

SPECIFICATIONS:

SECTION 08 71 00 / FINISH HARDWARE

1. PROVIDE A ROOM WITH SUFFICIENT SPACE AND SHELVING IN WHICH TO STORE AND ARRANGE THE FINISH HARDWARE. THIS ROOM SHALL BE LOCKED WITH A LOCK FURNISHED FOR THIS PROJECT. PROTECT HARDWARE FROM DAMAGE BOTH PRIOR TO AND AFTER INSTALLATION. TAG AND TURN KEYS OVER TO OWNER UPON COMPLETION OF THE WORK. HARDWARE SHALL BE ADA COMPLIANT.
2. WHILE THE FOLLOWING HARDWARE LIST IS INTENDED TO COVER DOORS AND ESTABLISH A TYPE AND STANDARD OF QUALITY, WHERE THE SIZE AND SHAPE OF MEMBERS TO BE EQUIPPED WITH HARDWARE PREVENTS OR MAKES UNSUITABLE THE USE OF EXACT TYPES SPECIFIED, FURNISH SUITABLE TYPES HAVING AS NEARLY AS PRACTICABLE THE SAME OPERATION, FUNCTION, STYLE AND QUALITY AS THAT SPECIFIED.
3. SIZES SHALL BE ADEQUATE FOR THE SERVICE TO WHICH THE INDIVIDUAL ITEMS OF HARDWARE WILL BE SUBJECTED IN THE COURSE OF NORMAL USAGE. EXAMINE THE SPECIFICATIONS, PLANS AND DETAILS, AND FURNISH THE PROPER HARDWARE, WHETHER LISTED OR NOT. IF THERE ARE OMISSIONS IN THE HARDWARE GROUPS IN REGARD TO REGULAR DOORS, THEY SHALL BE CALLED TO THE ATTENTION OF ARCHITECT FOR INSTRUCTIONS PRIOR TO BID OPENING, OTHERWISE, THE LIST WILL BE CONSIDERED COMPLETE.
4. SUBMIT SHOP DRAWINGS COMPLYING WITH SECTION 01 33 00 FOR WORK IN THIS SECTION.
5. PRIOR TO DELIVERY, PREPARE AND SUBMIT TO ARCHITECT, 5 COPIES OF A COMPLETE HARDWARE SCHEDULE. THE SCHEDULE SHALL INDICATE DOOR NUMBER AND LOCATION, QUANTITY, MANUFACTURER'S NUMBER, SIZE AND FINISH ALONG WITH PERTINENT INFORMATION FOR MANUFACTURING AND INSTALLATION. EACH ITEM ON THE SCHEDULE SHALL HAVE AN ITEM NUMBER. THE SCHEDULE SHALL INCLUDE KEYING INSTRUCTIONS.

TEMPLATE HARDWARE

6. HARDWARE SUPPLIED TO METAL DOORS OR JAMBS SHALL BE MADE TO TEMPLATE AND SECURED BY MACHINE SCREWS, WHERE CYLINDRICAL LOCKS ARE USED IN HOLLOW METAL DOORS, FURNISH LOCK REINFORCING IN THE DOOR AT THE TIME OF MANUFACTURE.
7. FURNISH FINISH HARDWARE WITH SCREWS, BOLTS, OR OTHER FASTENINGS OF SUITABLE SIZE AND TYPE TO ANCHOR THE HARDWARE IN POSITION FOR HEAVY USE AND TO HARMONIZE WITH THE HARDWARE AS TO MATERIAL AND FINISH. FURNISH FASTENINGS WHERE NECESSARY WITH EXPANSION SHIELDS, SEX BOLTS, TOGGLE BOLTS, AND OTHER APPROVED ANCHORS ACCORDING TO THE MATERIAL TO WHICH IT IS APPLIED, AND AS RECOMMENDED BY THE MANUFACTURER. FURNISH HARDWARE FASTENED TO CONCRETE WITH MACHINE SCREWS AND TAMP INS. FASTENERS FOR CLOSERS ON WOOD OR MINERAL CORE DOORS SHALL BE SEX BOLTS.

GUARANTEE

7. GUARANTEE HARDWARE FOR A PERIOD OF 2 YEARS FROM DATE OF ACCEPTANCE OF WORK. DEFECTS IN MATERIALS AND WORKSMANSHIP OCCURRING DURING THE GUARANTEE PERIOD SHALL BE CORRECTED AT NO EXPENSE TO THE OWNER.

PRODUCTS

8. REFER TO DOOR SCHEDULE FOR SPECIFIC MANUFACTURER
9. EXTERIOR OUT-SWINGING DOORS SHALL HAVE BUTTS WITH NON-REMOVABLE PIN WHEN THE DOOR IS CLOSED. DOORS SHALL HAVE BALL BEARING BUTTS. BUTTS SHALL BE SIZED IN WIDTH TO CLAMP TRIM.
10. DOORS 1 3/4" THICK AND UP TO 36" WIDE SHALL HAVE 3 (1-1/2 PAIR) 1 1/2" BUTTS
11. DOORS 1 3/4" THICK AND 37" TO 48" WIDE SHALL HAVE 3 (1-1/2 PAIR) 5" BUTTS.
12. DOORS 8'- 0" AND ABOVE SHALL HAVE 4 (2 PAIR) 5" BUTTS.
13. CLOSERS: MANUFACTURED BY LCN. OVERHEAD, SURFACE APPLIED; UNLESS CONCEALED IS DESIGNATED FOR ENTRANCE DOORS.
14. LOCKS AND LATCHES: MANUFACTURED BY SCHLAGE
15. CYLINDERS FOR LOCKS SHALL HAVE 6 PIN TUMBLERS. CYLINDERS SHALL BE REMOVABLE WITH CHANGE KEY WITHOUT REMOVING LOCK FROM DOOR. LOCK AND LATCHES TO HAVE 2 3/4" BACKSET UNLESS OTHERWISE NOTED.
16. STRIKES SHALL BE EXTENDED UPS WHERE REQUIRED TO PROTECT TRIM FROM BEING MARRED BY LATCH BOLT. WROUGHT BOXES SHALL BE FURNISHED WITH STRIKES.
17. PADLOCKS: MANUFACTURED BY SCHLAGE
18. KEYS AND KEYING: MANUFACTURED BY SCHLAGE
19. CYLINDERS FOR PROJECT SHALL BE SET TO NEW MASTER KEYS. CYLINDERS TO BE CONSTRUCTION MASTER KEYED. MASTER-KEY SETS AND INDIVIDUAL KEYING OF LOCKS SHALL BE DETERMINED BY OWNER.
20. FURNISH: COORDINATE KEY REQUIREMENTS WITH OWNER.
21. STOPS: MANUFACTURED BY IVES
22. STOPS (OTHER THAN OVERHEAD TYPE) SHALL BE WALL TYPE WHERE A WALL IS INDICATED WITHIN 12" AND PARALLEL TO THE DOOR LEAF IN THE OPEN POSITION AT 90°. DOWN FLOOR STOPS SHALL BE PROVIDED FOR DOORS WITH NO OVERHEAD STOPS AND NO RESTRICTIONS WITHIN 180° OF SWING.
23. OVERHEAD STOP INSTALL ON EXTERIOR ALUMINUM ENTRANCE DOORS: MANUFACTURED BY GLYNN-JOHNSON.
24. THRESHOLDS: MANUFACTURED BY PEMCO. TYPE AS SPECIFIED IN HARDWARE GROUPS. SIZED TO FIT OPENINGS.
25. DOOR SWEEPS: MANUFACTURED BY PEMCO. PROVIDE DOOR SWEEPS ON EXTERIOR DOORS.
26. WEATHER-STRIPING: MANUFACTURED BY PEMCO. PROVIDE AT EXTERIOR DOORS AT HEAD AND JAMB STILES.
27. SILENCERS: MANUFACTURED BY IVES. METAL FRAMES TO HAVE: SINGLE DOORS - 3 EACH JAMB; DOUBLE DOORS - 2 EACH JAMB.
28. EXIT DEVICES & TRIM: MANUFACTURED BY VON DUPRIN, INC.
29. EXIT DEVICES SHALL BE PANIC HARDWARE DEVICES MOUNTED ON DOORS AS SCHEDULED.
30. DRIP CAP: MANUFACTURED BY PEMCO. PROVIDE DRIP CAP OVER EXTERIOR OUT-SWINGING HOLLOW METAL DOORS NOT PROTECTED BY A WEATHER-TIGHT CANOPY.

SECTION 08 91 00 / LOUVERS

1. SUBMIT SHOP DRAWINGS COMPLYING WITH SECTION 01 33 00 FOR WORK IN THIS SECTION.
2. PRODUCTS AS MANUFACTURED BY AIROLITE COMPANY.
3. STATIONARY EXTRUDED ALUMINUM LOUVERS: TYPE K638 / DEPTH WITH 50% F.A.
4. FRAMES AND BLADES SHALL BE ALLOY 6063 T5, 12-GAUGE EXTRUDED ALUMINUM. ASSEMBLE LOUVERS COMPLETELY BY WELDING. JOIN AT VERTICAL MULLIONS WITH 1" TYPE SLIP MULLION. HORIZONTAL MULLIONS SHALL BE CONSTRUCTED SO AS TO BE INVISIBLE AND APPEAR AS A SINGLE LOUVER HEIGHT FOLLOWING INSTALLATION.
5. STATIONARY EXTRUDED ALUMINUM SIGHT-PROOF LOUVERS: TYPE K605 - 5" DEPTH WITH 52% F.A.
6. BLADES AND FRAMES SHALL BE ALLOY 6063-T5, 12-GAUGE EXTRUDED ALUMINUM. LOUVERS SHALL BE COMPLETELY ASSEMBLED INTO SECTIONS BY FACTORY WELDING. FURNISH 2" FLAT FLANGE AROUND EXTERIOR FACE WITH HOLES FOR ATTACHMENT TO WALL BY EXPANSION BOLTS.
7. STATIONARY EXTRUDED ALUMINUM NARROW-PROFILE LOUVERS: TYPE T608 - 2" DEPTH WITH 33% F.A.
8. BLADES SHALL BE SET ON 45° SLOPE WITH A RETURN BEND ON THE INTERIOR FACE. BOTH BLADES AND FRAMES SHALL BE ALLOY 6063-T5, 12-GAUGE EXTRUDED ALUMINUM. ASSEMBLE COMPLETELY BY FACTORY WELDING.
9. EQUIP LOUVERS WITH ALUMINUM INSECT SCREEN MOUNTED IN STANDARD FOLDED U-TYPE FRAME ATTACHED TO INTERIOR FACE WITH SHEET METAL SCREWS.
10. FINISH, COLOR AND SIZE: COLOR AND SIZE SHALL BE AS INDICATED ON THE DRAWINGS. RYMAR 500 TWO-COAT SYSTEM SHALL BE MANUFACTURER'S FACTORY APPLIED, WITH AN INHIBITIVE PRIMER AND OVEN-CURED RESIN COATING. COATING SHALL MEET THE PERFORMANCE REQUIREMENTS OF AAMA 2605.

11. CLEAR ANODIZED SHALL BE OF 0.4 MILL MINIMUM THICKNESS MEETING AA-M12C22A31, OR COLOR ANODIZED DYED FINISH OF 0.8 MILL MINIMUM THICKNESS MEETING AA-M12C22A42/44. ANODIZED COATINGS SHALL MEET OR EXCEED THE REQUIREMENTS OF AAMA 611-98.
12. INSTALL LOUVERS AT LOCATIONS INDICATED, STRAIGHT AND PLUMB, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

SECTION 09 20 00 / LIGHT-GAUGE FRAMING

QUALITY ASSURANCE

1. ASTM C-754 AND C-645 IS HEREBY MADE A PART OF THIS SPECIFICATION. WORK SHALL CONFORM TO THE METAL STUD MANUFACTURER'S ASSOCIATION STANDARDS.

MATERIALS

2. NON-LOAD BEARING INTERIOR WALLS: METAL STUDS SHALL BE ROLL FORMED CHANNEL TYPE STUDS, 25-GAUGE ELECTRO-GALVANIZED STEEL, SIZES INDICATED. USE 20-GAUGE STEEL STUDS FOR RECEIVE CERAMIC TILE AND FOR WALLS OVER 14' HIGH, AND AT JAMBS OF DOOR OPENINGS 36" OR WIDER.
3. PROVIDE METAL FLOOR AND CEILING RUNNERS DESIGNED TO ACCOMMODATE THE SPECIFIED STUDS. METAL FURRING CHANNELS FOR WALLS SHALL BE 25-GAUGE ELECTRO-GALVANIZED STEEL.
4. LOAD-BEARING AND EXTERIOR WALLS: METAL STUDS FOR INTERIOR LOAD-BEARING AND EXTERIOR WALLS SHALL BE ROLL FORMED CHANNEL TYPE STUDS, 16-GAUGE ELECTRO-GALVANIZED STEEL, 4" OR 6" SIZES AS INDICATED ON THE DRAWINGS.
5. METAL FURRING: SHALL BE ROLL FORMED FURRING CHANNEL TYPE, 25-GAUGE ELECTRO-GALVANIZED STEEL, SIZES AS INDICATED. USE 20-GAUGE FOR WALLS TO RECEIVE CERAMIC TILE AND AT JAMBS OF DOOR OPENINGS 36" OR WIDER. USE WHERE INDICATED FOR FURRING OF WALLS, AND CEILINGS.
6. PROVIDE METAL FLOOR AND CEILING RUNNERS DESIGNED TO ACCOMMODATE THE SPECIFIED STUDS.

INSTALLATION

7. ATTACH STEEL RUNNERS AT FLOOR AND CEILING TO STRUCTURAL ELEMENTS WITH FASTENERS LOCATED 27" FROM EACH END AND SPACED 24" OC. OR TO SUSPENDED CEILINGS WITH TOGGLE OR MOLLY BOLTS SPACED 16" OC.
8. POSITION STUDS VERTICALLY, ENGAGING FLOOR AND CEILING RUNNERS AND SPACING STUDS OVER DOOR, FRAME HEADER. AT DOOR OPENINGS LAP AND ONE POSITIVE ATTACHMENT PER STUD FLANGE. PLACE STUDS IN DIRECT CONTACT WITH DOORJAMBS, ABUTTING PARTITIONS, PARTITION CORNERS AND EXISTING CONSTRUCTION ELEMENTS. WHERE STUDS ARE INSTALLED DIRECTLY AGAINST EXTERIOR WALLS AND A POSSIBILITY OF WATER PENETRATION THROUGH WALLS EXISTS, INSTALL ASPHALT- FELT STRIPS BETWEEN STUDS AND WALL SURFACES.
9. ANCHOR STUDS ADJACENT TO DOOR AND WINDOW FRAMES, PARTITION INTERSECTIONS, AND CORNERS TO CEILING AND FLOOR RUNNER FLANGES WITH SCREWS (CRIMPING IS NOT ACCEPTABLE). ANCHOR STUDS TO JAMB AND HEAD ANCHOR CLIPS OF DOOR OR SIDELIGHT FRAMES BY BOLT OR SCREW ATTACHMENT. OVER METAL DOOR AND SIDELIGHT FRAMES, PLACE CUT-TO-LENGTH SECTION OF RUNNER WITH A WEB_FLANGE BEND AT EACH END HORIZONTALLY, AND SECURE WITH ONE POSITIVE ATTACHMENT PER FLANGE.
10. POSITION A CUT-TO-LENGTH STUD, EXTENDING TO CEILING RUNNER, AT VERTICAL PANEL JOINTS OVER DOOR, FRAME HEADER. AT DOOR OPENINGS OVER 36" IN WIDTH, INSTALL DOUBLE STUDS AT BOTH JAMBS. INSTALL ADDITIONAL STUD BACK TO BACK OF STUD AT DOORJAMBS. ANCHOR BY WELDING STUDS TO EACH OTHER.
11. AT PARTITION CORNERS, INSTALL A STUD SO THAT IT FORMS THE OUTSIDE CORNER. FOLLOWING APPLICATION OF A SINGLE LAYER OF WALLBOARD TO THIS STUD, INSTALL A SECOND STUD IN THE ABUTTING RUNNER AND SCREW ATTACH THE WEB THROUGH THE WALLBOARD INTO THE FLANGE OF THE FIRST STUD. A 3-STRUD CONVENTIONAL CORNER IS AN ACCEPTABLE ALTERNATIVE.
12. BRIDGE STUD-PARTITIONS AT MID-HEIGHT WITH 1 1/2" CHANNELS THROUGH VERTICAL STUDS AND SECURE IN PLACE. LAP CHANNELS BY NESTING ONE INSIDE THE OTHER TO A DEPTH OF AT LEAST 8" AND WELD THEM TOGETHER.
13. PROVIDE BRACED FRAMINGS OF STEEL STUD FRAMING AS DETAILED. USE ONLY MECHANICAL ATTACHMENTS.

WALL FURRING INSTALLATION

14. ATTACH METAL FURRING CHANNELS VERTICALLY SPACED 16" OC TO MASONRY OR CONCRETE SURFACES WITH HAMMER SET OR POWER DRIVEN FASTENERS OR CONCRETE STUD NAILS STAGGERED 24" OC ON OPPOSITE FLANGES. NEST CHANNELS 5" AT SPLICES AND ANCHOR WITH TWO FASTENERS IN EACH WING. WHERE FURRING CHANNEL IS INSTALLED DIRECTLY TO EXTERIOR WALL AND A POSSIBILITY OF WATER PENETRATION THROUGH WALL EXISTS, INSTALL ASPHALT FELT PROTECTION STRIP BETWEEN FURRING CHANNEL AND WALL.

SECTION 09 23 00 / GYPSUM BOARD

1. ASTM C-840 AND C-754, AND GA-216, ARE HEREBY MADE A DIRECT PART OF THIS SPECIFICATION.
2. SUBMIT INFORMATION COMPLYING WITH SECTION 01 33 00 FOR WORK IN THIS SECTION.
- a. FURNISH MANUFACTURER'S CERTIFICATION THAT MATERIAL MEET SPECIFICATION REQUIREMENT.
- b. FURNISH MANUFACTURER'S PRINTED INSTRUCTIONS FOR INSTALLATION OF ASSEMBLIES.

JOB CONDITIONS

3. TEMPERATURE AND HUMIDITY CONDITIONS: DO NOT INSTALL WALLBOARD UNLESS INSTALLATION AREAS COMPLY WITH THE MINIMUM TEMPERATURE AND VENTILATION REQUIREMENTS RECOMMENDED BY THE MANUFACTURER.
4. PROTECTION: PROVIDE CLOSURES FOR EXTERIOR OPENINGS, WHERE REQUIRED. ROOM TEMPERATURE DURING INSTALLATION OF WALLBOARD SHALL NOT BE LESS THAN 50° F, WITH ADEQUATE VENTILATION MAINTAINED TO ELIMINATE EXCESSIVE MOISTURE UNTIL JOINT COMPOUND IS DRY.
5. PROVIDE VENTILATION DURING AND FOLLOWING ADHESIVES AND JOINT TREATMENT APPLICATIONS. USE TEMPORARY AIR CIRCULATORS IN ENCLOSED AREAS LACKING NATURAL VENTILATION. UNDER SLOW DRYING CONDITIONS, ALLOW ADDITIONAL DRYING TIME BETWEEN COATS OF JOINT TREATMENT. PROTECT INSTALLED MATERIALS FROM DRAFTS DURING HOT, DRY WEATHER.

MANUFACTURES

6. GYPSUM WALLBOARD COMPONENTS SHALL BE AS MANUFACTURED BY NATIONAL GYPSUM COMPANY. PRODUCTS FROM US GYPSUM COMPANY, GEORGIA, PACIFIC, OR FLINTKOTE BLUE DIAMOND ARE ACCEPTABLE. IT IS INTENDED THAT MATERIALS FURNISHED BE A PART OF A SINGLE SYSTEM, WHETHER IT BE SUPPLIED BY ONE OR SEVERAL MANUFACTURERS.

PRODUCTS

7. GYPSUM WALLBOARD
- a. REGULAR WALLBOARD: ASTM C-36; OR FS SS-1_30, TYPE III, GRADE R, CLASS I, 5/8" THICKNESS, TAPERED EDGE.
- b. FIRE RATED WALLBOARD: ASTM C-36, TYPE X, OR FS SS-1_30, TYPE III, GRADE X, CLASS I, 5/8" THICKNESS, TAPERED EDGE.
- c. WATER-RESISTANT WALLBOARD: ASTM C_630, 5/8" THICKNESS, TAPERED EDGE, AS INDICATED ON PLAN.
- d. EXTERIOR WALLBOARD: NATIONAL GYPSUM COMPANY EXTERIOR SOFFIT BOARD, 5/8" THICKNESS, OR CONFORMING TO ASTM C_931.
8. WALLBOARD ACCESSORIES: CORNER BEAD REINFORCEMENT; KAL-KORNER BEAD
- b. METAL EDGE REINFORCEMENT: J-TRIM CASING BEAD
- CONTROL JOINTS: E-Z STRIP OR .093 ZINC CONTROL JOINT
9. NAILS: PROVIDE ANNULAR RING SHANK NAIL, GWB, 54, ASTM C_514, 1_1/4" FOR 1/2" WALLBOARD, 1_3/8" FOR 5/8" WALLBOARD, OR SMOOTH SHANK NAIL, 1_3/8" FOR 1/2" WALLBOARD, 1_1/2" FOR 5/8" WALLBOARD.
10. SCREWS: PROVIDE SELF-DRILLING, SELF-TAPPING, BUGLE HEAD, FOR USE WITH POWER DRIVEN TOOL. TYPE S FOR APPLICATION TO LIGHT-GAUGE METAL FRAMING, MINIMUM 1", TYPE S_12 FOR APPLICATION TO HEAVY-GAUGE METAL FRAMING (ASTM C_640), TYPE W FOR APPLICATION TO WOOD FRAMING, MINIMUM 1_1/2" (SINGLE LAYER), 1_5/8" (DOUBLE LAYER) (ASTM C_894), TYPE G FOR WALLBOARD TO WALLBOARD APPLICATION, MINIMUM 1_1/2", (ASTM C_893).
11. LAMINATING ADHESIVES: WALLBOARD TO WOOD OR METAL FRAMING: US GYPSUM DURABOND 200 OR 300; OR CONFORMING TO ASTM C_557 FOR WOOD FRAMING.
- l. WALLBOARD TO WALLBOARD: US GYPSUM DURABOND 600.
- j. WALLBOARD TO CORE BOARD OR SOUND DEADENING BOARD: US GYPSUM DURABOND 500.
- k. WALLBOARD TO CONCRETE OR MASONRY: US GYPSUM DURABOND 500.
12. SUSPENDED CEILING COMPONENTS: FURRING CHANNELS: TYPE DVC AS MANUFACTURED BY US GYPSUM, OR RIGID FURRING CHANNELS CONFORMING TO ASTM C_845.
- b. MAIN RUNNERS CHANNELS: COLD ROLLED SECTIONS, 1_1/2", FORMED OF NO.

- 16-GAUGE STEEL, PAINTED WITH A RUST INHIBITING PAINT
- HANGER WIRES: SIZES SPECIFIED, DOUBLE ANNEALED AND GALVANIZED, CONFORMING TO FS QQ_W_461, TYPE I.

13. FINISHING MATERIALS: JOINT TREATMENT SYSTEM SHALL BE PROFORM JOINT SYSTEM CONSISTING OF:
- a. PROFORM PAPER JOINT REINFORCING TAPE CONFORMING TO ASTM C-415.
- b. PROFORM PURPOSE JOINT COMPOUND FOR EMBEDDING, FILL AND FINISHING CONFORMING TO ASTM C-475.

14. TEXTURE FINISH:
- a. WALL TEXTURE MATERIAL SHALL BE REGULAR WALL TEXTURE AS MANUFACTURED BY HAMILTON MATERIALS.
- b. CEILING TEXTURE MATERIAL SHALL BE PAE, TEX PREMIUM CEILING TEXTURE, MANUFACTURED BY HAMILTON MATERIALS.
- c. WALL TEXTURE MATERIAL SHALL BE V_1200 WALL TEXTURE AS MANUFACTURED BY LAHABRA PRODUCTS.

15. SEALANTS: ACOUSTICAL SEALANT FOR SOUND CONTROL, WALLS SHALL BE PRESTITE NO 579.64 AS MANUFACTURED BY PRESTITE PRODUCTS, TREMCO ACOUSTICAL SEALANT BY TREMCO, OR USG ACOUSTICAL SEALANT.

INSTALLATION - SUSPENDED CEILINGS

16. EXCEPT WHERE OTHERWISE INDICATED, PROVIDE 1 1/2" MAIN RUNNER CHANNELS SPACED ON 4" CENTERS AND METAL FURRING CHANNELS SPACED ON NOT OVER 16" CENTERS. NEITHER MAIN RUNNERS NOR CROSS FURRING SHALL BE LET INTO NOR COME IN CONTACT WITH ABUTTING MASONRY WALLS OR PARTITIONS. LOCATE A MAIN RUNNER WITHIN 6" OF THE WALL TO SUPPORT THE ENDS OF THE FURRING CHANNELS, AND LOCATE HANGERS TO SUPPORT THE ENDS OF THE MAIN RUNNERS.
17. WHERE MAIN RUNNERS OR FURRING CHANNELS ARE SPLICED, OVERLAP THE ENDS NOT LESS THAN 8" AND TIE NEAR EACH END OF THE SPLICE WITH 2 LOOPS OF 16 GAUGE GALVANIZED WIRE.
18. SUSPEND MAIN RUNNERS FROM STRUCTURE ABOVE WITH ONE NO. 9 HANGER WIRE FOR EACH 12 SF OF CEILING AREA. WIRE HANGERS SHALL BE OF SUCH LENGTH SO THAT THE LOWER ENDS WILL BE SADDLE-TIED OR WRAPPED AROUND THE MAIN RUNNERS SO AS TO PREVENT TURNING OR TWISTING OF THE RUNNERS.

19. AT CONCRETE TIE UNITS, HANGER WIRES MAY BE ATTACHED BY RAM SET METHOD ONLY ON THE SIDES OF THE TIE STEMS, AT LEAST 6" ABOVE THE BOTTOM OF THE STEM. ATTACHMENT AT OTHER AREAS OF TIE UNITS SHALL BE DRILLED STUD, TYPE FASTENERS, WHERE TEES RECEIVE CONVENTIONAL CONCRETE TOPPING, HANGER WIRES MAY BE PLACED BETWEEN JOINTS OF UNITS PROVIDED DOUBLE LOOPED HANGERS ARE USED.

20. AT HOLLOW CORE SLAB MEMBERS, HANGERS SHALL BE GROUDED INTO CELL OF UNIT OR MECHANICAL FASTENERS MUST BE USED TO ATTACH HANGERS.
21. AT STEEL BEAMS, JOISTS OR OTHER STEEL CONSTRUCTION WRAP HANGERS AROUND, INSERT THROUGH, OR CLIP OR BOLT TO THE SUPPORTS, TO DEVELOP THE FULL STRENGTH OF THE HANGERS.

22. FOR WOOD CONSTRUCTION INSERT WIRE HANGERS IN HOLES DRILLED A MINIMUM OF 3" ABOVE BOTTOM OF JOISTS AND WITH THE UPPER END OF THE HANGER IN EACH CASE TWISTED 3 TIMES AROUND ITSELF, OR ATTACH WIRE HANGERS TO 3_1/2" NAILS, DRIVEN ON A DOWNWARD SLANT INTO SIDES OF JOISTS ALLOWING MINIMUM 1_1/4" PENETRATION INTO THE WOOD. DRIVING NAILS AT LEAST 6" FROM BOTTOM EDGES AND NOT OVER 36" ON CENTER WITH THE UPPER END OF THE HANGER TO EACH CASE TWISTED 3 TIMES AROUND ITSELF, OR, USE 4 1_1/2" 6-GAUGE WIRE STAPLES TO SECURE HANGERS TO THE SIDES OF THE JOISTS, DRIVING STAPLES HORIZONTALLY OR ON A DOWNWARD SLANT, 3 NEAR THE UPPER END OF THE LOOP AND THE FOURTH TO FASTEN THE LOOSE END.

23. FOR CAST-IN-PLACE CONCRETE INSTALL HANGER WIRES IN THE FORMWORK USING DOUBLE LOOPED HANGERS. SPECIAL INSERTS, AT LEAST EQUIVALENT IN STRENGTH TO THE HANGERS, TO WHICH THE HANGERS CAN LATER BE ATTACHED, MAY BE INSERTED THROUGH OR ATTACHED TO THE TOP OF THE FORMS IN LIEU OF ANCHORING THE HANGERS DIRECTLY IN THE CONCRETE.

24. SECURELY CLIP METAL FURRING CHANNELS TO MAIN RUNNERS USING FURRING CHANNEL CLIPS OR SADDLE-TIE WITH 2 STRANDS OF 16-GAUGE TIE WIRE. INSTALL FURRING CHANNEL CLIPS ON ALTERNATE SIDES OF THE MAIN RUNNER CHANNEL.

25. AT LIGHTS OR OTHER OPENINGS THAT INTERRUPT THE MAIN RUNNER OR FURRING CHANNELS REINFORCE CHANNELS AT RIGHT ANGLES TO ROLLED CHANNELS, WIRE TIE AD TOP AND PARALLEL TO THE MAIN RUNNER CHANNELS.

26. APPLY WALLBOARD WITH LONG DIMENSION AT RIGHT ANGLES TO THE FURRING CHANNELS, WITH ABUTTING ENDS AND EDGES OCCURRING OVER THE WEB SURFACE OF THE FURRING CHANNEL. USE WALLBOARD OF MAXIMUM POSSIBLE LENGTH TO MINIMIZE JOINTS. NEATLY FIT AND STAGGER END JOINTS. INSTALL WALLBOARD WITH 1" SCREWS SPACED 8" OC IN THE FIELD OF THE BOARD, AT BEARINGS, AND ALONG ABUTTING EDGES.

27. WHERE INDICATED FOR WALLBOARD APPLIED DIRECT TO BOTTOM CHORD OF STEEL JOIST, INSTALL RIGID FURRING CHANNELS AT RIGHT ANGLES TO JOISTS, LOCATED ON 16" CENTERS. ATTACH USING CLIPS OR WITH 2 STRANDS OF 16-GAUGE TIE WIRE.

INSTALLATION - WALLS

28. APPLY WALLBOARD WITH LONG DIMENSION AT RIGHT ANGLES TO FRAMING OR FURRING MEMBERS WITH ABUTTING ENDS AND EDGES OCCURRING OVER STUD FLANGES. USE WALLBOARD OF MAXIMUM PRACTICAL LENGTH TO MINIMIZE END JOINTS, NEATLY FIT AND STAGGER END JOINTS. ARRANGE JOINTS ON OPPOSITE SIDES OF THE PARTITION AS TO OCCUR ON DIFFERENT STUDS. CUT WALLBOARD NEATLY TO FIT AROUND OPENINGS. WALLBOARD SHALL EXTEND TO WITHIN 1/2" OF THE FLOOR.
29. WHEREVER WALLBOARD TERMINATES AGAINST DISSIMILAR MATERIALS OR WHERE EDGES OF WALLBOARD ARE EXPOSED, INSTALL METAL EDGE REINFORCEMENT AS SPECIFIED. AT OUTSIDE CORNERS INSTALL METAL CORNER BEAD REINFORCEMENT AS SPECIFIED.
30. AT LOCATIONS INDICATED INSTALL CONTROL JOINT OVER FACE OF WALLBOARD PANELS. CUT END JOINTS SQUARE, BUTT TOGETHER AND ALIGN TO PROVIDE NEAT FIT. ATTACH CONTROL JOINT TO WALLBOARD WITH BOSTITCH 1/2" TYPE G STAPLES SPACED NOT OVER 6" ON CENTER IN EACH FLANGE.

31. AT METAL STUDS APPLY WALLBOARD USING SCREWS SPACED A MAXIMUM OF 12" OC IN THE FIELD OF THE BOARD AND 12" OC ALONG THE ABUTTING END JOINTS; 8" OC AT RATED WALLS.
32. AT WOOD FRAMING APPLY WALLBOARD WITH DOUBLE NAILING METHOD. APPLY FIRST NAILS SPACED 12" OC WITH THE SECOND NAIL IN CLOSE PROXIMITY. INSTALLED AFTER FIRST NAILS ARE IN PLACE. NAILS SHALL NOT BE STAGGERED ON ADJOINING EDGES OR ENDS. NAILS SHALL BE DRIVEN WITH THE HEADS SLIGHTLY BELOW THE SURFACE OF THE WALLBOARD, IN A DIMPLE FORMED BY THE DRIVING TOOL. A NAIL SET SHALL NOT BE USED AND CARE SHALL BE TAKEN TO AVOID BREAKING THE PAPER FACE.

33. WHERE WR OR WX WALLBOARD IS USED, COAT CUT EDGES AND FASTENER HEADS WITH USG SHEETROCK WR SEALANT. TREAT CUT EDGES, UTILITY HOLES, AND JOINTS INCLUDING THOSE AT ANGLE INTERSECTIONS PRIOR TO INSTALLATION. TREAT FASTENER HEADS AFTER INSTALLATION.

34. AT SOUND CONTROL PARTITIONS INSTALL WALLBOARD OVER SOUND DEADENING BOARD. INSTALL HORIZONTALLY STAGGERING JOINTS BETWEEN LAYERS AND ON OPPOSITE SIDES AS FAR AS IS PRACTICAL. PROVIDE FULL RUNNING BEADS OF ACOUSTICAL SEALANT AT PERIMETER OF SUCH WALLS, BOTH SIDES. ALSO, PROVIDE AT SOUND CONTROL WALLS CONTINUOUS CALKING BEAD WHERE WALLBOARD FORMS A JUNCTURE WITH OTHER WALLS OR SURFACES.

35. APPLY ACOUSTICAL SEALANT USING AIR-OPERATED EQUIPMENT. INSPECT JOINTS TO RECEIVE SEALANT TO BE SURE THEY ARE CLEAN, DRY AND FREE OF DUST AND DIRT. SEAL AROUND LIGHT BOXES, OUTLETS AND SWITCHES, WITH A CONTINUOUS BEAD OF SEALANT. REMOVE EXCESS OF SEALANT OR SMEARS AS WORK PROGRESSES.

36. AT DOUBLE-STUD PARTITIONS, SUCH AS CHASES, INSTALL STRIPS OF WALLBOARD 12" WIDE AND OF LENGTHS TO SPAN THE PARTITION DEPTH BY SCREWING TO THE WEBS OF OPPOSING STUDS. SPACE STRIPS APPROXIMATELY 42" OC.

37. AT DOUBLE LAYER WALLS INSTALL BASE LAYER AS SPECIFIED ABOVE EXCEPT INSTALL VERTICALLY OVER FRAMING MEMBERS. INSTALL FACE LAYER WITH

ADHESIVE VERTICALLY AND PROVIDE FASTENERS UNTIL ADHESIVE SETS. STAGGER JOINTS IN FACE LAYER AT LEAST 10" FROM JOINTS IN BASE LAYER. AT VERTICAL CORNERS PROVIDE "FLOATING" CORNER INSTALLATION PER THE USG DRYWALL CONSTRUCTION HANDBOOK.

38. PROVIDE PERIMETER RELIEF WHERE NON-LOAD BEARING WALLBOARD PARTITIONS ABUT STRUCTURAL DECKS OR CEILINGS OR VERTICAL STRUCTURAL ELEMENTS. ALLOW NOT LESS THAN 1/4", OR MORE THAN 1/2" GAP BETWEEN WALLBOARD AND STRUCTURE. FINISH EDGES OF WALLBOARD FACE LAYER WITH SQUARE, NOSE METAL CASING HEAD AND CAULK SPACE BETWEEN CASING BEAD AND STRUCTURE WITH CONTINUOUS SEALANT BEAD. ATTACH WALLBOARD TO STUDS NOT LESS THAN 1/2" BELOW BOTTOM EDGE OF CEILING TRACK FLANGES AND TO FIRST STUD ADJACENT TO VERTICAL TRACKS. DO NOT ATTACH WALLBOARD DIRECTLY TO TRACKS.

39. WHERE WALLBOARD PARTITIONS INTERSECT MASONRY WALLS, PROVIDE CONTROL JOINT NO LESS THAN 1/4", OR MORE THAN 3/8" WIDE BETWEEN WALLBOARD AND MASONRY. FINISH EXPOSED EDGES OF WALLBOARD WITH SQUARE, NOSE METAL CASING HEAD AND CAULK SPACE BETWEEN CASING BEAD AND MASONRY WITH CONTINUOUS SEALANT BEAD.

40. INSTALL EXTERIOR CEILING BOARD ALLOWING 1/16" TO 1/8" SPACE BETWEEN BUTT END ENDS OF BOARD. FASTEN TO SUPPORTS WITH SCREWS SPACED 12" OC OR NAILS SPACED 9" OC. FOR METAL FRAMING USE 1" TYPE S SCREWS. FOR WOOD FRAMING USE 1_1/4" TYPE W SCREWS OR 1_1/2" GALVANIZED BOX OR ALUMINUM NAILS. CONCEAL PANEL JOINTS BY INSTALLING PANELS WITH ENDS INSTALLED INTO ALUMINUM HOLDINGS. FASTEN H HOLDINGS TO SUPPORT WITH SCREWS SPACED 12" OC OR NAILS SPACED 8" OC.

FINISHING

41. REINFORCE WALL AND CEILING ANGLES AND INSIDE VERTICAL CORNER ANGLES WITH TAPE FOLDED TO CONFORM TO THE ADJOINING SURFACE AND TO FORM A STRAIGHT, TRUE ANGLE. APPLY A THIN LAYER OF COMPOUND, APPROXIMATELY 3" WIDE, UNDER AND OVER THE TAPE IN THE ANGLE. JOINT TO BE REINFORCED. CENTER TAPE OVER JOINTS TO BE REINFORCED AND SEAL INTO THE COMPOUND, LEAVING SUFFICIENT COMPOUND UNDER THE TAPE TO PROVIDE PROPER BOND. APPLY A SKIM COAT OF COMPOUND IMMEDIATELY AFTER EMBEDDING TAPE AND CLEAN EXCESS COMPOUND FROM THE WALLBOARD SURFACE. AFTER DRYING, COVER EMBEDDING COMPOUNDS WITH AN ADDITIONAL COAT OF COMPOUND.

42. ALLOW JOINTS TO DRY THOROUGHLY (MINIMUM OF 24 HOURS) BETWEEN EACH APPLICATION OF COMPOUND.

43. COVER FILL COAT WITH COMPOUND SPREAD EVENLY OVER AND SLIGHTLY BEYOND THE TAPERED EDGE OF THE BOARD, FEATHERED AT THE EDGES, WITH A SMOOTH UNIFORM SLIGHT CROWN OVER THE JOINT. DIMPLES AT FASTENER HEADS SHALL RECEIVE 3 COATS OF COMPOUND IN SUCCESSION AS USED IN JOINTS.

44. CONCEAL FLANGES OF METAL CORNER AND EDGE REINFORCING BY AT LEAST 2 COATS OF COMPOUND. WHEN COMPLETED, THE COMPOUND SHALL EXTEND APPROXIMATELY 8" TO 10" ON EITHER SIDE OF THE EXPOSED METAL NOSING.
45. SAND COATS AS NECESSARY AFTER EACH APPLICATION OF COMPOUND HAS DRIED. THE FINAL COAT AND SUBSEQUENT SANDING SHALL LEAVE WALLBOARD AND TREATED AREAS UNIFORMLY SMOOTH AND READY TO RECEIVE DECORATION, TO THE EXTENT THAT AFTER PAINTING OF WALLBOARD THERE SHALL BE NO DISTINGUISHABLE DIFFERENCE IN APPEARANCE BETWEEN TAPED AND UN-TAPED SURFACES.

46. APPLY WALL TEXTURE TO EXPOSED WALLS (EXCEPT TOILETS) (AND WALLS TO RECEIVE WALL COVERING) UPON COMPLETION OF FINISHING SPECIFIED ABOVE. SURFACES SHALL BE FREE OF DUST, DIRT AND OIL BEFORE APPLICATION. USE AS HEAVY A MIXTURE AS PRACTICAL AND AVOID OVER THINNING OF THE MATERIAL. APPLY MATERIAL USING SPRAY EQUIPMENT CAPABLE OF DEVELOPING SUFFICIENT PRESSURE TO PRODUCE A LIGHT ORANGE PEEL TEXTURE FINISH.

SECTION 09 30 00 / TILE

1. SUBMIT SAMPLES COMPLYING WITH SECTION 01 33 00 FOR WORK IN THIS SECTION.
2. FURNISH MASTER GRADE CERTIFICATE FOR TILE, BEFORE INSTALLATION, BEARING THE CERTIFICATION MARK OF THE TCA, SIGNED BY THE MANUFACTURER STATING THE TYPE AND QUANTITY OF THE MATERIAL. FURNISH MANUFACTURER'S PRINTED INSTRUCTIONS FOR USE OF LATEX PORTLAND CEMENT AND MORTAR.
3. PROVIDE 1 CARTON OF EACH COLOR AND PATTERN OF CERAMIC TILE FOR OWNERS FUTURE USE.

4. ADHESIVES SHALL BE IN CONTAINERS LABELED CERTIFYING COMPLIANCE WITH REFERENCED STANDARDS.

JOB CONDITIONS

5. SET AND GROUT TILE IN EPOXY OR CEMENT MORTAR WHEN SURFACE TEMPERATURE IS AT LEAST 50° F AND RISING. COMPLY WITH TEMPERATURE RECOMMENDATIONS OF MANUFACTURER'S FOR BONDING AND GROUTING MATERIALS IN OTHER THAN PORTLAND CEMENT MORTAR.

MATERIALS

6. TILE SHALL BE STANDARD GRADE, MEETING THE REQUIREMENTS OF SPR_R_61 OF THE U.S. DEPARTMENT OF COMMERCE AND SHALL COMPLY WITH ANS A_137.1. TCA CERTIFICATION MARK SHALL APPEAR ON EACH CARTON LABEL.
7. FLOOR TILE SHALL BE STANDARD GRADE, UNGLAZED DUST-PRESSED PORCELAIN TILE, NOT LESS THAN 1/4" THICK WITH CUSHION EDGES AND IN FACE SIZES AND COLORS AS SELECTED. TILE SHALL COMPLY WITH SECTION 5.1 OF ANSI A-137.1. PROVIDE NECESSARY SHAPES AND TRIMMERS OF SIMILAR TILE AS REQUIRED.
8. WALL TILE SHALL BE STANDARD GRADE GLAZED TILE NOT LESS THAN 5/16" THICK WITH CUSHION EDGES, A COLORED MAT GLAZED FINISH AND IN FACE SIZES AND COLORS AS SELECTED. PROVIDE SPACER OR OTHER SIMILAR FEATURES ON EDGES OF TILE. TILE SHALL COMPLY WITH SECTION 6.1 OF ANSI A_137.1. PROVIDE A_3401 BASE MEMBER AT JUNCTION OF FLOOR AND AT INTERNAL CORNERS; ABLR 3401 AND ACL4 3401.
9. PORTLAND CEMENT: ASTM C-150, TYPE I.

10. AGGREGATE: ASTM C-144 FOR MORTAR AND GROUT.

11. HYDRATED LIME: ASTM C-206 OR C-207, TYPE S.

12. REINFORCING: 2" X 2" - 1616 GAUGE WELDED WIRE MESH.

13. MEMBRANE: 15 LB. FELT OR 4-MIL POLYETHYLENE FILM.

14. GLAZED TILE GROUT: TILEMATE 719, COLOR AS SELECTED.

15. TILE GROUT: HYDROMIX WITH ACRYLIC ADDITIVE, COLORED TO MATCH TILE, OR DARKER THAN TILE.

16. THIN SET FOR WALLS: ARDEX X-7 FAST SETTING COMMERCIAL THIN SET.

17. DRY SET MORTAR: ANSI A-118.4.

18. LATEX PORTLAND CEMENT MORTAR: ANSI A-118.4.

19. ORGANIC ADHESIVE: ANSI A-136.1, TYPE I.

EXPANSION JOINTS

20. SEALANT: TWO COMPONENT COMPLYING WITH ASTM C_920, TYPE M, CLASS 25, GRADE NS FOR JOINT IN VERTICAL SURFACES; GRADE P, USE T FOR JOINTS IN HORIZONTAL SURFACES.

21. BACKUP: FLEXIBLE AND COMPRESSIBLE TYPE OF CLOSED CELL FOAM POLYETHYLENE OR BUTYL RUBBER, ROUNDED AT SURFACE TO CONTACT

SEALANT, AS SHOWN IN TCA DETAILS, AND AS RECOMMENDED BY MANUFACTURER. IT SHALL FIT INTO THE JOINT WITH 1/8" COMPACTION AND TO SUCH A HEIGHT TO ALLOW A SEALANT DEPTH OF 3/4 THE WIDTH OF THE JOINT. SEALANT SHALL NOT BOND TO THE BACK-UP MATERIAL.

EXECUTION

FLOORS

22. INSTALL TILE USING DRY-SET MORTAR IN ACCORDANCE WITH ANSI A-108.5 AND TCA METHOD F-113-84. GROUT TILE WITH SPECIFIED GROUT, SLIGHTLY DEPRESSED.

23. SLOPE FLOORS UNIFORMLY TO FLOOR DRAINS WHERE REQUIRED.

WALLS

24. INSTALL TILE IN ADHESIVE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

25. GROUT TILE WITH SPECIFIED GROUT. ALIGN JOINTS IN WALL TILE VERTICALLY AND HORIZONTALLY.

EXPANSION JOINTS