

SECTION 08110 – STEEL DOORS AND FRAMES

1. GENERAL:

- A. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND PERFORM ALL WORK AND SERVICES FOR ALL HOLLOW METAL DOORS AND FRAMES AS SHOWN ON DRAWINGS AND AS SPECIFIED, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS, AND COMPLETELY COORDINATED WITH WORK OF ALL OTHER TRADES.
- B. ALTHOUGH SUCH WORK IS NOT SPECIFICALLY INDICATED, FURNISH AND INSTALL ALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES AND DEVICES INCIDENTAL TO OR NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
- C. FINISH HARDWARE SPECIFIED IN ANOTHER SECTION.

2. QUALITY ASSURANCE:

- A. PROVIDE DOORS AND FRAMES WHICH COMPLY WITH STEEL DOOR INSTITUTE "RECOMMENDED SPECIFICATIONS FOR STANDARD STEEL DOORS AND FRAMES" (SDI 100), AND AS HEREIN SPECIFIED.
- B. PROVIDE HOLLOW METAL MANUFACTURED BY A SINGLE FIRM UNLESS OTHERWISE ACCEPTABLE TO ARCHITECT. SUBJECT TO COMPLIANCE WITH SPECIFICATIONS, PRODUCTS OF FOLLOWING MANUFACTURER ARE APPROVED FOR USE:

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- C. OTHER MANUFACTURERS DESIRING APPROVAL SHALL SUBMIT NECESSARY LITERATURE AND SAMPLES TO ARCHITECT FOR APPROVAL PRIOR TO BID.
- D. ALTERNATE MANUFACTURERS, IF APPROVED, MUST PREP DOORS AND FRAMES PER STEELCRAFT MFG. CO. HARDWARE LOCATIONS.

3. SUBMITTALS:

- A. COPIES OF MANUFACTURER'S SPECIFICATIONS FOR FABRICATION, SHOP PAINTING AND INSTALLATION.
- B. SHOP DRAWINGS FOR FABRICATION AND ERECTION OF HOLLOW METAL WORK.
- C. CERTIFICATION THAT DOORS MEET OR EXCEED REQUIREMENTS OF SDI 100 AND THESE SPECIFICATIONS.
- D. SCHEDULE: SUBMIT SIX (6) COPIES OF THE HOLLOW METAL AND HARDWARE SCHEDULE (LINEAR FORMAT) FOLLOWING THE SAME FORMAT AS THE CONTRACT DOCUMENTS. SUBMIT TO THE ARCHITECT FOR APPROVAL AS SOON AS POSSIBLE AFTER AWARD OF CONTRACT. SCHEDULE MUST BE COMPLETE, INDICATING THE MANUFACTURER'S NAMES AND CATALOG NUMBERS, LOCATION AND FINISH OF EACH ITEM.

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- E. SCHEDULE OF DOORS AND FRAMES USING SAME REFERENCE NUMBERS FOR DETAILS AND OPENINGS AS INDICATED.
 - F. SOME VIEW WINDOWS AND SIDE LIGHTS MAY RECEIVE BLINDS. CONFIRM LOCATION OF GLASS STOPS PRIOR TO FABRICATION.
4. DELIVERY, STORAGE AND HANDLING:
- A. DELIVER HOLLOW METAL WORK IN CARTONS OR CRATES.
 - B. INSPECT, UPON DELIVERY FOR DAMAGE. MINOR DAMAGES MAY BE REPAIRED PROVIDED FINISH IS ACCEPTABLE TO ARCHITECT; OTHERWISE, REMOVE AND REPLACE DAMAGED ITEMS.
 - C. STORE UNITS OFF GROUND IN VERTICAL POSITION WITH SPACERS TO ALLOW AIR CIRCULATION.
5. JOB CONDITIONS:
- EXAMINE STRUCTURE, SUBSTRATES, AND CONDITIONS UNDER WHICH WORK IS TO BE INSTALLED FOR CONDITIONS DETRIMENTAL TO CORRECT AND TIMELY COMPLETION. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. INSTALLATION ASSUMES RESPONSIBILITY FOR PERFORMANCE.
6. MATERIALS:
- A. STEEL SHEET AND STRIP: COMMERCIAL QUALITY CARBON STEEL, COMPLYING WITH ASTM A568.
 - B. INSERTS, BOLTS AND FASTENERS: MANUFACTURER'S STANDARD UNITS. HOT-DIP GALVANIZED ITEMS, TO BE BUILT INTO EXTERIOR WALLS, IN ACCORD WITH ASTM A153, CLASS C OR D AS APPLICABLE.
 - C. SHOP-APPLIED PAINT: FOR STEEL SURFACES, USE RUST-INHIBITIVE ENAMEL OR PAINT, AIR-DRYING OR BAKED, SUITABLE AS A BASE FOR SPECIFIED FINISH PAINTS.
7. FABRICATION - GENERAL:
- A. FABRICATE UNITS RIGID, NEAT IN APPEARANCE AND FREE FROM DEFECTS. FORM METAL TO REQUIRED SIZES AND PROFILES. WHEREVER PRACTICABLE, FIT AND ASSEMBLE UNITS IN SHOP. IDENTIFY WORK, THAT CANNOT BE PERMANENTLY SHOP ASSEMBLED BEFORE SHIPMENT, TO ASSURE PROPER ASSEMBLY AT SITE. WELD EXPOSED JOINTS CONTINUOUSLY, GRIND, DRESS, AND MAKE SMOOTH, FLUSH AND INVISIBLE. DO NOT USE METALLIC FILLER TO CONCEAL MANUFACTURING DEFECTS.
 - B. EXPOSED FASTENERS: COUNTERSUNK PHILLIPS OR JACKSON FLAT HEAD SCREWS AND BOLTS.
 - C. PERFORM FINISH HARDWARE PREPARATION INCLUDING CUTOUTS, REINFORCING DRILLING AND TAPPING IN ACCORD WITH FINAL HARDWARE SCHEDULE AND TEMPLATES PROVIDED BY HARDWARE SUPPLIER. COMPLY WITH REQUIREMENTS OF ANSI A 115 SERIES "SPECIFICATIONS FOR DOOR AND FRAME PREPARATION".

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- D. DRILLING AND TAPPING FOR SURFACE-APPLIED FINISH HARDWARE MAY BE DONE AT PROJECT SITE.
 - E. LOCATE FINISH HARDWARE AS INDICATED ON FINAL SHOP DRAWINGS IN ACCORD WITH "RECOMMENDED LOCATIONS FOR BUILDER'S HARDWARE", BY NATIONAL HARDWARE ASSOCIATION.
 - F. SOME VIEW WINDOWS AND BORROWED LIGHTS MAY RECEIVE BLINDS. CONFIRM LOCATION OF GLASS STOPS PRIOR TO FABRICATION.
 - G. SHOP PAINTING:
 - (1) CLEAN OFF MILL SCALE, RUST, OIL, GREASE, DIRT AND OTHER FOREIGN MATERIALS BEFORE PAINTING.
 - (2) CLEAN, TREAT AND PAINT ALL SURFACES WHETHER CONCEALED OR EXPOSED IN FINISHED WORK.
 - (3) APPLY SHOP PRIMER OF EVEN CONSISTENCY READY TO RECEIVE FIELD-APPLIED PAINT.
8. HOLLOW METAL DOORS:
- A. PROVIDE HOLLOW METAL DOORS OF TYPES INDICATED, WITH MINIMUM 16 GA. FACE SHEETS.
 - (1) ALL STEEL DOORS SHALL BE 16 GA. FLUSH PANEL SEAMLESS DOORS. SEAMS AT EDGE OF STILE ARE APPROVED. SEAMS IN MIDDLE OF STILES ARE NOT APPROVED.
 - (2) EXTERIOR DOORS: PROVIDE SDI LEVEL III, MODEL 2, DOORS 1-3/4 IN. THICK, FULLY POLYSTYRENE INSULATED. ALL EXTERIOR DOORS SHALL BE G 90 HOT DIP GALVANIZED.
 - (3) EXTERIOR DOORS AND LITE KITS SHALL BE LARGE MISSILE IMPACT RATED
 - B. PROVIDE DOORS WITH CLOSER REINFORCEMENT WHERE CLOSERS ARE CALLED FOR.
 - C. PROVIDE DOORS WITH FLUSH SEALED TOPS.
9. FRAMES:
- A. PROVIDE HOLLOW METAL FRAMES OF TYPES INDICATED FOR DOORS, TRANSOMS, SIDELIGHTS, BORROWED LIGHTS, INTERIOR WINDOWS AND OTHER OPENINGS. CONCEAL ALL FASTENINGS.
 - (1) FABRICATE EXTERIOR FRAMES UP TO 4 FT. WIDE OF MINIMUM 14 GA.
 - (2) FABRICATE INTERIOR FRAMES OF MINIMUM 16 GA. STEEL.
 - (3) ALL EXTERIOR FRAMES SHALL BE G90 HOT DIP GALVANIZED FRAMES.
 - (4) ALL EXTERIOR FRAMES TO BE LARGE MISSILE IMPACT RATED.

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- B. FABRICATE FRAMES OF FULLY-WELDED CONSTRUCTION, WITH FACE WELDS GROUND SMOOTH.
- C. PROVIDE 26 GA. STEEL BOXES, WELDED TO FRAME, AT BACK OF ALL HARDWARE CUTOUTS.
- D. DRILL STOPS TO RECEIVE 3 SILENCERS ON STRIKE JAMBS OF SINGLE FRAMES AND 2 SILENCERS ON HEADS OF DOUBLE FRAMES. INSTALL PLASTIC PLUGS TO KEEP HOLES CLEAR DURING CONSTRUCTION. PROVIDE AND INSTALL SILENCERS.

10. INSTALLATION:

- A. INSTALL HOLLOW METAL UNITS AND ACCESSORIES IN ACCORD WITH APPROVED SHOP DRAWINGS, AND AS HEREIN SPECIFIED.
- B. PLACE FRAMES PRIOR TO CONSTRUCTION OF ENCLOSING WALLS AND CEILINGS. PLUMB, ALIGN, AND BRACE SECURELY UNTIL PERMANENT ANCHORS ARE SET. AFTER WALL CONSTRUCTION IS COMPLETED, REMOVE TEMPORARY BRACES AND SPREADERS LEAVING SMOOTH AND UNDAMAGED.
 - (1) LOCATE AND INSTALL MINIMUM OF 3 WALL ANCHORS PER JAMB AT HINGE AND STRIKE LEVELS. ANCHORS OF TYPE APPROPRIATE TO WALL CONSTRUCTION. MINIMUM ACCEPTABLE ANCHORS 16 GA., 1 IN. WIDE CORRUGATED STEEL. PROVIDE TWO 12 GA., ADJUSTABLE, 3 IN. WIDE, FLANGED FLOOR CLIPS PER FRAME JAMB, PUNCHED FOR ANCHORING. PROVIDE REMOVABLE SPREADERS AT BOTTOM AND MID-HEIGHT OF FRAME. COORDINATE BUILDING-IN OF ANCHORS AND GROUTING OF FRAMES WITH OTHER TRADES.
 - (2) SOLID GROUT FRAMES IN MASONRY AND CONCRETE WALLS.
- C. FIT DOORS TO SDI 100 DEGREE CLEARANCE.
- D. IMMEDIATELY AFTER ERECTION, SAND SMOOTH AREAS OF PRIME COAT WHICH ARE RUSTED OR DAMAGED AND APPLY TOUCH-UP OF COMPATIBLE PRIMER. LEAVE SMOOTH FOR FINISH PAINTING.
- E. VERIFY THAT HARDWARE SUPPLIER CHECKS AND READJUSTS OPERATING FINISH HARDWARE ITEMS JUST PRIOR TO FINAL INSPECTION. LEAVE WORK IN COMPLETE AND PROPER OPERATING CONDITION. REMOVE AND REPLACE DEFECTIVE WORK.
- F. SOME VIEW WINDOWS MAY RECEIVE BLINDS VERIFY LOCATION OF GLASS STOPS PRIOR TO INSTALLATION.

END OF SECTION