PLAYSYSTEM SPECIFICATIONS

GENERAL SPECIFICATIONS

MATERIAL: ALL MATERIALS SHALL BE STRUCTURALLY SOUND AND SUITABLE FOR SAFE PLAY. DURABILITY SHALL BE ENSURED ON ALL STEEL PARTS BY THE USE OF TIME-TESTED COATINGS SUCH AS ZINC PLATING, GALVANIZING, PROSHIELD® FINISH, TENDERTUFF™ COATING, ETC. COLORS SHALL BE SPECIFIED.
FASTENERS: PRIMARY FASTENERS SHALL BE SOCKETED AND PINNED TAMPERPROOF IN DESIGN, STAINLESS-STEEL (SST) PER ASTM F 879 UNLESS OTHERWISE INDICATED (SEE SPECIFIC PRODUCT INSTALLATION/SPECIFICATIONS). ALL PRIMARY FASTENERS SHALL INCLUDE A LOCKING PATCH TYPE MATERIAL THAT WILL MEET THE MINIMUM TORQUE REQUIREMENTS OF IFI-125. MANUFACTURER TO PROVIDE SPECIAL TOOLS FOR PINNED TAMPERPROOF FASTENERS.
TENDERTUFF COATING: METAL COMPONENTS TO BE TENDERTUFF-COATED SHALL BE THOROUGHLY CLEANED IN A HOT PHOSPHATIZING PRESSURE WASHER, THEN PRIMED WITH A WATER-BASED THERMOSETTING SOLUTION. PRIMED PARTS SHALL BE PREHEATED PRIOR TO DIPPING IN UV STABILIZED, LIQUID POLYVINYL CHLORIDE (PVC), THEN SALT CURED AT APPROXIMATELY 400 DEGREES. THE FINISHED COATING SHALL BE APPROXIMATELY .080" THICK AT AN 85 DUROMETER WITH A MINIMUM TENSILE STRENGTH OF 1700 PSI AND A MINIMUM TEAR STRENGTH OF 250 LBS/INCH. FIVE STANDARD COLORS AVAILABLE, ALL WITH A MATTE FINISH. (GRAY ONLY FOR HEALTHBEAT®).
PROSHIELD FINISH: ALL METAL COMPONENTS WITH PROSHIELD FINISH SHALL BE THOROUGHLY CLEANED AND PHOSPHATIZED THROUGH A FIVE-STAGE POWER WASHER. PARTS ARE THEN THOROUGHLY DRIED, PREHEATED AND PROCESSED THROUGH A SET OF AUTOMATIC POWDER SPRAY GUNS WHERE A MINIMUM .002" OF EPOXY PRIMER IS APPLIED, A MINIMUM .004" OF ARCHITECTURAL-GRADE SUPER DURABLE POLYESTER TGIC POWDER IS APPLIED. THE AVERAGE PROSHIELD FILM THICKNESS IS .006".
PROSHIELD IS FORMULATED AND TESTED PER THE FOLLOWING ASTM STANDARDS. EACH COLOR MUST MEET OR EXCEED THE RATINGS LISTED BELOW:
- HARDNESS (D3363) RATING 2H
- FLEXIBILITY (D522) PASS 1/8" MANDREL
- IMPACT (D2794) RATING MINIMUM 80 INCH-POUNDS
- SALT FOG RESISTANCE (B117 AND D1654) 4,000 HOURS AND RATING 6 OR GREATER
- UV EXPOSURE (G154, 340 BULB) 3,000 HOURS, RATING DELTA E OF 2, AND 90 PERCENT GLOSS RETENTION
- ADHESION (D3359, METHOD B) RATING 5B

THE PAINT LINE SHALL EMPLOY A "CHECKERED" ADHESION TEST DAILY.
DECKS: ALL DECKS SHALL BE OF MODULAR DESIGN AND HAVE 5/16" DIAMETER HOLES ON THE STANDING SURFACE. THERE SHALL BE A MINIMUM OF (4) SLOTS IN EACH FACE TO ACCOMMODATE FACE MOUNTING OF COMPONENTS. DECKS SHALL BE MANUFACTURED FROM A SINGLE PIECE OF LOW CARBON 12 GA (.105") SHEET STEEL CONFORMING TO ASTM SPECIFICATION A-1011. THE SHEET SHALL BE PERFORATED WITH A RETURN FLANGE ON THE PERIMETER TO PROVIDE THE REINFORCEMENT NECESSARY TO ENSURE STRUCTURAL INTEGRITY. THERE SHALL BE NO UNSUPPORTED AREA LARGER THAN 3.5 SQUARE FEET. THE UNIT SHALL THEN BE TENDERTUFF-COATED BROWN OR GRAY ONLY. DECKS SHALL BE DESIGNED SO THAT ALL SIDES ARE FLUSH WITH THE OUTSIDE EDGE OF THE SUPPORTING POSTS. NOT APPLICABLE FOR EVOS OR HEALTHBEAT.
CONCRETE PRODUCTS: TWO PROCESSES ARE USED FOR CONCRETE PRODUCTS. THE FOLLOWING SHALL APPLY:
1. CASTINGS TO BE MADE FROM GLASS FIBER REINFORCED CONCRETE (GFRC). GLASS FIBER TO BE ALKALI RESISTANT (AR) TYPE GLASS FORMULATED FOR CONCRETE. NOMINAL WALL THICKNESS OF 1" AND WEIGHS ABOUT 11 1/2 LBS. PER SQUARE FOOT. CASTINGS HAVE A STRENGTH OF 1,500 LBS. PER SQUARE INCH IN TENSION AND 5,000 LBS. PER SQUARE INCH IN COMPRESSION. FINISH: LATEX PAINT MADE FOR CONCRETE, NATURAL COLORS.
2. GLASS REINFORCED WET CAST SOLID POUR CONCRETE PRODUCT WITH A COMPRESSION STRENGTH OF 6000 PSI PER ASTM C39 AND WEIGHS ABOUT 143 LBS. PER CUBIC FOOT, FINISH: LATEX PAINT MADE FOR CONCRETE, NATURAL COLORS.

ROTATIONALLY MOLDED POLYETHYLENE PARTS: THESE PARTS SHALL BE MOLDED USING PRIME COMPOUNDED LINEAR LOW-DENSITY POLYETHYLENE WITH A TENSILE STRENGTH OF 2500 PSI PER ASTM D638 AND WITH COLOR AND UV-STABILIZING ADDITIVES. WALL THICKNESS VARIES BY PRODUCT FROM .187" (3/16") TO .312" (5/16").
PERMALENE® PARTS: THESE PARTS SHALL BE MANUFACTURED FROM 3/4" HIGH-DENSITY POLYETHYLENE THAT HAS BEEN SPECIALLY FORMULATED FOR OPTIMUM UV STABILITY AND COLOR RETENTION. PRODUCTS SHALL MEET OR EXCEED DENSITY OF .960 G/CC PER ASTM D1505, TENSILE STRENGTH OF 2400 PSI PER ASTM D638. FIVE STANDARD SOLID COLORS ARE AVAILABLE, SOME PERMALENE PARTS ARE AVAILABLE IN A TWO-COLOR PRODUCT WITH (2) .100" THICK EXTERIOR LAYERS OVER A .550" INTERIOR CORE OF A CONTRASTING COLOR. EIGHT STANDARD TWO-COLOR OPTIONS AVAILABLE. NOT APPLICABLE FOR HEALTHBEAT.
RECYCLED PERMALENE PARTS: THESE PARTS SHALL BE MANUFACTURED FROM 3/4" HIGH-DENSITY POLYETHYLENE THAT HAS BEEN SPECIALLY FORMULATED FOR OPTIMUM UV STABILITY AND COLOR RETENTION. PRODUCTS SHALL MEET OR EXCEED DENSITY OF .960 G/CC PER ASTM D1505, TENSILE STRENGTH OF 2400 PSI PER ASTM D638. UNLESS OTHERWISE SPECIFIED, THE BURY ON ALL FOOTINGS SHALL BE 34" BELOW FINISHED GRADE (FG) ON ALL IN-GROUND PLAY EVENTS/POSTS.
HARDWARE PACKAGES: ALL SHIPMENTS SHALL INCLUDE INDIVIDUAL COMPONENT-SPECIFIC HARDWARE PACKAGES. EACH HARDWARE PACKAGE SHALL BE LABELED WITH THE PART NUMBER, DESCRIPTION, A COMPONENT DIAGRAM SHOWING THE APPROPRIATE COMPONENT, PACKAGE WEIGHT, A BAR CODE LINKING THE HARDWARE PACKAGE TO THE JOB NUMBER, ASSEMBLER'S NAME, DATE AND TIME THE PACKAGE WAS ASSEMBLED, WORK CENTER NUMBER AND WORK ORDER NUMBER.
INSTALLATION DOCUMENTATION: ALL SHIPMENTS SHALL INCLUDE A NOTEBOOK OR PACKET OF ORDER-SPECIFIC, STEP-BY-STEP INSTRUCTIONS FOR ASSEMBLY OF EACH COMPONENT, INCLUDING EQUIPMENT ASSEMBLY DIAGRAMS, ESTIMATED HOURS FOR ASSEMBLY, FOOTING DIMENSIONS, CONCRETE QUANTITY FOR DIRECT BURY COMPONENTS, FALL HEIGHT INFORMATION, AREA REQUIRED INFORMATION AND DETAILED MATERIAL SPECIFICATIONS.
PACKING LIST: ALL SHIPMENTS SHALL INCLUDE A PACKING LIST FOR EACH SKID/CONTAINER, SPECIFYING THE PART NUMBERS AND QUANTITIES ON EACH SKID OR WITHIN EACH CONTAINER.
PACKAGING: PLAYBOOSTER® POSTS SHALL BE INDIVIDUALLY PACKAGED IN STURDY, WATER-RESISTANT, MAR-RESISTANT CARDBOARD BOXES. OTHER COMPONENTS SHALL BE INDIVIDUALLY WRAPPED OR BULK WRAPPED TO PROVIDE PROTECTION DURING SHIPMENT. SMALL PARTS AND HARDWARE PACKAGES WILL BE PLACED IN CRATES FOR SHIPMENT. THE COMPONENTS AND CRATES ARE THEN SHRINK-WRAPPED TO SKIDS (PALLETS) TO ENSURE SECURE SHIPPING.
MAINTENANCE KIT: AN ORDER-SPECIFIC MAINTENANCE KIT SHALL BE PROVIDED FOR EACH STRUCTURE ORDER. THE KIT WILL INCLUDE A NOTEBOOK OR PACKET WITH A SECOND SET OF INSTALLATION DOCUMENTS AND ORDER-SPECIFIC MAINTENANCE DOCUMENTATION WITH RECOMMENDATIONS ON HOW OFTEN TO INSPECT, WHAT TO LOOK FOR AND WHAT TO DO TO KEEP THE EQUIPMENT IN LIKE-NEW CONDITION. THE KIT ALSO INCLUDES TOUCH-UP PRIMER, APPROPRIATE COLOR TOUCH-UP PAINT, SANDPAPER, APPROPRIATE COLOR TOUCH-UP PVC, GRAFFITI REMOVER AND ADDITIONAL INSTALLATION TOOLS FOR THE TAMPERPROOF FASTENERS.

EVOS® GENERAL SPECIFICATIONS

5" ARCHES: ALL STEEL ARCHES TO BE PROSHIELD FINISHED AND MANUFACTURED FROM 5" O.D. GALVANIZED TUBING WITH A WALL THICKNESS OF .120".
STEEL ARCH MECHANICAL PROPERTIES:
- YIELD STRENGTH (MIN): 50,000 PSI
- TENSILE STRENGTH (MIN): 55,000 PSI
- ELONGATION: 25% IN 2 INCHES
- MODULUS OF ELASTICITY: 29.5 X 106 PSI

5" CLAMPS: ALL CLAMPS TO BE PROSHIELD FINISHED AND, UNLESS OTHERWISE NOTED, SHALL BE SAND CAST USING A 356-T6 ALUMINUM ALLOY AND HAVING THE FOLLOWING MECHANICAL PROPERTIES:
- ULTIMATE TENSILE: 35,000 PSI
- YIELD STRENGTH: 18,000 PSI
- ELONGATION: 8% IN 2 INCHES

STEEL-REINFORCED CABLES: MADE OF TIGHTLY WOVEN, POLYESTER-WRAPPED, POLYPROPYLENE CORE CABLE. THESE ABRASION-RESISTANT, COLOR-STABLE CABLES ARE EXTREMELY DURABLE AND VANDAL RESISTANT. BLACK ONLY. PROVIDED BY BERLINER SEILFABRIK, ONE OF THE MOST EXPERIENCED MANUFACTURERS OF STEEL CABLES IN THE WORLD, WITH A GLOBAL REPUTATION FOR TOP QUALITY SINCE 1865.

WEEVOS® GENERAL SPECIFICATIONS

3-1/2" ARCHES: ALL STEEL ARCHES TO BE PROSHIELD FINISHED AND MANUFACTURED FROM 3-1/2" O.D. GALVANIZED TUBING WITH A WALL THICKNESS OF .120".
STEEL ARCH MECHANICAL PROPERTIES:
- YIELD STRENGTH (MIN); 50,000 PSI
- TENSILE STRENGTH (MIN): 55,000 PSI
- ELONGATION: 25% IN 2 INCHES
- MODULUS OF ELASTICITY: 29.5 X 106 PSI

3-1/2" CLAMPS: ALL CLAMPS TO BE PROSHIELD FINISHED AND, UNLESS OTHERWISE NOTED, SHALL BE SAND CAST USING A 356-T6 ALUMINUM ALLOY AND HAVING THE FOLLOWING MECHANICAL PROPERTIES:
- ULTIMATE TENSILE: 35,000 PSI
- YIELD STRENGTH: 18,000 PSI
- ELONGATION: 8% IN 2 INCHES

STEEL-REINFORCED CABLES: MADE OF TIGHTLY WOVEN, POLYESTER-WRAPPED, POLYPROPYLENE CORE CABLE. THESE ABRASION-RESISTANT, COLOR-STABLE CABLES ARE EXTREMELY DURABLE AND VANDAL RESISTANT. AVAILABLE IN BLACK OR RED. ADVENTURESCAPES® BLACK CABLE ONLY. SPACELINK CLIMBER™ RED CABLE ONLY. PROVIDED BY BERLINER SEILFABRIK, ONE OF THE MOST EXPERIENCED MANUFACTURERS OF STEEL CABLES IN THE WORLD, WITH A GLOBAL REPUTATION FOR TOP QUALITY SINCE 1865.

PLAYBOOSTER® GENERAL SPECIFICATIONS

POSTS: POST LENGTH SHALL VARY DEPENDING UPON THE INTENDED USE AND SHALL BE A MINIMUM OF 42" ABOVE THE DECK HEIGHT. ALL POSTS SHALL BE PROSHIELD FINISHED TO SPECIFIED COLOR. ALL POSTS SHALL HAVE A "FINISHED GRADE MARKER" POSITIONED ON THE POST IDENTIFYING THE 34" BURY LINE REQUIRED FOR CORRECT INSTALLATION AND THE TOP OF THE LOOSE FILL PROTECTIVE SURFACING. TOP CAPS FOR POSTS SHALL BE ALUMINUM DIE CAST FROM 369.1 ALLOY AND PROSHIELD FINISHED TO MATCH THE POST COLOR. ALL CAPS SHALL BE FACTORY INSTALLED AND SECURED IN PLACE WITH (3) SELF-SEALING RIVETS. A MOLDED LOW-DENSITY POLYETHYLENE CAP, WITH DRAIN HOLES, SHALL BE PRESSED ONTO THE BOTTOM END OF THE POST TO INCREASE THE FOOTING AREA.
STEEL POSTS: ALL STEEL PLAYBOOSTER POSTS ARE MANUFACTURED FROM 5" O.D. TUBING WITH A WALL THICKNESS OF .120" AND SHALL BE GALVANIZED AFTER ROLLING AND SHALL HAVE BOTH THE I.D. AND THE CUT ENDS SPRAYED WITH A CORROSION RESISTANT COATING.
STEEL POST MECHANICAL PROPERTIES:
- YIELD STRENGTH (MIN): 50,000 PSI
- TENSILE STRENGTH (MIN): 55,000 PSI
- ELONGATION: 25% IN 2 INCHES
- MODULUS OF ELASTICITY: 29.5 X 106 PSI

ALUMINUM POSTS: ALL ALUMINUM PLAYBOOSTER POSTS TO BE MANUFACTURED FROM 6005-T5 EXTRUDED TUBING CONFORMING TO ASTM B-221. POSTS SHALL HAVE A 5" OUTSIDE DIAMETER WITH A .125" WALL THICKNESS.
ALUMINUM POST MECHANICAL PROPERTIES:
- YIELD STRENGTH (MIN); 35,000 PSI
- TENSILE STRENGTH (MIN): 38,000 PSI
- ELONGATION: 10% IN 2 INCHES
- MODULUS OF ELASTICITY: 10 X 106 PSI

ARCH POSTS: ALUMINUM ARCH POSTS SHALL BE MANUFACTURED FROM 6005-T5 ALLOY. THE ARCH SHALL BE FORMED TO A 21" CENTER LINE RADIUS TO COMPLEMENT THE 42" CENTER-TO-CENTER MODULE. THE ARCH SHALL BE OF ONE CONTINUOUS PIECE CONSTRUCTION. THERE SHALL BE NO WELDS OR ADDITIONAL PIECES MECHANICALLY FASTENED TO MANUFACTURE THE ARCH. EACH ARCH SHALL BE DESIGNED TO PROVIDE A MINIMUM OF 90 1/2" CLEAR SPAN FROM THE DECK TO THE INSIDE OF THE ARCH AT THE RADIUS PEAK. ARCHES SHALL BE PROSHIELD FINISHED TO A SPECIFIED COLOR.
CLAMPS: ALL CLAMPS TO BE PROSHIELD FINISHED AND, UNLESS OTHERWISE NOTED, SHALL BE DIE CAST USING A 369.1 ALUMINUM ALLOY AND HAVE THE FOLLOWING MECHANICAL PROPERTIES:
- ULTIMATE TENSILE: 47,000 PSI
- YIELD STRENGTH: 28,000 PSI
- ELONGATION: 7% IN 2 INCHES
- SHEAR STRENGTH: 29,000 PSI
- ENDURANCE LIMIT: 20,000 PSI

EACH FUNCTIONAL CLAMP ASSEMBLY SHALL HAVE AN APPROPRIATE NUMBER OF HALF CLAMPS AND SHALL BE FASTENED TO MATING PARTS WITH (2) 3/8" X 1 1/8" PINNED BUTTON HEAD CAP SCREWS (SST) AND (2) STAINLESS-STEEL (SST) RECESSED "T" NUTS. A 1/4" ALUMINUM DRIVE RIVET WITH STAINLESS STEEL PIN IS USED TO ENSURE A SECURE FIT TO THE POST.

PLAYBOOSTER® CLAMPS HAVE THREE FUNCTIONAL APPLICATIONS AND SHALL BE NAMED AS FOLLOWS:
1. OFFSET HANGER CLAMP ASSEMBLY
2. DECK HANGER CLAMP ASSEMBLY
3. HANGER CLAMP ASSEMBLY

STEEL-REINFORCED CABLES: MADE OF TIGHTLY WOVEN, POLYESTER-WRAPPED, POLYPROPYLENE CORE CABLE. THESE ABRASION-RESISTANT, COLOR-STABLE CABLES ARE EXTREMELY DURABLE AND VANDAL RESISTANT. AVAILABLE IN BLACK OR RED. ADVENTURESCAPES® BLACK CABLE ONLY. SPACELINK CLIMBER™ RED CABLE ONLY. PROVIDED BY BERLINER SEILFABRIK, ONE OF THE MOST EXPERIENCED MANUFACTURERS OF STEEL CABLES IN THE WORLD, WITH A GLOBAL REPUTATION FOR TOP QUALITY SINCE 1865.
PLAYODYSSEY® STRUCTURAL FRAME: POST LENGTH OF THE DOUBLE LADDER/CENTRAL COLUMN SHALL VARY DEPENDING UPON THE DECK HEIGHT AND SHALL BE FLUSH WITH THE BOTTOM OF A DECK INFILL OR A MINIMUM OF 46" ABOVE THE DECK HEIGHT. ALL POSTS SHALL BE PROSHIELD FINISHED TO SPECIFIED COLOR. ALL POSTS SHALL HAVE A "FINISHED GRADE MARKER" POSITIONED ON THE POST IDENTIFYING THE 60" BURY LINE REQUIRED FOR CORRECT INSTALLATION AND THE TOP OF THE LOOSE FILL PROTECTIVE SURFACING. POST CAPS SHALL BE ALUMINUM DIE CAST FROM 369.1 ALLOY AND PROSHIELD FINISHED TO MATCH THE POST COLOR. ALL CAPS SHALL BE FACTORY INSTALLED AND SECURED IN PLACE WITH (3) SELF SEALING RIVETS. A MOLDED LOW-DENSITY POLYETHYLENE CAP, WITH DRAIN HOLES, SHALL BE PRESSED ONTO THE BOTTOM END OF THE LADDER POSTS TO INCREASE THE FOOTING AREA. LADDERS ARE BOLTED TOGETHER BELOW GRADE TO ACT AS A SINGLE COLUMN FOR INSTALLATION PURPOSES. THE DECK SUPPORT WELDMENTS/ARMS ARE COMPRISED OF 5/16" (.312") STEEL CONFORMING TO 1010 STEEL PER ASTM A635 AND WELDED TO A 52" STEEL POST. ARMS ARE SECURED TO EACH LADDER POST WITH (4) 5/8" X 1 1/2" PINNED BUTTON HEAD CAP SCREWS THROUGH (2) 1/4" FLANGES.

PLAYODYSSEY OPTIONAL ALUMINUM ROOF POSTS: ALL FORMED ALUMINUM PLAYODYSSEY ROOF POSTS TO BE MANUFACTURED FROM 6005-T5 EXTRUDED TUBING CONFORMING TO ASTM B-221. POSTS SHALL HAVE A 5" OUTSIDE DIAMETER WITH A .125" WALL THICKNESS. POST SLEEVE SHALL HAVE 4.675" OUTSIDE DIAMETER WITH A .150" WALL THICKNESS. POST CAP SHALL BE ALUMINUM DIE CAST FROM 369.1 ALLOY AND PROSHIELD FINISHED TO MATCH THE POST COLOR. ALL CAPS SHALL BE FACTORY INSTALLED AND SECURED IN PLACE WITH (3) SELF-SEALING RIVETS.
VIBE™ HANDHOLDS: ROTOMOLDED SHELL, ELEVEN STANDARD COLORS AVAILABLE, WITH 7 GA (.179") HRPO STEEL SHEET INSERT THAT IS ZINC PLATED THEN PROSHIELD FINISHED, TWENTY-SIX STANDARD COLORS AVAILABLE.
VIBE ROOF: ROTOMOLDED SHELL, ELEVEN STANDARD COLORS AVAILABLE, WITH 12 GA (.105") HRPO STEEL SHEET INSERT THAT IS ZINC PLATED THEN PROSHIELD FINISHED. TWENTY-SIX STANDARD COLORS AVAILABLE.
VIBE ENCLOSURES: ROTOMOLDED SHELL, ELEVEN STANDARD COLORS AVAILABLE, WITH 7 GA (.179") HRPO STEEL SHEET INSERT THAT IS ZINC PLATED THEN PROSHIELD FINISHED, TWENTY-SIX STANDARD COLORS AVAILABLE. OPTION OF 10 ACTIVITY PANELS AVAILABLE IN NINETEEN STANDARD PERMALENE® COLORS. ALSO AVAILABLE BUBBLE OR WINDOW PANEL MADE OF 1/4" CLEAR POLYCARBONATE.

PLAYSHAPER™ GENERAL SPECIFICATIONS

POSTS: 2 3/8" SQUARE ALUMINUM POSTS SHALL HAVE A MINIMUM WALL THICKNESS OF .125" AND BE EXTRUDED OF 6005-T5 ALUMINUM ALLOY AND HAVE ROUNDED CORNERS AND RIBBED FACES FOR MAXIMUM SAFETY. A CAST ALUMINUM TOP CAP SHALL BE INSTALLED AT THE FACTORY WITH STAINLESS STEEL KNURLED SPACERS AND ALUMINUM DRIVE RIVETS. FLANGES FOR PANELS AND DECK SUPPORTS SHALL BE EXTRUDED OF 6061-T6 ALUMINUM ALLOY AND SLIDE INTO SLOTS EXTRUDED IN POSTS. FLANGES AND DECK SUPPORTS SHALL BE ATTACHED IN THE FACTORY WITH STAINLESS STEEL KNURLED SPACERS AND ALUMINUM DRIVE RIVETS. ALL DIRECT BURY POSTS SHALL HAVE A "FINISHED GRADE MARKER" POSITIONED ON THE POST IDENTIFYING THE 34" BURY LINE AND THE TOP OF THE REQUIRED SURFACING. A MOLDED LOW-DENSITY POLYETHYLENE CAP, WITH DRAIN HOLES, SHALL BE PRESSED ONTO THE BOTTOM END OF THE POST TO INCREASE THE FOOTING AREA. POSTS SHALL HAVE A POST NUMBER STICKER FOR INSTALLATION PURPOSES. ALL SURFACE MOUNT POSTS SHALL BE CONTINUOUSLY WELDED TO A 1/4" X 6" SQUARE 6061-T6 ALUMINUM SURFACE MOUNT PLATE AND ALLOW FOR 2" OF PROTECTIVE SURFACING. POSTS SHALL BE PROSHIELD FINISHED TO A SPECIFIED COLOR.
ALUMINUM POST MECHANICAL PROPERTIES:
- YIELD STRENGTH (MIN); 35,000 PSI
- TENSILE STRENGTH (MIN): 38,000 PSI
- ELONGATION: 10% IN 2 INCHES
- MODULUS OF ELASTICITY: 10 X 106 PSI

ARCH POSTS: ARCH POSTS SHALL HAVE THE SAME SHAPE AS THE POSTS AND BE EXTRUDED FROM 6063-T4 ALUMINUM ALLOY. ROOF SUPPORT FLANGES SHALL BE OF THE SAME SHAPE AND MATERIAL AS THE PANEL FLANGES. ARCH SHALL BE FORMED IN A 180 DEGREE ARC ON A 21" CENTER LINE RADIUS. ARCHES SHALL BE SECURED TO STANDARD LENGTH POSTS WITH SOLID ALUMINUM SLEEVES THAT ARE TAPPED TO RECEIVE (16) 3/8" X 5/8" PINNED BUTTON HEAD CAP SCREWS PER ARCH. ARCH POSTS SHALL BE PROSHIELD FINISHED TO A SPECIFIED COLOR.

Synthetic Grass Safety Surface System Specification

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications apply to this section.

1.2 DESCRIPTION OF WORK

A. Provide all labor, materials, equipment, and tools necessary for the complete installation of synthetic grass safety surface. Surface shall meet the requirements of ASTM F 1292 that states that the surface must yield both a peak deceleration of no more than 200 g's and a Head Injury Criteria (HIC) value of no more than 1,000 for a headfirst fall from the accessible height of the play equipment. Contractor to make submittal of the product to architect verifying the above indicated in1.2.1. The system shall consist of, but not necessarily be limited to, the following:

1 Synthetic grass consisting of fibers that are a minimum of 1.75 inch long. Turf fiber construction consisting of polyethylene monofilament and either texturized monofilament fibers tufted to a 2-layer stabilized woven polypropylene fabric (primary backing), with a secondary backing (stitch binder) of DuraFlo. (XGrass Play™ synthetic turf or equivalent).
2 Pad underlayment system consisting of porous closed cell composite materials. Thickness and density of panels shall be sufficient so that system meets the requirements of ASTM F 1292. SofPad™ or equivalent.
3 Synthetic Grass Infill, consisting of anti-microbial acrylic coated round silica particles, designed to provide the look, feel, and performance of optimally maintained natural grass. EnviroFill™ or equivalent.

B. Work included in this Section includes grading necessary to shape and drain the area and base preparation and installation of the synthetic grass in areas shown on Drawings.

PART 2 - PRODUCTS

2.1 SYNTHETIC GRASS SAFETY SURFACE

A. Aggregate Base - Crushed angular hard stone, ¾"minus compactible stone (not clean). (Refer to Section 3.2-B)
B. Synthetic grass: 1.75 inch XGrass™ Play from XGrass, 210 Howell Drive : Dalton, GA 30721 : Phone (877) 881-8477 or approved equal
a. Face Weight 50 oz/sy
a. Face Yarn Type: Polyethylene
c. Yarn Size 10800/7300
d. Pile Height: 1.75 inches
e. Color: Blend
f. Construction: Broadloom tufted
g. Stitch Rate: 8 per 3 inches
h. Tufting Gauge: 1/4"
i. Primary Backing: Stabilized dual layered woven polypropylene
j. Secondary Backing 10 oz. DuraFlo
k. Total Product Weight 68.7 oz/sy
l. Finished Roll Width 180" untrimmed
m. Warranty: 10-year fade

C. Pad Underlayment System: SofPad™ Standard recycled, non contaminated, Post industrial cross-link, closed cell Polyethylene - polyolefin foam pad from XGrass. Pad Underlayment System:
a. Foam Type: Polyethylene - Polyolefin
b. Bulk Density: 5.0-8.0 lb/cu ft
c. Effective Size 24 sq ft (net coverage)
d. Tensile Strength 34-36 psi

D. Synthetic Grass Infill : EnviroFill™ from XGrass, 210 Howell Drive : Dalton, GA 30721 : Phone (877) 881-8477 or approved equal Coating: Priority acrylic, iron oxide and chromium oxide
a. Grain shape: Hardness: 6-8 Mohs
b. Curvature: 0.7+
c. Specific Gravity: 1.76 g/cm3
d. Bulk Density: 110 lb/cu ft
e. Uniform coefficient 1.10 to 1.40
f. Effective Size .84 -1.68 mm

E. Splicing Material: 1000 denier coated nylon (Cordura®) 12" wide minimum.
F. Adhesive: Synthetic Turf Adhesive (from XGrass)

PART 3 - EXECUTION

3.1 GROUND PREPARATION

A. General: The ground area to receive synthetic grass safety surface is indicated on the Drawings.
B. Leveling and Site Preparation: All organic material and organic debris to be removed. Soil to be graded level and stabilized (compacted). Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers.

3.2 BASE AND SYNTHETIC GRASS CONSTRUCTION

A. General: The area to be smooth and graded to allow proper drainage. Refer to grading plan. The overall grade of the playground is not to exceed 3%.
B. Compacted Aggregate Base: Place 4 inches of aggregate base as leveling layer compacted to 90% of max density per AASHTO T99. Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers. Aggregate size should be ¾" minus (compactable).
C. Synthetic Grass: Place turf and cut to fit configuration as shown on Drawings. Splice seams. All seams must be attached with splicing film/fabric and adhesive as approved by the manufacturer for this type of installation of their product.
D. Infill: Apply layers of synthetic grass infill evenly with a spreader and broom the turf fibers with stiff bristle broom to stand fibers up and allow infill to settle into the bottom. Broom in infill round quartz silica sand approximately 3.5 pounds per square foot.
E. Anchoring/Edging: Edges of turf will be secured to ground with edging as indicated.

PART 4 - WARRANTY

4.1 WARRANTY

A. Provide 12 month warranty for all materials, installation and performance.

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TENNESSEE STATE UNIVERSITY
DAYCARE CENTERS

SITE DETAILS
Sheet Number
L2.02
16 APRIL 12
CONSTRUCTION DOCUMENTS

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SECTION 02751 - CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes exterior cement concrete pavement for the following:

1. Bicycle Track

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, expansive hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.4 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:

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D. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:

1. Cementitious materials and aggregates.
2. Steel reinforcement and reinforcement accessories.
3. Fiber reinforcement.
4. Admixtures.
5. Curing compounds.
6. Applied finish materials.
7. Bonding agent or adhesive.
8. Joint fillers.

E. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed pavement work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

1. Manufacturer must be certified according to the National Ready Mix Concrete Association's Plant Certification Program.

C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.

D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.

E. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by the requirements of the Contract Documents.

F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixes.

G. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.

1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Obtain Architect's approval of mockups before starting construction.
4. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.
5. Demolish and remove approved mockups from the site when directed by Architect.
6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1. Before submitting design mixes, review concrete pavement mix design and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with concrete pavement to attend, including the following:

a. Contractor's superintendent.
b. Independent testing agency responsible for concrete design mixes.
c. Ready-mix concrete producer.
d. Concrete subcontractor.

1.6 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.

1. Use flexible or curved forms for curves of a radius 15 feet or less.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

A. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

B. Deformed-Steel Welded Wire Fabric: ASTM A 497, flat sheet.

C. Epoxy-Coated Welded Wire Fabric: ASTM A 884/A 884M, Class A, plain steel.

D. Reinforcement Bars: ASTM A 615/A 615M, Grade 60, deformed.

E. Epoxy-Coated Reinforcement Bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars.

F. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60, deformed bars; assembled with clips.

G. Plain Steel Wire: ASTM A 82, as drawn.

H. Epoxy-Coated Wire: ASTM A 884/A 884M, Class A coated, plain steel.

I. Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60. Cut bars true to length with ends square and free of burrs.

J. Epoxy-Coated Joint Dowel Bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60 (Grade 420), plain steel bars.

K. Tie Bars: ASTM A 615/A 615M, Grade 60, deformed..

L. Hook Bolts: ASTM A 307, Grade A, internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.

M. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:

1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
2. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer coated wire bar supports.

N. Epoxy Repair Coating: Liquid two-part epoxy repair coating, compatible with epoxy coating on reinforcement.

2.3 CONCRETE MATERIALS

A. General: Use the same brand and type of cementitious material from the same manufacturer throughout the Project.

B. Portland Cement: ASTM C 150, Type I or II.

1. Fly Ash: ASTM C 618, Class F or C.
2. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

C. Blended Hydraulic Cement: ASTM C 595M, Type IS, portland blast-furnace slag cement.

D. Blended Hydraulic Cement: ASTM C 595M, Type IP portland pozzolan cement.

E. Blended Hydraulic Cement: ASTM C 595M, Type I (PM) pozzolan-modified portland cement.

F. Blended Hydraulic Cement: ASTM C 595M, Type I (SM) slag-modified portland cement.

G. Aggregate: ASTM C 33, uniformly graded, from a single source, with coarse aggregate as follows:

1. Class: 4S.
2. Class: 4M.
3. Class: 1N.

Maximum Aggregate Size: 1-1/2 inches nominal.
4. Maximum Aggregate Size: 1 inch nominal.
5. Maximum Aggregate Size: 3/4 inch nominal.
6. Do not use fine or coarse aggregates containing substances that cause spalling.

H. Exposed Aggregate: Selected, hard, and durable; washed; free of material that reacts with cementitious material or causes staining; from a single source, with gap graded coarse aggregate as follows:

1. Aggregate Sizes: 3/4 to 1 inch nominal.
2. Aggregate Sizes: 1/2 to 3/4 inch nominal.
3. Aggregate Sizes: 3/8 to 5/8 inch nominal.

I. Water: ASTM C 94.

2.4 ADMIXTURES

A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures.

B. Air-Entraining Admixture: ASTM C 260.

C. Water-Reducing Admixture: ASTM C 494, Type A.

D. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.

E. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.

F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.5 FIBER REINFORCEMENT

A. Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C 1116, Type III, 1/2 to 1-1/2 inches long.

B. Synthetic Fiber: Fibrillated or monofilament polypropylene fibers engineered and designed for use in concrete pavement, complying with ASTM C 1116, Type III, 1/2 to 1-1/2 inches long.

C. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

D. Products: Subject to compliance with requirements, provide one of the following:

1. Fibrillated Fibers:

a. Fibrasol F; Axim Concrete Technologies.
b. Fibermesh; Fibermesh, Div. of Synthetic Technologies.
c. Forta; Forta Corporation.
d. Grace Fibers; W. R. Grace & Co., Construction Products Div.

2. Monofilament Fibers:

a. Fibrasol IIP; Axim Concrete Technologies.
b. Fiberstrand 100; Euclid Chemical Co.
c. Fibermix Stealth; Fibermesh, Div. of Synthetic Industries.
d. Forta Mono; Forta Corporation.
e. Grace MicroFiber; W. R. Grace & Co., Construction Products Div.
f. Polystrand 1000; Metalcrete Industries.

2.6 CURING MATERIALS

E. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.

F. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

G. Water: Potable.

H. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

I. Clear Solvent-Borne Liquid-Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

J. Clear Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

K. White Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B.

L. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

M. Products: Subject to compliance with requirements, provide one of the following:

1. Evaporation Retarder:

a. Cimfilm; Axim Concrete Technologies.
b. Finishing Aid Concentrate; Burke Group, LLC (The).
c. Spray-Film; ChemMasters.
d. Aquafilm; Conspec Marketing & Manufacturing Co., Inc.
e. Sure Film; Dayton Superior Corporation.
f. Eucobar; Euclid Chemical Co.
g. Vapor Aid; Kaufman Products, Inc.
h. Lambco Skin; Lambert Corporation.
i. E-Con; L&M Construction Chemicals, Inc.
j. Confilm; Master Builders, Inc.
k. Waterhold; Metalcrete Industries.
l. Rich Film; Richmond Screw Anchor Co.
m. SikaFilm; Sika Corporation.
n. Finishing Aid; Symons Corporation.
o. Certi-Vex EnvioAssist; Vexcon Chemicals, Inc.

2. Clear Solvent-Borne Liquid-Membrane-Forming Curing Compound:

a. AH Curing Compound #2 DR; Anti-Hydro International, Inc.
b. Res-X Cure All Resin; Burke Group, LLC (The).
c. RX Cure; Conspec Marketing & Manufacturing Co., Inc.
d. Day-Chem Rez Cure; Dayton Superior Corporation.
e. Kurez DR; Euclid Chemical Co.
f. Nitocure S; Fosroc.
g. #64 Resin Cure; Lambert Corporation.
h. L&M Cure DR; L&M Construction Chemicals, Inc.
i. 3100-Clear; W. R. Meadows, Inc.
j. Seal N Kure FDR; Metalcrete Industries.
k. Rich Cure; Richmond Screw Anchor Co.
l. Resi-Chem C309; Symons Corporation.
m. Horncure 30; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
n. Uni Res 150; Unitex.
o. Certi-Vex RC; Vexcon Chemicals, Inc.

3. Clear Waterborne Membrane-Forming Curing Compound:

a. AH Curing Compound #2 DR WB; Anti-Hydro International, Inc.
b. Aqua Resin Cure; Burke Group, LLC (The).
c. Safe-Cure Clear; ChemMasters.
d. W.B. Resin Cure; Conspec Marketing & Manufacturing Co., Inc.
e. Day Chem Rez Cure (J-11-W); Dayton Superior Corporation.
f. Nitocure S; Fosroc.
g. Aqua Kure-Clear; Lambert Corporation.
h. L&M Cure R; L&M Construction Chemicals, Inc.
i. 1100 Clear; W. R. Meadows, Inc.
j. Resin Cure E; Nox-Crete Products Group, Kinsman Corporation.
k. Rich Cure E; Richmond Screw Anchor Co.
l. Resi-Chem Clear Cure; Symons Corporation.
m. Horncure 100; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
n. Hydro Cure; Unitex.
o. Certi-Vex Enviocure; Vexcon Chemicals, Inc.

4. White Waterborne Membrane-Forming Curing Compound:

a. AH Curing Compound #2 WB WP; Anti-Hydro International, Inc.
b. Aqua Resin Cure; Burke Group, LLC (The).
c. W.B. Resin Cure; Conspec Marketing & Manufacturing Co., Inc.
d. Thinfilm 450; Kaufman Products, Inc.
e. Aqua Kure-White; Lambert Corporation.
f. L&M Cure R-2; L&M Construction Chemicals, Inc.
g. 1200-White; W. R. Meadows, Inc.
h. White Pigmented Resin Cure E; Nox-Crete Products Group, Kinsman Corporation.
i. Rich Cure White E; Richmond Screw Anchor Co.
j. Resi-Chem High Cure; Symons Corporation.
k. Horncure 200-W; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
l. Hydro White 309; Unitex.

2.7 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

B. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1752, cork or self-expanding cork.

C. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

D. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

E. Rock Salt: Sodium chloride crystals, kiln dried, coarse gradation with 100 percent passing 3/8-inch sieve and 85 percent retained on a No. 8 sieve.

F. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements, and as follows:

1. Type II, non-load bearing, for bonding freshly mixed concrete to hardened concrete.
2. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
3. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

G. Chemical Surface Retarder: Water-soluble, liquid set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/8 to 1/4 inch

H. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

I. Products: Subject to compliance with requirements, provide one of the following:

1. Chemical Surface Retarder:

a. True Etch Surface Retarder; Burke Group, LLC (The).
b. Exposee; ChemMasters.
c. Delay S; Conspec Marketing & Manufacturing Co., Inc.
d. Concrete Surface Retarders; Euclid Chemical Co.
e. Expose; Kaufman Products, Inc.
f. Surftard; Metalcrete Industries.
g. Crete-Nox TA; Nox-Crete Products Group, Kinsman Corporation.
h. Lithotex; L. M. Scofield Co.
i. Rugasol-S; Sika Corporation.
j. Certi-Vex Envioset; Vexcon Chemicals, Inc.

2.8 CONCRETE MIXES

A. Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the trial batch method.

1. Do not use Owner's field quality-control testing agency as the independent testing agency.

C. Proportion mixes to provide concrete with the following properties:

1. Compressive Strength (28 Days): 4000 psi.
2. Compressive Strength (28 Days): 3500 psi.
3. Compressive Strength (28 Days): 3000 psi.
4. Maximum Water-Cementitious Materials Ratio: 0.45.
5. Maximum Water-Cementitious Materials Ratio: 0.50.
6. Slump Limit: 3 inches.
7. Slump Limit: 4 inches.

a. Slump Limit for Concrete Containing High-Range Water-Reducing Admixture: Not more than 8 inches after adding admixture to plant- or site-verified, 2- to 3-inch slump.

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D. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements for concrete exposed to deicing chemicals.

E. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Ground Granulated Blast-Furnace Slag: 50 percent.
4. Combined Fly Ash or Pozzolan, and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.

F. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content of 2.5 to 4.5 percent.

G. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content as follows within a tolerance of plus or minus 1.5 percent:

1. Air Content: 5.5 percent for 1-1/2-inch maximum aggregate.
2. Air Content: 6.0 percent for 1-inch maximum aggregate.
3. Air Content: 6.0 percent for 3/4-inch maximum aggregate.

H. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd.

I. Synthetic Fiber: Uniformly disperse in concrete mix at manufacturer's recommended rate, but not less than 1.5 lb/cu. yd.

J. Coloring Agent: Add coloring agent to mix according to manufacturer's written instructions.

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Comply with requirements and with ASTM C 94.

B. Ready-Mixed Concrete: Comply with requirements and with ASTM C 94 and ASTM C 1116.

1. When air temperature is between 85 deg F and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

C. Project-Site Mixing: Comply with requirements and measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixers of 1 cu. yd. or smaller capacity, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
2. For mixers of capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added.

PART 3 - EXECUTION

3.1 PREPARATION

A. Proof-roll prepared subbase surface to check for unstable areas and verify need for additional compaction. Proceed with pavement only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.

1. Apply epoxy repair coating to uncoated or damaged surfaces of epoxy-coated reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap to adjacent mats.

3.4 JOINTS

A. General: Construct construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.

1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour, unless pavement terminates at isolation joints.

1. Provide preformed galvanized steel or plastic keyway-section forms or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
1. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
2. Provide tie bars at sides of pavement strips where indicated.
3. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
4. Use epoxy bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.

1. Locate expansion joints at intervals of 50 feet, unless otherwise indicated.
2. Extend joint fillers full width and depth of joint.
3. Terminate joint filler less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to the following radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.

a. Radius: 1/4 inch.
b. Radius: 3/8 inch.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.

F. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to the following radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

1. Radius: 1/4 inch.
2. Radius: 3/8 inch.

3.5 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcement steel, and items to be embedded or cast in. Notify other trades to permit installation of their work.

B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.

D. Comply with requirements and with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.

E. Do not add water to concrete during delivery, at Project site, or during placement.

F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

G. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.

1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.

H. Place concrete in two operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed.

1. Remove and replace portions of bottom layer of concrete that have been placed more than 15 minutes without being covered by top layer, or use bonding agent if approved by Architect.

I. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surface treatments.

J. Slip-Form Pavers: When automatic machine placement is used for pavement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce pavement to required thickness, lines, grades, finish, and jointing as required for formed pavement.

1. Compact subbase and prepare subgrade of sufficient width to prevent displacement of paver machine during operations.

K. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
2. Do not use frozen materials or materials containing ice or snow.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

L. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover reinforcement steel with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
3. Fog-spray forms, reinforcement steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.6 CONCRETE FINISHING

A. General: Wetting of concrete surfaces during screeding, initial floating, or finishing operations is prohibited.

B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and the concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots, and fill low spots. Refloat surface immediately to uniform granular texture.

1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
2. Medium-to-Fine-Textured Broom Finish: Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.7 FINISHES

A. Finish concrete in the following sequence: Strike-off, consolidation, floating and removal of laitance.

B. Provide light broom texture transverse to traffic flow direction, or as indicated on the plans.

C. Round edges of each side of joints to a ½ inch radius.

D. Curing: Uniformly apply curing compound over the entire surface after finishing initial set and removal of side forms, in accordance with the manufacturers printed instructions for the application.

E. Rock-Salt Finish: After initial floating, uniformly seed 5 lb/100 sq. ft. over the concrete surface.

1. Cover surface with 1-mil- thick polyethylene sheet and remove when concrete has hardened and seven-day curing period has elapsed.
2. Embed rock salt into plastic concrete, power float concrete, and trowel finish.
3. After seven-day curing period, saturate concrete with water and broom-sweep surface to dissolve remaining rock salt.

F. Colored Dry-Shake Hardener Finish: After initial floating, apply colored dry-shake materials to pavement surfaces according to manufacturer's written instructions and as follows:

1. Uniformly apply colored dry-shake materials at a rate of 100 lb/100 sq. ft. unless greater amount is recommended by manufacturer to match pavement color required.
2. Uniformly distribute approximately two-thirds of colored dry-shake material over the concrete surface with mechanical spreader, and embed by power floating. Follow power floating with a second shake application, uniformly distributing remainder of dry-shake material to ensure uniform color, and embed by power floating.
3. After final floating, apply a hand-trowel finish followed by a broom finish to concrete. Cure concrete with curing compound recommended by dry-shake material manufacturer. Apply curing compound immediately after final finishing.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and follow recommendations in ACI 305R for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.

D. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

a. Water.
b. Continuous water-fog spray.
c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.9 PAVEMENT TOLERANCES

A. Comply with tolerances of ACI 117 and as follows:

1. Elevation: 1/4 inch.
2. Thickness: Plus 3/8 inch, minus 1/4 inch.
3. Surface: Gap below 10-foot- long, unleveled straightedge not to exceed 1/4 inch.
4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.
6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
8. Joint Spacing: 3 inches.
9. Contraction Joint Depth: Plus 1/4 inch, no minus.
10. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.

B. Testing Agency: Owner will engage a qualified testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include those specified in this Article.

C. Testing Services: Testing shall be performed according to the following requirements:

1. Sampling Fresh Concrete: Representative samples of fresh concrete shall be obtained according to ASTM C 172, except modified for slump to comply with ASTM C 94.
2. Slump: ASTM C 143; one test at point of placement for each compressive-strength test, but not less than one test for each day's pour of each type of concrete. Additional tests will be required when concrete consistency changes.
3. Air Content: ASTM C 231, pressure method; one test for each compressive-strength test, but not less than one test for each day's pour of each type of air-entrained concrete.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each set of compressive-strength specimens.
5. Compression Test Specimens: ASTM C 31/C 31M; one set of four standard cylinders for each compressive-strength test, unless otherwise indicated. Cylinders shall be molded and stored for laboratory-cured test specimens unless field-cured test specimens are required.
6. Compressive-Strength Tests: ASTM C 39; one set for each day's pour of each concrete class exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd.. One specimen shall be tested at 7 days and two specimens at 28 days; one specimen shall be retained in reserve for later testing if required.
7. When frequency of testing will provide fewer than five compressive-strength tests for a given class of concrete, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
8. When total quantity of a given class of concrete is less than 50 cu. yd., Architect may waive compressive-strength testing if adequate evidence of satisfactory strength is provided.
9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, current operations shall be evaluated and corrective procedures shall be provided for protecting and curing in-place concrete.
10. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive compressive-strength test results equal or exceed specified compressive strength and no individual compressive-strength test result falls below specified compressive strength by more than 500 psi.

D. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type and class, location of concrete batch in pavement, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as the sole basis for approval or rejection.

F. Additional Tests: Testing agency shall make additional tests of the concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements have not been met, as directed by Architect. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

3.11 REPAIRS AND PROTECTION

A. Remove and replace concrete pavement that is broken, damaged, or defective, or does not meet requirements in this Section.

B. Drill test cores where directed by Architect when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751

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TENNESSEE STATE UNIVERSITY
DAYCARE CENTERS

SITE DETAILS
Sheet Number
L2.04
16 APRIL 12
CONSTRUCTION DOCUMENTS

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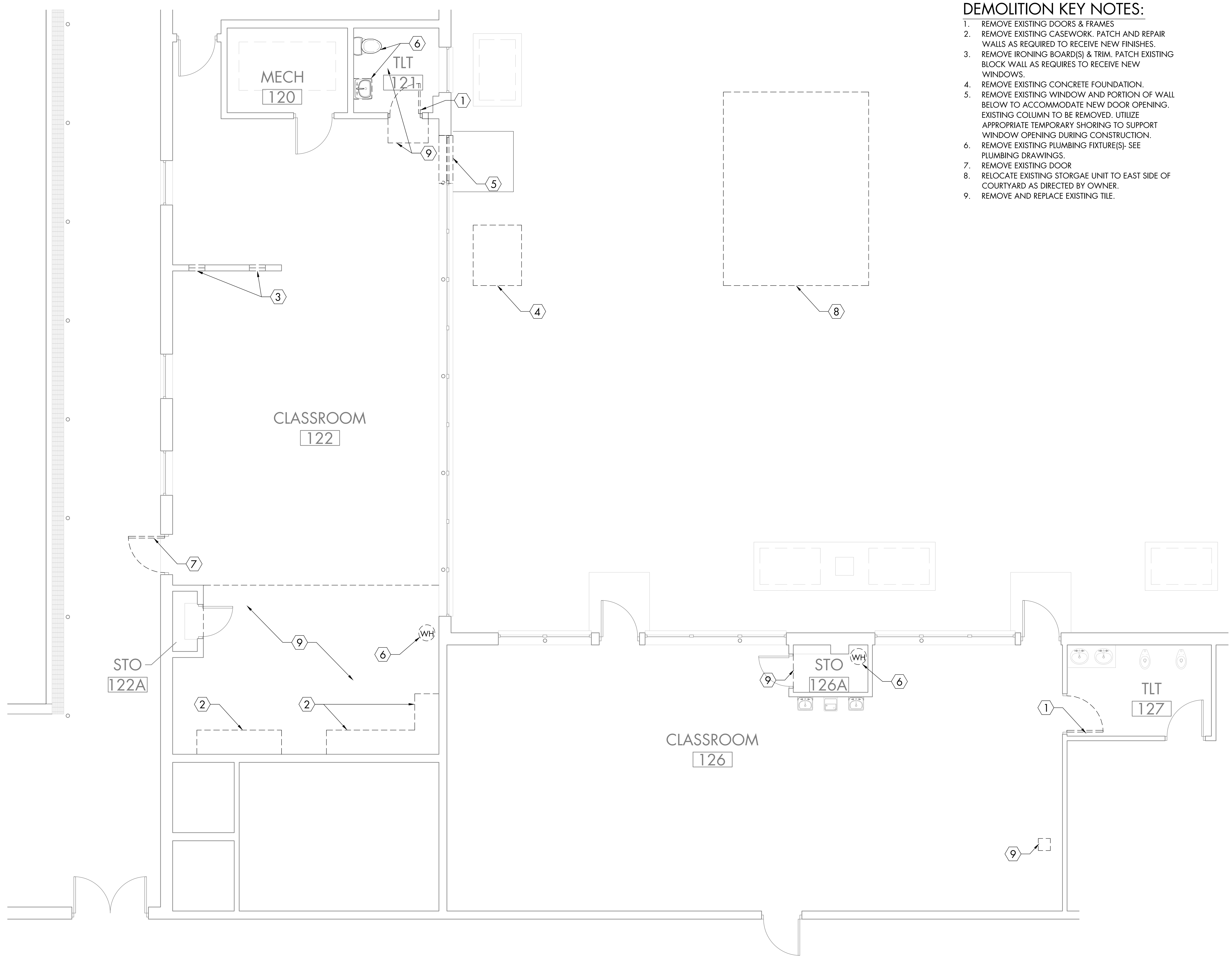
DEMOLITION KEY NOTES:

1. REMOVE EXISTING DOORS & FRAMES
2. REMOVE EXISTING CASEWORK. PATCH AND REPAIR WALLS AS REQUIRED TO RECEIVE NEW FINISHES.
3. REMOVE IRONING BOARD(S) & TRIM. PATCH EXISTING BLOCK WALL AS REQUIRES TO RECEIVE NEW WINDOWS.
4. REMOVE EXISTING CONCRETE FOUNDATION.
5. REMOVE EXISTING WINDOW AND PORTION OF WALL BELOW TO ACCOMMODATE NEW DOOR OPENING. EXISTING COLUMN TO BE REMOVED. UTILIZE APPROPRIATE TEMPORARY SHORING TO SUPPORT WINDOW OPENING DURING CONSTRUCTION.
6. REMOVE EXISTING PLUMBING FIXTURE(S)- SEE PLUMBING DRAWINGS.
7. REMOVE EXISTING DOOR
8. RELOCATE EXISTING STORGAE UNIT TO EAST SIDE OF COURTYARD AS DIRECTED BY OWNER.
9. REMOVE AND REPLACE EXISTING TILE.



01 FLOOR PLAN
DEMOLITION

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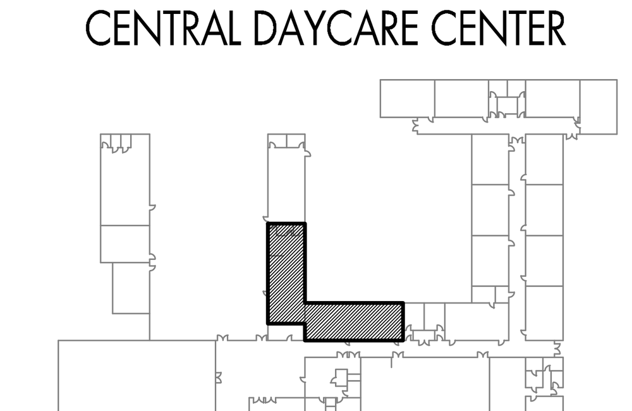

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DEMOLITION PLAN

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CODE EVALUATIONS

STATE OF TENNESSEE:

2006 INTERNATIONAL BUILDING CODE (EXCLUDING CHAPTERS 11 & 27)
2006 INTERNATIONAL FIRE CODE
2006 INTERNATIONAL FUEL GAS CODE
2006 INTERNATIONAL MECHANICAL CODE
2006 NFPA 101 LIFE SAFETY CODE
2008 NFPA 70 NATIONAL ELECTRICAL CODE
TENNESSEE PUBLIC BUILDING ACCESSIBILITY ACT, REV. 2005
AMEICANS WITH DISABILITIES ACT ACCESSIBLITY GUIDELINES (ADAAG) 1991 W/ 1994 REVS

FEDERAL:

AMERICANS WITH DISABILITIES ACT (ADA), 28 CFR PART 36, NONDISCRIMINATION ON BASIS OF DISABILITY BY PUBLIC ACCOMMODATIONS AND IN COMMERCIAL FACILITIES

BUILDING OCCUPANCY CLASSIFICATION

THIS PROJECT CONSISTS OF AN INTERIOR RENOVATION OF EXISTING DAYCARE FACILITY ADJACENT TO A BUSINESS OCCUPANCY WITHIN THE SAME BUILDING.

IBC OCCUPANCY GROUP:	I-4
SECONDARY USE AREA:	EDUCATION
NFPA 101 OCCUPANCY GROUP:	DAY CARE
SECONDARY USE AREA:	EDUCATIONAL

REQUIRED SEPARATION OF OCCUPANCIES [IBC TABLE 508.3.3 / NFPA TABLE 6.1.14.4.1(B)]
I-4 / EDUCATION:

BUILDING CONSTRUCTION CLASSIFICATION

	EXISTING	NEW
NUMBER OF FLOORS:	1	NA
SQUARE FOOTAGE	32,813	NA
OVERALL HEIGHT:	~16'	NA

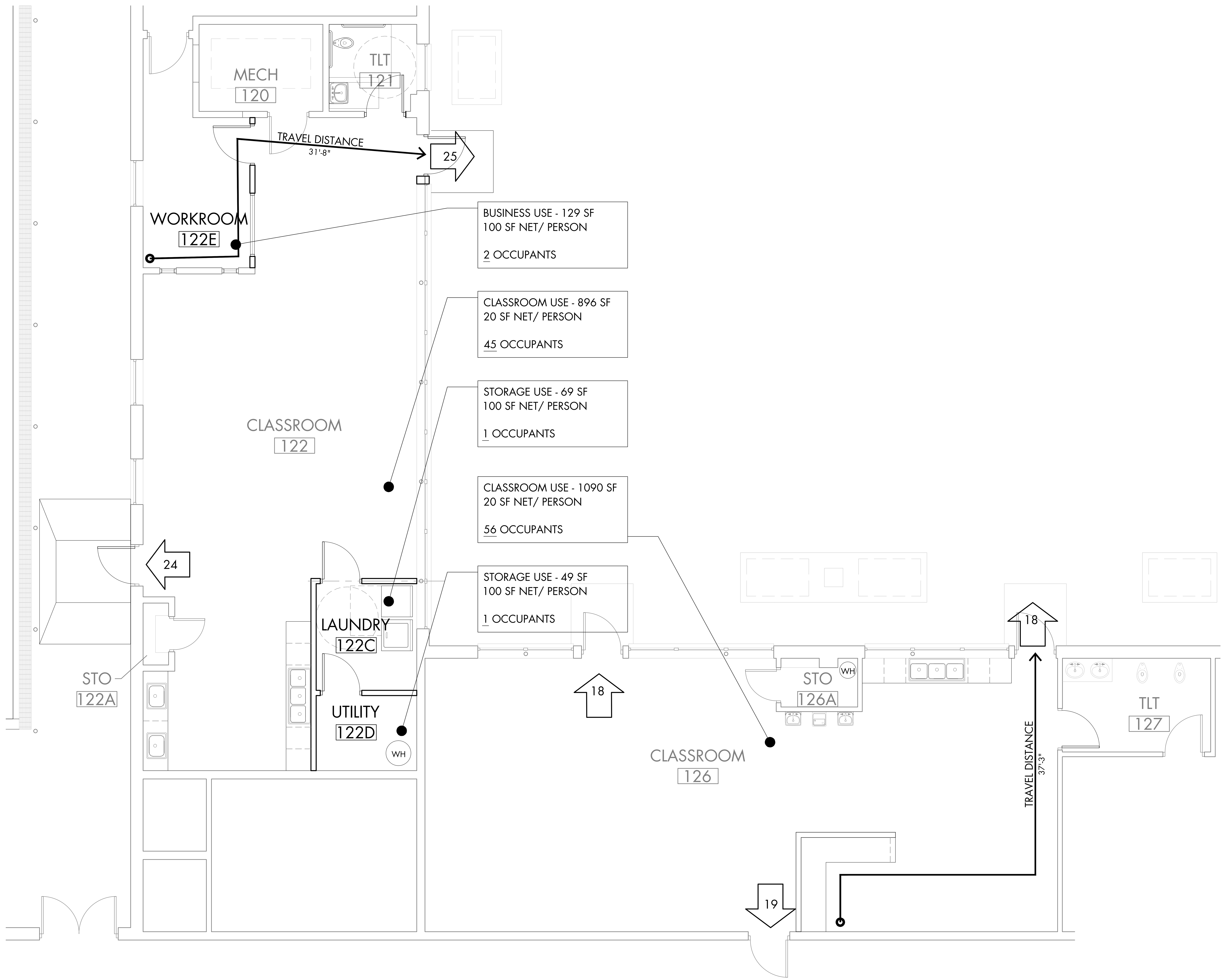
IBC CONSTRUCTION TYPE: IIB

STRUCTURALLY UNRESTRAINED

FIRE RESISTANCE RATINGS- per most restrictive requirements of IBC Table 601 and NFPA 220- Table 3

	IBC TABLE 601	NFPA TABLE 3
INTERIOR BEARING WALLS SUPPORTING OTHER COLUMNS OTHER BEARING WALLS OR MORE THAN ONE FLOOR:	0	0
INTERIOR BEARING WALLS SUPPORTING ONE FLOOR ONLY:	0	0
INTERIOR BEARING WALLS SUPPORTING ROOF ONLY:	0	0
COLUMNS SUPPORTING OTHER COLUMNS OR MORE THAN ONE FLOOR:	0	0
COLUMNS SUPPORTING ONE FLOOR ONLY:	0	0
COLUMNS SUPPORTING ROOF ONLY:	0	0
BEAMS GIRDERS AND TRUSSES SUPPORTING MORE THAN ONE FLOOR:	0	0
BEAMS GIRDERS AND TRUSSES SUPPORTING ONE FLOOR ONLY:	0	0
BEAMS GIRDERS AND TRUSSES SUPPORTING ROOF ONLY:	0	0
FLOOR AND CEILING ASSEMBLIES:	0	0
ROOF AND CEILING ASSEMBLIES:	0	0

EXTERIOR BEARING WALLS (TABLE 600): INTERIOR RENOVATION ONLY. NOT APPLICABLE
EXTERIOR NON BEARING WALLS (TABLE 600): INTERIOR RENOVATION ONLY. NOT APPLICABLE



01 FLOOR PLAN
NEW CONSTRUCTION

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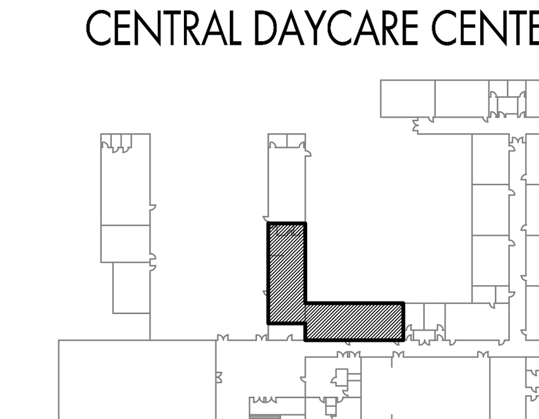

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LIFE SAFETY PLAN

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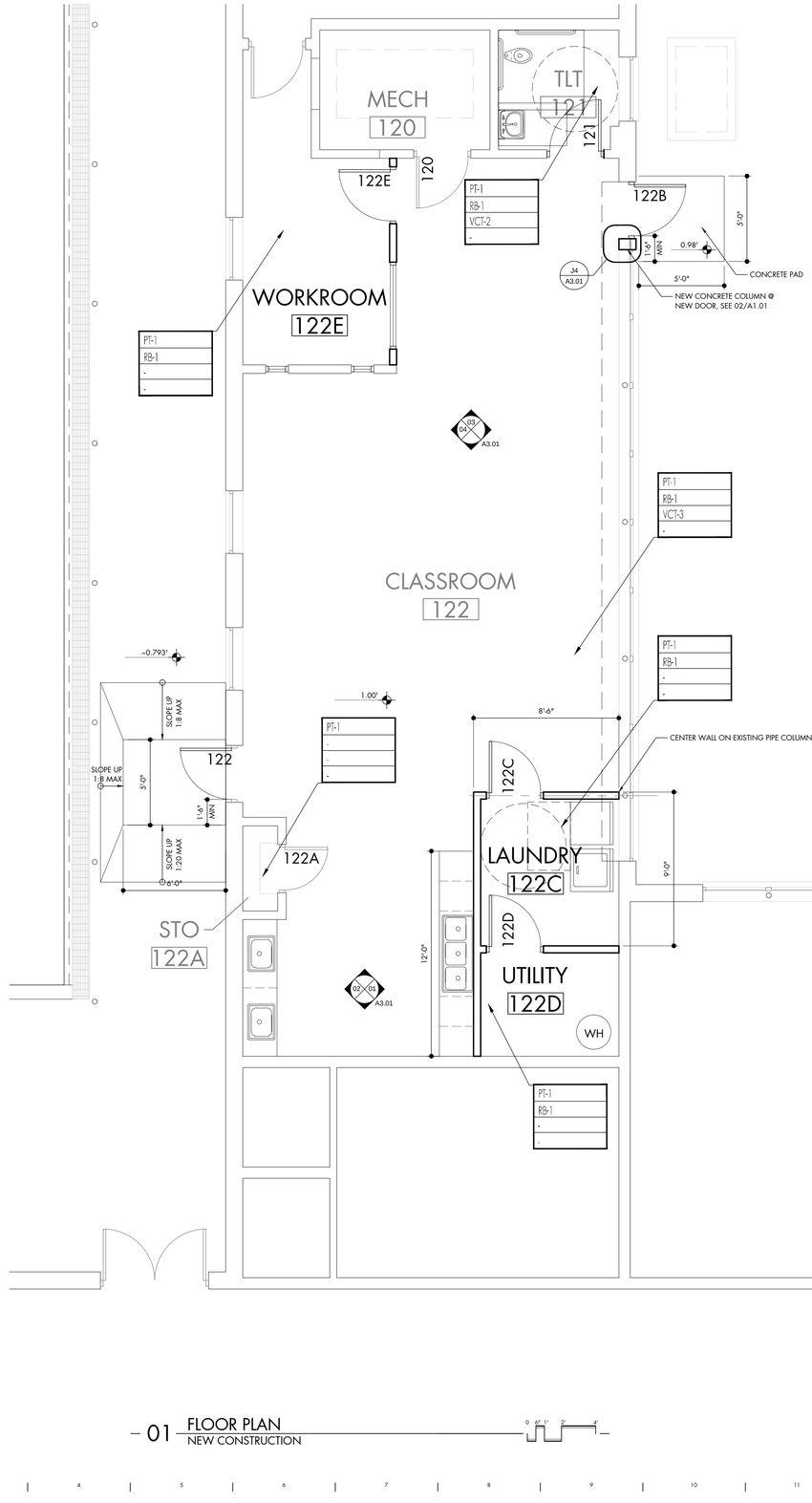
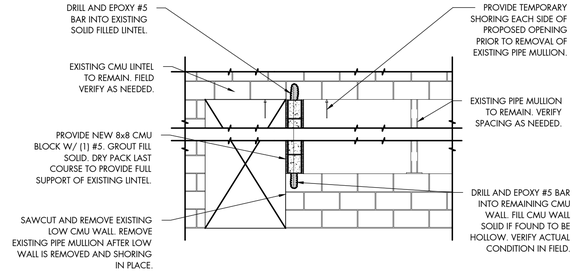


– 01 FLOOR PLAN
NEW CONSTRUCTION

0 6" 1' 2' 4'

DOOR SCHEDULE																
	DOOR										FRAME				FOOTNOTES
MARK	WIDTH	HEIGHT	THICKNESS **	TYPE	PAIR	FACE MATERIAL	CONSTRUCTION	GLAZING	UNDERCUT	RATING (MINUTES)	TYPE	MATERIAL	HEAD DETAIL	JAMB DETAIL	
120	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
121	3'-0"	3'-6"	1 3/4"	C	–	PT	HM	-		.	F-1	HM	H-1	J-1	REPLACE EXISTING DOOR & FRAME
122	3'-0"	7'-0"	1 3/4"	A	–	PT	HM	-		.	EX	EX	EX	EX	REPLACE EXISTING DOOR IN EXISTING FRAME
122A	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
122B	3'-0"	7'-0"	1 3/4"	B	–	PT	HM	5/8" IT		.	F-2	HM	H-3/4	J-3/J-4	
122C	3'-0"	7'-0"	1 3/4"	A	–	PT	HM	-		.	F-1	HM	H-2	J-2	
122D	3'-0"	7'-0"	1 3/4"	A	–	PT	HM	-		.	F-1	HM	H-2	J-2	
122E	3'-0"	7'-0"	1 3/4"	A	–	PT	HM	-		.	F-1	HM	H-2	J-2	
126A	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
126B	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
126C	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
123D	EX	EX	EX	EX	–	PT	HM	-		.	EX	EX	EX	EX	EXISTING DOOR, PAINT DOOR & FRAME
127	3'-0"	3'-6"	1 3/4"	C	–	PT	HM	-		.	F-1	HM	H-2	J-2	REPLACE EXISTING DOOR & FRAME



– 02 ELEVATION
STRUCTURAL ELEVATION @ NEW DOOR

0 6" 1' 2' 4'

FINISH LEGEND

WALLS
PT-1 PAINT, COLOR TO BE SELECTED

BASE
RB-1 FLEXCO RUBBER BASE 4" HIGH, BLACK

FLOOR
VCT-1 VINYL TILE, COLOR TO BE SELECTED

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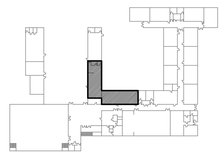

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FLOOR PLAN

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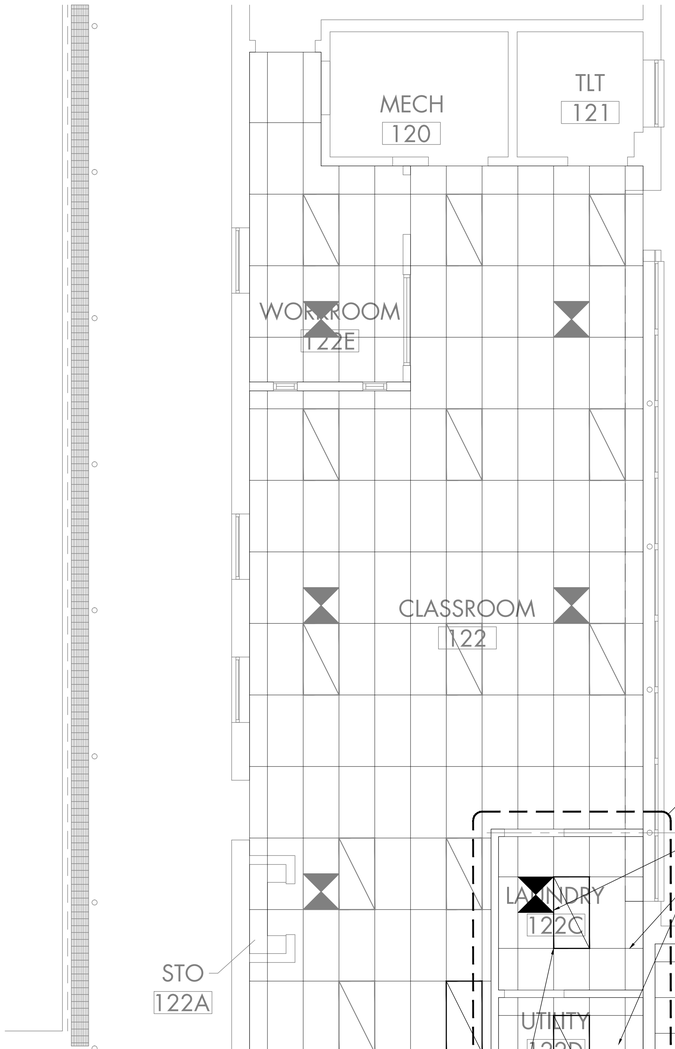
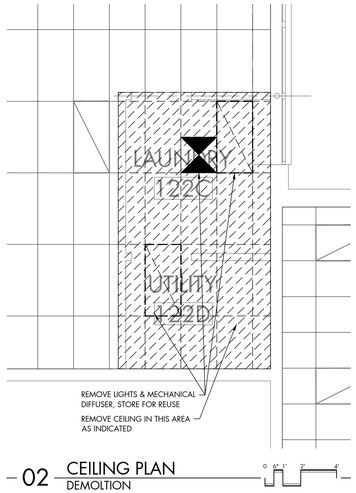
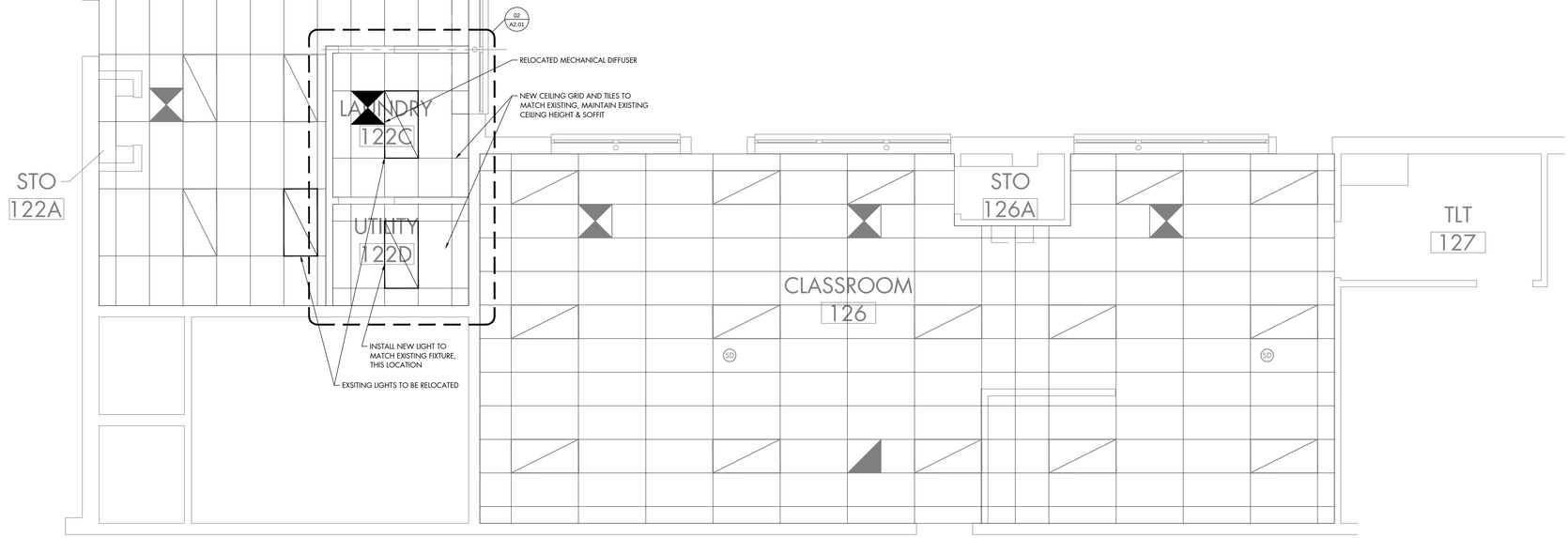


– 01 CEILING PLAN
NEW CONSTRUCTION



– 02 CEILING PLAN
DEMOLTION



SYMBOLS:

- ACOUSTICAL CEILING TILE
- TYPICAL RECESSED SPRINKLER HEAD AT CENTER OF TILE
- GYPSUM BOARD CEILING
- 2' x 4' RECESSED FLUORESCENT FIXTURE
- 2' x 2' RECESSED FLUORESCENT FIXTURE
- 1' x 4' SURFACE MOUNT FLUORESCENT FIXTURE
- 1' x 8' SURFACE MOUNT FLUORESCENT FIXTURE
- EXIT SIGN
- WALL MOUNTED EXIT SIGN
- SPRINKLER
- SMOKE DETECTOR
- HEAT DETECTOR
- RETURN/EXHAUST GRILLE
- SUPPLY GRILLE
- 2' x 4' RECESSED DIRECT/INDIRECT FLUORESCENT FIXTURE
- 1' x 4' PENDANT MOUNT FLUORESCENT FIXTURE

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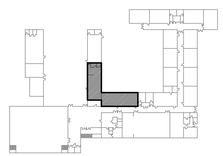

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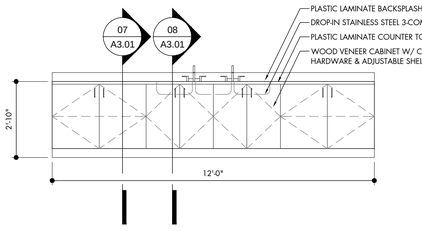
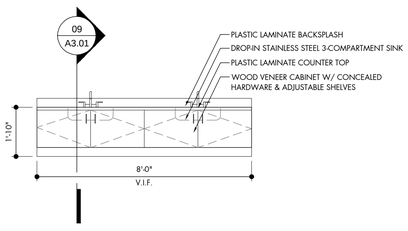
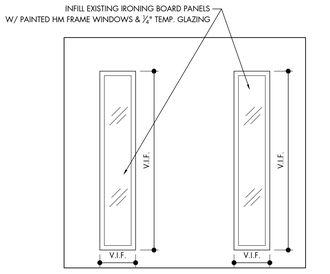


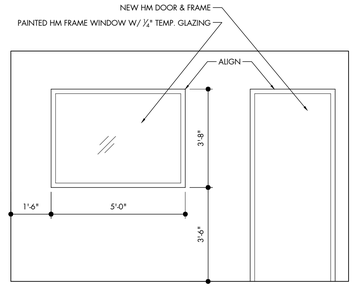
01 CASEWORK ELEVATION
3-COMPARTMENT SINK



02 CASEWORK ELEVATION
CHILDREN SINK

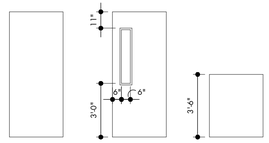


03 INTERIOR ELEVATION
TEACHER WORKROOM



04 INTERIOR ELEVATION
TEACHER WORKROOM

DOOR TYPES

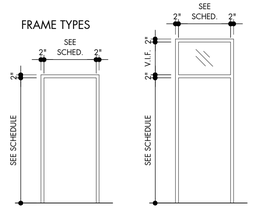


S.C. WOOD
A
FLUSH

S.C. WOOD
B
VERTICAL VISION PANEL

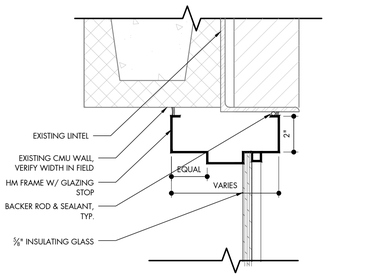
S.C. WOOD
C
FLUSH ½ DOOR

FRAME TYPES



F1
HOLLOW METAL

F2
HOLLOW METAL



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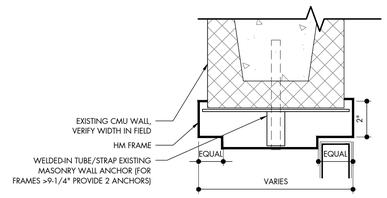
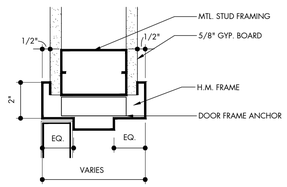


H1



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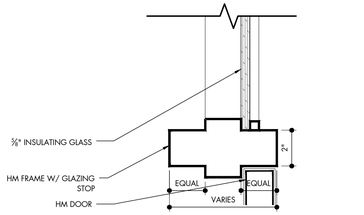

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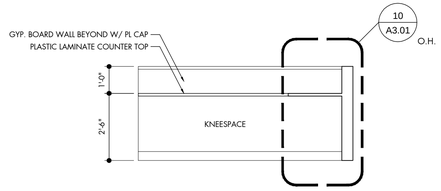

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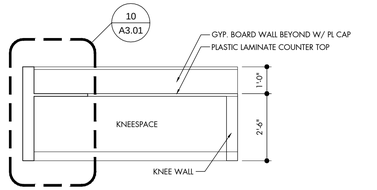

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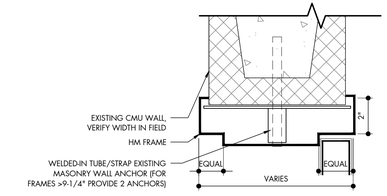

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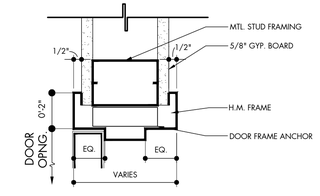

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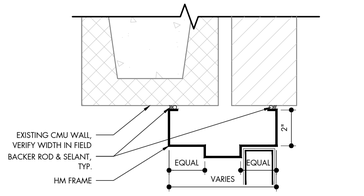

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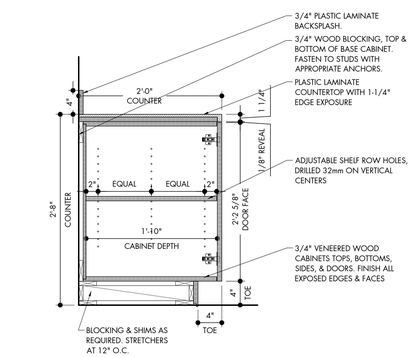

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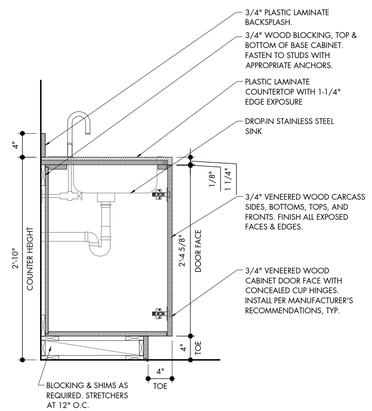

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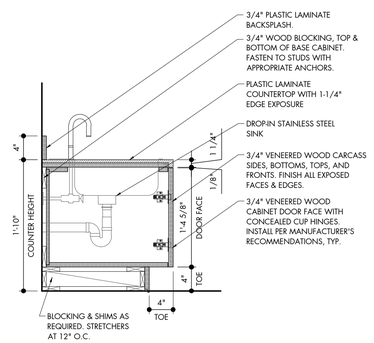

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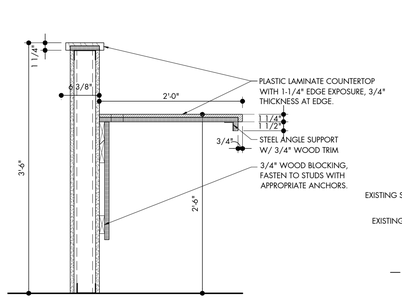

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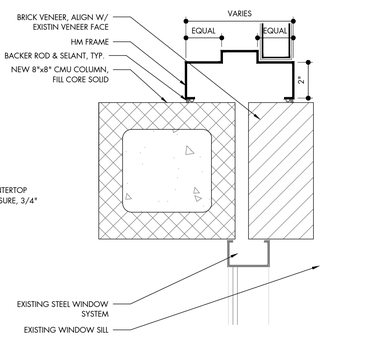

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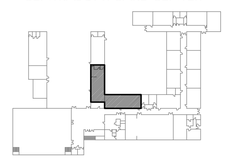

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CASEWORK
ELEVATIONS & DETAILS

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HVAC SYMBOL LEGEND

SYMBOL	DESCRIPTION
	-CEILING DIFFUSER, ROUND NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)
	-CEILING RETURN
	-CEILING EXHAUST
	-CEILING DIFFUSER, RECTANGULAR OR SQUARE NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)
	-VERTICAL MOUNT, SIDEWALL REGISTER/GRILLE
1 A101 SIM	-DETAIL REFERENCE: TOP-DETAIL#, BOTTOM-DRAWING# SHOWN ON
H	-DUCT SMOKE DETECTOR
	-DEMO TO POINT INDICATED
	-CONNECT TO POINT INDICATED
M	-MOTORIZED DAMPER
TS	-TEMPERATURE SENSOR
P	-PRESSURE SENSOR
BD	-BACKDRAFT DAMPER
1	-SHEET NOTE CALLOUT
	-CEILING MOUNTED ACCESS DOOR
M	-REFRIGERANT MONITOR
T	-DIGITAL THERMOSTAT
C	-CO2 MONITOR
T	-PRESSURE MONITOR

SYMBOL	DESCRIPTION
	-FIRE DAMPER (WITH ACCESS PANEL)
	-FIRE & SMOKE DAMPER (WITH ACCESS PANEL)
	-MOTOR OPERATED CONTROL DAMPER (MOD)
	-MANUAL BALANCING DAMPER
SA-1	-SOUND ATTENUATOR
FM	-AIR FLOW MEASURING STATION
	-DOOR GRILLE
	-UNDERCUT DOOR
	-ACCESS DOORS, VERTICAL OR HORIZONTAL
	-FLEXIBLE CONNECTION
16"x12"	-FLAT OVAL DUCT
16"x12"	-NEW DUCTWORK, FIRST DIMENSION IS SIDE SHOWN
16"x12" DOWN	-DUCT ELBOW, SUPPLY, FIRST DIMENSION INDICATES SIDE TO WHICH ARROW IS POINTING UP W/IN FLOOR
	-DUCT ELBOW, EXHAUST
	-DUCT ELBOW, RETURN
	-RECTANGULAR DUCT SECTION UP, SUPPLY AIR
	-RECTANGULAR DUCT SECTION UP, RETURN AIR
	-RECTANGULAR DUCT SECTION UP, EXHAUST AIR
	-ROUND DUCT SECTION UP
	-FLAT OVAL DUCT SECTION UP

SYMBOL	DESCRIPTION
	-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME
	-UNIT HEATER, VERTICAL MOUNT
	-UNIT HEATER, HORIZONTAL MOUNT
	-FAN COIL UNIT
	-INLINE CENTRIFUGAL FAN
	-CHANGE OF ELEVATION
	-FLEXIBLE DUCT
	-TRANSITION, CONCENTRIC
	-TRANSITION, ECCENTRIC
16"x10" 8"ø	-TRANSITION, SQUARE TO ROUND
	-SQUARE THROAT ELBOW W/ TURNING VANES
	-RADIUS ELBOW
	-RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF
	-SQUARE THROAT TEE
14"x10"	-RADIUS TEE
	-RECTANGLE/ROUND TAKE-OFF
	-STANDARD BRANCH TAKE-OFF
	-SPIN-IN TAKE-OFF
	-DISPERSION GRID FOR STEAM HUMIDIFIER

SYMBOL	DESCRIPTION
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CD	CONDENSATE
CR	CONDENSATE RETURN
PC	PUMPED CONDENSATE
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HPS	HIGH PRESSURE STEAM SUPPLY
MPS	MEDIUM PRESSURE STEAM SUPPLY
LPS	LOW PRESSURE STEAM SUPPLY
HPR	HIGH PRESSURE STEAM RETURN
MPR	MEDIUM PRESSURE STEAM RETURN
LPR	LOW PRESSURE STEAM RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION

SYMBOL	DESCRIPTION
	-FLOW DIRECTION
	-GATE VALVE
	-BALL VALVE
	-CALIBRATING BALANCING VALVE
	-BUTTERFLY VALVE
	-GAS COCK
	-UNION
	-STRAINER
	-CONTROL VALVE
S	-SOLENOID VALVE
	-PSI REG.
	CHECK VALVE
	-FLOW SWITCH
	-SLOPE DIRECTION (DOWN)
	-FLEX CONNECTION
	-O.S.&Y. GATE VALVE
	-STEAM TRAP
	-THREE-WAY CONTROL VALVE
	-THERMOMETER

SYMBOL	DESCRIPTION
EQUIP.	-P-TRAP
	-TWO-WAY CHECK VALVE
MV	-MANUAL VENT
	-PRESSURE GAUGE
	-RELIEF VALVE
FM	-FLOW METER
M	-WATER METER
	-INLINE PUMP
C	-INLINE PUMP
	-VALVE ON RISER
	-CAP
	-CONNECTION, BOTTOM
	-CONNECTION, TOP
	-COUPLING
	-ELBOW, 90 DEG.
	-ELBOW, 45 DEG.
	-ELBOW, TURNED DOWN
	-ELBOW, TURNED UP
	-TEE, OUTLET DOWN
	-TEE, OUTLET UP
D D	-45 DEG. PIPE RISE (R) / DROP (D)
	-PIPE ANCHORS
	-CONCENTRIC REDUCER
	-ECCENTRIC REDUCER

HVAC DRAWING INDEX

NOTE: SOME SYMBOLS SHOW ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT

HVAC ABBREVIATIONS

SYMBOL	DESCRIPTION
BHP	-BRAKE HORSEPOWER
BTU	-BRITISH THERMAL UNIT
℄	-CENTER LINE
CFM	-CUBIC FEET PER MINUTE
CV	-CONSTANT AIR VOLUME
△ P	-CHANGE IN PRESSURE
△ T	-CHANGE IN TEMPERATURE
CU	-CONDENSING UNIT
DDC	-DIRECT DIGITAL CONTROLS
DN	-DOWN
EAT	-ENTERING AIR TEMPERATURE
EF	-EXHAUST FAN
ESP	-EXTERNAL STATIC PRESSURE
ET	-EXPANSION TANK
EWT	-ENTERING WATER TEMPERATURE
FCU	-FAN COIL UNIT
FD	-FIRE DAMPER
FSD	-FIRE SMOKE DAMPER
FF	-FINAL FILTERS
FLA	-FULL LOAD AMPS
FPM	-FEET PER MINUTE
GPM	-GALLONS PER MINUTE
KW	-KILOWATT
LAT	-LEAVING AIR TEMPERATURE
LWT	-LEAVING WATER TEMPERATURE
LD	-LINEAR DIFFUSER
MBH	-THOUSAND BTUs PER HOUR
MCA	-MINIMUM CIRCUIT AMPS
MOCP	-MAXIMUM OVER CURRENT PROTECTION
MOD	-MOTOR OPERATED CONTROL DAMPER
NC	-NORMALLY CLOSED
NO	-NORMALLY OPEN
NTS	-NOT TO SCALE
OA	-OUTSIDE AIR
OAL	-OUTSIDE AIR LOUVER
PRV	-PRESSURE REDUCING VALVE
PSI	-POUNDS PER SQUARE INCH
PSIG	-PSI GAUGE
PVC	-POLYVINYL CHLORIDE PIPE
RA	-RETURN AIR
RPM	-REVOLUTIONS PER MINUTE
SA	-SUPPLY AIR
SP	-STATIC PRESSURE
TSP	-TOTAL STATIC PRESSURE
UH	-UNIT HEATER
UNO	-UNLESS NOTED OTHERWISE
V/PH	-VOLTS/PHASE
VAV	-VARIABLE AIR VOLUME
VFD	-VARIABLE FREQUENCY DRIVE

DESIGN CRITERIA

LOCATION	NASHVILLE, TN
AMBIENT SUMMER	94.4 DEG. F/ 75 DEG. F WB
AMBIENT WINTER	12.9 DEG. F DB
INTERIOR CONDITIONS	72 DEG. F/ 50% RH
ELEVATION	604 FT

HVAC EQUIPMENT TAGS

AIR DISTRIBUTION DEVICE

TAG
A
200
CFM

AIR HANDLING UNIT

AHU NUMBER
RTU-4

EXHAUST FAN

FAN NUMBER
EF-99

VARIABLE/CONSTANT VOLUME TERMINAL UNITS

AHU NUMBER
V1A-115
TERMINAL NUMBER

HVAC GENERAL NOTES

1. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.

2. DIMENSIONS SHALL BE FIELD-VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. COORDINATE THE WORK WITH OTHER TRADES INVOLVED. FIELD MODIFICATIONS SUCH AS OFFSETS IN PIPING OR DUCTWORK (INCLUDING DIVIDED DUCTWORK) NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCE SHALL BE PROVIDED AT NO ADDITIONAL COST.

3. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD.

4. SEE SPECIFICATIONS FOR GAUGES, THICKNESS, BRACING, REQUIREMENTS, ETC., OF DUCTWORK.

5. PROVIDE AIRFOIL TURNING VANES IN ALL 90 DEGREE RECTANGULAR DUCT ELBOWS.

6. DUCT SIZES AND ALL OPENINGS THROUGH BUILDING CONSTRUCTION SHALL SUIT EQUIPMENT FURNISHED.

7. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT OF ALL TRADES.

8. ALIGN THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, AND HUMIDITY SENSORS WITH CENTERLINE OF LIGHT SWITCHES UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, DOOR SWINGS AND ARCHITECTURAL INTERIOR ELEVATION DRAWINGS.

9. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION. ALL TERMINAL UNIT DRAIN PANS SHALL DRAIN FROM BOTTOM OF PAN.

10. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

11. DAMPERS AND INSIDES OF DUCTS VISIBLE THROUGH GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.

12. REFER TO TYPICAL DETAILS FOR PIPING AND INSTALLATION OF EQUIPMENT.

13. TRAPPED CONDENSATE DRAINS FROM ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED.

14. ACCESS PANELS IN DUCTWORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR OPERATION, BALANCING OR MAINTENANCE OF ALL MECHANICAL EQUIPMENT.

15. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS. ALL SPLIT DUCT FITTINGS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF SPLIT.

16. PROVIDE CONCRETE HOUSEKEEPING PAD UNDER ALL FLOOR-MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.

17. VERIFY FINISH WITH ARCHITECT PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSERS, LOUVERS AND OTHER AIR DISTRIBUTION DEVICES.

18. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EACH FAN, AIR HANDLING UNITS, AND FAN COIL UNITS.

19. PROVIDE TRANSITIONS AT DIFFUSER NECKS AS REQUIRED TO MATCH SIZES OF FLEX DUCTS TO BE CONNECTED.

20. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE/SMOKE RATED PARTITIONS, TO ALLOW FOR INSPECTIONS OF RATED WALLS.

21. LOCATE ALL OUTSIDE AIR INTAKES A MINIMUM OF 25'-0" CLEAR FROM ALL PLUMBING VENTS AND EXHAUST AIR DISCHARGE LOCATIONS. LOWEST POINT OF EACH OUTSIDE AIR INTAKE ON ROOF SHALL BE A MINIMUM OF 36" ABOVE ROOF AND 72" ABOVE GRADE.

22. DUCT RUNOUTS TO DIFFUSERS SHALL MATCH THE SIZE OF THE DIFFUSER NECK.

23. WATER PRESSURE DROPS THROUGH COIL CONTROL VALVES SHALL NOT EXCEED 5 PSI.

24. UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND VALVE DRAINS SHALL BE INDEPENDENTLY PIPED FULL SIZE TO THE NEAREST PLUMBING DRAIN.

25. SLEEVE AND SEAL ALL PIPING PENETRATIONS THROUGH BUILDING PARTITIONS. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN CHILLED WATER AND HOT

26. DUE TO VARIATIONS BETWEEN MANUFACTURERS, VERIFY EXACT DIMENSIONS OF EQUIPMENT REQUIRING FRAMED OPENINGS IN STRUCTURE WITH FINAL APPROVED SUBMITTAL. COORDINATE OPENINGS WITH GENERAL CONTRACTOR DURING FRAMING PHASE.

27. OPENINGS IN ROOF SLAB FOR DUCTS SHALL BE NO LARGER THAN OVERALL OUTSIDE DIMENSIONS OF DUCT. GROUT AND SEAL ANY GAPS BETWEEN DUCT AND OPENING.

28. TERMINAL REHEAT BOXES SHALL BE PROVIDED WITH FOIL FACED NON-ERODING INTERNAL LINER. DO NOT LINE SUPPLY DUCTS DOWNSTREAM OF THESE BOXES.

29. TERMINAL REHEAT BOXES AT END OF PIPING RUNS SHALL BE PROVIDED WITH 3-WAY MODULATING CONTROL VALVES AS NOTED ON DRAWINGS. ALL OTHER BOXES SHALL BE PROVIDED WITH 2-WAY VALVES.

30. FOR DUCT RUNOUTS ABOVE INACCESSIBLE (DRYWALL) CEILINGS AND SIDEWALL, PROVIDE AIR DISTRIBUTION DEVICES WITH FACE ADJUSTABLE OPPOSED BLADE DAMPERS AND OMIT THE MANUAL VOLUME DAMPER AT THE SPIN-IN. PROVIDE FLANGE-TYPE AIR DISTRIBUTION DEVICES FOR USE IN SPACES WITH DRYWALL CEILINGS.

31. FOR DUCT RUNOUTS ABOVE ACCESSIBLE (LAY-IN ACOUSTICAL TILE) CEILINGS, OMIT THE OPPOSED BLADE DAMPER AT THE DEVICE AND PROVIDE A MANUAL VOLUME DAMPER INTEGRAL WITH THE SPIN-IN. PROVIDE 24" X 24" EXTENDED PANELS FOR ALL DIFFUSERS IN LAY-IN CEILINGS.

32. ALL CAPPED PIPING SHALL BE IDENTIFIED WITH SERVICE STENCILED WITHIN 36" OF CAP.

33. DUCT AND/OR PIPING INSULATION SHALL NOT PASS THROUGH RATED PARTITIONS. STOP INSULATION AT WALL AND SEAL GYPSUM BOARD FITTED TIGHT AROUND DUCT.

34. WHERE DUCTS PENETRATE PARTITIONS, THE DUCT INSULATION SHALL BE OMITTED AT THE OPENING AND DRYWALL SHALL BE FITTED TIGHT AROUND THE DUCT. THE DUCT SHALL BE CAULKED AIRTIGHT AROUND THE FULL PERIMETER AND ON BOTH SIDES OF THE WALL.

35. THE EXTERIOR PERIMETER OF ALL COMBINATION FIRE/SMOKE DAMPER RETAINING ANGLES SHALL BE CAULKED WITH AN APPROVED SEALANT (NOT FIRE CAULK) TO PREVENT THE PASSAGE OF SMOKE.

36. DUCT MOUNTED SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR PROPER OPERATION. PROVIDE DUCT MOUNTED ACCESS DOORS AT ALL DETECTORS FOR ACCESS TO SAMPLING TUBE.

37. PROVIDE ACCESS PANELS IN SPACES WITH DRYWALL CEILINGS FOR ACCESS TO FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, DUCT MOUNTED SMOKE DETECTORS, BALANCING DAMPERS, VALVES, ETC. PROVIDE ACCESS PANEL ASSEMBLY IN ACCORDANCE WITH REQUIREMENTS OF CEILING ASSEMBLY. ACCESS PANELS SHALL BE PROVIDED AND LOCATED BY DIVISION 15 CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR.

38. ALL ROOF CURBS SHALL BE FURNISHED BY DIVISION 15 AND INSTALLED BY THE GENERAL CONTRACTOR RESPONSIBLE FOR DIMENSIONAL REQUIREMENTS OF ALL CURBS. ALL CURBS FOR ROOFTOP AIR HANDLING UNITS TO SHALL HAVE VIBRATION ISOLATION.

39. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DISTRIBUTION DEVICES. DO NOT LOCATE ANY SUPPLY DIFFUSER WITHIN 5'-0" OF A CEILING MOUNTED SMOKE DETECTOR.

40. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND GUIDELINES.

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HVAC - LEGENDS & NOTES

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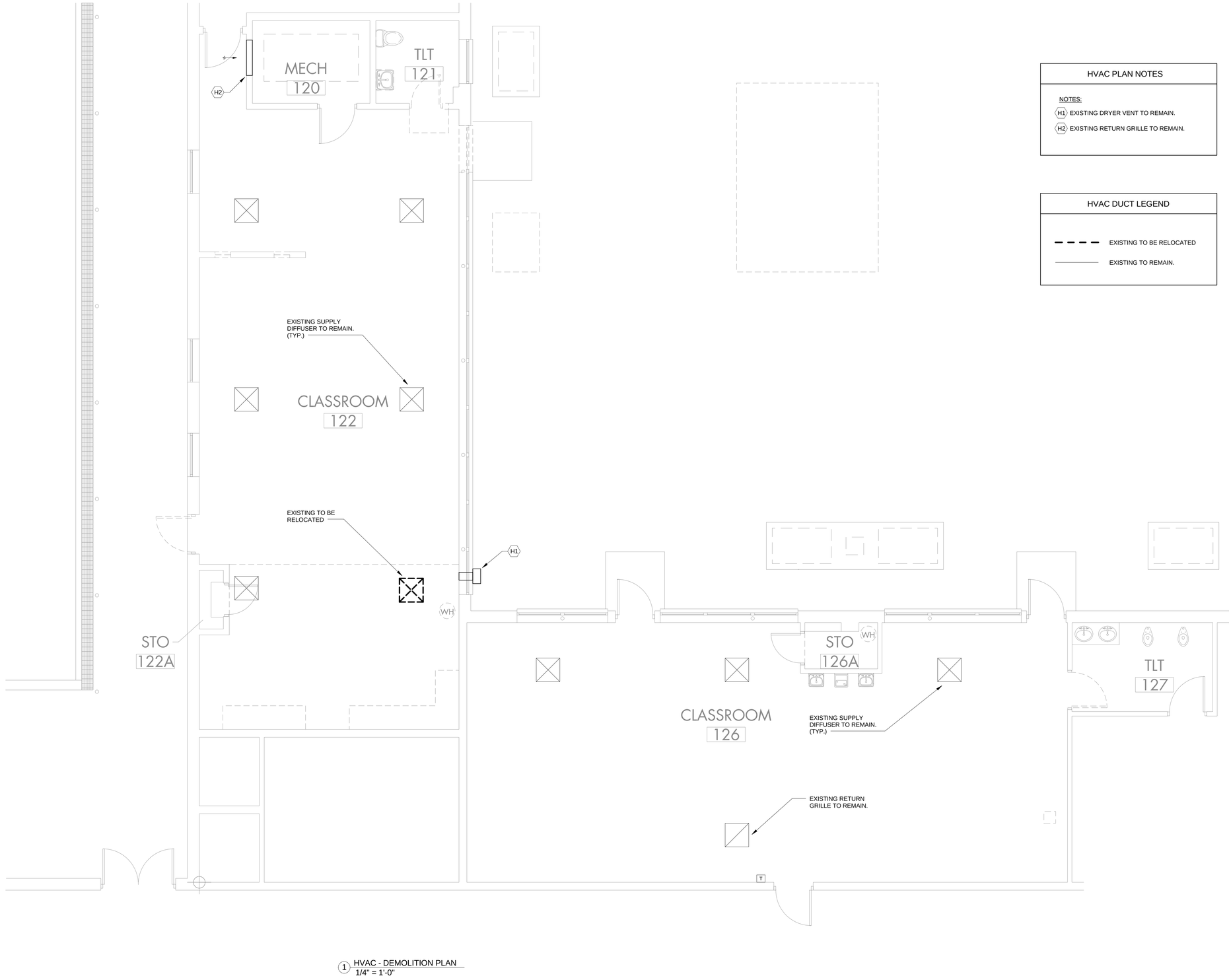

1 HVAC - DEMOLITION PLAN
1/4" = 1'-0"

HVAC PLAN NOTES

NOTES:

H1 EXISTING DRYER VENT TO REMAIN.

H2 EXISTING RETURN GRILLE TO REMAIN.

HVAC DUCT LEGEND

EXISTING TO BE RELOCATED

EXISTING TO REMAIN.

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HVAC - DEMOLITION PLAN

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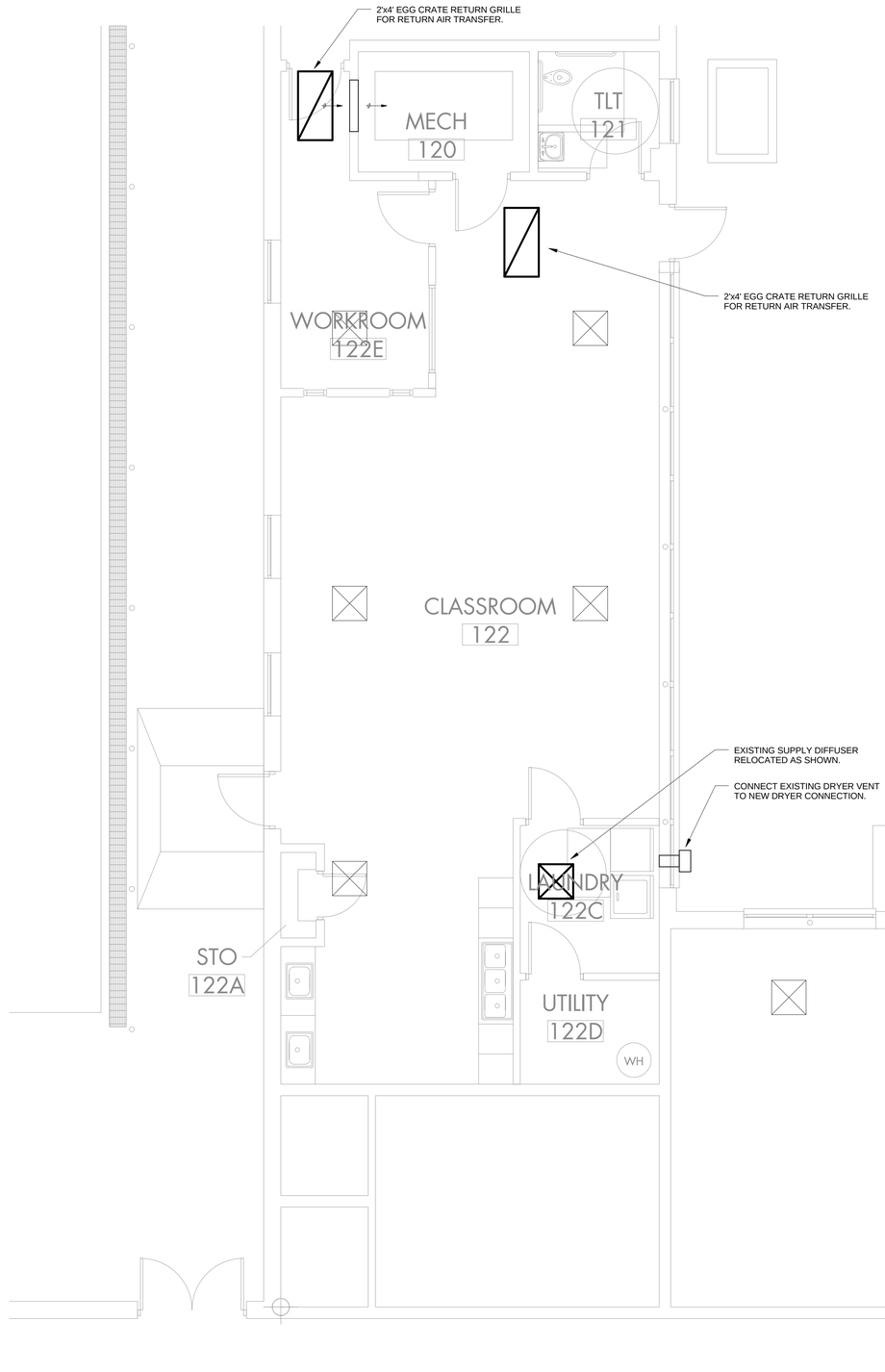

1 HVAC - FLOOR PLAN
1/4" = 1'-0"

HVAC DUCT LEGEND

NEW CONSTRUCTION

EXISTING TO REMAIN.

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HVAC - FLOOR PLAN

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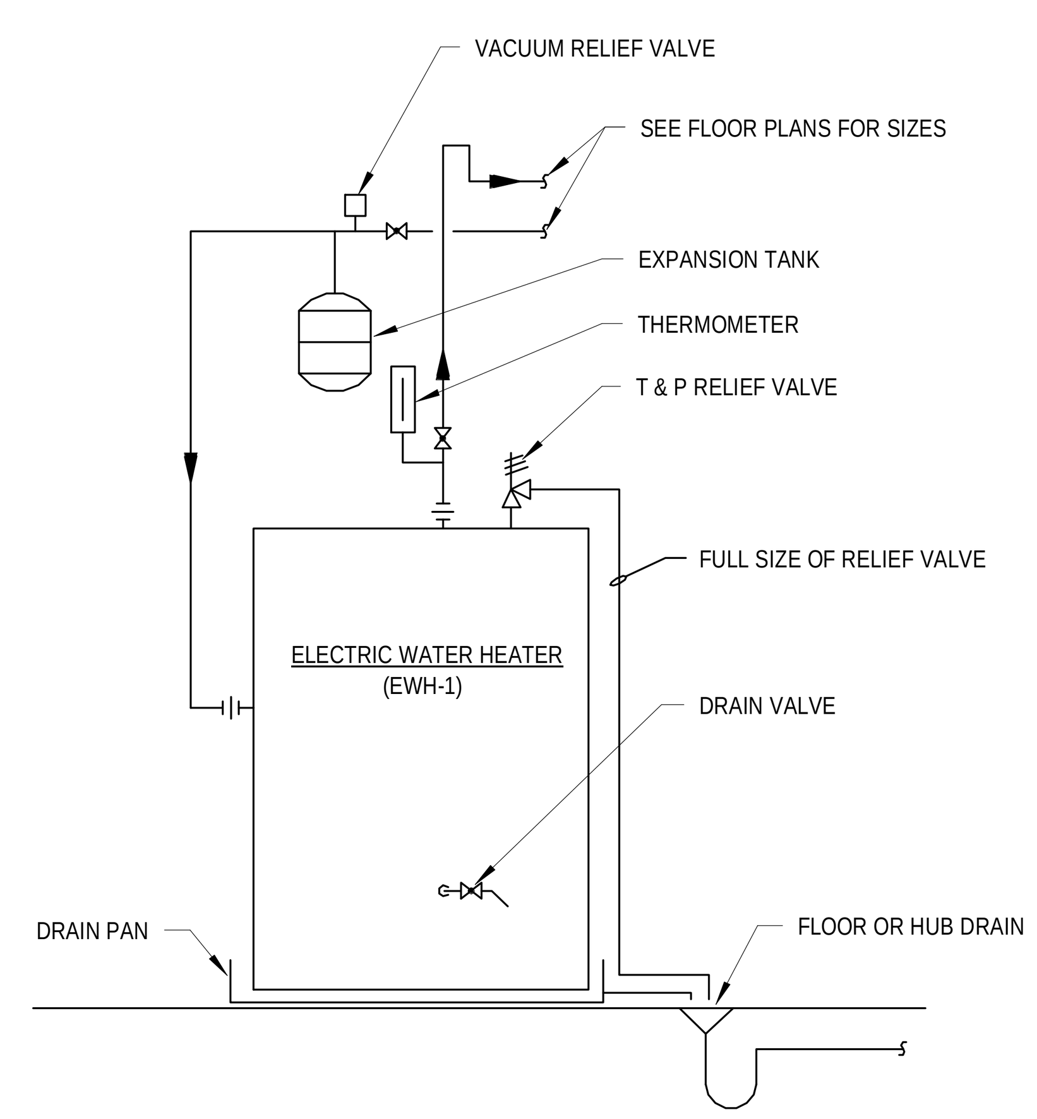
PLUMBING FIXTURE SCHEDULE																	
		FIXTURE		FAUCET		FLUSH VALVE		SEAT		CARRIER		STRAINER/TRAP		SUPPLIES		
MARK	DESCRIPTION	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANFACTURER	MODEL	MANUFACTURER	MODEL	NOTES
WC-1	CHILD HEIGHT WATER CLOSET - FLOOR MOUNTED, VITREOUS CHINA, ROUND FRONT, 1.6 GPF	AMERICAN STANDARD	2282.010	N/A	N/A	SLOAN	ROYAL 111-1.6	OLSONITE	126-CC	N/A	N/A	N/A	N/A	N/A	N/A	
L-1	CHILD HEIGHT LAVATORY - WALL HUNG, VITREOUS CHINA, 4" CENTERS, WRIST BLADE HANDLES, 5-1/4" GOOSENECK	AMERICAN STANDARD	0355.012	CHICAGO	895-317-GN2A E35ABCP	N/A	N/A	N/A	N/A	ZURN	ZR-1200 SERIES	MCGUIRE	155A/8902	MCGUIRE	2165CC	INSTALL WITH RIM AT 24" A.F.F., PROVIDE .5 GPM AERATOR - CHICAGO E2605-5JKACP
S-1	SINK - SINGLE COMP., SELF-RIMMING, STAINLESS STEEL, 22" x 19" x 7-1/2" DP., 8" CENTERS, SINGLE LEVER, 10" SWING SPOUT	ELKAY	LR2219	CHICAGO	2300-8CP	N/A	N/A	N/A	N/A	N/A	N/A	MCGUIRE	8912	MCGUIRE	2165CC	
S-2	SINK - TRIPLE COMP., SELF-RIMMING, STAINLESS STEEL, 54" x 22" x 10" DP., 8" CENTERS, SINGLE LEVER, 10" SWING SPOUT	ELKAY	LTR542210	CHICAGO	2300-8CP	N/A	N/A	N/A	N/A	N/A	N/A	MCGUIRE	8912	MCGUIRE	2165CC	CONTINUOUS WASTE - ELKAY LK-76

WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	RECOVERY	△ T (DEG F)	STORAGE (GALLONS)	POWER OR FUEL REQUIREMENTS	NOTES
EWH-1	STATE	PCE 40 20LSA	23 GPH	80 °	40 GAL	208V, 1PH, 4.5 KW	NON SIMULTANEOUS



ELECTRIC WATER HEATER
No Scale

1

PLUMBING ABBREVIATIONS

SYMBOL	DESCRIPTION
AFF	- ABOVE FINISH FLOOR
CFH	- CUBIC FEET PER HOUR
CO	- CLEANOUT
CONT	- CONTINUATION
CW	- DOMESTIC COLD WATER
DN	- DOWN
DWG	- DRAWING
EXIST	- EXISTING
°F	- DEGREE FAHRENHEIT
FCO	- FLOOR CLEANOUT
GPH	- GALLONS PER HOUR
GPM	- GALLONS PER MINUTE
HB	- HOSE BIBB
HW	- DOMESTIC HOT WATER
HWR	- DOMESTIC HOT WATER RECIRCULATING
IE	- INVERT ELEVATION
KW	- KILOWATT
LBS	- POUNDS
NTS	- NOT TO SCALE
OD	- OUTSIDE DIAMETER
PRV	- PRESSURE REDUCING VALVE
PSI	- POUNDS PER SQUARE INCH
PVC	- POLYVINYL CHLORIDE PIPE
S	- SANITARY SEWER
SH	- SHEET
V	- VENT
VTR	- VENT THRU ROOF
WCO	- WALL CLEANOUT
WTR	- WATER
RO	- REVERSE OSMOSIS

GENERAL NOTES

1. REFERENCE THE SPECIFICATIONS FOR MATERIAL AND EQUIPMENT INSTALLATION STANDARDS.
2. THE PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE AND LOCAL CODES.
3. PLANS ARE NOT COMPLETELY TO SCALE. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES.
4. PROVIDE ALL OFFSETS AND FITTINGS AND MAKE CONNECTION TO SITE UTILITIES.
5. CONCEAL PIPING ABOVE CEILINGS, WITHIN WALLS OR CHASES EXCEPT IN MECHANICAL ROOMS OR AS SPECIFICALLY NOTED.
6. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
7. SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS, AND FLOORS WITH U/L LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO OR EXCEED THE RATING OF THE WALL, CEILING OR FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES.
8. FLASH AND COUNTER-FLASH ROOF PENETRATIONS.
9. SEE ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
10. PROVIDE AUTOMATIC TRAP PRIMERS FOR FLOOR DRAIN TRAP SEALS.
11. PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS.
12. ALL EXPOSED PIPE AND FITTINGS IN FINISHED AREAS SHALL BE CHROME PLATED.
13. MOUNT HOSE BIBBS 24" ABOVE FINISHED GRADE.
14. PROVIDE CLEANOUTS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES. INSTALL CLEANOUT WITH COVER FLUSH TO FINISH SURFACE.
15. COORDINATE EXACT FLOOR DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. SET FLOOR DRAINS BELOW FINISHED FLOOR TO ALLOW FOR FLOOR SLOPING TO THE DRAIN. (SLOPE NOT TO EXCEED 1/4" PER FOOT).
16. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.
17. ALL WALL MOUNTED LAVATORIES SHALL BE ATTACHED TO FLOOR MOUNTED CARRIER DESIGNED TO WITHSTAND A VERTICAL LOAD OF 250 POUNDS ON THE FRONT OF THE FIXTURE.
18. PROVIDE SANITARY WASTE, VENT, DOMESTIC WATER, ETC. ROUGH-IN AND MAKE FINAL CONNECTIONS (TO INCLUDE PROVIDING ALL NECESSARY RELATED STOPS, VALVES, TRAPS, ETC. AND MAKE READY FOR USE) TO ALL EQUIPMENT, WHETHER FURNISHED BY THIS CONTRACTOR OR FURNISHED BY OTHERS.

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
X"CW	- DOMESTIC COLD WATER PIPING
X"HW	- DOMESTIC HOT WATER PIPING (120 DEG. F.)
X"S	- SANITARY SEWER PIPING
X"V	- VENT PIPING
	- SHUTOFF VALVE
	- HOSE BIBB OR WALL HYDRANT
	- CONNECTION, TOP
	- CONNECTION, BOTTOM
	- ELBOW, TURNED UP/DOWN
	- TEE, TURNED UP/DOWN

PLUMBING SHEET LIST	
SHEET NUMBER	SHEET NAME
P0.00	PLUMBING SCHEDULES & NOTES
P1.01	PLUMBING PLAN - DEMOLITION
P2.01	UNDERGROUND PLAN - NEW WORK
P2.02	PLUMBING PLAN - NEW WORK

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PLUMBING SCHEDULES & NOTES

Sheet Number

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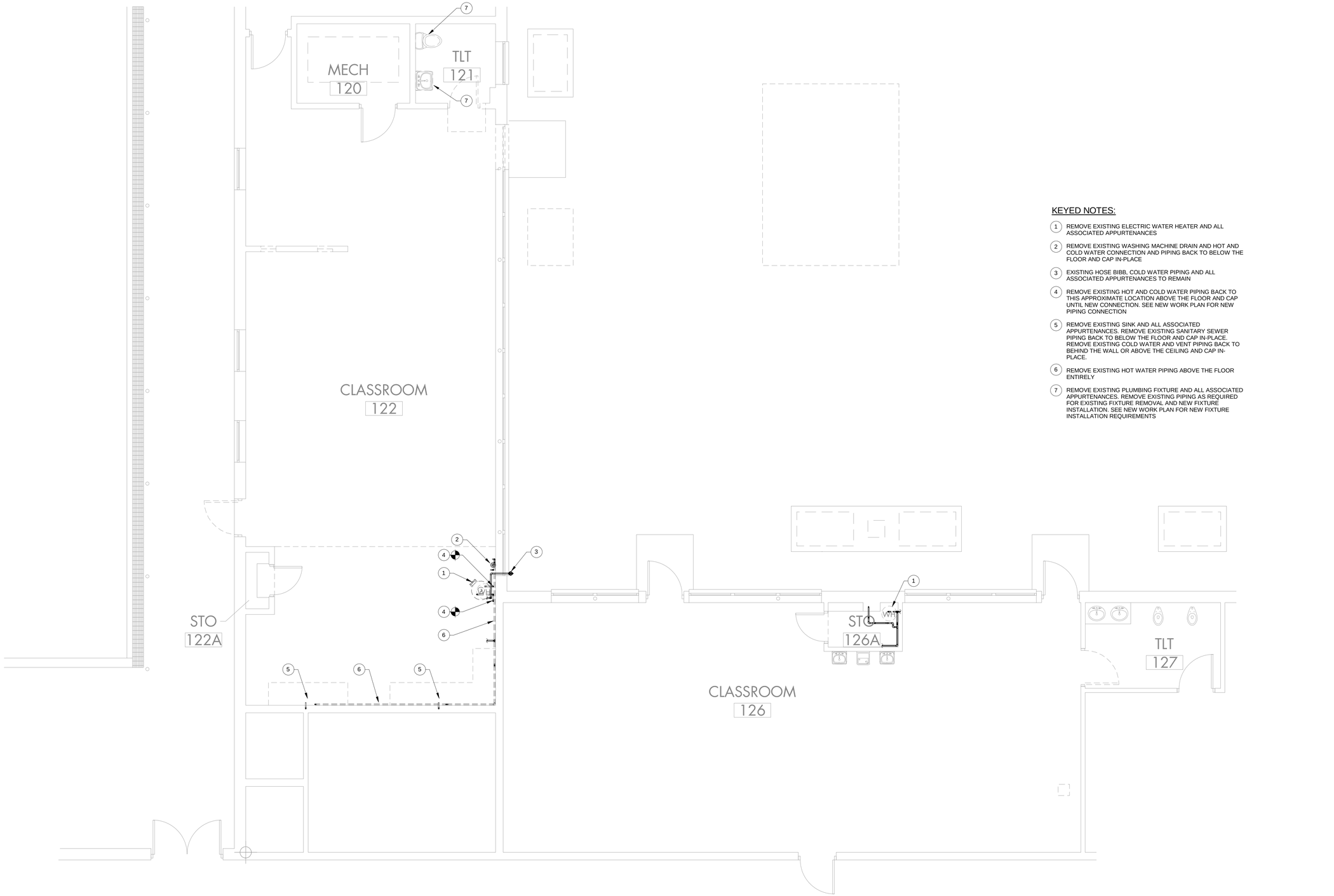

1 PLUMBING PLAN - DEMOLITION
1/4" = 1'-0"

KEYED NOTES:

1. REMOVE EXISTING ELECTRIC WATER HEATER AND ALL ASSOCIATED APPURTENANCES
2. REMOVE EXISTING WASHING MACHINE DRAIN AND HOT AND COLD WATER CONNECTION AND PIPING BACK TO BELOW THE FLOOR AND CAP IN-PLACE
3. EXISTING HOSE BIBB, COLD WATER PIPING AND ALL ASSOCIATED APPURTENANCES TO REMAIN
4. REMOVE EXISTING HOT AND COLD WATER PIPING BACK TO THIS APPROXIMATE LOCATION ABOVE THE FLOOR AND CAP UNTIL NEW CONNECTION. SEE NEW WORK PLAN FOR NEW PIPING CONNECTION
5. REMOVE EXISTING SINK AND ALL ASSOCIATED APPURTENANCES. REMOVE EXISTING SANITARY SEWER PIPING BACK TO BELOW THE FLOOR AND CAP IN-PLACE. REMOVE EXISTING COLD WATER AND VENT PIPING BACK TO BEHIND THE WALL OR ABOVE THE CEILING AND CAP IN-PLACE.
6. REMOVE EXISTING HOT WATER PIPING ABOVE THE FLOOR ENTIRELY
7. REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED APPURTENANCES. REMOVE EXISTING PIPING AS REQUIRED FOR EXISTING FIXTURE REMOVAL AND NEW FIXTURE INSTALLATION. SEE NEW WORK PLAN FOR NEW FIXTURE INSTALLATION REQUIREMENTS

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PLUMBING PLAN - DEMOLITION

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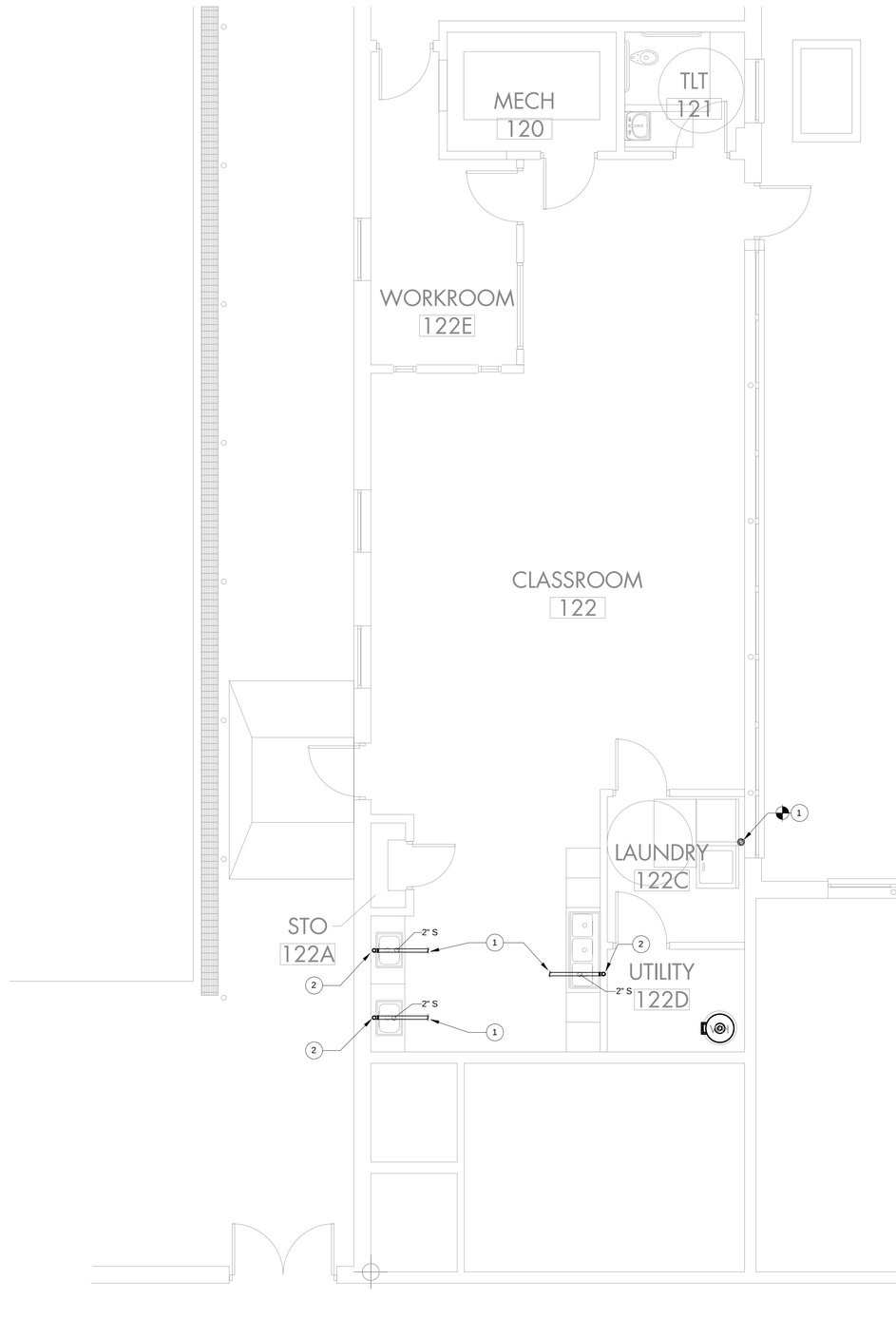

KEYED NOTES:

1. CONNECT NEW SANITARY SEWER PIPING TO EXISTING SANITARY SEWER PIPING BELOW FLOOR WITHIN THE AREA
2. 2" SANITARY SEWER PIPING FROM ABOVE

1 UNDERGROUND PLAN - PLUMBING
1/4" = 1'-0"

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UNDERGROUND PLAN - NEW WORK

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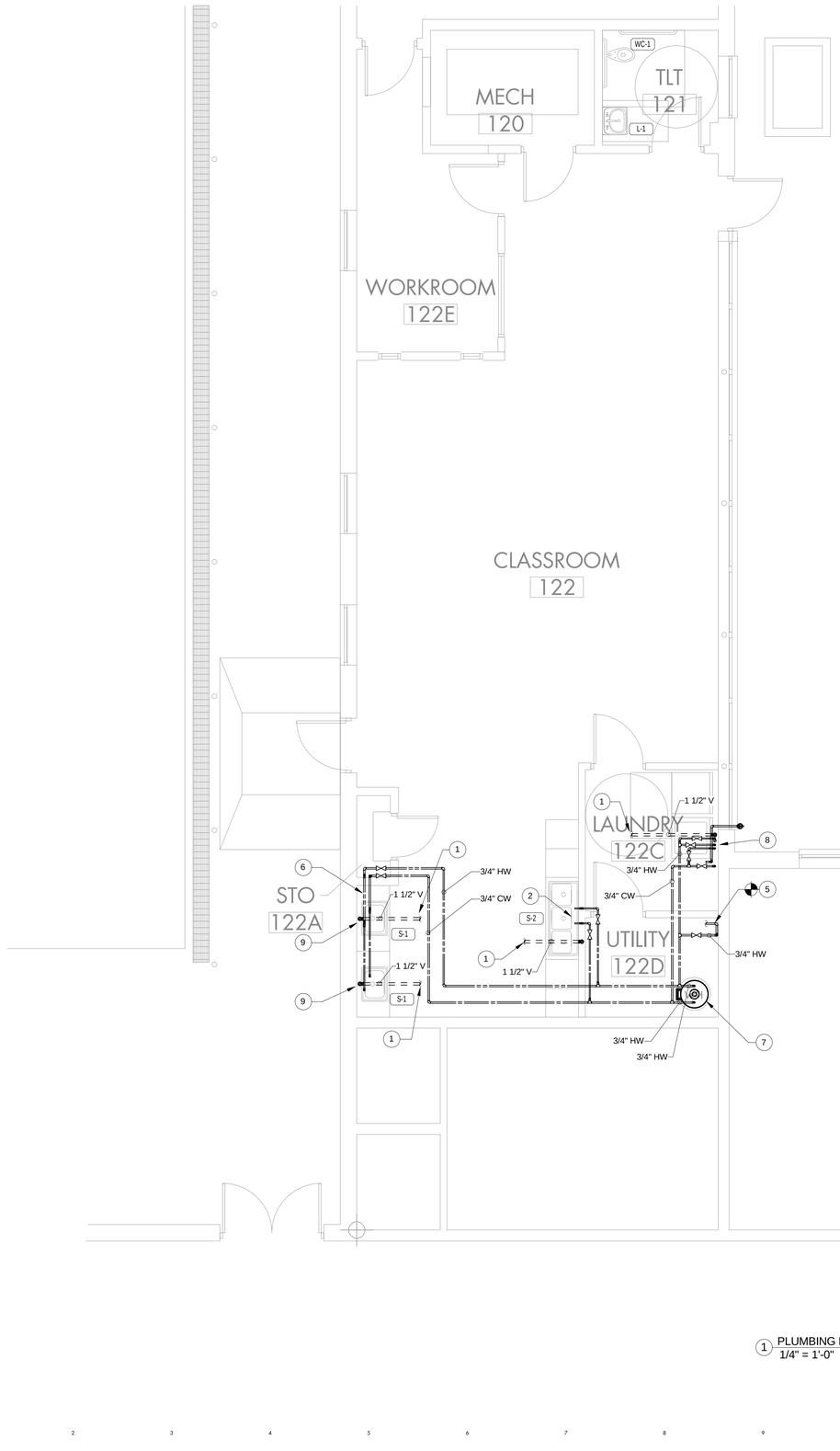

KEYED NOTES:

1. CONNECT NEW VENT PIPING TO EXISTING VENT PIPING ABOVE CEILING WITHIN THE AREA
2. 2" SANITARY SEWER PIPING DOWN TO BELOW, 2" VENT PIPING UP TO ABOVE CEILING, 1/2" HOT & COLD WATER PIPING DOWN TO CONNECTION WITH FIXTURE
3. 1 1/2" SANITARY SEWER PIPING DOWN. CONNECT NEW SANITARY SEWER PIPING TO EXISTING SANITARY SEWER PIPING IN APPROXIMATE LOCATION
4. CONNECT NEW COLD WATER PIPING TO EXISTING COLD WATER PIPING IN THIS APPROXIMATE LOCATION
5. CONNECT NEW HOT WATER PIPING TO EXISTING HOT WATER PIPING IN THIS APPROXIMATE LOCATION
6. ROUTE 1/2" HOT AND COLD WATER PIPING WITHIN CABINETRY TO CONNECTION WITH FIXTURE
7. 40 GALLON ELECTRIC WATER HEATER (EWH-1). SEE DETAIL 1/P0.00
8. PROVIDE 2" HUB DRAIN WITH P-TRAP AT 4 FT A.F.F. FOR WASHING MACHINE DRAIN, ROUTE 2" SANITARY SEWER PIPING DOWN TO CONNECTION WITH EXISTING SANITARY SEWER PIPING, 1-1/2" VENT PIPING UP TO ABOVE THE CEILING, ROUTE 1/2" HOT AND COLD WATER PIPING DOWN TO ANGLE VALVES AT 4 FT. A.F.F. FOR WASHING MACHINE CONNECTION, ROUTE HOT AND COLD WATER PIPING DOWN TO CONNECTION WITH EXISTING PIPING
9. 2" SANITARY SEWER PIPING DOWN TO BELOW, 2" VENT PIPING UP TO ABOVE CEILING

1 PLUMBING PLAN - NEW WORK
1/4" = 1'-0"

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PLUMBING PLAN - NEW WORK

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ELECTRICAL GENERAL NOTES:

THE REUSE OF EXISTING CONDUIT, RACEWAYS, AND BACKBOXES SHALL BE PERMITTED WHERE FEASIBLE. WHERE THE REUSE OF EXISTING RACEWAYS OCCURS, CONTRACTOR SHALL ENSURE THAT PROPER SEPARATION OF WIRING CLASSIFICATIONS IS MAINTAINED THROUGHOUT THE ENTIRE CIRCUIT. WHERE CO-MINGLING OCCURS, CONTRACTOR SHALL PROVIDE SEPARATE RACEWAYS TO MAINTAIN THE REQUIRED SEPARATION. THE CONTRACTOR SHALL INVESTIGATE THE EXISTING ELECTRICAL SYSTEM IN ENTIRETY PRIOR TO BID TO DETERMINE THE EXTENT OF ALL REQUIRED WORK.

ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. EXISTING CONDUIT, RACEWAYS, AND BOXES BEING REUSED SHALL BE DEMOLISHED/REWORKED IN A NEAT AND WORKMANLIKE MANNER.

EXISTING CONDITIONS SHOWN IN THESE DRAWINGS ARE TAKEN FROM ORIGINAL DRAWINGS AND FIELD INVESTIGATION. ALL EXISTING CONDITIONS MUST BE VERIFIED PRIOR TO BID TO DETERMINE ALL REQUIRED DEMOLITION/REWORK. FIELD CONDITIONS SHALL GOVERN.

THE PLANS ARE NOT INCLUSIVE OF ALL DEVICES WITHIN THE BUILDING. IT IS INTENDED TO PROVIDE THE CONTRACTOR WITH A GENERAL KNOWLEDGE OF THE EXISTING CONDITIONS WITHIN THE PROJECT AREA. ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION AND REWORK WHETHER SHOWN ON THE PLANS OR NOT.

ALL ITEMS REMOVED UNDER THIS PROJECT SHALL BE DISPOSED OF OR TURNED OVER TO THE OWNER AT THE OWNER'S DISCRETION.

ALL CONDUIT SHALL BE IDENTIFIED PER FACILITY STANDARDS. COORDINATE STANDARDS WITH FACILITY.

VERIFY AND COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF EQUIPMENT.

ALL DEVICES SHALL BE MOUNTED VERTICAL, UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO COMMENCING WORK AND DURING CONSTRUCTION FOR POWER AND/OR SYSTEM OUTAGES AS WELL AS GENERAL REQUIREMENTS.

EQUIPMENT SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED.

WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH NEC 110. THE EXCLUSIVELY DEDICATED SPACE EXTENDING FROM FLOOR TO STRUCTURAL CEILING WITH A WIDTH AND DEPTH OF THE PANELBOARD OR SWITCHBOARD MUST BE CLEAR OF ALL PIPING, DUCTS, EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES IN ACCORDANCE WITH NEC 408.

ALL NEW AND EXISTING PANELS AFFECTED BY THIS PROJECT SHALL BE PROVIDED WITH A NEW TYPE WRITTEN DIRECTORY.

MINIMUM WIRE SIZE IS #12 UNLESS NOTED OTHERWISE.

BRANCH CIRCUIT "RECIRCUITING" REQUIREMENTS:

ALL BRANCH CIRCUITS BEING USED FOR "RECIRCUITING" SHALL BE FULLY INVESTIGATED BY THE CONTRACTOR PRIOR TO PERFORMING THE REQUIRED WORK. "RECIRCUITING" SHALL INCLUDE, BUT NOT LIMITED TO DEMOLISHING EXISTING ELECTRICAL DEVICES SHOWN AS BEING REMOVED AND REUSING THAT BRANCH CIRCUIT TO FEED NEW ELECTRICAL DEVICES.

INTENT OF "RECIRCUITING" IS TO INTERCEPT THE EXISTING BRANCH CIRCUITS AT THE NEAREST, MOST CONVENIENT OVERHEAD JUNCTION BOX FOR EXTENSION TO NEW ELECTRICAL DEVICES SHOWN.
THE REUSE OF EXISTING RACEWAYS SHALL BE PERMITTED TO THE FULLEST EXTENT POSSIBLE PROVIDED THAT THE RACEWAYS ARE METALLIC AND PROPERLY SUPPORTED PER THE NEC. CONTRACTOR SHALL ENSURE THAT SUCH RACEWAYS ARE SUPPORTED, AND IF REQUIRED, ADD ADDITIONAL SUPPORTS.

ALL WIRING DEVICE'S COVERPLATES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND SWITCHES SHALL BE REPLACED WITH NEW COVERPLATES.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
$\$_a$	SINGLE POLE SWITCH (SUBSCRIPT INDICATES ITEM CONTROLLED)
$\$_D$	SINGLE POLE SWITCH WITH DIMMER
$\$_3$	THREE-WAY SWITCH
$\$_{OC}$	OCCUPANCY SWITCH
$\$_M$	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS
	DUPLEX RECEPTACLE "IG" INDICATES ISOLATED GROUND
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
WP	GFI RECEPTACLE. WP DENOTES WEATHERPROOF COVER.
	GFI RECEPTACLE MOUNTED ABOVE COUNTER
	TWO DUPLEX RECEPTACLES WITH COMMON COVER
J	JUNCTION BOX BPI: BASE POWER INLET - CONNECTION FOR MODULAR FURNITURE, PROVIDE BACKBOX FOR POWER AND A SEAPRATE BACKBOX FOR DATA, PROVIDE (2) CAT 6 CABLES BACK TO SERVER ROOM
	MAGNETIC MOTOR STARTER OR CONTACTOR SIZE AS NOTED
5	MOTOR CONNECTION, NUMBER DENOTES HORSEPOWER
VFD	VARIABLE FREQUENCY DRIVE
DDC	DIRECT DIGITAL CONTROL PANEL
T	TRANSFORMER
	AUTOMATIC TRANSFER SWITCH
30AR / NF	NON-FUSED DISCONNECT SWITCH, SIZE AS NOTED NF DENOTES NON-FUSED
30AR / 20AF	FUSED DISCONNECT AR DENOTES AMP RATING OF SWITCH AF DENOTES AMP FUSE SIZE
MCP SIZE; # OF POLES; 30/3 / 0; 3R; ENCLOSURE NEMA 1 UNLESS NOTED; NEMA STARTER SIZE	COMBINATION MAGNETIC MOTOR STARTER, SIZE AS NOTED 3 POLE UNLESS OTHERWISE NOTED
	BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. CONDUIT SHALL INCLUDE PHASE, NEUTRAL AND GROUND CONDUCTORS AS REQUIRED FOR CIRCUITS (UNLESS OTHERWISE NOTED).
	BRANCH CIRCUIT CONDUIT CONCEALED IN SLAB, UNDERGROUND OR UNDER FLOOR.
	BRANCH CIRCUIT CONDUIT EXPOSED
	GROUND OR GROUND ROD AS NOTED
	FLEXIBLE CONDUIT

SYMBOL	DESCRIPTION
	FLUORESCENT STRIP FIXTURE
A	FIXTURE DESIGNATION
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE, SWITCHED WITH BATTERY PACK
	FLUORESCENT FIXTURE, NON-SWITCHED WITH BATTERY PACK
	DOWN LIGHT FIXTURE
	EXIT LIGHT FIXTURE DIRECTION ARROWS AS SHOWN (SHADED QUADRANT INDICATES FACE(S) OF FIXTURE)
	WALL MOUNTED EXIT LIGHT FIXTURE
	BATTERY PACK WITH TWIN HEADS
PC	PHOTOCELL
	CEILING SMOKE DETECTOR, PHOTO-ELECTRIC TYPE UNLESS OTHERWISE NOTED E = ELEVATOR WITH RECALL CONTACTS I = IONIZATION
H	HEAT DETECTOR
	DUCT SMOKE DETECTOR R = RETURN S = SUPPLY
R	SUPERVISED CONTROL RELAY
F	COMBINATION AUDIBLE/VISUAL NOTIFICATION DEVICE
F	MANUAL PULL STATION
F F	COMBINATION AUDIBLE/VISUAL AND PULL STATION
F	VISUAL SIGNALING UNIT, WALL MOUNTED (NO AUDIO DEVICE)
FAAP	FIRE ALARM ANNUNCIATOR PANEL - FLUSH MOUNTED
FACP	FIRE ALARM CONTROL PANEL - FLUSH MOUNTED
	VOICE/DATA OUTLET BACK BOX, PROVIDE CAT 6 WIRE TO SERVER ROOM C = ABOVE THE COUNTER W = WALL MOUNTED CONDUIT = PROVIDE CONDUIT AND CAT6 WIRE TO SERVER ROOM

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.

Lighting Fixture Schedule

Type	Description	Type Comments
A	2' X 4', NEW LIGHT FIXTURE	MATCH EXISTING 2' X 4' LIGHT FIXTURES ON SITE
AX	2' X 4', EXISTING LIGHT FIXTURE	
B	EXISTING BATHROOM LIGHT FIXTURE	
HH	EMERGENCY WALL PACK	MATCH EXISTING EMERGENCY WALL PACKS ON SITE
X	EXIT SIGN	MATCH EXISTING EXIT SIGNS ON SITE

Sheet List

Sheet Number	Sheet Name
E0.01	ELECTRICAL LEGEND AND NOTES
E1.01	LIGHTING PLAN
E2.01	POWER/FIRE ALARM PLAN

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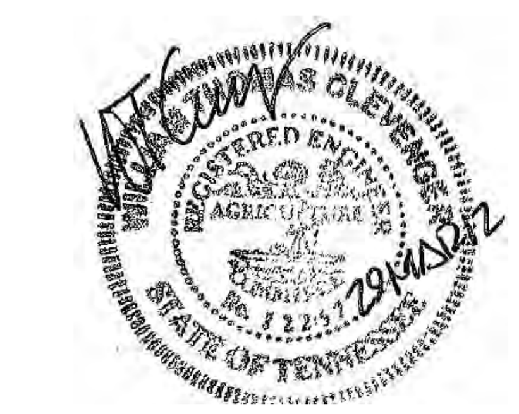

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ELECTRICAL LEGEND AND NOTES

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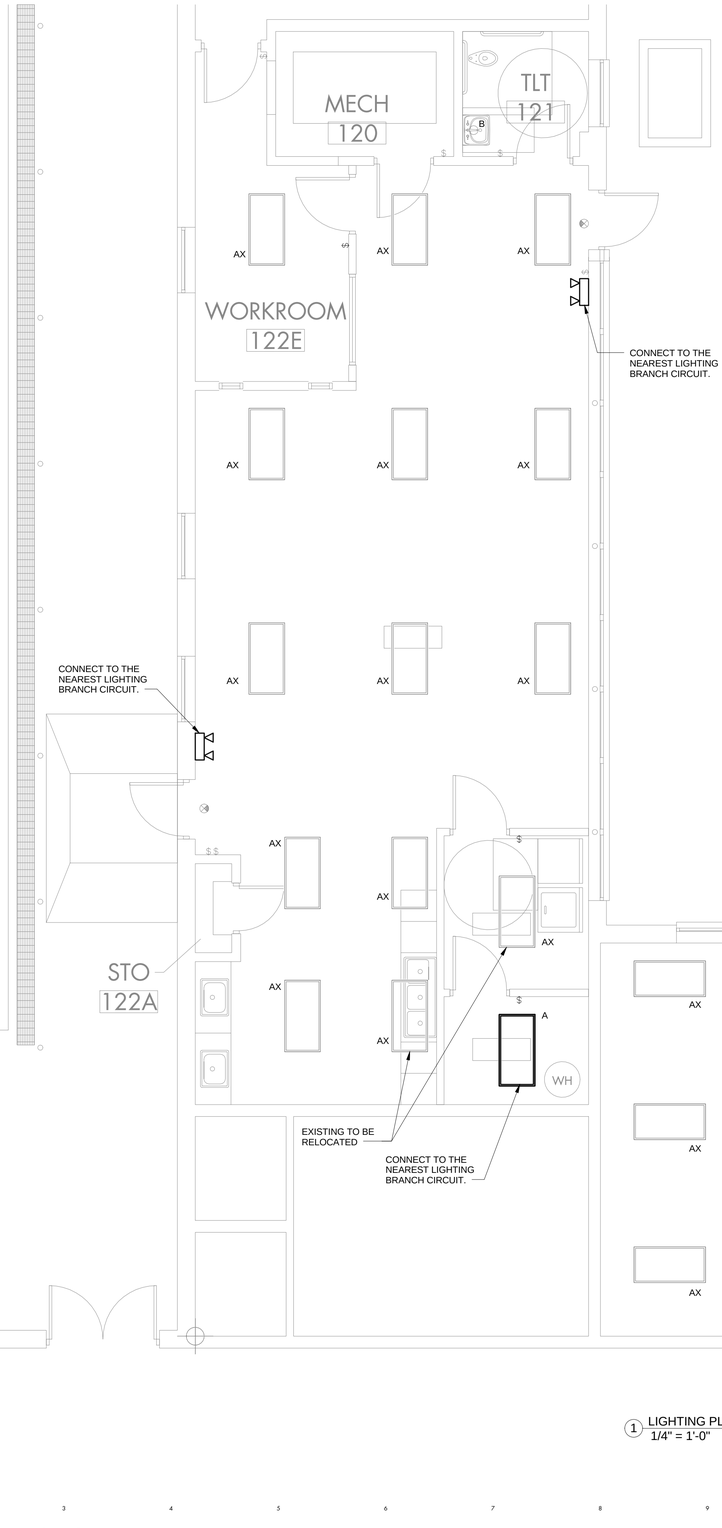

1 LIGHTING PLAN
1/4" = 1'-0"

LEGEND

$	EXISTING LIGHT SWITCH - TO REMAIN
$	NEW LIGHT SWITCH
	EXISTING LIGHT FIXTURE - TO REMAIN OR TO BE RELOCATED
	NEW LIGHT FIXTURE
	EXISTING TO REMAIN EMERGENCY LIGHT FIXTURE
	NEW EMERGENCY LIGHT FIXTURE
	EXISTING TO REMAIN EXIT LIGHT FIXTURE
	NEW EXIT LIGHT FIXTURE

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LIGHTING PLAN

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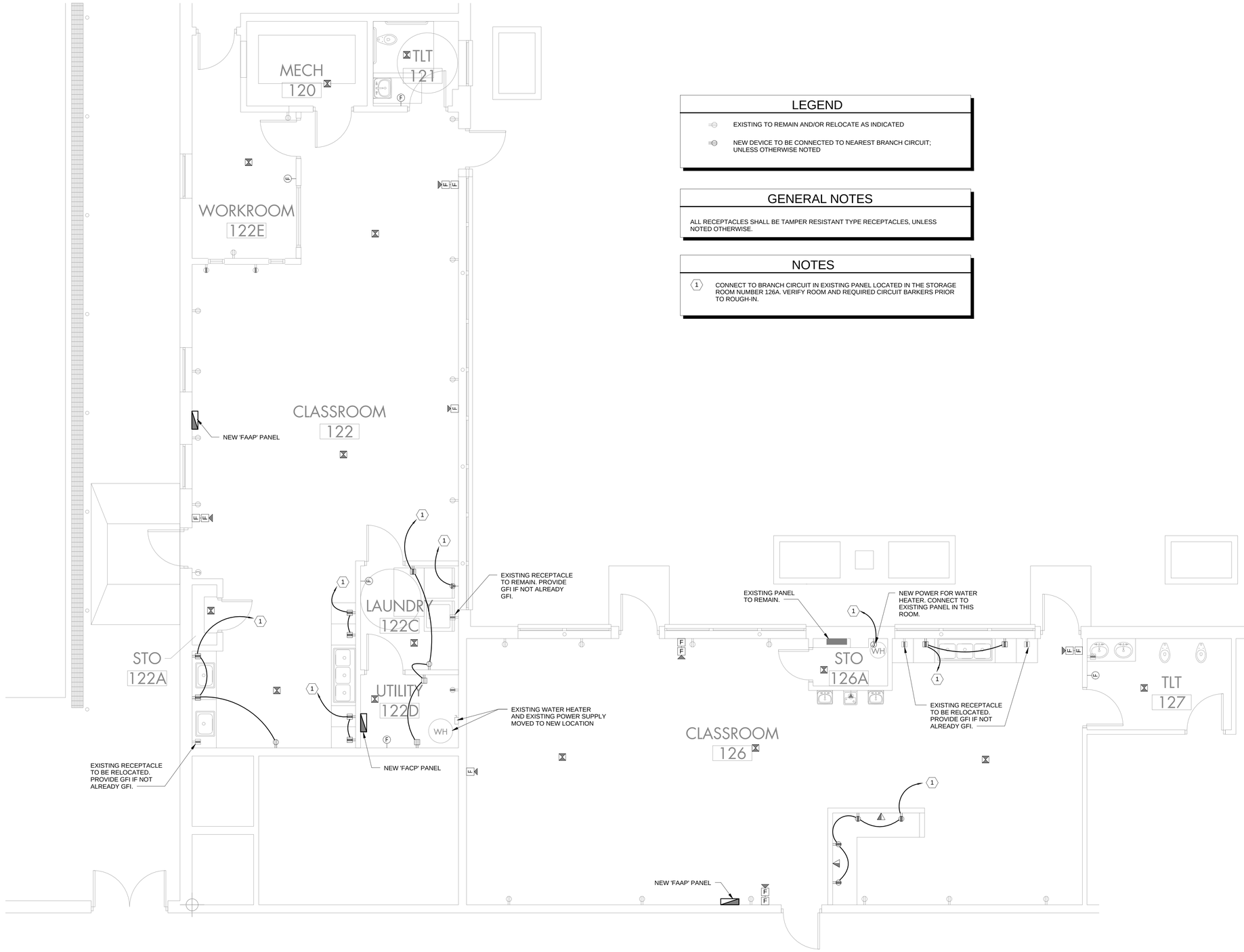

1 POWER/FIRE ALARM PLAN
1/4" = 1'-0"

LEGEND

EXISTING TO REMAIN AND/OR RELOCATE AS INDICATED

NEW DEVICE TO BE CONNECTED TO NEAREST BRANCH CIRCUIT; UNLESS OTHERWISE NOTED

GENERAL NOTES

ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE RECEPTACLES, UNLESS NOTED OTHERWISE.

NOTES

1. CONNECT TO BRANCH CIRCUIT IN EXISTING PANEL LOCATED IN THE STORAGE ROOM NUMBER 126A. VERIFY ROOM AND REQUIRED CIRCUIT BARKERS PRIOR TO ROUGH-IN.

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POWER/FIRE ALARM PLAN

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