



City of Portland
Reviewed for code compliance
Date: 03/02/21
Project #: 20-203103-DFS-01-FA

Submittal #09 51 13-1.1 09 51 13 - Acoustical Panel Ceilings

Lease Crutcher Lewis
550 SW 12th Avenue
Portland, Oregon 97205
Phone: (503) 223-0500

Project: PC19959-13 - PCC SYL MED. IMAGING
12000 SW 49th Avenue
Portland, Oregon 97219

09 51 13 - Acoustical Panel Ceilings

REVISION:	1	SUBMITTAL MANAGER:	Chris Kline (Lease Crutcher Lewis, LLC)
STATUS:	Open	DATE CREATED:	01/12/2021
ISSUE DATE:	01/13/2021	SPEC SECTION:	09 51 13 - Acoustical Panel Ceilings
RESPONSIBLE CONTRACTOR:	Anning-Johnson Company	RECEIVED FROM:	Bryce Mitchell
RECEIVED DATE:		SUBMIT BY:	
FINAL DUE DATE:	01/22/2021	LOCATION:	
		COST CODE:	
		TYPE:	Product Information

APPROVERS: Chris Kline (Lease Crutcher Lewis, LLC)

PCC Commissioning Review:

BALL IN COURT:

Chris Kline (Lease Crutcher Lewis, LLC)

DISTRIBUTION:

DESCRIPTION:

095113 1.3A PRODUCT DATA [previously approved](#)
095113 1.3B COORDINATION DRAWINGS (N/A)
095113 1.3C DELIGATED DESIGN SUBMITTAL [revised - see attached](#)
095113 1.3D QUALIFICATION DATA [previously approved](#)
095113 1.3E SAMPLES FOR VERIFICATION
095113 1.3F MAINTENANCE DATA [with close out](#)

SUBMITTAL WORKFLOW

NAME	SENT DATE	DUE DATE	RETURNED DATE	RESPONSE	ATTACHMENTS	COMMENTS
Bryce Mitchell		01/15/2021	01/19/2021	Submitted	20339 - PCC HT Med Ceiling - Rev Details & Calculations_20210119.pdf (Current)	
Chris Kline	01/19/2021	01/22/2021		Pending		

SUBMITTAL NO. -

THIS DOCUMENT HAS BEEN REVIEWED FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. THIS REVIEW DOES NOT RELIEVE SUBCONTRACTOR OR SUPPLIER OF RESPONSIBILITY FOR ADHERENCE TO CONTRACT DOCUMENTS

- ☒ APPROVED
- ☐ APPROVED AS NOTED
- ☐ FOR RECORD ONLY
- ☐ REJECTED
- ☐ REVISE AND RE-SUBMIT
- ☐ VOID

By chris.kline Date: 1/19/2021

<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REVISE & RESUBMIT
<input type="checkbox"/> REVISE AS NOTED	<input type="checkbox"/> REJECTED
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CMK	01/21/2021
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Bidder-Design Submittal No.

- ☒ No exceptions taken
- ☐ Make corrections noted
- ☐ Revise and resubmit
- ☐ Rejected

Refer to Submittal Review form for additional comments.

Review is only for conformance with the design concept and architectural intent. Approval of this item does not indicate approval of the submission for technical appropriateness or engineering capacity. The Bidder-Design Contractor is responsible for the design, including all engineering and performance specifications, as well as for all dimensions and quantities, fabrication processes, and the means, methods, and sequences of construction. Approval neither extends nor alters any contractual obligations of the Architect or the Contractor.

Date: 1/21/2021 By: Todd Spangler

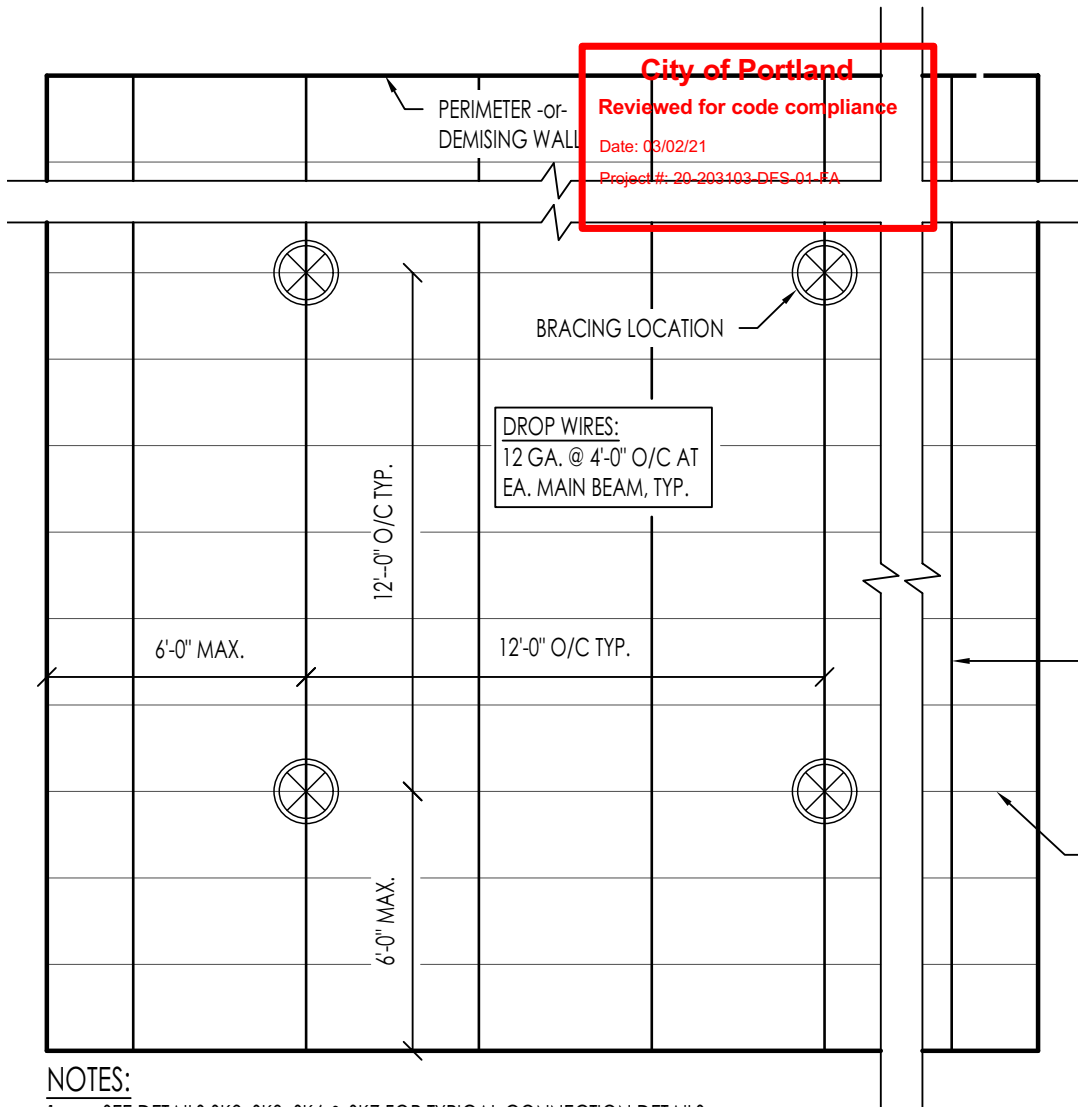
BY

DATE

C

HACKER

555 SE Martin Luther King Jr Blvd,
Ste 501
Portland, OR 97214



City of Portland
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EXPIRES: 12/31/2022

NOTES:

- SEE DETAILS SK2, SK3, SK6 & SK7 FOR TYPICAL CONNECTION DETAILS.
- A HEAVY DUTY T-BAR GRID SYSTEM SHALL BE USED.
- FOR CEILING AREAS EXCEEDING 1,000 SQ. FT., HORIZONTAL RESTRAINT OF CEILING TO THE STRUCTURAL SYSTEM SHALL BE PROVIDED. THE TRIBUTARY AREAS OF THE HORIZONTAL RESTRAINTS SHALL BE APPROXIMATELY EQUAL. WHERE CEILING AREAS ARE LESS THAN OR EQUAL TO 1,000 SQ. FT., BOUNDARY ELEMENTS SUCH AS WALLS SHALL BE ADEQUATELY BRACED BY OTHERS TO RESIST THE LATERAL CEILING FORCES EXERTED UPON IT.
- FOR CEILING AREAS EXCEEDING 2,500 SQ. FT. A SEISMIC JOINT OR FULL HEIGHT PARTITION THAT BREAKS THE CEILING UP INTO AREAS NOT EXCEEDING 2,500 SQ. FT. AND WITH A MAX. LENGTH TO WIDTH RATIO OF 4:1 SHALL BE PROVIDED PER DETAIL 1/SK8.
- CEILINGS WITH INTERSTITIAL SPACES LESS THAN 12 INCHES TO FRAMING ARE NOT REQUIRED TO HAVE LATERAL FORCE BRACING.
- SPRINKLER HEADS AND OTHER PENETRATIONS SHALL HAVE A 2" OVERSIZED RING THROUGH THE TILE TO ALLOW 1" OF FREE MOVEMENT IN ALL DIRECTIONS, SEE DETAIL SK5.
- THESE DRAWINGS ASSUME THAT THE STRUCTURE CAN SUPPORT ALL VERTICAL (STRUTS, DROP, ETC.) AND LATERAL LOADS (SPLAYS, ETC.) EXERTED UPON IT.

SPECIAL INSPECTION:

- PER I.B.C. -or- LOCAL JURISDICTION
- POST INSTALLED ANCHORS

DESIGN CRITERIA:

- $I_p = 1.0$ $S_{DS} = 0.698$ RISK CATEGORY: III
- CEILING WEIGHT LESS THAN OR EQUAL TO 4.0 psf
- FOR INTERIOR APPLICATIONS ONLY.

<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REVISE & RESUBMIT
<input type="checkbox"/> REVISE AS NOTED	<input type="checkbox"/> REJECTED
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TYPICAL SUSPENDED CEILING GRID PLAN

HCE CEILING - SHEETS.DWG

N.T.S.

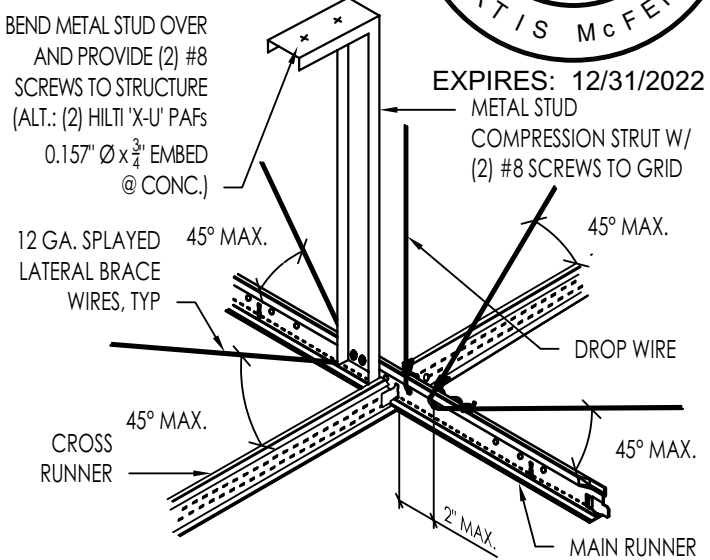
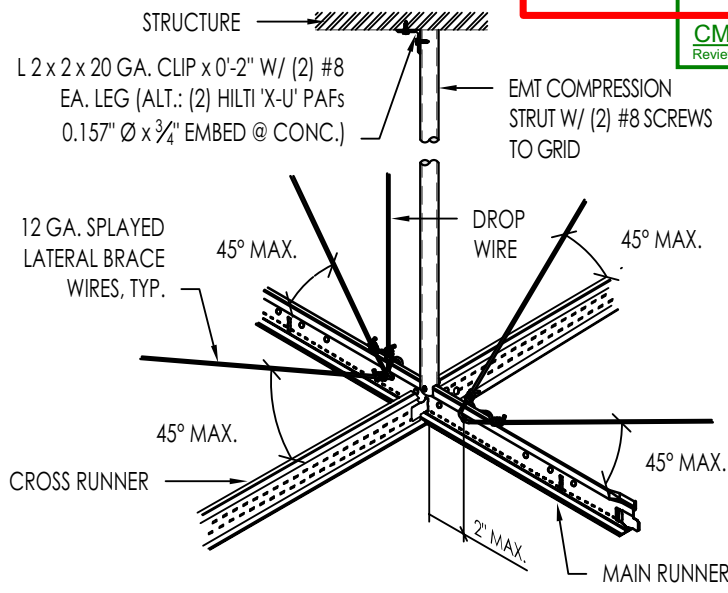


PCC HT MEDICAL IMAGING - CEILING
 12000 SW 49TH AVE
 PORTLAND OREGON

BY SM DATE 12/16/20
 REV DATE
 JOB NO 20339
 SHEET SK1 OF 9

City of Portland
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GENERAL NOTES:

- PARTITIONS THAT ARE TIED TO THE SUSPENDED CEILING SHALL HAVE BRACING INDEPENDENT OF THE CEILING BRACING SYSTEM.
- ALL MAIN BEAMS SHALL BE HEAVY DUTY.
- ALL CROSS TEE MEMBERS SHALL BE CAPABLE OF CARRYING THE DESIGN LOAD WITHOUT EXCEEDING A DEFLECTION OF 1/360 OF ITS SPAN.
- ALL SPLAY WIRES ARE TO BE SECURED TO THE MAIN RUNNER AND BE WITHIN 2" OF THE COMPRESSION STRUT.
- ALL SPLAY WIRES SHALL BE SPACED 6" MIN. FROM ALL HORIZONTAL PIPING OR DUCT WORK THAT IS NOT INDEPENDENTLY Laterally BRACED.
- HANGER AND PERIMETER WIRES ARE TO BE PLUMB WITHIN 1 IN 6 UNLESS COUNTER SLOPING WIRES ARE PROVIDED.
- HANGER WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING EQUIPMENT. SEE DETAIL 1/SK4 FOR A TYPICAL TRAPEZE AROUND OBSTRUCTIONS.
- LIGHT FIXTURES WEIGHING LESS THAN 10# SHALL HAVE (1) 12 GA. HANGER WIRE CONNECTED TO THE FIXTURE AND STRUCTURE ABOVE. THIS WIRE MAY BE SLACK.
- LIGHT FIXTURES WEIGHING MORE THAN 10# BUT LESS THAN 56# AND MECHANICAL EQUIPMENT WEIGHING MORE THAN 20# AND LESS THAN 56# ARE TO HAVE (2) 12 GA. WIRES ATTACHED TO OPPOSING CORNERS OF THE FIXTURE/EQUIPMENT AND ATTACH TO THE STRUCTURE. THESE WIRES MAY BE SLACK.
- ALL EQUIPMENT WEIGHING MORE THAN 56# ARE TO BE INDEPENDENTLY SUPPORTED.

COMPRESSION STRUTS:

- ALL SUSPENDED CEILING BRACING LOCATIONS ARE TO HAVE A VERTICAL COMPRESSION STRUT. THESE STRUTS MAY BE AN ELECTRICAL METALLIC TUBING (EMT) OR LIGHT GAUGE METAL STUDS. SEE COMPRESSION STRUT TABLE FOR SIZE AND ALLOWABLE LENGTHS.
- THE STRUTS SHALL BE VERTICAL, AND SHALL NOT HANG MORE THAN 1 IN 6 OUT OF PLUMB.
- IN A STRUCTURE WHERE THE ROOF SYSTEM IS COMPOSED OF WOOD BEAMS, PURLINS, AND SUB-PURLINS, THE 2x4 & 2x6 SUB-PURLINS ARE NOT TO HAVE STRUTS FASTENED TO THEM.

ELECTRICAL METALLIC TUBING (EMT) COMPRESSION STRUTS:	
SIZE	MAXIMUM LENGTH
1/2" DIAMETER	5'-10"
3/4" DIAMETER	7'-8"
1" DIAMETER	9'-9"

LIGHT GAUGE METAL STUD COMPRESSION STRUTS:	
MEMBER	MAXIMUM LENGTH
162S 125-33	7'-6"
BACK TO BACK 162S 125-33	11'-0"
250S 162-33	11'-0"
BACK TO BACK 250S 162-33	16'-0"

BACK-TO-BACK COMPRESSION STRUTS ARE TO BE CONNECTED TOGETHER WITH ONE (1) #6 SHEET METAL SCREW AT 16" O/C.

SPREADER BARS:

PROVIDE SPREADER BARS WHERE MAIN BEAMS AND CROSS TEES ARE NOT DIRECTLY ATTACHED TO PERIMETER CLOSURE ANGLE.

SPREADER BARS ARE NOT REQUIRED WHERE A 90 DEGREE INTERSECTING CROSS TEE OR MAIN MEMBER IS WITHIN 8" OF THE PERIMETER WALL.

WHERE REQUIRED SPREADER BARS ARE TO BE PLACED WITHIN 8" OF PERIMETER WALL.

1 TYP. SUSPENDED CEILING SEISMIC BRACING & NOTES
 SK2 HCE CEILING - SHEETS.DWG N.T.S.

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☐ REVISE AS NOTED

☐ REVISE & RESUBMIT
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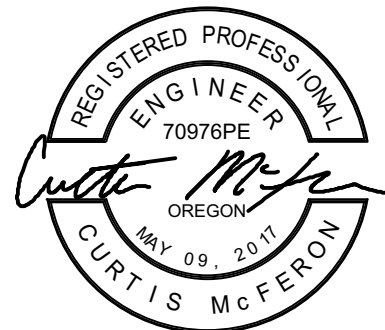
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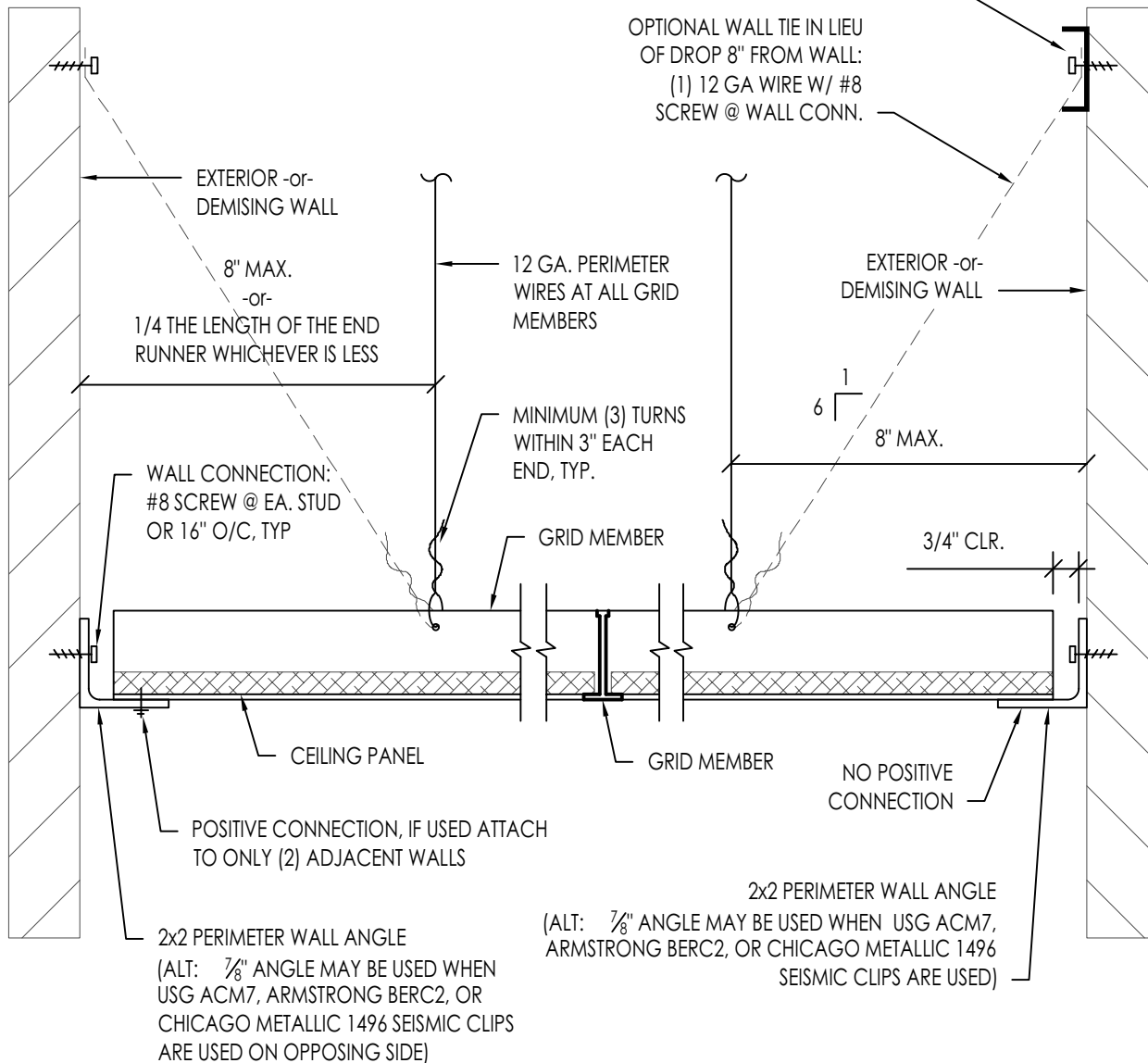
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EXPIRES: 12/31/2022

PERIMETER WIRES ARE NOT
REQUIRED AT CROSS TEE
MEMBERS WHEN THEIR
LENGTH IS 8" OR LESS.

150U50-54 COLD ROLLED CHANNEL. SPAN
(2) (20 GA. MIN.) WALL STUDS & CONNECT
W/ (2) #8 SCREWS EA. STUD. VERIFICATION
OF WALL TO SUPPORT OPTIONAL WALL TIE IS
TO BE BY OTHERS.



1
SK3

TYPICAL CEILING GRID / WALL CONNECTIONS

HCE CEILING - SHEETS.DWG

N.T.S.



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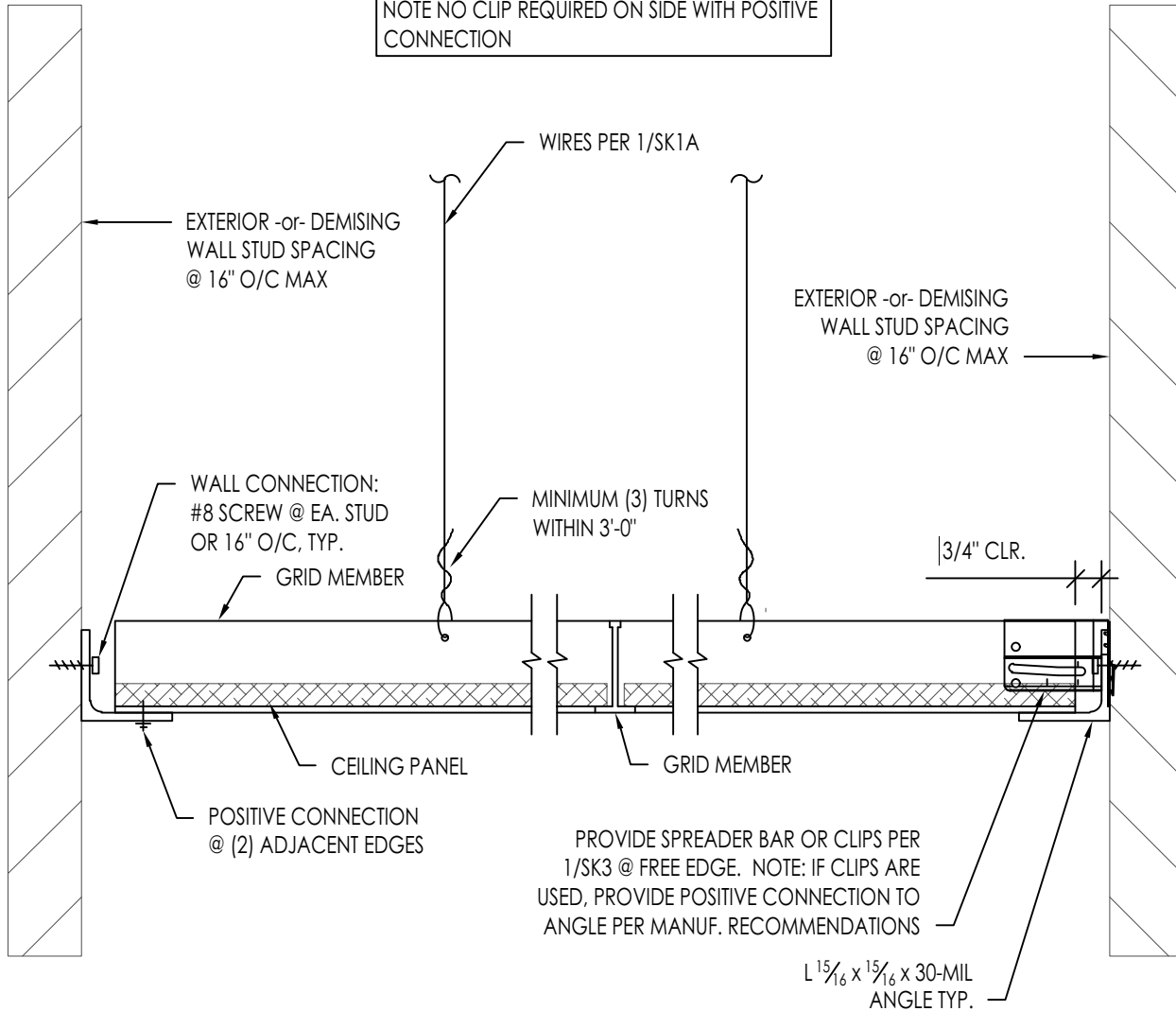
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EXPIRES: 12/31/2022

REFERENCE 1/SK3 FOR INFORMATION NOT SHOWN INCLUDING REQUIRED CLIP. NOTE NO CLIP REQUIRED ON SIDE WITH POSITIVE CONNECTION



1 CEILING SECTION W/ OUT PERIMETER WIRES
SK3A HCE CEILING - SHEETS.DWG

N.T.S.



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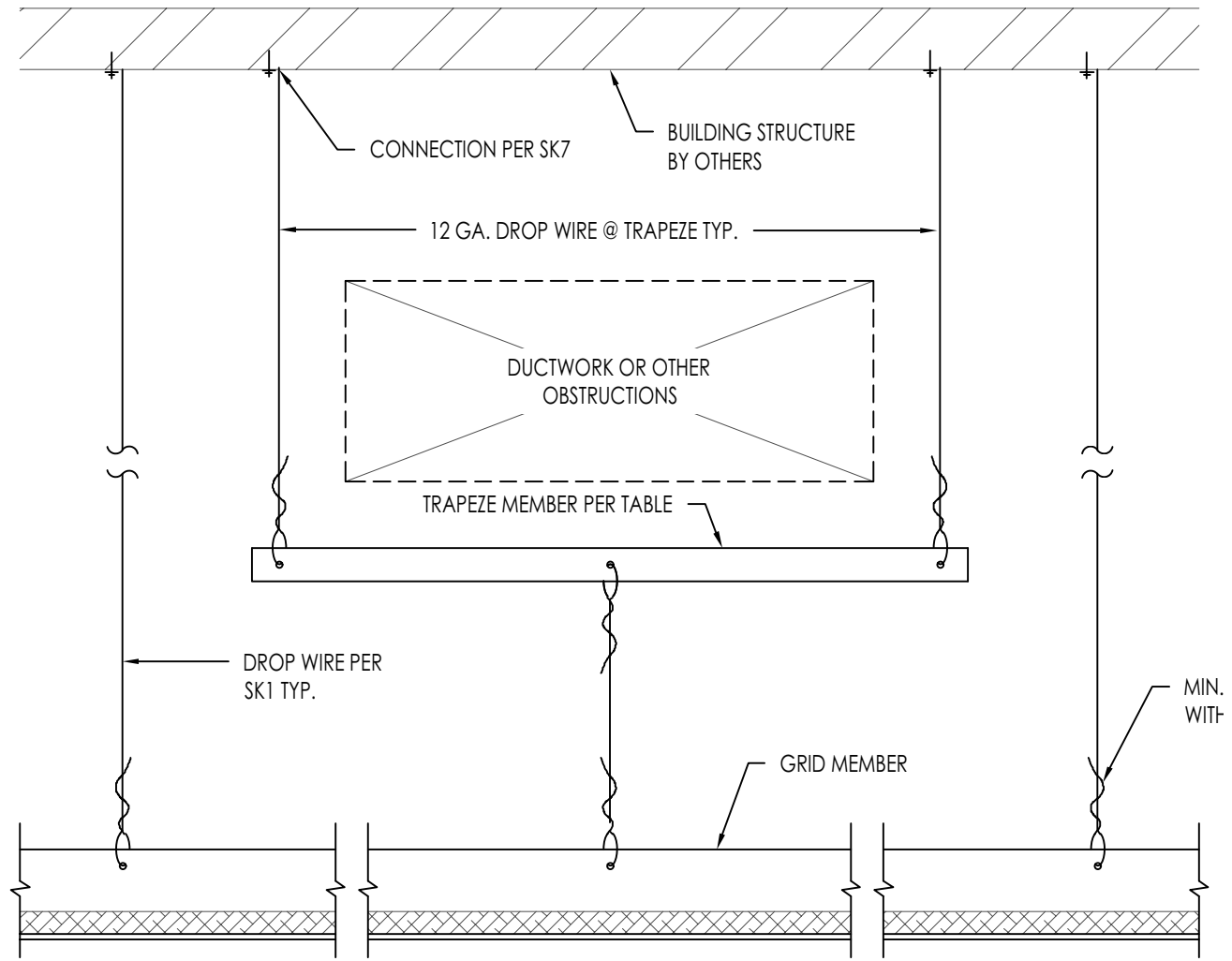
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TRAPEZE MEMBER	MAX # OF WIRES SUPPORTING	MAX. TRAPEZE SPAN	NOTES
162S 125-30	(1) WIRE	4'-0"	
250S 162-33	(1) WIRE	8'-0"	
BACK TO BACK 162S 162-54	(2) WIRES	8'-0"	CONNECT W/ #8 SCREWS @ 12" O/C
250S 162-68	(2) WIRES	10'-0"	



1

SK4

TYPICAL CEILING 'TRAPEZE'

HCE CEILING - SHEETS.DWG

N.T.S.

<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> REVISE & RESUBMIT
<input type="checkbox"/> DISAPPROVED	<input type="checkbox"/> REJECTED

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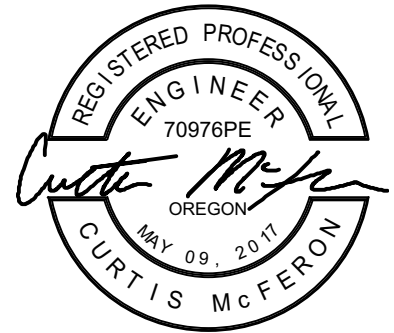
Date: 03/02/21

Project #: 20-203103-PES-01-PA

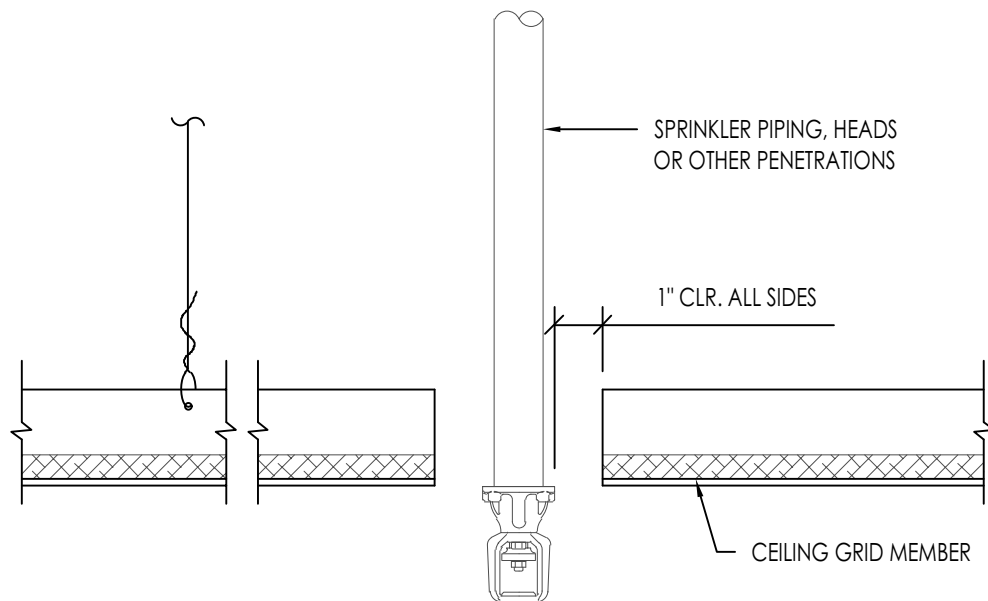
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EXPIRES: 12/31/2022



NOTE:
IN LIEU OF 1" CLEAR AROUND SPRINKLER HEADS OR PIPING IT IS ACCEPTABLE TO USE A FLEXIBLE HEAD PROVIDED IT CAN ACCOMMODATE 1" OF FREE MOVEMENT IN ANY DIRECTION.

1
SK5

TYPICAL CEILING AT SPRINKLER

HCE CEILING - SHEETS.DWG

N.T.S.



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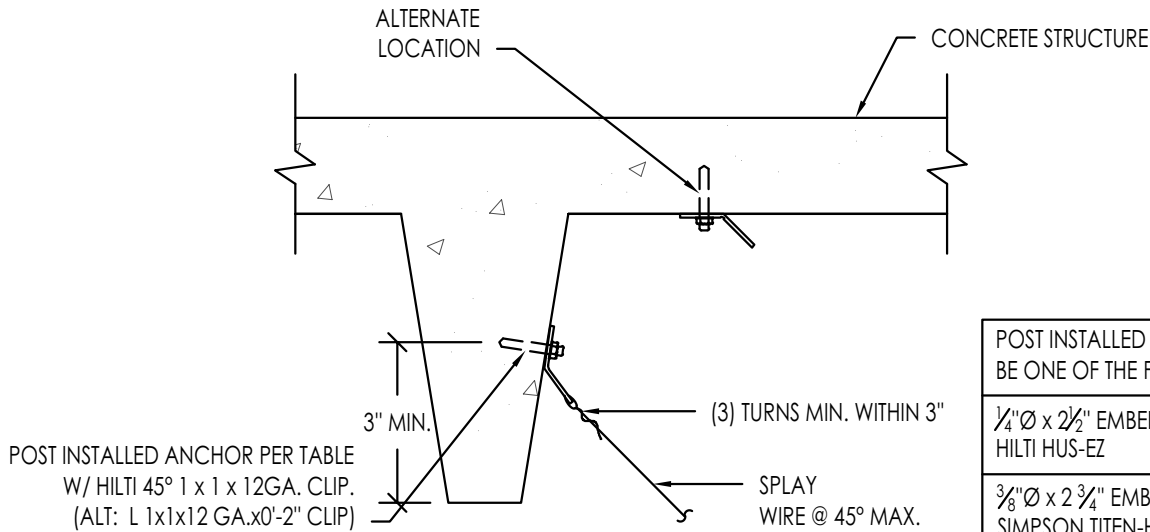
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SHEET SK5 OF 9

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<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REVISE AS NOTED	<input type="checkbox"/> REVISE & RESUBMIT <input type="checkbox"/> REJECTED
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POST INSTALLED ANCHORS SHALL BE ONE OF THE FOLLOWING:	
1/4"Ø x 2 1/2" EMBED HILTI HUS-EZ	ESR-3027
3/8"Ø x 2 3/4" EMBED SIMPSON TITEN-HD	ESR-2713
3/8"Ø x 2 1/8" EMBED POWERS WEDGE-BOLT+	ESR-2526
NOTE:	
<ul style="list-style-type: none"> SPECIAL INSPECTION PER THE LISTED ICC REPORT IS REQUIRED. DO NOT IMPACT REINFORCING & OR TENDONS 	

1
 SK6

TYPICAL SPLAY WIRE CONN.
 HCE CEILING - SHEETS.DWG

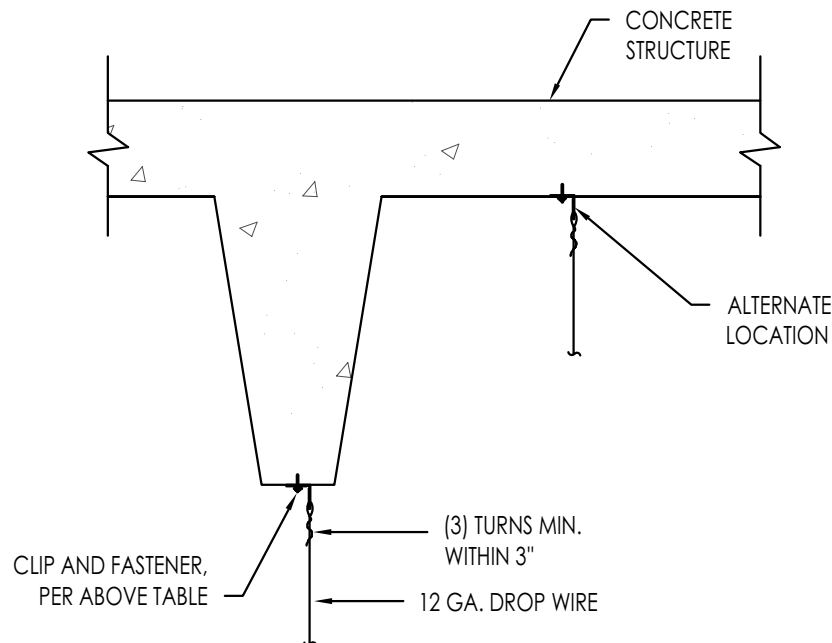
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City of Portland Reviewed for code compliance Date: 03/02/21 Project #: 20-203103-PCS-01-PA	<input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REVISE AS NOTED	<input type="checkbox"/> REVISE & RESUBMIT <input type="checkbox"/> REJECTED
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	01/21/2021 Date	



EXPIRES: 12/31/2022

ASSEMBLY	SHANK DIA.	EMBED	REF.
RAMSET 'SPC78'	0.150"Ø	3/4"	ESR-1799
RAMSET 'SPC114'	0.150"Ø	1 1/8"	ESR-1799
HILTI 'X-CX ALH27'	0.177"Ø	7/8"	ESR-2184
HILTI 'X-CX ALH32'	0.177"Ø	1"	ESR-2184



1
SK7

TYPICAL DROP WIRE CONN.

HCE CEILING - SHEETS.DWG

N.T.S.



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 SHEET SK7 OF 9

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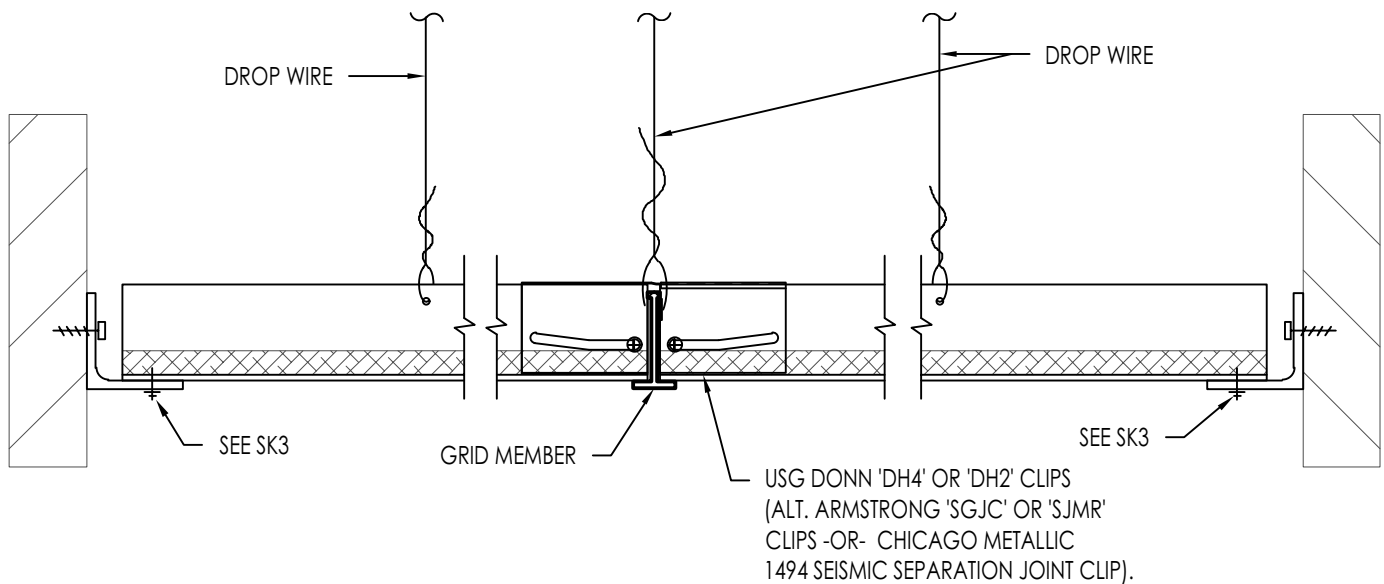
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1

SK8

SEISMIC JOINT CONNECTIONS

HCE CEILING - SHEETS.DWG

N.T.S.