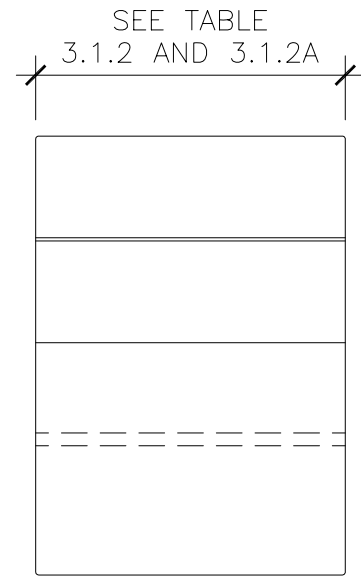
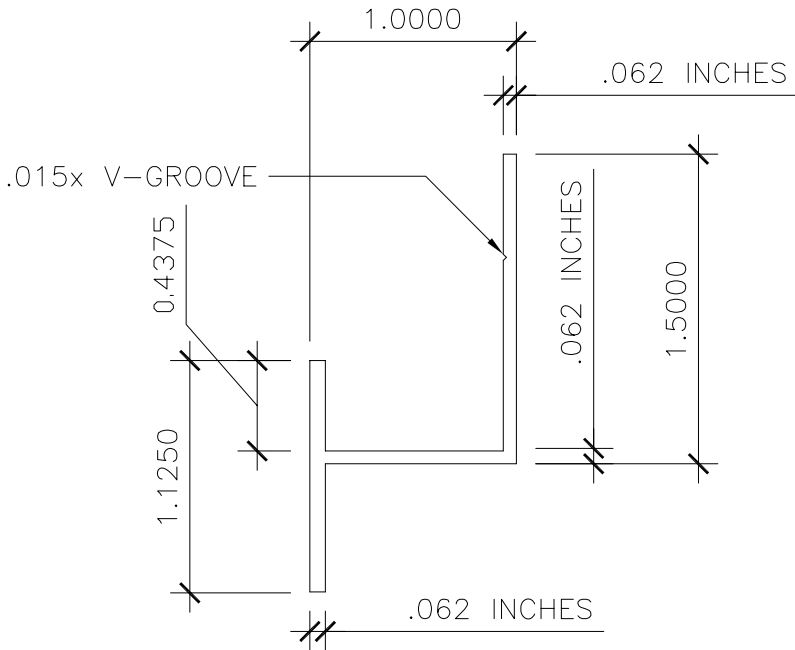
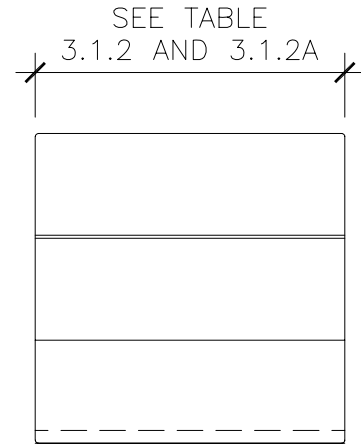
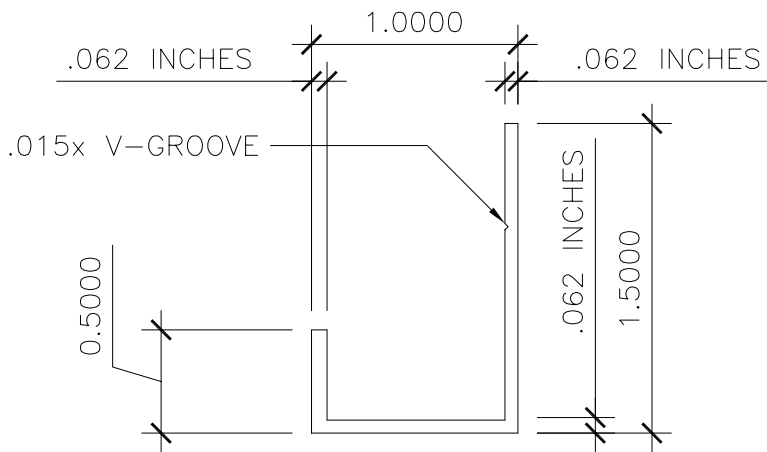


# ANCHORING SYSTEM, PLANNING AND INSTALLATION GUIDE



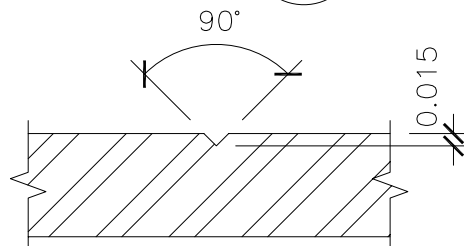
1 PROFILE: DOUBLE ANCHOR

2 VIEW: DOUBLE ANCHOR



3 PROFILE: SINGLE ANCHOR

4 VIEW: SINGLE ANCHOR

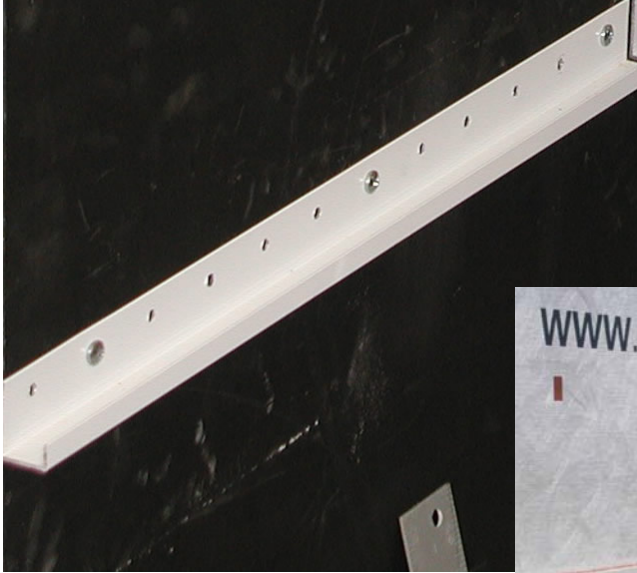


5 V-GROOVE

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DOUBLE/SINGLE ANCHOR

3.1.1



J-Anchor  
(See p. 3.1.1 of  
ALC Solution Manual)



T-Anchor  
(See p. 3.1.1 of  
ALC Solution Manual)



T-Anchor being cut to size on jobsite

# REQUIRED ANCHOR WIDTH/DEADWEIGHT FOR 1" THICK STONE

## ANCHOR WIDTH (INCHES)

TOTAL PANEL WEIGHT (lbs.)	ONE ANCHOR PER STONE	TWO ANCHORS PER STONE
10	1.50 1 SCREW	1.50 1 SCREW
15	1.50	1.50
20	1.65	1.50
25	2.06	1.50
30	2.47	1.50
35	2.88 2 SCREWS	1.50
40	3.29	1.65
45	3.71	1.86
50	4.12	2.06
55	4.53	2.27
60	4.94	2.47
65	5.36 3 SCREWS	2.68 2 SCREWS
70	5.77	2.89
75	6.18	3.09
80	6.59	3.30
85	7.00	3.50
90	7.42	3.71
95	7.83 4 SCREWS	3.92
100	8.24	4.12

FOR SCREW SIZES SEE: 3.1.3; 3.1.5A; 3.1.5B; 3.1.5C

NOTE: THE STRUCTURAL MEMBER AND FASTENER SIZES SHOULD ONLY BE USED AS GENERAL GUIDELINES. SPECIFIC DETAILS MUST BE REVIEWED BY A PROFESSIONAL STRUCTURAL ENGINEER TO VERIFY THEIR ADEQUACY.

REQUIRED ANCHOR WIDTH/STONE SLOT STRENGTH  


---

FOR 1" THICK STONE  


---

ANCHOR WIDTH (INCHES)

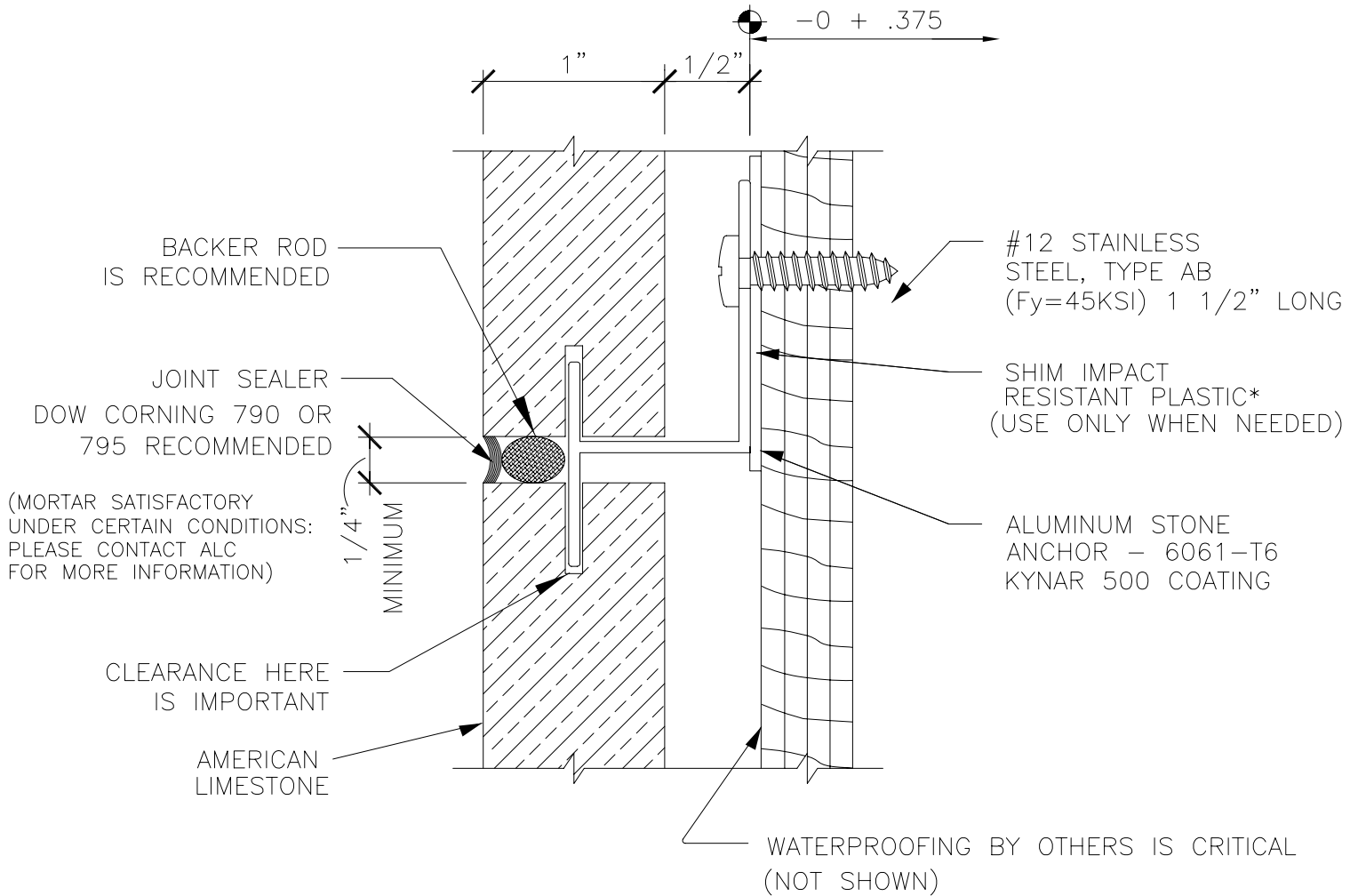
PANEL FACE AREA (sq.ft.)	IF TWO ANCHORS PER STONE	IF FOUR ANCHORS PER STONE
1.0	1.50	1.50
2.0	2.67	1.50
2.5	3.33	1.67
3.0	4.00	2.00
3.5	4.67	2.33
4.0	5.33	2.67
5.0	N/A	3.33
6.0	N/A	4.00
7.0	N/A	4.67
8.0	N/A	5.33
9.0	N/A	6.00
10.0	N/A	6.67
11.0	N/A	7.33
12.0	N/A	8.00
13.0	N/A	8.67
14.0	N/A	9.33
15.0	N/A	10.00
16.0	N/A	10.67

NOTE: THE STRUCTURAL MEMBER AND FASTENER SIZES SHOULD ONLY BE USED AS GENERAL GUIDELINES. SPECIFIC DETAILS MUST BE REVIEWED BY A PROFESSIONAL STRUCTURAL ENGINEER TO VERIFY THEIR ADEQUACY.

MANY TYPES OF PANELS CAN BE USED FOR THE EXTERIOR SHEATHING; HOWEVER THEY MUST BE APA PERFORMANCE RATED. THESE INCLUDE ORIENTED STRAND BOARD (OSB) AS WELL AS MANY GRADES OF PLYWOOD. WE WOULD PREFER:

APA STRUCTURAL 1 RATED SHEATHING EXPOSURE 1 5/8" THICK, MINIMUM.

THE PANELS SHOULD HAVE A 1/8" SPACING AT ALL EDGES AND END JOINTS. THE PANELS SHOULD BE NAILED WITH 8D NAILS SPACED AT 6" O.C. AT SUPPORTED PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.



1 TYPICAL JOINT AT ANCHOR

\*IF SHIM SPACE EXCEEDS 3/8", CONSULT A PROFESSIONAL ENGINEER.

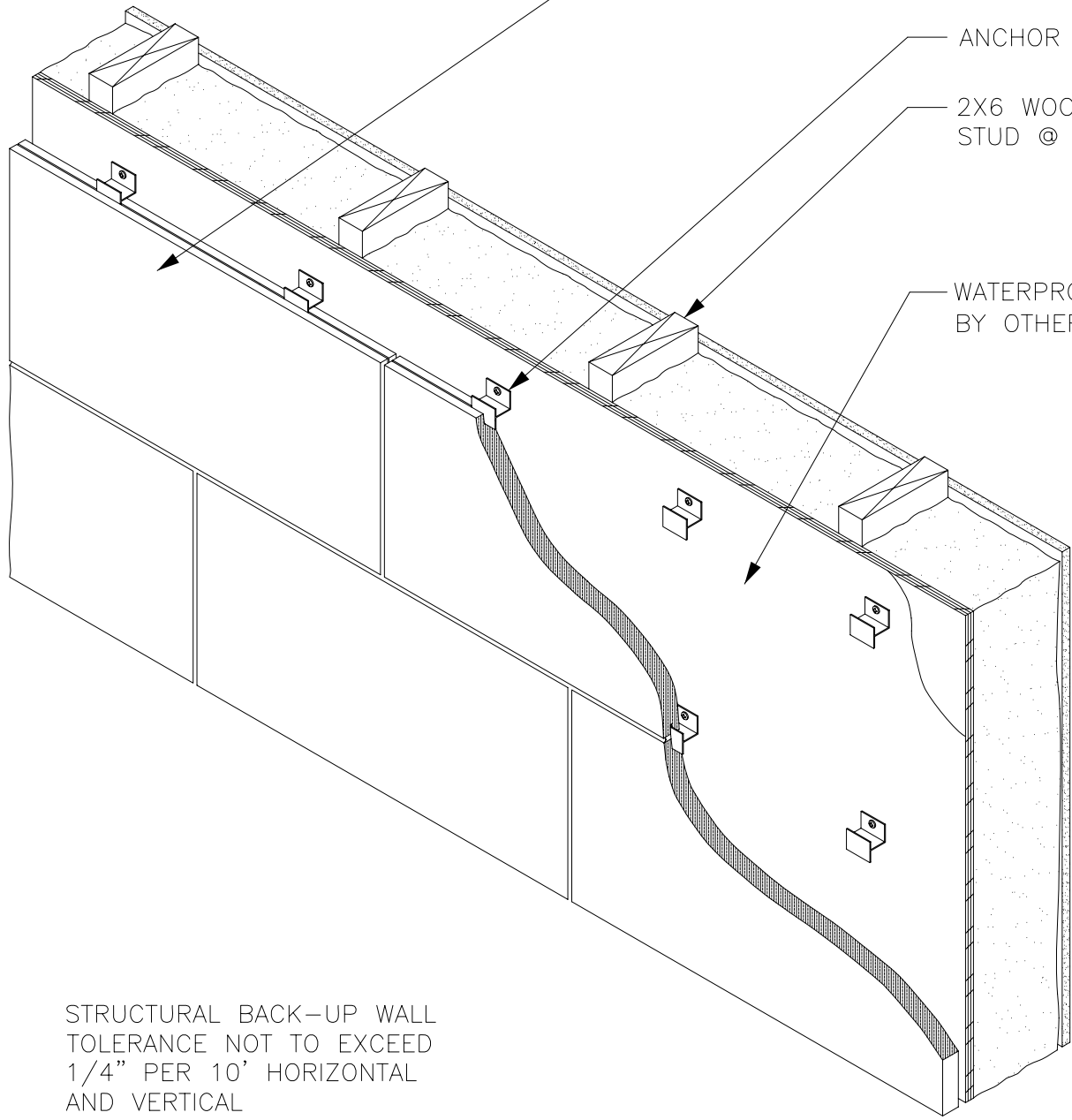
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TYPICAL JOINT AT ANCHOR  
 ATTACH TO WOOD OR STEEL STUDS

**3.1.3**

LOADING CRITERIA:  
 STONE WEIGHT 145 PCF  
 WIND LOAD 20 PSF  
 SEISMIC ZONE 0  
 (PLEASE CHECK WITH ALC)

AMERICAN LIMESTONE  
 PANEL 101 SHOWN



ANCHOR

2X6 WOOD OR METAL  
 STUD @ 16"O.C. TYP.

WATERPROOFING  
 BY OTHERS

STRUCTURAL BACK-UP WALL  
 TOLERANCE NOT TO EXCEED  
 1/4" PER 10' HORIZONTAL  
 AND VERTICAL

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TYPICAL WALL INSTALLATION – OPTION 1

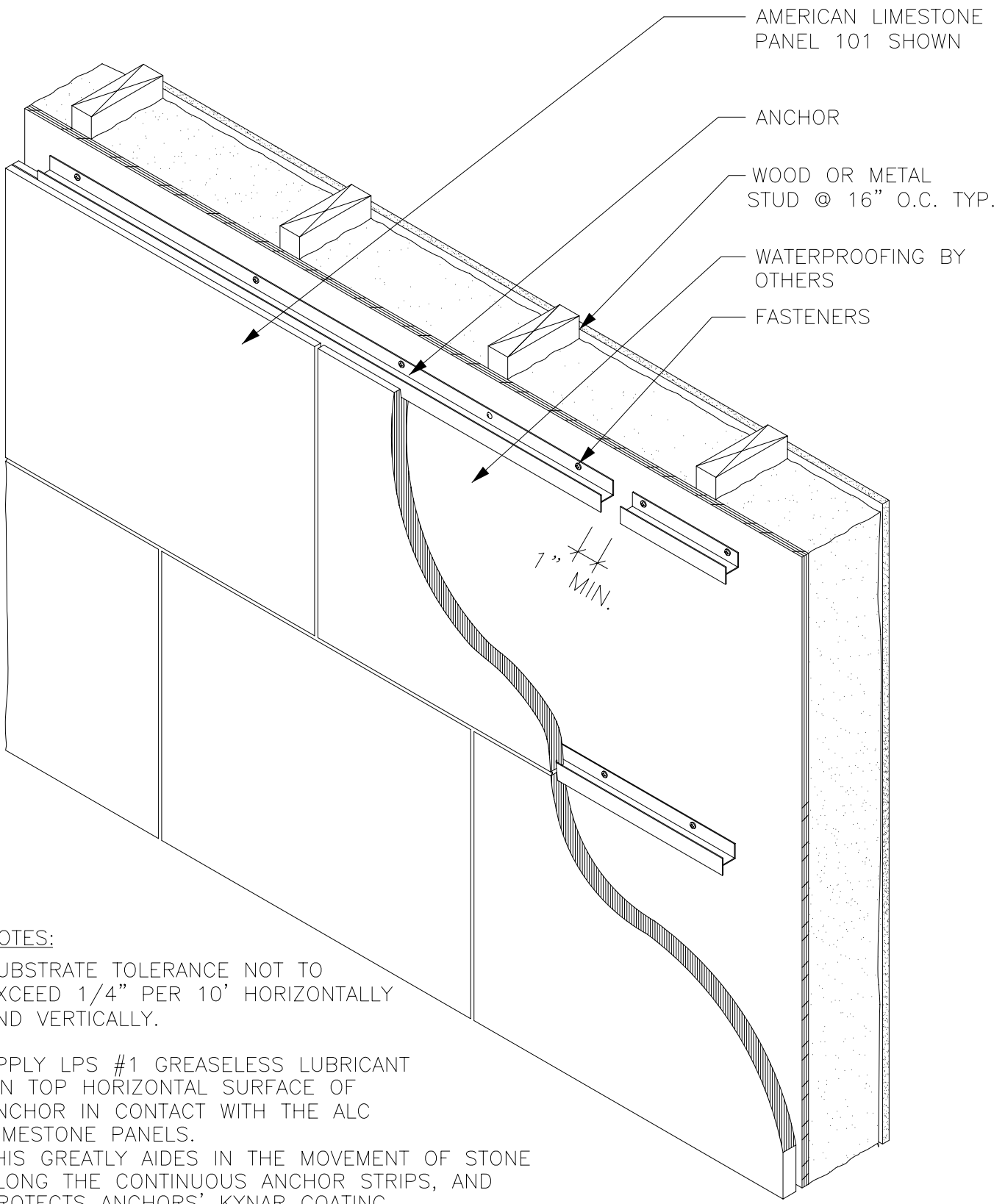
**3.1.4**



Individual Anchor  
Installation  
(See p. 3.1.4 of  
ALC Solution Manual)



Individual Anchor Installation  
(See p. 3.1.4 of ALC Solution Manual)



NOTES:

1. SUBSTRATE TOLERANCE NOT TO EXCEED 1/4" PER 10' HORIZONTALLY AND VERTICALLY.
2. APPLY LPS #1 GREASELESS LUBRICANT ON TOP HORIZONTAL SURFACE OF ANCHOR IN CONTACT WITH THE ALC LIMESTONE PANELS. THIS GREATLY AIDES IN THE MOVEMENT OF STONE ALONG THE CONTINUOUS ANCHOR STRIPS, AND PROTECTS ANCHORS' KYNAR COATING.
3. ALLOW 1" MIN. GAP BETWEEN CONTINUOUS ANCHORS TO PROVIDE SEEPAGE.

STONE WEIGHT  
WIND LOAD

145 PCF  
20 PSF

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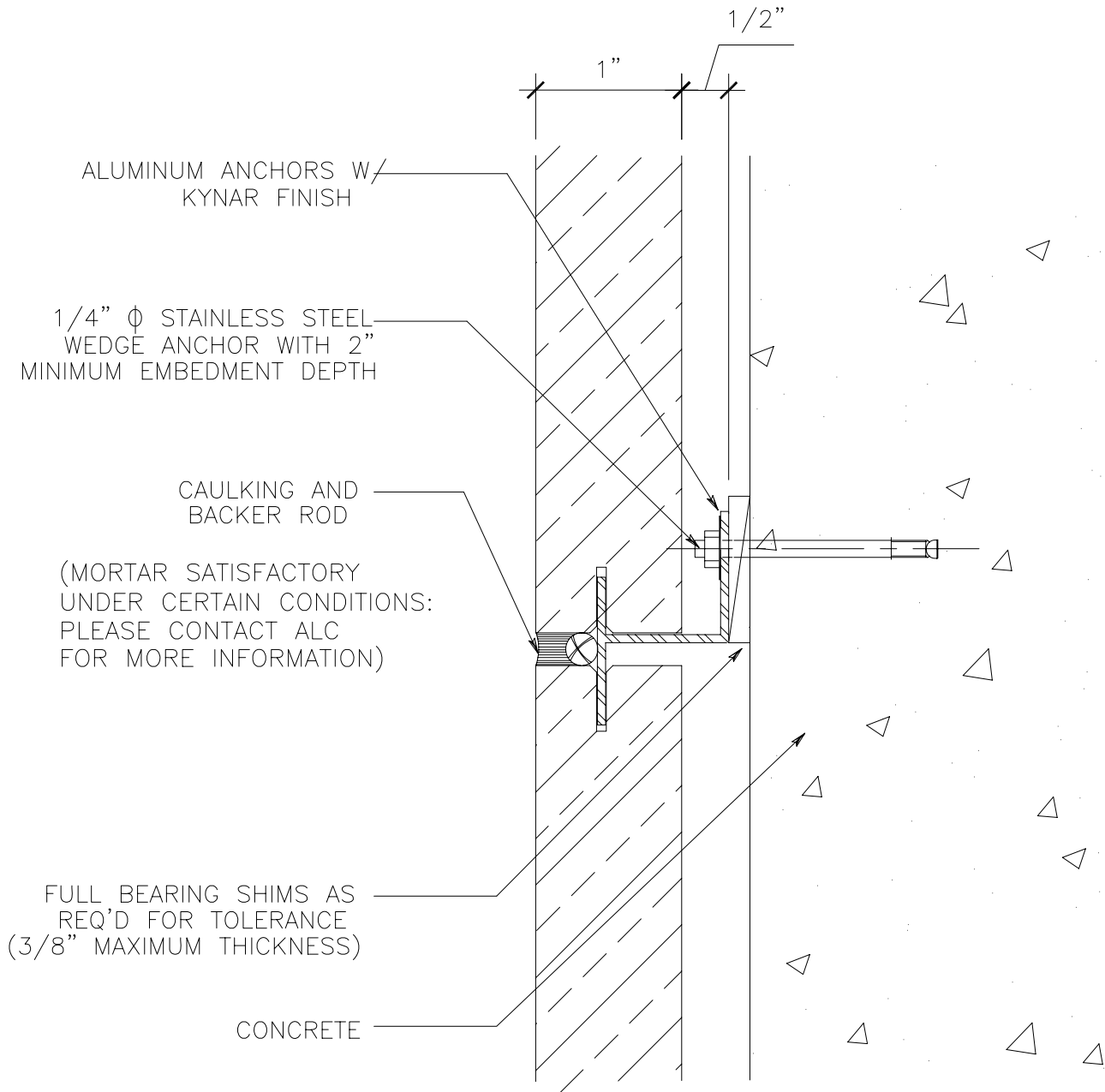
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TYPICAL WALL INSTALLATION – OPTION 2

**3.1.5**



Continuous Anchor Installation  
(See p. 3.1.5 of ALC Solution Manual)



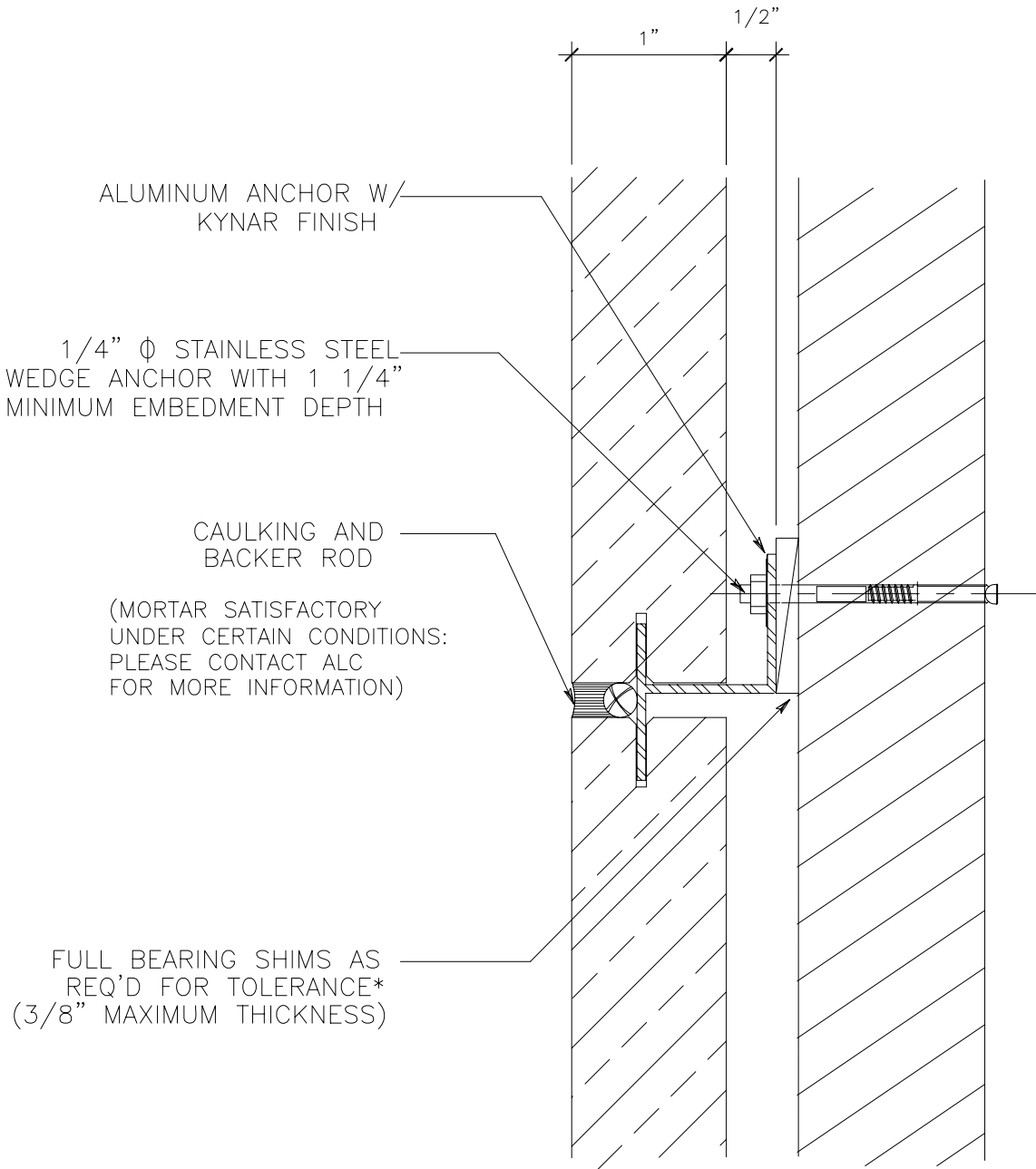
1 INTERMEDIATE STONE ANCHOR  
FOR USE @ CONCRETE BACK-UP

IF SHIM SPACE EXCEEDS 3/8", CONSULT A PROFESSIONAL ENGINEER.

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INTERMEDIATE STONE ANCHOR DETAIL @ CONCRETE BACK-UP

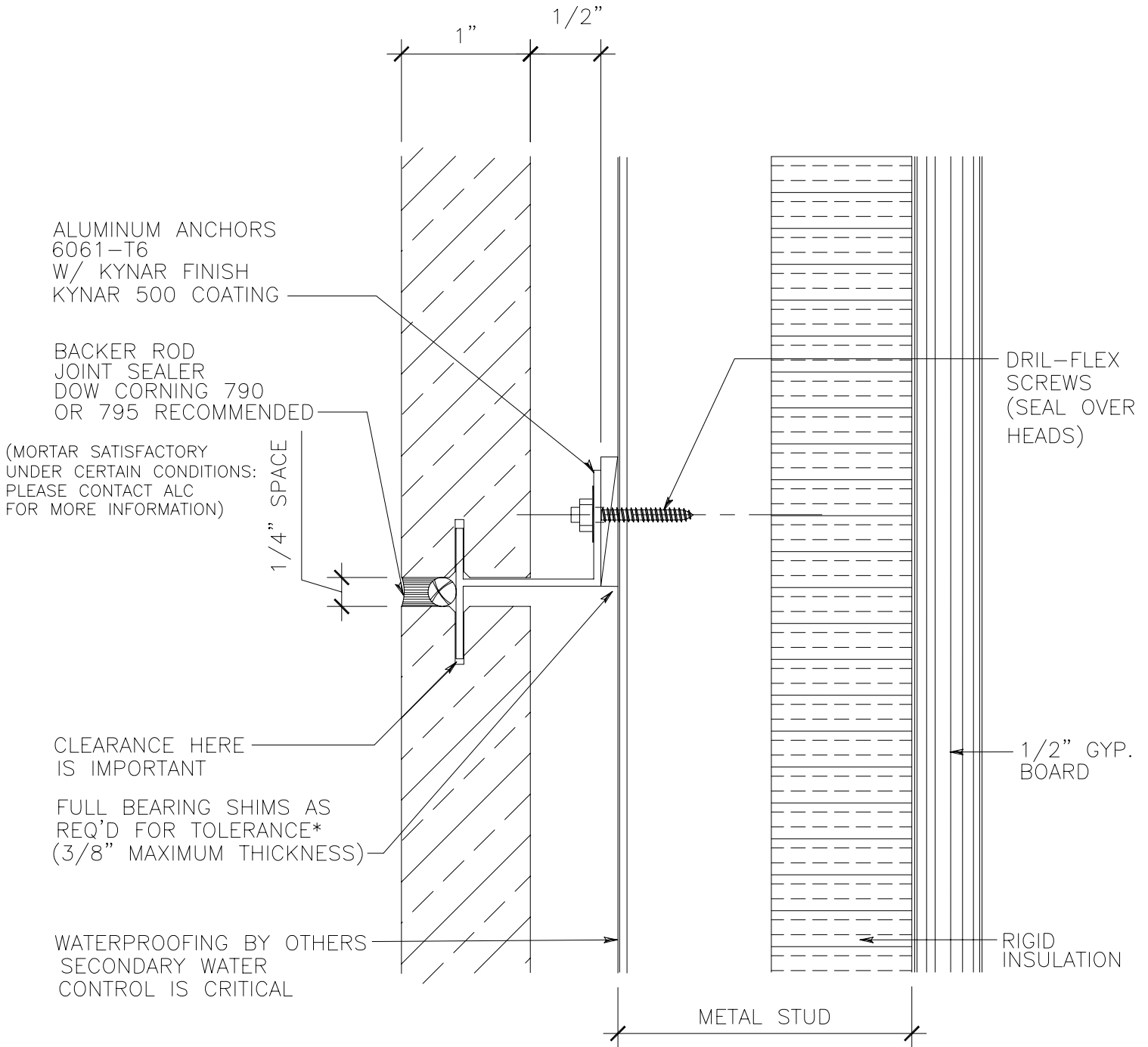
**3.1.5A**



1 INTERMEDIATE STONE ANCHOR  
FOR USE @ C.M.U. BLOCK BACK-UP

\*IF SHIM SPACE EXCEEDS 3/8", CONSULT A PROFESSIONAL ENGINEER.

<p><b>AMERICAN LIMESTONE COMPANY</b> A TEXAS CORPORATION WWW.AMERICANLIMESTONE.COM INFO@AMERICANLIMESTONE.COM</p>	<p>INTERMEDIATE STONE ANCHOR @ CMU BLOCK BACK-UP</p>	<p><b>3.1.5B</b></p>
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NOTE:  
STRUCTURAL BACK-UP WALL  
TOLERANCE NOT TO EXCEED 1/4"  
PER 10' HORIZONTAL AND VERTICAL

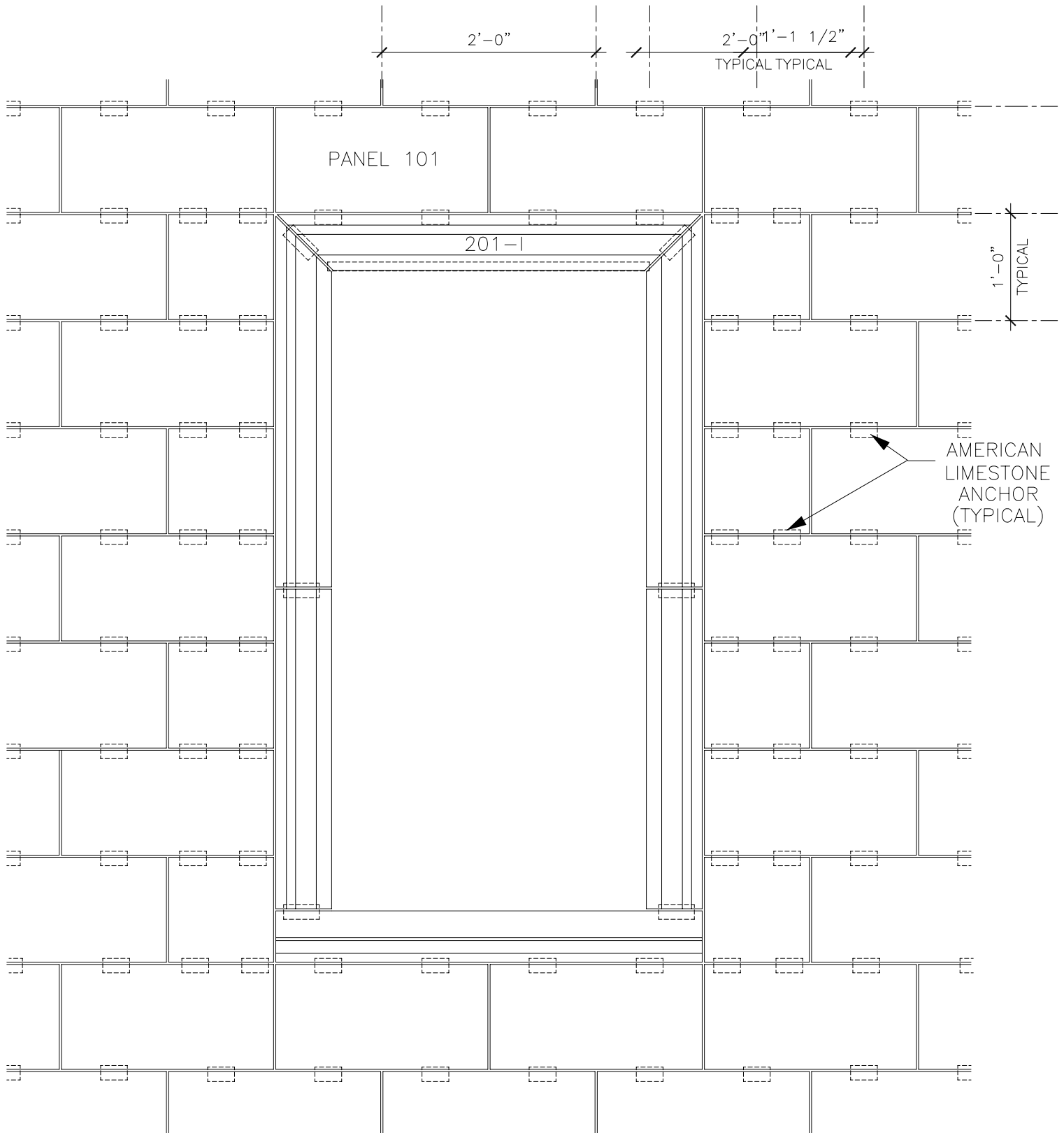
1 INTERMEDIATE STONE ANCHOR  
FOR USE @ METAL STUD BACK-UP

\*IF SHIM SPACE EXCEEDS 3/8", CONSULT A PROFESSIONAL ENGINEER.

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INTERMEDIATE STONE ANCHOR DETAIL @ METAL STUD BACK-UP

3.1.5C

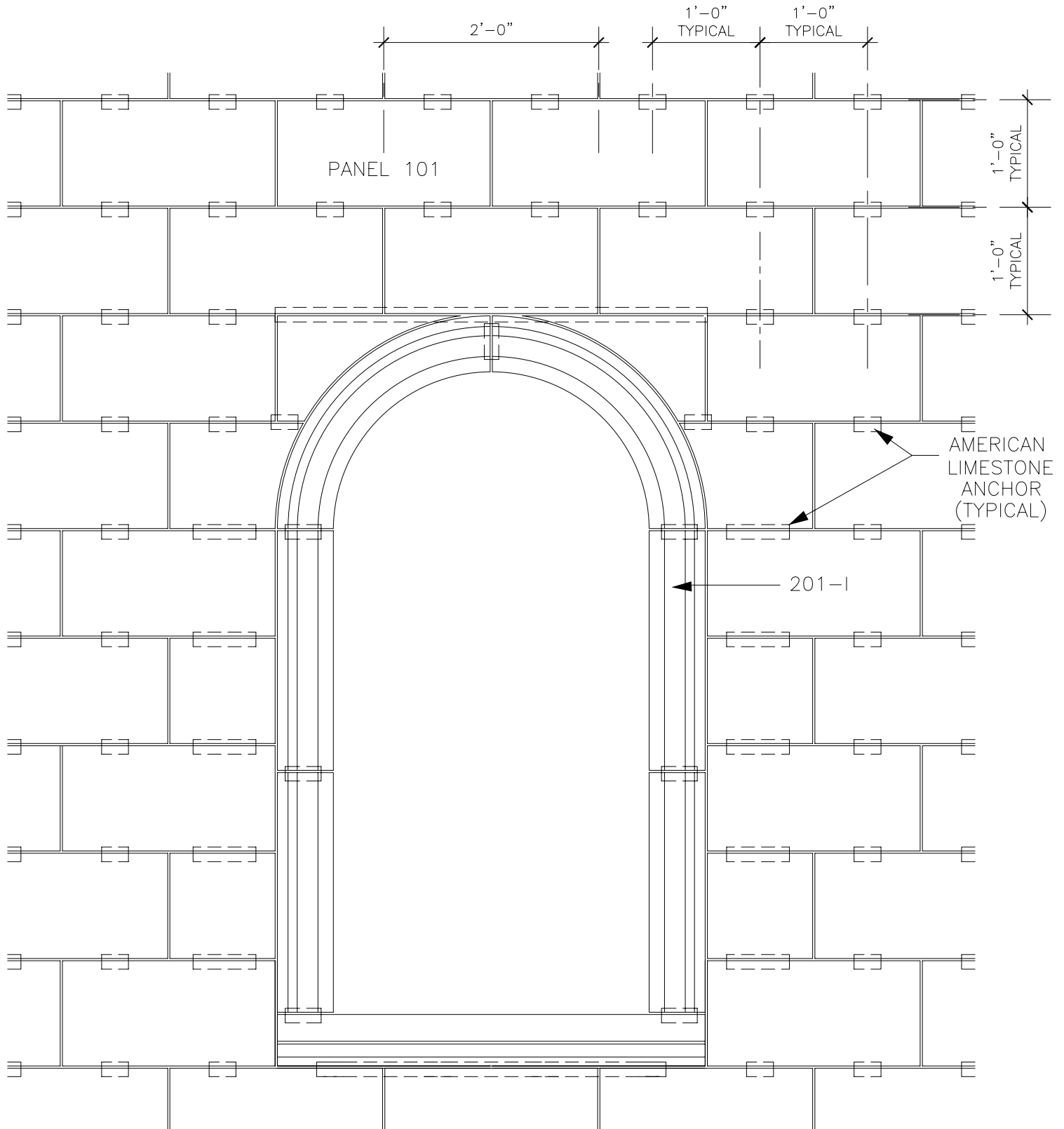


1 STONE ANCHOR ARRANGEMENT AT WINDOW  
PANEL 101 AND PROFILE 201-I SHOWN

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STONE ANCHOR ARRANGEMENT AT WINDOW

**3.1.6**

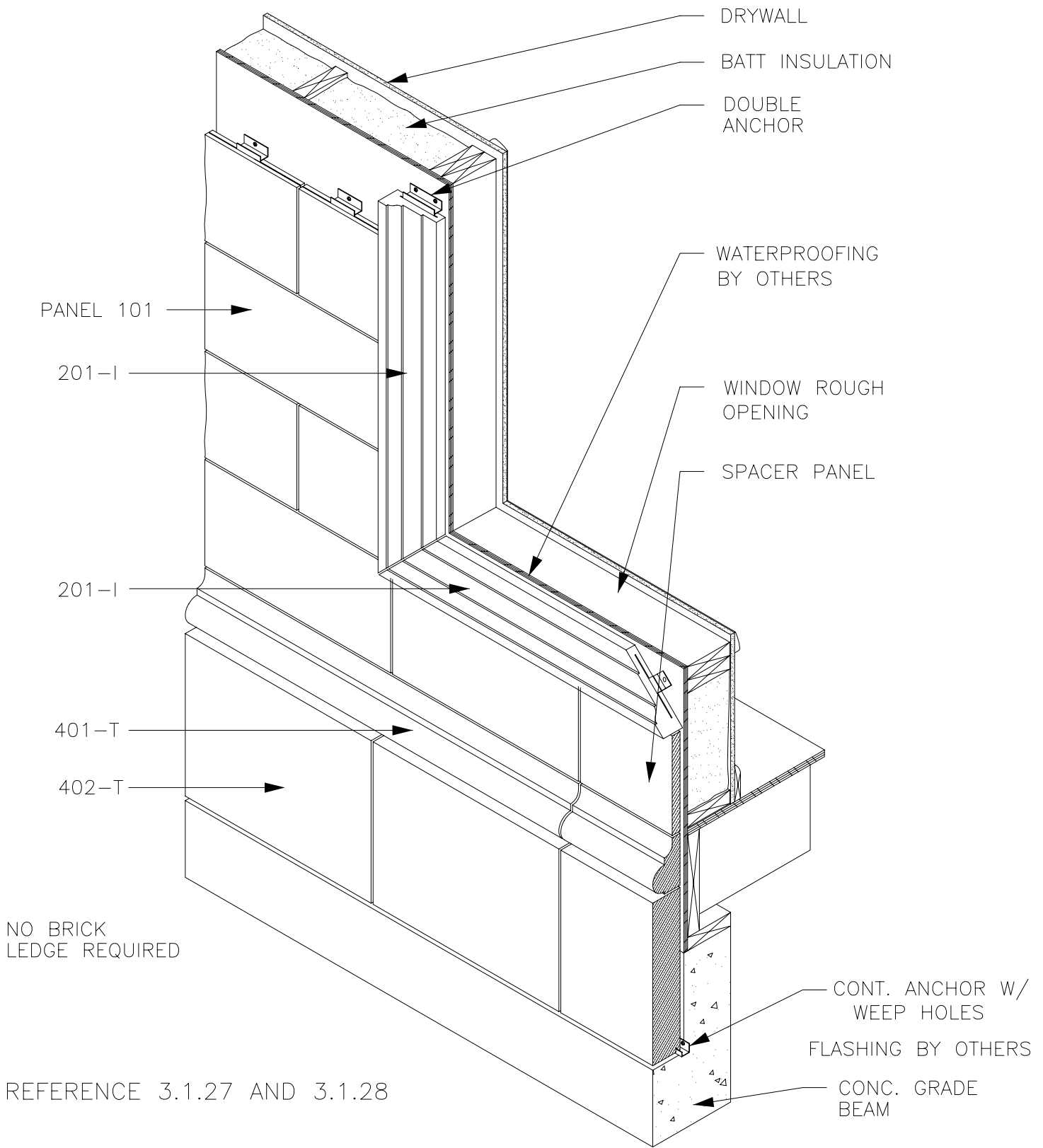


1 STONE ANCHOR ARRANGEMENT AT WINDOW ARCH  
 PANEL 101 AND PROFILE 201-1 SHOWN

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STONE ANCHOR ARRANGEMENT AT WINDOW ARCH

3.1.7



1

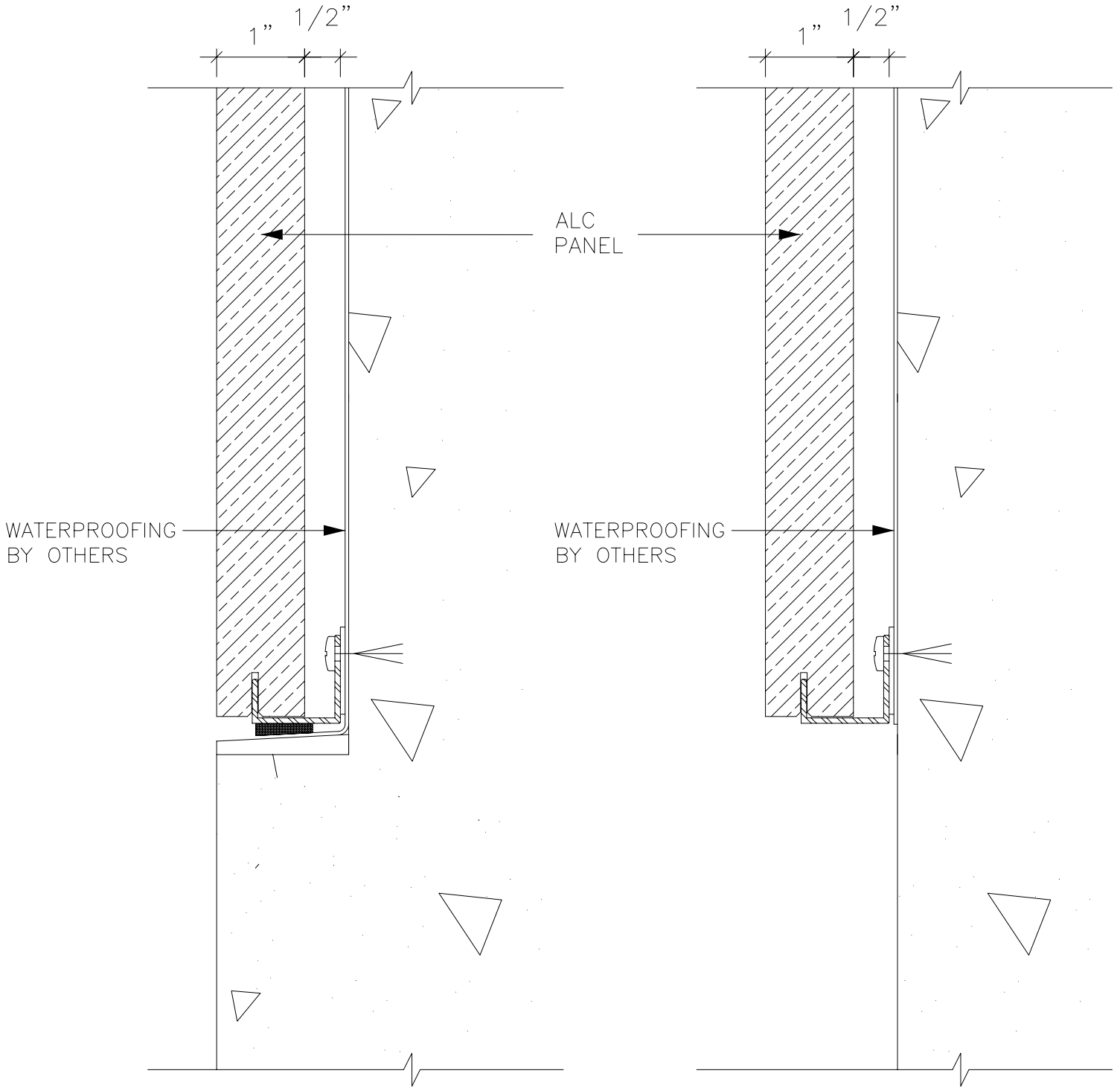
ISOMETRIC AT BASE AND WINDOW

PANEL 101 AND PROFILES 201-1, 401-T AND 401-T SHOWN

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ISOMETRIC AT BASE AND WINDOW

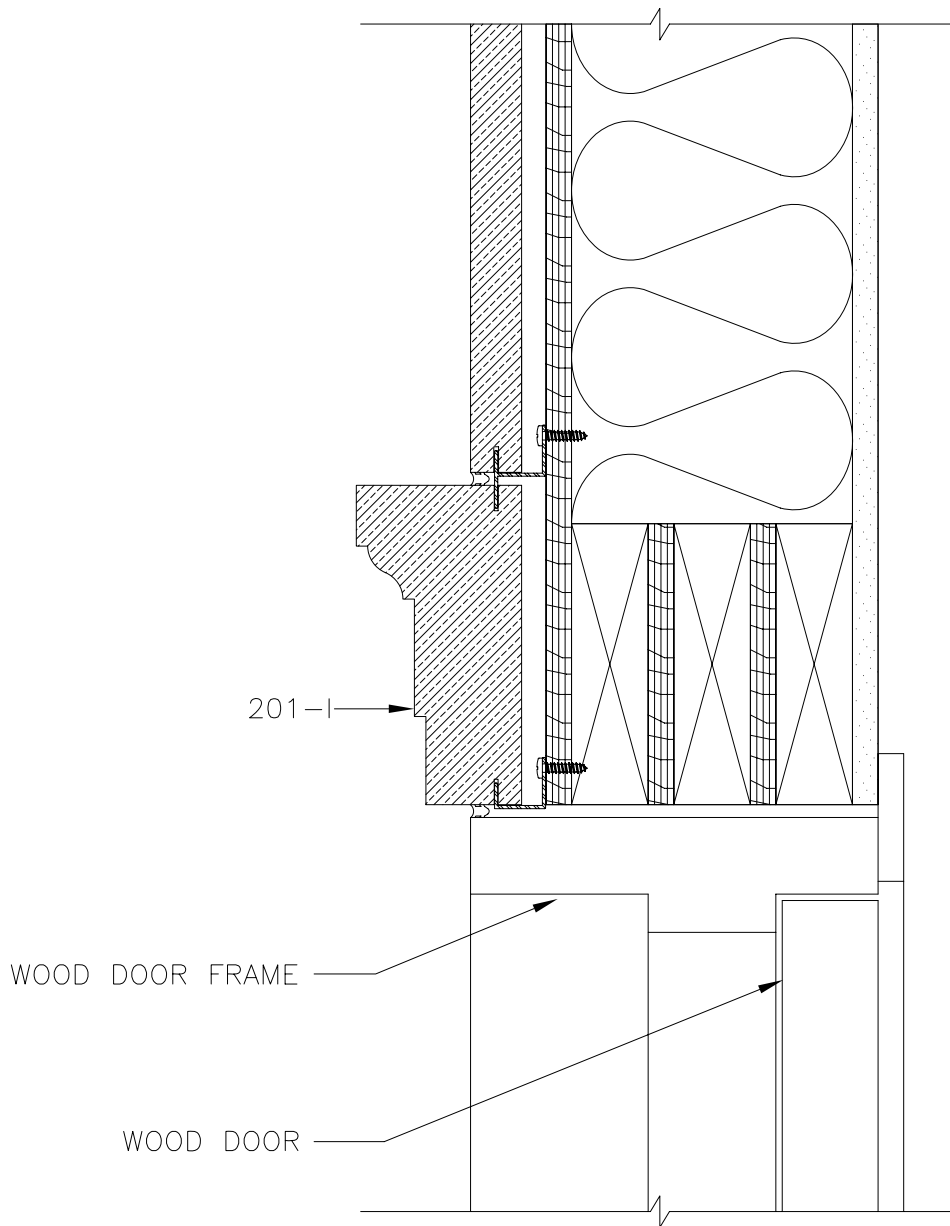
**3.1.8**



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STONE CLADDING BASE

3.1.9



WATERPROOFING NOT SHOWN - REQUIRED BY OTHERS

1 DOOR DETAIL AT HEADER  
 PROFILE 201-I SHOWN

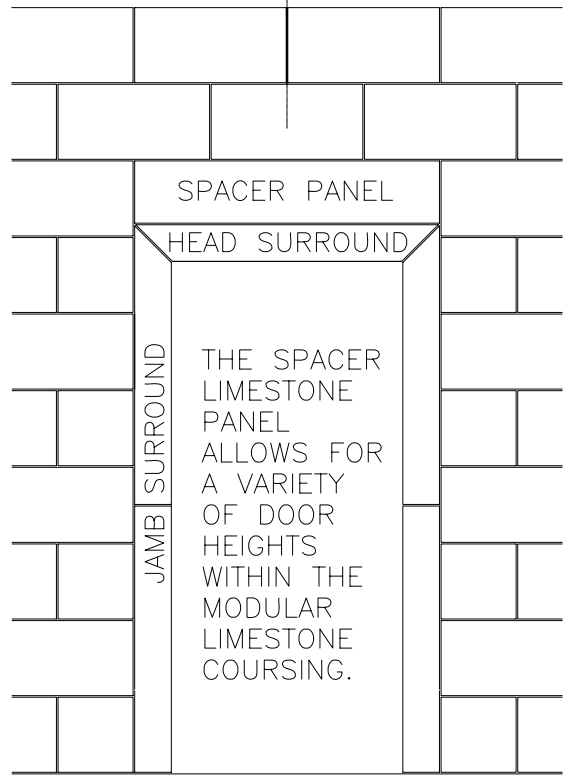
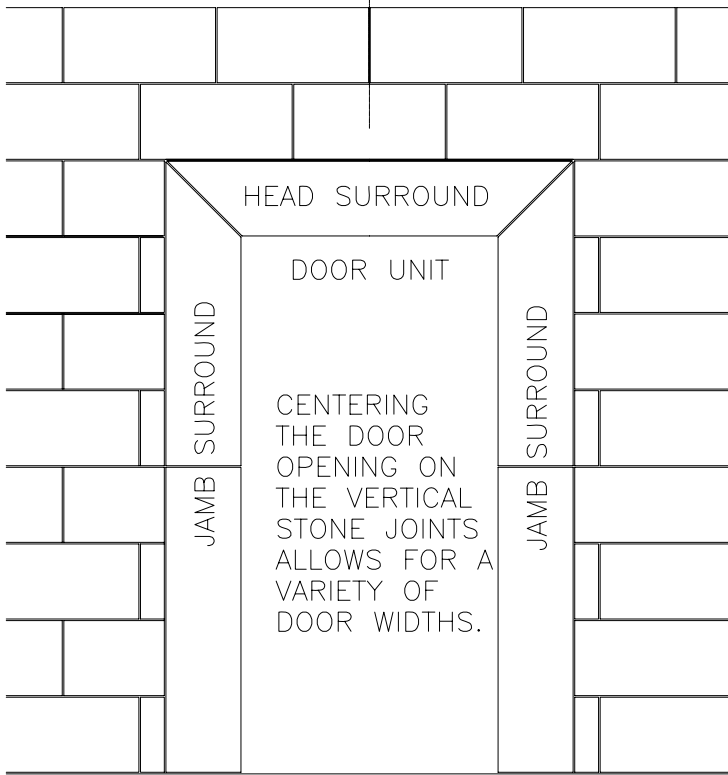
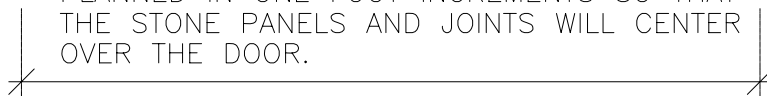
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DOOR DETAIL AT HEADER

3.1.10

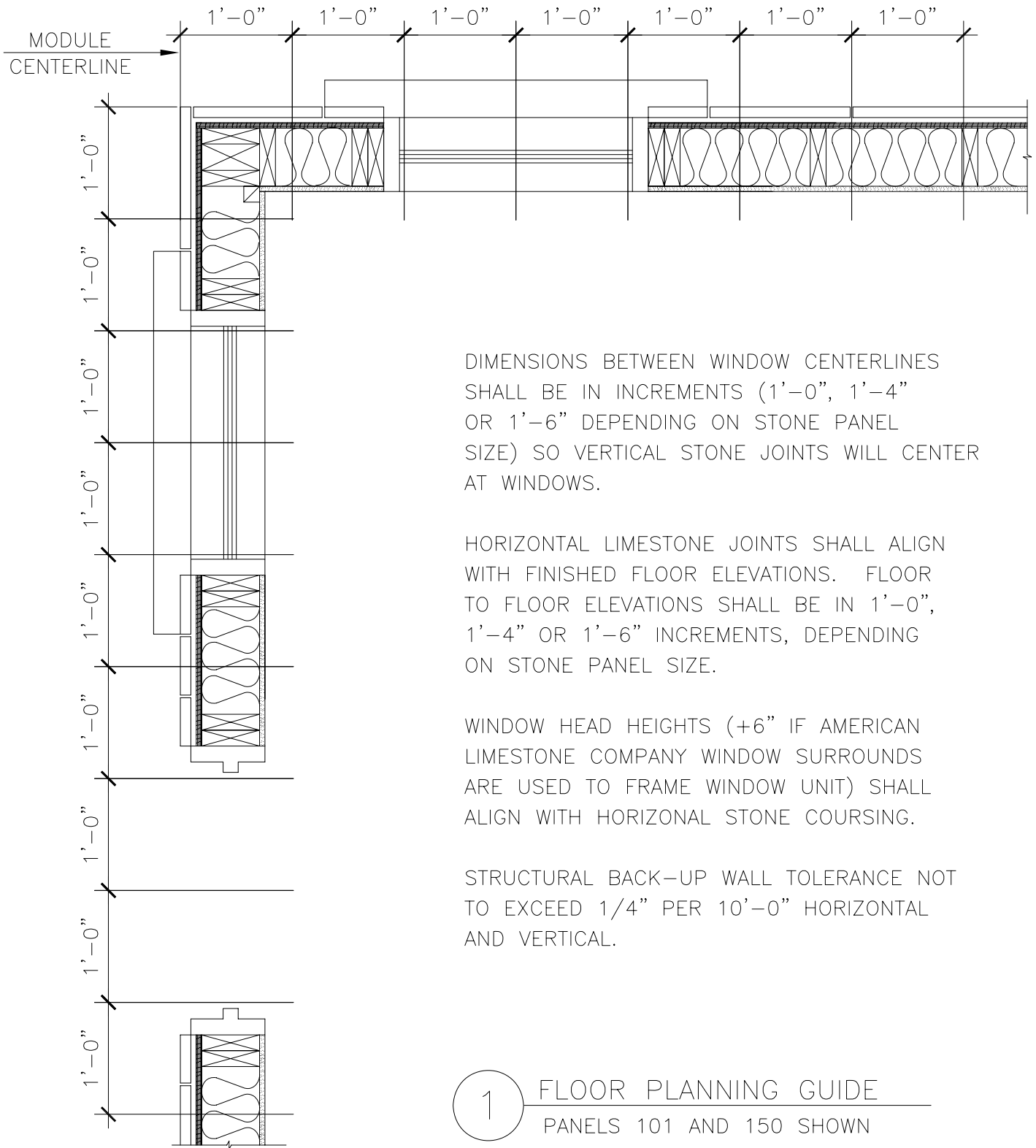
AMERICAN LIMESTONE DOOR SURROUNDS WILL ACCEPT STANDARD DOOR UNIT SIZES

DISTANCES BETWEEN THE CENTERLINES OF DOORS (OR DOORS AND WINDOWS) SHALL BE PLANNED IN ONE FOOT INCREMENTS SO THAT THE STONE PANELS AND JOINTS WILL CENTER OVER THE DOOR.



1 DOOR PLANNING GUIDE

1'-4" FOR 32" X 16" STONE PANEL



DIMENSIONS BETWEEN WINDOW CENTERLINES SHALL BE IN INCREMENTS (1'-0", 1'-4" OR 1'-6" DEPENDING ON STONE PANEL SIZE) SO VERTICAL STONE JOINTS WILL CENTER AT WINDOWS.

HORIZONTAL LIMESTONE JOINTS SHALL ALIGN WITH FINISHED FLOOR ELEVATIONS. FLOOR TO FLOOR ELEVATIONS SHALL BE IN 1'-0", 1'-4" OR 1'-6" INCREMENTS, DEPENDING ON STONE PANEL SIZE.

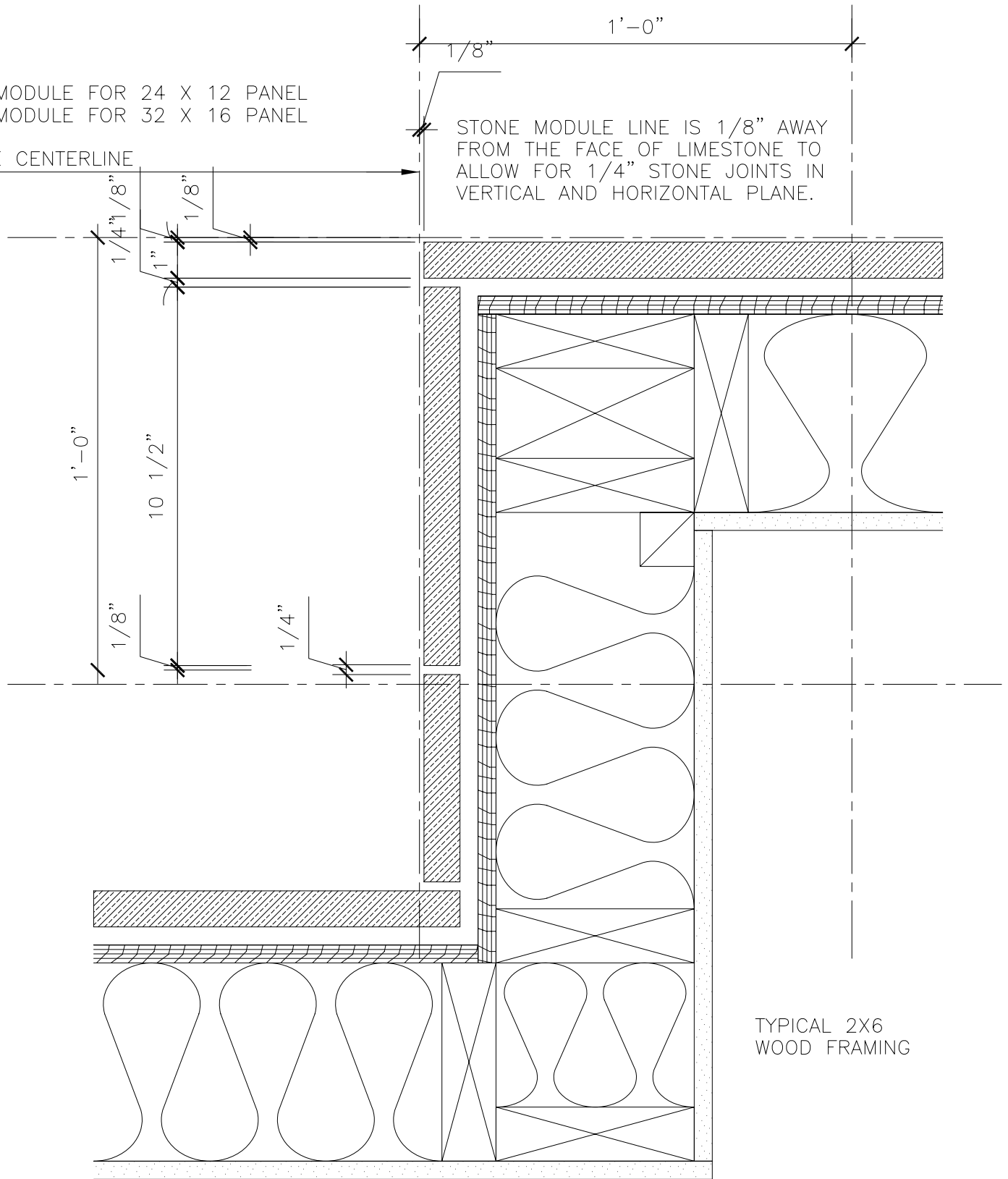
WINDOW HEAD HEIGHTS (+6" IF AMERICAN LIMESTONE COMPANY WINDOW SURROUNDS ARE USED TO FRAME WINDOW UNIT) SHALL ALIGN WITH HORIZONTAL STONE COURSING.

STRUCTURAL BACK-UP WALL TOLERANCE NOT TO EXCEED 1/4" PER 10'-0" HORIZONTAL AND VERTICAL.

1 FLOOR PLANNING GUIDE  
PANELS 101 AND 150 SHOWN

1'-0" MODULE FOR 24 X 12 PANEL  
 1'-4" MODULE FOR 32 X 16 PANEL

MODULE CENTERLINE

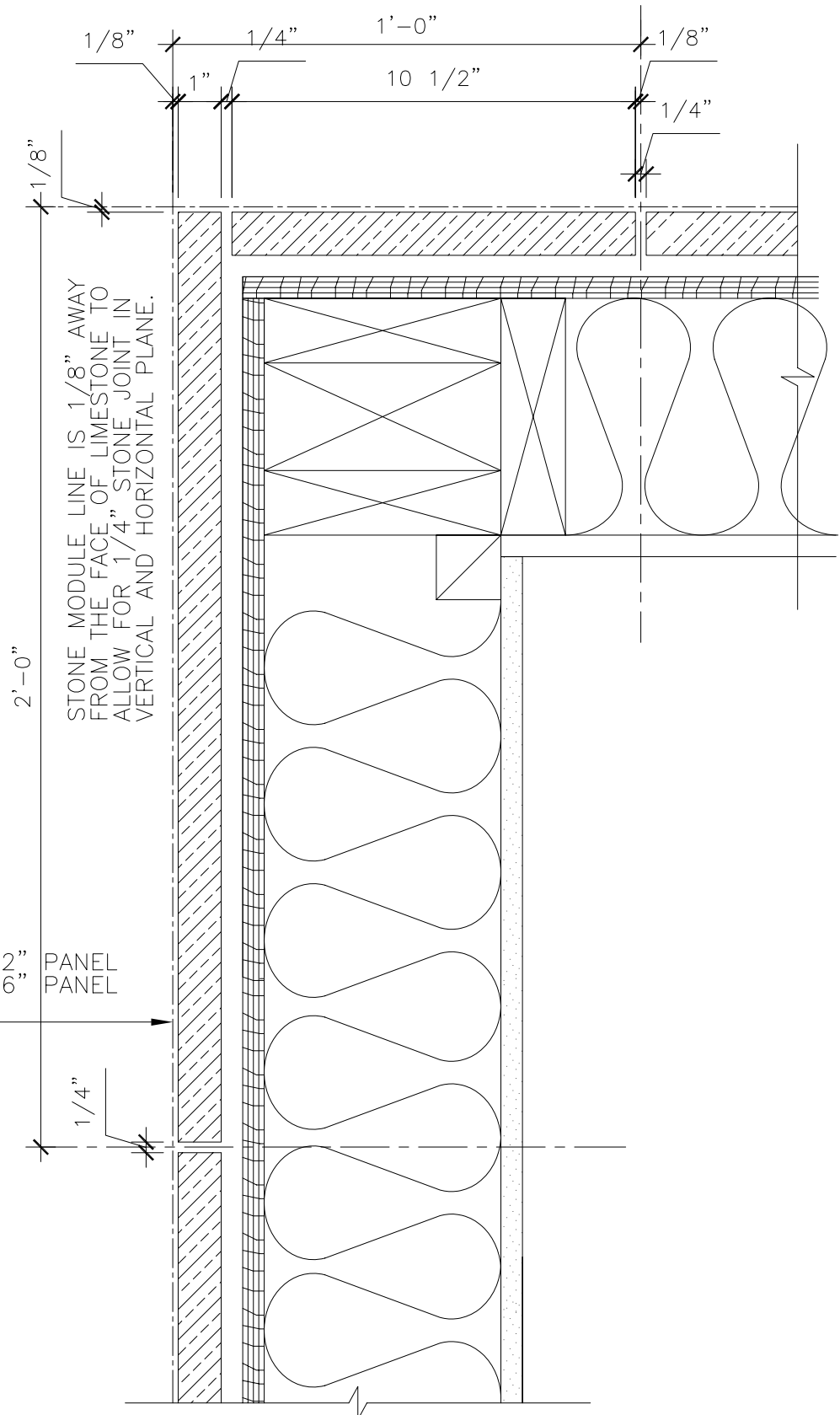


① PLAN SECTION AT CORNER

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PLAN SECTION AT CORNER

3.1.13

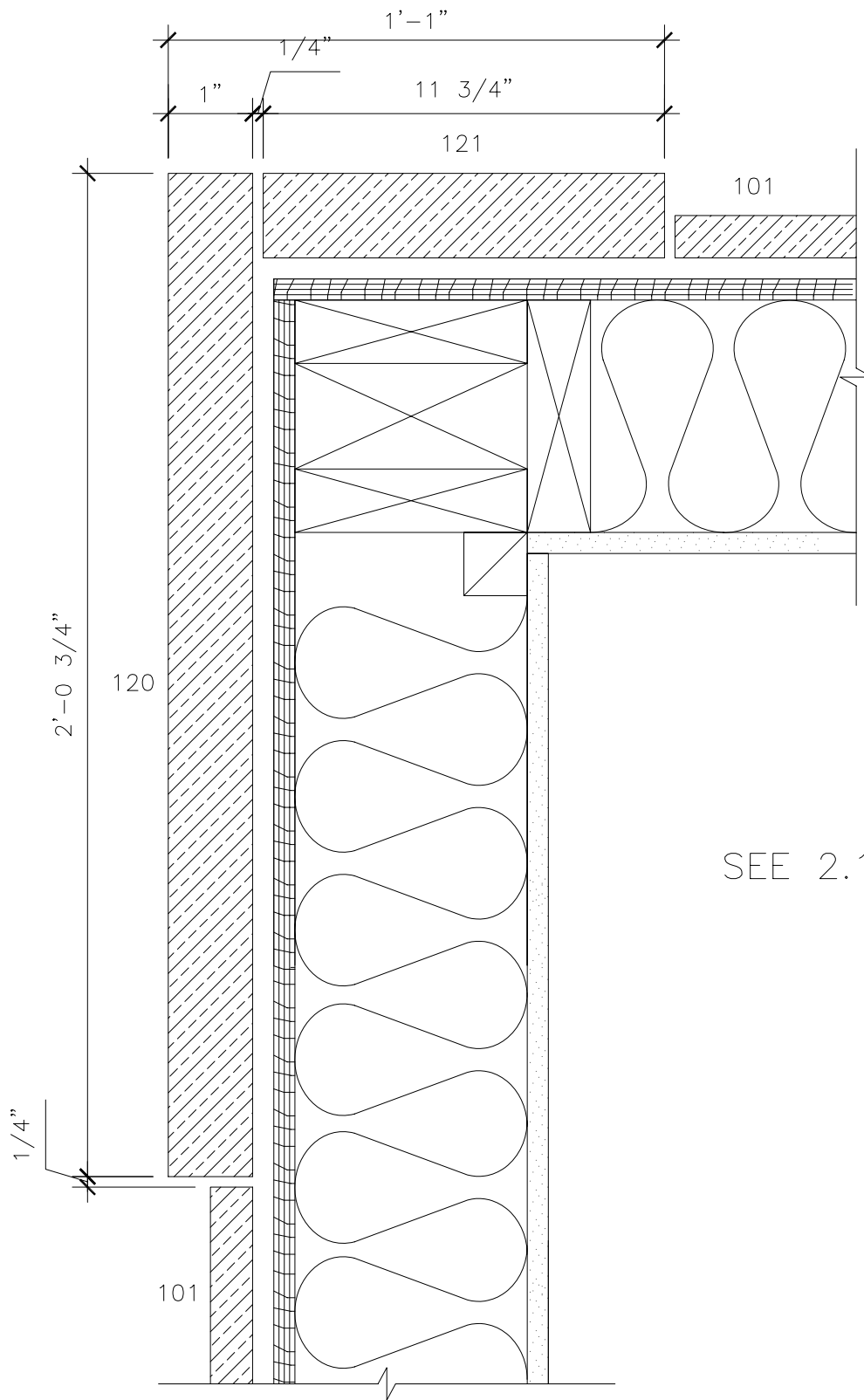


1 PLAN SECTION AT CORNER  
PANEL 101 SHOWN

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PLAN SECTION AT CORNER - PANEL 101 SHOWN

3.1.14



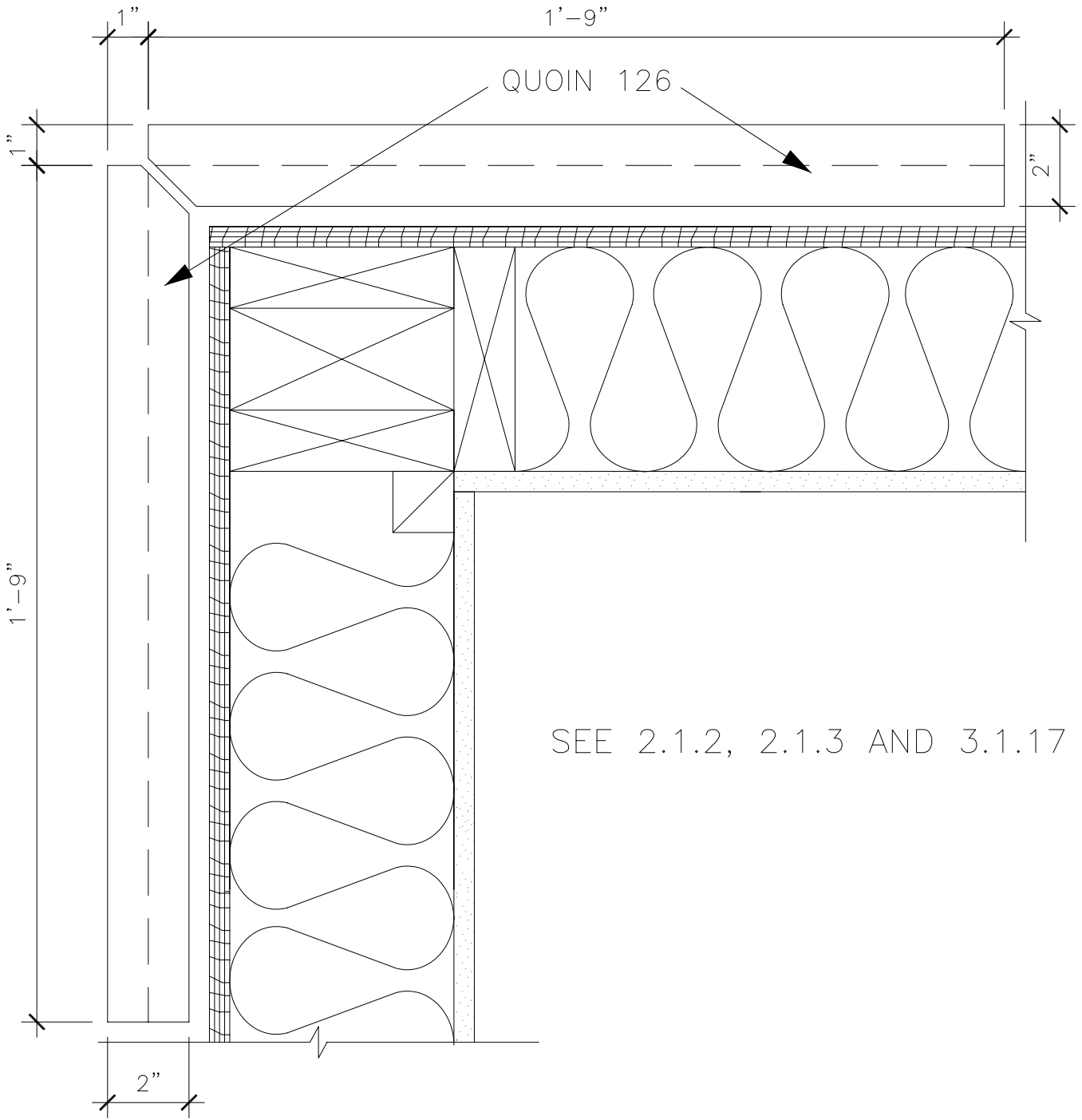
SEE 2.1.1

1 PLAN OF QUOINED CORNER  
PANELS 120 AND 121 SHOWN

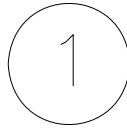
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PLAN OF QUOINED CORNER – PANELS 120 AND 121 SHOWN

**3.1.15**



SEE 2.1.2, 2.1.3 AND 3.1.17

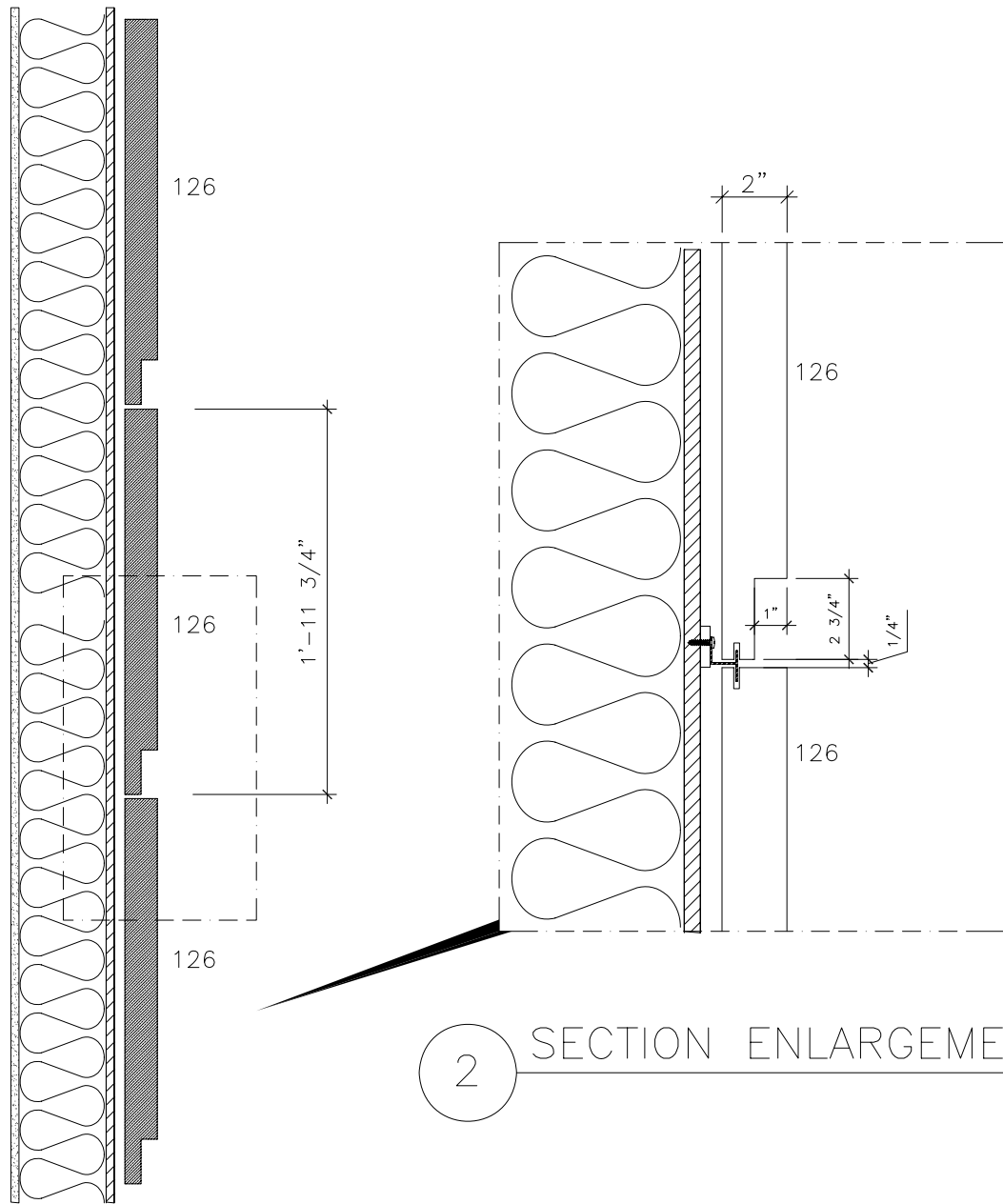


TUSCAN PLAN CORNER DETAIL  
 QUOIN 126 SHOWN

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TUSCAN PLAN CORNER DETAIL – QUOIN 126 SHOWN

**3.1.16**

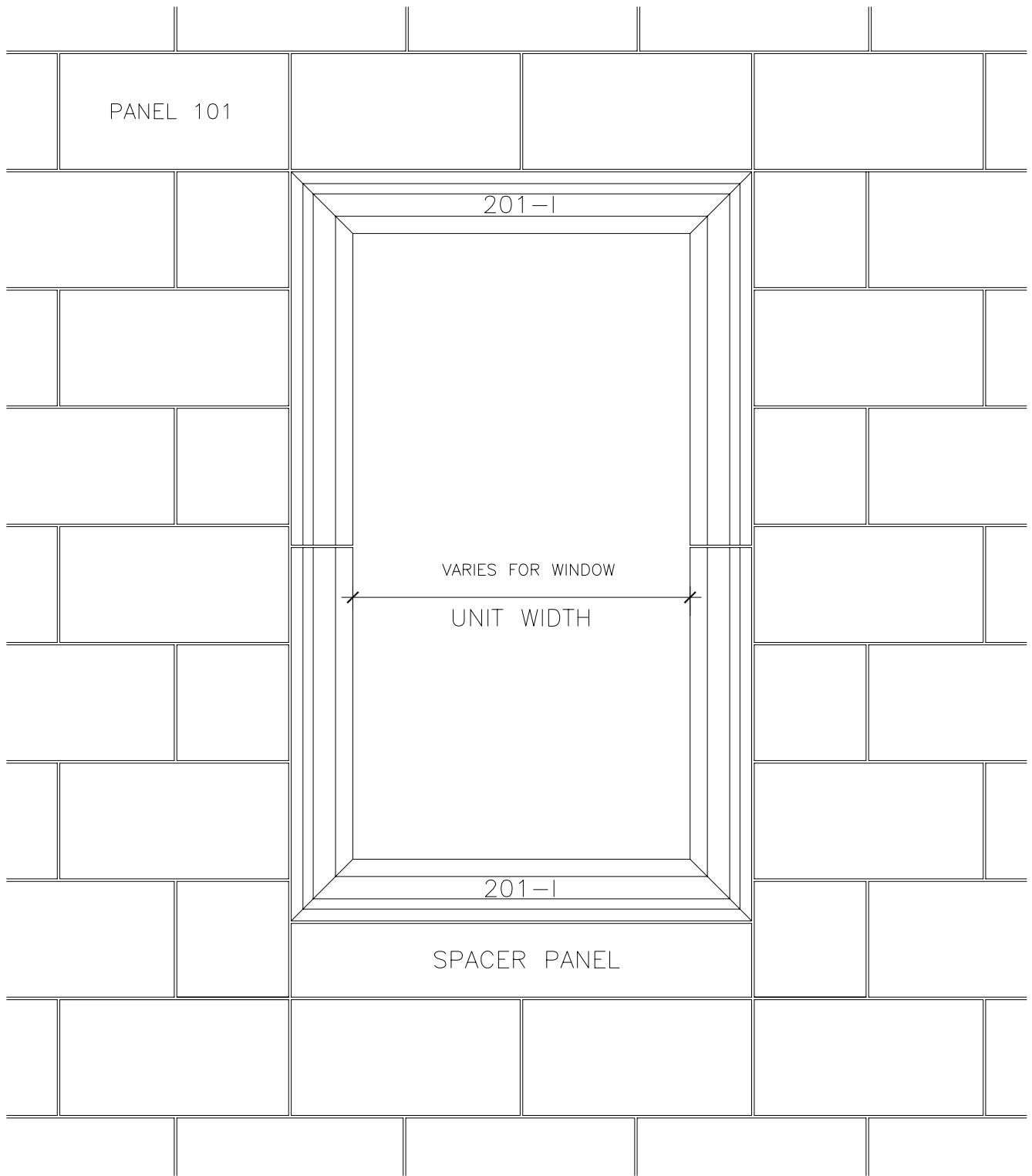


1 SECTION — QUOIN 126

2 SECTION ENLARGEMENT

SEE 2.1.2, 2.1.3 AND 3.1.16

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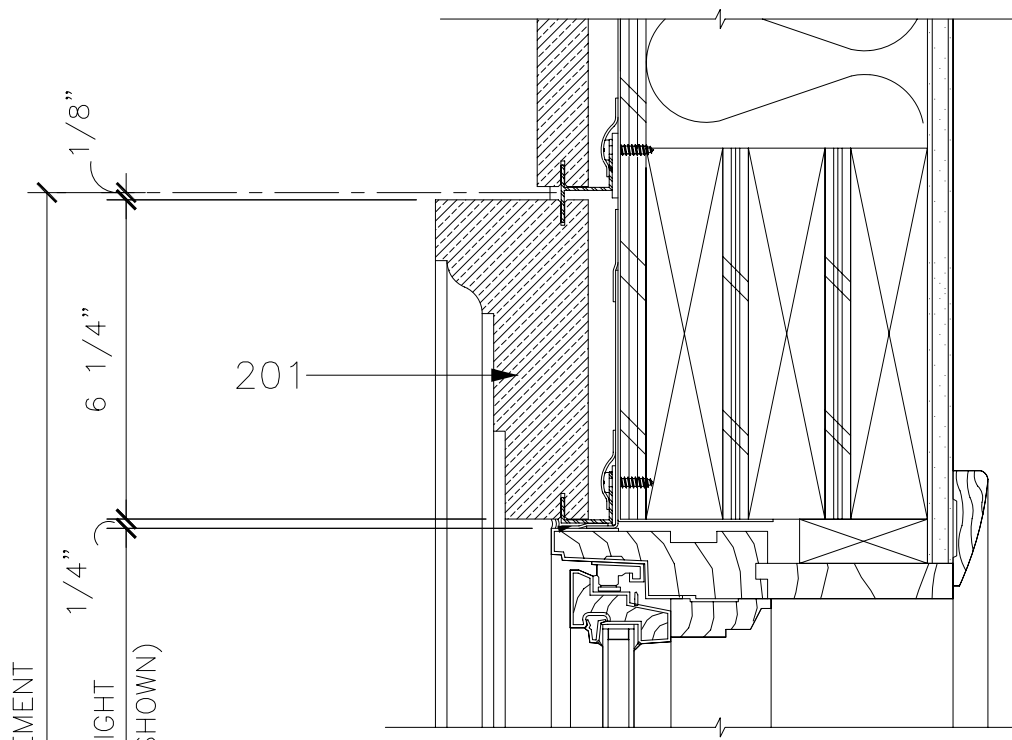
1 WINDOW ELEVATION 1

REFERENCE 3.1.19

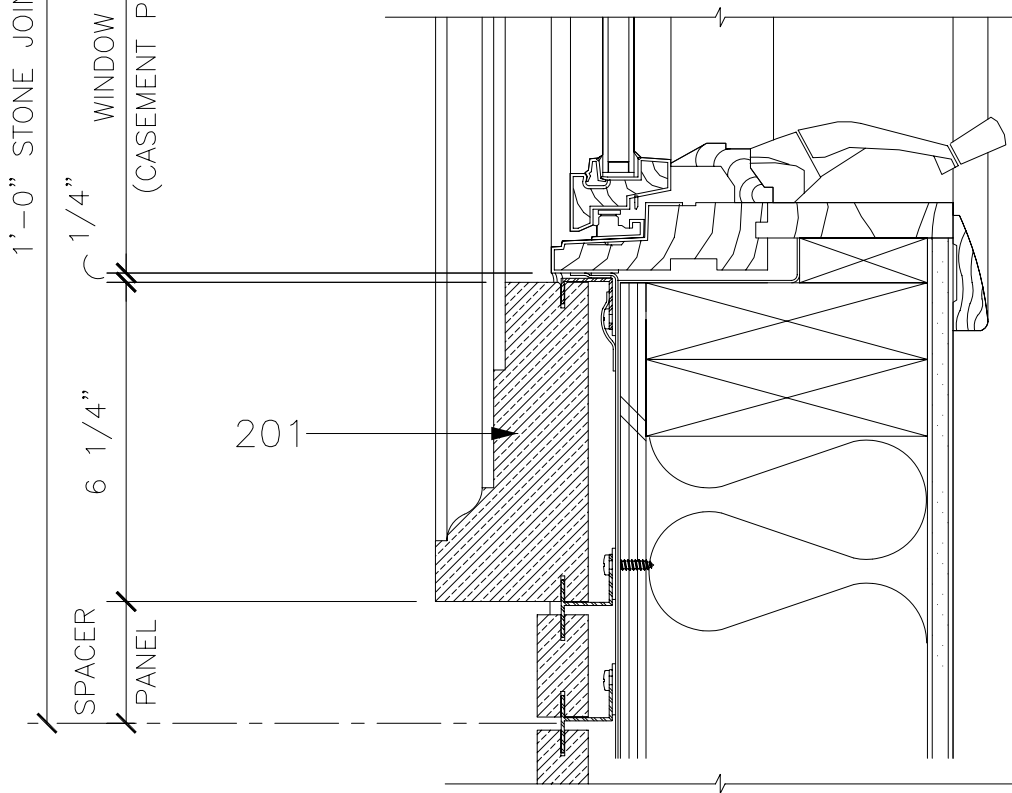
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WINDOW ELEVATION 1

**3.1.18**



1 SECTION @ HEADER

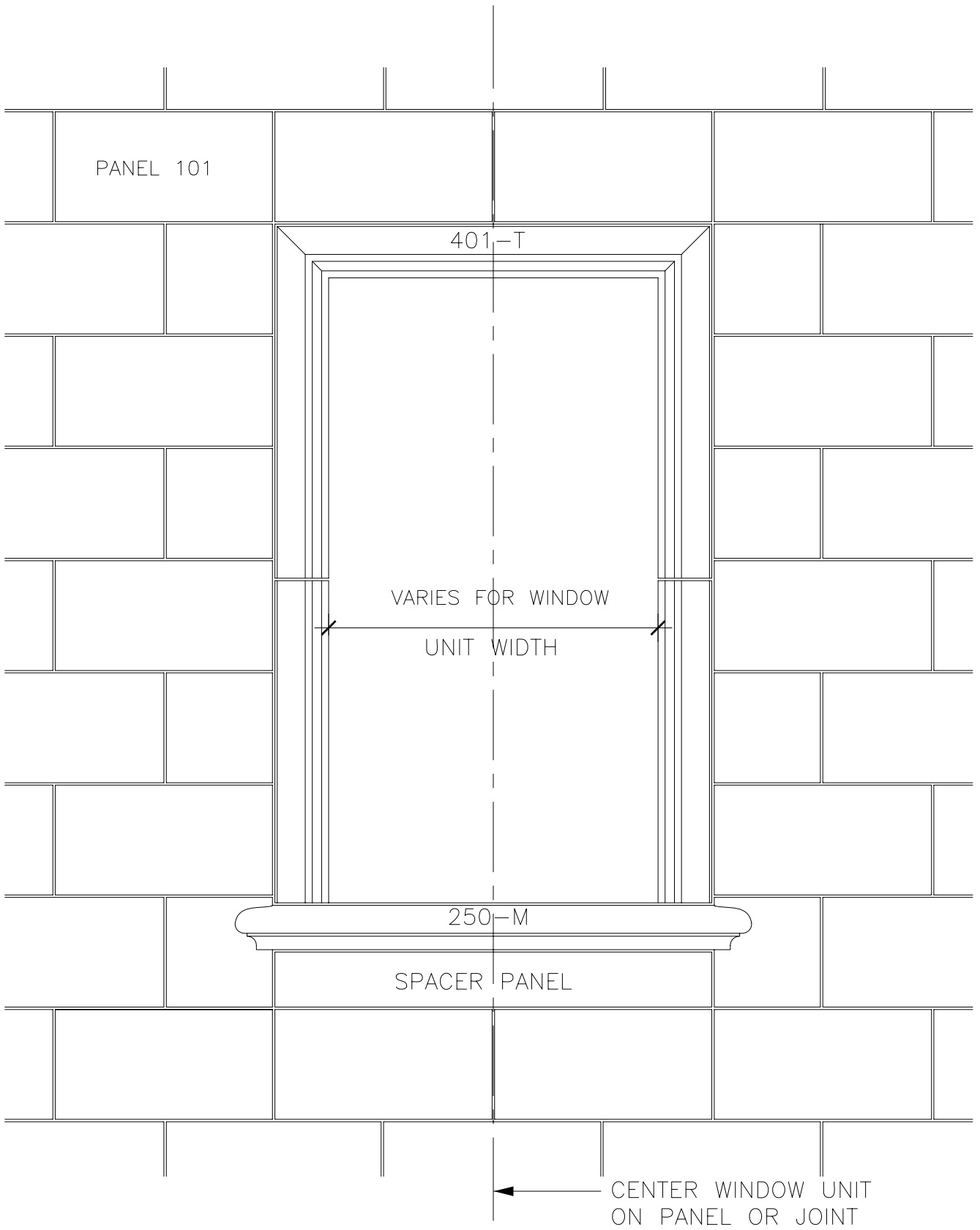


2 SECTION @ SILL

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WINDOW SECTION 1

3.1.19



REFERENCE 3.1.21

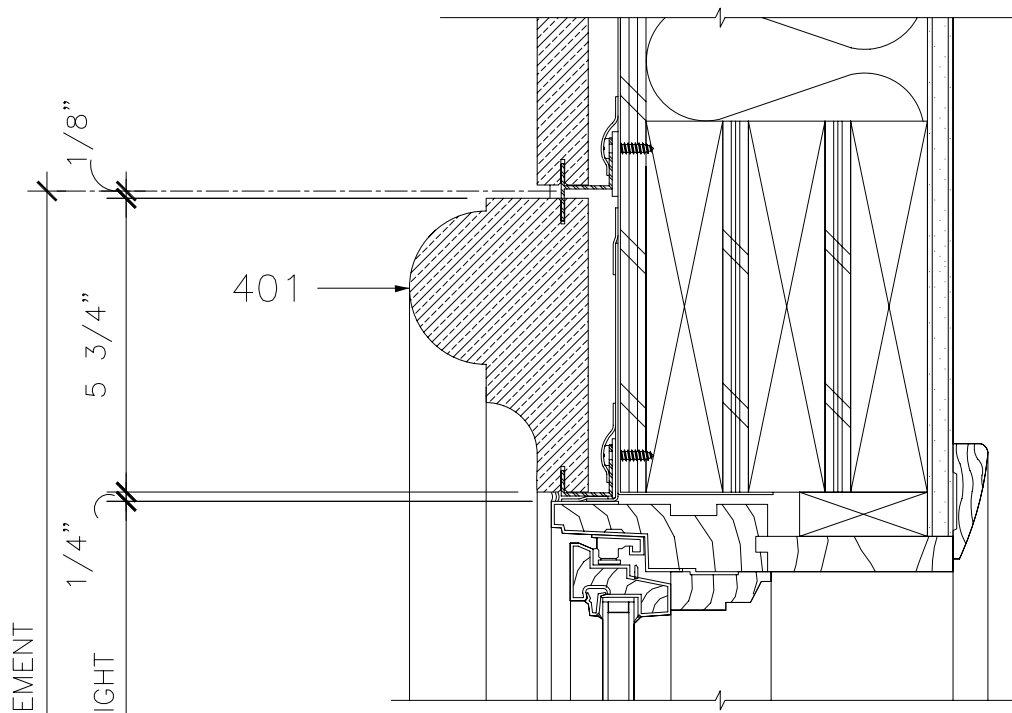
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WINDOW ELEVATION 2

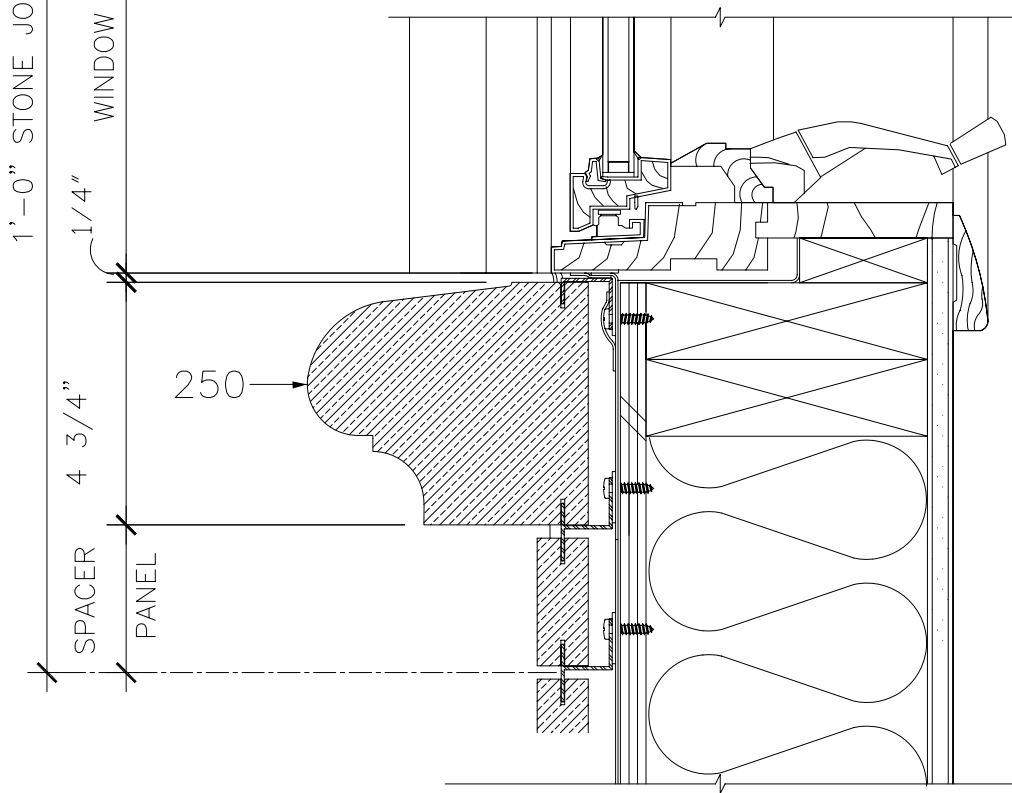
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WINDOW ELEVATION 2

**3.1.20**



1 SECTION @ HEADER



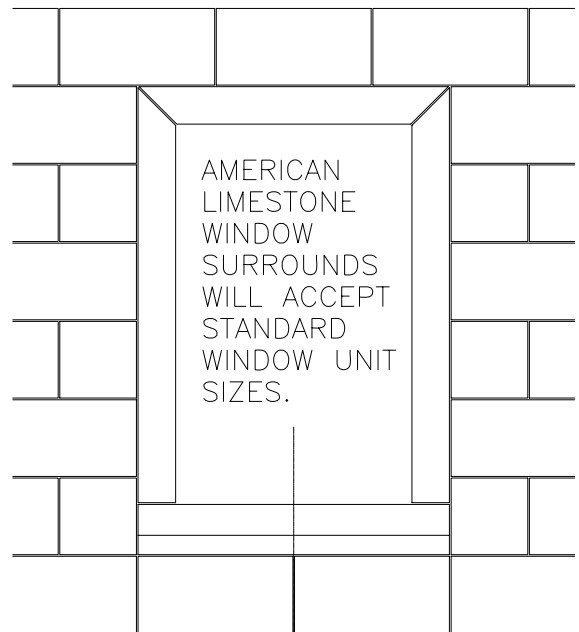
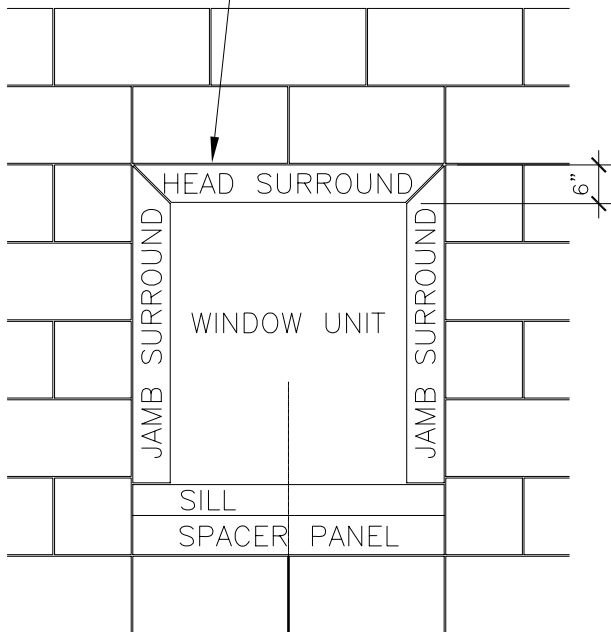
2 SECTION @ SILL  
WATERPROOFING BY OTHERS

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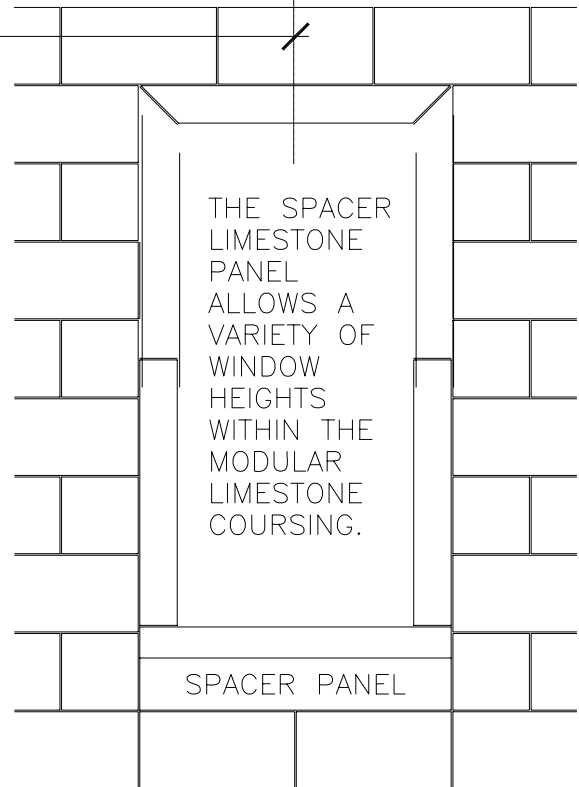
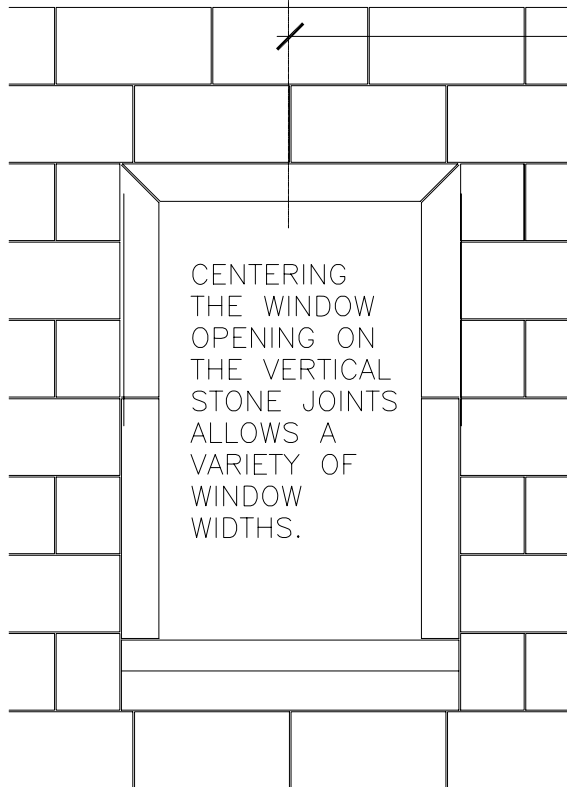
WINDOW SECTION 2

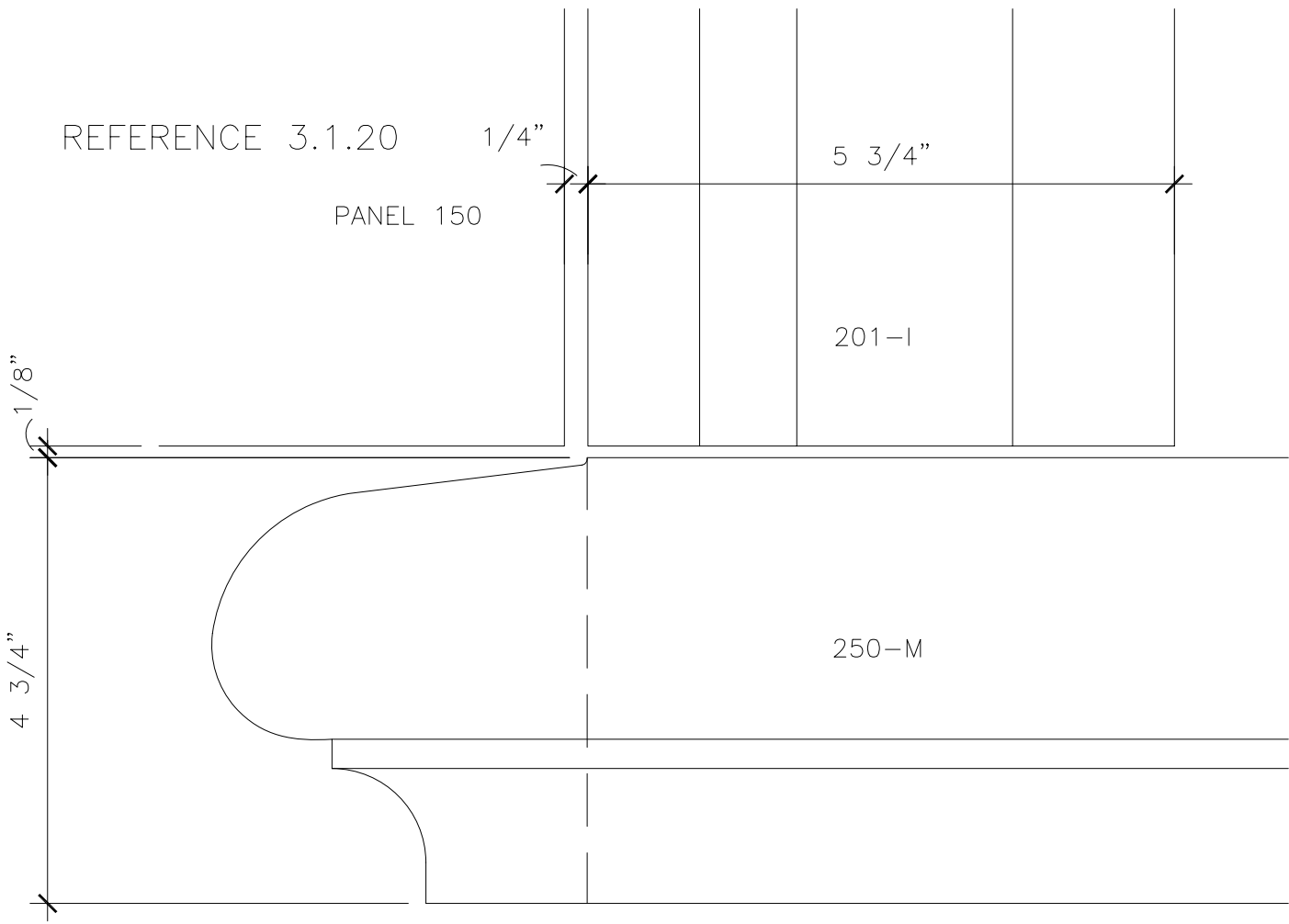
3.1.21

ARCHITECTS AND BUILDERS SHALL ALIGN THE TOP OF THE WINDOW UNIT WITH THE HORIZONTAL STONE COURSING. IF A WINDOW SURROUND IS SPECIFIED AS INDICATED HERE, THE HEAD OF THE WINDOW UNIT SHALL BE SIX (6) INCHES BELOW THE ADJACENT STONE COURSE.

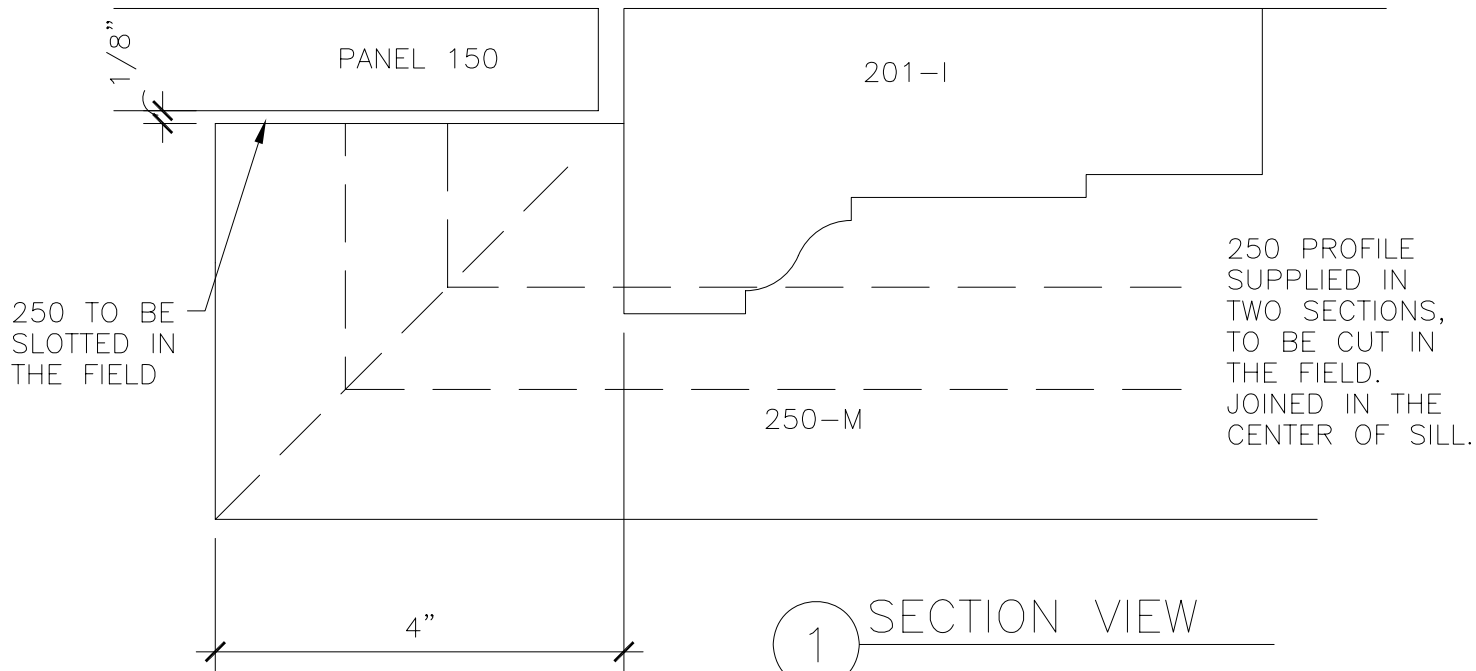


DISTANCES BETWEEN THE CENTERLINES OF WINDOWS SHALL BE PLANNED IN ONE FOOT INCREMENTS SO THAT THE STONE PANELS AND JOINTS WILL CENTER OVER THE WINDOW.





2 ELEVATION VIEW

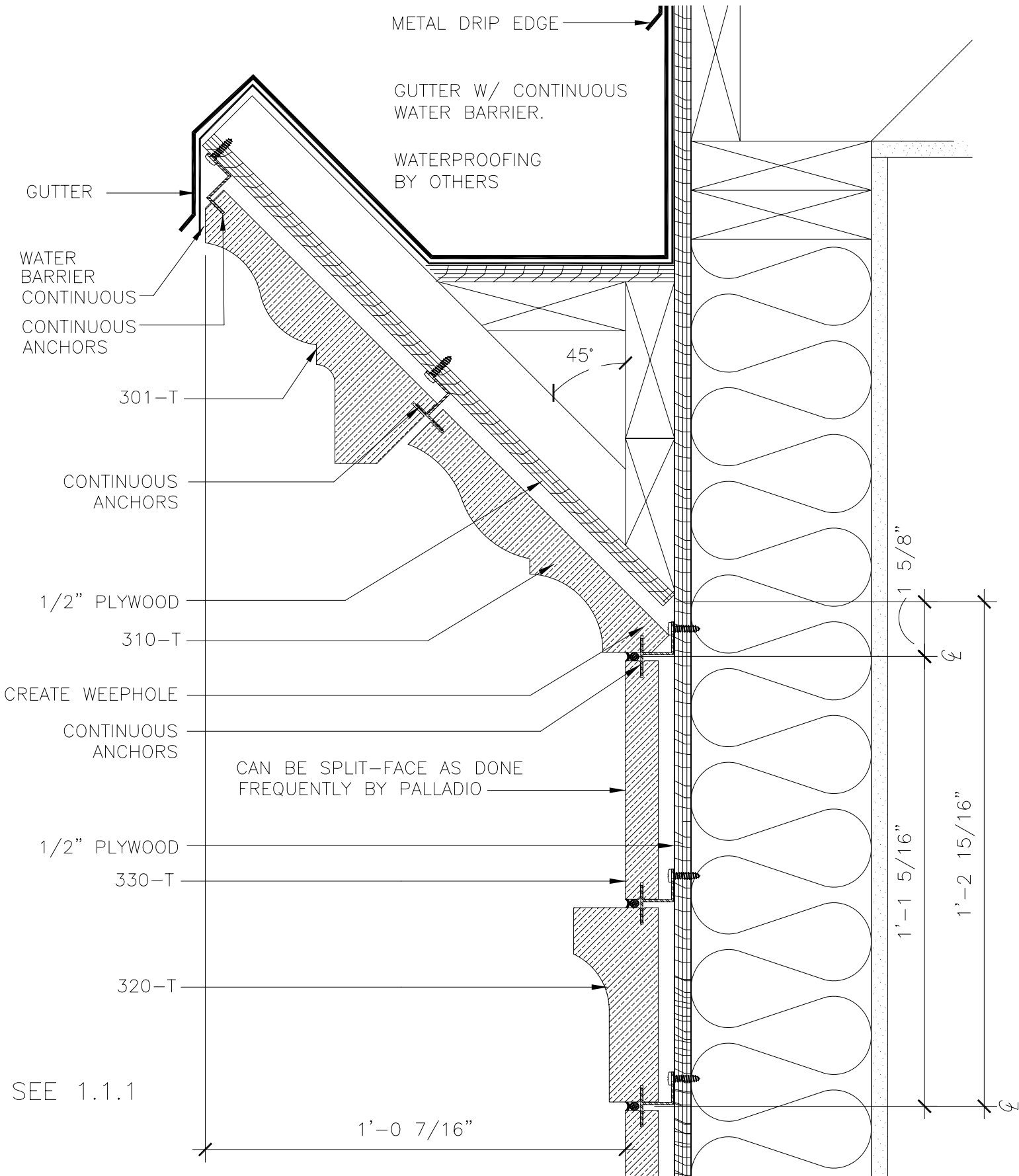


1 SECTION VIEW

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PROFILE 250-M USED AS WINDOW SILL

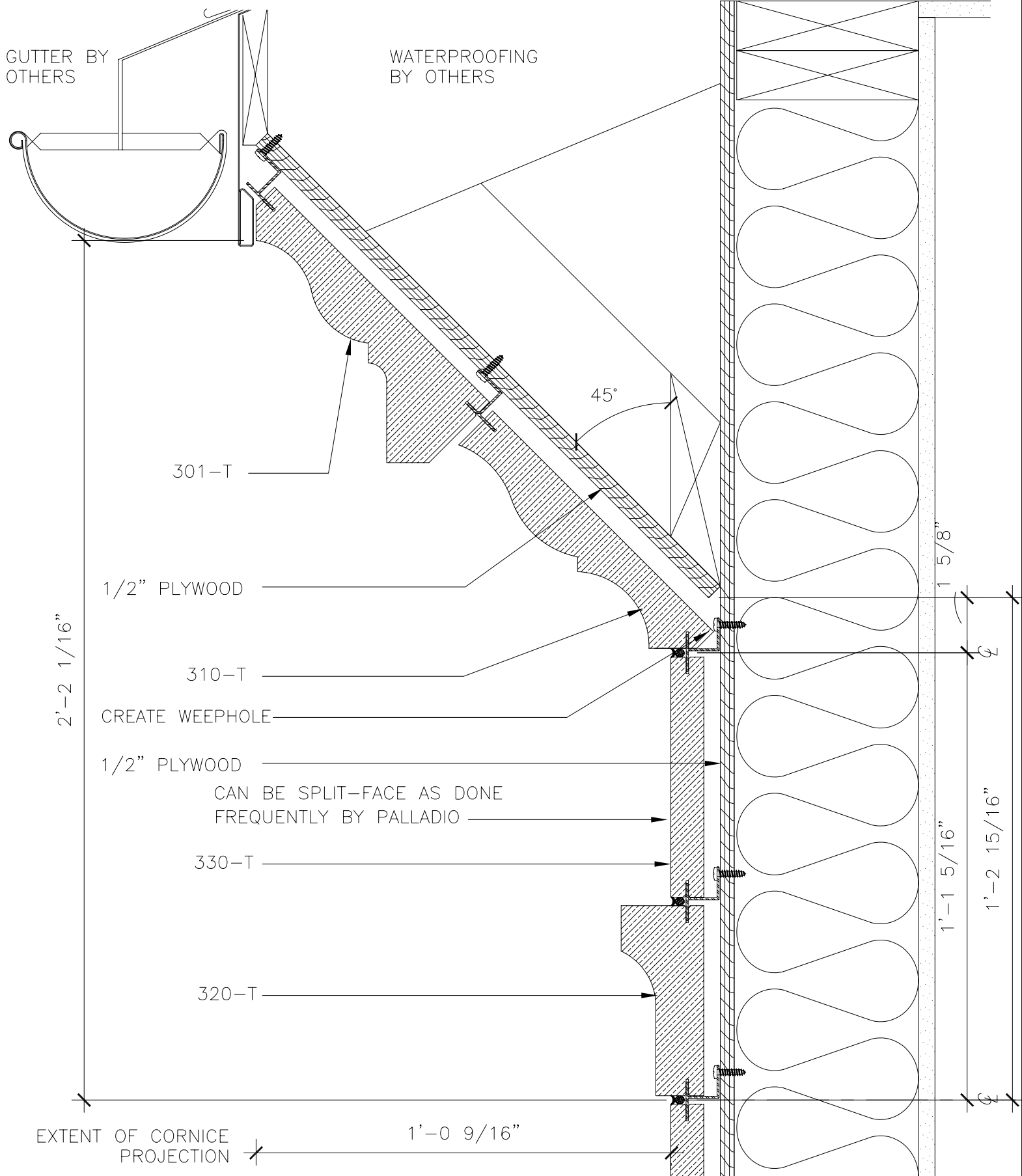
**3.1.23**



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SECTION THRU ENTABLATURE – TUSCAN CONCEALED GUTTER

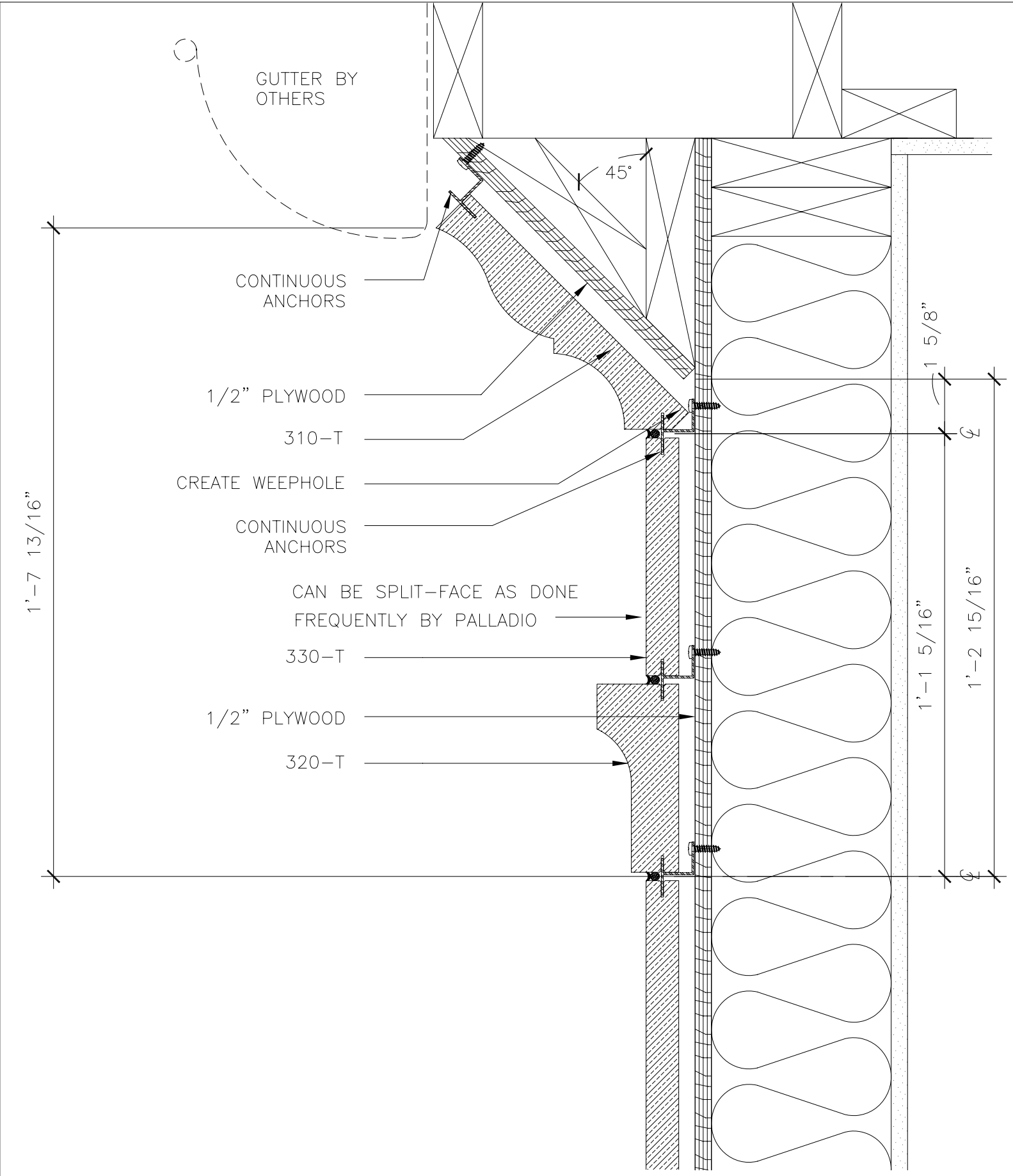
**3.1.24**



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SECT. THRU ENTABLATURE – TUSCAN EXPOSED GUTTER

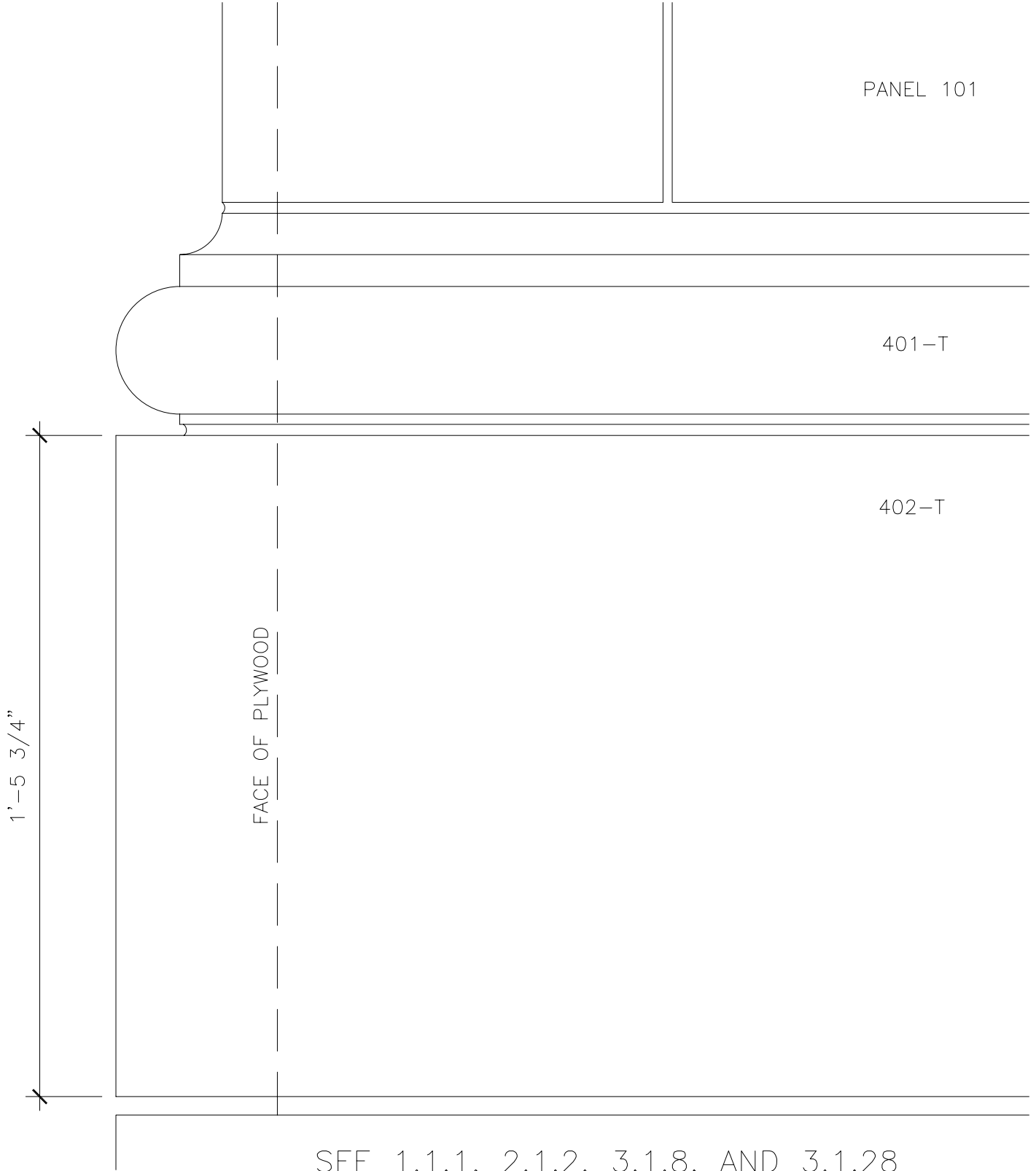
**3.1.25**



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SECT. THRU ENTABLATURE – TUSCAN OPT. EXPOSED GUTTER

**3.1.26**



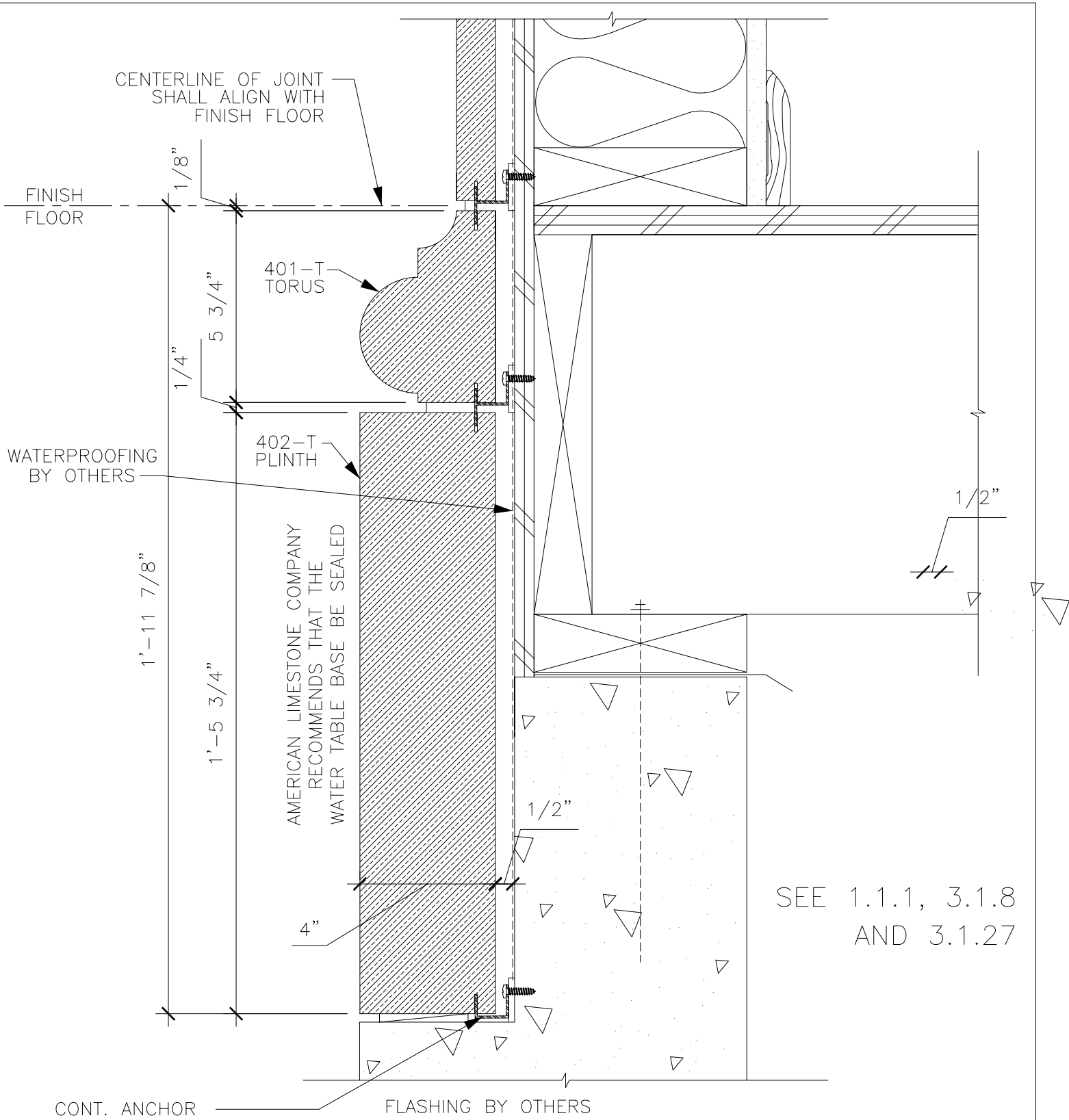
SEE 1.1.1, 2.1.2, 3.1.8, AND 3.1.28

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**3.1.27**



1 WATER TABLE SECTION - TUSCAN

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**3.1.28**