



**SECTION 111319  
STATIONARY LOADING DOCK EQUIPMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Recessed loading dock levelers.
- B. Edge-of-dock (EOD) levelers.
- C. Fixed dock seals.
- D. Adjustable curtain dock seals.
- E. Fixed dock shelters.
- F. Foam dock shelters.

**1.02 RELATED REQUIREMENTS**

- A. Section 031000 - Concrete Forming and Accessories: Placement of leveler frame << **and safety lock frame**; or **None - N/A**>> into concrete << **loading dock**; or \_\_\_\_\_>>.
- B. Section 031000 - Concrete Forming and Accessories: Placement of seal and shelter frame into concrete.
- C. Section 033000 - Cast-in-Place Concrete.
- D. Section 055000 - Metal Fabrications.
- E. Section 111313 - Loading Dock Bumpers.
- F. Section 111316 - Loading Dock Seals and Shelters.

**1.03 REFERENCE STANDARDS**

- A. ANSI MH30.1 - Design, Testing, and Utilization of Dock Leveling Devices; 2022.
- B. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025.
- C. UL 508A - Industrial Control Panels; Current Edition, Including All Revisions.

**1.04 SUBMITTALS**

- A. Product Data: Provide materials and finishes, installation details, roughing-in measurements, and operation of unit.
- B. Shop Drawings: Indicate required opening dimensions, tolerances, and perimeter conditions of construction.
- C. Shop Drawings: Indicate framed wall opening, dimensions and tolerances, adjacent construction, and fittings required for anchorages and anchor points.
- D. Manufacturer's Instructions: Indicate special requirements.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Operation Data: Provide operating instructions and identify unit limitations.
- H. Maintenance Data: Provide unit maintenance information, lubrication cycles, and spare parts manual.
- I. Specimen warranty.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with at least << **one**; or \_\_\_\_\_>> year of << **documented**; or **None - N/A**>> experience.

- B. Installer Qualifications: Company specializing in performing work of type specified and with at least << **one**; or \_\_\_\_\_>> year of<< **documented**; or **None - N/A**>> experience<< **and approved by manufacturer**; or **None - N/A**>>.

## 1.06 FIELD CONDITIONS

- A. Existing Conditions: Field-verify dimensions of construction related to stationary loading dock equipment prior to fabrication, including << **recessed pit dimensions**; **slope of inclined dock approach**; **dock height**; and \_\_\_\_\_>>.

## 1.07 WARRANTY

- A. Hydraulic Dock Leveler Manufacturer Warranty: Provide << **1-year**; or \_\_\_\_\_>> manufacturer warranty for defective work from Date of Installation. 5-year hydraulic warranty on hydraulic power unit, cylinders, pressure lines and fittings. 5-year structural warranty on deck, lip, rear hinge, and front hinge. Complete forms in <<**Owner**>>'s name and register with manufacturer.
- B. Hydraulic Dock Leveler Special Limited Warranty: If a Wayne Dalton Commercial Door and a leveler are purchased and installed together in the same opening this warranty shall be extended for an additional 12 months (excluding the hydraulic power unit, cylinders, pressure lines, fittings, deck, lip, rear hinge, and front hinge). Complete forms in <<**Owner**>>'s name and register with warrantor.
- C. Mechanical Dock Leveler Manufacturer Warranty: Provide << **1-year**; or \_\_\_\_\_>> manufacturer warranty for defective work from Date of Installation. The main spring has a limited prorated warranty for an additional 4 years following the 12-month warranty, for a total of 60 months. Complete forms in <<**Owner**>>'s name and register with manufacturer.
- D. Mechanical Dock Leveler Special Limited Warranty: If a Wayne Dalton Commercial Door and a leveler are purchased and installed together in the same opening this warranty shall be extended for an additional 12 months (excluding the main spring). Complete forms in <<**Owner**>>'s name and register with warrantor.
- E. Edge-of-Dock, Dock Seals, Dock Shelters Manufacturer Warranty: Provide << **1-year**; or \_\_\_\_\_>> manufacturer warranty for defective work from Date of Installation. Complete forms in <<**Owner**>>'s name and register with manufacturer.
- F. Edge-of-Dock Leveler Special Limited Warranty: If a Wayne Dalton Commercial Door and a leveler are purchased and installed together in the same opening this warranty shall be extended for an additional 12 months. Complete forms in <<**Owner**>>'s name and register with warrantor.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. Wayne Dalton; www.wayne-dalton.com; 1 (800) 827-3667.
- B. Substitutions: Not permitted.

### 2.02 RECESSED LOADING DOCK LEVELERS (PIT LEVELERS)

- A. Wayne Dalton; Hydraulic Dock Leveler, Model << **H68WD**; **H78WD** >>.
1. Provide manufacturer's standard loading dock levelers, complying with <<**ANSI MH30.1**>>, and of capacity, size, and construction indicated. Provide nonslip steel platform with complete controls, safety devices, and required accessories.
    - a. Recessed Concrete Pit: Provide << **preformed**; or \_\_\_\_\_>> concrete pit sized to fit dimensions of specified loading dock levelers.
      - 1) Reinforce concrete slab as required to support dock leveler.
      - 2) See Section 033000 for additional cast concrete requirements.

2. Automatic Vertical Compensation: Floating travel of dock leveler ramp edge extended to automatically compensate for upward and downward movement of truck bed during loading and unloading operations.
3. Automatic Lateral Compensation: Tilting of dock leveler ramp edge extended and resting on truck bed to automatically compensate for canted truck bed up to << **4 inches (102 mm)**>> over width of ramp.
4. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged ramp edge and rests on truck bed over dock leveler's working range, allows ramp edge to yield under incoming truck impact, and automatically retracts ramp edge when truck departs.
  - a. Adjustable Lip Extension: << **16 inches (406 mm); 18 inches (457 mm); 20 inches (508 mm); or \_\_\_\_\_ inches (\_\_\_\_\_ mm)**>> long.
  - b. Lip Taper: << **7 by 8 feet (2.13 by 2.44 m)**>> only.
  - c. Hinged Ramp Lip: Nonskid steel plate.
    - 1) Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.
  - d. Lip Keepers: Adjust for off-spec pits to accommodate << **18-inch (457 mm); 20-inch (508 mm); or \_\_\_\_\_-inch (\_\_\_\_\_ mm)**>> lips. Provide cross-traffic support and off-hour security.
5. Hydraulic Operating System: Electronically controlled, with 1 hp, frame-mounted << **single; three; or \_\_\_\_\_**>> phase motor; NEMA 4X push-button-control operated raising and gravity lowering of unloaded ramp.
  - a. Power Voltage: << **120/240 VAC single phase; 240/480 VAC three phase; or \_\_\_\_\_**>>.
  - b. Ramp raised to top operating range limit by push-button control; ramp lowered below building floor level by gravity.
    - 1) Hydraulic Failsafe: Velocity fuse automatically engages in event of sudden truck departure; maximum fall of << **3 inches (76 mm)**>> when loaded up to full rated capacity.
    - 2) Provide petroleum-based hydraulic fluid; aircraft grade; MIL-L-5606.
    - 3) Motor overload protection in accordance with <<**UL 508A**>> requirements.
6. Construction: Fabricate loading dock leveler frame, edge, and platform supports from structural and formed C-channel shapes, with platform and continuously supported hinged edge welded to supports; chamfer edge to minimize obstructing material-handling vehicles, and ensure entire assembly fabricated to withstand deformation during operation and storage phases of service.
  - a. Platform Thickness: << **1/4 inch (6.35 mm)**>>.
  - b. Lip Thickness: << **5/8 inch (15.8 mm); 3/4 inch (19 mm); or \_\_\_\_\_ inch (\_\_\_\_\_ mm)**>>.
  - c. Forklift Protection: << **Three wheel; or \_\_\_\_\_**>>.
  - d. Toe Guards: << **Full range in safety yellow; or \_\_\_\_\_**>>.
7. Ramp Traffic Support: Provide support for ramp at platform level in stored position to support cross-dock traffic with ramp edge retracted. Provide ability to descend below platform level.
8. Ramp Maintenance Support: Provide safety brace mechanism in framework of lift, not within lip, to support ramp in UP position during dock leveler maintenance.
  - a. Rated Capacity: Capable of supporting << **30,000 lb. (13608 kg); 35,000 lb. (13063 kg); 40,000 lb. (18144 kg); 45,000 lb. (20412 kg); or \_\_\_\_\_ lb. (\_\_\_\_\_ kg)**>> without permanent deflection or distortion.

9. Platform Size: << **6 by 8 feet (1.83 by 2.44 m); 7 by 8 feet (2.13 by 2.44 m);** or \_\_\_\_\_ by \_\_\_\_\_ feet (\_\_\_\_\_ by \_\_\_\_\_ m)>>, nominal.
10. Range of Operation: Dock levelers to compensate for height differences between truck bed and loading platform, as follows: << **12 inches (305 mm)**>> above dock level and << **12 inches (305 mm)**>> below dock level.
11. Lip Extension Length: << **16 inches (406 mm); 18 inches (457 mm); 20 inches (508 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>> long.
12. Smooth Path: Beveled edge-of-lip ramp transition, edge-to-deck transition, and floor-to-deck transition to minimize jolts to equipment and workers.
13. Platform Deck: Steel checker plate deck for traction, reinforced on underside, welded to fabricated steel frame.
14. Frame: Clean-pit type, with no dirt traps from cross-pit beams in rear of pit; dock leveler supports at sides of pit, including full front-to-rear openness for cleaning.
15. Hinged Ramp Lip: Nonskid steel plate.
  - a. Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.
16. Finish: Textured powder coat to increase durability of finish and slip resistance, and to reduce corrosion and VOCs.
17. Leveler Adjustment: Height adjusters operate above leveler deck to adjust plus or minus << **1.25 inches (32 mm)**>> without shims or welding equipment.
18. Transport Loops: Four lifting loops for top transport of leveler by forklift.
19. Bumpers: << **Standard 410-14;** or \_\_\_\_\_>>.
20. Weather Seals: << **Brush; Neoprene;** or \_\_\_\_\_>>.

- B. Wayne Dalton; Mechanical Dock Leveler, Model << **M68R; M78R** >>.
1. Provide manufacturer's standard loading dock levelers, complying with <<**ANSI MH30.1**>> requirements, and of capacity, size, and construction as indicated. Provide nonslip steel platform with complete controls, safety devices, and required accessories.
    - a. Recessed Concrete Pit: Provide << **preformed;** or \_\_\_\_\_>> concrete pit sized to fit dimensions of specified loading dock levelers.
      - 1) Reinforce concrete slab as required to support dock leveler.
      - 2) See Section 033000 for additional cast concrete requirements.
  2. Automatic Vertical Compensation: Floating travel of dock leveler ramp edge extended to automatically compensate for upward and downward movement of truck bed during loading and unloading operations.
  3. Automatic Lateral Compensation: Tilting of dock leveler ramp edge extended and resting on truck bed to automatically compensate for canted truck bed up to << **4 inches (102 mm)**>> over width of ramp.
  4. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged ramp edge and rests on truck bed over dock leveler's working range, allows ramp edge to yield under incoming truck impact, and automatically retracts ramp edge when truck departs.
    - a. Adjustable Lip Extension: << **16 inches (406 mm); 18 inches (457 mm); 20 inches (508 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>> long.
    - b. Lip Taper: << **7 by 8 feet (2.13 by 2.44 m)**>> only.
    - c. Hinged Ramp Lip: Nonskid steel plate.
      - 1) Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.

- d. Lip Keepers: Adjust for off-spec pits to accommodate << **18-inch (457 mm); 20-inch (508 mm); or \_\_\_\_\_-inch (\_\_\_\_\_ mm)>>** lips. Provide cross-traffic support and off-hour security.
- 5. Mechanical Operating System: Manually controlled, with counterbalance and spring operation; spring-operated raising and walk-down lowering of unloaded ramp.
  - a. Provide dock leveler with upward-biased-spring counterbalancing mechanism controlled by hold-down device; ramp raised to top operating range limit by operating recessed control handle to disengage hold-down device; ramp lowered below building floor level by operating auxiliary recessed control handle releasing supporting legs.
    - 1) Mechanical Failsafe: Safety legs automatically engage in event of sudden truck departure.
- 6. Construction: Fabricate loading dock leveler frame, edge, and platform supports from structural and formed C-channel shapes, with platform and continuously supported hinged edge welded to supports; chamfer edge to minimize obstructing material-handling vehicles, and ensure entire assembly fabricated to withstand deformation during operation and storage phases of service.
  - a. Platform Thickness: << **1/4 inch (6.35 mm)>>**.
  - b. Lip Thickness: << **5/8 inch (15.8 mm); 3/4 inch (19 mm); or \_\_\_\_\_ inch (\_\_\_\_\_ mm)>>**.
  - c. Forklift Protection: << **Three wheel; or \_\_\_\_\_>>**.
  - d. Toe Guards: << **Working range; Full range in safety yellow; or \_\_\_\_\_>>**.
- 7. Ramp Traffic Support: Provide support for ramp at platform level in stored position to support cross-dock traffic with ramp edge retracted. Provide ability to pull safety legs back and means to release supports allowing ramp to descend below platform level.
- 8. Ramp Maintenance Support: Provide safety brace mechanism in framework of lift, not within lip, to support ramp in up position during dock leveler maintenance.
  - a. Rated Capacity: Capable of supporting << **30,000 lb. (13608 kg); 35,000 lb. (13063 kg); 40,000 lb. (18144 kg); 45,000 lb. (20412 kg); or \_\_\_\_\_ lb. (\_\_\_\_\_ kg)>>** without permanent deflection or distortion.
- 9. Platform Size: << **6 by 8 feet (1.83 by 2.44 m); 7 by 8 feet (2.13 by 2.44 m); or \_\_\_\_\_ by \_\_\_\_\_ feet (\_\_\_\_\_ by \_\_\_\_\_ m)>>**, nominal.
- 10. Range of Operation: Dock levelers to compensate for height differences between truck bed and loading platform, as follows: << **12 inches (305 mm)>>** above dock level and << **12 inches (305 mm)>>** below dock level.
- 11. Smooth Path: Beveled edge-of-lip ramp transition, edge-to-deck transition, and floor-to-deck transition to minimize jolts to equipment and workers.
- 12. Platform Deck: Steel checker plate deck for traction, reinforced on underside, welded to fabricated steel frame.
- 13. Frame: Clean-pit type, with no dirt traps from cross-pit beams in rear of pit; dock leveler supports at sides of pit, including full front-to-rear openness for ease of cleaning.
- 14. Hinged Ramp Lip: Nonskid steel plate.
  - a. Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge and replaceable hinge pin for maintenance without breaking welds or grinding of metal.
- 15. Finish: Textured powder coat to increase durability of finish and slip resistance, as well as reduce corrosion and VOCs.

16. Leveler Adjustment: Height adjusters operate above leveler deck to adjust plus or minus << **1.25 inches (32 mm)**>> without shims or welding equipment.
17. Transport Loops: Four lifting loops for top transport of leveler by forklift.
18. Bumpers: << **Standard 410-14; or \_\_\_\_\_**>>.
19. Weather Seals: << **Brush; Neoprene; or \_\_\_\_\_**>>.

### 2.03 EDGE-OF-DOCK (EOD) LEVELERS

- A. Wayne Dalton; Edge of Dock Leveler, Model << **E66WD; E72WD** >>.
  1. Hinged-edge type, complying with <<**ANSI MH30.1**>> requirements, and located at exterior edge and securely mounted to face of loading dock. Levelers complying with ANSI MH14.1 lack load testing compliance and are not permitted.
  2. Automatic Vertical Compensation: Floating travel of dock leveler ramp edge extended to automatically compensate for upward and downward movement of truck bed during loading and unloading operations.
  3. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged ramp edge and rests on truck bed over dock leveler's working range, allows ramp edge to yield under incoming truck impact and automatically retracts ramp edge when truck departs unexpectedly. EOD also automatically stores to safe position when truck departs unexpectedly.
  4. Mechanical Operating System: Manually controlled, with counterbalance and spring operation; spring-operated raising and lowering of ramp.
  5. Construction: Fabricate loading dock leveler frame, edge, and platform supports from structural and formed steel shapes, with platform and hinged edge welded to supports; chamfer edge to minimize obstructing, material-handling vehicles; and ensure entire assembly fabricated to withstand deformation during operation and storage phases of service.
  6. Ramp Maintenance Support: Provide safety brace mechanism in framework to support ramp in up position during dock leveler maintenance.
  7. Rated Capacity: Capable of supporting << **20,000 pounds (9072 kg); 30,000 pounds (13608 kg); or \_\_\_\_\_ pounds (\_\_\_\_\_ kg)**>> without permanent deflection or distortion.
  8. Width: << **66 inches (1676 mm); 72 inches (1829 mm); or \_\_\_\_\_ inches (\_\_\_\_\_ mm)**>>.
  9. Smooth Path: Beveled lip edge-of-ramp transition, edge-to-deck transition, and floor-to-deck transition to avoid jolts to equipment and workers.
  10. Platform Deck: Steel checker plate deck, reinforced on underside, welded to fabricated steel frame. Also, have on bumper box.
  11. Hinged Ramp Edge: << **15-inch edge with standard crown (381 mm edge with standard crown); 15-inch edge with high crown (381 mm edge with high crown); 17-inch edge with standard crown (432 mm edge with standard crown); 17-inch edge with high crown (432 mm edge with high crown); or \_\_\_\_\_-inch edge with \_\_\_\_\_ crown (\_\_\_\_\_ mm edge with \_\_\_\_\_ crown)**>>.
    - a. Lip Hinge: Provide self-cleaning lug hinges to avoid debris trapped in hinge cavity and replaceable hinge pin for maintenance without welding equipment.
  12. Finish: Textured powder coat to increase durability of finish and slip resistance, as well as reduce corrosion and VOCs.
  13. Handle Storage: Self-storing within deck where convenient to reach. Tethered to prevent loss or misplacement. Powder-coated in safety yellow.
  14. Safety Brace: Conveniently located under leveler and tethered to prevent loss or misplacement. Powder-coated in safety yellow.
  15. Molded Bumper and Bumper Box: Manufacturer's standard.

### 2.04 FIXED DOCK SEALS

- A. Wayne Dalton; Fixed Dock Seal, Model LX10WD.
  1. Height: << **7 feet 6 inches (2286 mm)**>> minimum to << **9 feet (2743 mm)**>> maximum.
  2. Width: << **6 feet 4 inches (1930 mm)**>> minimum to << **11 feet (3353 mm)**>> maximum.

3. Projection: << **8 inches (203 mm)**>> minimum to << **20 inches (508 mm)**>> maximum.
  - a. Taper up << **8 to 20 inches (203 to 508 mm)**>> or down << **8 to 20 inches (203 to 508 mm)**>>.
  - b. Project Box Option: << **4 inches (102 mm); 6 inches (152 mm); 8 inches (203 mm); 10 inches (254 mm); 12 inches (305 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>>.
4. Cushion: Fire-retardant foam for full seal depth; tapered at jams. Full compression and recovery required to temperatures below << **minus 40 degrees F (minus 40 degrees C)**>>.
  - a. Continuously bonded to backing with flexible, nonflammable adhesive.
5. Covering Material: Standard weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
  - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m); 28 oz/sq ft (8.5 kg/sq m); 40 oz/sq ft (12.2 kg/sq m);** or \_\_\_\_\_ oz/sq ft (\_\_\_\_\_ kg/sq m)>>.
  - b. Covering Color: << **Black; Blue; Brown; Gray; Green;** or \_\_\_\_\_>>.
6. Covering Material: Heavy-weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
  - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m); 28 oz/sq ft (8.5 kg/sq m); 40 oz/sq ft (12.2 kg/sq m);** or \_\_\_\_\_ oz/sq ft (\_\_\_\_\_ kg/sq m)>>.
  - b. Covering Color: << **Black; Blue; Brown; Gray; Green; Red;** or \_\_\_\_\_>>.
7. Premium Abrasion-Resistant Covering Material: Fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
  - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m); 28 oz/sq ft (8.5 kg/sq m); 40 oz/sq ft (12.2 kg/sq m);** or \_\_\_\_\_ oz/sq ft (\_\_\_\_\_ kg/sq m)>>.
  - b. Abrasion Resistance: Six times more resistant than standard covering material.
  - c. Covering Color: Black.
8. Header: Fixed, air-vented construction.
  - a. Header Height: << **12 inches (305 mm); 15 inches (381 mm); 18 inches (457 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>>.
9. Vertical Columns: << **8/11: 8-inch back column, 11-inch front column (203 mm back column, 279 mm front column); 8/14: 8-inch back column, 14-inch front column (203 mm back column, 356 mm front column); 10/10: 10-inch back column, 10-inch front column (254 mm back column, 254 mm front column); 12/12: 12-inch back column, 12-inch front column (305 mm back column, 305 mm front column); 12/15: 12-inch back column, 15-inch front column (305 mm back column, 381 mm front column);** or **12/18: 12-inch back column, 18-inch front column (305 mm back column, 457 mm front column)**>>.
  10. Seams: Mechanically double stitched; double-ply at exposed face.
  11. UV Protection: Treat fabrics and threads with UV protection for fade resistance.
  12. Bottom Dock Seal: << **Same construction as header and vertical columns;** or \_\_\_\_\_>>.
    - a. Length: << **4 feet (1219 mm); 8 feet (2438 mm);** or \_\_\_\_\_ feet (\_\_\_\_\_ mm)>>.
  13. Curtain: To accommodate additional variation in trailer heights.
    - a. Installation: Velcro holding capability.
    - b. Fabric: << **Match seal fabric; Low-temperature PVC material for cold applications;** or \_\_\_\_\_>>.
    - c. Drop Length: << **12 inches (305 mm); 18 inches (457 mm); 24 inches (610 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>>.
  14. Column Double Fabric Layer: << **None required; Matching fabric dual layer required;** or \_\_\_\_\_>>.
  15. Draft Control: Two bottom draft flaps.
  16. Frame Construction (Top and Sides): << **Treated wood; Galvanized steel;** or \_\_\_\_\_>>.

17. Guide Stripe: << **24 inches high (610 mm high);** \_\_\_\_\_ inches high (\_\_\_\_\_ mm high); **Full height;** or \_\_\_\_\_>>.
18. Column Fabric Scuff Guard: << **None required;** **40 oz. premium fabric scuff guards required;** or \_\_\_\_\_>>.
19. Security Seal: << **Required;** **Not required;** or \_\_\_\_\_>>.
20. Wear Pleats: << **Not required;** **Matching fabric pleats;** or \_\_\_\_\_>>.
21. Corner Wear Pleats: << **Not required;** **66 oz. premium fabric pleats;** or \_\_\_\_\_>>.

## 2.05 ADJUSTABLE CURTAIN DOCK SEALS

- A. Wayne Dalton; Adjustable Curtain Dock Seal, Model LC20WD.
  1. Height: << **9 feet 6 inches (2895 mm)**>> minimum to << **12 feet (3657 mm)**>> maximum.
  2. Width: << **6 feet 4 inches (1930 mm)**>> minimum to << **12 feet (3657 mm)**>> maximum.
  3. Projection: << **8 inches (203 mm)**>> minimum to << **20 inches (508 mm)**>> maximum.
    - a. Taper up << **8 to 20 inches (203 to 508 mm)**>> or down << **8 to 20 inches (203 to 508 mm)**>>.
    - b. Project Box Option: << **4 inches (102 mm); 6 inches (152 mm); 8 inches (203 mm); 10 inches (254 mm); 12 inches (305 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>>.
  4. Cushion: Fire-retardant foam for full depth of seal; tapered at jambs. Full compression and recovery required to temperatures below << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Continuously bonded to backing with flexible, nonflammable adhesive.
  5. Covering Material: Standard weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Brown; Gray; Green;** or \_\_\_\_\_>>.
  6. Covering Material: Heavy-weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Brown; Gray; Green; Red;** or \_\_\_\_\_>>.
  7. Premium Abrasion-Resistant Covering Material: Fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.
    - b. Abrasion Resistance: Six times more resistant than standard covering material.
    - c. Covering Color: Black.
  8. Vertical Columns: << **8/11: 8-inch back column, 11-inch front column (203 mm back column, 279 mm front column); 8/14: 8-inch back column, 14-inch front column (203 mm back column, 356 mm front column); 8/20: 8-inch back column, 20-inch front column (203 mm back column, 508 mm front column); 10/10: 10-inch back column, 10-inch front column (254 mm back column, 254 mm front column); 12/12: 12-inch back column, 12-inch front column (305 mm back column, 305 mm front column); 12/15: 12-inch back column, 15-inch front column (305 mm back column, 381 mm front column);** or **12/18: 12-inch back column, 18-inch front column (305 mm back column, 457 mm front column)**>>.
  9. Seams: Mechanically double stitched; double-ply at exposed face.
  10. UV Protection: Treat fabrics and thread with UV protection for fade resistance.

11. Bottom Dock Seal: << **Same construction as header and vertical columns;** or \_\_\_\_\_>>.
  - a. Length: << **4 feet (1219 mm); 8 feet (2438 mm);** or \_\_\_\_\_ feet (\_\_\_\_\_ mm)>>.
12. Optional << **Adjustable; or Fixed**>> Curtain: << **Required; Not required; or \_\_\_\_\_**>>.
  - a. Height: << **Adjustable 24 to 60 inches (Adjustable 610 to 1524 mm); Fixed 12 to 60 inches (Fixed 305 to 1524 mm);** or \_\_\_\_\_ to \_\_\_\_\_ inches (\_\_\_\_\_ to \_\_\_\_\_ mm)>>.
    - b. Curtain Split: << **With Velcro; or Without Velcro**>>; << **24 to 48 inches (610 to 1219 mm);** or **12 to 48 inches (305 to 1219 mm)**>>.
  - c. Curtain Fabric: << **To match balance of fabric; Low-temperature PVC;** or \_\_\_\_\_>>.
13. Draft Control: Two bottom draft flaps.
14. Frame Construction (Top and Sides): << **Treated wood; Galvanized steel;** or \_\_\_\_\_>>.
15. Guide Stripes: << **Partial height; Full height; or \_\_\_\_\_**>>.
16. Wear Pleats: << **None required; Matching fabric pleats; 66 oz. premium fabric pleats;** or \_\_\_\_\_>>.
17. Corner Wear Pleats: << **None required; 66 oz. premium fabric pleats; Matching fabric pleats;** or \_\_\_\_\_>>.
18. Column Double Fabric Layer: << **None required; Matching fabric dual layer;** or \_\_\_\_\_>>.
19. Column Fabric Scuff Guard: << **None required; 40 oz. premium fabric scuff guards;** or \_\_\_\_\_>>.
  
20. Security Seal: << **Required; Not required; or \_\_\_\_\_**>>.

## 2.06 FIXED DOCK SHELTERS

- A. Wayne Dalton; Fixed Dock Shelter, Model TX40WD.
  1. Width: << **11 feet (3353 mm)**>> minimum to << **12 feet 8 inches (3861 mm)**>> maximum.
  2. Height: << **11 feet (3353 mm)**>> minimum to << **12 feet 6 inches (3810 mm)**>> maximum.
  3. Projection: << **24 inches (610 mm); 36 inches (914 mm); 48 inches (1219 mm); 60 inches (1524 mm);** or \_\_\_\_\_ inches (\_\_\_\_\_ mm)>>.
  4. Frame Construction for Top and Sides: << **Treated wood; Galvanized steel;** or \_\_\_\_\_>>.
  5. Side and Top Covering Material: Standard weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Gray; Green; Brown; or \_\_\_\_\_**>>.
  6. Side and Top Covering Material: Heavy-weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Gray; Green; Red; Brown; or \_\_\_\_\_**>>.
  7. Premium Abrasion-Resistant Side and Top Covering Material: Fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.

- b. Abrasion Resistance: Six times more resistant than standard covering material.
- c. Covering Color: Black.
- 8. Vertical Panel Upgraded Seal Accessories: << **Required; Not required; or \_\_\_\_\_**>>.
- 9. Seams: Mechanically double stitched; double-ply at exposed face.
- 10. UV Protection: Treat fabrics and thread with UV protection for fade resistance.
- 11. Curtain Drop: << **36 inches (914 mm)**>> minimum to << **60 inches (1524 mm)**>> maximum.
- 12. Draft Control:
  - a. Two draft control pads.
  - b. Projection: << **24 inches (610 mm); 36 inches (914 mm); 48 inches (1219 mm); 60 inches (1524 mm); or \_\_\_\_\_ inches (\_\_\_\_\_ mm)**>>.
- 13. Mounting: Galvanized mounting hardware and stabilizing bracket.
- 14. Steel Guards (Shelter Bumpers): Manufacturer's standard double guards.
- 15. Guide Stripes: << **Partial height; Full height; or \_\_\_\_\_**>>.

## 2.07 FOAM DOCK SHELTERS

- A. Wayne Dalton; Foam Dock Shelter Model TM70WD.
  - 1. Width: << **11 feet 4 inches (3454 mm)**>> maximum.
  - 2. Height: << **10 feet, 9 inches (3.28 m); 12 feet (3.66 m); or \_\_\_\_\_ feet (\_\_\_\_\_ m)**>>.
  - 3. Projection: << **16 inches (406 mm); 18 inches (457 mm); 20 inches (508 mm); 24 inches (610 mm); or \_\_\_\_\_ inches (\_\_\_\_\_ mm)**>>.
    - a. Taper up << **8 to 20 inches (203 to 508 mm)**>> or down << **8 to 20 inches (203 to 508 mm)**>>.
    - b. Project Box Option: << **4 inches (102 mm); 6 inches (152 mm); 8 inches (203 mm); 10 inches (254 mm); 12 inches (305 mm); or \_\_\_\_\_ inches (\_\_\_\_\_ mm)**>>.
  - 4. Frame Construction (Top and Sides): << **Treated wood; Galvanized steel; or \_\_\_\_\_**>>.
  - 5. Side and Top Covering Material: Standard weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **22 oz/sq ft (6.7 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Gray; Green; Brown; or \_\_\_\_\_**>>.
  - 6. Side and Top Covering Material: Heavy-weight fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.
    - b. Covering Color: << **Black; Blue; Gray; Green; Red; Brown; or \_\_\_\_\_**>>.
  - 7. Premium Abrasion-Resistant Side and Top Covering Material: Fabric that remains flexible to << **minus 40 degrees F (minus 40 degrees C)**>>.
    - a. Covering Weight: << **40 oz/sq ft (12.2 kg/sq m)**>>.
    - b. Abrasion Resistance: Six times more resistant than standard covering material.
    - c. Covering Color: Black.
  - 8. Seams: Mechanically double stitched; double-ply at exposed face.
  - 9. UV Protection: Treat fabrics and thread with UV protection for fade resistance.
  - 10. Optional << **Adjustable; or Fixed**>> Curtain: << **Required; Not required; or \_\_\_\_\_**>>.

- a. Height: << **Adjustable 30 to 52 inches (Adjustable 762 to 1321 mm); Fixed 18 to 52 inches (Fixed 457 to 1321 mm);** or \_\_\_\_\_ to \_\_\_\_\_ inches (\_\_\_\_\_ to \_\_\_\_\_ mm)>>.
- b. Curtain Split: << **With Velcro; or Without Velcro**>>; << **30 to 48 inches (762 to 1219 mm);** or **18 to 48 inches (457 to 1219 mm)**>>.
- c. Curtain Fabric: << **To match balance of fabric; Low-temperature PVC;** or \_\_\_\_\_>>.
- 11. Draft Control: Two bottom draft flaps.
- 12. Guide Stripes: << **Partial height; Full height; or \_\_\_\_\_**>>.
- 13. Wear Pleats: << **None required; Matching fabric pleats; 66 oz. premium fabric pleats; or \_\_\_\_\_**>>.
- 14. Corner Wear Pleats: << **None required; Matching fabric pleats; 66 oz. premium fabric pleats; or \_\_\_\_\_**>>.
- 15. Column Double Fabric Layer: << **None required; Matching fabric dual layer; or \_\_\_\_\_**>>.
- 16. Column Fabric Scuff Guard: << **None required; 40 oz. premium fabric guards; or \_\_\_\_\_**>>.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify << **existing conditions; and \_\_\_\_\_**>> meet manufacturer's requirements before starting work.
- B. Examine loading dock equipment area for compliance with requirements for installation tolerances and other conditions related to this work.
- C. Examine walls and floors of loading dock equipment concrete pits for suitable conditions, and verify pits are plumb and square and properly sloped back to front of loading dock for drainage.
- D. Verify rough-in wall opening and anchors are acceptable, correctly sized, and aligned to proper tolerances.
- E. Verify frames installed in concrete and masonry are correctly located.
- F. Proceed with installation after unsatisfactory conditions corrected.

### **3.02 PREPARATION**

- A. Prepare loading dock equipment for size and locations as indicated and provide anchoring devices with templates, diagrams, and installation instructions.
- B. Prepare metal curb angles along concrete edges of recessed pits with top flush with loading platform and fit exposed ends together to form smooth hairline joints.

### **3.03 INSTALLATION**

- A. Install loading dock leveler unit in prepared opening in accordance with manufacturer's written instructions.
  - 1. Set square and level.
  - 2. Anchor unit securely, flush with building floor, and fillet-weld back of leveling dock to pit frame; touch up with paint.
  - 3. Position pit levelers above or below dock height, inclusive of end loading with lip pendant.

- B. Install edge-of-dock levelers to ensure arrangement adequate to accommodate lift in proper relation to loading platform.
  1. Anchor or weld edge-of-dock leveler securely in place in accordance with manufacturer's written instructions.
  2. Weld anchor holes in contact with continuously embedded loading dock edge channel.
  3. Weld or bolt bumper blocks to face of loading dock.
- C. Install << **seal; and shelter**>> components in accordance with manufacturer's instructions.
  1. Set plumb and level.
  2. Attach anchors and fittings to prepared wall construction and opening frame.
- D. Grease fittings to lubricate deck hinge for smooth operation.

### 3.04 ADJUSTING

- A. Adjust installed loading dock equipment<< **and safety devices; or None - N/A**>> for smooth and balanced operation<< **and lubricate as recommended by manufacturer; or None - N/A**>>.
- B. Test dock levelers for vertical travel within operating range as indicated and adjust as necessary for proper operation.
- C. After installation, inspect exposed factory-finished loading dock equipment and repair damaged finishes.

### 3.05 CLEANING

- A. See Section << **017000 - Execution and Closeout Requirements**>> for additional requirements.
- B. Clean recessed pits of debris.

### 3.06 CLOSEOUT ACTIVITIES

- A. See Section << **017800 - Closeout Submittals**>> for additional submittals.
- B. See Section << **017900 - Demonstration and Training**>> for additional requirements.
- C. Demonstrate proper operation of << **loading dock equipment; or \_\_\_\_\_**>> to <<Owner>>'s designated representative.
- D. Demonstration: Demonstrate operation of system to <<Owner>>'s personnel.
  1. Use operation and maintenance data as reference during demonstration.
  2. Conduct walking tour of project.
  3. Briefly describe function, operation, and maintenance of each component.
- E. Training: Train <<Owner>>'s personnel on operation and maintenance of system.
  1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
  2. Provide minimum of << **two hours; one day; or \_\_\_\_\_**>> of training.
  3. Instructor: Manufacturer's training personnel.
  4. Location: At project site.
  5. Location: <<Owner>>'s offsite classroom facilities may be used.
  6. Location: Provide local classroom facilities.
  7. Location: At manufacturer's training facility; include travel expenses for << **one member; two members; or \_\_\_\_\_ members**>> of <<Owner>>'s staff.

### 3.07 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch up damaged finishes after Substantial Completion.

### 3.08 MAINTENANCE

- A. See Section << **017000 - Execution and Closeout Requirements**>>, for additional requirements relating to maintenance service.
- B. Provide separate maintenance contract for specified maintenance service.
- C. Provide service and maintenance of operating equipment for period of << **one year; two years; or \_\_\_\_\_**>> from Date of Substantial Completion.
  - 1. Provide maintenance service by skilled employees of loading dock equipment installer.
  - 2. Include<< **monthly; quarterly; \_\_\_\_\_; or None - N/A**>> preventive maintenance, repair, or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation of loading dock equipment at rated speed and capacity.
  - 3. Provide manufacturer's authorized replacement parts and supplies.

**END OF SECTION**