

# PROJECT SPECIFICATIONS

## 1.0 General Requirements

- 1.1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES AND ORDINANCES AND PER ALL AUTHORITIES HAVE JURISDICTION.
- 1.2. ALL PARTITION DIMENSIONS ON PLAN ARE TO THE FACE OF STUD INTERIOR AND TO THE FACE OF SHEATHING OR BRICK VENEER AT THE EXTERIOR (UNLESS OTHERWISE NOTED ON PLANS). NON-BEARING PARTITIONS ARE TO BE LAID OUT SO THAT STOCK COMPONENTS WILL FIT EXACTLY WITHIN THE INDICATED DIMENSIONS AFTER THE FINISHES ARE APPLIED. DIMENSIONS AT CRITICAL AREAS SUCH AS CLOSETS, BATHROOMS, ETC. MUST BE HELD.
- 1.3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND/OR DISCREPANCIES IN THE PLANS AND REPORT ANY ERRORS TO THE ARCHITECT PRIOR TO THE COMMENCEMENT OF THE WORK, OR BE RESPONSIBLE FOR THE SAME.
- 1.4. PLUMBING SCHEMATIC DRAWINGS, HVAC DRAWINGS, SEWER MAINS, ELECTRICAL OUTLETS, SWITCHES, LIGHT LOCATIONS, ROUTING OF ALL PLUMBING, MECHANICAL, AND ELECTRICAL WORK ARE TO BE COORDINATED BETWEEN THE TRADES AFFECTED BY THE WORK AS PART OF THEIR INSTALLATION LAYOUT.
- 1.5. NO PLUMBING, MECHANICAL, OR ELECTRICAL INFORMATION IS TO BE SCALED FROM DRAWING. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF EACH SUB-CONTRACTOR.

## 2.0 Materials and Workmanship

- 2.1. ALL WORK SHALL BE PERFORMED IN A WORKMAN-LIKE MANNER.
- 2.2. EACH CONTRACTOR SHALL INCLUDE LABOR, MATERIALS, TOOLS, EQUIPMENT, ETC., FOR THE COMPLETE CONSTRUCTION OF THE WORK INDICATED, AS DESCRIBED BY THE DRAWINGS AND SPECIFICATIONS.
- 2.3. MATERIALS AS SPECIFIED ON THE DRAWINGS SHALL BE USED. SUBSTITUTIONS OF MATERIALS WILL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE OWNER. THE ARCHITECT SHALL BE HELD HARMLESS FOR THE DECISIONS OF THE OWNER, IN ALL RESPECTS, LEGAL, LIABILITY, OR FINANCIALLY.
- 2.4. EACH SUB-CONTRACTOR SHALL AMEND AND MAKE GOOD AT HIS OWN COST, ANY DEFECTS OR OTHER FAULTS IN HIS WORKMANSHIP AND/OR MATERIAL.
- 2.5. EACH CONTRACTOR IS TO CLEAN UP DAILY THE DEBRIS INSIDE AND OUTSIDE THE BUILDING SITE WHICH HAVE BEEN CAUSED BY HIS WORK. ALL WASTE SHALL BE DISPOSED PROPERLY, AND IN CONSIDERATION OF ALL ENVIRONMENTAL, LOCAL AND NATIONAL LAWS, BY EACH SUB-CONTRACTOR. THE OWNER WILL CHARGE EACH SUB-CONTRACTOR RESPECTIVELY, SHOULD THEY NOT CLEAN-UP AS AGREED THE SUM OF \$50/HR.
- 2.6. HAZARDOUS MATERIAL HANDLING, REMOVAL AND DISPOSAL ARE NOT ANTICIPATED WITHIN THE SCOPE OF THIS PROJECT, ON THE SITE OR DURING CONSTRUCTION. THE OWNER AND ARCHITECT SHALL BE HELD HARMLESS IN ALL RESPECTS BY THE SUB-CONTRACTOR, ANY AGENCIES, LOCAL OR NATIONAL AUTHORITIES, AND THEIR INDIVIDUAL EMPLOYEES.

## 3.0 Excavation and Sitework

- 3.1. THE BUILDING SITE SHALL BE CLEARED OF ALL STUMPS, DEBRIS AND DELETERIOUS MATERIAL, AND SHALL BE FREE OF STANDING WATER BEFORE PROCEEDING WITH WORK. ALL TREES AND SHRUBS SHALL BE PROTECTED UNLESS SPECIFICALLY TAGGED FOR CLEARING BY THE OWNER.
- 3.2. FILL NECESSARY TO RAISE BUILDING SITE TO ELEVATION SHOWN ON DRAWINGS SHALL BE CLEAN AND FREE OF ORGANIC MATERIAL AND DEBRIS.
- 3.3. COMPACTED FILL SUPPORTING INTERIOR BUILDING SLABS SHALL BE OF APPROVED GRANULAR MATERIAL PLACED IN LIFTS NOT TO EXCEED NINE INCHES LOOSE THICKNESS AND COMPACTED TO A MAXIMUM OF 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 1557-70.
- 3.4. ALL FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL OR ON APPROVED COMPACTED FILL, EITHER OF WHICH MUST HAVE A MINIMUM BEARING CAPACITY OF 3,000 P.S.F.
- 3.5. ALL FOOTINGS AND PIERS SHALL EXTEND BELOW LOCAL FROST LINE.
- 3.6. AREA UNDER ALL BUILDING SLABS SHALL BE TREATED WITH ALDRIN, CHLORDANE, DIELDRIN OR APPROVED EQUAL SOIL POISON TO DEPTH OF 18 INCHES BELOW FINISHED GRADE; BY A TRAINED PERSONNEL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AND THE EPA.

## 4.0 Concrete

- 4.1. ALL CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ASTM C 150. ALL CONCRETE SHALL ATTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 P.S.I.
- 4.2. THE CONCRETE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION WITH THE GENERAL CONTRACTOR FOR THE PLACING OF ALL SLEEVES IN SLABS AND FOUNDATION WALL FOR TELEPHONE, PLUMBING, ELECTRICAL AND MECHANICAL TRADES.
- 4.3. THE CONCRETE SUB-CONTRACTOR SHALL INSTALL FOUNDATION REINFORCING STEEL, ANCHOR BOLTS, ETC. IN CONFORMANCE WITH THE SIZE AND SHAPES INDICATED ON THE DRAWINGS AND AS MAY BE REQUIRED BY THE NATURE OF THE WORK.
- 4.4. THE CONCRETE SUB-CONTRACTOR SHALL SEAL ALL INTERIOR SLABS AND EXPOSED INTERIOR CONCRETE WITH ONE COAT OF CLEAR CONCRETE SEALER. STEPS WITHIN THE GARAGE OR AT WET AREAS SHALL ALSO HAVE A NON SLIP ADDITIVE OR BRUSHED FINISH.
- 4.5. ALL EXTERIOR SLABS AND GARAGE SLABS SHALL HAVE 6 X 6 10/10 W.W.F. EXTERIOR SERVICE AND ENTRY WALKS SHALL BE A 5 BAG MIX WITH BRUSHED SAFETY FINISH, D.O. ALL STOOPS OR CONCRETE PATIOS.
- 4.6. PROVIDE EXPANSION JOINTS W/FILLER AND CONTROL JOINTS PER ACI RECOMMENDED PRACTICE.
- 4.7. PROVIDE (2)-1/2" CONTROL JOINTS AT ALL GARAGE SLABS, AND A DUST-SILL AT ALL OVERHEAD DOORS.
- 4.8. ALL CRAWL SPACE FLOORS SHALL HAVE A MINIMUM 2" MUD SLAB.

## 5.0 Masonry

- 5.1. VENEERED WALLS AS SHOWN ON THE DRAWING SHALL BE NOMINAL 4" MASONRY OR STONE OF COLOR AND VARIETY AS SELECTED BY OWNER WITH TYPE M, S OR N MORTAR AS REQUIRED BY LOCATION AND MOISTURE CONDITION. COLOR OF MORTAR SHALL BE SELECTED BY THE OWNER.
- 5.2. VENEERED WALLS SHALL BE ATTACHED TO THE FRAME BACK UP WALL WITH GALVANIZED METAL TIES AT 24" O.C. HORIZONTALLY AND EVERY 16" O.C. VERTICALLY OR AS OTHERWISE SHOWN ON THE DRAWINGS.
- 5.3. BRICK OR STONE PIERS SHALL BE OF THE SIZE AND TYPE AS SHOWN ON THE DRAWINGS WITH TYPE M, S, OR N MORTAR AS REQUIRED BY LOCATION AND MOISTURE CONDITION.
- 5.4. PROVIDE WEEPS AT ALL MASONRY WALLS AT 24" O.C. AT ALL FOUNDATIONS AND ABOVE ALL WINDOWS AND DOORS WITH MASONRY ABOVE.
- 5.5. BRICK OR STONE VENEER FIREPLACE SHALL BE AS SHOWN ON THE DRAWING, COLOR, TYPE, AND DESIGN AS SELECTED BY THE OWNER.

## 6.0 Carpentry

- 6.1. ALL LUMBER SHALL BE SPF #2 OR BETTER. STRESS GRADE LUMBER SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENINGS" NIMA LATEST EDITION. MATERIAL SHALL HAVE A FIBER STRESS IN BENDING (FB) OF 750 P.S.I. (950 P.S.I. REPEATITIVE), A MODULE OF ELASTICITY OF 1,100,000 P.S.I., (FE) PERPENDICULAR OF 425 P.S.I./PARALLEL OF 1,100 P.S.I. AND A HORIZONTAL SHEAR (FV) OF 70 P.S.I. UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 6.2. ALL FRAME WALLS SHALL BE 2X4 WOOD STUDS AT 16" O.C. UNLESS SPECIFIC IS NOTED OTHERWISE, WITH DOUBLE 2X4 TOP PLATE WITH STAGGERED SPLICE JOINTS AT ALL BEARING WALLS.
- 6.3. SUB-FLOORING SHALL BE 3/4" TONGUE AND GROOVE PLYWOOD 32/16 GLUED AND SCREWED. AN ACCEPTABLE ALTERNATE PER OWNER SHALL BE 5/8" T&G OSB SUB-FLOORING SIMILARLY ATTACHED. (ALL PLYWOOD APA RATED.)
- 6.4. ROOF SHEATHING SHALL BE 1/2" EXTERIOR GRADE TONGUE AND GROOVE PLYWOOD, 32/16 GLUED AND NAILED. AN ACCEPTABLE ALTERNATE PER OWNER SHALL BE 1/2" OSB SIMILARLY ATTACHED, WHERE RAFTER OR TRUSS SPACING DOES NOT EXCEED 16" O.C. WHERE RAFTER OR TRUSS SPACING IS GREATER THAN 16" O.C. AND DOES NOT EXCEED 24" O.C. 5/8" OSB W/CLIPS SHALL BE AN ACCEPTABLE ALTERNATE, GLUED AND NAILED. (ALL PLYWOOD APA RATED.)
- 6.5. ALL HEADER MATERIAL OVER EXTERIOR OPENINGS SHALL BE 2-2X12'S WITH A 1/2" PLYWOOD FLITCH UNLESS OTHERWISE NOTED WITH AN (FB) OF 750 P.S.I., INTERIOR HEADERS ARE AS NOTED WITH AN (FB) OF 750 P.S.I. ALL WALLS TO HAVE 2" SOLID WOOD FIRE-STOPPING AND ALL ELECTRICAL AND PLUMBING THROUGH FLOORS TO HAVE SPACES SEALED OFF WITH APPROVED FIBERGLASS OR ROCKWOOL BATT INSULATION. SILL PLATES ON CONCRETE SHALL BE PRESSURE TREATED AND SET IN SILL SEALER. ATTACHED TO FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS 10" LONG SPACED NOT OVER 4'-0" O.C., WITH A MINIMUM OF 2 ANCHOR BOLTS PER PIECE WITH NUTS AND WASHERS. DRAFT STOPPING SHALL BE A MIN. 5/8" F.C. DRYWALL.
- 6.7. PROVIDE STEEL STRAP ANCHORS FROM TOP PLATE TO SILL PLATE AT ALL CORNERS, OR 1/2" PLYWOOD FOR 4 FEET IN EACH DIRECTION FROM EACH CORNER FOR LATERAL BRACING.
- 6.8. PROVIDE A MINIMUM OF 3-2X4'S AT ALL CORNER AND BEAM CONDITIONS UNLESS NOTED OTHERWISE. PROVIDE DOUBLE STUDS AT EACH SIDE OF ALL DOOR AND WINDOW OPENINGS. AT EXTERIOR CORNER CONDITIONS THE CARPENTRY SUB-CONTRACTOR SHALL BE RESPONSIBLE TO FILL ALL VOIDS WITH BATT INSULATION.
- 6.9. ALL HEADERS, HEADER JOISTS, LVL'S OR MICRO-LAM BEAMS, SHALL BE SECURELY BOLTED & GLUED TOGETHER AS PER MANUFACTURERS INSTALLATION MANUALS. 1.9E LVL BEAMS SHALL BE MICROLAM® BY TRUSS JOIST MCMILLAN. 2.0E LVL BEAMS SHALL BE RIDGLAM® BY ROSEBURG, OR APPROVED EQUAL. TJI JOISTS SHALL BE SIZED ACCORDING TO FRAMING PLANS AND BY TRUSS JOIST MCMILLAN, ROSEBURG OR APPROVED EQUAL.
- 6.10. ALL FLITCH PLATE HEADERS SHALL BE AS NOTED WITH 1/2" DIAMETER BOLTS STAGGERED AT 16" O.C. AT QUARTER POINTS TOP AND BOTTOM OF SIDES.
- 6.11. USE GALVANIZED METAL CONNECTORS FOR CONNECTING JOISTS TO HEADERS (BY SIMPSON® OR EQUAL), AT FLUSH SUPPORT CONDITIONS OR WHERE NOTED. ALL CLIPS SHALL BE SECURELY SET WITH ALL HOLES NAILED FIRM.
- 6.12. SOFFITS SHALL BE 3/8" EXTERIOR FIR PLYWOOD, (20/0) CEDAR FACED PLYWOOD, VINYL PERFORATED, OR ALUMINUM PER OWNER OR AS DESCRIBED ON THE DRAWINGS.
- 6.13. KITCHEN AND VANITY CABINETS SHALL BE DESIGNED IN ACCORDANCE WITH THE LAYOUT SHOWN ON THE DRAWINGS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER BY THE CABINET SUB-CONTRACTOR FOR APPROVAL OF MATERIALS, COLORS, STYLE, COORDINATION WITH OTHER TRADES, AND INSTALLATION.
- 6.14. ALL FREESTANDING KITCHEN ISLANDS WITH STONE, GRANITE, MARBLE, ETC. COUNTERTOPS TO BE SUPPORTED ON DOUBLED JOISTS.
- 6.15. TYPICAL CLOSETS SHALL INCLUDE ONE 1-1/2" DIAMETER WOOD POLE AND 1" PARTICLE SHELVES AS SHOWN. SHELVES AND POLES OVER 4' IN LENGTH SHALL HAVE INTERMEDIATE BEARING. WIRE SHELVING MAY BE ACCEPTABLE ALTERNATE, PER OWNER.
- 6.16. BUILT-IN SHELVES, DRESSERS AND CABINETS SHALL BE DONE BY MILLWORK CARPENTER ACCORDING TO OWNER'S REQUIREMENTS.
- 6.17. ALL TRIM BOARDS, FASCIAS, SOFFITS, ETC. MATERIAL TO BE AS INDICATED ON THE DRAWINGS. ALL STAINED MATERIAL SHALL BE RS CEDAR, PAINT GRADE MATERIAL SHALL BE FIR S4S. NOTE ALL CUT ENDS SHALL BE RE-STAINED OR PAINTED AS CONDITIONS REQUIRE. WITH CEDAR SIDINGS USE 5/4 TRIM.
- 6.18. THE MANUFACTURER OF WOOD TRUSSES OR T.J.I.'S SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND MUNICIPALITY FOR APPROVAL THAT WILL INCLUDE TRUSS LAYOUTS, SHOWING ALL STRUCTURAL FRAMING MEMBERS WITH DIMENSIONS, SIZES, LOCATIONS, DETAILS, CONFIGURATIONS, STRESSES IN MEMBERS, GRADE OF LUMBER, TYPE OF FASTENING AND BEARING AND SPAN ALLOWANCES, AS WELL AS ALLOWABLE PENETRATION SIZE AND CUT POINTS. ITEM SHALL BE SUBMITTED SEALED AND SIGNED BY AN LICENSED STRUCTURAL ENGINEER IN ILLINOIS, PRIOR TO CONSTRUCTION.
- 6.19. PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS PARALLEL TO JOISTS AND PROVIDE SOLID BLOCKING UNDER ALL PARTITIONS PERPENDICULAR TO JOISTS.
- 6.20. PROVIDE SOLID BLOCKING AT 8'-0" O.C. MAXIMUM. PROVIDE SOLID BLOCKING AT ALL CERAMIC OR QUARRY AREAS.
- 6.21. PROVIDE DOUBLE TRIMMERS MINIMUM AT EACH SIDE OF ALL OPENINGS.
- 6.22. PROVIDE DOUBLE JOISTS AT ALL TUBS, SHOWERS, REFRIGERATORS AND WASHER/DRYER LOCATIONS.
- 6.23. BLOCKING SHALL BE PROVIDED AT 4'-0" O.C. WHERE DUCTWORK OR PLUMBING OCCURS.
- 6.24. PROVIDE 1/2" PLYWOOD SHEATHING AT ALL BRICK OR STONE VENEER WALLS.
- 6.25. PROVIDE HURRICANE ANCHOR CLIPS AT EACH RAFTER TO PLATE CONNECTION AND EACH RAFTER TO BEAM CONNECTION (BY SIMPSON® OR EQUAL).
- 6.26. ALL NAILING SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODES.

## 7.0 Moisture Control

- 7.1. ALL ROOFING SHALL BE 300# ARCHITECTURAL PROFILE FIBERGLASS SHINGLES W/SELF SEAL TABS AND FACTORY MUTUAL CLASS "A" RATING FOR FIRE BRAND.
- 7.2. AT ALL EAVES, OVERHANGES, VALLEYS & RIDGES FOR A DISTANCE OF 36" IN ALL DIRECTIONS, CONTRACTOR SHALL INSTALL "GRACE" ICE & WATERSHIELD TO EXTEND A MINIMUM OF 24" TO INSIDE OF EXTERIOR WALLS AND UP 18" EACH SIDE OF ALL VALLEYS.
- 7.3. ALL CONCEALED FLASHING SHALL BE A MINIMUM OF 16 GAUGE.
- 7.4. BASE SILL FLASHING, AS WELL AS WINDOW AND DOOR HEAD FLASHING AT MASONRY VENEER AREAS TO BE EQUAL TO 6 MIL. POLYETHYLENE VAPOR BARRIER, AND SHALL EXTEND UP THE WALL A MIN. OF 20" AT THE FOUNDATION AND 12" ELSEWHERE.
- 7.5. PROVIDE 6 MIL. POLYETHYLENE VAPOR BARRIER LAPPED A MINIMUM OF 6" UNDER SLABS AT ALL CONDITIONED SPACE AREAS, INCLUDING BASEMENTS.
- 7.6. ALL EXTERIOR PERIMETER CAULKING SHALL BE WATER AND WEATHER TIGHT. ELASTIC CAULKING COMPOUND SHALL BE NON-STAINING POLYSULPHIDE, ACRYLIC OR BUTYL. COLORED TO BE INCONSPICUOUS WITH ADJOINING MATERIALS. SUB-CONTRACTOR TO WARRANTEE MATERIAL COMPATIBILITY AND PERFORMANCE FOR EACH APPLICATION.
- 7.7. PROVIDE ALUMINUM DRIP CAPS OVER DOORS AND WINDOWS AND WHERE NOTED ON PLANS. USE 6 MIL. POLYETHYLENE FLASHING AT ALL WINDOW JAMBS, HEADS, AND SILLS, AND AT ALL DOOR JAMBS, HEADS, AND SILLS.
- 7.8. INSULATION: ALL MATERIALS FS 25 MAX & SD 450/ASTM E84:
  - 7.8.1. PROVIDE 2"x24" RIGID PERIMETER INSULATION AT ALL SLAB EDGES AT CONDITIONED SPACE AREAS AT SLAB ON GRADE FOUNDATIONS, R-7.
  - 7.8.2. PROVIDE R-22+ WALL INSULATION WITH INTEGRAL VAPOR BARRIER TO ROOM SIDE AT ALL FLOORS TO UNCONDITIONED SPACE AREAS, UNLESS NOTED OTHERWISE.
  - 7.8.3. PROVIDE R-38+ INSULATION WITH INTEGRAL VAPOR BARRIER TO ROOM SIDE AT ALL CEILING AREAS.
- 7.9. PROVIDE ALUMINUM OR VINYL VENTED SOFFIT AS SHOWN ON DRAWINGS, OR AT WOOD SOFFITS AND EAVES PROVIDED 4"x16" GALVANIZED METAL VENTS WITH INSECT SCREENS AT 6"-0" O.C.
- 7.10. EXHAUST OR INTAKE VENTS SHALL NOT BE PLACED LESS THAN 15'-0" TO ANY DECK AND/OR PATIO IN ANY DIRECTION, HORIZONTALLY AND VERTICALLY.
- 7.11. PROVIDE PRIMED OR PRE-FINISHED VENTSURE® RIGID STRIP RIDGE VENTS BY OWENS CORNING (OR APPROVED EQUAL) WHERE SHOWN ON DRAWINGS, (MIN. FREE AREA OF VENT = 1/300TH OF ATTIC AREA).
- 7.12. PROVIDE EXTERIOR BUILDING FELTS:
  - 7.12.1. 30# FELT AT ALL BRICK OR STONE VENEERS.
  - 7.12.2. TYVEK (OR APPROVED EQUAL) AT ALL SIDING AREAS.
  - 7.12.3. 15# ROOFING FELT WITH A MIN. DOUBLE STARTER COURSE-LAP AND DETAIL PER CONSTRUCTION STANDARDS FOR PARTICULAR ROOFING MATERIAL.

\*TYVEK\* IS ACCEPTABLE FOR USE BEHIND BRICK MASONRY AS WELL AS ALL SIDINGS.

## 8.0 Doors, Windows, Glazing

- 8.1. EXTERIOR DOORS SHALL BE OF THE SIZES SHOWN ON DRAWINGS. BROCHURE CUTS SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL REGARDING FINISH AND STYLE. BY THE DISTRIBUTOR.
- 8.2. INTERIOR DOORS SHALL BE OF THE SIZES AND TYPES AS SHOWN ON THE DRAWINGS. THE SUB-CONTRACTOR SHALL OBTAIN OWNER APPROVAL REGARDING DOOR FINISH AND STYLE BEFORE ORDERING.
- 8.3. WINDOWS SHALL BE OF THE SIZES AND TYPES AS SHOWN ON ELEVATIONS WITH PRE-FINISHED INTERIOR PER OWNER. UNLESS NOTED OTHERWISE, SIZES AS SHOWN ARE REFLECTIVE OF ANDERSON, 200 SERIES WINDOWS (APPROVED EQUAL MAY BE USED WITH OWNERS CONSENT).
- 8.4. PROVIDE TEMPERED GLASS AS REQUIRED BY LOCAL CODES, OR WHERE GLAZING IS LOCATED LESS THAN 18" ABOVE FINISHED FLOOR IN ANY AREA, AS WELL AS AT ALL SLIDING OR FRENCH DOOR INSTALLATIONS.
- 8.5. IN ALL SLEEPING AREAS WINDOWS SHALL BE REQUIRED TO PROVIDE A MINIMUM OF 5.7 SQUARE FEET OF EGRESS AREA WITH A MINIMUM CLEAR WIDTH OF EGRESS DIMENSION OF 20" AND CLEAR HEIGHT OF EGRESS DIMENSION OF 24".
- 8.6. ALL DOOR AND WINDOW HARDWARE SHALL BE AS SPECIFIED BY OWNER. PROVIDE GRILLS WHERE SHOWN ON ELEVATIONS.
- 8.7. ALL EXTERIOR DOORS AND OPERABLE WINDOWS TO HAVE SCREENS.
- 8.8. ALL GLAZING SHALL BE A MINIMUM OF 5/8" THERMOPANE, LOW E OR AS REQUESTED BY OWNER.
- 8.9. GARAGE DOORS ARE H.D. STEEL INSULATED OVERHEAD SECTIONAL AS SHOWN. OTHER STYLES ARE ACCEPTABLE AS APPROVED BY OWNER. PROVIDE ALL HEAVY DUTY GRADE SUPPORT AND OPENING HARDWARE. PROVIDE (1) AUTOMATIC GARAGE DOOR OPENER AT EACH DOOR.

### SAFETY GLAZING NOTES:

- 8.10. SAFETY GLAZING SHALL BE PROVIDED FOR GLASS LOCATED IN THE FOLLOWING AREAS:
  - 8.11. SWINGING OR SLIDING INGRESS AND EGRESS DOORS (INCLUDING STORM DOORS)
  - 8.12. FIXED OR OPENABLE PANELS LOCATED WITHIN TWENTY-FOUR INCHES (24") OF A DOOR AND WHOSE BOTTOM PANEL IS LOCATED LESS THAN SIXTY INCHES (60") ABOVE THE FLOOR.
  - 8.13. FIXED OR OPENABLE WINDOWS OR PANELS WITH A SURFACE AREA LARGER THAN NONE (9 )SQUARE FEET, WITH A BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR AND A TOP EDGE GREATER THAN 36" ABOVE THE FLOOR.
  - 8.14. DOORS AND ENCLOSURES FOR BATHTUBS, SHOWERS, HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, OR STEAM ROOMS. THIS SHALL INCLUDE EXTERIOR WINDOWS WITHIN THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF THE WINDOWS LOCATED LESS THAN SIXTY INCHES (60") ABOVE THE DRAIN INLET.
- 8.15. EXCEPTIONS TO SAFETY GLAZING:
  - LEADED, FACETED, OR DECORATIVE GLASS PANELS
  - PANELS IN DOORS OR ADJACENT PANELS THROUGH WHICH A 3" SPHERE IS UNABLE TO PASS
  - LOUVERED WINDOWS OR JALOUSIES NO THINNER THAN THREE SIXTEENTHS INCH (3/16") AND NO LONGER THAN 48"

### EMERGENCY GLASS OPENINGS:

- 8.1. EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE. THE UNITS MUST BE OPERABLE FROM THE INSIDE TO A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. WHERE WINDOWS ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE THEY SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR.
- 8.2. AN EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A MINIMUM CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24". THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20 INCHES.
  - 8.2.1. EXCEPTION: GRADE FLOOR WINDOW MAY HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET.

## 9.0 Finishes

- 9.1. INSTALL 1/2" U.S.G. BASE SHEET ROCK SYSTEM, PROVIDE 1/2" U.S.G. "GREEN BOARD" AT ALL TUB AND SHOWER RECESSES AND 5/8" TYPE "X" FIRE RATED GYPSUM BOARD AT ALL AREAS OF THE GARAGE COMMON TO ANY CONDITIONED INTERIOR SPACE. ALL INSTALLATIONS SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATION WITH FINAL SURFACE SMOOTH AND FREE FROM WAVES, PITS, AND BUCKLES, PRIMED AND READY FOR PAINT OR OTHER FINISH. ALL PANELS AND PARTITIONS SHALL BE NAILED & GLUED PER U.S.G. RECOMMENDATIONS.
- 9.2. INTERIOR WALL, FLOOR AND CEILING FINISHES SHALL BE PAINTED AS DIRECTED BY OWNER.
- 9.3. PAINT SHALL BE SHERWIN-WILLIAMS® OR OWNER APPROVED EQUAL, APPLIED IN TWO COATS. BASE COAT MAY BE SPRAYED, SECOND COATS SHALL BE ROLLED OR BRUSHED ACCORDING TO THE NATURE OF THE WORK. ALL COLORS TO BE SELECTED BY OWNER.
- 9.4. MILLWORK SHALL BE OF TYPE AND STYLE SELECTED BY OWNER. MILLWORK SHALL BE INSTALLED WITH TIGHT JOINTS AND SET FINISHING NAILS FOR PUTTY. READY FOR PAINT OR STAIN FINISH PER OWNER.
- 9.5. VINYL TILE, SHEET VINYL, CERAMIC TILE, QUARRY TILE, MARBLE, ONYX, ETC. SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND THE TILE COUNCIL OF AMERICA. PATTERNS AND COLORS SHALL BE AS SELECTED BY OWNER. UNDERLAYMENT SHALL BE INSTALLED PER THE MANUFACTURER AS NEEDED FOR EACH TYPE PRODUCT. IN ALL CASES ALL UNDERLAYMENT SHALL BE FULLY ADHERED, GLUED AND SCREWED.
- 9.6. STAINS SHALL BE "OLYMPIC" STAIN OR OWNER APPROVED EQUAL APPLIED AS PER MANUFACTURER'S RECOMMENDATIONS. COLORS TO BE SELECTED BY OWNER.
- 9.7. CONTRACTOR SHALL CONSULT WITH OWNER TO DETERMINE FINAL FINISH FOR STAINED SURFACES, I.E. POLYURETHANE SEMI-GLOSS, HIGH GLOSS OR NATURAL.
- 9.8. ALL COUNTERTOPS TO WALL & VANITY TOPS TO WALL CONNECTIONS SHALL BE CAULKED. ALSO, TUB/SHOWER BASIN TO PLATFORM, WALL AND FLOOR CONNECTIONS, OR TILE CORNERS IN WET AREAS SHALL BE NON-STAINING OR NON-YELLOWING POLYSULPHIDE, ACRYLIC OR BUTYL OR PER INSTALLATION. COLOR PER LOCATION TO BE APPROVED BY OWNER.

## 10.0 Heating and Ventilation

11. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL FOR A COMPLETE INSTALLATION OF THE REQUIRED WORK IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND THE AUTHORITY HAVING JURISDICTION.
12. FINAL DUCT SIZE AND FURNACE/AC CAPACITY TO BE DETERMINED BY MECHANICAL CONTRACTOR AND TO COMPLY WITH LOCAL CODES AND ORDINANCES - IT IS THE INSTALLER/CONTRACTOR'S JOB TO PERFORM THE CORRECT SIZING CALCULATION FOR THE BUILDING. THE CALCULATING PROCEDURE SHALL FOLLOW ASHRAE, MANUAL J OR OTHER APPROVED STANDARD
13. COORDINATE ALL WORK SHOWN HERE WITH ARCHITECTURAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 13.1. THE HEATING SYSTEM SHALL BE DESIGNED TO OPERATE AT 72 DEGREES F. INSIDE AT 3'-0" ABOVE THE FINISHED FLOOR, WHEN -20 DEGREES F. OUTSIDE WITH A 20 MPH WIND. THE COOLING SYSTEM SHALL BE DESIGNED TO OPERATE AT 72 DEGREES F. INSIDE THROUGHOUT WHEN 94 DEGREES F. DRY BULB, 72 DEGREES F. WET BULB WITH INDOOR RELATIVE HUMIDITY @ 48%.
- 10.2. THE HEATING SUB-CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATING SYSTEM CONSISTING OF, BUT NOT NECESSARILY LIMITED TO: GAS FIRED FORCED AIR FURNACE, FANS, DUCTS, SETBACK THERMOSTATS, AIR CONDITIONING, ETC. THE HEATING SUB-CONTRACTOR SHALL ALSO PROVIDE LINE DRAWINGS, BROCHURE CUTS, HEAT LOSS/HEAT GAIN INFORMATION, AND ALL OTHER PERFORMANCE DATA AS REQUESTED BY THE LOCAL BUILDING AUTHORITIES & IN ACCORDANCE WITH MANUAL "J" METHODOLOGIES.
- 10.3. DRYER EXHAUST SHALL BE DUCTED TO EXTERIOR WITH SUITABLE CAP AND BACKDRAFT DAMPER AND SCREENS.
- 10.4. BATHROOM AND POWDER ROOM EXHAUST FANS SHALL BE AS PER MECHANICAL PLANS AND SIZED IN ACCORDANCE WITH ASHRAE GUIDE, DUCTED DIRECTLY TO THE OUTSIDE BY AN APPROVED METHOD. ALL SYSTEMS SHALL BE MECHANICALLY ANCHORED AND A VENT TRAP SHALL BE INSTALLED.
- 10.5. COMBUSTION AIR INTAKES SHALL BE INSTALLED FOR FURNACE AND WATER HEATER IN ACCORDANCE WITH NFPA 54, D.O. FIREPLACE.
- 10.6. CLASS "B" VENTS TO HAVE MINIMUM 1" CLEARANCE TO ALL COMBUSTIBLES AND BE FIRESTOPPED AT ALL FLOORS AND CEILINGS.
- 10.7. ALL SUPPLY DUCTS IN ATTICS AND UNHEATED SPACES SHALL BE INSULATED W/3/4" THICK FIBERGLASS INSULATION OR APPROVED EQUAL TO HAVE A MIN R-5
- 10.8. EQUIPMENT EXPOSED TO NATURAL ELEMENTS SHALL BE WELDED OR SOLDERED AND SHALL RECEIVE ONE COAT OF PRIMER AND TWO COATS OF PAINT.
- 10.9. REGISTERS, DIFFUSERS, GRILLS, ETC. SHALL BE INSTALLED SO AS TO MATCH THE EXISTING EQUIPMENT.
- 10.10. CONTRACTOR SHALL USE CAUTION IN REMOVING AND RELOCATING EQUIPMENT TO REMAIN OR BE RELOCATED. DAMAGE TO SUCH EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 10.11. CONTROLS FOR THE COMPLETE INSTALLATION OF THE HVAC EQUIPMENT SHALL BE SUPPLIED BY THE HVAC CONTRACTOR AND CONNECTED BY THE ELECTRICAL CONTRACTOR.
- 10.12. ALL SHEET METAL DUCT WORK SHALL BE GALVANIZED AND CONSTRUCTED IN ACCORDANCE WITH "SMACNA" LOW PRESSURE STANDARDS.
- 10.13. HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE TESTING AND BALANCE OF THE HVAC EQUIPMENT.
- 10.14. DUCT CONNECTIONS TO DIFFUSERS MAY BE MADE WITH A FLEXIBLE DUCT SUCH THAT THE LENGTH OF THE FLEX DUCT DOES NOT EXCEED 6'-0".
- 10.15. CONTRACTOR SHALL FURNISH AND INSTALL ALL ROOF CURBS APPLICABLE TO EQUIPMENT SUPPLIED BY THE CONTRACTOR. ROOF CURBS SHALL BE INSTALLED SO THAT EQUIPMENT IS LEVEL AND THAT THE CURB FOLLOWS THE CONTOUR OF THE ROOF.
- 10.16. NOISE GENERATED BY ANY HVAC EQUIPMENT SHALL NOT EXCEED 55 dB AT LOT LINE.
- 10.17. INSTALL ANY DUCT WORK AS CLOSE AS POSSIBLE TO STRUCTURAL FRAME.
- 10.18. ALL HVAC EQUIPMENT SHALL BE LEVEL AS TO ASSEURE PROPER WORKING ORDER.
- 10.19. CONTRACTOR SHALL INSTALL ANY REQUIRED REFRIGERANT LINES IN ACCORDANCE WITH JURISDICTIONAL CODE REQUIREMENTS - TYPE "K" COPPER.
- 10.20. CONTRACTOR SHALL INSURE THAT FLUES OF EXISTING AND/OR NEW CONSTRUCTION EXTEND A MINIMUM OF 3'-0" ABOVE THE ROOF LINE AND THAT ALL FRESH-AIR INTAKES ARE INSTALLED A MINIMUM OF 15'-0" AWAY FROM ANY EXHAUST OUTLET, SOIL STACKS AND 6" AWAY TO BE MINIMUM 10'-0" ABOVE GRADE.
- 10.21. CONTRACTOR SHALL MAKE SURE THAT ALL EXPANSION VALVE DEVICES AND CONNECTIONS ARE REMOVED FROM THE AIRSTREAM ON NEW AND EXISTING EQUIPMENT.
- 10.22. NATURAL GAS PIPING SHALL BE SCHEDULE 40 STANDARD WEIGHT BLACK STEEL PIPE WITH STANDARD WEIGHT BLACK THREADED MALLEABLE IRON FITTINGS 2" OR SMALLER AND STANDARD WELDED FITTINGS 2 1/2" OR LARGER.
- 10.23. ALL EQUIPMENT CONNECTED TO NATURAL GAS PIPING SHALL BE HARD PIPED CONNECTIONS.
- 10.24. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTIONS TO ALL GAS BURNING APPLIANCES AND SHALL IN CONJUNCTION WITH THE HVAC CONTRACTOR MAKE ALL REQUIRED TESTS AS TO ASSURE A PROPER AND SAFE INSTALLATION.
- 10.25. SHEET METAL DUCTS SHALL INCORPORATE LOCK TYPE DAMPERS FOR BALANCING.
- 10.26. THE HVAC AND PLUMBING CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITIES FOR INCOMING SERVICE OF GAS, WATER, AND SEWAGE.
- 10.27. HEAT SUPPLY DUCTS ARE NOT PERMITTED IN EXTERIOR WALLS OR HOUSE TO GARAGE COMMON WALLS.
- 10.28. CLEARANCES FOR FORCED AIR FURNACES SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.
- 10.29. IF OUTSIDE AIR INTAKE FOR FURNACE, TWO PERMANENT OPENINGS SHALL BE PROVIDED - ONE HIGH AND ONE LOW. SIZE OF OPENINGS SHALL CONFORM TO ACCEPTED CODES IN THE AUTHORITY HAVING JURISDICTION.
- 10.30. FLOOR REGISTERS SHALL BE NOT MORE THAN 9" FROM WALL.
- 10.31. NOISE GENERATED BY ANY HVAC EQUIPMENT SHALL NOT EXCEED 35 db AT ANY INTERIOR LIVING OR SLEEPING ROOMS
- 10.32. LOCATE AND ADJUST THERMOSTATS PER PLAN AT 54" MAX ABFF

## 11.0 Plumbing

- 11.1. THE PLUMBING SUB-CONTRACTOR SHALL INCLUDE ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION OF ALL WATER AND SEWERAGE SYSTEMS.
- 11.2. ALL SYSTEMS AND EQUIPMENT SHALL CONFORM TO APPLICABLE LOCAL, STATE AND NATIONAL CODES. EXTERIOR SEWERS SHALL BE CAST IRON.
- 11.3. UNDERGROUND WATER PIPING SHALL BE TYPE "K" COPPER WITH FLARED FITTINGS. INTERIOR SUSPENDED WATER AND VENT PIPING SHALL BE SCHEDULE 40 PVC DMW WITH SOLVENT WELDED JOINTS, CAST IRON WITH CAULKED JOINTS, OR SCHEDULE 40 GALVANIZED PIPING WITH CAST IRON FITTINGS.
- 11.4. INTERIOR, AND TO THE POINT OF STABLE EARTH APPROXIMATELY 5' OUTSIDE OF THE BUILDING LINE, BURIED WASTE AND VENT PIPING SHALL BE SERVICE WEIGHT CAST IRON MINIMUM 4" DIA.
- 11.5. INTERIOR WATER PIPING SHALL BE TYPE "L" COPPER.
- 11.6. PROVIDE FREEZE PROOF PROTECTION ON DRAWINGS.
- 11.7. PROVIDE GREY BOX WITH SILL FAUCETS AND ONE STANDPIPE FOR CLOTHES WASHER AND 2" DRAIN.
- 11.8. PROVIDE A 12" AIR CHAMBER AT EVERY FIXTURE AND A 24" AIR CHAMBER AT TOP OF RESERS.
- 11.9. PROVIDE CHROME PLATED FIXTURE SUPPLIES AND STOPS FOR EVERY FIXTURE CONNECTION. PROVIDE DECORATIVE CHROME WALL PLATES AT ALL WALL SHOWER HEADS AND TOILET WALL OPENINGS.
- 11.10. PROVIDE CLEAN-OUTS IN WASTE AND SOIL FOR EACH CHANGE OR DIRECTION GREATER THAN 45 DEGREES AND AT TOP OF EACH STACK.
- 11.11. ALL WATER PIPES TO FIXTURES SHALL HAVE APPROVED VALVE.
- 11.12. PROVIDE A 1/4" REMOTE READ WATER METER AS REQUIRED BY THE LOCAL WATER DEPARTMENT.
- 11.13. PROVIDE AUXILIARY METAL PAN AND DRAIN FOR THE FURNACE INSTALLATION WHERE REQUIRED.
- 11.14. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTIONS TO ALL GAS BURNING APPLIANCES AND SHALL IN CONJUNCTION WITH THE HVAC CONTRACTOR MAKE ALL REQUIRED TESTS AS TO ASSURE A PROPER AND SAFE INSTALLATION.
- 11.15. PLUMBING CONTRACTOR AND THE HVAC CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITIES FOR INCOMING SERVICE OF GAS, WATER, AND SEWAGE.

## 12.0 Electrical

- 12.1. THE ELECTRICAL SUB-CONTRACTOR SHALL INCLUDE ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT FOR THE INSTALLATION OF A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.
- 12.2. THE ELECTRICAL SUB-CONTRACTOR SHALL INSTALL ALL WORK IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL, AND NATIONAL CODES AND ORDINANCES.
- 12.3. THE ELECTRICAL SUB-CONTRACTOR SHALL PROVIDE COPPER WIRE THROUGHOUT. NO. 1 AWG MINIMUM LOW VOLTAGE SIGNAL SYSTEM SHALL BE A MINIMUM 2 CONDUCTOR NO. 18 CONDUIT WHERE REQUIRED BY LOCAL CODE.
- 12.4. THE ELECTRICAL SUB-CONTRACTOR SHALL PROVIDE SERVICE AS PER ELECTRICAL PLANS.
- 12.5. DISTRIBUTION PANELS PER PLANS. PROVIDE BREAKS AS REQUIRED & MINIMUM 10% OF TOTAL PANEL OPEN FOR FUTURE EXPANSION.
- 12.6. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ONE (MINIMUM) SWITCHED FIXTURE WITH CAGE IN ALL ATTICS ABOVE THE ACCESS PANEL.
- 12.7. PROVIDE AN IN-SIGHT SWITCHED FURNACE DISCONNECT.
- 12.8. CONTROLS FOR THE COMPLETE INSTALLATION OF THE HVAC EQUIPMENT SHALL BE SUPPLIED BY THE HVAC CONTRACTOR AND CONNECTED BY THE ELECTRICAL CONTRACTOR.
- 12.9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AS REQUIRED BY CODE FOR FIXED APPLIANCES AND AUTHORITY AT THE LOCAL AUTHORITIES AT THE KITCHEN AND ALL BATHROOMS. AT EVERY EXTERIOR DOOR PROVIDE ONE WATER PROOF EXTERIOR GROUND FAULT DUPLEX OUTLET.
- 12.10. SMOKE AND HEAT DETECTORS SHALL BE ON AN APPROVED ELECTRICALLY POWERED SEPARATE CIRCUIT, AND HAVE BATTERY BACKUP, WITH WARNING LIGHT AND CIRCUIT INTERRUPTION SIGNAL.
- 12.11. CLOSET LIGHT SHALL BE U.L. APPROVED FLUORESCENT SURFACE FIXTURE OR OTHER ENCLOSED U.L. APPROVED FIXTURE PER OWNER.
- 12.12. ALL RECESSED INCADESCENT TO BE "JUNO" OR EQUAL AND STYLE AND RING COLOR TO BE APPROVED BY OWNER. 1/4" REMOTE READ WATER METER AND FIRE HAZARD.
- 12.13. WALL PLATES, OUTLET COVERS, DUPLEX OUTLETS AND SWITCHES SHALL BE WHITE DECO OR AS SELECTED BY OWNER. THIS SHALL INCLUDE RHEOSTATS OR TOUCH PLATES AS WELL AS FLOOR OUTLETS.
- 12.14. KITCHEN CONVENIENCE OUTLETS TO BE SPACED AT 24" O.C. @ 42" ABOVE THE FLOOR, AND SHALL BE ON A SEPARATE 20A CIRCUIT W/(T" TYPE) GFT RECEPTACLES.
- 12.15. CEILING LIGHT FIXTURES AND SWITCHES WITHIN BATHROOMS SHALL BE GF PROTECTED IN ALL INSTANCES, AND BEAR THE APPROPRIATE DESIGNATION FOR THE FIXTURES INTENDED USE, I.E. WATER PROOF, EXTERIOR ETC. ETC.
- 12.16. ALL CONVENIENCE OUTLETS TO BE INSTALLED @ 12"-15" ABFF & SWITCHES @ 48" ABFF.
- 12.17. PROVIDE ARC FAULT CIRCUIT INTERRUPTERS IN ALL BEDROOMS.



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### PROJECT NAME

RECINOS FAMILY  
ADDITION & REMODEL

### PROJECT ADDRESS

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### SHEET TITLE

## PROJECT SPECIFICATIONS

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3

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### REVISIONS

1

2

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### SHEET NUMBER

# S.1