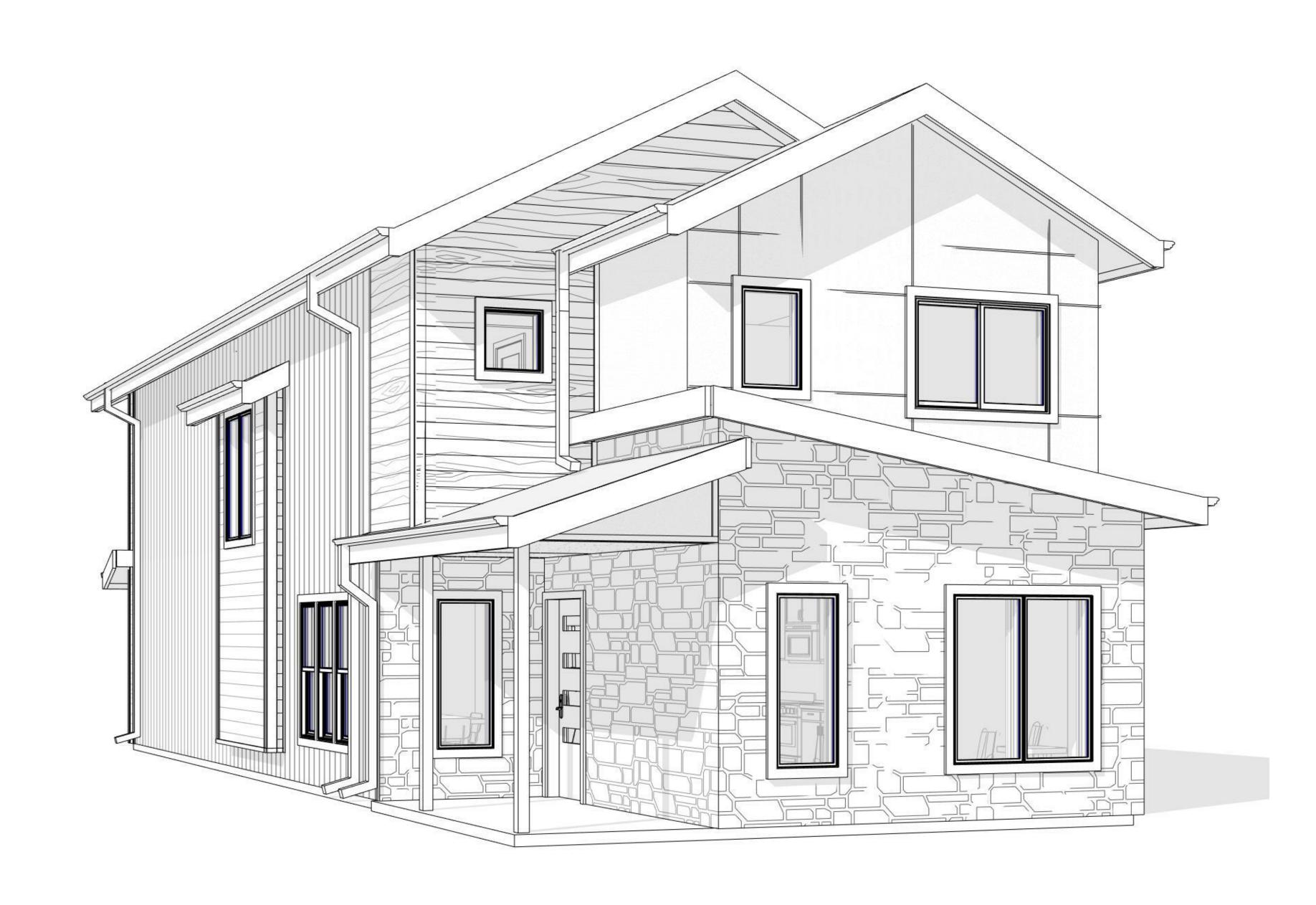
# RESERVE AT BLACKWELL - BUILDING F2

SE SHENANDOAH DRIVE LEE'S SUMMIT, MO 64063

## PERMIT DOCUMENTS

17 JAN 2024

COLLINS WEBB #: 21075





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collins

GRIFFIN RILEY PROPERTY GROUP 21 SE 29TH TERRACE LEE'S SUMMIT, MO 64082 P: 816.366.7900 www.griffinriley.com

## **ARCHITECT**

COLLINS | WEBB ARCHITECTURE 307B SW MARKET STREET LEE'S SUMMIT, MISSOURI 64063 P: 816.249.2270 www.collinsandwebb.com

## ELECTRICAL ENGINEER

ENGINEREED BUILDING SOLUTIONS, LLC P: 913.735.5654 www.ebsolutionskc.com

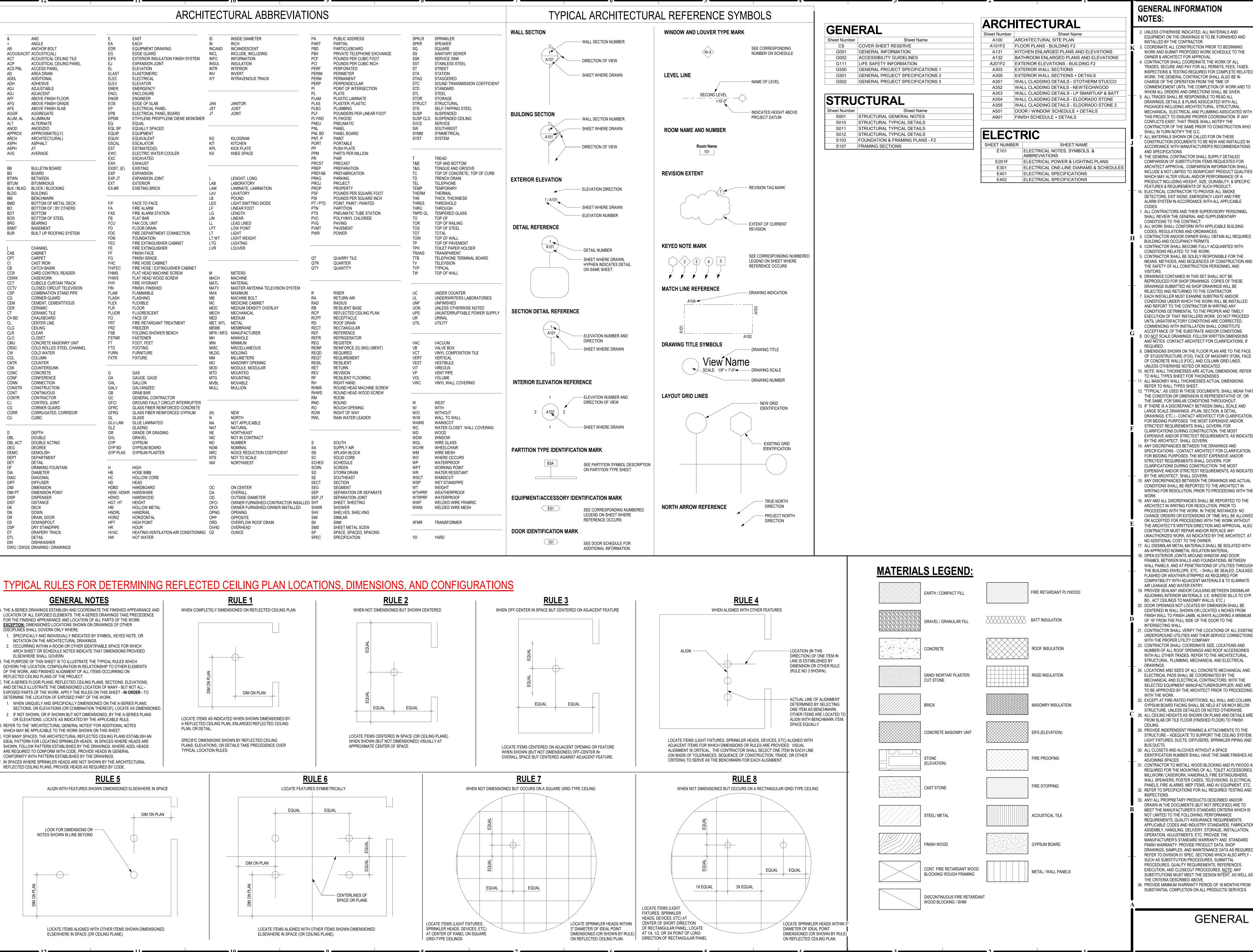
### STRUCTURAL ENGINEER

STAND STRUCTURAL ENGINEERING INC. 8234 ROBINSON STREET OVERLAND PARK, KS 662074 P: 913.214.2169 www.stand-sei.com

#### **CIVIL ENGINEER**

SCHLAGEL ASSOCIATES 14920 W. 107TH STREET LENEXA KS, 66215 P: 913.492.5158 www.Schlagelassociates.com





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CKWELL - BUILDING F2

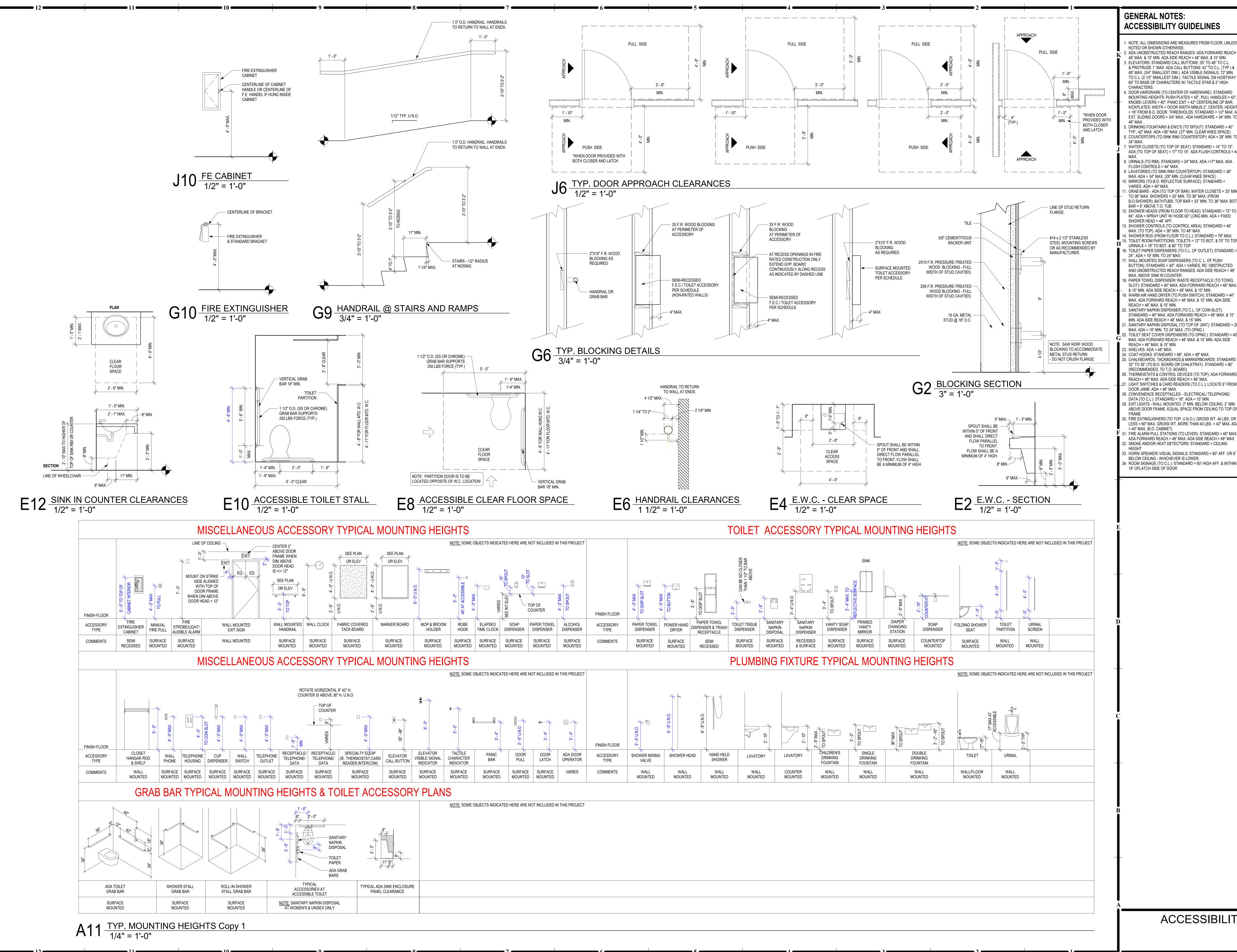
KESHENANDOAH DRIVE

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ISSUE DATE: 17 JAN 202 COLLINS WEBB #: 2107

GENERAL INFORMATION



**GENERAL NOTES: ACCESSIBILITY GUIDELINES** 

> 1. NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLES NOTED OR SHOWN OTHERWISE. 2. ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 3. ELEVATORS: STANDARD CALL BUTTONS: 35" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP.) 8 48" MAX. (3/4" SMALLEST DIM.). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM.). TACTILE SIGNAL ON HOISTWAY:

60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH 4. DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42", KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2", CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX., ADA HARDWARE = 34" MIN. TO

5. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STANDARD = 40" TYP., 42" MAX. ADA =36" MAX. (27" MIN. CLEAR KNEE SPACE) COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 7. WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15".

ADA (TO TOP OF SEAT) = 17" TO 19". ADA FLUSH CONTROLS = 44 8. URINALS (TO RIM): STANDARD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX. 9. LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 36" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE)

0. MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD = VARIES. ADA = 40" MAX. 1. GRAB BARS - ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 36" MAX. SHOWERS = 33" MIN. TO 36" MAX. (FROM B.O.SHOWER). BATHTUBS: TOP BAR = 33" MIN. TO 36" MAX. BOT BAR = 9" ABOVE T.O. TUB 2. SHOWER HEADS (FROM FLOOR TO HEAD); STANDARD = 72" 1 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF. 3. SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP). ADA = 38" MIN. TO 48" MAX.

14. SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX. 15. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 70" TO TOP. URINALS = 18" TO BOT. & 60" TO TOP 16. TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD = 24". ADA = 19" MIN. TO 24" MAX. 7. WALL MOUNTED SOAP DISPENSERS (TO C. L. OF PUSH BUTTON): STANDARD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER.

MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 20. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN. 1. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STANDARD = 2 MAX. ADA = 19" MIN. TO 24" MAX. (TO OPNG.) TOILET SEAT COVER DISPENSERS (TO OPNG.): STANDARD = 40 MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE

REACH = 48" MAX. & 15" MIN. 23. SHELVES: ADA = 48" MAX. 24. COAT HOOKS: STANDARD = 68". ADA = 48" MAX. 25. CHALKBOARDS, TACKBOARDS,& MARKERBOARDS: STANDARD 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED, TO T.O. BOARD) 26. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX. 7. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX.

9. EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN. . SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING

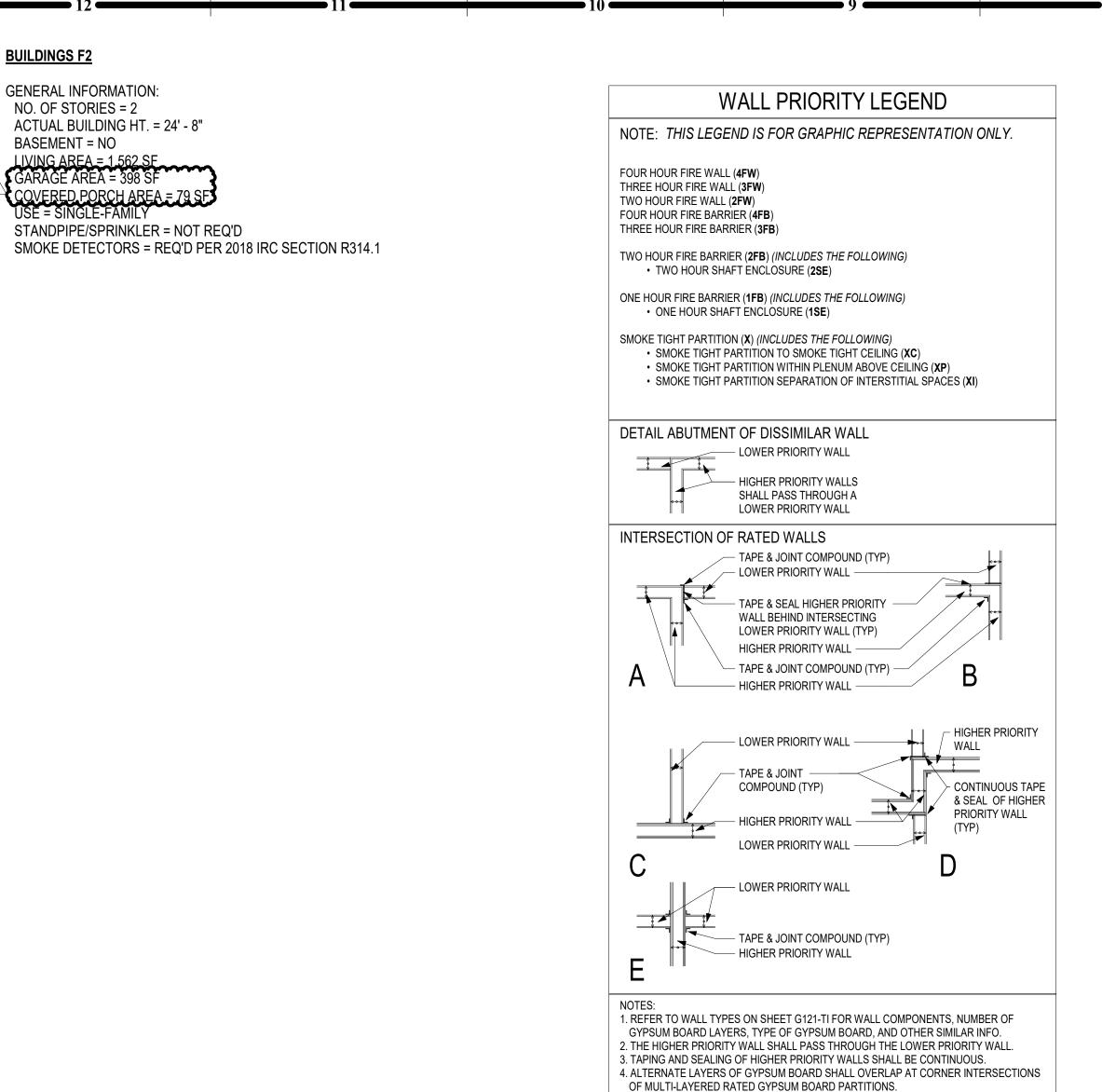
BELOW CEILING - WHICHEVER IS LOWER.

44. ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OFLATCH SIDE OF DOOR

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**REVISION DATES:** 

ACCESSIBILITY GUIDELINES



INSTALL FIRESAFING INSULATION

BOTTOM OF DECK

RE: STRUCTURAL

TO SEAL TOP OF WALL

(RATED WALLS ONLY)

- 2X WOOD TOP PLATE

--- 5/8" GYP. BD. EACH SIDE

(WHERE REQ'D)

— 2X WOOD SILL PLATE

WALL TYPE AA

TYPE WALL DESCRIPTION

NON RATED

| AA | | • 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE

AA1 • 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE

AA2 • 2X4 WOOD STUD @ 16" O.C. TO DECK ABOVE

NO SOUND BATT INSUL.

NO SOUND BATT INSUL.

NO SOUND BATT INSUL.

2-HR RATED RE: UL # U301

• 1-HR RATED RE: UL # U314

• 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE

• 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE

FIRE-RATED SEALANT AT FLOOR, DECK, & ALL PENETRATIONS

• 2 LAYERS - 5/8" TYPE "X" GYP. BD. EACH SIDE TO DECK ABOVE

• FIRE-RATED SEALANT AT FLOOR, DECK, & ALL PENETRATIONS

- 3 1/2" SOUND BATT INSULATION

FLOOR \_

## **WALL TYPE NOTES:** INSTALLING SOUND ISOLATING GYPSUM BOARD RIGIDLY CONNECT TO BOTH METAL STUD WALLS. AND ADDITIONAL WALL TYPE INFORMATION. TYPE DETAILS SHEET. RECESSED OR BUILT-IN EQUIPMENT; SUCH AS FIRE NOTED OTHERWISE. LABORATORY EQUIPMENT. FIRESTOP MATERIAL. . THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE. OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN. CLARITY. REFER TO FINISH SCHEDULE. AT ALL WET LOCATIONS. 2. EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLUMN GYPSUM BOARD FACING SHALL BE HELD AT 5/8 INCH BELOW STRUCTURE, UNLESS NOTED OR SHOWN OTHERWISE. 3. PROVIDE AND INSTALL BLOCKING REQUIRED FOR ALL A.V. EQUIPMENT. G.C. TO COORDINATE WITH TI CONSULTANT FOR FINAL LOCATIONS AND SIZE REQUIREMENTS. 4. COMPRESSIBLE FILLER - ACCEPTABLE MATERIALS WOULD BE FIBERGLASS INSULATION OR FIRESTOPPING. VOIDS TO BE COMPLETELY FILLED AND A FIRESTOP SEALANT OVER ANY ENDS. THIS IS TYPICAL FOR ALL ACOUSTICAL WALL ASSEMBLIES WHERE "COMPRESSIBLE FILLER" IS CALLED

FOR. THERE CAN BE NO VOIDS IN THE INSTALLATION.

5. MUD AND TAPE ALL 1ST AND 2ND LAYER GYP. BOARD

SPACING SPECIFIED BY SUPPLIER.

FLOOR PLAN.

JOINTS. PROVIDE 3RD LAYER FINISH PER GENERAL NOTES:

6. PROVIDE HORIZONTAL LATERAL BRACING WIRE WELDED TO STUD FOR ALL WALLS, AT APPROPRIATE GAGE AND

#### 1. DRYWALL PARTITIONS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH ASTM E497 - STANDARD PRACTICE FOR PARTITIONS, AND ASTM C919 - STANDARD PRACTICE FOR USE OF SEALANTS IN ACOUSTICAL APPLICATIONS. ALL SOUND BARRIER PARTITIONS SHOULD EXTEND FROM FLOOR TO STRUCTURE UNLESS STATED OTHERWISE. METAL STUDS SHALL BE RIGIDLY ATTACHED ONLY AT HEAD AND FOOT. STRUCTURAL CROSS BRACING MUST NOT 2. RE: LIFE SAFETY PLAN(S) FOR RATED WALL LOCATIONS. 3. RE: WALL TYPE DETAIL SHEET FOR TYPICAL WALL DETAILS 4. FOR TYPICAL TOP OF WALL CONDITIONS AT JOISTS AND BEAMS, REFER TO THE CLOSURE DETAILS ON THE WALL 5. WHERE "FIRE-RATED SEALANT" IS INDICATED ON WALL TYPES: PROVIDE FIRE-RATED SEALANT ABOVE TOP TRACK. UNDER BOTTOM TRACK, AT ALL PENETRATIONS (BOTH SIDES), AND AS REQUIRED BY FIRE RATING UL NUMBER. 6. EXTEND FIRE-RATED WALL CONSTRUCTION BEHIND EXTINGUISHER CABINETS (FEC), ELECTRICAL WATER COOLERS (EWC), ELECTRICAL PANELS, ETC., UNLESS 7. PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR B. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS: STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT, ALL PENETRATIONS THROUGH ACOUSTICAL AND FIRE RATED WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE, AND/OR ACOUSTICAL ISOLATION OF SPACES WITH APPROPRIATE ACOUSTICAL/ 0. WALL BASE IS NOT SHOWN ON ALL WALL TYPES FOR 1. PROVIDE GLASS-MAT, WATER RESISTANT BACKING BOARD

#### **FIRE WALLS (FW)** TO SEPARATE CONSTRUCTION INTO SEPARATE BUILDINGS. FIRE WALLS SERVE TO CREATE SEPARATE BUILDINGS FOR THE FOLLOWING CONSTRUCTION TYPE VARIES FROM ONE BUILDING TO ANOTHER. COMPLIANCE WITH MAXIMUM ALLOWABLE AREA REQUIREMENTS. • TO SEPARATE BUILDINGS WITH DIFFERENT LEVELS OF FIRE PROTECTION. • TO ADDRESS A PROPERTY LINE DEFINING DIFFERENT OWNERSHIP. SPECIAL CONSIDERATIONS THE FIRE WALL REQUIRES SUFFICIENT STRUCTURAL STABILITY UNDER FIRE CONDITIONS TO ALLOW THE COLLAPSE OF CONSTRUCTION ON EITHER SIDE WITHOUT COLLAPSE OF THE WALL. OPENINGS ARE REQUIRED TO BE PROTECTED. OPENINGS ARE LIMITED BASED ON A PERCENTAGE OF WALL LENGTH. EXTENDING THE FIRE WALL THROUGH THE ROOF WITH A PARAPET IS REQUIRED FOR SOME CONSTRUCTION CLASSIFICATIONS. THE REQUIRED FIRE RATING OF A FIRE WALL IS BASED ON OCCUPANCY GROUP AND CLASS OF CONSTRUCTION. HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER. FIRE BARRIERS (FB) DEFINITION A FIRE RATED WALL CONSTRUCTED TO RESTRICT THE SPREAD OF FIRE. CONTINUITY SHALL BE MAINTAINED FROM TOP OF FLOOR TO UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE. FIRE BARRIERS HAVE THE FOLLOWING APPLICATIONS. TO CREATE HORIZONTAL EXITS. TO SEPARATE EXIT PASSAGEWAYS. OCCUPANCY SEPARATIONS. TO SEPARATE INCIDENTAL USE AREAS. ISOLATION OF HAZARDS. TO SEPARATE ROOMS WITH DIFFERENT LEVELS OF FIRE PROTECTION. SMOKE BARRIERS AND SHAFT ENCLOSURES ARE FIRE BARRIERS. SEE ADDITIONAL REQUIREMENTS. STRUCTURAL SUPPORT OF A FIRE BARRIER IS REQUIRED TO BE OF THE SAME HOURLY FIRE RATING AS THE FIRE BARRIER, OR BETTER. OPENINGS ARE REQUIRED TO BE PROTECTED. HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH AND CLOSER.

**SHAFT ENCLOSURES (SE)** 

TO BE PROTECTED.

PERIMETER SMOKE SEALS.

A SHAFT ENCLOSURE IS A FIRE BARRIER FORMING THE BOUNDARY OF A VERTICAL

PENETRATIONS IN SHAFT ENCLOSURES ARE PROHIBITED UNLESS NECESSARY

FOR THE FUNCTION OF THE SHAFT. WHERE ALLOWED, OPENINGS ARE REQUIRED

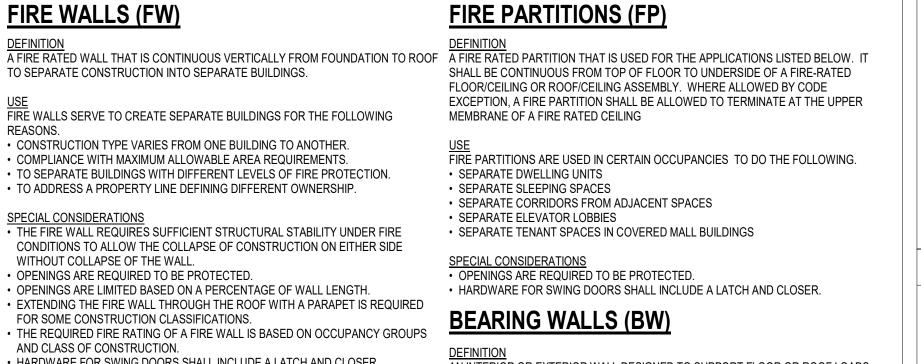
• DUCT PENETRATIONS REQUIRE COMBINATION SMOKE AND FIRE DAMPERS EXCEPT

HARDWARE FOR SWING DOORS SHALL INCLUDE A LATCH, CLOSER, AND

PROTECT OPENINGS IN FIRE RATED FLOOR/CEILING ASSEMBLIES.

FOR EXISTING CONDITIONS THAT ARE GRANDFATHERED.

FIRE & SMOKE RESISTIVE LEGEND DEFINITIONS



AN INTERIOR OR EXTERIOR WALL DESIGNED TO SUPPORT FLOOR OR ROOF LOADS. A BEARING WALL IS FIRE-RATED ONLY TO MAINTAIN THE INTEGRITY OF ITSELF AS A FIRE RATED STRUCTURAL ELEMENT. THE WALL DOES NOT SERVE AS A FIRE SEPARATION FROM ONE SIDE TO THE OTHER SIDE.

### A VERTICAL, LOAD BEARING STRUCTURAL ELEMENT.

 DOORS AND WINDOWS ARE NOT REQUIRED TO BE RATED. • HVAC DUCT PENETRATIONS ARE NOT REQUIRED TO BE FIRE-DAMPERED. PLUMBING, ELECTRICAL, SPRINKLER SYSTEM, AND CABLE PENETRATIONS ARE REQUIRED TO BE FIRE-STOPPED WITH FIRE SEALANT AT BOTH SIDES, FOR WALLS CONSTRUCTED OF HOLLOW CMU OR STUD FRAMING.

1. THE FOLLOWING INFORMATION SERVES TO PROVIDE BUILDING OWNERS WITH CONCISE DEFINITIONS OF WALL TYPES RELATED TO LIFE SAFETY ISSUES. THIS WITHIN SOME CONSTRUCTION CLASSIFICATIONS. CONSTRUCTION THAT PROVIDES
 INFORMATION IS NOT MEANT TO BE A SUBSTITUTE FOR APPLICABLE BUILDING CODES. 2. WHEN A WALL HAS MORE THAN ONE CLASSIFICATION, THE MOST RESTRICTIVE REQUIREMENTS FOR EACH CLASSIFICATION SHALL APPLY. 3. FOR NEW CONSTRUCTION, PERIMETER SMOKE-SEALS MAY BE REQUIRED AT FIRE

RATED DOORS IN CERTAIN OCCUPANCIES.

**GENERAL DESCRIPTION** FIRE RESISTIVE LEGEND PROJECT NAME: BLACKWELL RESERVE (SINGLE-FAMILY HOMES) PROJECT LOCATION: LEE'S SUMMIT, MISSOURI COUNTY: JACKSON 3 HOUR FIRE WALL **COLLINS WEBB ARCHITECTURE** 307B SW MARKET STREET 2FW 2FW 2FW 2FW 2 HOUR FIRE WALL LEES SUMMIT, MISSOURI 64063 APPLICABLE CODES: 2018 INTERNATIONAL RESIDENTAIL CODE **2FB 2FB 2FB 2FB** 2 HOUR FIRE BARRIER 2018 INTERNATIONAL PLUMBING CODE 2018 INTERNATIONAL MECHANICAL CODE IFB 1FB 1FB 1FB 1 HOUR FIRE BARRIER 2018 INTERNATIONAL FUEL GAS CODE 2018 INTERNATIONAL FIRE CODE 2017 NATIONAL ELECTRICAL CODE 2S 2S 2S 2 2S 2 HOUR SHAFT ENCLOSURE ICC/ANSI A117.1-2009, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES ISE 1SE 1SE 1SE 1 HOUR SHAFT ENCLOSURE FIRE EXTINGUISHERS **IFP 1FP 1FP 1 HOUR FIRE PARTITION** PROVIDE PORTABLE FIRE EXTINGUISHERS IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE .5FP 0.5FP 0.5FP 0.5FP 0.5 HOUR FIRE PARTITION FIRE PREVENTION CODE. . PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED, INSPECTED, AND MAINTAINED IN ACCORDANCE .5X 0.5X 0.5X 0.5X 0.5 HOUR CORRIDOR PARTITION WITH NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.

CEILING HEIGHT NOTES: (IRC R305)

1. HABITABLE SPACE, HALLWAYS, BATHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND PORTIONS OF BASEMENTS CONTAINING THESE SPACES SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0" A.F.F. 2. PORTIONS OF BASEMENTS THAT DO NOT CONTAIN HABITABLE SPACE, HALLWAYS, BATHROOMS, TOILET ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 6'-8" A.F.F. EXCEPTIONS: BEAMS, GIRDERS, DUCTS, OR OTHER OBSTRUCTIONS MAY PROJECT TO WITHIN 6'-4" OF

BOTTOM OF SOFFIT

- 2X4 / 2X6 WOOD STUD @ 16 O.C. WITH

HORIZ. BRACING, AS REQUIRED.

- HOUSE WRAP/ WEATHER BARRIER

PLYWOOD SUBSTRATE SHEATHING

OR LP FLAMEBLOCK SHEATHING NEWTECHWOOD HORIZONTAL SIDING - SEE ELEVATIONS

WOOD STUD BOTTOM PLATE

DOUBLE TOP PLATE

BATT INSULATION

FF/FF1

WALL TYPE FF

FURRING STRIPS @ 16" O.C

THE FINISHED FLOOR.

FIRE SPRINKLER NOTE: (IRC R302) 1. FIRE SPRINKLER NOT REQUIRED IF EXTERIOR WALLS OF DWELLINGS ARE SEPERATED BY FIVE FEET OR

MORE IF WALL IS UNRATED. IF WALL IS RATED (1 HR) NO SEPERATION IS REQUIRED.

WIDTH REQ'D (IN.) COMPONENT (IN.) EXIT WIDTH — PROVIDED (IN.) FROM ROOM OR LEVEL X = CLEAR WIDTH OF OPENING IN INCHES

> FIRE ALARM CONTROL PANEL FIRE DEPARTMENT CONNECTION

FIRE RISER CABINET

SB SB SB SB 1 HOUR SMOKE BARRIER

2BW 2BW 2BW 2BW 2 HOUR BEARING WALL

BW 1BW 1BW 1BW 1 HOUR BEARING WALL

CALCULATED EXIT 40" 32" MIN. WIDTH OF

WIDTH REQ'D (IN.)

MEANS OF EGRESS

NUMBER OF OCCUPANTS EXITING 200

EXIT WIDTH

NUMBER OF OCCUPANTS EXITING 200

PROVIDED (IN.)

KNOX BOX AREA OF RESCUE

ASSISTANCE ACCESSIBLE EGRESS COMPONENT **← ← ←** EGRESS PATH

INDICATES FIRE EXTINGUISHER CABINET(FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE. INDICATES KITCHEN/ BAR FIRE EXTINGUISHER

(FE) LOCATION WITH 75'-0" RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE. INDICATES TEMPORARY WALL HUNG FIRE EXTINGUISHER (FE) LOCATION WITH 75'-0"

RADIUS COVERAGE AREA. SEE SPECIFICATIONS FOR FE TYPE. **DOOR RATING LEGEND (REFER TO DOOR SCHEDULE)** 

20 MIN. DOOR 45 MIN. DOOR

90 MIN. DOOR

#### **GENERAL NOTES: FIREBLOCKING PER SECTION R302.11:**

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS: 1.1 VERTICALLY AT THE CEILING AND FLOOR LEVELS. 1.2 HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET. 2. AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS. 3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7. 4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E136 REQUIREMENTS. 5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1003.19. 6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT

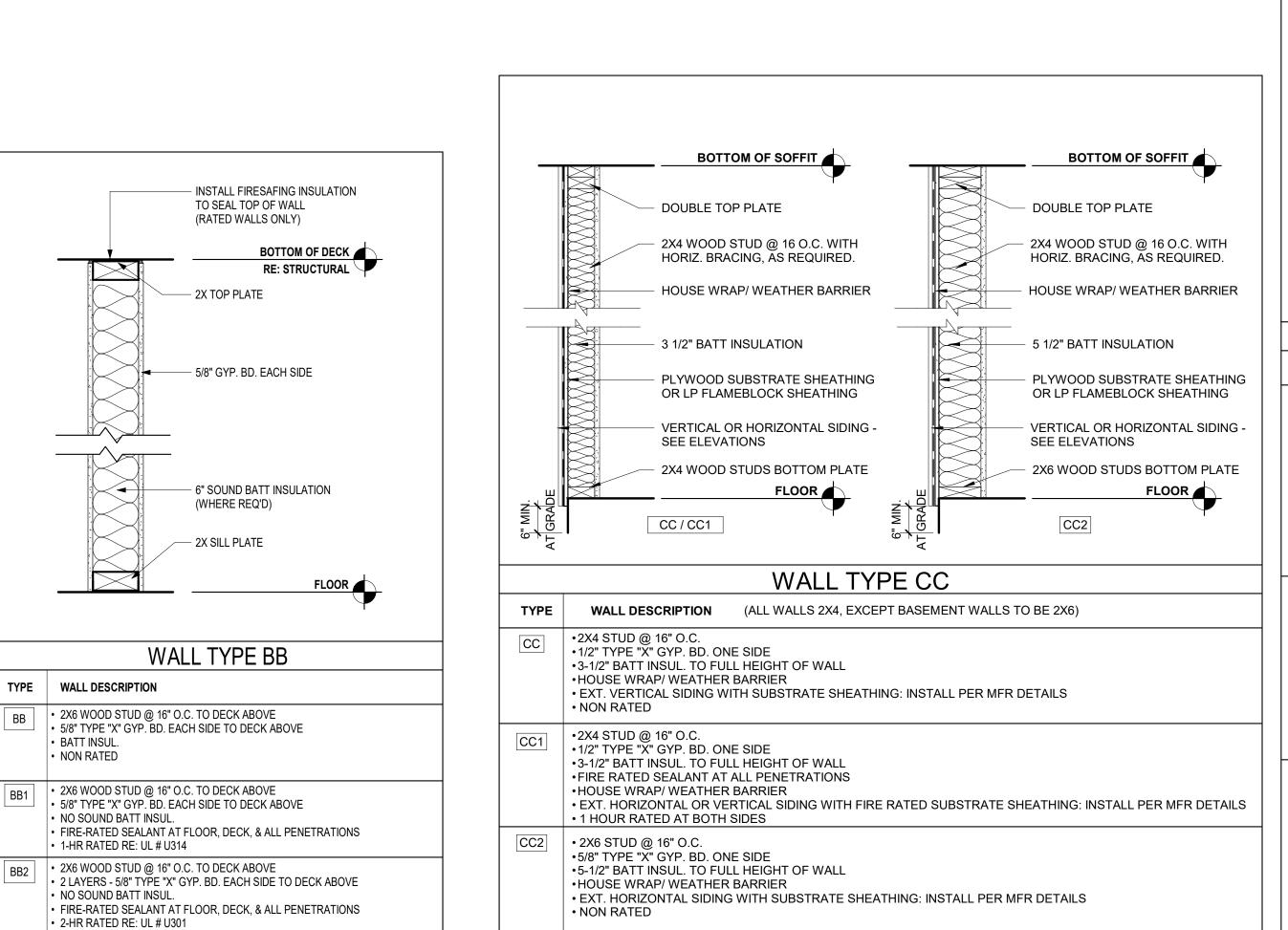
R302.11.1 FIREBLOCKING MATERIALS EXCEPT AS PROVIDED IN SECTION R302.11,

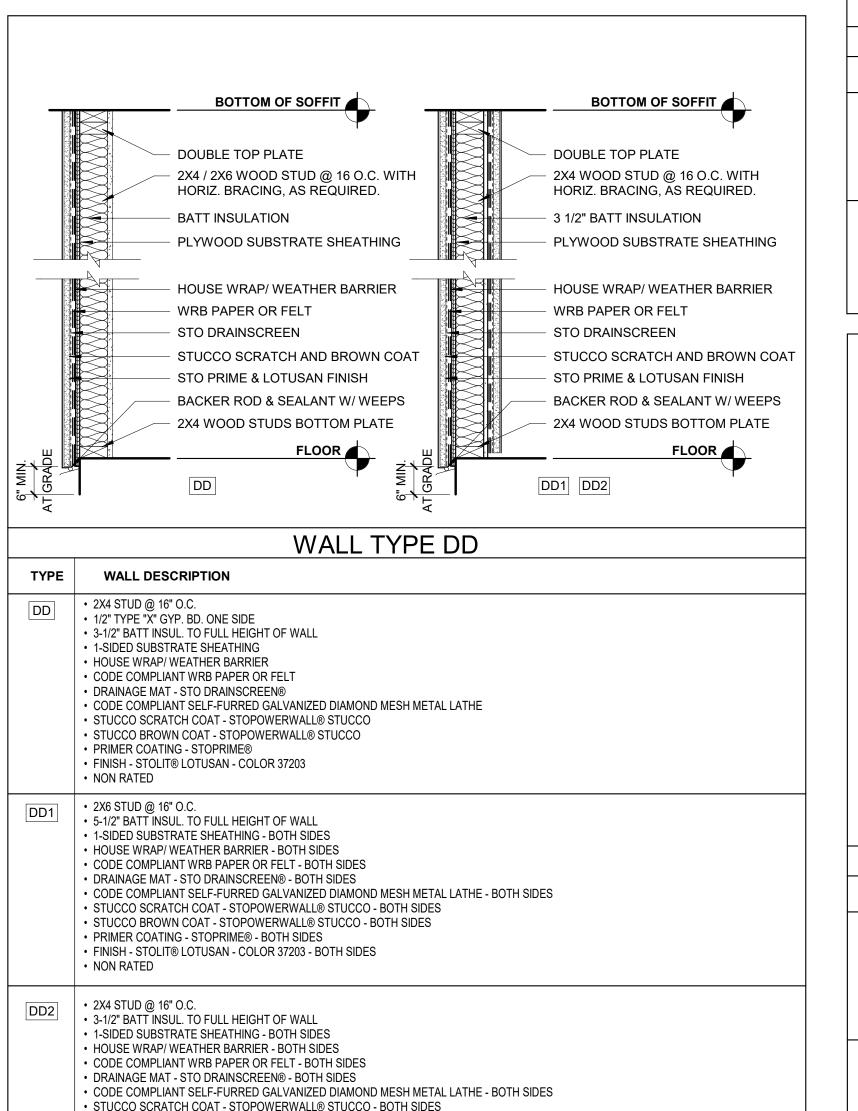
JOINTS BACKED BY 3/4-INCH PARTICLEBOARD. 5. ONE-HALF-INCH GYPSUM BOARD. 6. ONE-QUARTER-INCH CEMENT-BASED MILLBOARD. FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN 8. CELLULOSE INSULATION INSTALLED AS TESTED IN

ACCORDANCE WITH ASTM E119 OR UL 263, FOR THE

WEBBIL NUMBER PROFESSIONAL SEAL

COLLINS WEBB #:



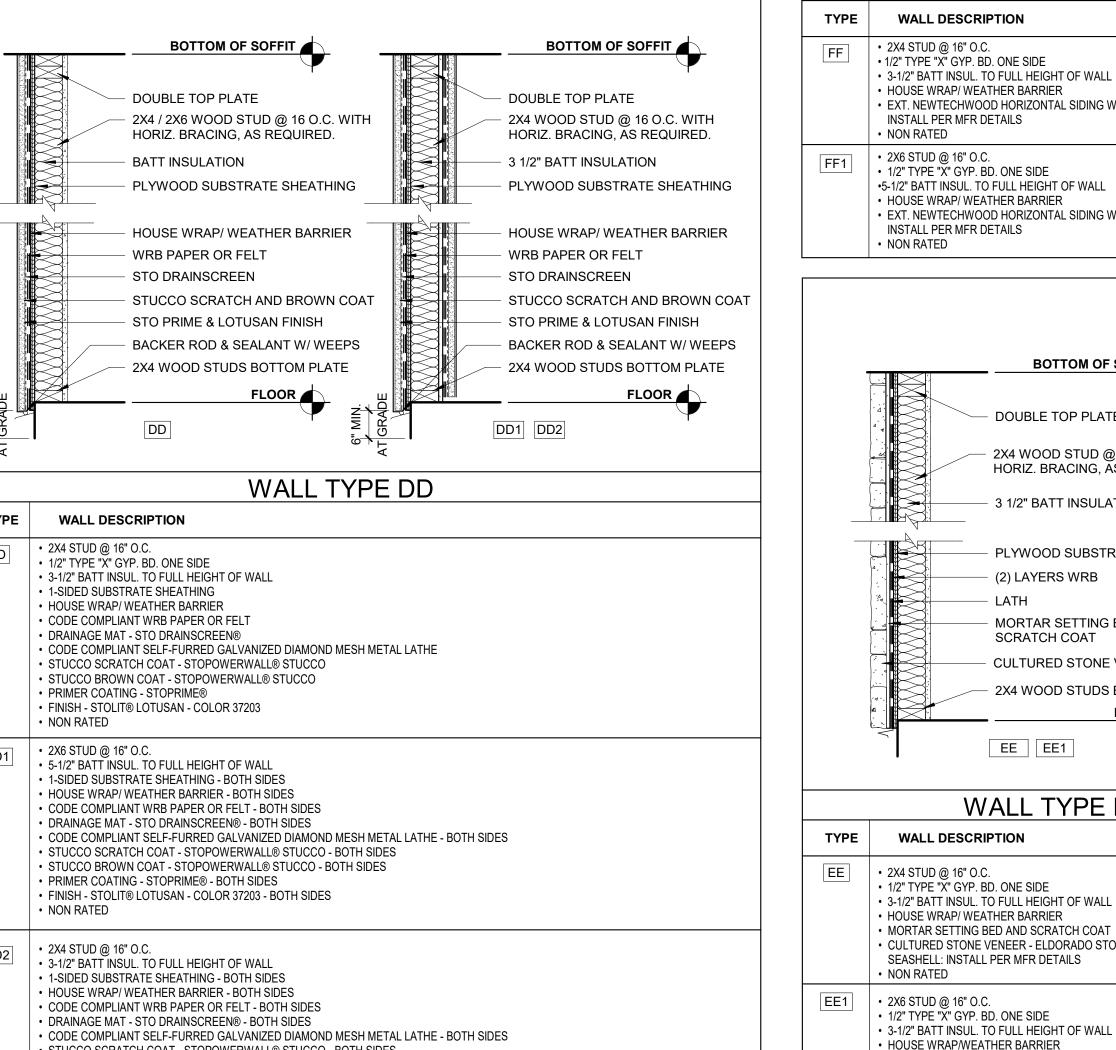


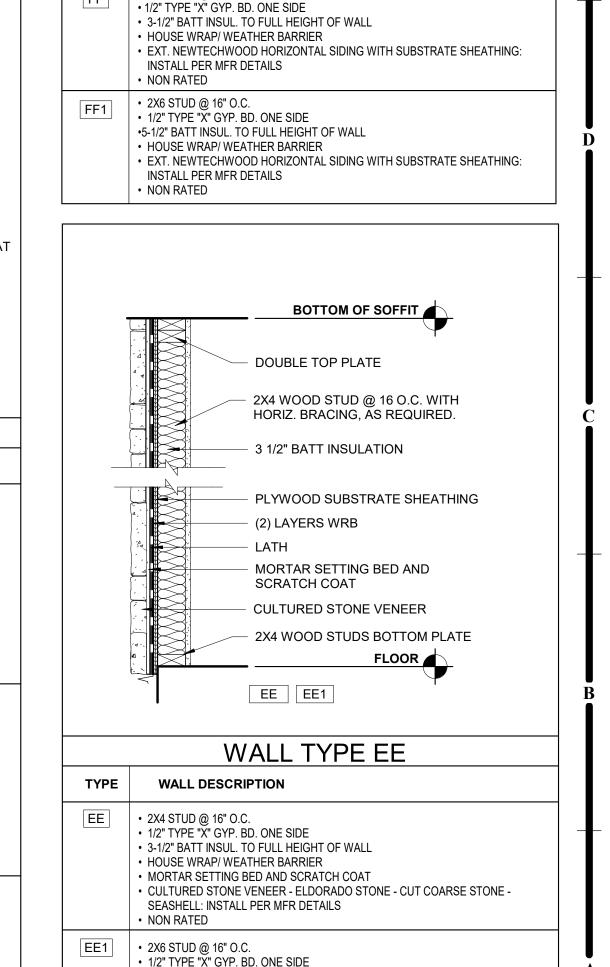
STUCCO BROWN COAT - STOPOWERWALL® STUCCO - BOTH SIDES

PRIMER COATING - STOPRIME® - BOTH SIDES

NON RATED

• FINISH - STOLIT® LOTUSAN - COLOR 37203 - BOTH SIDES





MORTAR SETTING BED AND SCRATCH COAT

SEASHELL: INSTALL PER MFR DETAILS

NON RATED

• CULTURED STONE VENEER - ELDORADO STONE - CUT COARSE STONE -

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ITEM 4, FIREBLOCKING SHALL CONSIST OF THE FOLLOWING MATERIALS.

1. TWO-INCH NOMINAL LUMBER. 2. TWO THICKNESSES OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS. 3. ONE THICKNESS OF 23/32-INCH WOOD STRUCTURAL C PANELS WITH JOINTS BACKED BY 23/32-INCH WOOD STRUCTURAL PANELS. 4. ONE THICKNESS OF 3/4-INCH PARTICLEBOARD WITH 7. BATTS OR BLANKETS OF MINERAL WOOL OR GLASS

SPECIFIC APPLICATION.

COMMENTS

LIFE SAFETY INFORMATION

### 1 SEE ADMINISTRATIVE SPECIFICATION FOR GENERAL REQUIREMENTS RELATED TO ADMINISTATION OF THIS

THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN THE PROJECT SHALL BE REQUIRED TO OBTAIN AND PAY FOR ALL NECESSARY LICENSES AS REQUIRED BY ANY LAW OR AGENCIES HAVING JURISDICTION (AHJ) OVER THE

. THE GENERAL CONTRACTOR WILL PAY FOR ALL PERMITS REQUIRED BY ANY AGENCY HAVING JURISDICTION (AHJ) OVER THE PROJECT FOR ALL WORK TO BE PREFORMED BY THE GENERAL CONTRACTOR.

THE CONTRACTOR SHALL PAY THE NECESSARY FEES TO CONNECT TO EXISTING UTILITIES AT THE PROPERTY LINE OR IN ADJACENT STREETS AND RIGHT OF WAY AS SPECIFIED, NECESSARY, AND/OR INCLUDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PAY ALL UTILITY COSTS (BILLS) DURING CONSTRUCTION UNTIL OWNER TAKES POSSESSION OF THE FACILITY OR THE FACILITY IS CERTIFIED AS SUBSTANTIALLY COMPLETE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT FINISHED SURFACES. PROTECTION FOR FINISHES SUCH AS DOORS, WALLS AND FLOORS SHOULD BE PROVIDED AS REQUIRED. ANY DAMAGES TO THESE AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.

. ANY DISCREPANCY OR CONFLICT WITHIN OR BETWEEN DRAWINGS AND ANY DISCREPANCY OR CONFLICT BETWEEN ANY DRAWING AND ANY SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. NOTWITHSTANDING. DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ARCHITECT'S AND/ OWNERS ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION. 2. THE GENERAL CONTRACTOR SHALL KEEP A COMPLETE SET OF DOCUMENTS ON THE PROJECT SITE AT ALL TIMES FOR

REFERENCE DURING CONSTRUCTION 3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILLS AND ATTENTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT. 4. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER ALL JOB SITE SAFETY PROCEDURES AND POLICIES. THE GENERAL CONTRACTOR SHALL HAVE A SAFETY COORDINATOR AND BE RESPONSIBLE

TO HOLD REGULARLY SCHEDULED SAFETY TRAINING WITH ALL JOB SITE PERSONNEL, INCLUDING ALL SUB CONTRACTOR 5. NEITHER THE ARCHITECT'S OR THE OWNERS INSPECTION NOR FAILURE TO INSPECT SHALL RELIEVE THE CONTRACTOR OF ANY OBLIGATION HEREUNDER. IF ANY WORK FAILS TO CONFORM TO THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY REMEDY AND/OR REPLACE THE SAME AT THE CONTRACTOR'S EXPENSE. NO ACCEPTANCE OR PAYMENT BY THE OWNER OR ARCHITECT SHALL CONSTITUTE A WAIVER OF THE FOREGOING AND NOTHING HEREIN SHALL EXCLUDE OR LIMIT ANY WARRANTIES IMPLIED BY LAW. 6. THE GENERAL CONTRACTOR SHALL SO CONDUCT ITS OPERATIONS AS NOT TO UNREASONABLY INTERFERE WITH TRAFFIC ON PUBLIC THOROUGHFARES ADJACENT OR NEAR TO THE PROJECT SITE.

THE GENERAL CONTRACTOR REPRESENTS THAT IT POSSESSES THE SKILLS REQUIRED FOR THE WORK, ASSUMES THE RESPONSIBILITIES OF AN EMPLOYER FOR PERFORMANCE OF THE WORK, AND ACTS AS AN EMPLOYER OF ONE OR MORE EMPLOYEES BY PAYING WAGES, DIRECTING ACTIVITIES AND PERFORMING OTHER SIMILAR FUNCTIONS. THE GENERAL CONTRACTOR IS AN INDEPENDENT CONTRACTOR, FREE TO DETERMINE THE MANNER IN WHICH THE WORK IS PERFORMED

2. THE GENERAL CONTRACTOR SHALL PROVIDE, AND MAINTAIN IN GOOD WORKING ORDER, THE FOLLOWING ITEMS FOR USE BY THE PROJECT SUPERINTENDENT DAILY DURING THE ENTIRE DURATION OF THE PROJECT: A. LAPTOP WITH INTERNET ACCESS. B. DIGITAL CAMERA WITH 'DATE STAMP' CAPABILITY AND WITH PROPER CABLES TO ATTACH TO LAPTOP. C. EMAIL ACCESS THROUGH THE LAPTOP. D. A PRINTER/SCANNER/FAX MACHINE WITH PROPER CABLES TO ATTACH TO LAPTOP.

F. PROJECT INTERNET CLOUD BASED SITE FOR MANAGEMENT OF PROJECT INFORMATION. SITE WILL BE USED FOR SUBMITTAL OF SHOP DRAWINGS, RFI'S & PHOTOS. SITE SHALL BE PROCORE OR EQUAL FUNCTIONALITY. 3. THE GENERAL CONTRACTOR SHALL HAVE A CONSTRUCTION SUPERINTENDENT ASSIGNED TO THIS PROJECT, AND THIS SUPERINTENDENT SHALL BE ON SITE EVERY DAY THERE IS ANY CONSTRUCTION ON THIS PROJECT. THE SUPERINTENDENT SHALL BE REACHABLE BY PHONE DURING NORMAL BUSINESS HOURS. ONCE ASSIGNED, THE SUPERINTENDENT SHALL NOT BE REMOVED OR REPLACED WITHOUT WRITTEN APPROVAL FROM OWNER & ARCHITECT, UNLESS SPECIFICALLY REQUESTED TO BE REPLACED BY OWNER.

4. THE SUPERINTENDENT WILL BE REQUIRED TO PROVIDE PHOTOGRAPHS (VIA EMAIL USING A DIGITAL CAMERA) TO THE OWNER & ARCHITECT EACH FRIDAY BY NOON CST, SHOWING THE PROGRESS OF CONSTRUCTION. THE GENERAL CONTRACTOR IS ENCOURAGED TO TAKE PHOTOS SEVERAL TIMES EACH WEEK TO HELP MAINTAIN PROOF OF CONSTRUCTION PROGRESS, RECORD UNCOVERED CONDITIONS, RECORD CONDITION AND AMOUNTS OF VENDOR GOODS UPON RECEIPT, AND RECORD CONSTRUCTION THAT VARIES FROM THE CD'S (AS PART OF THE AS-BUILTS). ALL PHOTOS WILL HAVE A 'DATE STAMP'.

. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OVERSEE CONSTRUCTION OF THE PROJECT,

INSPECTING THE WORK, MATERIALS, AND WORKMANSHIP PROVIDED BY ALL OF HIS TRADESMEN, SUBCONTRACTORS, AND SUPPLIERS. EXCELLENCE IN QUALITY OF CONSTRUCTION CAN ONLY BE ACHIEVED IF THE CONTRACTOR ENFORCES HIGH STANDARDS OF ACCEPTABILITY. THE GENERAL CONTRACTOR CANNOT DELEGATE HIS RESPONSIBILITY TO THE SUBCONTRACTORS, BUT MUST CONTINUALLY MONITOR THE WORK OF EACH TRADE ON THE PROJECT. 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE AND SCHEDULE ALL AGENCIES HAVING JURISDICTION (AHJ) INSPECTIONS NECESSARY TO OBTAIN THE CERTIFICATE OF OCCUPANCY (CERTIFICATE OF COMPLIANCE). PRIOR TO THE DATE OF THE AGENCY INSPECTION, THE GENERAL CONTRACTOR SHOULD INSPECT THE PROJECT TO INSURE THAT CONSTRUCTION COMPLIES WITH THE AGENCY REQUIREMENTS. SCHEDULING FINAL INSPECTIONS WITH AGENCY REPRESENTATIVES WHEN THE PROJECT IS NOT COMPLETE MUST BE AVOIDED. COPIES OF FINAL INSPECTIONS MUST BE PROVIDED TO OWNER & ARCHITECT AS THEY ARE AVAILABLE. 3. PRIOR TO REQUESTING THE SUBSTANTIAL COMPLETION INSPECTION, IT IS THE CONTRACTOR'S

RESPONSIBILITY TO CONDUCT HIS OWN PRE-SUBSTANTIAL COMPLETION INSPECTION OF THE CONSTRUCTION FOR QUALITY OF CONSTRUCTION AND COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. 4. THE FOLLOWING PEOPLE SHOULD BE IN ATTENDANCE FOR THE SUBSTANTIAL COMPLETION INSPECTION: A. GENERAL CONTRACTOR

B. GENERAL CONTRACTOR SUPERINTENDENT C. MECHANICAL CONTRACTOR

D. ELECTRICAL CONTRACTOR E. PLUMBING CONTRACTOR F. PAINTING CONTRACTOR H. FLOORING CONTRACTOR

7. DO NOT SCALE DRAWINGS.

5. ITEMS TO BE SUBMITTED AS A PREREQUISITE TO THE REQUEST FOR THE CERTIFICATE OF SUBSTANTIAL COMPLETION AND OWNER / ARCHITECT OBSERVATION OF ITEMS TO BE COMPLETED AND CORRECTED. A. GENERAL CONTRACTOR'S PUNCH LISTS B. HVAC TEST AND BALANCE REPORT

C. SPRINKLER SYSTEM ACCEPTANCE INSPECTION REPORT D. COPY OF VIDEO OF COMPLETED SEWER SYSTEM

6. THE REVIEW TEAM SHOULD PROCEED IN AN ORGANIZED MANNER THROUGHOUT THE BUILDING INSPECTING EACH SPACE OR ROOM. THE PUNCH LIST GENERATED BY THE SUBSTANTIAL COMPLETION INSPECTION TOUR IS TO BE PREPARED BY THE CONTRACTOR. ALONG WITH THE PUNCH LIST, THE ARCHITECT SHALL PREPARE THE "CERTIFICATE OF SUBSTANTIAL

. IMMEDIATELY AFTER RECEIPT OF THE PUNCH LIST, THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO BEGIN CORRECTION OF THE OUTSTANDING ITEMS. AFTER COMPLETION OF PUNCHLIST, THE CONTRACTOR SHALL NOTIFY OWNER & ARCHITECT IN WRITTING THAT FULL LIST OF ITENMS TO BE COMPLETED AND OR CORRECT IS

THE OWNER REQUIRES THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO MAINTAIN AN ACCURATE, CURRENT SET OF RECORD DOCUMENTS (AS-BUILTS) AS CONSTRUCTION PROGRESSES. ALL PERTINENT INFORMATION RELATING TO THE PROJECT MUST BE TIMELY MAINTAINED ON THE AS-BUILTS. THE AS-BUILTS MUST BE MAINTAINED ON-SITE IN THE GENERAL CONTRACTOR'S OFFICE AND WILL NOT BE USED FOR ANY OTHER PURPOSE. SINCE THE OWNER WILL OWN AND OPERATE THE FACILITY, IT IS IMPERATIVE THAT ALL PARTIES MAINTAIN ACCURATE INFORMATION REGARDING THE ALL DEVIATIONS FROM THE CONTRACT SET OF DRAWINGS MUST BE NOTED ON THE AS-BUILTS IN RED WITH CLOUDS FOR CLEAR IDENTIFICATION. THE OWNER WILL REVIEW THE AS-BUILTS FOR ACCURACY AND COMPLETENESS MONTHLY,

DURING THE PAYMENT APPLICATION REVIEW PROCESS. FAILURE TO POST CHANGES TO THE PROJECT ON THE AS-

BUILTS AS IDENTIFIED DURING THE ON-SITE MONTHLY REVIEW WILL BE CAUSE TO SUSPEND PAYMENT UNTIL RECTIFIED.

IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENFORCE THE TIMELY POSTING OF AS-BUILT CHANGES WITH THE

. WITHIN THIRTY (30) CALENDAR DAYS AFTER THE FINAL PROJECT SUBSTANTIAL COMPLETION, THE GENERAL CONTRACTOR SHALL COMPILE ALL CLOSE-OUT DOCUMENTS AND SUBMIT THEM TO THE OWNER FOR REVIEW. IF THE CONTRACTOR FAILS TO COMPLETE ITS REQUIREMENTS WITHIN THIS TIMELINE NOTED ABOVE THE CONTRACTOR MAY BE SUBJECT TO ADDITONAL ADMINISTATION FEES.

1. THE CATEGORIES LISTED BELOW SHOULD BE SUBMITTED AT THE SAME TIME.

SUBCONTRACTORS.

A. A DISK WITH ALL PHOTOS TAKEN DURING CONSTRUCTION. B. CHANGE ORDERS AND ALL ADDENDA ATTACHED AND POSTED TO THE AS-BUILT DRAWINGS. C. AS-BUILT DRAWINGS: ONE HARD COPY TO REMAIN ON SITE AND IN PLAN TUBE; ONE ELECTRONIC COPY TO BE SENT D. MATERIALS SELECTION DATA - PROVIDE ALL APPROVED SUBMITTALS.

E. OPERATION AND MAINTENANCE MANUALS (O&M) - PROVIDE O&M MANUALS BOXED AND BOUND. THIS ITEM IS OF SIGNIFICANT IMPORTANCE TO MSI FUTURE MAINTENANCE ACTIVITIES.

F. ALL HVAC TEST AND BALANCE REPORTS. H. RELEASE OF LIEN (AIA FORM 706A), PAYMENT OF DEBT (AIA FORM 706),

I. WARRANTIES, CERTIFICATES, AFFIDAVITS: 2. ALL INFORMATION INCLUDED IN THIS CATEGORY WILL BE FURNISHED IN ONE (1) COPY AND BOUND IN A STURDY THREE-RING BINDER WITH A LABEL ON THE OUTSIDE READING "GENERAL CLOSE-OUT DOCUMENTS" TO INCLUDE AN INDEX OF THE CONTENTS, ALL AIA DOCUMENTS WILL BE ORIGINAL (WITH RED LETTERING ON THE BOTTOM OF THE FORM) AND NOTARIZED. IF THE ELECTRONIC VERSION IS USED A COPY WITH ORIGINAL SIGNATURES WILL BE SUBMITTED. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR WILL HAVE SEPARATE TABS IDENTIFYING EACH BY NAME. THE GENERAL CONTRACTOR WILL LIST EACH SUBCONTRACTOR ALPHABETICALLY AND WILL CHECK TO INSURE THAT A "RELEASE OF LIEN" - AIA FORM G706A AND A "PAYMENT OF DEBT-AIA FORM G706 IS INCLUDED FOR HIMSELF AND EACH SUBCONTRACTOR. THE GENERAL CONTRACTOR WILL INCLUDE A "CONSENT OF SURETY" - AIA FORM G707. IN ADDITION, THE GENERAL CONTRACTOR WILL INCLUDE BEHIND HIS TAB THE FOLLOWING INFORMATION: A. A LIST OF NAMES, BUISNESS ADDRESSES, PHONE NUMBERS AND EMAIL ADRESSES FOR THE GENERAL

CONTRACTOR AND EACH SUBCONTRACTOR. B. AN ANNOTATED COPY OF THE SUBSTANTIAL COMPLETION PUNCH LIST INDICATING ACTION TAKEN ON EACH ITEM. C. WARRANTIES, CERTIFICATES AND AFFIDAVITS SHALL BE INCLUDED FOR ANY EQUIPMENT, MATERIALS OR SYSTEMS, COMBINED WITH ALL OF THE ABOVE INFORMATION AND PLACED BEHIND THE TAB OF THE CONTRACTOR THAT

**DIVISION 4 - MASONRY** 

04 0550 - MASONRY VENEERS & SIMULATED STONES

A. SUBMITTALS: SHOP DRAWINGS AND CALCULATIONS INDICATING PRODUCTS TYPES AND LAYOUT, VERTICAL AND HORIZONTAL DIMENSIONS, EDGE CONDITIONS, AND CONNECTION DETAILS TO SUBSTRATES. PROVIDE GROUT TYPES AND

B. BASIS OF DESIGN: CANYON LEDGE PROFILE AS MANUFACTURED BY CANYON STONE INC. MATCH THE MODULAR CONFIGURATIONS INDICATED IN THE CONSTRUCTION DOCUMENTS.

1. MORTAR: TYPE "N" TINTED TO A COLOR SELECTED BY THE ARCHITECT. 2. METAL LATH SHALL BE MINIMUM 2.5 LB. PAPER BACKED GALVANIZED METAL LATH (DIAMOND MESH) ATTACHED WITH 1-1/4" TYPE S-12 GALVANIZED NAILS. GALVANIZED FLASHING MAY ALSO BE USED. 3. IN WALL AND CAP FLASHING SHALL BE CARLISLE "PRE-KLEENED" EPDM OR COMPARABLE PRODUCTS MANUFACTURED BY W.R. GRACE OR ALCO.

4. BUILDING FELT TO BE 15# ASPHALT IMPREGNATED BUILDING FELT OVER WEATHER BARRIER OVER WALL SHEATHING. C. FABRICATIONS: FABRICATE ITEMS IN LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.

 FOLLOW MANUFACTURER RECOMMENDED INSTALLATION INSTRUCTIONS TO MAINTAIN WARRANTY. 2. APPLY MORTAR 1/2" TO 3/4" THICK TO PREPARED SURFACE AREA USING A PLASTERER'S OR MASON'S TROWEL AND LAY SIMULATED STONE UNITS LEVEL AND TRUE TO LINE IN FULL BEDS OF MORTAR. ALL JOINTS MUST BE COMPLETELY FILLED. APPLY ONLY ENOUGH MORTAR TO ALLOW STONES TO BE SET BEFORE MORTAR BEGINS TO 3. ALL JOINTS IN SIMULATED STONE WORK SHALL NOT EXCEED AN AVERAGE OF 1/2" IN WIDTH.

OTHER WALL OPENINGS. 5. DO NOT ALLOW MORTAR DROPPINGS TO HARDEN ON EXPOSED SURFACES. 6. WALLS SHALL BE COVERED WITH 15 LB. BUILDING FELT AND GALVANIZED METAL LATH SHALL BE INSTALLED PRIOR TO APPLICATION OF THE MORTAR BASE. MORTAR BASE MAY BE APPLIED DIRECTLY TO MASONRY BACK-UP.

4. RETAIN 1/2" DEEP X 1/4" WIDE SEALANT JOINTS AT PERIMETER OF EXTERIOR DOORS, WINDOW FRAMES AND

## **DIVISION 5 - METALS**

05 5000 - METAL RAILINGS

PRODUCT DATA AND SHOP DRAWINGS WITH PLANS ELEVATIONS AND SECTIONS INDICATING MEMBER SIZES AND LAYOUT, VERTICAL AND HORIZONTAL DIMENSIONS, EDGE CONDITIONS, AND CONNECTION DETAILS, INCLUDE DETAILS OF EQUIPMENT ASSEMBLIES. INDICATE DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD ASSEMBLY, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION. SAMPLES FOR INITIAL SELECTION: FOR EACH TYPE OF EXPOSED FINISH. 1. DELEGATED-DESIGN SUBMITTAL: FOR HANDRAIL AND GUARDRAIL SYSTEMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

B. DESIGN: METAL RAILINGS SHALL BE DESIGNED BY FABRICATOR TO SUPPORT CODE-REQUIRED LOADING AND TO MATCH THE CONFIGURATIONS INDICATED IN THE CONSTRUCTION DOCUMENTS. SEE DRAWINGS FOR REQUIRED RAILING ELEVATIONS. C. WARRANTY: MANUFACTURER'S WARRANTY: MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF

HANDRAIL AND GUARD RAIL SYSTEM THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD. WARRANTY PERIOD OF 30 YEAR. D. <u>BASIS OF DESIGN</u>: DIGGER SPECIALTIES, INC.; WESTBURY® ALUMINUM RAILING, TUSCANY SERIES. STYLE C10

1. GENERAL: PROVIDE MANUFACTURE'S STANDARD ACCESSORIES AS REQUIRED FOR COMPLETE RAILING SYSTEM AS INDICATED ON THE DRAWINGS AND AS REQUIRED TO COMPLY WITH PERFORMANCE REQUIREMENTS.

1. GENERAL: TYPE 304 STAINLESS-STEEL FASTNERS. PROVIDE EXPOSED FASTENERS WITH FINISH MATCHING APPEARANCE, INCLUDING COLOR AND TEXTURE, OF RAILINGS.

1. GENERAL: FABRICATE RAILINGS TO COMPLY WITH REQUIREMENTS INDICATED FOR DESIGN, DIMENSIONS, MEMBER SIZES AND SPACING, DETAILS, FINISH, AND ANCHORAGE, BUT NOT LESS THAN THAT REQUIRED TO SUPPORT 2. CUT, DRILL, AND PUNCH ALUMINUM CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROX. 1/32 INCH (1 MM) UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXP SURFACES. 3. FABRICATE CONNECTIONS THAT ARE EXPOSED TO WEATHER IN A MANNER THAT EXCLUDES WATER. PROVIDE WEEP HOLES WHERE WATER MAY ACCUMULATE.

1. POWDER-COAT FINISH: AAMA 2605 EXCEPT WITH A MINIMUM DRY FILM THICKNESS OF 1.5 MILS (0.04 MM). COMPLY WITH COATING MANUFACTURER'S WRITTEN INSTRUCTIONS FOR CLEANING, CONVERSION COATING, AND APPLYING

1. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE FABRICATED FROM SAME MATERIAL AND FINISH AS FABRICATION UNLESS NOTED OTHERWISE. SHIM AND LEVEL FABRICATIONS AS NECESSARY, COAT CONCEALED SURFACES OF ALUMINUM FABRICATIONS IN CONTACT WITH CONCRETE, GROUT, MASONRY, WOOD, OR DISSIMILAR METALS WITH BITUMINOUS PAINT.

2. FIT EXPOSED CONNECTIONS TOGETHER TO FORM TIGHT, HAIRLINE JOINTS. 3. PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING RAILINGS. SET RAILINGS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION; MEASURED FROM ESTABLISHED LINES AND LEVELS AND FREE OF RACK. 1. DO NOT WELD, CUT, OR ABRADE SURFACES OF RAILING COMPONENTS THAT ARE COATED OR FINISHED AFTER FABRICATION AND THAT ARE INTENDED FOR FIELD CONNECTION BY MECHANICAL OR OTHER MEANS WITHOUT FURTHER CUTTING OR FITTING.

4. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS. 5. ADJUST RAILINGS BEFORE ANCHORING TO ENSURE MATCHING ALIGNMENT AT ABUTTING JOINTS. 6. FASTENING TO IN-PLACE CONSTRUCTION: USE ANCHORAGE DEVICES AND FASTENERS WHERE NECESSARY FOR SECURING RAILINGS AND FOR PROPERLY TRANSFERRING LOADS TO IN-PLACE CONSTRUCTION. 7.PROTECT FINISHES OF RAILINGS FROM DAMAGE DURING CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY RAILING MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT TIME OF SUBSTANTIAL COMPLETION.

2. SET POSTS PLUMB WITHIN A TOLERANCE OF 1/16 INCH IN 3 FEET.

#### <u>DIVISION 5 - METALS</u>

PRODUCT DATA AND SHOP DRAWINGS WITH PLANS ELEVATIONS AND SECTIONS INDICATING MEMBER SIZES AND LAYOUT, VERTICAL AND HORIZONTAL DIMENSIONS, EDGE CONDITIONS, AND CONNECTION DETAILS. INCLUDE DETAILS OF EQUIPMENT ASSEMBLIES. INDICATE DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD ASSEMBLY, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION. SAMPLES FOR INITIAL SELECTION: 1. DELEGATED-DESIGN SUBMITTAL: FOR HANDRAIL AND GUARDRAIL SYSTEMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

B. DESIGN: METAL TUBE RAILINGS SHALL BE DESIGNED BY FABRICATOR TO SUPPORT CODE-REQUIRED LOADING AND TO MATCH THE CONFIGURATIONS INDICATED IN THE CONSTRUCTION DOCUMENTS. SEE DRAWINGS FOR REQUIRED RAILING ELEVATIONS.

1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS BEFORE FABRICATION.

1. A. DELEGATED DESIGN: ENGAGE A QUALIFIED PROFESSIONAL ENGINEER, TO DESIGN RAILINGS, INCLUDING ATTACHMENT TO BUILDING CONSTRUCTION. B. STRUCTURAL PERFORMANCE: RAILINGS, INCLUDING ATTACHMENT TO BUILDING CONSTRUCTION, SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED: 2. HANDRAILS AND TOP RAILS OF GUARDS:

A. UNIFORM LOAD OF 50 LBF/ FT. (0.73 KN/M) APPLIED IN ANY DIRECTION. B. CONCENTRATED LOAD OF 200 LBF (0.89 KN) APPLIED IN ANY DIRECTION. C. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

1. FASTENERS FOR ANCHORING RAILINGS TO OTHER CONSTRUCTION: SELECT FASTENERS OF TYPE, GRADE, AND CLASS REQUIRED TO PRODUCE CONNECTIONS SUITABLE FOR ANCHORING RAILINGS TO OTHER TYPES OF CONSTRUCTION INDICATED AND CAPABLE OF WITHSTANDING DESIGN LOADS.

1. METAL SURFACES, GENERAL: PROVIDE MATERIALS WITH SMOOTH SURFACES, WITHOUT SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES, STAINS, DISCOLORATIONS, OR BLEMISHES. 2. BRACKETS, FLANGES, AND ANCHORS: CAST OR FORMED METAL OF SAME TYPE OF MATERIAL AND FINISH AS SUPPORTED RAILS UNLESS OTHERWISE INDICATED. 3. PIPE: ASTM A 53/A 53M, TYPE F OR TYPE S, GRADE A, STANDARD WEIGHT (SCHEDULE 40), UNLESS ANOTHER GRADE AND WEIGHT ARE REQUIRED BY STRUCTURAL LOADS.

1. GENERAL: FABRICATE RAILINGS TO COMPLY WITH REQUIREMENTS INDICATED FOR DESIGN, DIMENSIONS, MEMBER SIZES AND SPACING, DETAILS, FINISH, AND ANCHORAGE , BUT NOT LESS THAN THAT REQUIRED TO SUPPORT STRUCTURAL LOADS. 2. CUT, DRILL, AND PUNCH ALUMINUM CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROXIMATELY 1/32 INCH (1 MM) UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES 3. FABRICATE CONNECTIONS THAT ARE EXPOSED TO WEATHER IN A MANNER THAT EXCLUDES WATER. PROVIDE 4. WELDED CONNECTIONS: USE FULLY WELDED JOINTS FOR PERMANENTLY CONNECTING RAILING COMPONENTS. COMPLY WITH REQUIREMENTS FOR WELDED CONNECTIONS IN "FABRICATION" ARTICLE WHETHER WELDING IS PERFORMED IN THE SHOP OR IN THE FIELD.

T.FOR NONGALVANIZED-STEEL RAILINGS, PROVIDE NONGALVANIZED FERROUS-METAL FITTINGS, BRACKETS, FASTENERS, AND SLEEVES: HOWEVER, GALVANIZE ANCHORS TO BE EMBEDDED IN EXTERIOR CONC OR MASONRY. 2. PREPARATION FOR SHOP PRIMING: PREPARE UNCOATED FERROUS-METAL SURFACES TO COMPLY WITH SSPC-SP 3, "POWER TOOL CLEANING." 3. PRIMER APPLICATION: APPLY SHOP PRIMER TO PREPARED SURFACES OF RAILINGS UNLESS OTHERWISE INDICATED. COMPLY WITH REQUIREMENTS IN SSPC-PA 1. "SHOP. FIELD. AND MAINTENANCE PAINTING OF STEEL," FOR SHOP PAINTING. PRIMER NEED NOT BE APPLIED TO SURFACES TO BE EMBEDDED IN CONC OR MAS.

1. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE FABRICATED FROM SAME MATERIAL AND FINISH AS FABRICATION UNLESS NOTED OTHERWISE. SHIM AND LEVEL FABRICATIONS AS NECESSARY. COAT CONCEALED SURFACES OF FABRICATIONS IN CONTACT WITH CONCRETE, GROUT, MASONRY, WOOD, OR DISSIMILAR METALS WITH

2. FIT EXPOSED CONNECTIONS TOGETHER TO FORM TIGHT, HAIRLINE JOINTS. 3. PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING RAILINGS, SET RAILINGS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION: MEASURED FROM ESTABLISHED LINES AND LEVELS AND FREE OF RACK. 1.DO NOT WELD, CUT, OR ABRADE SURFACES OF RAILING COMPONENTS THAT ARE COATED OR FINISHED AFTER FABRICATION AND THAT ARE INTENDED FOR FIELD CONNECTION BY MECHANICAL OR OTHER MEANS WITHOUT FURTHER CUTTING OR FITTING.

2. SET POSTS PLUMB WITHIN A TOLERANCE OF 1/16 INCH IN 3 FEET. 4. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS. 5. ADJUST RAILINGS BEFORE ANCHORING TO ENSURE MATCHING ALIGNMENT AT ABUTTING JOINTS. 6. FASTENING TO IN-PLACE CONSTRUCTION: USE ANCHORAGE DEVICES AND FASTENERS WHERE NECESSARY FOR SECURING RAILINGS AND FOR PROPERLY TRANSFERRING LOADS TO IN-PLACE CONSTRUCTION. 7 PROTECT FINISHES OF RAILINGS FROM DAMAGE DURING CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY RAILING MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT TIME OF SUBSTANTIAL COMPLETION.

**DIVISION 6 - WOOD AND PLASTICS** 

06 1000- ROUGH CARPENTRY

1. PROVIDE SUFFICIENT FIRE RETARDANT TREATED WOOD BLOCKING AT ALL STUDS FOR SECURING OF WALL & CEILING ITEMS, WHETHER FURNISHED BY OWNER OR CONTRACTOR. 2. CONCEALED WOOD IS TO BE FIRE RETARDANT TREATED UNLESS NOTED OTHERWISE. 3. PRESERVATIVE TREATED LUMBER IS REQUIRED FOR ALL ITEMS TO REMAIN IN CONTACT WITH CONCRETE OR MASONRY TO CONFORM TO AWPA STANDARD 5. 4. PLYWOOD SHALL BE CD GRADE APA FIR OR YELLOW PINE. ALL PLY-WOOD TO BE FIRE RATED WHERE WALLS ARE INDICATED AS RATED CONSTRUCTION. 5. BLOCKING SHALL BE CLOSELY FITTED, ACCURATELY SET TO REQUIRED LINES & LEVELS, SECURELY CONNECTED & RIGIDLY FIXED IN PLACE, USING NAILS, SCREWS, &/OR BOLTS AS INDICATED OR REQUIRED BY GOOD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

06 2000 - FINISH CARPENTR A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS.

B. <u>QUALITY STANDARD</u>: ARCHITECTURAL WOODWORK INSTITUTE'S "ARCHITECTURAL WOODWORK QUALITY

. MATERIALS:
1. SOFTWOOD LUMBER: MAXIMUM MOISTURE CONTENT OF 6 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH. 2. HARDWOOD LUMBER: MAXIMUM MOISTURE CONTENT OF 6 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH. 3. SHEET MATERIALS: SOFTWOOD PLYWOOD, EXPOSED TO VIEW: FACE SPECIES AS INDICATED, PLAIN SAWN, MEDIUM DENSITY FIBERBOARD CORE; PS 1 GRADE A-B, GLUE TYPE AS RECOMMENDED FOR APPLICATION.

1. COMPLETE FABRICATION BEFORE SHIPPING TO PROJECT SITE TO MAXIMUM EXTENT FEASIBLE. DISASSEMBLE ONLY AS NEEDED FOR SHIPPING AND INSTALLING. WHERE NECESSARY FOR FITTING AT PROJECT SITE, PROVIDE FOR SCRIBING AND TRIMMING 2. BACKOUT AND GROOVE BACKS OF FLAT MEMBERS, KERF BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT WHERE ENDS WILL BE EXPOSED IN FINISHED WORK.

1. DO NOT DELIVER OR INSTALL WOODWORK UNTIL BUILDING IS ENCLOSED, WET WORK IS COMPLETED, HVAC IS OPERATING, AND WOODWORK IS CONDITIONED TO PREVAILING CONDITIONS OF SPACE WHERE INSTALLED. MAINTAIN TEMPERATURE BETWEEN 55 F. AND 75 F. FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR DURATION OF PROJECT.

2. INSTALL WOODWORK LEVEL AND PLUMB AND SHIM AS REQUIRED WITH CONCEALED SHIMS TO 8 TOLERANCE OF 1 "/96" AND TO COMPLY WITH REFERENCED QUALITY STANDARD FOR GRADE SPECIFIED. 3. SCRIBE AND CUT WOODWORK TO FIT ADJOINING WORK, SEAL CUT SURFACES, AND REPAIR DAMAGED FINISH 4. INSTALL TRIM WITH MINIMUM NUMBER OF JOINTS POSSIBLE USING FULL-LENGTH PIECES TO GREATEST EXTENT

POSSIBLE. STAGGER JOINTS IN ADJACENT AND RELATED MEMBERS. 5. LUMBER FOR TRANSPARENT FINISH (STAINED OR CLEAR): USE PIECES MADE OF SOLID LUMBER 6. LUMBER FOR PAINTED FINISH: AT CONTRACTOR'S OPTION, USE PIECES WHICH ARE EITHER GLUED-UP OR MADE OF SOLID LUMBER STOCK. 7. DISCARD UNITS OF MATERIAL WHICH ARE UNSOUND, WARPED, BOWED, TWISTED, IMPROPERLY TREATED, NOT ADEQUATELY SEASONED OR TOO SMALL TO FABRICATE WORK WITH MINIMUM OF JOINTS OR OPTIMUM JOINTING ARRANGEMENTS, OR WHICH ARE DEFECTIVELY MANUFACTURED WITH RESPECT TO SURFACES, SIZES OR PATTERNS. 8. INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS. 9. SCRIBE AND CUT WORK TO FIT ADJOINING WORK, AND REFINISH CUT SURFACES OR REPAIR DAMAGED FINISH AT CUTS. 10. SAND WORK SMOOTH AND SET EXPOSED NAILS AND SCREWS.

12. FINISH WORK SHALL BE SMOOTH, FREE FROM ABRASION, TOOL MARKS, RAISED GRAIN MARKINGS, OR SIMILAR DEFECTS ON EXPOSED SURFACES.

11. APPLY WOOD FILLER IN EXPOSED NAIL AND SCREW INDENTATIONS.

06 4100 - ARCHITECTURAL WOOD CASEWORK A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING

DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS, INDICATE COMPONENT PROFILES, FASTENING METHODS. JOINTING DETAILS, AND ACCESSORIES. 1. SCALE OF DRAWINGS: 1-1/2 INCH TO 1 FOOT, MINIMUM. 2. PROVIDE THE INFORMATION REQUIRED BY AWI/AWMAC/WI (AWS) OR AWMAC/WI (NAAWS). 3. SAMPLES: SUBMIT ACTUAL SAMPLES OF ARCHITECTURAL CABINET CONSTRUCTION, MINIMUM 12 INCHES

SQUARE, ILLUSTRATING PROPOSED CABINET, COUNTERTOP, AND SHELF UNIT SUBSTRATE AND FINISH. B. <u>QUALITY STANDARD</u>: ARCHITECTURAL WOODWORK INSTITUTE'S "ARCHITECTURAL WOODWORK QUALITY

1. FABRICATOR QUALIFICATIONS: COMPANY SPECIALIZING IN FABRICATING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM FIVE YEARS OF DOCUMENTED EXPERIENCE.

D. <u>CABINE 1S:</u>
1. QUALITY STANDARD: CUSTOM GRADE, IN ACCORDANCE WITH AWI/AWMAC/WI (AWS) OR AWMAC/WI (NAAWS), UNLESS NOTED OTHERWISE. 2. WOOD VENEER FACED CABINET: CONCEALED SURFACES: MANUFACTURER'S OPTION. 3. PLASTIC LAMINATE FACED CABINETS: CUSTOM GRADE.

1. LAMINATES AS INDICATED IN SCHEDULES. COMPLY WITH MANUFACTURER INSTRUCTIONS. 2. ADHESIVE: TYPE RECOMMENDED BY FABRICATOR TO SUIT APPLICATION. 3. FASTENERS: SIZE AND TYPE TO SUIT APPLICATION.

EXPOSED LOCATIONS. 5. CONCEALED JOINT FASTENERS: THREADED STEEL. 6. GROMMETS: STANDARD PLASTIC, PAINTED METAL, OR RUBBER GROMMETS FOR CUT-OUTS, IN COLOR TO MATCH ADJACENT SURFACE. 7. HARDWARE: BHMA A156.9, TYPES AS RECOMMENDED BY FABRICATOR FOR QUALITY GRADE SPECIFIED 8. ADJUSTABLE SHELF SUPPORTS: STANDARD SIDE-MOUNTED SYSTEM USING RECESSED METAL SHELF STANDARDS OR MULTIPLE HOLES FOR PIN SUPPORTS AND COORDINATED SELF RESTS, POLISHED CHROME

4. BOLTS, NUTS, WASHERS, LAGS, PINS, AND SCREWS: OF SIZE AND TYPE TO SUIT APPLICATION; GALVANIZED OR

CHROME-PLATED FINISH IN CONCEALED LOCATIONS AND STAINLESS STEEL OR CHROME-PLATED FINISH IN

FINISH, FOR NOMINAL 1 INCH SPACING ADJUSTMENTS. 9. DRAWER SLIDES: TYPE: EXTENSION TYPES AS INDICATED. 10. HINGES: EUROPEAN STYLE CONCEALED SELF-CLOSING TYPE, [<>] STEEL WITH POLISHED FINISH. 11. SOFT CLOSE ADAPTER: CONCEALED, FRAME-MOUNTED, SCREW-ADJUSTABLE DAMPER; STEEL WITH 12. FINISH WORK IN ACCORDANCE WITH AWI/AWMAC/WI (AWS) OR AWMAC/WI (NAAWS).

1.INSTALL NO INTERIOR FINISH CARPENTRY OR MILLWORK UNTIL SPACES ARE ENCLOSED, DRY, AND CAPABLE OF BEING HEATED. MAINTAIN TEMPERATURE BETWEEN 55 F. AND 75 F. FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR DURATION OF PROJECT. 2.VERIFY ADEQUACY OF BACKING AND SUPPORT FRAMING. 3. VERIFY LOCATION AND SIZES OF UTILITY ROUGH-IN ASSOCIATED WITH WORK OF THIS SECTION.

4. SET AND SECURE CUSTOM CABINETS IN PLACE, ASSURING THAT THEY ARE RIGID, PLUMB, AND LEVEL. 5.USE FIXTURE ATTACHMENTS IN CONCEALED LOCATIONS FOR WALL MOUNTED COMPONENTS. 6.USE CONCEALED JOINT FASTENERS TO ALIGN AND SECURE ADJOINING CABINET UNITS. 7.CAREFULLY SCRIBE CASEWORK ABUTTING OTHER COMPONENTS, WITH MAXIMUM GAPS OF 1/32 INCH. DO NOT USE ADDITIONAL OVERLAY TRIM FOR THIS PURPOSE. 8. SECURE CABINETS TO FLOOR USING APPROPRIATE ANGLES AND ANCHORAGES

<u>DIVISION 7 - THERMAL AND MOISTURE PROTECTION</u>

07 1300 - SHEET WATERPROOFING A. <u>SUBMITTALS</u>:
1. PRODUCT DATA: PROVIDE DATA FOR MEMBRANE.

9. CLEAN CASEWORK, COUNTERS, SHELVES, HARDWARE, FITTINGS, AND FIXTURES.

2.PROVIDE SHOP DRAWINGS: INDICATE SPECIAL JOINT OR TERMINATION CONDITIONS AND CONDITIONS OF INTERFACE WITH OTHER MATERIALS 3. CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.

1. FLAME SPREAD INDEX: 25 OR LESS

ARE STATIC OR DYNAMIC.

2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREAS AND PLENUMS; 450 OR LESS WHERE CONCEALED.

MAINTAIN AMBIENT TEMPERATURES ABOVE 40 DEGREES F FOR 24 HOURS BEFORE AND DURING APPLICATION AND UNTIL LIQUID OR MASTIC ACCESSORIES HAVE CURED.

1. CONTRACTOR SHALL CORRECT DEFECTIVE WORK WITHIN A FIVE YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION; REMOVE AND REPLACE MATERIALS CONCEALING WATERPROOFING AT NO EXTRA COST TO

. <u>BASIS OF DESIGN</u>: 1. W.R. MEADOWS, INC; MEL-ROL: WWW.WRMEADOWS.COM

7. ADHESIVES: AS RECOMMENDED BY MEMBRANE MANUFACTURER.

1. SELF-ADHERED MODIFIED BITUMINOUS SHEET MEMBRANE: LOCATION: LOCATIONS AS IDENTIFIED IN 2. ROLLED, SELF-ADHERED MODIFIED BITUMINOUS SHEET MEMBRANE: THICKNESS: 60 MIL, 0.060 INCH, MINIMUM. THICKNESS: 60 MIL, 0.060 INCH, MINIMUM. CARRIER FILM: 4 MILS, POLYMERIC MEMBRANE:56 MILS, SHEET WIDTH: 3. SEAMING MATERIALS: AS RECOMMENDED BY MEMBRANE MANUFACTURER. 4. MEMBRANE SEALANT: AS RECOMMENDED BY MEMBRANE MANUFACTURER. 5. TERMINATION BARS: ALUMINUM: COMPATIBLE WITH MEMBRANE AND ADHESIVES. 6. SURFACE CONDITIONER: COMPATIBLE WITH MEMBRAN

. ACCESSORIES 1. SEALANT FOR CRACKS AND JOINTS IN SUBSTRATES: RESILIENT ELASTOMERIC JOINT SEALANT COMPATIBLE WITH SUBSTRATES AND WATERPROOFING MATERIALS. 2. PROTECTION BOARD: PROVIDE TYPE CAPABLE OF PREVENTING DAMAGE TO WATERPROOFING DUE TO BACKFILLING AND CONSTRUCTION TRAFFIC.

8. THINNER AND CLEANER: AS RECOMMENDED BY ADHESIVE MANUFACTURER, COMPATIBLE WITH SHEET

1. DO NOT INSTALL INSULATION ADHESIVES WHEN TEMPERATURE OR WEATHER CONDITIONS ARE DETRIMENTAL TO SUCCESSFUL INSTALLATION. DO NOT APPLY WATERPROOFING TO SURFACES UNACCEPTABLE TO MEMBRANE MANUFACTURER. 2. CLEAN AND PREPARE SURFACES TO RECEIVE WATERPROOFING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS: VACUUM SUBSTRATE CLEAN. 3. FILL NON-MOVING JOINTS AND CRACKS WITH A FILLER COMPATIBLE WITH WATERPROOFING MATERIALS.SEAL MOVING CRACKS WITH SEALANT AND NON-RIGID FILLER, USING PROCEDURES RECOMMENDED BY SEALANT AND WATERPROOFING MANUFACTURERS. 4. INSTALL MEMBRANE WATERPROOFING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NRCA (WM) APPLICABLE REQUIREMENTS. 5. SELF-ADHERING MEMBRANE: REMOVE RELEASE PAPER LAYER. AND ROLL OUT ONTO SUBSTRATE WITH A MECHANICAL ROLLER TO PROVIDE FULL CONTACT BOND.

6. OVERLAP EDGES AND ENDS, MINIMUM 3 INCHES, SEAL PERMANENTLY WATERPROOF BY METHOD

RECOMMENDED BY MANUFACTURER, AND APPLY UNIFORM BEAD OF SEALANT TO JOINT EDGE.

7. REINFORCE MEMBRANE WITH MULTIPLE THICKNESS OF MEMBRANE MATERIAL OVER JOINTS, WHETHER JOINTS

<u>DIVISION 7 - THERMAL AND MOISTURE PROTECTION (CONTINUED)</u>

IS PROVEN WATERTIGHT, DRAIN WATER AND REMOVE DAM.

OWNER'S NAME AND REGISTERED WITH MANUFACTURER.

07 1300 - SHEET WATERPROOFING (CONTINUED)

8. WEATHER LAP JOINTS ON SLOPED SUBSTRATE IN DIRECTION OF DRAINAGE, AND SEAL JOINTS AND SEAMS. 9. FLEXIBLE FLASHINGS: SEAL ITEMS WATERTIGHT THAT PENETRATE THROUGH WATERPROOFING MEMBRANE WITH FLEXIBLE FLASHINGS. 10. SEAL MEMBRANE AND FLASHINGS TO ADJOINING SURFACES. INSTALL TERMINATION BAR ALONG EDGES. INSTALL COUNTERFLASHING OVER EXPOSED EDGES. 11. INSTALLATION OF DRAINAGE PANEL AND PROTECTION BOARD. INSTALLER TO FOLLOW MANUFACTURERS INSTALLATION PROCEDURES. 12. UPON COMPLETION OF HORIZONTAL MEMBRANE INSTALLATION, DAM INSTALLATION AREA IN PREPARATION FOR FLOOD TESTING, FLOOD TO MINIMUM DEPTH OF 1 INCH WITH CLEAN WATER, AND AFTER 48 HOURS INSPECT FOR LEAKS, IF LEAKING IS FOUND, REMOVE WATER, REPAIR LEAKING AREAS WITH NEW WATERPROOFING MATERIALS AS DIRECTED BY ARCHITECT; REPEAT FLOOD TEST, AND REPAIR DAMAGE TO BUILDING. WHEN AREA

07 1400 - FLUID-APPLIED WATERPROOFING

1. PRODUCT DATA: PROVIDE DATA FOR MEMBRANE, SURFACE CONDITIONER, FLEXIBLE FLASHINGS, JOINT COVER SHEET, AND JOINT AND CRACK SEALANTS. SUBMIT MANUFACTURER WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN

1. ASTM E154/E154M - STANDARD TEST METHODS FOR WATER VAPOR RETARDERS USED IN CONTACT WITH EARTH UNDER CONCRETE SLABS, ON WALLS, OR AS GROUND COVER 2008A, WITH EDITORIAL REVISION (2013). 2. NRCA (WM) - THE NRCA WATERPROOFING MANUAL 2021.

1. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION, WITH NOT LESS THAN THREE YEARS DOCUMENTED EXPERIENCE. 2. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING WORK OF THE TYPE SPECIFIED AND WITH AT LEAST THREE YEARS OF DOCUMENTED EXPERIENCE.

1. CONSTRUCT MOCK-UP CONSISTING OF 100 SQ FT OF HORIZONTAL WATERPROOFED PANEL; TO REPRESENT FINISHED WORK INCLUDING INTERNAL AND EXTERNAL CORNERS, DRAINAGE PANEL, BASE FLASHINGS, CONTROL JOINTS, EXPANSION JOINTS, COUNTERFLASHINGS

I. MAINTAIN AMBIENT TEMPERATURES ABOVE 40 DEGREES F FOR 24 HOURS BEFORE AND DURING APPLICATION AND UNTIL CURED.

I. COLD-APPLIED RUBBERIZED ASPHALT WATERPROOFING: A. AVM INDUSTRIES, INC; AVM SYSTEM 500 (AUSSIE MEMBRANE):

ACCORDANCE WITH ASTM C836/C836M.

WWW.AVMINDUSTRIES.COM/#SLE B. EPRO WATERPROOFING SYSTEMS; ECOLINE-S: WWW.EPROSERV.COM/#SLE.

COLD-APPLIED RUBBERIZED ASPHALT WATERPROOFING: RUBBERIZED ASPHALTIC COMPOUND. SUITABLE FOR INSTALLATION ON CONCRETE AND CONCRETE MASONRY. 1. COMPLYING WITH ICC-ES AC29; EVIDENCE OF COMPLIANCE INCLUDES CURRENT ICC-ES EVALUATION REPORT CITING ICC-ES AC29. 2. HYDROSTATIC PRESSURE RESISTANCE: WHEN TESTED IN ACCORDANCE WITH ASTM C1306/C1306M, AT LEAST 50 POUNDS PER SQUARE INCH BY THE RAPID TEST AND AT LEAST 35 POUNDS PER SQUARE INCH BY THE LONG TERM TEST. 3. LOW TEMPERATURE RESISTANCE: NO CRACKING, LOSS OF ADHESION, SPLITTING OR PINHOLES WHEN TESTED AT MINUS 15 DEGREES F IN ACCORDANCE WITH ASTM C836/C836M. 4. ADHESION: NO SEPARATION WHEN TESTED IN ACCORDANCE WITH ASTM C836/C836M. 5. DECAY RESISTANCE: NO DECAY WHEN TESTED IN ACCORDANCE WITH ASTM

2. WATER-BASED ASPHALT EMULSION WATERPROOFING: A. MAR-FLEX WATERPROOFING & BUILDING PRODUCTS; ARMORMEMBRANE 363 WATER-BASED: WWW.MAR-FLEX.COM/#SLE.

6. WET FILM SAG RESISTANCE: NO SAG OR SAG WITHIN PLUS/MINUS 5 MILS WHEN TESTED IN

B. TREMCO COMMERCIAL SEALANTS & WATERPROOFING; TREMPROOF 260: WWW.TREMCOSEALANTS.COM/#SLE. C. W.R. MEADOWS, INC; MEL-ROL LM: WWW.WRMEADOWS.COM/#SLE 1. CURED THICKNESS: 60 MILS, 0.060 INCH, MINIMUM 2. SUITABLE FOR INSTALLATION OVER CONCRETE SUBSTRATES. 3. ELONGATION: 1000 PERCENT, MEASURED IN ACCORDANCE WITH ASTM D412. 4 PEEL ADHESION: ACCORDING TO ASTM D412 FOR THE FOLLOWING S 5. ADHESION: GREATER THAN 150 PSI, MEASURED IN ACCORDANCE WITH ASTM D4541.

1. SEALANT FOR JOINTS AND CRACKS IN SUBSTRATE: TYPE COMPATIBLE WITH WATERPROOFING MATERIAL AND AS RECOMMENDED BY WATERPROOFING MANUFACTURER.

1. EXAMINATION:1. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. 2. VERIFY SUBSTRATE SURFACES ARE FREE OF FROZEN MATTER, DAMPNESS, LOOSE PARTICLES, CRACKS, PITS, PROJECTIONS, PENETRATIONS, OR FOREIGN MATTER DETRIMENTAL TO ADHESION OR APPLICATION OF WATERPROOFING SYSTEM. 3. VERIFY THAT SUBSTRATE SURFACES ARE SMOOTH, FREE OF HONEYCOMB OR PITTING, AND NOT DETRIMENTAL TO FULL CONTACT BOND OF WATERPROOFING MATERIALS. 4. VERIFY ITEMS THAT PENETRATE SURFACES TO RECEIVE WATERPROOFING ARE SECURELY INSTALLED.

1. PROTECT ADJACENT SURFACES FROM DAMAGE NOT DESIGNATED TO RECEIVE WATERPROOFING. 2. CLEAN AND PREPARE SURFACES TO RECEIVE WATERPROOFING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS; VACUUM SUBSTRATE CLEAN 3. DO NOT APPLY WATERPROOFING TO SURFACES UNACCEPTABLE TO WATERPROOFING MANUFACTURER. 4. FILL NON-MOVING JOINTS AND CRACKS WITH A FILLER COMPATIBLE WITH WATERPROOFING MATERIALS. 5. SEAL MOVING CRACKS WITH SEALANT AND NON-RIGID FILLER, USING PROCEDURES RECOMMENDED BY SEALANT AND WATERPROOFING MANUFACTURERS. 6. PREPARE BUILDING EXPANSION JOINTS AT LOCATIONS AS INDICATED ON DRAWINGS. 7. INSTALL CANT STRIPS AT INSIDE CORNERS.

1. INSTALL WATERPROOFING TO SPECIFIED MINIMUM THICKNESS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND NRCA (WM) APPLICABLE REQUIREMENTS. 2. APPLY PRIMER OR SURFACE CONDITIONER AT A RATE RECOMMENDED BY MANUFACTURER, AND PROTECT CONDITIONER FROM RAIN OR FROST UNTIL DRY 3. AT JOINTS AND CRACKS LESS THAN 1/2 INCH IN WIDTH INCLUDING JOINTS BETWEEN HORIZONTAL AND VERTICAL SURFACES, APPLY 12 INCH WIDE STRIP OF JOINT COVER SHEET. 4. APPLY EXTRA THICKNESS OF WATERPROOFING MATERIAL AT CORNERS, INTERSECTIONS, AND ANGLES. 5. SEAL MEMBRANE AND FLASHINGS TO ADJOINING SURFACES.

07 2100 - THERMAL INSULATION A. <u>SUBMITTALS</u>: PRODUCT DATA FOR EACH TYPE OF INSULATION SPECIFIED.

1. FLAME SPREAD INDEX: 25 OR LESS

2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREAS AND PLENUMS; 450 OR LESS WHERE CONCEALED. 1. MINERAL FIBER OR GLASS FIBER BLANKET INSULATION: TYPE I, UNFACED WHERE SPECIFIED WITH SEPARATE

VAPOR BARRIER. FIBERS MANUFACTURED FROM GLASS, SLAG WOOL, OR ROCK WOOL. FLEXIBLE PREFORMED BATT OR BLANKET, COMPLYING WITH ASTM C665; FRICTION FIT.SEE DRAWINGS FOR SPECIFIC TYPES. A. FLAME SPREAD INDEX: 25 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84. B. SMOKE DEVELOPED INDEX: 450 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84. C. COMBUSTIBILITY: NON-COMBUSTIBLE, WHEN TESTED IN ACCORDANCE WITH ASTM E136, EXCEPT FOR 2. BOARD INSULATION: BOARD INSULATION AT CAVITY WALL CONSTRUCTION, EXTERIOR WALL BEHIND [RATED

AND ACOUSTIC CONDITIONS] WALL FINISH, AND INTERIOR WALL WITH FACER PROVIDING EXPOSED FINISH. A. EXPANDED POLYSTYRENE (EPS) BOARD INSULATION: COMPLIES WITH ASTM C578. 1. FLAME SPREAD INDEX (FSI): CLASS A - 0 TO 25, WHEN TESTED IN ACCORDANCE WITH ASTM E84. 2. SMOKE DEVELOPED INDEX (SDI): 450 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84. 3. BOARD SIZE: 48 INCH BY 96 INCH. 4. BOARD THICKNESS: 1-1/2 INCH. 5. TYPE AND COMPRESSIVE RESISTANCE: TYPE XI, 5 PSI (35 KPA), MINIMUM.

6. TYPE AND WATER ABSORPTION: TYPE XI, 4.0 PERCENT BY VOLUME, MAXIMUM, BY TOTAL IMMERSION. 1. VAPOR RETARDER: 6 MIL POLYETHYLENE AT CONCEALED AREAS (FLAME SPREAD/SMOKE DEVELOPED: 25/450), FOIL/SCRIM AT PLENUMS AND EXPOSED AREAS (FLAME SPREAD/SMOKE DEVELOPED: 25/50). PROVIDE WHERE

2. TAPE: REINFORCED POLYETHYLENE FILM WITH ACRYLIC PRESSURE SENSITIVE ADHESIVE. APPLICATION:

SEALING OF INTERIOR CIRCULAR PENETRATIONS, SUCH AS PIPES OR CABLES. 1. DO NOT INSTALL INSULATION ADHESIVES WHEN TEMPERATURE OR WEATHER CONDITIONS ARE DETRIMENTAL TO SUCCESSFUL INSTALLATION. 2. INSTALL INSULATION IN AREAS AND IN THICKNESSES INDICATED OR REQUIRED TO PRODUCE R-VALUES WHERE INDICATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS AND FILL VOIDS WITH INSULATION. 3. INSTALL IN EXTERIOR WALL AND CEILING SPACES WITHOUT GAPS OR VOIDS. DO NOT COMPRESS INSULATION. 4. TRIM INSULATION NEATLY TO FIT SPACES. INSULATE MISCELLANEOUS GAPS AND VOIDS. 5. EXTEND VAPOR RETARDER TO EXTREMITIES OF AREAS TO BE PROTECTED FROM VAPOR TRANSMISSION.

SECURE IN PLACE WITH ADHESIVES OR OTHER ANCHORAGE AS RECOMMENDED BY MANUFACTURER. LOCATE

SEAMS AT FRAMING MEMBERS, OVERLAP AND SEAL WITH SUITABLE TAPE (DUCT TAPE IS NOT SUITABLE).

07 2500 - WEATHER BARRIERS A. <u>SUBMITTALS</u>: PRODUCT DATA: PROVIDE DATA ON MATERIAL CHARACTERISTICS. SHOP DRAWINGS: PROVIDE RAWINGS OF SPECIAL JOINT CONDITIONS.

B. MOCK-UP: INSTALL AIR BARRIER, VAPOR RETARDER, AND WATER-RESISTIVE BARRIER MATERIALS IN MOCK-UP. C. <u>PRODUCTS</u>: AIR BARRIER, FLUID APPLIED: VAPOR PERMEABLE, ELASTOMERIC WATERPROOFING.

D. <u>BASIS OF DESIGN</u>: BASF CORPORATION; MASTERSEAL AWB 665:

6. DO NOT PERMIT INSTALLED INSULATION TO BE DAMAGED PRIOR TO ITS CONCEALMENT.

E. <u>ACCESSORIES</u>: 1. SEALANTS, TAPES, AND ACCESSORIES FOR SEALING WEATHER BARRIER AND SEALING WEATHER BARRIER TO ADJACENT SUBSTRATES: AS SPECIFIED OR AS RECOMMENDED BY WEATHER BARRIER MANUFACTURER. 2. FLEXIBLE FLASHING: SHEATHING FABRIC SATURATED WITH AIR BARRIER COATING AND COMPLYING WITH THE APPLICABLE REQUIREMENTS OF ICC-ES AC148. 3. LIQUID FLASHING: ONE PART, FAST CURING, NON-SAG, ELASTOMERIC, GUN GRADE, TROWELABLE LIQUID

1. VERIFY THAT SURFACES AND CONDITIONS ARE READY TO ACCEPT THE WORK OF THIS SECTION. 2. REMOVE PROJECTIONS. PROTRUDING FASTENERS. AND LOOSE OR FOREIGN MATTER THAT MIGHT INTERFERE WITH PROPER INSTALLATION 3. CLEAN AND PRIME SUBSTRATE SURFACES TO RECEIVE ADHESIVES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

<u>DIVISION 7 - THERMAL AND MOISTURE PROTECTION (CONTINUED)</u>

07 2500 - WEATHER BARRIERS (CONTINUED)

1. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. 2. AIR BARRIERS: INSTALL CONTINUOUS AIR TIGHT BARRIER OVER SURFACES INDICATED, WITH SEALED SEAMS AND WITH SEALED JOINTS TO ADJACENT SURFACES. 3. PREPARE SUBSTRATE IN MANNER RECOMMENDED BY COATING MANUFACTURER; TREAT JOINTS IN SUBSTRATE AND BETWEEN DISSIMILAR MATERIALS AS RECOMMENDED BY MANUFACTURER. 4. MASTIC COATING: INSTALL BY TROWEL OR ROLLER TO MINIMUM THICKNESS OF 1/4 INCH; USE SHEET SEAL TO JOIN TO ADJACENT CONSTRUCTION, SEAL AIR TIGHT WITH SEALANT. 5. USE FLASHING TO SEAL TO ADJACENT CONSTRUCTION AND TO BRIDGE JOINTS.

6. INSTALL FLASHING OVER SILLS, COVERING ENTIRE SILL FRAME MEMBER, EXTENDING AT LEAST 5 INCHES ONTO

WEATHER BARRIER AND AT LEAST 6 INCHES UP JAMBS; MECHANICALLY FASTEN STRETCHED EDGES.

7. AT OPENINGS TO BE FILLED WITH FRAMES HAVING NAILING FLANGES, SEAL HEAD AND JAMB FLANGES USING A CONTINUOUS BEAD OF SEALANT COMPRESSED BY FLANGE AND COVER FLANGES WITH SEALING TAPE AT LEAST 4 INCHES WIDE; DO NOT SEAL SILL FLANGE. 8. AT OPENINGS TO BE FILLED WITH NON-FLANGED FRAMES, SEAL WEATHER BARRIER TO EACH SIDE OF OPENING FRAMING, USING FLASHING AT LEAST 9 INCHES WIDE, COVERING ENTIRE DEPTH OF FRAMING. AT HEAD OF OPENINGS, INSTALL FLASHING UNDER WEATHER BARRIER EXTENDING AT LEAST 2 INCHES BEYOND FACE OF JAMBS; SEAL WEATHER BARRIER TO FLASHING. 10. AT INTERIOR FACE OF OPENINGS, SEAL GAP BETWEEN WINDOW/DOOR FRAME AND ROUGH FRAMING, USING JOINT SEALANT OVER BACKER ROD.

07 4020 - EXTERIOR INSULATION AND FINISH SYSTEMS

A. SUBMITTALS: PRODUCT DATA: PROVIDE DATA ON SYSTEM MATERIALS, PRODUCT CHARACTERISTICS, PERFORMANCE CRITERIA. 1. SHOP DRAWINGS: INDICATE WALL AND SOFFIT JOINT PATTERNS, JOINT DETAILS, AND MOLDING PROFILES 2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES.

B. MOCK- UP: 1.CONSTRUCT MOCK-UP OF TYPICAL EIFS APPLICATION ON SPECIFIED SUBSTRATE, SIZE AS INDICATED ON DRAWINGS, AND INCLUDING FLASHINGS, JOINTS, AND EDGE CONDITIONS. 2. MOCK-UP MAY REMAIN AS PART OF THE WORK.

1. DO NOT PREPARE MATERIALS OR APPLY EIFS UNDER CONDITIONS OTHER THAN THOSE DESCRIBED IN THE MANUFACTURER'S WRITTEN INSTRUCTIONS. 2. DO NOT PREPARE MATERIALS OR APPLY EIFS DURING INCLEMENT WEATHER UNLESS AREAS OF INSTALLATION ARE PROTECTED. PROTECT INSTALLED EIFS AREAS FROM INCLEMENT WEATHER UNTIL DRY.

INSULATION BOARD ADHESIVE-APPLIED DIRECTLY TO WATER-RESISTIVE COATING OVER SUBSTRATE:PROVIDE A

COMPLETE SYSTEM THAT HAS BEEN TESTED TO SHOW COMPLIANCE WITH THE FOLLOWINGCHARACTERISTICS;

1. PROVIDE MANUFACTURER'S STANDARD MATERIAL WARRANTY, COVERING A PERIOD OF NOT LESS THAN 5 YEARS. 1. EXTERIOR INSULATION AND FINISH SYSTEM: DRAINAGE TYPE; REINFORCED FINISH COATING ON FLAT-BACKED

INCLUDE ALL COMPONENTS OF SPECIFIED SYSTEM AND SUBSTRATE(S) IN TESTED SAMPLES. 2. FIRE CHARACTERISTICS: A. FLAMMABILITY: PASS, WHEN TESTED IN ACCORDANCE WITH NFPA 285. B. IGNITIBILITY: NO SUSTAINED FLAMING WHEN TESTED IN ACCORDANCE WITH NFPA 268.

1. FINISH COATING TOP COAT: WATER-BASED, AIR CURING, ACRYLIC OR POLYMER-BASED FINISH WITH INTEGRAL COLOR AND TEXTURE. 2. REINFORCING MESH: BALANCED, OPEN WEAVE GLASS FIBER FABRIC, TREATED FOR COMPATIBILITY AND IMPROVED BOND WITH COATING, WEIGHT, STRENGTH, AND NUMBER OF LAYERS AS REQUIRED TO MEET REQUIRED SYSTEM IMPACT RATING. 3. EXTRUDED POLYSTYRENE (XPS) BOARD INSULATION: COMPLIES WITH ASTM C578, WITH NATURAL SKIN 4. WATER-RESISTIVE BARRIER COATING: FLUID-APPLIED AIR AND WATER BARRIER MEMBRANE; APPLIED TO SHEATHING; FURNISHED OR APPROVED BY EIFS MANUFACTURER.

1. INSULATION ADHESIVE: TYPE REQUIRED BY EIFS MANUFACTURER FOR PROJECT SUBSTRATE.

1. GENERAL: INSTALL IN ACCORDANCE WITH EIFS MANUFACTURER'S INSTRUCTIONS AND ASTM C1397. 2. WATER RESISTIVE BARRIER: APPLY BARRIER COATING AS RECOMMENDED BY COATING MANUFACTURER; PRIME SUBSTRATE AS REQUIRED BEFORE APPLICATION. 3. INSULATION:

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. B. PLACE BOARDS IN A METHOD TO MAXIMIZE TIGHT JOINTS. STAGGER VERTICAL JOINTS AND INTERLOCK AT CORNERS. BUTT EDGES AND ENDS TIGHT TO ADJACENT BOARD AND TO PROTRUSIONS. ACHIEVE A CONTINUOUS FLUSH INSULATION SURFACE, WITH NO GAPS IN EXCESS OF 1/16 C. FILL GAPS GREATER THAN 1/16 INCH WITH STRIPS OR SHIMS CUT FROM THE SAME INSULATION MATERIAL. 4. CLASS PM FINISH:

A. REINFORCING MESH: INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. B. BASE COAT: INSTALL TO MINIMUM THICKNESS SPECIFIED, FOLLOWING MANUFACTURER'S INSTRUCTIONS. LEAVE BASE COAT IN CONDITION SUITABLE TO RECEIVE FINISH COAT. C. FINISH COAT: APPLY FINISH COAT AFTER BASE COAT HAS DRIED NOT LESS THAN 24 HOURS, EMBED FINISH AGGREGATE, AND FINISH TO A UNIFORM TEXTURE AND COLOR.

A. <u>SUBMITTALS</u>: PRODUCT DATA, AND SAMPLES OF LOCATIONS FOR EACH TYPE OF SIDING 1. VERTICAL SIDING, LP SMARTSIDE PANEL SIDING. CEDAR TEXTURE PANEL. 2. HORIZONTAL SIDING, LP SMARTSIDE LAP SIDING. CEDAR TEXTURE LAP.

APPLICABLE DOCUMENTS BEFORE INSTALLATION.

3. SOFFIT, VENTED / NONVENTED, LP SMARTSIDE SOFFIT. CEDAR TEXTURE. 1. EXTERIOR TRIM SHALL BE LOUISIANA-PACIFIC SMARTSIDE TRIM-FASCIA TREATED ENGINEERED WOOD TRIM OR APPROVED EQUAL, UNLESS OTHERWISE INDICATED, IN SIZES INDICATED ON THE

CREATE A CHEMICAL BOND AND CUT TO SHAPES INDICATED. 1. GENERAL: INSTALL PRODUCTS IN ACCORDANCE WITH THE LATEST INSTALLATION GUIDELINES OF THE MANUFACTURER AND ALL APPLICABLE BUILDING CODES AND OTHER LAWS, RULES, REGULATIONS AND ORDINANCES. REVIEW ALL MANUFACTURER INSTALLATION, MAINTENANCE INSTRUCTIONS, AND OTHER

2. CELLULAR PVC TRIM SHALL BE AS MANUFACTURED BY AZEK BUILDING PRODUCTS OR APPROVED

EQUAL. GLUED-UP MEMBERS SHALL BE GLUED WITH MANUFACTURER'S STANDARD ADHESIVE TO

07 3113 - ASPHALT SHINGLES & ACCESSORIES A. <u>SUBMITTALS</u>: PRODUCT DATA, AND SAMPLES OF EACH PRODUCT AND COLOR OPTIONS.

B. <u>WARRANTY:</u> STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE ASPHALT SHINGLES THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD. 1. MATERIAL WARRANTY PERIOD: 30 YEARS FROM DATE OF SUBSTANTIAL COMPLETION, PRORATED, WITH FIRST FIVE YEARS NONPRORATED. 2. ALGAE-DISCOLORATION WARRANTY PERIOD: ASPHALT SHINGLES WILL NOT DISCOLOR 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

C. <u>BASIS OF DESIGN</u>: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE TIMBERLINE 30 SHINGLES AS MANUFACTURED BY GAF ROOFING PRODUCTS OR APPROVED EQUAL WITH GRANULES TREATED TO RESIST ALGAE DISCOLORATION. COLOR SHALL BE SELECTED BY THE ARCHITECT.

1. LAMINATED-STRIP ASPHALT SHINGLES: ASTM D 3462, LAMINATED, MULTI-PLY OVERLAY CONSTRUCTION, GLASS-FIBER REINFORCED, MINERAL-GRANULE SURFACED, AND SELF-SEALING. 2. FELT: ASTM D 226, TYPE I, ASPHALT-SATURATED ORGANIC FELTS, NONPERFORATED. 3. SELF-ADHERING SHEET UNDERLAYMENT, POLYETHYLENE FACED: ASTM D 1970/D 1970M, MINIMUM OF 40-MIL- (1.0-MM-) THICK, SLIP-RESISTING, POLYETHYLENE-FILM-REINFORCED TOP SURFACE LAMINATED TO SBS-MODIFIED ASPHALT ADHESIVE, WITH RELEASE BACKING; COLD APPLIED. PREFERED PRODUCT GRACE CONSTRUCTION PRODUCTS, ICE AND WATER SHIELD

 ASPHALT ROOFING CEMENT: ASTM D 4586, TYPE II, ASBESTOS FREE. 2. ROOFING NAILS: ASTM F 1667; ALUMINUM OR HOT-DIP GALVANIZED-STEEL WIRE SHINGLE NAILS, MINIMUM 0.120-INCH DIAMETER, BARBED SHANK, SHARP-POINTED, WITH A MINIMUM 3/8-INCH DIAMETER FLAT HEAD AND OF SUFFICIENT LENGTH TO PENETRATE AT LEAST 1/8 INCH THROUGH THE ROOF SHEATHING. WHERE NAILS ARE IN CONTACT WITH METAL FLASHING, USE NAILS MADE FROM SAME METAL AS 3. FELT UNDERLAYMENT NAILS: ALUMINUM, STAINLESS-STEEL, OR HOT-DIP GALVANIZED-STEEL WIRE WITH

LOW-PROFILE CAPPED HEADS OR DISC CAPS, 1-INCH MINIMUM DIAMETER.

4. FABRICATE SHEET METAL FLASHING AND TRIM TO COMPLY WITH RECOMMENDATIONS IN SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" THAT APPLY TO DESIGN, DIMENSIONS, METAL, AND OTHER CHARACTERISTICS OF THE ITEM. PREFERED MATERIALS: SHEET METAL: PREFINISHED ALUMINUM. I.INSTALL ASPHALT SHINGLES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. RECOMMENDATIONS IN ARMA'S "RESIDENTIAL ASPHALT ROOFING MANUAL," AND ASPHALT SHINGLE RECOMMENDATIONS IN NRCA'S "THE NRCA ROOFING AND WATERPROOFING MANUAL." 2. INSTALL STARTER STRIP ALONG LOWEST ROOF EDGE, CONSISTING OF AN ASPHALT SHINGLE STRIP AT LEAST 7 INCHES WIDE WITH SELF-SEALING STRIP FACE UP AT ROOF EDGE. INSTALL STARTER STRIP ALONG RAKE EDGE.

3. EXTEND ASPHALT SHINGLES 3/8 INCH OVER FASCIA AT EAVES AND RAKES. 4. INSTALL FIRST AND REMAINING COURSES OF ASPHALT SHINGLES STAIR-STEPPING DIAGONALLY ACROSS ROOF DECK WITH MANUFACTURER'S RECOMMENDED OFFSET PATTERN AT SUCCEEDING COURSES, MAINTAINING 5. FASTEN ASPHALT SHINGLE STRIPS WITH ROOFING NAILS LOCATED ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. WHEN AMBIENT TEMPERATURE DURING INSTALLATION IS BELOW 50 DEG F, SEAL ASPHALT 6. HIP AND RIDGE CAP SHINGLES: MAINTAIN SAME EXPOSURE OF HIP AND RIDGE CAP SHINGLES AS ROOFING SHINGLE EXPOSURE. LAP RIDGE CAP SHINGLES TO SHED WATER AWAY FROM DIRECTION OF PREVAILING WINDS. FASTEN WITH ROOFING NAILS OF SUFFICIENT LENGTH TO PENETRATE SHEATHING.

07 6200 - SHEET METAL FLASHING AND TRIM

FLASHINGS, TERMINATIONS, AND INSTALLATION DETAILS.

D. DELIVERY, STORAGE, AND HANDLING

METAL SHEETS TO ENSURE DRAINAGE.

ABRICATED SHEET METAL ITEMS, INCLUDING FLASHINGS, COUNTERFLASHINGS, AND OTHER ITEMS INDICATED IN

AAMA 611 - VOLUNTARY SPECIFICATION FOR ANODIZED ARCHITECTURAL ALUMINUM 2014 (2015 ERRATA). ASTM C920 - STANDARD SPECIFICATION FOR ELASTOMERIC JOINT SEALANTS 2018. CDA A4050 - COPPER IN ARCHITECTURE - HANDBOOK CURRENT EDITION. SMACNA (ASMM) - ARCHITECTURAL SHEET METAL MANUAL 2012.

SHOP DRAWINGS: INDICATE MATERIAL PROFILE, JOINTING PATTERN, JOINTING DETAILS, FASTENING METHODS,

I. STACK MATERIAL TO PREVENT TWISTING, BENDING, AND ABRASION, AND TO PROVIDE VENTILATION. SLOPE

. PERFORM WORK IN ACCORDANCE WITH SMACNA (ASMM) AND CDA A4050 REQUIREMENTS AND STANDARD DETAILS, EXCEPT AS OTHERWISE INDICATED.

2. PREVENT CONTACT WITH MATERIALS THAT COULD CAUSE DISCOLORATION OR STAINING.

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**GENERAL PROJECT** 

D. <u>BASIS OF DESIGN</u>: SILVERED FLAT GLASS MIRRORS 1. GLASS MIRRORS, GENERAL: ASTM C 1503; MANUFACTURED USING COPPER FREE, LOW LEAD MIRROR COATING 2. CLEAR GLASS: MIRROR GLAZING QUALITY; ULTRACLEAR (LOW IRON) FLOAT GLASS WITH A MINIMUM 91 PERCENT VISIBLE LIGHT TRANSMISSION, NOMINAL THICKNESS: 1/4 INCH. 3. TEMPERED CLEAR GLASS: MIRROR GLAZING QUALITY, FOR BLEMISH REQUIREMENTS; AND COMPLY WITH ASTM C 1048 FOR KIND FT, CONDITION A, TEMPERED FLOAT GLASS BEFORE SILVER COATING IS E. MIRROR HARDWARE: TOP AND BOTTOM ALUMINUM J CHANNELS: ALUMINUM EXTRUSIONS WITH A RETURN DEEP

ENOUGH TO PRODUCE A GLAZING CHANNEL TO ACCOMMODATE MIRRORS OF THICKNESS INDICATED AND IN LENGTHS REQUIRED TO COVER BOTTOM AND TOP EDGES OF EACH MIRROR IN A SINGLE PIECE. FINISH: CLEAR 1. TOP AND BOTTOM MIRROR MOUNTING CLIPS: #277 MIRROR CLIPS AS MANUFACTURED BY KNAPE & VOGT OR

2. FASTENERS: FABRICATED OF SAME BASIC METAL AND ALLOY AS FASTENED METAL AND MATCHING IT IN FINISHED COLOR AND TEXTURE WHERE FASTENERS ARE EXPOSED. F. <u>INSTALLATION:</u> GENERAL: EXAMINE SUBSTRATES, OVER WHICH MIRRORS ARE TO BE MOUNTED, WITH INSTALLER

PRESENT, FOR COMPLIANCE WITH INSTALLATION TOLERANCES, SUBSTRATE PREPARATION, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK. A. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY OF MIRROR MASTIC WITH EXISTING FINISHES OR PRIMERS. B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES ARE DRY.

1.INSTALL MIRRORS TO COMPLY WITH MIRROR MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH REFERENCED GANA PUBLICATIONS. MOUNT MIRRORS ACCURATELY IN PLACE IN A MANNER THAT AVOIDS DISTORTING 2. INSTALL WALL MOUNTED ANNEALED GLASS MIRRORS IN THE APARTMENT UNITS WITH MIRROR CLIPS. ATTACH MIRROR HARDWARE SECURELY TO MOUNTING SURFACES WITH MECHANICAL FASTENERS INSTALLED WITH 3. ANCHORS OR INSERTS AS APPLICABLE. INSTALL FASTENERS SO HEADS DO NOT IMPOSE POINT LOADS ON BACKS OF MIRRORS. 4. PROTECT MIRRORS FROM BREAKAGE AND CONTAMINATING SUBSTANCES RESULTING FROM CONSTRUCTION OPERATIONS. 5. MAINTAIN ENVIRONMENTAL CONDITIONS THAT WILL PREVENT MIRRORS FROM BEING EXPOSED TO MOISTURE FROM CONDENSATION OR OTHER SOURCES FOR CONTINUOUS PERIODS OF TIME. 6. WASH EXPOSED SURFACE OF MIRRORS NOT MORE THAN FOUR DAYS BEFORE DATE SCHEDULED FOR INSPECTIONS THAT ESTABLISH DATE OF SUBSTANTIAL COMPLETION. WASH MIRRORS AS RECOMMENDED IN WRITING BY MIRROR MANUFACTURER.

#### **DIVISION 9 - FINISHES**

**DIVISION 8 - OPENINGS (CONTINUED)** 

08 8100 - MIRRORS

09 2116 - GYPSUM BOARD ASSEMBLIES A. <u>STEEL FRAMING MEMBERS:</u> COMPLY WITH ASTM C754 IN DEPTHS AND GAGES AS INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS: 1. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C645 WITH MANUFACTURER'S STANDARD CORROSION-RESISTANT ZINC COATING. 2. TIE WIRE: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0625" DIAMETER OR DOUBLE STRAND OF .0475" DIAMETER WIRE. 3. WIRE HANGERS: ASTM A 641/A 641M, CLASS 1 ZINC COATING, SOFT TEMPER. .0162" DIAMETER. B. PANEL PRODUCTS:PROVIDE IN THICKNESS AND TYPE INDICATED IN THE CONSTRUCTION DRAWINGS IN MAXIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS: 1. GYPSUM WALLBOARD: ASTM C 36, TYPE 'X' WITH TAPERED EDGES, SAG-RESISTANT TYPE FOR 2. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 630, TYPE 'X' ON ALL TOILET ROOM AND SHOWER ROOM WALLS, BEHIND ALL PLUMBING FIXTURES, AND AS INDICATED.

I. TRIM: ASTM 1047, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC. OR PLASTIC a. OUTSIDE CORNERS: PROVIDE CORNER BEAD UNLESS NOTED OTHERWISE b. EXPOSED PANEL EDGES: PROVIDE LC-BEAD (J-BEAD) UNLESS NOTED OTHERWISE; USE TEAR-AWAY BEAD WHERE GYP. BD. MEETS WINDOW FRAMES OR CEILING GRID. c. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. CONTACT ARCHITECT FOR LOCATIONS IF NOT INDICATED. 2. SOUND-ATTENUATION BLANKETS: ASTM C 665, TYPE I (UNFACED) 3. ACOUSTICAL SEALANT: COMPLY WITH ASTM C 834, NONSAG, PAINTABLE, NONSTAINING LATEX.

1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENT AND PROVIDE BRACING AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT. 2. GYPSUM PANELS AND FINISH: COMPLY WITH ASTM C 840 AND GA-216. ISOLATE GYPSUM BOARD ASSEMBLIES FROM ABUTTING STRUCTURAL AND MASONRY WORK AND FINISH AS FOLLOWS: A. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED FOR FIRE-RESISTANCE-RATED ASSEMBLY. B. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST COAT OF JOINT COMPOUND TO TAPE. FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT SUBSTRATES BEHIND TILE. C. LEVEL 4 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING FLAT, EGGSHELL, OR SATIN SHEEN PAINT OR WALLCOVERING D. LEVEL 5 (EMBED TAPE, APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT

COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY THIN SKIM COAT OF

JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT): AT

ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD

09 2216 - NON-STRUCTURAL METAL FRAMING A. <u>SUBMITTALS</u>: SHOP DRAWINGS: INDICATE PREFABRICATED WORK, COMPONENT DETAILS, STUD LAYOUT, FRAMED OPENINGS, ANCHORAGE TO STRUCTURE, ACOUSTIC DETAILS, TYPE AND LOCATION OF FASTENERS, ACCESSORIES, AND ITEMS OF OTHER RELATED WORK. DESCRIBE METHOD FOR SECURING STUDS TO TRACKS, SPLICING, AND FOR BLOCKING AND REINFORCEMENT OF FRAMING CONNECTIONS. 1. PRODUCT DATA: PROVIDE MANUFACTURER'S DATA ON PARTITION HEAD TO STRUCTURE CONNECTORS, SHOWING COMPLIANCE WITH REQUIREMENTS. 2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES AND PERIMETER CONDITIONS REQUIRING SPECIAL ATTENTION.

 CLARKDIETRICH BUILDING SYSTEMS: WWW.CLARKDIETRICH.COM. 2. CEMCO: WWW.CEMCOSTEEL.COM. 3. JAIMES INDUSTRIES: WWW.JAIMESIND.COM

4. STEEL CONSTRUCTION SYSTEMS: WWW.STEELCONSYSTEMS.COM

1. FIRE RATED ASSEMBLIES: COMPLY WITH APPLICABLE CODE AND AS FOLLOWS: A. TOP OF FIRE RATED PARTITIONS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1 AND 2] HOUR RATING. B. FIRE RATED SHAFT WALL REQUIREMENTS: LISTED ASSEMBLY BY UL, NO. [ON DRAWINGS]; [1] HOUR RATING. 2. NON-LOADBEARING FRAMING SYSTEM COMPONENTS: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 FOR THE SPACING INDICATED, WITH MAXIMUM DEFLECTION OF WALL FRAMING OF L/240 AT 5 PSF.

STUDS WITH PROVISION FOR CRIMP LOCKING TO STUD. STUDS: C SHAPED WITH FLAT OR FORMED WEBS WITH B. CEILING CHANNELS: C SHAPED. C. FURRING: HAT-SHAPED SECTIONS, MINIMUM DEPTH OF 7/8 INCH. D. CONTRACTOR TO PROVIDE BRACING AS REQUIRED TO COMPLETE SYSTEM.

F. WHERE INDICATED IN DRAWINGS, SHAFT WALL STUDS AND ACCESSORIES: ASTM C645; GALVANIZED SHEET STEEL, OF SIZE AND PROPERTIES NECESSARY TO COMPLY WITH ASTM C754 AND SPECIFIED PERFORMANCE G. CEILING HANGERS: TYPE AND SIZE AS SPECIFIED IN ASTM C754 FOR SPACING REQUIRED. H. PARTITION HEAD TO STRUCTURE CONNECTIONS: PROVIDE MECHANICAL ANCHORAGE DEVICES THAT ACCOMMODATE DEFLECTION USING SLOTTED HOLES, SCREWS AND ANTI-FRICTION BUSHINGS, PREVENTING ROTATION OF STUDS WHILE MAINTAINING STRUCTURAL PERFORMANCE OF PARTITION. I. FIT, REINFORCE, AND BRACE FRAMING MEMBERS TO SUIT DESIGN REQUIREMENTS.

3. VERIFY THAT ROUGH-IN UTILITIES ARE IN PROPER LOCATION. WITH MANUFACTURER'S INSTRUCTIONS. BETWEEN TOP OF STUDS AND STRUCTURE. AND CONNECT STUDS TO TRACK USING SPECIFIED MECHANICAL DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS; VERIFY FREE MOVEMENT OF TOP OF STUD CONNECTIONS; DO NOT LEAVE STUDS UNATTACHED TO TRACK. 12. DOUBLE STUD AT WALL OPENINGS, DOOR AND WINDOW JAMBS, NOT MORE THAN 2 INCHES FROM EACH SIDE OF

8. ALIGN STUD WEB OPENINGS HORIZONTALLY. 9. SECURE STUDS TO TRACKS USING CRIMPING METHOD. DO NOT WELD. 10. STUD SPLICING IS NOT PERMISSIBLE. 11. FABRICATE CORNERS USING A MINIMUM OF THREE STUDS.

13. BRACE STUD FRAMING SYSTEM RIGID. 14. COORDINATE ERECTION OF STUDS WITH REQUIREMENTS OF DOOR FRAMES; INSTALL SUPPORTS AND ATTACHMENTS 15. COORDINATE INSTALLATION OF BUCKS, ANCHORS, AND BLOCKING WITH ELECTRICAL, MECHANICAL, AND OTHER WORK TO BE PLACED WITHIN OR BEHIND STUD FRAMING. 16. BLOCKING: USE WOOD BLOCKING SECURED TO STUDS. PROVIDE BLOCKING FOR SUPPORT OF PLUMBING

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GENERAL PROJECT **SPECIFICATIONS 2** 

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION (CONTINUED)** 07 6200 - SHEET METAL FLASHING AND TRIM (CONTINUED)

RE-FINISHED ALUMINUM: ASTM B209 (ASTM B209M); 20 GAGE, (0.032 INCH) THICK; PLAIN FINISH SHOP PRE-COATED WITH MODIFIED SILICONE COATING. 1. FLUOROPOLYMER COATING: HIGH PERFORMANCE ORGANIC FINISH, AAMA 2604; MULTIPLE COAT THERMALLY CURED FLUOROPOLYMER FINISH SYSTEM. 2. COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

1. FORM SECTIONS TRUE TO SHAPE, ACCURATE IN SIZE, SQUARE, AND FREE FROM DISTORTION OR DEFECTS. 2. FORM PIECES IN LONGEST POSSIBLE LENGTHS. 3. HEM EXPOSED EDGES ON UNDERSIDE 1/2 INCH; MITER AND SEAM CORNERS. 4. FORM MATERIAL WITH FLAT LOCK SEAMS, EXCEPT WHERE OTHERWISE INDICATED; AT MOVING JOINTS, USE SEALED LAPPED, BAYONET-TYPE OR INTERLOCKING HOOKED SEAMS. 5. FABRICATE FLASHINGS TO ALLOW TOE TO EXTEND 2 INCHES OVER ROOFING GRAVEL. RETURN AND BRAKE

. FASTENERS: GALVANIZED STEEL, WITH SOFT NEOPRENE WASHERS. . PRIMER: ZINC CHROMATE TYPE.

3. CONCEALED SEALANTS: NON-CURING BUTYL SEALANT. 4. EXPOSED SEALANTS: ASTM C920; ELASTOMERIC SEALANT, WITH MINIMUM MOVEMENT CAPABILITY AS 5. RECOMMENDED BY MANUFACTURER FOR SUBSTRATES TO BE SEALED; COLOR TO MATCH ADJACENT MATERIAL.

. SECURE FLASHINGS IN PLACE USING CONCEALED FASTENERS, AND USE EXPOSED FASTENERS ONLY WHERE APPLY PLASTIC CEMENT COMPOUND BETWEEN METAL FLASHINGS AND FELT FLASHINGS. 3. FIT FLASHINGS TIGHT IN PLACE: MAKE CORNERS SQUARE, SURFACES TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES.

4. SEAL METAL JOINTS WATERTIGHT. 07 8100 - APPLIED FIREPROOFING A. SUBMITTALS: PRODUCT DATA: PROVIDE DATA INDICATING PRODUCT CHARACTERISTICS.

1. TEST REPORTS: REPORTS FROM REPUTABLE INDEPENDENT TESTING AGENCIES FOR PROPOSED PRODUCTS. INDICATING COMPLIANCE WITH SPECIFIED CRITERIA, CONDUCTED UNDER CONDITIONS SIMILAR TO THOSE ON PROJECT, AS FOLLOWS: A. BOND STRENGTH. B. BOND IMPACT.

C. COMPRESSIVE STRENGTH. D. FIRE TESTS USING SUBSTRATE MATERIALS SIMILAR THOSE ON PROJECT.

2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES. 3. MANUFACTURER'S QUALIFICATION STATEMENT.

. DO NOT APPLY FIREPROOFING WHEN TEMPERATURE OF SUBSTRATE MATERIAL AND SURROUNDING AIR IS BELOW 40 DEGREES F OR WHEN TEMPERATURE IS PREDICTED TO BE BELOW SAID TEMPERATURE FOR 24 HOURS 2. PROVIDE VENTILATION IN AREAS TO RECEIVE FIREPROOFING DURING APPLICATION AND 24 HOURS AFTERWARD, TO DRY APPLIED MATERIAL. 3. PROVIDE TEMPORARY ENCLOSURE TO PREVENT SPRAY FROM CONTAMINATING AIR.

CORRECT DEFECTIVE WORK WITHIN A TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION. A. INCLUDE COVERAGE FOR FIREPROOFING TO REMAIN FREE FROM CRACKING, CHECKING, DUSTING, FLAKING, SPALLING, SEPARATION, AND BLISTERING. B. REINSTALL OR REPAIR FAILURES THAT OCCUR WITHIN WARRANTY PERIOD.

. GCP APPLIED TECHNOLOGIES: WWW.GCPAT.COM/FIREPROOFING 2. ISOLATEK INTERNATIONAL CORP: WWW.ISOLATEK.COM 3. SOUTHWEST FIREPROOFING PRODUCTS COMPANY: WWW.SFRM.COM.

I. PROVIDE ASSEMBLIES AS INDICATED ON DRAWINGS. 2. PROVIDE FIRE RESISTANCE RATINGS FOR FOLLOWING BUILDING ELEMENTS AS REQUIRED BY LOCAL BUILDING A. PRIMARY STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, AND TRUSSES: [1 HOUR]. B. BEARING WALLS. INTERIOR: [1 HOUR]. C. FLOOR CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS: [1 HOUR].

D. ROOF CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS: [1HOUR]. F. <u>MATERIALS:</u> APPLIED FIREPROOFING MATERIAL FOR INTERIOR APPLICATIONS, CONCEALED: MANUFACTURER'S STANDARD FACTORY MIXED MATERIAL, WHICH WHEN COMBINED WITH WATER IS CAPABLE OF PROVIDING INDICATED FIRE RESISTANCE, AND COMPLYING WITH FOLLOWING REQUIREMENTS: 1. COMPOSITION: GYPSUM-BASED; NOT MINERAL-FIBER-BASED. 2. BOND STRENGTH: 150 POUNDS PER SQUARE FOOT, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM

3. DRY DENSITY: AS REQUIRED BY FIRE RESISTANCE DESIGN. 4. COMPRESSIVE STRENGTH: 8.33 POUNDS PER SQUARE INCH, MINIMUM. 5. EFFECT OF IMPACT ON BONDING: NO CRACKING, SPALLING OR DELAMINATION, WHEN TESTED IN ACCORDANCE 6. CORROSIVITY: NO EVIDENCE OF CORROSION, WHEN TESTED IN ACCORDANCE WITH ASTM E937/E937M. 7. SURFACE BURNING CHARACTERISTICS: MAXIMUM FLAME SPREAD INDEX OF 0 (ZERO) AND MAXIMUM SMOKE DEVELOPED INDEX OF 0 (ZERO), WHEN TESTED IN ACCORDANCE WITH ASTM E84.

I. PRIMER ADHESIVE: OF TYPE RECOMMENDED BY APPLIED FIREPROOFING MANUFACTURER. OVERCOAT: AS RECOMMENDED BY MANUFACTURER OF APPLIED FIREPROOFING MATERIAL. 3. METAL LATH: EXPANDED METAL LATH; MINIMUM WEIGHT OF 1.7 PSF, GALVANIZED FINISH. 4. WATER: CLEAN, POTABLE.

. VERIFY THAT SURFACES ARE READY TO RECEIVE FIREPROOFING. 2. VERIFY THAT DUCTS, PIPING, EQUIPMENT, OR OTHER ITEMS THAT WOULD INTERFERE WITH APPLICATION OF 3. VERIFY THAT VOIDS AND CRACKS IN SUBSTRATE HAVE BEEN FILLED. 4. VERIFY THAT PROJECTIONS HAVE BEEN REMOVED WHERE FIREPROOFING WILL BE EXPOSED TO VIEW AS A

5. PERFORM TESTS AS RECOMMENDED BY FIREPROOFING MANUFACTURER IN APPLICATIONS WHERE ADHESION OF FIREPROOFING TO SUBSTRATE IS IN QUESTION. 6. REMOVE INCOMPATIBLE MATERIALS THAT COULD EFFECT BOND BY SCRAPING, BRUSHING, SCRUBBING, OR

7. PREPARE SUBSTRATES TO RECEIVE FIREPROOFING IN STRICT ACCORDANCE WITH INSTRUCTIONS OF FIREPROOFING MANUFACTURER. 8. APPLY FIREPROOFING MANUFACTURER'S RECOMMENDED BONDING AGENT ON PRIMED STEEL. 9. INSTALL METAL LATH OVER STRUCTURAL MEMBERS AS INDICATED OR AS REQUIRED BY UL ASSEMBLY DESIGN

10. APPLY FIREPROOFING IN UNIFORM THICKNESS AND DENSITY AS NECESSARY TO ACHIEVE REQUIRED RATINGS. 11. INSPECT INSTALLED FIREPROOFING AFTER APPLICATION AND CURING FOR INTEGRITY, PRIOR TO ITS 12. ENSURE THAT ACTUAL THICKNESSES, DENSITIES, AND BOND STRENGTHS MEET REQUIREMENTS FOR SPECIFIED RATINGS AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ).

13. REMOVE EXCESS MATERIAL, OVERSPRAY, DROPPINGS, AND DEBRIS. 14. REMOVE FIREPROOFING FROM MATERIALS AND SURFACES NOT REQUIRED TO BE FIREPROOFED.

07 4113 - ROOFING MATERIALS & ACCESSORIES A. <u>SUBMITTALS:</u> PROVIDE DATA ON SHAPE OF COMPONENTS, MATERIALS AND FINISHES, ANCHOR TYPES AND

REQUIRED CLEARANCES AND TOLERANCES, AND OTHER AFFECTED WORK. C. <u>WARRANTY:</u> SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF SYSTEMS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN

B. SHOP DRAWINGS: INDICATE CONFIGURATION AND DIMENSION OF COMPONENTS, ADJACENT CONSTRUCTION,

A. ROOF EDGE FLASHINGS: FACTORY FABRICATED TO SIZES REQUIRED; CORNERS MITERED; CONCEALED 1. CONFIGURATION: FASCIA, CANT, AND EDGE SECUREMENT FOR ROOF MEMBRANE 2. PULL-OFF RESISTANCE: TESTED IN ACCORDANCE WITH ANSI/SPRI/FM 4435/ES-1 USING TEST METHODS RE-1 AND RE-2 TO POSITIVE AND NEGATIVE DESIGN WIND PRESSURE AS DEFINED BY APPLICABLE LOCAL BUILDING CODE. B. COPINGS: FACTORY FABRICATED TO SIZES REQUIRED; CORNERS MITERED; CONCEALED FASTENERS. 1. CONFIGURATION: CONCEALED CONTINUOUS HOLD DOWN CLEAT AT BOTH LEGS; INTERNAL SPLICE PIECE AT JOINTS OF SAME MATERIAL, THICKNESS, AND FINISH AS CAP; CONCEALED STAINLESS STEEL

1. WARRANTY PERIOD: TWO YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

2. PULL-OFF RESISTANCE: TESTED IN ACCORDANCE WITH ANSI/SPRI/FM 4435/ES-1 USING TEST METHOD RE-3 TO POSITIVE AND NEGATIVE DESIGN WIND PRESSURE AS DEFINED BY APPLICABLE 3. 24 GA. GALVALUME WITH KYNAR 500, 2.0 MILS THICK FLOUROCARBON FINISH. C. ROOF PENETRATION SEALING SYSTEMS: PREMANUFACTURED COMPONENTS AND ACCESSORIES AS REQUIRED TO PRESERVE INTEGRITY OF ROOFING SYSTEM AND MAINTAIN ROOF WARRANTY; SUITABLE FOR

PENETRATIONS WHERE APPLICABLE. A. PVDF (POLYVINYLIDENE FLUORIDE) COATING: SUPERIOR PERFORMANCE ORGANIC FINISH, AAMA 2605; MULTIPLE COAT, THERMALLY CURED FLUOROPOLYMER FINISH SYSTEM; COLOR AS INDICATED.

A. INSTALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NRCA (RM) APPLICABLE REQUIREMENTS. B. SEAL JOINTS WITHIN COMPONENTS WHEN REQUIRED BY COMPONENT MANUFACTURER. C. COORDINATE INSTALLATION OF COMPONENTS OF THIS SECTION WITH INSTALLATION OF ROOFING MEMBRANE AND A. SUBMITTALS: PRODUCT DATA: PROVIDE DATA ON PRODUCT CHARACTERISTICS, PERFORMANCE RATINGS, AND LIMITATIONS. 1. 3M FIRE PROTECTION PRODUCTS: HTTPS://WWW.3M.COM/3M/EN\_US/P/C/BUILDING-MATERIALS/FIRE-PROTECTION/

07 8400 - FIRESTOPPING

2. HILTI, INC: HTTPS://WWW.HILTI.COM/C/CLS FIRESTOP PROTECTION 7131 1. FIRESTOPPING MATERIALS: ANY MATERIALS MEETING REQUIREMENTS. 2. PRIMERS, SLEEVES, FORMS, INSULATION, PACKING, STUFFING, AND ACCESSORIES: PROVIDE TYPE OF MATERIALS AS REQUIRED FOR TESTED FIRESTOPPING ASSEMBLY. 3. FIRE RATINGS: REFER TO DRAWINGS FOR REQUIRED SYSTEMS AND RATINGS.

**DIVISION 8 - OPENINGS (CONTINUED)** 

SET #6. GARAGE

3 EACH HINGES

1 EACH CLOSER

08 0671 - DOOR HARDWARE (CONTINUED)

C. HARDWARE SCHEDULE (CONTINUED

1 EACH STOREROOM LOCK

SET #7. CLOSET BIFOLD DOORS
BULK HARDWARE TO BE PROVIDED BY MANUFACTURER

BULK HARDWARE TO BE PROVIDED BY MANUFACTURER

GLAZING, FRAME PROFILES, AND ANY INDICATED FINISH REQUIREMENTS.

3. REPUBLIC DOORS, AN ALLEGION BRAND: WWW.REPUBLICDOOR.COM

ASTM A1011/A1011M, COMMERCIAL STEEL (CS) TYPE B FOR EACH.

OTHERWISE FOR SPECIFIC HOLLOW METAL DOORS AND FRAMES.

REQUIREMENTS CONFLICT, COMPLY WITH THE MOST STRINGENT.

E. DOOR FACE METAL THICKNESS: 20 GAGE, 0.032 INCH, MINIMUM.

1. CECO DOOR, AN ASSA ABLOY GROUP COMPANY: WWW.ASSAABLOYDSS.COM.

1 EACH SMOKE GASKET

1 EACH THRESHOLD

1 EACH DUMMY TRIM

1 EACH DUMMY TRIM

SET #8. CLOSET BYPASS SLIDING DOORS

08 1113 - HOLLOW METAL DOORS AND FRAMES

B. HOLLOW METAL DOOR AND FRAME MANUFACTURERS:

2. DE LA FONTAINE INC: WWW.DELAFONTAINE.COM

C. SOUND-RATED HOLLOW METAL DOORS AND FRAMES:

DRAWINGS, STYLE: MANUFACTURERS STANDARD.

1. EXTERIOR DOORS: THERMALLY INSULATED.

G. DOOR THICKNESS: 1-3/4 INCH. NOMINAL

F. DOOR THICKNESS: 1-3/4 INCH, NOMINAL.

("POSITIVE PRESSURE FIRE TESTS")

AND AUTHORITIES HAVING JURISDICTION.

K. DOOR THICKNESS: 1-3/4 INCH, NOMINAL.

L. DOOR FINISH: FACTORY PRIMED AND FIELD FINISHED.

ACCORDANCE WITH APPLICABLE DOOR FRAME REQUIREMENTS.

B. FRAME METAL THICKNESS: 18 GAGE, 0.042 INCH, MINIMUM.

B. FRAME METAL THICKNESS: 18 GAGE, 0.042 INCH, MINIMUM.

A. FRAME METAL THICKNESS: 18 GAGE, 0.042 INCH, MINIMUM.

OPENING WITHOUT CUTTING MASONRY UNITS.

1. GLAZING: AS INDICATED IN DRAWINGS OR AS SPECIFIED.

3. INSTALL FIRE RATED UNITS IN ACCORDANCE WITH NFPA 80.

4. COORDINATE FRAME ANCHOR PLACEMENT WITH WALL CONSTRUCTION.

I. WEATHERSTRIPPING: REFER TO SECTION 08 7100.

J. DOOR FINISH: FACTORY PRIMED AND FIELD FINISHED.

A. BASED ON SDI STANDARDS: ANSI/SDI A250.8 (SDI-100).

G. DOOR FINISH: FACTORY PRIMED AND FIELD FINISHED.

A. BASED ON SDI STANDARDS: ANSI/SDI A250.8 (SDI-100).

E. DOOR FACE METAL THICKNESS: 20 GAGE, 0.032 INCH, MINIMUM.

E. DOOR FACE METAL THICKNESS: 20 GAGE, 0.032 INCH, MINIMUM.

A. ASED ON SDI STANDARDS: ANSI/SDI A250.8 (SDI-100).

. OVERLY DOOR COMPANY: WWW.OVERLY.COM

2. TYPICAL DOOR FACE SHEETS: FLUSH.

E. HOLLOW METAL DOOR

B. LEVEL 1 - STANDARD-DUTY.

WITH REQUIREMENTS.

2. INTERIOR DOORS, NON-FIRE RATED:

B. LEVEL 1 - STANDARD-DUTY.

B. LEVEL 1 - STANDARD-DUTY.

D. MODEL 1 - FULL FLUSH.

THE FOLLOWING

A. FULL LENGTH STOPS

A. FULL LENGTH STOPS

INDICATED ON DRAWINGS.

08 1416 - FLUSH WOOD DOORS

5. SIZES AS INDICATED IN DRAWINGS

FITTED IN FRAMES WITH UNIFORM CLEARANCES.

2. SET IN TWO PIECE W.P. SPLIT JAMB FRAMES WITH 1X4 WOOD CASING.

D. MODEL 1 - FULL FLUSH.

3. FIRE-RATED DOORS:

D. MODEL 1 - FULL FLUSH.

4. STEELCRAFT, AN ALLEGION BRAND: WWW.ALLEGION.COM

1 EACH WALL STOP

BB81 4-1/2X 4-1/2

A. SUBMITTALS: PRODUCT DATA AND SHOP DRAWINGS WITH DETAILS OF EACH OPENING, SHOWING ELEVATIONS,

1. STEEL USED FOR FABRICATION OF DOORS AND FRAMES SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING

3. GLAZED LIGHTS: NON-REMOVABLE STOPS ON NON-SECURE SIDE; SIZES AND CONFIGURATIONS AS INDICATED ON

4. HARDWARE PREPARATIONS, SELECTIONS AND LOCATIONS: COMPLY WITH NAAMM HMMA 830 AND NAAMM HMMA

831 OR BHMA A156.115 AND ANSI/SDI A250.8 (SDI-100) IN ACCORDANCE WITH SPECIFIED REQUIREMENTS.

ACCORDANCE WITH ASTM A653/A653M, WITH MANUFACTURER'S STANDARD COATING THICKNESS, UNLESS NOTED

5. ZINC COATING FOR TYPICAL INTERIOR AND/OR EXTERIOR LOCATIONS: PROVIDE METAL COMPONENTS ZINC-

COATED (GALVANIZED) AND/OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY THE HOT-DIP PROCESS IN

7. COMBINED REQUIREMENTS: IF A PARTICULAR DOOR AND FRAME UNIT IS INDICATED TO COMPLY WITH MORE

THAN ONE TYPE OF REQUIREMENT, COMPLY WITH THE SPECIFIED REQUIREMENTS FOR EACH TYPE: FOR

INSTANCE. AN EXTERIOR DOOR THAT IS ALSO INDICATED AS BEING SOUND-RATED MUST COMPLY WITH THE

F. DOOR CORE MATERIAL: MANUFACTURERS STANDARD CORE MATERIAL/CONSTRUCTION AND IN COMPLIANCE

REQUIREMENTS SPECIFIED FOR EXTERIOR DOORS AND FOR SOUND-RATED DOORS; WHERE TWO

C. PHYSICAL PERFORMANCE LEVEL C. 250.000 CYCLES: IN ACCORDANCE WITH ANSI/SDI A250.4.

H. TOP CLOSURES FOR OUTSWINGING DOORS: FLUSH WITH TOP OF FACES AND EDGES.

C. PHYSICAL PERFORMANCE LEVEL C, 250,000 CYCLES; IN ACCORDANCE WITH ANSI/SDI A250.4.

C. PHYSICAL PERFORMANCE LEVEL C, 250,000 CYCLES; IN ACCORDANCE WITH ANSI/SDI A250.4.

F. FIRE RATING: AS INDICATED ON DOOR SCHEDULE, TESTED IN ACCORDANCE WITH UL 10C AND NFPA 252

H. PROVIDE UNITS LISTED AND LABELED BY UL (DIR) OR ITS (DIR). ATTACH FIRE RATING LABEL TO EACH FIRE

I. SMOKE AND DRAFT CONTROL DOORS (INDICATED WITH LETTER "S" ON DRAWINGS AND/OR DOOR SCHEDULE)

SELF-CLOSING OR AUTOMATIC CLOSING DOORS IN ACCORDANCE WITH NFPA 80 AND NFPA 105, WITH FIRE-

IN ACCORDANCE WITH UL 1784 AT BOTH AMBIENT AND ELEVATED TEMPERATURES.

.COMPLY WITH STANDARDS AND/OR CUSTOM GUIDELINES AS INDICATED FOR CORRESPONDING DOOR IN

5. FRAMES FOR WOOD DOORS: COMPLY WITH FRAME REQUIREMENTS IN ACCORDANCE WITH CORRESPONDING

6. BORROWED LITES GLAZING FRAMES: CONSTRUCTION AND FACE DIMENSIONS TO MATCH DOOR FRAMES, AND A

8. FRAMES WIDER THAN 48 INCHES: REINFORCE WITH STEEL CHANNEL FITTED TIGHTLY INTO FRAME HEAD, FLUSH

7. FRAMES IN MASONRY WALLS: SIZE TO SUIT MASONRY COURSING WITH HEAD MEMBER 4 INCH HIGH TO FILL

G. <u>FINISHES:</u>
1.PRIMER: RUST-INHIBITING, COMPLYING WITH ANSI/SDI A250.10, DOOR MANUFACTURER'S STANDARD.

4. TEMPORARY FRAME SPREADERS: PROVIDE FOR FACTORY- OR SHOP-ASSEMBLED FRAMES.

2. INSTALL PREFINISHED FRAMES AFTER PAINTING AND WALL FINISHES ARE COMPLETE.

2. REMOVABLE STOPS: FORMED SHEET STEEL, SHAPE AS INDICATED ON DRAWINGS, MITERED OR BUTTED

THREE ON CENTER MULLION OF PAIRS, AND TWO ON HEAD OF PAIRS WITHOUT CENTER MULLIONS.

1.INSTALL DOORS AND FRAMES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RELATED

REQUIREMENTS OF SPECIFIED DOOR AND FRAME STANDARDS OR CUSTOM GUIDELINES INDICATED.

A. <u>SUBMITTALS</u>: PRODUCT DATA, PREFINISHED DOOR SKIN SAMPLES, AND DOOR SCHEDULE INDICATING DOOR AND

3. SILENCERS: RESILIENT RUBBER, FITTED INTO DRILLED HOLE; PROVIDE THREE ON STRIKE SIDE OF SINGLE DOOR,

2. INTERIOR DOOR FRAMES, NON-FIRE RATED: FACE WELDED TYPE. FRAME FINISH: FACTORY FINISHED.

3. DOOR FRAMES, FIRE-RATED: FACE WELDED TYPE. FIRE RATING: SAME AS DOOR, LABELED.

4. SOUND-RATED DOOR FRAMES: FULL PROFILE/CONTINUOUSLY WELDED TYPE.

CORNERS; PREPARED FOR COUNTERSINK STYLE TAMPER PROOF SCREWS.

3. LABEL: INCLUDE THE "S" LABEL ON FIRE-RATING LABEL OF DOOR.

RESISTANCE-RATED WALL CONSTRUCTION RATED THE SAME OR GREATER THAN THE FIRE-RATED DOORS, AND

2. GASKETING: PROVIDE GASKETING OR EDGE SEALING AS NECESSARY TO ACHIEVE LEAKAGE LIMIT.

J. DOOR CORE MATERIAL: MANUFACTURERS STANDARD CORE MATERIAL/CONSTRUCTION IN COMPLIANCE WITH

1.MAXIMUM AIR LEAKAGE: 3.0 CFM/SQ FT OF DOOR OPENING AT 0.10 INCH W.G. PRESSURE, WHEN TESTED

G. TEMPERATURE-RISE RATING (TRR) ACROSS DOOR THICKNESS: IN ACCORDANCE WITH LOCAL BUILDING CODE

6. HOLLOW METAL PANELS: SAME CONSTRUCTION, PERFORMANCE, AND FINISH AS DOORS.

CONFORMING TO ASTM A1008/A1008M. OR HOT-ROLLED PICKLED AND OILED (HRPO) STEEL CONFORMING TO

REQUIREMENTS; GALVANNEALED STEEL CONFORMING TO ASTM A653/A653M, COLD-ROLLED STEEL

SD115 MEM

WB26

425E

7101-PA

1. HEAD-OF-WALL JOINT SYSTEM FIRESTOPPING AT JOINTS BETWEEN FIRE-RATED WALL ASSEMBLIES AND NON-RATED HORIZONTAL ASSEMBLIES: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E2837 TO HAVE FIRE RESISTANCE F RATING EQUAL TO REQUIRED FIRE RATING OF FLOOR OR WALL, WHICHEVER IS GREATER. 2. FLOOR-TO-FLOOR, WALL-TO-WALL, AND WALL-TO-FLOOR JOINTS, EXCEPT PERIMETER, WHERE BOTH ARE FIRE-RATED: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E1966 OR UL 2079 TO HAVE FIRE RESISTANCE "F" RATING EQUAL TO REQUIRED FIRE RATING OF THE ASSEMBLY IN WHICH THE JOINT OCCURS. 3.THROUGH PENETRATION FIRESTOPPING: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E814 TO HAVE FIRE RESISTANCE F RATING EQUAL TO REQUIRED FIRE RATING OF PENETRATED ASSEMBLY.

1. INSTALLATIONS SHALL CONFORM TO UL REQUIREMENTS OF THE ASSEMBLY WHICH FIRESTOPPING IS TO BECOME PART OF THE BUILT ASSEMBLY

07 9200 - JOINT SEALANTS A. SUBMITTALS: PRODUCT DATA, AND SCHEDULE OF LOCATIONS FOR EACH TYPE OF SEALANT SUBMITTED. B. JOINT-SEALANT SCHEDULE: INCLUDE THE FOLLOWING INFORMATION: 1. JOINT-SEALANT APPLICATION, JOINT LOCATION, AND DESIGNATION.

3. JOINT-SEALANT FORMULATION. 4. JOINT-SEALANT COLOR. C. ENVIRONMENTAL LIMITATIONS: DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 deg F (4.4 deg C).

D. COMPATIBILITY: PROVIDE JOINT SEALANTS, JOINT FILLERS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER SERVICE AND APPLICATION CONDITIONS.

E. JOINT SEALANTS: 1. COLORS OF EXPOSED JOINT SEALANTS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE. 2. INTERIOR JOINTS IN CERAMIC TILE AND OTHER HARD SURFACES IN KITCHENS. TOILET ROOMS, AND AROUND PLUMBING FIXTURES: SINGLE COMPONENT, MILDEW-RESISTANT SILICONE SEALANT, ASTM C 920, TYPE S; GRADE NS, CLASS 25; USES NT, G, A, AND O; FORMULATED WITH FUNGICIDE.

3. INTERIOR JOINTS AROUND PERIMETERS OF DOORS AND FRAMES: LATEX SEALANT, SINGLE COMPONENT. NONSAG, MILDEW-RESISTANT, PAINTABLE, ACRYLIC EMULSION SEALANT COMPLYING WITH ASTM C 834. 4. ACOUSTICAL SEALANT FOR EXPOSED INTERIOR JOINTS: NONSAG, PAINTABLE, NONSTAINING, LATEX SEALANT COMPLYING WITH ASTM C 834. 5. ACOUSTICAL SEALANT FOR CONCEALED JOINTS: NONDRYING, NONHARDENING, NONSKINNING, NONSTAINING, GUNNABLE, SYNTHETIC-RUBBER SEALANT RECOMMENDED FOR SEALING INTERIOR CONCEALED JOINTS TO REDUCE TRANSMISSION OF AIRBORNE SOUND.

6. EXTERIOR CONCRETE PANELS, NATURAL STONES, MASONRY, ALUMINUM CURTAINWALLS, METAL PANELS AND WINDOW PERIMETERS. BASIS OF DESIGN PRODUCTS A. TREMCO INCORPORATED: SPECTREM 1. B. DOW CORNING CORPORATION; 790.

2. JOINT-SEALANT MANUFACTURER AND PRODUCT NAME.

C. PECORA CORPORATION; 890NST. 7. EXTERIOR JOINTS IN HORIZONTAL TRAFFIC SURFACES. ISOLATION AND CONTRACTION JOINTS IN CAST-IN-PLACE CONCRETE SLABS. URETHANE JOINT SEALANT: MULTICOMPONENT, NONSAG, TRAFFIC GRADE, CLASS 25. 8. FIRESTOP SEALANTS: INSTALL AT FIRE RATED ASSEMBLIES AND AS DIRECTED WITHIN UL REFERENCES BASIS OF DESIGN PRODUCTS: A. HILTI

1. GENERAL: PROVIDE SEALANT BACKINGS OF MATERIAL THAT ARE NONSTAINING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS; AND ARE APPROVED FOR APPLICATIONS INDICATED BY SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. 2. CYLINDRICAL SEALANT BACKINGS: ASTM C 1330, TYPE C (CLOSED-CELL MATERIAL WITH A SURFACE SKIN), AND OF SIZE AND DENSITY TO CONTROL SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING **OPTIMUM SEALANT PERFORMANCE** 3. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MANUFACTURER FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT. PROVIDE SELF-ADHESIVE TAPE WHERE APPLICABLE.

1. PRIMER: MATERIAL RECOMMENDED BY JOINT-SEALANT MANUFACTURER WHERE REQUIRED FOR ADHESION OF SEALANT TO JOINT SUBSTRATES INDICATED, AS DETERMINED FROM PRECONSTRUCTION JOINT-SEALANT-

2. CLEANERS FOR NONPOROUS SURFACES: CHEMICAL CLEANERS ACCEPTABLE TO MANUFACTURERS OF SEALANTS AND SEALANT BACKING MATERIALS, FREE OF OILY RESIDUES OR OTHER SUBSTANCES CAPABLE OF STAINING OR HARMING JOINT SUBSTRATES AND ADJACENT NONPOROUS SURFACES IN ANY WAY, AND FORMULATED TO PROMOTE OPTIMUM ADHESION OF SEALANTS TO JOINT SUBSTRATES. 3. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MFR. FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT 4. MASKING TAPE: NONSTAINING, NONABSORBENT MATERIAL COMPATIBLE WITH JOINT SEALANTS AND SURFACES

ADJACENT TO JOINTS. 3. INSTALLATION: COMPLY WITH ASTM C 1193; ASTM C 919 FOR ACOUSTICAL JOINTS; AND AS FOLLOWS: 1. REMOVE ALL LOOSE MATERIAL, CLEAN AND PRIME JOINTS IN ACCORDANCE WITH MANUFACTURER'S

INSTRUCTIONS, AND PROTECT ADJACENT SURFACES. 2. INSTALL BOND-BREAKER TAPE WHERE JOINT BACKINGS ARE NOT USED. 3. INSTALL SEALANT TOOLED CONCAVE, FREE OF AIR POCKETS, FOREIGN EMBEDDED MATTER, RIDGES, AND SAGS, AND PROTECT UNTIL FULLY CURED. SEALANT WITH DUST AND DEBRIS EMBEDDED IN SURFACE SHALL BE CAUSE

A. <u>SUBMITTALS</u>: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS. REFER TO ARCHITECTURAL PLANS AND HARDWARE SCHEDULES PROVIDED. 1. HARDWARE SUPPLIER SHALL SUBMIT FOUR COPIES OF FINAL HARDWARE SCHEDULE AT EARLIEST POSSIBLE DATE PARTICULARLY WHERE ACCEPTANCE OF HARDWARE SCHEDULE MUST PRECEDE FABRICATION OF OTHER WORK WHICH IS CRITICAL IN THE PROJECT CONSTRUCTION SCHEDULE. INCLUDE WITH SCHEDULE SHOP DRAWINGS OF OTHER WORK AFFECTED BY BUILDERS HARDWARE, AND OTHER INFORMATION ESSENTIAL TO THE

2. KEYING SCHEDULE. SUBMIT SEPARATE DETAILED SCHEDULE INDICATING CLEARLY HOW THE OWNER'S FINAL INSTRUCTIONS ON KEYING OF LOCKS HAS BEEN FULFILLED. ALL KEYING SHALL BE COORDINATED WITH THE B. PRODUCTS: REFER TO HARDWARE SCHEDULE AND ARCHITECTURAL DRAWINGS. 1. STRIKES. PROVIDE MANUFACTURER'S STANDARD WROUGHT BOX STRIKE FOR EACH LATCH OR LOCK BOLT, WITH CURVED LIP EXTENDED TO PROTECT FRAME. FINISH TO MATCH HARDWARE SET. PROVIDE STANDARD (OPEN)

STRIKE PLATES FOR INTERIOR DOORS WHERE WOOD DOOR FRAMES ARE USED. 2. IN GENERAL, HARDWARE FINISH SHALL BE US15 (SATIN NICKEL) UNLESS SPECIFIED DIFFERENTLY ON HARDWARE 3. SUPPLY CAL ROYAL HDFS3 FLEXIBLE DOOR STOPS IN THE APARTMENT DWELLING UNITS. USE 2 IVHP-23 HINGE STOPS WHERE FLEXIBLE STOPS CANNOT BE USED. 4. SUPPLY OUT SWINGING EXTERIOR DOORS WITH NON REMOVABLE PINS.

1. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN "RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS AND FRAMES" BY THE DOOR AND HARDWARE INSTITUTE, EXCEPT AS SPECIFICALLY INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS, AND EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT. MOUNT HARDWARE IN UNITS DESIGNATED FOR USE BY THE HANDICAPPED AT HEIGHTS RECOMMENDED FOR USE BY THE HANDICAPPED 2. INSTALL EACH HARDWARE ITEM IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. WHEREVER CUTTING AND FITTING IS REQUIRED TO INSTALL HARDWARE ONTO OR INTO SURFACES WHICH ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE REINSTALLATION OR APPLICATION OF SURFACE PROTECTIONS WITH FINISHING WORK SPECIFIED IN THE DIVISION 9 SECTIONS. DO NOT INSTALL SURFACE MOUNTED ITEMS UNTIL FINISHES HAVE BEEN COMPLETED ON THE SUBSTRATE. 3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER INSTALLATION AND OPERATION. 4.DRILL AND COUNTERSINK UNITS WHICH ARE NOT FACTORY PREPARED FOR ANCHORAGE FASTENERS. SPACE FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS. 5.METAL THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THIOKOL BASE CAULKING OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND

6. ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION SMOOTHLY AS INTENDED FOR THE APPLICATION MADE. 7.FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND FINISH OF

BB81 4 X 4 SP81 4 X 4 SD116 MEM DD01-180UL

1 EACH HINGE 2 EACH SPRING HINGES 1 EACH ENTRANCE LOCK 1 EACH SINGLE CYLINDER DEADBOLT KV116

SET #3. SINGLE SWING CLOSET DOORS BB81 4 X 4 3 EACH HINGES 1 EACH PASSAGE LATCH SET #4. BATHROOM / BEDROOM DOORS 3 EACH HINGES 1 EACH PRIVACY LOCK

SET #5. PAIR SWING LAUNDRY DOORS 6 EACH HINGES 2 EACH DUMMY TRIM 2 EACH BALL CATCH BALANCE OF HARDWARE BY DOOR SUPPLIER

FACTORY FIT DOORS TO SUIT FRAME OPENINGS TO COMPLY WITH REFERENCED STANDARD. COMPLY WITH NFPA 80 FOR FIRE-RESISTANCE RATED DOORS. 2. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED. 3. CUT AND TRIM OPENINGS TO COMPLY WITH REFERENCED STANDARDS.

4. LITE KITS: MATCHING WOOD STOPS 5. FACTORY FINISH DOORS FOR TRANSPARENT FINISH WITH STAIN AND MANUFACTURER'S STANDARD FINISH COMPARABLE TO AWI, SYSTEM TR-4, CONVERSION VARNISH OR AWI SYSTEM TR-6, CATALYZED POLYURETHANE. COMPLY WITH WDMA'S "HOW TO STORE, HANDLE, FINISH, INSTALL, AND MAINTAIN WOOD DOORS" ALIGNED AND

08 1613 - FIBERGLASS DOORS A. SUBMITTALS: PRODUCT DATA, PREFINISHED DOOR SKIN SAMPLES, AND DOOR SCHEDULE INDICATING DOOR AND FRAME SIZES. TYPES, ELEVATIONS, DETAILS, AND HARDWARE WITH DOOR AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.

08 3100 - ACCESS DOORS AND PANELS A. <u>SUBMITTALS</u>: PRODUCT DATA.

DIVISION 8 - OPENINGS (CONTINUED)

B. PRODUCTS: PRIME-PAINTED FLUSH, UNINSULATED ACCESS DOORS FOR WALLS AND CEILINGS WITH TRIMLESS FRAME AND SCREWDRIVER OPERATED LOCK FLUSH WITH FINISHED SURFACE. FIRE-RATED, SELF-LATCHING. AUTOMATIC CLOSING AT FIRE-RATED WALLS OR CEILINGS.

C. <u>INSTALLATION</u>: INSTALL FLUSH TO FINISHED DRYWALL SURFACE WITH FRAME TAPED AND SANDED LUSH WITH WALL OR CEILING SURFACE AND FINISH TO MATCH ADJACENT SURFACE.

A. SUBMITTALS: PRODUCT DATA, AND COLOR SAMPLES. DOOR SCHEDULE INDICATING DOOR AND FRAME SIZES. TYPES,

ELEVATIONS, DETAILS, AND HARDWARE WITH DOOR AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS. 1. C.H.I OVERHEAD DOORS. 5602 SHORELINE, CARRIAGE HOUSE DESIGNS. SQUARE TOP, NUMBER #32, COLOR WHITE

2. WIND LOAD RATING: 115 MPH PER OCAL CODE REQUIREMENTS. 3. WINDOW DESIGN, STOCKTON, GLASS- FAUX.

1. DOORS SHALL BE COMPLETE WITH ALL HARDWARE AND LIFTMASTER 3265, 1/2 HP CHAIN DRIVE GARAGE DOOR OPENER OR APPROVED EQUAL. OPERATOR SHALL HAVE A WALL MOUNTED MULTI- FUNCTION CONTROL PANEL AND TWO HAND. HELD ROLLING CODE TRANSMITTERS. SUPPLY AND INSTALL DOOR JAMB KEYPAD. GARAGE DOOR JAMBS SHALL HAVE PHOTOCELLS AT EACH SIDE OF EACH GARAGE DOOR. PROVIDE TIMERS FOR DOORS TO AUTOMATICALLY CLOSE IF LEFT OPEN FOR AN EXTENDED PERIOD OF TIME. I. INSTALL DOOR ASSEMBLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

3. SECURELY BRACE DOOR TRACKS SUSPENDED FROM STRUCTURE. SECURE TRACKS TO STRUCTURAL MEMBERS 4. FIT AND ALIGN DOOR ASSEMBLY INCLUDING HARDWARE, LEVEL AND PLUMB, TO PROVIDE SMOOTH OPERATION. 5. POSITION HEAD AND JAMB WEATHERSTRIPPING TO CONTACT DOOR SECTIONS WHEN CLOSED; SECURE IN 6. MAKE WIRING CONNECTIONS BETWEEN POWER SUPPLY AND OPERATOR AND BETWEEN OPERATOR AND 7. INSTALL ELECTRIC GARAGE DOOR OPENERS IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. INSTALLATION SHALL INCLUDE GARAGE DOOR SILENCER ISOLATION PADS.

08 4313 - ALUMINUM FRAMED STOREFRONTS A. SUBMITTALS: PRODUCT DATA: PROVIDE COMPONENT DIMENSIONS, DESCRIBE COMPONENTS WITHIN ASSEMBLY, ANCHORAGE AND FASTENERS, GLASS AND INFILL, DOOR HARDWARE, INTERNAL DRAINAGE DETAILS. 1. HARDWARE SCHEDULE: COMPLETE ITEMIZATION OF EACH ITEM OF HARDWARE TO BE PROVIDED FOR EACH DOOR. CROSS-REFERENCED TO DOOR IDENTIFICATION NUMBERS IN CONTRACT DOCUMENTS.

B. <u>WARRANTY:</u> WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER. 1. CORRECT DEFECTIVE WORK WITHIN A FIVE YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION. 2. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST FAILURE OF GLASS SEAL ON INSULATING GLASS UNITS, INCLUDING INTERPANE DUSTING OR MISTING. INCLUDE PROVISION FOR REPLACEMENT OF FAILED UNITS.

C. <u>Basis of Design</u>: Kawneer <u>Encore-Medium Stile</u>, <u>Anodized.verify finish with owner</u>. OTHER MANUFACTURERS: PROVIDE EITHER THE PRODUCT IDENTIFIED AS "BASIS OF DESIGN" OR AN EQUIVALENT

WITH INFILL, AND RELATED FLASHINGS, ANCHORAGE AND ATTACHMENT DEVICES. 2. ALUMINUM FRAMING MEMBERS: TUBULAR ALUMINUM SECTIONS[<>], DRAINAGE HOLES AND INTERNAL WEEP DRAINAGE SYSTEM. 3. EXTRUDED ALUMINUM: ASTM B221 (ASTM B221M). 4. STRUCTURAL STEEL SECTIONS: ASTM A36/A36M; SHOP PRIMED. 5. FASTENERS: STAINLESS STEEL 6. CONCEALED FLASHINGS: STAINLESS STEEL, 26 GAGE, 0.0187 INCH MINIMUM THICKNESS.

1. CLASS I COLOR ANODIZED FINISH: AAMA 611 AA-M12C22A44 ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING NOT LESS THAN 0.7 MILS THICK. COLOR AS SELECTED BY OWNER & ARCHITECT.

1. FOR EACH DOOR, INCLUDE WEATHERSTRIPPING, SILL SWEEP STRIP, AND THRESHOLD. 2. OTHER DOOR HARDWARE: STOREFRONT MANUFACTURER'S STANDARD TYPE TO SUIT APPLICATION. A. FINISH ON HAND-CONTACTED ITEMS: POLISHED CHROME.

1. VERIFY DIMENSIONS, TOLERANCES, AND METHOD OF ATTACHMENT WITH OTHER WORK. 2. VERIFY THAT WALL OPENINGS AND ADJOINING AIR AND VAPOR SEAL MATERIALS ARE READY TO RECEIVE WORK OF THIS SECTION. 3. INSTALL WALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. AND OTHER IRREGULARITIES. 5. ALIGN ASSEMBLY PLUMB AND LEVEL, FREE OF WARP OR TWIST. MAINTAIN ASSEMBLY DIMENSIONAL TOLERANCES, ALIGNING WITH ADJACENT WORK. 6. PROVIDE THERMAL ISOLATION WHERE COMPONENTS PENETRATE OR DISRUPT BUILDING INSULATION. 7. INSTALL SILL FLASHINGS. TURN UP ENDS AND EDGES; SEAL TO ADJACENT WORK TO FORM WATER TIGHT DAM. 8. WHERE FASTENERS PENETRATE SILL FLASHINGS, MAKE WATERTIGHT BY SEATING AND SEALING FASTENER HEADS TO SILL FLASHING.

9. PACK FIBROUS INSULATION IN SHIM SPACES AT PERIMETER OF ASSEMBLY TO MAINTAIN CONTINUITY OF THERMAL 10. SET THRESHOLDS IN BED OF SEALANT AND SECURE. 11. INSTALL HARDWARE USING TEMPLATES PROVIDED. ADJUST OPERATING HARDWARE AND SASH FOR SMOOTH 12. WASH DOWN SURFACES WITH A SOLUTION OF MILD DETERGENT IN WARM WATER, APPLIED WITH SOFT, CLEAN WIPING CLOTHS, AND TAKE CARE TO REMOVE DIRT FROM CORNERS AND TO WIPE SURFACES CLEAN.

B. <u>BASIS OF DESIGN</u>: VINYL CASEMENT WINDOWS- BASIS OF DESIGN: MI 3500 VINYL SINGLE- HUNG WINDOWS. C. <u>INSTALLATION:</u> ALL WINDOWS SHALL BE SET TRUE, PLUMB, LEVEL AND IN STRICT ACCORDANCE WITH THE

A. <u>SUBMITTALS</u>: PRODUCT DATA ON INSULATING GLASS UNIT, GLAZING UNIT, AND [SPANDREL] GLAZING TYPES: PROVIDE STRUCTURAL, PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING AND INSTALLATION REQUIREMENTS. 1. PRODUCT DATA ON GLAZING COMPOUNDS AND ACCESSORIES: PROVIDE CHEMICAL, FUNCTIONAL, AND ENVIRONMENTAL CHARACTERISTICS, LIMITATIONS, SPECIAL APPLICATION REQUIREMENTS, AND IDENTIFY AVAILABLE

B. WARRANTY: WARRANTY DOCUMENTATION: SUBMIT MANUFACTURER WARRANTY AND ENSURE THAT FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER. 1. INSULATING GLASS UNITS: PROVIDE A FIVE (5) YEAR MANUFACTURER WARRANTY TO INCLUDE COVERAGE FOR

C. <u>STOREFRONT GLAZING BASIS OF DESIGN:</u> GUARDIAN -SUNGUARD \_ SNX 62/27 \_COATED GLASS, CLEAR. WITH .24 U-

1201 AND ANSI Z97.1. 2. GLAZING PUBLICATIONS: WHERE APPLICABLE, COMPLY WITH WITH THE PUBLISHED RECOMMENDATIONS OF THE FOLLOWING: A. GANA PUBLICATIONS: "GLAZING MANUAL" AND "LAMINATED GLASS DESIGN GUIDE". B. SIGMA PUBLICATIONS: SIGMA TM-3000, "VERTICAL GLAZING GUIDELINES".

2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY q3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION

. FABRICATED GLASS PRODUCTS: 1. SEALED INSULATING-GLASS UNITS: PREASSEMBLED UNITS COMPLYING WITH ASTM E 774 FOR CLASS CBA UNITS WITH TWO SHEETS OF GLASS SEPARATED BY A 1/2-INCH DEHYDRATED SPACE FILLED WITH AIR. EXTERIOR GLASS COLOR TO MATCH EXISTING. INTERIOR GLASS SHALL BE

CONTAINED IN GANA'S "GLAZING MANUAL". 2. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS. FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALK-THROUGH.

1 EACH HINGE 2 EACH SPRING HINGES 1 EACH ENTRANCE LOCK 1 EACH SINGLE CYLINDER DEADBOLT KV116 1 EACH DOOR VIEWER SET #2. PATIO DOORS

SP81 4 X 4 SD116 MEM

BB81 4 X 4

B. DOORS: BASIS OF DESIGN: JELD-WEN- FIBERGLASS DOOR SERIES.LOW- E GLAZING. PROVIDE SIZES, AND DESIGNS AS INDICATED IN ELEVATIONS

8. GLAZING GASKETS: TYPE TO SUIT APPLICATION TO ACHIEVE WEATHER, MOISTURE, AND AIR INFILTRATION

7. SEALANT FOR SETTING THRESHOLDS: NON-CURING BUTYL TYPE.

B. FOR EACH DOOR, INCLUDE BUTT HINGES, PIVOTS, PUSH HANDLE, PULL HANDLE, EXIT DEVICE, NARROW STILE HANDLE LATCH, AND CLOSER. COORDINATE ADA PUSH BUTTON LOCATION.

4. ATTACH TO STRUCTURE TO PERMIT SUFFICIENT ADJUSTMENT TO ACCOMMODATE CONSTRUCTION TOLERANCES

A. <u>SUBMITTALS:</u> THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS FOR ALL WORK INCLUDED IN THIS SECTION, AND SHALL NOT PROCEED WITH FABRICATION AND DELIVERY PRIOR TO RECEIVING SUCH APPROVAL.

MANUFACTURER'S DIRECTIONS.

2. SAMPLES: SUBMIT TWO SAMPLES [12] BY [12] INCH IN SIZE OF GLASS UNITS.

SEAL FAILURE, INTERPANE DUSTING OR MISTING, INCLUDING PROVIDING PRODUCTS TO REPLACE FAILED UNITS

). QUALITY STANDARDS:1. SAFETY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR

3. MIRROR GLASS: ASTM C 1036, TYPE I, CLASS 1, QUALITY q1, SILVER COATED PER FS DDM411C,

1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS. SEALANTS. GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE 3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM

FRAME SIZES. TYPES, ELEVATIONS, DETAILS, AND HARDWARE WITH DOOR AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS. B. <u>BASIS OF DESIGN:</u> LINCOLN PARK, MASONITE, LE CHATEAU COLLECTION. HOLLOW CORE DOORS OR APPROVED C. <u>DOORS</u>: 1-3/8" THICK PREHING. SIZES, SPECIES, AND DESIGNS AS INDICATED COMPLYING WITH WDMA I.S.1-A CONDUITS AND ROOFING SYSTEM TO BE INSTALLED; DESIGNED TO ACCOMMODATE EXISTING 1. GRADE: PREMIUM HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING 2. VENEER MATCHING: BOOK AND RUNNING AND VENTILATING EQUIPMENT. 3. PAIR MATCHING AND SET MATCHING A.INTERIOR VENEER: FIVE OR SEVEN PLY, STRUCTURAL COMPOSITE LUMBER CORES.

BB81 4 X 4

SD126 MEM SD176 MEM

SD211 MEM

2. ANCHOR TO ADJACENT CONSTRUCTION WITHOUT DISTORTION OR STRESS.

2. SHOP DRAWINGS: INDICATE SYSTEM DIMENSIONS, FRAMED OPENING REQUIREMENTS AND TOLERANCES, AFFECTED RELATED WORK, EXPANSION AND CONTRACTION JOINT LOCATION AND DETAILS, AND FIELD WELDING

3. PROVIDE FIVE YEAR MANUFACTURER WARRANTY AGAINST EXCESSIVE DEGRADATION OF EXTERIOR FINISH. INCLUDE PROVISION FOR REPLACEMENT OF UNITS WITH EXCESSIVE FADING, CHALKING, OR FLAKING.

1. ALUMINUM-FRAMED STOREFRONT: FACTORY FABRICATED, FACTORY FINISHED ALUMINUM FRAMING MEMBERS

13. PROTECT INSTALLED PRODUCTS FROM DAMAGE UNTIL DATE OF SUBSTANTIAL COMPLETION.

E. GLASS:

1. FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY q3

A. TRACKS AND RUNNERS: SAME MATERIAL AND THICKNESS AS STUDS, BENT LEG RETAINER NOTCHED TO RECEIVE

1.COMPLY WITH REQUIREMENTS OF ASTM C754. 2.VERIFY EXISTING CONDITIONS BEFORE STARTING WORK.

4.EXTEND PARTITION FRAMING TO STRUCTURE WHERE INDICATED AND TO CEILING IN OTHER LOCATIONS. 5. PARTITIONS TERMINATING AT CEILING: ATTACH CEILING RUNNER SECURELY TO CEILING TRACK IN ACCORDANCE 6.PARTITIONS TERMINATING AT STRUCTURE: ATTACH TOP RUNNER TO STRUCTURE, MAINTAIN CLEARANCE 7.FIT RUNNERS UNDER AND ABOVE OPENINGS; SECURE INTERMEDIATE STUDS TO SAME SPACING AS WALL STUDS.

FIXTURES, WALL CABINETS, TOILET ACCESSORIES, HARDWARE, AND OPENING FRAMES.

COLLINS WEBB #: 21075

1. METROFLOR, KONECTO PLANK, PROJECT 54012 OR APPROVED EQUAL.

C. <u>ATTIC STOCK</u>: FURNISH ONE (1) BOX FOR EACH 50 BOXES OR FRACTION THEREOF OF EACH TYPE OF FLOOR TILE AND 20' OF EACH COLOR AND TYPE OF WALL BASE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.

RESILIENT TILE PRODUCTS: PROVIDE FLOOR TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH THE FOLLOWING: E. <u>RESILIENT WALL BASE:</u> ASTM TYPE TS (RUBBER, VULCANIZED THERMOSET) 1/8" THICK, FURNISHED IN

COILS IN STYLES AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS WITH JOB-FORMED INSIDE **INSTALLATION ACCESSORIES** 

I. LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, PORTLAND CEMENT, OR BLENDED HYDRAULIC CEMENT-BASED FORMULATION PROVIDED OR APPROVED BY FLOORING MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS. 2. ADHESIVES: WATER-RESISTANT TYPE RECOMMENDED BY MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS. SPREAD ONLY ENOUGH ADHESIVE TO PERMIT INSTALLATION OF MATERIALS BEFORE INITIAL SET. 3. MOLDINGS, TRANSITION AND EDGE STRIPS: SAME MATERIAL AS FLOORING.

1. PREPARE CONCRETE SUBSTRATES PER ASTM F 710. VERIFY THAT SUBSTRATES ARE DRY AND FREE OF CURING COMPOUNDS. SEALERS AND HARDENERS. 2. LAY OUT TILES SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN 3. LAY TILES IN PATTERNS INDICATED WITH GRAIN DIRECTION ALTERNATING IN ADJACENT TILES, UNLESS NOTED OTHERWISE 4. CLEAN, SEAL, AND WAX RESILIENT FLOORING IN ACCORDANCE WITH MANUFACTURER'S

H. WALL BASE AND ACCESSORY INSTALLATION: 1. CONFIRM THAT SOLID BACKING IS PROVIDED BEHIND ALL WALL BASE. AREAS WHERE GYPSUM BOARD IS HELD MORE THAN 1/2" ABOVE SLAB SHALL BE FILLED IN PRIOR TO BASE INSTALLATION. 2. INSTALL WALL BASE WITH MANUFACTURER'S RECOMMENDED ADHESIVE IN MAXIMUM LENGTHS POSSIBLE. APPLY TO WALLS, COLUMNS, PILASTERS, CASEWORK, AND OTHER PERMANENT 3. INSTALL TRANSITION STRIPS WHERE FLOORING MATERIALS MEET OR WHERE EDGE OF TILE IS EXPOSED AS INDICATED IN THE FINISH SCHEDULE.

A. <u>SUBMITTALS:</u> PRODUCT DATA AND SAMPLES OF EACH CARPET PRODUCT INDICATED. SUBMIT ACTUAL TILE SAMPLES OF EACH CARPET REQUIRED

B. WARRANTY: PROVIDE SPECIAL PROJECT WARRANTY, SIGNED BY CONTRACTOR, INSTALLER AND MANUFACTURER (CARPET MILL), AGREEING TO REPAIR OR REPLACE DEFECTIVE MATERIALS AND WORKMANSHIP OF CARPETING WORK DURING 1-YEAR WARRANTY PERIOD FOLLOWING SUBSTANTIAL COMPLETION. ATTACH COPIES OF PRODUCT

C. ATTIC STOCK: FURNISH FULL-WIDTH CARPET EQUAL TO 5% OF EACH TYPE AND COLOR CARPET NSTALLED, PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE. D. PRODUCTS: PROVIDE CARPET IN PATTERNS AND COLORS AND WITH BACKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS WITH CRITICAL RADIANT FLUX CLASSIFICATION CLASS I, NOT LESS

THAN 0.45 W/SQ. CM PER ASTM E 648. ORDER ALL MATERIALS FROM THE SAME FACTORY DYE LOT.

1.TROWELABLE LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, HYDRAULIC-CEMENT-BASED FORMULATION PROVIDED OR RECOMMENDED BY CARPET MANUFACTURER. 2. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NONSTAINING TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED, THAT COMPLIES WITH FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET AND IS RECOMMENDED OR PROVIDED BY CARPET MANUFACTURER.

F. INSTALLATION: FOR CARPET TILE COMPLY CRI 104, SECTION 13 "CARPET MODULES (TILES)". GENERAL: COMPLY WITH CRI'S "CRI CARPET INSTALLATION STANDARD" AND WITH CARPET MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PREPARING SUBSTRATES. 2. USE TROWELABLE LEVELING AND PATCHING COMPOUNDS, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. TO FILL CRACKS. HOLES. DEPRESSIONS. AND PROTRUSIONS IN SUBSTRATES. FILL OR LEVEL CRACKS, HOLES AND DEPRESSIONS 1/8 INCH WIDE OR WIDER, AND PROTRUSIONS MORE THAN 1/32 INCH, UNLESS MORE STRINGENT REQUIREMENTS ARE REQUIRED BY MANUFACTURER'S WRITTEN INSTRUCTIONS. 3.BROOM AND VACUUM CLEAN SUBSTRATES TO BE COVERED IMMEDIATELY BEFORE INSTALLING CARPET. 4.LAY CARPET TILE IN PATTERN AS INDICATED ON CONSTRUCTION DOCUMENTS AND SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN HALF-WIDTH. 5.TRIM CARPET NEATLY AND TIGHT TO WALLS AND AROUND INTERRUPTIONS. 6.INSTALL PATTERN PARALLEL TO WALLS AND BORDERS UNLESS OTHERWISE INDICATED. 7.DO NOT BRIDGE BUILDING EXPANSION JOINTS WITH CARPET. 8. CUT AND FIT CARPET TO BUTT TIGHTLY TO VERTICAL SURFACES, PERMANENT FIXTURES, AND BUILT-IN FURNITURE INCLUDING CABINETS, PIPES, OUTLETS, EDGINGS, THRESHOLDS, AND NOSINGS. BIND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET MANUFACTURER.

9. EXTEND CARPET INTO TOE SPACES, DOOR REVEALS, CLOSETS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS. 10. MAINTAIN REFERENCE MARKERS, HOLES, AND OPENINGS THAT ARE IN PLACE OR MARKED FOR FUTURE CUTTING BY REPEATING ON CARPET AS MARKED ON SUBFLOOR. USE NONPERMANENT, NONSTAINING

11. PROTECT CARPET AGAINST DAMAGE FROM CONSTRUCTION OPERATIONS AND PLACEMENT OF EQUIPMENT AND FIXTURES DURING THE REMAINDER OF CONSTRUCTION PERIOD. USE PROTECTION METHODS RECOMMENDED IN WRITING BY CARPET MANUFACTURER. 12. INSTALL TRANSITION STRIPS AT CARPET TERMINATIONS AS SPECIFIED ON THE CONSTRUCTION

A. <u>SUBMITTALS:</u> PRODUCT DATA AND SAMPLES OF EACH CARPET PRODUCT INDICATED. SUBMIT 18" X 27" SAMPLES OF EACH CARPET REQUIRED, AND 6" LENGTHS OF EXPOSED EDGE STRIPPING. B. WARRANTY: PROVIDE SPECIAL PROJECT WARRANTY, SIGNED BY CONTRACTOR, INSTALLER AND MANUFACTURER

(CARPET MILL), AGREEING TO REPAIR OR REPLACE DEFECTIVE MATERIALS AND WORKMANSHIP OF CARPETING

WORK DURING 1-YEAR WARRANTY PERIOD FOLLOWING SUBSTANTIAL COMPLETION. ATTACH COPIES OF PRODUCT

C. <u>ATTIC STOCK:</u> FULL-SIZE UNITS EQUAL TO 5 PERCENT OF AMOUNT INSTALLED FOR EACH TYPE INDICATED, BUT NOT LESS THAN 10 SQ. YD.

A. APARTMENT UNIT CARPET SHALL BE SUPPLIED AND INSTALLED UNDER AN ALLOWANCES OF \$8.00/SQUARE YARD FOR THE PURCHASE AND DELIVERY OF THE CARPET MATERIAL ONLY. 1. COSTS FOR THE PAD ACCESSORIES, TAXES, LABOR, ETC. ARE NOT INCLUDED IN THE ALLOWANCES STATED ABOVE BUT SHALL BE INCLUDED IN THE BID PRICE FOR A COMPLETE INSTALLATION. B. CARPET PAD SHALL BE 1/2" - 6# DENSITY REBOND PAD AS REQUIRED FOR A COMPLETE INSTALLATION.

1.TROWELABLE LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED, HYDRAULIC-CEMENT-BASED FORMULATION PROVIDED OR RECOMMENDED BY CARPET MANUFACTURER. 2. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NONSTAINING TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED, THAT COMPLIES WITH FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET AND IS RECOMMENDED OR PROVIDED BY CARPET MANUFACTURER. 3. SEAM ADHESIVE: HOT-MELT ADHESIVE TAPE OR SIMILAR PRODUCT RECOMMENDED BY CARPET MANUFACTURER FOR SEALING AND TAPING SEAMS AND BUTTING CUT EDGES AT BACKING TO FORM SECURE SEAMS AND TO PREVENT PILE LOSS AT SEAMS. 4. TACKLESS CARPET STRIPPING: WATER RESISTANT PLYWOOD STRIPS, 3/8" THICK WITH ANGULAR PINS PROTRUDING FROM TOP DESIGNED TO GRIP AND HOLD STRETCHED CARPET AT THE BACKING. PROVIDE 5. CARPET EDGE GUARD: EXTRUDED ALUMINUM BEND DOWN TYPE EDGE GUARD; WITH CONCEALED GRIPPER TEETH AND MINIMUM 1-1/2" WIDE PUNCHED ANCHORAGE FLANGE AND MINIMUM 5/8" WIDE FACE

 GENERAL: COMPLY WITH CRI'S "CRI CARPET INSTALLATION STANDARD" AND WITH CARPET MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PREPARING SUBSTRATES. 2. USE TROWELABLE LEVELING AND PATCHING COMPOUNDS, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, TO FILL CRACKS, HOLES, DEPRESSIONS, AND PROTRUSIONS IN SUBSTRATES. FILL OR LEVEL CRACKS, HOLES AND DEPRESSIONS 1/8 INCH WIDE OR WIDER, AND PROTRUSIONS MORE THAN 1/32 INCH, UNLESS MORE STRINGENT REQUIREMENTS ARE REQUIRED BY MANUFACTURER'S WRITTEN INSTRUCTIONS. 3.BROOM AND VACUUM CLEAN SUBSTRATES TO BE COVERED IMMEDIATELY BEFORE INSTALLING CARPET. 4.UNIT INSTALLATION, STRETCH-IN INSTALLATION WITH PAD. 5.COMPLY WITH CARPET MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHOP DRAWINGS FOR SEAM LOCATIONS AND DIRECTION OF CARPET; MAINTAIN UNIFORMITY OF CARPET DIRECTION AND LAY OF PILE. AT DOORWAYS, CENTER SEAMS UNDER THE DOOR IN CLOSED POSITION. 6.INSTALL PATTERN PARALLEL TO WALLS AND BORDERS UNLESS OTHERWISE INDICATED. 7.DO NOT BRIDGE BUILDING EXPANSION JOINTS WITH CARPET. 8. CUT AND FIT CARPET TO BUTT TIGHTLY TO VERTICAL SURFACES, PERMANENT FIXTURES, AND BUILT-IN FURNITURE INCLUDING CABINETS, PIPES, OUTLETS, EDGINGS, THRESHOLDS, AND NOSINGS. BIND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET MANUFACTURER. 9. EXTEND CARPET INTO TOE SPACES, DOOR REVEALS, CLOSETS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS. 10. MAINTAIN REFERENCE MARKERS, HOLES, AND OPENINGS THAT ARE IN PLACE OR MARKED FOR FUTURE CUTTING BY REPEATING ON CARPET AS MARKED ON SUBFLOOR. USE NONPERMANENT, NONSTAINING 11. PROTECT CARPET AGAINST DAMAGE FROM CONSTRUCTION OPERATIONS AND PLACEMENT OF EQUIPMENT AND FIXTURES DURING THE REMAINDER OF CONSTRUCTION PERIOD. USE PROTECTION METHODS RECOMMENDED

09 9000 - PAINTING AND COATING

A. SUBMITTALS: PRODUCT DATA AND THREE (3) DRAW-DOWN SAMPLES OF EACH COLOR AND SHEEN

B. ATTIC STOCK: FURNISH ONE (1) GALLON OF EACH PAINT COLOR AND SHEEN, IN CONTAINERS, PROPERLY LABELED AND SEALED.

C. PRODUCTS: PROVIDE MANUFACTURER'S BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.

1. ALL PAINT. STAIN. AND VARNISH SHALL BE PRODUCTS OF DEVOE, KWAL, SHERWIN WILLIAMS, PPG INDUSTRIES, PRATT & LAMBERT OR APPROVED EQUAL 2. ALL MATERIAL SHALL BE OF THE STANDARD RESIDENTIAL GRADE OF THE TYPES DESIGNATED. 3. ALL MATERIAL SHALL BE DELIVERED TO THE JOB SITE IN THE ORIGINAL, UNOPENED, LABELED CONTAINERS.

COLORS NOT SPECIFICALLY CALLED FOR IN THE PAINT SCHEDULE WILL BE SELECTED BY THE ARCHITECT.

09 9000 - PAINTING AND COATING (CONTINUED)

E. APPLICATION / INSTALLATION: EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATORS ACCORDING TO COATING MANUFACTURER'S WRITTEN INSTRUCTIONS. WHEN SPRAYED. EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS. PIGMENTED (OPAQUE) FINISHES: COMPLETELY COVER SURFACES TO PROVIDE A SMOOTH. OPAQUE SURFACE OF UNIFORM APPEARANCE. PROVIDE A FINISH FREE OF CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, RUNS, SAGS, ROPINESS, OR OTHER SURFACE

3. APPLY PRODUCTS PER MANUFACTURER RECOMMENDED GUIDELINES. PRODUCT COVERAGE MINIMUM ONE COAT OF PRIMER AND TWO FINAL COATS ON MATERIALS.APPLY PRODUCTS TO MATERIALS APPROVED BY MANUFCTURER PRODUCT DATA SHEETS. A. Exterior Work:

FLASHINGS, CONNECTORS, ETC.

1. ALL EXTERIOR GALVANIZED METAL

TWO COATS EXTERIOR SEMI-GLOSS METAL PAINT. 2. ALL EXPOSED STEEL FRAMES, ANGLES, TWO COATS SEMI-GLOSS METAL PAINT. (PRIME COAT CHANNELS, POSTS, RAILINGS, BEAMS, ETC. SURFACES THAT ARE NOT PRIMED.)

ONE COAT COMMERCIAL METAL ETCH.

ONE COAT EXTERIOR METAL PRIMER.

TWO COATS SEMI-GLOSS METAL PAINT.

TWO COATS OF EXTERIOR LATEX SATIN OR

PRIME AND BACK LATEX PRIMER.

3. ALL EXPOSED MISC. FERROUS METAL ITEMS INCLUDING RAILS, PLATES, ANGLES, BOLTS. (PRIME COAT SURFACES THAT ARE NOT PRIMED.) GRATES, CONDUITS, POSTS, PIPING, ETC. 4. ALL UNPRIMED EXTERIOR MILLWORK, TRIM, SMOOTH WOOD MATERIALS, ETC.

DOORS AND METAL FRAMES, GARAGE DOORS.

SEMI-GLOSS PAINT.

TOUCH-UP PRIME. TWO COATS OF 5. PRIMED MILLWORK AND TRIM. EXTERIOR 100% SATIN OR SEMI-GLOSS ACRYLIC LATEX PAINT.

ONE COAT PRIMER. TWO COATS EXTERIOR 6. ROUGH SAWN TRIM, BEAMS, COLUMNS, HEAVY BODIED STAIN. 7. PRIMED METAL ENTRY DOORS, FRENCH PATCH DENTS. TOUCH UP PRIMER. TWO

INSIDE AND OUTSIDE. 8. ANY OTHER PAINTING REQUIRED BY TWO COATS TO MATCH ADJACENT THE DRAWINGS. SURFACES

B. INTERIOR WORK:

1. GYPSUM BOARD WALLS EXCEPT IN KITCHENS, BATHROOMS, LAUNDRIES AND COMMON AREA CORRIDORS, UNLESS SCHEDULED FOR WALLCOVERING

2. GYPSUM BOARD WALLS IN KITCHENS,

ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF LATEX EGGSHELL WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.) ONE WALL IN EACH APARTMENT UNIT LIVING SPACE AND EACH BEDROOM SHALL BE PAINTED ACCENT COLORS.

TWO COATS OF LATEX FLAT PAINT.

OF LATEX SEMI-GLOSS PAINT

PREFINISHED WHITE

TWO COATS OF CLASS II VAPOR RETARDER

PAINT AT CEILINGS ADJACENT TO ATTICS.

ONE PRIME COAT OF LATEX PAINT, ONE

COAT LATEX PAINT AND ONE FINISH COAT

ONE COAT OF LATEX PAINT AND ONE FINISH

COAT OF LATEX SEMI-GLOSS PAINT.

TWO COATS METAL PAINT TO MATCH

FINISH TO MATCH SIMILAR CONDITIONS.

ADJACENT SURFACES UNLESS FACTORY

COVERAGE )

ONE COAT OF EPOXY COMPATABLE PRIMER PAINT AND

PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL

ONE FINISH COAT OF EPOXY EGGSHELL WALL

COATS OF OIL BASE SEMI-GLOSS PAINT

BATHROOMS AND LAUNDRIES UNLESS SCHEDULED FOR WALLCOVERING OR TILE.

3. GYPSUM BOARD WALLS IN COMMON ONE COAT OF PRIME LATEX PAINT AND ONE FINISH COAT OF SCRUBABLE LATEX AREA CORRIDORS FLAT WALL PAINT. (TWO COATS IF REQUIRED TO ACHIEVE FULL COVERAGE.)

5. DOOR CASINGS, BASE, WOOD, MILL-

4. GYPSUM BOARD CEILINGS.

WORK, ETC. (PRE-PRIMED.)

6. PRIMED HARDWOOD DOORS. 7. ALL MISCELLANEOUS FERROUS METAL,

8. ANY OTHER PAINTING WORK REQUIRED

INCLUDING GRILLES, REGISTERS, ETC.

A. SUBMITTALS: PRODUCT DATA FOR SETTING AND GROUTING MATERIALS AND THREE (3) SAMPLES OF EACH TILE SPECIFIED FOR VERIFICATION PURPOSES.

B. <u>ATTIC STOCK:</u> FURNISH 2% OF EACH TYPE OF CERAMIC TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.

C. <u>BASIS OF DESIGN</u>: SEE DRAWING SCHEDULES. D. <u>TILE:</u> COMPLY WITH STANDARD GRADE REQUIREMENTS IN ANSI A137.1 "SPECIFICATIONS FOR CERAMIC TILE" FOR PRODUCTS AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS.

1. THIN-SET MORTAR:

A. TYPICAL INTERIOR INSTALLATIONS: LATEX/POLYMER MODIFIED PORTLAND CEMENT COMPLYING WITH ANSI A108.5 AND ANSI 118.4. 2. GROUT:UNSANDED FOR JOINTS 1/16" WIDTH OR LESS, SANDED FOR JOINTS GREATER THAN 1/16" IN COLOR INDICATED IN SCHEDULE OR TO BE SELECTED BY ARCHITECT AND OWNER. A. TYPICAL INTERIOR INSTALLATIONS: STANDARD CEMENT GROUT WITH INTEGRAL STAIN INHIBITORS (TEC ACCUCOLOR XT, OR EQUAL) 3. SETTING BED ACCESSORIES: ANSI A 108.1A

. <u>INSTALLATION METHODS:</u> COMPLY WITH TILE INSTALLATION STANDARDS IN ANSI'S "SPECIFICATIONS FOR THE INSTALLATIONS OF CERAMIC TILE" AND TCA'S "HANDBOOK FOR CERAMIC TILE INSTALLATION" THAT APPLY TO THE MATERIALS AND METHODS INDICATED BELOW:

1. WHERE CUT TILE IS SPECIFIED AS THE TOP COURSE ON WALL WAINSCOTING OR WALL

BASE WITH AN EXPOSED TOP EDGE, THE FACTORY EDGE SHALL BE USED AS THE EXPOSED EDGE. H. <u>CONFLICTS:</u> IF NOT ADDRESSED ON DRAWINGS, WHERE ELECTRICAL DEVICES OR TOILET ACCESSORIES STRADDLE THE TRANSITION FROM THE TOP EDGE OF WAINSCOT WALL TILE TO GYPSUM BOARD SUBSTRATE, CONTACT ARCHITECT FOR RESOLUTION.

1. JOINT SIZE: SET TILE WITH THE SMALLEST GROUT JOINT ACHIEVABLE AND AS RECOMMENDED BY THE MFR. BASED ON THE TILE PRODUCT AND SUBSTRATE CONDITIONS, UNLESS NOTED 2. TILE PATTERN: LAY TILE IN PATTERNS AS INDICATED IN THE CONSTRUCTION DOCUMENTS. ALIGN JOINTS WHERE ADJOINING TILES ON FLOOR, BASE, WALLS, AND TRIM ARE THE SAME SIZE, UNLESS INDICATED OTHERWISE 3. INSTALLATION: INSTALL GROUT PER MANUFACTURER'S INSTRUCTIONS, EXERCISING CARE TO AVOID REMOVAL OF GROUT COLOR BY USE OF EXCESS WATER DURING INSTALLATION. FADED OR CHALKY GROUT SHALL BE CAUSE FOR REJECTION. 4. SEALER: AFTER FULLY CURED, GROUT SHALL BE SEALED WITH TWO (2) COATS OF COMMERCIAL QUALITY PENETRATING SILICONE SEALER.

09 5100 - ACOUSTICAL CEILINGS A. <u>SUBMITTALS</u>: PRODUCT DATA ONLY

3. <u>ATTIC STOCK:</u> FURNISH 2% OF EACH TYPE OF CEILING TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE.

C. <u>ACOUSTICAL TILE PRODUCTS</u>: PROVIDE CEILING TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM E 1264, CLASS A MATERIALS, TESTED PER ASTM

D. <u>SUSPENSION SYSTEM:</u> PROVIDE HEAVY DUTY, DIRECT-HUNG, SUSPENSION SYSTEMS AS INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM C 635. FURNISH ALUMINUM GRID IN SHOWERS, KITCHENS, AND OTHER HIGH-HUMIDITY AREAS. 1. ATTACHMENT DEVICES: SIZE FOR FIVE (5) TIMES THE DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1, DIRECT HUNG UNLESS OTHERWISE INDICATED. 2. WIRE HANGERS, BRACES, AND TIES: ZINC-COATED CARBON-STEEL WIRE; ASTM A 641/ (A 641 M) CLASS 1 ZINC COATING, SOFT TEMPER WITH A YIELD STRENGTH AT LEAST THREE (3) TIMES THE HANGER DESIGN LOAD (ASTM C 635, TABLE 1, DIRECT HUNG), BUT NOT LESS THAN 0.135" 3. SEISMIC STRUTS: MANUFACTURER'S STANDARD PRODUCT DESIGNED TO ACCOMMODATE SEISMIC FORCES. 4. HOLD-DOWN CLIPS: PROVIDE HOLD-DOWN CLIPS ON CEILING TILE IN ENTRANCE VESTIBULES, OMPUTER ROOMS EMPLOYING DRY CHEMICAL FIRE-SUPPRESSION SYSTEMS, AND OTHER

AREAS AS INDICATED. F. INSTALLATION: COMPLY WITH ASTM C 636 AND CISCA'S "CEILING SYSTEMS HANDBOOK". I. SEQUENCE WORK TO ENSURE ACOUSTICAL CEILINGS ARE NOT INSTALLED UNTIL BUILDING IS ENCLOSED, SUFFICIENT HEAT IS PROVIDED, DUST GENERATION ACTIVITIES HAVE TERMINATED, AND OVERHEAD WORK IS COMPLETED. TESTED. AND APPROVED. 2. INSTALL CEILING GRID AS INDICATED TO BE SYMMETRICAL ABOUT BOTH AXES OF EACH ROOM USING NOT LESS THAN HALF-SIZE TILE UNLESS INDICATED OTHERWISE ON THE REFLECTED

3. SUPPORT SUSPENSION SYSTEM INDEPENDENTLY OF DUCTS, PIPES, AND CONDUITS. 4. SUPPORT FIXTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN 6" OF EACH CORNER OR SUPPORT FIXTURES INDEPENDENTLY. 5. PROVIDE MATCHING PERIMETER MOLDING INSTALLED IN BEAD OF ACOUSTICAL SEALANT AT ALL LOCATIONS WHERE CEILING INTERSECTS VERTICAL SURFACES. USE MATCHING PRE-FORMED CLOSURES AT ROUND OR CURVED OBSTRUCTIONS.

6. FIELD-CUT EDGES SHALL MATCH PROFILE OF FACTORY EDGES.

**DIVISION 10 - SPECIALTIES** 

10 2800 TOILET AND BATH ACCESSORIES A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH ACCESSORIES.

3. <u>SUBMITTALS</u>
1. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING: 2. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS. 3. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS. 4. INSTALLATION METHODS.

1. INSTALLER MUST EXAMINE SUBSTRATES. PREVIOUSLY INSTALLED INSERTS AND ANCHORAGES NECESSARY FOR MOUNTING OF TOILET ACCESSORIES, AND OTHER CONDITIONS UNDER WHICH INSTALLATION IS TO OCCUR, AND MUST NOTIFY CONTRACTOR IN WRITING OF CONDITIONS DETRIMENTAL TO PROPER AND TIMELY COMPLETION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER. INSTALL ACCESSORIES ACCORDING TO RESPECTIVE MANUFACTURERS' WRITTEN INSTRUCTIONS. USING FASTENERS APPROPRIATE TO SUBSTRATE INDICATED AND RECOMMENDED BY UNIT MANUFACTURER. I NSTALL UNITS LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS AND AT HEIGHTS INDICATED.

INSTALLATIONS ARE NOT PERMITTED. 3. MOUNTING HEIGHTS SHALL BE AS RECOMMENDED BY THE ACCESSORY MANUFACTURER AND AT HEIGHTS RECOMMENDED BY USE FOR PHYSICALLY HANDICAPPED TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT 4. GRAB BARS: INSTALL TO WITHSTAND A DOWNWARD LOAD OF AT LEAST 250 LBF, WHEN TESTED ACCORDING TO ASTM F 446. 5. ADJUST ACCESSORIES FOR PROPER OPERATION AND VERIFY THAT MECHANISMS FUNCTION SMOOTHLY. 6. CLEAN AND POLISH ALL EXPOSED SURFACES AFTER REMOVING PROTECTIVE COATINGS.

10 3000 SOLID PLASTIC TOILET COMPARTMENTS A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH ACCESSORIES.

BASIS OF DESIGN: ECLIPSE TOILET PARTITIONS AS MANUFACTURED BY AND SUPPLIED BY SCRANTON 1. STYLE: FLOOR MOUNTED OVERHEAD-BRACED TOILET COMPARTMENTS. 2. DOORS AND PANELS: HIGH DENSITY POLYETHYLENE (HDPE), FABRICATED FROM SEQ CHAPTER 1 EXTRUDED POLYMER RESINS, FORMING SINGLE THICKNESS PANEL. A. WATERPROOF AND NONABSORBENT, WITH SELF-LUBRICATING SURFACE, RESISTANT TO MARKS BY PENS, PENCILS, MARKERS, AND OTHER WRITING INSTRUMENTS. B. THICKNESS: 1 INCH (25 MM).

C. EDGES: SHIPLAP. 3. PANEL COLOR: TRADITIONAL SERIES: 1. SHALE - ORANGE PEEL. 4. DOORS AND PANELS: HIGH PRIVACY: HEIGHT: 62 INCHES (1575 MM) HIGH AND MOUNTED AT 8 TO 14 INCHES (203 TO 356 MM) ABOVE THE FINISHED FLOOR.

I. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING: 2. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS. 3. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.

4. INSTALLATION METHODS. 5. SHOP DRAWINGS: PROVIDE LAYOUT DRAWINGS AND INSTALLATION DETAILS WITH LOCATION AND TYPE OF 6. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS OF COLOR CHIPS REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND PATTERNS.

1. METAL POSTS: 82.75 INCHES (2102 MM) HIGH, HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, FASTENED TO FOOT WITH STAINLESS STEEL TAMPER RESISTANT SCREW.

2. HIDDEN SHOE (FOOT): ONE-PIECE MOLDED POLYETHYLENE INVISIBLE SHOE INSERTED INTO METAL POST AND SECURED TO METAL POST WITH STAINLESS STEEL TAMPER RESISTANT SCREW. 3. HEADRAIL CAP AND CORNER CAP: ONE-PIECE MOLDED POLYETHYLENE SECURED TO METAL POST WITH STAINLESS STEEL TAMPER RESISTANT SCREW: ADJUSTABLE TO LEVEL HEADRAIL TO FINISHED FLOOR. 4. WALL BRACKETS: CONTINUOUS HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, INSERTED INTO SLOTTED PANEL AND FASTENED TO PANELS WITH STAINLESS STEEL TAMPER RESISTANT SCREWS. 5. HEADRAIL: HEAVY DUTY EXTRUDED ALUMINUM, CLEAR ANODIZED FINISH, SECURED TO WALL WITH STAINLESS STEEL TAMPER SCREWS. 6 DOOR HARDWARE

A. HINGES: EDGE-MOUNTED HELIX STYLE STAINLESS STEEL CONTINUOUS HINGE. CLOSING DEGREE: 5 DEGREES. COMES TO A FULL CLOSE ON ITS OWN WEIGHT B.OCCUPANCY INDICATOR LATCH AND HOUSING: MATERIAL: SATIN STAINLESS STEEL. OCCUPANCY INDICATORS: GREEN FOR OCCUPIED AND RED NOT OCCUPIED. SLIDE BOLT AND BUTTON. EQUIP WITH SECOND DOOR PULL AND DOOR STOP. D. DOOR PULLS: CHROME PLATED ZAMAK:

1. CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION. 2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS. 3. INSTALL PARTITIONS RIGID, STRAIGHT, PLUMB, AND LEVEL. 4. LOCATE BOTTOM EDGE OF DOORS AND PANELS \_\_\_ INCHES ABOVE FINISHED FLOOR. 5. CLEARANCE AT VERTICAL EDGES OF DOORS SHALL BE UNIFORM TOP TO BOTTOM AND SHALL NOT EXCEED 3/8 INCH (9.5 MM) 6. NO EVIDENCE OF CUTTING, DRILLING, AND/OR PATCHING SHALL BE VISIBLE ON THE FINISHED WORK. 7. FINISHED SURFACES SHALL BE CLEANED AFTER INSTALLATION AND BE LEFT FREE OF IMPERFECTIONS. 8. ADJUST DOORS AND LATCHES TO OPERATE CORRECTLY. 9. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.

10. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

A. REFERENCE CONSTRUCTION DRAWINGS FOR TYPE, SIZE AND LOCATIONS OF FIRE EXTINGUISHERS

MANUFACTURER'S FULL RANGE.

DISPENSERS, AND SIMILAR ITEMS.

THAT COULD DAMAGE STONE.

MANUFACTURER'S WRITTEN INSTRUCTIONS.

A. REFERENCE CONSTRUCTION DRAWINGS FOR QUANTITY, AND LOCATION OF APPLIANCES TO BE FURNISHED BY OWNER.

A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH

B. <u>SUBMITTALS</u>: INCLUDE PLANS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK: 1. PRODUCT DATA :FOR EACH STONE, STONE ACCESSORY, AND MANUFACTURED PRODUCT. 2. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS. 3. SAMPLES: FOR EACH STONE TYPE INDICATED.

I. FIELD MEASUREMENTS: VERIFY DIMENSIONS OF CONSTRUCTION TO RECEIVE STONE COUNTERTOPS BY FIELD MEASUREMENTS BEFORE FABRICATION.

1. SOURCE LIMITATIONS FOR STONE: OBTAIN STONE FROM A SINGLE QUARRY WITH RESOURCES TO MATERIALS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES. 2. QUARTZ: MATERIAL STANDARD: COMPLY WITH ASTM C 615. 3. ALL COUNTERTOPS SHALL BE GRANITE AS SELECTED BY THE OWNER WITH SQUARE EDGES AND MATCHING SIDE AND BACKSPLASHES. TOP AND BOTTOM EXPOSED EDGES SHALL BE SLIGHTLY EASED. 4. FINISH: POLISHED. 5. WATER CLEANABLE EPOXY ADHESIVE: ANSI A118.3., WATER • CLEANABLE EPOXY GROUT: ANSI A118.3, CHEMICAL RESISTANT, WATER • CLEANABLE, TILE SETTING AND GROUTING EPOXY. 6. SEALANT FOR COUNTERTOPS: MILDEW RESISTANT JOINT SEALANT: MILDEW RESISTANT, SINGLE COMPONENT, NONSAG, NEUTRAL CURING, SILICONE. COLOR: AS SELECTED BY ARCHITECT FROM

7. GROMMETS: 2 INCH ROUND GROMMETS BY DOUG MOCKETT & COMPANY, INC. OR APPROVED EQUAL. 1. SELECT MATERIAL FOR INTENDED USE TO PREVENT FABRICATED UNITS FROM CONTAINING CRACKS, SEAMS, AND STARTS THAT COULD IMPAIR STRUCTURAL INTEGRITY OR FUNCTION. 2. FABRICATE STONE COUNTERTOPS IN SIZES AND SHAPES REQUIRED TO COMPLY WITH REQUIREMENTS

4. NOMINAL THICKNESS: PROVIDE THICKNESS INDICATED, BUT NOT LESS THAN 3 CM (EXCEPT APARTMENT

3. GENERAL: COMPLY WITH RECOMMENDATIONS IN MIA'S "DIMENSION STONE DESIGN MANUAL VI."

UNIT BATHROOM COUNTERTOPS SHALL BE NOT LESS THAN 2CM). GAGE BACKS TO PROVIDE UNITS OF IDENTICAL THICKNESS 5. SPLASHES: PROVIDE 3/4. INCH THICK BACKSPLASHES AND END SPLASHES UNLESS OTHERWISE INDICATED 6. JOINTS: FABRICATE COUNTERTOPS WITHOUT JOINTS WHEREVER POSSIBLE. 7. CUTOUTS & HOLES: UNDERCOUNTER FIXTURES: MAKE CUTOUTS FOR UNDERCOUNTER FIXTURES IN SHOP USING TEMPLATE OR PATTERN FURNISHED BY FIXTURE MANUFACTURER. FORM CUTOUTS TO SMOOTH, EVEN CURVES. 8. COUNTER MOUNTED FIXTURES: PREPARE COUNTERTOPS IN SHOP FOR FIELD CUTTING OPENINGS FOR COUNTER MOUNTED FIXTURES. MARK TOPS FOR CUTOUTS AND DRILL HOLES AT CORNERS OF CUTOUT

1. GENERAL: INSTALL COUNTERTOPS OVER PLYWOOD SUBTOPS WITH FULL SPREAD OF WATER CLEANABLE GENERAL: INSTALL COUNTERTOPS BY ADHERING TO SUPPORTS WITH WATER CLEANABLE EPOXY 3. SET STONE TO COMPLY WITH REQUIREMENTS INDICATED. SHIM AND ADJUST STONE TO LOCATIONS

9. FITTINGS: DRILL COUNTERTOPS IN SHOP FOR PLUMBING FITTINGS, UNDERCOUNTER SOAP

LOCATIONS. MAKE CORNER HOLES OF LARGEST RADIUS PRACTICAL.

INDICATED, WITH UNIFORM JOINTS OF WIDTHS INDICATED AND WITH EDGES AND FACES ALIGNED 4. SPACE JOINTS WITH 1/16. INCH GAP FOR FILLING WITH SEALANT. USE TEMPORARY SHIMS TO ENSURE UNIFORM SPACING. CLAMP UNITS TO TEMPORARY BRACING, SUPPORTS, OR EACH OTHER TO ENSURE THAT COUNTERTOPS ARE PROPERLY ALIGNED AND JOINTS ARE OF SPECIFIED WIDTH. 5. COMPLETE CUTOUTS NOT FINISHED IN SHOP. MASK AREAS OF COUNTERTOPS ADJACENT TO CUTOUTS TO PREVENT DAMAGE WHILE CUTTING. USE POWER SAWS WITH DIAMOND BLADES TO CUT STONE. MAKE CUTOUTS TO ACCURATELY FIT ITEMS TO BE INSTALLED. AND AT RIGHT ANGLES TO FINISHED SURFACES UNLESS BEVELING IS REQUIRED FOR CLEARANCE. EASE EDGES SLIGHTLY TO PREVENT SNIPPING. 6. INSTALL BACKSPLASHES AND END SPLASHES BY ADHERING TO WALL WITH WATER • CLEANABLE EPOXY ADHESIVE, LEAVE 1/16. INCH GAP BETWEEN COUNTERTOP AND SPLASHES FOR FILLING WITH SEALANT. USE TEMPORARY SHIMS TO ENSURE UNIFORM SPACING. 7. GROUT JOINTS TO COMPLY WITH ANSI A108.10. REMOVE TEMPORARY SHIMS BEFORE GROUTING. TOOL GROUT UNIFORMLY AND SMOOTHLY WITH PLASTIC TOOL.

8. APPLY SEALANT TO JOINTS AND GAPS SPECIFIED FOR FILLING WITH SEALANT; COMPLY WITH SECTION 079200 "JOINT SEALANTS." REMOVE TEMPORARY SHIMS BEFORE APPLYING SEALANT. 9. ASSURE THAT SEAMS ARE SMOOTH, LEVEL AND TIGHT. SEAMS SHALL BE FILLED ENTIRELY SO FLUSH WITH COUNTERTOP, POLISH SURFACE AT SEAM, ASSURE THAT FILLER IS "NON. YELLOWING." 10. CLEANING: CLEAN COUNTERTOPS AS WORK PROGRESSES. REMOVE ADHESIVE, GROUT. MORTAR, AND SEALANT SMEARS IMMEDIATELY. CLEAN STONE COUNTERTOPS NO FEWER THAN SIX DAYS AFTER COMPLETION OF INSTALLATION, USING CLEAN WATER AND SOFT RAGS. DO NOT USE WIRE BRUSHES. ACID TYPE CLEANING AGENTS, CLEANING COMPOUNDS WITH CAUSTIC OR HARSH FILLERS, OR OTHER MATERIALS OR METHODS

11.SEALER APPLICATION: APPLY STONE SEALER TO COMPLY WITH STONE PRODUCER'S AND SEALER

A. REFERENCE CONSTRUCTION DRAWINGS & SCHEDULES FOR TYPE, QUANTITY, AND LOCATIONS OF TOILET AND BATH

B. SUBMITTALS: INCLUDE PLANS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK: 1. PRODUCT DATA :FOR EACH STONE, STONE ACCESSORY, AND MANUFACTURED PRODUCT. 2. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS. 3. SAMPLES: FOR EACH STONE TYPE INDICATED.

. FIELD MEASUREMENTS: VERIFY DIMENSIONS OF CONSTRUCTION TO RECEIVE STONE COUNTERTOPS BY FIELD MEASUREMENTS BEFORE FABRICATION.

1. SOURCE LIMITATIONS FOR STONE: OBTAIN FROM A SINGLE SOURCE TO PROVIDE MATERIALS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES.

1. QUALITY STANDARD: PREMIUM GRADE, IN ACCORDANCE WITH AWI/AWMAC/WI (AWS) OR AWMAC/WI (NAAWS), UNLESS NOTED OTHERWISE. 2. QUALITY STANDARD: SEFA 3 FOR LABORATORY WORKSURFACES. 3. PLASTIC LAMINATE COUNTERTOPS: HIGH-PRESSURE DECORATIVE LAMINATE (HPDL) SHEET BONDED TO SUBSTRATE. A. LAMINATE SHEET: NEMA LD 3, GRADE HGS, 0.048 INCH NOMINAL THICKNESS. B. EXPOSED EDGE TREATMENT: AS NOTED, SUBSTRATE BUILT UP TO MINIMUM 1-1/4 INCH THICK; COVERED WITH MATCHING LAMINATE. C. BACK AND END SPLASHES: SAME MATERIAL, SAME CONSTRUCTION. D. FABRICATE IN ACCORDANCE WITH AWI/AWMAC/WI (AWS) OR AWMAC/WI (NAAWS), SECTION 11 - COUNTERTOPS, CUSTOM GRADE.

MANUFACTURERS: 1. REFER TO FINISH LEGEND.

4. NATURAL QUARTZ AND RESIN COMPOSITE COUNTERTOPS: SHEET OR SLAB OF NATURAL QUARTZ AND PLASTIC RESIN OVER CONTINUOUS SUBSTRATE. A. FLAT SHEET THICKNESS: 1-1/4 INCH, MINIMUM.

B. NATURAL QUARTZ AND RESIN COMPOSITE SHEETS, SLABS AND CASTINGS: COMPLYING WITH ISFA 3-01 AND NEMA LD 3; ORTHOPHTHALIC POLYESTER RESIN, MINERAL FILLER, AND PIGMENTS; HOMOGENOUS, NON-POROUS AND CAPABLE OF BEING WORKED AND REPAIRED USING STANDARD WOODWORKING TOOLS: NO SURFACE COATING: COLOR AND PATTERN CONSISTENT THROUGHOUT THICKNESS.

1. REFER TO FINISH LEGEND FOR SOLID SURFACE AND CORIAN QUARTZ DESCRIPTIONS, MANUFACTURERS, PRODUCT NUMBERS, COLORS, SIZES AND CONTACT INFORMATION.

C. FACTORY FABRICATE COMPONENTS TO THE GREATEST EXTENT PRACTICAL IN SIZES AND SHAPES INDICATED; COMPLY WITH THE MIA DIMENSION STONE DESIGN MANUAL. D. FINISH ON EXPOSED SURFACES: POLISHED. E. COLOR AND PATTERN: AS INDICATED ON DRAWINGS.

I. SECURELY ATTACH COUNTERTOPS TO CABINETS OR SUPPORTS USING CONCEALED FASTENERS. MAKE FLAT SURFACES LEVEL; SHIM WHERE REQUIRED. 2. ATTACH PLASTIC LAMINATE COUNTERTOPS USING SCREWS WITH MINIMUM PENETRATION INTO SUBSTRATE BOARD OF 5/8 INCH. 3. SEAL JOINT BETWEEN BACK/END SPLASHES AND VERTICAL SURFACES. 4. GENERAL: INSTALL COUNTERTOPS OVER PLYWOOD SUBTOPS WITH FULL SPREAD OF WATER CLEANABLE EPOXY ADHESIVE 5. GENERAL: INSTALL COUNTERTOPS BY ADHERING TO SUPPORTS WITH WATER CLEANABLE EPOXY 6. SET STONE TO COMPLY WITH REQUIREMENTS INDICATED. SHIM AND ADJUST STONE TO LOCATIONS

INDICATED, WITH UNIFORM JOINTS OF WIDTHS INDICATED AND WITH EDGES AND FACES ALIGNED ACCORDING TO ESTABLISHED RELATIONSHIPS. 7. SPACE JOINTS WITH 1/16. INCH GAP FOR FILLING WITH SEALANT. USE TEMPORARY SHIMS TO ENSURE UNIFORM SPACING. CLAMP UNITS TO TEMPORARY BRACING, SUPPORTS, OR EACH OTHER TO ENSURE THAT COUNTERTOPS ARE PROPERLY ALIGNED AND JOINTS ARE OF SPECIFIED WIDTH. 8. COMPLETE CUTOUTS NOT FINISHED IN SHOP. MASK AREAS OF COUNTERTOPS ADJACENT TO CUTOUTS TO PREVENT DAMAGE WHILE CUTTING. USE POWER SAWS WITH DIAMOND BLADES TO CUT STONE. MAKE CUTOUTS TO ACCURATELY FIT ITEMS TO BE INSTALLED, AND AT RIGHT ANGLES TO FINISHED SURFACES UNLESS BEVELING IS REQUIRED FOR CLEARANCE. EASE EDGES SLIGHTLY TO PREVENT SNIPPING. 9. INSTALL BACKSPLASHES AND END SPLASHES BY ADHERING TO WALL WITH WATER. CLEANABLE EPOXY ADHESIVE. LEAVE 1/16 INCH GAP BETWEEN COUNTERTOP AND SPLASHES FOR FILLING WITH SEALANT.

USE TEMPORARY SHIMS TO ENSURE UNIFORM SPACING. 10. GROUT JOINTS TO COMPLY WITH ANSI A108.10. REMOVE TEMPORARY SHIMS BEFORE GROUTING. TOOL GROUT LINIFORMLY AND SMOOTHLY WITH PLASTIC TOOL 11. APPLY SEALANT TO JOINTS AND GAPS SPECIFIED FOR FILLING WITH SEALANT; COMPLY WITH SECTION 079200 "JOINT SEALANTS." REMOVE TEMPORARY SHIMS BEFORE APPLYING SEALANT 12. ASSURE THAT SEAMS ARE SMOOTH, LEVEL AND TIGHT. SEAMS SHALL BE FILLED ENTIRELY SO FLUSH WITH COUNTERTOP. POLISH SURFACE AT SEAM. ASSURE THAT FILLER IS "NON- YELLOWING." 13. CLEANING: CLEAN COUNTERTOPS AS WORK PROGRESSES. REMOVE ADHESIVE, GROUT,

MORTAR, AND SEALANT SMEARS IMMEDIATELY. CLEAN STONE COUNTERTOPS NO FEWER THAN SIX DAYS AFTER COMPLETION OF INSTALLATION, USING CLEAN WATER AND SOFT RAGS. DO NOT USE WIRE BRUSHES, ACID TYPE CLEANING AGENTS, CLEANING COMPOUNDS WITH CAUSTIC OR HARSH FILLERS, OR OTHER MATERIALS OR METHODS THAT COULD DAMAGE STONE. 14. SEALER APPLICATION: APPLY STONE SEALER TO COMPLY WITH STONE PRODUCER'S AND SEALER MANUFACTURER'S WRITTEN INSTRUCTIONS.

**DIVISION 32 - EXTERIOR IMPROVEMENTS** 32 3113 - FENCES, GATES & HARDWARE

A. REFERENCE CONSTRUCTION DRAWINGS FOR QUANTITY, AND LOCATIONS

9. PVC CEMENT: AS RECOMMENDED BY FENCE MANUFACTURER.

3.SUBMITTALS: THE CONTRACTOR SHALL PREPARE, AND SUBMIT TO THE ARCHITECT FOR APPROVAL, COMPLETE SHOP DRAWINGS FOR ALL WORK INCLUDED.PROVIDE PRODUCT DATA IN THE FORM OF MANUFACTURER'S TECHNICAL DATA, SPECIFICATIONS, AND INSTALLATIONS FOR FENCE, POSTS, GATE UPRIGHTS, POST CAPS, GATES, GATE HARDWARE AND ACCESSORIES. VERIFY LAYOUT INFORMATION FOR FENCES AND GATES SHOWN ON THE DRAWINGS IN RELATION TO THE PROPERTY SURVEY AND EXISTING STRUCTURES. VERIFY DIMENSIONS BY FIELD MEASUREMENTS. PROVIDE SAMPLES IN THE FORM OF 3" LENGTHS OF ACTUAL PRODUCT USED.

WARRANTY: LIFETIME NON-PRORATED LIMITED TRANSFERABLE WARRANTY APPLIES TO ORIGINAL HOMEOWNER/CONSUMER, OR 30 YEAR NON-PRORATED LIMITED WARRANTY APPLIES TO COMMERCIAL

D. BASIS OF DESIGN: DIGGER SPECIALTIES INC.(DSI), POLYVINYL FENCE SYSTEMS. TRI-MAX II, HEIGHT -72"

E. <u>MATERIALS:</u>
1. POSTS, RAILS, PICKETS, GATE UPRIGHTS, POST CAPS, AND ACCESSORIES SHALL BE OF HIGH IMPACT, ULTRA VIOLET (U.V.) RESISTANT, RIGID PVC, AND SHALL COMPLY WITH ASTM D 1784, CLASS 14344B. 2.FENCE POSTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED AND PRE-ROUTED TO RECEIVE RAILS AT SPACING INDICATED. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES. 3.RAILS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED PRE-ROUTED TO RECEIVE PICKETS AT SPACING

PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES. 4. PICKETS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES. PICKET SPACING FULL PRIVACY. 5.GATE UPRIGHTS: ONE PIECE EXTRUDED, OF LENGTHS INDICATED WITH ALUMINUM U CHANNEL INSERT. PROVIDE CROSS SECTION, WALL THICKNESS AND CORNER RADIUS MINIMUM TOLERANCES 6. POST CAPS: MOLDED, ONE PIECE. CROSS SECTION TO MATCH POST OR GATE SECTION. PROVIDE MINIMUM THICKNESS REQUIREMENTS. CONFIGURATION: FLAT OR FOUR-SIDED AS REQUIRED FOR INSTALLATION TO TOP OF POSTS AND GATE. ACCESSORIES: MANUFACTURERS' STANDARD GATE BRACE, SCREW CAPS, RAIL END REINFORCERS, AND OTHER ACCESSORIES AS REQUIRED. 7. STIFFENER CHANNELS, GALVANIZED STEEL STRUCTURAL CHANNEL. CONFIGURE CHANNELS FOR CONCEALED INSTALLATION WITHIN PVC RAILS WITH PRE-DRILLED HOLES FOR DRAINAGE. ALUMINUM EXTRUDED CHANNEL AVAILABLE UPON REQUEST. CROSS SECTION: 1.775 X 1.700 GALVANIZED STEEL CHANNEL THICKNESS: 0.040 8. FASTENERS AND ANCHORAGE: STAINLESS STEEL. ALL FASTENERS TO BE CONCEALED OR COLORED HEADS TO MATCH. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.

1. GENERAL: PROVIDE HARDWARE AND ACCESSORIES FOR EACH GATE ACCORDING TO THE FOLLOWING 2. HINGES: COLOR- BLACK, SIZE AND MATERIAL TO SUIT GATE SIZE, NON LIFT-OFF TYPE, SELF CLOSING, GLASS FILLED NYLON WITH ADJUSTER PLATE, OFFSET TO PERMIT 120 DEGREE GATE OPENING. PROVIDE ONE PAIR OF HINGES FOR EACH GATE. 3. LATCH: FINISH TO MATCH HINGE. MANUFACTURERS' STANDARD SELF LATCHING, GLASS FILLED NYLON AND STAINLESS STEEL COMPOSITION SINGLE OR DUAL ACCESS GRAVITY LATCH. PROVIDE ONE LATCH PER GATE. 4. HARDWARE: FINISH TO MATCH HINGE.STAINLESS STEEL. PROVIDE SIZES AS RECOMMENDED BY FENCE MANUFACTURER.

1. CONCRETE: PROVIDE CONCRETE CONSISTING OF PORTLAND CEMENT PER ASTM C 150, AGGREGATES PER ASTM C 33, AND POTABLE WATER. MIX MATERIALS TO OBTAIN CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. USE AT LEASE FOUR SACKS OF CEMENT PER CUBIC YARD, 1-INCH MAXIMUM SIZE AGGREGATE, 3-INCH MAXIMUM SLUMP. USE ½ INCH MAXIMUM SIZE AGGREGATE IN POST WHERE REQUIRED. 2. PACKAGES CONCRETE MIX: MIX DRY-PACKAGED NORMAL-WEIGHT CONCRETE CONFORMING TO ASTM C 387 WITH CLEAN WATER TO OBTAIN A 2 TO 3 INCH SLUMP.

1. INSTALL FENCE IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. DURING INSTALLATION, PVC COMPONENTS SHALL BE CAREFULLY HANDLED AND STORED TO AVOID CONTACT WITH ABRASIVE SURFACES. INSTALL COMPONENTS IN SEQUENCE AS RECOMMENDED BY FENCE MANUFACTURER. A. INSTALL FENCING AS INDICATED ON THE DRAWINGS PROVIDED. B. VARIATIONS FROM THE INSTALLATION INDICATED MUST BE APPROVED. C. VARIATIONS FROM THE FENCE AND GATE INSTALLATION INDICATED AND ALL COSTS FOR REMOVAL AND REPLACEMENT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

D. ALLOW MINIMUM 72 HOURS TO LET CONCRETE SET-UP BEFORE OPENING GATES.

E. CLEANING, REMOVE ALL TRACES OF DIRT AND SOILED AREAS.

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**GENERAL PROJECT SPECIFICATIONS 3** 

#### STRUCTURAL GENERAL NOTES:

STRUCTURAL GENERAL NOTES

-- ELEVATED FLOORS...

4. DECK GUARD RAIL LOAD:...

-- TOP CHORD DEAD LOAD....

-- BOT CHORD DEAD LOAD...

-- BOT CHORD LIVE LOAD....

-- TOP CHORD ROOF LIVE LOAD...

-- LIVE LOAD DEFLECTION CRITERIA.....

BALCONIES (EXTERIOR) AND DECKS

CEILING JOISTS W/O STORAGE

(SCUTTLE ACCESS ONLY)

CEILING JOISTS - ATTICS W/ STORAGE

(DOOR OR PULL DOWN LADDER ACCESS)

ROOMS - NON SLEEPING

SLEEPING ROOMS

ROOF - LIGHT ROOF COVERING

ROOF - HEAVY ROOF COVERING

(CONCRETE/TILE/SLATE)

-- ELEVATED GARAGE FLOORS......

1. LIVE LOADS [UNIFORM (PSF) / POINT LOADS (KIPS)]:

3. BASIC WIND SPEED (3 SEC GUST):..... 115 MPH

5. PREFABRICATED WOOD ROOF TRUSS DESIGN CRITERIA:

-- TOTAL LOAD DEFLECTION CRITERIA......MIN OF L/240

20 PSF / 1.0 K

40 PSF / 1.0 K

200# CONCENTRATED LOAD

APPLIED IN ANY DIRECTION

...20 PSF OVER GARAGES

10 PSF EVERYWHERE EXCEPT GARAGES

MIN DEAD LOAD MIN LIVE LOAD

..... 50 PSF / 2.0 K

...20 PSF

...10 PSF

....MIN OF L/360

15

**DESIGN CRITERIA:** 

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE "INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION". CONSULT WITH THE LOCAL JURISDICTION FOR INSPECTION REQUIREMENTS

2. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.

3. IF DISCREPANCIES EXIST BETWEEN STRUCTURAL PLANS, ARCHITECTURAL PLANS, OTHER PLANS, OR SPECIFICATIONS, THE CONTRACTOR OR SUBCONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR CLARIFICATION FROM THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH THE WORK

4. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO EXECUTE AND DETERMINE FINAL ERECTION PROCEDURES. SEQUENCING AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION.

MADE IN SHOP DRAWINGS, WHICH DO NOT COMPLY WITH THE CONTRACT DOCUMENTS. 6. BEAMS, COLUMNS, WALLS, AND FOOTING CENTERS SHALL BE CENTERED UNDER SUPPORTING MEMBERS (TYPICAL UNLESS NOTED OTHERWISE).

5. FABRICATORS AND SUPPLIERS SHALL CLEARLY NOTE AND HIGHLIGHT CHANGES

#### **EARTHWORK AND FOUNDATIONS:**

1. PRESUMPTIVE ALLOWABLE BEARING PRESSURE = 1.500 PSF (PER THE IRC), ALL FOOTINGS AND FOUNDATIONS SHALL BEAR ON NATIVE UNDISTURBED SOIL. NOTIFY ENGINEER IF FILL IS ENCOUNTERED BELOW FOOTING BEARING LOCATIONS.

2. ALL PERIMETER AND EXTERIOR FOOTINGS SHALL EXTEND AT LEAST 3'-0" BELOW FINAL ADJACENT GRADE. DEEPEN FOOTINGS AS REQUIRED TO PROVIDE THIS MINIMUM BOTTOM OF FOOTING.

3. SURFACE WATER SHALL NOT BE ALLOWED TO STAND ADJACENT TO OR DRAIN TOWARDS THE FOUNDATION UNDER ANY CIRCUMSTANCES. PAVEMENTS OR GRADED SOILS AT THE PERIMETER OF THE BUILDING, EXCEPT AS REQUIRED AT EXITS OR AS NOTED, SHALL BE SLOPED AWAY AT 5% OR 6" MIN FOR THE FIRST TEN FEET.

4. FOOTINGS MAY BE POURED TO NEAT LINES OF EXCAVATIONS PROVIDING VERTICAL LINES OF EXCAVATIONS CAN BE MAINTAINED DURING CONCRETE PLACEMENT.

5. FOUNDATION CONTRACTOR TO ENSURE PROPER ANCHOR ROD PROJECTION AND THAT ANCHOR RODS ARE HELD SECURELY IN POSITION PRIOR TO CONCRETE PLACEMENT. STRUCTURAL STEEL COLUMN ANCHOR RODS SHALL BE SET WITH A

6. FOUNDATION WALL BACKFILL SHALL NOT BE UNBALANCED BY MORE THAN TWO FEET ON EITHER SIDE AT ANY TIME. BASEMENT WALL AND RESTRAINED RETAINING WALL BACKFILL SHALL NOT BE PLACED, UNLESS THE WALL IS ADEQUATELY BRACED. RETAINING WALL AND BASEMENT WALL BACKFILL SHALL BE FREE DRAINING GRANULAR

7. SOIL CONDITIONS AT THE TIME OF CONSTRUCTION SHOULD BE EVALUATED BY THE CONTRACTOR. SOIL THAT IS TOO DRY OR TOO WET MAY BE SUBJECT TO EXCESSIVE SHRINKING OR SWELLING. IN ADDITION, SOME ON-SITE SOILS MAY BE UNSUITABLE FOR BACK FILL. CONSULT WITH A GEOTECHNICAL ENGINEER AS NEEDED FOR SITE PREP REQUIREMENTS.

#### PRE-FABRICATED WOOD ROOF TRUSS NOTES:

1. THE WOOD FLOOR TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER'S REVIEW. THE SHOP DRAWINGS SHALL INCLUDE PLACING PLANS OF ALL TRUSSES CLEARLY LABELED, DETAILS OF TRUSS CONNECTIONS AND ANCHORAGES, DETAILS OF METAL CONNECTORS USED AT JOINTS, AND ENGINEERING DESIGN DATA. THE ENGINEERING DESIGN FOR EACH TYPE OF TRUSS SHALL INCLUDE: TRUSS LOCATION IDENTIFICATION, ALL LOADINGS AND REACTIONS, WOOD SPECIES AND STRESS GRADES, MEMBER STRESSES, JOINT CONNECTIONS, CONFIGURATION, TRUSS TO TRUSS CONNECTIONS, BRACING FOR LATERAL STABILITY OF THE COMPLETED FRAMING SYSTEM, AND THE PROFESSIONAL ENGINEERS SEAL OF THE PERSON RESPONSIBLE FOR THE DESIGN OF THE TRUSSES/TRUSS SYSTEM.

2. THE CONTRACTOR SHALL FURNISH A COPY OF THE PREFAB TRUSS SHOP DRAWINGS TO BUILDING OFFICIAL FOR THEIR RECORDS.

3. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE FIELD CUT, NOTCHED, DRILLED, OR ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER RESPONSIBLE FOR THE TRUSS DESIGN.

#### **CONCRETE AND MASONRY REINFORCING STEEL:**

1. ALL REINFORCING BARS SHALL MEET ASTM A615 GRADE 40.

2. ALL MESH SHALL MEET ASTM A-185: LAP A MINIMUM OF 8" OR ONE FULL MESH, WHICHEVER IS GREATER.

3. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 3/4" CLEAR FOR SLABS. 2" CLEAR FOR FORMED SURFACES AND 3" CLEAR FOR FOOTINGS (TYPICAL UNLESS NOTED OTHERWISE).

4. CONTRACTOR SHALL VERIFY THAT ALL REINFORCEMENT, SLAB DOWELS, INSERTS, SLEEVES AND EMBEDDED ITEMS ARE PROPERLY LOCATED AND RIGIDLY SECURED PRIOR TO CONCRETE PLACEMENT, "WET STICKING" DOWELS WILL NOT BE

#### CAST IN PLACE CONCRETE:

1. CONCRETE CONSTRUCTION SHALL ADHERE TO THE RECOMMENDATIONS AND REQUIREMENTS OF ACI 332 - "REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION" (UNLESS NOTED OTHERWISE)

2. REQUIRED MINIMUM CONCRETE COMPRESSIVE STRENGTHS AT 28 DAYS: a. FOOTING AND GRADEBEAM CONCRETE.. ...3.500 PSI b. FOUNDATION WALL CONCRETE... ...4.000 PSI c. INTERIOR SOG ... ..3,500 PSI

3. EXTERIOR CONCRETE (FLOOR SLABS, WALLS, ETC) INCLUDING GARAGE FLOORS SHALL HAVE 6% (PLUS/MINUS 1%) ENTRAINED AIR.

d. EXTERIOR SLAB ON GRADE AND GARAGE FLOOR SLABS...4,000 PSI

4. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" (VERIFY WITH ARCHITECT).

5. NO ALUMINUM SHALL BE EMBEDDED IN ANY CONCRETE 6. NO CALCIUM CHLORIDE SHALL BE USED IN CONCRETE.

7. THE DESIGN, CONSTRUCTION, AND SAFETY OF ALL FORMWORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

8. ALL CONCRETE IS REINFORCED UNLESS SPECIFICALLY NOTED AS UNREINFORCED. REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH THE SAME REINFORCING AS SIMILAR SECTIONS OR AREAS.

9. CONSTRUCTION JOINTS IN GRADE BEAMS, CONTINUOUS FOOTINGS, AND WALLS THAT DO NOT CHANGE DIRECTION SHALL BE SPACED NO GREATER THAN 60'-0". INTERMEDIATE CONTROL JOINTS SHALL BE SPACED AT 25'-0" MAX FOR WALLS. CONTROL JOINTS IN WALLS SHALL ALSO BE LOCATED 15'-0" FROM CORNERS AND AT CHANGES IN WALL THICKNESS.

10. WHERE FRESH CONCRETE IS DEPOSITED AGAINST HARDENED CONCRETE (GREATER THAN 8 HRS OLD), CLEAN EXISTING SURFACE OF LAITANCE AND FOREIGN MATERIAL AND DAMPEN THE EXISTING SURFACE. IF REQUIRED, ROUGHEN EXISTING CONCRETE TO 1/4" AMPLITUDE.

11. SLABS ON GRADE SHALL BE 4" THICK MIN ON 6" OF GRANULAR FILL. REINF SLAB WITH 6 x 6-W2.1xW2.1 WWR. #3 BARS AT 18" OC. OR #4 BARS AT 24" OC (UNLESS NOTED OTHERWISE). ALL REINF SHALL BE PLACED IN UPPER 1/3 OF SLAB THICKNESS. AT INTERIOR SLABS, AN 8 MIL VAPOR BARRIER SHALL BE PLACED BETWEEN THE CONCRETE AND GRANULAR BASE AND CARE SHOULD BE TAKEN DURING CURING TO PREVENT SLAB CURLING. THIS NOTE SHALL BE TYPICAL UNLESS NOTED OTHERWISE.

12. SAW CUT JOINTS OR KEYED CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL

BE SPACED TO DIVIDE THE SLAB INTO PANELS NOT TO EXCEED 225 SQUARE FEET. THE LONGER DIMENSION OF EACH PANEL SHALL NOT EXCEED THE SHORTER DIMENSIONS BY MORE THAN 40%, JOINTS SHALL BE LOCATED AT COLUMN CENTERLINES WHERE POSSIBLE. SPACING BETWEEN JOINTS SHALL NOT EXCEED 15 FEET. CONTRACTOR SHALL SUBMIT JOINT LAYOUT TO ARCHITECT FOR APPROVAL.

(2' -6" MIN) EXCEPT AS NOTED AND PROVIDE CORNER BARS OF SAME SIZE AND

13. REINFORCEMENT SHALL BE CONTINUOUS AND LAPPED 53 BAR DIAMETERS

14. MINIMUM REINFORCING AROUND CONCRETE WALL OPENINGS 2'-0" OR GREATER (TYPICAL UNLESS NOTED OTHERWISE): (2) #5, EXTEND REINF 2'-0" PAST OPENINGS. PROVIDE (2) #5 x 4'-0" DIAGONAL BARS AT CORNERS.

15. MINIMUM REINFORCING IN PERIMETER STEM WALL SHALL BE #4 VERTS @ 16" OC WITH STD HOOKS INTO FOOTING AND #4 HORIZ @ 16" OC MAX. IN FOOTING PROVIDE (2) #4 CONTINUOUS W/ #4 TRANSVERSE @ 16" OC MAX.

16. MINIMUM REINFORCING IN ROUND PIERS SHALL BE (5) #3 VERTS W/ #3 TIES AT 16" OC MAX.

#### STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHAPES AND PLATE MATERIAL REQUIREMENTS (TYPICAL UNLESS NOTED OTHERWISE): a. WIDE FLANGE SHAPES - ASTM A992 (FY = 50 KSI MIN.)

b. CHANNELS, ANGLES, AND PLATES: - ASTM A36 (FY = 36 KSI MIN) c. RECTANGULAR HSS – ASTM A500, GR B (FY = 46 KSI)

d. ANCHOR RODS – ASTM F1554 (FY = 36 KSI MIN) e. ROUND PIPE - ASTM A53, GRB (FY=35 KSI MIN)

2. STRUCTURAL STEEL SHALL BE NEW AND MEET THE 15TH EDITION AISC "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS AND BRIDGES", AND THE "CODE OF STANDARD PRACTICES FOR STEEL BUILDINGS AND BRIDGES", EXCLUDING SECTION 4.4.1.B.

3. WELDING SHALL CONFORM TO THE CURRENT AND APPLICABLE AWS STANDARDS

AND BE COMPLETED BY AN AWS CERTIFIED WELDER. a. AWS D1.1 – STRUCTURAL WELDING CODE – STEEL b. AWS D1.3 – STRUCTURAL WELDING CODE – SHEET STEEL

c. AWS D1.6 - STRUCTURAL WELDING CODE - STAINLESS STEEL

4. WELD SIZES SHALL BE INCREASED TO MEET THE REQUIRED EFFECTIVE THROAT WIDTH IF GAPS EXIST AT THE FAYING SURFACE.

5. NO COLUMN OR BEAM SPLICES, UNLESS CLEARLY INDICATED ON THE STRUCTURAL DRAWINGS, WILL BE ALLOWED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

6. GROUT WHERE INDICATED ON PLANS AT BASE PLATES SHALL BE NON-METALLIC NON-SHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI AT 28 DAYS CONFORMING TO ASTM C1107.

7. ALL POST INSTALLED ANCHORS WHERE NOTED SHALL BE MANUFACTURED BY HILTI, INC. OR SIMPSON STRONG TIE AND BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS. SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL WITH APPROPRIATE ICBO EVALUATION REPORTS.

 FRAMING MATERIAL: A. NOMINAL STRUCTURAL LUMBER -- NO.2 OR BETTER, KD D. FIR, MIN Fb = 900 PSI, MIN E = 1,400 KSI. B. EXPOSED NOMINAL STRUCT LUMBER -- PRESS TREATED NO.2 OR BETTER, MIN Fb = 1,000 PSI, MIN E = 1,300 KSI C. MICROLLAM LVL (LAMINATED VENEER LUMBER) BEAMS SHALL MEET TRUS JOIST SPECIFICATIONS: MINIMUM Fb = 2,600 PSI AND MINIMUM E = 1,900 KSI. D. TIMBERSTRAND LSL (LAMINATED STRAND LUMBER) BEAMS SHALL MEET TRUS JOIST SPECIFICATIONS: MINIMUM Fb = 2.600 PSI AND MINIMUM F = 1.700 KSI. E. GLULAM FRAMING: 24F-V4 DOUGLAS FIR, ARCHITECTURAL FINISH (COORD W/

2. SUBSTITUTIONS OF SPECIFIED WOOD MEMBERS SHALL NOT BE MADE WITHOUT REVIEW OF THE ARCHITECT/ENGINEER

3. WOOD SHEATHING: A. ROOF SHEATHING SHALL BE 7/16" WITH AN APA SPAN RATING OF 32/16, EXPOSURE 1, MINIMUM 2 SPAN, FASTEN PER THE CHART ON THIS PAGE. IF ROOF RAFTER SPACING IS 24" OR GREATER THEN USE PLYCLIPS AT MIDSPAN. B. FLOOR SHEATHING SHALL BE TONGUE AND GROOVE, EXPOSURE 1, MINIMUM 2 SPAN, FASTENED WITH APA APPROVED ADHESIVE AND PER THE CHART ON THIS

-WHEN CLEAR DISTANCE BETWEEN FLOOR JOISTS OR FLOOR TRUSSES IS 16" OR LESS USE 3/4" SHEATHING WITH AN APA SPAN RATING OF 48/24. --WHEN CLEAR DISTANCE BETWEEN FLOOR JOISTS OR FLOOR TRUSSES IS GREATER THAN 16" USE 7/8" SHEATHING WITH AN APA SPAN RATING OF

C. WALL SHEATHING FOR EXTERIOR WALLS SHALL BE 7/16" WITH AN APA SPAN RATING OF 24/16, UNLESS NOTED OTHERWISE. ALL PANEL EDGES SHALL BE BACKED WITH 2 INCH NOMINAL OR WIDER FRAMING. FASTEN WITH 8d COMMON NAILS AT 6" OC MAXIMUM AT ALL TOP PLATES, BLOCKING, BOUNDARIES AND 10" OC MAXIMUM IN THE FIELD.

4. ALL WOOD SHEATHING TO BE STAGGERED 4'x8' SHEETS ORIENTED PERPENDICULAR TO SUPPORTING MEMBERS.

5. PROVIDE 1/8" GAP AT ALL SHEATHING PANEL EDGES AND END JOINTS UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. DUE TO CONSTRUCTION CONDITIONS, TEMPORARY EXPANSION JOINTS MAY BE REQUIRED IN FLOOR/ROOF

6. ALL HEADERS IN EXTERIOR OR INTERIOR BEARING WALLS SPANNING MORE THAN 3'-8" SHALL BE SUPPORTED ON DOUBLE STUDS UNLESS NOTED OTHERWISE.

7. LIGHT GAUGE WOOD FRAMING CONNECTORS AS NOTED ON THE PLANS FOR WOOD JOISTS, COLUMNS, BEAMS AND TRUSSES SHALL BE "STRONG - TIE" CONNECTORS BY THE SIMPSON CO. OR REVIEWED EQUIVALENT. CONNECTORS IN DIRECT CONTACT WITH PRESSURE TREATED LUMBER SHALL HAVE "ZMAX" G185 HOT DIP GALVANIZED COATING OR REVIEWED EQUIVALENT.

8. STAINLESS STEEL FASTENERS, ANCHOR BOLTS, LIGHT GAUGE CONNECTORS, ETC. MAY BE SUBSTITUTED FOR HOT DIP GALVANIZED MATERIALS AT THE CONTRACTORS OPTION.

9. ALL RAFTER AND CEILING JOIST CONNECTIONS SHALL COMPLY WITH IRC SECTION 802.3. PROVIDE UPLIFT CONNECTORS AT ROOF TO WALL CONNECTIONS PER IRC SECTION 802.11.

10. STUDS SHALL BE CONTINUOUS FROM FLOOR TO ROOF DIAPHRAGM PER IRC SECTION 602.3. WALL STUDS SHOULD NOT BE INTERRUPTED AT GABLE WALLS UNLESS BRACED BY A CEILING. WALLS EXTENDING HIGHER THAN TYPICAL SINGLE FLOOR PLATFORM FRAMING, SHALL BE CONTINUOUS (NOT INTERRUPTED) TO NEXT FLOOR ELEVATION OR ROOF.

11. SILL ANCHOR RODS SHALL BE 1/2" DIAMETER EMBEDDED 7" MIN INTO CONCRETE, SPACED NO FURTHER THAN 3'-0" OC, AND SHALL OCCUR WITHIN 12" OF THE ENDS OF A SILL PLATE. EACH SILL PLATE SHALL HAVE A MINIMUM OF 2 ANCHOR RODS. PROVIDE 2" SQ PLATE WASHERS AND NUTS.

12. PROVIDE FULL DEPTH 2x BLOCKING BETWEEN JOISTS OVER ALL INTERIOR LOAD BEARING WALLS AND AT DOWNSET GIRDERS

13. PROVIDE SOLID BLOCKING IN FLOOR FRAMING BELOW LOAD BEARING WALLS AND POINT LOADS ABOVE. BELOW POINT LOADS BLOCKING AREA SHOULD MATCH SIZE OF POST ABOVE.

#### 1. THE GARAGE FLOOR SHALL SLOPE TOWARD THE GARAGE DOOR.

SHEATHING.

2. NEW GARAGE DOOR SHALL BE A 20 MINUTE OR 1-3/8" SOLID WOOD DOOR BETWEEN THE HOUSE AND GARAGE.

3. 1/2" GYP BOARD SHALL BE USED ON WALLS BETWEEN GARAGE AND HOUSE. 5/8" TYPE-X GYP BOARD SHALL BE USED ON THE GARAGE CEILING.

#### **GENERAL NOTES:**

1. THE DRAWING SET IS CONSIDERED TO BE "BUILDERS PLANS" WHEREBY SOME ASPECTS OF THE PROJECT'S REQUIREMENTS ARE LEFT TO THE CONTRACTOR TO UNDERSTAND AND IMPLEMENT. AS SUCH, IT IS A REQUIREMENT THAT THE CONTRACTOR (BUILDER) BE COMPETENT IN RESIDENTIAL CONSTRUCTION AND HAVE A THOROUGH UNDERSTANDING OF THE APPLICABLE INTERNATIONAL RESIDENTIAL CODES (IRC). THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE REQUIREMENTS OF THE BUILDING CODE WHETHER EXPLICITLY STATED OR NOT. IF ADDITIONAL DETAIL OR GUIDANCE IS NEEDED BY THE CONTRACTOR OR HOMEOWNER, A WRITTEN REQUEST FOR SUCH GUIDANCE MAY BE SUBMITTED TO THE ENGINEER.

2. REFER TO THE IRC FOR ALL REQUIREMENTS NOT SPECIFICALLY STATED IN THE PLANS. THIS INCLUDES FIRE RATINGS, LIGHTING AND VENTILATION, SANITATION, GLAZING, GARAGES, SMOKE ALARMS AND CARBON MONOXIDE ALARMS, MEANS OF EGRESS, AND PROTECTION AGAINST DECAY AND TERMITES.

3. CONTRACTOR SHALL ENSURE THAT ALL MECHANICAL, ELECTRICAL, AND PLUMBING IS DESIGNED AND INSTALLED TO MEET THE REQUIREMENTS OF THE

4. EGRESS WINDOWS SHALL COMPLY WITH SECTION 310 OF THE IRC.

5. WALL COVERINGS SHALL BE WATER-RESISTANT AND COMPLY WITH SECTION 703.2 OF THE IRC.

6. WINDOWS SHALL HAVE FALL PROTECTION PER IRC 312.2.

7. PROVIDE CARBON MONOXIDE DETECTORS PER IRC SECTION R315.

8. ALL NEW CONSTRUCTION SHALL COMPLY WITH THE ENERGY CONSERVATION CODE AS LISTED IN CHAPTER 11 OF THE IRC. THIS INCLUDES: -- WALLS - INSULATE WITH R-13 MIN -- ATTICS - INSULATE WITH R-49 MIN (EXCEPTION: R-38 FOR VAULTED CEILINGS); USE 8" OF RIGID INSULATION (R40) IN VAULTED CEILINGS -- FLOORS OVER UNCONDITIONED SPACE - INSULATE WITH R-19 MIN

-- BASEMENT WALLS - R-13 CAVITY OR R-10 CONTINUOUS -- SLABS SHALL BE R-10 FOR A DEPTH OF 2'-0" -- DUCTWORK OUTSIDE OF CONDITIONED SPACES - R-8 MIN -- WINDOWS SHALL HAVE A "U" VALUE OF 0.35 OR BETTER

-- CRAWL SPACE WALLS - INSULATE WITH R-10 MIN

9. ALL EXTERIOR DOORS INCLUDING THE DOOR LEADING FROM THE GARAGE TO THE DWELLING UNIT SHALL INCORPORATE THE PHYSICAL SECURITY REQUIREMENTS OF THE LOCAL JURISDICTION AS REQUIRED.

10. THE THERMAL ENVELOPE OF THE BUILDING IS REQUIRED TO BE SEALED PER IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1.

11. ALL DUCTS, AIR HANDLERS, FILTER BOXES, AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED PER IRC SECTION N1103.2.2.

1. GLAZING IN HAZARDOUS LOCATIONS SHALL BE APPROVED SAFETY GLAZING MATERIALS PER IRC SECTION R308.

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STRUCTURAL GENERAL NOTES

VERT

W/O

VERTICAL

WITHOUT

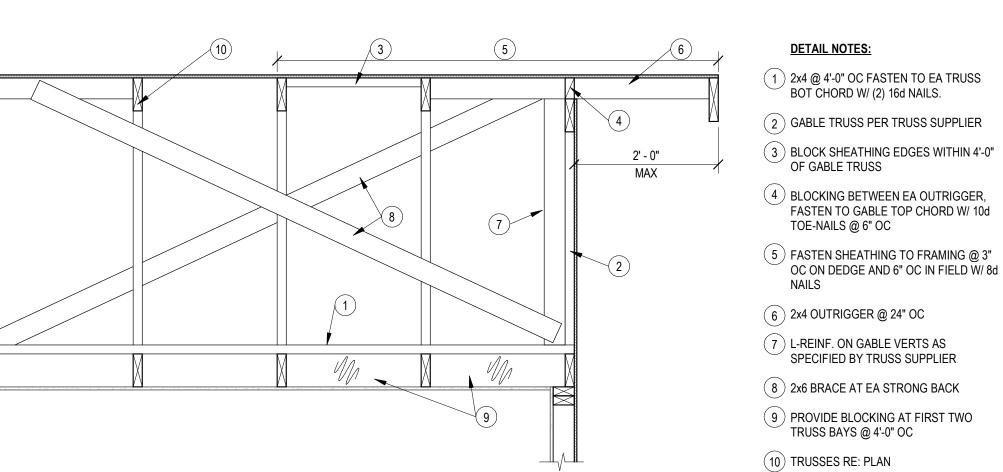
WIDE FLANGE

WORK POINT WWR WELDED WIRE REINFORCEMENT

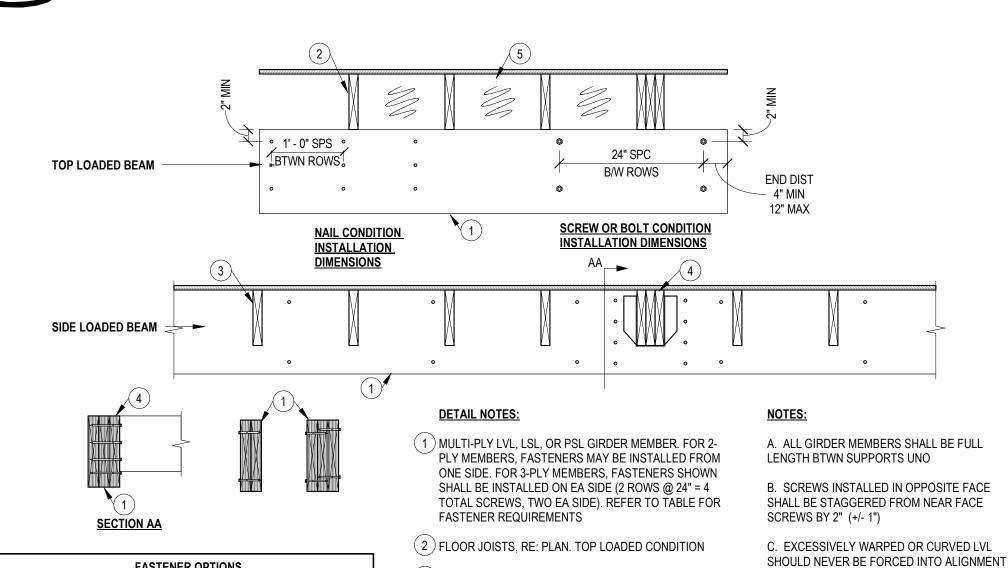
PROFESSIONA PROFESSIONAL SEAL

COLLINS WEBB #:

STRUCTURAL TYPICAL DETAILS



**GABLE END WALL TRUSS** 



	FA	STENER OPTIC	ONS	
FASTENER	BM DEPTH	2-PLY	3-PLY	4-PLY
10d (0.128"x3") NAILS	7.25" TO 14"	3 @ 12" OC	3 @ 12" OC EA SIDE	NOT ALLOWED
10d (0.128"x3") NAILS	` '		4 @ 12" OC EA SIDE	NOT ALLOWED
			2 @ 24" OC	2 @ 16" OC
STRUCTURAL SCREW	7.25" OR GREATER	2 @ 24" OC	2 @ 24" OC EA SIDE	2 @ 16" OC EA SIDE

**BUILT-UP ENGR LUMBER BEAM** 

(3) FLOOR JOISTS, RE: PLAN. SIDE LOADED CONDITION. PROVIDE FACE MOUNTED OR TOP FLANGE MOUNTED HANGERS ATTACHED TO GIRDER PER MFCR REQUIREMENTS (4) AT HEAVY LOADED BEAM HANGER LOCATIONS PROVIDE (4) STRUCTURAL SCREWS EA SIDE OF HANGER. SCREWS SHALL PENETRATE ALL PLYS (3.25" MIN FOR 2 PLY, 5" MIN FOR 3 PLY). THIS SHALL BE TYP

5 WHEN BEAM IS DOWNSET PROVIDE 2x FULL HEIGHT BLOCKING BTWN FLOOR JOISTS

REQUIRED, USE A SPADE BIT TO CREATE THE COUNTERSINK PRIOR TO INSTALLING THE E. BOLTS SHALL MEET OR EXCEED ASTM A307 F. STRUCTURAL SCREWS MAY BE ONE OF THE

BY USE OF CLAMPS, SCREWS OR BOLTS AS

D. IF COUNTERSINKING SCREWS OR BOLTS IS

SPLITTING MAY OCCUR

FOLLOWING PRODUCTS: 1/4"ø SIMPSON STRONG TIE SDS, WS SCREWS BY USP, OR TRUSSLOK SCREWS BY FASTENMASTER

BEAM PARALLEL TO WALL-

BEAM PARALLEL TO WALL-

**DETAIL NOTES:** ) WOOD BEAM, PER PLAN (2) WALL STUDS (3) IF TOP PLATE IS INTERRUPTED USE SIMPSON LSTA9 STRAP OR EQUIVALENT (4) WOOD JOISTS, RE: PLAN 5 DOUBLE 2x TOP PLATE BEAM PERP TO WALL-DOWN SET

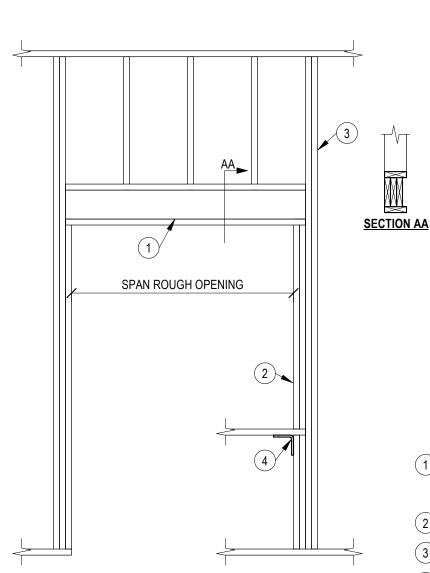
(6) MIN 3 STUDS TO SUPPORT BEAM UNO ON PLAN 7 ) FACE MOUNT JOIST HANGER 8 COORD BOT OF BEAM ELEV W/ ARCH REQUIREMENTS (9) 1/2" OSB SPACERS AS REQD

(10) SIMPSON LSTA9 STRAP EA 11) WHEN BEAM IS DOWNSET PROVIDE 2x FULL HT

BLOCKING BTWN FLOOR

BEAM PERP TO WALL-UP SET

## **BEAM BEARING CONDITIONS**



MARK	MEMBERS	MAX SPAN	JAMB MEMBERS					
H206	(2) 2x6	3'-6"	2x4 1 KING 1 TRIMMER					
H208	(2) 2x8	4'-6"	2x4 1 KING 1 TRIMMER					
H210	(2) 2x10	5'-9"	2x4 2 KING 2 TRIMMER					
H212	(2) 2x12	6'-9"	2x4 2 KING 2 TRIMMER					
HLVL	(2) 1.75"x11.875" LVL	13'-0"	2x4 3 KING 2 TRIMMER					
	NTERIOR WALL	<u>- WOOD HE</u>	ADER SCHEDULE					
MARK	MEMBERS	MAX SPAN	JAMB MEMBERS					
H206	(2)2x6 NON LD BRG	4'-0"	2x4 1 KING 1 TRIMMER					
H208	(2) 2x8	3'-6"	2x4 1 KING 2 TRIMMER					
H210	(2) 2x10	4'-3"	2x4 2 KING 2 TRIMMER					
H212	(2) 2x12	5'-0"	2x4 2 KING 2 TRIMMER					
HLVL	2x4 3 KING 2 TRIMMER							
* IF THERE IS A DECK @ THE EXTERIOR WALL USE THE INTERIOR WALL SCHEDULE								

**DETAIL NOTES:** 1 ) WOOD HEADER, RE: SCHEDULE. FOR EXTERIOR WALLS W/ DECK ON THE OUTSIDE USE THE INTERIOR WALL CHART. ALL HEADERS SHALL BE NAILED TOGETHER AT 16" OC MAX. PROVIDE PLYWOOD FILLER AS REQD TO MATCH STUD THICKNESS 2 TRIMMER STUDS, RE: SCHEDULE

3 KING STUDS, RE: SCHEDULE (4) PROVIDE STUD UNDER SILL END OR SIMPSON A35 CLIP ANGLE

(5) BORED HOLES SHALL NOT BE LOCATED IN THE SAME CROSS SECTION OF CUT OR

**HEADER SCHEDULE** 

**WD-102 TYPICAL WALL SECTION** 

ENG	LUMBER - I	FACE MOUNT	ED HANGER	SCHED
MARK	HANGER	FACE NAILS	JOIST NAILS	CAPACI
H1	HU9	(18) 10d x 1 1/2"	(6) 10d x 1 1/2"	1,7
H21	HUS410	(8) 10d	(8) 10d	1,7
H22	HHUS410	(30) 10d	(10) 10d	4,7
H23	HGUS410	(46) 10d	(16) 10d	7,6
H31	HU610	(18) 10d	(8) 10d	2,2
H32	HHUS5.50/10	(30) 10d	(10) 10d	4,7
H33	HGUS5.50/10	(46) 10d	(16) 10d	7,6
H41	HU410	(18) 10d	(8) 10d	2,2
H42	HHUS7.25/10	(30) 10d	(10) 10d	4,7
H43	HGUS7.25/10	(46) 10d	(16) 10d	7,6

			,	-,	
<b>HANGER SCH</b>	EDULE NO	OTES:			
<ol> <li>ALL HANGE</li> </ol>	ER DESIGN	NATIONS AF	RE BASED	ON	
SIMPSON STR	RONG TIE,	D. FIR			
<ol><li>IF HANGEF</li></ol>	R DESIGNA	ATION IS FO	LLOWED	BY (16d)	
ON PLANS, US	SE 16d NA	ILS IN LIEU	OF 10d.		
3. NAILS: 10d	= 0.148" D	IA x 3" LON	G, 16d = 0	).162" DIA	
x 3.5" LONG, 1	0d x 1 1/2'	' = 0.148" DI	4 x 1 1/2"	LONG	

**LEGEND** \_ D= DIM LUMBER " "= ENG LUMBER DESIGNATION

**DETAIL NOTES:** 

(1) DOUBLE TOP PLATE

CENTER STUDS

(4) MIN (2) STUDS BTWN

STRAP BETWEEN OPENINGS

DIM LUMBER - FACE MOUNTED HANGER SCHEDULE

MARK HANGER FACE NAILS JOIST NAILS CAPACITY (LB)

(6) 10d

(10) 10d

(10) 10d

(6) 10d

(10) 10d

(16) 10d

(8) 10d

(10) 10d

H11D | LUS210 | (8) 10d x 1 1/2" | (4) 10d x 1 1/2" |

(18) 10d

H21D LUS210-2

H22D HU210-2

H23D HHUS210-2

H31D LUS210-3 (8) 10d

H32D | HHUS210-3 | (30) 10d

H33D | HGUS210-3 | (46) 10d

H41D HU210-4 (18) 10d

H42D HHUS210-4 (30) 10d

H43D | HGUS210-4 | (46) 10d | (16) 10d

(5) LSTA36 STRAP ON BOTH SIDES OF THE WALL

1,032

1,537

2,251

4,738

1,537

4,738

7,644

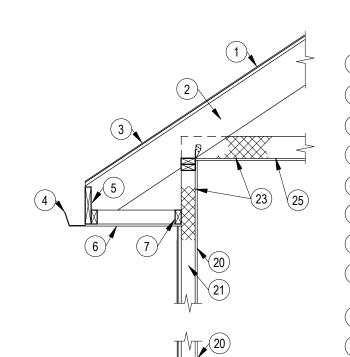
7,644

HEADER, RE: PLAN FOR SIZE

RUN CONT OVER TOP OF

(3) WINDOW OR DOOR OPENING

## HANGER SCHEDULE 3/4" = 1'-0"



**DETAIL NOTES:** 1) WOOD ROOF SHEATHING, RE: GENERAL NOTES (2) ROOF RAFTERS, RE: PLAN 3 ROOFING, RE: ARCH (4) GUTTER ON FASCIA BOARD

(5) 2x6 SUB-FASCIA, OR AS REQD 6) SOFFIT BOARD

(8) WOOD EXTERIOR WALL SHEATHING, RE: STRUCTURAL GENERAL NOTES. CONTRACTOR TO VERIFY BRACED WALL REQUIREMENTS W/ PLANS (9) SIDING, RE: ARCH

(10) RIM JOIST: USE 2x FRAMING W/ DIMENSIONAL LUMBER JOISTS, USE 1.5" LSL W/ I JOISTS 11) HOUSEWRAP OVER SHEATHING

13) VAPOR BARRIER BELOW SLAB, RE: GENERAL NOTES (14) CONC FOOTING. SIZE & REINFORCEMENT, RE: FOUNDATION PLAN (15) CONC FLOOR SLAB, RE: FOUNDATION PLAN & GENERAL NOTES (16) NOT USED

(17) 2x6 TREATED SILL PLATE. ANCHOR, RE: GENERAL NOTES (18) WOOD FLOOR JOIST, RE: PLAN. WHERE JOISTS RUN OPPOSITE DIRECTION, PROVIDE BLOCKING PER TYP DTL WD-110 (19) WOOD FLOOR SHEATHING, RE: GENERAL NOTES

(20) 1/2" GYPSUM BOARD OR SIMILAR, RE: BRACED WALL PLANS FOR ADDITIONAL FASTENER REQUIREMENT LOCATIONS (21) STUDS @ 16" OC (22) 2x SOLE PLATE

(23) INSULATION, RE: ENERGY REQUIREMENT NOTES

(25) CEILING JOISTS, RE: PLAN (2x6 MIN)

**BORED HOLE & NOTCHES - VERT FRAMING** 

**5** ELEVATION OF BEAM

**SECTION AT BOLTS** 

**SECTION AT HANGER** 

RZ305 - UPSET WF STL BM

EDGE FRAMING DETAIL

1 1/2" = 1'-0"

TOP PLATE SPLICE

3/4" = 1'-0"

NO NOTCHES IN MIDDLE 1/3

**DETAIL NOTES:** 

(4) 5/8" MIN TO EDGE

NOTCH IN STUD

6 MAX NOTCH = STUD DEPTH / 4

1) STUD DEPTH

**BORED HOLE & NOTCHES - HORIZ FRAMING** 

2 ) MAX DIAMETER OF BORED HOLE = STUD DEPTH / 2 1/2

(3) IF BORED HOLE IS GREATER THAN STUD DEPTH / 21/2 & LESS THAN 3 \* STUD DEPTH / 5, THEN STUD MUST BE DOUBLED & NO MORE THAN TWO SUCCESSIVE

**DETAIL NOTES:** 

(2) WF STEEL BEAM PER PLAN

3 2x FLOOR JOISTS PER PLAN

(4) SIMPSON JOIST HANGERS RE: PLAN

(1) WOOD FLOOR SHEATHING, RE:GENERAL NOTES

5) 1/2" ø THRU BOLTS @ 16" OC STAGGER AND SPACE

LOCATIONS TO AVOID INTERFERANCE WITH JOIST

AS SHOWN IN ELEVATION. COORDINATE BOLT

PACK WEB WITH 2x'S EA SIDE OF BEAM WEB. PLANE 2x'S AS REQD TO FIT INTO BEAM WEB

**DETAIL NOTES:** 

GENERAL NOTES

(2) DOUBLE TOP PLATE

(3) 2x RIM JOIST

1 STUD WALLS, RE: PLAN AND

4) FLOOR JOISTS PARALLEL

TO WALL, RE: PLAN FOR SIZE AND SPACING

5 PROVIDE BLOCKING IN THE

NEXT TO RIM JOIST.

6 NAIL SHEATHING TO BLOCKING

(7) STUD WALL ABOVE

FIRST TWO JOIST SPACES

MATCH FLOOR JOISTS SIZE

& SPACE @ 4'-0" OC MAX

(8) WOOD FLOOR SHEATHING, RE: GENERAL NOTES

**DETAIL NOTES:** 

2 DOUBLE TOP PLATE

(3)8 ROWS OF (2)16d NAILS AT SPLICE

4 ) JOINT IN LOWER PLATE MEMBERS SHALL OCCUR OVER A STUD

**DETAIL NOTES:** 

(4) JOIST DEPTH

RECOMMENDED

1 ) MAX DIMENSION = JOIST DEPTH / 4

(2) MAX DIMENSION = JOIST DEPTH / 3

(3) MAX DIMENSION = JOIST DEPTH / 6

(5) MAX DIMENSION = JOIST DEPTH / 3

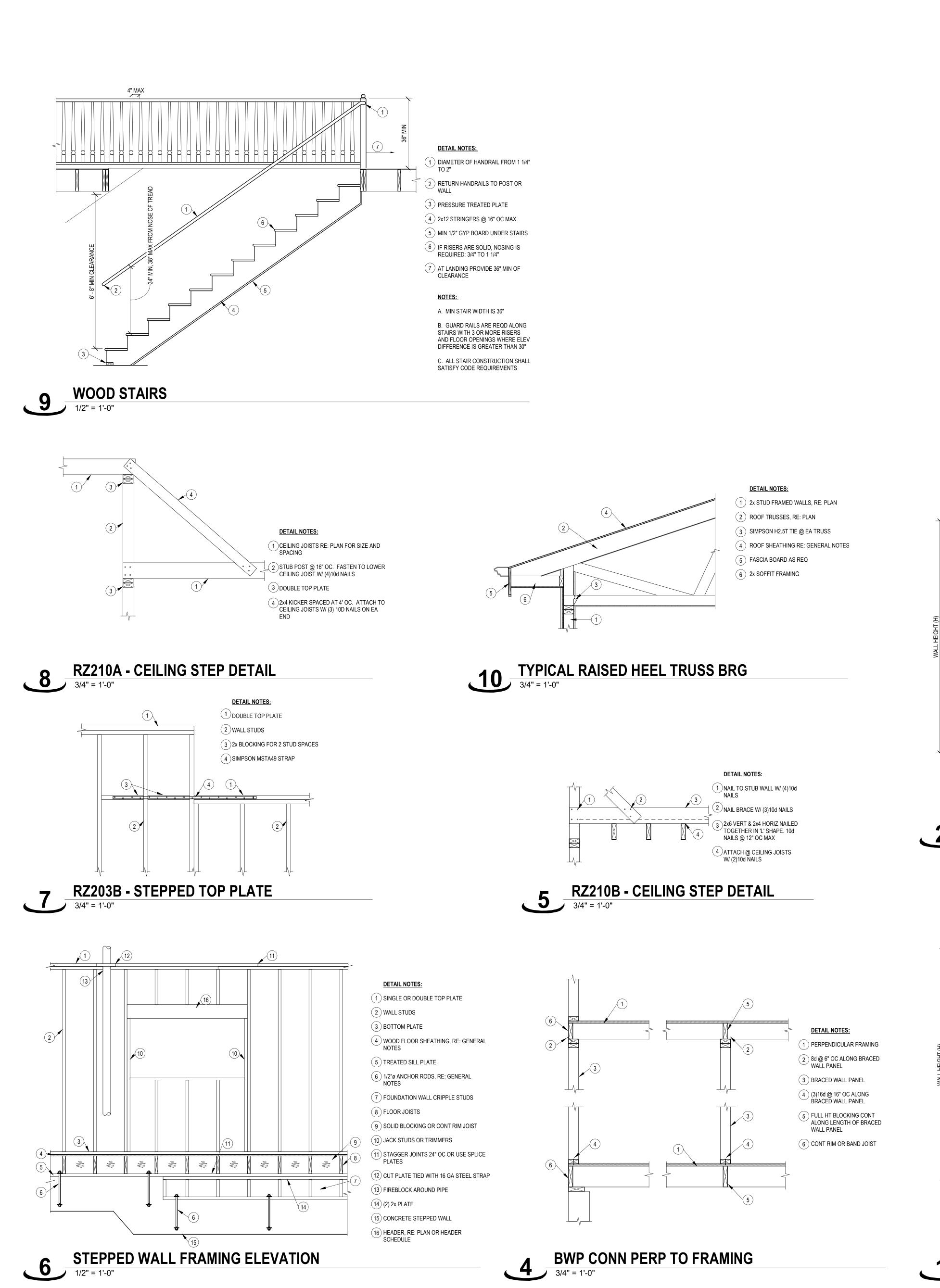
SQUARE HOLES AND NOTCHES NOT

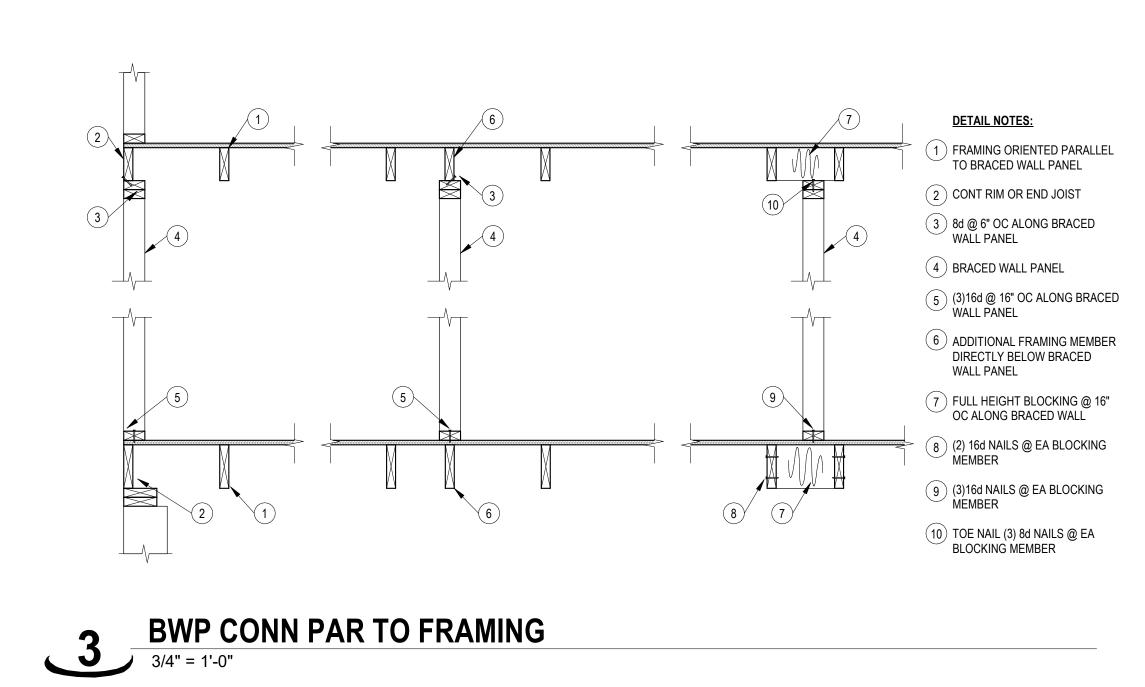
FROM ANY OTHER HOLE OR NOTCH

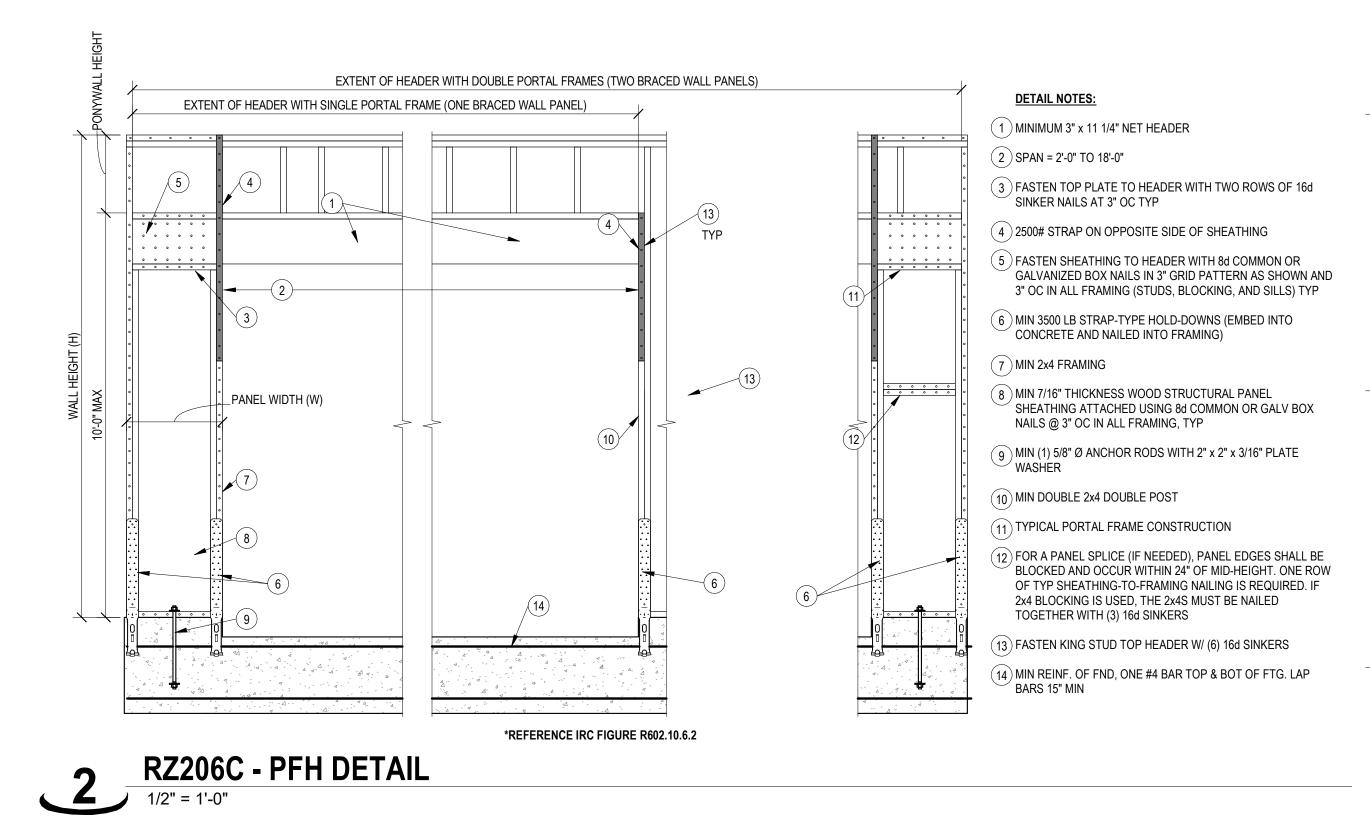
HOLES MAY BE ANYWHERE ALONG THE LENGTH OF THE SPAN MINUS 1'-0" ON EA END.

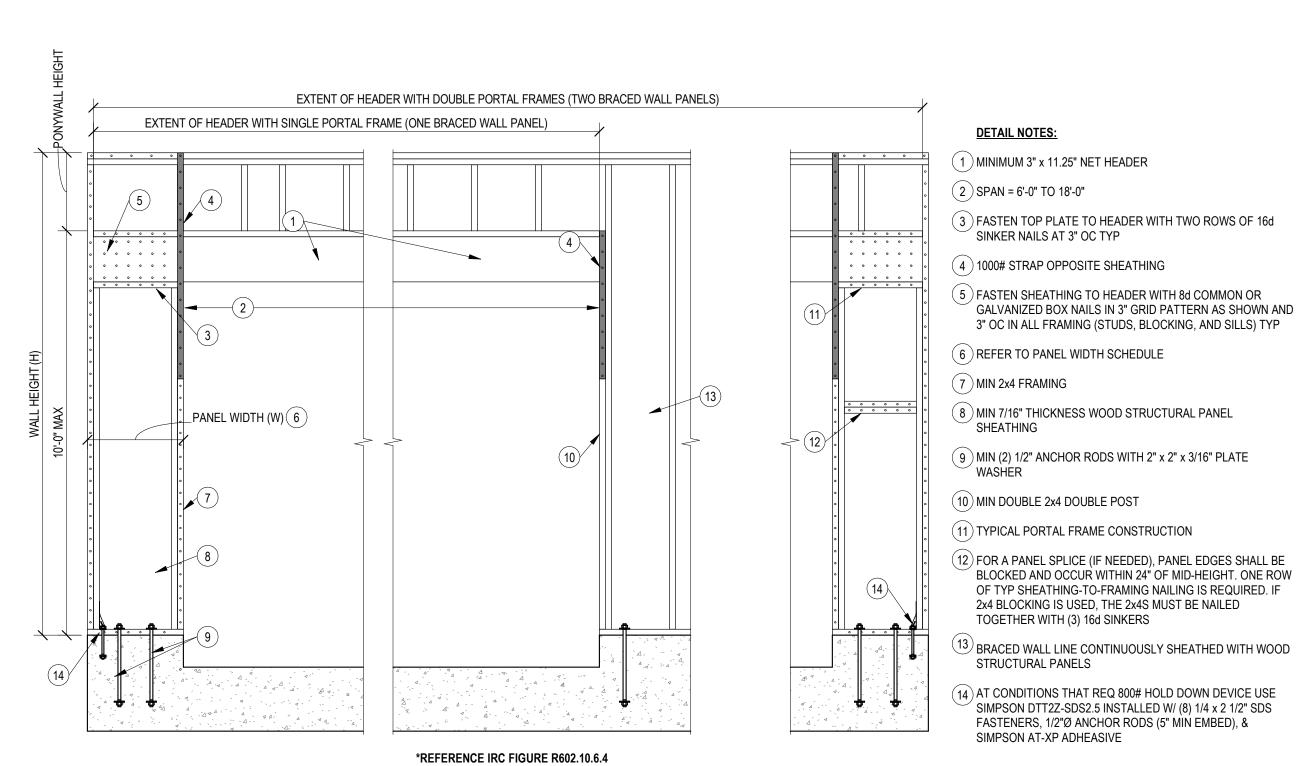
HOLE EDGES SHALL BE 2" FROM TOP OF JOIST OR BOTTOM OF JOIST. THEY SHALL ALSO BE 2"

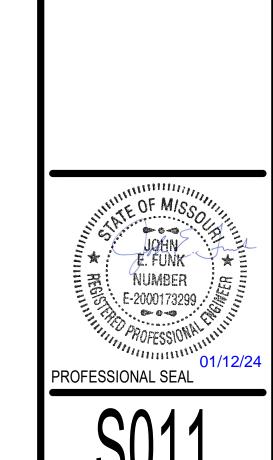
(1) WALL STUDS











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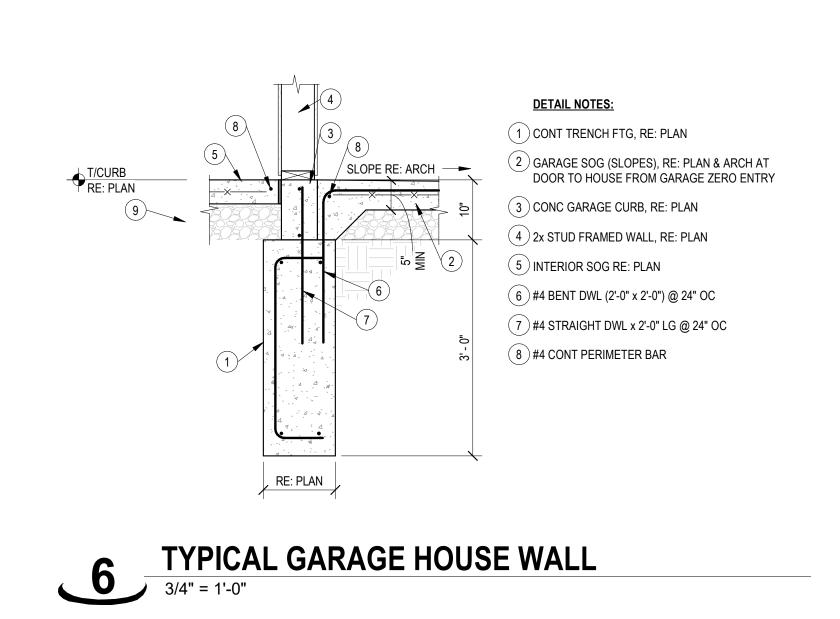
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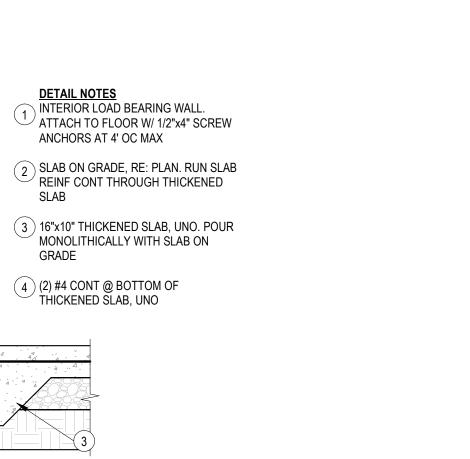
Blackwell

ENANDC SUMMIT

STRUCTURAL TYPICAL DETAILS

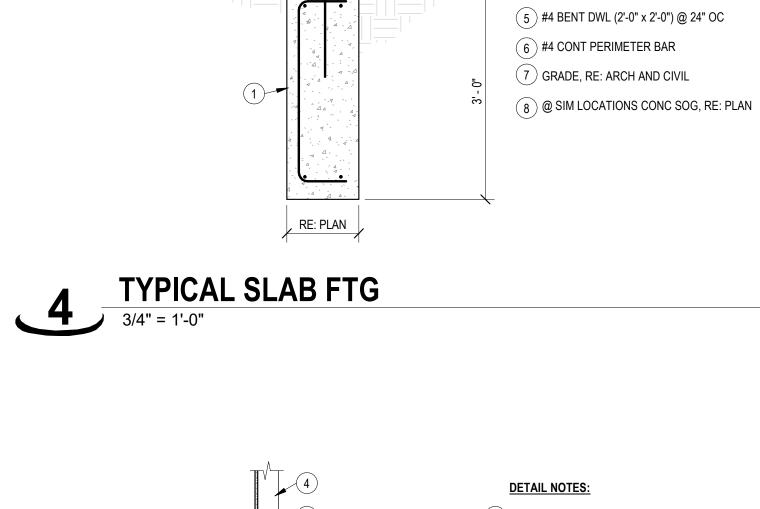
**RZ206B - CS-PF** 





ANCHORS AT 4' OC MAX

RZ108 - THICKENED SLAB



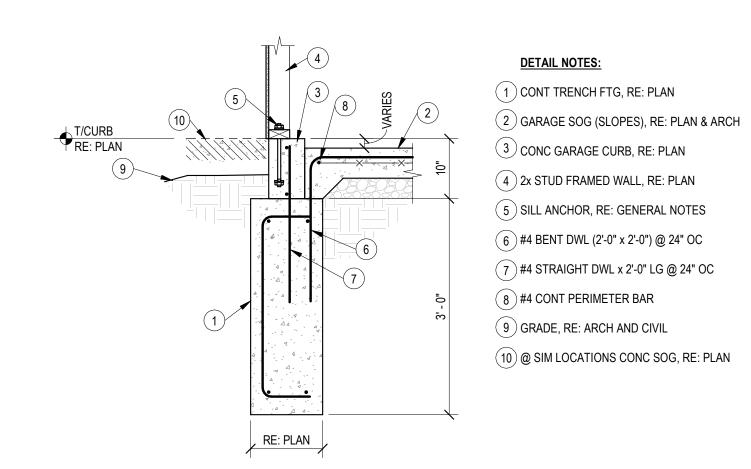
**DETAIL NOTES:** 

1 CONT TRENCH FTG, RE: PLAN

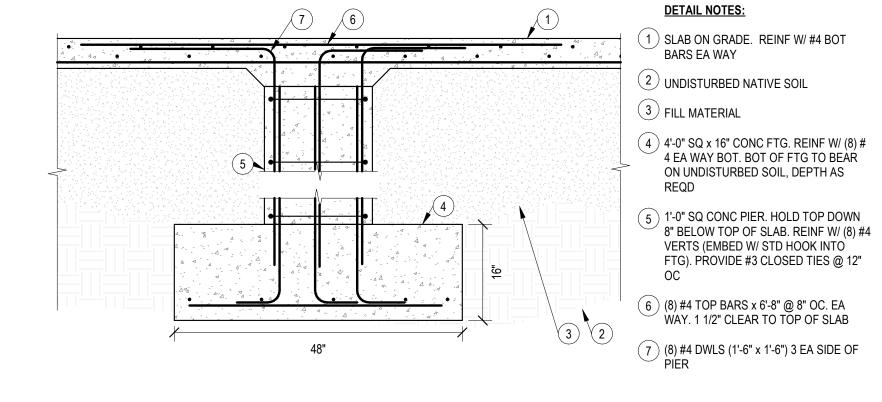
(3) 2x STUD FRAMED WALL, RE: PLAN

(4) SILL ANCHOR, RE: GENERAL NOTES

(2) SOG, RE: PLAN & ARCH



**TYPICAL GARAGE FTG** 



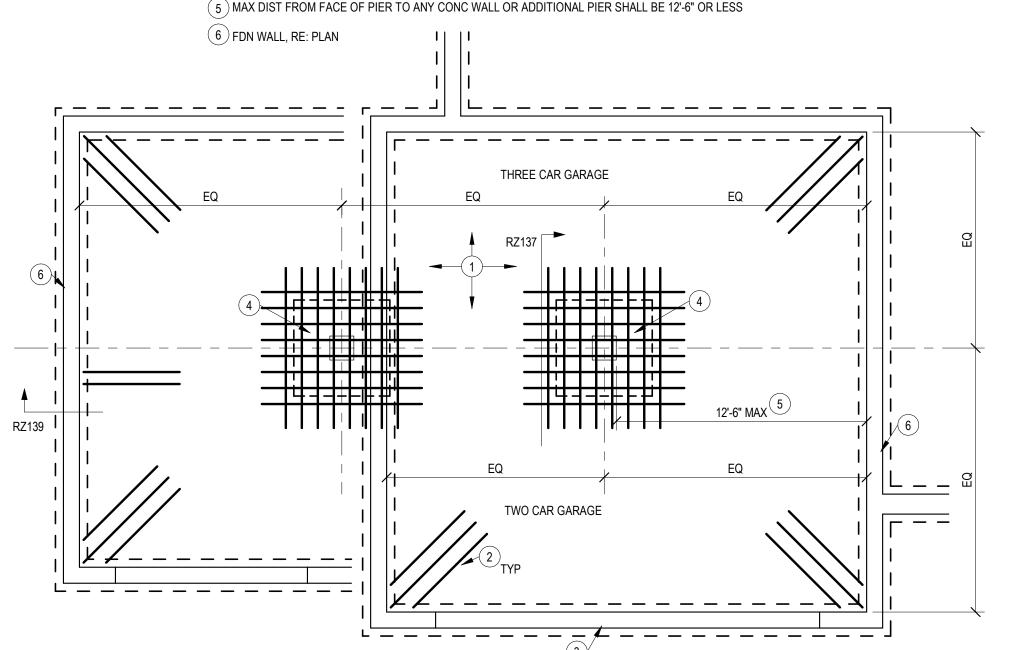
**RZ137 - GARAGE PIER**3/4" = 1'-0"

**DETAIL NOTES:** 1 6" THICK CONC GARAGE SLAB. REINF W/ #4 @ 12" OC EA WAY. PROVIDE HOOKED DWLS INTO WALLS PER TYP DTL RZ139 (2) (3) #4 CORNER BARS. SPACED 8" OC MAX

(3) HOLD DOWN SLAB AT GARAGE DOORS AND MAN DOORS. PROVIDE HOOKED DWLS INTO FDN WALL

(4) CONC PEDESTAL AND FTG PER TYP DTL RZ137. (1) PIER REQD FOR 2 CAR GARAGE, (2) PIERS REQD FOR 3 CAR GARAGE

(5) MAX DIST FROM FACE OF PIER TO ANY CONC WALL OR ADDITIONAL PIER SHALL BE 12'-6" OR LESS (6) FDN WALL, RE: PLAN



RZ136 - GARAGE SLAB ON FILL

1/4" = 1'-0"

THE OF MISSON

WINDER

NUMBER

F-2000173299

POFESSIONALITY PROFESSIONAL SEAL

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COLLINS WEBB #: 23090

STRUCTURAL TYPICAL DETAILS

WSP: WOOD STRUCTURAL PANEL. PANEL THICKNESS AND NAILING REQUIREMENTS IN GENERAL NOTES MEET BRACED WALL REQUIREMENTS.

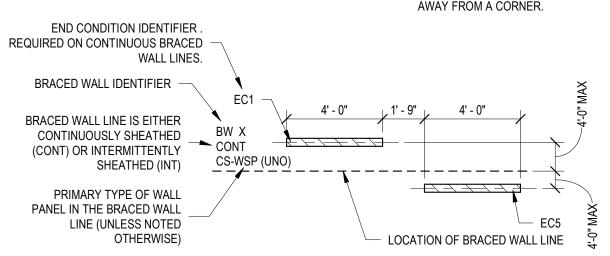
PER GENERAL NOTES MAY BE USED. MAX FASTENER SPACING = 4" FOR BOTH EDGE AND FIELD FASTENERS.

PFG: PORTAL FRAME GARAGE, RE: TYP DETAIL RZ-206A FOR REQUIREMENTS. CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME. CONSTRUCT

BE CONTINUOUSLY SHEATHED.

SIMILAR TO TYP DETAIL RZ-206A EXCEPT THAT ALL SURFACES SHALL

CS-WSP: CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL.



(2) 11-7/8" LVL HDR H22D (2) 11-1/4" LVL. ECCLL464 (3) 11-1/4" LVL

FOUNDATION AND 2ND FLOOR FRAMING PLAN

EC2: PROVIDE SIMPSON DTT2Z HOLDDOWN AT GB: GYP BOARD, 1/2" GYP BOARD EA SIDE OF WALL, NAILS OR SCREWS CORNER, FASTEN TO STUDS W/ (8) SIMPSON SDS SCREWS AND ANCHOR TO CONCRETE W/ 1/2" DIA SIMPSON TITEN HD SCREW ANCHOR x 4" MIN EMBED (6" OVERALL LENGTH). WHERE HOLDDOWN IS REQUIRED BETWEEN FLOORS, PROVIDE DTT2Z ABOVE AND BELOW FLOOR AND FASTEN TO WALL

> THREADED ROD. EC3: 48" WIDE BRACED WALL PANEL AT THE END OF THE WALL. NO RETURN PANEL IS REQUIRED.

END CONDITIONS (CONTINUOUSLY SHEATHED)

WALL. MIN RETURN PANEL LENGTH = 24".

EC1: PROVIDE RETURN PANEL AT THE END OF THE

--- HEADER BEAM \_\_\_\_ JOIST / TRUSS EXTENTS OF JOIST

FRAMING LEGEND

FOUNDATION LOAD BEARING WALL B. REFER TO S010-S012 FOR TYPICAL STRUCTURAL DETAILS.

C. ALL WOOD HEADERS IN PERIMETER WALLS AND INTERIOR LOAD BEARING WALLS NOT SPECIFICALLY CALLED OUT SHALL BE SELECTED FROM THE HEADER SCHEDULE ON TYPICAL DETAIL SHEETS.

SHEET NOTES

D. ALL WOOD BEAMS SHALL BEAR ON A MINIMUM OF (3) 2x4 STUDS OR SHALL ATTACH TO INTERSECTING WOOD BEAMS WITH A SIMPSON HUGS410 OR BETTER UNO. E. ALL MULTI-PLY ENGINEERING LUMBER BEAMS ARE

DESIGNATED BY NUMBER OF PLYS AND DEPTH [EX: (3) 14" LVL]. THE PLYS SHALL BE 1.75" WIDTH UNLESS NOTED OTHERWISE AND STRENGTH SHALL BE PER THE GENERAL NOTES. BEAMS SHALL BE FASTENED TOGETHER PER THE TYPICAL DETAILS.

A. REFER TO SHEET S001 FOR STRUCTURAL GENERAL

F. REFER TO ARCHITECTURAL SHEETS FOR ALL DIMENSIONS.

G. ALL STEEL BEAMS IN 1ST FLOOR FRAMING SHALL BE DOWNSET UNLESS NOTED OTHERWISE. ALL OTHER BEAMS IN 1ST FLOOR FRAMING SHALL BE UPSET, UNLESS NOTED OTHERWISE.

H. ALL WALLS SHALL BE 2x4 @ 16" OC, UNLESS NOTED OTHERWISE. ALL EXTERIOR WALLS ARE LOAD BEARING.

I. REFER TO SHEET S011 FOR BRACED WALL INFORMATION & DETAILS.

J. BEAM HANGERS ARE DENOTED ON PLANS AS "HXX". REFER TO SCHEDULE ON S010 FOR REQUIREMENTS. WHERE NOT CALLED OUT, CONTACT ENGINEER OR USED HEAVIEST HANGER FOR NUMBER OF PLYS IN BEAM BEING SUPPORTED.

K. SPECIFIC BEAMS CALLED OUT ON PLANS SHALL BE LOCATED UNDER THE LOAD BEARING ELEMENTS ABOVE. L. PROVIDE DOUBLE FLOOR JOIST UNDER ALL WALLS PARALLEL W/ JOIST.

M. T/FTG ELEVATION = 99'-2" T/SOG ELEVATION = 100'-0" TRUSS BRG = RE: ARCH

N. ANCHOR RODS SHALL BE PLACED IN TO THE TOP OF THE FOUNDATION WALLS PER THE GENERAL NOTES O. PLANS SHOWN ARE FOR PROTOTYPE BUILDING. RE: ARCH AND SITE PLAN FOR LOCATIONS, VARIATIONS, GRADING CONDITIONS, ETC.

P. BRACED WALL ARE SHOWN ON PLAN RE: BRACED WALL LEGEND ON THIS SHEET AND BRACED WALL DETAILS ON

**FDN PLAN NOTES:** 

(1) 4" THICK MIN SLAB ON GRADE, RE: GENERAL NOTES FOR REINF, VAPOR BARRIER AND, JOINTING REQMNTS. SLAB SHALL BE INSTALLED OVER PROPERLY COMPACTED SUITABLE FILL.

2 5" THICK MIN GARAGE SLAB ON GRADE, RE: GENERAL NOTES FOR REINF, VAPOR BARRIER AND, JOINTING REQMNTS. SLAB SHALL BE INSTALLED OVER PROPERLY COMPACTED SUITABLE FILL. 3 ) 12" WIDE TRENCH FTG REINF W/ (2) #5 CONT TOP & BOT

BARS & #4 C-SHAPED TIES @ 24" OC (4) 6" WIDE CONC GARAGE CURB REINF W/ A CONT #5 TOP &

(5) RECESS GARAGE CURB FOR DOOR OPENING

(6) 6x6 WOOD COLUMN, BASE CONNECTION: SIMPSON ABU66Z

7 6" THICK PORCH SLAB REINF W/ #4 @ 12" OC EA WAY & #4 BENT DOWELS (2'-0" x 2'-0") INTO TRENCH FTG

8 4" THICK PATIO SLAB REINF W/ #4 @ 12" OC EA WAY, PROVIDE 12" THICKEND SLAB EDGE REINF W/ (2) #4 CONT BOT BAR, RE: ARCH FOR PATIO EXTENTS

9 2x6 STUD FRAMED WALL @ 16" OC

10) PROVIDE EITHER A SIMPSON POST CAP PER PLAN OR NOTCH TOP OF COLUMN FOR BEAM BEARING & INSTALL WITH (4) FASTENMASTER LEDGERLOK SCREWS

(11) 2x12 @ 16" OC, PROVIDE FULL DEPTH BLOCKING @ MID SPAN OF SPANS OVER 16'-0"

2x12 @ 12" OC, PROVIDE FULL DEPTH BLOCKING @ MID SPAN OF SPANS OVER 16'-0" (2) 2X12 @ 16" OC, PROVIDE FULL DEPTH BLOCKING @ MID

SPAN OF SPANS OVER 16'-0" 14) FULL HEIGHT STUD FRAMED WALL FROM SOG TO TRUSS BEARING, PROVIDE STUD BAY BLOCKING @ 4'-0" OC UP

(15) EXTEND HEADER TO END OF BRACED WALL PANEL

(16) THICKEND SLAB BELOW WALL RE: TYPICAL DETAILS **D** (17) (4) 2x4 BRG STUD PACK BELOW BEAM

SECOND FLOOR CEILING FRAMING PLAN

1) ROOF TRUSSES BY TRUSS SUPPLIER PROVIDE SIMPSON H2.5T @ EA TRUSS BRG, RE: GENERAL NOTES FOR DESIGN CRITERIA & ARCH FOR ADDITIONAL INFO

(2) 2x STRUCTURAL FASCIA TO MATCH DEPTH OF OTHER FASCIA BOARDS, 2x8 MIN (3) 2x6 LEDGERS (1) TOP & (1) BOT ATTACHED W/ SD WOOD

(4) CANTILEVER ROOF TRUSSES BY TRUSS SUPPLER, RE: GENERAL NOTES FOR DESIGN CRITERIA & ARCH FOR ADDITIONAL INFO

**ROOF FRAMING PLAN** 

SCREWS @ 16" OC STAGGERED

ROOF TRUSSES BY TRUSS SUPPLIER PROVIDE SIMPSON H2.5T @ EA TRUSS BRG, RE: GENERAL NOTES FOR DESIGN CRITERIA & ARCH FOR ADDITIONAL INFO

TRANSITION GABLE END ROOF TRUSS BY TRUSS SUPPLIER, RE: GENERAL NOTES FOR DESIGN CRITERIA & ARCH FOR ADDITIONAL INFO

> JOHN E. FUNK NUMBER E-2000173299 PROFESSIONAL SEAL

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**REVISION DATES:** 

FOUNDATION & FRAMING PLANS -

. — . . — . . — . . +

**ROOF FRAMING PLAN** 

H210.\_\_\_\_H

H210 C3-W31

CANTILEVER

LEDGERS

CANTILEVER -

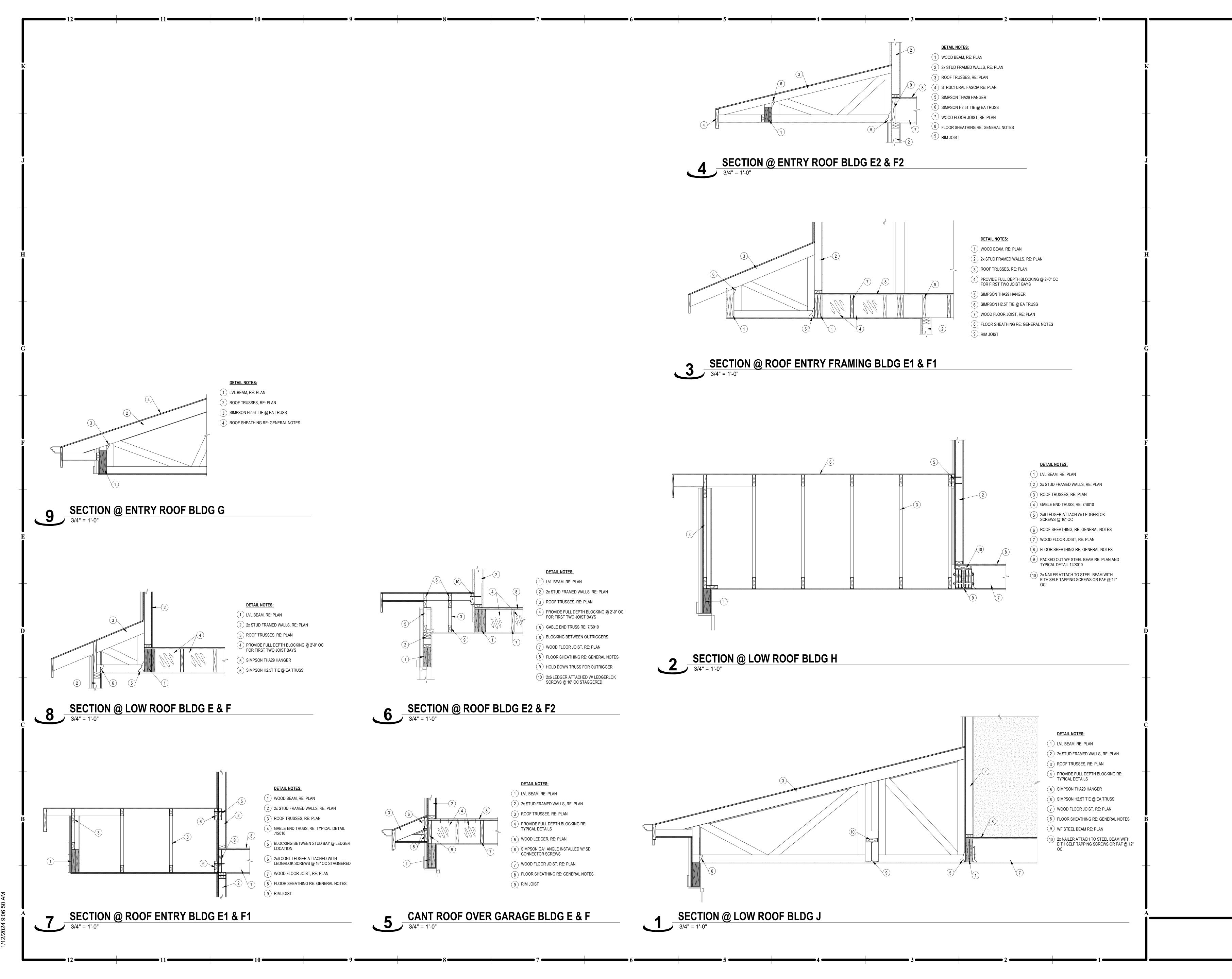
LEDGERS

2ND FLOOR WALL/LOW ROOF FRAMING PLAN

STUDS. CONNECT TOGETHER WITH 1/2" DIAMETER

EC5: SIMILAR TO EC2, EXCEPT HOLDDOWN DOES NOT OCCUR AT CORNER, BUT MAY BE UPTO 10'-0" AWAY FROM A CORNER.

EC-#: END CONDITION FOR CONTINUOUSLY SHEATH WALL PANEL.



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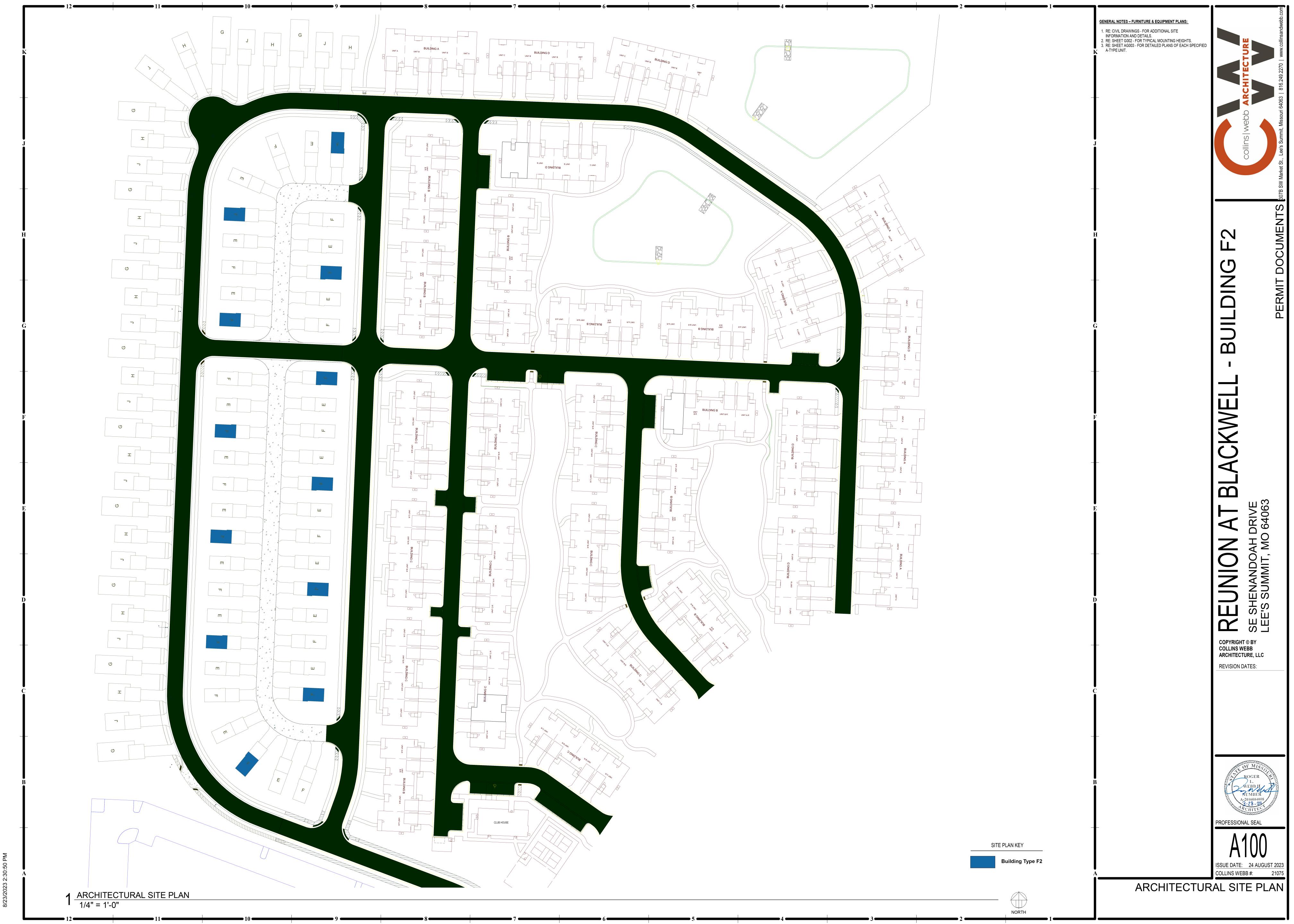
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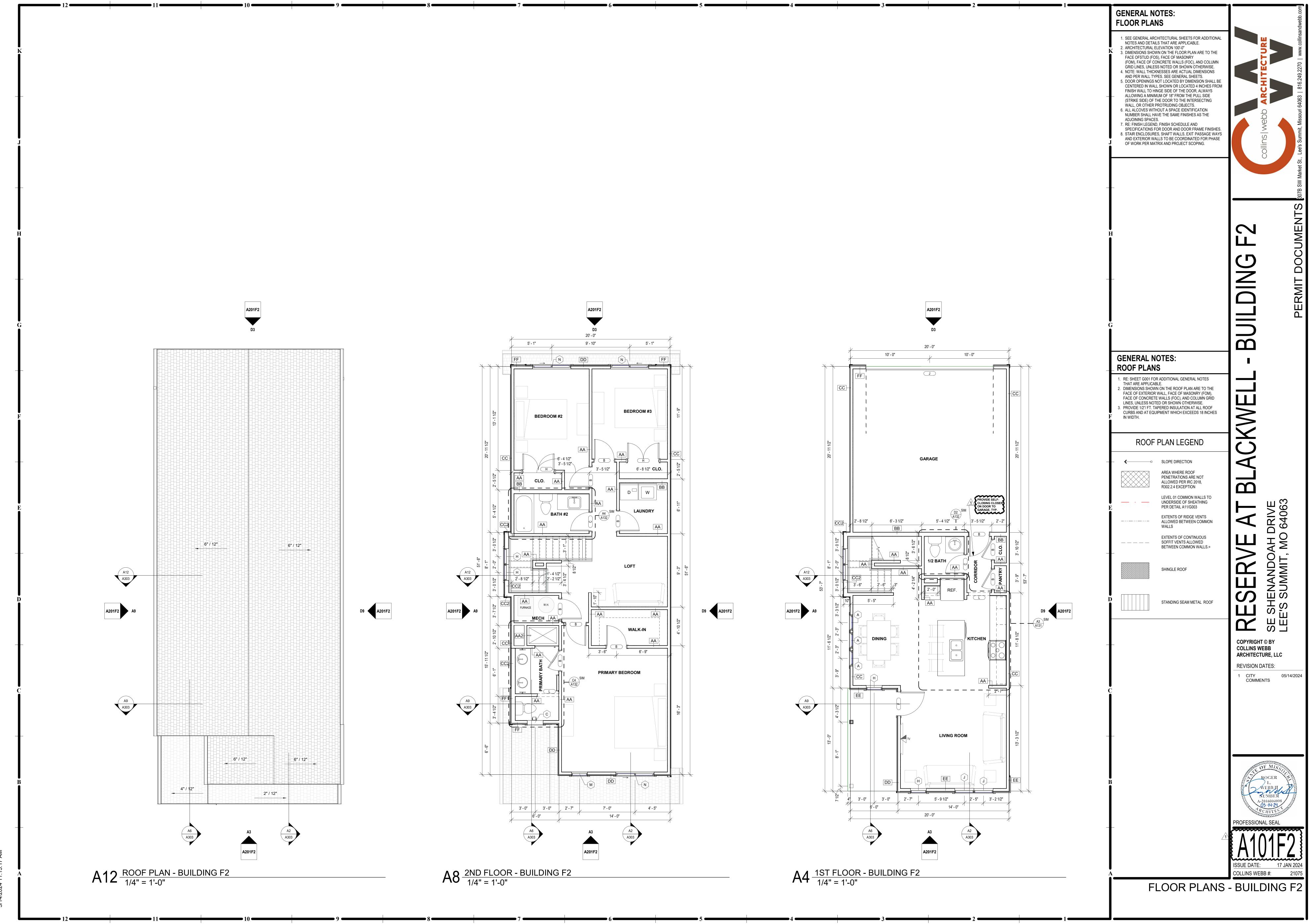
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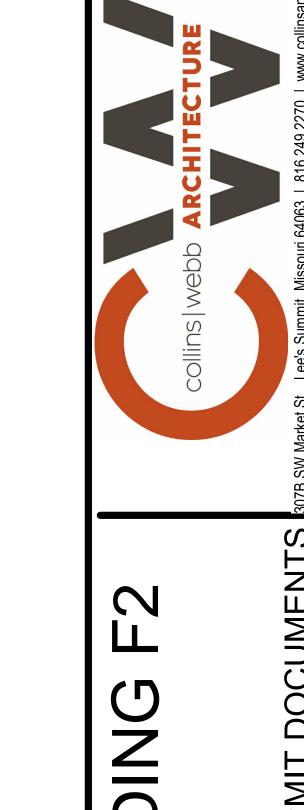
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FRAMING SECTIONS





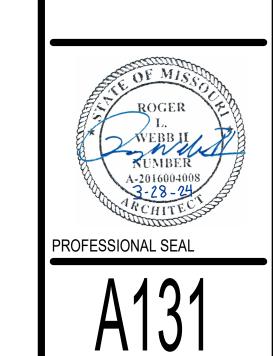
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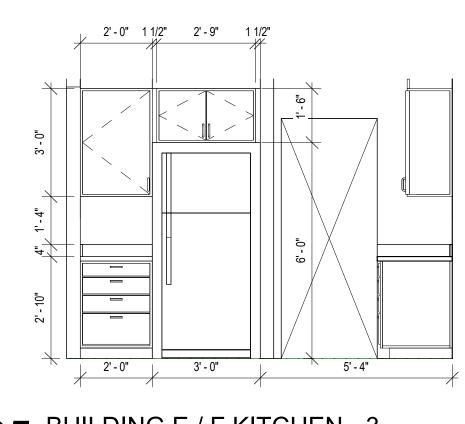


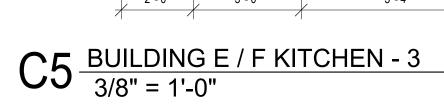
 
 ISSUE DATE:
 17 JAN 2024

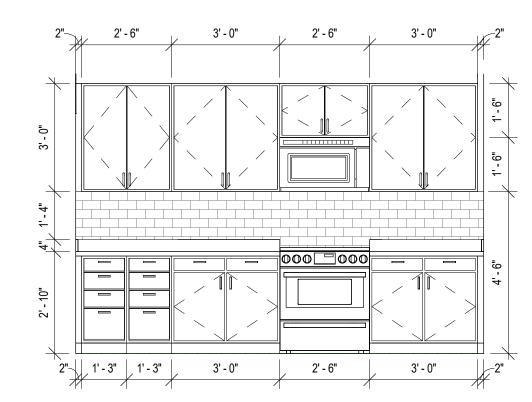
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 21075
 KITCHEN ENLARGED PLANS AND ELEVATIONS

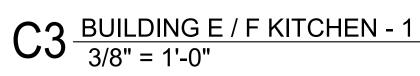
3" 1'-6" 3'-0" 2'-0" 3" G6 ISLAND ELEVATION \*RE: PLANS FOR LOCATION

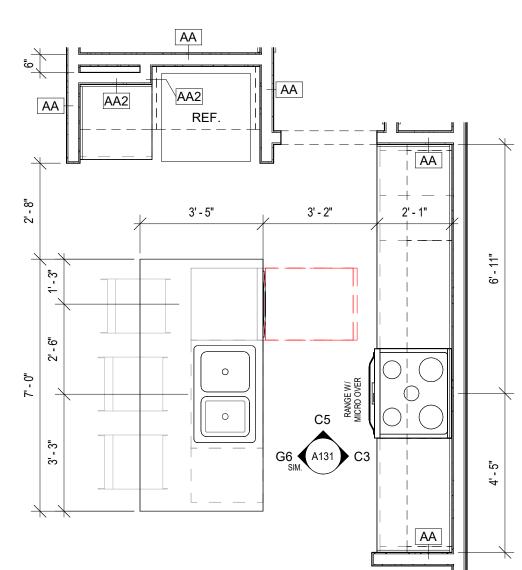
3/8" = 1'-0"



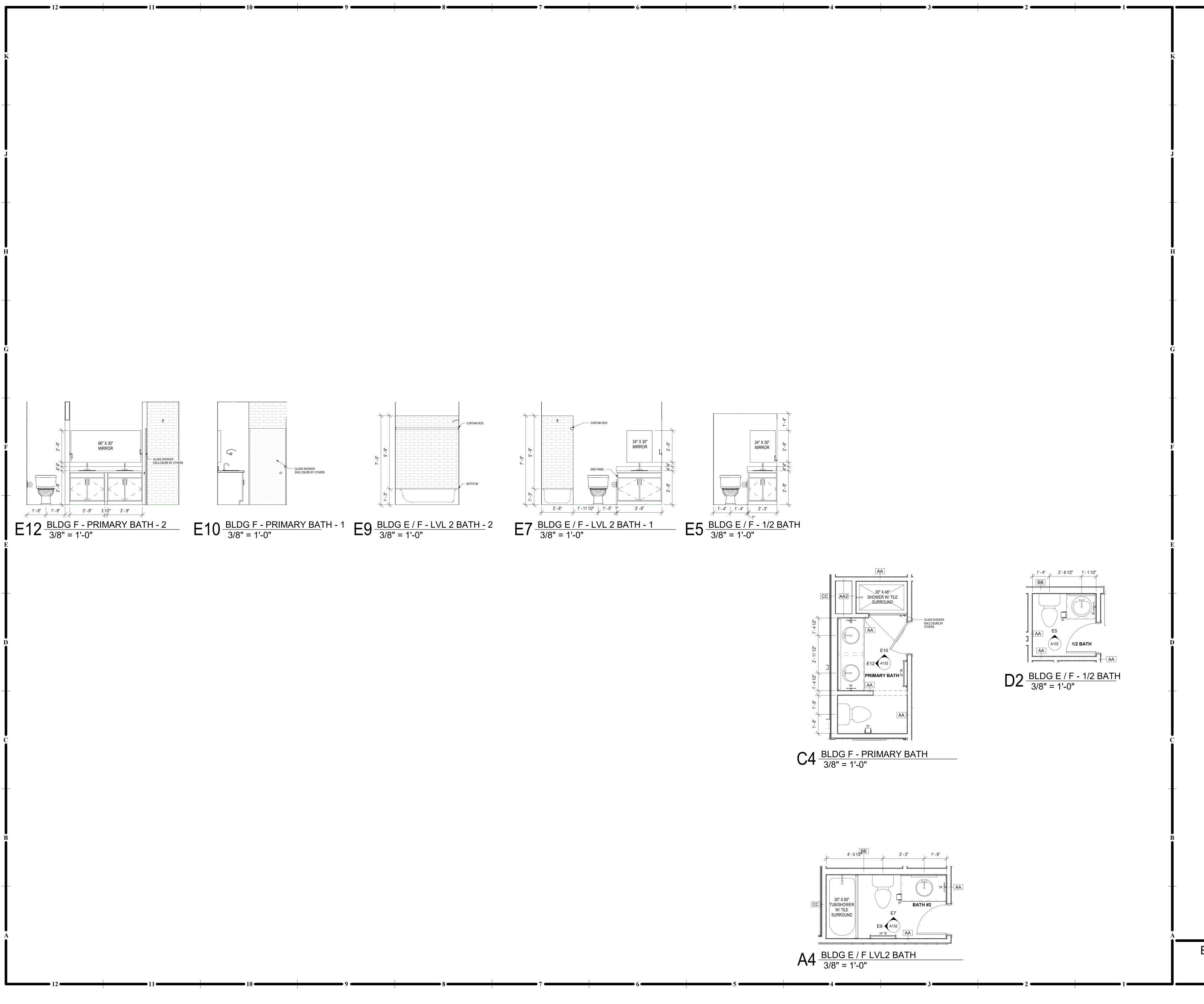


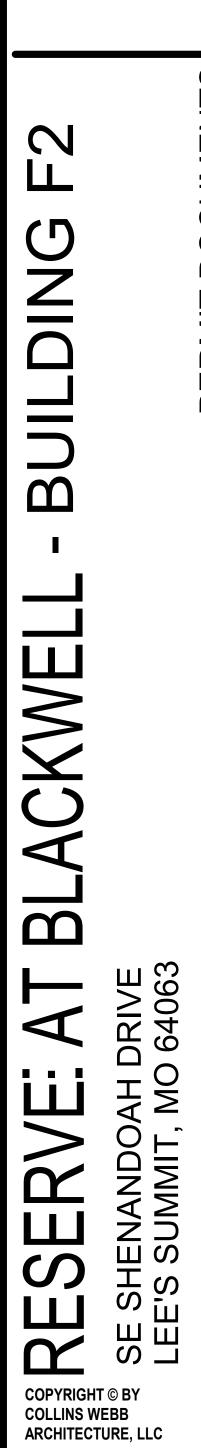






A3 BUILDING E / F - KITCHEN 3/8" = 1'-0"





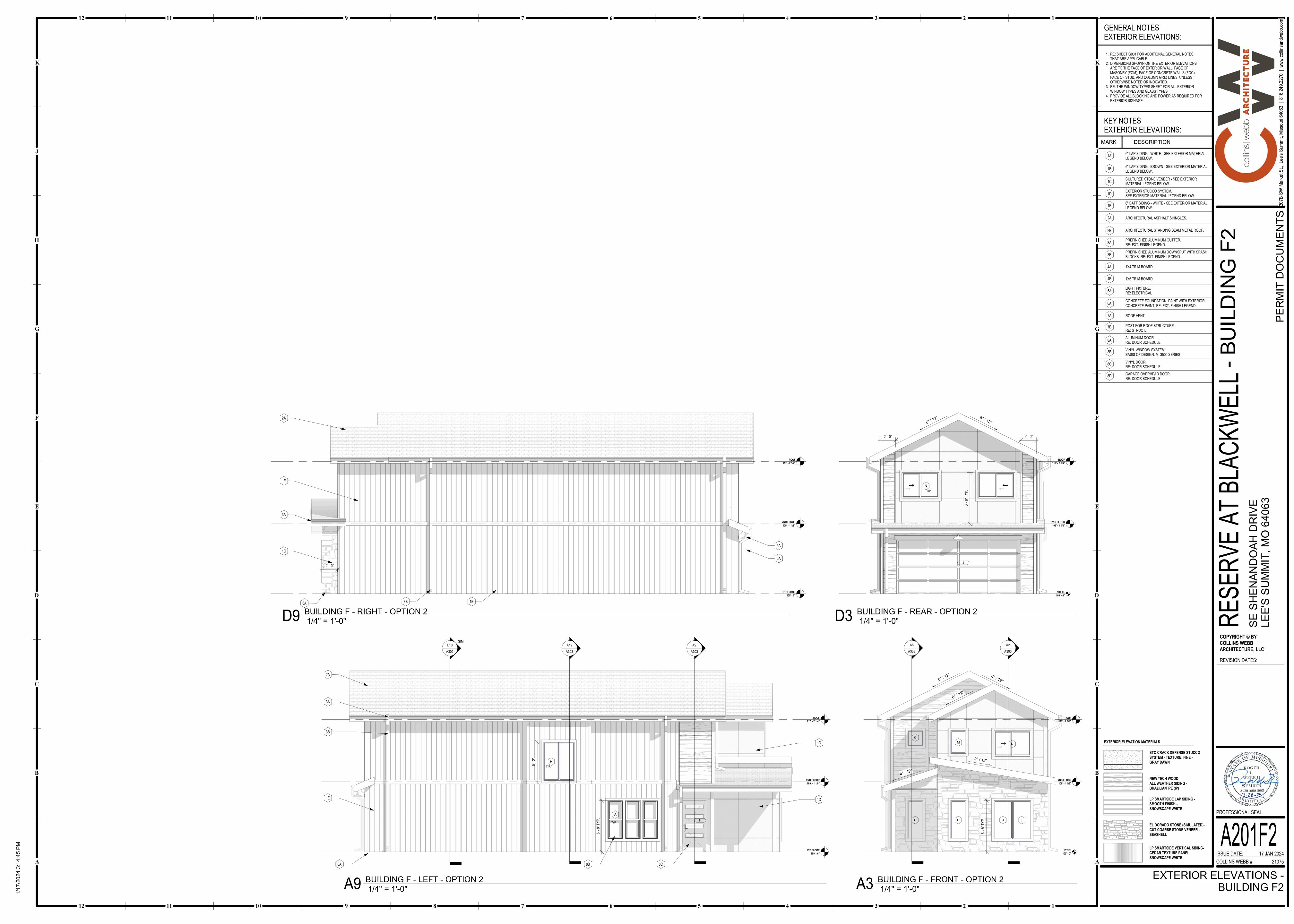
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3-28-24
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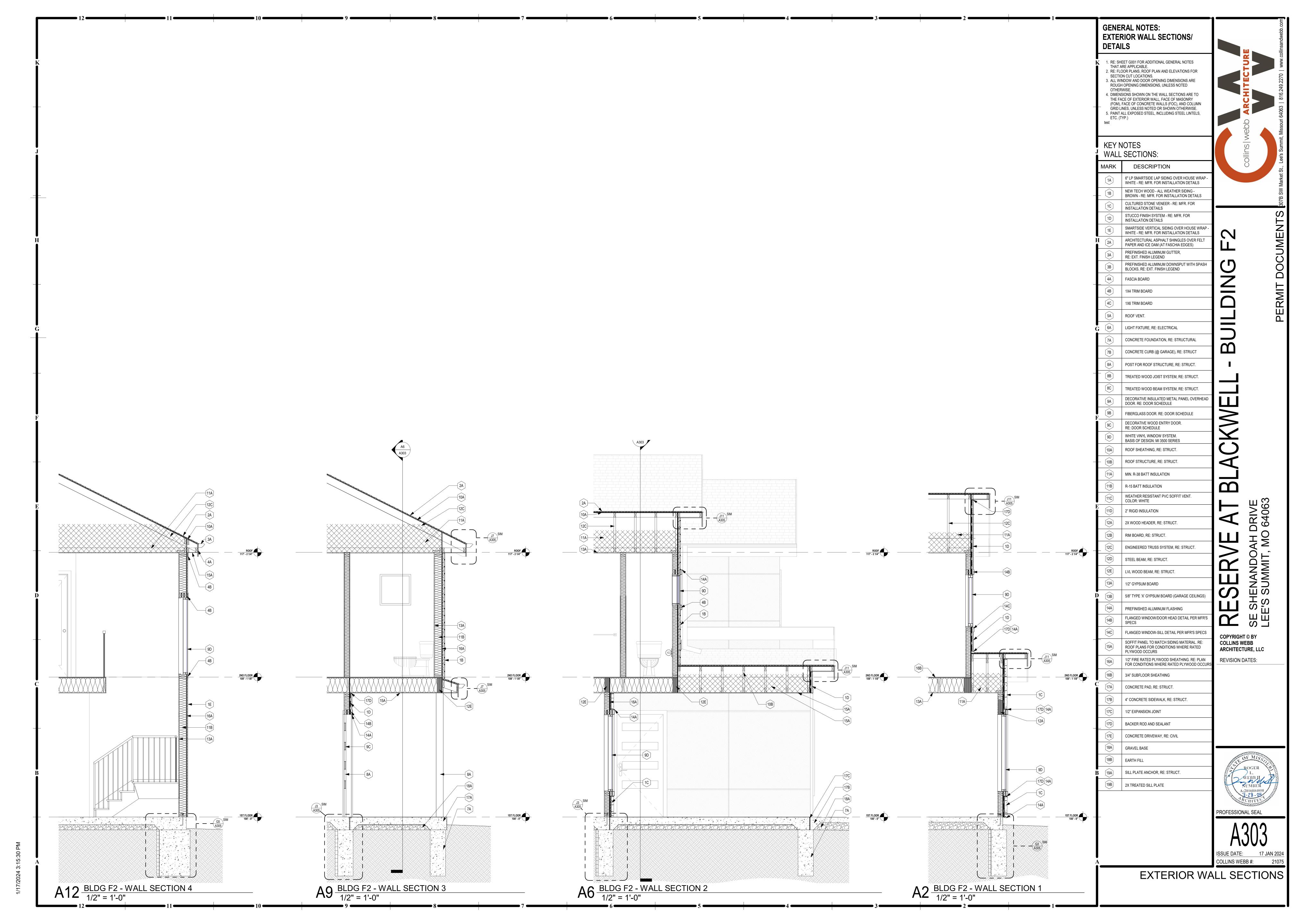
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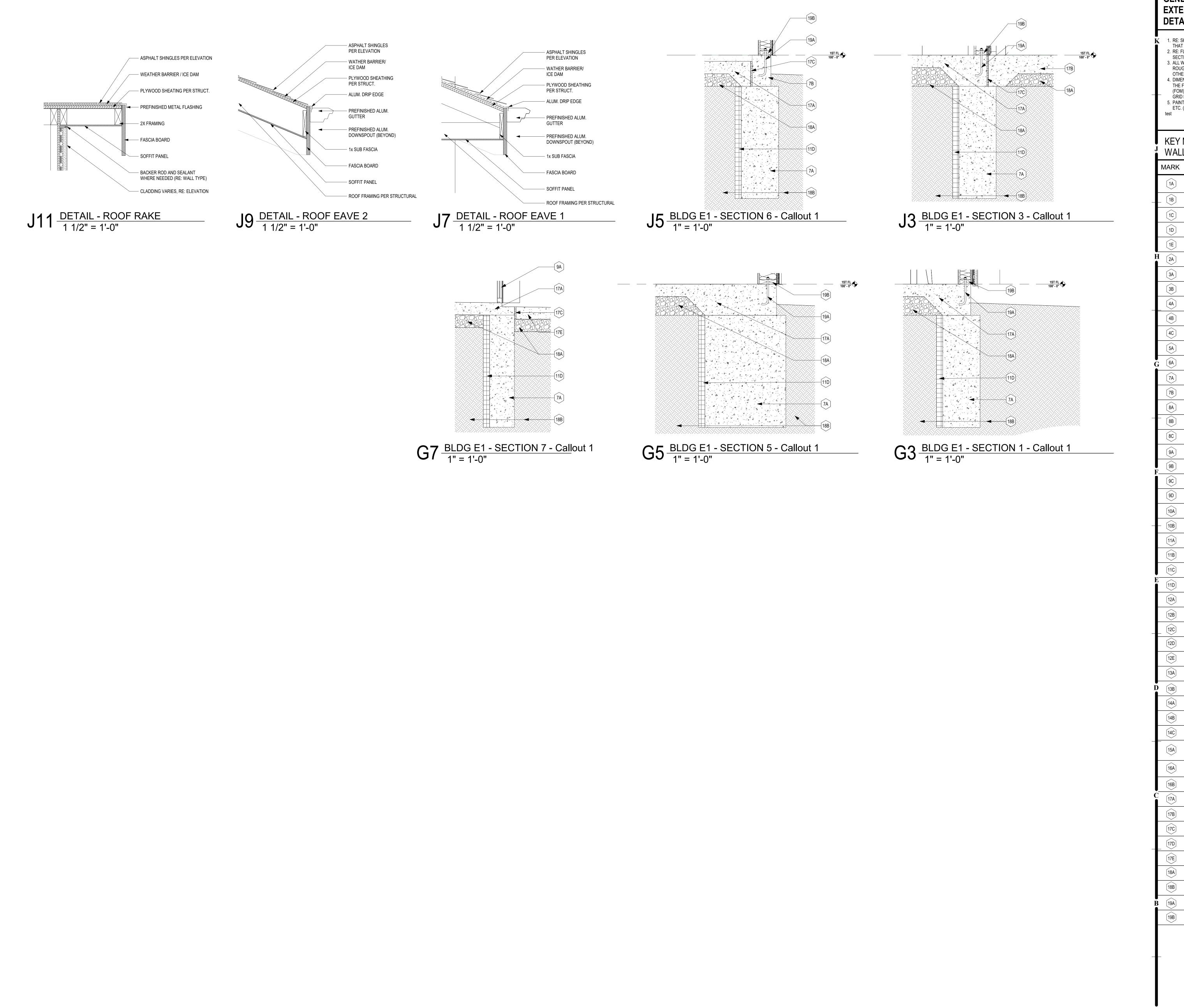
A132

ISSUE DATE: 17 JAN 2024
COLLINS WEBB #: 21075

BATHROOM ENLARGED PLANS AND ELEVATIONS







**GENERAL NOTES: EXTERIOR WALL SECTIONS/ DETAILS** 

- 1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
- 2. RE: FLOOR PLANS, ROOF PLAN AND ELEVATIONS FOR SECTION CUT LOCATIONS.
  3. ALL WINDOW AND DOOR OPENING DIMENSIONS ARE ROUGH OPENING DIMENSIONS, UNLESS NOTED
- 4. DIMENSIONS SHOWN ON THE WALL SECTIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE. 5. PAINT ALL EXPOSED STEEL, INCLUDING STEEL LINTELS,

**KEY NOTES** 

	T	SECTIONS:
	MARK	DESCRIPTION
	(1A)	6" LP SMARTSIDE LAP SIDING OVER HOUSE WRA WHITE - RE: MFR. FOR INSTALLATION DETAILS
_	_ (1B)	NEW TECH WOOD - ALL WEATHER SIDING - BROWN - RE: MFR. FOR INSTALLATION DETAILS
	1C	CULTURED STONE VENEER - RE: MFR. FOR INSTALLATION DETAILS
	1D	STUCCO FINISH SYSTEM - RE: MFR. FOR INSTALLATION DETAILS
	1E	SMARTSIDE VERTICAL SIDING OVER HOUSE WR WHITE - RE: MFR. FOR INSTALLATION DETAILS
Ì	H 2A	ARCHITECTURAL ASPHALT SHINGLES OVER FEL PAPER AND ICE DAM (AT FASCHIA EDGES)
	3A	PREFINISHED ALUMINUM GUTTER, RE: EXT. FINISH LEGEND
	3B	PREFINISHED ALUMINUM DOWNSPUT WITH SPA BLOCKS, RE: EXT. FINISH LEGEND
	ΔΔ	FASCIA BOARD

4A FASCIA BOARD 1X4 TRIM BOARD

1X6 TRIM BOARD ROOF VENT. LIGHT FIXTURE, RE: ELECTRICAL CONCRETE FOUNDATION, RE: STRUCTURAL CONCRETE CURB (@ GARAGE), RE: STRUCT

POST FOR ROOF STRUCTURE, RE: STRUCT. TREATED WOOD JOIST SYSTEM, RE: STRUCT. TREATED WOOD BEAM SYSTEM, RE: STRUCT.

DECORATIVE INSULATED METAL PANEL OVERHEAD DOOR. RE: DOOR SCHEDULE FIBERGLASS DOOR. RE: DOOR SCHEDULE DECORATIVE WOOD ENTRY DOOR. RE: DOOR SCHEDULE WHITE VINYL WINDOW SYSTEM. BASIS OF DESIGN: MI 3500 SERIES

ROOF SHEATHING, RE: STRUCT. ROOF STRUCTURE, RE: STRUCT. MIN. R-38 BATT INSULATION

R-15 BATT INSULATION WEATHER RESISTANT PVC SOFFIT VENT. COLOR: WHITE

2" RIGID INSULATION 2X WOOD HEADER, RE: STRUCT. RIM BOARD, RE: STRUCT.

ENGINEERED TRUSS SYSTEM, RE: STRUCT. STEEL BEAM, RE: STRUCT.

LVL WOOD BEAM, RE: STRUCT. 5/8" TYPE 'X' GYPSUM BOARD (GARAGE CEILINGS)

PREFINISHED ALUMINUM FLASHING FLANGED WINDOW/DOOR HEAD DETAIL PER MFR'S

FLANGED WINDOW-SILL DETAIL PER MFR'S SPECS SOFFIT PANEL TO MATCH SIDING MATERIAL. RE: ROOF PLANS FOR CONDITIONS WHERE RATED PLYWOOD OCCURS 1/2" FIRE RATED PLYWOOD SHEATHING. RE: PLAN FOR CONDITIONS WHERE RATED PLYWOOD OCCUR

3/4" SUBFLOOR SHEATHING

CONCRETE PAD, RE: STRUCT. 4" CONCRETE SIDEWALK, RE: STRUCT. 1/2" EXPANSION JOINT

BACKER ROD AND SEALANT CONCRETE DRIVEWAY, RE: CIVIL

18B EARTH FILL SILL PLATE ANCHOR, RE: STRUCT. 2X TREATED SILL PLATE

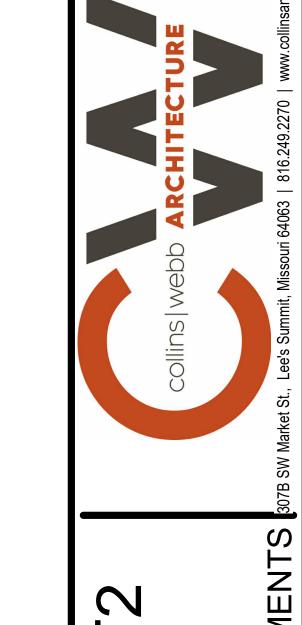
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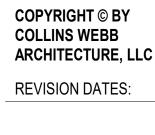
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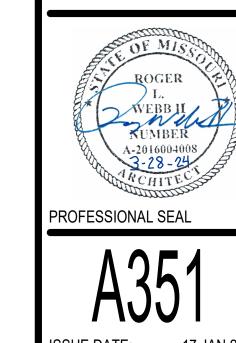
EXTERIOR WALL SECTIONS + DETAILS

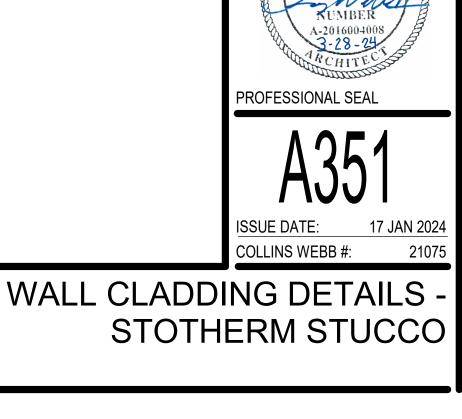




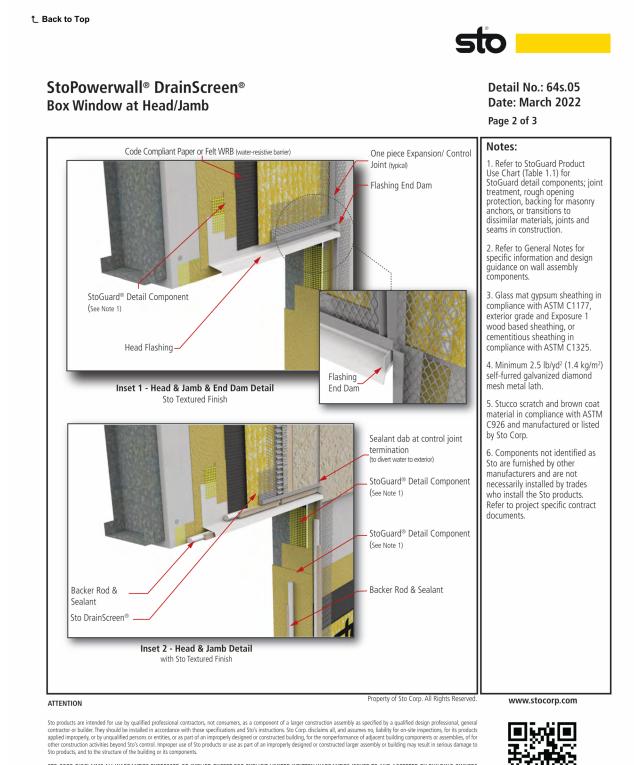
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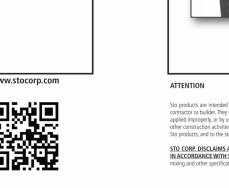


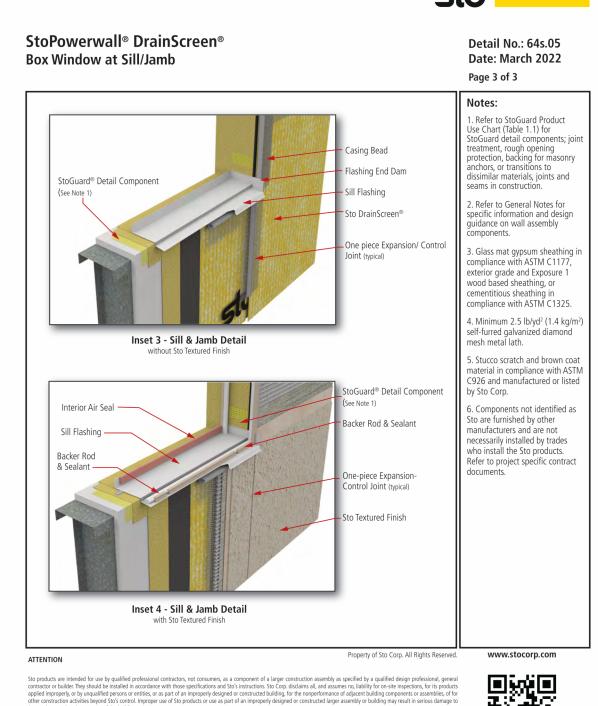




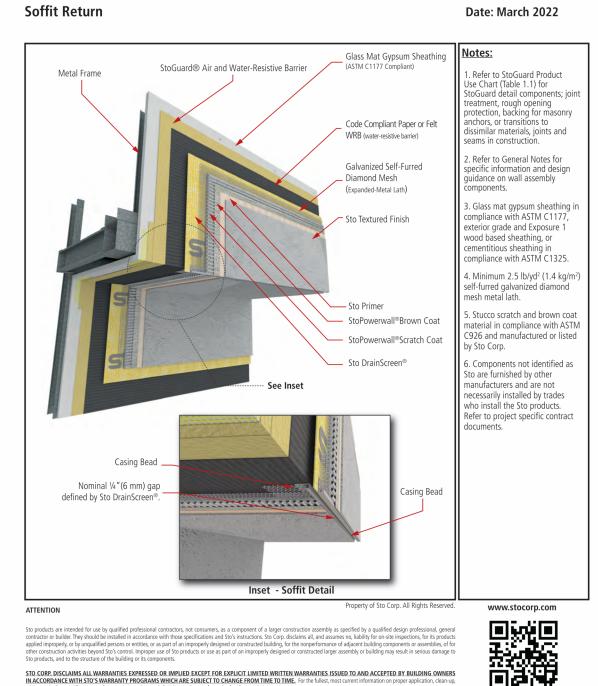


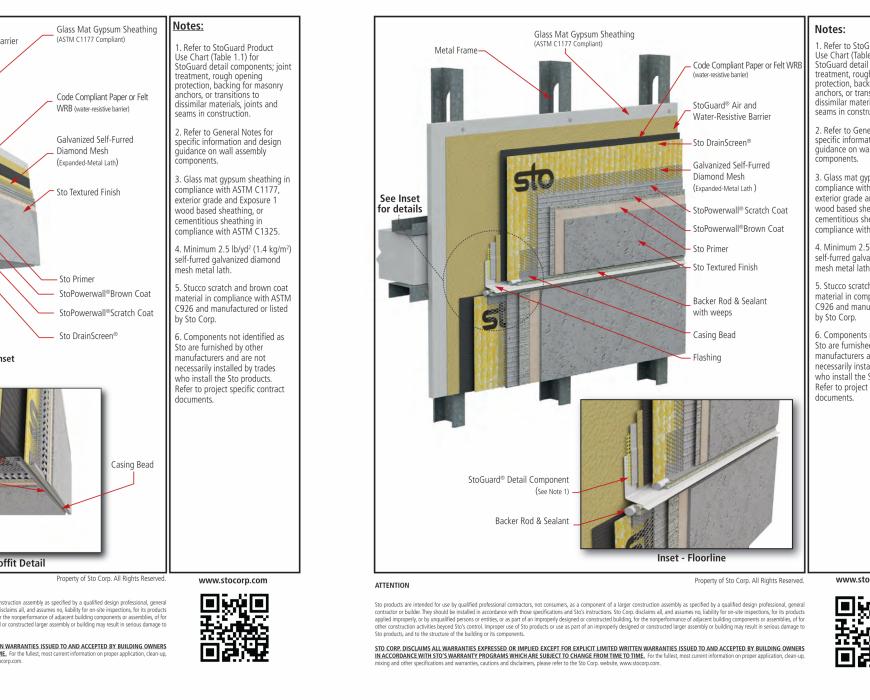








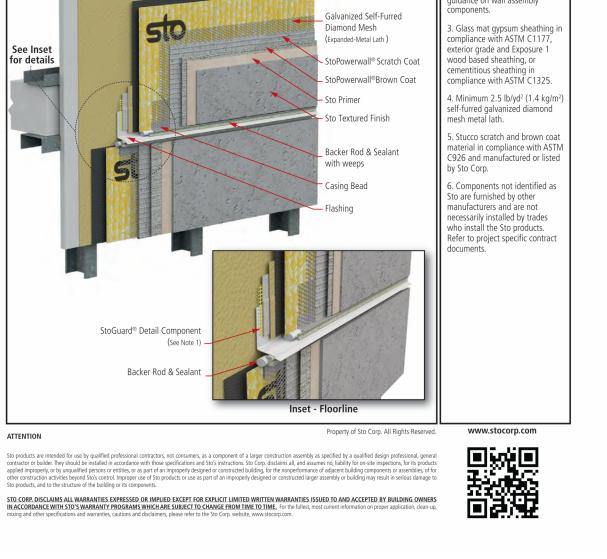


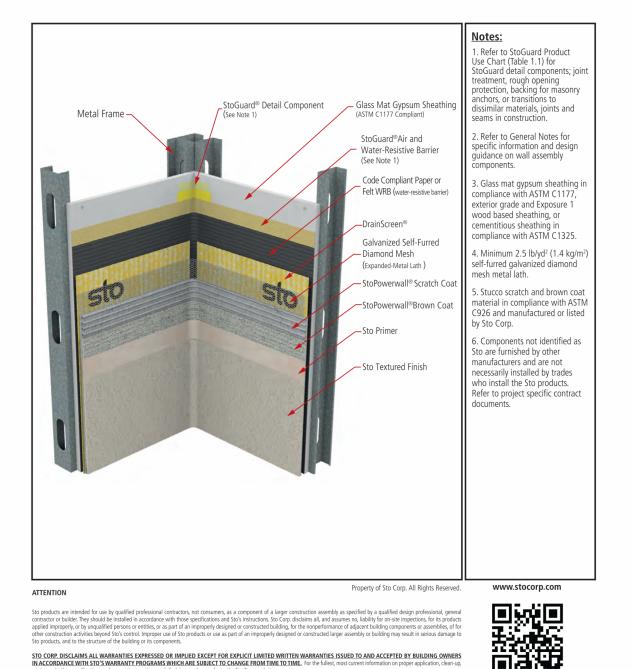


**↑** Back to Top

Floorline without Deflection Track







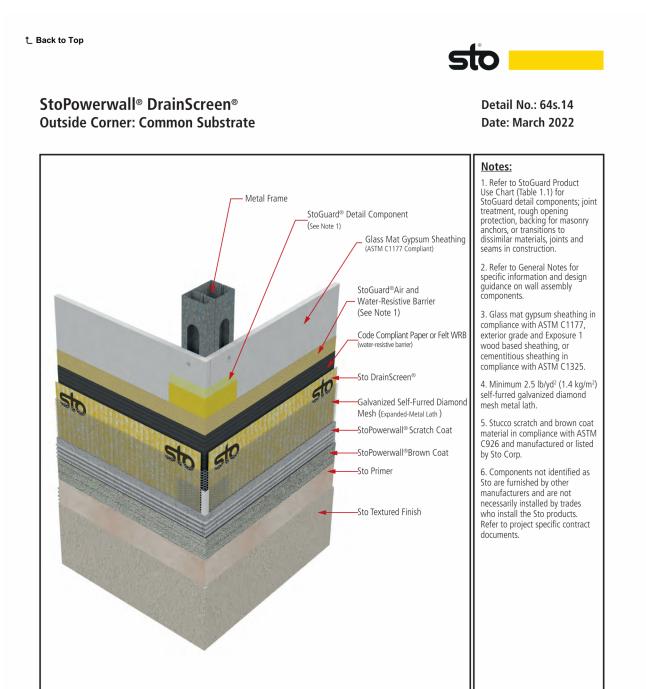
Date: March 2022

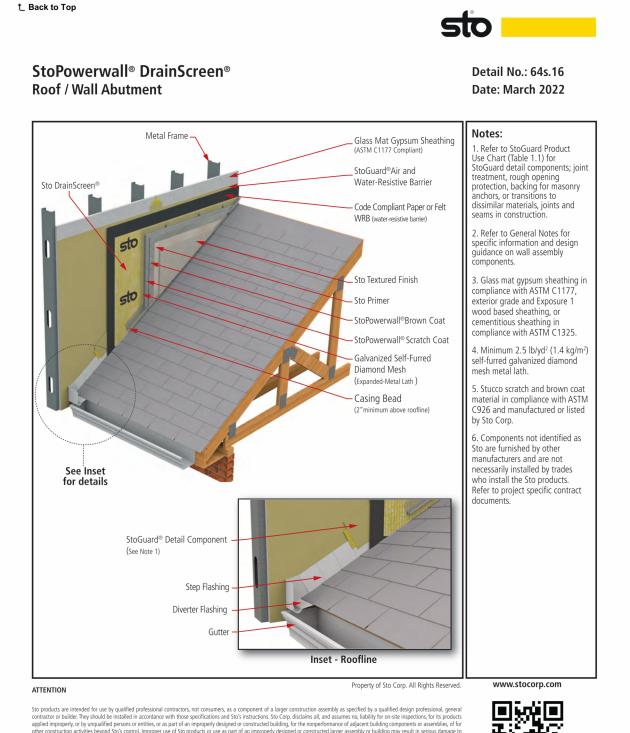
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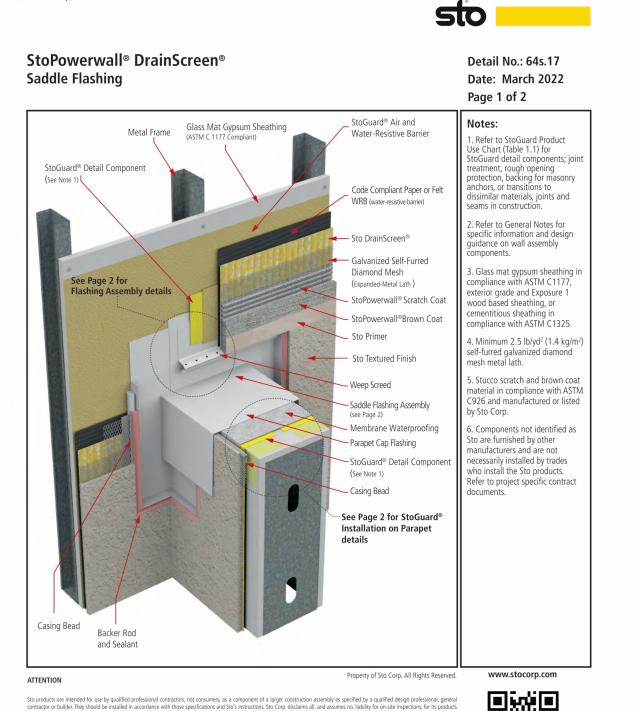
**Inside Corner: Common Substrate** 



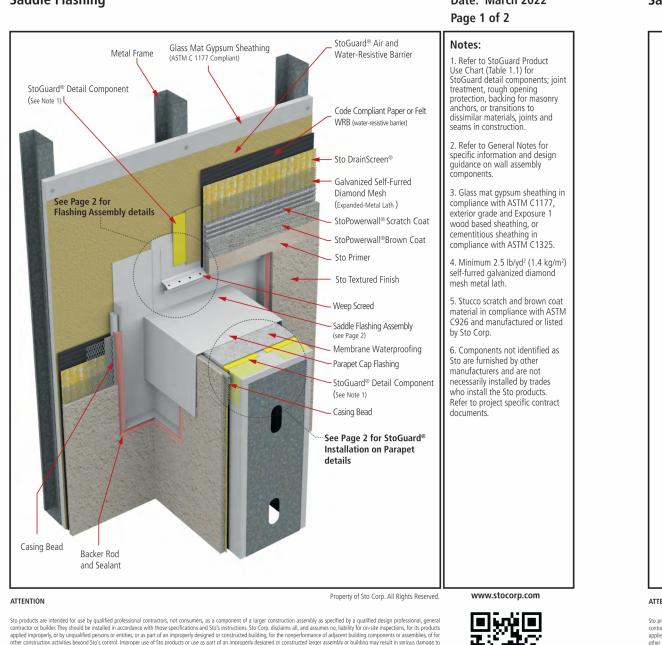
Date: March 2022

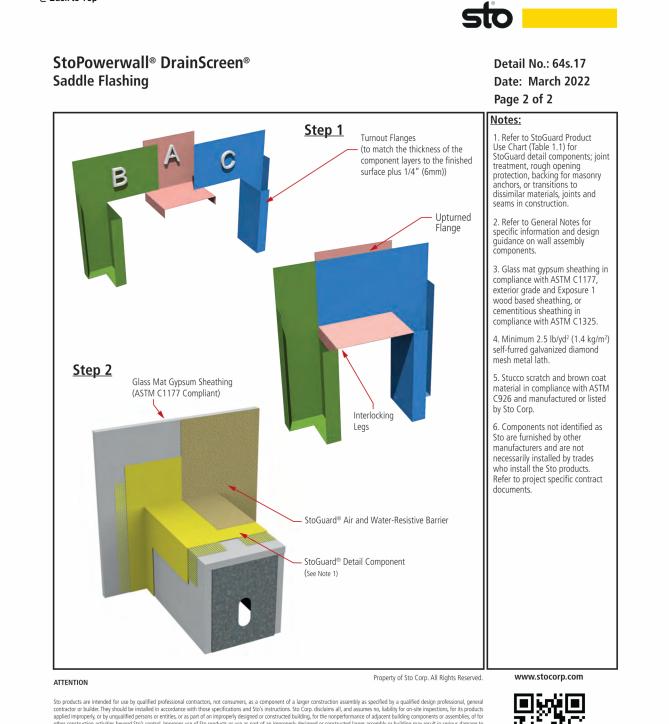


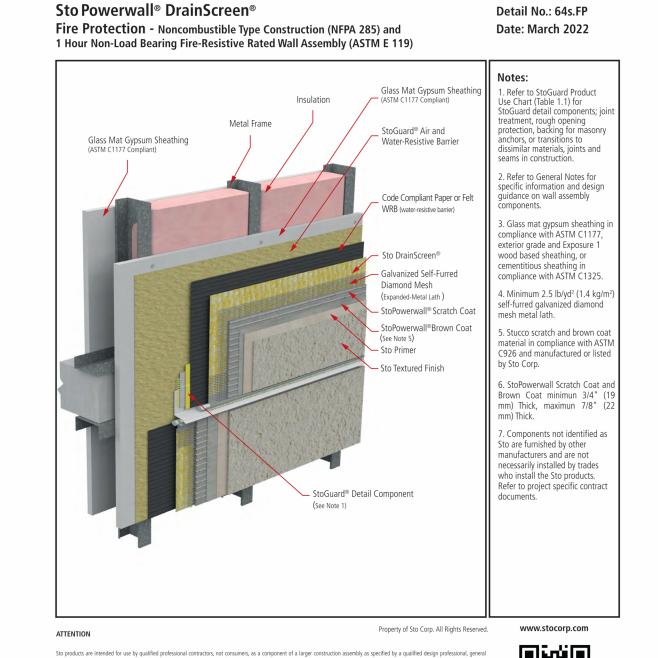




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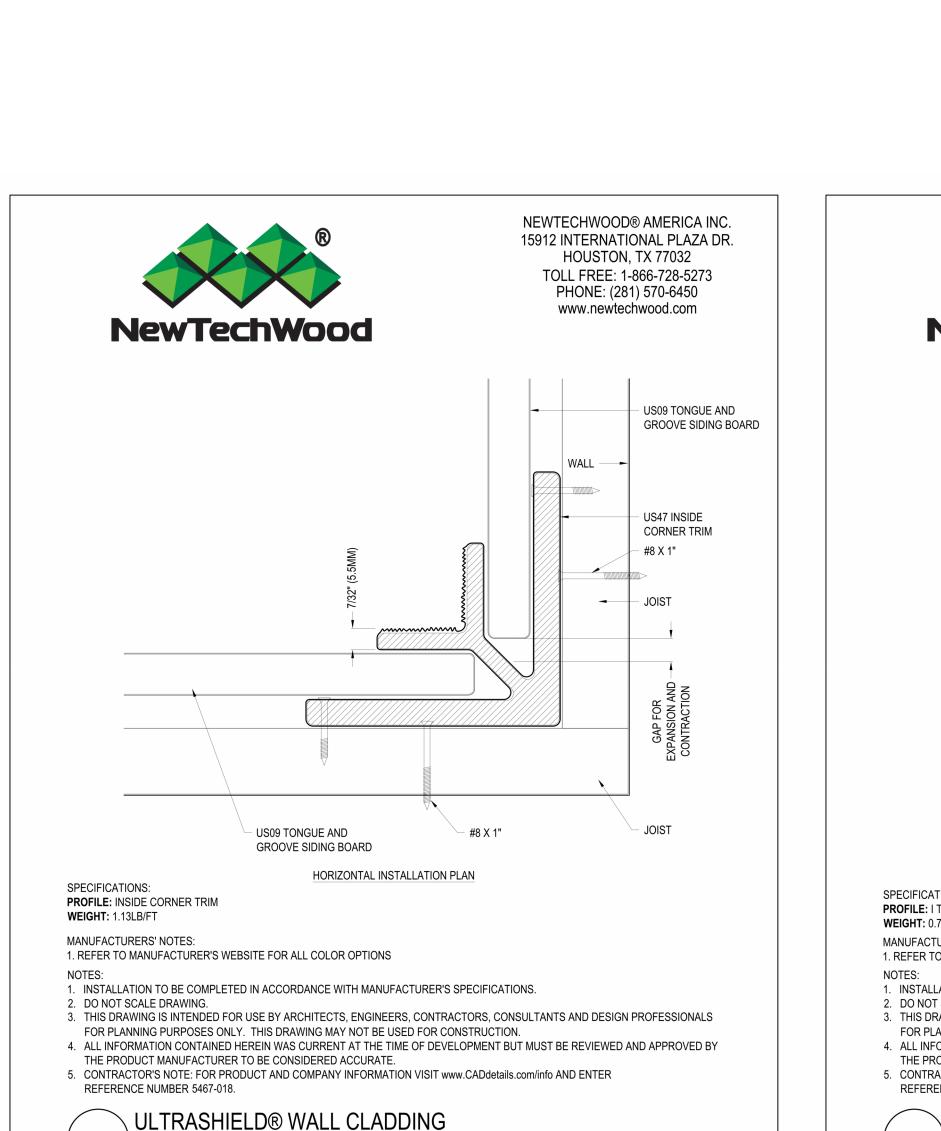


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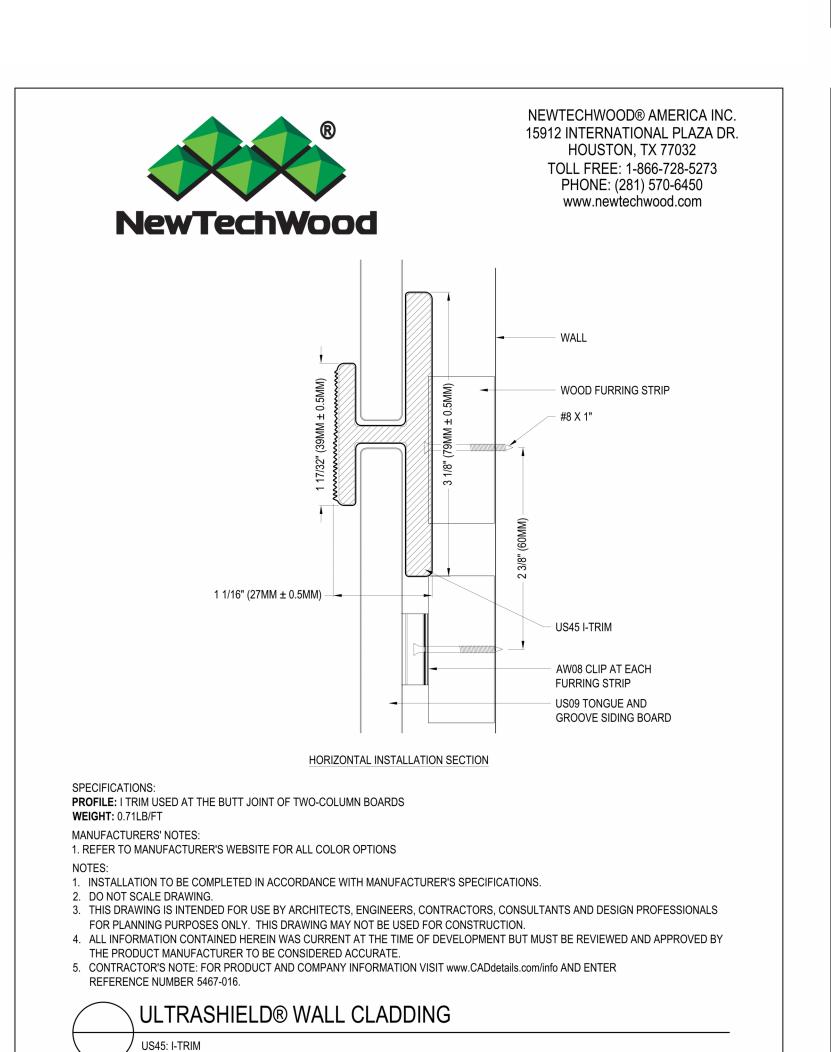
WALL CLADDING DETAILS -

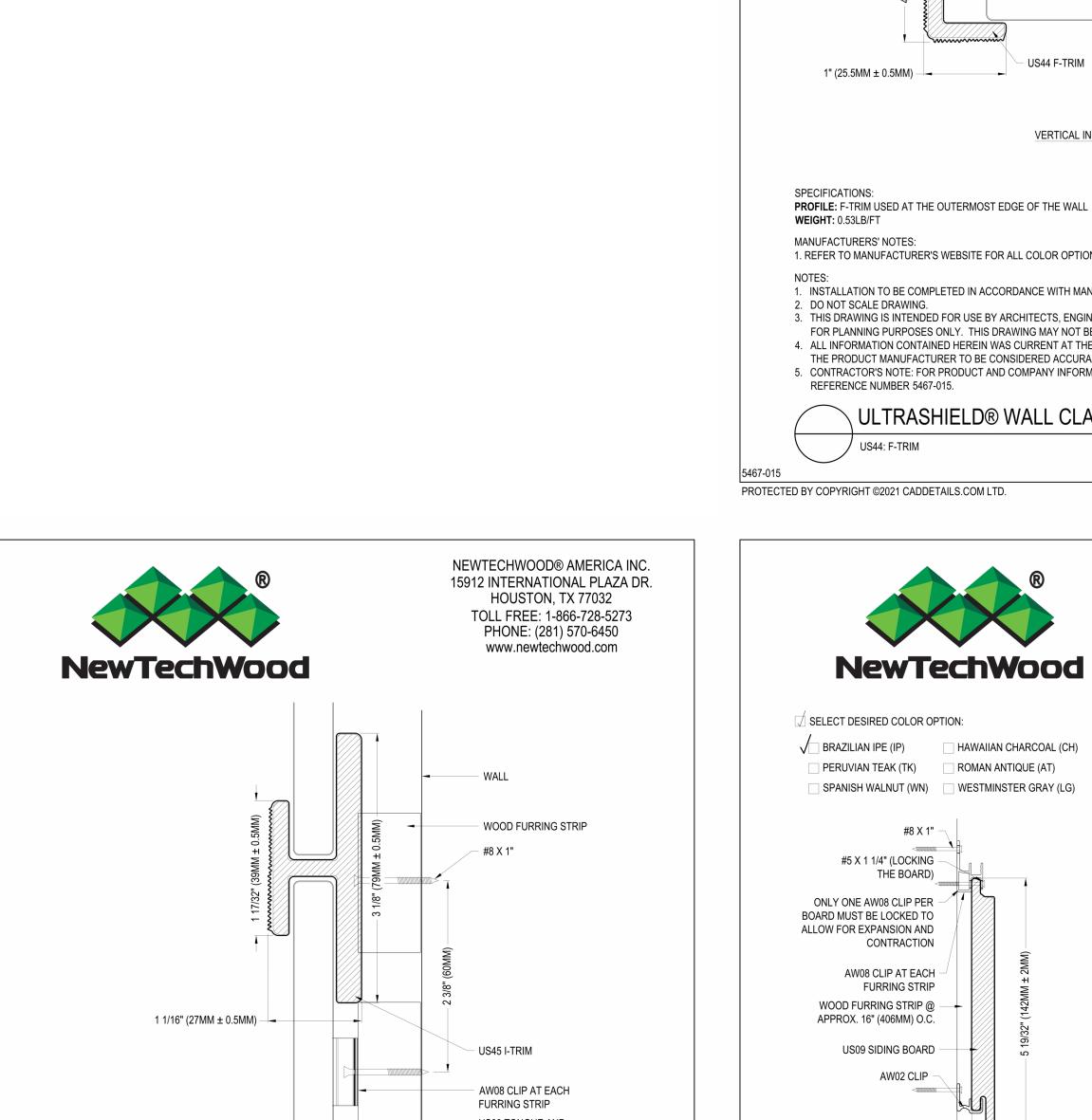


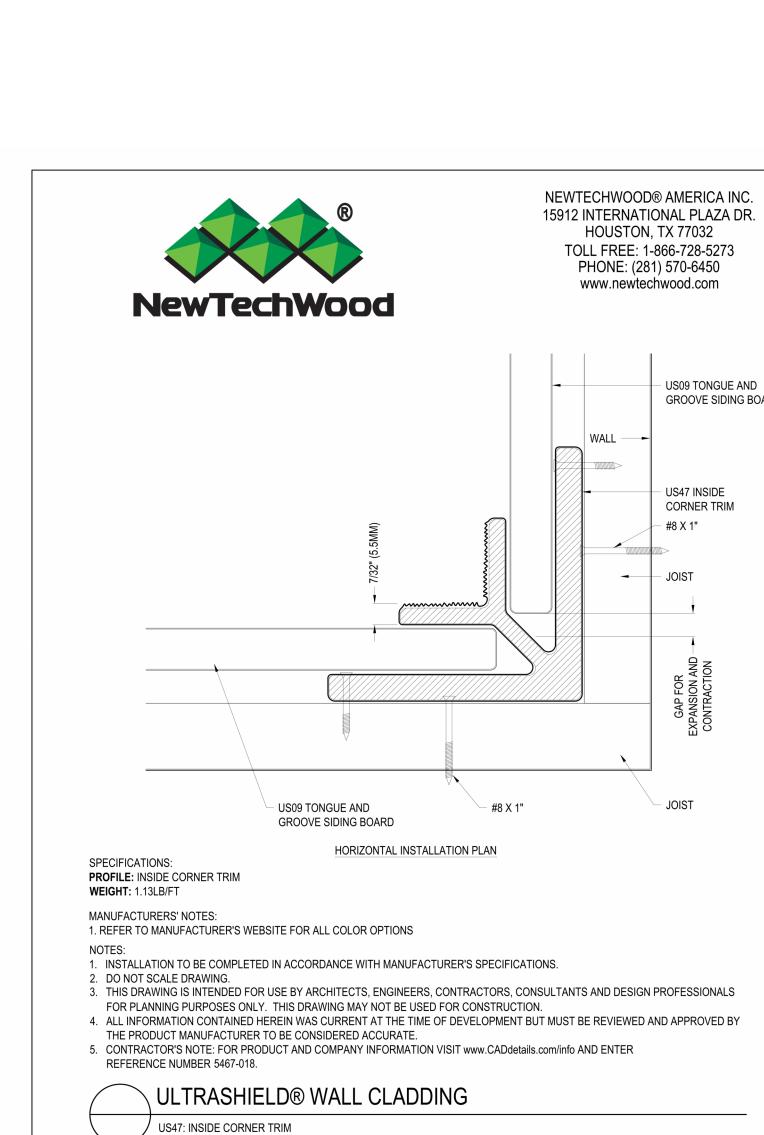
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HOUSTON, TX 77032

TOLL FREE: 1-866-728-5273

PHONE: (281) 570-6450

www.newtechwood.com

WOOD FURRING STRIP

US09 TONGUE AND

**GROOVE SIDING BOARD** 

US46 OUTSIDE

**CORNER TRIM** 

REVISION DATE 03/01/2022

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NewTechWood

2" (50MM)

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.

5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER

SPECIFICATIONS:

WEIGHT: 0.85LB/FT

PROFILE: OUTSIDE CORNER TRIM

1. REFER TO MANUFACTURER'S WEBSITE FOR ALL COLOR OPTIONS

THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

MANUFACTURERS' NOTES:

2. DO NOT SCALE DRAWING.

REFERENCE NUMBER 5467-017.

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US46: OUTSIDE CORNER TRIM

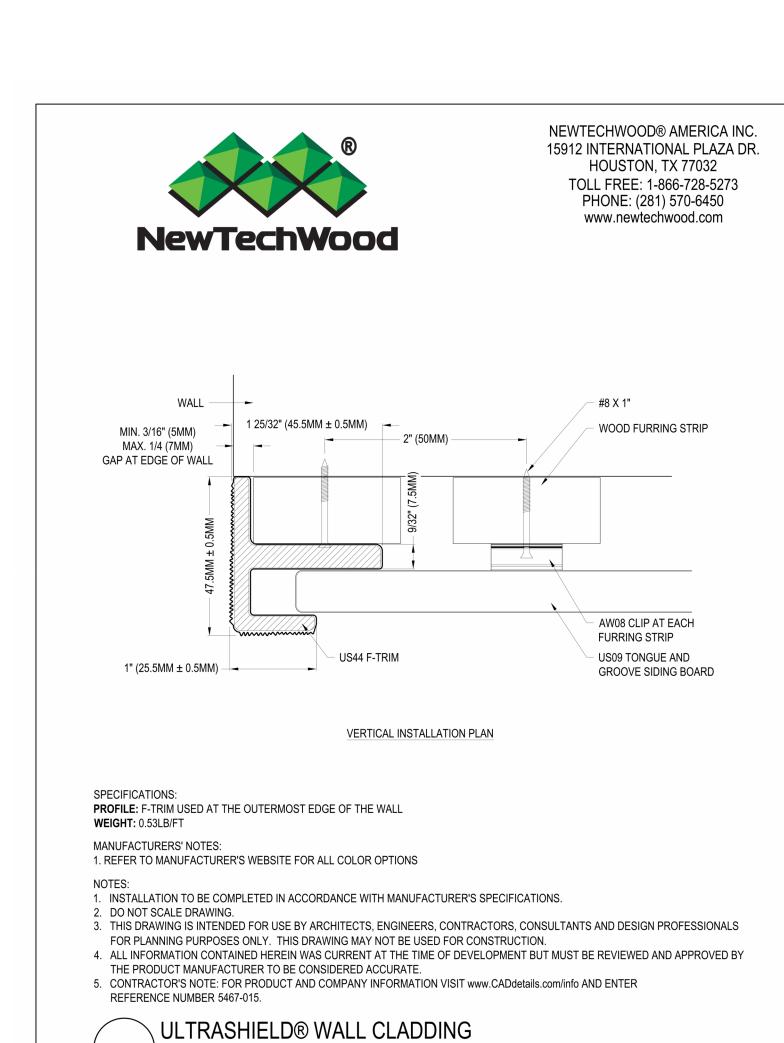
- AW08 CLIP AT US09 TONGUE AND

FURRING STRIP GROOVE SIDING BOARD

HORIZONTAL INSTALLATION PLAN

3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS

4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY



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AW08 CLIP AT

EACH FURRING

WOOD FURRING

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**─** 16" (406MM)

HORIZONTAL INSTALLATION ELEVATION

VERTICAL INSTALLATION ELEVATION

US09 TONGUE -AND GROOVE

SIDING BOARD

US09 TONGUE -

AND GROOVE SIDING BOARD

HORIZONTAL INSTALLATION SECTION

1. REFER TO MANUFACTURERS' WEBSITE FOR ALL CUSTOM COLOR OPTIONS

THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

US09: TONGUE AND GROOVE SIDING BOARD

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ULTRASHIELD® WALL CLADDING

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4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY

SPECIFICATIONS:

LENGTH: 16'

REVISION DATE 03/01/2022

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WEIGHT: 1.32LB/FT

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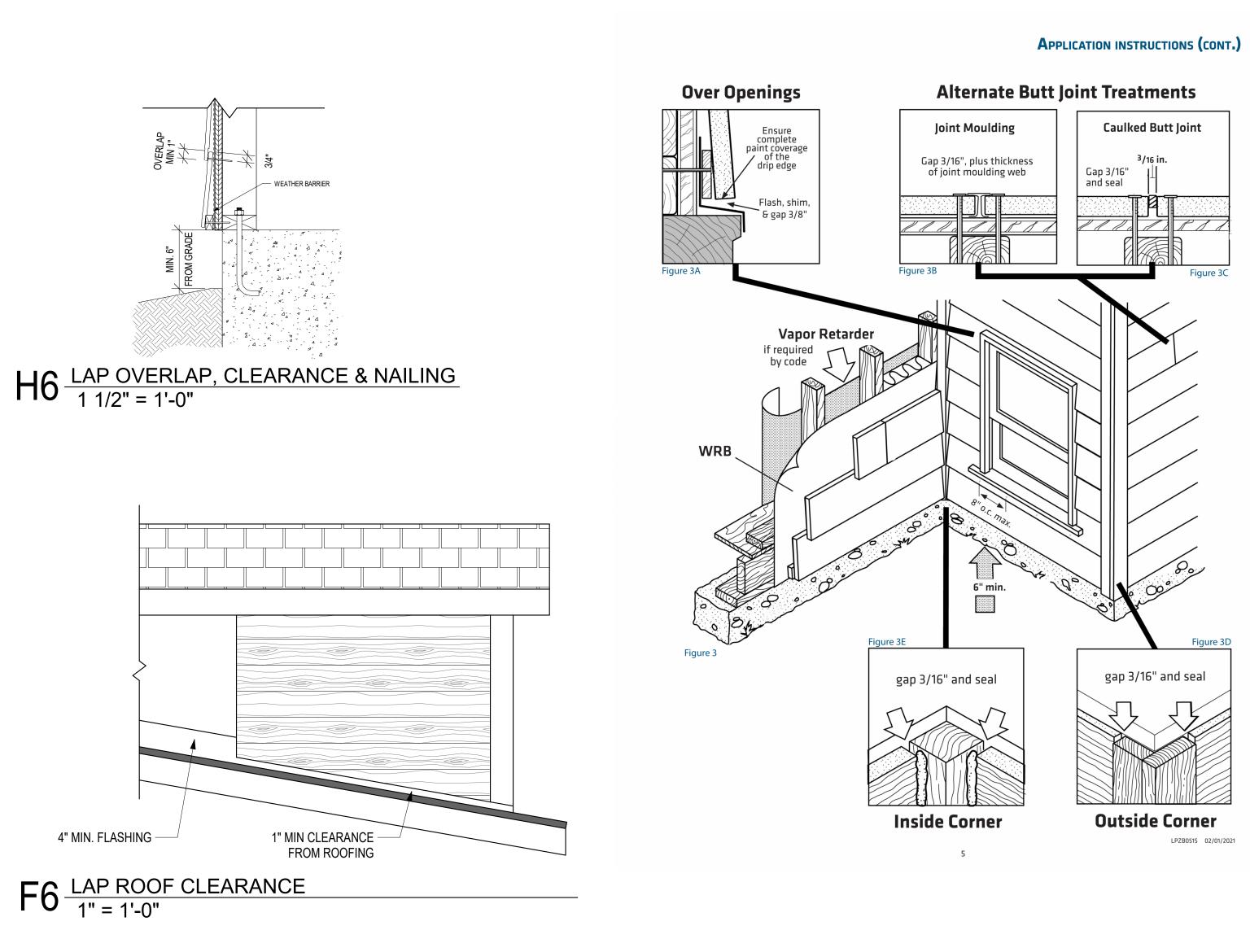
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REFERENCE NUMBER 5467-014.

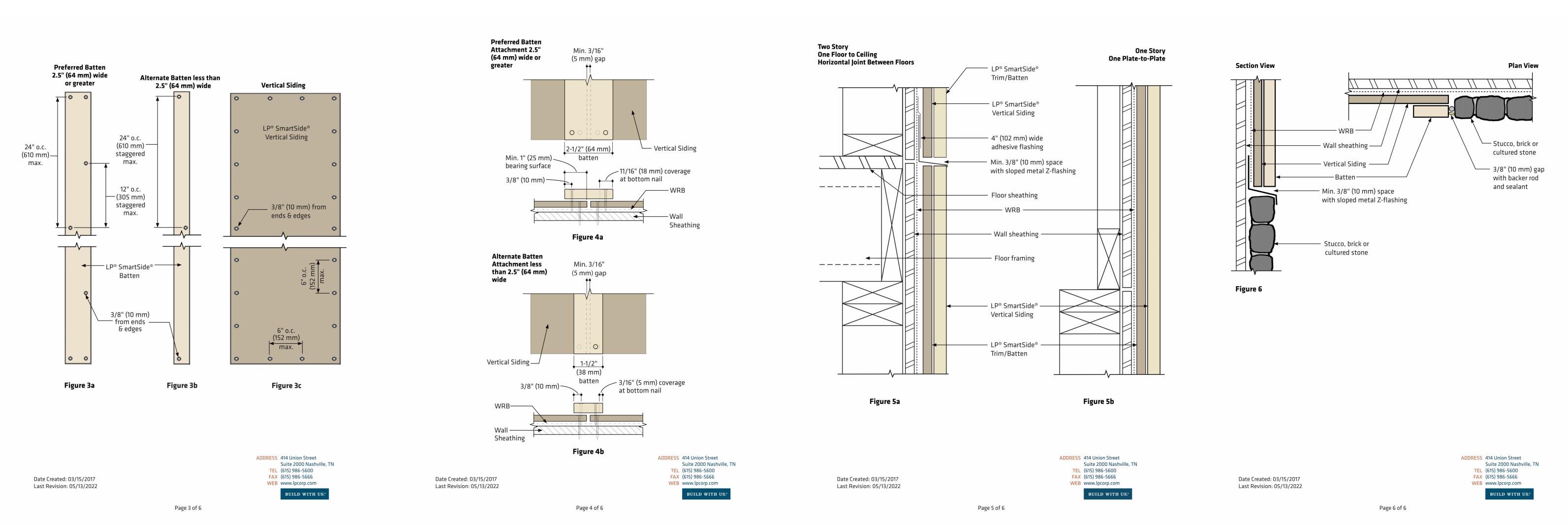
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PROFILE: TONGUE AND GROOVE SIDING

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## **BATT**



ZG FZ Collins | webb Archite

RESERVE AT BLACKWELL
SIGNAL DRIVE
SE SHENANDOAH DRIVE
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3-28-24
RCHITECT

| ISSUE DATE: 17 JAN 2024 | COLLINS WEBB #: 21075 | CO

WALL CLADDING DETAILS - LP SMARTLAP & BATT

ALTERNATE ENDS ABOVE AND BELOW TO

— EXTEND AT LEAST ONE LAYER OF WRB

- LATH - WRAP LATH AROUND CORNER

12 IN. (305 mm) MIN.TO NEXT FRAMING

ADHERED MANUFACTURED STONE VENEER

FROM EACH DIRECTION AROUND

CORNER 12 IN. (305 mm) MIN.

MEMBER AND LAP LATH AT

MORTAR JOINT (WHERE USED)

MORTAR SCRATCH COAT

MORTAR SETTING BED

— (2) LAYERS WRB

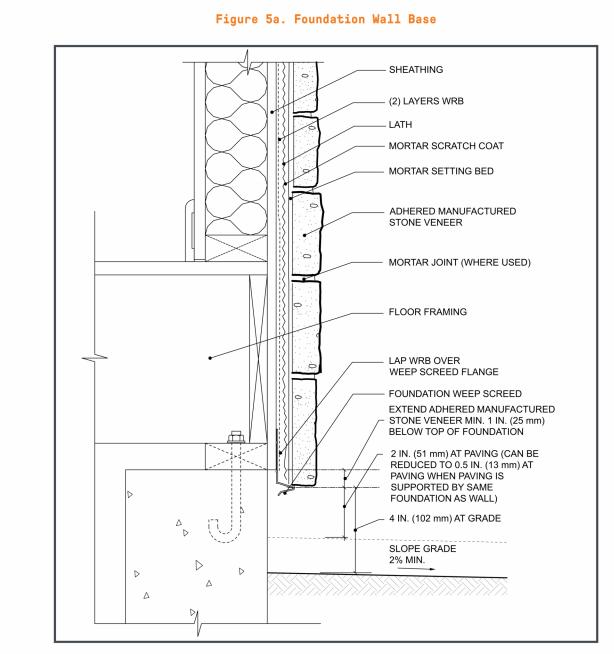
SHEATHING

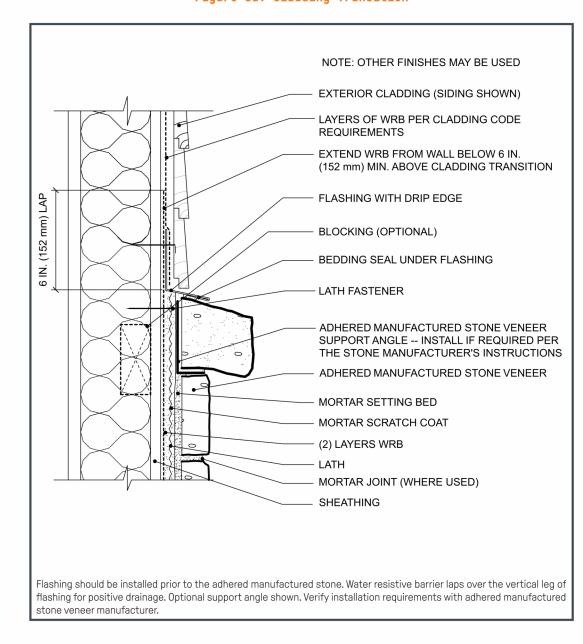
FRAMING MEMBER

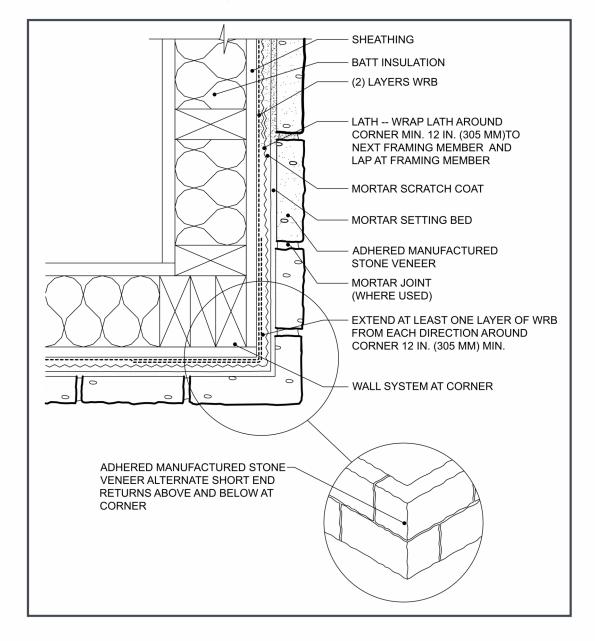
INTERWEAVE CORNER

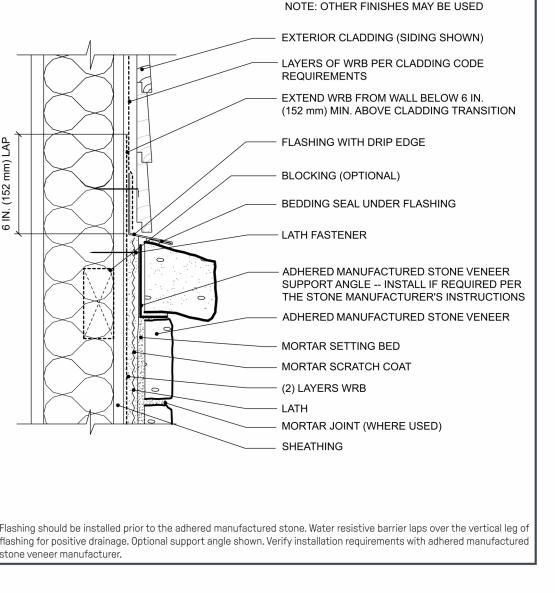
COLLINS WEBB #: **ELDORADO STONE** 

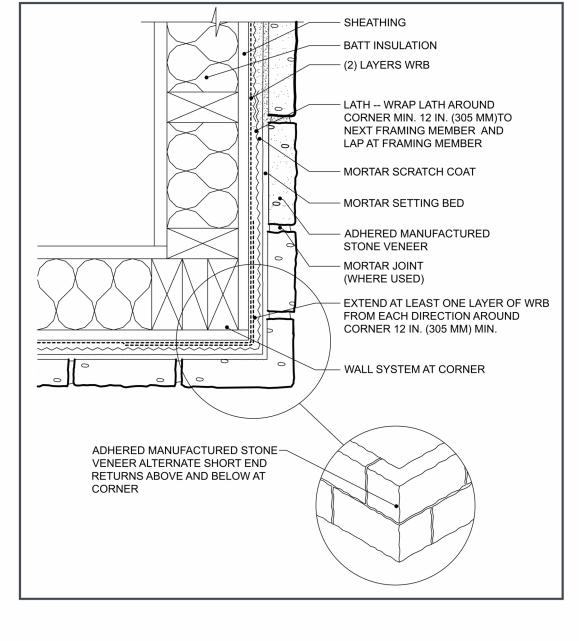
Figure 3. Wall Assembly Transition LAYERS OF WRB PER CLADDING CODE REQUIREMENTS LAP WRB OVER SCREED/FLASHING WEEP SCREED OR CASING BEAD (VARIES BY CLADDING TYPE) EXTEND WRB FROM WALL BELOW 6 IN. (152 mm) MIN. ABOVE STONE CLADDING FLASHING BEDDING SEALANT UNDER (152 mm) MIN. SCRATCH COAT MORTAR SETTING BED ADHERED MANUFACTURED STONE VENEER MORTAR JOINT (WHERE USED) (2) LAYERS WRB **FASTENER** BLOCKING (WHERE REQUIRED)

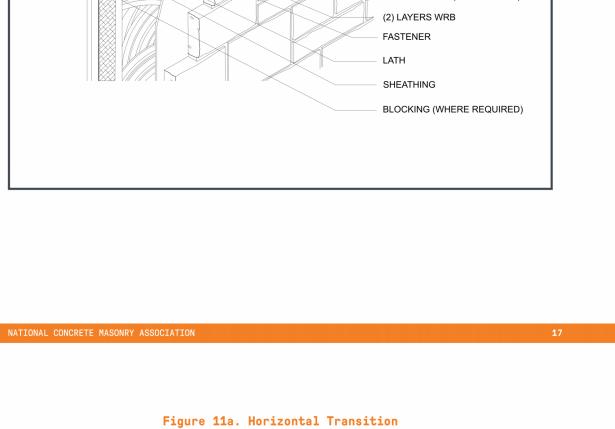












NOTE: OTHER FINISHES MAY BE USED

EXTERIOR SHEATHING (SIDING SHOWN)

- LAYERS OF WRB PER CLADDING CODE

- FLASHING - PROVIDE END DAM AT FLASHING TERMINATION

STRIP OF FLASHING - LAP OVER

FLASHING - PROVIDE END DAM AT

BEDDING SEAL UNDER FLASHING

CASING BEAD (OPTIONAL) OVER WRB

- ADHERED MANUFACTURED STONE VENEER

HORIZONTAL WOOD TRIM

BLOCKING FOR LATH EDGE

FLASHING TERMINATION

MORTAR SETTING BED

(2) LAYERS WRB

SHEATHING

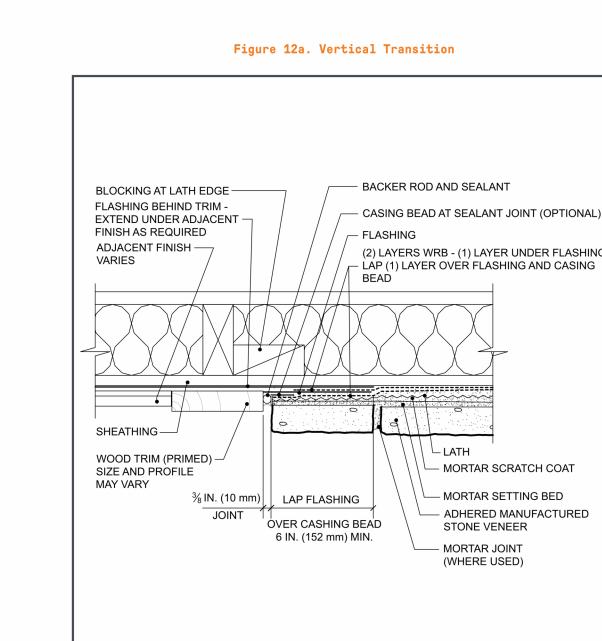
MORTAR SCRATCH COAT

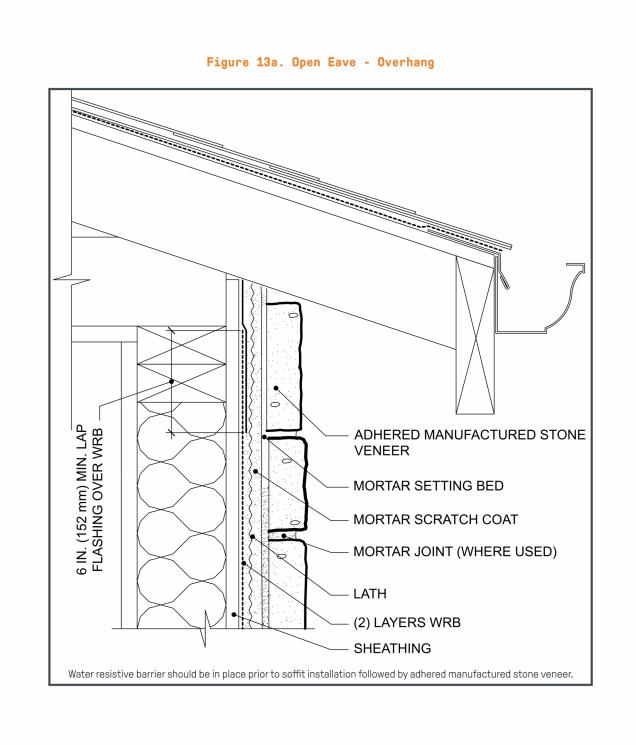
MORTAR JOINT (WHERE USED)

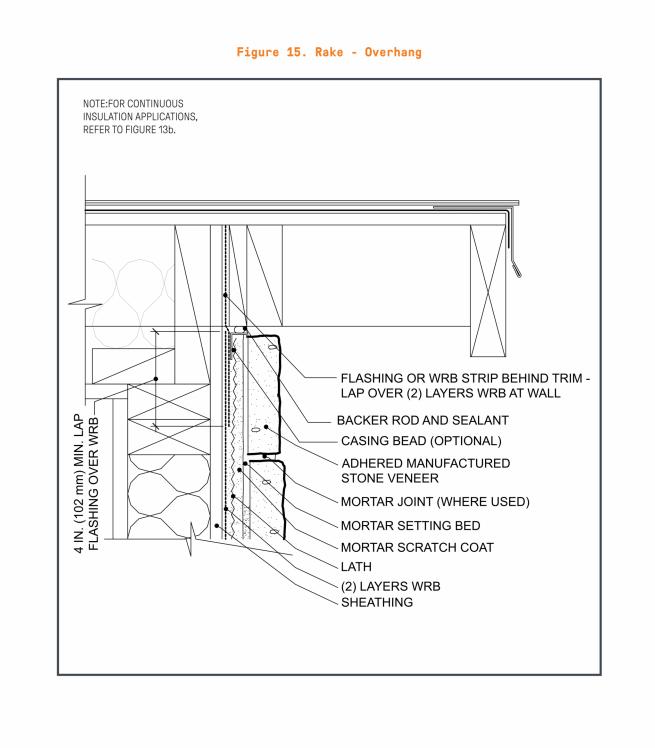
FLASHING BELOW

AND FLASHING

REQUIREMENTS







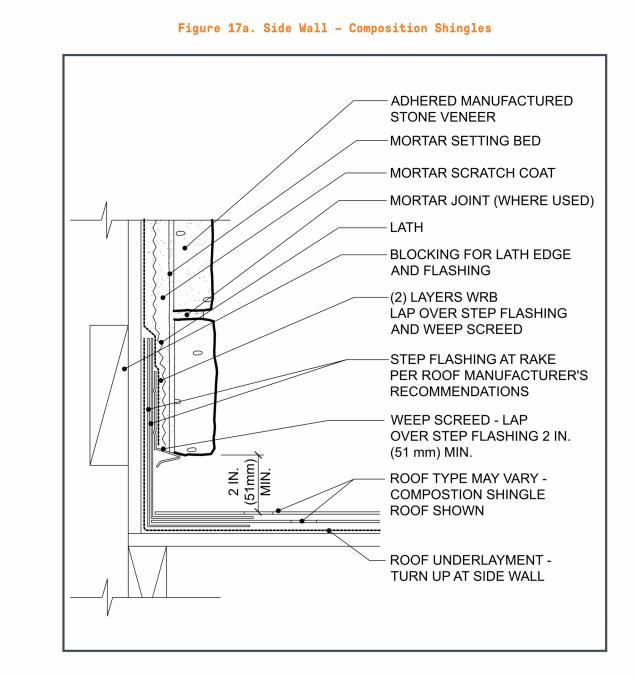


Figure 45. Wall-Section Multi-Floor Joint Detail

LAP WRB OVER FLASHIN SILL SCREED FLANGE

BEDDING SEAL UNDER

— MORTAR SCRATCH COAT

— MORTAR SETTING BED

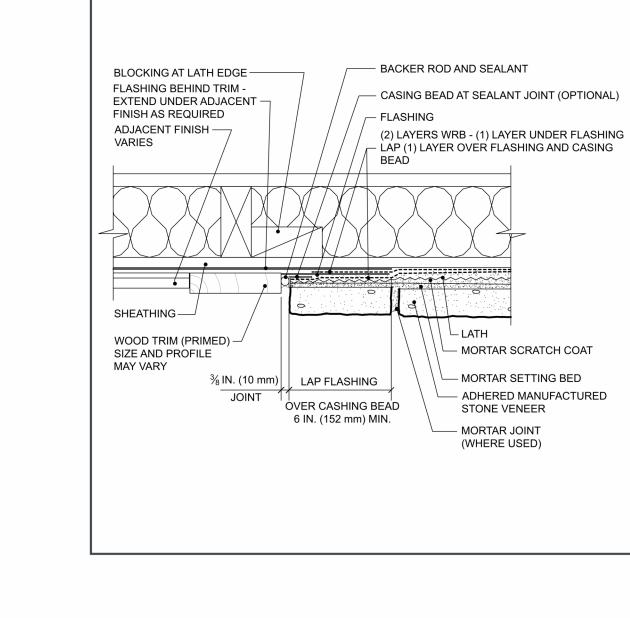
— SEE DETAIL ABOVE

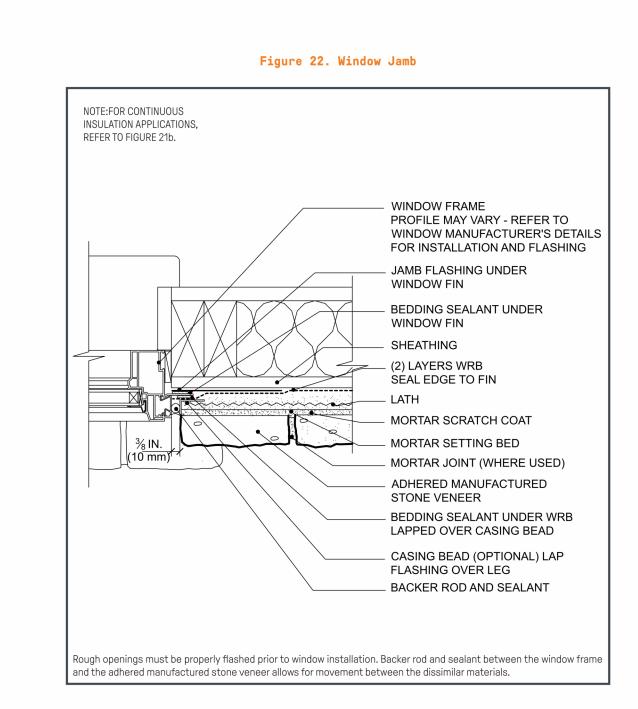
(WHERE USED)

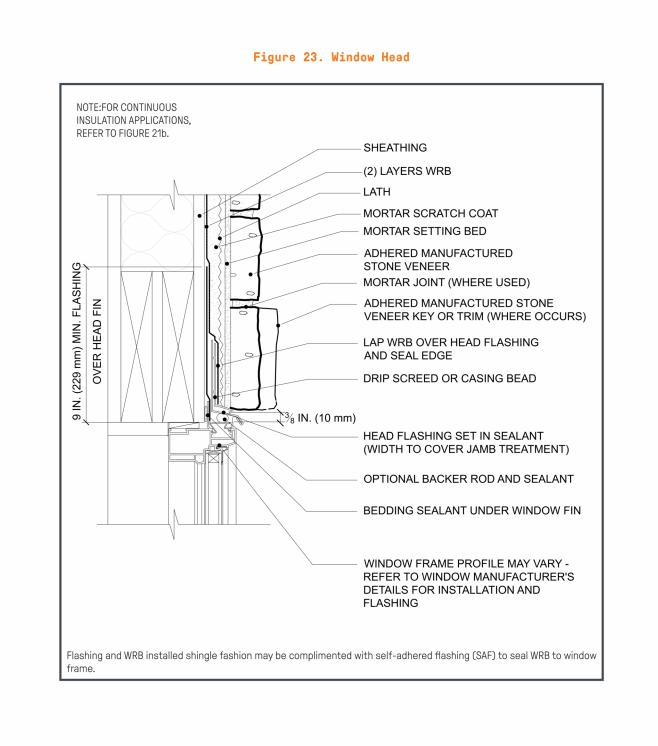
NOTE:FOR CONTINUOUS

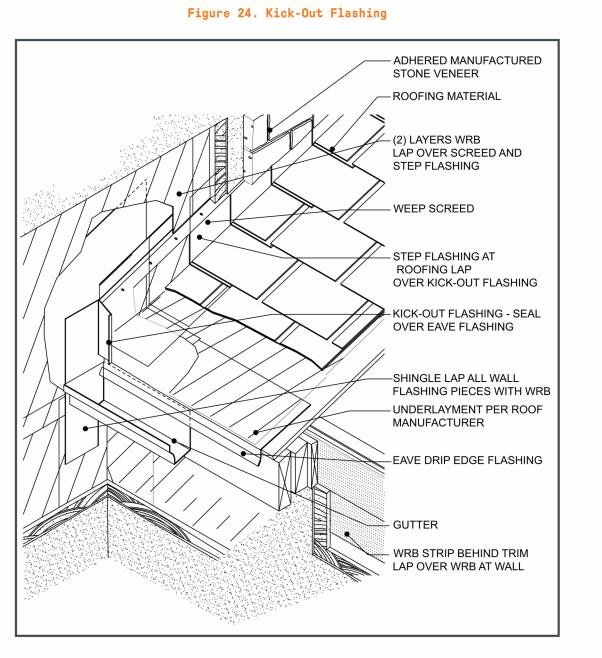
REFER TO FIGURE 41b.

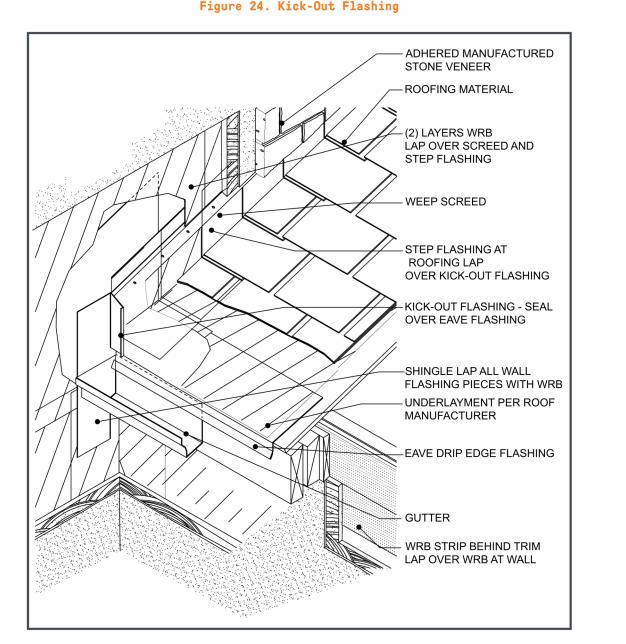
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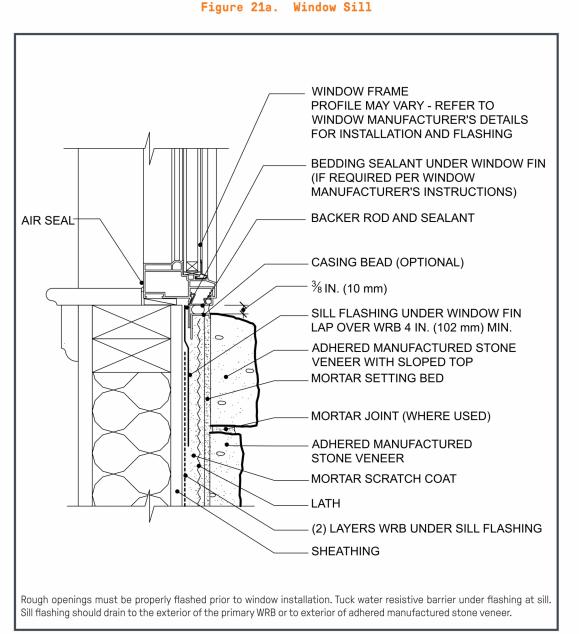


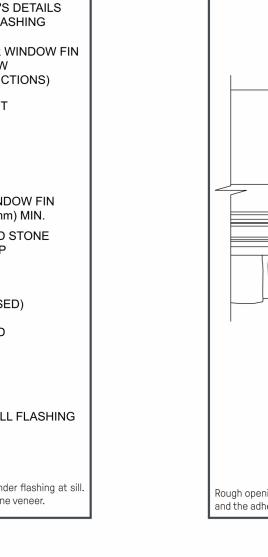














WALL CLADDING DETAILS -ELDORADO STONE 2



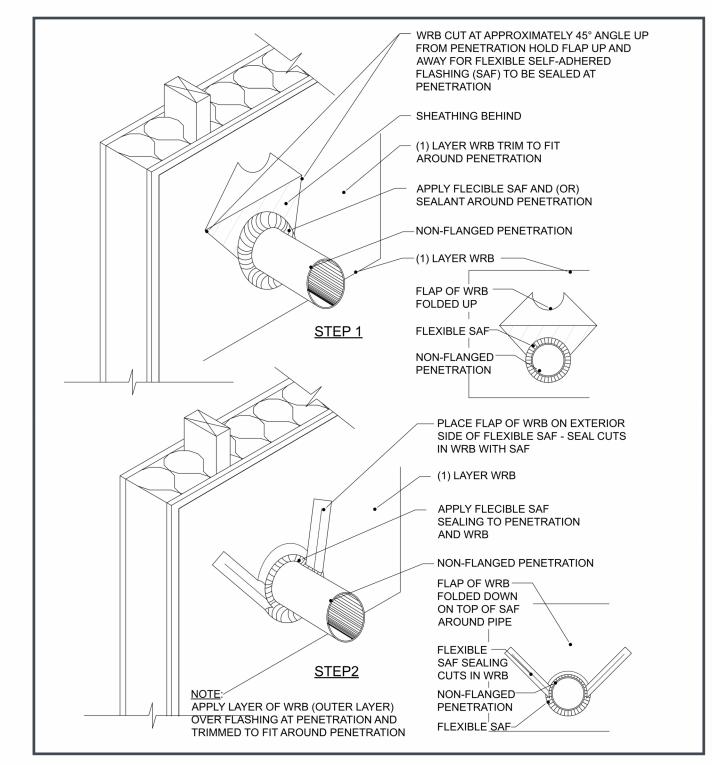


Figure 31. Penetration, Fixture

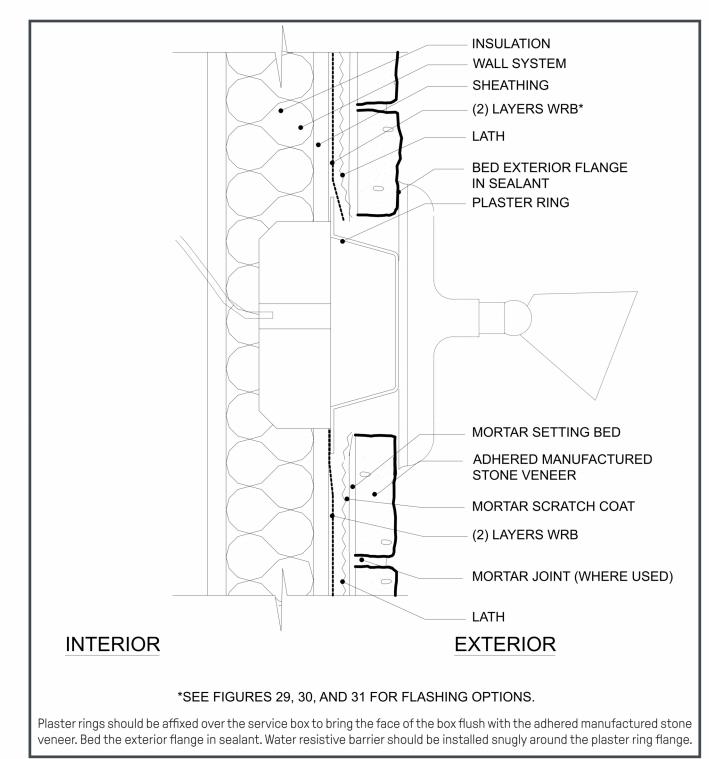


Figure 32. Penetration, Dryer Vent

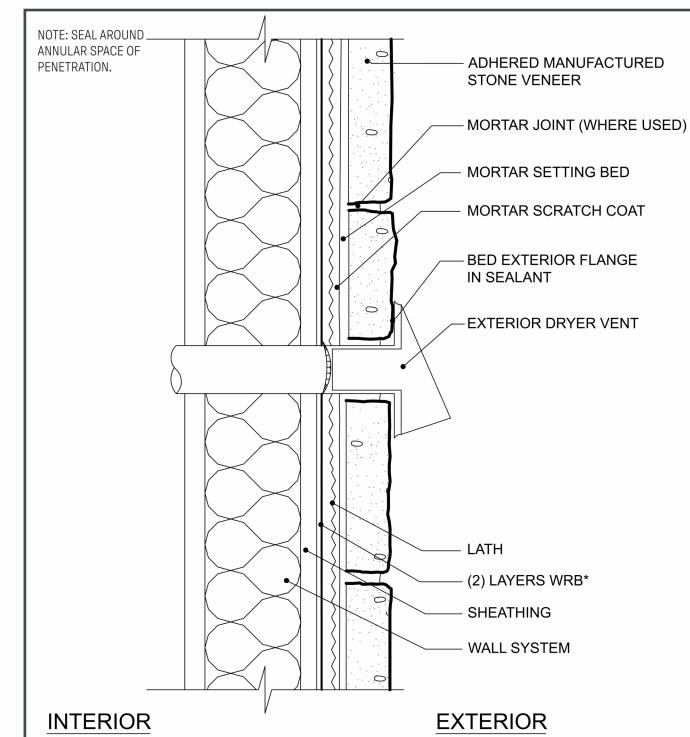


Figure 41a. Forward Mounted Commercial Window

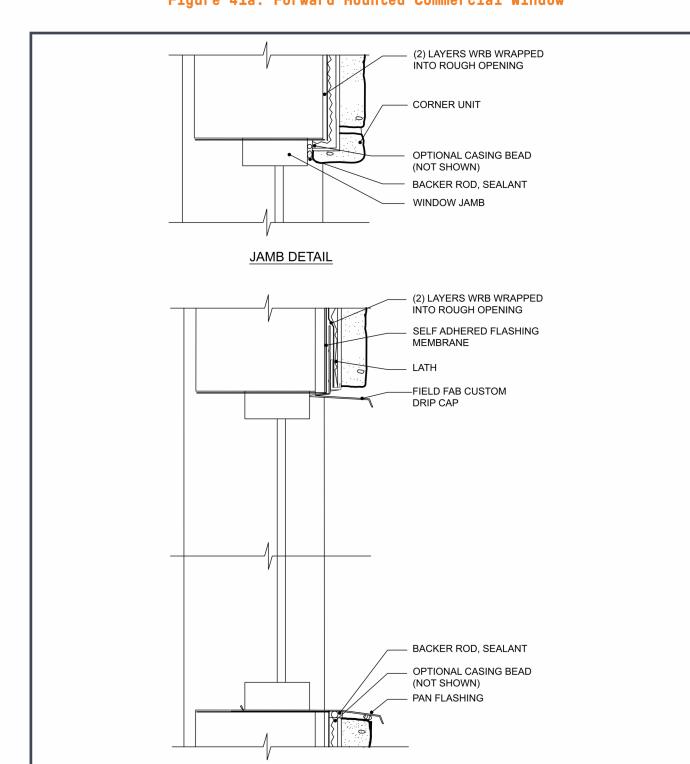
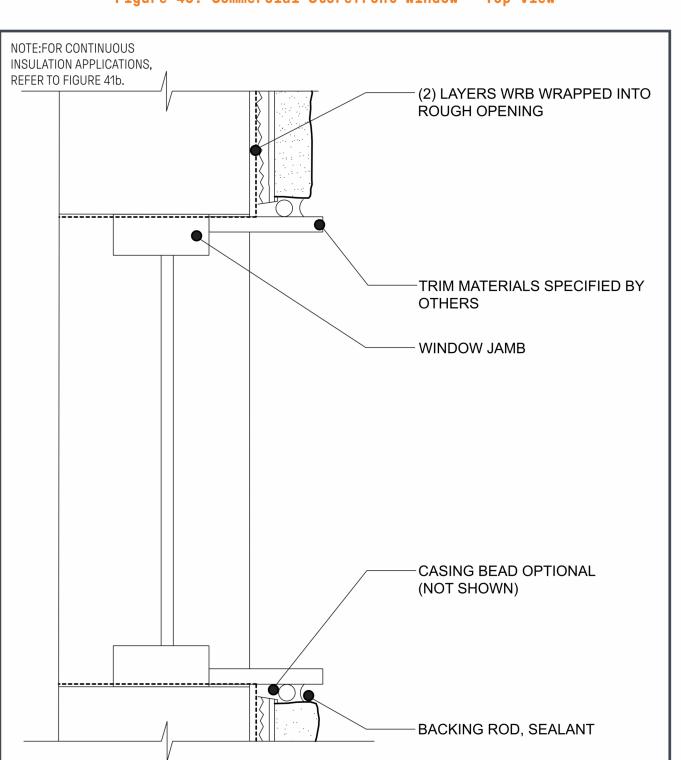
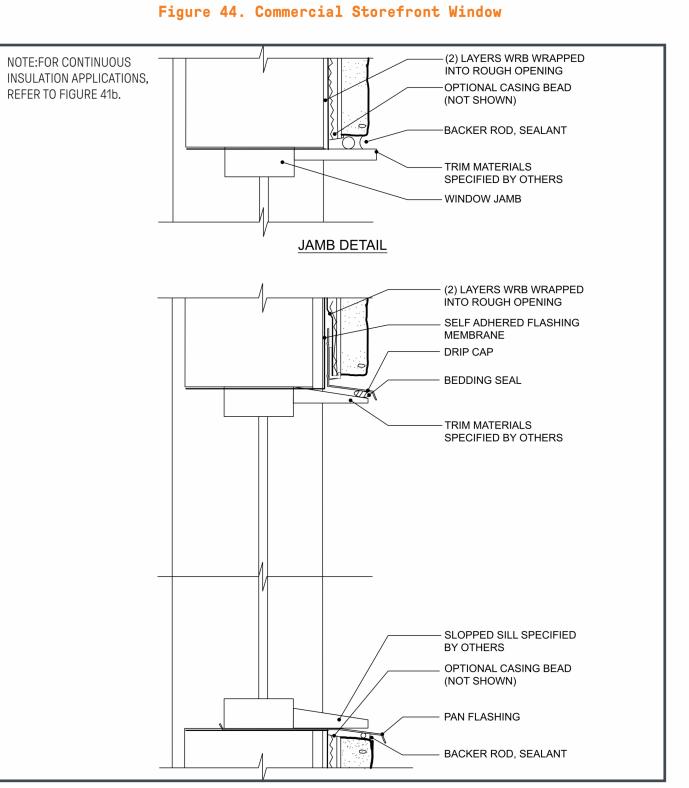
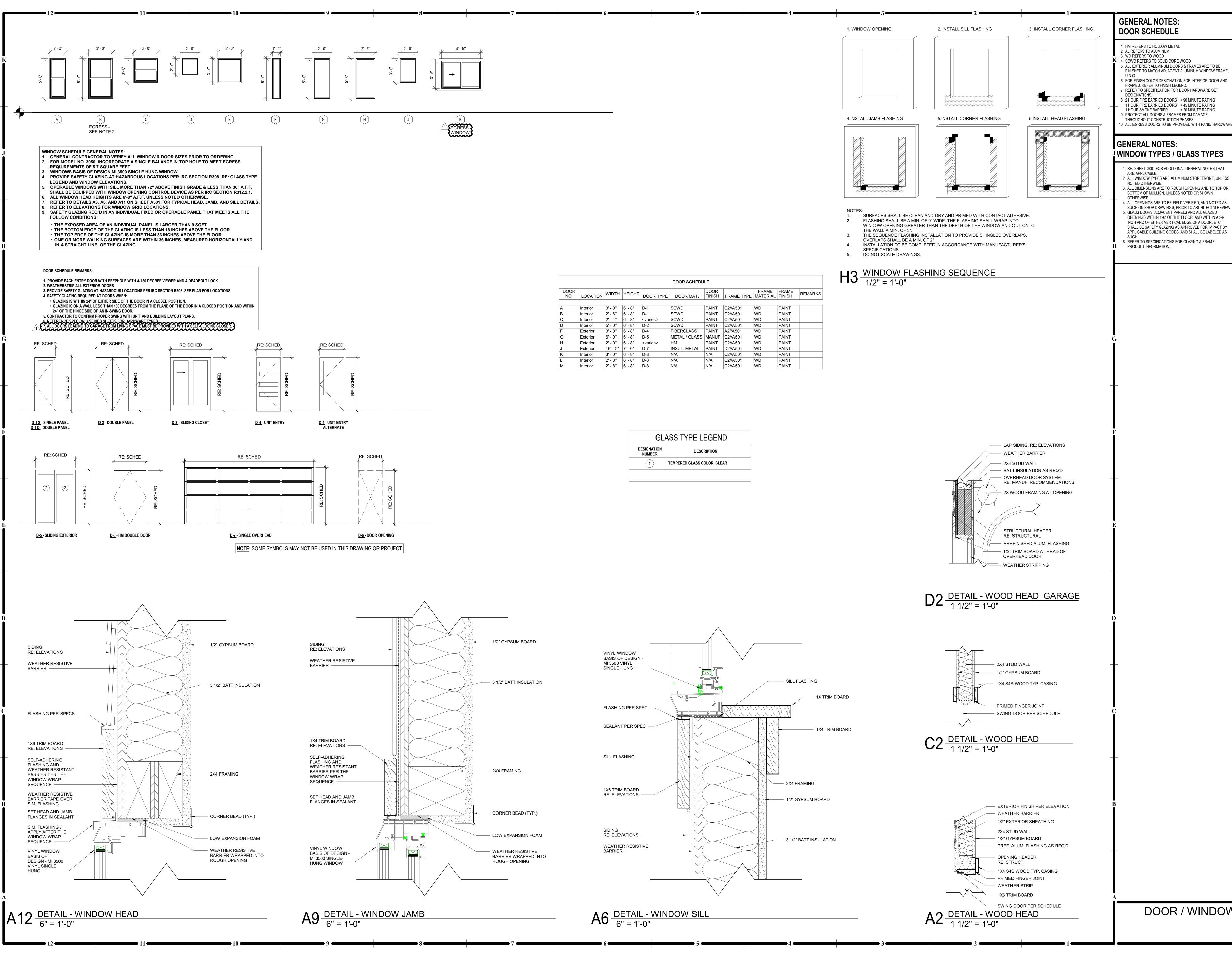


Figure 43. Commercial Storefront Window - Top View







**GENERAL NOTES:** DOOR SCHEDULE

1. HM REFERS TO HOLLOW METAL 2. AL REFERS TO ALUMINUM WD REFERS TO WOOD

4. SCWD REFERS TO SOLID CORE WOOD 5. ALL EXTERIOR ALUMINUM DOORS & FRAMES ARE TO BE

FINISHED TO MATCH ADJACENT ALUMINUM WINDOW FRAME, 6. FOR FINISH COLOR DESIGNATION FOR INTERIOR DOOR AND FRAMES, REFER TO FINISH LEGEND.

7. REFER TO SPECIFICATION FOR DOOR HARDWARE SET DESIGNATIONS. 8. 2 HOUR FIRE BARRIED DOORS = 90 MINUTE RATING 1 HOUR FIRE BARRIED DOORS = 45 MINUTE RATING 1 HOUR SMOKE BARRIER = 20 MINUTE RATING 9. PROTECT ALL DOORS & FRAMES FROM DAMAGE

**GENERAL NOTES:** 

ARE APPLICABLE. 2. ALL WINDOW TYPES ARE ALUMINUM STOREFRONT, UNLESS NOTED OTHERWISE.

4. ALL OPENINGS ARE TO BE FIELD VERIFIED, AND NOTED AS SUCH ON SHOP DRAWINGS, PRIOR TO ARCHITECT'S REVIEW.

5. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 1'-6" OF THE FLOOR, AND WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF A DOOR, ETC.,

6. REFER TO SPECIFICATIONS FOR GLAZING & FRAME PRODUCT INFORMATION.

J WINDOW TYPES / GLASS TYPES

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT

3. ALL DIMENSIONS ARE TO ROUGH OPENING AND TO TOP OR BOTTOM OF MULLION, UNLESS NOTED OR SHOWN

SHALL BE SAFETY GLAZING AS APPROVED FOR IMPACT BY APPLICABLE BUILDING CODES, AND SHALL BE LABELED AS

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**REVISION DATES:** 1 CITY COMMENTS

WEBBII NUMBER

PROFESSIONAL SEAL

COLLINS WEBB #:

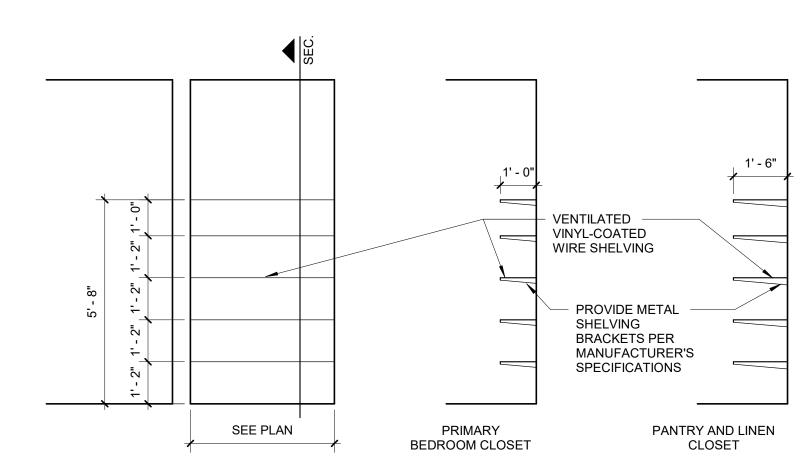
DOOR / WINDOW SCHEDULE + DETAILS

						FINISH LEGEND			
Silverspot Approved	TYPE ORDERING	FLOOR / WALL / CEILING	BUILDING TYPE	SYMBOL	MATERIAL	MANUFACTURER	ТҮРЕ	COLOR	TYP. AREA / REMARKS
RESERVE									
LOOR FINISH									
Х	Α	FLOOR FINISH	.RESERVE	C1	CARPET TILE (23oz, 18"X36")	MANNINGTON COMMERCIAL	AGAINST THE GRAIN / HAND SCRAPED	14300 CARVED	INSTALLATION METHOD: VERTICAL ASHLAR
VALL BASE		'							'
	В	WALL BASE	.RESERVE	MB1	METAL BASE - DECORATIVE PLATE STEEL (1/8"X6"H, BAR HEIGHT)			BLACK (EP5)	CONCIERGE, LOUNGE / BAR
WALL FINISH					· · · · · · · · · · · · · · · · · · ·				
	С	WALL FINISH	.RESERVE	EP1	PAINT - EPOXY	SHERWIN WILLIAMS	SATIN ENAMEL	SW 7674 PEPPERCORN	HM DOOR FRAMES, PORT GLASS WINDOW FRAMES
MILLWORK / CAS	SEWORK		1						
Х	D	MILLWORK / CASEWORK	.RESERVE	PL1	PLASTIC LAMINATE	WILSONART	PREMIUM, GLOSS LINE W/ AEON SCRATCH RESISTANCE FINISH	8214K-28 PHANTOM CHARCOAL	ELEVATOR CABS
WALL PROTECT	ION	<u>'</u>							<u>'</u>
	E	WALL PROTECTION	.RESERVE	CG1	CORNER GUARD - ALUMINUM (3/4" x 3/4")		FULL HEIGHT	BLACK	HIGH PROFILE AREAS. SEE FINISH FLOOR PLANS FOR LOCATIONS
CEILING FINISH		·				•			
X	F	CEILING FINISH	.RESERVE	ACT1	VINYL-FACED CEILING TILE (2'x4')	CERTAINTEED CEILINGS	VINYL SHIELD A, 1100-CRF-1	WHITE	KITCHEN, SERVICE, DRY GOODS, TRASH

#### **GENERAL NOTE:**

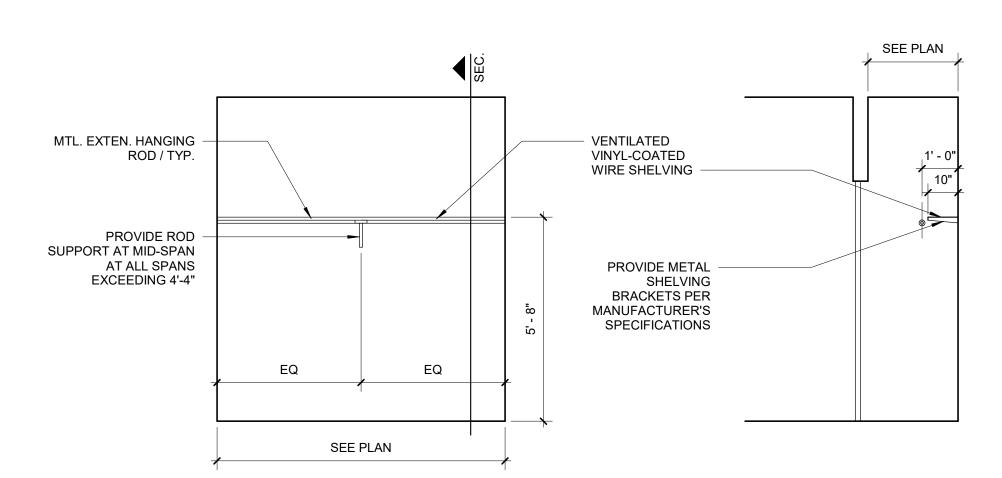
FINISH MATERIALS TO BE PROCURRED FROM OWNER SELECTED / SPECIFIED VENDOR, AS LISTED ABOVE. ALTERNATES OR SUBSTITUTIONS WILL NOT BE ACCEPTED.

	ROOM FINISH SCHEDULE											
	FLOOF	RS			CASEWORK							
ROOM NAME	FLOOR	WALL BASE	CEILING FINISH	Wall Finish	COUNTERTOP	REMARKS						
RESERVE												
1/2 BATH	TILE	TB1	P2	P1	QUARTZ							
BATH #2	TILE	TB1	P2	P1	QUARTZ							
BEDROOM #2	CPT	WB	P2	P1								
BEDROOM #3	CPT	WB	P2	P1								
BEDROOM #4	CPT	WB	P2	P1								
CLO.	MATCH ADJACENT FLOORING	WB	P2	P1								
CORR.	CPT	WB	P2	P1								
DINING	LVT	WB	P2	P1								
GARAGE	SMOOTH CONC	NONE	TAPE + MUD	TAPE + MUD								
KITCHEN	LVT	WB	P2	P1	QUARTZ							
LAUNDRY	LVT	WB	P2	P1								
LIVING ROOM	LVT	WB	P2	P1								
LOFT	CPT	WB	P2	P1								
MECH S	SMOOTH CONC	NONE	TAPE + MUD	TAPE + MUD								
PANTRY	LVT	WB	P2	P1								
PRIMARY BATH	TILE	TB1	P2	P1	QUARTZ							
PRIMARY BEDROOM	CPT	WB	P2	P1								
WALK-IN	CPT	WB	P2	P1								



SECTION

ELEVATION RE; PLANS FOR LOCATIONS C3 SHELVING DETAIL / 2 SIDE WALLS
3/8" = 1'-0"



**ELEVATION** 

RESILIENT FLOORING AS SCHED.

- UNDERLAYMENT TO BRING FLOORING FLUSH TO CARPET,

JOHNSONITE SUBFLOOR

LEVELER SYSTEM

JOHNSONITE CTA-XX-J,
 COLOR TO BE SELECTED

FROM MANUFACTURER'S STANDARD COLORS

CONCRETE FLOOR

— SCHLUTER RENO U, SATIN NICKEL ANODIZED ALUM.

— TILE AS SCHED.

RESILIENT FLOORING

A7 BASE DETAIL

3" = 1'-0"

B7 TRANSITION DETAIL

3" = 1'-0"

— WALL COVERING/FINISH BEHIND WALL BASE, TYP.

- FLOORING AS SCHED.

- 1X6 FINISHED WOOD TRIM (WB1 / WB2)

AS SCHED.

SCHLUTER SCHIENE, SATIN -

NICKEL ANODIZED ALUM. (AT)

CARPET AS SCH. —

B9 TRANSITION DETAIL

3" = 1'-0"

SCHED.

A9 TRANSITION DETAIL

3" = 1'-0"

A5 1 ROD / 1 SHELF DETAIL 3/8" = 1'-0"

FINISH SCHEDULE + DETAILS

**GENERAL NOTES: INTERIOR FINISHES** 

1. RE: SHEET G001 FOR ADDITIONAL GENERAL NOTES THAT ARE

APPLICABLE. 2. RE: G002 FOR ACCESSIBILITY GUIDELINES. 3. RE: A600 SERIES SHEETS FOR ADDITIONAL CEILING FINISH INFORMATION.

4. RE: A700 SERIES SHEETS FOR ADDITIONAL WALL FINISH CLARIFICATION. 5. RE: A900 SERIES SHEETS FOR ADDITIONAL FLOOR FINISH &

WALL PROTECTION INFORMATION. 6. ALL AUDITORIUM WALLS TO RECEIVE WALL CARPET, WC1, ARE TO BE PRIMED. PAINT P5, A MINIMUM OF 6" ABOVE TOP OF WALL CARPET. 7. HOLLOW METAL FRAMES SHALL RECEIVE SEMI-GLOSS FINISH

WHERE WALL COLOR IS DIFFERENT ON EACH SIDE OF THE HOLLOW METAL FRAME, PAINT FRAME TO MATCH CORRIDOR WALL, UNLESS NOTED OR SHOWN OTHERWISE. 8. CONTINUE WALL FINISH AS SCHEDULED BEHIND EQUIPMENT. 9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO

CASEWORK FABRICATION AND INSTALLATION. 10. ALL EXPOSED CASEWORK SURFACES SHALL BE FINISHED PLASTIC LAMINATE AS SCHEDULED, U.N.O. 11. ALL PLASTIC LAMINATE DOOR AND DRAWERS TO RECEIVE

1MM PVC EDGEBAND AND ALL COUNTERTOPS TO RECEIVE

3MM PVC EDGEBANDING. 12. ALL BACKSPLASH MATERIAL SHALL MATCH COUNTERTOP MATERIAL. 13. WHERE TWO MODULAR TILES (PORCELAIN, MARBLE, OR

QUARRY) OF VARYING THICKNESSES MEET, THE SETTING BED FOR THE THINNER TILE SHALL BE BUILT UP TO ENSURE

THAT THE FACES OF THE DIFFERENT TILES ARE FLUSH. 14. AT ALL EXPOSED OUTSIDE EDGES OF MARBLE WALL TILE (T1 PROVIDE BULLNOSE POLISHED EDGES. RE: DETAIL J7/A904 15. TRANSITION ALL WALL FINISHES/COLOR CHANGES AT INSIDE

CORNERS, UNLESS NOTED OTHERWISE (U.N.O.) 16. TRANSITION WALL BASE AT INSIDE CORNERS, U.N.O.

17. INSTALL METAL TRANSITION STRIP WHERE WALL TILE MEETS PAINTED GYP. BD. WALL IN ALL VERTICAL AND/ OR HORIZONTAL CONDITIONS, U.N.O.

#### ROOM FINISH SCHEDULE REMARKS:

AREAS WITH MULTIPLE DESIGNATED FINISHES, RE: FINISH FLOOR PLANS & INTERIOR ELEVATIONS FOR ADDITIONAL CLARIFICATION.

1. PROVIDE FULL HEIGHT WALL TILE AT WET WALL, RE: INTERIOR ELEVATIONS. 2. PROVIDE WALL TILE TO 6'-0" AFF ON ALL WALLS IN ROOM/SPACE. RE: INTERIOR ELEVATIONS.

3. PROVIDE FRP FULL HEIGHT. 4. PROVIDE FRP TO 3'-0" AFF.

5. PROVIDE FRP AT INSIDE OF BAR DIE WALL. 6. PROVIDE PLYWOOD PANELS FULL HEIGHT (ABOVE WALL BASE) AT WALLS DESIGNATED PER FINISH FLOOR PLANS. 7. PROVIDE CAULK JOINT BETWEEN EDGE OF STAIR AND/OR

AUDITORIUM RISER AND HORIZONTAL FINISH. CAULK JOINT COLOR TO MATCH LVT AND SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. JOINT SHOULD BE 1/8" OR LESS AND BE FINISHED PER SPECIFICATIONS. 8. PROVIDE WALL TILE TO 5'-0" AFF AT WET WALL, RE: INTERIOR ELEVATIONS.

9. PROVIDE FULL HEIGHT WALL TILE ON ALL WALLS IN ROOM/SPACE, RE: INTERIOR ELEVATIONS. 10. PROVIDE LEVEL 4 FINISH FOR ALL WALLS TO RECEIVE WC2, WC3, AND WC4. PROVIDE LEVEL 5 FINISH FOR ALL WALLS TO RECEIVE

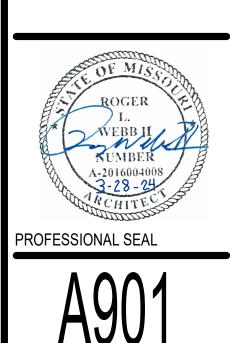
WG1 AND WG2.

12. PROVIDE LEVEL 3 FINISH FOR ALL WALLS TO RECEIVE WALL CARPET, WC1. PROVIDE WC1, ALONG PERIMETER OF ALL AUDITORIUM WALLS & KNEE WALLS, WITH THE EXCEPTION OF THE SCREEN WALL. RE: INTERIOR ELEVATIONS FOR SPECIFIC 3. PROVIDE FULL HEIGHT WALL CARPET, WC1/WC2 AS

SPECIFIED, ALONG PERIMETER OF ALL WALLS. RE: FINISH FLOOR PLANS FOR SPECIFIC LOCATIONS.

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E SHENANDO EE'S SUMMIT,



COLLINS WEBB #:

ELEC	CTRICAL ABBREVIATIONS
AC	ALTERNATING CURRENT
AHU	AIR HANDLING UNIT
A. OR AMPS.	AMPERES
AFC	ABOVE FINISH COUNTER
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
	AMPERES INTERRUPTING CAPACITY
AIC	
ATS	AUTOMATIC TRANSFER SWITCH
BTC	BRANCH TO CONNECTION POINT AND CONNECT EQUIPMENT
С	CONDUIT ("E.C." IS EMPTY CONDUIT)
CF	CEILING FAN
CM	COFFEE MAKER
СТ	COOKTOP
D	DEDICATED CIRCUIT
DCO	DUPLEX CONVIENCE OUTLET
DP	DISPOSAL
DW	DISHWASHER
DY	DRYER
EMT	ELETRICAL METALLIC TUBING
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER (WATER-COOLED DRINKING FOUNTAIN)
EX	EXISTING
FCU	FAN COIL UNIT
GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFIP	GROUND FAULT INTERRUPTER PROTECTED
GRD	GROUND
H	HORIZONTAL MOUNT (RECEPTACLE)
HD	VENTILATION HOOD
HP	HORSEPOWER
HT	HEAT TRACE POWER (PROVIDE W/ 20A/1P GFI BREAKER)
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND (DUPLEX RECEPTS NEMA 5-20RIG)
KCM	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT-AMPERES (1000 VOLT-AMPERES)
KW	KILOWATTS (1000 WATTS)
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
MW	MICROWAVE (COORD MTG HT W/ ARCHITECT)
NIC	NOT IN CONTRACT
NEC	NATIONAL ELECTRICAL CODE
NF	NOT FUSED
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PNL	PANEL
PH OR Ø	PHASE
Р	POLE
PVC	POLYVINYL CHLORIDE
RF	REFRIGERATOR
RG	RANGE
SPD	SURGE PROTECTIVE DEVICE
T	TAMPERPROOF RECEPTACLE
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION RECEPTACLE
UC	UNDERCOUNTER REFRIGERATOR (OR ICE MACHINE)
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERES
VD	VENDING MACHINE (24"AFF)
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WA	WASHER
WD	WARMING DRAWER
WO	WALL OVEN
WP	WEATHERPROOF
WP/WR	WEATHERPROOF/WEATHER RESISTANT
W/UNIT	DISCONNECT IS SUPPLIED WITH THE UNIT

## GENERAL ELECTRICAL NOTES

- . COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, REQUIREMENTS OF THE AHJ AND ALL LOCAL & STATE CODES. 2. DO NOT SCALE FROM THESE DRAWINGS.
- 3. REFER TO ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
- 4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRINGS AND BUSHINGS. 5. ALL JUNCTION BOXES SHALL HAVE A COVER.
- 6. COORDINATE EACH LIGHT FIXTURE INSTALLATION(S) W/ ACTUAL CEILING TO BE FURNISHED. . ALL BRANCH CIRCUITS WITHOUT A CONDUCTOR & CONDUIT INDICATED SHALL BE ROUTED TO A 20A-1P BREAKER W/ 2#12,1#12EG,3/4"C. B. ALL BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG AND ALL CONDUIT SHALL NOT
- BE SMALLER THAN 3/4"C. UNLESS SPECIFICALLY NOTED OTHERWISE. 9. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH DEDICATED NEUTRALS UNLESS NOTED OTHERWISE. WHERE NEUTRALS ARE INDICATED TO BE SHARED, MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH 2P OR 3P BREAKERS AS REQUIRED PER NEC210.4.

10. ALL CIRCUITS (LIGHTING AND POWER) SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND

- CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. THE RACEWAY SHALL NOT BE USED AN EQUIPMENT 11. ALL FIXTURES SHALL BE SUPPORTED FROM EACH CORNER (INDEPENDENT OF THE SUSPENDED CEILING)
- WITH 12 GAUGE WIRE CONNECTED TO STRUCTURAL SYSTEM OF BUILDING. THE INSTALLATION SHALL MEET OR EXCEED THE SEISMIC REQUIREMENTS OF LOCAL AND NATIONAL CODES. 12. ELECTRICAL DEVICE MOUNTING HEIGHTS, UNO:
- 78" AFF TO TOP OF PANEL PANELBOARDS 46" AFF TO CENTER OF SWITCH SWITCHES RECEPTACLES 18" AFF TO CENTER OF RECEPTACLE
- TELE/DATA OUTLETS 48" AFF TO CENTER OF RECEPTACLE APARTMENT LOADCENTERS PER ANSI A117.1 REQUIREMENTS (VERIFY WITH LOCAL INSPECTOR) 13. ELECTRICAL EQUIPMENT (PANELBOARDS, TRANSFORMERS, DISTRIBUTION EQUIPMENT, ETC.) IS SHOWN TO
- SCALE ON THE FLOOR PLANS. 14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIPMENT THAT WILL FIT WITHIN THE SPACES SHOWN ON THE PLANS AND COMPLYING WITH ALL CODE REQUIRED CLEARANCES.
- 15. ELECTRICAL CONTRACTOR TO LABEL ALL DEVICES (RECEPTACLES, SWITCHES, PANELBOARDS, DISCONNECTS, ETC.) WITH CIRCUIT NUMBER AND PANELBOARD DESIGNATION. RECEPTACLES, SWITCHES, AND SIMILAR DEVICES TO HAVE PRE-PRINTED, SELF ADHESIVE LABEL.
- 16. PANELBOARDS, DISCONNECT SWITCHES, AND SIMILAR DEVICES TO HAVE ENGRAVED, SELF-ADHESIVE, LAMINATED ACRYLIC LABEL (BLACK W/ WHITE LETTERING). 17. PROVIDE TYPE-WRITTEN PANELBOARD SCHEDULES FOR ALL ELECTRICAL PANELBOARDS.

	LIGHTING FIXTURES/DEVICE	ES		POWER EQUIPMENT/DEVIC	ES	
SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTIN	
<b>O</b> A	DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		SWITCHBOARD OR DISTRIBUTION PANEL REFER TO PANEL SCHEDULES		
<b>ô</b> A	DIRECTIONAL DOWNLIGHT (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING		DRY-TYPE TRANSFORMER REFER TO PLANS FOR KVA RATING		
ЮА	WALL MOUNTED LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL		120/208V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES		
A	LINEAR LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING OR SUSPENDED		277/480V, 3Ø, 4W PANELBOARD REFER TO PANEL SCHEDULES		
A	2X4 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	<u>0</u> 0	JUNCTION BOX	WALL OR CEILING	
А	2X2 LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	CEILING	30/20/3	FUSED SAFETY SWITCH (E.G. 30/20/3 INDICATES A 30A, 3-POLE SWITCH WITH 20A FUSES)		
	HATCHING ON FIXTURE INDICATES FIXTURE TO HAVE EMERGENCY BACK-UP		30/NF/3 <sup>L</sup>	NON-FUSED SAFETY SWITCH (E.G. 30/NF/3 INDICATES A 30A, 3-POLE SWITCH WITHOUT FUSES)		
<b>1</b> X3	TWO HEAD EMERGENCY LIGHT FIXTURE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING	S <sup>M</sup>	MOTOR RATED SWITCH		
<b>©</b> x₁ <b>1⊕1</b>	EMERGENCY EXIT SIGN. PROVIDE ARROW(S) AS INDICATED. SHADING INDICATES FACE (LETTER INDICATES FIXTURE TYPE) REFER TO LIGHT FIXTURE SCHEDULE	WALL OR CEILING	$\mathcal{O}'$	MOTOR		
S	SINGLE POLE SWITCH 20A (120/277V)	WALL - 48" AFF	Ю	NEMA 5-20R SIMPLEX RECEPTACLE	WALL - 18" AFF	
S <sub>3</sub>	THREE WAY SWITCH 20A (120/277V)	WALL - 48" AFF	₩	NEMA 5-20R DUPLEX RECEPTACLE	WALL - 18" AFF	
S <sub>4</sub>	FOUR WAY SWITCH 20A (120/277V)	WALL - 48" AFF	₽	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER	WALL - 6" ABOVE FINISHE COUNTER U.N.C	
HZ	WALL BOX DIMMER SWITCH	WALL - 48" AFF	#	NEMA 5-20R QUAD-PLEX RECEPTACLE	WALL - 18" AFF	
<b>Q</b> <sub>X</sub> ₹ <sub>X</sub>	CEILING OR WALL MOUNTED OCCUPANCY SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE  WALL OR CEILING		₽	NEMA 5-20R SPLIT RECEPTACLE. TOP OUTLET WIRED HOT. BOTTOM OUTLET SWITCHED.	WALL - 18" AFF	
HCX	LOW-VOLTAGE CONTROL STATION (LETTER INDICATES CONTROL STATION TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	WALL - 48" AFF	<b>⊗</b>	SPECIAL PURPOSE RECEPTACLE REFER TO PLANS FOR NEMA CONFIGURATION	WALL - 18" AFF OR CEILING	
₽©X	PHOTOCELL SENSOR (LETTER INDICATES SENSOR TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	FIELD VERIFY	₩USB	NEMA 5-20R - DUPLEX RECEPTACLE WITH USB PORTS SIMILAR TO HUBBELL #USB20AC5W	WALL - 18" AFF	
PP	POWERPACK (LETTER INDICATES POWERPACK TYPE) REFER TO LIGHTING CONTROLS SCHEDULE	ACCESSIBLE CEILING	<del>***</del>	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED ON CEILING	CEILING - FLUSI	
COMM	UNICATION/LOW-VOLTAGE	DEVICES	FB1	HUBBELL CFB4 SERIES FLOOR BOX (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH	
SYMBOL	DESCRIPTION	MOUNTING	FB2	HUBBELL B24 SERIES FLOOR BOX (OR EQUAL) WITH (1) DUPLEX RECEPTACLE AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH	
CR	CARD READER (VERIFY EXACT REQUIREMENTS)		FB3	HUBBELL B24 SERIES FLOOR BOX (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH	
<b>M</b>	DATA, TELEPHONE, OR COMBO TELE/DATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	WALL - 18" AFF	PK1	HUBBELL S1PT SERIES 4" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION CONNECTION CAPABILITY	FLOOR - FLUSH	
<b>③</b>	DATA, TELEPHONE, OR COMBO TELE/DATA OUTLET PROVIDE PULLSTRING IN CONDUIT TO ACCESSIBLE CEILING	FLOOR OR CEILING	PK2	HUBBELL S1PTFF SERIES 4" POKE-THRU (OR EQUAL) FOR POWER AND DATA CONNECTIONS TO PRE-WIRED FURNITURE VERIFY EXACT CONNECTION WITH FURNITURE VENDOR	FLOOR - FLUSH	
	TELEVISION OUTLET	WALL OR CEILING	PK3	HUBBELL S1R6 SERIES 6" POKE-THRU (OR EQUAL) WITH (2) DUPLEX RECEPTACLES AND DATA/COMMUNICATION AND A/V CONNECTION CAPABILITY	FLOOR - FLUSH	
●	SPEAKER OUTLET	FIELD VERIFY		CONDUIT IN OR UNDER FLOOR/GRADE		
TTB'	TELEPHONE TERMINAL BOARD	WALL		CONDUCTOR HOME RUN - ( ) HOT, ( ) NUETRAL, ( ) EQUIPMENT GROUND, & ( ) ISOLATED GROUND		
K	SECURITY CAMERA OUTLET	FIELD VERIFY		EQUIPMENT CONNECTION		
₽	PUSH BUTTON			CONDUIT IN CEILING OR WALL		
OTE: NOT ALL SYM	BOLS MAY BE USED.			FIRE ALARM DEVICES	1	

SYMBOL

HEAT DETECTOR

SMOKE DETECTOR

DESCRIPTION

COMBINATION SMOKE/CARBON MONOXIDE DETECTOR

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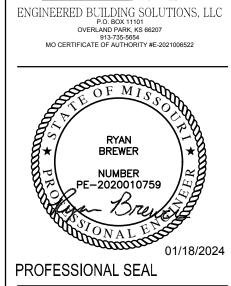
MOUNTING

CEILING

WALL/CEILING

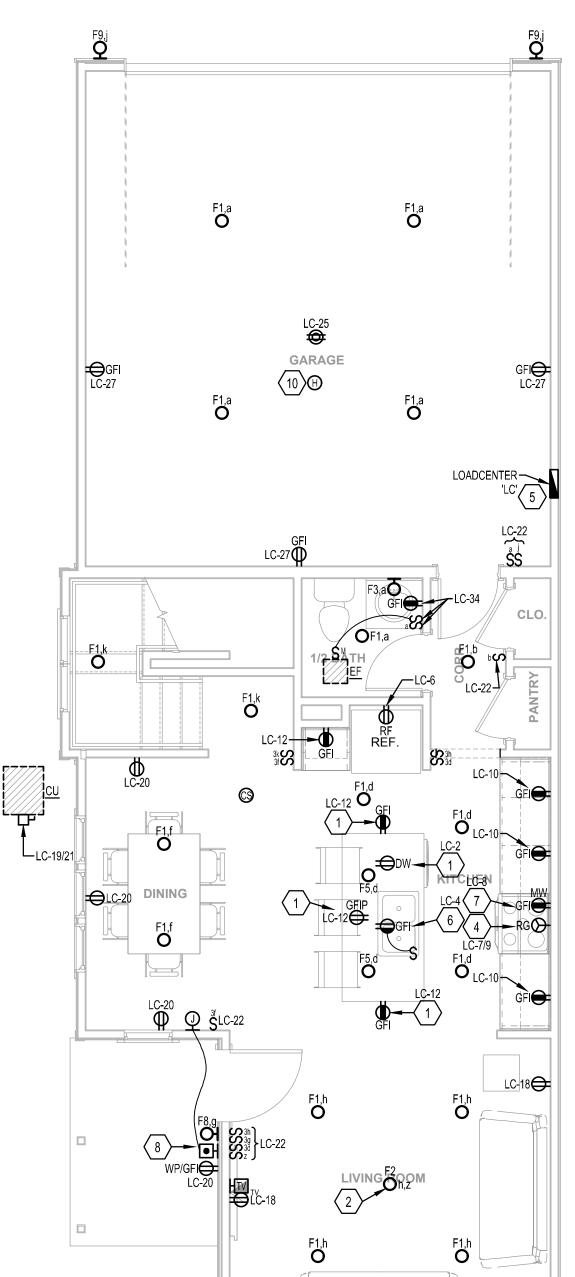
WALL/CEILING

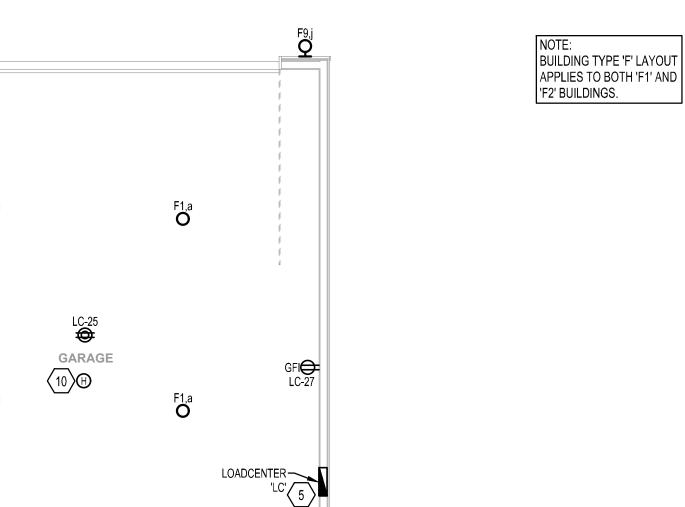
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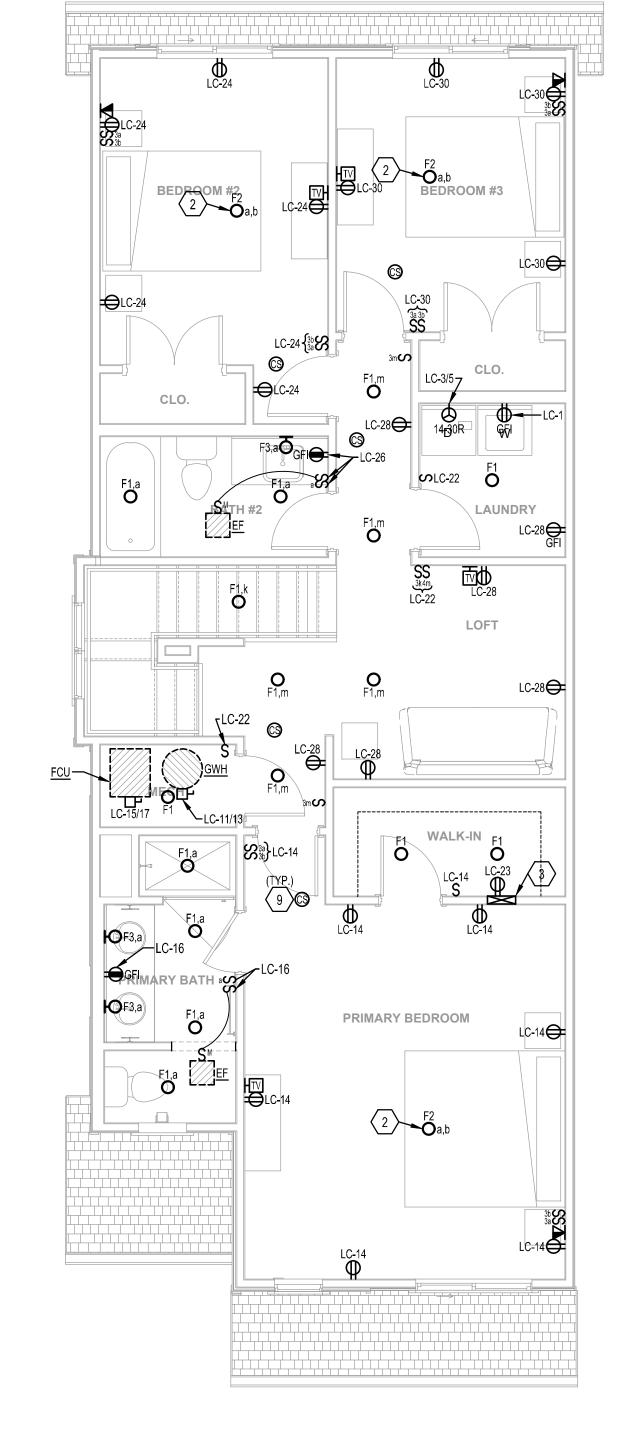


ISSUE DATE: 18 JAN 2024 COLLINS WEBB #:

ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS









OTES	CONDUCTORS	DESCRIPTION	TYPE	AMP/P				AMP/P	TYPE	DESCRIPTION	CONDUCTORS	NOTES
1,2	2#12,1#12EG,3/4"C.	WASHER	DFCI	20/1	1	Α	2	20/1	DFCI	DISHWASHER (DW)	2#12,1#12EG,3/4"C.	1,2
		DEG,3/4"C. DRYER (NEMA 14-30R)		30	3	В	4	20/1	AFCI	DISPOSAL (DP)	2#12,1#12EG,3/4"C.	1,2
6	3#10,1#10EG,3/4"C.			2	5	Α	6	20/1	DFCI	REFRIGERATOR (RF)	2#12,1#12EG,3/4"C.	1,2
_				50 /	7	В	8	20/1	AFCI	MICROWAVE (MW)	2#12,1#12EG,3/4"C.	1,2
6	3#8,1#10EG,3/4"C.	ELECTRIC RANGE (NEMA 14-50R)		2	9	Α	10	20/1	AFCI	KIT SMALL APPL CKT#1 (COUNTER GFCI'S)	2#12,1#12EG,3/4"C.	1,2,3
4,6 2#10,1#10EG,3,				30	11	В	12	20/1	AFCI	KIT SMALL APPL CKT#2 (WHERE APPLICABLE)	2#12,1#12EG,3/4"C.	1,2,3
	2#10,1#10EG,3/4°C.	WATER HEATER 'EWH'		2	13	Α	14	20/1	AFCI	BEDROOM #1 RCPTS & LTS	2#12,1#12EG,3/4"C.	1,2
4,6	2#8,1#10EG,3/4"C.	FAN COIL UNIT 'FCU-*'	114.00	45	15	В	16	20/1	AFCI	BATHROOM #1 RCPTS AND EF	2#12,1#12EG,3/4"C.	1,2
			HACR	2	17	Α	18	20/1	AFCI	GENERAL RCPTS (6 RCPTS/CKT MAX)	2#12,1#12EG,3/4"C.	1,2
<b>5</b> 0	2#10,1#10EG,3/4"C.	CONDENSING UNIT 'CU-*'	114.00	25 /	19	В	20	20/1	AFCI	GENERAL RCPTS (6 RCPTS/CKT MAX)	2#12,1#12EG,3/4"C.	1,2
5,6			HACR	2	21	Α	22	20/1	AFCI	GENERAL LIGHTING (KITCHEN,LIVING,DINING)	2#12,1#12EG,3/4"C.	1
1,2	2#12,1#12EG,3/4"C.	STRUCTURED MEDIA CENTER	AFCI	20/1	23	В	24	20/1	AFCI	BEDROOM #2 RCPTS & LTS	2#12,1#12EG,3/4"C.	1,2
1,2	2#12,1#12EG,3/4"C.	GARAGE DOOR OPENER	AFCI	20/1	25	Α	26	20/1	AFCI	BATHROOM #2 RCPTS AND EF	2#12,1#12EG,3/4"C.	1,2
1,2	2#12,1#12EG,3/4"C.	GARAGE RCPTS & LTS	AFCI	20/1	27	В	28	20/1	AFCI	GENERAL RCPTS (6 RCPTS/CKT MAX)	2#12,1#12EG,3/4"C.	1,2
1,2	2#12,1#12EG,3/4"C.	SMOKE & HEAT DETECTORS	AFCI	20/1	29	Α	30	20/1	AFCI	BEDROOM #3 RCPTS & LTS	2#12,1#12EG,3/4"C.	1,2
		SPACE ONLY			31	В	32	20/1	AFCI	BEDROOM #4 RCPTS & LTS	2#12,1#12EG,3/4"C.	1,2
		SPACE ONLY			33	Α	34	20/1	AFCI	BATHROOM #3 RCPTS AND EF	2#12,1#12EG,3/4"C.	1,2
		SPACE ONLY			35	В	36			SPACE ONLY		
		SPACE ONLY			37	Α	38			SPACE ONLY		
		SPACE ONLY			39	В	40			SPACE ONLY		

- ALL 120V-1Ø, 15 AMP AND 20 AMP DWELLING UNIT CIRCUITS SERVING OUTLETS OR DEVICES SHALL BE PROVIDED WITH A COMBINATION TYPE AFCI CIRCUIT BREAKER PER NEC 210.12(A). ALL 120V AND 250V, 15 AMP AND 20 AMP NON-LOCKING RECEPTACLES IN DWELLING UNITS SHALL BE LISTED AS TAMPER-RESISTANT TYPE PER NEC 406.12.
- RECEPTACLES IN KITCHENS, PANTRIES, BREAKFAST ROOMS, DINING ROOMS AND SIMILAR AREAS SHALL COMPLY WITH NEC 210.52(B) & (C).
- 4. PROVIDE NON-FUSED DISCONNECT SWITCH FOR UNIT. . PROVIDE NEMA 3R FUSED DISCONNECT SWITCH FOR UNIT.
- . VERIFY EXACT CONNECTION WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
- BREAKER TYPES: AFCI ARC FAULT CIRCUIT INTERRUPTER, GFCI GROUND FAULT CIRCUIT INTERRUPTER, DFCI DUAL FUNCTION ARC FAULT/GROUND FAULT CIRCUIT INTERRUPTER

**GENERAL NOTES** (NOT ALL NOTES APPLY)

REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.

. REFERENCE SHEET E102 FOR ELECTRICAL DETAILS. B. COORDINATE ALL MOUNTING HEIGHTS AND LOCATIONS FOR

ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN. I. ALL 120V-1Ø, 15 AMP AND 20 AMP DWELLING UNIT CIRCUITS

SERVING OUTLETS OR DEVICES SHALL BE PROVIDED WITH A COMBINATION TYPE AFCI CIRCUIT BREAKER PER NEC 210.12(A). . ALL 15 AMP AND 20 AMP, 120V AND 250V NON-LOCKING RECEPTACLES IN DWELLING UNITS SHALL BE LISTED AS TAMPER-RESISTANT TYPE PER NEC 406.12.

5. RECEPTACLES IN KITCHENS, PANTRIES, BREAKFAST ROOMS, DINING ROOMS AND SIMILAR AREAS SHALL COMPLY WITH NEC 210.52(B) & (C). PROVIDE AND INSTALL 3/4" CONDUIT AND PULL STRINGS FROM

TELEPHONE/DATA OUTLETS TO ABOVE ACCESSIBLE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND/OR OWNER. 3. VERIFY SPACING & LOCATIONS OF RECEPTACLES WITHIN DWELLING UNITS WITH LOCAL ELECTRICAL INSPECTOR PRIOR

TO INSTALLATION. PROVIDE ADDITIONAL RECEPTACLES IF ). COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS OF ALL MECHANICAL AND PLUMBING EQUIPMENT WITH MECHANICAL AND PLUMBING DRAWINGS/SUB-CONTRACTORS PRIOR TO ROUGH-IN. 10. PROVIDE CABLING (OR CONDUIT PATHWAY) FROM ALL TV AND DATA CONNECTIONS BACK TO STRUCTURED MEDIA CENTER AS REQUIRED. COORDINATE ALL TELE/DATA REQUIREMENTS WITH OWNER AND TELE/DATA SERVICE PROVIDER PRIOR TO



KEYED NOTES:

COORDINATE EXACT MOUNTING LOCATION OF RECEPTACLE WITH MILLWORK AND COUNTER ELEVATIONS AS REQUIRED. 2. CEILING MOUNTED FAN WITH LIGHT KIT. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

PROVIDE STRUCTURED MEDIA CENTER FOR TELE/DATA SERVICE TO DWELLING UNIT. ROUTE (1) 1-1/4" EMPTY CONDUIT WITH PULLSTRING FROM STRUCTURED MEDIA CENTER TO TELE/DATA DEMARCATION POINT ON DWELLING EXTERIOR. COORDINATE ALL TELE/DATA SERVICE REQUIREMENTS WITH OWNER AND TELE/DATA SERVICE PROVIDER PRIOR TO

I. RECEPTACLE CONNECTION FOR ELECTRIC RANGE. FIELD VERIFY EXACT RECEPTACLE CONFIGURATION WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. IF UNIT IS TO BE HARD-WIRED, PROVIDE A LOCKABLE CIRCUIT BREAKER IN THE LOAD CENTER AS REQUIRED TO SERVE AS EQUIPMENT DISCONNECTING MEANS.

5. DWELLING UNIT LOAD CENTER. REFER TO PANEL SCHEDULE (THIS SHEET) AND RISER DIAGRAM ON SHEET E301 FOR ADDITIONAL INFORMATION.

3. PROVIDE HALF-SWITCHED RECEPTACLE FOR GARBAGE DISPOSAL POWER. COORDINATE EXACT LOCATION OF SWITCH WITH MILLWORK AND COUNTER ELEVATIONS AS REQUIRED. IN HANDICAP ACCESSIBLE UNITS, SWITCH LOCATION TO BE PER ADA REQUIREMENTS.

RECEPTACLE FOR COMBINATION MICROWAVE & EXHAUST HOOD. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. IN HANDICAP ACCESSIBLE UNITS WHERE MICROWAVE SITS ON COUNTER, PROVIDE A SWITCHED RECEPTACLE ABOVE THE RANGE FOR EXHAUST HOOD POWER/CONTROL AND LOCATE SWITCH PER ADA REQUIREMENTS. B. LOW-VOLTAGE DOOR BELL SYSTEM. FIELD LOCATE

LOW-VOLTAGE TRANSFORMER AND CONNECT TO NEAREST RECEPTACLE CIRCUIT. PROVIDE ALL LOW-VOLTAGE WIRING BETWEEN PUSH BUTTON, TRANSFORMER AND CHIME FOR A COMPLETE AND OPERATIONAL SYSTEM. 2. 120V, COMBINATION SMOKE/CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP. ALL DETECTORS SHALL BE

INTERCONNECTED AND INSTALLED PER IRC 314 AND 315, AS WELL AS NFPA 72 AND 74. WHERE NECESSARY, PROVIDE ADDITIONAL DEVICES TO MEET CODE MINIMUM COVERAGE REQUIREMENTS. FIELD VERIFY EXACT LOCATION OF DETECTORS TO AVOID CLOSE PROXIMITY TO HVAC GRILLES AND DIFFUSERS.

10. 120V, RATE-OF-RISE HEAT DETECTOR WITH BATTERY BACKUP ALL DETECTORS SHALL BE INTERCONNECTED AND INSTALLED PER IRC 314 AND 315, AS WELL AS NFPA 72 AND 74. ONLY PROVIDE HEAT DETECTOR(S) WHERE REQUIRED BY LOCAL

WHERE ALLOWED BY LOCAL AHJ, TYPE 'NM'

MEETS (OR EXCEEDS) THE RATING OF THE OVERCURRENT PROTECTION FOR THE CIRCUIT

CABLING MAY BE USED. INCREASE WIRE SIZES

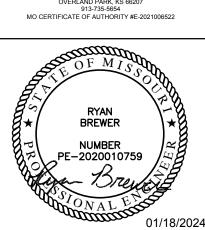
SHOWN IN LOADCENTER SCHEDULE AS REQUIRED

TO ENSURE AMPACITY RATING OF 'NM' CABLING

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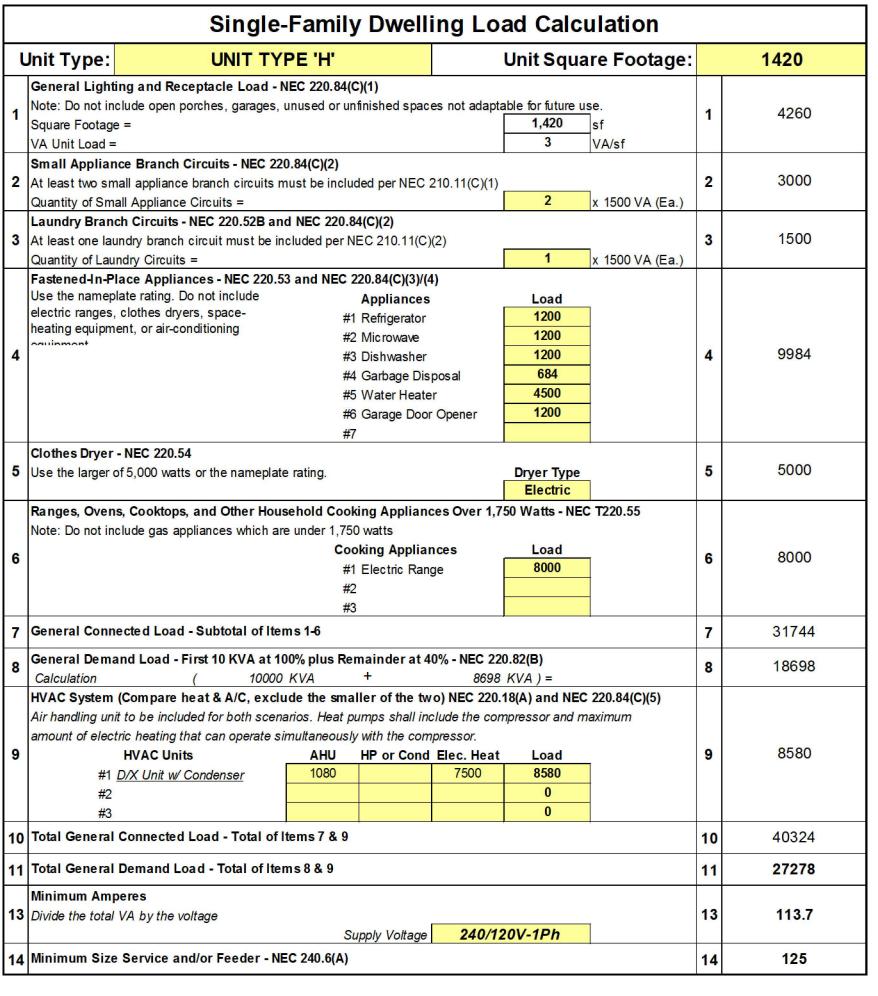




PROFESSIONAL SEAL

COLLINS WEBB #:

ELECTRICAL POWER & LIGHTING PLANS **BUILDING F** 



14	Minimum Siz	e Service and/or Feeder - NE	C 240.6(A)				14	125	
		Single-	Family Dwelli	ing Lo	ad Calcu	ılation			7 [
U	nit Type:	UNIT TY	PE'J'		Unit Squa	re Footage:		1685	
1				es not adapta	1,685	e. sf VA/sf	1	5055	
2	At least two sr	nce Branch Circuits - NEC 220 mall appliance branch circuits m nall Appliance Circuits =		210.11(C)(1)	2	x 1500 VA (Ea.)	2	3000	
3	At least one la	uch Circuits - NEC 220.52B and undry branch circuit must be in undry Circuits =		(2)	1	x 1500 VA (Ea.)	3	1500	
	Use the namer electric ranges	Place Appliances - NEC 220.5 plate rating. Do not include i, clothes dryers, space- nent, or air-conditioning	Appliances #1 Refrigerator #2 Microwave #3 Dishwasher #4 Garbage Dis #5 Water Heate #6 Garage Door	posal r	Load 1200 1200 1200 684 4500 1200		4	9984	
		of 5,000 watts or the nameplate	rating.		Dryer Type Electric		5	5000	
- 1	-	ns, Cooktops, and Other Hous nolude gas appliances which are		ices	Load 8000	T220.55	6	8000	
7	General Conr	nected Load - Subtotal of Iter					7	32539	<b>1</b>
8	General Dem Calculation	and Load - First 10 KVA at 10			0.82(B) KVA ) =		8	19016	
	Air handling un amount of elec		arios. Heat pumps shall inc	clude the con pressor.			9	8580	
10	Total General	Connected Load - Total of I	tems 7 & 9				10	41119	$\exists \mid \downarrow$
11	Total Genera	Demand Load - Total of Iter	ns8&9				11	27596	7
	Minimum Am Divide the total	peres IVA by the voltage	Supply Voltage	240/12	20V-1Ph		13	115.0	
14	Minimum Siz	e Service and/or Feeder - NE					14	125	$\rfloor \mid$

	Single	e-Family Dwel	ling Lo	ad Calcı	ulation		
l	Jnit Type: UNIT TYPI	ES 'E' & 'F'		Unit Squa	re Footage:		1495
1	General Lighting and Receptacle Load Note: Do not include open porches, garages Square Footage = VA Unit Load =		ces not adapta	able for future us	se. sf VA/sf	1	4485
2	Small Appliance Branch Circuits - NEC 2 At least two small appliance branch circuits Quantity of Small Appliance Circuits =		210.11(C)(1)	2	x 1500 VA (Ea.)	2	3000
3	Laundry Branch Circuits - NEC 220.52B at At least one laundry branch circuit must be Quantity of Laundry Circuits =	3	1500				
4	Fastened-In-Place Appliances - NEC 220 Use the nameplate rating. Do not include electric ranges, clothes dryers, space-heating equipment, or air-conditioning	.53 and NEC 220.84(C)(3)/ Appliance #1 Refrigerator #2 Microwave #3 Dishwashe #4 Garbage Di #5 Water Heat #6 Garage Doc #7	s r sposal ter	Load 1200 1200 1200 684 4500 1200		4	9984
5	Clothes Dryer - NEC 220.54 Use the larger of 5,000 watts or the namepl	ate rating.		Dryer Type Electric	1	5	5000
6	Ranges, Ovens, Cooktops, and Other Ho Note: Do not include gas appliances which		ances	50 Watts - NEC	T220.55	6	8000
7	General Connected Load - Subtotal of l					7	31969
8	General Demand Load - First 10 KVA at Calculation ( 100	100% plus Remainder at		<b>0.82(B)</b> KVA ) =		8	18788
9	HVAC System (Compare heat & A/C, exc Air handling unit to be included for both sce amount of electric heating that can operate HVAC Units #1 D/X Unit w/ Condenser #2 #3	clude the smaller of the t enarios. Heat pumps shall in simultaneously with the con	wo) NEC 220. nclude the con	18(A) and NEC		9	8580
10	Total General Connected Load - Total o	f Items 7 & 9	1			10	40549
11	Total General Demand Load - Total of l	tems 8 & 9				11	27368
13	Minimum Amperes Divide the total VA by the voltage	Supply Voltage	240/12	20V-1Ph		13	114.0
14	Minimum Size Service and/or Feeder -	NEC 240.6(A)				14	125

		Single-	Family Dwell	ing Lo	ad Calcı	ulation		
ι	Jnit Type:	UNIT TYI	PE 'G'		Unit Squa	re Footage:		1205
1				es not adapta	able for future us	se. sf VA/sf	1	3615
2	At least two sn	nce Branch Circuits - NEC 220 nall appliance branch circuits m all Appliance Circuits =		210.11(C)(1)	2	x 1500 VA (Ea.)	2	3000
3	Laundry Branch Circuits - NEC 220.52B and NEC 220.84(C)(2)  At least one laundry branch circuit must be included per NEC 210.11(C)(2)  Quantity of Laundry Circuits =   1 x 1500 VA (Ea.)							1500
4	Use the namep electric ranges	lace Appliances - NEC 220.5 plate rating. Do not include , clothes dryers, space- nent, or air-conditioning	Appliances #1 Refrigerator #2 Microwave #3 Dishwasher #4 Garbage Dis #5 Water Heate #6 Garage Doo	sposal er	Load 1200 1200 1200 684 4500 1200		4	9984
5	Clothes Dryer - NEC 220.54 Use the larger of 5,000 watts or the nameplate rating.  Dryer Type  Electric						5	5000
6	Ranges, Ovens, Cooktops, and Other Household Cooking Appliances Over 1,750 Watts - NEC T220.55  Note: Do not include gas appliances which are under 1,750 watts  Cooking Appliances  #1 Electric Range  #2  #2						6	8000
7	#3 General Connected Load - Subtotal of Items 1-6							31099
8	General Demand Load - First 10 KVA at 100% plus Remainder at 40% - NEC 220.82(B)  Calculation ( 10000 KVA + 8440 KVA) =							18440
9	Air handling un amount of elec	(Compare heat & A/C, excluit to be included for both scenatiric heating that can operate since HVAC Units  D/X Unit w/ Condenser	arios. Heat pumps shall in multaneously with the con	clude the cor	mpressor and m		9	8580
10	10 Total General Connected Load - Total of Items 7 & 9							39679
11	1 Total General Demand Load - Total of Items 8 & 9						11	27020
13	Minimum Amperes  Divide the total VA by the voltage  Supply Voltage  240/120V-1Ph						13	112.6
14	Minimum Size	e Service and/or Feeder - NE					14	125

HVAC DESIGN TO BE COMPLETED BY OTHERS. LOADS SHOWN IN FEEDER CALCULATION ARE ASSUMED VALUES AND SHOULD BE VERIFIED WITH ACTUAL HVAC SYSTEM TO BE INSTALLED. NOTIFY ENGINEER IF ACTUAL LOADS ARE GREATER THAN THOSE SHOWN IN THE CALCULATIONS.

	FEEDER SCHEDULE									
THHN/THWN COPPER CONDUCTORS W/ EG CONDUCTOR XHHW ALUMINUM CONDUCTORS W/ EG CONDUCTOR										
	CONDUCTORS & GROUND									
CODE	SETS	CONDUCTORS	RACEWAY	AMPS						
S123	S123 - 3#1 (CU)		1-1/2"	130						

CONDUCTORS.

ALL CONDUCTORS AMPACITY BASED ON THE NEC TABLE 310-16 FOR CONDUCTORS W/ 75°C INSULATION.

ALL RACEWAY SIZES (EMT/RMC/PVC 40) BASED ON THE NEC TABLE

4(CHAPTER 9), 40% FILL COLUMN. ELECTRICAL CONTRACTOR TO VERIFY ALL EQUIPMENT CONDUCTOR TERMINATION TEMPERATURE RATINGS (IE, 60°C OR 75°C). ADJUST

CONDUCTOR AMPACITY AND CONDUIT SIZES ACCORDINGLY. VERIFY MAXIMUM NO. OF SETS OF SERVICE ENTRANCE CONDUCTORS ALLOWED W/ UTILITY CO.

EQUIPMENT GROUNDING CONDUCTORS BASED ON T250.122. GROUND TO BE ADJUSTED PER T250.66 FOR SEPARATELY DERIVED SYSTEMS. ALUMINUM FEEDERS NOT TO BE USED ON TRANSFORMER SECONDARY

**VOLTAGE DROP CHART** VOLTAGE DROP WIRING SCHEDULE

FOR 1Ø LOADCENTER FEEDERS								
MAX LENGTH OF FEEDER (FEET)	FEEDER WIRE (AWG) & CONDUIT SIZE (IN.)							
150	REFER TO FEEDER SCHEDULE							
225	(3)#1/0, (1)#4G - 1-1/2"C.							
300	(3)#2/0, (1)#4G - 2"C.							
150	REFER TO FEEDER SCHEDULE							
225	(3)#2/0, (1)#4G - 2"C.							
300	(3)#3/0, (1)#4G - 2"C.							
	MAX LENGTH OF FEEDER (FEET) 150 225 300 150 225							

PROVIDE FEEDERS FOR LOADCENTERS AS INDICATED IN THE TABLE ABOVE. THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL INSTALLED FEEDER ROUTING AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.

CONDUCTOR SIZES ARE BASED ON SOLID COPPER CONDUCTORS FOR WIRES SMALLER THAN #6 AND STRANDED COPPER CONDUCTORS FOR WIRES #6 AND LARGER, IN A SINGLE METAL CONDUIT. LIMITS FOR CONDUCTOR LENGTH SHOWN ARE BASED ON A MAXIMUM

OF 3% VOLTAGE DROP TO COMPLY WITH THE NEC FOR CIRCUITS LOADED UP TO 80% OF THE BREAKER RATING. FIELD VERIFY EXACT FEEDER LENGTHS AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

**VOLTAGE DROP CHART** BRANCH CIRCUIT VOLTAGE DROP WIRING

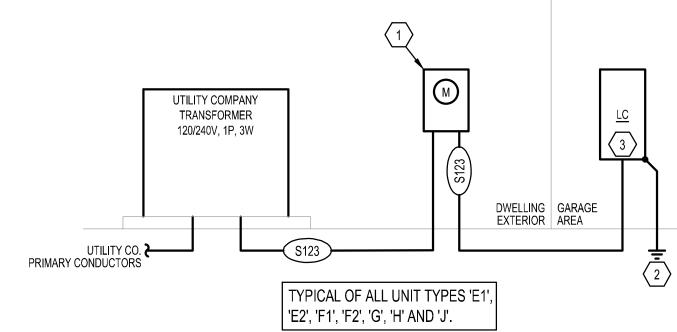
SCHEDULE FOR 1Ø CIRCUITS									
BRANCH CIRCUIT	WIRE SIZE	MAXIMUM LENGTH OF BRANCH CIRCUIT (FEET)							
RATING (AMPS)	(AWG)	120V	208V	240V	277V	480V			
	#12	50	90	110	125	200			
20A	#10	80	150	175	200	350			
ZUA	#8	140	230	280	320	550			
	#6	215	375	430	500	870			
	#10	50	100	110	130	225			
30A	#8	80	160	180	210	360			
JUA	#6	135	250	280	325	560			
	#4	220	400	400 450	525	910			

PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS

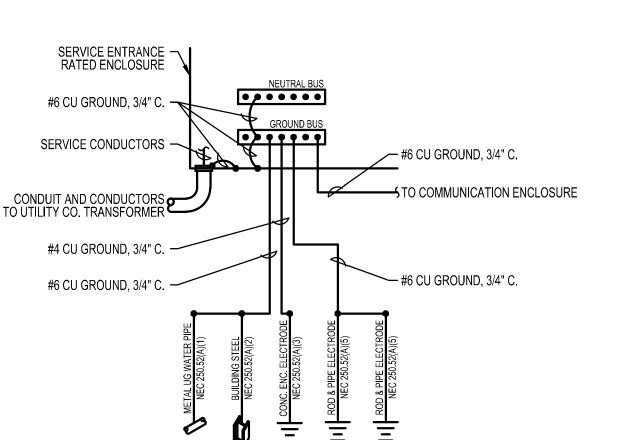
APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3% CONDUCTOR SIZES ARE BASED ON SOLID COPPER CONDUCTORS FOR WIRES SMALLER THAN #6 AND STRANDED COPPER CONDUCTORS FOR WIRES #6 AND LARGER, IN A SINGLE METAL CONDUIT. LIMITS FOR CONDUCTOR LENGTH SHOWN ARE BASED ON A MAXIMUM

OF 3% VOLTAGE DROP TO COMPLY WITH THE NEC FOR CIRCUITS LOADED UP TO 80% OF THE BRANCH BREAKER RATING. FIELD VERIFY EXACT BRANCH CIRCUIT LENGTHS AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

UNLESS NOTED OTHERWISE, WIRE SIZES CALLED OUT IN PANEL SCHEDULES DO NOT ACCOUNT FOR VOLTAGE DROP. CONTRACTOR SHALL INCREASE WIRE SIZES AS REQUIRED UTILIZING VOLTAGE DROP TABLE PROVIDED.



**ELECTRICAL RISER DIAGRAM** SCALE: NO SCALE



## **SERVICE GROUNDING DETAIL** SCALE: NO SCALE

FIXT.	DESCRIPTION & MANUFACTURER OPTIONS		LAMPS	FIXT.			REMARKS/MOUNTING	NOTES
TYPE			TYPE	VOLT				
	SURFACE MOUNTED LED DOWNLIGHT, 1200 LUMEN, 3000K, WHITE FINISH		LED	120V	15W	Coord. w/ Architect	Surface (Ceiling)	1
F1	M# HALO #SLD612/8030/WH							
	52" 5-BLADE FAN, 3 SPEED, REVERSIBLE, WITH GLOBE LIGHT KIT, BRUSHED NICKEL FINISH	1	LED	120V	15W	Coord. w/ Architect	Surface (Ceiling)	1
F2	M# ROYAL PACIFIC #1057-L							
	DUAL VANITY WALL SCONCE, CHROME FINISH	1	LED	120V	20W	Coord. w/ Architect	Surface (Wall)	1
F3	M# MINKA #6542-77							
	COUNTERTOP PENDANT LIGHT, CHROME FINISH	1	LED	120V	10W	Coord. w/ Architect	Pendant (Verify Ht w/ Architect)	1
F5	M# HOME DECORATION #7434P-15							
	ENTRY LIGHT, FINISH BY ARCHITECT	1	LED	120V	36W	Coord. w/ Architect	Wall (Refer Arch Elevation)	1
F8	M#   TERON #GRDW24-CNL-L18-120-12CV-WAL							
	PATIO LIGHT, BRONZE FINISH	1	LED	120V	10W	Standard	Wall (Refer Arch Elevation)	1
F9	M# NUVO #60-531							

ABBREVIATIONS. . COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL DEVICES WITH ARCHITECT AND/OR INTERIOR ELEVATIONS PRIOR TO ROUGH-IN. B. FIELD VERIFY ALL ELECTRICAL WORK WITH OWNER PRIOR TO

REFERENCE SHEET E101 FOR GENERAL NOTES, SYMBOLS, AND

DOCUMEN

KEYED NOTES:

**GENERAL NOTES** 

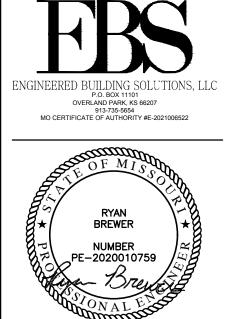
(NOT ALL NOTES APPLY)

START OF PROJECT.

PROVIDE METER PER UTILITY COMPANY STANDARDS. INSTALLATION SHALL MEET ALL UTILITY COMPANY REQUIREMENTS AND LOCAL CODES. PROVIDE A GROUNDING ELECTRODE SYSTEM COMPLIANT WITH IRC SECTION 3608. REFER TO DETAIL 2 (THIS SHEET) FOR

ADDITIONAL INFORMATION. PROVIDE SERVICE ENTRANCE RATED, 125A MAIN CIRCUIT BREAKER LOAD CENTER. REFER TO PANEL SCHEDULE ON E201 SHEET(S) FOR ADDITIONAL INFORMATION. REFER TO NEC 250.53 FOR ADDITIONAL INFORMATION.

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PROFESSIONAL SEAL

COLLINS WEBB #:

ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES THE ARCHITECTURAL SPECIFICATIONS AND DRAWINGS INCLUDING THE GENERAL CONDITIONS, INCLUDING ALL SUPPLEMENTS ISSUED THERETO, INSTRUCTIONS TO SHOULD THERE BE APPARENT VIOLATIONS OF N.E.C. CLEARANCE, NOTIFY THE BIDDERS, AND OTHERS PERTINENT DOCUMENTS ISSUED BY THE ARCHITECT ARE ARCHITECT-ENGINEER BEFORE PROCEEDING WITH CONNECTION OR PLACEMENT A PART OF THESE SPECIFICATIONS AND ELECTRICAL DRAWINGS. THIS TRADE SHALL CONSULT THEM FOR INSTRUCTIONS WHICH APPLY. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL LAYOUT AND WORK INCLUDED. ELECTRICIAN SHALL FOLLOW DRAWINGS IN LAYOUT THE ELECTRICAL WORK AND INSTALLATION STUDIES ARE REQUIRED TO COORDINATE THE ELECTRICAL WORK CONSULT THE DRAWINGS AND LAYOUTS OF OTHER TRADES TO VERIFY LOCATION WITH THE WORK OF OTHER TRADES. PREPARE COORDINATION DRAWINGS AT AND SPACES IN WHICH WORK WILL BE INSTALLED.

#### CODES, PERMITS, INSPECTION AND COMMISSIONING

INSTALLATION SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL WORK IN EFFECT, INCLUDING THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), THE NATIONAL ELECTRICAL SAFETY CODE, ALL LOCAL GOVERNING CODES AND ORDINANCES, WITH THE REGULATIONS OF THE SERVING ELECTRICAL UTILITY COMPANY. PROVIDE ALL REQUIRED PERMITS AND INCLUDE THE COST OF PROVIDE APPROVED SHOP DRAWINGS TO ALL REQUIRED DISCIPLINES AND SAME IN THE COST OF THE PROJECT. OBTAIN AND PAY FOR (WITHOUT ADDITIONAL EXPENSE TO THE OWNER) ALL REQUIRED INSPECTIONS AND REVIEWS. PROVIDE FOR AND PAY ALL EXPENSES (WITHOUT ADDITIONAL EXPENSE DIFFERS FROM CONTEMPLATED DESIGN, MAKE NECESSARY ADJUSTMENTS TO TO THE OWNER) ASSOCIATED WITH LIGHTING AND LIGHTING CONTROLS COMMISSIONING. ALL COMMISSIONING DOCUMENTATION SHALL BE CERTIFIED AND GIVEN TO OWNER AND DESIGN PROFESSIONAL.

THE FOLLOWING INDUSTRY STANDARDS AS APPLICABLE TO ELECTRICAL WORK SHALL APPLY TO THE WORK OF THIS DIVISION EXCEPT THAT, WHERE THE REQUIREMENTS OF THESE SPECIFICATIONS ARE MORE THAN THE LISTED STANDARD, THESE SPECIFICATIONS SHALL TAKE PRECEDENCE:

UL - UNDERWRITERS' LABORATORIES NEMA - NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION NECA - NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION

ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE

ASTM - AMERICAN SOCIETY OF TESTING MATERIALS.

ALL MATERIALS SHALL BE NEW, UL LISTED AND LABELED WHERE LABELED MATERIALS ARE AVAILABLE, UNDAMAGED AND FREE OF DEFECTS AT TIME OF INSTALLATION. MATERIALS OR EQUIPMENT DAMAGED IN SHIPMENT OR OTHERWISE DAMAGED PRIOR TO OR DURING INSTALLATION SHALL NOT BE REPAIRED AT THE JOB SITE, BUT SHALL BE REPLACED WITH NEW MATERIALS. WHEN THE MANUFACTURER'S NAME APPEARS IN THESE SPECIFICATIONS AND DRAWINGS, IT SHALL BE CONSTRUED THAT THE MANUFACTURER HAS TO MEET THE FULL REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.

SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT TO THE ARCHITECT FOR ENGINEER'S REVIEW ELECTRONICALLY OR HARD COPIES. INCLUDE SUFFICIENT INFORMATION TO INDICATE COMPLETE COMPLIANCE WITH SPECIFICATIONS. PROVIDE SUBMITTALS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT SCHEDULE. ALLOW ONE WEEK FOR ENGINEER REVIEW TIME. THE ENGINEER'S SUBMITTAL REVIEWS WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN DIMENSIONS, DETAILS, SIZE OF MEMBERS, OR QUANTITIES: OR FOR OMITTING COMPONENTS OR FITTINGS: OR FOR NOT COORDINATING ITEMS WITH ACTUAL BUILDING CONDITIONS AND/OR OTHER

ACCUMULATE DURING THE PROGRESS OF THE JOB. THE FOLLOWING DATA IN DUPLICATE, AND PREPARE IN A NEAT BROCHURE OR PACKET FOLDER TO BE TURNED OVER TO THE OWNER AT SUBSTANTIAL COMPLETION: RECORD DRAWINGS PER ABOVE.

ALL WARRANTIES, GUARANTEES, AND MANUFACTURER'S DIRECTION ON EQUIPMENT & MATERIAL FURNISHED.

COMPLETE PLAIN ENGLISH STEP-BY-STEP OPERATING INSTRUCTIONS FOR THE ELECTRICAL SYSTEM. ONE COPY OF THESE INSTRUCTIONS SHALL BE FRAMED AND POSTED AS DIRECTED ON THE PREMISES.

CERTIFIED LIGHTING AND LIGHTING CONTROLS COMMISSIONING AS REQUIRED BY UNLESS OTHERWISE INDICATED. CURRENTLY ADOPTED ENERGY CODE REQUIREMENTS.

MANUFACTURERS' NAMES AND CATALOG NUMBERS MANUFACTURER'S NAME AND MODEL OR CATALOG NUMBERS. USE OF NAMES TRAY PENETRAIONS THROUGH FIRE-RATED WALLS AND FLOORS. SEALANTS AND PROPER TYPE, SIZE AND NUMBER AS REQUIRED TO ACCOMPLISH SPECIFIED AND CATALOG NUMBERS DOES NOT INDICATE THAT THE EQUIPMENT SPECIFIED IN ACCESSORIES SHALL HAVE FIRE-RESISTANCE RATINGS INDICATED, AS NECESSARILY AN "OFF THE SHELF" ITEM. VARIANCES MAY BE DUE TO REQUIREMENT OF DESIRED FINISH, MATERIAL OR OTHER MODIFICATION.

IN THE CASE OF PANELBOARDS, SAFETY SWITCHES AND OTHER EQUIPMENT REQUIRING WIRE AND CABLE TERMINATIONS, ASCERTAIN THAT LUG SIZES AND WIRING GUTTERS OR WIRING SPACE ALLOWED IS PROPER FOR THE WIRES AND CABLES CONTAINED THEREIN.

WHEN APPROVAL IS GIVEN FOR THE USE OF EQUIPMENT DIFFERING FROM THAT SHOWN ON DRAWINGS IN REGARD TO FOUNDATIONS, SPACE FOR PIPING, DUCTWORK, WIRING, INSULATION, ETC. CHANGES REQUIRED TO ACCOMPLISH SUCH DIFFERENCES SHALL BE ACCOMPLISHED AT NO COST TO THE OWNER.

ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM THE WEATHER, IN PARTICULAR, DRIPPING OR SPLASHING WATER, AT ALL TIMES DURING SHIPMENT, PROVIDE ALL REQUIRED GROUNDING FOR A COMPLETE SERVICE ENTRANCE STORAGE AND CONSTRUCTION. MANUFACTURER'S RECOMMENDATIONS WITH REGARD TO STORAGE, PROTECTION, AND HANDLING SHALL BE FOLLOWED.

SHALL BE THOROUGHLY DRIED AND PUT THROUGH A DIELECTRIC TEST, AT THE EXPENSE OF THE CONTRACTOR. TO ASCERTAIN THE SUITABILITY OF THE APPARATUS OR IT SHALL BE REPLACED WITHOUT ADDITIONAL COST TO THE

DAMAGED OR DEFECTIVE EQUIPMENT: INSPECT ALL ELECTRICAL EQUIPMENT AND REQUIREMENTS. MATERIALS PRIOR TO INSTALLATION. INSTALLATION OR PLACEMENT INTO SERVICE OF DAMAGED MATERIALS WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER IS PROHIBITED. REPLACE OR REPAIR TO NEW CONDITION, AS CERTIFIED BY THE MANUFACTURER, AND TEST DAMAGED EQUIPMENT IN COMPLIANCE WITH INDUSTRY STANDARDS AT NO ADDITIONAL COST TO THE OWNER. EQUIPMENT REQUIRED FOR THE TESTING SHALL BE PROVIDED BY THE CONTRACTOR.

THE SIZE OF ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS IS BASED ON DIMENSIONS OF A PARTICULAR MANUFACTURER, (GENERALLY THE FIRST NAMED). ACCEPTABLE IS 12 IN BY 12 IN CLEAR OPENING WHERE HAND ACCESS ONLY IS WHILE OTHER MANUFACTURERS MAY BE ACCEPTABLE, IT IS THE RESPONSIBILITY REQUIRED. OF THE TRADE TO DETERMINE IF THE EQUIPMENT PROPOSED WILL FIT IN THE ALLOCATED SPACE.

INSTALL ALL EQUIPMENT IN A MANNER TO PERMIT ACCESS TO ALL SURFACES. MAINTAIN PROPER CLEARANCE TO MEET ALL SAFETY AND OPERATING CODES, CONTROL, ADJUSTMENT, MAINTENANCE AND POSSIBLE REPLACEMENT OF EQUIPMENT IN DETERMINING CLEARANCE.

ACCURATE SCALE WHERE SEVERAL ELEMENTS OF ELECTRICAL OR COMBINED MECHANICAL/STRUCTURAL/ELECTRICAL WORK MUST BE SEQUENCED AND POSITIONED WITH PRECISION IN ORDER TO FIT INTO THE AVAILABLE SPACE.

SHOW THE ACTUAL PHYSICAL DIMENSIONS REQUIRED FOR PROPER INTEGRATION OF EQUIPMENT WITH BUILDING SYSTEMS.

VERIFY FINAL ELECTRICAL CHARACTERISTICS BEFORE ROUGHING POWER FEEDS SPIRALLY WOUND STEEL STRIP WITH OVERALL JACKET OF LIQUID TIGHT PVC, UL TO ANY EQUIPMENT. WHEN ELECTRICAL DATA ON APPROVED SHOP DRAWINGS THE WIRING, DISCONNECTS, AND BRANCH-CIRCUIT PROTECTION FOR THE EQUIPMENT ACTUALLY INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

DAMAGE FROM INTERFERENCE CAUSED BY INADEQUATE COORDINATION SHALL BE RECTIFIED AT NO ADDITIONAL COST TO THE OWNER.

ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE OWNER.

THIS TRADE SHALL DO OR HAVE DONE BY COMPETENT TRADESMEN ALL CUTTING ALL BRANCH CIRCUITS SHALL BE ANNEALED (SOFT) COPPER COMPLYING WITH IN CONSTRUCTIVE PARTS OF THE BUILDING LIKELY TO IMPAIR ITS STRENGTH SHALL BE DONE WITHOUT THE ARCHITECT-ENGINEER'S WRITTEN APPROVAL.

EXCAVATION, TRENCHING AND BACKFILLING ARE SPECIFIED IN SECTION EXCAVATION TRENCHING AND BACKFILLING FOR UTILITIES. CONDUIT IS TO BE INSTALLED AS SPECIFIED FOR PIPELINES. CONDUIT INSTALLED BENEATH FLOOR SLAB SHALL BE A MINIMUM OF 6" BELOW SLAB, BACKFILL OVER CONDUIT SHALL BE COMPACTED AS FOR SLAB BEDDING MATERIAL. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF CONDUIT (PIPE) PENETRATION OF EXTERIOR

COORDINATE SLEEVE SELECTION AND APPLICATION WITH SELECTION AND APPLICATION OF FIRE-STOPPING SPECIFIED IN ARCHITECTURAL SPECIFICATIONS

FOOTINGS. COMPLETE INSTALLATION SHALL CONFORM TO N.E.C.

ROOFS: COORDINATE ALL ROOF PENETRATIONS WITH ENGINEER, OWNER, AND AS APPLICABLE. THE ROOFING CONTRACTOR PROVIDING A ROOF WARRANTY. KEEP ALL RACEWAY PENETRATIONS WITHIN MECHANICAL EQUIPMENT CURBS WHEREVER POSSIBLE. COORDINATE WITH DIVISION 15. FLASH AND COUNTERFLASH ALL OPENINGS THROUGH ROOF, AND/OR PROVIDE PRE-FABRICATED MOLDED SEALS COMPATIBLE WITH THE ROOF CONSTRUCTION INSTALLED, OR AS REQUIRED BY THE ENGINEER, OWNER, OR ROOFING CONTRACTOR. ALL ROOF PENETRATIONS SHALL BE LEAKTIGHT AT THE TERMINATINO OF THE WORK AND SHALL NOT VOID ANY NEW OR EXISTING ROOF WARRANTIES.

WALLS AND FLOORS - SLEEVES FOR RACEWAYS AND CABLES: STEEL PIPE SLEEVES: ASTM A 53/A 53M, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED STEEL, PLAIN ENDS AND DRIP RINGS.

CAST IRON PIPE SLEEVES: CAST OR FABRICATED "WALL PIPE", EQUIVALIENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL SATERSTOP,

FIRESTOPPING: FIRE RESISTANT THROUGH PENETRAION SEALANTS - TWO PART, AS RECOMMENDED BY THE SYSTEM EQUIPMENT MANUFACTURER. FOAMED-IN-PLACE, SILICONE SEALANT FORMULATED FOR USE IN ESTABLISHED BY TESTING IDENTICAL ASSEMBLIES IN ACCORDANCE WITH ASTM E

814, BY UNDERWRITER'S LABORATORIES, INC., OR OTHER NRTL ACCEPTABLE TO ACCEPTABLE MANUFACTURERS - HILTI, INC., 3M CORP, RECTORSEAL, SPECIFY TECHNOLOGY INC., UNITED STATES GYPSUM COMPANY.

SERVICE SHALL BE AS SHOWN ON DRAWINGS.

PROVIDE SECONDARY SERVICE INTO THE BUILDING WITH CONDUIT AND WIRING AS SHOWN ON THE PLANS, INCLUDING, BUT NOT LIMITED TO, UNDERGROUND RACEWAYS AND CABLES AND SECONDARY CONNECTIONS TO UTILITY TRANSFORMERS AS REQUIRED BY SERVING ELECTRICAL UTILITY COMPANY. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BID.

GROUNDING SYSTEM. PERMANENTLY AND EFFECTIVELY GROUND AND BOND THE ELECTRICAL INSTALLATION IN A THOROUGH AND EFFICIENT MANNER, AND IN CONFORMANCE (AT A MINIMUM) WITH N.E.C. OR THESE DOCUMENTS, WHERE SHOULD ANY APPARATUS BE SUBJECTED TO POSSIBLE INJURY DUE TO WATER, IT THEY EXCEED CODE REQUIREMENTS. USE BARE OR INSULATED CONDUCTORS, AS SPECIFIED HEREIN, AND OTHER MATERIALS INDICATED ON THE DRAWINGS.

> PROVIDE ALL NECESSARY ENCLOSURES REQUIRED BY THE OWNER FOR THE UTILITY COMPANY METERING. REFER TO DRAWINGS FOR MINIMUM REQUIREMENTS. COORDINATE WITH UTILITY COMPANY PRIOR TO BID FOR ALL

ALL EQUIPMENT OF A PARTICULAR KIND. SUCH AS WIRING DEVICES AND PANELBOARDS AND ALL LIGHTING FIXTURES OF THE SAME TYPE, SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.

PANELS. SIZE AS REQUIRED FOR PROPER ACCESS AND MAINTENANCE. MINIMUM

PROVIDE LABELS FOR EACH MOTOR CONTROLLER, SAFETY SWITCH, RELAY, PANELBOARD, CONTACTOR, TIMER, CONTROL DEVICE, METER AND CIRCUIT BREAKER. LABELS SHALL BE LAMINATED, PHENOLIC STRIPS 1/16" THICK, AND ENGRAVED TO SHOW BLACK LETTERS ON A WHITE BACKGROUND NOT LESS THAN DESCRIBED BELOW UNDER "PLATES". 1/4" HIGH. SIZE STRIPS TO PROPERLY FIT MANUFACTURER'S BRACKETS AND BE LEGIBLE. WHERE MANUFACTURER'S BRACKETS ARE NOT PROVIDED, MOUNT LABELS WITH PROPER SCREWS, OR AN APPROVED ADHESIVE.

CONDUIT, RIGID STEEL; GALVANIZED OR SHERADIZED AND MANUFACTURED IN ACCORDANCE WITH ANSI STANDARD C80.L. FITTINGS SHALL BE PIPE THREADED. MALLEABLE IRON. CONNECTORS SHALL BE INSULATED THROAT TYPE.

CONDUIT, PVC: POLYVINYLCHLORIDE SCHEDULE 40 PIPE SPECIFICALLY MANUFACTURED AND LABELED (UL STANDARD 651) FOR USE AS ELECTRICAL CONDUIT. FITTINGS SHALL BE EITHER SOCKET WELDED TYPE OR PIPE THREADED DUST AND MOISTURE RESISTANT, MELAMINE BODY, GRAY NYLON FACE BACKED WITH INSULATED THROAT.

CONDUIT, FLEXIBLE METALLIC: GALVANIZED, INTERLOCKED SPIRALLY WOUND STEEL STRIP WITH GALVANIZED OR SHERADIZED FITTINGS. LISTED PER UL-L. FITTINGS SHALL BE OF THE SQUEEZE TYPE WITH INSULATED THROATS.

CONDUIT, LIQUIDTIGHT FLEXIBLE METALLIC: GALVANIZED, INTERLOCKED LISTED. FITTINGS SHALL BE STEEL OR MALLEABLE IRON INSULATED THROAT,

TRADE SIZE SHALL BE COMPRESSION TYPE, MANUFACTURED FROM MALLEABLE IRON OR STEEL, AND RAIN AND/OR CONCRETE-TIGHT AS REQUIRED BY INSTALLATION. POT METAL OR DIE CAST TYPE FITTINGS ARE PROHIBITED. CONNECTORS SHALL BE INSULATED THROAT TYPE.

NDUCTORS AND CABLES GENERAL: SERVICE LATERALS AND PANELBOARD FEEDERS SHALL BE OF ANY MATERIAL ITEMS OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED ANNEALED (SOFT) COPPER COMPLYING WITH ICEA S-95-658/NEMA WC70; SOLID IN THESE SPECIFICATIONS OR VISA-VERSA, OR ANY ACCESSORIES NECESSARY TO CONDUCTOR FOR NO. 10 AWG AND SMALLER; CONCENTRIC, COMPRESSED STRANDED FOR NO, 8 AWG AND LARGER. ALL FEEDER CONDUCTORS NO 8 AWG PRIOR TO INSTALLATION. AND LARGER; STRANDED, TYPE THWN-2 OR XHHW-2 INSULATION.

AND PATCHING NECESSARY FOR THE INSTALLATION OF THIS WORK. NO CUTTING ICEA S-95-658/NEMA WC70; SOLID CONDUCTOR FOR NO. 10AWG AND SMALLER; CONCENTRIC, COMPRESSED STRANDED FOR NO. 8 AWG AND LARGER. ALL BRANCH CIRCUIT CONDUCTORS NO 8 AWG AND LARGER; STRANDED, TYPE THWN-2 OR XHHW-2 INSULATION. ALL CONDUCTORS, NO 10 AWG AND SMALLER. USED FOR POWER AND LIGHTNG CIRCUITS; SOLID COPPER, TYPE THWN-2 INSULATION (WET OR DAMP LOCATIONS, OR IN CONDUIT BELOW GRADE OR SLAB), TYPE THHN INSULATION (DRY LOCATIONS ONLY ABOVE GRADE), OR DUAL RATED TYPE THHN/THWN-2. ALL BRANCH CIRCUIT WIRING SHALL NOT BE SMALLER THAN NO 12 AWG. IF NO CONDUCTOR SIZE IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE CONDUCTORS AND CONDUIT SIZED PER NFPA 70 AND UNATTENDED USE AS APPLICABLE. BASED ON THE INDICATED BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE RATING AND NUMBER OF POLES. WHERE NO CIRCUIT SIZE (CONDUCTORS AND OVERCURRENT PROTECTIVE DEVICE) IS INDICATED ON THE DRAWINGS FOR A BRANCH CIRCUIT, PROVIDE THREE NO 12 AWG CONDUCTORS IN 3/4" RACEWAY, AND A 20A SINGLE POLE CIRCUIT BREAKER.

CONDUCTOR INSULATION TYPES; 90-DEGREE C-RATED, TYPE THHN/THWN-2 OR

XHHW-2 COMPLYING WITH ICEA S-95-658/NEMA WC70 COLORS FOR 208/120V CONDUCTORS PHASE A: BLACK

PHASE B: RED PHASE C: BLUE NEUTRAL: WHITE EQUIPMENT GROUND: GREEN ISOLATED GROUND: GREEN WITH YELLOW STRIPE

COLORS FOR 480/277V CONDUCTORS PHASE A: BROWN PHASE B: ORANGE

PHASE C: YELLOW

NEUTRAL: WHITE

EQUIPMENT GROUND: GREEN UNLESS NOTED OTHERWISE. SPECIAL PURPOSE CONDUCTORS AND CABLES. SUCH AS LOW VOLTAGE CONTROL AND SHIELDED INSTRUMENT WIRING, SHALL BE SHALL BE FURNISHED COMPLETE WITH PROPER FUSES.

IN SOME INSTANCES, SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE THROUGH-PENETRAION FIRE-STOPPING AROUND CABLES, RACEWAYS, AND CABLE CONTROL WIRING; STRANDED COPPER CONDUCTORS, 600V INSULATION, OF THE

FUNCTION. MINIMUM SIZE; NO. 14 AWG UNLESS NOTED OTHERWISE. MC TYPE CABLE CAN BE USED IF ACCEPTED BY LOCAL AUTHORITY AND GOVERNING CODES FOR WHIPS FROM JUNCTION BOX TO LIGHT FIXTURES ONLY. TYPE MC CABLE; 600V, UNJACKETED; ANSI E119 AND E814, UL STANDARDS 44 OR SHEET STEEL AND FINISH WITH BAKED ON GRAY ENAMEL OVER RUST INHIBITOR. 83 (AS APPLICABLE), AND 1569, NFPA 70 ARTICLE 330; ALUMINUM OR GALVANIZED

CODE; ICEA METHOD 1, WITH GREEN INSULATED GROUDING CONDUCTOR. PROVIDE A DEDICATED EQUIPMENT-GROUNDING CONDUCTOR, OR BONDING JUMPER, AS APPLICABLE, IN ALL BRANCH CIRCUITS AND FEEDERS, SIZED IN ACCORDANCE WITH NFPA 70, UNLESS INDICATED AS LARGER ON THE DRAWINGS.

PROVIDE A DEDICATED NEUTRAL (WHERE REQUIRED) AND DEDICATED GROUNDING CONDUCTOR FOR EACH BRANCH CIRCUIT.

VOLTAGE DROP IN BRANCH CIRCUITS SHALL NOT EXCEED 2%.

GFCI CIRCUITS: DO NOT USE MULTI-CONDUCTOR CIRCUITS, WITH A SHARED NEUTRAL FOR ANY GFCI CIRCUIT BREAKER OR RECEPTACLE CIRCUIT. BRANCH CIRCUITS FED FROM GFCI CIRCUIT BREAKERS, LIMIT THE ONE-WAY CONDUCTOR LENGTH TO 100 FEET BETWEEN THE PANELBOARD AND THE MOST REMOTE RECEPTACLE OR LOAD ON THE GFCI CIRCUIT.

OUTLET BOXES: GALVANIZED PRESSED STEEL WITH GALVANIZED STEEL EXTENSION RINGS OR PLASTER RINGS OR TILE RINGS TO PROVIDE EXPOSED SURFACE FLUSH WITH WALL OR CEILING FINISH. PROVIDE ALL CEILING OUTLET BOXES WITH "NO-BOLT" OR THROUGH AND LOCKNUTTED TYPE FIXTURE STUDS.

ARE NOT SIZED ON THE DRAWINGS. THEY SHALL BE SIZED IN ACCORDANCE WITH WITH ULL STANDARDS.

N.E.C. REQUIREMENTS. FINISH IN STANDARD GRAY ENAMEL, WITH SIDES AND PROVIDE ACCESS PANELS FOR ALL EQUIPMENT AND DEVICES REQUIRING SUCH BACK SPOT-WELDED IN POSITION AND THE REMOVABLE SCREW COVER MOUNTED EACH PANELBOARD, AS A COMPLETE UNIT, SHALL HAVE A SHORT CIRCUIT RATING WITH BRASS MACHINE SCREWS.

SWITCHES: HEAVY DUTY AC, RATED 20 AMPERES, 120/277 VOLTS, SINGLE-POLE. DOUBLE-POLE, THREE-POLE, OR FOUR-WAY AS NOTED ON DRAWINGS OR AS REQUIRED FOR THE SWITCHING ARRANGEMENTS IN EACH SPACE. HUBBELL #HBL122\*\* OR EQUAL. COORDINATE SWITCH COLORS WITH COVERPLATES AS

SWITCHES, SPECIAL PURPOSE: KEY OPERATED, HEAVY-DUTY AC, RATED 20 AMPERES, 120/277 VOLTS, SINGLE OR MULTI-POLE AS NOTED OR AS REQUIRED. HUBBELL #HBL122\*\* OR EQUAL.

RECEPTACLES: THREE WIRE GROUNDING TYPE, 120 VOLT RATED, SPECIFICATION GRADE 20 AMPERES DUPLEX UNLESS NOTED OTHERWISE ON DRAWINGS. HUBBELL #5362 OR EQUAL. COORDINATE RECEPTACLE COLOR WITH COVERPLATE AS DESCRIBED BELOW UNDER "PLATES". SINGLE RECEPTACLE, 20 AMPERE, 120 VOLT, SPECIFICATION GRADE. HUBBELL #5361 OR EQUAL.

BY FABRIC REINFORCED NEOPRENE GASKET SLIT TO PROVIDE WIPING ACTION ON CAP BLADES. PASS & SEYMOUR #6307 OR APPROVED EQUAL. GROUND FAULT CIRCUIT INTERRUPTER, NYLON FACE CLASS A, NEMA 5-20R, SPECIFICATION GRADE. HUBBELL #GF-5362\* OR EQUAL.

CORROSION RESISTANT, SIMILAR AND APPROVED EQUAL TO STANDARD RECEPTACLE, EXCEPT FABRICATED FROM YELLOW MELAMINE PLASTIC WITH YELLOW NYLON FACE AND EXPOSED METAL PARTS FINISHED TO RESIST CORROSION. (NEMA 5-15R = HUBBELL #52CM61).

ISOLATED GROUND, DUPLEX OR SIMPLEX THREE WIRE GROUNDING TYPE ELECTRIC METALLIC TUBING: GALVANIZED OR SHERADIZED AND MANUFACTURED SPECIFICATION GRADE, ORANGE FACE, GROUND CONTACT FULLY ISOLATED FROM CIRCUIT BREAKERS: CIRCUIT BREAKERS OF THE PROPER SIZE, RATING, AND IN ACCORDANCE WITH ANSI STANDARD C80.3. FITTINGS 1/2 INCH THROUGH 2 INCH STRAP AND EQUIPPED WITH SCREW TERMINAL. HUBBELL #IG-5362\* OR EQUAL.

> SCHEDULED ON DRAWINGS. PLATES: PROVIDE PLATES FOR ALL OUTLET BOXES. PLATES SHALL BE OF SUITABLE CONFIGURATION FOR THE NUMBER AND TYPE OF DEVICES SERVED, SHALL BE ONE PIECE, SHALL OVERLAP OUTLET BOX EDGE AND ROOM SURFACES,

AND SHALL BE SMOOTH FINISH NYLON TYPE OF SAME MANUFACTURER AS THE

WIRING DEVICES. VERIFY DESIRED MATERIALS AND COLORS WITH ARCHITECT

RECEPTACLES, SPECIAL PURPOSE: SPECIAL PURPOSE OUTLETS SHALL BE AS

STANDARD INTERIOR: IVORY FINISHED ON LIGHT COLORED WALLS - COORDINATE ALL COLORS WITH ARCHITECT

INTERIOR DAMP LOCATIONS: STAINLESS STEEL.

EXTERIOR LOCATIONS: FOR UNATTENDED WET LOCATIONS, PROVIDE IN-USE NEMA 3R. UL LABELED PLATES MOLDED FROM A CLEAR HIGH IMPACT ULTRAVIOLET STABILIZED POLYCARBONATE MATERIAL FOR EASY VERIFICATION THAT CORDS ARE PLUGGED IN AND THAT THE GFCI IS FUNCTIONING. COVER PLATES SHALL BE BY THE SAME MANUFACTURER AS THE WIRING DEVICES; COMPLYING WITH NFPA 70 406.8 (A) OR (B) REQUIREMENTS FOR ATTENDED OR

ACCEPTABLE MANUFACTURERS: HUBBELL, PASS & SEYMOUR, LEVITON AND COOPER.

URNISH AND INSTALL FLUSH CABINETS AND ENCLOSURES AS SHOWN ON THE PLANS AND AS HEREIN SPECIFIED. UNIT SHALL BE PROVIDED WITH DEAD FRONT SUB PANEL, RECESSED AS REQUIRED, TO HOUSE CONTROLS, DOOR SHALL BE PROVIDED WITH CONCEALED HINGES AND FLUSH KEY OPERATED LOCK, DOOR SPECIAL FINISHES. AND TRIM SHALL BE PRIME PAINTED FOR FIELD PAINTING TO MATCH WALL REQUIRED TO MEET FIELD CONDITIONS. EXACT BACKBOX SIZE TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

SAFETY SWITCHES: SAFETY SWITCHES SHALL CONSIST OF A BOX, FRONT COVER, AND CIRCUIT PROTECTOR DEVICE ALL MANUFACTURED AND ASSEMBLED IN ACCORDANCE WITH NEMA STANDARDS

THE BOX SHALL BE FABRICATED FROM CODE GAUGE GALVANIZED SHEET STEEL IN UNITS SHALL BE FURNISHED FOR SURFACE OR FLUSH MOUNTING WITH EITHER GENERAL PURPOSE OR RAINTIGHT ENCLOSURES, AS REQUIRED. FUSED UNITS

SHALL CONSIST OF BOX, INTERIOR, FRONT, AND CIRCUIT PROTECTIVE DEVICES. THE ASSEMBLY SHALL BE U.L. LABELED AND BE LISTED FOR SERVICE. THE ASSEMBLY SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NEMA STANDARD PB-1. THE LATEST UL STANDARD (UL-50) AND SHALL HAVE A TURNED EDGE AROUND THE FRONT FOR RIGIDITY AND FOR CLAMPING ON FRONT. TELEPHONE CO. THE TELEPHONE TERMINAL BOARD SHALL BE PROVIDED WITH A PROVIDE STANDARD KNOCKOUTS ON REMOVABLE BOX ENDS. FABRICATE FROM EACH FRONT SHALL HAVE A DOOR MOUNTED ON SEMI-CONCEALED HINGES WITH STEEL INTERLOCKED ARMOR; THHN- OR XHHW-INSULATED CONDUCTORS; COLOR A CYLINDER LOCK, INDEX CARD CIRCUIT DIRECTORY MOUNTED BEHIND CLEAR PLASTIC AND HELD IN A METAL FRAME, AND CONCEALED TRIM CLAMPS FOR MOUNTING TO THE BOX. ALL LOCKS SHALL BE MASTER KEYED AND ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

ALL INTERIORS SHALL BE COMPLETELY FACTORY ASSEMBLED. THE DESIGN OF THE INTERIOR SHALL PERMIT REPLACEMENT OF INDIVIDUAL BRANCH BREAKERS WITHOUT DISTURBING ADJACENT UNITS AND WITHOUT MACHINE DRILLING OR TAPPING. BUS BARS FOR PANELS RATED 600 AMPERES OR MORE SHALL BE TIN PLATED 98% CONDUCTIVITY COPPER OR TIN FINISH ALUMINUM (57% CONDUCTIVITY) OF RECTANGULAR CROSS-SECTION. BUS BARS FOR PANELS RATED LESS THAN 600 AMPERES SHALL BE TIN PLATED 98% CONDUCTIVITY COPPER OF RECTANGULAR CROSS-SECTION. BUS BAR CONNECTIONS TO BRANCH CIRCUIT BREAKERS SHALL BE THE PHASE SEQUENCE TYPE AND ACCEPT PROVIDE FLUORESCENT FIXTURES WITH ELECTRONIC BALLASTS SUITABLE FOR BOLT-ON TYPE BREAKERS ONLY. PANELBOARD BUS STRUCTURE AND MAIN BREAKER OR MAIN LUGS SHALL BE RATED AS SCHEDULED ON DRAWING. SUCH RATINGS SHALL BE ESTABLISHED BASED ON HEAT RISE TESTS IN ACCORDANCE WITH UL STANDARDS. GROUP INCOMING CABLE LUGS AT ONE END FOR SEPARATION FROM LOAD SIDE CABLES. EQUIPMENT NEUTRAL BUSSING WITH A LUG FOR EACH BRANCH BREAKER POSITION. INTERIOR SHALL MOUNT TO BOX WITHOUT TOOLS.

BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, BOLT-ON THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKERS ONE, TWO OR THREE POLE WITH INTEGRAL JUNCTION AND PULL BOXES: FABRICATE IN ACCORDANCE WITH NEMA AND N.E.C. CROSSBAR FOR MULTI-POLE UNITS, EQUIPPED WITH AN OVERCENTER, TRIP-FREE, LED LIGHT FIXTURES ARE TO BE PROVIDED WITH COMPATIBLE DRIVER AND MUST STANDARDS AND REQUIREMENTS INSOFAR AS MATERIAL, GAUGES, DIMENSIONS, TOGGLE-TYPE OPERATING ACTION AND POSITIVE HANDLE INDICATION OF AND FABRICATION METHODS. BOXES SHALL BEAR THE UL LABEL. WHERE BOXES BREAKER STATUS. CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE

EQUAL TO OR GREATER THAN THE INTEGRATED EQUIPMENT RATING SHOWN ON DRAWINGS. THE RATING SHALL BE ESTABLISHED BY TESTING WITH THE OVERCURRENT DEVICES MOUNTED IN THE PANELBOARD. THE SHORT CIRCUIT TESTS ON THE OVERCURRENT DEVICES ON THE STRUCTURE SHALL BE MADE SIMULTANEOUSLY BY CONNECTING THE FAULT TO EACH OVERCURRENT DEVICE WITH THE PANELBOARD CONNECTED TO ITS RATED SUPPLY VOLTAGE.

REFER TO PANELBOARD SCHEDULES FOR FULLY RATED OR SERIES-RATED REQUIREMENTS. SERIES-RATED SYSTEMS ARE NOT ALLOWED UNLESS SPECIFICALLY INDICATED ON PANELBOARD SCHEDULES. WHERE ALLOWED, SERIES-RATED SYSTEMS SHALL BE PROPERLY LABELLED BY NEC REQUIREMENTS.

METHOD OF TESTING SHALL BE PER UL STANDARDS. PANELBOARDS SHALL BE MARKED WITH THEIR MAXIMUM SHORT CIRCUIT CURRENT RATING AT THE SUPPLY

APPROVED MANUFACTURERS: SQUARE-D CO. OR EQUAL BY GE, SIEMENS AND/OR INDICATED. FULL-CAPACITY PRIMARY TAPS: BELOW 25 KVA - MINIMUM OF TWO 5%

FUSES OF THE PROPER SIZE, RATING AND ELECTRICAL CHARACTERISTICS SHALL BE PROVIDED IN EACH FUSIBLE DEVICE. FUSES OF 600 VOLTS AND BELOW SHALL BE UL CLASS RK-1, CURRENT-LIMITING, TIME-DELAY, DUAL-ELEMENT, 200,000 AMPERE RMS SYMMETRICAL INTERRUPTING CAPACITY ON NON-MOTOR CIRCUITS SHEET STEEL CONSTRUCTION. MANUFACTURERS: SQUARE D, GENERAL AND UL CLASS RK-5, TIME-DELAY, DUAL-ELEMENT, 200,000 AMPERES RMS SYMMETRICAL INTERRUPTING CAPACITY ON MOTOR CIRCUITS.

APPROVED MANUFACTURERS: BUSSMANN, LITTLEFUSE OR FERRAZ-SHAWMUT (ALL FUSES SHALL BE OF SAME MANUFACTURER TO ENSURE SELECTIVE

ELECTRICAL CHARACTERISTICS SHALL BE PROVIDED WHERE CALLED FOR ON DRAWINGS. BREAKERS SHALL BE THERMAL MAGNETIC MOLDED-CASE WITH QUICK-MAKE, QUICK-BREAK, OVER CENTER TOGGLE TYPE MECHANISM AND TRIP-FREE HANDLE MECHANISM. THE BREAKER SHALL BE ENCLOSED IN A SUITABLE NEMA RATED ENCLOSURE. BREAKERS SHALL BE OF SAME MANUFACTURER AS THOSE IN THE PANELBOARDS.

ELECTRONIC TIME SWITCHES: ELECTRONIC, SOLID STATE PROGRAMMABLE UNITS WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL917. SPST, 30 AMPERE INDUCTIVE OR RESISTIVE, 240VAC, CONTACT RATING. 2 PROGRAMMABLE ON-OFF SET POINTS ON A 24-HOUR SCHEDULE, ALLOWING DIFFERENT SET POINTS FOR EACH DAY OF THE WEEK. ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUE FOR ON-OFF FUNCTION OF A PROGRAM. ASTRONOMIC TIME ON ALL CHANNELS. BATTERY BACKUP FOR SCHEDULES AND TIME CLOCK.

SOLID STATE, WITH SPST DRY CONTACT RATED FOR 1800-VA TUNGSTEN OR 1000-VA INDUCTIVE, TO OPERATE CONNECTED RELAY, CONTACTOR COILS OR MICROPROCESSOR INPUT, COMPLYING WITH UL 773A.

FURNISH AND INSTALL A SYSTEM OF PROPERLY SIZED AND PROPERLY LOCATED OUTLETS WITH ASSOCIATED CONNECTING CONDUIT RUNS, EXTENDING TO PULL BOXES AND TELEPHONE BACKBOARD. FURNISH AND INSTALL RACEWAYS, FOR INCOMING SERVICE WHERE INDICATED. OUTLET BOXES: UNLESS OTHERWISE INDICATED, ALL TELEPHONE OUTLETS AND JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO ACCOMMODATE

OUTLET COVER PLATES: TELEPHONE OUTLET COVER PLATES SHALL MATCH THOSE SPECIFIED FOR ADJACENT WIRING DEVICES, INCI UDING THOSE WITH

INTERNAL TERMINAL STRIPS BY TELEPHONE CO.

FINISHES. PROVIDE KNOCK-OUTS, LOUVERS AND IDENTIFICATION ENGRAVING AS RACEWAYS: MATERIALS FOR TELEPHONE RACEWAY SYSTEM WORK SHALL BE IN ACCORDANCE WITH CORRESPONDING RACEWAYS SPECIFIED HEREIN AND IN OTHER SECTIONS.

> VERIFY LOCATION OF WALL OUTLETS BEFORE ROUGHING IN TO ENSURE COORDINATION WITH OWNER'S FINAL INTENDED FURNITURE LAYOUT. PLAN INDICATIONS SHALL NOT BE SCALED UNLESS DIRECTED. OUTLETS SHALL BE RELOCATED WITHIN ROOMS BEFORE ROUGH-IN WHERE DIRECTED BY ARCHITECT-ENGINEER WITHOUT ADDITIONAL COST TO OWNER.

ACCORDANCE WITH U.L. LISTING AND LABEL. THE CIRCUIT PROTECTOR DEVICE TELEPHONE SERVICE CONDUIT LAYOUT SHALL HAVE THE JOB SITE APPROVAL OF SHALL BE HEAVY DUTY, QUICK-MAKE, QUICK-BREAK FUSED OR UNFUSED SWITCH AN AUTHORIZED REPRESENTATIVE OF THE TELEPHONE CO. COORDINATE WORK RATED FOR MOTOR CIRCUITS AND/OR SERVICE ENTRANCE DUTY. IF REQUIRED. SO THAT BOTH TELEPHONE CO. AND OWNER'S REPRESENTATIVES ARE PRESENT AT THE SAME TIME FOR APPROVAL OR CHANGES IN AMPLE TIME FOR ANY REQUIRED CORRECTIONS BEFORE COMPLETION OF PROJECT.

> FROM EACH TELEPHONE OUTLET, PROVIDE 3/4" EMT CONDUIT CONCEALED IN WALL TO 6" ABOVE ACCESSIBLE CEILING OR UP TO STRUCTURE WHERE NO CEILING EXISTS, UNLESS SHOWN OTHERWISE ON DRAWINGS.

TELEPHONE TERMINAL BOARD: PRIOR TO INSTALLATION OF TELEPHONE TERMINAL BOARD, THE EXACT LOCATION SHALL BE VERIFIED WITH THE DOUBLE DUPLEX RECEPTACLE LOCATED WHERE INDICATED ON THE DRAWINGS. THE TERMINAL BOARD SHALL BE CONSTRUCTED OF 4' X 8' X 3/4" PLYWOOD WITH TWO (2) COATS OF FLAME RETARDANT PAINT UNLESS NOTED OTHERWISE ON DRAWINGS.

FIXTURES ARE SPECIFIED IN THE SCHEDULE BY MANUFACTURER'S NAME AND CATALOG NUMBER.

ALL RECESSED LIGHT FIXTURES SHALL BE PROVIDED WITH FACTORY INSTALLED THERMAL PROTECTION.

ALL LAMPS USED ON THIS PROJECT SHALL BE NEW, DELIVERED TO THE JOB SITE

IN THE ORIGINAL PACKING CASES AND SLEEVES AND SHALL BE OF THE SAME MANUFACTURER. OPERATION OF LAMPS SPECIFIED; TOTAL HARMONIC DISTORTION LESS THAN 20%; FREQUENCY OF OPERATION OF 20 KHZ OR GREATER WITH NO VISIBLE FLICKER;

HID BALLASTS SHALL BE AUTO TRANSFORMER REACTOR, HIGH POWER FACTOR POTTED AND ENCASED TO MINIMIZE SOUND. APPROVED MANUFACTURERS: GE, SYLVANIA, OR OSRAM.

LINE TRANSIENT WITHSTAND RATINGS AS DEFINED IN ANSI/IEEE, CATEGORY A.

APPROVED MANUFACTUERERS: ADVANCE OR EQUAL BY MAGNETEK, MOTOROLA

BE COORDINATED WITH CONTROL TYPE INDICATED. CONTRACTOR IS RESPONSIBLE TO ENSURE CONTROLS ARE CAPABLE OF PROPERLY CONTROLLING LIGHT FIXTURES AS INDICATED WITHIN THESE DRAWINGS.

ALL CONTACTORS AND RELAYS SHALL BE ULLISTED AND LABELED. GENERAL PURPOSE, ELECTRICALLY HELD TYPE, IN NEMA 1 ENCLOSURES, WHERE SPECIFICALLY NOTED ON DRAWINGS, UNITS SHALL BE ELECTRICALLY HELD OR MOMENTARY OPERATIONAL TYPE. UNITS SHALL BE FURNISHED WITH LINE OR LOW VOLTAGE CONTROL AS NOTED AND WITH THE CORRECT NUMBER OF POLES AND CURRENT CHARACTERISTICS. WHERE LOW VOLTAGE OPERATION IS INDICATED, PROVIDE PROPER STEPDOWN TRANSFORMERS AND RECTIFIERS. APPROVED MANUFACTURERS: ASCO, OR MANUFACTURER OF APPROVED PANELBOARDS FURNISHED.

GENERAL PURPOSE, UL-LISTED/LABELED 150 DEGREES C TEMPERATURE RISE ABOVE 40 DEGREES C AMBIENT, INSULATING MATERIALS: EXCEED NEMA ST-020 STANDARDS, RATED FOR 220 DEGREES C, UL-COMPONENT RECOGNIZED INSULATION SYSTEM. PHASES, VOLTAGES, AND SIZES: AS INDICATED ON THE DRAWINGS. SOUND LEVEL: NOT EXCEEDING NEMA STANDARDS FOR THE SIZES (2-); 25 KVA TO 300 KVA - MINIMUM OF SIX 2.5% (2+, 4-); ABOVE 300 KVA - FOUR 2.5% (2+, 2-). TRANSFORMER CORE AND COIL ASSEMBLIES: MOUNTED ON INTEGRAL VIBRATION-ABSORBING PADS. MAKE FINAL CONDUIT CONNECTIONS TO TRANSFORMERS WITH FLEXIBLE CONDUIT, WITH AT LEAST 6" OF SLACK IN ALL DIRECTIONS. TRANSFORMER ENCLOSURES: FULLY ENCLOSED (EXCEPT FOR VENTILATION OPENINGS), NEMA 2, DRIP-PROOF, FABRICATED OF HEAVY GAUGE ELECTRIC, ACME, SIEMENS.

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COLLINS WEBB# **ELECTRICAL SPECIFICATIONS** 

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**ELECTRICAL** SPECIFICATIONS

PROVIDE ALL RACEWAYS AND POWER WIRING FOR ALL DIVISION 15 EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, INCLUDING, BUT NOT LIMITED TO, PUMPS, WATER HEATERS, AND HVAC EQUIPMENT, AND ALL LINE-VOLTAGE CONTROL AND

EMPTY CONDUIT SYSTEMS INSTALLED FOR COMMUNICATION SYSTEMS, PUBLIC INTERLOCK WIRING NOT PROVIDED UNDER DIVISION 15. CONNECT PER MANUFACTURER'S WIRING DIAGRAMS. COORDINATE WITH DIVISION 15 FOR DISCONNECTS FURNISHED WITH EQUIPMENT. AND PROVIDE ALL DISCONNECT SWITCHES AS REQUIRED. AFTER INSTALLING WIRING, VERIFY THAT EACH MOTOR

VERIFY THE ACTUAL "MAXIMUM OVERCURRENT PROTECTION" DEVICE RATINGS AND "MINIMUM CIRCUIT AMPACITY" CONDUCTOR SIZING FOR MECHANICAL EQUIPMENT FROM THE EQUIPMENT NAMEPLATE. BASE ELECTRICAL INSTALLATIONS ON ACTUAL REQUIRED AMPERAGES, WHICH MAY VARY SOMEWHAT FROM THE CONDUCTOR AND EQUIPMENT SIZES SHOWN ON THE DRAWINGS; HOWEVER, IN NO CASE, REDUCE THE SIZE OF CONDUCTORS INDICATED ON THE DRAWINGS WITHOUT AUTHORIZATION FROM THE ENGINEER. PROVIDE PROPERLY SIZED ELECTRICAL WIRING AND EQUIPMENT WITHOUT EXTRA MOISTURE, USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT FITTINGS. COST TO THE OWNER. NOTIFY THE ENGINEER OF ALL CHANGES REQUIRED IN THE ELECTRICAL INSTALLATION DUE TO EQUIPMENT VARIANCES SO THAT THE EFFECTS ON FEEDERS, BRANCH CIRCUITS, PANELBOARDS, FUSES AND CIRCUIT BREAKERS CAN BE CHECKED PRIOR TO PURCHASING AND INSTALLATION. BE RESPONSIBLE FOR COORDINATING WITH DIVISION 15 TO VERIFY THE ACTUAL AMPACITIES AND CORRECT SIZES OF ALL CONDUCTORS AND OVERCURRENT FOR ALL MOTORS, WHEN STARTERS ARE PROVIDED UNDER DIVISION 16.

LOAD HAS THE CORRECT PHASE ROTATION.

PROVIDE ALL RACEWAYS, POWER WIRING, AND LINE-VOLTAGE CONTROL AND INTERLOCK WIRING NOT PROVIDED UNDER DIVISION 15, FOR ALL THERMOSTATS, TEMPERATURE CONTROL DEVICES, AND CONTROLS, INCLUDING, BUT NOT LIMITED TO, NIGHT-STATS, WATER HEATER INTERLOCKS, TIME SWITCHES AND OVERRIDE TIMERS. SEE MECHANICAL DRAWINGS FOR LOCATIONS AND TEMPERATURE CONTROL DIAGRAMS. LOW-VOLTAGE CONDUCTORS FOR THERMOSTATS AND TEMPERATURE CONTROL SYSTEMS MAY BE RUN EXPOSED ABOVE FINISHED ACCESSIBLE CEILINGS, IF APPROVED AND LISTED FOR THIS PURPOSE, BUT SHALL ON CENTERS BE INSTALLED IN CONDUIT WITHIN WALLS AND WHERE EXPOSED IN THE WORK

#### EXECUTION

ERECT EQUIPMENT PARTS AT SUCH TIME AND IN SUCH MANNER AS TO MINIMIZE INTERFERENCES AND DELAYS IN THE EXECUTION OF THE WORK CARE SHALL BE USED IN THE ERECTION AND INSTALLATION OF ALL EQUIPMENT AND MATERIALS TO AVOID MARRING SURFACES OF THE WORK. DAMAGES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

EQUIPMENT REQUIRING ELECTRICAL SERVICE SHALL NOT BE ENERGIZED OR PLACED IN SERVICE UNTIL ALL INTERESTED PARTIES HAVE BEEN DULY NOTIFIED AND ARE PRESENT OR HAVE WAIVED THEIR RIGHT TO BE PRESENT. WHERE EQUIPMENT TO BE PLACED IN SERVICE INVOLVES SERVICE OR CONNECTION FROM ANOTHER CONTRACTOR OR THE OWNER, NOTIFY THE OWNER IN WRITING BE COMPLETE.

REQUIRED TO ALL MISCELLANEOUS EQUIPMENT FURNISHED BY OTHERS, OR UNDER OTHER DIVISIONS OF THE WORK. THIS SHALL INCLUDE POWER AND CONTROL WIRING. WIRING DEVICES AND COVER-PLATES FOR BUILT-IN EQUIPMENT ARE INCLUDED IN THE WORK OF THIS DIVISION. SAFETY DISCONNECTS AND OTHER MISCELLANEOUS PROTECTIVE DEVICES REQUIRED BY N.E.C. ARE INCLUDED IN THE WORK OF THIS DIVISION. DO ALL ROUGHING-IN AND FINAL CONNECTIONS FROM APPROVED SHOP DRAWINGS ONLY.

COMPLIANCE WITH THE DRAWING AND ANY NOTES THEREON IS REQUIRED. PROVIDE OPENINGS THROUGH WALLS, PARTITIONS, FLOORS, AND ROOFS AS REQUIRED FOR ELECTRICAL WORK.

PROVIDE SLEEVES FOR ELECTRICAL WORK PASSING THROUGH WALLS, OTHERWISE SPECIFIED. FIRE WALL AND/OR FLOOR INTEGRITY SHALL BE CONCRETE FLOORS AND ROOFS, SHALL BE FABRICATED FROM STANDARD GALVANIZED STEEL PIPE WITH ENDS FINISHED SMOOTH, BURR FREE, WITHOUT SHARP EDGES. SLEEVES IN WALLS, ROOFS, AND FLOORS OF OTHER CONSTRUCTION AND THROUGH SUSPENDED CEILINGS SHALL BE FABRICATED BE FABRICATED SUCH THAT WATERPROOFING CAN BE FLASHED ONTO AND AROUND THE SLEEVE.

ALL POWER AND LIGHTING CIRCUITS SHALL BE RUN IN METALLIC RACEWAYS EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. THESE RACEWAYS SHALL BE RUN CONCEALED IN ALL FINISHED AREAS, AND WHERE RUN EXPOSED SHALL BE SQUARE TO THE BUILDING AND HELD TIGHT TO THE BUILDING CONSTRUCTION. LOW VOLTAGE, TELEPHONE, INTERCOM, MUSIC, ALARM AND SECURITY WIRING RUN ABOVE ACCESSIBLE CEILINGS SHALL BE RUN USING INSULATED, PLENUM AHJ. VERIFY ALL REQUIREMENTS PRIOR TO INSTALLATION. METALLIC CONDUIT PROVIDE FOR A FUTURE DEVICE IN THE BOX. FOR THESE SYSTEMS SHALL BE PROVIDED ONLY WHERE RUN INSIDE WALLS. THE DRAWINGS INDICATE THE REQUIRED SIZE OF ALL RACEWAYS (EXCEPT AS HEREINAFTER SPECIFIED), THE POINTS OF TERMINATION AND THE SUGGESTED ROUTING. HOWEVER, THE INSTALLER IS RESPONSIBLE FOR PROPER

COORDINATION WITH BUILDING STRUCTURE AND THE WORK OF OTHER TRADES. FURNISHED COMPLETE WITH PLASTER RING OR TILE RING ACCORDING TO WALL FURNISH ALL REQUIRED BENDS, ELBOWS, FITTINGS, JUNCTION AND PULL BOXES, CONSTRUCTION WHERE REQUIRED. BOXES FOR INSTALLATION IN MASONRY WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS, THAT MAY BE REQUIRED WALLS SHALL BE SPECIAL SQUARE CORNER MASONRY TYPE. BOXES FOR TO SATISFY CODES AND THE STANDARDS OF GOOD PRACTICE. WHERE CONDUITS MOUNTING OF LIGHTING FIXTURES SHALL BE FOUR INCH OCTAGON, EQUIPPED FOR BOTH BRANCH AND FEEDER CIRCUITS ARE RUN CONCEALED, THEY MAY BE WITH 3/8 IN. "NO-BOLT" FIXTURE STUD. BOXES FOR FLOOR OUTLETS SHALL BE RUN OUT OF SQUARE TO THE BUILDING PROVIDING THE SHORTEST POSSIBLE RUN CONCRETE PROOF STEEL BOXES WITH ADJUSTABLE TOPS AND DEVICES AS IS UTILIZED. RACEWAY SIZES ARE BASED ON THE USE OF COPPER CONDUCTORS

HEREINAFTER NOTED OR SHOWN. ALL BOXES SHALL BE FURNISHED COMPLETE AND N.E.C. FILL.

CONDUIT SHALL BE CONSTRUED AS ELECTRICAL RACEWAYS AND SHALL CONFORM TO THE FOLLOWING: CONCEALED IN SUSPENDED CEILINGS AND INTERIOR PARTITIONS - EMT WITH SET SCREW TYPE FITTINGS. UNDERGROUND OR BELOW INTERIOR SLABS - GRS. (NOTE: PVC CONDUIT IS PERMITTED OUTSIDE TELEPHONE, ALARM, AND SIGNAL SYSTEM OUTLET BOXES SHALL BE STANDARD FOR PARKING AREA LIGHTING, SIGNS, ETC. ELBOWS SHALL BE GRS). EXPOSED ON OUTLET BOX TYPE WHERE ONLY ONE CONDUIT ENTERS SAME. UNLESS BUILDING EXTERIOR - GRS.

CONDUIT BENDS SHALL BE MADE TO THE LARGEST POSSIBLE RADIUS FOR EASE IN ADAPTER RING. PULLING CONDUCTORS AND TO PROVIDE A NEATLY INSTALLED APPEARANCE, EQUIPMENT AND CONDITIONS PERMITTING, POWER CONDUIT BENDS SHALL CONFORM TO THE FOLLOWING: 1-1/2 IN. - 18 IN. RADIUS; 2 IN. - 24 IN. RADIUS; 2-1/2 INSPECT ARCHITECTURAL DRAWINGS AND LOCATE LOCAL SWITCHES ON THE IN. - 24 IN. RADIUS: 3 IN. - 36 IN. RADIUS.

GRS CONDUIT SHALL BE CUT WITH POWER OR HACKSAW AND CLEANLY REAMED

TO REMOVE ALL "BURRS" AND ALL FIELD CUT THREADS SHALL BE PAINTED WITH WHITE LEAD BEFORE COUPLINGS ARE APPLIED.

TELEPHONES, OWNER ITEMS AND OTHER SYSTEMS AS INDICATED ON DRAWINGS GROUND RECEPTACLES AND POWER OUTLETS TO THE CONDUIT SYSTEM WITH A SHALL BE INSTALLED COMPLETE WITH NYLON PULL WIRES PROPERLY TAGGED AT GREEN GROUNDING CONDUCTOR SIZE IN ACCORDANCE WITH N.E.C. AND BOTH ENDS FOR IDENTIFICATION.

CONTINUOUSLY IN CONDUITS, CAUSING CONDENSATION AND THE COLLECTION OF EQUIPMENT CONNECTED TO THE ELECTRICAL SYSTEM SHALL BE GROUNDED MOISTURE, THE CONDUITS SHALL BE SEALED AT EACH END WITH A PLIABLE X DUCT SEALING COMPOUND. ALSO SEAL ALL CONDUITS ENTERING AND LEAVING REFRIGERATED EQUIPMENT AND PROVIDE EXPANSION JOINTS PER N.E.C.

ALL CONNECTIONS TO MOTORS, SOLENOID VALVES, PRESSURE SWITCHES, LIMIT METALLIC CONDUIT SYSTEM. THIS REQUIREMENT INCLUDES ALL FLEXIBLE SWITCHES, AND SIMILAR APPARATUS SHALL BE FLEXIBLE CONDUIT WHERE PERMITTED. WHERE EQUIPMENT IS INSTALLED OUTDOORS OR EXPOSED TO

EQUIPMENT LEVELING, HANGERS AND SUPPORTS SET EACH PIECE INSTALLED UNDER THIS DIVISION TRUE AND LEVEL. ADEQUATELY SUPPORT ALL RACEWAYS FROM THE STRUCTURE USING SCREW CLAMPS TO SECURE TO SAME. ARRANGE SUPPORTS TO PREVENT MOISTURE COLLECTION AND ALLOW ENTRANCE TO BOXES WITHOUT BENDS. INSTALL PROTECTIVE DEVICES FOR ALL EQUIPMENT, AND CORRECT OVERLOAD HEATERS MULTIPLE CONDUITS USING CHANNEL TRAPEZE SUPPORTS TIGHT TO STRUCTURE GROUND CONDUCTOR - SIZE AS PER N.E.C. REQUIREMENTS, SOFT DRAWN OR ABOVE. USE APPROVED SPACERS TO INSULATE FROM CONTACT WITH BUILDING. SIZE CLAMPS. INSERTS. CHANNELS AND ALL OTHER MEMBERS TO SUPPORT A LOAD EQUAL TO 200% OF THE COMBINED WEIGHT OF ALL SUPPORTED MATERIAL PLUS THE WEIGHT OF A MAN.

> WHERE SEVERAL RACEWAYS ARE SUPPORTED ON A COMMON TRAPEZE HANGER, SUPPORTS SHALL BE SPACED TO ACCOMMODATE THE SMALLEST SIZE RACEWAY INVOLVED. SPACE HANGERS AS FOLLOWS: RIGID CONDUIT: 1/2 AND 3/4 IN. SIZE; 6'-0" ON CENTERS; 1 AND 1-1/4 IN. SIZE; 9'-0"

ELECTRIC METALLIC TUBING:

1/2 AND 3/4 IN. SIZE; 5'-0" ON CENTERS; 1 AND 1-1/4 IN SIZE; 6'-0" ON CENTERS.

SECURELY ATTACH HANGERS AND SUPPORTS TO CONSTRUCTION BY METHODS RECOMMENDED IN THE "NECA STANDARDS OF INSTALLATION" MANUAL COORDINATION WITH MECHANICAL TRADES: THE INTENT OF THE ABOVE CEILING SUPPORTS IS TO COMBINE AS MANY PIPES, CONDUITS, ETC., AS IS POSSIBLE WITHIN SAFE STRUCTURAL LIMITS, ON EACH HORIZONTAL SECTION OF A TRAPEZE CONDUCTORS WITH ADHESIVE WRAP LABELS WITHIN 2 IN. OF THE CONDUCTOR HANGER. PRIOR TO SELECTING THE HORIZONTAL MEMBER, ALL TRADES, MECHANICAL AND ELECTRICAL, SHALL COORDINATE ACTUAL NUMBER OF PIPES, CONDUITS, ETC., SUCH THAT FINAL SELECTION RESULTS IN A NEATLY GROUPED, DISCIPLINED AND ACCESSIBLE INSTALLATION.

EXCEPT FOR SUCH ITEMS AS ARE NORMALLY WIRED AT THEIR POINT OF MANUFACTURE AND SO DELIVERED - AND UNLESS SPECIFICALLY NOTED TO THE CONTRARY HEREIN - THE ELECTRICAL TRADE SHALL DO ALL ELECTRICAL WIRING WHEN THE EQUIPMENT WILL BE READY. THE OWNER SHALL BE NOTIFIED AS FAR OF EVERY CHARACTER. IT IS THE INTENT OF THESE SPECIFICATIONS AND IN ADVANCE AS POSSIBLE, OF THE DATE THE VARIOUS ITEMS OF EQUIPMENT WILL DRAWINGS THAT ALL SYSTEMS AND EQUIPMENT SHALL BE PROVIDED WITH ALL NECESSARY UTILITY CONNECTIONS, COMPLETED TO ALLOW SAFE AND PROPER OPERATION OF SAID SYSTEMS. WHEN IT IS NECESSARY FOR TRADES THE WORK OF THIS TRADE INCLUDES ROUGH-IN FOR AND FINAL CONNECTION AND PERFORMING WORK COVERED BY THIS DIVISION TO MAKE FINAL CONNECTIONS TO ITEMS OF EQUIPMENT BEING FURNISHED BY OTHERS, OR BY OTHER TRADES UNDER OTHER DIVISIONS, ALL SUCH WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DIVISION AND ALL MATERIALS USED SHALL BE AS SPECIFIED HEREIN.

MINIMUM WIRE SIZE FOR BRANCH CIRCUITS SHALL BE #12 AWG, EXCEPT THAT HOMERUNS LONGER THAN 100 FT. LENGTH FROM THE PANEL TO THE CIRCUIT'S ELECTRICAL LOAD CENTER SHALL BE #10 AWG MINIMUM. WHERE RUNS EXCEED 150', CONTRACTOR MUST ENSURE WIRE SIZE BEING UTILIZED DOES NOT CREATE A VOLTAGE DROP GREATER THAN 3%. REQUEST PROPER WIRE SIZE PRIOR TO THOROUGHLY CLEAN ALL FIXTURES, SWITCHES, OTHER DEVICES, PANELBOARDS, INSTALLATION IF A 3% VOLTAGE DROP MAY OCCUR FOR ANY BRANCH CIRCUIT.

AND EQUIPMENT PROVIDED OR CONNECTED IN THIS CONTRACT. ALL SURFACES WHERE MORE THAN THREE CURRENT CARRYING CONDUCTORS ARE ENCLOSED IN SHALL BE PROPERLY POLISHED AND SHALL BE FREE OF PAINT AND ALL OTHER THE SAME RACEWAY, CONDUCTORS ARE TO BE DERATED PER N.E.C. AND WIRE DIRT OR DEBRIS. TOUCHUP OR COMPLETELY REFINISH ALL EQUIPMENT PARTITIONS, ROOFS, AND FLOORS. SLEEVES SHALL EXTEND THROUGH FLOORS, SIZE INCREASED AS REQUIRED. WHERE THE INCREASED CONDUCTOR SIZE FURNISHED WITH FACTORY FINISHES THAT IS DAMAGED DURING DELIVERY OR WALLS AND PARTITIONS AND SHALL BE CUT FLUSH WITH EACH SURFACE UNLESS REQUIRES, INCREASE THE RACEWAY SIZE AS WELL. FOR CONTROL WIRING, USE CONSTRUCTION. PROPERLY PROTECT THE FRONTS OF ALL PANELBOARDS, #14 AWG MINIMUM, FOR FIXTURE WIRING, AS PERMITTED BY N.E.C., USE #18 AWG SWITCHBOARDS AND SIMILAR EQUIPMENT TO PREVENT MARRING AND OTHER RESTORED AFTER PENETRATION. SLEEVES IN CONCRETE AND MASONRY WALLS, MINIMUM. FOR SIGNAL AND COMMUNICATIONS SYSTEMS USE WIRE SIZE AS SPECIFICALLY REQUIRED BY THE SYSTEM SUPPLIER.

MAKE CONNECTIONS TO TERMINALS USING PRESSURE TYPE CONNECTORS. SOLDERED JOINTS ARE PROHIBITED. ALL JOINTS IN CONDUCTORS SHALL BE FROM 22 U.S. GAUGE GALVANIZED STEEL. FLOOR SLEEVES SHALL EXTEND THREE MADE AT AN ACCESSIBLE LOCATION WITHIN A BOX BY TWISTING THE BARE INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. SPACE BETWEEN CONDUCTOR ENDS TOGETHER AND APPLYING A WIRE CONNECTOR IN ALL SIZES FLOOR SLEEVES AND PASSING CONDUIT SHALL BE FILLED WITH DUCT SEAL UP TO THE MAXIMUM CAPACITY OF THE CONNECTOR. JOINTS SHALL BE TAPED PACKING AND CAULKED WITH WATERPROOF COMPOUND AS APPROVED. WHERE WITH AN APPROVED ELECTRICAL TAPE. SPLICES FOR CONDUCTORS LARGER CONDUITS PASS THROUGH WATERPROOFED FLOORS OR WALLS, SLEEVES SHALL THAN #10 AWG SHALL BE MADE WITH AN APPROVED COMPRESSION (SQUEEZE) CONNECTOR INSULATED WITH NOT LESS THAN TWO LAYERS OF ELECTRICAL FILL TEST ALL CIRCUITS TO ASSURE THEM TO BE FREE OF GROUNDS AND SHORTS. TAPE TO 1.5 TIMES THE THICKNESS OF INSULATION, FOLLOWED BY TWO (MINIMUM) LAYERS OF HALF-LAPPED ELECTRICAL TAPE FOR MECHANICAL PROTECTION. LOCATE ALL SPLICES IN BOXES OR FITTINGS OF PROPER SIZE PER

IDENTIFY ALL WIRES AND CABLES WITH BRADY ADHESIVE WIRE MARKERS AT EACH BOX, PANEL, AND OUTLET. IDENTIFICATION SHALL, AS A MINIMUM, INDICATE CAPACITY, SPEED, AND OVERALL SATISFACTORY OPERATION. CHECK THAT THE THE PANEL AND CIRCUIT SUPPLYING THE OUTLET. AT THE PANEL END, THE LOAD PROPER OVERLOAD HEATERS HAVE BEEN INSTALLED BY READING THE MOTOR SERVED AND ITS LOCATION SHALL BE INDICATED. PROVIDE A MINIMUM OF 8 IN. NAMEPLATE. ADJUST THE SIZE OF THE OVERLOAD HEATER AS REQUIRED TO RATED CABLE. PROVIDE LOW VOLTAGE CABLE IN CONDUIT IF REQUIRED BY LOCAL SLACK WIRE AT EACH OUTLET FOR MAKING CONNECTION TO THE DEVICE OR TO MATCH THE MOTOR NAMEPLATE. OPERATE ALL MAIN AND FEEDER SWITCHES AND

> EACH BOX SHALL BE OF PROPER SIZE TO ACCOMMODATE THE DEVICE AND FUNCTION FOR WHICH IT IS SHOWN. BOXES FOR WALL DEVICES SHALL BE WITH PROPER COVER AND/OR DEVICE PLATE AND DEVICE. UNLESS OTHERWISE NOTED, PLACE OUTLET BOXES AT THE FOLLOWING HEIGHTS (BOX CENTER TO FINISH FLOOR): WALL SWITCHES 48" AND CONVENIENCE OUTLETS 18" UNLESS NOTED OTHERWISE ON DRAWINGS.

OTHERWISE SPECIFIED OR INDICATED ON DRAWINGS, WHERE TWO OR MORE CONDUITS ENTER, BOX SHALL BE 4-11/16 IN. SQUARE MINIMUM WITH SUITABLE

LOCATE ALL OUTLETS AS INDICATED ON DRAWINGS, HOWEVER, AT INSTALLATION STRIKE SIDE OF THE DOOR.

WHERE BUILDING VENTILATION CONDITIONS ARE SUCH THAT AIR MAY FLOW

CONNECTION TO THE BOX MAY BE A "G" CLIP OR BY A 10/24 SCREW THREADED INTO A HOLE IN THE BACK OF THE BOX AND USED FOR NO OTHER PURPOSE. WITHIN INSULATED GREEN GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH N.E.C. AND INSTALLED WITHIN THE RACEWAY. CONDUCTOR SHALL BE CONTINUOUS BETWEEN A GROUNDING SCREW IN THE EQUIPMENT JUNCTION BOX AND A GROUND ATTACHMENT IN THE NEAREST OUTLET BOX IN THE RIGID

CONDUIT.

GENERALLY FOR TELEPHONE AND SUPPLEMENTAL COMMUNICATION SYSTEMS NO 6 AWG CONDUCTOR TO EACH PROTECTOR CABINET, OTHER CABINET, OR DEVICE INSTALLATION SHALL BE CONSIDERED SUFFICIENT, FROM THE SERVICE GROUND (UNLESS INDICATED OTHERWISE).

EQUIPMENT, RACEWAY SYSTEMS, WIRING SYSTEM NEUTRALS, RECEPTACLES AND

CONNECTED BETWEEN THE DEVICE GROUNDING SCREW AND THE OUTLET BOX.

ACCORDANCE WITH N.E.C. ARTICLE 250.

POWER OUTLETS, MOTORS AND MOTORIZED EQUIPMENT, SHALL BE GROUNDED IN

GROUND-RODS - 1/2" DIA., 10' LONG, COPPERWELD SOFT ANNEALED, COPPER WIRE.

JOINTS AND CONNECTIONS - MOLDED FUSION WELDING PROCESS USING PROPER MOLD AND THE NUMBER, SIZE AND TYPE CARTRIDGE FOR THE JOINT OR CONNECTION. WATERPIPE CONNECTION, SILICON BRONZE APPROVED MECHANICAL CONNECTOR DESIGNED FOR THE PIPE AND CABLE TO BE BONDED.

PANELBOARD INSTALLATION: MOUNT PANELBOARDS WITH CENTERLINE AT 5 FT.-6IN. ABOVE FINISH FLOOR, EXCEPT THAT THE HIGHEST BREAKER HANDLE SHALL BE BELOW 6 FT.-5 IN. ABOVE FINISH FLOOR, ARRANGE BREAKERS SO THAT THE BREAKER RATING IS VISIBLE

PANEL DIRECTORIES, AS A MINIMUM, SHALL BE TYPEWRITTEN AND INDICATE BREAKER POSITION NUMBER AND EQUIPMENT SERVED. THE PANEL IDENTIFICATION SHALL BE LOCATED ON THE PANEL TRIM AND SHALL CONSIST OF A BLACK LAMINATED PHENOLIC LABEL, SCREW MOUNTED, WITH THE PANEL IDENTIFICATION MATCHING PANEL IDENTIFICATION ON DRAWINGS, LABEL ALL TERMINATION PRIOR TO INSTALLATION OF TRIM.

WITH THE PANEL FRONT IN PLACE.

PROVIDE A LIGHTING FIXTURE FOR EACH AND EVERY OUTLET IN ACCORDANCE WITH TYPE DESIGNATION AND FIXTURE SCHEDULE ON THE DRAWINGS. VERIFY THE ARCHITECTURAL FINISHES AND CEILING CONSTRUCTION AND - REGARDLESS OF THE CATALOG NUMBER PREFIXES AND SUFFIXES SHOWN - PROVIDE FIXTURES WITH THE PROPER TRIM, FRAMES, SUPPORTS, AND HANGER AND OTHER MISCELLANEOUS APPURTENANCES TO PROPERLY COORDINATE WITH SAID FINISHES. REINFORCE CEILING CONSTRUCTION AS REQUIRED TO PROPERLY SUPPORT THE WEIGHT OF FIXTURES INSTALLED THEREON.

IMMEDIATELY PRIOR TO FINAL INSPECTION: THOROUGHLY CLEAN ALL FIXTURES INSIDE AND OUT, INCLUDING PLASTICS AND GLASSWARE. ADJUST TRIM TO FIT ADJACENT SURFACES, REPLACE BROKEN OR DAMAGED PARTS, INSTALL NEW LAMPS. ELECTRICALLY AND MECHANICALLY TEST THE SYSTEM FOR PROPER OPERATION.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL FROM LOCAL CODE AUTHORITIES AND MAKING ANY REVISIONS DIRECTED BY THEM ON EMERGENCY AND EXIT LIGHTING.

DEFACING.

AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY THE WORK OF THE TRADESMEN DOING ELECTRICAL WORK. AT COMPLETION OF THE WORK, REMOVE ALL RUBBISH, TOOLS, EQUIPMENT, AND SURPLUS MATERIALS. BROOM CLEAN ALL ASSIGNED SPACES PRIOR TO LEAVING THE PREMISES.

TESTING AND LOAD BALANCING

LIGHT AND TEST EACH LAMP. PROVE AND TEST THE AVAILABLE VOLTAGE ON THE LOAD SIDE OF EACH DISCONNECT. VERIFY PROPER OPERATION OF THE DISCONNECT. VERIFY THE PHASE SEQUENCE, VOLTAGE, AND ROTATION AT EACH MOTOR IN THE PRESENCE OF THE INSTALLER. RUN EACH MOTOR WITH ITS CONTROL AS NEARLY AS POSSIBLE UNDER OPERATING CONDITIONS FOR A SUFFICIENT LENGTH OVER TIME TO DEMONSTRATE CORRECT ALIGNMENT, WIRING BREAKERS.

THE VARIOUS BRANCH CIRCUITS SERVED FROM THE LIGHTING PANELBOARDS VARY IN LOADING. CAREFULLY BALANCE THE ACTUAL OPERATING LOAD ON EACH PANELBOARD WHEN ALL LOAD IS TURNED ON AND THE SYSTEM IS OPERATING AT 100% DEMAND, THE UNBALANCE SHALL NOT EXCEED 10%. DURING FINAL INSPECTION, FURNISH THE TEST INSTRUMENTS AND QUALIFIED PERSONNEL TO PERFORM COMPLETE TESTING. COSTS OF ALL TESTING, INCLUDING THE INCIDENT COSTS FOR RETESTING OCCASIONED BY DEFECTS AND FAILURES OF THE EQUIPMENT TO MEET THE SPECIFICATIONS, SHALL BE BORNE BY THE CONTRACTOR.

FURNISH AT THE COMPLETION OF THE PROJECT A FINAL INSPECTION CERTIFICATE FROM THE LOCAL INSPECTING AUTHORITY.

END OF SECTION 16000