



ADDENDUM NO. 5
Appoquinimink School District
Silver Lake Elementary School
Additions and Renovations – Bid Package 'A'
Page 1

January 16, 2020

The bid due date for the following Contracts remains unchanged:

- A-01: Demolition
- A-02: Sitework
- A-03: Concrete
- A-04: Masonry
- A-05: Structural Steel & Miscellaneous Metals
- A-07: Roofing
- A-08: Metal Studs & Drywall
- A-10: Casework & Millwork
- A-11: Folding Partitions
- A-12: Painting
- A-13: Acoustical Ceilings
- A-14: Flooring
- A-15: Resinous Flooring
- A-16: Ceramic Tile
- A-17: Kitchen Equipment
- A-18: Fire Protection
- A-19: Mechanical & Plumbing
- A-20: Building Management Systems
- A-21: Electrical
- A-22: Special Systems
- A-23: Structured Cable
- A-24: Testing & Balancing
- A-25: Telephone System.

Bids will be received until 3:00 p.m. on Tuesday, January 21, 2020. The location for receipt of bids remains Room 144 & 145 of the Appoquinimink School District, Marion Profitt Training Center, 118 South Sixth Street, Odessa, Delaware 19730

The bid due date for the following Contracts has been extended:

- A-06: Carpentry and General Work
- A-09: Glass and Glazing

Bids are being received until 3:00pm on Tuesday, January 28, 2020. The location for receipt of bids remains Room 144 & 145 of the Appoquinimink School District, Marion Profitt Training Center, 118 South Sixth Street, Odessa, Delaware 19730





NOTICE: Attach this addendum to the project manual for this project. It modifies and becomes a part of the contract documents. Work or materials not specifically mentioned herein are to be described in the main body of the specifications and as shown on the drawings. Bidders shall acknowledge receipt of this addendum on the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

Whenever this Addendum modifies a portion of the Project Manual added information is shown as **Bold** and deleted information is shown as ~~striketrough~~.

The contract documents for the above referenced project, dated December 6, 2019 are amended as follows:

GENERAL CLARIFICATIONS:

1. The deadline for questions was January 14, 2020. No further questions from bidders will be considered at this time.
2. This is a clarification in reference to Specification Section 11 68 00 – PLAY FIELD EQUIPMENT AND STRUCTURES (Article 1.3.A). The only manufacturers approved for this project are the two listed in the Specification Section. They are:
 - Miracle Recreation Equipment Company
 - Kompan Playground and Fitness Solutions
3. To clarify the intent of the response to RFI 056, issued in Addendum #4, and A.SKE-7; pressure-treated wood blocking shall be installed as required at the roof edge on the entire building perimeter. Sketch A.SKE-7 (revised as attached) shows the intent of this typical condition.
4. Penn Lighting Associates' light fixture package substitution request, dated January 14, 2020 has been reviewed and rejected by the Architect of Record.

QUESTIONS AND ANSWERS:

1. See attached responses to RFI's 18, 21, 22, 28, 36, 47, 58, 59, 67, 70, 76, 80, 81, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 98, 100, 101, 102, 103, 104, 105, 106, 107, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, & 127.

MODIFICATIONS TO SPECIFICATIONS:

1. Section 000110 – Table of Contents
 - a. Add the following new specifications sections to the Table of Contents:
 - i. Section 047323 – Calcium Silicate Building Stone
 - ii. Section 066000 – Cellular PVC Trim
 - iii. Section 102113 – Plastic Toilet Compartments
 - iv. Section 26 07 73 – Classroom Audio, Safety, & Intercommunication System
 - v. Section 326816.13 – Playground Protective Surfacing





2. Section 004100 – Bid Forms

a. Contract A-06 Carpentry and General Work

- i. Bid form has been replaced to revise the applicable Bid Alternates, see attached.

3. Section 011100 – Summary of Work; make the following pen and ink changes:

a. Contract A-02 – Sitework

- i. Add technical specification section 326816.13 - Playground Protective Surfacing.

ii. Revise paragraph 1 to read as follows:

1. Provide sitework, site clearing, landscaping, ~~fiber lines~~, storm, sanitary and water utilities, concrete & asphalt paving, all exterior concrete, ~~tree grates~~, signage & striping, curbs, walks and topsoil/seeding.

iii. Revise paragraph 41 to read as follows:

41. Provide the ornamental site fence and permanent exterior gates, including all hardware. The excavation, installation of foundations and backfilling for fence piers will be completed by the Sitework Contractor. The masonry will be provided by Masonry contractor. Fence related mounting hardware for permanent exterior gates will be provided by the Sitework Contractor. ~~Access control hardware shall be supplied and installed by Carpentry & General Works Contractor.~~ Access control hardware/software and fire alarm integrations of gate hardware, including terminations, cabling, etc. will be provided by the Special Systems Contractor. The Electrical Contractors shall provide all pathways & electrical requirements to support installation.

iv. Delete paragraph 77 in its entirety. The downspouts all discharge to grade.

v. Add the following paragraphs:

80. This Contractor shall provide for the following within the existing mechanical yard:

- a. Removal of existing concrete (9' x 12') pad on grade that previously supported the above ground oil tank.
- b. Removal of (5) steel bollards and foundations.
- c. Removal of (3) wood piers and foundations.
- d. Restore disturbed area with full depth paving section, per detail drawing C6.

81. This Contractor shall provide submittals for the products and/or materials provided by this contract in accordance with the section 013300 –



**Submittal Procedures, including but not necessarily limited to the following:**

- a. **Sediment controls shown on drawings**
 - b. **Sewer Main pipes and cleanouts**
 - c. **Water meter vault and appurtenances**
 - d. **Water main pipes**
 - e. **Storm drain pipe materials, inlets and manholes**
 - f. **Graded aggregate base material**
 - g. **Concrete for curbing, sidewalks and slabs**
 - h. **Asphalt paving materials**
 - i. **Landscaping materials**
 - j. **Site benches, fencing, bike racks, wheel stops, basketball pole and backboard**
 - k. **Irrigation system design**
 - l. **Signage**
 - m. **Seed mix**
 - n. **Bioretention media and underdrain materials**
- b. Contract A-03 – Concrete
- i. Revise paragraph 15 to read as follows:
 15. Asphalt concrete paving and portland cement concrete paving, sidewalks and curbs shall be provided by others. This contractor shall be responsible for concrete walk-off pads at exterior doors. **This Contractor shall prepare site and provide new trash compactor pad.**
 - ii. Add the following paragraphs:
 30. **This Contractor shall provide concrete footing for the exterior digital signage.**
 31. **This Contractor shall provide two (2) 2'x2' concrete pads for mockup of resinous flooring where directed by the Construction Manager. Mix design and finish to match interior floor slabs.**
 32. **This Contractor shall provide concrete foundations on grade for masonry mock-up walls.**
 33. **This Contractor shall provide 2'x2'x2' thickened slab at each volleyball floor sleeve. Coordinate layout shall be provided by the Carpentry and General Works Contract.**
- c. Contract A-04 – Masonry
- i. Add technical specification section 047323 Calcium Silicate Building Stone.
 - ii. Revise paragraph 20 to read as follows:
 20. Provide all firesafing and fire caulking as required for all work related to masonry work. This includes fire resistant and compressible filler





at the top of all masonry walls, as required. **This also includes at all locations where structural steel penetrates masonry walls.**

- iii. Revise paragraph 23 to read as follows:
 - 23. This contractor shall be responsible for removal of all masonry debris and trash associated with new construction. **The Masonry Contractor must purchase and supply their own individual dumpster for masonry debris and trash associated with new construction.**
- iv. Add the following paragraphs:
 - 33. **Provide mock-up of exterior wall on concrete foundation provided by the Concrete Contractor.**
 - 34. **Provide additional crews as necessary to meet project schedule.**
 - 35. **Provide Calcium Silicate Building Stone.**
 - 36. **During demolition, the Masonry Contractor shall salvage up to 1000 existing face bricks, removal of mortar, and storage onsite where directed by the Construction Manager. Salvaged brick supply will be used for the infill/tooth-in of existing openings during renovation/construction. Coordinate, as necessary, with demolition contractor.**
 - 37. **This Contractor shall provide masonry foundation and surround for the exterior digital signage.**
- d. Contract A-05 – Structural Steel & Misc. Metals
 - i. Delete paragraph 13 in its entirety.
 - ii. Revise paragraph 16 to read as follows:
 - 16. Furnish loose steel lintels, angles, plates and embedded items to the Concrete and Masonry contractors, **including items needed for exterior wall mock-up.**
- e. Contract A-06 – Carpentry and General Works
 - i. Add technical specification Section 102113 Plastic Toilet Partitions.
 - ii. Delete technical specification section 081613 FRP Flush Doors.
 - iii. Revise paragraph 6 to read as follows:
 - 6. Provide hardware for all doors. (Aluminum, FRP, hollow metal, steel and wood) The aluminum and FRP doors **and frames** will be provided by the Glass & Glazing Contractor. Install finish hardware at all hollow metal, steel and wood doors. ~~All low voltage wiring within the wood, steel and hollow metal doors and frames is to be installed by this contractor. All low voltage wiring within the Aluminum &~~





~~FRP doors and frames is to be installed by the Glass & Glazing contractor. Final connection and power supply to be provided by Electrical Contractor. Attend Hardware Coordination Meetings with security contractor, electrical contractor and owner in order to insure complete system is being provided.~~

- iv. Revise paragraph 9 to read as follows:
 - 9. **Permanent exterior gates and hardware for permanent exterior gates will be provided by the Sitework Contractor. and installed by Carpentry & General Works Contractor. The Carpentry and General Works Contractor shall provide permanent cores in exterior gates.** Access control hardware/software and fire alarm integrations of gate hardware, including terminations, cabling, etc. will be provided by the Special Systems Contractor. The Electrical Contractors shall provide all pathways & electrical requirements to support installation.
- v. Revise paragraph 24 to read as follows:
 - 24. Provide toilet and bath accessories. **All soap and paper towel dispensers are owner supplied and installed.**
- vi. Add the following paragraphs:
 - 50. **Provide rough carpentry as need in the construction of the exterior mock-up wall.**
 - 51. **This Contractor shall provide layout of volleyball floor sleeves and coordination with the Concrete Contractor.**
- f. Contract A-07 – Roofing
 - i. Revise paragraph 1 to read as follows:
 - 1. Provide all roofing, including accessories for a complete and watertight installation. System shall include, but not be limited to: tapered insulation, PVC materials, adhesives and fasteners, sealants, insulation (including design), flashings, cants, copings, reglets and counter flashings, roof-edge specialties, crickets, walkway pads, downspouts, lamb tongue, mechanical & plumbing penetrations, roof overflow drains , temporary openings at all penetrations and temporary and permanent flashing at all mechanical, **electrical, and kitchen** equipment curbs.
 - ii. Add the following paragraph:
 - 27. **Alternate No. 12: The roofing contractor shall coordinate with the Electrical Contractor and flash all roof penetrations associated to the Lightning Protection System. Lightning Protection System shall be provided by the Electrical Contractor.**





- g. Contract A-08 – Metal Studs & Drywall
 - i. Add technical specification section 066000 Cellular PVC Trim.
 - ii. Revise paragraph 12 to read as follows:
 - 12. Include molded shapes. **Refer to paragraph 38, within this Contractor's scope of work.**
 - iii. Add the following paragraph:
 - 51. **Provide CFMF as need in the construction of the exterior mock-up wall.**
- h. Contract A-09 – Glass & Glazing
 - i. Revise paragraph 5 to read as follows:
 - 5. Install finish hardware for aluminum and FRP doors **and frames** only. Hardware for all FRP & aluminum doors will be supplied by Contract A-06, Carpentry & General Works and installed by this subcontractor.
 - ii. Delete paragraph 18 in its entirety.
- i. Contract A-10 – Casework and Millwork
 - i. Revise paragraph 9 to read as follows:
 - 9. Coordinate blocking requirements with Contract ~~A-05~~ **A-06**: Carpentry & General Works.
- j. Contract A-12 – Painting
 - i. Revise paragraph 1 to read as follows:
 - 1. Provide all painting. (all walls, **soffits**, and ceilings indicated on the finish schedule).
 - ii. Revise paragraph 5 to read as follows:
 - 5. Paint exposed piping ~~and~~ ductwork (sprinkler, plumbing, electrical), **exposed ceilings, and structures**, in accordance with the Drawings and Specifications.
- k. Contract A-14 – Flooring
 - i. Revise paragraph 3 to read as follows:
 - 3. Provide all resilient flooring, resilient base, thresholds reducer strips, leveling compounds and accessories. This work shall include all flooring (VCT, LVT & vinyl sheet flooring), base, stair treads, moldings, adhesives, fasteners and accessories. Per ASD, the floor polishing of resilient flooring will be completed by ASD. Do NOT





include costs in base bid for polishing of these floors. **Coordinate with Ceramic Tile Contractor for transitions between materials provided by this contract and stone thresholds.**

- ii. Revise paragraph 24 to read as follows:
 - 24. Provide a ~~\$15,000~~ **\$40,000** allowance, included in base bid, specific to repair of existing concrete slab to remain prior to installation of new flooring system. Allowance to be used at the discretion of the Construction Manager.

- l. Contract A-15 – Resinous Flooring
 - i. Revise paragraph 7 to read as follows:
 - 7. Provide multiple moisture tests, of all flooring systems, prior to installation. **Provide vapor retarding sealer as needed and/or required by the technical specifications.**

 - ii. Add the following paragraphs:
 - 15. **This Contractor shall provide two (2) 2'x2' mockups of resinous flooring on concrete slabs provided by the Concrete Contractor. Place where directed by the Construction Manager.**
 - 16. **Provide metal trim pieces (Schluter strips, etc.) integral to the system installation as indicated in the construction documents.**

- m. Contract A-17 – Kitchen Equipment
 - i. Revise paragraph 11 to read as follows:
 - 11. Provide all caulking and sealants for proper installation and in accordance with public health regulations. **Provide fire stopping of any penetration associated with this contract through smoke and fire partitions.**

- n. Contract A-18 – Fire Protection
 - i. Revise paragraph 5 to read as follows:
 - 5. Provide firesafing/**firestopping of any penetration associated with this contract through smoke and fire partitions.**

- o. Contract A-19 – Mechanical & Plumbing
 - i. Revise paragraph 27 to read as follows:
 - 27. **Roof curbs, pipe, hoods and vent equipment & supports are to be supplied by contractor in which the units, piping, etc. are being supplied. The openings for the curbs in the roofing materials shall be cut by the Roofing Contractor. Openings in the metal deck shall**





be cut by the contractor in which the units are being provided. The roofing contractor shall provide all flashing and sealing of the curbs. Any wood blocking required will be provided by Carpentry & General Works Contractor. ~~This Contractor shall provide delegated design of roof curbs and roof mounted equipment supports, refer to specification Section 077200—Roofing Accessories.~~

- ii. Delete paragraph 19 in its entirety.
- iii. Delete paragraph 37 in its entirety.

p. Contract A-21 – Electrical

- i. Revise paragraph 22 to read as follows:

22. Provide stage lighting systems including fixtures, controls, wiring, light grids, supports and attachments. **Provide a \$250,000 allowance for the stage lighting system as outlined in specification section 260930 – Dimming Controls, included in base bid, to be used at the discretion of the Construction Manager.**

- ii. Add the following paragraph:

38. **This Contractor shall install owner furnished exterior digital signage (Daktronics Galaxy), and required electrical circuit from Town of Middletown dedicated services entrance/meter. (BPA ADDENDUM NO. 5)**

4. Section 012300 – Alternates; make the following pen and ink changes:

- a. Revise Alternate No. 5a to read as follows:

Alternate No. 5a: Change Gymnasium Floor to Wood (Alt. No. 1 – Base Bid)

- a. Base Bid: Provide an LVT floor in the new gymnasium **and Fitness 503**, if not selecting Alternate No. 1.
- b. Alternate: Change the floor from LVT to wood in the new gymnasium **and Fitness 503**, if not selecting Alternate No. 1.

- b. Revise Alternate No. 5a to read as follows:

Alternate No. 5b: Change Gymnasium Floor to Wood (Alt. No. 1 – Alternate)

- a. Base Bid: Provide an LVT floor in the new gymnasium **and Fitness 503**, if selecting Alternate No. 1.
- b. Alternate: Change the floor from LVT to wood in the new gymnasium **and Fitness 503**, if selecting Alternate No. 1.

5. Section 013700 – BIM Coordination





- a. See revised Scope Participant List, attached.
6. Section 047323 – Calcium Silicate Building Stone
 - a. Add new specification section to the project manual.
 7. Section 066000 – Cellular PVC Trim
 - a. Add new specification section to the project manual.
 8. Section 10 14 23 – Panel Signage; make the following pen and ink changes:
 - a. Revise the following paragraphs:
 - i. 3.4.A.3. shall read as follows: Quantity: 40
 - ii. 3.4.B.3. shall read as follows: Quantity: 80
 - iii. 3.4.C.3. shall read as follows: Quantity: 25
 - iv. 3.4.D.3. shall read as follows: Quantity: 25
 - v. 3.4.E.3. shall read as follows: Quantity: 0
 - vi. 3.4.F.3. shall read as follows: Quantity: 5
 - vii. 3.4.G.3. shall read as follows: Quantity: 20
 9. Section 102800 – Toilet, Bath, and Laundry Accessories; make the following pen and ink changes:
 - a. Revise the following paragraphs:
 - i. 2.2.A. Remove AJW Architectural Products from list of manufacturers
 - ii. 2.4.A. Remove AJW Architectural Products from list of manufacturers
 - iii. 2.5.B shall read as follows:
 - 2.5 WARM-AIR DRYERS
 - A. Source Limitations: Obtain warm-air dryers from single source from single manufacturer.
 - B. Warm-Air Dryer:
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Dyson Airblade V, or a comparable product by one of the following:
 - a. World Dryer
 - b. Excel Dryer Inc.
 2. Description: High-speed, warm-air hand dryer for rapid hand drying.
 3. Mounting: Surface mounted.
 4. Operation: Electronic-sensor activated.
 5. Cover Material and Finish: Brushed Stainless steel, No. 4 finish (satin).
 6. Electrical Requirements: As indicated on Drawings.
 - C. Accessories:





1. HEPA Filter
2. Noise Reduction Nozzle.
3. 16x32 stainless wall guard, 89S by Excel Dryer Inc, or equal.
4. ADA-Compliant Recess Kit (40502) (if required),
Brushed Stainless steel.

10. Section 116623 – Gymnasium Equipment; make the following pen and ink changes:

a. Revise the following paragraphs:

- i. 2.2.E.3.a. shall read as follows:
 1. Operation: Electric with integral gear-drive motor, with limit switches preset to goal heights, and one detachable electric control device(s).
- ii. 2.2.G. shall read as follows:
 1. Winch: Hoist, consisting of heavy-duty, fully enclosed worm-gear, brake, cable drum, cable, and fittings, for mounting on wall with equipment mounting board; designed to move and hold backboard in any raised or lowered position.
- iii. 2.2.K.1. shall read as follows:
 1. Break-away Basketball Goal: Materials, dimensions, and fabrication per manufacturer's standard design 503576
- iv. 2.2.N. shall read as follows:
 1. Backboard Safety Strap: Designed for backboard indicated to instantly to stop a load from falling due to cable breakage, cable clamp failure, any increase in speed due to failure or back drive of a winch, or supporting structure.
- v. 2.3.B.1. shall read as follows:
 1. Floor Plate: Manufacturer's standard hinged access cover, designed to be flush with adjacent flooring
- vi. 2.3.C.1. shall read as follows:
 1. Draper Inc.; Volleyball System, No. PVS 500004
- vii. 2.5.D.5. shall read as follows:
 1. Installation Method: Z-clip top and bottom.
- viii. 2.5.D.7. shall read as follows:
 1. Wall cutouts – provide as required

11. Section 116800 – Play Field Equipment and Structures

- a. REPLACE section in its entirety with new attached section 116800.

12. Section 260140 – Wiring Devices; make the following pen and ink changes:

a. Revise the following paragraphs:

- i. Paragraph 2.3B, ADD subparagraph 1: *1. All receptacles shall be tamper resistant.*





13. Section 26 07 71, TELECOMMUNICATIONS SYSTEM

- a. REPLACE section in its entirety with new attached section 26 07 71.

14. Section 26 07 73, CLASSROOM AUDIO, SAFETY, & INTERCOMMUNICATION SYSTEM

- a. Add new specification section to the project manual.

MODIFICATIONS TO DRAWINGS:

1. Civil Drawings – The following sheets have been replaced in their entirety:

- a. C3 – Site Plan
 - i. Revisions to trash compactor location and extent of concrete pad.
 - ii. Updated detail references for various site elements.
- b. C4 – Grading & Utility Plan
 - i. Revisions to trash compactor location and associated grades.
- c. C6 – Site Details
 - i. Updated details have been added for the basketball goal and flag pole.

2. Structural Drawings

- a. S11.A – Revisions to structural framing at mechanical unit AHU/A1.
- b. S11.C – Revisions to structural framing at mechanical unit ERU/3.
- c. S11.F – Revisions to structural framing at mechanical units ERU/1 & ERU/2.

3. Architectural Drawings

- a. The following sheets have been replaced in their entirety:
 - i. Sheet AD.1: Revisions to roof demolition.
 - ii. Sheet A20.1: Additional Roof type and Gravity vent info.
 - iii. Sheet A50.1: Door Hardware sets.
 - iv. Sheet A50.5: Vapor barrier detail at doors.
 - v. Sheet A50.8: Vapor barrier detail at doors.
 - vi. Sheet A51.3: Vapor barrier detail at windows.
 - vii. Sheet A51.4: Vapor barrier detail at windows.
 - viii. Sheet A51.5: Vapor barrier detail at windows.
- b. Architectural Sketches:
 - i. The following sketches are incorporated as part of responses to RFI's
 1. A.SKE-3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 15.
 2. A.SKE-7 has been revised.





4. Interior Drawings – The following sheets have been replaced in their entirety:
- a. A90.A – FINISH PLAN AREA ‘A’
 - i. Identified start and stop of finishes for ‘STAGE (105)’
 - b. A90.B – FINISH PLAN AREA ‘B’
 - i. Finish tags have been changed in the following rooms:
 - 1. 601, 602, 603, 604, 605, 606, & 609
 - c. A90.A – FINISH PLAN AREA ‘D’
 - i. Changes to the finish schedule include:
 - 1. AWD-1 now references the gym in the description
 - 2. WF-1 now references only the stage
 - 3. VCT-1-9 has series name has been updated from ‘AZROCK’ to ‘COLOR ESSENSE’
 - d. A90.A – FINISH PLAN AREA ‘D’ ALTERNATE
 - i. Finish tags have been changed in the following rooms to reflect the correct identification of wood flooring AWD-1:
 - 1. GYMNASIUM (624)
 - 2. FITNESS (503)
 - ii. Added note “FULL HEIGHT TILE WET WALL, WAINSCOT TILE ALL OTHER WALLS @ TOILET 506, 507, 508, 509. SEE ELEV. 3&4 / A92.A”.
 - e. A91.A – CASEWORK PLANS AND ELEVATIONS
 - i. Changes to all overhead cabinets from 12” to 15” deep.
 - ii. Cubbies have been changed to be 15” deep from the 12” deep previously changed in Addendum no. 4
 - iii. Wardrobe cabinets have been changed to show one continuous door instead of a “faux 2-door” appearance.
 - iv. Typical rooms are shown, notes identifying similar rooms have been added adjacent to the room tags shown on plan.
 - v. Note (19) added under “GENERAL NOTES - CASEWORK” to clarify the extent of marker boards, tack boards, and interactive screens shown on the casework drawings.
 - f. A91.B – CASEWORK PLANS AND ELEVATIONS
 - i. Changes to all overhead cabinets from 12” to 15” deep.





- ii. Cubbies have been changed to be 15" deep from the 12" deep previously changed in Addendum no. 4
 - iii. Wardrobe cabinets have been changed to show one continuous door instead of a "faux 2-door" appearance.
 - iv. Typical rooms are shown, notes identifying similar rooms have been added adjacent to the room tags shown on plan.

 - g. A91.C – CASEWORK PLANS AND ELEVATIONS
 - i. Changes to all overhead cabinets from 12" to 15" deep.
 - ii. Wardrobe cabinets have been changed to show one continuous door instead of a "faux 2-door" appearance.

 - h. A91.D – CASEWORK PLANS AND ELEVATIONS
 - i. Changes to all overhead cabinets from 12" to 15" deep.
 - ii. Wardrobe cabinets have been changed to show one continuous door instead of a "faux 2-door" appearance.

 - i. A91.E – CASEWORK PLANS AND ELEVATIONS
 - i. Changes to all overhead cabinets from 12" to 15" deep.
 - ii. Wardrobe cabinets have been changed to show one continuous door instead of a "faux 2-door" appearance.

 - j. A91.F – CASEWORK SECTIONS
 - i. Changes to all overhead cabinets from 12" to 15" deep.
 - ii. Wardrobe cabinets have been changed to show one continuous door instead of a "faux 2-door" appearance.
 - iii. Cubbies have been changed to be 15" deep from the 12" deep previously changed in Addendum no. 4

 - k. A92.A – INTERIOR ELEVATIONS
 - i. Drawing 1 – CORRIDOR TILE PATTERN: Tile patterns shown for clarification of pattern repetition
5. Kitchen/Food Service Drawings
- a. K-103 – Kitchen Plumbing Rough-in Plan
 - i. Rough-in location for hand sink added.

 - b. K503 – Ventilator Details





- i. Ventilator elevation has increased to 83" above finished floor.

6. Mechanical Drawings

- a. Drawing M40.1 SCHEDULES MECHANICAL – ROOFTOP UNIT SCHEDULE
 - i. ADD "Supply fan VFD w/shaft grounding ring" to note #3.
- b. Drawing M40.1 SCHEDULES MECHANICAL – ROOFTOP UNIT SCHEDULE (ALTERNATE)
 - i. ADD "Supply fan VFD w/shaft grounding ring" to note #2.

7. Plumbing Drawings

- a. Drawing P40.1 Schedules Plumbing
 - i. Floor drain F-33 shall be replaced with floor drain F-33A in rooms 110, 111, 112, & 113 shall be of clamping style, compatible with the installation of sheet vinyl flooring.
 - ii. The following are acceptable manufacturers and their product models for floor drain F-33A:
 1. Zurn Z 400 H – 6/9H
 2. Wade 110 – FC6/9
 3. Mifab F1100 – FC
 - iii. Floor cleanouts in rooms 110, 111, 112 and 113 shall be of a clamping style. The following are acceptable manufacturers and their product models:
 1. Mifab C1100-RFC
 2. Wade 8000-FC
 3. Watts CO-200-RFC7
 4. Josam 55000-CFC
 5. Blücher BCO-220

8. Electrical Drawings

- a. Drawing E10.B – FLOOR PLAN – AREA "B" – LIGHTING:
 - i. ADD (1)type "A" fixture and (2)single pole wall switch control. Refer to Sketch SKE.04.
 - ii. REVISE lighting layout in COTS 611. Refer to Sketch SKE.04.
- b. Drawing E30.3 – LEGEND & SCHEDULES – ELECTRICAL:
 - i. REVISE Light Fixture Schedule. Refer to drawing E30.1.
 - ii. The following changes are made to the LIGHT FIXTURE SCHEDULE found on sheet E30.3





1. The following additional changes are made to column with heading "PRE-APPROVED CATALOG NUMBER (LS)"

<u>TYPE</u>	<u>PRE-APPROVED CATALOG NUMBER (LS)</u>
P	PORTFOLIO - LSR8B50D010TEP
PE	PORTFOLIO - LSR8B50D010TEP-LV4R1
Q	PORTFOLIO - LSRUD6B20D010P
Y	SURE-LITES - CX71WHSDR6

End of Addendum No. 5





REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 018

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 24 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A92.A Elevation 1 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Old World Tile

Date: 24 December 2019

1.) Submitted Question.

Please reference sheet A92.A Elevation 1. Can you confirm that the 1st and 3rd accent stripe in the tile pattern is random with respect to the placement of WT-2, WT-3, WT-4, and WT-8 with an equal amount of each accent tile?

RESPONSE:

Refer to drawing 1/A92.A issued in Addendum no. 5 for clarification of tile patterns for the corridor.

1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 021

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 26 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet Date: 26 December 2019

- 1.) Base bid for the Gymnasium Floor is LVT (as see in the Alternates and not the finish plans)
 - a. It does not clarify what or who owns the stripping / paint as shown on the plans.

RESPONSE:

- 1.) Refer to response to RFI #111.

Response By: J.D. Bartlett, EDiS Company Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 022

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 26 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet

Date: 26 December 2019

- 1.) Submitted Question.

For the base bid, the stage is to get the athletic wood floor?

RESPONSE:

Refer to revised finish plan, A90.A. Issued via Addendum #5.

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 028

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 27 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Reed Associates

Date: 27 December 2019

- 1.) Submitted Question.

What hardware is required for the doors on the stage front?

RESPONSE:

- 1.) Refer to door schedule and specifications, as revised in Addendum #5.

Response By: J.D. Bartlett, EDiS Company Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 036

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 30 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Joseph T. Richardson

Date: 30 December 2019

- 1.) Submitted Question.

There are a lot more “P” and “M” drawings that printed out that are not listed on the 0.2 drawing index page. Some of them referenced area “D” Alt. #1 and some that have a lot of hand-written notes on them. Please confirm the complete list of drawings.

RESPONSE:

- 1.) Refer to attached MEP drawing index.

Response By: Oscar Enderica Date: 1/15/2020

Drawing List

M0.0	LEGENDS MECHANICAL
MD.A1	DEMOLITION FLOOR PLAN ARE "A" DUCTWORK
MD.A2	DEMOLITION FLOOR PLAN ARE "A" DUCTWORK
MD.B1	DEMOLITION FLOOR PLAN ARE "A" DUCTWORK
MD.B2	DEMOLITION FLOOR PLAN ARE "A" DUCTWORK
M10.A	FLOOR PLAN AREA "A" MECHANICAL DUCTWORK
M10.B	FLOOR PLAN AREA "B" MECHANICAL DUCTWORK
M10.C	FLOOR PLAN AREA "C" MECHANICAL DUCTWORK
M10.D	FLOOR PLAN AREA "D" MECHANICAL DUCTWORK
M10.DA	FLOOR PLAN AREA "A" ALT #1 MECHANICAL
M11.B	MEZZANINE PLAN AREA "B" MECHANICAL DUCTWORK
M11.C	MEZZANINE PLAN AREA "C" MECHANICAL DUCTWORK
M12.A	FLOOR PLAN AREA "A" MECHANICAL PIPING
M12.B	FLOOR PLAN AREA "B" MECHANICAL PIPING
M12.C	FLOOR PLAN AREA "C" MECHANICAL PIPING
M20.A	ROOF PLAN AREA "A" MECHANICAL
M20.D	ROOF PLAN AREA "D" MECHANICAL
M20.DA	ROO FPLAN AREA "D" ALT #1 MECHANICAL
M30.1	DETAILS MECHANICAL
M30.2	DETAILS MECHANICAL
M30.3	DETAILS MECHANICAL
M40.1	SCHEDULES MECHANICAL
M40.2	SCHEDULES MECHANICAL
M40.3	SCHEDULES MECHANICAL
FD.A	DEMOLITION FLOOR PLAN AREA "A" FIRE PROTECTION
FD.B	DEMOLITION FLOOR PLAN AREA "B" FIRE PROTECTION

Drawing List

F10.A	FLOOR PLAN AREA "A" FIRE PROTECTION
F10.B	FLOOR PLAN AREA "B" FIRE PROTECTION
F10.C	FLOOR PLAN AREA "C" FIRE PROTECTION
F10.D	FLOOR PLAN AREA "D" FIRE PROTECTION
F10.DA	FLOOR PLAN AREA "D" ALT #1 FIRE PROTECTION
F30.1	DETAILS FIRE PROTECTION
F40.1	SCHEDULES FIRE PROTECTION
PD.A	DEMOLITION FLOOR PLAN AREA "A" PLUMBING
PD.B	DEMOLITION FLOOR PLAN AREA "B" PLUMBING
P10.A	FLOOR PLAN AREA "A" BELOW SLAB PLUMBING
P10.B	FLOOR PLAN AREA "B" BELOW SLAB PLUMBING
P10.C	FLOOR PLAN AREA "C" BELOW SLAB PLUMBING
P10.D	FLOOR PLAN AREA "D" BELOW SLAB PLUMBING
P10.DA	FLOOR PLANS AREA "D" ALT #1 PLUMBING
P11.A	FLOOR PLAN AREA "A" ABOVE SLAB PLUMBING
P11.B	FLOOR PLAN AREA "B" ABOVE SLAB PLUMBING
P11.C	FLOOR PLAN AREA "C" ABOVE SLAB PLUMBING
P11.D	FLOOR PLAN AREA "D" ABOVE SLAB PLUMBING
P13.1	ENLARGED KITCHEN PLAN AREA "A" PLUMBING
P20.A	ROOF PLAN AREA "A" PLUMBING
P20.B	ROOF PLAN AREA "B" PLUMBING
P20.C	ROOF PLAN AREA "C" PLUMBING
P20.D	ROOF PLAN AREA "D" PLUMBING
P20.DA	ROOF PLAN AREA "D" ALT #1 PLUMBING
P30.1	DETAILS PLUMBING

Drawing List

P30.2	DETAILS PLUMBING
P30.3	RISER DIAGRAMS PLUMBING
P40.1	SCHEDULES PLUMBING
ED.A1	DEMOLITION FLOOR PLAN AREA "A" LIGHTING
ED.A2	DEMOLITION FLOOR PLAN AREA "A" POWER
ED.B1	DEMOLITION FLOOR PLAN AREA "B" LIGHTING
ED.B2	DEMOLITION FLOOR PLAN AREA "B" POWER
E10.A	FLOOR PLAN AREA "A" LIGHTING
E10.B	FLOOR PLAN AREA "B" LIGHTING
E10.C	FLOOR PLAN AREA "C" LIGHTING
E10.D	FLOOR PLAN AREA "D" LIGHTING
E10.DA	FLOOR PLANS AREA "D" ALT #1 ELECTRICAL
E11.A	FLOOR PLAN AREA "A" POWER
E11.B	FLOOR PLAN AREA "B" POWER
E11.C	FLOOR PLAN AREA "C" POWER
E11.D	FLOOR PLAN AREA "D" POWER
E12.A	FLOOR PLAN AREA "A" SPECIAL SYSTEMS
E12.B	FLOOR PLAN AREA "B" SPECIAL SYSTEMS
E12.C	FLOOR PLAN AREA "C" SPECIAL SYSTEMS
E12.D	FLOOR PLAN AREA "D" SPECIAL SYSTEMS
E12.DA	FLOOR PLAN AREA "D" ALT #1 SPECIAL SYSTEMS
E13.1	ENLARGED KITCHEN PLAN AREA "A" POWER
E20.A	ROOF PLLAN AREA "A" ELECTRICAL
E20.D	ROOF PLLAN AREA "D" ELECTRICAL
E20.DA	ROOF PLLAN AREA "D" ALT #1 ELECTRICAL

Drawing List

E30.1	DETAILS & SCHEDULES ELECTRICAL
E30.2	SINGLE LINE DIAGRAM ELECTRICAL
E30.3	LEGENDS & SCHEDULES ELECTRICAL
E30.4	SCHEDULES ELECTRICAL
E30.5	PANEL SCHEDULES ELECTRICAL
E30.6	PANEL SCHEDULES ELECTRICAL
E50.1	SITE PLAN ELECTRICAL

Drawing List



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 047

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 30 DECEMBER 2019

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Thompson & Sons Contracting

Date: 30 December 2019

- 1.) Submitted Question.

Need to know if there's details for the playground?

RESPONSE:

- 1.) Refer to revised specification section, issued in Addendum #5.

Response By: J.D. Bartlett, EDiS Company

Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 058

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 02 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A11.B, A20.1 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Conventional Builders, Inc.

Date: 02 January 2020

- 1.) Submitted Question.

Drawing (A)S11.B pod roof framing does not match drawing A20.1 which show pod framing on existing roof. Can more details be provided?

RESPONSE:

- 1.) See Sheet A20.1 re-issued with addendum #5, details 1 and RA-11 for portion of the roof deck to be removed.

Response By: Oscar Enderica Date: 1/13/2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 059
FROM: J.D. BARTLETT, EDiS COMPANY DATE: 02 JANUARY 2020
PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS
DWG. # / DETAIL: S512 / 4 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Conventional Builders, Inc. Date: 02 January 2020

- 1.) Drawing S512 section 4 shows 3/8 U-Bracket, will this be under the steel contract?

RESPONSE:

- 1.) The 3/8" U-Bracket will be provided by the Structural Steel & Misc. Metal Contractor.

Response By: J.D. Bartlett, EDiS Company Date: 13 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 067

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 02 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: J&G Building Group

Date: 02 January 2020

- 1.) Submitted Question.

I haven't located a spec section for the PVC trim, nor who it would belong too. Maybe this is assumed?

RESPONSE:

- 1.) See new specification section 06 60 00 - CELLULAR PVC TRIM, issued in Addendum #5.

Response By: Bob Grove

Date: 14 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 070

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 02 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A50.1 SPEC. SECTIONS: 087100 PAGE:

REQUEST:

Submitted By: Delaware Brick

Date: 02 January 2020

- 1.) Submitted Question.

After reviewing the door schedule on plan A50.1 and hardware spec section 08 71 00, the door numbers on A50.1 do not match the door numbers on the hardware sets in spec section 08 71 00.

RESPONSE:

- 1.) Refer to door schedule and specifications, as revised in Addendum #5.

Response By: J.D. Bartlett, EDiS Company

Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 076

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 03 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: J&B Caulkers, Inc.

Date: 03 January 2020

- 1.) Will the cast stone to cast stone and cast stone to masonry at coping, sills & surrounds point with mortar or caulk?

RESPONSE:

- 1.) Sealant shall be installed at these locations.

Response By: Bob Grove

Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 080

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Specialty Finishes Date: 06 January 2020

- 1.) Are soap dispensers and/or paper towel dispensers required at sinks locations other than toilet rooms?
- 2.) Markerboard and tack board locations are not clearly indicated on the drawings. Please clarify all locations required

RESPONSE:

- 1.) All soap dispensers and/or paper towel dispensers shall be supplied and installed by the district supply vendor.
- 2.) Refer to sheets A91.X sheets for locations of markerboards and tackboards.

Response By: Bob Grove Date: 14 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 081

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Specialty Finishes Date: 06 January 2020

- 1.) Provide toilet partition complete specifications.
- 2.) Provide plans for all required cubicle curtains and track locations.
- 3.) Provide the location(s) for all required building plaque(s).
- 4.) At restrooms, is Keynote 10Z soap dispensers required at Keynote 22Q and 22R lavatories?
- 5.) Provide an enlarged plan for Custodial Office in reference to Drawing A60.2 Locker Type B.
- 6.) Provide architectural drawings for all required flagpole locations.
- 7.) Provide a signage schedule or drawings indicating signage locations for Section 101423 Panel Signage
- 8.) Provide drawings (including detail drawings) for stage curtains and curtain track.
- 9.) Provide Section 090600 as referenced in Section 116143, Part 2.03.C.
- 10.) Provide drawings indicating all required corner guard locations.

RESPONSE:

- 1.) See specification section as part of Addendum #5.
- 2.) See sketch A-SKE-15 issued as part of Addendum #5.
- 3.) See sketch A-SKE-13 issued as part of Addendum #5.
- 4.) All soap dispensers and/or paper towel dispensers shall be supplied and installed by the district supply vendor.
- 5.) There are no lockers required in room 121A Custodial Office
- 6.) See sketch A-SKE-12 issued as part of Addendum #5.



- 7.) Refer to Article 3.4 of Specification Section 10 14 23, which contains the Interior Signage schedule.
- 8.) Review answer to RFI 96 for information regarding stage curtains.
- 9.) Specification Section 090600 is hereby deleted from the project.
- 10.) Corner Guards shall be deleted from this project.

Response By: Bob Grove Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 086

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: 101100 PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc Date: 06 January 2020

- 1.) Substitution Request - Specification Section 101100. The contractor has requested that Platinum Visual be approved as an equal as detailed in the attached request.

RESPONSE:

- 1.) Subject to the requirements of Specification Section 10 11 00 Visual Display Units, the submitted product is approved.

Response By: Bob Grove Date: 15 January 2020



SUBSTITUTION REQUEST (During the Bidding Phase)

Project: Silver Lake Elementary School Additions & Renovations
To: R.G. Architects, LLC.
Re: Request for manufacturer substitution
Substitution Request Number:
From: Linda Howarth / Union Wholesale Co.
Date: 12-06-20
A/E Project Number:
Contract For: Additions & Renovations

Specification Title: Visual Display Units
Section: 101100 Page: 3, 4
Description: Markerboards, tackboards
Article/Paragraph: Part 2 - Products

Proposed Substitution: BTS Series MB/TB & FCS Series Markerwall 1/2" Particleboard recommended
Manufacturer: Platinum Visual Address: 1451 E. Sixth Street Phone: (800) 498-2990
Trade Name: Platinum Visual Systems Corona, CA Model No.: BTS, FCS

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
Same warranty will be furnished for proposed substitution as for specified product.
Same maintenance service and source of replacement parts, as applicable, is available.
Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
Proposed substitution does not affect dimensions and functional clearances.
Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Linda Howarth
Signed by:
Firm: Union Wholesale Company
Address: 500 E. Front Street
Wilmington, DE 19801
Telephone: 302-656-4462

A/E's REVIEW AND ACTION

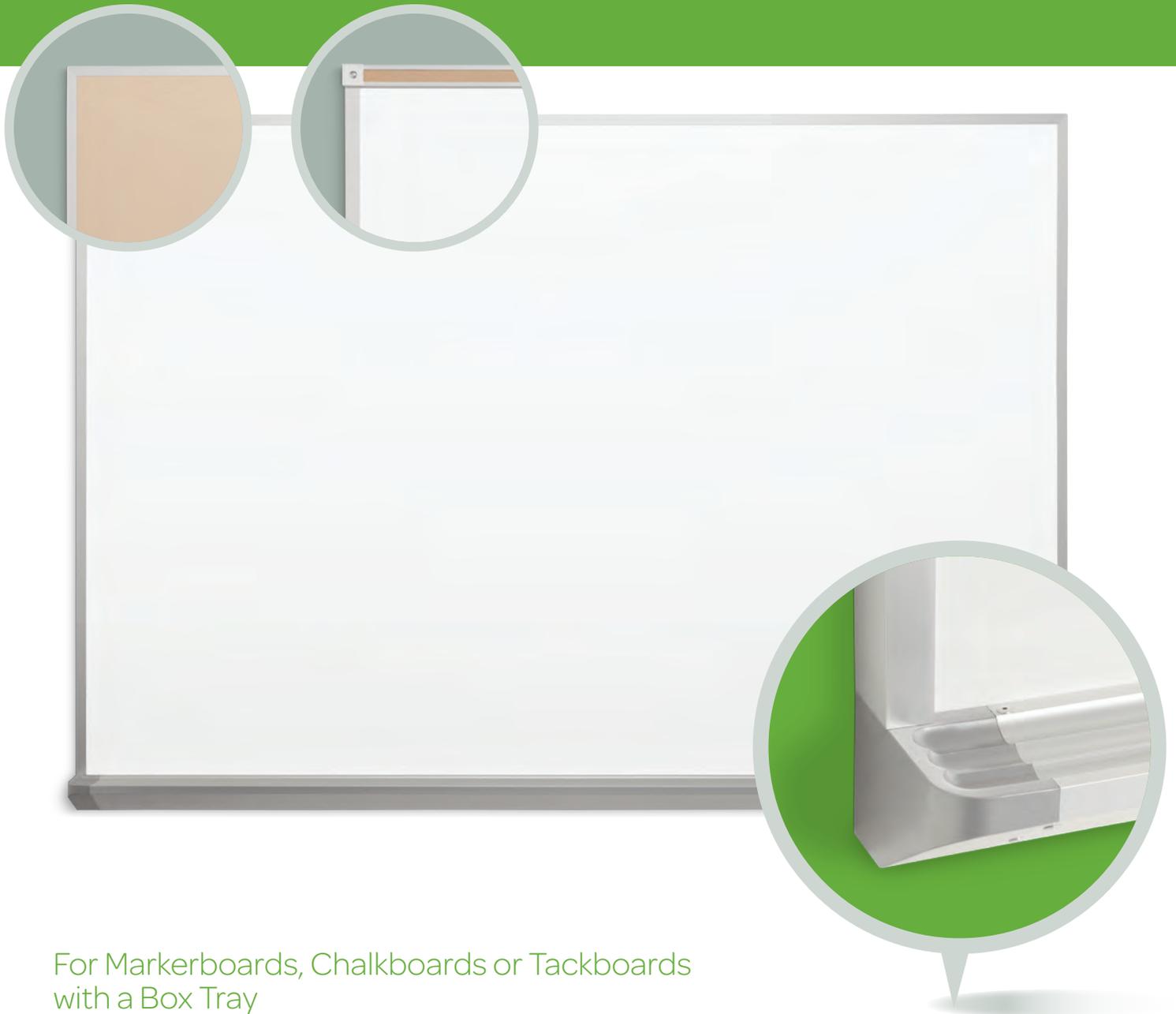
- Substitution approved - Make submittals in accordance with Specification Section 01330.
Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
Substitution rejected - Use specified materials.
Substitution Request received too late - Use specified materials.

Signed by:

Date:

Supporting Data Attached: [] Drawings [X] Product Data [] Samples [] Tests [] Reports []

Boards: Box Tray Trim System [BTS]



For Markerboards, Chalkboards or Tackboards with a Box Tray

- Porcelain-on-steel writing surfaces with a lifetime warranty.
- All extrusions are manufactured with high quality aluminum alloy to exacting specifications.
- Heavy-duty aluminum extrusions come standard in clear satin anodized. Also available in optional dark bronze anodized or a variety of powder coated finishes.
- Full length extruded aluminum box tray with cast aluminum end closures.



Suggested Specifications

PART 1: *general*

1.1 SECTION INCLUDES

- A. Porcelain-on-Steel Markerboards.
- B. Porcelain-on-Steel Chalkboards.
- C. Colored Cork Tackboards.
- D. Visual Display Board Accessories.

1.2 RELATED SECTIONS

- A. Section 06100 – Wood or Steel Blocking.
- B. Section 09000 – Gypsum Wall Board.
- C. Section 09720 – Vinyl Wall Coverings.
- D. Section 09900 – Paints and Coatings.

1.3 REFERENCES

- A. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
- B. ASTM E84 – Test Method for Surface Burning and Characteristics of Building Materials.
- C. ASTM C540 – Gloss Test for Porcelain Enamel Steel (Porcelain Enamel Institute PEI-501).

1.4 SUBMITTALS

- A. Submit products and samples under provisions of Section 01300.
- B. Product Data: Provide technical data for products specified. Include Material Safety Data Sheets, when applicable.
- C. Shop Drawings: Provide shop drawings for each type of visual display board specified including section details indicating trim, face, core and backing materials, dimensions, joint locations and special anchor details.
- D. Color Samples: Submit set of color chips displaying manufacturer's full range of colors and finishes.
- E. Product Samples: Submit samples not less than twelve inches square and framed on two adjacent sides, to illustrate materials, finish, color, and configuration of each type of visual display board required.
- F. Care and Maintenance Data: Provide data on cleaning requirements, stain removal, and recommended maintenance precautions.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's instructions for handling and storage of Visual Display Boards.

1.6 PROJECT CONDITIONS

- A. Field measure prior to fabrication to ensure proper fit.
- B. General contractor to maintain proper climate before, during and after installation.

1.7 WARRANTY

- A. Submit manufacturer's "Life of Building" warranty, stating that under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations, Porcelain-on-Steel Markerboards and Chalkboards are guaranteed for the life of the building.
- B. Warranty shall cover replacement of defective Porcelain-on-Steel Markerboards and Chalkboards due to discoloration, excessive fading of color, crazing, cracking or flaking. Warranty does not cover the cost of removal or reinstallation.

PART 2: *products*

2.1 MANUFACTURERS

- A. Provide visual display boards as manufactured by Platinum Visual Systems™, Corona, California. Tel.: (800)498-2990 Fax: (951)817-9900. Email: info@pvsusa.com. Website: www.pvsusa.com.
- B. Substitutions: See Section 01600 – Product Requirements.

2.2 MARKERBOARDS AND CHALKBOARD MATERIALS

- A. Steel Face Sheets: Writing surface will be Writanium® 28 gauge steel face with porcelain enamel finish fused to the steel sheet using a continuous coil process.
 - 1. Markerboard and Chalkboard surface shall be fused at a temperature of 1450° and 1200° respectively.

2. The gloss of the writing surface will not increase more than three units when subjected to wearability tests specified in testing procedures for 30 hours.
- B. Core Material: 1/2" particleboard.
 - C. Backing Material: .005" aluminum backing sheet.
 - D. Metal Trim and Accessories: 6063 aluminum alloy with a T5 temper.
 - E. Adhesive: As recommended by manufacturer for project conditions.

2.3 PORCELAIN ON STEEL MARKERBOARDS AND CHALKBOARDS

- A. Provide Markerboards and Chalkboards for project from manufacturer's BTS Series.
 1. Metal trim and accessories: BTS Series aluminum extrusions with clear satin anodized finish.
 - a. Chalktray CR340: Standard continuous hollow box chalktray with ribbed section and molded aluminum end closures.
 - b. Map rail MR411: Standard 1" high continuous rail with colored cork insert as follows:
 - 1) Endstops: One pair per Map rail.
 - 2) Map hooks: One every 2' of Map rail.
 - 3) Roller brackets: One pair per Map rail.
 - 4) Flag holder: One per room.
 - c. Frame CH215: Standard channel frame with 3/4" face.
 2. Size: As shown on drawings.
 3. Color: As selected from manufacturer's standard colors.

2.4 COLORED CORK TACKBOARD MATERIALS

- A. Face Sheet: Colored cork surface will be 1/4" resilient homogenous tackable linoleum surface consisting of linseed oil, granulated cork, rosin binders and dry pigments calendared onto natural burlap backing. Color shall extend through thickness of material and be self-healing.
- B. Core Material: 1/4" medium density fiberboard.
- C. Metal Trim: 6063 aluminum alloy with T5 temper.
- D. Adhesive: As recommended by manufacturer for project conditions.

2.5 COLORED CORK TACKBOARDS

- A. Provide Tackboards for project from manufacturer's BTS Series.
 1. Metal trim and accessories: BTS Series aluminum extrusions with clear satin anodized finish.
 - a. Frame CH215: Standard channel frame with 3/4" face.
 2. Size: As shown on drawings.
 3. Color: As selected from manufacturer's standard colors.

2.6 FABRICATION

- A. Laminate facing sheet and backing sheet to core material under pressure, using manufacturer's recommended adhesive.
- B. Provide factory-assembled visual display boards, except where sizes demand partial field assembly.
- C. Assemble units in one piece without joints, wherever possible. Where required dimensions exceed maximum panel size available, provide two or more pieces of equal length, as indicated on approved shop drawings. Assemble to verify fit at factory, then disassemble for delivery and final assembly at project site.

PART 3: *execution*

3.1 EXAMINATION

- A. Verify that substrates are properly prepared to receive visual display boards. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

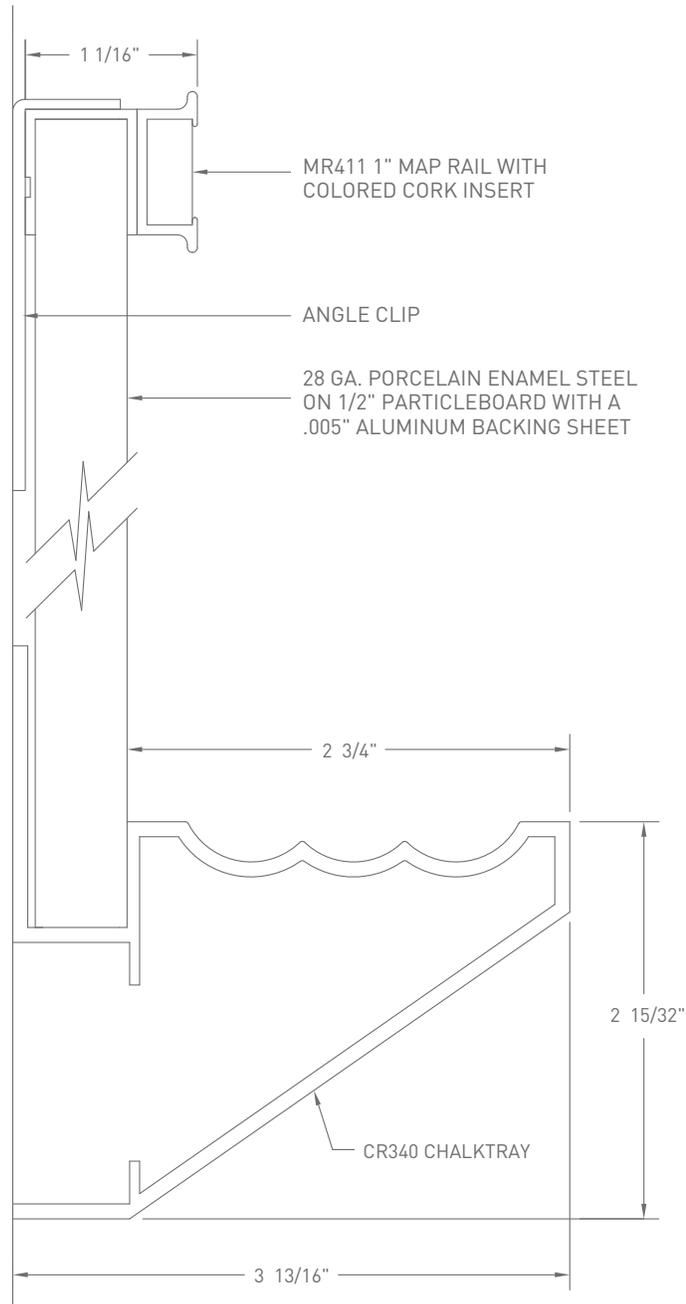
- A. Comply with manufacturer's installation instructions.
- B. Where visual display boards must be partly assembled at project site, use factory-supplied H-bar to maintain proper alignment.
- C. Install visual display boards level and plumb, keeping perimeter trim aligned in accordance with manufacturer's recommendations.

3.3 ADJUSTING AND CLEANING

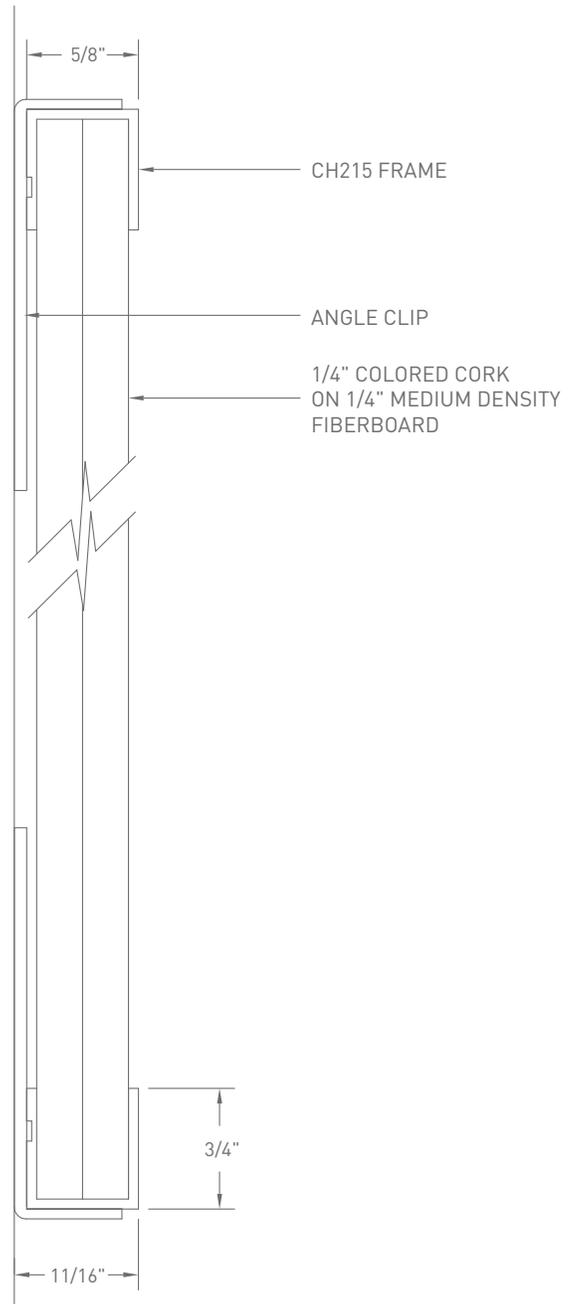
- A. Verify that all accessories are installed as required for each unit.
- B. Upon completion of installation, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

BTS: Specifications

MARKERBOARD/CHALKBOARD



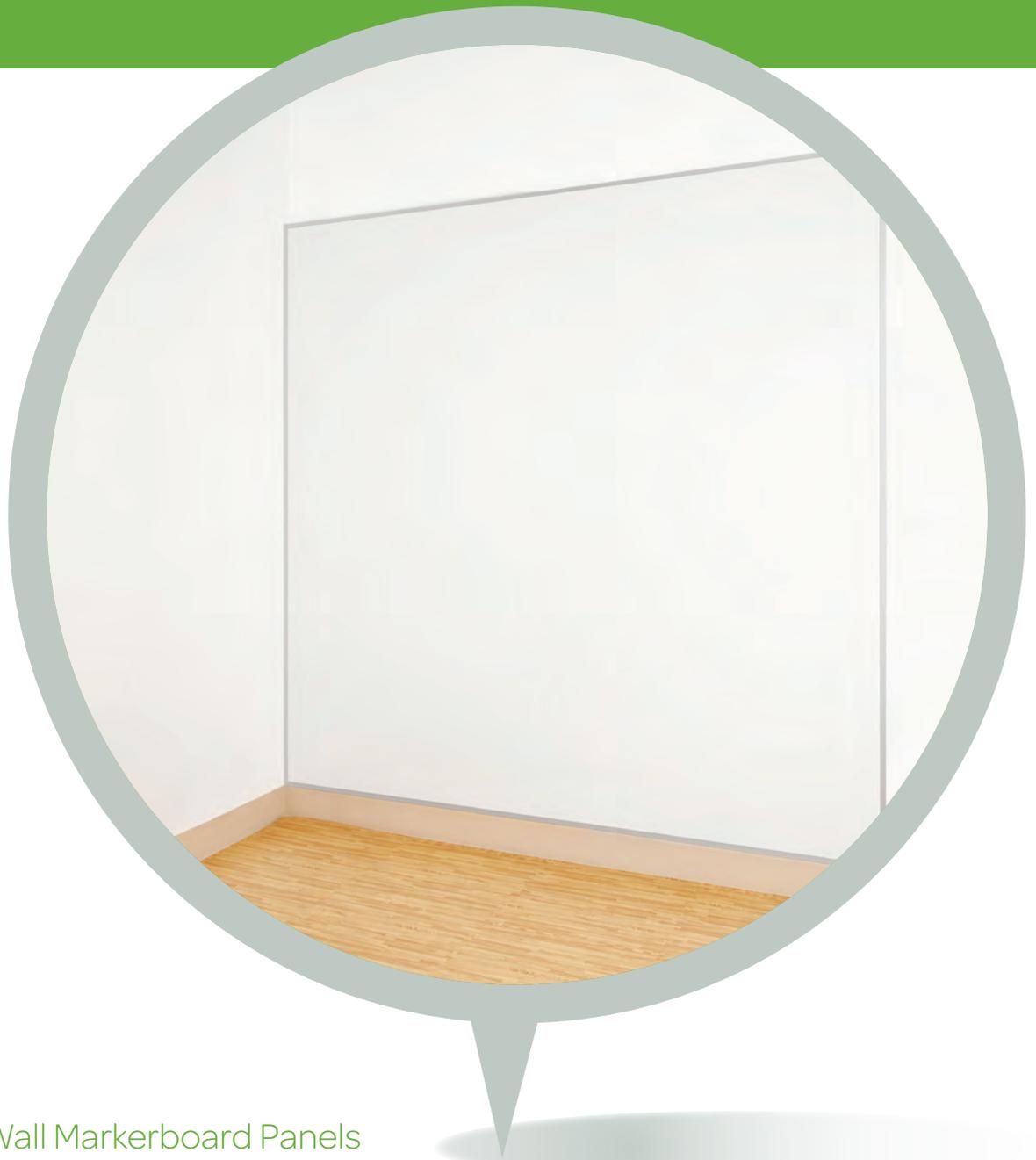
TACKBOARD



PLATINUM
LET'S CREATE TOGETHER.™

1451 E. Sixth Street, Corona, CA 92879
800 498 2990 | 951 817 2200 | FAX 951 817 9900
www.pvsusa.com | info@pvsusa.com

Boards: Floor to Ceiling Markerboard System [FCS]



For Wall to Wall Markerboard Panels Joined with a Concealed Spline

- The ideal solution for applications that require the absolute maximum amount of writing space.
- Porcelain-on-steel writing surfaces with a lifetime warranty.
- All extrusions are manufactured with high quality aluminum alloy to exacting specifications.
- Can be designed to fit any size room.

Suggested Specifications

PART 1: *general*

1.1 SECTION INCLUDES

- A. Porcelain-on-Steel Markerboards.
- B. Porcelain-on-Steel Chalkboards.

1.2 RELATED SECTIONS

- A. Section 06100 – Wood or Steel Blocking.
- B. Section 09000 – Gypsum Wall Board.
- C. Section 09720 – Vinyl Wall Coverings.
- D. Section 09900 – Paints and Coatings.

1.3 REFERENCES

- A. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
- B. ASTM E84 – Test Method for Surface Burning and Characteristics of Building Materials.
- C. ASTM C540 – GlossTest for Porcelain Enamel Steel (Porcelain Enamel Institute PEI-501).

1.4 SUBMITTALS

- A. Submit products and samples under provisions of Section 01300.
- B. Product Data: Provide technical data for products specified. Include Material Safety Data Sheets, when applicable.
- C. Shop Drawings: Provide shop drawings for each type of visual display board specified including section details indicating trim, face, core and backing materials, dimensions, joint locations and special anchor details.
- D. Color Samples: Submit set of color chips displaying manufacturer's full range of colors and finishes.
- E. Product Samples: Submit samples not less than twelve inches square and framed on two adjacent sides, to illustrate materials, finish, color, and configuration of each type of visual display board required.
- F. Care and Maintenance Data: Provide data on cleaning requirements, stain removal, and recommended maintenance precautions.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's instructions for handling and storage of Visual Display Boards.

1.6 PROJECT CONDITIONS

- A. Field measure prior to fabrication to ensure proper fit.
- B. General contractor to maintain proper climate before, during and after installation.

1.7 WARRANTY

- A. Submit manufacturer's "Life of Building" warranty, stating that under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations, Porcelain-on-Steel Markerboards and Chalkboards are guaranteed for the life of the building.
- B. Warranty shall cover replacement of defective Porcelain-on-Steel Markerboards and Chalkboards due to discoloration, excessive fading of color, crazing, cracking or flaking. Warranty does not cover the cost of removal or reinstallation.

PART 2: *products*

2.1 MANUFACTURERS

- A. Provide visual display boards as manufactured by Platinum Visual Systems™, Corona, California. Tel.: (800)498-2990 Fax: (951)817-9900. Email: info@pvsusa.com. Website: www.pvsusa.com.
- B. Substitutions: See Section 01600 – Product Requirements.

2.2 MARKERBOARDS AND CHALKBOARD MATERIALS

- A. Steel Face Sheets: Writing surface will be Writanium® 28 gauge steel face with porcelain enamel finish fused to the steel sheet using a continuous coil process.
 - 1. Markerboard and Chalkboard surface shall be fused at a temperature of 1450° and 1200° respectively.
 - 2. The gloss of the writing surface will not increase more than three units when subjected to wearability tests specified in testing procedures for 30 hours.
- B. Core Material: 1/2" particleboard.
- C. Backing Material: .005" aluminum backing sheet.
- D. Metal Trim and Accessories: 6063 aluminum alloy with a T5 temper.
- E. Adhesive: As recommended by manufacturer for project conditions.

2.3 PORCELAIN ON STEEL MARKERBOARDS AND CHALKBOARDS

- A. Provide Markerboards and Chalkboards for project from manufacturer's FCS Series.
 - 1. Metal trim and accessories: FCS Series aluminum extrusions with clear satin anodized finish.
 - a. Frame CH358: Channel frame with 3/4" face. No exposed fasteners permitted.
 - b. Chalktray CR310: Standard continuous solid magnetic chalktray with ribbed section and smoothly curved ends. Length to be 24". One per elevation.
 - c. Spline: Continuous aluminum stabilizing spline at each joint.
 - 2. Floor to Ceiling Markerboards and Chalkboards Panels:
 - a. Panel Sizes: Width to be 4' wide with equal size panels at ends. Height to be a maximum of 12' high.
 - b. Joints: Butt joint factory fired edges vertically to form smooth transition from panel to panel.
 - c. Splines: Panels to be factory milled to accept aluminum stabilizing spline at each joint.
 - 3. Size: As shown on drawings.
 - 4. Color: As selected from manufacturer's standard colors.

2.4 FABRICATION

- A. Laminate facing sheet and backing sheet to core material under pressure, using manufacturer's recommended adhesive.
- B. Provide factory-assembled visual display boards, except where sizes demand partial field assembly.
- C. Assemble units in one piece without joints, wherever possible. Where required dimensions exceed maximum panel size available, provide two or more pieces of equal length, as indicated on approved shop drawings. Assemble to verify fit at factory, then disassemble for delivery and final assembly at project site.

PART 3: *execution*

3.1 EXAMINATION

- A. Verify that substrates are properly prepared to receive visual display boards. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

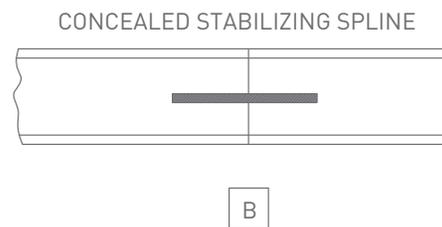
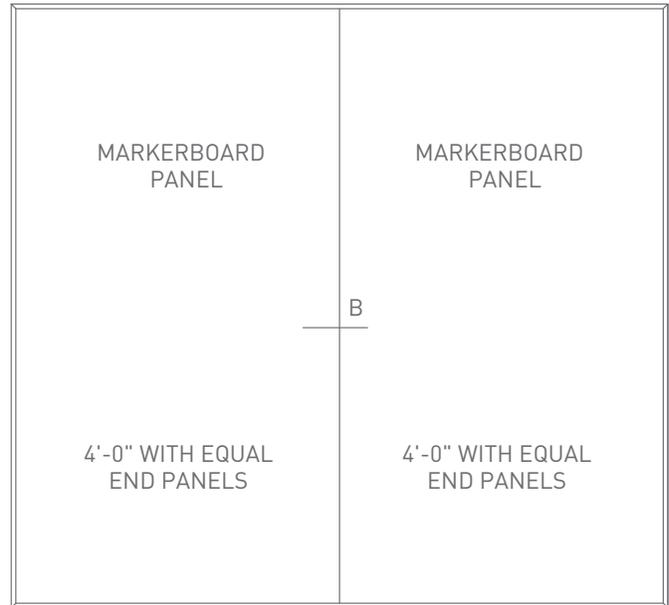
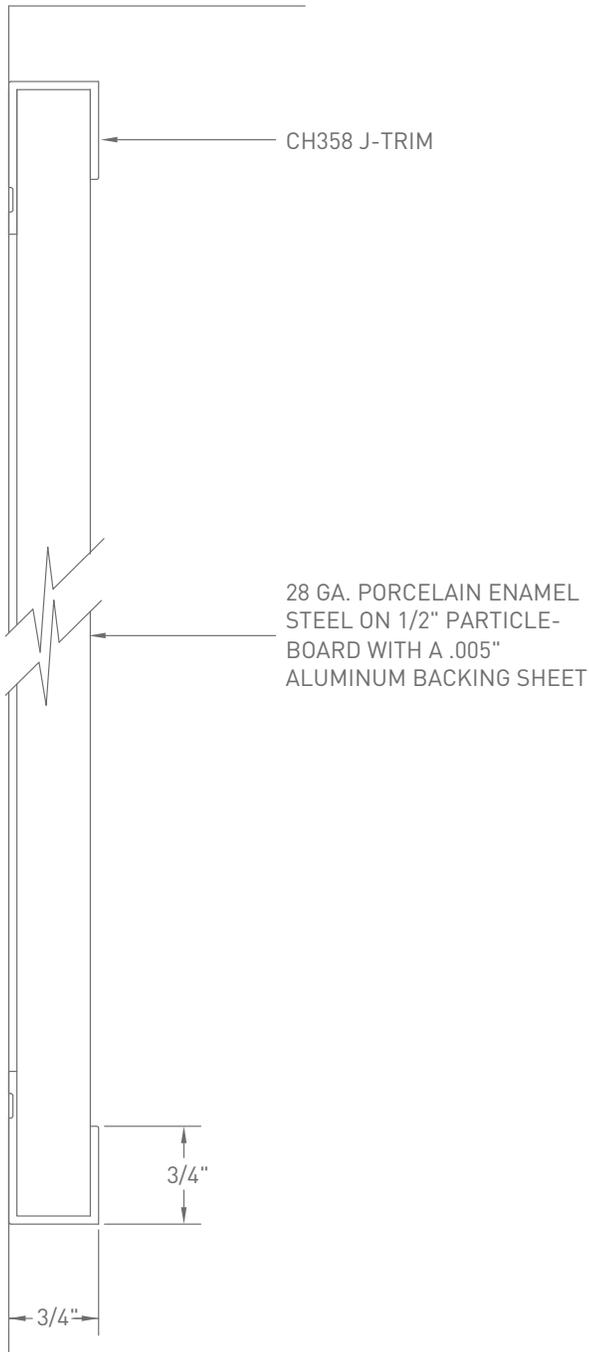
- A. Comply with manufacturer's installation instructions.
- B. Where visual display boards must be partly assembled at project site, use factory-supplied H-bar to maintain proper alignment.
- C. Install visual display boards level and plumb, keeping perimeter trim aligned in accordance with manufacturer's recommendations.

3.3 ADJUSTING AND CLEANING

- A. Verify that all accessories are installed as required for each unit.
- B. Upon completion of installation, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

FCS: Specifications

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REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 087

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Conventional Builders Date: 06 January 2020

- 1.) Please clarify discrepancies with window treatments as indicated in the attached document.

RESPONSE:

Refer to updated window treatment schedule in spec section 122413 issued in Addendum no. 5

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020

3.4 CLEANING AND PROTECTION

- A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.
- C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

WINDOW TREATMENT SCHEDULE

SILVER LAKE ELEMENTARY SCHOOL WINDOW TREATMENT SCHEDULE					
Mark	Width	Height	Room Name	Room Number	Window Treatment
A	3' - 0 3/8"	5' - 4 3/8"	VESTIBULE	100	-
A	3' - 0 3/8"	5' - 4 3/8"	VESTIBULE	100	-
B	6' - 0 3/8"	5' - 4 3/8"	VESTIBULE	100	-
B	6' - 0 3/8"	5' - 4 3/8"	VESTIBULE	100	-
L	15' - 0 3/8"	5' - 4 3/8"	VESTIBULE	100	-
A	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	102	-
A	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	102	-
C	9' - 0 3/8"	5' - 4 3/8"	CORRIDOR	102	-
C	9' - 0 3/8"	5' - 4 3/8"	CORRIDOR	102	-
A	3' - 0 3/8"	5' - 4 3/8"	ENSEMBLE	103	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	ENSEMBLE	103	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	ENSEMBLE	103	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	COMM SUPPORT	130	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	MEDIA CENTER	132	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	MEDIA CENTER	132	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	MEDIA CENTER	132	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	MEDIA CENTER	132	RS-1
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	204	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	204	RS-2
H	9' - 0 3/8"	5' - 4 3/8"	COMMONS	204	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	206	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	206	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	207	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	207	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	213	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	213	RS-2
H	9' - 0 3/8"	5' - 4 3/8"	COMMONS	213	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	215	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	215	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	216	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	216	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	219	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	219	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	220	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	220	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	221	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	221	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	222	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	222	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	222	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	223	RS-2
M	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	300	-
M	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	300	-
B	6' - 0 3/8"	5' - 4 3/8"	ASST. PRINC.	302	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	INTVNT.	303	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	304	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	305	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	305	RS-2
J	6' - 0 3/8"	7' - 4 3/8"	CLASSROOM	305	RS-2
X	3' - 0 3/8"	5' - 4 3/8"	CLASSROOM	305	RS-2
X	3' - 0 3/8"	5' - 4 3/8"	CLASSROOM	305	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	FACULTY	306	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	308	RS-2

THERE IS ONLY ONE TYPE A WINDOW IN RM 103

THERE ARE NO WINDOWS SHOWN IN RM 130

TYPE X WINDOWS TO BE BRICKED IN FOR RM 305

SILVER LAKE ELEMENTARY SCHOOL WINDOW TREATMENT SCHEDULE					
Mark	Width	Height	Room Name	Room Number	Window Treatment
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	308	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	309	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	309	RS-2
H	9' - 0 3/8"	5' - 4 3/8"	COMMONS	309	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	310	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	310	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	ESL	316	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	SPANISH RELATED ARTS	317	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	SPANISH RELATED ARTS	317	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	322	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	322	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	323	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	323	RS-2
H	9' - 0 3/8"	5' - 4 3/8"	COMMONS	323	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	324	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	324	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	FACULTY	326	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	327	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	327	RS-2
J	6' - 0 3/8"	7' - 4 3/8"	CLASSROOM	327	RS-2
X	3' - 0 3/8"	5' - 4 3/8"	CLASSROOM	327	RS-2
X	3' - 0 3/8"	5' - 4 3/8"	CLASSROOM	327	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	328	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	328	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	329	-
A	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	329	-
M	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	329	-
M	3' - 0 3/8"	5' - 4 3/8"	CORRIDOR	329	-
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	330	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	330	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	SGI	331	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	SGI	331	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	SGI	335	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	SGI	335	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	336	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	336	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	403	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	COMMONS	403	RS-2
H	9' - 0 3/8"	5' - 4 3/8"	COMMONS	403	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	404	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	404	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	405	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	405	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	ART ROOM	412	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	ART ROOM	412	RS-2
B	6' - 0 3/8"	5' - 4 3/8"	ART ROOM	412	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CONFERENCE	418	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	OFFICE	419	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	OFFICE	419	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	GUIDANCE	420	RS-1
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	426	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	426	RS-2

TYPE X WINDOWS TO BE BRICKED IN FOR RM 305

SILVER LAKE ELEMENTARY SCHOOL WINDOW TREATMENT SCHEDULE					
Mark	Width	Height	Room Name	Room Number	Window Treatment
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	427	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	427	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	428	RS-2
K	6' - 0 3/8"	5' - 4 3/8"	CLASSROOM	428	RS-2
A	3' - 0 3/8"	5' - 4 3/8"	VESTIBULE	501	-
A	3' - 0 3/8"	5' - 4 3/8"	VESTIBULE	501	-
B	6' - 0 3/8"	5' - 4 3/8"	VESTIBULE	501	-
B	6' - 0 3/8"	5' - 4 3/8"	VESTIBULE	501	-
D	6' - 0 3/8"	5' - 4 3/8"	GYMNASIUM	502	-
D	6' - 0 3/8"	5' - 4 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
E	6' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
F	9' - 0 3/8"	4' - 0 3/8"	GYMNASIUM	502	-
C	9' - 0 3/8"	5' - 4 3/8"	FITNESS	503	RS-1
S	9' - 0 3/8"	5' - 4 3/8"	STORAGE	505	-
B	6' - 0 3/8"	5' - 4 3/8"	CORRIDOR	600	-
B	6' - 0 3/8"	5' - 4 3/8"	CORRIDOR	600	-
B	6' - 0 3/8"	5' - 4 3/8"	CORRIDOR	600	-
B	6' - 0 3/8"	5' - 4 3/8"	CORRIDOR	600	-
B	6' - 0 3/8"	5' - 4 3/8"	CORRIDOR	600	-
A	3' - 0 3/8"	5' - 4 3/8"	PRINCIPAL	602	RS-1
C	9' - 0 3/8"	5' - 4 3/8"	PRINCIPAL	602	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	ADMINISTRATIVE	604	RS-1
C	9' - 0 3/8"	5' - 4 3/8"	OPEN OFFICE	604	RS-1
A	3' - 0 3/8"	5' - 4 3/8"	CONFERENCE ROOM	605	RS-1
A	3' - 0 3/8"	5' - 4 3/8"	CONFERENCE ROOM	605	RS-1
B	6' - 0 3/8"	5' - 4 3/8"	CONFERENCE ROOM	605	RS-1
C	9' - 0 3/8"	5' - 4 3/8"	CONFERENCE ROOM	605	RS-1
A	3' - 0 3/8"	5' - 4 3/8"	FINANCE	606	RS-1

TYPE C WINDOW TO BE SPLIT INTO 3 SHADES IN RM 503 B/C RS-1 FABRIC WIDTH LIMITATIONS

TYPE C WINDOW TO BE SPLIT INTO 3 SHADES IN RM 602 B/C RS-1 FABRIC WIDTH LIMITATIONS

TYPE C WINDOW TO BE SPLIT INTO 3 SHADES IN RM 604 B/C RS-1 FABRIC WIDTH LIMITATIONS

TYPE C WINDOW TO BE SPLIT INTO 3 SHADES IN RM 605 B/C RS-1 FABRIC WIDTH LIMITATIONS



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 088

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: J&G Building Group

Date: 06 January 2020

- 1.) I have concerns about quantifying the PVC trim. As the stone caps and casings have a profile page, is there a better description of the PVC profiles?
-
-

RESPONSE:

- 1.) The majority of the PVC trim shall be milled from nominal 5/4 stock. The special profiles required for this project are as follows:
 - a. Basis-of-Design profiles (for profile reference)
 - i. Manufacturer: Versatex (Azek approved equal)
 - b. For Jambs, Sill Aprons
 1. Style: Stealth Trim
 2. Size: 5/4X4 nominal
 - c. Fascia (See 19/A42.1 for typical conditions)
 1. Style: Standard Trim
 2. Size: 5/4X12 nominal (ripped as reqd)
 - d. Soffit (See 19/A42.1 for typical conditions)
 1. Style: Standard Trim
 2. Size: 3/4 sheet (ripped as reqd)
 - e. All other running trim
 1. Style: Standard Trim
 2. Size: 5/4X4 nominal

Response By: Bob Grove

Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 089

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc Date: 06 January 2020

- 1.) When reviewing the information for this project the spec calls out for AWI Certification Program Certificates/Labels. As you know, many casework subcontractors follow AWI Quality Standard's, but are not Certified. We are formally requesting the AWI Certification be Waived as a requirement for this project.

RESPONSE:

- 1.) The AWI Certification requirement, as written in section 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK, shall be removed from the project.

Response By: Oscar Enderica Date: 1/14/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects PRE-BID RFI#: 090

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc Date: 06 January 2020

- 1.) I noticed that none of the door numbers in the hardware spec section match the door schedule or door numbers on floor plans. In addition, there are door numbers indicated in hardware groups 1, 2, 3, 4, 6, 8, 9, 10, & 15 that are not shown on the door schedule. There may be more, but nothing matches up and it is confusing at best.

RESPONSE:

- 1.) Refer to door schedule and specifications, as revised in Addendum #5.

Response By: J.D. Bartlett, EDiS Company Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 091

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 06 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A20.1 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Parksite Date: 06 January 2020

- 1.) The roof details on drawing A20.1 reference a new High Performance Underlayment and Ice Protection Membrane. Please provide specifications and installation requirements for these products.

RESPONSE:

- 1.) Reference Specification Section.07 31 13 – article 2.3.B, which provides the approved products. Manufacturer’s installation instructions and requirements shall be followed during installation.

Response By: Bob Grove Date: 16 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 092

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: 116623 PAGE: _____

REQUEST:

Submitted By: TJ Distributors Date: 08 January 2020

- 1.) Substitution Request - Specification Section 116623. The bidder has requested that Performance Sports Systems (PSS) be approved as an equal as detailed in the attached request. Note: The same manufacturer was provided on Appoquinimink High School.

RESPONSE:

- 1.) Performance Sports Systems (PSS) is approved as an equal for equipment supplied and installed under Specification Section 11 66 23.

Response By: Bob Grove Date: 14 January 2020



Sales, Service & Installation of Spectator Seating, Athletic Equipment
Serving Maryland, Virginia, Delaware & Washington DC

To: J.D. Bartlett
EDiS Company

Date: 1/6/20
From: Logan Grier

E-mail: jdbartlett@ediscompany.com

-- SUBSTITUTION REQUEST --

Re: Silver Lake Elementary School
Section 116623 – Gymnasium Equipment

We respectfully request approval of Performance Sports Systems as equal to the specified manufacturers for Section 116623 – Gymnasium Equipment.

Performance Sports Systems is one of the world's largest gym equipment manufacturers. You can see more about Performance Sports System products at the following link: [PSS Catalog](#).

We have installed this equipment at the following Delaware Schools in the past:

1. Cape Henlopen High School
2. Appoquinimink High School
3. Thomas McKean High School
4. Sussex Central High School
5. Indian River High School
6. Delaware State University
7. Tower Hill School
8. Milford Central Academy
9. South Elementary School
10. Richey Elementary School

I look forward to your determination and please let me know if you have any questions or require additional information.

Sincerely,

Logan Grier



SUBSTITUTION REQUEST

Project: Silver Lake Elementary School Substitution Request Number: 1
 From: TJ Distributors
 To: R G Architects, LLC Date: 1/7/2020
 A/E Project Number: 18035
 Re: Section 116623 Contract For: Gymnasium Equipment

Specification Title: 116623 Description: Gymnasium Equipment
 Section: 11623 Page: _____ Article/Paragraph: 2.2.C, 2.3.A, 2.4.A, 2.5.A

Proposed Substitution: Performance Sports Systems (PSS)
 Manufacturer: PSS Address: Nobelsville, IN Phone: 800-848-8034
 Trade Name: Basketball Hoops & Wall padding Model No.: Vary, see cut sheets
 Installer: TJ Distributors Address: Forest Hill, MD Phone: 410-638-6358
 History: New product 2-5 years old 5-10 yrs old More than 10 years old
 Differences between proposed substitution and specified product: None

Point-by-point comparative data attached - REQUIRED BY A/E

Reason for not providing specified item: We are dedicated representatives of PSS products and are not permitted to supply and other manufacturer's products.

Similar Installation:

Project: Cape Henlopen HS Architect: Buck Simpers
 Address: 1250 Kings Highway Owner: Cape Henlopen School District
Lewes, DE 19958 Date Installed: September 2009

Proposed substitution affects other parts of Work: No Yes; explain _____

Savings to Owner for accepting substitution: Unknown allowing additional competition

Proposed substitution changes Contract Time: No Yes [Add] [Deduct] _____ days.

Supporting Data Attached: Drawings Product Data Samples Tests Reports Catalog

**SUBSTITUTION
REQUEST
(Continued)**

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Jason Dinan

Signed by: _____

Firm: TJ Distributors

Address: 2220 Commerce Road, Unit 5
Forest Hill, MD 21050

Telephone: 410-638-6358

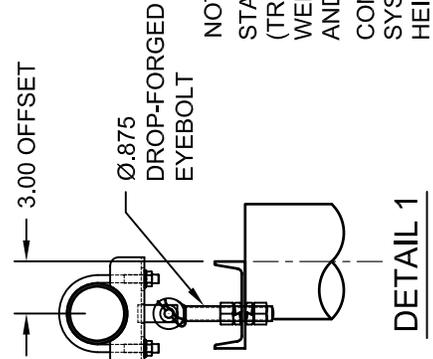
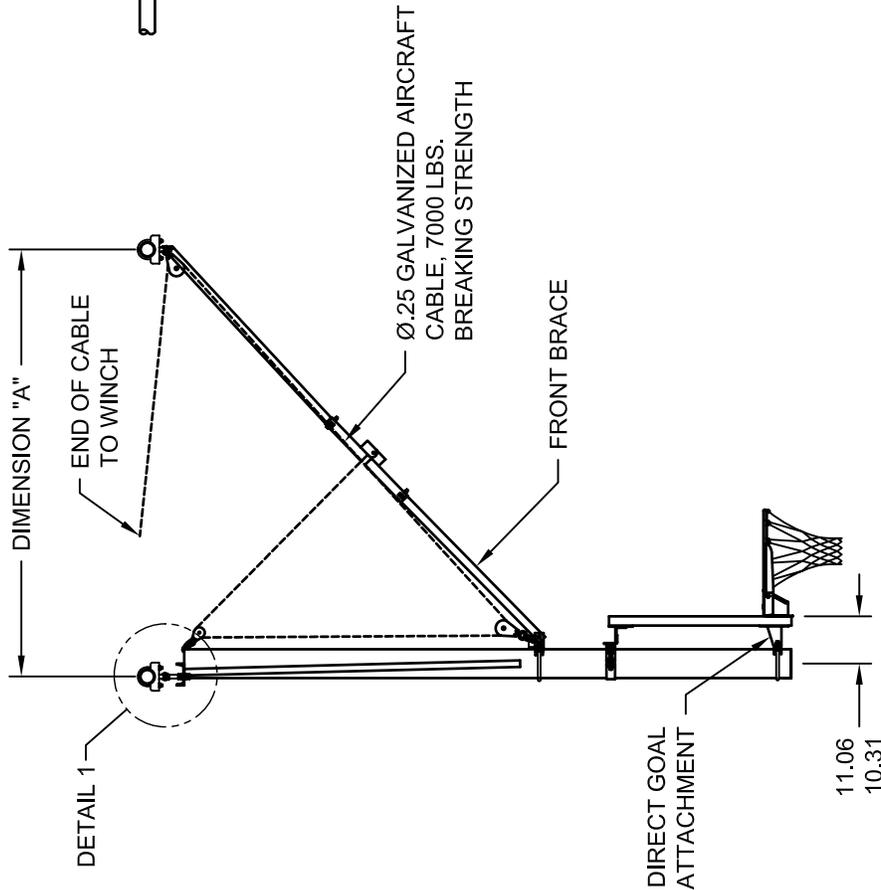
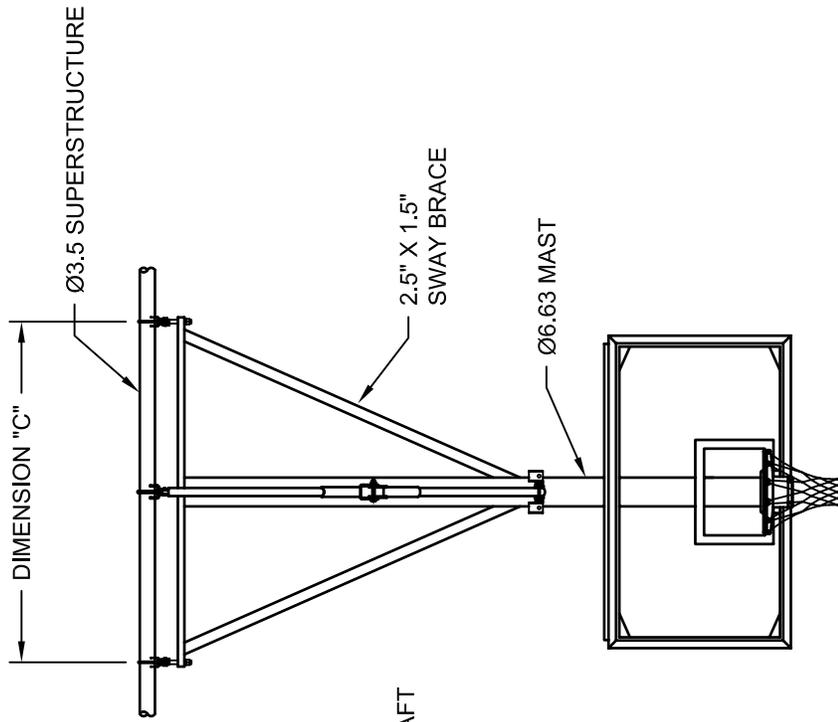
Attachments: Cut sheets and link to catalog: <http://www.perfsports.com/data/uploads/2015%20PSS%20Catalog.pdf>

A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01330.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

Additional Comments: Contractor Subcontractor Supplier Manufacturer A/E _____



TRUSS HEIGHT FEET & (METERS)	DIM "A" Ft.-In. (Meters)	DIM "C" Ft.-In. (Meters)
20 TO 20.9 (6.10-6.39M)	5'-0" (1.52M)	6'-6" (1.98M)
21 TO 21.9 (6.40-6.69M)	5'-11" (1.80M)	6'-6" (1.98M)
22 TO 22.9 (6.70-7.00M)	6'-11" (2.11M)	6'-6" (1.98M)
23 TO 23.9 (7.01-7.31M)	7'-11" (2.41M)	6'-6" (1.98M)
24 TO 24.9 (7.32-7.61M)	8'-11" (2.72M)	6'-6" (1.98M)
25 TO 25.9 (7.62-7.92M)	9'-11" (3.02M)	7'-9" (2.36M)
26 TO 26.9 (7.93-8.22M)	10'-11" (3.33M)	7'-9" (2.36M)
27 TO 27.9 (8.23-8.52M)	11'-11" (3.63M)	7'-9" (2.36M)
28 TO 28.9 (8.53-8.83M)	12'-11" (3.94M)	7'-9" (2.36M)
29 TO 30.0 (8.84-9.14M)	13'-11" (4.24M)	7'-9" (2.36M)

NOTE:
 STANDARD ATTACHMENT HEIGHTS (TRUSS HEIGHTS) FOR MODEL 3107 WELDED UNITS ARE 20 FT. MINIMUM AND 30 FT. MAXIMUM
 CONTACT PERFORMANCE SPORTS SYSTEMS FOR INFORMATION IF TRUSS HEIGHTS ARE NOT WITHIN THIS RANGE.

DIMENSIONS ABOVE ARE ± 1/2"

REVISION		
REV.	DATE	BY
A	10/15/03	JJC
B	12/11/03	JJC
C	02/04/04	MDL
D	06/29/05	DAM
E	12/18/06	WAE
F	05/12/08	RWP



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FRONT BRACED FRONT FOLD BACKSTOP				
DRAWN	CONNERLEY	DATE	04/30/03	MATERIAL N/A
APPROVED	JJC	DATE	04/30/03	FINISH N/A
FILE LOC.	Q:\Final Release\Specifications			DWG. NO. 3107
SIZE	SCALE	SHT. NO.	PART NO.	REV
A	NONE	1 OF 1	3107	F



MODEL 3107

WELDED SINGLE POST FRONT BRACED FRONT FOLDING BASKETBALL STRUCTURE

RECOMMENDED APPLICATION

This unit is designed for applications not allowing sufficient space behind the backboard for a rear brace. This single post unit can be used at heights from 20' to 30'.

SPECIFICATIONS

Unit shall be supported from 3-1/2" O.D. x 0.120" wall ASTM A-500 Grade B horizontal and 2-3/8" O.D. x 12 gauge (0.109") wall ASTM A-513 vertical structural steel tubing secured to the building with heavy gauge steel stampings or weldments (as required by building conditions). When truss span widths exceed 10'-0", 3-1/2" O.D. x Schedule 40 (0.216") wall ASTM A-500 Grade B will be used for the horizontals. Spans over 14'-0" will use welded bridge pipe.

The backstop shall be of a single post design with a main vertical mast made of 6-5/8" O.D. x 0.120" wall ASTM A-500 Grade B structural steel tubing with 2-1/2" x 1-1/2" x 14 gauge (0.083") wall ASTM A-513 rectangular steel tube sway braces miter cut and welded in place to a top horizontal 4" x 1-1/2" x 0.18" web ASTM A-36 steel channel. Main mast will be suspended from superstructure with an offset hanger 3" in front of the pivot point. Units with less than 3" offset will not be approved as equal. Backstop shall be manufactured to allow 6" vertical adjustment for plumbing of the backboard. All fittings shall be heavy gauge steel stampings or weldments. A direct goal attachment is used to transfer stress from the goal to the main mast assembly preventing strain on the backboard.

Front brace shall be 1-7/8" O.D. x 12 gauge (0.109") wall ASTM A-513 steel tubing attached to the main mast 12" to 18" above the backboard. When truss heights are higher than 27'-0", front brace shall be 2-3/8" O.D. x 12 gauge (0.109") wall ASTM A-513 steel tubing. Folding brace shall be of a jackknife design with an adjustable hinge for easy installation and field adjustment.

Backstop shall be raised and lowered with 1/4" galvanized aircraft cable with a breaking strength of 7000 lbs. Backstop shall be furnished with standard black finish. If special finish coat is required, specify final painting by painting contractor. Backstop manufactured in accordance with 1994 rule 1, section 8, stating that all parts of the backboard support system shall be at least 6" behind backboard.

ACCESSORIES

BACKBOARDS AND GOALS - All PSS and/or Gared backboards and goals are available on this unit. See the backboards and goals section in the specification manual.

BANK PADDING - See the accessories section in the specification manual.

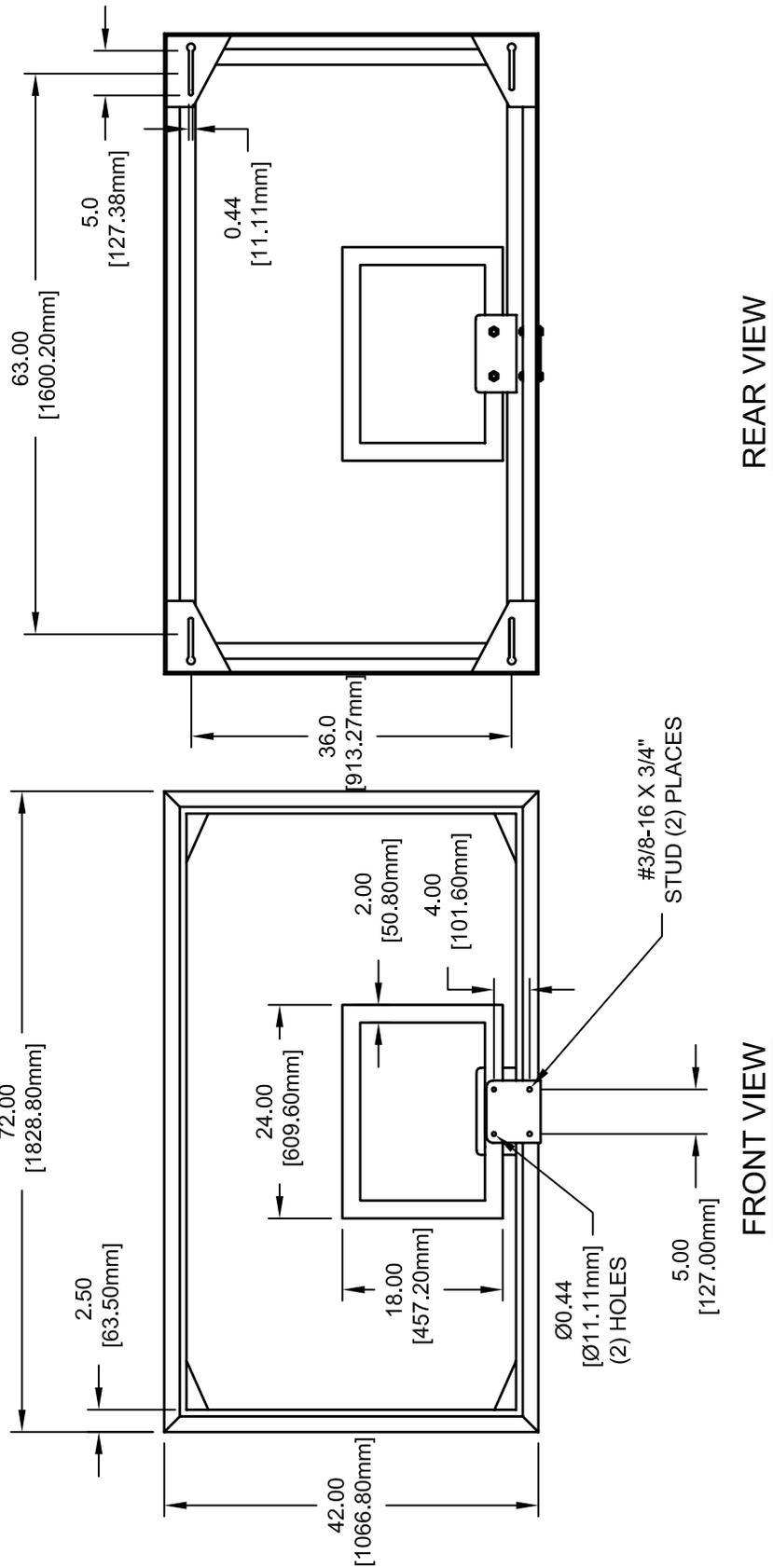
HOISTS - Either Electric hoist or manual winch is available on all folding units. See the accessories section in the specification manual.

CERTIFICATIONS

Unit meets all requirements of the NCAA and NFHS. Unit complies with design standards of the California Department of State Architects. Unit is approved by FIBA for international Level 2 competition. Certificate of Approval available.



Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC



REAR VIEW

FRONT VIEW

NOTE:
 BACKBOARD THICKNESS - 2 1/8".
 MATERIAL - 1/2" THICK TEMPERED GLASS WITH ALUMINUM FRAME.
 FINISH - GRAY POWDERCOAT ON BRACKETS AND PLATES.

REVISION		
REV.	DATE	BY
A	12/01/03	JJC
B	06/06/08	RWP




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42" ALUMINUM FRAME GLASS BACKBOARD

DRAWN	CONNERLEY	DATE	05/02/03	MATERIAL	AS NOTED
APPROVED	JJC	DATE	05/02/03	FINISH	AS NOTED
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	AFRG42
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NOTED	1 OF 1	AFRG42	B	



MODEL AFRG42

ALUMINUM FRAME 72" X 42" RECTANGULAR GLASS BACKBOARD

The AFRG42 backboard shall be fabricated with an aluminum frame constructed of 0.200" thick extruded "F" channel with steel corner brackets. All steel components shall be powder coated with a durable gray finish. Aluminum-capped frame will not be acceptable. Manufacturer of backboard shall have over ten years experience. Backboard shall meet NCAA and high school requirements.

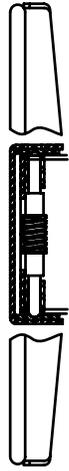
Glass shall be 1/2" in thickness and fully tempered with white border and target lines permanently fused onto the surface. 12mm glass will not be considered equal to 1/2" glass, with a nominal thickness range of .485" to .515", and will not be used as a substitute for full 1/2" glass. Vinyl shock absorbing material insulates the glass from the frame. Goal mounting holes shall be on standard 5" horizontal and 4" vertical centers. Acrylic cushioning pad shall be used between steel mounting plate and glass to protect against possible breakage.

ACCESSORIES

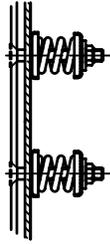
GOALS

Compatible goals are models 1000, 2000+, 2500, 2500I, 3000, 20123T-B (Snap B), and 5500. See goal section in specification manual.

Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC

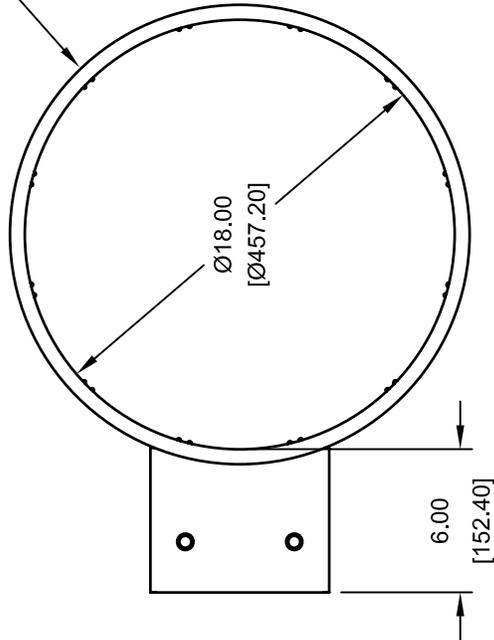


POSITIVE LOCK DETENT MECHANISM



DUAL RETURN SPRINGS

Ø0.62 [15.88] STEEL ROD



R0.22 [R5.56] TYP.

1.31 [33.34]

0.88 [22.23]

(TOP OF RIM)

6.31 [160.34]

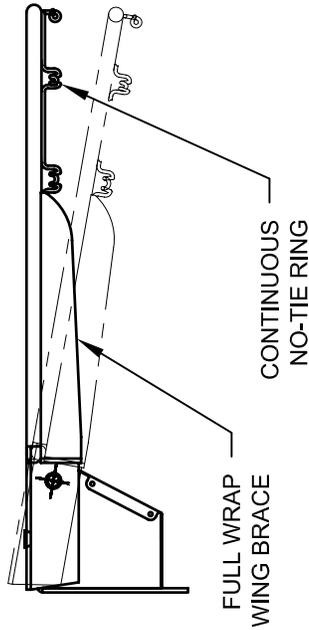
4.00 [101.60]

5.00 [127.00]

5.00 [127.00]

7.00 [177.80]

R0.44 [R11.11] (2) PLACES



FULL WRAP WING BRACE

CONTINUOUS NO-TIE RING

MOUNTING PLATE VIEW SCALE 2:1

NOTE:
OFFICIAL ORANGE POWDER COAT FINISH.
GOAL IS SUPPLIED WITH ANTI-WHIP NYLON NET AND MOUNTING HARDWARE.

REVISION		
REV.	DATE	BY
A	10/17/03	JJC
B	12/03/03	JJC
C	12/20/06	WAE
D	04/21/08	RWP



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2000+ BREAKAWAY GOAL

DRAWN	CONNERLEY	DATE	05/08/03	MATERIAL	N/A
APPROVED	JJC	DATE	05/08/03	FINISH	AS NOTED
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	2000
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	2000	D	



MODEL 2000+

POSITIVE LOCK BREAK-AWAY GOAL

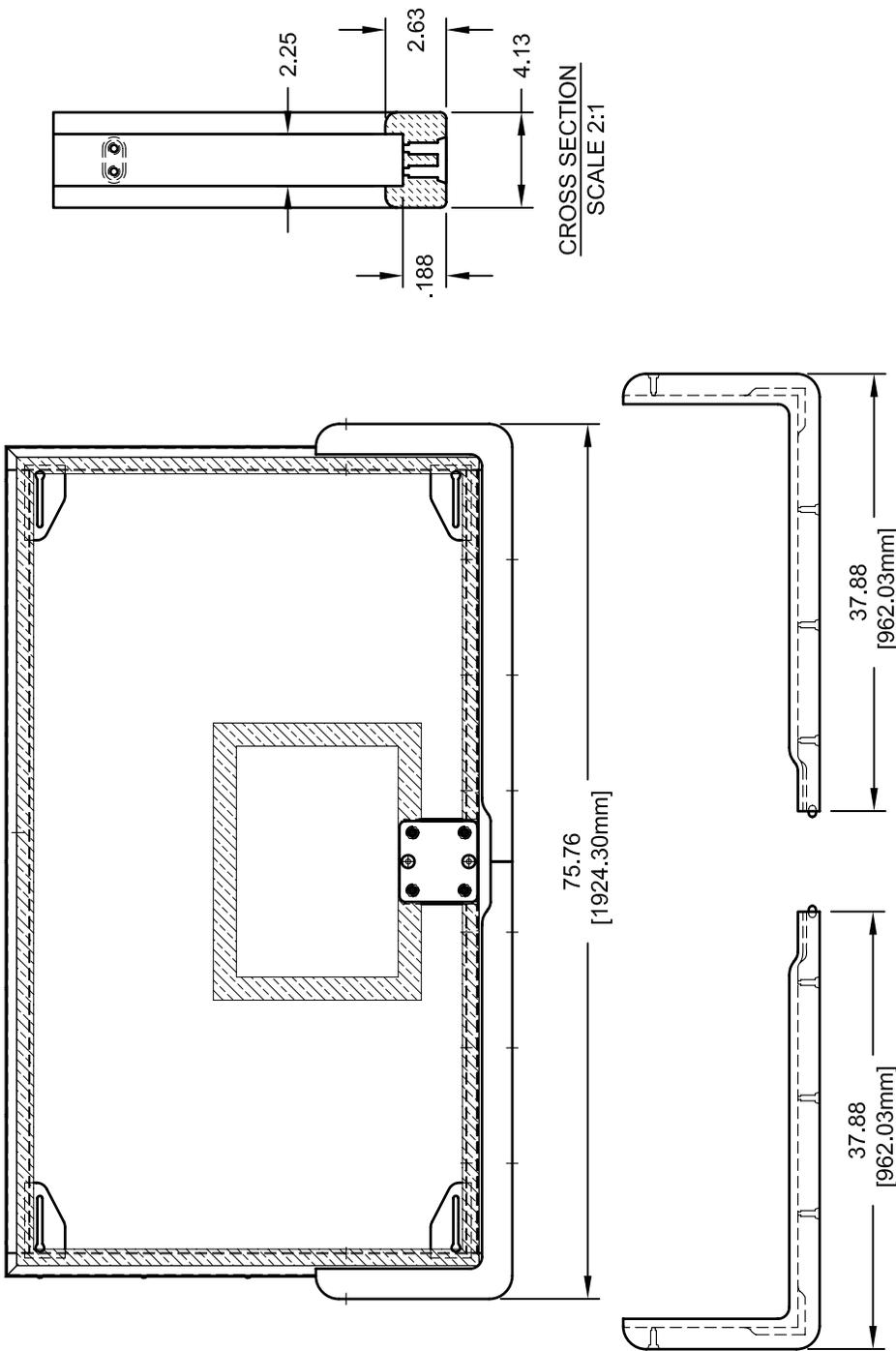
The 2000+ goal shall be constructed with an enclosed positive lock mechanism to hold rim in solid playing position. Goal shall be designed so that any possible entrapment areas have been eliminated.

Goal shall have official size 18" ring of 5/8" diameter steel with continuous no-tie net attachment, full wing brace design, and a durable orange powder coated finish. Anti-whip net and hardware shall be included. Hole spacing shall be 5" x 5". Goal shall meet NCAA and high school specifications.

ACCESSORIES

BACKBOARDS

Compatible backboards are models LXP4200, AFRG42, RG, AFRG48, FSGII, 1301B, 1342B, 1370B, 1401B, 1442B, 3010RG, 3011RG, ARG, 3050RG, BB48A38, BB60A38, BB60G38, BB72A38, BB72G50, and GP72422. See backboard section in specification manual.



CROSS SECTION
SCALE 2:1

BOLT ON BACKBOARD PADDING IS DESIGNED FOR USE ON RECTANGULAR GLASS BOARDS WITH ALUMINUM OR STEEL FRAMES. IT IS NOT RECOMMENDED FOR USE ON RECTANGULAR WOOD AND FIBERGLASS BOARDS OR ANY FAN SHAPED BACKBOARD.

COLOR	PART #	MODEL #
FOREST GREEN	PMCEFST	1330
GRAY	PMCEGRY	1331
SCARLET RED	PMCESCAR	1334
KELLY GREEN	PMCEKEL	1335
NAVY BLUE	PMCENAV	1336
ROYAL BLUE	PMCEROY	1337
BLACK	PMCEBLK	1338

REVISION		
REV.	DATE	BY
A	12/08/03	JJC
B	12/18/06	JJC
C	04/16/08	RWP



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BACKBOARD PADDING - BOLT ON				
DRAWN	CONNERLEY	DATE	04/18/03	MATERIAL N/A
APPROVED	JJC	DATE	04/18/03	FINISH N/A
FILE LOC. Q:\Final Release\Specifications			DWG. NO.	1330
SIZE	SCALE	SHT. NO.	PART NO.	REV
A	NONE	1 OF 1	PMCE	C



MODEL PMCE
PRO MOLD CUSHION EDGE

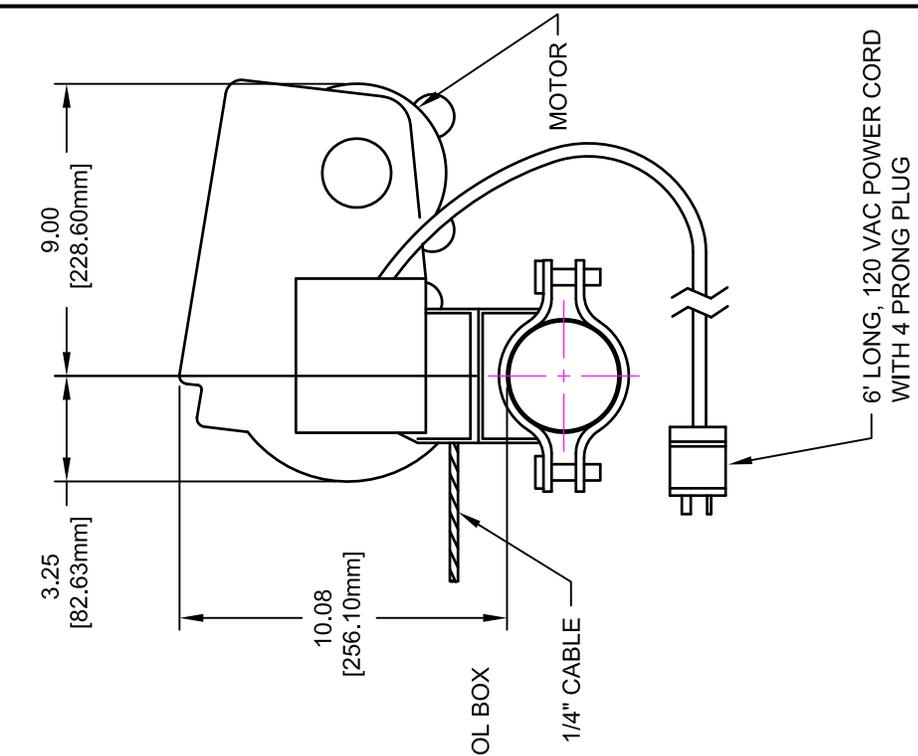
APPLICATION

The double sided backboard padding is 2" thick, urethane foam that protects the players while the skin molding process protects the padding. Each half is 36" long and allows for 15" to run up the side of the rectangular backboard. Each half is symmetrical which allows the half sections to be used on both right and left sides of the backboard. Half sections bolt to all 72" official glass backboards that have a width of 2". Meets all NCAA, high school and FIBA specifications.

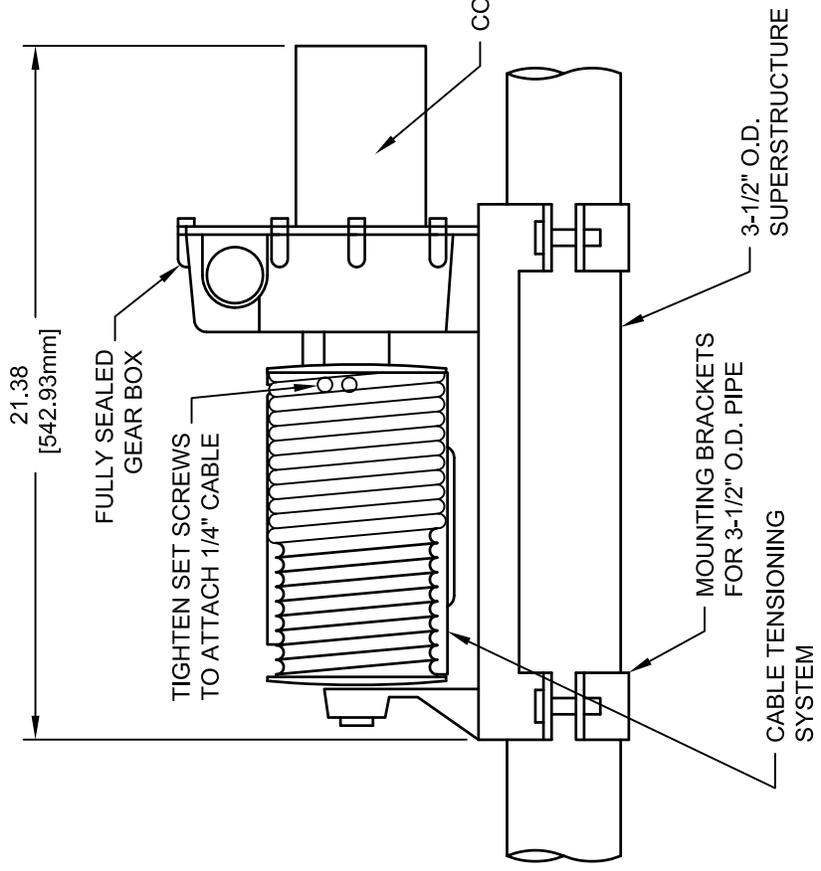
Mounting hardware is included.

Available in the following colors: Navy Blue, Royal Blue, Kelly Green, Forest Green, Gray, Scarlet, and Black.

Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC



CAUTION
 KEY SWITCH MUST BE LOCATED IN AN AREA THAT ALLOWS THE BACKSTOP TO BE VISIBLE TO THE OPERATOR.



NOTE:
 MOTOR DATA: MIN. 3/4 HP, 110/120 VAC, 60 HZ, SINGLE PHASE, INSTANT REVERSE, THERMALLY PROTECTED.

REVISION		
REV.	DATE	BY
A	12/05/03	JJC
B	12/05/03	JJC
C	04/03/08	JJC
D	06/09/09	RWP




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ELECTRIC HOIST				
DRAWN	CONNERLEY	DATE	04/18/03	MATERIAL N/A
APPROVED	JJC	DATE	04/18/03	FINISH N/A
FILE LOC. Q:\Final Release\Specifications			DWG. NO. 1194	
SIZE	SCALE	SHT. NO.	PART NO.	REV
A	NONE	1 OF 1	1194	D



MODEL 1194

ELECTRIC BACKSTOP HOIST

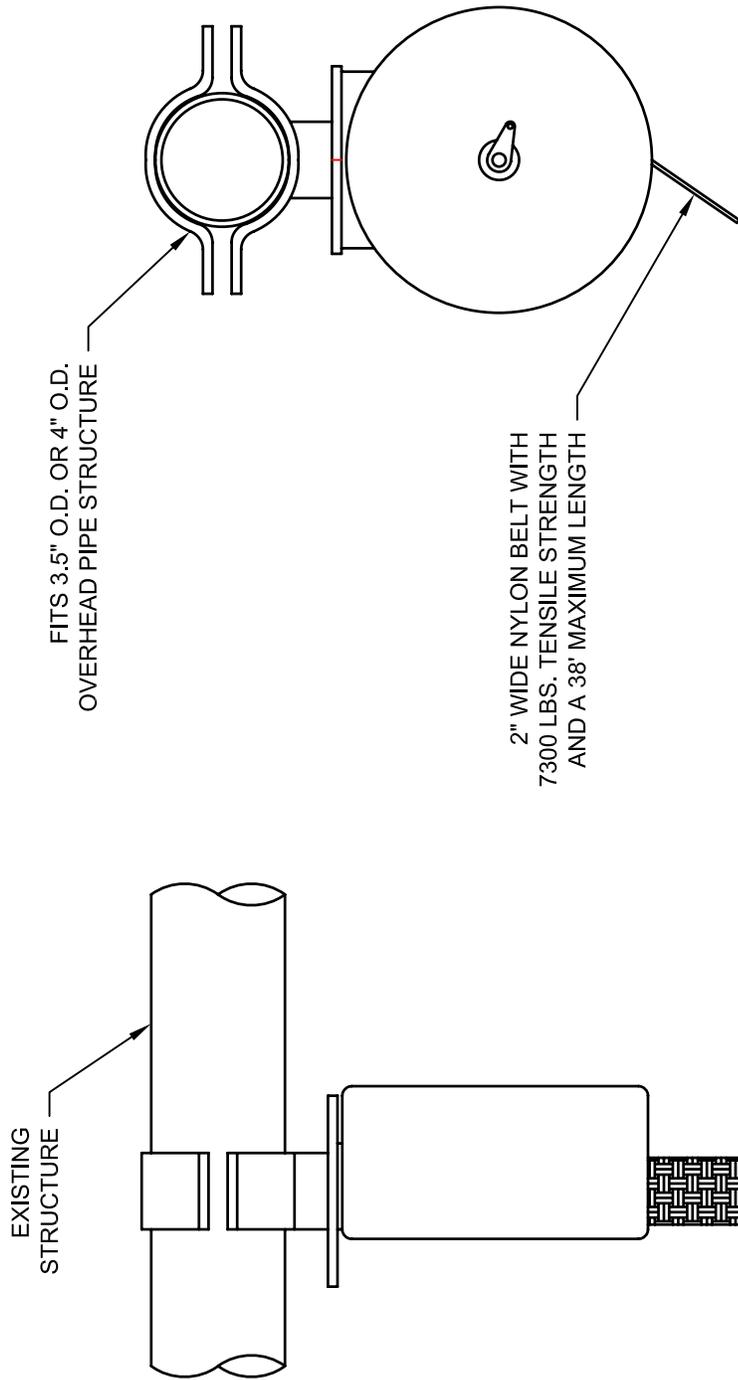
Designed to lift an 1800 lb backstop assembly with a safety line stall pull of 2200 lbs.

Load Type	Vertical Lifting, pulling on a slope, or pulling horizontally.
Rope Type	¼" Diameter 7 x 19 galvanized aircraft cable (7000 lb breaking strength)
Rope Travel	25' on one layer Additional 20' on second layer for 45' total.
Rope Speed	12 FPM
Electrical	110 VAC, 60 Cycle. Other voltages and frequencies available on special order at additional cost.
Motor	Minimum ¾ HP, 13 A (Full load amperage). Instant reversing, low maximum current draw design.
Duty Cycle	Standard: 10 Minutes ON, 20 Minutes OFF.
Rope Drum	Grooved for accurate winding. Supported on large diameter ball bearings and with positive, through the drum rope anchoring.
Braking	Passive uni-directional brake.
Pressure Roller	Constant pressure type with torsion spring mounting for even pressure on rope during winding.
Limit Switches	Heavy duty upper and lower limit switches, gear driven for high accuracy. Maximum travel is 45'.
Frame Construction	Precision interlocking steel frame for high rigidity and precise alignment. Semi-enclosed for safety. Powder coated for corrosion resistance.
Weight	64 lbs.

WARNING:

Not to be used for lifting people
Not recommended for lifting objects over people without either a safety locking device or an automatic fall arrester system installed.

Subject to design change and current manufacturing practices.
Revised June 12, 2009 ©2008 Gared Holdings, LLC



FITS 3.5" O.D. OR 4" O.D.
OVERHEAD PIPE STRUCTURE

2" WIDE NYLON BELT WITH
7300 LBS. TENSILE STRENGTH
AND A 38' MAXIMUM LENGTH

EXISTING
STRUCTURE

BELT

BUCKLE
CONNECTION

BELT ATTACHMENT

CAUTION

LOCKING STRAP IS RATED FOR 1000 LBS. AND HAS BEEN TESTED TO HOLD 1500 LBS. FREE FALL THRUST. THIS DOES NOT INSURE THAT OTHER COMPONENTS, SUCH AS BUILDING STRUCTURE WILL WITHSTAND THRUST LOAD.

REVISION		
REV.	DATE	BY
A	12/05/03	JJC




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MODEL 1100 SAFSTOP					
DRAWN	CONNERLEY	DATE	04/17/03	MATERIAL	N/A
APPROVED	JJC	DATE	04/17/03	FINISH	
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	1100-R000
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	1100-R000	A	



MODEL 1100

“SAFSTOP” BACKSTOP SAFETY LOCK

This unit is designed to prevent free-fall of backstops due to cable, pulley, support fitting, or winch failure. Any sudden surge of speed due to failure shall instantly lock "Safstop" and hold the backstop in any position. This unit will lock backstop before it travels 12" in a free-fall. This unit is fully functional during storage, raising and lowering of backstops.

“Safstop” is attached to 3 1/2" O.D. overhead superstructure with a universal mounting-bracket that allows for tubing parallel or perpendicular to the unit. The 2" wide nylon belt has a tensile strength of 6000 lbs. and can extend 35 feet. The belt is attached to the backstop frame using a buckle connection.

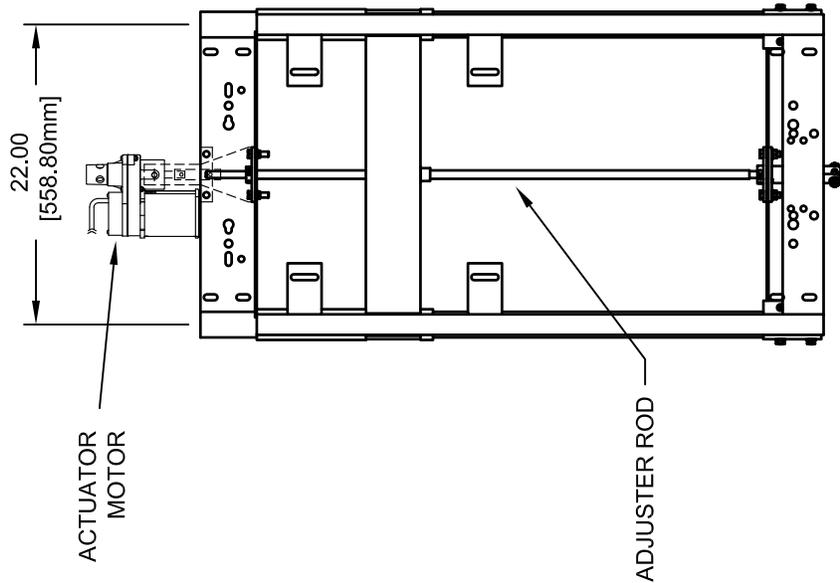
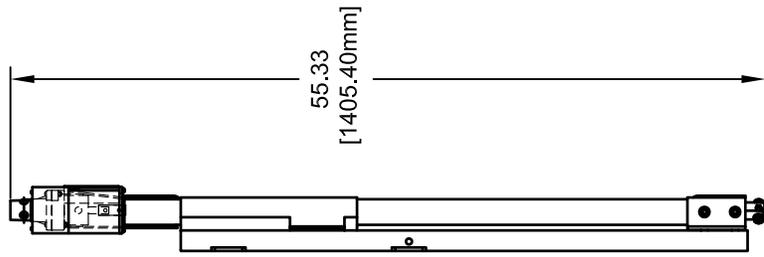
“Safstop” has an automatic spring-loaded reset and does not require electricity in order to operate. “Safstop” locks by inertial force for immediate and positive setting, or centrifugal force for slower setting. Locking mechanism is contained within cast aluminum housing. "Safstop" is recommended for any backstop folded over seating.

“Safstop” is also available with different belt length. Belt will only retract 35 feet.

MODEL 1103-45' belt length

CAUTION:

“Safstop” is rated for 1000 lbs. And has been tested to hold 1500 lbs. This does not insure that other components, such as building structure will withstand thrust load.



REVISION		
REV.	DATE	BY
A	12/05/03	JJC
B	12/18/06	WAE
C	04/16/08	RWP
D	06/23/08	DWP
E	10/27/08	DWP
F	6/12/09	DWP



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ELECTRIC HEIGHT ADJUSTER (ADJUST-A-GOAL)

DRAWN	CONNERLEY	DATE	04/17/03	MATERIAL	N/A
APPROVED	JJC	DATE	04/17/03	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	1170
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	1170	D	



MODEL 1170

ELECTRIC HEIGHT ADJUSTER ADJUST-A-GOAL SERIES

APPLICATION

This unit is designed to electrically adjust goal height from 8' to 10'. This unit is operated with your choice hard wire kit or power wand kit and power wand. (One power wand may be used to operate several electric adjust-a-goals.) This unit may be installed on any Performance Sports Systems and/or Gared basketball units as well as many by other manufacturers.

MATERIAL

Vertical tubing shall allow the slide tubing to move freely without binding. Horizontal structure are two 2" x 4" x 1/8" thick steel L braces, one at each end. A 3 1/2" x 3/4" x 1/8" thick steel c-channel is used as a direct goal attachment to transfer loads from backboard to the surrounding framework. All components are welded to ensure stability during normal play. Electric actuator shall provide smooth, reversible linear motion for loads up to 600 lbs. And travel 24". Actuator to have 25% duty cycle and factory set cam style limit switches. Height indicator label located on the back of the unit shall be used to visually determine height settings from 8' to 10' in 3" increments.

Unit shall be furnished with standard flat black finish and should not be painted after shipment. Unit must be periodically lubricated to insure proper function and ease of height adjustment.

ACCESSORIES

HARD WIRE KIT

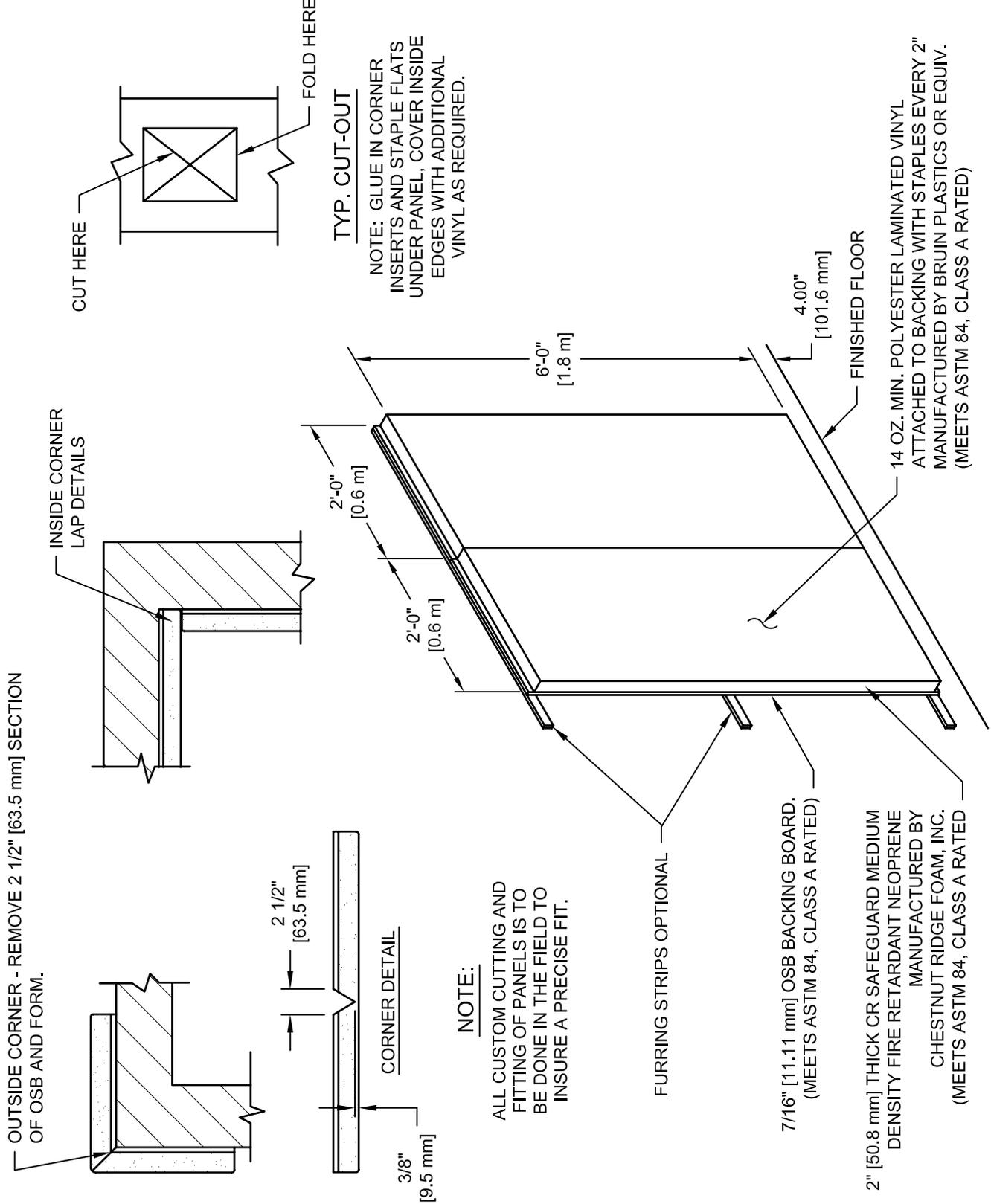
Compatible hard wire kit is the Model 1158. See accessories section in specification manual.

POWER WAND WIRING KIT

Compatible power wand wiring kit is the Model 1157. See accessories section in specification manual.

POWER WAND

Compatible power wand is the Model 1159. See accessories section in specification manual.



OUTSIDE CORNER - REMOVE 2 1/2" [63.5 mm] SECTION OF OSB AND FORM.

INSIDE CORNER LAP DETAILS

TYP. CUT-OUT

NOTE: GLUE IN CORNER INSERTS AND STAPLE FLATS UNDER PANEL, COVER INSIDE EDGES WITH ADDITIONAL VINYL AS REQUIRED.

NOTE:

ALL CUSTOM CUTTING AND FITTING OF PANELS IS TO BE DONE IN THE FIELD TO INSURE A PRECISE FIT.

FURRING STRIPS OPTIONAL

7/16" [11.11 mm] OSB BACKING BOARD. (MEETS ASTM 84, CLASS A RATED)

2" [50.8 mm] THICK CR SAFEGUARD MEDIUM DENSITY FIRE RETARDANT NEOPRENE MANUFACTURED BY CHESTNUT RIDGE FOAM, INC. (MEETS ASTM 84, CLASS A RATED)

14 OZ. MIN. POLYESTER LAMINATED VINYL ATTACHED TO BACKING WITH STAPLES EVERY 2" MANUFACTURED BY BRUJIN PLASTICS OR EQUIV. (MEETS ASTM 84, CLASS A RATED)

FINISHED FLOOR

REVISION		
REV.	DATE	BY
A	12/17/03	JDF
B	03/30/04	JJC
C	06/06/08	RWP




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FIRE RETARDANT WALL PADDING

DRAWN	CONNERLEY	DATE	05/06/03	MATERIAL	AS NOTED
APPROVED	JJC	DATE	05/06/03	FINISH	AS NOTED
FILE LOC.	Q:\Final Release\Specifications			DWG. NO.	CLASS A SPEC
SIZE	SCALE	SHT. NO.	PART NO.	CLASS A SPEC	
A	NOTED	1 OF 1			
					REV C



MODEL 4130

CLASS "A" FIRE RETARDANT WALL PADDING

Wall padding standard size shall be 6' x 2' with 1" nailing margin on top and bottom of each panel. Pads shall be constructed using 2" thick CR SafGuard medium fire retardant neoprene foam, as manufactured and patented by Chestnut Ridge Foam, Inc. or equal, and meeting ASTM E84 with a Class A rating meeting Flame-Spread Index of 25 or less, and Smoke Development index of 450 or less. Foam shall be cemented to 7/16" oriented strand board.

Cover material shall be 14-ounce polyester laminated vinyl as manufactured by Value Vinyls or equal, attached to backing with staples every two inches. Vinyl to be flame retardant material meeting ASTM 84, with a Class A rating.

Vinyl shall be available in white, yellow, orange, red, kelly green, forest green, royal blue, marine blue, navy blue, gray, black, maroon, beige, teal and purple.

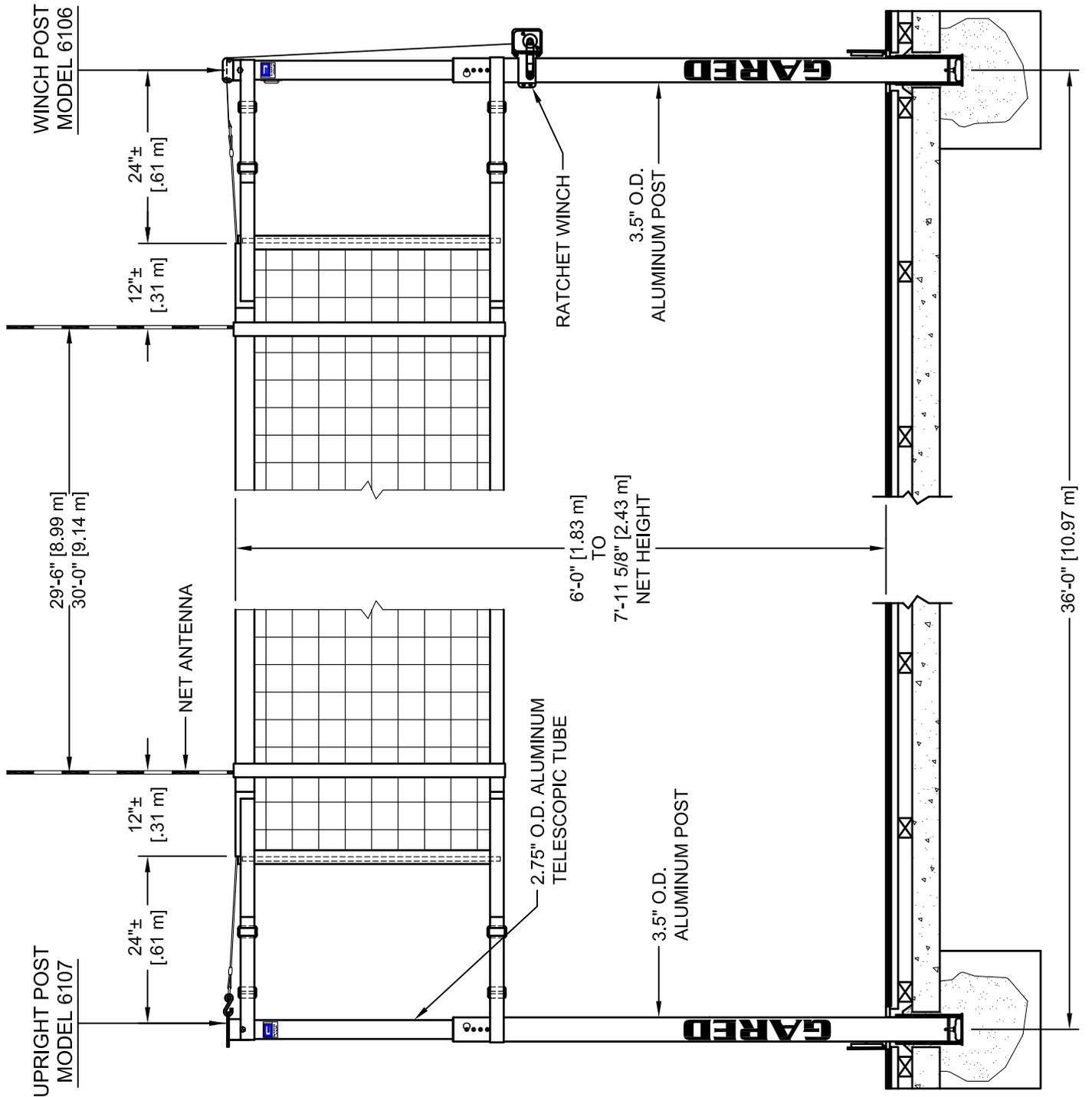
See model number code chart for specific model number. Custom padding (thickness, material, and color) and size of padding (height and width) must have written description.

Custom cutting and fitting of padding may be done in field to insure proper fit. Furring strips by others.

ACCESSORIES

WALL ATTACHMENT TRIMS AND HARDWARE

Most wall padding may be attached with special attachment trims and hardware. See the wall padding section in the specification manual.



REVISION		
REV.	DATE	BY
A	10/28/03	MDL
B	01/05/04	MDL
C	01/22/04	MDL
D	03/04/05	ATS
E	06/02/08	RWP
F	06/11/09	RWP



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SCHOLASTIC VOLLEYBALL SYSTEM - 1 COURT

DRAWN	LEWIS	DATE	10/10/03	MATERIAL	N/A
APPROVED	JJC	DATE	10/14/03	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO. 6100	
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	6100	F	



MODEL 6100

SCHOLASTIC TELESCOPIC VOLLEYBALL SYSTEM

RECOMMENDED APPLICATION

Top quality unit for use in facilities requiring product for competitive situations. Meets all grade school, middle school, YMCA, club, USVBA, NFHS, and NCAA requirements for competitive play.

FLOOR SLEEVES AND COVER PLATES

Please refer to attached specification

UPRIGHTS

Upright Bottom Post shall be lightweight high strength 3 1/2" O.D. aluminum. The upper telescoping adjustable tube shall be 2 7/8" lightweight high strength aluminum. Finish shall be gray anodize. Uprights shall be removable type designed for use with below floor sleeves or above floor T-bases. Uprights shall be provided with adjustable high impact rubber foot to protect finished floors and to allow for additional precise net height adjustment. The uprights will have infinite net height adjustment between 6' to 8' -4" to meet all age group height settings for both men and women.

NET TENSIONER (WINCH)

The net tensioner shall incorporate a heavy duty, self-locking ratchet mechanism with a compression clutch brake type release. A high tensile nylon strap will be used with the winch to achieve required net tension.

NET

Net features include 1" diameter wood dowel and 4" square black nylon mesh (250-lbs tensile strength) for excellent performance and durability. Free floating net along 1/8" diameter steel 7 x 19 cable (1,760-lbs. Minimum breaking strength) allows for quick and easy centering of net about the court lines. Nylon straps with metallic clips are used to secure net in place. Net shall be 32' length and 39" width. Net perimeter shall have a 2" wide vinyl coated polyester hem that is double stitched. Net meets or exceeds all requirements for most levels of competition.

UPRIGHT PADS

Upright safety pads shall be one single piece 72" in height. Padding shall be constructed with 1 1/2" thick cross-linked polyethylene closed cell foam covered with 14-ounce nylon reinforced vinyl. Attachment to uprights shall be with Velcro® straps. Standard Colors are: white, yellow, orange, red, kelly green, forest green, royal blue, marine blue, navy blue, gray, black, maroon, beige, and purple.

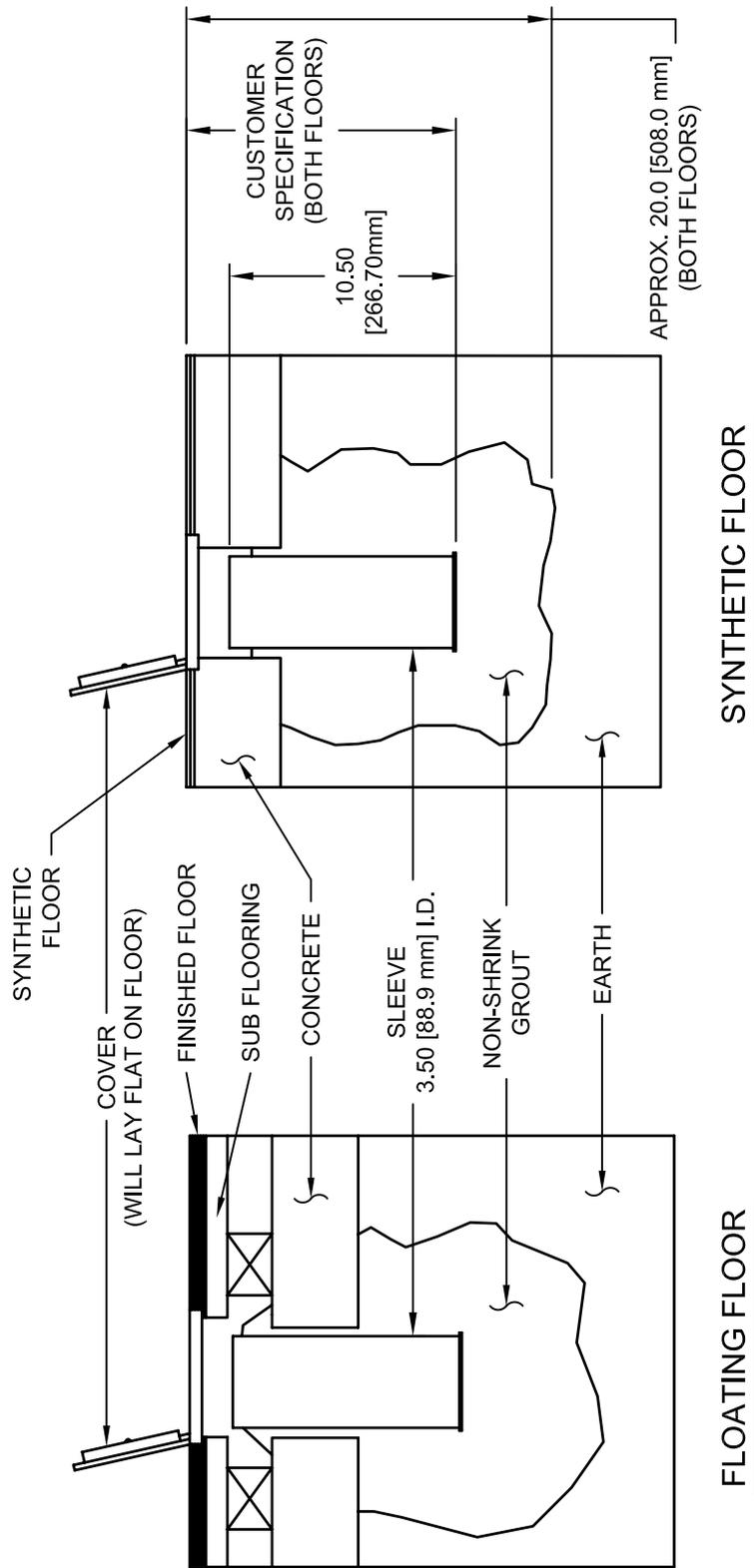
NET ANTENNA AND TAPE

Net antenna shall be 3/8" diameter fiberglass rods 72" long with alternating red and white bands. Net tape shall be white nylon reinforced vinyl 2 1/2" wide with full-length pocket to accept the antenna. Attachment to net shall be full-length quick action Velcro® closures.

AVAILABLE OPTIONS

Center Post Uprights for multi-court applications
Referee Stand with optional padding
Storage Cart

Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC



REVISION		
REV.	DATE	BY
A	12/17/03	MJB
B	12/29/03	JJC
C	06/02/08	RWP



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VOLLEYBALL ANCHOR SYSTEM

DRAWN	CONNERLEY	DATE	05/09/03	MATERIAL	N/A
APPROVED	JJC	DATE	05/09/03	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	6400
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	6400	C	

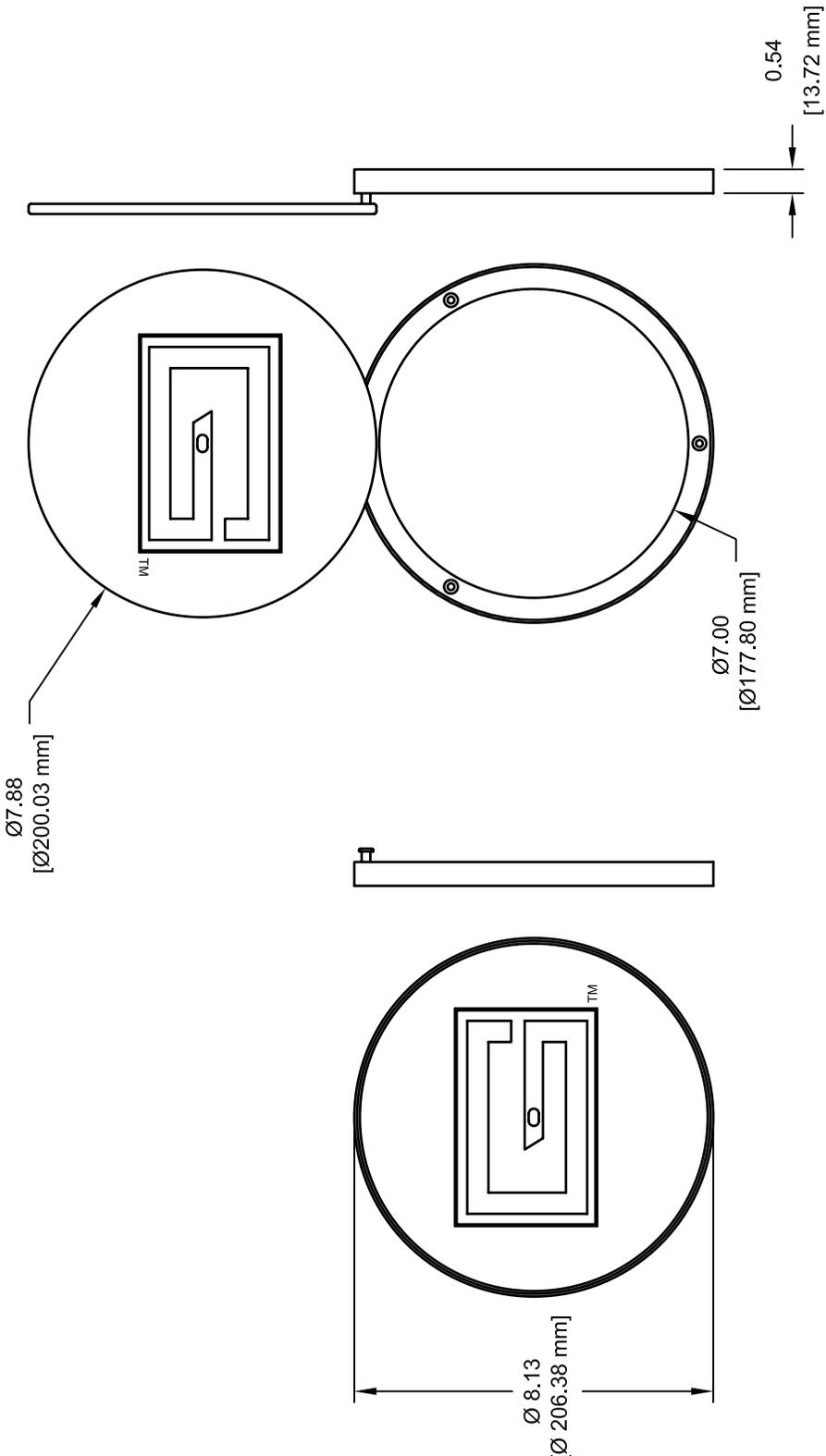


MODEL 6400

VOLLEYBALL 3.5" DIA. FLOOR SLEEVE

Floor sleeve shall be constructed of steel and shall be up to 10-1/2" long. Inside diameter of sleeve shall be 3-1/2". Sleeve is designed to work with both floating and non-floating synthetic floors.

Subject to design change and current manufacturing practices.
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OPEN POSITION

CLOSED POSITION

MODEL	FINISH	KEY REQUIRED
6432	POLISHED BRASS	YES
6433	CHROME	YES

REVISION		
REV.	DATE	BY
-	-	-




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OVERSIZED LOW PROFILE FLOOR COVER

DRAWN	CONNERLEY	DATE	08/18/08	MATERIAL	N/A
APPROVED	CONNERLEY	DATE	08/18/08	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	6432
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NOTED	1 OF 1	6432	-	



MODEL 6432

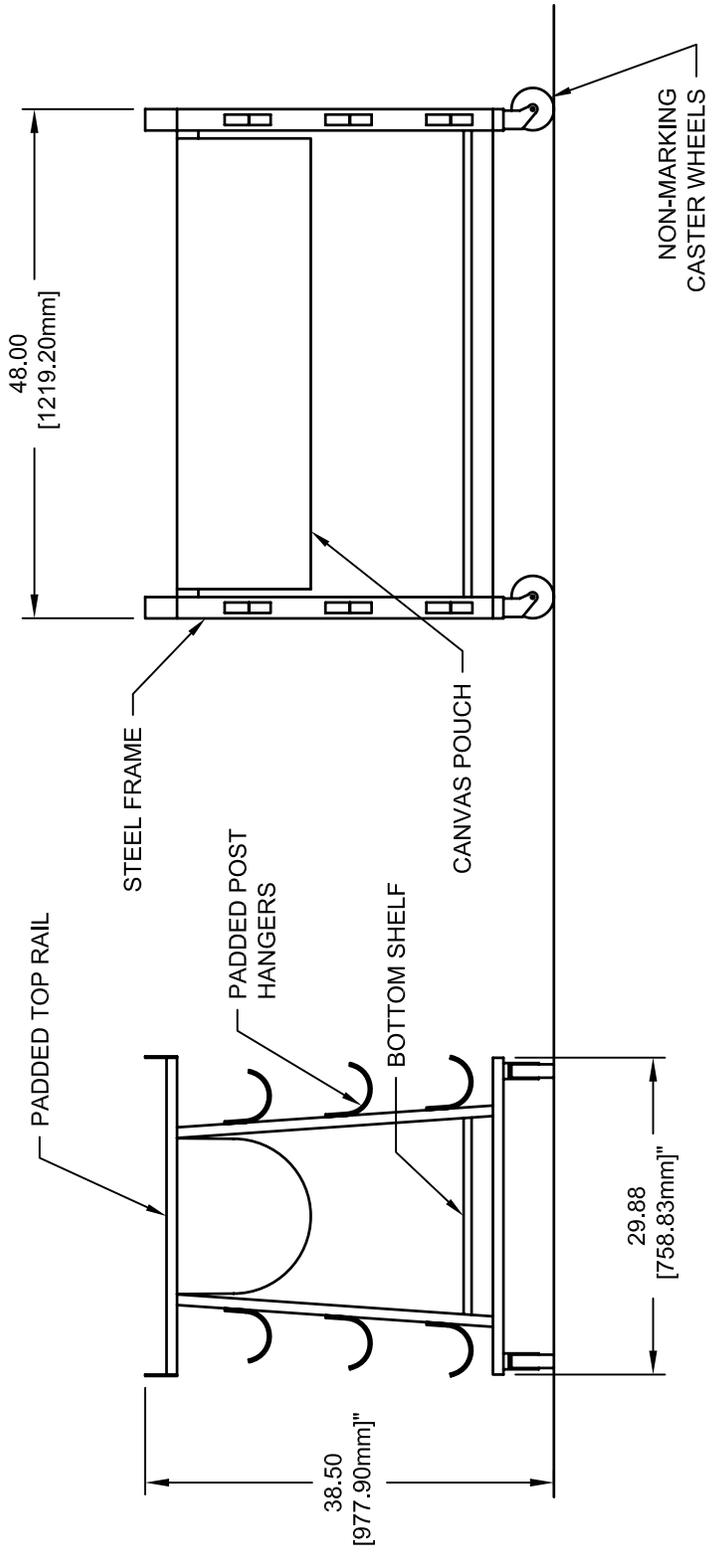
**LOW PROFILE VOLLEYBALL FLOOR COVER
OVERSIZED**

Floor cover shall be brass alloy for model 6432 and chromed steel for model 6433. Cover plate shall have a molded plastic recessed mounting flange, cork gasket, and 7 7/8" diameter cover. Molded plastic recessed mounting flange shall be 8 1/8" in diameter and have 3 holes in the ring (for screwing into the floor) that shall be completely concealed under the cover when in the closed position, allowing for a completely flat surface. In a "floating" wood floor, the floor plate is connected to the floor only, allowing it to move with the expansion and contraction of the floor. Cover shall be 7 7/8" in diameter by 1/4" thick. Diameter of opening shall be 7".

6432 - Polished Brass with key

6433 - Chrome with key

Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC



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REV.	DATE	BY
A	12/17/03	MJB
B	04/07/04	JJC
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VOLLEYBALL STORAGE SYSTEM

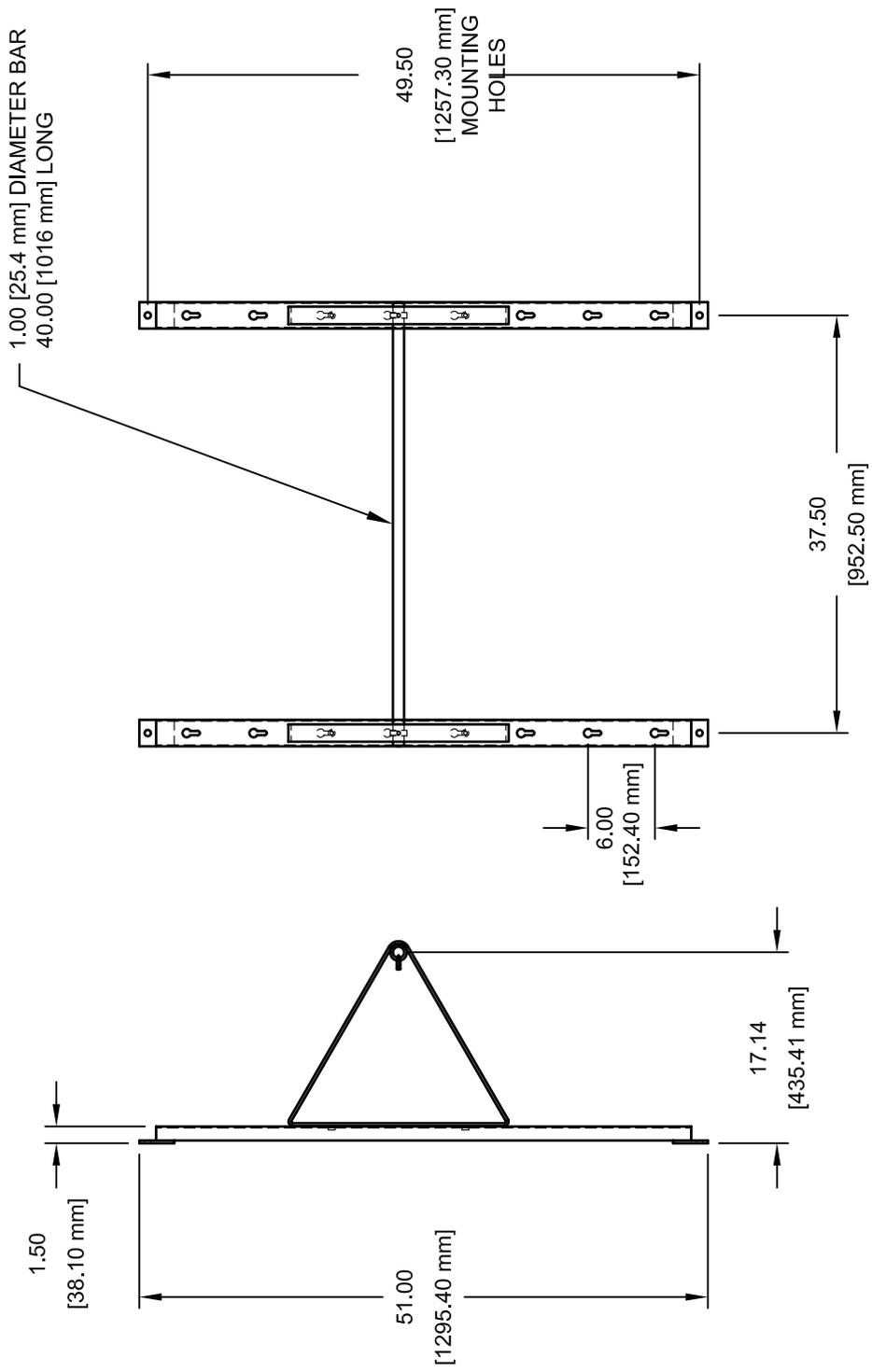
DRAWN	CONNERLEY	DATE	05/09/03	MATERIAL	N/A
APPROVED	JJC	DATE	05/09/03	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	6295
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NONE	1 OF 1	6295	C	



MODEL 6295
VOLLEYBALL STORAGE CART

Storage cart shall store and transport one referee stand, six volleyball posts, nets, pads, and antennae. Frame shall be steel rectangular tubing with dark green powder coat finish. Top rail and post hangers shall have padding for equipment protection. Bottom shelf and canvas pouch allows for storage of additional equipment. Non-marking swivel casters allow for easy transport.

Subject to design change and current manufacturing practices.
Revised April 4, 2008 ©2008 Gared Holdings, LLC



CHIN-UP BAR CONSTRUCTED OF STEEL FRAME AND WELDED STEEL MOVEABLE BAR STRUCTURE. BAR ADJUSTS TO 6 PREDETERMINED HEIGHTS USING KEYHOLE SLOTS. UNIT IS POWDERCOATED GRAY.

REVISION		
REV.	DATE	BY
A	12/17/03	MJB
B	03/29/04	JJC
C	10/01/07	JJC
D	05/15/08	JJC




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CHIN-UP BAR

DRAWN	CONNERLEY	DATE	05/08/03	MATERIAL	N/A
APPROVED	JJC	DATE	05/08/03	FINISH	N/A
FILE LOC. Q:\Final Release\Specifications				DWG. NO.	109
SIZE	SCALE	SHT. NO.	PART NO.	REV	
A	NOTED	1 OF 1	109	D	



MODEL 109

CHIN-UP BAR

Chin up bar shall be constructed of steel frame rails and welded steel moveable bar structure. Bar is 1" diameter and shall adjust to four predetermined heights using keyhole slots. Finished in gray powder coat.

Hardware for attachment of steel frame to wall not included.



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 093

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A50.9, A92.B/C SPEC. SECTIONS: 116623 PAGE:

REQUEST:

Submitted By: TJ Distributors

Date: 08 January 2020

- 1.) Can you confirm that the lights and HVAC in the gym will be mounted above or even with the bottom chord of the truss to avoid interference with the ceiling mounted basketball hoops?
- 2.) Section 116623, paragraph 2.2 specifies basketball equipment but the drawings for the gym (base bid and alternate) do not indicate how many basketball hoops are to be provided. Can you provide the number of basketball hoops to be provided for the base bid and alternate gym?
- 3.) Section 116623, paragraph 2.2.E specifies two different operations of the goal height adjusters; manual with detachable crank handle and electric with electric control device. Can you please confirm the operation desired for the goal height adjuster?
- 4.) Section 116623, paragraph 2.2.H specifies control of backstop to be electric but does not specify the operation. Can you please confirm that the control of the backstop is to be electric with key-switch operation?
- 5.) Section 116623, paragraph 2.2.K. does not specify the type of goal to be used. Can you confirm the basketball goals should be break-away not stationary?
- 6.) Section 116623, paragraph 2.3 specifies volleyball sleeves/cover plates and volleyball equipment but the drawings for the gym (base bid and alternate) do not indicate how many of each are to be provided. Can you provide the number of sleeves/cover plates and volleyball systems to be provided for the base bid and alternate gym?
- 7.) Can it be confirmed that deepened slabs will be provided for installation of the volleyball floor sleeves? This will allow the gym equipment contractor to core drill and set the sleeves in the exact location in lieu of trying to locate these during the initial slab pour.
- 8.) Section 116623, paragraph 2.4.C specifies that wall mounted pull-up bars are to be furnished and installed; however, the drawings do not show any pull-up bars. Can



you please confirm that wall mounted pull up bars are required and confirm the quantity needed?

- 9.) Section 116623, paragraph 2.5.D.5. specifies manufacturers standard installation method but drawing A50.9, detail 1 indicates the padding being attached by concealed Z-clips. Can you confirm if Z-clips or manufacturers standard attachment are desired?
- 10.) Drawing A92.B, detail 1 for the base bid gym and A92.C, detail 1 for the alternate gym both show a climbing wall but one is not specified in Section 116623. Will a climbing wall be required, if so, can a specification be provided?

RESPONSE:

- 1.) All HAC & lighting is to be installed above the bottom chord of the roof trusses.
- 2.) Two basketball goals are to be provided for the base bid, and no additional goals for the alternate.
- 3.) Electric with electric control device.
- 4.) Confirmed. The control of the backstop is to be electric with key-switch operation.
- 5.) The basketball goals are to be break-away.
- 6.) Base bid shall have 2 sets. Alternate shall have 3 sets.
- 7.) A 2'x2' thickened slab will be provided at each volleyball floor sleeve, however the Carpentry & General Work contractor shall provide layout and coordination. Refer to revisions to Summary of Work, Addendum #5.
- 8.) Two wall-mounted pull up bars are required. Location shall be determined in field during construction.
- 9.) Z-clip attachment is to be used for installing the pads.
- 10.) The Basis-of Design for the climbing wall shall be:
 - a. Manufacturer: Everlast Climbing, A Playcore Company
 - b. Model: Superior Rock Climbing Wall
 - c. Size: 8'H X 40'L
 - d. Safety Surfacing: 2" Standard cordless mat locking system
- 11.) See attached product information

Response By: Bob Grove Date: 14 January 2020



8'x40' SUPERIOR ROCK™ TRAVERSE WALL®

CLIMBING WALL SYSTEM:

- Molded from rock along the North Shore of Lake Superior.
- Shading varies from panel to panel for a Rock Realistic look.
- 10 panels, 8 feet high by 4 feet wide, for an overall length of forty feet.
- 200 Groperz™ Route-Setting Hand Holds™ in three colors – Green, Yellow and Red. All holds have a standardized bolt length. Holds come with mounting bolts and allen wrenches.
- 660 - Premium 5/8 inch barrel T-Nuts for easy installation and increased route-setting capabilities
- **Safety, Care and Maintenance Instructions** booklet.
- **Climbing Wall Rules & Guidelines** signs included with purchase. (18"x24")
- **Climbing the Walls** activity guide is included to get your students climbing! (250 pages)
- All Everlast products are backed by Product Liability Insurance and carry a One-Year Warranty.
- We perform background checks on all our trained, professional installers, and they are covered by worker's compensation insurance.

SAFETY SURFACING:

2" STANDARD CORDLESS MAT LOCKING® SYSTEM

(protected by US Patent 7819778)

- Our Cordless Mat Locking® System protects your wall from unsupervised use by securing the mats to the wall via our security latch, not cords – the most user-friendly system available.
- Our 2-inch mats have been tested per the ASTM F1292-04 Standard Specification and exceed the performance requirements
- Ten mats, 6 feet high and 4 feet wide, for an overall length of forty feet
- Foam consists of 2 inches of recycled polyethylene.
- Two nylon-webbing loops attached to each mat for use as Mat Locking System.
- Two highly durable thermal plastic coated tabs attach to each mat and connect to base of the wall (to prevent climbing under mats when wall is closed). These unique tabs are the most durable way to connect the mats to the wall.
- 18 Ounce vinyl mats are available in Red or Royal Blue. (Custom color upgrades are available.)
- Available upgrade to our Premium 3" Mats that have been tested per the ASTM F1292-04 and ASTM F2440-11 Standards. Fire Retardant Mat upgrades are also available if needed. Contact your local safety inspector or fire marshal to determine if they are necessary.

ACCESSORIES

- None Included



8'x40' SUPERIOR ROCK™ TRAVERSE WALL® Package	
Shipping and Handling	
Wall Package Subtotal	
<u>Installation</u>	<i>Installation Not Included</i>
<u>Additional Products</u>	
<i>None Included</i>	
GRAND TOTAL	
<i>Prices do not include tax</i>	

Notes:

Fire Retardant Upgrade Available Upon Request (additional charges apply)

We are committed to offering you the most competitive pricing available. We will do our best to maintain current pricing, but due to recent inflationary pressures prices are subject to change without notice.

For Installed Walls Only: Pricing includes labor and freight at normal rates. If special conditions, such as prevailing wage, expedited freight, or inside delivery are required, please let us know and we will quote you the appropriate costs.

Prepared by: Sue Nelson

42 Northern Stacks Drive, Suite 100 | Minneapolis, MN 55421
P: 800-476-7366 F: 651-665-9130 www.everlastclimbing.com



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 094

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A51.2 SPEC. SECTIONS: 122413 PAGE:

REQUEST:

Submitted By: Specialty Finishes Date: 08 January 2020

- 1.) Section 122413 Roller Shades specifies three different types of hardware – fascia, pocket head box, and surface head box. Please clarify which type is required.
- 2.) Section 122413, Roller Shade Schedule pages 9 and 10 are the same, with exception of Fitness 503. Please issue a corrected schedule.
- 3.) Section 122413, Roller Shade Schedule “Mark H” lists the window height of 5’-4 3/8”. Sheet A51.2, Window Type “H” overall window height is 109-1/16”. Are roller shades required for the full-height?

RESPONSE:

1. Hardware to be surface mounted headbox with fascia and end caps
2. Schedule has been corrected per addendum no. 5
3. Yes, schedule has been corrected per addendum no. 5

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 095

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A91.F / 7 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Specialty Finishes Date: 08 January 2020

- 1.) Detail 7/A91.F, is calling for a 1/4" reveal to be routed into the door on the wardrobe side of the teacher wardrobe cabinet. The factory has informed us that all of these doors cannot be made on the factory assembly line and must be manually made. This will increase the cost of the cabinet significantly due to all of the hand work to rout this reveal out, painting the reveal (they will not inlay a 1/4" piece of laminate). We are suggesting making the wardrobe side one solid door with no reveal and only one wire pull as shown in the attached sketch. Putting this reveal in the door will cost the owner thousands of dollars that doesn't need to be wasted due to the manual manufacturing of these custom doors. Another option we may offer as an option is to make the unit as a 4-door unit as shown in elevation and mechanically fasten the top and bottom doors of the wardrobe side on the inside of the door so it functions as a single door. Please confirm.

RESPONSE:

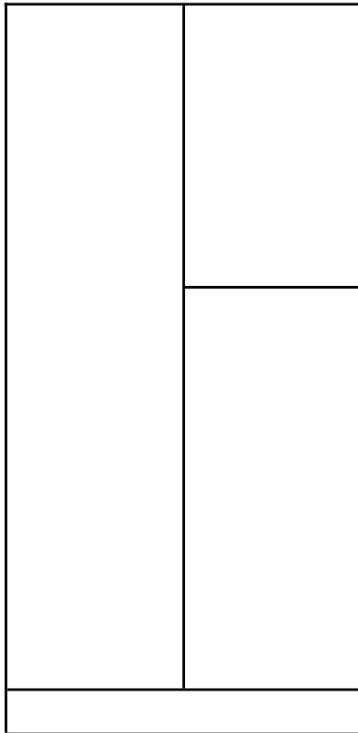
See revised detail 7/A91.F issued per Addendum no. 5. All associated casework elevations have also been updated to show the cabinet with one continuous wardrobe door.

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



If you look at detail 7/A91.F, the architect is calling for a 1/4" reveal to be routed into the door on the wardrobe side of the teacher wardrobe cabinet. I have spoken to the factory about this detail and they are telling me that all of these doors cannot be made on the factory assembly line and must be manually made. This will increase the cost of the cabinet significantly due to all of the hand work to rout this reveal out, painting the reveal (they will not inlay a 1/4" piece of laminate). we are suggesting making the wardrobe side one solid door with no reveal and only one wire pull see below



Putting this reveal in the door will cost the owner thousands of dollars that doesn't need to be wasted due to the manual manufacturing of these custom doors. Another option we may offer as an option is to make the unit as a 4 door unit as shown in elevation and mechanically fasten the top and bottom doors of the wardrobe side on the inside of the door so it functions as a single door.



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 096

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: 116143 PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc. Date: 08 January 2020

- 1.) Specification Section 116413, Article 2.7, Paragraph A.2 states that the battens are to be shop painted black. We recommend using 1-1/2" Schedule 40 black steel pipe with a lacquer finish. Is this acceptable?
 - 2.) Specification Section 116143, Article 2.7 Paragraph E indicated grade 80 chain is required. Grade 80 chain is not used in for dead-hung supports due to the size and shape of its links. 1/4" Grade 30 chain is typically used to suspend dead-hung items over a stage as it greatly exceeds the minimum safety factors required for static loads. Therefore, is 1/4" Grade 30 acceptable to use?
 - 3.) Specification Section 116143, Article 3.3 Paragraph C indicates that we are required to close the ends of the batten units. Typically, the battens ends are left open. Therefore, we recommend leaving the ends of the battens open or at the very most installing a soft vinyl batten end cap. Is this acceptable?
 - 4.) Specification Section 116143, Article 1.4 Paragraph A.1 mentions draw curtain machines. Nowhere else in the specification does it depict what type of draw curtain machine is required. Therefore, is it required?
 - 5.) Specification Section 116143, Article 2.4 Paragraph A.6 states to provide lining for each curtain. Other than Article 2.3, Paragraph D, nowhere else in the specification does it mention lining for the curtain fabrics. Therefore, which curtains receive lining if any?
 - 6.) Specification Section 116143, Article 2.3 Paragraph B.2 lists three types of curtain fabrics for the front curtain. Seeing that the specified fabric comes backed with a vinyl lining, would we be required to provide the additional lining as specified?
-



RESPONSE:

- 1.) Yes, this is acceptable.
- 2.) Yes, ¼" Grade 30 is acceptable, providing it meets the loading requirement.
- 3.) The battens ends may be left open.
- 4.) Draw curtain machines are not required.
- 5.) Other than what is required by Article 2.3, Paragraph D, no other lining is required.
- 6.) No additional lining would be required on a fabric with a vinyl lining.

Lineset Schedule

- One (1) Front valance
- One (1) Front curtain
- Three (3) Border curtains – at each light bar
- Two (2) Side curtains on fixed battens
- One (1) Rear Curtain

Curtain fabrics

- Front setting curtains:
 - 21 oz IFR Doral Opaque as distributed by Fred Krieger (Or equal)
 - Color: As selected by Architect from manufacturer's full range.
- Cyclorama curtains:
 - 16 oz IFR Black Cyc Fabric as distributed by Melfabco (Or equal)

Response By: _____ Bob Grove _____ Date: _____ 15 January 2020 _____



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 098

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A30.D SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet Date: 08 January 2020

- 1.) In Addendum #2, Drawing A30.D, the floor base in the gym was changed from WD-1 to RB-1. Please confirm if the design intent is to utilize RB-1 if the wood floor alternate is elected.

RESPONSE:

Design intent is for:
RB-1 to be used with the base bid of LVT-1
WD-1 is to be used with gym alternate AWD-1

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 100

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Thompson & Sons Contracting

Date: 08 January 2020

- 1.) Please provide additional detail on the bench, trash receptacles, & basketball hoop referenced on the site plan. Specifications have not been provided.

RESPONSE:

- 1.) Refer to sheet L3 for bench, trash details. New basketball detail has been added to sheet C6.

Response By: SJG

Date: 01/14/20



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 101

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: 09 51 13 PAGE: _____

REQUEST:

Submitted By: Peninsula Acoustical Date: 08 January 2020

- 1.) Although Section 090600 (Finish Schedule) is referenced in the Spec 09 51 13 Acoustical Panel Ceilings, it is not included in the Specifications, nor any addenda that I see. Please provide it at your earliest convenience, as it is needed to identify the item numbers, descriptions, and colors of the ceiling tiles.

RESPONSE:

- 1.) Section 090600 (Finish Schedule) is not part of this project. There are only two acoustical ceiling types on the project, and they are indicated on the drawings.

The specification Section 09 51 13 -ACOUSTICAL PANEL CEILINGS is hereby modified as follows:

- 2.3 shall now read: ACOUSTICAL PANELS: CT-01
- Delete 2.3.D.
- 2.4 shall now read: ACOUSTICAL PANELS: CT-03
- Delete 2.4.D.

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 102

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 08 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: EDiS Company Date: 08 January 2020

- 1.) Construction documents do not clearly identify the extent of concrete foundations for the proposed flagpole, bike rack, benches, outdoor basketball hoops, trash receptacles, site signage. Please provide necessary details to depict design intent.

RESPONSE:

1. Refer to Addendum #5, which includes revisions to the documents that incorporate this information.

Response By: SIG Date: 01/14/20



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 103

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 09 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet Date: 09 January 2020

- 1.) On the finish Material Schedule, VT 1-9 shows Tarkett Azrock (renamed Tarkett VCT) with a color selection for Color Essence VET. The Color Essence VET tile and corresponding adhesive is a lot more expensive (more than 3X) than the Tarkett VCT and corresponding adhesive. Just want to make sure that the architect wants the Color Essence VET since they have actual colors listed.

RESPONSE:

Yes, Color Essence VET for VT 1-9 is correct. The finish schedule has been updated on A90.D to indicate Color Essence.

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 104
FROM: J.D. BARTLETT, EDiS COMPANY DATE: 09 JANUARY 2020
PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS
DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Conventional Builders Date: 09 January 2020

- 1.) Contact A-6 Carpentry & General Works Package, Summary of Work, Note 2 notes wall sheathing under our section, the sheathing is dens glass which is covered under the metal stud contract. Please advise who owns this.
- 2.) Contact A-6 Carpentry & General Works Package, Summary of Work, Note 2 is calling for package A-6 to install ice shield, this is normally performed by the roofing contract so they can get the guarantee for the roofing. Please advise.

RESPONSE:

- 1.) Response. Refer to Addendum #4 for revisions to specification section 011100 - Summary of Work, which addresses both questions.

Response By: J.D. Bartlett, EDiS Company Date: 13 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 105

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 09 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Peninsula Acoustical Date: 09 January 2020

- 1.) Please provide specifications for metal stud framing and drywall assemblies. Please provide specification for batt insulation (interior sound and thermal batt insulation).

RESPONSE:

- 1.) See addendum #4 specification section 09 22 16.

Response By: Oscar Enderica Date: 1/13/2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 106
FROM: J.D. BARTLETT, EDiS COMPANY DATE: 09 JANUARY 2020
PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS
DWG. # / DETAIL: S513 / 2 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: North East Contractors Date: 09 January 2020

- 1.) Which contract is responsible for the roof sheathing (D1 Plywood - D2 & D4 Metal Decking - D3 Armorloc) on CFMF?
- 2.) Which contract is responsible for the 12-gauge CFMF shown between the heel of the truss system? See detail 2/S513 as example

RESPONSE:

- 1.) Plywood roof sheathing shall be provided by Contract A-06 Carpentry & General Work. Metal deck shall be provided by Contract A-05 Structural Steel & Misc. Metals.
- 2.) CFMF shall be provided by Contract A-08 Metal Stud & Drywall contractor.

Response By: J.D. Bartlett, EDiS Company Date: 13 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 107

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 09 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: North East Contractors

Date: 09 January 2020

- 1.) Does all interior framing and drywall stop at the bottom chord of the trusses?

RESPONSE:

- 1.) Yes, unless noted otherwise. Exception: all mechanical mezzanine walls, up to underside of roof deck.

Response By: Oscar Enderica Date: 1/13/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 109

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A10.E SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Younger Services Date: 13 January 2020

- 1.) Please reference drawing A10.E, what type of surfacing is required in playground area? Are there any details available for the playground subbase and drainage system?
- 2.) Please reference drawing A10.E, can a specification or drawing be provided for the playground surfacing?

RESPONSE:

- 1.) See addendum #4 details 3 and 4 Sheet A10.E. For slopes refer to civil sheets.

Response By: Oscar Enderica Date: 1/13/2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 110
FROM: J.D. BARTLETT, EDiS COMPANY DATE: 13 JANUARY 2020
PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS
DWG. # / DETAIL: A50.4 / T17, T14 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet Date: 13 January 2020

- 1.) On the bid for you have 'Caulking' listed on the subcontractor page. What exactly are we supposed to be caulking (CPT, VCT, LVT or SV)?
- 2.) Floor Protection in the Flooring Summary of Work:
 - a. Ram board – is this 50%, 75% or 100% of area?
 - b. Masonite – What are we calling high traffic areas?
 - i. Corridors
 - ii. Walk ways around the gym and cafetorium
 - iii. Vestibules
 - iv. Any other places??
- 3.) Transitions listed on A50.4 show marble thresholds going from resinous to CPT (T19), SV (T20), Vinyl Tile (T16) and VCT (T15). Who owns these marble thresholds as this is typically in the ceramic tile scope of work?
- 4.) Please verify that the Expansion Joint Threshold as shown on T17/A50.4 & T14/A50.4 is NOT in the flooring scope of work.

RESPONSE:

- 1.) Response. The flooring contractor is responsible for any joint sealants required to execute scope within the bid documents.
- 2.) Flooring protection is the responsibility of the respective flooring contractors. High traffic areas will be dependent upon sequencing and schedule as the project progresses, but will certainly include corridors, vestibules, and high reach spaces, such as the gymnasium and cafetorium.



- 3.) Refer to Contract A-16 - Ceramic Tile, scope item #1, which includes stone thresholds.
- 4.) Refer to Contract A-8 - Metal Studs and Drywall, scope item #17, which includes expansion joints related to flooring systems. The Flooring Contractor shall provide coordination with this contract and patching and finishing of the materials provided by its contract, as necessary, where it interfaces with the floor expansion joint system.

Response By: J.D. Bartlett, EDiS Company Date: 14 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 111

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet

Date: 13 January 2020

- 1.) LVT 1 is now listed in the Gym 502:
 - a. What material is the game lines?
 - b. Who owns the games lines?
 - c. Is Fitness 503 is also LVT 1?

RESPONSE:

- a) Game lines shall be inlaid, laser cut LVT, colors to be selected from manufactures full range of colors. Refer to documents for striping layout.
- b) Game lines will be provided by contract A-14 - Flooring.
- c) Fitness 503 is to be LVT-1 in the base bid. Finished in Fitness 503 are to match the flooring and base used in the gymnasium dependent on which alternate or base bid is chosen. Refer to Addendum #5 for revisions to bid Alternates No. 5a & No. 5b.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 112

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Corrado Construction Company

Date: 13 January 2020

- 1.) Alternate #10 calls for courtyard irrigation but none is shown, please provide details or clarify.

RESPONSE:

- 1.) Irrigation area to include grass and planting beds in courtyard. Irrigation contractor shall provide design and details for submittal review to the CM.

Response By: SG Date: 01/14/20



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 113

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Ventresca Brothers Date: 13 January 2020

- 1.) The door schedule on drawing A50.1 show openings 502A and 502B receiving hollow metal frames and aluminum doors. This is unusual, please confirm or clarify.
- 2.) The door schedule on drawing A50.1 lists door openings 122C and 122D, but I don't see the openings on the floor plan. Please clarify.
- 3.) Please provide a spec section for the toilet partitions.
- 4.) Drawings A60.1 and A60.2 show keynote 10AX – stainless steel guard wall plate. It appears that this is located below the hand dryers. I don't see this item listed in the toilet accessories spec, can a spec be provided?
- 5.) Drawing A60.2 shows keynote 6BY – fire treated blocking, but I don't see this keynote appear on any of the floor plans. Please clarify the purpose of this keynote.
- 6.) The following items are in the Carpentry & General Work scope, but I don't see them shown on the drawings:
 - a. 102123 – Cubicle Curtains
 - b. 115213 – Projection Screens
 - c. 116143 – Stage Curtains
 - d. 116623 – Gym Equipment
- 7.) Drawing A92.B shows wall padding and climbing walls. Please provide specifications.
- 8.) Drawings A90.A and A90.B show several specific classroom elevations, but not every classroom in the school is represented. It appears that these elevations should be applied to the other classrooms, but I don't want to assume the locations. Please clarify the intent.
- 9.) Carpentry & General Work scope of work item 35 refers to installing owner supplied items (Smart TVs/displays, projectors, and mounting brackets) will be supplied by



Owner. Please provide a schedule of sizes and quantities, so that we know what to bid.

- 10.) Alternate 11 calls for FRP doors and frames at classrooms into courtyard. There is no alternate work noted on the door schedule on drawing A50.1. Please clarify the scope/details of this alternate.

RESPONSE:

- 1.) These doors shall be aluminum doors in aluminum frames.
- 2.) These doors are not part of the project.
- 3.) Specification section issued as part of Addendum #5.
- 4.) Provide 16x32 stainless wall guard, 89S by Excel Dryer Inc, or equal.
- 5.) It is referenced in detail 5/A60.2.
- 6.)
 - a. See sketch A-SKE-15 issued as part of Addendum #5.
 - b. Refer to Electrical drawings for locations of projection screens
 - c. Refer to response to RFI 96 regarding stage curtains.
 - d. Refer to specifications and responses to related RFIs for quantities. Specific locations of gym equipment shall be field identified.
- 7.) See response to RFI 93.
- 8.) Correct. The drawings shown are typical. Reference Interiors series drawings sheets issued in Addendum #5 for clarification
- 9.) Reference Electrical drawings for locations.
- 10.) See response to RFI 93 115.

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 114

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Ventresca Brothers Date: 13 January 2020

- 1.) The 1. Please clarify which contract owns the game line striping in the gym.
- 2.) Wood trim is listed in the Casework & Millwork, but it is also listed in item 17 of the Carpentry & General Work scope. Please confirm that item 17 of the Carpentry & General Work scope should be deleted.
- 3.) Which contractor owns the plywood under the solid surface sills? See WS1/A51.3 for example.
- 4.) Please confirm that spec section 081613 FRP Flush Doors should be deleted from the spec section list for Carpentry & General Work.
- 5.) Drawings A60.1 and A60.2 show keynote 10AX – stainless steel guard wall plate. It appears that this is located below the hand dryers. Is this to be provided by Carpentry & General Work?
- 6.) Please confirm that the construction sign on drawing A60.2 is by the owner and/or construction manager.
- 7.) Drawing A92.B shows wall padding and climbing walls. Which contract owns these items?
- 8.) Please remove the caulking contractor from the Carpentry & General Work subcontractor list, as the caulking work for this contract is insignificant, and a caulking subcontractor will not be required.
- 9.) Please clarify why the following alternates are listed on the Carpentry & General Work bid form:
 - a. Alternate 4 – operable windows
 - b. Alternate 5A – wood gym flooring
 - c. Alternate 5B – wood gym flooring
 - d. Alternate 7 – decorative ceilings in common areas
 - e. Alternate 8 – add outdoor classroom in courtyard



RESPONSE:

- 1.) Contract A-14 - Flooring.
- 2.) "Trim" listed in Contract A-10 Casework and Millwork is specifically related with the installation of the materials provided and installed under this contract. Contract A-06 Carpentry and General Work is responsible for all interior standing and running trim as required in the construction documents.
- 3.) Contract A-06 - Carpentry and General Work.
- 4.) Correct. Refer to Addendum #5.
- 5.) Stainless steel guard wall plate will be provided by Contract A-06 Carpentry & General Work.
- 6.) Confirmed, the sign on detail 7/60.2 will be provided by the Construction Manager.
- 7.) The wall padding and climbing walls are components of the Gymnasium Equipment and are to be provided by Contract A-06 Carpentry and General Work. Refer to specification revisions in Addendum #5.
- 8.) Refer to response to RFI #053.
- 9.) Alternate #4, 5A, 5B, 7, and 8 do not apply to Contract A-06 Carpentry and General Work. See revised bid form, issued in Addendum #5.

Response By: _____ J.D. Bartlett, EDiS Company _____ Date: _____ 15 January 2020 _____



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 115

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Pottsgrove Glass Co. Date: 13 January 2020

- 1.) Door 132B is listed as an "AL" door type "F" (Flush). Please verify if this should be changed to a door type "G2", or if the door is to be changed to "FRP" in order to be a type "F".
 - 2.) Doors 122C & 122D are listed as an "AL" door in SF-2 frame on A50.1. These doors cannot be located on the floor plan and do not appear to be used. Please verify location of doors and frame on floor plan.
 - 3.) Glazing specification 088000, paragraph 3.10 (Insulated Glass Schedule), calls for the outdoor lite to get a self-cleaning coated glass. Please verify if self-cleaning glass is required at exterior lite.
 - 4.) Specification 081613, paragraph 2.1, lists basis of design for FRP doors "commercial Door Systems". This company no longer exists and closed their business. Please verify the FRP company "FRP Architectural Door" can be added to the list of acceptable manufactures in 081613. The Owner of FRP Architectural Doors was once a partner of Commercial Door Systems. Additionally, we have used FRP Architectural Door on the Whitehall / Lorewood Grove School that was previously completed. Additional information on FRP Architectural Doors can be found at <http://www.frparch.com>.
 - 5.) Alternate #11 calls for FRP doors in the courtyard at the corridor only in the base bid, and at the classrooms in the alternate. I cannot find any location on the Architectural drawings that shows which doors are to be in the base bid and which doors are to be in alternate #11. Please verify scope for base bid VS alt #11.
-



RESPONSE:

- 1.) Door 132B shall be an aluminum door type "G2".
- 2.) Doors 122C & 122D shall be deleted from the project.
- 3.) Self-cleaning glass is not required.
- 4.) FRP Architectural Door is an acceptable manufacturer, and is subject to all requirements of Specification Section 08 16 13, and other related sections of the Project manual.
- 5.) The doors referenced by Alternate 11 are 220B, 223B, and 427B.

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 116

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Pottsgrove Glass Co. Date: 13 January 2020

- 1.) Please verify all interior trim board is in the A-06 Carpentry scope of work and not in A-09 Glazing. Reference detail SFJ10 on A50.3.
- 2.) Please verify all exterior PVC trim is in the A-06 Carpentry scope of work and not in A-09 Glazing. Reference details H8, H9, J8, J9 on A50.
- 3.) Window specification 085113, paragraph 3.3 (Field Quality Control) calls for field testing of 3 windows of each type by a testing agency. 3 windows of each type will be approximately 50 total windows field tested which will be an extremely high field testing cost. Please verify how many windows will require testing along with their locations if possible.
- 4.) Please verify if final window & glass cleaning is required to be provided in contract 09A Glass, or if this is being provided by owner after completion of project. Reference spec 085113, paragraph 3.4 as well as spec 088000, paragraph 3.7.
- 5.) Please verify if contract 09A is required to provide window protection after installation. Reference spec 085113, paragraph 3.4.
- 6.) Storefront specification 084113, paragraph 3.3 (Field Quality Control) calls for testing of 3 storefronts as selected by architect. Please verify location and sizing of test areas. Please note you cannot field test the door openings.

RESPONSE:

- 1.) Refer to specification Section 011100 - Summary of Work, Contract A-06, paragraph 17.



- 2.) Refer to specification Section 011100 - Summary of Work, Contract A-08, paragraph 38.
- 3.) Refer to Addendum #5, which incorporates revisions that address this item.
- 4.) Glass should be free of construction debris at the completion of the contract. Final cleaning will be performed by the Construction Manager.
- 5.) This specification section is referencing protection during execution of the installation, which will be required.
- 6.) Refer to Addendum #5, which incorporates revisions that address this item.

Response By: J.D. Bartlett, EDiS Company Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 117

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Corrado Construction Company Date: 13 January 2020

- 1.) Sitework SOW item #42, provide specs for basketball goals and bike racks.
- 2.) Sheet 6 shows a 10" Type 1-6 curb, should this be 18"?
- 3.) Provide details for playground surface and subbase.
- 4.) The plans call for 1 1/2" and 2" milling of the existing pavement, which is correct?

RESPONSE:

1. See sheet C6 for bike rack detail. Basketball hoop detail is added to sheet C6.
2. Revise to 18" height.
3. See architectural drawings.
4. 1.5" milling is correct, with 2" overlay.

Response By: SG Date: 01/14/20



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 118

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: C4 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Corrado Construction Company Date: 13 January 2020

- 1.) Who owns abandonment of the existing utility lines running north/south thru the site as shown on sheet C4?
 - 2.) Who is responsible for installing the new sanitary manhole shown as 'to be provided by the town' on sheet C4?
 - 3.) Clarify 'fiber lines' listed on sitework SOW item #1.
 - 4.) In reference to sitework SOW item #7, would it be possible for all subcontractors to be responsible for their own wash out? We as a site contractor have no control over what each other sub will do or need.
 - 5.) Who is responsible for removal of the site light poles?
 - 6.) Sitework SOW item #20, will the temporary fence be driven post or panels?
 - 7.) Sitework SOW item #29, can each subcontractor be responsible for their own street cleaning? Or can we establish an allowance as we will have no control over other subs. Plus we will not be on site at all times so who will be responsible for street cleaning if we are not on site?
 - 8.) Sitework SOW item #31, what is the source for the temporary water and where will it be located on site?
 - 9.) Sitework SOW item #41 calls for the hardware for the exterior gates to be installed by the Carpenter & General works Contractor, normally all items of work pertaining to fence and gate installation are performed by the fencing subcontractor, please clarify.
 - 10.) What, if anything, are we responsible for the installation of the grease trap.
-



RESPONSE:

- 1.) The existing 8" water and 10" sanitary sewer lines that are noted "by others", are being installed by the Town of Middletown under a separate contract that has been sequenced with the Silver Lake ES construction.
- 2.) The referenced manhole that is noted "to be provided by the town", is being installed by the Town of Middletown under a separate contract that has been sequenced with the Silver Lake ES construction.
- 3.) Reference to "fiber lines" in Contract A-02 Sitework, paragraph 1 has been eliminated. Refer to Addendum #5.
- 4.) No. The goal is to consolidate washout locations on the site, with a single contractor responsible for providing, maintaining, and removing. All contractors will be held accountable for inappropriate use of the concrete washout station.
- 5.) Contract A-02 Sitework. Refer to specification Section 011100 - Summary of Work, Contract A-02, paragraph 43.
- 6.) Driven posts.
- 7.) No. The goal is to consolidate the responsibility to a single contractor responsible for this work. All contractors will be held accountable for appropriate use of the site.
- 8.) The existing water service will be intercepted at the incoming service at the northeast corner of the building.
- 9.) These gates will be interfaced with the card access system. Refer to Addendum #5 which delineates responsibilities of the various components.
- 10.) Refer to specification Section 011100 - Summary of Work, Contract A-19 - Mechanical and Plumbing, paragraph 43. Mechanical and Plumbing contractor are responsible for installation of the new grease trap system, in total.

Response By: J.D. Bartlett, EDiS Company Date: 14 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects PRE-BID RFI#: 119

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 13 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A91F / 9 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Reed Associates Date: 13 January 2020

- 1.) After reviewing addenda #4, Detail 9/A91F issued a section detail of the student cubbies. The floor plans and elevations show these units as 24" deep to match the depth of the adjacent casework. The detail is showing only 12" deep with a 3" overhang "seat" at each cubby. With this design these will need to be made as a lower cubby unit, a 15" countertop, the cubby unit, and a wall cabinet stacked in that order. This will triple the installation costs which would be approximately \$50K. According to the elevations there are 6 hooks to be installed in each cubby, to cut down the depth from 24" to 12", the hooks on the side walls of the cubby will be almost unusable due to the narrowness/closeness to the hooks that are mounted on the back of the unit. We would suggest either leaving the depth as originally drawn on the elevations/floor plans, or make the entire unit 15" deep if they are looking for a narrower depth footprint.

RESPONSE:

Detail for the cubbies and overhead cabinets have been revised to be 15" deep from the previous 12" issued in Addendum no. 4.

Refer to casework plans and details issued per Addendum no. 5.

- 1.) Responses.

Response By: Jordan Miller - BSA+A Date: 1/15/2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 120

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Nickle Electrical Date: 14 January 2020

- 1.) Please provide the location of the existing main distribution panel and the size and number of conduits feeding it from utility transformer.
- 2.) Please provide line diagram and details for wiring and mounting of stage lighting and controls.

RESPONSE:

- 1.) Existing "MDP" and motor control center are located on the mezzanine of the Boiler Room. "MDP" has six (6) 4" conduits to the transformer. This is all to be removed and provide new as indicated on documents. Incoming service has changed location.
- 2.) No. This is a performance specification. Basic system with low voltage control stations. Branch circuits and feeders are called out in documents.

Response By: Douglas M Green - Furlow Associates, Inc Date: January 14, 2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 121

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Nickle Electrical Date: 14 January 2020

- 1.) Is the Electrical Contractor responsible for providing and installing the stage/theatrical lighting and controls or will there be a Stage Contractor responsible for this work?
- 2.) Who is responsible for providing and installing the pipe battens in the Cafetorium and Stage areas?
- 3.) Will the utility raceway in the kitchen be supplied and installed by the Kitchen Contractor?

RESPONSE:

- 1.) Refer to specification Section 011100 - Summary of Work, Contract A-21, paragraph 22.
- 2.) The Electrical Contractor is responsible for Specification Section 260930 - Dimming Controls, in its entirety, including providing the design, lighting, dimming system/lighting controls and rigging.
- 3.) The utility raceway is the responsibility of the Electrical Contractor. Refer to the Kitchen series drawings.

Response By: J.D. Bartlett, EDiS Company Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 122

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Quality Heating & Air Co. Date: 14 January 2020

- 1.) I have a question about Silver Lake Elem School Addition & Reno involving the Outside Air Hoods. Mechanical drawings (M11.B, M11.C) say to reference the architectural and the architectural (A31.8) say to reference the mechanical. We do not see a schedule for this equipment, and there is no Mechanical Roof Plan for this location. Are they existing?

RESPONSE:

- 1.) Reference the revised roof plan issued in Addendum #5 and the responses to related RFIs.

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 123

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Corrado Construction Company Date: 14 January 2020

- 1.) Per Addendum #4 item 77 please provide detail for downspout connectors.

RESPONSE:

- 1.) Downspout connectors are not required as part of this project..

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY PRE-BID RFI#: 124

FROM: J.D. BARTLETT, EDiS COMPANY DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Corrado Construction Company Date: 14 January 2020

- 1.) Sitework SOW Item #1 refers to tree grates but none are shown, please clarify.
- 2.) Per Addendum #4 revised paragraph 40 says that we are now responsible to provide off-site disposal of unsuitable materials uncovered during interior excavation. Is this referring to any materials we encounter or is it saying we own disposal for others? If we are responsible for disposal for others, we will need a quantity to allow for bid purposes.
- 3.) Per Addendum #4, clarify Item #79

RESPONSE:

- 1.) Reference to "tree grates" in Contract A-02 Sitework, paragraph 1 has been eliminated. Refer to Addendum #5.
- 2.) The intent is to re-use all materials excavated from the interior, unless deemed unsuitable. Any materials that fail compaction requirements will be considered for redistribution on the site.
- 3.) The contractor is responsible for transport of all concrete from the mixer to the pour location, by any means necessary.

Response By: J.D. Bartlett, EDiS Company Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 125

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: 116623 PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc. Date: 14 January 2020

- 1.) Section 116623 Gymnasium Equipment, Part 2.04.C Pull-up Bar, provide the location(s) required.

RESPONSE:

- 1.) Location shall be determined in field during construction.

Response By: Bob Grove Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: EDiS COMPANY

PRE-BID RFI#: 126

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: A92.B / 1 SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Brandywine Contractors, Inc. Date: 14 January 2020

- 1.) Clarify the Contract responsible for the climbing wall shown at Gym Elevation 1 on Sheet A92.B

RESPONSE:

- 1.) The wall padding and climbing walls are components of the Gymnasium Equipment and are to be provided by Contract A-06 Carpentry and General Work. Refer to specification revisions in Addendum #5.

Response By: J.D. Bartlett, EDiS Company Date: 15 January 2020



REQUEST FOR INFORMATION
BID PACK A

TO: BOB GROVE, RG Architects

PRE-BID RFI#: 127

FROM: J.D. BARTLETT, EDiS COMPANY

DATE: 14 JANUARY 2020

PROJECT: SILVER LAKE ELEMENTARY SCHOOL – ADDITIONS & RENOVATIONS

DWG. # / DETAIL: _____ SPEC. SECTIONS: _____ PAGE: _____

REQUEST:

Submitted By: Tri-State Carpet Date: 14 January 2020

- 1.) With the change to sheet vinyl flooring in the kitchen, please provide construction details to describe the interface between the sheet vinyl flooring floor drains and all other floor penetrations.

RESPONSE:

1. Floor drains in rooms 110, 111, 112 and 113 shall be of a clamping style. The following are acceptable manufacturers and their product models:
 - a. Zurn Z 400 H – 6/9H
 - b. Wade 110 – FC6/9
 - c. Mifab F1100 – FC
2. Floor cleanouts in rooms 110, 111, 112 and 113 shall be of a clamping style. The following are acceptable manufacturers and their product models:
 - a. Mifab C1100-RFC
 - b. Wade 8000-FC
 - c. Watts CO-200-RFC7
 - d. Josam 55000-CFC
 - e. Blücher BCO-220

Response By: Bob Grove Date: 16 January 2020

Contract: A-06: Carpentry & General Work

BID FORM

For Bids Due: January 14 21, 2020 To: Appoquinimink School District
118 South Sixth Street
Odessa, DE 19730

Name of Bidder: _____

Bidder Address: _____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.: _____ Taxpayer ID No.: _____

(Other License Nos.): _____

(A copy of Bidder's Delaware Business License must be attached to this form.)

Phone No.: () _____ - _____ Fax No.: () _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ _____ (\$ _____)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1: Increase the Size of the Gymnasium

Add/Deduct _____ (\$ _____)

Alternate No. 2a: Change Veneer on Gymnasium (Alt. No. 1 – Base Bid)

Add/Deduct _____ (\$ _____)

Appoquinimink School District
Silver Lake Elementary School Additions & Renovations
Bid Package A

December 6, 2019
Addendum #5 – 16 JAN 2020

Alternate No. 2b: Change Veneer on Gymnasium (Alt. No. 1 – Alternate)

Add/Deduct _____ (\$ _____)

Alternate No. 3: Add Decorative Cast Stone at Windows

Add/Deduct _____ (\$ _____)

~~Alternate No. 4: Operable Windows~~

~~Add/Deduct _____ (\$ _____)~~

~~Alternate No. 5a: Change Gymnasium Floor to Wood (Alt. No. 1 – Base Bid)~~

~~Add/Deduct _____ (\$ _____)~~

~~Alternate No. 5b: Change Gymnasium Floor to Wood (Alt. No. 1 – Alternate)~~

~~Add/Deduct _____ (\$ _____)~~

~~Alternate No. 7: Add Decorative Ceilings in Common Areas~~

~~Add/Deduct _____ (\$ _____)~~

~~Alternate No. 8: Add Outdoor Classroom in the Courtyard~~

~~Add/Deduct _____ (\$ _____)~~

Alternate No. 11: Add FRP Doors/Frames at Classrooms into Courtyard

Add/Deduct _____ (\$ _____)

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the

**Appoquinimink School District
Silver Lake Elementary School Additions & Renovations**

Bid Package A

December 6, 2019

Addendum #5 – 16 JAN 2020

contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)

Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Bond
- Consent of Surety
- Affidavit of Employee Drug Testing Program
- Delaware Business License
- Town of Middletown Contractor's License
- (Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1. Rough Carpentry	_____	_____	_____
2. Overhead Doors	_____	_____	_____
3. Caulking	_____	_____	_____
4. Doors, Frames & Hardware	_____	_____	_____
5. Wheelchair Lift	_____	_____	_____

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date January 14, 2020.

All the terms and conditions of **Contract: A-06: Carpentry & General Work** have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE
(TYPED): _____

AUTHORIZED REPRESENTATIVE
(SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____ of
_____ in the County of _____ and State of _____ as
Principal, and _____ of _____ in the County of _____
_____ and State of _____ as Surety, legally authorized to do business in the State of Delaware
("State"), are held and firmly unto the **Appoquinimink School District** in the sum of _____
Dollars (\$ _____), or percent not to exceed _____
_____ Dollars (\$ _____) of amount of bid on Contract No. _____ to be paid to the
Appoquinimink School District for the use and benefit of the **Appoquinimink School District** for which payment well
and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly
and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the
Appoquinimink School District a certain proposal to enter into this contract for the furnishing of certain material and/or
services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute
this Contract as may be required by the terms of this Contract and approved by the **Appoquinimink School District** this
Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the
terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____ seal and dated this ____ day of _____ in the year of our Lord two thousand
and _____ (20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

Name of Bidder (Organization)

Corporate Seal	By: _____ Authorized Signature
Attest _____	_____ Title
Witness _____	_____ Name of Surety
	_____ Title

CONSENT OF SURETY

DATE _____

To: **Appoquinimink School District**
118 South Sixth Street
Odessa, DE 19730

Gentlemen:

We, the _____

(Surety Company's Address)

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

(Contractor)

(Address)

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

(Surety Company)

By _____
(Attorney-in-Fact)

AFFIDAVIT
OF
EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.



Silver Lake Elementary School
Additions and Renovations
Project Building Information Modeling (BIM)
Scope Participant List January 3, 2020 (Revised Addendum #5)

~~Contract: A-03: Concrete~~
Contract: A-05: Structural Steel & Miscellaneous Metals
~~Contract: A-06: Carpentry & General Work~~
Contract: A-08: Metal Studs & Drywall
~~Contract: A-11: Folding Partitions~~
~~Contract: A-13: Acoustical Ceilings~~
~~Contract: A-17: Kitchen Equipment~~
Contract: A-18: Fire Protection
Contract: A-19: Mechanical & Plumbing
Contract: A-21: Electrical



SECTION 04 73 23

CALCIUM SILICATE BUILDING STONE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Calcium silicate building stone units.

1.2 REFERENCES

- A. .1 ASTM C73: Standard Specification for Calcium Silicate Face Brick.
- B. .2 CSA A371: Masonry Construction for Buildings.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include dimensions and finishes.
- B. Shop Drawings: Show fabrication and installation details for stone units. Include dimensions, details of reinforcement and anchorages if any, and indication of finished faces.
- C. Samples:
 - 1. For each color and texture of stone required.
 - 2. For colored mortar.
- D. Material Test Reports: Test results prepared by an independent testing agency, indicating tested material characteristics as part of a source quality control program, current within the past five (5) years..

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer having sufficient plant facilities to produce the shapes, quantities and size of Products required in accordance with the project schedule.
- B. Installer: Company or person specializing in commercial masonry work.
- C. Mock-Up: Supply sufficient quantity of full size calcium silicate building stone units for use in constructing mock-up panel.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver calcium silicate building stone units in protective film. Prevent damage to units.
- B. Lift skids with proper and sufficiently long slings or forks with protection to prevent damage to units. Protect edges and corners.
- C. Store units in a manner designed to prevent damage and staining of units.
- D. Stack units on timbers or platforms at least 75 mm above grade.

- E. Place polyethylene or other plastic film between wood and other finished surfaces of units when stored for extended periods of time.
- F. Cover stored units with protective enclosure if exposed to weather.
- G. Do not use salt or calcium-chloride to remove ice from masonry surfaces

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers of calcium silicate building stone units having Products considered acceptable for use:
 - 1. Basis of Design: Arriscraft
 - 2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 MATERIALS

- A. Calcium Silicate Building Stone Units: to ASTM C73, Grade SW; solid units that have been pressure formed and autoclaved; special shapes as indicated; [two] [three]-size configuration; as follows:
 - 1. Modular Sizes:
 - a. SHA22: 59 mm high, 92 mm + 6 mm bed, various lengths up to 600 mm.
 - b. SHA50: 127 mm high, 83 mm + 6 mm bed, various lengths up to 803 mm.
 - c. SHA75S: 194 mm high, 95 mm bed, various lengths up to 600 mm.
 - 2. Texture: split finish on exposed faces.
 - 3. Color as selected by Architect.
- B. Mortar: 1:1:6 Portland cement-hydrated lime-sand mix, as specified Project manual.
- C. Grout: 45 MPa at 28 days
- D. Wall Ties and Anchorages: as specified in Project manual
- E. Joint Sealants and Backer Rods: non-staining type, as specified Project manual
- F. Flashing, Vents, and Masonry Accessories: as specified in Project manual.

2.3 FABRICATION TOLERANCES

- A. Fabricate calcium silicate building stone units to a pressed tolerance of plus or minus 3 mm.

2.4 SOURCE QUALITY CONTROL

- A. Test compressive strength and absorption from specimens selected at random from plant production.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify site conditions are ready to receive work.
- B. Inspect materials for fit and finish prior to installation. Do not set unacceptable units.
- C. Beginning of installation means acceptance of existing conditions.

3.2 CUTTING MASONRY UNITS

- A. Cut masonry units to length with a masonry splitter.
- B. Dress split end to match face when exposed in wall.

3.3 WETTING MASONRY UNITS

- A. Where the ambient air temperature exceeds 38°C or exceeds 32°C with a wind velocity greater than 13 km/h, pre-wet masonry units.
- B. Lay wetted units when surface dry.

3.4 COURSING

- A. Place masonry to lines and levels indicated.
- B. Maintain masonry courses to uniform width. Make vertical and horizontal joints equal and of uniform thickness.

3.5 PLACING AND BONDING

- A. Lay masonry in full bed of mortar, properly jointed with other work. Buttering corners of joints.
- B. Fully bond intersections, and external corners.
- C. Do not adjust masonry units after laying. Where resetting of masonry is required, remove, clean units and reset in new mortar.
- D. Install lintels as scheduled.
- E. Install wall ties and anchorages as specified.
- F. Install flashings, vents, and masonry accessories as specified

3.6 SITE TOLERANCES

- A. Conform to standard tolerances for unit masonry of CSA A371.

3.7 FIELD QUALITY CONTROL

- A. Architect Inspection: Architect will inspect installed masonry and reject masonry that is chipped, cracked, or blemished (streaked, stained or otherwise damaged), as described below.
- B. Masonry will be inspected to be free of cracks or other blemishes on the finished face or front edges of the masonry units exceeding 10 mm or that can be seen from a distance of 6.0 metres.

- C. Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a 6.0 metre distance.
- D. Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips shall not be obvious under diffused daylight illumination from a 6.0 metre distance.
- E. Efflorescence will not be cause for rejection.
- F. Make Good rejected masonry as directed by Architect.

3.8 ADJUSTING AND CLEANING

- A. Clean a 30 square feet area of wall designated by Architect as directed below and leave for one week. If no harmful effects appear, all objectionable stains removed and after mortar has set and cured, clean masonry as follows:
 - 1. Protect windows, sills, doors, trim and other work from damage.
 - 2. Remove large particles with stiff fibre brushes without damaging surface.
 - 3. Saturate masonry with clean water and flush off loose mortar and dirt.
 - 4. Dilute cleaning agent with clean water in controlled proportions.
 - 5. Apply solution to pre-soaked wall surface.
 - 6. Thoroughly rinse cleaning solution and residue from wall surface.
- B. Use alternative cleaning solutions and methods for difficult to clean masonry only after consultation with masonry unit manufacturer.

3.9 PROTECTION

- A. Protect units from damage resulting from subsequent construction operations.
- B. Use protection materials and methods which will not stain or damage units.
- C. Remove protection materials upon Substantial Performance of the Work, or when risk of damage is no longer present.

END OF SECTION 04 73 23

SECTION 06 60 00

CELLULAR PVC TRIM

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Free-Foam Cellular PVC Trim Boards for:

1. Corner boards.
2. Soffits.
3. Fascia.
4. Door pilasters.
5. Frieze boards.
6. Rake boards.
7. Pilasters.
8. Water tables.
9. Architectural millwork.
10. Door trim.
11. Window trim.
12. Skirtboards.

1.2 REFERENCES

- A. ASTM D 792 - Density and Specific Gravity of Plastics by Displacement.
- B. ASTM D 570 - Water Absorption of Plastics.
- C. ASTM D 638 - Tensile Properties of Plastics.
- D. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D 1761 - Mechanical Fasteners in Wood.
- F. ASTM D 5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by means of a Striker Impacted by a Falling Weight.
- G. ASTM D 256 - Determining the Pendulum Impact Resistance of Plastics.
- H. ASTM D 696 - Coefficient of Linear Thermal Expansion of Plastics Between minus 30 degrees C and plus 30 degrees C with a Vitreous Silica Dilatometer.
- I. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- J. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- K. ASTM D 648 - Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- L. ASTM D 3679 - Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.
- M. ASTM D 2240 - Rubber Property - Durometer Hardness
- N. ASTM D 3345 - Standard Test Method for Laboratory Evaluation of Wood and Other Cellulosic Materials for Resistance to Termites.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- B. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and finish.
- C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with a minimum of 5 years producing PVC trim products.
- B. Installer Qualifications: Installer with a minimum of 3 years experience with the installation of PVC trim products.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 3. Refinish mock-up area as required to produce acceptable work.
 4. Accepted mock-ups shall be comparison standard for remaining Work

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products on a flat and level surface on a full shipping pallet. Handle materials to prevent damage to product edges and corners.
- B. Store materials under a protective covering to prevent jobsite dirt and residue from collecting on the boards.

1.6 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Provide manufacturer's 30 year transferable warranty against defects in manufacturing that causes the products to rot, corrode, delaminate, or excessively swell from moisture.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: AZEK Trimboards:
- B. Other Approved manufacturers:
 - 1. Versatex
 - 2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 MATERIALS

- A. PVC: Free Foam Cellular PVC material with a small-cell microstructure and density of .55 grams/cm³.
- B. Performance and physical characteristic requirements:
 - 1. Physical:
 - a. Density: 0.55 g/cm³ when tested in accordance with ASTM D 792.
 - b. Water Absorption: Less than 0.50 percent when tested in accordance with ASTM D 570
 - 2. Mechanical:
 - a. Tensile Strength: 3582 psi when tested in accordance with ASTM D 638.
 - b. Tensile Modulus: 107,000 psi when tested in accordance with ASTM D 638.
 - c. Flexural Strength: 5179 psi when tested in accordance with ASTM D 790.
 - d. Flexural Modulus: 215,600 psi when tested in accordance with ASTM D 790.
 - e. Modulus of Elasticity: 209,500 psi when tested in accordance with ASTM D 638.
 - f. Elongation: 9.0 percent when tested in accordance with ASTM D 638.
 - g. Nail Hold: 398 lbf/in of penetration when tested in accordance with ASTM D 1761.
 - h. Screw Hold: 240 lbf/in of penetration when tested in accordance with ASTM D 1761.
 - i. Staple Hold: 69 lbf/in of penetration when tested in accordance with ASTM D 1761.
 - j. Gardner Impact: 34 In-lbs when tested in accordance with ASTM D 5420.
 - k. Notched Izod Impact: 0.270 Ft-lbs/inch when tested in accordance with ASTM D 256.
 - l. Termite Resistance: Rating of 10 as tested in accordance with ASTM D 3345.
 - m. Hardness: 60+ when tested in accordance with ASTM D 2240.
 - 3. Thermal:
 - a. Coefficient of Linear Expansion: 3.25 x 10⁻⁵ in/in/degrees F when tested in accordance with ASTM D 696.
 - b. Burning Rate: Failed to Ignite when tested in accordance with ASTM D 635.
 - c. Flame Spread Index: 25 when tested in accordance with ASTM E 84.
 - d. Heat Deflection Temp (264 psi): 146 degrees F when tested in accordance with ASTM D 648.
 - e. Heat Deflection Temp (66 psi): 153 degrees F when tested in accordance with ASTM D 648.

- f. Oil Canning (@ 140 degrees F: Passed when tested in accordance with ASTM D 648.
4. Manufacturing Tolerances:
 - a. Variation in component length: Minus 0.00 / plus 1.00.
 - b. Variation in component width: plus or minus 1/32 inch.
 - c. Variation in component thickness: plus or minus 1/32 inch.
 - d. Variation in component edge cut: plus or minus 2 degrees.
 - e. Variation in Density plus or minus 0.02 grams per cubic centimeter.
 5. Workmanship, Finish, and Appearance:
 - a. Free Foam Cellular PVC that is homogeneous and free of voids, holes, cracks, foreign inclusions and other defects. Edges must be square and top and bottom surfaces shall be flat with no convex or concave deviation.
 - b. Uniform surface free from cupping, warping, and twisting.
- C. SIMULATED WOOD TRIM

1. PVC Trimboard: Cellular with Sealed Edge.
 - a. Size:
 - 1) Nominal Width: As shown
 - b. Nominal Thickness:
 - 1) 1 inch (3/4 inch actual size).
 - 2) 5/4 inch (1 inch actual size).
 - c. Finish:
 - 1) Smooth/Smooth finish.
2. Sheet Board: S4S Sheet. For use as sheet materials or to create columns and decorative millwork.
 - a. Size: As shown
 - b. Finish:
 - 1) Smooth/Smooth finish.
3. PVC Cornerboard: Corners: Folded 90 degree one piece assembly produced with a smooth appearance .
 - a. Size:
 - 1) Nominal Corner Size: 4 Inches
 - 2) Nominal Thickness: 5/4 inch (1 inch actual size).
 - b. Finish:
 - 1) Smooth.
4. Mouldings: Mouldings designed to compliment exterior trim.
 - a. Crowns: Size as shown
 - b. Casings:
 - 1) Base Cap.
 - 2) Brick Mould.
 - 3) Back Band.
 - 4) Rake Moulding.
 - 5) Adams Casing.
 - c. Cove:
 - 1) Quarter Round.
 - 2) Bed Moulding.

- d. Sill:
 - 1) Sill.
- e. Finish:
 - 1) Smooth finish.

D. ACCESSORIES

1. Fasteners:
 - a. Use 12 gauge stainless steel fasteners designed for wood trim and siding. Fastener should have sufficient flexural and tensile strength to resist bending.
 - b. Use fasteners with thin shanks, blunt points, and full round heads that are long enough to penetrate the substrate a minimum of 1-1/2 inches.
 - c. Do not use staples, small brads and wire nails. Avoid using fine threaded wood screws and ring-shank fasteners.
 - d. Use standard nail guns with a pressure setting between 70 psi and 100 psi. The recommended pressure depends on the type of gun, type of nail, ambient temperature, and the substrate. Care should be taken not to overdrive the nail into the material.
 - e. Pre-drilling is not typically required unless large fasteners are used or the product is installed during temperatures below 40 degrees F.
 - f. Use two fasteners for every framing member for trimboard applications. Sheet and trimboards 8 inches and wider require additional fasteners.
 - g. Install fasteners no more than 2 inches from the end of each board.
 - h. Avoid fastening simulated wood trim over hollow or uneven areas. Fasten onto flat, solid substrates.
 - i. 3/8 inch and 1/2 inch thick Sheet and Beadboard is not designed to be ripped and used for trim applications. These products must be glued and mechanically fastened to the substrate.
2. Adhesives: Finishing System.
 - a. All bonded surfaces must be smooth, clean, and in complete contact with each other for best results.
 - b. Adhere simulated wood trim to itself with PVC cement or cellular PVC adhesives to prevent joint separation. Acceptable adhesives are PVC Trim Welder, IPS Weld-On 705 (white), and Zevo PVC Trim adhesive.
 - c. PVC cements cure quickly (3-5 minutes or less), and have a limited working time.
 - d. Scarf cut joints are recommended where applicable.
 - e. Bonded joints should be secured with fasteners and fastened with two rows on each side of the joint.
 - f. When bonding simulated wood trim to other substrates, consult the adhesive manufacturer to determine suitability.
3. Nail Hole Filler: Cortex plug system by Fasten Master.
4. Sealants: Use urethane, polyurethane, polymer blends or acrylic based sealants that do not contain silicone as specified in Section 07 91 16 - Joint Gaskets.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Cutting:
 - 1. Simulated wood trim can be cut using standard woodworking saws. Conventional carbide-tipped blades designed for cutting wood are preferred. Avoid using fine-tooth metal-cutting blades.
 - 2. Rough-cut edges are typically caused by excessive friction, poor board support, or worn or improper tooling.
- C. Drilling:
 - 1. Simulated wood trim can be drilled using standard woodworking drill bits. Do not use drill bits made for rigid PVC.
 - 2. Avoid frictional heat build-up.
 - 3. Remove shavings periodically from a drill hole as necessary.
- D. Milling and Moulding:
 - 1. Simulated wood trim can be milled or moulded using standard milling or moulding machines found in millwork shops.
 - 2. Rake angle 20 to 30 degrees. 25 degrees is recommended.
 - 3. Cutting speed to be optimized with the number of knives and feed rate.
- E. Routing:
 - 1. Simulated wood trim can be routed with virtually any piece of equipment used to rout wood.
 - 2. Carbide tipped router bits are recommended.
 - 3. Machinery that allows for multiple cutting speeds will allow you to optimize the process obtaining a smoother finished part.
- F. Edge Finishing:
 - 1. Traditional sanding, grinding or filing tools used for woodworking are preferred.

G. Nail Location:

1. For trimboard applications use two fasteners per framing member.
2. Use additional fasteners are required for trimboard 8 inches and wider.
3. Install fasteners a maximum of 2 inches from the end of each board.

H. Expansion and Contraction:

1. Simulated wood trim expands and contracts with changes in temperature. Properly fastening along the entire length is required to minimize expansion and contraction.
2. Allow 3/16 inch space per 18-foot run of trim for expansion and contraction.
3. Bond joints between pieces of simulated wood trim to eliminate separation.
4. Allow expansion and contraction space at the ends of long runs.

I. Cleaning:

1. Clean simulated wood trim with mild detergent and water, according to manufacturer instructions.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 102113 - PLASTIC TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-plastic toilet compartments configured as toilet enclosures and urinal screens.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.
- B. Shop Drawings: For toilet compartments.
 - 1. Include plans, elevations, sections, details, and attachment details.
 - 2. Show locations of cutouts for compartment-mounted toilet accessories.
 - 3. Show locations of centerlines of toilet fixtures.
 - 4. Show locations of floor drains.
- C. Samples for Initial Selection: For each type of toilet compartment material indicated.
 - 1. Include Samples of hardware and accessories involving material and color selection.
- D. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:
 - 1. Each type of material, color, and finish required for toilet compartments, prepared on 6inch-square Samples of same thickness and material indicated for Work.
- E. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of toilet compartment.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents and source.
 - 1. Door Hinges: One hinge with associated fasteners.
 - 2. Latch and Keeper: One latch and keeper with associated fasteners.
 - 3. Door Bumper: One bumper with associated fasteners.
 - 4. Door Pull: One door pull with associated fasteners.
 - 5. Fasteners: Ten fasteners of each size and type.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments and urinal screens by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 75 or less.
 - 2. Smoke-Developed Index: 450 or less.
- B. Fire hazard classification: Pass NFPA 286.
- C. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.2 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Basis of Design Product: Subject to compliance with requirements, provide Scranton Products, or comparable product by one of the following:
 - 1. Bradley Corporation; Mills Partitions.
 - 2. Global Partitions.
- B. Toilet-Enclosure Style: Floor anchored, Overhead braced.
- C. Urinal-Screen Style: Floor anchored.
- D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.

1. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless-steel strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.
2. Color and Pattern: Refer to Section 090600.

E. Pilaster Shoes: Manufacturer's standard design; stainless steel, anchored to finish floor.

F. Brackets (Fittings):

1. Stirrup Type: Continuous, aluminum.

2.3 HARDWARE AND ACCESSORIES

A. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.

1. Hinges: Manufacturer's Stainless Steel, full height (continuous), self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees with Spring Hinge.
2. Latch and Keeper: Manufacturer's heavy-duty surface-mounted heavy aluminum extrusion (6463-T5 Alloy) latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with through-bolts.
3. Coat Hook: Manufacturer's heavy-duty combination cast-stainless-steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with through-bolts.
4. Door Bumper: Manufacturer's heavy-duty rubber-tipped cast-stainless-steel bumper at out-swinging doors. Mount with through-bolts.
5. Door Pull: Manufacturer's heavy-duty cast-stainless-steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.4 MATERIALS

A. Aluminum Extrusions: ASTM B 221.

B. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.

C. Stainless-Steel Castings: ASTM A 743/A 743M.

2.5 FABRICATION

A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment

of toilet accessories.

- B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch-wide, in-swinging doors for standard toilet compartments and 36-inch-wide, out-swinging doors with a minimum 32-inchwide, clear opening for compartments designated as accessible.
- D. Urinal Screen Sizes: Provide panels with a minimum width of 20 inches.
- E. Dividing panels shall be 55 inches high and mounted 14 inches above finish floor.
- F. Doors shall be 55 inches high and mounted 14 inches above finish floor.
- G. Pilasters shall be 82 inches high and fastened to stainless steel shoes with theft-proof sex bolts

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:
 - a. Pilasters and Panels: 1/2 inch.
 - b. Panels and Walls: 1 inch.
 - 2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than two brackets attached near top and bottom of panel.
 - a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.
- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace

when doors are in closed position.

- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION

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SECTION 11 68 00
PLAY FIELD EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 SCOPE

- A. Furnish labor, material and equipment necessary for the provision and installation of the playground equipment, structure or modular unit as shown on the drawings and specified herein.
- B. Work shall include but not limited to the following: excavation, layout, and the provision and installation of playground equipment, structure or modular unit in accordance with the manufacturer's installation instructions, including all appurtenances and accessories as required for a full and complete installation.

1.2 SUBMITTALS

- A. Product Data: The Contractor shall submit within 90 calendar days after receipt of Notice to Proceed, complete sets of the material and equipment submittals, including:
 - 1. Play equipment manufacturer and manufacturer's representative's name(s) and address(es);
 - 2. Plan view drawings with model numbers, descriptive labels (including component names,) deck heights, and notations of compliance with CPSC, ASTM F1487-01 and ADA;
 - 3. Detailed component list with model numbers and catalog descriptions;
 - 4. Color chart;
 - 5. Written material specifications for all components;
 - 6. IPEMA certification certificate from the IPEMA website;
 - 7. Copy of manufacturer's warranty in certificate format;
 - 8. Copy of manufacturer's ISO 9001 Certification.
- B. Approval of the submittals shall be the Contractor's authorization to order the required material and equipment. There will be no deviation from the approved submittals without the written authorization of the Owner's representative

1.3 PRODUCTS

- A. Products: The layouts shown in the plan views is based upon equipment and measurements from one of the following Manufacturers:
 - 1. Miracle Recreation Equipment Company
 - 2. Kompan Playground and Fitness Solutions
- B. The equipment plans shown on sheet A10E represent layouts developed utilizing equipment from each manufacturer above. The Equipment layouts have been reviewed and deemed equivalent. Each equipment list from each manufacturer has been designed in such a way to ensure the equipment fits in either design indicated (base bid or alternate)
- C. Design and Fabrication: Playground equipment, structure or modular unit submitted for consideration shall be equivalent in design, layout, deck size, post size, clamping/fastening system, deck/slide/climber height, ADA accessibility, appearance, color and construction detail to playground equipment specified in the drawings. Reasonable variations in size/height (no more than +/-10%) and manufacturer's standard colors

may be allowed at the Owner’s discretion. Color schemes are to match as closely as possible to the originally specified colors. Play value and safety features of components must be equal or superior to specified design as judged by the Owner or Owner’s representative.

- D. Modification: Any expense of modification, adjustment or revision required to ensure compliance of furnished equipment to specified equipment and playground design shall be the sole expense and responsibility of the Contractor.

1.4 PLAYGROUND SAFETY STANDARDS AND QUALITY ASSURANCE

- A. All products shall bear the certification seal of the International Play Equipment Manufacturers Association (IPEMA). All designs shall meet or exceed the Americans with Disabilities Act (ADA) "Final Accessibility Guidelines for Play Areas" regulations as published on October 18, 2000. All manufacturers must be ISO 9001 certified.

1.5 REFERENCES AND STANDARDS

- A. ASTM: American Society for Testing and Materials
- B. CPSC: Consumer Product Safety Commission
- C. IPEMA: International Playground Equipment Manufacturers Association
- D. ADA: Americans with Disabilities Act
- E. ISO: International Organization for Standardization
- F. CPSI: Certified Playground Safety Inspector

1.6 WARRANTY/GUARANTEE

- A. The equipment manufacturer shall warrant material and workmanship against defects, from the date of manufacturer’s invoice, for the period of time as follows:
 1. LIMITED ONE HUNDRED (100) YEAR WARRANTY against structural failure due to weather corrosion or defects in materials and workmanship on aluminum deck posts, steel deck posts, clamping/fastening (Versalok[®]), and associated fastening hardware.
 2. LIMITED FIFTEEN (15) YEAR WARRANTY against structural failure due to weather corrosion or defects in materials and workmanship on steel support legs and Mira-Therm[™] II components on MEGA TOWER[®], TOTS' CHOICE[®], KIDS' CHOICE[®], CENTER STAGE[®], Nexus[®] and Boulder Ridge[®] Rock Wall; on playsystem steel components including railings, rungs, and rigid climbers, and Rockite[®].
 3. LIMITED ONE (1) YEAR WARRANTY against structural failure caused by defective materials or defective workmanship on TODDLERS’ CHOICE[®] main support materials and decks.
 4. LIMITED ONE (1) YEAR WARRANTY structural failure caused by defective materials or defective workmanship on Slashproof Seats and 360 degree Bucket Tot Seats for Swings.
 5. LIMITED ONE (1) YEAR WARRANTY against structural failure due to defects in materials and workmanship for all products and components that are not specifically listed above, including, without limitation, all moving parts such as swing hangers, swivels, chains, whirls, trolleys and flexible climbers.
 6. Repaired or replacement part(s) are only warranted for the balance of the original limited warranty.
 7. These limited warranties do not include fading of colors, damage due to excessive wear and tear, vandalism, or negligence. These warranties are valid only if products are installed according to manufacturer’s installation instructions.

PART 2 - MATERIALS

2.1 EQUIPMENT

- A. See drawings for type, style, configuration, size and height of playground equipment, structure or modular unit to be provided.
- B. See drawings for the color schedules of the various elements of playground equipment, structure or modular unit to be provided.

2.2 EQUIPMENT/COMPONENT LIST

- A. Manufacturer: Miracle Recreation Equipment Company

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
2740	SWG PART THERAPEUTIC SWG SEAT W/CHAIN (8' TR)	1
2840	SWG PART SLASH PROOF SEAT W/CHAIN (8' TR)	4
7147351HX	5" OD ADD-A-BAY 8' TR (1) GEN SEAT REQ MC	1
7147352	5" OD SINGLE POST SWG FRAME ONLY 2 SEATS REQ	1
7147352X	BAY EXTENSION FOR 5" OD SGL POST SWG FRAME	1
494106†	LITTLE OWL ROCK	1
494108†	LOOKOUT ROCK	1
494302†	TWO ROPE BRIDGE	1
7145029	SQUARE DECK (ATTACHES TO 4 POSTS)	1
7145039	1/2 HEX FULL DECK (ATTACHES TO 4 POSTS)	4
7145493	5" OD X 112" POST (3' DECK)	1
7145494	5" OD X 124" POST (4 DECK)	5
714553	5" OD X 160" POST (5'6" TO 6'6" DECKS)	4
714554	5" OD X 178" POST (7' TO 8' DECKS)	4
714574	5" OD X 186" POST FOR ROOF (5'6"-6'6" DECK)	6
714633	HOW TALL RU PANEL (POST MOUNT)	1
7146704	CHAMELEON II SHORT STRAIGHT SECTION	7
7146705	CHAMELEON II RIGHT SECTION	3
714670M22	CHAM II DBL SLIDE ENTRY/EXIT (7'-8'6" DK)	1
7146771	HURRICANE BRIDGE, INCLINED 2'	1
7146788	BACKTRACK CLIMBER (8' DECK)	1
7146806C	WAVE HEX ROOF W/TOPPER	1
7147285	BUMP & GLIDE SLIDE, ONE PIECE (5' DECK)	1
71473888	FOSSIL BLUFF CLIMBER (8' OCTAGON DECK)	1
71474959U	6'2" TYP SLIDE 405 DEG DOMED WAVE (5' DECK)	1
714782	CRUNCH STATION	1
71478615	BONGO JUNGLE CLIMBER GRD TO 3' DK W/OUT POST	1
714796P1	BELL (POST MOUNT)	1
7148135	DECK ENCL FOR OVERHEAD CLIMBERS (ONLY)	2
7148155	END LADDER FOR OVERHEAD CLIMBERS (ONLY)	1
714816W	FULL WAVE BARRIER, TUBE	1
7148173B	SINGLE POD SEAT	1
7148191D	BOULDER RIDGE 1 SECTION, GROUND TO DECK	1
714851359	SQUARE TRANSFER POINT W/OPEN HR (3' DECK)	1
71486345	4' HORIZONTAL LADDER (ONLY)	1
7148819	STEPS BETWEEN DECKS W/3' RISE	1
7149831	MARBLE RACE PANEL	1
714999Z	CUSTOMER SERVICE KIT (NO PRICE)	1

PLAY FIELD EQUIPMENT AND STRUCTURES

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304	TEN SPIN	1
4561	TARANTULA CLIMBER	1
925920Z	TOUCH UP PAINT KIT - FREESTANDING (NO PRICE)	1
9451	SADDLE SEAT, ANGLED POST	1
9451	SADDLE SEAT, ANGLED POST	1
9451	SADDLE SEAT, ANGLED POST	1
7145039	1/2 HEX FULL DECK (ATTACHES TO 4 POSTS)	1
71452459	CST 5' SQUARE DECK	1
71453459	CST 5' SQUARE DECK FOR ROOF	1
714553	5" OD X 160" POST (5'6" TO 6'6" DECKS)	4
7146704	CHAMELEON II SHORT STRAIGHT SECTION	2
7146704	CHAMELEON II SHORT STRAIGHT SECTION	1
7146704	CHAMELEON II SHORT STRAIGHT SECTION	1
7146705	CHAMELEON II RIGHT SECTION	1
7146706	CHAMELEON II LEFT SECTION	1
7146707	CHAMELEON II LONG STRAIGHT SECTION	1
7146707	CHAMELEON II LONG STRAIGHT SECTION	1
7146707	CHAMELEON II LONG STRAIGHT SECTION	1
714670M31	CHAM II TPRL SLIDE ENTRY/EXIT (5'-6'6" DK)	1
7146804C	WAVE QUAD ROOF W/TOPPER	1
7146835	HURRICANE CLIMBER (5' DECK)	1
7147196	CLIFF CLIMBER (6'6" DECK)	1
7147285	BUMP & GLIDE SLIDE, ONE PIECE (5' DECK)	1
71474959U	6'2" TYP SLIDE 405 DEG DOMED WAVE (5' DECK)	1
714816W	FULL WAVE BARRIER, TUBE	2
71485159	SQUARE TRANSFER POINT W/CLOSED HR (5' DECK)	1
71497049	4' ARCH BRIDGE BETWEEN DECKS	1
7149939	ADA STAIRS BTWN DECKS W/1'6" RISE	1
787Z	RISK MANAGEMENT SIGN - ENGLISH (NO PRICE)	1
925961	THUMB DRIVE 2GB - MREC	1
926021	MREC CARD F/THUMB DRIVE	1
INST. BOOK	INSTALL BOOK FOR PP ORDERS	1

B. Manufacturer: Kompan Playground and Fitness Solutions

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
PCM310704	DOUBLE MEGA TOWER DECK CUSTOM VNT	1
PCM410304	FOUR TOWER WITH BANISTER CUSTOM VNT	1
ELE400062-3717	MULTISPINNER CAROUSEL,IG 90	1
ELE400062-3717	SUPERNOVA - GREY/LIME GREEN,IG	1
ELE400024-3717LG	SPINNER BOWL, Lime Green,IG	1
ELE400024-3717BL	SPINNER BOWL, Blue,IG	2
PCX804-0901	SQUARE ACTIVITY TOWER, LIME,IG	1
KSW-CUSTOM 950234	CUSTOM 4 Bay 7B 1 ADA	1

PART 3 - INSTALLATION

3.1 INSTALLATION

- A. Instructions: Explicit, printed installation instructions, written in English, shall be provided by the manufacturer, which shall include detailed, scaled plan views, elevations, and footing drawings and details when applicable, as well as sequential assembly instructions to assure proper installation of the playground

equipment, structure or modular unit.

- B. Equipment must be installed by a manufacturer-certified installer and must be installed in accordance with the manufacturer's installation instructions. Installation crew leader must be CPSI-certified. If not installed by a manufacturer-certified installer, the equipment shall be inspected after installation by a CPSI not employed by the installer and signed off by said CPSI before the playground is opened for first use.
- C. Close Out: Contractor shall provide the Owner with one copy of complete manufacturer's installation instructions and maintenance kit if provided. Most manufacturers send at least two sets of installation manuals with each order. Additional sets of installation instructions should be purchased from the manufacturer if originals are lost or damaged. It is the Contractor's responsibility to secure the installation instructions from the installer. Miracle Recreation mails one complete set of installation instructions directly to the Owner, and the Contractor shall not be required to supply additional sets to the Owner.
- D. Clean Up: The site shall be kept clean and free of tools, trash, debris and installation materials on a daily basis. Material may be stored on site during installation with appropriate protective measures and approval by the Owner's representative.

END OF SECTION 11 68 00

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SECTION 26 07 71
TELECOMMUNICATION SYSTEM**PART 1 – GENERAL**

1.1 General

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to work of this section. Electrical Contractor shall provide device boxes, conduit stubs, and pull strings for all wall-mounted speakers.
- B. This section is a Division 26 Communications System, and is part of each Division-26 Section making reference to the telecommunications system specified herein.
- C. The contractor shall furnish and install all equipment including, but not limited to, outlet boxes, conduit (with pull strings), wiring, cable, speakers, telephones and clocks as shown on the plans, and all other equipment necessary to provide a complete and operating system for the Appoquinimink School District-

1.2 Scope of Work

- A. Provide a telephone type communications system for all instructional and administrative areas. Provide for system integration of the following basic school communications systems including the Cafetorium and local classroom sound systems.
 - 1. Telephone System
 - 2. Voice Mail System
 - 3. Inner connection with classroom audio and intercommunication system
- B. Volp Telephone System: System provides for the interconnection to public telephone lines and intercommunications throughout the school. Each classroom or office provided with a telephone can communicate with any other internal telephone by touch-tone access. Integrate with the public telephone lines to provide inward and outward telephone calls on a controlled basis. Features and functions of the telephone system includes:
 - 1. Private two-way telephone handset to handset communications.
 - 2. Direct dial communications.
 - 3. Dial access to intercom system for public address.
 - 4. Administrative control console with display and busy lamp field.
 - 5. Multi-line telephones.
 - 6. Software programmable features, functions, and restrictions.
- C. Voice Mail System: Provide system that utilizes recorded voice messages that are accessible from any touch tone telephone. System shall be fully integrated to digital telephone system. System shall provide the following features and functions.
 - 1. Ability to light and extinguish message lights automatically.
 - 2. Automated Attendant
 - 3. Voice Mail

1.3 Reference Standards

- A. National Fire Protection Association:
 - 1. NFPA 70-90: National Electrical Code.
- B. Underwriters Laboratories, Inc.:

1. UL 486A-91: Wire connectors and soldering lugs for use with copper conductors.
2. UL 1449-85: Transient voltage surge suppressors.
3. Comply with UL 1863.

C. Electronics Industries Association:

1. EIA 568-91: Commercial Building Telecommunications Wiring Standard.
2. EIA-160: Sound Systems.
3. EIA-299A: Loudspeakers, Dynamic Magnetic Structures and Impedance.
4. EIA-310A: Racks, Panels and Associated Equipment.
5. SE-101-A: Amplifier for Sound Equipment.
6. SE-103: Speakers for Sound Equipment.

D. Federal Communications Commission:

1. FCC Regulations, Part 15 Title 47.

1.4 Submittals

A. Shop Drawings: Submit in accordance with Section 01300, including the following:

1. Product and cable specification data sheets.
2. Main Distribution Frame (MDF) and equipment assembly details.
 - a. Indicate size and space requirements.
 - b. Indicate positions of major components.
3. Complete wiring diagrams indicating:
 - a. Devices.
 - b. Components.
 - c. Interconnecting wiring.
 - d. Block diagrams
4. Data base programming sheet indicating all features of telephones, speakers, etc.
5. Floor plans indicating device and component locations, conduit, raceway and cable routes.
6. Grounding details and requirements.
7. Power connections, including source and branch circuit data.

B. Operation and Maintenance Manuals: Submit in accordance with Section 01300, including the following:

1. Component Operating Manual including technical data sheets.
 - a. Control settings.
 - b. Amplifier loads.
2. Information for reordering replacement parts.
 - a. Provide a replacement parts list.
 - b. Provide a list of recommended parts, tools, and instruments for testing and maintenance purposes.
3. Wiring diagrams/details:
 - a. System functional block diagrams.
 - b. System schematic diagrams.
 - c. System wiring list.
 - d. Identify terminals to facilitate installation, operating and maintenance.
 - e. Indicate terminals to facilitate installation, operating and maintenance.
 - f. Indicating and distinguish between field and factory wiring.
4. System Operating Instructions: Provide a clear and concise description of operation which gives, in detail, the information required to properly operate the equipment and system.
5. Update to include any information necessitated by construction. Complete "as installed" wiring and schematic diagrams shall be included which show all items of equipment and their interconnecting wiring.

6. Component Service Manual: Include information for testing, repair, troubleshooting, assembly, disassembly, and required/recommended maintenance intervals.
- C. Project Record Documents:
1. Submit in accordance with Section 01300 for the complete system. Record drawings shall include and indicate all components of the installed systems, including the routing of conduit, raceways and cable.
 2. Drawings shall be coordinated and referenced to the O & M manuals and related wiring diagrams. Floor plan drawings shall be 1/16" = 1'-0" or greater to provide for clear and legible documents.
- D. Test Reports: Submit field test reports specified in Part 3.
- 1.5 Training
- A. Provide all training and utilize specified manuals and record documentation. All training shall be provided at the project site and coordinated with the Owner. All training sessions will be video taped by the vendor for Owner's future reference.
- B. Training shall include a minimum of two four-hour sessions encompassing all instructions required for system operation. Provide operators manuals and user guides with training. Provide follow up training for 8 hours minimum after initial training.
- C. Training shall utilize the equipment provided at the project site. Coordinate use, time and availability of equipment with the Owner.
- D. Demonstrate adjustment, operation and maintenance of the system including each component and control.
- E. Voice Mail / Homework Hotline: Basic training shall be provided for this system. Additional training for system programming and database management shall be in addition to this contract and will be purchased on an "as needed" basis.
- 1.6 Warranty and Maintenance
- A. Provide a one (1) year warranty of the installed system against defects in material and workmanship. All labor and materials shall be provided at no expense to the Owner during normal working hours. The warranty period shall begin on the date of system acceptance.
- B. Make available a service contract offering continuing factory authorized service of this system after the initial warranty period.
- 1.7 Quality Assurance
- A. Maintenance Qualifications:
1. Experienced in manufacturing equipment of the types and capacities specified for this project.
 2. Equipment has a record of successful in-service performance.
- B. Contractor Qualifications:
1. Established communications and electronics contractor for at least five (5) years.
 2. Authorized distributor for the equipment supplied with full manufacturer's warranty privileges.
 3. Maintains a fully equipped service organization capable of providing full maintenance and service of the installed system within 24 hours.
 4. Maintains the necessary spare parts in the proper proportion as recommended by the manufacturer to maintain and service the equipment being installed.

- C. Manufacturer's Instructions: Comply with all installation instructions and methods recommended or required by the manufacturer.
- D. Reference Standards: Comply with all reference standards indicated in this section as applicable. System shall be UL Listed under UL813.

1.8 System Requirements and Operation

Digital Telephone System

- A. The contractor shall provide a complete and satisfactory digital telephone system. All equipment and installation material requirements shall be furnished and installed including the interfaces to intercom and voice mail systems. System being provided is a Remote Campus ECS.
 - 1. Contractor shall provide a microprocessor, stored program control telephone system.
 - 2. The system shall employ state-of-the-art digital technology and be in current production.
 - 3. All talking circuits shall be balanced transmission circuits.
 - 4. System proposed must allow full integration with voice mail.
 - 5. All systems must be adequately surge protected based upon stated manufacturer's requirements.
- B. Central Switching Exchange: The installation shall include a comprehensive programmable telephone communications system consisting of a digital central switching exchange. The system shall have expansion capability to support up to 448 ports. The following is a outline of the system minimum requirements.
 - 1. All programmable functions shall be located in battery backed RAM to prevent loss in the event of system failure.
 - 2. The central switch shall utilize standard dual tone multiple frequency (DTMF) decoding in conformance with standard telephone practices.
 - 3. The system shall provide direct dialing, full duplex private telephone communication between all stations equipped with administrative or staff telephones.
 - 4. The system must provide the flexibility of interfacing with all of the following telephone industry standard trunking providing compatibility with existing and future services.
 - a. Loop Start O2LS2: The system must be compatible with existing central office lines.
 - b. Ground Start O2GS2: The system must be compatible with central office GS Lines.
 - c. DID O2RV2: The system must provide Direct Inward Dialing capabilities where direct individual station access over non-dedicated trunks is required.
 - d. OPX OL13C: The system must have capabilities of remote extensions not on the local premise to access all system features.
 - e. E+M Tie Lines TL31M/TL32M: The system shall be compatible with standard PBX signaling for direct connection to an existing or future remote PBX.
 - f. T1 SF/D4 Framing or ESF/D5 Framing: The system shall provide high volume phone traffic capabilities with direct interface without the need for additional interface equipment. Systems requiring additional T1 interfacing equipment such as channel banks are not acceptable.
 - g. CENTREX: The system shall have the capability of interfacing with other outside providers such as Centrex, Watts and Data services.
 - h. ISDN PRI – The system shall have the capability to interface with outside providers via ISDN primary rate interface.
 - 5. Incoming trunk groups shall provide the capability of directing calls to multiple points such as Operator/Attendant, Administrator, Staff or Emergency Lines. The system shall also offer routing,

- transferring and conferencing of outside trunks to any of the Administrative or Staff telephones. Outside call that are directly go to an Administrative telephone can be automatically transferred to the attendant's station if unanswered within a predetermined amount of time.
6. The system must provide automatic circular hunting for the first available outgoing trunk when placing calls from within the system.
 7. The system shall have capabilities for discriminating ringing to enable the receiving party to distinguish between internal and outside calls.
 8. The system shall provide Direct Inward System Access (DISA). It shall be possible to access central switch functions (i.e. paging, monitoring, remote activation of time schedules and relays ,etc.) from any offsite touch tone telephone via an incoming telco line. Only authorized individuals may use this feature by dialing the dedicated trunk number and then dialing the system function.
 9. The system shall allow for Station Message Detail Recording (SMDR) providing a complete printed record of all calls being placed within the system or when any of the system C.O. lines are accessed.
 10. System shall have the capability of connecting in a master/slave configuration with the other building in the complex. System shall house the ISDN PRI cards that will be shared by all systems.
 11. Provide the following system features:
 - a. Add on Conference: Allows a station user and/or operator console to add a third, fourth, and fifth internal party to an existing two-party conversation.
 - b. Alpha-Numeric Display For Attendant Position: A visual device on a console switch, by use of digits and/or alphabetical designation, indicates the trunk circuit to which the attendant is connected, or on internal calls, the station number and alpha/name identification class of service of the station line in voice connection with the attendant.
 - c. Area/Office Code Restriction: The ability of the switching system to selectively identify 6-digit area and Office Codes, and either allow or deny passage of long-distance calls to those specific 6-digit codes. This type of restriction is usually provided on a trunk group basis, and on an "allowed" rather than "denied" basis.
 - d. Call Forwarding: Allows a station user to program at any time any internal station number (or the attendant), and when activated by the status user, all incoming calls to this station will be automatically rerouted to that preprogrammed number.
 - e. Call Forwarding - Busy Line: Automatically reroutes incoming Direct Inward Dialing (DID) calls, attendant processed calls, incoming CCS calls, or direct terminating Tie Line Calls, directly to attendant or predetermined secondary station when the called station is busy.
 - f. Call Forwarding - No Answer: Similar in function to the "busy line" version of Call Forwarding, automatic rerouting of a call, DID, or alternate facility to the attendant or a preprogrammed secondary station occurs when a given station does not answer within a prescribed time interval.
 - g. Call Transfer: Capability for any mutli-line administrative or single line staff telephone to transfer a "call" to any other multi-line administrative or single line staff telephone.
 - h. Class of Service: A numerical index that is assigned to each extension and determines a variety of allowed or denied types of calls on both an incoming and an outgoing basis.
 - i. Direct Inward Dialing (DID): A basic facility allowing incoming calls from the public telephone network to reach specific lines without attendant intervention or assistance.

- j. Direct Outward Dialing: The extension user can make external calls without attendant assistance.
- k. Directed Call Pickup: A station user is able to answer calls ringing on any other station by dialing a unique code of that particular station to be answered.
- l. Direct Paging Access: Facilities for telephones which have been software programmed with this capability, to instantaneously distribute page announcements simultaneously to all locations equipped with loudspeakers, by dialing a predetermined code number.
- m. Direct Station Selector: Ability to one-touch transfer calls to intended party while also providing busy status indication of same extension.
- n. Do Not Disturb: A feature allowing incoming calls to an extension to be routed to the call forward destination, other features operate as if the extension is busy.
- o. End-To-End Signaling: Attendant and stations are able to continue to send DTMF signaling over an established external communications path.
- p. Fixed Night Service: An arrangement used to route incoming calls, normally answered at the attendant position, to pre-selected stations with the system when the attendant is not on duty.
- q. Flexible Night Service: Permits the attendant to "set-up" night connections in accordance with day-to-day requirements, with full flexibility in the assignment of incoming trunks to various stations. Such night service arrangements must be established by the attendant on each occasion they are activated.
- r. Flexible Numbering Plan: Station dial plan is user definable to meet the requirements of the owner.
- s. Hold: The capability to maintain a connection to a busy line, even when the station originating the connection is not off hook to the line or is engaged by another line.
- t. Last Number Re-Dial: Memory contained either within the system common equipment or within the station instrument enables the station user to dial a special access digit or button to activate a speed calling treatment of the last number which was dialed from that station instrument.
- u. Message Waiting Indication/Activation: A station user may initiate message waiting lamp indication at another station with button or feature code.
- v. Programmable Feature Keys: Multiple buttons which can be programmed on a per station basis to access system features with one button access.
- w. Remote Maintenance: A remote terminal can access the system for maintenance through a modem part or built-in system modem.
- x. Speed Calling Station: Allows station users to assign abbreviated codes to certain frequently called numbers for use system-wide.
- y. Speed Call System: Allows attendant to assign abbreviated codes to certain frequently called numbers for use system-wide.
- z. Voice Mail Integration: Capability of integration to future voice mail system including direct access to intended party's mailbox without entering any digits, message waiting light indication, and access to immediate operator assistance.

- aa. Call Transfer to Voice Mail: Calls may be transferred directly to any voice mail box from any phone.
- C. Administrative Attendant Console(s): Provide units with the following features. (Quantity as per plans)
 - 1. Ability to distinguish call type and status via a 32-character liquid crystal display.
 - 2. Ability to transfer calls via a single button to stations.
 - 3. Ability to monitor status of all stations in system via a direct station selection (DSS) console.
- D. Multi-Line Digital Telephone(s): Provide units with the following features. (Quantity as per plans)
 - 1. Twenty-Four (24) programmable direct station select "speed dial" keys (buttons) for automatic dialing. These buttons can be initially programmed for C.O. line access, All Call Page, Zone Page, Manual Class Change Signaling and direct station selection of frequently dialed extensions.
 - 2. Feature buttons for a minimum of 8 features.
 - 3. LCD display to show feature use, trunk use, and incoming caller identification.
 - 4. Full handsfree speaker phone.
 - 5. Message waiting indication.
- E. Digital Classroom Telephone(s): Provide units with the following features. (Quantity as per plans)
 - 1. Flash key.
 - 2. Message waiting light.
 - 3. Ringer Volume Control
 - 4. Wall or desk mount as indicated on plans.

VOICE MAIL SYSTEM: Provide system that utilizes recorded voice messages that are accessible from any touch tone telephone, 24 hours a day, 7 days a week. System shall be an option card in the Digital Telephone system. Voice Mail shall provide the following features and functions.

- A. Digital Integrated with the telephone system including customized call forwarding with personalized greeting or transfer capability. Messages left in a users mailbox will light the users telephone lamp automatically. After accessing messages, the system will extinguish the user's lamp automatically.
- B. Full or Part Time Automated Attendant.
- C. Voice Mail
- D. Audio Bulletin Board with Information Mailboxes
- E. Outbound Dialing to Phones, cellular services and digital pagers
- F. Distribution and School-Wide Announcements
- G. Ability to capture and announce Caller ID information within each message
- H. A Directory Lookup feature for non users
- I. A Windows based System Administrator Editor
- J. Number of Ports: The system shall have four (8) ports

PART 2 - PRODUCTS

- 2.1 Acceptable Manufacturers

- A. All bids shall be based on the equipment as specified herein.
- B. The telecommunication system supplier shall be licensed (Alarm and Communications License furnished by the State Board of Electricity) and be an established professional communications system subcontractor with a minimum of five years of continuous service.

Approved system suppliers for this project are:

- 1. Simplex Building Systems

2.2 EQUIPMENT

- A. Alcatel Lucent Omni PCX Enterprise Communications System

2.3 PBX TELEPHONE SYSTEM

- A. Office Phones #8038
Classroom Phones #8018

- 1. Simplex Grinnell to coordinate with District for which rooms are to be equipped with administrative and classroom handsets.
- B. Telephone Trunk Ports: Provide ports for the direct connection of 50 central office lines capable of operating with either loop start or ground start trunks for existing and future compatibility with utility services.
- C. Digital Telephone Ports: Provide as required to support quantities indicated. Construct system with 20% spare capacity.
- D. Single Line Telephone Ports: Provide as required to support quantities indicated. Construct system with 20% spare capacity.

WALL PLATES AND JACKS

- A. See Specification Section 260741.

POWER SUPPLY AND TRANSIENT/SURGE PROTECTION

- A. AC Voltage Supply
 - 1. Separately fused, 110 volt AC circuit fused with a circuit breaker of 20 amps.
 - 2. Protect the AC supply with a Tripp Lite Model ISOBAR (IB) 2.0 AC outlet strip or equivalent.
- B. Grounding: The cabinet housing the CSE and associated sound equipment shall be grounded to the building ground via a #6 AWG insulated copper wire.

PERIPHERAL SYSTEM DEVICES

- A. Backboards: Provide 4'x8' plywood backboards for mounting of system cross connect field mount as shown on the plans. Provide modular termination backboards with 110 type terminal blocks as required to terminate all cables. Provide distribution and cross connect backboards equal to AT&T 110 Series for all cross connect wiring.

PART 3 - EXECUTION

3.1 Conduit and Raceway Installations

- A. Provide conduit and raceway systems as specified in Section 260110 f as indicated below.
 - 1. Accessible suspended ceilings: Provide conduit from each outlet to plenum space above ceiling.
 - 2. Non-Accessible ceilings: Provide conduit run from each outlet to cable tray.
 - 3. Exposed structure: Provide conduit run from each outlet to cable tray.
- B. Minimum conduit size:
 - 1. Telephones: 3/4" conduit.
 - 2. Speakers: 1/2" conduit.
- C. Label all conduits at cable tray.
- D. Outlet Boxes: 2-1/8 inches deep, 2 gang with single gang device ring as required for wall construction. Use deep masonry boxes at masonry construction.

3.2 WIRING INSTALLATION

- A. Methods:
 - 1. Install wiring in conduit and raceways except as indicated.
 - 2. Wiring above accessible suspended ceilings may be installed without conduit.
 - 3. Install wiring in cable tray at all locations where cable tray is provided. Route wiring and cable directly to nearest available cable tray.
 - 4. Conceal wiring installations where possible.
- B. Installation:
 - 1. Cable Support: Securely fasten to the permanent building structure where not installed in raceway. Support at regular intervals appropriate to the cable and wire size. Cable and wiring shall not lay loose on ceiling tiles or grids. Install parallel to building lines and follow building structure. Use cable support equipment/hardware recommended by the manufacturer.
 - 2. Cable Pulling: Do not exceed manufacturer's recommended pulling tensions. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between indicated termination, tap, or junction points. Remove and discard cable where damaged during installation and replace it with new cable.
 - 3. Wiring in Enclosures: Bundle, lace, and trim the conductors to terminal points with no excess. Provide and use lacing bars and distribution spools.
 - 4. Identify and tag all cables with permanent type markers to denote location served.
 - 5. Provide cabling and make connection to the telephone company's telephone lines where the service enters the building.
 - 6. Provide a minimum #6 AWG insulated copper ground wire from the main equipment rack to the building main ground bus. Size and provide grounding as recommended by the manufacturer.

C. Terminations:

1. Splice, Taps and Terminations: Use numbered terminal strips in junction, pull and outlet boxes, terminal cabinets, and equipment enclosures. Tighten connections to comply with tightening torques specified in UL Standard 486A.
2. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors.
3. Rack and terminal cabinet wiring shall be neatly routed or bundled in plastic wiring duct and routed along rack sides. All splices and connections shall be by plug, solder or screw terminal strips, etc. Splices shall not hang in racks or terminal cabinets.

3.3 EQUIPMENT INSTALLATIONS

- A. Surge Suppressors: Where AC power-operated devices are not protected against voltage transients by integral surge suppressors conforming to UL Standard 1449, install surge suppressors at the device power line terminals.
- B. Install and wire equipment in accordance with accepted engineering and installation practices. Only the highest degree of workmanship will be accepted.
- C. Label all front panel controls used in the normal operation of the system using plastic laminate engraved labels, or approved equal. Firmly affix to the panel or device. Dymo or Kroy tap adhesive backed lettering is not acceptable. Refer to Section 260055.
- D. Label each major system component as to function and area served.
- E. Mount system components in cabinets or racks as recommended by manufacturer, except as otherwise indicated.
- F. Arrange equipment to facilitate access for maintenance and working space.
- G. Identify system components, wiring, cabling, and terminals according to Section 260055 "Electrical Identification".

3.4 FIELD SERVICES AND TESTING

- A. Measure the impedance of each amplifier's connected loudspeaker load after all speakers are installed and all transformer "taps" properly set. All room or area volume controls shall be set at "full on" for these measurements. Where more than one zone is connected to the same amplifier, each zone shall be measured individually and then combined. These measurements shall be made with proper test equipment using a 1000 Hz sine wave signal. The results of these measurements shall be recorded for inclusion in the operation manuals.
- B. Where the measurement of any amplifier's loudspeaker load is less than 1.25 times the amplifiers nominal output impedance, make required corrections.
- C. The gain controls of all electronic equipment shall be set as required and then capped or locked into position. Controls which are used for normal system operation are excluded from this requirement. All control settings shall be recorded for inclusion in operation manuals.

3.5 FINAL CHECKOUT AND ACCEPTANCE

- A. System shall be complete and fully operational before requesting final acceptance and scheduling system demonstration/training.

- B. Final Acceptance of the system will be given upon completion of all of the specified requirements, including testing, training and demonstration, and submittal of all required documentation.

3.6 EXTRA DEVICES

- A. In addition to the equipment shown on the project drawings, include the quantities of the components shown below. These devices may be installed at the discretion of the Owner, Architect or Engineer. If necessary, these devices, along with the required panel additions, wiring, labor, etc., shall be furnished and installed at no additional cost to the Owner. If, at the end of the project, they are not required to be installed, they shall be given to the Owner for their use.

<u>Qty</u>	<u>Description</u>
3	Classroom Telephones
1	Administrative Telephone

3.7 EXECUTION

- A. All work under this section shall be performed by persons having specific familiarity with telephone, data, and sound system installation. Upon request, the contractor shall submit resumes, references or other corroborating documentation, to the engineer to confirm the contractor’s capabilities and experience.
- B. **GROUNDING:** Except where specifically indicated otherwise, all exposed non-current carrying metallic parts of the communications system shall be grounded. This may be accomplished via a driven ground rod, cold water pipe or building power ground. If the building power ground is used, a separate ground conductor shall be used from the equipment to the grounding grid. All grounding shall be done with #6 solid copper wire or larger. The contractor shall use every effort to insure system stability and safety.

END OF SECTION 260771

SECTION 26 07 73
CLASSROOM AUDIO, SAFETY & INTERCOMMUNICATION SYSTEM

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The requirements of the contract documents, including the General and Supplementary General Conditions and Division 1 – General Requirements shall apply to the work of this section.
- B. At the time of proposal, any exceptions taken of these specifications, all variances from these specifications and all substitutions of operating capabilities or equipment called for in these specifications shall be listed in writing and forwarded to the Architect / Engineer. Any such exception, variances or substitutions which were not listed at the time of bid and are identified in the submittal, shall be grounds for immediate disapproval with comment.

1.2 SCOPE OF WORK

- A. The work covered by this section of the specifications shall include all material, labor, hardware, software, firmware and programming to install a completed and operating system as described herein and shown in the drawings. The system shall utilize the schools shared data network, and not require the use of any proprietary switches, routers, or other network components. The physical network components shall be provided by the owner or the contractor, the scope of this document does not include the physical network including switches, routers, or network cabling. Beyond the shared data network hardware, the rest of the system shall be complete with all necessary materials, labor, hardware, software, firmware and programming specifically tailored for the installation. It shall be possible to permanently modify the software on site by using a system administrator software network interface.
- B. The intent of this specification is to maximize communications between the classroom and administrative areas utilizing VoIP (Voice over Internet Protocol) Technology while enhancing school safety and reducing maintenance, operational, and installation cost.
- C. Under this specification, the system shall provide a complete VoIP Communication System for the all classrooms and flex spaces as indicated on the drawings. An analog solution using speakers and volume controls in the offices, corridors, exterior locations, restrooms, gymnasium and cafeteria shall also be part of this project.
- D. The Communication System shall provide VoIP or network distribution of intercom, overhead paging, emergency paging, class change time tones, emergency tones and program material.
- E. Any and all miscellaneous materials, labor, hardware, software, firmware and programming that is not listed in the specification section that is required to provide a complete and operating system shall be provided as part of the scope of work for this installation.
- F. The work covered by this section of the specifications shall be coordinated with any and all trades that are affected by the installation of this system. All work is to be complete and as required and specified elsewhere under these project specifications.
- G. All the actual required system components and cabling are not shown or specified as this carries between acceptable manufactures and suppliers. It shall be the responsibility of the contractor to obtain this information from the acceptable supplier and or manufacturer and include the cost of the same in his bid.

1.3 APPLICABLE CODES AND STANDARDS

- A. All devices of the system shall be listed by UL (Underwriters Laboratory). All components of the system shall bear the UL label.

- B. The system shall be installed in strict accordance with all the requirements of the National Electric Code.
- C. The system shall be installation in strict accordance with the requirements of the Americans with Disabilities Act (ADA).
- D. The system shall be installed in strict accordance with the requirements of all other applicable codes as well as all Federal, State, and local codes.

1.4 RELATED DOCUMENTS

- A. Secure any and all required permits and approvals prior to installation.

1.5 RELATED WORK

- A. The contractor shall coordinate work in this section with all related trades that the system effects of integrates with. Work and / or equipment provided in other sections and related to the system shall include but not be limited to the following:
 - 1. Cable support system
 - 2. Structured Cabling System installer
 - 3. Network Infrastructure Supplier – switches/routers

1.6 SUBMITTALS

- A. Furnish to the Architect / Engineer complete equipment submittal technical specification sheets and shop drawing submittals in .pdf format for this system including but not limited to the following:
 - 1. A material list with the quantity of each piece of equipment, names of manufacturers, model numbers and the technical data information on all equipment the contractor proposes to install. This material list is to be broken out and listed by Specification Section, per piece of equipment. If a piece of equipment is needed but not listed in this specification section, it shall be listed in the area of the submittal it pertains to. The technical information is to be a piece of the manufacturers printed literature that is produced by the equipment manufacturer. Internet web page listings will not be accepted. Provide a description of any special installation procedures that will differ from what is specified or shown on drawings.
 - 2. Complete system circuit diagrams of the entire system, point to point on scaled floor plans scaled to match that of the scale of the project documents. The shop drawings are required to clearly illustrate how all components related to each other and how they interconnect to each other. A complete point to point wiring diagram of any and all panels and how they interconnect with all the components and or devices that are part of the system as well as any ancillary devices that are being provided by other trades. All cables run are to be shown of the shop drawing submittals. Cable tags shown on the shop drawing submittals shall correspond with cable tags that are located inside equipment enclosures as well as documented on the as-built drawing. The shop drawing submittals shall include scaled drawings of all racks, panels, consoles and special assemblies. The show drawing shall include all circuit numbers of all cables and terminal connections as well as how they are labels. Each drawing shall have a descriptive title and all subparts of each drawing shall be completely described. All drawings shall have the name of the project, Architect / Engineer and contractor in the title block. The floor plans, rooms names and numbers for the submittal drawings are to match that of the project documents. The symbol used on the submittal drawings are to match that of the project documents. The only information to be shown on the submittal drawings for this Specification Section shall be information that pertains to the system that is being submitted on.
 - 3. Provide a custom detailed description of the operation of the submitted system for this particular installation and a statement listing every technical and operation parameter wherein the submitted equipment varies from what was originally specified. If the submitter fails to list a particular variance

and his submittal is accepted; but subsequently, deemed to be unsatisfactory because of the unlisted variance, the submitter shall replace or modify such equipment at once without cost to the Owner. A letter or certificate from the manufacturer stating that the system contractor is an authorized distributor and installer of the submitted equipment shall be supplied.

4. The contractor shall be responsible for providing to the Architect / Engineer any and all additional information required and as deemed necessary by the Architect / Engineer for submittal and shop drawing submittal review.

1.7 QUALITY ASSURANCE

- A. This specification section shall be a one (1) manufacturer responsibility or as specified herein with no exceptions. Any variances to this specification item shall be submitted to the Architect / Engineer ten (10) working days prior to proposal for review by the Architect / Engineer. The equipment manufacturer for this specification section to have been in business and manufacturing the specified equipment for a minimum of ten (10) years.
- B. The contractor shall be the factory authorized and factory certified distributor and installer of the equipment to be provided for this specification section. The installation contractor's factory certification is to be submitted to the Architect / Engineer as part of the contractor's subcontractor and materials list at the time of the bid as well as with the shop drawing submittal.
- C. The contract for the systems described herein will be assigned to the general contractor for the building construction. The intercommunication system contractor shall coordinate all work and work sequencing with the general contractor.
- D. Owner and Architect / Engineer Inspections: The Owners technology staff and Architect / Engineer shall provide advising as requested. The Owners technology staff shall inspect the project as the work progresses. Prior to final acceptance of the work, the Contractor shall make arrangements with the appropriate authorized Owner personal to inspect the construction areas, both to ensure satisfactory completion of the work and to ensure complete cleanup and restoration of areas affected by the work. Temporary protection, coverings, and structures shall be removed at or before time of inspection.

1.8 CIRCUITING GUIDELINES

- A. All wiring shall be Cat. 6/6a for connections to speakers, call switches, etc... for future migration to a complete IP (Internet Protocol) based intercom paging system. Cabling from the MDF or IDF to each classroom enclosure shall be provided by others. A patch cable, providing connectivity from the work outlet faceplate to the MS-500 shall be provided by others to the AV contractor for connection to the network.
- B. Each classroom / education space to have a dedicated network connection to the intercom paging system head-end to provide 2-way communications from the building telephone system handset to each classroom / education space individually.
- C. Each office / administrative space to have 1-way communications from the paging system and be capable to being addressed from the building telephone system handset.
- D. Each corridor / common space / exterior space including library, cafeteria and gymnasium to have 1-way communications from the paging system and be capable of being addressed from the building telephone system handset.
- E. All wiring shall be in accordance with the Manufacturers specifications.

1.9 SEQUENCE OF OPERATIONS

- A. The ability to be distributed via a fiber 10/100/1000mB switched, VLAN enabled network or 10/100/1000mB

switched stand-alone intercom network. It shall be possible to eliminate the need for copper feeder cables between the Main and Intermediate distribution frames through the use of fiber optics.

- B. Shall have SIP (Session Initiation Protocol) Integration to connect all talk-paths to the VoIP phone system of choice.
- C. The system shall provide the ability to support a SIP tunnel from the building's VoIP phone system to provide two-way communication from all administrative telephones to any location equipped with a talkback speaker or audio system with room microphone.
- D. System shall interface with any VoIP telephone system using SIP type integration thus allowing the school(s) to upgrade or replace their telephone system without suffering a requirement to replace, or lose any feature of, their internal communications (intercom) system. Any system that limits system features based upon any selected telephone system and is not SIP based shall not be acceptable.
- E. Automatically sound a tone or play a pre-page WAV file over any loudspeaker connected for two-way communication to alert the classroom teacher that this 2-way call has been established. This is intended to prevent unauthorized monitoring.
- F. Distribution of emergency announcement(s) from any authorized telephone to all areas furnished with a loudspeaker. Emergency announcements shall have the highest system priority
- G. Distribution of general announcements from any administrative telephone, staff telephone, or classroom telephone. The system shall be capable of providing all-call, group call, or multiple group call.
- H. Classroom speakers or audio systems with room microphone shall be software assignable to unlimited paging groups.
- I. Provide the ability to define and archive unlimited schedules with up to three hundred (300) events per schedule. Each scheduled event shall be capable of activating included tones or playing custom audio/voice phrases or controlling any I/O port on a system network interface for building control. Schedule administration, modification and creation functions shall be available through web access on remote computers and mobile devices.
- J. The system shall provide an administrative console for the front office, consisting of a touch screen interface no less than 22" diagonal interface.
- K. The User Interface will be map based. The manufacturer shall provide the ability to take a map in any format, including paper copy, PDF, Visio, etc. and create from that the map used for the primary user interface. Non map based User Interfaces will not be considered.
- L. The WAV or MP3 files shall be activated via the administration software, telephone and / or telephone system and / or pushbuttons.
- M. The WAV or MP3 files shall be programmable as to what level of priority they can be broadcast. They shall be programmable as to override any class change tones, normal all call, music, and intercom in the event of an emergency.
- N. The WAV or MP3 files shall also have the ability to be broadcast into any one or all of the zones with the system.
- O. The WAV or MP3 files shall have the ability to be broadcast via a schedule for any day of the week or time of the day. They shall also have the ability to be broadcast for any duration of time and repeat number of plays with the ability to select how long the duration is between each repeated broadcast.

- P. The WAV or MP3 files shall also have the ability to be a part of the classroom change tones within the system. These files shall be able to replace any tone within the class change schedules as to offer the flexibility of customizable tones and or phrases in this class change mode.
- Q. It shall be possible without the cost of additional hardware/software to incorporate a LAN / WAN district wide paging system by means of the built in VoIP district Paging Adapter or district software. This adapter shall give the district the ability to page each school independently, as a group of schools, or all schools.
- R. The system shall allow for the integration of changeable message signs to support bells and notifications. These signs shall be multi-color, multi segment LED scrolling displays and powered and controlled via a network PoE (Power over Ethernet) connection.
- S. The system shall also allow for the integration of third-party system through the use of contact closure, TCP (Transmission Control Protocol) communication, RS-232 communications and HTTP (HyperText Transfer Protocol) communications.

1.10 WARRANTY

- A. The manufacturer and installation contractor shall guarantee the system, equipment and all its components for a minimum of two (2) years from date of final acceptance of the system as documented by the Architect / Engineer. This guarantee shall cover the replacement of all parts and labor to replace the same made necessary by normal usage and wear.
- B. Upon completion of the installation of the system, the contractor shall provide to the Architect / Engineer and Owner a signed written statement, on company letterhead, substantially in form as follows: “The undersigned, have engaged as the Intercom paging system contractor for the _____ building project confirms that the system was installed in accordance with the wiring diagrams, instructions and directions provided by the manufacturer.”
- C. Contractor shall repair, adjust, and / or replace, whichever the Owner and / or Architect / Engineer determines to be in its best interests, any defective equipment, materials, or workmanship, as well as such parts of the work damaged or destroyed by such defect, during warranty period, at the contractor’s sole cost and expense.
- D. In the event that any of the equipment specified, supplied, and / or installed as part of the work should fail to produce capacities or meet design specification as published or warranted by the manufacturer of the equipment involved or as specified in this document, the contractor shall, in conjunction with the equipment manufacturer, remove and replace such equipment with equipment that will meet requirements without additional cost to the Owner.

1.11 TRAINING AND INSTRUCTION FOR OWNER MAINTENANCE

- A. A training program including a minimum of four (4) hours on the use of the system shall be provided to the Owner to use at their discretion. A full and complete overview of the system shall be included in this training as well as any literature required by the Owner to allow complete and total use of the system by the Owner’s designated staff. System maintenance requirements for the equipment will also be documented and turned over the Owner. This training shall be recorded and archived in CD/DVD format and turned over to the Owner for archiving purposes. The Contractor shall provide any required materials and staff to record the training.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. The following manufacturers are approved to submit proposals for this project:
 - 1. Audio Enhancement – EPIC System

2.2 EQUIPMENT

A. Intercom Paging System:

1. The system shall be a software-controlled system, whose primary interface is a web-based portal, accessible from any authorized computer. The system shall utilize a 1U rack server, operating as an appliance, dedicated to the operation of the IPB (Intercom Paging and Bells) & SAFE (Signal Alert For Education) System only. The rack server shall have industry standard redundancy, including RAID1, Dual Power Supplies, and hot swappable hard drives. The entire system shall be Linux based.
2. The system shall be SIP Integrated to the VoIP telephone system.
3. The system shall provide a simple calendar-based scheduling system for bells. It shall provide the ability to have an unlimited number of bell schedules
4. The system shall provide a map-based User Interface. All major functions, including Intercom, Paging, Notifications and Alerts shall be done using the map as the foundation for those actions. Paging shall clearly show on the map where the page audio will be transmitted to.
5. Bell Schedules shall be easily assigned to days and changed simply with authenticated access to the system through any browser-based device.
6. The system shall utilize a shared data network (VLAN [Virtual Local Area Network] enabled) or dedicated network as means of distribution for all voice overhead paging, emergency paging, emergency tones, intercom, and class change tones.
7. The system shall be capable of accessing remote classrooms (trailers, temporary classrooms etc.) via IP interface or room audio system with room microphone. This shall provide intercom, class change tones, emergency tones, and normal / emergency paging via a wired network to these remote locations.
8. Exterior speakers shall be capable of being on separate zones and programmed separately.
9. Ability to synchronize to the same NTP server utilized for the Master Clock system.
10. Ability to produce user defined tone signals for time tones or emergency tones.
11. The system shall have SIP Integration to connect all talk-paths to the VoIP phone system of choice.
12. The system shall provide the ability to support a SIP trunk from the building's VoIP phone system to provide two-way communication from all administrative telephones to any location equipped with a talkback speaker or audio system with room microphone.
13. System shall interface with any VoIP telephone system using SIP type integration thus allowing the school(s) to upgrade or replace their telephone system without suffering a requirement to replace, or lose any feature of, their internal communications (intercom) system. Any system that limits system features based upon any selected telephone system and is not SIP based shall not be acceptable.
14. The system shall provide its own SIP environment, and in the case of a failure of the schools VoIP telephone system, be capable of operating completely independently for all functions, save access from the handsets connected to the schools VoIP system.
15. Provide web access, which will give ability to monitor operations and functions of the system.
16. Provide web-based off-site programming and diagnostics of the system. It shall also be capable of determining basic circuit faults.

17. The system shall have a Web based administration programming tool which allows the administrative personnel to easily manage Audio Sources, Class Change schedules, paging groups, time updates, holiday schedules and day/night mode operation from an internet browser.
18. The system shall provide calendar-based scheduling up to four years in advance. The system shall be capable of displaying a fully year calendar and differentiating which bell program is scheduled to run on each day. The calendar shall be based on a standard school year and provide a selectable start month for example, it can be configured to run from August to July.
19. The system shall be capable of being fully integrated with the school's existing LDAP (Lightweight Directory Access Protocol) or Active Directory system. Systems that do not provide LDAP or Active Directory integration shall not be considered.
20. The system shall provide discreet control over roles for the system. Roles shall be definable down to the individual feature level and provide the district with the ability to restrict or grant access to any roll individual features or groups of features.
21. The system shall provide web browser access to the system specifically for a teacher. Teacher access shall be assigned through LDAP or Active Directory. The Teacher screen shall provide information specific to the room that the teacher is assigned to. That information shall consist of, but not limited to, the next scheduled event for the room (Bell, Announcement, etc.), Audio/Visual Controls for their classroom technology, Teacher Name, Room Number, an Intercom Call button, and an Emergency call button.
22. The system shall have the ability to carry IP Communications to the edge of the classroom Audio/visual Systems. It shall be able to control connected A/V Devices, provided that those devices are controllable by RS-232.
23. The system shall be based on a database structure, utilizing a robust commercially available database such as SQL(Structured Query Language).
24. The system shall provide 2-way handsfree communication in each classroom.
25. System Classroom and Common Zone network interfaces shall be capable of utilizing standard Cat 6/6a infrastructure for installation from the Telecommunications Closets only to the classroom and/or zone, thus allowing for only one type of wiring infrastructure within the school. Distribution of all voice signaling shall utilize a shared or dedicated network. Systems that require homerun, dedicated, 18 gauge shielded wiring shall not be acceptable.
26. The system shall provide a flexible and robust event engine, and in addition to pre-programmed events and actions, the event engine shall be capable of accepting Java based programming to accomplish advanced integrations and functions.
27. The system can automatically broadcast page emergency instructions throughout an entire school when an alarm (e.g. lockdown, lockout, security, fire) is tripped or manually activated. The emergency instructions shall be preprogrammed and require no user intervention. The system shall provide redundant alarm annunciation over intercom/paging speakers and is not meant to replace primary fire alarm or security systems.
28. The system shall provide the ability for the school to upload their own recorded files for both Bell Tones, and Notifications
29. The platform shall provide the ability to initiate school safety paging announcements, evacuation tones and take cover tones from any telephone within the facility or outside the facility to any other location within the facility or district.

30. IP-enabled two-way voice communication shall be available from any provided telephone or administrative console through any speaker in the system. This shall allow hands-free communication to any classroom or any individual loudspeaker unit. A pre-announce tone shall sound immediately before the intercom path is opened.
 31. The system shall provide for a complete personal alert function for each teacher. The alert functionality shall be an integrated part of the administrative head end software and shall not require any separate application or hardware to support this functionality.
 32. The teacher personal alert functionality shall be integrated into the classroom microphones and the teacher web screen.
 33. The system shall be capable of displaying on the map the location of the alert in the case of a microphone that is within range of its paired receiver, or from the teacher's web access screen. The system shall also be capable of approximately locating the location of the alert in the case of a microphone that is not in range of its paired receiver. A system, either the microphone system, or the administrative system that is not capable of receiving an alert from a microphone that is not within range of its paired receiver shall not be considered.
 34. Upon alert, the system shall have the ability to provide notification on the dedicated console at the front office, or on any other computer which is currently logged into the administrative interface and has the appropriate credentials. The system shall provide both an audible tone, and a change on the screen that clearly indicates that an emergency alert has been received.
 35. Upon alert, the system shall also be capable of sending e-mail and SMS Text messages to the designated school personnel. These alerts shall include a web link to the administrative console.
 36. If cameras are installed in the classrooms, the system shall be capable of showing a live video from the classroom that received an alert. This shall only be shown in the case of an alert where the microphone is within range of its paired receiver.
 37. The system shall have the ability to acknowledge the receipt of the alert by changing the indicators on the classroom microphone receiver in the room where the alert was received from. In the case of an alert received from a microphone not in range of its paired receiver, no acknowledge shall be sent.
 38. The system shall have the capability of maintaining a record of all alerts that are received and provide appropriate school personnel the capability to enter information about the alert, which shall be maintained in the systems database. That information shall also be made available to appropriate school personnel in the form of a report that shows all alerts that have occurred, their date, time, and the end alert information.
 39. The system shall contain a rules-based integration engine that allows for input of TCP, HTTP, or Serial Data and allows for the parsing of data for actions or triggering other systems via TCP, HTTP or Serial.
 40. The system shall support digital message displays that provide visual feedback in the form of scrolling messages via an LCD or LED display all controlled from the network.
- B. Intercom Paging System Network Intercom Interface:
1. Shall allow users to install intercom paging systems spanning multiple building or facilities connected through a VLAN.
 2. Network Requirements:
 - a. 10/100 Ethernet switch port configured on a dedicated VLAN.

C. Intercom Paging System Power:

1. All Network interfaces used in the classroom and for the common zones shall be powered via PoE from the district provided network switches.
 - a. PoE switches and network cabling from MDF (Main Distribution Frame) and IDF (Intermediate Distribution Frame) to devices provided by others.

D. Intercom Paging System Administrative Console Software:

1. The administrative console shall be customizable, flexible and provide full access to the intercom paging system.
2. The supplier is required to provide a dedicated touch screen console for the front office, with a minimum size of 22" Diagonally. The Console shall not require the district to provide any additional hardware, software or licensing. The Console shall also provide a boom microphone attached via USB to the console for paging/intercom use.
3. Administrative access to the system shall be browser based and shall also be capable of being any administrative computer.
4. Functionality to provide full access to all features such as all call, paging groups, emergency tones, control music, WAV file distribution, test rooms, crisis mode, schedules, etc...

E. SAFE SYSTEM & NETWORK PAGING INTERFACE - Audio Enhancement, MS-300

1. Provide a Network Interface with performance as follows:
 - a. Full-Duplex, Hands Free communications on Intercom Call
 - b. Amplifier powered only by the PoE power source for emergency paging applications, support IEEE 802.3af and 802.3at
 - c. Mounting Bracket as required
 - d. Connections – The following connections shall be available:
 - (1) Line Output for connecting to auxiliary amplifiers
 - (2) 2 External I/O Connections – 8P8C (RJ45)
 - (3) Wall Plate Terminal 8P8C (RJ45)
 - (4) 8P8C (RJ45) for PoE Network Connection
 - e. 1 speaker connection
 - (1) The system shall provide a speaker connection which is powered exclusively by the PoE power from the network
 - f. Network Connection
 - (1) The system shall have a network connection with PoE power.
 - (2) PoE shall be present on the system in order to provide power for the amplifier during a power emergency
 - g. Integrated Network Based Communications

(1) The System shall support the following protocols:

- (a) Directed UDP (User Datagram Protocol)
- (b) Unicast Audio
- (c) Multicast Audio
- (d) SIP
- (e) TCP Control

h. Integrated Serial Tunnel over TCP

i. The system shall have integrated SIP communications and be able to communication bi-directionally with any VoIP communications system that follows the standard SIP protocols.

j. The system shall also have the ability to operate with multi-cast IP messages as well.

F. Analog Intercom System Cabling:

- 1. West Penn
- 2. Belden
- 3. General Cable
- 4. Mohawk
- 5. Accepted substitute

G. Intercom Paging System Volume control:

- 1. Volume control shall be capable of controlling the volume of up to one hundred-fifty (150) 1-way speakers.
- 2. Volume control shall be mounted on a brushed stainless-steel single gang wall plate with the plate being embossed with a dial scale of "0 through 10."
- 3. Volume control shall be equipped with a skirted black knob with white position indicator.
- 4. Volume control shall include a stainless-steel mounting box and hardware.

H. Intercom Paging System Lay-In Ceiling Speaker.

1. Lay-In Specifications

- a. Lay-in ceiling speaker shall consist of a white 1'x2' perforated grille, a speaker and integral back box or equivalent ceiling speaker with appropriate backbox, grille and tile bridge.
- b. The volume control is accessible above the grid
- c. The speaker shall be capable of handling minimum 35 watts continuous power.
- d. Sound pressure level at 1 meter on axis with a 1 Watt input shall be 95 dB.
- e. The frequency response shall be 70 Hz to 17 kHz.
- f. The baffle shall be constructed with a single piece of perforated steel with a white baked on acrylic enamel finish.
- g. The back box shall meet or exceeds UL 2043 for installation in a plenum space
- h. Maximum dimensions of the grill shall be 2' x 2' (60.96 cm x 60.96 cm).

- i. Weight shall be approximately 5.5 lbs. (2.49 kg).
- I. Intercom Paging System Surface Wall Speaker:
 - 1. Wall speaker shall consist of a speaker, volume settings and sloped baffle.
 - 2. The speaker, housing and hardware shall be electrically and acoustically matched for a frequency response of 60 Hz to 12 kHz.
 - 3. The speaker shall be 8" (20.32 cm) in diameter and have a ceramic magnet weighing 5 ounces.
 - 4. The voice coil shall be .75" (1.91 cm) in diameter.
 - 5. Voice coil impedance shall be 45 ohm.
 - 6. Operating temperature shall be -20 to + 55 °C (-40 to + 131 °F).
 - 7. The baffle shall be constructed of gray painted steel with a black cloth grille.
 - 8. Maximum dimensions of the housing shall be 10.13" (25.73 cm) H x 12.31" (31.27 cm) W x 4.63" (11.75 cm) D.
 - 9. Approximate weight is 4.25 lbs (1.91 kg).
 - J. Intercom Paging System Paging Horn:
 - 1. Shall be a weather-resistant, high efficiency reentrant type horn speaker.
 - 2. Shall be equipped with an amplifier and externally accessible volume control.
 - 3. Shall include an adjustable swivel base.
 - 4. The frequency response shall by 275 Hz to 14 kHz.
 - 5. Dispersion shall be 90° horizontal and 90° vertical.
 - 6. Sound pressure level shall be 121 dB measured at 4 feet (1.22 m) on axis with an input to the amplifier module being -10 dBm at 1 kHz.
 - 7. Distortion shall be less than 2.0% at rated output of 15 watts RMS.
 - 8. Input impedance shall be 600 ohms nominal.
 - 9. The amplifier shall operate on a -24 Vdc nominal, positive ground power supply.
 - 10. Operating current shall be 900 mA at -24Vdc
 - 11. Operating temperature shall be -4 to 131 °F (-20 to 55 °C).
 - 12. Operating humidity shall be 0-95% noncondensing.
 - 13. Dimension of the horn shall be 8" (20.3 cm) W x 8" (20.3 cm) H x 9:" (22.9 cm) D.
 - 14. Weight shall be approximately 4.0 lbs (1.8 kg).

K. Classroom Sound Reinforcement System:

1. Audio Enhancement – Optimum System
2. A classroom sound reinforcement system shall be installed in all areas of the building as shown on the drawings and as listed in the specifications.
3. Classroom sound reinforcement system shall be fully interfaced to the intercom paging system.
4. The output of the intercom paging system shall directly interface to the classroom sound reinforcement system.
5. The sound reinforcement system shall be capable of integration with the facility intercom/paging system. All sound reinforcement systems shall allow the facility intercom/paging system to directly mute them. The Receiver Module shall have the capability to sense a paging signal from the facility communications system. When a page has been sensed, the classroom sound system shall mute local audio to facilitate hearing the facility page.
6. This integration shall give positive control when interfaced to the classroom sound reinforcement system within the system as to cut off or duck all sources within the classroom when an intercom or page announcement is made from anywhere within the school.
7. The classroom sound reinforcement speakers shall be used as the intercom paging system speakers.
8. The intercom paging system speakers shall be connected to receive audio from any of the in-room sources and receive audio from the intercom paging system.
9. The classroom sound reinforcement system shall be mounted in a wall mount enclosure, specifically designed which allows the microphone receiver to remain visible through the door of the enclosure
10. The DECT (Digital Enhanced Cordless Telecommunications) based microphone receiver shall be capable of being mounted directly to the enclosure and connecting to the amplifier utilizing Cat. 6/6a cable.
11. Each microphone input shall have a carrier detect indicator to verify the input is active.
12. The classroom sound reinforcement system shall have a secondary line level output to connect to self-amplified speakers or other audio equipment if needed.
13. The classroom sound reinforcement system shall have an emergency cut-off input that when interfaced to the fire alarm relay contact output shall silence all audio devices within the room in the event of a fire as to help lower the overall decibels levels to help the students and staff hear the audible fire alarm tones / instructions within that room.
14. The classroom sound reinforcement system shall be capable with interfacing to future classroom cameras to capture lesson video and audio together on one recording.
15. The Wireless Microphone shall be capable of adjusting the volume of external audio sources that are connected to the Main Control Unit. The Wireless Microphone shall be powered by a single rechargeable LiON (Lithium-ion) battery which can be charged inside the microphone via a standard USB cable. The Wireless Microphone shall be able to operate for up to a typical eight (8) hour workday on a single charge.
16. Each classroom sound reinforcement system shall include but not limited to the following components:

- a. DECT Based receiver
- b. Amplifier & Network Interface
- c. Two wireless microphones with rechargeable LiON batteries
- d. Four (4) FS-17 Flat panel ceiling speakers (S2)

L. Classroom Sound Amplification System (CSAS) EQUIPMENT:

AMPLIFIER - Audio Enhancement MS-500 Amplifier/Network Interface:

1. Provide a fully PoE Powered Receiver/Amplifier with ability to provide functions described above with performance as follows:
 - a. Audio Power: 30 watts RMS mains powered amplifier
 - b. 92% Efficient Class D Amplifier
 - c. 1% percent THD across full frequency range of amplifier
 - d. Frequency Response: 20 Hz to 20 kHz
 - e. Power Requirements: PoE 802.3af/at 25.5W Maximum
 - f. Signal-to-noise: >89dB
 - g. Integrated mounting tabs
 - h. Thermal and short circuited protected
2. Controls:
 - a. The primary control of the system shall be done through the teacher microphone.
 - b. The following functions shall be available via USB connection for setup during installation:
 - (1) Input Control for multi-media sources and mixed IR source
 - (2) Equalizer Controls
 - (3) Discreet Output volume controls for each input
 - c. RS-232 Control
 - (1) Provide RS-232 control of the amplifier, and an additional RS-232 port which provides pass through control of a downstream device such as a projector
 - (2) RS-232 processor shall be capable of differentiating between commands destined for the amplifier, and responding to those commands, and commands intended for the downstream and passing those commands through to the secondary RS-232 port
 - (3) Command pass through shall be bi-directional
 - d. Connections – The following connections shall be available:
 - (1) Four (4) Multi-Media inputs
 - (2) Dedicated Line output – for Assistive Listening Device Connection
 - (3) Color Coded Connection
 - (4) 8P8C RJ45 Connection for Intercom Paging Wall plate
 - (5) Support for Touch Based Wall Controller on Remote Port
 - (6) General Purpose I/O Output on 8P8C RJ45

M. DECT Technology RF Receiver – Audio Enhancement SRC-14

1. The Receiver shall utilize DECT technology. DECT is a radio technology for voice applications. DECT is ideal for the classroom because the use of both frequency and time domain is ideally suited to smaller areas with a large number of users. In each classroom, it will be an independent system, with all necessary electronics to support the receiving & pairing functionality mounted on the wall near the amplifier or in the ceiling. The receiver will be connected to the amplifier through a universal twisted pair cable, using

balanced audio connections. Power for the receiver shall be provided through the same cable as the balanced audio connections.

2. The receiver shall provide the following functionality. These features shall be included on board the receiver, and not require any external support to perform these functions.
 - a. Three Channel DECT based reception
 - b. The receiver shall provide both a low and high-power mode selectable via a DIP (Dual In-line Package) switch
 - c. Pairing Button for Linking microphone to the receiver
 - d. External contacts to allow for a remote pairing button
 - e. Stereo Auxiliary Input
 - f. Auxiliary Line Level Output – Un-Balanced
 - g. Remote control of both microphone channels, and the auxiliary input from the teacher microphone
 - h. Public address system mute terminals – This is a contact closure connection when closed, it mutes the audio output from the receiver
 - i. Advanced Feedback Blocker
 - (1) The system shall have the ability to actively control feedback. This shall be done via an analog circuit that provides up to five active filters to control specific frequencies,
 - (2) The Feedback Blocker shall also have the ability to lower the overall of the system by up to 6dB, during a user error situation where the overall system gain is manually turned up too high
 - (3) The Feedback Blocker system shall automatically remove the filtering upon resolution of the user-initiated error condition
 - (4) The Feedback Blocker shall be of an analog design – in order to avoid the detrimental effects of digital sampling, only analog systems shall be considered in order to implement this feature.
 - j. Audio Output
 - (1) The system shall have the ability to provide both three (3) independent audio signals (Ch 1, Ch 2, and Aux) or with the change of a DIP switch, provide a mixed signal
 - (2) The system shall provide an audible tone when the remote volume control on the teacher microphone is used. It will also provide a low & high output level, and an on/off selection via a DIP switch setting
 - (3) The system shall have the capability of attenuating its output level by -10 dB with a DIP switch setting
 - k. Emergency Alert Contacts
 - (1) The system shall provide a trigger signal when the teacher presses and holds a button on her transmitter for more than two (2) seconds.
 - (2) The system shall be capable of providing a visual indication of three (3) red LED's when the teacher initiates a trigger signal
 - (3) The system shall also be capable of receiving a trigger acknowledgement signal back from an external source, and altering the visual indicator from three (3) red LED's to two (2) Green and one (1) red LED
 - l. Recording Contacts

- (1) The system shall provide for a secondary notification that can be used for future applications such as signaling an NDVR (Network Digital Video Recorder) to start a recording
 - m. Control System Integration
 - (1) The system shall have on board the capability of being controlled via RS-232 protocol.
 - (2) The system shall also have the capability of broadcasting RS-232 commands when the teacher presses the up/down volume controls on their microphone
 - n. Power Requirements: 24Vdc, Power Supplied from the amplifier.
 - o. Operating Frequency – 1.9 GHz Band
 - p. Receiver Type: DECT
 - q. Mounting Bracket as required
 - (1) The receiver shall be capable of being mounted on the ceiling or a wall
 - (2) Bracket shall provide mounting to standard electrical boxes
 - (3) Channel 1 Volume Control – Fully controllable from the teacher microphone remotely through the DECT system
 - (4) Channel 2 Volume Control – Fully controllable from the teacher microphone remotely through the DECT system
 - (5) Auxiliary Input Volume Control – Fully controllable from the teacher microphone remotely through the DECT system
 - (6) Alert Controls on Teacher Microphone – Two (2) buttons on the sides of the microphone
 - (7) Recording Control on Teacher Microphone – One (1) button on the front of the microphone
- N. Teacher Body Pack Transmitter Audio Enhancement STD-14
1. Provide a body pack transmitter with performance as follows:
 - a. Operating frequency – 1.9 GHz - DECT
 - b. Audio distortion: <1.0% (± 40 kHz deviation @ 1kHz)
 - c. Integrated microphone
 - d. Internal charger circuit
 - e. Micro USB Charging Port – shall be capable of being charged from a standard USB port – including a port on a computer
 - f. Power button functionality
 - g. Power on – turns the microphone on when microphone is off and button is pressed
 - h. Mute – mutes the microphone when pressed and released once microphone is turned on
 - i. Power Off – push and hold to turn power off
 2. Additional Function (F) Button Features
 - a. SAFE Alert Functionality – Provides security alert when the two (2) buttons on the sides of the microphone are pressed and held for more than two (2) seconds
 - b. Recording Functionality – Provides simple logic signal when the REC button is pressed on the face of the microphone which activates terminals on the receiver
 3. External Inputs
 - a. Provide an inputs for an external microphone
 - b. Provide an input for a stereo auxiliary input (Mixed to Mono in microphone)

4. Microphone Element – The teacher microphone shall utilize a 10mm microphone element to insure optimum frequency response and maximum pickup of teacher’s voice.
 5. Power 1 - LiON Long Life Battery (Systems using two (2) batteries will not be considered)
 - a. Battery style shall be common between handheld microphone and teacher transmitter. Systems that use different batteries in the handheld vs teacher microphone shall not be considered.
 6. Provide remote volume control for the system from the teacher’s transmitter
 - a. Volume control via the wireless microphone system to allow the teachers to remotely adjust their own volume level.
 - b. Volume control for the other channel from the teacher’s microphone
 - c. Volume control for the auxiliary inputs from the teacher’s microphone
 - d. Side Alert Buttons – Provide remote control functionality that allows for enabling additional multi-use functions from the teacher microphone.
 - e. REC Button – Provide a button on the face of the microphone that can be used for multiple purposes
- O. Classroom Intercom Call Button WPA-504/502
1. Reference technology floor plans for device locations
 2. Single gang decora style call button white in color
 3. Black button for intercom call
 4. 8P8C (RJ45) connection
 5. Matching white decora style face plate
 6. WPA-502 includes red emergency button for alerting
- P. Ceiling Enclosure specifications
1. Provide a ceiling enclosure that is sized appropriately for the equipment being installed in each classroom
 2. Ceiling enclosure shall be plenum rated and UL Listed
 3. Overall dimensions shall be to fit in a standard drop tile ceiling.
 4. Enclosure shall support power and data as necessary for equipment.
 5. Cover of enclosure shall support mounting of Audio Enhancement XD Receiver, WPA-501 Microphone, and EduCam360 and be lockable.
 6. Enclosure should be pre-assembled with equipment by the manufacture
- Q. Wall Mount Enclosure
1. Provide a ceiling enclosure that is sized appropriate and specific to house the Audio Enhancement amplifier, Audio Enhancement XD Receiver, AVConnect Receiver and WPA-502/504 Wall Plate. Audio Enhancement receiver shall be seen from the front of the enclosure with accessible buttons.
 2. Enclosure shall be wall mountable and support enclosing a single gang 120V electrical outlet.
 3. Enclosure shall have a swinging door and a cam or key lock.
 4. Enclosure shall be white in color.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. The entire system shall be installed in a workmanlike manner, in accordance with approved manufacturers wiring diagrams and these specifications. The contractor shall furnish all conduits, cable tray, surface raceway, wiring, outlet boxes, junction boxes, cabinets etc... as well as all required miscellaneous materials

and labor necessary for the complete installation of the cable support / pathway system.

- B. Wiring may be opened wired in cable tray or "J" hooks above accessible suspended lay-in ceilings. Wiring in walls or exposed on walls shall be enclosed in EMT conduit. Cable shall be supported at a minimum of every 5'.
- C. A nylon pull string shall be installed in each conduit / surface raceway run.
- D. Any locations where flexible metal conduit has to be used, it is to terminate to a junction box on both ends and be securely anchored for proper support.
- E. Conduit indications in the drawings are a minimum standard.
- F. All equipment shall be mounted with sufficient clearance for observation, servicing, testing and accessible from either the floor or ladder. If any device is installed in a location that is deemed inaccessible by the Owner and or Architect / Engineer, it will be moved to an accessible location by the contractor at no additional cost to the Owner.
- G. The contractor shall supply access panels where required and as defined by the Architect / Engineer. Contractor to notify the Architect / Engineer immediately if this issue arises during construction.
- H. All penetration of floor slabs and firewalls shall be fire stopped in accordance with all Federal, State and local codes.
- I. All wiring shall be color coded per National Electrical Code requirements and standards.
- J. All conduit ends shall have plastic grommets to protect cable from damage due to sharp edges on the conduit.
- K. Mounting heights and mounting requirements shall be as shown on the drawings.
- L. All junction boxes shall be clearly marked and labeled for easy identification. Flexible connectors shall be used for all devices mounted in suspended lay-in ceiling panels. All conduits, outlet boxes, junction boxes and panels shall be securely installed and anchored with appropriate fittings and connectors to insure positive grounding throughout the entire system.
- M. No wiring except that of this system shall be installed in this systems cable support / pathway system.
- N. Wiring splices shall be made only in designated junction boxes and tagged on both sides of the junction. The junction shall be made on clearly labeled, insulated terminal strip. Transposing or changing the color-coding of the cable is not permitted. Wire nut connectors are not acceptable. System cable and the 120vac power cable shall be in separate conduits.
- O. It shall be the responsibility of the contractor to wire and connect ancillary devices to this system as listed in this specification section.
- P. Any circuits leaving the building to the outside shall be protected by the appropriate transient protection devices as required by the manufacturer to avoid damage to the system if transient surges are inducted on to these circuits (i.e., lighting strikes).
- Q. Contractor to provide in-wall bracing support for all devices that are to be wall mounted to walls that are not masonry block walls.
- R. All devices shall be protected throughout the entire project. All devices shall be kept free of construction dirt and debris during the entire project. The contractor shall be responsible for replacing at no additional cost to the Owner any devices that are deemed dirty or unsuitable for use by the Owner and or Architect / Engineer throughout the entire project.

- S. All cabling and devices shall be labeled with type written labels. Device labels and cable labels shall match the labeling information that is documented on the as-built drawings. Contractor to coordinate labeling schemes and labeling requirements with A/E prior to commencing with final labeling. Labeling system shall be by Brady or Panduit.

3.2 INSTALLER QUALIFICATION

- A. Installer shall have a BICSI RCDD (Registered Communication Distribution Designer) on staff.
- B. Installer shall have an Avixa CTS (Certified Technology Specialist) on staff.
- C. Installer shall be an Authorized Audio Enhancement reseller and be certified in EPIC System.
- D. Installer shall hold an appropriate State Contracting or Electrical License as required.

3.3 FIELD QUALITY CONTROLL

- A. The system shall be installed and fully tested as listed in these specifications. The system shall be demonstrated to perform all features and functions as listed in these specifications at a minimum.

3.4 TESTING

- A. Reports of any field-testing during the system installation shall be forwarded to the Owner and Architect / Engineer for review and comment.
- B. Each individual system operation on a circuit-by-circuit basis shall be tested for its complete operation. Any devices that are to be connected to the system shall be tested as specified. Device locations and address / circuit numbers are to be documented on the as-built drawings as well as the wiring configuration of the device circuits. Device locations shall be field verified by the contractor and are to include any costs in the bid that is relating to all devices being connected to the system. The procedure for testing the entire system shall be set forth in these specifications and with the consent and approval of the Architect / Engineer, Owner and equipment manufacturer. Confirm testing requirements with the Owner and Architect / Engineer prior to commencing with system testing.
- C. Perform the tests and adjustments necessary to assure the satisfactory quality and level of performance of the system under normal operating conditions.
- D. Establish the normal settings for all controls and devices for all system operational and functional features and record the same for future reference. All levels shall be set and recorded in the as-built documentation for optimum system performance.
- E. The installation technician from the installer / manufacturer shall perform all system tests as specified. Perform all tests in the presence of the Owner, Architect / Engineer and any designated personnel as deemed necessary by the Owner or Architect / Engineer. This test shall be performed with the devices at their operational location and under normal operational conditions. Bench or default settings for devices are not acceptable. All test and test report costs shall be included in the contractors bid. A checkout report shall be generated by the installation technician and submitted to the Owner and Architect. The report shall include but not be limited to the following:
 - 1. A complete list of all equipment installed with corresponding serial numbers.
 - 2. Indication that all equipment is properly installed, functions and conforms to the specifications.
 - 3. Serial numbers, locations by device and model number for each installed device.
 - 4. Technicians name, specified certification credentials and date of system test.
 - 5. Any additional information as deemed necessary by the Owner and or Architect / Engineer.

- F. A substantial completion test shall be performed before the final test and acceptance of the system by the Owner and Architect / Engineer. At the time of the substantial completion system test, provide to the Owner or his representative an oral explanation of the operation and maintenance of the system. Before starting the tests and adjustments listed above, the contractor shall submit the following to the Owner and the Architect / Engineer for review during the substantial completion test:
1. Preliminary as-built wiring diagrams of the entire system.
 2. Preliminary copy of the operation and maintenance manuals.
 3. Preliminary copy of the system test report form.
- G. If no system performance issues arise during the substantial completion test that need to be repaired by the installation contractor, this can be approved as the final system test by the Owner and or Architect / Engineer. If there are performance issues that arise that do need to be repaired, another complete and comprehensive system test will be scheduled and performed to show that the necessary repairs have been properly addressed. These tests will be performed at no cost to the Owner until a time that the system is shown to be in complete operating condition as approved by the Owner and Architect / Engineer.
- H. A commissioning report of all the tested functionality of the system shall be provided by a certified L2 technician by the manufacture or by the manufacture themselves.

3.5 DOCUMENTATION AND TRAINING

- A. After the final system test and the Owner and Architect / Engineer has accepted the system to be in the proper operating condition, the contractor shall compile and provide to the Owner three (3) complete operation and maintenance manuals and three (3) sets of as-built drawings on the completed system to include but not be limited to the following:
1. Operating and maintenance instruction sheets for each piece of equipment showing the proper operation and maintenance of the system component.
 2. Individual factory issued operation and maintenance catalog brochures of all equipment and components that were installed as part of the system. Advertising brochures, submittal data sheets and operational materials are to also be included but shall not be used in lieu of the required technical manuals.
 3. Complete as-built wiring diagrams and floor plan drawings of the complete system installation showing how the system was installed. These drawings shall include any devices that are connected to the system with their address / circuit number documented as well as the wiring configuration of all device circuits. The as-built drawings shall be an updated and revised copy of the submittal drawings showing all modifications made during the installation of the system. A copy of the as-built drawings in electronic format on CD/DVD generated in AutoCAD Release 2014 or higher will be forwarded on to the Owner and Architect / Engineer for archiving in the operation and maintenance manuals.
 4. A statement of guarantee including the date of the termination of the warranty as well as the phone number of the person to be called in the event of equipment failure.
 5. A cover letter, for the above mentioned tests, certifying the entire system and its components, application and installation meets or exceeds the recommendations of the manufacturer, all applicable code requirements and test specifications.
- B. The final and installed version of the system software shall be provided to the Owner on a CD/DVD for storage in the operation and maintenance manuals. These manuals shall be used for final check out of the system.

END OF SECTION 26 07 73

SECTION 32 68 16.13
PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. This work includes finishing and installing the specified safety surface.

1.2 DESCRIPTION OF SYSTEM

A. Safety Turf shall be poured-in-place to provide a resilient, rubber surface installed over a base as specified. The surfacing contractor shall be responsible for all labor, materials, tools, and equipment to perform all work and services for the installation of the surface.

1.3 QUALITY ASSURANCE

A. Impact attenuation test results will be provided to the owner’s representative. This will also include HIC test results. Test results shall meet or exceed ASTM-F1292-04 Impact Attenuation Guidelines of 200 G’s or less from the actual fall height. HIC test results shall be less than 1000 at this fall height. Surface shall be accessible per ASTM- F1951-99 Determination of Accessibility of Surface Systems under and Around Playground Equipment. Surfacing should be installed per ASTM and CPSC guidelines.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Safety Turf, Inc., Robertson Industries, Inc., BYO Recreation.
2. DuraPlay Surfacing Systems

2.2 MATERIALS

A. **POURED BASE LAYER** - A precise combination of recycled SBR and Butyl rubber mixed on site with a MDI polyurethane prepolymer binder. Recbase® or an approved equivalent may be used in conjunction with base rubber for thicknesses over 3”.

B. **POURED 1/2” TOP LAYER** – EPDM or TPV rubber granules (1-4mm size) and a solvent free, enhanced UV stable, MDI polyurethane prepolymer binder. (Note: An aliphatic binder may be used if initial “yellowing” of light colored granules is undesirable)

C. **COLOR**- Colors will be chosen by owner or owner’s representative

PART 3 - PROCEDURE

3.1 SUB BASE

A. If the surface is existing (or new) asphalt or concrete, a not larger than a 1” deep by 1” wide keyway is to be cut into surface along the perimeter of the safety surface area. This will provide for a stopping point for the beveled perimeter edge allowing for a barrier free accessibility.

B. If asphalt or concrete is not used, then the sub base will be a compacted stone base. This base shall be prepared with a minimum of 4” of DE #57 stone that is spread and compacted to a flat surface leaving the thickness of the required safety surface below finish level. Please note that a greater thickness of stone may

be required if the existing material being removed is, for example wood chips.

3.2 INSTALLATION

- A. **THICKNESS** - Total minimum depth of the safety surface will be 2". The thickness may be adjusted to meet the fall height requirements noted in section 1.1.2.
- B. **POURED BASE LAYER** - The 1 ½" min. layer of recycled SBR/Butyl will be mixed on site with a MDI polyurethane prepolymer binder in a mortar mixer. Mix until they are coated uniformly. This layer will be poured in place by means of a screed and hand trowel. Edge conditions shall be per project requirements. The minimum temperature requirement for installation of the base layer is 40 degrees and rising. Cure time increases at lower temperatures and humidity. (Note: This layer will be adjusted to the correct thickness per fall height requirements. Recbase® or an approved equivalent, may be used in conjunction with rubber base layer for thicknesses 3" or better.)
- C. **POURED TOP LAYER** - The 1/2" poured top layer shall be composed of EPDM or TPV granular rubber. The EPDM or TPV rubber is mixed on site with a MDI polyurethane prepolymer binder in a mortar mixer. Mix granules until they are coated uniformly. The top layer will be poured-in-place and hand trowel or rolled. If the safety matting is installed over existing asphalt or concrete, the EPDM or TPV granules will be troweled into the keyway to provide a smooth transition from the existing surface onto the safety matting. The minimum temperature requirement for installation of the top layer is 50 degrees and rising. Cure time increases at lower temperatures and humidity. Day seams may be required for areas greater than 3,000 square feet. Edges - Surface edges shall be flush with the edge of adjacent area, or be such that there is a smooth transition onto the safety matting from the existing surface, or per owner's requirements.
- D. **POROSITY** - Surface shall be porous to the extent of allowing the equivalent of 12" per hour of rainfall to flow through it.
- E. **TRACTION** - Surface shall be non-skid, wet or dry.
- F. **SOFTNESS** - Surface deflection with a 30 lb. Load shall be ¼" to ½" with 99% recovery.
- G. **HEALTH & ENVIRONMENT AFTER CURING** - Surface shall be non-toxic, non-allergenic and non-polluting.

3.3 PROTECTION

The safety surface should be protected from foot traffic for a minimum of 24 hours after installation to allow surface to cure. Note: This curing time may be longer in colder weather.

END OF SECTION 32 68 16.13