

SPECIFICATIONS:

SECTION 05 58 00 / METAL FABRICATIONS

1. SUBMIT SHOP DRAWINGS COMPLYING WITH SECTION 01 33 00 FOR WORK IN THIS SECTION.
- a. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ASSEMBLIES OF METALWORK, WHICH ARE NOT COMPLETELY SHOWN BY THE MANUFACTURER'S DATA SHEETS.
- b. INCLUDE PLANS, ELEVATIONS, AND DETAILS OF SECTIONS AND CONNECTIONS.
- c. SHOW ANCHORAGE AND ACCESSORY ITEMS.

2. THE EXTENT OF MISCELLANEOUS METALWORK IS SHOWN ON THE DRAWINGS AND INCLUDES ITEMS FABRICATED FROM IRON AND STEEL SHAPES, PLATES, BARS, STRIPS, TUBES, PIPES AND CASTINGS WHICH ARE NOT A PART OF THE STRUCTURAL STEEL OR OTHER METAL SYSTEMS.

3. COMPLY WITH THE PROVISIONS OF THE FOLLOWING:
- a. ALSO SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, INCLUDING COMMENTARY OF THE AISC SPECIFICATIONS
- b. ALSO SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
- c. AISC STRUCTURAL WELDING CODE - STEEL
- d. ASTM A 6 GENERAL REQUIREMENTS FOR DELIVERY OF ROLLED STEEL PLATES, SHAPES, SHEET PILING AND BARS FOR STRUCTURAL USE
- e. WELDING PROCESSES AND WELDING OPERATORS IN ACCORDANCE WITH AISC STANDARD QUALIFICATION PROCEDURE

4. THE TYPES OF ITEMS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
- a. CARPENTER'S IRONWORK
- b. PIPE GUARDS
- c. LADDERS
- d. LOOSE BEARING PLATES
- e. MISCELLANEOUS FRAMING AND SUPPORTS
- f. MISCELLANEOUS TRIM
- g. ANGLE CORNER GUARDS
- h. CHANNEL DOORFRAMES
- i. DOCK ANGLES
- j. ANGLE JAMBS
- k. PLATES FOR DOORS
- l. OVERHEAD TOLLET COMPARTMENT SUPPORT
- m. OVERHEAD FOLDING PARTITION SUPPORT
- n. TRELLIS
- o. FENCING AND GATES
- p. ELEVATOR SILL ANGLES AND GUIDE RAIL SUPPORTS

5. FURNISH INSERTS AND ANCHORING DEVICES WHICH MUST BE SET IN CONCRETE OR BUILT INTO MASONRY FOR THE INSTALLATION OF THE WORK. PROVIDE SETTING DRAWINGS, TEMPLATES, INSTRUCTIONS AND DIRECTIONS FOR INSTALLATION OF ANCHORAGE DEVICES.

6. PREASSEMBLE ITEMS IN THE SHOP TO THE GREATEST EXTENT POSSIBLE, SO AS TO MINIMIZE FIELD SPlicing AND ASSEMBLY OF UNITS AT THE PROJECT SITE. DISASSEMBLE UNITS ONLY TO THE EXTENT NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. CLEARLY MARK UNITS FOR REASSEMBLY.

7. STEEL PLATES, SHAPES, BARS AND BAR-SIZE SHAPES: ASTM A_36.
8. STEEL TUBING (HOT FORMED, WELDED OR SEAMLESS): ASTM A_501.
9. HOT ROLLED CARBON STEEL BARS: ASTM A_575, GRADE AS SELECTED BY FABRICATOR.
10. COLD FINISHED STEEL BARS: ASTM A_108, GRADE AS SELECTED BY FABRICATOR.
11. HOT ROLLED CARBON STEEL SHEETS AND STRIPS: ASTM A_568 AND ASTM A_569; PICKLED AND OILED.
12. COLD ROLLED CARBON STEEL SHEETS: ASTM A_36.

13. GALVANIZED CARBON STEEL SHEETS: ASTM A_526, WITH ASTM A_525, G90 ZINC COATING.
14. COLD DRAWN STEEL TUBING: ASTM A_512 SUNK DRAWN, BUTT-WELDED, COLD FINISHED AND STRESS RELIEVED.
15. STEEL PIPE: ASTM A_53, TYPE AS SELECTED, GRADE A, BLACK FINISH UNLESS GALVANIZING IS REQUIRED, STANDARD WEIGHT, SCHEDULE 40, UNLESS OTHERWISE SHOWN OR SPECIFIED.

16. THREADED TYPE CONCRETE INSERTS: GALVANIZED FERROUS CASTINGS, INTERNALLY THREADED TO RECEIVE 3/4" DIAMETER MACHINE BOLTS; EITHER MALLEABLE IRON COMPLYING WITH ASTM A_47 OR CAST STEEL COMPLYING WITH ASTM A_27; HOT DIP GALVANIZED IN COMPLIANCE WITH ASTM A_153.

17. WEDGE TYPE CONCRETE INSERTS: GALVANIZED BOX TYPE FERROUS CASTINGS, DESIGNED TO ACCEPT 3/4" DIAMETER BOLTS HAVING SPECIAL WEDGE, SHAPED HEADS, EITHER MALLEABLE IRON COMPLYING WITH ASTM A_47 OR CAST STEEL COMPLYING WITH ASTM A_27; HOT DIPPED GALVANIZED IN COMPLIANCE WITH ASTM A153.

18. PROVIDE CARBON STEEL BOLTS HAVING SPECIAL WEDGE, SHAPED HEADS, NUTS, WASHERS AND SHIMS; GALVANIZED IN COMPLIANCE WITH ASTM A_153.

19. SLOTTED TYPE CONCRETE INSERTS: GALVANIZED 1/8" THICK PRESSED STEEL PLATE COMPLYING WITH ASTM A_283, BOX TYPE WELDED CONSTRUCTION WITH SLOT DESIGNED TO RECEIVE 3/4" DIAMETER SQUARE HEAD BOLT AND WITH KNOCKOUT COVER, HOT DIP GALVANIZED IN COMPLIANCE WITH ASTM A_36.

20. MASONRY ANCHORAGE DEVICES: EXPANSION SHIELD; FS FF_S_325.

21. TOGGLE BOLTS: TUMBLE WING TYPE; FS FF_S_588, TYPE, CLASS AND STYLE AS REQUIRED.

22. PROVIDE ZINC COATED FASTENERS WITH GALVANIZING COMPLYING WITH ASTM A_153 FOR EXTERIOR USE OR WHERE BUILT INTO EXTERIOR WALLS; SELECT FASTENERS FOR THE TYPE, GRADE AND CLASS REQUIRED FOR THE INSTALLATION OF MISCELLANEOUS ITEMS.

23. STANDARD BOLTS AND NUTS: ASTM A_307, GRADE A, REGULAR HEXAGON HEAD.

24. LAG BOLTS: FS FF_B_561, SQUARE HEAD TYPE.

25. WOOD SCREWS: ANSII B_18.6.1 PLAT HEAD CARBON STEEL.

26. PLAIN WASHERS: FS FF_W_84, HELICAL SPRING TYPE CARBON STEEL.

27. METAL PRIMER PAINT: PRIMER SHALL BE TNEMC SERIES 10 GRAY.

28. GALVANIZING REPAIR PAINT: HIGH ZINC DUST CONTENT PAINT FOR WELDS IN GALVANIZED STEEL, COMPLYING WITH MILITARY SPECIFICATIONS MIL-P_21035

29. USE MATERIALS OF THE SIZE AND THICKNESS SHOWN, OR IF NOT SHOWN, OF THE REQUIRED SIZE AND THICKNESS TO PRODUCE ADEQUATE STRENGTH AND DURABILITY OF THE FINISHED PRODUCT FOR THE INTENDED USE.

30. FOR THE FABRICATION OF METALWORK WHICH WILL BE EXPOSED TO VIEW, USE ONLY MATERIALS WHICH ARE SMOOTH AND FREE OF SURFACE BLEMISHES, SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES AND ROUGHNESS. REMOVE SUCH BLEMISHES BY GRINDING OR BY WELDING AND GRINDING. PRIOR TO CLEANING, TREATING AND APPLICATION OF SURFACE FINISHES INCLUDING ZINC COATINGS.

31. FORM EXPOSED WORK TRUE TO LINE AND LEVEL WITH ACCURATE ANGLES AND STRAIGHT SHARP EDGES. EASE EXPOSED EDGES TO A RADIUS OF APPROXIMATELY 1/32" UNLESS OTHERWISE SHOWN. FORM BENT METAL CORNERS TO THE SMALLEST RADIUS POSSIBLE WITHOUT CAUSING GRAIN SEPARATION.

32. WELD CORNERS AND SEAMS CONTINUOUSLY AND IN ACCORDANCE WITH THE RECOMMENDATIONS OF AISC. GRIND EXPOSED WELDS SMOOTH AND FLUSH, TO MATCH AND BLEND WITH ADJOINING SURFACES. FORM EXPOSED CONNECTIONS WITH HAIRLINE JOINTS WHICH ARE FLUSH AND SMOOTH, USING CONCEALED FASTENERS WHEREVER POSSIBLE. USE EXPOSED FASTENERS OF THE TYPE SHOWN, OR IF NOT SHOWN, USE COUNTERSUNK SCREWS OR BOLTS.

33. CUT, REINFORCE AND DRILL METALWORK AS MAY BE REQUIRED TO RECEIVE FINISH HARDWARE AND SIMILAR ITEMS OF WORK.

34. PROVIDE A ZINC COATING FOR THOSE ITEMS SHOWN OR SPECIFIED TO BE GALVANIZED, USING ONE OF THE FOLLOWING HOT DIP PROCESSES AFTER FABRICATION:
- ASTM A_153 FOR GALVANIZING OF IRON AND STEEL HARDWARE

35. ASTM A_123 FOR GALVANIZING OF ROLLED, PRESSED AND FORGED STEEL SHAPES, PLATES, BARS, AND STRIP 1/8" THICK AND HEAVIER, AND FOR GALVANIZING OF ASSEMBLED STEEL PRODUCTS

36. SHOP PAINTING
37. SHOP PAINT METALWORK, EXCEPT THOSE MEMBERS OR PORTIONS OF MEMBERS TO BE EMBEDDED IN CONCRETE OR MASONRY, SURFACES AND EDGES TO BE FIELD WELDED, AND GALVANIZED SURFACES.

38. REMOVE SCALE, RUST AND OTHER DELETERIOUS MATERIALS BEFORE THE SHOP COAT OF PAINT IS APPLIED. CLEAN HEAVY RUST AND LOOSE MILL SCALE IN ACCORDANCE WITH SSPC SP_2 HAND TOOL CLEANING, OR SSPC SP_3 POWER TOOL CLEANING OR SSPC SP_7 BRUSH-OFF BLAST CLEANING. REMOVE OIL, GREASE AND SIMILAR CONTAMINANTS IN ACCORDANCE WITH SSPC SP_1 SOLVENT CLEANING.

39. APPLY ONE SHOP COAT OF METAL PRIMER PAINT TO FABRICATED METAL ITEMS; APPLY TWO COATS OF PAINT TO SURFACES WHICH ARE INACCESSIBLE AFTER ASSEMBLY. IMMEDIATELY AFTER SURFACE PREPARATION, BRUSH OR SPRAY ON METAL PRIMER PAINT, APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, AND AT A RATE TO PROVIDE A UNIFORM DRY FILM THICKNESS OF 2 MILS FOR EACH COAT.

40. FURNISH BENT OR OTHERWISE CUSTOM FABRICATED BOLTS, PLATES, ANCHORS, HANGERS, DOWELS AND OTHER SHAPES AS REQUIRED FOR FRAMING AND SUPPORTING OF WOODWORK, AND FOR ANCHORING OR SECURING WOODWORK TO CONCRETE OR OTHER STRUCTURES.

41. MANUFACTURE OR FABRICATE ITEMS OF SIZES, SHAPES AND DIMENSIONS REQUIRED. FURNISH MALLEABLE IRON WASHERS FOR HEADS AND NUTS WHICH BEAR ON WOOD STRUCTURAL CONNECTIONS; ELSEWHERE FURNISH STEEL WASHERS.

42. FABRICATE LADDERS WITH DIMENSIONS, SPACINGS, DETAILS AND ANCHORAGES AS REQUIRED. COMPLY WITH THE REQUIREMENTS OF ANSI A14.3, EXCEPT AS OTHERWISE SHOWN. PROVIDE 12" X 12" CONTINUOUS STRUCTURAL STEEL FLAT BAR SIDE RAILS WITH EASED EDGES, SPACED 18" APART. PROVIDE 3/4" DIAMETER SOLID STRUCTURAL STEEL BAR RUNGS, SPACED 12" OC.

43. FIT RUNGS INTO PUNCHED HOLES IN CENTERLINE OF SIDE RAILS, PLUG WELD AND GRIND SMOOTH ON OUTER RAIL FACES.
44. SUPPORT EACH LADDER AT TOP AND BOTTOM AND AT INTERMEDIATE POINTS SPACED NOT MORE THAN 8' OC. USE WELDED OR BOLTED STEEL BRACKETS, DESIGNED FOR ADEQUATE SUPPORT AND ANCHORAGE, AND TO HOLD THE LADDER OFF CLEAR OF THE WALL SURFACE AND OTHER OBSTRUCTING CONSTRUCTION. EXTEND RAILS 42" ABOVE TOP RUNG, AND RETURN RAILS TO WALL OR STRUCTURE UNLESS OTHER SECURE HANDHOLDS ARE PROVIDED. IF THE LADDER STRUCTURE IS TO BE USED TO CLIMB ABOVE THE STRUCTURE TO PROVIDE GOOSENECK THE EXTENDED RAILS BACK TO THE STRUCTURE TO PROVIDE SECURE LADDER ACCESS.

45. PROVIDE NONSLIP SURFACE ON THE TOP OF EACH RUNG, EITHER BY COATING THE RUNG WITH ALUMINUM OXIDE GRANULES SET IN EPOXY RESIN ADHESIVE, OR BY USING A TYPE OF MANUFACTURED RUNG WHICH IS FILLED WITH ALUMINUM OXIDE GROUT.
46. PROVIDE LOOSE BEARING PLATES FOR STEEL ITEMS BEARING ON MASONRY OR CONCRETE. THE REINFORCING OF THE PLATE, FRAMES, FRAMES TWISTS, AND OF REQUIRED THICKNESS AND BEARING AREA. DRILL PLATES TO RECEIVE ANCHOR BOLTS AND FOR GROUTING AS REQUIRED.

47. PROVIDE LOOSE STRUCTURAL STEEL SHAPE LINTELS FOR OPENINGS AND RECESSES IN MASONRY WALLS AND PARTITIONS, AS SHOWN. WELD ADJOINING MEMBERS TOGETHER TO FORM A SINGLE UNIT. PROVIDE NOT LESS THAN 6" BEARING AT EACH SIDE OF OPENINGS.

48. PROVIDE STEEL FRAMING AND SUPPORTS WHICH ARE NOT A PART OF THE STRUCTURAL STEEL FRAMEWORK, AS REQUIRED TO COMPLETE THE WORK.
49. FABRICATE MISCELLANEOUS UNITS TO THE SIZES, SHAPES AND PROFILES SHOWN OR OF THE REQUIRED DIMENSIONS TO ABOVE ADJOINT GRATING, PLATES, DOORS OR OTHER WORK TO BE RETAINED BY THE FRAMING. FABRICATE FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS OF WELDED CONSTRUCTION USING MITERED CORNERS, WELDED BRACKETS AND SPlice PLATES AND A MINIMUM NUMBER OF JOINTS FOR FIELD CONNECTION. CUT, DRILL AND TAP UNITS TO RECEIVE HARDWARE AND SIMILAR ITEMS TO BE ANCHORED TO THE WORK.

50. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

51. PROVIDE STRUCTURAL STEEL SHELF ANGLES OF SIZES SHOWN FOR ATTACHMENT TO CONCRETE FRAMING. PROVIDE SLOTTED HOLES TO RECEIVE 3/4" BOLTS, SPACES NOT MORE THAN 6" FROM ENDS AND NOT MORE THAN 24" OC.
52. FURNISH WEDGE TYPE CONCRETE INSERTS, COMPLETE WITH FASTENERS, FOR ATTACHMENT OF SHELF ANGLES TO CAST-IN PLACE CONCRETE.

53. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

54. PROVIDE STRUCTURAL STEEL SHELF ANGLES OF SIZES SHOWN FOR ATTACHMENT TO CONCRETE FRAMING. PROVIDE SLOTTED HOLES TO RECEIVE 3/4" BOLTS, SPACES NOT MORE THAN 6" FROM ENDS AND NOT MORE THAN 24" OC.
55. FURNISH WEDGE TYPE CONCRETE INSERTS, COMPLETE WITH FASTENERS, FOR ATTACHMENT OF SHELF ANGLES TO CAST-IN PLACE CONCRETE.

56. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

57. PROVIDE STRUCTURAL STEEL SHELF ANGLES OF SIZES SHOWN FOR ATTACHMENT TO CONCRETE FRAMING. PROVIDE SLOTTED HOLES TO RECEIVE 3/4" BOLTS, SPACES NOT MORE THAN 6" FROM ENDS AND NOT MORE THAN 24" OC.

58. FURNISH WEDGE TYPE CONCRETE INSERTS, COMPLETE WITH FASTENERS, FOR ATTACHMENT OF SHELF ANGLES TO CAST-IN PLACE CONCRETE.

59. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

60. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

61. PROVIDE STRUCTURAL STEEL SHELF ANGLES OF SIZES SHOWN FOR ATTACHMENT TO CONCRETE FRAMING. PROVIDE SLOTTED HOLES TO RECEIVE 3/4" BOLTS, SPACES NOT MORE THAN 6" FROM ENDS AND NOT MORE THAN 24" OC.
62. FURNISH WEDGE TYPE CONCRETE INSERTS, COMPLETE WITH FASTENERS, FOR ATTACHMENT OF SHELF ANGLES TO CAST-IN PLACE CONCRETE.

63. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

64. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

65. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

66. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

67. PROVIDE SHAPES AND SIZES AS REQUIRED FOR THE PROFILES SHOWN. FABRICATE UNITS FROM STRUCTURAL STEEL SHAPES AND PLATES AND STEEL BARS, WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. USE CONCEALED FIELD SPICES WHEREVER POSSIBLE. PROVIDE CUTOUTS, FITTINGS AND ANCHORAGES AS REQUIRED FOR COORDINATION OF ASSEMBLY AND INSTALLATION WITH OTHER WORK.

68. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

69. INSTALL STANDING TRIM IN SINGLE LENGTHS WITHOUT SPICES, RUNNING TRIM IN LENGTHS AS LONG AS POSSIBLE, JOINED ONLY WHERE SLOTT FASTENINGS CAN BE MADE. END JOINTS IN BUILT-UP MEMBERS SHALL BE WELL DISTRIBUTED. MITER EXTERNAL CORNERS, COPE INTERNAL CORNERS.

70. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

71. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

72. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

73. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

74. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

75. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

76. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

77. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

78. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

79. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

80. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

81. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

82. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

83. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

84. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

85. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

86. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

87. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

88. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

89. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

90. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

91. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

92. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

93. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

94. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

95. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

96. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

97. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

98. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

99. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

100. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

101. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

102. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

103. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

104. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

105. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

106. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

107. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

108. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

109. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

110. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

111. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

112. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

113. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

114. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

115. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

116. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

117. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

118. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

119. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE SHALL BE REPLACED.

120. MAKE LOCK CUTOUTS WITH TEMPLATES USING MANUFACTURER'S RECOMMENDED METHODS. CUT MORTISES ACCURATELY TO SIZE AND DEPTH, WITH MINIMUM CLEARANCE. PATCHING WILL NOT BE PERMITTED, AND DOORS AND FRAMES INCORRECTLY PREPARED FOR HARDWARE