

6. CONTRACTOR MUST DISPOSE OF ALL DEBRIS IN AN APPROVED FACILITY IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

H. CONTRACTOR TO INSTALL THE MEMBRANE SYSTEM PER ALL LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.

102 WARRANTY

A. ROOF TO HAVE DURO-LAST, INC.'S STANDARD WRITTEN FULL ROOFING SYSTEM REPAIR AND/OR REPLACEMENT 5-YEAR WARRANTY AT NO ADDITIONAL WARRANTY SHALL BE A NO-DOLLAR LIMIT THE CHARGE, COVERING MATERIALS AND LABOR. ISSUED BY THE ORIGINAL MANUFACTURER OF THE ROOFING MEMBRANE AND WARRANTY INCLUDE ALL ACCESSORIES SUPPLIED BY THE ROOFING MANUFACTURER. WARRANTY INCLUDES THE REPAIR OR REPLACEMENT OF MEMBRANE AND MATERIALS AND THE COST OF/ OR TURNKEYS OF LABOR AT THE CONTRACTOR LIST PRICE WHICH IS IN EFFECT AT THE TIME OF REPAIR. WARRANTY SHALL INCLUDE LOSS OF CONSEQUENTIAL DAMAGES DUE TO FAILURE OF THE ROOF SYSTEM AND CONTAIN NO EXCLUSIONS FOR PONDED WATER OR BIOLOGICAL GROWTH. NO PRIVATE LABEL PRODUCTS SHALL BE ACCEPTED. UPON WARRANTY INSPECTION AND ACCEPTANCE OF THE ROOF, THE WARRANTY SHALL BE TURNED OVER TO THE CONTRACTOR BY A DURO-LAST QUALITY ASSURANCE SPECIALIST.

103 HEIGHT REQUIREMENTS

A. THE TOTAL HEIGHT OF THE INSTALLED ROOFING SYSTEM INCLUDING ALL ACCESSORIES, GROUND PLATES, 2"X4" BREATHER VENTS, ETC., SHALL NOT EXCEED 25 POUNDS PER SQUARE FOOT. INSULATION HEIGHT VARIES ACCORDING TO R-VALUE DESIRED.

104 SUBMITTALS

A. WRITTEN CONFIRMATION FROM DURO-LAST ROOFING, INC. THAT THE INSTALLER IS AN AUTHORIZED DEALER/CONTRACTOR.

B. SHOP DRAWING SHOWING THE LAYOUT OF THE PREFABRICATED ROOFING PANELS.

C. CONTRACTOR SHALL INFORM THE OWNER PROJECT MANAGER OF ALL TIMELINES, SCHEDULES, AND CONSTRUCTION PROCESSES PRIOR TO WORK COMMENCEMENT.

105 PRODUCT DELIVERY, STORAGE, & HANDLING PROCEDURES

A. FOLLOW DURO-LAST, INC.'S INSTRUCTIONS, CAUTIONS, WARNINGS AND PROCEDURES.

B. ROOFING SYSTEM SHALL NOT BE APPLIED WHEN WEATHER CONDITIONS ARE NOT WITHIN THE RANGE ACCEPTABLE UNDER DURO-LAST'S RECOMMENDATIONS.

PART 2 PRODUCT

201 ROOF MEMBRANE

A. MEMBRANE COMPONENTS TO BE PRODUCTS OF DURO-LAST ROOFING, INC. NO SUBSTITUTIONS WILL BE ACCEPTED.

B. A SPECIAL FORMULATED, PERMANENT, THERMOPLASTIC ALLOY, BONDED TO A HIGH TENACITY, LOW SHRINKAGE HEFT, INSERTED POLYESTER FABRIC WITH RESISTANCE TO ULTRAVIOLET RAYS, MICROORGANISMS AND IMPERVIOUS TO MOST CAUSTIC CHEMICALS, ANIMAL FATS, GREASES AND OILS TYPICALLY FOUND ON A RESTAURANT ROOF.

C. MEMBRANE SHALL BE FACTORY DIELECTRICALLY WELDED INTO PREFABRICATED SHEETS UP TO 2500 SQUARE FEET OR AS DETERMINED BY JOB CONDITION.

D. THE NEW ROOFING SHALL BE A PREFABRICATED MECHANICALLY FASTENED INSTALLATION OF SINGLE-PLY REINFORCED MEMBRANE, 40 MILS THICK.

E. FIRE RESISTANCE OF THE THERMOPLASTIC ROOFING SYSTEM SHALL MEET UL CLASS A. ALL PACKAGINGS OF MEMBRANE AND INSULATION SHALL BEAR UL CLASS A LABEL.

F. MEMBRANE SHALL BE WHITE.

G. ALL ROOFING COMPONENTS USED AT ROOF PENETRATIONS SHALL BE PROVIDED BY DURO-LAST ROOFING, INC.

202 INSULATION

A. INSTALL TWO LAYERS OF NEW POLYISOCYANURATE INSULATION. NEW INSULATION MUST BE A MINIMUM OF R-30. INSTALL INSULATION ACCORDING ROOF MEMBRANE MANUFACTURERS SPECIFICATIONS.

203 ROOF WALK PADS

A. 24" X 24" SAFETY STRIPE WALK PADS AS MANUFACTURED BY DURO-LAST ROOFING.

PART 3 EXECUTION

301 SUBSTRATE INSPECTION

A. INSPECT ALL SURFACES TO RECEIVE ROOFING FOR ANY CONDITION THAT WILL ADVERSELY AFFECT EXECUTION, PERFORMANCE, OR QUALITY OF WORK.

B. ALL ROOF SURFACES AND ALL SLOPED SURFACES TO DRAINS AND OUTLETS SHALL BE CHECKED AND APPROVED BY THE ROOFING CONTRACTOR PRIOR TO THE START OF THE ROOFING WORK.

C. INSTALL ROOFING MATERIAL ONLY UNDER SATISFACTORY CONDITIONS AS SPECIFIED BY THE MEMBRANE MANUFACTURER.

302 GENERAL REQUIREMENTS

- A. PRECAUTIONS
1. DO NOT LAY OUT OR EXPOSE ANY INSULATION ON THE DECK THAT CANNOT BE COVERED BY MEMBRANE ON THE SAME DAY.
 2. IN MAKING ALL FIELD HEAT WELDS, MAKE SURE ALL EDGES ARE CLEAN AND FREE OF TAR, MASTIC OR OTHER FOREIGN ITEMS.
 3. DO NOT DISPOSE MEMBRANE AND ACCESSORIES TO A CONSTANT TEMPERATURE IN EXCESS OF 10 DEGREES FAHRENHEIT.
 4. SEALANTS AND ADHESIVES SHOULD BE APPLIED ACCORDING TO DURO-LAST, INC.'S SPECIFICATIONS.
 5. START SECURING THE MEMBRANE AT THE HIGHEST POINT AND WORK TOWARDS THE DRAINS.

B. PROTECTION OF ROOFING SURFACES STORMS, WHEELING, OR TRUCKING DIRECTLY ON ROOF INSULATION OR MEMBRANE SURFACE IS NOT RECOMMENDED. SMOOTH, CLEAN PLYWOOD OR PLANK WALKWAYS, RUNWAYS AND PLATFORMS SHALL BE PROVIDED AS NECESSARY.

303 INSULATION INSTALLATION

A. THE ROOF INSULATION SHALL BE INSTALLED WITH APPROVED FASTENERS AND DISTRIBUTION PLATES PLACED ACCORDING TO THE MANUFACTURERS MOST RECENT PUBLISHED SPECIFICATIONS FOR THE USE UNDER THE DURO- LAST ROOFING SYSTEM AND FOR ISSUANCE OF THE WARRANTY.

304 MEMBRANE INSTALLATION

A. INSTALL THE ROOFING SYSTEM TO DURO-LAST, INC.'S MOST RECENT PUBLISHED SPECIFICATIONS.

305 INSPECTION & WARRANTY

A. AFTER THE INSTALLATION IS COMPLETE, A DURO-LAST QUALITY ASSURANCE SPECIALIST SHALL INSPECT THE VISIBLE DETAILS OF THE ROOFING SYSTEM FOR ACCEPTABILITY FOR WARRANTY ISSUANCE. ANY DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AND MADE READY FOR REINSPECTION WITHIN FIVE (5) WORKING DAYS. UPON ACCEPTANCE, THE WARRANTY SHALL BE PROMPTLY ISSUED.

SECTION - 07840 - FIRESTOPPING

A. SUMMARY: FIRESTOPPING MATERIAL FOR PENETRATIONS IN FIRE-RATED CONSTRUCTION

B. SYSTEM DESCRIPTION

1. EACH FIRESTOPPING SYSTEM SHALL BE SELECTED TO MAINTAIN FIRE RATING OF THE ASSEMBLY IN WHICH IT USED.
2. FIRESTOPPING SYSTEMS SHALL BE RESILIENT AS NECESSARY TO ACCOMMODATE DIFFERENTIAL MOVEMENT BETWEEN ASSEMBLIES.

C. QUALITY ASSURANCE

1. PRIOR TO INSTALLATION OF FIRE STOPPING SYSTEMS OBTAIN APPROVAL FROM THE JURISDICTIONAL CODE AUTHORITIES FOR THE FIRE STOPPING SYSTEMS AND APPLICATIONS PROPOSED. NOTIFY THE OWNER / REPRESENTATIVE IF APPROVAL CANNOT BE OBTAINED.
2. FIRESTOPPING TESTED IN ACCORDANCE WITH ASTM E81, ASTM E84, OR UL 1711 TO MEET THE HOURLY FIRE RATINGS OF THE CONSTRUCTION BEING SEALED. PROVIDE FIRE RATED ASSEMBLIES, EXCEPT WHERE T-RATED ASSEMBLIES ARE REQUIRED BY THE CODE AUTHORITY.
3. FIRESTOPPING SYSTEMS SHALL BE UL LISTED ASSEMBLIES.

D. PRODUCTS

1. FIRESTOPPING SYSTEMS: SYSTEMS MEETING THE REQUIREMENTS SPECIFIED AND SUITABLE FOR THE CONDITIONS INDICATED.

E. INSTALLATION

1. PROVIDE FIRESTOPPING AT MECHANICAL, ELECTRICAL, AND PLUMBING PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, AND CEILINGS, AND OTHER LOCATIONS AS INDICATED ON THE DRAWINGS.
2. INSTALL FIRESTOPPING IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND AS NECESSARY TO MEET THE SPECIFIED FIRE RATING REQUIREMENTS.
3. WHERE FIRESTOPPING IS USED TO SEAL AROUND PENETRATIONS THROUGH WATERPROOF MEMBRANES, INSTALL TO MAINTAIN INTEGRITY OF WATERPROOF BARRIER.
4. PATCHING OF HOLES IN EXISTING CONSTRUCTION
 41. FILL OPEN HOLES WHICH REMAIN AFTER REMOVAL OF EXISTING MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS, PATCH AND REPAIR HOLES AS NECESSARY TO MATCH THE ADJACENT CONSTRUCTION AND TO MAINTAIN THE FIRE RATING OF THE ASSEMBLIES. FIRESTOPPING SYSTEMS MAY BE USED TO FILL HOLES THAT WILL BE CONCEALED IN THE FINISH CONSTRUCTION.
 42. WHERE FIRESTOPPING SYSTEMS ARE USED TO FILL FLOOR OPENINGS IN OCCUPIED AREAS, PROVIDE MINIMUM 1/8 GAGE SHEET METAL COVER AS NECESSARY TO SUPPORT FLOOR LOADS AND TO PREVENT DAMAGE TO THE FIRE STOPPING ASSEMBLIES. SECURE SHEET METAL AS NECESSARY TO PREVENT IRREGULARITIES FROM TELEGRAPHING THROUGH THE FLOOR FINISHES OVER THE SHEET METAL.

SECTION - 07850 - FIRE RATED JOINTS

A. SUMMARY:

1. FIRE RATED CONSTRUCTION JOINT ASSEMBLIES IN FIRE-RATED CONSTRUCTION, INCLUDING JOINTS AT THE FOLLOWING LOCATIONS:
 11. WHERE PARTITION HEADS MEET THE UNDERSIDE OF OVERHEAD FLOOR OR ROOF CONSTRUCTION.
 12. JOINTS IN FIRE RATED CONCRETE OR MASONRY WALLS.
2. REQUIREMENTS FOR FIRE RATED CONSTRUCTION JOINT ASSEMBLY COMPONENTS PROVIDED IN OTHER SECTIONS.

B. REFERENCES

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 11. E81 - METHOD FOR FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS.
2. UNDERWRITERS LABORATORIES (UL)

21. STANDARD 207M - TESTS FOR FIRE RESISTANCE OF BUILDING JOINT SYSTEMS.

C. SYSTEM DESCRIPTION

1. EACH FIRE RATED CONSTRUCTION JOINT ASSEMBLY SHALL BE SELECTED TO MAINTAIN FIRE RATINGS OF THE ASSEMBLY IN WHICH IT USED.
2. EACH FIRE RATED CONSTRUCTION JOINT ASSEMBLY SHALL BE RESILIENT AS NECESSARY TO ACCOMMODATE DIFFERENTIAL MOVEMENT BETWEEN ASSEMBLIES.

D. QUALITY ASSURANCE

1. FIRE RATED CONSTRUCTION JOINT ASSEMBLIES: SUCCESSFULLY TESTED IN ACCORDANCE WITH ASTM E81 INCLUDING HOSE STREAM TEST, TO MEET THE HOURLY RATINGS OF THE CONSTRUCTION BEING SEALED.
2. FIRE RATED CONSTRUCTION JOINT ASSEMBLIES AT PARTITION HEADS SHALL HAVE BEEN SUCCESSFULLY TESTED IN ACCORDANCE WITH THE DYNAMIC REQUIREMENTS OF UL 207M INCLUDING HOSE STREAM TEST, TO MEET THE HOURLY FIRE RATINGS OF THE CONSTRUCTION BEING SEALED.

E. FIRE RATED CONSTRUCTION JOINT ASSEMBLIES

1. METAL STUD PARTITION HEAD CONSTRUCTION JOINT ASSEMBLY:

11. SYSTEM: BASED ON UL ASSEMBLIES LISTED ON THE DRAWINGS.
12. FIRE RATED RUNNER, FIRE TRAK® BY FIRE TRAK CORPORATION, KIMBALL, MN (62-318-1200).
13. GYPSUM BOARD: AS SPECIFIED IN SECTION 04050.
14. FILL, VOID, OR CAVITY MATERIAL: AS LISTED IN THE FIRE RATED ASSEMBLY.

F. INSTALLATION

1. INSTALL CONSTRUCTION JOINT ASSEMBLIES IN ACCORDANCE WITH THE FIRE RATED ASSEMBLIES LISTED, AND AS NECESSARY TO MEET THE SPECIFIC FIRE RATINGS REQUIREMENTS.
2. COORDINATE INSTALLATION OF INTEGRAL COMPONENTS AS NECESSARY TO ENSURE THE FIRE RATINGS OF THE ASSEMBLIES.

SECTION - 07920 - JOINT SEALANTS

A. QUALITY ASSURANCE: USE ONLY SKILLED INSTALLERS SPECIALLY TRAINED IN THE TECHNIQUES OF SEALING, AND FAMILIAR WITH THE PUBLISHED RECOMMENDATIONS OF THE MANUFACTURERS OF THE SEALANTS BEING USED.

B. SEALANTS:

1. TYPE S - NEUTRAL CURE SILICONE SEALANTS
11. DOWN CORNING, 710 SILICONE BUILDING SEALANT, OR 715 SILICONE STRUCTURAL GLAZING AND WEATHERPROOFING SEALANT.
12. PECORA, 840 ARCHITECTURAL SILICONE SEALANT.
2. TYPE PTMS: ASTM C420, TYPE M, GRADE NS, CLASS 25, PECORA "DYNATREED", TREMCO 11PL, OR APPROVED, CUSTOM COLORS TO MATCH ADJACENT GROUT COLOR.
3. TYPE A: ASTM C824; TREMCO "ACRYLIC LATEX CAULK", PECORA "AC-207, SONNEBORN "SONOLAC" OR APPROVED.
4. TYPE SM: MILDEW RESISTANT SILICONE SEALANT, USDA APPROVED, DOWN CORNING 786 BY DOWN CHEMICAL, GE SANITARY SEALANT OR APPROVED, CLEAR.
5. TYPE SG: SILL GASKET; DOWN STYROFOAM SILL SEAL, FOAM GASKET

C. ACCESSORY MATERIALS

1. PRIMER: NON-STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION.
2. JOINT CLEANER: NON-CORROSIVE AND NON-STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER, COMPATIBLE WITH JOINT FORMING MATERIALS.
3. JOINT FILLER: CLOSED CELL POLYETHYLENE FOAM, ROUND PROFILE, THICKNESS 50% OF JOINT WIDTH.
4. BOND BREAKER: PRESSURE SENSITIVE TAPE RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION.

D. PREPARATION

1. CLEAN AND PREPARE JOINTS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. REMOVE LOOSE MATERIALS AND OTHER FOREIGN MATTER THAT MIGHT IMPAIR ADHESION OF SEALANT.
2. APPLY MASKING TIGHTLY AROUND JOINTS TO PROTECT ADJACENT SURFACES FROM EXCESS SEALANT.
3. PRIME AS REQUIRED FOR PROPER BOND TO SUBSTRATE MATERIALS.
4. PLACE BACKING MATERIALS TO ACHIEVE PROPER SEALANT WIDTH/DEPTH RATIOS. USE BOND BREAKER WHERE REQUIRED.

E. INSTALLATION

1. PERFORM WORK IN ACCORDANCE WITH ASTM G83, UNLESS SPECIFIED OTHERWISE OR RECOMMENDED OTHERWISE BY THE SEALANT MANUFACTURER.
2. SEALANT BEADS SHALL HAVE A SECTIONAL WIDTH TO DEPTH RATIO OF 2 TO 1.

3. INSTALL TYPE PTMS SEALANT FULL DEPTH IN TILE EXPANSION JOINTS WITH NO BACKER ROD.
4. TOOL JOINTS CONCAVE, UNLESS INDICATED OTHERWISE. FINISH FREE OF AIR POCKETS, FOREIGN EMBEDDED MATTER, RIDGES, AND SAGS.

F. PROTECT SEALANT IN JOINTS SUBJECT TO DIRT, MOISTURE, AND TRAFFIC DURING THE SEALANT CURING PROCESS. PROTECTION SHALL BE ABLE TO RESIST TRAFFIC WHILE REMAINING SECURELY IN POSITION.

G. SCHEDULES

1. TYPE S: PROVIDE AT ALL EXTERIOR JOINTS; STANDARD COLORS AS SELECTED BY OWNER / REPRESENTATIVE.
2. TYPE PTMS: PROVIDE AT ALL EXPANSION JOINTS IN STONE AND TILE; CUSTOM COLORS TO MATCH GROUT SAMPLES SUBMITTED BY THE TILE INSTALLER.
3. TYPE A: PROVIDE AT ALL INTERIOR JOINTS, UNLESS SPECIFIED OTHERWISE; STANDARD COLORS TO MATCH ADJACENT CONSTRUCTION.
4. TYPE SM: PROVIDE AT JOINTS AROUND COUNTER.
5. TYPE SG: PROVIDE AT ALL LOCATIONS WHERE A WOOD SILL PLATE OCCURS OVER A CONCRETE OR MASONRY SURFACE.

SECTION 0800 - METAL DOORS AND FRAMES

A. FIRE LABELS

PROVIDE UNDERWRITERS' LABELS ON DOORS AND FRAMES WHERE, AND OF CLASS INDICATED.

B. REFERENCE STANDARDS

1. STEEL DOOR INSTITUTE
 - SD-100 - RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES.
2. NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
 - NAAMM-04M SPECIFICATIONS FOR CUSTOM HOLLOW METAL DOORS AND FRAMES.
3. AMERICAN SOCIETY FOR TESTING AND MATERIALS
 - ASTM A366 - SPECIFICATION OF STEEL, CARBON, COLD-ROLLED SHEET QUALITY COMMERCIAL.

G. MATERIALS

1. CONFORM TO NAAMM, PAGES 3 THROUGH 6. CONFORM TO NAAMM FOR LABELED CONSTRUCTION.
2. ZINC-COAT ANY EXTERIOR DOORS, AND DOOR FRAMES, WHEN APPLICABLE STANDARD.
3. SOUND DEADENING: MANUFACTURERS STANDARD INORGANIC NON COMBUSTIBLE INSULATION.
4. ANCHORS, FASTENERS, AND ACCESSORIES: MANUFACTURERS

D. STEEL DOOR FRAME FABRICATION AND MANUFACTURER

KNOCK DOWN FRAMES: PROVIDE STANDARD TYPE, KNOCKED-DOWN FRAMES DESIGNED TO BE SECURELY INSTALLED IN THE ROUGH OPENING AFTER FINISH WALL MATERIAL IS APPLIED.

E. PREPARATION OF FINISH HARDWARE

1. WORK TO TEMPLATES FOR ALL HARDWARE CONFORM TO STANDARDS OF HARDWARE MANUFACTURER.

F. INSTALLATION

1. CONFORM TO NAAMM, PAGE 6, PART 3
2. KNOCK-DOWN FRAMES: FILL FRAME INTER WITH APPROVED FILLER, AND SMOOTH AND PRIME.

SECTION - 0805 - HOLLOW METAL DOORS AND FRAMES

A. SUMMARY: HOLLOW STEEL DOORS AND FRAMES

B. REFERENCES

1. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA): NFPA 80 - FIRE DOORS AND WINDOWS.
2. STEEL DOOR INSTITUTE (SDI)
 21. SD-100 - STANDARD STEEL DOORS AND FRAMES.
 22. SD-105 - RECOMMENDED DIRECTION INSTRUCTIONS FOR STEEL FRAMES.
3. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 31. A366 - SPECIFICATION FOR STEEL, CARBON, COLD ROLLED SHEET, COMMERCIAL QUALITY.
 32. A564 - SPECIFICATION FOR STEEL, CARBON (65 MAXIMUM PERCENT), HOT ROLLED SHEET AND STRIP, COMMERCIAL QUALITY.

C. QUALITY ASSURANCE

1. CONFORM TO REQUIREMENTS OF SD-100.
2. REGULATORY REQUIREMENTS
 21. INSTALLED FRAME AND DOOR ASSEMBLY SHALL CONFORM TO NFPA 80 FOR FIRE RATED CLASS INDICATED.
 22. WHERE DOORS ARE NOTED WITH AN HOURLY FIRE RESISTANCE RATING, PROVIDE DOOR AND FRAME ASSEMBLIES LABELED BY UNDERWRITERS LABORATORY OR ANY OTHER TESTING LABORATORY APPROVED BY THE LOCAL CODE AUTHORITIES TO MEET THE HOURLY FIRE RATINGS NOTED. ASSEMBLIES SHALL MEET JURISDICTIONAL REQUIREMENTS FOR POSITIVE PRESSURE.
 23. WHERE A HOLLOW METAL FRAME IS USED AS A GLAZED OPENING IN AN INTERIOR FIRE RATED WALL ASSEMBLY, THE FRAME SHALL BE LABELED TO MATCH THE FIRE RATING REQUIRED FOR A DOOR ASSEMBLY IN THE FIRE RATED WALL, EXCEPT IN A 1 HOUR FIRE RATED CORRIDOR WALL ASSEMBLY, THE GLAZED FRAME SHALL BE LABELED TO A 45 MINUTE RATINGS. IN A HOUR FIRE RATED CORRIDOR WALL ASSEMBLY, WHERE THE DOOR FRAME IS INTEGRAL WITH THE GLAZED FRAME, THE FRAME SHALL HAVE A 45 MIN RATINGS.
3. INCLUDE 1/2" LABEL ON FIRE RATED DOOR ASSEMBLIES WHICH ARE LOCATED AT 1 HOUR RATED EXIT CORRIDORS WHEN REQUIRED BY LOCAL JURISDICTION.
4. MEMBERS OF THE STEEL DOOR INSTITUTE AND OF THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS, SUBJECT TO COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.

D. MATERIALS

3. STEEL SHEET: COLD ROLLED ASTM A366, OR HOT ROLLED PICKLED AND OILED SHEET CONFORMING TO ASTM A564.

E. DOORS

1. SD-100, SEAMLESS DESIGN.
2. MINIMUM 1/8-GAGE FACE SHEETS FOR INTERIOR DOORS; MINIMUM 1/6 GAGE FACE SHEETS FOR EXTERIOR DOORS.
3. CORES
 31. INTERIOR DOORS: VERTICAL STEEL STIFFENERS WITH SOUND DEADENING FILL BETWEEN STIFFENERS, OR RESIN IMPREGNATED KRAFT PAPER HONEYCOMB CORE.
 32. EXTERIOR DOORS: POLYSTYRENE OR POLYURETHANE FOAM CORE.
4. PROVIDE CONTINUOUSLY WELDED SEAMLESS EDGES. NO PLASTIC FILLERS WILL BE ACCEPTED.

F. FULLY WELDED FRAMES

1. DESIGN: DOUBLE RABBIT, UNLESS INDICATED OTHERWISE; FULLY WELDED.
2. EXTERIOR FRAMES: MINIMUM 1/4 GAGE.
3. INTERIOR FRAMES: MINIMUM 1/6 GAGE FOR FRAMES OF DOOR OPENINGS UP TO AND INCLUDING 4 FEET IN WIDTH 1/4 GAGE FOR FRAMES GREATER THAN 4 FEET IN WIDTH.
4. PROVIDE EXTENDED RETURN LEGS AT EXTERIOR OPENINGS AS INDICATED TO SUPPORT SEALANT SYSTEMS.

G. FABRICATION

1. SHOP-FABRICATE UNITS TO ACCOMMODATE THE HARDWARE SPECIFIED IN SECTION 0810.
 2. FABRICATE FRAMES AND DOORS WITH HARDWARE REINFORCEMENT PLATES WELDED IN PLACE. REINFORCE FOR BUTTS, CLOSERS, AND OTHER SIMILAR MOVING HARDWARE ITEMS. REINFORCING SHALL BE MINIMUM 3/16-INCH STEEL PLATE. REINFORCE EACH BUTT WITH MINIMUM 1/2"X 1/2" X 1/2" INCH PLATE ON HINGE SIDES OF BOTH DOOR AND FRAME. REINFORCE FOR CLOSERS THE FULL WIDTH OF THE DOOR.
 3. REINFORCE FRAMES UNDER 48 INCHES WITH ROLL FORMED STEEL CHANNELS FITTED TIGHTLY INTO FRAME HEAD, FLUSH WITH TOP.
 4. CLOSE TOP AND BOTTOM EDGES OF DOORS WITH STEEL CHANNEL. MINIMUM 1/8-GAUGE EXTENDING FULL WIDTH OF DOOR, SPOT-WELDED TO BOTH FACES. CLOSE TOP EDGES OF EXTERIOR DOORS FLUSH WITH STEEL FILLER CAP, SEAL JOINTS WATER-TIGHT.
 5. FINISH AT EXTERIOR UNITS MODIFIED EPOXY ESTER BAKED-ON PRIMER TO RECEIVE URETHANE COATINGS SPECIFIED IN SECTION 0900, OR SERIES 64 EPOXYLINE F BY THERMAX, OR SERIES 880® BY CARBOLINE.
 6. PROVIDE METAL RAIN HOOD FOR EXTERIOR DOOR FRAMES.
 7. ATTACH FIRE RATED LABEL TO EACH FRAME AND DOOR UNIT.
- #### H. INSTALLATION OF WELDED FRAMES
1. INSTALL FRAMES IN ACCORDANCE WITH SD-105 AND IN ACCORDANCE WITH LABELING REQUIREMENTS.
 2. COORDINATE WITH WALL CONSTRUCTION FOR ANCHOR PLACEMENT.
 3. INSTALL ACCESSORIES.
 4. INSTALLATION TOLERANCES
 41. MAXIMUM DIAGONAL DISTORTION 1/16 INCH MEASURED WITH STRAIGHT EDGE, CORNER TO CORNER.
 42. INSTALL DOORS PLUMB AND LEVEL TO 1/16 INCH IN 7 FEET.

I. DOOR INSTALLATION

1. FIT AND PREPARE DOORS FOR INSTALLATION IN ACCORDANCE WITH THE DOOR MANUFACTURERS PRINTED INSTRUCTIONS.
2. INSTALL DOORS PLUMB AND SQUARE.
3. FABRICATE FOR 1/8 INCH CLEARANCE AT HEAD AND EACH JAMB, 1/8 INCH BETWEEN PARS OF DOORS, 3/16 INCH CLEARANCE FROM HARD SURFACE. FINISH FLOOR, 3/4 INCH FROM HARD SURFACE. BENEATH DOORS AT OPENINGS INDICATED TO RECEIVE CARPETING, AND 3/16 INCH CLEARANCE ABOVE TOP OF THRESHOLD.
4. INSTALL ROSES, KICK PLATES, CLOSERS, AND OTHER SURFACE MOUNTED HARDWARE ONLY AFTER DOOR FINISHING IS COMPLETE AND FINISHES ARE COMPLETELY CURED.
5. FIT HOLLOW METAL DOORS IN ACCORDANCE WITH SDI 100.
6. DOOR AND HARDWARE INSTALLATION IS SPECIFIED IN SECTION 0810.

SECTION 0820 - WOOD DOORS

A. DESCRIPTION OF SYSTEMS: REFER TO DOOR SCHEDULE FOR DOOR SPECIFICATION

B. CODES AND STANDARDS

SECTION - 08305 - ACCESS DOORS

A. ACCESSIBLE MANUFACTURERS

1. ACCESS PANEL SOLUTIONS (B71) 542-0033

B. DOOR TYPES

1. NON RATED CONCEALED DRYWALL ACCESS DOOR.

11. RECESSED TYPE DESIGN

12. GLASS FIBER REINFORCED PANEL.

13. INTEGRAL ATTACHMENT FLANGE AND DRYWALL BEAD FOR FLUSH INSTALLATION.

14. FULLY CONCEALED PIVOT ROD HINGE.

15. LATCHES: SCREWDRIVER OPERATED CAM LATCH.

C. MINIMUM SIZES: PROVIDE ACCESS DOORS IN SIZES INDICATED. WHEN NOT INDICATED PROVIDE 12" X 12" SIZE FOR HAND ACCESS, AND 24" X 24" SIZE FOR MAN ENTRY.

D. INSTALLATION

1. PROVIDE ACCESS DOORS IN THE LOCATIONS INDICATED, AND FOR ACCESS TO BALANCING AND FIRE DAMPERS, TRAP PRIMERS, VALVES, FANS, TERMINAL UNITS, AND OTHER EQUIPMENT REQUIRING PERIODIC INSPECTION OR MAINTENANCE THROUGH FINISHED WALLS OR CEILINGS, WHETHER INDICATED OR NOT.

2. COORDINATE ACCESS REQUIREMENTS WITH OTHER TRADES AND LANDLORD.

SECTION - 0845 - ALUMINUM STOREFRONTS AND ENTRANCES

A. SUMMARY:

1. EXTERIOR ALUMINUM FRAMED WINDOW SYSTEMS.

B. REFERENCES

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 11. B204 - ALUMINUM AND ALUMINUM ALLOY SHEET AND PLATE.
 12. B221 - ALUMINUM ALLOY EXTRUDED BARS, RODS, WIRE, SHAPES, AND TUBES.
 13. E289 - RATE OF AIR LEAKAGE THROUGH EXTERIOR WINDOWS, CURTAIN WALLS, AND DOORS.
 14. E330 - STRUCTURAL PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, AND DOORS BY UNIFORM STATIC AIR PRESSURE DIFFERENCE.
2. ARCHITECTURAL ALUMINUM MANUFACTURERS ASSOCIATION (AAMA).

C. SYSTEM DESCRIPTION

1. PERFORMANCE - EXTERIOR ALUMINUM WINDOW AND STOREFRONT SYSTEM
 11. SYSTEM SHALL ACCOMMODATE EXPANSION AND CONTRACTION CAUSED BY A TEMPERATURE RANGE OF 0 DEGREES F. TO 180 DEGREES F. WITHOUT DETRIMENTAL EFFECTS TO COMPONENTS, SEALING SYSTEMS, AND SURROUNDING CONSTRUCTION (AAMA 505-45).
 12. DESIGN SYSTEM WITH PROVISIONS TO DRAIN MOISTURE TO THE EXTERIOR OF THE SYSTEM.
 13. AIR INFILTRATION: SHALL NOT EXCEED .05 CFM PER SQUARE FOOT OF FIXED AREA WHEN TESTED IN ACCORDANCE WITH ASTM E283 AT 6.24 PSF.
 14. WATER INFILTRATION: NO WATER PENETRATION WHEN MEASURED IN ACCORDANCE WITH ASTM E331 AT (5) PSF AND WITH AAMA 504-44 AT (5) PSF.
2. WINDOW AND STOREFRONT STRUCTURAL DESIGN
 21. DESIGN AND SIZE MEMBERS TO WITHSTAND POSITIVE AND NEGATIVE WIND LOADS AS REQUIRED BY THE LOCAL JURISDICTIONAL AUTHORITY.
 22. LIMIT MILLION DEFLECTION TO VTB, OR FLEXURE LIMIT OF (3/4)" GLASS WITH FULL RECOVERY OF GLAZING MATERIALS, WHICHEVER IS LESS, (ASTM E-330)

D. WARRANTY: FURNISH FIVE YEAR WRITTEN WARRANTY EXECUTED TO THE OWNER FROM THE MANUFACTURER OF THE STOREFRONT SYSTEM, AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP, IN ACCORDANCE WITH SECTION 0710.

E. MATERIALS

1. EXTRUDED ALUMINUM: ASTM B204, 6063 T5 ALLOY AND TEMPER.

2. SHEET ALUMINUM: ASTM B204, 5005-H32 ALLOY, OR APPROVED.

F. COMPONENTS

1. ACCESSIBLE MANUFACTURERS
 11. ANHELD BUILDING PRODUCTS DIVISION
 12. CECO
 13. CURRIES
 14. MESKER
 15. STEEL CRAFT, BY AMERICAN STANDARD

2. DOORS: BY MANUFACTURER

3. STOREFRONT AND WINDOW FRAMING

31. WHERE RECONFIGURATION OF EXISTING FRAMING IS SHOWN, MATCH DIMENSIONS, PROFILE, GLAZING THICKNESS AND FINISH OF EXISTING ALUMINUM WINDOW FRAMING.

32. PROVIDE THERMALLY BROKEN OR THERMALLY IMPROVED ASSEMBLIES AT ALL EXTERIOR SYSTEMS.

4. GLAZING BEADS: MANUFACTURERS STANDARD EPDM OR NEOPRENE GLAZING BEADS, FOR A COMPLETE WEATHERPROOF SEAL. FURNISH FOR INSTALLATION AS A PART OF THE WORK OF SECTION 08002.