs wood fiber per acre.
2. Pick Chain	Hay or straw	Use on slopes steeper than 3:1. Pull across slopes with suitable power equipment.
3. Mulch Anchoring Tool or disk (smooth or notched)	Hay or straw	Apply mulch and pull a mulch anchoring tool over mulch. When a disk (smooth) is used, set in straight position and pull across slope with suitable power equipment. Mulch material should be "tucked" into soil surface about 3 inches. Limited to 3:1 slopes or flatter.
4. Tracked	Hay or straw	Suitable for areas less than 3% not subject to wind blowing. Apply mulch and drive tracked equipment up and down slope over entire surface so cleat marks are parallel to contour.
5. Chemical	Hay or straw	Apply according to manufacturer's instructions.

Site Erosion Control  
Marine Use Facility  
Portland, Maine

5. The contractor shall remove all temporary erosion control devices from the site after construction is complete and the site is permanently stabilized.

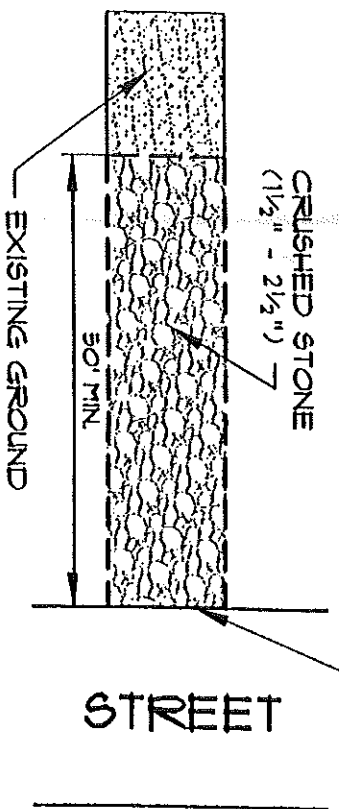
Please feel free to contact me if you have any questions concerning the use of these measures. We feel that these measures if properly constructed and maintained will be sufficient to control erosion on your project without any adverse impact to the area. Thank you for involving this firm on your project.

Sincerely yours,



Stephen Roberge, PE  
For SJR Engineering

PROVIDE APPROPRIATE TRANSITION  
BETWEEN STABILIZED CONSTRUCTION  
ENTRANCE & PUBLIC RIGHT OF WAY



- 1) STONE SIZE - AASHTO DESIGNATION N 43, SIZE 2 (2 1/4" - 1/2") USE CRUSHED STONE
- 2) LENGTH - AS EFFECTIVE BUT NOT LESS THAN 50'
- 3) THICKNESS - NOT LESS THAN 8"
- 4) WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF NECESSITY OR EGRESS.
- 5) WASHINGS - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
- 6) MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY TRAPSED USES TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.

## STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE