

PORTLAND PUBLIC SCHOOLS
TECHNICAL DESIGN AND CONSTRUCTION STANDARDS

DIVISION 10 – SPECIALTIES

Signage: See PPS Signage Manual

Visual Display: Coordinate visual display surfaces with the requirements of Division 27, the PPS Educational Specifications, and the PPS Office of Technology and Information Services (OTIS).

Toilet Rooms: All-Gender / single occupancy restrooms are required. Coordinate sink and toilet accessories with Facilities Operations and the District vendor (see Attached Supplyworks Toilet and Sink Accessories) and with current accessibility codes. Locate accessories on drawings in plan and elevation. Include trash receptacle. Ensure all code required clearances are met after installation.

Storage: Provide ample storage to meet educational and administrative needs. Coordinate with the PPS Educational Specifications and the PPS project representative.

10-11-13 Visual Display Surface: Chalk Boards

- A. Not to be used in new construction.
- B. Demolition: The mastic in existing installations often contains asbestos. Test prior to removal. Mitigate and repair walls before replacing in accordance with all applicable regulations.

10-11-16 Visual Display Surface: Marker Boards (White Boards)

- A. Low-gloss porcelain on steel with finish approved for use as a projection surface. Provide a marker board surface which supports the use of pens, pencils, and crayons in addition to standard dry markers. All marks are to be removable by damp cloth. Markerboard dimension to support a 100" diagonal projected image. Coordinate with Division 12 projection screens, Division 27, and OTIS.
 - 1. 24-gauge steel facing.
 - 2. Laminated to 1/2" core.
 - 3. 0.015" minimum aluminum backing.
 - 4. Off white.
 - 5. Magnetic
 - 6. Glass Whiteboards are not acceptable for use in PPS classrooms or conference rooms.
- B. Accessories
 - 1. Map rails with cork insert.
 - 2. Map hooks.
 - 3. Marker pen tray.

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4. Flagpole holder.
5. Aluminum frames, trays and trim, satin anodized.
- A. Fabrication and Installation
 1. Provide continuous perimeter and inter-panel joints and solid wood backing.
 2. Mechanically anchored.
 3. See PPS District Standard Drawing No. S-044 for mounting.
 4. Coordinate

10-11-23 Tack Boards & Strips

- A. Cork with aluminum frame.
- B. Tack Board Panels
 1. Minimum 3/8" thick Homosote
 2. Fabric-wrapped option
 - a. For edges that are not fabric-wrapped, provide full edge protection.
- C. Furnish a sample of fabricated panel with edge detail to the District project representative for review and approval prior to installation.

10-13-00 Directories

- A. Directories to comply with the PPS Signage Manual. Location to be at the main entrance and corresponding location on each floor.

10-14-00 Signage

- A. See the PPS Signage Manual.

10-14-50 Exterior Signage

- A. Verify zoning and permit requirements for all exterior signage.
- B. Scoreboards acceptable for sports fields.
- C. Site rules, wayfinding and other exterior signage are included in the PPS Signage Manual.

10-21-13.13 Solid Surface Plastic Toilet and Shower Partitions

- A. Code and Certification Requirements:
 1. Meet all requirements of ADA Standards for Accessible Design. Refer to District Accessibility Guidelines for additional information. Use child requirements at K-5 & K-8 schools.
 2. Green Guard Certified.
 3. Provide manufacturer's 25 year warranty against breakage, corrosion, and delamination under normal conditions.

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4. Compliant with NFPA 286 or as required by code.
- B. Design:
 1. Doors swing inward wherever feasible.
 2. At hinge and latch locations provide “no peek” design that prevents gaps between the door panels and pilasters and / or wall mounting.
 3. Provide backing within walls and ceilings to withstand partition loading, including weight of children climbing partitions.
 4. Urinal Partitions
 - a. Design shall minimize need for partitions.
 5. Provide full height wall brackets at areas of heavy abuse.
 6. Submittals to provide shop drawings including dimensional layout, elevations, trim, closures, and accessories.
- C. Materials and panel construction:
 1. Partitions shall be high-density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming a single thickness panel with minimum 25% and preferred 100% post-consumer content.
 2. Color: Variegated, through color material required. Example product selection is Scranton Hiny Hider Onyx. Solid color partitions are not allowed. Panel and door thickness: 1" minimum
- D. Mounting
 1. Floor mounted, overhead braced.
 2. Fasteners: “vandal-proof” required Sheet metal screws are not allowed.
- E. Hardware:
 1. Wall and pilaster brackets: Heavy duty aluminum extrusions, bright-dip anodized finish. Continuous, full-length, double-ear.
 2. Hinges: 8" heavy-duty, self-closing, no peek
 3. Latch and housing: heavy duty extruded aluminum. Latch housing bright dip anodized finish. Slide latch and paddle.
 4. For all toilet compartments provide occupancy indicator.
 - a. The latch is required to open from the exterior with a key or tool. The latch should be tamper proof and not open with a coin.
- F. Accessories:
 1. Combination doorstop with rubber cushion, and coat hook.
 2. Doors swinging to plaster or sheet rock walls to have wall mounted bumper on solid backing.

10-21-50 Cubicles & Curtains

- A. Where required, provide privacy curtains.

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1. Include ceiling mounted track.
2. Upper portion to be mesh.
 - a. NFPA 701 compliant.
3. Lower portion to be a fire-resistant material in accordance with all applicable regulations.

10-26-00 Wall & Corner Protection

- A. Provide stainless steel corner guards at all outward corners.
 1. Minimum height to align with wainscotting, if used.
 2. If there is no wainscotting, minimum height is 6' AFF.
 3. If it is a staff only area, minimum height is 8' AFF, or match the height of the doors.
- B. Material
 1. Stainless steel type 304
 2. Finish: #4
 3. Thickness: 16 gauge (.06")
 4. Leg length: 3-1/2"

10-28-13 Toilet Accessories

- A. General:
 1. Accessories to be vandal proof, have concealed fastenings, and are to be tamper and theft resistant.
 2. Accessories in elementary schools shall be mounted at heights appropriate for size of children. See PPS ADA for Elementary Standards.
 3. Meet all code accessibility requirements. Refer to District Accessibility Guidelines for additional information. Use ADA for children in K-5 and K-8 schools.
 4. Coordinate toilet accessories with Facilities Operations and the District vendor and with current codes. Locate accessories on drawings in plan and elevation. Include trash receptacle. Ensure all code required clearances are met after installation.
- B. Backing and Blocking for Restroom Accessories.
 1. Backing and blocking to rigidly support accessories.
 2. Detail on contract drawings.
 3. Design to resist dedicated vandal attack.
 4. Blocking and backing for door bumps, door hold open devices, toilet partitions, restroom accessories, etc., 1" fir plywood backing.
 5. Light gauge plate or stud blocking is not acceptable.

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- a. 20 ga. Metal backing in metal framed walls
- 6. For new construction all backing and blocking shall be concealed behind wall finishes.
- 7. Use manufacturer's heavy duty mounting kits when available.
- 8. Renovation work:
 - a. Backing panels may be exposed but shall be sealed to protect from moisture.
 - b. Mechanically fasten to framing.
 - c. Match existing phenolic or plywood backing panels / mounting boards.
 - d. If none exist, ¾" birch plywood or B-C fir plywood with natural birch laminate and matching birch hardwood or "T" edge trimold edging is acceptable
- C. Restroom Mirrors – See division 8.
- D. Grab bars; stainless steel type 304 with #4 finish, with dimension, extents, and mounting heights and configuration in compliance with all code requirements. Provide flanges with concealed fasteners. Grab bars shall be capable of withstanding a 500-pound minimum vertical load or greater if required by code.
- E. Sanitary product receptacle.
 - 1. Provide one receptacle in each stall in restrooms, staff restrooms, single occupancy and all-gender restrooms.
 - 2. Receptacles which are shared between stalls are not allowed. No swing openings allowed.
 - 3. Receptacles must have top opening.
 - 4. Receptacle must be sized to fit District standard liner.
 - a. Stainless steel preferred, white metal acceptable.
- F. District contracts with vendors for the following items. See Attachment for owner provided contractor installed sink and toilet accessories.
 - 1. Seat cover dispensers located in staff and single occupancy restrooms must be compatible with Renown seat cover product REN03801. Renown Part #REN05179 or Stainless steel preferred.
 - 2. Soap dispensers – provided by District soap vendors. See vendor information in Attachment and locate per ADA Guidelines.
 - 3. Toilet paper dispenser – provided by toilet paper vendors. See vendor information in Appendix and locate per ADA Guidelines and provide backing as applicable as noted above.
 - 4. Paper towel dispensers – provided by District paper towel vendors.
 - a. See vendor information in Appendix and locate per ADA Guidelines and provide backing as noted above.

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- b. In new construction and major renovations, consider eliminating paper towels and installing electric hand dryers.
- G. Waste receptacles:
 - 1. Show waste receptacles accurately sized and located on floor plans.
 - 2. Waste receptacles located in built-in alcoves in corridors & cafeteria are preferred.
 - 3. No integrated receptacles are allowed. Ensure ease of emptying. Do not require lifting to remove. Do not locate under counter due to vandalism/fire hazard.
 - 4. Waste receptacles must be located outside the path of travel and wheelchair clearance.
 - 5. Provide freestanding waste containers. Locate in recess out of path of travel if possible.
 - 6. Provide 32 gallon plastic open top round receptacles. The district prefers these to metal for durability, low cost and weight. Alternates (must be able to utilize 32 gallon District liners):
 - a. Rubbermaid Marshal Classic Container FG817088 BLACK, 25 Gallon
 - b. Witt (WIT 7C-1838T) round side entry fiberglass, black, 25 Gallon

10-44-13 Fire Protection Specialties

- A. Fire Extinguisher Cabinets
 - 1. Locations must meet code and should be approved by Fire Marshal and AHJ. Priority of district is to locate near restrooms and science classrooms/labs.
 - 2. Recessed when possible. If not recessed, ensure ADA is met for protrusion.
 - 3. Minimum interior depth, 7 inches.
 - 4. Must comply with Fire Code 906.8
- B. AED – Locate in or near main office and in large gathering spaces (i.e. cafeteria, auditorium/lobby, gymnasiums. Locations and placement to be reviewed with Risk Management.
- C. Knox Box should typically be located near the front entry of the school. Coordinate exact location with fire marshal.
 - 1. New Construction – provide recessed mount.
 - 2. Existing Construction – provide recessed mount, if possible. Surface mount is also acceptable.
 - 3. Do not tie into any of the alarm systems

10-51-00 Lockers

- A. Corridor Lockers

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1. Heavy duty, knockdown (KD), all welded, and all welded fully framed construction acceptable.
 1. High schools: 15" x 15" x 72" single-tier or double tier. Double tier preferred in new and major remodeled schools when lockers will not be shared. Single tier preferred for shared lockers.
 2. K5, K8 and middle schools: generally, shared with 2 students: single tier with 2 shelves and 3 hooks. Middle hook should be 'double hook'.
 3. Recessed preferred. Where not feasible, surface mounted is acceptable with 18 gauge sloped tops. Verify egress widths and ADA clearances at doors.
 4. 14 gauge plain doors, 16 gauge frame, and 24 gauge solid body components.
 5. Gravity lift type multi-point spring loaded latching.
 6. 16 gauge continuous piano type hinge.
 7. Deep-drawn seamless stainless steel recessed handle
 8. Built in locks
 - i. Example lock: Master Lock #1630 or District approved equal.
 9. Minimum 2 year warranty
- B. Athletic Lockers
 1. Fully framed, all-welded hollow T or angle iron construction with 16 gauge continuous top and 16 gauge shelves, 18 gauge solid back., 14 gauge perforated doors , 13 gauge ½" expanded metal sides. Lifetime warranty.
 - a. Gymnasium (PE) Lockers
 - i. 12" x 16".
 - ii. 3-Tier lockers overall height 72", with slope tops
 - iii. 2-Tier lockers overall height 48" at islands
 - iv. Formed doors; inside stiffeners 3+"; recessed single point latching
 - v. Concrete base
 - b. Team Lockers
 - i. 18" x 16" x 72" single-tier, with sloped tops.
 - ii. 2 Tier lockers overall height 72"
 - iii. 14 gauge diamond perforated doors with 3" wide 18 gauge full height door stiffener. 3 point, Cremone latching
 - c. Concrete base
 - d. Curb mount, doors, handles and latches to match gym lockers.
 2. Sloping tops on freestanding and surface-mounted lockers.
 3. Continuous raised base – base of locker shall be in reach range for ADA
- C. Material and Construction:
 1. Exposed metals, 16-gauge steel with 14 gauge doors at corridors and 14-gauge doors at athletic lockers.

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2. Finish: Match existing, where occurs. Provide factory finish for all new lockers.
 3. Doors, continuous perimeter reinforcing. Recessed without louvers.
 4. Perforated or expanded metal at athletic lockers
 5. Recessed handles. Corridor and PE-Athletics – single point latching. Team lockers – three points, Cremone latching.
 6. All-welded, fully boxed attached to locker at factory
 7. Pop rivet fasteners construction prohibited.
- D. Accessories:
1. 1 shelf for single use or 2 shelf for full height shared lockers.
 2. Sides and center coat hooks (3 total per locker). Chrome or zinc finish. Paint not allowed.
- E. Locks:
1. Single-tier three point pickproof latching devices.
 2. Double-tier two point pickproof latching devices.
 3. Latch to be one-piece pre-lubricated spring steel.
 4. Latch contained within the lock bar, under tension, to provide rattle free operation.
 5. Lock bar secured within door channel with self-lubricating polyethylene guides to isolate lock bar from metal-to-metal contact.
 6. All locks to be combination locks. Provide 3 copies of the combination lock schedule.
 1. Lock examples includes: Master 1630 or 1670 combination locks or match existing.
 2. ADA Locks examples include: Master 1636MKADA or 1695MKADA
 7. Pickproof” latching devices.
- F. Locker Restoration
1. Restoration to be completed off-site.
 2. Electrostatic coating.
 3. New frames and doors (locker fronts) may be used to replace fronts on existing lockers.
- G. Example Manufacturers:
1. DeBourgh: Corregidoor, Sentry All American. List Industries Superior Heavy Duty Corridor KD Wardrobe Lockers

10-55-00 Postal Specialties

- A. Mail Drops
1. Open mail slots discharging into the building are unacceptable.

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2. Roadside delivery: Heavy-duty vandal resistant steel without locking mechanism.
3. Door to door delivery: Heavy gauge metal container large enough for accumulation.

10-56-00 Storage Assemblies

- A. Cubbies
 1. Provide open storage cubbies in Pre-K thru 5th grade classrooms and as indicated by the Educational Specifications.
 2. Material – Exposed hardwood such as birch with waterproof sealer.
 3. Standard size: 12"x15"x36", single tier.
 4. Provide 1 upper shelf.
 5. Provide Sides and center coat hooks (3 total per locker).
 6. Pre-K and head start to include a bottom shelf for shoe storage. Overall height of 48". Consider a bench style for ease of shoe removal.

10-75-00 Flagpoles

- A. Schools typically have one flag pole per school. It should fly the US flag, Oregon flag and POW/MIA flag, per State Policy 107-011-160.
- B. Where more than one pole is required or planned for, others should be lit at night so they can remain up. Provide a solar sensor on all lights.
- C. Fabricated in a single section.
- D. Provide proper structural support at base.
- E. Pole shall be removable when replacement/repair is needed.
- F. Aluminum with satin finish.
- G. Ball finial to be clear anodized or aluminum finish.
- H. Internal Cable Halyard.
- I. Internal winch system, with lockable access door and removable winch handle.
- J. Lock to match building master keying system.
- K. Ground Set
- L. 35-foot pole (minimum), size appropriate to the building.
- M. Max wind speed with flag – 135 MPH
- N. Able to hold all 3 flags. Below are suggested sizes for a 35' pole.
 1. US Flag 8'x5'
 2. Oregon Flag & POW/MIA Flag 5'x3'.
- O. Approved Products
 1. Concord American Flagpole

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- a. Independence Series – IRW
- 2. District Approved Equal

10 81 13 Bird Control Devices

A. Bird Netting

- 1. To be used to exclude birds from areas where they may roost or nest
- 2. 3/4" Mesh
- 3. UV Stabilized
- 4. Knotted
- 5. Flame-resistant
- 6. Rot-resistant
- 7. Waterproof
- 8. Install as recommended by the manufacturer.
- 9. 10-year minimum warranty against material defects and workmanship.

B. Bird Spikes

- 1. Coordinate with Maintenance and FOM if there are no alternatives to controlling bird nesting and perching.