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S.C. SUPREME COURT

THE STATE OF SOUTH CAROLINA
In The Supreme Court

APPEAL FROM CHARLESTON COUNTY
Jennifer B. McCoy, Circuit Court Judge

Civil Action No. 2015-CP-10-00955

Appellate Case No. 2023-001422

Palmetto Pointe At Peas Island Condominium Property Owners Association, Inc. And Jack Love, Individually, and on behalf of all others similarly situated, ...Plaintiffs,

vs.

Island Pointe, LLC; Complete Building Corporation; Tri-County Roofing, Inc.; Creekside, Inc; American Residential Services, LLC d/b/a ARS/Rescue Rooter Charleston; Andersen Windows, Inc; Atlantic Building Construction Services, Inc., n/k/a Atlantic Construction Services, Inc.; Builder Services Group, Inc. d/b/a Gale Contractor Services; Novus Architects, Inc., f/k/a SGM Architects, Inc.; Tallent and Sons, Inc; W C Services, Inc.; CRG Engineering, Inc; CertainTeed Corporation; Kelly Flooring Products, Inc, d/b/a Carpet Baggcrs; Cornerstone Construction and Mark Malloy d/b/a Cornerstone Construction; Miracle Siding, LLC and Wilson Lucas Sales d/b/a Miracle Siding, LLC; Mark Palpoint a/k/a Micah Palpoint; Elroy Alonzo Vasquez; Chris a/k/a John Doe 61; Alderman Construction; Stanley's Vinyl Fence Designs; Cohen's Drywall Company, Inc; Mosely Concrete; Hand A Framing Construction, LLC a/k/a H&A Framing Construction, LLC and d/b/a H and A Framing, LLC, H&A Construction, and Hand A Construction; JMC Construction, Inc; JMC Construction, LLC; John Doe 1—15, ... Defendants,

of which Palmetto Pointe At Peas Island Condominium Property Owners Association, Inc. and Jack Love, individually, and on behalf of all others similarly situated are the Respondents,

and

Tri-County Roofing, Inc.....Appellant.

APPENDIX
Volume VI

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SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Interior standing and running trim.
2. Interior frames and jambs.
3. Stairwork and rails.

B. Related Sections include the following:

1. Division 12 Section "Residential Casework" for residential cabinets.

1.3 DEFINITIONS

A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

B. Rough carriages for stairs are a part of interior architectural woodwork. Platform framing, headers, partition framing, and other rough framing associated with stairwork are specified in Division 6 Section "Rough Carpentry."

1.4 SUBMITTALS

A. Product Data: For each type of product indicated, including handrail brackets and finishing materials and processes.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show details full size.
2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.

C. Samples for Verification:

1. Lumber products with shop-applied opaque finish, 50 sq. in. for lumber, for each finish system and color.

2. Exposed hardware and accessories, one unit for each type and finish.

D. Product Certificates: For each type of product, signed by product manufacturer.

E. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

F. Qualification Data: For fabricator.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

B. Installer Qualifications: Fabricator of products.

C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.8 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

B. Hardware Coordination: Distribute copies of approved hardware schedule specified in Division 8 Section "Door Hardware" to fabricator of architectural woodwork; coordinate Shop Drawings and fabrication with hardware requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

B. Wood Species for Opaque Finish: White pine or any closed-grain hardwood.

C. Wood Products: Comply with the following:

1. Hardboard: AHA A135.4.
2. Medium-Density Fiberboard: ANSI A208.2, Grade MD.
3. Particleboard: ANSI A208.1, Grade M-2.
4. Softwood Plywood: DOC PS 1.

2.2 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

2.3 FABRICATION, GENERAL

A. Interior Woodwork Grade: Unless otherwise indicated, provide Custom-grade interior woodwork complying with referenced quality standard.

B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch Thick or Less: 1/16 inch.
2. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.

D. Complete fabrication, including assembly, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for

shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

1. Seal edges of openings in countertops with a coat of varnish.

F. Install glass to comply with applicable requirements in Division 8 Section "Glazing" and in GANA's "Glazing Manual." For glass in wood frames, secure glass with removable stops.

2.4 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

A. Grade: Custom.

B. Wood Base and Crown Material: Medium-density fiberboard.

1. Base: 7-1/2-inch high speed base.
2. Crown Molding: 4-5/8-inch high, 2-piece with BLO3FJ shingle mold base.

C. Door and Window Trim Material: 3-1/2-inch wide medium density fiberboard, or Buyer's Selection upgrade.

D. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.

E. Profiles: As indicated on Drawings.

2.5 INTERIOR FRAMES AND JAMBS FOR OPAQUE FINISH

A. Grade: Custom.

B. Wood Species: White pine or any closed-grain hardwood.

2.6 STAIRWORK AND RAILS

A. Grade: Custom.

B. Type: Straight run; closed riser; closed stringer.

C. Wood Species and Cut for Transparent Finish: Red Oak, plain sawn, or as otherwise selected by Architect.

D. Wood Species for Opaque Finish: White pine or any closed-grain hardwood.

E. Finishes for Stair Parts: As follows:

1. Treads: Transparent.
2. Risers: Opaque.
3. Stringers: Opaque.
4. Balusters: Transparent.
5. Handrails: Transparent.
6. Scotia, Cove, and Other Moldings: Opaque.

F. Prefabricated Wood Stairs (Builder's Option): Subject to compliance with requirements, provide interior stairwork by the following:

1. Southern Staircase, 6025 Shiloh Road, Suite E, Alpharetta, GA 30005; (800) 874-8408.

2.7 SHOP PRIMING

A. Shop Priming: Shop apply the prime coat for items specified to be field finished with opaque finish. Refer to Division 9 painting Sections for material and application requirements.

B. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of plastic-laminate-clad woodwork do not require backpriming when surfaced with plastic laminate, backing paper, or thermoset decorative panels.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.

B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.

D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.

F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 incheslong, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.
2. Install wall railings on indicated metal brackets securely fastened to wall framing.
3. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

G. Stairs: Securely anchor carriages to supporting substrates. Install stairs with treads and risers no more than 1/8 inch from indicated position.

H. Railings:

1. General: Install rails with no more than 1/8 inch in 96-inch variation from a straight line.
2. Stair Rails: Glue and dowel or pin balusters to treads and railings, and railings to newel posts.
3. Wall Rails: Support rails on indicated metal brackets securely fastened to wall framing.

I. Refer to Division 9 Sections for final finishing of installed architectural woodwork.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate, and adjust hardware.

C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06402

SECTION 07180 - TRAFFIC COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes traffic coatings for the following applications:

1. Pedestrian traffic at screened porches at rear deck and second floor porches.

1.3 SUBMITTALS

A. Product Data: For each product indicated.

B. Shop Drawings: Show extent of each traffic coating. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other termination conditions.

C. Samples for Verification: For each type of traffic coating required, prepared on rigid backing and of same thickness and material indicated for the Work.

D. Material Certificates: Signed by manufacturer certifying that traffic coatings comply with requirements, based on comprehensive testing of current product formulations within the last three years.

E. Maintenance Data: To include in maintenance manuals specified in Division 1. Identify substrates and types of traffic coatings applied. Include recommendations for periodic inspections, cleaning, care, maintenance, and repair of traffic coatings.

1.4 QUALITY ASSURANCE

A. Installer (Applicator) Qualifications: An experienced applicator who has specialized in installing work similar in material, design, and extent to that indicated for this Project and who is certified by manufacturer.

B. Source Limitations: Use traffic coatings of a single manufacturer.

C. Fire-Test-Response Characteristics: For traffic coatings as follows:

1. Fire-response testing was performed by UL, ITS, or another independent testing and inspecting agency that is acceptable to authorities having jurisdiction and that performs testing and follow-up services.

2. Provide materials identical to those of traffic coatings tested according to ASTM E 108 for deck type and slopes indicated and that comply with requirements for roof-covering Class indicated.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels showing the following information:

1. Manufacturer's brand name.
2. Type of material.
3. Directions for storage.
4. Date of manufacture and shelf life.
5. Lot or batch number.
6. Mixing and application instructions.
7. Color.

B. Store materials in a clean, dry location protected from exposure to direct sunlight. In storage areas, maintain environmental conditions within range recommended in writing by manufacturer.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F above dew point.

1. Do not apply traffic coatings in snow, rain, fog, or mist, or when such weather conditions are imminent during the application and curing period. Apply only when frost-free conditions occur throughout the depth of the substrate.

1.7 WARRANTY

A. General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Special Warranty: Written warranty, signed by traffic coating manufacturer agreeing to repair or replace traffic coatings that do not comply with requirements or that deteriorate during the specified warranty period. Warranty does not include deterioration or failure of traffic coating due to unusual weather phenomena, failure of prepared and treated substrate, formation of new substrate cracks exceeding 1/16 inch in width, fire, vandalism, or abuse by snowplow, maintenance equipment, and truck traffic.

1. Deterioration of traffic coatings includes, but is not limited to, the following:

a. Adhesive or cohesive failures.

b. Abrasion or tearing failures.
c. Surface crazing or spalling.
d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.

C. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Traffic Coating: Three-stage, fabric reinforced, flexible coating system, liquid applied in successive stages to form on continuous, seamless watertight membrane. Total thickness of cured coating system: 40 mils.

B. Material Compatibility: Provide primers; base, intermediate, and top coats; and miscellaneous materials that are compatible with one another and with substrate under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience.

2.2 TRAFFIC COATING

A. Manufacturers: Provide the following or Architect approved equal:

1. Hydro-Stop, Inc. (Basis of Design).

B. Primer: Manufacturer's standard factory-formulated primer recommended for substrate and conditions indicated.

C. Base and Saturation Coats: Highly flexible water-based acrylic co-polymer coating.

D. Top Coat: UV-resistant blend of highly flexible water-based acrylic co-polymer resin coating.

1. Product: Sealoflex, Inc.; "Sealoflex Finish Coat" (Basis of Design).
2. Color: As selected by Architect from manufacturer's full range.

E. Cured Membrane Characteristics: As follows:

1. Dimensional Stability: <0.44% change; ASTM D1204.
2. Elongation: 53 percent; ASTM D 412.
3. Tensile Strength: 3109 psi; ASTM D 638.
4. Weathering: No effects on physical properties after 3600 hours; ASTM G 26.
5. Moisture Vapor: 3 grain/hr./sq.ft.; ASTM E 96.
6. Wind Uplift: Meets Class I-200; FM 4470.
7. Fire-Test-Response Characteristics: Class A roof covering per ASTM E 108.

2.3 MISCELLANEOUS MATERIALS

A. Joint Sealants: Single component urethane sealant recommended in writing by manufacturer for substrate and joint conditions indicated and for compatibility with traffic coatings; complying

with ASTM C 920, Type M, Class 25, Grade NS for sloping and vertical applications or Grade P for deck applications, and Use T where subject to traffic or Use NT elsewhere.

B. Metal Drip Edge: Metallic-coated aluminum-zinc alloy-coated steel (Galvalume) with top and bottom of horizontal surfaces pre-primed with Sealoflex Metal Etch Primer.

C. Traffic Topping: Manufacturer's recommended traffic topping; "Hydro-Stop Traffic Coat".

D. Adhesive: Manufacturer's recommended contact adhesive.

E. Reinforcing Fabric: Manufacturer's recommended knitted polyester, non-woven, stitch bonded, heat set fabric with the following characteristics:

1. Weight: 3 oz./sq.yd.
2. Tensile Strength: 57.1 psi; ASTM D 1682.
3. Elongation: 61.65 percent; ASTM D 1682.
4. Mullein Burst: 176.8 lbs.; ASTM D 3786.
5. Trapezoid: 16.1 lbs.; ASTM D 117.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Applicator present, for compliance with requirements and for other conditions affecting performance of traffic coatings.

1. For the record, prepare written report, endorsed by Applicator, listing conditions detrimental to performance.
2. Verify compatibility with and suitability of substrates.
3. Begin coating application only after minimum concrete curing and drying period recommended by traffic coating manufacturer has passed, after unsatisfactory conditions have been corrected, and after surfaces are dry.
4. Verify that substrates are visibly dry and free of moisture. Test for moisture by method recommended in writing by manufacturer.
5. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Clean and prepare substrates according to manufacturer's written recommendations to produce clean, dust-free, dry substrate for traffic coating application.

B. Mask adjoining surfaces not receiving traffic coatings and deck substrate penetrations to prevent spillage, leaking, and migration of coatings.

C. Apply 6-inch wide strip of base coat, fabric, and saturation coat centrally over junctions between horizontal and vertical surfaces as flashing. Apply concrete primer to entire deck surface at a rate of 250 sq.ft. per gal.

3.3 TERMINATIONS AND PENETRATIONS

A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at expansion joints, drains, and sleeves according to manufacturer's written recommendations.

B. Provide sealant cants at penetrations and at reinforced and nonreinforced deck-to-wall butt joints.

C. Install metal drip edge at outside perimeters of deck adhering into position using two 1/8-inch diameter beads of polyurethane sealant.

3.4 JOINT AND CRACK TREATMENT

A. Prepare, treat, rout, and fill joints and cracks in substrates according to manufacturer's written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to ASTM D 4258.

3.5 TRAFFIC COATING APPLICATION

A. Apply traffic coating material according to manufacturer's written recommendations.

1. Start traffic coating application in presence of manufacturer's technical representative.
2. Verify that wet film thickness of each component coat complies with requirements every 100 SF.
3. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated and omit aggregate on vertical surfaces.

B. Apply one coat of base coat to entire surface.

C. Embed fabric directly into base coat while still wet. Overlap adjacent runs of fabric 4 inches minimum. Immediately apply saturation coat and back roll to cover and penetrate fabric. Allow to dry.

1. Apply foundation and saturation coats at a total combined rate of 40sq.ft./gal. minimum.

D. Apply 2 coats of finish coating at a combined rate of 70 sq.ft./gal. Over entire area. Apply in two coats. While second coat is still wet, broadcast sand over entire coated area and allow to dry. Remove excess sand when dry.

E. Apply two coats of traffic coating at a rate of 125 sq.ft./gal. Per coat. Color to be selected by Architect.

3.6 FIELD QUALITY CONTROL

A. Hose Test: Perform hose test to check for leaks.

B. Testing: Owner may engage a qualified testing agency to perform field quality-control testing.

1. Samples of material delivered to Project site shall be taken, identified, sealed, and certified in presence of Owner and Contractor.

2. Testing agency shall perform tests for characteristics specified, using applicable referenced testing procedures or, if not referenced, using tests cited in manufacturer's product data.
3. Testing agency shall verify thickness of coatings during traffic coating application.

C. If test results show traffic coating materials do not comply with requirements, remove noncomplying materials, prepare surfaces, and reapply traffic coatings.

D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.7 CURING AND PROTECTING

A. Cure traffic coatings according to manufacturer's written recommendations. Prevent contamination and damage during application and curing stages.

B. Protect traffic coatings from damage and wear during remainder of construction period.

END OF SECTION 07180

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Concealed building insulation.

B. Related Sections include the following:

1. Division 9 Section "Gypsum Board Assemblies" for sound attenuation insulation.

1.3 DEFINITIONS

A. Mineral-Fiber Insulation: Insulation composed of rock-wool fibers, slag-wool fibers, or glass fibers; produced in boards and blanket with latter formed into batts (flat-cut lengths) or rolls.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: Full-size units for each type of exposed insulation indicated.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for insulation products.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.

B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Surface-Burning Characteristics: ASTM E 84.
2. Fire-Resistance Ratings: ASTM E 119.
3. Combustion Characteristics: ASTM E 136.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect plastic insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 - PRODUCTS

2.1 GLASS-FIBER INSULATION

A. Manufacturers:

1. CertainTeed Corporation.
2. Guardian Fiberglass, Inc.
3. Johns Manville.
4. Knauf Fiber Glass.
5. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics. R-value of R-13 for walls, R-19 for floors and R-30 for ceilings, unless otherwise indicated on Drawings.

C. Faced, Glass-Fiber Blanket Insulation: ASTM C 665, Type III (blankets with kraft vapor-retarder membrane on one face). R-value of R-13 for walls, R-19 for floors and R-30 for ceilings, unless otherwise indicated on Drawings.

D. Glass-Fiber Loose-Fill Insulation: ASTM C 764, Type I for pneumatic application or Type II for poured application; with maximum flame-spread and smoke-developed indexes of 5. R-value of R-30 for ceilings, unless otherwise indicated on Drawings.

2.2 AUXILIARY INSULATING MATERIALS

A. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by insulation manufacturers for sealing joints and penetrations in vapor-retarder facings.

B. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide cross ventilation between insulated attic spaces and vented eaves, including stairs and dormer roof areas.

C. Insulation Clips: Galvanized steel clips approved by manufacturer of insulation for holding insulation in place.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.

C. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Seal joints between foam-plastic insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

C. Set vapor-retarder-faced units with vapor retarder to warm side of construction, unless otherwise indicated.

1. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.

D. Install mineral-fiber insulation in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch clearance of insulation around recessed lighting fixtures.
4. Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
5. For wood-framed construction, install mineral-fiber blankets according to ASTM C 1320 and as follows:

a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

E. Place loose-fill insulation into spaces indicated, either by pouring or by machine blowing, to comply with ASTM C 1015. Level horizontal applications to uniform thickness as indicated, lightly settle to uniform density, but do not compact excessively.

3.5 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07210

SECTION 07261 – WEATHER RESISTANT BARRIERS

PART 1 - GENERAL

.1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Weather-resistant barrier.
2. Barrier flashing.
3. Window sill flashing.

B. Related Sections include the following:

1. Division 6 Section "Rough Carpentry" for installation of plywood sheathing over wall framing.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

1. Building Wrap: For air/moisture-infiltration protection, include data substantiating compliance with building code in effect for Project.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Installer with successful experience in the installation of air barrier/secondary weather resistant barriers.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, or other causes. Stack sheathing flat on leveled supports off the ground, under cover, and fully protected from weather.

PART 2 - PRODUCTS

2.1 WEATHER-RESISTANT BARRIER

A. Building Wrap: ASTM E 1677, Type I air retarder; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; and UV stabilized.

1. Products: Subject to compliance with requirements, provide the following:
   a. DuPont; Tyvek HomeWrap.
2. Permeance: Not less than 152 g through 1 sq. m of surface in 24 hours per ASTM E 96, Desiccant Method (Procedure A).
3. Material: Manufacturer's standard.

2.2 ACCESSORY MATERIALS

A. Fasteners: **DuPont™ Tyvek® Wrap Caps**, DuPont Weatherization Systems. Nails with large heads or plastic washers. Wide staples with a 1.0 inch minimum crown may be used if applied on wood sheathing.

B. Window Sill Flashing: Self-adhering, elasticized polyethylene tape, minimum 70 mils thick, designed to provide flexible sill protection.

1. Product: "Tyvek FlexWrap" by DuPont or equal.
2. Primer: Liquid primer recommended for substrate by manufacturer of sheet flashing material.

C. Barrier Flashing: Composite underlayment product consisting of 32-mil-thick pliable and highly adhesive rubberized asphalt compound bonded completely and integrally to 8-mil-thick, high-density, cross-laminated polyethylene film to produce an overall thickness of 40 mils.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. "Bituthene Ice & Water Shield" or "Vycor," W.R. Grace & Co.
   b. "Polyguard Deck Guard," Polyguard Products, Inc.
   c. "Celo-Guard," Celotex Corporation.
   d. "WinterGuard," CertainTeed, Inc.
2. Primer: Liquid primer recommended for substrate by manufacturer of sheet flashing material.

PART 3 - EXECUTION

3.1 WEATHER-RESISTANT BARRIER INSTALLATION

A. Install Air Barrier over exterior side of exteriror wall sheathing.

1. Install Air Barrier after sheathing is installed and before windows and doors are installed. Install lower level barrier prior to upper layers to ensure proper shingling of layers.
2. Overlap Air Barrier at corners of building by a minimum of 12 inches.

3. Overlap Air Barrier vertical seams by a minimum of 6 inches.
4. Ensure barrier is plum and level with foundation, and unroll extending Air Barrier over window and door openings.
5. Attach Air Barrier to wood, insulated sheathing board or exterior gypsum with plastic cap nails every 12" to 18" on vertical stud line with wood stud framing, and screws with washers to metal stud framing. When attaching to wood sheathing, a minimum 1.0 inch crown staple may be used. When attaching to masonry, use adhesive recommended by manufacturer.
6. Prepare window and door rough openings as follows:
    a. Prepare each window rough opening by cutting a modified "I" pattern in the Air Barrier.
        1. Horizontally cut Air Barrier along bottom of header.
        2. Vertically cut Air Barrier down the center of window openings from the top of the window opening down to 2/3 of the way to the bottom of the window openings.
        3. Diagonally cut Air Barrier from the bottom of the vertical cut to the left and right corners of opening.
        4. Fold side and bottom flaps into window opening and fasten every 6 inches. Trim off excess.
    b. Prepare each rough door opening by cutting a standard "I" pattern in the Air Barrier.
        1. Horizontally cut Air Barrier along bottom of door frame header and along top of sill.
        2. Vertically cut Air Barrier down the center of door openings from the top of the door opening (header) down to the bottom of the door opening (sill).
        3. Fold side flaps inside around door openings and fasten every 6 inches. Trim off excess.
7. Tape all horizontal and vertical seam of Air Barrier with DuPont™ Tyvek® Tape.
8. Seal all tears and cuts in Air Barrier with DuPont™ Tyvek® Tape.

B. Barrier Flashing Installation: Where indicated, apply barrier flashing material over sheathing. Prime substrate in accordance with manufacturer's instructions. Install in weatherlap pattern, lapping edges minimum of 4 inches and ends minimum of 6 inches over the preceding sheets. Roll membrane to adhere to substrate. Seal all tears or punctures with tape.

1. Apply barrier flashing at all openings. Where building wrap and barrier flashing are contiguous, lap uppermost material over lower material as recommended by manufacturer but not less than 2 inches.
2. Cut back building wrap 1/2 inch on each side of break in supporting members at expansion and control joint locations. Apply 6-inch wide barrier flashing strips centered over joints; lap edge of building wrap over barrier flashing.

END OF SECTION 07261

SECTION 07311 - ASPHALT SHINGLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Asphalt shingles.
2. Felt underlayment.
3. Self-adhering sheet underlayment.
4. Ridge vents.

B. Related Sections include the following:

1. Division 9 Section "Gypsum Board Assemblies" for exterior gypsum soffits and soffit vents.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated, including details of construction relative to materials, dimensions of individual components, profiles, textures and colors.

B. Samples for Initial Selection: For each type of asphalt shingle and ridge vent, in the form of manufacturer's sample finishes showing the full range of colors and profiles available.

1. Include similar Samples of trim and accessories involving color selection.

C. Samples for Verification: For the following products, of sizes indicated, to verify color selected.

1. Asphalt Shingle: Full-size asphalt shingle strip.
2. Ridge and Hip Cap Shingles: Full-size ridge and hip cap asphalt shingle.
3. Ridge Vent: 12-inch- long Sample.
4. Exposed Valley Lining: 12 inches square.
5. Self-Adhering Underlayment: 12 inches square.

D. Qualification Data: For Installer, including certificate signed by asphalt shingle manufacturer stating that Installer is approved, authorized, or licensed to install roofing system indicated.

E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency or by manufacturer and witnessed by a qualified testing agency, for asphalt shingles.

F. Research/Evaluation Reports: For asphalt shingles.

G. Maintenance Data: For asphalt shingles to include in maintenance manuals.

H. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual that is approved, authorized, or licensed by asphalt shingle roofing system manufacturer to install roofing system indicated.

B. Source Limitations: Obtain ridge and hip cap shingles through one source from a single asphalt shingle manufacturer.

C. Fire-Test-Response Characteristics: Provide asphalt shingle and related roofing materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790, for application and roof slopes indicated.

D. Wind-Resistance-Test Characteristics: Where wind-resistant asphalt shingles are indicated, provide products identical to those tested according to ASTM D3161 or UL 997 and passed. Identify each bundle of asphalt shingles with appropriate markings of applicable testing and inspecting agency.

E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store roofing materials in a dry, well-ventilated, weathertight location according to asphalt shingle manufacturer's written instructions. Store underlayment rolls on end on pallets or other raised surfaces. Do not double-stack rolls.

1. Handle, store, and place roofing materials in a manner to avoid significant or permanent damage to roof deck or structural supporting members.

B. Protect unused underlayment from weather, sunlight, and moisture when left overnight or when roofing work is not in progress.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit asphalt shingle roofing to be performed according to manufacturer's written instructions and warranty requirements.

1. Install self-adhering sheet underlayment within the range of ambient and substrate temperatures recommended by manufacturer.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period. Materials failures include manufacturing defects and failure of asphalt shingles to self-seal after a reasonable time.

1. Material Warranty Period: 30 years from date of Substantial Completion, prorated, with first 5 years nonprorated.
2. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds up to 80 mph for 5 years from date of Substantial Completion.

B. Special Project Warranty: Roofing Installer's warranty, on warranty form at end of this Section, signed by roofing Installer, covering Work of this Section, in which roofing Installer agrees to repair or replace components of asphalt shingle roofing that fail in materials or workmanship within the following warranty period:

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

A. Three-Dimensional, Laminated-Strip Asphalt Shingles: ASTM D 3462, laminated, multi-ply overlay construction, glass-fiber reinforced, mineral-granule surfaced, and self-sealing.

1. Products:
   a. CertainTeed; Landmark AR Series "Weathered Wood" (Basis of Design).
2. Strip Size: Manufacturer's standard.
3. Algae Resistance: Granules treated to resist algae discoloration.
4. Color and Blends: As selected by Architect from manufacturer's full range.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

C. Starter Strip (for application at eave and at rake edge): As recommended by manufacturer.

2.2 UNDERLAYMENT MATERIALS

A. Felts: ASTM D 226 or ASTM D 4869, Type I (15-lb.), asphalt-saturated organic felts, nonperforated.

B. Self-Adhering Sheet Underlayment: ASTM D 1970, minimum of 40-mil- thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; cold applied.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Grace, W. R. & Co.; Grace Ice and Water Shield.
   b. Henry Company; Perma-Seal PE.
   c. Johns Manville International, Inc.; Roof Defender.
   d. Owens Corning; WeatherLock M.
   e. Polyguard Products, Inc.; Polyguard Deck Guard.

2.3 ACCESSORIES

A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.

B. Roofing Nails: ASTM F 1667; aluminum, stainless-steel, copper, or hot-dip galvanized steel wire shingle nails, minimum 0.120-inch- diameter, barbed shank, sharp-pointed, with a minimum 3/8-inch- diameter flat head and of sufficient length to penetrate 3/4 inch into solid wood decking or extend at least 1/8 inch through OSB or plywood sheathing.

1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.

C. Felt Underlayment Nails: Aluminum, stainless-steel, or hot-dip galvanized steel wire with low profile capped heads or disc caps, 1-inch minimum diameter.

2.4 METAL FLASHING AND TRIM

A. Sheet Metal Flashing and Trim: Comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."

1. Sheet Metal: Stainless steel.

B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item.

1. Step Flashings: Fabricate with a headlap of 2 inches and a minimum extension of 5 inches over the underlying asphalt shingle and up the vertical surface.
2. Cricket Flashings: Fabricate with concealed flange extending a minimum of 18 inches beneath upslope asphalt shingles and 6 inches beyond each side of chimney and 6 inches above the roof plane.
3. Metal Drip Edges: Brake-formed sheet metal with at least 2-inch roof deck flange and 1-1/2-inch fascia flange with 3/8-inch drip at lower edge. Furnish in lengths of 8 or 10 feet.

C. Vent Pipe Flashings: EPDM pipe flashing.

2.5 RIDGE VENTS

A. Rigid Ridge Vent: Manufacturer's standard rigid section high-density polypropylene or other UV-stabilized plastic ridge vent with nonwoven geotextile filter strips; for use under ridge shingles.

1. Products:
   a. Air Vent Inc., a CertainTeed Company; ShingleVent II.
   b. Mid-America Building Products; RidgeMaster Plus.
   c. Owens Corning; VentSure Ridge Vent.
   d. Ridglass Manufacturing Company, Inc.; Coolvent.
   e. Trimline Building Products; Trimline Ridge Vent.
2. Minimum Net Free Area: 15 square inches per lineal foot.
3. Width: Coordinate with pre-cut ridge and hip shingle width.
4. Thickness: .945 inches.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. Examine roof sheathing to verify that sheathing joints are supported by framing and blocking or metal clips and that installation is within flatness tolerances.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provision has been made for flashings and penetrations through asphalt shingles.
3. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application. Cover knotholes or other minor voids in substrate with sheet metal flashing secured with noncorrosive roofing nails.

B. Coordinate installation with flashings and other adjoining work to ensure proper sequencing. Do not install roofing materials until all vent stacks and other penetrations through roof sheathing have bee installed and are securely fastened against movement.

3.3 UNDERLAYMENT INSTALLATION

A. Single-Layer Felt Underlayment: Install single layer of felt underlayment on roof deck perpendicular to roof slope in parallel courses. Lap sides a minimum of 2 inches over underlying course. Lap ends a minimum of 4 inches. Stagger end laps between succeeding courses at least 72 inches. Fasten with felt underlayment nails.

1. Install felt underlayment on roof deck not covered by self-adhering sheet underlayment. Lap sides of felt over self-adhering sheet underlayment not less than 3 inches in direction to shed water. Lap ends of felt not less than 6 inches over self-adhering sheet underlayment.

B. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free, on roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Lap sheets in direction to shed water. Lap sides not less than 3-1/2 inches . Lap ends not less than 6 inches staggered 24 inches between courses. Roll laps with roller. Cover underlayment within 30 days.

1. Valleys: Extend from lowest to highest point 18 inches on each side.
2. Sidewalls: Extend beyond sidewall 18 inches and return vertically against sidewall not less than 4 inches.
3. Roof-Penetrating Elements: Extend beyond penetrating element 18 inches and return vertically against penetrating element not less than 4 inches.

3.4 METAL FLASHING INSTALLATION

A. General: Install metal flashings and other sheet metal to comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."

1. Install metal flashings according to recommendations in ARMA's "Residential Asphalt Roofing Manual" and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

B. Place metal drip edge tight with fascia boards at all rake and eave edges and extend 3 inches back from roof edge bend downward over the fascia boards. Weather lap joints 2 inches. Fasten in place with nails spaced 8 to 10 inches apart.

C. At eaves, place drip edge directly onto deck below underlayment. At rakes, place drip edge over underlayment.

3.5 ASPHALT SHINGLE INSTALLATION

A. Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

B. Install starter strip along lowest roof edge, consisting of an asphalt shingle strip at least 7 inches wide with self-sealing strip face up at roof edge.

1. Extend asphalt shingles 1/2 inch over fascia at eaves and rakes.
2. Install starter strip along rake edge.

C. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.

D. Fasten asphalt shingle strips with a minimum of six roofing nails located according to manufacturer's written instructions for applicable wind uplift requirements.

1. Where roof slope is less than 4:12, seal asphalt shingles with asphalt roofing cement spots.
2. When ambient temperature during installation is below 50 deg F , seal asphalt shingles with asphalt roofing cement spots.

E. Closed-Cut Valleys: Extend asphalt shingle strips from one side of valley 12 inches beyond center of valley. Use one-piece shingle strips without joints in the valley. Fasten with extra nail in upper end of shingle. Install asphalt shingle courses from other side of valley and cut back to a straight line 2 inches short of valley centerline. Trim upper concealed corners of cut-back shingle strips.

1. Do not nail asphalt shingles within 6 inches of valley center.
2. Set trimmed, concealed-corner asphalt shingles in a 3-inch- wide bed of asphalt roofing cement.

F. Ridge Vents: Install continuous ridge vents over asphalt shingles according to manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.

G. Ridge and Hip Cap Shingles: Maintain same exposure of cap shingles as roofing shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds. Fasten with roofing nails of sufficient length to penetrate sheathing.

1. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.

. END OF SECTION 07311

Attachment: Roofing Installer's Warranty

ROOFING INSTALLER'S WARRANTY

A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:

1. Owner: <Insert name of Owner.>
2. Address: <Insert address.>
3. Building Name/Type: <Insert information.>
4. Address: <Insert address.>
5. Area of Work: <Insert information.>
6. Acceptance Date: <Insert date.>
7. Warranty Period: <Insert time.>
8. Expiration Date: <Insert date.>

B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:

   a. lightning;
   b. peak gust wind speed exceeding <Insert wind speed> mph ;
   c. fire;
   d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
   e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
   f. vapor condensation on bottom of roofing; and
   g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said

alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

5. During Warranty Period, if original use of roof is changed, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature.>
2. Name: <Insert name.>
3. Title: <Insert title.>

SECTION 07460 - SIDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Fiber-cement siding.
2. Fiber-cement panels.
3. Fiber-cement trim.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For each type, color, texture, and pattern required.

1. 12-inch- long-by-actual-width Sample of siding.
2. 12-inch- long-by-actual-width Sample of panel.
3. 12-inch- long-by-actual-width Sample of trim.

C. Product Certificates: For each type of siding and panel, signed by product manufacturer.

D. Research/Evaluation Reports: For each type of siding required.

1.4 QUALITY ASSURANCE

A. Source Limitations for Siding and Panel: Obtain each type, color, texture, and pattern of siding and panel, including related accessories, through one source from a single manufacturer.

B. Mockup: Build mockup to verify selections made under sample submittals and to demonstrate aesthetic effects.

1. Build mockup of typical wall area as shown on Drawings.
2. Build mockup approximately 48 inches long by 60 inches high. Include outside corner on one end of mockup and inside corner on other end.

C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials in a dry, well-ventilated, weathertight place.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with siding installation only if substrate is completely dry and if existing and forecasted weather conditions permit siding to be installed according to manufacturer's written instructions.

1.7 SEQUENCING

A. Coordinate installation with flashings and other adjoining construction to ensure proper sequencing.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace siding that does not comply with requirements or that fails within specified warranty period. Failures include, but are not limited to, cracking, deforming or otherwise deteriorating beyond normal weathering.

1. Warranty Period: 30 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide fiber cement panels by one of the following:

1. James Hardie Building Products.
2. CertainTeed Corporation.

2.2 SIDING

A. Fiber Cement Siding: Asbestos free, fiber cement siding complying with ASTM C1186, Type A, Grade II, and as follows:

1. Horizontal Lap Siding Pattern: Boards 9-1/4 inches wide in plain style (8-inch exposure).
   a. Texture: Wood grain.
2. Thickness: 5/16-inch nominal.
3. Finish: Factory prime painted; tint primer to be similar to finish color.
4. Combustibility: Non-combustible in accordance with ASTM E136.
5. Surface Burning Characteristics: Maximum Flame Spread 0, Fuel Contributed 0, Smoke Developed 5 when tested in accordance with ASTM E84.
6. Product: "Hardiplank Select Cedarmill"; James Hardie Siding Products or equal.

2.3 PANELS

A. Fiber-Cement Panel: Panels made from fiber-cement board that does not contain asbestos fibers; complies with ASTM C 1186, Type A, Grade II; is classified as noncombustible when tested according to ASTM E 136; and has a flame-spread index of 25 or less when tested according to ASTM E 84.

1. Manufacturers: Same manufacturers listed for fiber-cement siding.
2. Pattern: Smooth texture; panel width as indicated.
3. Factory Priming: Manufacturer's standard acrylic primer.

2.4 ACCESSORIES

A. Fiber Cement Accessories: Accessories made from fiber-cement board that does not contain asbestos fibers; complies with ASTM C 1186, Type A, Grade II; classified as noncombustible when tested according to ASTM E 136.

1. Texture: Smooth.
2. Type: Moldings and trim.
3. Thickness: 1-inch nominal.

B. Flashing: Provide stainless-steel flashing complying with Division 7 Section "Sheet Metal Flashing and Trim" at window and door heads and where indicated.

C. Elastomeric Joint Sealant: Single-component urethane joint sealant complying with requirements in Division 7 Section "Joint Sealants" for Use NT (nontraffic) and for Uses M, G, A, and, as applicable to joint substrates indicated, O joint substrates.

D. Fasteners:

1. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch or 3 screw-threads into substrate.
2. For fastening fiber-cement siding, use stainless-steel fasteners.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of siding. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION

A. General: Comply with siding manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply. Center nails in elongated nailing slots without binding siding to allow for thermal movement. Overlap joints to shed water away from direction of prevailing wind.

B. Fiber Cement Siding: Comply with siding manufacturer's written installation instructions applicable to products and applications indicated, unless more stringent requirements apply. Overlap joints to shed water away from direction of prevailing wind.

1. Starting and Joining Methods: Install minimum ¼" thick lath starter strip at bottom course of wall. Apply planks horizontally with 1-1/4" wide laps at top. Lap bottom edge of first plank over starter strip. Align vertical joints of planks over framing members or studs.
2. Off-Stud Splices: When vertical joints occur between stud or framing members, utilize off-stud metal joiner. Position metal joiner so that bottom lip rests on solid course of planks. Fasten plank to framing. Position and fasten abutting plank into place, ensuring that lower edges of two planks align. Locate metal joiner centrally behind joint. Locate off-stud splices minimum of two stud cavities from wall corners. Locate successive splices within same plank course no closer than 48 inches. Locate splices at least one stud cavity away from window and door openings. Stagger splices at minimum 24-inch intervals when located in same wall cavity.
3. Wind Resistance: Where a specified level of wind resistance is required, fasten fiber cement siding in accordance with Table No. II in National Evaluation Service Report No. NER-405.

3.4 ADJUSTING AND CLEANING

A. Remove damaged, improperly installed, or otherwise defective siding materials and replace with new materials complying with specified requirements.

B. Clean finished surfaces according to siding manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 07460

SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

.1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following sheet metal flashing and trim:

1. Formed flashing and trim.

1.3 PERFORMANCE REQUIREMENTS

A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.

B. Thermal Movements: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

C. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

D. Uniform Wind Load Capacity: Design, size and install components to withstand positive and negative wind loading pressures in accordance with Applicable code, as determined by structural engineer.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:

1. Identify material, thickness, weight, and finish for each item and location in Project.

2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.

1.5 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1. Meet with Owner, Architect, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, unit skylights, and roof-mounted equipment.
2. Review methods and procedures related to sheet metal flashing and trim.
3. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
4. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.

B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1.7 COORDINATION

A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

2.1 SHEET METALS

A. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304.

1. Finish: No. 2D (dull, cold rolled).

2.2 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.

1. Exposed Fasteners: Stainless steel.
2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
3. Blind Fasteners: High-strength stainless-steel rivets.

C. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.

D. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.

E. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polysulfide silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.

G. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

H. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.3 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.

B. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.

C. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.

1. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

D. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.

E. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.

F. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" for application but not less than thickness of metal being secured.

2.4 FLASHING AND SHEET METAL FABRICATIONS

A. Typical Sheet Metal Flashing and Trim: Fabricate from the following material:

1. Stainless Steel: 0.0187 inch thick.

B. Flashing Receivers: Fabricate from the following material:

1. Stainless Steel: 0.0156 inch thick.

2.5 WALL SHEET METAL FABRICATIONS

A. Through-Wall Flashing in Frame Construction: Fabricate head, sill, and similar flashings to extend 4 inches beyond wall openings. Form head and sill flashing with 2-inch- high end dams. Fabricate from the following:

1. Stainless Steel: 0.0156 inch thick.

2.6 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.

1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.

1. Coat side of stainless-steel metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene underlayment.
3. Bed flanges in thick coat of asphalt roofing cement where required for waterproof performance.

C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.

D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of elastomeric sealant.

E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

1. Space cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.

F. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.

G. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.

1. Stainless Steel: Use stainless-steel fasteners.

H. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches except where pretinned surface would show in finished Work.

1. Stainless-Steel Soldering: Pretin edges of uncoated sheets to be soldered using solder recommended for stainless steel and phosphoric acid flux. Promptly wash off acid flux residue from metal after soldering.

3.3 ROOF FLASHING INSTALLATION

A. General: Install sheet metal roof flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.

B. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4 inches over base flashing. Install stainless-steel draw band and tighten.

C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with elastomeric sealant.

1. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.

D. Roof-Penetration Flashing: Coordinate installation of roof-penetration and EPDM pipe flashing with installation of roofing and other items penetrating roof.

3.4 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Openings Flashing in Frame Construction: Install continuous head, sill, and similar flashings to extend 4 inches beyond wall openings, unless otherwise indicated.

3.5 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.

C. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07620

SECTION 07841 - FIRESTOP SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes firestop systems for penetrations through the following fire-resistance-rated assemblies, including both empty openings and openings containing penetrating items:

1. Floors.
2. Roofs.
3. Walls and partitions.

1.3 PERFORMANCE REQUIREMENTS

A. General: For the following constructions, provide firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly penetrated.

1. Fire-resistance-rated non-load-bearing walls, including partitions, with fire-protection-rated openings.
2. Fire-resistance-rated floor assemblies.

B. F-Rated Systems: Provide firestop systems with F-ratings indicated, as determined per ASTM E 814, but not less than that equaling or exceeding fire-resistance rating of constructions penetrated.

C. T-Rated Systems: For the following conditions, provide firestop systems with T-ratings indicated, as well as F-ratings, as determined per ASTM E 814, where systems protect penetrating items exposed to potential contact with adjacent materials in occupiable floor areas:

1. Penetrations located outside wall cavities.
2. Penetrations located outside fire-resistive shaft enclosures.
3. Penetrations located in construction containing fire-protection-rated openings.
4. Penetrating items larger than 4-inch- diameter nominal pipe or 16 sq. in. in overall cross-sectional area.

D. For firestop systems exposed to view, traffic, moisture, and physical damage, provide products that after curing do not deteriorate when exposed to these conditions both during and after construction.

1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant firestop systems.

2. For penetrations involving insulated piping, provide firestop systems not requiring removal of insulation.

E. For firestop systems exposed to view, provide products with flame-spread ratings of less than 25 and smoke-developed ratings of less than 450, as determined per ASTM E 84.

1.4 SUBMITTALS

A. Product Data: For each type of firestop system product indicated.

B. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Signed by manufacturers of firestop system products certifying that products furnished comply with requirements.

D. Product Test Reports: From a qualified testing agency indicating firestop system complies with requirements, based on comprehensive testing of current products.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed firestop systems similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations: Obtain firestop systems, for each kind of penetration and construction condition indicated, from a single manufacturer.

C. Fire-Test-Response Characteristics: Provide firestop systems that comply with the following requirements and those specified in "Performance Requirements" Article:

1. Firestopping tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL, or another agency performing testing and follow-up inspection services for firestop systems acceptable to authorities having jurisdiction.
2. Firestop systems are identical to those tested per ASTM E 814. Provide rated systems complying with the following requirements:.
    a. Firestop system products bear classification marking of qualified testing and inspecting agency.
    b. Firestop systems correspond to those indicated by reference to firestop system designations listed by the following:
        1) UL in "Fire Resistance Directory."

D. Engineering Judgments: Where there is no specific third party tested and classified firestop system available for a particular application, obtain from the firestop manufacturer an Engineering Judgment (EJ) or Equivalent Fire Resistance Rated Assembly (EFRRA) to be submitted to the Architect and authority having jurisdiction for approval prior to installation.

E. Preinstallation Conference: Before installing firestop systems, conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings." Notify participants at least 5 working days before conference.

1. Meet with Owner; Architect; construction manager; inspection agency representative; firestop Installer(s); manufacturer's technical representative; and installers whose work interfaces with or affects firestopping, including Division 15 and 16 subcontractors.
2. **Coordination of Trades: Coordinate firestop systems for all penetrations and construction conditions to provide consistency in quality, manufacturer and installation of materials. Coordinate with work of Divisions 15 and 16.**

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver firestop system products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer; date of manufacture; lot number; shelf life, if applicable; qualified testing and inspecting agency's classification marking applicable to Project; curing time; and mixing instructions for multicomponent materials.

B. Store and handle materials for firestop systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install firestop systems when ambient or substrate temperatures are outside limits permitted by through-penetration firestop system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Ventilate firestop systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

1.8 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that firestop systems are installed according to specified requirements.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate firestop systems.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Hilti Construction Chemicals, Inc.
2. 3M Fire Protection Products.
3. Specified Technologies, Inc.

4. Tremco.
5. W.R. Grace.
6. Other manufacturers listed in the UL Fire Resistance Directory.

2.2 FIRESTOPPING, GENERAL

A. Compatibility: Provide firestop systems that are compatible with one another, with the substrates forming openings, and with the items, if any, penetrating firestop systems, under conditions of service and application, as demonstrated by firestop system manufacturer based on testing and field experience.

B. Accessories: Provide components for each firestop system that are needed to install fill materials and to comply with "Performance Requirements" Article. Use only components specified by firestop system manufacturer and approved by the qualified testing and inspecting agency for firestop systems indicated. Accessories include, but are not limited to, the following items:

1. Permanent forming/damming/backing materials, including the following:
   a. Slag-/rock-wool-fiber insulation.
   b. Sealants used in combination with other forming/damming/backing materials to prevent leakage of fill materials in liquid state.
   c. Fire-rated form board.
2. Temporary forming materials.
3. Substrate primers.
4. Collars.
5. Steel sleeves.

2.3 FILL MATERIALS

A. General: Provide firestop systems containing the types of fill materials standard with manufacturer for systems complying with rating requirements indicated. Fill materials are those referred to in directories of the referenced testing and inspecting agencies as fill, void, or cavity materials.

B. Cast-in-Place Firestop Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer metallic sleeve lined with an intumescent strip, a radial extended flange attached to one end of the sleeve for fastening to concrete formwork, and a neoprene gasket.

C. Latex Sealants: Single-component latex formulations that after cure do not re-emulsify during exposure to moisture.

D. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

E. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced elastomeric sheet bonded to galvanized steel sheet.

F. Intumescent Putties: Nonhardening dielectric, water-resistant putties containing no solvents, inorganic fibers, or silicone compounds.

G. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.

H. Mortars: Prepackaged, dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers, and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.

I. Pillows/Bags: Reusable, heat-expanding pillows/bags consisting of glass-fiber cloth cases filled with a combination of mineral-fiber, water-insoluble expansion agents and fire-retardant additives.

J. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

K. Silicone Sealants: Moisture-curing, single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below:

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping, gunnable sealant, unless indicated firestop system limits use to nonsag grade for both opening conditions.
2. Grade for Horizontal Surfaces: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces.
3. Grade for Vertical Surfaces: Nonsag formulation for openings in vertical and other surfaces.

L. Spray Firestopping Material: Flexible, sprayable, water-based coating designed for firestopping of head-of-wall joints.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Firedam Spray, 3M Fire Protection Products.
b. CP 672 Firestop Joint Spray, Hilti Construction Chemicals, Inc.
c. Tremstop Acrylic Spray; Tremco, Inc.

2.4 MIXING

A. For those products requiring mixing before application, comply with firestop system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning: Clean out openings immediately before installing firestop systems to comply with written recommendations of firestop system manufacturer and the following requirements:

1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of firestop systems.
2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestop systems. Remove loose particles remaining from cleaning operation.
3. Remove laitance and form-release agents from concrete.

B. Priming: Prime substrates where recommended in writing by firestop system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent firestop systems from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestop system materials. Remove tape as soon as possible without disturbing firestop system's seal with substrates.

3.3 FIRESTOP SYSTEM INSTALLATION

A. General: Install firestop systems to comply with "Performance Requirements" Article and firestop system manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install 12-inch wide fire safing strip at ceiling/floor juncture.

C. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

1. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.

D. Install fill materials for firestop systems by proven techniques to produce the following results:

1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 FIELD QUALITY CONTROL

A. Inspecting Agency: Owner will engage a qualified, independent inspecting agency to inspect through-penetration firestops. Independent inspecting agency shall comply with ASTM E 2174 requirements including those related to qualifications, conducting inspections, and preparing test reports.

1. Inspecting agency will state in each report whether inspected firestop systems comply with or deviate from requirements.

B. Proceed with enclosing firestop systems with other construction only after inspection reports are issued.

C. Where deficiencies are found, repair or replace firestop systems so they comply with requirements.

3.5 IDENTIFICATION

A. Identify through-penetration firestop systems with pressure-sensitive, self-adhesive, preprinted vinyl labels. Attach labels permanently to surfaces of penetrated construction on both sides of each firestop system installation where labels will be visible to anyone seeking to remove penetrating items or firestop systems. Include the following information on labels:

1. The words: "Warning--Through-Penetration Firestop System--Do Not Disturb. Notify Building Management of Any Damage."
2. Contractor's name, address, and phone number.
3. Through-penetration firestop system designation of applicable testing and inspecting agency.
4. Date of installation.
5. Through-penetration firestop system manufacturer's name.
6. Installer's name.

3.6 CLEANING AND PROTECTION

A. Clean off excess fill materials adjacent to openings as Work progresses by methods and with cleaning materials that are approved in writing by firestop system manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure firestop systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated firestop systems immediately and install new materials to produce on firestop systems complying with specified requirements.

END OF SECTION 07841

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for the applications indicated in the Joint-Sealant Schedule at the end of Part 3.

1.3 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

D. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.

E. Qualification Data: For Installer.

F. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.

G. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Submit not fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

1.6 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period for Silicone Sealants: 20 years from date of Substantial Completion.
2. Warranty Period for Urethane Sealants: 5 years from date of Substantial Completion.

C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:

1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.

2. Disintegration of joint substrates from natural causes exceeding design specifications.
3. Mechanical damage caused by individuals, tools, or other outside agents.
4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

2.2 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project..

C. Single-Component Neutral-Curing, General Purpose Silicone Sealant:

1. Products:
   a. Dow Corning Corporation; 790.
   b. Tremco; Spectrem 1 (Basic).
   c. Pecora Corporation; 890.
2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 50.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.
6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

D. Single-Component Mildew-Resistant Neutral-Curing Silicone Sealant:

1. Products:
   a. Pecora Corporation; 898.
   b. Tremco; Tremsil 600 White.
2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.

E. Multicomponent Pourable Urethane Sealant:

1. Products:

   a. Pecora Corporation; Dynatrol II-SG.
   b. Sika Corporation, Inc.; Sikaflex - 2c SL.
   c. Sonneborn, Division of ChemRex Inc.; SL 2.
   d. Tremco; THC-900.

2. Type and Grade: M (multicomponent) and P (pourable).
3. Class: 25.
4. Uses Related to Exposure: T (traffic).
5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.

F. Single-Component Nonsag Urethane Sealant:

1. Products:

   a. Sika Corporation, Inc.; Sikaflex - 1a.
   b. Sonneborn, Division of ChemRex Inc.; NP 1.
   c. Tremco; Vulkem 116.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.

2.3 LATEX JOINT SEALANTS

A. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF.

B. Products:

1. Pecora Corporation; AC-20+.
2. Sonneborn, Division of ChemRex Inc.; Sonolac.
3. Tremco; Tremflex 834.

2.4 ACOUSTICAL JOINT SEALANTS

A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following:

1. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
2. Products:

   a. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant.
   b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.

2.5 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or other type, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles

remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Exterior horizontal nontraffic and traffic joints in cast-in-place concrete slabs.

1. Joint Sealant: Multicomponent pourable urethane sealant.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

B. Exterior joints in fiber cement siding and panels.

1. Joint Sealant: Single-component nonsag urethane sealant.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

C. Exterior perimeter joints between different materials listed above and frames of doors and windows.

1. Joint Sealant: Single-component neutral-curing silicone sealant or single-component nonsag urethane sealant, as recommended by manufacturer.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

D. Other exterior joints in vertical and horizontal nontraffic surfaces.

1. Joint Sealant: Single-component neutral-curing silicone sealant or single-component nonsag urethane sealant, as recommended by manufacturer.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

E. Interior perimeter joints of exterior openings.

1. Joint Sealant: Single-component nonsag urethane sealant.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

F. Interior joints between plumbing fixtures and adjoining walls, floors, and counters.

1. Joint Sealant: Single-component mildew-resistant neutral-curing silicone sealant.
2. Joint-Sealant Color: White As selected by Architect from manufacturer's full range.

G. Perimeter joints between interior wall surfaces and casework, and frames of interior doors and windows.

1. Joint Sealant: Latex sealant.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 07920

SECTION 08211 - WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Interior molded panel doors.
2. Exterior non-entry swinging doors on ground floor.
3. Pre-hung wood door assemblies.

B. Related Sections include the following:

1. Division 6 Section "Rough Carpentry" for wood blocking for door installations.
2. Division 6 Section "Interior Architectural Woodwork" for separate wood door frames.
3. Division 8 Section "Door Hardware" for door hardware.

1.3 SUBMITTALS

A. Product Data: For each type of door. Include details of core and edge construction and trim for openings.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.

C. Samples for Verification:

1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain wood doors through one source from a single manufacturer.

B. Fire-Rated Wood Doors and Frames: Doors and frames complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252.

1. Test Pressure: After 5 minutes into the test, the neutral pressure level in furnace shall be established at 40 inches or less above the sill.

C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in plastic bags or cardboard cartons.

C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Wood Doors:

a. Jeld-Wen.
b. Craftmaster Door Designs.
c. Masonite International Corporation.
d. PremDor.

2.2 DOORS FOR OPAQUE FINISH

A. Interior Hollow-Core Doors:

1. Grade: Custom.
2. Faces: Molded hardboard made from wood chips and resins that are chemically and physically bonded under intense heat and pressure.

a. Hardboard Faces: AHA A135.4, Class 1 (tempered) or Class 2 (standard).

B. Interior Fire-Rated Doors (45-Minute Rating): Fire-rated doors with 1-3/4-inch- thick, edged and veneered mineral-core stiles and rails and 1-1/8-inch- thick, veneered mineral-core raised panels, complying with requirements indicated for interior doors.

C. Exterior Wood Composite Doors for Ground Floor Applications:

1. Design: Flush or panel style, as selected by Architect.
2. Faces: Skins of resin and reinforcing materials, permanently bonded to engineered wood frames and composite core.
3. Application: Exterior, non-entry swinging doors on first floor.
4. Product: Jeld-Wen "AlternaPlus" Wood Composite Doors, or Architect approved equivalent.

2.3 INTERIOR FIRE-RATED DOOR FRAMES

A. Manufacturers:

1. Algoma Hardwoods, Inc.
2. Eggers Industries; Architectural Door Division.
3. Malman Company (The).
4. Marshfield Door Systems, Inc.

B. Frames, complete with casings, fabricated from solid fire-retardant-treated wood or from veneered fire-retardant particleboard, fire-retardant medium-density fiberboard, or mineral board.

1. Species: Any close-grained hardwood:

2.4 FABRICATION

A. Fabricate doors in sizes indicated for Project-site fitting.

B. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels, unless otherwise indicated:

C. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.

D. Pre-Hung Door Assemblies: At Contractor's option, provide pre-hung wood door assemblies complying with the following:

1. Jambs: Hardwood jambs finished to match doors.
2. Profiled stops.
3. Hardware: Locate in accordance with DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
   a. Hinges for 1-3/8" Doors: 3-1/2" x 3-1/2" square edge hinges; 3 per door.
   b. Hinges for 1-3/4" Doors: 42" x 4" square edge hinges; 3 per door.
   c. Other Hardware: In accordance with Division 8 Section "Door Hardware".
4. Knob side of door edge is beveled.
5. Jamb leg extends 1-1/4-inch below door (may be trimmed for finished door height).

2.5 SHOP PRIMING

A. Doors for Opaque Finish: Shop prime faces and edges of doors, including cutouts, with one coat of wood primer specified in Division 9 Section "Painting."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames before hanging doors.

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
2. Reject doors with defects.

B. For pre-hung doors, examine installed framing and blocking before hanging units.

1. Verify that framing and blocking comply with indicated requirements for pre-hung door units and have been installed level and plumb.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install fire-rated wood door frames level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Countersink fasteners, fill surface flush, and sand smooth.

B. Hardware: For installation, see Division 8 Section "Door Hardware."

C. Manufacturer's Written Instructions: Install doors to comply with manufacturer's written instructions, referenced quality standard, and as indicated.

D. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer. Machine doors for hardware. Seal cut surfaces after fitting and machining.

1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold.
2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
   a. Comply with NFPA 80 for fire-rated doors.

E. Pre-Hung Doors: Align and fit door assemblies in framing with uniform clearances as indicated below. Trim jambs as required to install door units at proper height.

1. Clearances: Provide 1/8 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold.
   a. Comply with NFPA 80 for fire-rated doors.

F. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

G. Field-Finished Doors: Refer to the following for finishing requirements:

1. Division 9 Section "Painting."

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08211

SECTION 08250 - ENTRY DOOR AND FRAME ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Fiberglass entry doors and transoms.

1.3 SUBMITTALS

A. Product Data: For each type of door. Include details of edge construction and trim for openings. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.

C. Samples for Verification: Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain entry doors through one source from a single manufacturer.

B. Safety Glass: Comply with 16 CFR 1201.

C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in plastic bags or cardboard cartons.

C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Fiberglass Doors:

a. Jeld-Wen.
b. Masonite.
c. Therma-Tru (Basis of Design).

2.2 FIBERGLASS ENTRY DOORS

A. Front Entry Doors:

1. Door Panels: Molded from proprietary thermoset composite, smooth texture, stainable and paintable. Door edges: machinable kiln-dried clear northern red oak, flush and square with door faces, lock edge reinforced with full-length 3-1/2-inch wide engineered lumber core. Door bottom edge: moisture-proof and decay-proof composite. Core: foamed-in-place polyurethane, CFC-free, density 2.0 pcf minimum, K-factor of 0.14 for minimum thermal transmittance. Standard factory sizes may be edge trimmed or end trimmed in shop or field to suit replacement door size requirements.
2. Frames: Milled from 5/4 kiln-dried pine, profiled with 1/2-inch stop, minimum depth 4-9/16 inches. Other frame depths available to match wall constructions.
3. Hardware: Heirloom Oil Rubbed Bronze hardware, or as otherwise selected by Architect, with Schlage F359-PLY-613 Exterior Entry Handleset.
4. Sills: HP adjustable sills with rot-proof substrate.
5. Gasketing: Swing-in models, press-fit in kerfs at jamb stops in frames. Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors. Corner pads at bottom margin corners from jacketed thermoset closed-cell foam.
6. Finish: Prefinished, as selected by Architect.
7. Product: "Smooth Star Style S1153" by Therma-Tru, or as otherwise selected by Architect.

2.3 FABRICATION AND FINISHING

A. Factory fit doors to suit frame-opening sizes and to comply with referenced quality standard.

1. Provide 1/8-inch clearance at jambs, heads, and meeting stiles and 1/2 inch at bottom. At thresholds, provide 3/8-inch clearance.

B. Factory machine doors for hardware that is not surface applied.

C. Factory finish fiberglass doors, as selected by Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings before installing doors and frames.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Hardware: For installation, see Division 8 Section "Door Hardware."

B. Manufacturer's Written Instructions: Install doors, frames and sidelights to comply with manufacturer's written instructions, referenced quality standard, and as indicated.

C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08250

SECTION 08361 - SECTIONAL OVERHEAD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes manually operated, oversized sectional overhead doors.

B. Related Sections include the following:

1. Division 8 Section "Door Hardware" for lock cylinders and keying.

1.3 DEFINITIONS

A. Operation Cycle: One cycle of a door is complete when it is moved from the closed position to the fully open position and returned to the closed position.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide sectional overhead doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:

1. Wind Loads: Determine loads based on the following minimum design wind pressures:

a. Uniform pressure (velocity pressure) of 30 lbf/sq. ft., or as otherwise required to comply with wind load requirements, acting inward and outward.

B. Operation-Cycle Requirements: Provide sectional overhead door components and operators capable of operating for not less than 25,000 cycles.

1.5 SUBMITTALS

A. Product Data: For each type and size of sectional overhead door and accessory. Include the following:

1. Summary of forces and loads on walls and jambs.

B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer's product data.

C. Samples for Initial Selection: Contractor to submit cutsheets of Amarr Tuscany styles for selection of style(s) by Architect.

D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.

1. Frame: 6 inches long.
2. Panel: 6 inches square.

E. Qualification Data: For Installer.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Source Limitations: Obtain sectional overhead doors through one source from a single manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Steel Doors with Steel Panels:

a. Amarr Garage Doors.
b. Overhead Door Corp. – Banner Collection "Crest Series" (Basis of Design).
c. Raynor.
d. Wayne-Dalton Corp.

2.2 STEEL DOOR SECTIONS

A. Construct door sections including face sheets and frames from zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M, G90 coating designation.

1. Minimum Base-Metal (Uncoated) Thickness for Section Faces: 0.033 inch.
2. Exterior-Section Face: Woodgrain embossed texture with raised panels.

B. Fabricate door panels from a single sheet to provide sections not more than 24 inches high and nominally 2 inches deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.

C. Enclose open sections with channel end stiles formed from not less than 0.064-inch- thick galvanized steel sheet and weld end stiles to door section in place. Provide intermediate stiles formed from not less than 0.064-inch- thick galvanized steel sheet, cut to door section profile, and welded in place.

D. Reinforce bottom section with a continuous channel or angle complying with bottom-section profile.

E. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place.

F. Provide reinforcement for hardware attachment.

G. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints and free of warp, twist, and deformation.

H. Overall Door Height: 10 feet, or as otherwise indicated on Drawings.

I. Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Surface Preparation: Clean galvanized surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants.

a. Pretreat zinc-coated steel, after cleaning, with a conversion coating of type suited to organic coating applied over it.

2. Apply manufacturer's standard primer and finish coats to interior- and exterior-door faces after forming, according to coating manufacturer's written instructions for application, thermosetting, and minimum dry film thickness.

a. Color and Gloss: White, or as otherwise selected by Architect.

2.3 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Manufacturer's standard, galvanized steel track system, sized for door size and weight, designed for lift type indicated and clearances shown, and complying with ASTM A 653/A 653M for minimum G60 zinc coating. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced at 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design to ensure tight closure at jambs when door unit is closed. Weld or bolt to track supports.

B. Track Reinforcement and Supports: Galvanized steel track reinforcement and support members, complying with ASTM A 36/A 36M and ASTM A 123/A 123M. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.

1. Support and attach tracks to opening jambs with continuous angle welded to tracks and attached to wall. Support horizontal (ceiling) tracks with continuous angle welded to track and supported by laterally braced attachments to overhead structural members at curve and end of tracks.

a. Repair galvanized coating on tracks according to ASTM A 780.

C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of overhead door.

D. Windows: Type and size indicated and in arrangement shown. Set glazing in vinyl, rubber, or neoprene glazing channel for metal-framed doors and elastic glazing compound for wood doors, as required. Provide removable stops of same material as door-section frames.

1. Size: Manufacturer's standard for type of glazing indicated.
2. Glass: As selected by Architect.

2.4 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty galvanized steel hinges of not less than 0.0747-inch- thick, uncoated steel at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible. Provide double-end hinges where required, for doors exceeding 16 feet in width, unless otherwise recommended by door manufacturer.

C. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch- diameter roller tires for 3-inch- wide track and 2-inch-diameter roller tires for 2-inch- wide track.

D. Handles: Provide decorative handles with cylinder locks, as selected by Architect from manufacturer's full line.

E. Fabricate locking device assembly with lock, spring-loaded dead bolt, operating handle, cam plate, and adjustable locking bar to engage through slots in tracks.

1. Locking Bars: Full-disc cremone type, both jamb sides operable from inside and outside.
2. Lock cylinder is specified in Division 8 Section "Door Hardware."

F. If door unit is power operated, provide safety interlock switch to disengage power supply when door is locked.

2.5 COUNTERBALANCE MECHANISM

A. Extension Spring: Counterbalance mechanism with aircraft-type steel cable over ball-bearing sheaves. Provide oil-tempered wired springs with internal safety rods. Combine operation with a spring bumper in each horizontal track to cushion door at end of opening operation.

B. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs fabricated from oil-tempered-steel wire complying with ASTM A 229/A 229M, Class II, mounted on a cross-header tube or steel shaft. Connect to door with galvanized aircraft-type lift cables with cable safety factor of at least 5 to 1. Provide springs calibrated for a minimum of 10,000 cycles.

C. Cable Drums: Cast-aluminum or gray-iron casting cable drums grooved to receive cable. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of shaft. Provide one additional midpoint bracket for shafts up to 16 feet long and two

additional brackets at one-third points to support shafts more than 16 feet long unless closer spacing is recommended by door manufacturer.

D. Cable Safety Device: Include a spring-loaded, steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if either cable breaks.

E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level shaft and prevent sag.

F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.6 ELECTRIC DOOR OPERATORS

A. General: Provide electric door operator assembly of size and capacity recommended and provided by door manufacturer for door specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

B. Comply with NFPA 70.

C. Disconnect Device: Hand-operated disconnect device or mechanism for automatically engaging chain-and-sprocket operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount disconnect device and operator so they are accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.

D. Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency auxiliary operator.

E. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70, Class 2 control circuit, maximum 24-V, ac or dc.

F. Door-Operator Type: Unit consisting of electric motor and manufacturer's standard trolley or jackshaft type operator appropriate for door.

G. Electric Motors: High-starting torque, reversible, continuous-duty, Class A insulated, electric motors complying with NEMA MG 1, with overload protection, sized to start, accelerate, and operate door in either direction from any position, at not less than 2/3 fps and not more than 1 fps, without exceeding nameplate ratings or service factor.

1. Type: Polyphase, medium-induction type.
2. Service Factor: Comply with NEMA MG 1, unless otherwise indicated.
3. Coordinate wiring requirements and electrical characteristics of motors with building electrical system.
4. Provide open dripproof-type motor, and controller with NEMA ICS 6, Type 1 enclosure.

H. Remote-Control Station: Momentary-contact, three-button control station with push-button controls labeled "Open," "Close," and "Stop."

I. Obstruction Detection Device: Provide each motorized door with indicated external automatic safety sensor capable of protecting full width of door opening. Activation of sensor immediately stops and reverses downward door travel.

1. Photoelectric Sensor: Manufacturer's standard system designed to detect an obstruction in door opening without contact between door and obstruction.

J. Limit Switches: Adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install door, track, and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports according to Shop Drawings, manufacturer's written instructions, and as specified.

B. Fasten vertical track assembly to framing, spaced not less than 24 inches apart. Hang horizontal track from structural overhead framing with angle or channel hangers fastened to framing by welding or bolting or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

3.2 STARTUP SERVICES

A. Engage a factory-authorized service representative to perform startup services.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.3 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and with weathertight fit around entire perimeter.

B. Adjust belt-driven motors as follows:

1. Use adjustable motor-mounting bases for belt-driven motors.
2. Align pulleys and install belts.
3. Tension belt according to manufacturer's written instructions.

C. Touch-up Painting: Immediately after welding galvanized track to track supports, clean field welds and abraded galvanized surfaces and repair galvanizing to comply with ASTM A 780.

END OF SECTION 08361

SECTION 08550 - WOOD WINDOWS AND DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following vinyl-clad wood-framed window and door product types:

1. Double hung, vinyl-clad wood windows.
2. Sliding, vinyl-clad patio doors.

1.3 PERFORMANCE REQUIREMENTS

A. General: Provide wood windows and doors capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified and that are of test size indicated below:

1. Minimum size required by AAMA/NWWDA 101/I.S.2.

B. AAMA/WDMA Performance Requirements: Provide wood windows and doors of performance indicated that comply with AAMA/WDMA 101/I.S.2/NAFS, unless more stringent performance requirements are required to meet wind loads.

1. Sliding Door Performance Class and Grade: SGD LC30.
2. Hung Window Performance Class and Grade: LC30.

C. Thermal Transmittance: Maximum indicated at 15-mph exterior wind velocity and winter condition temperatures when tested according to AAMA 1503.

1. Windows: 0.28 Btu/sq. ft. x h x deg F.
2. Doors: 0.38 Btu/sq. ft. x h x deg F.

D. Air Infiltration: Maximum rate not more than indicated when tested according to AAMA/NWWDA 101/I.S.2, Air Infiltration Test.

1. Maximum Rate: 0.3 cfm/sq. ft. of area at an inward test pressure of 1.57 lbf/sq. ft.

E. Water Resistance: No water leakage when tested according to AAMA/NWWDA 101/I.S.2, Water Resistance Test.

1. Test Pressure: 15 percent of positive design pressure, but not less than 2.86 lbf/sq. ft. or more than 12 lbf/sq. ft..

F. Uniform Wind Load Capacity: Design, size and install components to withstand positive and negative wind loading pressures in accordance with International Residential Code, as indicated on Drawings.

1.4 SUBMITTALS

A. Product Data: Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions for each type of wood window and doorindicated.

B. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other Work, operational clearances, and the following:

1. Mullion details, including reinforcement and stiffeners.
2. Joinery details.
3. Flashing and drainage details.
4. Glazing details.

C. Samples for Verification: For wood window and door components required, prepared on Samples of size indicated below.

1. Main Framing Member: 12-inch- long, full-size sections of extrusions with factory-applied color finish.

D. Product Test Reports: Based on evaluation of comprehensive tests performed within the last four years by a qualified testing agency, for each type, grade, and size of wood window. Test results based on use of down-sized test units will not be accepted.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An installer acceptable to wood window and door manufacturer for installation of units required for this Project.

B. Fenestration Standard: Comply with AAMA/NWWDA 101/I.S.2, "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors," for minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

C. Glazing Publications: Comply with published recommendations of glass manufacturers and GANA's "Glazing Manual" unless more stringent requirements are indicated.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify wood window and door openings by field measurements before fabrication and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Vinyl-Clad Wood Windows and Doors:

✓a. Andersen Commercial Group; Andersen Corp. (Basis of Design)
b. Crestline; a brand of Peachtree Companies, Inc.; TPC Acquisition, Inc.
c. Weather Shield Mfg., Inc.

2.2 MATERIALS, GENERAL

A. Wood: Clear ponderosa pine or another suitable fine-grained lumber; kiln-dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide; water-repellent preservative treated.

B. Vinyl for Cladding: Consisting of a rigid PVC sheath made from PVC complying with ASTM D 4726, not less than 35-mil average thickness, in permanent, integral color, and mechanically bonded to exterior wood frame members; white color, or as otherwise selected by Architect.

C. Wood Trim and Glazing Stops: Material to match frame members.

D. Clad Trim and Glazing Stops: Material and finish to match clad frame members.

1. Simulated true divided light trim.
2. Trim pieces or metal closures where windows are mulled together.
3. Sill extender.

E. Fasteners: Aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by manufacturer to be noncorrosive and compatible with wood window and door members, cladding, trim, hardware, anchors, and other components. Cadmium-plated steel fasteners are not permitted.

1. Exposed Fasteners: Unless unavoidable for applying hardware, do not use exposed fasteners. For application of hardware, use fasteners that match finish of member or hardware being fastened, as appropriate.

F. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated. Cadmium-plated steel anchors, clips, and accessories are not permitted.

G. Reinforcing Members: Aluminum, nonmagnetic stainless steel, nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated. Cadmium-plated steel reinforcing members are not permitted.

H. Sliding-Type Weather Stripping: Provide woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric. Comply with AAMA 701/702.

1. Weather Seals: Provide weather stripping with integral barrier fin or fins of semirigid, polypropylene sheet or polypropylene-coated material.

2.3 GLAZING

A. Glass: Clear, insulating-glass units complying with Division 8 Section "Glazing."

B. Glazing System: Manufacturer's standard factory-glazing system as indicated in Division 8 Section "Glazing."

2.4 HARDWARE

A. General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with wood; designed to smoothly operate, tightly close, and securely lock sliding wood windows and doors and sized to accommodate panel weight and dimensions. Do not use aluminum in frictional contact with other metals. Where exposed, provide solid bronze or nonmagnetic stainless steel.

B. Roller Assemblies: Provide movable panels with adjustable-height roller assemblies consisting of self-lubricating, dual tandem nylon or stainless-steel ball-bearing rollers; two roller assemblies per panel.

C. Threshold and Sill Cap/Track: Provide manufacturer's standard threshold and track of thickness, dimensions, and profile indicated; designed to comply with performance requirements indicated and to drain to exterior; with manufacturer's standard finish.

D. Door and Window Pulls: Provide manufacturer's standard metal or wood pull grips.

E. Window Locks and Latches: Designed to allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.

F. Door Locks: Install manufacturer's standard pull and multipoint keyless locking device on each movable panel, lockable from inside only. Adjust locking device to allow unobstructed movement of panel across adjacent panel in direction indicated.

G. Security Foot Bolt: Provide security foot-operated dead bolt attached to bottom rail of movable sliding glass door panels to lock the panel when fully closed and when partially open to permit ventilation.

2.5 INSECT SCREENS

A. General: Design windows and sliding glass doors and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches. Locate screens on outside of door or window and provide operable exterior panel for each. Comply with SMA 2006.

B. Insect Screen Frames: Manufacturer's standard extruded-aluminum or formed-tubular-aluminum members, with mitered or coped joints, concealed fasteners, adjustable rollers, and removable PVC or PE spline/anchor concealing edge of frame.

1. Finish: Anodized aluminum in color selected by Architect.

C. Glass-Fiber Mesh Fabric: ASTM D 3656, 20-by-20 or 20-by-30 mesh of PVC-coated, glass-fiber threads; woven and fused to form a fabric mesh resistant to corrosion, shrinkage, stretch, impact damage, and weather deterioration in the following color.

1. Mesh Color: Charcoal gray.

2.6 FABRICATION

A. General: Fabricate wood windows and doors, in sizes indicated, that comply with AAMA/NWWDA 101/I.S.2 for performance class and performance grade indicated. Include a complete system for assembling components and anchoring windows.

B. Fabricate wood windows and doors that are reglazable without dismantling sash framing.

C. Factory machine windows for openings and hardware that is not surface applied.

D. Weather Stripping: Provide full-perimeter weather stripping for each operable sash and ventilator, unless otherwise indicated.

E. Mullions: Provide mullions and cover plates as shown, matching window and door units, complete with anchors for support to structure and installation of window and door units. Allow for erection tolerances and provide for movement of window and door units due to thermal expansion and building deflections, as indicated. Provide mullions and cover plates capable of withstanding design loads of window and door units.

F. Factory-Glazed Fabrication: Except for light sizes in excess of 100 united inches , glaze wood windows and doors in the factory where practical and possible for applications indicated. Comply with requirements in Division 8 Section "Glazing" and with AAMA/NWWDA 101/I.S.2.

G. Glazing Stops: Provide nailed or snap-on glazing stops coordinated with Division 8 Section "Glazing" and glazing system indicated. Provide glazing stops to match sash frames.

H. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

2.7 WOOD FINISHES

A. Factory-Primed Windows: Provide fabricator's standard factory prime coat for exposed interior wood surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances; rough opening dimensions; levelness of sill plate; coordination with wall flashings, vapor retarders, and other built-in components; and other conditions affecting performance of work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Comply with manufacturer's written instructions for installing windows and doors, hardware, accessories, and other components; Drawings; and Shop Drawings.

B. Install windows and doors level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.

C. Set sill members in bed of sealant or with gaskets, as indicated, for weathertight construction.

D. Metal Protection: Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with requirements specified in "Dissimilar Materials" Paragraph in Appendix B in AAMA/NWWDA 101/I.S.2.

3.3 PROTECTION AND CLEANING

A. Protect window and door surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor window and door surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances do contact window and door surfaces, remove contaminants immediately according to manufacturer's written recommendations.

B. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

C. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels and clean surfaces.

D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 08550

SECTION 08710 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Door hardware for swinging doors.
2. Cylinders for doors specified in other Sections.

1.2 DOOR HARDWARE

A. Door Hardware Selection: Furnish door hardware selected by Architect, in quantities specified by Hardware Consultant.

B. Coordination: Coordinate door hardware with other Work. Furnish Shop Drawings of other Work where required or requested to coordinate installation.

1.3 SUBMITTALS

A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.
3. Content: Include the following information:
   a. Type, style, function, size, label, hand, and finish of each door hardware item.
   b. Manufacturer of each item.
   c. Fastenings and other pertinent information.
   d. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e. Explanation of abbreviations, symbols, and codes contained in schedule.
   f. Mounting locations for door hardware.
   g. Door and frame sizes and materials.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

D. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

E. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.

F. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

C. Architectural Hardware Consultant Qualifications: A person who is currently certified by the Door and Hardware Institute 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.

D. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

E. Regulatory Requirements: Comply with provisions of the following:

1. Comply with ANSI A117.1.
    a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping or twisting of the wrist.
    b. Thresholds: Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.

F. Keying Conference: Conduct conference at Project site with project Owner to comply with requirements in Division 1 Section "Project Meetings." Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver keys to Owner by hand, registered mail, or overnight package service.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section, and the Door Hardware Schedule, as provided by Hardware Consultant.

2.2 HINGES

A. Standards: Comply with the following:

1. Butts and Hinges: BHMA A156.1.
2. Template Hinge Dimensions: BHMA A156.7.
3. Self-Closing Hinges: BHMA A156.17.

B. Quantity: Provide the following, unless otherwise indicated:

1. Two Hinges: For doors with heights up to 60 inches.
2. Three Hinges: For doors with heights 61 to 90 inches.
3. Four Hinges: For doors with heights 91 to 120 inches.
4. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

C. Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

Maximum Door Size (inches)	Hinge Height (inches)	Metal Thickness (inches) Standard Weight	Heavy Weight
32 by 84 by 1-3/8	3-1/2	0.123	-
36 by 84 by 1-3/8	4	0.130	-
36 by 84 by 1-3/4	4-1/2	0.134	0.180
42 by 90 by 1-3/4	4-1/2	0.134	0.180
48 by 96 by 1-3/4	4-1/2	0.134	0.180
48 by 120 by 1-3/4	5	0.146	0.190

D. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

E. Hinge Weight: Unless otherwise indicated, provide the following:

1. Exterior Doors: Heavy-weight hinges.
2. Interior Doors: Standard-weight hinges.

F. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Hinges: Stainless steel, with stainless-steel pin.
2. Interior Hinges: Steel, with steel pin.

G. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
2. Wood Screws: For wood doors and frames.
3. Screws: Phillips flat-head screws; machine screws (drilled and tapped holes) for metal doors; wood screws for wood doors and frames. Finish screw heads to match surface of hinges.

2.3 LOCKS AND LATCHES

A. Standards: Comply with the following:

1. Bored Locks and Latches: BHMA A156.2.
2. Auxiliary Locks: BHMA A156.5.

B. Auxiliary Locks: BHMA Grade 1.

C. Lock Trim: Comply with the following:

1. Lever: Cast
2. Escutcheon (Rose): Forged

D. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:

1. Bored Locks: BHMA A156.2.

2.4 CYLINDERS AND KEYING

A. Standards: Comply with the following:

1. Cylinders: BHMA A156.5, removable core.

B. Cylinder Grade: BHMA Grade 1.

C. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:

1. Number of Pins: Six.
2. Bored-Lock Type: Cylinders with tailpieces to suit locks.

D. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:

1. Interchangeable Cores: Core insert, removable by use of a special key.
2. Removable Cores: Core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

E. Keys: Provide nickel-silver keys complying with the following:

1. Quantity: In addition to one extra blank key for each lock, provide the following:
   a. Cylinder Change Keys: Three.
   b. Master Keys: Five.

2.5 STRIKES

A. Standards: Comply with the following:

1. Strikes for Bored Locks and Latches: BHMA A156.2.
2. Strikes for Auxiliary Deadlocks: BHMA A156.5.

B. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.

2.6 DOOR BOLTS

A. Bolt Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Half-Round Surface Bolts: Minimum 7/8-inch (22-mm) throw.
2. Interlocking Surface Bolts: Minimum 15/16-inch (24-mm) throw.

B. Surface Bolts: BHMA A156.16, Grade 1.

1. Flush Bolt Heads: Minimum of 1/2-inch-diameter rods of brass, bronze, or stainless steel with minimum 12-inch-long rod for doors up to 84 inches in height. Provide longer rods as necessary for doors exceeding 84 inches.

2.7 DOOR GASKETING

A. Standard: Comply with BHMA A156.22.

B. General: Provide continuous weather-strip gasketing on exterior doors. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

C. 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.

D. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

E. Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

2.8 THRESHOLDS

A. Standard: Comply with BHMA A156.21.

2.9 MISCELLANEOUS DOOR HARDWARE

A. Standard: Comply with the following:

1. Auxiliary Hardware: BHMA A156.16.

B. Auxiliary Hardware: BHMA Grade 1 unless otherwise indicated.

2.10 FABRICATION

A. Manufacturer's Nameplate: Do not provide manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except as otherwise approved by Architect.

1. Manufacturer's identification will be permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. 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 or forming methods if different from specified standard.

C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.11 FINISHES

A. Standard: Comply with BHMA A156.18.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. BHMA Designations: Comply with base material and finish requirements indicated by the following:

1. BHMA 619: Brushed nickel plated, clear coated, over brass or bronze base metal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, wall and floor construction, and other conditions affecting performance of door hardware.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Steel Doors and Frames: Comply with DHI A115 series.

1. Surface-Applied Door Hardware: Drill and tap doors and frames according to SDI 107.

B. Wood Doors: Comply with DHI A115-W series.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. 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."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.4 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to

operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. 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 from the latch, measured to the leading edge of the door.

3.5 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

END OF SECTION 08710

SECTION 08800 - GLAZING

PART 1 - GENERAL

-1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Windows.
2. Doors.
3. Glazed entrances and storefront framing.

1.3 PERFORMANCE REQUIREMENTS

A. General: Provide glazing systems capable of withstanding normal thermal movement and wind loads without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:

a. Specified Design Wind Loads: As indicated on Drawings.
b. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.

1) For insulating glass.

c. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.
d. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.

C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.4 SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

B. Samples: For the following products, in the form of 12-inch- square Samples for glass and of 12-inch- long Samples for sealants. Install sealant Samples between two strips of material representative in color of the adjoining framing system.

1. Insulating glass for each designation indicated.

C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.

D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.

E. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers).

B. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.

C. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.

1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

D. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.

1. Subject to compliance with requirements, obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency or manufacturer acceptable to authorities having jurisdiction.
2. Where glazing units, including Kind FT glass, are specified in Part 2 articles for glazing lites more than 9 sq. ft. in area, provide glazing products that comply with Category II materials, and for lites 9 sq. ft. or less in area, provide glazing products that comply with Category I or II materials.

E. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: GANA's "Glazing Manual."

2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.

1.8 WARRANTY

A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form, made out to Owner and signed by coated-glass manufacturer agreeing to replace coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years from date of Substantial Completion.

B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS

A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality-Q3; of class indicated.

B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.

2. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass where safety glass is indicated or required by applicable code.

C. Pyrolytic-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide coating applied by pyrolytic deposition process during initial manufacture, and complying with other requirements specified.

D. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for Class CBA units and with requirements specified in this Article and in Part 2 "Insulating-Glass Units" Article.

1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
2. Provide Kind FT (fully tempered) glass lites where safety glass is indicated.
3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
4. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
5. Spacer Specifications: Manufacturer's standard spacer material and construction.

2.2 GLAZING SEALANTS

A. General: Provide products of type indicated, complying with the following requirements:

1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Single-Component Neutral- and Basic-Curing Silicone Glazing Sealants:

a. Products:

1) Dow Corning Corporation; 790.
2) GE Silicones; SilPruf SCS2000.
3) Sonneborn, Div. of ChemRex, Inc.; Omniseal.
4) Tremco; Spectrem 3.

b. Type and Grade: S (single component) and NS (nonsag).
c. Class: 50.
d. Use Related to Exposure: NT (nontraffic).

e. Uses Related to Glazing Substrates: M, G, A, and, as applicable to glazing substrates indicated, O.
f. Applications: Glazing applications.

2.3 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.4 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

2.5 INSULATING-GLASS UNITS

A. Low-E Insulating-Glass Units for Windows and Doors:

1. Basis-of-Design Product: Manufacturer's standard low-E insulating glass.
2. Overall Unit Thickness and Thickness of Each Lite: 16 mm and 3.0 mm.
3. Outdoor Lite: Class 1 (clear) float glass, fully tempered where indicated on the drawings.
4. Indoor Lite: Class 1 (clear) float glass, fully tempered where indicated on the drawings.
5. Low-E Coating: Pyrolytic or sputtered on second surface.
6. Visible Light Transmittance: 72 percent minimum.
7. Winter Nighttime U-Factor: .26 maximum.
8. Solar Heat Gain Coefficient: 0.41 maximum.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing glazing, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep system.
3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

3.4 SEALANT GLAZING (WET)

A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.5 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 08800

SECTION 08830 - MIRRORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following types of silvered flat glass mirrors.

1. Annealed monolithic glass mirrors.

1.3 DEFINITIONS

A. Deterioration of Mirrors: Defects developed from normal use that are attributable to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning mirrors contrary to mirror manufacturer's written instructions. Defects include discoloration, black spots, and clouding of the silver film.

1.4 PERFORMANCE REQUIREMENTS

A. Provide mirrors that will not fail under normal usage. Failure includes glass breakage and deterioration attributable to defective manufacture, fabrication, and installation.

1.5 SUBMITTALS

A. Product Data: For the following:

1. Mirrors.
2. Mirror mastic.
3. Mirror hardware.

B. Shop Drawings: Include mirror elevations, edge details, mirror hardware, and attachments to other work.

C. Product Certificates: For each type of mirror and mirror mastic, signed by product manufacturer.

D. Qualification Data: For Installer.

E. Warranty: Special warranty specified in this Section.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed mirror glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in mirror installations with a record of successful in-service performance.

B. Source Limitations for Mirrors: Obtain mirrors from one source for each type of mirror indicated.

C. Glazing Publications: Comply with the following published recommendations:

1. GANA's "Glazing Manual" unless more stringent requirements are indicated. Refer to this publication for definitions of glass and glazing terms not otherwise defined in this Section or in referenced standards.
2. GANA Mirror Division's "Mirrors, Handle with Extreme Care: Tips for the Professional on the Care and Handling of Mirrors."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect mirrors according to mirror manufacturer's written instructions and as needed to prevent damage to mirrors from condensation, temperature changes, direct exposure to sun, or other causes.

B. Comply with mirror manufacturer's written instructions for shipping, storing, and handling mirrors as needed to prevent deterioration of silvering, damage to edges, and abrasion of glass surfaces and applied coatings. Store indoors, protected from moisture including condensation.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Do not install mirrors until ambient temperature and humidity conditions are maintained at levels indicated for final occupancy.

1.9 WARRANTY

A. Special Warranty: Manufacturer's standard form, made out to Owner and signed by mirror manufacturer agreeing to replace mirrors that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below:

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide mirrors by one of the following:

1. Guardian Industries Corp.
2. Independent Mirror Industries, Inc.
3. Lenoir Mirror Company.
4. VVP America, Inc.; Binswanger Mirror Products.

2.2 SILVERED FLAT GLASS MIRROR MATERIALS

A. Clear Glass Mirrors: ASTM C 1503, Mirror Select Quality.

1. Nominal Thickness: 6.0 mm.

2.3 MISCELLANEOUS MATERIALS

A. Setting Blocks: Elastomeric material with a Type A Shore durometer hardness of 85, plus or minus 5.

B. Mirror Mastic: An adhesive setting compound, produced specifically for setting mirrors and certified by both mirror manufacturer and mastic manufacturer as compatible with glass coating and substrates on which mirrors will be installed.

2.4 MIRROR HARDWARE

A. Top and Bottom Aluminum J-Channels: Aluminum extrusions with a return deep enough to produce a glazing channel to accommodate mirrors of thickness indicated and in lengths required to cover bottom and top edges of each mirror in a single piece.

1. Bottom Trim: J-channels formed with front leg and back leg not less than 3/8 and 7/8 inch in height, respectively, and a thickness of not less than 0.05 inch.
2. Top Trim: J-channels formed with front leg and back leg not less than 5/8 and 1 inch in height, respectively, and a thickness of not less than 0.062 inch.

B. Fasteners: Fabricated of same basic metal and alloy as fastened metal and matching it in finished color and texture where fasteners are exposed.

C. Anchors and Inserts: Provide devices as required for mirror hardware installation. Provide toothed or lead-shield expansion-bolt devices for drilled-in-place anchors. Provide galvanized anchors and inserts for applications on inside face of exterior walls and where indicated.

2.5 FABRICATION

A. Mirror Sizes: To suit Project conditions, cut mirrors to final sizes and shapes. Provide full-width vanity mirrors, extending from top of vanity splash to 76 inches above finish floor.

B. Mirror Edge Treatment: Rounded polished edge.

1. Seal edges of mirrors after edge treatment to prevent chemical or atmospheric penetration of glass coating.
2. Require mirror manufacturer to perform edge treatment and sealing in factory immediately after cutting to final sizes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, over which mirrors are to be mounted, with Installer present, for compliance with installation tolerances, substrate preparation, and other conditions affecting performance.

1. Verify compatibility with and suitability of substrates, including compatibility of mirror mastic with existing finishes or primers.
2. Proceed with mirror installation only after unsatisfactory conditions have been corrected and surfaces are dry.

3.2 PREPARATION

A. Comply with mastic manufacturer's written installation instructions for preparation of substrates, including coating surfaces with mastic manufacturer's special bond coating where applicable.

3.3 INSTALLATION

A. General: Install mirrors to comply with mirror manufacturer's written instructions and with referenced GANA publications. Mount mirrors accurately in place in a manner that avoids distorting reflected images.

B. Provide a minimum air space of 1/8 inch between back of mirrors and mounting surface for air circulation between back of mirrors and face of mounting surface.

C. For wall-mounted mirrors, install mirrors with mastic and mirror hardware.

1. Attach mirror hardware securely to mounting surfaces with mechanical fasteners installed with anchors or inserts as applicable. Install fasteners so heads do not impose point loads on backs of mirrors.
2. For mirror hardware in the form of continuous J-channels at bottom, provide setting blocks 1/8 inch thick by 4 inches long at quarter points. Provide, between setting blocks, 2 slotted weeps not less than 1/4 inch wide by 3/8 inch long.
3. Where indicated, install mirror hardware in the form of J-channels that are fabricated in single lengths to fit and cover top and bottom edges of mirrors.
4. Install mastic as follows:
    a. Apply barrier coat to mirror backing where approved in writing by manufacturers of mirrors and backing material.
    b. Apply mastic to comply with mastic manufacturer's written instructions for coverage and to allow air circulation between back of mirrors and face of mounting surface.
    c. After mastic is applied, align mirrors and press into place while maintaining a minimum air space of 1/8 inch between back of mirrors and mounting surface.

3.4 CLEANING AND PROTECTION

A. Protect mirrors from breakage and contaminating substances resulting from construction operations.

B. Do not permit edges of mirrors to be exposed to standing water.

C. Maintain environmental conditions that will prevent mirrors from being exposed to moisture from condensation or other sources for continuous periods of time.

END OF SECTION 08830

SECTION 09260 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Interior gypsum wallboard.
2. Exterior gypsum board for soffits.
3. Tile backing panels.
4. Sound attenuation blankets.
5. Soffit vents.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.

C. Samples: For the following products:

1. Trim Accessories: Full-size sample in 12-inch- long length for each trim accessory indicated.

1.4 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

1. Fire-Resistance-Rated Assemblies: Indicated by design designations from UL's "Fire Resistance Directory or GA-600, "Fire Resistance Design Manual."

B. Sound Transmission Characteristics: For gypsum board assemblies with STC ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by a qualified independent testing agency.

1. STC-Rated Assemblies: Indicated by design designations from GA-600, "Fire Resistance Design Manual."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.

B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Gypsum Board and Related Products:

a. G-P Gypsum Corp.
b. Lafarge North America Inc.
c. National Gypsum Company.
d. United States Gypsum Co.

2.2 INTERIOR GYPSUM WALLBOARD

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.

B. Gypsum Wallboard: ASTM C 36/C 36M or ASTM C 1396/C 1396M.

1. Regular Type:

a. Thickness: As indicated
b. Long Edges: Tapered.
c. Location: Vertical and horizontal surfaces, unless otherwise indicated.

2. Type X:

a. Thickness: 5/8 inch
b. Long Edges: Tapered.
c. Location: Where required for fire-resistance-rated assembly.

C. Water-Resistant Gypsum Board: ASTM C 630/C 630M or ASTM C 1396/C 1396M.

1. Core: Water-resistant type; Type X core where required for fire resistance; thickness as indicated on Drawings.

2.3 EXTERIOR GYPSUM BOARD FOR CEILINGS AND SOFFITS

A. Exterior Gypsum Soffit Board: ASTM C 931/C 931M or ASTM C 1396/C 1396M, with manufacturer's standard edges.

1. Core: 5/8 inch, Type X.

2.4 TILE BACKING PANELS

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.

B. Cementitious Backer Units: ANSI A118.9.

1. Products: Subject to compliance with requirements, provide one of the following:

a. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
b. National Gypsum Co.; PermaBase Cement Board.
c. United States Gypsum Co.; DUROCK Cement Board.

2. Panel Thickness: As indicated.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, or paper-faced galvanized steel sheet.
2. Shapes:

a. Cornerbead: Use at outside corners, unless otherwise indicated.
b. LC-Bead: J-shaped with long flange receives joint compound; use at exposed panel edges.
c. Expansion (Control) Joint: Use where indicated.

B. Exterior Trim: ASTM C 1047.

1. Material: Rolled zinc.
2. Shapes:

a. Cornerbead.
b. LC-Bead: J-shaped; exposed long flange receives joint compound.

C. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Fry Reglet Corp.
b. Gordon, Inc.
c. Pittcon Industries.

2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221, alloy 6063-T5.

3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.
4. Soffit Vent Strip: Trim piece in profile indicated with continuous ventilation slots along entire length of unit; provide Fry Reglet Corp. #PCS-75-V-100 or equal.
5. Round Soffit Vent: Round ventilation unit; 3-inch diameter, unless otherwise indicated; provide Midget Louver #RLS Series Aluminum Louver or equal.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape:

1. Interior Gypsum Wallboard: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
   a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.

D. Joint Compound for Exterior Applications:

1. Exterior Gypsum Soffit Board: Use setting-type taping compound and setting-type, sandable topping compound.

E. Joint Compound for Tile Backing Panels:

1. Water-Resistant Gypsum Backing Board: Use setting-type taping and setting-type, sandable topping compounds.
2. Cementitious Backer Units: As recommended by manufacturer.

2.7 ACOUSTICAL SEALANT

A. Products: Subject to compliance with requirements, provide one of the following:

1. Acoustical Sealant for Exposed and Concealed Joints:
   a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
   b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.

B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2.8 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

D. Thermal Insulation: As specified in Division 7 Section "Building Insulation."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.

I. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

3.3 PANEL APPLICATION METHODS

A. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
2. On partitions/walls, apply gypsum panels vertically (parallel to framing) horizontally (perpendicular to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
    a. Stagger abutting end joints not less than one framing member in alternate courses of board.
    b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.

B. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.

C. Tile Backing Panels:

1. Cementitious Backer Units: ANSI A108.11, at locations indicated to receive tile.
2. High Humidity Areas Not Subject to Wetting: Install moisture and mold resistant gypsum wallboard panels to produce a flat surface except at showers, tubs, and other tile-surfaced locations.
3. Where tile backing panels abut other types of panels in the same plane, shim surfaces to produce a uniform plane across panel surfaces.

3.4 APPLYING EXTERIOR GYPSUM PANELS FOR CEILINGS AND SOFFITS

A. Apply panels perpendicular to supports, with end joints staggered and located over supports.

1. Install with 1/4-inch open space where panels abut other construction or structural penetrations.
2. Fasten with corrosion-resistant screws.

B. Exterior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. LC-Bead: Use at exposed panel edges.

3.5 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

3.6 FINISHING GYPSUM BOARD ASSEMBLIES

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:

1. Level 1: Embed tape at joints in ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies.
2. Level 2: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges where panels are substrate for tile and where indicated.
3. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

END OF SECTION 09260

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Porcelain tile.
2. Stone thresholds installed as part of tile installations.
3. Waterproof / crack-suppression membrane for thin-set tile installations.

1.3 PERFORMANCE REQUIREMENTS

A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:

1. Level Surfaces: Minimum 0.6.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

C. Samples for Verification:

1. Full-size units of each type and composition of tile and for each color and finish required.
2. Full-size units of each type of trim and accessory for each color and finish required.
3. Stone thresholds in 6-inch lengths.

D. Product Certificates: For each type of product, signed by product manufacturer.

E. Material Test Reports: For each tile-setting and -grouting product.

1.5 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain all tile of same type from one source or producer.

1. Obtain tile from same production run and of consistent quality in appearance and physical properties for each contiguous area.

B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from a single manufacturer and each aggregate from one source or producer.

C. Source Limitations for Other Products: Obtain each of the following products specified in this Section through one source from a single manufacturer for each product:

1. Stone thresholds.
2. Waterproofing.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement in ANSI A137.1 for labeling sealed tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Store liquid latexes and emulsion adhesives in unopened containers and protected from freezing.

E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements, unless otherwise indicated.
2. For facial dimensions of tile, comply with requirements relating to tile sizes specified in Part 1 "Definitions" Article.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI standards referenced in "Setting and Grouting Materials" Article.

C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements:

1. As selected by Unit Buyer from Builder-approved selections.

D. Factory Blending: For tile exhibiting color variations within ranges selected during Sample submittals, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

2.2 TILE PRODUCTS

A. Porcelain Tile: Flat tile as follows:

1. Composition: Porcelain.
2. Facial Dimensions: 12 by 12 inches (nominal).
3. Thickness: 5/16 inch.
4. Face: Plain with square or cushion edges.

B. Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes as follows, selected from manufacturer's standard shapes:

1. Trim: Module size 4 by 12 inches.
2. External Corners for Thin-Set Mortar Installations: Surface bullnose.
3. Internal Corners: Field-butted square corners except with coved base and cap angle pieces designed to fit with stretcher shapes.

2.3 THRESHOLDS

A. General: Fabricate to sizes and profiles indicated or required to provide transition between adjacent floor finishes.

1. Bevel edges at 1:2 slope, aligning lower edge of bevel with adjacent floor finish. Limit height of bevel to 1/2 inch or less, and finish bevel to match face of threshold.

B. Marble Thresholds: ASTM C 503 with a minimum abrasion resistance of 10 per ASTM C 1353 or ASTM C 241 and with honed finish.

1. As selected by Unit Buyer from Seller-approved selections.

2.4 WATERPROOFING AND CRACK-SUPPRESSION MEMBRANES FOR THIN-SET TILE INSTALLATIONS

A. General: Manufacturer's standard product that complies with ANSI A118.10.

B. Fabric-Reinforced, Fluid-Applied Product: System consisting of liquid-latex rubber, and fabric reinforcement.

1. Products:

a. Custom Building Products; Trowel & Seal Waterproofing and Anti-Fracture Membrane.
b. LATICRETE International Inc.; Laticrete 9235 Waterproof Membrane.
c. MAPEI Corporation; PRP M19.
d. Summitville Tiles, Inc.; S-9000.

2.5 SETTING AND GROUTING MATERIALS

A. Manufacturers:

1. Bonsal, W. R., Company.
2. Custom Building Products.
3. C-Cure.
4. LATICRETE International Inc.
5. MAPEI Corporation.
6. Southern Grouts & Mortars, Inc.

B. Chemical-Resistant, Water-Cleanable, Tile-Setting and -Grouting Epoxy: ANSI A118.3.

C. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.

D. Standard Unsanded Cement Grout: ANSI A118.6, color as indicated.

E. Polymer-Modified Tile Grout: ANSI A118.7, sanded, color as indicated.

2.6 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

C. Grout Sealer: Manufacturer's standard penetrating product for sealing grout joints.

1. Products:

a. Bonsal, W. R., Company; Grout Sealer.
b. Bostik; CeramaSeal Grout Sealer.
c. C-Cure; Penetrating Sealer 978.
d. MAPEI Corporation; KER 004, Keraseal Penetrating Sealer for Unglazed Grout and Tile.
e. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.
f. TEC Specialty Products Inc.; TA-256 Penetrating Silicone Grout Sealer.

2.7 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.

1. Verify that substrates for setting tile are firm; dry; clean; free of oil, waxy films, and curing compounds; and within flatness tolerances required by referenced ANSI A108 Series of tile installation standards for installations indicated.
2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed before installing tile.
3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.

B. Provide concrete substrates for tile floors installed with adhesives or thin-set mortar that comply with flatness tolerances specified in referenced ANSI A108 Series of tile installation standards.

1. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions. Use product specifically recommended by tile-setting material manufacturer.
2. Remove protrusions, bumps, and ridges by sanding or grinding.

C. Blending: For tile exhibiting color variations within ranges selected during Sample submittals, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 INSTALLATION, GENERAL

A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules on Drawings.

B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules on Drawings.

C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.

1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.

F. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Locate joints in tile surfaces directly above joints in concrete substrates.
2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."

G. Grout tile to comply with requirements of the following tile installation standards:

1. For ceramic tile grouts (sand-portland cement; dry-set, commercial portland cement; and latex-portland cement grouts), comply with ANSI A108.10.

3.4 WATERPROOFING AND CRACK-SUPPRESSION MEMBRANE INSTALLATION

A. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.

B. Install crack-suppression membrane to comply with manufacturer's written instructions to produce membrane of uniform thickness bonded securely to substrate.

C. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.5 FLOOR TILE INSTALLATION

A. General: Install tile to comply with requirements in the Tile Installation Schedule on Drawings, including those referencing TCA installation methods and ANSI A108 Series of tile installation standards.

B. Joint Widths: Install tile on floors with the following joint widths:

1. Porcelain Tile: 3/8 inch.

C. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile, unless otherwise indicated.

D. Grout Sealer: Apply grout sealer to cementitious grout joints according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer that has gotten on tile faces by wiping with soft cloth.

3.6 CLEANING AND PROTECTING

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove latex-portland cement grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions, but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

B. When recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.

C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

3.7 FLOOR TILE INSTALLATION SCHEDULE

A. Upper Floor Tile Installation: Interior floor installation on cementitious backer units over wood; thin-set mortar, with waterproof/crack-suppression membrane; TCA F144 and ANSI A108.5.

1. Tile Type: Porcelain tile.
2. Thin-Set Mortar: Latex-portland cement mortar.
3. Grout: Polymer-modified sanded grout.

END OF SECTION 09310

SECTION 09640 - WOOD FLOORING

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes factory-finished wood flooring.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show installation details including location and layout of each type of wood flooring and accessory.

C. Samples for Verification: For each type of wood flooring and accessory, with stain color and finish required, approximately 12 inches long and of same thickness and material indicated for the Work and showing the full range of normal color and texture variations expected.

1.4 QUALITY ASSURANCE

A. Mockups: Install mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. To set quality standards for installation, install mockup of floor area as shown on Drawings.
2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver wood flooring materials in unopened cartons or bundles.

B. Protect wood flooring from exposure to moisture. Do not deliver wood flooring until after concrete, masonry, plaster, ceramic tile, and similar wet work is complete and dry.

C. Store wood flooring materials in a dry, warm, ventilated, weathertight location.

1.6 PROJECT CONDITIONS

A. Conditioning period begins not less than seven days before wood flooring installation, is continuous through installation, and continues not less than seven days after wood flooring installation.

1. Environmental Conditioning: Maintain an ambient temperature between 65 and 75 deg F and relative humidity planned for building occupants in spaces to receive wood flooring during the conditioning period.
2. Wood Flooring Conditioning: Move wood flooring into spaces where it will be installed, no later than the beginning of the conditioning period.
    a. Do not install flooring until it adjusts to relative humidity of, and is at same temperature as, space where it is to be installed.
    b. Open sealed packages to allow wood flooring to acclimatize immediately on moving flooring into spaces in which it will be installed.

B. After conditioning period, maintain relative humidity and ambient temperature planned for building occupants.

C. Install factory-finished wood flooring after other finishing operations, including painting, have been completed.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace engineered wood flooring that fails in materials or workmanship within specified warranty period.

1. Installation Warranty Period: Five years from date of Substantial Completion.
2. Structural Warranty Period: One year from date of Substantial Completion.
3. Moisture Protection Warranty: Five years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 FACTORY-FINISHED WOOD FLOORING

A. Engineered-Wood, Strip Flooring: HPVA EF.

1. Manufacturers:
    a. Kahrs International, Inc.
    b. Bruce Hardwood Flooring.
    c. Tarkett Wood Division.
2. Species, Width and Finish: As selected by Unit Buyer from Builder-approved selections.
3. Thickness: 5/8 inch.
4. Length: Manufacturer's standard.
5. Edge Style: Square.
6. Finish: UV urethane or acrylic impregnated.

2.2 ACCESSORY MATERIALS

A. Joint Adhesive: Mastic recommended by flooring and adhesive manufacturers for application indicated.

B. Trowelable Leveling and Patching Compound: Latex-modified, hydraulic-cement-based formulation approved by wood flooring manufacturer.

C. Cork Expansion Strip: Composition cork strip.

D. Trim: In same species and grade as wood flooring, unless otherwise indicated.

1. Threshold: Tapered on each side and routed at bottom of one side to accommodate wood flooring.
2. Reducer Strip: 2 inches wide, tapered on 1 side, and in thickness matching wood flooring.
3. Stair Tread and Nosing: As indicated on Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of wood flooring.

1. Verify that substrates comply with tolerances and other requirements specified in other Sections.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Substrate Moisture Testing, General: Perform tests recommended by manufacturer or, if none, comply with applicable recommendations in NWFA's "Installation Guidelines: Wood Flooring."

1. Proceed with installation only after substrates pass testing.

3.2 PREPARATION

A. Broom or vacuum clean substrates to be covered immediately before product installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION

A. Comply with flooring manufacturer's written installation instructions for "Float-In Installation for Traditional Tongue & Groove, 15 mm".

B. Provide expansion space at walls and other obstructions and terminations of flooring of not less than 1/2 inch.

C. Engineered-Wood Flooring: Install floating floor with glued joints.

D. Wood Trim: Coordinate installation of flooring with installation of baseboard.

3.4 CLEANING AND PROTECTION

A. Perform the following operations immediately after installation of wood flooring:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Use manufacturer's recommended wood floor cleaner on surfaces to remove marks and soil. Do not clean surfaces until after time period recommended by manufacturer.

B. Protect installed wood flooring during remainder of construction period with covering of heavy kraft paper or other suitable material. Do not use plastic sheet or film that might cause condensation.

1. Do not move heavy and sharp objects directly over kraft-paper-covered wood flooring. Protect flooring with plywood or hardboard panels to prevent damage from storing or moving objects over flooring.

END OF SECTION 09640

SECTION 09680 - CARPET

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Carpet.
2. Carpet cushion.

B. Related Sections include the following:

1. Division 1 Section "Allowances" for carpet allowance.

1.3 SUBMITTALS

A. Product Data: For the following, including installation recommendations for each type of substrate:

1. Carpet: For each type indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
2. Carpet Cushion: For each type indicated. Include manufacturer's written data on physical characteristics and durability.

B. Shop Drawings: Show the following:

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
2. Existing flooring materials to be removed.
3. Existing flooring materials to remain.
4. Carpet type, color, and dye lot.
5. Locations where dye lot changes occur.
6. Seam locations, types, and methods.
7. Type of subfloor.
8. Type of installation.
9. Pattern type, repeat size, location, direction, and starting point.
10. Pile direction.
11. Type, color, and location of insets and borders.
12. Type, color, and location of edge, transition, and other accessory strips.
13. Transition details to other flooring materials.
14. Type of carpet cushion.

C. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

1. Carpet: 12-inch- square Sample.
2. Exposed Edge, Transition, and other Accessory Stripping: 12-inch- long Samples.
3. Carpet Cushion: 6-inch- square Sample.
4. Carpet Seam: 6-inch Sample.
5. Mitered Carpet Border Seam: 12-inch- square Sample. Show carpet pattern alignment.

D. Product Schedule: For carpet and carpet cushion. Use same designations indicated on Drawings.

E. Qualification Data: For Installer.

F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency.

G. Maintenance Data: For carpet to include in maintenance manuals. Include the following:

1. Methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
2. Precautions for cleaning materials and methods that could be detrimental to carpet and carpet cushion.

H. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.

B. Fire-Test-Response Characteristics: Provide products with the critical radiant flux classification indicated in Part 2, as determined by testing identical products per ASTM E 648 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

C. Mockups: Before installing carpet, build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRI 104, Section 5, "Storage and Handling."

1.6 PROJECT CONDITIONS

A. Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."

B. Environmental Limitations: Do not install carpet and carpet cushion until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

C. Do not install carpet and carpet cushion over concrete slabs until slabs have cured, are sufficiently dry to bond with adhesive, and have pH range recommended by carpet manufacturer.

D. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.

1.7 WARRANTY

A. Special Warranty for Carpet: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within specified warranty period.

1. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse.
2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs and delamination.
3. Warranty Period: 10 years from date of Substantial Completion.

B. Special Warranty for Carpet Cushion: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet cushion installation that fail in materials or workmanship within specified warranty period.

1. Warranty includes consequent removal and replacement of carpet and accessories.
2. Warranty does not include deterioration or failure of carpet cushion due to unusual traffic, failure of substrate, vandalism, or abuse.
3. Failure includes, but is not limited to, permanent indentation or compression.
4. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CARPET

A. Products: As selected by Owner under allowance specified in Division 1 Section "Allowances".

B. Color: As selected by Unit Buyer from Builder-approved selections.

2.2 CARPET CUSHION

A. Traffic Classification: CCC Class I, moderate traffic.

B. Polyurethane-Foam Cushion: Bonded.

1. Thickness: 3/8 inch.
2. Density: 6 lb/cu. ft.

C. Performance Characteristics: As follows:

1. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm.

2.3 INSTALLATION ACCESSORIES

A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet cushion manufacturer.

B. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is recommended or provided by carpet and carpet cushion manufacturers.

C. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI 104, Section 12.2.

D. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.

E. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.

B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:

1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet cushion manufacturer.
2. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving carpet.
3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. General: Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing substrates.

B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.

C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet cushion manufacturer.

D. Broom and vacuum clean substrates to be covered immediately before installing carpet.

3.3 INSTALLATION

A. Comply with CRI 104 and carpet and carpet cushion manufacturers' written installation instructions for the following, as directed by Interior Designer:

1. Direct-Glue-Down Installation: Comply with CRI 104, Section 9, "Direct Glue-Down Installation."
2. Stretch-in Installation: Comply with CRI 104, Section 12, "Stretch-in Installation."
3. Stair Installation: Comply with CRI 104, Section 13, "Carpet on Stairs" for stretch-in installation.

B. Comply with carpet manufacturer's written recommendations and Shop Drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.

C. Do not bridge building expansion joints with carpet.

D. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.

E. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.

G. Install pattern parallel to walls and borders to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.

H. Comply with carpet cushion manufacturer's written recommendations. Install carpet cushion seams at 90-degree angle with carpet seams.

3.4 CLEANING AND PROTECTING

A. Perform the following operations immediately after installing carpet:

1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
2. Remove yarns that protrude from carpet surface.
3. Vacuum carpet using commercial machine with face-beater element.

B. Protect installed carpet to comply with CRI 104, Section 16, "Protection of Indoor Installations."

C. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet manufacturer and carpet cushion manufacturer.

END OF SECTION 09680

SECTION 09912 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.

1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1.3 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.

1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Qualification Data: For Applicator.

C. Paint Color Schedule: Prior to requesting inspection for Substantial Completion, submit schedule indicating all paint manufacturers, product numbers and colors for all painted surfaces.

1.4 QUALITY ASSURANCE

A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Source Limitations: Obtain primers for each coating system from the same manufacturer as the finish coats.

C. Benchmark Samples (Mockups): Provide a full-coat benchmark finish samples of each type of coating and substrate required on the Project. Comply with procedures specified in PDCA P5. Duplicate finish of approved prepared samples.

1. The Architect will select one room or surface to represent surfaces and conditions for each type of coating and substrate to be painted.
   a. Wall Surfaces: Provide samples on at least 100 sq. ft. of wall surface.
   b. Doors: Provide full size samples for interior and exterior doors.
   c. Small Areas and Items: The Architect will designate an item or area as required.
2. After permanent lighting and other environmental services have been activated, apply coatings to each surface according to the Schedule or as designated by Architect. Provide required sheen, color, and texture on each surface.
   a. After finishes are accepted, the Architect will use the benchmark sample to evaluate coating systems of a similar nature.
3. Final approval of colors will be from job-applied samples.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F . Maintain storage containers in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.6 PROJECT CONDITIONS

A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F .

B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F .

C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: The product listing for paint is based on products of **Sherwin-Williams Co.** Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

1. Benjamin Moore & Co.
2. PPG Industries, Inc.
3. ICI Dulux Paints.

2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. Exterior Paint Colors: As selected by Architect from pre-approved colors.

D. Interior Paint Colors: As selected by Unit Buyer from Builder-approved selection.

E. Interior and Exterior Wood Stain Colors: As selected by Architect from manufacturer's full range.

2.3 EXTERIOR PRIMERS

A. Exterior Latex Primer: MPI #6.

1. Sherwin-Williams; A-100 Exterior Latex Wood Primer B42W41: Applied at a dry film thickness of not less than 2.0 mils.

B. Exterior Galvanized Metal Primer: Factory-formulated galvanized metal primer for exterior application.

1. Sherwin-Williams; Galvite HS Paint B50WZ3: Applied at a dry film thickness of not less than 2.0 mils.

2.4 INTERIOR PRIMERS

A. Interior Gypsum Board Primer: Factory-formulated latex-based primer for interior application.

1. Sherwin-Williams; PrepRite 200 Latex Wall Primer B28W200 Series: Applied at a dry film thickness of not less than 1.6 mils.

B. Interior Wood Primer for Semigloss Alkyd-Enamel Finishes: Factory-formulated alkyd- or acrylic-latex-based interior wood primer.

1. Sherwin-Williams; PrepRite Wall and Wood Primer B49W200 Series: Applied at a dry film thickness of not less than 1.6 mils.

C. Interior Ferrous-Metal Primer: Factory-formulated quick-drying rust-inhibitive alkyd-based metal primer.

1. Sherwin-Williams; Kem Kromik Universal Metal Primer B50NZ6/B50WZ1: Applied at a dry film thickness of not less than 3.0 mils.

D. Interior Zinc-Coated Metal Primer: Factory-formulated galvanized metal primer.

1. Sherwin-Williams; Galvite HS B50WZ30: Applied at a dry film thickness of not less than 3.0 mils.

2.5 EXTERIOR FINISH COATS

A. Exterior Latex (Semigloss): MPI #11 (Gloss Level 5).

1. Sherwin-Williams; A-100 Exterior Gloss Latex A8W16 Series: Applied at a dry film thickness of not less than 1.3 mils.

B. Exterior Full-Gloss Acrylic Enamel for Ferrous and Other Metals: Factory-formulated full-gloss waterborne acrylic-latex enamel for exterior application.

1. Sherwin-Williams; DTM Acrylic Coating Gloss (Waterborne) B66W100 Series: Applied at a dry film thickness of not less than 2.4 mils.

2.6 INTERIOR FINISH COATS

A. Interior Flat Latex Paint: Factory-formulated flat latex paint for interior application.

1. Sherwin-Williams; Duration Home Interior Latex Matte Paint A96 Series: Applied at a dry film thickness of not less than 1.4 mils.

B. Interior Semigloss Alkyd Enamel: Factory-formulated semigloss alkyd enamel for interior application.

1. Sherwin-Williams; ProMar Interior Alkyd Semi-Gloss Enamel B34W251 Series: Applied at a dry film thickness of not less than 1.7 mils.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.

1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.

2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.

1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and reprime.
2. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
3. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
4. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.
4. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
5. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
2. Omit primer over metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.

E. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

F. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 FIRE RATED ASSEMBLIES

A. Permanently identify fire walls. Above decorative ceiling line and in concealed spaces, apply a minimum one-inch wide red line interrupted at maximum 15-ft spacing with the wording "X HOUR FIRE BARRIER - PROTECT ALL OPENINGS" in 4-inch high letters with "X" designating the appropriate hourly rating.

3.5 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.

1. After painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.7 EXTERIOR PAINT SCHEDULE

A. Fiber Cement Panels and Trim: Provide the following finish systems over pre-primed exterior, fiber-reinforced cement panels:

1. Semigloss Acrylic-Enamel Finish: Two finish coats over shop primer.
   a. Finish Coats: Exterior semigloss acrylic enamel.

B. Smooth Wood: Provide the following finish systems over smooth wood trim and other exterior wood surfaces:

1. Semigloss Acrylic-Enamel Finish: Two finish coats over a primer.
   a. Primer: Exterior wood primer for acrylic enamels.
   b. Finish Coats: Exterior semigloss acrylic enamel.

C. Zinc-Coated Metal: Provide the following finish systems over exterior zinc-coated metal surfaces:

1. Full-Gloss Acrylic-Enamel Finish (Typical): Two finish coats over a galvanized metal primer.
   a. Primer: Exterior galvanized metal primer.
   b. Finish Coats: Exterior full-gloss acrylic enamel for ferrous and other metals.

3.8 INTERIOR PAINT SCHEDULE

A. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:

1. Flat Latex Finish: Two finish coats over a primer.

a. Primer: Interior gypsum board primer.
b. Finish Coats: Interior flat latex enamel.

B. Wood: Provide the following paint finish systems over interior wood surfaces:

1. Semigloss Alkyd-Enamel Finish: Two finish coats over a primer.

a. Primer: Interior wood primer for semi-gloss alkyd-enamel finishes (omit for shop primed surfaces).
b. Finish Coats: Interior semigloss alkyd enamel.

C. Ferrous Metal: Provide the following finish systems over ferrous metal:

1. Semi-Gloss Latex Finish: Two finish coats over a primer.

a. Primer: Interior ferrous-metal primer.
b. Finish Coats: Interior semigloss latex enamel.

D. Zinc-Coated Metal: Provide the following finish systems over interior zinc-coated metal surfaces:

1. Semi-Gloss Latex Finish: Two finish coats over a primer.

a. Primer: Interior zinc-coated metal primer.
b. Finish Coats: Interior semigloss latex enamel.

END OF SECTION 09910

SECTION 10305 – MANUFACTURED FIREPLACES (ALTERNATE)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Manufactured fireplaces (Unit Buyer's option).

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Initial Selection: For units with factory-applied color finishes as follows:

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative of manufacturer for installation and maintenance of units required for this Project.

B. Product Approvals: Provide fireplaces with the following approvals:

1. ANSI Z21.50 standard.
2. WHI J20036399.

PART 2 - PRODUCTS

2.1 FIREPLACES

A. Manufactured Fireplaces: Provide vent-free gas fireplace assembly.

1. Size: 34" wide firebox.
2. Rating: 32,000 Btu.
3. Liner: Herringbone pattern refractory brick.
4. Finish: Manufacturer's standard two-coat baked-enamel finish.

5. Viewing Area: Screen.
6. Gas Logs: Realistic split oak ceramic fiber gas logs for use with vent-free fireboxes; complying with ANSI Z21.11.2 standards.
7. Product: Superior Model VF-6000 by Lennox Hearth Products, Orange, CA.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

B. Upon completion of this installation, visually inspect all exposed surfaces. Touch up scratches and abrasions with touch up paint recommended by the manufacturer, making imperfection invisible to the unaided eye from a distance of five feet.

C. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION 10305

SECTION 10550 - POSTAL SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Cluster box units (CBUs).

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of postal specialty.

B. Shop Drawings: For each type of postal specialty. Include plans, elevations, sections, details, and attachments to other work.

1. Include identification sequence for compartments.

C. Samples for Verification: For each type of exposed finish required, prepared on 6-by-6-inch square Samples.

D. Maintenance Data: For postal specialties and finishes to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative of postal specialty manufacturer for installation of units required for this Project.

B. Source Limitations: Obtain postal specialties through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver lock keys to Owner by registered mail or overnight package service with a record of each corresponding lock and key number.

1.6 COORDINATION

A. Coordinate layout and installation of postal specialties with wall construction.

B. Templates: Obtain and distribute to parties involved templates for installing postal specialties.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of postal specialties that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures.
b. Faulty operation of hardware, except door locks.
c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated, and as follows:

1. Sheet and Plate: ASTM B 209 .
2. Extruded Shapes: ASTM B 221 .

B. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers.

2.2 CLUSTER BOX UNITS (CBUs)

A. General: Consisting of multiple compartments enclosed within freestanding, pedestal-mounted enclosure. Provide access to compartments for distributing incoming mail from front of unit by unlocking master lock and swinging pair of side-hinged master doors to provide accessibility to entire group of compartments. Provide access to each compartment for removing mail by swinging compartment door. Comply with USPS-B-1118E.

1. Products:

a. Auth-Florence Manufacturing Co., A Florence Company; 1575 Series.
b. Cutler Manufacturing Corporation; 8901 Series.
c. Salsbury Industries; 3300 Series.
d. Security Manufacturing Corporation; Cluster Box Units.

B. Compartment Enclosure: Fabricated from aluminum sheet with integral weather-protection hood, with the following number and size of compartments:

1. Type III: Provide 16 compartments 12 inches wide by 3 inches high by 15 inches deep, 1 outgoing mail receptacle 12 inches wide by 3 inches high by 15 inches deep, 1 parcel locker 12 inches wide by 10 inches high by 15 inches deep, and 1 parcel locker 12 inches wide by 13 inches high by 15 inches deep.

C. Compartment Doors and Frames: Fabricated from one-piece extruded aluminum or aluminum sheet. Equip each compartment door with lock, tenant identification, and concealed, full-length, flush hinge on one side. Provide outgoing mail slot with weather protection flap.

1. Tenant Identification: Number engraved into face of compartment door.
2. Compartment Door Locks: Dustproof, 5-pin tumbler, cylinder cam locks capable of at least 1000 key changes; with 3 keys for each compartment door. Key each compartment differently.
3. Parcel-Locker Door Locks: Two-key security system in which control key provides access to parcel-locker key, and parcel-locker key opens compartment and is retained once compartment is opened.

D. Pedestal: Same material and finish as compartment enclosure and attached with theft-resistant fasteners.

E. Aluminum Finish: Finish surfaces exposed to view with clear anodic, silver baked-enamel, or powder-coated finish.

2.3 ACCESSORIES

A. General: Unless otherwise indicated, provide accessories fabricated by same manufacturer as mailboxes.

2.4 FABRICATION

A. Preassemble postal specialties in shop to greatest extent possible to minimize field assembly. Form postal specialties to required shapes and sizes, with true lines and angles, square, rigid, and without warp, with metal faces flat and free of dents or distortion. Make exposed metal edges and corners free of sharp edges and burrs, and safe to touch.

B. Mill joints to a tight, hairline fit. Cope or miter corner joints. Form joints exposed to weather to exclude water penetration.

C. Drill or punch holes required for fasteners and remove burrs. Use security fasteners where fasteners are exposed. If used, seal external rivets before finishing.

D. Comply with AWS for recommended practices in shop welding. Provide welds behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded joints of flux, and dress exposed and contact surfaces.

E. Fabricate doors of postal specialties to preclude binding, warping, or misalignment.

F. Where dissimilar metals will contact each other, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturers of dissimilar metals.

2.5 ALUMINUM FINISHES

A. Clear Anodic Finish: Manufacturer's standard Class 1 clear anodic coating, 0.018 mm or thicker, over a satin (directionally textured) mechanical finish, complying with AAMA 611.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances, roughing-in openings, clearances, and other conditions affecting performance of work.

B. Examine walls for suitable conditions where units will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install postal specialties level and plumb, according to manufacturer's written instructions and roughing-in drawings.

1. Metal Protection: Where aluminum will contact grout, concrete, masonry, wood, or dissimilar metals, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturers of dissimilar metals.

3.3 ADJUSTING, CLEANING, AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as postal specialties are installed, unless otherwise indicated in manufacturer's written installation instructions.

B. Adjust doors to operate easily without binding. Verify that integral locking devices operate properly.

C. On completion of postal specialty installation, clean interior and exterior surfaces as recommended by manufacturer.

D. Touch up marred finishes, or replace postal specialties that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by postal specialty manufacturer.

E. Replace postal specialties that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 10550

SECTION 10801 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Bathroom accessories.

B. Related Sections include the following:

1. Division 1 Section "Allowances" for toilet accessory allowance.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

B. Samples: Full size, for each accessory item to verify design, operation, and finish requirements.

1. Approved full-size Samples will be returned and may be used in the Work.

C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

D. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same articles in Part 2, provide products of same manufacturer unless otherwise approved by Architect.

1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.6 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Products: As selected by Owner under allowance specified in Division 1 Section "Allowances".

2.2 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.0312-inch minimum nominal thickness, unless otherwise indicated.

B. Brass: ASTM B 19 flat products; ASTM B 16 (ASTM B 16M), rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Nickel Coating: ASTM B 151/B 151M, Alloy UNS No. C74500 or No. C77600.

D. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

E. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.3 PRIVATE-USE BATHROOM ACCESSORIES

A. Manufacturer:

1. The Delaney Company; Callan Bathroom Accessories.
2. Better Home Products.
3. Ginger.

2.4 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 10801

SECTION 10900 – WARDROBE AND CLOSET SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Coated wire storage shelving.

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for wardrobe and closet specialties.

B. Shop Drawings: Show fabrication and installation details for wardrobe and closet specialties, including attachments to other work. Include plans, elevations, sections, details, and relationship to other work.

C. Samples for Verification: For the following components, of size indicated below.

1. Shelves: Full size, but not more than 24 inches wide by 12 inches deep.
2. Connectors: Full size.

D. Maintenance Data: For wardrobe and closet specialties to include in maintenance manuals.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver wardrobe and closet specialties palleted, wrapped, or crated to provide protection during transit and Project-site storage.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install wardrobe and closet specialties until spaces are enclosed and weatherproof, wet work in spaces is completed and dry, and ambient temperature is being maintained at the levels indicated for Project when occupied for its intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

1. Closet Maid (Basis of Design)
2. Closets by TIMM.
3. Schulte Corp.

2.2 MATERIALS

A. Steel Wire: ASTM A 899; basic cold drawn, Grade C-1006; average tensile strength over 100,000 psi; coated.

2.3 STORAGE SHELVING

A. Open-Wire Storage Shelving: Open-wire, metal storage shelving system.

1. Wire Shelving: Coated steel wire, 1/2 to 1 inch incremental cross-deck spacings.
2. Shelf Capacity: 200 lb.
3. Steel Finish: Heavy-duty polyvinyl chloride (PVC) formula resin, plasticizers, stabilizers, pigments, and other additives; 9 – 11 mils thick; white color, unless otherwise indicated.

B. Sizes and Locations: Field verify all locations.

1. Laundry Shelves: One 16-inch deep shelf and rod; 5'-6" AFF above washer and dryer.
2. Coat Closets: One 12-inch deep shelf and rod at 6'0" AFF.
3. Pantry: Six (6) full-depth shelves at 12 inches o.c., beginning at 24 " AFF.
4. Bedroom Closets (Standard): One 16-inch deep shelf with hanger at 6'-0" AFF.
5. Master Bedroom Closets: Rear of Closet - One 16-inch deep shelf with hanger at 6'-3" AFF. Side Wall – Two 16-inch deep shelves at 3'-2" and 6'-3" AFF. Shoe Shelves – 2'-6" wide by 10" deep at 12 inches o.c., beginning at 24" AFF.

2.4 FABRICATION

A. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Fabricate wardrobe and closet specialties square and rigid with posts plumb and true, and shelves flat and free of dents or distortion. Fabricate connections to form a rigid structure, free of buckling and warping.

C. Shear and punch metals cleanly and accurately. Remove burrs.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Examine walls to which wardrobe and closet specialties will be attached for properly located blocking, grounds, or other solid backing for attachment of support fasteners.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Examine prepared spaces to ensure that they are sized and located in accordance with shop drawings.

B. Cut shelves 1/2 inch to 1-3/8 inches shorter than actual wall measurements; cap all exposed ends.

C. Install shelving plumb and level at heights indicated in accordance with shop drawings and manufacturer's printed installation instructions.

D. On completion of installation, clean exposed surfaces as recommended by manufacturer.

E. Touch up marred finishes or replace metal storage shelving that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by metal storage shelving manufacturer.

END OF SECTION 10900

SECTION 11451 - RESIDENTIAL APPLIANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Electric ranges.
2. Refrigerator/freezers.
3. Microwave ovens.
4. Garbage disposers.
5. Dishwashers.

B. Related Sections include the following:

1. Division 1 Section "Allowances" for appliance allowance.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include operating characteristics, dimensions of individual appliances, and finishes for each appliance.

B. Appliance Schedule: For appliances; use same designations indicated on Drawings.

C. Manufacturer Certificates: Signed by manufacturers certifying that products comply with requirements.

D. Maintenance Data: For each product to include in maintenance manuals.

E. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer for installation and maintenance of units required for this Project.

B. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 100 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.

C. Source Limitations: Obtain residential appliances through one source.

1. Provide products from same manufacturer for each type of appliance required.

2. To the greatest extent possible, provide appliances by a single manufacturer for entire Project.

D. Product Options: Information on Drawings and in Specifications establishes requirements for product's 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.

E. Regulatory Requirements: Comply with provisions of the following product certifications:

1. NFPA: Provide electrical appliances listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
2. UL and NEMA: Provide electrical components required as part of residential appliances that are listed and labeled by UL and that comply with applicable NEMA standards.

F. AHAM Standards: Provide appliances that comply with the following AHAM standards:

1. Dishwashers: AHAM DW-DW1.
2. Electric Ranges: AHAM ER-1.
3. Household Refrigerators: AHAM HRF-1.

G. Energy Ratings: Provide residential appliances that carry labels indicating energy-cost analysis (estimated annual operating costs) and efficiency information as required by the FTC Appliance Labeling Rule.

1. Provide appliances that qualify for the EPA/DOE ENERGY STAR product labeling program.

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.5 WARRANTY

A. Special Warranties: Manufacturer's standard form in which manufacturer of each appliance specified agrees to repair or replace residential appliances or components that fail in materials or workmanship within specified warranty period.

1. Electric Range: Five-year limited warranty for surface-burner elements.
2. Refrigerator/Freezer: Five-year limited warranty for the sealed refrigeration system.
3. Microwave Oven: Five-year limited warranty for defects in the magnetron tube.
4. Dishwasher: 10-year warranty against deterioration of tub and door liner.

PART 2 - PRODUCTS

2.1 APPLIANCES

A. Manufacturers:

1. General Electric Company – Profile Series (Basis of Design).
2. Whirlpool.

B. Range:

1. Slide-In Electric Range:

a. Size: 30 inch, unless otherwise indicated.
b. Electric Burner Elements: Four ceramic elements.
c. Smooth top.
d. Oven: One.
e. Finish: Stainless steel.
f. Product: Profile Model JS968SFSS by GE.

C. Microwave Oven:

1. Oven: Standard features include the following:

a. Oven Capacity: 1.8 cu. ft.
b. Oven Features: Digital control panel with timer display and turntable.
c. Mounting: Undercabinet.
d. Electrical Power: 1100 W.
e. Ventilation: 3-speed fan; externally vented.
f. Finish: Stainless steel.
g. Product: Profile Spacemaker Model JVM12070S by GE.

D. Refrigerator/Freezer:

1. Type: Freestanding, frost-free, side-by-side refrigerator/freezer.
2. Storage Capacity: 23 cu. ft., minimum.
3. Refrigerator Features:

a. Compartment Storage: Vegetable crisper and meat compartment.
b. Glass shelves.

4. Freezer Features: Automatic icemaker and storage bin.
5. Energy Consumption: Measured and certified by AHAM HRF-1 at not more than 689 kWh/year under average conditions.
6. Temperature Controls: Separate temperature controls for each compartment, and with switch for condensation-control heating element at freezer opening.
7. Finish: CleanSteel (Stainless steel) or "stainless steel look" as approved by Architect.
8. Product: Profile Model PSS23LSSSS by GE.

E. Dishwasher:

1. Type: Under the counter, 24 inches wide.
2. Tub and Door Liner: Stainless steel.
3. Operation: Multiple wash cycles with hot-air and heat-off drying cycle options.
4. Controls: Solid-state, electronic, press-to-start type.
5. Finish: Stainless steel.
6. Product: Profile Model PDW8880JSS by GE.

F. Garbage Disposer:

1. Type: Large capacity continuous feed disposer.
2. Motor: 1/2 horsepower.
3. Speed: 1725 rpm grinding action.
4. Connection: Direct wire power connection.
5. Product: Badger Model 5 by Insinkerator.

2.2 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Examine roughing-in for piping systems to verify actual locations of piping connections before equipment installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Comply with manufacturer's written instructions.

B. Built-in Equipment: Securely anchor units to supporting cabinets or countertops with concealed fasteners. Verify that clearances are adequate for proper functioning and rough openings are completely concealed.

C. Freestanding Equipment: Place units in final locations after finishes have been completed in each area. Verify that clearances are adequate to properly operate equipment.

D. Utilities: Refer to Divisions 15 and 16 for plumbing and electrical requirements.

3.3 CLEANING AND PROTECTION

A. Test each item of residential appliances to verify proper operation. Make necessary adjustments.

B. Verify that accessories required have been furnished and installed.

C. Remove packing material from residential appliances and leave units in clean condition, ready for operation.

3.4 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain residential appliances. Refer to Division 1 Section "Demonstration and Training."

END OF SECTION 11451

SECTION 11453 – DISAPPEARING STAIRS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Disappearing attic stairs.

1.3 SUBMITTALS

A. Product Data: For each type of disappearing stair. Indicate component materials and dimensions and include construction and application details.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bessler Stairway Company – Model 30 (Basis of Design).
2. Calvert USA.

2.2 PRODUCTS

A. Lumber: No. 2 yellow pine with 19 percent maximum moisture content.

B. Lumber Trim for Opaque (Painted) Finish: Either finger-jointed or solid pine.

C. Door Panels: Manufacturer's standard hollow core door panel.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set disappearing stair units to required levels and lines, with members plumb, true to line, cut, and fitted. Fit to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

C. Install trim with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long except where necessary. Stagger joints in adjacent and related standing and running trim. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints.

END OF SECTION 11453

SECTION 12356 - RESIDENTIAL CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Kitchen cabinets.
2. Bathroom cabinets.
3. Cultured marble countertops at bathrooms.
4. Granite countertops at kitchens.

B. Related Sections include the following:

1. Division 11 Section "Residential Appliances" for appliances.
2. Division 15 Section "Plumbing Fixtures" for nonintegral sinks and plumbing fittings.

1.3 DEFINITIONS

A. Exposed Surfaces of Cabinets: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets or behind glass doors.

B. Semiexposed Surfaces of Cabinets: Surfaces behind opaque doors or drawer fronts, including interior faces of doors and interiors and sides of drawers. Bottoms of wall cabinets are defined as "semiexposed."

C. Concealed Surfaces of Cabinets: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of cabinets installed directly against and completely concealed by walls or other cabinets. Tops of wall cabinets and utility cabinets are defined as "concealed."

1.4 SUBMITTALS

A. Product Data: For the following:

1. Cabinets.
2. Granite countertops.
3. Cultured marble countertops.
4. Cabinet hardware.

B. Shop Drawings: For cabinets and countertops. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, methods of joining countertops, and cutouts for plumbing fixtures.

C. Samples for Verification:

1. Wood-veneered panels with transparent finish, 8 by 10 inches, for each species.
2. Cultured marble material for countertops, 6 inches square.
3. Granite for countertops, 6 inches square.
4. Exposed hardware, for each type of item.
5. One full-size, 16 inches wide, finished base cabinet complete with hardware, doors, and drawers but without countertop. Sample will be returned to Contractor for use on Project.
6. One full-size cultured marble countertop for base cabinet, with backsplash.
7. One full-size granite countertop for base cabinet, with backsplash.

D. Product Certificates: Signed by manufacturers of casework certifying that products furnished comply with requirements.

1.5 QUALITY ASSURANCE

A. Source Limitations for Cabinets: Obtain cabinets through one source from a single manufacturer.

B. Quality Standards: Unless otherwise indicated, comply with the following standards:

1. Cabinets: KCMA A161.1.

a. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semiexposed location of each unit and showing compliance with the above standard.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Established Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Provide fillers and scribes to allow for trimming and fitting.

C. Field Measurements: Where casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.

D. Field Measurements for Countertops: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete.

1.7 COORDINATION

A. Coordinate layout and installation of blocking and reinforcement in partitions for support of casework.

B. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis of Design Manufacturer: The design for cabinets is based on products **by Marsh Furniture Co.** Subject to compliance with requirements, provide the named product or a comparable product by Architect-approved manufacturer.

2.2 CABINET MATERIALS

A. General:

1. Adhesives: Do not use adhesives that contain urea formaldehyde.
2. Hardwood Lumber: Kiln dried to 7 percent moisture content.
3. Softwood Lumber: Kiln dried to 10 percent moisture content.
4. Hardwood Plywood: HPVA HP-1.
5. Particleboard: ANSI A208.1, Grade M-2.
6. Medium-Density Fiberboard: ANSI A208.2, Grade MD.
7. Hardboard: AHA A135.4, Class 1 Tempered.

B. Exposed Materials:

1. Exposed Wood Species:
   a. Select materials for compatible color and grain. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure, or natural character markings.
   b. Staining and Finish: As indicated.
2. Solid Wood: Clear hardwood lumber of species indicated, free of defects.
3. Plywood: Hardwood plywood with face veneer of species indicated, with Grade A faces and Grade C backs of same species as faces.
   a. Edge band exposed edges with minimum 1/8-inch- thick, solid-wood edging of same species as face veneer.
4. Thermoformed Vinyl-Faced Panels: Medium-density fiberboard, milled to required shapes, with a thermoformed vinyl overlay applied in a vacuum or membrane press.
   a. Color: White.

C. Semiexposed Materials: Unless otherwise indicated, provide the following:

1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects. Same species as exposed surfaces or stained to be compatible with exposed surfaces.

2. Plywood: Hardwood plywood with Grade C faces and not less than Grade 3 backs of same species as faces. Face veneers of same species as exposed surfaces or stained to be compatible with exposed surfaces.
3. Vinyl-Faced Particleboard: Medium-density particleboard with vinyl film adhesively bonded to particleboard.

   a. Provide vinyl film on both sides of shelves, dividers, drawer bodies, and other components with two semiexposed surfaces and on semiexposed edges.
   b. Colors, Textures, and Patterns: White.

D. Concealed Materials: Solid wood or plywood, of any hardwood or softwood species, with no defects affecting strength or utility; particleboard; medium-density fiberboard; or hardboard.

2.3 CABINET HARDWARE

A. General: Manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish as follows:

1. Manufacturer: Liberty Hardware Manufacturing Corporation, Winston-Salem, NC or equal as approved by Architect.

B. Pulls: Surface-mounted decorative pulls, as selected by Architect.

C. Hinges: Concealed European-style self-closing hinges.

D. Drawer Guides: Epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or B05091.

2.4 COUNTERTOP MATERIALS

A. Cultured Marble Material: Homogeneous blend of polyester resin, catalyst, fillers and pigments that is thoroughly mixed and placed into open molds that have been coated with a clear gel coat. The gel coat is specially formulated to produce a tough, durable, transparent surface resistant to inservice wear.

1. Integral Sink Bowls: Provide integral bowls in sizes as indicated.
2. Colors and Patterns: As selected by Unit Owner from Builder-approved selections.
3. Product: Cultured Marble Vanity Top by Virginia Marble Manufacturers, Inc. or equal.

B. Stone Countertop:

1. Material: Granite, ASTM C 615.
2. Colors and Patterns: As selected by Unit Owner from Builder-approved selections.
3. Manufacturer: Beltone Marble and Granite, as distributed by Makai Sales, Ltd. or equal.

C. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.5 KITCHEN CABINETS

A. Kitchen Cabinet Style and Finish: As selected by Unit Owner from Builder-approved selections as follows:

1. Oak with raised style panel.
2. Maple with raised style panel.
3. Cherry with raised style panel.

B. Face Style: Flush overlay; door and drawer faces cover cabinet fronts with only enough space between faces for operating clearance.

C. Cabinet Style: Face Frame.

D. Door and Drawer Fronts: Solid-wood stiles and rails, 5/8 inch thick, with 3/4-inch- thick, solid-wood center panels.

E. Exposed Cabinet End Finish: Wood veneer.

F. Drawers: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.

G. Shelves: 3/4-inch- thick particleboard or 5/8-inch- thick plywood.

H. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.

I. Factory Finishing: Finish cabinets at factory. Defer only final touchup until after installation.

2.6 BATHROOM CABINETS

A. Bathroom Cabinet Style and Finish: "Dakota" by Marsh Furniture Co.; white thermofoil.

B. Face Style: Flush overlay; door and drawer faces cover cabinet fronts with only enough space between faces for operating clearance.

C. Cabinet Style: Frameless.

D. Door and Drawer Fronts: 1/2-inch- thick, thermoformed-vinyl-faced panels with vinyl overlay on faces and edges and with thermoset decorative panel backs.

E. Exposed Cabinet End Finish: Thermoformed vinyl-faced panels.

F. Drawers: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.

G. Shelves: 3/4-inch- thick particleboard or 5/8-inch- thick plywood.

H. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.

2.7 COUNTERTOPS

A. Configuration: Provide countertops with the following front and backsplash style:

1. Front: Bullnose.
2. Backsplash: Radius edge with 3/8-inch radius.

B. Countertops for Bathrooms: Cultured marble.

C. Countertops for Kitchens: Granite.

D. Cultured Marble Countertops: Fabricate tops in one piece with shop-applied backsplashes, unless otherwise indicated. Comply with cultured marble manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.

1. Form integral sink bowls in cultured marble countertops in the shop.

E. Stone Countertops:

1. Thickness: 3 cm.
2. Seams: Fabricate countertops in sections for joining in field, with bonded seams.
3. Cutouts and Holes for Fittings: Make cutouts in shop using template furnished by fitting manufacturer. Form cutouts to smooth, even curves with edges at right angles to top. Ease juncture of cutout edges with tops, and finish edges to match tops.
4. Splashes: 3 cm nominal thickness backsplashes and end splashes, profile as indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match cabinet face.

B. Install cabinets without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.

C. Install cabinets and countertop level and plumb to a tolerance of 1/8 inch in 8 feet.

D. Fasten cabinets to adjacent units and to backing.

1. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches o.c., with toggle bolts through metal backing behind gypsum board.

E. Fasten cultured marble countertops by screwing through corner blocks of base units into underside of countertop. Align adjacent surfaces, and form seams to comply with manufacturer's written instructions using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.2 INSTALLING STONE COUNTERTOPS

A. Install stone countertops over plywood subtops with a full spread of water-cleanable epoxy adhesive.

B. Space seams with 1/16-inch gap for filling with sealant. Use temporary shims to ensure uniform spacing and use clamps to eliminate lipping.

C. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts while cutting.

D. Install rim mounted stainless steel sink as specified in Division 15 Section "Plumbing Fixtures".

E. Install backsplash and end splashes by adhering to wall with water-cleanable epoxy adhesive. Leave 1/16-inch gap between countertop and splash for filling with sealant. Use temporary shims to ensure uniform spacing.

F. Apply sealant to seams and to gap between countertops and splashes.

3.3 ADJUSTING AND CLEANING

A. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

B. Clean casework on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

END OF SECTION 12356

SECTION 14240 - HYDRAULIC ELEVATORS (ALTERNATE)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes residential hydraulic elevators (Unit Buyer's option).

1.3 SUBMITTALS

A. Submittals: Shop Drawings and Samples of exposed finishes.

1. Provide Owner with inspection and acceptance certificates and operating permits, as required by authorities having jurisdiction.
2. Submit maintenance manuals, including parts list with sources indicated, and emergency instructions. Submit for Owner's information at contract closeout.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: In addition to local governing regulations, comply with ASME A17.1.

1. Seismic Requirements: In accordance with applicable Code.

B. Maintenance: Beginning at Substantial Completion, provide 12 months' full maintenance service. Include monthly preventive maintenance, repair, or replacement of worn or defective components, lubrication, cleaning, and adjusting.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

1. Waupaca Elevator Inc. – "Designer" Model Excelevator Hydraulic Elevator.
2. Inclinator Company of America, Inc. – "Elevette 3400" with Monorail Hydraride.

2.2 MATERIALS AND COMPONENTS

A. Systems and Machinery: Manufacturer's standard hydraulic residential elevator systems as indicated in published product literature and as follows:

1. Rated Load: 750 lbs.
2. Rated Speed: 40 fpm.

B. Power Supply: 208/240 V, 60 Hz, single phase; 30 amps.

C. Car Dimensions: 36 inches by 48 inches.

D. Gate Type: Collapsible accordion type.

E. Concealed Wiring: Enclose wiring within housings of units. Do not use conduit exposed to view.

F. Finish Materials: As selected by Unit Buyer from Builder-approved selections.

2.3 OPERATION SYSTEMS

A. "Automatic Operation" as defined in ASME A17.1.

2.4 SIGNAL EQUIPMENT

A. Manufacturer's standard car control station. Mount in return panel adjacent to car door.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide substantially level pit floor slab to support loads imposed and adequate supports for guide rail fastenings, in accordance with manufacturer's requirements.

B. Comply with manufacturer's written instructions.

C. Adjust elevators for 1/4-inch leveling tolerance.

D. Set sills flush with finished floor. Fill space under sills solidly with nonshrink, nonmetallic grout.

E. On completion of installation, and before permitting use of elevators, perform acceptance tests as required by ASME A17.1 and by governing regulations and agencies.

END OF SECTION 14240

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of Architects
1735 New York Avenue, N.W.
Washington, D.C. 20006-5292

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ARTICLE 1 GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of Addenda relating to bidding requirements).

1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Architect and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor, (3) between the Owner and Architect or (4) between any persons or entities other than the Owner and Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

1.1.7 THE PROJECT MANUAL

The Project Manual is a volume assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are

complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.3 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.3 CAPITALIZATION

1.3.1 Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles and identified references to Paragraphs, Subparagraphs and Clauses in the document or (3) the titles of other documents published by the American Institute of Architects.

1.4 INTERPRETATION

1.4.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.5 EXECUTION OF CONTRACT DOCUMENTS

1.5.1 The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor or both do not sign all the Contract Documents, the Architect shall identify such unsigned Documents upon request.

1.5.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

1.6 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

1.6.1 The Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect or the Architect's consultants, and unless otherwise indicated the Architect and the Architect's consultants shall be deemed the authors of them and will retain all common law, statutory and other reserved rights, in addition to the copyrights. All copies of Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in

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the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' copyrights or other reserved rights.

ARTICLE 2 OWNER

2.1 GENERAL

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Subparagraph 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Furnishing of such evidence shall be a condition precedent to commencement or continuation of the Work. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

2.2.2 Except for permits and fees, including those required under Subparagraph 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

2.2.4 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.

2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or persistently fails to carry out Work in

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accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven-day period give the Contractor a second written notice to correct such deficiencies within a three-day period. If the Contractor within such three-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

3.1 GENERAL

3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.1 Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Subparagraph 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the Architect as a request for information in such form as the Architect may require.

3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Architect, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Architect.

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3.2.3 If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Architect in response to the Contractor's notices or requests for information pursuant to Subparagraphs 3.2.1 and 3.2.2, the Contractor shall make Claims as provided in Subparagraphs 4.3.6 and 4.3.7. If the Contractor fails to perform the obligations of Subparagraphs 3.2.1 and 3.2.2, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. The Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage.

3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

3.4 LABOR AND MATERIALS

3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.4.2 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order.

3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.5 WARRANTY

3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract

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Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.6 TAXES

3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded.

3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work.

3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

3.7.4 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

3.8 ALLOWANCES

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

3.8.2 Unless otherwise provided in the Contract Documents:

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances;

.3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Clause 3.8.2.1 and (2) changes in Contractor's costs under Clause 3.8.2.2.

3.8.3 Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in the Work.

3.9 SUPERINTENDENT

3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

3.10.2 The Contractor shall prepare and keep current, for the Architect's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals.

3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

3.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect is subject to the limitations of Subparagraph 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect without action.

3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by

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the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice the Architect's approval of a resubmission shall not apply to such revisions.

3.12.10 The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Subparagraph 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

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3.13 USE OF SITE

3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

3.14 CUTTING AND PATCHING

3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

3.15 CLEANING UP

3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

3.16 ACCESS TO WORK

3.16.1 The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

3.17 ROYALTIES, PATENTS AND COPYRIGHTS

3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

3.18 INDEMNIFICATION

3.18.1 To the fullest extent permitted by law and to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor in accordance with Paragraph 11.3, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be

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construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

3.18.2 In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Subparagraph 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

4.1 ARCHITECT

4.1.1 The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

4.1.3 If the employment of the Architect is terminated, the Owner shall employ a new Architect against whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the former Architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents, and will be an Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Paragraph 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

4.2.2 The Architect, as a representative of the Owner, will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Subparagraph 3.3.1.

4.2.3 The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

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4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

4.2.6 The Architect will have authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

4.2.7 The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Paragraphs 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.

4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor.

The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Paragraph 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until 15 days after written request is made for them.

4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.

4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

4.3 CLAIMS AND DISPUTES

4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

4.3.2 Time Limits on Claims. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Architect and the other party.

4.3.3 Continuing Contract Performance. Pending final resolution of a Claim except as otherwise agreed in writing or as provided in Subparagraph 9.7.1 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

4.3.4 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the Architect has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to further proceedings pursuant to Paragraph 4.4.

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4.3.5 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.6.

4.3.6 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Paragraph 4.3.

4.3.7 CLAIMS FOR ADDITIONAL TIME

4.3.7.1 If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

4.3.7.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

4.3.8 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

4.3.9 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

4.3.10 Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Subparagraph 4.3.10 shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

4.4 RESOLUTION OF CLAIMS AND DISPUTES

4.4.1 Decision of Architect. Claims, including those alleging an error or omission by the Architect but excluding those arising under Paragraphs 10.3 through 10.5, shall be referred initially to the Architect for decision. An initial decision by the Architect shall be required as a

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condition precedent to mediation, arbitration or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered by the Architect. The Architect will not decide disputes between the Contractor and persons or entities other than the Owner.

4.4.2 The Architect will review Claims and within ten days of the receipt of the Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Architect is unable to resolve the Claim if the Architect lacks sufficient information to evaluate the merits of the Claim or if the Architect concludes that, in the Architect's sole discretion, it would be inappropriate for the Architect to resolve the Claim.

4.4.3 In evaluating Claims, the Architect may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Architect in rendering a decision. The Architect may request the Owner to authorize retention of such persons at the Owner's expense.

4.4.4 If the Architect requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either provide a response on the requested supporting data, advise the Architect when the response or supporting data will be furnished or advise the Architect that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Architect will either reject or approve the Claim in whole or in part.

4.4.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be final and binding on the parties but subject to mediation and arbitration.

4.4.6 When a written decision of the Architect states that (1) the decision is final but subject to mediation and arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within 30 days after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said 30 days' period shall result in the Architect's decision becoming final and binding upon the Owner and Contractor. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned.

4.4.7 Upon receipt of a Claim against the Contractor or at any time thereafter, the Architect or the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Architect or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.4.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the Claim by the Architect, by mediation or by arbitration.

4.5 MEDIATION

4.5.1 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Subparagraphs 4.3.10, 9.10.4 and 9.10.5 shall, after initial decision by the Architect or 30 days after submission of the Claim to the Architect, be

subject to mediation as a condition precedent to arbitration or the institution of legal or equitable proceedings by either party.

4.5.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract and with the American Arbitration Association. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

4.5.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

4.6 ARBITRATION

4.6.1 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Subparagraphs 4.3.10, 9.10.4 and 9.10.5, shall, after decision by the Architect or 30 days after submission of the Claim to the Architect, be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes by mediation in accordance with the provisions of Paragraph 4.5.

4.6.2 Claims not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Architect.

4.6.3 A demand for arbitration shall be made within the time limits specified in Subparagraphs 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Paragraph 13.7.

4.6.4 Limitation on Consolidation or Joinder. No arbitration arising out of or relating to the Contract shall include, by consolidation or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by written consent containing specific reference to the Agreement and signed by the Architect, Owner, Contractor and any other person or entity sought to be joined. No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in arbitration. No person or entity other than the Owner, Contractor or a separate contractor as described in Article 6 shall be included as an original third party or additional third party to an arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described therein or with a person or entity not named or described therein. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

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4.6.5 Claims and Timely Assertion of Claims. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

4.6.6 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

ARTICLE 5 SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitute.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the

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Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Paragraph 4.3.

6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the

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Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5.

6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Subparagraph 3.14.

6.3 OWNER'S RIGHT TO CLEAN UP

6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

7.1 GENERAL

7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

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7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

.1 change in the Work;

.2 the amount of the adjustment, if any, in the Contract Sum; and

.3 the extent of the adjustment, if any, in the Contract Time.

7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Subparagraph 7.3.3.

7.3 CONSTRUCTION CHANGE DIRECTIVES

7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 unit prices stated in the Contract Documents or subsequently agreed upon;

.3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 as provided in Subparagraph 7.3.6.

7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Architect on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Clause 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph 7.3.6 shall be limited to the following:

.1 costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

.2 costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

.5 additional costs of supervision and field office personnel directly attributable to the change.

7.3.7 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7.3.8 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs. For any portion of such cost that remains in dispute, the Architect will make an interim determination for purposes of monthly certification for payment for those costs. That determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a claim in accordance with Article 4.

7.3.9 When the Owner and Contractor agree with the determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

7.4 MINOR CHANGES IN THE WORK

7.4.1 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 8 TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

8.1.2 The date of commencement of the Work is the date established in the Agreement.

8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Paragraph 9.8.

8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents or a notice to proceed given

by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of morgages, mechanic's liens and other security interests.

8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Paragraph 4.3.

8.3.3 This Paragraph 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents.

9.3.1.1 As provided in Subparagraph 7.3.8, such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

9.3.1.2 Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

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9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's

opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Subparagraph 3.3.2, because of:

.1 defective Work not remedied;

.2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;

.3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;

.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;

.5 damage to the Owner or another contractor;

.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or

.7 persistent failure to carry out the Work in accordance with the Contract Documents.

9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.6 PROGRESS PAYMENTS

9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

9.6.4 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.6.2, 9.6.3 and 9.6.4.

9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

9.7 FAILURE OF PAYMENT

9.7.1 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

9.8 SUBSTANTIAL COMPLETION

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Clause 11.4.1.5 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and

have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Subparagraph 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Subparagraph 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that

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portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

.1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;

.2 failure of the Work to comply with the requirements of the Contract Documents; or

.3 terms of special warranties required by the Contract Documents.

9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Clauses 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.18.

10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

10.3 HAZARDOUS MATERIALS

10.3.1 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

10.3.2 The Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up, which adjustments shall be accomplished as provided in Article 7.

10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Subparagraph 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) and provided that such damage, loss or expense is not due to the sole negligence of a party seeking indemnity.

10.4 The Owner shall not be responsible under Paragraph 10.3 for materials and substances brought to the site by the Contractor unless such materials or substances were required by the Contract Documents.

10.5 If, without negligence on the part of the Contractor, the Contractor is held liable for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

10.6 EMERGENCIES

10.6.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or

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extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph 4.3 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;

.2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

.3 claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

.4 claims for damages insured by usual personal injury liability coverage;

.5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

.7 claims for bodily injury or property damage arising out of completed operations; and

.8 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

11.3 PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE

11.3.1 Optionally, the Owner may require the Contractor to purchase and maintain Project Management Protective Liability insurance from the Contractor's usual sources as primary coverage for the Owner's, Contractor's and Architect's vicarious liability for construction operations under the Contract. Unless otherwise required by the Contract Documents, the Owner

shall reimburse the Contractor by increasing the Contract Sum to pay the cost of purchasing and maintaining such optional insurance coverage, and the Contractor shall not be responsible for purchasing any other liability insurance on behalf of the Owner. The minimum limits of liability purchased with such coverage shall be equal to the aggregate of the limits required for Contractor's Liability Insurance under Clauses 11.1.1.2 through 11.1.1.5.

11.3.2 To the extent damages are covered by Project Management Protective Liability insurance, the Owner, Contractor and Architect waive all rights against each other for damages, except such rights as they may have to the proceeds of such insurance. The policy shall provide for such waivers of subrogation by endorsement or otherwise.

11.3.3 The Owner shall not require the Contractor to include the Owner, Architect or other persons or entities as additional insureds on the Contractor's Liability Insurance coverage under Paragraph 11.1.

11.4 PROPERTY INSURANCE

11.4.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.4 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

11.4.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

11.4.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

11.4.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

11.4.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

11.4.1.5 Partial occupancy or use in accordance with Paragraph 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial

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occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

11.4.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

11.4.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

11.4.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

11.4.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Subparagraph 11.4.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

11.4.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Paragraph 11.4. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

11.4.7 Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Paragraph 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

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11.4.8 A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.4.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

11.4.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.6. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

11.4.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved as provided in Paragraphs 4.5 and 4.6. The Owner as fiduciary shall, in the case of arbitration, make settlement with insurers in accordance with directions of the arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

11.5 PERFORMANCE BOND AND PAYMENT BOND

11.5.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

11.5.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

12.1.2 If a portion of the Work has been covered which the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

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12.2 CORRECTION OF WORK

12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

12.2.1.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

12.2.2 AFTER SUBSTANTIAL COMPLETION

12.2.2.1 In addition to the Contractor's obligations under Paragraph 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Subparagraph 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Paragraph 2.4.

12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work.

12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Paragraph 12.2.

12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.2.5 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the one-year period for correction of Work as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.3 ACCEPTANCE OF NONCONFORMING WORK

12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Subparagraph 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.2.2 The Owner may, without consent of the Contractor, assign the Contract to an institutional lender providing construction financing for the Project. In such event, the lender shall assume the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Subparagraph 13.5.3, shall be at the Owner's expense.

13.5.3 If such procedures for testing, inspection or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 INTEREST

13.6.1 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

13.7.1 As between the Owner and Contractor:

.1 Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

.2 Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and

.3 After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Paragraph 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Paragraph 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

.1 issuance of an order of a court or other public authority having jurisdiction which requires all Work to be stopped;

.2 an act of government, such as a declaration of national emergency which requires all Work to be stopped;

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.3 because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or

.4 the Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Subparagraph 2.2.1.

14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Paragraph 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

14.1.3 If one of the reasons described in Subparagraph 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.3.

14.2 TERMINATION BY THE OWNER FOR CAUSE

14.2.1 The Owner may terminate the Contract if the Contractor:

.1 persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;

.3 persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

14.2.2 When any of the above reasons exist, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 accept assignment of subcontracts pursuant to Paragraph 5.4; and

.3 finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

14.2.3 When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Subparagraph 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

PALMETTO POINTE

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PLAINTIFF'S EXHIBIT 619

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NOTE: "M" DENOTES MIRRORED BUILDING

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TITLE SHEET

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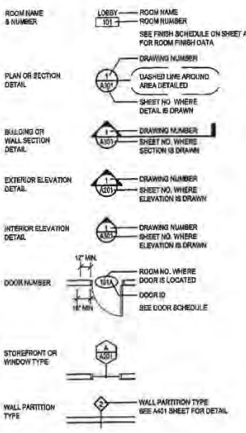
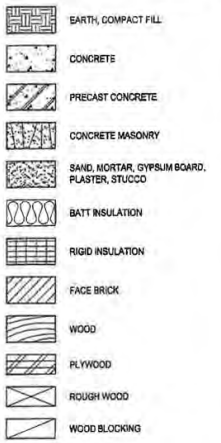
SYMBOL LEGEND



MATERIALS LEGEND

SECTIONS



ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ANOD.	ANODIZED
ARCH.	ARCHITECTURAL/ARCHITECT
@	AT
BRG.	BEARING
BOT.	BOTTOM
BLDG.	BUILDING
(C)	CAULK
CAB.	CABINET
C.F.C.I.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
C.F.O.I.	CONTRACTOR FURNISHED, OWNER INSTALLED
CLG.	CEILING
CPT.	CARPET
CTR.	CENTER
CLOS.	CLOSET
COL.	COLUMN
CONC.	CONCRETE
C.J.	CONTROL JOINT
DTL.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
DWG.	DRAWING
EA.	EACH
ELEC.	ELECTRIC/ELECTRICAL
E.W.C.	ELECTRIC WATER COOLER
ELEV.	ELEVATION-GRADE OR BLDG.
E.J.	EXPANSION JOINT
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.F.	EXHAUST FAN
EXIST., (E)	EXISTING
EXT.	EXTERIOR
FT.	FEET
FIN.	FINISH
F.E.	FIRE EXTINGUISHER (ON WALL BRACKET)
F.E.C.	FIRE EXTINGUISHER (IN SEMI-RECESSED WALL CABINET)
F.L.R.	FLOOR
F.D.	FLOOR DRAIN
GALV.	GALVANIZED
GA.	GAUGE
GYP.BD.	GYPSUM BOARD
HC.	HANDICAP ACCESSIBLE
HDWR.	HARDWARE
HT.	HEIGHT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
LAM.	LAMINATE
LAV.	LAVATORY
MFR.	MANUFACTURER
M.O.	MASONRY OPENING
MATL.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MTL.	METAL
MIN.	MINIMUM
(N)	NEW
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
O.F.O.I.	OWNER FURNISHED, OWNER INSTALLED
OPNG.	OPENING
O.H.	OPPOSITE HAND
O.R.D.	OVERFLOW ROOF DRAIN
(P)	PAINT
PLYWD.	PLYWOOD
PR.	PAIR
PREF.	PRE FINISHED
PREFAB.	PREFABRICATED
RAD., R.	RADIUS
RE:	REFERENCE
REINF.	REINFORCE
REQ'D.	REQUIRED
R.D. (L)	ROOF DRAIN (LEADER)
R.O.	ROUGH OPENING
SHT.	SHEET
SIM.	SIMILAR
SPECS.	SPECIFICATIONS
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STRUCT.	STRUCTURAL
TEL.	TELEPHONE
TR.	TREATED
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
(V)	VERIFY
V.C.T.	VINYL COMPOSITION TILE
VERT.	VERTICAL
V.T.R.	VENT THROUGH ROOF
W.C.	WATER CLOSET
WD.	WOOD

CODE INFORMATION

APPLICABLE CODES

BUILDING CODE:	INTERNATIONAL RESIDENTIAL CODE - 2000 EDITION
MECHANICAL CODE:	INTERNATIONAL MECHANICAL CODE - 2000 EDITION
PLUMBING CODE:	INTERNATIONAL PLUMBING CODE - 2000 EDITION
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE - 1997 EDITION
FIRE SAFETY	IFC - INTERNATIONAL FIRE CODE

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ABBREVIATIONS, SYMBOLS, NOTES, AND CODE ANALYSIS

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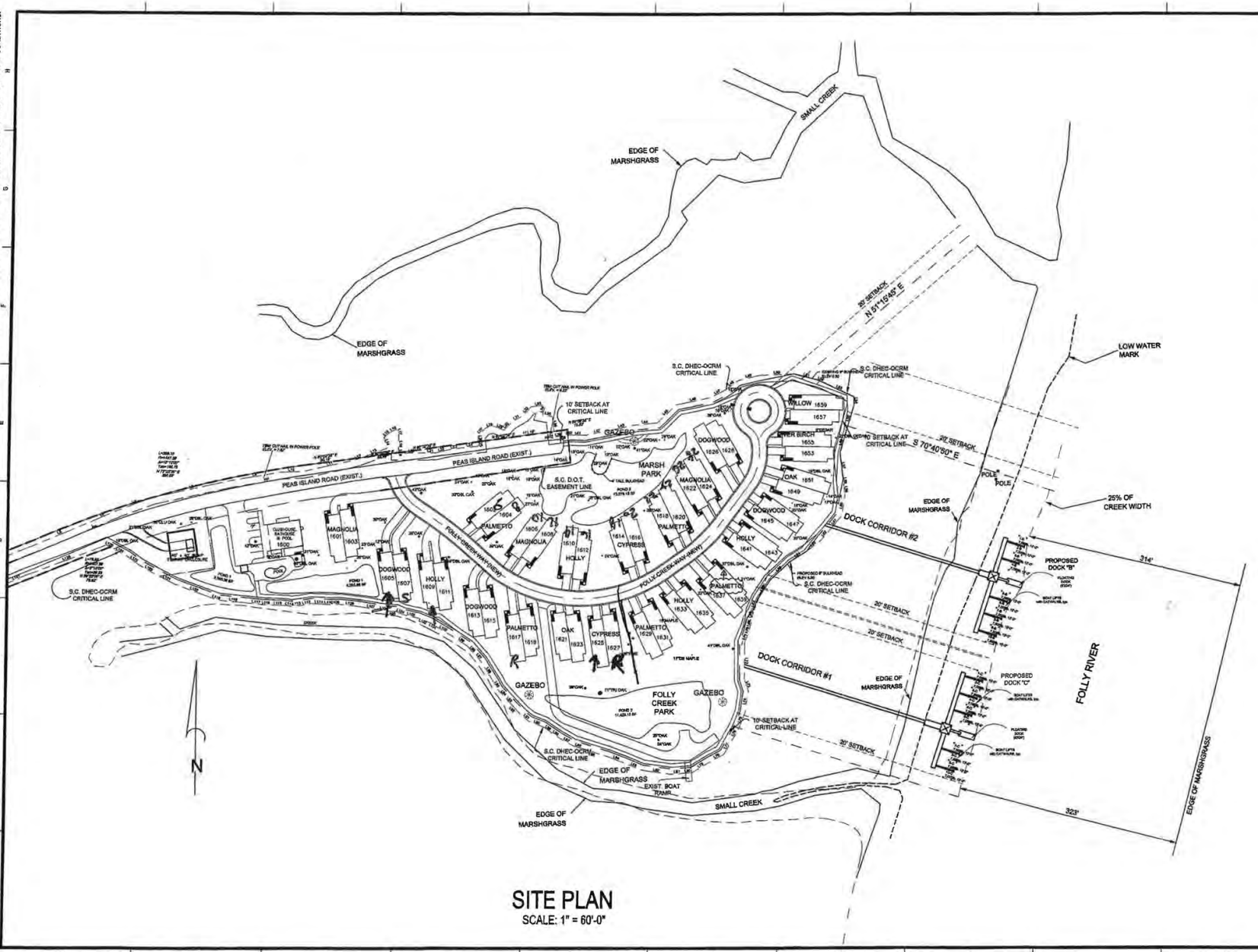

SITE PLAN

SCALE: 1" = 60'-0"

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PALMETTO POINTE
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SITE PLAN SHOWING PROPOSED DOCKS

REVISIONS	
	8/7/08
	9/1/08

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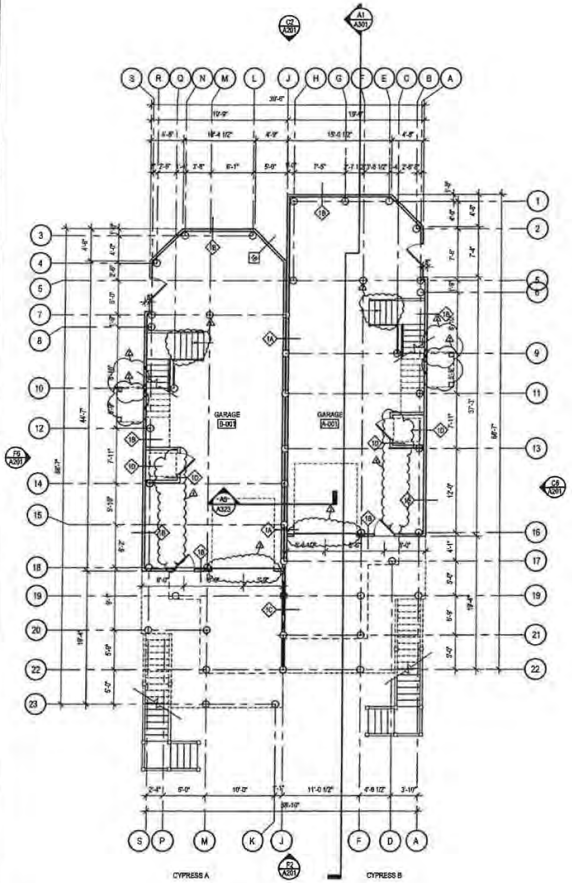
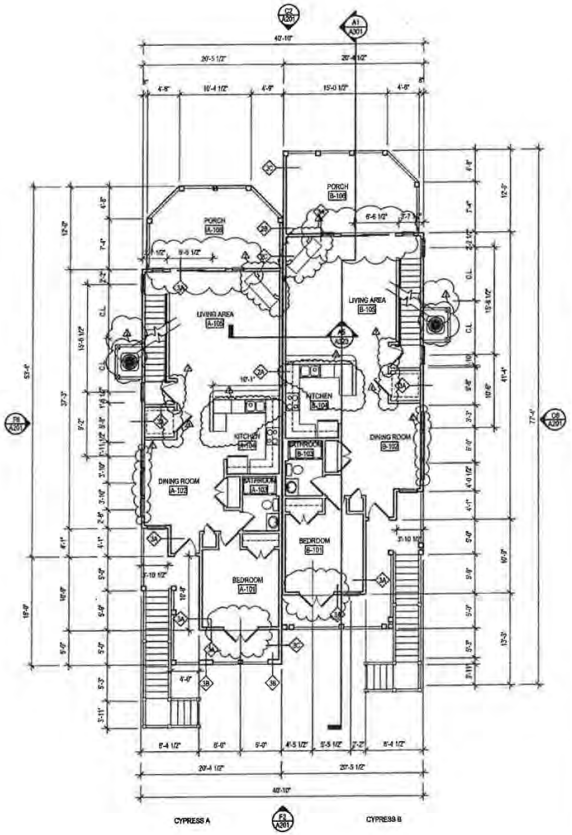
SHEET NUMBER	A001

CONSTRUCTION SET

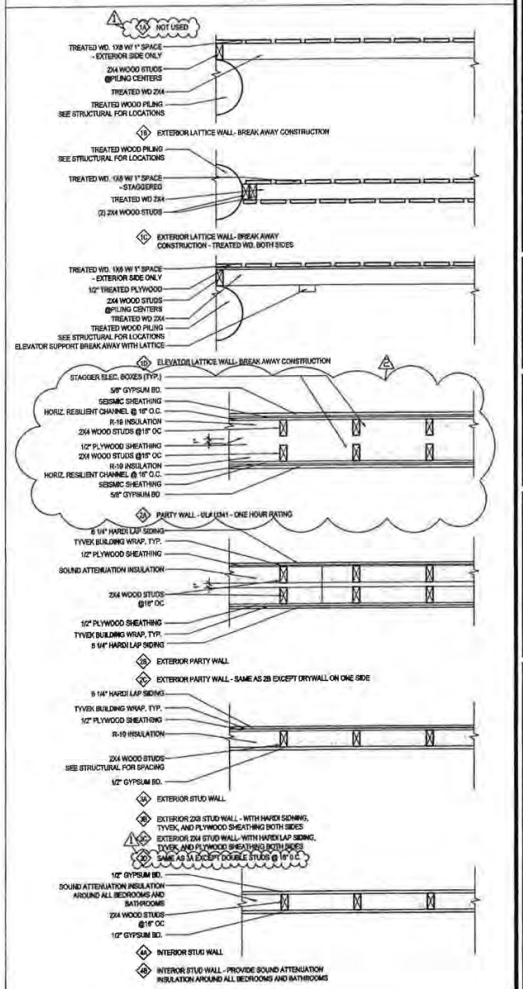


A1 / A101 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A101 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL FLOOR PLAN NOTES

1. SEE WALL TYPES ABOVE.
2. ——— ——— INDICATES ITEMS OVERHEAD OR ABOVE.
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-401-A408 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-401-808 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A410 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A110 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A410 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. DATHERIAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X18" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE

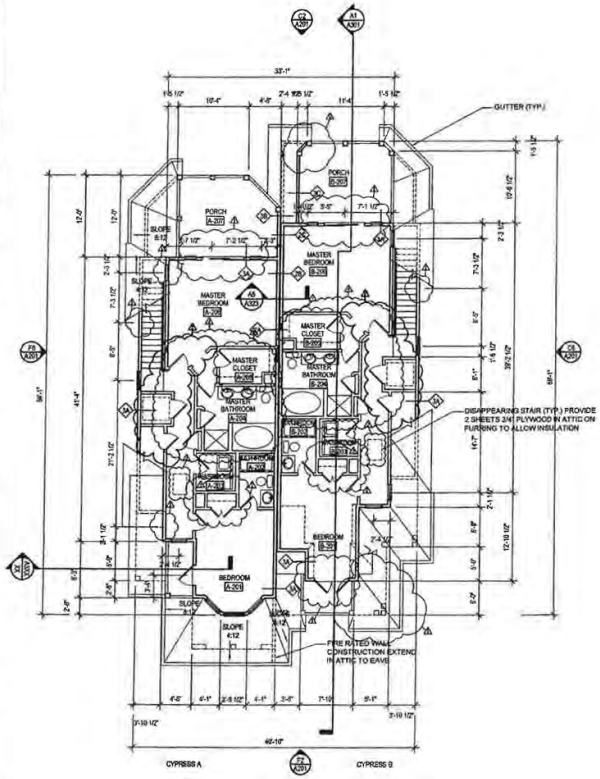
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

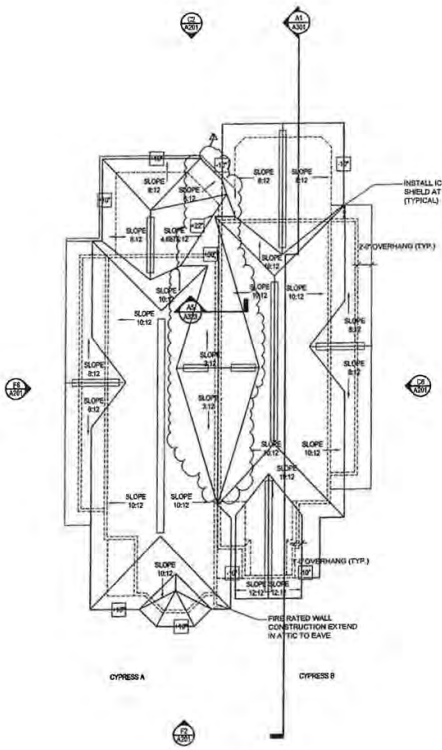
THE CYPRESS: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

REVISIONS:	
1	9/7/06
2	9/22/06
3	01/19/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER:	2003-1105.03
SHEET NUMBER:	A101

CONSTRUCTION SET





A1 / A102 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

A5 / A102 ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. ——— ——— INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A608 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-656 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A419 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A419 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. SWITCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 1/2"X1'X16" PLYWOOD CONNECTORS @ 16-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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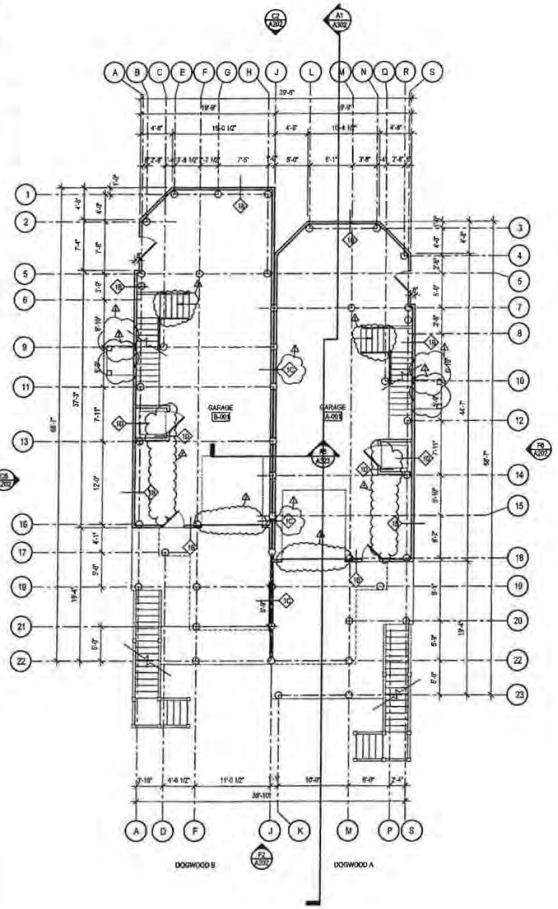
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE CYPRESS: SECOND FLOOR PLAN AND ROOF PLAN

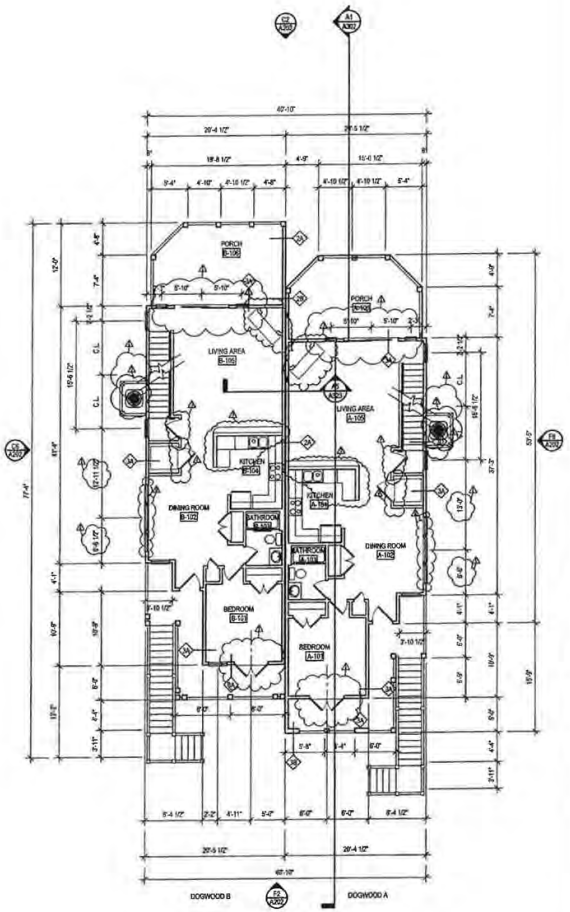
REVISIONS	
1	9/7/07
2	10/22/07
3	01/15/07
4	03/05/07

DRAWN BY: RJM
CHECKED BY: TYS
DATE: 02-05-2007
SGM JOB NUMBER: 2003-1105.03
SHEET NUMBER: A102

CONSTRUCTION SET



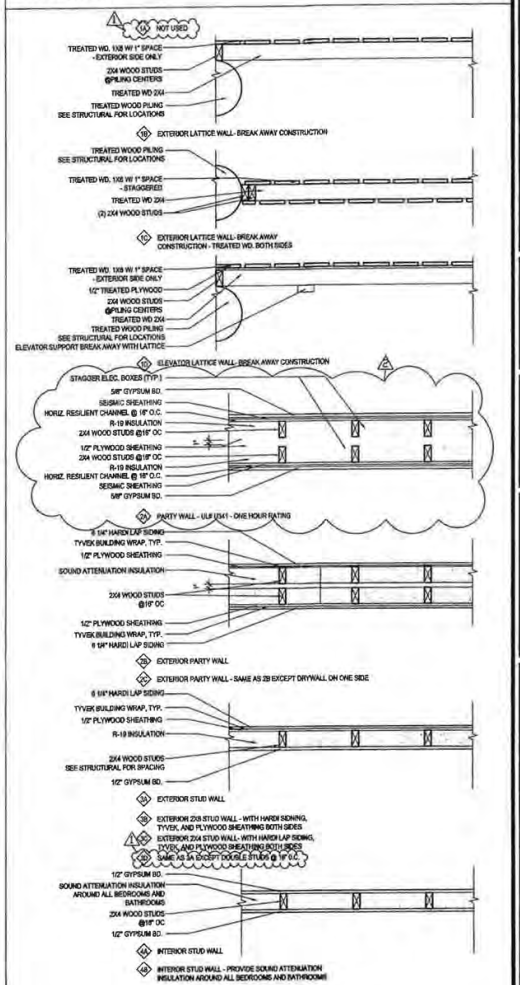
A1 / A103 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A103 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL FLOOR PLAN NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — — INDICATES ITEMS OVERHEAD OR ABOVE.
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A415 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS. INTERIOR WALL TYPES ARE LOCATED ON THE A401-A418 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 12"X1 1"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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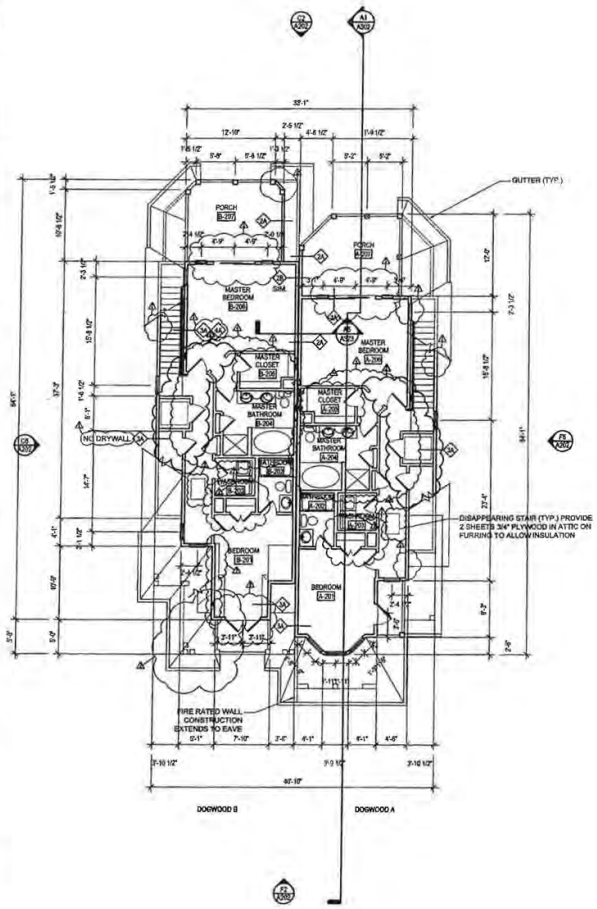
FOLLY BEACH, SOUTH CAROLINA

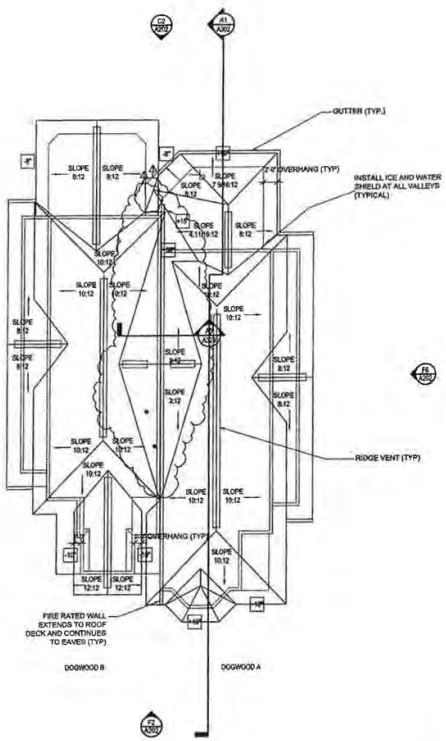
THE DOGWOOD: PILE PLANGROUND FLOOR PLAN AND FIRST FLOOR PLAN

REVISIONS:	
1	9/7/06
2	9/22/06
3	01/16/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TWS
DATE:	02-05-2007
SGM JOB NUMBER:	2003-1105.03
SHEET NUMBER:	A103

CONSTRUCTION SET





NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A1 / A104 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

A5 / A104 ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. – – – – – – INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A608 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 10"X11"X16" PLYWOOD CONNECTORS @ 6'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE
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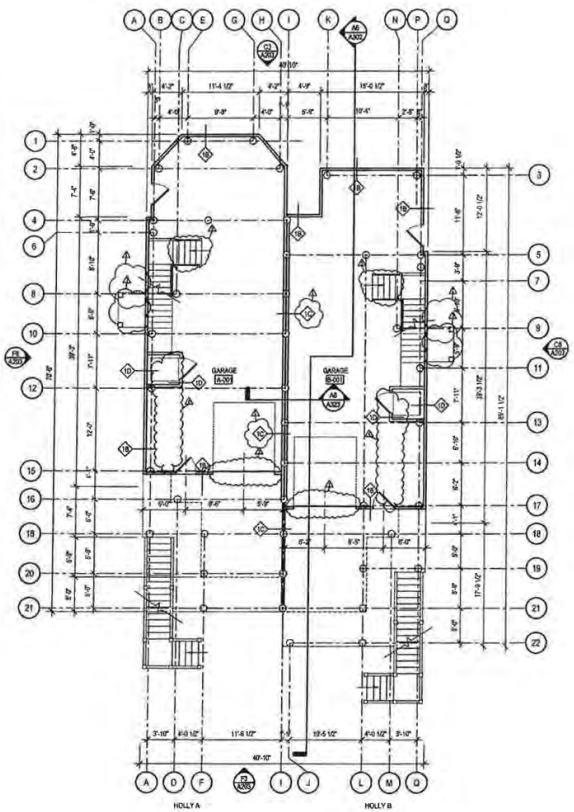
THE DOGWOOD: SECOND FLOOR PLAN AND ROOF PLAN

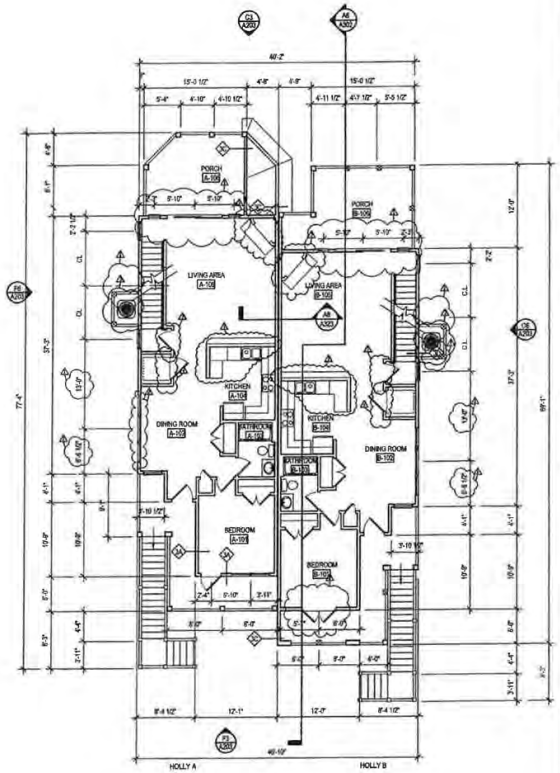
REVISIONS	
1	5/7/08
2	6/22/06
3	01/10/07
4	02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER: 2003-1105.03
SHEET NUMBER: A104

CONSTRUCTION SET



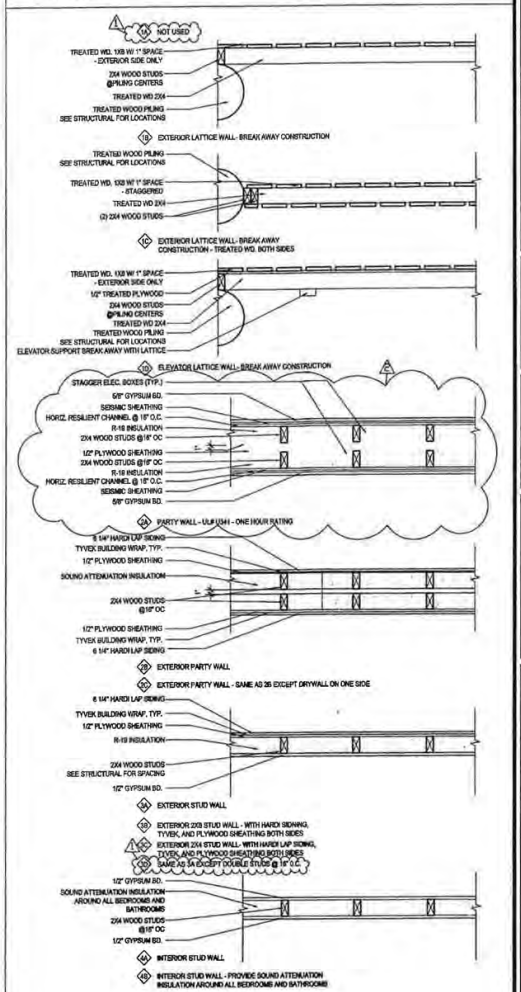
A1 / A105 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A105 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — — INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-606 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X6 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X1"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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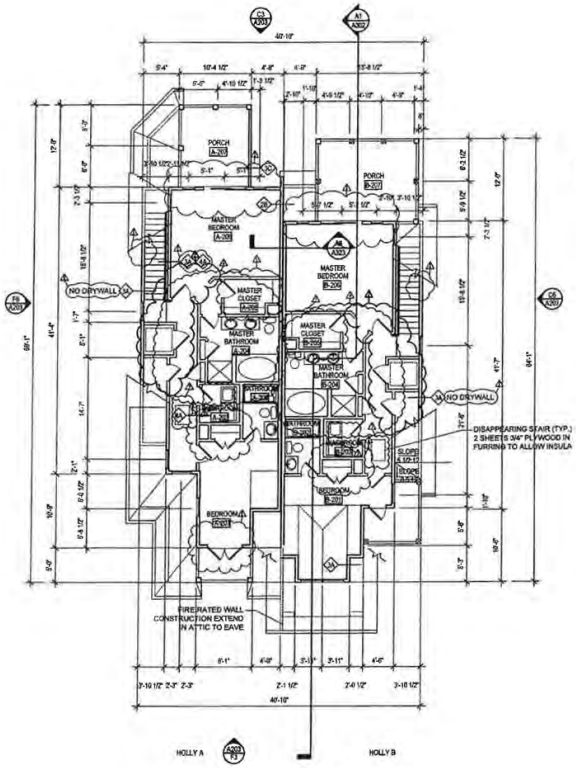
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE HOLLY: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

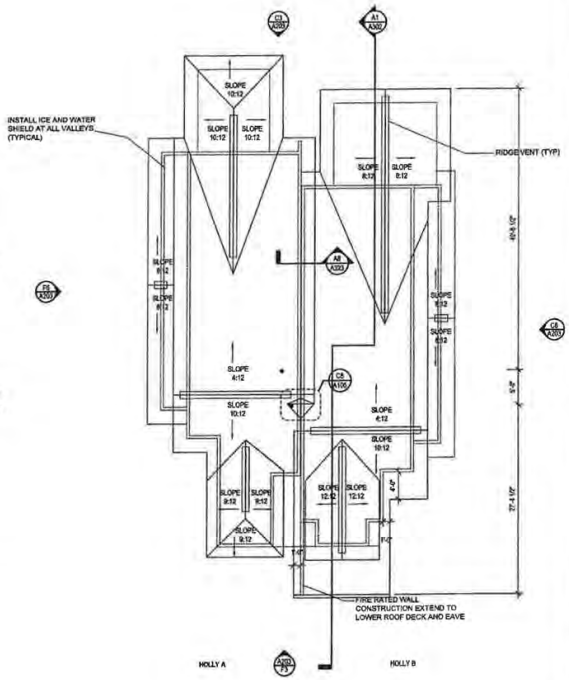
REVISIONS:	
1	5/7/07
2	9/22/06
3	01/13/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNG
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A105

CONSTRUCTION SET

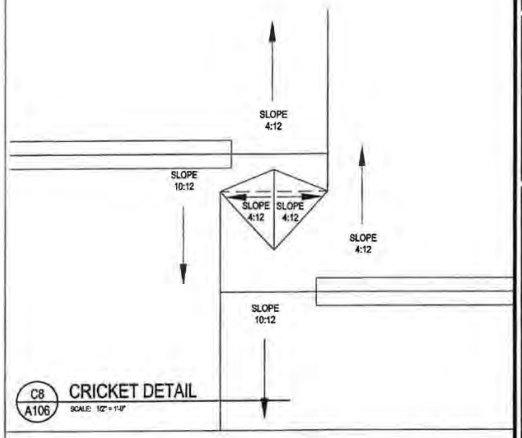


A1 / A106 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A106 ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B



C8 / A106 CRICKET DETAIL
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — — INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-101 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-808 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 1/2"X1'X16" PLYWOOD CONNECTORS @ 6'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE HOLLY: SECOND FLOOR PLAN AND ROOF PLAN

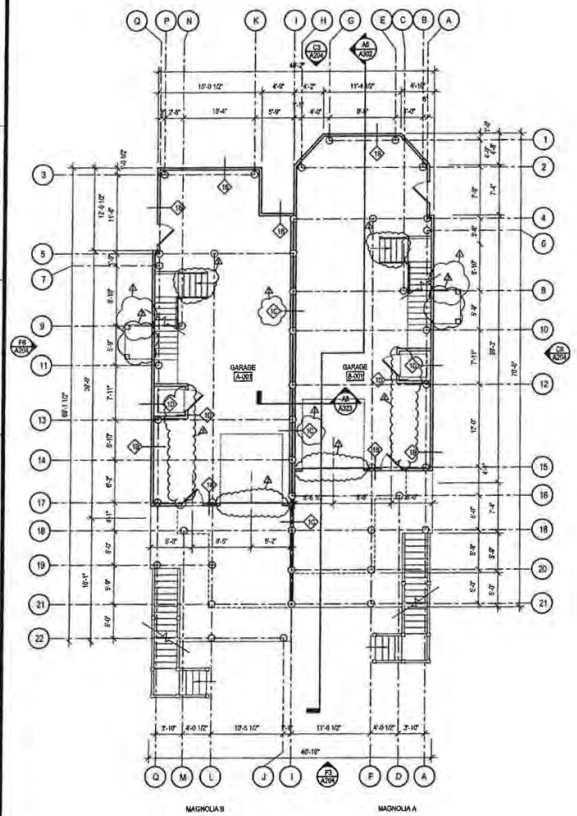
REVISIONS:	
1	9/7/06
2	6/22/06
3	01/15/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TMS
DATE:	02-05-2007

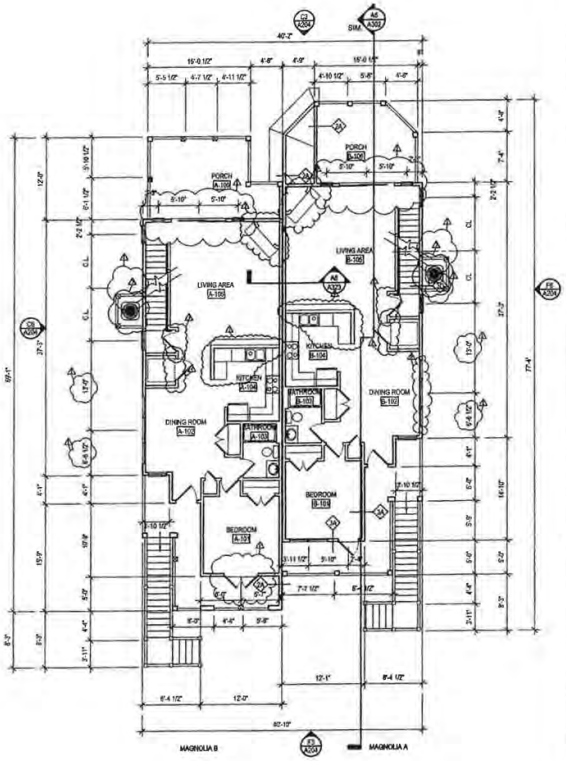
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A106

CONSTRUCTION SET



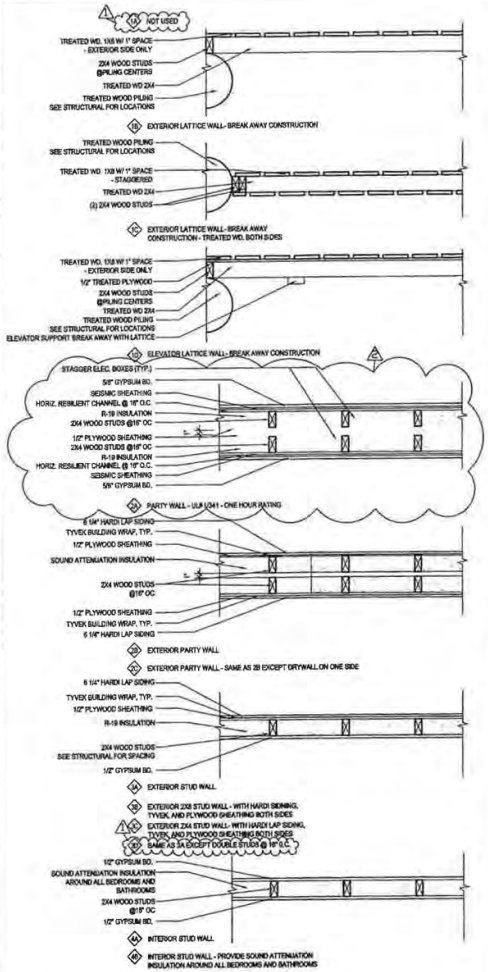
A1 / A107 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A107 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. - - - - - - INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A418 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A118 SHEETS/ INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 1/2"X1"X1'-9" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOUS AS REQUIRED.

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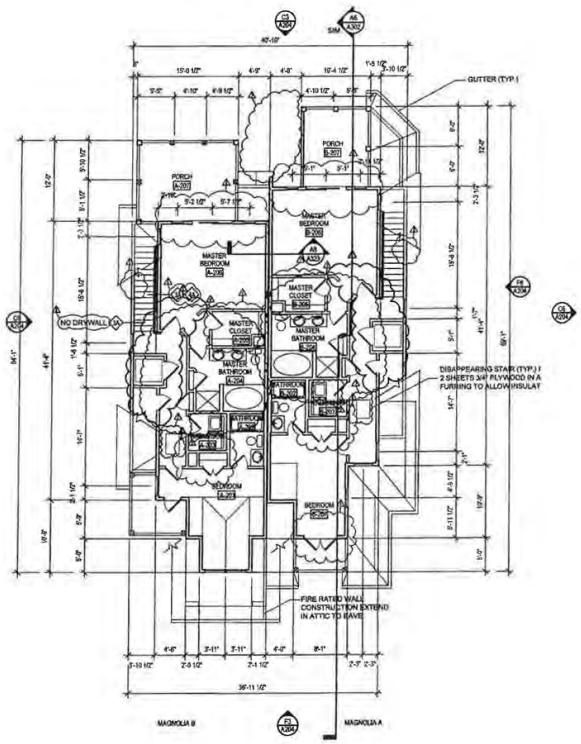
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE MAGNOLIA: PILE PLANGROUND FLOOR PLAN AND FIRST FLOOR PLAN

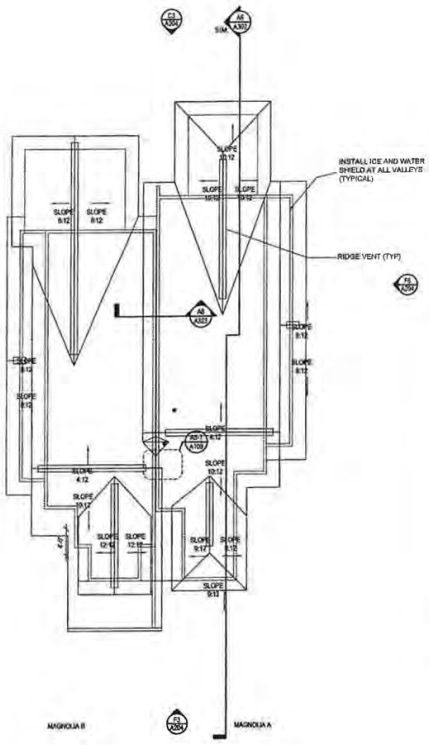
REVISIONS	
1	6/7/06
2	9/22/06
3	01/15/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A107

CONSTRUCTION SET

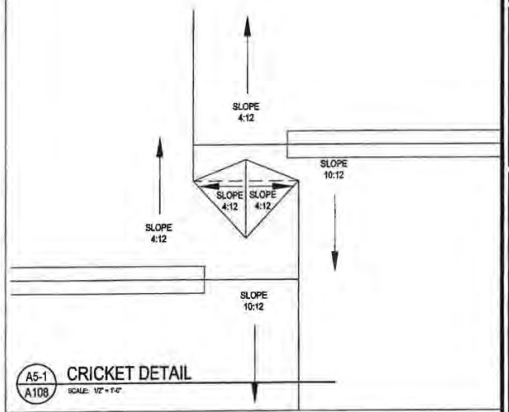


A1 / A108 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A108 ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B



A5-1 / A108 CRICKET DETAIL
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — INDICATES ITEMS OVERHEAD OR ABOVE.
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURERS SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A401-A808 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A401-808 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X6 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X36" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

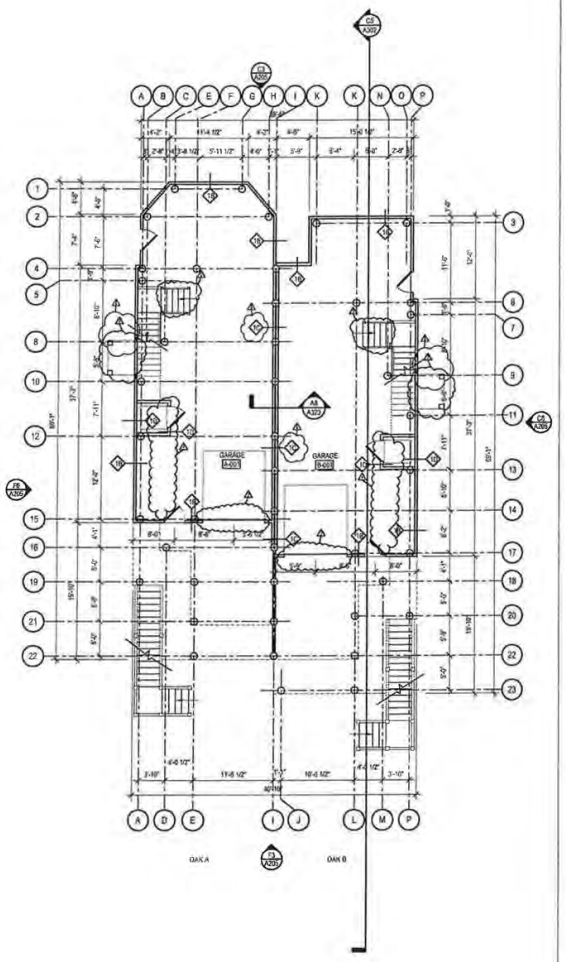
THE MAGNOLIA: SECOND FLOOR PLAN AND ROOF PLAN

REVISIONS:
1 5/7/08
2 6/23/08
3 01/13/07
4 02/05/07

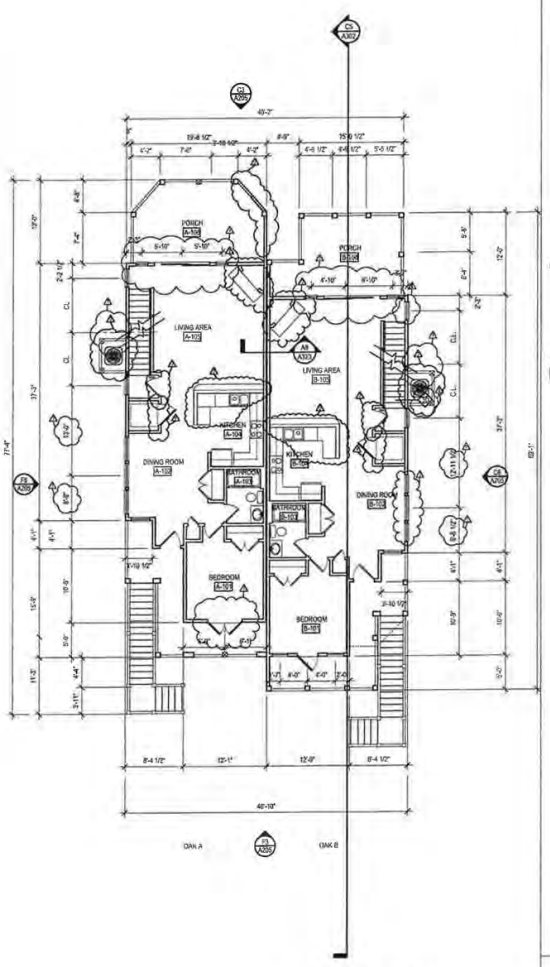
DRAWN BY: RJM
CHECKED BY: TNB
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A108

CONSTRUCTION SET

R-2550

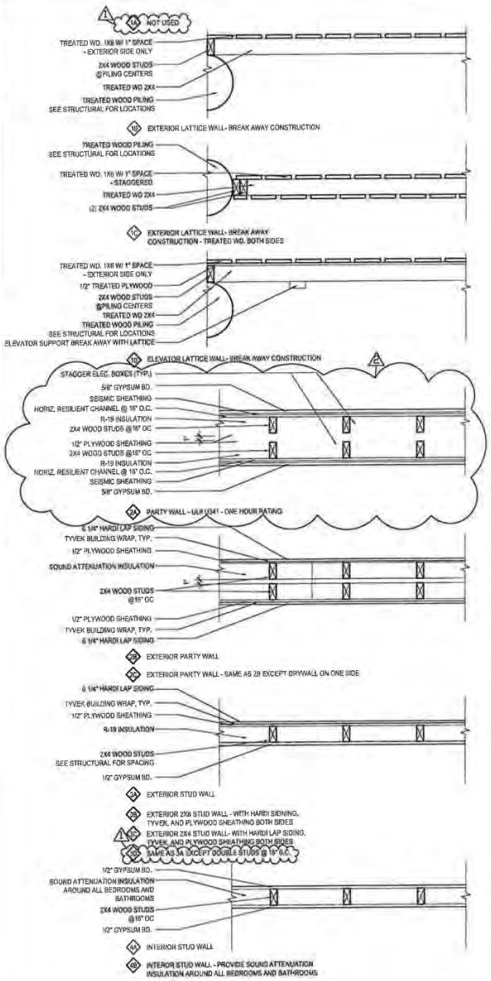


A1 / A109 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A109 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. – – – – – – – INDICATES ITEMS OVERHEAD OR ABOVE
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4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A608 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION, MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 10"X11"X10" PLYWOOD CONNECTORS @ 6'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE

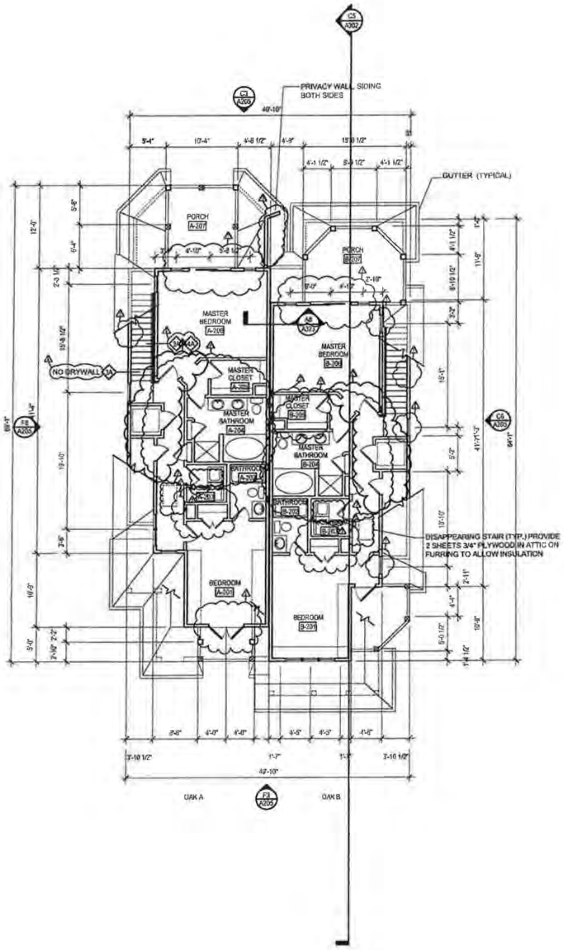
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE OAK: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

REVISIONS:	
1	6/7/06
2	9/22/06
3	01/15/07
4	02/05/07

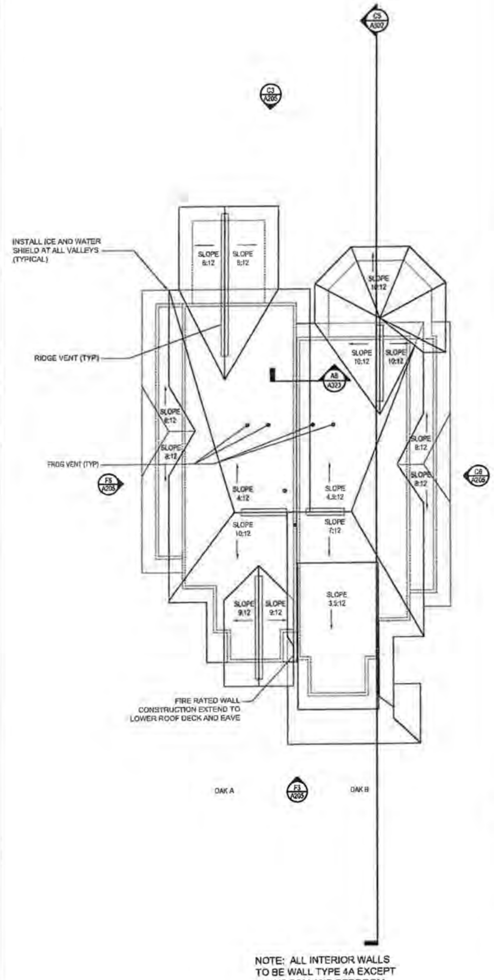
DRAWN BY:	RJM
CHECKED BY:	TKS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A109

CONSTRUCTION SET



A1 / A110 SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"



NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A110 ROOF PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — — INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A118 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X8 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE

PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE OAK-SECOND FLOOR PLAN AND ROOF PLAN

REVISIONS:
1 5/7/06
2 5/22/06
3 01/15/07
4 02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

SGM JOB NUMBER
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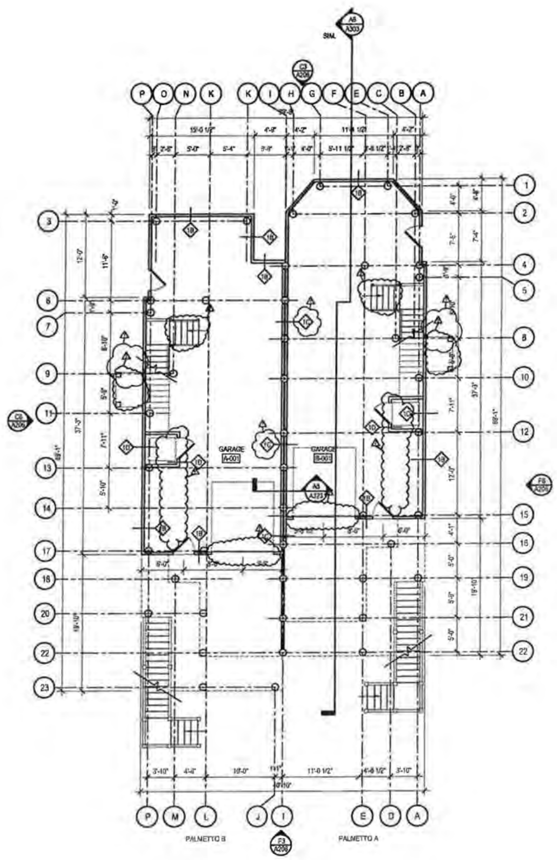
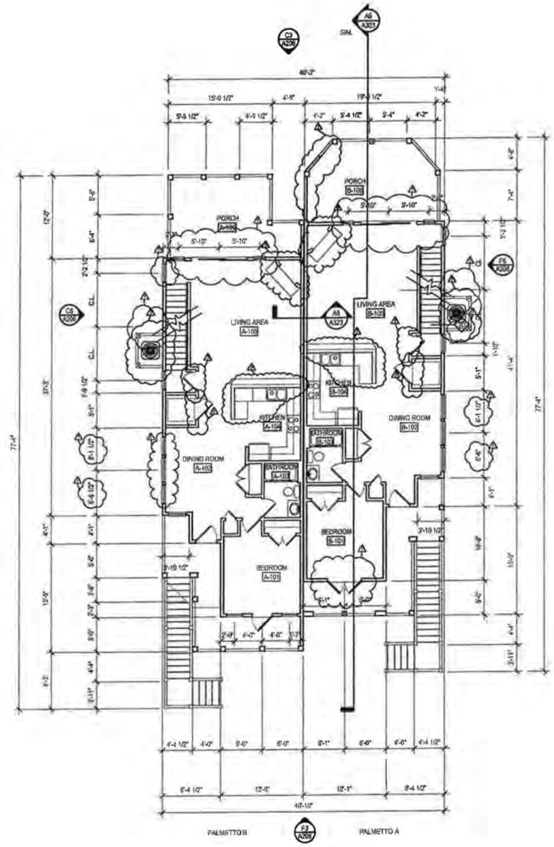
SHEET NUMBER
A110

CONSTRUCTION SET



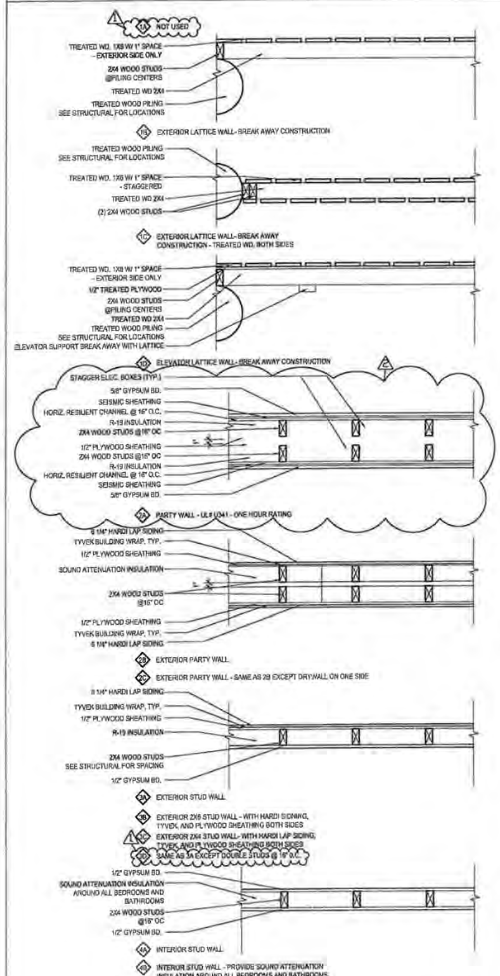
A1 / A111 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A111 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
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8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE

PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE PALMETTO: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

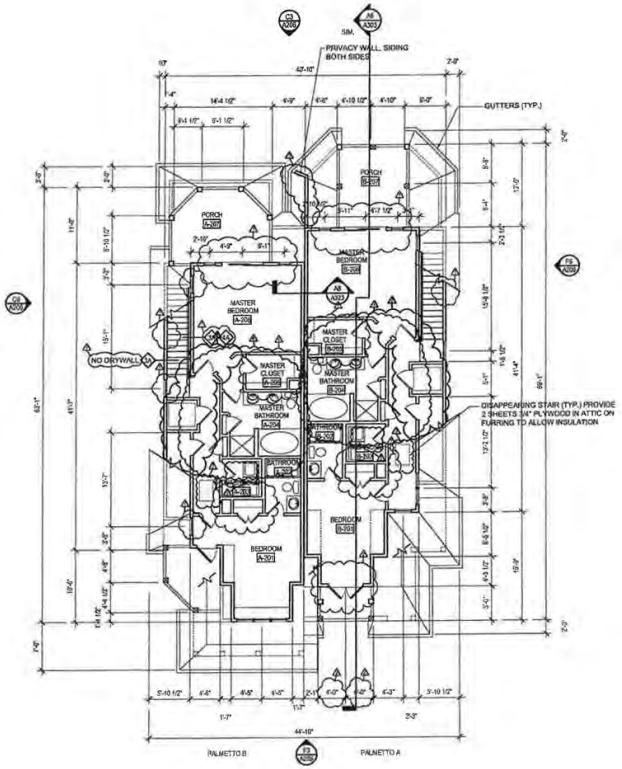
REVISIONS:
1. 6/7/06
2. [illegible]
3. 01/15/07
4. [illegible]

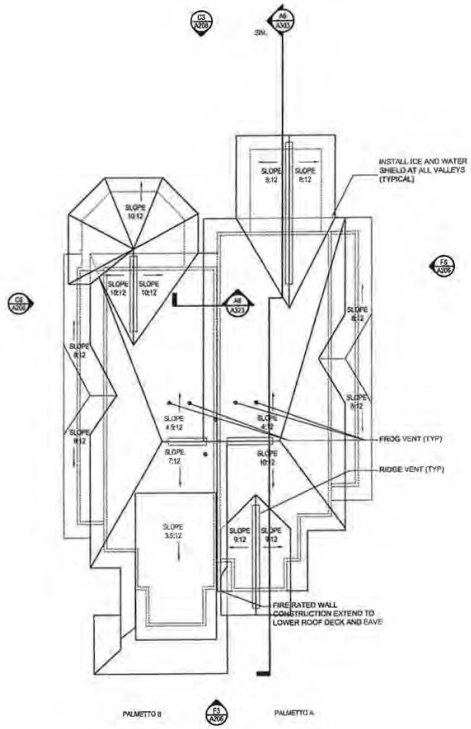
DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A111

CONSTRUCTION SET





NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A1 / A112 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

A5 / A112 ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
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7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A601-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A119 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A601-A418 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION, MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS (WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 10"X11"X1/8" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE PALMETTO: SECOND FLOOR PLAN AND ROOF PLAN

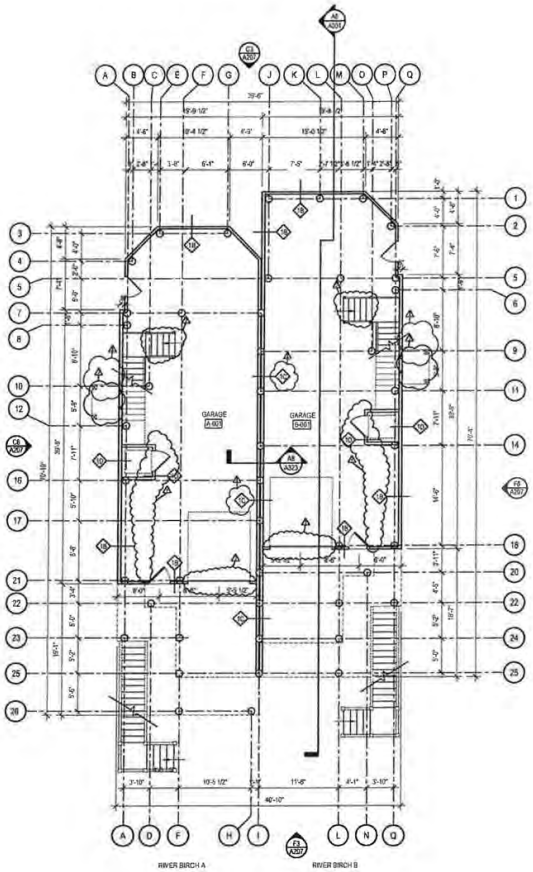
REVISIONS	
1	9/7/06
2	9/22/06
3	01/11/07
4	02/05/07

DRAWN BY:	SLM
CHECKED BY:	TNS
DATE:	02-05-2007

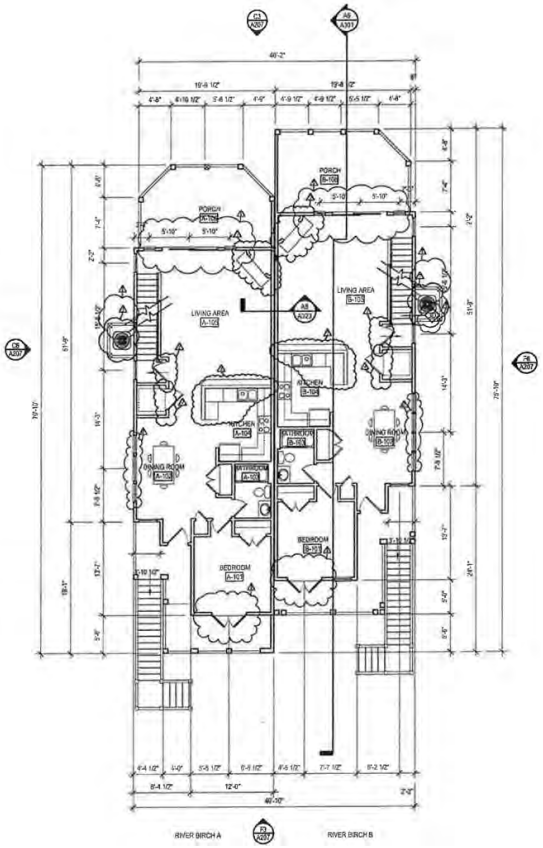
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A112

CONSTRUCTION SET



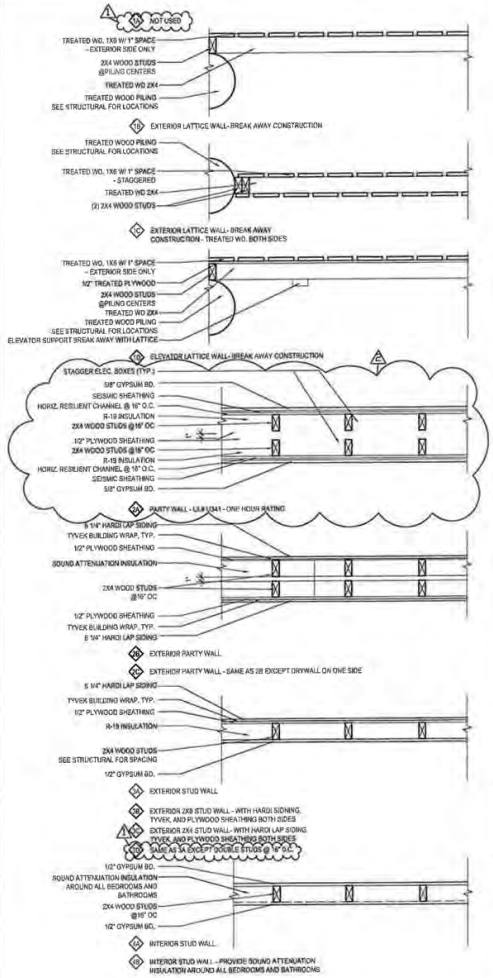
A1 / A113 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A113 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
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8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATIONS. MATCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 12"X11"X1/8" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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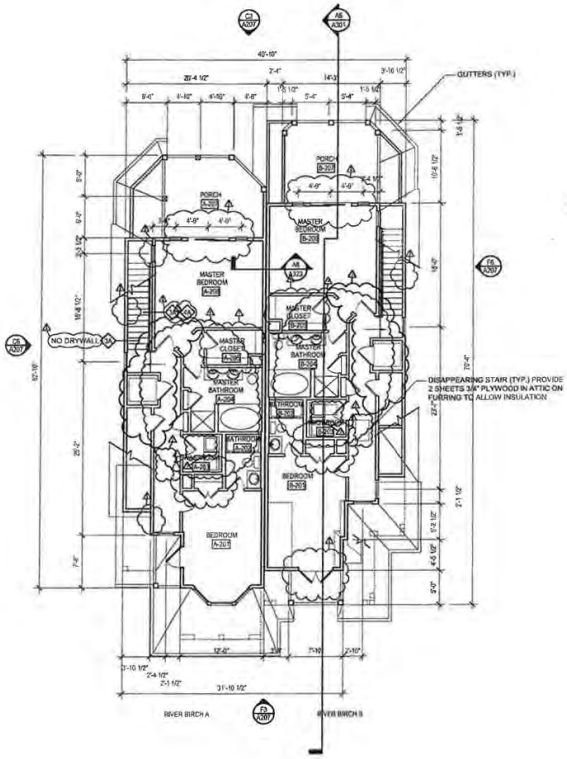
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE RIVER BIRCH: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

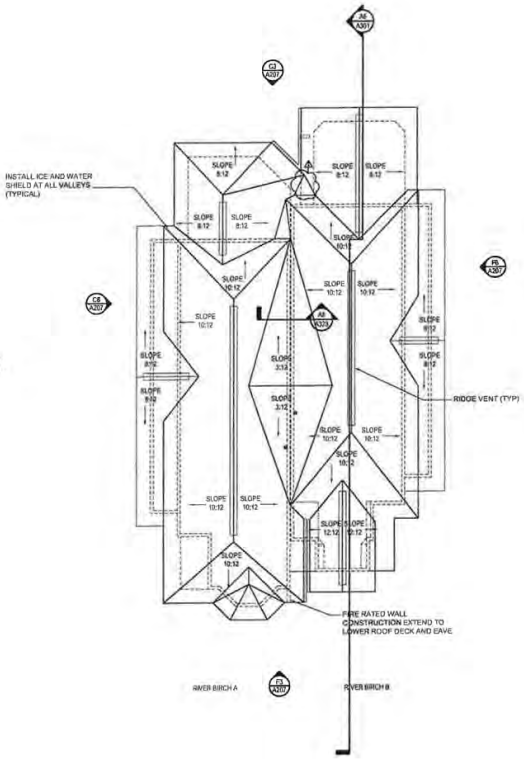
CONSTRUCTION SET

REVISIONS:	
1	6/7/06
2	9/22/06
3	01/15/07
4	05/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	03-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A113



A1 / A114 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A114 ROOF PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — — — INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
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7. SEE SHEET A-601-602 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-605 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A415 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALLY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X8 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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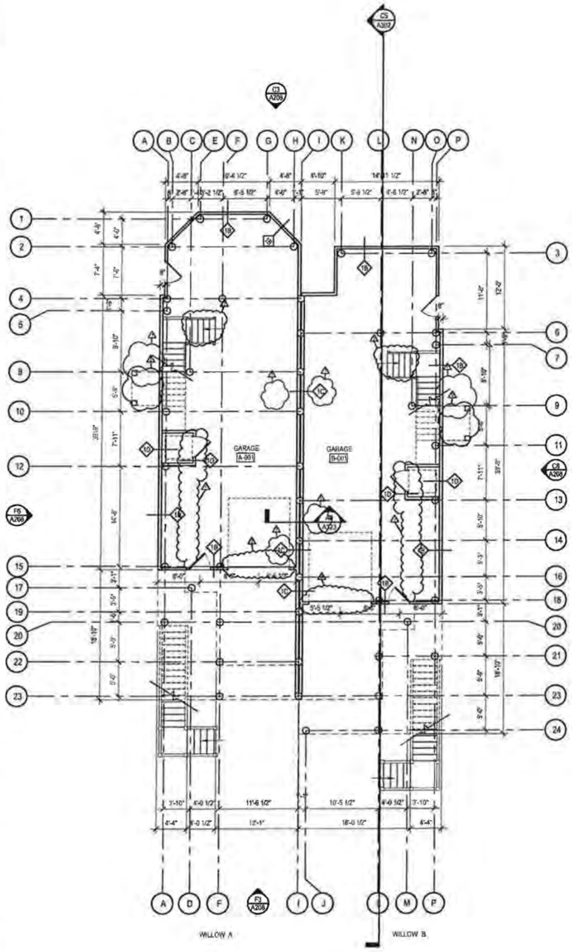
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE RIVER BIRCH: SECOND FLOOR PLAN AND ROOF PLAN

REVISIONS:
1. 6/7/06
2. 6/22/06
3. 01/15/07
4. 02/5/07

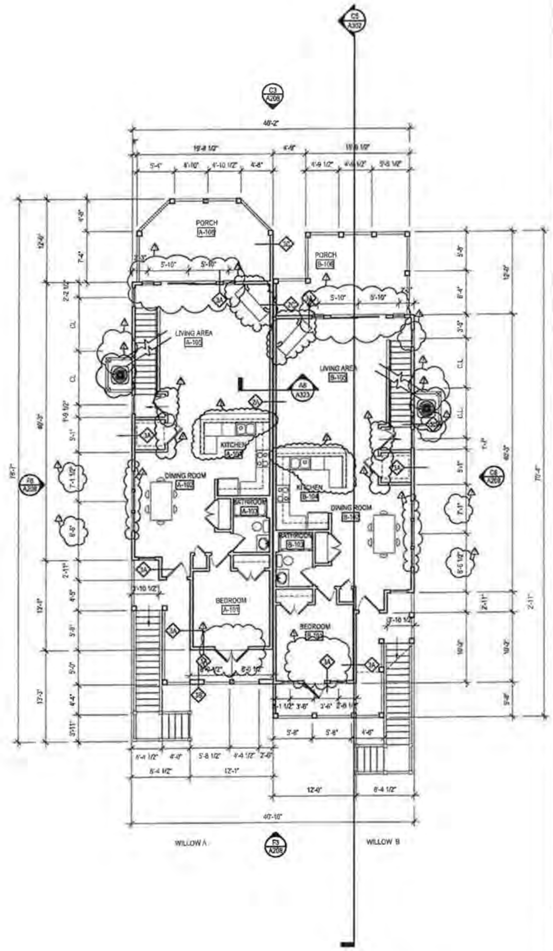
DRAWN BY: SGM
CHECKED BY: TAE
DATE: 12-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A114

CONSTRUCTION SET



A1 / A115 PILE PLAN / GROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

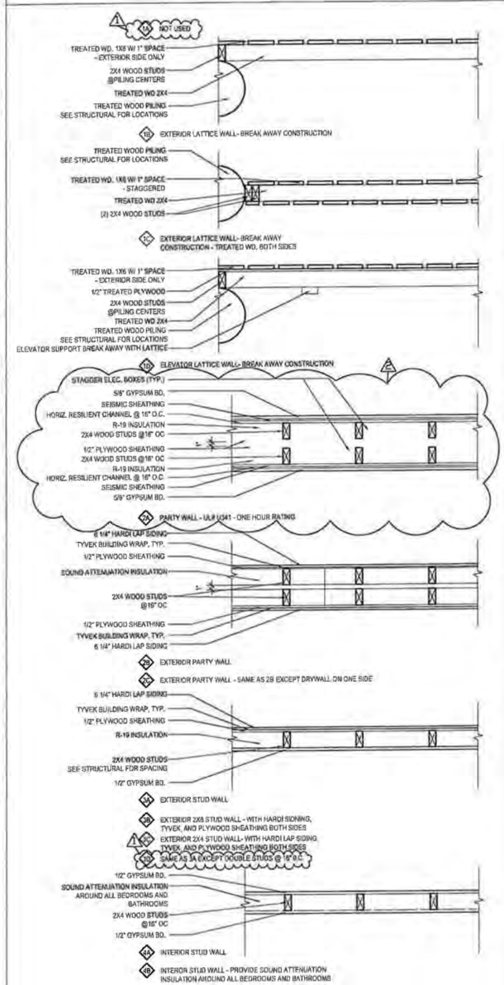


NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

A5 / A115 FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

WALL TYPES



GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. ——— ——— ——— INDICATES ITEMS OVERHEAD OR ABOVE
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A608 FOR DOOR SCHEDULE, DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-608 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X6 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX., CAVITY TO BE FILLED W/ R-30 BATT INSULATION USING VENTILATION TROUGHS CONTINUOS AS REQUIRED.

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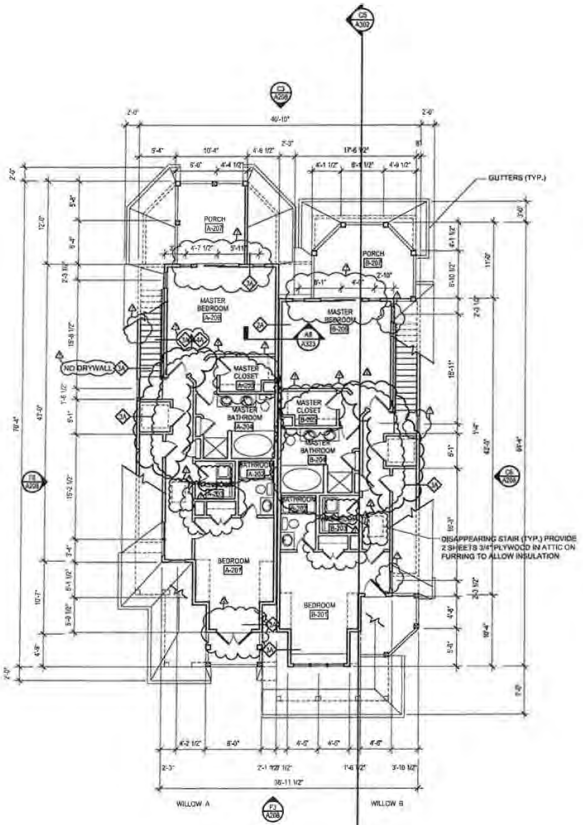
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE WILLOW: PILE PLAN/GROUND FLOOR PLAN AND FIRST FLOOR PLAN

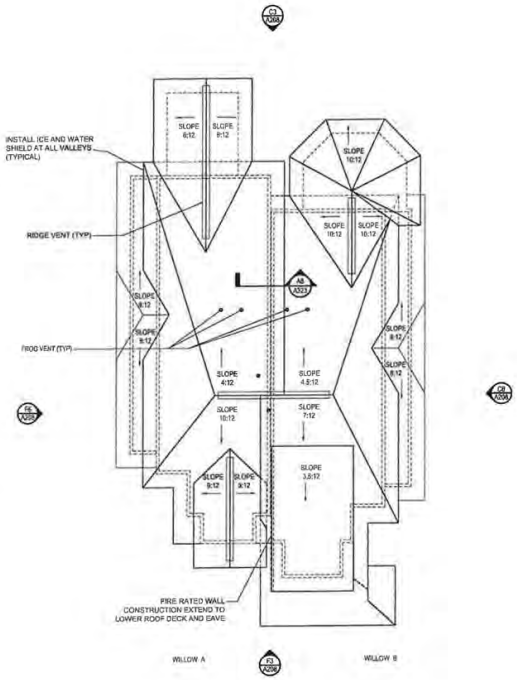
REVISIONS:
1 5/7/06
2 6/22/06
3 01/15/07
4 02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A115

CONSTRUCTION SET



A1 / A116 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



A5 / A116 ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTE: ALL INTERIOR WALLS TO BE WALL TYPE 4A EXCEPT BATHROOM AND BEDROOM WALLS TO BE 4B

GENERAL NOTES

1. SEE WALL TYPES ABOVE.
2. — — — — INDICATES ITEMS OVERHEAD OR ABOVE.
3. ALL WINDOW DIMENSIONS TO CENTERLINE OF OPENING. SEE DOOR AND WINDOW MANUFACTURER SPECS FOR R.O. SIZES.
4. WALL TYPE CHANGES OCCUR AT ROOM CORNERS.
5. DIMENSIONS ARE TO FACE OF WOOD STUDS AND CENTER OF STRUCTURAL COMPONENTS UNLESS NOTED OTHERWISE.
6. SEE SHEET A-701 AND A-702 FOR FINISH SCHEDULE AND TRANSITION LOCATIONS.
7. SEE SHEET A-601-A606 FOR DOOR SCHEDULE; DOOR TYPES, AND DETAILS
8. SEE SHEET A-601-605 FOR BUILDING WRAP DETAILS
9. SEE SHEETS A401-A416 FOR ALL INTERIOR DIMENSIONS, WINDOW TAGS, AND DOOR TAGS FOR ALL UNIT TYPES
10. SEE STRUCTURAL DRAWINGS FOR COLUMN SPACING DIMENSIONS
11. EXTERIOR WALL TYPES ARE LOCATED ON THE A101-A116 SHEETS INTERIOR WALL TYPES ARE LOCATED ON THE A401-A416 SHEETS
12. VERIFY WINDOW AND DOOR LOCATION. MATCH PLAN GRAPHICALY PRIOR TO COMPLETING LAYOUT.
13. CATHEDRAL CEILINGS @ STAIRS AND FRONT BEDROOMS WITH DORMERS ARE TO BE CONSTRUCTED OF 2X6 RAFTERS WITH 2X6 CEILING JOISTS BUTTED TOGETHER USING 1/2"X11"X16" PLYWOOD CONNECTORS @ 8'-0" O.C. MAX. CAVITY TO BE FILLED W/ R-30 SATT INSULATION USING VENTILATION TROUGHS CONTINUOUS AS REQUIRED.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
THE WILLOW: SECOND FLOOR PLAN AND ROOF PLAN

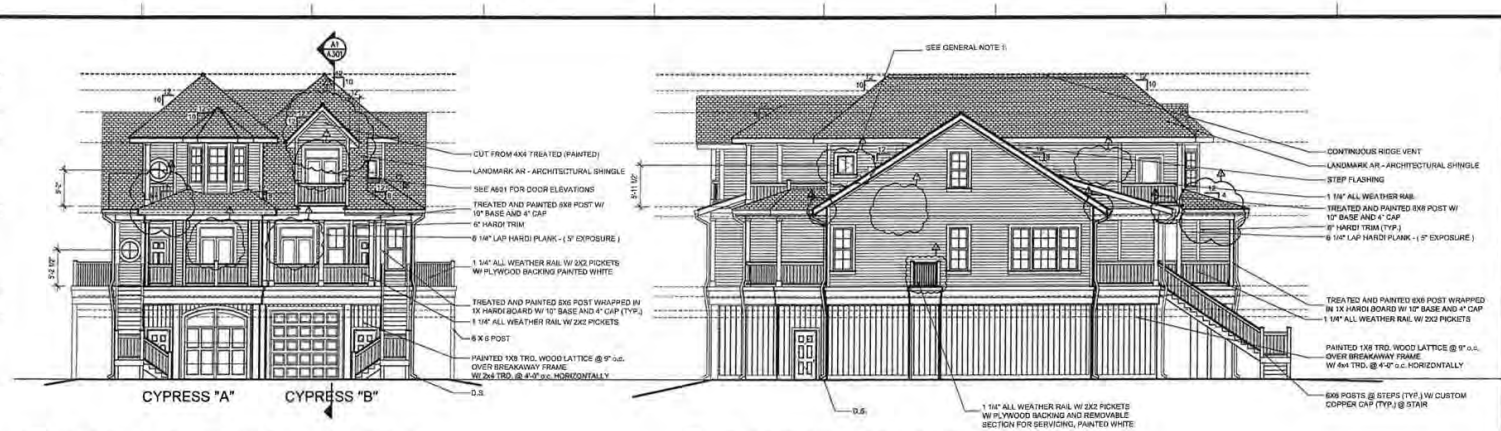
REVISIONS	
1	6/7/06
2	6/22/06
3	9/11/07
4	03/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A116

CONSTRUCTION SET

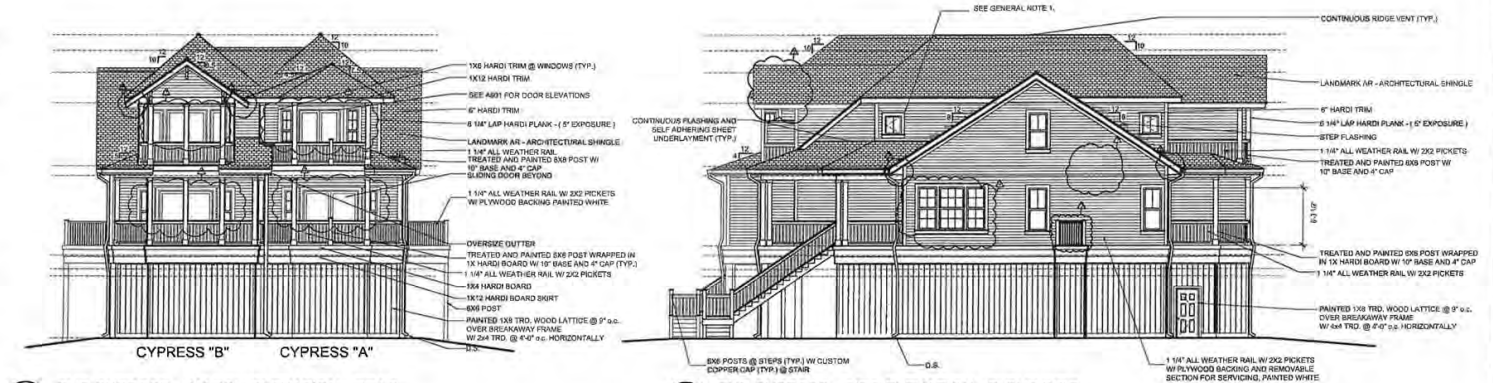


F2 / A201 THE CYPRESS - STREET ELEVATION - FRONT

SCALE: 1/8" = 1'-0"

F6 / A201 THE CYPRESS - SIDE ELEVATION - LEFT SIDE

SCALE: 1/8" = 1'-0"



C2 / A201 THE CYPRESS - MARSH ELEVATION - REAR

SCALE: 1/8" = 1'-0"

C6 / A201 THE CYPRESS - SIDE ELEVATION - RIGHT SIDE

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR. RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

CYPRESS ELEVATIONS

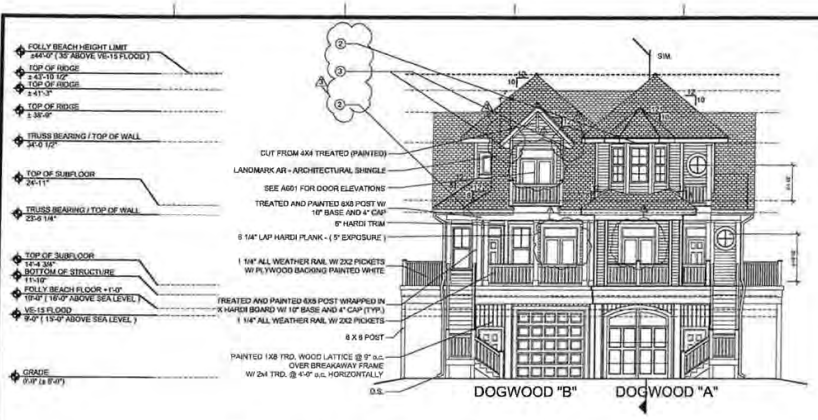
NO	DESCRIPTION	DATE
1		9/7/06
2		9/25/06
3		01/15/07
4		02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007

SGM JOB NUMBER
2003-1105.03

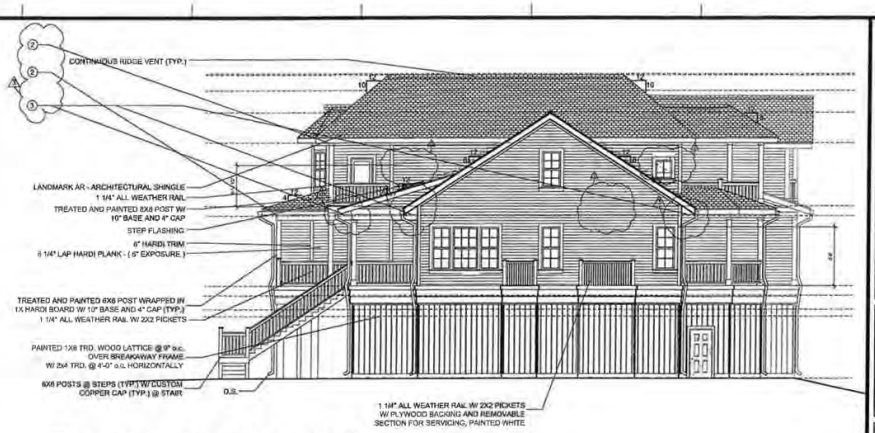
SHEET NUMBER
A201

CONSTRUCTION SET



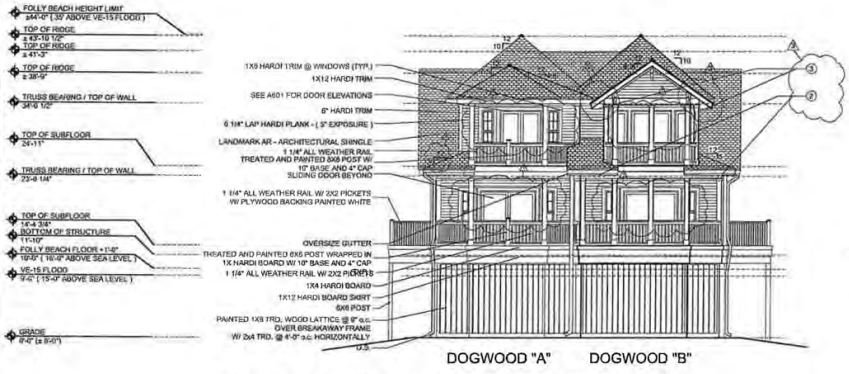
F2 A202 THE DOGWOOD - STREET ELEVATION - FRONT

SCALE: 1/8" = 1'-0"



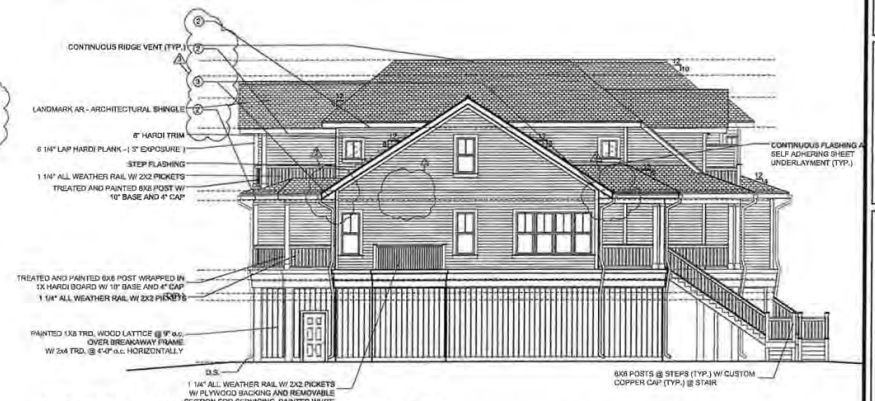
F6 A202 THE DOGWOOD - SIDE ELEVATION - RIGHT SIDE

SCALE: 1/8" = 1'-0"



C2 A202 THE DOGWOOD - MARSH ELEVATION - REAR

SCALE: 1/8" = 1'-0"



C6 A202 THE DOGWOOD - SIDE ELEVATION - LEFT SIDE

SCALE: 1/8" = 1'-0"

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

EAVES KEYNOTES

1. SLOPED SOFFIT AT ANGLE OF FASCIA BOARD
2. "FLAT" SOFFIT PARALEL TO FLOOR PLANE.
3. SLOPED SOFFIT @ RAKE EAVE TRANSITIONS TO FLAT SOFFIT. FASCIA OF "BOX" FLUSH WITH BUILDING'S CORNER POST.
4. SLOPED SOFFIT @ RAKE EAVE TRANSITIONS TO FLAT SOFFIT. "SHOWCASE" BOX FLUSH WITH FASCIA BOARD OF ROOF EDGE.
5. RAKE CONDITION RETURNS WITH ROOFED AREA AS CONSTRUCTED IN FIELD.
6. "GREEK RAKE" RETURNS WITH HIPPED ROOF AREA.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

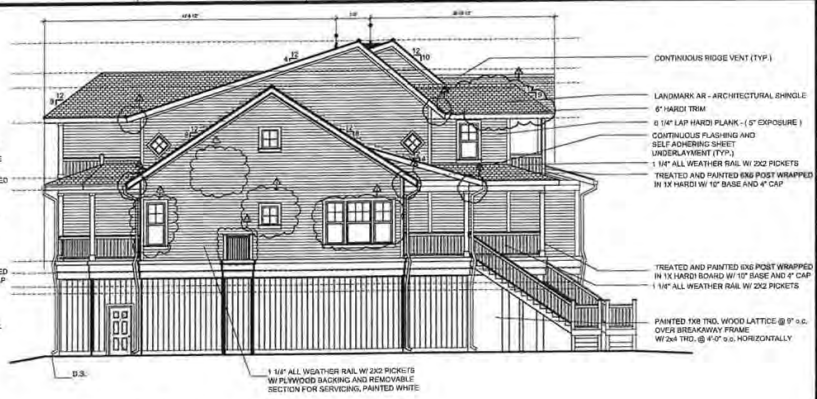
DOGWOOD ELEVATIONS

REVISIONS:
1. 10/19/06

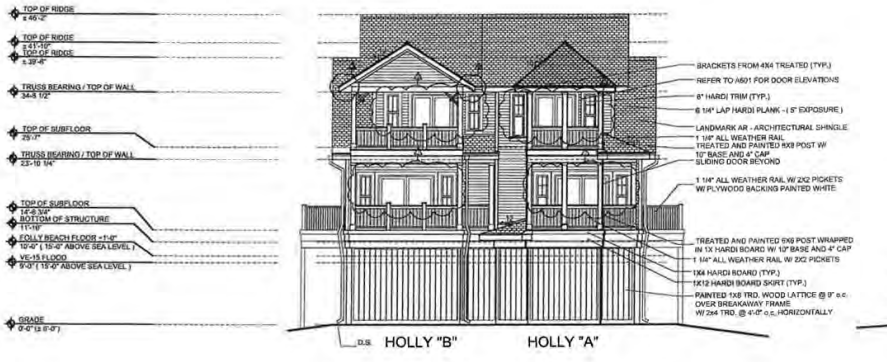
DRAWN BY: GLP
CHECKED BY: TRC
DATE: 10-10-2006
SGM JOB NUMBER: 2003-1105.03
SHEET NUMBER: A202

CONSTRUCTION SET-EAVE REVISIONS

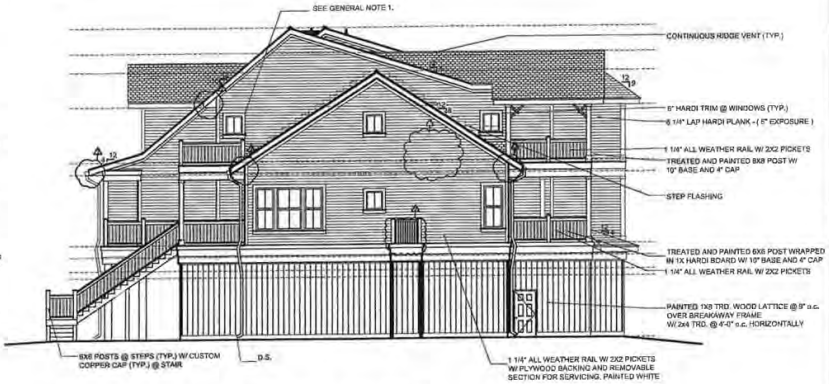
F3 A203 THE HOLLY - STREET ELEVATION - FRONT
SCALE: 1/8" = 1'-0"



F6 A203 THE HOLLY - SIDE ELEVATION - LEFT SIDE
SCALE: 1/8" = 1'-0"



C3 A203 THE HOLLY - MARSH ELEVATION - REAR
SCALE: 1/8" = 1'-0"



C6 A203 THE HOLLY - SIDE ELEVATION - RIGHT SIDE
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR., RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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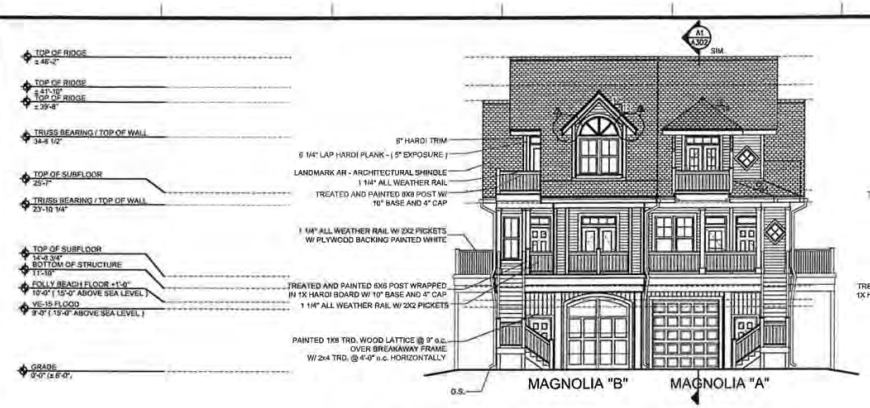
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

HOLLY ELEVATIONS

REVISIONS:
1 6/7/06
2 6/23/06
3 7/10/07
4 10/05/07

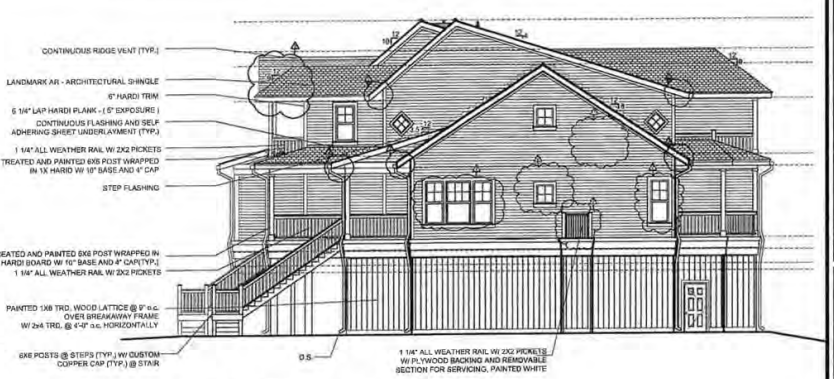
DRAWN BY: RJM
CHECKED BY: TMS
DATE: 02-05-2007
SGM JOB NUMBER 2003-1105.03
SHEET NUMBER A203

CONSTRUCTION SET



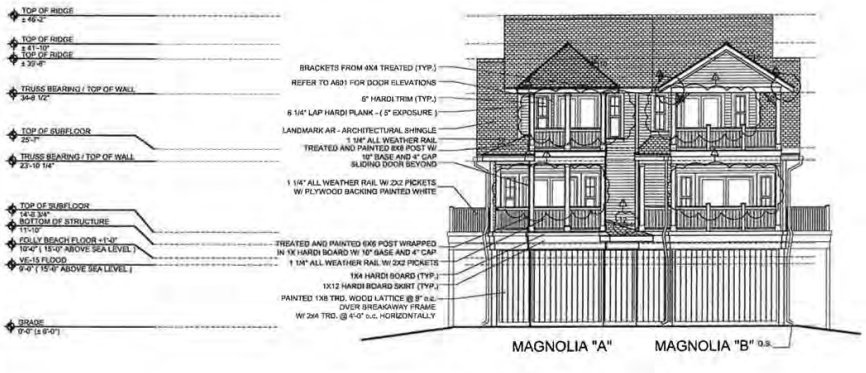
F3 / A204 THE MAGNOLIA - STREET ELEVATION - FRONT

SCALE: 1/8" = 1'-0"



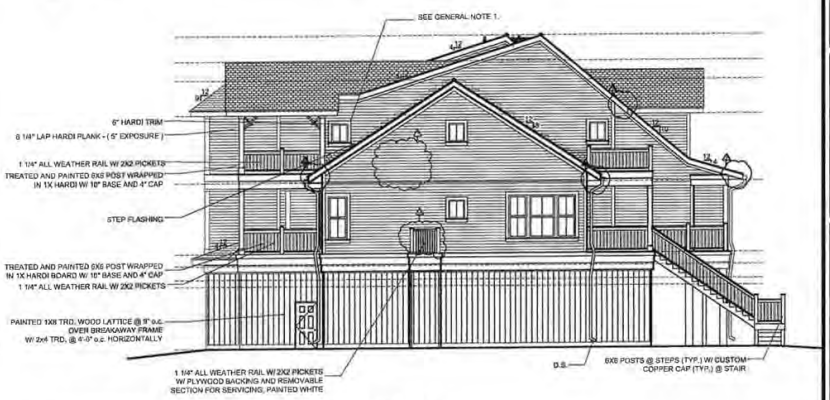
F6 / A204 THE MAGNOLIA - SIDE ELEVATION - RIGHT SIDE

SCALE: 1/8" = 1'-0"



C3 / A204 THE MAGNOLIA - MARSH ELEVATION -REAR

SCALE: 1/8" = 1'-0"



C6 / A204 THE MAGNOLIA - SIDE ELEVATION - LEFT SIDE

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR., RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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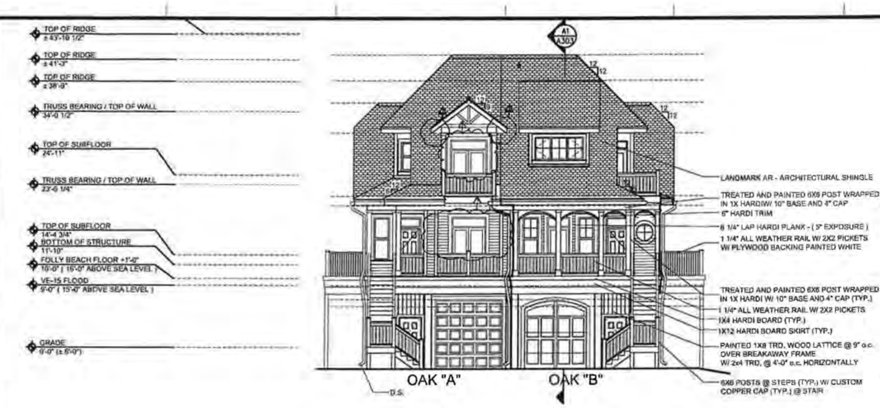
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

MAGNOLIA ELEVATIONS

REVISIONS:
1. 6/7/06
2. 9/22/06
3. 01/19/07
4. 02/05/07

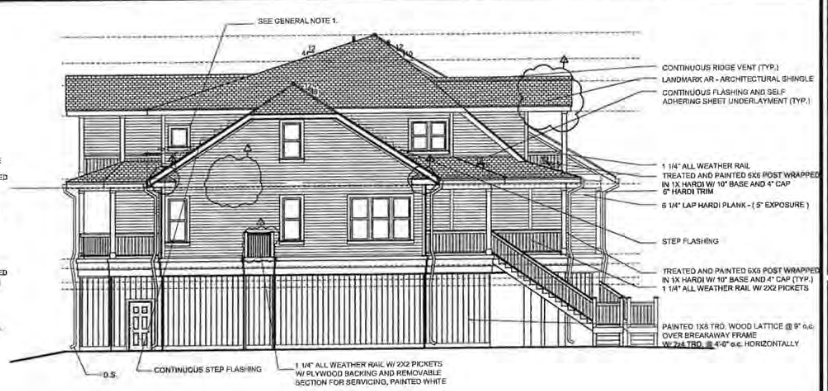
DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A204

CONSTRUCTION SET



F3 / A205 **THE OAK - STREET ELEVATION**

SCALE: 1/8" = 1'-0"

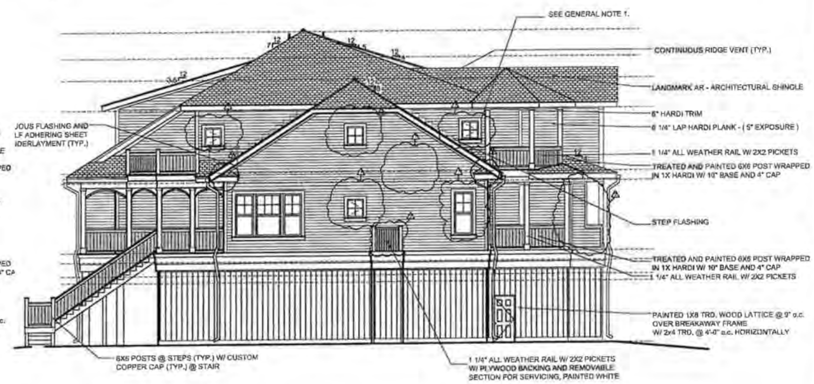


F6 / A205 **THE OAK - RIGHT SIDE ELEVATION**

SCALE: 1/8" = 1'-0"

C3 / A205 **THE OAK - MARSH ELEVATION**

SCALE: 1/8" = 1'-0"



C6 / A205 **THE OAK - LEFT SIDE ELEVATION**

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR . RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

OAK ELEVATIONS

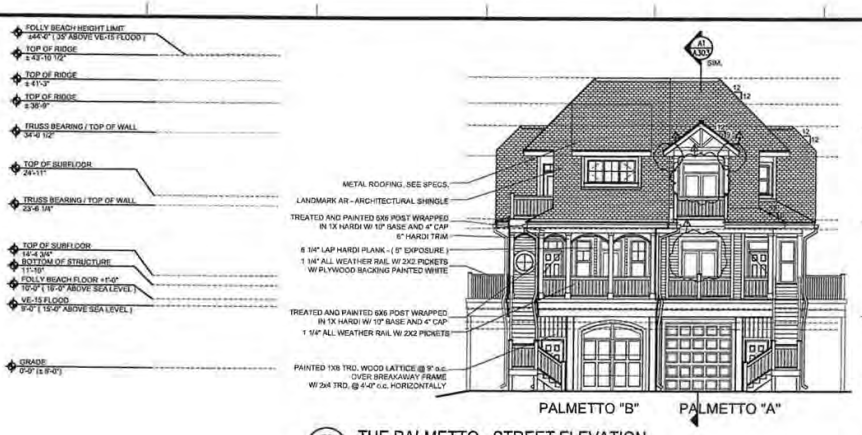
REVISIONS:

DRAWN BY: RJM
CHECKED BY: TNS
DATE:

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A205

CONSTRUCTION SET

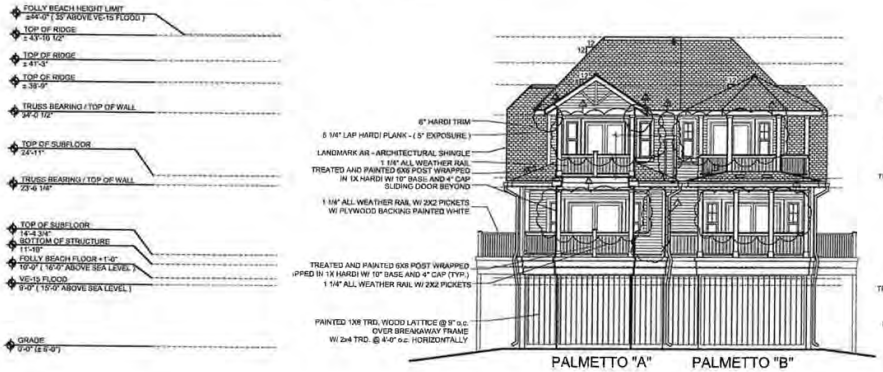


F3 / A206 THE PALMETTO - STREET ELEVATION

SCALE: 1/8" = 1'-0"

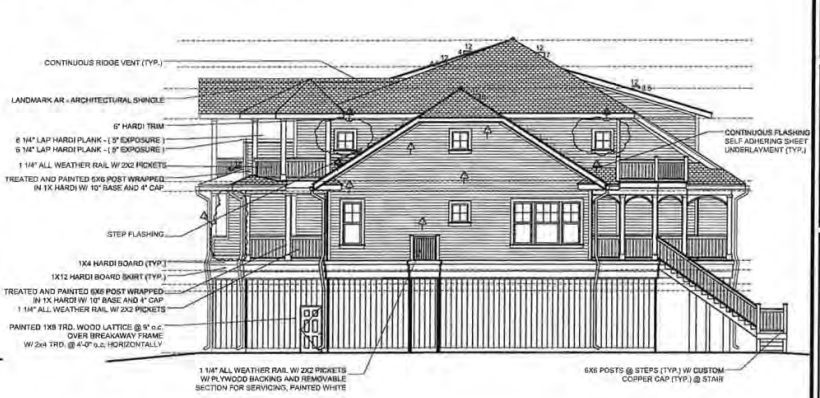
F6 / A206 THE PALMETTO - RIGHTSIDE ELEVATION

SCALE: 1/8" = 1'-0"



C3 / A206 THE PALMETTO - MARSH ELEVATION

SCALE: 1/8" = 1'-0"



C6 / A206 THE PALMETTO - LEFT SIDE ELEVATION

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR , RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

PALMETTO ELEVATIONS

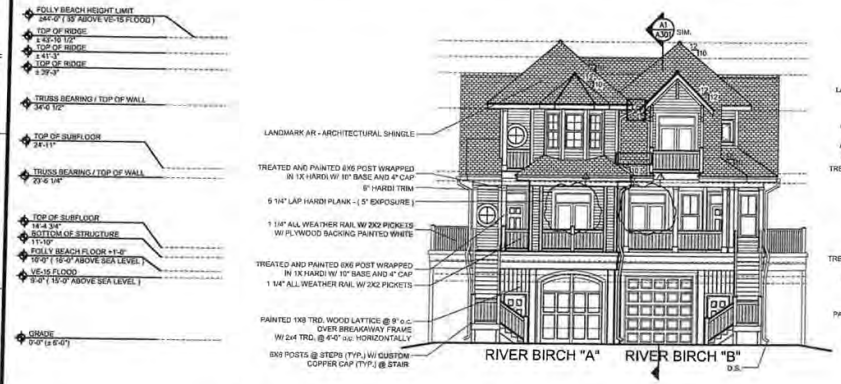
REVISIONS:
1 07/05
2 6/22/06
3 3/15/07
4 3/25/07

DRAWN BY: KLM
CHECKED BY: TAS
DATE: 02-05-2007

SGM JOB NUMBER
2003-1105.03

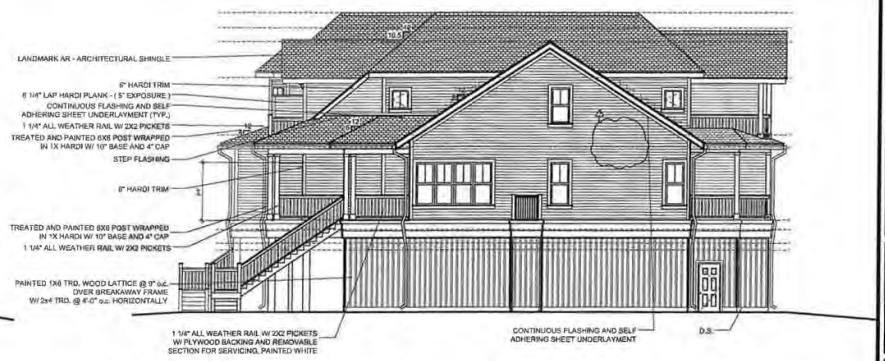
SHEET NUMBER
A206

CONSTRUCTION SET



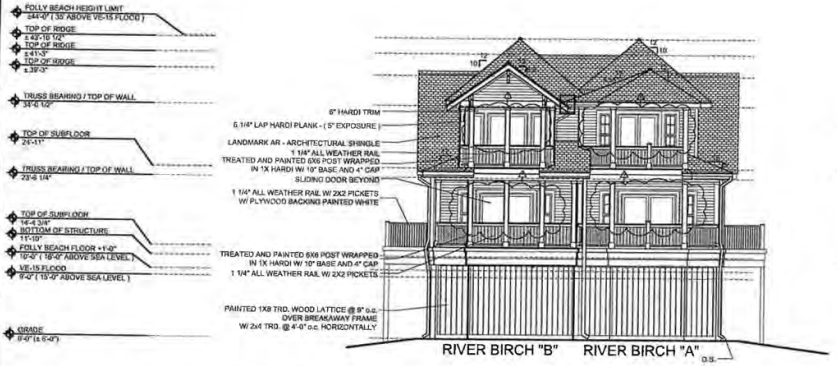
E2 / A207 THE RIVER BIRCH - STREET ELEVATION

SCALE: 1/8" = 1'-0"



E6 / A207 THE RIVER BIRCH - RIGHT SIDE (SIDE "A") ELEVATION

SCALE: 1/8" = 1'-0"



E2 / A207 THE RIVER BIRCH - MARSH ELEVATION

SCALE: 1/8" = 1'-0"

E6 / A207 THE RIVER BIRCH - LEFT SIDE (SIDE "B") ELEVATION

SCALE: 1/8" = 1'-0"

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

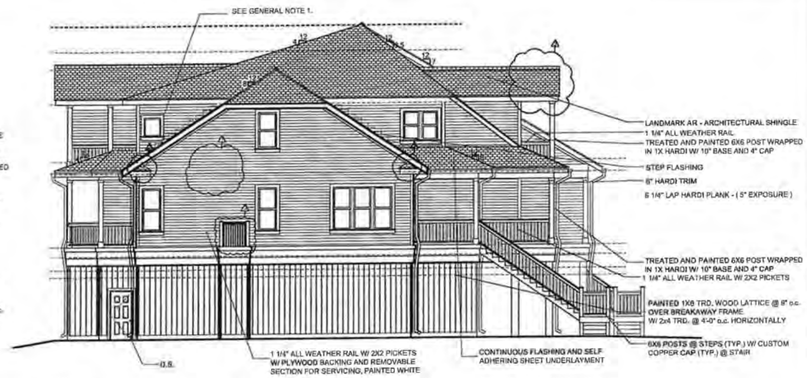
RIVER BIRCH ELEVATIONS

REVISIONS:	
1	6/7/06
2	5/22/06
3	2/11/2007
4	2/26/2007

DRAWN BY:	SJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A207

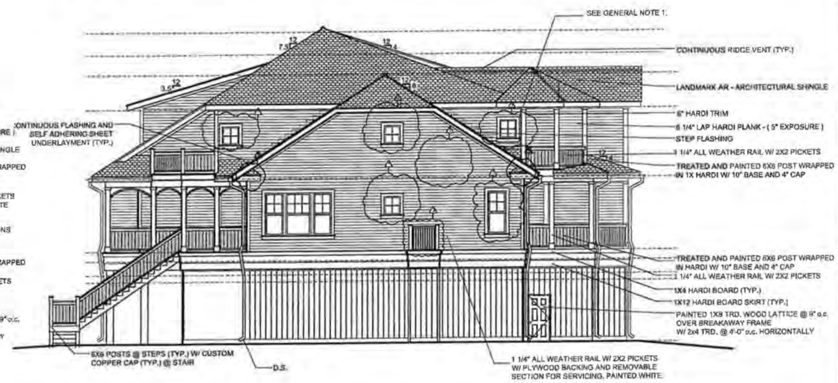
CONSTRUCTION SET

F3 / A208 **THE WILLOW - STREET ELEVATION - FRONT**
SCALE: 1/8" = 1'-0"



F6 / A208 **THE WILLOW - SIDE ELEVATION - LEFT SIDE**
SCALE: 1/8" = 1'-0"

C3 / A208 **THE WILLOW - MARSH ELEVATION - REAR**
SCALE: 1/8" = 1'-0"



C6 / A208 **THE WILLOW - SIDE ELEVATION - RIGHT SIDE**
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ACCENT WINDOWS TO BE MOUNTED @ FROM CENTER OF WINDOW ABOVE FINISH FLOOR . RAISE WINDOW HEIGHT AS NEEDED TO AVOID ROOF FLASHING, TRIM, ECT.

PAINT SCHEDULE

-FOR BIDDING PURPOSES- ALL TRIM TO BE ONE COLOR.

-FOR BIDDING PURPOSES- ALL LATTICE TO BE ONE COLOR

-FOR BIDDING PURPOSES- BODY OF BUILDING 1 TO BE ONE COLOR AND BODY OF OTHER TO BE A DIFFERENT COLOR.

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PALMETTO POINTE
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FOLLY BEACH, SOUTH CAROLINA

WILLOW ELEVATIONS

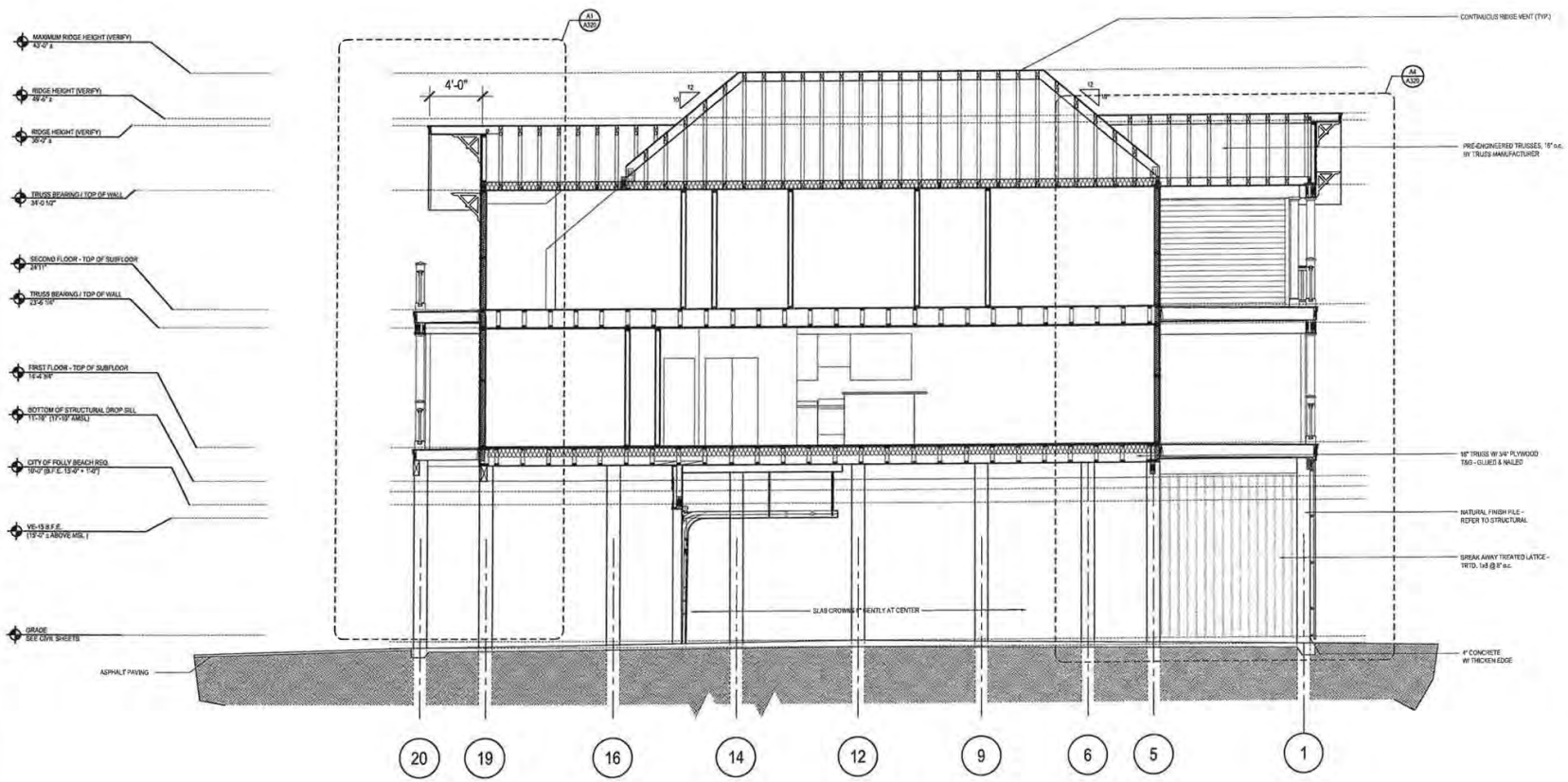
REVISIONS:
1 6/7/06
2 6/22/06
3 01/15/07
4 02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A208

CONSTRUCTION SET



A1 / A301 BUILDING SECTION
SCALE: 1/4" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

CYPRESS BUILDING SECTION

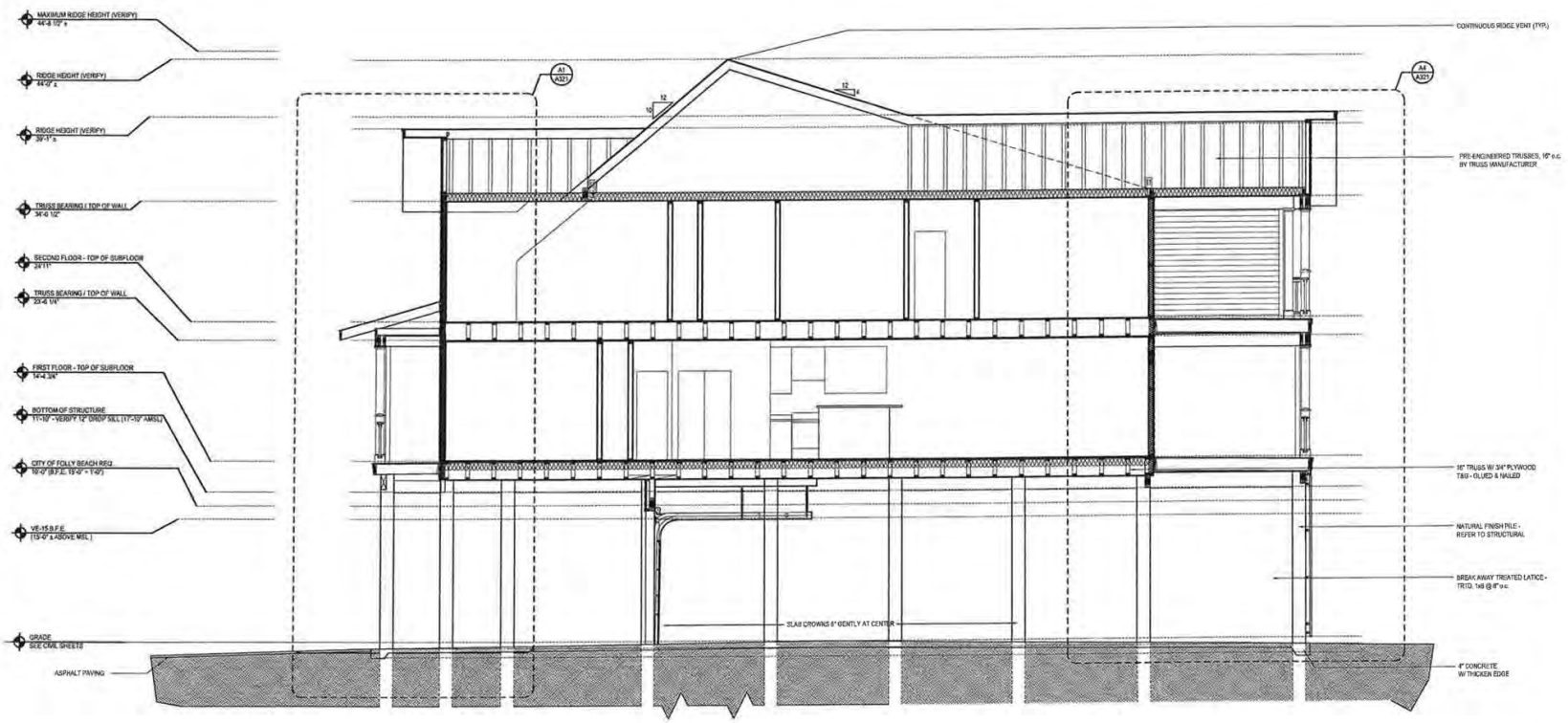
REVISIONS:
1 6/7/06
2 9/22/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A301

CONSTRUCTION SET



A1 / A302 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

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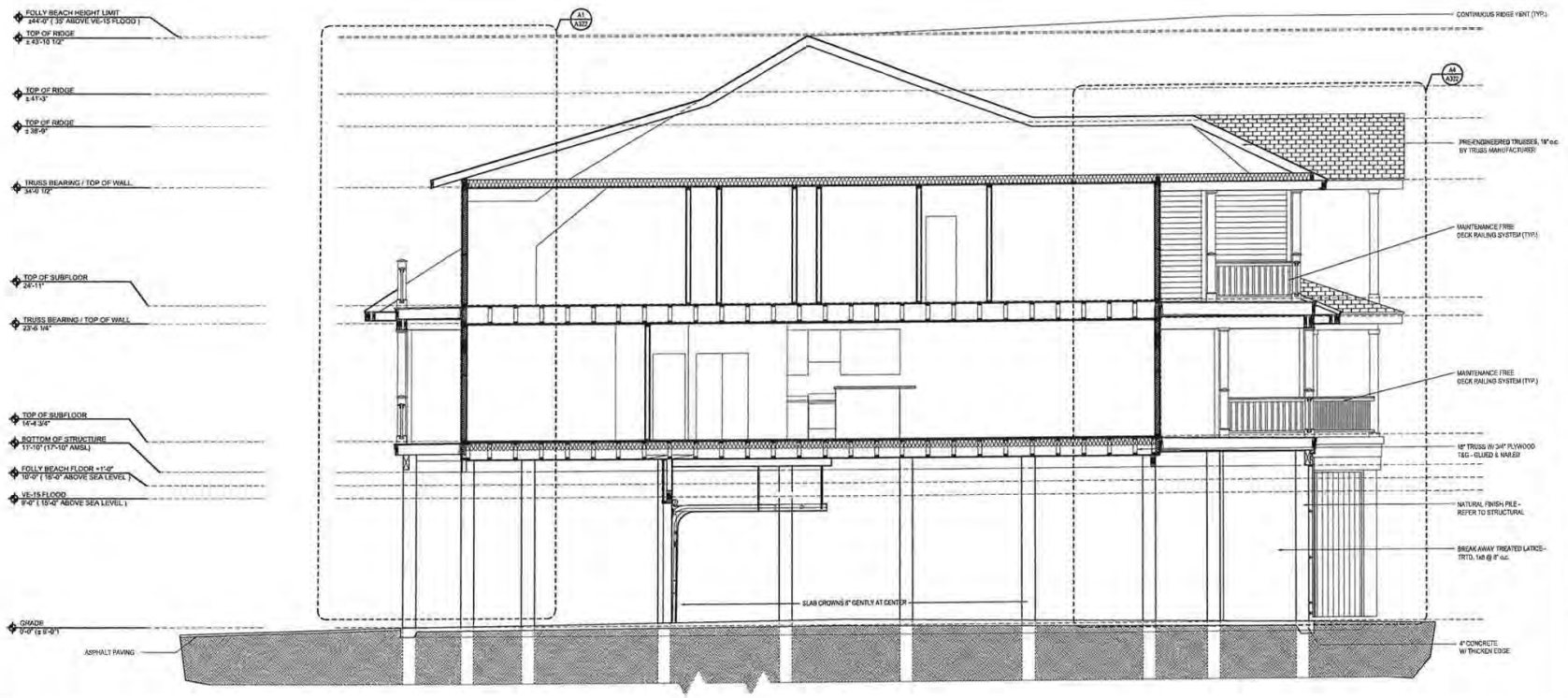
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

HOLLY BUILDING SECTION

REVISIONS:
1 9/7/06
2 6/22/06
3 01/15/07
4 02/05/07

DRAWN BY: ILM
CHECKED BY: TNS
DATE: 03-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A302

CONSTRUCTION SET



A1 / A303 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

SGM
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710 JOHNNIE DODDS BLVD.
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WEBSITE: WWW.SGMA.NET

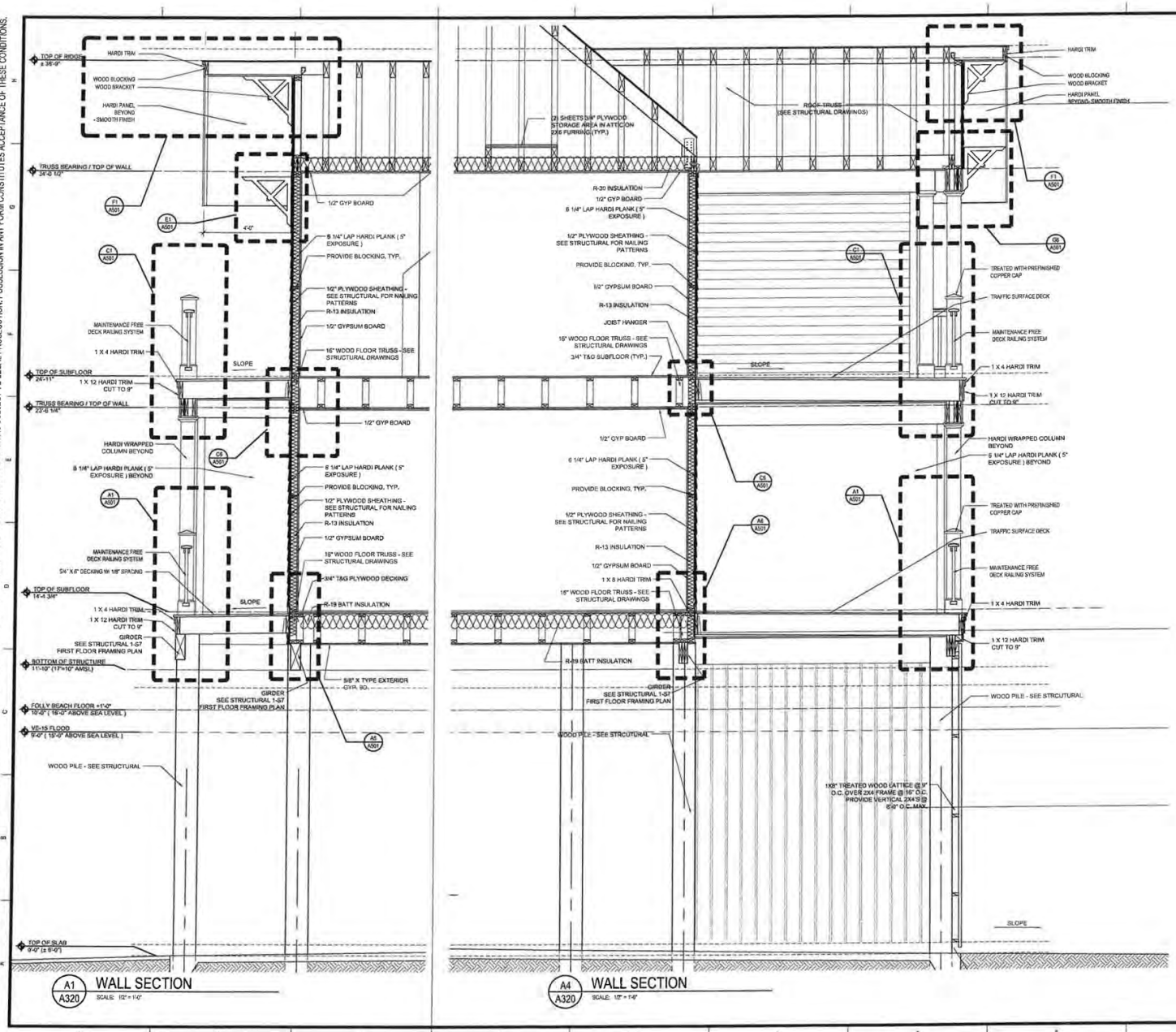
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

OAK BUILDING SECTION

REVISIONS:	
1	10/7/06
2	6/22/06
3	2/15/07
4	05/05/07

DRAWN BY:	RJH
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A303

CONSTRUCTION SET



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PALMETTO POINTE
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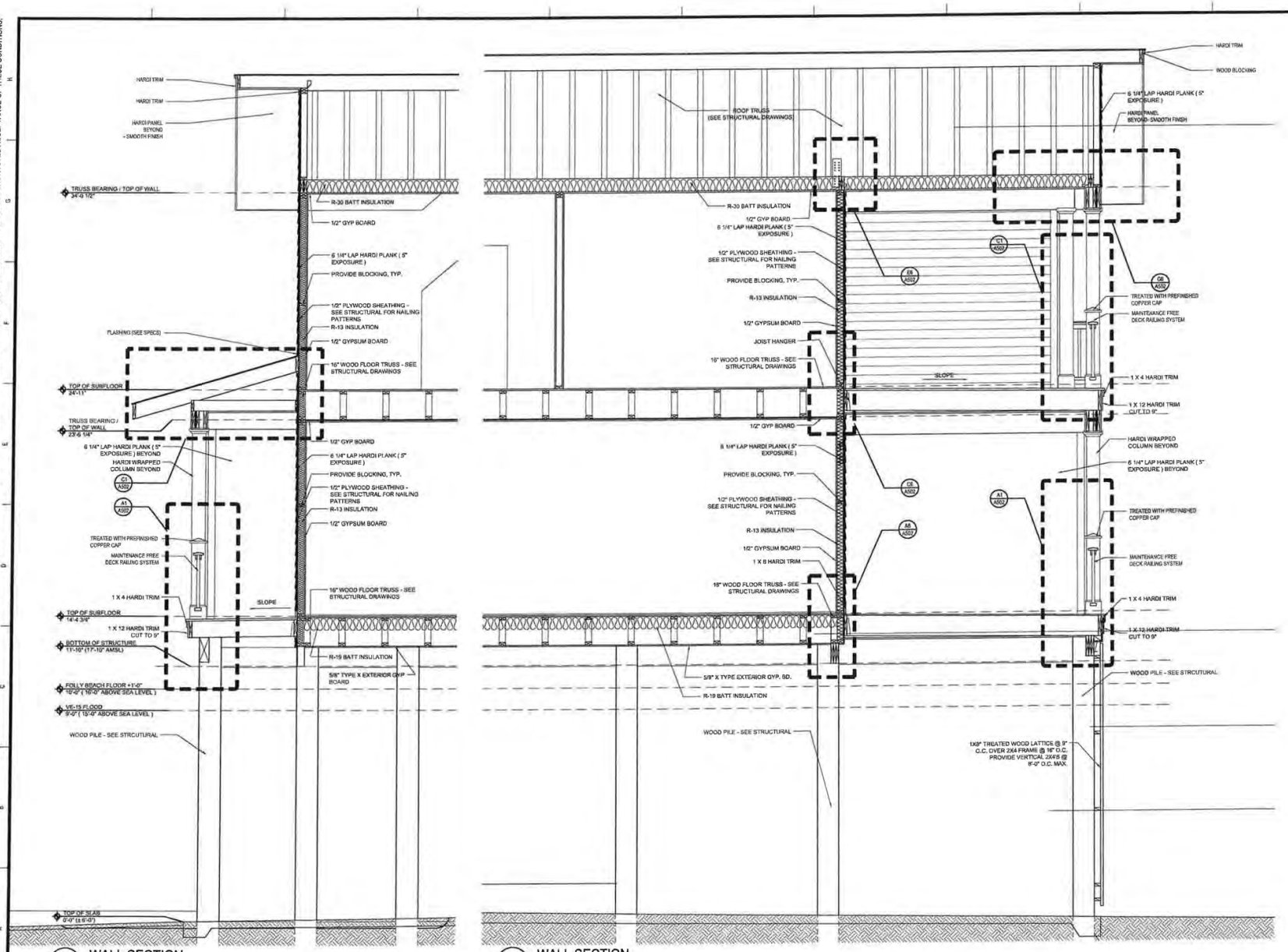
THE CYPRESS: WALL SECTIONS

REVISIONS:
1 6/7/06
2 9/22/06
3 2/01/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TAS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A320

CONSTRUCTION SET



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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE HOLLY WALL SECTIONS

REVISIONS:
1 6/7/06
2 6/22/06
3 11/15/07
4 12/06/07

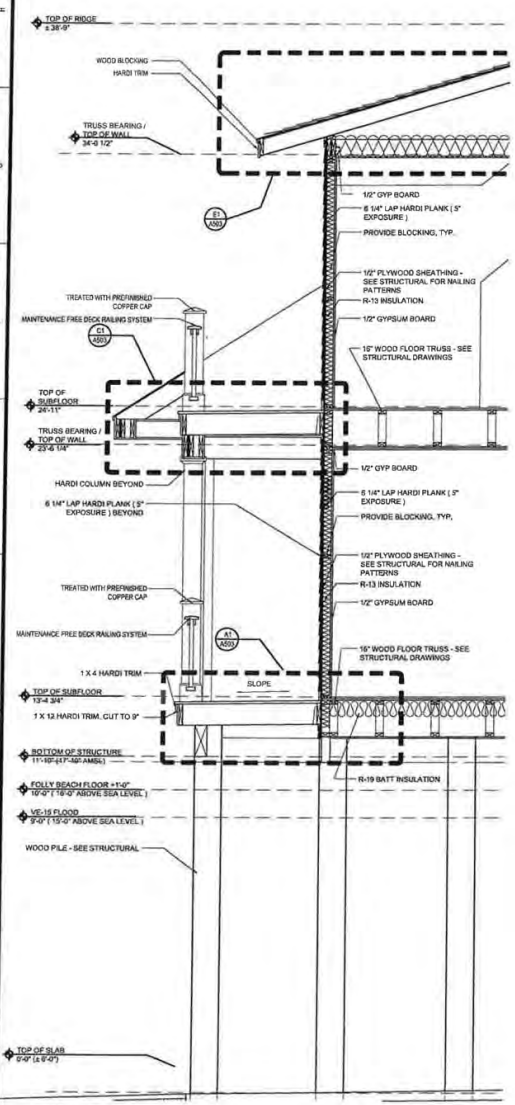
DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007

SGM JOB NUMBER
2003-1105.03

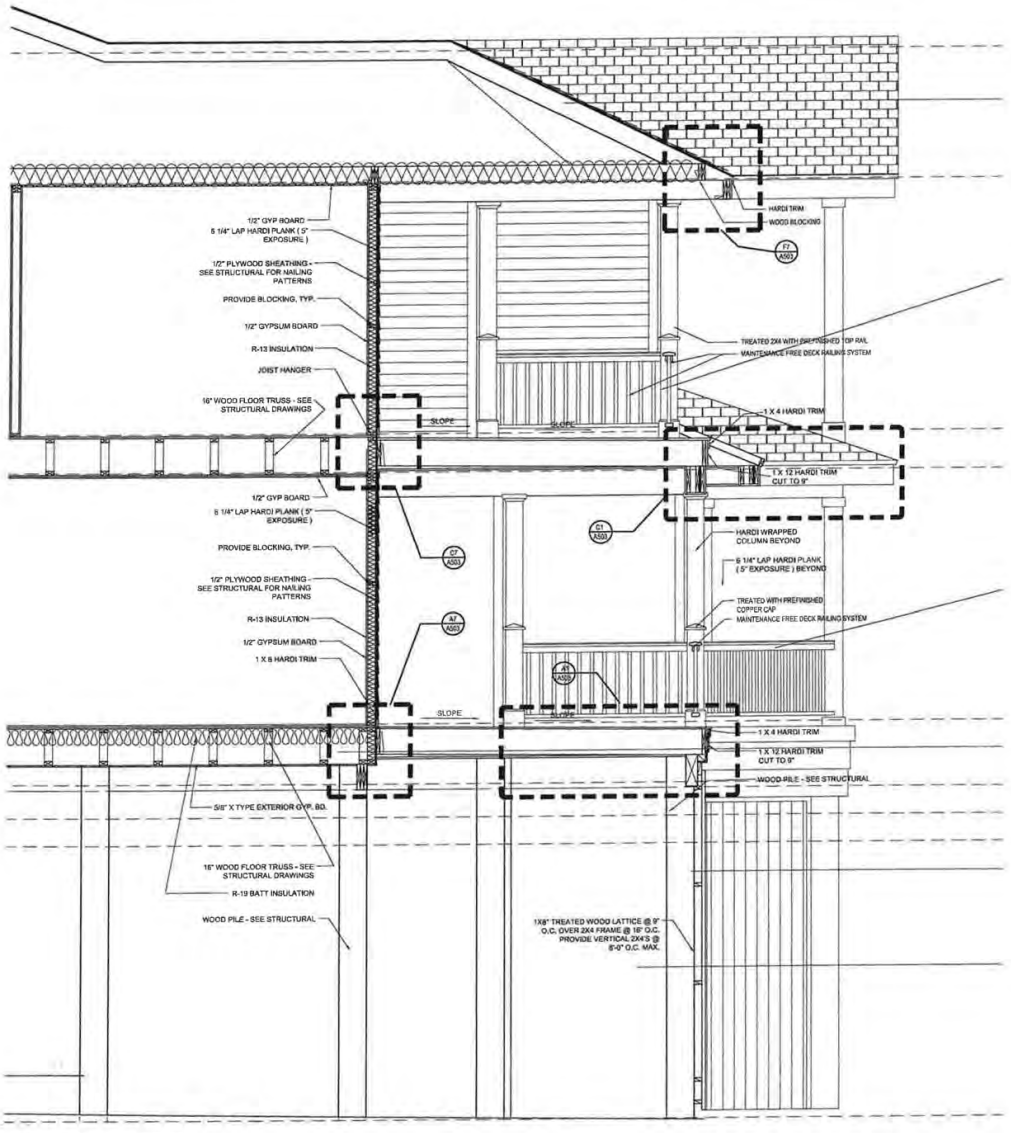
SHEET NUMBER
A321

CONSTRUCTION SET

R-2571



A1 / A322 WALL SECTION
SCALE: 1/2" = 1'-0"



A4 / A322 WALL SECTION
SCALE: 1/2" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

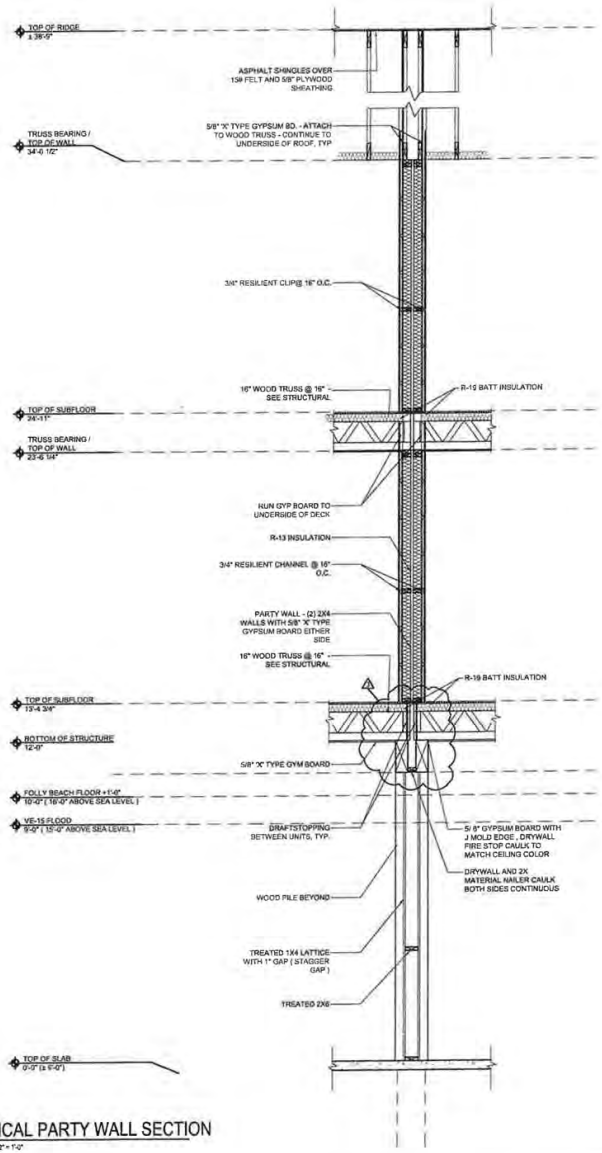
THE OAK: WALL SECTIONS

REVISIONS:
1 5/7/06
2 6/23/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER: 2003-1105.03
SHEET NUMBER: A322

CONSTRUCTION SET

R-2572



A1 / A323 TYPICAL PARTY WALL SECTION

SCALE: 1/2" = 1'-0"

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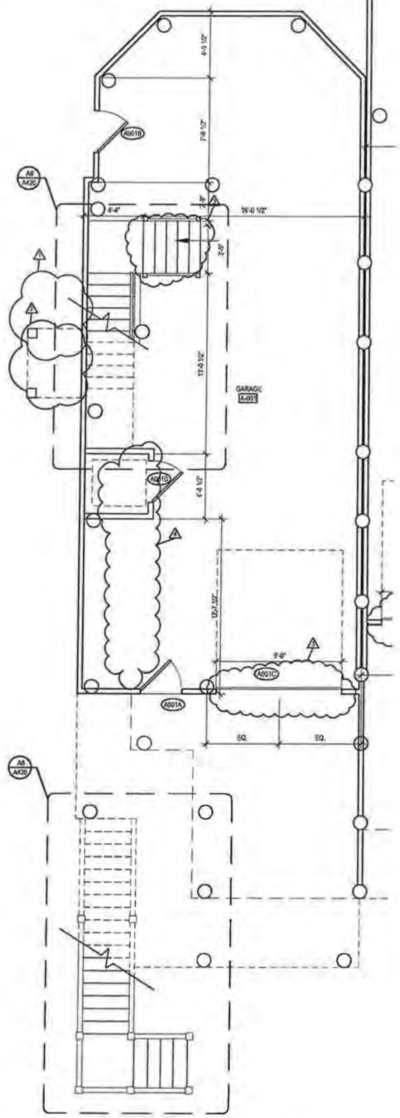
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

PARTY WALL SECTION

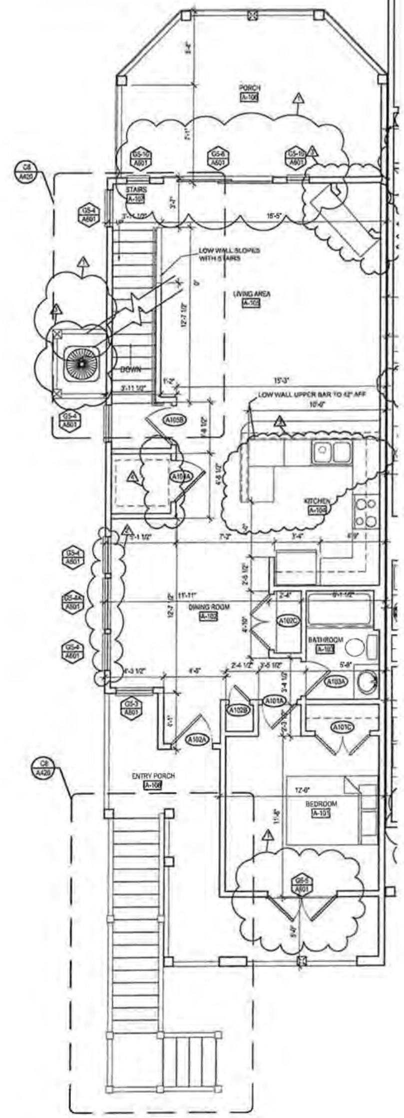
REVISIONS
1 07/08
2 4/25/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 12-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A323

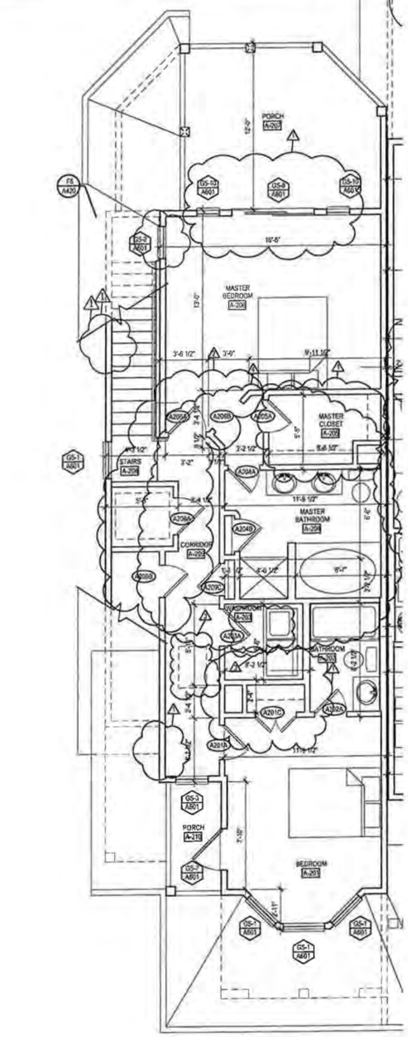
CONSTRUCTION SET



A1 / A401 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT A



A3 / A401 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT A



A6 / A401 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT A

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PALMETTO POINTE

PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

CYPRESS BUILDING - UNIT A: ENLARGED FLOOR PLANS

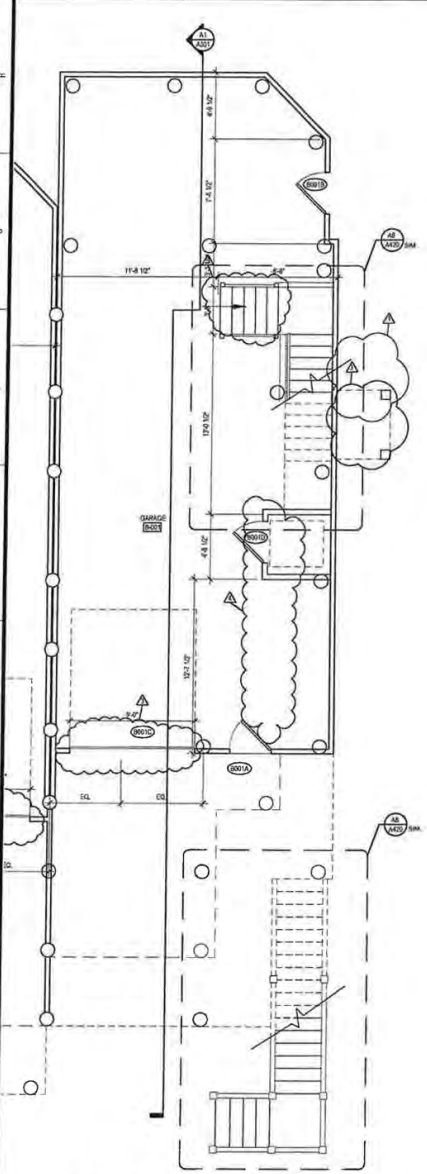
REVISIONS:
1 6/7/06
2 6/22/06
3 01/15/07
4 02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

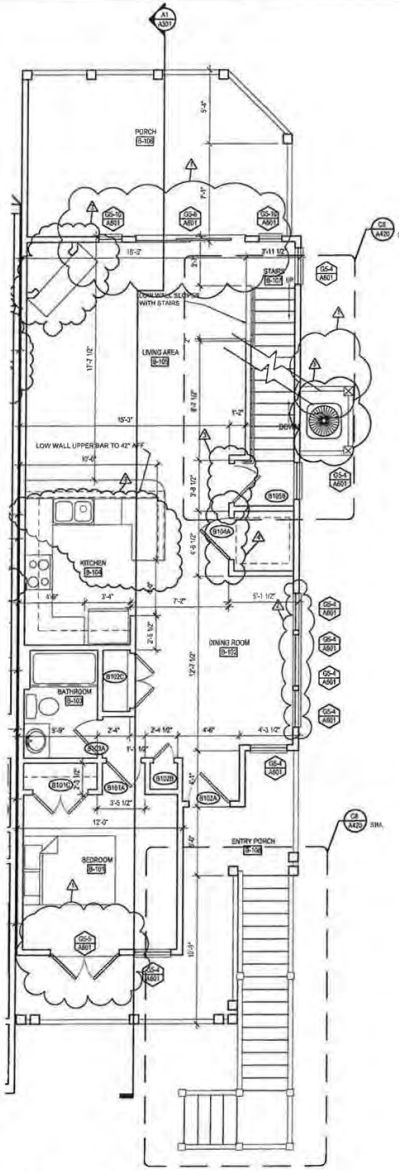
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A401

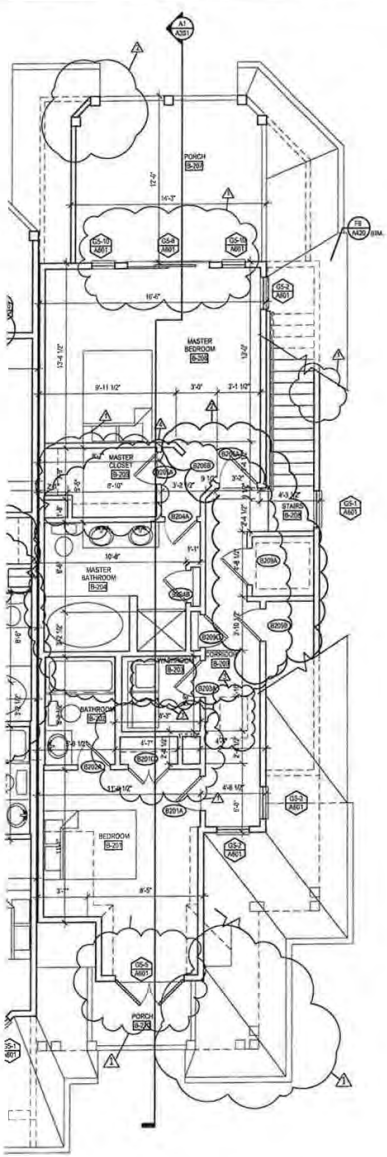
CONSTRUCTION SET



A1 / A402 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT B



A3 / A402 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT B



A6 / A402 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" CYPRESS UNIT B

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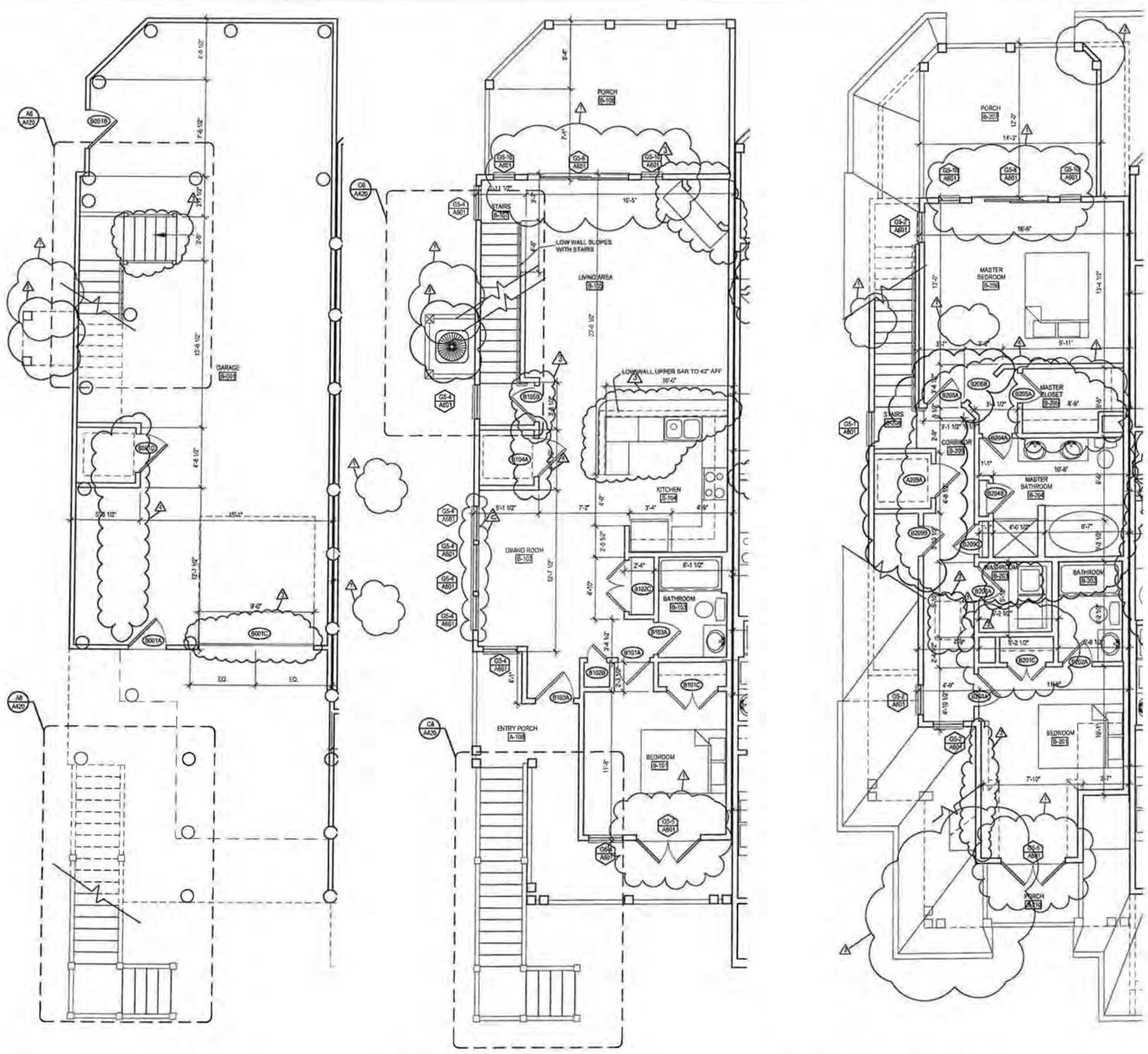
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
CYPRESS BUILDING - UNIT B: ENLARGED FLOOR PLANS

REVISIONS:
1 07/06
2 02/06
3 01/1507
4 02/05/07

DRAWN BY: TLM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A402

CONSTRUCTION SET

R-2575



A1 / A403 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT B

A3 / A403 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT B

A6 / A403 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT B

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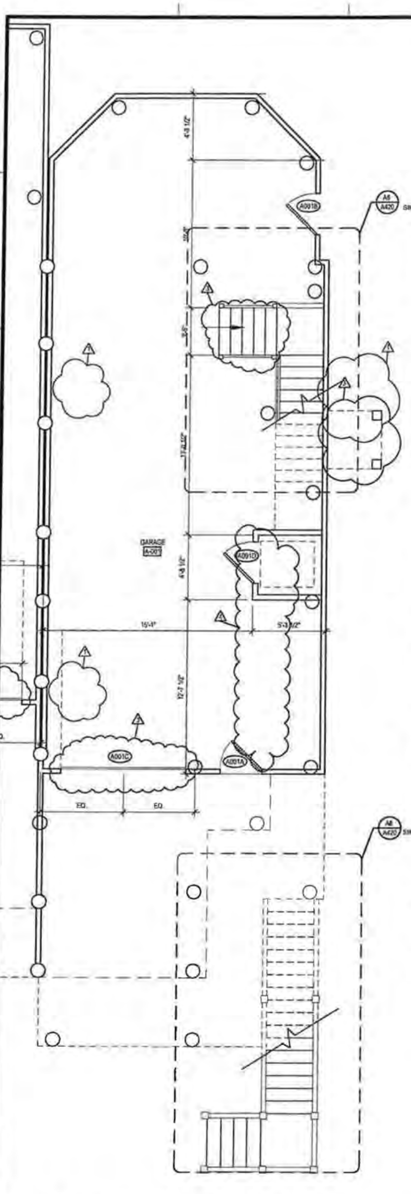
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

DOGWOOD BUILDING - UNIT A: ENLARGED FLOOR PLANS

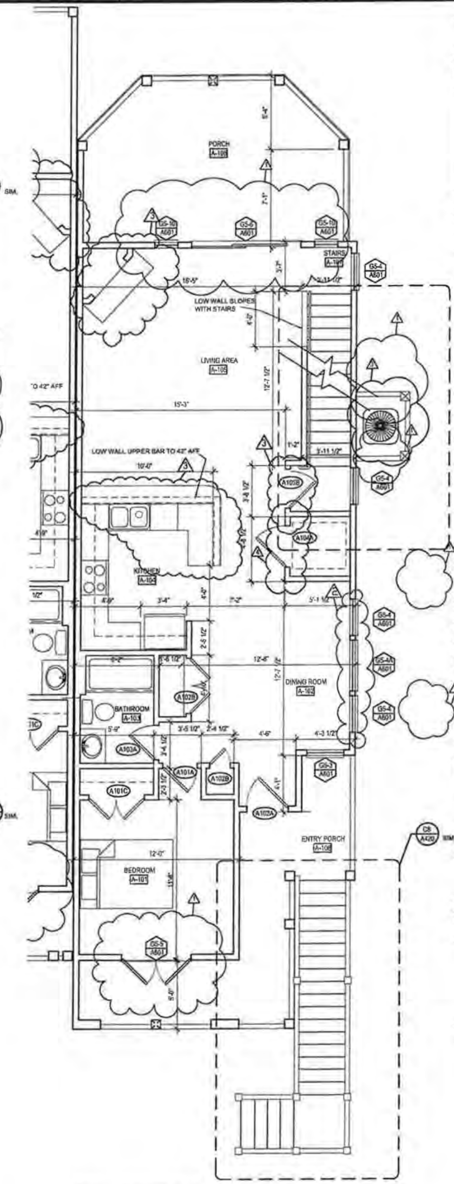
REVISIONS:
1 5/7/06
2 6/22/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A403

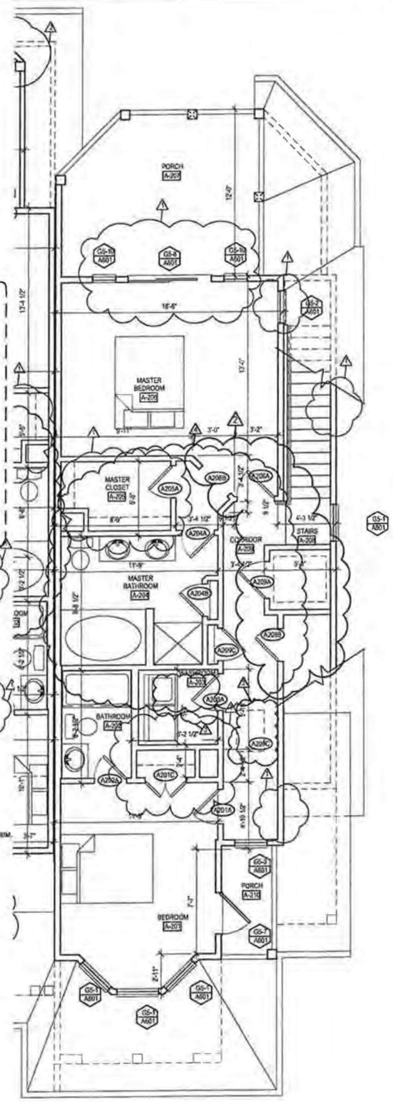
CONSTRUCTION SET



A1 A404 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT A



A3 A404 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT A



A6 A404 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" DOGWOOD UNIT A

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PALMETTO POINTE
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DOGWOOD BUILDING - UNIT B: ENLARGED FLOOR PLANS

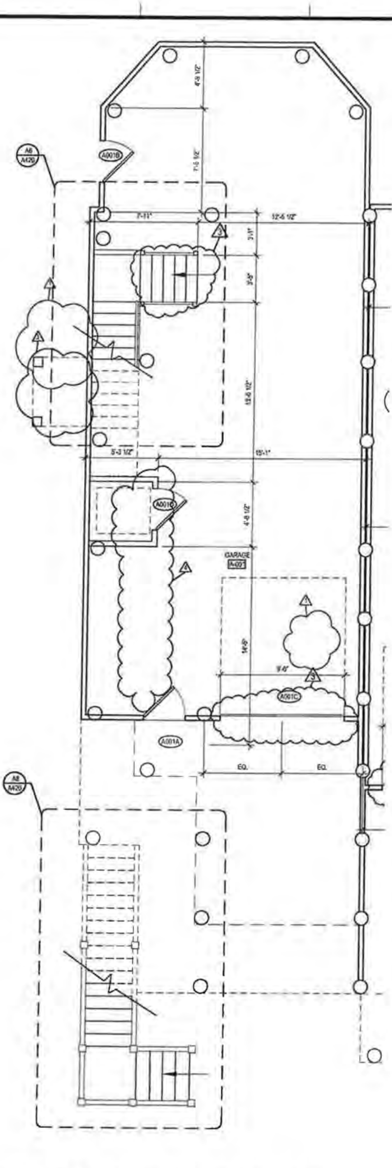
REVISIONS:

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007

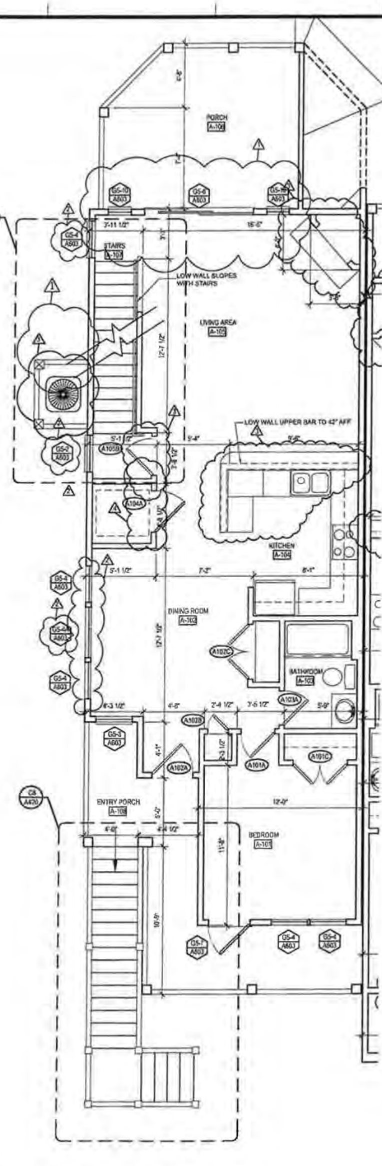
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A404

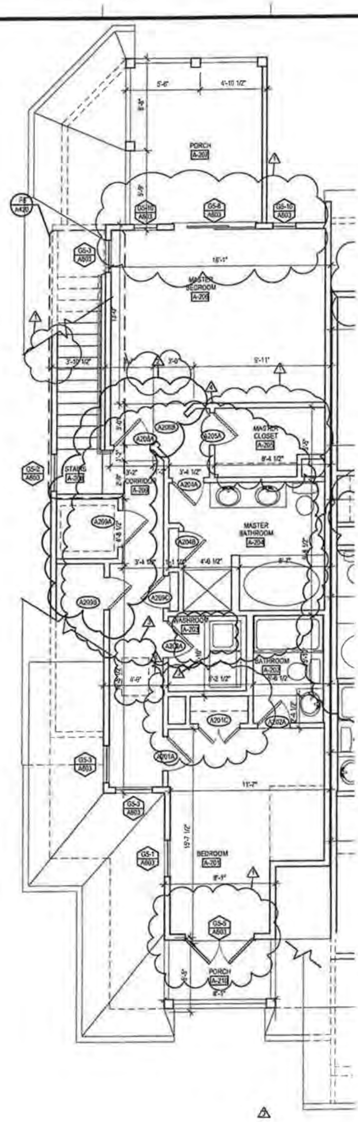
CONSTRUCTION SET



A1 / A405 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT A



A3 / A405 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT A



A6 / A405 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT A

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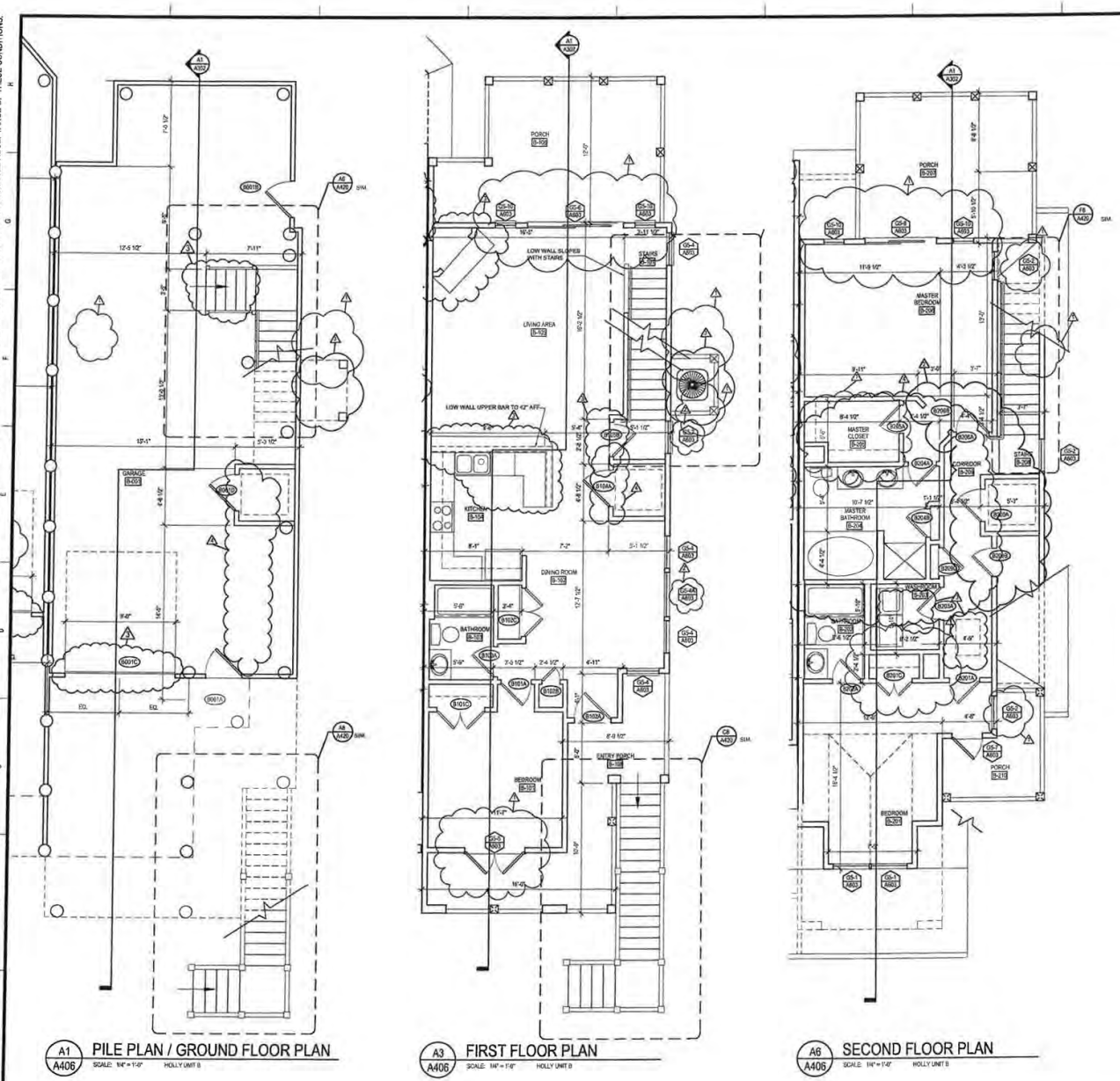
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

HOLLY BUILDING - UNIT A: ENLARGED FLOOR PLANS

REVISIONS:

DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A405

CONSTRUCTION SET



A1 / A406 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT B

A3 / A406 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT B

A6 / A406 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" HOLLY UNIT B

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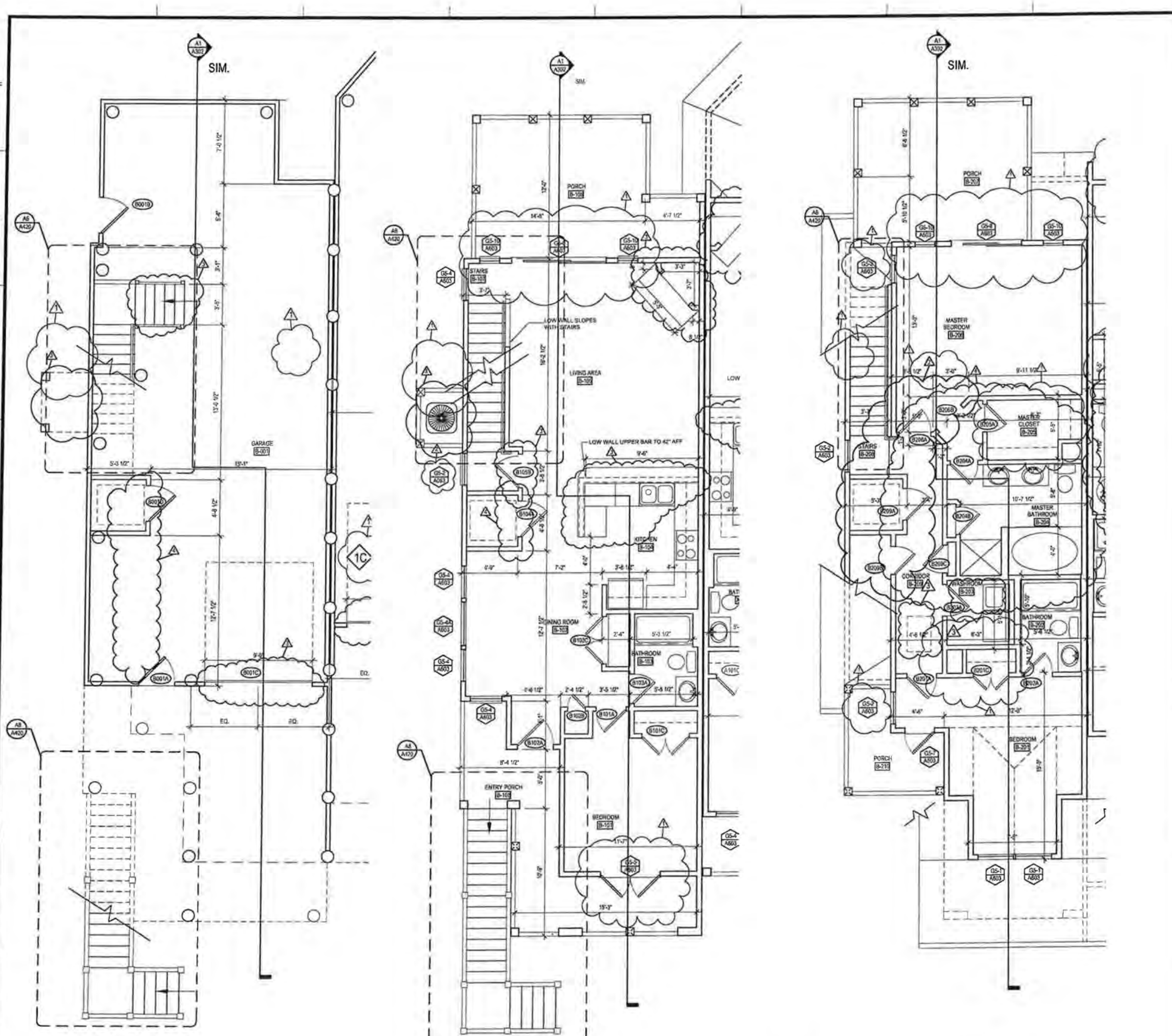
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

HOLLY BUILDING - UNIT B: ENLARGED FLOOR PLANS

REVISIONS:
1 5/7/06
2 8/22/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TME
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A406

CONSTRUCTION SET



A1/A407 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT B

A3/A407 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT B

A6/A407 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT B

SGM
Architecture
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710 JOHNNIE DODDS BLVD.
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FAX: (843) 849-6750
WEBSITE: WWW.SGMA.NET

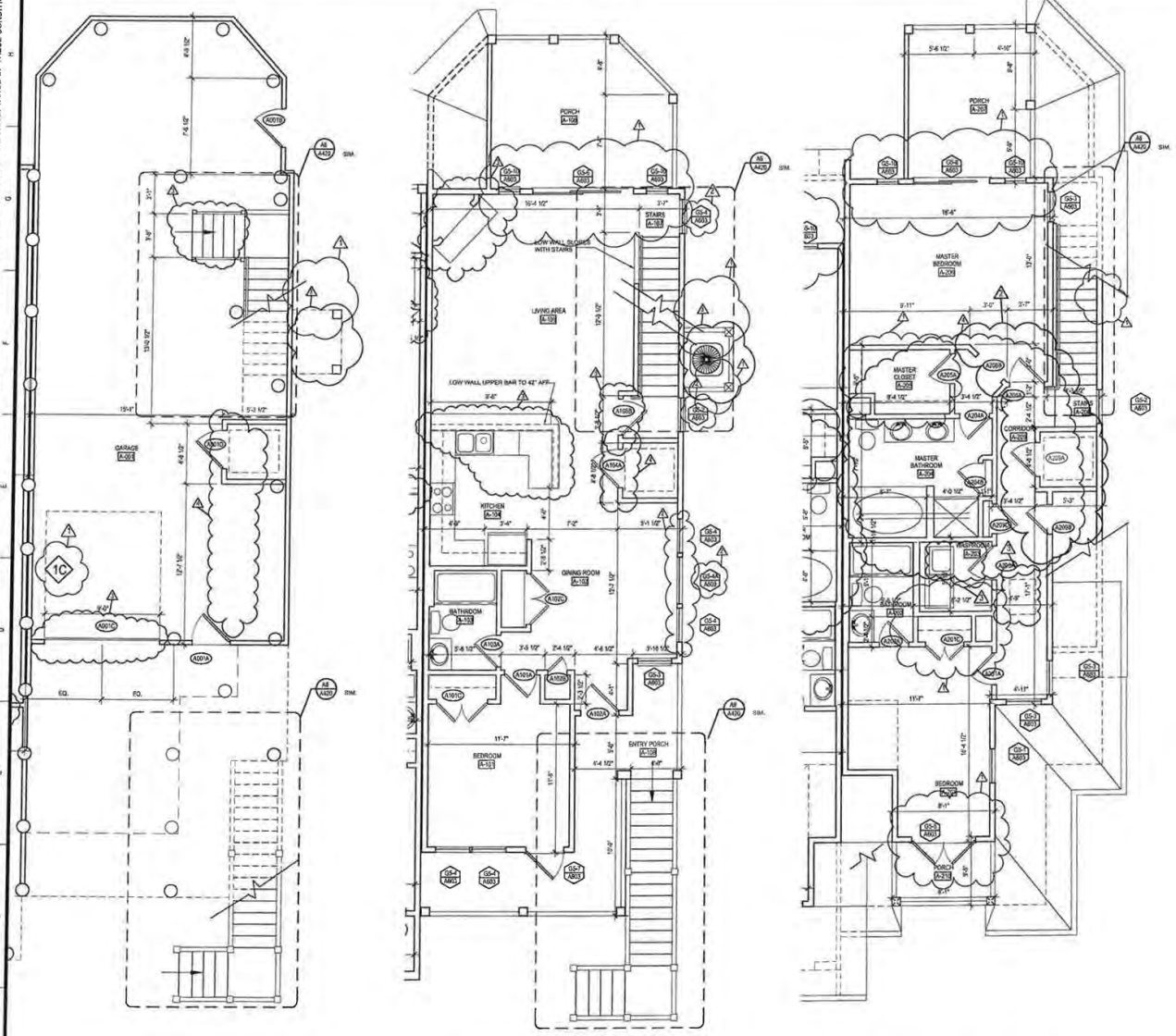
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

MAGNOLIA BUILDING - UNIT B: ENLARGED FLOOR PLANS

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A407

CONSTRUCTION SET



A1 / A408 **PILE PLAN / GROUND FLOOR PLAN**
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT A

A3 / A408 **FIRST FLOOR PLAN**
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT A

A6 / A408 **SECOND FLOOR PLAN**
SCALE: 1/4" = 1'-0" MAGNOLIA UNIT A

SGM
Architecture
Interiors
Planning
710 JOHNNIE DODDS BLVD.
SUITE 300, P.O. BOX 1005
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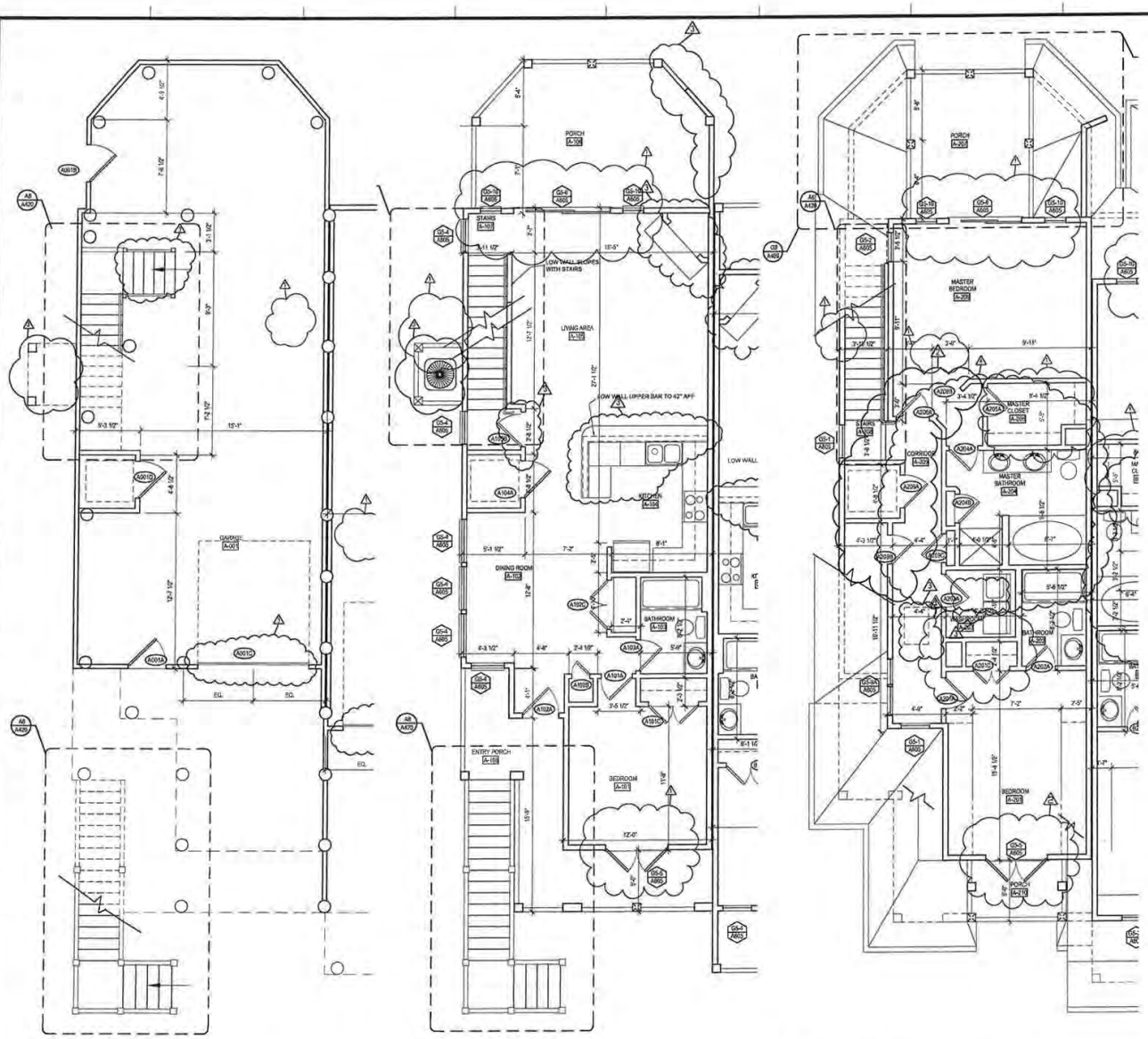
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
MAGNOLIA BUILDING - UNIT A-ENLARGED PLANS

REVISIONS:
1. 6/7/06
2. 9/22/06
3. 01/15/07
4. 02/05/07

DRAWN BY: RJM
CHECKED BY: TAS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A408

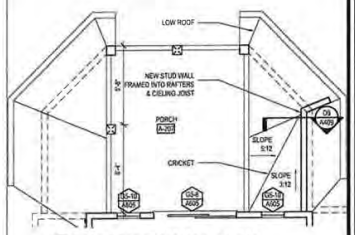
CONSTRUCTION SET



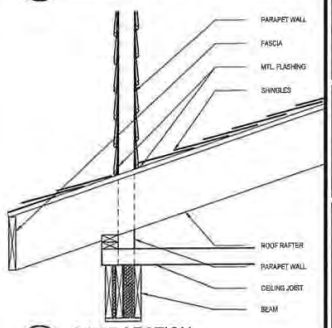
A1 / A409 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT A

A3 / A409 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT A

A6 / A409 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT A



G9 / A409 PRIVACY WALL PLAN
SCALE: 1/4" = 1'-0" OAK UNIT A



D9 / A409 ROOF SECTION
SCALE: 1" = 1'-0" OAK UNIT A

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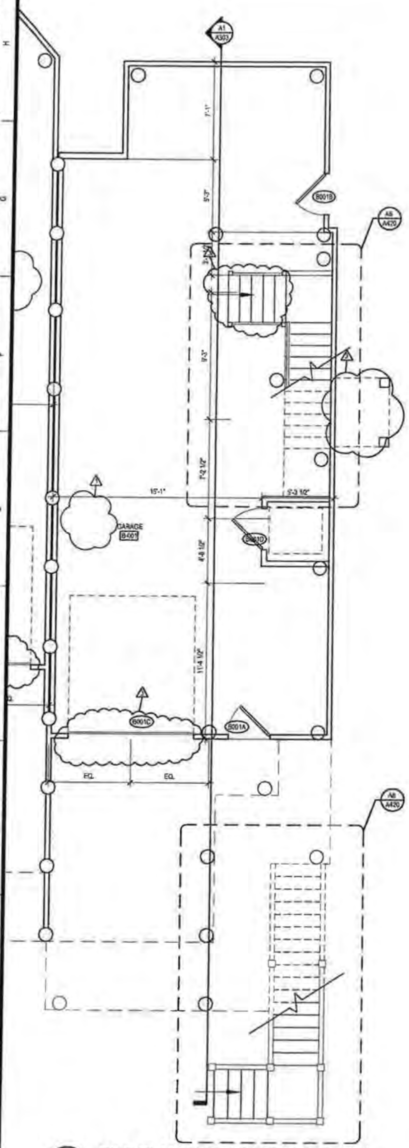
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

OAK BUILDING - UNIT A ENLARGED FLOOR PLANS

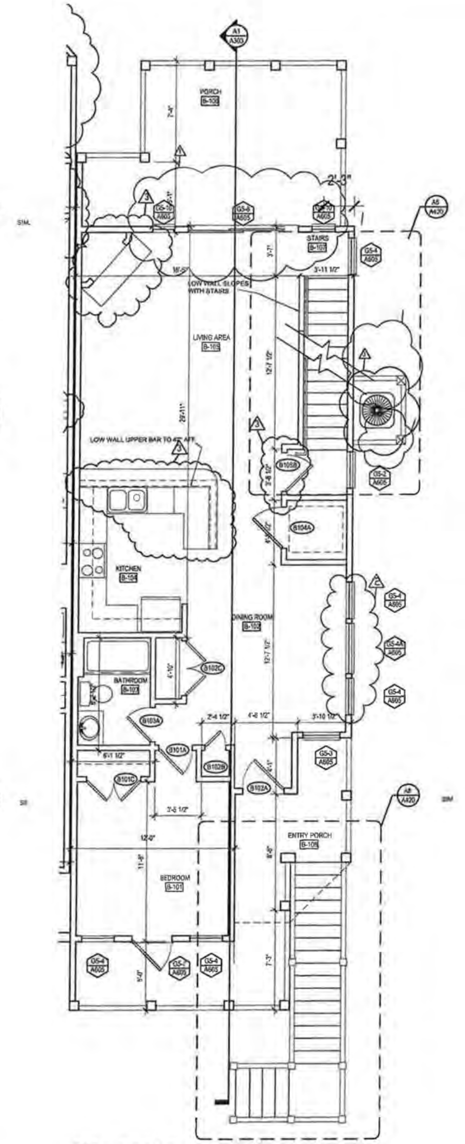
REVISIONS:
1 07/06
2 10/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TAS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A409

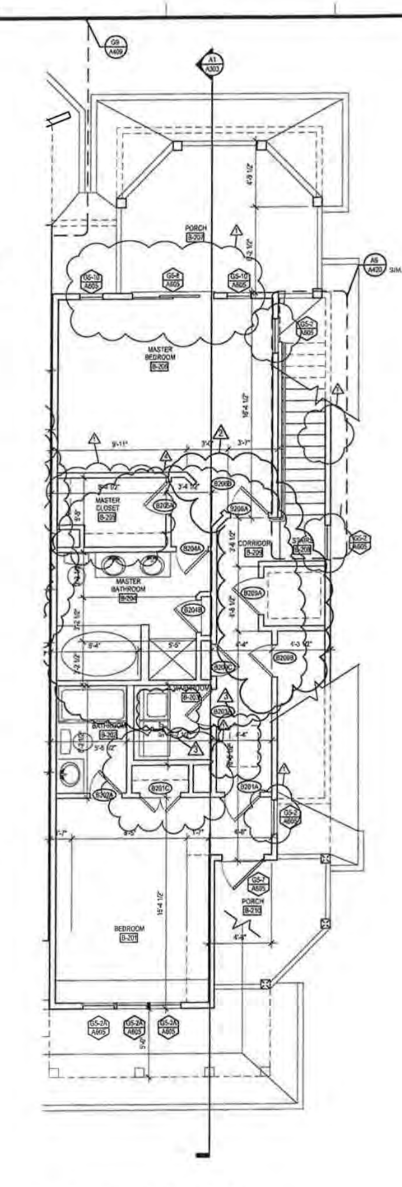
CONSTRUCTION SET



A1 A410 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT B



A3 A410 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT B



A6 A410 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" OAK UNIT B

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PALMETTO POINTE

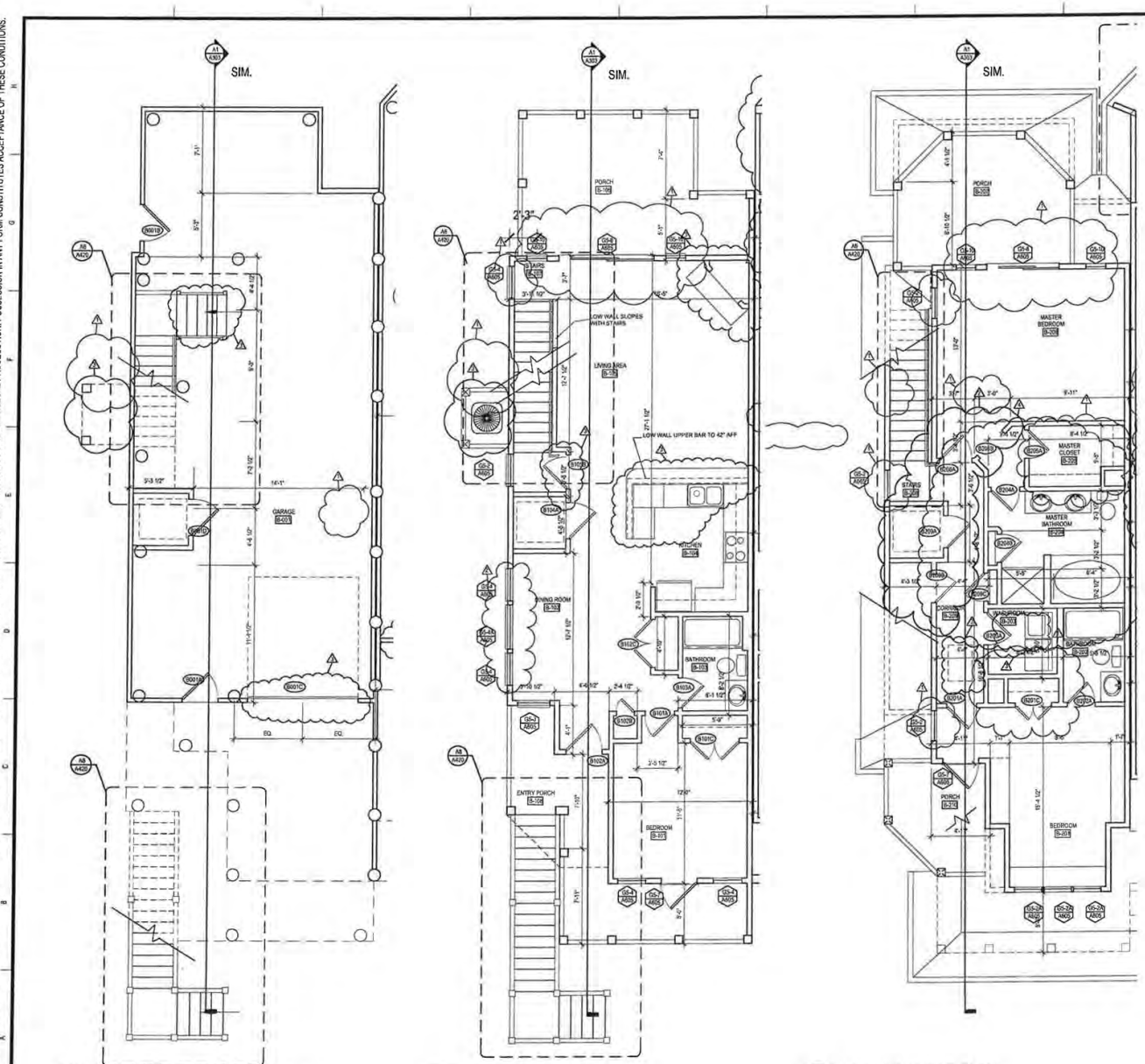
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

OAK BUILDING - UNIT B: ENLARGED FLOOR PLANS

REVISIONS:

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A410

CONSTRUCTION SET



A1 A411 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT B

A3 A411 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT B

A6 A411 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT B

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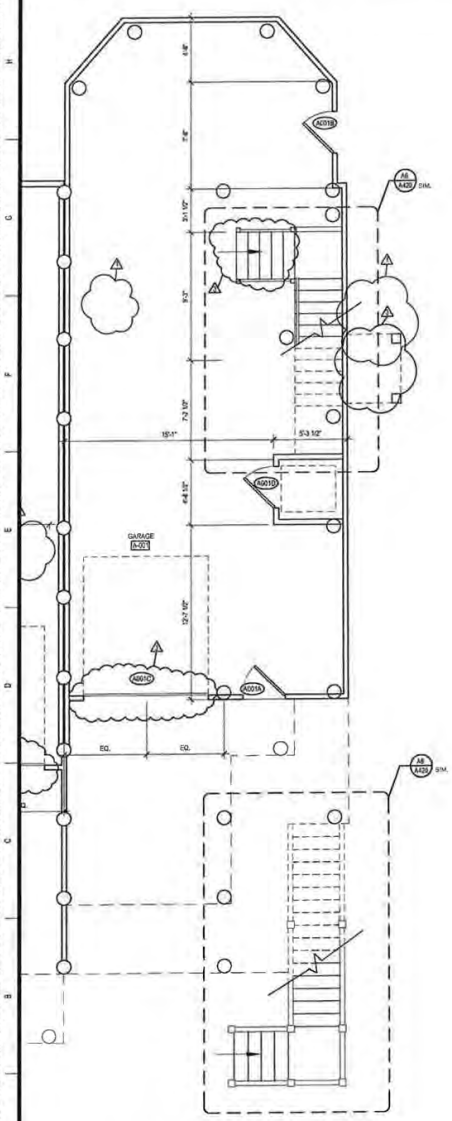
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

PALMETTO BUILDING - UNIT A: ENLARGED FLOOR PLANS

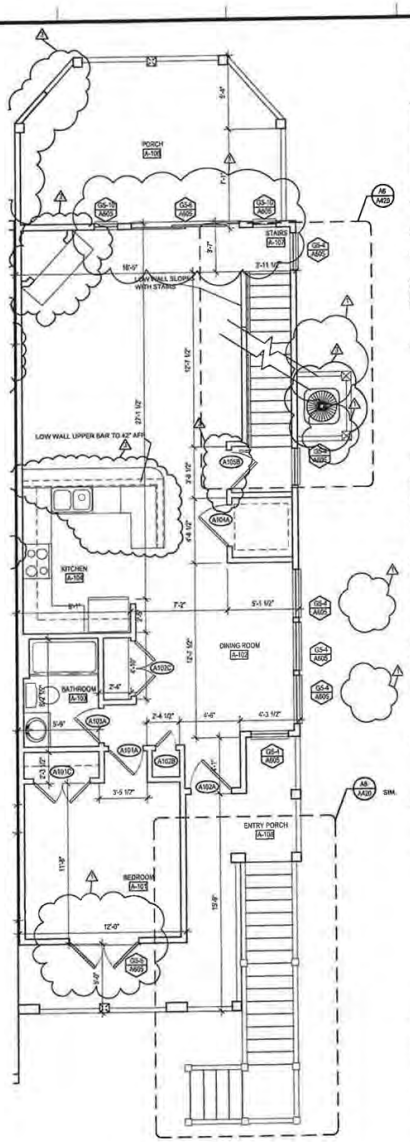
REVISIONS:
1 6/7/06
2 9/22/06
3 01/15/07
4 03/05/07

DRAWN BY: RJM
CHECKED BY: TAS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A411

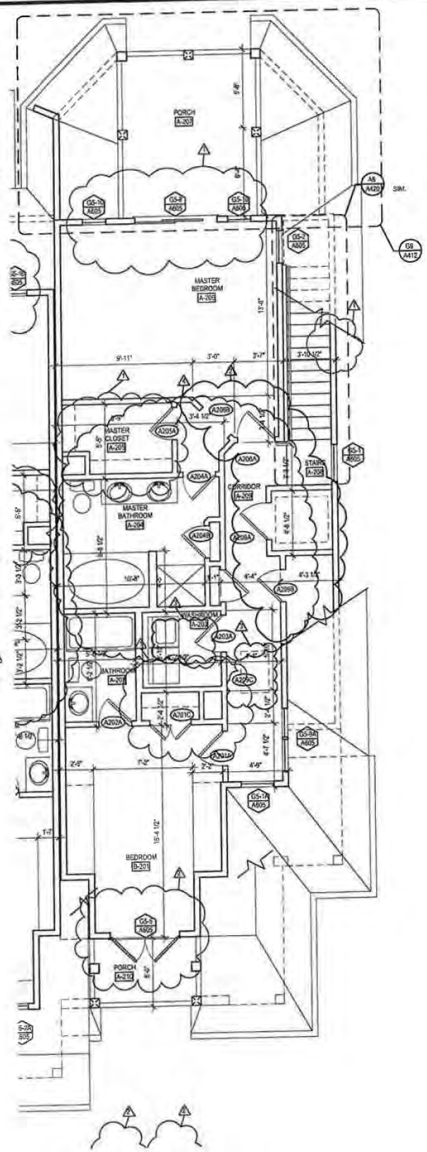
CONSTRUCTION SET



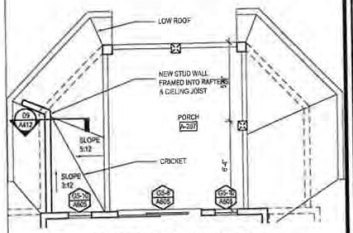
A1 / A412 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT A



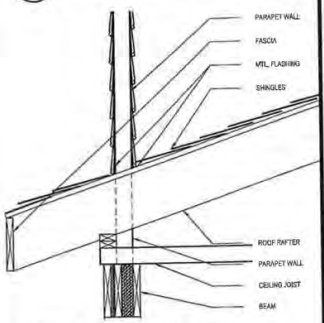
A3 / A412 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT A



A6 / A412 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" PALMETTO UNIT A



G9 / A412 PRIVACY WALL PLAN
SCALE: 1/4" = 1'-0" OAK UNIT A



D9 / A412 ROOF SECTION
SCALE: 1/2" = 1'-0" PALMETTO UNIT B

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
PALMETTO BUILDING - UNIT B: ENLARGED FLOOR PLANS

REVISIONS	
1	9/7/06
2	6/22/06
3	01/15/07
4	02/05/07

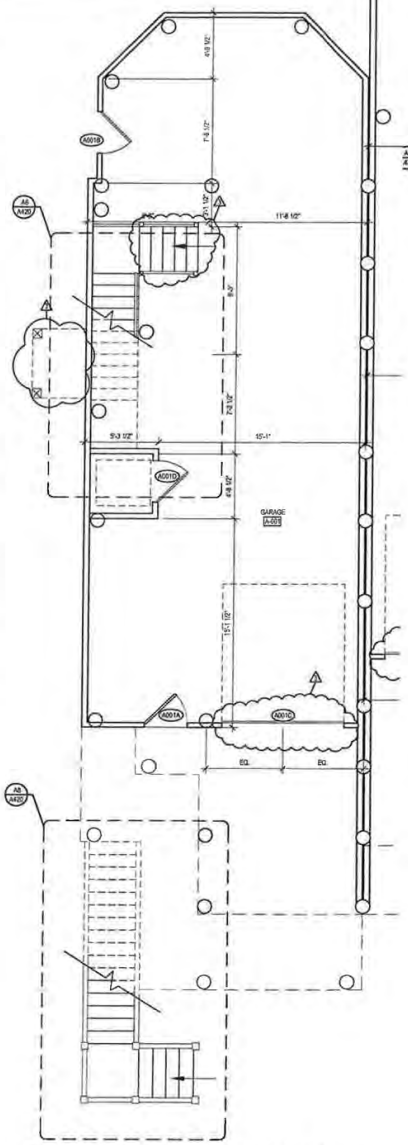
DRAWN BY:	RLM
CHECKED BY:	TNS
DATE:	02-06-2007

SGM JOB NUMBER
2003-1105.03

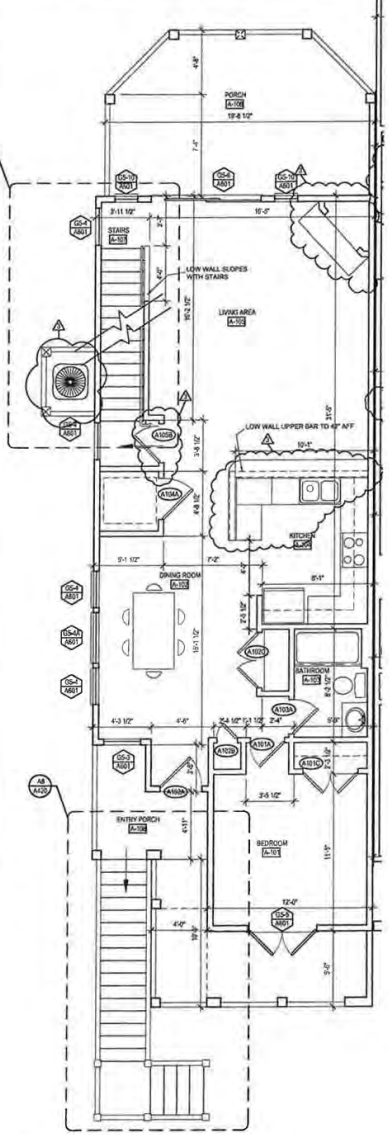
SHEET NUMBER
A412

CONSTRUCTION SET

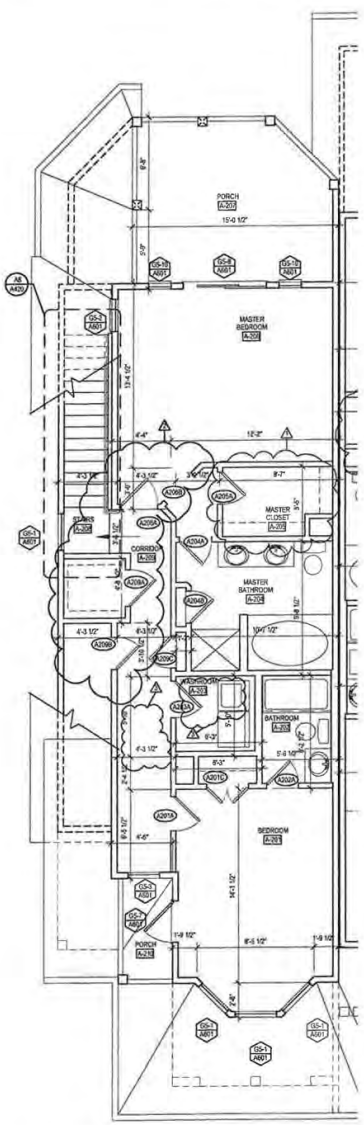
R-2585



A1 / A413 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT A



A3 / A413 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT A



A6 / A413 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT A

NOTES
1. SEE A601 FOR DOOR AND WINDOW SCHEDULES.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
RIVER BIRCH BUILDING - UNIT A - ENLARGED FLOOR PLANS

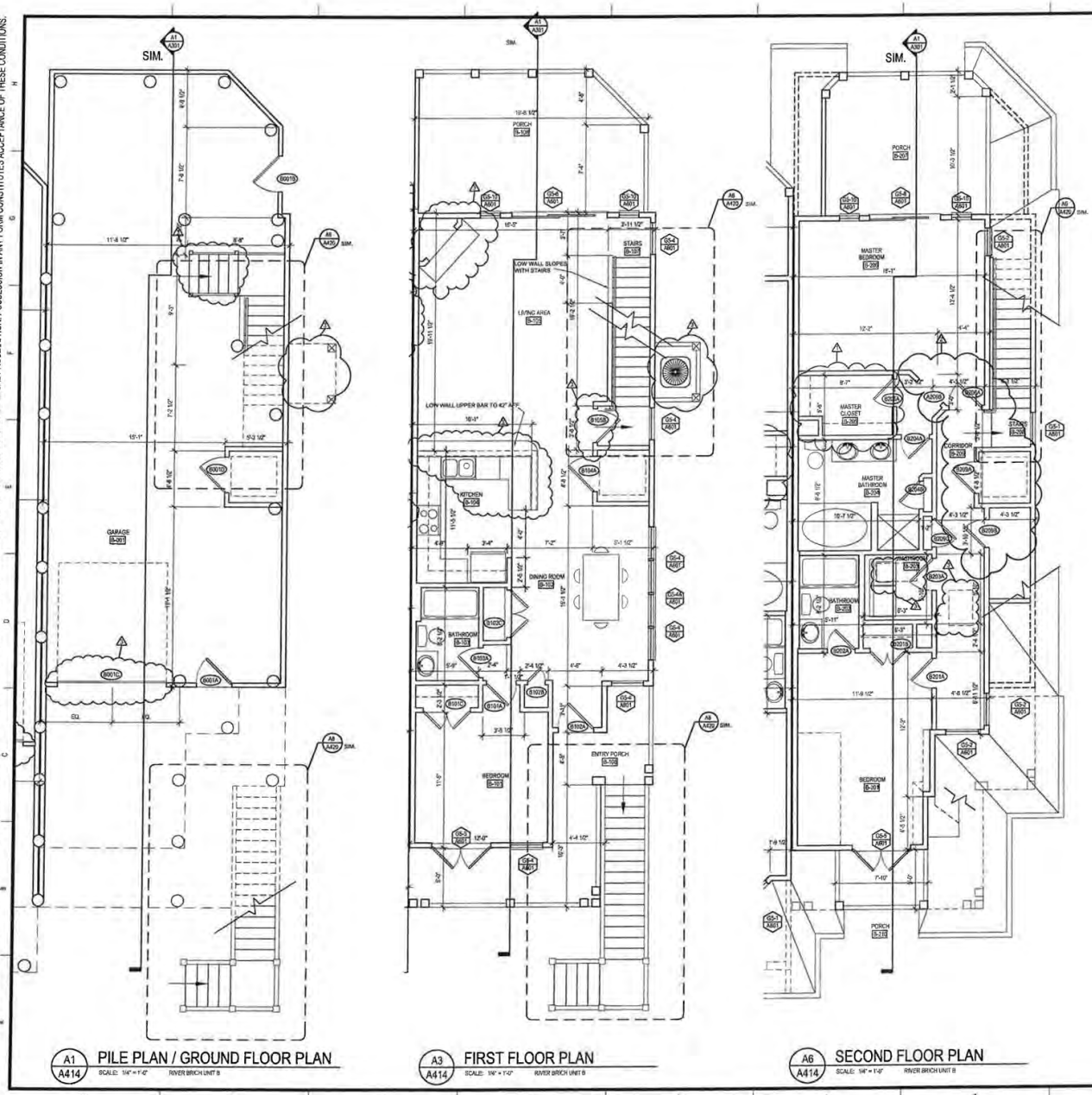
REVISIONS
5/1/06
9/22/06
01/15/07

DRAWN BY:	RJM
CHECKED BY:	TNE
DATE:	02-05-2007

SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A413

CONSTRUCTION SET



A1 / A414 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT B

A3 / A414 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT B

A6 / A414 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" RIVER BIRCH UNIT B

NOTES
1. SEE A601 FOR DOOR AND WINDOW SCHEDULES.

SGM
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Interiors
Planning
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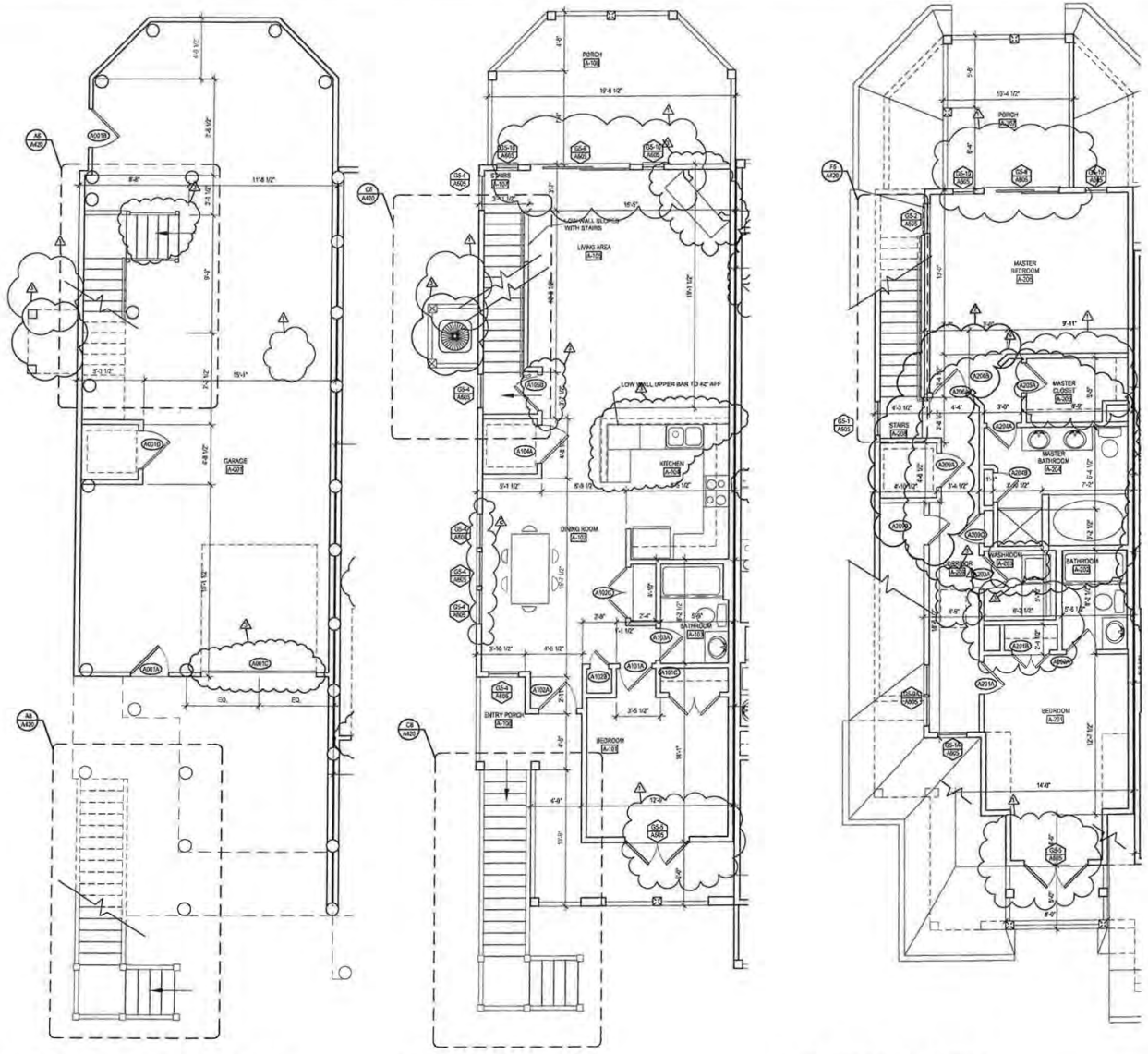
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
RIVER BIRCH BUILDING - UNIT B : ENLARGED FLOOR PLANS

REVISIONS:
07/05
12/22/06
01/15/07

DRAWN BY: RJW
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A414

CONSTRUCTION SET



A1 / A415 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT A

A3 / A415 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT A

A6 / A415 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT A

NOTES
1. SEE A803 FOR DOOR AND WINDOW SCHEDULES.

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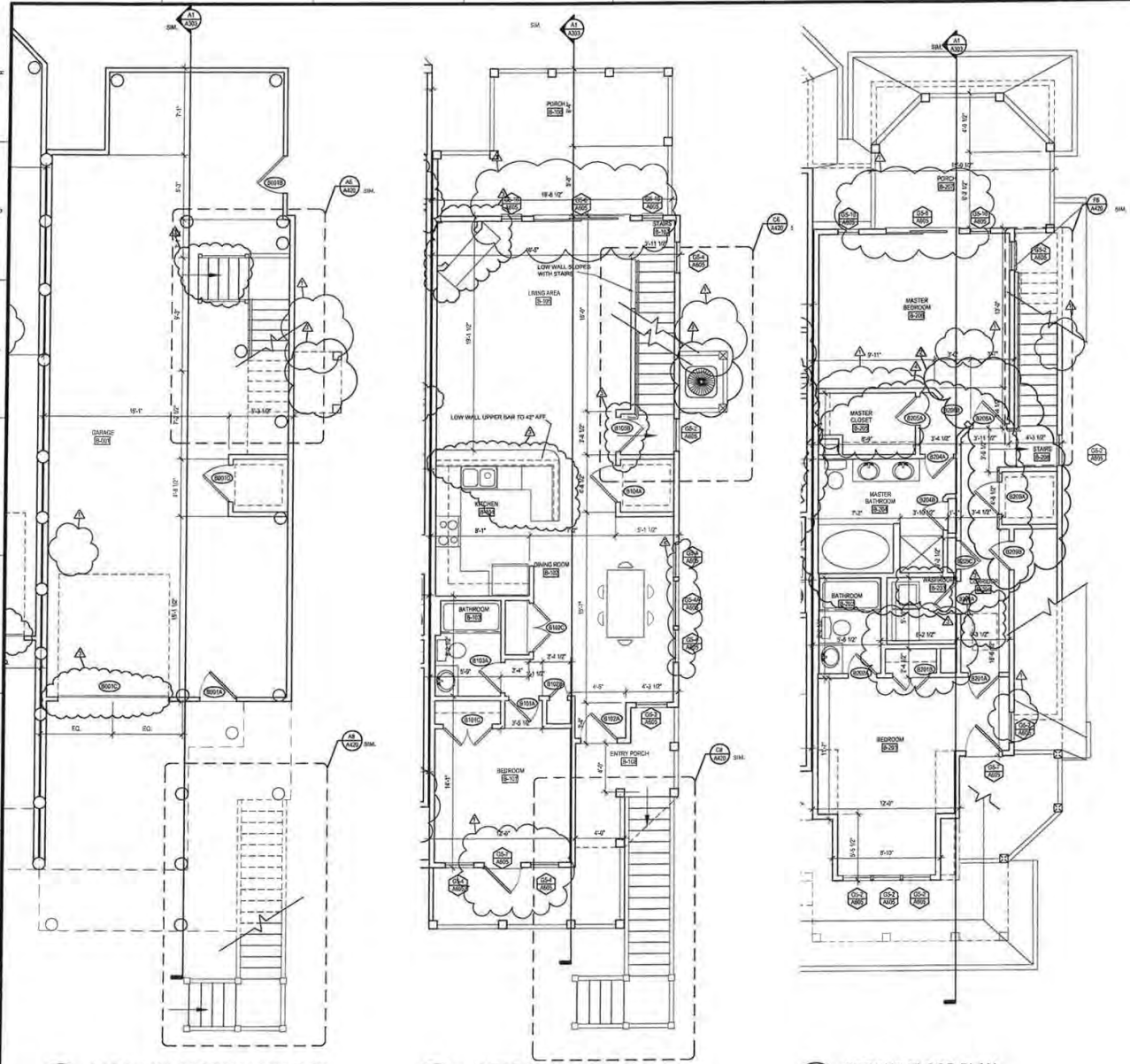
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

WILLOW BUILDING - UNIT A: ENLARGED FLOOR PLANS

REVISIONS:
1 6/7/06
2 9/22/06
3 01/15/07
4 02/05/07

DRAWN BY: JLM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A415

CONSTRUCTION SET



A1 / A416 PILE PLAN / GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT B

A3 / A416 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT B

A6 / A416 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" WILLOW UNIT B

NOTES
1. SEE A603 FOR DOOR AND WINDOW SCHEDULES.

SGM
Architecture
Interiors
Planning
710 JOHNNIE DODDS BLVD.
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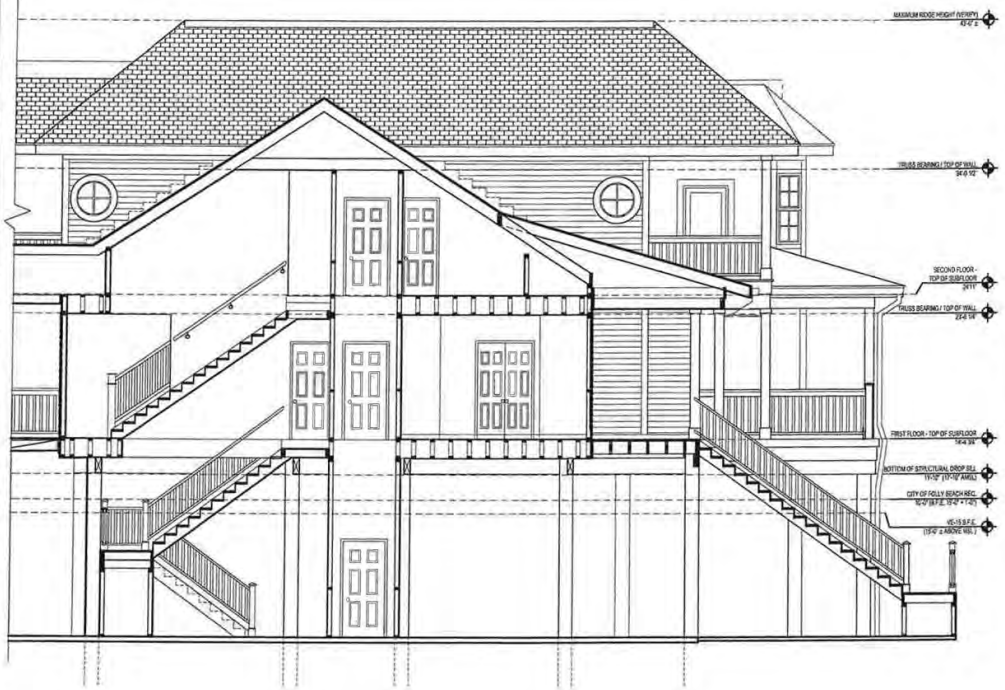
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

WILLOW BUILDING - UNIT B: ENLARGED FLOOR PLANS

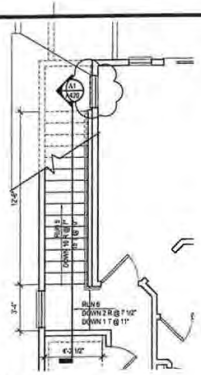
REVISIONS:
1. 6/7/06
2. 9/22/06
3. 01/15/07
4. 02/05/07

DRAWN BY: KJM
CHECKED BY: TNS
DATE: 02-09-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A416

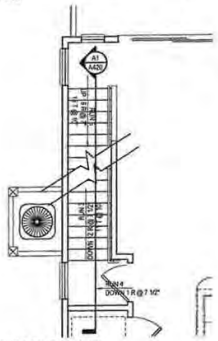
CONSTRUCTION SET



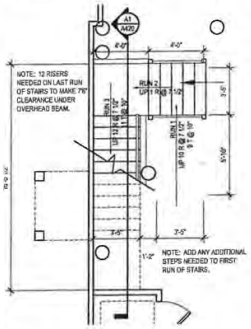
A1 / A420 **STAIR SECTION**
SCALE: 1/4" = 1'-0"
NOTE: CYPRESS SECTION SHOWN, ALL UNITS SIMILAR, TYP.



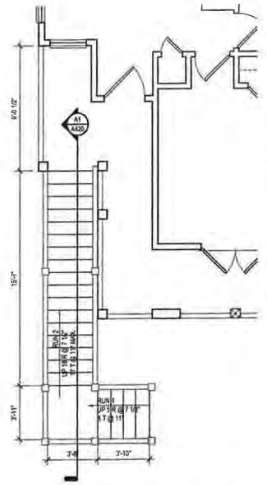
F6 / A420 **INTERIOR STAIRS THIRD FLOOR**
SCALE: 1/4" = 1'-0"



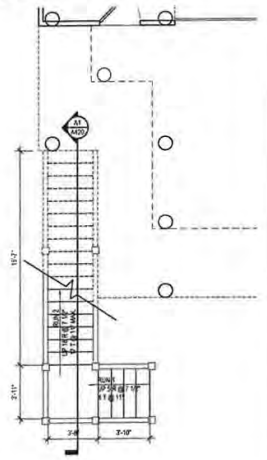
C6 / A420 **INTERIOR STAIRS SECOND FLOOR TO THIRD FLOOR**
SCALE: 1/4" = 1'-0"



A6 / A420 **INTERIOR STAIRS FIRST FLOOR TO SECOND FLOOR**
SCALE: 1/4" = 1'-0"



C8 / A420 **EXTERIOR ENTRY STAIRS**
SCALE: 1/4" = 1'-0"



A8 / A420 **EXTERIOR ENTRY STAIR**
SCALE: 1/4" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

ENLARGED STAIR PLANS/STAIR SECTION

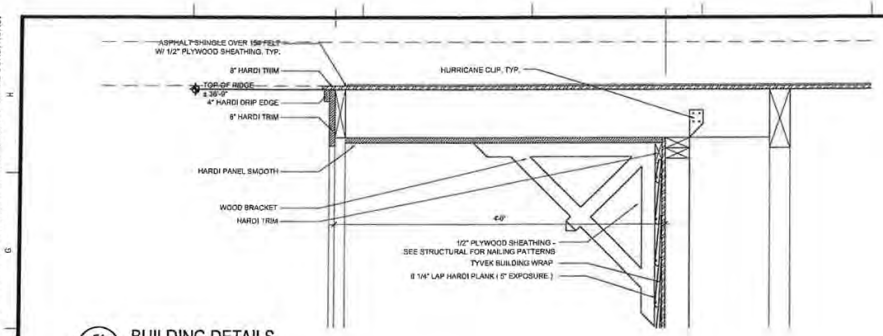
REVISIONS	
1	4/7/06
2	6/22/06
3	01/15/07
4	02/05/07

DRAWN BY:	RJM
CHECKED BY:	TNE
DATE:	02-05-2007

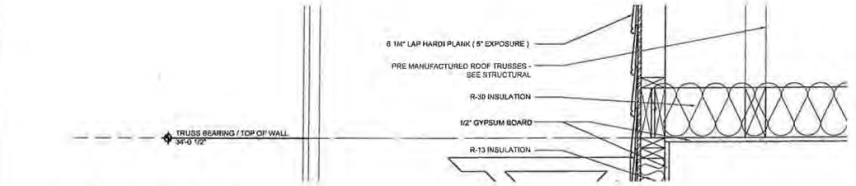
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A420

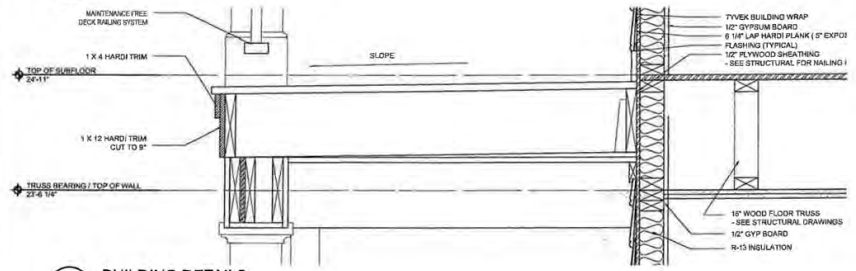
CONSTRUCTION SET



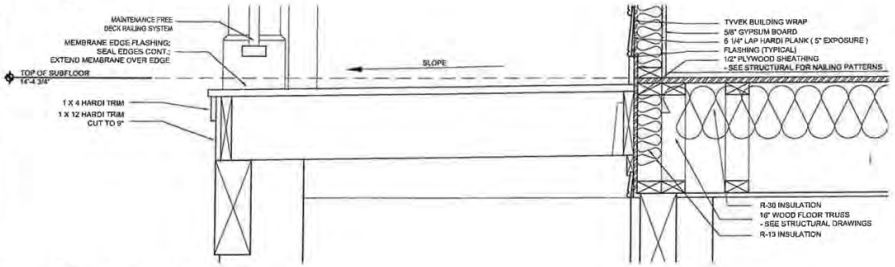
F1 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



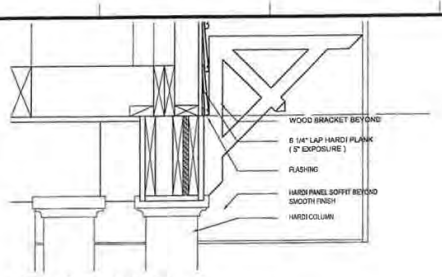
E1 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



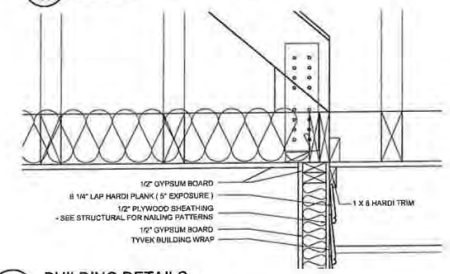
C1 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



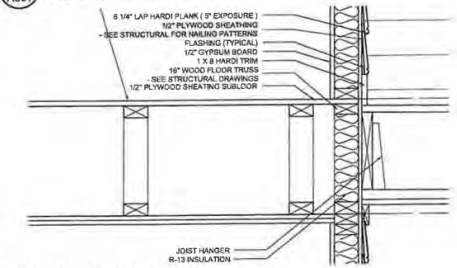
A1 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



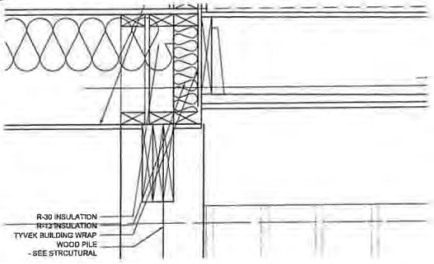
F6 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



E6 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



C6 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



A6 A501 BUILDING DETAILS
SCALE: 1/2" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

THE CYPRESS BUILDING DETAILS

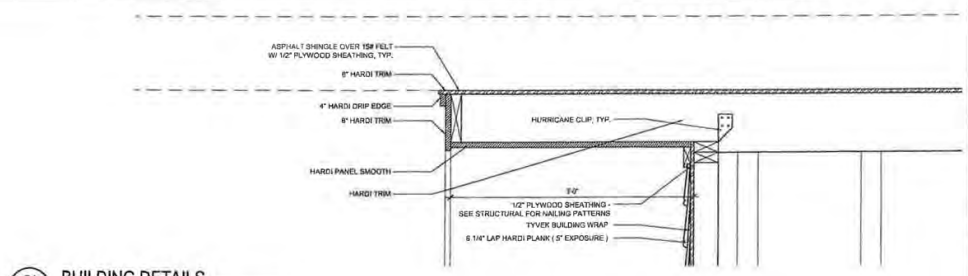
REVISIONS:
1 07/06
2 6/2006
3 01/13/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TAS
DATE: 02-05-2007

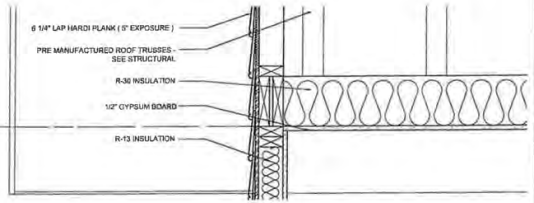
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A501

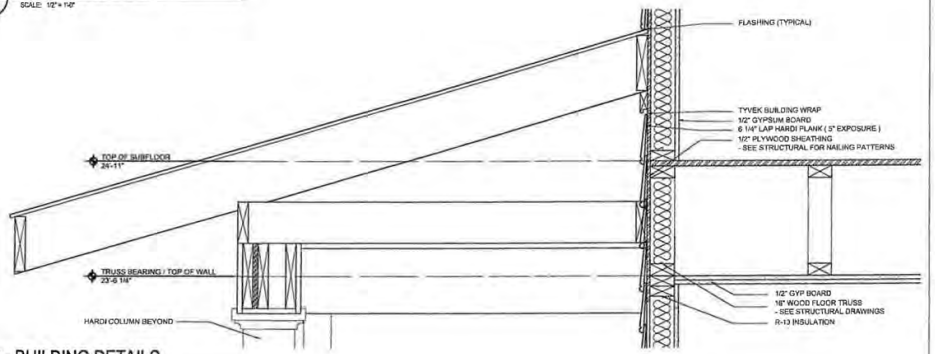
CONSTRUCTION SET



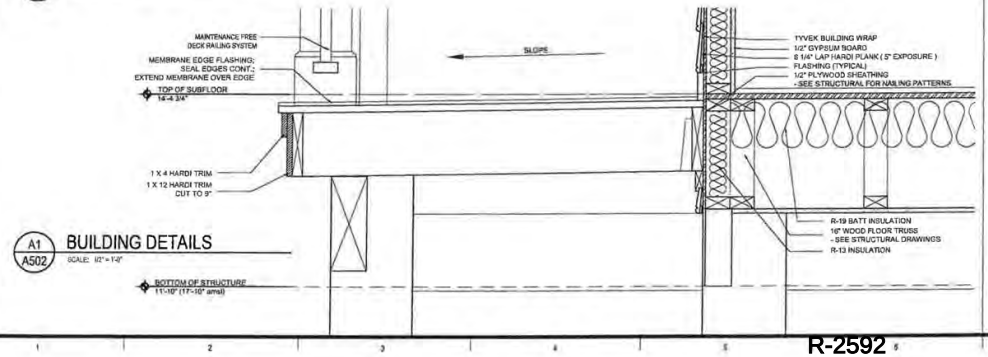
G1 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



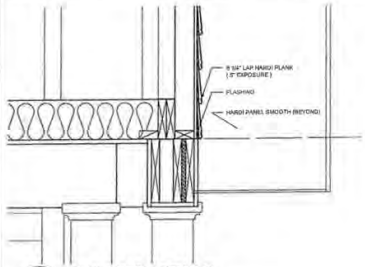
E1 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



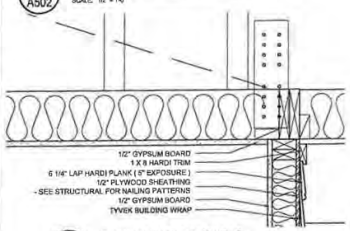
C1 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



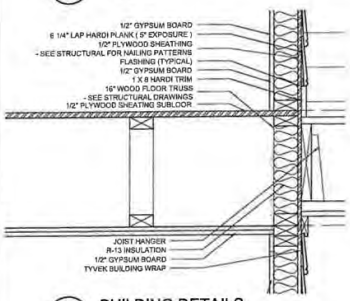
A1 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



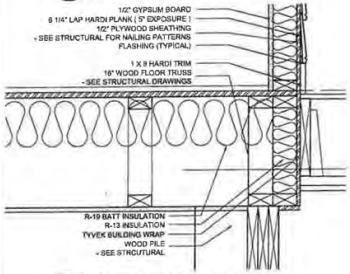
G6 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



E6 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



C6 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"



A6 A502 **BUILDING DETAILS**
SCALE: 1/2" = 1'-0"

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PALMETTO POINTE

PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

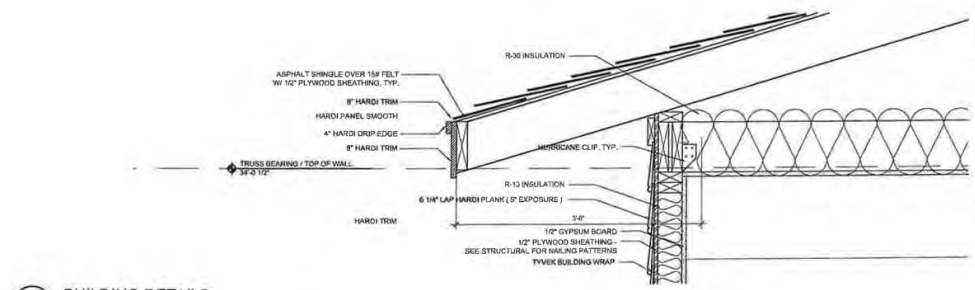
THE HOLLY BUILDING DETAILS

REVISIONS:	
1	5/7/06
2	5/22/06
3	01/15/07
4	02/05/07

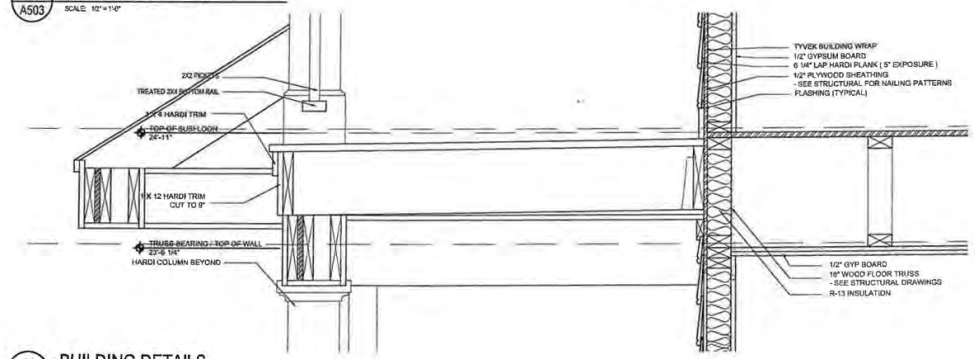
DRAWN BY:	RJH
CHECKED BY:	TNS
DATE:	02-03-2007
SGM JOB NUMBER:	2003-1105.03
SHEET NUMBER:	A502

CONSTRUCTION SET

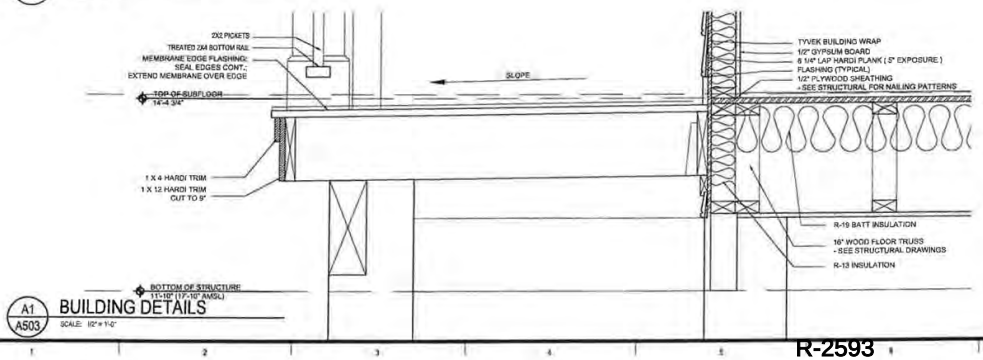
R-2592



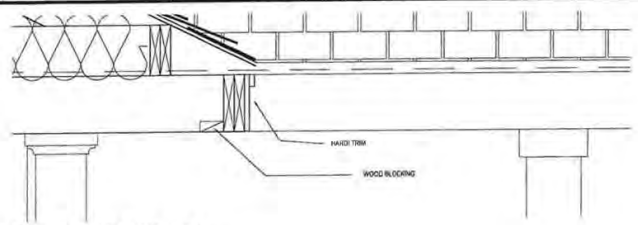
E1 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



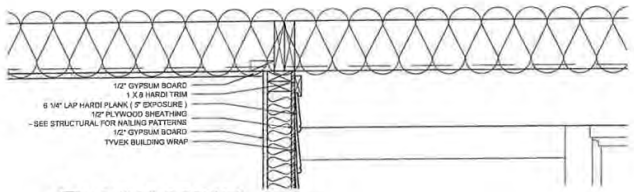
C1 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



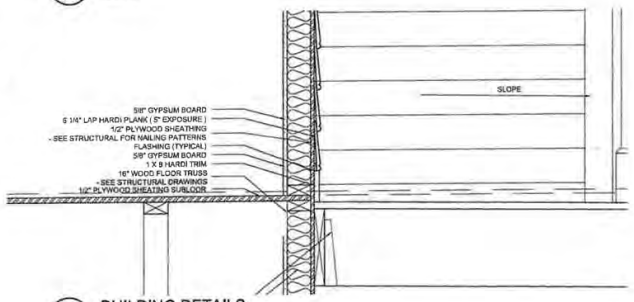
A1 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



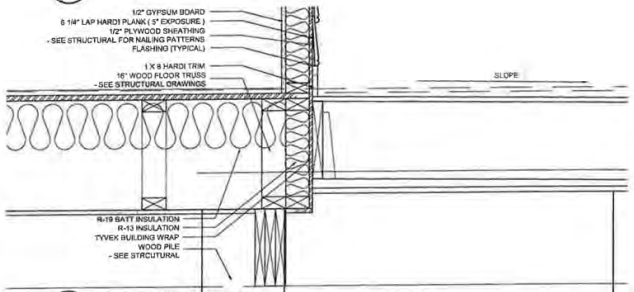
F7 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



E7 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



C7 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"



A7 / A503 BUILDING DETAILS
SCALE: 1/2" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA
THE OAK BUILDING DETAILS

REVISIONS:
1 6/7/06
2 6/23/06
3 01/15/07
4 02/05/07

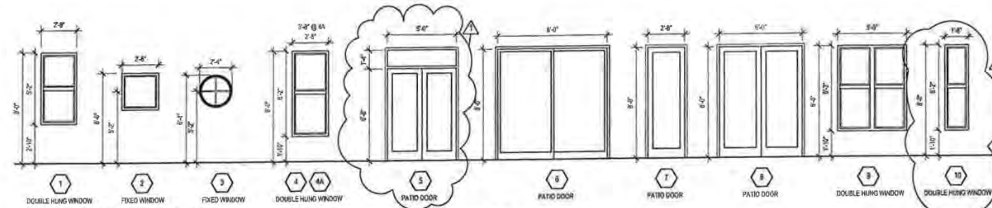
DRAWN BY: FJH
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER 2003-1105.03
SHEET NUMBER A503

CONSTRUCTION SET

CYPRESS, DOGWOOD, AND RIVERBIRCH DOOR SCHEDULE

ROOM	DOOR	SIZE (W X H)	THICKNESS	DOOR TYPE	RATING	HARDWARE	HEAD	JAMB	SILL	COMMENTS
UNIT A										
GARAGE A-001	A-001A	3'-0" X5'-8"	1 3/4"	B	NONE					
GARAGE A-001	A-001B	3'-0" X 6'-8"	1 3/4"	B	NONE					
GARAGE A-001	A-001C	9'-0" X 9'-0"	N/A	D	NONE					
GARAGE A-001	A-001D	3'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM A-101	A-101A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-101	A-101C	(2) 2'-0" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102A	3'-0" X 6'-8"	1 3/4"	A	NONE					
DINING ROOM A-102	A-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102C	(2) 2'-0" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-103	A-103A	2'-4" X 6'-8"	1 3/8"	C	NONE					
KITCHEN A-104	A-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA A-105	A-105B	2'-8" X 6'-8"	1 3/4"	B	NONE					
BEDROOM A-201	A-201A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-201	A-201C	(2) 1'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-202	A-202A	2'-4" X 6'-8"	1 3/8"	C	NONE					
WASHROOM A203	A-203A	2'-8" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204B	2'-4"X6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204C	2'-0" X 6'-8"	1 3/8"	C	NONE					
MASTER CLOSET A-205	A-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206A	2'-0" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206B	2'-4" X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR A-209	A-209A	2'-8" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR A-209	A-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR A-209	A-209C	2'-4" X 6'-8"	1 3/8"	C	NONE					
UNIT B										
GARAGE B-001	B-001A	3'-0" X5'-8"	1 3/4"	B	NONE					
GARAGE B-001	B-001B	3'-0" X 6'-8"	1 3/4"	B	NONE					
GARAGE B-001	B-001C	9'-0"X9'-0"	N/A	D	NONE					
GARAGEB-001	B-001D	3'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM B-101	B-101A	2'-0" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-101	B-101C	(2) 2'-0" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102A	3'-0" X 6'-8"	1 3/4"	A	NONE					
DINING ROOM B-102	B-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102C	(2) 2'-0" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-103	B-103A	2'-6" X 6'-8"	1 3/8"	C	NONE					
KITCHEN B-104	B-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA B-105	B-105B	2'-8" X 6'-8"	1 3/4"	B	NONE					
BEDROOM B-201	B-201A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-201	B-201C	(2) 1'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-202	B-202A	2'-4" X 6'-8"	1 3/8"	C	NONE					
WASHROOM B-203	B-203A	2'-8" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204B	2'-8"X6'-8"	1 3/8"	C	NONE					
MASTER CLOSET B-205	B-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206B	2'-4" X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR B-209	B-209A	2'-8" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR B-209	B-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR B-209	B-209C	1'-6" X 6'-8"	1 3/8"	C	NONE					

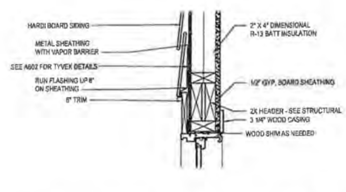
NOTES
1. ALL EXTERIOR DOORS & WINDOWS TO BE ANDERSON W/ THE EXCEPTION OF OVERHEAD GARAGE DOOR.
2. ALL MULLIONS ARE TO BE AS SHOWN ON THE ELEVATIONS AND ARE TO BE FIXED (NOT SNAP IN), TYP.



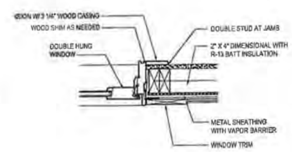
TYPICAL NOTE: SEE ELEVATIONS FOR MULLION PATTERNS, TYP.
PROVIDE MULLION PER STRUCTURAL ENGINEERS WRITTEN RECOMMENDATIONS TYP. AT MULTIPLE UNITS

NOTE: ALL WINDOW HEAD HEIGHTS ARE AS SHOWN UNLESS OTHERWISE NOTED ON BUILDING ELEVATIONS, TYP.

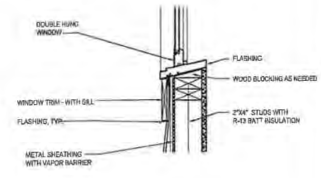
G5 / A601 — CLAD WINDOWS, DOORS, & JAMBS
SCALE: 1/4" = 1'-0"



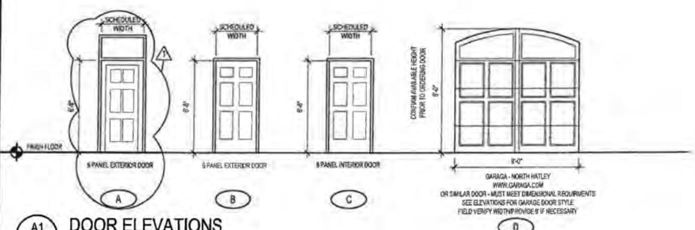
D5 / A601 — HEAD AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D7 / A601 — JAMB AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D9 / A601 — SILL AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



GARAGA - NORTH HATLEY
WWW.GARAGA.COM
OR SIMILAR DOOR - MUST MEET DIMENSIONAL REQUIRMENTS
SEE ELEVATIONS FOR GARAGE DOOR STYLE
FIELD VERIFY WIDTH/PROVIDE 9' IF NECESSARY

A1 / A601 — DOOR ELEVATIONS
SCALE: 1/4" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

CYPRESS, DOGWOOD, AND RIVER BIRCH UNITS DOOR &WINDOW SHEDULES

REVISIONS:
1 — 8/7/06
2 — 9/22/06
3 — 01/15/07
4 — 02/05/07

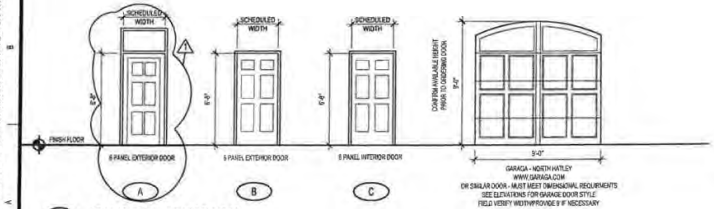
DRAWN BY:	RJM
CHECKED BY:	TNS
DATE:	02-05-2007
SGM JOB NUMBER	2003-1105.03
SHEET NUMBER	A601

CONSTRUCTION SET

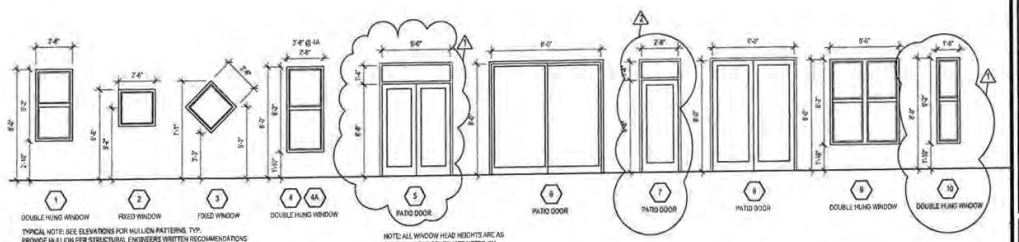
HOLLY AND MAGNOLIA DOOR SCHEDULE

ROOM	DOOR	SIZE (W X H)	THICKNESS	DOOR TYPE	RATING	HARDWARE	HEAD	JAMB	SILL	COMMENTS
UNIT A										
GARAGE A-001	A-001A	3'-0" X 6'-8"	1 3/4"	B	NONE					
GARAGE A-001	A-001B	3'-0" X 6'-8"	1 3/8"	B	NONE					
GARAGE A-001	A-001C	9'-0" X 8'-0"	N/A	D	NONE					
GARAGE A-001	A-001D	3'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM A-101	A-101A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-101	A-101C	(2) 2'-4" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102A	3'-0" X 6'-8"	1 3/8"	A	NONE					
DINING ROOM A-102	A-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102C	(2) 2'-4" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-103	A-103A	2'-4" X 6'-8"	1 3/8"	C	NONE					
KITCHEN A-104	A-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA A-105	A-105B	3'-0" X 6'-8"	1 3/4"	C	NONE					
BEDROOM A-201	A-201A	3'-0" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-201	A-201C	(2) 1'-4" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-202	A-202A	2'-4" X 6'-8"	1 3/8"	C	NONE					
WASHROOM A303	A-303A	2'-6" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204B	2'-4"X8'-0"	1 3/8"	C	NONE					
MASTER CLOSET A-205	A-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206A	2'-6" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206B	2'-4"X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR A-209	A-209A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR A-209	A-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR A-209	A-209C	2'-4" X 6'-8"	1 3/8"	C	NONE					
UNIT B										
GARAGE B-001	B-001A	3'-0" X6'-8"	1 3/8"	B	NONE					
GARAGE B-001	B-001B	3'-0" X 6'-8"	1 3/4"	B	NONE					
GARAGE B-001	B-001C	9'-0"X 8'-0"	N/A	D	NONE					
GARAGEB-001	B-001D	3'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM B-101	B-101A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-101	B-101C	(2) 2'-4" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102A	3'-0" X 6'-8"	1 3/8"	B	NONE					
DINING ROOM B-102	B-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102C	(2) 2'-4" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-103	B-103A	2'-4" X 6'-8"	1 3/8"	C	NONE					
KITCHEN B-104	B-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA B-105	B-105B	2'-6" X 6'-8"	1 3/4"	B	NONE					
BEDROOM B-201	B-201A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-201	B-201C	(2) 1'-4" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-202	B-202A	2'-4" X 6'-8"	1 3/8"	C	NONE					
WASHROOM B-203	B-203A	2'-6" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204B	2'-6"X8'-0"	1 3/8"	C	NONE					
MASTER CLOSET B-205	B-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206A	2'-6" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206B	2'-4" X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR B-209	B-209A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR B-209	B-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR B-209	B-209C	1'-6" X 6'-8"	1 3/8"	C	NONE					

NOTES
1. ALL EXTERIOR DOORS & WINDOWS TO BE ANDERSEN W THE EXCEPTION OF OVERHEAD GARAGE DOOR
2. ALL MULLIONS ARE TO BE AS SHOWN ON THE ELEVATIONS AND ARE TO BE FIXED (NOT SNAP IN), TYP.



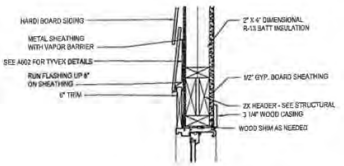
A1 / A603 DOOR ELEVATIONS
SCALE: 1/4" = 1'-0"



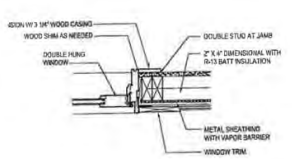
TYPICAL NOTE: SEE ELEVATIONS FOR MULLION PATTERNS, TYP.
PROVIDE MULLION PER STRUCTURAL ENGINEERS WRITTEN RECOMMENDATIONS
TYP. AT MULTIPLE UNITS

NOTE: ALL WINDOW HEAD HEIGHTS ARE AS SHOWN UNLESS OTHERWISE NOTED ON BUILDING ELEVATIONS, TYP.

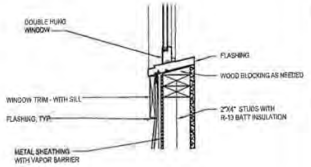
G5 / A603 CLAD WINDOWS, DOORS, & JAMBS
SCALE: 1/4" = 1'-0"



D5 / A603 HEAD AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D7 / A603 JAMB AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D9 / A603 SILL AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

HOLLY AND MAGNOLIA UNITS DOOR AND WINDOW SCHEDULES

NO	REVISIONS	
1		6/7/06
2		9/22/06
3		01/15/07
4		02/05/07

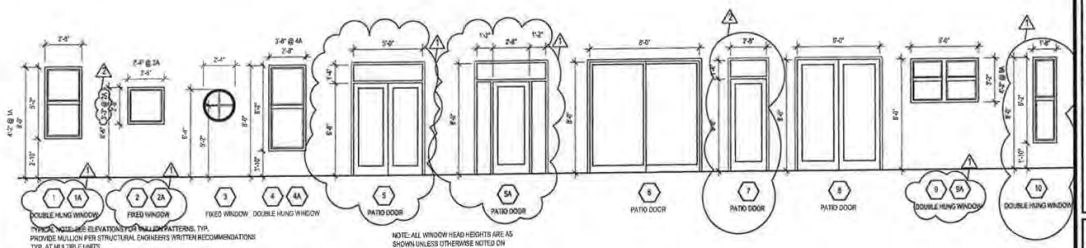
DRAWN BY: RJM
CHECKED BY: TNS
DATE: 02-05-2007
SGM JOB NUMBER: 2003-1105.03
SHEET NUMBER: A603

CONSTRUCTION SET

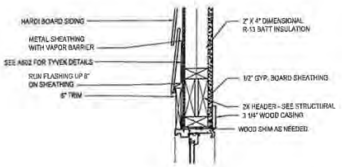
OAK, PALMETTO, AND WILLOW DOOR SCHEDULE

ROOM	DOOR	SIZE (W X H)	THICKNESS	DOOR TYPE	RATING	HARDWARE	HEAD	JAMB	SILL	COMMENTS
UNIT A										
GARAGE A-001	A-001A	3'-0" X6'-8"	1 3/4"	B	NONE					
GARAGE A-001	A-001B	2'-0" X 6'-8"	1 3/8"	B	NONE					
GARAGE A-001	A-001C	9'-0" X 7'-0"	WR	B	NONE					
GARAGE A-001	A-001D	7'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM A-101	A-101A	3'-0" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-101	A-101C	(2) 2'-0" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102A	3'-0" X 6'-8"	1 3/4"	A	NONE					
DINING ROOM A-102	A-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM A-102	A-102C	(2) 1'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-103	A-103A	2'-6" X 6'-8"	1 3/8"	C	NONE					
KITCHEN A-104	A-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA A-105	A-105B	3'-0" X 6'-8"	1 3/4"	C	NONE					
BEDROOM A-201	A-201A	3'-0" X 6'-8"	1 3/8"	C	NONE					
BEDROOM A-201	A-201C	(2) 1'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM A-202	A-202A	2'-6" X 6'-8"	1 3/8"	C	NONE					
WASHROOM A202	A-203A	2'-8" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204A	2'-6" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM A-204	A-204B	2'-4"X6'-8"	1 3/8"	C	NONE					
MASTER CLOSET A-205	A-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206A	3'-0" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM A-206	A-206B	3'-4" X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR A-209	A-209A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR A-209	A-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR A-209	A-209C	2'-4" X 6'-8"	1 3/8"	C	NONE					
UNIT B										
GARAGE B-001	B-001A	3'-0" X6'-8"	1 3/4"	B	NONE					
GARAGE B-001	B-001B	3'-0" X 6'-8"	1 3/8"	B	NONE					
GARAGE B-001	B-001C	9'-0"X 6'-8"	N/A	D	NONE					
GARAGE B-001	B-001D	7'-0" X 6'-8"	1 3/8"	B	3/4 HOUR					
BEDROOM B-101	B-101A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-101	B-101C	(2) 2'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102A	3'-6" X 6'-8"	1 3/4"	B	NONE					
DINING ROOM B-102	B-102B	1'-6" X 6'-8"	1 3/8"	C	NONE					
DINING ROOM B-102	B-102C	(2) 2'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-103	B-103A	2'-6" X 6'-8"	1 3/8"	C	NONE					
KITCHEN B-104	B-104A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
LIVING AREA B-105	B-105B	2'-8" X 6'-8"	1 3/4"	B	NONE					
BEDROOM B-201	B-201A	2'-6" X 6'-8"	1 3/8"	C	NONE					
BEDROOM B-201	B-201C	(2) 1'-6" X 6'-8"	1 3/8"	C	NONE					
BATHROOM B-202	B-202A	2'-4" X 6'-8"	1 3/8"	C	NONE					
WASHROOM B-203	B-203A	2'-8" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BATHROOM B-204	B-204B	2'-4"X6'-8"	1 3/8"	C	NONE					
MASTER CLOSET B-205	B-205A	2'-4" x 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206A	2'-4" X 6'-8"	1 3/8"	C	NONE					
MASTER BEDROOM B-206	B-206B	2'-4" X 6'-8"	N/A	-	NONE					CASED OPENING
CORRIDOR B-209	B-209A	3'-0" X 6'-8"	1 3/8"	C	3/4 HOUR					
CORRIDOR B-209	B-209B	2'-4" X 6'-8"	1 3/8"	C	NONE					
CORRIDOR B-209	B-209C	1'-6" X 6'-8"	1 3/8"	C	NONE					

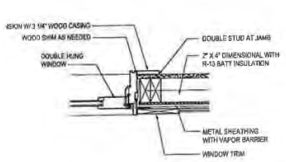
NOTES
1. ALL EXTERIOR DOORS & WINDOWS TO BE ANDERSON W/ THE EXCEPTION OF OVERHEAD GARAGE DOOR
2. ALL MULLIONS ARE TO BE AS SHOWN ON THE ELEVATIONS AND ARE TO BE FIXED (NOT SNAP IN), TYP.



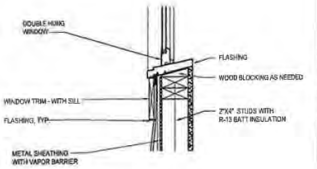
G5 / A605 CLAD WINDOWS, DOORS, & JAMBS
SCALE: 1/4" = 1'-0"



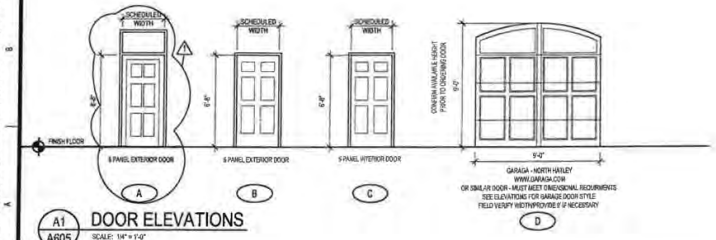
D5 / A605 HEAD AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D7 / A605 JAMB AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



D9 / A605 SILL AT DOUBLE HUNG WINDOW AT EXTERIOR HARDI PLANK SIDING
SCALE: 1 1/2" = 1'-0"



A1 / A605 DOOR ELEVATIONS
SCALE: 1/4" = 1'-0"

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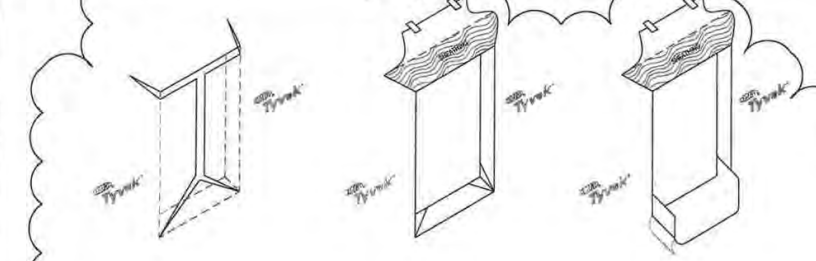
PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

OAK, PALMETTO, AND WILLOW UNITS DOOR AND WINDOW SCHEDULES

NO.	REASON	
1		5/7/06
2		9/22/06
3		01/15/07
4		02/05/07

DRAWN BY: RJM
CHECKED BY: TND
DATE: 02-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A605

CONSTRUCTION SET



PREPARE WEATHER RESISTANT BARRIER FOR WINDOW OR DOOR INSTALLATION -

A. MAKE A MODIFIED "I-CUT" IN THE WEATHER - RESISTIVE BARRIER

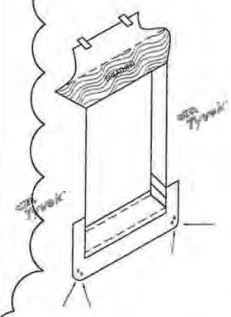
B. CUT A FLAP ABOVE THE ROUGH OPENING TO ALLOW HEAD FLASHING INSTALLATION

C. FOLD SIDE AND BOTTOM FLAPS INTO ROUGH OPENING AND SECURE, FLIP HEAD FLAP UP AND TEMPORARILY SECURE

A. CUT SILL FLASHING TAPE AT LEAST 12" LONGER THAN WIDTH OF ROUGH OPENING SILL

B. REMOVE FIRST PIECE OF RELEASE PAPER, ALIGN EDGE OF SILL FLASHING WITH INSIDE EDGE OF SILL, AND ADHERE INTO ROUGH OPENING ACROSS SILL AND UP JAMBS (MIN 6" SEE DETAIL). SILL FLASHING SHOULD NOT WRAP ONTO THE INTERIOR SURFACE OF FRAMING.

C. REMOVE SECOND RELEASE PAPER

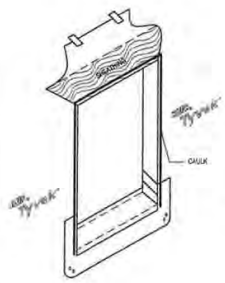


A. FAN TYVEK FLEX WRAP AT BOTTOM CORNERS ONTO FACE OF WALL

B. FIRMLY PRESS SILL FLASHING TO ENSURE FULL ADHESION

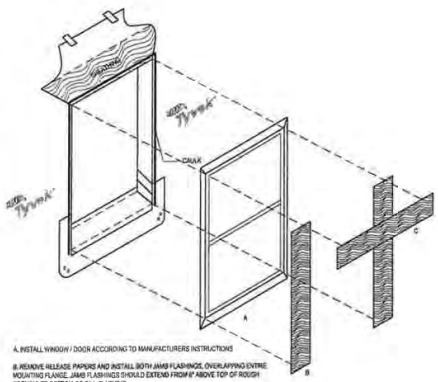
C. ENSURE BOTTOM CORNERS ARE SECURE - SECURE FANNED EDGES WITH MECHANICAL FASTENERS (i.e. CAP NAILS, SCREWS, ECT.)

D. INSTALL SILL PAN OVER FLEX WRAP



A. APPLY CONTINUOUS BEAD OF CAULK TO WALL OR BACK SIDE OF WINDOW MOUNTING FLANGE ACROSS JAMBS AND HEADS

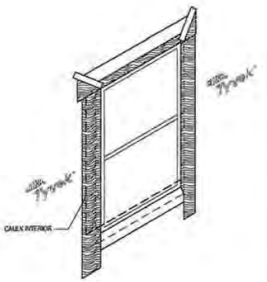
B. DO NOT APPLY CAULK ACROSS BOTTOM SILL FLANGE



A. INSTALL WINDOW / DOOR ACCORDING TO MANUFACTURERS INSTRUCTIONS

B. REMOVE RELEASE PAPERS AND INSTALL BOTH JAMB FLASHINGS, OVERLAPPING ENTIRE MOUNTING FLANGE. JAMB FLASHINGS SHOULD EXTEND FROM 6" ABOVE TOP OF ROUGH OPENING TO BOTTOM OF SILL FLASHING

C. REMOVE RELEASE PAPERS AND INSTALL HEAD FLASHING, OVERLAPPING ENTIRE MOUNTING FLANGE. HEAD FLASHING SHOULD EXTEND BEYOND OUTSIDE EDGES OF BOTH JAMB FLASHINGS.



A. FLIP HEAD FLAP DOWN OVER THE HEAD FLASHING

B. SECURE FLAP ABOVE WINDOW WITH SHEATHING TAPE

C. CAULK - USING BACKER ROD IF NECESSARY TO SEAL REAR OF WINDOW / DOOR (INTERIOR) FRAME TO ROUGH OPENING

OWNER, AND MANUFACTURERS REPRESENTATIVE, AND BUILDING WRAP REPRESENTATIVE

WINDOWS ARE TO BE INSTALLED IN ACCORDANCE WITH ANDERSEN PRODUCT GUIDE FOR PROFESSIONALS WITH THE FOLLOWING EXCEPTIONS: INSTALLATION INSTRUCTIONS CALL FOR A BEAD OF SILICONE TO BE RUN DOWN THE ENTIRE LENGTH OF THE FLANGE SUCH THAT IT SEALS THE ROUGH OPENING WHEN INSTALLED. A GENEROUS BEAD OF SILICONE SHOULD ALSO BE ADDED IN THE LOWER CORNERS WHERE THE FLANGE DOES NOT CONNECT TO THE SIDE JAMB. A VERY FINE BEAD OF SILICONE SHOULD BE RUN AT THE POINT WHERE THE SILL STOP MEETS THE SILL.

PROVIDE PLASTIC SILL PANS AT SECOND FLOOR DOORS ON OAK AND PALMETTO UNIT FRONT PORCHES THAT HAVE NO PORCH ROOF.

A7 / A602

INSTALATION DIAGRAMS FOR BUILDING WRAP / WINDOW FLASHING / DOORS SIMILAR

SCALE: N.T.S.

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

DOOR AND WINDOW DETAILS

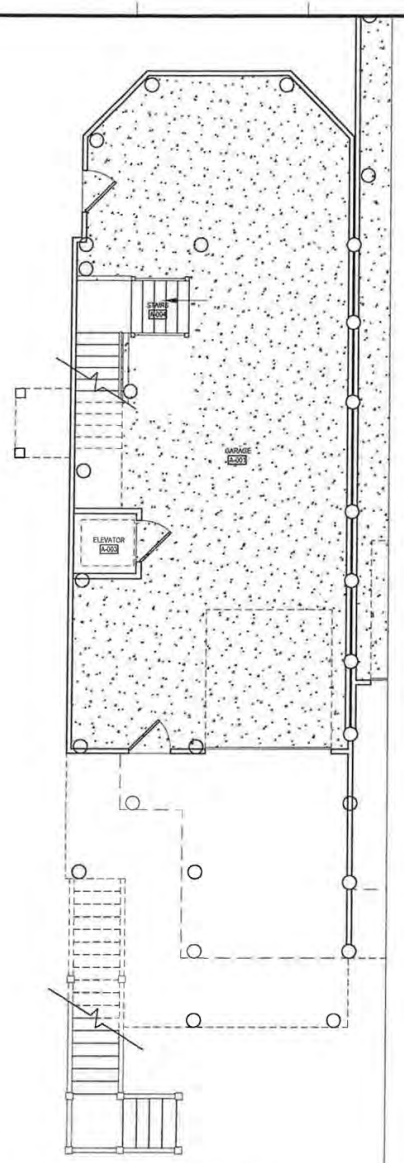
REVISIONS	
1	4/7/06
2	6/22/06
3	01/15/07
4	02/09/07

DRAWN BY:	RJM
CHECKED BY:	TMS
DATE:	02/15/2007

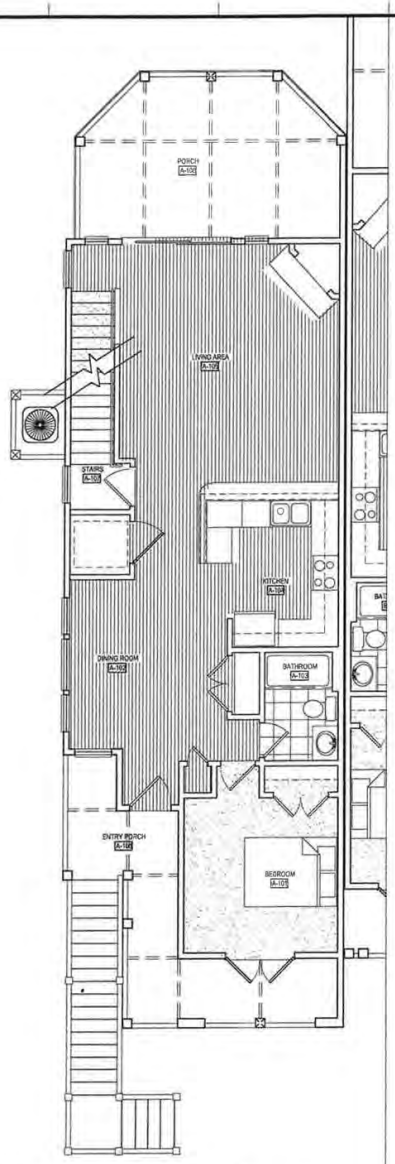
SGM JOB NUMBER
2003-1105.03

SHEET NUMBER
A609

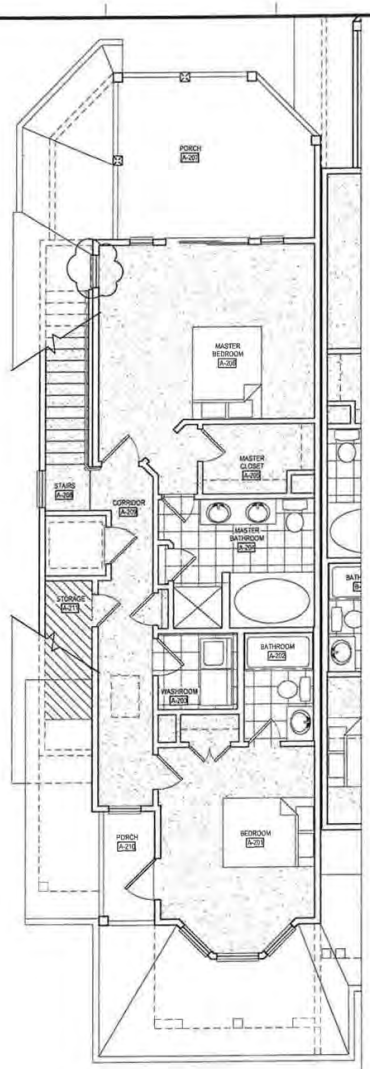
CONSTRUCTION SET



A1 / A701 GROUND FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"



A3 / A701 FIRST FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"



A8 / A701 SECOND FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"

FINISH MATERIAL LEGEND

SYMBOL	FINISH DESCRIPTION	STYLE NAME & MANUF.
FLOORS		
CONC	SEALED CONCRETE / UNFINISHED	
WF	WOOD FLOOR	
CT	CERAMIC TILE	
CPT	CARPET	
WD-1	5/4 X 6 DECKING	
TC	TRAFFIC COATING	
PLY	PLYWOOD FLOOR	
BASE		
WB	WOOD BASE	
PAINT		
PT-1	PAINT ON WALL	
PT-2	PAINT ON WALL	
PT-3	PAINT ON WALL	
PT-4	PAINT ON DOOR FRAMES	
PT-5	PAINT ON CEILING	
WALLS		
GB	GYP. BOARD	
LT	LATTICE	
HB	HARDI BOARD	
CEILING		
GB	GYP BOARD CEILING	
HP	HARDIE PANEL	
DOORS		
WOOD DOORS	SEE SHEET A / 901 FOR DETAILS	
MOLDING		
CM	CROWN MOLDING	

ROOM FINISH SCHEDULE

VERIFY FINISHES

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	BASE MATERIAL	MOLDING	WALLS MATERIAL	WALLS FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	ROOM NUMBER
A-001	GARAGE	CONC.	-	-	GB/LT	PT	GB	PT	VARIES	A-001
A-002	STORAGE	CONC.	-	-	GB	PT	GB	PT	9'-0"	A-002
A-003	ELEVATOR *	-	-	-	LT	PT	GB	PT	9'-0"	A-003
A-004	STAIRS	UNF.	-	-	GB	PT	GB	PT	9'-0"	A-004
A-101	BEDROOM	CPT	WD	CM	GB	PT	GB	PT	9'-0"	A-101
A-102	DINING	WF	WD	CM	GB	PT	GB	PT	9'-0"	A-102
A-103	BATHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	A-103
A-104	KITCHEN	WF	WD	CM	GB	PT	GB	PT	9'-0"	A-104
A-105	LIVING AREA	WF	WD	CM	GB	PT	GB	PT	9'-0"	A-105
A-106	PORCH	TC	-	-	HB	PT	HP	PT	9'-0"	A-106
A-107	STAIRS	CPT	WD	CM	GB	PT	GB	PT	9'-0"	A-107
A-108	ENTRY PORCH	UNF.	-	-	HB	PT	HP	PT	9'-0"	A-108
A-201	BEDROOM	CPT	WD	-	GB	PT	GB	PT	9'-0"	A-201
A-202	BATHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	A-202
A-203	WASHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	A-203
A-204	MASTER BATH	CT	WD	CM	GB	PT	GB	PT	9'-0"	A-204
A-205	MASTER CLOSET	CPT	WD	-	GB	PT	GB	PT	9'-0"	A-205
A-206	MASTER BEDROOM	CPT	WD	CM	GB	PT	GB	PT	9'-0"	A-206
A-207	PORCH	TC	-	-	HB	PT	-	PT	9'-0"	A-207
A-208	STAIRS	CPT	WD	CM	GB	PT	GB	PT	9'-0"	A-208
A-209	CORRIDOR	CPT	WD	-	GB	PT	GB	PT	9'-0"	A-209
A-210	PORCH	TC	-	-	HB	PT	HP	PT	9'-0"	A-210
A-211	STORAGE	PLY	-	-	-	-	-	-	9'-0"	A-211

ROOM FINISH LEGEND

WOOD FLOORS
PLYWOOD FLOORS
12" X 12" CERAMIC TILE
CARPET

NOTES:

1. INSTALL TRANSITION STRIPS BETWEEN FLOOR FINISHES.
2. SEE FINISH FLOOR PLAN THIS SHEET FOR FLOOR PATTERN.
3. SELECTIONS SHOWN ARE FOR MATERIAL & MANUFACTURER PURPOSES ONLY. COLOR OF MATERIAL MAY BE SUBJECT TO CHANGE.
4. ALL PAINT TO BE EGGSHELL FINISH
5. ALL FINISH COLORS TO BE CHOSEN BY OWNER.
6. ALL BUILDINGS HAVE SIMILAR FINISH SCHEDULE

* IF ELEVATOR IS NOT CHOSEN, PROVIDE FLOORING IDENTICAL TO ADJACENT SPACE @ EACH FLOOR

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PALMETTO POINTE
PEAS ISLAND, FOLLY ROAD
FOLLY BEACH, SOUTH CAROLINA

TYPICAL UNIT A FINISH PLANS AND DETAILS

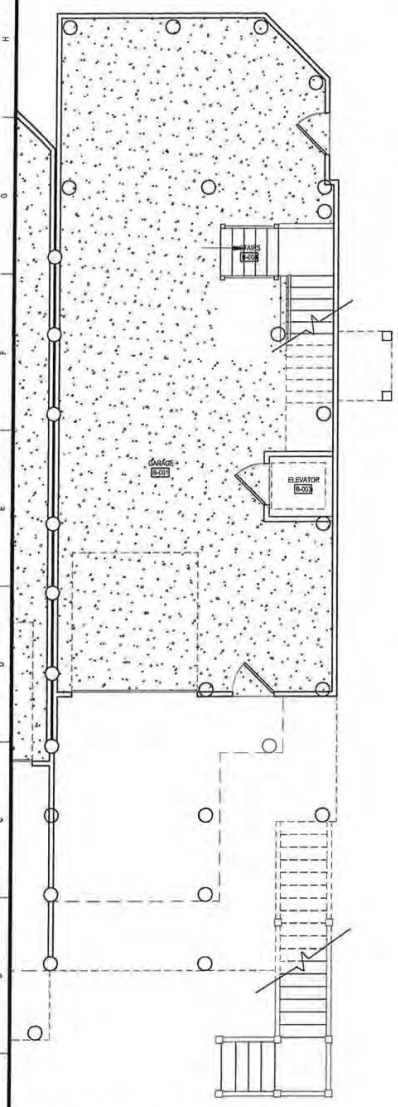
REVISIONS:
1 1/7/06
2 9/22/06
3 01/15/07
4 02/05/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 03-05-2007
SGM JOB NUMBER
2003-1105.03

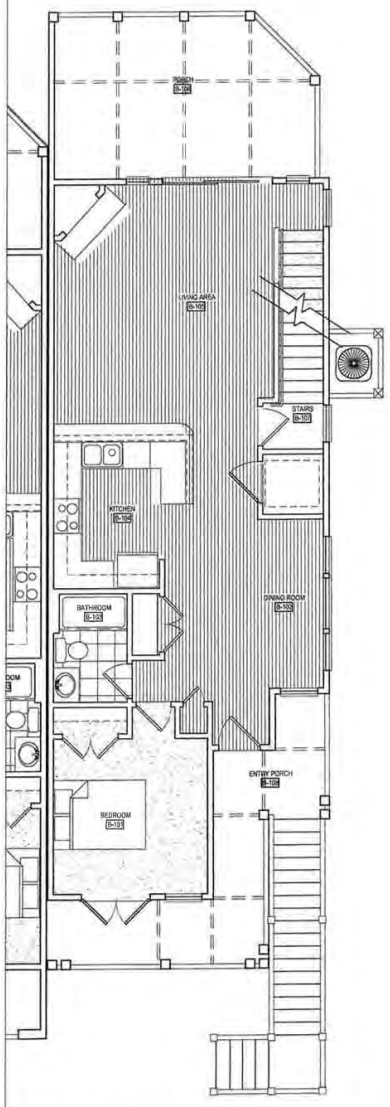
SHEET NUMBER
A701

CONSTRUCTION SET

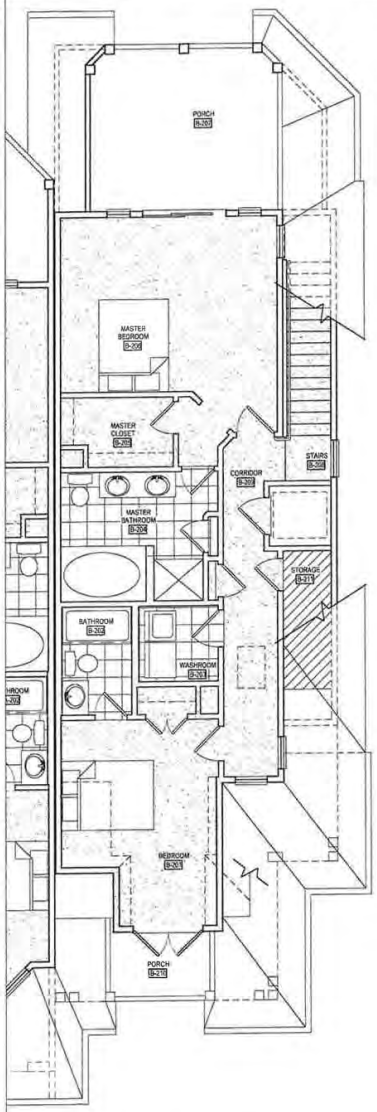
R-2598



A1 / A702 GROUND FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"



A3 / A702 FIRST FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"



A8 / A702 SECOND FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"

FINISH MATERIAL LEGEND

SYMBOL	FINISH DESCRIPTION	STYLE NAME & MANUF.
FLOORS		
CONC	SEALED CONCRETE / UNFINISHED	
WF	WOOD FLOOR	
CT	CERMIC TILE	
CPT	CARPET	
WD-1	5/4 X 6 DECKING	
TC	TRAFFIC COATING	
PLY	PLYWOOD FLOOR	
BASE		
WB	WOOD BASE	
PAINT		
PT-1	PAINT ON WALL	
PT-2	PAINT ON WALL	
PT-3	PAINT ON WALL	
PT-4	PAINT ON DOOR FRAMES	
PT-5	PAINT ON CEILING	
WALLS		
GB	GYP. BOARD	
LT	LATTICE	
HB	HARDI BOARD	
CEILING		
GB	GYP BOARD CEILING	
HP	HARDIE PANEL	
DOORS		
WOOD DOORS	SEE SHEET A / 601 FOR DETAILS	
MOLDING		
CM	CROWN MOLDING	

ROOM FINISH SCHEDULE

VERIFY FINISHES

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	BASE MATERIAL	MOLDING	WALLS MATERIAL	WALLS FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	ROOM NUMBER
B-001	GARAGE	CONC.	-	-	GB/LT	PT	GB	PT	VARIES	B-001
B-002	STORAGE	CONC.	-	-	GB	PT	GB	PT	9'-0"	B-002
B-003	ELEVATOR *	-	-	-	LT	PT	GB	PT	9'-0"	B-003
B-004	STAIRS	UNF.	-	-	GB	PT	GB	PT	9'-0"	B-004
B-101	BEDROOM	CPT	WD	CM	GB	PT	GB	PT	9'-0"	B-101
B-102	DINING	WF	WD	CM	GB	PT	GB	PT	9'-0"	B-102
B-103	BATHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	B-103
B-104	KITCHEN	WF	WD	CM	GB	PT	GB	PT	9'-0"	B-104
B-105	LIVING AREA	WF	WD	CM	GB	PT	GB	PT	9'-0"	B-105
B-106	PORCH	TC	-	-	HB	PT	HP	PT	9'-0"	B-106
B-107	STAIRS	CPT	WD	CM	GB	PT	GB	PT	9'-0"	B-107
B-108	ENTRY PORCH	UNF	-	-	HB	PT	HP	PT	9'-0"	B-108
B-201	BEDROOM	CPT	WD	-	GB	PT	GB	PT	9'-0"	B-201
B-202	BATHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	B-202
B-203	WASHROOM	CT	WD	-	GB	PT	GB	PT	9'-0"	B-203
B-204	MASTER BATH	CT	WD	CM	GB	PT	GB	PT	9'-0"	B-204
B-205	MASTER CLOSET	CPT	WD	-	GB	PT	GB	PT	9'-0"	B-205
B-206	MASTER BEDROOM	CPT	WD	CM	GB	PT	GB	PT	9'-0"	B-206
B-207	PORCH	TC	-	-	HB	PT	HP	PT	9'-0"	B-207
B-208	STAIRS	CPT	WD	CM	GB	PT	GB	PT	9'-0"	B-208
B-209	CORRIDOR	CPT	WD	-	GB	PT	GB	PT	9'-0"	B-209
B-210	PORCH	TC	-	-	HB	PT	HP	PT	9'-0"	B-210
B-211	STORAGE	PLY	-	-	-	-	-	-	9'-0"	B-211

ROOM FINISH LEGEND

WOOD FLOORS
PLYWOOD FLOORS
12" X 12" CERAMIC TILE
CARPET

NOTES:
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TYPICAL UNIT B FINISH PLANS AND SCHEDULE

REVISIONS:
1 6/7/06
2 6/22/06
3 7/17/07
4 10/5/07

DRAWN BY: RJM
CHECKED BY: TNS
DATE: 12-05-2007
SGM JOB NUMBER
2003-1105.03
SHEET NUMBER
A702

CONSTRUCTION SET

BRITT PETERS & ASSOCIATES, INC.
Consulting Engineers

GENERAL:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE PLANS PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING ALL WORK DURING CONSTRUCTION.
3. WHERE SPECIFIC CONSTRUCTION REQUIREMENTS ARE NOT GIVEN, APPLICABLE PROVISIONS OF THE INTERNATIONAL RESIDENTIAL CODE SHALL PREVAIL.
4. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED IN THE FIELD AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF WORK.
5. ALL BUILDINGS AND STRUCTURES ERECTED IN COASTAL HIGH HAZARD AREAS (INCLUDING V ZONES) SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.3.1 THROUGH R327.3.5 OF THE 2003 IRC
   A. REF. ARCH. FOR FINISHED FLOOR ELEVATION AND THE DESIGN FLOOD ELEVATION (DFE).
   B. ENCLOSED AREAS BELOW THE DFE SHALL BE USED SOLELY FOR PARKING, BUILDING ACCESS, OR STORAGE.
6. DESIGN WATER VELOCITY USED TO DETERMINE HYDRODYNAMIC LOADS IS ASSUMED TO BE APPROXIMATELY 13.7 FPS.
7. WALLS BELOW THE ELEVATED FLOOR SHALL NOT BE PART OF THE STRUCTURAL SYSTEM AND BE DESIGNED TO BREAK AWAY WITHOUT CAUSING STRUCTURAL DAMAGE TO THE ELEVATED PORTION OF THE BUILDING OR SUPPORTING FOUNDATION SYSTEM.

FOUNDATIONS:

1. THE STRUCTURE SHALL BE SUPPORTED ON DRIVEN PILES.
2. PREPARATION OF THE SITE, INCLUDING INITIAL UNDERCUTTING, FILL/ BACKFILL MATERIAL, FILL/ BACKFILL PLACEMENT, AND COMPACTION SHALL BE IN ACCORDANCE WITH THE "SUBSURFACE EXPLORATION PEAS ISLAND TOWN HOMES, FOLLY BEACH, SC" BY ALLEN FOLLINE ASSOCIATES, DATED 09/13/05 (PROJECT #05-0856).
3. ALL ENGINEERED FILL SHALL BE PLACED IN UNIFORM LIFTS OF 10 IN. OR LESS, AND COMPACTED TO A MINIMUM OF 95% OF THE SOIL'S MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). THE UPPER 12 INCHES BENEATH PAVEMENT SECTIONS SHOULD BE 100% COMPACTED.
4. PILE DRIVING OPERATIONS SHALL BE SUPERVISED BY A GEOTECHNICAL ENGINEER OR A QUALIFIED SOIL TECHNICIAN TO VERIFY ALL PILES ARE DRIVEN SATISFACTORILY.

TIMBER PILINGS:

1. ALL TIMBER PILINGS SHALL BE PRESSURE TREATED TO A MINIMUM RETENTION OF 0.80 LBS. OF ACQ PER CUBIC FOOT OF WOOD.
2. ROUND TIMBER FRICTION PILES SHALL BE SYP AND CONFORM TO ASTM D25.
3. ALL PILINGS SHALL HAVE A MINIMUM CIRCUMFERENCE OF 38" (12"ø) MEASURED 3 FEET FROM THE BUTT AND A MINIMUM CIRCUMFERENCE OF 32" (10"ø) AT THE TIP. REFERENCE STANDARD ASTM D244 FOR STRAIGHTNESS AND SOUNDNESS.
4. PILE CAPACITY SHALL BE 15 TONS COMPRESSION (7 TONS TENSION) AND SHALL BE DRIVEN TO AN ELEVATION OF 20 FEET BELOW THE EXISTING GROUND SURFACE.
5. ALL FIELD CUTS ON MEMBERS THAT PROVIDE STRUCTURAL SUPPORT SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA STANDARD M4.

CONCRETE:

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH 4" SLUMP AND W/C = 0.52.
2. AIR ENTRAINING AGENTS SHALL BE USED TO PRODUCE 3% TO 6% AIR BY VOLUME IN ALL CONCRETE EXPOSED TO WEATHER.
3. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE CURRENT "ACI MANUAL OF CONCRETE PLACEMENT".
4. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
5. ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.
6. ALL REINFORCING SHALL MEET ASTM A615, GRADE 60.
7. NO ALUMINUM SHALL BE IMBEDDED IN ANY CONCRETE.

WOOD STRUCTURAL PANEL SHEATHING:

1. ALL ROOF & FLOOR SHEATHING SHALL BE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO FRAMING AND END JOINTS SHALL BE STAGGERED.
2. ALL FLOOR SHEATHING SHALL BE 3/4" T&G WOOD STRUCTURAL PANELS WITH EXTERIOR GLUE.
   ELEVATED FLOORS:
   ATTACH TO ALL SUPPORTED EDGES WITH 10d NAILS AT 6" O.C., NAIL SPACING AT DIAPHRAGM BOUNDARY IS 6" O.C., AND FIELD NAILING AT 12" O.C. WITH MIN. 1 5/8" PENETRATION INTO 2x FRAMING MEMBER.
3. CEILING DIAPHRAGM SHALL BE 1/2" GYPSUM WALLBOARD ATTACHED DIRECTLY TO CEILING JOISTS OR BOTTOM CHORDS OF TRUSSES WITH 5d COOLER NAILS AT 7" O.C. AT SUPPORTED EDGES AND 12" O.C. IN FIELD.
4. ROOF DECK SHALL BE 5/8" WOOD STRUCTURAL PANELS ATTACHED WITH 8d NAILS AT 6" O.C. AT SUPPORTED EDGES, NAIL SPACING AT DIAPHRAGM BOUNDARY IS 4" O.C., AND 6" O.C. IN FIELD. INSTALL PSC SHEATHING CLIPS BY SIMPSON STRONG-TIE AT ALL UNSUPPORTED EDGES OF ROOF DECK (ONE PER SPAN).
5. WHERE EITHER 2-INCH OR 2 1/2-INCH FASTENER SPACINGS ARE USED WITH 2-INCH WIDE FRAMING MEMBERS FOR WOOD STRUCTURAL PANELS USED AT ROOF OR FLOOR, THE FRAMING MEMBER ADJOINING PANEL EDGES SHALL BE 3-INCH NOMINAL WIDTH AND NAILS AT PANEL EDGES SHALL BE STAGGERED IN TWO LINES.
6. ADHESIVE ATTACHMENT OF WALL SHEATHING SHALL NOT BE PERMITTED IN SEISMIC DESIGN CATEGORIES C, D1, AND D2.
7. OPENINGS IN HORIZONTAL DIAPHRAGMS WITH A DIMENSION PERPENDICULAR TO THE JOISTS GREATER THAN 4 FEET SHALL BE BLOCKED BEYOND THE HEADERS AND METAL TIES NOT LESS THAN 16 GAGE BY 1 1/2" WIDE WITH (8) 16d COMMON NAILS ON EACH SIDE OF THE HEADER-JOIST INTERSECTION SHALL BE PROVIDED.

LUMBER:

1. UNLESS NOTED OTHERWISE, ALL LUMBER SHALL BE #2 SOUTHERN-YELLOW-PINE WITH A MAXIMUM MOISTURE CONTENT OF 19%.
2. REFERENCE PLANS AND DETAILS FOR SIMPSON STRONG-TIE CONNECTORS. PROVIDE SIMPSON NAILS PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL LUMBER EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL BE PRESSURE IMPREGNATED TO A MINIMUM RETENTION OF 0.25 LBS. OF ACQ PER CUBIC FOOT OF WOOD, AND EACH PIECE SHALL BEAR THE THIRD PARTY QUALITY MARK "ABOVE GROUND USE."
4. ALL LUMBER IN CONTACT WITH THE GROUND/CONCRETE SHALL BE PRESSURE IMPREGNATED TO A MINIMUM RETENTION OF 0.40 LBS. OF ACQ PER CUBIC FOOT OF WOOD, AND EACH PIECE SHALL BEAR THE THIRD PARTY QUALITY MARK "GROUND CONTACT USE."
5. REF. STANDARD AWPA C2 AND ASTM D1760 FOR PRESSURE TREATMENT OF TIMBER PRODUCTS.
6. AS A MINIMUM, ANCHOR AND NAIL FRAMING SHALL COMPLY WITH "TABLE R602.3 (1) - FASTENING SCHEDULE FOR STRUCTURAL MEMBERS" OF THE INTERNATIONAL RESIDENTIAL CODE. HEADERS AND JACK STUDS SHALL BE PROVIDED AT EACH OPENING IN EXTERIOR BEARING WALLS AS REQUIRED PER TABLE R502.5 (1) AND R502.5 (2) OF THE INTERNATIONAL RESIDENTIAL CODE. WHERE HEADER BEAMS AND GIRDERS DO NOT CONFORM TO THE SPAN TABLES, PRE-ENGINEERED GIRDERS SHALL BE USED. THE MINIMUM NUMBER OF FULL-LENGTH WALL STUDS FOR EACH HEADER SHALL BE IN ACCORDANCE WITH TABLE 305C OF THE SSTD 10-99.
7. ALL MULTIPLE PIECE WOOD BEAMS/COLUMNS SHALL BE CONNECTED TOGETHER WITH (3) ROWS OF GALV. 12d COMMON WIRE NAILS @ 12" O.C. (UNO).
8. THE DOUBLE TOP PLATES OF THE WALL SHALL RESIST THE CHORD FORCES IN THE ROOF DIAPHRAGM AND ACT AS DRAG STRUTS BETWEEN SHEAR WALL SEGMENTS. JOINTS SHALL BE LAPPED SPLICED WITHIN THE CENTER THIRD OF A WALL LENGTH AND THE MINIMUM LAP SHALL BE 4 FEET.
9. COMMON NAILS
   8d ø= 0.131 L= 2 1/2 in
   10d ø= 0.148 L= 3 in
   16d ø= 0.162 L= 3 1/2 in

FASTENERS:

1. ALL STEEL PLATE WASHERS SHALL BE GALVANIZED AND MEET ASTM A36.
2. ALL DECK SCREWS SHALL BE STAINLESS STEEL. PROVIDE (2) SCREWS PER 2x PLANK. REF. STANDARD ANSI/ASME B18.6.1-1981.
3. ALL STEEL BOLTS SHALL BE GALVANIZED AND MEET ASTM A307. BOLT HOLES SHALL BE A MAXIMUM 1/16" LARGER THAN THE BOLT DIAMETER. BOLTS SHALL NOT BE FORCIBLY DRIVEN.
4. ALL LAG SCREWS SHALL CONFORM TO STANDARD ANSI/ASME B18.2.1-1981. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK.
   THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
   THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE LAG SCREW.

SHEAR WALL SCHEDULE

SHEAR WALL	SHEATHING	NAIL	SPC	SHEAR	HOLDOWNS (DET.)	ANCHOR	STUD FASTENER	QTY	UPLIFT
SWA	15/32" OSB	10d	6	283	MSTC28	-	16d SINKERS	36	YES
SWB	15/32" OSB	10d	6	283	MSTC40	-	16d SINKERS	52	YES
SWC	(2) 15/32" OSB	10d	4	846	HD8A	7/8"ø	7/8"ø A307 BOLT	3	NO

NOTE:
(2) 15/32" OSB DENOTES ONE LAYER OF SHEATHING ON EACH FACE OF SHEARWALL.

FRAMING ADJOINING PANEL EDGES SHALL BE 3-INCH NOMINAL OR WIDER, AND NAILS SHALL BE STAGGERED WHERE BOTH OF THE FOLLOWING CONDITIONS ARE MET: (1) 10d NAILS HAVING PENETRATION INTO FRAMING OF 1 1/2 INCHES AND (2) NAILS ARE SPACED 3 INCHES O.C.

WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6 INCHES O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. OR FRAMING SHALL BE 3-INCH NOMINAL OR THICKER AND NAILS SHALL BE STAGGERED.

COORDINATE HOLDOWNS W/ FLOOR FRAMING

HEADER & GIRDER SPANS FOR EXTERIOR BEARING WALLS

SPAN	SIZE	NJ	NK	COMMENTS
2-6	2-2x4	1	2	ALT. HH HDR HANGER
3-11	2-2x6	1	2	ALT. HH HDR HANGER
5-0	2-2x8	2	3	
6-1	2-2x10	2	3	
7-1	2-2x12	2	3	
6-3	3-2x8	2	3	
7-7	3-2x10	2	3	
8-10	3-2x12	2	3	

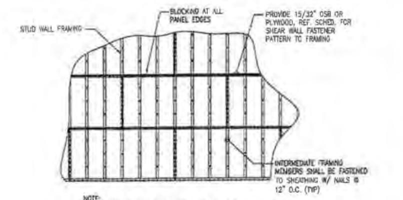
NOTE:
SPANS ARE GIVEN IN FEET AND INCHES

NO. 2 GRADE LUMBER

NJ-NUMBER OF JACK STUDS REQUIRED TO SUPPORT EACH END

NK-NUMBER OF KING STUDS REQUIRED AT EACH END

CONTRACTOR SHALL NOTIFY ENGINEER IF HEADER/ GIRDER CONDITION DOES NOT CONFORM TO SPAN TABLE.



NOTE:
ORIENTATION OF WALL SHEATHING SHALL BE AT CONTRACTOR'S OPTION; HOWEVER, BLOCKING SHALL BE INSTALLED AT ALL PANEL EDGES NOT BACKED BY WALL FRAMING.

TYPICAL SHEAR WALL ATTACHMENT

NOTE:
(REFERENCE SHEARWALL SCHEDULE FOR APPLICABILITY)
IN LIEU OF USING SIMPSON TIES AT TYPICAL STUD TO PLATE CONNECTIONS, WOOD STRUCTURAL PANELS MAY BE USED TO RESIST UPLIFT. THE FOLLOWING PRESCRIPTIVE REQUIREMENT APPLIES:

PANELS SHALL BE INSTALLED WITH FACE GRAIN PARALLEL TO STUDS.

ALL HORIZONTAL JOINTS SHALL OCCUR OVER FRAMING AND SHALL BE ATTACHED W/ (2) ROWS OF FASTENERS AT 4" O.C., STAGGERED, AT TOP AND BOTTOM PANEL EDGES.

ON TWO STORY CONSTRUCTION, UPPER PANELS SHALL BE ATTACHED AT THE TOP TO THE UPPER DOUBLE TOP PLATE AND AT BOTTOM OF PANEL TO THE BAND JOIST. UPPER ATTACHMENT OF LOWER PANEL SHALL BE MADE TO BAND JOIST AND LOWER ATTACHMENT MADE TO LOWEST PLATE AT FIRST FLOOR FRAMING. LOWEST PLATE OF FIRST FLOOR FRAMING SHALL BE ATTACHED TO FOUNDATION WITH BOLTS AS SHOWN.

WHERE WINDOWS AND DOORS INTERRUPT WOOD STRUCTURAL PANELS, FRAMING ANCHORS OR CONNECTORS SHALL BE USED AS SHOWN.

HEADER & GIRDER SPANS FOR INTERIOR BEARING WALLS

SPAN	SIZE	NJ	COMMENTS
2-2	2-2x4	1	
3-2	2-2x6	2	
4-1	2-2x8	2	
4-11	2-2x10	2	
5-9	2-2x12	2	
5-1	3-2x8	2	
6-2	3-2x10	2	
7-2	3-2x12	2	

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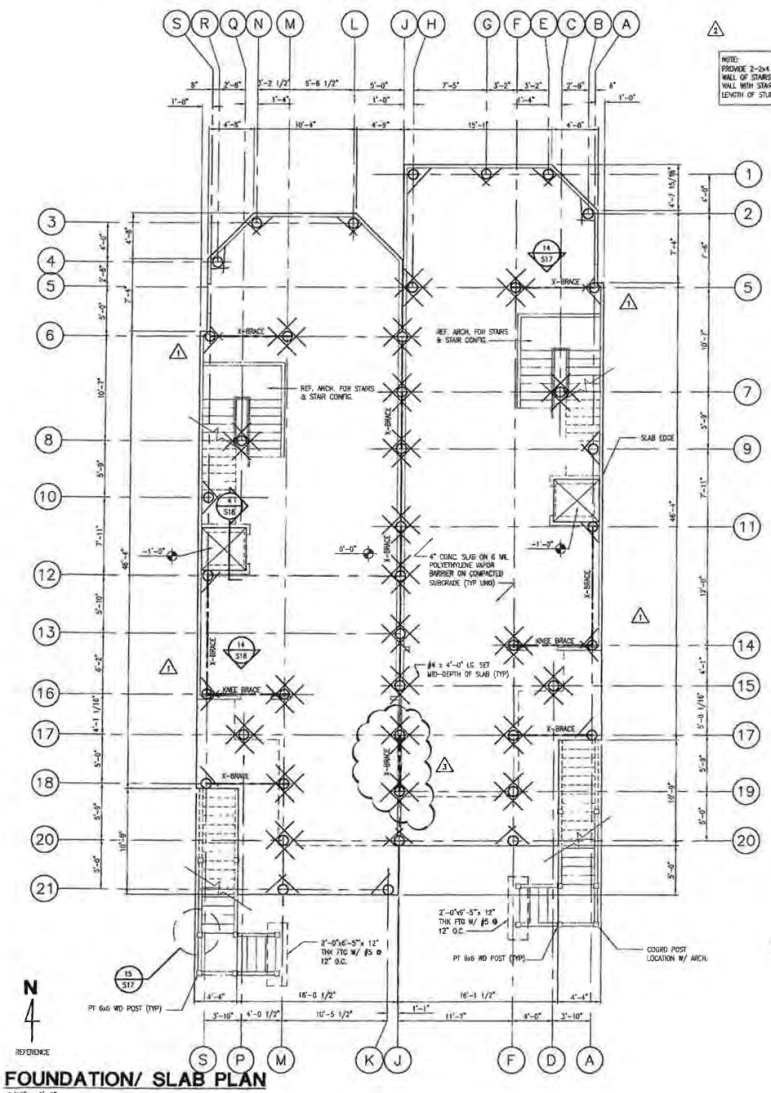
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title: GENERAL NOTES

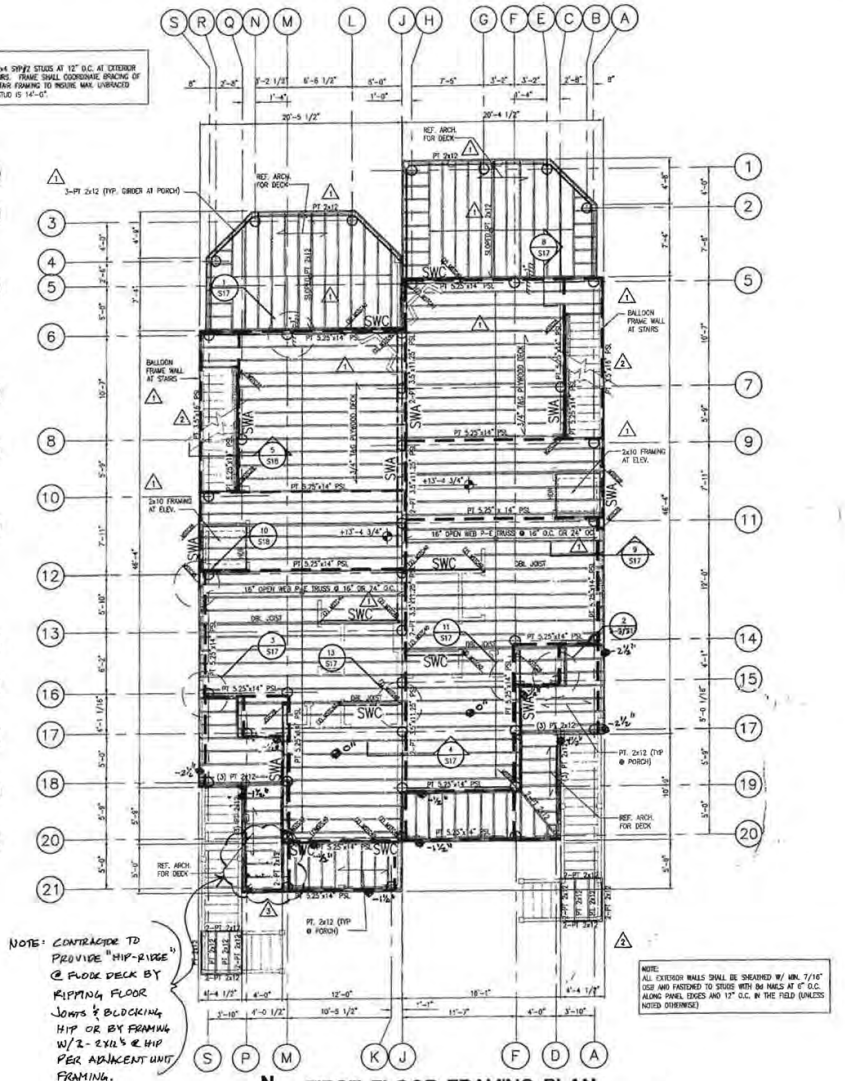
Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S0



FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" (8'-0" AMSL) DATUM
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
PROVIDE 2-2x4 STUD/2 STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".



NOTE: CONTRACTOR TO PROVIDE "HIP-RIDGE" @ FLOOR DECK BY RIPPING FLOOR JOISTS & BLOCKING HIP OR BY FRAMING W/ 2-2x12's @ HIP PER ADJACENT UNIT FRAMING.

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-0 3/4" (16'-8 3/4" AMSL) DATUM
DENOTES SHEAR WALL LOCATION
XX.XX TOP OF FLOOR ELEVATION
SW# DENOTES SHEARWALL TYPE, REF. SHT. S2 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN. REF. DET. SHT. FOR HOLDOWN INSTALLATION

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

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PEAS ISLAND
FOLLY BEACH, SC

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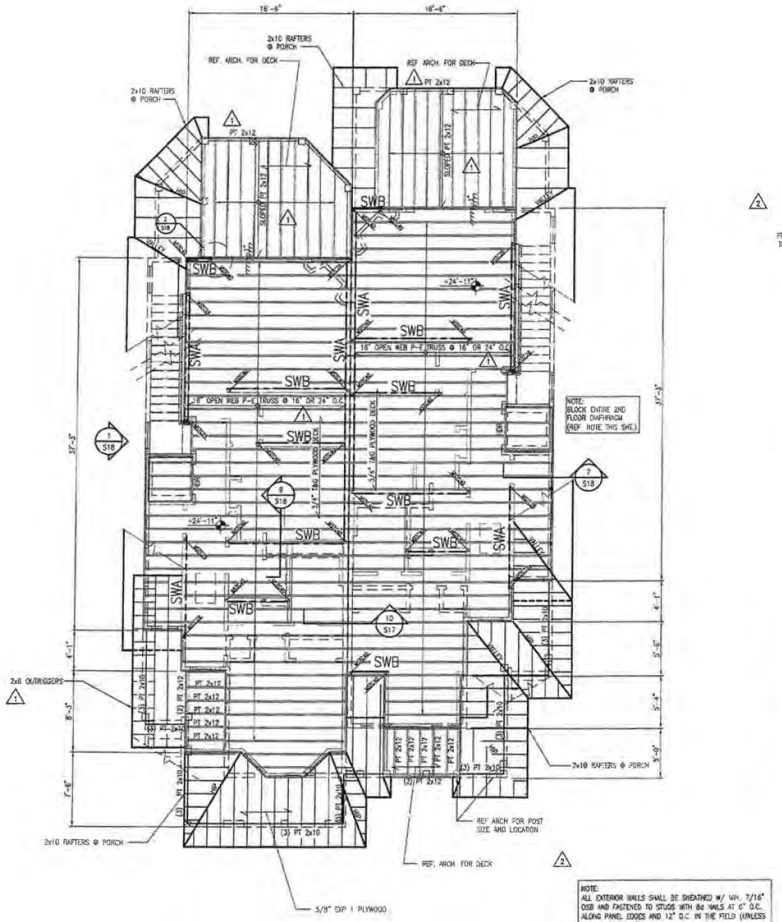
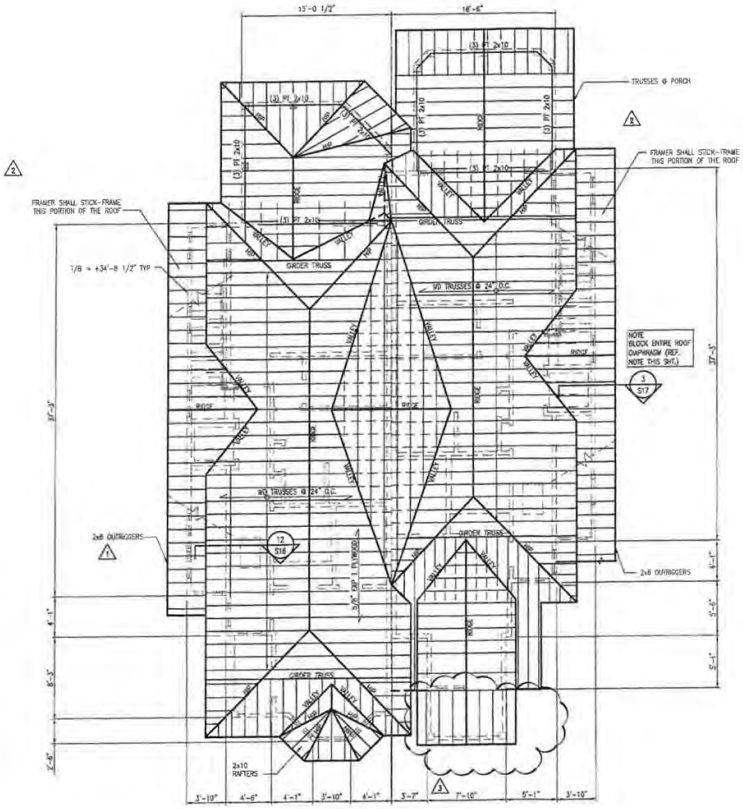
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
THE CYPRESS FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S1





NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

N SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"

F.H. FLR. EL. = +25'-7" (31'-7" ABS.) DATUM

——— DENOTES SHEAR WALL LOCATION

SWA DENOTES SHEARWALL, REF. SHT. S3 FOR SCHED.

IS DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S18 FOR TYPICAL HOLDOWN

XX.XX DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

N ROOF FRAMING PLAN

3/16" = 1'-0"

T/B DENOTES TRUSS BEARING

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

BRITT PETERS AND ASSOCIATES INC. consulting engineers
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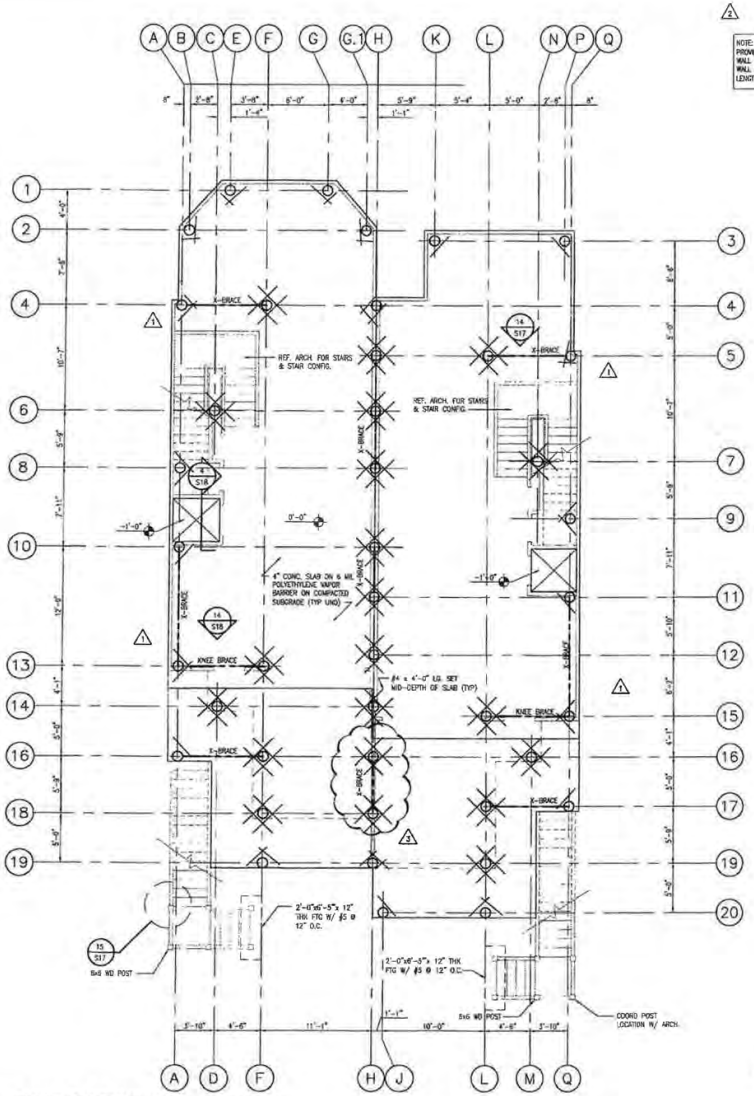
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
THE CYPRESS SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S2

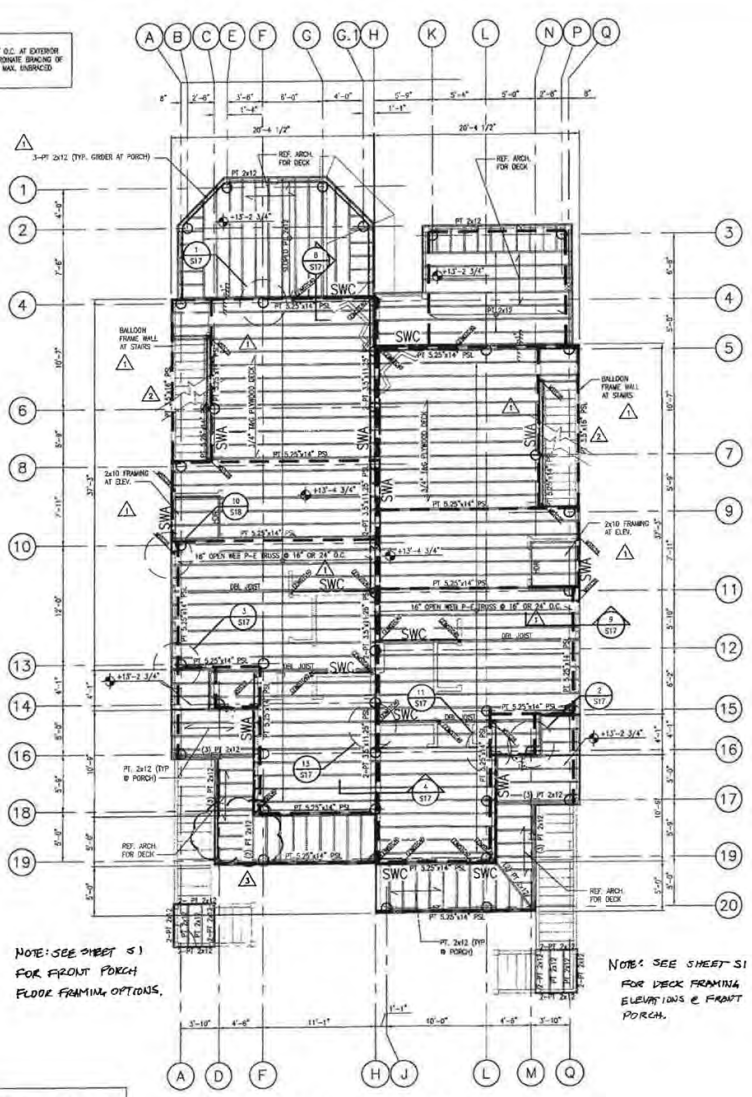


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" (8'-0" AMSL) DATUM
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S16)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

N
REFERENCE

NOTE:
PROVIDE 2-2x4 SPIKED STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".



NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (18'-8 3/4" AMSL) DATUM
DENOTES SHEAR WALL LOCATION
XX.XX TOP OF FLOOR ELEVATION
SW DENOTES SHEARWALL TYPE, REF. SHT. S5 FOR SCHED
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. S7/2 FOR HOLDOWN INSTALLATION

N
REFERENCE

BRITT PETERS AND ASSOCIATES INC.
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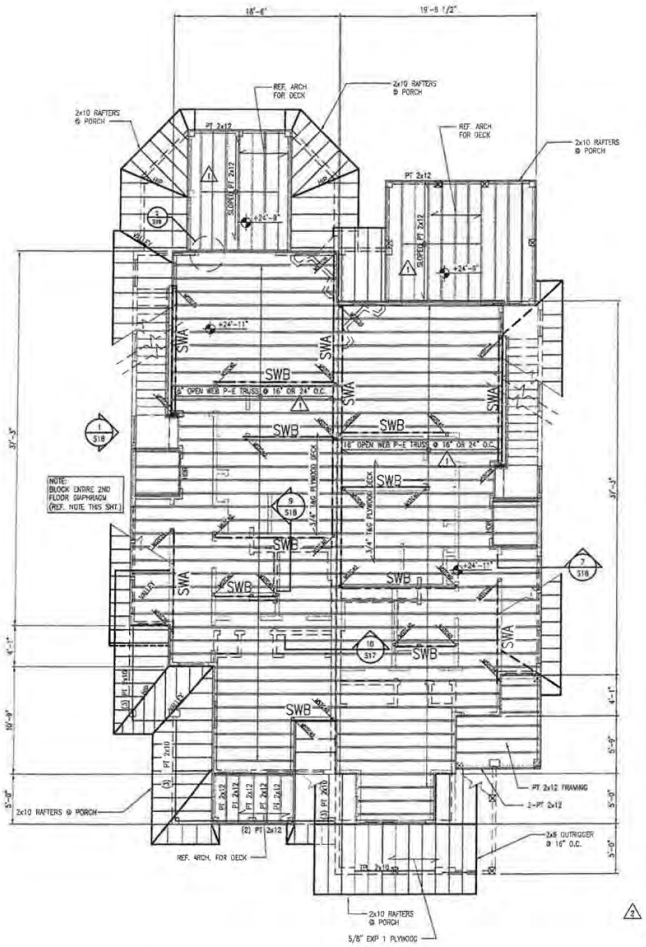
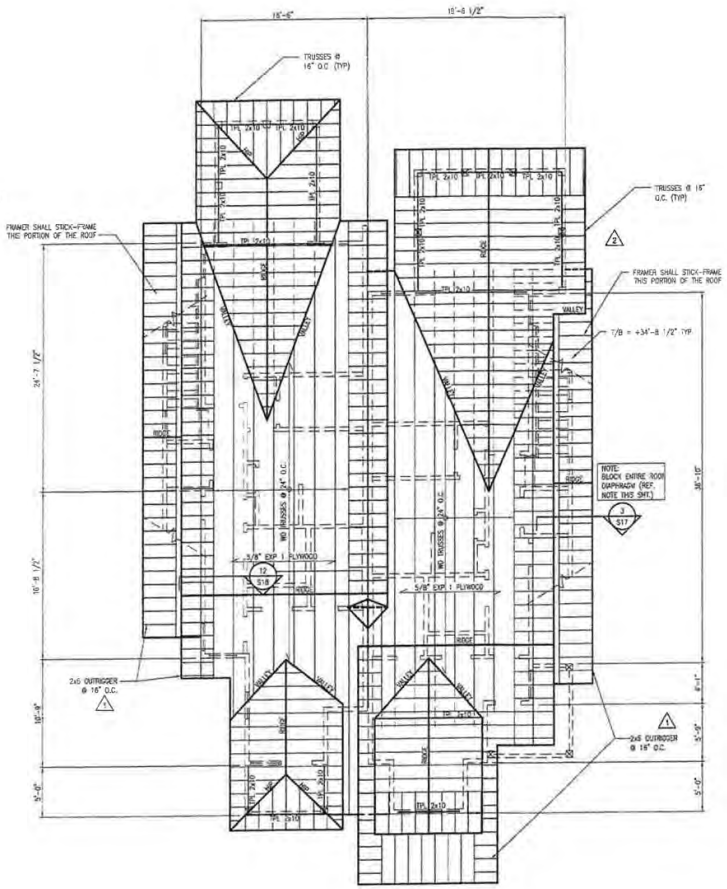
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
		Revisions	
0	10.14.05	ISSUED FOR PERMIT	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
2	06.15.06	GENERAL REVISION	CJM
3	02.13.06	GENERAL REVISION	JSR

Sheet Title
THE HOLLY FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S3





NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"

FIN. FLR. EL. = +25'-7" (31'-7" AMSL) DATUM

——— DENOTES SHEAR WALL LOCATION

SWB DENOTES SHEARWALL, REF. SHT. S8 FOR SCHED.

□ DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S18 FOR TYPICAL HOLDOWN

XX.XX' DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

ROOF FRAMING PLAN

3/16" = 1'-0"

T/B DENOTES TRUSS BEARING

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

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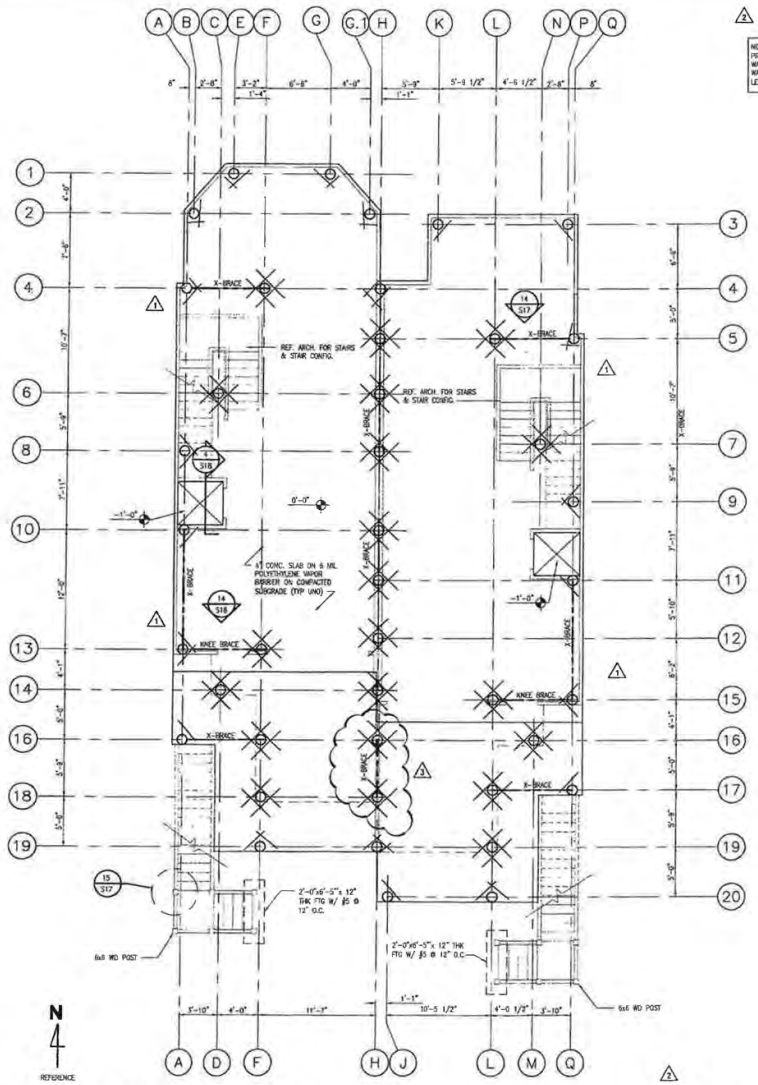
			Revisions	
3	02.13.06	GENERAL REVISION		JSR
2	06.15.06	GENERAL REVISION		CJM
1	03.14.06	ISSUED FOR CONSTRUCTION		CJM
0	10.14.05	ISSUED FOR PERMIT		CJM

Sheet Title
THE HOLLY SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S4

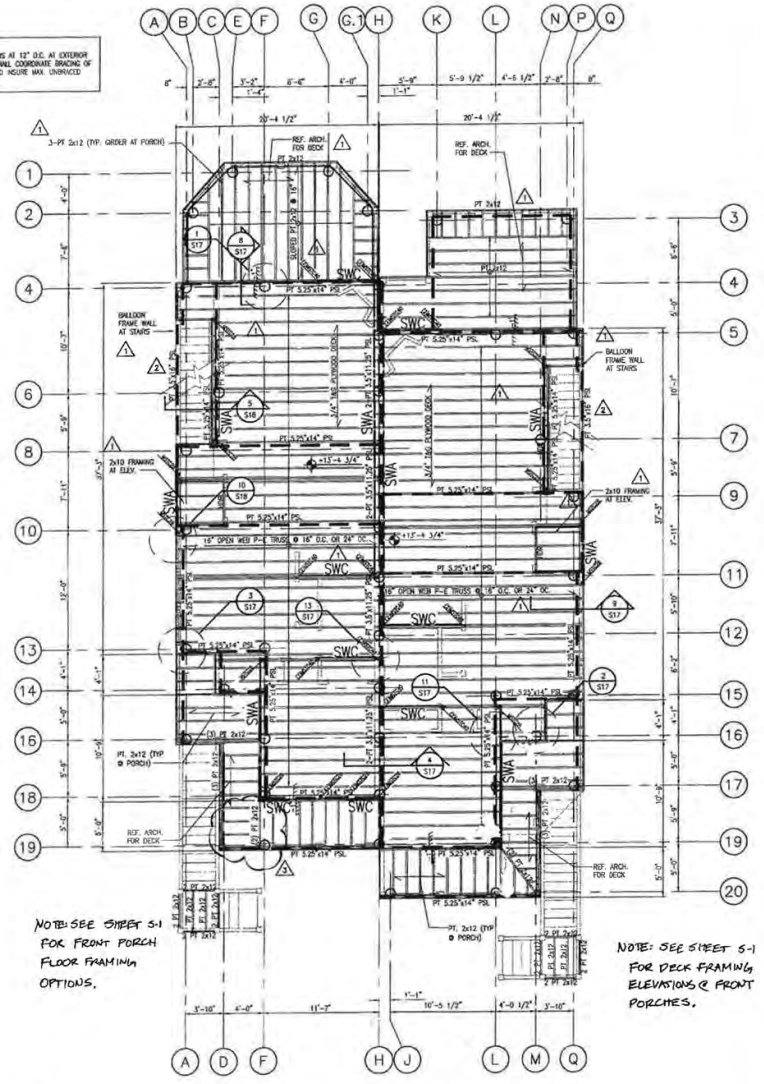


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" DATUM (0'-0" AMSL)
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
PROVIDE 2-2x4 SWPF STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



NOTE: SEE SHEET S-1 FOR FRONT PORCH FLOOR FRAMING OPTIONS.

NOTE: SEE SHEET S-1 FOR DECK FRAMING ELEVATIONS & FRONT PORCHES.

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-6 3/4" (19'-8 3/4" AMSL)
DENOTES SHEAR WALL LOCATION
XX.XX TOP OF FLOOR ELEVATION
SWF DENOTES SHEARWALL TYPE, REF. SHT. S3 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. SHT. FOR HOLDOWN INSTALLATION

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PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

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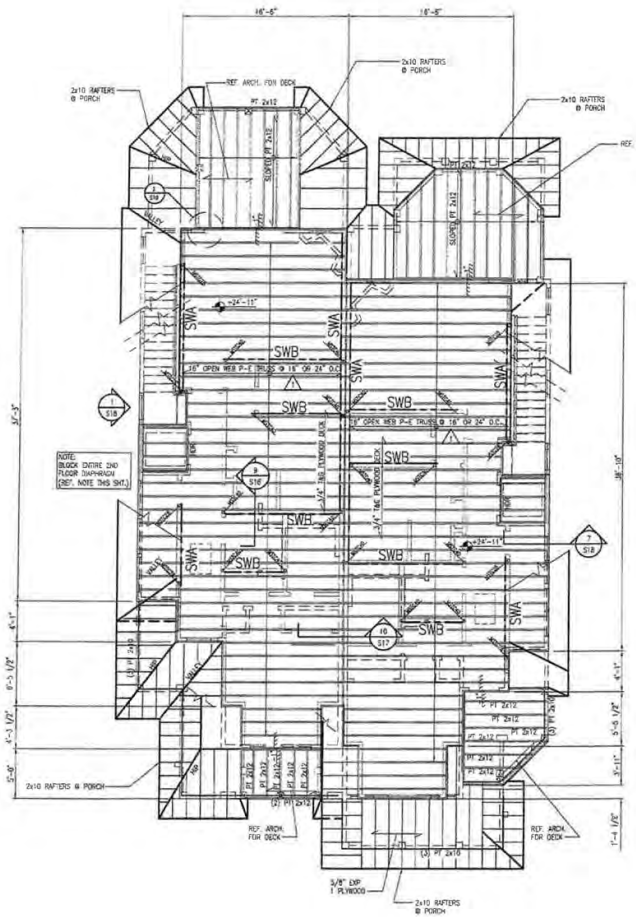
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	

Revisions

Sheet Title:
THE OAK FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S5



N SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"

FIN. FLR. EL. = +26'-9" (30'-7" AMSL) DATUM

REFERENCE

DENOTES SHEAR WALL LOCATION

SWB DENOTES SHEARWALL, REF. SHT. S3 FOR SCHED.

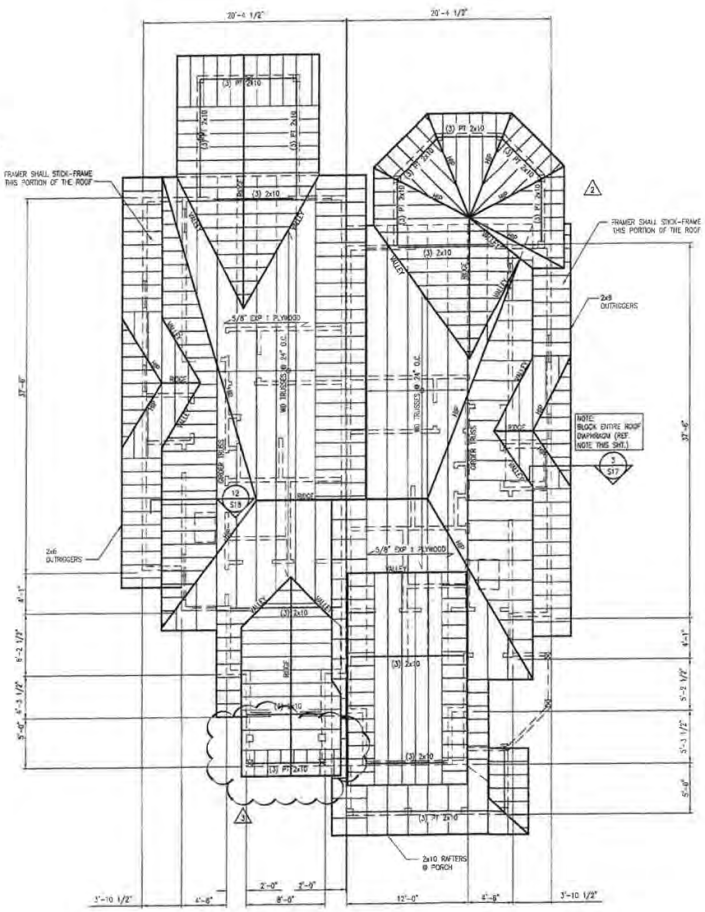
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S18 FOR TYPICAL HOLDOWN

XX.XX' DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



N ROOF FRAMING PLAN

3/16" = 1'-0"

1/8" = +34'-6 1/2" (40'-8 1/2" AMSL)

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

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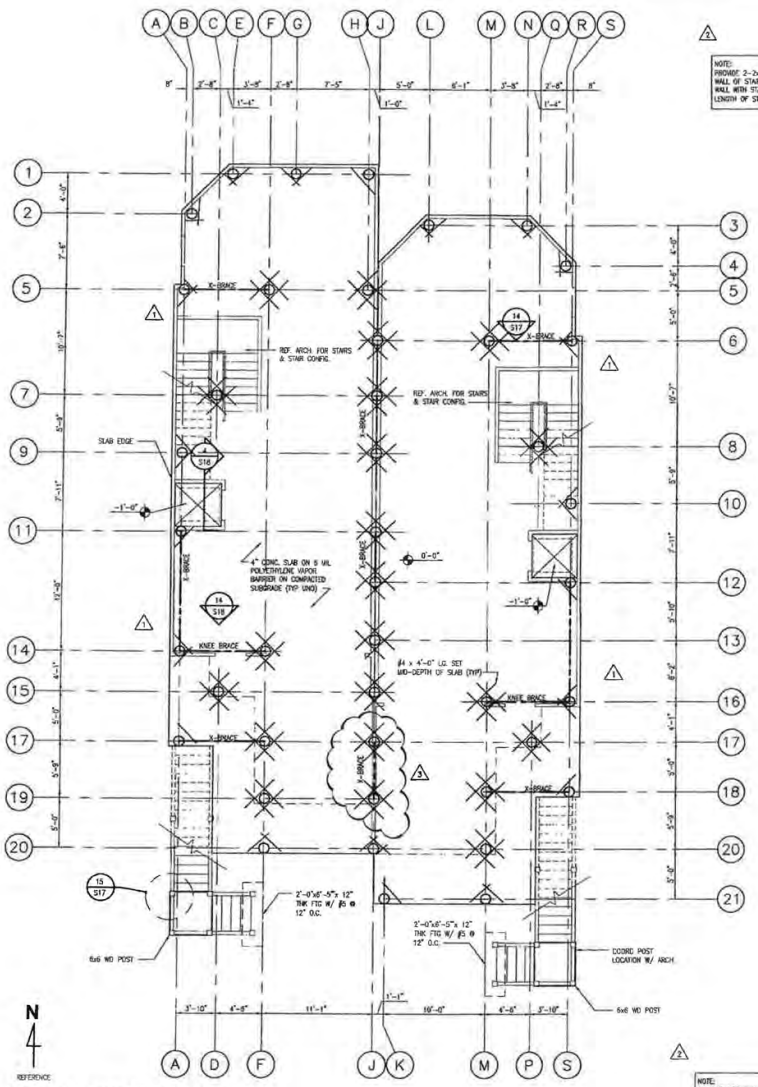
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
THE OAK
SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	08.15.06
Job No.	05283
Sheet No.	S6

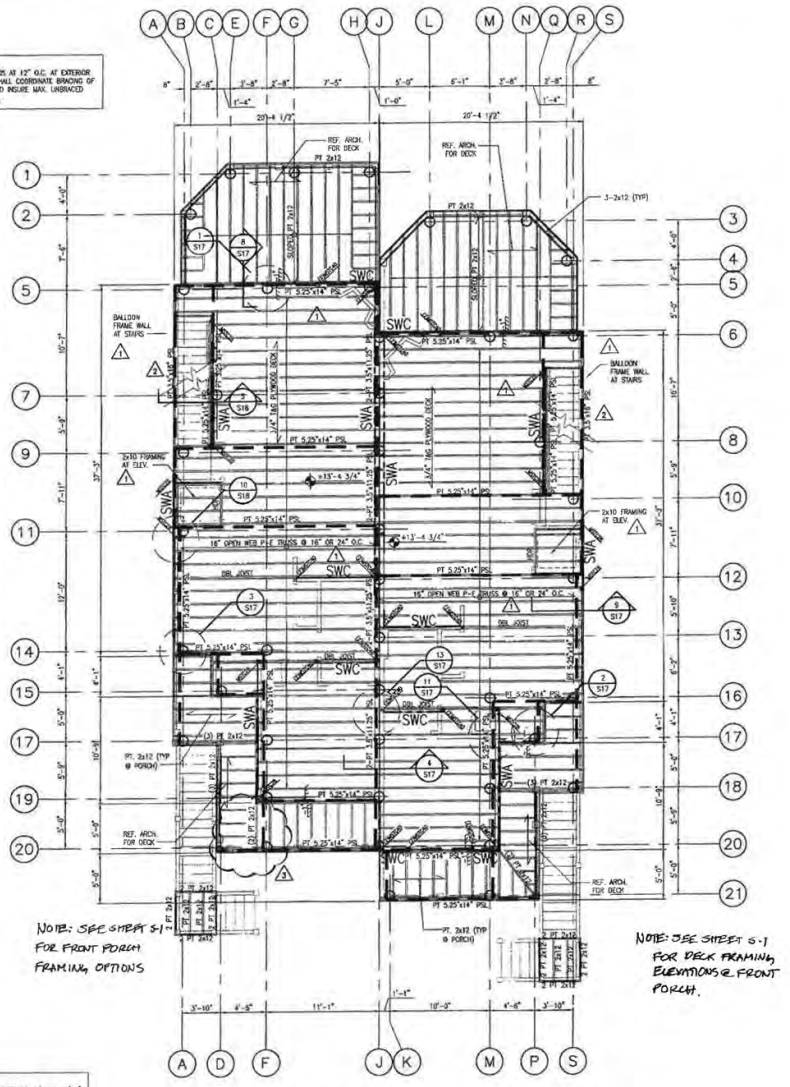


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 9'-8" (6'-0" AMSL) DATUM
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
PROVIDE 2-2x4 SYP#2 STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



NOTE: SEE SHEET S-1 FOR FRONT PORCH FRAMING OPTIONS

NOTE: SEE SHEET S-1 FOR DECK FRAMING ELEVATIONS & FRONT PORCH.

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (19'-8 3/4" AMSL) DATUM
DENOTES SHEAR WALL LOCATION
SW DENOTES SHEARWALL TYPE, REF. SHT. S0 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. S/ST. FOR HOLDOWN INSTALLATION
XX.XX TOP OF FLOOR ELEVATION

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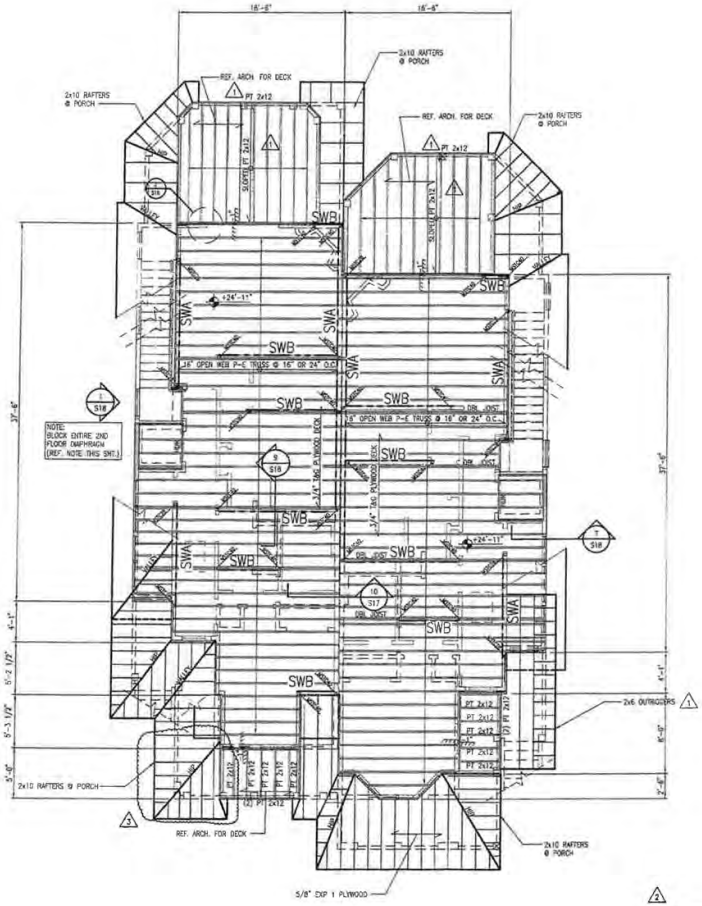
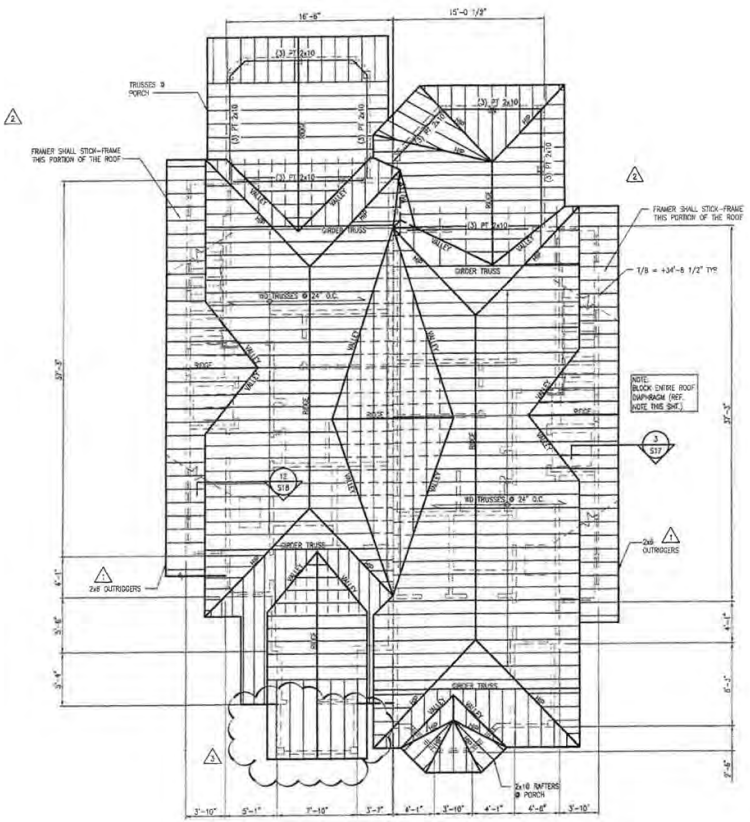
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
		Revisions	
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
THE DOGWOOD FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S7





NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

N SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +25'-7" (31'-7" ANSL) DATUM

REFERENCE

——— DENOTES SHEAR WALL LOCATION

SWA DENOTES SHEARWALL, REF. SHT. S0 FOR SCHED.

⊕ DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. SHT. FOR TYPICAL HOLDOWN

XX.XX DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

N ROOF FRAMING PLAN

3/16" = 1'-0"

T/B DENOTES TRUSS BEARING

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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PEAS ISLAND
FOLLY BEACH, SC

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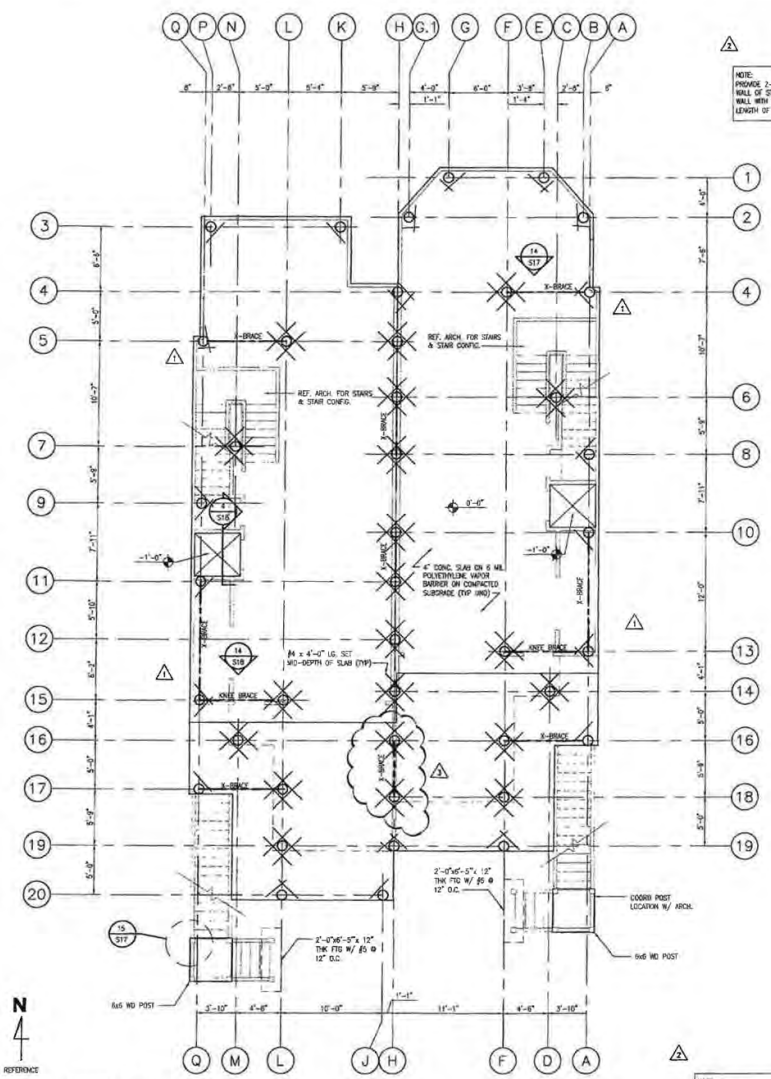
3	02.13.06	GENERAL REVISION	JES
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	

Sheet Title
THE DOGWOOD SECOND FLOOR AND ROOF FRAMING PLANS

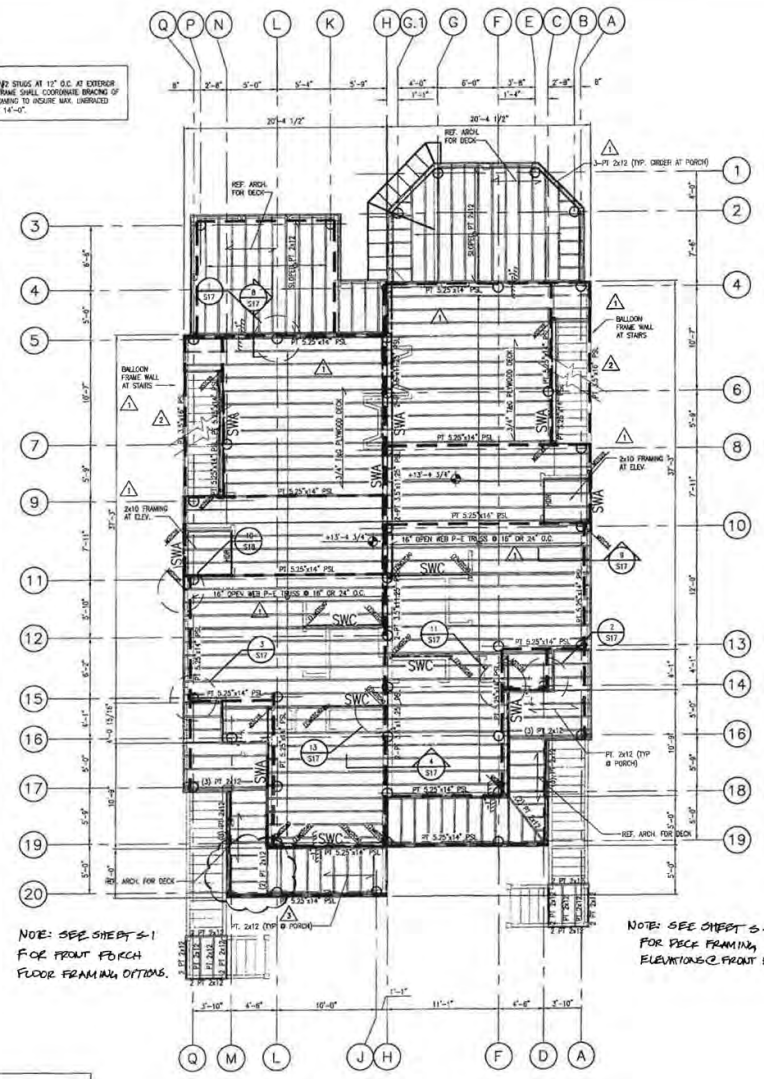
Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S8



FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" (8'-0" ANSL) DATUM
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S16)
XX.XX' TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



NOTE: SEE SHEET S-1 FOR FRONT PORCH FLOOR FRAMING OPTIONS.

NOTE: SEE SHEET S-1 FOR DECK FRAMING ELEVATIONS @ FRONT PORCH.

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (19'-8 3/4" AMSL) DATUM
DENOTES SHEAR WALL LOCATION
XX.XX' TOP OF FLOOR ELEVATION
SWA DENOTES SHEARWALL TYPE, REF. SHT. S8 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. S9E FOR HOLDOWN INSTALLATION

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PEAS ISLAND
FOLLY BEACH, SC

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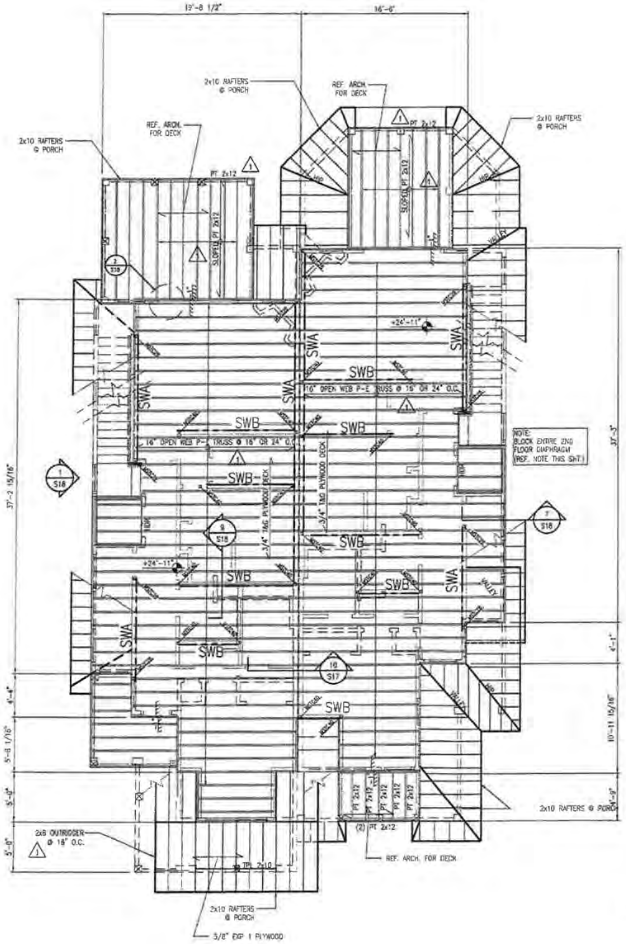
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
THE MAGNOLIA FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S9



NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +25'-7" (31'-7" AMSL) DATUM

DENOTES SHEAR WALL LOCATION

SW# DENOTES SHEARWALL. REF. SHT. S0 FOR SCHED.

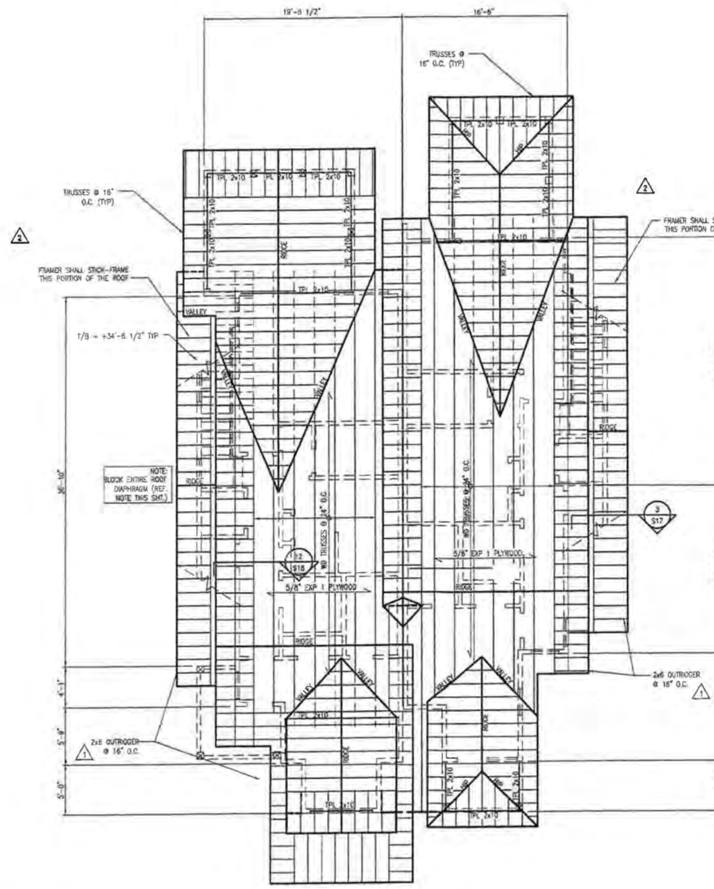
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S18 FOR TYPICAL HOLDOWN

XX.XX' DENOTES ELEVATION

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.



ROOF FRAMING PLAN

3/16" = 1'-0"

T/B DENOTES TRUSS BEARING

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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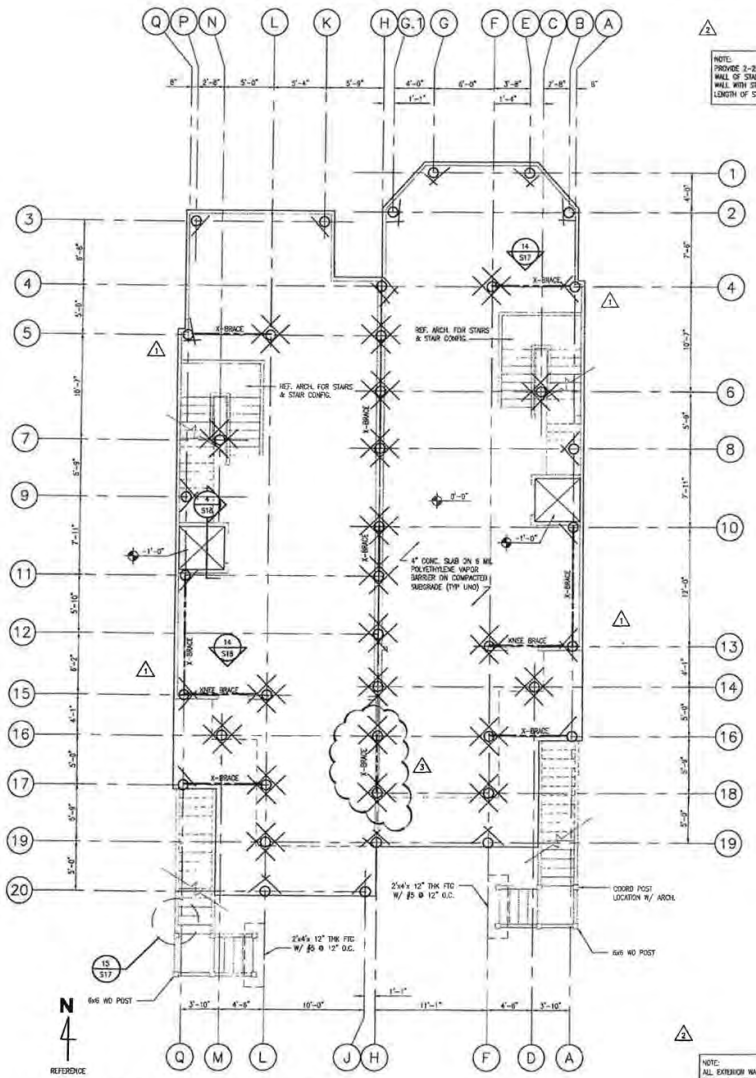
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

Revisions

Mark	Date	Description	By
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
THE MAGNOLIA SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S10

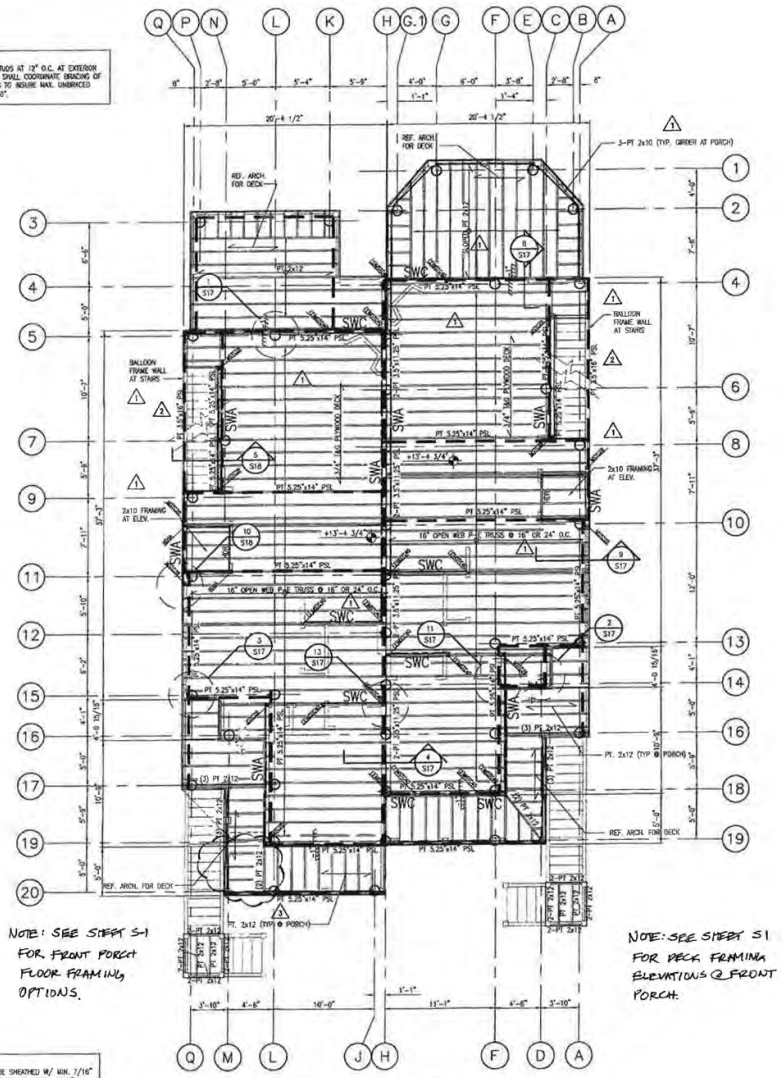


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" DATUM (6'-0" AMSL)
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
PROVIDE 3-2x4 SYP#2 STUDS AT 13" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



NOTE: SEE SHEET S-1 FOR FRONT PORCH FLOOR FRAMING OPTIONS.

NOTE: SEE SHEET S1 FOR DECK FRAMING ELEVATIONS & FRONT PORCH.

FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (19'-8 3/4" AMSL)
SWC DENOTES SHEARWALL TYPE, REF. SHT S0 FOR SCHED.
DENOTES SHEAR WALL LOCATION
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. SHT. FOR HOLDOWN INSTALLATION
XX.XX TOP OF FLOOR ELEVATION

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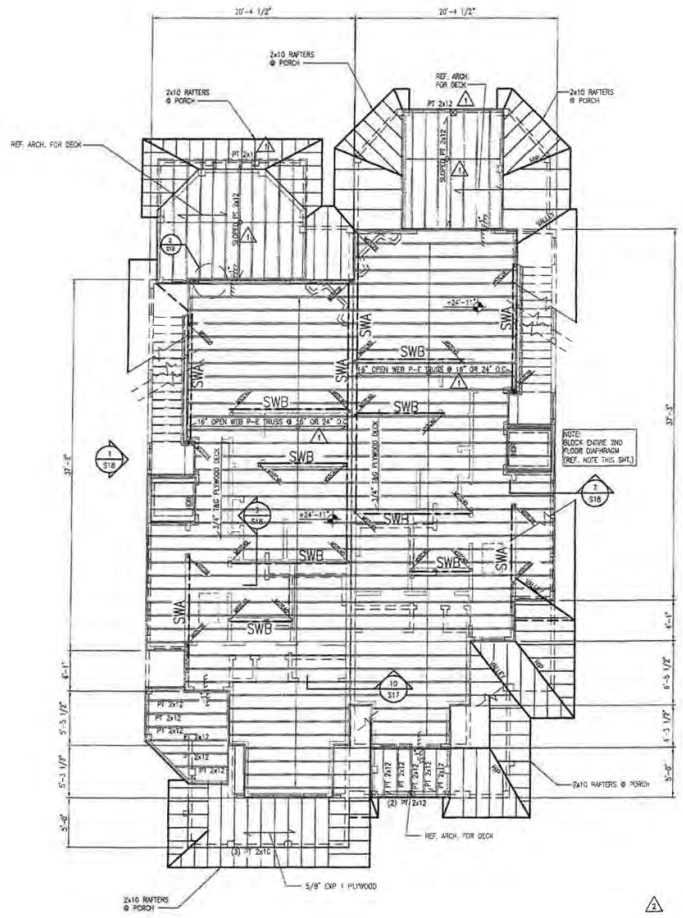
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
THE PALMETTO FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05263
Sheet No.	S11



N SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"
7N. FLR. EL. = +25'-7"

——— DENOTES SHEAR WALL LOCATION

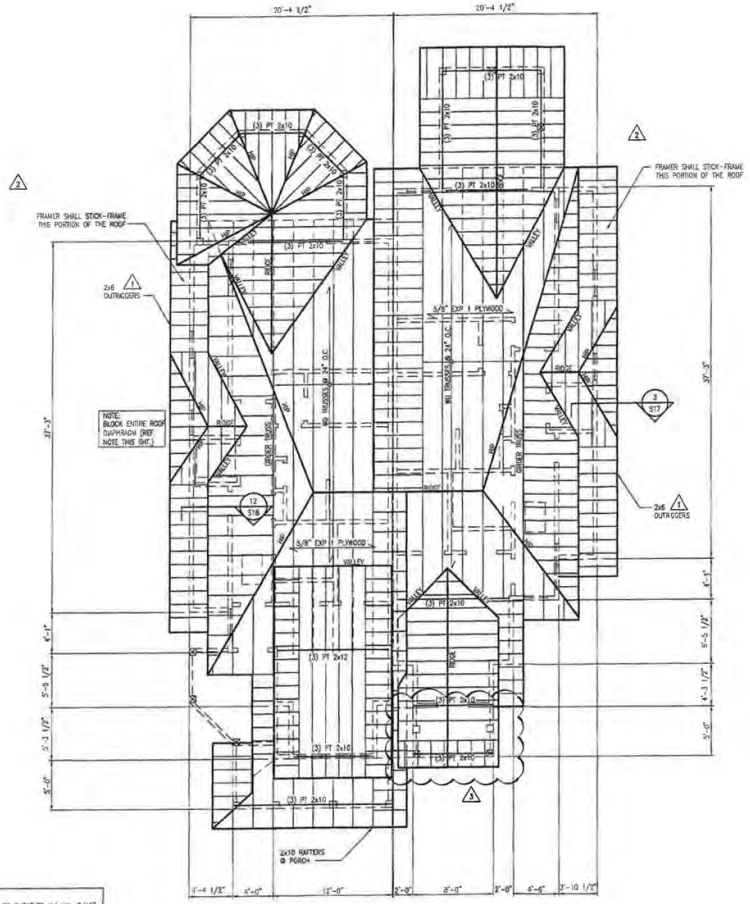
SW# DENOTES SHEARWALL REF. SHT. S0 FOR SCHED.

REFERENCE: ⊙ DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S18 FOR TYPICAL HOLDOWN

XX.XX DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.



NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)

N ROOF FRAMING PLAN

3/16" = 1'-0"
7/8 = +34'-8 1/2" (40'-8 1/2" ANGL)

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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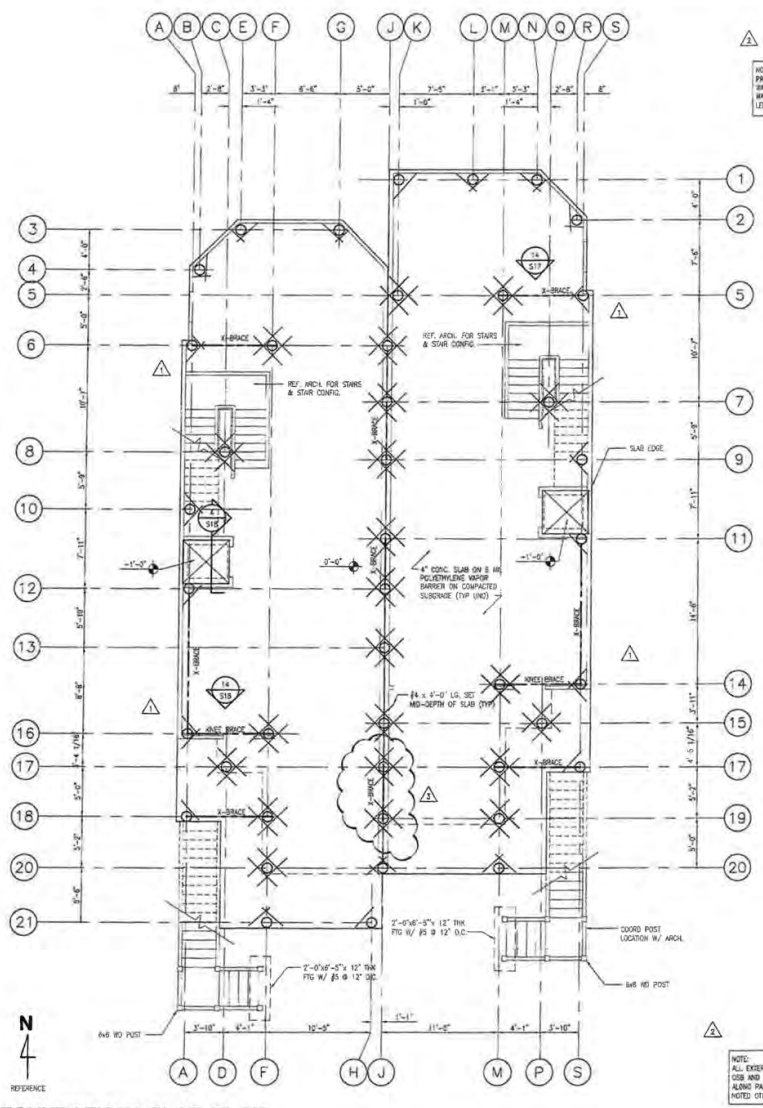
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
Revisions			
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	09.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
THE PALMETTO SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05263
Sheet No.	S12

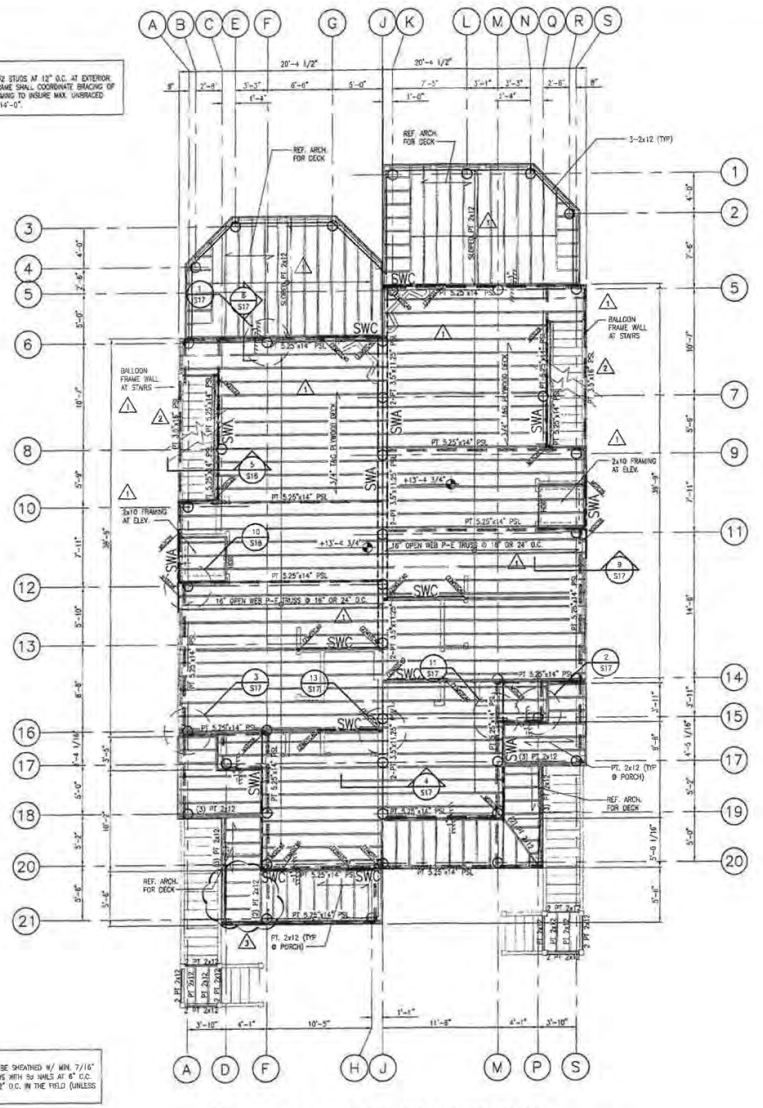


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-8" DATUM (=8'-0" AMSL)
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE:
PROVIDE 2-2x4 SYP#2 STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (+19'-8 3/4" AMSL)
DENOTES SHEAR WALL LOCATION
XX.XX TOP OF FLOOR ELEVATION
SWA DENOTES SHEARWALL TYPE. REF. SHT. S0 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN. REF. DET. SHT. FOR HOLDOWN INSTALLATION

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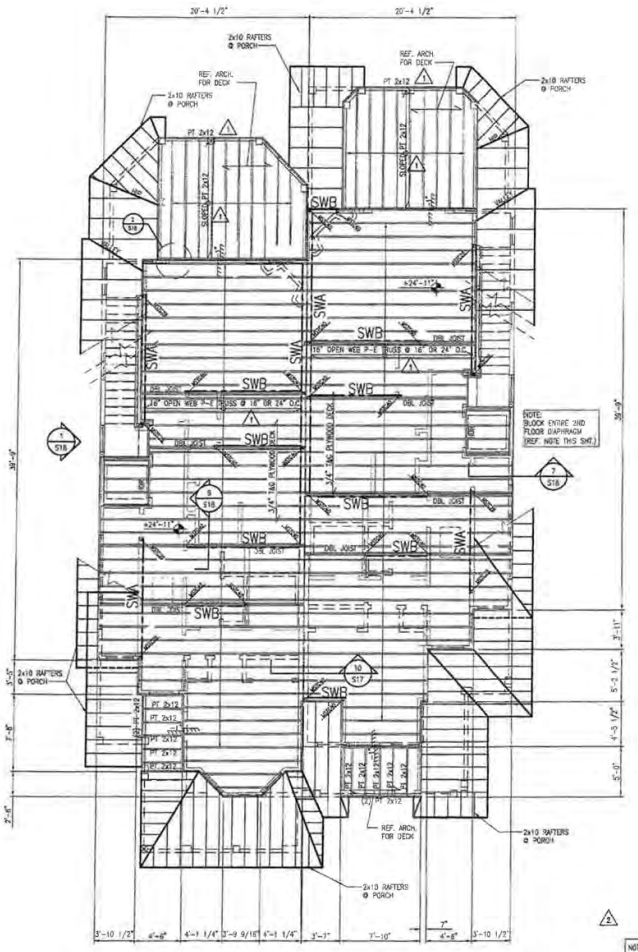
PALMETTO POINTE
PEAS ISLAND
FOLLY BEACH, SC

No.	Date	Description	By
		Revisions	
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
RIVER BIRCH FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S13

R-2613



SECOND FLOOR FRAMING PLAN

N

3/16" = 1'-0"
FIN. FLR. EL. = +25'-7"

REFERENCE

DENOTES SHEAR WALL LOCATION

SWB DENOTES SHEARWALL. REF. SHT. S3 FOR SCHED.

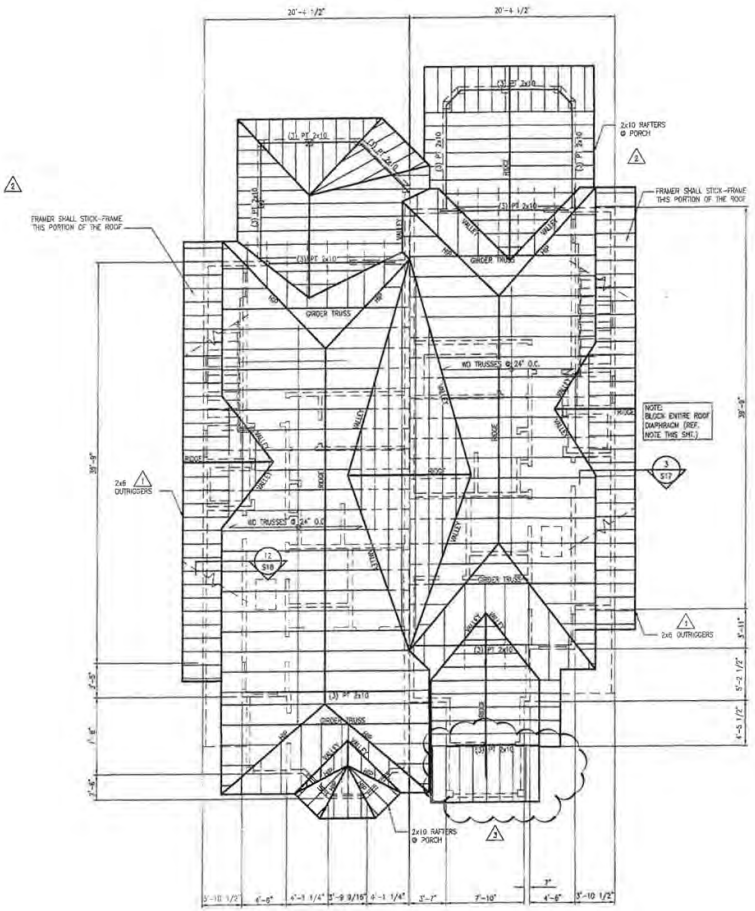
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S16 FOR TYPICAL HOLDOWN

XX.XX DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



ROOF FRAMING PLAN

N

3/16" = 1'-0"
1/8" = +34'-8 1/2" (40'-8 1/2" AMSL)

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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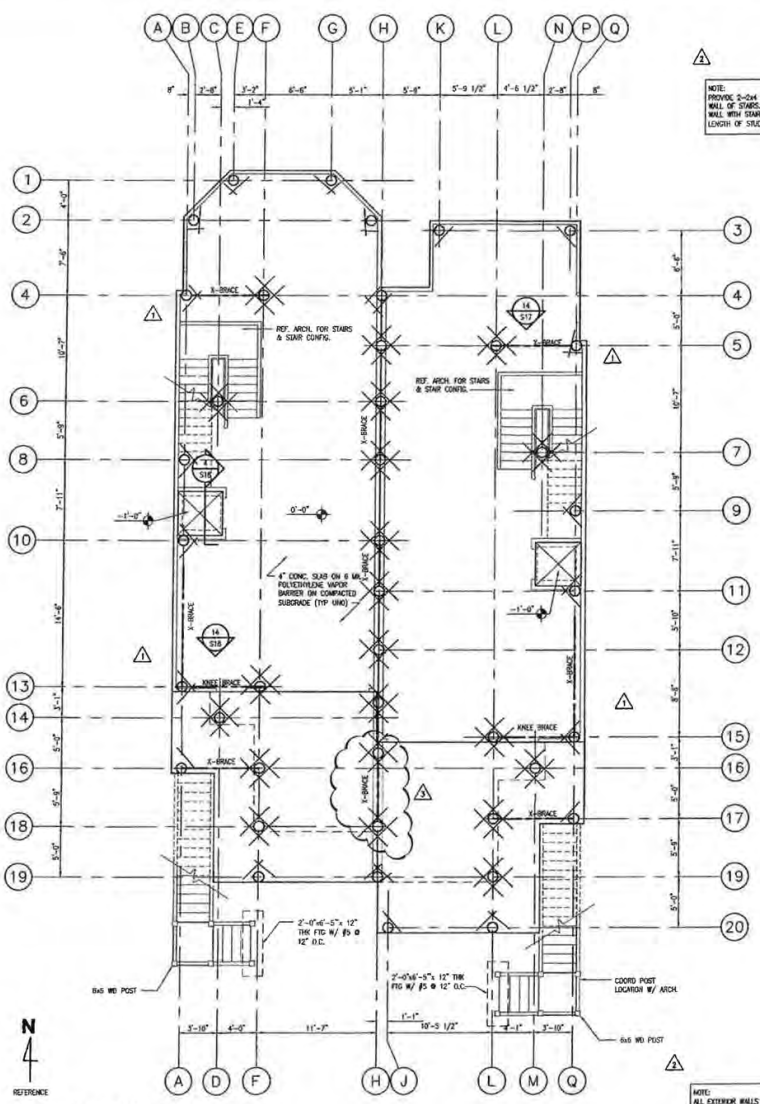
PEAS ISLAND
FOLLY BEACH, SC

Mark	Date	Description	By
		Revisions	
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
RIVER BIRCH SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S14

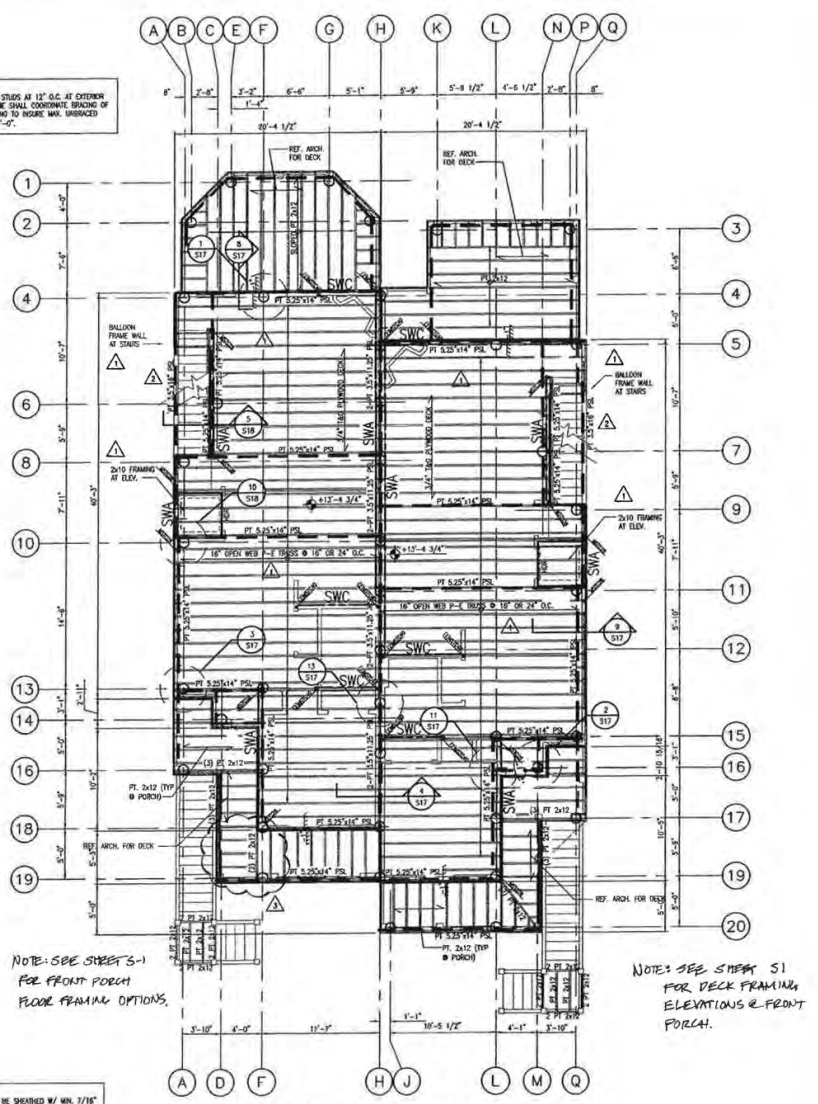


FOUNDATION/ SLAB PLAN

3/16" = 1'-0"
FIN. FLR. EL. = 0'-0" DATUM (8'-0" AMSL)
CJ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT (REF. DET. 13/S18)
XX.XX' TOP OF CONCRETE SLAB ELEVATION
DENOTES DIAGONAL BRACING LOCATION (REF. ELEV. 14/S17)
DENOTES 12"ø TIMBER PILE

NOTE: PROVIDE 2-2x4 STUDS AT 12" O.C. AT EXTERIOR WALL OF STAIRS. FRAME SHALL COORDINATE BRACING OF WALL WITH STAIR FRAMING TO INSURE MAX. UNBRACED LENGTH OF STUD IS 14'-0".

NOTE: ALL EXTERIOR WALLS SHALL BE SHEATHED W/ MIN. 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



FIRST FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +13'-8 3/4" (+19'-8 3/4" AMSL)
DENOTES SHEAR WALL LOCATION
SWF DENOTES SHEARWALL TYPE, REF. SHT. S8 FOR SCHED.
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. S9T. FOR HOLDOWN INSTALLATION
XX.XX' TOP OF FLOOR ELEVATION

NOTE: SEE SHEET S-1 FOR FRONT PORCH FLOOR FRAMING OPTIONS.

NOTE: SEE SHEET S1 FOR DECK FRAMING ELEVATIONS @ FRONT PORCH.

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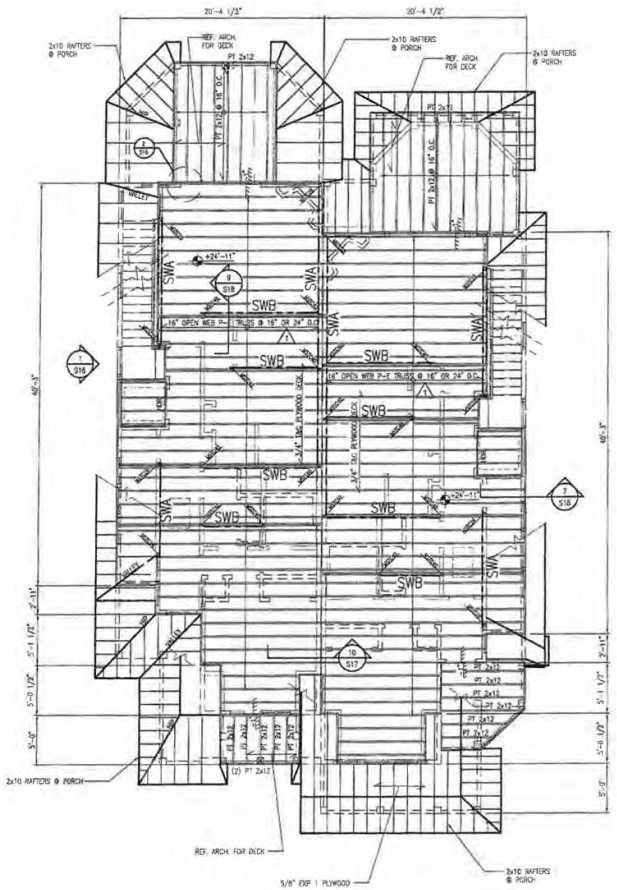
PEAS ISLAND
FOLLY BEACH, SC

By	Description	Date
JSR	GENERAL REVISION	02.13.06
CJM	GENERAL REVISION	06.15.06
CJM	ISSUED FOR CONSTRUCTION	03.14.06
CJM	ISSUED FOR PERMIT	10.14.05

Revisions

Sheet Title
WILLOW FOUNDATION AND FIRST FLOOR FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S15



SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"
FIN. FLR. EL. = +25'-7"

REFERENCE

——— DENOTES SHEAR WALL LOCATION

SW# DENOTES SHEARWALL, REF. SHT. S9 FOR SCHED.

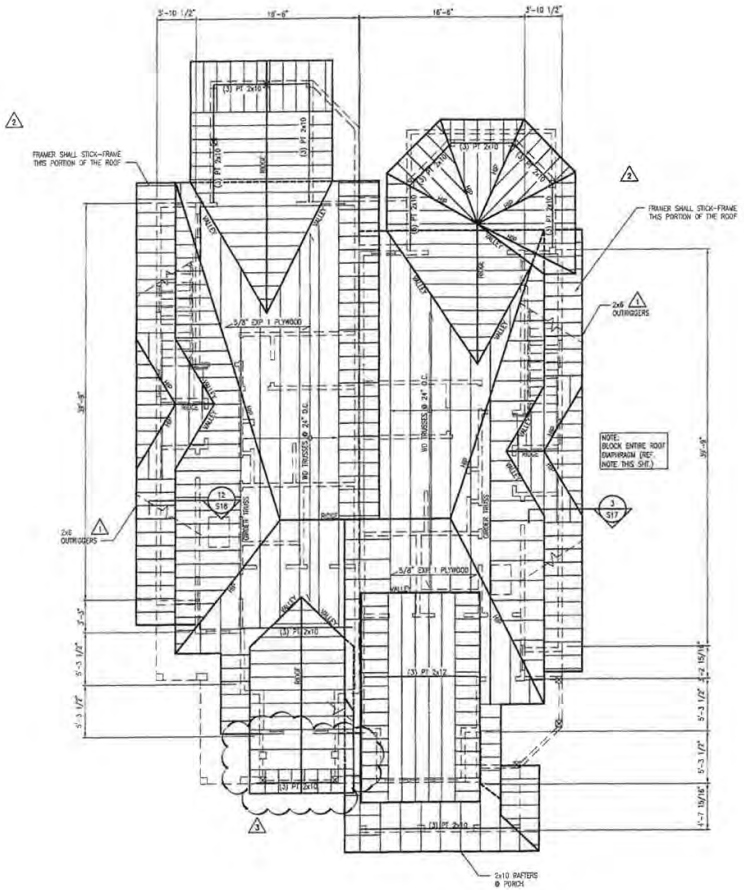
DENOTES SIMPSON STRONG-TIE HOLDOWN REF. DET. 2/S16 FOR TYPICAL HOLDOWN

XX.XX' DENOTES ELEVATION

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

NOTE:
ALL EXTERIOR WALLS SHALL BE SHEATHED W/ WAL 7/16" OSB AND FASTENED TO STUDS WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNLESS NOTED OTHERWISE)



ROOF FRAMING PLAN

3/16" = 1'-0"
1/8" = +34'-8 1/2" (49'-8 1/2" AMSL)

REFERENCE

NOTE:
WHERE BLOCKED DIAPHRAGMS ARE INDICATED, FASTENER SPACING AT DIAPHRAGM BOUNDARIES AND CONTINUOUS PANEL EDGES SHALL BE 4" O.C. AND FASTENER SPACING AT ALL OTHER PANEL EDGES SHALL BE 6" O.C.

ALL SHEARWALLS SHALL EXTEND TO UNDERSIDE OF ROOF DECK.

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FOLLY BEACH, SC

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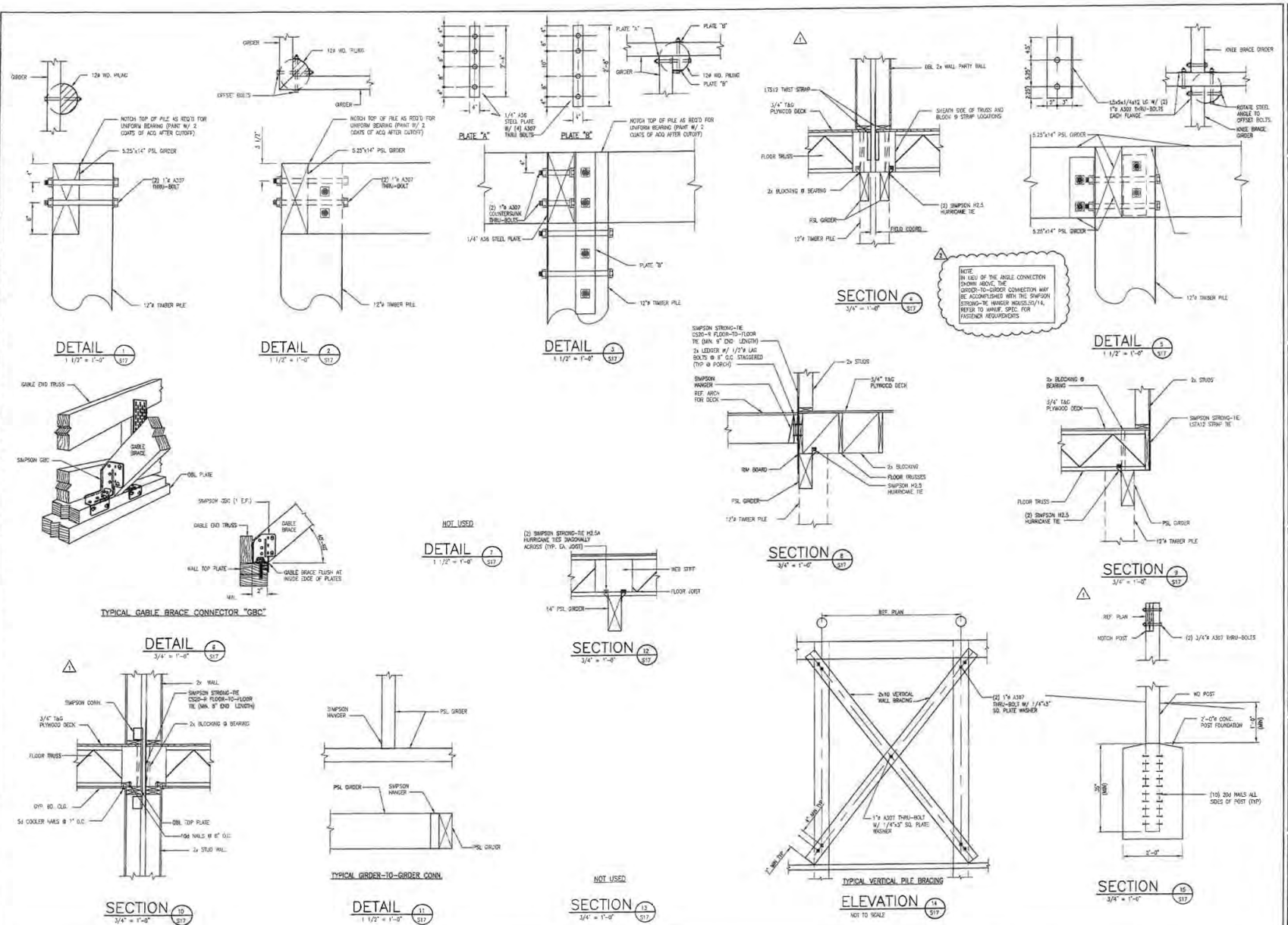
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	08.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title
WILLOW SECOND FLOOR AND ROOF FRAMING PLANS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05283
Sheet No.	S16



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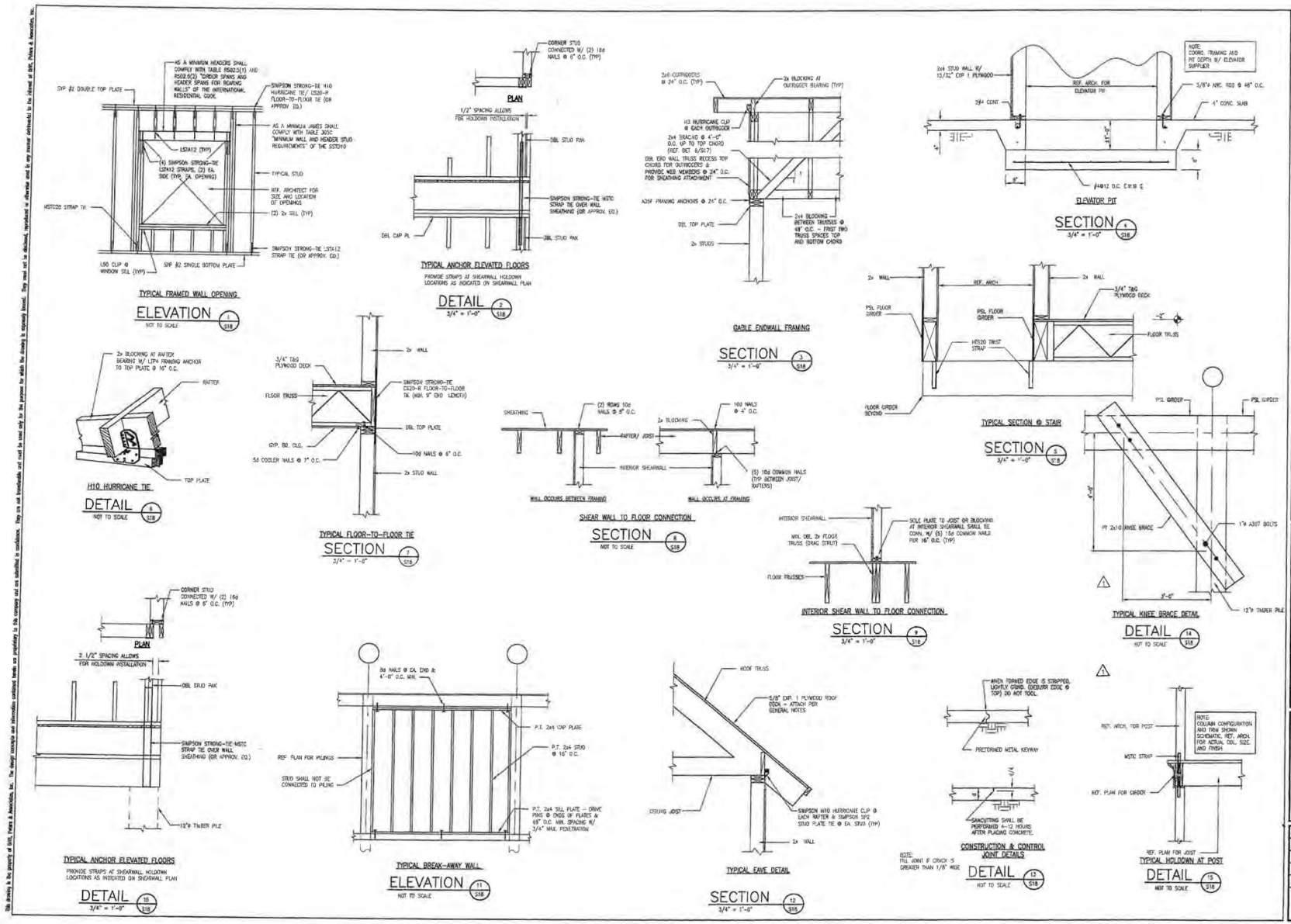
PEAS ISLAND
FOLLY BEACH, SC

No.	Date	Description	By
3	02.13.06	GENERAL REVISION	JSR
2	06.15.06	GENERAL REVISION	CJM
1	03.14.06	ISSUED FOR CONSTRUCTION	CJM
0	10.14.05	ISSUED FOR PERMIT	CJM

Revisions

Sheet Title: SECTIONS AND DETAILS

Drawn	JES
Designed	JES
Checked	CJM
Date	06.15.06
Job No.	05263
Sheet No.	S17



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FOLLY BEACH, SC

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1	08.14.06	ISSUED FOR CONSTRUCTION	CJM
	10.14.05	ISSUED FOR PERMIT	CJM

Sheet Title
SECTIONS AND DETAILS

Drawn	JES
Designed	JES
Checked	CJM
Date	08.15.06
Job No.	05283
Sheet No.	S18

Loss of Use Removed from Estimate

Project name	Palmetto Pointe LOU remov
Estimator	Jay
Labor rate table	Standard Labor
Equipment rate table	Standard Equipment
Bid date	2:00 PM
Report format	Sorted by 'Group phase/Phase' 'Detail' summary

R-2619

Item	Description	Takeoff Qty	Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
1000.000	***GENERAL REQUIREMENTS***											
1062.100	**Bond/Certif: Insurance**											
30	Builders Risk Insurance	1.00 ls	-	-	-	-	96,000.00 /ls	96,000		-	0	96,000
	Bond/Certif: Insurance							**96,000**				**96,000**
1300.010	**Personnel: Superintendent**											
10	Superintendent	110.00 wk	1,900.00 /wk	209,000	-	-	-	-			-	209,000
10	Asst. Superintendent (Quality Control)	110.00 wk	1,100.00 /wk	121,000	-	-	-	-			-	121,000
	Personnel: Superintendent			**330,000**								**330,000**
	8,800.00 Labor hours											
	8,800.00 Equipment hours											
1510.010	**Utilities: Temporary**											
10	Temp Electricity (office trailer)	26.00 mo	-	-	-	-	-	-		3,120	0	3,120
40	Mobile Phone (Super & Asst)	52.00 mo	-	-	-	-	-	-		4,420	0	4,420
80	Temp Toilet	26.00 mo	-	-	270.00 /mo	7,020	-	-		-	-	7,020
	Utilities: Temporary					**7,020**				**7,540**		**14,560**
1520.010	**Temp: Facilities**											
10	Tool Trailers	26.00 mo	-	-	-	-	-	-		5,714	-	5,714
10	Office Trailer	26.00 mo	-	-	-	-	-	-		9,123	-	9,123
	Temp: Facilities									**14,837**		**14,837**
	24,728.49 Equipment hours											
1520.020	**Temp: Supplies**											
10	Cups & Ice	26.00 mo	0.00	0	120.00 /mo	3,120	-	-		-	-	3,120
	Temp: Supplies					**3,120**						**3,120**
	520.00 Labor hours											
1520.030	**Office Supplies**											
8	Super - Laptop (allocated use $400/yr)	1.00 ls	-	-	-	-	-	-		800	-	800
10	Job Sign	1.00 ea	60.00 /ea	60	850.00 /ea	850	-	-		-	-	910
	Office Supplies			**60**		**850**				**800**		**1,710**
	3.000 Labor hours											
1540.010	**Tools & Equipment**											
10	Super: Truck Expense	26.00 mo	0.00	0	0.00	0	-	-		16,900	-	16,900
10	Asst. Super: Truck Expense	26.00 mo	0.00	0	0.00	0	-	-		16,900	-	16,900
50	Super: Gas Expense	26.00 mo			450.00 /mo	11,700	-	-			-	11,700
50	Asst. Super: Gas Expense	26.00 mo			450.00 /mo	11,700	-	-			-	11,700
50	Equip: Gas Expense	26.00 mo	0.00	0	300.00 /mo	7,800	-	-		-	-	7,800
50	Forklift Rental	26.00 mo			0.00	0	26.27 /mo	683		66,820	0	67,503
50	Man Lift Rental	22.00 mo			0.00	0	30.23 /mo	665		48,840	0	49,505
	Tools & Equipment					**31,200**		**1,348**		**149,460**		**182,008**
	3,560.00 Labor hours											
1540.020	**Temp: Construction Aids**											
20	Scaffold - Rental	1.00 ls	0.00	0	0.00	0	-	-		630,000	-	630,000
20	Scaffold Labor Install - Tear Down	1.00 ls	0.00	0	0.00	0	313,824.00 /ls	313,824		-	-	313,824
	Temp: Construction Aids							**313,824**		**630,000**		**943,824**
	0.700 Labor hours											
1560.100	**Temporary Controls**											
10	Temp Weather Protection - Exterior (500 sf per unit)	40.00 ea	1,000.00 /ea	40,000	450.00 /ea	18,000	-	-		-	-	58,000
40	Interior Zip Walls & Dust Protection - Interior (move 2 to 4 times per unit)	40.00 ea	600.00 /ea	24,000	300.00 /ea	12,000	-	-		-	-	36,000

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Item		Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
		Temporary Controls				**64,000**		**30,000**						**94,000**
		3,428.571 Labor hours												
1562.010		**Temp Relocation**												
	30	Move out home owners	0.00	unit	-	-	-	-	0.00	0		-	0	
	40	Store Furniture (additional 4 months per unit)	0.00	mn	0.00	0	-	-	0.00	0		-	-	
	40	Temp Lodging (40 units x 16 weeks)	0.00	wk	0.00	0	-	-	-	-		-	0	
	40	Meal reimbursement for homeowners	0.00	dy	0.00	0	-	-	-	-		-	0	
	40	Electrical Power reimbursement for homeowners	0.00	mn	0.00	0	-	-	-	-		-	0	
	40	Water service reimbursement for homeowners	0.00	mn	0.00	0	-	-	-	-		-	0	
	40	Change HVAC Filters	0.00	unit	0.00	0	0.00	0	-	-		-	0	
		GENERAL REQUIREMENTS				***394,060***		***72,190***		***411,172***		***802,637***	***0***	***1,680,059***
		16,312.271 Labor hours												
		33,528.49 Equipment hours												
1730.000		***DEMOLITION***												
1736.010		**Demo: Wood**												
	30	Remove Exterior Sheathing & Studs (assumed 20% damage)	15,600.00	sf	2.98 /sf	46,488	0.00	0	-	-		0	0	46,488
	150	Remove Exterior (hardi) Siding	78,000.00	sf	0.83 /sf	64,740	-	-	-	-		0	-	64,740
	150	Remove Exterior Hardi Trim	87,700.00	lf	0.62 /lf	54,374	-	-	-	-		0	-	54,374
	150	Remove Applied Trim @ Columns	720.00	ea	10.00 /ea	7,200	-	-	-	-		0	-	7,200
	150	Remove Building Wrap	78,000.00	sf	0.21 /sf	16,380	-	-	-	-		0	-	16,380
	150	Remove Exterior (hardi) Siding @ Club House	1,464.00	sf	0.83 /sf	1,215	-	-	-	-			-	1,215
	150	Remove Building Wrap	1,464.00	sf	0.21 /sf	307	-	-	-	-			-	307
		Demo: Wood				**190,705**								**190,705**
		9,535.23 Labor hours												
		13,147.40 Equipment hours												
1737.010		**Demo: Roofing**												
	10	Remove Shingles	780.00	sq	0.00	0	-	-	55.00 /sq	42,900		-	-	42,900
	10	Remove Roofing Felt (included with Shingles)	780.00	incl	0.00	0	-	-	-	-		-	-	
	10	Trash Chutes for removal	20.00	ea			-	-	1,000.00 /ea	20,000		-	-	20,000
	10	Remove Shingles - Club House	27.00	sq			-	-	55.00 /sq	1,485		-	-	1,485
		Demo: Roofing								**64,385**				**64,385**
		803.50 Labor hours												
1738.010		**Demo: Doors & Windows**												
	120	Remove Windows	400.00	ea	72.00 /ea	28,800	-	-	-	-		-	-	28,800
	130	Remove Exterior Window Trim	400.00	ea	18.00 /ea	7,200	-	-	-	-		0	-	7,200
	130	Remove Interior Window Trim	7,560.00	lf	1.22 /lf	9,223	-	-	-	-		0	-	9,223
		Demo: Doors & Windows				**45,223**								**45,223**
		9,359.99 Labor hours												
		7,960.00 Equipment hours												
1738.050		**Demo: Misc Items**												
	50	Remove Porch Coatings (Seal-o- Flex)	160.00	ea	450.05 /ea	72,007	-	-	-	-		0	-	72,007
	50	Remove Railings	5,645.00	lf	8.571 /lf	48,383	-	-	-	-			-	48,383
		Demo: Misc Items				**120,390**								**120,390**
		139,690.042 Labor hours												
		1,161.00 Equipment hours												
1739.010		**Demo: Finishes, Floors**												
	50	Remove Wood Floor	22,605.00	sf	1.20 /sf	27,126	-	-	-	-		-	-	27,126
	110	Remove Wood Shoe Mold	5,632.00	lf	0.66 /lf	3,717	-	-	-	-		0	-	3,717
	110	Remove Carpet	28,867.00	sf	0.55 /sf	15,877	-	-	-	-		0	-	15,877
	110	Remove tile	6,462.00	sf	3.00 /sf	19,386	-	-	-	-		0	-	19,386

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Item		Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Subcontract Name	Equipment Amount	Other Amount	Total Amount
		Demo: Finishes, Floors				**66,106**								**66,106**
		3,305.30 Labor hours												
		409.61 Equipment hours												
1739.080		**Demo: Finishes, Ceilings**												
	40	Remove Sheetrock Ceiling @ 1st Floor Ceilings	32,513.00	sf	0.70 /sf	22,759	-	-	-	-		-	-	22,759
		Demo: Finishes, Ceilings				**22,759**								**22,759**
		1,625.65 Labor hours												
1739.090		**Demo: Exterior Finishes**												
	40	Remove Gutters	2,384.00	lf	2.00 /lf	4,768	-	-	0.00	0		0	-	4,768
	40	Remove Downspouts	3,650.00	lf	1.00 /lf	3,650	-	-	0.00	0		0	-	3,650
		Demo: Exterior Finishes				**8,418**								**8,418**
		603.40 Labor hours												
		120.68 Equipment hours												
1739.150		**Demo: Mechanical/Elect**												
	20	Remove Duct Insulation (included with Mech quote)			-	-	-	-				-	-	
1740.010		**Clean Up**												
	10	Current Cleanup - weekly general cleanup	110.00	wk	600.00 /wk	66,000	35.00 /wk	3,850	-	-		-	-	69,850
	10	Current Cleanup - weekly general cleanup (Club House Bldg)	4.00	wk	600.00 /wk	2,400	35.00 /wk	140	-	-		-	-	2,540
	20	Dumpsters - for demolition (6 per Bldg)	120.00	ea	-	-			-	-		72,000	0	72,000
	20	Dumpsters - General & New work (1 every 2 wks)	52.00	ea	-	-			-	-		31,200	0	31,200
	20	Dumpsters - for demolition (Club House Bldg)	6.00	ea	-	-			-	-		3,600		3,600
	60	Final Cleanup	58,000.00	sqft					0.40 /sqft	23,200		-	-	23,200
		Clean Up				**68,400**		**3,990**		**23,200**		**106,800**		**202,390**
		2,904,560.00 Labor hours												
1780.010		**Punchlist, Etc**												
	10	Punchlist, etc (Carp 2.5 wk per Bldg)	20.00	ea	2,500.00 /ea	50,000	800.00 /ea	16,000	-	-		-	-	66,000
		Punchlist, Etc				**50,000**		**16,000**						**66,000**
		2,500.00 Labor hours												
		DEMOLITION				***572,000***		***19,990***		***87,585***		***106,800***	***0***	***786,375***
		3,071,983.11 Labor hours												
		22,798.69 Equipment hours												
2000.000		***SITEWORK***												
2620.010		**Drainage Corrections**												
	60	6" Drainage Piping	1,280.00	lf	0.00	0	0.00	0	25.00 /lf	32,000		0	-	32,000
	70	12" Drainage Piping	320.00	lf	0.00	0	0.00	0	31.00 /lf	9,920		0	-	9,920
	80	15" Drainage Piping	460.00	lf	0.00	0	0.00	0	37.00 /lf	17,020		0	-	17,020
	90	12x12 Catch Basin	30.00	ea	0.00	0	0.00	0	1,500.00 /ea	45,000		0	-	45,000
	100	18x18 Catch Basin	4.00	ea	0.00	0	0.00	0	1,700.00 /ea	6,800		0	-	6,800
	100	Flap Valves	12.00	ea					750.00 /ea	9,000			-	9,000
	110	Wood BulkHead	220.00	lf	0.00	0	0.00	0	75.00 /lf	16,500		0	-	16,500
	110	CMU back of Units 1641 thru 1651	1.00	ls	0.00	0	0.00	0	6,101.00 /ls	6,101		0	-	6,101
		Drainage Corrections								**142,341**				**142,341**
		2,327.00 Labor hours												
2900.010		**Landscaping & Irrigation**												
	50	Landscaping Repair (each bldg)	20.00	ea	0.00	0	0.00	0	4,000.00 /ea	80,000	Allowance	-	-	80,000
	50	Landscaping Repair (club house)	1.00	ea					4,000.00 /ea	4,000	Allowance	-	-	4,000
		Landscaping & Irrigation								**84,000**				**84,000**
		1,470 Labor hours												

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Item	Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
	SITEWORK				***0***		***0***		***226,341***		***0***	***0***	***226,341***
	2,328.470 Labor hours												
3000.000	***CONCRETE***												
3310.210	**Conc: Slabs On Grade**												
c 35	Remove Existing Portions of Driveway & Dispose	10.00	ld	0.00	0	0.00	0	450.00 /ld	4,500		-	-	4,500
c 37	Remove 18" soil - Muck & Fill for compaction	612.00	cy	0.00	0	0.00	0	50.00 /cy	30,600		-	-	30,600
c 40	Labor to install new concrete	10,000.00	sf	0.00	0	0.00	0	3.00 /sf	30,000		-	-	30,000
c 40	Fine Grade - prep for pour	10,000.00	sf	0.00	0	0.00	0	1.00 /sf	10,000		-	-	10,000
c 40	Concrete - material	136.00	cy	0.00	0	130.00 /cy	17,680	-	-		-	-	17,680
c 40	Control Joints - concrete driveway -included in labor					0.00	0	-	-		-	-	
c 40	Edge Form - concrete driveway	2,000.00	lf	4.00 /lf	8,000	2.50 /lf	5,000	-	-		-	-	13,000
	Conc: Slabs On Grade				**8,000**		**22,680**		**75,100**				**105,780**
	5,589.50 Labor hours												
	CONCRETE				***8,000***		***22,680***		***75,100***		***0***	***0***	***105,780***
	5,589.50 Labor hours												
5000.000	***METALS***												
5605.010	**Misc Steel**												
10	Unit 1635 - Steel Shim repair	1.00	ea	150.00 /ea	150	50.00 /ea	50	-	-		-	-	200
	Misc Steel				**150**		**50**						**200**
	7.500 Labor hours												
	METALS				***150***		***50***		***0***		***0***	***0***	***200***
	7.500 Labor hours												
6000.000	***WOOD & PLASTICS***												
6112.010	**Framing: Studs 2x4 > 2x8**												
120	Repair - Sheathing & Framing (20% Allowance)	15,600.00	sf	3.98 /sf	62,088	1.98 /sf	30,888	-	-		-	-	92,976
120	Repair - Roof Sheating Replacement Allowance (10% Allowance)	1.00	ls	0.00	0	0.00	0	12,187.00 /ls	12,187		-	-	12,187
	Framing: Studs 2x4 > 2x8				**62,088**		**30,888**		**12,187**				**105,163**
	3,104.60 Labor hours												
6113.010	**Framing: Ceiling Joists**												
1	Porch Framing Repairs (underneath Seal-o-Flex) - Allowance	160.00	ea	536.00 /ea	85,760	400.00 /ea	64,000	-	-		-	-	149,760
1	---includes 2 carp, 1 helper - 1 day per porch							-	-		-	-	
	Framing: Ceiling Joists				**85,760**		**64,000**						**149,760**
6160.010	**Plywood: Subfloor**												
80	Add missing subfloor screws (per unit) - 1carp/1help	40.00	ea	336.022 /ea	13,441	100.00 /ea	4,000	-	-		-	-	17,441
	Plywood: Subfloor				**13,441**		**4,000**						**17,441**
	672.043 Labor hours												
6430.010	**Arch Wd Wrk: Interior Stair Railings**												
20	Remove Int. Bottom Stair Post (& pickets)	40.00	ea	75.00 /ea	3,000	5.00 /ea	200	-	-		-	-	3,200
30	Remove Trim	640.00	lf	0.50 /lf	320	0.00	0	-	-		-	-	320
30	Install New Trim	640.00	lf	2.00 /lf	1,280	3.00 /lf	1,920	-	-		-	-	3,200
30	Install New Post & Pickets	320.00	lf	20.00 /lf	6,400	35.00 /lf	11,200	-	-		-	-	17,600

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Item		Description	Takeoff Qty		Unit Cost	Amount	Unit Cost	Amount	Subcontract Unit Cost	Subcontract Amount	Name			
6430.010		**Arch Wd Wrk: Interior Stair Railings**												
	30	Clubhouse - handrail work to make coninuous	12.00	lf	10.40 /lf	125	20.00 /lf	240	8.333 /lf	100		-	-	465
		Arch Wd Wrk: Interior Stair Railings				**11,125**		**13,560**		**100**				**24,785**
		556.24 Labor hours												
6430.020		**Arch Wd Wrk: Exterior Railings**												
	10	Vinyl Railing - Porch Rails	4,821.00	lf	25.00 /lf	120,525	27.00 /lf	130,167	-	-		-	-	250,692
	10	Vinyl Railing - Stair Run	1,670.00	lf	25.00 /lf	41,750	28.75 /lf	48,013	-	-		-	-	89,763
		Arch Wd Wrk: Exterior Railings				**162,275**		**178,180**						**340,455**
		8,113.75 Labor hours												
6440.020		**Arch Wd Wrk: Wood Columns**												
	20	Replace - applied trim top & bottom	720.00	ea	20.00 /ea	14,400	10.00 /ea	7,200	-	-		-	-	21,600
		Arch Wd Wrk: Wood Columns				**14,400**		**7,200**						**21,600**
		720.00 Labor hours												
6450.010		**Arch Wd Wrk: Wood Base**												
	2	Shoe Molding (where wood flooring removed)	6,195.00	lf	0.00	0	0.70 /lf	4,337	1.75 /lf	10,841		-	-	15,178
		Arch Wd Wrk: Wood Base						**4,337**		**10,841**				**15,178**
		774.38 Labor hours												
6452.010		**Arch Wd Wrk: Interior Window Casing**												
	10	Interior Window Casings	8,694.00	lf	0.00	0	1.75 /lf	15,215	3.00 /lf	26,082		-	-	41,297
	20	Interior Window Stool	400.00	ea	0.00	0	30.00 /ea	12,000	25.00 /ea	10,000		-	-	22,000
		Arch Wd Wrk: Interior Window Casing						**27,215**		**36,082**				**63,297**
		2,538.800 Labor hours												
6454.010		**Arch Wd Wrk: Misc. Trim**												
	1	Units 1611 & 1651 Repair Cracks in Interior Trim	2.00	ea	0.00	0	0.00	0	2,000.00 /ea	4,000		-	-	4,000
		Arch Wd Wrk: Misc. Trim								**4,000**				**4,000**
		0.20 Labor hours												
6455.010		**Arch Wd Wrk: Ext Trim**												
	1	1x8 - Hardi Trim	16,343.00	lf	1.63 /lf	26,639	1.73 /lf	28,273	-	-		-	-	54,912
	2	1x4 - Hardi Trim @ Freeze	5,433.00	lf	1.63 /lf	8,856	0.84 /lf	4,564	-	-		-	-	13,420
	2	1x4 - Hardi Trim @ Freeze (Club House)	200.00	lf	1.63 /lf	326	0.84 /lf	168	-	-		-	-	494
	3	1x12 - Hardi Trim @ Freeze	5,433.00	lf	1.63 /lf	8,856	2.77 /lf	15,049	-	-		-	-	23,905
	8	1x14 - Hardi Trim @ Freeze	5,433.00	lf	1.63 /lf	8,856	3.05 /lf	16,571	-	-		-	-	25,426
	10	1x6 - Hardi Trim - corner boards	20,700.00	lf	1.63 /lf	33,741	1.32 /lf	27,324	-	-		-	-	61,065
	10	1x10 - Hardi Trim - Beam Wrap	9,724.00	lf	1.63 /lf	15,850	2.28 /lf	22,171	-	-		-	-	38,021
	10	1x8 - Hardi Trim - Beam Wrap	4,862.00	lf	1.63 /lf	7,925	1.74 /lf	8,460	-	-		-	-	16,385
	10	1x6 - Hardi Trim - corner boards (Club House)	144.00	lf	1.63 /lf	235	1.32 /lf	190	-	-		-	-	425
		Arch Wd Wrk: Ext Trim				**111,283**		**122,770**						**234,053**
		58,995.843 Labor hours												
6456.010		**Arch Wd Wrk: Soffit/Eave**												
	20	Soffit Panel	35,604.00	sf	2.28 /sf	81,177	0.97 /sf	34,536	-	-		-	-	115,713
	20	Soffit Panel (Club House)	416.00	sf	2.28 /sf	948	0.97 /sf	404	-	-		-	-	1,352
	40	1x4 - Hardi Eave Trim	11,868.00	lf	2.85 /lf	33,824	0.84 /lf	9,969	-	-		-	-	43,793
	40	1x8 - Hardi Eave Trim	11,868.00	lf	2.85 /lf	33,824	1.74 /lf	20,650	-	-		-	-	54,474
	40	1x4 - Hardi Eave Trim (Club House)	190.00	lf	2.85 /lf	542	0.84 /lf	160	-	-		-	-	701
	40	1x8 - Hardi Eave Trim (Club House)	190.00	lf	2.85 /lf	542	1.74 /lf	331	-	-		-	-	872
		Arch Wd Wrk: Soffit/Eave				**150,856**		**66,049**						**216,905**
		14,494.69 Labor hours												
6460.010		**Arch Wd Wrk: Door/Window**												
	130	Exterior Window & Door Trim	13,041.00	lf	1.63 /lf	21,257	0.84 /lf	10,954	-	-		-	-	32,211
	130	Engr Sealant with Backrod @ Openings	13,041.00	lf	1.00 /lf	13,041	0.75 /lf	9,781	-	-		-	-	22,822
	130	Engr Sealant with Backrod @ Openings (Club House)	300.00	lf	1.00 /lf	300	0.75 /lf	225	-	-		-	-	525
	130	Exterior Window & Door Trim (Club House)	300.00	lf	1.63 /lf	489	0.84 /lf	252	-	-		-	-	741

R-2624

Item		Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
		Arch Wd Wrk: Door/Window				**35,087**		**21,212**						**56,299**
		10,762.831 Labor hours												
6471.010		**Arch Wd Wrk: Porch Screening**												
	10	Porches with Screening	39.00	ea	672.00 /ea	26,208	450.00 /ea	17,550	-	-		-	-	43,758
		Arch Wd Wrk: Porch Screening				**26,208**		**17,550**						**43,758**
		39.00 Labor hours												
6491.010		**Hardi - Siding**												
	10	6-1/4" Hardi - Siding	212,411.00	lf	0.91 /lf	193,294	0.48 /lf	101,957	-	-		-	-	295,251
	10	Siding Fasteners	175,000.00	ea	0.00	0	0.04 /ea	7,000	-	-		-	-	7,000
	10	Water Table (correct slope & flashing)	5,433.00	lf	1.63 /lf	8,856	2.50 /lf	13,583	-	-		-	-	22,438
	10	6-1/4" Hardi - Siding @ Club House	2,928.00	lf	0.91 /lf	2,664	0.48 /lf	1,405	-	-		-	-	4,070
	10	Water Table (correct slope & flashing) @ Club House	172.00	lf	1.63 /lf	280	2.50 /lf	430	-	-		-	-	710
		Hardi - Siding				**205,095**		**124,375**						**329,470**
		WOOD & PLASTICS				***877,617***		***681,335***		***63,210***		***0***	***0***	***1,622,163***
		100,772.37 Labor hours												
7000.000		***THERMAL & MOISTURE PROT***												
7139.010		**Waterproofng: Other**												
	20	Tyvek Wrap	69,625.00	sf	0.18 /sf	16,133	0.30 /sf	26,888	-	-		-	-	43,020
	20	Tyvek Wrap @ Club House	1,464.00	sf	0.18 /sf	264	0.30 /sf	439	-	-		-	-	703
	30	Window & Door Wrap & Flashings	13,041.00	lnft	1.00 /lnft	13,041	0.65 /lnft	8,477	-	-		-	-	21,518
	30	Window & Door Wrap & Flashings @ Club House	248.00	lnft	1.00 /lnft	248	0.65 /lnft	161	-	-		-	-	409
		Waterproofng: Other				**29,685**		**35,965**						**65,650**
		1,484.251 Labor hours												
7180.000		**Porch & Deck Coatings**												
	10	Seal-O-Flex Decks	24,167.00	sf	-	-	-	-	16.00 /sf	386,672		-	-	386,672
	20	- Flashings & Pans			-	-	-	-				-	-	
		Porch & Deck Coatings								**386,672**				**386,672**
7310.010		**Shingles: Several Types**												
	10	Fiberglas Roof Shingles	976.00	sq	0.00	0	90.00 /sq	87,840	100.00 /sq	97,600		-	-	185,440
	10	Fiberglas Roof Shingles @ Club House	27.00	sq			90.00 /sq	2,430	100.00 /sq	2,700		-	-	5,130
	70	Hipp Shingles	4,533.00	lf	-	-	3.00 /lf	13,599	5.00 /lf	22,665		-	-	36,264
	90	Ridge Vent	2,301.00	lf	0.00	0	3.00 /lf	6,903	5.00 /lf	11,505		-	-	18,408
	90	Crane Rental - Stock Roof	20.00	ea			0.00	0	0.00	0		11,000	-	11,000
	90	Drip Edge	11,868.00	lf			0.00	0	2.00 /lf	23,736		-	-	23,736
	90	Drip Edge (Club House)	190.00	lf					2.00 /lf	380		-	-	380
		Shingles: Several Types						**110,772**		**158,586**		**11,000**		**280,358**
		7,757.60 Labor hours												
7311.010		**Shingles: Felt**												
	30	Roofing Felt 30 lb.	976.00	sq	0.00	0	15.00 /sq	14,640	20.00 /sq	19,520		-	-	34,160
	30	Roofing Felt 30 lb. @ Club House	27.00	sq			15.00 /sq	405	20.00 /sq	540		-	-	945
		Shingles: Felt						**15,045**		**20,060**				**35,105**
		250.75 Labor hours												
7312.010		**Shingles: Nails**												
	10	Roofing Nails	976.00	sq	-	-	10.00 /sq	9,760	-	-		-	-	9,760
		Shingles: Nails						**9,760**						**9,760**
7600.010		**Roof Counter Flashings**												
	10	Coil Flashings by Roofer	976.00	sq	0.00	0	0.00	0	30.00 /sq	29,280		-	-	29,280
	10	Coil Flashings by Roofer @ Club House	27.00	sq					30.00 /sq	810		-	-	810

R-2625

Item	Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
	Roof Counter Flashings								30,090				30,090
	100.30 Labor hours												
7710.010	**Roof Acccessories**												
10	Gutters	2,615.00	lf	0.00	0	0.00	0	12.00 /lf	31,380		-	-	31,380
110	Downspouts	3,939.00	lf	0.00	0	0.00	0	12.00 /lf	47,268		-	-	47,268
110	Diverters (4ea per Bldg)	80.00	ea					30.00 /ea	2,400		-	-	2,400
	Roof Acccessories								81,048				81,048
	633.13 Labor hours												
7710.030	**Aluminum/Vinyl Porch Ceilings**												
10	Remove - porch ceilings	21,015.00	sf	0.50 /sf	10,508	0.00	0	-	-		-	-	10,508
20	Install New Poch Ceilings	24,167.00	sf	2.00 /sf	48,334	1.40 /sf	33,834	-	-		-	-	82,168
	Aluminum/Vinyl Porch Ceilings				58,842		33,834						92,675
	2,942.08 Labor hours												
7840.000	**Applied Fireproofing**												
60	Firespray Perimeter @ Fire Walls	2,243.00	lf	0.00	0			25.00 /lf	56,075		-	-	56,075
60	Firecaulk Penetrations @ Fire Walls (40 Units)	40.00	ea	0.00	0			150.00 /ea	6,000		-	-	6,000
	Applied Fireproofing								62,075				62,075
	91.32 Labor hours												
	THERMAL & MOISTURE PROT				***88,527***		***205,375***		***738,531***		***11,000***	***0***	***1,043,433***
	13,259.421 Labor hours												
8000.000	***DOORS & WINDOWS***												
8150.010	**Double Hung Windows**												
10	Type 1 - Window	127.00	ea	267.00 /ea	33,909	975.00 /ea	123,825	10.00 /ea	1,270		-	-	159,004
20	Type 4 - Window	246.00	ea	267.00 /ea	65,682	1,081.00 /ea	265,926	10.00 /ea	2,460		-	-	334,068
30	Type 4a - Window	21.00	ea	267.00 /ea	5,607	1,186.00 /ea	24,906	10.00 /ea	210		-	-	30,723
40	Type 9 - Window	6.00	ea	400.00 /ea	2,400	2,278.00 /ea	13,668	10.00 /ea	60		-	-	16,128
	Double Hung Windows				107,598		428,325		4,000				539,923
	DOORS & WINDOWS				***107,598***		***428,325***		***4,000***		***0***	***0***	***539,923***
9000.000	***FINISHES***												
9133.010	**GWB: Patch Existing**												
10	Replace Existing Sheetrock Ceilings (for ductwork)	39,349.00	sf	0.00	0	0.00	0	3.00 /sf	118,047		-	-	118,047
10	Patch Interior Sheetrock around window replacements	400.00	ea	0.00	0	0.00	0	50.00 /ea	20,000		-	-	20,000
10	Patch Walls - 1st floor demo repair - allowance	40.00	ea	0.00	0	0.00	0	300.00 /ea	12,000		-	-	12,000
10	Units 1611 & 1651 Repair Sheetrock Cracks	2.00	ea					2,000.00 /ea	4,000	Allowance	-	-	4,000
	GWB: Patch Existing								154,047				154,047
	39,791.00 Labor hours												
9134.010	**GWB: Fire Walls**												
30	Patch & Repair - Fire Walls	8,630.00	sf	0.00	0	0.50 /sf	4,315	2.00 /sf	17,260		-	-	21,575
30	Remove - Roof Sheathing - load sheetrock into space	40.00	ea	40.00 /ea	1,600	0.00	0	-	-		-	-	1,600
30	Reinstall Roof Sheathing	40.00	ea	60.001 /ea	2,400	75.00 /ea	3,000	-	-		-	-	5,400
40	Add furring & 2 layers of Type X - ceiling outside garage	8,254.00	sf	0.00	0	7.00 /sf	57,778	-	-		-	-	57,778
40	- paint ceiling outside garage	8,254.00	sf	0.00	0	0.00	0	2.00 /sf	16,508		-	-	16,508

R-2626

Item		Description	Takeoff Qty		Labor Unit Cost	Labor Amount	Material Unit Cost	Material Amount	Subcontract Unit Cost	Subcontract Amount	Name	Equipment Amount	Other Amount	Total Amount
		GWB: Fire Walls				**4,000**		**65,093**		**33,768**				**102,861**
		1,406.231 Labor hours												
9310.010		**Tile: Floor & Wall**												
	200	Ceramic Floor Tile	7,431.00	sf	0.00	0	0.00	0	14.50 /sf	107,750		-	-	107,750
		Tile: Floor & Wall								**107,750**				**107,750**
		371.55 Labor hours												
9640.010		**Flooring Wood**												
	10	Wood Flooring	24,865.00	sf	0.00	0	0.00	0	8.00 /sf	198,920		-	-	198,920
		Flooring Wood								**198,920**				**198,920**
		3,729.75 Labor hours												
9680.010		**Flooring Carpet**												
	6	Carpet Complete with Pad	3,528.00	sy	0.00	0	0.00	0	25.00 /sy	88,200		-	-	88,200
		Flooring Carpet								**88,200**				**88,200**
		352.80 Labor hours												
9910.020		**Painting: Exterior & Interior**												
	5	Painting	1.00	ls	0.00	0	0.10 /ls	0	741,760.00 /ls	741,760		-	-	741,760
	10	- Ext. Hardi Siding & Trim							-	-		-	-	
	10	- Ext Soffits, Porch Warp,Clmns							-	-		-	-	
	10	- Interior Sheetrock & Trim							-	-		-	-	
		Painting: Exterior & Interior				**0**				**741,760**				**741,760**
		0.10 Labor hours												
		FINISHES				***4,000***		***65,093***		***1,324,445***		***0***	***0***	***1,393,538***
		45,651.43 Labor hours												
15000.000		***MECHANICAL***												
15300.010		**Sprinkler**												
	10	Fire Protection - Attic Space	1.00	ls	-	-	-	-	378,920.00 /ls	378,920		-	-	378,920
	10	4" Water Service to each building	20.00	ea	-	-	-	-	18,000.00 /ea	360,000	Allowance	-	-	360,000
	10	Additional work to create a chase to attic space	20.00	ea	-	-	-	-	5,000.00 /ea	100,000	Allowance	-	-	100,000
		Sprinkler								**838,920**				**838,920**
15400.000		**Plumbing**												
	430	Remove & Reset Toilets for Floor Replacment	120.00	ea	-	-	-	-	150.00 /ea	18,000		-	-	18,000
		Plumbing								**18,000**				**18,000**
15700.000		**HVAC Systems**												
	530	HVAC Repairs per Orbitals Report	20.00	ea	-	-	-	-	101,306.00 /ea	2,026,120		-	-	2,026,120
	530	Unit 1643 Repair Ductwork Straps	1.00	ls	-	-	-	-	250.00 /ls	250		-	-	250
	530	Undercut Doors per Orbital Report	160.00	ea	-	-	-	-	25.00 /ea	4,000		-	-	4,000
		HVAC Systems								**2,030,370**				**2,030,370**
		MECHANICAL				***0***		***0***		***2,887,290***		***0***	***0***	***2,887,290***
16000.000		***ELECTRICAL***												
16500.010		**Lighting**												
	530	Lighting - Remove & Reinstall for Exterior Repairs	40.00	ea	-	-	-	-	400.00 /ea	16,000	Allowance	-	-	16,000
	530	Power to each Sprinkler Riser per Bldg	20.00	ea	-	-	-	-	900.00 /ea	18,000	Allowance	-	-	18,000
	530	Additional scope per Orbitals report	1.00	ls	-	-	-	-	271,440.00 /ls	271,440		-	-	271,440
		Lighting								**305,440**				**305,440**

Item	Description	Takeoff Qty	Labor		Material		Subcontract			Equipment	Other	Total
			Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Amount	Name	Amount	Amount	Amount
	ELECTRICAL			*0*		*0*		*305,440*		*0*	*0*	*305,440*

R-2628

Estimate Totals

Description	Amount	Totals	Rate
Labor	2,051,952		
Material	1,495,038		
Subcontract	6,123,114		
Equipment	920,437		
Other			
	10,590,541	10,590,541	
Sales Tax	205,315		8.500 %
Taxes & Ins On Labor	759,222		37.000 %
endables & Non Expendables	41,039		2.000 %
	1,005,576	11,596,117	
Engineering Fees	1,043,651		9.000 %
	1,043,651	12,639,768	
Overhead	884,784		7.000 %
Profit	1,352,455		10.000 %
	2,237,239	14,877,007	
Building Permit - Folly Beach	66,947		0.450 %
Plan Review Fee	37,193		0.250 %
Business License	22,886		0.150 %
	127,026	15,004,033	
Surety Bond	253,479		
Total		***15,257,512***	

R-2629

Palmetto Pointe: Clubhouse
Certificates of Occupancy

1600

Clubhouse

Certificate of Occupancy 2/19/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Assembly (Clubhouse) Bldg. Permit No. BP2005-163

Group A-3 Type Construction VB Fire District Folly Beach

Owner of Building Island Point LLC Address

Building Address 1600 Pos. Island Blvd Locality Folly Beach SC 29439

Building Official

By:

Date: 1-19-07

POST IN A CONSPICUOUS PLACE

Palmetto Pointe: PHASE 1
Certificates of Occupancy

1633

(I)

Certificate of Occupancy 3-1-67

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification _____ Bldg. Permit No. _____

Group R-3 Type Construction _____ Fire District _____

Owner of Building _____ Address _____

Building Address _____ Locality _____

_____ By: _____
Building Official

Date: _____

POST IN A CONSPICUOUS PLACE

1635

(I)

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification _____ Bldg. Permit No. _____

Group _____ Type Construction _____ Fire District _____

Owner of Building _____ Address _____

Building Address _____ Locality _____

_____ By: _____
Building Official

Date: _____

POST IN A CONSPICUOUS PLACE

1637

(J)

Certificate of Occupancy

Reported 2/9/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP05-110

Group R-3 Type Construction 5B Fire District Folly Beach

Owner of Building Daniel Pratt III Address

Building Address 1637 Folly Rd Locality Folly Beach SC 29439

Building Official

By

Date: 2-7-07

POST IN A CONSPICUOUS PLACE

1639

(J)

Certificate of Occupancy

Replaced 2-10-07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP05-10

Group R-3 Type Construction VB Fire District Folly Road

Owner of Building Palmetto Pointe JC Address

Building Address 1639 Folly River Way Locality E. Hwy Beach SC 29439

Building Official

By:

Date: 2-10-07

POST IN A CONSPICUOUS PLACE

City of Folly Bch-FOIA 000475 (2015-0066)

R-2636

1641

(K)

Certificate of Occupancy

Department of Building Inspection

Reported 2-9-07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification [illegible] Bldg. Permit No. BP2005-110

Group R-3 Type Construction V B Fire District Folly Beach

Owner of Building [illegible] LLC Address

Building Address 1641 Folly Creek Way Locality Folly Beach SC 29439

[illegible] Building Official By [illegible]

Date: 2-8-07

POST IN A CONSPICUOUS PLACE

1643

(K)

Certificate of Occupancy

2-14-07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-110

Group R3 Type Construction IB Fire District Folly Beach

Owner of Building Palmetto Point, LLC Address

Building Address 1643 Folly Creek Wk Locality Folly Beach, SC 29439

J. E. Hall
Building Official

By:

Date: 2-14-07

POST IN A CONSPICUOUS PLACE 2-14-07 2661

City of Folly Bch-FOIA 000497 (2015-0066)

R-2638

1645

L

Certificate of Occupancy

Department of Building Inspection 2-14-07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe HC Address

Building Address 1645 Folly Creek Way Locality Folly Beach SC 29439

Jim K. Hall
Building Official

By:

Date: 2-14-07

POST IN A CONSPICUOUS PLACE

1647

(L)

Certificate of Occupancy

Department of Building Inspection

2-14-07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto P. & L. LLC Address

Building Address 1647 Folly Beach Hwy Locality Folly Beach, SC 29439

James A. Hall
Building Official

By:

Date: 2-14-07

POST IN A CONSPICUOUS PLACE

R-2640

City of Folly Bch-FOIA 000501 (2015-0066)

1649

(M)

Certificate of Occupancy

Department of Building Inspection

2-14-07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BB2005-110

Group R3 Type Construction FB Fire District Folly Beach

Owner of Building Palmetto Pointe LLC Address

Building Address 1649 Folly Creek Way Locality Folly Beach, SC 29439

Building Official

By:

Date: 2-14-07

POST IN A CONSPICUOUS PLACE

R-2641

City of Folly Bch-FOIA 000500 (2015-0066)

1651

M

Certificate of Occupancy

Department of Building Inspection

2-14-07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe Address

Building Address 1651 Folly Creek Way Locality Folly Beach, SC 29439

Building Official By:

Date: 2-14-07

POST IN A CONSPICUOUS PLACE

City of Folly Bch-FOIA 000498 (2015-0066)

R-2642

1653

(N)

Certificate of Occupancy

2/19/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-110

Group R-3 Type Construction V.B. Fire District Folly Beach

Owner of Building Folly Point LLC Address

Building Address 1653 Folly Creek Way Locality Folly Beach SC 29439

C. Howell
Building Official

By:

Date: 2-19-07

POST IN A CONSPICUOUS PLACE

R-2643

City of Folly Bch-FOIA 000483 (2015-0066)

1655

(N)

Certificate of Occupancy 2/19/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP21C 5-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Folly Point LLC Address

Building Address 1655 E Ashley Ave Locality Folly Beach SC 29439

Building Official

By:

Date 2-19-07

POST IN A CONSPICUOUS PLACE

Palmetto Pointe: PHASE 2
Certificates of Occupancy

1601

(A)

Certificate of Occupancy

5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification _____ Bldg. Permit No. _____

Group _____ Type Construction _____ Fire District _____

Owner of Building _____ Address _____

Building Address _____ Locality _____

_____ By: _____

Building Official

Date: _____

POST IN A CONSPICUOUS PLACE

1603

(A)

Certificate of Occupancy

5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-112

Group R-3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe LLC Address

Building Address 1603 Folly Beach Hwy Locality Folly Beach, SC 29439

Building Official

By:

Date: 5/29/07

POST IN A CONSPICUOUS PLACE

1605

(B)

Certificate of Occupancy

5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification [illegible] Bldg. Permit No. [illegible]

Group R-3 Type Construction VB Fire District Folly Beach

Owner of Building [illegible] LLC Address

Building Address 1605 Folly Creek Way Locality [illegible] Beach SC 29439

[illegible]
Building Official

By: [illegible]

Date: 5/23/07

POST IN A CONSPICUOUS PLACE

1607

(B)

Certificate of Occupancy 5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. B[illegible]-116

Group R-3 Type Construction VB Fire District Folly Beach

Owner of Building [illegible] LLC Address

Building Address 1607 Folly Beach Way Locality Folly Beach, SC 29439

[illegible signature] Building Official

By: [illegible]

Date: 5/22/07

POST IN A CONSPICUOUS PLACE

1609

(C)

Certificate of Occupancy

5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential — Bldg. Permit No.: BP2106-MC

Group: R-3 — Type Construction: VB — Fire District: Folly Beach

Owner of Building: [illegible] LLC — Address:

Building Address: 1609 Folly Creek Way — Locality: Folly Beach, SC 29439

[signature]
Building Official

By: [signature]

Date: 5/22/07

POST IN A CONSPICUOUS PLACE

1611

(C)

Certificate of Occupancy

5/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. FL 0606-110

Group R3 Type Construction VB Fire District [illegible]

Owner of Building [illegible] Address

Building Address [illegible] Locality [illegible]

Building Official

By:

Date: 5/25/07

POST IN A CONSPICUOUS PLACE

1613

(D)

Certificate of Occupancy

4/25/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP0606110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Dolinette Private TIC Address

Building Address 1613 Folly Creek Way Locality Folly Beach, SC 29439

Building Official

By:

Date: 4/25/07

POST IN A CONSPICUOUS PLACE

R-2652

City of Folly Bch-FOIA 000441 (2015-0066)

1615

D

Certificate of Occupancy

4/25/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe, LLC Address

Building Address 1615 Folly Rd. Folly Locality Folly Beach, SC 29439

Building Official

By

Date: 4/25/07

POST IN A CONSPICUOUS PLACE

1617

(E)

Certificate of Occupancy

4/25/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-110

Group R3 Type Construction VB Fire District F.I.P. Beach

Owner of Building Palm Harbor Pointe LLC Address

Building Address 1617 Folly Creek Way Locality Folly Beach, SC 29439

J. F. Hall
Building Official

By

Date: 4/25/07

POST IN A CONSPICUOUS PLACE

1629

E

Certificate of Occupancy

11/29/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-110

Group R-3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe TCC Address

Building Address 1629 Folly Creek Way Locality Folly Beach, SC 29439

Building Official

By: 25d

Date: 11-29-07

POST IN A CONSPICUOUS PLACE

1621

(F)

(ave?.)

Certificate of Occupancy

Department of Building Inspection

3/27/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential Bldg. Permit No.: BP2005-110

Group: R3 Type Construction: VB Fire District: Folly Beach

Owner of Building: Palmetto Pointe LLC Address:

Building Address: 1621 Folly Creek Way Locality: Folly Beach, SC 29439

[signature]
Building Official

By: [signature]

Date: 3/27/07

POST IN A CONSPICUOUS PLACE

1621

(F)
(dup?)

Certificate of Occupancy

4/18/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. SF2006-110

Group R3 Type Construction V-B Fire District Folly Beach

Owner of Building DL-HoPointe LLC Address

Building Address 1621 Folly Creek Way Locality Folly Beach SC 29439

Building Official

By: DEB

Date: 4/24/07

POST IN A CONSPICUOUS PLACE

1623

(F)

(dup?)

Certificate of Occupancy

3/27/09

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. [illegible]

Group R3 Type Construction VB Fire District [illegible]

Owner of Building [illegible] Address [illegible]

Building Address [illegible] Locality [illegible]

Building Official

By: [illegible]

Date: 3-27-09

POST IN A CONSPICUOUS PLACE

1623

(F)

(dup?)

Certificate of Occupancy

4/14/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006 110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Point LLC Address

Building Address 1623 Folly Creek Way Locality Folly Beach, SC 29439

Mark E. Hall

Building Official

By:

Date: 4/14/07

POST IN A CONSPICUOUS PLACE

1625

(6)
(2-p?)

Certificate of Occupancy

Department of Building Inspection

3/1/20/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-111

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building [illegible] Address /

Building Address 1625 E Ashley Ave [illegible] Locality Folly Beach, SC 29439

[signature] Building Official By [signature]

Date 3/20/07

POST IN A CONSPICUOUS PLACE

1625

(6)
(dup?)

Certificate of Occupancy

Department of Building Inspection

4/9/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following.

Use Classification Residential Bldg. Permit No. BP2006-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Builders LLC Address

Building Address 1125 Folly Beach Hwy Locality Folly Beach, SC 29439

Building Official

By

Date: 4/9/07

POST IN A CONSPICUOUS PLACE

City of Folly Bch-FOIA 000440 (2015-0066)

R-2661

1627

(G) (dup?)

Certificate of Occupancy

7/27/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential   Bldg. Permit No. [illegible]

Group: R   Type Construction: VB   Fire District: Folly Beach

Owner of Building: Palmetto Pointe LLC   Address: ______

Building Address: [illegible] Folly Creek Way   Locality: Folly Beach, SC [illegible]

______ [illegible] Hall   By: [illegible]

Building Official

Date: 3/26/07

POST IN A CONSPICUOUS PLACE

1677

(G)

(dup?)

Certificate of Occupancy

4/19/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential Bldg. Permit No. BP2006-110

Group: R-3 Type Construction: VB Fire District: Folly Beach

Owner of Building: Palmetto [illegible] LLC Address:

Building Address: 1127 Folly Creek Way Locality: Folly Beach, SC 29439

[illegible]
Building Official

By: [illegible]

Date: 4/14/07

POST IN A CONSPICUOUS PLACE

1629

(H)

Certificate of Occupancy

3-1-07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification [illegible] Bldg. Permit No. [illegible]

Group R-3 Type Construction [illegible] Fire District [illegible]

Owner of Building [illegible] Address

Building Address [illegible] Locality [illegible]

Building Official

By: [illegible]

Date: 3-1-07

POST IN A CONSPICUOUS PLACE

City of Folly Bch-FOIA 000457 (2015-0066)

R-2664

1631

(H)

Certificate of Occupancy

3-1-07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2005-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building [illegible] Address

Building Address 11 Folly [illegible] Way Locality Folly Beach, SC 29439

Building Official

By:

Date: 3-1-07

POST IN A CONSPICUOUS PLACE

Palmetto Pointe: PHASE 3
Certificates of Occupancy

1606

(T)

Certificate of Occupancy

Department of Building Inspection

11/24/97

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential Bldg. Permit No. BP2006-110

Group: R3 Type Construction: VB Fire District: Folly Beach

Owner of Building: Palmetto Post [illegible] Address: ______

Building Address: 1606 Folly Beach [illegible] Locality: Folly Beach SC 29439

[signature] Hall
Building Official

By: [illegible]

Date: 11-2-07

POST IN A CONSPICUOUS PLACE

1608

(T)

Certificate of Occupancy

Department of Building Inspection

1/2/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification [illegible] Bldg. Permit No. BP-[illegible]-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Point HB Address

Building Address 1608 Folly Creek Way Locality Folly Beach SC 29439

[signature] Building Official By: [initials]

Date: 11-2-07

POST IN A CONSPICUOUS PLACE

1610

(S)

Certificate of Occupancy

4/02/07

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pointe LLC Address

Building Address 1610 Folly Creek Way Locality Folly Beach SC 29439

Building Official

By:

Date: 11-7-07

POST IN A CONSPICUOUS PLACE

1612

(5)

Certificate of Occupancy

Department of Building Inspection

11/21/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP-2006-1160

Group R-3 Type Construction V-B Fire District Folly Beach

Owner of Building Palmetto Pointe LLC Address

Building Address 1612 Folly Road Locality Folly Beach SC 29439

Building Official

By:

Date: 11-2-07

POST IN A CONSPICUOUS PLACE

R-2670

City of Folly Bch-FOIA 000467 (2015-00066)

1614

(R)

Certificate of Occupancy

Department of Building Inspection

1/24/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following.

Use Classification Residential Bldg. Permit No. BP#2006-110

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building Palmetto Pines LLC Address

Building Address 1614 Folly Beach Way Locality Folly Beach SC 29439

Building Official By:

Date: -2-07

POST IN A CONSPICUOUS PLACE

1616

(R)

Certificate of Occupancy

Department of Building Inspection

11/2/07

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential   Bldg. Permit No.: BP2006-15

Group: R3   Type Construction: V-B   Fire District: Folly Beach

Owner of Building: Palmetto Pr. LLC   Address:

Building Address: 1616 Folly Creek Way   Locality: Folly Beach SC 29439

[signature]
Building Official   By: AKS

Date: 11-2-07

POST IN A CONSPICUOUS PLACE

1618

Q

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. BP2006-112

Group R3 Type Construction FB Fire District Folly Beach

Owner of Building [illegible] Address

Building Address 1618 Folly Beach Hwy Locality Folly Beach SC 29439

Building Official

By

Date 12-20-07

POST IN A CONSPICUOUS PLACE

1620

(Q)

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential Bldg. Permit No.: BP 9006-110

Group: R3 Type Construction: V-B Fire District: Folly Beach

Owner of Building: Palmetto Point LLC Address: –

Building Address: 1620 Folly Creek Way Locality: Folly Beach SC 29439

[illegible signature]
Building Official

By: [illegible]

Date: 11-2-07

POST IN A CONSPICUOUS PLACE

1622

(P)

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification [illegible] Bldg. Permit No. [illegible]

Group R3 Type Construction VB Fire District Folly Beach

Owner of Building [illegible] Address

Building Address [illegible] Locality Folly Beach SC [illegible]

[illegible signature]
Building Official

By: [illegible]

Date: [illegible]

POST IN A CONSPICUOUS PLACE

1624

(P)

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Bank, A-2 Bldg. Permit No. BP2004-110

Group B3 Type Construction VB Fire District 20 Bell St 29406

Owner of Building [illegible] Address

Building Address [illegible] Locality 20 Bell St 29406

Building Official By:

Date: 1-26-7

POST IN A CONSPICUOUS PLACE

1626

Certificate of Occupancy

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification Residential Bldg. Permit No. [illegible]

Group R-3 Type Construction V-B Fire District [illegible]

Owner of Building [illegible] Address [illegible]

Building Address [illegible] Locality [illegible]

[illegible]
Building Official

By [illegible]

Date: [illegible]

POST IN A CONSPICUOUS PLACE

R-2677

City of Folly Bch-FOIA 000472 (2015-0066)

1628

O

Certificate of Occupancy

11/12

Department of Building Inspection

This Certificate issued pursuant to the requirements of the Standard Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the Jurisdiction regulating building construction or use. For the following:

Use Classification: Residential Bldg. Permit No. 13-209-110

Group: R3 Type Construction: VB Fire District: Folly Beach

Owner of Building: Palmetto Point LLC Address: ______

Building Address: 1628 Folly Creek Way Locality: Folly Beach SC 29439

Building Official By: [illegible]

Date: 1-2-07

POST IN A CONSPICUOUS PLACE

R-2678