

ADDENDUM NUMBER TWO 10/02/2018

PROJECT: WHITMIRE TOWN HALL RENOVATIONS – 3606.1704
95 MAIN ST.
WHITMIRE, SC 29178.

FROM: Johnson, Laschober & Associates, P.C.
1296 Broad Street
Augusta, GA 30903
(706) 724-5756

To: All Bidders

The following clarifications, amendments, additions, revisions, changes and/or modifications shall take precedence over the plans and specifications for the above-named project and shall become part of the Contract Documents. Where any item called for in the specifications or indicated on the drawings is not supplemented hereby, the original requirements shall remain in effect. Where any original item is amended, voided or superseded hereby, the provision of such item not specifically amended, voided or superseded shall remain in effect. Failure to acknowledge this addendum in the Form of Bid will result in Bid being deemed non-responsive.

GENERAL INFORMATION:

1. Drawings that were revised for Addendum #1 have “9/25/18 ADDENDUM #2” in the revision block. This is incorrect. The correct information should read “9/25/18 ADDENDUM #1”
2. See attachment for official PRE-BID SIGN IN SHEET.
3. The project will have a total of (4) allowances. Owner Contingency Allowance, Furniture Allowance, Mold Remediation Allowance, and a **\$10,000** Roof Allowance for the existing building. See Specification 012100 for details.
4. Contract Modification Process has been updated. See specification 012600 section 1.2 B.

5. **ADD ALTERNATE #3** will include flooring, base and wall painting for the upper level floor finishes. Demolition in this area will be included as part of the BASE BID. See specification 012300 for details.
6. Changing the 3FORM Simple Spec Partition wall to a Hollow Metal Framed Glass wall has been added as a **DEDUCT ALTERNATE #4**. See specification 012300 and ASK01 for details.
7. **DIVISION 7** of Specifications were added. Please see below for Specifications 070150.19- Preparation for Reroofing, 079200- Joint Sealants, and 075423- Thermoplastic-Polyolefin (TPO) Roofing.
8. See Specification 087100 for revisions to door hardware.
9. Panel GP1 will now be included as part of the **BASE BID**. See Revised drawing E-401 for additional information.
10. See drawing revisions attached for G-001_R2, G-003_R1, A-002_R2, A-100_R2, A-104_R1, A-401_R2, A-601_R1, A-701_R2 & AALT01_R2.
11. The ramp going out of the existing Town hall to the demo'd area..... Is there a detail of the ramp? **JLA RESPONSE: There is no ramp on the backside of the Town Hall building. On the interior there will be a set of steps that are details on A-401. The exterior will be a 6" concrete slab.**
12. Is Firestone an acceptable manufacturer for roofing materials?
JLA RESPONSE: Yes
13. What is the floor finish to be on the stairs/risers?
JLA RESPONSE: Paint, see revised finish schedule on A-701.
14. Is the LVT flooring direct glue down or floating installation?
JLA RESPONSE: LVT will be direct glue down

END OF ADDENDUM NUMBER TWO



Project:	Whitmire Town Hall Renovations	Project Number:	2018-19
Owner:	Town of Whitmire / County of Newberry	Construction Manager:	Cumming Corporation
		Architect:	Johnson, Laschober & Associates, PC
Location:	Whitmire Town Hall	Date / Time:	9/27/18 / 12:00 PM

Pre-Bid Sign in Sheet

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APPENDIX 'A'
Asbestos & Lead-Based Paint Assessment Report by S&ME

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
 - 2. Unit-cost allowances.
 - 3. Quantity allowances.
 - 4. Contingency allowances.
 - 5. Testing and inspecting allowances.
- C. Related Requirements:
 - 1. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 LUMP-SUM, UNIT-COST, AND QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.9 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.10 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. **Allowance No. 1:** Owner Contingency Allowance: Include a contingency allowance of **\$25,000** including overhead and profit for use according to Owner's written instructions.
- B. **Allowance No. 2:** Furniture Allowance of **\$20,000**: Includes all labor and equipment for new computer desk and workstations per the proposed furniture plan.
- C. **Allowance No. 3:** Mold Remediation of **\$8,000**: Includes all labor and materials to remove mold in areas where new construction will be performed.
- D. **Allowance No. 4:** Roof Allowance of **\$10,000**: Includes the repair of the main buildings existing roof structure, sheathing and insulation, as it is required for the installation of a new roof. See drawing A-301 for clarification.

END OF SECTION 012100

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES – (See Contract Documents for a Full Description of the Work to be provided for each Alternate listed below)

- A. **ADD ALTERNATE NO. 1:** GARAGE ROOF. PROVIDE ALL WORK AS IT PERTAINS AND IS DESCRIBED IN THE CONTRACT DOCUMENTS. THIS IS TO INCLUDE BUT NOT LIMITED TO ROOF MEMBRANE, SHEATHING, INSULATION BOARD AND ROOF JOISTS.
- B. **ADD ALTERNATE NO. 2:** GARAGE MODIFICATIONS. PROVIDE ALL WORK AS DESCRIBED IN CONTRACT DOCUMENTS AS IT RELATES TO THE RENOVATIONS OF THE PORTION OF THE TOWN GARAGE BUILDING THAT IS TO REMAIN. THIS WORK IS TO INCLUDE, DEMOLITION, FRAMING, PLUMBING, ELECTRICAL, HVAC AND FINISHES. INTERIOR & EXTERIOR.
- C. **ADD ALTERNATE NO. 3:** PROVIDE NEW FLOOR FINISHES, PAINT AND BASE IN ROOMS 203, 204, 205, 206, 207 AND 208
- D. **DEDUCT ALTERNATE NO. 4:** REPLACE THE 3FORM SIMPLE SPEC WALL PARTITION w/ A HOLLOW METAL GLASS WALL PARTITION AS OUTLINED IN ASK01.

END OF SECTION 012300

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Contractor profit on Change Orders shall be limited to 15% on self-performed work and 7 ½% on subcontractor work.
- C. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail." or forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Rain Day Adjustment: If a Contractor requests, a time extension may be granted of one day for each day that the actual number of rain days (precipitation 0.1 inches) in excess of the Mean Number of Days of Precipitation of 0.1 Inches or More as listed below occurs based on actual data gathered on site or that available from the South Carolina Climatology Office, plus impact days to the extent said impact could not be mitigated by the Contractor and/or its subcontractors by reasonable and prudent construction means and methods. The Mean Number of Days of Precipitation of 0.1 Inches or More as follows:

January 6 Days
February 6 Days
March 7 Days
April 5 Days
May 6 Days
June 8 Days

July 9 Days
August 9 Days
September 6 Days
October 4 Days
November 4 Days
December 6 Days

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on appropriate EJCDC document.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 or EJCDC Document C-940. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 070150.19 - PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Partial tear-off of roof areas indicated on Drawings.
 - 2. Re-cover preparation of entire roof area.
 - 3. Removal of flashings and counter flashings.
 - 4. Temporary roofing.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for use of premises and for phasing requirements.
 - 2. Section 015000 "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for reroofing preparation.

1.3 ALLOWANCES

- A. Allowance for removal of existing wet insulation, and replacement with new insulation, is specified under Section 012100 "Allowances."

1.4 DEFINITIONS

- A. EPS: Molded (expanded) polystyrene.
- B. OSB: Oriented strand board.
- C. Partial Roof Tear-off: Removal of selected components and accessories from existing roofing system.
- D. Roofing Terminology: Definitions in ASTM D 1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
- E. Roof Re-Cover Preparation: Existing roofing system is to remain and be prepared for new roof installed over it.

1.5 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at **Project site**.
 - 1. Meet with Owner, Architect, Construction Manager, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing tear-off, including, but not limited to, the following:
 - a. Reroofing preparation, including roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system components that are to remain.
 - c. Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.
 - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
 - e. Existing roof deck conditions requiring Architect notification.
 - f. Existing roof deck removal procedures and Owner notifications.
 - g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
 - h. Structural loading limitations of roof deck during reroofing.
 - i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.
 - j. HVAC shutdown and sealing of air intakes.
 - k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
 - l. Asbestos removal and discovery of asbestos-containing materials.
 - m. Governing regulations and requirements for insurance and certificates if applicable.
 - n. Existing conditions that may require Architect notification before proceeding.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Temporary Roofing Submittal: Product data and description of temporary roofing system.
 - 1. If temporary roof remains in place, include surface preparation requirements needed to receive permanent roof, and submit a letter from roofing manufacturer stating acceptance of the temporary roof and that its inclusion does not adversely affect the new roofing system's resistance to fire and wind or specified special warranty.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1. Include certificate that Installer is approved by warrantor of existing roofing system.
2. Include certificate that Installer is licensed to perform asbestos abatement.

B. Field Test Reports:

1. Fastener pull-out test report.

C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.

1. Submit before Work begins.

D. Landfill Records: Indicate receipt and acceptance of **demolished roofing materials and** hazardous wastes, such as asbestos-containing materials, by a landfill facility licensed to accept them.

E. Regulatory Requirements:

1. Comply with governing EPA notification regulations before beginning roofing removal.
2. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.8 FIELD CONDITIONS

A. Existing Roofing System: **Membrane** roofing.

B. Owner **will not** occupy portions of building immediately below reroofing area.

C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.

D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.

1. Construction Drawings **and Project Manual** that identify existing roofing system are provided for Contractor's convenience and information, but they are not a warranty of all existing conditions. They are intended to supplement rather than serve in lieu of Contractor's own investigations. Contractor is responsible for conclusions derived from documents.

F. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed.

G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

1. Remove only as much roofing in one day as can be made watertight in the same day.
- H. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.
 1. Existing roof will be left no less watertight than before removal.
 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.
- I. Hazardous Materials: A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
 3. Coordinate reroofing preparation with hazardous material remediation to prevent water from entering existing roofing system or building.

PART 2 - PRODUCTS

2.1 TEMPORARY PROTECTION MATERIALS

- A. EPS Insulation: ASTM C 578.
- B. Plywood: DOC PS 1, Grade CD, Exposure 1.
- C. OSB: DOC PS 2, Exposure 1.

2.2 TEMPORARY ROOFING MATERIALS

- A. Design and selection of materials for temporary roofing are Contractor's responsibilities.
- B. Sheathing Paper: Red-rosin type, minimum 3 lb/100 sq. ft. (0.16 kg/sq. m).
- C. Base Sheet: ASTM D 4601/D 4601M, Type II, nonperforated, asphalt-impregnated and -coated, glass-fiber sheet.
- D. Glass-Fiber Felts: ASTM D 2178/D 2178M, Type IV, asphalt-impregnated, glass-fiber felt.
- E. Asphalt Primer: ASTM D 41/D 41M.
- F. Roofing Asphalt: ASTM D 312/D 312M, Type III or IV.
- G. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approvals' RoofNav.

2.3 INFILL AND REPLACEMENT MATERIALS

- A. Use infill materials matching existing roofing system materials unless otherwise indicated.
 - 1. Infill materials are specified in Section 075423 "Thermoplastic-Polyolefin (TPO) Roofing" unless otherwise indicated.
- B. Wood blocking, curbs, and nailers are specified in Section 061053 Miscellaneous Rough Carpentry."
- C. Plywood roof sheathing is specified in Section 061600 "Sheathing."
- D. Parapet Sheathing:
 - 1. ASTM C 1177/C 177M or ASTM C 1278/C 1278M water-resistant gypsum substrate; **5/8 inch (16 mm)** thick where required.
- E. Fasteners: Factory-coated steel fasteners with metal or plastic plates and acceptable to new roofing system manufacturer.

2.4 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection of In-Place Conditions:
 - 1. Protect existing roofing system that is not to be reroofed.
 - 2. Loosely lay **1-inch- (25-mm-)** minimum thick, EPS insulation over existing roofing in areas not to be reroofed.
 - a. Loosely lay **15/32-inch (12-mm)** plywood or OSB panels over EPS. Extend EPS past edges of plywood or OSB panels a minimum of **1 inch (25 mm)**.
 - 3. Limit traffic and material storage to areas of existing roofing that have been protected.
 - 4. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
 - 5. Comply with requirements of existing roof system manufacturer's warranty requirements.
- B. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- C. Shut off rooftop utilities and service piping before beginning the Work.
- D. Test existing roof drains to verify that they are not blocked or restricted.

1. Immediately notify Architect of any blockages or restrictions.
- E. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- F. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- G. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
 1. Prevent debris from entering or blocking roof drains and conductors.
 - a. Use roof-drain plugs specifically designed for this purpose.
 - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
 - a. Do not permit water to enter into or under existing roofing system components that are to remain.

3.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day **and obtain authorization to proceed.**
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Aggregate ballast from roofing has been previously removed.
- D. Remove remaining loose aggregate from aggregate-surfaced, built-up bituminous roofing using a power broom.
- E. Partial Roof Tear-off: Where indicated on Drawings, remove existing roofing down to deck and immediately check for presence of moisture.
 1. If moisture is found, notify the Architect who will contact the **Owner to engage** a qualified testing agency to perform the following test:
 - a. Coordinate with Owner's testing agency to schedule times for tests and inspections immediately after removal.
 2. Survey exposed substrate that is to remain using infrared color thermography according to ASTM C 1153.

- a. Prepare survey report of initial scan indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.
3. Survey exposed substrate that is to remain using electrical capacitance/impedance testing according to ASTM D 7954/D 7954M.
 - a. Prepare survey report indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.
4. Remove wet or damp materials below existing roofing and above deck as directed by Architect.
5. Inspect wood blocking, curbs, and nailers for deterioration and damage.
 - a. If wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
6. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry.
 - a. Remove unadhered bitumen, unadhered felts, and wet felts.
7. Remove fasteners from deck **or cut fasteners off slightly above deck surface.**

3.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
 1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
 1. Do not proceed with installation until directed by Architect.
- D. Prepare and paint steel deck surface.
 1. Painting and preparation for painting is specified in Section 099113 "Exterior Painting."

3.4 INFILL MATERIALS INSTALLATION

- A. Immediately after roof tear-off, and inspection and repair, if needed, of deck, fill in tear-off areas to match existing roofing system construction.
 1. Installation of infill materials is specified in **Section 075423 "Thermoplastic-Polyolefin (TPO) Roofing."**
 2. Installation of wood blocking, curbs, and nailers is specified in **Section 061053 Miscellaneous Rough Carpentry."**

- B. Install new roofing patch over roof infill area.

- 1. If new roofing is installed the same day tear-off is made, roofing patch is not required.

3.5 TEMPORARY ROOFING

- A. Install approved temporary roofing over area to be reroofed.
- B. Remove temporary roofing before installing new roofing.

3.6 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, mechanically attached roofing fastener buttons projecting above roofing, and other substrate irregularities from existing roofing that inhibit new recover boards from conforming to substrate.
 - 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
 - 2. Scarify surface of sprayed polyurethane foam as necessary to achieve a sufficiently uniform plane to receive new recover boards.
 - 3. Broom clean existing substrate.
 - 4. Coordinate with Owner's inspector to schedule times for tests and inspections.
 - 5. Verify that existing substrate is dry.
 - a. Spot check substrates with an electrical capacitance moisture-detection meter.
 - 6. Remove materials that are wet or damp.
 - a. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- B. Remove blisters and areas of roofing not fully adhered.

3.7 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
 - 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.
 - 1. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish as existing.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
 - 1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

- D. When directed by Architect, replace parapet framing, wood blocking, curbs, and nailers to comply with **Section 061053 Miscellaneous Rough Carpentry."**

3.8 FASTENER PULL-OUT TESTING

- A. **Perform** fastener pull-out tests according to SPRI FX-1, and submit test report to **Architect** before installing new roofing system.
 - 1. Obtain **Architect's** approval to proceed with specified fastening pattern.
 - a. **Roofing manufacturer** may furnish revised fastening pattern commensurate with pull-out test results.

3.9 DISPOSAL

- A. Collect demolished materials and place in containers.
 - 1. Promptly dispose of demolished materials.
 - 2. Do not allow demolished materials to accumulate on-site.
 - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

PART 1 GENERAL

1.01 DESCRIPTION

- A. The project consists of installing Carlisle Syntec's Sure-Weld (TPO) Mechanically-Fastened Roofing System as outlined below:

Apply the Sure-Weld Mechanically Fastened Roofing System in conjunction with tapered insulation over the existing roof.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the Sure-Weld reinforced TPO (Thermoplastic Polyolefin) Mechanically-Fastened Roofing System including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.
- C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.
- D. Any contractor who intends to submit a bid using a roofing system other than the approved manufacturer must submit for pre-qualification in writing fourteen (14) days prior to the bid date. Any contractor who fails to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
1. Shop drawings showing layout, details of construction and identification of materials.
 2. Sample of the manufacturer's Membrane System Warranty.
 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer along with the dates training was received.
 4. Certification from the membrane manufacturer indicating the fasteners are capable of providing a static backout resistance of 10 inch pounds minimum is required.
 5. Certification from the membrane manufacturer indicating the membrane thickness over the reinforcing scrim (top ply membrane thickness) is nominal .15-mil or thicker.
 6. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the Architect prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store Sure-Weld membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. Sure-Weld membrane that has been exposed to the elements for approximately 7 days must be prepared with Carlisle Weathered Membrane Cleaner prior to hot air welding.
 - 2. Store curable materials (adhesives and sealants) between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
 - 3. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- C. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.
- D. Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. Interior stairs or elevators may not be used for removing debris or delivering materials, except as

authorized by the building superintendent.

1.07 EXISTING CONDITIONS

If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

1.08 PRE-CONSTRUCTION CONFERENCE

- A. A pre-bid meeting will be held at the job site.
- B. Prior to bid submittal, the roofing contractor should schedule a job site inspection to observe actual conditions and verify all dimensions on the roof. The job site inspection may occur on the day of the pre-bid meeting or prior to such a meeting. Should access to the roof be necessary before or after the pre-bid meeting, the contractor must contact the owner's representative to coordinate an appropriate time.
- C. Any conditions which are not shown on the design drawings should be indicated on the shop drawing and included to clarify any conditions not shown.

1.09 TEMPORARY FACILITIES AND CONTROLS

- A. Temporary Utilities:
 - 1. Water, power for construction purposes and lighting are available at the site and will be made available to the roofing contractor.
 - 2. Provide all hoses, valves and connections for water from source designated by the owner when made available.
 - 3. When available, electrical power should be extended as required from the source. Provide all trailers, connections and fused disconnects.
- B. Building Site:
 - 1. The roofing contractor shall use reasonable care and responsibility to protect the building and site against damages. The contractor shall be responsible for the correction of any damage incurred as a result of the performance of the contract.
 - 2. The roofing contractor shall remove all debris from the job site in a timely and legally acceptable manner so as to not detract from the aesthetics or the functions of the building.
- C. Security:

Obey the owner's requirements for personnel identification, inspection and other security measures.

1.10 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building.
- C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.11 SAFETY

The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. **Safety shall be the responsibility of the roofing contractor.** All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.12 WORKMANSHIP

- A. Applicators installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.

1.13 QUALITY ASSURANCE

- A. The Sure-Weld Roofing System must achieve a UL Class A.
- B. The specified roofing assembly must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to:

ANSI/SPRI WD-1 "Wind Design Standard Practice for Roofing Assemblies"
International Building Code (IBC)

- C. The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.
- D. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- E. The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing single-ply TPO roofing systems and having installed at least one (1) roofing application or several similar systems of equal or greater size within one year.
- F. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.
- G. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- H. The Sure-Weld TPO White membrane meets CRRC (Cool Roof Rating Council) for reflectance and emittance. When tested in accordance with ASTM C1549, the Sure-Weld White material has an initial solar reflectance of 0.79 and a 3-year aged reflectance of 0.70. The material has also been tested for emittance in accordance with ASTM C1371; an initial emittance of 0.90 and a 3-year aged emittance of 0.86 were achieved.
- I. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.

1.14 JOB CONDITIONS, CAUTIONS AND WARNINGS

Refer to Carlisle's Sure-Weld Roofing System specification for General Job Site Considerations.

- A. Safety Data Sheets (SDS) must be on location at all times during the transportation, storage and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Carlisle Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.

- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weathertight at the end of the work day.
- I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.15 WARRANTY

- A. Provide manufacturer's **20 year** Total System Warranty covering both labor and material. The maximum wind speed coverage shall be peak gusts of **90 mph** measured at 10 meters above ground level.
- B. Pro-rated System Warranties shall not be accepted.
- C. Evidence of the manufacturer's warranty reserve shall be included as part of the project submittals for the specifier's approval.

PART 2 PRODUCTS

2.01 GENERAL

- A. All components of the specified roofing system shall be products of Carlisle SynTec or approved equal.
- B. All products (including insulation, fasteners, fastening plates, prefabricated accessories and edgings) must be **manufactured and/or supplied** by the roofing system manufacturer and covered by the warranty.

2.02 MEMBRANE

- A. Furnish Sure-Weld **60-mil** thick reinforced TPO (Thermoplastic Polyolefin) membrane as needed to complete the roofing system. Membrane thickness over the reinforcing scrim (top-ply thickness) shall be nominal .015-mil or thicker. Membrane sheets in rolls 12', 10' or 8' wide by 100' long.
- B. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or

manufacturers approved by roof membrane manufacturer.

- C. Exposed Face Color: **White**.

2.03 INSULATION/UNDERLAYMENT

- A. This is a reroofing over an existing structure. Insulation shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Insulation shall be from one of the following as supplied by Carlisle SynTec or approved equal.
1. **Carlisle Insulbase Polyisocyanurate** – A foam core insulation board covered on both sides with a medium weight fiber-reinforced felt facer meeting ASTM C 1289-06, Type II, Class 1, Grade 2 (20 psi) or Grade 3 (25 psi). The product is available in 4' x 8' standard size with a thickness from 1 to 4 inches. 4' x 4' tapered panels are also available.
 2. **Carlisle SecurShield Polyisocyanurate**– A foam core insulation board covered on both sides with a coated glass fiber mat facer meeting ASTM C 1289-06, Type II, Class 2, Grade 2 (20 psi) or Grade 3 (25 psi). The product is available in 4' x 8' standard size with a thickness from 1 to 4 inches. 4' x 4' tapered panels are also available.
 3. **Carlisle SecurShield HD Composite** – Composite insulation panel comprised of ½-inch high-density Polyiso cover board laminated during the manufacturing process to SecurShield rigid Polyiso roof insulation meeting ASTM C1289 Type II, Class2, Grade 2 (20 psi) or Grade 3 (25 psi). Available in 4' x 8' boards with thickness from 2" to 4.5". 4' x 4' panels are also available.
 4. **Carlisle Stormbase Polyiso Composite (OSB)** – Polyiso insulation bonded on the bottom side with a medium weight fiber-reinforced felt facer and laminated with a top surface of 7/16" or 5/8" thick Oriented Strand Board (OSB) meeting ASTM C1289, Type V, Class1 Grade 2 (20 psi) or Grade 3 (25 psi). Available in 4' x 8' boards with thickness from 1-1/2" to 4".
 5. **Carlisle SecurShield HD Cover Board**– a rigid insulation panel composed of a high-density, closed-cell polyisocyanurate foam core laminated to moisture resistant coated-glass fiber-mat facer for use as a cover board or recover board meeting ASTM 1289-06, Type II, Class 2 (100 psi). Available 1/2" thick 4' x 8' panel weight 11 lbs with an R-value of 2.5.
 6. **SecurShield HD FR** - Designed for direct application to combustible decks, this rigid insulation panel composed of a high-density (109 psi max), closed-cell polyisocyanurate foam core laminated to coated-glass fiber-mat facer for use as a cover board or recover board. Achieves a UL 790 Class A combustible deck assembly rating without the need for fire-rated slip sheets or thermal barrier products. Available 1/2" thick 4' x 8' panel weight 11 lbs with an R-value of 2.5.
 7. **SecurShield HD Plus** - a rigid insulation panel composed of a high-density (109 psi max), closed-cell polyisocyanurate foam core laminated to premium-performance coated-glass fiber-mat facer for use as a cover board or recover board. Available 1/2" thick 4' x

8' panel weight 11 lbs with an R-value of 2.5. Meets an FM 1-90 using only 8 fasteners per 4' x 8' board.

8. **Carlisle HP-F Polyiso** – A rigid roof insulation panel composed of a closed cell polyisocyanurate foam core bonded on each side with trilaminated foil facers meeting ASTM C1289-06, Type I, Grade 2 (20 psi) or Grade 3 (25 psi). Available in 4' x 8' boards with thickness from 1' to 4'. 4' x 4' panels are also available.
9. **XPS: Extruded Polystyrene** – Available through Carlisle is dimensionally stable with high thermal and low water absorption performance capability. XPS is available in varying compressive strengths thicknesses and sizes. Refer to specific product data sheets for physical properties and additional technical information. Specified beneath Sure-Seal HP Recovery Board, Dens-Deck Prime or Securock
 - a. Thermapink 18 or 25 Extruded Polystyrene
 - b. Foamular 400 or Durapink Extruded Polystyrene
 - c. Dow Recovermate, Dow Styrofoam Deckmate, or Dow Styrofoam Deckmate Plus Extruded Polystyrene
10. **Securock Cover Board** – A uniform composition of fiber-reinforced with no facer for use as a cover board or a thermal barrier. Available in 1/4" to 5/8" thick and 4' x 4' or 4' x 8' size boards. Long uninterrupted runs (>200') may require slight gapping due to thermal expansion.
11. **Dens Deck Prime** –gypsum core that incorporates glass-mat facings on the top and bottom side. Available in 1/4" to 5/8" and 4' x 4' or 4' x 8' size boards.
12. **Dens Deck Cover Board** –gypsum core that incorporates glass-mat facings on the top and bottom side for use as a cover board. Available in 1/4" to 5/8" and 4' x 4' or 4' x 8' size boards.
13. **R-Tech FanFold Recover Board** – Closed-cell lightweight expanded polystyrene (EPS) with polymeric laminated faces which meets ASTM C 578 for use as a recover board. Available in thicknesses of 3/8" to 3/4" with coverage 4' x 50' (2 squares). 4' x 8' units are also available.

2.04 ADHESIVES AND CLEANERS

All products shall be furnished by Carlisle and specifically formulated for the intended purpose.

- A. **Sure-Weld Bonding Adhesive:** A high-strength, synthetic rubber adhesive used for bonding Sure-Weld membrane to various surfaces. The adhesive is applied to both the membrane and the substrate at a coverage rate of approximately 60 square feet per gallon per finished surface (includes coverage on both surfaces).

- B. **Low VOC Bonding Adhesive for TPO:** This product meets the <250 gpl VOC (volatile organic compound) content requirements of the OTC Model Rule for Single-Ply Roofing Adhesives. A high strength, solvent-based contact adhesive that allows bonding of TPO membrane to various porous and non-porous substrates. Apply at a rate of 60 ft² per gallon finished surface. Available in 5 gallon pails. This product does not comply with southern California counties with additional restrictions on solvents. See Carlisle's Product Data Sheet for a listing of the counties involved.
- C. **Low VOC Bonding Adhesive 1168:** This product meets the <250 gpl VOC (volatile organic compound) content requirements of the OTC Model Rule for Single Ply Roofing Adhesives. A high strength, solvent-based contact adhesive the allows bonding of TPO membrane to various porous and non-porous substrates. Apply at a rate of 60 ft² per gallon finished surface. Available in 5-gallon cans. This product complies with southern California counties with additional restrictions on solvents. See Carlisle's Product Data Sheet for a listing of the counties involved.
- D. **Aqua Base 120 Bonding Adhesive:** A semi pressure-sensitive, water based adhesive used as a two-sided contact adhesive. Coverage rate is 120 square feet per gallon finished surface (applied to membrane and substrate). Refer to Spec Supplement G-10-17 "Aqua Base 120 Bonding Adhesive" for Warranty limitations and other considerations.
- E. **CAV-GRIP III Low-VOC Aerosol Contact Adhesive/Primer:** a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: bonding Sure-Weld membrane to various surfaces, enhancing the bond between Carlisle's VapAir Seal 725TR and various substrates, priming unexposed asphalt prior to applying FAST Adhesive and for adhering Sure-Weld/Sure-Flex FleeceBACK and Sure-Weld TPO membrane to vertical walls. Coverage rate is approximately 2,000 sq. ft. per cylinder as a primer, in a single-sided application and 1,000 sq. ft. per cylinder as an adhesive, in a double-sided application.
- F. **Cut-Edge Sealant:** A white or clear colored sealant used to seal cut edges of reinforced Sure-Weld membrane. A coverage rate of approximately 225 - 275 linear feet per squeeze bottle can be achieved when a 1/8" diameter bead is applied.
- G. **Water Cut-Off Mastic:** Used as a mastic to prevent moisture migration at drains, compression terminations and beneath conventional metal edging (at a coverage rate of approximately 10' per tube or 100' per gallon).
- H. **Universal Single-Ply Sealant:** A 100% solids, solvent free, voc free, one part polyether sealant that provides a weather tight seal to a variety of building materials. It is white in color and is used for general caulking such as above termination bars and metal counter flashings and at scuppers.
- I. **Thermoplastic One-Part Pourable Sealer:** A one-part, moisture curing, elastomeric polyether sealant used to fill TPO Molded Pourable Sealant Pockets. Packaged in 4, 2-liter foil pouches inside a reusable plastic bucket. 1 pouch will fill 2 TPO Molded Pourable Sealant Pockets.
- J. **Weathered Membrane Cleaner:** Used to prepare membrane for heat welding that has been exposed to the elements or to remove general construction dirt at an approximate coverage rate of 400 square feet per gallon (one surface).
- K. **TPO Primer:** A solvent-based primer used to prepare the surface of Sure-Weld Membrane prior to application of Pressure-Sensitive Coverstrip and TPO Pressure-Sensitive RUSS.

- L. **TPO Low VOC Primer:** A solvent-based, low solids primer used to prepare the surface of Sure-Weld Membrane prior to application of Pressure-Sensitive Coverstrip and TPO Pressure-Sensitive RUSS. This low VOC product is ideal for use in states where environmental issues are a concern.
- M. **Cav-Grip Primer:** a low VOC contact adhesive used to prime surfaces for the application of 725TR.
- N. **Carlisle CAV-GRIP III Low-VOC Aerosol Contact Adhesive/Primer:** a low-VOC, methylene chloride-free adhesive that can be used for a variety of applications including: bonding Sure-Weld membrane to various surfaces, enhancing the bond between Carlisle's VapAir Seal 725TR and various substrates, priming unexposed asphalt prior to applying FAST Adhesive and for adhering Sure-Seal/Sure-Weld/Sure-Flex FleeceBACK and Sure-Seal EPDM or Sure-Weld TPO membrane to vertical walls. Coverage rate is approximately 2,000 sq. ft. per cylinder as a primer, in a single-sided application and 1,000 sq. ft. per cylinder as an adhesive, in a double-sided application.

2.05 FASTENERS AND PLATES

To be used for mechanical attachment of insulation and to provide additional membrane securement as required

- A. **HP- Fasteners:** a threaded, #14 fastener with a #3 phillips drive used with steel and wood roof decks.
- B. **HP-X Fasteners:** A heavy duty #15 threaded fastener with a #3 phillips drive used for membranre or insulation securement into steel, wood plank or minimum 15/32 inch thick plywood when increased pullout resistance is desired.
- C. **HP-Xtra Fastener:** an oversized diameter (.315) steel threaded fastener with a #3 phillips drive used in conjunction with Piranha Xtra Plates for membrane securemt into steel or wood decks.
- D. **Pre-Assembled ASAP Fasteners:** A pre-assembled 3" diameter Plastic Plate and # 12 threaded fastener with a #3 drive used for insulation attachment into steel or wood decks. Installed using OMG Fastening Tools.
- E. **InsulFast Fasteners:** A threaded #12 fastener with #3 phillips drive used for insulation attachment into steel or wood decks.
- F. **CD-10 Fasteners:** A non-threaded, hammer driven fastener used with structural concrete roof decks rated 3,000 psi or greater.
- G. **HP 14-10 Fasteners:** A #14 threaded fastener with a #3 phillips drive used for minimum 3,000 psi concrete decks.
- H. **Polymer Gyptec Fasteners:** A non-penetrating, plastic fastener and corresponding 3" diameter plate used with lightweight deck substrates such as cementitious wood fiber, gypsum, and lightweight insulating concrete.
- I. **HP Purlin Fasteners:** Specifically designed for use with Carlisle's Metal Retrofit Roofing System to secure membrane and RUSS to structural steel purlins. The self drilling point can penetrate 12-

18 gauge steel with superior pullout resistance.

- J. **HP Term Bar Nail-Ins:** A 1-1/4" long expansion anchor with a zinc plated steel drive pin used for fastening the Carlisle Termination Bar or Seam Fastening Plates to concrete, brick, or block walls.
- K. **Piranha Plates:** A 2-3/8" diameter metal barbed fastening plate used with Carlisle HP-X or HP-14-10 Fasteners for membrane securement. This plate can be used for insulation securement.
- L. **Piranha Xtra Plates:** A 2-3/8" diameter metal barbed fastening plate with an oversized hole for use with Carlisle HP-Xtra Fasteners for membrane securement.
- M. **Insulation Fastening Plates:** a nominal 3 inch diameter plastic or metal plate used for insulation attachment.
- N. **Sure-Weld Pressure-Sensitive RUSS™** (Reinforced Universal Securement Strip): a 6" wide, nominal 45-mil thick reinforced TPO membrane with 3" wide Pressure Sensitive Tape laminated along one edge. The 6" wide Pressure-Sensitive RUSS is used horizontally at the base of walls, curbs, etc., in conjunction with 2" diameter Seam Fastening Plates below the TPO deck membrane for additional membrane securement.
 - 1. **6" wide Pressure-Sensitive RUSS** is used horizontally or vertically at the base of walls, curbs, etc., in conjunction with PiranhaFastening Plates below the TPO deck membrane for additional membrane securement.
 - 2. **10" wide Pressure-Sensitive RUSS** is for perimeter membrane securement.

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

- A. **General:** All metal edging, copings and fascia shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code as provided by the following approved manufacturers:
 - 1. Drexel Metal Supplies
 - 2. OMG Roofing Products
 - 3. Metal Era, Inc

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.02 INSULATION PLACEMENT AND ATTACHMENT

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required Carlisle fasteners and plates in accordance with manufacturers specifications.

3.03 MEMBRANE PLACEMENT AND ATTACHMENT

- A. Unroll and position membrane. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
- B. Secure the membrane with the required Carlisle Fasteners and Plates spaced a maximum of 12 inches on center depending on project conditions (centered over the pre-printed marks approximately 1-1/2 inches from the edge of the membrane sheet).
- C. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.

3.04 FLASHING

- A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using Sure-Weld reinforced membrane. Sure-Weld non-reinforced membrane can be used for flashing pipe penetrations, Sealant Pockets, scuppers, as well as inside and outside corners when the use of pre-fabricated accessories is not feasible.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.05 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
- B. Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

3.06 CLEAN UP

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION 075423

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Nonstaining silicone joint sealants.
 - 2. Urethane joint sealants
 - 3. Mildew-resistant joint sealants
 - 4. Butyl joint sealants.
 - 5. Latex joint sealants.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- 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 kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

- B. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.6 FIELD 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 (5 deg C).
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace 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 agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 - 1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 - 2. Disintegration of joint substrates from 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 JOINT SEALANTS, 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 joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 NONSTAINING SILICONE JOINT SEALANTS

- A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.
- B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
 - 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Sikasil WS 290, Sika Corporation
 - b. 890 NST Pecora
- C. Silicone, Nonstaining, S, NS, 50, NT: Nonstaining, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM D 5893, ASTM C719 Pass +100 – 50% joint movement.
 - 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Sikasil WS 295, Sika Corporation
 - b. Dow 756 SMS, Dow Corning Corporation
 - c. GE SilPruf SCS9000 Mumentive
 - d. 895 NST, Pecora
- D. Silicone, S, NS, 100/50, T, NT: single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM D5893, ASTM C719 pass +100 /-50% Joint Movement.
 - 1. Subject to compliance with requirements, provide products by the following:
 - a. Sikasil 728 NS. Sika Corporation
 - b. Dow Corning 888
- E. Silicone, M, NS, 50, NT: multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Use NT.

1. Subject to compliance with requirements, provide products by the following:
 - a. Sikasil WS-295 FPS, Sika Corporation
 - b. Spectrum 4 TS, Tremco

2.3 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Sikaflex 1a, Sika Corporation
 - b. Sonolastic NP1, BASF
 - c. Dynatrol I-XL, Pecora
 - d. Dymonic, Tremco
- B. Urethane, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade P, Class 25, Uses T and NT.
 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Sikaflex 1CSL, Sika Corporation, (limestone only)
 - b. Sonolastic SL 1, BASF
 - c. Vulkem 45, Tremco
 - d. NR-201, Pecora
- C. Urethane, M, NS, 25, T, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Uses T and NT.
 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Sikaflex 2CNS EZ Mix, Sika Corporation
 - b. Sonolastic NP 2, BASF
 - c. Dymonic 240, Tremco
 - d. Dynatrol II, Pecora

2.4 MILDEW-RESISTANT JOINT SEALANTS

- A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.

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

- a. Sikasil-GP, Sika Corporation.
- b. Dow GP, Dow Corning
- c. Tremsil 200, Tremco
- d. 860, Pecora
- e. SCS 1000, GE.

2.5 BUTYL JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealants: ASTM C 1311.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Bostik, Inc.
 - b. Pecora Corporation.
 - c. Tremco, Inc.

2.6 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BASF Corporation-Construction Systems.
 - b. Pecora Corporation.
 - c. Sherwin-Williams Company (The).
 - d. Tremco Incorporated.

2.7 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BASF Corporation-Construction Systems.
 - b. Construction Foam Products; a division of Nomaco, Inc.

- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) Type O (open-cell material) Type B (bicellular material with a surface skin) or any of the preceding types, 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. Provide self-adhesive tape where applicable.

2.8 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 performance of the Work.
- 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, 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. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - c. Unglazed surfaces of ceramic tile.

3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by 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 or primer 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. Install sealant backings of kind 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.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- 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 in subparagraphs 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 profile per Figure 8A in ASTM C 1193 unless otherwise indicated.
4. Provide flush joint profile at locations indicated on Drawings, as indicated on Structural and Architectural notes, and according to Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated on Drawings, and according to Figure 8C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:
 - a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
3. Inspect tested joints and report on the following:
 - a. Whether sealants filled joint cavities and are free of voids.
 - b. Whether sealant dimensions and configurations comply with specified requirements.
 - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

- B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 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.

3.6 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces
 - 1. Joint Locations:
 - a. Construction joints in cast-in-place concrete.
 - b. Joints between plant-precast architectural concrete units.
 - c. Control and expansion joints in unit masonry.
 - d. Joints between metal panels.
 - e. Joints between different materials listed above.
 - f. Perimeter joints between materials listed above and frames of doors, windows and louvers.
 - g. Control and expansion joints in ceilings and other overhead surfaces.
 - h. Other joints as indicated on Drawings.
 - 2. Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
 - 1. Joint Locations:
 - a. Isolation joints in cast-in-place concrete slabs.
 - b. Control and expansion joints in brick flooring.
 - c. Control and expansion joints in tile flooring.
 - d. Other joints as indicated on Drawings.
 - 2. Joint Sealant: Urethane, S, P, 25, T, NT.

3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
 1. Joint Locations:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Tile control and expansion joints.
 - c. Vertical joints on exposed surfaces of unit masonry, concrete walls, and partitions.
 - d. Other joints as indicated on Drawings.
 2. Joint Sealant: Urethane, S, NS, 25, NT.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement.
 1. Joint Locations:
 - a. Control joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints between interior wall surfaces and frames of interior doors windows
 - c. Other joints as indicated on Drawings.
 2. Joint Sealant: Acrylic latex.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- E. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
 1. Joint Locations:
 - a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
 - b. Tile control and expansion joints where indicated.
 - c. Other joints as indicated on Drawings.
 2. Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- F. Joint-Sealant Application: Concealed mastics.
 1. Joint Locations:
 - a. Aluminum thresholds.
 - b. Sill plates.
 - c. Other joints as indicated on Drawings.
 2. Joint Sealant: Butyl-rubber based.
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200

SECTION 087100 – DOOR HARDWARE

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 commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Sliding doors.
 - 3. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section “Door Hardware Schedule”.
 - 2. Division 08 Section “Hollow Metal Doors and Frames”.
 - 3. Division 08 Section “Flush Wood Doors”.
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series
 - 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions 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 Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 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 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.
 - h. Warranty information for each product.
 - 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: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- D. Informational Submittals:
 - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

- E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified 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.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
- E. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- F. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

- 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, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties 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. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Five years for exit hardware.
 - 3. Twenty five years for manual surface door closer bodies.
 - 4. Twenty five years for manual surface door closer bodies.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. 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.
 - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 - 4. Hinge Options: Comply with the following:

- a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

- a. Hager Companies (HA).
- b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
- c. Stanley Hardware (ST).

2.3 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 5. Keyway: **Match Facility Standard.**
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 3. Existing System: **Key locks to Owner's existing system.**
- E. Key Quantity: Provide the following minimum number of keys:
 1. Change Keys per Cylinder: Two (2)
 2. Master Keys (per Master Key Level/Group): Five (5).
 3. Construction Keys (where required): Ten (10).
- F. Construction Keying: Provide construction master keyed cylinders.
- G. Key Registration List (Biting List):
 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 2. Provide transcript list in writing or electronic file as directed by the Owner.

2.4 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 - 1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) – ML2000 Series.
 - b. Sargent Manufacturing (SA) – 8200 Series.
 - c. Yale Locks and Hardware (YA) – 8800FL Series.
- B. Knurling: Where required by local code provide knurling or abrasive coating to all levers on doors leading to hazardous areas such as mechanical rooms, boiler and furnace rooms, janitor closets, and as otherwise required or specified.

2.5 LOCK AND LATCH STRIKES

- A. 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.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 - 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 - 4. Dustproof Strikes: BHMA A156.16.

2.6 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.

2.7 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size.

Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) – DC6000 Series.
 - b. Sargent Manufacturing (SA) - 351 Series.
 - c. Norton Door Controls (NO) - 7500 Series.
 - d. Yale Locks and Hardware (YA) - 4400 Series.

2.8 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width

and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, .050-inch thick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Trimco (TC).

2.9 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Manufacturers:
 - a. Hiawatha, Inc. (HI).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Trimco (TC).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 1. Manufacturers:
 - a. Rixson Door Controls (RF).
 - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - c. Sargent Manufacturing (SA).

2.10 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 - 1. National Guard Products (NG).
 - 2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
 - 3. Reese Enterprises, Inc. (RE).

2.11 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.12 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

- C. 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 scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and 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.

- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 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.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with

corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

C. Manufacturer's Abbreviations:

1. MK - McKinney
2. SA - Sargent
3. RF - Rixson
4. RO - Rockwood
5. PE - Pemko

Hardware Sets

Set: 1.0

Doors: 106B

Description: Exterior Corridor (OH)

3 Hinge	TA2314 x NRP 4-1/2" x 4-1/2"	US32D	MK
1 Exit Device (classroom)	8813 ETMD	US32D	SA
1 Door Closer	SRI 351 CPS	EN	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Threshold	1715A		PE
1 Gasketing	303AV TKSP8		PE
1 Rain Guard	346C TKSP8		PE
1 Door Bottom	216AV TKSP8		PE

Set: 2.0

Doors: G100, G100E, G101B

Description: Exterior Garage

3 Hinge	TA2314 x NRP 4-1/2" x 4-1/2"	US32D	MK
1 Exit Device (classroom)	8813 ETMD	US32D	SA
1 Door Closer	SRI 351 CPS	EN	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Threshold	1715A		PE
1 Gasketing	303AV TKSP8		PE
1 Rain Guard	346C TKSP8		PE
1 Door Bottom	216AV TKSP8		PE

Set: 3.0

Doors: 101, 101B

Description: Corridor Single

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Exit Device (passage)	8815 ETMD	US32D	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
3 Silencer	608		RO

Set: 4.0

Doors: 113

Description: Mechanical

3 Hinge (heavy weight)	T4A3386 4-1/2" x 4-1/2"	US32D	MK
1 Storeroom Lock	86 8204 LNMD	US26D	SA
1 Door Closer	351 UO	EN	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
1 Gasketing	S88D x L.A.R.		PE

Notes: Knurled lever outside

Set: 5.0

Doors: 114

Description: Janitor (OH)

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lock	8204 LNMD	US26D	SA
1 Surf Overhead Stop	9-X36	630	RF
1 Mop Plate	K1050 4" x 1" L.D.W.	US32D	RO
1 Gasketing	S88D x L.A.R.		PE

Set: 6.0

Doors: 111B

Description: Town Hall Clerk

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Office Lock	8205 LNMD	US26D	SA
1 Door Closer	351 UO	EN	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
1 Gasketing	S88D x L.A.R.		PE

Set: 7.0

Doors: G103

Description: Office

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
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1 Office Lock	8205 LNMD	US26D	SA
1 Wall Stop	409	US32D	RO
3 Silencer	608		RO

Set: 8.0

Doors: G101

Description: Garage

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Classroom Lock	8237 LNMD	US26D	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
1 Gasketing	S88D x L.A.R.		PE
1 Sweep	18041CNB		PE

Set: 9.0

Doors: 107, 108, 117, 118

Description: Cells Storage / Evidence

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Room Door Lock	8224 LNMD	US26D	SA
1 Door Closer	351 UO	EN	SA
1 Kick Plate	K1050 10" x 2" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
3 Silencer	608		RO

Set: 10.0

Doors: G105

Description: Storage (OH)

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lock	8204 LNMD	US26D	SA
1 Surf Overhead Stop	9-X36	630	RF
3 Silencer	608		RO

Set: 11.0

Doors: 116

Description: Interview

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Privacy Lock	49 8265 LNMD	US26D	SA
1 Wall Stop	409	US32D	RO
3 Silencer	608		RO

Set: 12.0

Doors: 103, 104

Description: Toilet (WS)

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
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1 Privacy Lock	49 8265 LNMD	US26D	SA
1 Mop Plate	K1050 4" x 1" L.D.W.	US32D	RO
1 Wall Stop	409	US32D	RO
3 Silencer	608		RO

Set: 13.0

Doors: G104

Description: Toilet (OH)

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Privacy Lock	49 8265 LNMD	US26D	SA
1 Surf Overhead Stop	9-X36	630	RF
1 Mop Plate	K1050 4" x 1" L.D.W.	US32D	RO
3 Silencer	608		RO

Set: 14.0

Doors: G100A, G100B, G100C

Description: Overhead (Garage)

1 HBO	All hardware by door manufacturer	00
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Set: 15.0

Doors: 102, 105, 111A

Description: Cased Opening

1 NHW	No Hardware Required	00
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Set: 16.0

Doors: 100, 109, 110, 115, 201, 202, 203, 204, 205, 206, 207, 208

Description: Existing

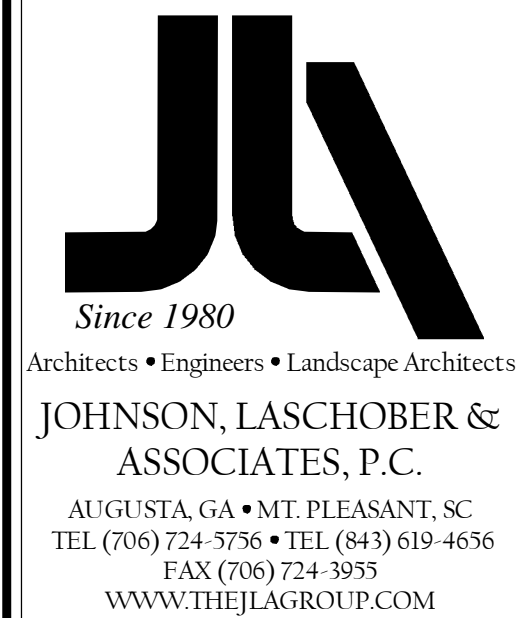
1 NHW	No Hardware Required	00
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Notes: Existing hardware to be re-used.

END OF SECTION 087100

NEWBERRY COUNTY
NEWBERRY, SOUTH CAROLINA

TOWN HALL POLICE - CITY OF WHITMIRE
210 MAIN STREET, WHITMIRE, SC 29178



NEWBERRY COUNTY
NEWBERRY, SOUTH CAROLINA

TOWN HALL POLICE -
CITY OF WHITMIRE

PROJECT LOCATION:
210 MAIN STREET, WHITMIRE, SC 29178

GENERAL NOTES:

THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS SHALL BE REQUIRED TO VISIT THE PREMISES TO INSPECT EXISTING CONDITIONS, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND CORRELATE PERSONAL OBSERVATIONS WITH REQUIREMENTS OF THE DRAWINGS.

ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH COUNTY REGULATIONS AND CODES, O.S.H.A. STANDARDS, THE CODE STANDARDS LISTED, EXECUTED IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARDS, AND CONFORM TO SPECIFIC REGULATIONS AS MANDATED BY THE OWNER AND THE ARCHITECT.

IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO INSURE THE PROCUREMENT OF ALL REQUIRED AND NECESSARY PERMITS. ALL CONTRACTORS SHALL OBTAIN NECESSARY AND APPLICABLE CITY/COUNTY PERMITS, INSPECTIONS AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY WORK AND CERTIFICATE OF OCCUPANCY UPON COMPLETION OF PROJECT. CONTRACTOR SHALL FURNISH COPIES OF PERMITS, INSPECTIONS AND CERTIFICATES TO OWNER UPON REQUEST.

CONTRACTOR SHALL BE REQUIRED TO COORDINATE WORK SCHEDULE TO MINIMIZE DISRUPTION OF NORMAL ACTIVITIES AND TO AVOID INTERFERENCE WITH ADJACENT OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE PRECAUTIONS TO PROTECT SURROUNDINGS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION AREAS AND OCCUPIED OR PUBLIC AREAS TO BE MAINTAINED BY CONTRACTOR. DAMAGE TO EXISTING-TO-REMAIN CONSTRUCTION, MATERIALS OR EQUIPMENT TO BE RESTORED TO ORIGINAL CONDITION.

CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TRASH AND DEBRIS FROM JOB SITE ON A DAILY BASIS. FINAL CLEAN-UP WITHIN SCOPE OF WORK.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL RELATED TRADES AND VENDORS NECESSARY TO THE COMPLETION OF THE JOB ON A TIMELY BASIS.

DO NOT SCALE DRAWINGS. USE WRITTEN DIMENSIONS ONLY. SUBMIT TO ARCHITECT ANY DISCREPANCIES FOR CLARIFICATION.

ALL WORK SHALL BE IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CURRENT EDITION OF NATIONAL ELECTRIC CODE, INTERNATIONAL PLUMBING AND MECHANICAL CODE, RECOGNIZED INDUSTRY STANDARDS, CRAFTSMANSHIP STANDARDS IN THE AREA, ALL MANUFACTURERS RECOMMENDATIONS, AND ALL OTHER APPLICABLE CODES.

THE DESIGN PROFESSIONAL DOES NOT GUARANTEE THE PERFORMANCE OF THE PROJECT IN ANY RESPECT OTHER THAN THAT OUR PROFESSIONAL WORK AND JUDGEMENT RENDERED MEET THE STANDARDS OF CARE OF OUR PROFESSION.

THE LOCATION OF THE EXISTING UTILITIES AND STRUCTURES SHOWN HEREON ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND ACTUAL LOCATION OF SUCH, WHETHER SHOWN HEREON OR NOT, PRIOR TO ANY EXCAVATION ANY DAMAGES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

THE FLOOR ON BOTH SIDES OF A DOOR SHALL BE LEVEL AND SHALL HAVE THE SAME ELEVATION ON BOTH SIDES OF THE DOOR, FOR A DISTANCE ON EACH SIDE EQUAL TO THE WIDTH OF THE WIDEST SINGLE DOOR.

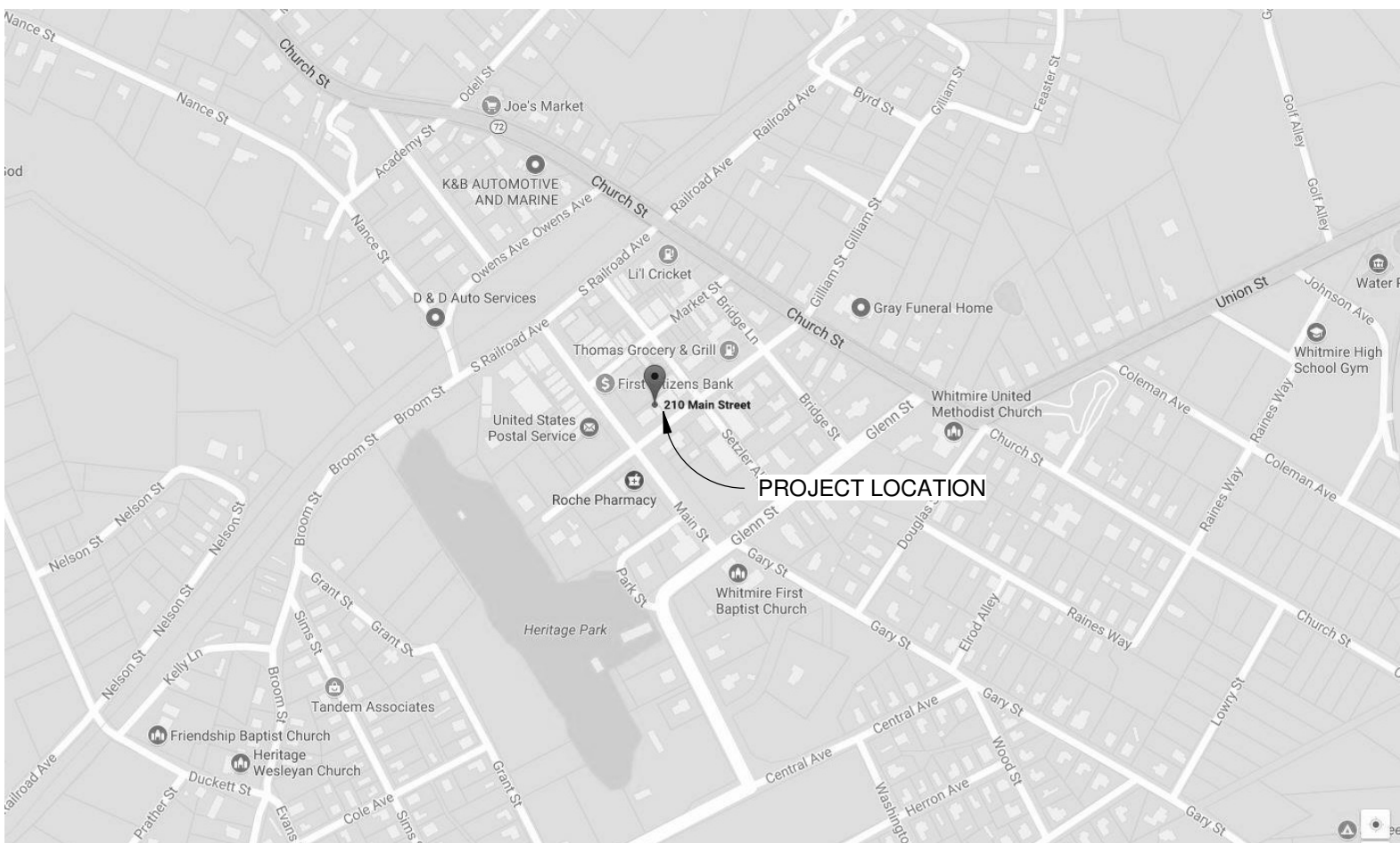
FIRE EXTINGUISHERS SHALL BE LOCATED PER THE REQUIREMENTS OF NFPA 10. THE SIZE SHALL BE A MINIMUM OF 2 A 10 BC 1 AND SHALL BE INSTALLED AT A MAXIMUM OF 48" A.F.F. TO THE TOP OF THE HANDLE.

PROVIDE CONT. SOLID BLOCKING, AS REQUIRED, IN WALLS TO RECEIVE ACCESSORY ITEMS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
HANDRAILS
TOILET ROOM ACCESSORIES
GRAB BARS
FIRE EXTINGUISHER CABINETS & BRACKETS
CABINETS AND SHELVES

CLEAN WALLS, DOORS, DOOR FRAMES, HANDRAILS, GUARDRAILS, ETC. PER MANUFACTURERS RECOMMENDATIONS PRIOR TO SEALING AND PAINTING.

TEMPORARY SIGNS: PROVIDE TEMPORARY SIGNS AS REQUIRED TO INFORM PUBLIC AND INDIVIDUALS SEEKING ENTRANCE TO PROJECT.
PROVIDE TEMPORARY, DIRECTIONAL SIGNS FOR CONSTRUCTION PERSONNEL AND VISITORS. MAINTAIN AND TOUCHUP SIGNS SO THEY ARE LEGIBLE AT ALL TIMES.

PROJECT LOCATION MAP



PROJECT TEAM

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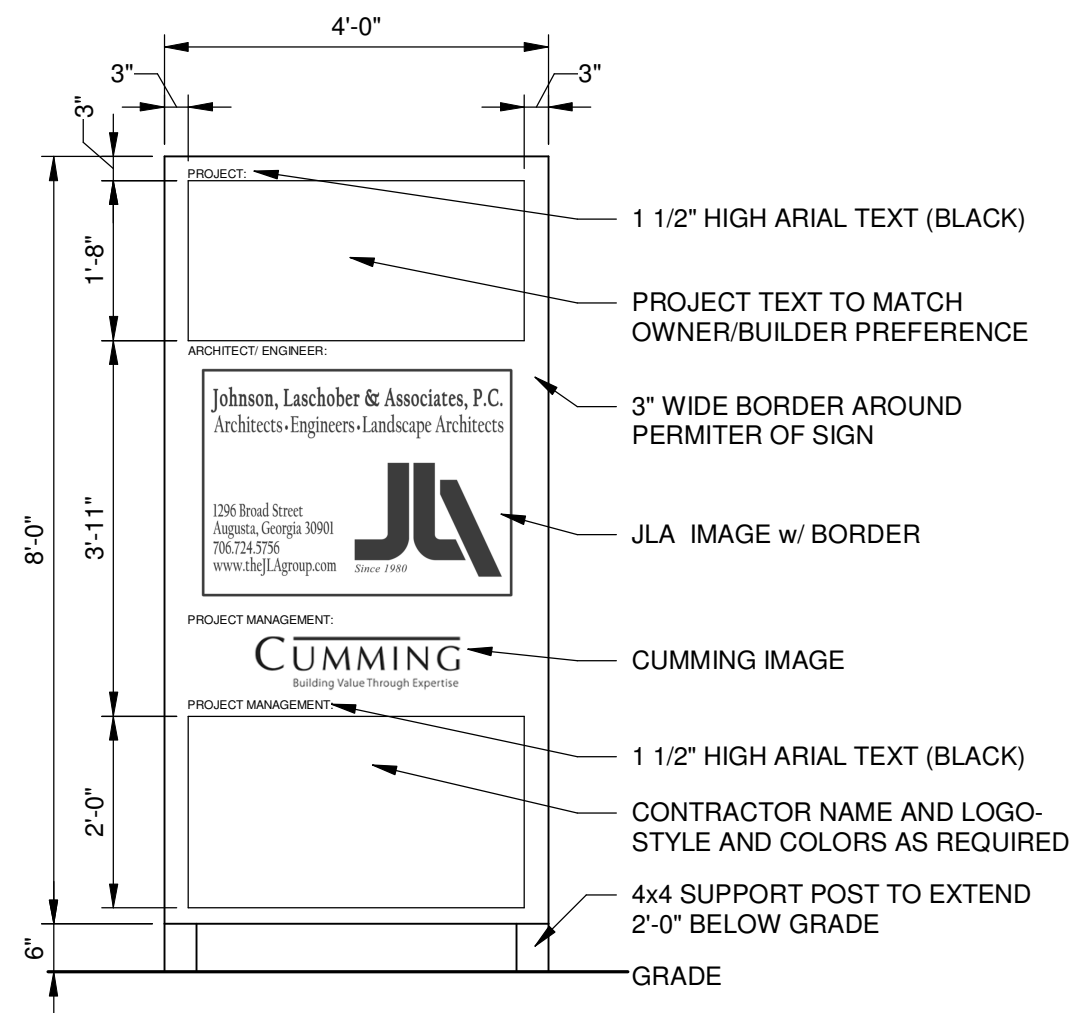
FIRE PROTECTION ENGINEER

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JOB SITE SIGN



GRAPHIC SYMBOLS

CENTERLINE		REVISION INDICATION	
C		REVISION NUMBER	
A		AREA REVISED	TYPICAL DIMENSION INDICATOR
A1		DOOR NUMBER	FLOOR ELEVATION
A1		GLASS TYPE	WALL TYPE
A1		ROOM NAME AND AREA	
A1		SECTION KEYS	
A1		SHEET IDENTIFIER FOR LOCATION OF SECTION	
A1		ELEVATION KEY	

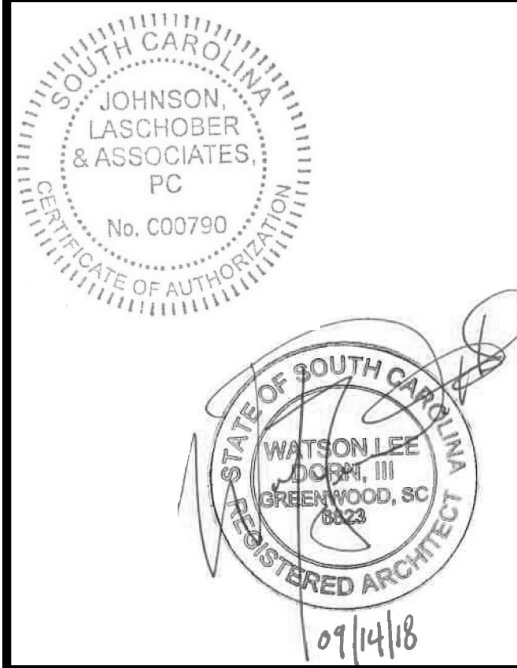
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ALTERNATES

- REMOVE AND REPLACE ROOF ON GARAGE.
- COMPLETE PROPOSED WORK IN GARAGE AREA PER SHEET AALT01 & AALT02.
- COMPLETE FINISHES ON THE SECOND LEVEL OF THE MAIN TOWN HALL BUILDING.
- SUBSTITUTE THE 3 FORM PARTITION w/ A HOLLOW METAL PARTITION.

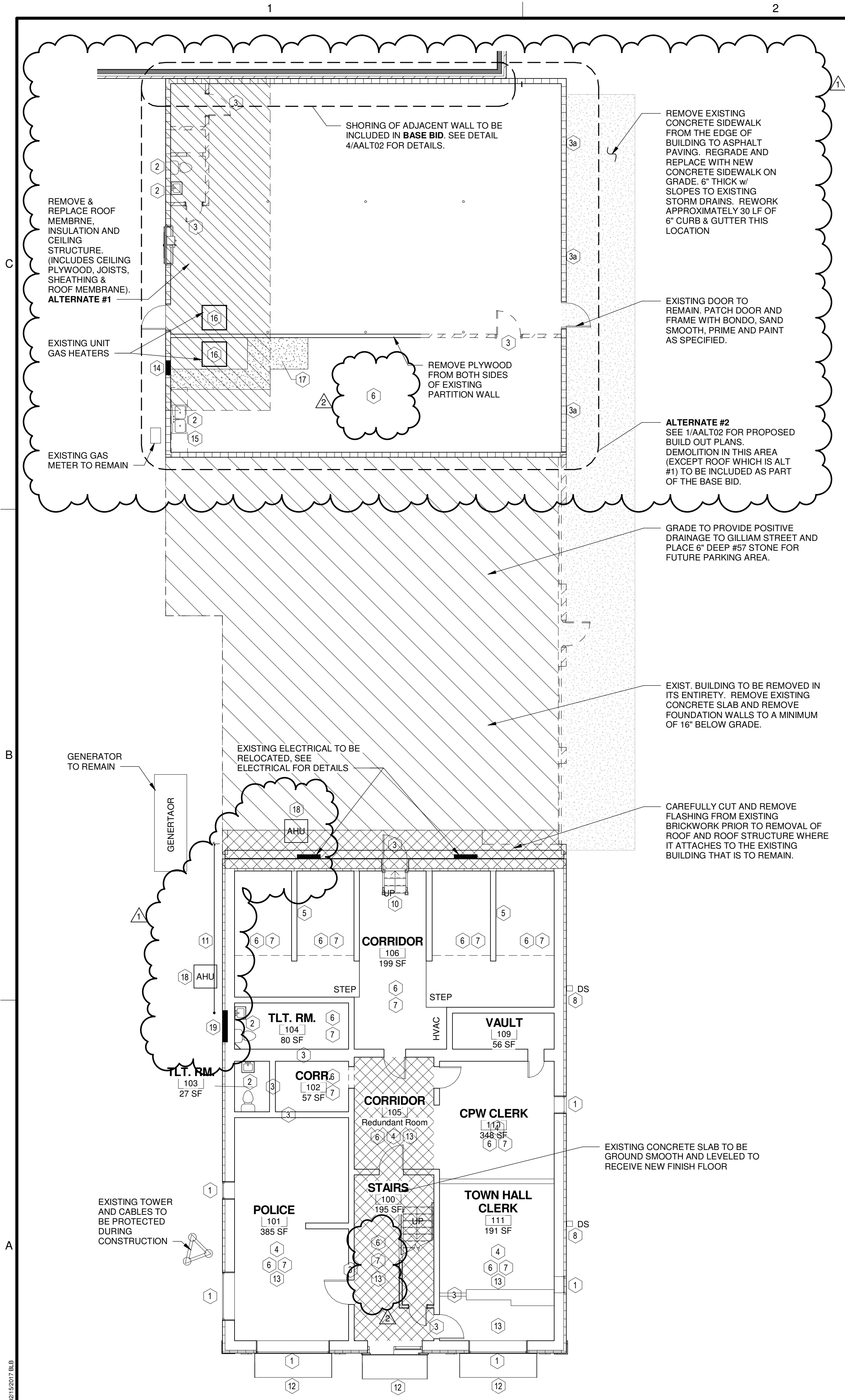


REVISION		DESCRIPTION	
1	09/14/18	WLD	ISSUED FOR CONSTRUCTION
2	10/2/18	WLD	ADDENDUM #2
3	09/25/18	WLD	ADDENDUM #2
4	09/14/18	WLD	ISSUED FOR CONSTRUCTION

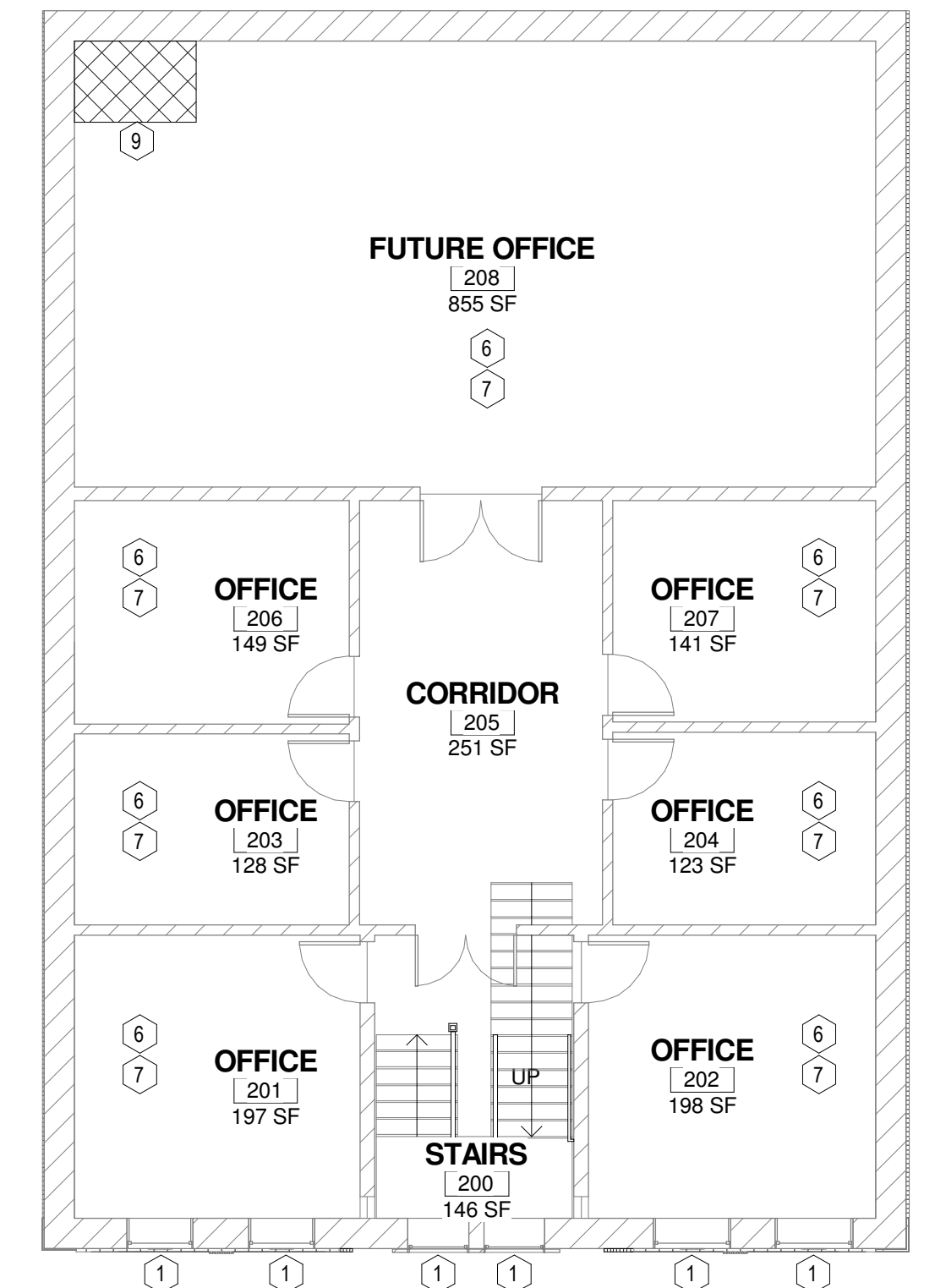
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DRAWN BY:	CTH
CHECKED BY:	WLD
DATE:	12/11/17
SHEET TITLE:	COVER SHEET
SCALE	AS NOTED
DRAWING NO.	G-001
REV.	2

CODE ANALYSIS					
MINIMUM STANDARD CODES					
IBC - INTERNATIONAL BUILDING CODE	2015 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
IFGC - INTERNATIONAL FUEL GAS CODE	2015 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
IMC - INTERNATIONAL MECHANICAL CODE	2015 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
IPC - INTERNATIONAL PLUMBING CODE	2015 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
NATIONAL ELECTRICAL CODE	2014 EDITION				
INTERNATIONAL FIRE CODE	2015 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
INTERNATIONAL ENERGY CONSERVATION CODE	2009 EDITION, W/ SOUTH CAROLINA AMENDMENTS				
ADA STANDARDS FOR ACCESSIBLE DESIGN	LATEST EDITION, W/ SOUTH CAROLINA AMENDMENTS				
NFPA - 101 LIFE SAFETY CODES	2015 EDITION				
REVIEW PER DESIGN					
OCCUPANCY CLASSIFICATION (IBC CHAPTER 3, NFPA 101 CHAPTER 6)					
IBC <u> B </u>		NFPA <u> BUSINESS </u>			
TYPE OF CONSTRUCTION (IBC CHAPTER 6, NFPA 101 CHAPTER 6)					
IBC <u> IIIB </u>		NFPA <u> II </u>			
SPRINKLER REQUIRED (IBC CHAPTER 9, NFPA CHAPTER 7)		SPRINKLER PROVIDED			
YES <u> </u> NO <u> X </u>		YES <u> </u> NO <u> X </u>			
BUILDING FLOOR AREA ALLOWED PER FLOOR (IBC TABLE 506.2)					
YES <u> </u> NO <u> X </u>					
1ST FLOOR ALLOWED	<u> 19,000 SF </u>	BY DESIGN	<u> 2,594 SF (existing) </u>		
2ND FLOOR ALLOWED	<u> 19,000 SF </u>	BY DESIGN	<u> 2,594 SF (existing) </u>		
TOTAL ALLOWED	<u> 36,000 SF </u>	BY DESIGN	<u> 5,188 SF (existing) </u>		
BUILDING HEIGHT (IBC TABLE 504.3)					
HEIGHT ALLOWED		<u> 75'-0" (3 STORIES) </u>			
HEIGHT BY DESIGN		<u> 28'-6" TO TOP OF PARAPET <u> 2 STORY </u></u>			
REQUIRED PLUMBING FIXTURES- TABLE 2902.1					
	MALE	FEMALE	UNISEX	LAVATORIES	SERVICE SINKS
ASSEMBLY:	REQUIRED: 1	1	0	2	1
	PROVIDED: 1	1	0	2	1
<u> DRINKING FOUNTAINS: </u>					
	REQUIRED: 1				
	PROVIDED:	(WATER DISPENSER LOCATED IN CORRIDOR 105, OWNER PROVIDED & INSTALLED)			
OCCUPANT LOAD (IBC SECT. 1004 & TABLE 1004.1.2, NFPA T-7.3.1.2) =					
1ST FLOOR:	<u> BUSINESS - 100SF PER PERSON (874SF) </u>		=	<u> 9 OCCUPANTS </u>	
	<u> ACCESSORY STORAGE - 300SF PER PERSON (580SF) </u>		=	<u> 2 OCCUPANTS </u>	
	<u> TOTAL = </u>			<u> 11 OCCUPANTS </u>	
2ND FLOOR:	<u> BUSINESS - 100SF PER PERSON (1824SF) </u>		=	<u> 19 OCCUPANTS </u>	
	<u> TOTAL = </u>			<u> 30 OCCUPANTS </u>	
REQUIRED MEANS OF EGRESS					
1ST FLOOR:	DOOR REQUIRED DOOR EGRESS CAPACITY PER IBC: 30 PEOPLE * .2" PER PERSON = 6" EGRESS CAPACITY PROVIDED: 2 DOORS * 34" = 68"				
2ND FLOOR:	STAIR REQUIRED STAIR EGRESS CAPACITY PER IBC: 19 PEOPLE * .3" PER PERSON = 5.7" MINIMUM STAIR WIDTH 44" (1011.2) (1 STAIR @ 44" = 44" TOTAL)				
PANIC HARDWARE REQUIRED ON EXIT DOORS					
TRAVEL DISTANCES					
COMMON PATH	(IBC 1006.2.1, NFPA T-A7.6)	100 FT			
DEAD END	(IBC 1020.4, NFPA T-A7.6.)	20 FT			
TRAVEL DISTANCE	(IBC T-1017.2, NFPA A7.6.1)	200 FT			
FIRE RESISTANCE RATING REQUIRED (IBC TABLE 601, NFPA TABLE A-8-2.1.2)					
STRUCTURAL FRAME		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
***including columns, girders and trusses					
BEARING WALLS					
EXTERIORS		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
INTERIORS		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
NONBEARING WALLS & PARTITIONS					
EXTERIORS		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
INTERIORS		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
FLOOR CONSTRUCTION		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
***including supporting beams & joists					
ROOF CONSTRUCTION		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		
***including supporting beams & joists					
REQUIRED SEPARATION OF OCCUPANCIES (IBC T-508.4, NFPA T-6.1.14.4.1)					
BUSINESS / ASSEMBLY		IBC <u> 0 </u> HR	NFPA <u> 0 </u> HR		

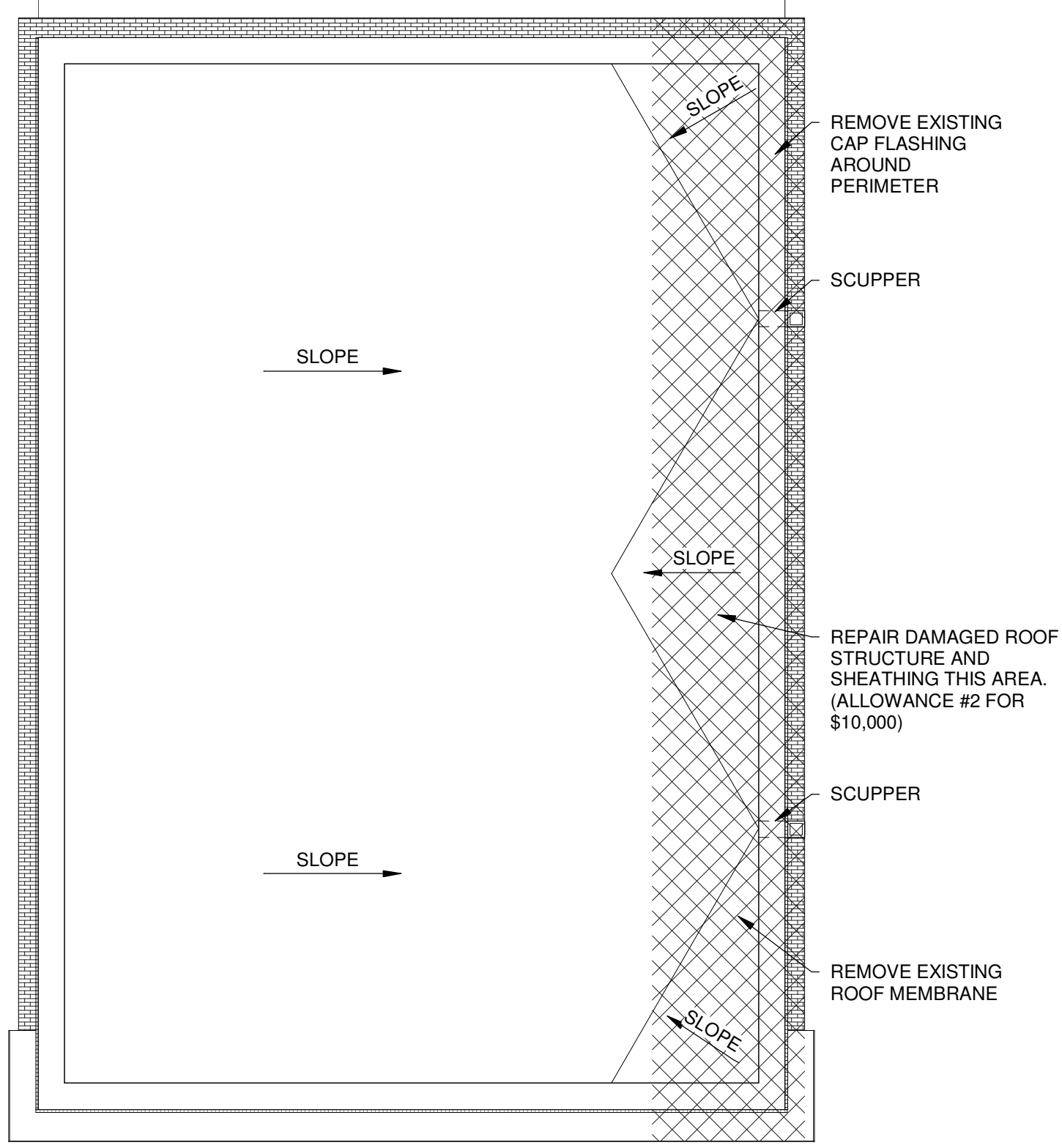
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1
A-002
DEMOLITION PLAN- LEVEL 1
SCALE: 1/8" = 1'-0"



2
A-002
DEMOLITION PLAN- LEVEL 2
SCALE: 1/8" = 1'-0"



3
A-002
DEMOLITION ROOF PLAN
SCALE: 1/8" = 1'-0"

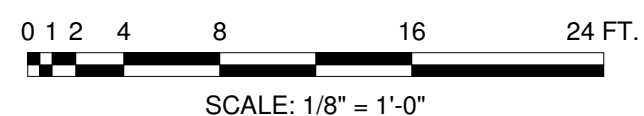
GENERAL DEMOLITION NOTES

1. THE SCOPE OF THE DEMOLITION WORK INCLUDES THE FOLLOWING (UNLESS SPECIFICALLY INDICATED OTHERWISE):
2. EXISTING CEILINGS AND SUPPORT SYSTEMS ARE TO BE REMOVED UNLESS NOTED OTHERWISE BY THE ARCHITECT.
3. EXISTING FINISHED FLOORING TO BE REMOVED. SUBFLOORING, TO INCLUDE BUT NOT LIMITED TO FLOOR JOIST SYSTEM, IS TO BE INSPECTED FOR MOLD AND/OR WATER DAMAGE. ANY MOLD TO BE REMEDIATED AND DAMAGED BUILDING COMPONENTS ARE TO BE REPLACED WITH NEW LIKE MATERIALS. CONTACT ARCHITECT/ ENGINEER FOR EXCESSIVE DAMAGE PRIOR TO DEMOLITION.
4. ALL WALLS THAT ARE SCHEDULED TO BE REMOVED SHALL INCLUDE THE REMOVAL OF ALL GAS PIPING, ELECTRICAL AND PLUMBING WORK CONCEALED WITHIN THOSE WALLS.
5. ALL ABANDONED, NONESSENTIAL OR OTHERWISE NOT SPECIFICALLY SHOWN TO BE REMOVED, MECHANICAL, PLUMBING OR ELECTRICAL UTILITIES THAT ARE EXPOSED AFTER CEILING OR WALL REMOVAL, ARE TO BE REMOVED AND CAPPED AT POINT OF ORIGIN. CONSULT ARCHITECT IF QUESTIONS ARISE AS TO WHETHER A SERVICE IS TO BE ABANDONED OR IS TO REMAIN.
6. ALL OTHER COMPONENTS OF THE EXISTING CONSTRUCTION, NOT ESSENTIAL TO REMAIN, THAT WOULD INTERFERE WITH THE INSTALLATION OF NEW WORK OR INTERFERE WITH THE INSTALLATION OF NEW FLUSH, UNBROKEN PLUMB AND LEVEL WALL, CEILING, AND FLOOR SURFACES, SHALL BE REMOVED.
7. ALL EXISTING UTILITY SERVICE LINES IN RENOVATED AREAS SHALL CONNECT TO NEW SERVICE LINES OR BE REMOVED AND CAPPED OFF AS REQUIRED. REMOVE AND CAP OFF ALL ABANDONED UTILITIES BEHIND FINISH WALL SURFACES OR BELOW FLOOR SLABS WHICH ARE EXPOSED DURING THE WORK.
8. ALL EXPOSED MATERIALS INCLUDED, BUT NOT LIMITED TO, CONCRETE, MASONRY, AND TILE WILL BE CUT IN STRAIGHT LINES PLUMB OR LEVEL USING CONCRETE SAWS, SCORING KNIVES OR OTHER APPROPRIATE TOOLS AS REQUIRED TO GIVE SMOOTH CLEAN EDGES. IRREGULARITIES IN EXPOSED SURFACES OR SURFACES TO BE REFINISHED SHALL BE GROUND SMOOTH OR FILLED FLUSH.
9. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR THE REGULAR DAILY REMOVAL OF ALL WASTE MATERIAL FROM THE PROJECT SITE AND BE RESPONSIBLE FOR KEEPING ALL AREAS CLEAN.
10. SALVAGE: THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND ITEMS TO BE REMOVED. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER WHEN DEMOLITION IS ABOUT TO BEGIN AND CONDUCT A SURVEY WITH THE OWNER TO IDENTIFY THOSE ITEMS TO BE SALVAGED. ITEMS IDENTIFIED BY THE OWNER TO BE SALVAGED AND TURNED OVER TO THE OWNER ARE TO BE REMOVED BY THE GENERAL CONTRACTOR AND DELIVERED TO A MUTUALLY AGREED LOCATION.
11. EXISTING WALLS THAT TIE INTO EXTERIOR WALLS SHALL BE REMOVED FLUSH WITH THE EXTERIOR WALL. EXTERIOR WALLS SHALL NOT BE DAMAGED DURING DEMOLITION ACTIVITIES. THE EXISTING INTERIOR SHEETROCK ON EXTERIOR WALLS TO REMAIN TO HOLD BUILDING INSULATION IN PLACE.
12. EXTERIOR DOORS AND WINDOWS THAT ARE TO REMAIN ARE TO BE PROTECTED DURING DEMOLITION ACTIVITIES.
13. ALL EXISTING MECHANICAL UNITS, DUCTWORK, GRILLES AND DIFFUSERS TO BE REMOVED ENTIRELY. OWNER RETAINS SALVAGE RIGHTS TO HVAC EQUIPMENT UNLESS NOTED OTHERWISE.
14. ALL ELECTRICAL SERVICE PANELS, BRANCHWIRING, RECEPTACLES AND LIGHT FIXTURES TO BE REMOVED ENTIRELY.

DEMOLITION NOTES	
---	WALLS TO BE DEMOLISHED
---	WALLS TO REMAIN

DEMOLITION KEYNOTES

- 1 REMOVE AND DISPOSE EXISTING WINDOW. REPAIR WALL AS REQUIRED. SEE DETAIL 5/A-401.
- 2 REMOVE AND DISPOSE EXISTING PLUMBING FIXTURES. REPAIR WALL/FLOOR AS REQ'D. SEE MECHANICAL DRAWINGS
- 3 REMOVE AND DISPOSE EXISTING DOOR AND FRAMING. REPAIR WALL/FLOOR AS REQUIRED.
- 3a REMOVE OVERHEAD DOOR, FRAME, TRACK AND MOTOR.
- 4 REMOVE EXISTING WALL COVERINGS. INSPECT FOR MOLD AND/OR DETERIATION. REMEDIATE ALL MOLD AND REPLACE DAMAGED BUILDING COMPONENTS WITH NEW MATERIALS. SEE PROPOSED PLAN FOR NEW MATERIALS.
- 5 REMOVE CELL WALLS. CONSULT WITH OWNER ON SALVAGE OR DISPOSAL OF MATERIALS.
- 6 REMOVE AND DISPOSE EXISTING FINISH FLOORING. ENSURE SUBFLOOR/SLAB IS LEVELED AND READY TO RECEIVE NEW FLOORING.
- 7 REMOVE AND DISPOSE EXISTING CEILING AND SUPPORT SYSTEM.
- 8 REMOVE DOWNSPOUTS.
- 9 REMOVE FLOOR AS REQUIRED FOR NEW MECHANICAL.
- 10 REMOVE STEEL STAIRS
- 11 REMOVE EXISTING GAS LINE.
- 12 EXISTING AWNING TO BE REPLACED WITH SAME SIZE AWNING- UTILIZED EXISTING AWNING FRAMING.
- 13 ALL INTERIOR WALLS ON FIRST FLOOR TO BE STRIPPED TO STUDS TO ALLOW FOR NEW ELECTRICAL WORK. ONCE COMPLETE REPLACE WITH 5/8" GYP. BOARD ON ALL EXPOSED SURFACES
- 14 REMOVE EXISTING THROUGH WALL MECHANICAL UNIT AND PATCH HOLE w/ CMU AS REQUIRED.
- 15 REMOVE EXISTING MILLWORK.
- 16 REMOVE EXISTING UNIT HEATERS.
- 17 SAW CUT EXISTING FLOOR SLAB FOR NEW PLUMBING LAYOUT PER PAL702.
- 18 REMOVE EXISTING HVAC UNITS, PIPING, DUCTWORK AND ASSOCIATED ELECTRICAL. SEE GENERAL DEMOLITION NOTE 10.
- 13 REMOVE EXISTING LOUVER AND PATCH WALL TO MATCH EXISTING.



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WWW.THEJLAGROUP.COM

CLIENT: NEWBERRY COUNTY
NEWBERRY, SOUTH CAROLINA

PROJECT NAME: TOWN HALL POLICE -
CITY OF WHITMIRE

PROJECT LOCATION: 210 MAIN STREET, WHITMIRE, SC 29178

JOHNSON, LASCHOB & ASSOCIATES, P.C.
No. C03790
STATE OF SOUTH CAROLINA
REGISTERED ARCHITECT

WATSON LEE
JANUARY 1, 2018
REGISTERED ARCHITECT

01/14/18

REV	DATE	BY	DESCRIPTION
2	10/2/18	WLD	ADDENDUM #2
0	09/25/18	WLD	ADDENDUM #2
0	09/14/18	WLD	ISSUED FOR CONSTRUCTION

PROJECT NO. 3606.1704

DRAWN BY: CTH/JPT

CHECKED BY: WLD

DATE: 12/11/17

SHEET TITLE: **DEMOLITION PLAN**

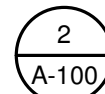
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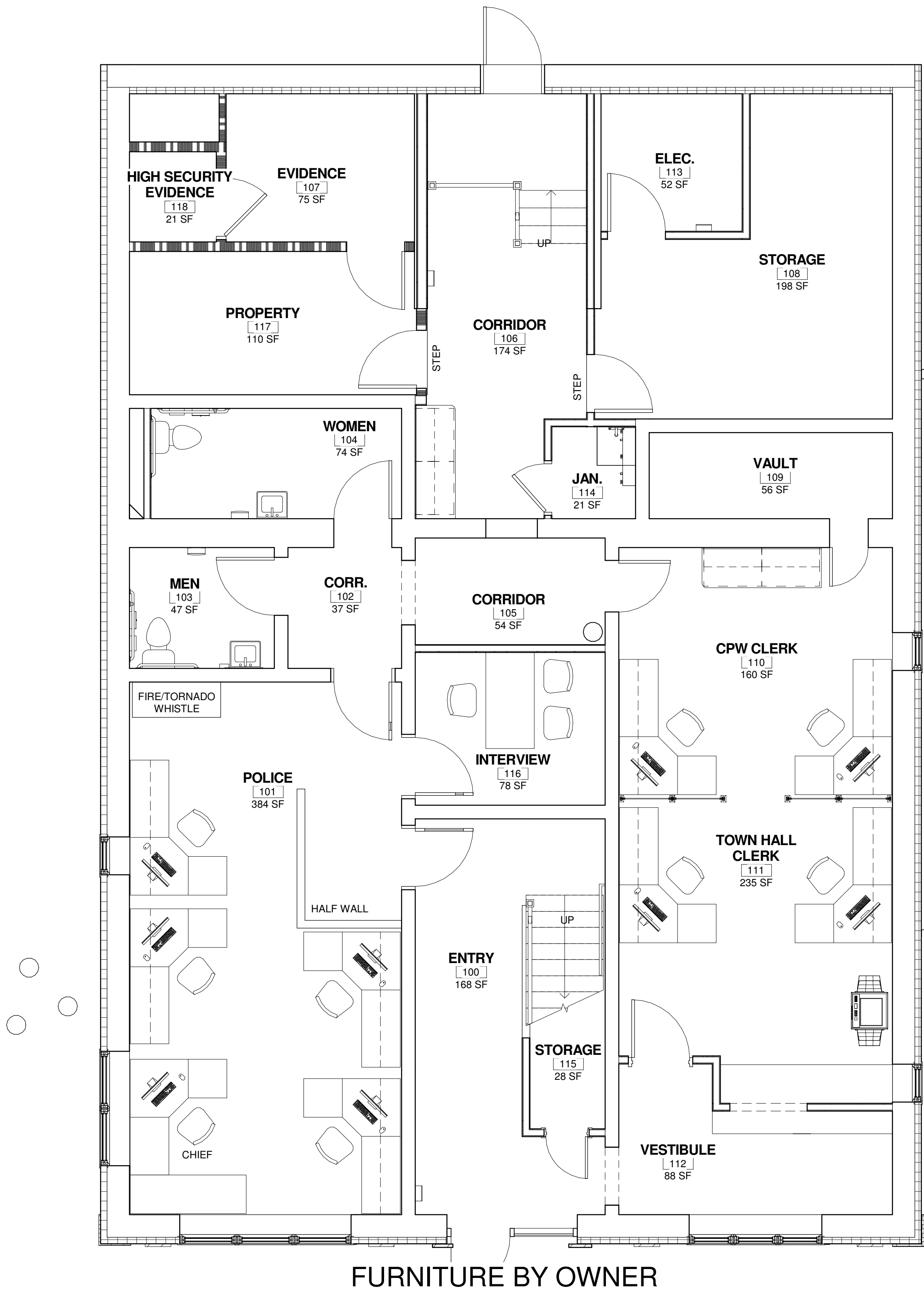
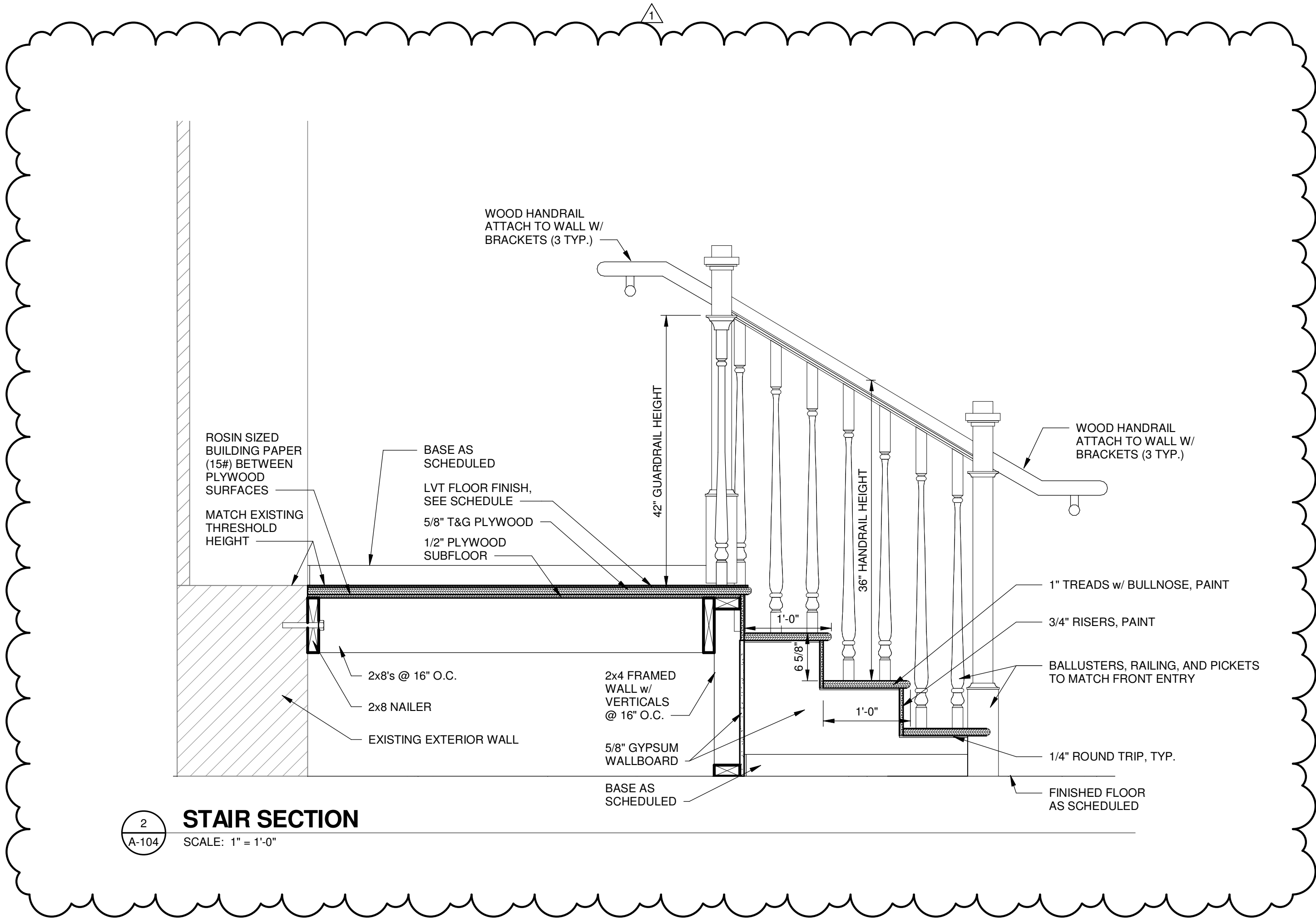
REV. **2**

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CLIENT: NEWBERRY COUNTY
NEWBERRY, SOUTH CAROLINA

PROJECT NAME: **TOWN HALL POLICE -
CITY OF WHITMIRE**

PROJECT LOCATION: 210 MAIN STREET, WHITMIRE, SC 29178

JOHNSON
LASCHOBER
& ASSOCIATES,
P.C.
No. C03790
STATE OF SOUTH CAROLINA
REGISTERED ARCHITECT
WATSON LEE
JANUARY 11, 2018
WHITMIRE, SC
01/14/18

REV	DATE	BY	DESCRIPTION
1	10/2/18	WLD	ADDENDUM #2
0	09/14/18	WLD	ISSUED FOR CONSTRUCTION

PROJECT NO. 3606.1704
DRAWN BY: JPT
CHECKED BY: WLD
DATE: 12/11/17
SHEET TITLE:

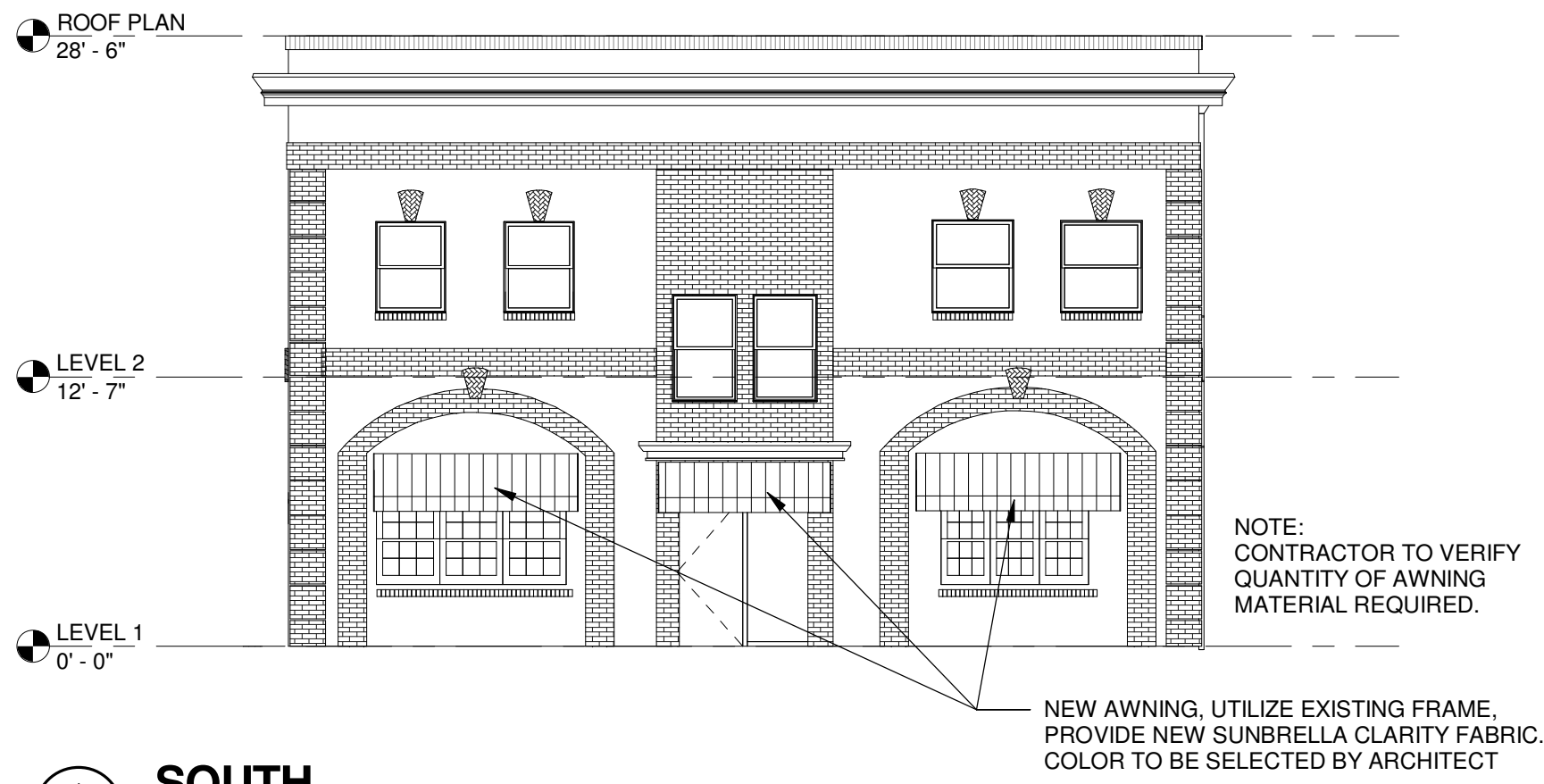
**PROPOSED
FURNITURE PLAN -
FIRST FLOOR &
STAIR SECTION**

SCALE AS NOTED
DRAWING NO. **A-104** REV. **1**

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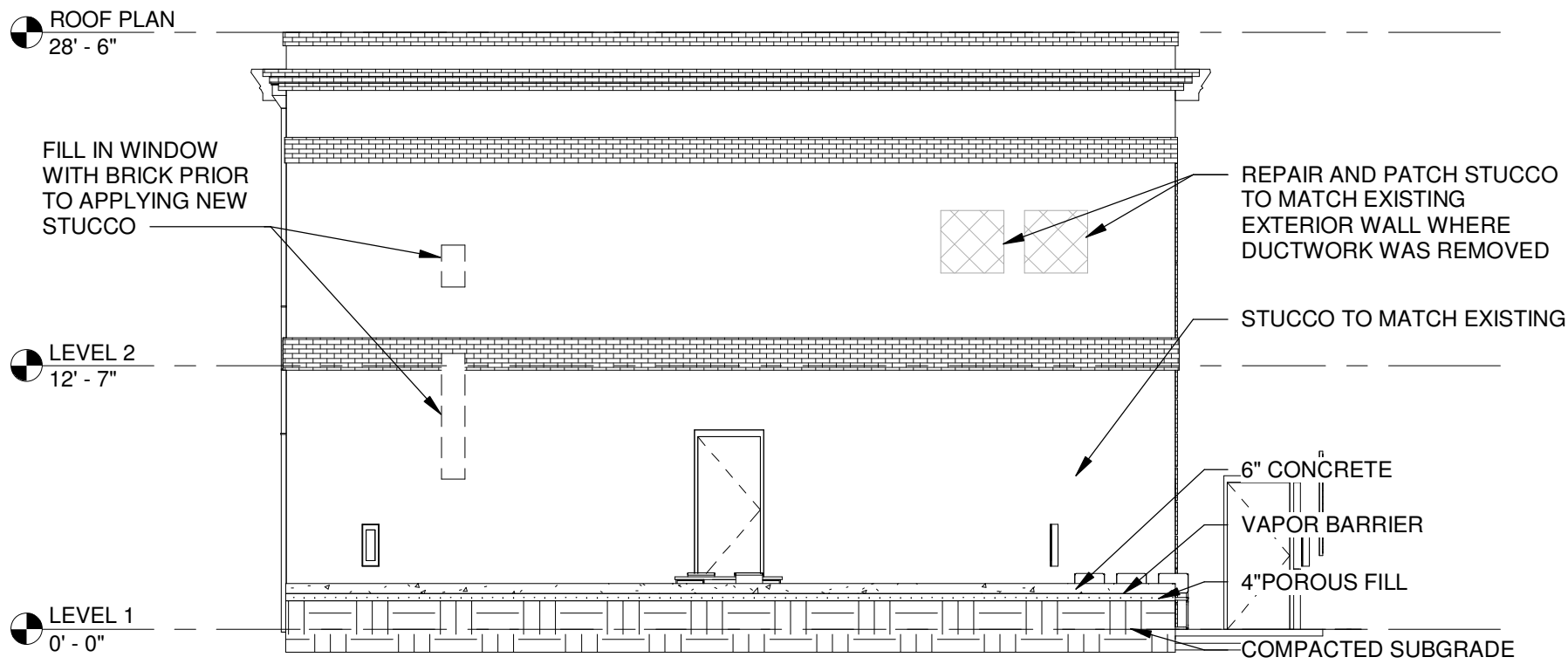
C
B
A

ORDER: JLA3006.DWG, REV. 02/15/2017, FLS

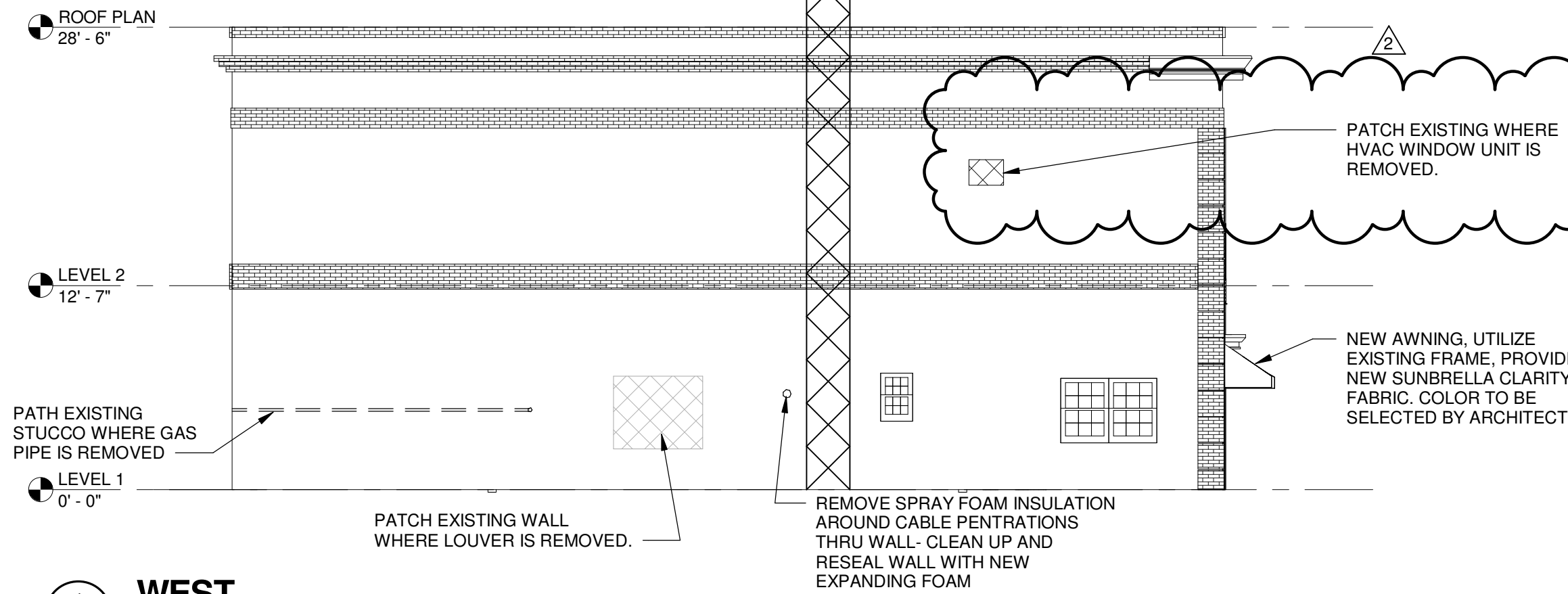


1
A-401
SOUTH
SCALE: 1/8" = 1'-0"

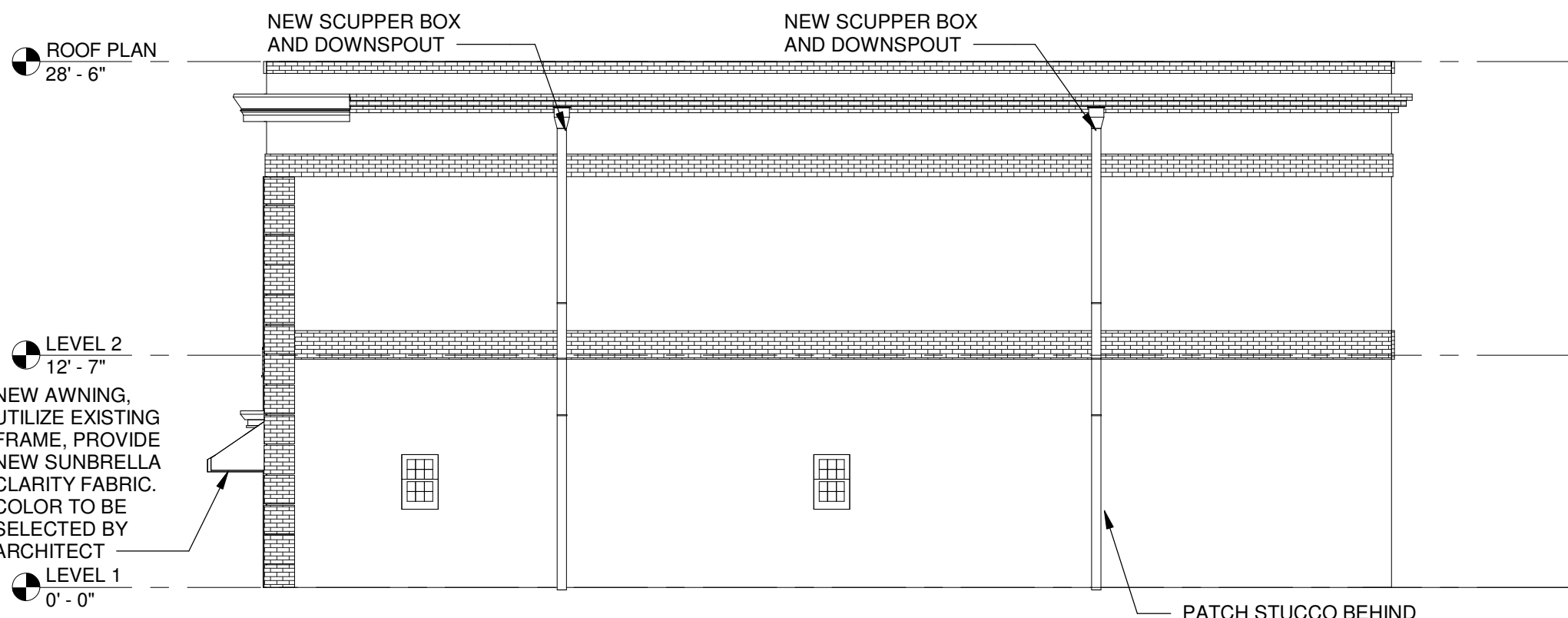
NOTE:
REPAINT ENTIRE EXTERIOR OF BUILDING- 2 COATS MINIMUM.
COLORS TO MATCH EXISTING.



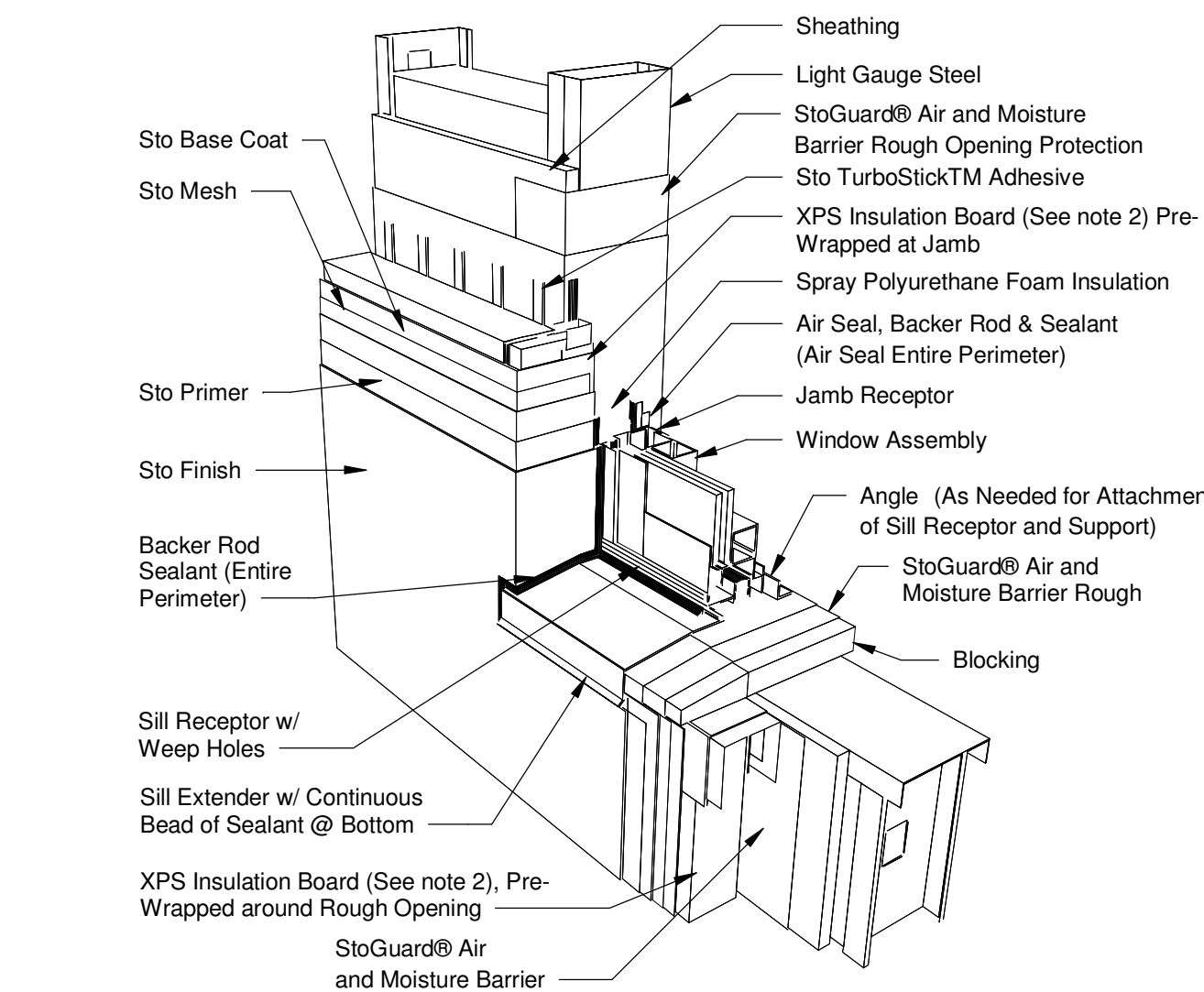
3
A-401
NORTH
SCALE: 1/8" = 1'-0"



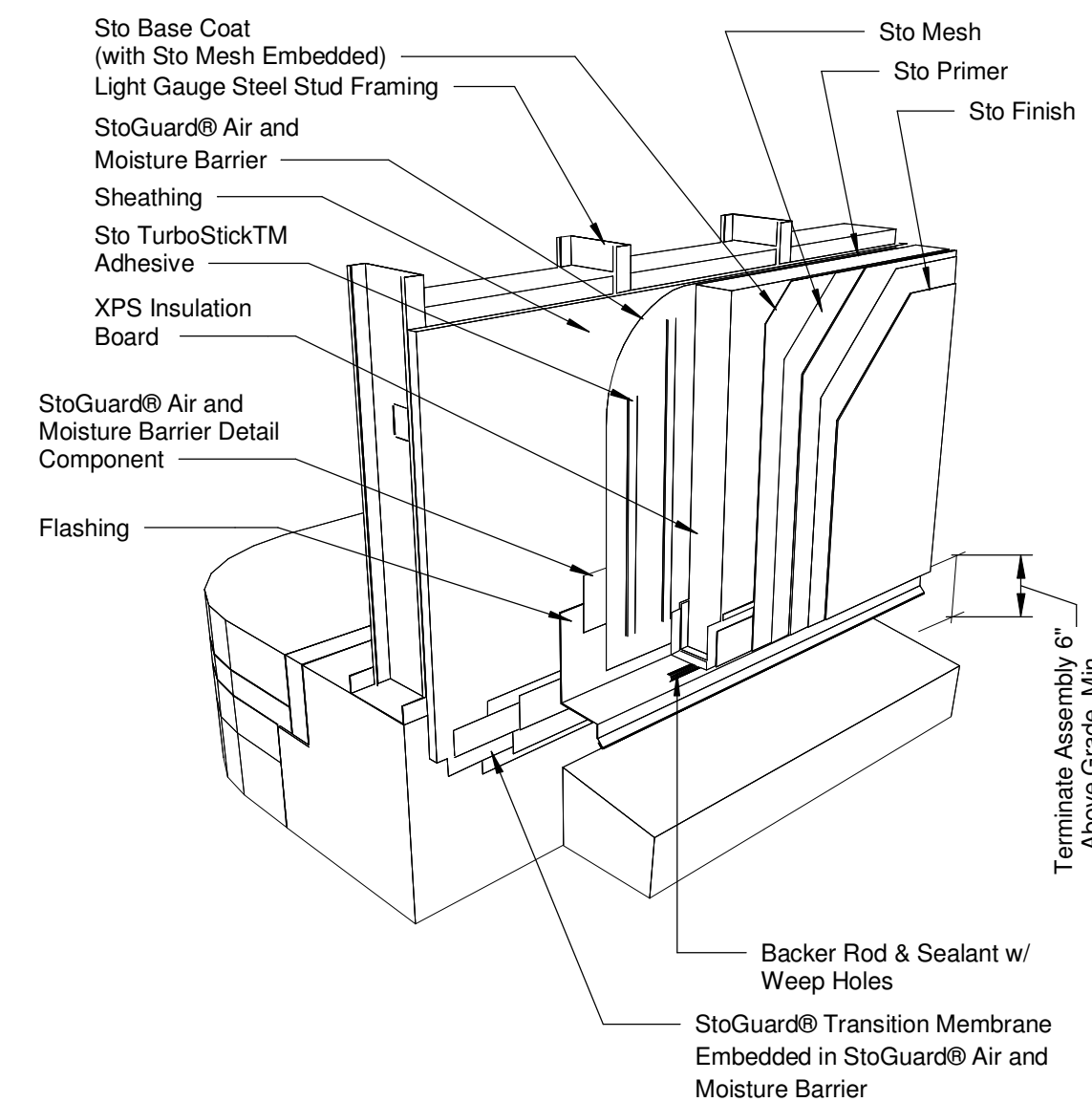
4
A-401
WEST
SCALE: 1/8" = 1'-0"



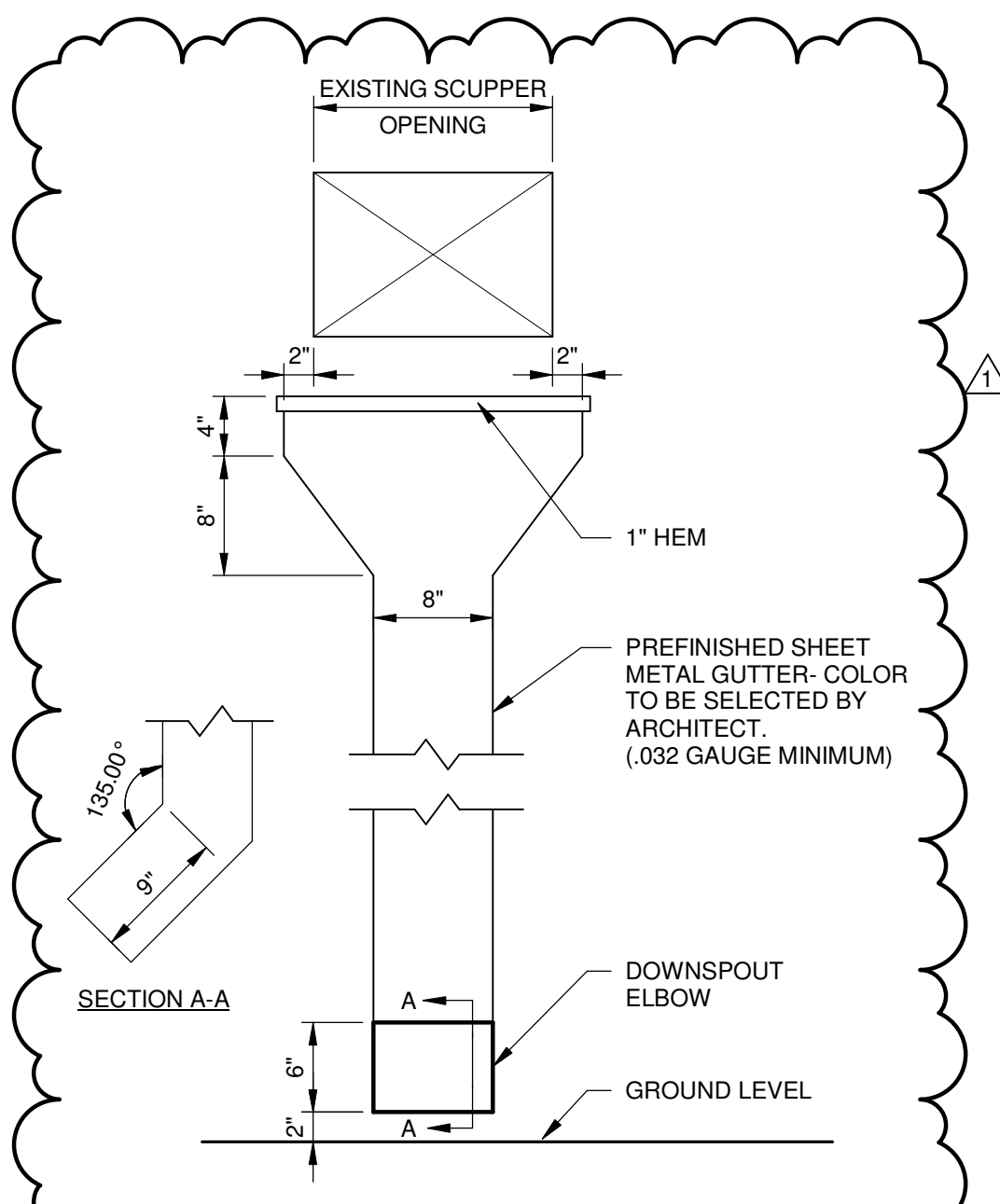
2
A-401
EAST
SCALE: 1/8" = 1'-0"



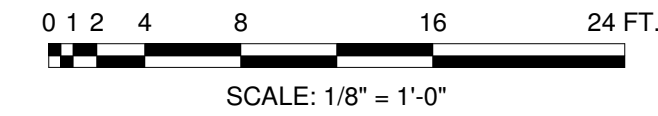
5
A-401
EIFS WINDOW FLASHING
SCALE: 1/2" = 1'-0"



6
A-401
EIFS TERMINATION @ GRADE
SCALE: 1/2" = 1'-0"



7
A-401
DOWNSPOUT DETAIL
SCALE: 1" = 1'-0"



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CLIENT: NEWBERRY COUNTY
NEWBERRY, SOUTH CAROLINA
PROJECT NAME: **TOWN HALL POLICE - CITY OF WHITMIRE**
PROJECT LOCATION: 210 MAIN STREET, WHITMIRE, SC 29178

JOHNSON, LASCHOBER & ASSOCIATES, P.C.
No. C03790
STATE OF SOUTH CAROLINA
WATSON LEE
JANUARY 14, 2018
REGISTERED ARCHITECT
01/14/18

REV	DATE	BY	DESCRIPTION
2	10/2/18	WLD	ADDENDUM #2
0	09/25/18	WLD	ADDENDUM #2
0	09/14/18	WLD	ISSUED FOR CONSTRUCTION

PROJECT NO. 3606.1704
DRAWN BY: CTH
CHECKED BY: WLD
DATE: 12/11/17

SHEET TITLE:
EXTERIOR ELEVATIONS

SCALE AS NOTED
DRAWING NO. **A-401**
REV. **2**

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DOOR SCHEDULE							
NUMBER	TYPE	DOOR			FINISH	COMMENTS	
		WIDTH	HEIGHT	THICKNESS			
100	EX	3'-0 3/4"	6'-11 1/2"			EXISTING	
101	HG	3'-0"	7'-0"	0'-1 3/4"	WD	PT	
101B	N	3'-0"	7'-0"	0'-1 3/4"	WD	PT	
102	CO	0'-0"	0'-0"				
103	F	3'-0"	7'-0"	0'-1 3/4"	WD	PT	
104	F	3'-0"	7'-0"	0'-1 3/4"	WD	PT	
105	CO	0'-0"	0'-0"		WD	PT	
106B	F	3'-0"	7'-0"	0'-1 3/4"	ST	PT	
107	F	3'-0"	7'-0"	0'-1 3/4"	ST	PT	
108	F	3'-0"	6'-8"	0'-2"	ST	PT	
109	EX	2'-0"	7'-0"	0'-1 3/4"		EXISTING	
110	EX	2'-8"	7'-0"	0'-1 3/4"		EXISTING	
111A	CO	0'-0"	0'-0"				
111B	FG	3'-0"	7'-0"				
113	F	3'-0"	6'-8"	0'-2 1/2"	WD	PT	
114	F	2'-6"	7'-0"	0'-1 3/4"	WD	PT	
115	EX	2'-2"	6'-8"	0'-1 3/8"			
116	N	3'-0"	7'-0"	0'-1 3/4"	WD	PT	
117	F	3'-0"	6'-8"	0'-2"	ST	PT	

NOTE:

1. ALL TYPES TO HAVE FINELIGHT GRILLES BETWEEN THE GLASS w/ A COLONIAL PATTERN.
2. REPLACED ALL WINDOW SILLS w/ 2CM SOLID SURFACE SILL.

WINDOW TYPES

SCALE: 3/8" = 1'-0"

NO GRILLE

1/2

UNIT DIMENSION 1/4"

UNOBSTRUCTED GLASS 2 3/8"

5/8"

1 5/16"

3"

1 1/4"

1 1/8"

1 1/2"

7/8" INSULATED GLASS (LOW E ARGON FILLED)

R.O.

UNIT DIMENSION 1/4"

UNOBSTRUCTED GLASS 2 3/8"

5/8"

1 5/16"

2 7/8"

1 1/4"

1 1/8"

1 1/2"

7/8" INSULATED GLASS (LOW E ARGON FILLED)

SCALE: $\frac{3}{8}" = 1'-0"$

NOTE:

1. ALL TYPES TO HAVE FINELIGHT GRILLES BETWEEN THE GLASS w/ A COLONIAL PATTERN.
2. REPLACED ALL WINDOW SILLS w/ 2CM SOLID SURFACE SILL

DOOR SCHEDULE							
NUMBER	TYPE	DOOR			MATERIAL	FINISH	COMMENTS
		WIDTH	HEIGHT	THICKNESS			
118	F	3' - 0"	7' - 0"	0' - 1 3/4"	ST	PT	B-LABEL
201	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
202	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
203	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
204	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
205	EX	5' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
206	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
207	EX	3' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
208	EX	6' - 0"	7' - 0"	0' - 1 3/4"			EXISTING
G100	F	3' - 0"	7' - 0"	0' - 1 3/4"	ST		REPLACE DOOR ONLY, INSULATED
G100A	OD	12' - 6"	10' - 0"	0' - 3"	ALUM	FF	
G100B	OD	10' - 5"	9' - 0"	0' - 3"	ALUM	FF	
G100C	OD	12' - 5"	9' - 0"	0' - 3"	ALUM	FF	
G100E	F	3' - 0"	7' - 0"	0' - 1 3/4"	ST	PT	
G101	F	3' - 0"	7' - 0"	0' - 1 3/4"	WD	PT	
G101B	F	3' - 0"	7' - 0"	0' - 1 3/4"	ST	PT	
G103	F	3' - 0"	7' - 0"	0' - 1 3/4"	WD	PT	
G104	F	3' - 0"	7' - 0"	0' - 1 3/4"	WD	PT	
G105	F	3' - 0"	7' - 0"	0' - 1 3/4"	WD	PT	

EXIST/EX. = EXISTING
CO = CASSED OPENING
FS = FLUSH STEEL
ALUM = ALUMINUM
HM = HOLLOW METAL
ST = STEEL
FF = FACTORY FINISH/ STANDARD COLORS
PT = PAINT
WD = SOLID CORE WOOD

FINISH SCHEDULE									
NUMBER	NAME	FLOOR FINISH	BASE	WALL FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	COMMENTS	
100	ENTRY	LVT-1	RB-1	PT	GB	PT-5	8'-0"	WALL PAINT COLOR TO BE DETERMINED, TYP.	
101	POLICE	CPT-1	RB-1	PT	ACT	-	9'-0"		
102	CORR.	LVT-1	RB-1	PT	ACT	-	9'-0"		
103	MEN	LVT-1	RB-1	PT-3	ACT	-	9'-0"	ALUMINUM GRID w/ VINYL FACED GYP.	
104	WOMEN	LVT-1	RB-1	PT-3	ACT	-	9'-0"	ALUMINUM GRID w/ VINYL FACED GYP.	
105	CORRIDOR	LVT-1	RB-1	PT	ACT	-	9'-0"		
106	CORRIDOR	LVT-1	RB-1	PT	ACT	-	9'-0"		
107	EVIDENCE	SC	RB-1	PT	OPEN TO STRUC. ABOVE	-			
108	STORAGE	SC	RB-1	PT	OPEN TO STRUC. ABOVE	-			
109	VAULT	CPT-1	RB-1	PT	GB	-	9'-0"		
110	CPW CLERK	CPT-1	RB-1	PT	ACT	-	9'-0"		
111	TOWN HALL CLERK	CPT-1	RB-1	PT	ACT	-	9'-0"		
112	VESTIBULE	LVT-1	RB-1	PT	ACT	-	9'-0"		
113	ELEC.	SC	RB-1	PT	ACT	-	9'-0"		
114	JAN.	LVT-1	RB-1	PT-3	ACT	-	9'-0"		
115	STORAGE	LVT-1	RB-1	PT	OPEN TO STAIRS ABOVE	-			
116	INTERVIEW	CPT-1	RB-1	PT	ACT	-	9'-0"		
117	PRISONERY	SC	RB-1	PT	OPEN TO STRUC. ABOVE	-			
118	HIGH SECURITY EVIDENCE	SC	RB-1	PT	GB	PT-5	8'-0"		
200	STAIRS	PT	PT	PT	ACT	-	9'-0"	RISERS, TREADS & HANDRAILS TO BE SANDED, LEVELED & PAINTED	
201	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	*****BASE BID, SEE NOTE 6*****	
202	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
203	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
204	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
205	CORRIDOR	LVT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
206	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
207	OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
208	FUTURE OFFICE	CPT-1	RB-1	PT	ACT	-	9'-0"	NOTE 5	
G100	GARAGE AREA	CONC*	-	PT	PLYWOOD (EXISTING)	PT-5	9'-0"	*PRESSURE WASH FLOOR AND SEAL	
G101	CORRIDOR	LVT-1	RB-1	PT	ACT	-	9'-0"		
G102	BREAK ROOM	LVT-1	RB-1	PT	ACT	-	9'-0"		
G103	OFFICE	LVT-1	RB-1	PT	ACT	-	9'-0"		
G104	ADA TOILET	LVT-1	RB-1	PT	ACT	-	9'-0"		
G105	STORAGE	WOOD	-	PT	PLYWOOD	PT-5	9'-0"	CEILING ATTACHED TO STRUCTURE	

CPT-1 - CARPET TILE	PT-1 - WALL PAINT	SS-1 - SOLID SURFACE
MANUFACTURER: SHAW CONTRACT SPEC: TBD SIZE: TILE 24"x24"; INSTALL TBD COLOR: TBD CONTACT: JOE WALKER 706-831-3938	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SATIN FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: DUPONT SPEC: CORIAN SIZE: 2CM COLOR: TBD CONTACT: PAUL STEVENS 678-662-0919
LVT-1 - LUXURY VINYL TILE	PT-2 - WALL PAINT	PL-1 - PLASTIC LAMINATE
MANUFACTURER: SHAW CONTRACT SPEC: TBD SIZE: TBD COLOR: TBD CONTACT: JOE WALKER 706-831-3938	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SATIN FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: WILSONART SPEC: STANDARD LAMINATE COLOR: TBD CONTACT: ANGIE LIBERTO 770-616-3088
RB-1 - RUBBER BASE	PT-3 - WALL PAINT	PL-2 - PLASTIC LAMINATE
MANUFACTURER: ROPPE SPEC: STD COVE BASE COLOR: TBD CONTACT: MICHELE MUSGROVE 404-640-0241	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SATIN FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: WILSONART SPEC: STANDARD LAMINATE COLOR: TBD CONTACT: ANGIE LIBERTO 770-616-3088
TR-1 - TRANSITION STRIPS	PT-4 - TRIM PAINT	PT-5 - GYP CEILING PAINT
MANUFACTURER: ROPPE SPEC: RUBBER COLOR: TBD CONTACT: MICHELE MUSGROVE 404-640-0241	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SEMI-GLOSS FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MFR: SHERWIN-WILLIAMS SPEC: INTERIOR, FLAT FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410

ACT: ACoustICAL CEILING TILE	RB: RUBBER / VINYL BASE
CONC: CONCRETE	RF: RUBBER FLOOR
CPT: CARPET	RN: RUBBER NOSING
CT: CERAMIC TILE	RT: RUBBER TILE
CB: CERAMIC TILE BASE	RSTR: RUBBER STAIR TREAD/RISER
CW: CERAMIC WALL COATING	SC: SEALED CONCRETE
EPX: EPOXY FLOORING	SPP: SPORTS FLOORING
EWC: EPOXY COATING	SS: SOLID SURFACE
EPP: EPOXY PAINT	ST: STAIN
ETR: EXISTING TO REMAIN	STC: STAMPED CONCRETE
EXP: EXPOSED STRUCTURE	SV: SHEET VINYL
FRP: FIBER REINFORCED PANEL	TBD: TO BE DETERMINED
GB: GYPSUM BOARD, ALL GYP.	TR: TRANSITION STRIP
BD: TO RECEIVE KNOCKDOWN	WC: WALL COVERING
DRYWALL FINISH	WDB: WOOD BASE
GT: GROUT	WDF: WOOD FLOORING
LV: LUXURY VINYL TILE	WTF: WOOD TACKING FLOORING
P: PAINT	VCT: VINYL COMPOSING TILE
PC: PAINTED CONCRETE	VP: VINYL PLANK FLOORING
PL: PLASTIC LAMINATE	VRB: VENTED RUBBER BASE

1. PRIME AND PAINT ALL EXPOSED STRUCTURE, FRAMING, BRACING, DUCT WORK, CONDUIT
2. ALL GYPSUM BOARD WALLS TO RECEIVE KNOCK DOWN FINISH TO MATCH EXISTING
3. ALL CONCRETE MASONRY WALLS TO RECEIVE EPOXY PAINT
4. SHOWER WALLS TO RECEIVE EPOXY WALL COATING
5. INSTALLATION OF NEW CEILING WILL BE INCLUDED AS PART OF BASE BID
6. ALL FINISHES IN THIS ARE TO BE INCLUDED AS PART OF THE BASE BID. INCLUDE TOP STAIR LANDING AS PART OF FINISHES IN OFFICE 201.

A-701 SCALE: 6" = 1'-0"

SCALE: 6" = 1'-0"

A-701 SCALE: 6" = 1'-0"

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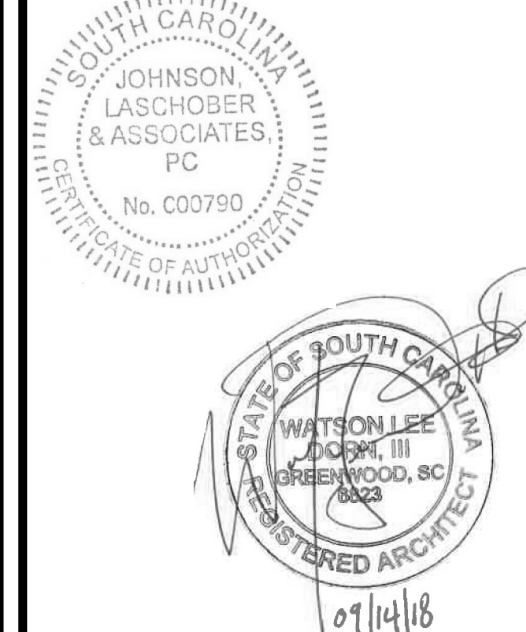
**TOWN HALL POLICE -
CITY OF WHITMIRE**

PROJECT LOCATION:
210 MAIN STREET, WHITMIRE, SC 29178

CLIENT:

PROJECT NAME:

PROJECT LOCATION:



PROJECT NO.	3606.1704
DRAWN BY:	CTH/JPT
CHECKED BY:	WLD
DATE:	12/11/17

SHEET TITLE:

**DOOR, WINDOW
SCHEDULE,
DETAILS, ROOM
FINISH SCHEDULE**

SCALE	AS NOTED
-------	----------

DRAWING NO.	REV
A-701	2



1
AALT01



LIGHTING FIXTURE SCHEDULE							
ID	BASIS OF DESIGN		VOLT.	WATTS	LAMP TYPE	MOUNTING	REMARKS
	MANUF.	MODEL NUMBER					
A	COLUMBIA	LCAT24-40MWG-EDU	120	33	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4'
AE	COLUMBIA	LCAT24-40MWG-EDU-ELL14	120	33	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4' WITH EMERGENCY BATTERY PACK
B	COLUMBIA	LCAT24-40LWG-EDU	120	40	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4'
BE	COLUMBIA	LCAT24-40LWG-EDU-ELL14	120	40	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4' WITH EMERGENCY BATTERY PACK
C	COLUMBIA	LCAT24-40HWG-EDU	120	44	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4'
D	ELITE	HH6-LED-1200L-MD-40K-SHZ-WT	120	17	4000K LED	RECESSED	LED DOWNLIGHT
DE	ELITE	HH6-LED-1200L-MD-40K-EMG-LED-SHZ-WT	120	17	4000K LED	RECESSED	LED DOWNLIGHT WITH EMERGENCY BATTERY PACK
E	COLUMBIA	LCL4 40 ML EDU ELL14	120	42	4000K LED	WALL/SURFACE	GENERAL PURPOSE 4' STRIP FIXTURE WITH EMERGENCY BATTERY
F	DAYOLITE	MEDL-PL-DI-SI-40-LO-4-W-U-EPC	120	45	4000K LED	WALL	4 FT UNIT- INTEGRAL SENSOR FOR HI-LO OPERATION
G	OXYGEN	3-547-20	120	26	4000K LED	WALL	VANITY LIGHT
H	LIGHTALARMS	CAM ACDC P	120	20	LED	WALL	WALL SCONCE WITH INTEGRAL BATTERY PACK.
J	COLUMBIA	LCL4 40 ML EDU	120	42	4000K LED	SUSPENDED	GENERAL PURPOSE 4' STRIP FIXTURE
X	COMPASS	CER	120	5	LED	WALL / CEILING	EXT SIGN

LIGHTING FIXTURE SCHEDULE NOTES:
1 . COORDINATE ALL FINISH OPTIONS WITH ARCHITECT.

MOTOR SCHEDULE				
ID	VOLTAGE	PHASE	WIRE / COND.	DESCRIPTION
1	240	1	2#4, #8G, 1" C.	RTU-1
2	240	1	2#4, #8G, 1" C.	RTU-2
3	120	1	2#12, #12G, 3/4" C.	EF-1
4	120	1	2#12, #12G, 3/4" C.	EF-2
5	120	1	2#12, #12G, 3/4" C.	EF-3
6	120	1	2#12, #12G, 3/4" C.	UH-1
7	240	1	2#10, #10G, 1" C.	AHU-1
8	240	1	2#12, #12G, 3/4" C.	OHP-1
9	120	1	2#12, #12G, 3/4" C.	WH-1
10	120	1	2#12, #12G, 3/4" C.	EF-4
11	120	1	2#12, #12G, 3/4" C.	GARAGE DOOR MOTOR

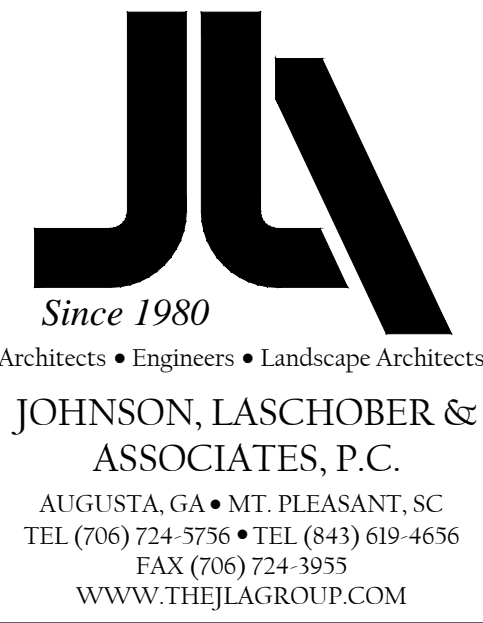
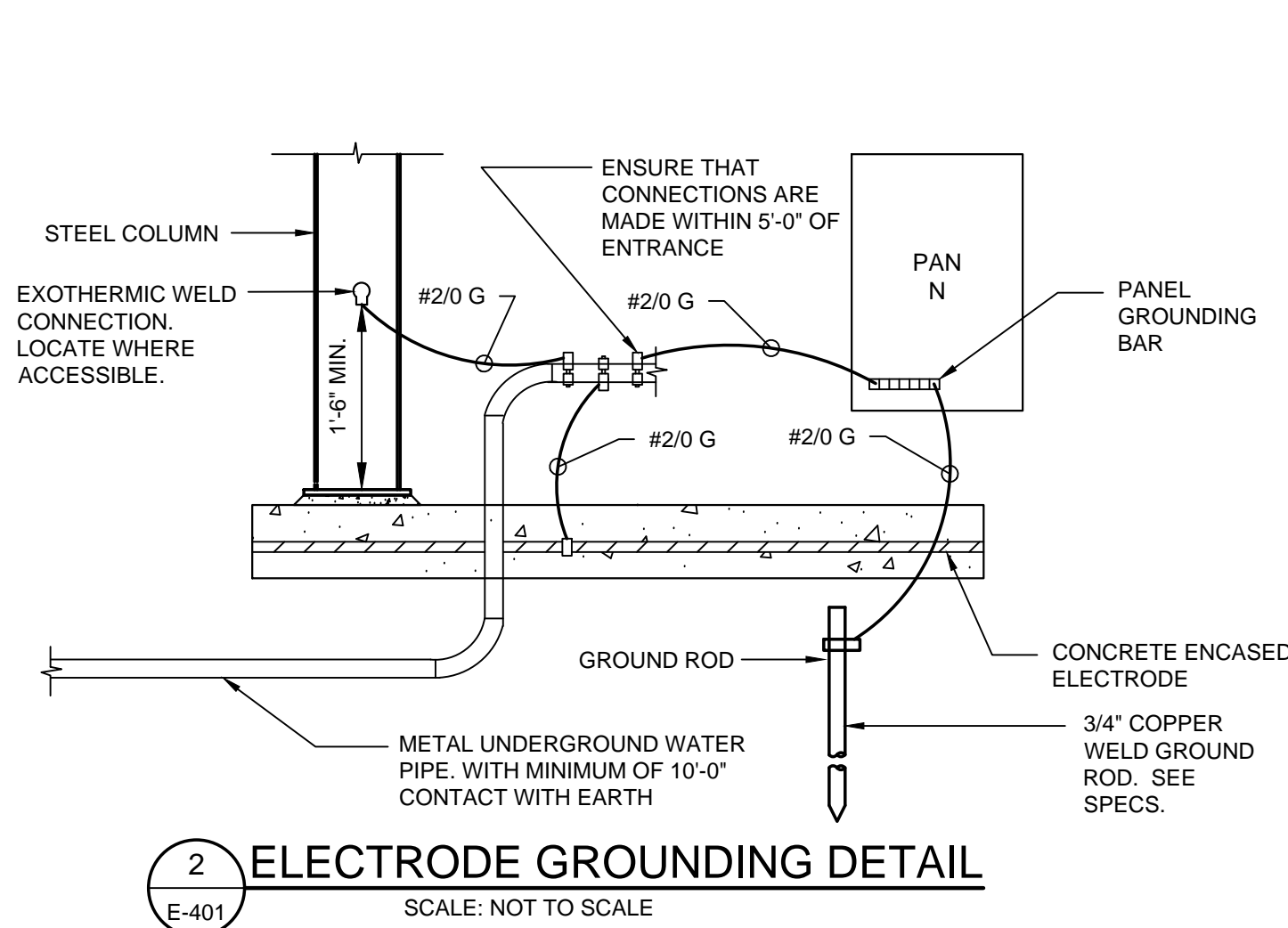
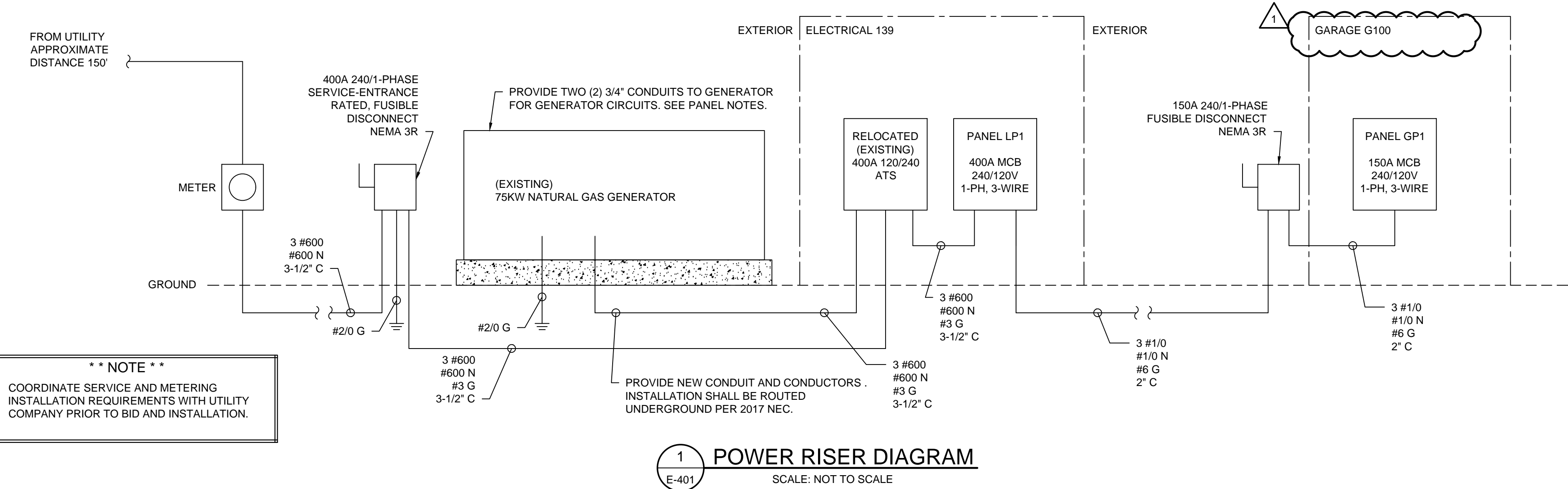
MOTOR SCHEDULE NOTES:
1 . PROVIDE LOCAL DISCONNECTING MEANS FOR EACH MOTOR. COORDINATE WITH MOTOR MOCF.

SPECIAL OUTLET SCHEDULE				
ID	VOLTAGE	PHASE	WIRE / COND.	DESCRIPTION
1	240	1	2#10, #10G, 3/4" C.	EWB-1
2	240	1	2#10, #10G, 3/4" C.	EWB-2

SPECIAL OUTLET SCHEDULE NOTES:
1 . PROVIDE LOCAL DISCONNECTING MEANS. COORDINATE WITH MOTOR MOCF.

VOLTAGE 120 /240V				PANEL LP1		LOCATION ELEC. 113				
PHASE 1		WIRE 3		MAIN AMPS 400		MOUNTING SURFACE		BREAKER		
S.C.C.		TBD MIN.				MAIN				
CKT	BREAKER AMPS	P	VA	SERVING	PHASE	SERVING	VA	BREAKER AMPS	P	CKT
1	20	1	1,644	LIGHTS	A	GENERAL RECEPTACLES	1,620	20	1	2
3	20	1	1,351	LIGHTS		GENERAL RECEPTACLES	1,620	20	1	4
5	20	1	1,440	MEETING 208, CORR. 205	A	CPW CLERK 110	900	20	1	6
7	20	1	900	MEETING 208		TOWN HALL CLERK 111	900	20	1	8
9	20	1	720	OFFICE 201	A	TOWN HALL CLERK COUNTER	360	20	1	10
11	20	1	720	OFFICE 202	B	TOWN HALL COPIER	1,500	20	1	12
13	20	1	720	OFFICE 203	A	POLICE 101	900	20	1	14
15	20	1	720	OFFICE 204	B	POLICE 101	900	20	1	16
17	20	1	720	OFFICE 206	A	GENERATOR BATT. CHARGER*	500	20	1	18
19	20	1	720	OFFICE 207	B	GENERATOR CASE HEATER*	500	20	1	20
21	30	2	2,250	EWB-1	A	INTERVIEW 116	720	20	1	22
23			2,250		B	SPARE		20	1	24
25	20	1		SPARE	A	SPARE		20	1	26
27	20	1		SPARE	B	SPARE		20	1	28
29		1		SPACE	A	SPACE			1	30
31		1		SPACE	B	SPACE			1	32
33		1		SPACE	A	SPACE			1	34
35		1		SPACE	B	PANEL GP1	16,020	200	2	36
37		1		SPACE	A		13,358			38
39	60	2	4,692	RTU-1	B	RTU-2	4,692	60	2	40
41			4,692		A		4,692			42
VA PER PHASE				35,236	37,485	TOTAL VA	72,721			
AMPS PER PHASE				294	312	DIVERSIFIED VA	72,721			
REMARKS: 1 . *PROVIDE 3#12 FOR EACH GENERATOR CIRCUIT.										

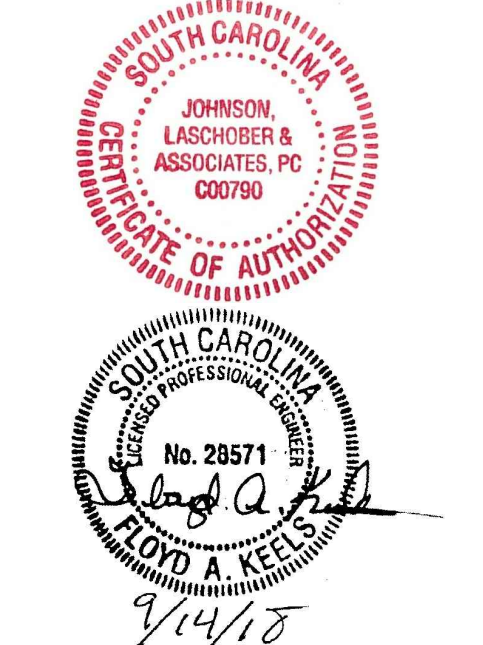
VOLTAGE 120 /240V				PANEL GP1**		LOCATION GARAGE G100				
PHASE 1		WIRE 3		MAIN AMPS 150		MOUNTING SURFACE		BREAKER		
S.C.C.		TBD MIN.				MAIN		M.L.O.		
CKT	BREAKER		VA	SERVING	PHASE	SERVING	VA	BREAKER		CKT
	AMPS	P						AMPS	P	
1	20	1	1,162	LIGHTING	A	GARAGE RECEPTACLES	540	20	1	2
3	20	1	500	EXTERIOR LIGHTING	B	GARAGE RECEPTACLES	540	20	1	4
5	20	1	1,500	OVERHEAD DOOR	A	GARAGE RECEPTACLES	360	20	1	6
7	20	1	1,500	OVERHEAD DOOR	B	GARAGE RECEPTACLES	540	20	1	8
9	20	1	1,500	OVERHEAD DOOR	A	REFRIGERATOR	800	20	1	10
11	20	1		SPARE	B	APPLIANCE RECEPTACLE	1,500	20	1	12
13	25	2	2,880	AHU-1	A	APPLIANCE RECEPTACLE	1,500	20	1	14
15			2,880		B	OFFICE RECEPTACLES	720	20	1	16
17	20	2	1,440	OHP-1	A	GENERAL RECEPTACLES	1,080	20	1	18
19			1,440		B	UH-1	288	20	1	20
21	30	2	2,250	EWB-2	A	WH-1	1,008	20	1	22
23			2,250		B	EXISTING EXHAUST FAN*	1,200	20	1	24
VA PER PHASE				16,020	13,358	TOTAL VA	29,378			
AMPS PER PHASE				134	111	DIVERSIFIED VA	29,378			
REMARKS: 1. **VERIFY BREAKER AND WIRING WITH EXISTING EQUIPMENT TO REMAIN. 2. **BASE BID: PROVIDE PANEL AND DISCONNECT AS SHOWN ON RISER DIAGRAM. RECIRCUIT EXISTING PER 2014 NEC. UPDATE PANEL DIRECTORY. ALTERNATE#2: PROVIDE ELECTRICAL DESIGN AS SHOWN ON SHEET EALT02.										



CLIENT: NEWBERRY COUNTY NEWBERRY, SOUTH CAROLINA

PROJECT NAME: TOWN HALL POLICE - CITY OF WHITMIRE

PROJECT LOCATION: 210 MAIN STREET, WHITMIRE, SC 29178



REV	DATE	BY	DESCRIPTION
1	10/02/18	FAK	ADDENDUM #2
0	09/14/18	FAK	ISSUED FOR CONSTRUCTION

PROJECT NO.	3606.1704
DRAWN BY:	JAP/JFP
CHECKED BY:	FAK
DATE:	12/11/17
SHEET TITLE:	
ELECTRICAL SCHEDULES AND DETAILS	
SCALE: AS NOTED	
DRAWING NO.	E-401
REV.	1