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

OFFICE USE ONLY

APPLICATION #: OPM-0041

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Worthington Armstrong Venture

Manufacturer's Technical Representative: Jason Ameen

Mailing Address: 101 Lindenwood Dr., Ste 350, Malvern, PA 19355

Telephone: (610) 722-1218 Email: jrameen@armstrongceilings.com

Product Information

Product Name: SingleSpanTM Corridor Ceiling System

Product Type: Corridor suspended acoustical ceiling system

Product Model Number: 730144HRC, 730102HRC, 730098HRC, XL7328, XL8320, SWA9878HRC, SWA9854HRC, BERC2, XTAC, LSB8HRC, STAC

General Description: Metal suspension ceiling system for hospital corridors where plenum space is limited due to

Applicant Information

Applicant Company Name: Worthington Armstrong Venture

Contact Person: Jason Ameen

Mailing Address: 413 Pierce Drive, Chester Springs, PA 19425

Telephone: (610) 722-1218 Email: ameenjr@hotmail.com

Title: Technical Services Manager

Registered Design Professonal Preparing Engineering Recommendations

Company Name: DEVCO ENGINEERING

Name: Alex Cheyne California License Number: S4916

Mailing Address: 245 NE Conifer Blvd, Corvallis, OR 97330

Telephone: (541) 757-8991 Email: alex@devcoengineering.com

HCAI 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, 2022 (CBSC 2022) 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 2022 may be used when approved by HCAI prior to testing.

☐ Analysis

☐ Experience Data

☒ Combination of Testing, Analysis, and/or Experience Data (Please Specify): Seismic testing of ceiling system by SEESL

HCAI Approval

Date: 2/20/2024

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

Instructions For System Specifier/Installer:

A1. Request from SEOR the S_{DS} and z/h values (as applicable to Eq. 13.3-1 of ASCE 7-16), the locations of all Protected Zones, and all criteria applicable within Protected Zones.

A2. Identify locations in project where support conditions and minimum substrate requirements match those listed in these System Drawings.

A3. Identify locations in project where wall loading conditions match those detailed in 1A, 1B, and 1C on sheet 1.18.

A4. For areas identified in steps A2 & A3, select wall, ceiling, and anchorage details appropriate for selected S_{DS} and support conditions. See 1.03 for instructions on ceiling layout selection and arrangement.

A5. Provide project specific engineered designs under the responsible charge of an appropriately licensed design professional for all conditions and locations which fall beyond the scope of these System Drawings. See Notes 1.2 - 1.6 on Sheet 1.01.

A6. Provide submittal for approval to SEOR (and others as required by contract documents), identifying:
- Design values used in detail and component selection.
- Selected components and details.
- Engineered designs as they will be applied to the project.
- Locations where system is to be installed per these System Drawings.
- Locations where engineered designs beyond the scope of these System Drawings are to be installed.

A7. Where approved by SEOR (and other appropriate parties) install system in accordance with all requirements of these System Drawings, the 2022 California Building Code (CBC 2022), and all referenced standards therein.

A8. Provide special inspection in accordance with the notes listed on sheet 1.02 and the CBC 2022.

Responsibilities of the Structural Engineer of Record (SEOR):

B1. Provide the specifier/installer with the appropriate S_{DS} & z/h values (as applicable to Eq. 13.3-1 of ASCE 7-16) to be used in selecting the applicable details of this system.

B2. Review submittal noted in A6 and verify that appropriate design values were used in selecting details.

B2.1 Confirm that the weights and attachment details for the components identified in this submittal are in conformance with the design intent of the supporting structure and that the supporting structure is adequate to resist the loads imposed by this system in addition to all other loads.

B2.2. Verify that project conditions allow for placement of system anchors at locations specified.

B2.3. Verify that the substrates to which this system is anchored meet the requirements specified in Note 5 on sheet 1.02.

B2.4. Verify that all new or existing anchors for other components and systems are an adequate distance from anchorage for this system and check for interaction where appropriate.

B2.5 Review of project specific engineered components which fall beyond the scope of these System Drawings are not listed herein. Where required, designs shall be prepared and reviewed in accordance with the project contract documents.

B2.6 Review of submittal shall include verification of floor deflections as noted in Note 1.4 on Sheet 1.01.

B3. Verify that installation of this system and special inspection is performed in conformance with the CBC 2022 and these System Drawings. Verify that results from special inspection demonstrate acceptable performance of items tested and provide appropriate resolution where they do not. Item B3 may be delegated to an appropriately licensed design professional at the discretion of the SEOR.

B4. Verify if Protected Zones exist within the primary structure, delineate locations of Protected Zones on the project documents, and provide criteria for limitations of attachment within Protected Zones.

System Drawings:

REGISTERED PROFESSIONAL ENGINEER
ALEX T. HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2024.02.19 15:23:48-08'00'

DEVCO engineering inc.
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355
WORTHINGTON ARMSTRONG VENTURE

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
COVER SHEET

DRAWING:
1.00

1. General:

1.1. This OSHPD Preapproval of Manufacturer's Certification (OPM) is based on the California Building Code (CBC). The design forces for use with this OPM shall be based on the CBC 2022.

1.2. Conditions not described or depicted within these System Drawings require engineered design by an appropriately licensed design professional. These conditions include but are not limited to:
- Wall openings - including headers, jambs, sills, fastening, and anchorage.
- Ceiling systems in adjacent rooms which require support by corridor walls.
- Ceiling framing spans greater than shown in these System Drawings.
- Corridor configurations other than those shown on sheet 1.03.
- Interruptions of fixed or sliding ceiling perimeter conditions.
- Ceilings spanning movement joints in the primary structure.

1.3. See the project documents for the locations of Protected Zones and corresponding connection criteria. Assure that all Protected Zone connection criteria, including that fasteners are not installed within Protected Zones, are met.

1.4. Confirm that the maximum vertical differential movement of the supporting structure below, relative to the supporting structure above, either upwards or downwards, does not exceed 0.66 inches. Movements that exceed this limit are beyond the scope of these System Drawings and require an engineered design of the slotted track & associated fasteners to supporting structure above.

1.5. Confirm that wall deflection design criteria in note 3.4 are appropriate for all finishes and attachments to be installed on walls. Where not appropriate, provide an engineered design of the wall framing.

1.6. Seismic bracing and anchorage of all cabinets, signage, appurtenances, etc. attached to, supported by, or braced by walls in these System Drawings shall conform to load and location limits shown within the System Drawings and shall be designed by an appropriately licensed design professional.

1.7. These System Drawings represent the completed ceiling and wall system (System) and are not intended to indicate the means and / or methods of construction. The contractor shall provide and be responsible for the shoring, bracing, scaffolding, guys, rigging and other temporary supports as needed to safely resist all loading imposed upon the system during erection and construction.

1.8. Erection and construction procedures shall conform to the requirements of applicable ordinances, regulations and the provisions of the CBC.

1.9. All construction shall be coordinated with and shall be subject to the special inspection requirements of these System Drawings and of the CBC.

1.10. The contractor shall coordinate all dimensions and details between the System Drawings and that of other trades prior to commencing work. Should there be any conflicts, notify the architect for clarification.

1.11. General notes and typical details shown on the System Drawings apply to all System Drawings unless shown or noted otherwise.

1.12. Construct corridor walls in accordance with ASTM C754.

1.13. Specifier/installer is responsible for understanding and conveying to appropriate parties, the potential for system damage due to seismic loading and drift.

2. Applicable Codes:

2.1. California Building Code 2022 edition

2.2. ASCE 7-16 Minimum Design Loads for Buildings and Other Structures - including Supplements no. 1 & 2

2.3. ACI 318-19 Building Code Requirements for Structural Concrete

2.4. AISI S100-16 (2020) w/ S2-20 North American Specification for the Design of Cold-Formed Steel Structural Members.

3. Design Criteria:

3.1. Live Loads:
Minimum horizontal wall pressure = 5 psf
per CBC 2022 1607A.15

3.2. Dead Loads:
Calculated design values shall be based on 4psf minimum. Do not install a combined system dead load greater than 3.51 psf.

3.3. Seismic:
Risk Category = IV
S_{DS}= Project Specific (See limits on 1.03)
I_P=1.5, a_P=1.0, R_P=2.5, Ω_o=2.0, z/h max.=1.0

3.4. Deflection Limits:
Wall lateral deflection: L/240
Ceiling vertical gravity deflection: L/360

3.5. Load Combinations:

3.5.1. Wall framing designed to carry dead loads and the greater of the calculated seismic demand and the minimum horizontal wall pressure.

4. Products and Materials:

4.1. Cold Formed Steel for Wall Framing

4.1.1. All cold formed steel studs, joist, track & misc. shapes shall conform to ASTM C645 and be of mill certified steel meeting:
54 mil - ASTM A653 SS GRD 50 w/ G40 Galvanizing
30-43 mil - ASTM A653 SS GRD 33 w/ G40 Galvanizing
or
54 mil - ASTM A1003 ST GRD 50H w/ G40 Galvanizing
33-43 mil - ASTM A1003 ST GRD 33H w/ G40 Galvanizing
30 mil - ASTM A1003 GRD NS33H w/ G40 Galvanizing

4.1.2. All steel studs, joist & track shall have a legible label, stamp or embossment, at a maximum of 96 inches o.c., indicating the manufacturer's name, logo or initials, evaluation service report number, the material base metal thickness (uncoated) in 0.001 inch and the yield strength if different than 33 ksi.

4.1.3. Mill certificates from the coil producer shall be made available if requested. Mill certificate to include as a minimum the chemical composition, yield strength, tensile strength, elongation, and coating thickness.

4.1.4. Minimum section properties shall conform to ICC-ESR 3064P

4.1.5. Studs shall not be spliced.

4.1.6. Finish material shall not bridge deflection compensation joints.

4.2. Hanger Wire

4.2.1. Wire to be galvanized annealed mild steel wire as defined in ASTM A641. Use a minimum of three twists within 3" length at ends of hanger wire.

4.3. Fasteners for Wall Framing

4.3.1. Screws shall be Pro-Twist self-drilling tapping screw with HWD Hex Washer Head, per ICC ESR-1408.

4.3.2. Edge distance & O.C. spacing per sections and details, but shall not be less than:

EDGE DIST. (INCHES)			O.C. SPACING (INCHES)		
#8	#10	#12 & #14	#8	#10	#12 & #14
1/4"	5/16"	3/8"	1/2"	9/16"	3/4"

4.3.3. Screw to wall studs to have min. (3) thread penetration, typ.

4.4. Power-Actuated Fasteners

4.4.1. Low Velocity Fasteners (LVF), Powder Driven Fasteners (PDF), Power Driven Pins (PDP) and shot pins all represent the same device and will hereafter be referred to as Power-Actuated Fasteners (PAF).

4.4.2. All PAF shall be Hilti X-U per ICC-ESR 2269, X-U 15 PAF's shall not be used.

4.4.3. Embedment depth shall be 1¼ inch minimum for concrete applications. For structural steel applications embedment depth shall be as required to provide for full penetration of pointed end of fastener through steel.

4.4.4. For maximum and minimum spacing and minimum edge distances, see substrate specific details on sheets 1.11, 1.12, 1.14, 1.19, & 1.20.

4.5. Concrete Wedge Anchors

4.5.1. All concrete wedge anchors shall be Hilti Kwik Bolt TZ2 (KB-TZ2) per ICC-ESR 4266

4.5.2. Diameter and embedment length shall be as shown in these System Drawings.

4.5.3. For maximum and minimum spacing and minimum edge distances, see table below unless noted in substrate specific details on sheets 1.11, 1.12, 1.14, 1.19, & 1.20.

ANCHOR SPACING & EDGE DISTANCE

DIAMETER (INCHES)	SPACING (INCHES O.C.)	EDGE DISTANCE (INCHES)
¼	1.5	3
⅜	5	5

Hanger Wire Anchors

4.5.1. Hanger wire anchors shall be either Hilti X-CX fastener assemblies as per ICC-ESR 2184.

4.5.2. Diameter and embedment length shall be as shown in these System Drawings.

4.6. SingleSpan Suspended Ceiling System

4.6.1. Unless noted otherwise in these System Drawings, all SingleSpan components shall be provided and installed per the more restrictive of these System Drawings, ICC-ESR-1308, or IAPMO-ES-ER 0244.

4.7. Acoustic Ceiling Tiles

4.7.1. Acoustic ceiling tiles shall have a weight not exceeding 2.50 psf.

4.8. Light Fixtures

4.8.1. Light fixtures shall be a modular troffer style drop in fixture which fits into a 2' x 4' ceiling grid system.

4.8.2. Lights shall be seismically rated to a level appropriate for the intended application.

4.8.3. Lights shall weigh no more than 18lbs.

4.9. Seismic Fixture Clamp (SFC) Light Clips

4.9.1. SFC light clips shall be seismically rated to a level appropriate for use in the intended application.

4.9.2. SFC clips shall be selected for the appropriate geometric constraints of the intended application in accordance with the clip manufacturer's instructions.

4.9.3. SFC clips shall conform to ICC-ES AC 184 Acceptance Criteria for Attachment Devices for Recessed Lighting Fixtures in Suspended Ceiling Systems.

REGISTERED PROFESSIONAL ENGINEER
ALEX M. HEYNE
No. S 4916
Exp. 06/30/24
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2024.02.19 15:23:57-08'00'

DEVCO engineering inc.

WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
GENERAL NOTES

DRAWING:
1.01

5. Minimum Requirements for Substrates:

5.1. Structural steel to receive anchorage must comply with the minimum strength requirements of ASTM A36, ASTM A572 grade 50 or ASTM A992, and have a nominal thickness greater than or equal to $\frac{3}{16}$ inch.

5.2. Composite concrete on metal deck to receive anchorage must comply with the following:

5.2.1. The steel deck profile for 3 inch deep composite floor deck panel shall be 20ga min. and have a minimum Fy of 33ksi. Lower and upper flute width must be a minimum of 4½ inches. Concrete fill above top of steel deck panel must be minimum 3¼ inches thick.

5.2.2. The steel deck profile for 1½ inch deep composite floor deck panel shall be 20ga min. and have a minimum Fy of 33ksi. Lower and upper flute widths must be a minimum of 1¾ inch and 3½ inches respectively. This deck panel may also be inverted. concrete fill above the top of steel deck panel must be minimum 3¼ inches thick.

5.2.3. Concrete fill must have a minimum f'_c of 3000psi.

5.3. Solid uniform depth reinforced concrete slabs to receive anchorage must have a minimum f'_c of 4000psi and shall have a minimum thickness of 3.75 inches where PAF's are to be used and 4.75 inches where concrete screw anchors are to be used.

5.4. Existing and/or proposed ceilings in rooms adjacent to corridor must not be designed in such a way as to be capable of delivering load to corridor walls.

1. Special Inspection:

1.1. General Requirements

1.1.1. It is the contractor's responsibility to coordinate all inspections by the enforcement agency. Per section 1704A of the CBC 2022, the contractor will coordinate all special inspections and structural observation with the SEOR. The contractor shall be liable for additional costs incurred by the failure of the contractor to coordinate inspection requirements. All inspections not done by the SEOR shall be done by an approved agent retained by the owner.

1.1.2. Contractor shall submit a written statement of responsibility to the building official and the owner prior to the commencement of work on this system. This statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection and the special inspection requirements listed in these System Drawings.

1.1.3. Inspections shall be completed prior to finish enclosure.

1.2. WAVE SingleSpan Ceiling System

1.2.1. Inspector shall verify that the ceiling system is as described in these System Drawings and complies with the most restrictive installation instructions as enumerated in these System Drawings, IAPMO-ES-ER 0244, and ICC-ESR 1308.

1.3. Hilti X-U, X-CX, and PAF's and Assemblies

1.3.1. Special inspection of PAF's is not required by the above standards, ICC-ES-ESR 2269, nor 2184, and is not required by these System Drawings.

1.4. Hilti KB-TZ2 Wedge Anchors

1.4.1. Periodic Special Inspection

1.4.1.1. Periodic special inspection is required in accordance with section 1705A.1.1 and Table 1705A.3 of the CBC 2022. The special inspector must be present as often as required in accordance with the project statement of special inspection as dictated by the SEOR. When required, the special inspector shall perform special inspections in accordance with ICC ESR 4266.

1.4.2. Post-Installed Concrete Anchor Testing

1.4.2.1. Per 1910A.5 of the 2022 CBC, these anchors shall be torque tested using the torque wrench method as per 1910A.5.2 (Exception 1).

1.4.3. Acceptance Criteria

1.4.3.1. Torque-controlled post-installed anchors tested with a calibrated torque wrench shall attain the specified torque within 1/2 turn of the nut; or one-quarter (1/4) turn of the nut for a 3/8 inch sleeve anchor only.

1.4.4. Testing Frequency

1.4.4.1. Post-installed anchors through base and top track constitute a sill plate application; therefore, per 1910A.5.3, 10% of these anchors shall be tested.

1.4.4.2. The design tension load on all other post-installed anchors is less than 100 lbs; therefore, per 1910A.5.3 Exception 2, 10% of these anchors shall be tested.

1.4.4.3. If any anchor fails testing, all anchors of the same type shall be tested, which are installed by the same trade, not previously tested until twenty consecutive anchors pass, then resume the initial test frequency.

1.4.5. Test Loads

1.4.5.1. Per CBC section 1910A.5.4(2) required test loads shall be per the manufacturer's recommended installation torque based on ICC ESR-4266. See table below for typical torque loads.

TORQUE REQUIREMENTS

ANCHOR	TEST TORQUE (lb-ft)
¼"Ø KB-TZ2	4
⅜"Ø KB-TZ2	30

Abbreviations For System Drawings:

A.D. - ARCHITECTURAL DRAWINGS
ADD'L - ADDITIONAL
ALT. - ALTERNATE
BM. - BEAM
B.O. - BOTTOM OF
BLD'G - BUILDING
BLK'G - BLOCKING
BTWN. - BETWEEN
CL. or CLR. - CLEAR
CLG. - CEILING
COL. - COLUMN
CONC. - CONCRETE
CONN. - CONNECTION
CONT. - CONTINUOUS
CRC - COLD ROLLED CHANNEL
C.W. - CURTAINWALL
DBL. - DOUBLE
DEF'L - DEFLECTION
DIAG. - DIAGONAL
DIM - DIMENSION
DIV ANG or DA - DIVERTER ANGLE
DWG - DRAWING
EA. - EACH
E.D. - EDGE DISTANCE
EL. or ELEV. - ELEVATION
(E) - EXISTING
E.O.D. - EDGE OF DECK
E.O.R. - ENGINEER OF RECORD
E.O.S. - EDGE OF SLAB
EQ. - EQUAL
F.O. - FACE OF
FLG - FLANGE
FLR. - FLOOR
F.S. - FAR SIDE
GA - GAUGE
G.C. - GENERAL CONTRACTOR
HDR - HEADER
HGT. - HEIGHT
HORIZ or HOR. - HORIZONTAL
HSS - HOLLOW STRUCTURAL SECTION
I.L.O. - IN LIEU OF
INV. - INVERTED
JT. - JOINT
LG. - LONG
LOC'N - LOCATION
LLH - LONG LEG HORIZONTAL
LLV - LONG LEG VERTICAL
L.V.F. - LOW VELOCITY FASTENER (SEE GENERAL NOTES FOR SIZE & TYPE)
LVL. - LEVEL
LWC - LIGHT WEIGHT CONCRETE
MAX. - MAXIMUM
MFG - MANUFACTURER
MIN. - MINIMUM
(N) - NEW
N.T.S. - NOT TO SCALE
N/A - NOT APPLICABLE
N.S. - NEAR SIDE
NWC - NORMAL WEIGHT CONCRETE
O.C. - ON CENTER
O.H. - OPPOSITE HAND
O.H.D. - OVERHEAD DOOR
OPN'G - OPENING
OWJ - OPEN WEB JOIST
PC. - PIECE
PERP. - PERPENDICULAR
PT - POINT
REINF. - REINFORCING
REF. - REFERENCE
REQ'D - REQUIRED
R.F.I. - REQUEST FOR INFORMATION
R.O. - ROUGH OPENING
S.D. - STRUCTURAL DRAWINGS
SECT. - SECTION
SIM. - SIMILAR
SPCL BRK - SPECIAL BRAKE
SQ. - SQUARE
STL - STEEL
SW - SHEARWALL
T&B - TOP & BOTTOM
T.O. - TOP OF
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VERT. - VERTICAL
W.B. - WEDGE BOLT
WDW. - WINDOW
WF - WIDE FLANGE
W/ - WITH
W/IN - WITHIN
W/O - WITHOUT
W.P. - WORK POINT

DEVCO engineering inc.
WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

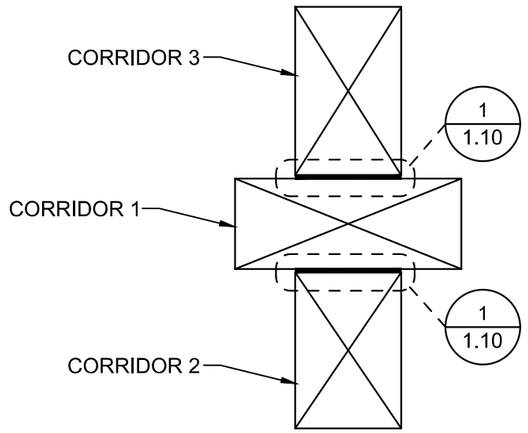
DRAWN BY: DEVCO

SHEET TITLE:
GENERAL NOTES / SPECIAL INSPECTION / TESTING

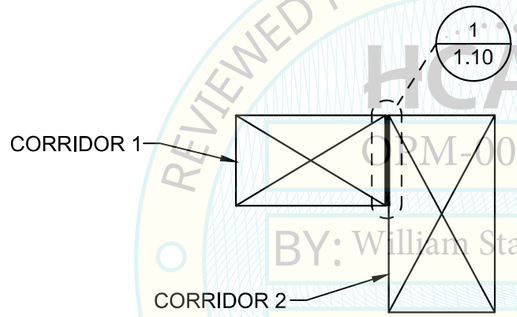
DRAWING:
1.02

Instructions For Ceiling Layout Selection by Specifier/Installer:

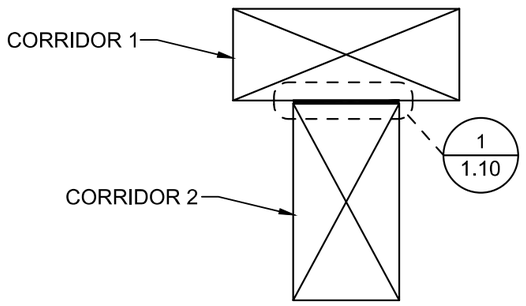
1. Various ceiling grid layout options available for use are shown. Each has maximum permissible dimensions as shown.
2. These ceiling grid layouts may be combined in accordance with the system separation schematics below. Provide a system separation joint as shown between each layout.
3. For projects where S_{DS} does not exceed 1.33: within any layout, any ceiling tile may be replaced with a troffer style light fixture in accordance with sheet 1.15.
4. For corridors 6' or narrower, the hanger wire supporting each main beam may be omitted.
5. Where mechanical equipment interferes with placement of hanger wire, see 2 / 1.09 for a trapeze option.



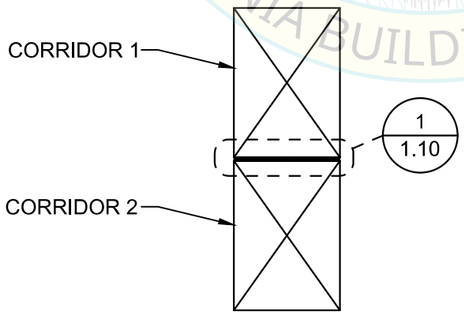
1D INTERSECTING CORRIDOR
SCALE: N.T.S.



1B 90° CORNER
SCALE: N.T.S.

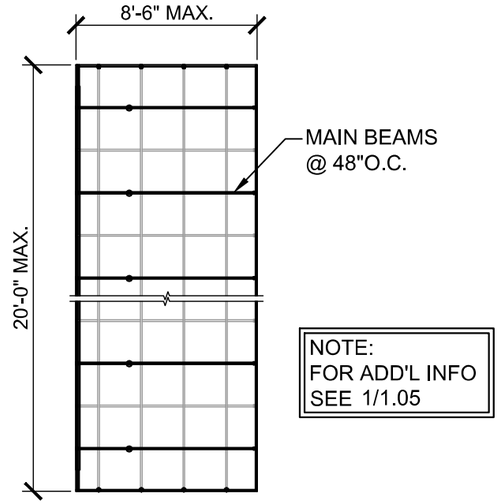


1C T-INTERSECTION
SCALE: N.T.S.



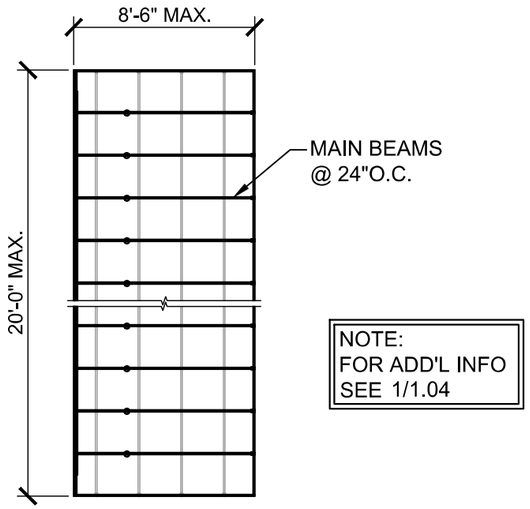
1A STRAIGHT EXTENSION
SCALE: N.T.S.

1 SYSTEM SEPARATION SCHEMATIC PLANS
SCALE: N.T.S.



NOTE:
FOR ADD'L INFO
SEE 1/1.05

B CEILING LAYOUT B STRAIGHT W/ MAINS @ 48"O.C. (FOR SDS ≤ 1.50)
SCALE: N.T.S.



NOTE:
FOR ADD'L INFO
SEE 1/1.04

A CEILING LAYOUT A STRAIGHT W/ MAINS @ 24"O.C. (FOR SDS ≤ 1.83)
SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:07:30-07'00'

DEVCO engineering inc.
WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

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ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
CEILING LAYOUT OPTIONS & GEN. NOTES

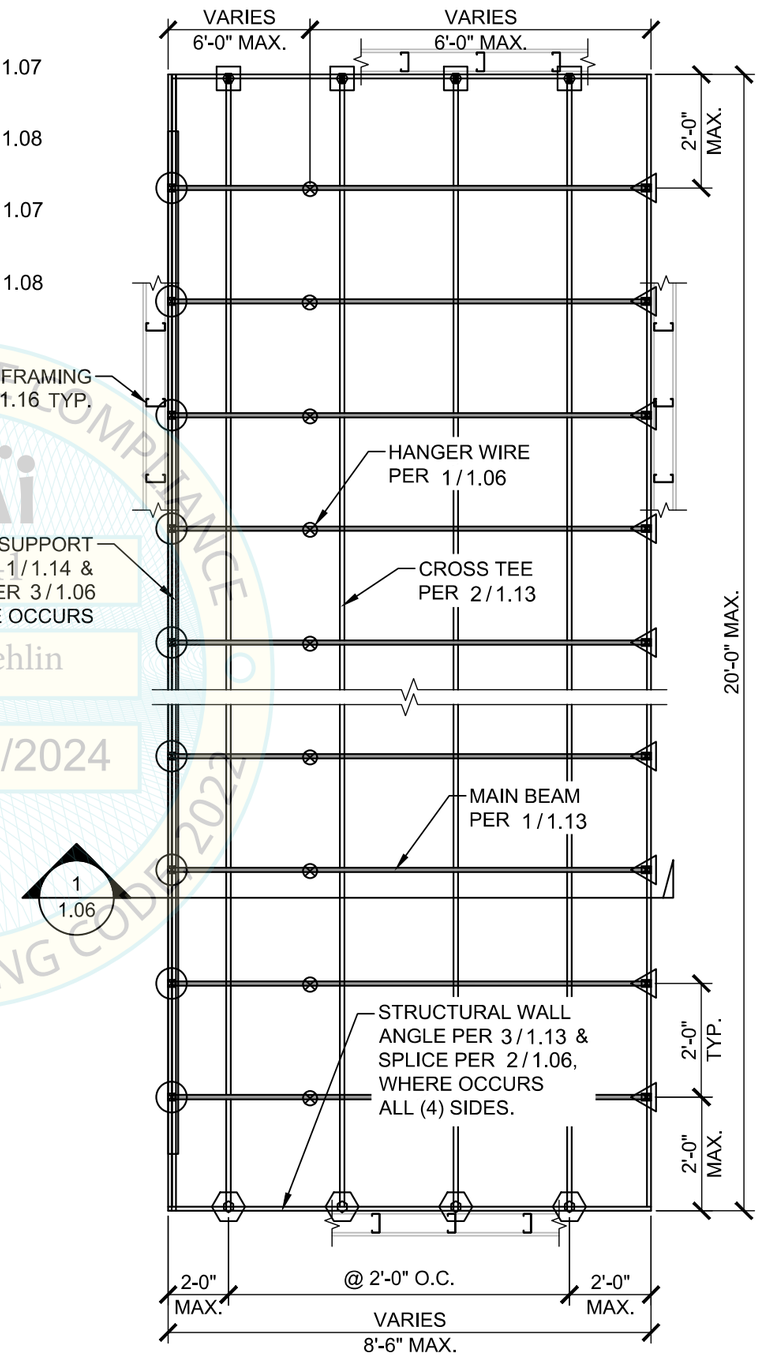
DRAWING:
1.03

2/20/2024

OPM-0041: Reviewed for Code Compliance by William E Staehlin

CONNECTION LEGEND

- MAIN BEAM FIXED CONNECTION - SEE 1/1.07
- CROSS TEE FIXED CONNECTION - SEE 1/1.08
- MAIN BEAM SLIP CONNECTION - SEE 2/1.07
- CROSS TEE SLIP CONNECTION - SEE 2/1.08



1
1.06

1 CEILING LAYOUT FOR STRAIGHT CORRIDOR W/ MAIN BEAMS @ 24"O.C. (FOR SDS ≤ 1.83)

SCALE: 3/8" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA

DIGITAL SIGNATURE

2023.11.02 16:08:41-07'00'

DEVCO engineering inc.

WAVE
WORTHINGTON ARMSTRONG VENTURE

CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

CALIFORNIA, USA

PROJECT NO. 21-628

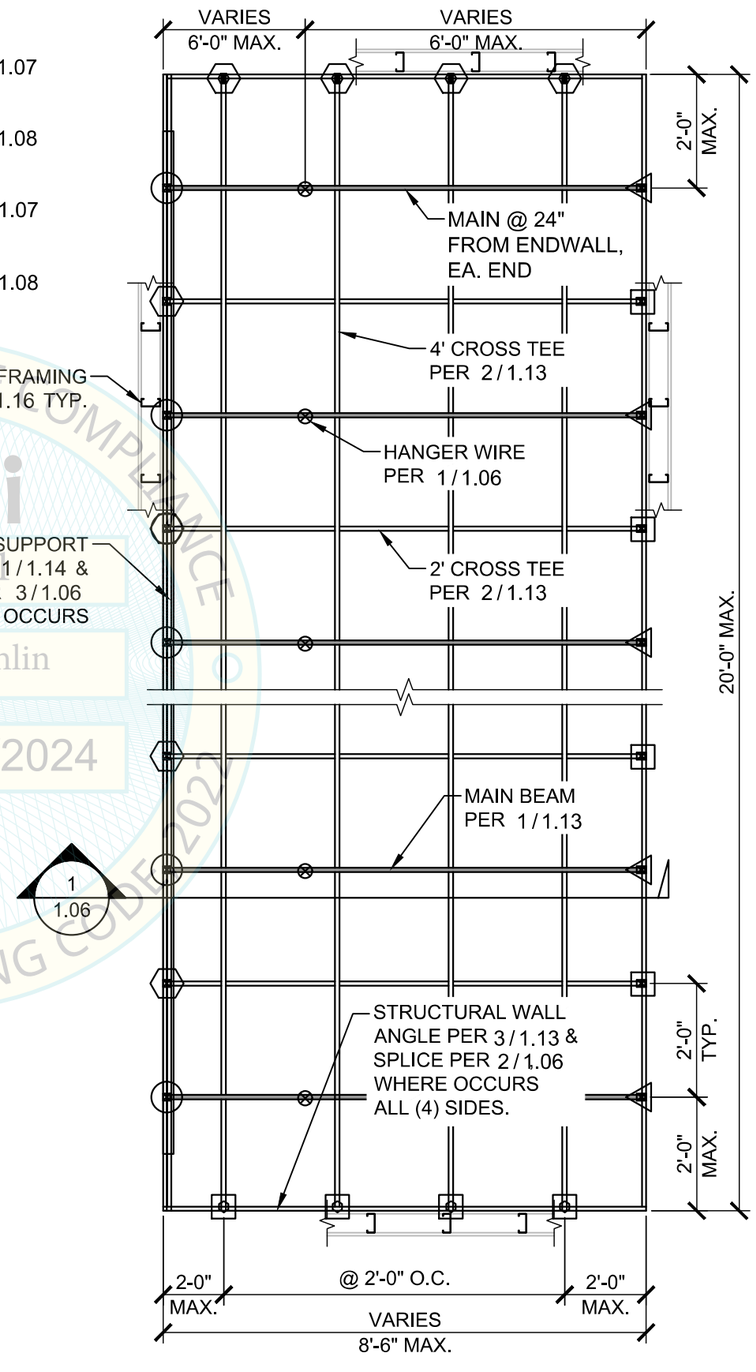
DRAWN BY: DEVCO

SHEET TITLE:
CEILING LAYOUT

DRAWING:
1.04

CONNECTION LEGEND

- MAIN BEAM FIXED CONNECTION - SEE 1/1.07
- CROSS TEE FIXED CONNECTION - SEE 1/1.08
- MAIN BEAM SLIP CONNECTION - SEE 2/1.07
- CROSS TEE SLIP CONNECTION - SEE 2/1.08



CEILING LAYOUT FOR STRAIGHT CORRIDOR W/ MAIN BEAMS @ 48"O.C. (FOR SDS ≤ 1.50)

1 SCALE: 3/8" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ALEX M HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:08:46-07'00'

DEVCO engineering inc.

WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

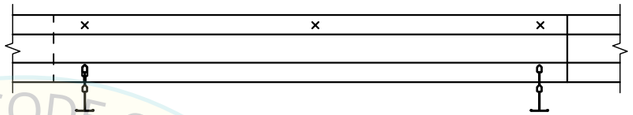
PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
CEILING LAYOUT

DRAWING:
1.05

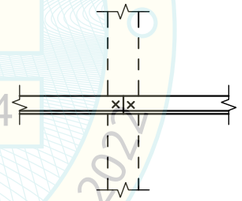
NOTE:
1. LATERAL SUPPORT BAR SHALL BE LAPPED ONE FULL SPACING OF THE MAIN BEAMS AT SPLICES + 3" MIN. EACH END W/ (3) #8 x 1¼" TRUSS HEAD SELF DRILLING SCREWS THROUGH TOP FLANGE OF LATERAL SUPPORT BAR.
2. LATERAL SUPPORT BAR TO EXTEND MIN. 3" BEYOND LAST MAIN & ATTACH TO MIN. (1) WALL STUD BETWEEN MAIN & END OF CEILING.



3 LATERAL SUPPORT BAR SPLICE

SCALE: 1 1/2" = 1'-0"

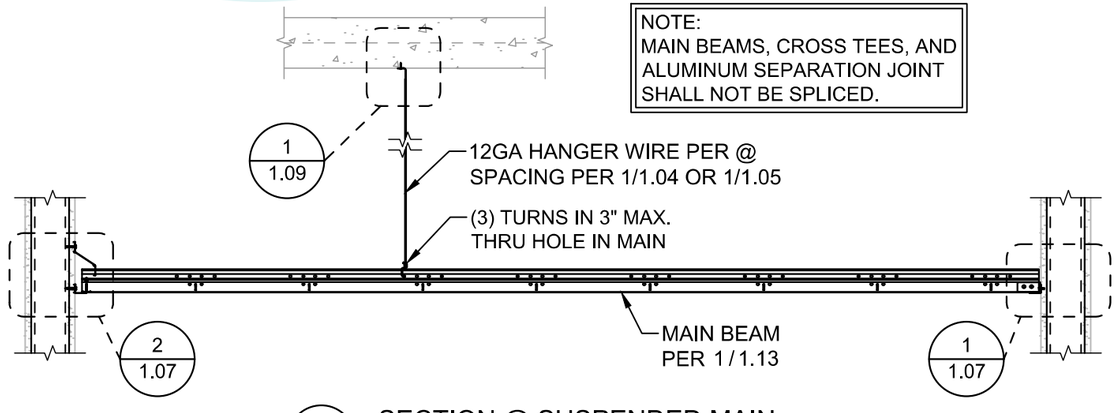
NOTE:
STRUCTURAL WALL ANGLE SHALL BE SPLICED AT STUD ℄ W/ #8 x 1¼" TRUSS HEAD SELF DRILLING SCREW THRU EACH ANGLE TO STUD.



2 STRUCTURAL WALL ANGLE SPLICE

SCALE: 1 1/2"=1'-0"

NOTE:
MAIN BEAMS, CROSS TEES, AND ALUMINUM SEPARATION JOINT SHALL NOT BE SPLICED.



1 SECTION @ SUSPENDED MAIN

SCALE: 3/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ALEX M HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:08:50-07'00'

DEVCO engineering inc.
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

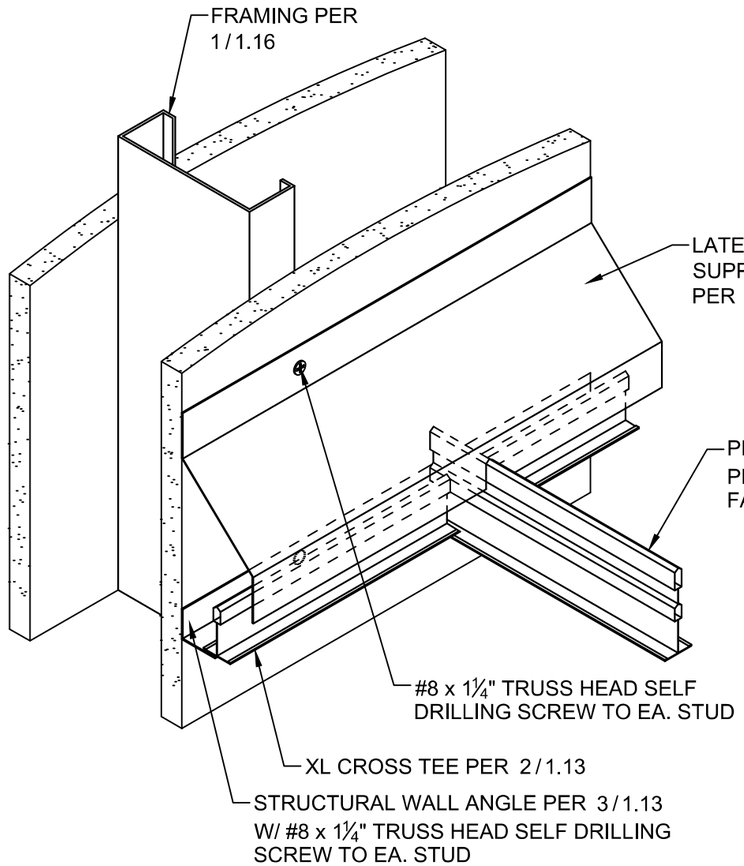
PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

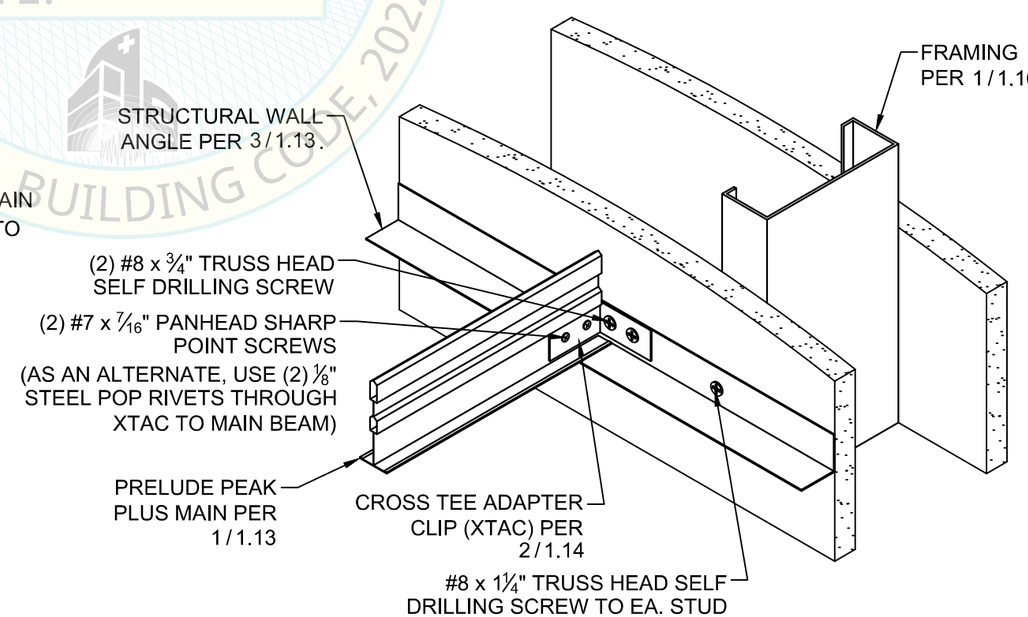
SHEET TITLE:
CEILING DETAILS

DRAWING:
1.06



2 SLIP CONNECTION OF MAIN BEAM TO WALL

SCALE: N.T.S.



1 FIXED CONNECTION OF MAIN BEAM TO WALL

SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:08:54-07'00'

DEVCO engineering inc.
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

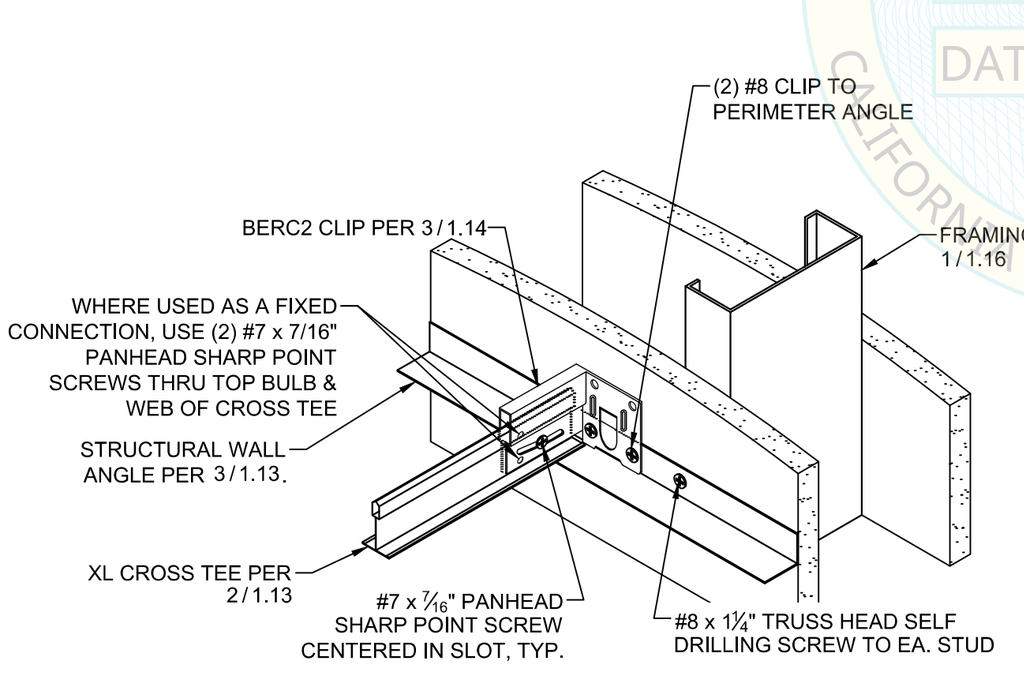
PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

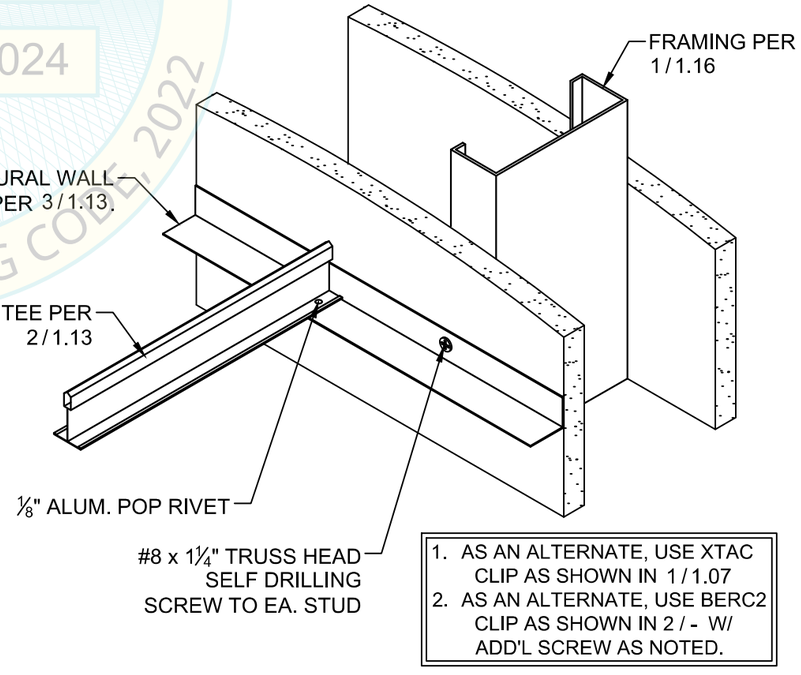
SHEET TITLE:
CEILING DETAILS

DRAWING:
1.07



2 SLIP CONNECTION OF CROSS TEE TO WALL

SCALE: N.T.S.



1. AS AN ALTERNATE, USE XTAC CLIP AS SHOWN IN 1 / 1.07
2. AS AN ALTERNATE, USE BERC2 CLIP AS SHOWN IN 2 / - W/ ADD'L SCREW AS NOTED.

1 FIXED CONNECTION OF CROSS TEE TO WALL

SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX M. HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:08:58-07'00'

DEVCO engineering inc.
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

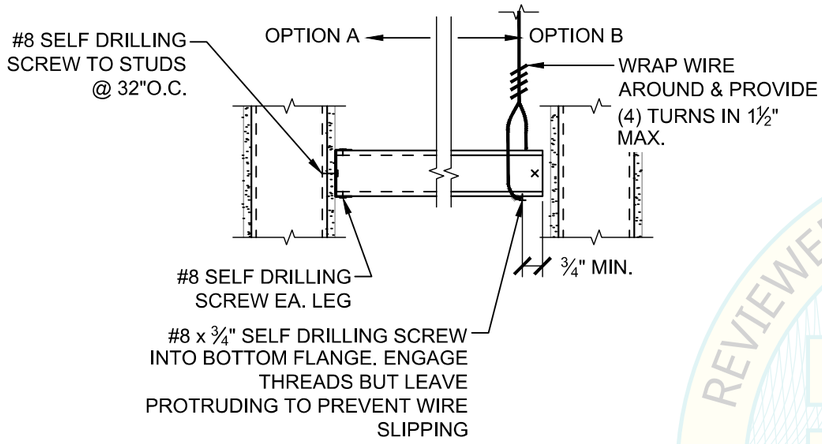
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

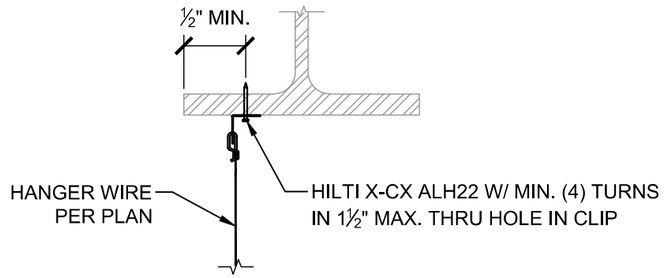
SHEET TITLE:
CEILING DETAILS

DRAWING:
1.08

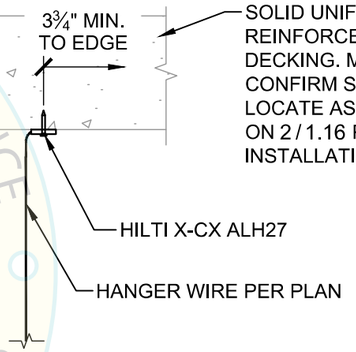


3 SPREADER/TRAPEZE END CONNECTIONS

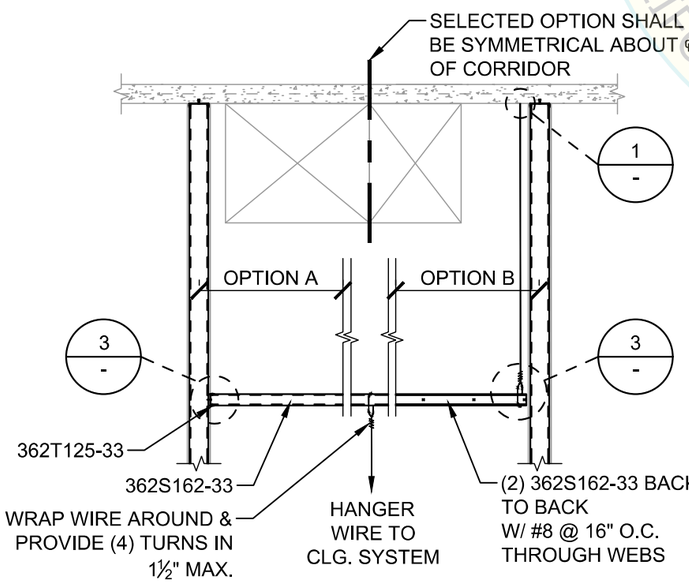
SCALE: N.T.S.



C HANGER WIRE @ STEEL BEAM

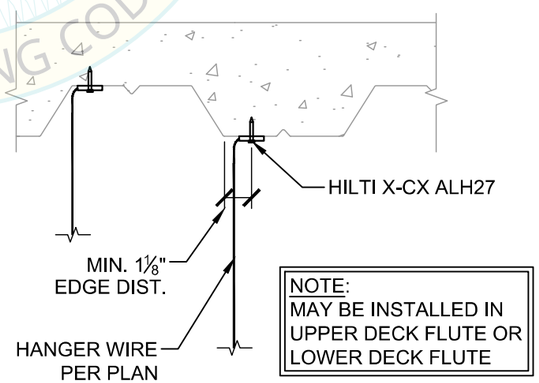


B HANGER WIRE @ CONCRETE SLAB W/O METAL DECK



2 OPTIONAL SPREADER/TRAPEZE SUPPORT

SCALE: 1/4" = 1'-0"



A HANGER WIRE @ CONCRETE FILLED METAL DECK

1 HANGER WIRE

SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX C. HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:03-07'00'

DEVCO engineering inc.
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355
WORTHINGTON ARMSTRONG VENTURE

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

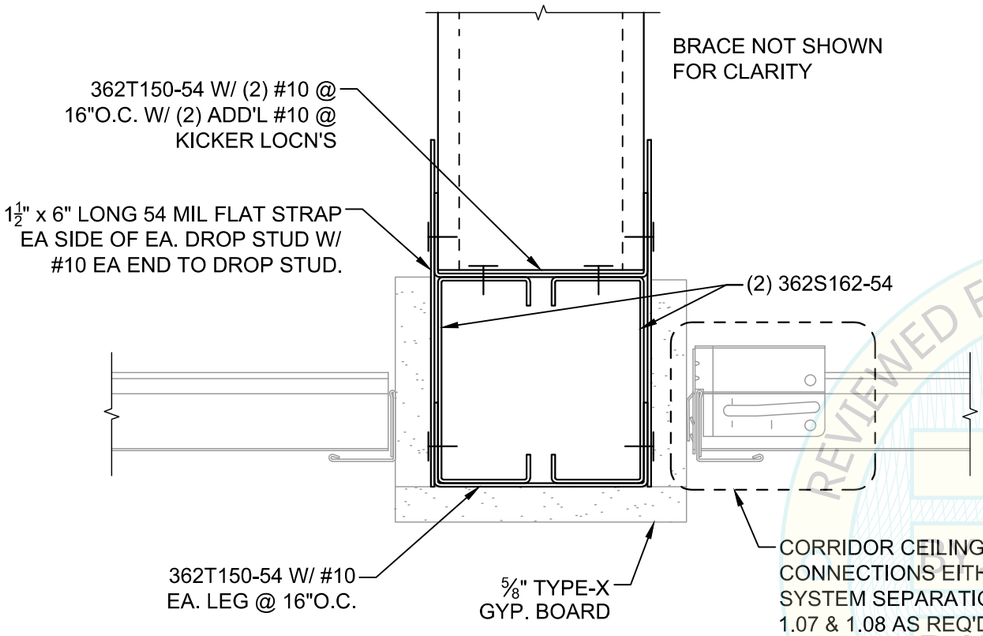
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

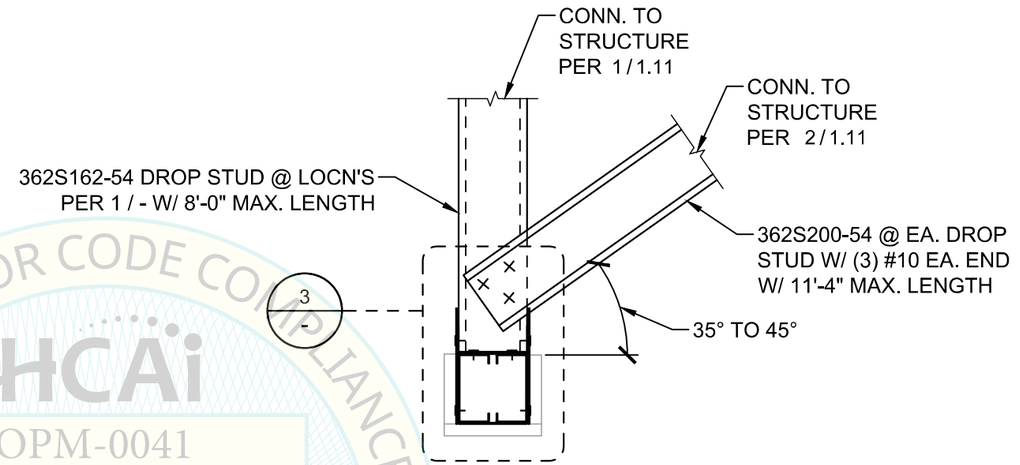
SHEET TITLE: HANGER DETAILS

DRAWING: 1.09



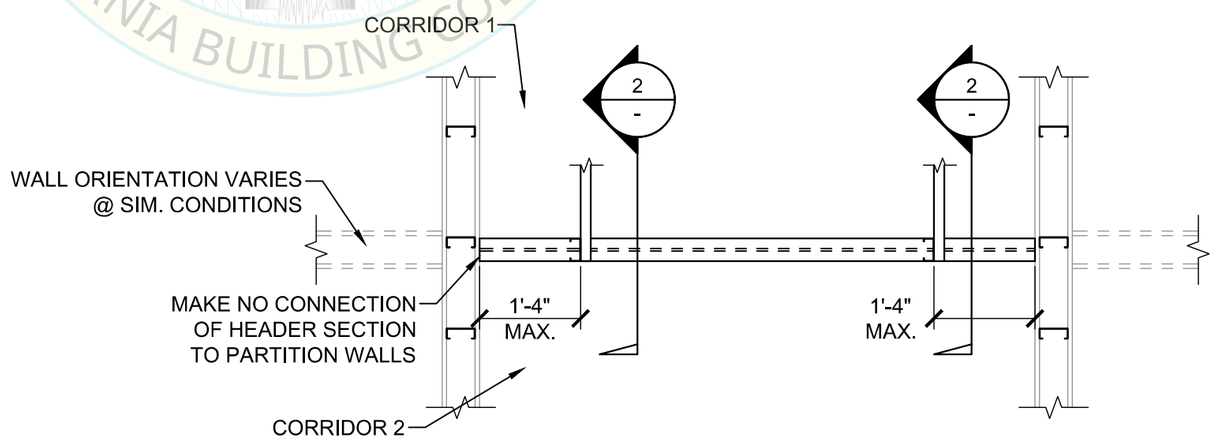
3 DETAIL @ SYSTEM SEPARATION

SCALE: 4 1/2"=1'-0"



2 SECTION @ SYSTEM SEPARATION

SCALE: 1 1/2"=1'-0"



1 ENLARGED SYSTEM SEPARATION PLAN

SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX C HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:07-07'00'

DEVCO engineering inc.
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE,
SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan
CORRIDOR CEILING
AND WALL FRAMING -
OPM-0041

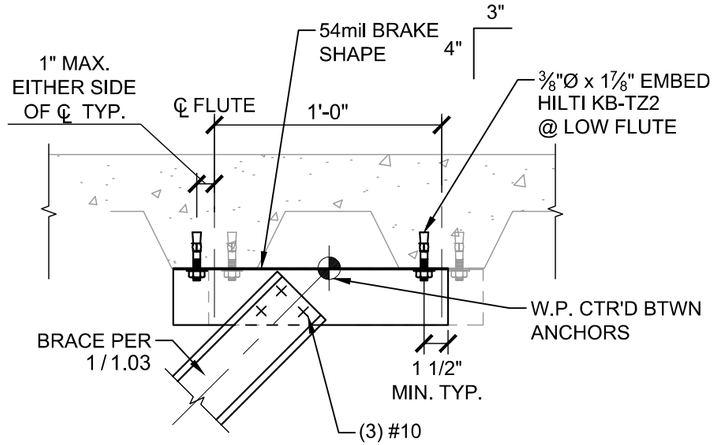
PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

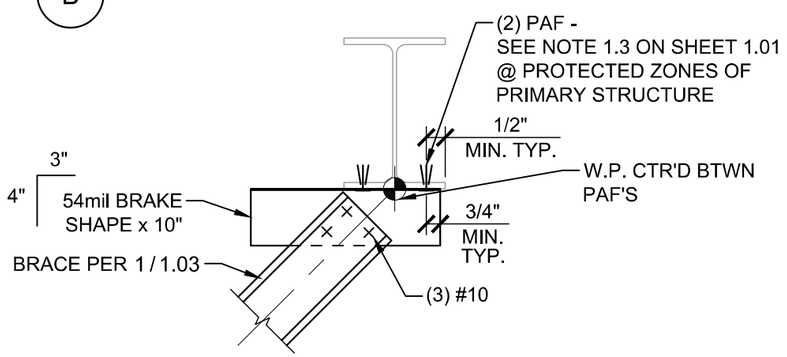
DRAWN BY: DEVCO

SHEET TITLE:
SYSTEM SEPARATION JOINT

DRAWING:
1.10



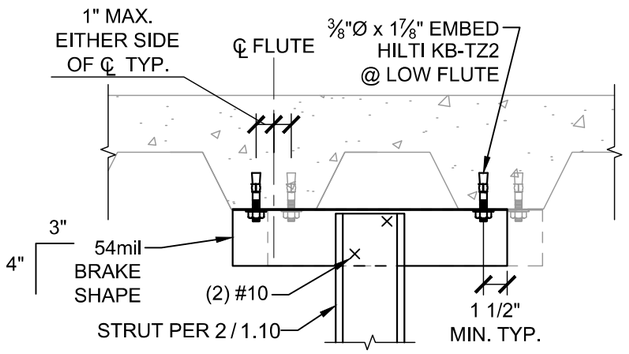
B @ CONC. SLAB OR SLAB ON METAL DECK



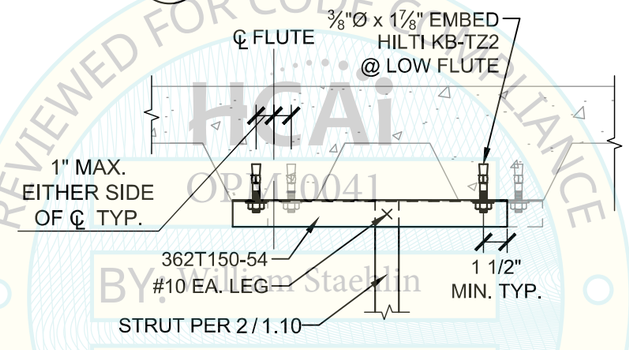
A @ B.O. WF BEAM

SYSTEM SEPARATION JOINT
BRACE CONN. TO STRUCTURE

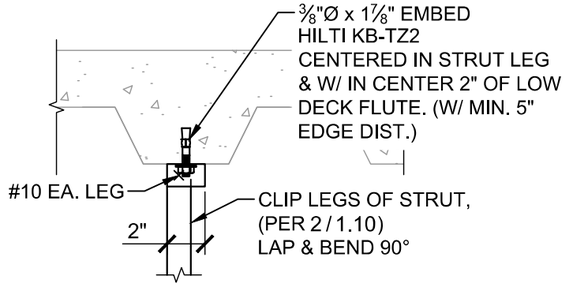
2 SCALE: 1 1/2" = 1'-0"



C-3 ANCHOR OFFSET FROM FLUTE

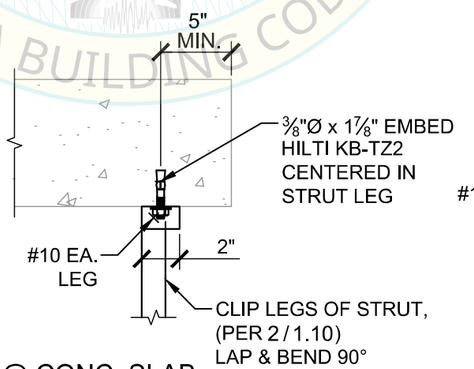


C-2 ANCHOR OFFSET FROM FLUTE

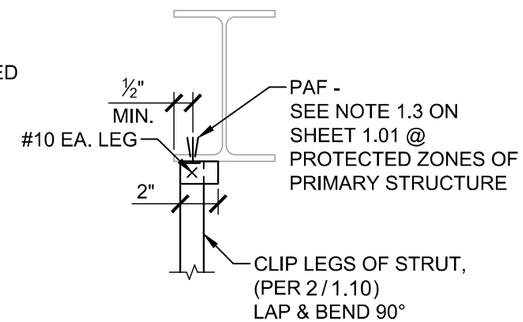


C-1 ANCHOR CENTERED IN FLUTE

C @ CONC. SLAB ON METAL DECK



B @ CONC. SLAB W/O METAL DECK



A @ B.O. WF BEAM

SYSTEM SEPARATION JOINT
STRUT CONN. TO STRUCTURE

1 SCALE: 1 1/2" = 1'-0"

NOTES:
1. SEE SECTION 5 OF GENERAL NOTES FOR MINIMUM SUBSTRATE REQUIREMENTS.
2. CONFIRM SLAB REINFORCEMENT & LOCATE AS REQ'D PER ANCHOR NOTES ON 2 / 1.16 PRIOR TO ANCHOR INSTALLATION

REGISTERED PROFESSIONAL ENGINEER
ALEX C HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:12-07'00'

DEVCO engineering inc.

WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan
CORRIDOR CEILING
AND WALL FRAMING -
OPM-0041

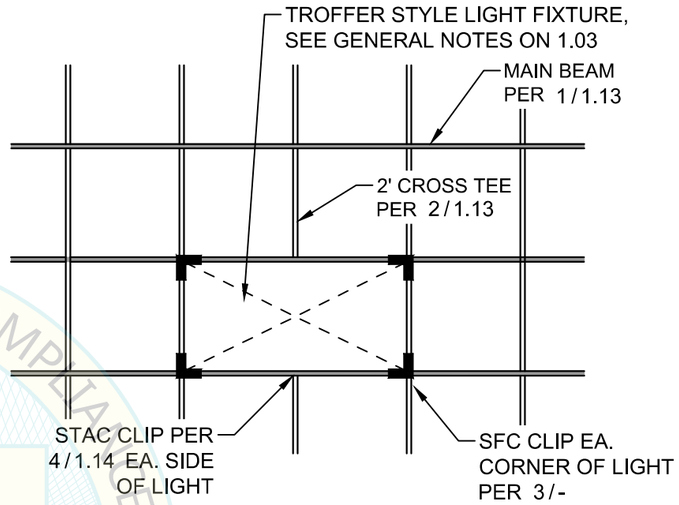
PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

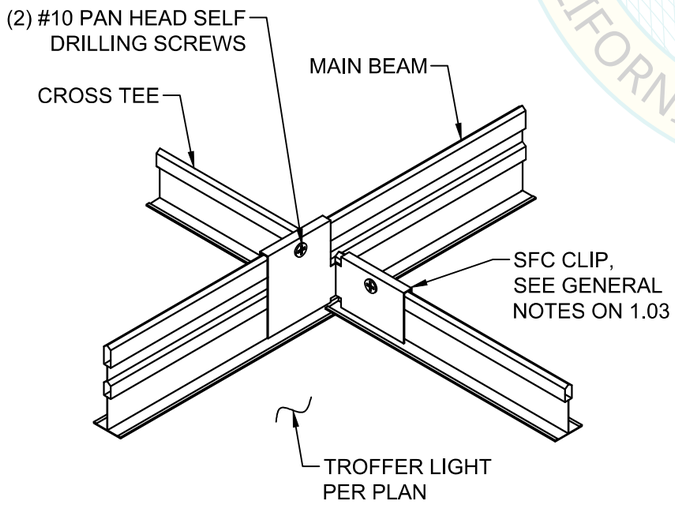
SHEET TITLE:
CEILING DETAILS

DRAWING:
1.11



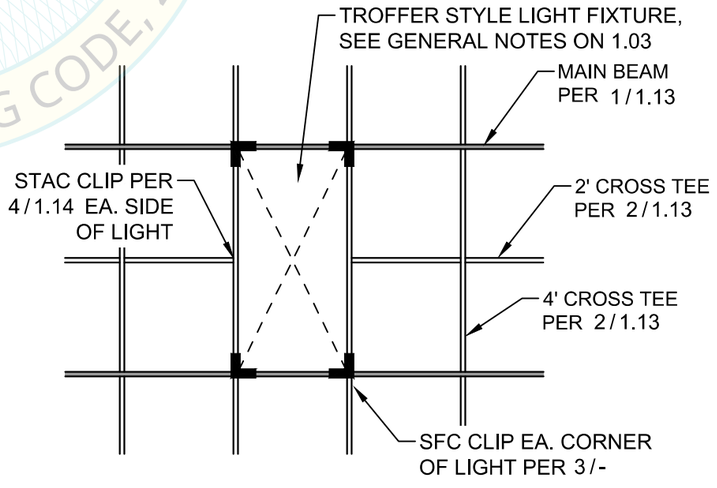
2 LIGHTS IN 2' O.C. MAIN BEAM LAYOUT

SCALE: 3/8" = 1'-0"



3 CONNECTION @ TROFFER LIGHTS

SCALE: N.T.S.



1 LIGHTS IN 4' O.C. MAIN BEAM LAYOUT

SCALE: 3/8" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA

DIGITAL SIGNATURE

2023.11.02 16:09:16-07'00'

devco engineering inc.

WAVE
WORTHINGTON ARMSTRONG VENTURE

CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

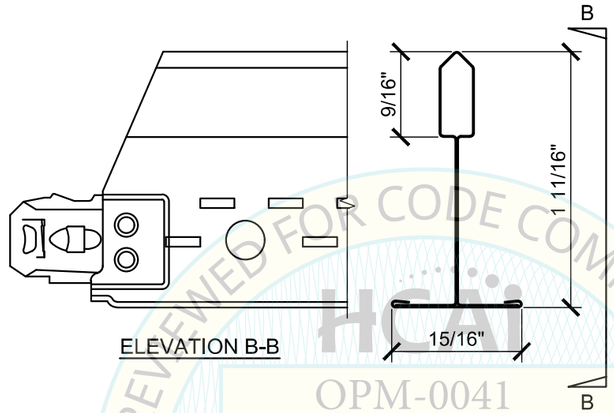
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
LIGHT DETAILS

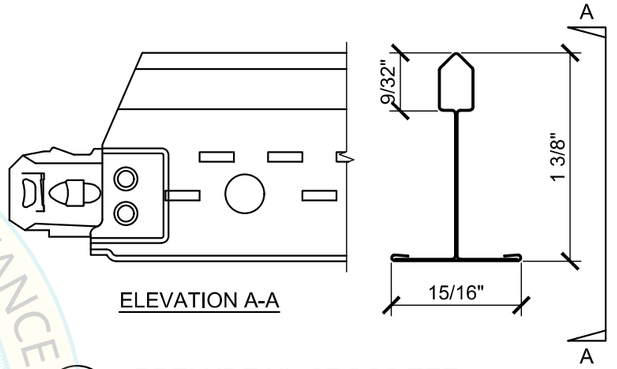
DRAWING:
1.12



ELEVATION B-B

B PRELUDE XL CROSS TEE ALTERNATE

SCALE: 1"=1" PART # XL8320



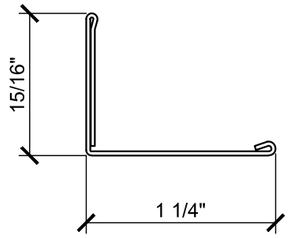
ELEVATION A-A

A PRELUDE XL CROSS TEE

SCALE: 1"=1" PART # XL7328

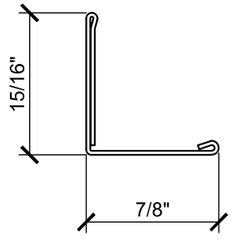
2 PRELUDE XL CROSS TEE

SCALE: 1"=1"



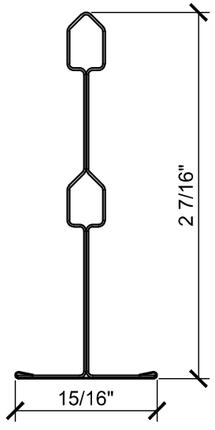
B ALTERNATE STRUCTURAL WALL ANGLE

SCALE: 1"=1" PART # SWA9854HRC



A STRUCTURAL WALL ANGLE

SCALE: 1"=1" PART # SWA9878HRC



1 PRELUDE PEAK PLUS MAIN BEAM

SCALE: 1"=1" PART # 730144HRC, 730102HRC, 730098HRC

3 STRUCTURAL WALL ANGLE

SCALE: 1"=1"

OPM-0041: Reviewed for Code Compliance by William E Staehlin

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:21-07'00'

DEVCO engineering inc.

WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

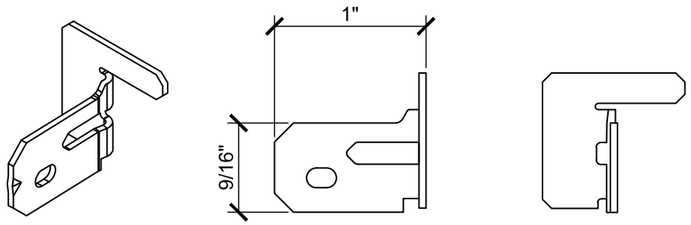
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

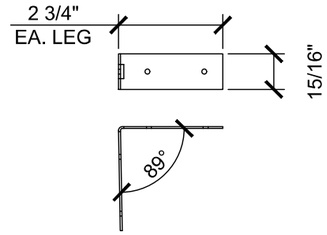
SHEET TITLE:
CEILING COMPONENTS

DRAWING:
1.13



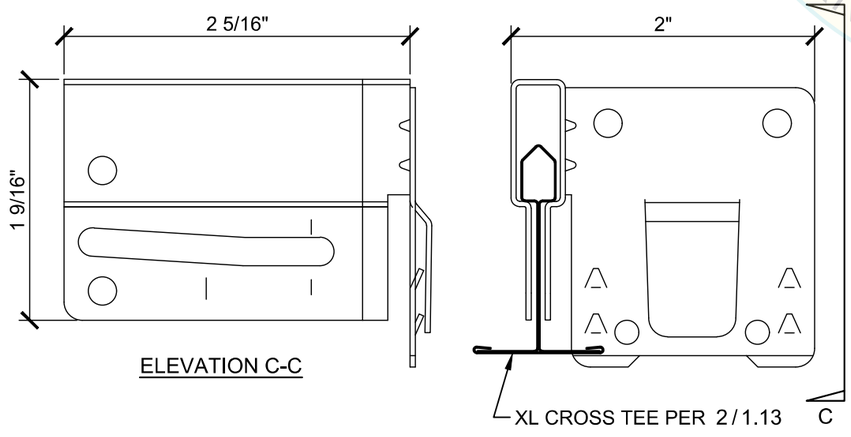
4 SINGLE TEE ADAPTER CLIP (STAC) - PART # STAC

SCALE: 1"=1"



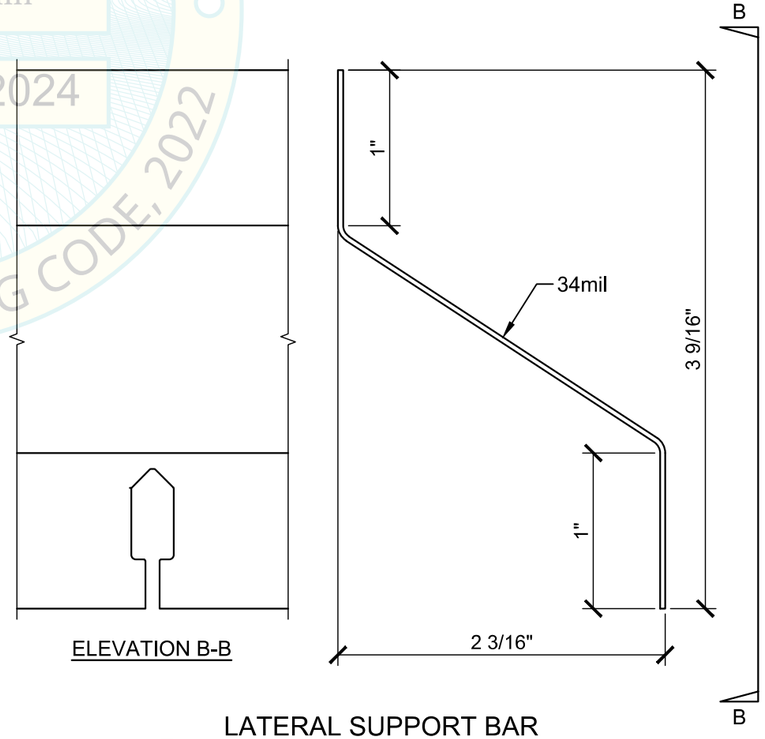
2 CROSSTEE ADAPTER CLIP (XTAC) - PART # XTAC

SCALE: 3"=1'-0"



3 2" BEAM END RETAINING CLIP (BERC2) - PART #BERC2

SCALE: 1"=1"



1 LATERAL SUPPORT BAR PART # LSB8HRC

SCALE: 1"=1"

REGISTERED PROFESSIONAL ENGINEER
ALEX R HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:26-07'00'

DEVCO engineering inc.
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355
WORTHINGTON ARMSTRONG VENTURE

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:

CALIFORNIA, USA

PROJECT NO. 21-628

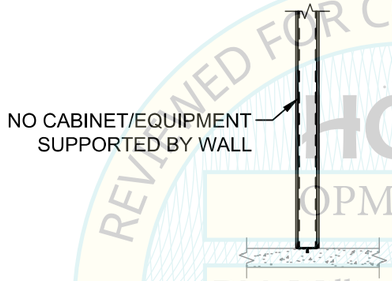
DRAWN BY: DEVCO

SHEET TITLE:
CEILING COMPONENTS

DRAWING:
1.14

2/20/2024

OPM-0041: Reviewed for Code Compliance by William E Staehlin



A CORRIDOR WALL - CONDITION A

CORRIDOR WALL FRAMING									
SDS	MAX. WALL HEIGHT								
	9'-0"			12'-0"			16'-0"		
0.25-0.99	362S125-30	400S125-30	600S125-30	362S125-30	400S125-30	600S125-30	362S162-33*	400S162-33*	600S125-30
1.00-1.25	362S125-30	400S125-30	600S125-30	362S162-33	400S125-30	600S125-30	362S162-43*	400S162-33*	600S125-30
1.25-1.45	362S125-30	400S125-30	600S125-30	362S162-33	400S162-33	600S125-30	362S162-54*	400S162-43*	600S162-33
1.46-1.83	362S125-30	400S125-30	600S125-30	362S162-33*	400S162-33	600S125-30	362S200-54*	400S162-43*	600S162-33

NOTES:

1. TYPICAL WALLS SUPPORTING ARMSTRONG SINGLE SPAN CEILING (SEE A/-)
2. WALL STUDS SHALL BE SPACED @ 16" O.C. MAX
3. WALLS SHALL BE FULLY SHEATHED EA. SIDE FULL HEIGHT WITH 5/8" TYPE X GYPSUM BOARD INSTALLED IN ACCORDANCE WITH ASTM C840 AS A MINIMUM OR AS REQUIRED BY MORE RESTRICTIVE PROJECT SPECIFIC REQUIRMENTS.
4. FOR ALL CONDITIONS WITH ADDITIONAL LOADS APPLIED TO STUDS FROM CABINETS, ENGINEER MUST DESIGN ACCORDING TO SPECIFIC LOADS.
5. MEMBER SIZES IN TABLE MEET L/360 DEFLECTION LIMIT EXCEPT WHEN DENOTED WITH (*) IN WHICH THE MEMBER SIZE ONLY MEETS L/240 DEFLECT CRITERIA.

1 TABLE 1 - CORRIDOR WALL FRAMING

SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER
ALEX M HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:30-07'00'

DEVCO engineering inc.

WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
WALL SCHEDULE

DRAWING:
1.15

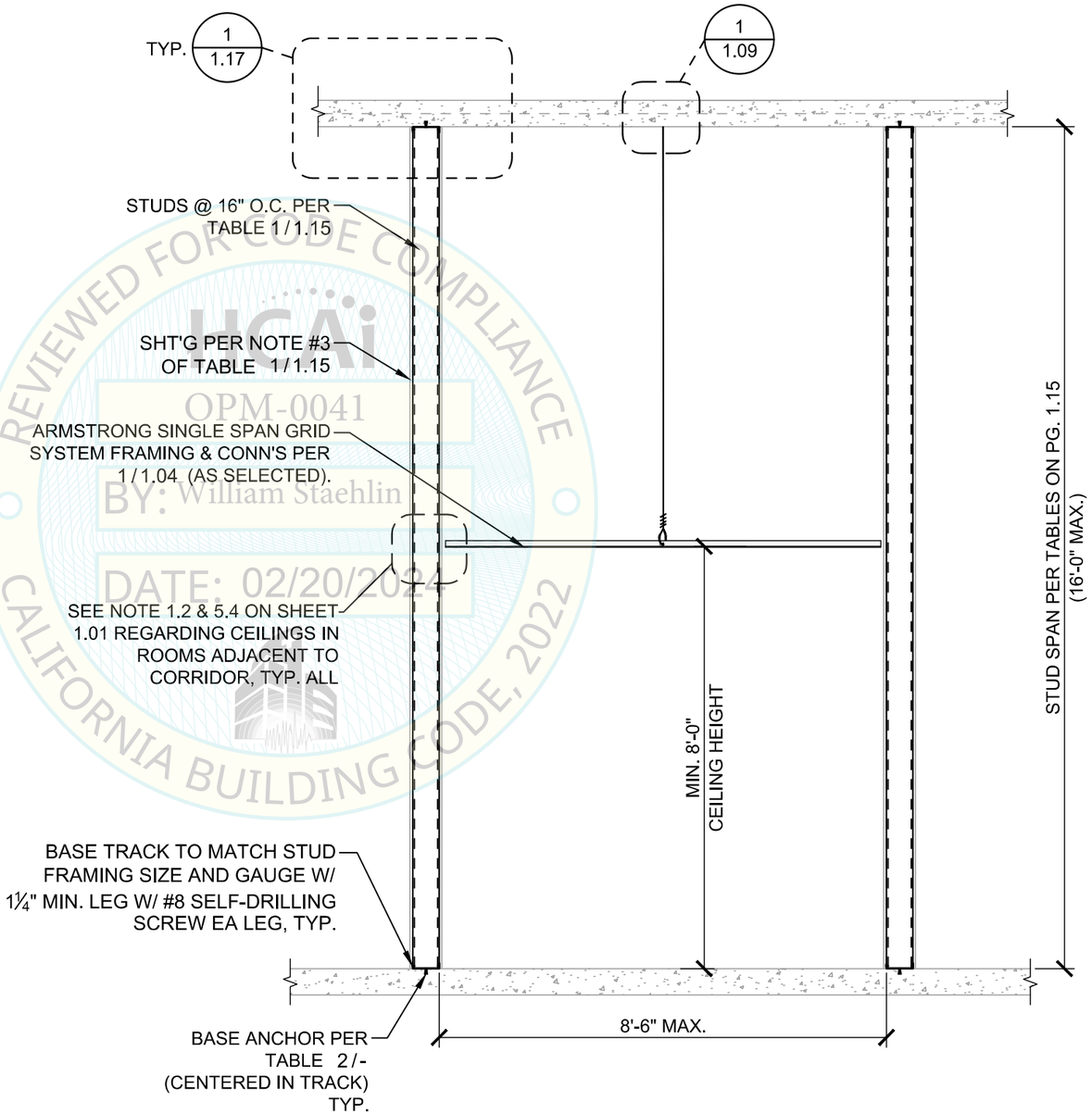
ANCHOR NOTES:

1. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER ACTUATED FASTENERS (PAF) IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.
2. WHEN INSTALLING DRILLED-IN ANCHOR AND/OR PAF INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRE-STRESSED TENDONS BY USING A NON-DESTRCUTIVE METHOD PRIOR TO INSTALLATION. USE EXTREME CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION.
3. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PAF.

BASE TRACK FASTENERS				
CORRIDOR WALL CONDITION	FASTENER	MAX. SPACING	MIN CONC. THK.	MIN EDGE DIST IN CONC.
A	HILTI X-U	12" O.C.	3¾"	3"
A	¼"Ø x 1¾" CONCRETE EMBEDMENT HILTI KB-TZ2 WEDGE ANCHOR	24" O.C.	3¼"	1½"

2 TABLE 2 - BASE ANCHORS

SCALE: N.T.S.



1 CORRIDOR SECTION

SCALE: 3/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
ALEX M. HEYNE
No. S 4916
Exp. 06/30/24
STRUCTURAL
STATE OF CALIFORNIA
DIGITAL SIGNATURE
2023.11.02 16:09:34-07'00'

DEVCO engineering inc.
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355
WAVE
WORTHINGTON ARMSTRONG VENTURE

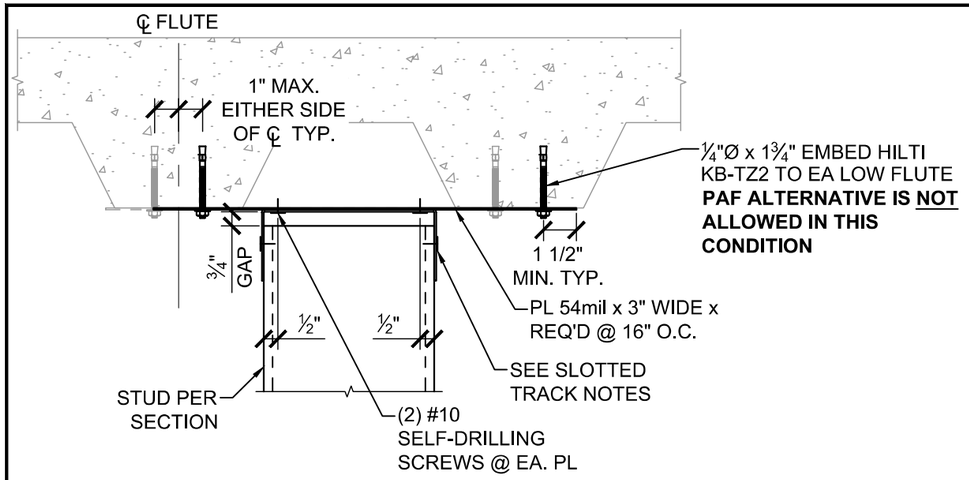
DRAWING STATUS:

	DESCRIPTION:	DATE:

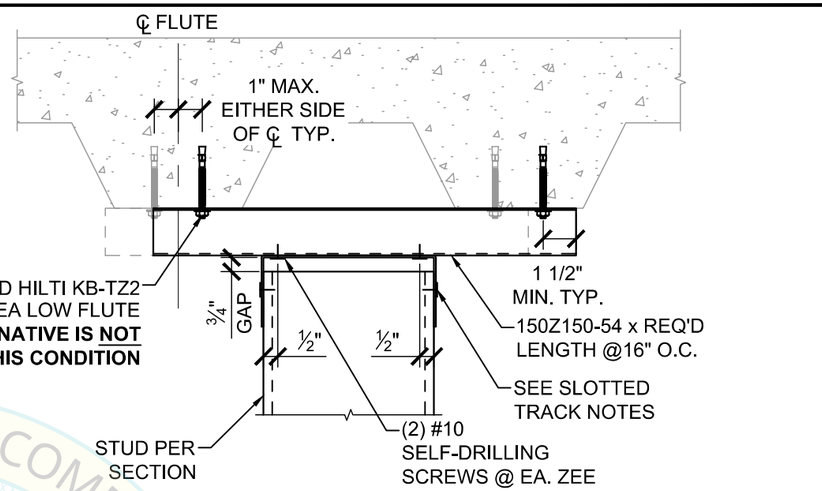
ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

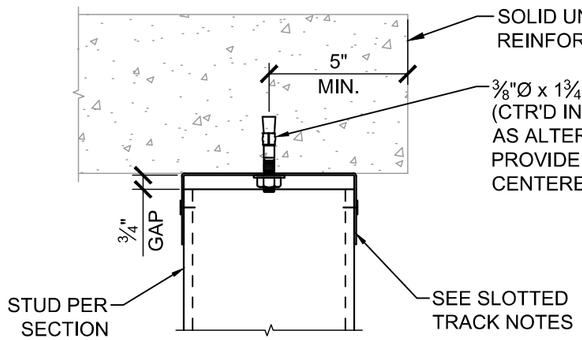
PROJECT NO. 21-628
DRAWN BY: DEVCO
SHEET TITLE: WALL FRAMING
DRAWING: 1.16



F PARALLEL TO CONCRETE SLAB ON METAL DECK W/ PLATE



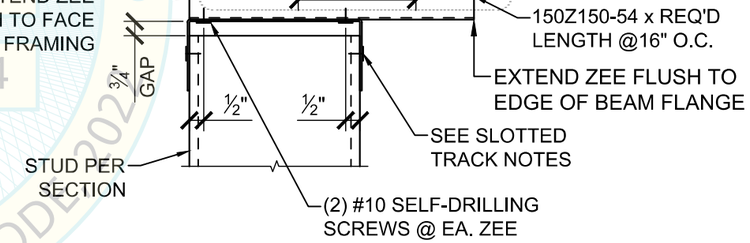
C PARALLEL TO CONCRETE SLAB ON METAL DECK W/ ZEE



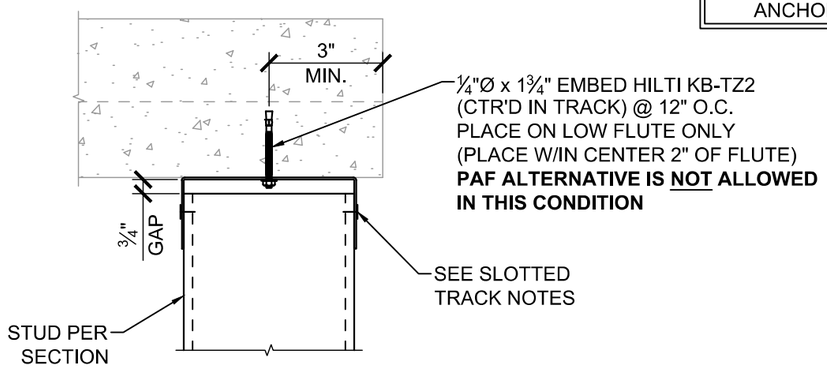
E TO CONCRETE SLAB W/O METAL DECK

SLOTTED TRACK CONNECTION NOTES:

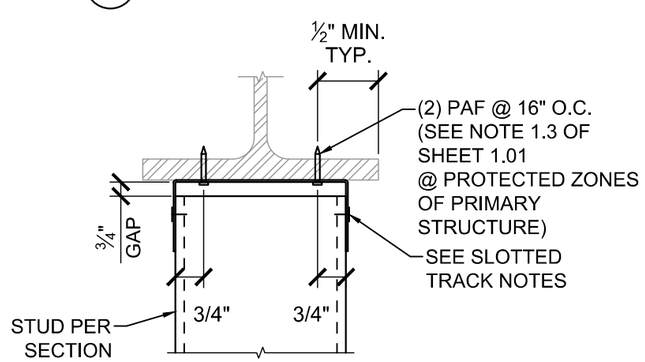
1. 16 GA. SLOTTED TRACK W/ 2½" LEGS W/ 1½" SLOTS CENTERED IN LEG, W/ #8 SELF-DRILLING SCREWS EA. LEG (CENTER IN SLOT).
2. MAKE NO CONNECTION OF FINISH TO TRACK.
3. SEE SECTION 5 OF GENERAL NOTES FOR MINIMUM SUBSTRATE REQUIREMENTS.
4. CONFIRM SLAB REINFORCEMENT & LOCATE AS REQ'D PER ANCHOR NOTES ON 2 / 1.16 PRIOR TO ANCHOR INSTALLATION



B @ BOTTOM OF WF BEAM W/ ZEE



D TRACK PERP. TO CONCRETE SLAB ON METAL DECK



A @ BOTTOM OF WF BEAM

1 SLOTTED TRACK CONNECTION DETAILS

SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER
ALEX V. HEYNE
No. S 4916
Exp. 06/30/24
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WAVE
WORTHINGTON ARMSTRONG VENTURE
CORPORATE ENGINEERING: 101 LINDENWOOD DRIVE, SUITE 350, MALVERN, PA 19355

DRAWING STATUS:

	DESCRIPTION:	DATE:

ARMSTRONG SingleSpan CORRIDOR CEILING AND WALL FRAMING - OPM-0041

PROJECT LOCATION:
CALIFORNIA, USA

PROJECT NO. 21-628

DRAWN BY: DEVCO

SHEET TITLE:
WALL DETAILS

DRAWING:
1.17