

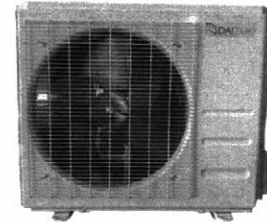
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(Subject to Renew March 1, 2022 or next code cycle)

EVALUATION SUBJECT: DAIZUKI MINI SPLIT SERIES DXTH-20
TER-20-26978
REPORT HOLDER:

 EVERWELL PARTS, INC.
 10914 NW 33RD ST #100
 DORAL, FL 33172, USA
 (305) 406-2331 | EVERWELLPARTS.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 **International Building Code (2012, 2015, & 2018)** and the **Florida Building Code Sixth & Seventh Editions (2017 & 2020)** per FBC Building Sections 104.11 and 453.25.5, FBC Mechanical 301.15, FBC Building Ch. 16, ASCE 7, FBC Residential M1202.1, FS 471.025, and 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 rational analysis to qualify the following design criteria:

- Maximum unit dimensions certified herein
- Unit weight range certified herein
- Tie-down configuration and anchor spacing
- Anchor capacity for various substrates
- Maximum allowable lateral and uplift pressures certified herein.

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 herein shall be installed in strict compliance with this TER & manufacturer-provided model specifications. Product components shall be of the material specified in the manufacturer-provided product specifications. All fasteners and anchors shall be installed in accordance with the applicable provisions specified herein in addition to the anchor/fastener manufacturers' published installation instructions.

LIMITATIONS & CONDITIONS OF USE:

Use of this product shall be in strict accordance with this TER as noted herein. Installation shall conform to the minimum standards stated in the referenced building code(s) in addition to tie-down details and limitations stated herein. See final page for complete limitations & conditions of use.

UNIT CASING MATERIAL:

19 GA min. galv. sheet steel equivalent to ASTM A653 CS Cold Rolled Steel or stronger.

Top cover, front plate, and side plate secured with #8 min. SAE GR 2 SMS screws or stronger.

Knockouts provided for utility & control connections.

For further unit construction information, please contact manufacturer.

TERMINOLOGY:

See list of abbreviations on the final page of this report.

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

This evaluation is valid for all DAIZUKI models described herein. Any structural changes outside of the design as described herein would void this certification.

STRUCTURAL PERFORMANCE:

Models referenced herein are subject to the following design limitations:

Maximum Rated Wind Pressures*:
± 120 psf Lateral, 95 psf Uplift

- Required design pressures shall be determined on a site-specific basis in accordance with ASCE 7 and applicable sections of the building code(s) being referenced in accordance with ASD methodology.
- Required design pressures shall be less than or equal to the maximum pressures listed herein.
- *Maximum Rated Wind Pressures indicate the maximum pressures that all units listed herein are approved for. Valid for at-grade and rooftop applications. See limitations herein.
- Site-specific wind analysis may produce alternate limitations provided maximum rated wind pressures stated herein are not exceeded.

VISIT ECALC.IO/26978

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July 27, 2020

 Frank Bennardo, P.E., SECB If Checked, Certifying
 ENGINEERING EXPRESS® Engineer and PE #
 FL PE #0046549 FLCA #9885 Appear Above

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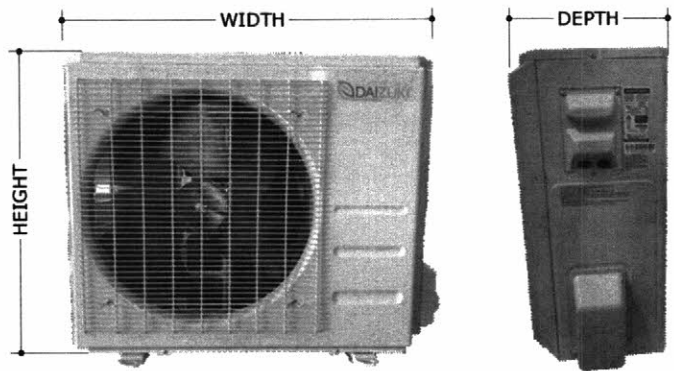
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MODELS, DIMENSIONS, & WEIGHTS

MODEL	WIDTH (in)	DEPTH (in)	HEIGHT (in)
DXTH09C416-20	32	12	22
DXTH12C416-20	32	12	22
DXTH09C426-20	31	12	22
DXTH12C426-20	31	12	22
DXTH18C426-20	34	14	24
DXTH24C426-20	37	15	28
DXTH36C426-17	38	18	32

NOTE: ALL DIMENSIONS ARE ROUNDED UP TO THE NEXT INCH TO PROVIDE MAXIMUM ALLOWABLE UNIT DIMENSIONS. ALL UNIT WEIGHTS SHALL BE BETWEEN 50 lb AND 160 lb.



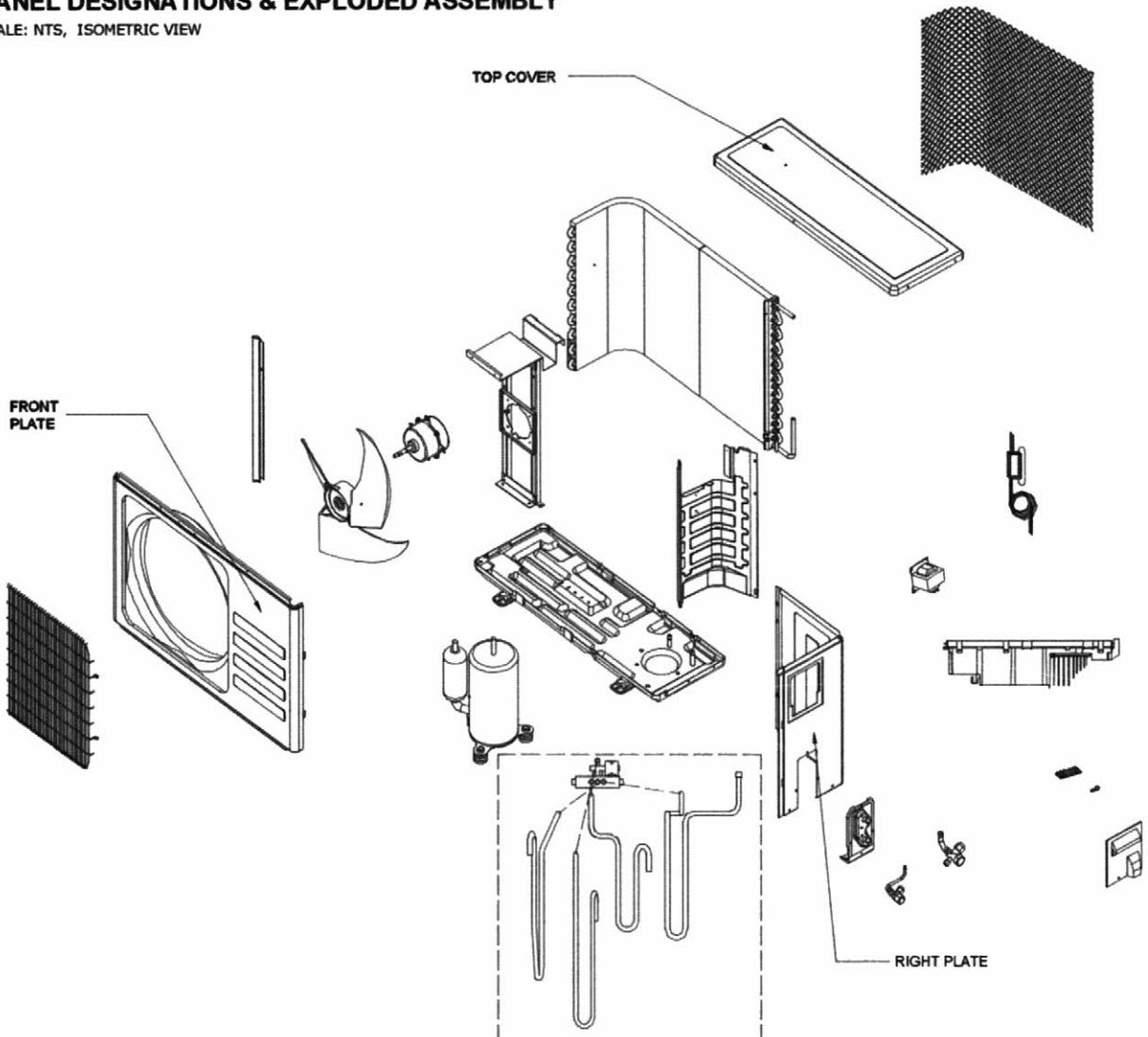
1 FRONT PLATE
2 SCALE: NTS FRONT VIEW

2 RIGHT PLATE
2 SCALE: NTS RIGHT VIEW

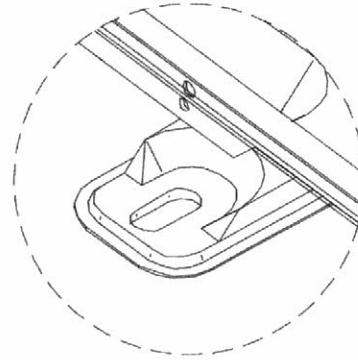
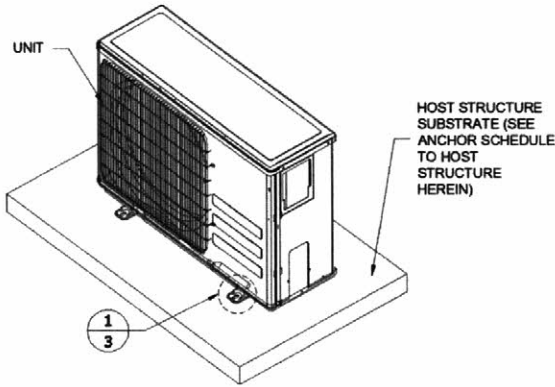
NOTE: DEPICTIONS ABOVE ARE FOR ILLUSTRATIVE PURPOSES ONLY; ACTUAL UNITS MAY DIFFER IN APPEARANCE.

PANEL DESIGNATIONS & EXPLODED ASSEMBLY

SCALE: NTS, ISOMETRIC VIEW



PRODUCT INSTALLATION



UNIT INTEGRATED FOOT
SCALE: NTS ISOMETRIC VIEW

UNIT INTEGRATED FOOT SHALL BE 14 GA MIN. ASTM A853 GALV. STEEL OR STRONGER. FASTEN UNIT TO HOST STRUCTURE USING ANCHOR FROM ANCHOR SCHEDULE TO HOST STRUCTURE TABLE. (FIGURE FOR ILLUSTRATION PURPOSES)

ANCHOR SCHEDULE TO HOST STRUCTURE

WIND PRESSURE LATERAL (UPLIFT)	3000 psi MIN. CONCRETE	1/8" MIN. THICK ASTM A36 OR STRONGER STEEL	1/8" MIN. THICK 6061-T6 ALUMINUM
± 60 psf (48 psf)	A	B	B
± 80 psf (64 psf)	N/A	B	B
± 100 psf (79 psf)	N/A	B	B
± 120 psf (95 psf)	N/A	B	B

ANCHOR TYPES TO HOST STRUCTURE:

A: 1/4" Ø ITW TAPCON OR EQUIVALENT WITH 1" MIN. OD WASHER, 1.75" EMBEDMENT, AND 3" MIN. EDGE DISTANCE, TYP.
B: 1/4" Ø SAE GR. 5 OR SS THRU BOLT WITH 1" MIN. OD WASHERS TOP AND BOTTOM, TYP.
N/A: NOT APPLICABLE

ANCHOR SCHEDULE DIRECTIVE:

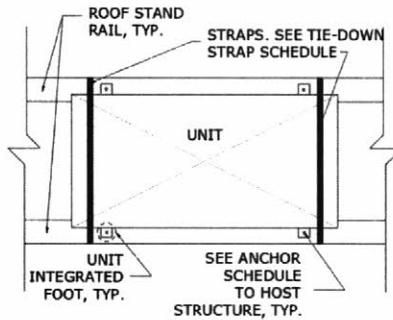
ANCHOR SHALL BE SELECTED PER SITE-SPECIFIC WIND PRESSURES AND HOST SUBSTRATE. PRESSURES UP TO 60 psf LATERAL (48 psf UPLIFT) AND BELOW SHALL USE THE ANCHOR SPECIFIED IN THE CORRESPONDING ROW. WIND PRESSURES IN-BETWEEN PRESSURE TIERS SHALL USE THE ANCHOR SPECIFIED BY THE HIGHER PRESSURE TIER.

TIE-DOWN STRAP SCHEDULE

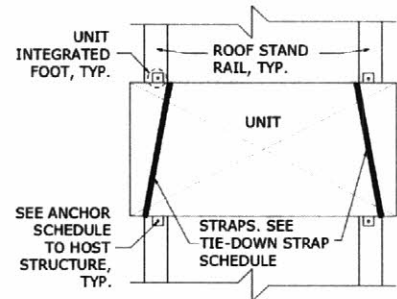
WIND PRESSURE LATERAL (UPLIFT)	NUMBER OF STRAPS	MIN. WLL PER STRAP (lb)
± 60 psf (48 psf)	0	N/A
± 80 psf (64 psf)	A	B
± 100 psf (79 psf)	A	B
± 120 psf (95 psf)	A	B

NOTES:

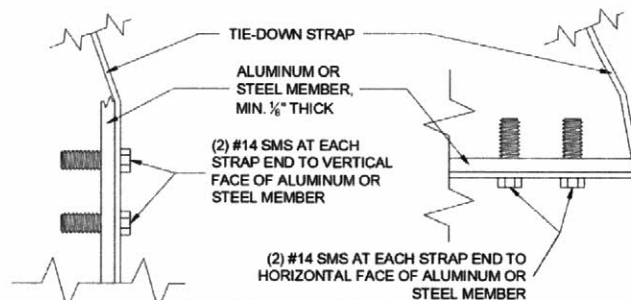
- TIE-DOWN STRAPS ARE REQUIRED FOR ROOFTOP APPLICATIONS.
- WORKING LOAD LIMIT (WLL) IS PER STRAP'S MANUFACTURER, SPECIFIED PER STRAP. STRAP LENGTH SHALL BE VERIFIED ON SITE FOR ALL UNITS. IF STRAP IS RATED TO A CAPACITY OR BREAKING STRENGTH INSTEAD OF WLL, THE CAPACITY/BREAKING STRENGTH SHALL BE DIVIDED BY 3 TO OBTAIN A WLL THAT COMPLIES WITH THE SCHEDULE ABOVE.
- STRAP MATERIAL SHALL BE HIGH-STRENGTH WEBBING AND SHALL BE COMPLIANT FOR EXTERIOR GRADE USE IF THEY CONTAIN PLASTIC COMPONENTS, PER FBC CHAPTER 26.
- TIE-DOWN STRAPS SHALL BE WRAPPED AROUND UNIT AND ROOF STAND RAIL, AND SHALL BE TIGHTENED TO 50 lb.



UNIT TIE-DOWN TO ROOF STAND (PARALLEL)
SCALE: NTS PLAN VIEW



UNIT TIE-DOWN TO ROOF STAND (PERPENDICULAR)
SCALE: NTS PLAN VIEW



TIE-DOWN STRAP ATTACHMENT TO HOST
SCALE: NTS SECTION VIEW

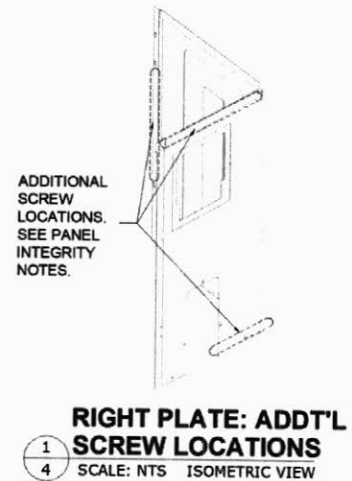
FORCES SUMMARY

CABINET	WIND PRESSURE LATERAL (UPLIFT)	LONG SIDE (WIDTH x HEIGHT)			SHORT SIDE (DEPTH x HEIGHT)			MAX. UPLIFT FORCE
		MAX. SLIDING FORCE	MAX. OVERTURNING MOMENT	MAX. TENSION PER SIDE	MAX. SLIDING FORCE	MAX. OVERTURNING MOMENT	MAX. TENSION PER SIDE	
MODEL # DXTH36C426-17*	± 60 psf (48 psf)	506.7 lb	9307.7 lb-in	592.8 lb	240.0 lb	5874.9 lb-in	220.9 lb	228.0 lb
	± 80 psf (64 psf)	675.6 lb	12606.5 lb-in	803.0 lb	320.0 lb	8165.7 lb-in	307.0 lb	304.0 lb
	± 100 psf (79 psf)	844.4 lb	15868.1 lb-in	1010.7 lb	400.0 lb	10393.3 lb-in	390.7 lb	375.3 lb
	± 120 psf (95 psf)	1013.3 lb	19166.9 lb-in	1220.8 lb	480.0 lb	12684.1 lb-in	476.8 lb	451.3 lb

NOTES:
 *FORCES SUMMARY BASED ON LARGEST UNIT MODEL AS THE WORST-CASE SCENARIO. SEE "MODELS, DIMENSIONS & WEIGHTS" TABLE ON PAGE 2 FOR ALL APPROVED UNIT MODELS. CALCULATIONS WERE PERFORMED ACCORDING TO THE INFORMATION PROVIDED BY THE CLIENT AND MANUFACTURER-LISTED SPECIFICATIONS.

PANEL INTEGRITY

CABINET	WIND PRESSURE LATERAL (UPLIFT)	PANEL NAME	WIND FORCE ON PANEL	ADDITIONAL SCREWS REQUIRED
MODEL # DXTH36C426-17*	± 60 psf (48 psf)	TOP COVER	228.0 lb	0
		FRONT PLATE	380.0 lb	1
		RIGHT PLATE	633.3 lb	2
	± 80 psf (64 psf)	TOP COVER	304.0 lb	0
		FRONT PLATE	506.7 lb	0
		RIGHT PLATE	844.4 lb	2
	± 100 psf (79 psf)	TOP COVER	375.3 lb	0
		FRONT PLATE	633.3 lb	0
		RIGHT PLATE	1055.6 lb	2
	± 120 psf (95 psf)	TOP COVER	451.3 lb	0
		FRONT PLATE	760.0 lb	0
		RIGHT PLATE	1266.7 lb	4



NOTES:
 *FORCES SUMMARY BASED ON LARGEST UNIT MODEL AS THE WORST-CASE SCENARIO. SEE "MODELS, DIMENSIONS & WEIGHTS" TABLE ON PAGE 2 FOR ALL APPROVED UNIT MODELS. CALCULATIONS WERE PERFORMED ACCORDING TO THE INFORMATION PROVIDED BY THE CLIENT AND MANUFACTURER-LISTED SPECIFICATIONS. SCREW QUANTITIES WERE CHECKED TO REINFORCE UNIT PANELS AS NEEDED. ADDITIONAL SCREWS REQUIRED SHALL BE #8 SAE GR 2 OR STRONGER SMS AND SHALL BE INSTALLED AS FOLLOWS:
 - FRONT PLATE: ATTACH SCREW AT BOTTOM, JOINING PANEL TO BASE PAN. PROVIDE 3" MIN. SPACING FROM NEIGHBORING SCREWS.
 - RIGHT PLATE: DISTRIBUTE SCREW AMOUNTS EQUALLY BETWEEN TWO SIDES:
 - FOR SIDE WITH UTILITY/CONTROL KNOCKOUTS, SCREWS SHALL BE LOCATED EITHER ALONG THE BOTTOM TO JOIN PANEL TO BASE PAN, OR ALONG THE TOP TO JOIN PANEL TO TOP COVER. PROVIDE 3" MIN. SPACING FROM NEIGHBORING SCREWS. SEE DETAIL ON THIS PAGE.
 - FOR PERPENDICULAR SIDE, SCREWS SHALL BE LOCATED ALONG SIDE FLANGE CIRCLED IN DETAIL 1/4 ON THIS PAGE.

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.

TERMINOLOGY (CONTINUED):

The following abbreviations may appear in this report: "ASCE" for "American Society of Civil Engineers", "ASD" for "Allowable Stress Design", "FBC" for "Florida Building Code", "FLCA" for "Florida Certificate of Authorization", "FMC" for "Florida Mechanical Code", "GR." for "grade", "HVAC" for "heating, ventilation, and air conditioning", "max." for "maximum", "min." for "minimum", "NTS" for "not to scale", "OD" for "outer diameter", "PE" for "Professional Engineer", "psf" for "pounds per foot squared (lb/ft²)", "SAE" for "Society of Automotive Engineering", "SECB" for "Structural Engineering Certification Board", "SMS" for "sheet metal screws", "SS" for "stainless steel", "TER" for "Technical Evaluation Report", "U.N.O." for "unless noted otherwise", "w/o" for "without", "#" for "number", and "Ø" for "diameter". For additional abbreviation/terminology clarifications, please contact this office.

LIMITATIONS & CONDITIONS OF USE (CONTINUED):

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 building 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 under any circumstances.

All of the wind-resisting exterior panels (with accompanying retrofits) individually meet or exceed their capacity to resist the design wind loads as stated in the calculations as required by the FBC. Due to the indeterminate nature of these units, distortion and deflection cannot be accurately evaluated, but with diaphragm action of external components and internal stiffeners, the base unit has the capacity to withstand these forces with individual external parts being contained. Inspections shall be implemented during annual equipment maintenance or after a named storm; all fasteners and cabinet components are to be verified, and all damaged, loose, corroded and/or broken fasteners and cabinet components shall be replaced to ensure structural integrity against hurricane wind forces. Contact this office for any reevaluation needs as designated by the Authority Having Jurisdiction.

Remarks	Drawn	Checked	Date
Initial Issue	EPR	RWN	7/27/20