TECHNOTES

Accessible Sliding and In-Swing Patio Door Threshold with Air & Water Performance

The intent of this TechNote is to provide solutions to meeting the sliding and in-swing hinged patio door threshold accessibility requirements found or referenced in the Fair Housing Act, ICC/ANSIA117.1, and the International Building Code.

The codes and standards outlined in the table below describe the following three dwelling unit classifications: Accessible, Type A, and Type B. The table below also summarizes the door threshold requirements for each dwelling unit type and the variations for hinging and sliding doors. Confirm specific dwelling unit type requirements and installation options for projects with the Project Architect or local building code official.

Accessible Route Door Threshold Height/Shape and Floor Elevation Change Requirements

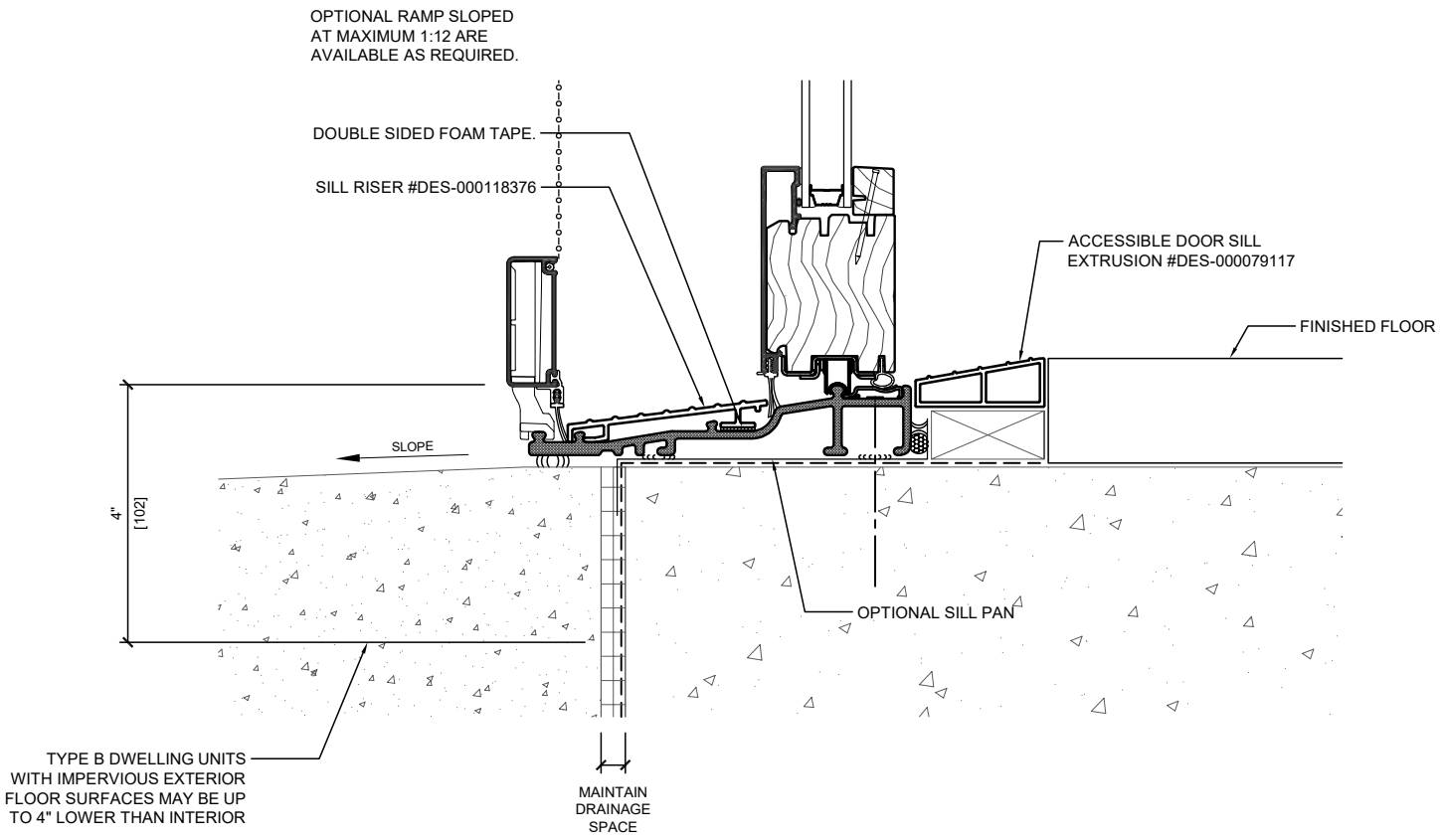
Dwelling Unit Type	Allowable Threshold Height	Max Change in interior and exterior Floor Surface	Example Details					
			Pella® Reserve & Lifestyle Series	Impervia	Encompass	Entry Door	250 Series	Bonelli
Accessible & Type A	3/4"[1, 5] (Sliding)	0"[2]	1	2	3	—	6	—
	1/2"[1, 6] (In-Swing)	0"[2]	5	—	—	4	—	7
Type B	3/4"[1] (Sliding)	0"[2] (Pervious)[3]	1	2	3	—	6	—
		4"[2] (Impervious)[4]						
	1/2"[1] (In-Swing)	0"[2] (Pervious)[3]	5	—	—	4	—	7
		4"[2] (Impervious)[4]	5	—	—	4	—	7

1. Any change in height greater than 1/4" must be beveled at a 1:2 maximum slope.
2. Variation in elevation of 1/2" is permitted due to difference in finish materials.
3. Pervious landing surfaces include decking with spaces or similar.
4. Impervious landing surfaces include concrete, brick, flagstone or similar.
5. Sliding doors may not be acceptable due to operating force and ease of hardware use accessibility requirements in Type A units.
6. Confirm swing door hardware complies with accessibility requirements for operating force and ease of use in Type A units.
7. Public access hinge doors are required to be out-swing with a bottom rail height that has a minimum 10" of smooth surface the full width on the push side.

The following example details illustrate how Pella sliding doors can be installed to meet accessibility requirements while maintaining certified air, water and structural performance ratings.

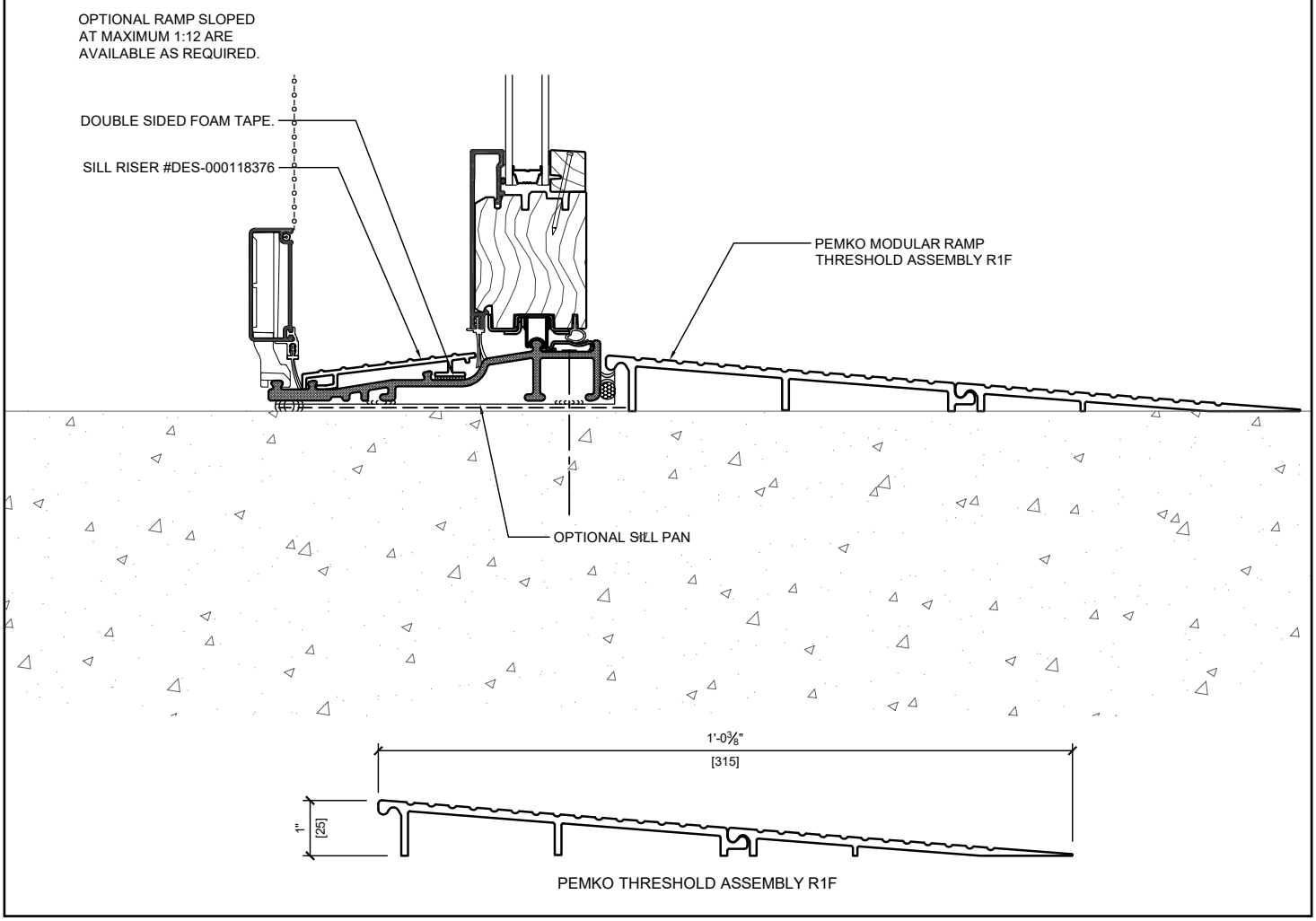
The extruded aluminum accessibility adapters shown in the example details are available through the Pella Architectural Services custom extrusion ordering process. More information about the quoting and ordering process can be found by going to *mypella.com>PERL>Sales Tools>Custom Extrusion Ordering Process* (under the "Installation Accessories Catalog" heading).

NOTE: RAMPS CAN BE INTERPRETED AS NOT MEETING ACCESSIBILITY REQUIREMENTS WHEN ADDED AS A TRANSITION FROM FINISHED FLOOR TO DOOR SILL. CONFIRM THE ADDITION OF RAMPS MEET ACCESSIBILITY REQUIREMENTS WITH THE PROJECT ARCHITECT OR LOCAL BUILDING CODE OFFICIAL.

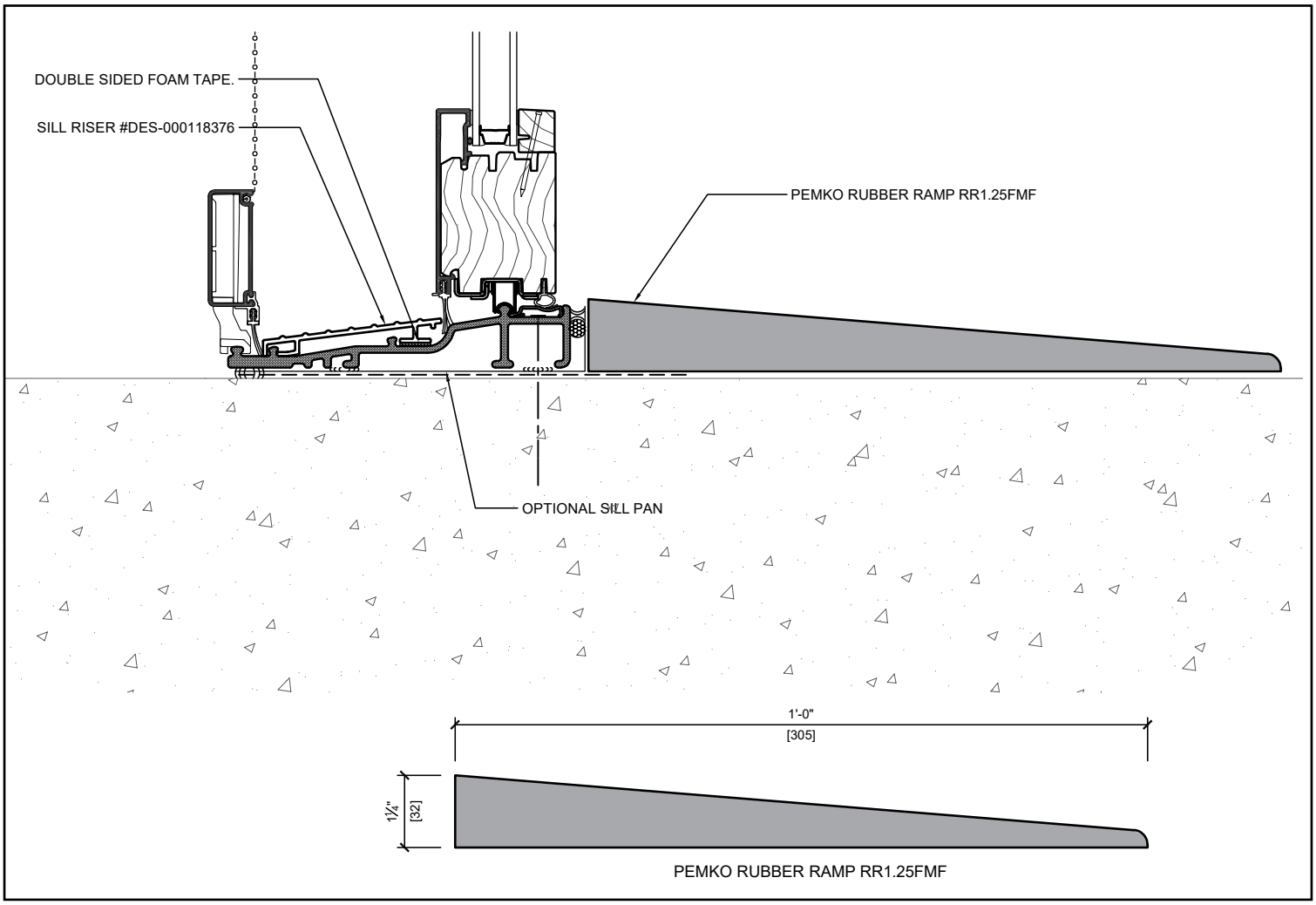


1a | ACCESSIBLE SILL ADAPTER - CLAD WOOD SLIDING PATIO DOOR

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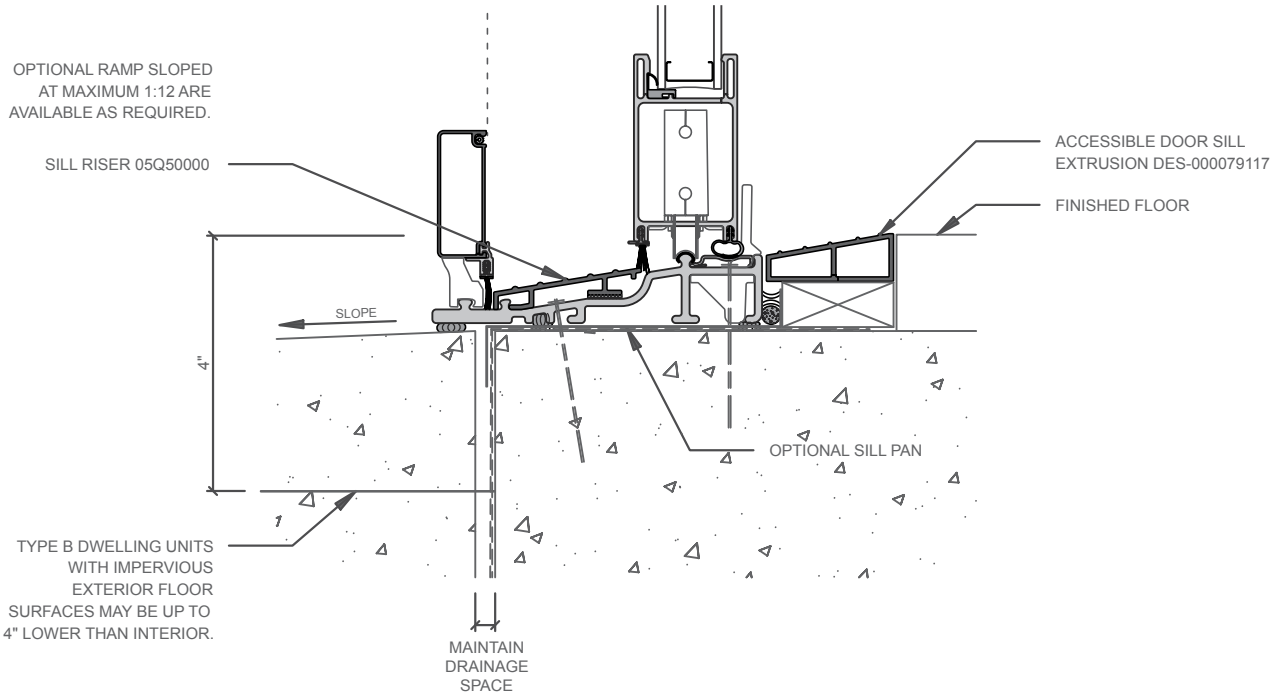


1b | ACCESSIBLE SILL ADAPTER - CLAD WOOD SLIDING PATIO DOOR

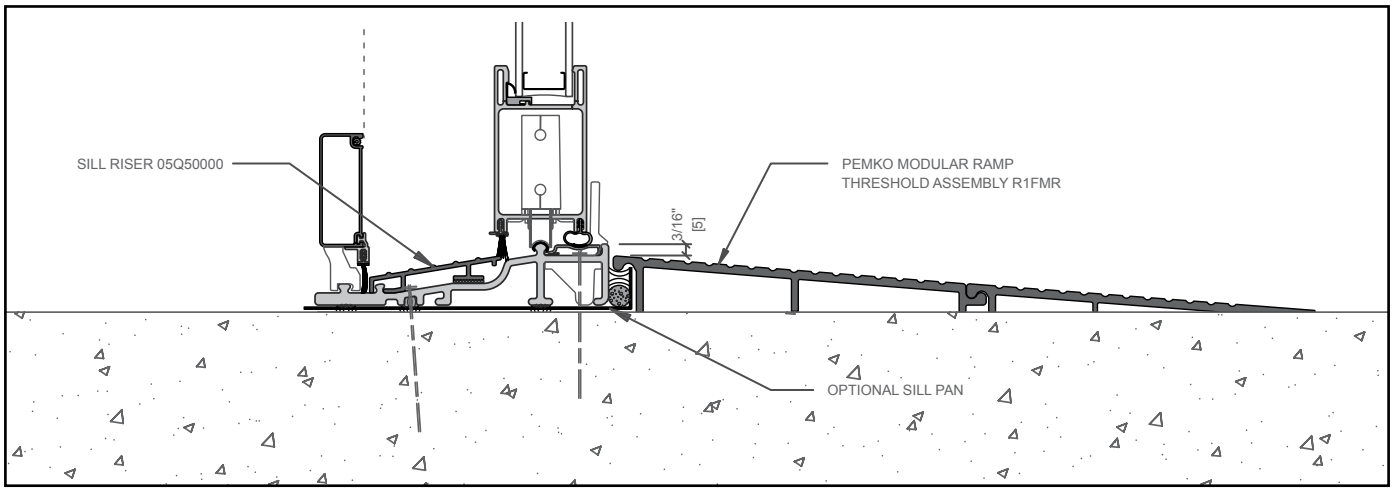


1c | ACCESSIBLE SILL ADAPTER - CLAD WOOD SLIDING PATIO DOOR

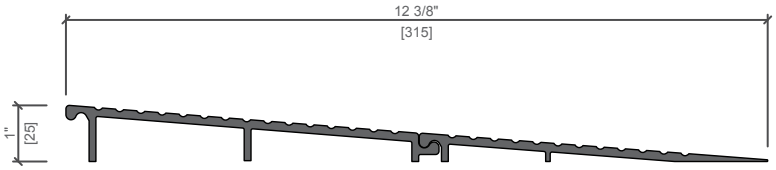
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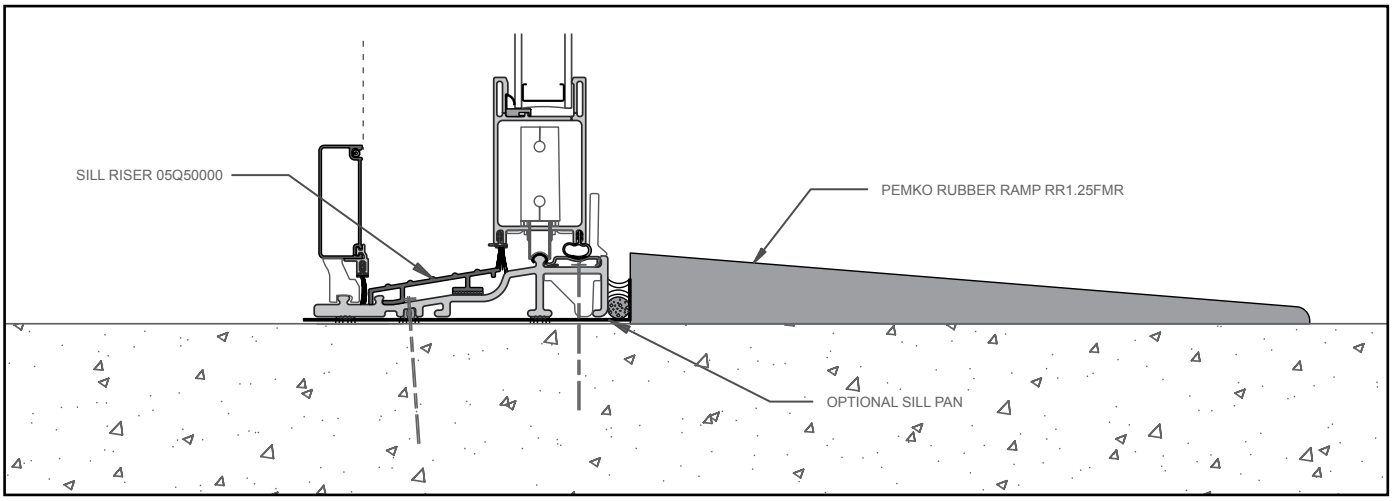
2a | ACCESSIBLE SILL ADAPTER - IMPERVIA SLIDING DOOR



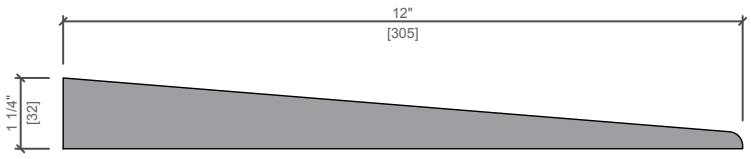
2b | ACCESSIBLE SILL ADAPTER - IMPERVIA SLIDING DOOR



THRESHOLD ASSEMBLY R1FMR

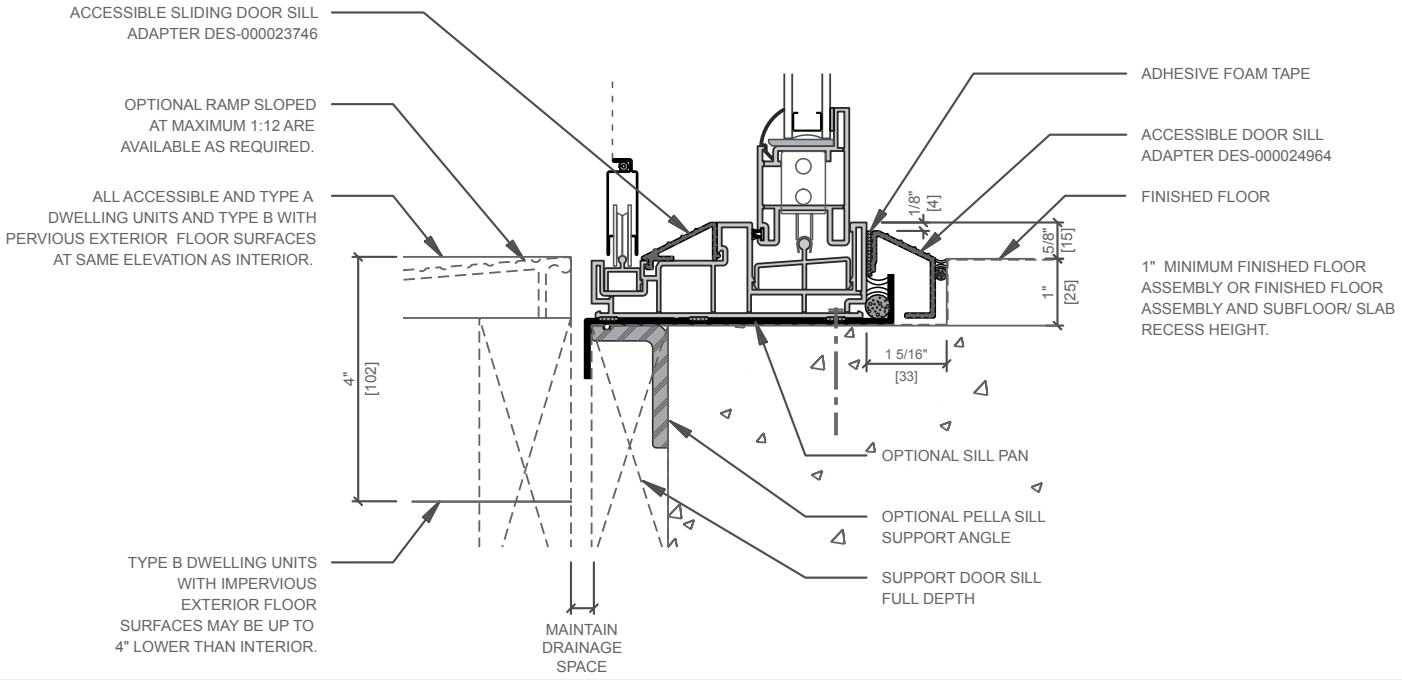


2c | ACCESSIBLE SILL ADAPTER - IMPERVIA SLIDING DOOR

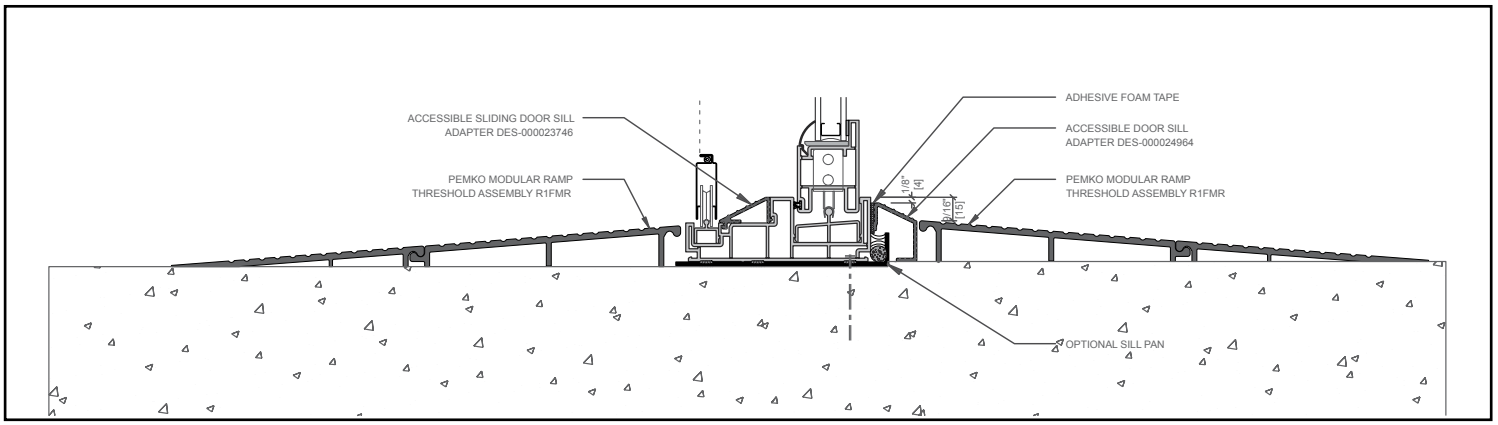


PEMKO RUBBER RAMP RR1.25FMR

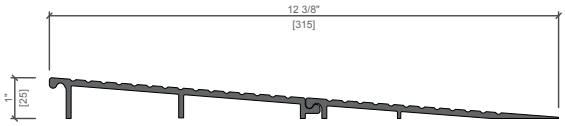
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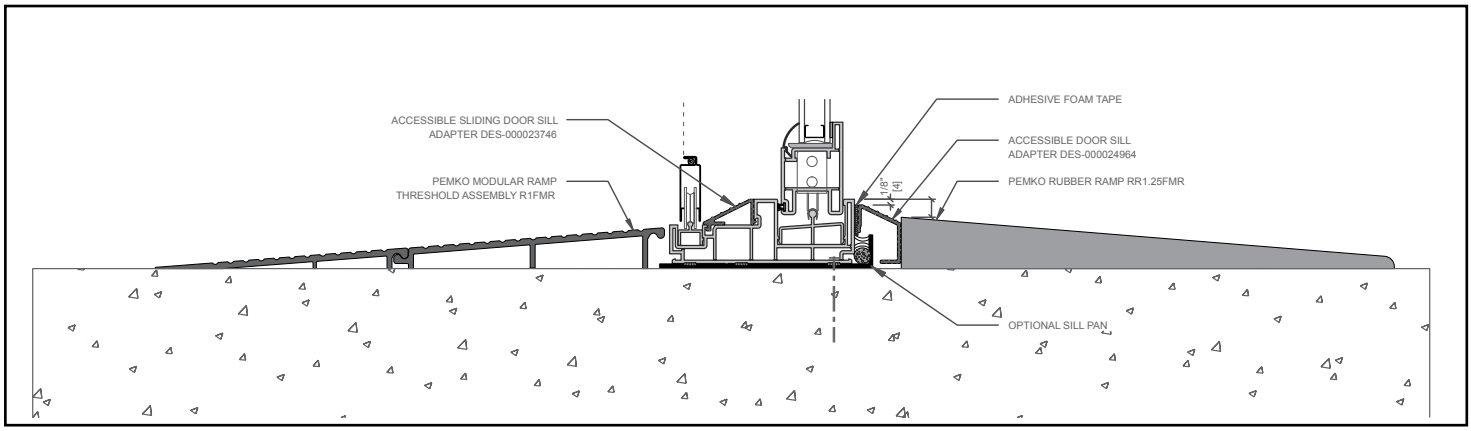
3a | ACCESSIBLE SILL ADAPTER - ENCOMPASS SLIDING DOOR



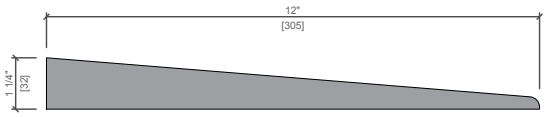
3b | ACCESSIBLE SILL ADAPTER - ENCOMPASS SLIDING PATIO DOOR



THRESHOLD ASSEMBLY R1FMR

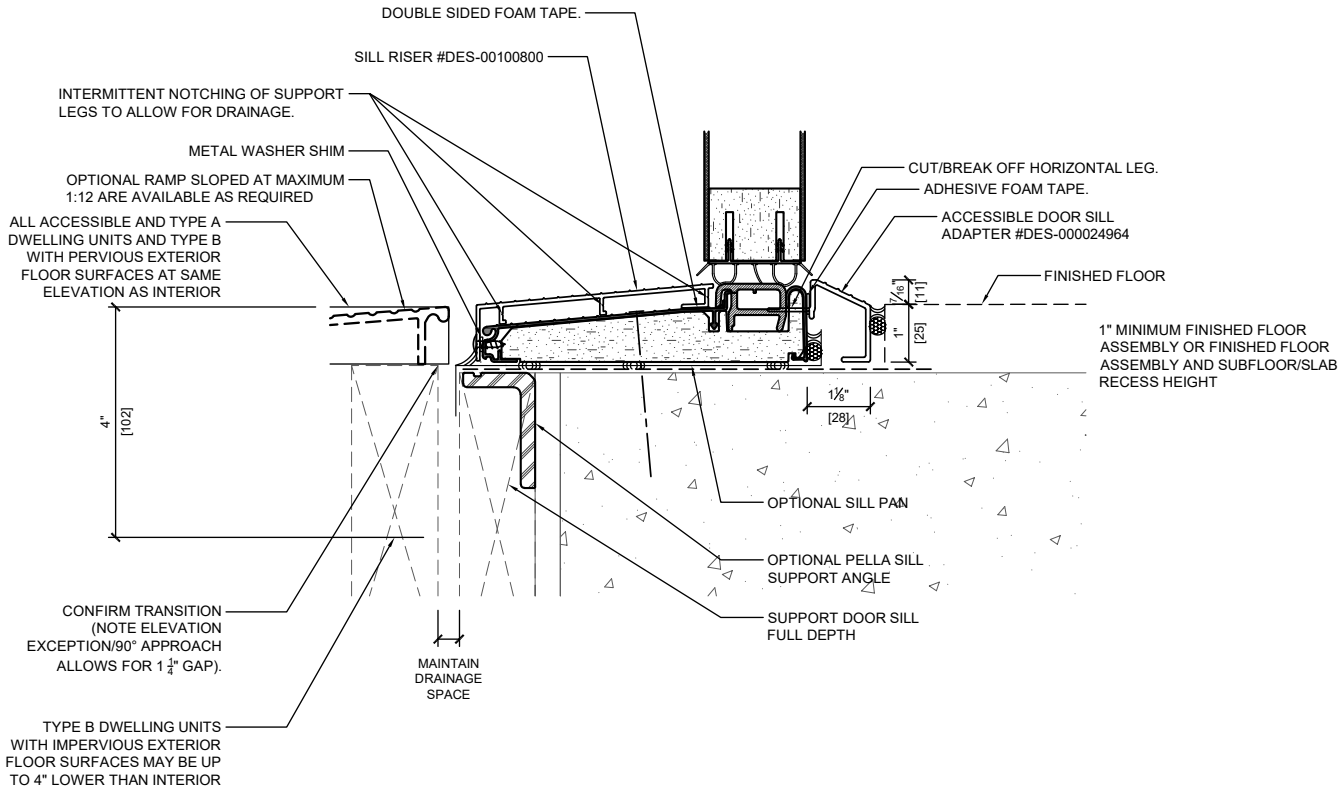


3c | ACCESSIBLE SILL ADAPTER - ENCOMPASS SLIDING PATIO DOOR

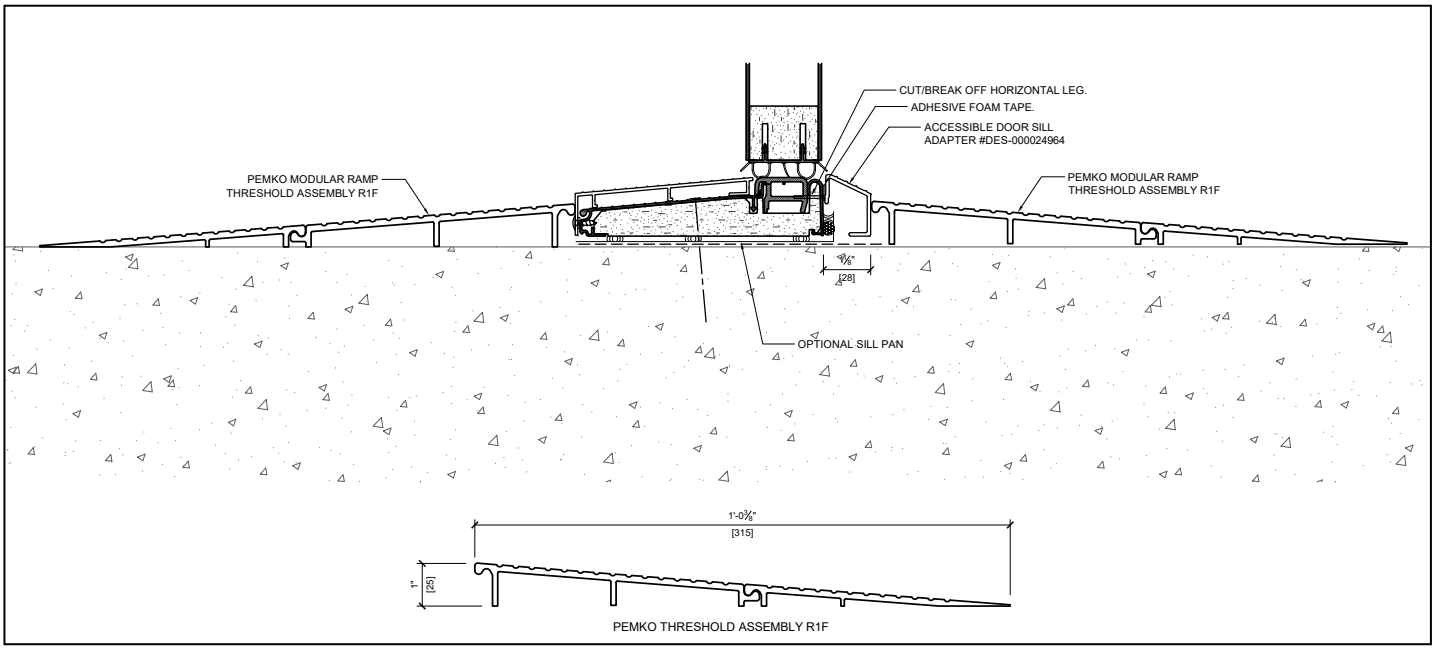


PEMKO RUBBER RAMP RR1.25FMR

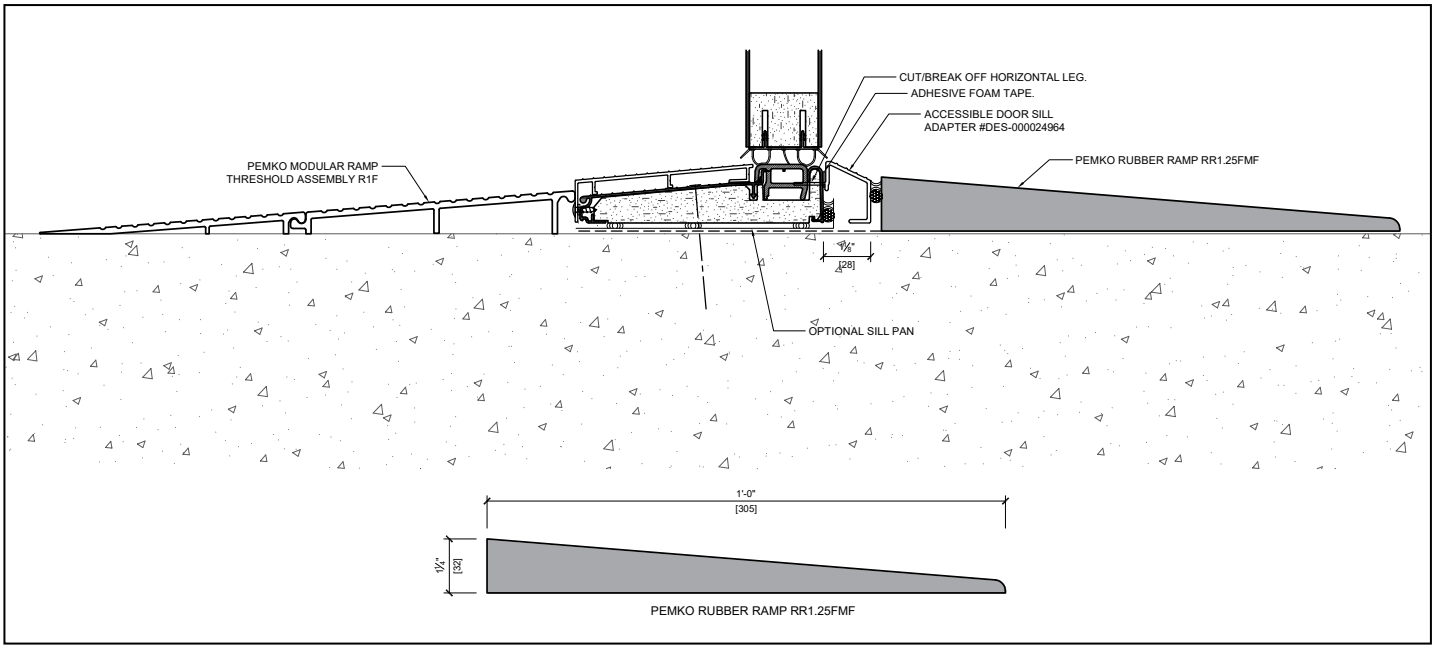
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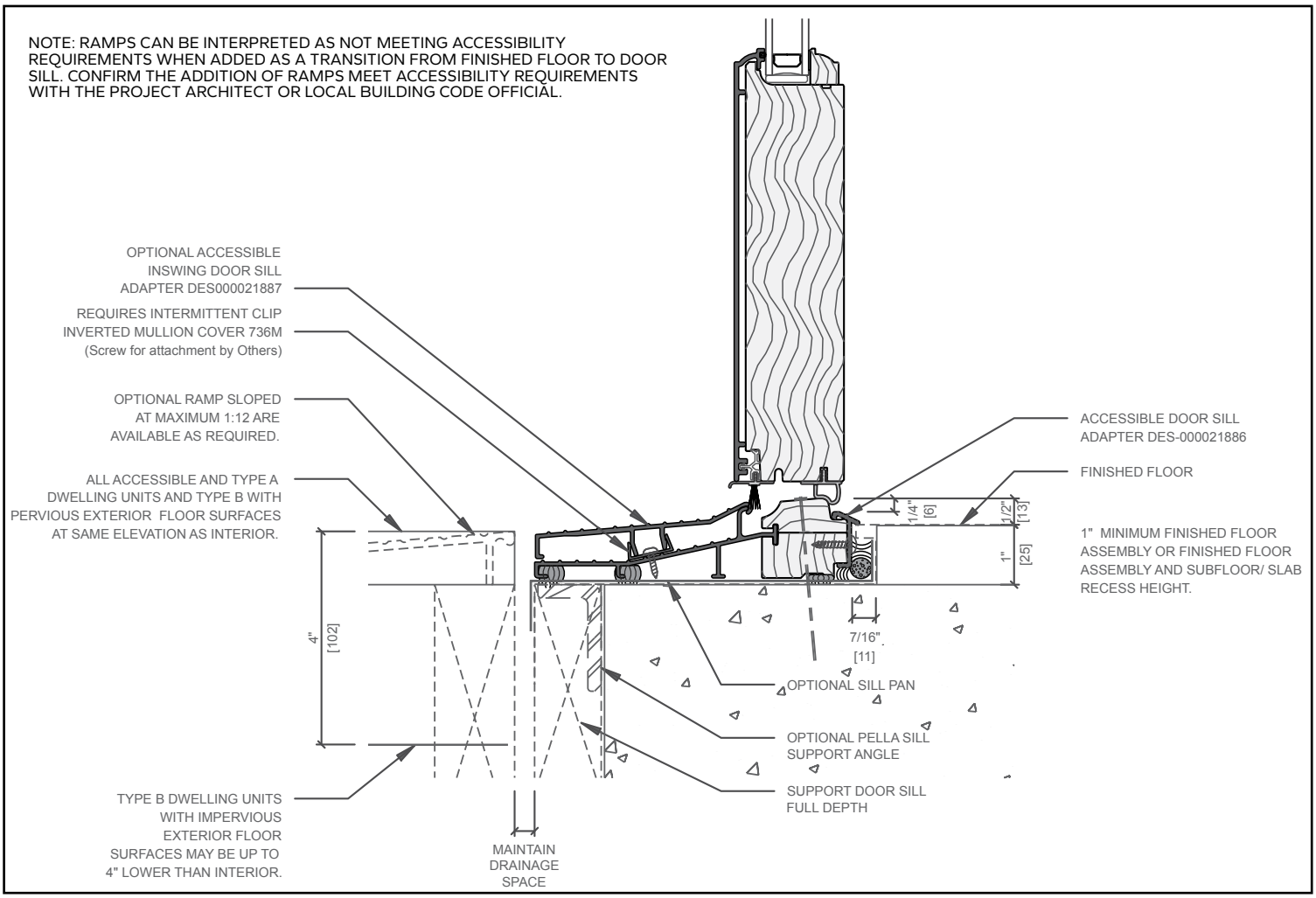
4a | ACCESSIBLE SILL ADAPTER - IN-SWING ENTRY DOOR



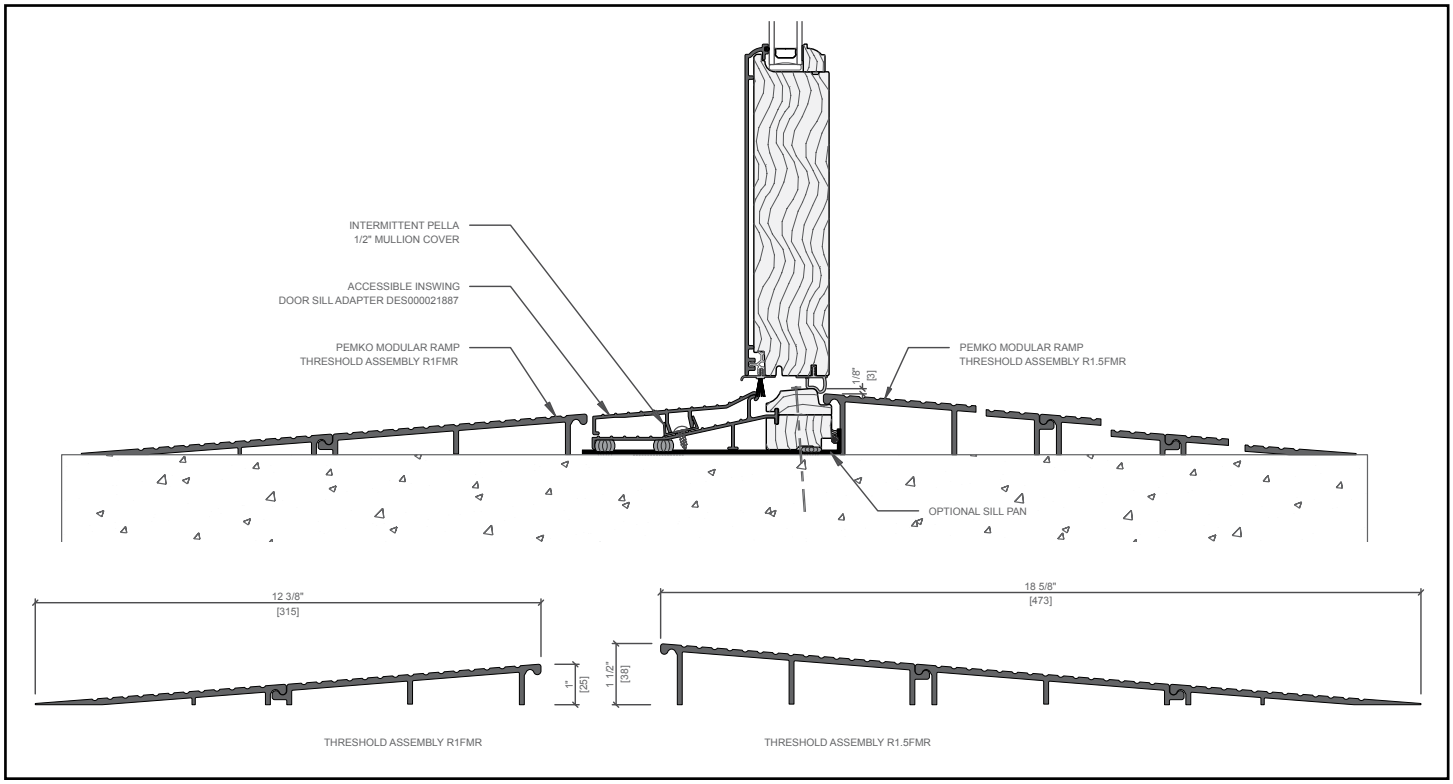
4b | ACCESSIBLE SILL ADAPTER - IN-SWING ENTRY DOOR



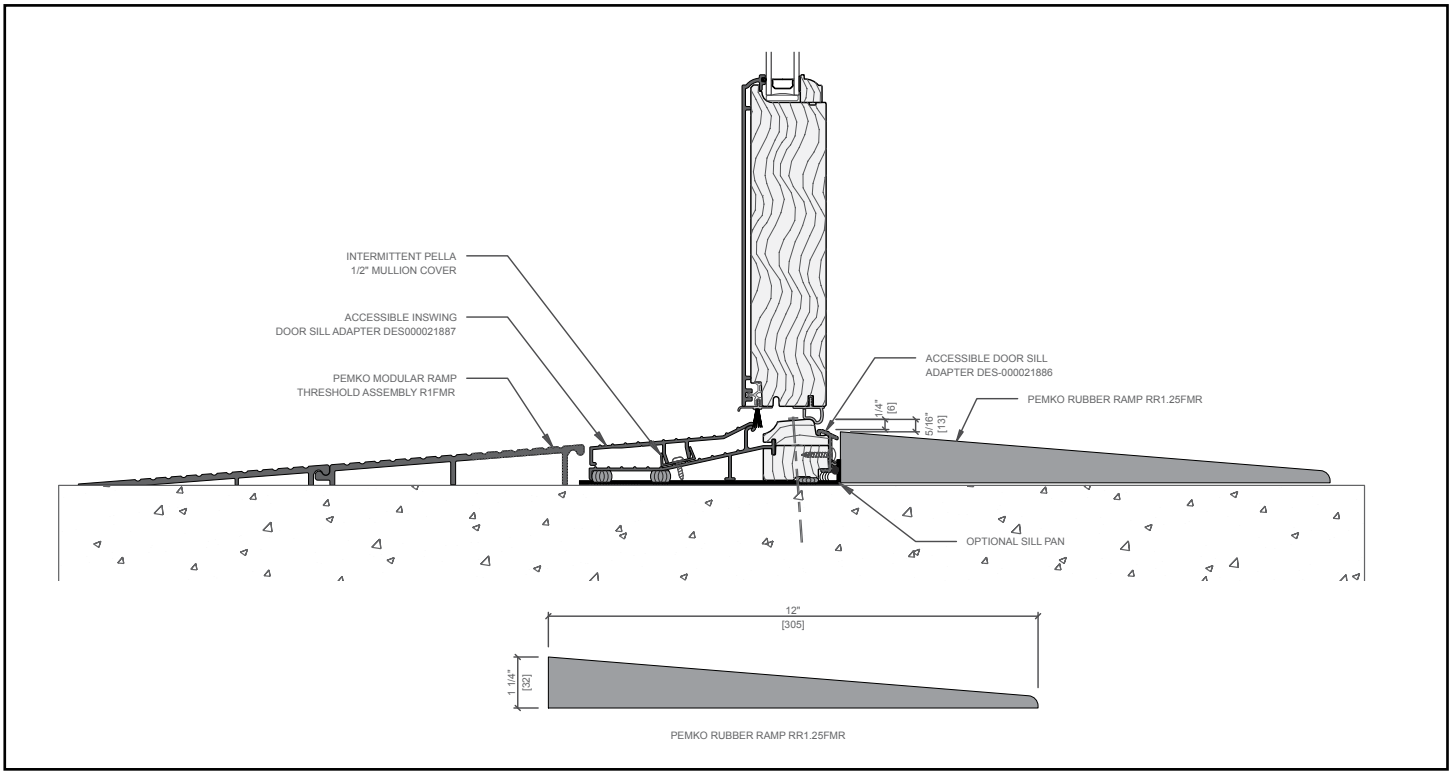
4c | ACCESSIBLE SILL ADAPTER - IN-SWING ENTRY DOOR



5a | ACCESSIBLE SILL ADAPTER - CLAD WOOD IN-SWING DOOR

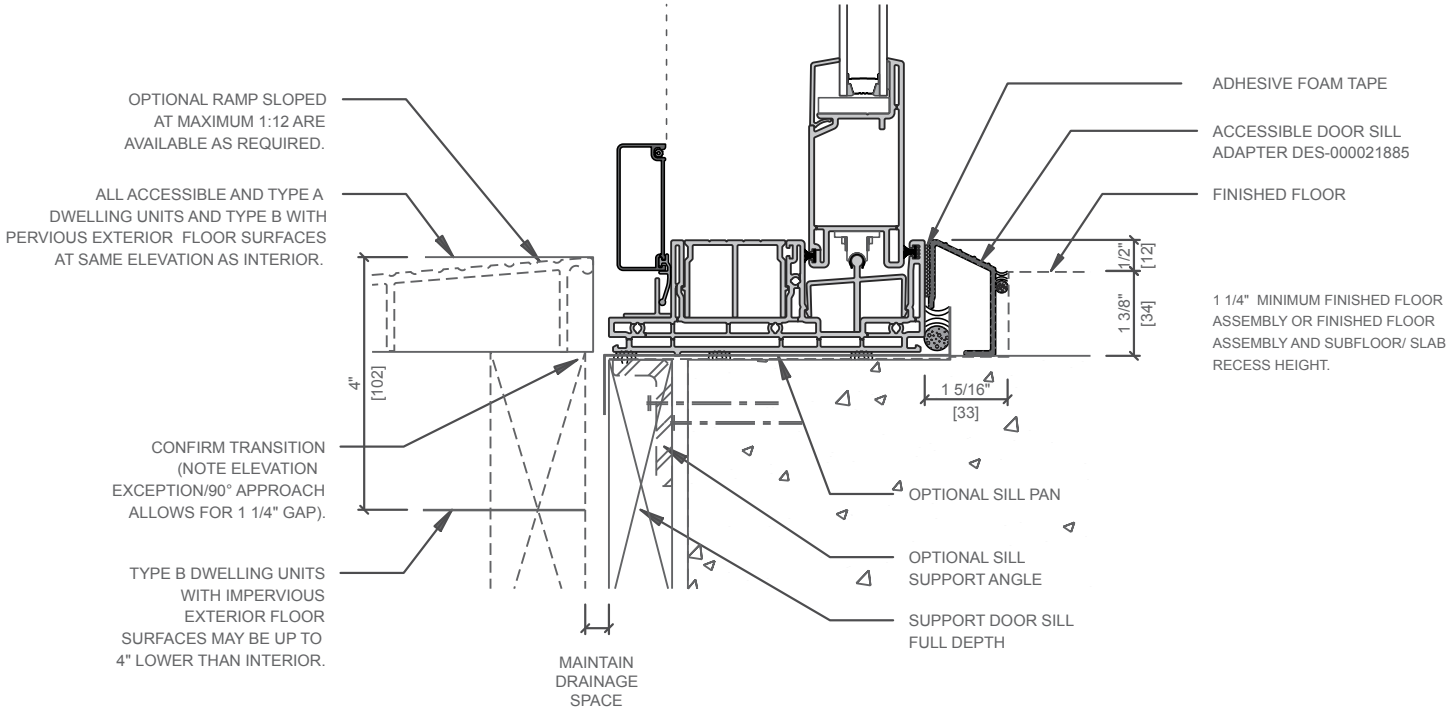


5b | ACCESSIBLE SILL ADAPTER - CLAD WOOD IN-SWING DOOR

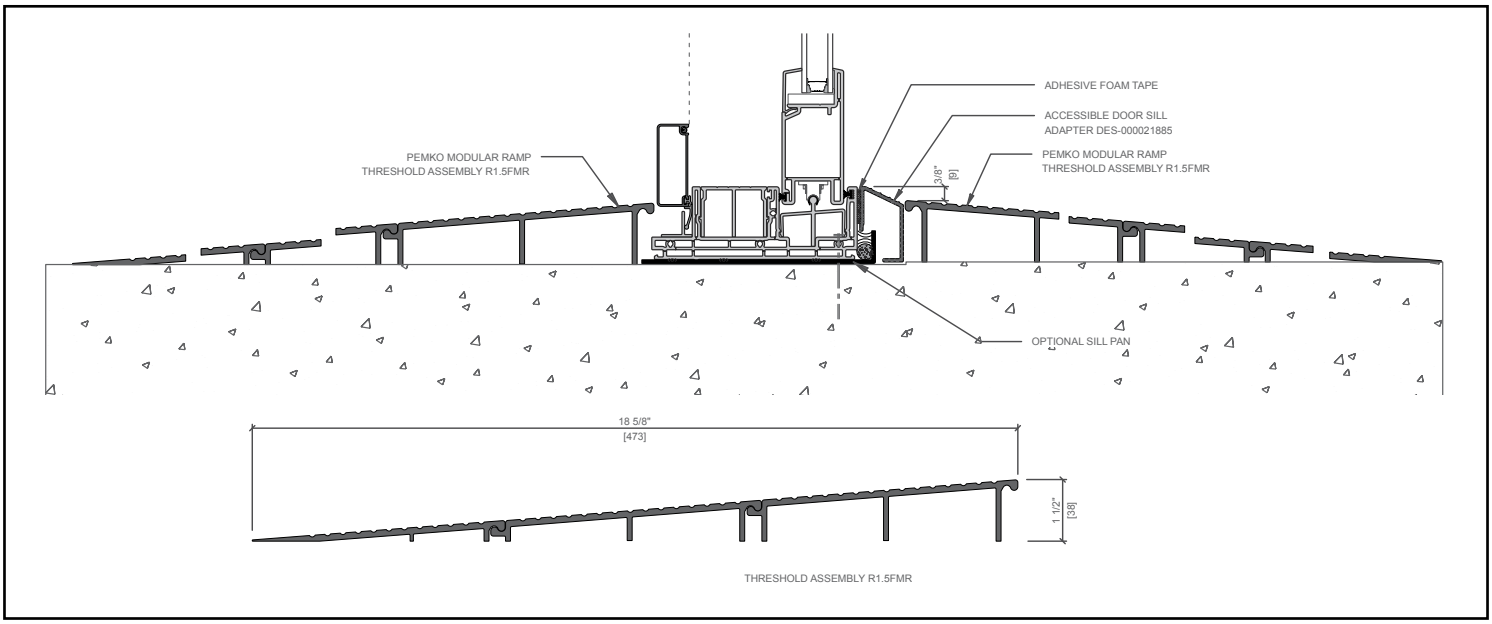


5c | ACCESSIBLE SILL ADAPTER - CLAD WOOD IN-SWING DOOR

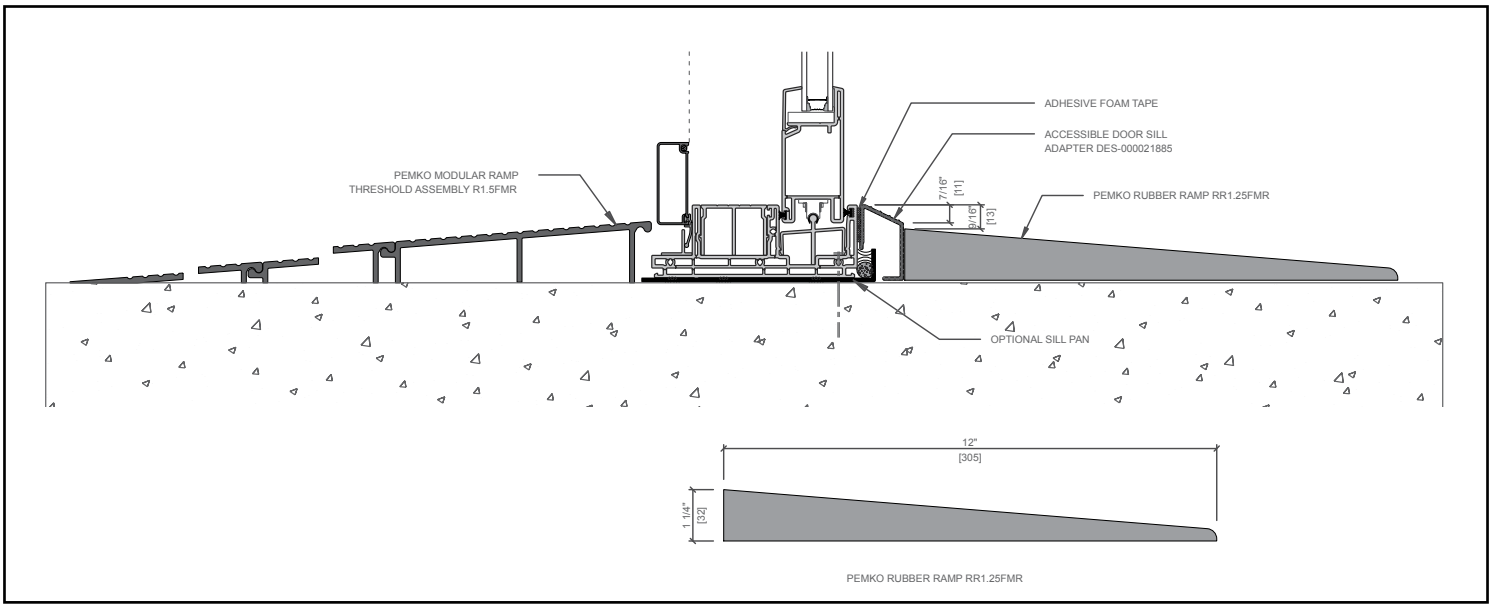
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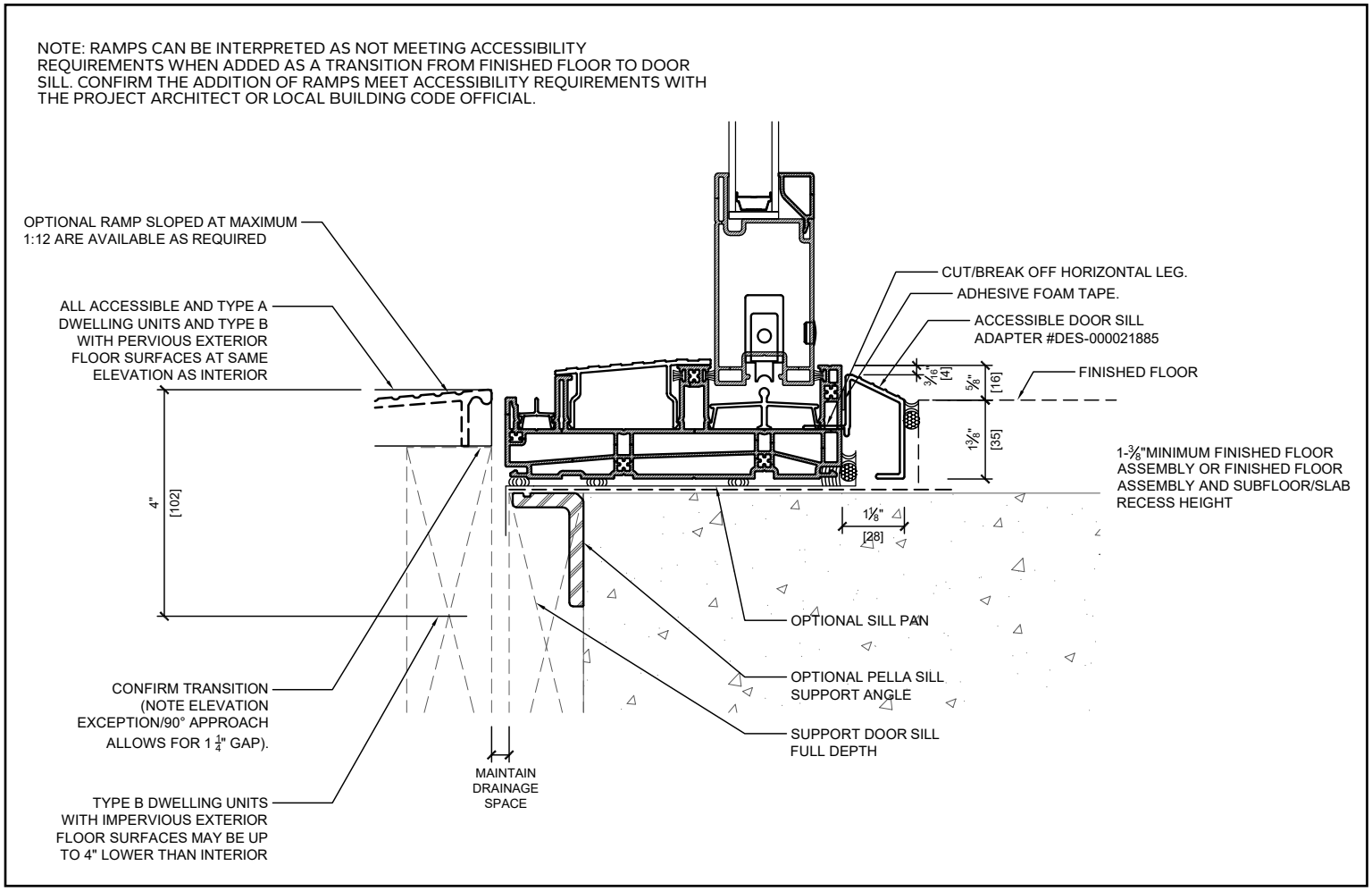
6a | ACCESSIBLE SILL ADAPTER - 250 SERIES CLASSIC SLIDING PATIO DOOR



6b | ACCESSIBLE SILL ADAPTER - 250 SERIES CLASSIC SLIDING PATIO DOOR

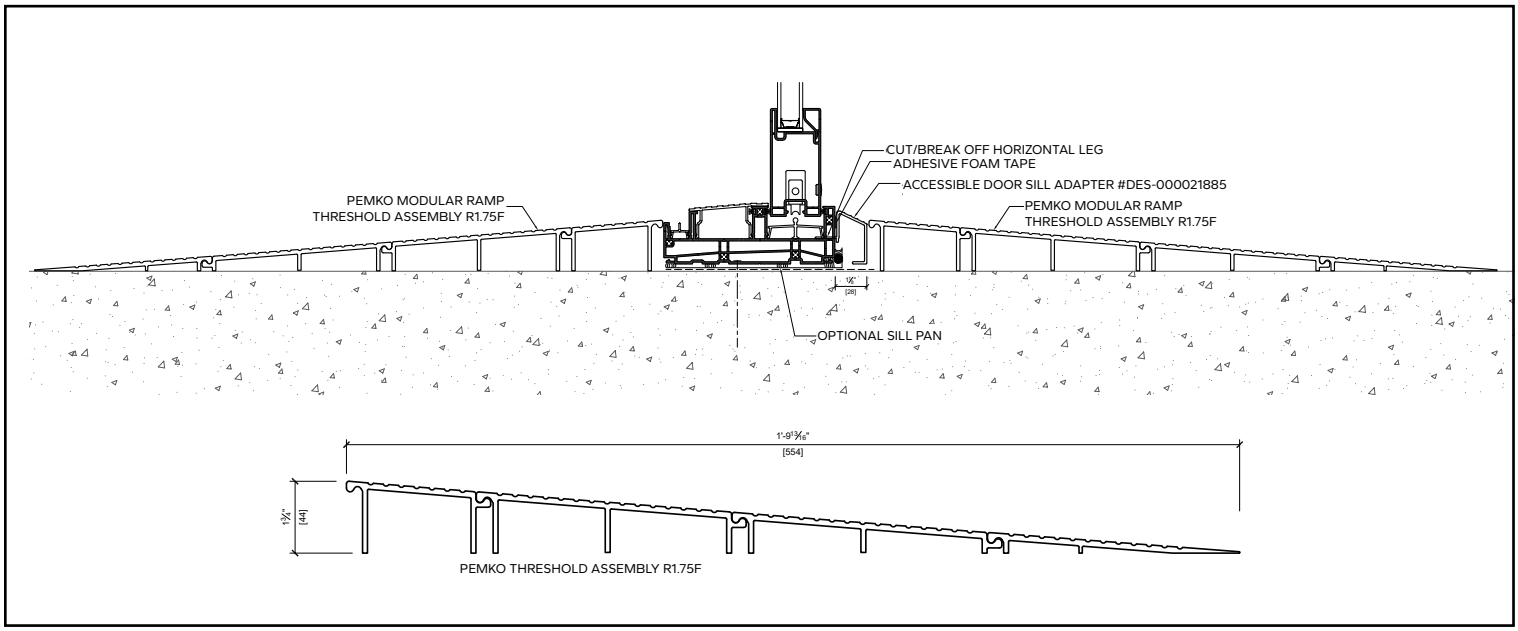


6c | ACCESSIBLE SILL ADAPTER - 250 SERIES CLASSIC SLIDING PATIO DOOR



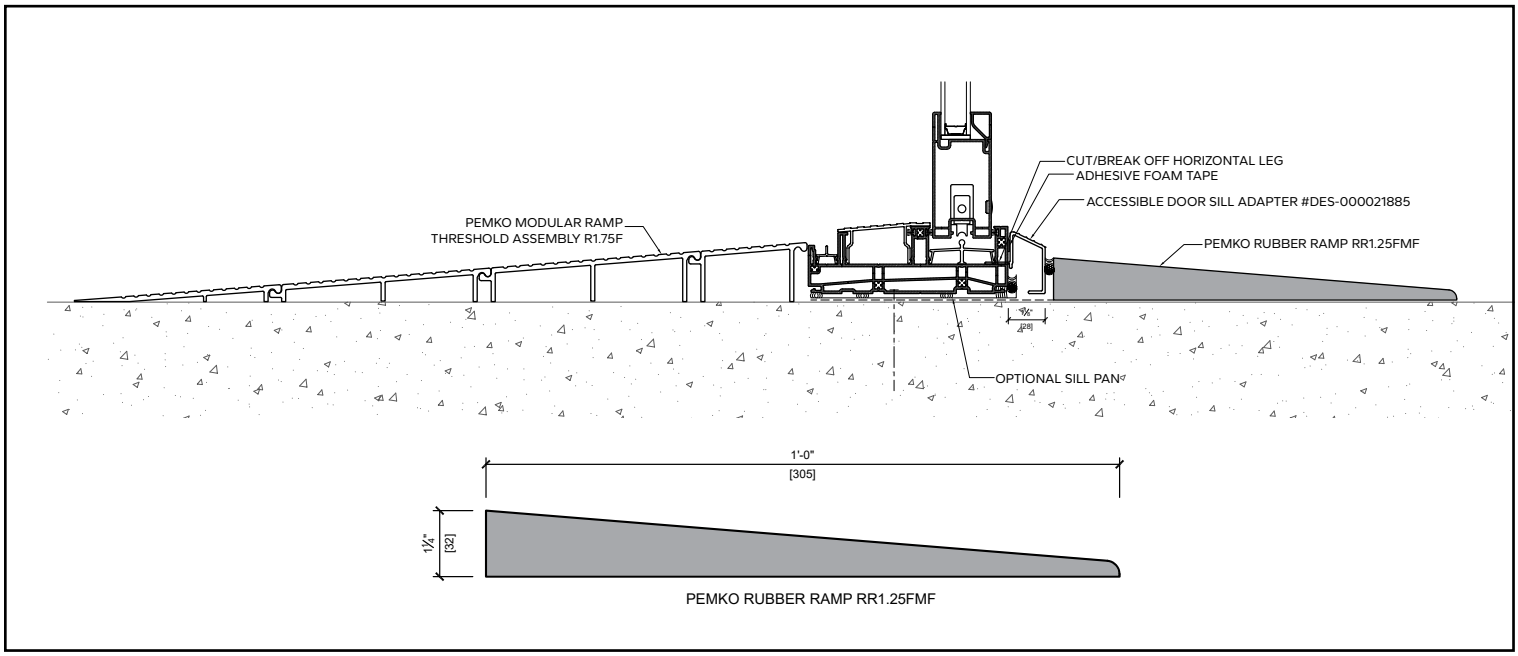
6d | ACCESSIBLE SILL ADAPTER - 250 SERIES PREMIUM SLIDING PATIO DOOR

Note: 250 Series Standard Sliding Patio Door details are similar to Premium with a smaller bottom rail height.



6e | ACCESSIBLE SILL ADAPTER - 250 SERIES PREMIUM SLIDING PATIO DOOR

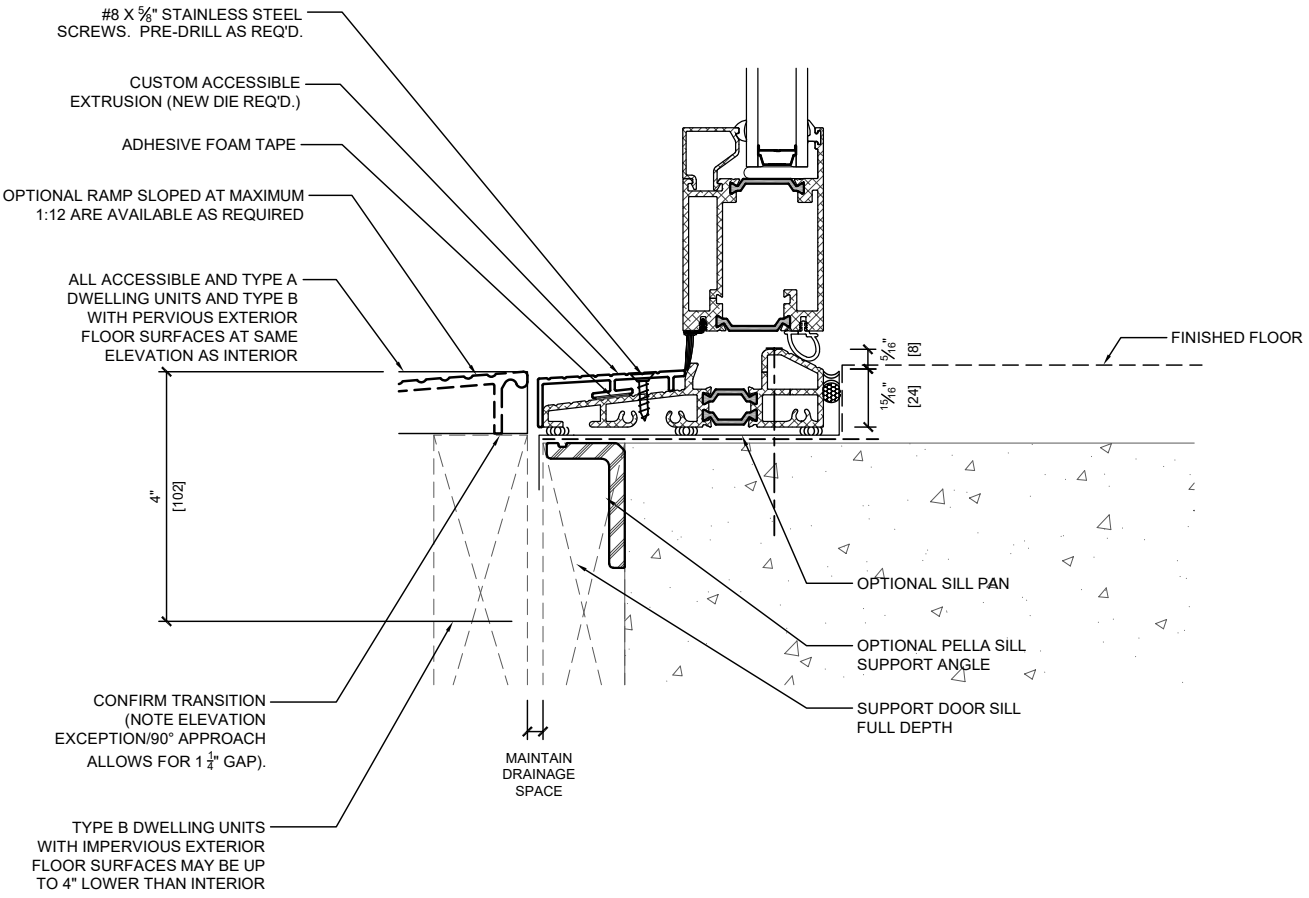
Note: 250 Series Standard Sliding Patio Door details are similar to Premium with a smaller bottom rail height.



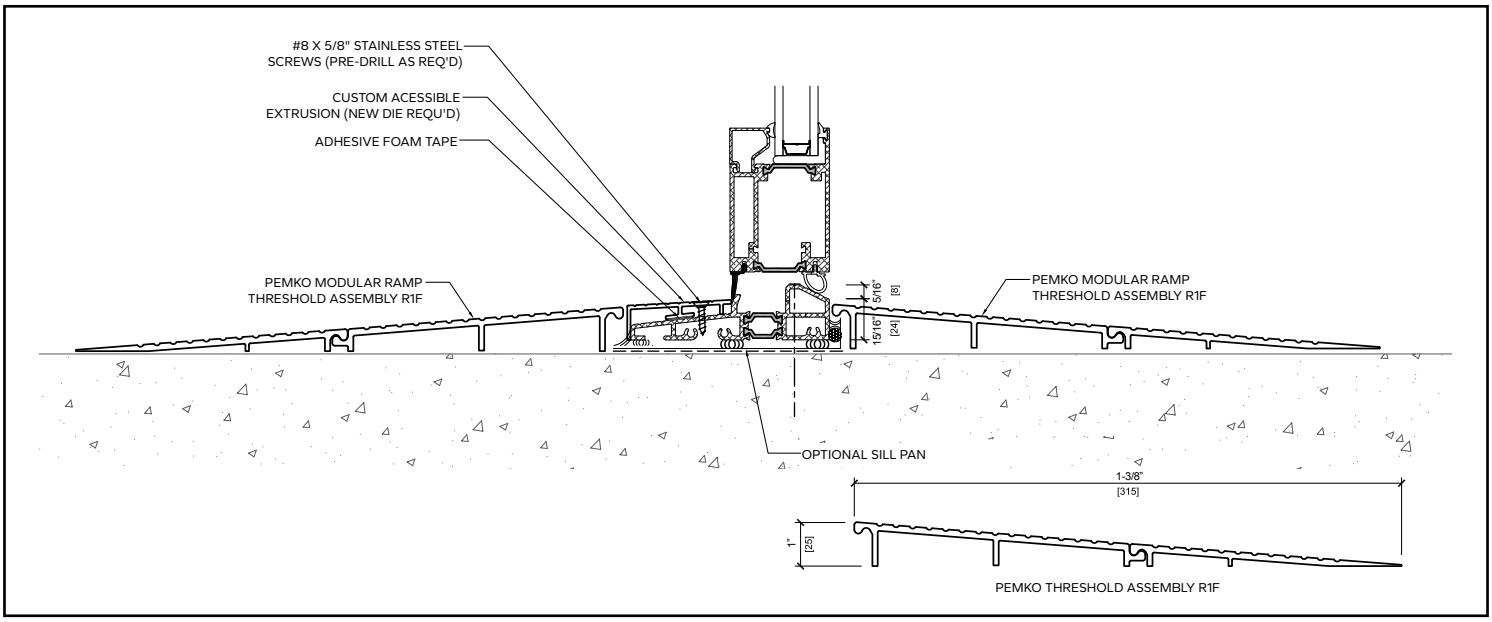
6f | ACCESSIBLE SILL ADAPTER - 250 SERIES PREMIUM SLIDING PATIO DOOR

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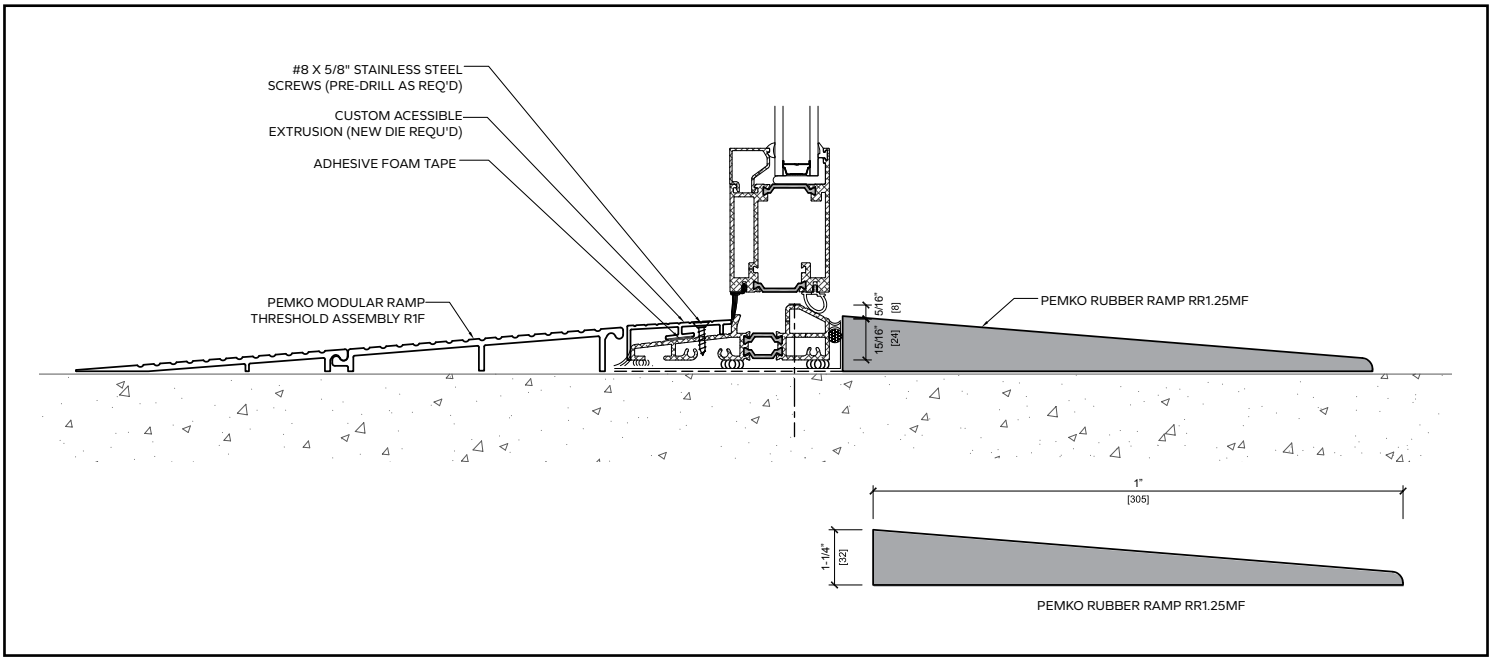
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7a | ACCESSIBLE SILL ADAPTER - BONELLI IN-SWING ENTRY DOOR



7b | ACCESSIBLE SILL ADAPTER - BONELLI IN-SWING ENTRY DOOR



7c | ACCESSIBLE SILL ADAPTER - BONELLI IN-SWING ENTRY DOOR

SPECIAL NOTES:

1. While the solutions proposed here require the added expense of a sill accessory it is worth noting the proposed sliding Pella door solutions retain their certified performance ratings, which in most instances exceed competitor's ratings.
2. Please note 32" clear opening width requirements also apply. Balcony and patio doors are often part of the “accessible route” and need to meet these requirements.
3. Current Pella products available with low profile sills:
    a) Pella® Reserve in-swing and out-swing doors.
    b) Pella® Reserve and Pella Entry in-swing and out-swing doors.
    c) Multi-slide, in-swing bifold, and out-swing bifold doors.
    d) Bonelli in-swing, out-swing, multi-slide, and bifold doors.
4. Doors with low-profile sills typically have zero water resistance.