PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. EGGERS INDUSTRIES.
2. MARSHFIELD DOOR SYSTEMS, INC.
3. MOHAWK FLUSH DOORS, INC.; A MASONITE COMPANY.

2.2 DOOR CONSTRUCTION, GENERAL

A. LOW-EMITTING MATERIALS: PROVIDE DOORS MADE WITH ADHESIVES AND COMPOSITE WOOD PRODUCTS THAT DO NOT CONTAIN UREA FORMALDEHYDE.
B. WDMA I.S.1-A PERFORMANCE GRADE:
1. HEAVY DUTY UNLESS OTHERWISE INDICATED.
C. PARTICLEBOARD-CORE DOORS:
1. PARTICLEBOARD: ANSI A208.1, ¾GRADE LD-1⅛ ¾OR⅛ ¾GRADE LD-2⅛ ¾, MADE WITH BINDER CONTAINING NO UREA-FORMALDEHYDE RESIN⅛.
2. BLOCKING: PROVIDE WOOD BLOCKING IN PARTICLEBOARD-CORE DOORS AS NEEDED TO ELIMINATE THROUGH-BOLTING HARDWARE.
D. STRUCTURAL-COMPOSITE-LUMBER-CORE DOORS:
1. STRUCTURAL COMPOSITE LUMBER: WDMA I.S.10.
a. SCREW WITHDRAWAL, FACE: 700 LBF (3100 N).
b. SCREW WITHDRAWAL, EDGE: 400 LBF (1780 N).

2.3 PLASTIC-LAMINATE-FACED DOORS

A. INTERIOR SOLID-CORE DOORS
1. GRADE: CUSTOM.
2. PLASTIC-LAMINATE FACES: HIGH-PRESSURE DECORATIVE LAMINATES COMPLYING WITH NEMA LD 3, GRADE HGS.
3. COLORS, PATTERNS, AND FINISHES: AS INDICATED ON THE DÉCOR DRAWINGS.
4. EXPOSED VERTICAL EDGES: PLASTIC LAMINATE THAT MATCHES FACES.
5. CORE: PARTICLEBOARD.
6. CONSTRUCTION: THREE PLIES. STILES AND RAILS ARE BONDED TO CORE, THEN ENTIRE UNIT ABRASIVE PLANED BEFORE FACES ARE APPLIED.

2.4 FABRICATION

A. FACTORY FIT DOORS TO SUIT FRAME-OPENING SIZES INDICATED. COMPLY WITH CLEARANCE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING UNLESS OTHERWISE INDICATED.
B. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED.
C. OPENINGS: CUT AND TRIM OPENINGS THROUGH DOORS IN FACTORY.
1. LIGHT OPENINGS: TRIM OPENINGS WITH MOLDINGS OF MATERIAL AND PROFILE INDICATED.
2. GLAZING: FACTORY INSTALL GLAZING IN DOORS INDICATED TO BE FACTORY FINISHED. COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 08 SECTION "GLAZING."
3. LOUVERS: FACTORY INSTALL LOUVERS IN PREPARED OPENINGS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. HARDWARE: FOR INSTALLATION, SEE DIVISION 08 SECTION "DOOR HARDWARE."
B. INSTALLATION INSTRUCTIONS: INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE REFERENCED QUALITY STANDARD, AND AS INDICATED.
C. JOB-FITTED DOORS: ALIGN AND FIT DOORS IN FRAMES WITH UNIFORM CLEARANCES AND BEVELS; DO NOT TRIM STILES AND RAILS IN EXCESS OF LIMITS SET BY MANUFACTURER OR PERMITTED FOR FIRE-RATED DOORS. MACHINE DOORS FOR HARDWARE. SEAL EDGES OF DOORS, EDGES OF CUTOUTS, AND MORTISES AFTER FITTING AND MACHINING.
1. CLEARANCES: PROVIDE 1/8 INCH (3.2 MM) AT HEADS, JAMBS, AND BETWEEN PAIRS OF DOORS. PROVIDE 1/8 INCH (3.2 MM) FROM BOTTOM OF DOOR TO TOP OF DECORATIVE FLOOR FINISH OR COVERING UNLESS OTHERWISE INDICATED. WHERE THRESHOLD IS SHOWN OR SCHEDULED, PROVIDE 1/4 INCH (6.4 MM) FROM BOTTOM OF DOOR TO TOP OF THRESHOLD UNLESS OTHERWISE INDICATED.

SECTION 083113 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES ACCESS DOORS AND FRAMES FOR CEILINGS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF ACCESS DOOR AND FRAME INDICATED.
B. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.

1.3 QUALITY ASSURANCE

A. SIZE AND LOCATION VERIFICATION: DETERMINE SPECIFIC LOCATIONS AND SIZES FOR ACCESS DOORS NEEDED TO GAIN ACCESS TO CONCEALED EQUIPMENT, AND INDICATE ON THE DRAWINGS.

PART 2 - PRODUCTS

2.1 MATERIALS

A. STEEL PLATES, SHAPES, AND BARS: ASTM A 36.
1. HOT-DIP GALVANIZED STEEL: COAT TO COMPLY WITH ASTM A 123 FOR STEEL AND IRON PRODUCTS AND ASTM A 153 FOR STEEL AND IRON HARDWARE.
B. STEEL SHEET:
1.ELECTROLYTIC ZINC-COATED: ASTM A 591 COMMERCIAL STEEL (CS) WITH CLASS C COATING AND PHOSPHATE TREATMENT TO PREPARE SURFACE FOR PAINTING.
C. DRYWALL BEADS: EDGE TRIM FORMED FROM 0.0299-INCH (0.76-MM) ZINC-COATED STEEL SHEET FORMED TO RECEIVE JOINT COMPOUND AND IN SIZE TO SUIT THICKNESS OF GYPSUM WALL AND/OR CEILING PANELS INDICATED.

2.2 ACCESS DOORS AND FRAMES

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. LARSEN'S MANUFACTURING COMPANY.
B. FLUSH ACCESS DOORS AND TRIMLESS FRAMES:
1. MATERIAL: PRIME-PAINTED STEEL SHEET.
2. SURFACE TYPE: GYPSUM BOARD.
3. LOCATIONS: WALLS AS INDICATED.
4. DOOR: MINIMUM 0.060-INCH THICK SHEET METAL SET FLUSH WITH SURROUNDING FINISH SURFACES TO RECEIVE GYPSUM BOARD FACE.
5. FRAME: MINIMUM 0.060-INCH THICK SHEET METAL WITH BEAD FOR TYPE OF SURFACE INDICATED.
6. HINGES: CONTINUOUS PIANO HINGE.
7. LATCH: SCREWDRIVER - OPERATED CAM LATCH.
8. LOCK: KEY-OPERATED CYLINDER LOCK.

2.3 FABRICATION

A. LATCHING MECHANISMS: FURNISH NUMBER REQUIRED TO HOLD DOORS IN FLUSH, SMOOTH PLANE WHEN CLOSED.
1. FOR RECESSED PANEL DOORS, PROVIDE ACCESS SLEEVES FOR EACH LOCKING DEVICE. FURNISH PLASTIC GROMMETS AND INSTALL IN HOLES CUT THROUGH FINISH.

PART 3 - EXECUTION

3.1 INSTALLATION

A. ADVISE INSTALLERS OF OTHER WORK ABOUT SPECIFIC REQUIREMENTS RELATING TO ACCESS DOOR AND FLOOR DOOR INSTALLATION, INCLUDING SIZES OF OPENINGS TO RECEIVE ACCESS DOOR AND FRAME, AS WELL AS LOCATIONS OF SUPPORTS, INSERTS, AND ANCHORING DEVICES.
B. SET FRAMES ACCURATELY IN POSITION AND ATTACH SECURELY TO SUPPORTS WITH PLANE OF FACE PANELS ALIGNED WITH ADJACENT FINISH SURFACES.
C. INSTALL ACCESS DOORS WITH TRIMLESS FRAMES FLUSH WITH ADJACENT FINISH SURFACES OR RECESSED TO RECEIVE FINISH MATERIAL.
D. ADJUST DOORS AND HARDWARE AFTER INSTALLATION FOR PROPER OPERATION.

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:
1. EXTERIOR AND INTERIOR STOREFRONT FRAMING.

1.2 PERFORMANCE REQUIREMENTS

A. GENERAL PERFORMANCE: ALUMINUM-FRAMED SYSTEMS SHALL WITHSTAND THE EFFECTS OF THE FOLLOWING PERFORMANCE REQUIREMENTS WITHOUT EXCEEDING PERFORMANCE CRITERIA OR FAILURE DUE TO DEFECTIVE MANUFACTURE, FABRICATION, INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION:
1. MOVEMENTS OF SUPPORTING STRUCTURE INDICATED ON DRAWINGS INCLUDING, BUT NOT LIMITED TO, STORY DRIFT AND DEFLECTION FROM UNIFORMLY DISTRIBUTED AND CONCENTRATED LIVE LOADS.
2. DIMENSIONAL TOLERANCES OF BUILDING FRAME AND OTHER ADJACENT CONSTRUCTION.
3. FAILURE INCLUDES THE FOLLOWING:
a. DEFLECTION EXCEEDING SPECIFIED LIMITS.
b. THERMAL STRESSES TRANSFERRING TO BUILDING STRUCTURE.
c. FRAMING MEMBERS TRANSFERRING STRESSES, INCLUDING THOSE CAUSED BY THERMAL AND STRUCTURAL MOVEMENTS TO GLAZING.
d. NOISE OR VIBRATION CREATED BY WIND AND BY THERMAL AND STRUCTURAL MOVEMENTS.
e. LOOSENING OR WEAKENING OF FASTENERS, ATTACHMENTS, AND OTHER COMPONENTS.
f. FAILURE OF OPERATING UNITS.
B. WIND LOADS: AS INDICATED ON DRAWINGS.

1.3 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
B. SHOP DRAWINGS: FOR ALUMINUM-FRAMED SYSTEMS. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
1. INCLUDE DETAILS OF PROVISIONS FOR SYSTEM EXPANSION AND CONTRACTION AND FOR DRAINAGE OF MOISTURE IN THE SYSTEM TO THE EXTERIOR.
C. SAMPLES: FOR EACH TYPE OF EXPOSED FINISH REQUIRED.

1.4 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: MANUFACTURER'S AUTHORIZED REPRESENTATIVE WHO IS TRAINED AND APPROVED FOR INSTALLATION OF UNITS REQUIRED FOR THIS PROJECT.
B. ENGINEERING RESPONSIBILITY: PREPARE DATA FOR ALUMINUM-FRAMED SYSTEMS, INCLUDING SHOP DRAWINGS, BASED ON TESTING AND ENGINEERING ANALYSIS OF MANUFACTURER'S STANDARD UNITS IN SYSTEMS SIMILAR TO THOSE INDICATED FOR THIS PROJECT.
C. PRODUCT OPTIONS: INFORMATION ON DRAWINGS AND IN SPECIFICATIONS ESTABLISHES REQUIREMENTS FOR SYSTEMS' AESTHETIC EFFECTS AND PERFORMANCE CHARACTERISTICS. AESTHETIC EFFECTS ARE INDICATED BY DIMENSIONS, ARRANGEMENTS, ALIGNMENT, AND PROFILES OF COMPONENTS AND ASSEMBLIES AS THEY RELATE TO SIGHTLINES, TO ONE ANOTHER, AND TO ADJOINING CONSTRUCTION. PERFORMANCE CHARACTERISTICS ARE INDICATED BY CRITERIA SUBJECT TO VERIFICATION BY ONE OR MORE METHODS INCLUDING PRECONSTRUCTION TESTING, FIELD TESTING, AND IN-SERVICE PERFORMANCE.
D. ACCESSIBLE ENTRANCES: COMPLY WITH APPLICABLE PROVISIONS IN THE U.S. ARCHITECTURAL & TRANSPORTATION BARRIERS COMPLIANCE BOARD'S ADA-ABA ACCESSIBILITY GUIDELINES AND ICC/ANSI A117.1.
E. SOURCE LIMITATIONS FOR ALUMINUM-FRAMED SYSTEMS: OBTAIN FROM SINGLE SOURCE FROM SINGLE MANUFACTURER.
F. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT A DATE AND TIME TO BE ESTABLISHED.

1.5 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF ALUMINUM-FRAMED SYSTEMS THAT DO NOT COMPLY WITH REQUIREMENTS OR THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT INDICATED ON DRAWINGS.
1. YKK AP AMERICA INC.

2.2 MATERIALS

A. ALUMINUM: ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED.
1. SHEET AND PLATE: ASTM B 209.
2. EXTRUDED BARS, RODS, PROFILES, AND TUBES: ASTM B 221
3. EXTRUDED STRUCTURAL PIPE AND TUBES: ASTM B 429.
4. STRUCTURAL PROFILES: ASTM B 308/B 308M.
5. WELDING RODS AND BARE ELECTRODES: AWS A5.10/A5.10M.
B. STEEL REINFORCEMENT: MANUFACTURER'S STANDARD ZINC-RICH, CORROSION-RESISTANT PRIMER, COMPLYING WITH SSPC-PS GUIDE NO. 12.00; APPLIED IMMEDIATELY AFTER SURFACE PREPARATION AND PRETREATMENT. SELECT SURFACE PREPARATION METHODS ACCORDING TO RECOMMENDATIONS IN SSPC-SP COM AND PREPARE SURFACES ACCORDING TO APPLICABLE SSPC STANDARD.
1. STRUCTURAL SHAPES, PLATES, AND BARS: ASTM A 36/A 36M.
2. COLD-ROLLED SHEET AND STRIP: ASTM A 1008/A 1008M.
3. HOT-ROLLED SHEET AND STRIP: ASTM A 1011/A 1011M.

2.3 FRAMING SYSTEMS

A. FRAMING MEMBERS: MANUFACTURER'S STANDARD EXTRUDED-ALUMINUM FRAMING MEMBERS OF THICKNESS REQUIRED AND REINFORCED AS REQUIRED TO SUPPORT IMPOSED LOADS.
1. CONSTRUCTION: THERMALLY BROKEN.
2. GLAZING SYSTEM: RETAINED MECHANICALLY WITH GASKETS ON FOUR SIDES.
3. GLAZING PLANE: AS INDICATED.
B. BRACKETS AND REINFORCEMENTS: MANUFACTURER'S STANDARD HIGH-STRENGTH ALUMINUM WITH NONSTAINING, NONFERROUS SHIMS FOR ALIGNING SYSTEM COMPONENTS.
C. FASTENERS AND ACCESSORIES: MANUFACTURER'S STANDARD CORROSION-RESISTANT, NONSTAINING, NONBLEEDING FASTENERS AND ACCESSORIES COMPATIBLE WITH ADJACENT MATERIALS.
1. USE SELF-LOCKING DEVICES WHERE FASTENERS ARE SUBJECT TO LOOSENING OR TURNING OUT FROM THERMAL AND STRUCTURAL MOVEMENTS, WIND LOADS, OR VIBRATION.
2. REINFORCE MEMBERS AS REQUIRED TO RECEIVE FASTENER THREADS.
D. CONCEALED FLASHING: MANUFACTURER'S STANDARD CORROSION-RESISTANT, NONSTAINING, NONBLEEDING FLASHING COMPATIBLE WITH ADJACENT MATERIALS.
E. FRAMING SYSTEM GASKETS AND SEALANTS: MANUFACTURER'S STANDARD, RECOMMENDED BY MANUFACTURER FOR JOINT TYPE.
1. PROVIDE SEALANTS FOR USE INSIDE OF THE WEATHERPROOFING SYSTEM THAT HAVE A VOC CONTENT OF 250 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).

2.4 GLAZING SYSTEMS

A. GLAZING: AS SPECIFIED IN DIVISION 08 SECTION "GLAZING."
B. GLAZING GASKETS: MANUFACTURER'S STANDARD COMPRESSION TYPES; REPLACEABLE, MOLDED OR EXTRUDED, OF PROFILE AND HARDNESS REQUIRED TO MAINTAIN WATERTIGHT SEAL.
C. SPACERS AND SETTING BLOCKS: MANUFACTURER'S STANDARD ELASTOMERIC TYPE.

2.5 ENTRANCE DOOR SYSTEMS

A. ENTRANCE DOORS: MANUFACTURER'S STANDARD GLAZED ENTRANCE DOORS FOR MANUAL-SWING OPERATION.
1. DOOR CONSTRUCTION: 1-3/4-INCH (44-MM) OVERALL THICKNESS, WITH MINIMUM 0.125-INCH- (3.2-MM-) THICK, EXTRUDED-ALUMINUM TUBULAR RAIL AND STILE MEMBERS. MECHANICALLY FASTEN CORNERS WITH REINFORCING BRACKETS THAT ARE DEEPLY PENETRATED AND FILLET WELDED OR THAT INCORPORATE CONCEALED TIE RODS.
a. THERMAL CONSTRUCTION: HIGH-PERFORMANCE PLASTIC CONNECTORS SEPARATE ALUMINUM MEMBERS EXPOSED TO THE EXTERIOR FROM MEMBERS EXPOSED TO THE INTERIOR.
2. DOOR DESIGN: AS INDICATED.
a. ACCESSIBLE DOORS: SMOOTH SURFACED FOR WIDTH OF DOOR IN AREA WITHIN 10 INCHES (255 MM) ABOVE FLOOR OR GROUND PLANE.
3. GLAZING STOPS AND GASKETS: MANUFACTURER STANDARD, SNAP-ON, EXTRUDED-ALUMINUM STOPS AND PREFORMED GASKETS.
a. PROVIDE NONREMOVABLE GLAZING STOPS ON OUTSIDE OF DOOR.
B. ENTRANCE DOOR HARDWARE: AS SPECIFIED AND ON THE DRAWINGS AS INDICATED.

2.6 ENTRANCE DOOR HARDWARE

A. GENERAL: PROVIDE ENTRANCE DOOR HARDWARE AND ENTRANCE DOOR HARDWARE SETS INDICATED IN DOOR AND FRAME SCHEDULE FOR EACH ENTRANCE DOOR TO COMPLY WITH REQUIREMENTS IN THIS SECTION.
1. ENTRANCE DOOR HARDWARE SETS: PROVIDE QUANTITY, ITEM, SIZE, FINISH OR COLOR INDICATED.
2. OPENING-FORCE REQUIREMENTS:
a. EGRESS DOORS: NOT MORE THAN 15 LBF (67N) TO RELEASE THE LATCH AND NOT MORE THAN 30 LBF (133N) TO SET THE DOOR IN MOTION AND NOT MORE THAN 15 LBF (67N) TO OPEN THE DOOR TO ITS MINIMUM REQUIRED WIDTH.
b ACCESSIBLE INTERIOR DOORS: NOT MORE THAN 5 LBF (22.2 N) TO FULLY OPEN DOOR.
3. LATCHES AND EXIT DEVICES: NOT MORE THAN 15 LBF (67 N) REQUIRED TO RELEASE LATCH.
B. BUTT HINGES: BHMA A156.1, GRADE 1, RADIUS CORNER.
1. NONREMOVABLE PINS: PROVIDE SET SCREW IN HINGE BARREL THAT, WHEN TIGHTENED INTO A GROOVE IN HINGE PIN, PREVENTS REMOVAL OF PIN WHILE ENTRANCE DOOR IS CLOSED.
2. EXTERIOR HINGES: AS INDICATED ON THE DRAWING.
3. QUANTITIES:
a. FOR DOORS UP TO 87 INCHES (2210 MM) HIGH, PROVIDE 3 HINGES PER LEAF.
C. PANIC EXIT DEVICES: BHMA A156.3, GRADE 1, LISTED AND LABELED BY A TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR PANIC PROTECTION, BASED ON TESTING ACCORDING TO UL 305, AND AS INDICATED ON THE DRAWING.
D. CYLINDERS: BHMA A156.5, GRADE 1.
1. KEYING: MASTER KEY SYSTEM. PERMANENTLY INSCRIBE EACH KEY WITH A VISUAL KEY CONTROL NUMBER AND INCLUDE NOTATION "DO NOT DUPLICATE".
E. STRIKES: PROVIDE STRIKE WITH BLACK-PLASTIC DUST BOX FOR EACH LATCH OR LOCK BOLT; FABRICATED FOR ALUMINUM FRAMING.
F. OPERATING TRIM: BHMA A156.6.
G. CLOSERS: BHMA A156.4, GRADE 1, WITH ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION, SIZED AS REQUIRED BY DOOR SIZE, EXPOSURE TO WEATHER, AND ANTICIPATED FREQUENCY OF USE; ADJUSTABLE TO MEET FIELD CONDITIONS AND REQUIREMENTS FOR OPENING FORCE.
H. DOOR STOPS: BHMA A156.16, GRADE 1, FLOOR OR WALL MOUNTED, AS APPROPRIATE FOR DOOR LOCATION INDICATED, WITH INTEGRAL RUBBER BUMPER.
I. WEATHER STRIPPING: MANUFACTURER'S STANDARD REPLACEABLE COMPONENTS.
J. WEATHER SWEEPS: MANUFACTURER'S STANDARD EXTERIOR-DOOR BOTTOM SWEEP WITH CONCEALED FASTENERS ON MOUNTING STRIP.
K. SILENCERS: BHMA A156.16, GRADE 1.
L. THRESHOLDS: BHMA A156.21, RAISED THRESHOLDS BEVELED WITH A SLOPE OF NOT MORE THAN 1:2, WITH MAXIMUM HEIGHT OF 1/2 INCH (13 MM).

2.7 ACCESSORY MATERIALS

A. BITUMINOUS PAINT: COLD-APPLIED, ASPHALT-MASTIC PAINT COMPLYING WITH SSPC-PAINT 12 REQUIREMENTS EXCEPT CONTAINING NO ASBESTOS; FORMULATED FOR 30-MIL (0.762-MM) THICKNESS PER COAT.

2.8 FABRICATION

A. FORM OR EXTRUDE ALUMINUM SHAPES BEFORE FINISHING.
B. WELD IN CONCEALED LOCATIONS TO GREATEST EXTENT POSSIBLE TO MINIMIZE DISTORTION OR DISCOLORATION OF FINISH. REMOVE WELD SPATTER AND WELDING OXIDES FROM EXPOSED SURFACES BY DESCALING OR GRINDING.
C. FRAMING MEMBERS, GENERAL: FABRICATE COMPONENTS THAT, WHEN ASSEMBLED, HAVE THE FOLLOWING CHARACTERISTICS:
1. PROFILES THAT ARE SHARP, STRAIGHT, AND FREE OF DEFECTS OR DEFORMATIONS.
2. ACCURATELY FITTED JOINTS WITH ENDS COPED OR MITERED.
3. MEANS TO DRAIN WATER PASSING JOINTS, CONDENSATION WITHIN FRAMING MEMBERS, AND MOISTURE MIGRATING WITHIN THE SYSTEM TO EXTERIOR.
4. PHYSICAL AND THERMAL ISOLATION OF GLAZING FROM FRAMING MEMBERS.
5. ACCOMMODATIONS FOR THERMAL AND MECHANICAL MOVEMENTS OF GLAZING AND FRAMING TO MAINTAIN REQUIRED GLAZING EDGE CLEARANCES.
6. PROVISIONS FOR FIELD REPLACEMENT OF GLAZING FROM EXTERIOR.
7. FASTENERS, ANCHORS, AND CONNECTION DEVICES THAT ARE CONCEALED FROM VIEW TO GREATEST EXTENT POSSIBLE.
D. MECHANICALLY GLAZED FRAMING MEMBERS: FABRICATE FOR FLUSH GLAZING WITHOUT PROJECTING STOPS.
E. ENTRANCE DOOR FRAMES: REINFORCE AS REQUIRED TO SUPPORT LOADS IMPOSED BY DOOR OPERATION AND FOR INSTALLING ENTRANCE DOOR HARDWARE.
F. ENTRANCE DOORS: REINFORCE DOORS AS REQUIRED FOR INSTALLING ENTRANCE DOOR HARDWARE.

2.9 ALUMINUM FINISHES

A. BAKED-ENAMEL OR POWDER-COAT FINISH: AAMA 2603 EXCEPT WITH A MINIMUM DRY FILM THICKNESS OF 1.5 MILS (0.04 MM).
1. COLOR AND GLOSS: AS INDICATED BY MANUFACTURER'S DESIGNATIONS.
B. HIGH-PERFORMANCE ORGANIC FINISH: 3 OR 4 COAT FLUOROPOLYMER FINISH COMPLYING WITH AAMA 2605 AND CONTAINING NOT LESS THAN 70 PERCENT PVDF RESIN BY WEIGHT IN BOTH COLOR COAT AND CLEAR TOPCOAT.
1. COLOR AND GLOSS: AS INDICATED ON THE DRAWINGS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. GENERAL:
1. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. DO NOT INSTALL DAMAGED COMPONENTS.
3. FIT JOINTS TO PRODUCE HAIRLINE JOINTS FREE OF BURRS AND DISTORTION.
4. RIGIDLY SECURE NONMOVEMENT JOINTS.
5. INSTALL ANCHORS WITH SEPARATORS AND ISOLATORS TO PREVENT METAL CORROSION AND ELECTROLYTIC DETERIORATION.
6. SEAL JOINTS WATERTIGHT UNLESS OTHERWISE INDICATED.
B. METAL PROTECTION:
1. WHERE ALUMINUM WILL CONTACT DISSIMILAR METALS, PROTECT AGAINST GALVANIC ACTION BY PAINTING CONTACT SURFACES WITH PRIMER OR APPLYING SEALANT OR TAPE, OR BY INSTALLING NONCONDUCTIVE SPACERS AS RECOMMENDED BY MANUFACTURER FOR THIS PURPOSE.
2. WHERE ALUMINUM WILL CONTACT CONCRETE OR MASONRY, PROTECT AGAINST CORROSION BY PAINTING CONTACT SURFACES WITH BITUMINOUS PAINT.
C. INSTALL COMPONENTS TO DRAIN WATER PASSING JOINTS, CONDENSATION OCCURRING WITHIN FRAMING MEMBERS, AND MOISTURE MIGRATING WITHIN THE SYSTEM TO EXTERIOR.
D. SET CONTINUOUS SILL MEMBERS AND FLASHING IN FULL SEALANT BED AS SPECIFIED IN DIVISION 07 SECTION "JOINT SEALANTS" TO PRODUCE WEATHERTIGHT INSTALLATION.
E. INSTALL COMPONENTS PLUMB AND TRUE IN ALIGNMENT WITH ESTABLISHED LINES AND GRADES, AND WITHOUT WARP OR RACK.
F. INSTALL GLAZING AS SPECIFIED IN DIVISION 08 SECTION "GLAZING."
G. ENTRANCE DOORS: INSTALL DOORS TO PRODUCE SMOOTH OPERATION AND TIGHT FIT AT CONTACT POINTS.
1. EXTERIOR DOORS: INSTALL TO PRODUCE WEATHERTIGHT ENCLOSURE AND TIGHT FIT AT WEATHER STRIPPING.
2. FIELD-INSTALLED ENTRANCE DOOR HARDWARE: INSTALL SURFACE-MOUNTED ENTRANCE DOOR HARDWARE ACCORDING TO ENTRANCE DOOR HARDWARE MANUFACTURERS' WRITTEN INSTRUCTIONS USING CONCEALED FASTENERS TO GREATEST EXTENT POSSIBLE.

3.2 FIELD QUALITY CONTROL

A. REPAIR OR REMOVE WORK IF TEST RESULTS AND INSPECTIONS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.
B. ALUMINUM-FRAMED ASSEMBLIES WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:
1. COMMERCIAL DOOR HARDWARE.
2. CYLINDERS FOR DOORS SPECIFIED IN OTHER SECTIONS.
B. SEE DIVISION 08 DOOR SECTIONS FOR DOOR SILENCERS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
B. SAMPLES: FOR EACH EXPOSED FINISH.
C. OTHER ACTION SUBMITTALS:
1. DOOR HARDWARE SETS: PREPARED BY OR UNDER THE SUPERVISION OF INSTALLER, DETAILING FABRICATION AND ASSEMBLY OF DOOR HARDWARE, AS WELL AS PROCEDURES AND DIAGRAMS.
a. FORMAT: USE SAME SCHEDULING SEQUENCE AND FORMAT AND USE SAME DOOR NUMBERS AS IN THE CONTRACT DOCUMENTS.
b. CONTENT: INCLUDE THE FOLLOWING INFORMATION:
1) IDENTIFICATION NUMBER, LOCATION, HAND, FIRE RATING, AND MATERIAL OF EACH DOOR AND FRAME.
2) TYPE, STYLE, FUNCTION, SIZE, QUANTITY, AND FINISH OF EACH DOOR HARDWARE ITEM. INCLUDE DESCRIPTION AND FUNCTION OF EACH LOCKSET AND EXIT DEVICE.
3) COMPLETE DESIGNATIONS OF EVERY ITEM REQUIRED FOR EACH DOOR OR OPENING INCLUDING NAME AND MANUFACTURER.
2. KEYING SCHEDULE: PREPARED BY OR UNDER THE SUPERVISION OF INSTALLER, DETAILING OWNER'S FINAL KEYING INSTRUCTIONS FOR LOCKS.

1.3 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: AN EMPLOYER OF WORKERS TRAINED AND APPROVED BY LOCK MANUFACTURER.
1. INSTALLER'S RESPONSIBILITIES INCLUDE SUPPLYING AND INSTALLING DOOR HARDWARE AND PROVIDING A QUALIFIED ARCHITECTURAL HARDWARE CONSULTANT AVAILABLE DURING THE COURSE OF THE WORK TO CONSULT WITH CONTRACTOR, ARCHITECT, AND OWNER ABOUT DOOR HARDWARE AND KEYING.
B. ARCHITECTURAL HARDWARE CONSULTANT QUALIFICATIONS: A PERSON WHO IS CURRENTLY CERTIFIED BY DHI AS AN ARCHITECTURAL HARDWARE CONSULTANT AND WHO IS EXPERIENCED IN PROVIDING CONSULTING SERVICES FOR DOOR HARDWARE INSTALLATIONS THAT ARE COMPARABLE IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT.
C. KEYING CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE TO COMPLY WITH REQUIREMENTS IN DIVISION 01 SECTION "PROJECT MANAGEMENT AND COORDINATION." INCORPORATE KEYING CONFERENCE DECISIONS INTO FINAL KEYING SCHEDULE AFTER REVIEWING DOOR HARDWARE KEYING SYSTEM.

1.4 DELIVERY, STORAGE, AND HANDLING

A. DELIVER KEYS TO MANUFACTURER OF KEY CONTROL SYSTEM FOR SUBSEQUENT DELIVERY TO OWNER.
B. DELIVER KEYS AND PERMANENT CORES TO OWNER BY REGISTERED MAIL OR OVERNIGHT PACKAGE SERVICE.

1.5 COORDINATION

A. TEMPLATES: DISTRIBUTE DOOR HARDWARE TEMPLATES FOR DOORS, FRAMES, AND OTHER WORK SPECIFIED TO BE FACTORY PREPARED FOR INSTALLING DOOR HARDWARE. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING DOOR HARDWARE TO COMPLY WITH INDICATED REQUIREMENTS.

1.6 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF DOOR HARDWARE THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: THREE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. GENERAL: PROVIDE DOOR HARDWARE FOR EACH DOOR TO COMPLY WITH REQUIREMENTS IN THIS SECTION, DOOR HARDWARE SETS INDICATED IN DOOR SCHEDULE ON THE DRAWINGS, AND THE DOOR HARDWARE SCHEDULE AT THE END OF PART 3.
1. DOOR HARDWARE SETS: PROVIDE QUANTITY, ITEM, SIZE, FINISH AND COLOR INDICATED AND NAMED MANUFACTURERS' PRODUCTS.

2.2 HINGES AND PIVOTS

A. GENERAL: FULL MORTISE, RADIUSED CORNERS, FIVE (5) KNUCKLE BALL BEARING, HEAVYWEIGHT, 4-1/2 BY 4-1/2 INCHES, BUTTON TIP 6 PIN. EXCEPT FOR HINGES TO BE INSTALLED ENTIRELY (BOTH LEAVES) INTO WOOD DOORS AND FRAMES, PROVIDE ONLY TEMPLATE-PRODUCED UNITS.
B. HINGE BASE METAL: AS INDICATED IN DOOR HARDWARE SCHEDULE AT THE END OF PART 3, OR IF NOT INDICATED, PROVIDE THE FOLLOWING:
1. EXTERIOR HINGES: STAINLESS STEEL, WITH STAINLESS-STEEL PIN.
2. INTERIOR HINGES: STEEL, WITH STEEL PIN STAINLESS STEEL, WITH STAINLESS-STEEL PIN.
C. NONREMOVABLE PINS: PROVIDE SET SCREW IN HINGE BARREL THAT PREVENTS REMOVAL OF PIN WHILE DOOR IS CLOSED; FOR OUTSWINGING EXTERIOR DOORS.
D. SCREWS: PHILLIPS FLAT-HEAT SCREWS; SCREW HEADS FINISHED TO MATCH SURFACE OF HINGES.
1. METAL DOORS AND FRAMES. MACHINE SCREWS (DRILLED AND TAPPED HOLES).
2. WOOD DOORS AND FRAMES: WOOD SCREWS.

2.3 MECHANICAL LOCKS AND LATCHES

A. LOCKSET DESIGN: AS SCHEDULED.
B. DUMMY TRIM: MATCH LEVER LOCK TRIM AND ESCUTCHEONS.
C. LOCK THROW: COMPLY WITH LABELED FIRE DOOR REQUIREMENTS.
D. BACKSET: 2-3/4 UNLESS OTHERWISE INDICATED.

2.4 EXIT DEVICES

A. PANIC EXIT DEVICES: LISTED AND LABELED FOR PANIC PROTECTION, BASED ON TESTING ACCORDING TO UL 305.
B. FIRE EXIT DEVICES: COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED FOR FIRE AND PANIC PROTECTION, BASED ON TESTING ACCORDING TO UL 305 AND NFPA 252.
C. DUMMY PUSH BAR: NONFUNCTIONING PUSH BAR MATCHING FUNCTIONAL PUSH BAR.
D. OUTSIDE TRIM: PULL WITH CYLINDER; MATERIAL, FINISH AND DESIGN TO MATCH LOCKSETS AND LATCHSETS, UNLESS OTHERWISE INDICATED.
E. THROUGH BOLTS: FOR EXIT DEVICES AND TRIM ON METAL DOORS.

2.5 OPERATING TRIM

A. PUSH-PULL DESIGN: AS INDICATED ON DRAWINGS.

2.6 CLOSERS

A. SURFACE MOUNTED CLOSERS: AS INDICATED ON DRAWINGS.
B. CLOSER HOLDER RELEASE DEVICES: BHMA A156.15.
C. SIZE OF UNITS: FACTORY-SIZED, ADJUSTABLE TO MEET FIELD CONDITIONS AND REQUIREMENTS FOR OPENING FORCE.

2.7 PROTECTIVE TRIM UNITS

A. SIZED 2 INCHES LESS THAN DOOR WIDTH, BEVELED 3 SIDES, BY HEIGHT SCHEDULED OR INDICATED. FASTEN WITH EXPOSED MACHINE OR SELF-TAPPING SCREWS, COUNTERSUNK, FINISH TO MATCH PLATE.
1. MATERIAL: METAL.

2.8 STOPS AND HOLDERS

A. STOPS AND HOLDERS: PROVIDE FLOOR STOPS FOR DOORS, UNLESS WALL OR OTHER TYPE STOPS ARE SCHEDULED OR INDICATED. DO NOT MOUNT FLOOR STOPS WHERE THEY WILL IMPEDE TRAFFIC. WHERE FLOOR OR WALL STOPS ARE NOT APPROPRIATE, PROVIDE OVERHEAD HOLDERS.
B. SILENCERS FOR DOOR FRAMES: NEOPRENE OR RUBBER; FABRICATED FOR DRILLED-IN APPLICATION TO FRAME.

2.9 DOOR GASKETING AND THRESHOLDS

A. DOOR GASKETING: PROVIDE CONTINUOUS POLYURETHANE WEATHER-STRIP GASKETING ON EXTERIOR DOORS AND PROVIDE SMOKE, LIGHT, OR SOUND GASKETING ON INTERIOR DOORS WHERE INDICATED OR SCHEDULED. PROVIDE NONCORROSIVE FASTENERS FOR EXTERIOR APPLICATIONS AND ELSEWHERE AS INDICATED.
1. AIR LEAKAGE: NOT TO EXCEED 0.50 CFM PER FOOT OF CRACK LENGTH FOR GASKETING OTHER THAN FOR SMOKE CONTROL, AS TESTED ACCORDING TO ASTM E 283.
2. SMOKE-LABELED GASKETING: ASSEMBLIES COMPLYING WITH NFPA 105 THAT ARE LISTED AND LABELED, BASED ON TESTING ACCORDING TO UL 1784.
3. FIRE-LABELED GASKETING: ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED, BASED ON TESTING ACCORDING TO UL 10B OR NFPA 252.
4. SOUND-RATED GASKETING: ASSEMBLIES THAT ARE LISTED AND LABELED BASED ON TESTING ACCORDING TO ASTM E 1408.
5. GASKETING MATERIALS: COMPLY WITH ASTM D 2000 AND AAMA 701/702.
B. THRESHOLDS: OF TYPE SCHEDULED OR INDICATED.

2.10 CYLINDERS, KEYING, AND STRIKES

A. CYLINDERS: TUMBLER TYPE, CONSTRUCTED FROM BRASS OR BRONZE, STAINLESS STEEL, OR NICKEL SILVER.
1. NUMBER OF PINS: SEVEN
2. HIGH-SECURITY GRADE: BHMA GRADE 1A, LISTED AND LABELED AS COMPLYING WITH UL 437 (SUFFIX A).
3. PERMANENT CORES: MANUFACTURER'S STANDARD; FINISH FACE TO MATCH LOCKSET; INTERCHANGEABLE CORES.
4. CONSTRUCTION CORES: PROVIDE CONSTRUCTION CORES THAT ARE REPLACEABLE BY PERMANENT CORES. PROVIDE 5 CONSTRUCTION MASTER KEYS.
a.REPLACE CONSTRUCTION CORES WITH PERMANENT CORES, AS INDICATED IN KEYING SCHEDULE AND AS DIRECTED BY OWNER.
a. FURNISH PERMANENT CORES TO OWNER FOR INSTALLATION.
B. KEYING SYSTEM: FACTORY-REGISTERED KEYING SYSTEM; MASTER KEY SYSTEM.
1. KEYS: PROVIDE NICKEL-SILVER KEYS PERMANENTLY INSCRIBED WITH A VISUAL KEY CONTROL NUMBER AND "DO NOT DUPLICATE" NOTATION. IN ADDITION TO ONE EXTRA BLANK KEY FOR EACH LOCK, PROVIDE THREE CHANGE KEYS AND FIVE MASTER KEYS.
D. KEY CONTROL SYSTEM: INCLUDE KEY-HOLDING HOOKS, LABELS, KEY TAGS WITH SELF-LOCKING KEY HOLDERS, ENVELOPES, AND MARKERS. CONTAIN SYSTEM IN WALL-MOUNTED TYPE METAL CABINET WITH BAKED-ENAMEL FINISH. INCLUDE CROSS-INDEX SYSTEM SET UP BY KEY CONTROL MANUFACTURER, WITH CARD INDEX.
E. STRIKES: MANUFACTURER'S STANDARD STRIKE WITH STRIKE BOX FOR EACH LATCH OR LOCK BOLT, WITH CURVED TIP EXTENDED TO PROTECT FRAME, FINISHED TO MATCH DOOR HARDWARE SET.

2.11 FABRICATION

A. BASE METALS: FURNISH METALS OF A QUALITY EQUAL TO OR GREATER THAN THAT OF SPECIFIED DOOR HARDWARE UNITS AND BHMA A156.18 FOR FINISHES. DO NOT FURNISH MANUFACTURER'S STANDARD MATERIALS IF DIFFERENT FROM SPECIFIED STANDARD.
B. FASTENERS: PHILLIPS FLAT-HEAT SCREWS WITH FINISHED HEADS TO MATCH SURFACE OF DOOR HARDWARE UNLESS OTHERWISE INDICATED. PROVIDE STEEL MACHINE OR WOOD SCREWS OR STEEL THROUGH BOLTS FOR FIRE-RATED APPLICATIONS.
C. SPACERS OR SEX BOLTS: FOR THROUGH BOLTING OF HOLLOW METAL DOORS.
D. FASTENERS FOR WOOD DOORS: COMPLY WITH REQUIREMENTS OF DHI WDHS.2, "RECOMMENDED FASTENERS FOR WOOD DOORS."
E. FINISHES: COMPLY WITH BHMA A156.18.

PART 3 - EXECUTION

3.1 INSTALLATION

A. STEEL DOORS AND FRAMES: COMPLY WITH DHI A115 SERIES. DRILL AND TAP DOORS AND FRAMES FOR SURFACE-APPLIED HARDWARE ACCORDING TO SDI 107.
B. EXAMINE DOORS AND FRAMES FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, LABELED FIRE DOOR ASSEMBLY CONSTRUCTION, WALL AND FLOOR CONSTRUCTION, AND OTHER CONDITIONS AFFECTING PERFORMANCE. EXAMINE ROUGHING-IN FOR ELECTRICAL POWER SYSTEMS TO VERIFY ACTUAL LOCATIONS OF WIRING CONNECTIONS BEFORE ELECTRIFIED DOOR HARDWARE INSTALLATION.
C. WOOD DOOR PREPARATION: COMPLY WITH DHI A115-W SERIES.
D. MOUNTING HEIGHTS: COMPLY WITH THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE INDICATED:
1. STANDARD STEEL DOORS AND FRAMES: DHI'S "RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR STANDARD STEEL DOORS AND FRAMES."
2. WOOD DOORS: DHI WDHS.3, "RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR WOOD FLUSH DOORS."
E. ADJUST AND REINFORCE ATTACHMENT SUBSTRATES AS NECESSARY FOR PROPER INSTALLATION AND OPERATION. DRILL AND COUNTERSINK UNITS THAT ARE NOT FACTORY PREPARED FOR ANCHORAGE FASTENERS. SPACE FASTENERS AND ANCHORS ACCORDING TO INDUSTRY STANDARDS.
1. THRESHOLDS: SET THRESHOLDS FOR EXTERIOR AND ACOUSTICAL DOORS IN FULL BED OF SEALANT COMPLYING WITH REQUIREMENTS SPECIFIED IN DIVISION 7 SECTION "JOINT SEALANTS."
F. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH ACCESSIBILITY REQUIREMENTS.
1. DOOR CLOSERS: ADJUST SWEEP PERIOD SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 INCHES (75 MM) FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

3.2 DOOR HARDWARE SCHEDULE

A. AS INDICATED ON DRAWINGS.

REVISIONS	BY

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NOT FOR CONSTRUCTION

Case No. 18-0000002
New Building for
ARBY'S
Store #8149
1058 Dunlawton Ave.
Port Orange, Florida

Date: 08. 14. 18
Project Mgr: DM
Drawn: DC
Job: 18-082
Sheet
N6