Engineering Evaluation Report #5500-08182026

Prepared by:
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N. Venice, FL 34275
(941) 480-1600
Florida Registration: #29296

Manufacturer:
PGT Industries, LLC
3400 Precision Drive
N. Venice, FL 34275

Product Description:
SH5500 Series Impact-Resistant, Vinyl, Single Hung Window, (LM), FL-1435

Compliance:
The above-mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61 G20-3.005 method 1(d). The product listed herein complies with requirements of the current Florida Building Code.

This product has been evaluated and is in compliance with the current Florida Building Code, including the “High Velocity Hurricane Zone” (HVHZ).

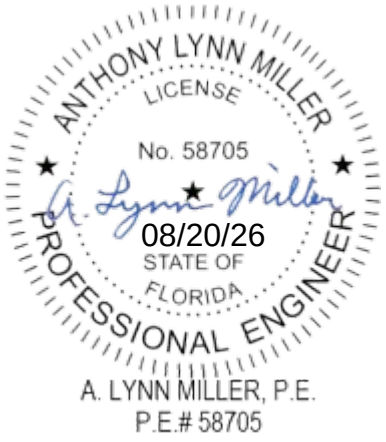
Supporting Technical Documentation:
1. Approval Document: Drawing number SH5500-LM-HVHZ, signed and sealed by A. Lynn Miller, P.E.

2. Test Reports:
FTL-7964 & 7966, signed and sealed by Idalmis Ortega P.E.; Fenestration Testing Laboratories, Medley, FL
QAI NOK-8674 signed and sealed by Idalmis Ortega P.E.; QAI Laboratories, Nokomis, FL
TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Anchor Calculations signed and sealed by A. Lynn Miller, P.E. 9/27/14, 8/20/26

4. Miami-Dade RER Product Control Section NOA’s; PVB and/or SG Interlayer by Kuraray America, Inc.

Limitations and Conditions of use:
• Units must be glazed per ASTM E1300-09, refer to approval document for glazing details.
• This product is rated to be used in the HVHZ.
• This product is impact resistant and does not require impact protection in wind borne debris regions.
• Frame material to be extruded Vinyl.
• Units must be installed in accordance with approval document.



SERIES SH5000
IMPACT RESISTANT SINGLE HUNG WINDOW

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

2) MAXIMUM AND MIN. REQUIRED DESIGN LOADS AS SHOWN ON DRAWING UNLESS NOTED OTHERWISE. GLASS SIZES ARE APPROXIMATE AND MUST BE VERIFIED BY GLASS FABRICATOR ABOVE OR BELOW THE HVHZ. FOR GLASS/LITE CONFIGURATIONS NOT TESTED.

3) ALL WINDOW MUST BE LOCATED WITHIN 1 FOOT VERTICALLY AND 1 FOOT HORIZONTALLY OF THE CORNER(S) OF THE WALL OPENING. ALL WINDOWS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED BY THE ENGINEER OF RECORD. ALL FASTENERS SHALL BE CORROSION RESISTANT AND SHALL BE SPACED AS SHOWN ON THE DRAWINGS. ALL FASTENERS SHALL BE LOCATED WITHIN 6" OF THE CORNERS AND SPACED AT A MAXIMUM OF 16" O.C. UNLESS NOTED OTHERWISE. SHIMS SHALL BE PLACED AT ALL FASTENER LOCATIONS AND INSTALLED SUCH THAT THE FRAME IS PLUMB, LEVEL AND SQUARE. SHIMS SHALL BE PLACED AT THE HEAD AND SILL AT EACH MULLION LOCATION AND AT A MAXIMUM OF 24" O.C. SPACING. IT IS THE RESPONSIBILITY OF THE INSTALLER, OR CONTRACTOR EMPLOYING THE INSTALLER, TO FOLLOW THE INSTRUCTIONS. SHOULD ANY DISCREPANCIES BE FOUND BETWEEN THE INSTRUCTIONS AND THE ACTUAL CONDITIONS, IT IS THE RESPONSIBILITY OF THE INSTALLER, OR CONTRACTOR EMPLOYING THE INSTALLER, TO NOTIFY THE ENGINEER OF RECORD AND/OR PGT FOR RESOLUTION BEFORE PROCEEDING WITH THE INSTALLATION.

4) ANCHOR FASTENERS SHALL BE STAINLESS STEEL OR OTHER CORROSION RESISTANT MATERIAL AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ANCHOR FASTENERS SHALL BE LOCATED WITHIN 6" OF THE CORNERS AND SPACED AT A MAXIMUM OF 16" O.C. SPACING. IT IS THE RESPONSIBILITY OF THE INSTALLER, OR CONTRACTOR EMPLOYING THE INSTALLER, TO FOLLOW THE INSTRUCTIONS. SHOULD ANY DISCREPANCIES BE FOUND BETWEEN THE INSTRUCTIONS AND THE ACTUAL CONDITIONS, IT IS THE RESPONSIBILITY OF THE INSTALLER, OR CONTRACTOR EMPLOYING THE INSTALLER, TO NOTIFY THE ENGINEER OF RECORD AND/OR PGT FOR RESOLUTION BEFORE PROCEEDING WITH THE INSTALLATION.

5) MAX. I.G. SHIMS MAY BE REQUIRED AT EACH MULLION LOCATION TO MAINTAIN THE MULLION TO MEET PLUMB TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS FROM MULLION TO THE STRUCTURE WITHOUT DEFLECTION. SHIMS SHALL BE PLACED AT MAX. 16" O.C.

6) DESIGN PRESSURES:
A. NEGATIVE DESIGN LOADS REQUIRED FOR WATER TEST PROCEDURE. FRAME AREA, FOR ANCILLARY INFORMATION
B. POSITIVE DESIGN LOADS REQUIRED FOR WATER TEST PROCEDURE. FRAME AREA, FOR ANCILLARY INFORMATION
C. DESIGN LOADS ARE BASED ON ALLOWABLE STRESS DESIGN (ASD).

7) THE ANCHORAGE METHOD SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE U.S. LOAD DURATION FACTOR HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE U.S. LOAD DURATION FACTOR HAS BEEN USED FOR THE EVALUATION OF ANCHORS AND/OR ANCHORING METHODS. THIS COMPLIES WITH CURRENT JOINT COMMITTEE ON WOOD STRUCTURES (JCWS) AND THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CONCRETE REQUIREMENTS.

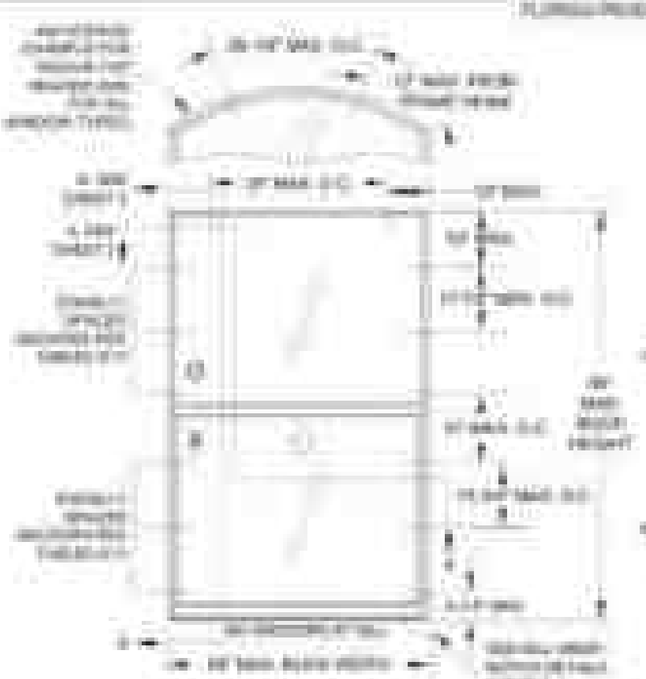
8) REFER TO FLORIDA RESIDENTIAL BUILDING CODE FOR GLASS REQUIREMENTS.

9) FRAME FLANGES OR MOUNTING FINS MAY BE TRIMMED AS NEEDED TO ENSURE AN EQUAL LITE FRAME.

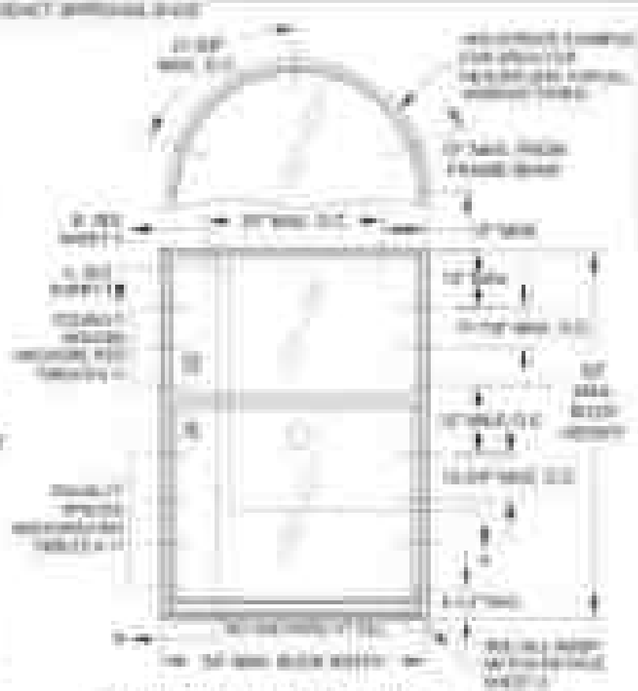
SEE SHEET 2 FOR LABEL INFORMATION

GENERAL NOTES	1
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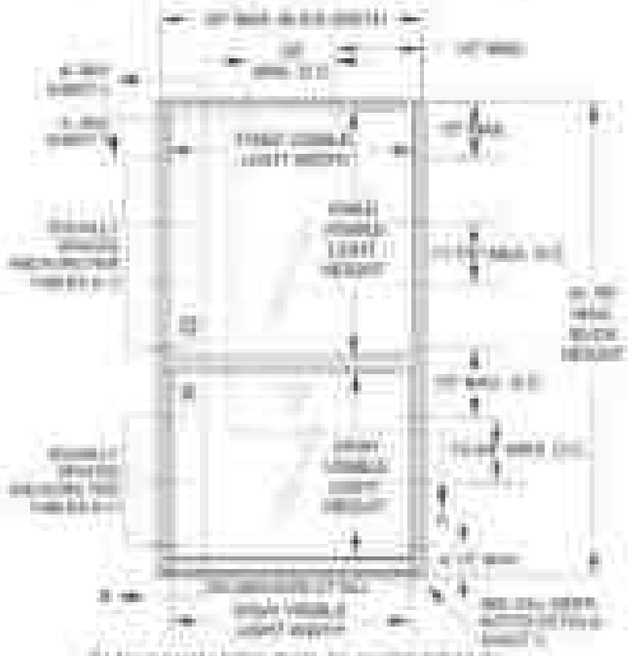
VISIBLE LIGHT FORMULAS
WIDTH
HEIGHT



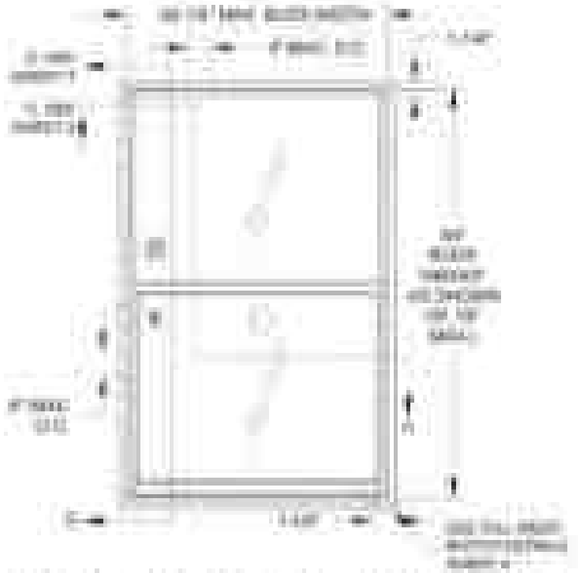
ELEVATION FOR TYP. EQUAL LITE FRAME
SHOWN WITH EQUAL LITE CONFIGURATION



ELEVATION FOR TYP. FLANGE FRAME
SHOWN WITH STANDARD COTTAGE CONFIGURATION



ELEVATION FOR TYP. FLANGE FRAME
SHOWN WITH GRILLPROVIEW CONFIGURATION



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME
SHOWN WITH EQUAL LITE CONFIGURATION
ANCHORED THROUGH THE NAILFIN

DESIGN PRESSURE RATING CHANGE SEE SHEET NO. 6-8
WATER TEST PRESSURE SEE TEST REPORT
IMPACT RATING LARGE AND SMALL MISSILE IMPACT RESISTANT SEE NOA NO.

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NORTH VENICE, FL 34275
(941) 480-1600

GENERAL NOTES & ELEVATIONS

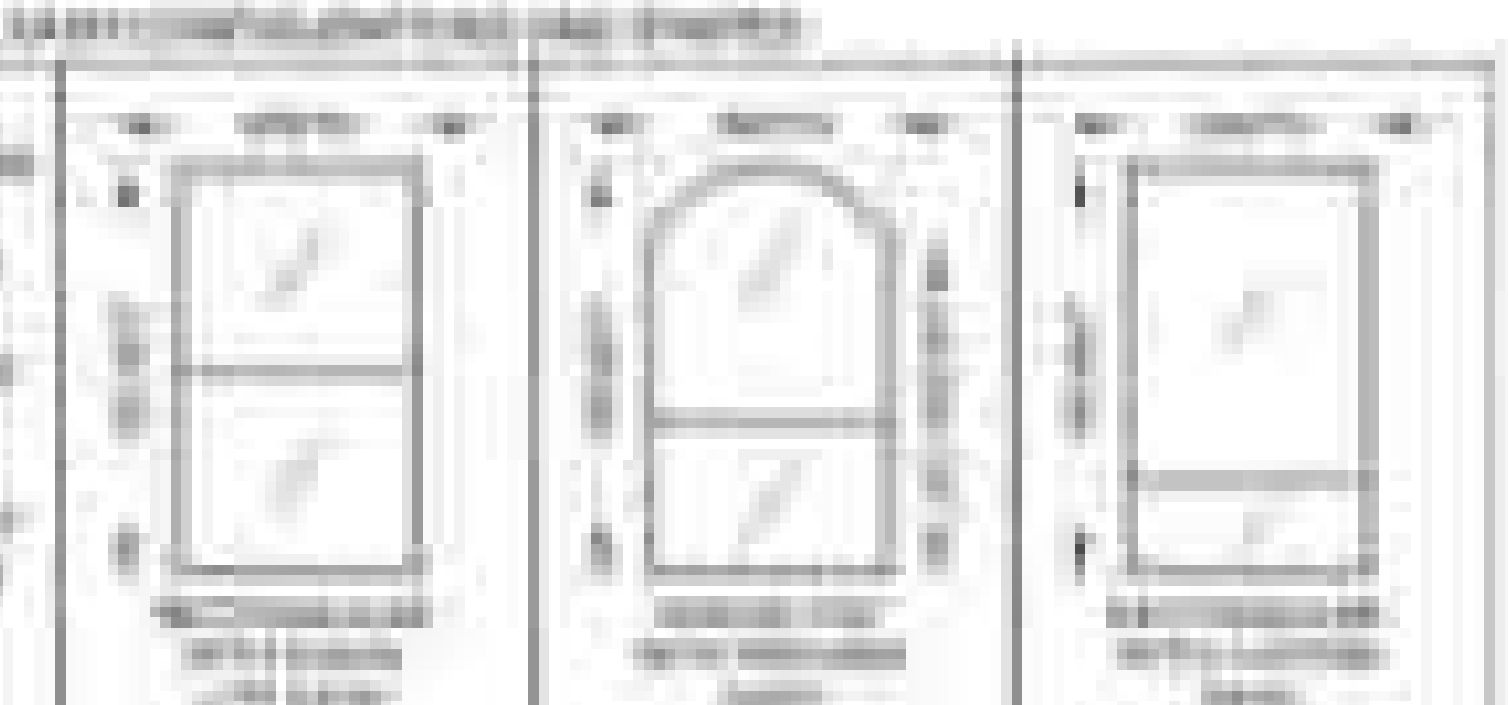
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DATE	10-15-20
SCALE	AS NOTED
DRAWING NO.	SH5000
SHEET NO.	1 OF 15

PROFESSIONAL ENGINEER
STATE OF FLORIDA

USER INSTRUCTIONS

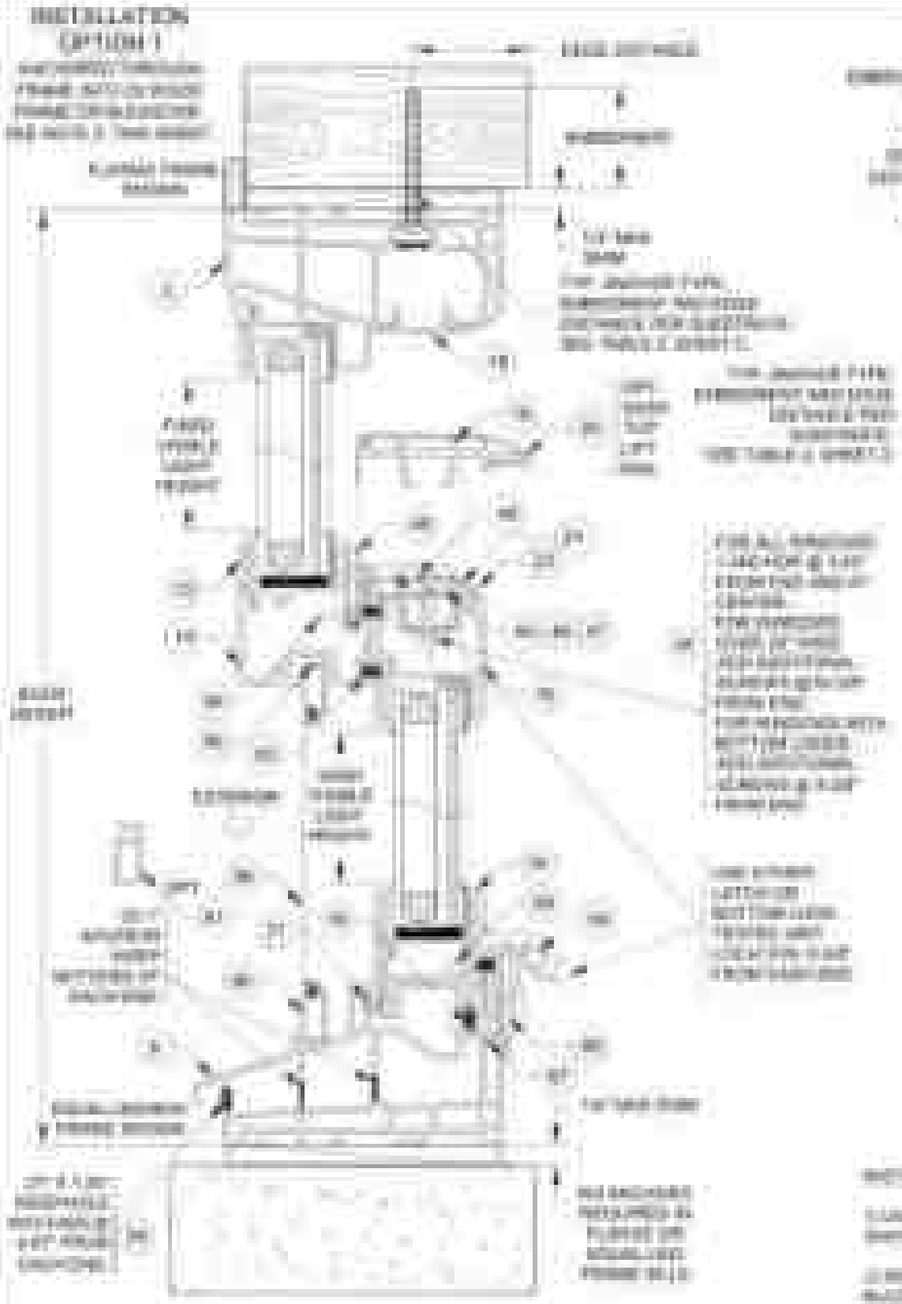


TYP. GLAZING DETAIL



PGT

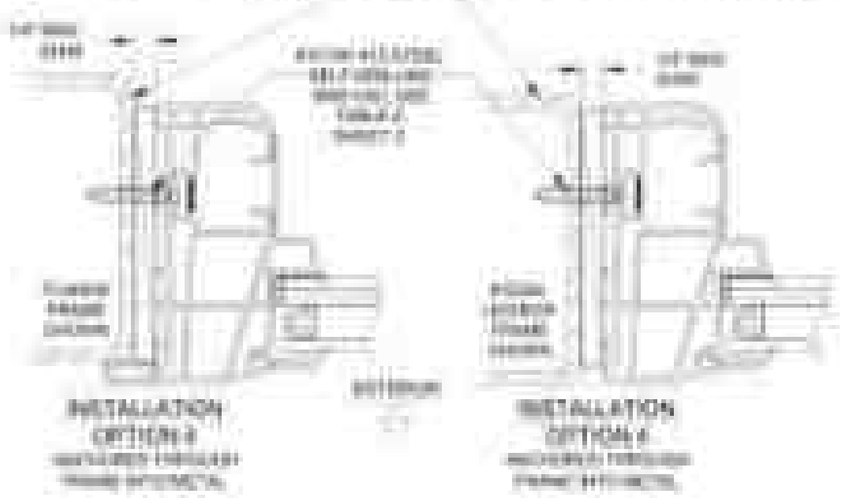
INSTALLATION DETAILS FOR FLANGE & EQUAL-LEG/BOX FRAMES



VERTICAL SECTION B-B



HORIZONTAL SECTION A-A

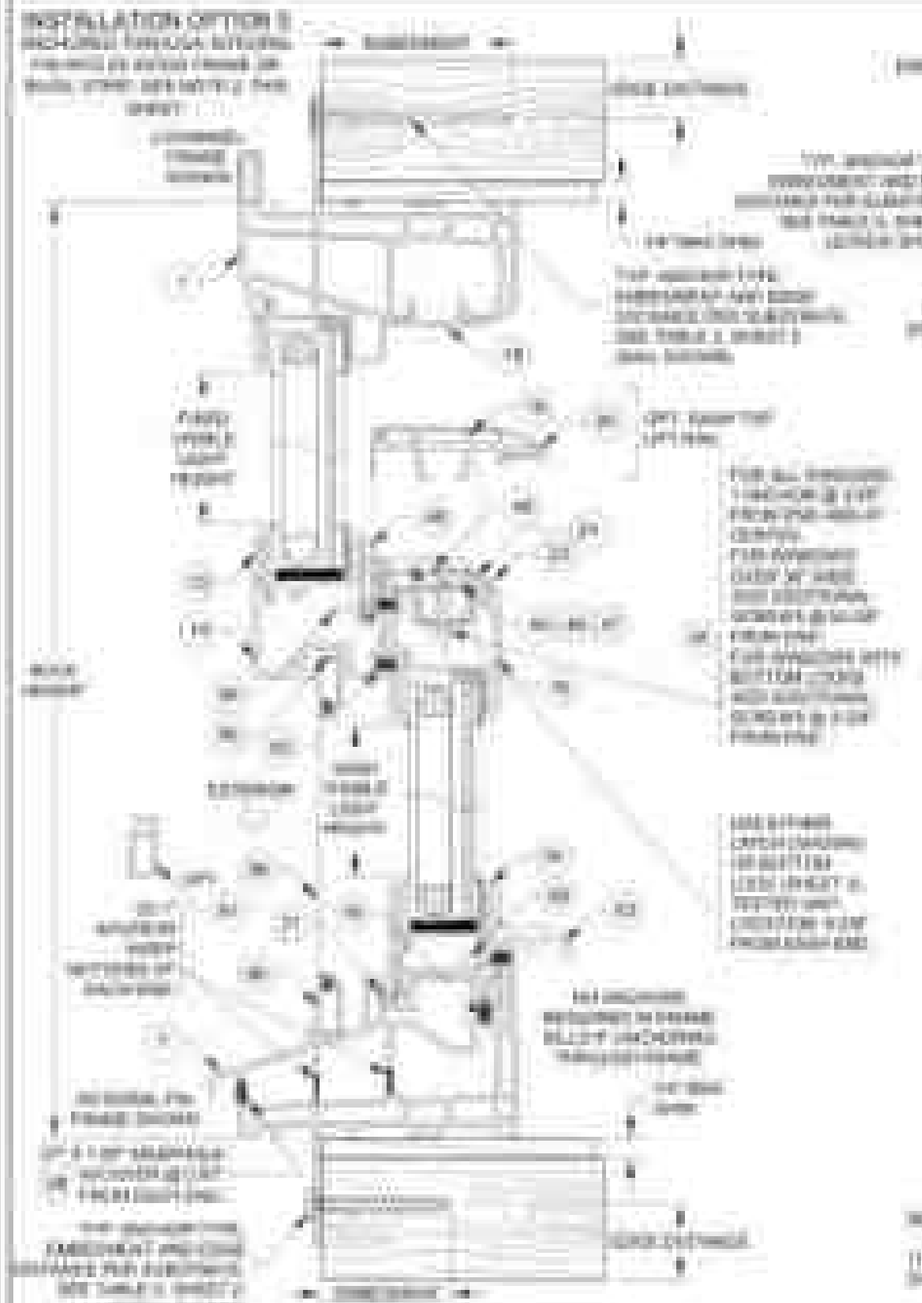


INSTALLATION NOTES:

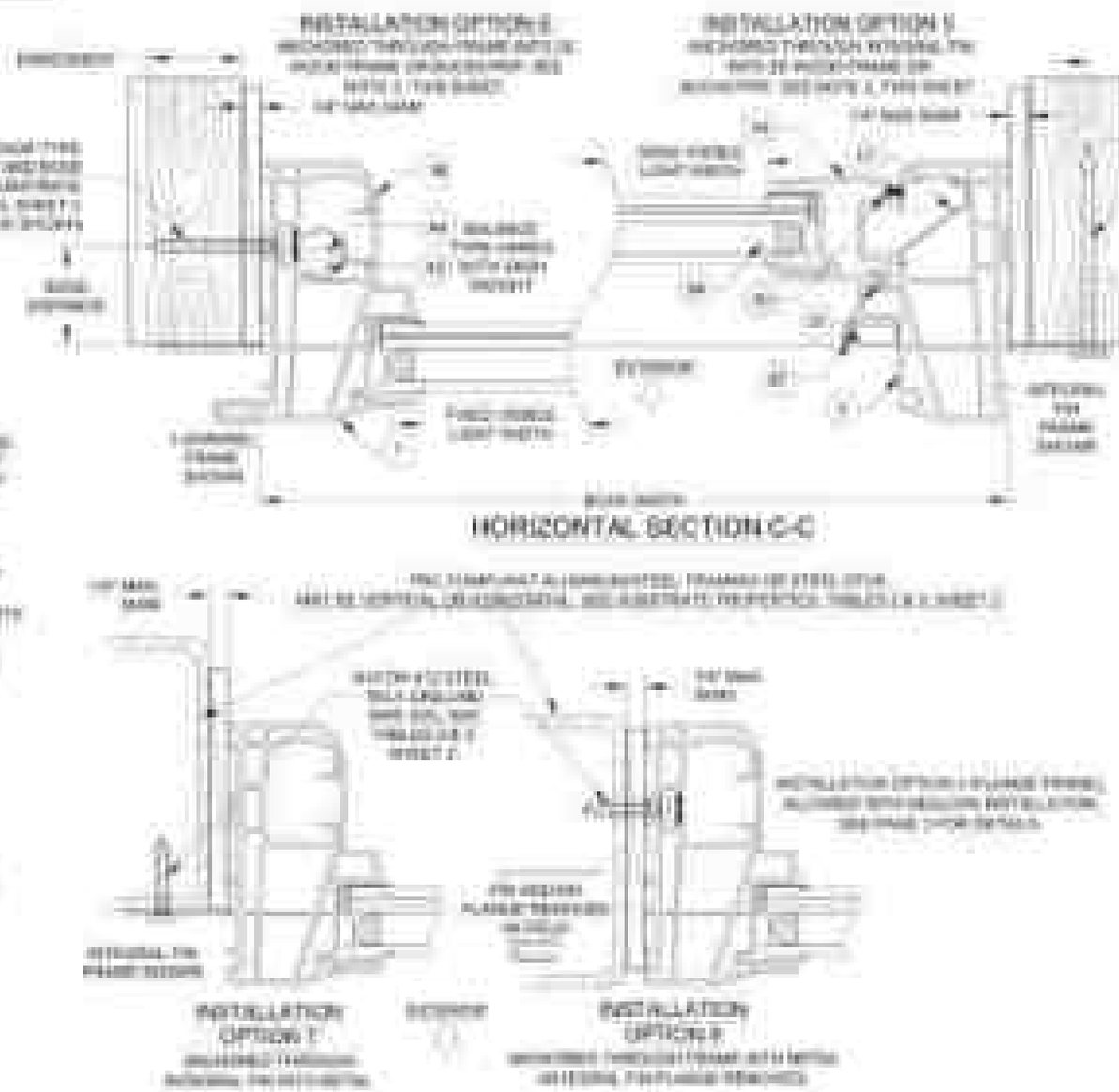
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NORTH PORT, FL 34286
941-480-1600
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INSTALLATION DETAILS FOR INTEGRAL FIN & J-CHANNEL FRAMES



VERTICAL SECTION D-D



HORIZONTAL SECTION C-C

PGT

VINYL SINGLE HUNG WINDOW

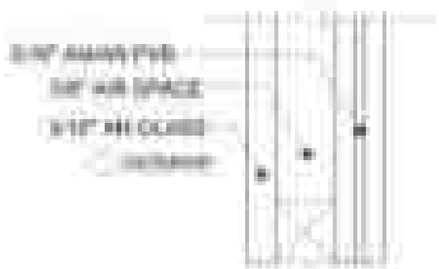
SHEET NUMBER



GLASS TYPE 5



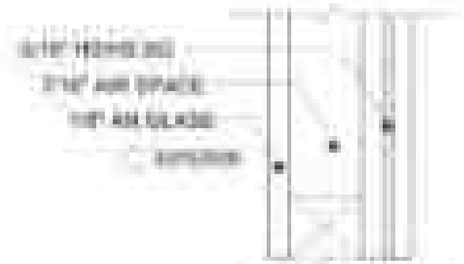
GLASS TYPE 6



GLASS TYPE 7



GLASS TYPE 8



GLASS TYPE 9



GLASS TYPE 10



GLASS TYPE 11



GLASS TYPE 12



GLASS TYPE 13



GLASS TYPE 14



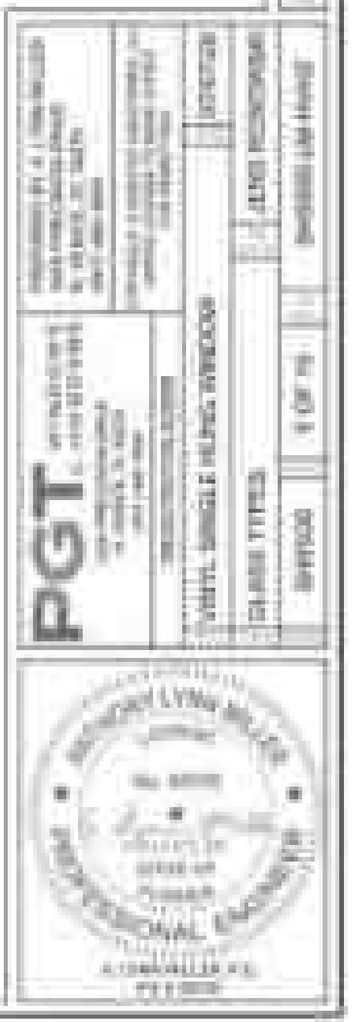
GLASS TYPE 15

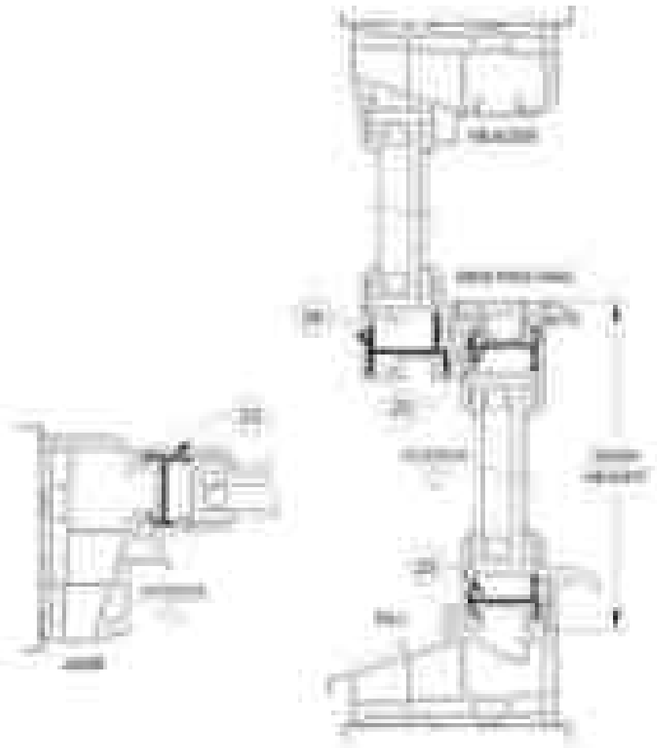


GLASS TYPE 16









SECTION DETAIL FOR WINDOWS
WITH LEVEL #1 REINFORCEMENT

Rated Class	Design Pressure (lb/ft²)
H R / HX	+/-60.0
Rated Impact	
IR	+/-50 lb/ft² (2.39 kPa)

SEE TABLE # FOR SIZE/SPAN
GROUP AND QUANTITY

NOTES

1) USE THESE TABLES FOR ALL OPENINGS INSTALLED THROUGH THIS FRAME OR EXTENSION JAMB.
2) FRAME DIMENSIONS ARE SLOCK. SIZES EQUAL R.O. SIZE FOR CMU COURSE.
3) FOR ASSISTANCE WHEN SIZING UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION SHOWN ON THIS TABLE.
4) MINIMUM DIMENSIONS SHOWN IN FIGURES ABOVE APPLY TO ALL FRAME TYPES & CONFIGURATIONS.

GLASS TYPES: T.S. / T.T. / T.P.
E.G. 5 MM T.S. GLASS OR
PVB, WITH A MINIMUM OF

PGT

SINGLE HUNG WINDOW

2" FRAME

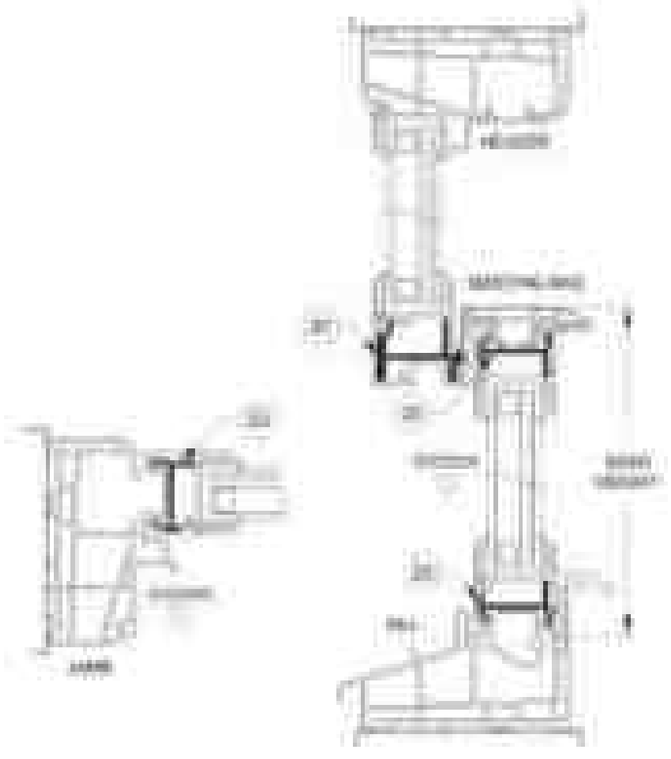
DATE

SCALE

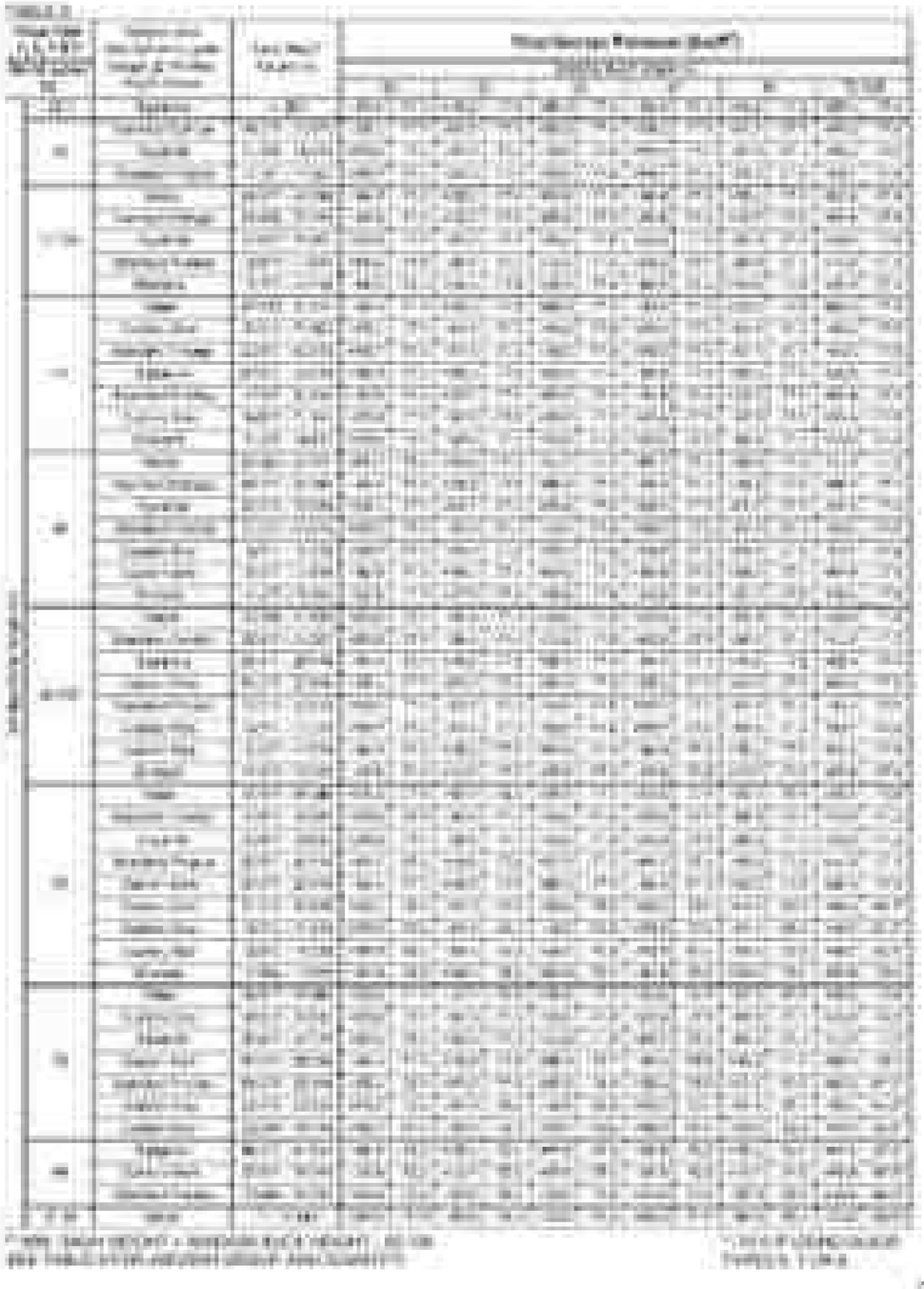
DRAWING

REVISIONS

BROWARD COUNTY, FLORIDA
PRODUCT CONTROL APPROVED



SECTION DETAIL FOR WINDOWS
WITH LEVEL R2 REINFORCEMENT
FOR ALL FRAME TYPES, Cases 1-CO, 2-CO, 3-CO



NOTES

1) USE THESE TABLES FOR ALL OPERATORS INSTALLED THROUGH THE FRAME OR EXTERIOR STOP.
2) FRAME DIMENSIONS ARE SLICE, WITH EQUAL SIGHT LINES ON ALL SIDES.
3) FOR ASSISTANCE WHERE A PRODUCT IS TO BE SPECIFIED AVAILABLE WITH NO TABULAR INFORMATION SHOWN ON THIS TABLE,
4) ALL DIMENSIONS SHOWN IN PARENTHESES ARE IN MILLIMETERS.

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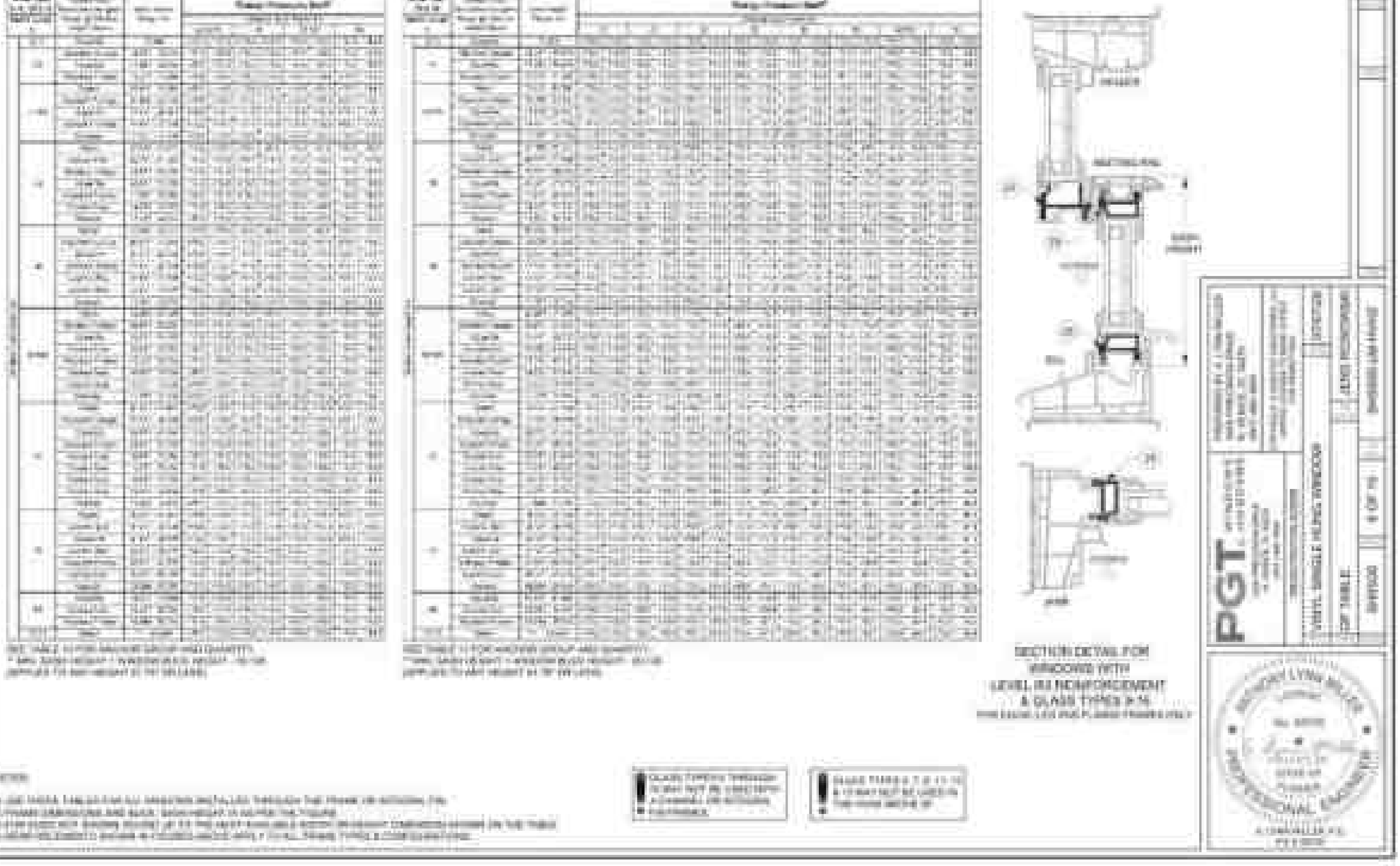
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DRAWN BY: [illegible]
DATE: 10-1-2020
SCALE: NTS

TITLE: DESIGN PRESSURE TABLES
SHEET NUMBER: T-1

REVISIONS
1 [illegible]

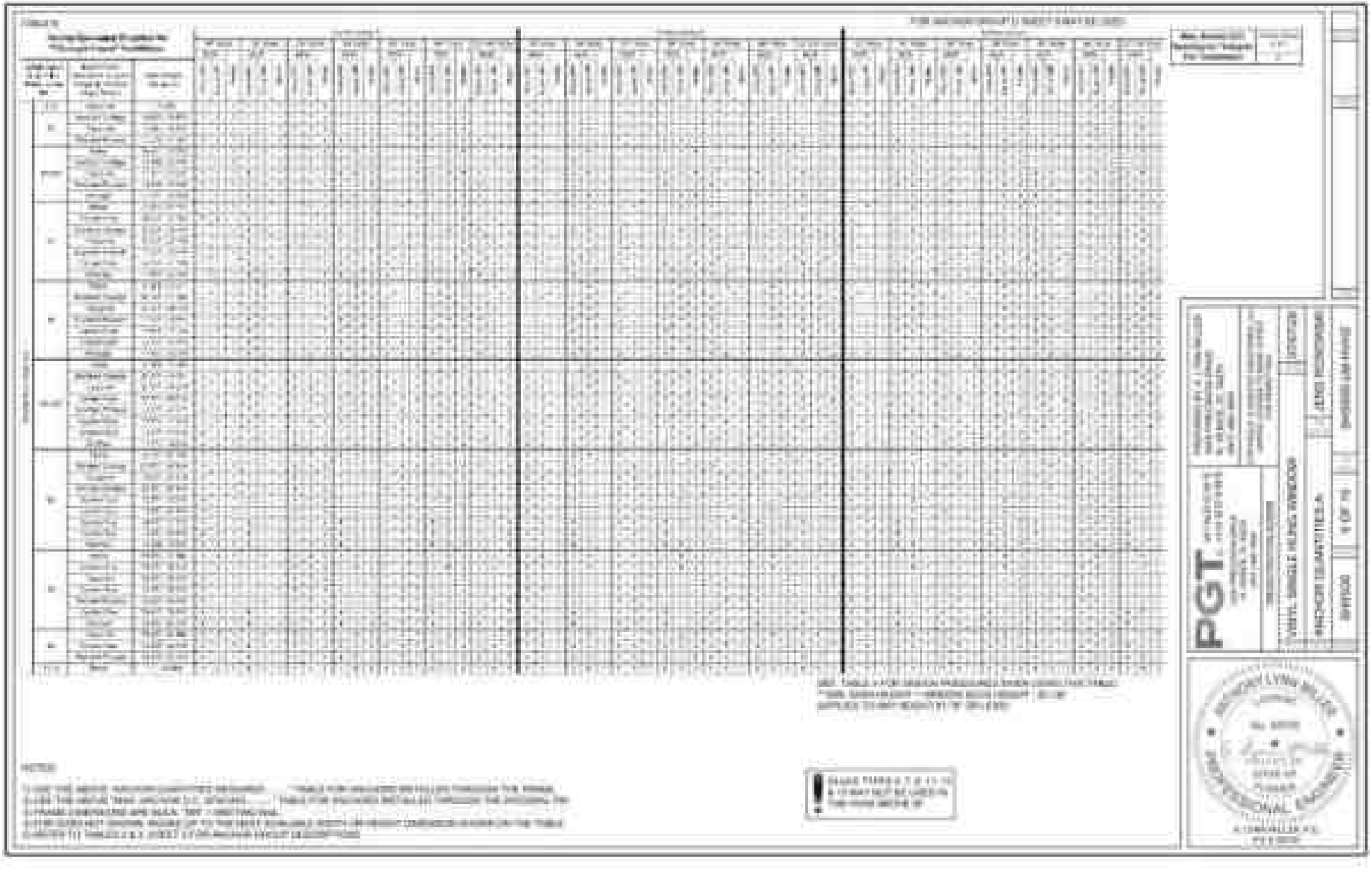
REGISTERED PROFESSIONAL ENGINEER
[illegible]
STATE OF FLORIDA



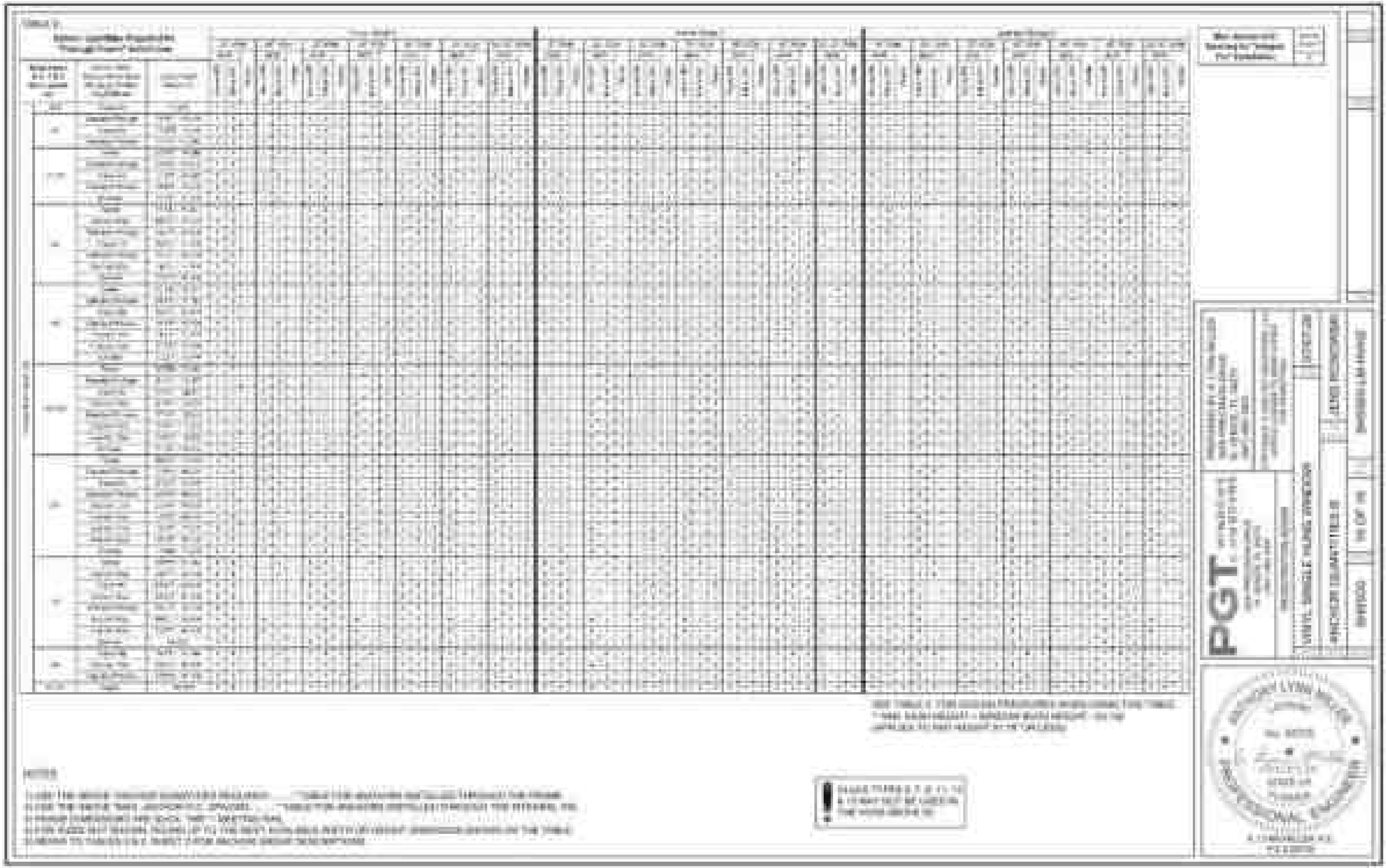
SECTION DETAIL FOR
WINDOWS WITH
LEVEL R5 REINFORCEMENT
& GLASS TYPES 9-15

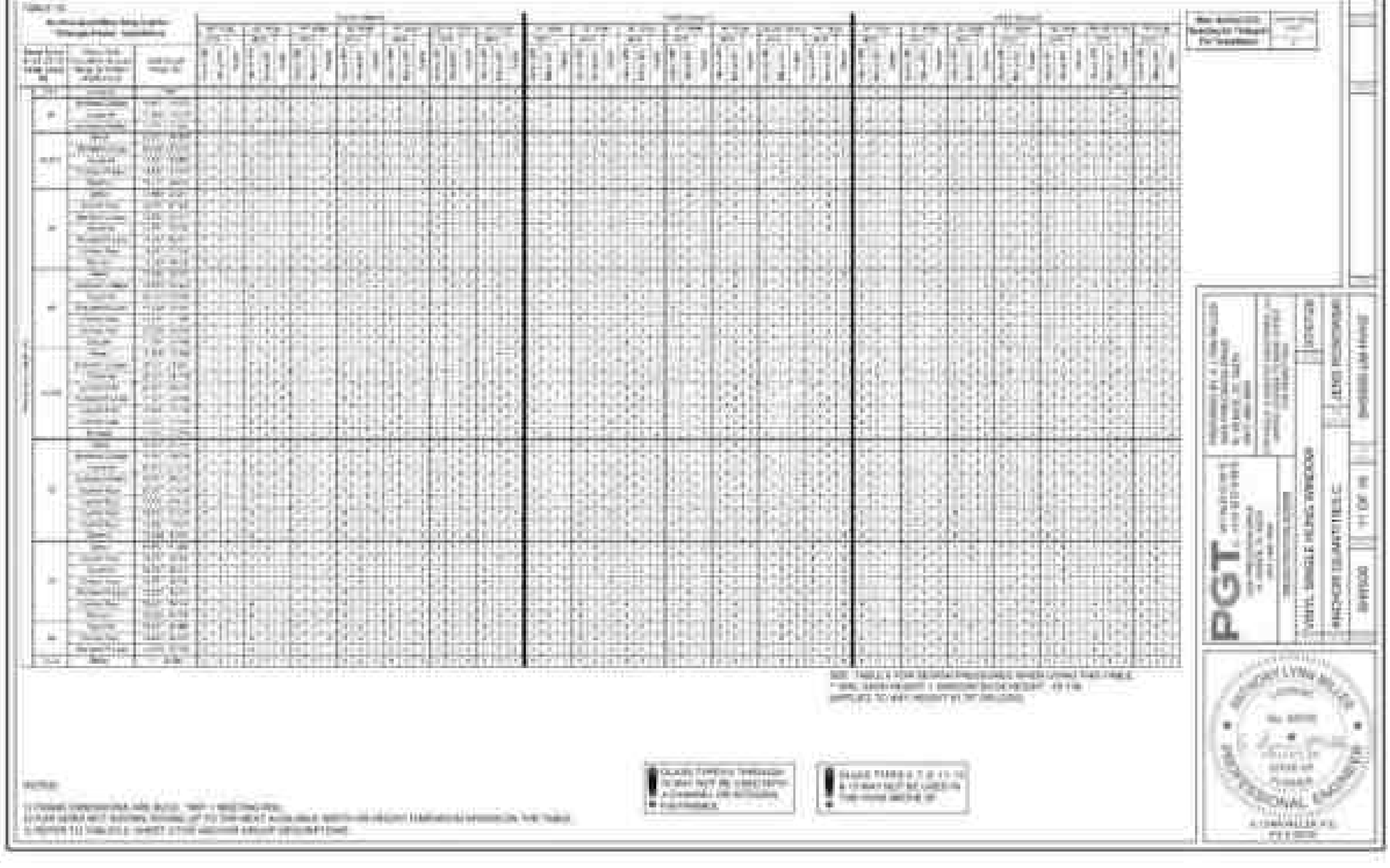
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TABLE 1.1

Ultimate Wind Pressures for Components and Cladding

Effective Wind Area (sq. ft.)	Zone	Roof Slope	Ultimate Wind Pressure (psf)
10	1		
	2		
	3		
20	1		
	2		
	3		
50	1		
	2		
	3		
100	1		
	2		
	3		
200	1		
	2		
	3		
500	1		
	2		
	3		
1000	1		
	2		
	3		

SEE TABLE 1.7 FOR DESIGN PRESSURES WHEN OPENING PROTECTION IS REQUIRED

NOTES:

1) FRAME DESIGNATIONS ARE (L.C.S. "XXX" = WIDTH) ONLY.

2) FOR SLOPES NOT SHOWN, INTERPOLATE TO THE NEXT AVAILABLE HIGHER OR LOWER DESIGNATION SHOWN ON THE TABLE.

3) REFER TO TABLE 2.1 SHEET 1 FOR ADJUSTMENT DESCRIPTIONS

GLASS CANNOT BE USED IN THIS AREA

GLASS CANNOT BE USED IN THIS AREA

PGT

TITLE: SINGLE HUNG WINDOW

DESIGNATED

DATE: 10-31-18

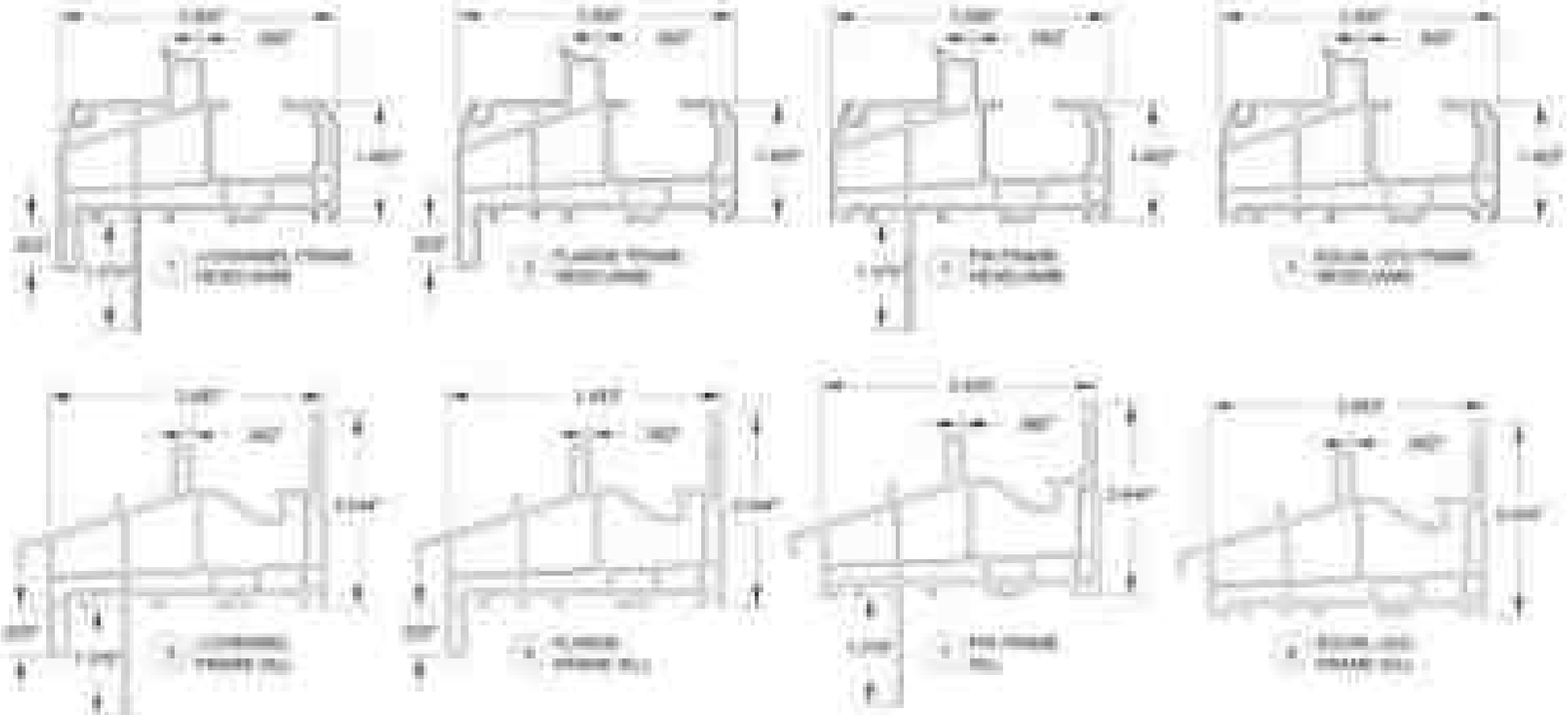
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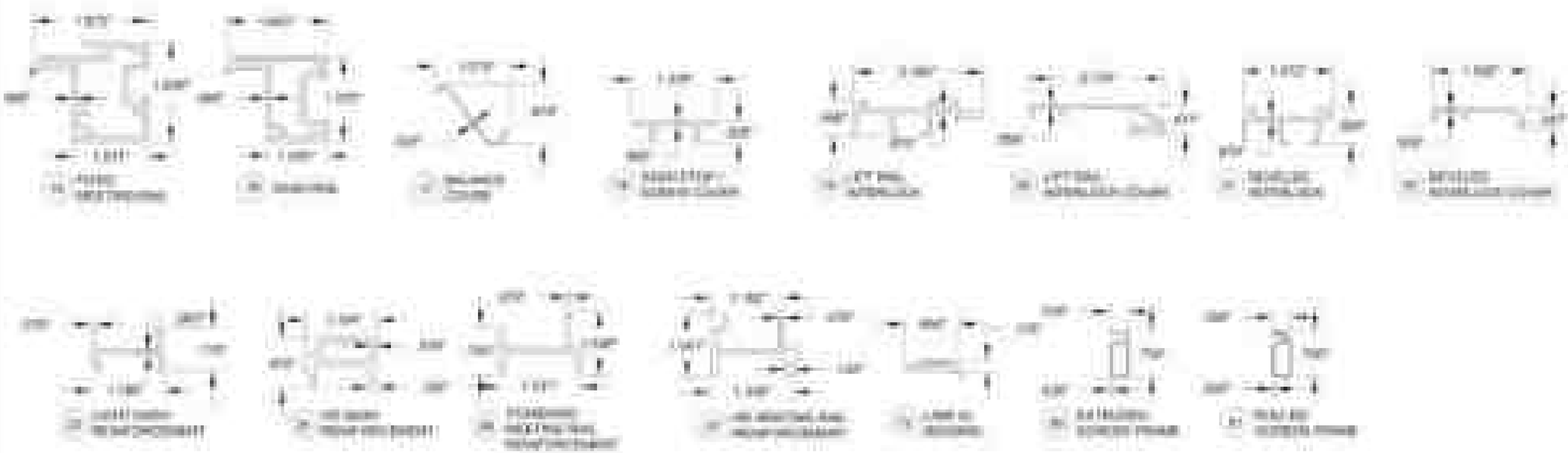
SHEET NUMBER: 1 OF 1

REVISIONS

NO. DESCRIPTION DATE

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PGT SINGLE HUNG WINDOW

SECTIONS

DATE: 10-20-15
DRAWN BY: DGS
SCALE: 3" = 1'-0"

PROFESSIONAL ENGINEER

Table 10

Bill of Materials

#	Part #	Description	Material
1	[illegible]	Single Hung Frame Head & Jambs – J-Channel	PVC
2	[illegible]	Single Hung Frame Head & Jambs – Flange	PVC
3	[illegible]	Single Hung Frame Head & Jambs – Fin	PVC
4	[illegible]	Single Hung Frame Head & Jambs – Equal Leg/Box	PVC
[illegible]	[illegible]	SH/DH Frame Sill – J-Channel	PVC
[illegible]	[illegible]	SH/DH Frame Sill – Flange	PVC
[illegible]	[illegible]	SH/DH Frame Sill – Fin	PVC
[illegible]	[illegible]	SH/DH Frame Sill – Equal Leg/Box	PVC
[illegible]	[illegible]	[illegible] Meeting Rail	PVC
[illegible]	[illegible]	[illegible], Top & Bottom	PVC
[illegible]	[illegible]	[illegible] Cover	PVC
[illegible]	[illegible]	[illegible] Cover	PVC
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] Cover	PVC
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] Cover	PVC
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[illegible]	[illegible]	[illegible] Reinforcement	[illegible]
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[illegible]	[illegible]	Weatherstrip [illegible]	
[illegible]	[illegible]	Weatherstrip [illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible] Cover	PVC
[illegible]	[illegible]	[illegible] Balance	
[illegible]		[illegible]	SS
[illegible]		[illegible] Balance	
[illegible]	[illegible]	[illegible]	Nylon
[illegible]	[illegible]	[illegible]	[illegible]

Table 10 Cont.

Bill of Materials, cont.

#	Part #	Description	Material
[illegible]	[illegible]	Sash Lock Mechanism	[illegible]
[illegible]	[illegible]	[illegible] Lock	Cast Zinc
[illegible]	[illegible]	Sash Lock Cover Assembly	Cast Zinc
[illegible]	[illegible]	[illegible]	SS
[illegible]	[illegible]	[illegible] Lock Keeper	Cast Zinc
[illegible]	[illegible]	[illegible]	SS
[illegible]	[illegible]	[illegible] Latch Cover Assy	PVC
[illegible]	[illegible]	[illegible] Latch Cover Assy	PVC
[illegible]	[illegible]	[illegible]	SS
[illegible]	[illegible]	Tilt Latch	PVC
[illegible]	[illegible]	Tilt Latch [illegible]	[illegible]
[illegible]	[illegible]	Tilt Latch Spring	SS
[illegible]	[illegible]	[illegible] Tilt Latch Finger Pull	PVC
[illegible]	[illegible]	[illegible] Tilt Latch Finger Pull	Cast Zinc
[illegible]	[illegible]	[illegible]	PVC
[illegible]	[illegible]	[illegible]	SS
[illegible]	[illegible]	Sash Pull Handle	Cast Zinc
[illegible]	[illegible]	Sash Pull Handle [illegible] Assembly	Cast Zinc
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[illegible]	[illegible]	[illegible] Screen Frame	[illegible]
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PGT

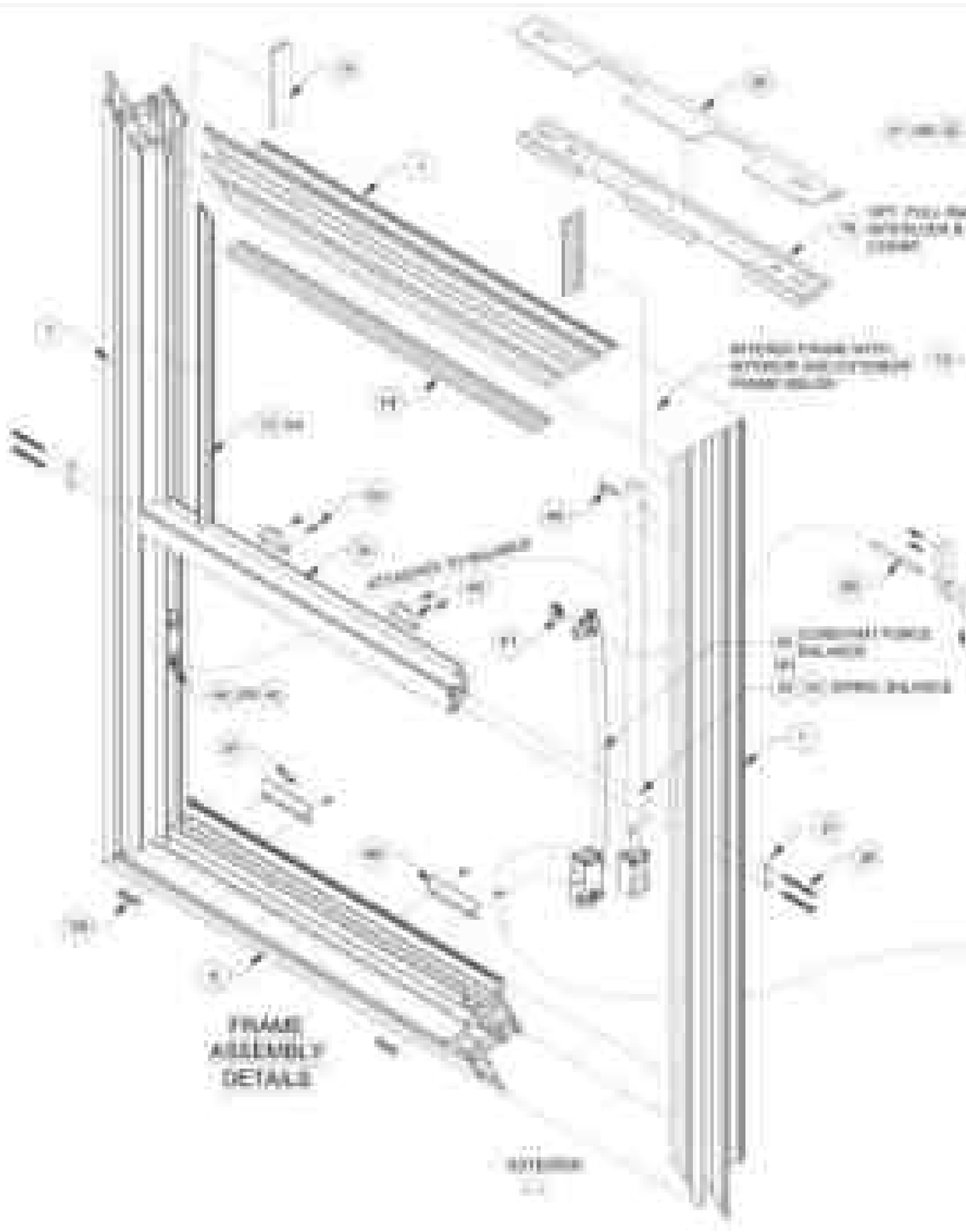
VINYL SINGLE HUNG WINDOW

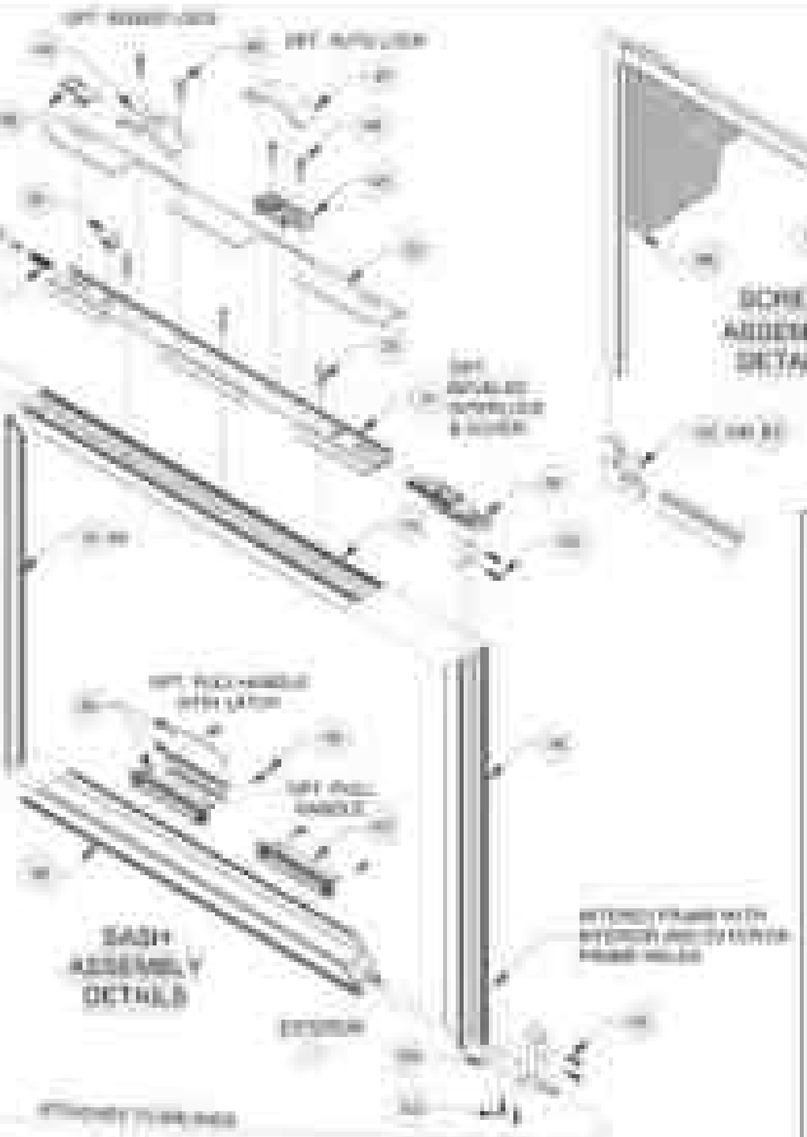
BOM

[illegible]

PROFESSIONAL ENGINEER

[illegible]


FRAME
ASSEMBLY
DETAILS


SASH
ASSEMBLY
DETAILS


SCREEN
ASSEMBLY
DETAILS

NOTES:

PGT