SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:
   1. INTERIOR GYPSUM BOARD, WALL AND CEILINGS.
   2. TILE BACKING PANELS.
   3. CEMENTITIOUS BACKER UNITS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

1.3 QUALITY ASSURANCE

A. FIRE-RESISTANCE-RATED ASSEMBLIES: FOR FIRE-RESISTANCE-RATED ASSEMBLIES, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT TESTING AGENCY.
B. STC-RATED ASSEMBLIES: FOR STC-RATED ASSEMBLIES, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 90 AND CLASSIFIED ACCORDING TO ASTM E 413 BY AN INDEPENDENT TESTING AGENCY.

PART 2 - PRODUCTS

2.1 INTERIOR GYPSUM BOARD

A. GENERAL: COMPLYING WITH ASTM C 36/C 36M OR ASTM C 1396/C 1396M, AS APPLICABLE TO TYPE OF GYPSUM BOARD INDICATED AND WHICHEVER IS MORE STRINGENT.
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
      a. AMERICAN GYPSUM CO.
      b. BPB AMERICA INC.
      c. G-P GYPSUM.
      d. LAFARGE NORTH AMERICA INC.
      e. NATIONAL GYPSUM COMPANY.
      f. PABCO GYPSUM.
      g. TEMPLE.
      h. USG CORPORATION.
B. REGULAR TYPE:
   1. THICKNESS: 1/2 INCH (12.7 MM).
   2. LONG EDGES: TAPERED.
C. TYPE X:
   1. THICKNESS: 5/8 INCH (15.9 MM).
   2. LONG EDGES: TAPERED.
D. CEILING TYPE: MANUFACTURED TO HAVE MORE SAG RESISTANCE THAN REGULAR-TYPE GYPSUM BOARD.
   1. THICKNESS: 1/2 INCH (12.7 MM).
   2. LONG EDGES: TAPERED.
E. MOISTURE- AND MOLD-RESISTANT TYPE: WITH MOISTURE- AND MOLD-RESISTANT CORE AND SURFACES.
   1. CORE: 5/8 INCH (15.9 MM); TYPE MR.
   2. LONG EDGES: TAPERED.

2.2 TILE BACKING PANELS

A. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 630/C 630M OR ASTM C 1396/C 1396M.
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
      a. AMERICAN GYPSUM CO.
      b. BPB AMERICA INC.
      c. G-P GYPSUM.
      d. LAFARGE NORTH AMERICA INC.
      e. NATIONAL GYPSUM COMPANY.
      f. PABCO GYPSUM.
      g. TEMPLE.
      h. USG CORPORATION.
B. CEMENTITIOUS BACKER UNITS: ANSI A118.1.
   1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
      a. CUSTOM BUILDING PRODUCTS; WONDERBOARD.
      b. FINPAN, INC.; UTIL-A-CRETE CONCRETE BACKER BOARD.
      c. USG CORPORATION; DUROCK CEMENT BOARD.
   2. THICKNESS: AS INDICATED ON DRAWINGS.

2.3 TRIM ACCESSORIES

A. INTERIOR TRIM: ASTM C 1047.
   1. MATERIAL: GALVANIZED OR ALUMINUM-COATED STEEL SHEET.
   2. SHAPES:
      a. CORNERBEAD.
      b. BULLNOSE BEAD.
      c. LC-BEAD: J-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
      d. L-BEAD: L-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
      e. U-BEAD: J-SHAPED; EXPOSED SHORT FLANGE DOES NOT RECEIVE JOINT COMPOUND.
      f. CURVED-EDGE CORNERBEAD: WITH NOTCHED OR FLEXIBLE FLANGES.
B. ALUMINUM TRIM: EXTRUDED ACCESSORIES OF PROFILES AND DIMENSIONS INDICATED.
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
      a. FRY REGLET CORP.
      b. GORDON, INC.
      c. PITTCON INDUSTRIES.
   2. ALUMINUM: ALLOY AND TEMPER WITH NOT LESS THAN THE STRENGTH AND DURABILITY PROPERTIES OF ASTM B 221 (ASTM B 221M), ALLOY 6063-T5.
   3. FINISH: CORROSION-RESISTANT PRIMER COMPATIBLE WITH JOINT COMPOUND AND FINISH MATERIALS SPECIFIED.

2.4 JOINT TREATMENT MATERIALS

A. GENERAL: COMPLY WITH ASTM C 475/C 475M.
B. JOINT TAPE:
   1. INTERIOR GYPSUM WALLBOARD: PAPER.
   2. TILE BACKING PANELS: AS RECOMMENDED BY PANEL MANUFACTURER.
C. JOINT COMPOUND FOR INTERIOR GYPSUM WALLBOARD: FOR EACH COAT USE FORMULATION THAT IS COMPATIBLE WITH OTHER COMPOUNDS APPLIED ON PREVIOUS OR FOR SUCCESSIVE COATS.
   1. PREFILLING: AT OPEN JOINTS, ROUNDED OR BEVELED PANEL EDGES, AND DAMAGED SURFACE AREAS, USE SETTING-TYPE TAPING COMPOUND.
   2. EMBEDDING AND FIRST COAT: FOR EMBEDDING TAPE AND FIRST COAT ON JOINTS, FASTENERS, AND TRIM FLANGES, USE SETTING-TYPE TAPING COMPOUND.
      a. USE SETTING-TYPE COMPOUND FOR INSTALLING PAPER-FACED METAL TRIM ACCESSORIES.
   3. FILL COAT: FOR SECOND COAT, USE SETTING-TYPE, SANDABLE TOPPING COMPOUND.
   4. FINISH COAT: FOR THIRD COAT, USE SETTING-TYPE, SANDABLE TOPPING COMPOUND.
D. JOINT COMPOUND FOR TILE BACKING PANELS:
   1. WATER-RESISTANT GYPSUM BACKING BOARD: USE SETTING-TYPE TAPING COMPOUND AND SETTING-TYPE, SANDABLE TOPPING COMPOUND.
   2. CEMENTITIOUS BACKER UNITS: AS RECOMMENDED BY BACKER UNIT MANUFACTURER.

2.5 AUXILIARY MATERIALS

A. GENERAL: PROVIDE AUXILIARY MATERIALS THAT COMPLY WITH REFERENCED INSTALLATION STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
B. STEEL DRILL SCREWS: ASTM C 1002, UNLESS OTHERWISE INDICATED.
   1. USE SCREWS COMPLYING WITH ASTM C 954 FOR FASTENING PANELS TO STEEL MEMBERS FROM 0.033 TO 0.112 INCH (0.84 TO 2.84 MM) THICK.
   2. FOR FASTENING CEMENTITIOUS BACKER UNITS, USE SCREWS OF TYPE AND SIZE RECOMMENDED BY PANEL MANUFACTURER.
C. SOUND ATTENUATION BLANKETS: ASTM C 665, TYPE I (BLANKETS WITHOUT VAPOR FACING) PRODUCED BY COMBINING THERMOSETTING RESINS WITH MINERAL FIBERS MANUFACTURED FROM GLASS, SLAG WOOL, OR ROCK WOOL.
   1. FIRE-RESISTANCE-RATED ASSEMBLIES: COMPLY WITH MINERAL-FIBER REQUIREMENTS OF ASSEMBLY.
D. ACOUSTICAL SEALANT: AS SPECIFIED IN DIVISION 07 SECTION "JOINT SEALANTS."
   1. PROVIDE SEALANTS THAT HAVE VOC CONTENT OF 250 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).
E. THERMAL INSULATION: AS SPECIFIED IN DIVISION 07 SECTION "THERMAL INSULATION."
F. VAPOR RETARDER: AS SPECIFIED IN DIVISION 07 SECTION "THERMAL INSULATION."

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS, GENERAL

A. COMPLY WITH ASTM C 840.
B. EXAMINE PANELS BEFORE INSTALLATION. REJECT PANELS THAT ARE WET, MOISTURE DAMAGED, AND MOLD DAMAGED.
C. ISOLATE PERIMETER OF GYPSUM BOARD APPLIED TO NON-LOAD-BEARING PARTITIONS AT STRUCTURAL ABUTMENTS, EXCEPT FLOORS. PROVIDE 1/4- TO 1/2-INCH- (6.4- TO 12.7-MM-) WIDE SPACES AT THESE LOCATIONS, AND TRIM EDGES WITH EDGE TRIM WHERE EDGES OF PANELS ARE EXPOSED. SEAL JOINTS BETWEEN EDGES AND ABUTTING STRUCTURAL SURFACES WITH ACOUSTICAL SEALANT.
D. WOOD FRAMING: INSTALL GYPSUM PANELS OVER WOOD FRAMING, WITH FLOATING INTERNAL CORNER CONSTRUCTION. DO NOT ATTACH GYPSUM PANELS ACROSS THE FLAT GRAIN OF WIDE-DIMENSION LUMBER, INCLUDING FLOOR JOISTS AND HEADERS. FLOAT GYPSUM PANELS OVER THESE MEMBERS, OR PROVIDE CONTROL JOINTS TO COUNTERACT WOOD SHRINKAGE.

3.2 APPLYING INTERIOR GYPSUM BOARD

A. INSTALL INTERIOR GYPSUM BOARD IN THE FOLLOWING LOCATIONS:
   1. REGULAR TYPE: AS INDICATED ON DRAWINGS.
   2. TYPE X: AS INDICATED ON DRAWINGS.
3. CEILING TYPE: AS INDICATED ON DRAWINGS.
4. MOISTURE- AND MOLD-RESISTANT TYPE: AS INDICATED ON DRAWINGS.

3.3 APPLYING TILE BACKING PANELS

A. WATER-RESISTANT GYPSUM BACKING BOARD: INSTALL WHERE INDICATED. INSTALL WITH 1/4-INCH (6.4-MM) GAP WHERE PANELS ABUT OTHER CONSTRUCTION OR PENETRATIONS.
B. CEMENTITIOUS BACKER UNITS: ANSI A108.1, AT INDICATED TILE.
C. AREAS NOT SUBJECT TO WETTING: INSTALL REGULAR-TYPE GYPSUM WALLBOARD PANELS TO PRODUCE A FLAT SURFACE EXCEPT AT LOCATIONS INDICATED TO RECEIVE WATER-RESISTANT PANELS.
D. WHERE TILE BACKING PANELS ABOUT OTHER TYPES OF PANELS IN SAME PLANE, SHIM SURFACES TO PRODUCE A UNIFORM PLANE ACROSS PANEL SURFACES.

3.4 INSTALLING TRIM ACCESSORIES

A. GENERAL: FOR TRIM WITH BACK FLANGES INTENDED FOR FASTENERS, ATTACH TO FRAMING WITH SAME FASTENERS USED FOR PANELS. OTHERWISE, ATTACH TRIM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
B. CONTROL JOINTS: INSTALL CONTROL JOINTS AT LOCATIONS INDICATED ON DRAWINGS, INCLUDING ARBY'S DECOR DRAWINGS.
C. INTERIOR TRIM: INSTALL IN THE FOLLOWING LOCATIONS:
   1. CORNERBEAD: USE AT OUTSIDE CORNERS.
   2. BULLNOSE BEAD: USE AT OUTSIDE CORNERS.
3. LC-BEAD: USE AT EXPOSED PANEL EDGES.
4. L-BEAD: USE WHERE INDICATED.
5. U-BEAD: USE AT EXPOSED PANEL EDGES WHERE INDICATED.
D. ALUMINUM TRIM: INSTALL IN LOCATIONS INDICATED ON DRAWINGS.

3.5 FINISHING GYPSUM BOARD

A. GENERAL: TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR DECORATION. PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES.
B. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS.
C. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.
D. GYPSUM BOARD FINISH LEVELS: FINISH PANELS TO LEVELS INDICATED BELOW:
   1. LEVEL 2: PANELS THAT ARE SUBSTRATE FOR TILE WHERE INDICATED ON DRAWINGS.
   2. LEVEL 3: WHERE INDICATED ON DRAWINGS.
   3. LEVEL 4: AT PANEL SURFACES THAT WILL BE EXPOSED TO VIEW, UNLESS OTHERWISE INDICATED.
      a. PRIMER AND ITS APPLICATION TO SURFACES ARE SPECIFIED IN OTHER DIVISION 09 SECTIONS.
E. CEMENTITIOUS BACKER UNITS: FINISH ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

3.6 APPLYING TEXTURE FINISHES

A. SURFACE PREPARATION AND PRIMER: PREPARE AND APPLY PRIMER TO GYPSUM PANELS AND OTHER SURFACES RECEIVING FINISHES. APPLY PRIMER TO SURFACES THAT ARE CLEAN, DRY, AND SMOOTH.

3.7 PROTECTION

A. PROTECT INSTALLED PRODUCTS FROM DAMAGE FROM WEATHER, CONDENSATION, DIRECT SUNLIGHT, CONSTRUCTION, AND OTHER CAUSES DURING REMAINDER OF THE CONSTRUCTION PERIOD.
B. REMOVE AND REPLACE PANELS THAT ARE WET, MOISTURE DAMAGED, AND MOLD DAMAGED.
   1. INDICATIONS THAT PANELS ARE WET OR MOISTURE DAMAGED INCLUDE, BUT ARE NOT LIMITED TO, DISCOLORATION, SAGGING, OR IRREGULAR SHAPE.
   2. INDICATIONS THAT PANELS ARE MOLD DAMAGED INCLUDE, BUT ARE NOT LIMITED TO, FUZZY OR SPLOTCHY SURFACE CONTAMINATION AND DISCOLORATION.

SECTION 093000 - TILING

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:
   1. CERAMIC MOSAIC TILE.
   2. QUARRY TILE.
   3. GLAZED WALL TILE.
   4. METAL EDGE STRIPS INSTALLED AS PART OF TILE INSTALLATIONS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH PRODUCT INDICATED.
B. SHOP DRAWINGS: SHOW LOCATIONS OF EACH TYPE OF TILE AND TILE PATTERN. SHOW WIDTHS, DETAILS, AND LOCATIONS OF EXPANSION, CONTRACTION, CONTROL, AND ISOLATION JOINTS.
C. SAMPLES:
   1. EACH TYPE, COMPOSITION, COLOR, AND FINISH OF TILE AND GROUT.

1.3 EXTRA MATERIALS

A. FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.
   1. TILE AND TRIM UNITS: FURNISH QUANTITY OF FULL TILE UNITS EQUAL TO 3 PERCENT OF AMOUNT INSTALLED, FOR EACH TYPE, COMPOSITION, COLOR, PATTERN, AND SIZE INDICATED.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. IN OTHER PART 2 ARTICLES WHERE TITLES BELOW INTRODUCE LISTS, THE FOLLOWING REQUIREMENTS APPLY FOR PRODUCT SELECTION:
   1. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE PRODUCTS SPECIFIED.

2.2 TILE PRODUCTS

MANUFACTURERS:
A. AMERICAN OLEAN; DIV. OF DAL-TILE INTERNATIONAL CORP.
2. DALTILE; DIV. OF DAL-TILE INTERNATIONAL INC.
3. CUSTOM BUILDING PRODUCTS (GROUT).
B. ANSI CERAMIC TILE STANDARD: PROVIDE STANDARD GRADE TILE THAT COMPLIES WITH ANSI A137.1, "SPECIFICATIONS FOR CERAMIC TILE," FOR TYPES, COMPOSITIONS, AND OTHER CHARACTERISTICS INDICATED.
C. PROVIDE TILE, GROUT AND OTHER ACCESSORY ITEMS AS INDICATED ON THE DRAWINGS AND ARBY'S "DECOR" PLANS.

2.3 ACCESSORY MATERIALS

1. LATEX-PORTLAND CEMENT PRODUCT: FLEXIBLE MORTAR WITH ACRYLIC-LATEX ADDITIVE.
   a. PRODUCTS:
1) MAPEI CORPORATION; PRP 315.
2) SOUTHERN GROUTS & MORTARS, INC.; SOUTHCRETE 1800.

2.4 SETTING AND GROUTING MATERIALS

A. MANUFACTURERS:
   1. CUSTOM BUILDING PRODUCTS.
B. PORTLAND CEMENT MORTAR (THICK-SET) INSTALLATION MATERIALS: ANSI A108.1A.
C. DRY-SET PORTLAND CEMENT MORTAR (THIN SET): ANSI A118.1.
   1. FOR WALL APPLICATIONS, PROVIDE NONSAGGING MORTAR.
D. LATEX-PORTLAND CEMENT MORTAR (THIN SET): ANSI A118.4.
   1. PREPACKAGED DRY-MORTAR MIX CONTAINING DRY ADDITIVE TO WHICH ONLY WATER MUST BE ADDED.
   2. PREPACKAGED DRY-MORTAR MIX COMBINED WITH LIQUID-LATEX ADDITIVE.
   3. FOR WALL APPLICATIONS, PROVIDE NONSAGGING MORTAR.
E. CHEMICAL-RESISTANT, WATER-CLEANABLE, TILE-SETTING AND -GROUTING EPOXY: ANSI A118.3.
F. STANDARD SANDED CEMENT GROUT: ANSI A118.6, COLOR AS INDICATED ON ARBY'S "DECOR" PLANS.
G. STANDARD UNSANDED CEMENT GROUT: ANSI A118.6, COLOR AS INDICATED ON ARBY'S "DECOR" PLANS.
H. POLYMER-MODIFIED TILE GROUT: ANSI A118.7, COLOR AS INDICATED ON ARBY'S "DECOR" PLANS.
   1. POLYMER TYPE: DRY, REDISPERSIBLE FORM, PREPACKAGED WITH OTHER DRY INGREDIENTS.
   2. POLYMER TYPE: LIQUID-LATEX FORM FOR ADDITION TO PREPACKAGED DRY-GROUT MIX.

2.5 MISCELLANEOUS MATERIALS

A. ELASTOMERIC SEALANTS: ELASTOMERIC SEALANTS OF BASE POLYMER AND CHARACTERISTICS INDICATED THAT COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 07 SECTION "JOINT SEALANTS."
B. TROWELABLE UNDERLAYMENTS AND PATCHING COMPOUNDS: LATEX-MODIFIED, PORTLAND CEMENT-BASED FORMULATION PROVIDED OR APPROVED BY MANUFACTURER OF TILE-SETTING MATERIALS.
C. METAL EDGE STRIPS: ANGLE OR L-SHAPE, WHITE ZINC ALLOY EXPOSED-EDGE MATERIAL.
D. GROUT SEALER: MANUFACTURER'S STANDARD SILICONE PRODUCT FOR SEALING GROUT JOINTS THAT DOES NOT CHANGE COLOR OR APPEARANCE OF GROUT.

PART 3 - EXECUTION

3.1 PREPARATION

A. REMOVE COATINGS, INCLUDING CURING COMPOUNDS AND OTHER SUBSTANCES THAT CONTAIN SOAP, WAX, OIL, OR SILICONE, THAT ARE INCOMPATIBLE WITH TILE-SETTING MATERIALS.
B. FILL CRACKS, HOLES, AND DEPRESSIONS WITH TROWELABLE LEVELING AND PATCHING COMPOUND ACCORDING TO TILE-SETTING MATERIAL MANUFACTURER'S WRITTEN INSTRUCTIONS.
C. REMOVE PROTRUSIONS, BUMPS, AND RIDGES BY SANDING OR GRINDING.
D. BLENDING: FOR TILE EXHIBITING COLOR VARIATIONS, USE FACTORY BLENDED TILE OR BLEND TILES AT PROJECT SITE BEFORE INSTALLING.
E. FIELD-APPLIED TEMPORARY PROTECTIVE COATING: WHERE INDICATED UNDER TILE TYPE OR NEEDED TO PREVENT GROUT FROM STAINING OR ADHERING TO EXPOSED TILE SURFACES, PRECOAT THEM WITH CONTINUOUS FILM OF TEMPORARY PROTECTIVE COATING, TAKING CARE NOT TO COAT UNEXPOSED TILE SURFACES.

3.2 INSTALLATION, GENERAL

A. ANSI TILE INSTALLATION STANDARDS: COMPLY WITH PARTS OF ANSI A108 SERIES "SPECIFICATIONS FOR INSTALLATION OF CERAMIC TILE" THAT APPLY TO TYPES OF SETTING AND GROUTING MATERIALS AND TO METHODS INDICATED IN CERAMIC TILE INSTALLATION SCHEDULES.
B. TCA INSTALLATION GUIDELINES: TCA'S "HANDBOOK FOR CERAMIC TILE INSTALLATION" COMPLY WITH TCA INSTALLATION METHODS INDICATED IN CERAMIC TILE INSTALLATION SCHEDULES.
C. EXTEND TILE WORK INTO RECESSES AND UNDER OR BEHIND EQUIPMENT AND FIXTURES TO FORM COMPLETE COVERING WITHOUT INTERRUPTIONS, UNLESS OTHERWISE INDICATED. TERMINATE WORK NEATLY AT OBSTRUCTIONS, EDGES, AND CORNERS WITHOUT DISRUPTING PATTERN OR JOINT ALIGNMENTS.
D. ACCURATELY FORM INTERSECTIONS AND RETURNS. PERFORM CUTTING AND DRILLING OF TILE WITHOUT MARRING VISIBLE SURFACES. GRIND CUT EDGES OF TILE ABUTTING TRIM, FINISH, OR BUILT-IN ITEMS. FIT TILE CLOSELY TO ELECTRICAL OUTLETS, PIPING, FIXTURES, AND OTHER PENETRATIONS SO PLATES, COLLARS, OR COVERS OVERLAP TILE.
E. JOINTING PATTERN: LAY TILE IN GRID PATTERN, AS INDICATED. ALIGN JOINTS WHEN ADJOINING TILES ON FLOOR, BASE, WALLS, AND TRIM ARE SAME SIZE. LAY OUT TILE WORK AND CENTER TILE FIELDS IN BOTH DIRECTIONS IN EACH SPACE OR ON EACH WALL AREA. ADJUST TO MINIMIZE TILE CUTTING. PROVIDE UNIFORM JOINT WIDTHS, UNLESS OTHERWISE INDICATED.
F. LAY OUT TILE WAINSCOTS TO NEXT FULL TILE BEYOND DIMENSIONS INDICATED.
G. EXPANSION JOINTS: LOCATE EXPANSION JOINTS AND OTHER SEALANT-FILLED JOINTS DURING INSTALLATION OF SETTING MATERIALS, MORTAR BEDS, AND TILE. DO NOT SAW-CUT JOINTS AFTER SETTING TILES.
   1. LOCATE JOINTS IN TILE SURFACES DIRECTLY ABOVE JOINTS IN CONCRETE SUBSTRATE.
   2. PREPARE JOINTS AND APPLY SEALANTS TO COMPLY WITH REQUIREMENTS IN DIVISION 07 SECTION "JOINT SEALANTS."
H. GROUT TILE TO COMPLY WITH REQUIREMENTS OF ANSI A108.10, UNLESS OTHERWISE INDICATED.
   1. FOR CHEMICAL-RESISTANT EPOXY GROUTS, COMPLY WITH ANSI A108.6.

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES ACOUSTICAL PANELS AND EXPOSED SUSPENSION SYSTEMS FOR CEILINGS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
B. SAMPLES: FOR EACH EXPOSED FINISH.

1.3 QUALITY ASSURANCE

1. SURFACE-BURNING CHARACTERISTICS: ACOUSTICAL PANELS COMPLYING WITH ASTM E 1264 FOR CLASS A MATERIALS, WHEN TESTED PER ASTM E 84.
   a. SMOKE-DEVELOPED INDEX: 450 OR LESS.
C. SEISMIC STANDARD: COMPLY WITH THE FOLLOWING:
1. STANDARD FOR CEILING SUSPENSION SYSTEMS REQUIRING SEISMIC RESTRAINT: COMPLY WITH ASTM E 580.
2. CISCA'S RECOMMENDATIONS FOR ACOUSTICAL CEILINGS: COMPLY WITH CISCA'S "RECOMMENDATIONS FOR DIRECT-HUNG ACOUSTICAL TILE AND LAY-IN PANEL CEILINGS--SEISMIC ZONES 0-2."
3. CISCA'S GUIDELINES FOR SYSTEMS REQUIRING SEISMIC RESTRAINT: COMPLY WITH CISCA'S "GUIDELINES FOR SEISMIC RESTRAINT OF DIRECT-HUNG SUSPENDED CEILING ASSEMBLIES--SEISMIC ZONES 3 & 4."
4. SDCE 1, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES": SECTION 9, "EARTHQUAKE LOADS."
D. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE AT A DATE AND TIME TO BE ESTABLISHED.

1.4 EXTRA MATERIALS

A. FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.
   1. ACOUSTICAL CEILING PANELS: FULL-SIZE PANELS EQUAL TO 2.0 PERCENT OF QUANTITY INSTALLED.
   2. SUSPENSION SYSTEM COMPONENTS: QUANTITY OF EACH EXPOSED COMPONENT EQUAL TO 2.0 PERCENT OF QUANTITY INSTALLED.

PART 2 - PRODUCTS

2.1 ACOUSTICAL PANEL CEILINGS, GENERAL

A. ACOUSTICAL PANEL STANDARD: COMPLY WITH ASTM E 1264.
B. METAL SUSPENSION SYSTEM STANDARD: COMPLY WITH ASTM C 635.
C. ATTACHMENT DEVICES: SIZE FOR FIVE TIMES THE DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1, "DIRECT HUNG," UNLESS OTHERWISE INDICATED. COMPLY WITH SEISMIC DESIGN REQUIREMENTS.
D. WIRE HANGERS, BRACES, AND TIES: ZINC-COATED CARBON-STEEL WIRE; ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER.
   1. SIZE: SELECT WIRE DIAMETER SO ITS STRESS AT 3 TIMES HANGER DESIGN LOAD (ASTM C 635, TABLE 1, "DIRECT HUNG") WILL BE LESS THAN YIELD STRESS OF WIRE, BUT PROVIDE NOT LESS THAN 0.106-INCH- (2.69-MM-) DIAMETER WIRE.
E. SEISMIC PERIMETER STABILIZER BARS, SEISMIC STRUTS, AND SEISMIC CLIPS WHERE REQUIRED.
F. METAL EDGE MOLDINGS AND TRIM: TYPE AND PROFILE INDICATED OR, IF NOT INDICATED, MANUFACTURER'S STANDARD MOLDINGS FOR EDGES AND PENETRATIONS THAT COMPLY WITH SEISMIC DESIGN REQUIREMENTS; FORMED FROM SHEET METAL OF SAME MATERIAL, FINISH, AND COLOR AS THAT USED FOR EXPOSED FLANGES OF SUSPENSION SYSTEM RUNNERS.

2.2 ACOUSTICAL PANELS FOR ACOUSTICAL PANEL CEILING

A. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
   1. ARMSTRONG WORLD INDUSTRIES, INC.
   2. USG INTERIORS, INC.
B. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE THE PRODUCT INDICATED ON DRAWINGS:

2.3 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILING

A. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
   1. ARMSTRONG WORLD INDUSTRIES, INC.; PRELUDE XL 15/16 INCH EXPOSED TEE.

PART 3 - EXECUTION

3.1 INSTALLATION

A. COMPLY WITH ASTM C 636 AND SEISMIC DESIGN REQUIREMENTS INDICATED, PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCA'S "CEILING SYSTEMS HANDBOOK."
B. MEASURE EACH CEILING AREA AND ESTABLISH LAYOUT OF ACOUSTICAL PANELS TO BALANCE BORDER WIDTHS AT OPPOSITE EDGES OF EACH CEILING. AVOID USING LESS-THAN-HALF-WIDTH PANELS AT BORDERS.
C. SUSPEND CEILING HANGERS FROM BUILDING'S STRUCTURAL MEMBERS. PLUMB AND FREE FROM CONTACT WITH INSULATION OR OTHER OBJECTS WITHIN CEILING PLENUM. SPLAY HANGERS ONLY WHERE REQUIRED AND, IF PERMITTED WITH FIRE-RESISTANCE-RATED CEILINGS, TO MISS OBSTRUCTIONS. OFFSET RESULTING HORIZONTAL FORCES BY BRACING, COUNTERSPLAYING, OR OTHER EQUALLY EFFECTIVE MEANS. WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACINGS THAT INTERFERE WITH LOCATION OF HANGERS, USE TRAPEZES OR EQUIVALENT DEVICES. WHEN STEEL FRAMING DOES NOT PERMIT INSTALLATION OF HANGER WIRES AT SPACING REQUIRED, INSTALL CARRYING CHANNELS OR OTHER SUPPLEMENTAL SUPPORT FOR ATTACHMENT OF HANGER WIRES.
D. INSTALL EDGE MOLDINGS AND TRIM OF TYPE INDICATED AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS. SCREW ATTACH MOLDINGS TO SUBSTRATE AT INTERVALS NOT MORE THAN 16 INCHES (400 MM) O.C. AND NOT MORE THAN 3 INCHES (75 MM) FROM ENDS, LEVELING WITH CEILING SUSPENSION SYSTEM TO A TOLERANCE OF 1/8 INCH IN 12 FEET (3.2 MM IN 3.6 M). MITER CORNERS ACCURATELY AND CONNECT SECURELY.
E. INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS.
F. INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FIT ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.

SECTION 096816 - SHEET CARPETING

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES WOVEN CARPET.

1.2 SUBMITTALS

A. SHOP DRAWINGS: INCLUDE THE FOLLOWING:
   1. SEAM LOCATIONS.
2. PATTERN TYPE, REPEAT, LOCATION, DIRECTION, AND STARTING POINT.
3. PILE DIRECTION.
4. INSETS AND BORDERS.
5. TRANSITION, AND OTHER ACCESSORY STRIPS.
6. TRANSITION DETAILS TO OTHER FLOORING MATERIALS.

1.3 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: A SPECIFIED INSTALLER WHO IS CERTIFIED BY THE FLOOR COVERING INSTALLATION BOARD OR WHO CAN DEMONSTRATE COMPLIANCE WITH CRI CERTIFICATION PROGRAM REQUIREMENTS.

1.4 DELIVERY, STORAGE, AND HANDLING

A. COMPLY WITH CRI 104, SECTION 5, "STORAGE AND HANDLING."

1.5 PROJECT CONDITIONS

A. GENERAL: COMPLY WITH CRI 104, SECTION 12, "SITE CONDITIONS: TEMPERATURE AND HUMIDITY" AND SECTION 13, "VENTILATION."
B. ENVIRONMENTAL LIMITATIONS: DO NOT INSTALL CARPET UNTIL WET WORK IN SPACES IS COMPLETE AND DRY, AND AMBIENT TEMPERATURE AND HUMIDITY CONDITIONS ARE MAINTAINED AT THE LEVELS INDICATED FOR PROJECT WHEN OCCUPIED FOR ITS INTENDED USE.
C. DO NOT INSTALL CARPET OVER CONCRETE SLABS UNTIL SLABS HAVE CURED AND ARE SUFFICIENTLY DRY TO BOND WITH ADHESIVE AND CONCRETE SLABS HAVE PH RANGE RECOMMENDED BY MANUFACTURER.
D. WHERE PARTITIONS OR OTHER ITEMS ARE INDICATED FOR INSTALLATION ON TOP OF CARPET, INSTALL CARPET BEFORE INSTALLING THESE ITEMS.

1.6 WARRANTY

A. SPECIAL WARRANTY FOR CARPET: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPLACE CARPET THAT DOES NOT COMPLY WITH REQUIREMENTS OR THAT FAILS WITHIN TEN (10) YEARS FROM DATE OF SUBSTANTIAL COMPLETION. WARRANTY DOES NOT INCLUDE DETERIORATION OR FAILURE OF CARPET FROM UNUSUAL TRAFFIC, FAILURE OF SUBSTRATE, VANDALISM, OR ABUSE. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, MORE THAN 10 PERCENT LOSS OF FACE FIBER, EDGE REAVELING, SNAGS, RUNS, AND DELAMINATION.

PART 2 - PRODUCTS

2.1 CARPET

A. PRODUCT: AS INDICATED ON DECOR DRAWINGS.
1. COLOR AND PATTERN: AS INDICATED ON DECOR DRAWINGS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. COMPLY WITH CRI 104, SECTION 8, "DIRECT GLUE-DOWN."
B. MAINTAIN UNIFORMITY OF CARPET DIRECTION AND LAY OF PILE. AT DOORWAYS, CENTER SEAMS UNDER DOOR IN CLOSED POSITION. BIND OR SEAL CUT EDGES A