



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PREAPPROVAL OF  
MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0503

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal/Update

Manufacturer Information

Manufacturer: Legrand AV (Middle Atlantic Products)

Manufacturer's Technical Representative: Sudharsan Yogasuntharam

Mailing Address: 300 Fairfield Road, Fairfield, NJ 07004

Telephone: (973) 839-1011

Email: sudharsan.yogasuntharam@legrand.com

Product Information

Product Name: AXS-1R Series

Product Type: Racks and Enclosures

Product Model Number: AXS-IR-1927-20, AXS-IR-1932-26, AXS-IR-1938-26, AXS-IR-2527-20, AXS-IR-2532-26, AXS-IR-2538-26, AXS-IR-3827-20, AXS-IR-3832-26, AXS-IR-3838-26, AXS-IR-4127-20, AXS-IR-4132-26, AXS-IR-4138-26, AXS-IR-4527-20, AXS-IR-4532-26, AXS-IR-4538-26

General Description: Gang-able Floor Standing Enclosures intended to enclose audio, video and IT equipment.

Applicant Information

Applicant Company Name: Legrand AV (Middle Atlantic Products)

Contact Person: Sudharsan Yogasuntharam

Mailing Address: 300 Fairfield Road, Fairfield, NJ 07004

Telephone: (973) 839-1011

Email: sudharsan.yogasuntharam@legrand.com

Title: Compliance Engineer

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

OSHPD



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

**Registered Design Professional Preparing Engineering Recommendations**

Company Name: SIMPSON GUMPERTZ & HEGER

Name: William Bruin

California License Number: CE57867

Mailing Address: 500 12th Street, Suite 270, , Oakland, CA 94607

Telephone: 510-457-4456

Email: wmbuin@sgh.com

**OSHDP Special Seismic Certification Preapproval (OSP)**

☐ Special Seismic Certification is preapproved under OSP

OSP Number: \_\_\_\_\_

**Certification Method**

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16

☐ Other(s) (Please Specify): \_\_\_\_\_

\*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHDP prior to testing.

☒ Analysis

☐ Experience Data

☐ Combination of Testing, Analysis, and/or Experience Data (Please Specify): \_\_\_\_\_

**OSHDP Approval**

Date: 7/15/2020

Name: Jeffrey Kikumoto

Title: Senior Structural Engineer

Condition of Approval (if applicable): \_\_\_\_\_

\*Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs\*

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

**OSHDP**

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCE) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019

2. THE WORK SHOWN ON THESE DRAWINGS IS FOR THE SEISMIC SUPPORTS & ATTACHMENTS OF THE SUBJECT RACK ENCLOSURES. MAXIMUM PERMISSIBLE CONTENT CAPACITIES FOR VARIOUS HEIGHTS WITHIN THE BUILDING ARE PROVIDED IN TABLES 1 THRU 7.

- $I_P = 1.5$  (CBC §1617.1.17)  
 $S_{DS} \leq 2.04G$   
 $\Omega_O = 2.0$   
 $a_P = 2.5, R_P = 6$   
 $Z, H = \text{VARIES}$

LATERAL FORCE,  $F_{P,H} = [(0.4 a_P S_{DS} I_P W_P) / R_P] * (1 + 2 Z/H)$   
 VERTICAL FORCE,  $F_{P,V} = 0.2 S_{DS} W_P$

4. DESIGN LOADS SHOWN IN TABLE 1 ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.

5. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS & ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE. IT DOES NOT COVER THE COMPONENT OR ITS CONTENTS. IF THE RACKS CONTAIN INTERNAL COMMUNICATION SERVERS & ROUTERS, SPECIAL SEISMIC CERTIFICATION IS REQUIRED.

6. MFR RESPONSIBLE FOR EQUIPMENT INCLUDING SEISMIC BRACKETS. CONTRACTOR RESPONSIBLE FOR ANCHOR HARDWARE & INSTALLATION.

1. RACK ENCLOSURES MAY BE ANCHORED TO EITHER A SAND LIGHT-OR NORMAL-WEIGHT, REINFORCED CONCRETE FLOOR OR SLAB (TABLES 2-4) OR SAND LIGHT- OR NORMAL-WEIGHT CONCRETE FILL OVER METAL DECK (TABLES 5-7). IN ALL CASES, THE MINIMUM CONCRETE COMPRESSIVE STRENGTH (F'C) SHALL BE 3,000 PSI.

2. REINFORCED CONCRETE FLOOR SLAB (OR CONCRETE FILL OVER METAL DECK) SHALL HAVE MINIMUM THICKNESS BASED ON THE ANCHOR TYPES AS NOTED IN TABLE 8 AND 9

3. INSTALLATION OF THE RACK ENCLOSURES IS LIMITED TO INTERIOR LOCATIONS ONLY, WHERE DESIGN IS CONTROLLED BY SEISMIC FORCES.

4. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
5. SEOR MUST ENSURE THE ENCLOSURE RACK IS LOADED SO THAT THE CG IS NO HIGHER THAN THE CG SHOWN HEREIN. THE EQUIPMENT MANUFACTURER HAS DESIGNED THE UNIT TO MAKE THE C.G. LESS THAN OR EQUAL TO THE HEIGHT DIMENSION SHOWN ON SHEET 6.

Anchor Type (Reference Table)		Maximum Shear ( $V_u$ ) and Tension ( $T_u$ ) Per Anchor (pounds)				
		Demand Parameter	Elevation in Building (z/h)			
			0 (Ground)	1/3	2/3	$\leq 1$
Epoxy Anchor Solid Slab of NW Concrete (Table 2)	$V_u$	836	836	1060		1354
	$T_u$	2656	2656	2855		2795
Expansion Anchor Solid Slab of NW Concrete (Table 3)	$V_u$	818	818	1053		1080
	$T_u$	1880	1880	1895		1882
Expansion Anchor Solid Slab of Sand LW Concrete (Table 4)	$V_u$	753	753	743		757
	$T_u$	1295	1295	1299		1276
Expansion Anchor NW Concrete Fill over Deck (Table 5)	$V_u$	753	753	743		732
	$T_u$	1247	1247	1262		1245
Expansion Anchor Sand LW Concrete Fill over Deck (Table 6)	$V_u$	514	514	511		508
	$T_u$	824	824	838		842
Thru-Bolt Connection NW or Sand LW Concrete over Deck (Table 7)	$V_u$	1394	1394	1394		1394
	$T_u$	2185	2185	2185		2185

TABLE 1: MAXIMUM DEMAND LOADS FOR AXS-IR SERIES ENCLOSURES (SEE FOOTNOTES 1-3)

**SIMPSON GUMPERTZ & HEGER**

Engineering of Structures  
and Building Enclosures

Simpson Gumpertz & Heger Inc.  
500 12th Street, Suite 270  
Oakland, California 94607  
t: 510.457.4600 f: 510.457.4399  
www.sgh.com



7/13/2020


USED ON: --	APPROVALS	DATE		
	MODELED			
NEXT ASSY: --	DRAWN		TITLE  AXS-IR-SERIES OSHPD	
	CIRCLED DIMENSIONS ARE CRITICAL INSPECTION DIMENSIONS UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMAL: ± PLC ±.03 3 PLC ±.010 FRACTIONS: ±1/32 ANGLES: .1°			
MATERIAL: SEE COMPONENTS			PART NO.	PART REV.
FRESH --			SIZE 3	DXF NO. NONE
--	SCALE = 1/8"		DWG NO.	DWG REV.





TABLE 7: AXS-IR SERIES ENCLOSURES & MAXIMUM OSHPD SEISMIC CONTENT CAPACITY (LBS) WITH 1/2" THRU-BOLTS IN NORMALWEIGHT OR SAND-LIGHTWEIGHT CONCRETE FILL OVER METAL DECK. (SEE FOOTNOTES 1-4)

RACK ENCLOSURE	ELEVATION IN BUILDING (Z/H)			
	GROUND	1/3	2/3	≤1
AXS-IR-1927-20	700	700	500	350
AXS-IR-1932-26	700	700	500	350
AXS-IR-1938-26	700	700	500	350
AXS-IR-2527-20	550	550	375	250
AXS-IR-2532-26	550	550	375	250
AXS-IR-2538-26	550	550	375	250
AXS-IR-3827-20	350	350	225	125
AXS-IR-3832-26	350	350	225	125
AXS-IR-3838-26	350	350	225	125
AXS-IR-4127-20	300	300	175	90
AXS-IR-4132-26	300	300	175	90
AXS-IR-4138-26	300	300	175	90
AXS-IR-4527-20	250	250	150	70
AXS-IR-4532-26	250	250	150	70
AXS-IR-4538-26	250	250	150	70

RACK ENCLOSURE	ELEVATION IN BUILDING (Z/H)			
	GROUND	1/3	2/3	≤1
AXS-IR-1927-20	1200	1200	1200	1200
AXS-IR-1932-26	1200	1200	1200	1200
AXS-IR-1938-26	1200	1200	1200	1200
AXS-IR-2527-20	1200	1200	1200	1200
AXS-IR-2532-26	1200	1200	1200	1200
AXS-IR-2538-26	1200	1200	1200	1200
AXS-IR-3827-20	1200	1200	1200	1200
AXS-IR-3832-26	1200	1200	1200	1200
AXS-IR-3838-26	1200	1200	1200	1200
AXS-IR-4127-20	1200	1200	1200	1200
AXS-IR-4132-26	1200	1200	1200	1200
AXS-IR-4138-26	1200	1200	1200	1200
AXS-IR-4527-20	1200	1200	1200	1200
AXS-IR-4532-26	1200	1200	1200	1200
AXS-IR-4538-26	1200	1200	1200	1200

## FOOTNOTES TABLE 6: Jeffrey Kikumoto

1. INCLUDES ALL AXS-IR SERIES RACK ENCLOSURES UP TO A HEIGHT OF 45 SPACES
2. RACK ENCLOSURES SHALL BE INSTALLED WITH MIDDLE ATLANTIC AXS-IR-Z4K SEISMIC KIT PER MANUFACTURER INSTRUCTIONS, WITH THE ADDITION OF A 5/8" WELD WASHER AT EACH ANCHOR LOCATION.
3. THE SUPPORTED RACK ENCLOSURE CONTENTS SHALL BE DISTRIBUTED WITHIN THE ENCLOSURE SUCH THAT 50% OF THE TOTAL WEIGHT IS LOCATED WITHIN THE BOTTOM THIRD OF THE RACK ENCLOSURE HEIGHT, 25% IN THE MIDDLE THIRD, AND 25% IN THE TOP THIRD. CONTENTS ARE IN ADDITION TO UNIT SELF-WEIGHT
4. ANCHORAGE WITH HILTI KWIK-BOLT TZ OR SIMPSON STRONG-TIE STRONG BOLT 2. REFER TO TABLE 9.
5. RATED RACK CAPACITY = 1200 LBS

1. INCLUDES ALL AXS-IR SERIES RACK ENCLOSURES UP TO A HEIGHT OF 45 SPACES
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4. ANCHORAGE WITH 1/2" DIAMETER THRU-BOLTS OF ASTM F1554 GRADE 36 OR 105, WITH CONNECTION TO THE DECK SOFFIT AS DETAILED ON THE DRAWINGS. REFER TO TABLE 9.
5. RATED RACK CAPACITY = 1200 LBS



A

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B

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C

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D

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E

1. CONCRETE ANCHORS FOR THE SUBJECT RACK ENCLOSURES INSTALLED IN SOLID REINFORCED CONCRETE SHALL BE ONE OF THE TYPES LISTED IN TABLE 8, WITH THE DIAMETER, EMBEDMENT, AND EDGE DISTANCES SPECIFIED. ANCHORS SHALL BE OF CARBON STEEL AND FOLLOW ALL INSTALLATION REQUIREMENTS SPECIFIED IN THE CORRESPONDING ESR REPORTS.
2. CONCRETE ANCHORS FOR THE SUBJECT RACK ENCLOSURES INSTALLED IN TOP SIDE OF CONCRETE FILL OVER METAL DECK SHALL BE ONE OF THE TYPES LISTED IN TABLE 9, WITH THE DIAMETER, EMBEDMENT, AND EDGE DISTANCES SPECIFIED. ANCHORS SHALL BE OF CARBON STEEL AND FOLLOW ALL INSTALLATION REQUIREMENTS SPECIFIED IN THE CORRESPONDING ESR REPORTS
3. ALTERNATIVELY, SUBJECT RACK ENCLOSURES MAY BE INSTALLED IN TOP SIDE OF CONCRETE FILL OVER METAL DECK USING THE THRU-BOLT CONNECTION AS LISTED IN TABLE 9 AND SHOWN ON THE DRAWINGS.
4. LOCATE ALL EXISTING REINFORCING BARS WITHIN 12 INCHES OF PROPOSED ANCHOR LOCATIONS PRIOR TO DRILLING FOR CONCRETE ANCHORS. DO NOT CUT, CORE, OR DRILL THROUGH EXISTING REINFORCING BARS.
5. ALL CONCRETE ANCHORS SHALL BE INSTALLED WITH PROPER TOOLS AND PROCEDURES IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ICC EVALUATION SERVICE REPORTS REFERENCED ABOVE.
6. CONCRETE ANCHORS REQUIRE SPECIAL INSPECTION FOR INSTALLATION IN ACCORDANCE WITH CBC TABLE 1705A.3.
7. CONCRETE ANCHORS SHALL BE TESTED A MINIMUM OF 24 HOURS AFTER INSTALLATION TO VERIFY PROPER INSTALLATION IN ACCORDANCE WITH CBC SECTION 1910A.5
8. A MINIMUM OF TWO ANCHORS (50%) PER ENCLOSURE MUST BE TESTED (CBC 1910A.5.3).
9. TESTING OF THE POST INSTALLED ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR & A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY (CBC 1910A.5.3)
10. ANCHORS SHALL BE TESTED TO LOADS SHOWN BELOW (CBC 1910A.5.4):  
  
A) EPOXY ANCHORS IN NORMAL WEIGHT CONCRETE – 3904 LB

07/14/2020

	1	2	3	4	5	6	7	8																												
	<div>THIS DRAWING CONTAINS TRADE INFORMATION DEEMED TO BE CONFIDENTIAL AND PROPRIETARY PROPERTY OF MIDDLE ATLANTIC PRODUCTS, INC. AND IS TO BE USED ONLY FOR THE PURPOSES FOR WHICH IT IS SUBMITTED AND FURTHER SHALL NOT BE COPIED IN WHOLE OR PART WITHOUT WRITTEN PERMISSION FIRST OBTAINED FROM MIDDLE ATLANTIC PRODUCTS, INC.</div>					<div><div><div>Middle Atlantic Products, Inc. an ISO 9001:2000 Registered Company</div></div><div>OPM-0503-19</div><div>AXS-IR-SERIES OSHPD</div></div> <div><div>REVISION: C</div><div>REV BY: TB</div><div>EFFECTIVE DATE: TBD</div><div>PAGE: 5 of 7</div></div>																														
A	TABLE 9: ACCEPTABLE FASTENERS FOR ANCHORING OF THE AXS-IR SERIES OF RACK ENCLOSURES TO TOPSIDE OF CONCRETE FILL OVER METAL DECK (NOTES 1,2)					RESPONSIBILITIES OF THE SEOR																														
B	<table><tr><th>Anchor Type</th><th>ICC ESR</th><th>Outside Diameter (inches)</th><th>Effective Embedment (inches) (hef)</th><th>MIN Thick Above/Within Flute (inches)</th><th>MIN Edge Distance (inches)</th><th>MIN Spacing (inches)</th></tr><tr><td>HILTI KWIK Bolt TZ Expansion Anchors</td><td>1917</td><td>0.5</td><td>2</td><td>3.25/1.5</td><td>6</td><td>6.5</td></tr><tr><td>Simpson Strong-Tie Strong-Bolt 2 Expansion Anchors</td><td>3037</td><td>0.5</td><td>2.25</td><td>3.25/1.5</td><td>6</td><td>8</td></tr><tr><td>ASTM F1554 Thru-Bolt (Note 3)</td><td>NA</td><td>0.5</td><td>NA</td><td>3.25/1.5</td><td>6</td><td>NA</td></tr></table>					Anchor Type	ICC ESR	Outside Diameter (inches)	Effective Embedment (inches) (hef)	MIN Thick Above/Within Flute (inches)	MIN Edge Distance (inches)	MIN Spacing (inches)	HILTI KWIK Bolt TZ Expansion Anchors	1917	0.5	2	3.25/1.5	6	6.5	Simpson Strong-Tie Strong-Bolt 2 Expansion Anchors	3037	0.5	2.25	3.25/1.5	6	8	ASTM F1554 Thru-Bolt (Note 3)	NA	0.5	NA	3.25/1.5	6	NA	<div>1. THE STRUCTURAL ENGINEER-OF-RECORD (SEOR) SHALL VERIFY THAT THE WEIGHT OF RACK ENCLOSURE CONTENTS DOES NOT EXCEED THE APPROVED CAPACITY FOR THE LOCATION OF INSTALLATION.</div> <div>2. THE SEOR SHALL VERIFY THAT PROJECT SPECIFIC SEISMIC PARAMETERS (S<sub>DS</sub> &amp; z/h) DO NOT EXCEED THE DESIGN VALUES STATED ON THESE DRAWINGS</div> <div>3. THE SEOR SHALL VERIFY THAT THE EXISTING STRUCTURE IS ADEQUATE TO SUPPORT THE LOADS AND REACTIONS IMPOSED BY THE ANCHORED RACK ENCLOSURE IN ADDITION TO ALL OTHER LOADS AND FORCES. MAXIMUM ANCHORAGE DEMAND LOADS ARE LISTED IN TABLE 1.</div> <div>4. SEOR SHALL VERIFY THAT A PLACARD IS PLACED ON THE RACK STATING THE FOLLOWING:<div><div>A. UNIT MODEL NUMBER: 0503-19</div><div>B. NAME OF THE BUILDING IN WHICH IT WILL BE INSTALLED.</div><div>C. HIGHEST FLOOR WHERE IT CAN BE USED.</div><div>D. MAXIMUM TOTAL WEIGHT OF THE CONTENTS THAT CAN BE STORED ON THE RACK.</div><div>E. MAXIMUM WEIGHT THAT CAN BE STORED ON EACH SHELF BASED ON THE WEIGHT DISTRIBUTION SPECIFIED IN THIS OPM.</div><div>F. MAXIMUM S<sub>DS</sub> VALUE AS LISTED IN THIS OPM.</div></div></div> <div>5. SEOR SHALL VERIFY THAT THE CONCRETE FLOOR MEETS THE REQUIREMENTS OF THIS PRE-APPROVAL.</div> <div>6. VERIFY THAT THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ANCHORED MEETS ALL REQUIREMENTS OF THE APPLICABLE ICC ESR.</div> <div>7. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.</div> <div>8. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE ANCHORS SHOWN IN THIS PRE-APPROVAL. VERIFY THAT THERE IS NO ADVERSE INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR 6 hef FROM THIS UNIT'S ANCHORS.</div> <div>9. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 201. CBC AND THE DETAILS SHOWN IN THIS PRE-APPROVAL.</div>		
Anchor Type	ICC ESR	Outside Diameter (inches)	Effective Embedment (inches) (hef)	MIN Thick Above/Within Flute (inches)	MIN Edge Distance (inches)	MIN Spacing (inches)																														
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C	NOTES TABLE 9																																			
D	<div>1. FOR NORMALWEIGHT OR SAND-LIGHTWEIGHT CONCRETE WITH A MINIMUM FC = 3000 PSI</div> <div>2. APPLIES TO THE AXS-IR SERIES ENCLOSURES LISTED IN TABLES 4-6</div> <div>3. ASTM F1554 GRADE 36 OR 105 THRU-BOLTS WITH CONNECTION TO THE DECK SOFFIT AS DETAILED ON THE DRAWINGS.</div>																																			
E	<div><div><div>SIMPSON GUMPERTZ &amp; HEGER</div><div>Engineering of Structures and Building Enclosures</div><div><div>Simpson Gumpertz &amp; Heger Inc. 500 12th Street, Suite 270 Oakland, California 94607 Phone: 510.457.4600 Fax: 510.457.4399 www.sgh.com</div><div><div>San Francisco San Jose San Diego Los Angeles New York Chicago Houston Dallas</div></div></div></div><div><div>REGISTERED PROFESSIONAL ENGINEER</div><div>WILLIAM M. BRUN</div><div>No. C 57867</div><div>CIVIL</div><div>STATE OF CALIFORNIA</div></div><div>07/14/2020</div><div>OPM-0503-19: Reviewed for Code Compliance by Jeffrey Kikumoto</div><div>7/13/2020</div></div>					<div><div>USED ON: --</div><div>MODELED: --</div><div>DRAWN: --</div><div>NEXT ASSY: --</div><div>MATERIAL: SEE COMPONENTS</div><div>FRESH: --</div><div>SCALE: 1/8"</div></div> <div><div>APPROVALS</div><div>DATE</div><div>CIRCLED DIMENSIONS ARE CRITICAL. INSPECTION DIMENSIONS UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMAL: 2 PLG 0.03 3 PLG 0.00 FRACTIONS: 16/32 ANGLES: 1/4" SCALE = 1/8"</div><div><div>AXS-IR-SERIES OSHPD</div><div>PART NO. PART REV</div><div>SIL: 3 DXF NO. NONE</div><div>DWG NO. 7 of 9</div></div></div>																														



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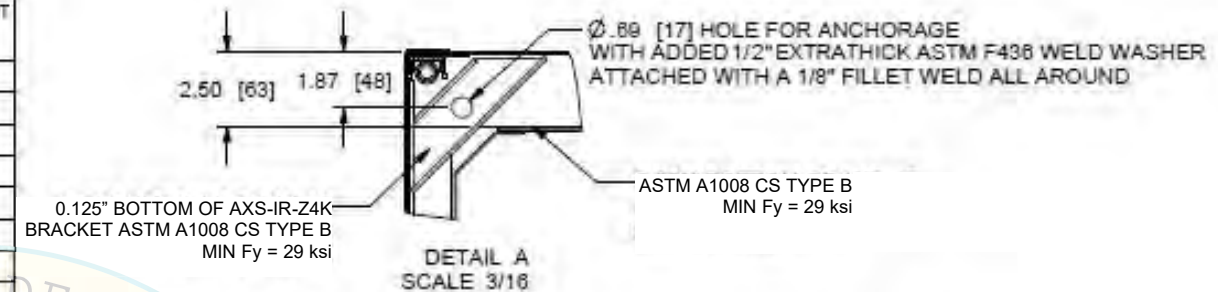


OPM-0503-19

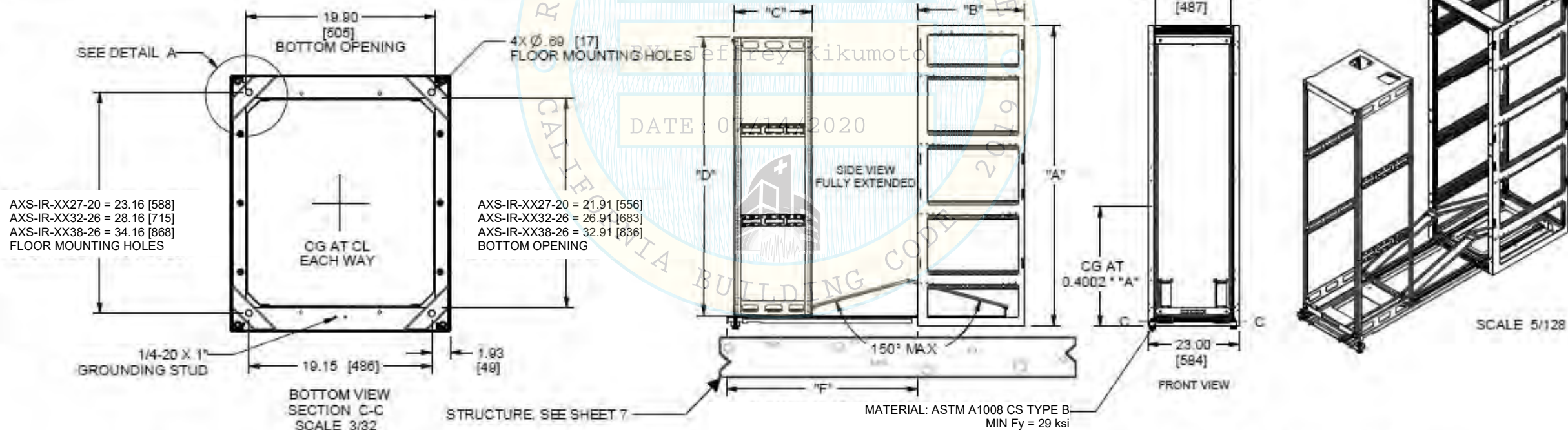
AXS-IR-SERIES OSHPD

REVISION:	C
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EFFECTIVE DATE:	TBD
PAGE:	6 of 7

MODEL #	USEABLE RACKING HEIGHT	HOST CABINET OVERALL HEIGHT "A"	HOST CABINET OVERALL DEPTH "B"	FRAME DEPTH "C"	FRAME HEIGHT "D"	FRAME ROLL OUT "F"	RACK WEIGHT [LBS] (EMPTY)
AXS-IR-1927-20	16	37.45 [951]	27 [686]	20 [508]	32.5 [826]	47.5 [1207] TO 48.5 [1232]	130
AXS-IR-2527-20	22	47.95 [1218]	27 [686]	20 [508]	43.0 [1092]	47.5 [1207] TO 48.5 [1232]	139
AXS-IR-3827-20	35	70.70 [1796]	27 [686]	20 [508]	65.0 [1651]	47.5 [1207] TO 48.5 [1232]	151
AXS-IR-4127-20	38	75.95 [1929]	27 [686]	20 [508]	70.3 [1786]	47.5 [1207] TO 48.5 [1232]	163
AXS-IR-4527-20	42	82.95 [2107]	27 [686]	20 [508]	77.3 [1963]	47.5 [1207] TO 48.5 [1232]	167
AXS-IR-1932-26	16	37.45 [951]	32 [813]	26 [660]	32.5 [826]	47.5 [1207] TO 48.5 [1232]	147
AXS-IR-2532-26	22	47.95 [1218]	32 [813]	26 [660]	43.0 [1092]	47.5 [1207] TO 48.5 [1232]	156
AXS-IR-3832-26	35	70.70 [1796]	32 [813]	26 [660]	65.0 [1651]	47.5 [1207] TO 48.5 [1232]	170
AXS-IR-4132-26	38	75.95 [1929]	32 [813]	26 [660]	70.3 [1786]	47.5 [1207] TO 48.5 [1232]	184
AXS-IR-4532-26	42	82.95 [2107]	32 [813]	26 [660]	77.3 [1963]	47.5 [1207] TO 48.5 [1232]	188
AXS-IR-1938-26	16	37.45 [951]	38 [965]	26 [660]	32.5 [826]	47.5 [1207] TO 48.5 [1232]	161
AXS-IR-2538-26	22	47.95 [1218]	38 [965]	26 [660]	43.0 [1092]	47.5 [1207] TO 48.5 [1232]	170
AXS-IR-3838-26	35	70.70 [1796]	38 [965]	26 [660]	65.0 [1651]	47.5 [1207] TO 48.5 [1232]	184
AXS-IR-4138-26	38	75.95 [1929]	38 [965]	26 [660]	70.3 [1786]	47.5 [1207] TO 48.5 [1232]	196
AXS-IR-4538-26	42	82.95 [2107]	38 [965]	26 [660]	77.3 [1963]	47.5 [1207] TO 48.5 [1232]	203



FOR SEISMIC APPLICATION USE P/N AXS-IR-Z4K  
\*\* BSPN-xxx-xx ADDS 0.658 [17] PER SIDE TO WIDTH (REMOVABLE SIDE PANELS)  
\*\*\* MINIMUM RAIL SETBACK SHOWN, MAXIMUM RAIL SET BACK IS 2.5 [64]  
\*\*\*\* REQUIRES TRACKS (TRACK50) AND STANDS (TRACKL) FOR SERVICING  
NOTE(S):  
1. ALL DIMENSIONS IN FORMAT: INCHES [MILLIMETERS]  
2. THE SEISMIC CONTENT CAPACITIES OF THIS OPM ARE APPLICABLE  
WHEN THE AXS-IR IS IN THE CLOSED AND LOCKED POSITION



(4 ANCHORS TO BE USED)  
ANCHORED USING AXS-IR-Z4K BRACKET WITH 1/2" WELD WASHER AT EACH  
ANCHOR LOCATION. INSTALL ON SITE PER KIT DIRECTIONS.  
REFER TO DETAILS ON SHEET 7

SUPPORTS & ATTACHMENTS MATERIAL THICKNESS = .060 [1.5] BASE + .125 [3.2] BRACKET

FIRST RACK SPACE IS 4 INCHES FROM BASE. ALL OTHER RACK SPACES ARE 1.755 INCHES IN HEIGHT.  
MAX CONTACT CAPACITY FOR EACH UNIT CAN BE FOUND ON TABLE 2 THRU 7 BASED ON  
CAPACITY OF SUPPORTS & ATTACHMENTS

Middle Atlantic Products

certifies this document as an outline drawing.

Signature:

Print Name: Sudharsan Yogasuntharam

Title: Compliance & Regulatory Engineer

Date: 7/2/2020



SIMPSON GUMPERTZ & HEGER

Engineering of Structures  
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Simpson Gumpertz & Heger Inc.  
500 12th Street, Suite 270  
San Francisco, CA 94103  
www.sgh.com

San Francisco  
Los Angeles  
Washington, DC



USED ON --	APPROVALS	DATE		
	MODELED			
	DRAWN			
NEXT ASSY: --	CIRCLED DIMENSIONS ARE CRITICAL INSPECTION DIMENSIONS UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMAL: 2 PLC ±.03 3 PLC ±.010		TITLE  AXS-IR-SERIES OSHPD	
MATERIAL: SEE COMPONENTS	FRACTIONS: 16/32 ANGLES: 1/2			
FINISH --	SCALE = 1/8"		PART NO.	PART REV.
--			SIZE 3	DXF NO. NONE
			DWG NO.	DWG REV.

07/14/2020

OPM-0503-19 Reviewed for Code Compliance by Jeffrey Kikumoto

7/13/2020



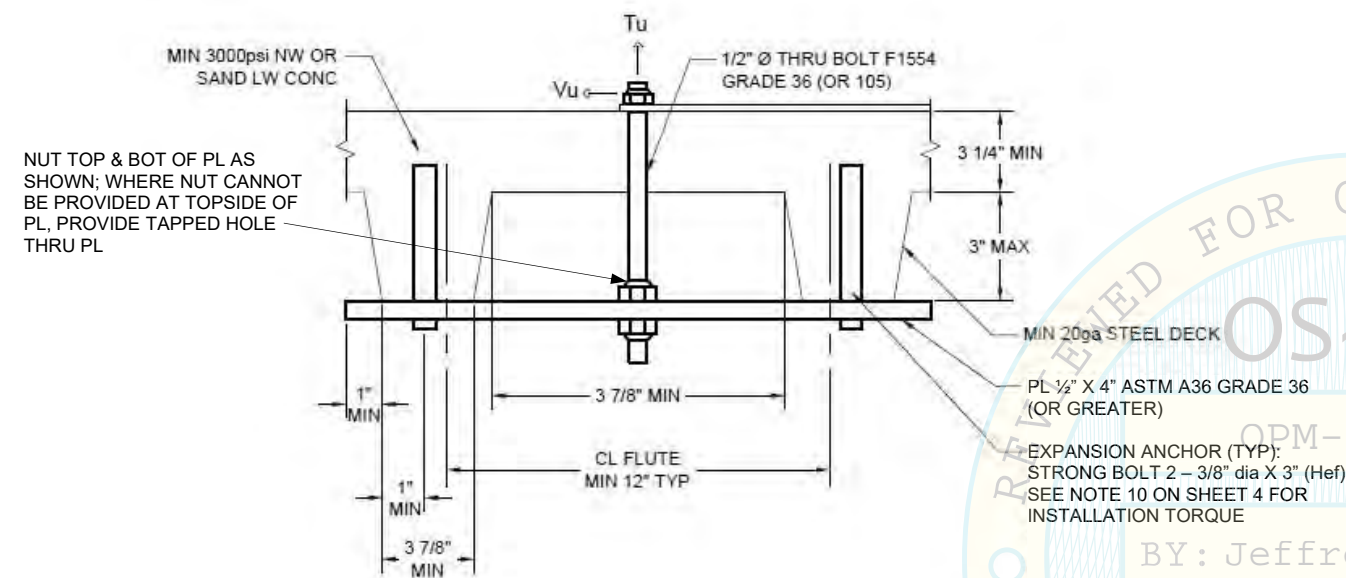
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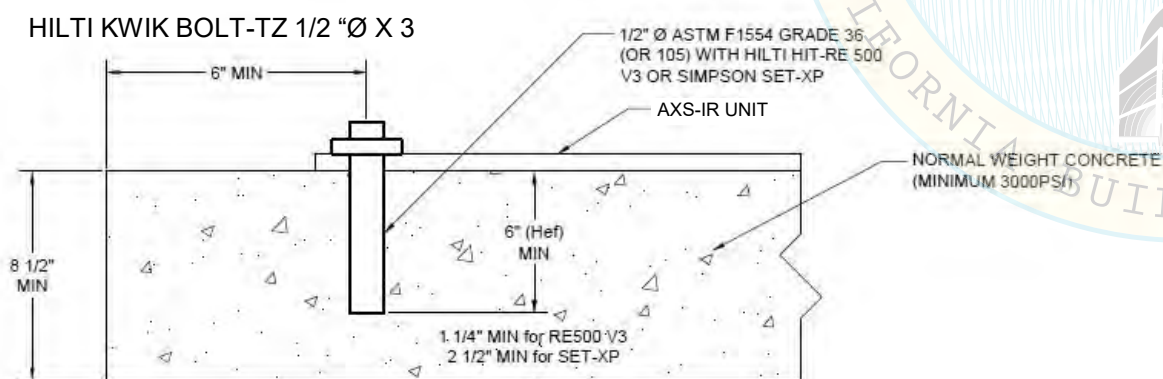
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AXS-IR-SERIES OSHPD

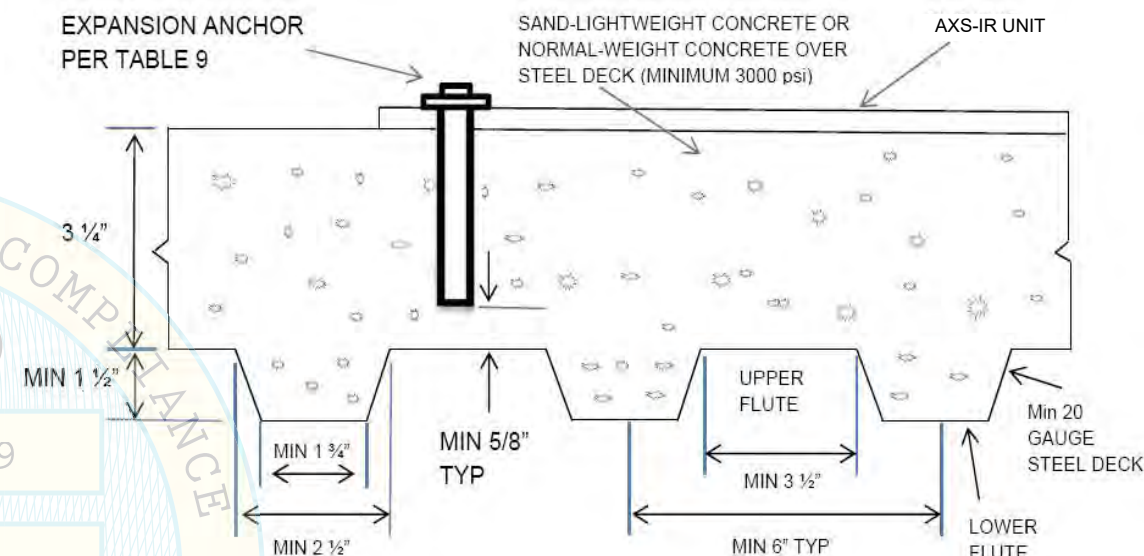
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PAGE:	7 of 7



THRU-BOLT CONNECTION DETAIL



EXPANSION ANCHOR IN DECK CONNECTION DETAIL



EXPANSION ANCHOR CONNECTION DETAIL

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USED ON: --	APPROVALS MODELED	DATE		
NEXT ASSY: --	DRAWN			
MATERIAL: SEE COMPONENTS	CIRCLED DIMENSIONS ARE CRITICAL. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMAL: 2 PLC ±.03 3 PLC ±.05 FRACTIONS: 1/16 ANGLES: 30°		TITLE AXS-IR-SERIES OSHPD	
FINISH --	SCALE = 1/8"		PART NO.	PART REV.
			SIZE 3"	DWG NO.
			DWG NO.	DWG REV.