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

OFFICE USE ONLY

APPLICATION #: OPM-0652

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Abbott Automation Solutions - Diagnostics Division

Manufacturer's Technical Representative: Kevin Reed

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (972) 518-6155 Email: Kevin.Reed@abbott.com

Product Information

Product Name: Abbott Automation Solutions - Archive II, Archive III, Spiral Element & Elevated Tracks

Product Type: Automated Pre/Post Analytical Processing Laboratory Instruments

Product Model Number: Archive II & III Single, Archive II & III Twin, Archive II & III Loader Module, Archive II & IIIStorage, Spiral Element, Elevated Tracks: 20, 40 & 80 cm Straight Sections, 90 Degree Turn Section, 3 & 4 Way Roundabout; Floor Supported Tracks: 20, 40 and 80cm Straight Sections.

General Description: The Abbott Automated Solutions is a Modular System designed to automate pre-analytical and post-analytical processing, sample-handling, and processing in the Laboratory. System consolidates multiple analytical instruments into a unified work station by employing a common sample processing capability.

Applicant Information

Applicant Company Name: Abbott Automation Solutions - Diagnostics Division

Contact Person: Kevin Reed

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (972) 518-6155 Email: Kevin.Reed@abbott.com

Title: Engineering Manager R&D

Registered Design Professonal Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald California License Number: S4346

Mailing Address: 2710 Gateway Oaks Drive, Suite 190N, Sacramento, CA 95833

Telephone: (916) 920-2020 Email: dieters@cyseng.com

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950 ☐ ASHRAE 171 ☐ FEMA 461

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2025 (CBSC 2025) 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 2025 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

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

HCAI Approval

Date: 3/27/2026

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

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NOTES:

THESE DRAWINGS ARE PREPARED FOR ABBOTT LABORATORIES, AN ILLINOIS CORPORATION, ABBOTT PARK, ILLINOIS.

1. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE HCAI PRE–APPROVAL PROGRAM WEBSITE AND PROVIDE ONE COPY FOR THE INSPECTOR OF RECORD.

2. THIS PRE–APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE LABORATORY EQUIPMENT TO THE STRUCTURE.

3. BRACKETS, STRUT PLATES & CONCRETE ANCHORS SHALL BE PROVIDED & INSTALLED BY THE CONTRACTOR.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

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ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

GENERAL NOTES:

1. THIS CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS & INFORMATION (HCAI) OFFICE OF STATEWIDE HOSPITAL PLANNING & DEVELOPMENT (OSHPD) PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2025.
   THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2025.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD FOR A SITE SPECIFIC PROJECT TO VERIFY:
   A. THE ADEQUACY OF THE NEW OR (E) STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EACH EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
   B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
   C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR (E) ANCHORS. THE SPACING SHOWN IN THE TEST LOADS IN TABLES 1.1 & 1.2 ON THIS PG IS THE REQ MIN SPACING OF THE GIVEN DIA ANCHORS. THE REQ SPACING FROM ANCHORS OF OTHER DIA & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
   D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2025 & W/ THE DTLS SHOWN IN THIS PRE-APPROVAL.
   E. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DTLS, & THE MATERIAL & GA OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
   F. THAT THE CONC SLAB TO WHICH THE EQUIP IS ANCHORED SHALL MEET THE REQUIREMENTS OF THE APPLICABLE ICC REPORT & THIS OPM.

3.1. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STL HILTI KB-TZ2 EXPANSION ANCHORS COMPLYING W/ ESR-4266 MOST RECENT EDITION, UNO.

   A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLE ON THIS PG. PROVIDE FULL THRD ENGAGEMENT FOR NUT & WASHER.
   B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR & REPORT OF TEST RESULTS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD, OWNER & ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. IF ANY ANCHOR FAILS THE TEST, TEST ALL ANCHORS. THE TEST SHALL BE PERFORMED 24 HOURS OR MORE AFTER INSTALLATION. TESTING MAY BE DONE PRIOR TO EQUIP INSTALLATION, HOWEVER, THE NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO, REFER TO 2025 CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
   C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLIES FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
      - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED W/IN THE FOLLOWING LIMITS: WEDGE TYPE:
        ONE-HALF (½) TURN OF THE NUT.
   D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
   E. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. FOR CASE 2 & 3, SEE TABLE 1.1 BELOW.

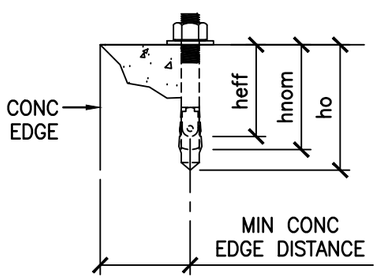


TABLE 1.1 – HILTI KB-TZ2 EXPANSION ANCHORS

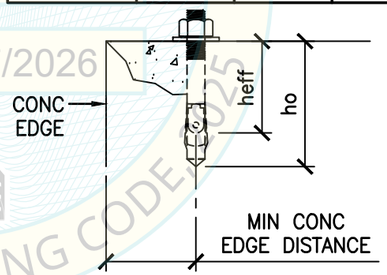
CONDITION OF ANCHORAGE	ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD TORQUE (FT-LBS)	BRACKET (QTY)
CASE 2	½	2½	2	2¾	4	12	5½	50	1, 3 & HAT BRACKET
CASE 3	½	2½	2	2¾	3¼	12	5½	50	1, 2, 3 & HAT BRACKET

3.2 BRACKET 2 EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STL HILTI HSL4 EXPANSION ANCHORS COMPLYING W/ ESR-4386, LATEST EDITION.

   A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLE ON THIS PG. PROVIDE FULL THRD ENGAGEMENT FOR NUT & WASHER.
   B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR & REPORT OF TEST RESULTS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD, OWNER & ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. IF ANY ANCHOR FAILS THE TEST, TEST ALL ANCHORS. THE TEST SHALL BE PERFORMED 24 HOURS OR MORE AFTER INSTALLATION. TESTING MAY BE DONE PRIOR TO EQUIP INSTALLATION, HOWEVER, THE NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO, REFER TO 2025 CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
   C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLIES FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
      - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED W/IN THE FOLLOWING LIMITS: WEDGE TYPE:
        ONE-HALF (1/2) TURN OF THE NUT.
   D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
   E. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. FOR CASE 2, SEE TABLE 1.2 BELOW.

TABLE 1.2 – HILTI HSL4 EXPANSION ANCHORS

CONDITION OF ANCHORAGE	ANCHOR OUTSIDE DIA (mm) da	NOMINAL ANCHOR DIA	EFFECTIVE EMBED (mm) hef	HOLE DEPTH (mm) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD TORQUE (Nm)	BRACKET (QTY)
CASE 2	18	M12	80	105	5 3/8	12	4	60	2



REGISTERED PROFESSIONAL ENGINEER DIETER T SIEBALD No. S4346 STRUCTURAL STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: GENERAL NOTES

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GENERAL NOTES: (CONTINUED)

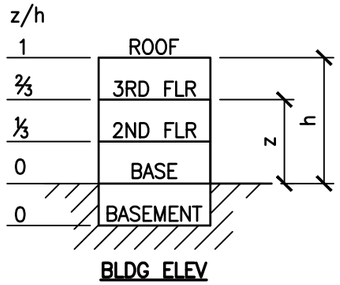
4. BOLTS THROUGH CONC ON MTL DECK:
   A. BOLTS SHALL BE TORQUED BY ¾ TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED, UNO. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQ TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
   B. THRU–BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
   C. THRU–BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING IN ACCORDANCE W/ REQUIREMENTS FOR POST–INSTALLED ANCHORS. THRU–BOLTS W/ STL TO STL CONNECTION IN TENSION DO NOT REQUIRE TESTING.
5. EXPANSION ANCHORS TO BOTT OF CONC FILL OVER MTL DECK:
   A. HILTI KB–TZ2 (ICC ESR–4266) TENSION TEST LOAD. FOR CASE 1, SEE TABLE 1.3 BELOW.

TABLE 1.3

CONDITION OF ANCHORAGE	ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	MAX INSTALLATION TORQUE (FT–LBS)
CASE 1	1/4	1 3/4	1 1/2	2	3 1/4	1*	10*	4

* SEE PG 401 IN THIS OPM & FIGURE 5B IN ESR–4266

6. THREE (3) CASES OF ATTACHMENT ARE SPECIFIED & PRESENTED IN THIS PRE–APPROVAL:



BLDG ELEV

CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h≤ PER COMPONENT SCHED ON PG 201). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3¼" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE A325 STL THRD ROD THRU CONC FILL & MTL DECK.

CASE 2: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG (z/h=0). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB FOR BRACKETS 1 & 3 & A MIN 5⅜" NWC SLAB FOR BRACKET 2. (f'c = 3000 PSI, MIN).

CASE 3: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h≤ PER COMPONENT SCHED ON PG 201). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3¼" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE EXPANSION ANCHORS PER GENERAL NOTES.

7. THIS PRE–APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQUAL TO VALUES PUBLISHED IN COMPONENT SCHED ON PG 201.

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SHEET TITLE: GENERAL NOTES (CONTINUED)

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DESIGN CRITERIA

SUPPORT & ATTACHMENT DESIGN IS PER 2025 CBC AND ASCE 7-22 AT LRFD LEVEL FORCES.

FLOOR MOUNTED EQUIPMENT:
OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-22:
W_P AS NOTED ON COMPONENT SCHEDULE ON PG 201
FOR CASE 1 - UPPER FLRS ABV THE BASE, z/h ≤ VALUES PER COMPONENT SCHEDULE OF PG 201
S_{DS} = PER COMPONENT SCHEDULE ON PG 201
FOR CASE 2 - SLAB AT OR BLW BASE, z/h = 0
S_{DS} = PER COMPONENT SCHEDULE ON PG 201
FOR CASE 3 - UPPER FLRS ABV THE BASE, z/h ≤ VALUES PER COMPONENT SCHEDULE OF PG 201
S_{DS} = PER COMPONENT SCHEDULE ON PG 201

ELEVATED TRACKS:
DISTRIBUTION SYSTEM: ELECTRICAL CONDUIT & CABLE TRAYS.
W_P AS NOTED ON COMPONENT SCHEDULE ON PG 201
FOR CASE 1 - UPPER FLRS ABV THE BASE, z/h ≤ VALUES PER COMPONENT SCHEDULE OF PG 201
S_{DS} = PER COMPONENT SCHEDULE ON PG 201

LOAD COMBINATIONS
$(0.9 - 0.2\ S_{DS})\ D - \Omega_0\ F_p$ (FOR MAX TENSION)
$(1.2 + 0.2\ S_{DS})\ D + \Omega_0\ F_p$ (FOR MAX COMPRESSION)

$C_{PM} = F_p/W_p = 0.4\ S_{DS}\ I_p \left[\frac{H_f}{R\mu}\right]\left[\frac{C_{AR}}{R_{po}}\right]$ ASCE 7-22 (13.3-1)

$C_{PM} = F_p/W_p$ (MAX) $= 1.6\ S_{DS}\ I_p$ ASCE 7-22 (13.3-2)
$C_{PM} = F_p/W_p$ (MIN) $= 0.3\ S_{DS}\ I_p$ ASCE 7-22 (13.3-3)
$C_{VM} = F_v/W_p = \pm 0.2\ S_{DS}\ I_p$ ASCE 7-22 (12.4-4a)
$Hf_{MIN} = 1.0$ AT OR BELOW GRADE PLANE
$Hf_{MAX} = 1+2.5\ (z/h) = 3.250$ ABOVE GRADE z/h = 0.90
$R\mu_{MIN} = 1.0$ AT OR BELOW GRADE PLANE
$R\mu_{MAX} = 1.3$ ABOVE GRADE FOR UNSPECIFIED BUILDING SFRS
$[Hf/R\mu]_{MAX} = 2.50$ ABOVE GRADE z/h = 0.90
$[Hf/R\mu]_{MIN} = 1.00$ AT OR BELOW GRADE PLANE

SUPPORT & ATTACHMENT DESIGN IS PER 2025 CBC AT LRFD LEVEL FORCES PER TABLE 13.6-1 OF ASCE 7-22. "OTHER MECHANICAL OR ELECTRICAL COMPONENTS"

C_{AR}	= 1.0	= 2.8 AT ELEVATED TRACKS
R_{po}	= 1.5	
I_p	= 1.5	
Ω_0	= 2.0	
W_p	= AS NOTED ON "COMPONENT PLANS & ELEVATIONS" PAGES	

DESIGN PARAMETERS & BRACING GUIDELINES - ELEVATED TRACKS

1. DESIGN & INSTALLATION OF THE SEISMIC BRCG FOR THE ELEVATED TRACK SYSTEMS MUST CONFORM TO ACSE/SEI 7-22 SECTION 13 & 2025 CBC SECTION 1617A.1.24.
2. THE SPACING & DETAILS OF THE SUPPORT & BRCG OF ELEVATED TRACK SYSTEMS MUST COMPLY W/ ASCE/SEI 7-22 SECTION 13.6 AND 2025 CBC SECTIONS 1601A.1.4 & 1617A.1.17 APPLICABLE ONLY TO HCAI 1,2,4,5 DESIGNATED PROJECTS.
3. SEISMIC BRCG MUST HAVE A MAX SPACING NOT EXCEEDING THAT SPECIFIED IN THESE DRAWINGS.
4. SEISMIC BRACE ANCHORAGE MUST BE AT LEAST 5½" AWAY FROM ANY OTHER ANCHORAGE & 12" FROM CONC EDGES, UNO.

ABBREVIATIONS:

@	AT
ABV	ABOVE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BLW	BELOW
BRCG	BRACING
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
CONC	CONCRETE
COORD	COORDINATE
DBL	DOUBLE
DIA (ø)	DIAMETER
(E)	EXISTING CONDITION
EA	EACH
ELEV	ELEVATION
EN	EDGE NAILING/EDGE FASTENING
EQUIP	EQUIPMENT
ES	EACH SIDE
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLR	FLOOR
FT (')	FOOT/FEET
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL
GA	GAUGE
HCAI	DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
IN (")	INCH
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
mm	MILLIMETER
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OPP	OPPOSITE
PG	PAGE
PL	PLATE
PSI	POUNDS PER SQUARE INCH
SCHED	SCHEDULE
SEOR	STRUCTURAL ENGINEER OF RECORD
SLWC	SAND-LIGHTWEIGHT CONCRETE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
THK	THICK/THICKNESS
THRD	THREAD OR THREADED
TYP	TYPICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
VERT	VERTICAL
W/	WITH
Wp	OPERATING WEIGHT
WT	WEIGHT

FRACTION & UNIT CONVERSIONS (FOR REFERENCE ONLY)

FRACTION	DECIMAL	mm
1/32	0.03	0.8
1/16	0.06	1.6
3/32	0.09	2.4
1/8	0.13	3.2
5/32	0.16	4.0
3/16	0.19	4.8
7/32	0.22	5.6
1/4	0.25	6.4
9/32	0.28	7.1
5/16	0.31	7.9
11/32	0.34	8.7
3/8	0.38	9.5
13/32	0.41	10.3
7/16	0.44	11.1
15/32	0.47	11.9
1/2	0.50	12.7

FRACTION	DECIMAL	mm
17/32	0.53	13.5
9/16	0.56	14.3
19/32	0.59	15.1
5/8	0.63	15.9
21/32	0.66	16.7
11/16	0.69	17.5
23/32	0.72	18.3
3/4	0.75	19.1
25/32	0.78	19.8
13/16	0.81	20.6
27/32	0.84	21.4
7/8	0.88	22.2
29/32	0.91	23.0
15/16	0.94	23.8
31/32	0.97	24.6

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	PAGE NO.	COMPONENT	LEVELING FOOT DIMS		CG LOCATION			WEIGHT (W_p)	COMPONENT TYPE			ANCHOR P/ BRACKET REF	SEISMIC DESIGN VALUES						CONTROLLING ELEMENT AT CASE 2	CONTROLLING ELEMENT AT CASE 3
									FLR MOUNTED MODULE	FLR SUPPORTED TRACKS	ELEVATED TRACK		CASE 1		CASE 2		CASE 3			
			WIDTH	DEPTH	$\bar{x}$	$\bar{y}$	$\bar{z}$						S_{DS}	z/h	S_{DS}	z/h	S_{DS}	z/h		
ARCHIVE II OR III	210.01	ARCHIVE II OR III SINGLE	SEE PG 210.01					N/A	X			N/A	1.40	0.90	2.50	0.00	0.77	0.90	ANCHOR BOLT	ANCHOR BOLT
	210.02	ARCHIVE II OR III TWIN	SEE PG 210.02					N/A	X			N/A	1.40	0.90	2.50	0.00	0.77	0.90	ANCHOR BOLT	ANCHOR BOLT
	210.02A	ARCHIVE II OR III – LOADER MODULE	26.9"	22.8"	12.42"	16.29"	33.09"	587#	X			PGS 301–301B	1.40	0.90	2.50	0.00	0.77	0.90	ANCHOR BOLT	ANCHOR BOLT
	210.02B	ARCHIVE II OR III – STORAGE	52.8"	25.8"	27.01"	13.78"	36.61"	1778#	X			PG 302	1.40	0.90	2.50	0.00	0.44	0.90	ANCHOR BOLT	ANCHOR BOLT
ELEVATED TRACK COMPONENTS	210.03	SPIRAL ELEMENT	SEE PG 210.03		17.98"	17.54"	50.29"	561#	X			PG 303	2.50	1.0	2.50	0.00	1.125	0.90	BRACKET	BRACKET
	210.04	STRAIGHT SECTION– 20cm	N/A		5.45"	2.80"	3.48"	11#			X	SEE PGS 501–503	1.40	1.0	N/A	0.00	N/A	1.0	BRACKET	BRACKET
	210.05	STRAIGHT SECTION– 40cm			9.71"	2.80"	3.54"	13#			X									
	210.06	STRAIGHT SECTION– 80cm			17.93"	2.80"	3.57"	26#			X									
	210.07	90 DEGREE TURN SECTION			4.88"	5.75"	3.53"	13#			X									
	210.08	ROUNDABOUT – 3–WAY			15.91"	15.91"	3.41"	66#			X									
	210.08	ROUNDABOUT – 4–WAY			15.91"	15.91"	3.41"	66#			X									
FLR SUPPORTED TRACKS	210.09	STRAIGHT SECTION – 20cm	7.95"	6.69"	3.98"	3.35"	19.33"	26#		X		SEE PGS 220 & 310	2.50	1.0	2.50	0.00	1.125	0.90	BRACKET	BRACKET
	210.10	STRAIGHT SECTION – 40cm	15.91"	6.69"	7.95"	3.35"	20.33"	50#		X										
	210.11	STRAIGHT SECTION – 80cm	31.81"	6.69"	15.91"	3.35"	20.86"	83#		X										

NOT SEOR

SHEET TITLE: COMPONENT SCHEDULE

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ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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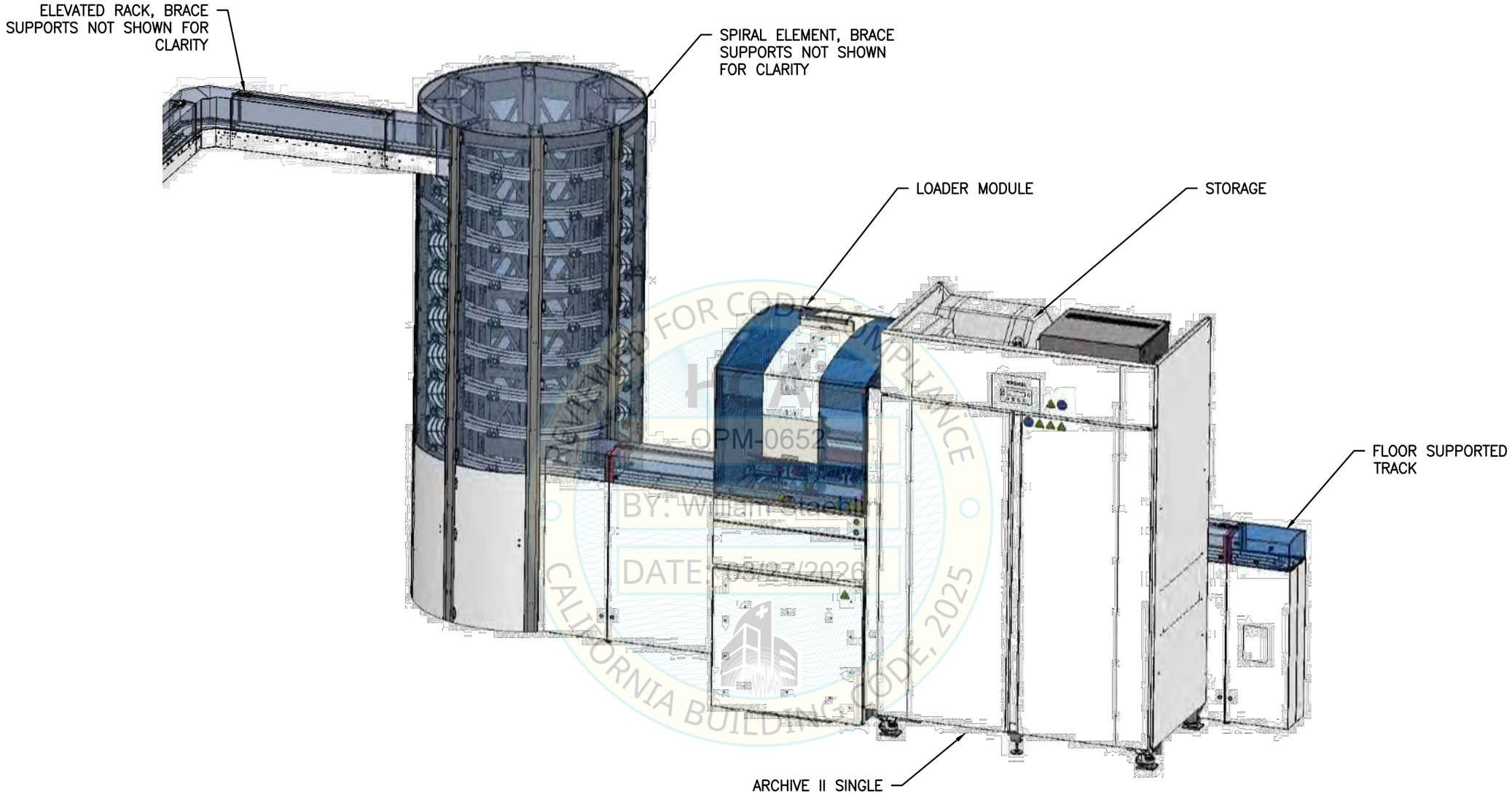

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: COMPONENT CONFIGURATION

Abbott

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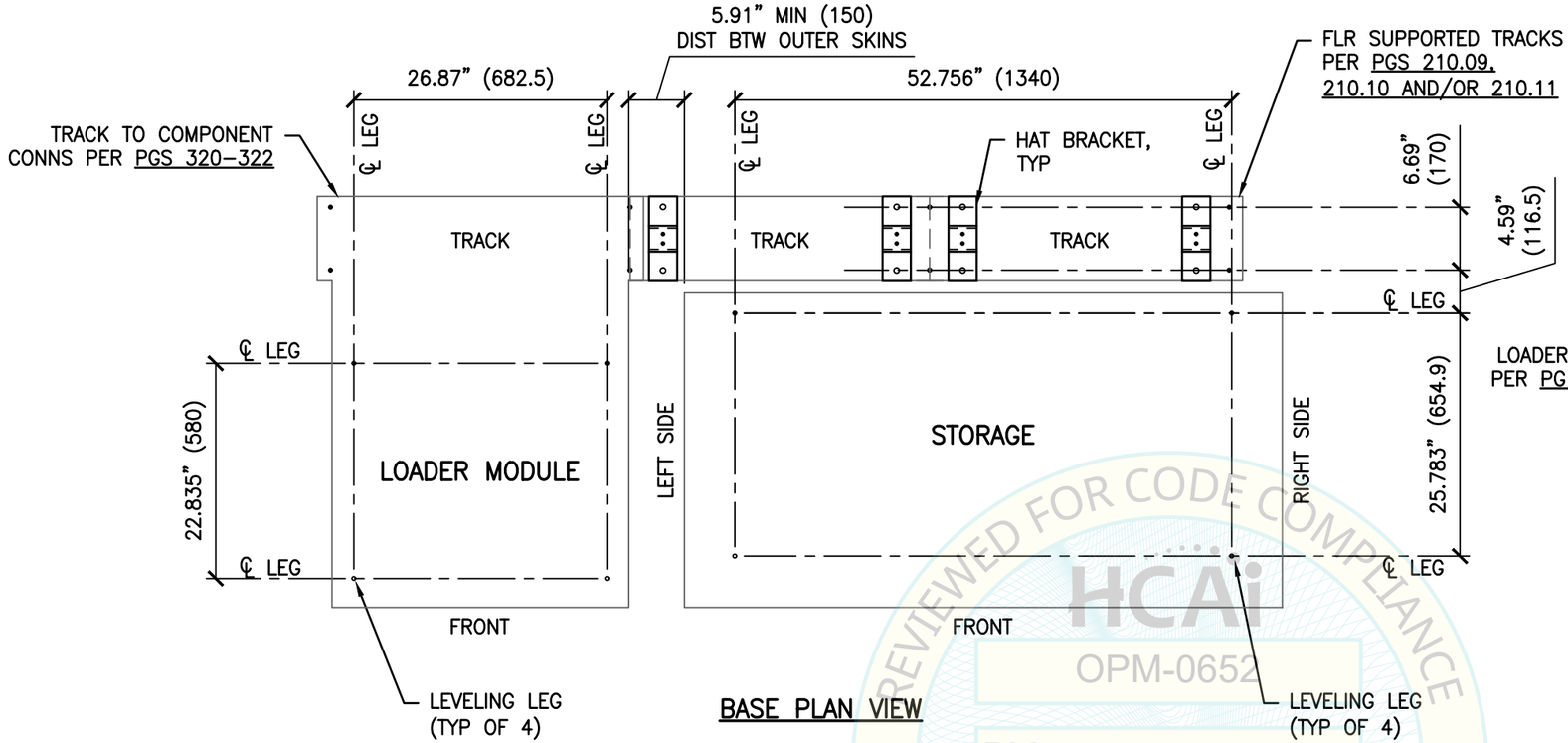
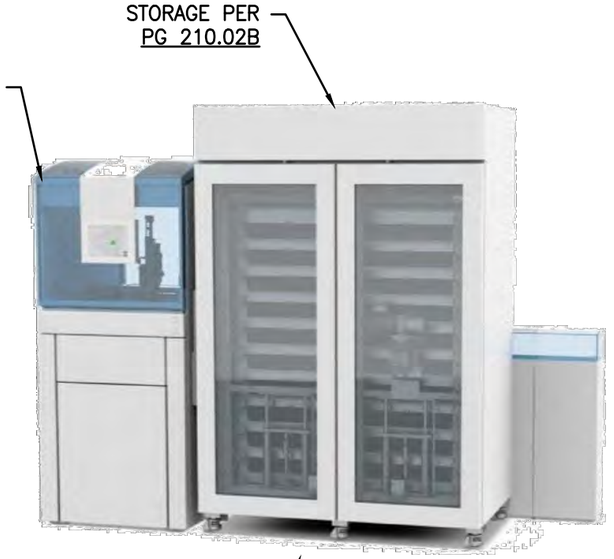


BASE PLAN VIEW



NOTE: THE STORAGE COMPONENT MAY BE PLACED ON THE RIGHT OR LEFT SIDE OF THE LOADER MODULE & THE DOORS MAY NOT BE SEE THROUGH

REGISTERED PROFESSIONAL ENGINEER
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STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: MODULE: ARCHIVE II OR ARCHIVE III SINGLE
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
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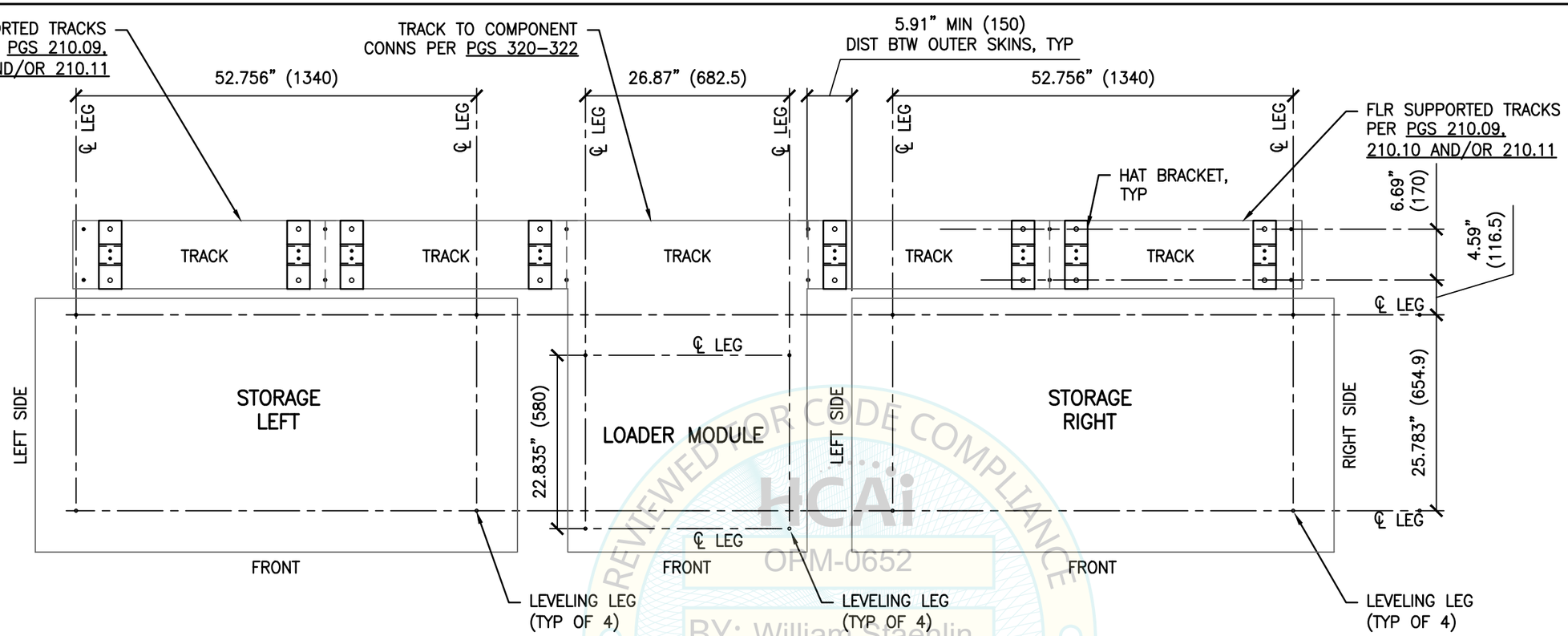
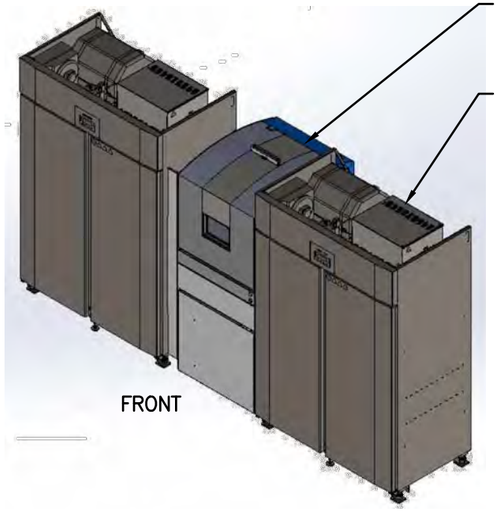


BASE PLAN VIEW

NOTE THAT THE TOP INSTRUMENTATION MAY LOOK SLIGHTLY DIFFERENT



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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: MODULE: ARCHIVE II OR ARCHIVE III TWIN
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
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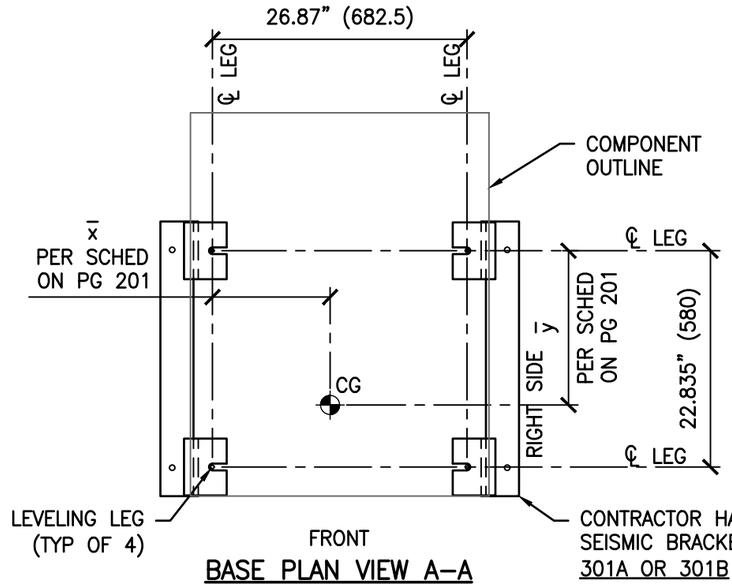
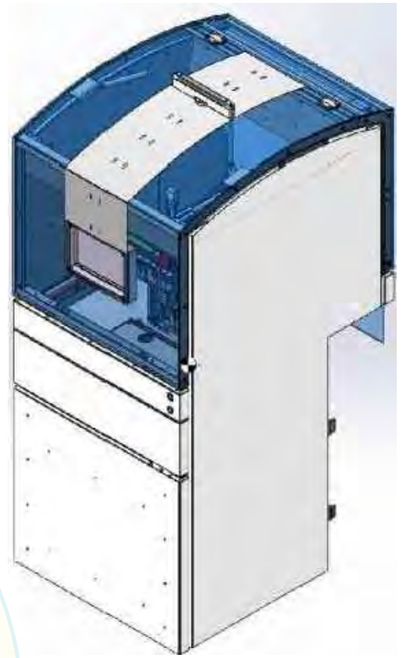
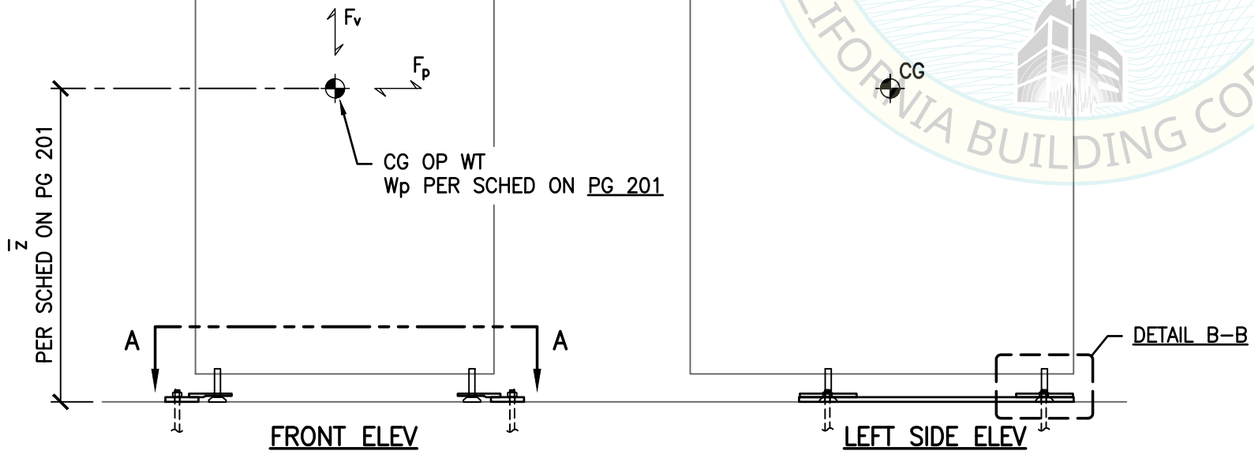


BASE PLAN VIEW A–A



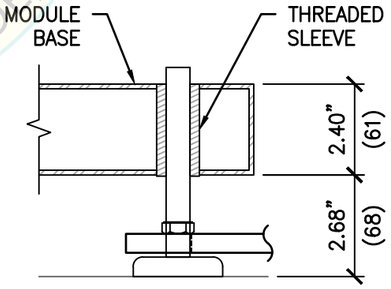
	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	1182#	1571#	413#
CASE 2 [1]	698#	1087#	249#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

LEFT SIDE ELEV



DETAIL B–B

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: MODULE: ARCHIVE II OR ARCHIVE III LOADER MODULE BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS SUPPORTS & ATTACHMENTS

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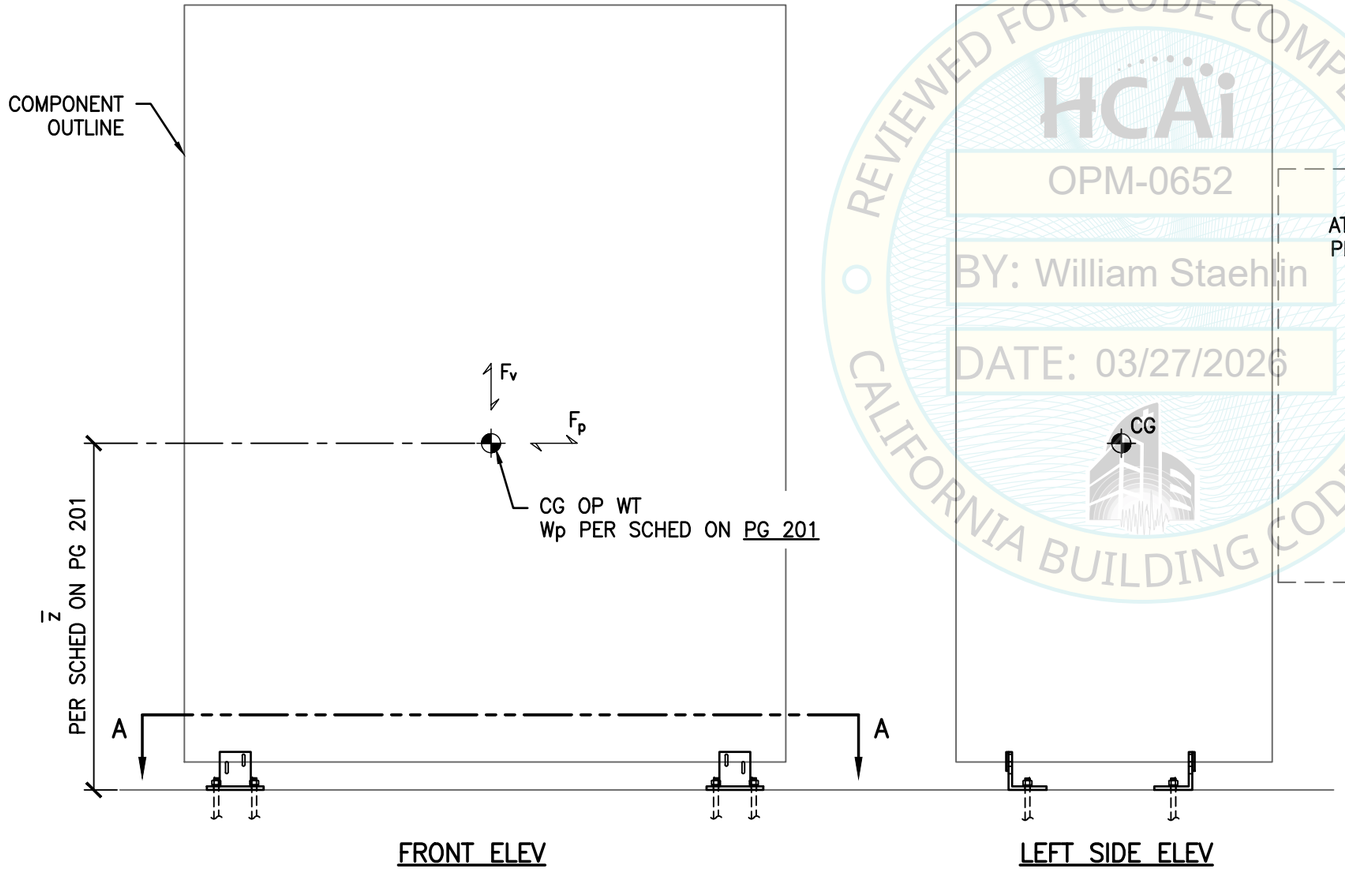
FRONT

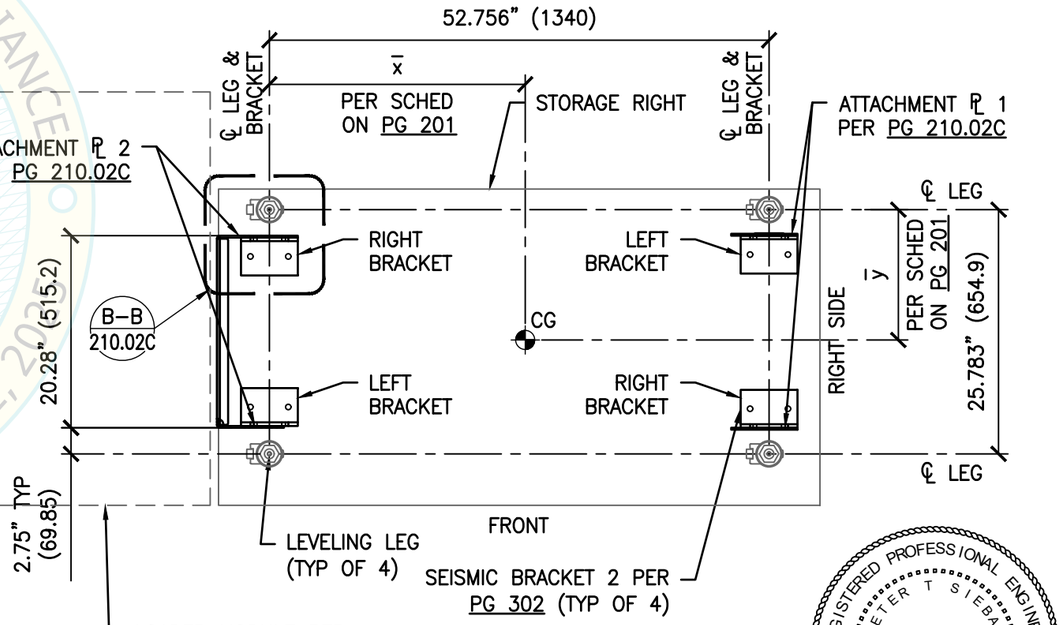
	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	2440#	3416#	978#
CASE 2 [1]	1940#	2926#	776#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

LEFT SIDE ELEV



BASE PLAN VIEW A–A

NOTE:
STORAGE RIGHT SHOWN.
STORAGE LEFT MIRRORED

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SHEET TITLE: MODULE: ARCHIVE II OR ARCHIVE III STORAGE
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
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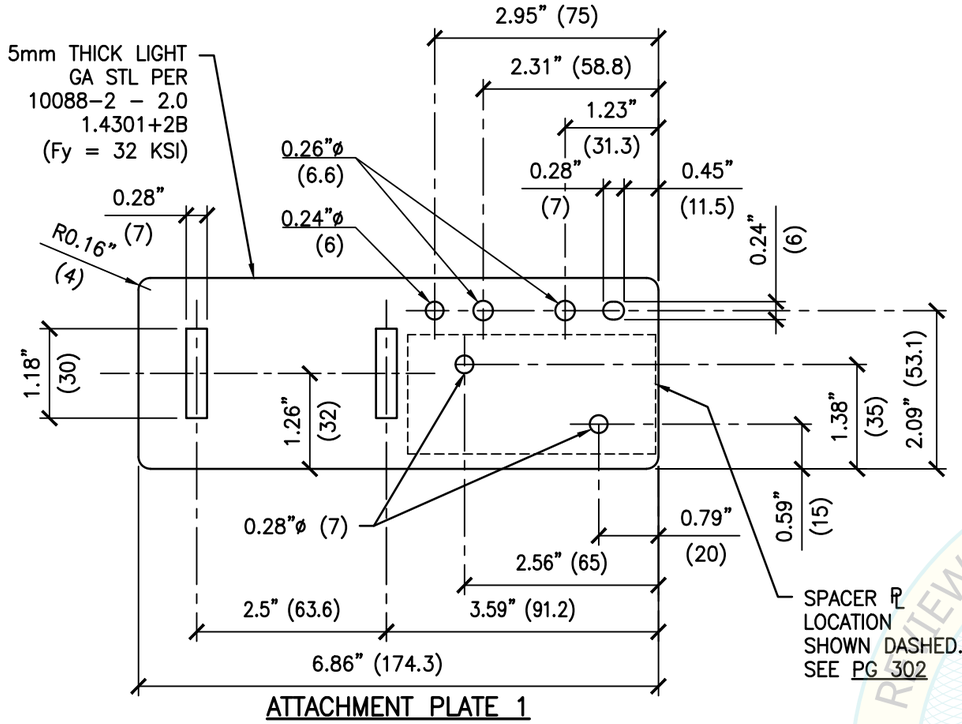
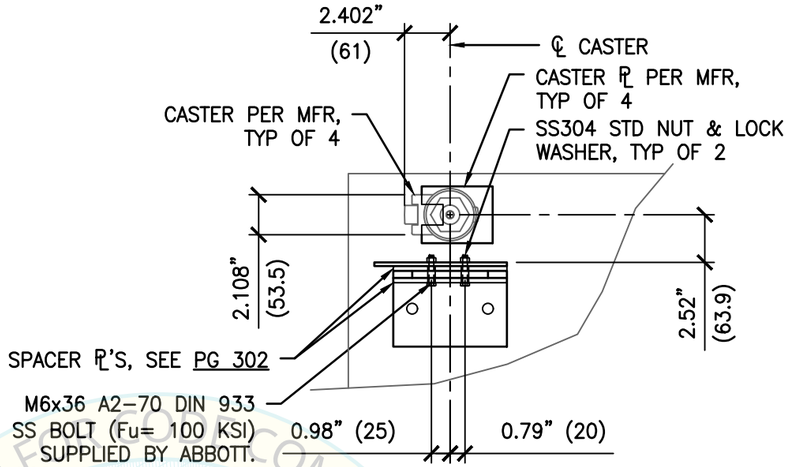


ATTACHMENT PLATE 1

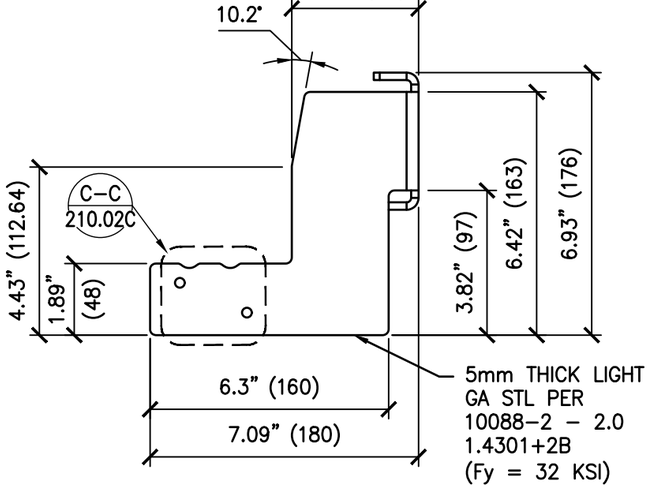


DETAIL B–B

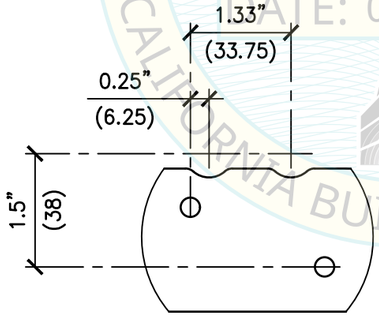
	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	1690#	2660#	551#
CASE 2 [1]	2064#	3054#	634#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

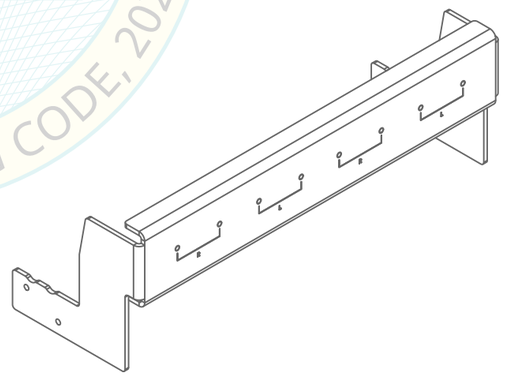
FRONT



ATTACHMENT PLATE 2



DETAIL C–C



NOT SEOR

SHEET TITLE: MODULE: ARCHIVE II OR ARCHIVE III STORAGE ATTACHMENT PLATE DETAILS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS SUPPORTS & ATTACHMENTS

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SUPPORTING STRUCTURE. SEE PGS 501–503 FOR ATTACHMENTS

UNISTRUT P1000

45 DEG ±15 DEG

AXIS OF BRACE

36" MAX

2– ½"Ø HHCS BOLTS & UNISTRUT P1010 CHANNEL NUTS. FOR PROPER INSTALLATION TORQUE TWIST–OFF TYPE BOLTS UNTIL BREAKS AWAY MIN 50 FT–LBS

0.19" THK BRACKET, EN 10088, ES OF ELEVATED TRACK. Fy= 33 KSI

UNISTRUT P1354 W/ 2–½" HHCS BOLTS & CHANNEL NUTS TO BRACE. FOR PROPER INSTALLATION TORQUE TWIST–OFF TYPE BOLTS UNTIL BREAKS AWAY MIN 50 FT–LBS, TYP OF 4 BRACES EQ SPACED

NOTE:
BRACE AT TOP ONLY SHOWN AT ONE LOCATION FOR CLARITY

2.6"

0.86"

1.41"

0.47"

0.47"

CLG LINE BY OTHERS. CLG MAY HAVE TO BE RECESSED BY OTHERS. NOT PART OF OPM

B

B

0.5" MIN

0.47"

2.6"

0.47"

1.41"

0.86"

SEISMIC BRACKET 4 PER PG 304, TYP OF 4

2– M6x16 A2–70 DIN 933–SS BOLTS (Fu= 100 KSI) W/ LOCK WASHER & SS304 STUD NUT, SUPPLIED BY ABBOTT, TORQUE TO 5.6 FT–LBS (67 IN–LBS), TYP

(4) M6 CAP SCREWS, SS A2 Fy=30 KSI, MIN AT EA BRACKET TO ELEVATED TRACK

TOP BRACE, TYP OF 4 EQ SPACED SLOTS IN COVER PROVIDED BY MFR

ELEVATED TRACK SPIRAL LINK PER MFR

CG

TOP PLAN VIEW B–B

MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	C_{max}	V_{max}
CASE 1 [2]	246#	213#
CASE 2 [1]	246#	120#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

F_v

F_p

CG OP WT W_p PER SCHED ON PG 201

100"

18 GA MIN VERT TOWER

$\bar{z}$ PER SCHED ON PG 201

A

A

DETAIL C–C

ELEV

NUT WELDED TO UNDERSIDE OF MODULE

DETAIL C–C

$\bar{x}$ PER SCHED ON PG 201

$\bar{y}$ PER SCHED ON PG 201

44.45" (1129)

35.43"

CG

FLR SUPPORTED TRACK SPIRAL LINK PER MFR

SEISMIC BRACKET 3 PER PG 303, TYP OF 4 EQ SPACED. USE STL SHIMS FOR LEVEL INSTALLATION

BASE PLAN VIEW A–A

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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: SPIRAL ELEMENT
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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SACRAMENTO, CA 95833
TEL (916) 920-2020
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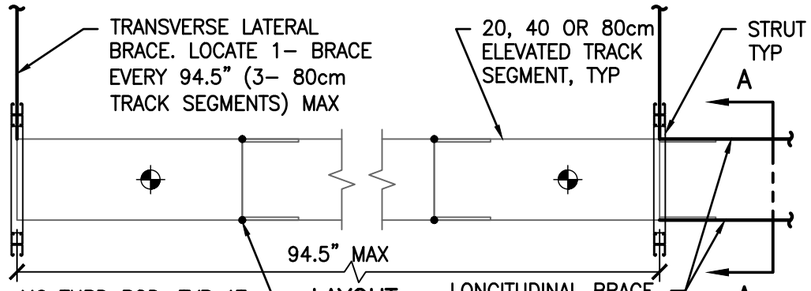
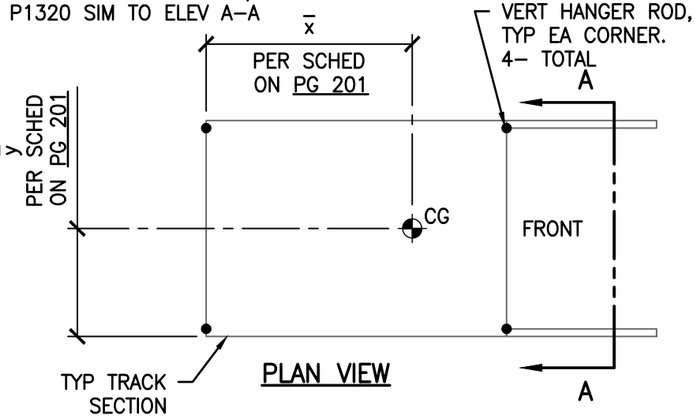
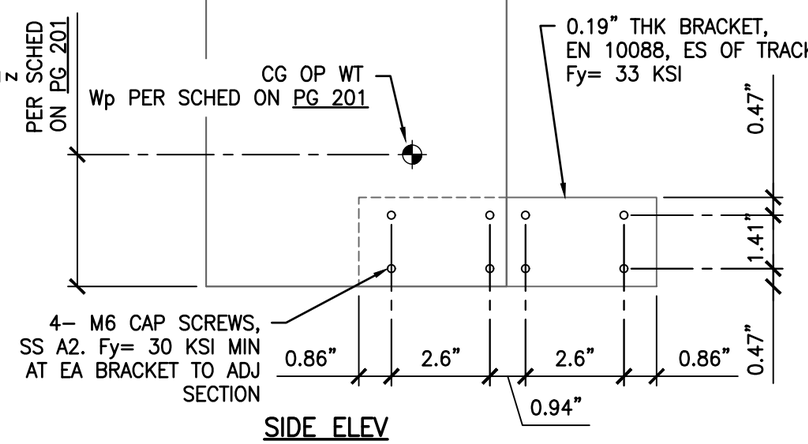
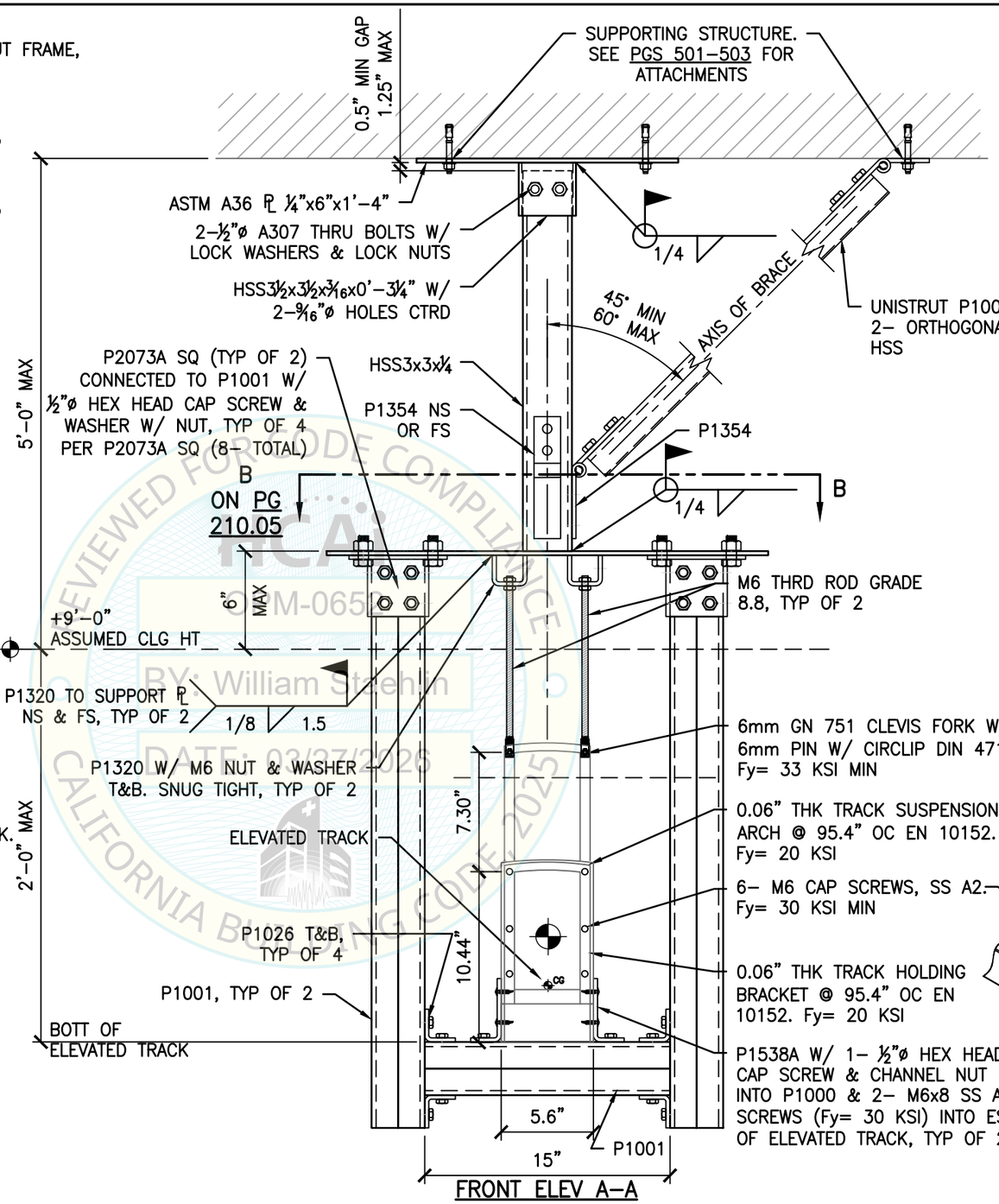


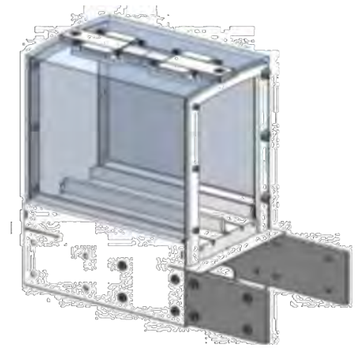


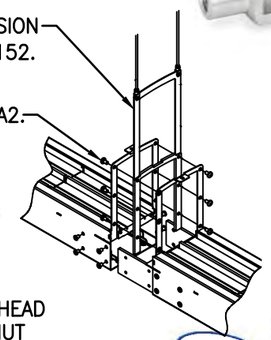




MAX ANCHOR FORCES AT LRFD		
	T_{max}	V_{max}
CASE 1	954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.





NOT SEOR

SHEET TITLE: ELEVATED TRACK COMPONENTS: STRAIGHT SECTION - 20cm BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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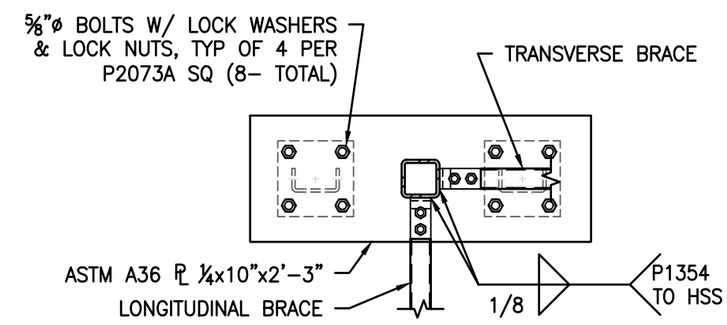
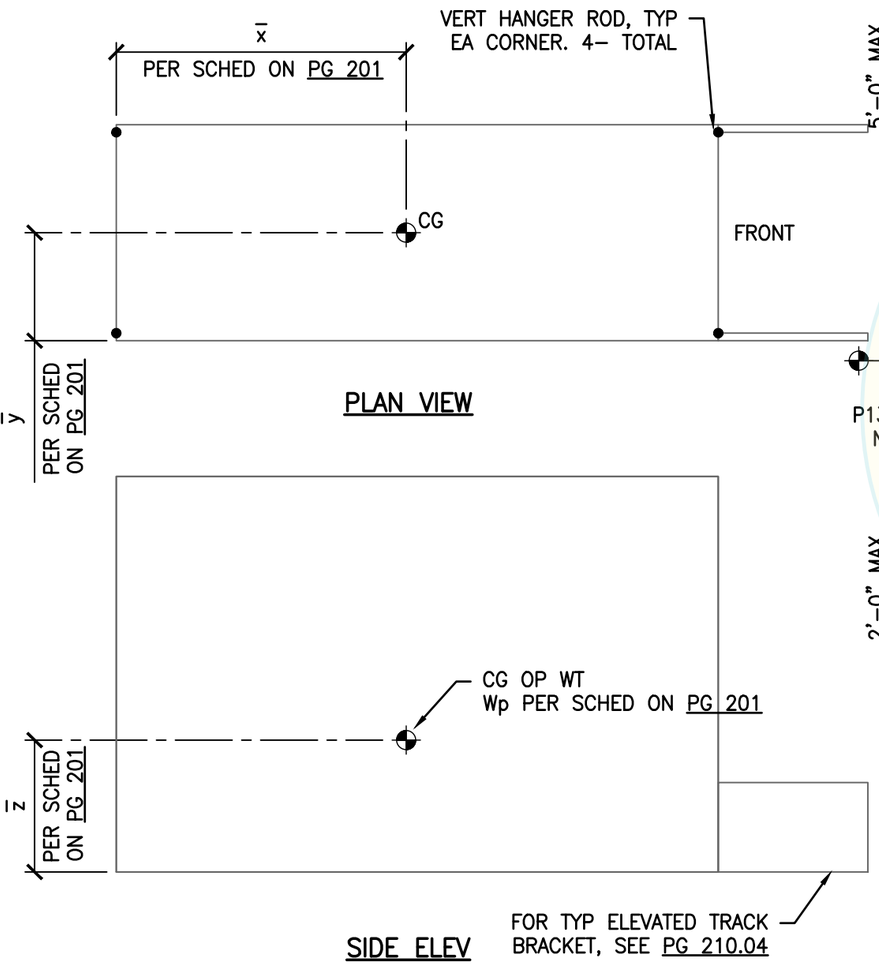
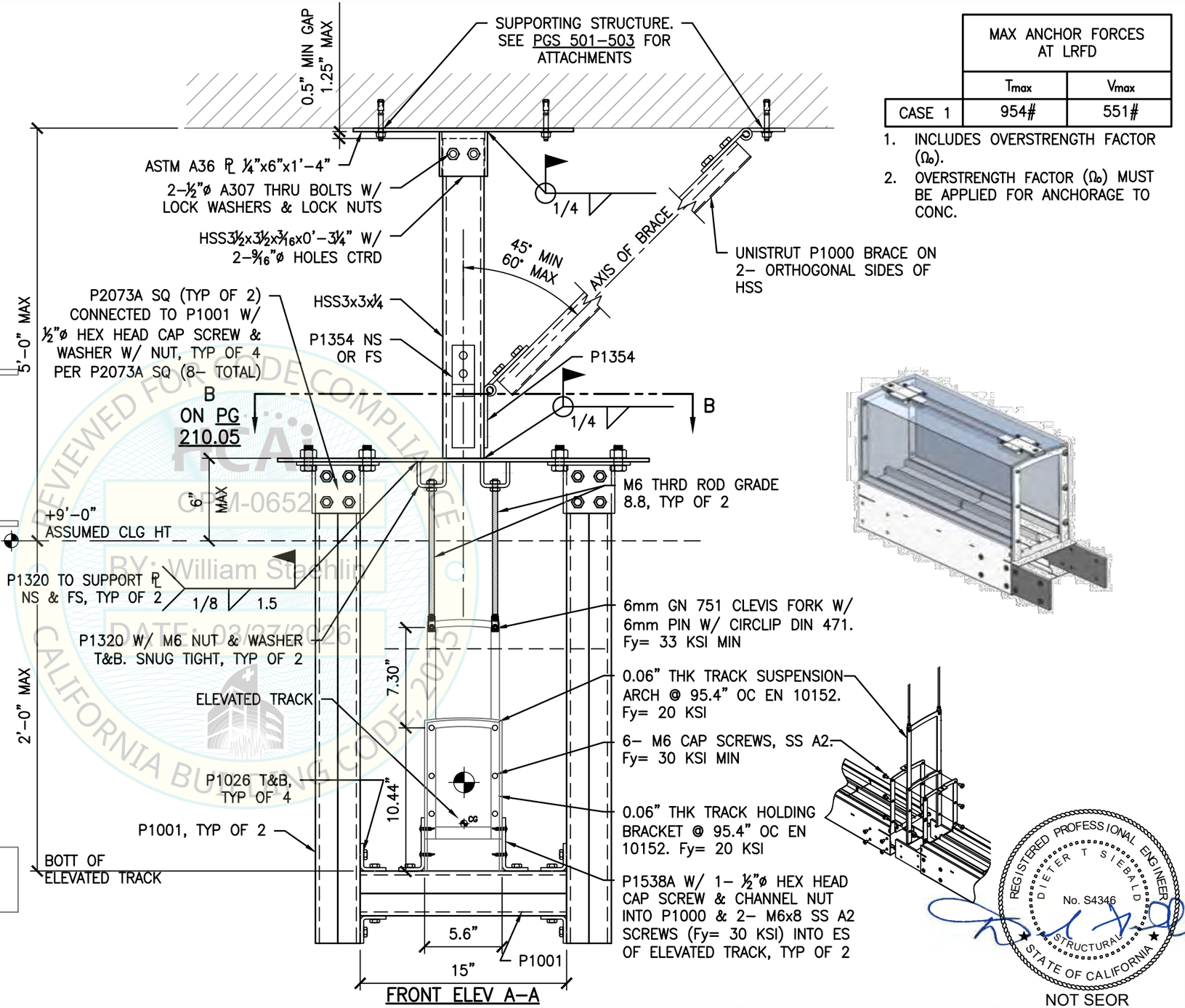


PLAN VIEW B–B



PLAN VIEW

SIDE ELEV



FRONT ELEV A–A

MAX ANCHOR FORCES AT LRFD		
	T_{max}	V_{max}
CASE 1	954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOT SEOR

SHEET TITLE: ELEVATED TRACK COMPONENTS: STRAIGHT SECTION - 40cm
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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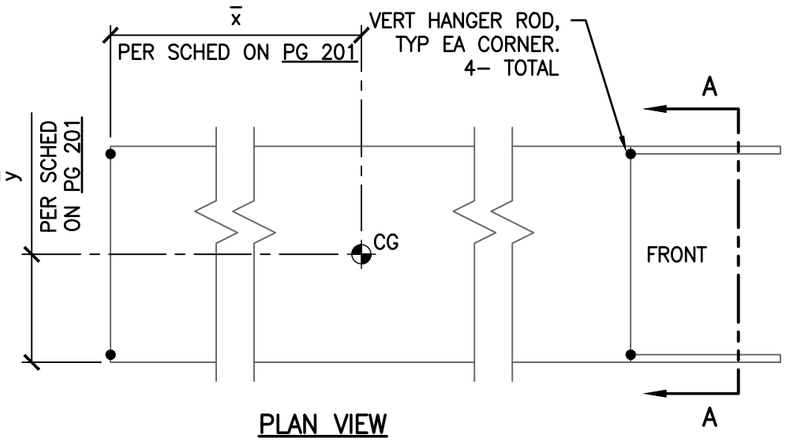
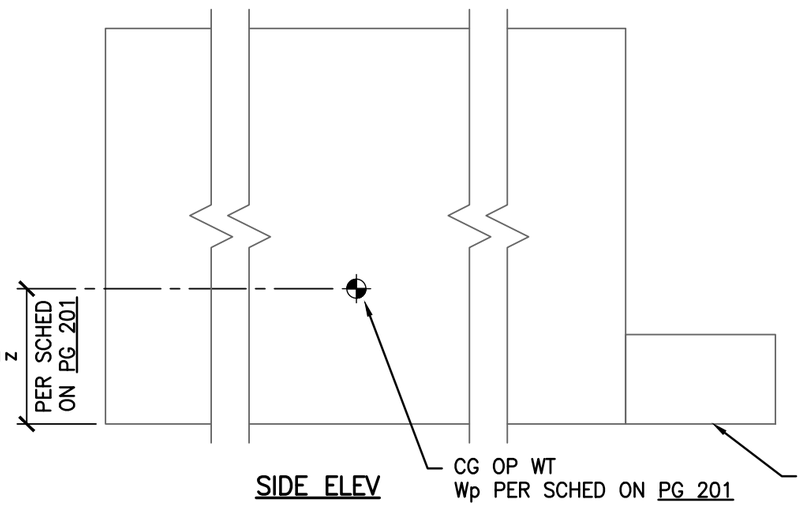
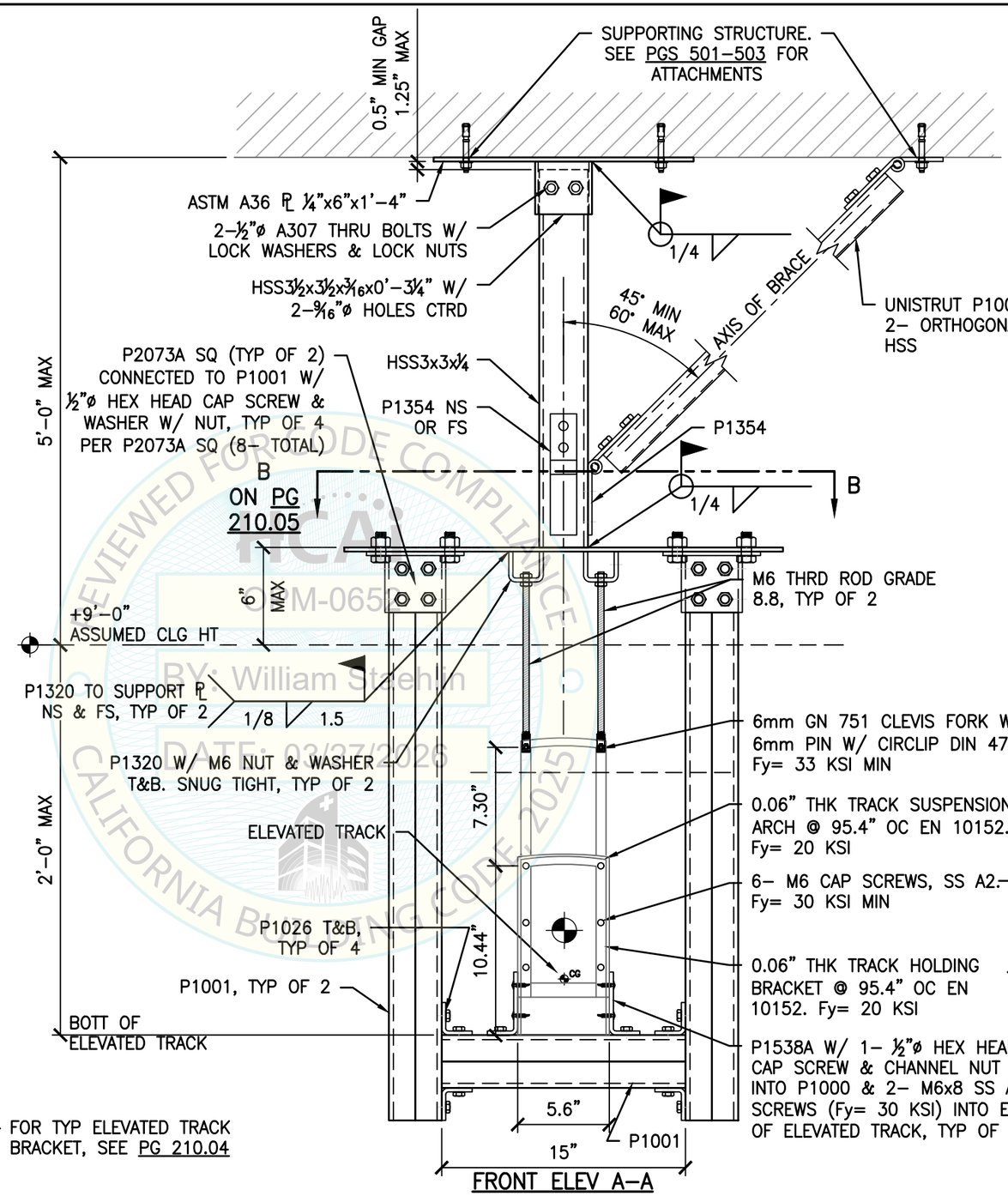
NOTES:
1. 1– TRANSVERSE LATERAL BRACE MUST OCCUR EVERY 95.4" MAX. SEE LAYOUT PLAN VIEW ON PG 210.04 SIM.
2. 1– LONGITUDINAL BRACE EVERY 95.4" MAX. SEE LAYOUT PLAN VIEW ON PG 210.04 SIM.



PLAN VIEW



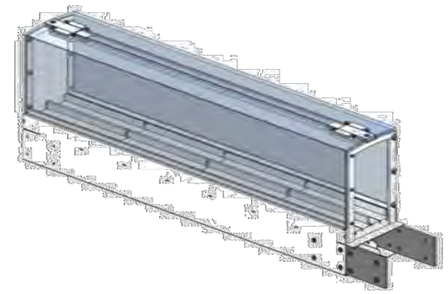
SIDE ELEV

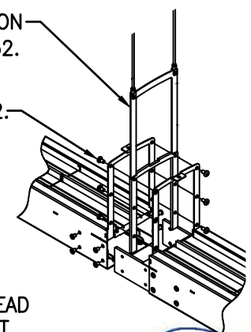


FRONT ELEV A–A

	MAX ANCHOR FORCES AT LRFD	
	T_{max}	V_{max}
CASE 1	954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.





NOT SEOR

SHEET TITLE: ELEVATED TRACK COMPONENTS: STRAIGHT SECTION - 80cm
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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SACRAMENTO, CA 95833
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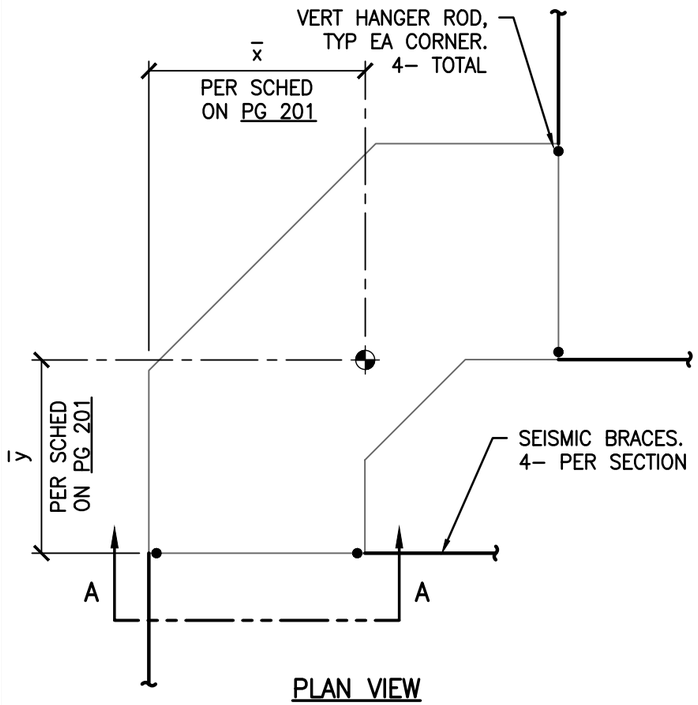
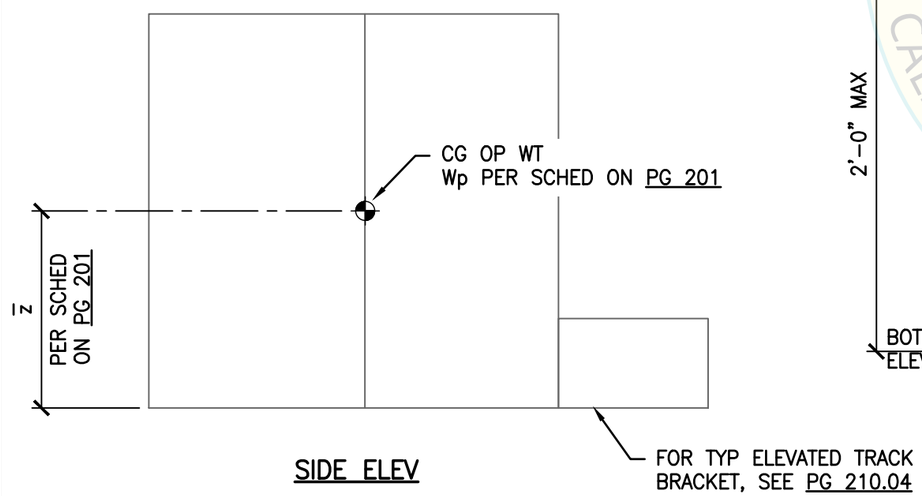
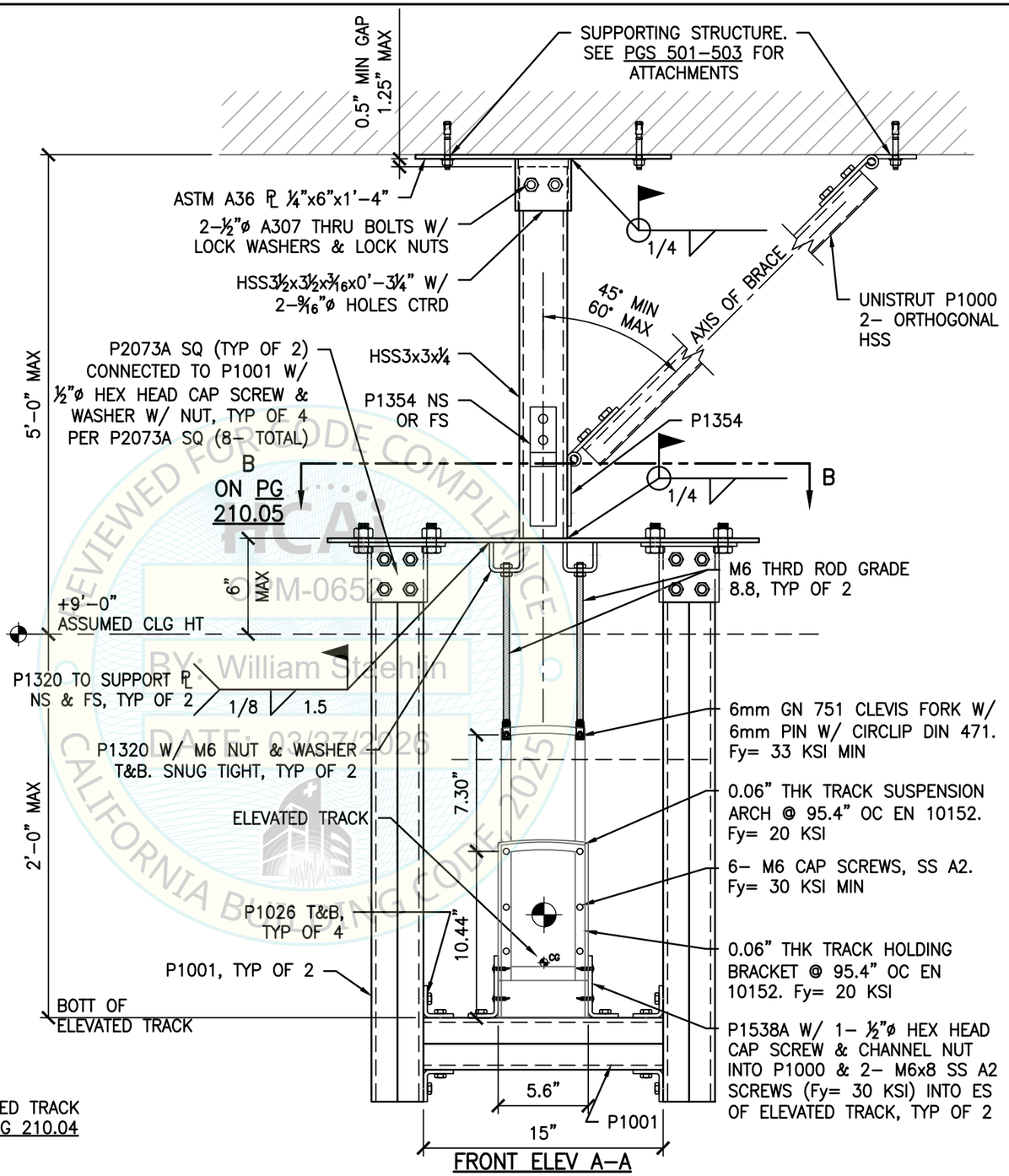


PLAN VIEW



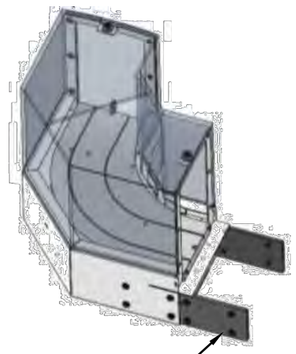
SIDE ELEV



FRONT ELEV A–A

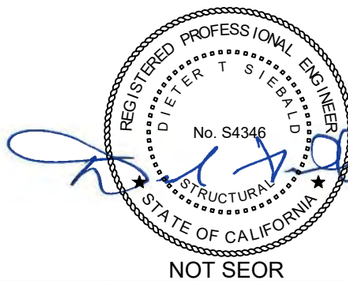
	MAX ANCHOR FORCES AT LRFD	
	T_{max}	V_{max}
CASE 1 [2]	954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FOR TYP ELEVATED TRACK BRACKET, SEE PG 210.04

ISOMETRIC OF 90 DEG TURN SECTION



NOT SEOR

SHEET TITLE: ELEVATED TRACK COMPONENTS: 90 DEGREE TURN SECTION BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS SUPPORTS & ATTACHMENTS

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2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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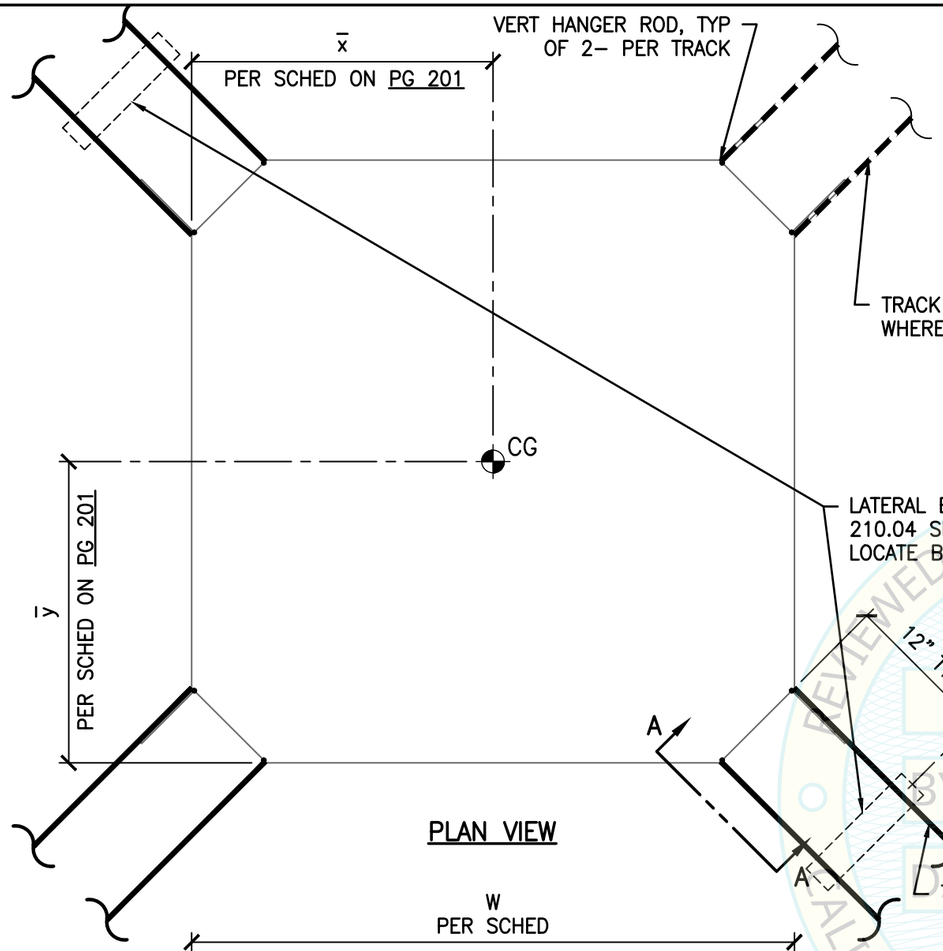
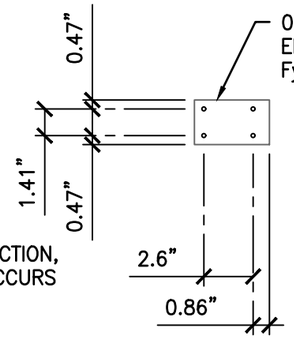


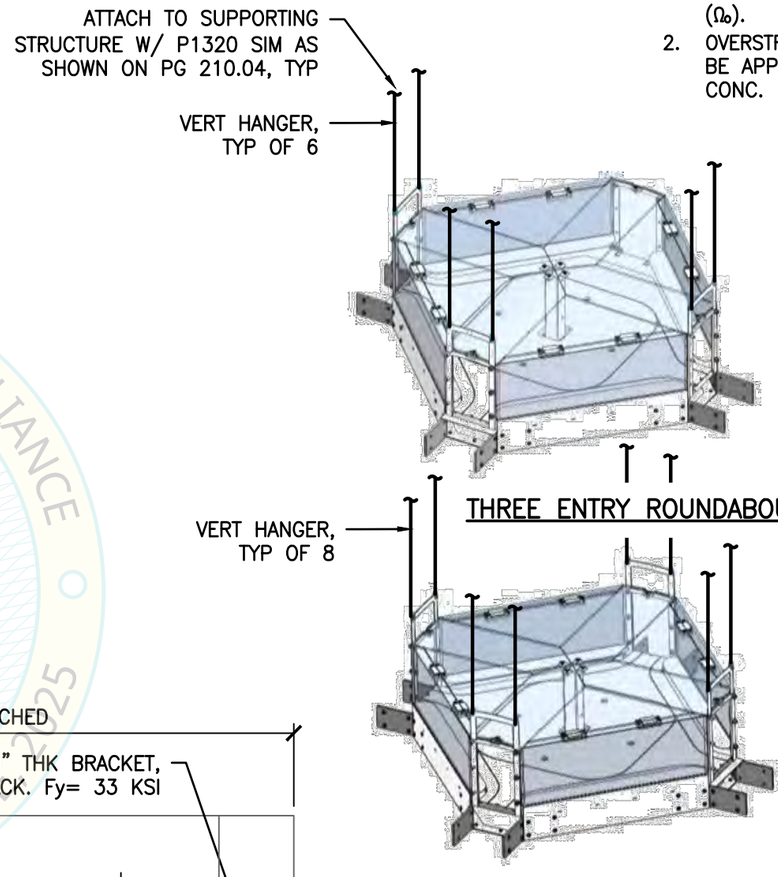
PLAN VIEW



ELEV A–A
TYP

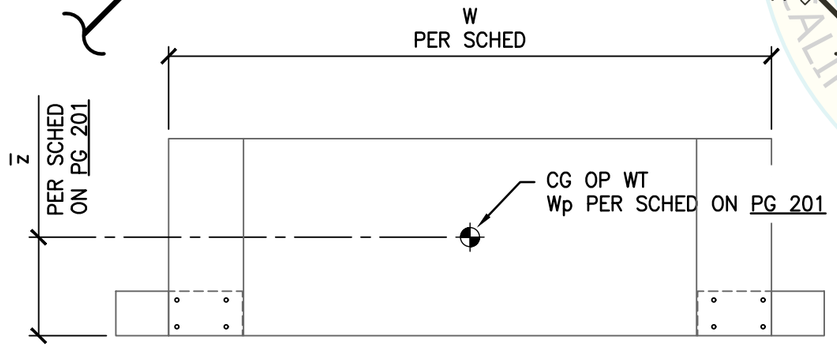
	MAX ANCHOR FORCES AT LRFD		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	773#	716#	446#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

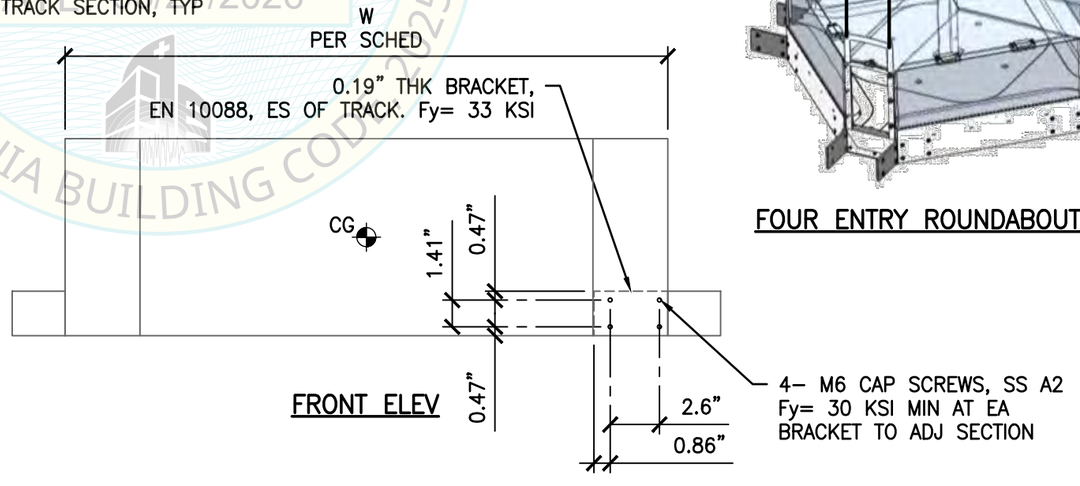


THREE ENTRY ROUNDABOUT

FOUR ENTRY ROUNDABOUT



SIDE ELEV



FRONT ELEV

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ELEVATED TRACK COMPONENTS: ROUNDABOUT SECTIONS
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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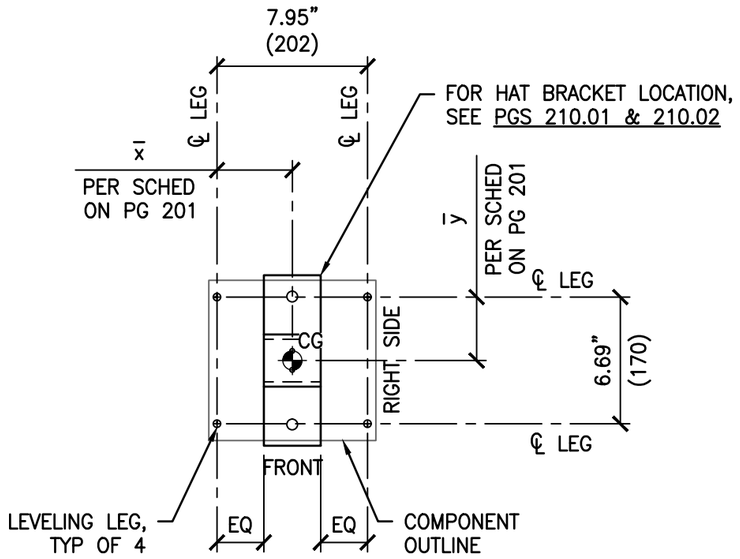
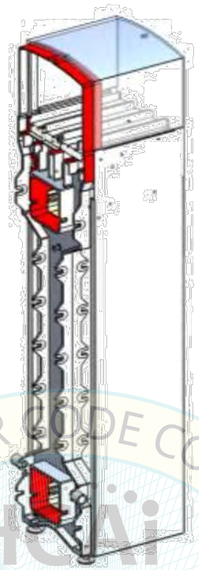
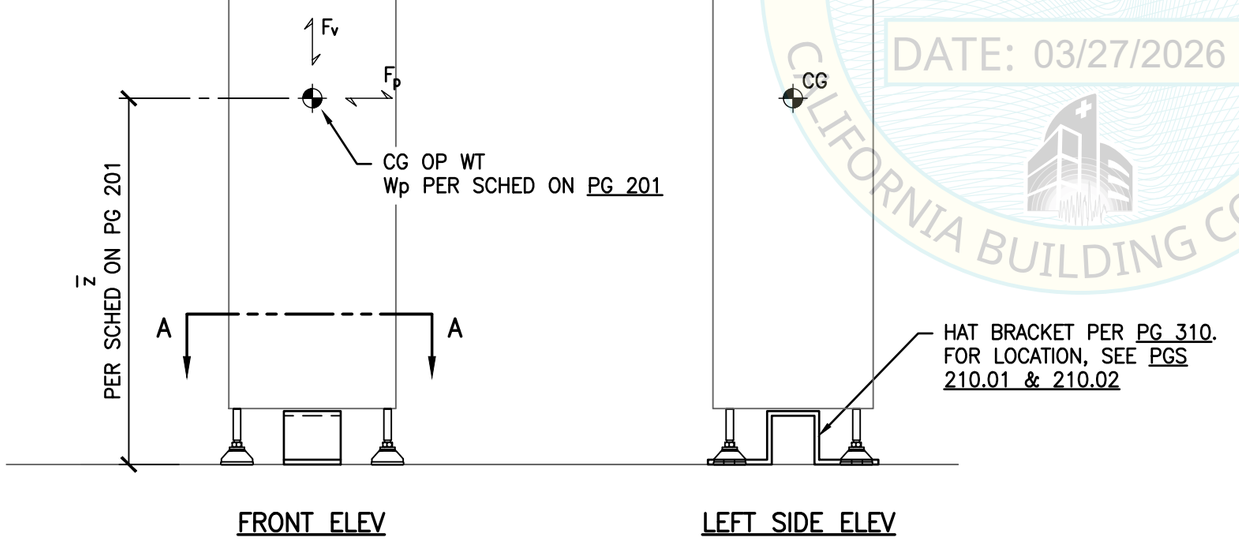


BASE PLAN VIEW A–A



	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	294#	321#	40#
CASE 2 [1]	163#	191#	22#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

LEFT SIDE ELEV

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED TRACK: STRAIGHT SECTION - 20cm
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
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2710 GATEWAY OAKS DRIVE, SUITE 190N
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TEL (916) 920-2020
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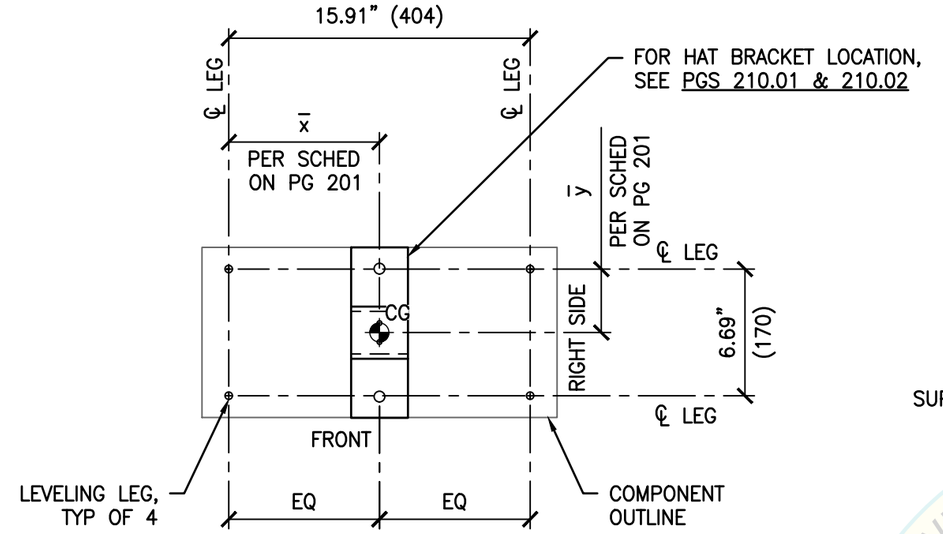
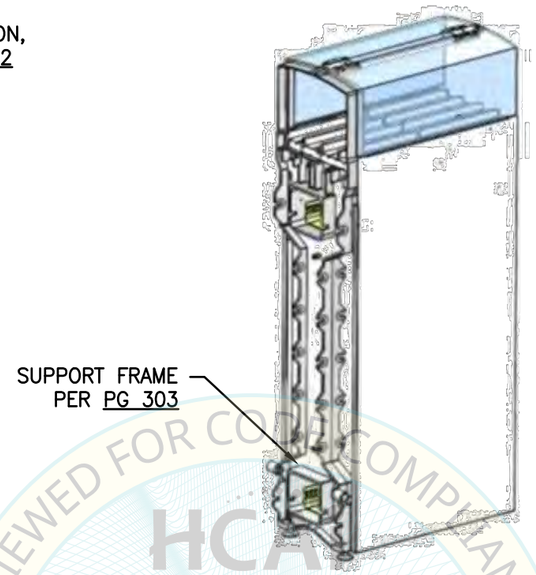
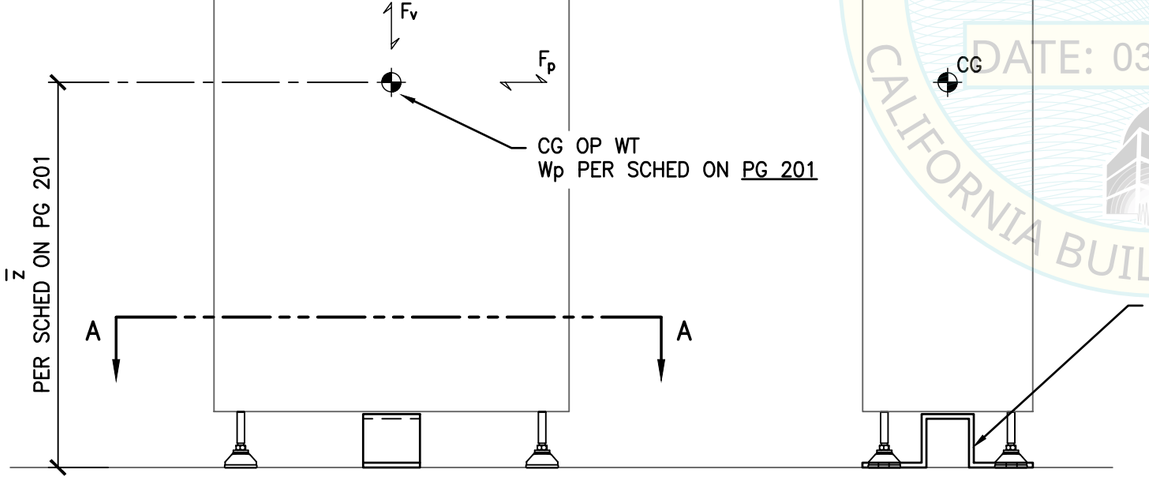


BASE PLAN VIEW A–A



	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	488#	552#	81#
CASE 2 [1]	272#	335#	46#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

LEFT SIDE ELEV

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED TRACK: STRAIGHT SECTION - 40cm
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
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TEL (916) 920-2020
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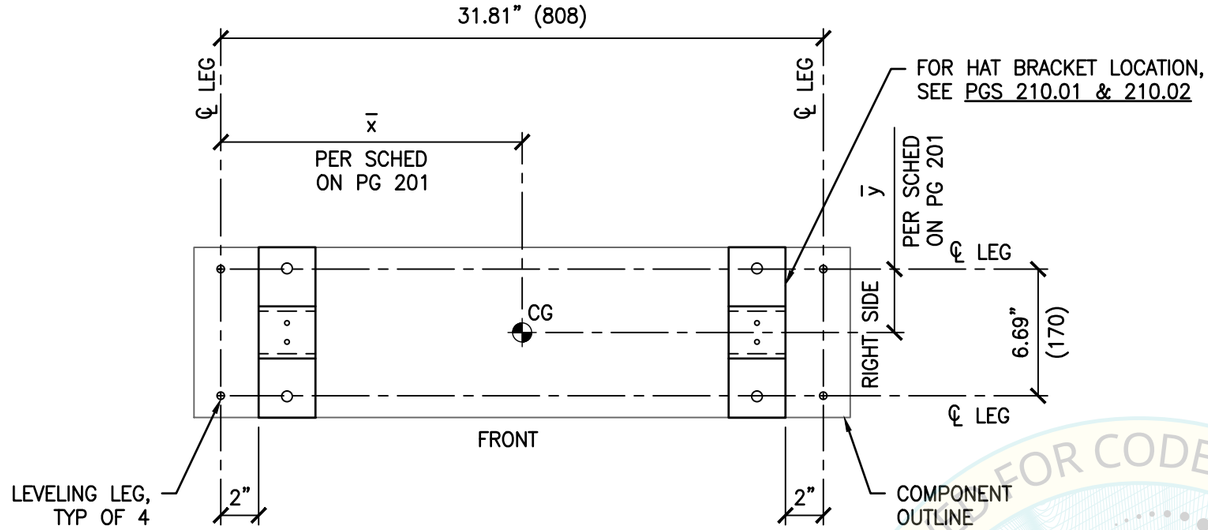
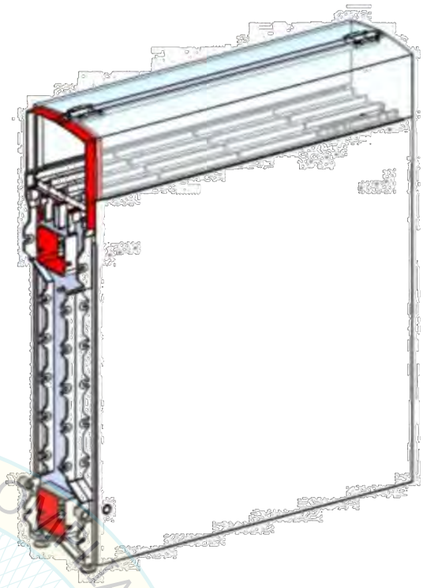
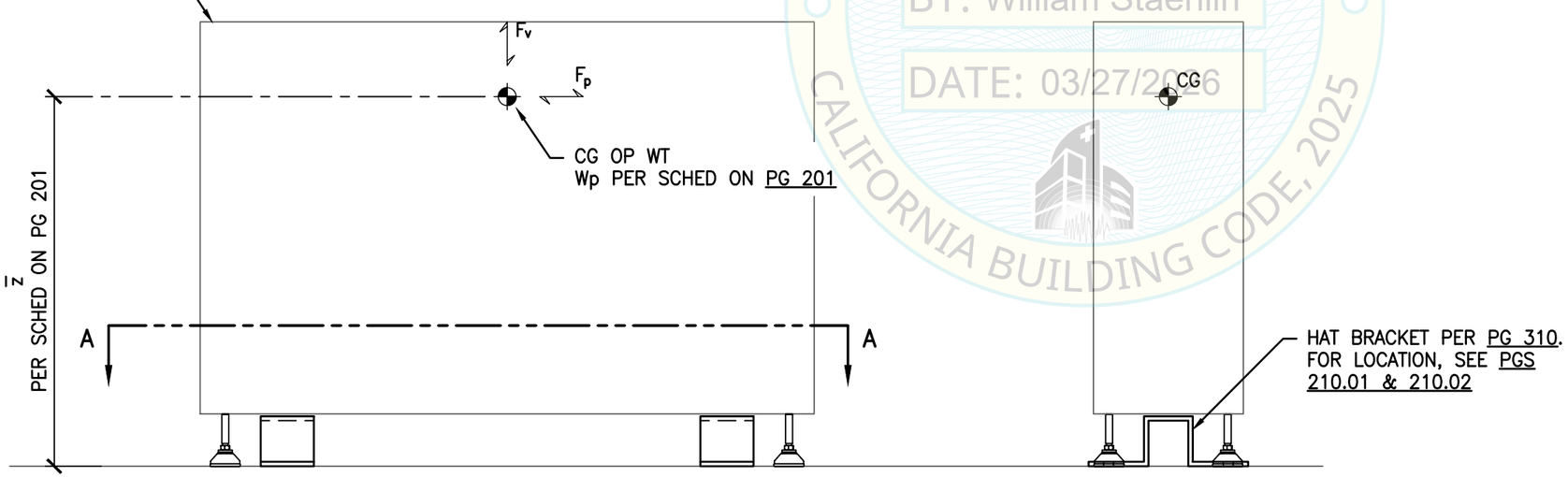


BASE PLAN VIEW A–A



	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG		
	T_{max}	C_{max}	V_{max}
CASE 1 [2]	778#	882#	129#
CASE 2 [1]	433#	537#	73#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

LEFT SIDE ELEV

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED TRACK: STRAIGHT SECTION - 80cm
BASE PLAN & ELEVATIONS

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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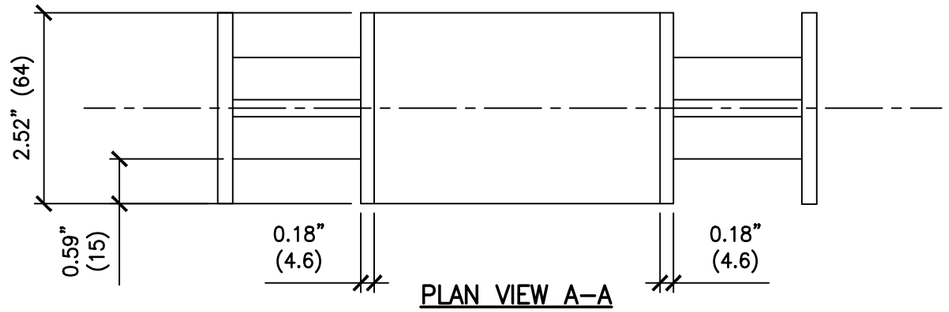
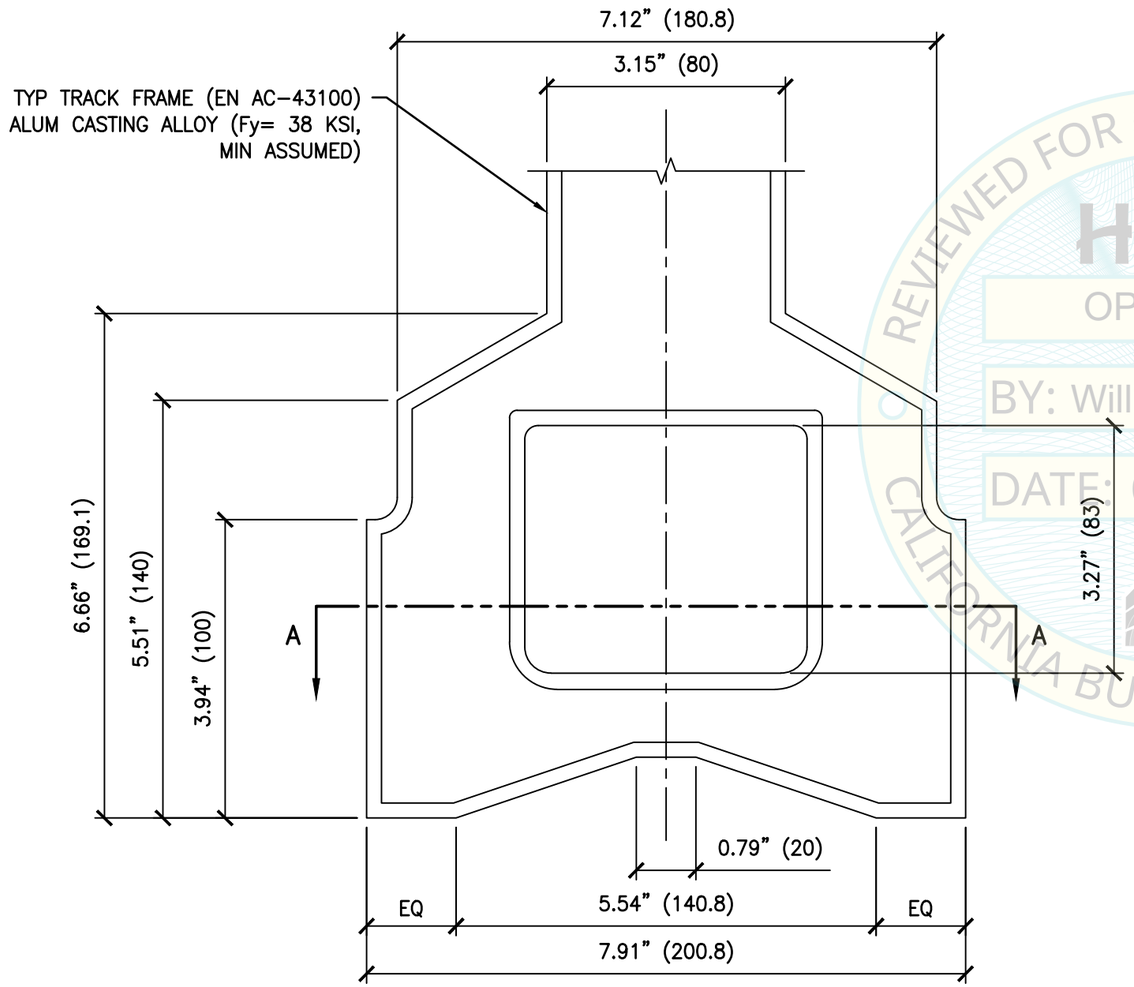
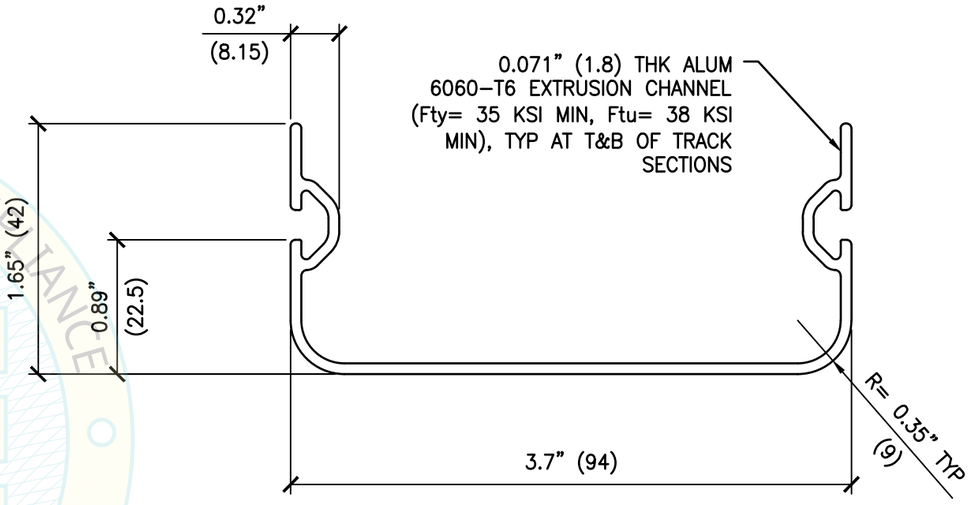
SUPPORT FRAME



PLAN VIEW A–A



CHANNEL



REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR MOUNTED TRACK DETAIL
SUPPORT FRAME

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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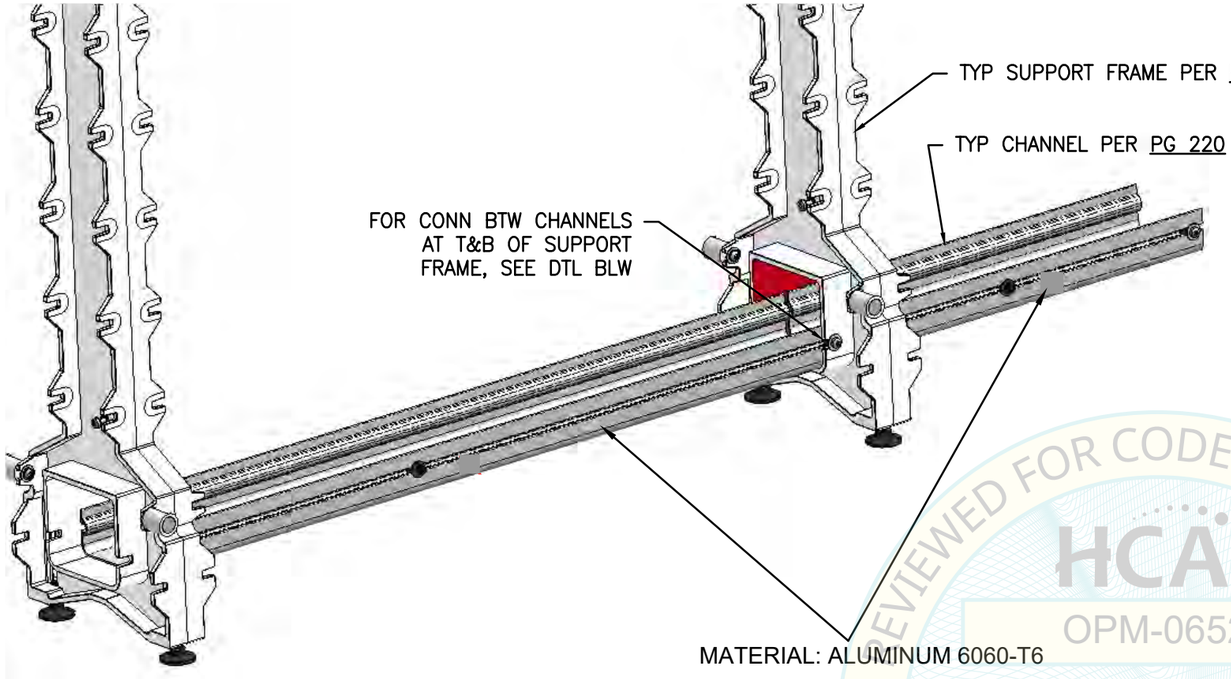
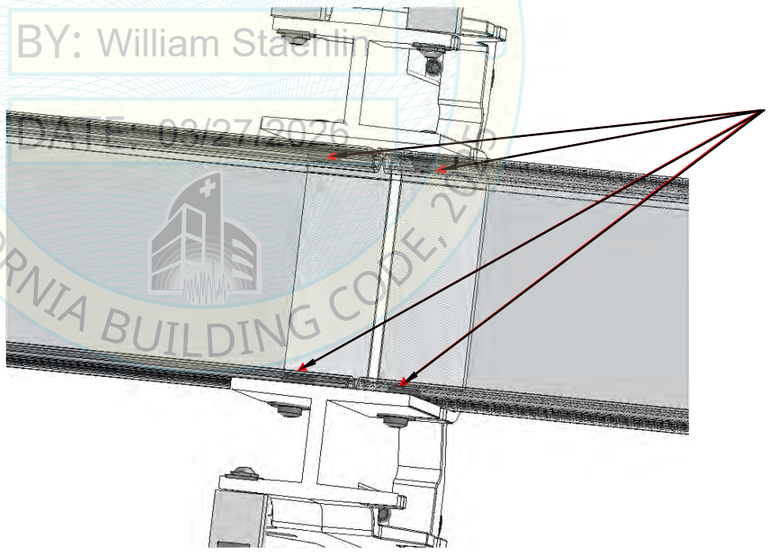
SUPPORT FRAME TO CHANNEL CONNECTION



MATERIAL: ALUMINUM 6060-T6

SUPPORT FRAME ISOMETRIC



SCREW DIN 7985 M5x12–TX A2
TORQUE TIGHTENED TO 2.5 FT–LBS MIN
(Fy= 65 KSI MIN, Fu= 102 KSI MIN)
WASHER DIN 9021–5,3 A2 T–SLOT NUT – M5 STL ZINC

SUPPORT FRAME TO CHANNEL CONN

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR MOUNTED TRACK DETAIL
SUPPORT FRAME CONNECTIONS

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CYS STRUCTURAL ENGINEERS, INC.
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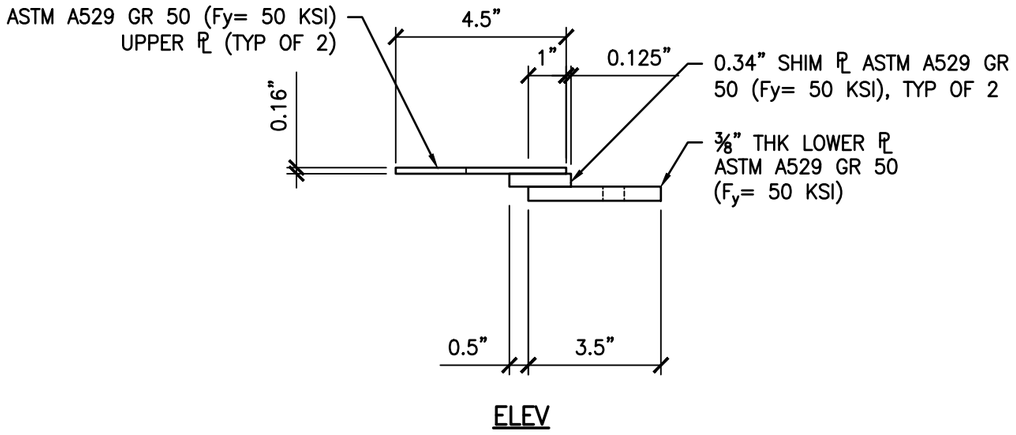
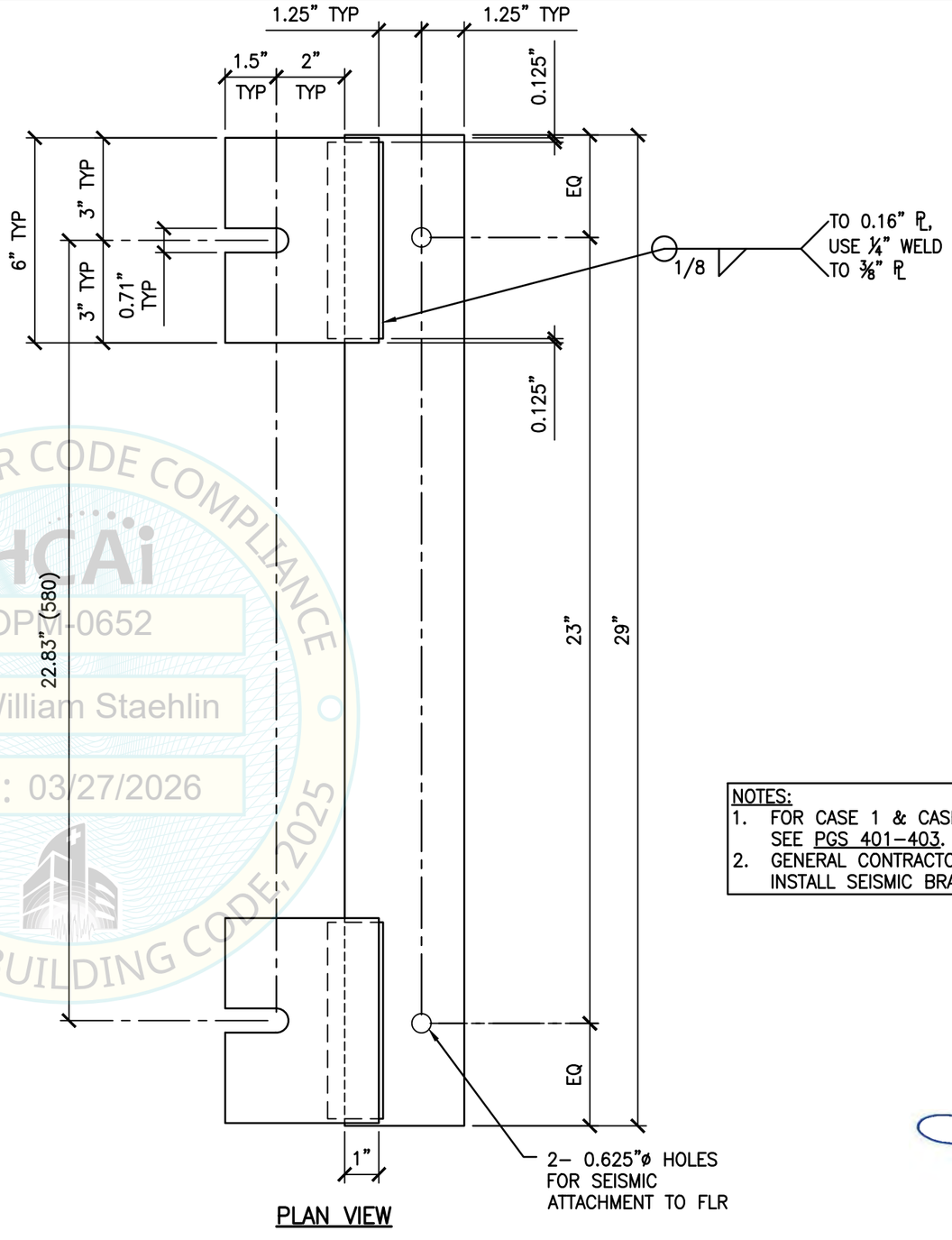


ELEV



PLAN VIEW

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 401–403.
2. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 1 DETAIL
LOADER MODULE

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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SACRAMENTO, CA 95833
TEL (916) 920-2020
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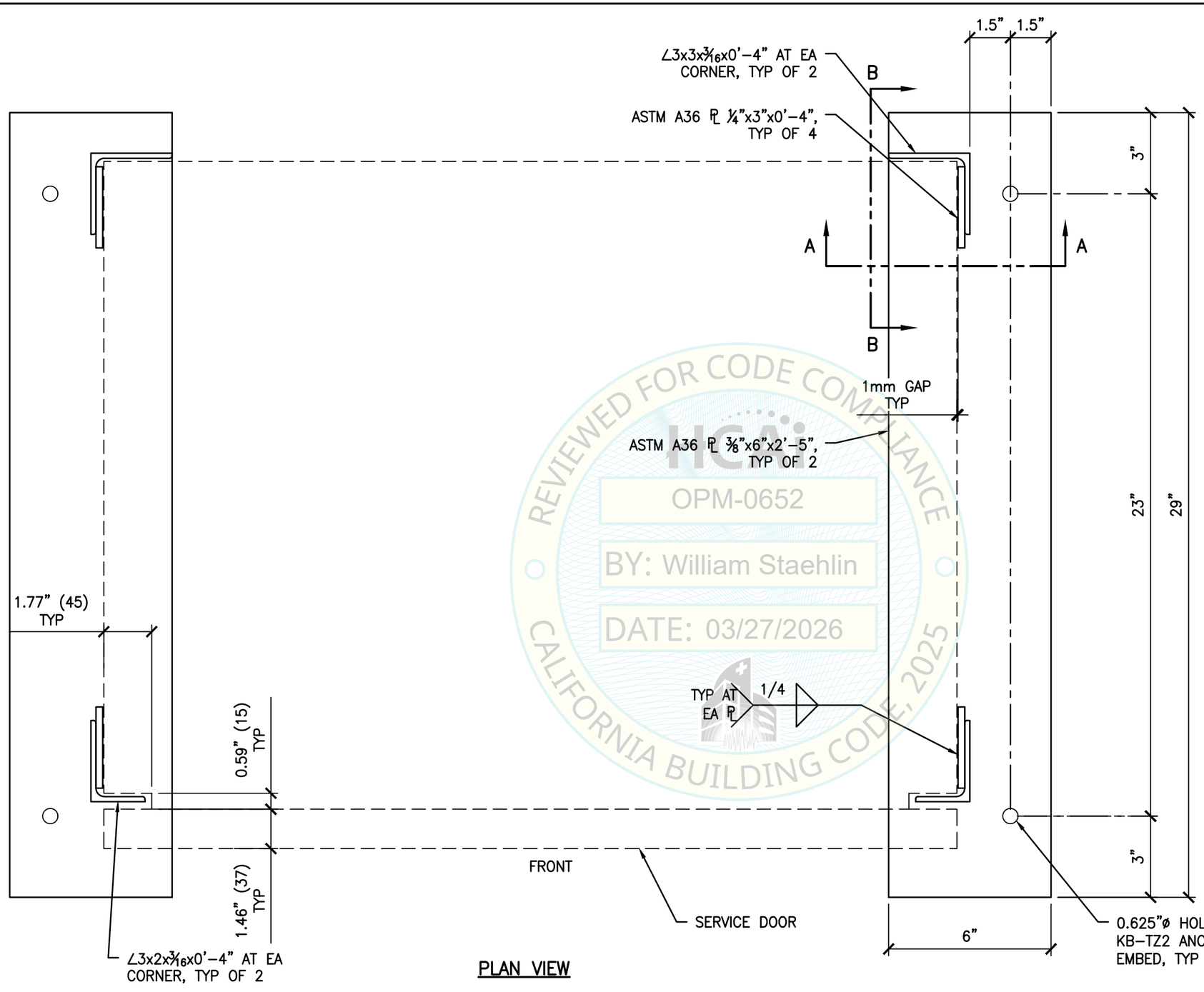
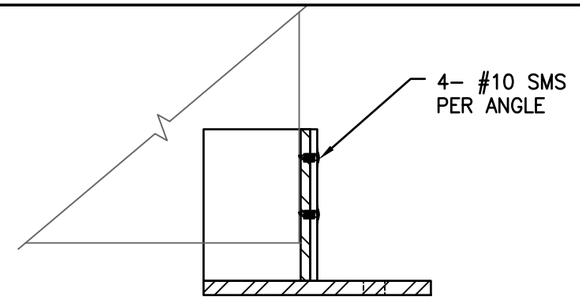
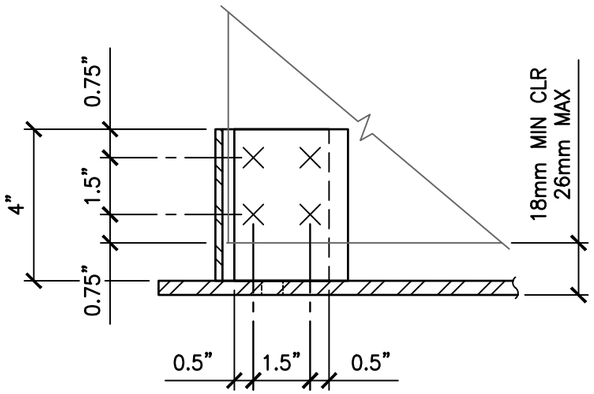


PLAN VIEW



SECTION A-A



SECTION B-B

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 401-403.
2. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 1 - OPTION 2 DETAIL
LOADER MODULE

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

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2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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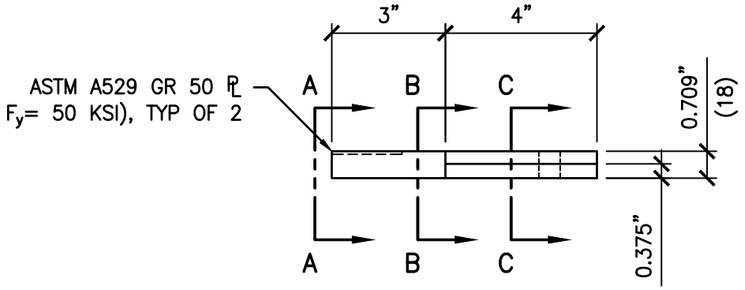
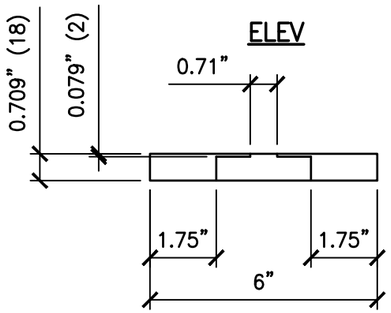
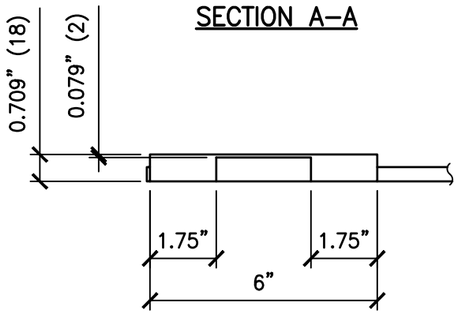
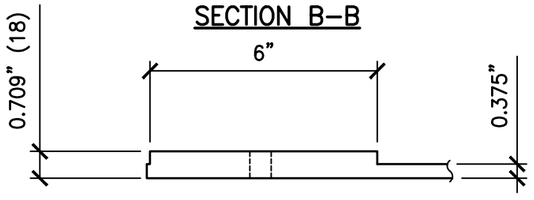




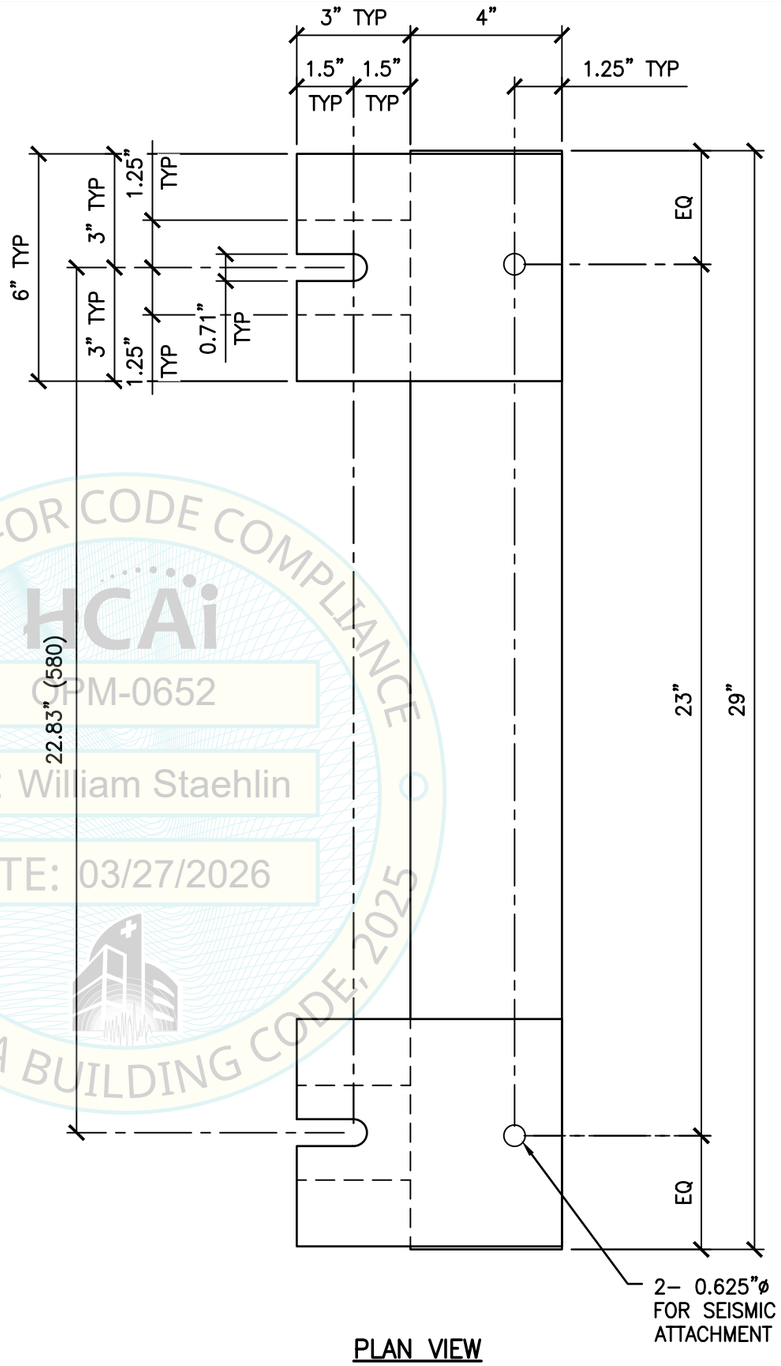
SECTION A–A



SECTION B–B



SECTION C–C



PLAN VIEW

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 401–403.
2. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 1 - OPTION 3 DETAIL
LOADER MODULE

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
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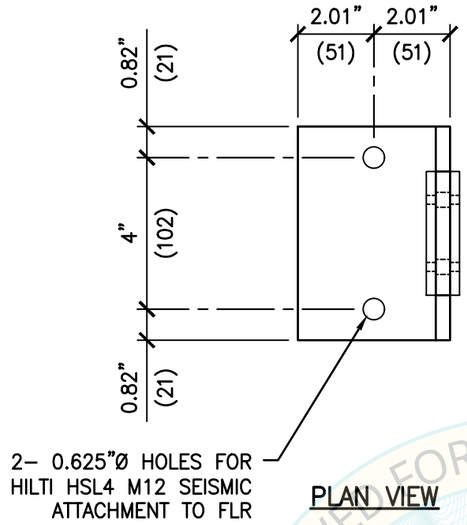
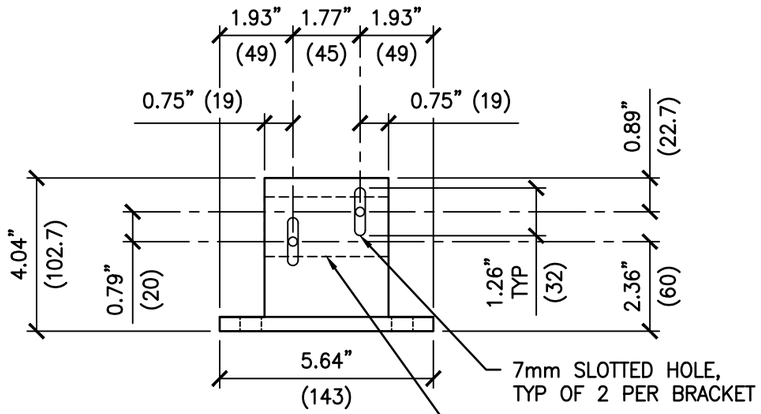
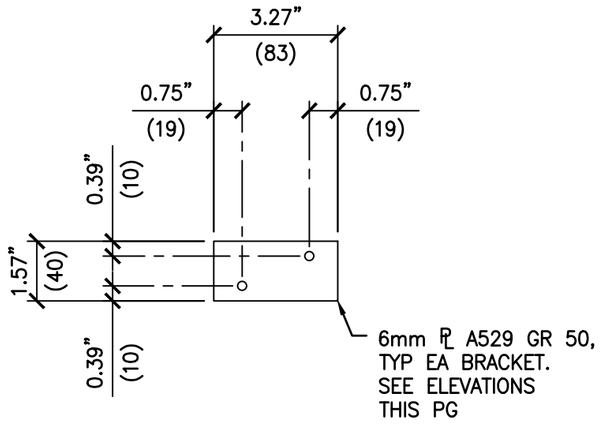


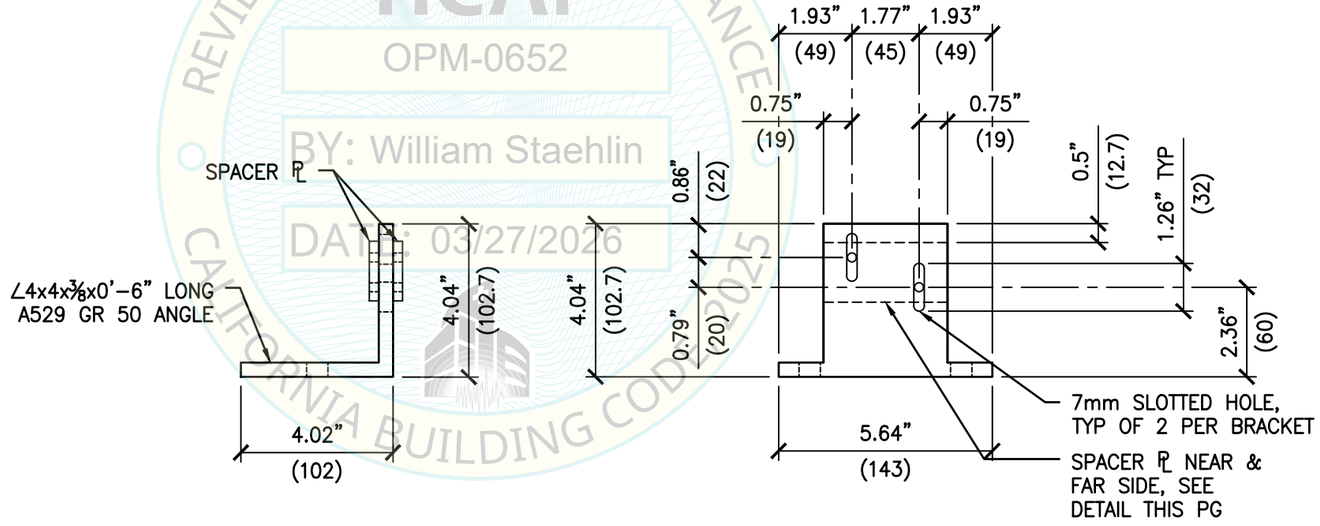
PLAN VIEW



RIGHT BRACKET
FRONT ELEVATION



TYP SPACER PLATE
AT LEFT & RIGHT BRACKETS



SIDE ELEVATION

LEFT BRACKET
FRONT ELEVATION

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 2 DETAIL
STORAGE

ABBOTT AUTOMATION SOLUTIONS
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SUPPORTS & ATTACHMENTS

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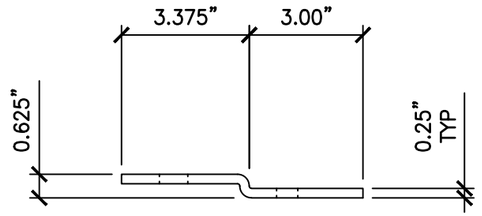

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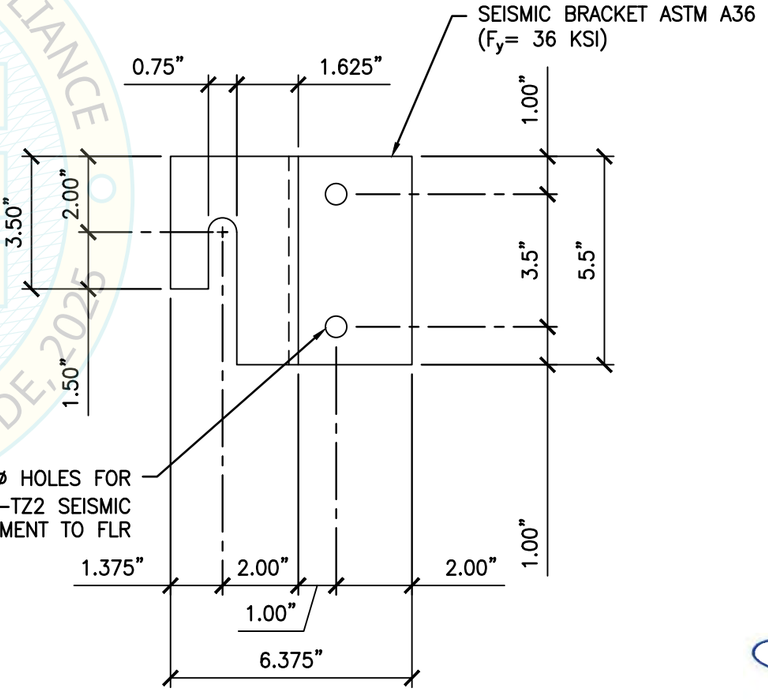

PLAN VIEW

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 3 DETAIL
SPIRAL ELEMENT

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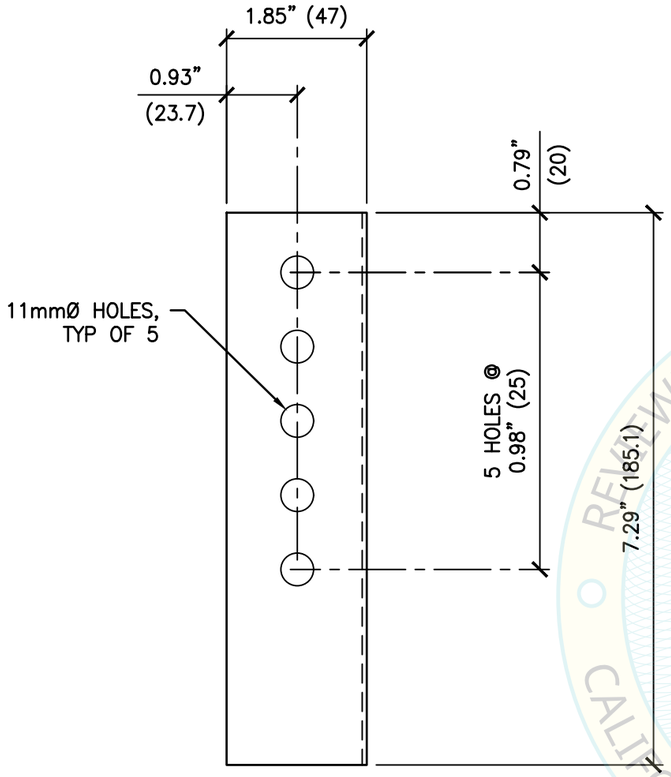
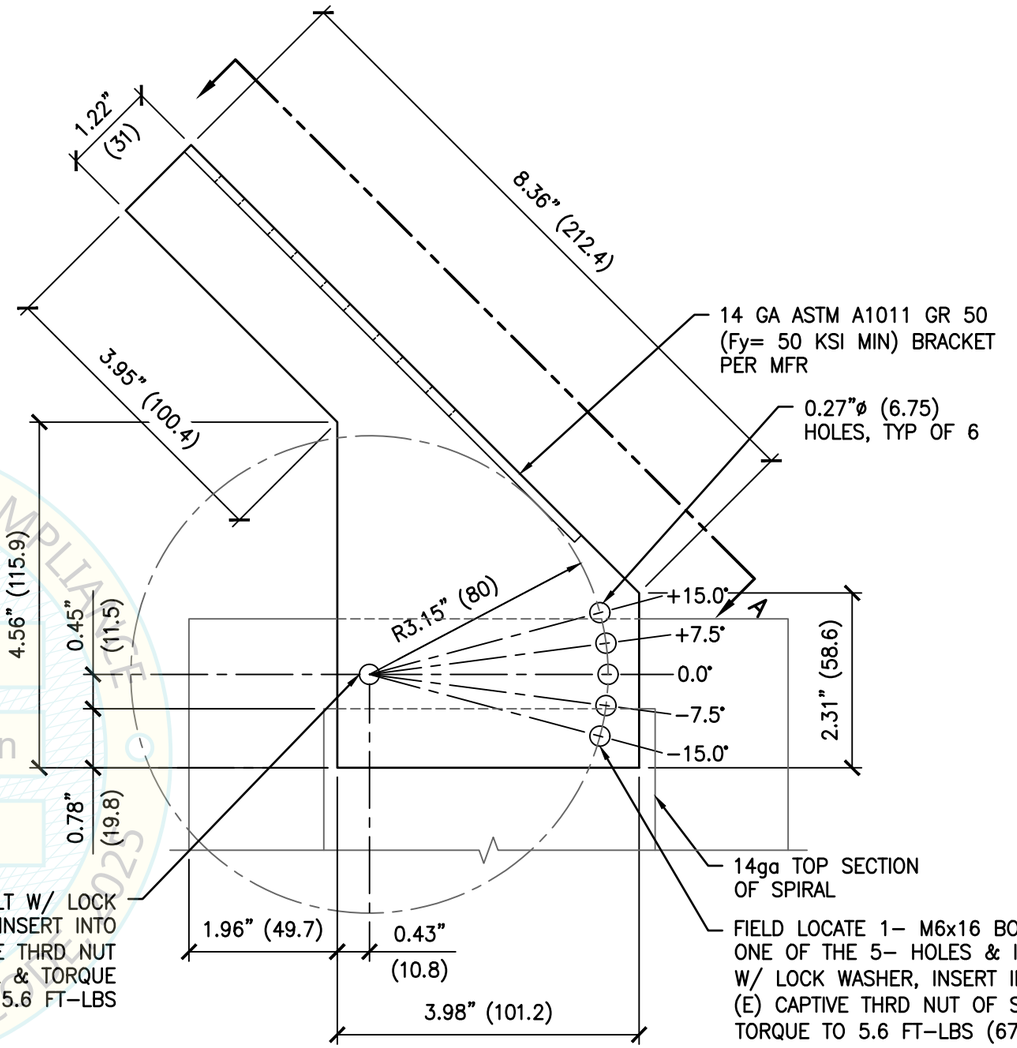


DETAIL A–A
NTS



SEISMIC BRACKET 4
NTS

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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: SEISMIC BRACKET 4 DETAIL
SPIRAL ELEMENT

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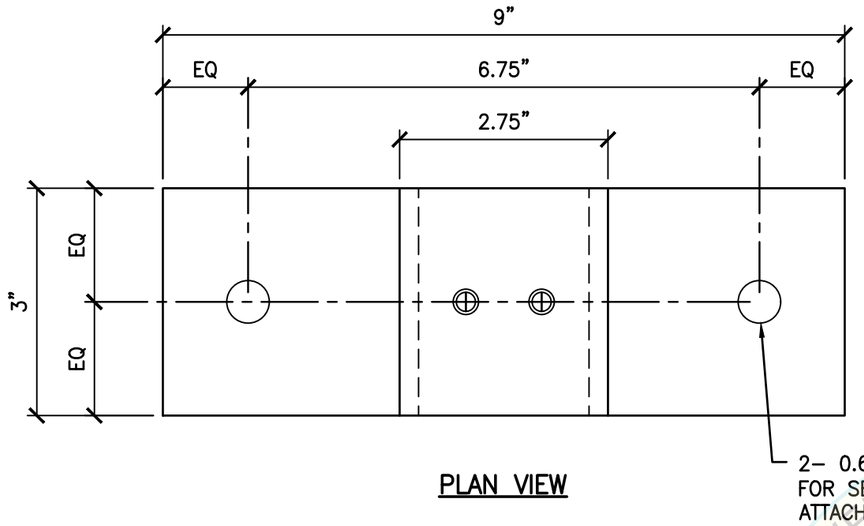
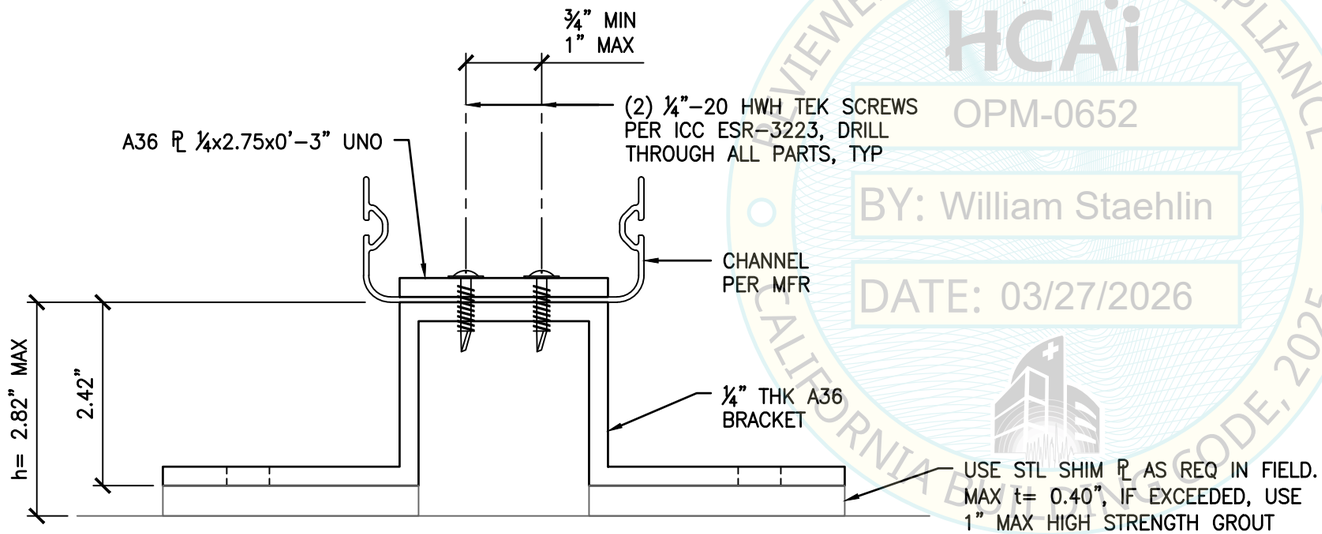
HAT BRACKET



PLAN VIEW



ELEV

NOTES:
1. FOR CASE 1, 2 & 3 ANCHORAGE TO FLR, SEE PGS 401, 402 & 404.
2. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

NOT SEOR

SHEET TITLE: SEISMIC HAT BRACKET DETAIL
FLOOR MOUNTED TRACK

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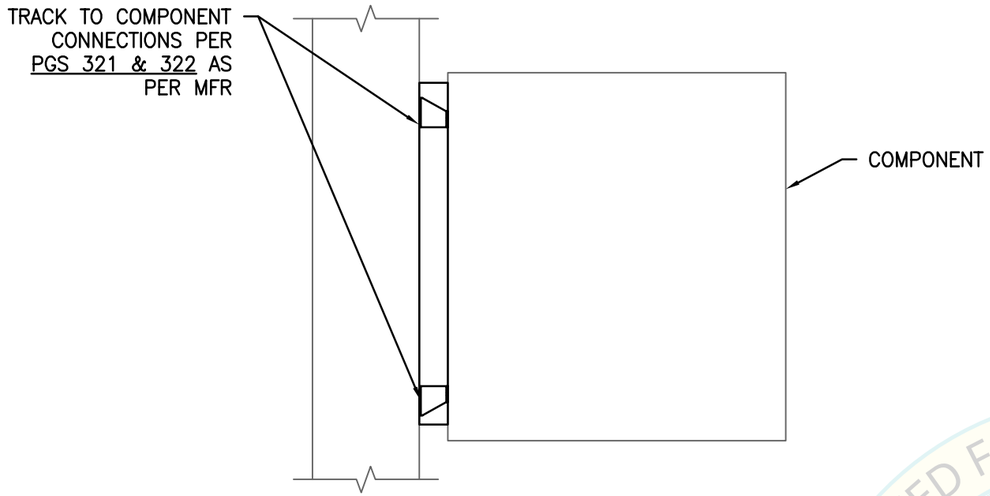
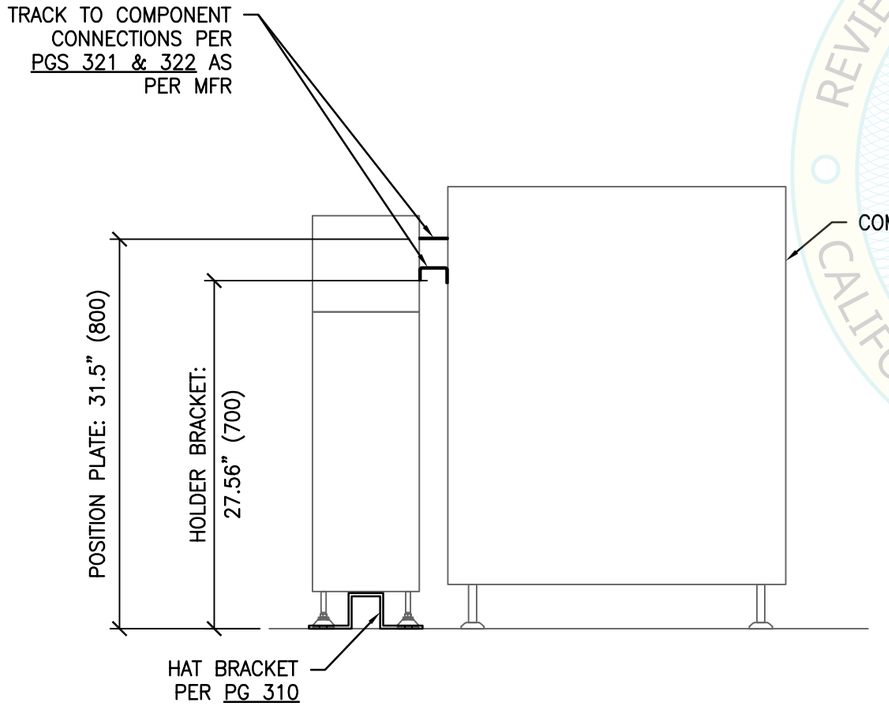


PLAN VIEW



IN LINE ELEV

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DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: TRACK TO COMPONENT CONNECTION

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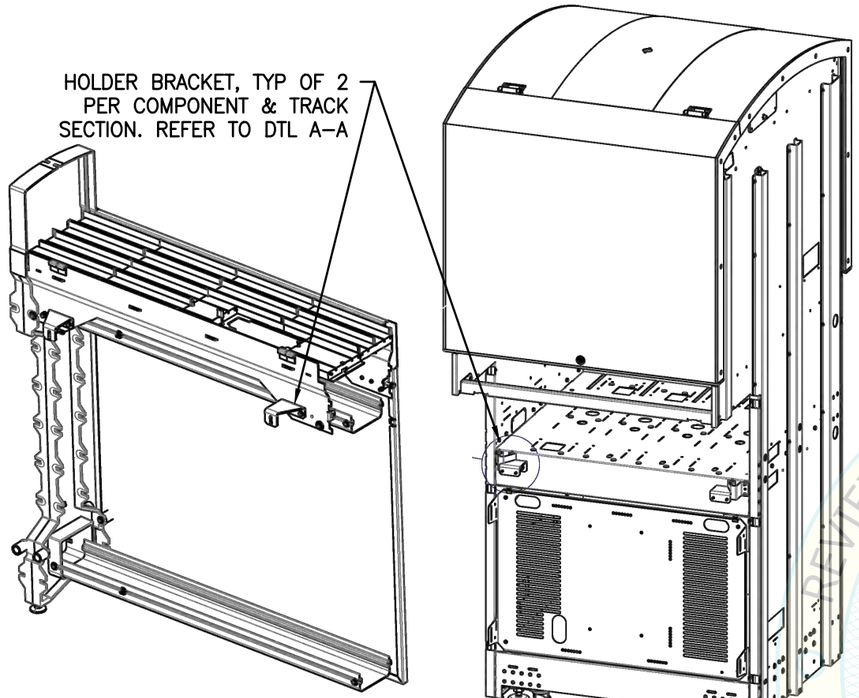
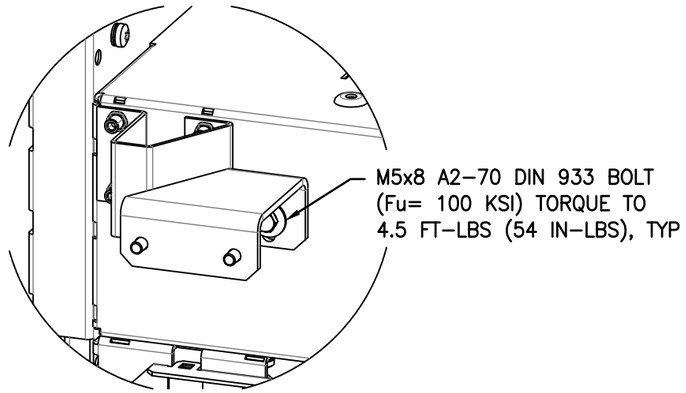
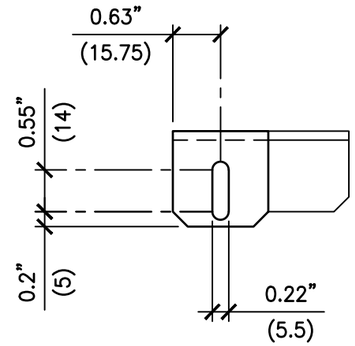
HOLDER BRACKET CONNECTION

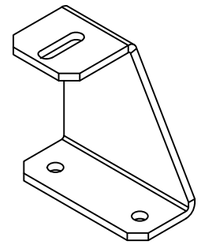


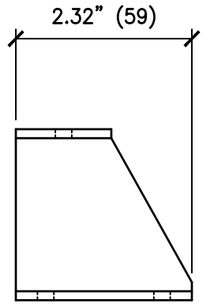


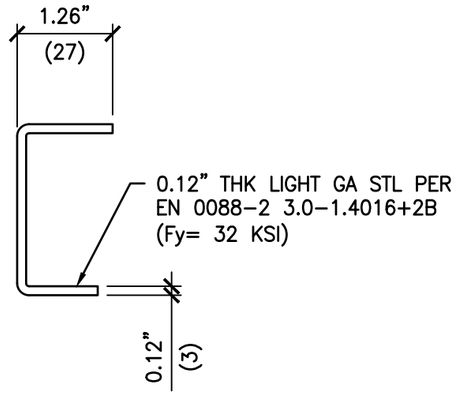
DETAIL A–A

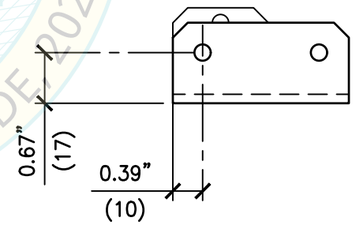
HOLDER BRACKET DETAIL











REGISTERED PROFESSIONAL ENGINEER
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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: TRACK TO COMPONENT CONNECTION
HOLDER BRACKET

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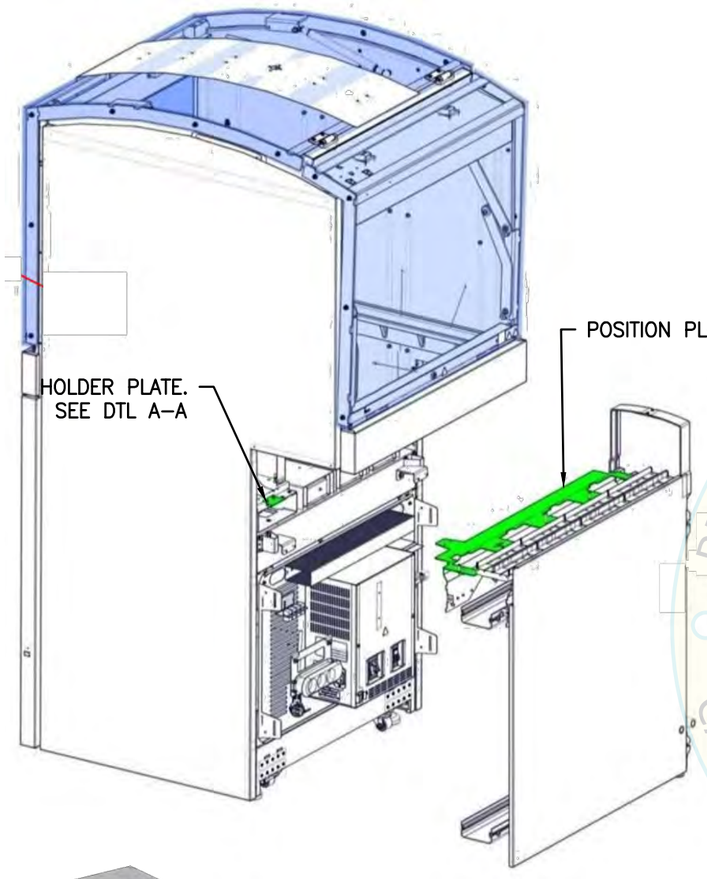
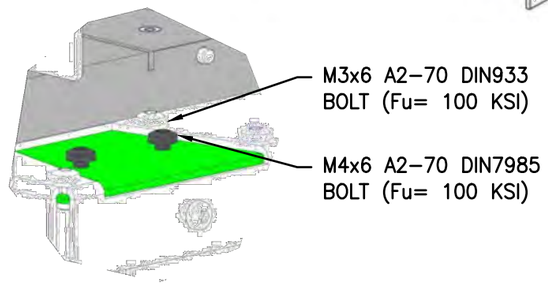
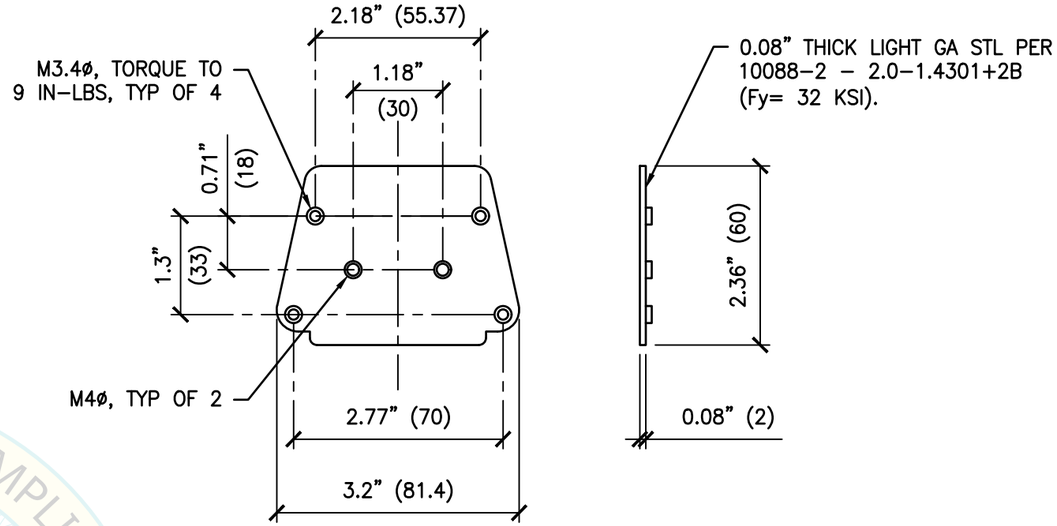
POSITION PLATE CONNECTION



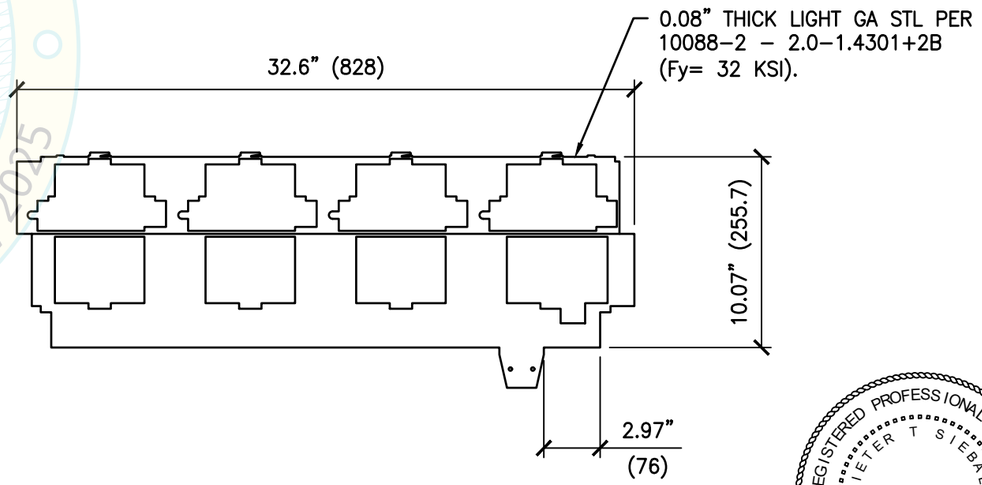


DETAIL A–A

HOLDER PLATE DETAIL



POSITION PLATE DETAIL



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STRUCTURAL
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SHEET TITLE: TRACK TO COMPONENT CONNECTION
POSITION PLATE

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
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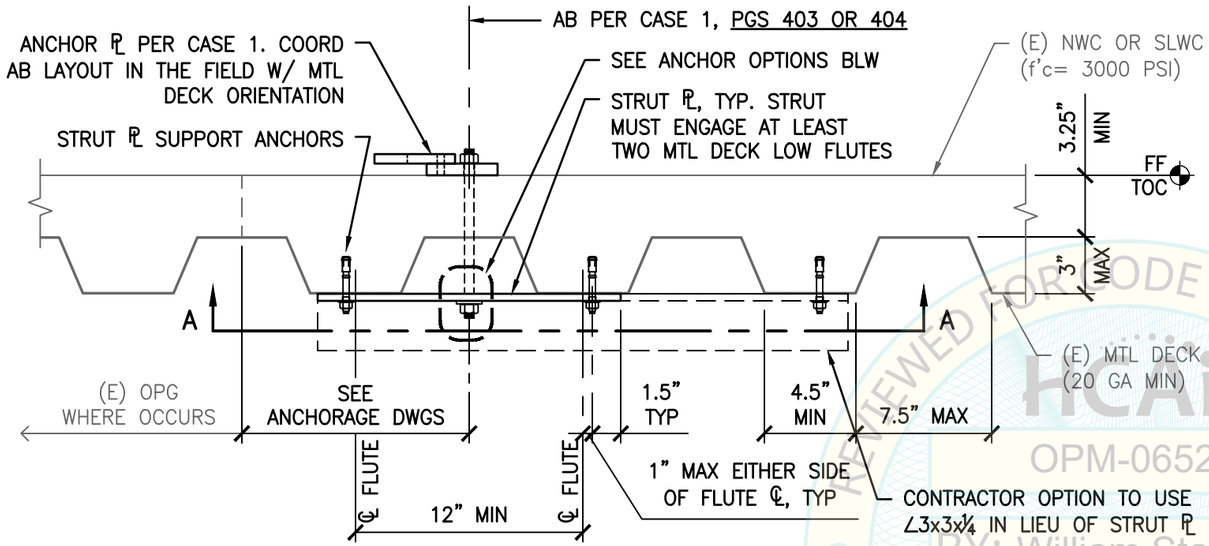
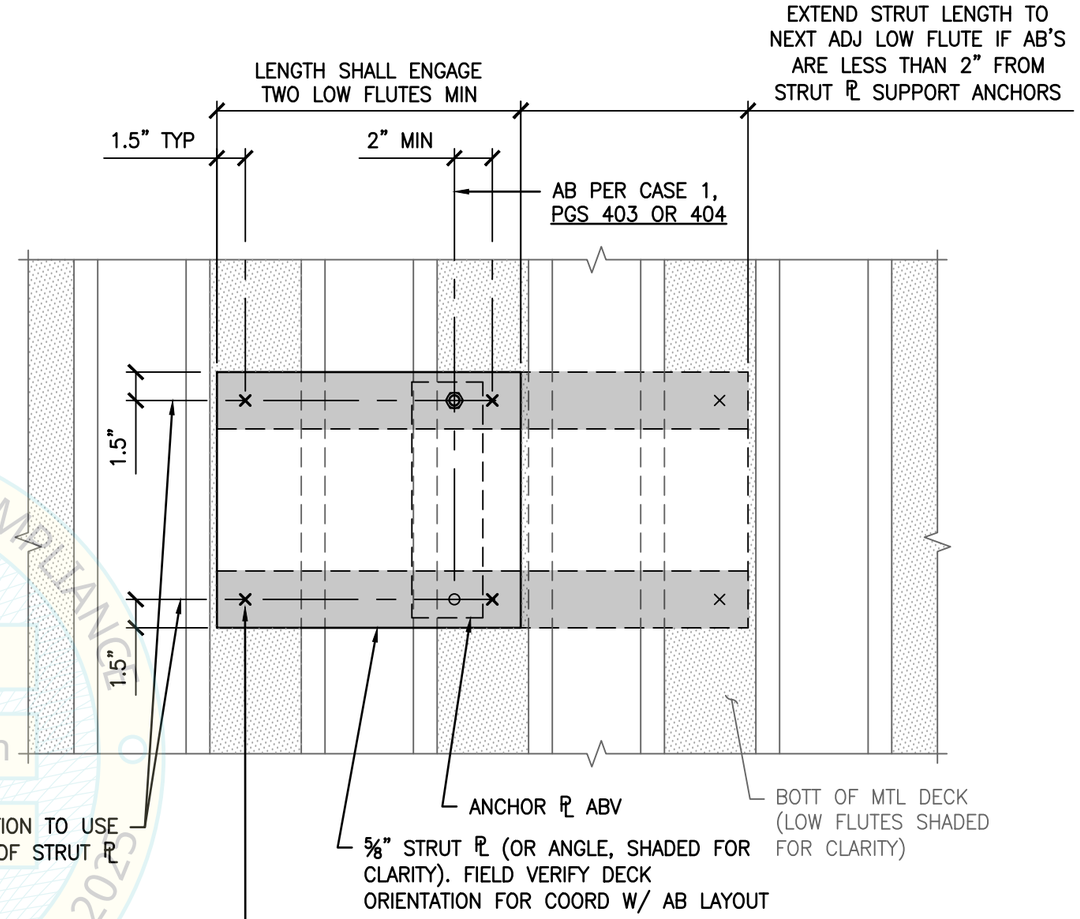
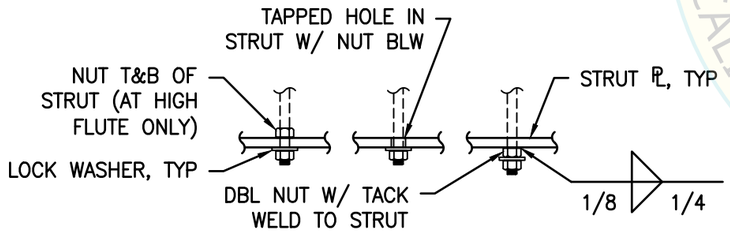




SECTION A-A



ANCHOR OPTIONS

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: CASE 1 - TYPICAL STRUT DETAILS

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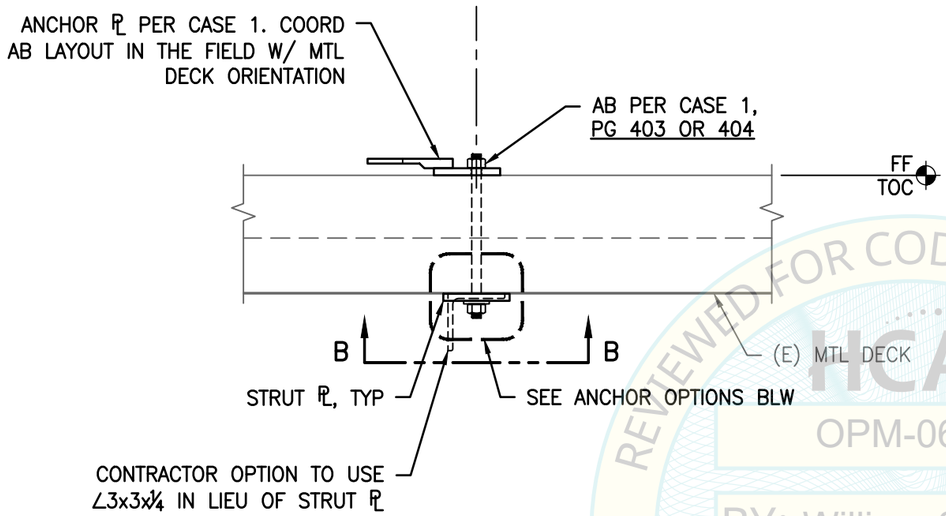
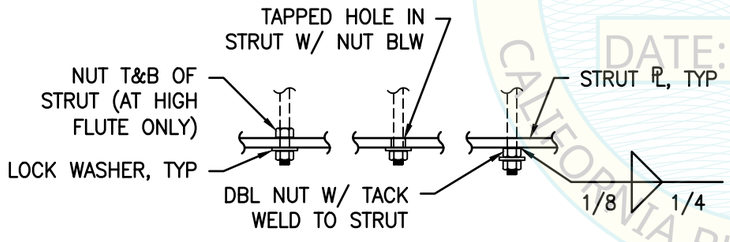
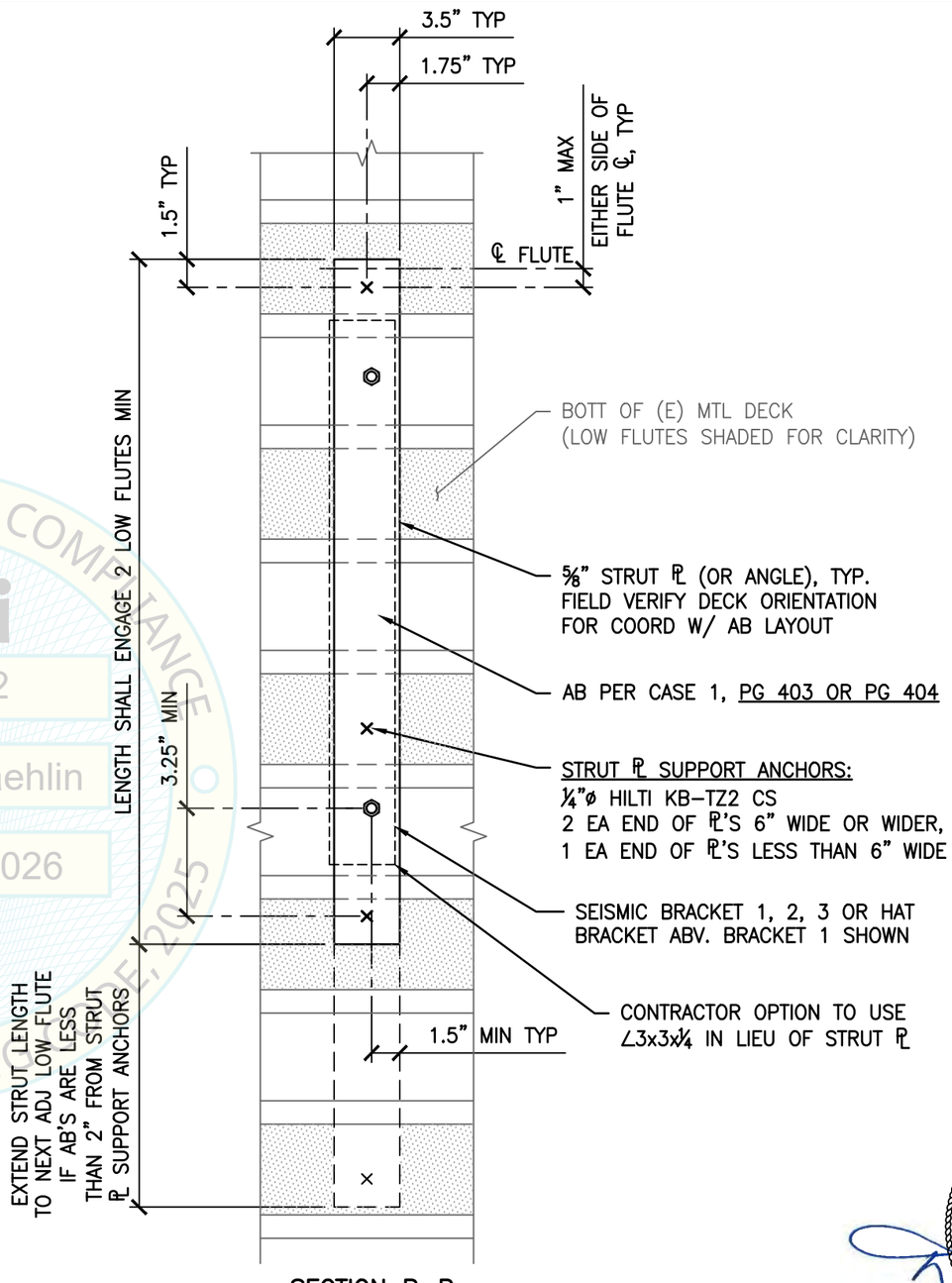




ANCHOR OPTIONS



SECTION B–B

REGISTERED PROFESSIONAL ENGINEER
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STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: CASE 1 - TYPICAL STRUT DETAILS

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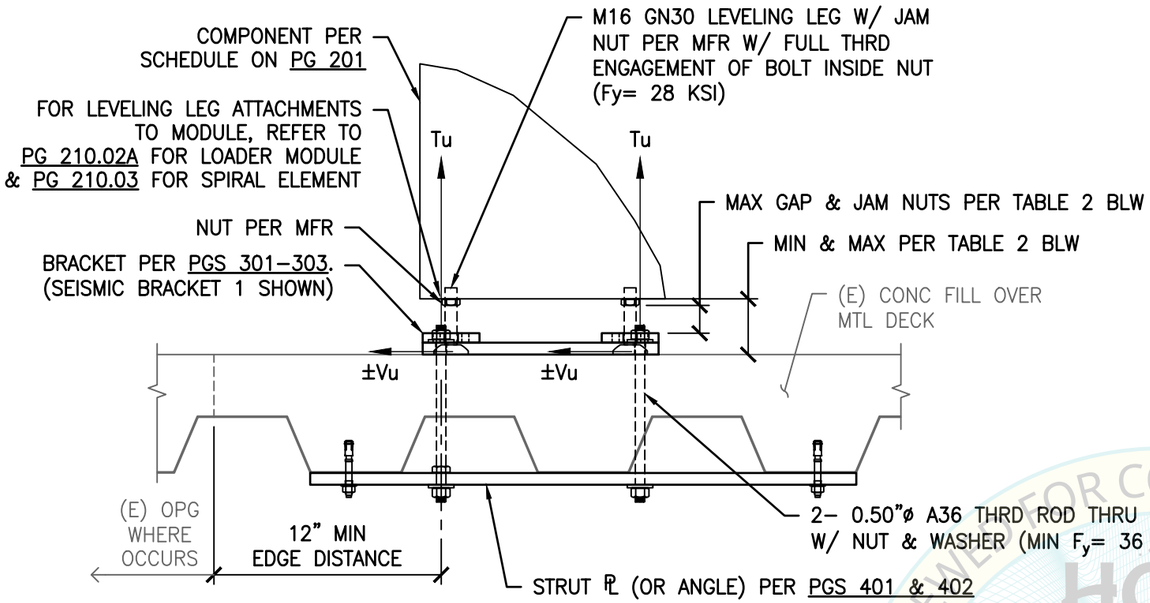
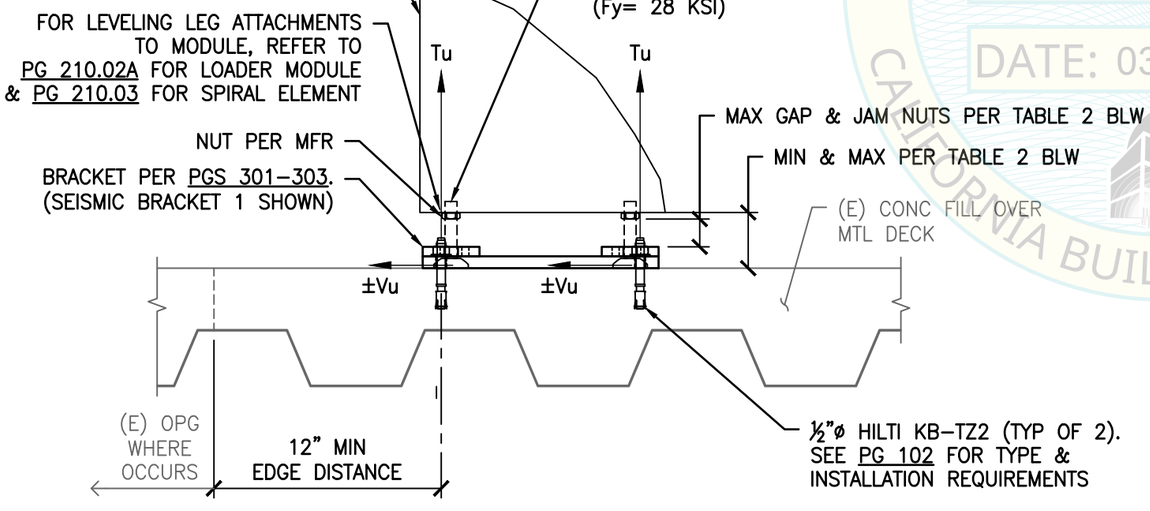


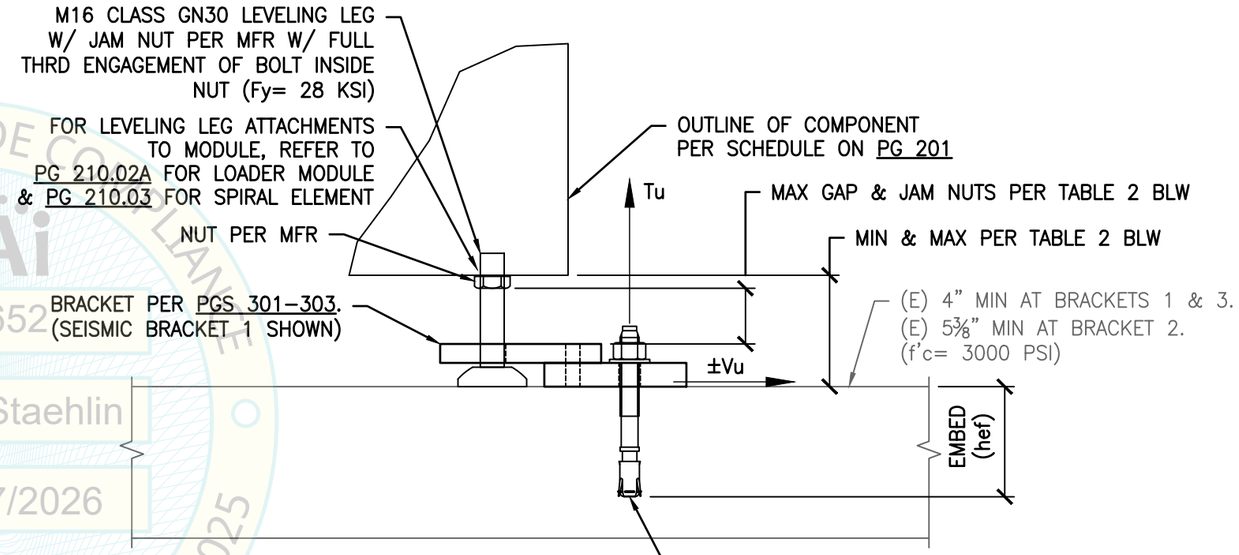
CASE 1 – SUSPENDED FLR W/ THRU–BOLTS



CASE 3 – SUSPENDED FLR W/ ANCHOR BOLTS

MAX ANCHOR FORCES AT LRFD AT EA AB[1]								
CASE 1			CASE 2			CASE 3		
BRACKET	Tu	Vu	BRACKET	Tu	Vu	BRACKET	Tu	Vu
1	1309#	1772#	1	1227#	830#	1	806#	568#
2	1213#	1281#	2	2050#	1029#	2	690#	402#
3	0#	852#	3	0#	320#	3	0#	320#

OVERSTRENGTH FACTOR (Ω_o) IS APPLIED TO Vu FOR ANCHORAGE TO CONC FOR CASE 1.
OVERSTRENGTH FACTOR (Ω_o) IS APPLIED TO Tu & Vu FOR ANCHORAGE TO CONC FOR CASE 2 & 3.
[1]VALUES ARE NON–CONCURRENT. FOR A BREAKDOWN, REFER TO INDIVIDUAL COMPONENTS.



CASE 2 – SOG

(SLAB AT OR BLW GRADE)**

** CASE 2 ANCHORAGE CAN ALSO BE USED AT SLAB OVER MTL DECK AT OR BLW GRD. (E) CONC SHALL BE NORMAL WEIGHT, f'c= 3000 PSI MIN & HAVE A MIN CONC TOPPING THICKNESS AS NOTED IN THE DTL ABV.

TABLE 2

BRACKET #	COMPONENT	MIN GAP	MAX GAP	MAX GAP & JAM NUT SIZE (mm)
1	LOADER MODULE	2.52" (64)	2.83" (72)	8mm
2	STORAGE	4.13" (105)		N/A
3	SPIRAL ELEMENT	0.68" (17)	1.68" (43)	6mm

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SHEET TITLE: CASE 1, 2 & 3 SEISMIC BRACKETS 1,2 & 3

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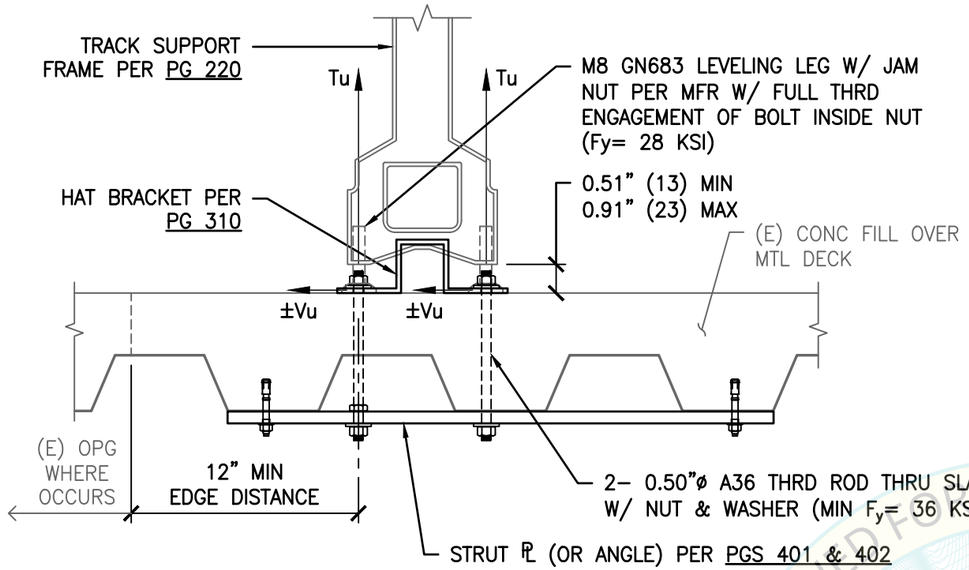
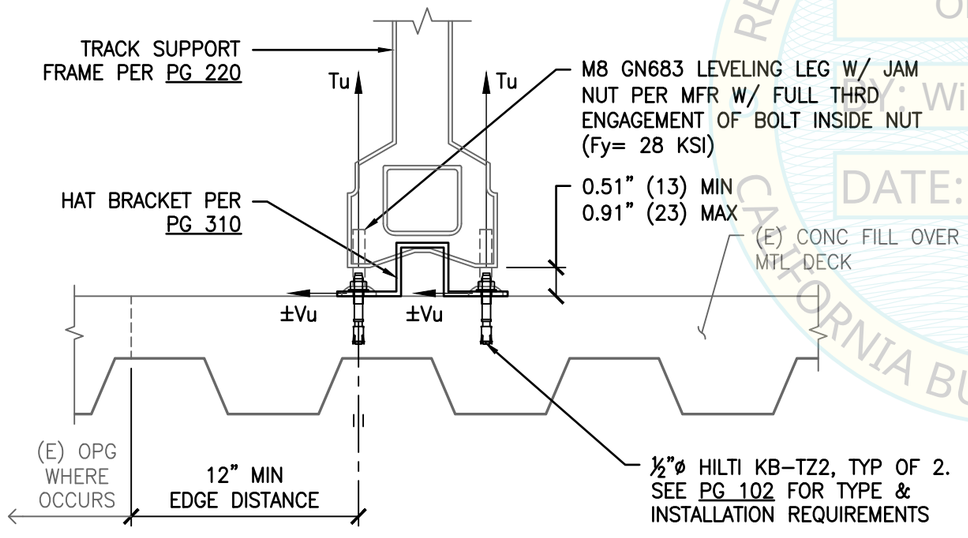


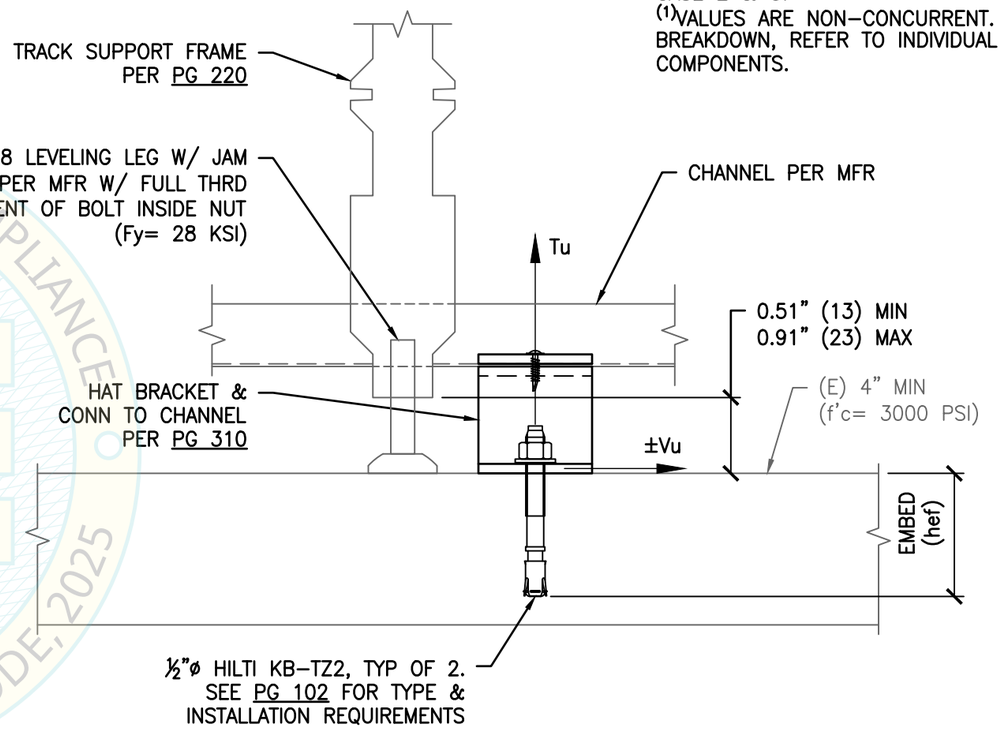
CASE 1 – SUSPENDED FLR W/ THRU–BOLTS



CASE 3 – SUSPENDED FLR W/ ANCHOR BOLTS

MAX ANCHOR FORCES AT LRFD AT EA AB(1)		
CASE	Tu	Vu
1	617#	155#
2	450#	75#
3	450#	75#

OVERSTRENGTH FACTOR (Ω_o) IS APPLIED TO Vu FOR ANCHORAGE TO CONC FOR CASE 1.
OVERSTRENGTH FACTOR (Ω_o) IS APPLIED TO Tu & Vu FOR ANCHORAGE TO CONC FOR CASE 2 & 3.
(1)VALUES ARE NON–CONCURRENT. FOR A BREAKDOWN, REFER TO INDIVIDUAL COMPONENTS.



CASE 2 – SOG

(SLAB AT OR BLW GRADE)**

** CASE 2 ANCHORAGE CAN ALSO BE USED AT SLAB OVER MTL DECK AT OR BLW GRD. (E) CONC SHALL BE NORMAL WEIGHT, f'c= 3000 PSI MIN & HAVE A MIN CONC TOPPING THICKNESS AS NOTED IN THE DTL ABV.

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STRUCTURAL
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SHEET TITLE: CASE 1, 2 & 3 - SEISMIC HAT BRACKET

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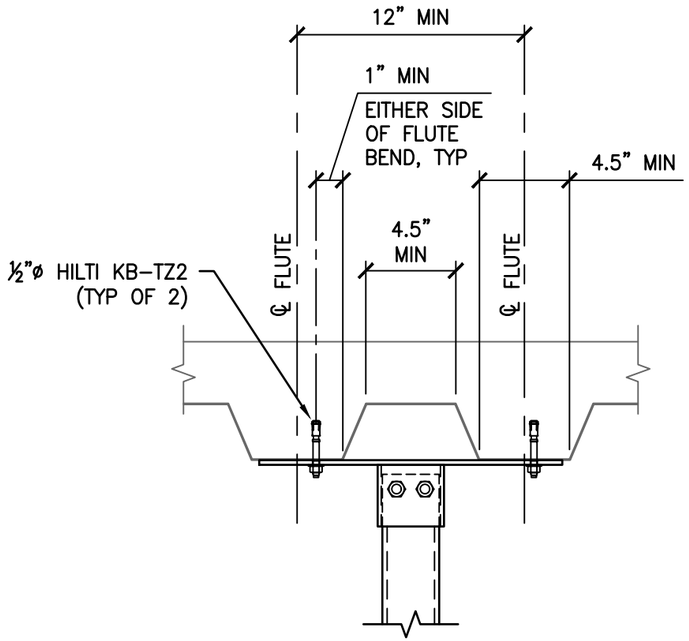
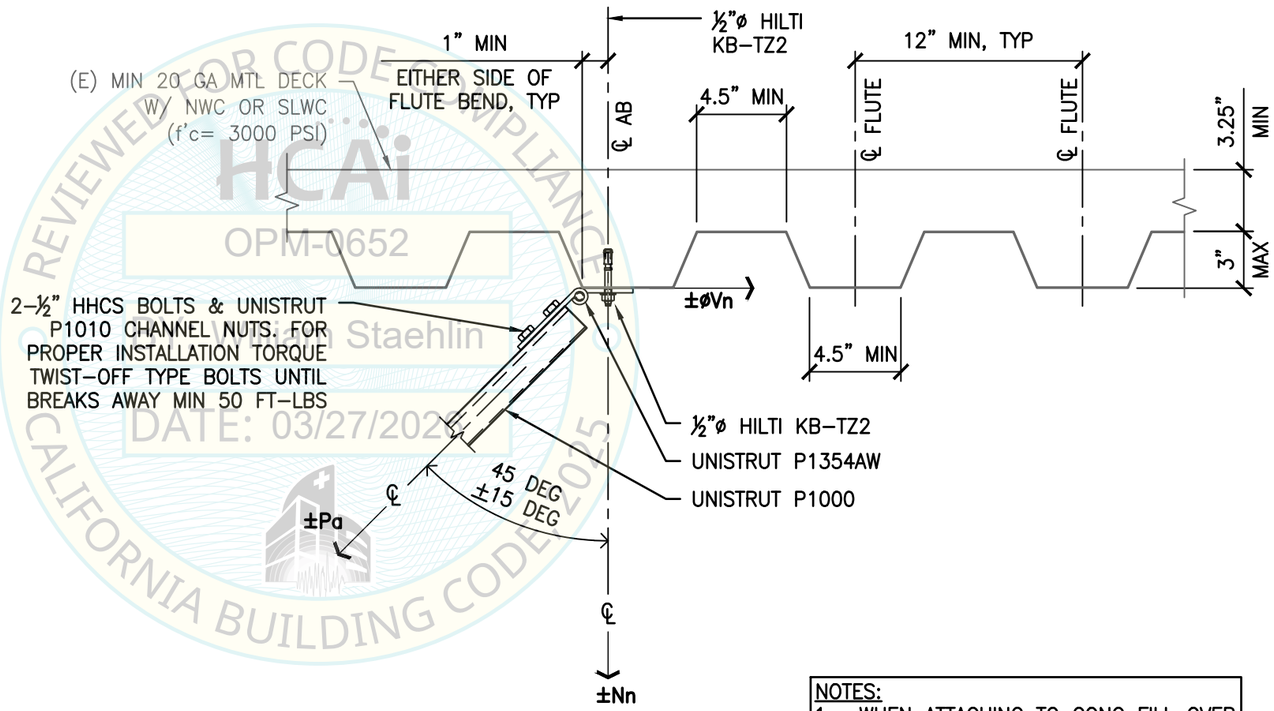
MAX ANCHOR FORCES AT LRFD	
T_{max}	V_{max}
954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.





NOTES:
1. WHEN ATTACHING TO CONC FILL OVER MTL DECK, ANCHORS MUST BE INSTALLED IN LOWER FLUTE OF DECK.
2. DTL IS TYP FOR LONGITUDINAL & TRANSVERSE BRACES.
3. DTL MAY BE USED FOR BOTH CASE 1 & 2 LOCATIONS.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
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SHEET TITLE: ELEVATED TRACKS
SUPPORT & ATTACHMENT DETAILS TO UNDERSIDE OF MTL DECK W/ CONC FILL. BRACE STRUTS PERP TO DECK

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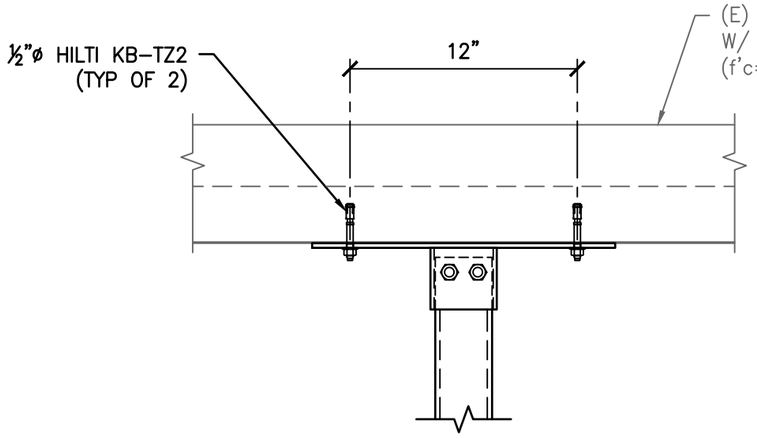
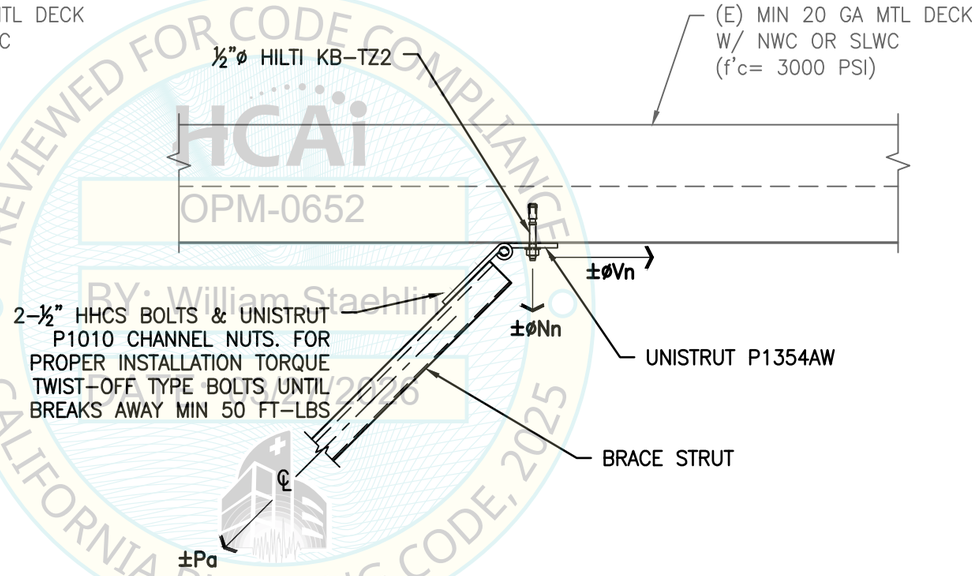
MAX ANCHOR FORCES AT LRFD	
T_{max}	V_{max}
954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.





NOTES:
1. WHEN ATTACHING TO CONC FILL OVER MTL DECK, ANCHORS MUST BE INSTALLED IN LOWER FLUTE OF DECK.
2. DTL IS TYP FOR LONGITUDINAL & TRANSVERSE BRACES.
3. DTL MAY BE USED FOR BOTH CASE 1 & 2 LOCATIONS.
4. SEE PG 501 FOR INFO NOT SHOWN.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ELEVATED TRACKS
SUPPORT & ATTACHMENT DETAILS TO UNDERSIDE OF MTL DECK W/ CONC FILL. BRACE STRUTS PARALLEL TO DECK

ABBOTT AUTOMATION SOLUTIONS
ARCHIVE II, SPIRAL ELEMENT & ELEVATED TRACKS
SUPPORTS & ATTACHMENTS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

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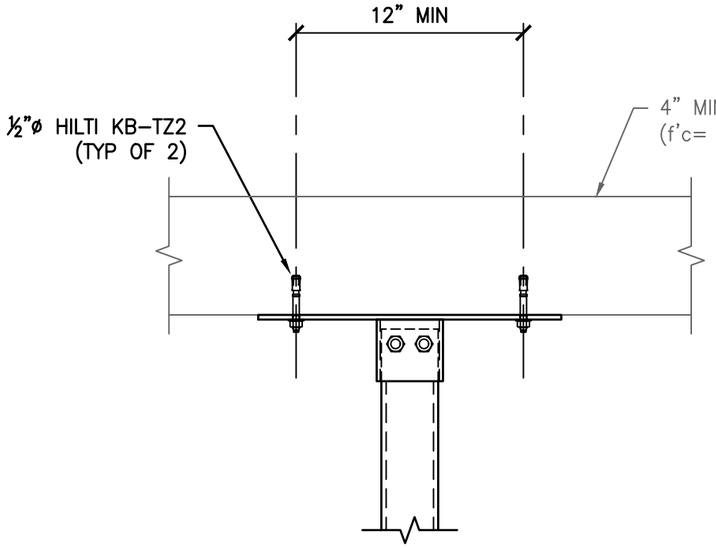
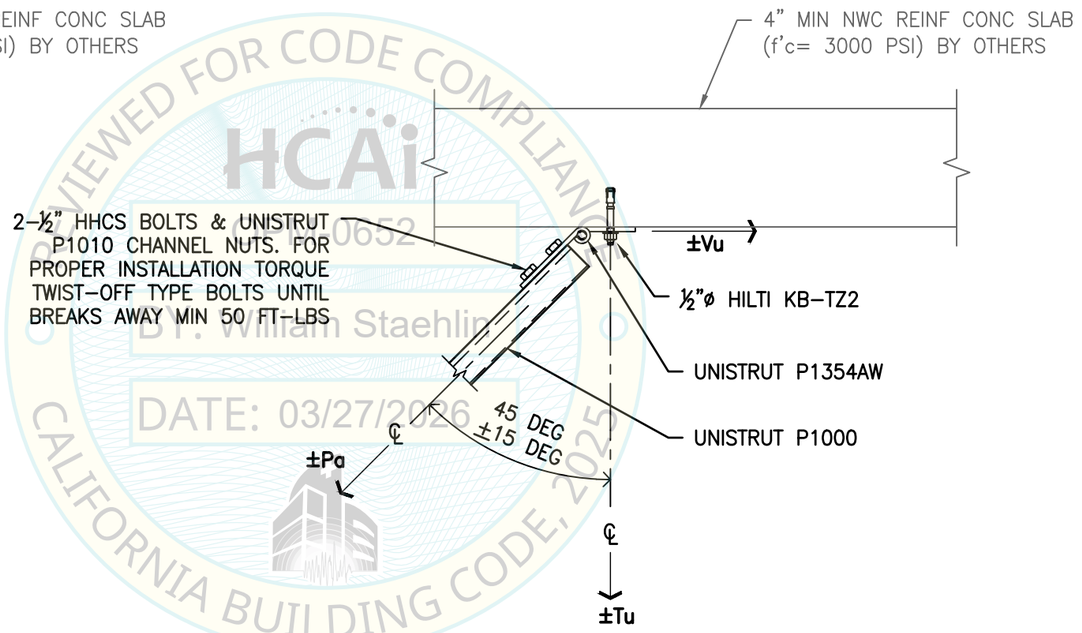
MAX ANCHOR FORCES AT LRFD	
T_{max}	V_{max}
954#	551#

1. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
2. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.





NOTES:
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DIETER T SIEBALD
No. S4346
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SHEET TITLE: ELEVATED TRACKS
SUPPORT & ATTACHMENT DETAILS TO UNDERSIDE OF CONCRETE FLOOR OR ROOF

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