

Rooftop Systems Engineers, P.C.

Suite 201, West Millbrook Road, Raleigh, North Carolina 27609-4482 919-872-7866; 919-872-4486 fax
www.rooftopsystemsengrs.com

GUTTER ENHANCEMENTS at DR. BROWN'S OFFICE 154 SW MAIN STREET ROCKY MOUNT, NC 27804

Prepared by:

ROOFTOP SYSTEMS ENGINEERS, P.C.
SUITE 201
316 W MILLBROOK ROAD
RALEIGH, NC 27609-4482

919-872-7866; 919-872-4486 fax
www.rooftopsystemsengrs.com

August 9, 2014

RSE Job No. 14-021

**GUTTER ENHANCEMENTS
DR. BROWN'S OFFICE
ROCKY MOUNT, NC**

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NOTICE TO BIDDERS

Sealed proposals will be received by Octavia Mitchell in Dr. Monique Brown's Office, 154 SW Main Street, Rocky Mount, North Carolina 27804, telephone number (252) 937-3022, up to **4:00 P.M. on Thursday, February 5, 2015** for "GUTTER ENHANCEMENTS at DR. BROWN'S OFFICE – ROCKY MOUNT, NC." The bid opening will be held in Dr. Brown's Office.

Complete plans, specifications and contract documents will be open for inspection at Rooftop Systems Engineers, Suite 201, 316 West Millbrook Road, Raleigh, NC. Electronic copies are available by request.

The work of this Project shall consist of constructing a sloped drainage channel along two sides of the vaulted barrel roof, and replacement of scuppers and conductor heads at Dr. Monique Brown's Office located at 154 SW Main Street, Rocky Mount, NC 27804. The bid will be awarded as a single prime contract.

All contractors are hereby notified that they must have all licenses under the State laws governing their respective trades. Bidders are notified that Chapter 87 ("Contractors") of the General Statutes of North Carolina will be observed in receiving bids and awarding contracts.

Performance and Payment Bonds are not required.

No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of 45 days.

A mandatory pre-bid meeting will be held at Dr. Brown's Office, 154 SW Main Street, Rocky Mount, NC 27804, at **1:00 P.M. on Tuesday, January 27th, 2015**. Minority business owners, single prime contractors, subcontractors or suppliers are urged to attend the pre-bid meeting to meet other potential single prime contractors.

The Owner reserves the right to reject any or all bids and to waive informalities.

The Owner will not discriminate against any contractor submitting a bid because of race, creed, color, national origin or handicap.

INFORMAL CONTRACT GENERAL CONDITIONS

GENERAL

It is understood and agreed that by submitting a bid that the Contractor has examined these contract documents, drawings and specifications and has visited the site of the Work, and has satisfied himself relative to the Work to be performed.

MATERIALS, EQUIPMENT AND EMPLOYEES

The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, fuel, sanitary facilities and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.

All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.

No changes shall be made in the Work except upon written approval and change order of the Designer/Owner.

Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed.

However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Substitution of materials, items or equipment of equal or equivalent design shall be submitted to the architect or engineer for approval or disapproval; such approval or disapproval shall be made by the architect or engineer prior to the opening of bids.

If at any time during the construction and completion of the work covered by these contract documents, the conduct of any workman of the various crafts be adjudged a nuisance to the Owner or if any workman be considered detrimental to the work, the Contractor shall order such parties removed immediately from the site.

The contractor shall designate a foreman/superintendent who shall direct the work.

CODES, PERMITS AND INSPECTIONS

The Contractor shall obtain the required permits, if required, give all notices, and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Designer in writing. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the Owner, he shall bear all cost arising therefrom.

All work under this contract shall conform to the current North Carolina Building Code and other state and national codes as are applicable

SAFETY REQUIREMENTS

The Contractor shall be responsible for the entire site and the construction of the same and provide all the necessary protections as required by laws or ordinances governing such conditions and as required by the Owner or Designer. He shall be responsible for any damage to the Owner's property, or that of others on the job, by himself, his personnel

or his subcontractors, and shall make good such damages. He shall be responsible for and pay for any claims against the Owner arising from such damages.

The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926 published in Volume 39, Number 122, Part 11, June 24, 1974 Federal Register), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.

The Contractor shall provide all necessary safety measures for the protection of all persons on the work, including the requirements of the AGC Accident Prevention Manual in Construction as amended, and shall fully comply with all state laws or regulations and North Carolina Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.

EQUAL OPPORTUNITY

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to Equal Employment Opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor, are incorporated herein.

The Contractors agree not to discriminate against any employees or applicant for employment because of physical or mental handicap in regard to any position for which the employees or applicant is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices.

INSURANCE

The Contractor shall not commence work until he has obtained all insurance required, and the Owner has approved such insurance, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been obtained.

The Contractor shall provide and maintain during the life of this contract Workmen's Compensation Insurance for all employees employed at the site of the project under his contract.

The Contractor shall provide and maintain during the life of this contract such Public Liability and Property Damage Insurance as shall protect him and any subcontractor performing work covered by this contract, from claims for damage for personal injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operation be by the Contractor himself or by any subcontractor, or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

Public Liability Insurance in an amount not less than \$300,000 for injuries, including accidental death, to any one person and subject to the same limit for each person, in amount not less than \$500,000 on account of one accident; and Property Damage Insurance in an amount not less than \$100,000/\$300,000.

Each Certificate of Insurance shall bear the provision that the policy cannot be canceled, reduced in amount or coverage eliminated in less than fifteen (15) days after mailing written notice to the insured and/or the Owner of such alteration or cancellation, sent by registered mail.

The Contractor shall furnish the Owner with satisfactory proof of carriage of the insurance required before written approval is granted by the Owner.

INVOICES FOR PAYMENT

No partial payment will be made unless agreed to in advance. Final payment will be made lump sum within thirty (30) consecutive days after acceptance of the work and the submission both of notarized contractor's affidavit and four copies of invoices which are to include the contract, account and job order numbers.

The contractor's affidavit shall state: "This is to certify that all costs of materials, equipment, labor, and all else entering into the accomplishment of this contract, including payrolls, have been paid in full."

Executed contract documents, insurance certifications and, upon completion and acceptance of the work, invoices and other information requested are to be sent to:

Rooftop Systems Engineers, P.C.
316 West Millbrook Road, Suite 201
Raleigh, NC 27609
Telephone 919.872.7866

It is imperative that contract documents, invoices, etc., be sent only to the above address in order to assure proper and timely delivery and handling.

CLEANING UP

The Contractor shall keep the sites and surrounding area reasonably free from rubbish at all times and shall remove debris from the site from time to time or when directed to do so by the Owner. Before final inspection and acceptance of the project, the Contractor shall thoroughly clean the sites, and completely prepare the project and site for use by the Owner.

GUARANTEE

The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twenty four (24) months following the final acceptance of the work and shall replace such defective materials or workmanship without cost to the owner.

Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.

Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor, which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.

Guarantees for roofing workmanship and materials shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

CONTRACTOR-SUBCONTRACTOR RELATIONSHIPS

The Contractor agrees that the terms of these contract documents shall apply equally to a subcontractor as to the Contractor, and that the subcontractor is bound by those terms as an employee of the Contractor.

The general contractor awarded the contract shall not subcontract more than 25% of the total contract without the approval of the Designer prior to bidding. The bidder shall obtain permission 10 days prior to the bid date. Within fourteen (14) days after the award of the contract he shall submit copies of any subcontracts.

INFORMAL CONTRACT PROPOSAL AND CONTRACT

GUTTER ENHANCEMENTS at DR. MONIQUE BROWN'S OFFICE

The undersigned, as bidder, proposes and agrees if this proposal is accepted to contract with Dr. Monique Brown for the furnishing of all materials, equipment, and labor necessary to complete the construction of the work described in these documents in full and complete accordance with plans, specifications, and contract documents, and to the full and entire satisfaction of the Owner and Rooftop Systems Engineers, P.C. for the sum of:

BASE BID:

1. Mobilization and submittals.
Lump Sum \$ _____

2. Wood framing for new pitched gutter channels.
Lump Sum \$ _____

3. New board insulation and cover board.
Lump Sum \$ _____

4. New EPDM membrane, including all accessories and flashings, and all other work specified but not listed in this schedule.
Lump Sum \$ _____

5. New through-wall scuppers and conductor heads, including necessary masonry work.
Lump Sum \$ _____

TOTAL BASE BID (Items 1 through 5)

Dollars (\$ _____)

UNIT PRICES

This work is being bid based upon the Contractor's lump sum prices and unit prices. Unit prices shall apply throughout the life of the contract. Unit prices shall be applied, as appropriate, to compute the total value of changes in the base bid quantity of the work all in accordance with the contract documents.

Should the actual quantities of work be increased or decreased, Unit Prices shown will be used to adjust the contract price (increase or decrease) throughout the life of the contract.

In the event of a discrepancy in the mathematical extensions of unit prices, the extended price shall be corrected per the unit price shown. In the event of a discrepancy in the addition of extended and lump sum prices, the subtotal shall be corrected based on the extended and lump sum prices shown.

*SUBMIT THREE (3) ORIGINALS OF THIS DOCUMENT AS YOUR BID.
Bid Form Page 1 of 2*

Proposal Signature Page

Respectively submitted this _____ day of _____ 20____

(Contractor)
Federal ID#: _____ By: _____

Witness: _____ Title: _____
(Owner, partner, corp. Pres. Or Vice President)

Address: _____
(Proprietorship or Partnership)

Attest: *(corporation)*
(Corporate Seal)

By: _____ License #: _____

Title: _____
(Corporation Secretary/Ass't Secretary)

ACCEPTED: (Base Bid)

BY: _____ TITLE: _____

DATE: _____, 2014

SUBMIT THREE (3) ORIGINALS OF THIS DOCUMENT AS YOUR BID.
Bid Form Page 2 of 2

**DIVISION 1
GENERAL REQUIREMENTS
SECTION 01010
SUMMARY OF WORK**

PART 1 GENERAL

1.1 Work Covered by Contract Documents

Work under this contract consists of furnishing all labor, materials, and equipment necessary to perform the GUTTER ENHANCEMENTS at DR. BROWN'S OFFICE, Rocky Mount, NC.

1.2 Scope of Work:

1.2.1 Remove water trapped between EPDM membrane layers at south gutter channel.

1.2.2 Construct framing along both gutter channels to provide 1/4" / ft slope toward scuppers at rear parapet.

1.2.3 Replace through-wall scuppers (2) at rear parapet. Construct and flash in new scuppers per drawings. This includes reworking brick masonry to accommodate the new scupper dimensions.

1.2.4 Replace conductor heads (2) per drawings.

1.2.5 Install new board insulation, .045 mil EPDM membrane, and coverboard over new sloped gutter framing.

1.3 Contract Method - Construct the work based on the lump sum items and unit priced items as shown on the Bid Form.

1.4 Work Sequence - Work shall proceed in a continuous and orderly manner. Phased construction is unacceptable.

1.5 Contractor Use of Premises

1.5.1 Limit use of premises for construction operations to allow for Owner occupancy.

1.5.2 Coordinate use of premises under direction of the Owner.

1.5.3 The Contractor shall strive to minimize disruption to the building operations and occupancy during remedial roofing activities.

1.5.4 The Contractor shall be held liable for any damages to the building, the building contents, or its occupancy resulting from work under this contract.

- 1.5.5 Roofing and/or insulation shall not be installed during the hours of darkness.
- 1.6 Owner Occupancy - Owner will occupy premises during entire period of construction to conduct his normal operations. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations. The Contractor shall be held liable for delays/interruptions of production resulting from work under this contract.
- 1.7 Coordination
 - 1.7.1 Coordinate work of the various sections of specifications to assure efficient and orderly sequence of installation of materials.
 - 1.7.2 Coordinate work under this contract with other contract work relating to the same building/roof areas to assure efficient and orderly sequence of installation of materials.
- 1.8 Reference Standards
 - 1.8.1 Products specified by association or trade standards, must comply to those standards, except when more rigid requirements are specified herein or are required by applicable codes.
 - 1.8.2 The date of the standard is that which is in effect as of the bid date, except when a specific date is stated.
 - 1.8.3 Should there be a discrepancy between the referenced standards and these contract documents, the latter shall govern unless written interpretation is obtained from the Owner. In any event, Owner and Designer shall have final approval over work.
 - 1.8.4 Should there be discrepancies among the referenced standards, the more stringent requirements shall govern.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01300 SUBMITTALS

PART 1 GENERAL

- 1.1 Procedures:
 - 1.1.1 Provide in digital format marked to show:
 - 1.1.1.1 Project name
 - 1.1.1.2 Contractor
 - 1.1.1.3 Submittal number (see tabulation below).
 - 1.1.1.4 Contractor's approval and date.
 - 1.1.1.5 The specific material to be used:
 - A. Designate such information as model number, type, trade name, size, weight color, material type, manufacturer, etc.
 - B. Any deviations from contract documents shall be clearly identified.
 - 1.1.2 Address - Send all submittals to the Designer.
 - 1.1.3 Review - After Designer's review of submittals, revise and resubmit, as required, identifying changes made since previous submittal.
 - 1.1.4 Address - Send all submittals to the Owner's representative.
- 1.2 Shop Drawings - Submit shop drawings for all sheet metal components showing shapes, dimensions, corner details, end details and method of attachment.
- 1.3 Product Data:
 - 1.3.1 Submit a complete description of the roofing system listing all components and their respective manufacturer.
 - 1.3.2 Submit manufacturer's technical specifications and installation instructions for each major roofing component required.
 - 1.3.3 Minimum required components include but are not limited to: fasteners, insulation, cover board, membrane, primers and termination sealants.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 Timing:

- 3.1.1 Make all submittals in accordance with schedules specified herein unless otherwise required.
- 3.1.2 A minimum of ten (10) calendar days shall be allowed for review by the Designer following receipt of the submittal.
- 3.1.3 All submittal packages shall be reviewed prior to actual start of appropriate segment of the project.

3.2 Review:

- 3.2.1 Review by the Designer shall be directed to the general method of construction only and shall not be construed as a complete check nor shall this review relieve the contractor from responsibility for errors and/or omissions which may exist.
- 3.2.2 The notations "Reviewed" or "Make corrections as noted" shall authorize the contractor to proceed with fabrication, purchase, or both subject to the revisions, if any required by the Designer's review comments.
- 3.2.3 The Contractor shall make all revisions as required. If the Contractor considers any required revisions to constitute a change he shall so notify the Designer under the provisions as specified in the general conditions. Only those revisions directed or approved by the Designer shall be shown on the resubmittal.
- 3.2.4 After a submittal has been reviewed by the Designer, substitution of materials or equipment shall not be considered unless accompanied by an acceptable explanation as to the necessity of the substitution.

3.3 List of required submittals - see following:

SUBMITTALS
GUTTER ENHANCEMENTS at DR. BROWN'S OFFICE
ROCKY MOUNT, NC

**Review is for general compliance with the contract documents. No responsibility is assumed
for correctness of dimensions or details.**

ITEM	DATE SUBMITTED	STATUS			
		Reviewed	Make Corrections Noted	Revise and Resubmit	Rejected
1. Emergency telephone numbers					
2. Subcontractors					
3. Material suppliers					
4. Project Schedule					
5. Sequence of operations					
6. Schedule of Values					
SECTION 02070					
7. Plywood					
8. Joists / ledgers					
9. Fasteners					
SECTION 04520					
10. Mortar mix					
SECTION 07212					
11. Coverboard					
12. ISO					
13. Fasteners / plates					
14. Adhesive					
SECTION 07531					
15. Membrane					
16. Membrane cleaner					
17. Adhesive					
18. Seam tape					
19. Termination bar					
20. Lap sealant					
SECTION 07621					
21. Stainless steel scuppers					
22. Kynar coated conductor head / outer scupper flange					
23. Sealant					
24. Membrane manufacturer's scupper flashing detail.					

END OF SECTION

SECTION 01400 QUALITY CONTROL

PART 1 GENERAL

1.1 Quality Control - Contractor

- 1.1.1 Maintain quality control over products, services, site conditions, and workmanship, to produce work of specified quality.
- 1.1.2 Project foreman shall be on site at all times that work is being performed.
- 1.1.3 Subcontractor foremen shall be on site at all times that the work is being performed; he shall be at the actual work site to observe workmanship and to be able to direct the work.
- 1.1.4 Preconstruction meeting - The preconstruction meeting shall be attended by the contractors superintendent or project manager and foreman who will actually perform the work.
- 1.1.5 Contractor Employees:
 - 1.1.5.1 None but skilled foremen and workmen shall be employed on work requiring special qualifications. Any person employed on the work who fails, refuses, or neglects to obey the instructions in anything relating to this work, or who appears to be disorderly, insubordinate, or incompetent, shall upon the order of the Owner be at once discharged and not again employed on any part of the work. Any interference with, or abusive or threatening conduct toward the Designer or his assistants by the Contractor or his employees or agents, shall be authority for the Owner to annul the Contract and re-let the work.
 - 1.1.5.2 The Contractor shall provide all agents, workers and subcontractor's with identification badges which shall be worn at all times they are on the Owner's premises. The identification badges shall at a minimum display the company name, telephone number and employee name.
- 1.1.6 Protection of Work, Property, and Public
 - 1.1.6.1 The Contractor shall take all necessary precautions and shall be totally responsible for guarding against fires and shall provide suitable and adequate fire extinguishers conveniently located on the roof at staging areas, storage areas, and at areas or equipment where an open flame is being used.

Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire prevention.

- 1.1.6.2 OSB, minimum ½” inch thick, or other suitable materials shall be used to protect membrane roof areas from damage that may be caused by concentrated equipment loads and foot traffic.
- 1.1.6.3 Roof traffic shall be confined to work areas. Contractor shall be responsible for leaks and repairs that develop in traffic areas during and after project completion.
- 1.1.6.4 Work shall be coordinated as to prevent foot traffic, and storage of materials and equipment on newly completed roof areas or on the existing single ply membrane..
- 1.1.6.5 Take appropriate steps at each construction site to protect the general public from hazards created by demolition and construction operations.
- 1.1.6.6 Separate demolition or construction site from public access by fences, barricades, or other appropriate security measures. Accident prevention signs and markers shall comply with N. C. OSHA regulations to warn of dangers (e.g., overhead electrical wires) and restrictions (e.g., restricted access areas, hard hat areas). Where necessary, provide protected detour routes for vehicles or pedestrian traffic.
- 1.1.6.7 Barricades and signs must be substantial enough to deter bypassing, vandalizing, or theft. Keep signs neat and legible at all times. Handmade signs are not acceptable.
- 1.1.6.8 All barricades, temporary walkways, and protection of work and materials shall accommodate access, provide adequate warning, and protection to all segments of the population including wheelchair users and those using walking aids and the hearing and visually impaired.
- 1.1.6.9 Contractor will note that building will remain occupied during work. He is responsible for taking all precautions necessary to protect building, contents, and personnel from damage or injury from his operations, and from water entry into the building during construction. Dirt and dust must be kept to a minimum.

1.1.6.10 Prior to starting work Contractor shall obtain approval of the Owner for locations of work operations at ground level, such as material storage, hoisting, dumping, etc. Work will be restricted to approved locations.

1.1.7 Security Measures:

1.1.7.1 The Owner will provide only those security measures which are deemed prudent for its own operations. The Contractor shall provide the necessary security means to protect his or her work, materials, tools and construction equipment from vandalism, theft, and fire. The Contractor is responsible for replacement of his or her materials, machinery, equipment, tools, and supplies which are the subject of theft or mysterious disappearance. Clearly mark all tools and equipment with the Contractor's identification. The Contractor shall clearly mark all tool boxes.

1.1.7.2 The Contractors shall provide the Owner with a list of day and night phone numbers to use in case of emergencies during the course of the project.

1.1.7.3 Hazard Communication Standards - All Contractors shall comply with the OSHA Hazard Communication Standard. The written Hazard Communications Program and Material Safety Data Sheets for each hazardous chemical shall be readily available and centrally located on site.

1.2 Quality Control - Owner

1.2.1 The Owner reserves the right to retain the services of an independent construction monitoring representative to provide full-time monitoring of the reroofing. If the Owner engages this service, the Contractor will be informed. Testing may be performed to determine any deficiencies.

1.2.2 The cost of such services will be borne by the Owner for the contract time noted in the bid form. The cost of any monitoring and testing required after this period of time due to the installation being incomplete as a result of Contractor-controlled nonperformance will be borne by the Contractor as stated in paragraph 9.11.1 on page 23 of the Supplementary Conditions. Such costs will be deducted from the monies due to the Contractor at the time of final payment, recognizing any extensions of time granted by the Owner.

1.2.3 The Owner's project inspector shall be present during all installation of the roofing system. Any work performed without said presence may be rendered unacceptable unless prior arrangement is made otherwise with the Owner.

- 1.2.4 The Contractor shall inform the Owner's project manager two (2) weeks prior to the start of the roofing installation and three (3) days prior to the restart of roofing work following a period of work suspension, except for single days of suspension due to weather.
- 1.2.5 The Contractor shall be required to notify the Owner's project manager prior to cancellation of any operations and subsequent restarts of the project. Any cost resulting from the failure to notify shall be borne by the Contractor.
- 1.2.6 Work found to be in violation of the specifications, or not in conformance with acceptable roofing standards, shall be subject to rejection including complete removal and replacement with new material at the Contractor's expense.
- 1.2.7 The Owner's project inspector shall document quantities of those materials bid on a unit price basis listed in the Form of Proposal as well as other materials.

1.3 Quality Control - Manufacturer

Selected membrane manufacturer shall be required to provide qualified personnel to observe field conditions, including suitability of surfaces and material installation at start of field work and completion of field work. Manufacturer's representative shall submit written report(s) to the Designer and Owner listing observations and recommendations. Roofing contractor shall be responsible for ensuring site visits by membrane manufacturer's representative. Written documentation of requests is required.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01500 TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 Description

- 1.1.1 To provide for temporary facilities and controls required for the performance of the project such items include but are not necessarily limited to utilities such as heat, water, electricity and telephone; sanitary facilities; contractor's facilities; and enclosures such as tarpaulins, barricades, canopies.
- 1.1.2 All equipment furnished by Contractors shall comply with all pertinent safety requirements.
- 1.1.3 Ladders, planks, hoists, and all similar items furnished by individual trades in the execution of their own portions of the work are not a part of this section.

1.2 Product Handling

- 1.2.1 Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
- 1.2.2 All required connections to existing utility systems shall be made with minimum disruption. If disruption of existing service is required notice shall be given to the Owner and connections shall not be made without Owner's approval. If necessary, Contractor shall provide for alternate temporary service.
- 1.2.3 If the required utility is not available from the Owner, the Contractor shall provide for alternate temporary service for the duration of the project.

PART 2 PRODUCTS

2.1 All temporary facilities shall be subject to Owner's approval.

- 2.1.1 Electricity - Owner to provide use of outlets.
- 2.1.2 Water - The Contractor shall furnish water required for construction.

2.2 Sanitary Facilities - Contractor shall provide and maintain proper temporary sanitary facilities in the quantity required for use of all personnel. All facilities shall be maintained in a sanitary condition at all times. The contractor's personnel are not to use the Owner's toilet and drinking water facilities.

2.3 Enclosures

2.3.1 Contractor shall furnish, install and maintain for the duration of the project, all scaffolds, ladders, tarpaulins, barricades, warning signs, platforms, bridges, canopies, steps, and other temporary construction required to properly facilitate completion of the project in compliance with all safety and other regulations.

2.3.2 Contractor shall provide all necessary safeguards to warn and prevent pedestrians and Owner personnel from being exposed to dangers or hazards created by this project.

2.4 Signs - No signs or advertising of any kind shall be allowed on the project site unless approved in advance by the Owner.

2.5 Construction Aids

2.5.1 Contractor shall provide equipment for access to the roof unless otherwise directed by Owner.

2.5.2 Contractor shall provide for debris removal services and containers. Placement and servicing of containers shall be coordinated with the Owner.

2.5.3 Residue and debris from all operations shall not be allowed to accumulate on the project site. Debris shall be removed and properly disposed of daily in accordance with all Federal, State and Local regulations.

2.5.4 Dust, dirt and debris created by project construction shall be properly contained or controlled by the Contractor. Method(s) of control shall be approved by the Designer and Owner.

2.6 Safety and Protection of Facilities

2.6.1 Comply with the General Conditions and Supplementary Conditions of this specification concerning safety and protection.

2.6.2 The Contractor shall take all necessary precautions and shall be totally responsible for guarding against fires and shall provide suitable and adequate fire extinguishers conveniently located on the roof at staging areas, and storage areas.

2.6.3 Roof traffic shall be confined to work areas. Contractor shall be responsible for leaks and repairs that develop in traffic areas during and after project completion.

- 2.6.4 Work shall be coordinated as to prevent working, foot traffic, and storage of materials and equipment on newly completed roof areas.
 - 2.6.5 Self-supporting ramps shall be used where expansion joints, area dividers, etc., are to be crossed.
 - 2.6.6 The Contractor shall provide the Owner and the Designer with off hours telephone numbers of his project supervisor, foreman, etc., to allow contact by the Owner if an emergency arises.
- 2.7 Storage
- 2.7.1 The Contractor shall be responsible for proper storage of equipment, materials, and devices furnished by himself and/or his subcontractors and suppliers.
 - 2.7.2 To the maximum extent reasonably possible, the Contractor shall not store combustible or flammable materials inside the building, or on roof levels.
 - 2.7.3 All storage areas are subject to approval by the Owner or his authorized representative.
 - 2.7.4 Cover and protect all materials from rain, snow, etc.
- 2.8 Parking - Contractor's construction vehicles shall enter the project site and park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt on going operations of the Owner.
- 2.9 Plans, Specifications and Submittals - One digital copy of the plans and specifications will be made available to the Contractor. The Contractor shall be responsible for maintaining at least one current set of plans and specifications and reviewed submittals on the roof for the duration of construction.
- 2.10 Ventilation
- 2.10.1 Provide, as required, facilities to maintain specific storage conditions as described within this specification and as recommended by the materials manufacturer.
 - 2.10.2 Provide adequate ventilation of enclosed areas to prevent the accumulation of fumes, vapors, and gases.

END OF SECTION

SECTION 01750 GUARANTEES

PART 1 GENERAL

- 1.1 Drawings and general provisions of the contract including General, Supplemental and Special Conditions, and other Division 1 specification sections apply to work of this section.
- 1.2 Upon completion of the work and prior to the final payment the Contractor shall submit the following items to the designer:
 - 1.2.1 Documentation of completion of all items noted on punch lists prepared by the Designer.
 - 1.2.2 Contractor's guarantee to Owner.
- 1.3 Guarantees and Bonds:
 - 1.3.1 All guarantees shall be issued to the Owner or party designated by the Designer.
 - 1.3.2 All guarantees shall be issued bearing a signature of an officer of the company and shall not require the signature of the owner nor designer.
 - 1.3.3 Contractor's Guarantee:
 - 1.3.3.1 Use the attached guarantee form.
 - 1.3.3.2 The Contractor shall guarantee the materials and workmanship of the roofing and coating systems against leakage and against defects due to faulty materials, workmanship, and contract negligence for a period of two (2) years following acceptance of the project by the Owner.
- 1.4 Emergency repairs:
 - 1.4.1 Emergency repairs to defects and leaks shall be performed within 24 hours of receiving notice from the Owner. As soon as weather permits, permanent repairs and restoration of affected areas shall be accomplished in a manner in conformance with the original contract requirements. This work shall be done without additional cost to the Owner, except if it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hail storm, or other unusual phenomena.
 - 1.4.2 The guarantees shall also state that the Owner has the right, at any time during the 2 year Contractor's guarantee period and the Manufacturer's guarantee period, to make emergency repairs to protect the contents of the

building or the building itself from damage due to leaking. The cost of emergency repairs made during the first two years of the guarantee period shall be borne by the Contractor and action by the Owner shall not invalidate the guarantee.

- 1.5 The effective date of all guarantees shall be the same and shall be on the date of the final inspection when the Owner, Designer, Contractor and Manufacturer agree that all work has been completed in substantial compliance with the plans and specifications.
- 1.6 Final payment will be made to the Contractor only after three (3) copies of the guarantees have been submitted and the membrane manufacturer acknowledges that all bills are paid. All such documents shall show the project name and location and the Owner's name.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SEE THE ATTACHED CONTRACTOR'S GUARANTEE

CONTRACTOR'S GUARANTY

Whereas, _____
of _____
herein called "Contractor", has completed application of the following roof:
Owner: _____
Address of Owner: _____
Type & Name of Building: _____
Building Location: _____
Area of Roof: _____ Date of Completion: _____
Date Guarantee Expires: _____

Whereas, at the inception of the work, the Contractor agreed to guarantee the aforesaid roof against faulty workmanship for a limited period and to guarantee that the materials are those required by the agreement, subject to the conditions herein set forth:

Now, therefore, the Contractor hereby guarantees, subject to the conditions herein set forth, that during a period of two years from the date of completion of said roof, it will, at its own cost and expense, make or cause to be made such repairs to said roof resulting solely from faults or defects in workmanship applied by or through the Contractor as may be necessary to maintain said roof in a watertight condition, and in the event of failure of any material, the Contractor will give reasonable assistance to the Owner in obtaining from the respective manufacturer whatever adjustment is reasonable in light of the manufacturers guarantee.

This guarantee is made subject to the following conditions:

1. Specifically excluded from this guarantee are any and all damages caused by lightning, wind in excess of the design wind speed as defined by the International Building Code, hailstorm, or other unusual phenomena of the elements; foundation settlement; failure or cracking of the roof deck; defects or failure of material used as roof base over which roof is applied; defects of parapet walls, coping caps, chimneys, skylights, vents, supports or other parts of the building; or fire. If the roof is damaged by reason of any of the foregoing this guarantee shall thereupon become null and void for the balance of the guarantee period unless such damage is repaired by the Contractor at the expense of the party requesting such repairs.
2. The guarantees contained are in lieu of all other guarantees, express or implied, including any guarantees of merchantability or fitness for a particular use. Nothing in this instrument shall render the Contractor liable for consequential damages to the building or contents resulting from any faults or defects in material or workmanship.
3. No work shall be done on said roof, including, but without limitation, openings made for flues, vents, drains, sign brackets or other equipment fastened to or set on the roof, unless the Contractor shall be first notified, shall be given the opportunity to make the necessary roofing application recommendations with respect thereto, and such recommendations are complied with. Failure to observe this condition shall render this guarantee null and void. The Contractor shall be paid for time and material expended in making recommendations or repairs occasioned by the work of others on said roof.
4. This guarantee shall not be or become effective unless and until the Contractor has been paid in full for said roof in accordance with the agreement pursuant to which such roof was applied.
5. Additional conditions or exclusions: None

In Witness Whereof, this instrument has been duly executed this _____ day of _____, 20____.

Authorized Signature

**DIVISION 6
WOOD**

SECTION 06114 - ROUGH CARPENTRY

PART 1 GENERAL

1.1 Work Included - Installation of new framing and sheathing along gutter channels.

1.2 Related Work Specified Elsewhere

1.2.1 Selective Demolition - Section 02070

1.2.2 Single Ply Roofing - Section 07531

1.2.3 Sheet Metal Flashing & Trim - Section 07621

1.3 Environmental Conditions - Material installation shall proceed only when weather conditions are in compliance with the manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to rejection including removal and replacement.

1.4 Quality Assurance

1.4.1 Contractor shall provide sufficient qualified workmen and supervisors who shall be present at all times during execution of this portion of the work and who shall be familiar with the type of construction involved and the materials and techniques specified.

1.4.2 The Owner shall make no allowance for lack of skill of the workmen.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Dimensional Lumber:

2.1.1.1 Shall be No. 2 or better Southern Yellow Pine, kiln-dried prior to and after treatment to a moisture content of not more than 19 percent.

2.1.1.2 Shall be sound, thoroughly seasoned, dressed to nominal finish dimension, and free of warpage, cupping, and bowing.

2.1.1.3 All nailers and other blocking associated with the roofing installation shall be pressure treated with 0.25 pcf retention of waterborne preservative and shall conform to AWPA Standard C2 above ground use.

- 2.1.1.4 Preservative shall be one of the following or approved equal:
 - A. Alkaline copper quaternary (ACQ-C) as produced by licensed treaters of Chemical Specialties, Inc. or Osiose Inc. - Wood Preserving Division.
 - B. Copper azole (CA) as produced by licensed treaters of Arch Treatment Technologies, Inc.
- 2.1.1.5 Asphaltic, arsenic, chromium or creosote preservatives shall not be used.
- 2.1.1.6 The presence of AWWPA quality mark LP-22 on each piece is required.
- 2.1.1.7 Dimensions are to be determined by job conditions, and the roof system manufacturer's specifications.
- 2.1.2 Plywood: APA Rated Sheathing (CDX) with waterproof glue for exterior applications in thicknesses specified. Shall comply with the requirements of U.S. Product Standard PS1-83 and each sheet shall clearly bear the APA trademark of the American Plywood Association.
- 2.2 Accessories
 - 2.2.1 Nails: Shall be hot dipped galvanized 10 and 16-penny, annular-ring shank nails conforming to ASTM A-153, Class D.
 - 2.2.2 Screws: Shall be #12 bugle head screw with modified buttress thread form equal to ITW Buildex #12 Bugle Roofgrip with Spex coating. Screws shall have corrosion resistant coating meeting FM Specification 4470.
 - 2.2.3 Masonry Anchors: Shall be 1/4 inch by 3 inch expanding anchor-type, equal to Zamac Nailin fastener No. 2804.
 - 2.2.4 Joist Hangers: Shall be 16 gauge galvanized steel, equal to Simpson Strongtie Model U26.

PART 3 EXECUTION

- 3.1 Inspection
 - 3.1.1 Verify that masonry surfaces to receive new ledgers are sound.
 - 3.1.2 The Owner's representative and the Contractor shall document the actual quantities of materials installed.

3.2 Installation

- 3.2.1 2x6 joists should be provided at 24" O.C. where span of new sheathing exceeds 40".
- 3.2.2 2x6 joist ledgers installed along the parapets should receive specified masonry anchors at 6" O.C., staggered.
- 3.2.3 Joists to be secured to parapet ledgers using joist hangers. 16d nails fasten hangers to ledger, 10d nails fasten hangers to joists.
- 3.2.4 Joists to be secured to new continuous 2x8 over existing OSB sheathing using a minimum of 3 fasteners at each connection. Fasten each side and once through the top of each joist.

END OF SECTION

**DIVISION 7
THERMAL AND MOISTURE PROTECTION**

**SECTION 07212
BOARD INSULATION**

PART 1 GENERAL

- 1.1 Work Included - Installation of new insulation and coverboard.
- 1.2 Related Documents - Drawings and general provisions of contract, including General, Supplemental, and Special Conditions and other Division - 1 Specification sections apply to work of this section.
- 1.3 Related Work Specified Elsewhere:
 - 1.3.1 Rough Carpentry - Section 06114
 - 1.3.2 Single Ply Sheet Roofing - Section 07531
 - 1.3.3 Sheet Metal Flashing and Trim - Section 07621
- 1.4 Submittals:
 - 1.4.1 Submittals shall be in accordance with Section 1300 of this specification.
 - 1.4.2 Submit the securement type and patterns for securing the insulation system in the field, perimeters and corners of the roof.
- 1.5 Environmental Conditions - Materials installation shall proceed only when weather conditions are in compliance with the manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to rejection, removal and replacement.
- 1.6 Warranty - Warranties shall be in accordance with Section 01750 of this specification.
- 1.7 Wind and Fire Resistance - The complete roof system above the deck, including but not limited to insulation, overlayment boards, mechanical fasteners, insulation adhesive, membrane adhesives and roof membrane shall be approved by FM and UL and have ratings of 1-75 and Class A, respectively.

PART 2 PRODUCTS

- 2.1 Materials:
 - 2.1.1 New Insulation Board - Shall be a faced thermal insulation board composed of rigid cellular polyisocyanurate (minimum compressive strength of 20 psi). Heavy duty facers shall be on both major surfaces and shall be an asphalt-coated glass fiber mat. Foam core shall have a flame spread of 25 or less.

Insulation shall conform to ASTM E-108, Factory Mutual 4450, and Underwriters Laboratories 1256. Thermal resistance shall be computed using Long Term Thermal Resistance (LTTR) values in accordance with ASTM C1303 and CAN/ULC-S770-00. Insulation system shall provide an R-Value of 5.6 per inch thickness. Insulation shall be 2" thick.

2.1.2 Coverboard - Shall be high density, water resistant, and moisture resistant treated board with inorganic fibrous glass mat facer on both sides. All pieces shall have a maximum size of 4' x 4'. Shall be one of the following:

2.1.2.1 1/4" thick Securock as manufactured by U.S. Gypsum Company, 125 South Franklin Street, Chicago, IL 60606, (800) 874-4968.

2.1.2.2 1/4" thick DensDeck Prime as manufactured by G-P Gypsum Corporation, 55 Park Place, N.E., Atlanta, GA 30303, (404) 652-4000.

2.1.3 Insulation securement to wood deck - Shall be FM Global Class I construction and pass FM approval Standard 4470 or UL 1256 approved heavy duty self tapping, corrosion resistant threaded #12 screw fastener with #3 phillips head and 3" diameter steel stress plates. Fastener length shall be sized to penetrate the wood deck a minimum of 1".

2.1.4 Coverboard securement to insulation - Shall be a FM Global approved component low rise insulation adhesive as recommended and/or provided by the membrane manufacturer to be included in the membrane manufacturer's total system warranty.

PART 3 EXECUTION

3.1 Preparation: All roof surfaces (deck, polyisocyanurate insulation, parapet masonry) shall be inspected prior to the installation of the new materials. Installation shall constitute approval of all roof surfaces by the contractor.

3.2 Inspection - The roof surface shall be smooth, clean, dry, free of debris and all foreign matter. All roof surfaces shall be inspected prior to installation and application of new materials will constitute approval of the surface by the roofing contractor.

3.3 Installation:

3.3.1 General:

3.3.1.1 Install no more insulation than can be completely dried-in with membrane in the same day.

3.3.1.2 Adjacent insulation boards shall be tightly abutted, with gaps greater than 1/4 inch filled by cutting out enough material to allow placement of a minimum 3 inch wide piece of similar insulation.

- 3.3.1.3 Insulation and coverboard shall be laid in parallel courses with joints staggered between underlying layer.
- 3.3.1.4 Board-to-board height variations greater than $\frac{1}{16}$ inch at top surface of insulation shall be shaved to provide a smooth transition between board surfaces.
- 3.3.2 Insulation - The insulation shall be mechanically attached per manufacturer's instructions to achieve the specified wind uplift requirements.
- 3.3.3 Coverboard - The coverboard shall be secured to the new polyisocyanurate insulation with a low rise foam adhesive.

END OF SECTION

**SECTION 07531
SINGLE PLY SHEET ROOFING**

PART 1 GENERAL

- 1.1 Work Included - Installation of new EPDM membrane, flashing, and termination bar along gutter sections.
- 1.2 Related Work Specified Elsewhere
 - 1.2.1 Board Insulation - Section 07212
 - 1.2.2 Sheet metal Flashing and Trim - Section 07621
- 1.3 Submittals.
 - 1.3.1 Submittals shall be in accordance with Section 01300 of this specification.
- 1.4 Quality Assurance
 - 1.4.1 Standards: Comply with standards specified in this section and as listed in the General Requirements.
 - 1.4.2 Qualifications of Manufacturer: Products used in the work included in this section shall be produced by manufacturers regularly engaged in the manufacturer of similar items and with a history of successful production acceptable to the Owner.
 - 1.4.3 Qualifications of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section. As a minimum, the roofing foreman and the membrane applicator shall be certified and trained by the membrane manufacturer and shall be experienced in the application of the specified membrane system, and shall be on site at all times. Written certification must be provided.
- 1.5 Environmental Conditions - Materials installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation imminent. Materials installed during adverse weather conditions shall be subject to removal and replacement.
- 1.6 Warranty - Warranties shall be in accordance with Section 01750 of this specification.

PART 2 PRODUCTS

2.1 Materials

2.1.1 Membrane - Shall be one of the following manufacturers:

2.1.1.1 Carlisle Tire & Rubber Company

2.1.1.2 Firestone Industrial Products Company, or approved equal.

2.1.2 Seam tape - Shall be one of the following:

2.1.2.1 Carlisle 6" securTAPE

2.1.2.2 Firestone 6" QuickSeam Splice Tape

2.1.3 Related materials. Materials such as bonding adhesive, slip sheet, mastic, sealant, clad metal, pre-molded flashings, non-reinforced membrane, fasteners, stress plates and termination bar shall be supplied by membrane manufacturer. Any components not manufactured and packaged by the membrane manufacturer shall be identified in writing by the membrane manufacturer.

PART 3 EXECUTION

3.1 Inspection

3.1.1 Verify coverboard surface is smooth, clean, rigid and free from debris, projections, holes, etc. which may adversely affect the membrane application.

3.1.2 Verify masonry wall substrate is suitably prepared for adhering membrane.

3.2 Installation

3.2.1 General.

3.2.1.1 The Contractor shall strictly adhere to the applicable manufacturer's published specifications for installation unless otherwise specified. Instructions and procedures described herein are to be considered minimum requirements for application of materials.

3.2.1.2 The contractor shall be responsible for coordinating the work to ensure that the new and existing roofing systems remain watertight at the end of each working day. The contractor shall be responsible for any interior damages resulting from water that enters the building by way of defects in or damage to the existing roof systems or due to incomplete construction of the new system.

3.2.2 Weather conditions.

3.2.2.1 Outside ambient air temperature must be above 40° F.

3.2.2.2 Drying time of adhesive will be affected by ambient temperatures and must be taken into consideration when determining roll sizes and installation sequencing.

3.2.3 Membrane installation.

3.2.3.1 Position the membrane over the prepared substrate and fold the sheet to allow a workable exposure of the underside of the membrane.

3.2.3.2 Clean the entire work area with a power leaf blower to assure that the surfaces to receive adhesive are free of all insulation particles, dust, tear off residue and other undesirable materials.

3.2.3.3 Apply a continuous coat of bonding adhesive to the exposed bottom side of the membrane and a mirrored area of the substrate. Adhesive coverage should average 100 s.f. per gallon with a 50 s.f. per gallon net coverage for the membrane and substrate combined.

3.2.3.4 Allow the adhesive to dry to a point of being tacky, but not stringy to the touch. Do not allow the adhesive to dry completely.

- 3.2.3.5 When sufficiently dry, carefully maneuver the glued portion of the membrane onto the glued portion of the substrate, avoiding any wrinkles or air pockets. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process.
- 3.2.3.6 Repeat the process noted in the paragraph above for the remaining unbonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of seven inches, ensuring proper shingling of the membrane to shed water over the laps.
- 3.2.3.7 No adhesive shall be applied to the lap "seam" areas of the membrane.
- 3.2.3.8 Side and end lap splicing:
- A. Position the membrane at the seam area by overlapping membrane 7".
 - B. Tack the membrane back using seam primer or suitable ballast materials.
 - C. When constructing seam to existing EPDM membrane, use a solvent cleaner as provided by membrane manufacturer to thoroughly clean membrane prior to applying primer and tape.
 - D. After ensuring there is no bonding adhesive in the seam area, apply primer uniformly at least 1" wider than tape application area to both membrane surfaces, using long back and forth strokes with pressure along the length of the splicing area until surfaces become dark gray in color.
 - E. After allowing primer to dry, apply the splice tape to the bottom layer with the release film positioned on top. Immediately roll the splice tape with silicon hand roller.
 - F. Place the top membrane to rest on bottom membrane with release film still in place and check alignment.
 - G. Broom the entire length of the seam area at a 45 degree angle while the release film is being pulled away, then

pressure roll the entire length of the seam using silicon roller, starting at one end and working to the other.

- H. Apply a continuous stripping ply to cover the length of the splice between new and existing membranes. Brush apply primer before setting a bead of lap sealant to the “uphill” lap at the junction of stripping ply and existing EPDM.

END OF SECTION

SECTION 07621 SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

- 1.1 Work Included - Installation of new scuppers, conductor heads, and accessory materials.

- 1.2 Related Work:
 - 1.2.1 Selective Demolition - Section 02070
 - 1.2.2 Rough Carpentry - Section 06114
 - 1.2.3 Single Ply Sheet Roofing - Section 07531

- 1.3 Quality Assurance:
 - 1.3.1 Qualifications of the Manufacturer - Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Designer.
 - 1.3.2 Qualifications of the Installer - Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this section.
 - 1.3.3 All sheet metal installation shall be uniform with joints at corners and angles mitered and the different sections accurately fitted and rigidly secured. Exposed edges shall be returned (hemmed), both for strength and appearance, and sheet metal shall be fitted closely and neatly. The Contractor providing all necessary cleats or stiffeners and other reinforcements as required to make all sections rigid and substantial.
 - 1.3.4 Completed sheet metal work shall be aesthetically pleasing and professional in every aspect. Perform all necessary work to prepare the substrate to provide straight lines and true planes. All non-conforming work (oil-canning, dents, and stains) are unacceptable and shall be replaced at no cost to the Owner. All exposed edges shall be hemmed and all joints shall be neatly fitted. Concealed or unforeseen conditions shall be brought to the attention of the Designer prior to fabrication and installation.
 - 1.3.5 In acceptance or rejection of the work of this section, the Owner will make no allowance for lack of skill on the part of the workmen.

1.4 Storage and Handling:

1.4.1 Store materials dry.

1.4.2 Stack material to prevent twisting, bending, or abrasion.

1.4.3 During storage prevent material contact with any substance that would discolor or stain, including soil and water.

1.5 Scheduling:

1.5.1 All new sheet metal work shall be closely coordinated with the installation of the new roof system.

1.5.2 New sheet metal shall be installed simultaneously with the roofing work such that roofing terminations will not be left unprotected and closures are properly installed at the locations noted.

PART 2 PRODUCTS

2.1 Sheet Metal:

2.1.1 Thru-Wall Scuppers:

2.1.1.1 Shall be Type 304 stainless steel.

2.1.1.2 New scuppers shall be 10" wide x 6" tall. The bottom of the scupper opening shall be level with the top of the roof surface.

2.1.2 Conductor Head - Size shall be as detailed on the drawings.

2.1.3 Termination Bar - Shall be 1/8 inch x 1 inch 316 aluminum flat bar, hot rolled annealed, pickled and conforming to requirements of ASTM-A276. Pre-drill holes for fasteners 6 inches o.c. Holes shall be slotted.

2.2 Accessory Materials:

2.2.1 Fasteners:

2.2.1.1 Nails - Shall be stainless steel, length to suit.

2.2.1.2 Screws - Shall be stainless steel, self-drilling, self-tapping No. 12 screws, pan head minimum 1 inch long, with neoprene washers.

2.2.1.3 Pop Rivets - Use 1/8" diameter stainless steel pop rivets color to match adjoining metal.

2.2.2 Silicone Sealant

2.2.2.1 Composition: Sealant shall be low modulus, neutral-curing one component silicone, with a movement capability of +/- 50%.

2.2.2.2 Material shall be of gun grade consistency, shall be easily workable and shall be capable of producing a smooth, attractive sealant bead.

2.2.2.3 Colors shall be selected by the Owner from the manufacturer's standard and custom color charts. Submit samples for the Owner's selection and approval.

2.2.2.4 The following manufacturers and their products listed are approved for use on this project:

- A. Pecora Corporation: 890 Architectural Silicone Sealant
- B. Dow Corning 790 Silicone Building Sealant
- C. GE Silicones SilPruf LM SCS2700

PART 3 EXECUTION

3.1 Inspection:

3.1.1 Inspect nailer areas to verify clean, smooth, free of depressions, waves, or projections and solidly supported joints.

3.1.2 Verify roof openings, pipes, sleeves or vents through roof are solidly set.

3.1.3 Verify compatibility of flashing system with other system materials.

3.1.4 Verify installation of all appropriate base flashings prior to installation of sheet metal.

3.2 Fabrication:

3.2.1 Fabrication shall be in accordance with the standards and details in the Architectural Sheet Metal Manual, published by the Sheet Metal and Air Conditioning Contractors National Association, Inc.

3.2.2 Fabricate and install sheet metal sections in 10-foot lengths except where shorter lengths are required by construction.

3.2.3 Form sections square, true, and accurate to size, free from distortion, sharp edges, and other defects detrimental to appearance or performance.

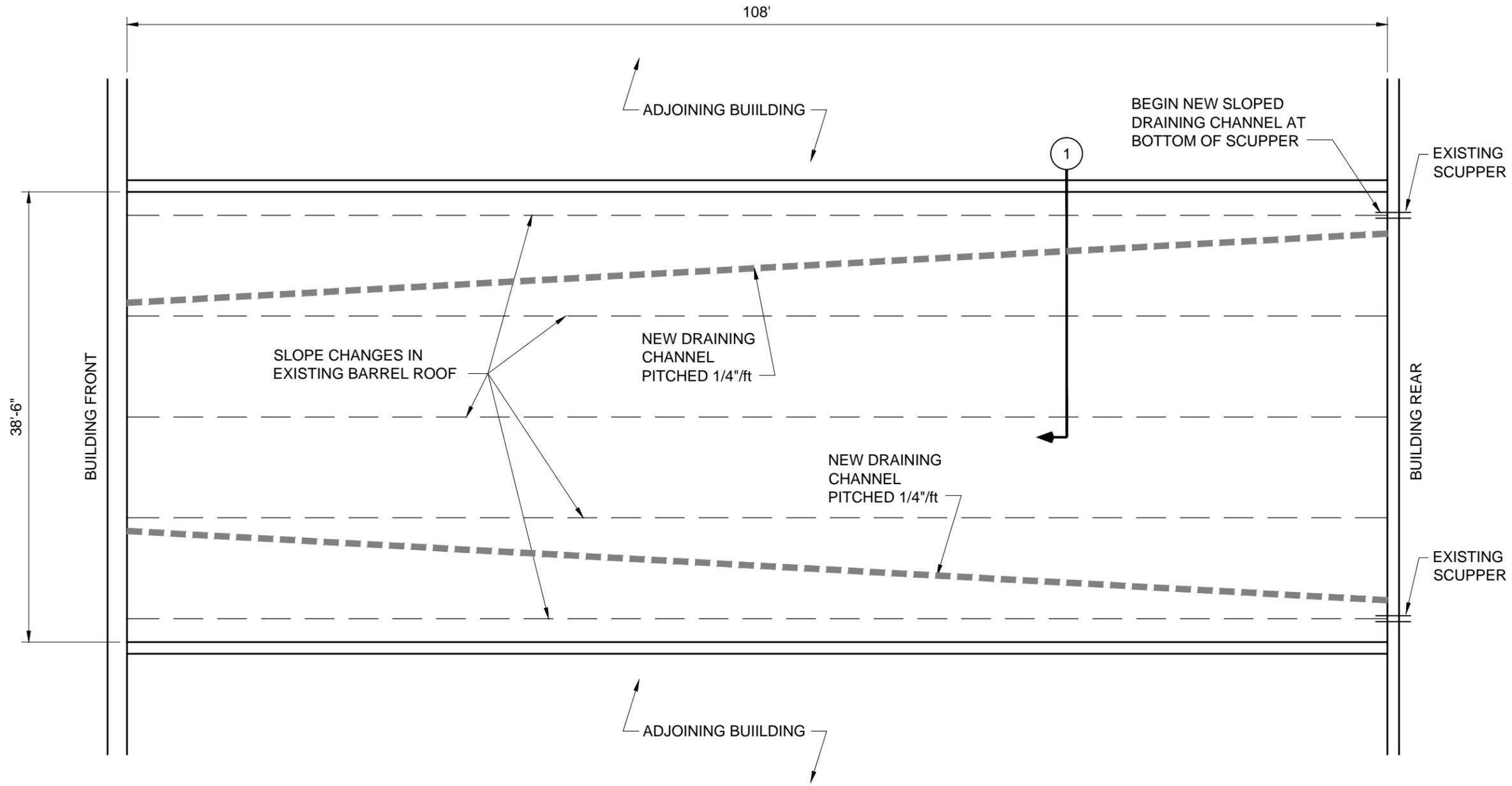
- 3.2.4 Junctures, intersections, corners and unions of sheet metal shall be held to 18-inch legs or less.
 - 3.2.5 At all locations where new sheet sections terminate, the sheet metal flashings shall terminate with end sections of one-piece construction to provide watertight seams. Provide shop drawings for all conditions. Seams shall be soldered.
 - 3.2.6 Sheet metal flashing shall be fabricated and installed to allow for expansion and contraction of the component materials without buckling, hole elongation, fastener failure or excess stress loading situations developing at any time during the temperature cycle. Clips shall be designed and installed to resist rotation and to avoid shear stress when roofing material expands and contracts.
- 3.3 General Installation:
- 3.3.1 Installation shall be in accordance with the standards and details in the Architectural Sheet Metal Manual, published by the Sheet Metal and Air Conditioning Contractors National Association, Inc.
 - 3.3.2 All exposed edges of sheet metal shall be folded back, or hemmed, on concealed surfaces.
 - 3.3.3 All counterflashing shall be secured with gasketed, screw type fasteners spaced not more than 12" c-c and not less than two fasteners on any side as shown in the drawings.
- 3.4 Thru-wall Scuppers:
- 3.4.1 Solder all joints.
 - 3.4.2 Shall be constructed and installed per detail drawings.
 - 3.4.3 All sides of the scupper coverplates shall be sealed to the exterior face of the building by first installing sealant tape to the back flange of the coverplate prior to scupper installation and caulking the exposed edges of the coverplate after the scupper is installed.
 - 3.4.4 Flash scupper according to membrane manufacturer's provided details. Submit details according to Section 1300.
- 3.5 Conductor Head - Shall be constructed and installed per detail drawings.

3.6 Sealant Application:

- 3.6.1 It shall be the responsibility of the applicator to install the sealant in accord with the contract documents and in a manner that ensures optimum performance of the materials used.
- 3.6.2 All sealing shall be done when surface temperatures are above 40 degrees F. Do not apply sealant if precipitation is forecast in the next 24 hours after application. All surfaces receiving caulking or sealing material shall be dry and clean.
- 3.6.3 Masking - Thoroughly and completely mask all joints where the appearance of sealant on adjacent surfaces would be objectionable.
- 3.6.4 Sealant shall be applied in a continuous operation using a professional cartridge-type caulking gun or bulk-loading gun. Guns shall have nozzle of proper size and shall provide sufficient pressure to completely fill joints as designed.
- 3.6.5 Tool all sealant into place.
- 3.6.6 There shall be no air voids throughout the entire joint cross section. To ensure complete joint fill, tooling shall be performed within ten(10) minutes of sealant application.
- 3.6.7 At corner and butt/splice conditions for metal to metal joints, apply bond breaker tape prior to sealant application.

END OF SECTION

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ROOF PLAN



NOTES:
1. VERIFY ALL DIMENSIONS

Roof Plan

DR. BROWN'S OFFICE
154 SW MAIN ST.
ROCKY MOUNT, NC 27804

ROOFTOP SYSTEMS ENGINEERS, P.C.
316 W. MILLBROOK ROAD, SUITE 201
RALEIGH, NC 27609-4482
NC License No. C-0807
919-872-7866; 919-872-4486 fax
www.rse-pc.com

DRAWN BY: ACS

CHECKED BY: JW

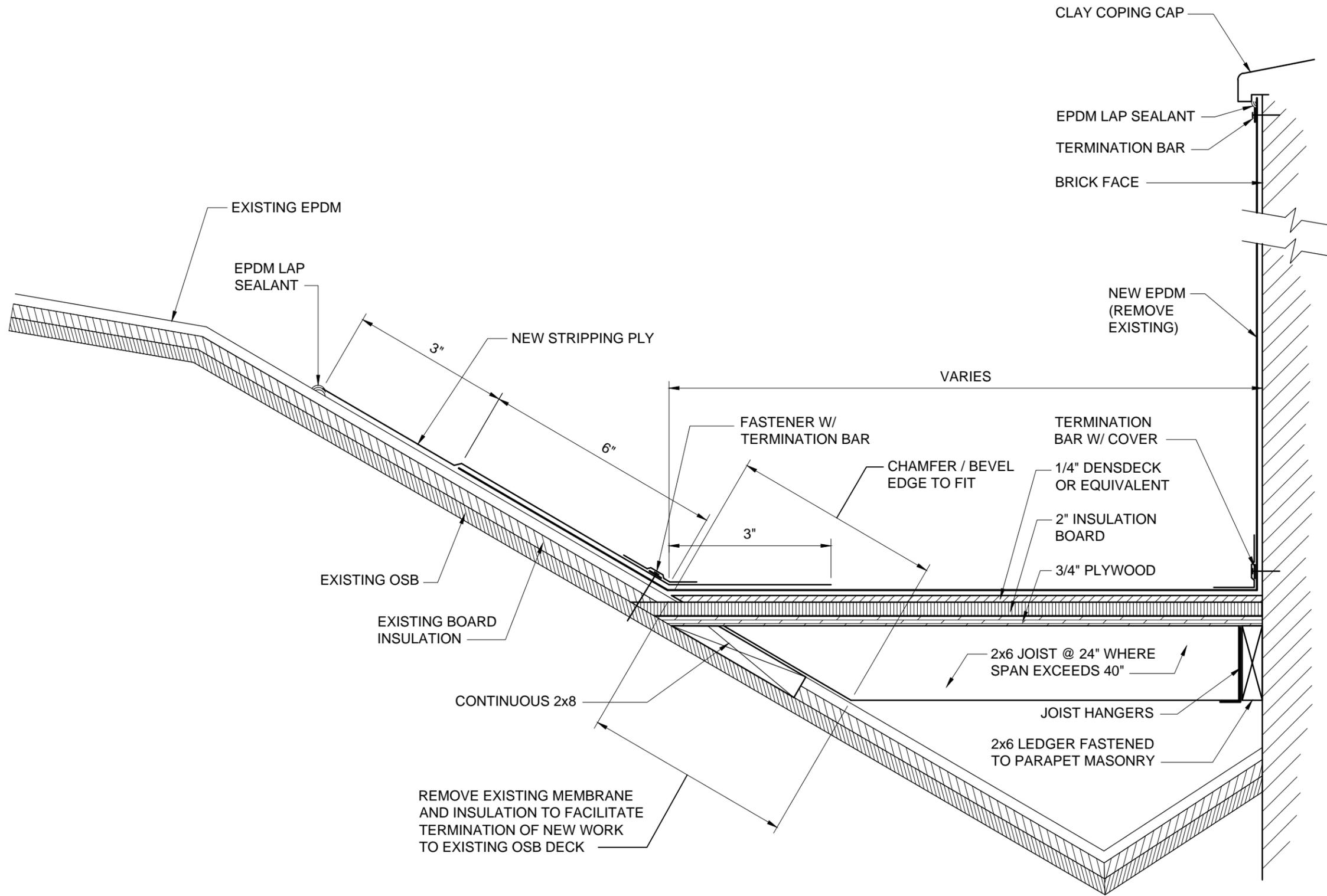
DATE 07-17-14

JOB NO. 14-021

SCALE: 1"=10'-0"

SHEET 1 OF 2

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1 SECTION AT ADJACENT BULDING
SCALE: N.T.S.

NOTES:
1. VERIFY ALL DIMENSIONS

1 Section at Adjacent Building

DR. BROWN'S OFFICE 154 SW MAIN ST. ROCKY MOUNT, NC 27804		ROOFTOP SYSTEMS ENGINEERS, P.C. 316 W. MILLBROOK ROAD, SUITE 201 RALEIGH, NC 27609-4482 NC License No. C-0807 919-872-7866; 919-872-4486 fax www.rse-pc.com	
DRAWN BY:	ACS	JOB NO.:	14-021
CHECKED BY:	JW	SCALE:	NONE
DATE:	07-17-14	SHEET OF:	2

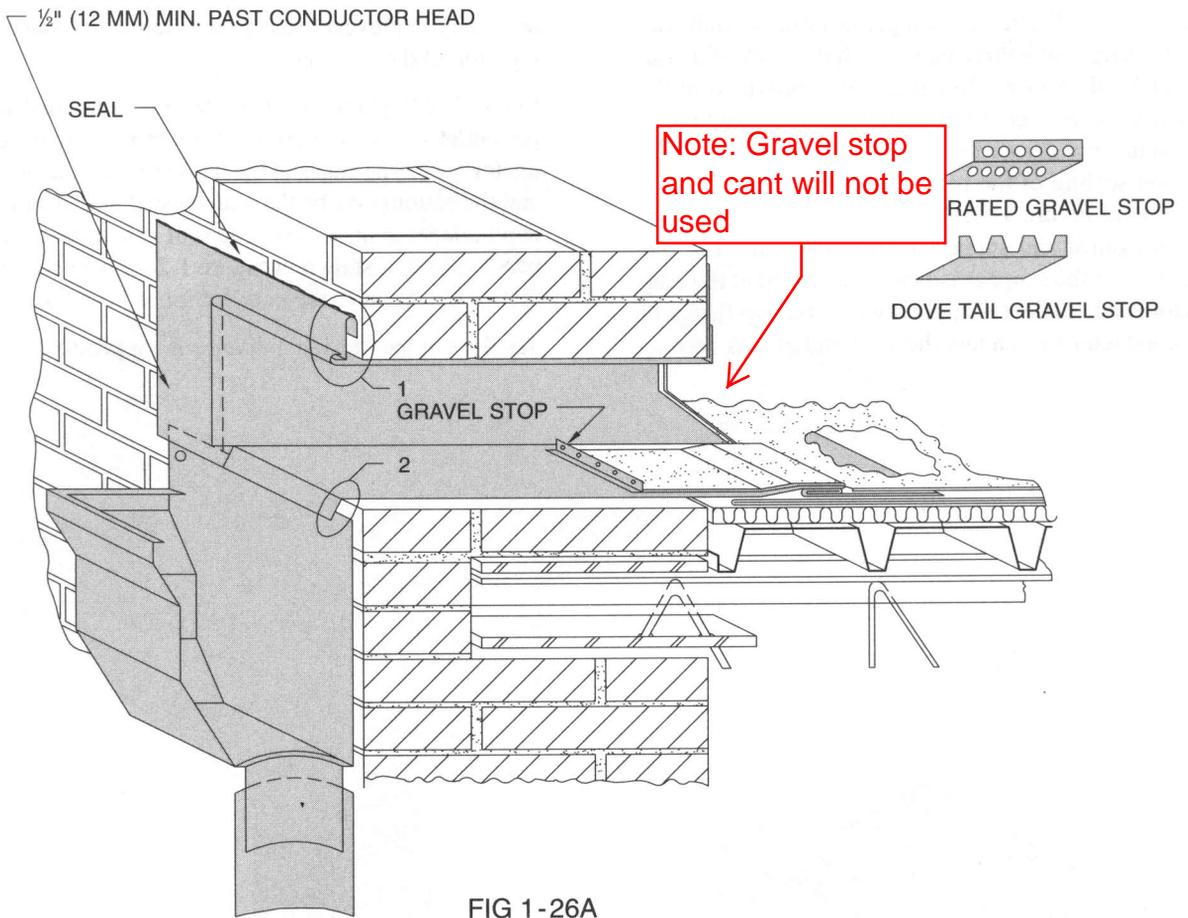


FIG 1-26A

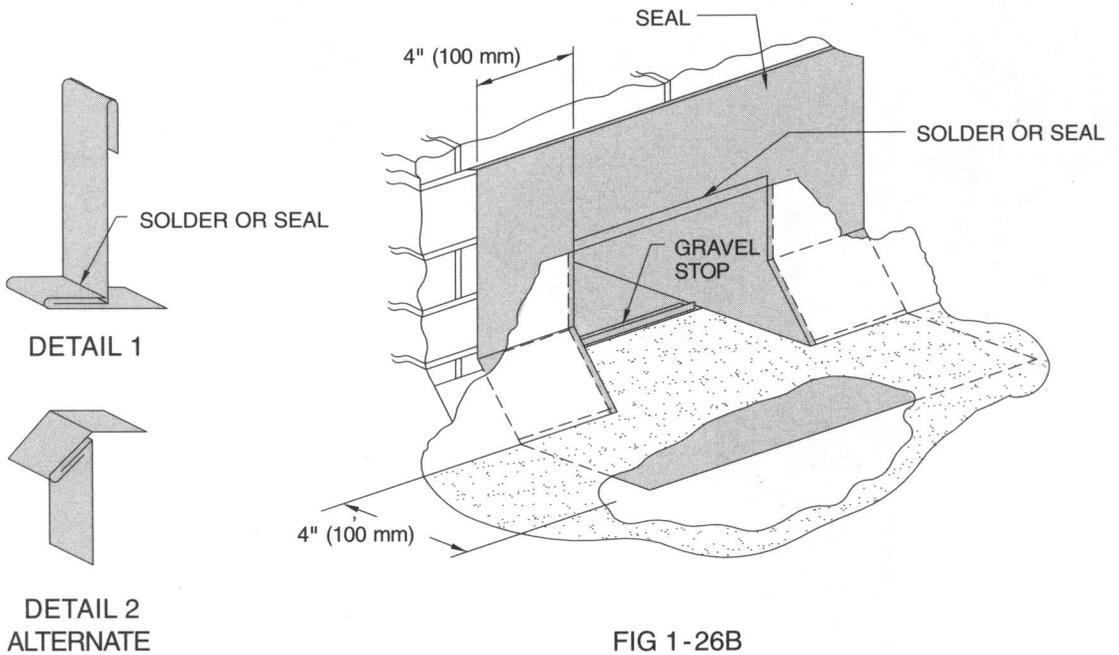


FIG 1-26B

FIGURE 1-26 SCUPPER DESIGN AND INSTALLATION

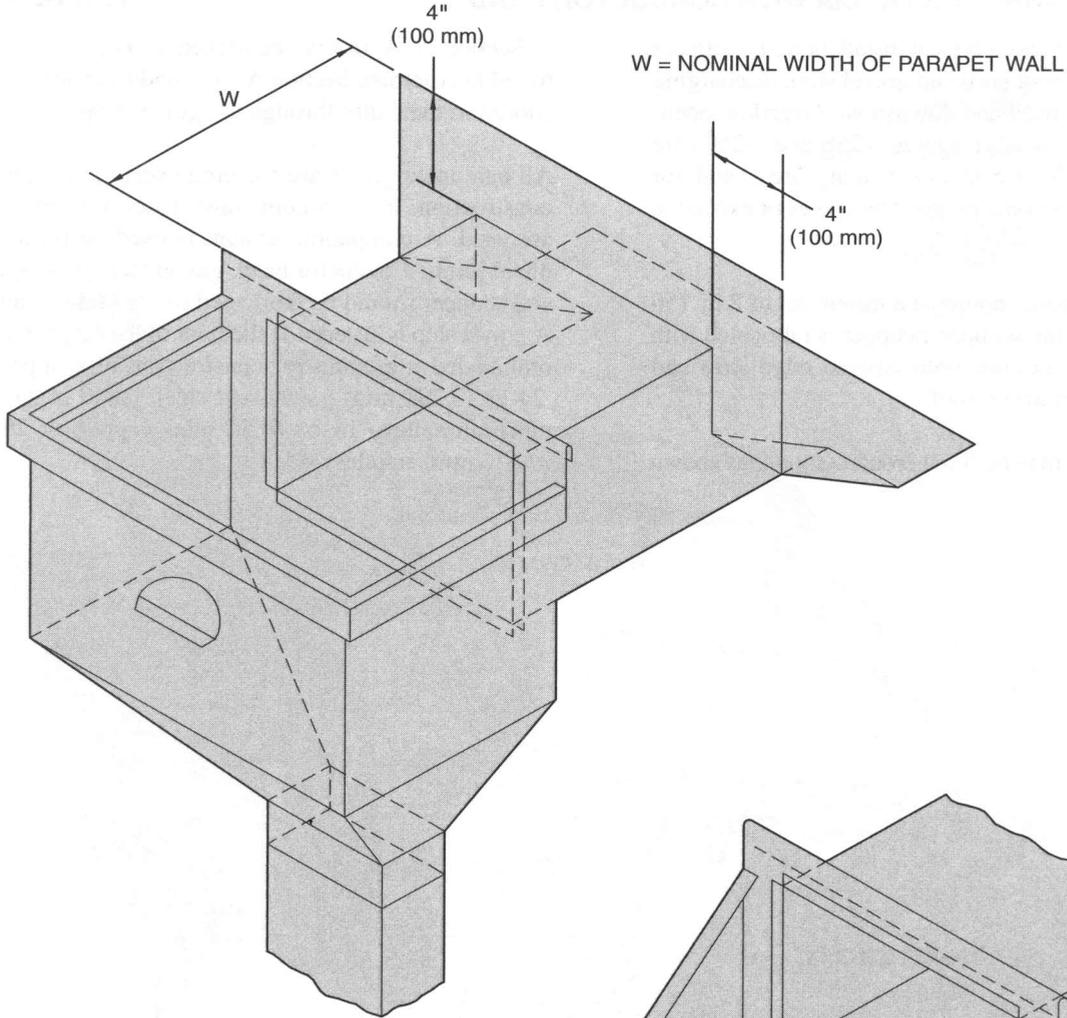
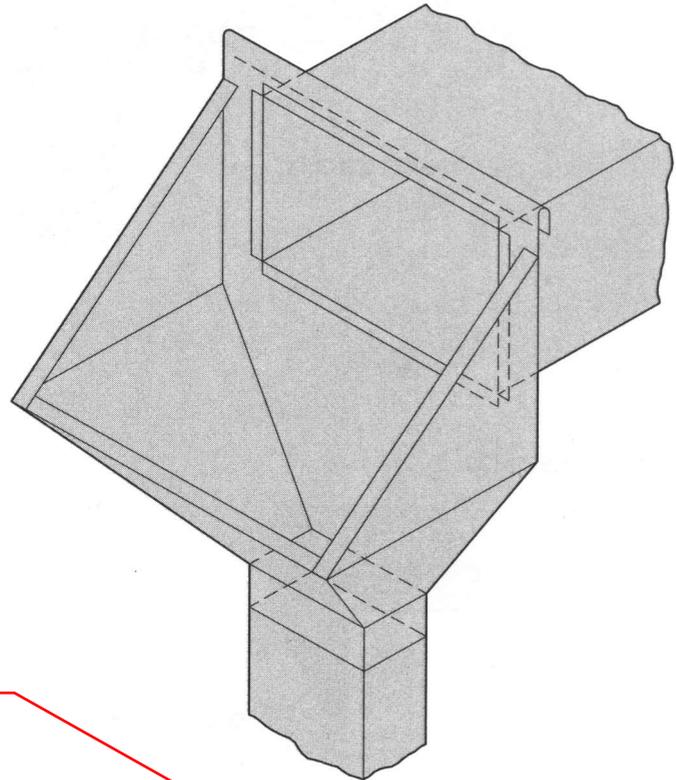


FIG 1-27A



Use this design

FIG 1-27B

FIGURE 1-27 SCUPPER DESIGN AND INSTALLATION