

KNOTWOOD - GENERIC SLIDING GATE SHOP DRAWINGS

PROPERTY MANAGER:
PER ARCHITECT / ENGINEER

DESIGN ENGINEER:

PVE, LLC

2000 GEORGETOWN DRIVE, SUITE 101

SEWICKLEY, PA 15143

<u>DRAWING LIST</u>			<u>LATEST REVISION</u>	<u>DATE</u>
T-100	-	TITLE SHEET		
G-100	-	GENERAL NOTES		
A-100	-	SLIDING GATE PLAN & ELEVATION		
A-101	-	TYPICAL SLIDING GATE DETAILS		

PREPARED BY:



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PREPARED FOR:



ISSUED FOR:

ISSUED DATE: 05/15/2024

[illegible]

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PROJECT NAME:

KNOTWOOD - GENERIC VEHICLE SLIDING
GATE SHOP DRAWINGS

PROJECT LOCATION:

DRAWING NAME:

TITLE SHEET

SEAL & SIGNATURE	PROJECT NO:	202110314
	DRAWN BY:	
	CHECKED BY:	
	DRAWING NO: T-100	
PAGE NO:		

GENERAL NOTES:

1. DRAWING REFERENCE:
N/A
2. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO INSTALLATION. DO NOT SCALE OFF DRAWINGS.
3. ALL MEMBERS SHALL BE SAW CUT IN FIELD AS REQUIRED.
4. NO SPLICES SHALL BE PERMITTED UNLESS INDICATED OTHERWISE ON DRAWINGS.
5. TOUCH UP ALL SCRATCHES WITH DEALER PROVIDED COLORS TO MATCH.
6. WELDING IS NOT PERMITTED, UNLESS OTHERWISE INDICATED ON DRAWINGS.
7. THE CONTENTS SHOW THE APPLICATION OF ALUMINUM KNOTWOOD FRAMING COMPONENTS ONLY. THE INSTALLING CONTRACTOR IS TO REFER TO THE PROJECT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
8. DIMENSIONS HEREIN ARE FOR ENGINEERING PURPOSES ONLY AND MUST BE REVIEWED FOR THE PURPOSE OF APPROVAL. ALL CONDITIONS ARE SUBJECT TO APPROVAL AND TO FIELD VERIFICATION PRIOR TO FABRICATION OR INSTALLATION.
9. BEFORE ORDERING, FABRICATING OR ERECTING ANY MATERIAL, MAKE ANY NECESSARY SURVEYS AND MEASUREMENTS TO VERIFY THAT IN PLACE WORK HAS BEEN BUILT ACCORDING TO THE CONTRACT DOCUMENTS AND ARE WITHIN ACCEPTABLE TOLERANCES. THIS INCLUDES THE ORIGINAL BUILDINGS AND ALL ADDITIONS THERETO. NOTIFY THE A/E AND OWNER'S REPRESENTATIVES OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
10. TEMPORARY BRACING OF THE SYSTEM AND SAFETY DURING CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY BRACING OF THE SYSTEM SHALL REMAIN IN PLACE UNTIL THE SYSTEM IS TOTALLY IN PLACE. CONTRACTOR SHALL COORDINATE LOCATIONS OF TEMPORARY BRACING WITH OTHER CONTRACTORS. REFER TO DRAWINGS FOR ADDITIONAL CRITERIA.
11. THIS SUBMITTAL IS SUBJECT TO THE REVIEW AND APPROVAL OF THE PROJECT ARCHITECT/ENGINEER OF RECORD PRIOR TO INSTALLATION.

BUILDING LOADS:

1. SUPERIMPOSED DEAD LOAD AND LIVE LOADS

a. DEAD LOAD

1. KESGF100501.83 PLF

2. KESP2W50501.00 PLF

3. KES150160.95 PLF

4. KES100160.60 PLF

5. KES65160.33 PLF

6. KES38160.22 PLF

b. LIVE LOADS

1. DISTRIBUTED LOAD5 PSF

2. FRAME CONCENTRATED LOAD200 LBF

3. INFILL CONCENTRATED LOAD50 LBF
2. SNOW LOADS
- a. N/A - SNOW LOADS NEGLECTED
3. WIND
- a. SEE LOAD TABLES FOR MAX WIND PRESSURES
4. SEISMIC
- a. N/A - SEISMIC LOADS NEGLECTED

CODES AND STANDARDS:

1. THE FOLLOWING CODES AND STANDARS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, APPLY TO THE DESIGN AND CONSTRUCTION OF THIS PROJECT WITH LATEST EDITION PER GOVERNING BUILDING CODE TO BE USED:
- a. ASCE 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"

b. IBC 2018, "INTERNATIONAL BUILDING CODE"

c. AA ADM-2015 "ALUMINUM DESIGN MANUAL"

d. ACI 318-14. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

e. 7TH EDITION - 2020 FLORIDA BUILDING CODE

ALUMINUM NOTES:

1. ALL STRUCTURAL ALUMINUM COMPONENTS SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND ADM-2015.
2. MATERIAL NOTES:

ALL SHAPES SHALL BE ONE OF THE FOLLOWING ALUMINUM ALLOYS AND TEMPERS:

6061-T66063-T66063-T5

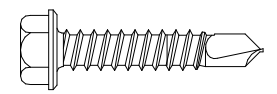
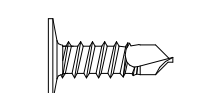
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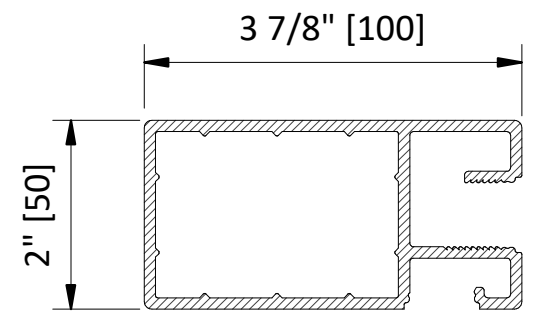
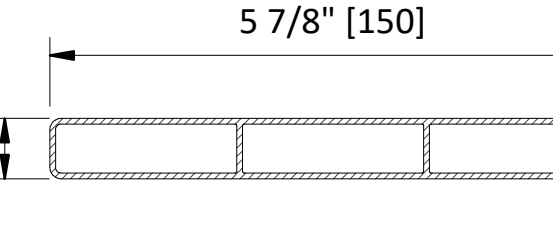
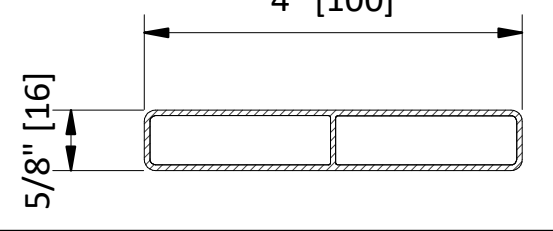
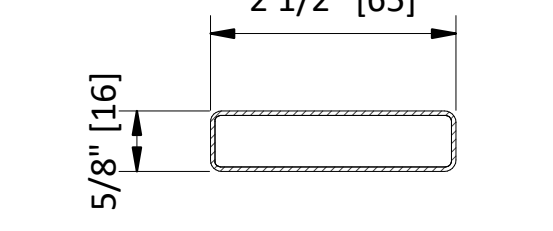
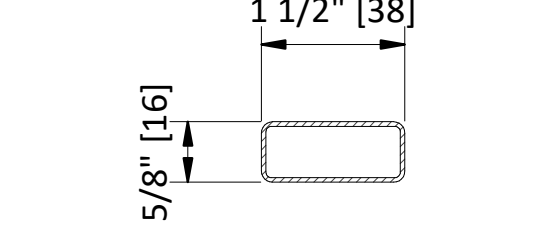
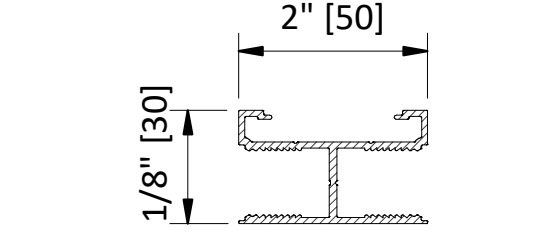
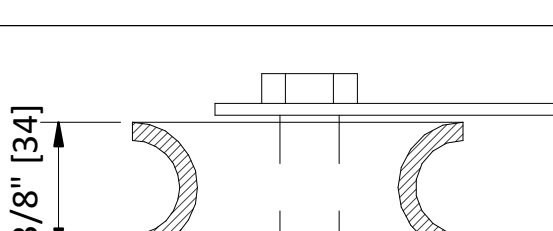
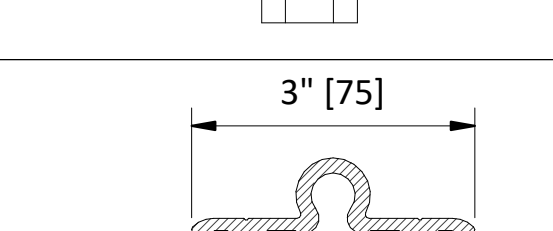
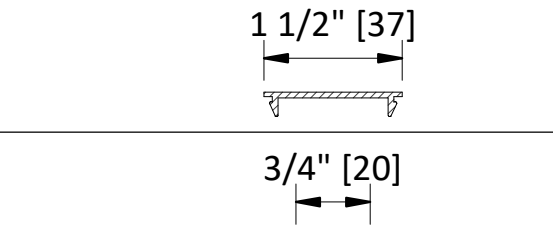

E: 10x10³ KSI E: 10x10³ KSI E: 10x10³ KSI
3. SCREWS:
- SELF-TAPPING METAL SCREWS (AS NOTED) - #10 MINIMUM GALVANIZED UNLESS NOTED OTHERWISE ALUMINUM WHERE NOTED AT HIGH/SALT EXPOSURE
4. WHERE ALUMINUM IS IN CONTACT WITH OTHER METALS EXCEPT 300 SERIES STAINLESS TELL, ZINC OR CADMIUM AND THE FAYING SURFACES ARE EXPOSED TO MOISTURE, THE OTHER METALS SHALL BE PAINTED OR COATED WITH ZINC, CADMIUM, OR ALUMINUM.
5. UNCOATED ALUMINUM SHALL NOT BE EXPOSED TO MOISTURE OR RUNOFF THAT HAS COME IN CONTACT WITH OTHER UNCOATED METALS EXCEPT 300 SERIES STAINLESS, ZINC, OR CADMIUM.
6. ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH WOOD, FIBERBOARD, OR OTHER POROUS MATERIAL THAT ABSORBS WATER SHALL BE PAINTED.
7. ALUMINUM SURFACES SHALL BE PAINTED IF THEY ARE TO BE PLACED IN CONTACT WITH CONCRETE OR MASONRY UNLESS THE CONCRETE OR MASONRY REMAINS DRY AFTER CURING AND NO CORROSIVE ADDITIVES SUCH AS CHLORIDES ARE USED.
8. ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE WITH CORROSIVE ADDITIVES SUCH AS CHLORIDES IF THE ALUMINUM IS ELECTRICALLY CONNECTED TO STEEL. ALUMINUM EMBEDDED IN CONCRETE SHALL BE WRAPPED WITH 10 MIL PIPE WRAP OR PLASTIC TAPE. WRAP MUST PROTECT ALL ALUMINUM SURFACES FROM EXPOSURE TO CONCRETE.
9. AS AN ALTERNATIVE TO THE PREVIOUS REQUIREMENTS FOR ALUMINUM IN CONTACT WITH OTHER MATERIALS, ALUMINUM SHALL BE SEPARATED FROM THE MATERIALS OF THIS SECTION BY A NONPOROUS ISOLATOR COMPATIBLE WITH THE ALUMINUM AND THE DISSIMILAR MATERIAL.
10. STEEL FASTENERS WITH A MINIMUM TENSILE ULTIMATE STRENGTH GREATER THAN 120 KSI IN THE LOAD BEARING PORTION OF THE SHANK SHALL NOT BE USED IN CONTACT WITH ALUMINUM. ALL FASTENERS SHALL BE LOCATED AT A SPACING THAT CONFORMS TO AISC STANDARD GAGE AND PITCH.
11. BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16" (U.O.N.).
12. PREDRILL ALL HOLES FOR MATERIAL THICKER THAN 3/16".
13. NOMINAL DIAMETER OF UNTHREADED HOLES FOR SCREWS SHALL NOT EXCEED THE NOMINAL DIAMETER OF THE SCREWS BY MORE THAN 1/16".
14. THE SPACING BETWEEN SCREW CENTERS SHALL NOT BE LESS THAN 2.5 TIMES THE NOMINAL DIAMETER OF THE SCREWS.
15. THE DISTANCE FROM THE EDGE OF A PART TO THE CENTER OF THE SCREWS SHALL NOT BE LESS THAN 1.5 TIMES THE NOMINAL DIAMETER OF THE SCREW.
16. WASHERS SHALL HAVE A NOMINAL DIAMETER NOT LESS THAN 5/16" AND SHALL HAVE A NOMINAL THICKNESS NOT LESS THAN 0.050".

TYPICAL SCREW FASTENER LEGEND:

NOTE: SCREWS SHOWN BELOW ARE TYPICAL EXAMPLES AND ALL MAY NOT BE USED IN PROJECT. CONTRACTOR MAY ELECT TO USE OTHER TYPES. SCREW MATERIAL PER THE GENERAL NOTES AND MINIMUM SCREW DIAMETER PER THE DETAILS MUST BE MAINTAINED. DRILL POINT, HEAD STYLE, AND THREAD COUNT PER INCH SHALL BE SELECTED BY THE CONTRACTOR BASED ON THE APPLICATION.

#10-16X1" HEX WASHER HEAD (HWH) SELF DRILLING SCREW (5/16" HEX-HEAD) (METAL TO METAL) MANUF. PART NO. 10100HW3CS		TRIANGLE FASTENER 1-800-486-1832
#10-16X5/8" BLAZER LO PROFILE PANCAKE HEAD SELF DRILLING SCREW (2/2 QUADREX DRIVE) (METAL TO METAL) MANUF. PART NO. CSSD5-#10X5/8"-PC-QX-F		TRIANGLE FASTENER 1-800-486-1832

ENLARGED PART DETAILS (DIMENSIONS IN [] ARE MM):

KESGF10050	
KES15016	
KES10016	
KES6516	
KES3816	
KESP2W5030	
KAGSGTRB	
KESGT80	
KESINFL	
KESINFS	

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PLAN REVISIONS

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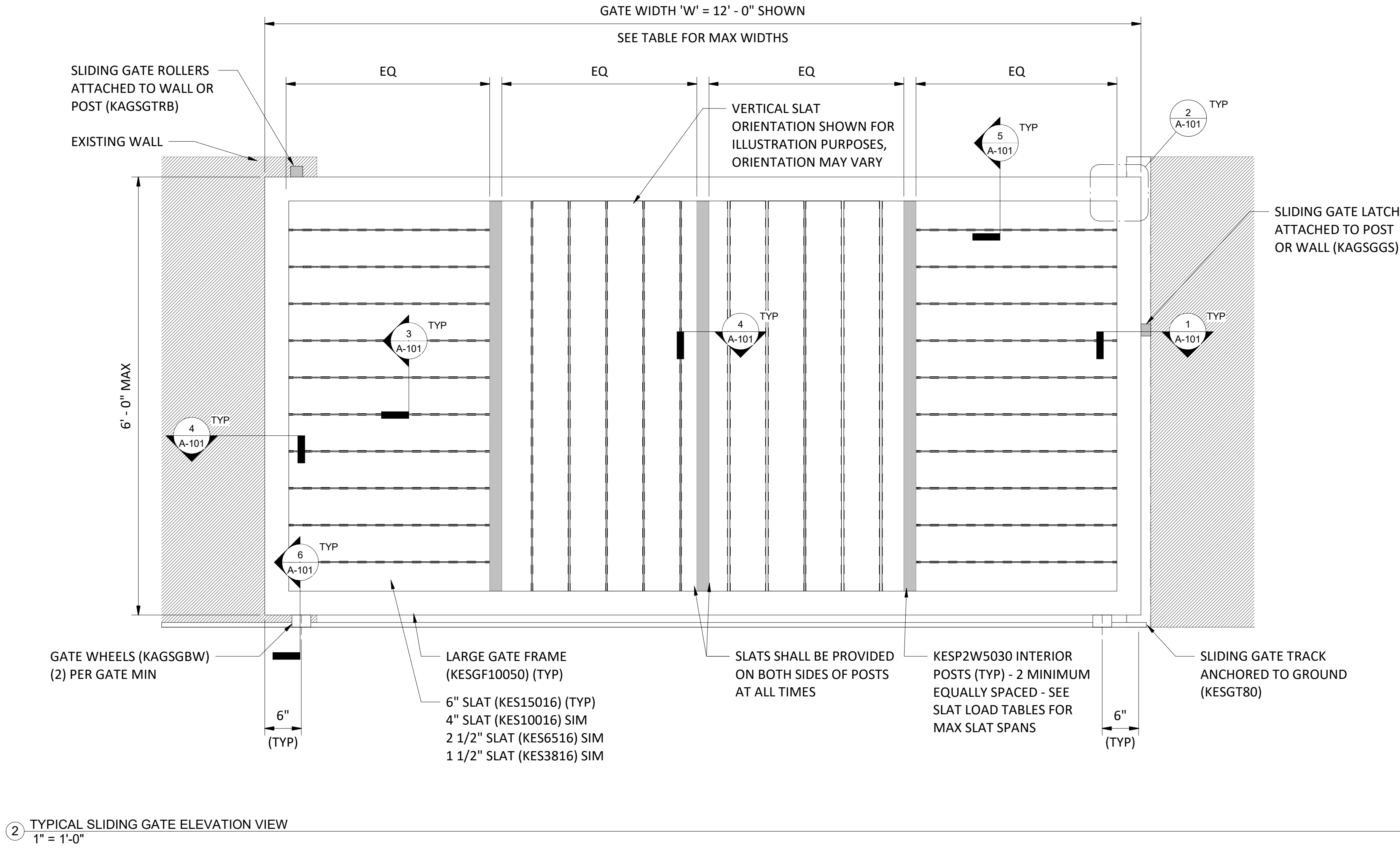
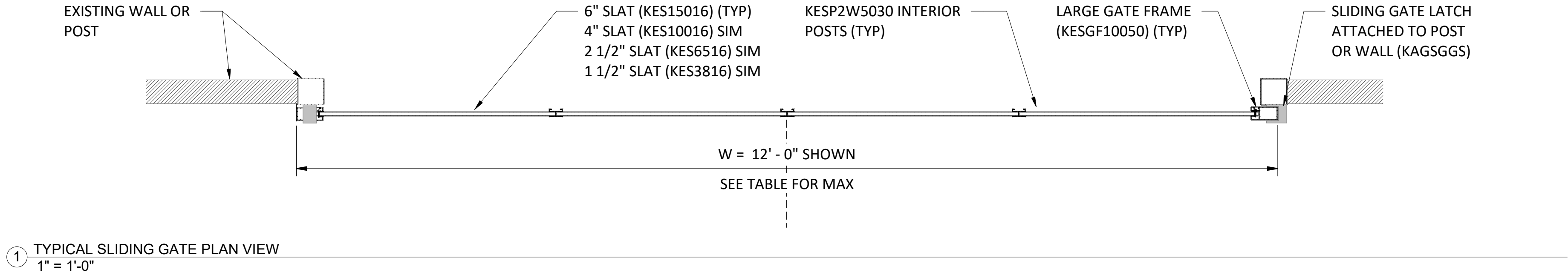
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SLIDING GATE FRAME (KESGF10050) LOAD TABLE			
GATE HEIGHT 'H' (MAX)	GATE WIDTH 'W' (MAX) ¹	MAX DESIGN PRESSURE ²	MAX ULT WIND PRESSURE ³
6'-0"	10'-0"	33 PSF	55 PSF
6'-0"	11'-0"	28.8 PSF	48 PSF
6'-0"	12'-0"	24 PSF	40 PSF
6'-0"	13'-0"	19.2 PSF	32 PSF
6'-0"	14'-0"	16.8 PSF	28 PSF
6'-0"	15'-0"	15 PSF	25 PSF
6'-0"	16'-0"	13.8 PSF	23 PSF
6'-0"	17'-0"	12 PSF	20 PSF
6'-0"	18'-0"	10.8 PSF	18 PSF

1. MAX WIDTH BASED ON SOLID GATE WITH MINIMAL GAPS.
2. MAX ALLOWED ASD FACTORED LOAD FOR GATE AS DEFINED BY ASCE 7.
3. MAX ULTIMATE WIND PRESSURE FOR GATE AS DEFINED BY ASCE 7.

6" SLAT (KES15016) LOAD TABLE		
SLAT SPAN 'W' (MAX)	MAX DESIGN PRESSURE ²	MAX WIND PRESSURE ³
3'-0"	146 PSF	243 PSF
4'-0"	82 PSF	136 PSF
5'-0"	52 PSF	86 PSF
6'-0"	36 PSF	60 PSF

1. MAX SLAT SPAN BASED ON PRESSURE APPLIED TO LARGE FLAT FACE.
2. MAX ALLOWED ASD FACTORED LOAD AS DEFINED BY ASCE 7.
3. MAX ULTIMATE WIND PRESSURE AS DEFINED BY ASCE 7.
4. SLATS SHALL BE EVALUATED BY EOR FOR USE IN GUARDRAIL APPLICATION.

4" SLAT (KES10016) LOAD TABLE		
SLAT SPAN 'W' (MAX)	MAX DESIGN PRESSURE ²	MAX WIND PRESSURE ³
3'-0"	138 PSF	230 PSF
4'-0"	77 PSF	128 PSF
5'-0"	49 PSF	81 PSF
6'-0"	34 PSF	56 PSF

1. MAX SLAT SPAN BASED ON PRESSURE APPLIED TO LARGE FLAT FACE.
2. MAX ALLOWED ASD FACTORED LOAD AS DEFINED BY ASCE 7.
3. MAX ULTIMATE WIND PRESSURE AS DEFINED BY ASCE 7.
4. SLATS SHALL BE EVALUATED BY EOR FOR USE IN GUARDRAIL APPLICATION.

2 1/2" SLAT (KES6516) LOAD TABLE		
SLAT SPAN 'W' (MAX)	MAX DESIGN PRESSURE ²	MAX WIND PRESSURE ³
3'-0"	120 PSF	200 PSF
4'-0"	67 PSF	111 PSF
5'-0"	43 PSF	71 PSF
6'-0"	30 PSF	50 PSF

1. MAX SLAT SPAN BASED ON PRESSURE APPLIED TO LARGE FLAT FACE.
2. MAX ALLOWED ASD FACTORED LOAD AS DEFINED BY ASCE 7.
3. MAX ULTIMATE WIND PRESSURE AS DEFINED BY ASCE 7.
4. SLATS SHALL BE EVALUATED BY EOR FOR USE IN GUARDRAIL APPLICATION.

1 1/2" SLAT (KES3816) LOAD TABLE		
SLAT SPAN 'W' (MAX)	MAX DESIGN PRESSURE ²	MAX WIND PRESSURE ³
3'-0"	122 PSF	203 PSF
4'-0"	68 PSF	113 PSF
5'-0"	44 PSF	73 PSF
6'-0"	30 PSF	50 PSF

1. MAX SLAT SPAN BASED ON PRESSURE APPLIED TO LARGE FLAT FACE.
2. MAX ALLOWED ASD FACTORED LOAD AS DEFINED BY ASCE 7.
3. MAX ULTIMATE WIND PRESSURE AS DEFINED BY ASCE 7.
4. SLATS SHALL BE EVALUATED BY EOR FOR USE IN GUARDRAIL APPLICATION.

1. GENERIC LAYOUT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF ANY WORK.

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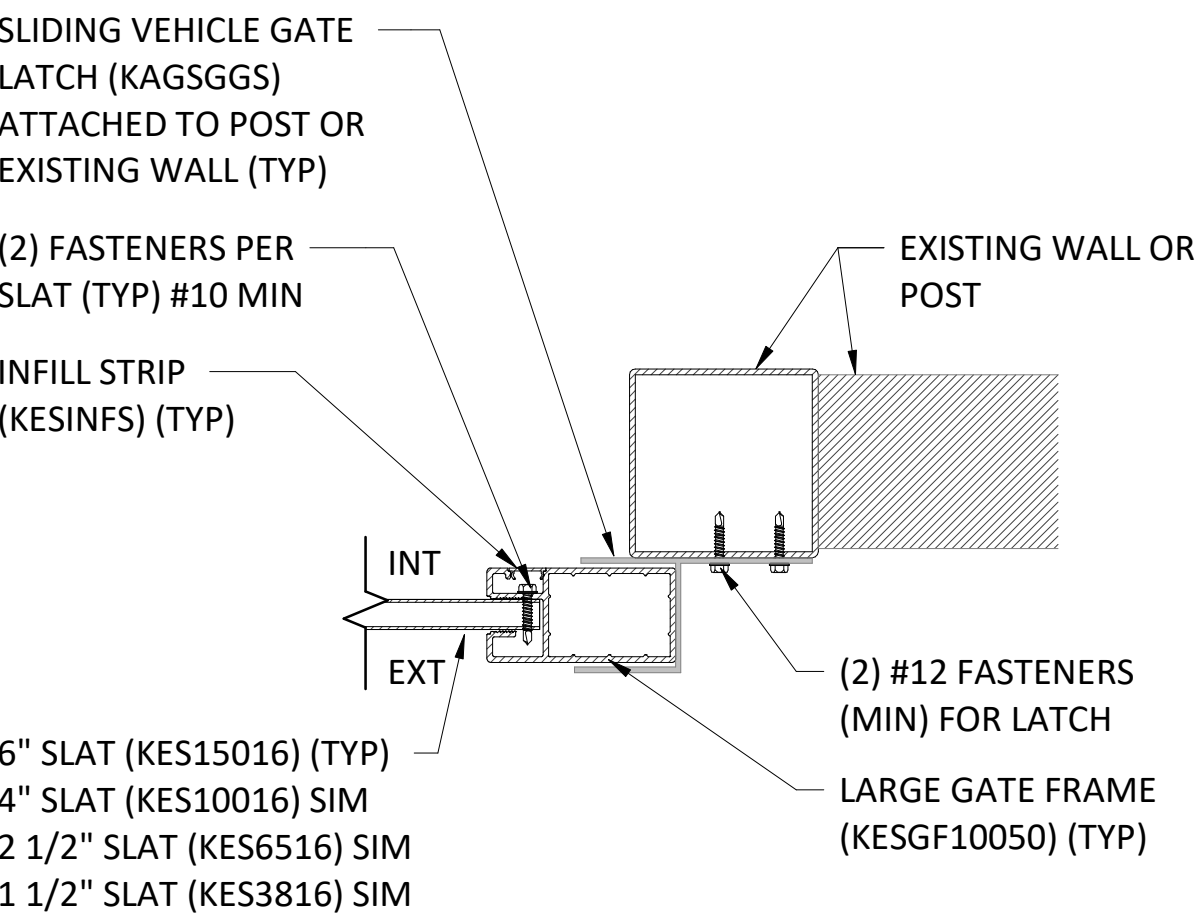
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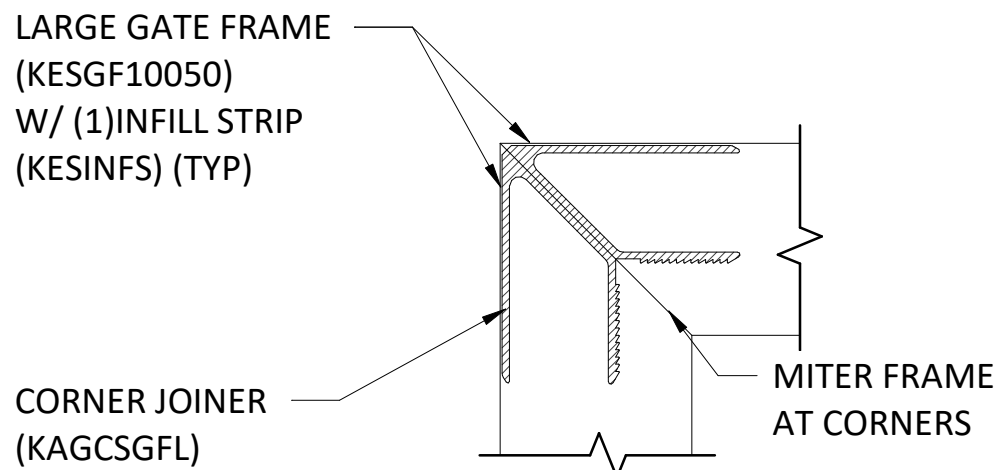
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SLIDING GATE PLAN & ELEVATION

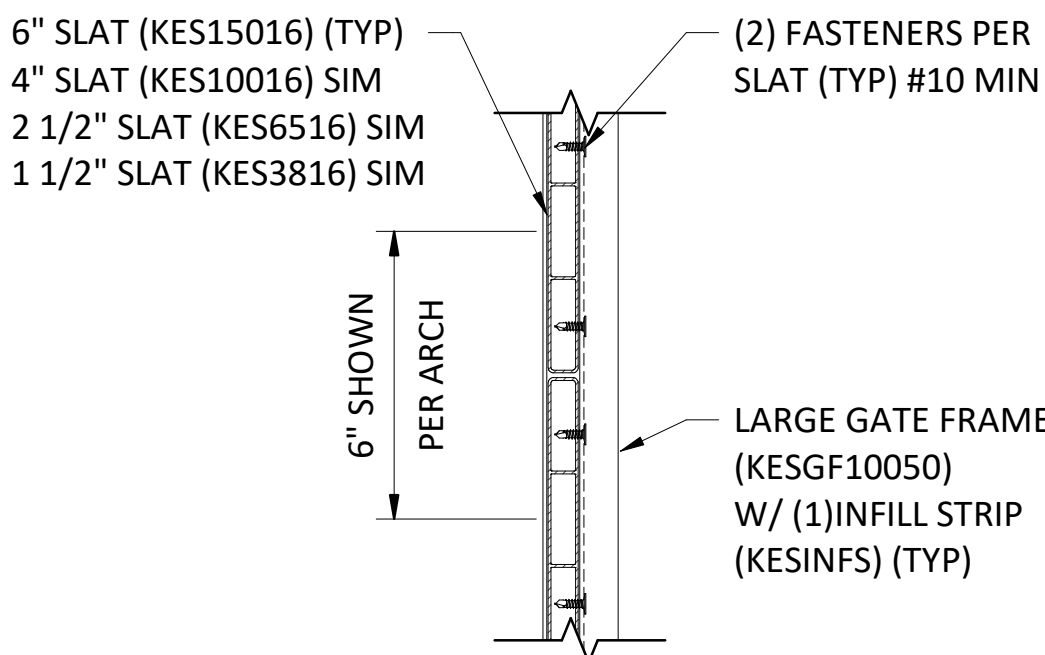
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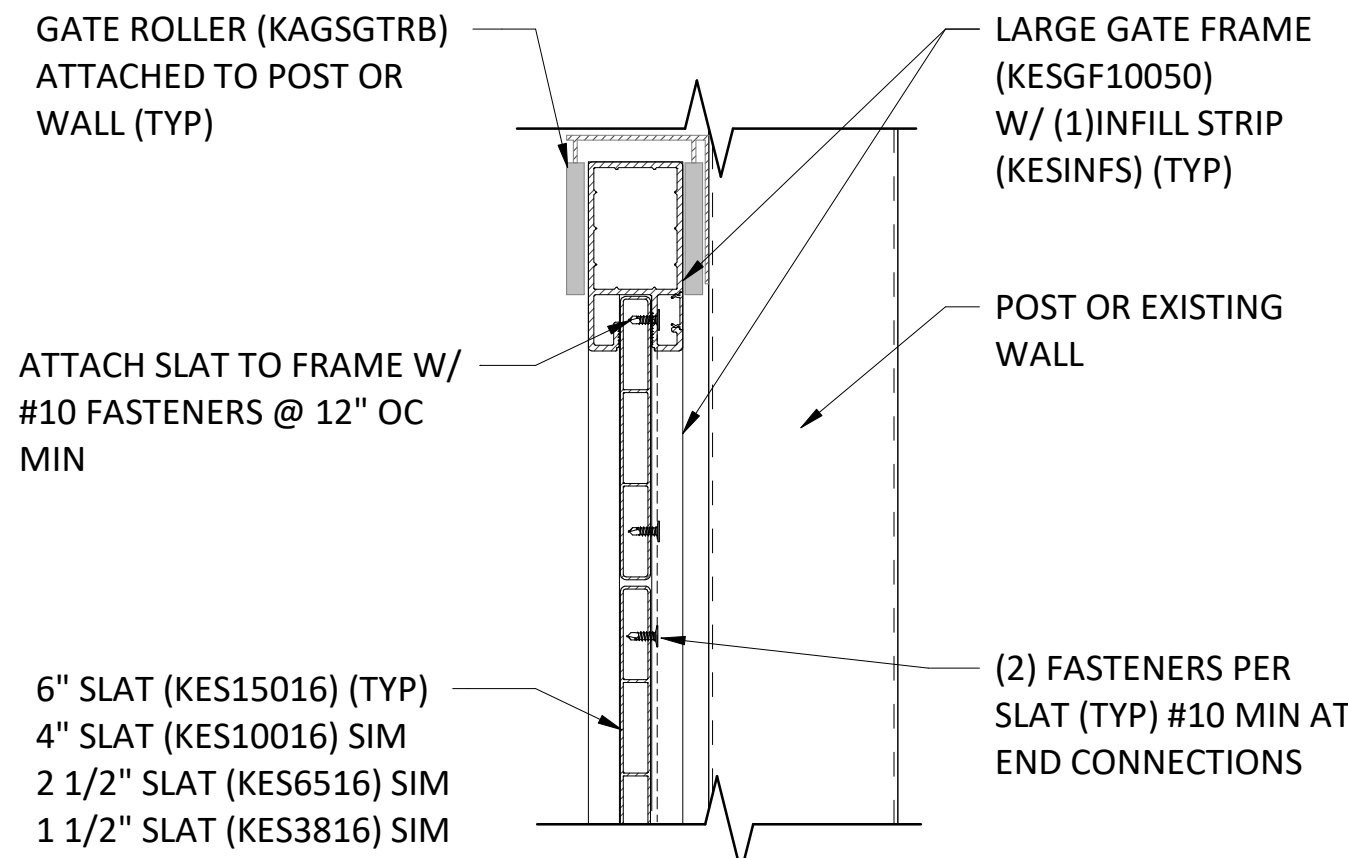
1 TYPICAL SLIDING GATE LATCH DETAIL
3" = 1'-0"



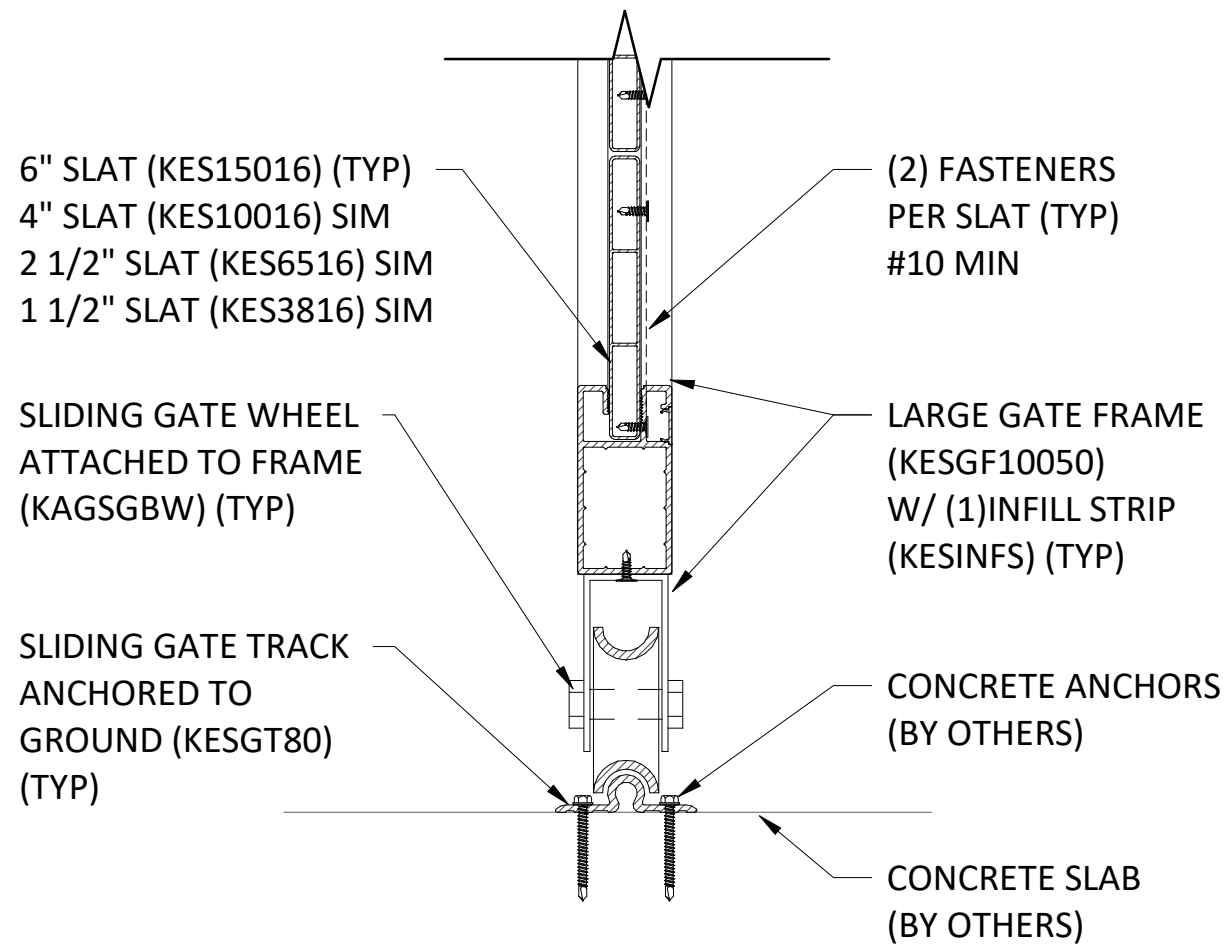
2 TYPICAL SLIDING GATE FRAME CORNER
3" = 1'-0"



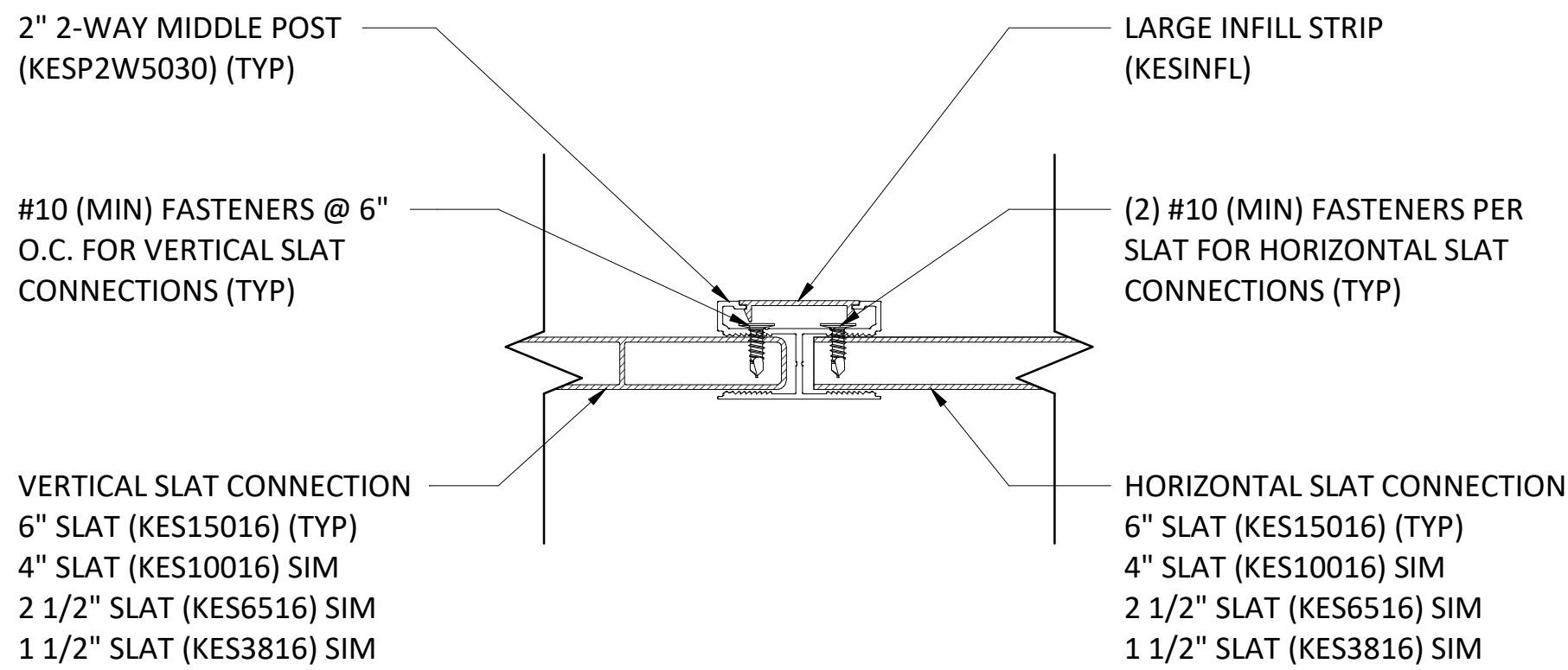
3 TYPICAL SLIDING GATE SLAT CONNECTION DETAIL
3" = 1'-0"



5 TYPICAL SLIDING GATE TOP CONNECTION DETAIL
3" = 1'-0"



6 TYPICAL SLIDING GATE BOTTOM DETAIL
3" = 1'-0"



4 TYPICAL SLIDING GATE MIDDLE POST CONNECTION DETAIL
6" = 1'-0"

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