

CITY OF DULUTH – COMFORT SYSTEMS INTERIOR REMODELING
DULUTH, MINNESOTA

ADDENDUM NO. 02

The following Addendum shall be appended to and become part of the Plans and Specifications for City of Duluth – Comfort Systems Interior Remodeling – Duluth, MN.

This Addendum supersedes and supplants all previous reference to similar items.

Architecture Advantage, LLC
1434 East Superior Street
Duluth, Minnesota 55805

Addendum Item:

Changes to the Specification

1. **TABLE OF CONTENTS**

Add the following sections:

Division 09 – FINISHES

TILING093000

DIRECT APPLIED ACOUSTIC CEILINGS095153

2. **087100** **DOOR HARDWARE**

Section 087100 DOOR HARDWARE to be incorporated into the specifications.

3. **093000** **TILING**

Section 093000 TILING to be incorporated into the specifications.

4. **095153** **DIRECT APPLIED ACOUSTIC CEILINGS**

Section 095153 DIRECT APPLIED ACOUSTIC CEILINGS to be incorporated into the specifications.

5. **096813** **TILE CARPETING**

2.1 CARPET TILE

A. Manufacturer:

1. InterFace – ~~Worn Again~~ The Standard

a. ~~Architect to select from manufacturer's full range of colors.~~ Color 9371-Aegean

Changes to the Plans

6. **A1.1** **LEVEL 1 CONSTRUCTION PLAN**

WALL TYPES:

Type G; 8" CMU in lieu of 8" burnished CMU – Existing coursing heights vary – field verify to match.

Type H; 12" CMU in lieu of 12" burnished CMU – Existing coursing heights vary – field verify to match.

LEVEL 1 CONSTRUCTION PLAN:

Door 178A: Clarification. New door, frame, hardware and opening to be under Alternate #01. The door lintel to be under separate contract.

7. **A2.1** **SCHEDULES, INTERIOR ELEVATIONS**

DOOR SCHEDULE:

See attached R-1 dated 07.17.15 for revised door schedule.

End of Addendum 02

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following: Finish Hardware for door openings, except as otherwise specified herein.
 - 1. Door hardware for steel (hollow metal) doors.
 - 2. Door hardware for wood doors.

- B. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
 - 1. Builders Hardware Manufacturing Association (BHMA).
 - 2. NFPA 101 - Life Safety Code.
 - 3. NFPA 80 - Fire Doors and Windows.
 - 4. ANSI-A156.xx - Various Performance Standards for Finish Hardware.
 - 5. UL10C - Positive Pressure Fire Test of Door Assemblies.
 - 6. ANSI-A117.1 - Accessible and Usable Buildings and Facilities.
 - 7. DHI /ANSI A115.IG - Installation Guide for Doors and Hardware.
 - 8. ICC - International Building Code.

- C. Intent of Hardware Groups:
 - 1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
 - 2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

1.2 SUBSTITUTIONS

- A. Comply with requirements of Division 1.

1.3 SUBMITTALS

- A. Comply with requirements of Division 1.

- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

- C. Product Data: Manufacturer's specifications and technical data including the following:
 - 1. Detailed specification of construction and fabrication.
 - 2. Manufacturer's installation instructions.
 - 3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
 - 4. Submit 6 copies of catalog cuts with hardware schedule.
 - 5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2.

- D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.
 - 1. List groups and suffixes in proper sequence.
 - 2. Completely describe door and list architectural door number.
 - 3. Manufacturer, product name, and catalog number.
 - 4. Function, type, and style.
 - 5. Size and finish of each item.
 - 6. Mounting heights.
 - 7. Explanation of abbreviations and symbols used within schedule.
 - 8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.
 - 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

- F. Samples: (If requested by the Architect)
 - 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
 - 2. 3 samples of metal finishes.

- G. Contract Closeout Submittals: Comply with requirements of Division 1 including specific requirements indicated.
 - 1. Operating and maintenance manuals: Submit 3 sets containing the following.
 - a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Name, address, and phone number of local representative for each manufacturer.
 - d. Parts list for each product.
 - 2. Copy of final hardware schedule, edited to reflect, "As installed".
 - 3. Copy of final keying schedule
 - 4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
 - 5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

- A. Comply with requirements of Division 1.
 - 1. Statement of qualification for distributor and installers.
 - 2. Statement of compliance with regulatory requirements and single source responsibility.
 - 3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
 - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
 - b. Hardware Schedule shall be prepared and signed by an AHC.
 - 4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
 - 5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.

- a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
 - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.
- B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Comply with requirements of Division 1.
1. Deliver products in original unopened packaging with legible manufacturer's identification.
 2. Package hardware to prevent damage during transit and storage.
 3. Mark hardware to correspond with "reviewed hardware schedule".
 4. Deliver hardware to door and frame manufacturer upon request.
- B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS

- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY

- A. Refer to Conditions of the Contract.
- B. Manufacturer's Warranty:
1. Closers: Lifetime.
 2. Exit Devices: Five years.
 3. Locksets & Cylinders: Three years.
 4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION

- A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE

- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.

2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.
- B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with requirements of Division 1.

<u>Item:</u>	<u>Manufacturer:</u>	<u>Approved:</u>
Hinges	Stanley	Bommer, McKinney
Locksets	Best	No Substitution
Cylinders	Match Existing System	No Substitution
Electric Strike	Best	Hes
Closers	Stanley Commercial	LCN
Protection Plates	Trimco	Hager, Rockwood
Overhead Stops	ABH	Rixson, Glynn Johnson
Door Stops	Trimco	Hager, Rockwood
Gasketing	National Guard	Reese, Pemko

2.2 MATERIALS

- A. Hinges:
1. Furnish five knuckles with flush ball bearings.
 2. Provide hinge type as listed in schedule.
 3. Template screw hole locations.
 4. Bearings are to be fully hardened.
 5. Bearing shell is to be consistent shape with barrel.
 6. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
 7. Equip with easily seated, non-rising pins.
 8. Non Removable Pin screws shall be slotted stainless steel screws.
 9. Hinges shall be full polished, front, back and barrel.
 10. Hinge pin is to be fully plated.
 11. Bearing assembly is to be installed after plating.
 12. Sufficient size to allow 180-degree swing of door.
 13. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
 14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish.
 15. UL10C listed for Fire rated doors.
- B. Mortise Type Locks and Latches:
1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C.

2. Furnish UL or recognized independent laboratory certified mechanical operational testing to 4 million cycles minimum.
 3. Provide 9001-Quality Management and 14001-Environmental Management.
 4. Fit ANSI A115.1 door preparation
 5. Functions and design as indicated in the hardware groups
 6. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
 7. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
 8. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
 9. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated
 10. Provide sufficient curved strike lip to protect door trim
 11. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
 12. Lock shall have self-aligning, thru-bolted trim
 13. Levers to operate a roller bearing spindle hub mechanism
 14. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
 15. Spindle to be designed to prevent forced entry from attacking of lever
 16. Provide locksets with 7-pin removable and interchangeable core cylinders
 17. Each lever to have independent spring mechanism controlling it
 18. Core face must be the same finish as the lockset.
 19. Design:
 - a. Lever: 3.
 - b. Rose: H.
- C. Cylinders:
1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
 2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
 3. Coordinate and provide as required for related sections.
- D. Door Closers:
1. Tested and approved by BHMA for ANSI 156.4, Grade 1.
 2. UL10C certified.
 3. Conform to ANSI 117.1.
 4. Separate adjusting valves for closing and latching speed, and backcheck.
 5. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions.
 6. Mount closers on non-public side of door, unless otherwise noted in specification.
 7. Closers shall be non-handed, non-sized and multi-sized.
- E. Door Stops: Provide a wall stop for every opening as listed in the hardware sets.
1. Wall stop shall be wrought bronze, brass or stainless steel.
 2. Provide fastener suitable for wall construction.
 3. Coordinate reinforcement of walls where wall stop is specified.
- F. Kickplates: Provide with four beveled edges ANSI J102, 14 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- G. Electric Door Strike: ANSI/BHMA 156.31, Grade 1 and listed ANSI/ UL1034, Warnock Hersey.

1. The ES5 electric strike will accept up to a 3/4" latch bolt and 1" deadbolt. Field reversible, failsafe/fail secure.
 2. Listed UL10C Fire Door assemblies for Single Door application.
 3. UL tested 1500 lb static strength.
 4. ES5 Electrical Specifications Dual Voltage coil 600mA @12V DC, 300mA @24V AC.
 5. Contacts: SPDT, Dry, 5 Amp @30V.
 6. LBM Latch bolt Monitor.
 7. LBM/LCM Signals door is closed and latched or unlatched and Open.
 8. DBM Signals deadbolt projected or retracted.
- H. Gaskets: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
- I. Provide one wall mounted Telkee, Lund or MMF series key cabinet complete with hooks, index and tags to accommodate 50% expansion. Coordinate mounting location with architect.
- J. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.3 FINISH

- A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products
- B. Powder coat door closers to match other hardware, unless otherwise noted.
- C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING

- A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.
- B. Cylinders, removable and interchangeable core system: Best Standard 7-pin.
- C. Furnish keys in the following quantities:
 1. Provide quantity per keying meeting.
- D. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.
- E. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
 - 1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
 - 1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
 - 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
 - 3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
 - 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
 - 1. Check and adjust closers to ensure proper operation.
 - 2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
 - a. Verify levers are free from binding.
 - b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.
 - 3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE

Manufacturer List

CodeAB
BE
BY
NA
SH
ST
TR**Name**Architectural Builders Hardware
Best Access Systems
By Others
National Guard
Stanley Commercial Hardware
Stanley
Trimco**Finish List****Code**626
630
689
GREY
US26D**Description**Satin Chromium Plated
Satin Stainless Steel
Aluminum Painted
Grey
Chromium Plated, Dull**Option List****Code**VIN
C-SUNK HOLES**Description**Visual Indicator
Counter Sinking of Kick Plates

Hardware Sets

Hardware Group No. 01 - Int - Sgl - Passage - Existing

Door: 157D

1 Passage Set	45H-0N3H	626	BE
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Hardware Group No. 02 - Int - Sgl - Passage

Doors: 157B, 177A

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Passage Set	45H-0N3H	626	BE
1 Kick Plate	KO050 14" x 2" LDW CSK	630	TR
1 Conc OH Stop	4020 SERIES	630	AB
3 Door Silencers	1229A	GREY	TR

NOTE: Provide Wall Bumper, Trimco 1270WV in Lieu of OVH Stop on Door 157B

Hardware Group No. 03 - Int - Sgl - Privacy - Rated - Existing

Door: 133

1 Privacy Set	45H-0LT3H VIN	626	BE
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Hardware Group No. 04 - Int - Sgl - Privacy - Rated

Doors: 128A, 178A

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Privacy Set	45H-0LT3H VIN	626	BE
1 Door Closer	QDC111	689	SH
1 Kick Plate	KO050 14" x 2" LDW CSK	630	TR
1 Wall Bumper	1270WV	630	TR
1 Gasketing	5050 B-17 17'	NA	

Hardware Group No. 05 - Int - Sgl - Storeroom - Access

Door: 157C

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7D3H STD	626	BE
1 Electric Strike	ES5 B S	630	BE
1 Door Closer	QDC111	689	SH
1 Kick Plate	KO050 14" x 2" LDW CSK	630	TR
1 Wall Bumper	1270WV	630	TR
1 Card Reader	CARD READER BY OWNER	BY	
3 Door Silencers	1229A	GREY	TR

Hardware Group No. 06 - Int - Sgl - Storeroom - Access

Door: 177C

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Lockset	45H-7D3H STD	626	BE
1 Electric Strike	ES5 B S	630	BE
1 Door Closer	QDC117	689	SH
1 Kick Plate	KO050 14" x 2" LDW CSK	630	TR
1 Card Reader	CARD READER BY OWNER	BY	
3 Door Silencers	1229A	GREY	TR

END OF SECTION 087100

SECTION 093000 - TILING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Ceramic tile.
 - 2. Waterproof membrane.
 - 3. Crack isolation membrane.
 - 4. Tile backing panels.
 - 5. Metal edge strips.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples:
 - 1. Each type and composition of tile and for each color and finish required.
 - 2. Assembled samples, with grouted joints, for each type and composition of tile and for each color and finish required.
 - 3. Stone thresholds in 6-inch lengths.

1.3 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering and identified with labels describing contents.
 - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.

PART 2 - PRODUCTS

2.1 TILE PRODUCTS

- A. ANSI Ceramic Tile Standard: Provide Standard grade tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
- B. FloorScore Compliance: Tile for floors shall comply with requirements of FloorScore Standard.
- C. Low-Emitting Materials: Tile flooring systems shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the

Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

D. Tile Type: Ceramic wall tile.

1. Manufacturer: DalTile Semi-Gloss
2. Color: To be selected by Architect from manufacturer's standard range.
3. Composition: Ceramic.
4. Module Size: 4-1/4 inch by 4-1/4 inch.
5. Grout Color: As selected by Architect from manufacturer's full range.
6. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as required from manufacturer's standard range.

E. Tile Type: Ceramic floor tile.

1. Manufacturer: DalTile Keystones
2. Color: To be selected by Architect from manufacturer's standard range.
3. Composition: Ceramic.
4. Module Size: 2 inch by 2 inch.
5. Grout Color: As selected by Architect from manufacturer's full range.
6. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as required from manufacturer's standard range.
 - a. Built-Up Base MB-5A at all locations with coordinating inside and outside corners.

2.2 WATERPROOF MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated.

2.3 CRACK ISOLATION MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.12 for standard performance and is recommended by the manufacturer for the application indicated.

2.4 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
- B. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1.
- C. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
- D. EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar (Thin Set): ANSI A118.11.
- E. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3.

2.5 GROUT MATERIALS

- A. Water-Cleanable Epoxy Grout: ANSI A118.3.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Atlas Minerals & Chemicals, Inc.
 - b. Boiardi Products; a QEP company.
 - c. Bonsal American; an Oldcastle company.
 - d. Bostik, Inc.
 - e. C-Cure.
 - f. Custom Building Products.
 - g. Jamo Inc.
 - h. Laticrete International, Inc.
 - i. MAPEI Corporation.
 - j. Mer-Kote Products, Inc.
 - k. Southern Grouts & Mortars, Inc.
 - l. Summitville Tiles, Inc.
 - m. TEC; a subsidiary of H. B. Fuller Company.
 - n. Approved equal – see Division 01 for requirements.
- B. Grout for Pregrouted Tile Sheets: Same product used in factory to pregrout tile sheets.

2.6 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Metal Edge Strips: Angle or L-shape, stainless steel, ASTM A 666, 300 Series exposed-edge material.
- C. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
 - 1. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.
- D. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 INSTALLATION

- A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
 - 1. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:
 - a. Exterior tile floors.
 - b. Tile floors in wet areas.
 - c. Tile swimming pool decks.
 - d. Tile floors in laundries.
 - e. Tile floors composed of tiles 8 by 8 inches or larger.
 - f. Tile floors composed of rib-backed tiles.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

- F. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/16 inch.
 - 2. Quarry Tile: 1/4 inch.
 - 3. Glazed Wall Tile: 1/16 inch.
 - 4. Decorative Thin Wall Tile: 1/16 inch.

- G. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

- H. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
 - 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

- I. Metal Edge Strips: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated.

- J. Grout Sealer: Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

- K. Install cementitious backer units and fiber-cement underlayment and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

- L. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.

- M. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness and bonded securely to substrate.

END OF SECTION 093000

SECTION 095153 – DIRECT APPLIED ACOUSTIC CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes acoustic panels and suspension systems for ceilings.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Submit reflected ceiling plans drawn to scale prescribed by Architect.
 - 1. Include coordinated penetrations and ceiling-mounted items.
 - 2. Include any necessary details or drawings from the manufacturer regarding recommended installation.
- C. Samples: For each exposed finish.
- D. Product test reports.
- E. Maintenance data.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Delivery of acoustic free-hanging element products will be in the original unopened packages with the manufacturer's label intact.
- B. Handling and storage should be in accordance with the manufacturer's Material Safety Data Sheets (MSDS).
- C. Individual panels should be handled carefully to avoid damage.

1.4 PROJECT CONDITIONS

- A. Install acoustic elements only in conditions that are within the manufacturer's published limits for temperature and humidity.
- B. Areas receiving ceiling panels should be free of construction debris and dust.

1.5 COORDINATION

- A. Coordinate the installation of the acoustic free-hanging elements with any and all trades whose work is impacted by that installation.

PART 2 - PRODUCTS

2.1 ACOUSTICAL PANELS FOR ACOUSTICAL PANEL CEILING

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. New Millennium WhisperTex Acoustical Panels
 - a. Panel Description: 6pcf fiberglass-core with woven fabric facing
 - b. NRC: .90
 - c. Testing: ASTM C423-66 and C423-81
 - d. Warranty: 2 years
 - e. Size: As noted on drawings.
 - f. Thickness: 1"
 - g. Edges: Square Edge wrapped
 - h. Finished Surface Color: Architect to select from standard colors
 - i. Mounting Device: Z- Clip
 - 2. Approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Measure each ceiling area and establish a layout to be coordinated with Architect
- B. Install the ceiling system in accordance with the manufacturer's printed instructions.

3.2 MAINTENANCE

- A. Replace any and all damaged ceiling system components
- B. Clean any and all exposed surfaces in accordance with the manufacturer's printed instructions.

END OF SECTION 095153

DOOR SCHEDULE

<u>NO.</u>	<u>DOOR SIZE</u>	<u>DOOR TYPE</u>	<u>FRAME TYPE</u>	<u>FINISH</u>	<u>HARDWARE</u>	<u>FIRE RATING</u>	<u>COMMENTS</u>
128A	3'-0"X7'-0"	HM (D-1)	HM (F-1)	PAINT	H-4	20 MIN	
133	EX.	EX.	EX.	EX.	H-3	EX. 20 MIN	CHANGE LOCKSET ONLY
156	EX.	EX.	EX.	EX.	EX.	-	
157A	EX.	EX.	EX.	EX.	EX.	-	
157B	3'-0"X7'-0"	WD (D-1)	HM (F-1)	PAINT	H-2	-	
157C	3'-0"X7'-0"	WD (D-1)	HM (F-1)	PAINT	H-5	-	
157D	EX.	EX.	EX.	EX.	H-1	-	
174	EX.	EX.	EX.	EX.	-	-	
177A	3'-0"X7'-0"	WD (D-1)	HM (F-1)	PAINT	H-2	-	
177C	3'-0"X7'-0"	WD (D-2)	HM (F-2)	PAINT	H-6	-	
178A	3'-0"X7'-0"	HM (D-2)	HM (F-1)	PAINT	H-4	1.5 HR	CARD READER, ELECTRIC STRIKE CHANGE LOCKSET TO LATCHSET

DOORS NOT INCLUDED IN THIS SCHEDULE ARE EXISTING AND NO WORK TO THESE DOORS.

DOOR SCHEDULE

1/4" = 1'-0"

**City of Duluth
Comfort Systems**

520 Garfield Avenue - Duluth, MN

PROJECT NO:
1411

DRAWN BY:
Author

CHECKED BY:
Checker

RELEASE DATE:
07/17/14

REVISIONS:



architecture
A D V A N T A G E

a limited liability company

1434 East Superior Street - Duluth, Minnesota 55805
Phone: 218.724.5588 - Fax: 218.724.5589 - Email: info@architectureadvantage.com

SHEET NO.

R-1