

**Jefferson County School District, R-1
Support Services**

TECHNICAL GUIDELINES

DIVISION 10 – SPECIALTIES

AUGUST 2022

Jefferson County School District, R-1 TECHNICAL GUIDELINES 2022
Division 10 - Specialties

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10 11 00 Visual Display Surfaces – October 2021

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Whiteboard paint, markerboard paint, or dry erase paint is prohibited.
- Submittals
- Product Data:
 1. Required
- Shop Drawing:
 1. Required
 1. Samples:
 - a. Required
 2. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status
 - (2) Samples excluded.
 - b. Maintenance Instructions
- Chalkboards
 1. Not Permitted
- Markerboards
 1. Balanced, high-pressure, factory-laminated markerboard assembly of three-ply construction, consisting of moisture-barrier backing, stable core material, and porcelain-enamel face sheet with low-gloss finish. Laminate panels under heat and pressure with flexible waterproof adhesive.
 2. Standard Sizes:
 - a. 4-feet high x lengths starting at 4-feet in 2-foot increments up to 12-feet.
 3. Core:
 - a. 7/16-inch thick particle board or MDF Backing:
 4. Min. 0.015 aluminum sheet.
 5. Writing Surface:
 - a. Magnetic
 - b. Continuous (no joints) porcelain-enamel on min. 25 gauge steel
 6. Frame:
 - a. Continuous clear satin anodic finish
 - b. Min. 0.062-inch thick aluminum extruded frames with mitered corners
 - c. Integral continuous extruded aluminum marker tray tray with aluminum end stops.
Tray extension min. 2-3/4-inch, max. 4-inches from board surface.
 7. Integral 1-inch continuous natural cork tack strip along top of board.
 8. Accessories:
 - a. Map hooks and flag holder
 9. Color:
 - a. White, low-gloss.
 10. Bypass sliding, multiple surface boards are not permitted.
- Tackboards
 1. Standard Sizes:

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- a. 4-feet high x lengths starting at 4-feet in 2-foot increments up to 12-feet.
1. 1/4 inch un-faced sheet cork factory bonded to 3/8 inch fiberboard or comparable backing.
2. Color:
 - a. No requirements
3. Integral aluminum frame
- Visual Aid Boards
 1. Vinyl-faced porous material with frame.
- Frame and Trim
 1. Aluminum with natural color satin anodized finish
 2. Concealed mounting.
- Map rail
 1. Full length of marker board
 2. Complete with end stops and 1 standard map hook/clip per 24 inches of length.
 3. Omit marker board trays in areas of physical activity such as gymnasiums
 4. Flag bracket
 5. Extra Materials:
 - a. Deliver map hooks/clips in packages directly to District Project Manager.
- Custom Markerboard Surfaces
 1. With approval of District Project Manager only
 2. Custom shapes and sizes (non-standard)
 3. Same construction as standard markerboards
 4. Board shall not cover electrical receptacles, wall and light switches, wall access panels, windows, doors, etc.
 - a. Mounting over vinyl or other applied wall surfaces is prohibited. Substrates and surfaces shall be stable, vertical and plumb
 - b. Minimum 20-inches above floor surface (avoid wall electrical receptacles), maximum 7'-0" above finish floor.
 - c. Concealed mounting brackets and hangers required; construction adhesives are prohibited
 - d. Edges must be rounded or framed with aluminum trim. Butt-joints at multiple panels

END SECTION 10 11 00

10 12 00 Display Cases - August 2015

- Work in this section is open to any product or material.

END SECTION 10 12 00

10 13 00 Directories - October 2010

- Work in this section is open to any product or material.
- Coordinate with District Project Manager for Directory Requirements.

END SECTION 10 13 00

10 14 00 Signage - August 2022

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 1. Product Data:
 - a. Required
 2. Signage Schedule:
 - a. Required
 3. Samples:
 - a. Required
 4. Dedication Plaque rubbing:
 - a. Required prior to casting
 5. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - (2) Samples excluded.
- Coordination
 1. Review traffic and parking signs with:
 - a. Jefferson County
 - b. Municipality
 - c. District Project Manager.
- To the greatest extent possible, work in this section should be low-maintenance and vandal-resistant.
- Building dedication Plaques:
 1. One bronze dedication tablet is required for each new building and major additions.
 2. Size:
 - a. 18 inches x 18 inches
 3. Material:
 - a. Cast Bronze
 4. Finish:
 - a. Letter Face and Border – Satin Polish
 - b. Background – Leatherette, Dark Oxidized
 - c. Two coats of Clear Metal Lacquer Over Surface
 5. See Technical Details Drawings for sample plaque.
- Exterior Signage:
 1. Freestanding and/or on-building identification, including address number
 - a. Address numbers to be ten inches high
 2. Individual letters for building mount:
 - a. Finished aluminum
 - b. 10 inch high
 - c. Helvetica medium font or other font approved by District Project Manager.
 3. Approved methods of attachment for individual letters on masonry building facade:
 - a. Flush to masonry with threaded aluminum stud set in non-staining cement.
 - b. Aluminum tube spacers up to 1.5 inches with threaded aluminum stud set in non-staining cement.

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- c. Top and bottom parallel back bars or channels anchored into masonry
- 4. Signage per ADA
- 5. Design, locate, and secure exterior signage to minimize vandalism.
- 6. Spacers and fasteners for exterior signs:
 - a. Non-corrosive and vandal-resistant
- 7. Exterior Door Decal Signage
 - a. 6-inch adhered vinyl numbers applied to all exterior single doors and door pairs, lockset side, upper right or left corners. White or Black to contrast with the door color.
 - b. Sequentially numbered (1, 2, 3, 4, etc.) starting at the main entrance door and running clockwise.
 - c. Numbers are not required to coordinate with interior room numbers
- Traffic Signage
 - 1. Signs (directional, parking lot):
 - a. 1/8" thick steel complying with standard municipal sizing and constructed of vinyl face, vinyl graphics and letters.
 - 2. Posts and sleeves
 - a. Material:
 - (1) Steel posts conforming to the standard specification for hot rolled carbon sheet steel, structural quality, ASTM designation A570, Grade 50; 60,000 p.s.i.
 - b. Shape:
 - (1) Square tube formed of 12 gauge (.105 U.S.S. gauge) and 10 gauge (.135 U.S.S. gauge) steel, rolled to size and welded directly in the corner by high frequency resistance welding and externally scarfed to agree with corner radii.
 - c. Finish:
 - (1) Hot-dipped galvanized steel conforming to ASTM A653, G90, Structural Quality, Grade 50, Class 1.
 - (2) Corner weld is zinc coated after scarfing operation.
 - (3) Steel is coated with a chromate conversion coating and a clear organic polymer topcoat.
 - (4) Both the interior and the exterior of the post and post sleeve shall be galvanized.
 - d. Cross section:
 - (1) Perforated sign post: 1-3/4" x 1-3/4", U.S.S. Gauge 12, 2.06 lbs./foot.
 - Perforated post sleeve: 2" x 2", U.S.S. Gauge 12, 2.42 lbs./foot.
 - e. Holes:
 - (1) 7/16, +/- 1/64, inches in diameter on one inch centers on all four sides down the entire length of the post.
 - (2) On square tubing, holes shall be on centerline of each side and true alignment and opposite each other directly and diagonally.
 - f. Length:
 - (1) Post = 10'
 - (2) Post sleeve = 3'
 - g. Drive post sleeve into the ground so maximum 6" is exposed above grade.
 - (1) Sign post shall be telescoped into the sleeve and be fastened with 7/16" bolt and nut.
 - (2) Top of sign post shall be no higher than 7' from grade.

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- Interior Signage
 1. Room identification - General:
 - a. Flexible/removable inserts in permanent fixed frameless holder.
 - b. One per door or opening
 - c. Provide slots for insertion of occupants and/or program names
 - d. ¼ inch thick monolithic molded polyester composite
 - e. Integral body, letter, graphics, color.
 - f. Raised (tactile) upper-case sans serif characters, prefer 1-inch high; may provide 5/8 inch to 2 inches high with approval of District Project Manager.
 - g. Characters that contrast 70-100% with background.
 - h. Grade II Braille
 - i. Pictograms
 - j. Non-glare finish
 - k. Install on the wall adjacent to the latch side of the door per ADAAG.
 - l. Reference Technical Details Drawings.
 2. Room identification
 - a. In addition to the room number, all single-fixture toilet rooms shall be labeled, “Restroom” . Include only an ADA symbol, if relevant.
 - b. Keep signage as generic as possible. For example, instead of identifying “Principal’s Office”, use “Office” and two insert slots or no title with just the use of two slots. Use just the room number with open slots for those rooms that do not have specific core uses.
 3. Directional and Informational Signage
 - a. Non-glare finish and contrast.
 - b. Width-to-height and stroke-to-height ratios as required for readability
 4. ADA compliant.
 5. Calculate and include Maximum capacity of assembly occupancies signage
 6. Room Number Sign (match Fire Map Numbers and refer to CG011, Content, 17 Facility Room Number Coordination for more instructions)
 - a. At all doors and openings from the access side.
 - b. 1- 1/2” high x 3” wide with square corners.
 - c. Room Number printed in 1” Helvetica medium font.
 - d. Room Number text will be upper case only.
 - e. All letters shall be engraved white letters with black or dark brown background.
 - f. Locate centered on upper door frame head for all spaces so the space is identified from the exterior of the space.
 - (1) For openings without a header or overhead soffit, locate signage on one side near the ceiling.
- Quality Control:
 1. Spell-check signage and submittals prior to fabrication.

END SECTION 10 14 00

10 17 00 Telephone Specialties – October 2010

- See Division 27

END SECTION 10 17 00

10 21 00 Compartments and Cubicles – August 2019

- Work in this section is restricted to specific products of specific manufacturers that have been previously approved by Jefferson County School District, R-1 Purchasing Department.
- Submittals
 1. Product Data:
 - a. Required
 2. Samples:
 - a. Required
 - b. Colors selected from manufacturers' standard range of colors
 - (1) Fabrics
 - (2) Plastic Laminate
 - (3) Metal
 - (4) Other
 3. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - (2) Samples excluded.
- Manufacturers:
 1. Coordinate with the District Project Manager for list of acceptable manufacturers
- Coordination
 1. Layout with electrical outlets
 2. Other scopes of work adjacent to, or part of, the project
 3. ADA Accessibility required between, within, and around enclosures

END SECTION 10 21 00

10 21 13 Toilet Compartments – August 2016

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Coordinate layout with plumbing fixtures, floor drains, and access panels.
- Coordinate solid blocking at wall brackets in frame construction.
- Submittals
 1. Product Data:
 - a. Required
 2. Shop Drawing:
 - a. Required
 3. Samples:
 - a. Required for finish selection

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4. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - (2) Samples excluded.
 - b. Manufacturer Maintenance Instructions
- Configuration
 1. Floor to ceiling pilaster:
 - a. Required for locker rooms and high abuse public restrooms
 2. Overhead braced:
 - a. Preferred
 3. Ceiling Hung:
 - a. Prohibited
 4. European:
 - a. Prohibited
 5. Doorless:
 - a. Prohibited
- Panels and Doors
 1. Solid Polymer Resin (HDPE):
 - a. Preferred
 2. Solid Color Reinforced Composite (SCRC)
 - a. Acceptable with approval of District Project Manager
 3. Solid Phenolic
 - a. Acceptable with approval of District Project Manager
 4. Baked Enamel steel, plastic laminate, stainless steel, and other finishes are prohibited.
 5. Thickness
 - a. Minimum 1”
- Pilasters
 1. Material:
 - a. Per panels and doors
 2. 6 inch minimum width with manufacturer’s standard shoe.
 3. Reinforced at locker rooms and high abuse public restrooms
 4. Thickness
 - a. Minimum 1”
- Headrail
 1. Anti-grip profile
- Hinges:
 1. Stainless steel or heavy aluminum extrusion
 2. Surface mounted through-bolt type
 3. Adjustable gravity type with concealed ball bearing rollers
- Latch and Keeper:
 1. Stainless steel or heavy aluminum extrusion
 2. Recessed with combination rubber faced door strike and keeper.
 3. Slide type latch operation
 4. Rotary (twist) type prohibited
 5. Pull:
 - a. Required for swing-out doors only.
 6. Emergency access hardware is required at ADA compartments

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- Wall Brackets:
 1. Pre-drilled heavy stainless steel or aluminum extrusion
 2. Full Height continuous or 4 inch height spaced no more than 16 inches o.c.
- Fasteners:
 1. Tamper-resistant, concealed stainless steel
- Combination Coat Hook and Bumper:
 1. Manufacturer's standard rubber-tipped stainless steel unit
 2. Plastic material prohibited.
 3. Provide one supplemental coat hook inside stalls intended for the disabled
- Door Pull:
 1. Knob type is prohibited.

END SECTION 10 21 13

10 21 24 Cubicle Tracks and Curtains – August 2021

- For use as privacy curtains in school clinics and special education areas.
- Ceiling Mounted Curtain Track and Rollers:
 - Extruded aluminum track, slotted to receive roller carriers, with pre-manufactured corner radiuses. Clear anodized.
 - Spool carrier with nylon spool and aluminum hooks
- Cubicle Curtain:
 - Fabric: Tight-weave, 100% polyester, opaque, washable
 - Flame retardant: NFPA 701
 - Solid or pattern
 - Applied or integral antimicrobial treatment
 - Open weave nylon mesh top
- Acceptable Manufacturers:
 - Any manufacturer meeting the requirements of this section

END SECTION 10 21 24

10 22 00 Partitions – August 2015

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 1. Product Data:
 - a. Required
 2. Shop Drawing:
 - a. Required
 3. Samples:
 - a. Finishes
 4. Manufacturer Test Reports:
 - a. Acoustical performance

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5. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - (2) Samples excluded.
 - b. Operation and Maintenance Manual
- Finish:
 1. Hard surface
 2. Vinyl Wall Covering
 3. Carpet and Fabric Covering are prohibited for finish materials.
- Acoustical Design of contiguous ceilings, floors, permanent partitions, and interface details must be consistent with acoustical properties of specified partitions.
- A locking closure panel is required for operable partition pockets
- Motorized operable partitions are prohibited unless authorized by District Project Manager.
- Folding Gates:
 1. Overhead types are prohibited.
 2. Locations are restricted per egress requirements of the International Building Code
- Provide lockset per Division 08 with cylinder keyed to building master.
- Demountable Partitions:
 1. Prohibited
- Portable Partitions, Screens, Panels
 1. System must be capable of individual or multi panel two-directional placement without the use of special hardware such as "buttons."
 - a. Continuous Splines permitted.
 2. Acoustical performance: STC = 25 to 35
 3. Panel width: 48 inches preferred;
 4. Panel weight limit: 4.0 lbs./sq. ft. or 120 lbs./panel
 5. Portability (weight) is preferred over acoustical properties.
 6. Concealed operating hardware
- Operable Partitions
 1. Folding Panel Partitions
 - a. Paired panel type only
 - b. Acoustical performance:
 - (1) STC = 30 to 40
 - c. Carrier:
 - (1) Omni-directional rolling type
 - (2) Sliding type is prohibited
 - d. Top and bottom mechanical pressure seals are preferred over sweeps.
 - e. Lever closure systems are preferred over angle jambs.
 - f. Pass doors are prohibited
 - g. Plastic wheels are prohibited
 2. Accordion Folding Partitions:
 - a. Not recommended in new construction.
 - b. Coordinate with the District on use.
 3. Coiling Partitions:
 - a. Prohibited.
- UL Rating is required if utilizing electrical chases or internal/integral power components.

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- Field Testing is required to confirm NIC (Noise Isolation Class) performance within 70% of specified STC rating (i.e. specified STC 50 = 35 NIC or better).

END SECTION 10 22 00

10 26 00 Wall and Door Protection – August 2015

- Work in this section is open to any product or material
- Corner guard:
 1. Required at exterior corners of corridor and public area frame (stud) partition construction.
 2. Aluminum, opaque plastic or resilient.
 - a. Install protection after application of finishes
 3. 6 feet minimum height
 4. Screw attachment is required
 - a. Adhesive attachment is prohibited.

END SECTION 10 26 00

10 28 00 Toilet, Bath, and Laundry Accessories – August 2021

- Work in this section is restricted to specific products of specific manufacturers that have been previously approved by Jefferson County School District, R-1 Purchasing Department.
- Submittals
 1. Product Data:
 - a. Required
 2. Closeout:
 - a. All submittals listed above
 - (1) Updated to record status.
 - b. Keys
- Limit electric hand/hair dryers to locations where the noise does not adversely impact the acoustics in adjacent instructional or public areas.
- Mirror:
 1. Manufacturer:
 - a. ASI
 - b. Bobrick
 - c. Bradley
 2. Channel or angle frame is required to permit field replacement of mirror.
 3. Integral shelf is prohibited.
- Soap Dispenser:
 1. Verify product and manufacturer with District Project Manager.
- Paper Towel Dispenser:
 1. Verify product and manufacturer with District Project Manager.
 2. Acceptable Locations: All locations where Electric Hand Dryers are not provided

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- Electric Hand/Hair Dryer:
 1. Fixed nozzle only
 2. Manufacturer:
 - a. American Dryer, “Extreme Air-EXT”
 - (1) Trim kit, as applicable
 - (2) Without heating element
 - (3) No-touch sensor
 - (4) Vandal-resistant
 - (5) Anti-microbial
 - (6) Color: White Epoxy
 - (7) Material: Steel
 3. Acceptable Locations: Multi-fixture Student Toilet Rooms.
 - a. Do not provide in single-fixture toiler rooms or classroom areas
- Toilet Tissue Dispenser:
 1. Verify product and manufacturer with District Project Manager.
- Sanitary Napkin Disposal (at MS and HS girl’s restroom stalls only):
 1. Manufacturer:
 - a. ASI
 - b. Bobrick
 - c. Bradley
 2. Surface mounted, type 304 stainless steel all-welded construction, satin finish, with top access Cover. Cover shall be one-piece seamless construction with full-length stainless steel piano hinge. Concealed anchoring. Nominal size: 8” w x 10” h x 4” d.
- Grab Bars:
 1. Manufacturer
 - a. ASI
 - b. Bobrick
 - c. Bradley
- Coat Hooks (with bumper):
 1. Manufacturer
 - a. ASI
 - b. Bobrick
 - c. Bradley
- Lavatory Book Shelf:
 1. Manufacturer
 - a. ASI
 - b. Bobrick
 - c. Bradley
 2. Eighteen gauge stainless steel with raised front and back edges
 3. Six inches wide, mounted 1 inch out from the wall to facilitate cleaning
 4. Length:
 - a. Full length of lavatory or lavatory bank
- Mount on stainless steel brackets bolted to the wall.
- Medicine Cabinet:
 1. Recessed
 2. Locking
 3. Mirrored

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4. 18 x 24 inches
5. Manufacturer
 - a. ASI
 - b. Bobrick
 - c. Bradley
- Diaper changing station in Family restrooms:
 1. Manufacturer
 - a. Koala Corporation
 - b. Other manufacturers as approved by District
- Fasteners/ Hangers:
 1. Manufacturer
 - a. ASI
 - b. Bobrick
 - c. Bradley
 2. Concealed corrosion- and tamper-resistant
- Locks:
 1. Provide locks with the same keying for each type of accessory unit in the project.
 2. Furnish two keys for each lock.
- Products in this Section should be provided with concealed names or labels identifying the manufacturer.
- Secure toilet, bath, and laundry accessories to solid or reinforced substrates only.

END SECTION 10 28 00

10 43 13 Defibrillator Cabinets – August 2021

- Work in this section is restricted to specific products of specific manufacturers that have been previously approved by Jefferson County School District, R-1.
 1. J. L. Industries
 2. Approved equivalent. Coordinate with District Project Manager.
- Automatic Emergency Defibrillators (AED) cabinets are required for new buildings, additions and renovations, if not already installed at the site.
- Submittals
 1. Product Data
 - a. Required
 2. Closeout
 - a. Submittals listed above
 - (1) Updated to record status
- AED Cabinet
 1. Surface mounted AED cabinets at existing facilities and semi-recessed at new construction.
 - a. J.L. Industries, “LifeStart” AED Cabinets
 - b. Mounting Height per manufacturer’s recommendations
 - c. Steel or aluminum construction, powder coating or baked enamel
 - d. With alarm
- Locations
 1. Two per high school

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- a. One near main entrance
 - b. One outside main entrance to Gymnasium
 2. One per elementary school, middle school and all other support buildings
 - a. Near main entrance
 3. Additional units may be purchased by the school or site
 - a. Locate in coordination with District Project Manager.
 4. The Initial location(s) and any relocations shall require coordination with the District Project Manager and approval by the District's Health Services Department.
- Coordination
 1. Provide Electrical Power Source

END SECTION 10 43 13

10 44 00 Fire Protection Specialties – October 2022

- Work in this section is restricted to specific products of specific manufacturers that have been previously approved by Jefferson County School District, R-1.
 1. Fire Extinguishers:
 - a. Amerex
 2. Fire Extinguisher Cabinets:
 - a. J. L. Industries
 - b. Larsen's
- Coordination
 1. Work in this section is subject to the review and approval of the authority having jurisdiction (AHJ).
- Submittals
 1. Product Data:
 - a. Required
 2. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
- Fire Extinguisher Cabinet
 1. Semi-recessed Fire Extinguisher Cabinets only.
 - a. Surface-mounted type is permitted for unique circumstances and only with approval of District Project Manager..
 - (1)
 - b. Surface-mounted brackets acceptable in Mechanical and Boiler Rooms.
 - c. Acceptable Mfrs:
 - (1) Larsen
 - (2) J. L. Industries
 - (3) Acceptable Mfr meeting all requirements
 2. ADA Compliant
 3. U.L. approved
 4. Fire-rated where required.
 5. Compliant with current NFPA Publication 10, current edition.
 6. Manufactured within the past 12 months
 7. Semi-recessed hollow metal type with 2 ½ - 3-inches rolled edge return

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8. Mitered trim with flush door construction
 9. Zinc plated or stainless steel pull handles with roller catch
 10. Inside dimensions (minimum) – sized to the fire extinguisher:
 - a. W: 9 ½ inches or 10 ½ inches;
 - b. H: 24 inches;
 - c. D: 6 inches
 11. Finish options:
 - a. White powder coat finish.
 - b. 304 stainless steel with #4 finish with approval of District Project Manager.
 - c. Clear anodized
 12. Door:
 - a. Single piece ½” thick
 - b. Without lock
 - c. Pull-open door
 - d. Full-height 3-inch nominal vertical opening at pull side without glazing
 13. Hinge:
 - a. Full height piano hinge
 14. Glass options:
 - a. Clear acrylic glazing
 15. Trim options:
 - a. Extruded Aluminum
 - b. Cold Rolled Steel
 - c. Stainless Steel (with approval only).
 16. A single model of Fire Extinguisher cabinet is preferred throughout a building.
- Fire Extinguisher
 1. Manufacturer and model:
 - a. Per Fire Extinguisher Schedule.
 2. No substitutions.
 3. One piece steel or aluminum cylinder
 4. Head, handle, and valve assembly
 - a. Only steel, aluminum, brass or combination of these metals are allowed
 - b. Nylon and plastic components are prohibited
 - Accessories
 1. Keys:
 - a. None
 1. Provide manufacturer's standard identification decals for each cabinet
 - Locations
 1. Per applicable codes
 2. Per Fire Extinguisher Schedule
 3. Corridors
 - a. In addition to code requirements, provide fire extinguishers in cabinets at each end of building corridors in the immediate vicinity of exit doors.
 4. Minimum required locations:
 - a. Instructional Areas
 - (1) Locate one fire extinguisher within 6 feet of primary exit door in each of the instructional areas itemized in the Fire Extinguisher Schedule.
 - (2) Auto Shop:
 - (a) One fire extinguisher within 6 feet of primary exit door

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- (b) One fire extinguisher at each side of vehicle bay doors
- b. Non-Instructional Areas
 - (1) Locate one fire extinguisher within 6 feet of the primary exit door in each of the non-instructional areas itemized in the Fire Extinguisher Schedule.

FIRE EXTINGUISHER SCHEDULE

Type	Size	Class	Locations (Within 6'-0" of Exit Door)	Approved Manufacturer and Model
General purpose dry chemical	10 pounds	4A:60B:C	Auditorium (minimum 1 at rear, each side) Auto Shop (also at each bay door) Boiler room Chemical Storage Chemistry Lab Communications Equipment, MDF, IDF Computer / Technology / Electronics Lab Corridor Electrical Equipment Room FACS Lab Grounds equipment storage HVAC Machine Room / Penthouse Kitchen (food service) Penthouse Shops (metal, welding, wood) Stage (minimum 1 each side) Tech Arts Technology Welding	Amerex B456
General purpose dry chemical	5 pounds	3A:40B:C	Art studio Automotive Classroom Computer Lab Jewelry studio Staff lounge	Amerex B402

END SECTION 10 44 00

10 51 00 Lockers – August 2022

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 1. Product Data:

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- a. Required
2. Shop Drawing:
 - a. Required
3. Samples:
 - a. Sample locker for field quality control
 - b. Color sample
4. Closeout:
 - a. Submittals listed above
 - b. Updated to record status
 - c. Samples excluded.
5. Schedule of lock combinations
- Extra Materials:
 1. Touch-up paint:
 - a. Provide 8 fluid ounces for each 100 lockers or fraction, of each color installed;
(1) Up to 1 quart total for standard colors and up to 2 quarts total for custom colors.
- Panel parts:
 1. Fabricated from mild cold rolled sheet steel free from imperfections and capable of taking a high-grade enamel finish.
- Welded construction is required for P.E./Athletic lockers.
- No plastic or pot metal (cast zinc) components.
- Finish:
 1. Factory applied baked enamel or powder coat finish selected from manufacturer's full line of standard colors (minimum of 15 colors).
 2. Custom colors only as approved by Jefferson County School District R-1.
- Body Frame
 1. 1 3/8 inches x 0 7/8 inches minimum section
 2. 16 gauge
 3. 14 gauge for P.E./Athletic lockers.
- Door Frame
 1. Cold-rolled steel channel with corners lapped and fastened into a rigid assembly
 2. Capable of taking same high-grade finish as balance of locker
 3. Gauge:
 - a. Same as body frame
 4. Strike:
 - a. Full height continuous or locally reinforced
 5. 16-gauge channel frame members are required between the upper and lower doors of multiple tier lockers
- Doors
 1. Standard
 - a. 16-gauge flattened carbon steel with flanges on all 4 sides for rigidity.
 - b. Louvers are not recommended
 2. P.E./Athletic:
 - a. 14-gauge angle frame and center lock plate
 - b. Fully concealed lock bar and channel formation on the hinge side and right angle formations across the top and bottom.
 - c. 14 gauge flattened carbon steel with right angle flanges on all four sides.

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- d. Expanded or punched to provide a net vent area no less than 25% of gross door surface area.
- e. Security-type vents are preferred;
 - (1) Hole ventilation is acceptable if each opening dimension is less than 1/4 inch.
- f. Configure bays to prevent the end locker door from swinging into cross traffic.
- Lock/Latch Device (All lockers)
 - 1. Positive pre-locking automatic-type locking device whereby locker may be locked while door is open, then closed without unlocking and without damaging locking mechanism.
 - a. Deadbolt type lock/latch is prohibited.
 - 2. Latch mechanism:
 - a. Nylon, spring steel, or composite assembly
 - 3. Lock bar:
 - a. 24-gauge minimum galvanized cold rolled steel
 - (1) 3-point latching is required for single pan doors over 24-inch height
 - (2) Single point latching is acceptable for double-pan and reinforced door construction.
 - (3) 2 point latching is required elsewhere.
 - (4) Fully enclosed, tamper-resistant lock bar is required for P.E./Athletic lockers and is preferred elsewhere.
 - 4. Lifting (handle) feature contained in a formed 20-gauge stainless steel or chrome-plated steel finished steel pocket.
 - a. Projecting lift mechanisms are prohibited
 - b. Painted pockets are prohibited.
 - 5. Catch:
 - a. 14-gauge steel fabrication welded to frame
- Combination Lock (All lockers):
 - 1. Built-in, master keyed combination lock for each locker
 - a. Manufacturer and model as approved by Jeffco Schools. Consult with the District Project Manager.
 - b. Plastic, nylon, or vinyl internal parts are prohibited.
 - 2. Padlock locker designs are prohibited.
 - 3. ADA compliant lock and latch device as required
 - 4. High School Academic Lockers: Keyless 360 locks as manufactured by Keyless.co
 - a. KEYLESS360-SN and KEYLESS360-SN-ADA
 - b. Standard stain nickel electroplate finish
- Hinges
 - 1. Standard lockers:
 - a. 2 inches high, five knuckle, full loop, tight pin style 16 gauge steel hinges
 - 2. PE/Athletic:
 - a. Continuous full height piano type hinges
 - 3. Full height piano type hinges are acceptable in areas other than PE/Athletic.
 - 4. Hinge attachments to frame and door (minimum per hinge leaf):
 - a. 2 spot welds
 - b. 2 tamper resistant bolt/nuts
 - c. 3 rivets
 - d. Any 3 point combination of weld, bolt, and rivet
 - e. Additional attachments for continuous full height piano type hinges

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- (1) As per manufacturer for adequately securing hinges
5. 3 hinges are required for locker doors over 42 inches high;
 - a. 2 hinges elsewhere
- Body
 1. Cold rolled steel specially flanged for added strength and rigidity to insure tight joints between bolts.
 2. 24 gauge with 20 gauge floor typical.
 3. P.E./Athletic lockers:
 - a. 18 gauge throughout
 4. Vented locker body common walls are not permitted.
- Fasteners:
 1. Bolts and nuts: zinc plated, tamper-resistant.
- Hooks
 1. Zinc plated steel or aluminum with ball points.
 2. 3 single-pronged wall hooks
 3. One double-pronged ceiling/shelf hook required for all lockers over 24 inches high.
- Shelf
 1. 22-gauge minimum rolled-lip fabrication located approximately 9 inches from top.
 2. Required for lockers 36 inch nominal height and taller.
- Sloped top
 1. Required at all non-recessed or non-soffited installations
 2. 1:3 minimum slope
 3. 20 gauge minimum
 4. Continuous (seamless) assemblies are preferred.
- Miscellaneous
 1. Identification plate
 - a. Locker number plates: Engraved or punched steel plates
 - (1) Attached with rivets.
 - (2) Coordinate locker numbers and sequence with District Project Manager.
 - b. Plastic or laminated plates are prohibited
 2. Tamper-resistant rubber silencers
- Quality
 1. Full flush construction and detailing.
 - a. No component should project more than 1/8 inch from the plane of locker door and frame.
 2. High quality continuous uniform tight seams and corners without gaps, burrs, sharp edges, or exposed unfinished flanges which could snag clothing.
 3. Seams and joints should not permit passage of a U.S. dime.
- Install lockers on 4 inch high (clear) concrete curb or integral concrete base / bench configuration.
 1. Wood curb is permitted only for limited retrofit applications.
 2. Locker legs are prohibited.

END SECTION 10 51 00

[10 55 00 Postal Specialties – October 2010](#)

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- Work in this section is open to any product or material
- Minimum mail slot dimension: 5 inches high x 14 inches wide.

END SECTION 10 55 00

10 56 00 Storage Assemblies – October 2010

- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 1. Product Data:
 - a. Required
 2. Shop Drawing:
 - a. Required for Mobile Storage Units only
 3. Samples:
 - a. Required
 4. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - b. Operation and Maintenance Manual is required for Mobile Storage Units only
- Structural evaluation of floor may be required.
- Metal Storage Shelving
 1. Standards:
 - a. Heavy-duty type
 2. Brackets:
 - a. Heavy-duty, positive attachment (retainer) type.
 3. Shelves:
 - a. Design to limit deflection to ¼ inch in 36 inches with 20 lbs. per lineal foot loading.
 - b. Finish is required at all surfaces.
- Mobile Storage Units
 1. Rails
 - a. Steel
 - b. Size and spacing per manufacturer's recommendations for anticipated loading
 2. Deck:
 - a. Integral, machined ¾ inch (minimum) particleboard or plywood or 3/16 inch (minimum) hardboard with continuous ADA compliant ramp / closure plate
 3. Carriages and Stationary bases
 - a. Pre-engineered formed steel or aluminum components designed for 1000 p.l.f.
 - b. Precision bolted and cross-braced rigid assembly
 - c. End Panel:
 - (1) 5/8 inch core stock with high-pressure laminate covering entire face and wrapped around both vertical returns
 - d. Engineered to prevent tipping
 4. Wheels
 - a. Solid steel
 - b. Permanently shielded ball bearings
 - c. 2 3/4 inch minimum diameter

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5. Drive
 - a. Mechanically assisted manual positive drive system
 - b. Starting effort to move ratio = 1 : 2500 or better
 - c. Automatic handle disengage when not in active drive mode
 - d. Automatic collapse feature or 3 inch maximum projection when idle
 - e. Sprocket - chain - drive shaft mechanism
6. Shelving
 - a. Supports and reinforcements:
 - (1) 2 per shelf, 14-gauge steel
 - b. All other components 18-gauge cold rolled steel
 - c. Uprights:
 - (1) Closed-end
 - d. Shelves:
 - (1) Flanged all 4 sides
 - e. Center and backstops required
 - f. Typical configuration
 - (1) 76 inches nominal height with 6 shelves adjustable @ 1 1/2 inch intervals.
7. Reference Shelf
 - a. Same as above mounted under shelf on ball bearing extension slides
 - b. Minimum 1 per aisle at 30 inches to 40 inches above floor.
8. Finish:
 - a. Baked enamel or powder coating from manufacturer's standard color palette
9. Card Holder:
 - a. Sleeve or frame at each carriage and stationary unit end panel to hold and protect a 3 inches x 5 inches identification card
10. Hardware:
 - a. Provide handles and other hardware necessary for a complete and functional installation
11. Rails
 - a. Install rails dead level with leveling pads or scribe strips
 - b. Shims prohibited
 - c. Align and secure track joints both vertically and horizontally
 - d. Fill gaps between track and floor with non-shrink 8000 psi grout
12. Deck
 - a. Install deck on solid, leveled substructure secured to floor
 - b. Allow for future removal
 - c. Trim exposed edges with T-molding or equivalent
 - d. Recess ramp to occur within shelving system
13. Install system to accommodate future expansion
- Fabricated Wood Storage Shelving
 1. Standards: Heavy-duty type
 2. Brackets: Heavy-duty, positive attachment (retainer) type.
 3. Shelves:
 - a. Design to limit deflection to ¼ inch in 36 inches with 20 pounds per lineal foot loading.
 - b. Particleboard shelving is prohibited unless fully plastic-laminate faced.
 - c. Finish is required at all surfaces.
- Plastic Storage Shelving:

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1. Prohibited
- Wire Storage Shelving:
 1. No requirements
- Storage Racks:
 1. No requirements

END SECTION 10 56 00

10 57 00 Wardrobe and Closet Specialties – October 2010

- Work in this section is open to any product or material.
- Submittals
 1. Product Data:
 - a. Required
 2. Shop Drawing:
 - a. Required
 3. Samples:
 - a. Required
 4. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
 - (2) Samples excluded.
- Coat racks
 1. Plastic coat racks are prohibited.
 2. Hook spacing may not be less than 9 inches o.c.
- Rod and Shelf
- Secure wardrobe and closet specialties to solid or reinforced substrates only.

END SECTION 10 57 00

10 70 00 Exterior Specialties – August 2021

- Work in this section is open to any product or material
 1. Awnings and Canopies:
 - a. Structurally sound and stable
 - b. Weather resistant material
 - c. UV stable
 - d. Consider wind and snow loads
 - e. Fabric and Canvas materials are prohibited.
 2. Pergolas, Trellises and other free-standing structures
 - a. Material
 - (1) All materials used shall be reviewed by the District Project Manager
 - (2) Acceptable Materials: Fiberglass, Plastic-Wood Composites, Metal
 - (a) Wood structures are prohibited.
 - b. Structural Integrity
 - (1) The construction and components shall be pre-engineered or a design certified by a Structural Engineer

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(2) All footings shall be designed or certified by a Structural Engineer.

END SECTION 10 70 00

10 73 00 Exterior Marquees – August 2022

1. Marquees:

- a. Electronic Message Display Signs
 - (1) Monochrome Outdoor LED Matrix Display Sign
 - (a) Line Spacing: 20mm maximum.
 - (b) LED Full Color Preferred. Monochrome allowed with approval of District Project Manager.
 - (c) Graphic Capability: Text, graphics, logos, basic animation, video clips, multiple font styles and sizes.
 - (d) Display Dimming: Required – automatic, scheduled, and/or manual control.
 - (e) Optimal viewing angle: 130 degrees horizontal; 60 degrees vertical
 - (f) Face Configuration: Double. Single allowed with approval of District Project Manager
 - (g) Communication Method: Wireless (Ethernet Radio Bridge) or wired (connected to Jeffco Network).
 - (h) Cabinet Enclosure
 - 1. Metallic components, vented, designed for outdoor use, and sealed from weather
 - 2. Aluminum construction preferred
 - (i) UL listed, FCC Compliant for wireless
 - (j) Plug-and-play connections
 - (k) Size: Comply with local Zoning Regulations for maximum size and display features allowed
 - (2) Software: Manufacturer’s standard for signage provided.
 - (a) Windows Operating System compatible with facility operating system.
 - (b) Browser based – users can access software from any device with an internet connection, including smartphones, tablets, laptops and desktops
 - (c) All access shall be password enabled
 - (d) Software must be approved by Jeffco IT Department for security
 - (3) Fixed Graphics Panel(s):
 - (a) Optional
 - (b) School Identification Text and Graphics
 - (4) Acceptable Manufacturers:
 - (a) Daktronics
 - (b) Nevco
 - (c) Vantage LED USA
 - (d) Approved Equivalent
 - 1. Must be approved by District Project Manager prior to entering into contract with vendor or installer
 - (5) Mounting
 - (a) Site mounted on pedestals, or masonry or concrete base
 - (b) Exterior wall mounted on the building

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1. Structural evaluation required to wall-mounted
- b. Shipping and installation
 - (1) Full-service turn-key product and installation contract required at existing facilities
 - (a) Shipping, delivery, and installation shall be included
- c. Electrical Power
 - (1) From building
 - (a) All conduit shall be rated for underground use and direct buried in conformance with NEC from marquee to building
 - (b) Conduit within building shall be concealed to the greatest extent possible. If power will be exposed within the building, provide wiremold
 - (2) Solar
 - (a) Discouraged. Use only with approval from Facilities Management and District Project Manager
- d. Low-voltage conduit, if necessary
 - (1) For communications between building and sign
 - (a) All conduit shall be rated for underground use and direct buried in conformance with NEC from marquee to building
- e. Foundations and/or Footings
 - (1) Required
 - (2) Conform with building codes adopted by the Colorado Division of Fire Prevention and Control
 - (3) Concrete
 - (4) Material for areas of exposed base may be of concrete, masonry, or material provided with Marquee rated for exterior use and shall be weather-tight in construction.
- f. Zoning
 - (1) Conform with building zoning requirements of Authorities Having Jurisdiction, including CDOT if the marquee will be placed adjacent to a state highway
- g. Maintenance and Service
 - (1) Must have parts and certified technicians available in the Denver Metro area
 - (2) Service contracts must be made available to the schools. Service is the responsibility of the schools.
- h. Training
 - (1) Provide training to facility staff operating the marquee signage
 - (2) Available telephone customer service access for technical and operational questions
- i. Warranty:
 - (1) Minimum 5 year warranty

END SECTION 10 73 00

[10 75 00 Flagpoles – October 2021](#)

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- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Submittals
 1. Product Data:
 - a. Required
 2. Shop drawings
 - a. Required
 3. Closeout:
 - a. All submittals listed above
 - (1) Updated to record status.
 - b. Operation and maintenance manual
- Ground Set Flagpoles
 1. Tapered seamless extruded aluminum with aluminum top ball
 - a. 6 inch minimum butt diameter
 - b. 3.5 inch minimum top diameter
 2. 0.1875 inch minimum wall thickness
 3. Single-piece construction preferred
 4. 25 feet exposed length at elementary school
 5. 30 feet exposed length at junior and senior high schools
 6. Non-fouling, manually operated ball bearing revolving track
 7. Concealed, locking, tamper-resistant internal halyard for 2 flags
 8. Removable crank handle
 9. Grounding / Lighting Protection per NFPA:
 - a. Strike termination device
 - b. Down conductor
 - c. Ground terminal
 - d. Bonding to metal objects within 12 foot radius
- Accessories
 1. Rope: 1/16 inch diameter stainless steel aircraft cable
 2. Halyard: Flexible bronze core with 2 pairs of snaps
 3. Counterweight: Neoprene-coated 3.5 pounds with braided retainer ring
- 2 feet 6 inch (minimum radius) paved apron is required around the base of ground-set flagpoles.
- If lighting is provided, use ground-mounted or ground-recessed lighting only. Top pole mounted lighting is prohibited.

END SECTION 10 75 00

10 80 00 Other Specialties - October 2010

- Work in this section is open to any product or material.

END SECTION 10 80 00

10 81 00 Pest Control Devices - October 2010

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- Work in this section is open to any product or material meeting the requirements of this Technical Guideline.
- Use of poisons and toxic substances for pest control is prohibited.
- Submittals
 1. Product Data:
 - a. Required.
 - b. Include MSDS
 2. Closeout:
 - a. Submittals listed above
 - (1) Updated to record status.
- Bird Control:
 1. Use of separate, active bird control measures is not recommended.
 2. Jefferson County School District, R-1 requires building exteriors to be designed with minimal exposed structure and similar details which attract and harbor birds.
- Insect Control:
 1. No special requirements
- Rodent Control:
 1. Required at storm drainage outlets.

END SECTION 10 81 00

10 83 00 Flags and Banners – August 2021

- Exterior American Flags:
 1. Heavy-duty, double-ply, 100% heavyweight spun polyester
 2. Embroidered stars, sewn stripes, a double-sewn fly end, and durable white canvas heading with brass grommets.
 3. Nylon flag with approval of District Project Manager
- Exterior Banners
 1. All exterior banners larger than ten (10) square feet in size must be reviewed by the District Project Manager prior to installation.
 2. Commercial-grade vinyl or polyester, printed front and back, with pole hems top and bottom.
 3. Secure top and bottom and other necessary edges of the banner to meet local wind load requirements.
 4. All banners mounted on parking lot light poles, fencing, buildings, or other structures, must be approved by District Project Manager prior to purchase and installation.
 - a. Provide wind load calculations
 - b. Provide mounting details
 - c. Banners that result in light-pole sway as a result of wind shall be removed immediately.
 - d. Limit one banner per light pole once all above conditions have been met.
 5. All exterior banners must be designed and fabricated with wind slits.
 6. Pole or fence mounted banners must have break-away type mounts or be mounted on the footings.

END SECTION 10 83 00