



Asheboro City Schools

Request for Proposals

Purchasing Department

1126 S. Park Street
Asheboro, NC 27203
(336)625-5104

Direct All Inquiries To:

All questions are due by 2:00 PM on
October 14, 2022

147-MetalLockers

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Bid Opening Date: 2:00 PM October 20, 2022

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Bids Due by 2:00 PM October 20, 2022

1.0 Description:

This Invitation for Bid is to provide lockers, all materials and labor for installation at Asheboro High School. This project will be in coordination with a General Contractor currently performing renovation work. The project needs to be completed by mid-December 2022.

SECTION 105113 - METAL LOCKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the proposal apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Knocked-down, athletic metal lockers.
 - 2. Knocked-down, open-front athletic metal lockers.
 - 3. Locker benches.

1.3 DEFINITIONS

- A. Uncoated Steel Sheet Thicknesses: Indicated as the minimum thicknesses.

1.4 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker and bench.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - 1. Show base, sloping tops, filler panels, recess trim, and other accessories.
 - 2. Include locker identification system.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: For metal lockers and locker benches, in manufacturer's standard sizes.
- E. Qualification Data: For Installer.
- F. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.
- G. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** An authorized representative of metal locker manufacturer for installation and maintenance of units required for this Project.
- B. **Source Limitations:** Obtain metal lockers and accessories through one source from a single manufacturer.
- C. **Product Options:** Drawings indicate size, profiles, and dimensional requirements of metal lockers and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."
 - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. **Regulatory Requirements:** Where metal lockers are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and ICC A117.1.
 - 1. Provide not less than 1 shelf located no higher than **48 inches (1219 mm)** above the floor for forward reach.
 - 2. Provide 1 shelf located at bottom of locker no lower than **15 inches (381 mm)** above the floor for forward reach.
 - 3. Provide hardware that does not require tight grasping, pinching, or twisting of the wrist, and that operates with a force of not more than 5 lbf (22.2 N).
- E. **Preinstallation Conference:** Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for metal locker installation.

1.7 PROJECT CONDITIONS

- A. **Field Measurements:** Verify the following by field measurements before fabrication and indicate measurements on Shop Drawings:
 - 1. Concealed framing, blocking, and reinforcements that support metal lockers before they are enclosed.
 - 2. Recessed openings.
 - 3. **Established Dimensions:** Where field measurements cannot be made without delaying the Work, establish recessed opening dimensions and proceed with fabricating metal lockers without field measurements. Coordinate wall and floor construction to ensure that actual recessed opening dimensions correspond to established dimensions.

1.8 COORDINATION

- A. Coordinate size and location of field installed bases for metal lockers.
- B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - 1. Structural failures.
 - 2. Faulty operation of latches and other door hardware.
 - 2. Damage from deliberate destruction and vandalism is excluded.
 - 3. Warranty Period for Knocked-Down Metal Lockers: two (2) years from date of Substantial Completion.

1.10 EXTRA MATERIALS

- A. Furnish extra materials described below, before construction begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Full-size units of the following metal locker hardware items equal to 5 percent of amount installed for each type and finish installed, but no fewer than 3 units:
 - 2.
 - 1. Identification plates.
 - 2. Hooks.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Basis-of-Design Product: The design for each metal locker specified is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008, Commercial Steel (CS) Type B, suitable for exposed applications.
- B. Expanded Metal: ASTM F 1267, Type II (flattened), Class I, 3/4-inch (19-mm) steel mesh, with at least 70 percent open area.
- C. Stainless-Steel Sheet: ASTM A 666, Type 304.
- D. Extruded Aluminum: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated.
- E. Plastic Laminate: NEMA LD 3, Grade HGP.
- F. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.
- G. Anchors: Select material, type, size, and finish required for secure anchorage to each substrate.
 - 1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance.
 - 2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.3 **KNOCKED-DOWN ATHLETIC METAL LOCKERS (LOCKER TYPE A, LOCKER TYPE C, LOCKER TYPE D)**

- A. Basis-of-Design Product manufacturer: Penco Products, Inc. or a comparable product of one of the following:
 - 1. Art Metal Products
 - 2. Lyon Workspace Products
 - 3. Republic Storage Systems Company
- B. Description
 - 1. Locker Arrangement: Single tier (type C) and Double tier (type A) as indicated on drawings.
 - 2. Construction: Assembled by bolting body components together. Fabricate from unperforated, cold-rolled steel sheet with thicknesses as follows:
 - 1. Tops and Bottoms: 0.0528 inch (1.35 mm) thick, with single bend at edges.
 - 2. Backs: 0.0428 inch (1.1 mm) thick.
 - 3. Shelves: 0.0528 inch (1.35 mm) thick, with double bend at front and right-angle single bend at sides and back.
 - 4. Unperforated Sides: Fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet.
 - 5. Frames: Channel formed; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet or 0.0966-inch- (2.5-mm-) thick steel angles; lapped and factory

welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral door strike full height on vertical main frames.

6. Cross Frames for Double-Tier Lockers: Channel formed and fabricated from same material as main frames; welded to vertical main frames.
7. Locker Base: Structural channels, formed from 0.0528-inch thick, cold-rolled steel sheet; welded to front and rear of side-panel frames; flanged inward at bottom for anchoring to floor.
8. Perforated Doors: One-piece, fabricated from 0.0677-inch- (1.7-mm-) thick, cold-rolled steel sheet with manufacturer's standard diamond perforations; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges and latch point (bottom) and right-angle single bend at remaining edges for box lockers.
9. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches (381 mm) wide; welded to inner face of doors.
10. Knuckle Hinges, Self-closing; welded to door and attached to door frame with not less than 2 factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees. Steel, full loop, 5 or 7 knuckles, tight pin; minimum 2 inches (51 mm) high. Provide not less than 3 hinges for each door more than 42 inches (1067 mm) high.
11. Recessed Door Handle and Latch: Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond face of door; pry resistant.

C. Equipment: Equip each metal locker with identification plate and the following, unless otherwise indicated:

1. Single-Tier Units (Type C): Shelf, one double-prong ceiling hook, and two single-prong wall hooks.
2. Double-Tier Units (Type A): One double-prong ceiling hook and two single-prong wall hooks per opening.
3. Personnel Units (Type D): Shelf, one (1) coat rod with two (2) hooks, front extension with maple bench and drawer unit. Drawer unit to have louvered front.

D. Accessories:

1. Continuous Base: 4 inches (102 mm) high; fabricated from 0.0677-inch- (1.7-mm-) thick, cold-rolled steel sheet.
2. Continuous Sloping Tops: Fabricated from minimum 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet; approximately 20-degree pitch.
 1. Closures: Vertical-end type.
3. Recess Trim: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
4. Filler Panels: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
5. Boxed End Panels: Fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet.

E. Finish: Powder coat.

1. Color(s): As selected by Architect from manufacturer's full range.

2.4 **KNOCKED-DOWN, OPEN-FRONT ATHLETIC METAL LOCKERS (LOCKER TYPE B)**

- A. Basis-of-Design Product manufacturer: Penco Products, Inc. or a comparable product of one of the following:
 - 1. Art Metal Products
 - 2. Lyon Workspace Products
 - 3. Republic Storage Systems Company
- B. Locker Arrangement: Open front, with seat/footlocker, upper shelf with security box.
- C. Body: Assembled by riveting or bolting body components together. Fabricate from unperforated, cold-rolled steel sheet with thicknesses as follows:
 - 1. Tops and Bottoms: 0.0528 inch (1.35 mm) thick, with single bend at edges.
 - 2. Backs: 0.0428 inch (1.1 mm) thick.
 - 3. Shelves: 0.0528 inch (1.35 mm) thick, with double bend at front and right-angle single bend at sides and back.
- D. Perforated Sides: Fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet with manufacturer's standard diamond perforations. Perforations shall not occur above upper shelf, at security compartment or at seat/footlocker.
- E. Frames: Channel formed; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet or 0.0966-inch- (2.5-mm-) thick steel angles; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames.
- F. Locker Base: Structural channels, formed from 0.0528-inch thick, cold-rolled steel sheet; welded to front and rear of side-panel frames; flanged inward at bottom for anchoring to floor.
- G. Seats/Shelves: Full width of metal locker; channel formed; fabricated from 0.0677-inch- (1.7-mm-) thick, cold-rolled steel sheet; with stiffeners for reinforcement.
- H. Seats/Footlockers: Enclosure full width of bottom of metal locker; fabricated from cold-rolled steel sheet.
 - 1. Seat/Lid: 0.0677 inch (1.7 mm) thick; channel formed, and reinforced with stiffeners; with manufacturer's standard, steel continuous hinge that is completely concealed and tamper resistant when seat/lid is closed; with padlock hasp.
 - 2. Front Panel: 0.0677 inch (1.7 mm) thick; channel formed at top edge; with minilouvers for ventilation; and recessed for padlock loop.
 - 3. Sides: Integral part of unperforated sides.
- I. Security Boxes: Consisting of partition extending from upper shelf to top of metal locker, fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet; with channel-formed, 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet door frame, and door fabricated from 0.0677-inch- (1.7-mm-) thick, cold-rolled steel sheet with right-angle single bend at edges; with manufacturer's standard, steel continuous hinge that is completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees.

1. Single-Point Latching: Stainless-steel strike plate with integral pull; with steel, nonmoving latch hook with steel padlock loop that projects through door and is finished to match metal locker body.
- J. Equipment: Equip each metal locker with identification plate and the following, unless otherwise indicated:
1. Two single-prong wall hooks, bolted to locker back.
 2. Coat rod and two rod holders.
- K. Accessories:
1. Continuous Sloping Tops: Fabricated from minimum 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet; approximately 20-degree pitch.
 1. Closures: Vertical-end type.
 2. Recess Trim: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
 3. Filler Panels: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
 4. Boxed End Panels: Fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet.
- L. Finish: Powder coat.
1. Color(s): As selected by Architect from manufacturer's full range.
- 2.5 LOCKER BENCHES
- A. General: Provide locker benches fabricated by same manufacturer as metal lockers.
- B. Bench Tops: Manufacturer's standard 1-piece units of the following material, minimum 9-1/2 inches (240 mm) wide by 1-1/4 inches (32 mm) thick, with rounded corners and edges:
1. Laminated maple with one coat of clear sealer on all surfaces, and one coat of clear lacquer on top and sides.
- C. Fixed Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors, and as follows:
1. Tubular Steel: 1-1/4-inch- (32-mm-) diameter steel tubing, with 0.1265-inch- (3.2-mm-) thick steel flanges welded at top and base; with baked-enamel finish; anchored with exposed fasteners.
 1. Color: Match metal lockers

2.6 FABRICATION

- A. General: Fabricate metal lockers square, rigid, and without warp; with metal faces flat and free of dents or distortion. Make exposed metal edges free of sharp edges and burrs, and safe to touch.
 - 1. Form body panels, doors, shelves, and accessories from one-piece steel sheet, unless otherwise indicated.
 - 2. Provide fasteners, filler plates, supports, clips, and closures as required for a complete installation.
- B. Unit Principle: Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.
- C. Knocked-Down Construction: Fabricate metal lockers for nominal assembly at Project site using nuts, bolts, screws, or rivets. Factory weld frame members together to form a rigid, one-piece assembly.
- D. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.
- E. Identification Plates: Manufacturer's standard etched, embossed, or stamped aluminum plates; with numbers and letters at least 3/8 inch (9 mm) high.
- F. Legs: Formed by extending vertical frame members or by attaching gusset-type legs to locker body; with provision for fastening to floor; finished to match lockers.
 - 1. Closed Front and End Bases: Fabricate bases without overlap or exposed fasteners; finished to match lockers.
- G. Continuous Base: Formed into channel or Z profile for stiffness, and fabricated in lengths as long as practicable to enclose base and base ends of metal lockers; finished to match lockers.
- H. Continuous Sloping Tops: Fabricated in lengths as long as practicable, without visible fasteners at splice locations; finished to match lockers.
 - 1. Sloped top corner fillers, mitered.
- I. Recess Trim: Fabricated with minimum 2-1/2-inch (64-mm) face width and in lengths as long as practicable; finished to match lockers.
- J. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip joint filler angle formed to receive filler panel.
- K. Boxed End Panels: Fabricated with 1-inch- (25-mm-) wide edge dimension, and designed for concealing fasteners and holes at exposed ends of nonrecessed metal lockers; finished to match lockers.
 - 1. Provide one-piece panels for double-row (back-to-back) locker ends.
- L. Finished End Panels: Designed for concealing unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.

1. Provide one-piece panels for double-row (back-to-back) locker ends.

- M. Center Dividers: Full-depth, vertical partitions between bottom and shelf; finished to match lockers.

2.7 STEEL SHEET FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Factory finish steel surfaces and accessories except stainless-steel and chrome-plated surfaces.
- C. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond. Use manufacturer's standard methods.
- D. Baked-Enamel Finish: Immediately after cleaning, pretreating, and phosphatizing, apply manufacturer's standard thermosetting baked-enamel finish. Comply with paint manufacturer's written instructions for application, baking, and minimum dry film thickness.
- E. Powder-Coat Finish: Immediately after cleaning and pretreating, electrostatically apply manufacturer's standard baked-polymer thermosetting powder finish. Comply with resin manufacturer's written instructions for application, baking, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls, floors, and support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

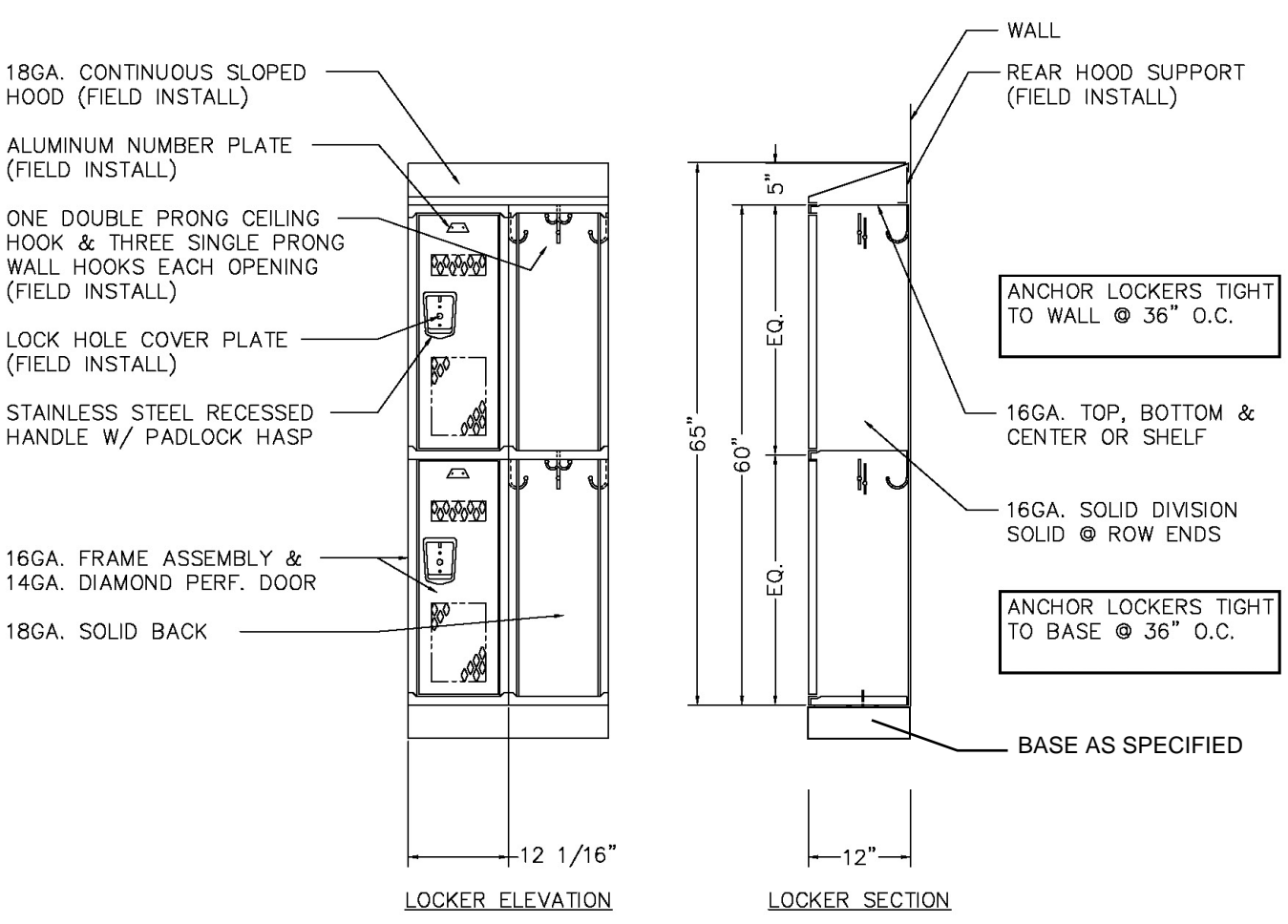
- A. General: Install level, plumb, and true; shim as required, using concealed shims.
 1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion, using concealed fasteners.
 2. Anchor single rows of metal lockers to walls near top of lockers and to floor.
 3. Anchor back-to-back metal lockers to floor.
- B. Knocked-Down Metal Lockers: Assemble knocked-down metal lockers with standard fasteners, with no exposed fasteners on door faces or face frames.

- C. Equipment and Accessories: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.
 - 1. Attach hooks with at least two fasteners.
 - 2. Attach door locks on doors using security-type fasteners.
 - 3. Identification Plates: Identify metal lockers with identification indicated on Drawings.
 - 1. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
 - 2. Attach plates to upper shelf of each open-front metal locker, centered, with a least two aluminum rivets.
 - 4. Attach recess trim to recessed metal lockers with concealed clips.
 - 5. Attach filler panels with concealed fasteners. Locate fillers panels where indicated on Drawings.
 - 6. Attach sloping top units to metal lockers, with closures at exposed ends.
 - 7. Attach boxed end panels with concealed fasteners to conceal exposed ends of nonrecessed metal lockers.
 - 8. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.
- D. Fixed Locker Benches: Provide not less than 2 pedestals for each bench, uniformly spaced not more than 60 inches apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

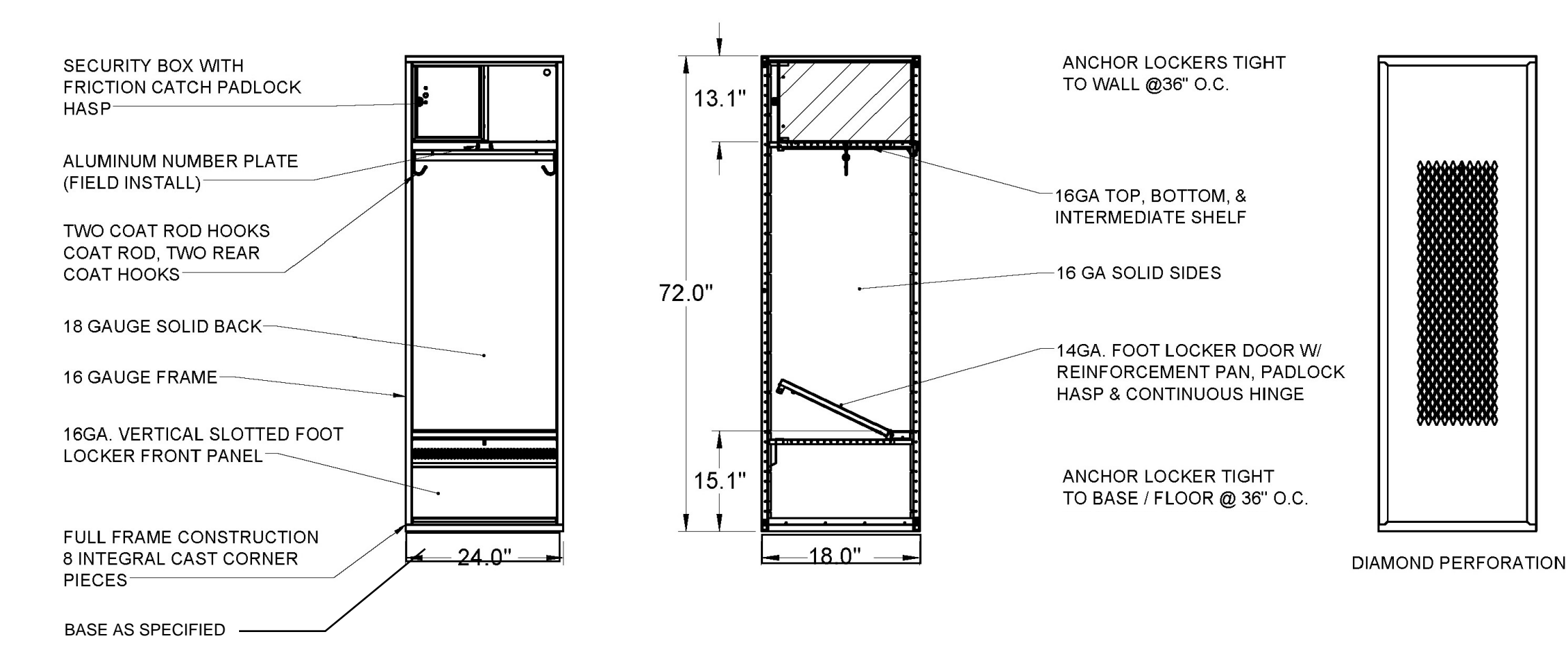
3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.
- B. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit metal locker use during construction.
- C. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by metal locker manufacturer.

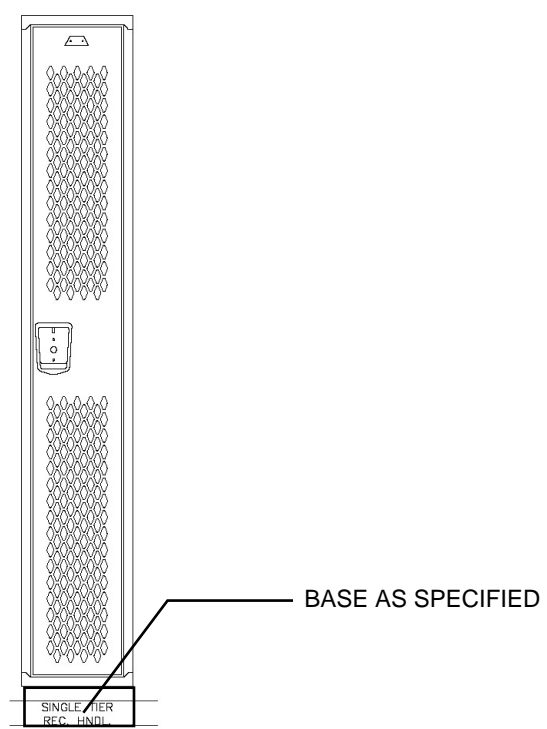
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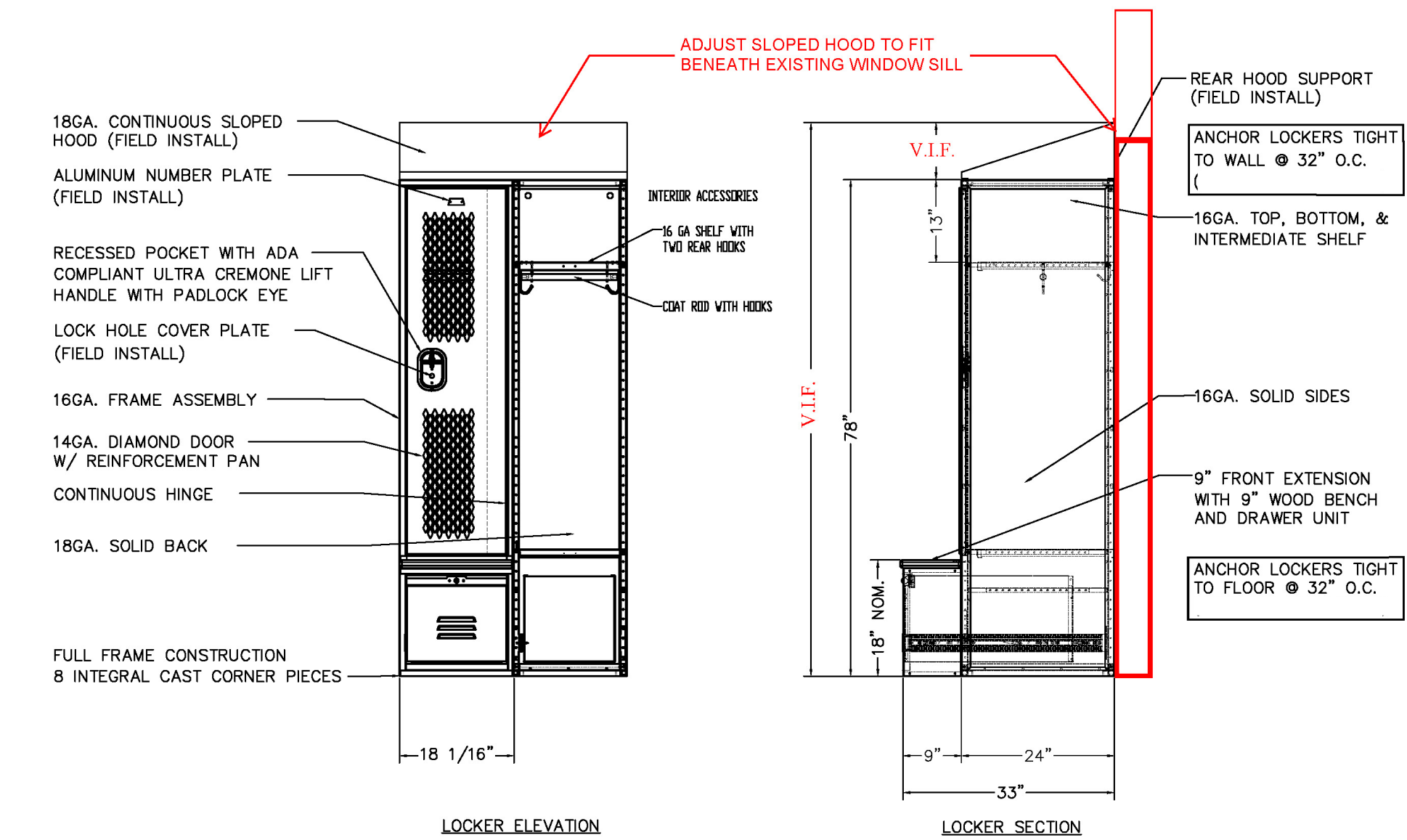
TYPE A: 12" X 12" X 30"/ 60" DOUBLE TIER LOCKER



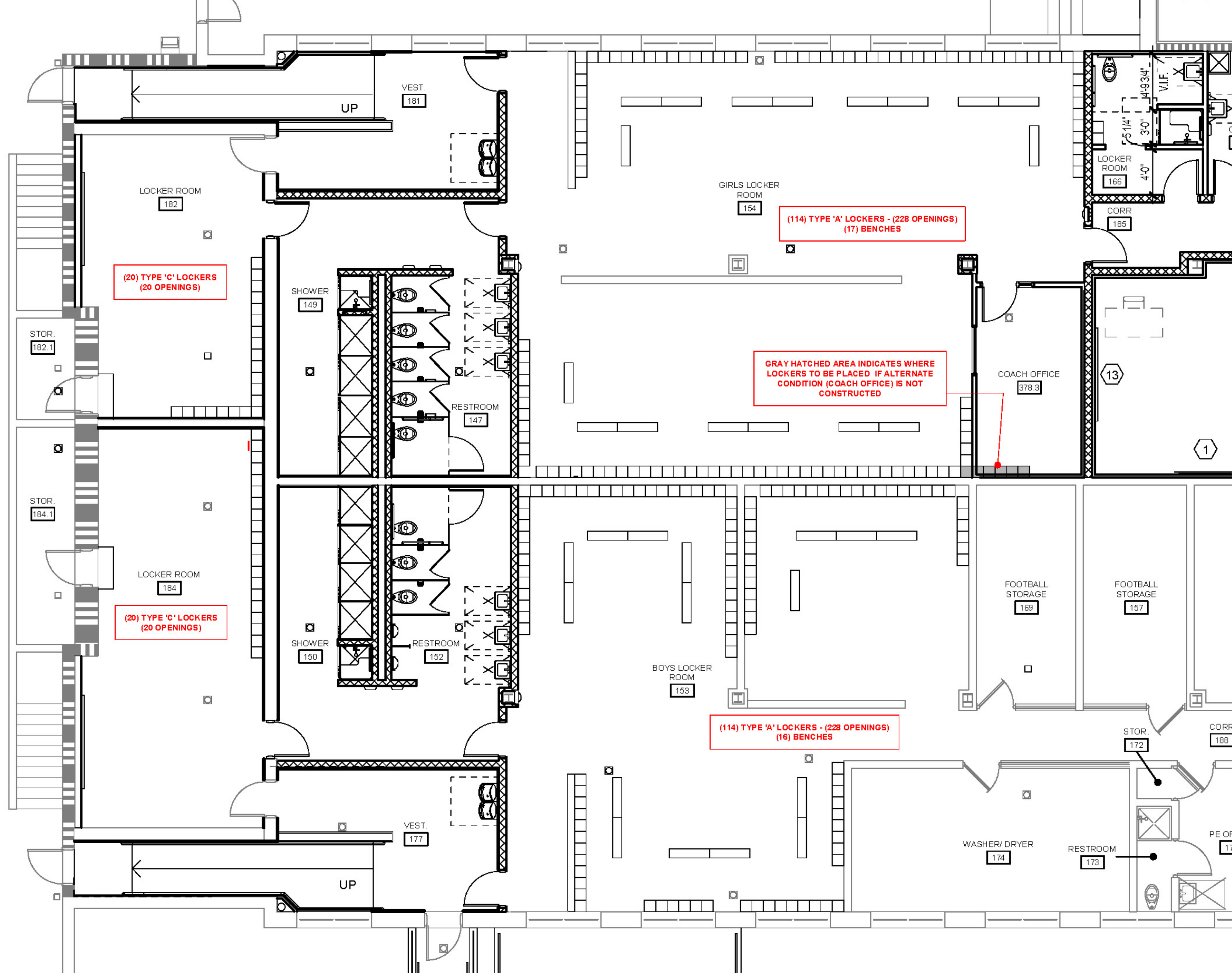
TYPE B: 24" X 18" X 72" STADIUM STYLE OPEN FRONT FULLY FRAMED LOCKER



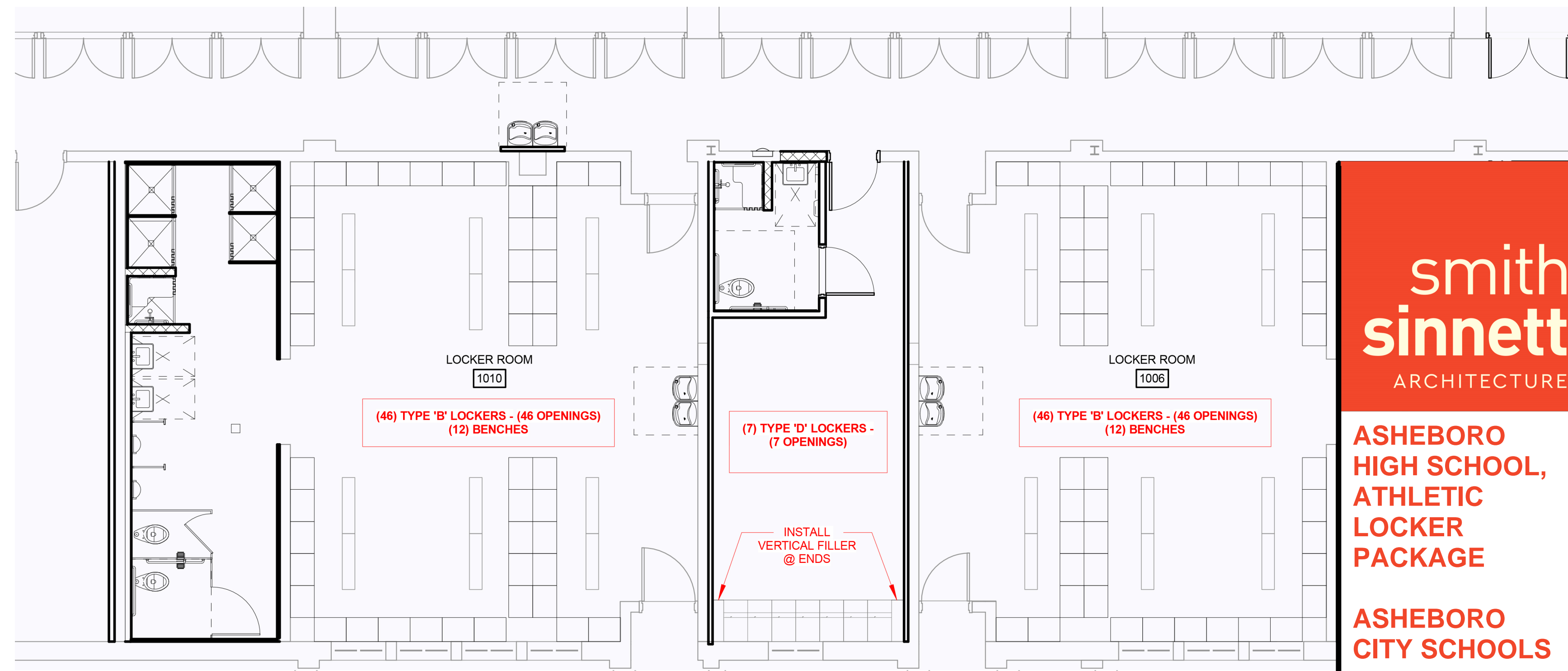
TYPE C: 12" X 12" X 60" SINGLE TIER ATHLETIC LOCKER



TYPE D: 18" X 24" X 78" FULLY FRAMED PERSONNEL LOCKER WITH BENCH



AUX GYM - CLASS/TEAM LOCKER ROOMS

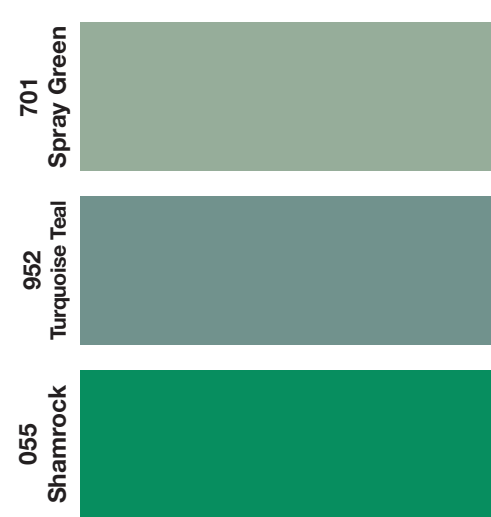
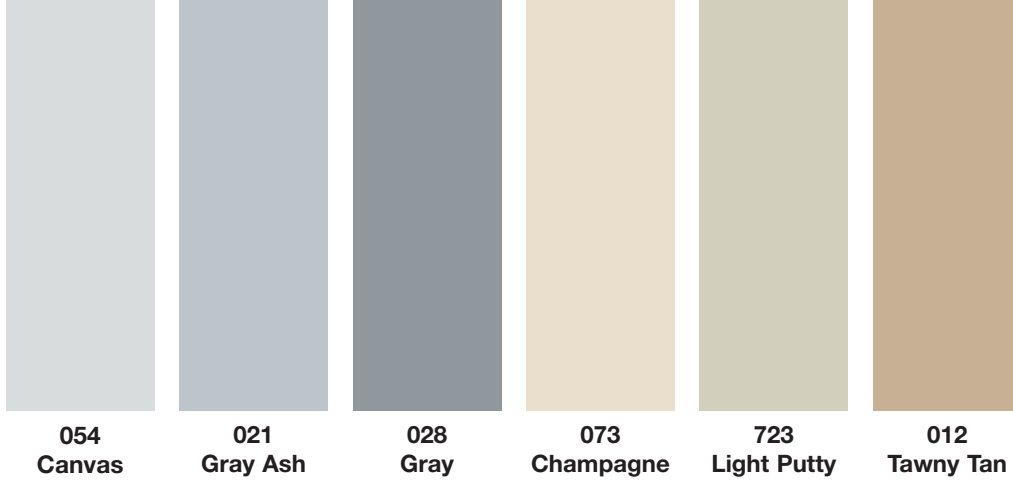


MAIN GYM - VARSITY LOCKER ROOMS

smith
sinnett
ARCHITECTURE

ASHEBORO
HIGH SCHOOL,
ATHLETIC
LOCKER
PACKAGE

ASHEBORO
CITY SCHOOLS



Color Chart

24 Brilliant Colors

Penco Products provides 24 Brilliant Colors as a standard color selection for all steel products manufactured in our Hamilton, NC facility. The colors shown on this color chart are a true representation of our powder coat finish gloss and sheen.

- **A Superior Process:** Penco's painted products receive the most advanced metal treatment in the industry.
- **Three Tough Finishes:** Penco offers three powder coat finishes that provide a finish that is tough and durable.
- **GREENGUARD Gold Certified:** All products manufactured by Penco Products are GREENGUARD Gold Certified through UL Environment's GREENGUARD Certification Program.

Locker color - 052
Reflex Blue

