

# Rebid of Roof Replacements at Various City Buildings

## Invitation for Bids # PSPW-19-15

General Information		
Project Cost Estimate	Varies by location	See Section 1.4
Project Timeline	Varies by location	See Section 1.4
Evaluation of Proposals	Staff	See Section 1.7
Mandatory Pre-Bid Meeting	10:00 a.m. on December 18, 2019 Starting at the Public Services Conference room, 8300 South Palm Drive, Pembroke Pines FL 33025	See Section 1.8
Question Due Date	January 7, 2020	See Section 1.8
Proposals will be accepted until	2:00 p.m. on January 21, 2020	See Section 1.8
5% Proposal Security / Bid Bond	Required in the event that the proposal exceeds \$200,000	See Section 4.1
100% Payment and Performance Bonds	Required in the event that the proposal exceeds \$200,000	See Section 4.2

THE CITY OF PEMBROKE PINES  
PURCHASING DIVISION  
8300 SOUTH PALM DRIVE  
PEMBROKE PINES, FLORIDA 33025  
(954) 518-9020



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- Attachment A: Contact Information Form
- Attachment B: Non-Collusive Affidavit
- Attachment C: Proposer’s Qualifications Statement
- Attachment D: Sample Insurance Certificate
- Attachment E: Specimen Contract - **Construction Agreement**
- Attachment F: References Form
- Attachment G: Mandatory Pre-Bid/Site Visit Confirmation Form
- Attachment H: Standard Release of Lien Form
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## **SECTION 1 - INSTRUCTIONS**

### **1.1 NOTICE**

Notice is hereby given that the City Commission of the City of Pembroke Pines is seeking sealed proposals for:

#### **IFB # PSPW-19-15 Rebid of Roof Replacements at Various City Buildings**

Solicitations may be obtained from the City of Pembroke Pines website at <http://www.ppines.com/index.aspx?NID=667> and on the [www.BidSync.com](http://www.BidSync.com) website.

If you have any problems downloading the solicitation, please contact the BidSync Support line at 1-800-990-9339.

If additional information help is needed with downloading the solicitation package please contact the Purchasing Office at (954) 518-9020 or by email at [purchasing@ppines.com](mailto:purchasing@ppines.com). The Purchasing Office hours are between 7:00 a.m. - 6:00 p.m. on Monday through Thursday and is located at 8300 South Palm Drive, Pembroke Pines, Florida 33025.

The City requires all questions relating to the solicitation be entered through the "Ask a Question" option tab available on the BidSync website. Responses to the questions will be provided online at [www.bidsync.com](http://www.bidsync.com). Such request must be received by the "Question Due Date" stated in the solicitation. The issuance of a response via BidSync is considered an Addendum and shall be the only official method whereby such an interpretation or clarification will be made.

**Proposals will be accepted until 2:00 p.m., Tuesday, January 21, 2020.** Proposals must be submitted electronically at [www.BidSync.com](http://www.BidSync.com). The sealed electronic proposals will be publicly opened at 2:30 p.m. by the City Clerk's Office, in the City Hall Administration Building, 4<sup>th</sup> Floor Conference Room located at 601 City Center Way, Pembroke Pines, Florida, 33025.

### **1.2 PURPOSE**

The City of Pembroke Pines is seeking proposals from qualified firms, hereinafter referred to as the Contractor, to replace the roof at the Carl Shechter Community Center and several other city-owned facilities, in accordance with the terms, conditions, and specifications contained in this solicitation.

### **1.3 SCOPE OF WORK**



### **1.3.1 PROJECT DETAILS FOR FLAT ROOFS**

- Roof system design shall be based on a 180 mph wind resistance.
- Verification of all dimensions, square footages, and quantities are the responsibility of the Contractor.
- The bid shall include pricing for a built-up roofing system. Vendor shall use CertainTeed roof materials or proven equal and receive approval from the city representative for such.
- Contractor to provide separate price to replace the rotunda tile roof at the Carl Shechter Community center.
- All products must be Miami/Dade approved and installed in accordance with the 2017 Florida Building Code.
- Where applicable, roof insulation shall be replaced with equal or greater quality and R-Value.
- At no time shall the contractor uncover work which cannot be protected the same day.
- Contractor shall be responsible for removal and re-installation of all roof top equipment including but not limited to all skylights, satellite dishes, lightning protection, A/C equipment, and electrical/refrigerant penetrations where applicable.
- Remove all existing roof surfaces to supporting deck.
- Contractor is responsible for cutting wall to remove old stucco stop at flashing.
- Repair any exposed damaged surfaces to include light weight concrete and stucco surfaces prior to installation of new roofing system. Contractor to provide price per foot on damaged lightweight concrete and stucco.
- For roofs that are not pre-tapered: Install all new insulation board (or lightweight concrete as needed) with a  $\frac{1}{4}$ " per foot required taper and any required crickets to allow proper drainage; there will be zero tolerance for ponding water.
- Contractor shall seal, as required around existing vents, curbs, drains, scuppers or any other roof penetrations.
- Install 75# base sheet by mechanically fastening as per appropriate code requirements and engineer specifications.
- Install 2 plies of Flintglas ply VI hot mopped with asphalt.
- Install 1 ply of granulated fiberglass cap sheet.
- Install modified bitumen on all walls and flashings.
- Install all required membrane and sheet metal flashings in accordance with the local building code and the manufacturer's standard details.
- Flash all required curbs, parapet walls (up and over), mechanical curbs or other required areas.
- Install cantilever strip around all curbs and parapet walls.
- Install new retrofit drains.
- Secure all base flashings with proper sealant.
- Install termination bar around all curbs and wall flashing.
- Install all new surface mount stainless steel stucco stop where applicable.
- Fabricate and install all new stainless steel pitch pans throughout.
- Install expansion joints as required.



- Install all new 26 gauge stainless steel overflow scupper flashing.
- Install all new 26 gauge stainless steel eave drip edge where applicable.
- Install all new 26 gauge stainless steel coping caps with proper PT wood nailers throughout.
- Contractor shall replace all fascia and drip edge nailer with PT Wood and add a line item with a cost per sheet to be used for plywood sheeting replacement.
- Install walk pads from roof hatch to all A/C units.
- Where applicable (coping cap shall not have exposed mechanical fasteners).
- Install all new goose necks to house refrigerant lines for A/C units where applicable.
- Install all new roofing equipment curbs where applicable.
- Install all new skylights where applicable.
- All equipment must be installed as per all governing code requirements.
- All work must be started within 10 days of the issuance of the Notice to Proceed and have passed all inspections within the specified timeline for each roof project. See Section 1.4, "Project Cost Estimate & Timeline" for different timeline requirements from NTP to completion on different jobs.
- Contractor to provide a price per square foot to repair light weight concrete deck and hidden stucco surfaces as needed.

### **1.3.2 PROJECT DETAILS FOR SHINGLE ROOFS**

- Remove entire roofing system to wood deck.
- Install 30# felt, nail off following building code requirements.
- Install green Owens Corning Architectural Dimensional Shingles.
- Install all new PT 2X10 fascia.
- Install all new led stacks and roof vents.
- Install all new white 3X3 drip edge.
- Remove Boston gables to update design to hip roof. (**Pasadena Restrooms only**)
- Contractor shall provide a price per square foot for replacing damaged wood decking.
- Contractor shall remove and reinstall gutters and downspouts as needed.

### **1.3.3 GENERAL INFORMATION**

- The City reserves the right to split awards. The intent is to complete the roof projects during the winter season to prevent rain delays.
- The minimum experience required as a licensed Roofing Contractor and/or General Contractor is five (5) years for these projects.
- Contractor shall provide all materials, labor, equipment, and any other necessary items required for complete installation.
- All documents, plans, submittals, and NOA's required to obtain a permit are to be provided by the contractor.
- Contractor must provide all testing, manufacturer warranties, and certifications.



- The successful Bidder shall employ a competent English speaking superintendent who shall be in attendance at the project site during the progress of the work. The superintendent shall be the primary representative for the Bidder and all communications given to and all decisions made by the superintendent shall be binding to the Bidder.
- Contractor will be required to schedule all work with the City's Project Manager.
- Contractor shall be responsible for all debris removal and restoration to any existing areas damaged by the contractor once the project is completed. Site shall be made safe, and clean of debris at the end of each work day.
- All precautions need to be taken for life safety and protection of people, vehicles, and all other structures on the site.
- The work must be performed Monday through Friday or as approved by the Project Manager.
- Damaged stucco surfaces that are visible prior to the roof tear off shall be included in the bid price. Hidden stucco and light weight concrete surfaces shall be repaired using the price per square foot provided by the contractor as part of the bid and as approved by the project manager prior to the execution of the repair.

#### **1.3.4 USE OF PREMISES**

- Contractor shall limit their use on the premises for work and storage, and to allow for Owner's Occupancy.
- Contractor shall coordinate use of premises under direction of owner representative, assume full responsibility for protection and safe keeping of products under this contract stored on site, and move any stored products under Contractor's control which interfere with operations of the Owners or separate contractor.

#### **1.4 PROJECT COST ESTIMATE & TIMELINE**

The estimated total cost for this group of projects is \$900,000.



Location and Address	Approximate Square Footage	Calendar Days From NTP to Completion
<b>Carl Shechter Community Center</b> 301 N.W. 103 Ave. Pembroke Pines FL 33025	<b>40,000 sq. ft.</b>	<b>90</b>
<b>Pines Recreation Center North Concession Stand</b> 7400 Pines Blvd. Pembroke Pines FL 33024	<b>6,624 sq. ft.</b>	<b>30</b>
<b>Pasadena Park Restroom Bldg.</b> 8815 Pasadena Blvd. Pembroke Pines FL 33024	<b>1,200 sq. ft.</b>	<b>30</b>
<b>East Side Maintenance Bldg.</b> 9870 Johnson St. Pembroke Pines FL 33025	<b>2,500 sq. ft.</b>	<b>30</b>
<b>Studio 18</b> 1101 Poinciana Dr. Pembroke Pines FL 33025	<b>11,270 sq. ft.</b>	<b>45</b>
<b>Bright Beginnings Preschool</b> 901 NW 129 Ave. Pembroke Pines FL 33028	<b>13,400 sq. ft.</b>	<b>45</b>
<b>FSU Charter School “B” Building</b> 601 SW 172 Ave. Pembroke Pines FL 33029	<b>21,120 sq. ft.</b>	<b>45</b>

#### **1.4.1 PERMITS**

The City anticipates this project to require the following permits:

Permit	Agency	Cost (or related method of calculation)
Building	City of Pembroke Pines Building Department (Calvin, Giordano & Associates, Inc.)	3% of construction costs

#### **1.4.2 PERMIT ALLOWANCE**

Please note the City will include a Permit Allowance for this project, **therefore proposers should not include permit costs in their total proposal price.**

The City shall include a “Permit Allowance” for this project. The Contractor shall obtain all required permits to complete the work, however the City shall utilize the Permit Allowance to reimburse the contractor for the related permit, license, impact or inspection fees. Payments will be made to the contractor based on the actual cost of permits upon submission of paid permit receipts. The City shall not pay for other costs related to obtaining or securing permits.

The City shall determine the amount of the allowance at time of award. The allowance may be based on a specified percent of the proposed project amount and shall be established



for the specific project being performed under the contract. This dollar amount shall be shown on the specific project purchase order as a distinct item from the vendor's overall offer to determine the total potential dollar value of the contract. Any Permit Allowance funds that have not been utilized at the end of the project will remain with the City, if the City Permit fees exceed the allowance indicated, the City will reimburse the contractor the actual amount of City Permit Fees required for project completion.

### **1.4.3 WARRANTIES**

- The awarded contractor must provide a warranty of not less than 10 years for labor.
- The awarded contractor must provide a manufacturer's warranty of not less than twenty (20) years for materials.
- **Copies of all warranties MUST be provided with bids and shall be No Dollar Amount Limit.**

## **1.5 PROPOSAL REQUIREMENTS**

The following documents will need to be completed, scanned and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal. The proposer interested in responding to this solicitation must provide the information requested below. Submittals that do not respond completely to all requirements specified herein may be considered non-responsive and eliminated from the process.

### **1.5.1 Attachment A: Contact Information Form**

- a. Attached is contact information form (Attachment A) where the vendor will enter their contact information and complete the proposal checklist. The Contact information form shall be electronically signed by the contact person authorized to represent the contractor. This form must be completed and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal.
- b. The vendor must provide their pricing through the designated lines items listed on the BidSync website.
- c. Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.
- d. The contact information form should contain an electronic signature of the authorized representative of the Proposer along with the address and telephone number for communications regarding the Proposal.



- e. Proposals by corporations should be executed in the corporate name by the President or other corporate officer accompanied by evidence of authority to sign. The corporate address and state of incorporation must also be shown.
- f. Proposals by partnerships should be executed in the partnership name and signed by a partner whose title and the official address of the partnership must be shown.

## **1.5.2 Attachment B: Non-Collusive Affidavit**

## **1.5.3 Attachment C: Proposer's Qualifications Statement**

## **1.5.4 Attachment F: References Form**

- a. Complete **Attachment F: References Form**, preferably where the team was the same. References should be from the last five years and should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. As part of the proposal evaluation process, the City may conduct an investigation of references, including a record check or consumer affairs complaints. Proposers' submission of a proposal constitutes acknowledgment of the process and consent to investigate. The City is the sole judge in determining Proposers qualifications.

## **1.5.5 Attachment G: Mandatory Pre-Bid Meeting Form**

## **1.5.6 Proposal Security (Bid Bond Form or Cashier's Check)**

- a. Each Proposal must be accompanied by a certified or cashier's check or by a Bid Bond made payable to the City of Pembroke Pines on an approved form, duly executed by the Proposer as principal and having as surety thereon a surety company acceptable to CITY and authorized to write such Bond under the laws of the State of Florida, in an amount not less than five percent (5%) of the amount of the base Proposal price.
- b. Contingency is not to be counted in the total amount the proposal security is based on.
- c. Proposers must submit a scanned copy of their bid security (bid bond form or cashier's check) with their bid submittal through BidSync.
- d. Proposers must also submit their original bid security (bid bond form or cashier's check) at time of the bid due date, or they may be deemed as non-responsive.
- e. The original Bid Bond or Cashier's Check should be in a sealed envelope, plainly marked "**BID SECURITY - IFB # PSPW-19-15 Rebid of Roof**".





**Replacements at Various City Buildings**” and sent to the City of Pembroke Pines, City Clerk’s Office, 4th Floor, 601 City Center Way, Pembroke Pines, Florida, 33025.

- f. Please see SECTION 4 - SPECIAL TERMS & CONDITIONS of this IFB for additional information.

### **1.5.7 Copies of Warranties**

## **1.6 VENDOR REGISTRATION AND QUALIFICATION DOCUMENTS**

The City has implemented a new process that is intended to make the bidding process easier for vendors that bid on multiple City projects. This process will require vendors to complete and submit the following standard forms and documents at any time prior to bidding on a project. In addition, the vendors will be able to utilize these same forms without the need to re-fill and re-submit the forms each time they bid on a City project.

**Furthermore, please make sure to update this information on an as-needed basis so that all pertinent information is accurate, such as local business tax receipts, and any other relevant information.**

These forms will be found under the “Vendor Registration” group of “Qualifications” on the BidSync website for the City of Pembroke Pines. Please note that the BidSync website requires bidders to complete all of these qualifications prior to being able to submit questions on any bids, therefore, please make sure to complete this information as soon as possible.

The following documents can be completed prior to the bidding process through the BidSync website and do not need to be attached to your submittal as the BidSync website will automatically include it.

### **1.6.1 Vendor Information Form**

### **1.6.2 Form W-9 (Rev. October 2018)**

- a. Previously dated versions of this form will delay the processing of any payments to the selected vendor.

### **1.6.3 Sworn Statement on Public Entity Crimes Form**

### **1.6.4 Local Vendor Preference Certification**

- a. If claiming Local Pembroke Pines Vendor Preference, business must attach a current business tax receipt from the City of Pembroke Pines





- b. If claiming Local Broward County Vendor Preference, business must attach a current business tax receipt from Broward County or the city within Broward County where the business resides.
- c. The Local Vendor Preference Certification form must be completed by/for the proposer; the proposer **WILL NOT** qualify for Local Vendor Preference based on their sub-contractors' qualifications.

**1.6.5 Local Business Tax Receipts**

**1.6.6 Veteran Owned Small Business Preference Certification**

- a. If claiming Veteran Owned Small Business Preference Certification, business must attach the "Determination Letter" from the United States Department of Veteran Affairs Center for Verification and Evaluation notifying the business that they have been approved as a Veteran Owned Small Business (VOSB).
- b. The Veteran Owned Small Business Preference Certification form must be completed by/for the proposer; the proposer **WILL NOT** qualify for Veteran Owned Small Business Preference based on their sub-contractors' qualifications.

**1.6.7 Equal Benefits Certification Form**

**1.6.8 Vendor Drug-Free Workplace Certification Form**

**1.6.9 Scrutinized Company Certification**

**1.7 EVALUATION OF PROPOSALS & PROCESS OF SELECTION**

- A. Staff will evaluate all responsive proposals received from proposers who meet or exceed the bid requirements contained in the solicitation. Evaluations shall be based upon the information contained in the proposals as submitted.
- B. Staff will make a recommendation to the City Commission for award of contract.



## **1.8 TENTATIVE SCHEDULE OF EVENTS**

<b>Event</b>	<b>Time &amp;/or Date</b>
Issuance of Solicitation (Posting Date)	<b>December 10, 2019</b>
Mandatory Pre-Bid Meeting	<b>10:00 a.m. on December 18, 2019</b>
Question Due Date	<b>January 7, 2020</b>
Anticipated Date of Issuance for the Addenda with Questions and Answers	<b>January 13, 2020</b>
Proposals will be accepted until	<b>2:00 p.m. on January 21, 2020</b>
Proposals will be opened at	<b>2:30 p.m. on January 21, 2020</b>
Evaluation of Proposals by Staff	<b>TBD</b>
Recommendation of Contractor to City Commission award	<b>TBD</b>
Issuance of Notice to Proceed	<b>TBD</b>
Project Commencement	<b>Not later than 10 days after NTP</b>
Project Completion	<b>Varies by location; see Section 1.4</b>

### **1.8.1 MANDATORY PRE-BID MEETING / SITE VISIT**

There will be a mandatory scheduled pre-bid meeting on **December 18, 2019 at 10:00 a.m.** The meeting will start in the Public Services Conference room, located at 8300 South Palm Drive, Pembroke Pines FL 33025, and vendors will proceed to the remaining locations at the direction of the Public Services staff in attendance.

All vendors will be required to complete **Attachment G "Mandatory Pre-Bid Meeting Form"** at the meeting and submit it as part of their proposal to show proof of attendance to the mandatory meeting.

## **1.9 SUBMISSION REQUIREMENTS**

Bids/proposals **must be submitted electronically** at [www.bidsync.com](http://www.bidsync.com) on or before **2:00 p.m. on January 21, 2020.**

Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.

The vendor must provide their pricing through the designated lines items listed on the BidSync website. In addition, the vendor must complete any webforms on the BidSync website and provide any additional information requested throughout this solicitation. Any additional information requested in the solicitation should be scanned and uploaded. **Unless otherwise specified, the City requests for vendors to upload their documents as one (1) PDF document in the order that is outline in the bid package.**



The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals. BidSync Support is happy to help you with submitting your proposal and to ensure that you are submitting your proposals correctly, but we ask that you contact their support line at 1-800-990-9339 with ample time before the bid closing date and time.

**PLEASE DO NOT SUBMIT ANY PROPOSALS VIA MAIL, E-MAIL OR FAX.**

However, please note that any required Bid Bond or Cashier's Check should be in a sealed envelope, plainly marked "**BID SECURITY - IFB # PSPW-19-15 Rebid of Roof Replacements at Various City Buildings**" and sent to the City of Pembroke Pines, City Clerk's Office, 4th Floor, 601 City Center Way, Pembroke Pines, Florida, 33025.



## **SECTION 2 - INSURANCE REQUIREMENTS**

The CONTRACTOR shall indemnify and hold harmless the CITY and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the CITY or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the CONTRACTOR or its employees, agents, servants, partners principals or subcontractors. The CONTRACTOR shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the CITY, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. The CONTRACTOR expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the CONTRACTOR shall in no way limit the responsibility to indemnify, keep and save harmless and defend the CITY or its officers, employees, agents and instrumentalities as herein provided.

CONTRACTOR shall not commence work under this Agreement until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the CITY nor shall the CONTRACTOR allow any subcontractor to commence work on his subcontract until all similar such insurance required of the subcontractor has been obtained and similarly approved.

**CERTIFICATES OF INSURANCE**, reflecting evidence of the required insurance, shall be filed with the City's Risk Manager prior to the commencement of this Agreement. Policies shall be issued by companies authorized to do business under the laws of the State of Florida. The insurance company shall be rated no less than "A" as to management, and no less than "Class VI" as to financial strength according to the latest edition of Best's Insurance Guide published by A.M. Best Company.

Policies shall be endorsed to provide the CITY thirty (30) days' notice of cancellation, material change or non-renewal of policies required under the contract. If the carrier will not agree to this notification, the CONTRACTOR or its insurance broker shall notify the CITY of any cancellation or reduction in coverage within seven days of receipt of insurer's notification of cancellation or reduction in coverage.

Insurance shall be in force until all obligations required to be fulfilled under the terms of the Agreement are satisfactorily completed as evidenced by the formal acceptance by the CITY. In the event the insurance certificate provided indicates that the insurance shall terminate and lapse during the period of this Agreement, then in that event, the CONTRACTOR shall furnish, at least fifteen (15) days prior to the expiration of the date of such insurance, a renewed certificate of insurance as proof that equal and like coverage for the balance of the period of the Agreement and extension thereunder is in effect. The CONTRACTOR shall not commence nor continue to provide any services pursuant to this Agreement unless all required insurance remains in full force and effect. CONTRACTOR shall be liable to CITY for any lapses in service resulting from a gap in insurance coverage.

The insurance requirements specified in this Agreement are minimum requirements and in no way reduce any liability the CONTRACTOR has assumed in the indemnification/hold harmless section(s) of this Agreement.



## 2.1 REQUIRED INSURANCE

- A. COMMERCIAL GENERAL LIABILITY INSURANCE** including, but not limited to: coverage for premises & operations, personal & advertising injury, products & completed operations, Liability assumed under an Insured Contract (including tort liability of another assumed in a business contract), and independent contractors. Coverage must be written on an occurrence basis, with limits of liability no less than:

1. Each Occurrence Limit - \$1,000,000
2. Fire Damage Limit (Damage to rented premises) - \$100,000
3. Personal & Advertising Injury Limit - \$1,000,000
4. General Aggregate Limit - \$2,000,000
5. Products & Completed Operations Aggregate Limit - \$2,000,000 (**mostly for construction or equipment sold to the CITY**)

Products & Completed Operations Coverage shall be maintained for two (2) years after the final payment under this contract. (Increase to 10 years for construction projects) (For construction projects also include: Designated Construction Project(s) General Aggregate Limit)

**The City of Pembroke Pines must be shown as an additional insured with respect to this coverage.** City's Additional Insured status shall extend to any coverage beyond the minimum requirements for limits of liability found herein.

- B. WORKERS' COMPENSATION AND EMPLOYERS LIABILITY INSURANCE** covering all employees, and/or volunteers of the CONTRACTOR engaged in the performance of the scope of work associated with this Agreement. In the case any work is sublet, the CONTRACTOR shall require the subcontractors similarly to provide Workers Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. Coverage for the CONTRACTOR and his subcontractors shall be in accordance with applicable state and/or federal laws that may apply to Workers' Compensation Insurance with limits of liability no less than:

1. Workers' Compensation : Coverage A – Statutory
2. Employers Liability: Coverage B \$500,000 Each Accident  
\$500,000 Disease – Policy Limit  
\$500,000 Disease – Each Employee

If CONTRACTOR claims to be exempt from this requirement, CONTRACTOR shall provide CITY proof of such exemption along with a written request for CITY to exempt CONTRACTOR, written on CONTRACTOR letterhead.

Coverage shall be included for injuries or claims under the USL&H or Jones Act, when applicable.

- C. AUTO LIABILITY INSURANCE** covering all owned, leased, hired, non-owned and employee non-owned vehicles used in connection with the performance of work under this Agreement, with a combined single limit of liability for bodily injury and property damage no less than:



1. Any Auto (Symbol 1)  
Combined Single Limit (Each Accident) - \$1,000,000
2. Hired Autos (Symbol 8)  
Combined Single Limit (Each Accident) - \$1,000,000
3. Non-Owned Autos (Symbol 9)  
Combined Single Limit (Each Accident) - \$1,000,000

If work under this Agreement includes transportation of hazardous materials, policy shall include pollution liability coverage equivalent to that provided by ISO pollution liability-broadened coverage for auto endorsement CA9948 and the Motor Carrier Act endorsement MCS90.

- D. PROFESSIONAL LIABILITY/ERRORS & OMISSIONS INSURANCE**, when applicable, with a limit of liability no less than \$1,000,000 per wrongful act. This coverage shall be maintained for a period of no less than three (3) years after final payment of the contract. (Increase to 10 years for construction projects)
- E. ENVIRONMENTAL/POLLUTION LIABILITY** shall be required with a limit of no less than \$1,000,000 per wrongful act whenever work under this Agreement involves potential losses caused by pollution conditions. Coverage shall include: Contractor's completed operations as well as sudden and gradual pollution conditions. If coverage is written on a claims-made basis, coverage shall be maintained for a period of no less than three (3) years after final payment of the contract. **The City of Pembroke Pines must be shown as an additional insured with respect to this coverage.** Furthermore, the CITY'S Additional Insured status shall extend to any coverage beyond the minimum requirements for limits of liability found herein.
- F. CYBER LIABILITY including Network Security and Privacy Liability** when applicable, with a limit of liability no less than \$1,000,000 per loss. Coverage shall include liability arising from: theft, dissemination and/or use of confidential information stored or transmitted in electronic form, unauthorized access to, use of, or tampering with computer systems, including hacker attacks or inability of an authorized third party to gain access to your services, including denial of service, and the introduction of a computer virus into, or otherwise causing damage to, a customer's or third person's computer, computer system, network, or similar computer-related property and the data, software and programs thereon. This coverage shall be maintained for a period of no less than three (3) years after final payment of the contract. **The City of Pembroke Pines must be shown as an additional insured with respect to this coverage.** Furthermore, the CITY'S Additional Insured status shall extend to any coverage beyond the minimum requirements for limits of liability found herein.
- G. CRIME COVERAGE** when applicable, shall include employee dishonesty, forgery or alteration, and computer fraud in an amount of no less than \$1,000,000 per loss. If Contractor is physically located on the City's premises, a third-party fidelity coverage extension shall apply.
- H. BUILDER'S RISK INSURANCE** shall be "All Risk" for one hundred percent (100%) of the completed value of the project with a deductible of not more than five percent (5%) for Named Windstorm and \$20,000 per claim for all other perils. The Builder's Risk Insurance





shall include interests of the CITY, the CONTRACTOR and subcontractors of the project. The CONTRACTOR shall include a separate line item for all costs associated with the Builder's Risk Insurance Coverage for the project. The CITY reserves the right at its sole discretion to utilize the CONTRACTOR'S Builder's Risk Insurance or for the CITY to purchase its own Builder's Risk Insurance for the Project. Prior to the CONTRACTOR purchasing the Builder's Risk insurance for the project, the CONTRACTOR shall allow the CITY the opportunity to analyze the CONTRACTOR'S coverage and determine who shall purchase the coverage. Should the CITY utilize the CONTRACTOR'S Builder's Risk Insurance, the CONTRACTOR shall be responsible for all deductibles. If the CITY chooses to purchase the Builder's Risk Coverage on the project, the CONTRACTOR shall provide the CITY with a change order deduct for all premiums and costs associated with the Builder's Risk insurance in their schedule. Should the CITY choose to utilize the CITY'S Builder's Risk Program, the CITY shall be responsible for the Named Windstorm Deductible and the CONTRACTOR shall be responsible for the All Other Perils Deductible.

- I. **SEXUAL ABUSE** may not be excluded from any policy for Agreements involving any interaction with minors or seniors.

## 2.2 REQUIRED ENDORSEMENTS

1. The City of Pembroke Pines shall be named as an Additional Insured on each of the General Liability policies required herein
2. Waiver of all Rights of Subrogation against the CITY
3. 30 Day Notice of Cancellation or Non-Renewal to the CITY
4. CONTRACTOR's policies shall be Primary & Non-Contributory
5. All policies shall contain a "severability of interest" or "cross liability" liability clause without obligation for premium payment of the CITY
6. The City of Pembroke Pines shall be named as a Loss Payee on all Property and/or Inland Marine Policies as their interest may appear.

CONTRACTOR shall name the CITY, as an additional insured on each of the General Liability policies required herein and shall hold the CITY, its agents, officers and employees harmless on account of claims for damages to persons, property or premises arising out of the services provided hereunder. Any insurance required of the CONTRACTOR pursuant to this Agreement must also be required by any subcontractor in the same limits and with all requirements as provided herein, including naming the CITY as an additional insured, in any work is subcontracted unless such subcontractor is covered by the protection afforded by the CONTRACTOR and provided proof of such coverage is provided to CITY. The CONTRACTOR and any subcontractors shall maintain such policies during the term of this Agreement.

The CITY reserves the right to require any other additional types of insurance coverage and/or higher limits of liability it deems necessary based on the nature of work being performed under this Contract.



## **SECTION 3 - GENERAL TERMS & CONDITIONS**

### **3.1 EXAMINATION OF CONTRACT DOCUMENTS**

Before submitting a Proposal, each Proposer should (a) consider federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost or performance of the work, (b) study and carefully correlate the Proposer's observations with the Proposal Documents; and (c) notify the Purchasing Manager of all conflicts, errors and discrepancies, if any, in the Proposal Documents.

The Proposer, by and through the submission of a Proposal, agrees that Proposer shall be held responsible for having familiarized themselves with the nature and extent of the work and any local conditions that may affect the work to be done and the services, equipment, materials, parts and labor required.

### **3.2 CONFLICT OF INSTRUCTIONS**

If a conflict exists between the General Conditions and Instructions stated herein and specific conditions and instructions contained in specifications, the specifications shall govern.

### **3.3 ADDENDA or ADDENDUM**

A formal solicitation may require an Addendum to be issued. An addendum in some way may clarify, correct or change the original solicitation (i.e. due date/time, specifications, terms, conditions, line item). Vendors submitting a proposal should check the BidSync website for any addenda issued. Vendors are cautioned not to consider verbal modifications to the solicitation, as the addendum issued through BidSync will be the only official method whereby changes will be made.

### **3.4 INTERPRETATIONS AND QUESTIONS**

If the Proposer is in doubt as to the meaning of any of the Proposal Documents, is of the opinion that the Conditions and Specifications contain errors or contradictions or reflect omissions, or has any question concerning the conditions and specifications, the Proposer shall submit a question for interpretation or clarification. The City requires all questions relating to the solicitation be entered through the **"Ask a Question"** option tab available on the BidSync website. Responses to the questions will be provided online at [www.bidsync.com](http://www.bidsync.com). Such request must be received by the **"Question Due Date"** stated in the solicitation. Questions received after **"Question Due Date"** shall not be answered. Interpretations or clarifications in response to such questions will be issued via BidSync. The issuance of a response via BidSync is considered an Addendum and shall be the only official method whereby such an interpretation or clarification will be made.

BidSync Support is also available to assist proposers with submitting their proposal and to ensure that proposers are submitting their proposals correctly. Proposers should ensure that they contact the BidSync support line at 1-800-990-9339 with ample time before the bid closing date and time.

For all other questions related to this solicitation, please contact the Purchasing Division at [purchasing@ppines.com](mailto:purchasing@ppines.com).

### **3.5 RULES, REGULATIONS, LAWS, ORDINANCES and LICENSES**

The awarded contractor shall observe and obey all laws, ordinances, rules, and regulations of the federal, state, and CITY, which may be applicable to the service being provided. The awarded firm shall have or be responsible for obtaining all necessary permits or licenses required, if necessary, in order to provide this service.





Bidder warrants by submittal that prices quoted here are in conformity with the latest federal price guidelines, if any.

### 3.6 WARRANTIES FOR USAGE

Whenever a bid is sought, seeking a source of supply for a specified time for materials or service, the quantities or usage shown are estimated only. No guarantee or warranty is given or implied by the City as to the total amount that may or may not be purchased from any resulting contracts. These quantities are for bidders information only and will be used for tabulation and presentation of bid.

### 3.7 BRAND NAMES

If and wherever in the specifications a brand name, make, name of manufacturer, trade name, or vendor catalog number is mentioned, it is for the purpose of establishing a grade or quality of material only. Since the City does not wish to rule out other competition and equal brands or makes, the phrase "OR EQUAL" is added. However, if a product other than that specified is bid, Bidders shall indicate on their proposal and clearly state the proposed substitution and deviation. It is the vendor's responsibility to provide any necessary documentation and samples within their bid submittal to prove that the product is equal to that specified. Such samples are to be furnished before the date of bid opening, unless otherwise specified. Additional evidence in the form of documentation and samples may be requested if the proposed brand is other than that specified. The City retains the right to determine if the proposed brand shall be considered as an approved equivalent or not.

### 3.8 QUALITY

All materials used for the manufacture or construction of any supplies, materials, or equipment covered by this bid shall be new, the latest model, of the best quality, and

highest grade workmanship, unless otherwise noted.

### 3.9 SAMPLES

Samples, when requested, must be furnished before, or at the bid opening, unless otherwise specified, and delivered free of expense to the City and if not used in testing or destroyed, will upon request within thirty (30) days of bid award be returned at the bidders expense.

### 3.10 DEVELOPMENT COSTS

Neither the City nor its representatives shall be liable for any expenses incurred in connection with the preparation, submission or presentation of a Bid in response to this solicitation. All information in the Bid shall be provided at no cost to the City.

### 3.11 PRICING

Prices should be stated in units of quantity specified in the bidding specifications. In case of discrepancy in computing the amount of the bid, the unit prices quoted will govern.

Bidder warrants by virtue of bidding that prices, terms, and conditions quoted in his bid will be firm for acceptance for a period of ninety (90) days from date of bid opening unless otherwise stated by the City or bidder.

### 3.12 DELIVERY POINT

All items shall be delivered F.O.B. destination, and delivery cost and charges included in the bid price. Failure to do so may be cause for rejection of bid.

### 3.13 TAX EXEMPT STATUS

The City is exempt from Florida Sales and Federal Excise taxes on direct purchase of tangible property.

### 3.14 CONTRACT TIME

By virtue of the submission of the Proposal, Proposer agrees and fully understands that



the completion time of the work of the Contract is an essential and material condition of the Contract and that time is of the essence. The Successful Proposer agrees that all work shall be prosecuted regularly, diligently and uninterrupted at such rate of progress as will ensure full completion thereof within the time specified. Failure to complete the work within the time period specified shall be considered a default.

In addition, time will be of the essence for any orders placed as a result of this bid. Purchaser reserves the right to cancel such orders, or part thereof, without obligation if delivery is not made at the time(s) or place(s) specified.

### **3.15 COPYRIGHT OR PATENT RIGHTS**

Bidder warrants that there have been no violations of copyrights or patent rights in manufacturing, producing, or selling other goods shipped or ordered as a result of this bid, and seller agrees to hold the purchaser harmless from any and all liability, loss or expense occasioned by such violation.

### **3.16 PUBLIC ENTITY CRIMES**

"A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list."

The Public Entity Crime Affidavit Form, attached to this solicitation, includes

documentation that shall be executed by an individual authorized to bind the Proposer. The Proposer further understands and accepts that any contract issued as a result of this solicitation shall be either voidable or subject to immediate termination by the City. In the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133 or Section 287.134, respectively, Florida Statutes. The City in the event in such termination, shall not incur any liability to the Bidder for any goods, services or materials furnished.

### **3.17 CONFLICT OF INTEREST**

The award of any contract hereunder is subject to the provisions of Chapter 112, Florida Statutes. Proposers must disclose with their Proposal the name of any officer, director, partner, proprietor, associate or agent who is also an officer or employee of CITY or any of its agencies. Further, all Proposers must disclose the name of any officer or employee of CITY who owns, directly or indirectly, an interest of five percent (5%) or more in the Proposer's firm or any of its branches or affiliate companies.

### **3.18 FACILITIES**

The City reserves the right to inspect the Bidder's facilities at any time with prior notice.

### **3.19 ENVIRONMENTAL REGULATIONS**

CITY reserves the right to consider Proposer's history of citations and/or violations of environmental regulations in determining a Proposer's responsibility, and further reserves the right to declare a Proposer not responsible if the history of violations warrant such determination. Proposer shall submit with the Proposal, a complete history of all citations and/or violations, notices and dispositions thereof. The non-submission of any such documentation shall be deemed to be an affirmation by the Proposer that there are no citations or violations. Proposer shall notify



CITY immediately of notice of any citation or violation that Proposer may receive after the Proposal opening date and during the time of performance of any contract awarded to Proposers.

### **3.20 SIGNATURE REQUIRED**

All proposals must be signed with the firm name and by an officer or employee having authority to bind the company or firm by his signature. FAILURE TO PROPERLY SIGN PROPOSAL SHALL INVALIDATE SAME, AND IT MAY NOT BE CONSIDERED FOR AWARD.

The individual executing this Bid on behalf of the Company warrant to the City that the Company is authorized to do business in the State of Florida, is in good standing and that Company possesses all of the required licenses and certificates of competency required by the State of Florida and Broward County to provide the goods or perform the services herein described.

The signed bid shall be considered an offer on the part of the bidder or contractor, which offer shall be deemed accepted upon approval by the City Commission of the City of Pembroke Pines and in case of default on the part of the bidder or contractor after such acceptance, the City of Pembroke Pines may take such action as it deems appropriate including legal action for damages or specific performance.

### **3.21 MANUFACTURER'S CERTIFICATION**

The City of Pembroke Pines reserves the right to request from bidder separate manufacturer certification of all statements made in the proposal.

### **3.22 MODIFICATION OR WITHDRAWAL OF PROPOSAL**

The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync

website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals.

### **3.23 PUBLIC BID; BID OPENING AND GENERAL EXEMPTIONS**

All submittals received by the deadline will be recorded, and will subsequently be publicly opened on the same business day at 2:30 p.m. at the office of the City Clerk, 4th Floor, 601 City Center Way, Pembroke Pines, Florida, 33025.

All Proposals received from Proposers in response to the solicitation will become the property of CITY and will not be returned to the Proposers. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of CITY. Proposers are requested to identify specifically any information contained in their Proposals which they consider confidential and/or proprietary and which they believe to be exempt from disclosure, citing specifically the applicable exempting law.

Pursuant to Section 119.071 of the Florida Statutes, sealed bids, proposals, or replies received by a Florida public agency shall remain exempt from disclosure until an intended decision is announced or until 30 days from the opening, whichever is earlier.

Therefore, bidders will not be able to procure a copy of their competitor's bids until an intended decision is reached or 30 days has elapsed since the time of the bid opening.

However, pursuant to Section 255.0518 of the Florida Statutes, when opening sealed bids that are received pursuant to a competitive solicitation for **construction or repairs on a public building or public work**, the entity shall:

- (a) Open the sealed bids at a public meeting.



(b) Announce at that meeting the name of each bidder and the price submitted in the bid.

(c) Make available upon request the name of each bidder and the price submitted in the bid.

For solicitations that are **not** for **“construction or repairs on a public building or public work”** the City shall not reveal the prices submitted in the bids until an intended decision is announced or until 30 days from the opening, whichever is earlier.

### **3.24 RESERVATIONS FOR REJECTION AND AWARD**

The City of Pembroke Pines reserves the right to accept or reject any and all bids or parts of bids, to waive irregularities and technicalities, and to request rebids. The City also reserves the right to award a contract on such items(s) or service(s) the City deems will best serve its interests. All bids shall be awarded to the most responsive/responsible bidder, provided the (City) may for good cause reject any bid or part thereof. It further reserves the right to award a contract on a split order basis, or such combinations as shall best serve the interests of the City unless otherwise specified. No premiums, rebates or gratuities permitted, either with, prior to, or after award. This practice shall result in the cancellation of said award and/or return of items (as applicable) and the recommended removal of bidder from bid list(s).

### **3.25 BID PROTEST**

Any protests or challenges to this competitive procurement shall be governed by Section 35.38 of the City's Code of Ordinances.

### **3.26 INDEMNIFICATION**

The Successful Proposer shall pay all claims, losses, liens, settlements or judgments of any nature whatsoever in connection with the subsequent indemnifications including, but not limited to,

reasonable attorney's fees (including appellate attorney's fees) and costs.

CITY reserves the right to select its own legal counsel to conduct any defense in any such proceeding and all costs and fees associated therewith shall be the responsibility of Successful Proposer under the indemnification agreement. Nothing contained herein is intended nor shall it be construed to waive City's rights and immunities under the common law or Florida Statute 768.28 as amended from time to time.

Additional indemnification requirements may be included under Special Terms and Conditions and/or as part of a specimen contract included in the solicitation package.

**General Indemnification:** To the fullest extent permitted by laws and regulations, Successful Proposer shall indemnify, defend, save and hold harmless the CITY, its officers, agents and employees, harmless from any and all claims, damages, losses, liabilities and expenses, direct, indirect or consequential arising out of or in consequence of the products, goods or services furnished by or operations of the Successful Proposer or his subcontractors, agents, officers, employees or independent contractors pursuant to or in the performance of the Contract.

**Patent and Copyright Indemnification:** Successful Proposer agrees to indemnify, defend, save and hold harmless the CITY, its officers, agents and employees, from all claims, damages, losses, liabilities and expenses arising out of any alleged infringement of copyrights, patent rights and/or the unauthorized or unlicensed use of any invention, process, material, property or other work manufactured or used in connection with the performance of the Contract, including its use by CITY.

### **3.27 DEFAULT PROVISION**





In the case of default by the bidder or contractor, the City of Pembroke Pines may procure the articles or services from any other sources and hold the bidder or contractor responsible for any excess costs occasioned or incurred thereby.

The City shall be the sole judge of nonperformance, which shall include any failure on the part of the successful Bidder to accept the Award, to furnish required documents, and/or to fulfill any portion of the contract within the time stipulated. Upon default by the successful Bidder to meet any terms of this agreement, the City will notify the Bidder five (5) days (weekends and holidays excluded) to remedy the default. Failure on the Contractor's part to correct the default within the required five (5) days shall result in the contract being terminated and upon the City notifying in writing the Contractor of its intentions and the effective date of the termination. The following shall constitute default:

A. Failure to perform the Work required under the contract and/or within the time required or failing to use the subcontractor, entities and personnel as identified and set forth, and to the degree specified in the contract.

B. Failure to begin the Work under this Bid within the time specified.

C. Failure to perform the Work with sufficient Workers and equipment or with sufficient materials to ensure timely completion.

D. Neglecting or refusing to remove materials or perform new Work where prior Work has been rejected as non-conforming with the terms of the contract.

E. Becoming insolvent, being declared bankrupt, or committing act of bankruptcy or insolvency, or making an assignment renders the successful Bidder incapable of performing the Work in accordance with and as required by the contract.

F. Failure to comply with any of the terms of the contract in any material respect.

In the event of default of a contract, the successful Bidder shall pay all attorney's fees and court costs incurred in collecting any damages. The successful Bidder shall pay the City for any and all costs incurred in ensuing the completion of the project.

Additional provisions may be included in the specimen contract.

### **3.28 ACCEPTANCE OF MATERIAL**

The material delivered under this proposal shall remain the property of the seller until a physical inspection and actual usage of this material and/or services is made and thereafter accepted to the satisfaction of the City and must comply with the terms herein, and be fully in accord with specifications and of the highest quality. In the event the material and/or services supplied to the City are found to be defective or do not conform to specifications, the City reserves the right to cancel the order upon written notice to the seller and return product to seller at the sellers expense.

### **3.29 LOCAL GOVERNMENT PROMPT PAYMENT ACT**

The City complies with Florida Statute 218.70, Florida Prompt Payment Act.

### **3.30 SCRUTINIZED COMPANIES LIST**

In accordance with Florida Statute 287.135, as amended, a company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services if:

(a) Any amount of, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or



(b) One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company:

1. Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or

2. Is engaged in business operations in Syria.

By submitting a bid, proposal or response, the company, principals or owners certify that they are not listed on the Scrutinized Companies that boycott Israel List, Scrutinized Companies with activities in Sudan List, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or is engaged in business operations in Syria.

### **3.31 PUBLIC RECORDS; TRADE SECRET, PROPRIETARY AND CONFIDENTIAL SUBMITTALS**

The Proposer's response to this solicitation is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this solicitation and the Contract to be executed for this solicitation, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the solicitation purporting to require confidentiality of any portion of the Proposer's response to the solicitation, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer

claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the solicitation constitutes a Trade Secret.

Any claim of confidentiality on financial statements must be asserted at the time of submittal. The firm must identify the specific statute that authorizes the exemption from the Public Records Law. Please note that the financial statement exemption provided for in Section 119.071(1)c, Florida Statutes only applies to submittals in response to a solicitation for a "public works" project.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED. ALL DOCUMENTS THAT THE FIRM PURPORTS TO BE CONFIDENTIAL, PROPRIETARY OR A TRADE SECRET SHALL BE UPLOADED TO THE BIDSYNCH WEBSITE AS A SEPARATE ATTACHMENT CLEARLY IDENTIFYING THE EXEMPTION BEING CLAIMED UNDER FLORIDA STATUTES 119.07.

The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records.



## **SECTION 4 - SPECIAL TERMS & CONDITIONS**

### **4.1 PROPOSAL SECURITY**

**Proposal Security Requirements:** Each Proposal must be accompanied by a certified or cashier's check or by a Bid Bond made payable to the City of Pembroke Pines on an approved form, duly executed by the Proposer as principal and having as surety thereon a surety company acceptable to CITY and authorized to write such Bond under the laws of the State of Florida, in an amount not less than five percent (5%) of the amount of the base Proposal price.

Proposers must submit a scanned copy of their bid security (bid bond form or cashier's check) with their bid submittal through BidSync. Proposers must also submit their original bid security (bid bond form or cashier's check) at time of the bid due date, or they may be deemed as non-responsive. The original Bid Bond or Cashier's Check should be in a sealed envelope, plainly marked "**BID SECURITY - IFB # PSPW-19-15, Rebid of Roof Replacements at Various City Buildings**" and sent to the:

City of Pembroke Pines,  
City Clerk's Office, 4th Floor,  
601 City Center Way,  
Pembroke Pines, Florida, 33025.

**Successful Proposer:** The Proposal Security of the Successful Proposer will be retained until such Proposer has executed the Contract and furnished the required insurance, payment and performance bonds, whereupon the Proposal Security will be returned. If the Successful Proposer fails to execute and deliver the Contract and furnish the required insurance and bonds within fifteen (15) calendar days of the Notice of Award, CITY may annul the Notice of Award and the entire sum of the Proposal Security shall be forfeited.

**Three Lowest Proposers:** The Proposal Security of the three (3) lowest Proposers will be returned within seven (7) calendar days after CITY and the Successful Proposer have executed the written Contract or if no such written Contract is executed within ninety (90) calendar days after the date of the Proposal opening, upon the demand of any Proposer at any time thereafter, provided that he has not been notified of the acceptance of his Proposal.

**All Other Proposers:** Proposal Security of all other Proposer will be returned within seven (7) calendar days after the proposal opening. The agent or attorney in fact or other officer who signs a Bid Bond for a surety company must file with such bond a certified copy of his power of attorney authorizing him to do so.

### **4.2 PAYMENT AND PERFORMANCE BONDS**

Within fifteen (15) calendar days after Notice of Award and in any event prior to commencing work, the Contractor shall execute and furnish to City a performance bond and a payment bond, each written by a corporate surety, having a resident agent in the State of Florida and having been in business with a record of successful continuous operation for at least five (5) years. The surety shall hold a current certificate of authority from the Secretary of Treasury of the United States as an acceptable surety on federal bonds in accordance with United States Department of Treasury Circular No. 570. If the amount of the Bond exceeds the underwriting limitation set forth in the circular, in order to qualify, the net retention of the surety company shall not exceed the underwriting limitation in the circular and the excess risks must be protected by coinsurance, reinsurance, or other methods, in accordance with Treasury Circular 297, revised September 1, 1978 (31DFR, Section 223.10, Section 223.11). Further, the surety company shall provide City with evidence



satisfactory to City, that such excess risk has been protected in an acceptable manner. The surety company shall have at least the following minimum qualification in accordance with the latest edition of A.M. Best's Insurance Guide, published by Alfred M. Best Company, Inc., Ambest Road, Oldwick, New Jersey 08858:

B+ to A+

Two (2) separate bonds are required and both must be approved by the City. **The penal sum stated in each bond shall be 100% of the contract price.** The performance bond shall be conditioned that the Contractor performs the contract in the time and manner prescribed in the contract. The payment bond shall be conditioned that the Contractor promptly make payments to all persons who supply the Contractor with labor, materials and supplies used directly or indirectly by the Contractor in the prosecution of the work provided for in the Contract and shall provide that the surety shall pay the same in the amount not exceeding the sum provided in such bonds, together with interest at the maximum rate allowed by law; and that they shall indemnify and save harmless the City to the extent of any and all payments in connection with the carrying out of said Contract which the City may be required to make under the law.

Pursuant to the requirements of Section 255.05(1)(a), Florida Statutes, it shall be the duty of the Contractor to record the aforesaid payment and performance bonds in the public records of Broward County, with the Contractor to pay all recording costs.

#### 4.3 OWNER'S CONTINGENCY

While the specifications contained in this solicitation and any ensuing Purchase Orders or contracts have incorporated all anticipated work to be accomplished, there may be unanticipated work required of the vendor in conjunction with a specific project. For this reason, the City

Commission may award a project with an "Owner's Contingency". This contingency or allowance authorizes the City execute change orders up to the amount of the contingency without the need to obtain additional Commission approval. The Owner's Contingency is usually based on a specified percent of the proposed project amount and is established for the specific project being performed under the contract. This dollar amount shall be shown on the specific project purchase order as a distinct item from the vendor's overall offer to determine the total potential dollar value of the contract. It is hereby understood and agreed that the vendor shall not expend any dollars in connection with the Owner's Contingency without the expressed prior approval of the City's authorized representative. Any Owner's Contingency funds that have not been utilized at the end of the project will remain with the Owner, the contractor shall only be paid for the proposed project cost as approved by the City Commission along with any Owner Contingency expenses that were approved by the City's authorized representative.

#### 4.4 TAX SAVER PROGRAM

The Contractor shall cooperate on certain projects to allow the City to avail itself of a sales tax savings program.

#### 4.5 RELEASE OF LIEN

Contractor must provide an executed Partial/Final Release of Lien utilizing the City's standard Release of Lien Form in order for the City to release any payments to the Contractor.

#### 4.6 SOLID WASTE CONSTRUCTION AND DEMOLITION DEBRIS COLLECTION AND DISPOSAL REQUIREMENTS

The City of Pembroke Pines has an exclusive solid waste franchise agreement with Waste Pro of Florida, Inc. for the collection and





disposal of all solid waste including construction and demolition (C & D) debris. All applicants for bids to perform construction work for the City of Pembroke Pines shall be subject to the requirements found in the City's exclusive solid waste franchise agreement and must contract Waste Pro of Florida, Inc. for the collection and disposal of all construction and demolition debris generated at such construction job sites.

For the current applicable rates and fees for Waste Pro of Florida, Inc. dumpsters, roll-off containers, and other related solid waste service equipment needs, please contact David Perez, Waste Pro's Pembroke Pines Sales Representative at (954) 967-4200 or [dperez@wasteprousa.com](mailto:dperez@wasteprousa.com).

For further information related to the solid waste franchise requirements, please contact Rose Colombo, Solid Waste Franchise Agreement Contract Manager, at (954) 518-9011 or [rcolombo@ppines.com](mailto:rcolombo@ppines.com).

For solid waste franchise enforcement questions, please contact the City of Pembroke Pines Code Compliance Unit at (954) 431-4466.

**CONTACT INFORMATION FORM**

IN ACCORDANCE WITH “PSPW-19-15” titled “Rebid of Roof Replacements at Various City Buildings” attached hereto as a part hereof, the undersigned submits the following:

**A) Contact Information**

The Contact information form shall be electronically signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal’s properly written authority to such deputy or subordinate must accompany the proposal. This form must be completed and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder’s submittal. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

**COMPANY INFORMATION:**

COMPANY: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY, STATE &amp; ZIP CODE: \_\_\_\_\_

**PRIMARY CONTACT FOR THE PROJECT:**

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

**AUTHORIZED APPROVER:**

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

**B) Proposal Checklist**

Are all materials, freight, labor and warranties included?	Yes_____
<b>Did you include copies of all warranties in your bid package, per the instructions in section 1.4.3? This is a requirement.</b>	Yes_____

Did you make sure to submit the following items, as stated in section 1.5 “Proposal Requirements” of the bid package?

Attachment A - Contact Information Form	Yes_____
Attachment B - Non-Collusive Affidavit	Yes_____
Attachment C - Proposer’s Completed Qualification Statement	Yes_____
Attachment F - References Form	Yes_____
Attachment G - Mandatory Pre-Bid Meeting Form	Yes_____
Does your proposal exceed \$200,000 for this construction project? If so, please include a Proposal Security (Bid Bond or Cashier’s Check) along with a separate line item to provide a Payment and Performance Bond. (See Bid Package for details)	Yes_____

Did you make sure to update the following documents found under the “Vendor Registration” group of “Qualifications” on the BidSync website for the City of Pembroke Pines?

Vendor Information Form	Yes_____
Form W-9 (Rev. October 2018)	Yes_____
Sworn Statement on Public Entity Crimes Form	Yes_____
Local Vendor Preference Certification	Yes_____
Local Business Tax Receipts	Yes_____
Veteran Owned Small Business Preference Certification	Yes_____
Equal Benefits Certification Form	Yes_____
Vendor Drug-Free Workplace Certification Form	Yes_____
Scrutinized Company Certification	Yes_____

**C) Sample Proposal Form**

*The following sample price proposal is for information only. The vendor must provide their pricing through the designated lines items listed on the BidSync website.*

Address	Project Cost
<b>Carl Shechter Community Center</b> 301 NW 103rd Avenue Pembroke Pines, FL 33026	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Lightweight Concrete</b>	<b>Price to be Submitted Via BidSync</b>
<b>Stucco Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Rotunda Tile Roof</b>	<b>Price to be Submitted Via BidSync</b>
<b>Steel Deck Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>

Address	Project Cost
<b>Pines Recreation Center</b> 7400 Pines Blvd. Pembroke Pines, FL 33024	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Wood Decking Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>

Address	Project Cost
<b>Pasadena Park Restrooms</b> 8815 Pasadena Blvd. Pembroke Pines, FL 33026	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Wood Decking Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>



Address	Project Cost
<b>Studio 18 in the Pines</b> 1101 Poinciana Drive Pembroke Pines, FL 33026	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Lightweight Concrete</b>	<b>Price to be Submitted Via BidSync</b>
<b>Stucco Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Steel Deck Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>

Address	Project Cost
<b>Eastside Maintenance Building</b> 9870 Johnson St. Pembroke Pines FL 33025	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Stucco Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>

Address	Project Cost
<b>Bright Beginnings Preschool</b> 901 NW 129 Ave. Pembroke Pines FL 33028	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Steel Deck Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Stucco Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>



Address	Project Cost
<b>FSU Charter School "B" Building</b> 601 SW 172 Ave. Pembroke Pines FL 33029	<b>Price to be Submitted Via BidSync</b>
Additional Work	Cost per SQ. FT.
<b>Steel Deck Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Stucco Repair</b>	<b>Price to be Submitted Via BidSync</b>
<b>Cost to Provide Payment and Performance Bond</b>	<b>Price to be Submitted Via BidSync</b>

Dated: September 27, 2019

Job Order # 19R622

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Senior Center  
301 NW 103rd Ave  
Pembroke Pines, FL 33025

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).

On 09/16/2019 our field representative visited the referenced site and conducted thirty-five (35) field withdrawal resistance tests on the OMG 1.8" Twin-Lock base sheet fasteners into the lightweight insulating concrete (LWIC). All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,



Keith LeBlanc, P.E. 9/27/19  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration





**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Senior Center

Job Address: 301 NW 103rd Ave  
Pembroke Pines, FL 33025

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
9/22/15

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000



**Building / Roof System Information:**Area Number: 1Roof Area Height 20 ft.Roof Area Length 269 ft.Second Largest Dimension 236 ft.Total Roof Area 41926 ft<sup>2</sup>419 sq.Perimeter Area 5308 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

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Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: 1.8" Twin-LockFastener Manufacturer: OMGPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	143	C
2	146	C
3	201	C
4	129	C
5	64	C
6	142	C
7	135	C
8	172	C
9	92	C
10	112	C
11	173	C
12	171	C
13	167	P
14	132	P
15	92	P
16	103	P
17	120	P
18	167	P
19	230	P
20	211	P
21	170	P
22	127	P
23	152	P
24	160	P
25	162	F

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26	211	F
27	134	F
28	53	F
29	116	F
30	54	F
31	98	F
32	98	F
33	184	F
34	130	F
35	117	F
36		
37		
38		
39		
40		
41		
42		
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50		

## Fastener Installation Information:

Is the fastener a self driller? ☐ Yes ☒ NoIf yes, list the type of tool used for fastener installation: N/ASpeed of tool: N/A rpm'sNumber of tests conducted: n= 35

\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

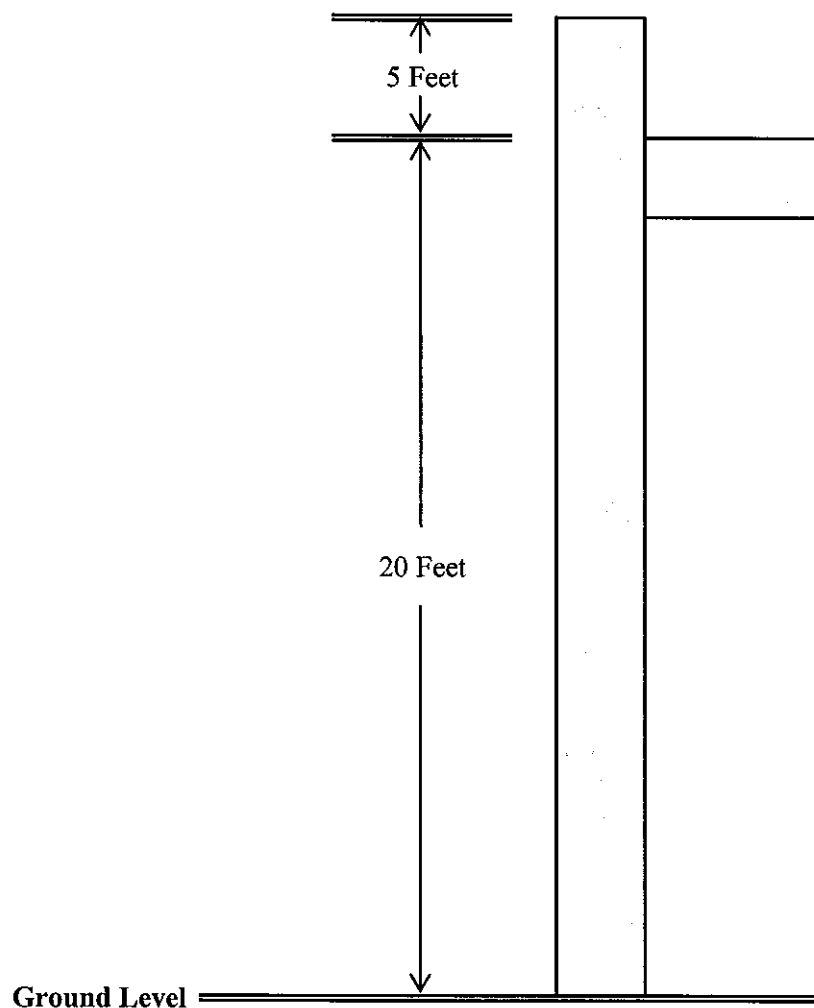
Mean Failure Load	F=	139.09	lbf
Sample Standard Deviation	Sf=	43.17	lbf
Minimum Characteristic Resistance Force	F'=	125.68	lbf

## Notes:

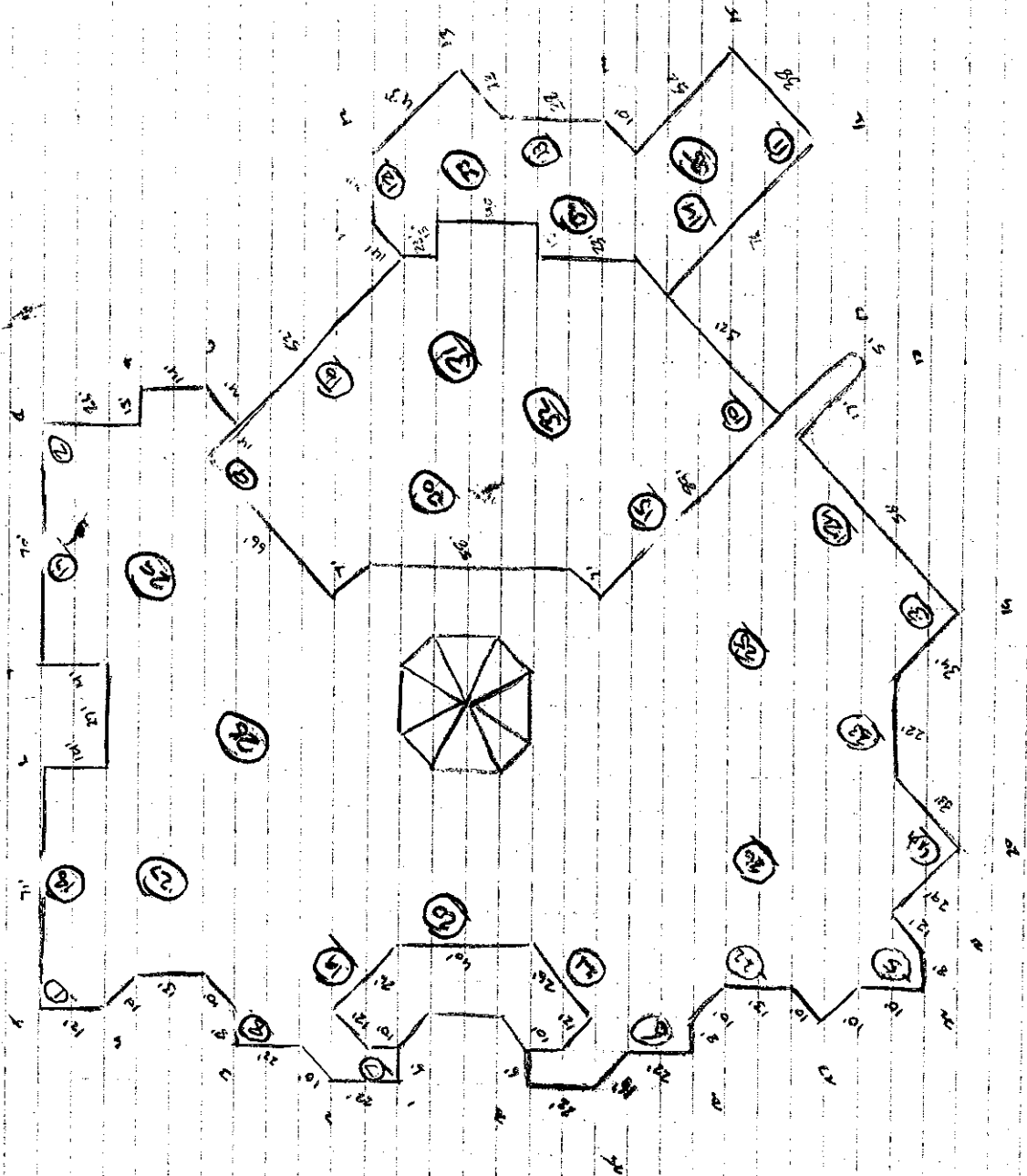
- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.

**Roof Area 1**

(If no parapet wall exists insert "N/A")



100' 11" 11"  
100' 11" 11"  
100' 11" 11"



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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

**CARDINAL • DETECTO**

Miami Branch Office: 3215 NW 10th Terrace, Suite 203 • Oakland Park, FL 33309  
Phone: (954) 563-4120 • Fax: (954) 563-9920 • miami@cardet.com • www.CardinalScale.com





Dated: September 27, 2019

Job Order # 19R622

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais**RE: Field Withdrawal Resistance Test**  
Senior Center  
301 NW 103rd Ave  
Pembroke Pines, FL 33025

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).

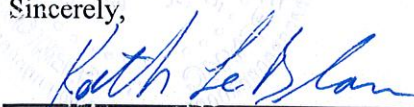
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FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

Keith LeBlanc, P.E.  
Federal Engineering and Testing, Inc. 9/27/19  
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Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Senior Center

Job Address: 301 NW 103rd Ave  
Pembroke Pines, FL 33025

Contact Individual  
at jobsite (if any) Matt Desharnais

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Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

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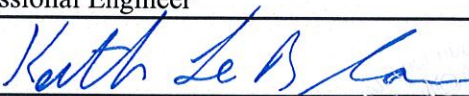
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Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
9/27/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**

Area Number: 1

Roof Area Height 20 ft.

Roof Area Length 269 ft.

Second Largest Dimension 236 ft.

Total Roof Area 41926 ft<sup>2</sup>

419 sq.

Perimeter Area 5308 ft<sup>2</sup>

(See RAS 117)

**Building / Roof System Information:**

Area Number: \_\_\_\_\_

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Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

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\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>

(See RAS 117)

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Area Number: \_\_\_\_\_

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Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>

(See RAS 117)



## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
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See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

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12	171	C
13	167	P
14	132	P
15	92	P
16	103	P
17	120	P
18	167	P
19	230	P
20	211	P
21	170	P
22	127	P
23	152	P
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Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
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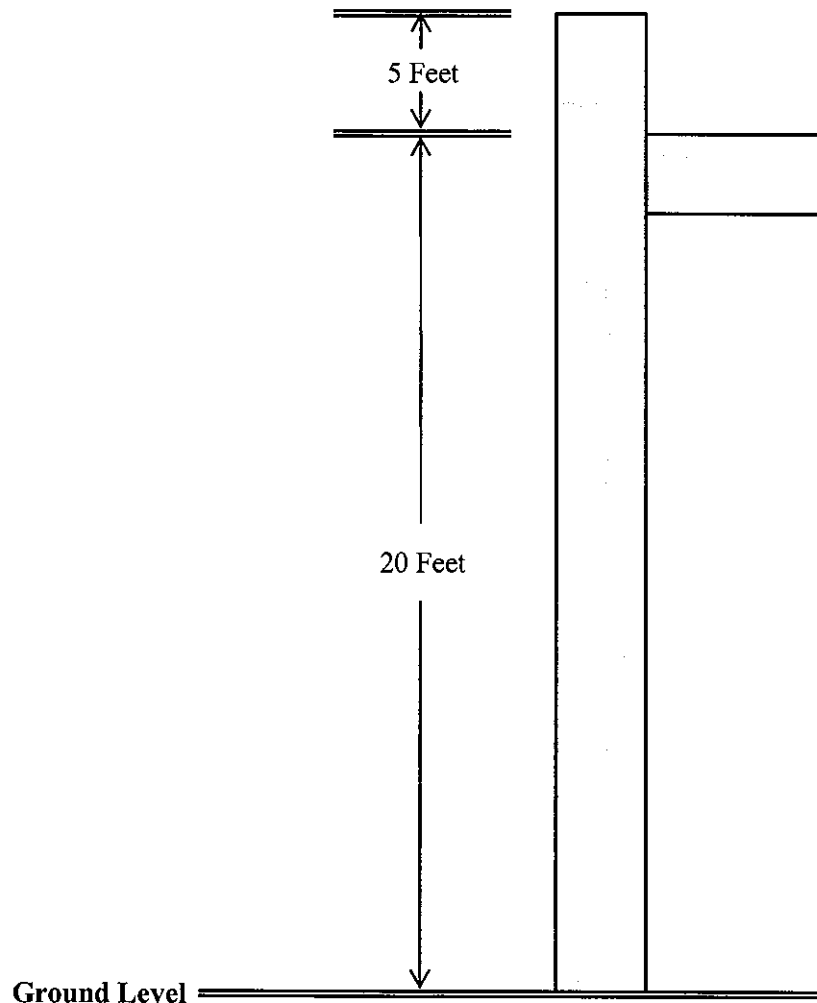
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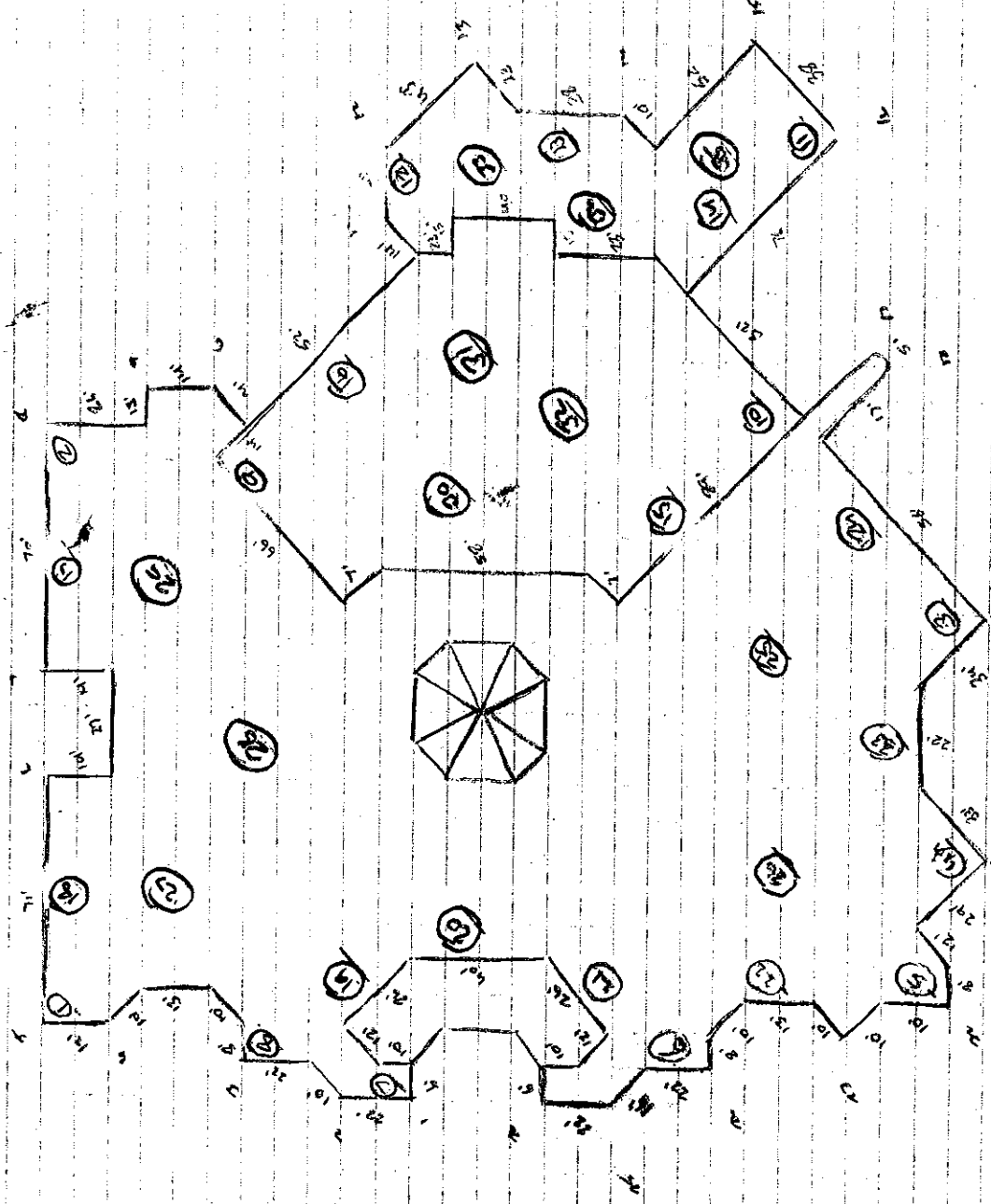
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OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
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STANDARDS CALIBRATION DATE: 11/23/2017

FLORIDA STATE CERTIFICATION NO.: 137

**CARDINAL • DETECTO**

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Dated: September 27, 2019

Job Order # 19R622

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: TAS-126 Roof Moisture Survey**  
Senior Center  
301 NW 103rd Ave  
Pembroke Pines, FL 33025

Dear Sirs:

In accordance with your authorization, Federal Engineering & Testing, Inc. has performed a Roof Moisture Survey in compliance with TAS-126 and the Florida Building Code Section 1521.12 on September 16, 2019 at the above referenced project site.

The purpose of our survey was to determine the moisture content of the exterior roof. This is a roof moisture survey only and is not considered a roof top inspection.

The subject building consists of a C.B.S. structure with a built up roof system over lightweight concrete insulation over a metal roof deck.

On September 16, 2019 our field engineer visited the site and conducted a nuclear moisture survey. In addition, 8 core samples were secured to verify the oven dried moisture contents.

All tests were performed according to the Florida Building Code Section 1521.12, Protocol TAS-126 and the Roof Consultants Institute "Standard Practice for the Detection and Location of Latent Moisture in Building Roofing Systems by Nuclear Thermalization" using a Troxler Model 3216.

Pursuant to the Florida Building Code Section 1521.12; the moisture content of the existing roof system shall not exceed 5% by weight in the roof membrane and 8% by weight in the insulation system.

September 27, 2019  
 Senior Center  
 301 NW 103rd Ave  
 Pembroke Pines, FL 33025  
 Page 2


The following is a summary of the core test results:

Oven Dried Gravimetric Analysis % Moisture								
Core Number	1	2	3	4	5	6	7	8
Grid Core Locations	F-12	S-9	F-7	N-6	F-7	C-9	F-4	A-9
Built Up Roof	0.2	0.3	1.5	3.7	0.5	0.3	0.4	1.8
Lightweight Concrete	NA	NA	NA	NA	NA	NA	NA	NA
Nuclear Reading	7	24	45	59	8	9	22	34

The moisture content of the existing roof was in compliance with the Florida Building Code Section 1521.12 and Protocol TAS-126 at the time of the inspection with the exception of the following. No grid locations were found with trapped moisture greater than 5% in the roof membrane layers or 8% in the insulation layers. (See attached roof top plan for locations of corings and results of each test grid). Moisture testing of the lightweight concrete not required per FBC Section 1521.12.

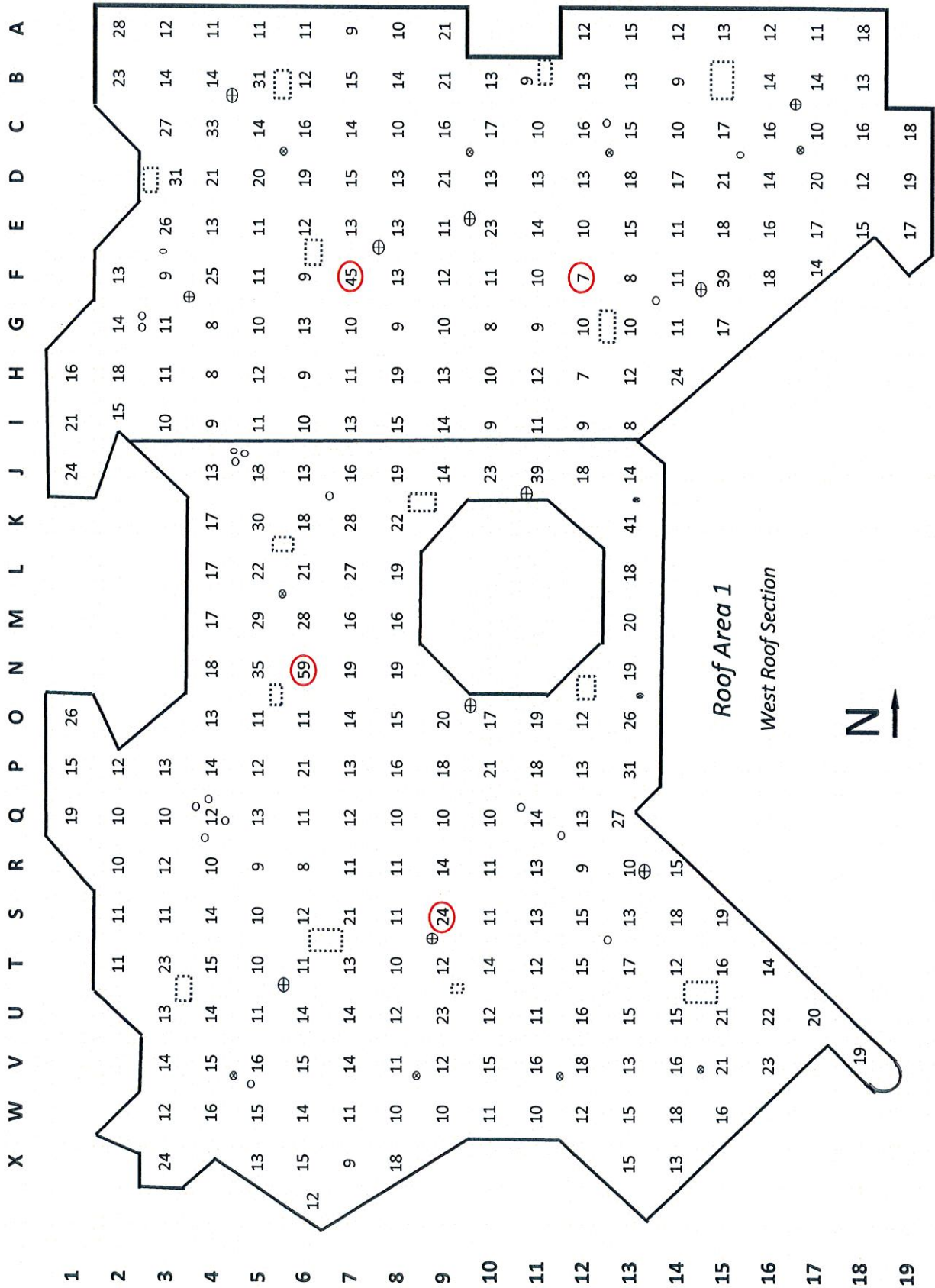
The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements and roof top traffic. It has been a pleasure serving you at this phase of your project and look forward to doing so in the near future.

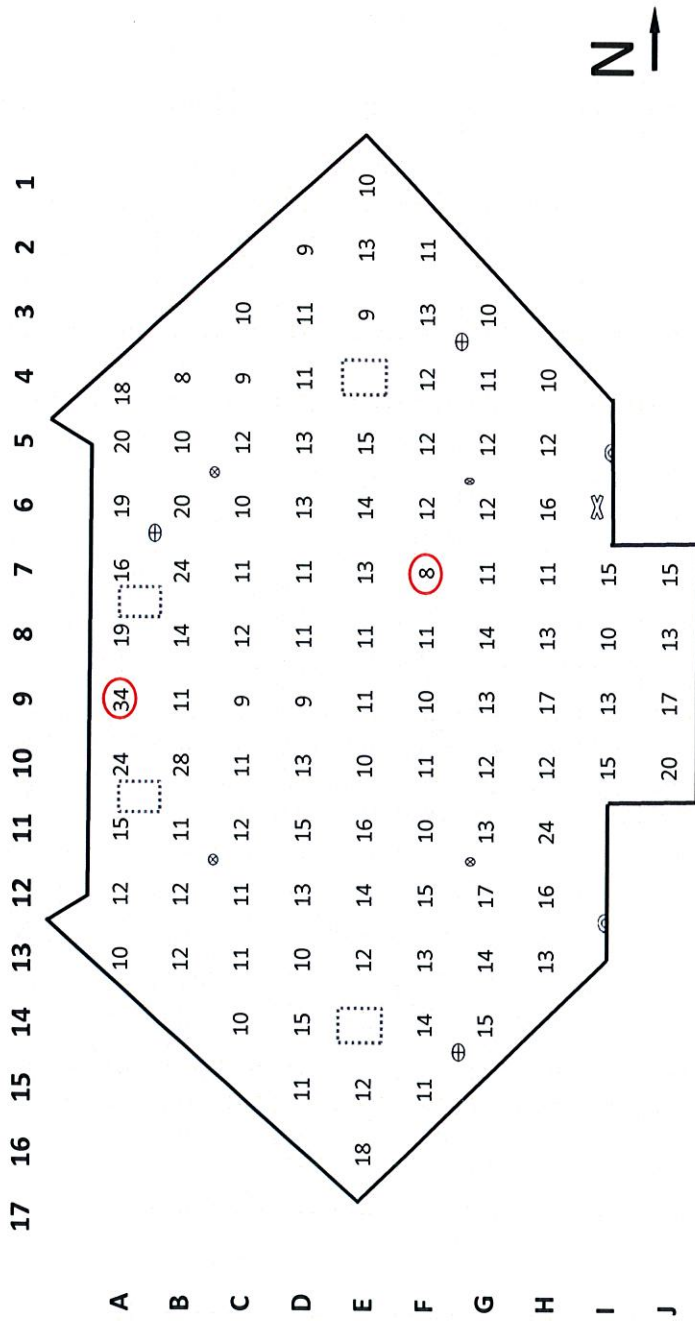
Sincerely,

  
 Keith LeBlanc, PE  
 Federal Engineering and Testing, Inc.

Florida Reg. Number 59394  
 Certificate of Authorization 5471  
 Miami-Dade County Certification # 18-1105.02







*Roof Area 2*

*Center Roof Section*

# Moisture Gravimetric Analysis - Roof Area 1

**Client:** City of Pembroke Pines  
**Address:** 8300 South Palm Drive  
 Pembroke Pines, FL 33024  
**Project:** Senior Center  
**Project Address:** 301 NW 103rd Ave  
 Pembroke Pines, FL 33025

**Work Order #:** 19R622  
**Field Test Date:** September 16, 2019  
**Laboratory Date:** September 17, 2019

Test & Location		Description	Weight Before Drying	Weight After Drying	Moisture Weight	Percent (%) Moisture
Core 1	Grid Point					
7	F-12	Built Up Roof	12.18	12.15	0.03	0.2
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 2	Grid Point					
24	S-9	Built Up Roof	28.23	28.15	0.08	0.3
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 3	Grid Point					
45	F-7	Built Up Roof	18.57	18.30	0.27	1.5
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 4	Grid Point					
59	N-6	Built Up Roof	44.68	43.09	1.59	3.7
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-

# Moisture Gravimetric Analysis - Roof Area 2 & 3



**Client:** City of Pembroke Pines  
**Address:** 8300 South Palm Drive  
Pembroke Pines, FL 33024  
**Project:** Senior Center  
**Project Address:** 301 NW 103rd Ave  
Pembroke Pines, FL 33025

**Work Order #:** 19R622  
**Field Test Date:** September 16, 2019  
**Laboratory Date:** September 17, 2019

Draft Document for Commission Review

Attachment I

Test & Location		Description	Weight Before Drying	Weight After Drying	Moisture Weight	Percent (%) Moisture
Core 1	Grid Point					
8	F-7	Built Up Roof	12.11	12.05	0.06	0.5
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 2	Grid Point					
9	C-9	Built Up Roof	26.00	25.93	0.07	0.3
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 3	Grid Point					
22	F-4	Built Up Roof	23.34	23.24	0.10	0.4
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 4	Grid Point					
34	A-9	Built Up Roof	26.00	25.53	0.47	1.8
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-

Dated: September 27, 2019

Job Order # 19R622

**City of Pembroke Pines**8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais**RE: TAS-126 Roof Moisture Survey**Senior Center  
301 NW 103rd Ave  
Pembroke Pines, FL 33025

Dear Sirs:

In accordance with your authorization, Federal Engineering & Testing, Inc. has performed a Roof Moisture Survey in compliance with TAS-126 and the Florida Building Code Section 1521.12 on September 16, 2019 at the above referenced project site.

The purpose of our survey was to determine the moisture content of the exterior roof. This is a roof moisture survey only and is not considered a roof top inspection.

The subject building consists of a C.B.S. structure with a built up roof system over lightweight concrete insulation over a metal roof deck.

On September 16, 2019 our field engineer visited the site and conducted a nuclear moisture survey. In addition, 8 core samples were secured to verify the oven dried moisture contents.

All tests were performed according to the Florida Building Code Section 1521.12, Protocol TAS-126 and the Roof Consultants Institute "*Standard Practice for the Detection and Location of Latent Moisture in Building Roofing Systems by Nuclear Thermalization*" using a Troxler Model 3216.

Pursuant to the Florida Building Code Section 1521.12; the moisture content of the existing roof system shall not exceed 5% by weight in the roof membrane and 8% by weight in the insulation system.



September 27, 2019  
Senior Center  
301 NW 103rd Ave  
Pembroke Pines, FL 33025  
Page 2

The following is a summary of the core test results:

Oven Dried Gravimetric Analysis % Moisture								
Core Number	1	2	3	4	5	6	7	8
Grid Core Locations	F-12	S-9	F-7	N-6	F-7	C-9	F-4	A-9
Built Up Roof	0.2	0.3	1.5	3.7	0.5	0.3	0.4	1.8
Lightweight Concrete	NA	NA	NA	NA	NA	NA	NA	NA
Nuclear Reading	7	24	45	59	8	9	22	34

The moisture content of the existing roof was in compliance with the Florida Building Code Section 1521.12 and Protocol TAS-126 at the time of the inspection with the exception of the following. No grid locations were found with trapped moisture greater than 5% in the roof membrane layers or 8% in the insulation layers. (See attached roof top plan for locations of corings and results of each test grid). Moisture testing of the lightweight concrete not required per FBC Section 1521.12.

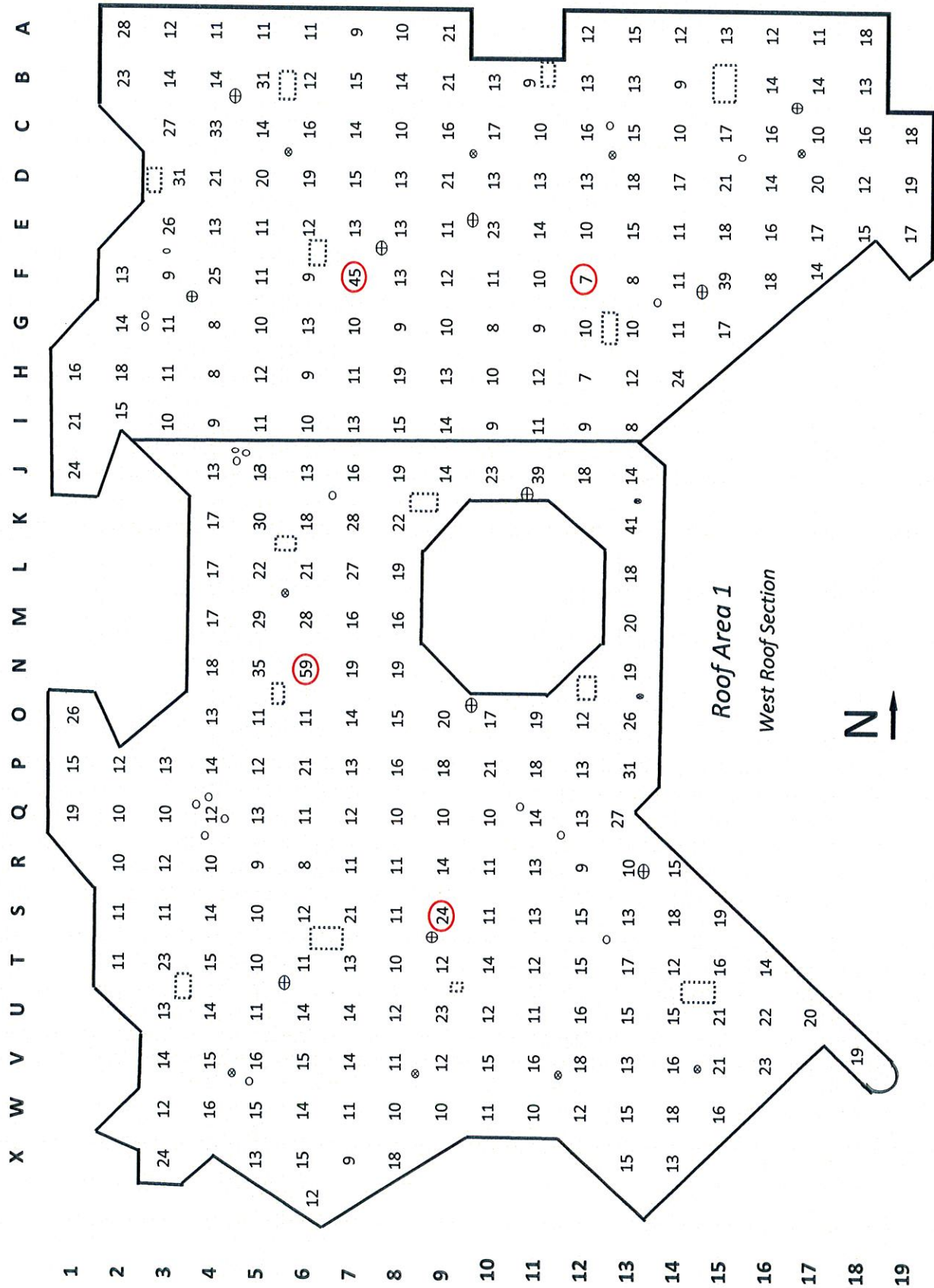
The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements and roof top traffic. It has been a pleasure serving you at this phase of your project and look forward to doing so in the near future.

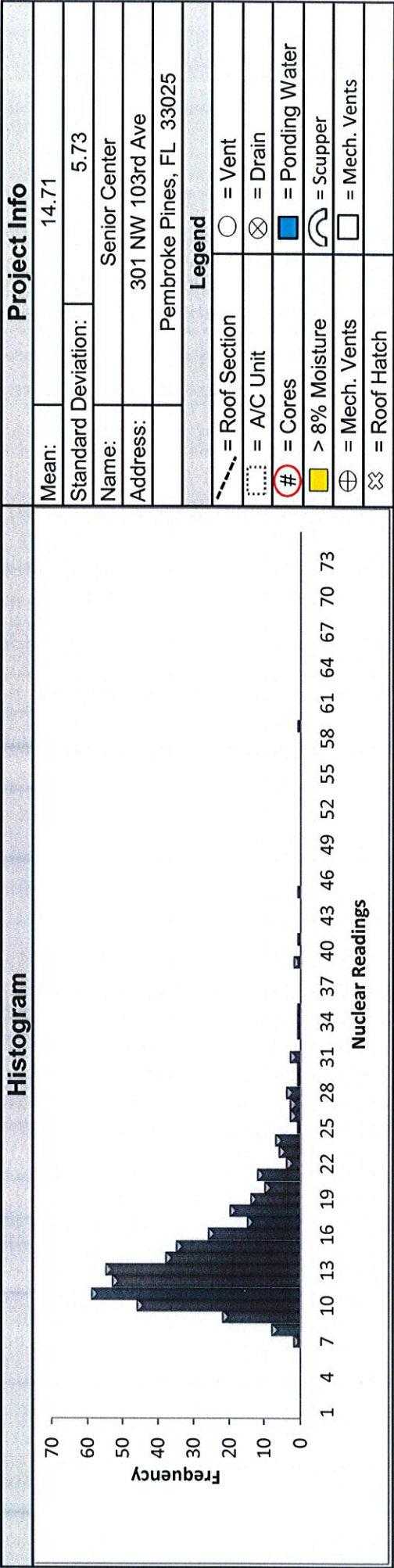
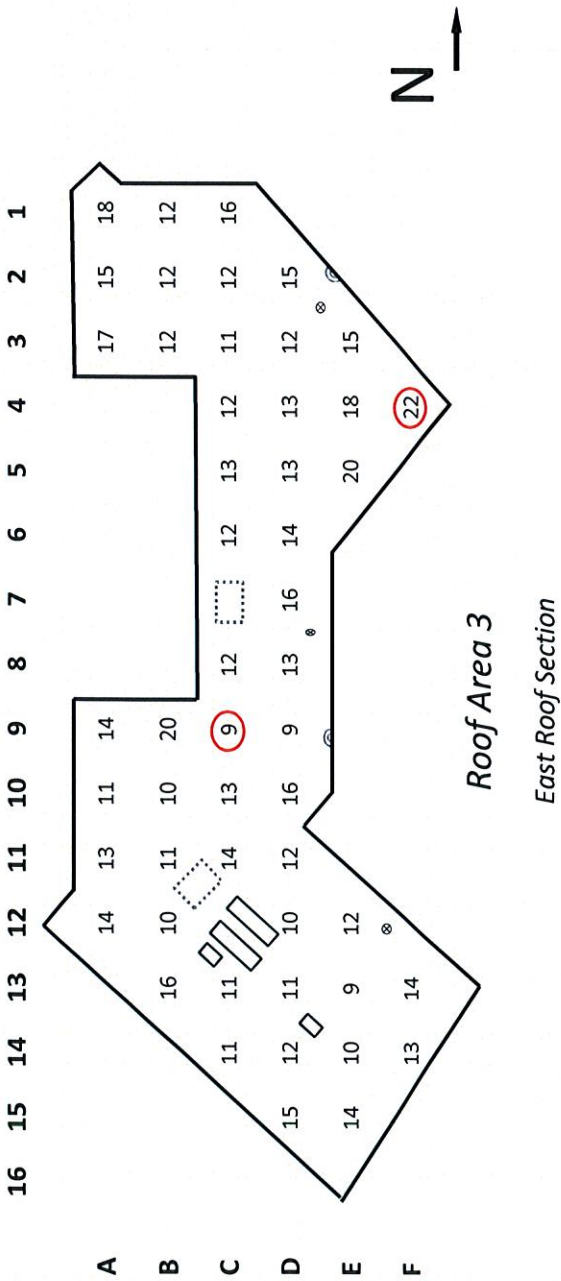
Sincerely,



Keith LeBlanc, PE  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization 5471  
Miami-Dade County Certification # 18-1105.02









# Moisture Gravimetric Analysis - Roof Area 1

**Client:** City of Pembroke Pines  
**Address:** 8300 South Palm Drive  
Pembroke Pines, FL 33024  
**Project:** Senior Center  
**Project Address** 301 NW 103rd Ave  
Pembroke Pines, FL 33025

**Work Order #:** 19R622  
**Field Test Date:** September 16, 2019  
**Laboratory Date:** September 17, 2019

Test & Location		Description	Weight Before Drying	Weight After Drying	Moisture Weight	Percent (%) Moisture
Core 1	Grid Point					
7	F-12	Built Up Roof	12.18	12.15	0.03	0.2
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 2	Grid Point					
24	S-9	Built Up Roof	28.23	28.15	0.08	0.3
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 3	Grid Point					
45	F-7	Built Up Roof	18.57	18.30	0.27	1.5
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 4	Grid Point					
59	N-6	Built Up Roof	44.68	43.09	1.59	3.7
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-

# Moisture Gravimetric Analysis - Roof Area 2 & 3



**Client:** City of Pembroke Pines  
**Address:** 8300 South Palm Drive  
 Pembroke Pines, FL 33024  
**Project:** Senior Center  
**Project Address** 301 NW 103rd Ave  
 Pembroke Pines, FL 33025

**Work Order #:** 19R622  
**Field Test Date:** September 16, 2019  
**Laboratory Date:** September 17, 2019

Test & Location		Description	Weight Before Drying	Weight After Drying	Moisture Weight	Percent (%) Moisture
Core 1	Grid Point					
8	F-7	Built Up Roof	12.11	12.05	0.06	0.5
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 2	Grid Point					
9	C-9	Built Up Roof	26.00	25.93	0.07	0.3
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 3	Grid Point					
22	F-4	Built Up Roof	23.34	23.24	0.10	0.4
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-
Core 4	Grid Point					
34	A-9	Built Up Roof	26.00	25.53	0.47	1.8
		-	-	-	-	-
		-	-	-	-	-
		-	-	-	-	-



Dated: September 27, 2019

Job Order # 19R644

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Studio 18  
1101 Poinciana Drive (screws)  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).


On 09/26/2019 our field representative visited the referenced site and conducted ten (10) field withdrawal resistance tests on the Drilltech #12 Screw fasteners into the metal roof deck. All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
\_\_\_\_\_  
Keith LeBlanc, P.E.  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Studio 18

Job Address: 1101 Poinciana Drive (screws)  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

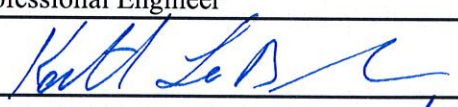
Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
10/1/18

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000



**Building / Roof System Information:**Area Number: 1Roof Area Height 19 ft.Roof Area Length 140 ft.Second Largest Dimension 60 ft.Total Roof Area 8400 ft<sup>2</sup>84 sq.Perimeter Area 2256 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #12 ScrewsFastener Manufacturer: DrilltechPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	520	C
2	398	C
3	463	C
4	392	C
5	430	P
6	350	P
7	520	P
8	406	P
9	410	F
10	512	F
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

## Fastener Installation Information:

Is the fastener a self driller? ☒ Yes ☐ NoIf yes, list the type of tool used for fastener installation: Cordless DrillSpeed of tool: Variable rpm'sNumber of tests conducted: n= 10

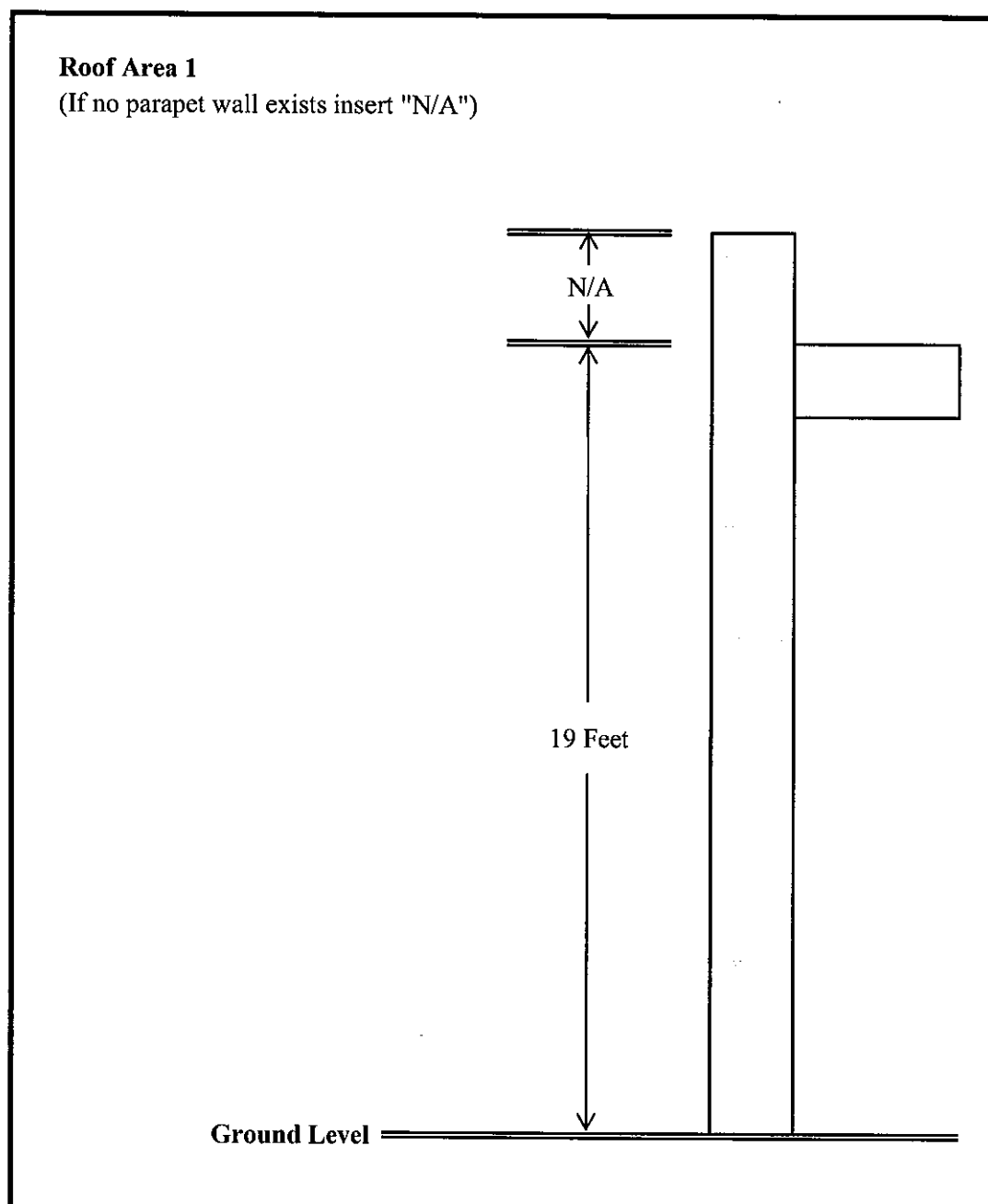
\* See Section 8 of Test Protocol TAS 105

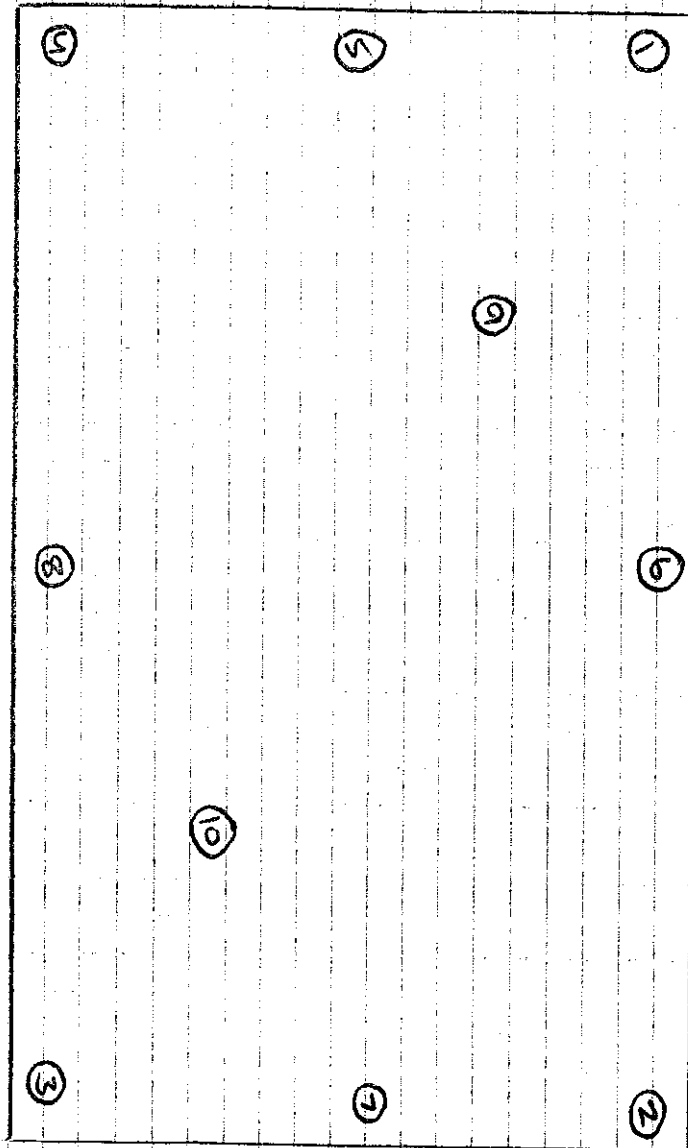
\* Note the locations of all tests on "Building Information" Detail #1, attached)

Mean Failure Load	F=	440.10	lbf
Sample Standard Deviation	Sf=	60.40	lbf
Minimum Characteristic Resistance Force	F'=	422.54	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.





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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

**CARDINAL • DETECTO**

Miami Branch Office: 3215 NW 10th Terrace, Suite 203 • Oakland Park, FL 33309  
Phone: (954) 563-4120 • Fax: (954) 563-9920 • miami@cardet.com • www.CardinalScale.com





Dated: September 27, 2019

Job Order # 19R644

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais**RE: Field Withdrawal Resistance Test**  
Studio 18  
1101 Poinciana Drive (screws)  
Pembroke Pines, FL 33024

Dear: Sirs:

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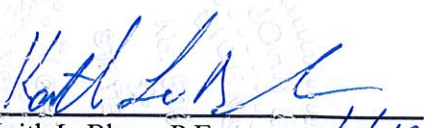
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The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
Keith LeBlanc, P.E. 10/1/19  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Studio 18

Job Address: 1101 Poinciana Drive (screws)  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
10/11/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**Area Number: 1Roof Area Height 19 ft.Roof Area Length 140 ft.Second Largest Dimension 60 ft.Total Roof Area 8400 ft<sup>2</sup>84 sq.Perimeter Area 2256 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #12 ScrewsFastener Manufacturer: DrilltechPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
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3	463	C
4	392	C
5	430	P
6	350	P
7	520	P
8	406	P
9	410	F
10	512	F
11		
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19		
20		
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22		
23		
24		
25		

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
27		
28		
29		
30		
31		
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37		
38		
39		
40		
41		
42		
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## Fastener Installation Information:

Is the fastener a self driller? ☒ Yes ☐ NoIf yes, list the type of tool used for fastener installation: Cordless DrillSpeed of tool: Variable rpm'sNumber of tests conducted: n= 10

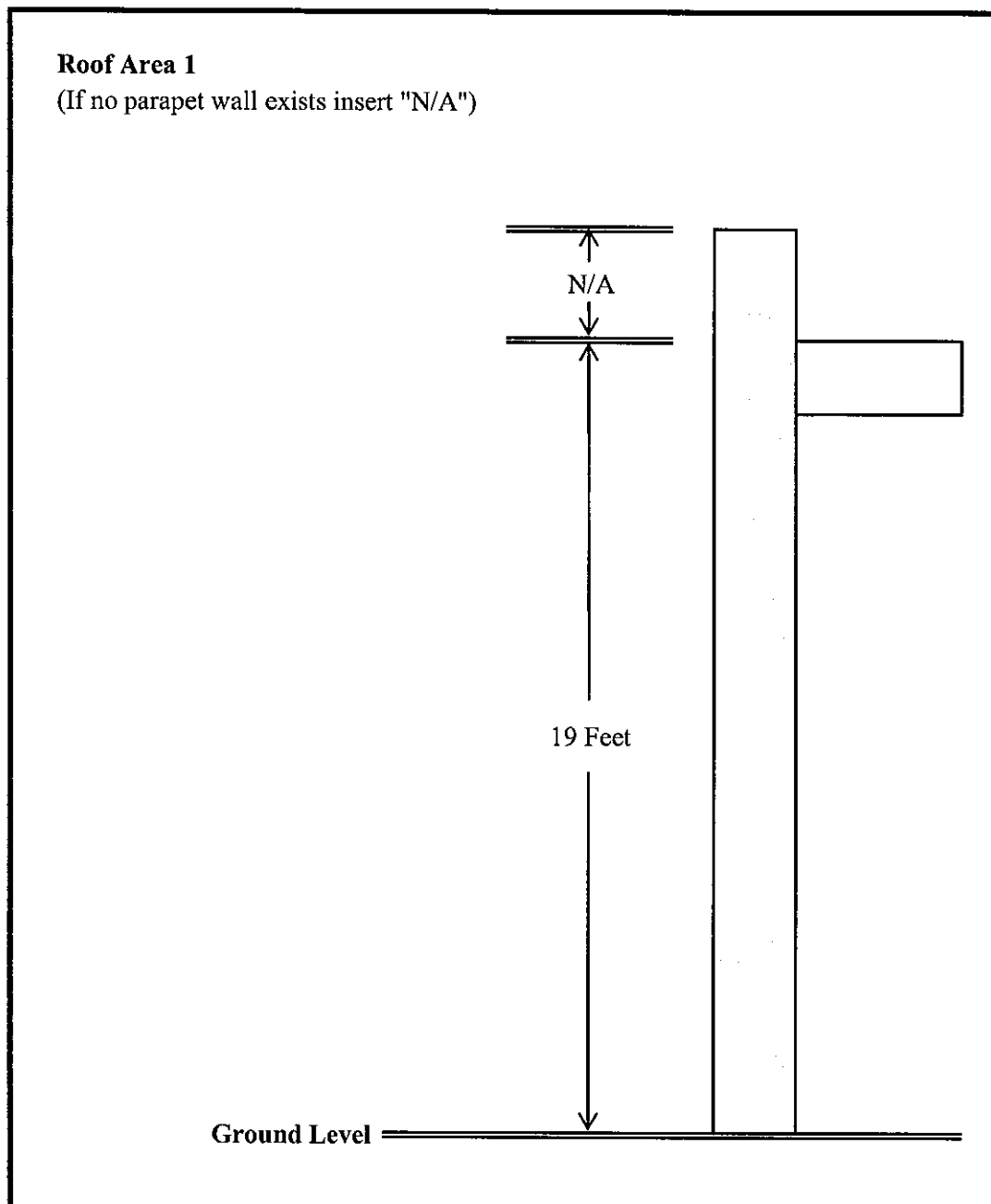
\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

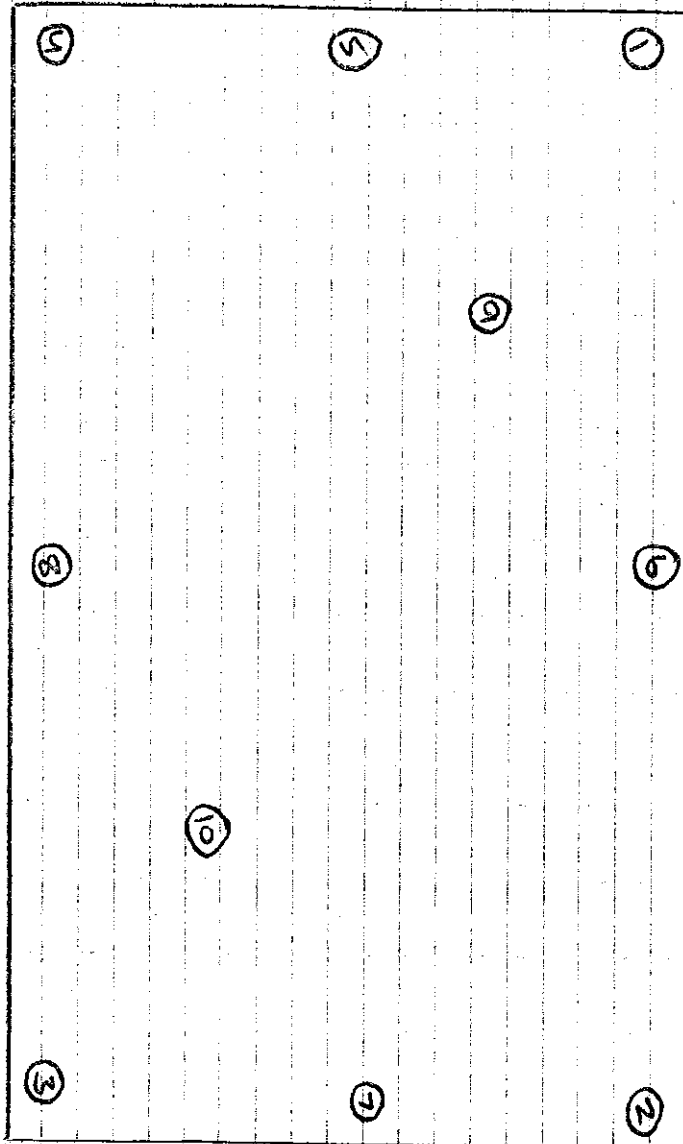
Mean Failure Load	F=	440.10	lbf
Sample Standard Deviation	Sf=	60.40	lbf
Minimum Characteristic Resistance Force	F'=	422.54	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.







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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

**CARDINAL • DETECTO**

Miami Branch Office: 3215 NW 10th Terrace, Suite 203 • Oakland Park, FL 33309  
Phone: (954) 563-4120 • Fax: (954) 563-9920 • miami@cardet.com • www.CardinalScale.com



Dated: September 27, 2019

Job Order # 19R645

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Studio 18  
1101 Poinciana Drive (base sheet)  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).


On 09/26/2019 our field representative visited the referenced site and conducted thirteen (13) field withdrawal resistance tests on the OMG 1.8" Twin-Lock base sheet fasteners into the lightweight insulating concrete (LWIC). All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
Keith LeBlanc, P.E. 9/27/19  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration





**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Studio 18

Job Address: 1101 Poinciana Drive (base sheet)  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
9/27/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**Area Number: 1Roof Area Height 19 ft.Roof Area Length 140 ft.Second Largest Dimension 60 ft.Total Roof Area 8400 ft<sup>2</sup>84 sq.Perimeter Area 2256 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*



**Field Withdrawal Resistance Recording Sheet**

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: 1.8" Twin-LockFastener Manufacturer: OMGPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	202	C
2	284	C
3	203	C
4	164	C
5	220	P
6	243	P
7	226	P
8	209	P
9	209	F
10	221	F
11	279	F
12	283	F
13	227	F
14		
15		
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25		

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
27		
28		
29		
30		
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37		
38		
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**Fastener Installation Information:**Is the fastener a self driller? ☐ Yes ☒ NoIf yes, list the type of tool used for fastener installation: N/ASpeed of tool: N/A rpm'sNumber of tests conducted: n= 13

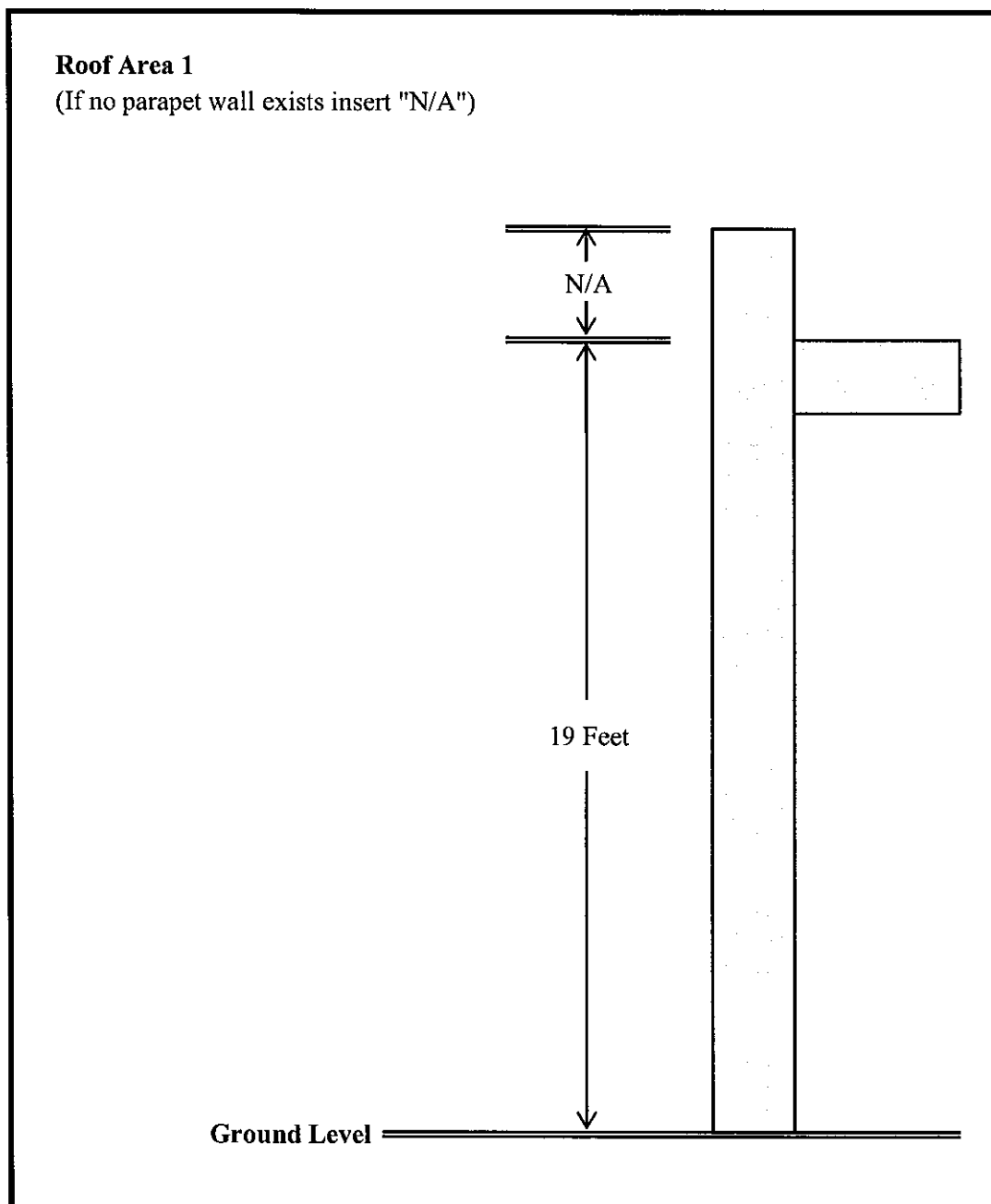
\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

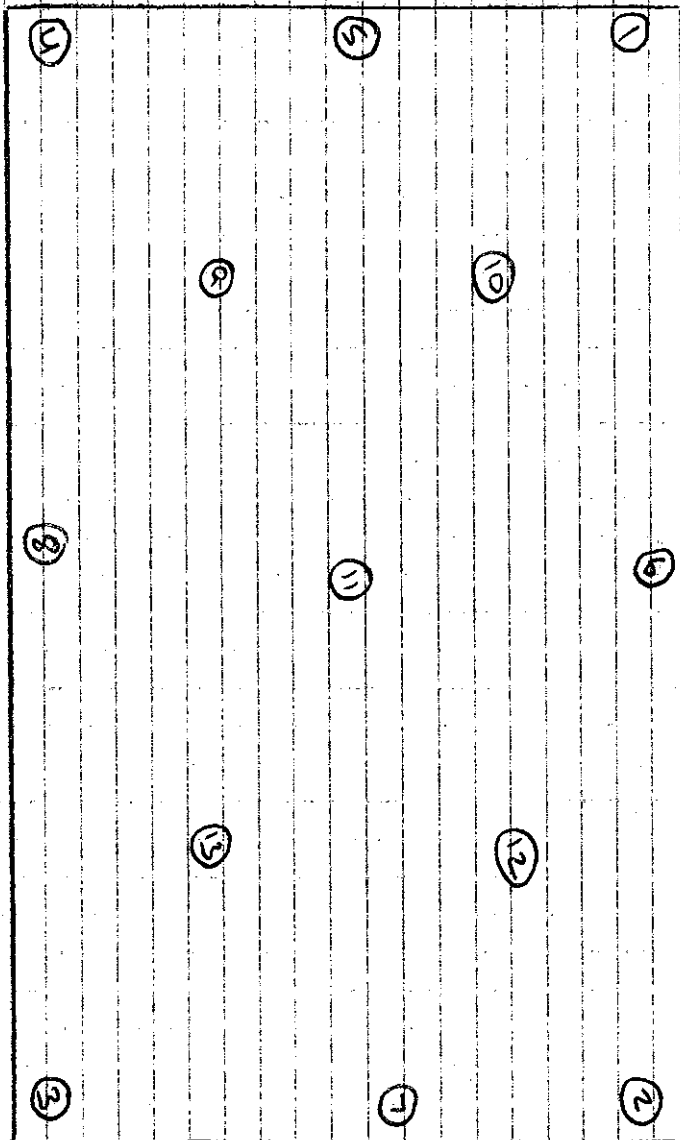
Mean Failure Load	F=	228.46	lbf
Sample Standard Deviation	Sf=	35.62	lbf
Minimum Characteristic Resistance Force	F'=	215.45	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.



Building Information - Detail # 1



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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

**CARDINAL • DETECTO**

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Phone: (954) 563-4120 • Fax: (954) 563-9920 • miami@cardet.com • www.CardinalScale.com







Dated: September 27, 2019

Job Order # 19R645

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Studio 18  
1101 Poinciana Drive (base sheet)  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).

On 09/26/2019 our field representative visited the referenced site and conducted thirteen (13) field withdrawal resistance tests on the OMG 1.8" Twin-Lock base sheet fasteners into the lightweight insulating concrete (LWIC). All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

Keith LeBlanc, P.E. 9/27/19  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Studio 18

Job Address: 1101 Poinciana Drive (base sheet)  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

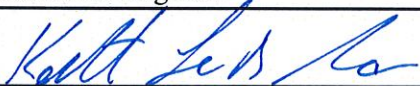
Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
9/17/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**Area Number: 1Roof Area Height 19 ft.Roof Area Length 140 ft.Second Largest Dimension 60 ft.Total Roof Area 8400 ft<sup>2</sup>84 sq.Perimeter Area 2256 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

**Field Withdrawal Resistance Recording Sheet**

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: 1.8" Twin-LockFastener Manufacturer: OMGPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	202	C
2	284	C
3	203	C
4	164	C
5	220	P
6	243	P
7	226	P
8	209	P
9	209	F
10	221	F
11	279	F
12	283	F
13	227	F
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Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
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**Fastener Installation Information:**Is the fastener a self driller? ☐ Yes ☒ NoIf yes, list the type of tool used for fastener installation: N/ASpeed of tool: N/A rpm'sNumber of tests conducted: n= 13

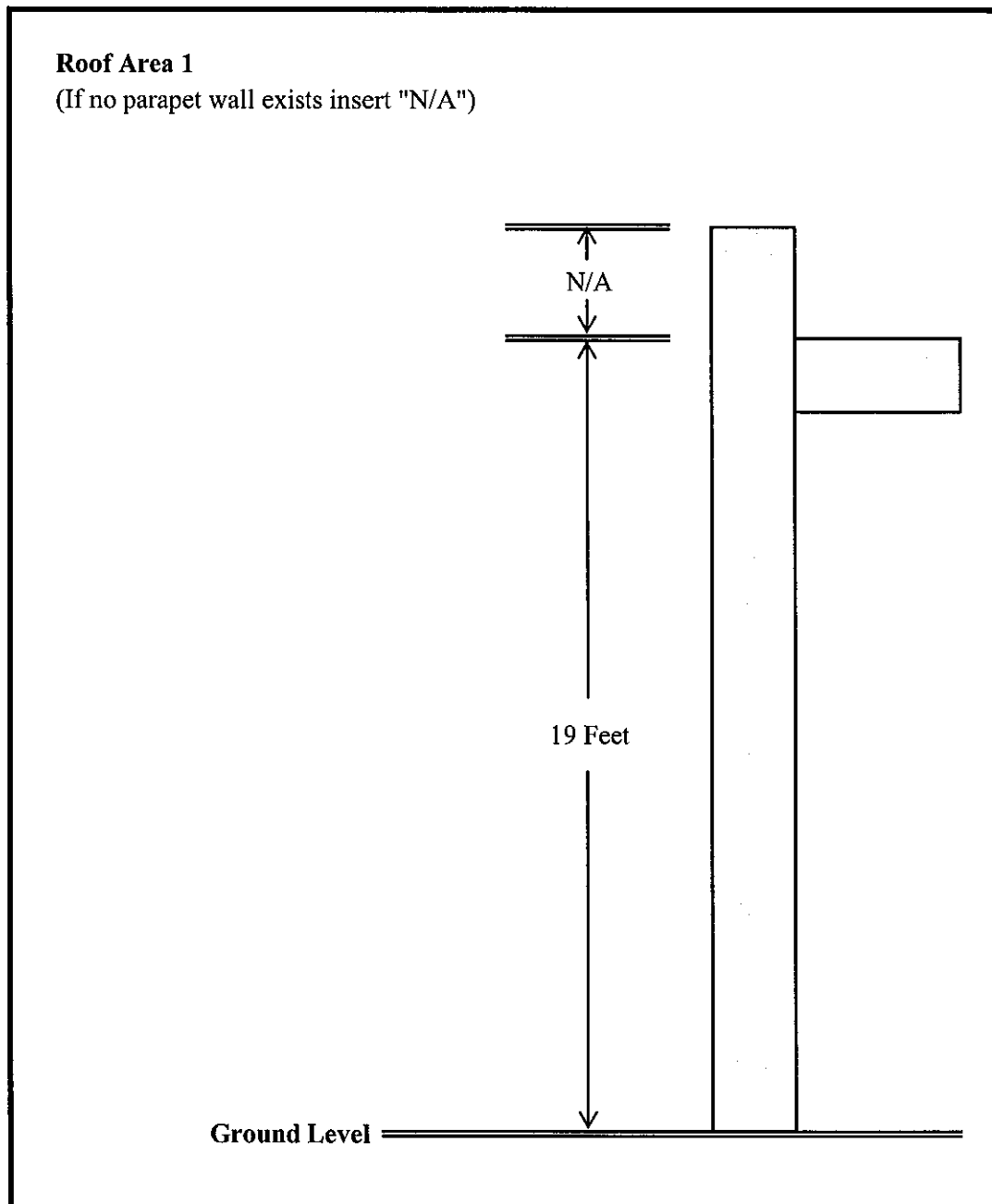
\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

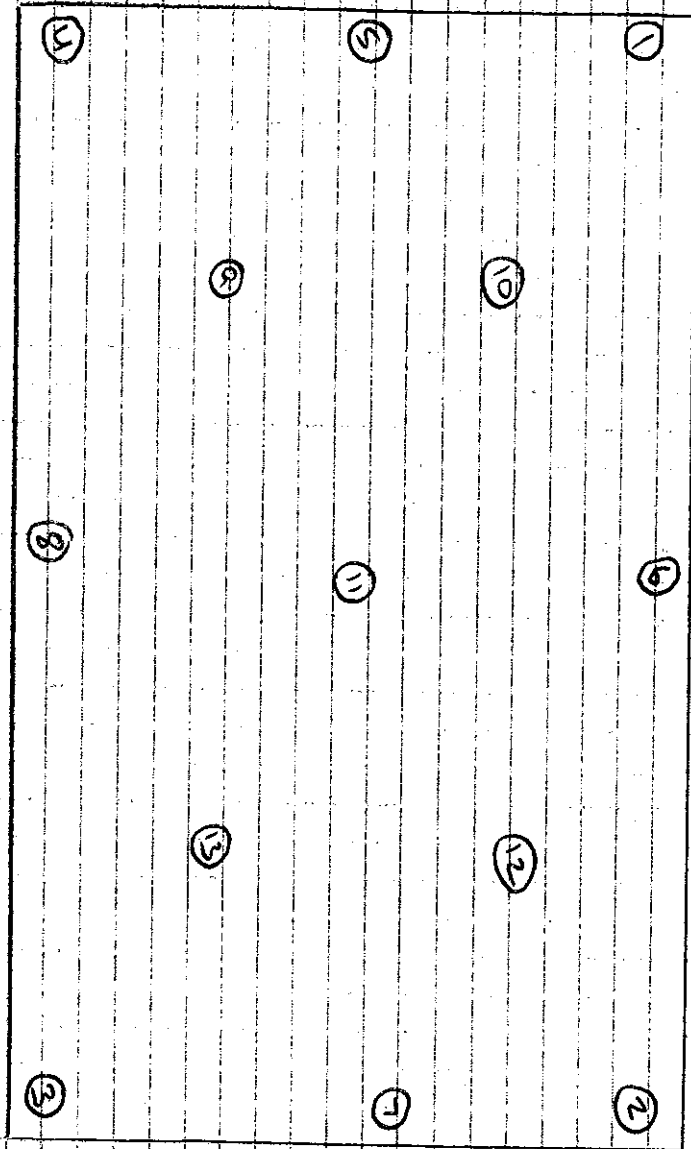
Mean Failure Load	F=	228.46	lbf
Sample Standard Deviation	Sf=	35.62	lbf
Minimum Characteristic Resistance Force	F'=	215.45	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.



Building Information - Detail # 1





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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE: 11/23/2017

FLORIDA STATE CERTIFICATION NO.: 137

**CARDINAL • DETECTO**

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Phone: 954-784-2941  
E-Fax: 954-784-7875  
admin@fed-eng.com  
www.fed-eng.com

Environmental | Geotechnical | Materials Testing | Roof Testing | Inspections | GPR

Dated: October 4, 2019

Job Order # 19R652

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Bright Beginnings  
901 NW 129th Ave  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).


On 10/03/2019 our field representative visited the referenced site and conducted ten (10) field withdrawal resistance tests on the Drill Tech #14 screw fasteners into the steel roof deck. All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
Keith LeBlanc, P.E. 10/4/19  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Bright Beginnings

Job Address: 901 NW 129th Ave  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
12/4/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000



**Building / Roof System Information:**Area Number: 1Roof Area Height 20 ft.Roof Area Length 120 ft.Second Largest Dimension 113 ft.Total Roof Area 11936 ft<sup>2</sup>119 sq.Perimeter Area 3216 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #14 ScrewFastener Manufacturer: Drill TechPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	420	C
2	369	C
3	439	C
4	530	C
5	592	P
6	470	P
7	439	P
8	520	F
9	479	F
10	477	F
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Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
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## Fastener Installation Information:

Is the fastener a self driller? ☒ Yes ☐ NoIf yes, list the type of tool used for fastener installation: Cordless DrillSpeed of tool: Variable rpm'sNumber of tests conducted: n= 10

\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)



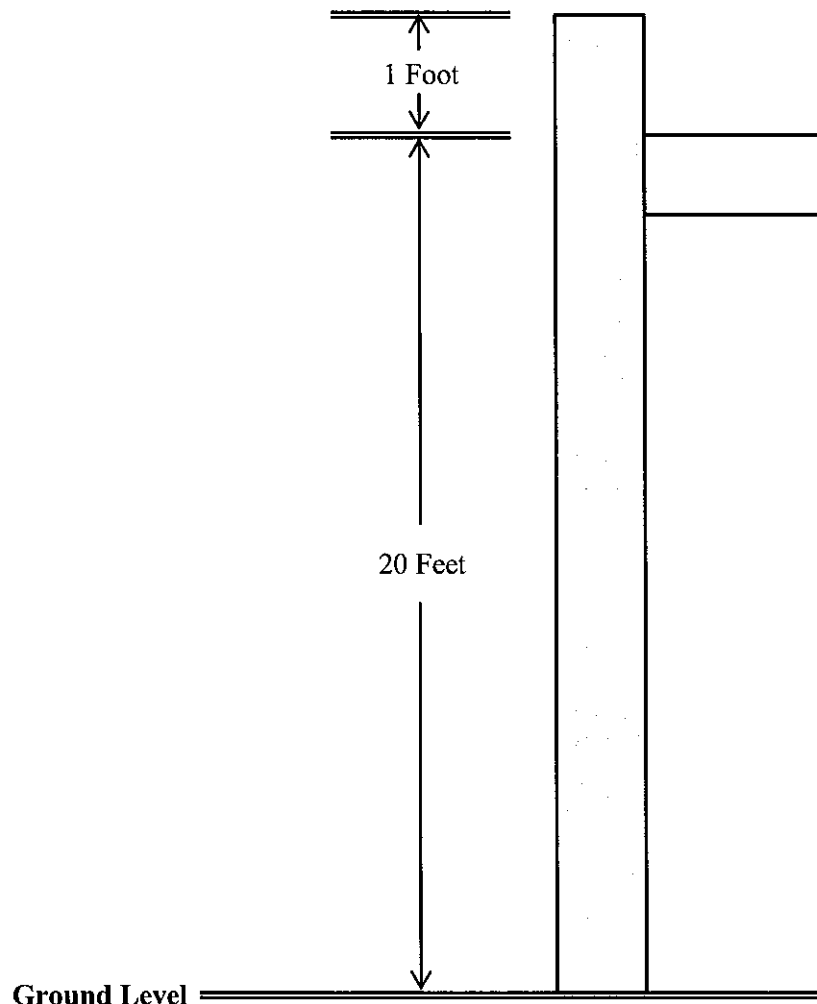
Mean Failure Load	F=	473.50	lbf
Sample Standard Deviation	Sf=	62.91	lbf
Minimum Characteristic Resistance Force	F'=	455.58	lbf

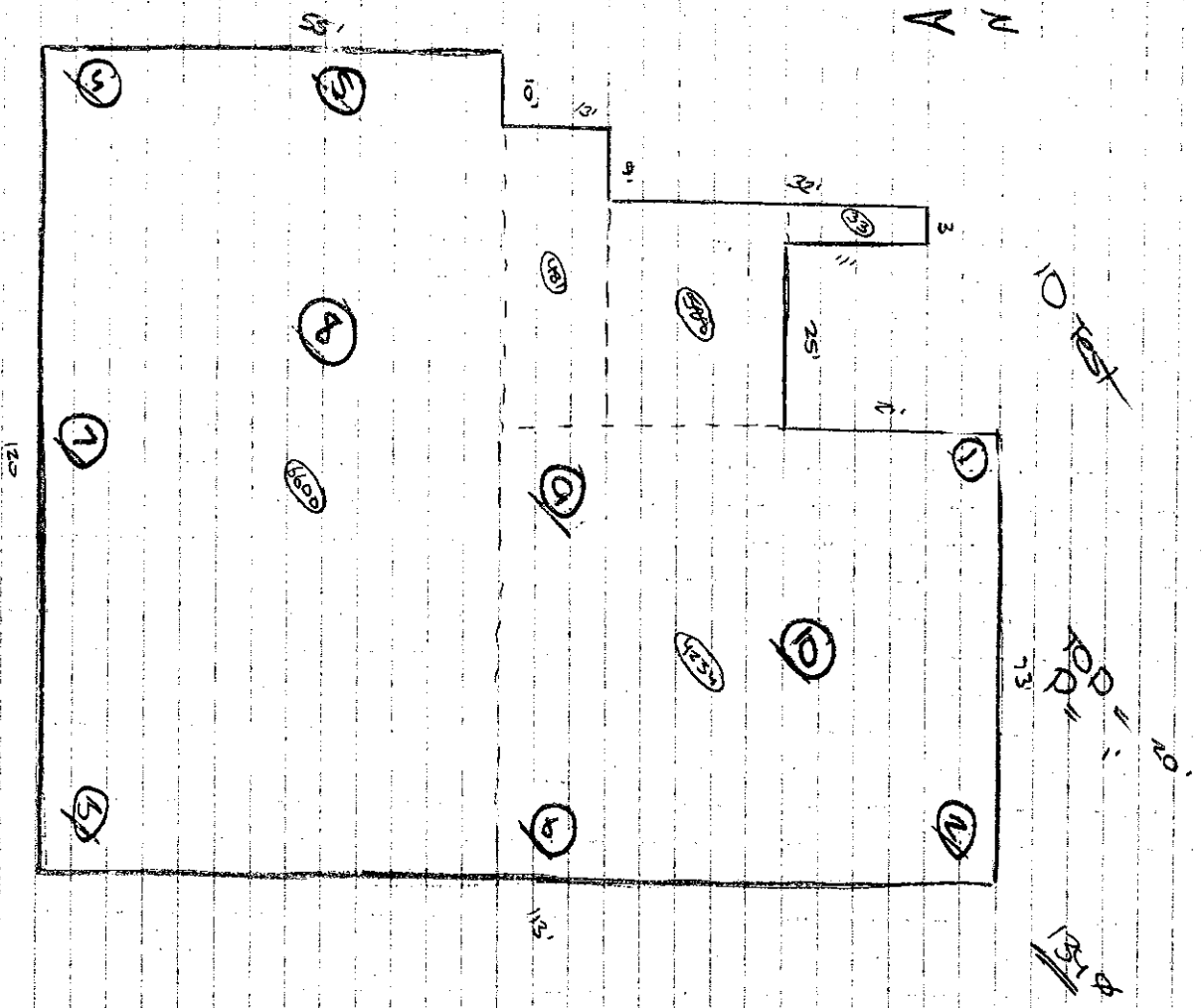
## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.

**Roof Area 1**

(If no parapet wall exists insert "N/A")





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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

THIS DOCUMENT CERTIFIES THAT THE ABOVE INSTRUMENT HAS BEEN TESTED AND FOUND TO BE  
WITHIN 5% OF THE FIRST 500 LB. OF A TEST LOAD AND WITHIN 10% OF A TEST LOAD BETWEEN  
501 LB AND 2,000 LB

THE STANDARDS USED ARE ALSO TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

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Phone: 954-784-2941  
E-Fax: 954-784-7875  
admin@fed-eng.com  
www.fed-eng.com

Environmental | Geotechnical | Materials Testing | Roof Testing | Inspections | GPR

Dated: October 4, 2019

Job Order # 19R652

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
Bright Beginnings  
901 NW 129th Ave  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).

On 10/03/2019 our field representative visited the referenced site and conducted ten (10) field withdrawal resistance tests on the Drill Tech #14 screw fasteners into the steel roof deck. All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

A handwritten signature in blue ink, appearing to read "Keith LeBlanc", is written over a horizontal line. To the right of the signature, the date "10/4/19" is handwritten in blue ink.

Keith LeBlanc, P.E.  
Federal Engineering and Testing, Inc.

Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration





**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: Bright Beginnings

Job Address: 901 NW 129th Ave  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.


Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
10/4/15

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000



**Building / Roof System Information:**Area Number: 1Roof Area Height 20 ft.Roof Area Length 120 ft.Second Largest Dimension 113 ft.Total Roof Area 11936 ft<sup>2</sup>119 sq.Perimeter Area 3216 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*

## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #14 ScrewFastener Manufacturer: Drill TechPredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	420	C
2	369	C
3	439	C
4	530	C
5	592	P
6	470	P
7	439	P
8	520	F
9	479	F
10	477	F
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
27		
28		
29		
30		
31		
32		
33		
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37		
38		
39		
40		
41		
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## Fastener Installation Information:

Is the fastener a self driller? ☒ Yes ☐ NoIf yes, list the type of tool used for fastener installation: Cordless DrillSpeed of tool: Variable rpm'sNumber of tests conducted: n= 10

\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

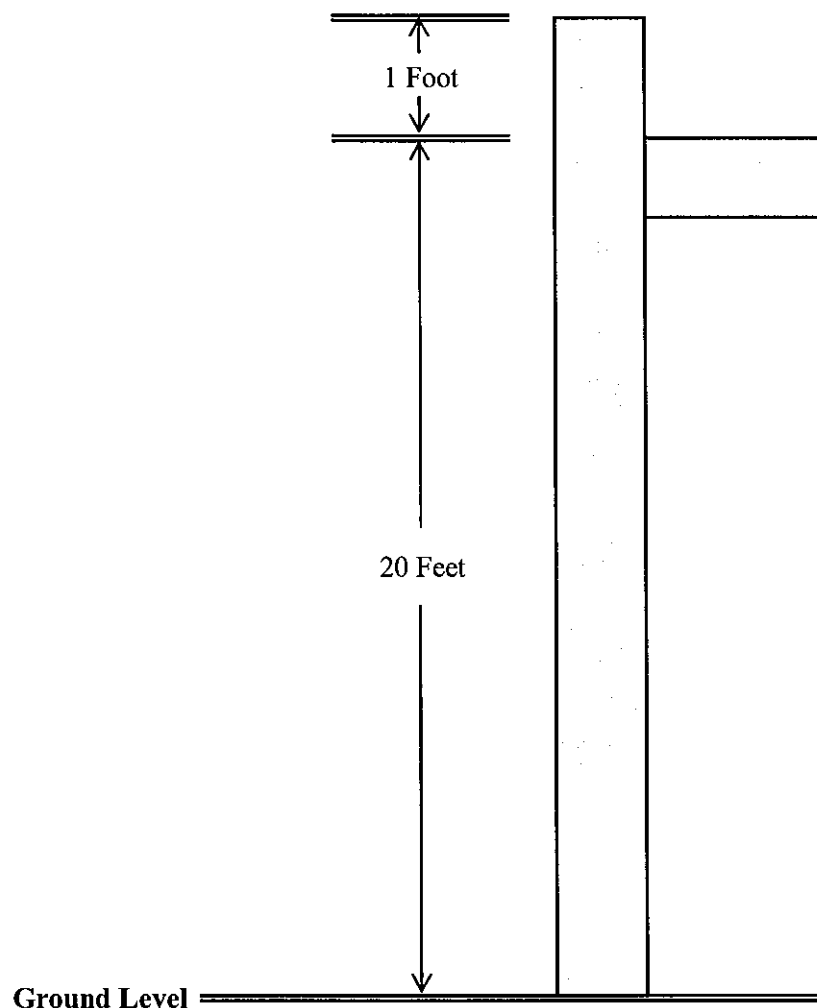
Mean Failure Load	F=	473.50	lbf
Sample Standard Deviation	Sf=	62.91	lbf
Minimum Characteristic Resistance Force	F' <sub>l</sub> =	455.58	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.

**Roof Area 1**

(If no parapet wall exists insert "N/A")

**Building Information - Detail # 1**



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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

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501 LB AND 2,000 LB

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STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
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Dated: October 3, 2019

Job Order # 19R651

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
FSU Charter School  
601 SW 172nd Ave  
Pembroke Pines, FL 33024

Dear: Sirs:

Pursuant to your request, Federal Engineering & Testing, Inc. (FE&T) has performed a field withdrawal resistance test in compliance with Testing Application Standard TAS-105 and the Florida Building Code High Velocity Hurricane Zone at the above referenced site. The purpose of our test was to determine the uplift capacity of the mechanical fasteners at the above referenced project. FE&T is a Miami Dade Certified Testing Laboratory (Certification #18-1105.02).


On 10/02/2019 our field representative visited the referenced site and conducted sixteen (16) field withdrawal resistance tests on the Mule-Hide #14 screw fasteners into the steel roof deck. All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

FE&T is an independent third party providing un-biased testing information and results. FE&T is not affiliated with our client nor do we have any financial interest in the project or determination of the test results.

Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
Keith LeBlanc, P.E.  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
Miami-Dade County Certification # 18-1105.02

Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration



**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: FSU Charter School

Job Address: 601 SW 172nd Ave  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

Testing Agency Name: Federal Engineering & Testing Inc.

Company Address: 3370 NE 5th Avenue, Oakland Park, FL 33334

Company Telephone: (954) 784-2941

Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
10/21/15

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**

Area Number: 1

Roof Area Height 30 ft.

Roof Area Length 253 ft.

Second Largest Dimension 66 ft.

Total Roof Area 17274 ft<sup>2</sup>

173 sq.

Perimeter Area 4704 ft<sup>2</sup>

*(See RAS 117)*

**Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>

*(See RAS 117)*

**Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>

*(See RAS 117)*

**Field Withdrawal Resistance Recording Sheet**

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #14 ScrewsFastener Manufacturer: Mule-HidePredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
1	429	C
2	563	C
3	609	C
4	510	C
5	496	C
6	360	C
7	582	P
8	520	P
9	512	P
10	498	P
11	726	P
12	605	F
13	598	F
14	469	F
15	467	F
16	571	F
17		
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Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
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**Fastener Installation Information:**Is the fastener a self driller? ☒ Yes ☐ NoIf yes, list the type of tool used for fastener installation: Cordless DrillSpeed of tool: Variable rpm'sNumber of tests conducted: n= 16

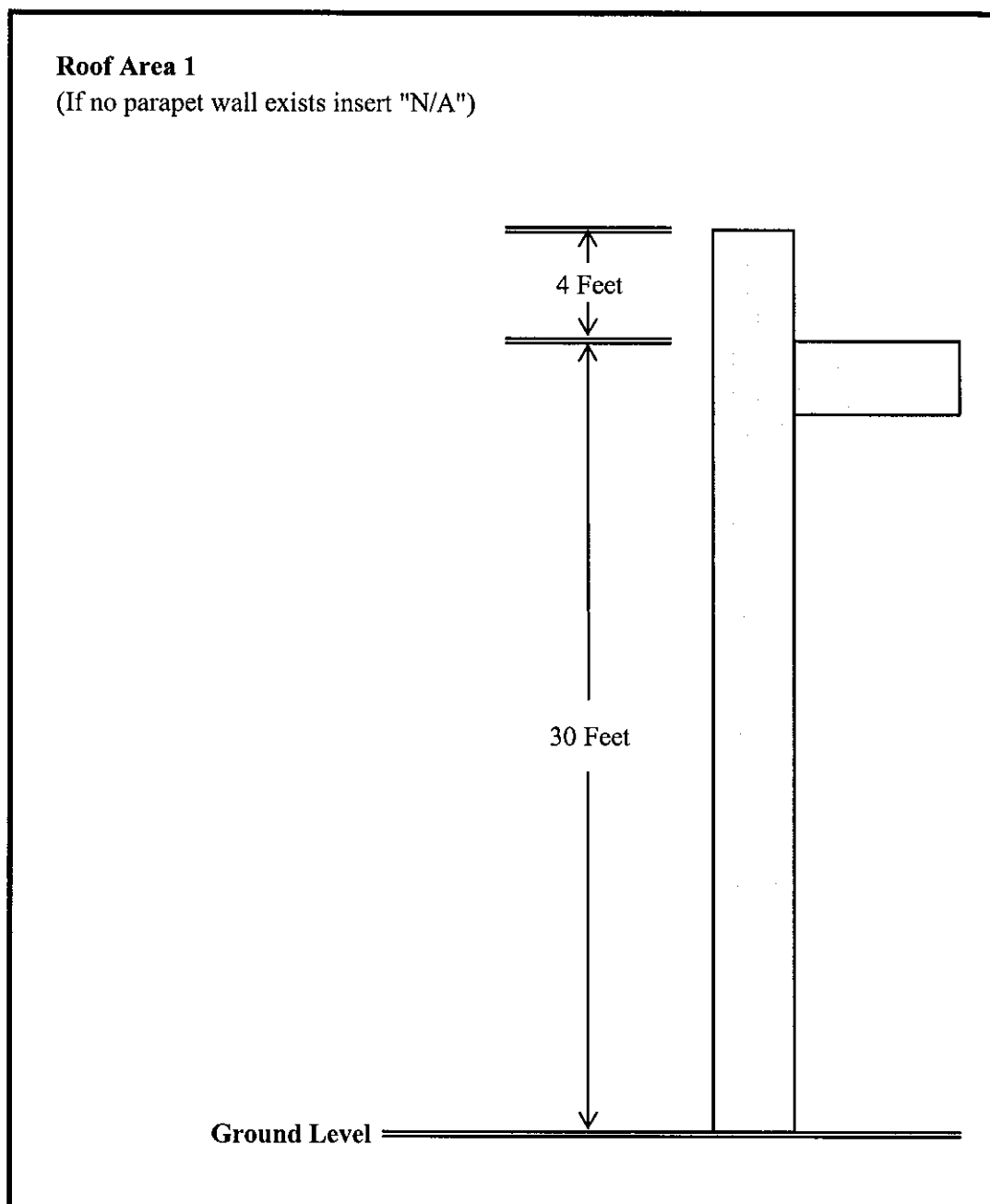
\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

Mean Failure Load	F=	532.19	lbf
Sample Standard Deviation	Sf=	85.67	lbf
Minimum Characteristic Resistance Force	F'=	512.47	lbf

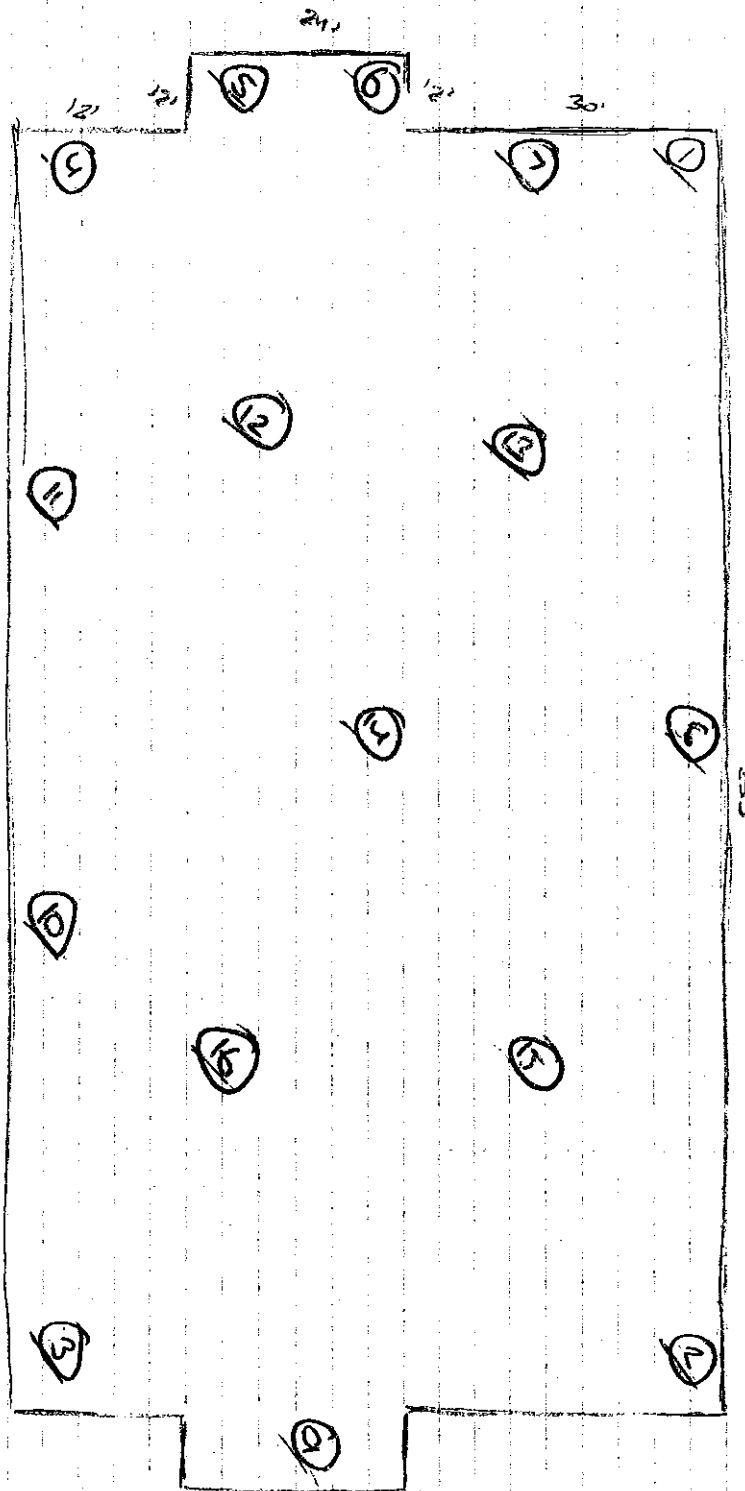
## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
- 2) A safety factor of 2 to 1 shall be applied to all results of laboratory testing.
- 3) The following pages shall be completed for each roof area and included with all Field Withdrawal Resistance Test Recording Sheets.



Building Information - Detail # 1





21'

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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
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STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
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Dated: October 3, 2019

Job Order # 19R651

**City of Pembroke Pines**  
8300 South Palm Drive  
Pembroke Pines, FL 33024  
Attn: Matt Desharnais

**RE: Field Withdrawal Resistance Test**  
FSU Charter School  
601 SW 172nd Ave  
Pembroke Pines, FL 33024

Dear: Sirs:

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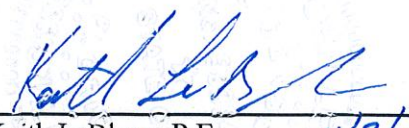
On 10/02/2019 our field representative visited the referenced site and conducted sixteen (16) field withdrawal resistance tests on the Mule-Hide #14 screw fasteners into the steel roof deck. All tests were found in compliance with the Florida Building Code and TAS-105. See attached copies of TAS-105 forms with test results.

The test results presented reflect the condition of the roof system at the time of the test. These results are time and sample dependent since roof conditions are continuously changing due to exposure to the elements. All tests were conducted according to the Florida Building Code Test Protocol TAS-105 using a calibrated Comten Industries Fastener Tester Model No.DFG 2W2000 (see attached calibration).

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Federal Engineering & Testing, Inc., appreciates the opportunity to be of service to you at this phase of your project. If you have any questions or comments, please give us a call. It has been a pleasure working with you and look forward to doing so in the near future.

Sincerely,

  
Keith LeBlanc, P.E.  
Federal Engineering and Testing, Inc.  
Florida Reg. Number 59394  
Certificate of Authorization # 5471  
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Attachments include the following:  
Field Withdrawal Resistance Test Results  
Field Sketch  
Comten Calibration





**Florida Building Code Test Protocol TAS-105**  
**Building Code Compliance Office**  
*Testing Application Standard TAS 105-11*

Field Withdrawal Resistance Test Results

**General Information:**

Job Name: FSU Charter School

Job Address: 601 SW 172nd Ave  
Pembroke Pines, FL 33024

Contact Individual  
at jobsite (if any) Matt Desharnais

**Testing Agency / Equipment Information:**

Note: The undersigned acknowledges that all testing has been conducted and results have been reported in compliance with Florida Building Code Test Protocol TAS-105

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Company Fax: (954) 784-7875

Representative Name: Mr. Keith LeBlanc P.E.

Representative Title: Professional Engineer

Signature:   
10/31/19

Testing Apparatus: Comten Industries Fastener Tester Model DFG2W2000

**Building / Roof System Information:**Area Number: 1Roof Area Height 30 ft.Roof Area Length 253 ft.Second Largest Dimension 66 ft.Total Roof Area 17274 ft<sup>2</sup>173 sq.Perimeter Area 4704 ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)***Building / Roof System Information:**

Area Number: \_\_\_\_\_

Roof Area Height \_\_\_\_\_ ft.

Roof Area Length \_\_\_\_\_ ft.

Second Largest Dimension \_\_\_\_\_ ft.

Total Roof Area \_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ sq.

Perimeter Area \_\_\_\_\_ ft<sup>2</sup>*(See RAS 117)*



## Field Withdrawal Resistance Recording Sheet

Component to be secured:

- ☐ Insulation  
☐ Membrane  
☐ Anchor or Basesheet  
☐ Woodblocking  
☐ Metal Profiles  
☒ Resistance Verification Only

Area Number 1

(Refer to deck dimensions on Page No. 2)

Fastener Type: #14 ScrewsFastener Manufacturer: Mule-HidePredrilled: Yes ☐ No ☒If Yes, Drill Bit Size: N/A "diameterHole Depth: N/A

See Section 8 to determine number of tests (If drill is high tolerance include range in 1/1000" tolerance)

Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
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8	520	P
9	512	P
10	498	P
11	726	P
12	605	F
13	598	F
14	469	F
15	467	F
16	571	F
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Sample & Plan Identifier	Initial Failure Load (lbf)	Roof Area
26		
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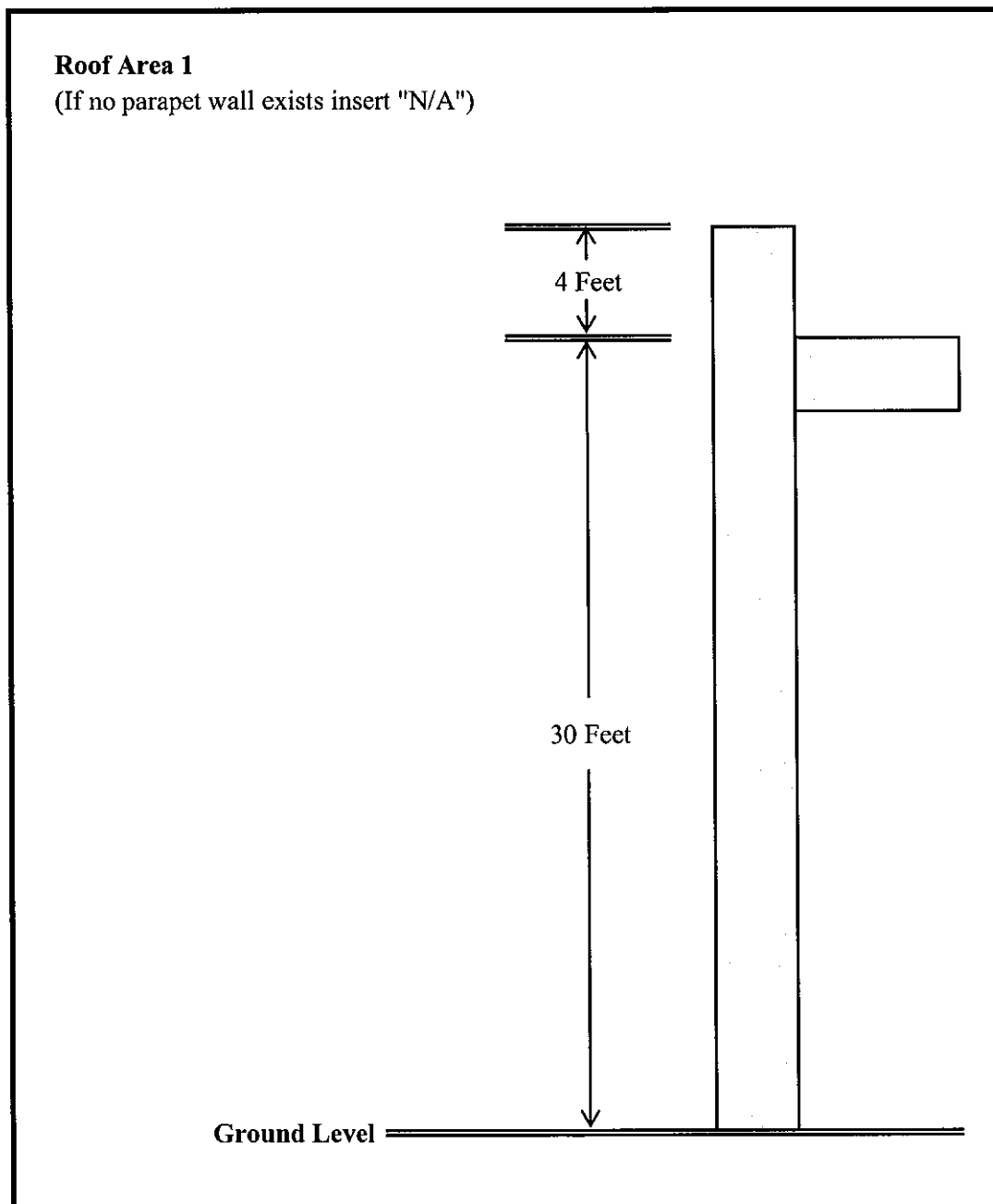
\* See Section 8 of Test Protocol TAS 105

\* Note the locations of all tests on "Building Information" Detail #1, attached)

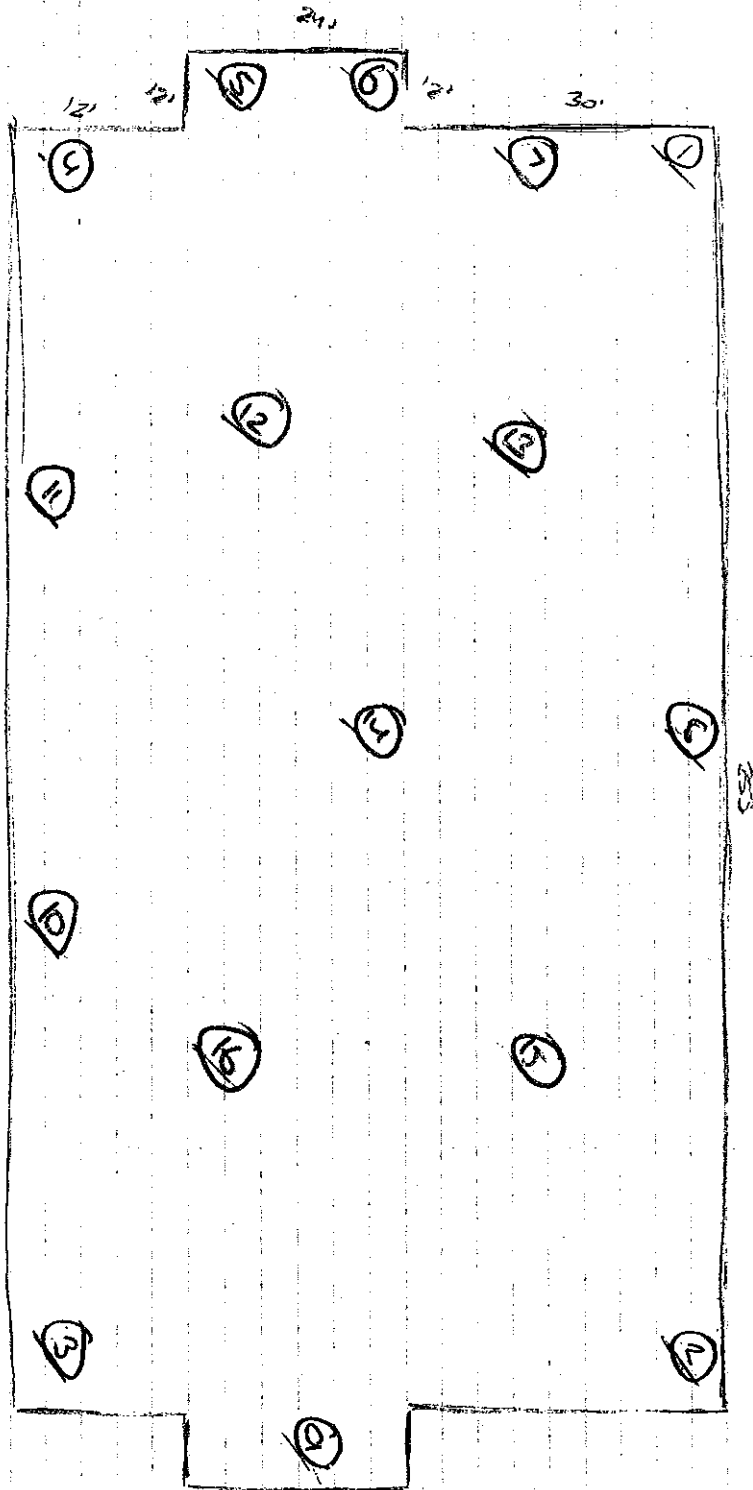
Mean Failure Load	F=	532.19	lbf
Sample Standard Deviation	Sf=	85.67	lbf
Minimum Characteristic Resistance Force	F'=	512.47	lbf

## Notes:

- 1) Use of the results herein to determine the required number of fasteners for insulation attachment or an acceptable anchor or base sheet fastener spacing, as outlined in RAS 117, shall utilize the minimum characteristic resistance force (F'), determined in compliance with Section 9 of TAS 105. No margin of safety shall be applied to field withdrawal resistance test results determined in compliance with TAS 105.
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Building Information - Detail # 1



21/10

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**CERTIFICATE OF CALIBRATION**

OWNER OF ITEM:	<u>FEDERAL ENGINEERING</u>	REPORT NO.:	<u>34050</u>
SCALE TYPE:	<u>PUSH/PULL TESTER</u>	CALIBRATION DATE:	<u>08/28/19</u>
MANUFACTURER:	<u>COMTEN / ASHCROFT</u>	RECALIBRATION DUE:	<u>NOVEMBER 2019</u>
MODEL NUMBER:	<u>DFG2W2000</u>	TECHNICIAN:	<u>SCOTT</u>
SERIAL NUMBER:	<u>2140844 / WT #1</u>	CAPACITY:	<u>2,000 LB</u>
PROCEDURE USED:	<u>TEST WEIGHT</u>	DIVISIONS:	<u>.1 LB</u>

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AND TECHNOLOGY (NIST).

STANDARDS CALIBRATION DATE:	<u>11/23/2017</u>
FLORIDA STATE CERTIFICATION NO.:	<u>137</u>

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Miami Branch Office: 3215 NW 10th Terrace, Suite 203 • Oakland Park, FL 33309  
Phone: (954) 563-4120 • Fax: (954) 563-9920 • miami@cardet.com • www.CardinalScale.com







DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

## NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786)315-2590 F (786) 31525-99  
[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**CertainTeed Corporation**  
**20 Moores Road**  
**Malvern, PA 19355**

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: CertainTeed Conventional Built-Up-Roof System over Lightweight Concrete Decks.

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 13-0204.08 and consists of pages 1 through 10.  
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 16-0322.19  
Expiration Date: 04/28/18  
Approval Date: 02/01/18  
Page 1 of 10



**ROOFING SYSTEM APPROVAL**

<b>Category:</b>	Roofing
<b>Sub-Category:</b>	Built-Up Roofing
<b>Material:</b>	Fiberglass
<b>Deck Type:</b>	Lightweight Concrete
<b>Maximum Design Pressure:</b>	-52.5 psf

**TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:****TABLE 1**

<b><u>Product</u></b>	<b><u>Dimensions</u></b>	<b><u>Test Specification</u></b>	<b><u>Product Description</u></b>
Flintglas Ply 4	36" x 164'7"; Roll weight: 40/55 lbs. (5 squares)	ASTM D2178 Type IV UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintglas Premium Ply 6	39 3/8" x 164'7"; Roll weight: 40 lbs. (5 squares)	ASTM D2178, Type VI UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintglas® MS Cap CoolStar	36" X 32'10"; Roll Weight: 78 lbs. (1 square)	ASTM D3909 UL Type G3	Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes. Covered with reflective CoolStar Coating.
Flintglas® MS Cap Sheet	36" X 32'10"; Roll Weight: 78 lbs. (1 square)	ASTM D3909 UL Type G3	Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
All Weather/Empire Base Sheet	36" x 65'10"; Roll weight: 86 lbs. (2 squares)	ASTM D4601 Type II	SBS modified, fiberglass reinforced base/ply sheet.
Flexiglas Base Sheet	36" x 98'9"; Roll weight: 90 lbs. (3 squares)	ASTM D4601 Type II	SBS modified, fiberglass reinforced base/ply sheet.
Flintlastic Poly SMS Base Sheet	39 3/8" x 64'4"; Roll weight: 90 lbs. (2 squares)	ASTM D4601 Type II	SBS modified, polyester reinforced base/ply sheet.
Glasbase Base Sheet	36" x 98'9"; Roll weight: 69 lbs. (3 squares)	ASTM D4601 Type II	Asphalt coated, fiberglass reinforced base/ply sheet.
Flintlastic Base 20	36" x 98'9"; Roll weight: 90 lbs. (3 squares)	ASTM D6163 Grade S Type I	SBS modified, fiberglass reinforced base/ply sheet.



**TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:****TABLE 1**

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Flintlastic Ultra Poly SMS Base Sheet	39 3/8" x 32' 10"	ASTM D6164 Grade S Type I	SBS modified, polyester reinforced base/ply sheet.

**APPROVED INSULATIONS:****TABLE 2**

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
FlintBoard ISO	Polyisocyanurate foam insulation	CertainTeed Corporation
FlintBoard <sub>H</sub> ISO	Polyisocyanurate foam insulation	CertainTeed Corporation
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC.
ENRGY 3	Polyisocyanurate foam insulation	Johns Manville Corp.
Ultra-Max	Polyisocyanurate roof insulation	RMax Operating, LLC.
Structodek High Density Fiberboard Insulation	High Density Wood Fiber insulation board.	Blue Ridge Fiberboard, Inc.
EnergyGuard™ Perlite Roof Insulation	Perlite insulation board	GAF
Fesco Board	Expanded perlite and fiber insulation	Johns Manville Corp.

**APPROVED FASTENERS:****TABLE 3**

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Trufast FM-90 Base Sheet Fastener	Base ply fastening systems for lightweight concrete decks.	2.7" x 1.7"	Altenloh, Brinck & Co. U.S., Inc.
2.	CR Assembled Base Sheet Fastener (1.7")	Fastener assembly for Base Sheet fastening only	1.125" x 1.75" 2.75" Galvalume steel stress plate	OMG, Inc.



**EVIDENCE SUBMITTED:**

<b><u>Test Agency/Identifier</u></b>	<b><u>Name</u></b>	<b><u>Report</u></b>	<b><u>Date</u></b>
Trinity ERD	TAS 117 (B)	3503.10.06	10/10/06
	TAS 117 (B)	O6490.04.07-R1	06/27/07
	TAS 117 (B)/ ASTM D6862	C8500SC.11.07	11/30/07
	TAS 114	C8370.08.08	08/19/08
	ASTM Physical Properties	C10080.09.08-R4	03/25/10
	ASTM D4601	C40050.09.12-1	09/28/12
	ASTM D3909	C44200.03.13	03/22/13
	ASTM D2178	C47250.03.14	03/26/14
	ASTM D1876	C35460.05.11-R1	05/20/15
	ASTM D3909	CTR-SC11145.09.16-2A	09/19/16
	ASTM D4601	CTR-SC11145.09.16-3A	09/19/16
Factory Mutual Research Corp.	FMRC 4470	J.I. #3Y8A1.AM	03/23/96
	FMRC 4454	J.I. 0D3A3.AM	04/04/97
	FMRC 4470	J.I. 1D7A4.AM	11/09/98
	FMRC 4470	J.I. 2D0A0.AM	12/23/98
Underwriters Laboratories, Inc.	UL 790	R11656	01/11/13
PRI Construction Materials Technologies LLC	ASTM D6163	CTC-066-02-01	08/09/11
	ASTM D2178	CTC-123-02-01	03/13/12
	ASTM D4601	CTC-124-02-01	03/13/12
	ASTM D4601	CTC-127-02-01	03/13/12

**APPROVED ASSEMBLIES**

- Deck Type 4I:** Lightweight Concrete, Insulated
- Deck Description:** Concrecel, Mearlcrete or Elastizell Cellular Lightweight Concrete over structural concrete. (Deck System Limitations Apply.)
- System Type A:** Anchor sheet mechanically fastened, one or more layer of insulation adhered with approved asphalt.

**All General and System limitations apply.**

- LWC Deck:** Minimum 160 psi, Elastizell Lightweight Insulating Concrete is applied with an 1/8" slurry coat followed by a 2" Star-R-Foam Gripper-HB or 1/12" Apache Holey Board. Apply a minimum 2" thick top coat of Elastizell Lightweight Insulating concrete.
- Or
- Minimum 200 psi, Mearlcrete is applied with an 1/8" slurry coat followed by minimum 1-1/2" thick Holey Board or EPS Insulation. Followed by a minimum 2" thick top coat of Mearlcrete or Elastizell is placed over the insulation
- Or
- Minimum 400 psi, Concrecel Bonding agent applied to the deck at rate 600 ft<sup>2</sup>/gal. followed by a slurry-coat of insulating concrete 1/4" thick above the top flange followed by a minimum 1" thick holey board and allowed to cure overnight. The following day a minimum 2 1/4" top coat Concrecel Concrete is placed. After an additional cure time of 24 hours, Concrecel Curing Compound was roller applied at a rate of 600 ft<sup>2</sup>/gal.

- Base Sheet Options:** (Elastizell; Option #1) One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintastic Base 20 or Flintastic Poly SMS Base Sheet mechanically attached to the deck using Trufast FM-90 Base Sheet Fastener spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet.  
*(Maximum Design Pressure –45 psf, See General Limitation #7.)*
- (Concrecel or Mearlcrete; Option #2.) One ply of All Weather/Empire Base Sheet or Glasbase Base Sheet mechanically attached to the deck using OMG CR Assembled Base Sheet Fastener (1.7") spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet.  
*(Maximum Design Pressure –52.5 psf, See General Limitation #7.)*

One or more layers of any of the following insulations:



<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u>	<u>Fastener Density/ft<sup>2</sup></u>
ACFoam-II, ENRGY 3, Ultra-Max, H-Shield Minimum 1" thick	N/A	N/A
Structodek High Density Fiberboard Insulation Minimum ½" thick	N/A	N/A
Fesco Board or EnergyGuard™ Perlite Roof Insulation Minimum ¾" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum ¾" thick	N/A	N/A

<u>(Optional) Top Insulation Layer</u>	<u>Insulation Fasteners</u>	<u>Fastener Density/ft<sup>2</sup></u>
Any Insulation listed for Base Layer, above.		

**Note:** All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

<b>Base Sheet: (Optional)</b>	Install one ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq.
<b>Ply Sheet:</b>	One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.
<b>Cap Sheet: (Optional)</b>	One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.
<b>Surfacing:</b>	(Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following: <ol style="list-style-type: none"> <li>1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. &amp; 300 lbs./sq., respectively.</li> <li>2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.</li> </ol>

**Maximum Design Pressure:** See fastening requirements above



NOA No.: 16-0322.19  
 Expiration Date: 04/28/18  
 Approval Date: 02/01/18  
 Page 6 of 10



<b>Deck Type 4:</b>	Lightweight Concrete, Non-Insulated
<b>Deck Description:</b>	Concrecel, Mearlcrete or Elastizell Cellular Lightweight Concrete over structural concrete. (Deck System Limitations Apply.)
<b>System Type E:</b>	Base sheet mechanically fastened.

**All General and System limitations apply.**

<b>LWC Deck:</b>	<p>Minimum 160 psi, Elastizell Lightweight Insulating Concrete is applied with an 1/8" slurry coat followed by a 2" Star-R-Foam Gripper-HB or 1/12" Apache Holey Board. Apply a minimum 2" thick top coat of Elastizell Lightweight Insulating concrete.</p> <p>Or</p> <p>Minimum 200 psi, Mearlcrete is applied with an 1/8" slurry coat followed by minimum 1-1/2" thick Holey Board or EPS Insulation. Followed by a minimum 2" thick top coat of Mearlcrete or Elastizell is placed over the insulation</p> <p>Or</p> <p>Minimum 400 psi, Concrecel Bonding agent applied to the deck at rate 600 ft<sup>2</sup>/gal. followed by a slurry-coat of insulating concrete 1/4" thick above the top flange followed by a minimum 1" thick holey board and allowed to cure overnight. The following day a minimum 2 1/4" top coat Concrecel Concrete is placed. After an additional cure time of 24 hours, Concrecel Curing Compound was roller applied at a rate of 600 ft<sup>2</sup>/gal.</p>
<b>Base Sheet Options:</b>	<p>(Elastizell; Option #1) One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or Flintlastic Poly SMS Base Sheet mechanically attached to the deck using Trufast FM-90 Base Sheet Fastener spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet. <i>(Maximum Design Pressure –45 psf, See General Limitation #7.)</i></p> <p>(Concrecel or Mearlcrete; Option #2.) One ply of All Weather/Empire Base Sheet or Glasbase Base Sheet mechanically attached to the deck using OMG CR Assembled Base Sheet Fastener (1.7") spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet. <i>(Maximum Design Pressure –52.5 psf, See General Limitation #7.)</i></p>
<b>Ply Sheet:</b>	One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.
<b>Cap Sheet: (Optional)</b>	One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.



**Surfacing:**

(Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Flood coat of hot asphalt with an application rate of 60 lbs./sq.  $\pm$  20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design  
Pressure:**

See fastening requirements above



**LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:**

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.



**GENERAL LIMITATIONS:**

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant  
**(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners).  
**(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

**END OF THIS ACCEPTANCE**



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599  
[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

## NOTICE OF ACCEPTANCE (NOA)

Owens Corning Roofing and Asphalt, LLC  
One Owens Corning Parkway  
Toledo, OH 43659

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (in Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION:** Duration®, Duration® Premium, TruDefinition® Duration®, and TruDefinition® Duration® Designer Colors Collection

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No.12-0309.01 and consists of pages 1 through 6.  
The submitted documentation was reviewed by Gaspar J Rodriguez.



NOA No.: 16-0425.01  
Expiration Date: 07/19/21  
Approval Date: 07/21/16  
Page 1 of 6



**ROOFING ASSEMBLY APPROVAL**

**Category:** Roofing  
**Sub-Category:** Asphalt Shingles  
**Materials:** Laminate  
**Deck Type:** Wood

**SCOPE**

This approves a roofing system using **Owens Corning Duration® and Duration® Premium** asphalt shingles manufactured by Owens Corning as described in Section 2 of his Notice of Acceptance.

**PRODUCT DESCRIPTION**

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
<b>Duration®</b> <i>Manufacturing Locations #1, 2</i>	13 ¼" x 39 ¾"	TAS 110	A heavy weight, fiberglass reinforced four tab asphalt shingle with continuous bead of sealant.
<b>Duration® Premium;</b> <b>TruDefinition® Duration®;</b> <b>TruDefinition® Duration®</b> <b>Designer Colors Collection</b> <i>Manufacturing Location #1, 2, 3, 4</i>	13 ¼" x 39 ¾"	TAS 110	A heavy weight, fiberglass reinforced four tab asphalt shingle with large nail area with continuous bead of sealant.
<b>Duration®</b> <i>Manufacturing Location #1, 2, 3</i>	13 ¼" x 39 ¾"	TAS 110	A heavy weight, fiberglass reinforced four tab asphalt shingle with dashed bead of sealant.
<b>Duration® Premium;</b> <b>TruDefinition® Duration®;</b> <b>TruDefinition® Duration®</b> <b>Designer Colors Collection</b> <i>Manufacturing Location #1, 2, 3, 4</i>	13 ¼" x 39 ¾"	TAS 110	A heavy weight, fiberglass reinforced four tab asphalt shingle with dashed bead of sealant.

**MANUFACTURING LOCATION**

1. Jacksonville, FL
2. Memphis, TN
3. Savannah, GA
4. Irving, TX



**EVIDENCE SUBMITTED**

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
PRI Asphalt Technologies, Inc.	OCF-157-02-01	TAS 100	10/26/10
	OCF-102-02-01	TAS 100	11/12/07
	OCF-156-02-01	TAS 100	10/26/10
	OCF-163-02-01	TAS 100	12/10/10
	OCF-164-02-01	TAS 100	12/10/10
	OCF-098-02-01	TAS 100	02/22/07
	OCF-099-02-01	TAS 100	02/26/07
	OCF-102-02-01	TAS 100	11/12/07
	OCF-172-02-01	TAS 100	05/26/11
	OCF-179-02-01	TAS 100	02/02/12
Underwriters Laboratories, Inc.	07CA39536	TAS 107	11/11/07
	03NK04954	TAS 107	03/28/03
	03NK04954	TAS 107	03/11/03
	10NK13947	TAS 107	11/12/10
	11CA15662	TAS 107	05/27/11
	11NB21712	TAS 107	02/18/12
	07CA02026	ASTM D 3462	01/26/07
	12CA12180	ASTM D 3462	03/01/12

**LIMITATIONS**

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Shall not be installed on roof mean heights in excess of 33 ft.
3. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

**INSTALLATION**

1. Shingles shall be installed in compliance with Roofing Application Standard RAS 115.
2. Flashing shall be in accordance with Roofing Application Standard RAS 115
3. The manufacturer shall provide clearly written application instructions.
4. Exposure and course layout shall be in compliance with Detail 'A', attached.
5. Nailing shall be in compliance with Detail 'B', attached.

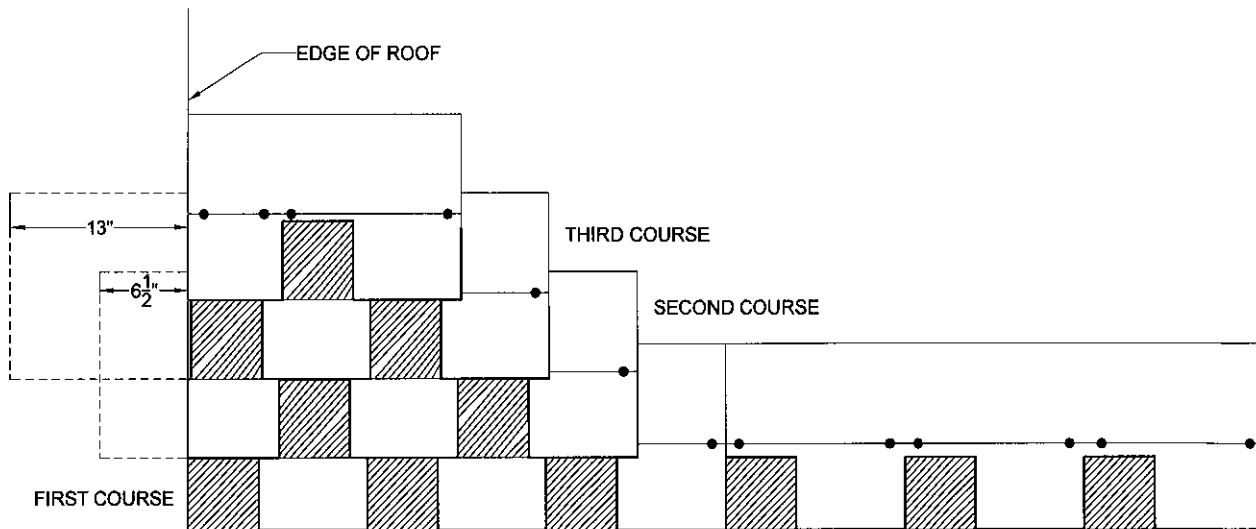
**LABELING**

1. Shingles shall be labeled with the Miami-Dade Seal as seen below, or the wording "Miami-Dade County Product Control Approved".



**BUILDING PERMIT REQUIREMENTS**

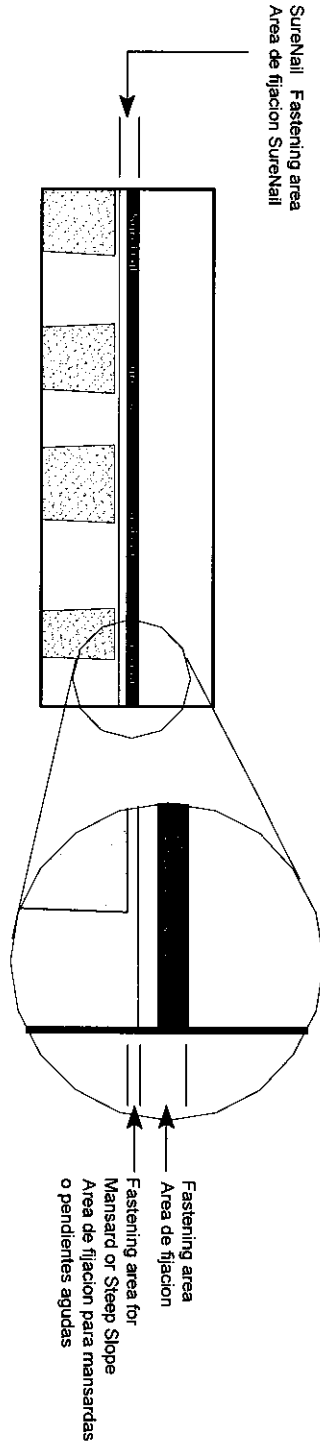
1. Application for building permit shall be accompanied by copies of the following:
  - 1.1 This Notice of Acceptance.
  - 1.2 Any other documents required by the Building Official or the applicable code in order to properly evaluate the installation of this system.

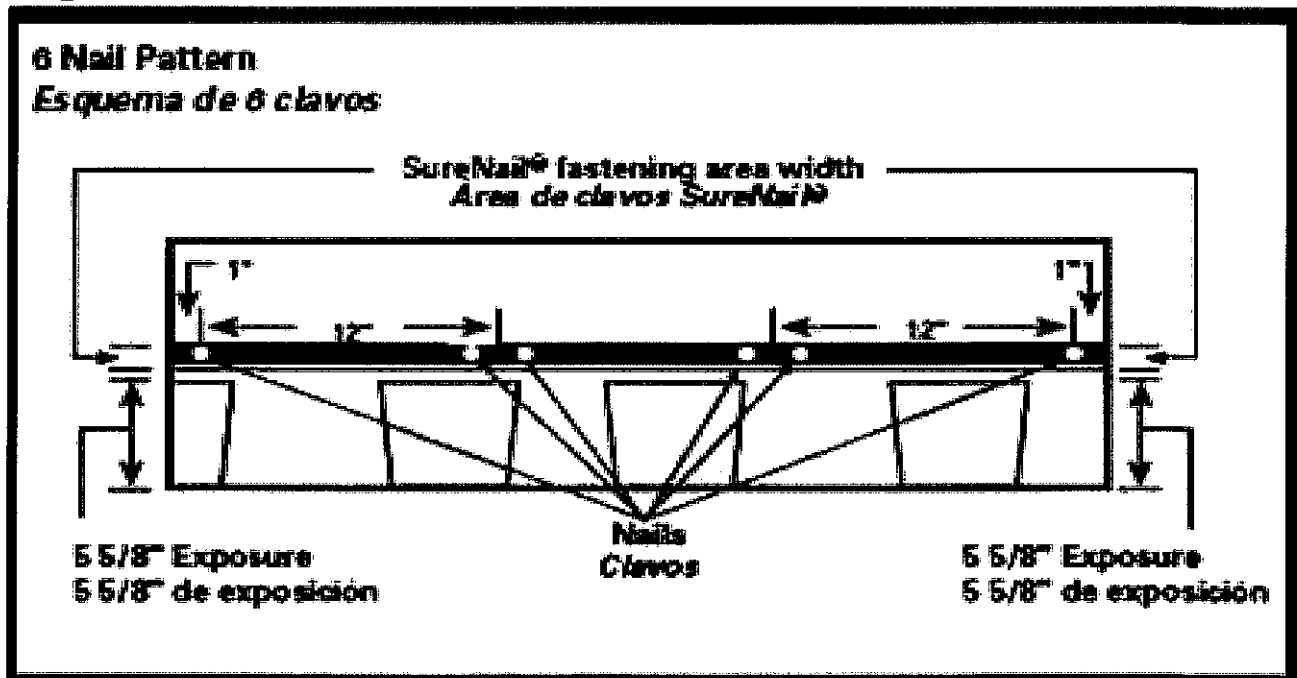
**DETAIL A**

# **DETAIL B**

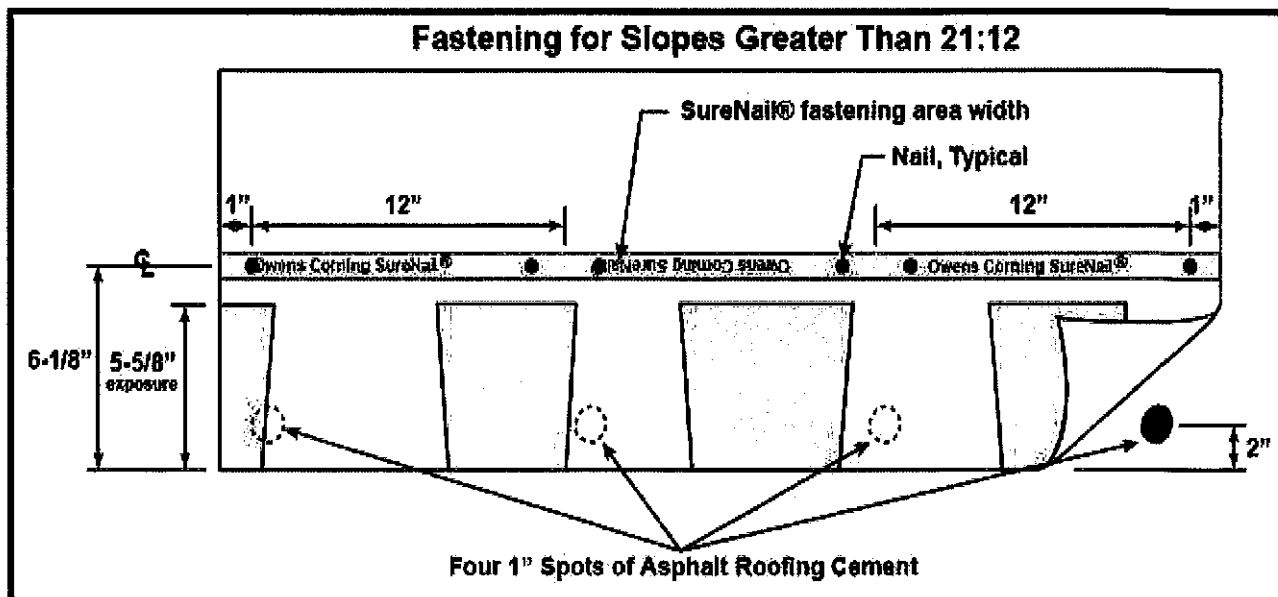
## **DURATION & TRUDEFINITION® DURATION®**

(SEALANT MAY BE CONTINUOUS OR DASHED. NOT SHOWN IN THE DETAIL DRAWINGS)





MAXIMUM SLOPE 21:12



SLOPE GREATER THAN 21:12

END OF THIS ACCEPTANCE





MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786)315-2590 F (786) 31525-99  
[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

## NOTICE OF ACCEPTANCE (NOA)

CertainTeed Corporation  
20 Moores Road  
Malvern, PA 19355

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION:** CertainTeed Conventional Built-Up-Roof System over Concrete Decks.

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No. 16-0322.23 and consists of pages 1 through 23.  
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 17-1003.13  
Expiration Date: 05/19/23  
Approval Date: 04/26/18  
Page 1 of 23

**ROOFING SYSTEM APPROVAL**

**Category:** Roofing  
**Sub-Category:** Built-Up Roofing  
**Material:** Fiberglass  
**Deck Type:** Concrete  
**Maximum Design Pressure:** -355 psf

**TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:****TABLE 1**

<b><u>Product</u></b>	<b><u>Dimensions</u></b>	<b><u>Test Specification</u></b>	<b><u>Product Description</u></b>
Black Diamond™ Base Sheet	36" x 68'7"; Roll weight: 78 lbs. (2 squares)	ASTM D 1970	Self-adhering fiberglass reinforced modified bitumen base sheet.
Flintlastic Ultra Glass SA	39 3/8" x 33'11"	ASTM D 1970	Self-adhering, fiberglass reinforced, SBS modified bitumen base/ply sheet.
Flintglas Ply 4	36" x 164'7"; Roll weight: 40/55 lbs. (5 squares)	ASTM D 2178 Type IV UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintglas Premium Ply 6	39 3/8" x 164'7"; Roll weight: 40 lbs. (5 squares)	ASTM D 2178, Type VI UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintglas® MS Cap CoolStar	36" X 32'10"; Roll Weight: 78 lbs. (1 square)	ASTM D 3909 UL Type G3	Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes. Covered with reflective CoolStar Coating.
Flintglas® MS Cap Sheet	36" X 32'10"; Roll Weight: 78 lbs. (1 square)	ASTM D 3909 UL Type G3	Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
Yosemite® Venting Base Sheet	39 3/8" x 32'10"	ASTM D 3909 ASTM D 4897 UL Type G3	Mineral surfaced fiberglass reinforced buffer sheet.
All Weather/Empire Base Sheet	36" x 65'10"; Roll weight: 86 lbs. (2 squares)	ASTM D 4601 Type II	SBS modified, fiberglass reinforced base/ply sheet.
Flexiglas Base Sheet	36" x 98'9"; Roll weight: 90 lbs. (3 squares)	ASTM D 4601 Type II	SBS modified, fiberglass reinforced base/ply sheet.
Flintlastic Poly SMS Base Sheet	39 3/8" x 64'4"; Roll weight: 90 lbs. (2 squares)	ASTM D 4601 Type II	SBS modified, polyester reinforced base/ply sheet.

**TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:****TABLE 1**

<b><u>Product</u></b>	<b><u>Dimensions</u></b>	<b><u>Test Specification</u></b>	<b><u>Product Description</u></b>
Glasbase Base Sheet	36" x 98'9"; Roll weight: 69 lbs. (3 squares)	ASTM D 4601 Type II	Asphalt coated, fiberglass base/ply sheet.
Flintlastic Base 20	36" x 98'9"; Roll weight: 90 lbs. (3 squares)	ASTM D 6163 Grade S Type I	SBS modified, fiberglass reinforced base/ply sheet.
Flintlastic Ultra Poly SMS Base Sheet	39 3/8" x 32'10"	ASTM D6164 Grade S Type I	SBS modified, polyester reinforced base/ply sheet.

**APPROVED INSULATIONS:****TABLE 2**

<b><u>Product Name</u></b>	<b><u>Product Description</u></b>	<b><u>Manufacturer (With Current NOA)</u></b>
FlintBoard ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard <sub>H</sub> ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Ultra-Max, Multi-Max FA-3	Polyisocyanurate roof insulation	RMax Operating, LLC.
Fesco Board	Expanded perlite and mineral fiber board	Johns Manville Corp.
Structodek High Density Fiberboard Roof Insulation	High Density Wood Fiber insulation board.	Blue Ridge Fiberboard, Inc.



**APPROVED FASTENERS/ADHESIVES:****TABLE 3**

<b><u>Fastener Number</u></b>	<b><u>Product Name</u></b>	<b><u>Product Description</u></b>	<b><u>Dimensions</u></b>	<b><u>Manufacturer (With Current NOA)</u></b>
1.	Dekfast DF-#14-PH3 & Deckfast DF-#15 PH3	Insulation fastener for wood, steel and concrete decks	Various	SFS Group USA
2.	Dekfast PLT-H-2-7/8	Galvalume AZ50 steel plate	2 7/8" x 3 1/4"	SFS Group USA
3.	Dekfast PLT-P-R-3	Polypropylene plate	3" x 3 1/4"	SFS Group USA
4.	#14 Roofgrip	Insulation fastener for concrete, steel or wood decks.	Various	OMG, Inc.
5.	3 in. Ribbed Galvalume Plate	Galvalume stress plate.	3" round	OMG, Inc.
6.	AccuTrac Plate	Galvalume stress plate.	3" square	OMG, Inc.
7.	CD-10	Insulation fastener for concrete decks.	Various	OMG, Inc.
8.	Fluted Nail	Insulation fastener	Various	OMG, Inc.
9.	OMG Plastic Plate	Polypropylene plastic plate	3" round	OMG, Inc.
10.	3 in. Round Metal Plate	Galvalume AZ50 steel plate	3" round	OMG, Inc.
11.	Trufast #14 HD Fastener	Insulation fastener for concrete decks	Various	Altenloh, Brinck & Co. U.S., Inc.
12.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
13.	FlintFast #14	Insulation fastener for concrete decks	Various	CertainTeed Corp.
14.	FlintFast 3" Insulation Plate	Galvalume AZ50 steel plate	3" round	CertainTeed Corp.

**EVIDENCE SUBMITTED:**

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Trinity ERD	TAS 117 (B)	3503.10.06	10/10/06
	TAS 117 (B)	O6490.04.07-R1	06/27/07
	TAS 114	3521.07.04	10/26/07
	TAS 117 (B)/ ASTM D 6862	C8500SC.11.07	11/30/07
	TAS 114	C8370.08.08	08/19/08
	ASTM Physical Properties	C10080.09.08-R4	03/25/10
	TAS 117 (B)	C35500.02.11	02/09/11
	FM 4470 / TAS 114	3513.08.02-R1	03/17/11
	ASTM D4601	C40050.09.12-1	09/28/12
	ASTM D1970	C40050.09.12-2	09/28/12
	ASTM D3909	C44200.03.13	03/22/13
	ASTM D2178	C47250.03.14	03/26/14
	ASTM D1876, / TAS 114, / FM 4474	C45620.03.14	03/27/14
	ASTM D1876	C35460.05.11-R1	05/20/15
	ASTM D3909	CTR-SC11145.09.16-2A	09/19/16
	ASTM D3909	CTR-SC11145.09.16-2B	09/19/16
	ASTM D4601	CTR-SC11145.09.16-3A	09/19/16
	ASTM D4897	CTR-SC11145.09.16-4	09/19/16
Factory Mutual Research Corp.	FMRC 4470	J.I. #3Y8A1.AM	03/23/96
	FMRC 4454	J.I. 0D3A3.AM	04/04/97
	FMRC 4470	J.I. 2D0A0.AM	12/23/98
	FMRC 4470	J.I. 1D7A4.AM	11/09/98
Underwriters Laboratories, Inc.	UL 790	R11656	01/11/13
PRI Construction Materials Technologies LLC	ASTM D6163	CTC-066-02-01	08/09/11
	ASTM D2178	CTC-123-02-01	03/13/12
	ASTM D4601	CTC-124-02-01	03/13/12
	ASTM D4601	CTC-127-02-01	03/13/12
	ASTM D6164	CTC-190-02-01	12/02/13
	ASTM D1970	CTC-199-02-01	01/22/14



**APPROVED ASSEMBLIES**

<b>Membrane Type:</b>	BUR
<b>Deck Type 3I:</b>	Concrete Decks, Insulated
<b>Deck Description:</b>	2500 psi structural concrete or concrete plank
<b>System Type A(1):</b>	Anchor sheet (optional), base sheet and/or insulation adhered with approved asphalt

**All General and System Limitations apply.**

**Anchor Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20 or  
**(Optional)** Glasbase Base Sheet in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq. (See General Limitation #4)

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>Table 3</u>	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
<b>FlintBoard ISO, FlintBoard<sub>H</sub> ISO, AC Foam-II, ENRGY 3, Ultra-Max, H-Shield</b> <b>Minimum 1" thick</b>	N/A	N/A
<b>Structodek High Density Fiberboard Roof Insulation</b> <b>Minimum ½" thick</b>	N/A	N/A
<b>Fesco Board</b> <b>Minimum ¾" thick</b>	N/A	N/A
<b>DensDeck, DensDeck Prime</b> <b>Minimum ¼" thick</b>	N/A	N/A

**Note:** Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

**Base Sheet:** Install one ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20,  
**(Optional)** Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq.

**Ply Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.



**Cap Sheet:  
(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design  
Pressure:** -87.5 psf (See General Limitations # 9)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A(2):** Insulation adhered to deck with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>FlintBoard ISO, FlintBoard<sub>H</sub> ISO, ACFoam-II, ENRGY 3, Ultra-Max, H-Shield Minimum 1" thick</b>	<b>N/A</b>	<b>N/A</b>
<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>Structodek High Density Fiberboard Roof Insulation Minimum ½" thick</b>	<b>N/A</b>	<b>N/A</b>

**Note:** Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

**Base Sheet:** One or more plies of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the composite insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Ply Sheet:** One or more plies of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Cap Sheet:  
(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.



**Surfacing:**

*(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibred Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibred Aluminum Roof Coating.

**Maximum Design  
Pressure:**

-227.5 psf (See General Limitations #9)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A(3):** Insulation adhered to deck with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>FlintBoard ISO, FlintBoard<sub>H</sub> ISO, AC Foam-II, ENRGY 3, Ultra-Max, H-Shield</b> <b>Minimum 1" thick</b>	N/A	N/A
<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>DensDeck, DensDeck Prime</b> <b>Minimum ¼" thick</b>	N/A	N/A

**Note:** Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

**Base Sheet:** One or more plies of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the composite insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Ply Sheet:** One or more plies of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Cap Sheet:**  
**(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.





**Surfacing:**

*(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibred Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibred Aluminum Roof Coating.

**Maximum Design  
Pressure:**

-240 psf (See General Limitations #9)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A(4):** Insulation adhered to deck with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>Table 3</u>	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
FlintBoard <sub>H</sub> ISO, ENRGY-3, H-Shield Minimum 1.5" thick	N/A	N/A

**Note:** Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

**Base Sheet:** One or more plies of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet adhered to the fiberglass insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Ply Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Cap Sheet: (Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design Pressure:** -355 psf (See General Limitations #9)



NOA No.: 17-1003.13  
 Expiration Date: 05/19/23  
 Approval Date: 04/26/18  
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<b>Membrane Type:</b>	BUR
<b>Deck Type 3I:</b>	Concrete Decks, Insulated
<b>Deck Description:</b>	2500 psi structural concrete or concrete plank
<b>System Type B(1):</b>	Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b>Base Insulation Layer</b>	<b>Insulation Fasteners Table 3</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>FlintBoard<sub>H</sub> ISO, ENRGY 3, H-Shield Minimum 1.4" thick</b>	<b>1 4, 7, 8</b>	<b>1:3 ft<sup>2</sup> 1:4 ft<sup>2</sup></b>
<b>ISO 95+ GL Minimum 1.4" thick</b>	<b>1, 11, 13 4, 7, 8</b>	<b>1:3 ft<sup>2</sup> 1:4 ft<sup>2</sup></b>
<b>Ultra-Max Minimum 1.5" thick</b>	<b>1, 4, 7, 8</b>	<b>1:2.9 ft<sup>2</sup></b>
<b>Fesco Board Minimum ¾" thick</b>	<b>1, 4, 11, 13</b>	<b>1:2 ft<sup>2</sup></b>
<b>Structodek High Density Fiberboard Roof Insulation Minimum ½" thick</b>	<b>1, 4, 11, 13</b>	<b>1:2 ft<sup>2</sup></b>

**Note:** Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<b>Top Insulation Layer (Optional)</b>	<b>Insulation Fasteners Table 3</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Any of the insulations listed for Base Layer, above.</b>		
<b>DensDeck, DensDeck Prime Minimum ¼" thick</b>	<b>N/A</b>	<b>N/A</b>

**Note:** Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.



<b>Base Sheet: (Optional)</b>	Install one ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq. (See General Limitation #4)
<b>Ply Sheet:</b>	One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.
<b>Cap Sheet: (Optional)</b>	One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.
<b>Surfacing:</b>	<p>(Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:</p> <ol style="list-style-type: none"><li>1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.</li><li>2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.</li></ol>
<b>Maximum Design Pressure:</b>	-52.5 psf (See General Limitations #9)



<b>Membrane Type:</b>	BUR
<b>Deck Type 3I:</b>	Concrete Decks, Insulated
<b>Deck Description:</b>	2500 psi structural concrete or concrete plank
<b>System Type B(2):</b>	Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>FlintBoard ISO, FlintBoard<sub>H</sub> ISO, ENRGY 3, ACFoam-II, Multi-Max FA-3, H-Shield</b> <b>Minimum 1.5" thick</b>	<b>1, 4, 11, 13</b>	<b>1:1.33 ft<sup>2</sup></b>

**Note:** Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>Fesco Board</b> <b>Minimum ¾" thick</b>	<b>N/A</b>	<b>N/A</b>
<b>Structodek High Density Fiberboard Roof Insulation</b> <b>Minimum ½" thick</b>	<b>N/A</b>	<b>N/A</b>

**Note:** Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

<b>Base Sheet:</b> <b>(Optional)</b>	Install one ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq.
<b>Ply Sheet:</b>	One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.
<b>Cap Sheet:</b> <b>(Optional)</b>	One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.





**Surfacing:**

*(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibred Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibred Aluminum Roof Coating.

**Maximum Design  
Pressure:**

-52.5 psf (For Fesco Board) (See General Limitation #7)

-67.5 psf (For Structodek High Density Fiberboard Roof Insulation) (See General Limitation #7)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type C(1):** All layers of insulation simultaneously fastened

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b><u>Base Insulation Layer (Optional)</u></b>	<b><u>Insulation Fasteners</u></b> <b><u>Table 3</u></b>	<b><u>Fastener</u></b> <b><u>Density/ft<sup>2</sup></u></b>
<b>Ultra-Max</b> <b>Minimum 1" thick</b>	N/A	N/A
<b>FlintBoard ISO, AC Foam-II</b> <b>Minimum 1.3" thick</b>	N/A	N/A
<b>FlintBoard<sub>H</sub> ISO, ENRGY 3, H-Shield</b> <b>Minimum 1.4" thick</b>	N/A	N/A
<b>Structodek High Density Fiberboard Roof Insulation</b> <b>Minimum ½" thick</b>	N/A	N/A
<b>Fesco Board</b> <b>Minimum ¾" thick</b>	N/A	N/A

**Note:** All layers shall be simultaneously attached; See top layer below for fasteners and density.

<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners</u></b> <b><u>Table 3</u></b>	<b><u>Fastener</u></b> <b><u>Density/ft<sup>2</sup></u></b>
<b>ENRGY 3, H-Shield</b> <b>Minimum 1.4" thick</b>	1 4, 7, 8	1:3 ft <sup>2</sup> 1:4 ft <sup>2</sup>
<b>ISO 95+ GL</b> <b>Minimum 1.4" thick</b>	2 4, 7, 8	1:3 ft <sup>2</sup> 1:4 ft <sup>2</sup>
<b>Ultra-Max</b> <b>Minimum 1.5" thick</b>	1, 4, 7, 8, 11 or 13	1:2.9 ft <sup>2</sup>
<b>Fesco Board</b> <b>Minimum ¾" thick</b>	1, 4, 11 or 13	1:2 ft <sup>2</sup>
<b>Structodek High Density Fiberboard Roof Insulation</b> <b>Minimum ½" thick</b>	1, 4, 11 or 13	1:2 ft <sup>2</sup>

**Note:** All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:  
(Optional)** Install one ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq. (See General Limitation #4)
- Ply Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered to the base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.
- Cap Sheet:  
(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.
- Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
  2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.
- Maximum Design Pressure:** -52.5 psf (See General Limitations #9)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type C(2):** All layers of insulation simultaneously fastened

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
FlintBoard ISO, FlintBoard <sub>H</sub> ISO, AC Foam-II, ENRGY 3, Multi-Max FA-3, H-Shield Minimum 1.5" thick	1, 3, 4, 11 or 13	1:1.33 ft <sup>2</sup>

**Note:** All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

**Base Sheet:** One ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered.

**Ply Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Cap Sheet:**  
**(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design Pressure:** -52.5 psf (See General Limitation #7)



**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type D:** All layers of insulation and base sheet simultaneously attached

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>FlintBoard ISO, FlintBoard<sub>H</sub> ISO, AC Foam-II, ENRGY 3, ENRGY 3 25 PSI, H-Shield</b> <b>Minimum 1.5" thick</b>	N/A	N/A
<b><u>Top Insulation Layer (Optional)</u></b>	<b><u>Insulation Fasteners</u> <u>Table 3</u></b>	<b><u>Fastener</u> <u>Density/ft<sup>2</sup></u></b>
<b>Fesco Board</b> <b>Minimum ¾" thick</b>	N/A	N/A
<b>Structodek High Density Fiberboard Roof Insulation</b> <b>Minimum ½" thick</b>	N/A	N/A
<b>DensDeck, DensDeck Prime</b> <b>Minimum ¾" thick</b>	N/A	N/A

**Note:** Optional top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

**Base Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Yosemite Venting Base Sheet mechanically attached as below.

**Fastening:** OMG #14 Roofgrip and OMG 3 in. Ribbed Galvalume Plates, Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 Plate, FlintFast #14 fasteners with FlintFast 3" Insulation Plate or Trufast #14 HD Fastener with Trufast 3" Metal Insulation Plates at a 4" side lap 6" o.c. and two rows staggered in the center of the sheet, 6" o.c.

**Ply Sheet:** *(Optional if Cap Sheet used)* One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.





**Cap Sheet:  
(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design  
Pressure:** -67.5 psf (See General Limitation #7)



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**Membrane Type:** BUR  
**Deck Type 3:** Concrete Decks, Non-Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type F:** Base sheet adhered with approved asphalt

**All General and System Limitations apply.**

One or more layers of any of the following insulations:

**Base Sheet:** Install one or more plies of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Glasbase Base Sheet directly to the concrete substrate. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq., or spot or strip mopped as detailed in this approval; see General Limitation #4

**Ply Sheet:** One ply of All Weather/Empire Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or two or more plies of Flintglas Ply Sheet 4 or Flintglas Premium Ply 6 adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-35 lbs./sq.

**Cap Sheet:  
(Optional)** One ply of Flintglas MS Cap Sheet or Flintglas MS Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

**Surfacing:** *(Required if no cap sheet is used)* Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. A two part coating consisting of a base coat of APOC #300 Non-Fibered Emulsion at rate of 3 gal./sq.; surfaced with 1 gal./sq. APOC#212 Fibered Aluminum Roof Coating.

**Maximum Design  
Pressure:** -235 psf (See General Limitation #9)



**CONCRETE DECK SYSTEM LIMITATIONS:**

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

**GENERAL LIMITATIONS:**

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

**Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

**END OF THIS ACCEPTANCE**