



## NORTHSTAR EXTERIOR WALL PANEL SYSTEM

A FIBER REINFORCED POLYMER EXTERIOR WALL PANEL WITH A 1/4" THICK  
FIBER REINFORCED POLYMER BALLISTIC ARMOR PLATE SHEATHING BONDED  
TO A 6" FIBER REINFORCED POLYMER FRAME ASSEMBLY

### HVHZ

DESIGN PRESSURE: +75 / -85 PSF  
MISSILE IMPACT: LEVEL D  
DEFLECTION LIMIT: L/180

### NON-HVHZ

DESIGN PRESSURE: +90 / -85 PSF  
MISSILE IMPACT: LEVEL D  
DEFLECTION LIMIT: L/120

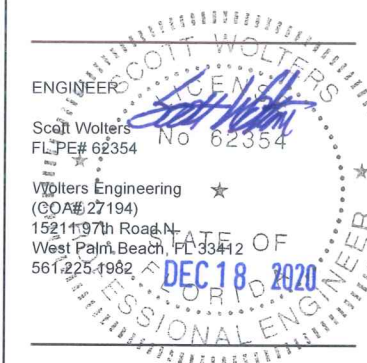


NORTHSTAR TECHNOLOGIES GROUP INC  
365 FIFTH AVE S.  
NAPLES, FLORIDA 34102  
239.850.6253

PINGLESE@NORTHSTARTGI.COM

NORTHSTARTGI.COM

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DRAWN BY: P. Inglese

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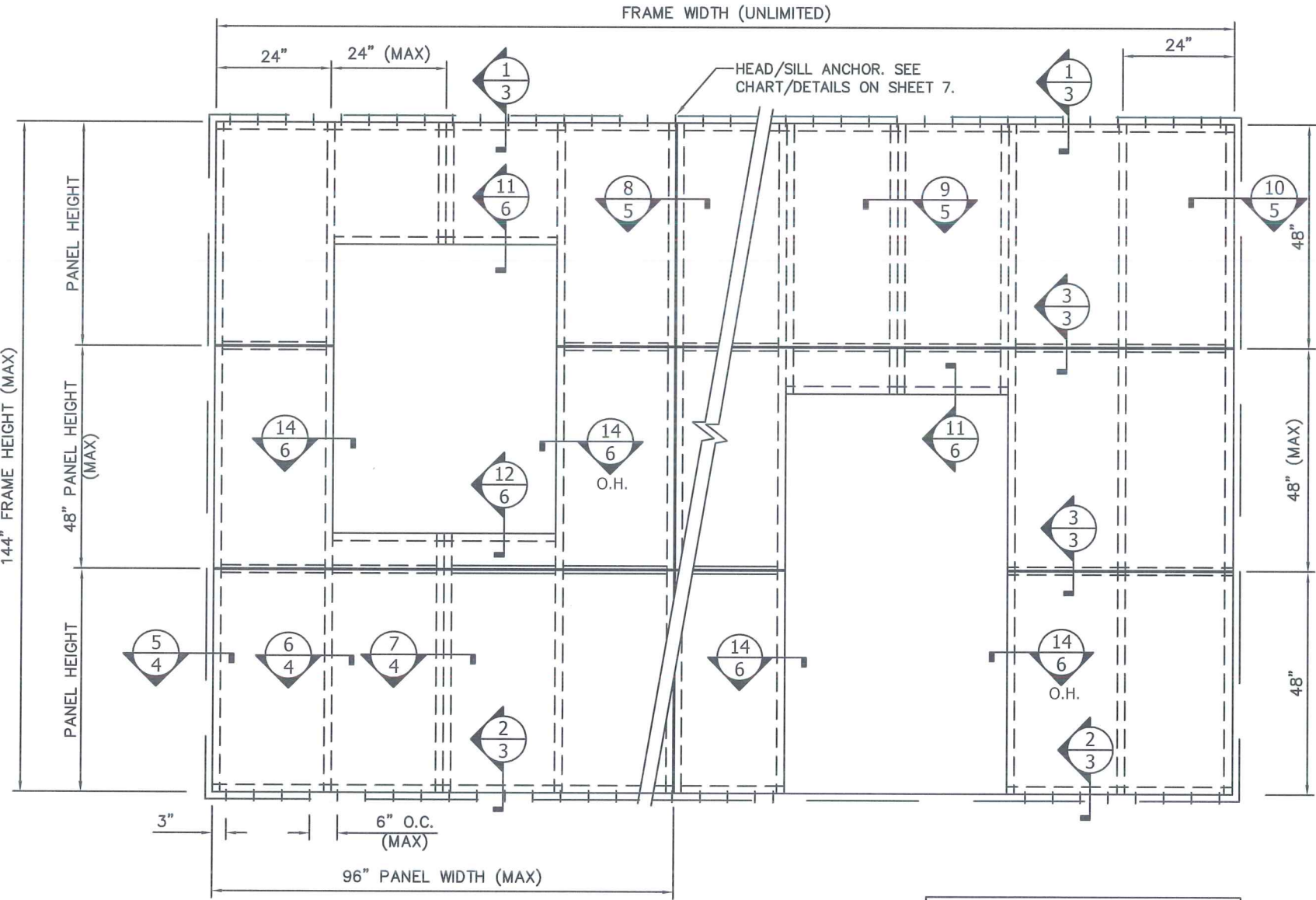
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GENERAL NOTES:

- 1. THIS SYSTEM MEETS ALL OF THE REQUIREMENTS OF THE 6TH EDITION (2017) FLORIDA BUILDING CODE, INCLUDING THE HVHZ PROVISIONS.
- 2. THIS SYSTEM HAS BEEN TESTED PER TAS 201, 202, & 203. IT LARGE AND SMALL MISSILE IMPACT RESISTANT. SHUTTERS ARE NOT REQUIRED.
- 3. THIS SYSTEM HAS BEEN DESIGNED AND TESTED AS A WALL CLADDING SYSTEM ONLY. IF USED IN A LOAD BEARING APPLICATION THE ENGINEER MUST ADD ADDITIONAL FIBER REINFORCED POLYMER FRAMING COMPONENTS TO DESIGN THE MAIN WIND FORCE RESISTING SYSTEM.
- 4. THIS SYSTEM HAS BEEN TESTED PER ASTM E84 & E2768, AND MEETS THE REQUIREMENTS OF FBC SECTIONS 2613.5 AND 2603.5.4. FIRE RATINGS OR FIRE RESISTANCE IS NOT A PART OF THIS REVIEW.
- 5. ALL ANCHORS SECURING THE SYSTEM TO PRESSURE TREATED WOOD SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE CHEMICALS IN THE WOOD.
- 6. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE PROTECTED PER FBC REQUIREMENTS.
- 7. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. Cd=1.6 WAS USED FOR WOOD SCREWS ONLY.

MANUFACTURING NOTES:

- 1. INTERMEDIATE VERTICAL STUDS ARE INSTALLED 24" O.C, ALTERNATING BETWEEN SINGLE AND DOUBLE STUDS, EXCEPT DOUBLE STUDS ARE USED AT CENTER OF DOOR OR WINDOW OPENINGS GREATER THAN 24" WIDE. THE STUDS ARE NOTCHED AT EACH END TO FIT INTO THE HEAD/SILL TRACKS, WHICH ARE CONTINUOUS.
- 2. INTERMEDIATE HORIZONTAL STUDS ARE INSTALLED 48" MAX. O.C, AND ARE NOTCHED TO FIT INTO THE VERTICAL STUDS WHERE REQUIRED.
- 3. AN 1/8" BEAD OF 3M SCOTCH-WELD MULTI-MATERIAL COMPOSITE URETHANE EPOXY IS APPLIED TO ALL THE VERTICAL AND HORIZONTAL STUDS TO BOND WITH THE STRONGWELL HS ARMOR FIBERGLASS PANELS AND APPLIED TO ALL VERTICAL AND HORIZONTAL JOINTS AND SCREW HEADS AS A SEALANT.



STANDARD ELEVATION  
(EXTERIOR VIEW)

DESIGN PRESSURE

+75 / -85 psf (HVHZ)  
+90 / -85 psf (Non-HVHZ)



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ENGINEER

SCOTT WOLTERS

FL PE# 62354 No 62354

Wolters Engineering  
(CO# 27194)  
1521 97th Road N.  
West Palm Beach, FL 33412  
561.225.3982

DEC 18 2020

PROFESSIONAL ENGINEER

JOB NUMBER: 20201204

DATE: 12.14.2020

DRAWN BY: P Inglese

REVISIONS

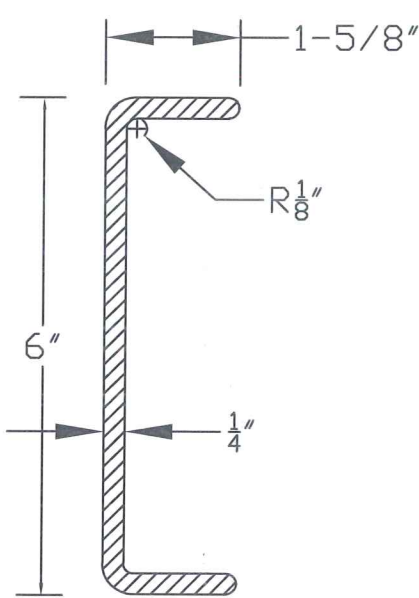
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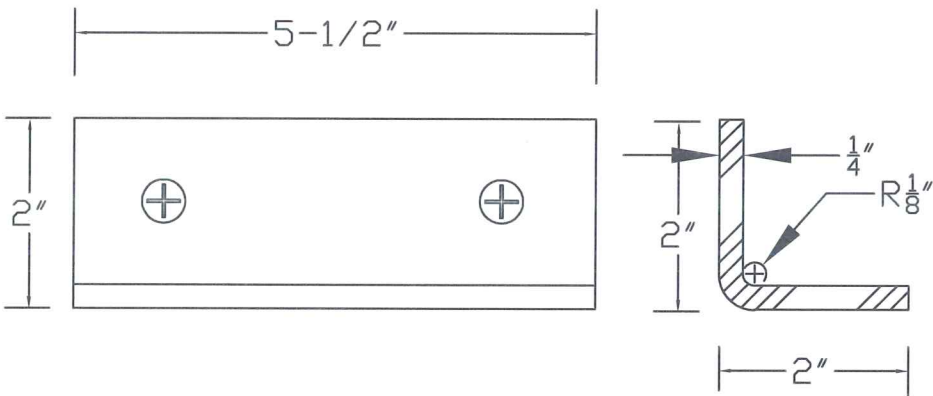
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BILL OF MATERIALS

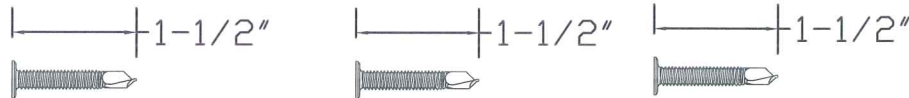
PART #	DESCRIPTION	MANUFACTURER	NOTES
1	6" X 1-5/8" FIBERGLASS CHANNEL	STRONGWELL	EXTREN 500 OR 525 PE POLYESTER RESIN
2	2" X 2" X 5-1/2" FIBERGLASS ANGLE	STRONGWELL	EXTREN 500 OR 525 PE POLYESTER RESIN
3	#14 X 1-1/2" SS FH TEK SCREW	ITW BUILDEX	FRONT AND BACK OF STUD AT HEAD / SILL
4	#14 X 1-1/2" SS FH TEK SCREW	ITW BUILDEX	1-1/4" FROM END OF STUDS AND 12" MAX O.C.
5	#14 X 1-1/2" SS FH TEK SCREW	ITW BUILDEX	(4) FASTENERS PER CLIP ANGLE
6	1/4" BALLISTIC ARMOR PLATE SHEATHING	STRONGWELL	BONDED TO FRAMING WITH 3M SCOTCH-WELD EPOXY
7	PERIMETER SEALANT AND BACKER ROD	PER ARCHITECTS SPECIFICATION	SUPPLIED BY OTHERS



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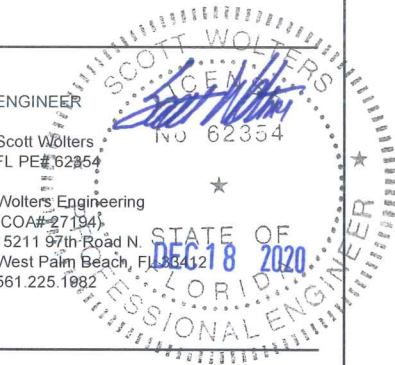


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NAPLES, FLORIDA 34102  
239.850.6253

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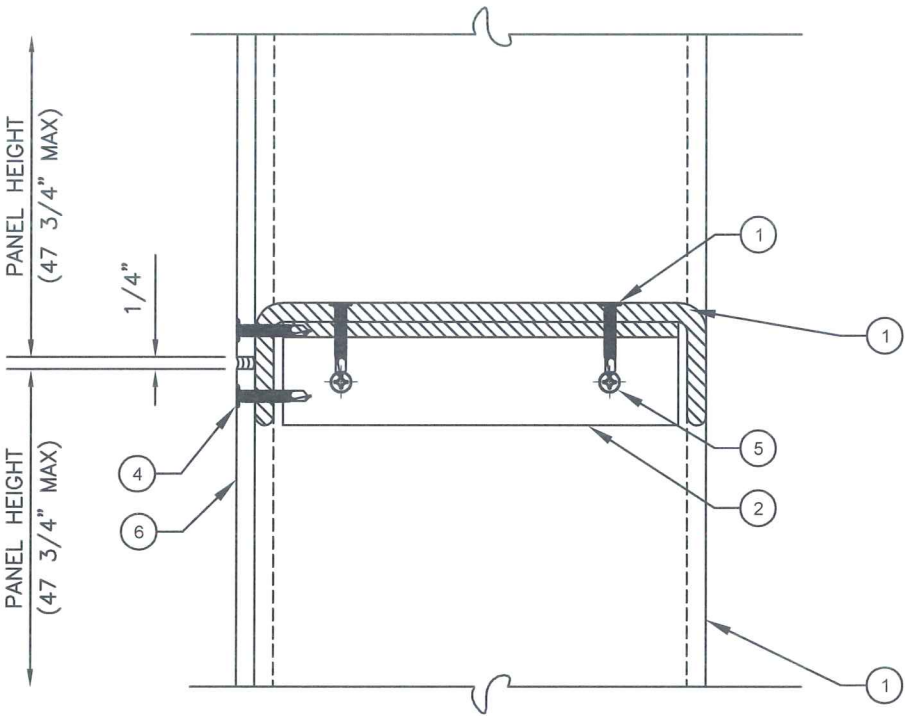
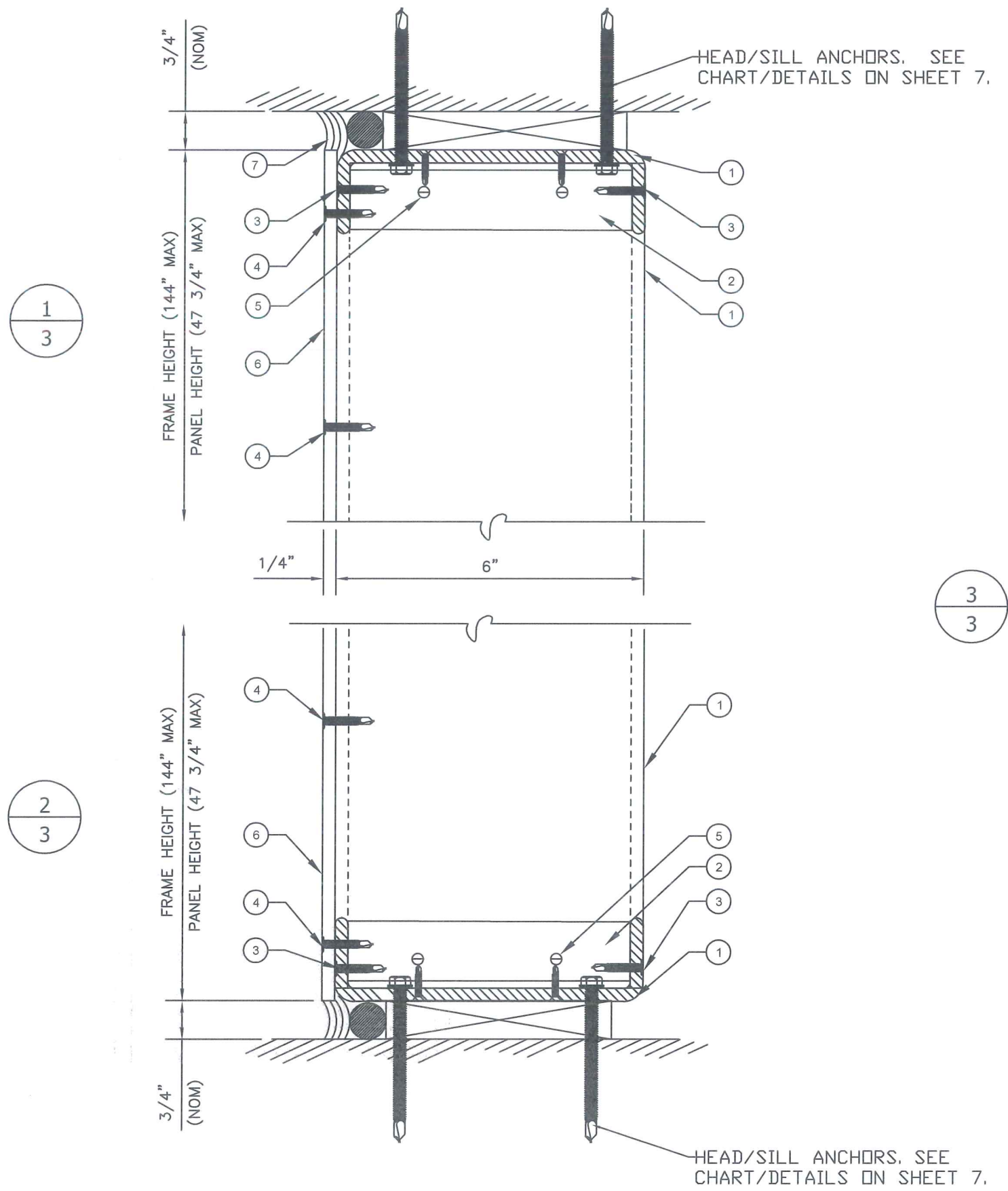
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365 FIFTH AVE S.  
NAPLES, FLORIDA 34102  
239.850.6253

PINGLESE@NORTHSTARTGI.COM

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ENGINEER

Scott Wolters  
FL PE# 62354

Wolters Engineering  
(COA# 27194)  
15211 97th Road N.  
West Palm Beach, FL 33411  
561.225.4982

JOB NUMBER: 20201214

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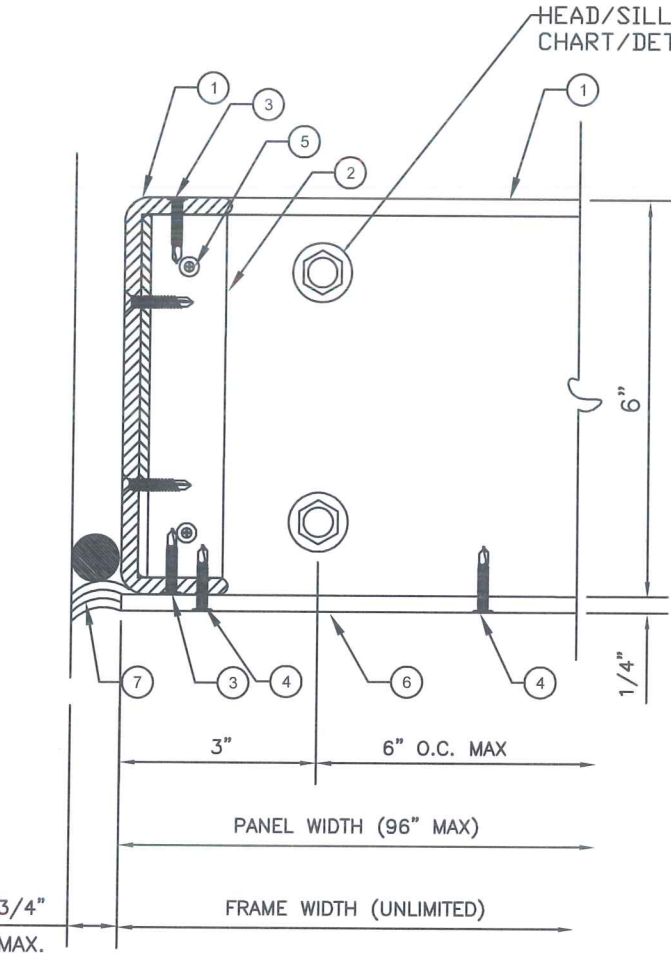


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365 FIFTH AVE S.  
NAPLES, FLORIDA 34102  
239.850.6253

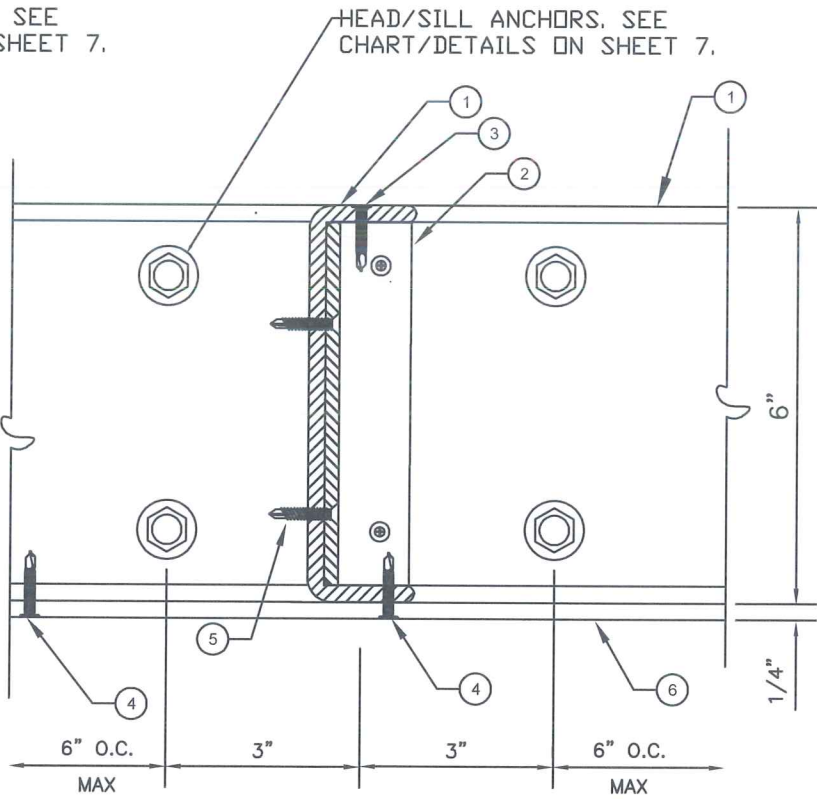
PINGLESE@NORTHSTARTGI.COM

NORTHSTARTGI.COM

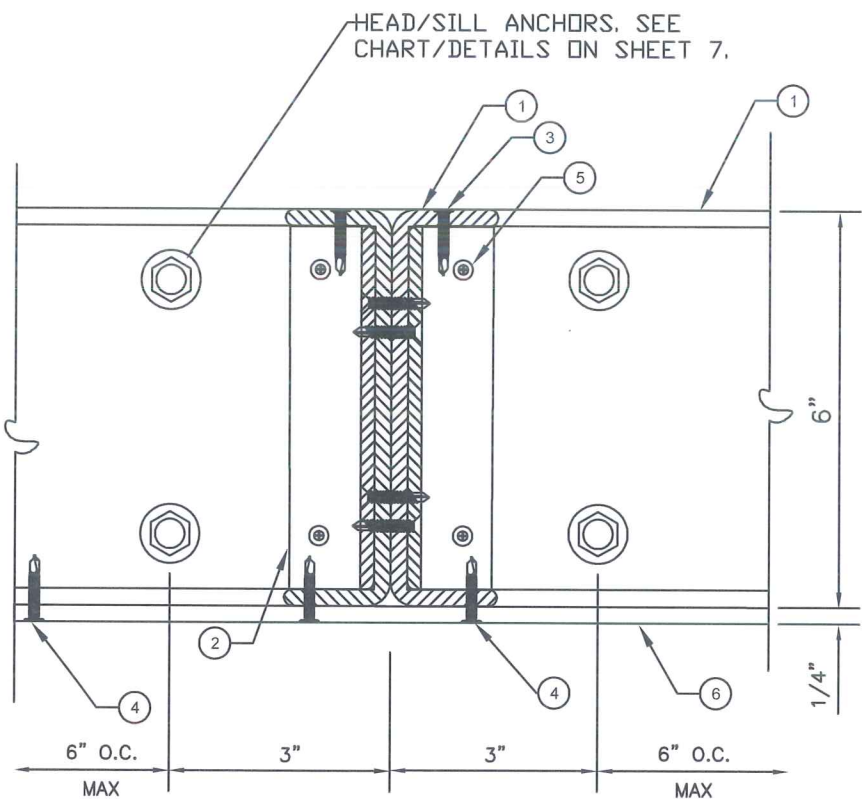
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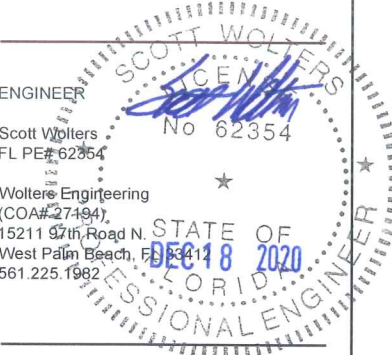
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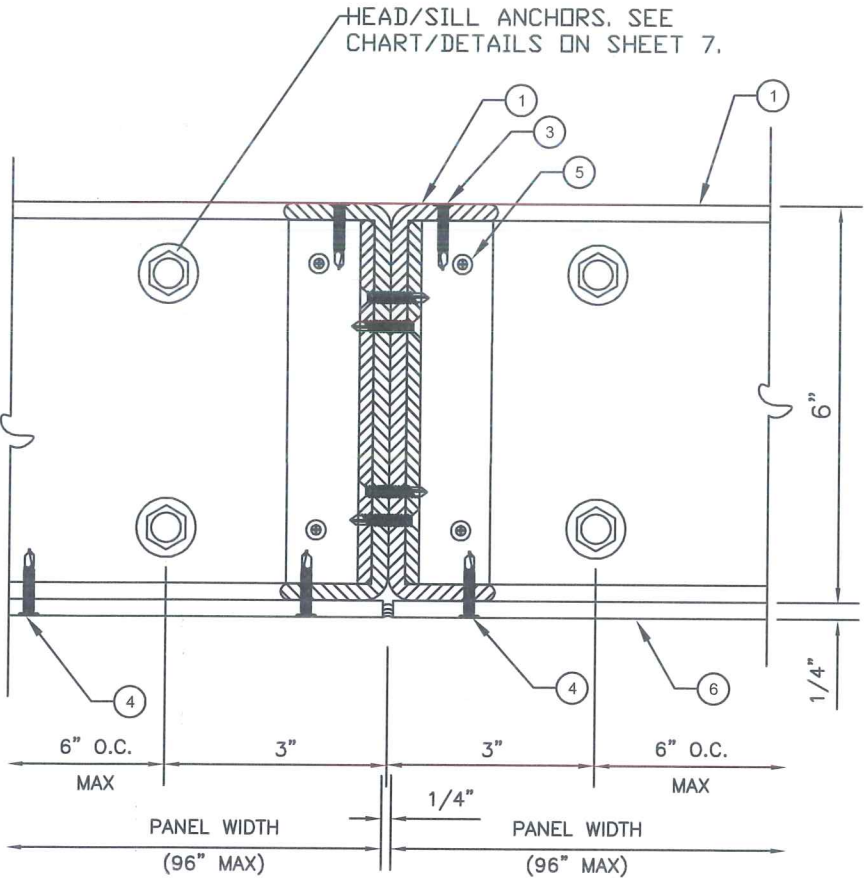


NORTHSTAR TECHNOLOGIES GROUP INC  
365 FIFTH AVE S.  
NAPLES, FLORIDA 34102  
239.850.6253

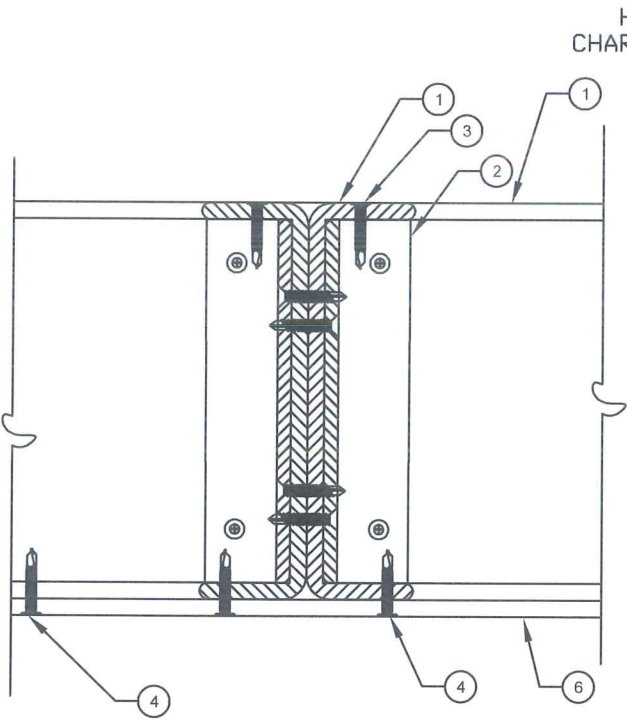
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NORTHSTARTGI.COM

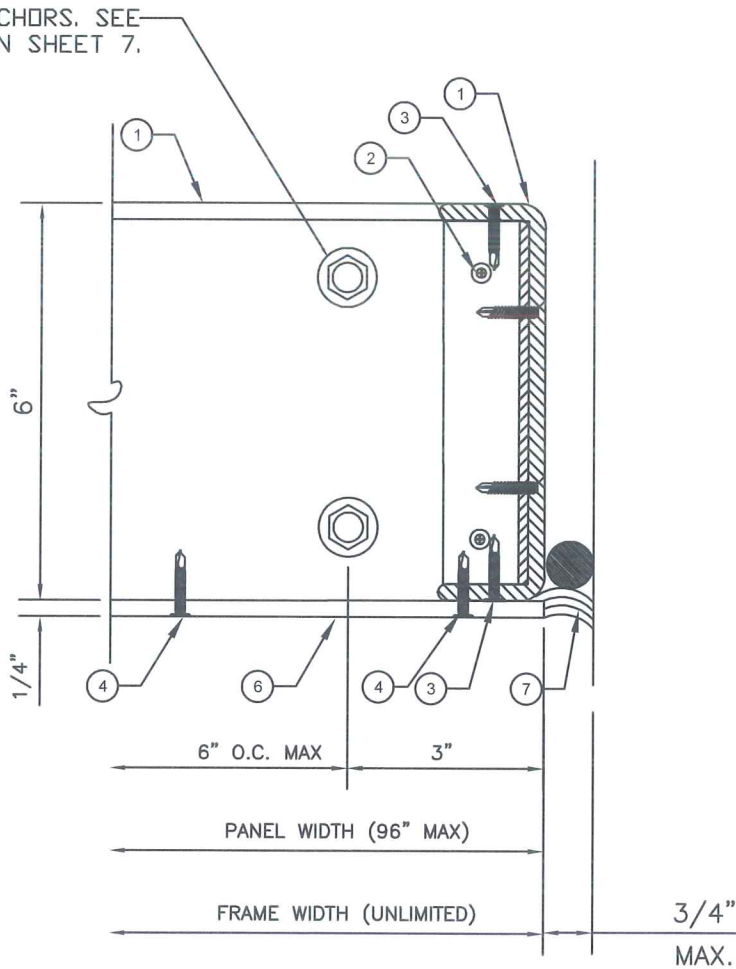
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ENGINEER

Scott Walters  
FL PE# 62354

Walters Engineering  
(COA# 27494)  
15211 97th Road NE  
West Palm Beach, FL 33412  
561.225.1982

JOB NUMBER: 20201214

DATE: 12.14.2020

DRAWN BY: P Inglese

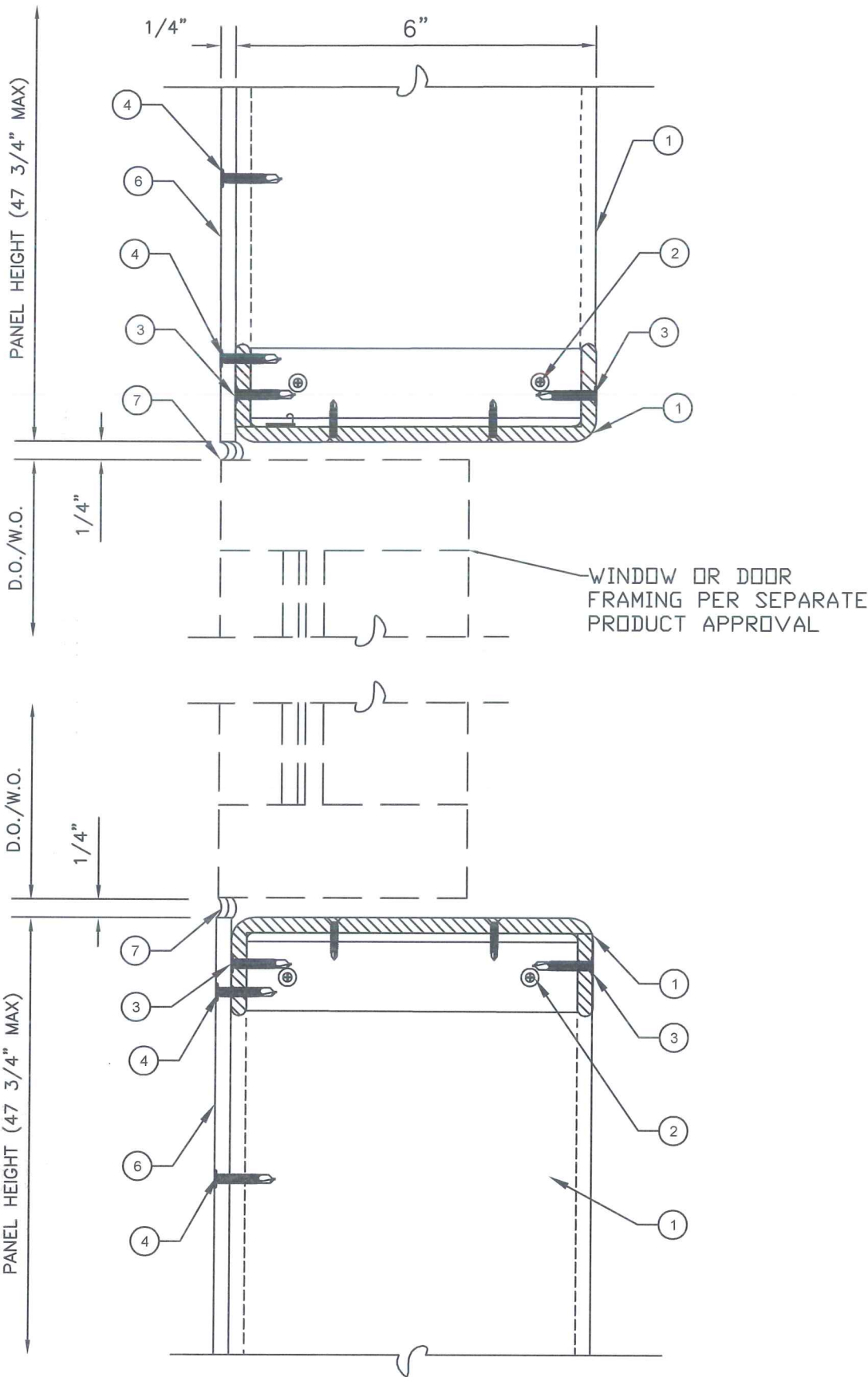
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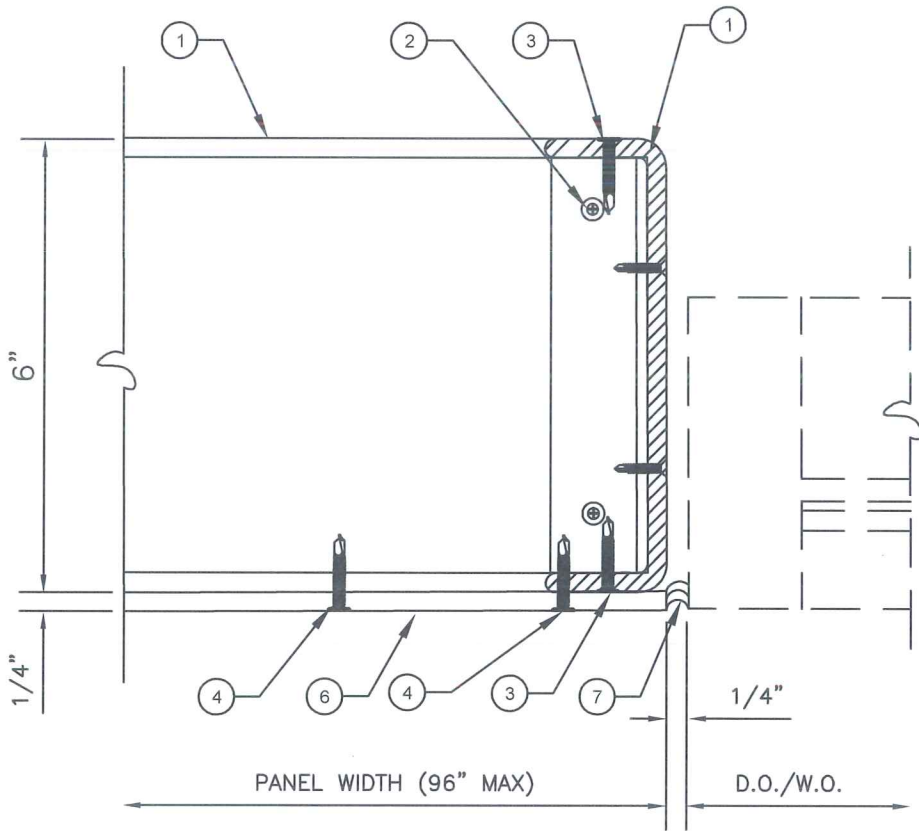


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NORTHSTAR TECHNOLOGIES GROUP INC  
365 FIFTH AVE S.  
NAPLES, FLORIDA 34102  
239.850.6253

PINGLESE@NORTHSTARTGI.COM

NORTHSTARTGI.COM

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ENGINEER  
Scott Walters  
FL PE# 62354  
Walters Engineering  
(COA# 27194)  
15211 87th Road N.  
West Palm Beach, FL 33412  
561.225.1982  
DEC 18 2020  
PROFESSIONAL ENGINEER

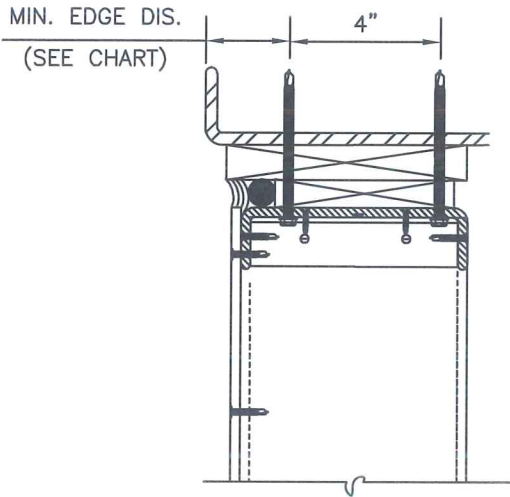
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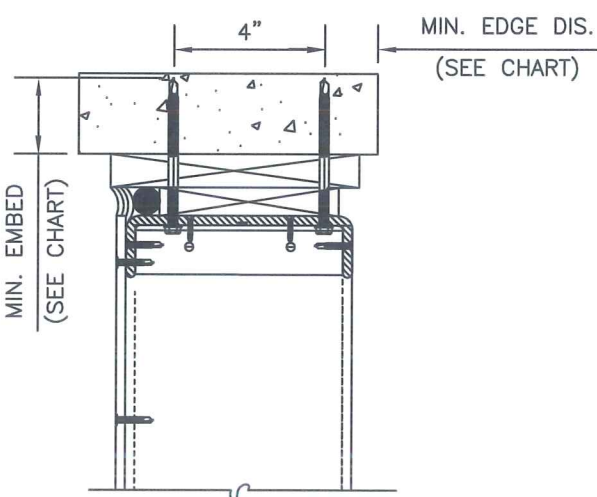
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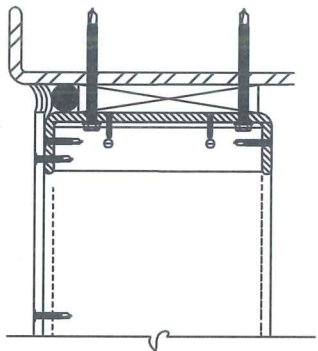
STEEL WITH OPTIONAL WOOD BUCK



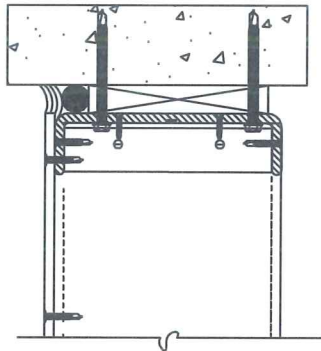
CONCRETE WITH OPTIONAL WOOD BUCK

HEAD/SILL ANCHOR REQUIREMENTS			
SUBSTRATE TYPE	ANCHOR TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE
CONCRETE (2.85 ksi MIN)	5/16" DIA. ELCO ULTRACON	1 3/4"	1 3/4"
2X P.T. WOOD (S.G.=0.5, MIN)	5/16" DIA. ELCO ULTRACON	1 1/2"	1"
STEEL (1/8", 46 ksi MIN)	5/16" DIA. ITW TEKS SELF-DRILLING SCREW	FULL <sup>++</sup>	1/2"

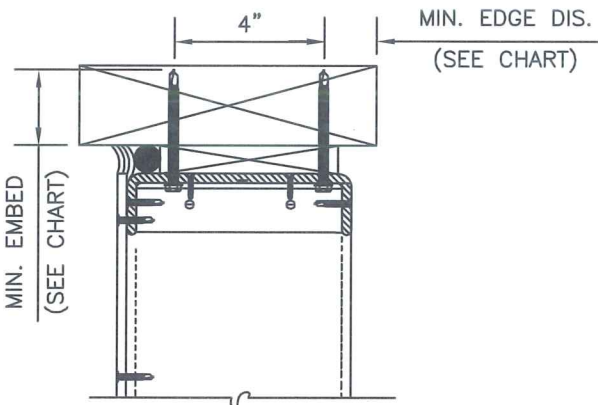
<sup>++</sup> FULLY PENETRATES METAL WITH 3 THREADS BEYOND



DIRECTLY TO STEEL  
(1/8", 46 ksi MIN)



DIRECTLY TO CONCRETE  
(2846 psi MIN)



DIRECTLY TO WOOD  
(2X, S.G. = 0.5 MIN)



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