

160 SW 12TH AVE SUITE 106, DEERFIELD BEACH, FL 33442
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(Issued February 1, 2021. Subject to Renew August 1st, 2022 or next code cycle)

EVALUATION SUBJECT: FIRST COMPANY WHSC UNIT
TER-20-27109
REPORT HOLDER:

 FIRST COMPANY
 8273 MOBERLY LANE
 DALLAS, TX USA
 214-388-5751 | FIRSTCO.COM

 Florida Building Code Sixth & Seventh Editions (2017 & 2020)
 International Building Code (2012, 2015 & 2018)

SCOPE OF EVALUATION (compliance with the following codes):
THIS IS A STRUCTURAL (WIND) PERFORMANCE EVALUATION ONLY. NO ELECTRICAL OR TEMPERATURE PERFORMANCE RATINGS OR CERTIFICATIONS ARE OFFERED OR IMPLIED HEREIN.

 This Product Evaluation Report is being issued in accordance with the requirements of the the **International Building Code (2012, 2015, & 2018)** and the **Florida Building Code Sixth & Seventh Editions (2017 & 2020)** per FBC Section 104.11, FMC 301.15, FBC Building Ch. 16, ASCE-7, FBC Existing Building sections 707.1, 707.2, FBC Building 1522.2, and FBC Residential M1202.1, M1301.1, FS 471.025, including Broward County Administrative Provisions 107.3.4. The product noted on this report has been tested and/or evaluated as summarized herein.

IN ACCORDANCE WITH THESE CODES EACH OF THESE REPORTS MUST BEAR THE ORIGINAL SIGNATURE & RAISED SEAL OF THE EVALUATING ENGINEER.
SUBSTANTIATING DATA:
• Product Evaluation Documents

Substantiating documentation has been submitted to provide this TER and is summarized in the sections below.

• Structural Engineering Calculations

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

- Maximum allowable unit panel wind pressure connection integrity
- Maximum allowable sliding for through the wall applications

Calculation summary is included in this TER and appears below.

NOTE: No 33% increase in allowable stress has been used in the design of this product.

INSTALLATION:

The product(s) listed above shall be installed in strict compliance with this TER & manufacturer-provided model specifications.

The product components shall be of the material specified in the manufacturer-provided product specifications. All screws must be installed in accordance with the applicable provisions & anchor manufacturer's published installation instructions. Installation shall follow manufacturer specifications as well as the information provided herein.

LIMITATIONS & CONDITIONS OF USE:

 Use of this product shall be in strict accordance with this TER as noted herein. See final page for complete limitations and conditions of use. This product is **NOT** approved for rooftop installation.

OPTIONS:

 This evaluation is valid for the following **FIRST COMPANY** models:
 WHSC (44"H X 27"W X 23" D)

FINISH:

Baked enamel.

NOTE: GRAPHICAL DEPICTIONS IN THIS REPORT ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER IN APPEARANCE
SCOPE:

This document certifies the following condenser units for wind certification and host installation.

WHSC (44"H X 27"W X 23" D)

DESIGN NOTES:

Models referenced herein are subject to the following design limitations:

MAXIMUM ALLOWABLE DESIGN PRESSURES:
+90 PSF / -180 psf (ASD)

- Required design pressures shall be determined on a site-specific basis in accordance with the following directive:

- **FBC2017, IBC2012, IBC2015:** ASCE 7-10 and applicable sections of the building code being referenced;
- **FBC2020, IBC2018:** ASCE 7-16 and applicable sections of the building code being referenced;

 - Required design pressures shall be less than or equal to the maximum pressures listed herein. * **MAXIMUM ALLOWABLE DESIGN PRESSURES** indicates the maximum pressures that all units listed herein are approved for. Valid for at-grade applications only. See limitations herein.

UNIT CASING MATERIAL:

All unit cabinetry shall be assembled according to manufacturer specifications. All cabinetry panels shall be 20GA minimum ASTM A653 cold rolled steel and all screws shall be #8 min SAE Grade 5. Provide 5 pitches minimum thread plane.

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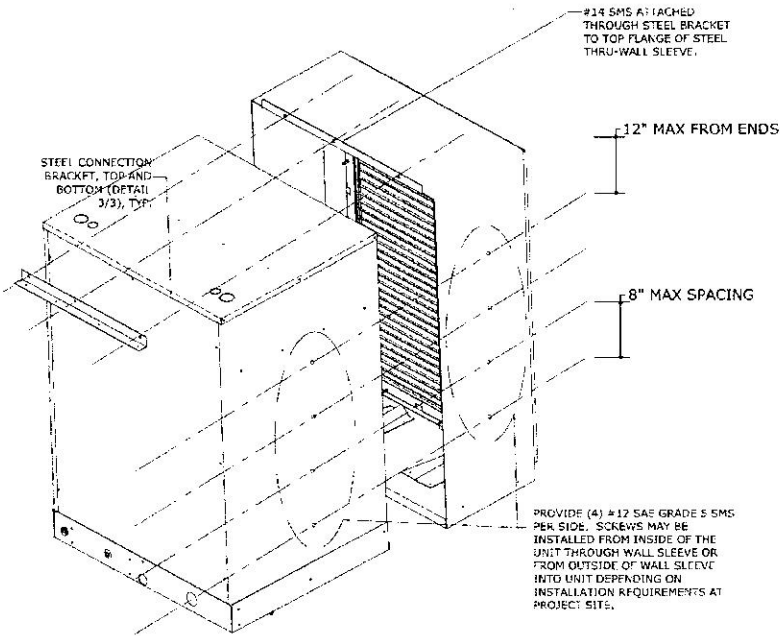
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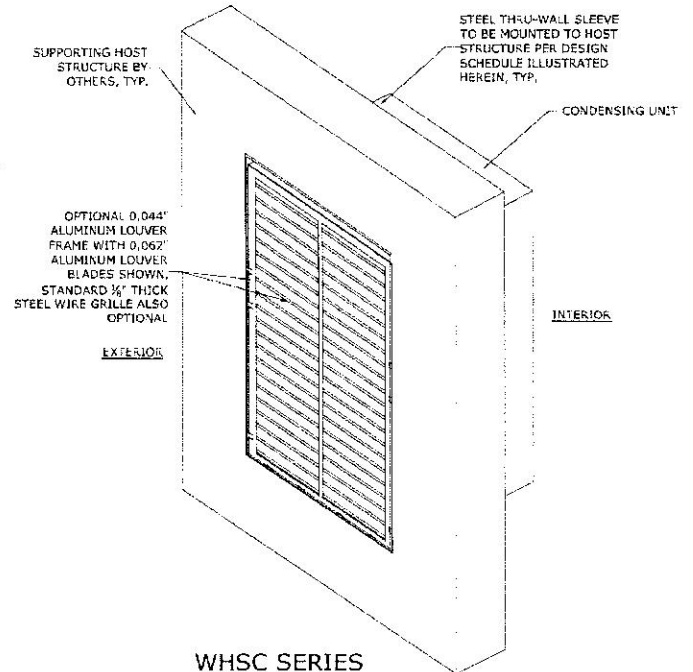
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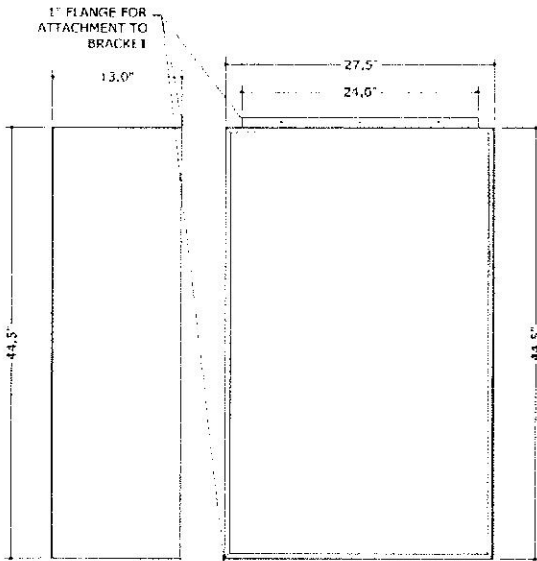
PRODUCT INSTALLATION



1 CONNECTION BRACKET ISOMETRIC DETAIL
2 N.T.S. ISOMETRIC



2 WHSC SERIES (INSTALLATION THROUGH THE WALL SHOWN)
2 N.T.S. ISOMETRIC



3 THROUGH THE WALL SLEEVE
2 N.T.S. ELEVATION

GENERAL NOTES

- This certification is limited to the design of unit cabinetry to resist the wind pressures at the installation scenarios described herein. This document also certifies the design capacity of the attachment of the condensing unit to the various host structure substrates (by others) listed in the design schedule. Large and small missile impact are not covered in this certification and shall be approved through a separate submittal if required. This certification considers a 300lb max condensing unit.
- No 33-1/3% increase in allowable stress has been used in the design of this system. Wind load duration factor $cd=1.6$ has been used for wood anchor design.
- The system detailed herein is generic and does not provide information for a specific site. For site conditions different from the conditions detailed herein, a licensed engineer or registered architect shall prepare site specific documents for use in conjunction with this document.
- Permit holder shall verify the adequacy of the existing structure to withstand superimposed loads. Wood bucks (by others) shall be anchored properly to transfer loads to the existing structure.
- Unless otherwise noted herein, all screws shall be SAE Grade 5 carbon steel.
- Electrical ground, when required, to be designed & installed by others. All mechanical specifications (clear space, tonnage, etc.) shall be as per manufacturer recommendations and are the express responsibility of the contractor.
- All existing supporting wood host structure members shall be $G=0.55$ min., design and integrity by others.
- All existing supporting steel host structure members shall be 18ga (T=0.0478) ASTM A653, $Fy=33ksi$ $Fu=45$ ksi min, design and integrity by others.
- The contractor is responsible to insulate all members from dissimilar materials to prevent electrolysis.
- Engineer seal affixed here to validates structural design as shown only. Use of this specification by contractor, et. Al. Indemnifies & saves harmless this engineer for all cost & damages including legal fees & appellate fees resulting from material fabrication, system erection, & construction practices beyond that which is called for by local, state, & federal codes & from deviations of this plan.
- Alterations, additions or other markings to this document are not permitted and invalidate this certification.

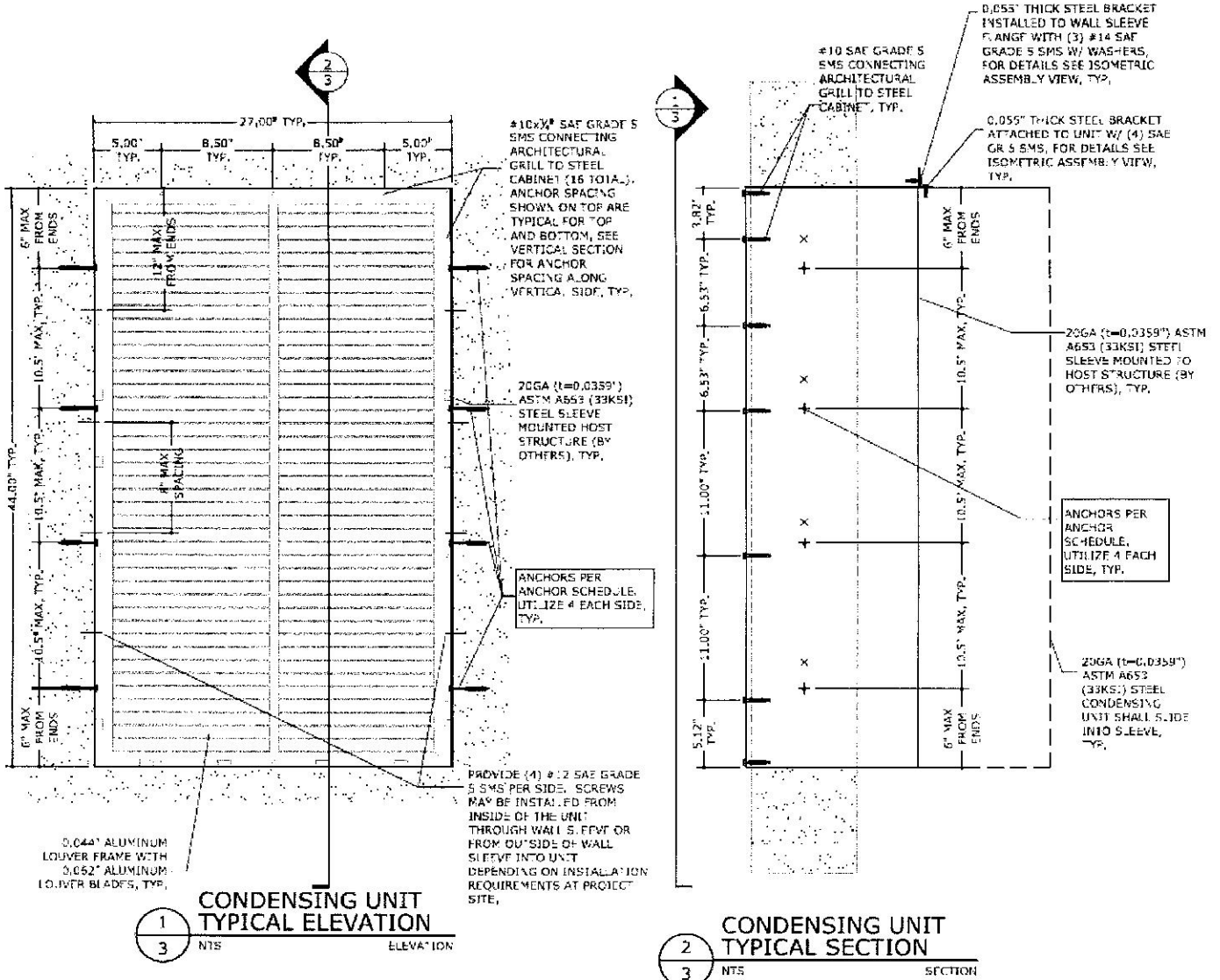
LIMITATIONS & CONDITIONS OF USE:

Use of this product shall be in strict accordance with this TER as noted herein.

The supporting host structure shall be designed to resist all superimposed loads as determined by others on a site specific basis as may be required by the Authority Having Jurisdiction. Host structure conditions which are not accounted for in this product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer. No evaluation is offered for the host supporting structure by use of this document; Adjustment factors noted herein and the applicable codes must be considered, where applicable. All supporting components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

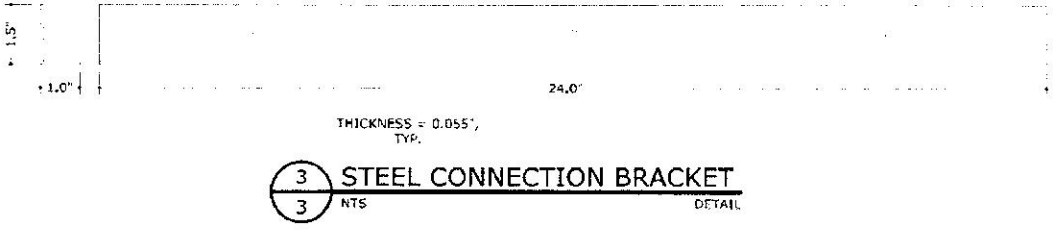
Fasteners must penetrate the supporting members such that the full length of the threaded portion is embedded within the main member. This evaluation does not offer any evaluation to meet large missile impact debris requirements which typically are not required for this type of product. Site-specific wind analysis may produce alternate limitations provided maximum rated wind pressure is not exceeded. The attachment of the units to the host structure shall be installed according to the information provided herein.

PRODUCT INSTALLATION



ANCHOR SCHEDULE

ANCHOR TYPE	DESCRIPTION	INSTALLATION
1	1/4" SAF GRADE 5 SHEET METAL SCREW	INSTALL TO 18GA (t=0.0478") ASTM A653 MIN. STEEL STUD.
2	#14 WOOD SCREW	1 1/2" THREAD PENETRATION TO WOOD (G=0.55 MIN), 1 1/2" EDGE DISTANCE
3	3/8" TO 1/2" ITW TAPCON OR FICO ULTRACON	1 1/2" EMBED TO 3192 PSI CONC., 2 1/2" EDGE DISTANCE, 4" MIN. SPACING FROM ANY ADJACENT CONC. ANCHOR.
4	3/8" TO ELCO ULTRACON	2 1/4" EMBED TO ASTM C-90 GROUT FILLED BLOCK, 2 1/2" EDGE DISTANCE, 4 1/2" MIN. SPACING FROM ANY ADJACENT CONC. ANCHOR.



ANCHOR NOTES

- All concrete anchors shall be installed to un-cracked concrete only.
- Install all concrete anchors according to manufacturer's recommendations.
- Sheet metal screws shall be installed with a minimum of 5 pitches past the thread plane.

IN ALL CONDITIONS IT IS THE RESPONSIBILITY OF THE PERMIT HOLDER TO ENSURE THE HOST STRUCTURE IS CAPABLE OF WITHSTANDING THE RATED GRAVITY, LATERAL, AND UPLIFT FORCES BY SITE-SPECIFIC DESIGN. NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS OFFERED BY ENGINEERING EXPRESS AS TO THE INTEGRITY OF THE HOST STRUCTURE TO CARRY DESIGN FORCE LOADS INCURRED BY THIS UNIT.