



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

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

OFFICE USE ONLY

APPLICATION #: OPM-0508

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Belimed, Inc

Manufacturer's Technical Representative: Jay Upchurch

Mailing Address: 8351 Palmetto Commerce Parkway, Suite 10, Ladson, SC 29456

Telephone: (843) 216-7424

Email: jay.upchurch@belimed.com

Product Information

Product Name: WASHER/DISINFECTOR

OPM-0508

Product Type: Washer/Disinfecter

Product Model Number: WD 290 IQ

BY: Timothy Piland

General Description: WD 290 IQ offers increased throughput because the prepared batch starts automatically.

Applicant Information

Applicant Company Name: Belimed, Inc

Contact Person: Jay Upchurch

Mailing Address: 8351 Palmetto Commerce Parkway, Suite 10, Ladson, SC 29456

Telephone: (843) 216-7424

Email: jay.upchurch@belimed.com

Title: Product Manager

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Registered Design Professional Preparing Engineering Recommendations

Company Name: ISAT SEISMIC BRACING

Name: Deep Shah

California License Number: S5867

Mailing Address: 14848 Northam Street, La Mirada, CA 90638

Telephone: (714) 523-1771

Email: dshah@isatsb.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): _____

HCAI Approval

Date: 3/19/2024

Name: Timothy Piland

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

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Submittal Documents

OSHDP OPM-0508

OPM-0508

ATTACHMENT OPM DRAWINGS WD 290 IQ STERILIZERS

BELIMED

ISAT
14848 Northam Street,
La Mirada, CA 90638
877-999-4728

FILE NO.: CLT-0818-207

REV 4





OSHPD OPM-0508

DRAWING INDEX

INDEX

Cover Page	p i
Index Page	p ii
General Notes	p 1
Attachment Notes	p 2
Belimed WD 290 IQ Layout Plan	p 3
Equipment Anchorage at Grade	p 4
Equipment Anchorage at Elevated Slabs	p 5
Bracket Details	p 6
Adjustable Leg	p 7
Dimensions and Anchorage Forces	p 8

FILE NO.: CLT-0118-207

"Empowered by Experience"

Index Rev 4

OSHPD OPM-0508

MANUFACTURE: BELIMED
EQUIPMENT TYPE: STERILIZERS

GENERAL NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
2. SEISMIC CRITERIA USED: $S_{DS} = 1.75$ $I_p = 1.5$ $a_p = 1.0$ $R_p = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0$ $F_pH = 0.79$ AND FOR $z/h \leq 1.0$ $F_pH = 2.10$ AND $F_pV = 0.35$.
3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-16 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $\Omega_0 = 1.5$ IS USED FOR CONCRETE MATERIALS PER OSHPD CRITERIA AND PER CBC 2019 SECTION 1617A.1.23. LOADS SHOWN ARE STRENGTH DESIGN LOADS PER ASCE 7-16 SECTION 12.4.3.2.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: ALL THREAD ROD ASTM F593 CW1 304 STAINLESS STEEL ($F_y = 65$ KSI) FOR BOLTS AT ELEVATED FLOORS, ANGLE ASTM A36 ($F_y = 36$ KSI) HOT DIPPED GALVANIZED.
6. CONCRETE SLABS:
 - a. FOR ELEVATED SOLID CONCRETE SLABS: 6" THICKNESS OF NORMAL WEIGHT CONCRETE WITH 4000 PSI MINIMUM STRENGTH.
 - b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAGE MINIMUM, 4 1/2 INCH MINIMUM BOTTOM FLUTE WIDTH AND MINIMUM FLUTE SPACING OF 12", WITH 3 1/4 INCH SAND LIGHT WEIGHT CONCRETE CONCRETE COVER AT 3000 PSI MINIMUM STRENGTH.
 - c. FOR SLAB ON GRADE: 6" THICKNESS NORMAL WEIGHT CONCRETE AT 4000 PSI MINIMUM STRENGTH.
7. POST-INSTALLED CONCRETE ANCHORS: HILTI KWIK BOLT TZ2 (ESR-4266) STAINLESS STEEL 5/8" DIAMETER x 4" EFFECTIVE EMBEDMENT. DRILL 11/16" DIAMETER x 4.75" INCH MINIMUM DEEP HOLE; INSTALLATION TORQUE SHALL BE 60 FT-LBS; CLEAN HOLE PER MANUFACTURER'S INSTRUCTIONS. FOR ANCHORS INTO THE SOFFITT OF THE METAL DECK USE HILTI KWIK BOLT TZ2 (ESR-4266) 1/2" DIAMETER x 4" HOLE DEPTH, 3 1/4" EFFECTIVE EMBEDMENT AND 40FT-LBS. INSTALLATION TORQUE. BOTH ARE SUPPLIED BY INSTALLATION CONTRACTOR.
8. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS.

OPM-0508 BELIMED WD 290 IQ STERILIZER GENERAL NOTES

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#230860 OSHPD OPM - 0508 DWG - 1

OSHPD OPM-0508

MANUFACTURE: BELIMED

EQUIPMENT TYPE: STERILIZERS

ATTACHMENT NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
2. PERIODIC SPECIAL INSPECTION PER CBC 2016 SECTION 1705A.3.8 AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. IN ADDITION, FOLLOW THE PROVISIONS OF THE 2019 CALIFORNIA BUILDING CODE SECTION 1910A.5.5 BY CONFIRMING THE INSTALLATION TORQUE SPECIFIED IN NOTE 7 ON PAGE GENERAL NOTES. TESTING IS NOT TO OCCUR UNTIL A MINIMUM OF 24 HOURS HAS ELAPSED AFTER THE INSTALLATION OF THE SUBJECT ANCHORS. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. IF ANY ANCHOR FAILS TEST ALL ANCHORS. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY AN APPROVED AGENCY EMPLOYED BY THE FACILITY OWNER PER CBC 1704A AND 1910A.5 AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER AND ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. THE SEOR SHALL PROVIDE REMEDIAL ANCHOR DETAILS IN THE EVENT THAT AN ANCHOR FAILS TO MEET THE TEST REQUIREMENTS. FOR THROUGH BOLTS MARK THE NUT LOCATION AT THE SNUG TIGHT CONDITION. INSPECTOR IS TO VERIFY 3/4 TURN.
3. STRENGTH DESIGN WAS USED FOR ANCHOR FORCE CALCULATIONS INCLUDING $\Omega_0 = 1.5$ WHERE REQUIRED FOR ATTACHMENT TO CONCRETE.
4. PROVIDE FOR FULL THREAD ENGAGEMENT OF THE NUT AND WASHER.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

1. CONFIRM THE MATERIAL PROPERTIES AND THICKNESS OF THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ATTACHED MEETS THE REQUIREMENTS OF THIS OPM: Timothy Piland
2. PROVIDE A PLAN FOR INSPECTION OF SUPPORTS AND ATTACHMENTS AND VERIFY ITS IMPLEMENTATION.
3. CONFIRM THE SPECIFIED MINIMUM CONCRETE EDGE DISTANCES ARE MAINTAINED BASED ON THE ACTUAL EQUIPMENT LOCATION. VERIFY THAT EXISTING OR NEW ANCHORS ARE AN ADEQUATE DISTANCE FROM THIS UNIT'S ATTACHMENT.
4. VERIFY THAT THE EXISTING STRUCTURE IS ADEQUATE FOR THE IMPOSED DEAD, LATERAL AND TENSION FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
5. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH CBC 2019 AND WITH THE OPM-0508 DETAILS INCLUDING MATERIALS AND DIMENSIONS OF THE SUPPORT WHERE THE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION
6. VERIFY THAT THE PROJECT SPECIFIC S_{DS} AND z/h VALUES RESULT IN SEISMIC FORCES (E_h AND E_v) DO NOT EXCEED THE VALUES SHOWN IN GENERAL NOTES.

OPM-0508 BELIMED WD 290 IQ STERILIZER ATTACHMENT NOTES



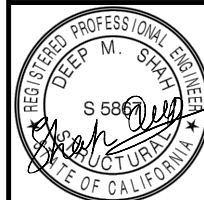
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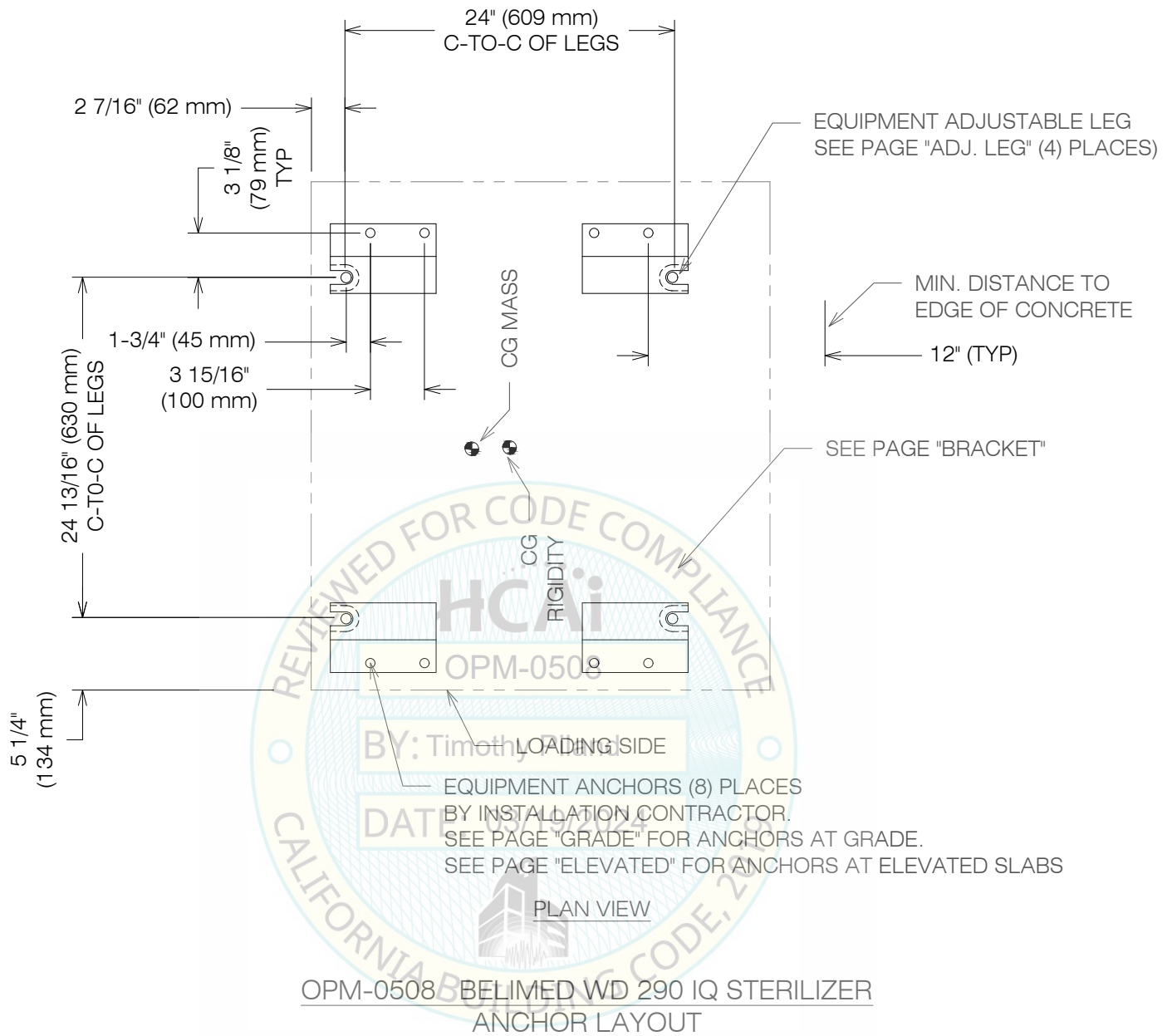
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#230860 OSHPD OPM - 0508 DWG - 2





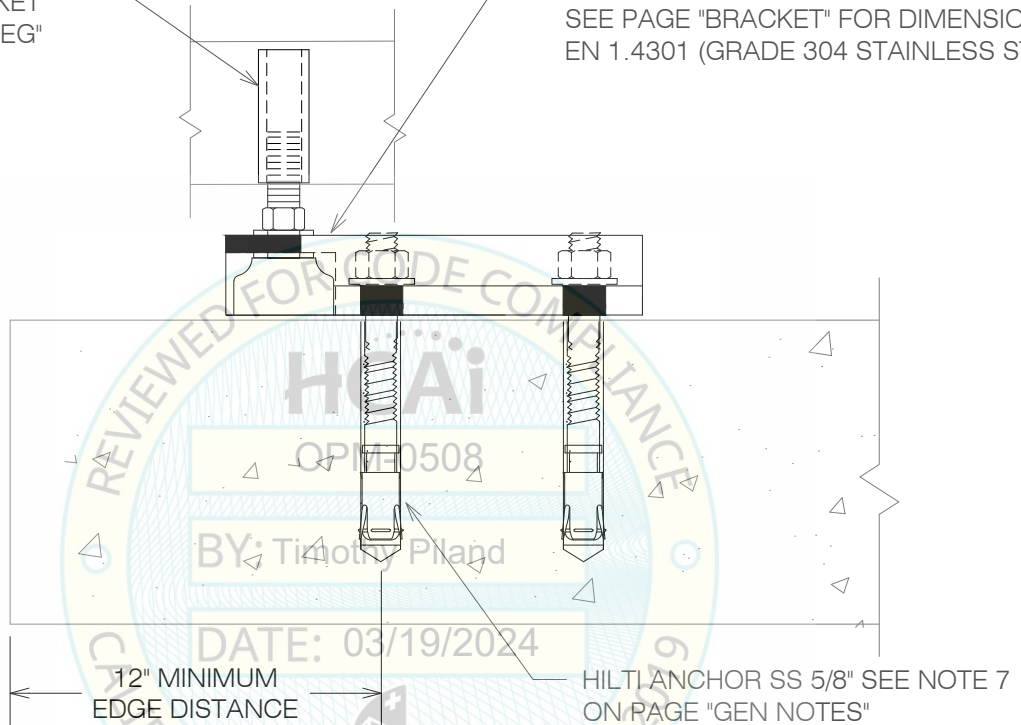
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#230860 OSHPD OPM-0508 DWG - 3

ADJUSTABLE LEG
AND SOCKET
SEE PAGE "ADJ LEG"

BRACKET BY BELIMED WHERE SHOWN
SEE LAYOUT PLANS
SEE PAGE "BRACKET" FOR DIMENSIONS
EN 1.4301 (GRADE 304 STAINLESS STEEL)



OPM-0508 BELIMED WD 290 IQ STERILIZER
ATTACHMENT DETAILS AT SLAB-ON-GRADE



TOTAL SUPPORT

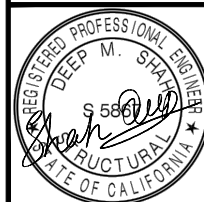
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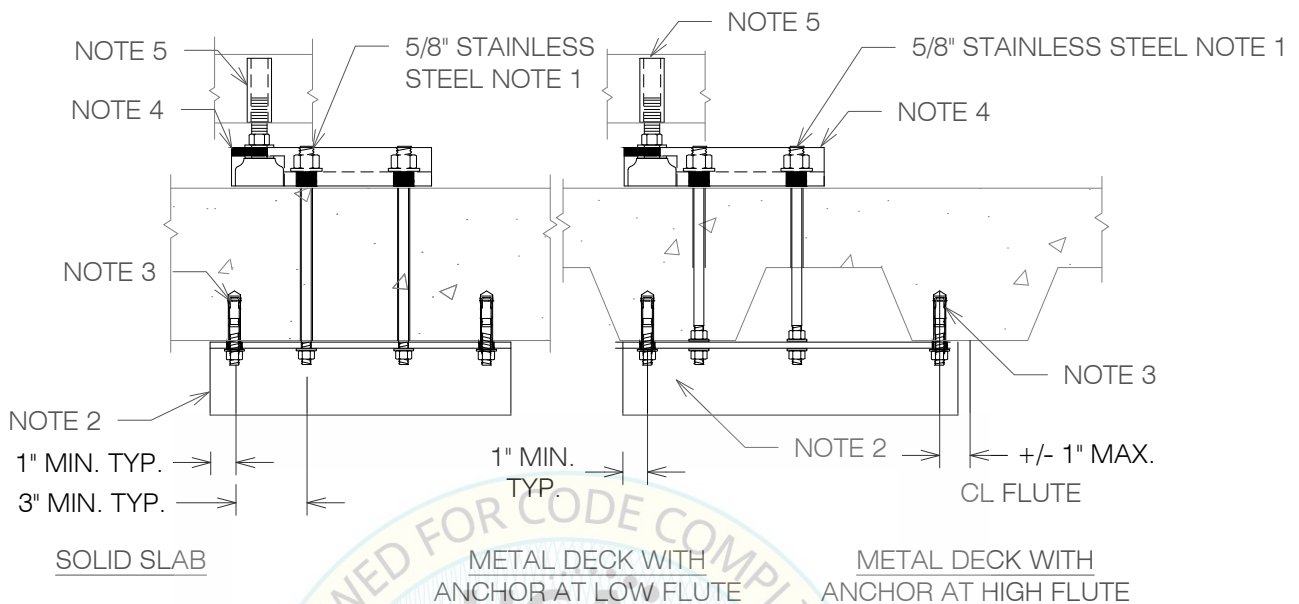


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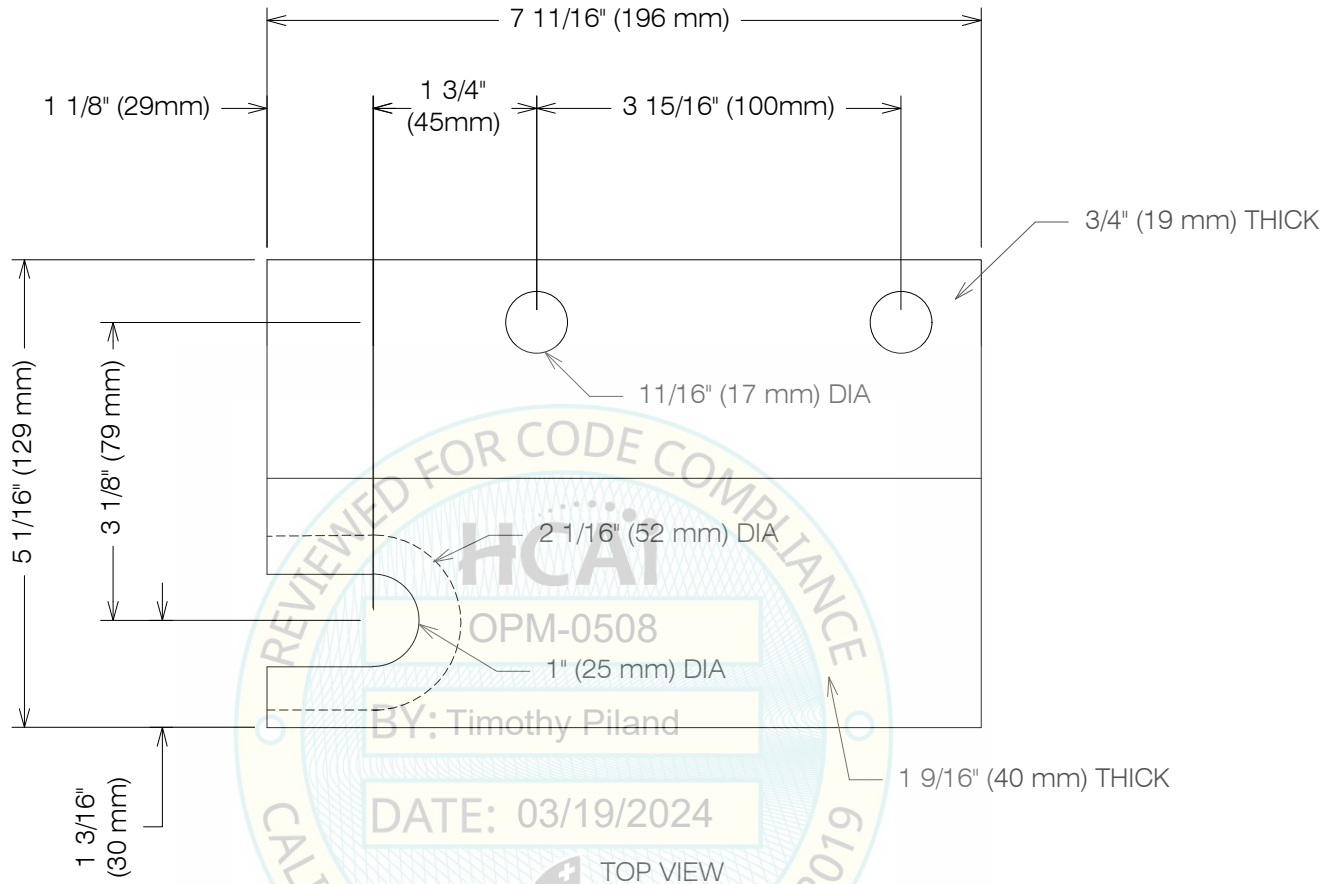
1. DRILL 11/16" HOLE IN THE CONCRETE SLAB TO RECEIVE THE 5/8" ASTM F593 CW1 (Fy = 65 KSI) 304 STAINLESS STEEL RODS WITH MATCHING WASHERS AND NUTS.
2. SUPPLEMENTAL ANGLE SHALL BE L3x3x1/4 ASTM A36. DRILL 11/16" HOLES IN ANGLE FOR EQUIPMENT ATTACHMENT BOLTS. FOR LOCATIONS WHERE A TOP NUT CANNOT BE INSTALLED, DRILL AND TAP THE ANGLE TO RECEIVE THE 5/8" ASTM F593 CW1 (Fy = 65 KSI) EQUIPMENT ATTACHMENT BOLT.
3. ANCHOR INTO BOTTOM OF SLAB SHALL BE HILTI KWIK BOLT (TZ2) 1/2", SEE NOTE 7 ON PAGE "GEN NOTES".
4. BRACKET BY BELIMED WHERE SHOWN SEE LAYOUT PLANS SEE PAGE "BRACKET" FOR DIMENSIONS EN 1.4301 (GRADE 304 STAINLESS STEEL)
5. ADJUSTABLE LEG AND SOCKET, SEE PAGE "ADJ LEG".

OPM-0508 BELIMED WD 290 IQ
ATTACHMENT DETAILS AT ELEVATED SLABS

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#230860 OSHPD OPM-0508 DWG - 5

SEE PAGE "ANC LAYOUT"
FOR BRACKET LOCATIONS



TOP VIEW

BELIMED PART NO. 1045234 (AS SHOWN) AND 1045238 (OPP. HAND)
EN 1.4301 STAINLESS STEEL (Fy = 30.5 KSI)

OPM-0508 BELIMED WD 290 IQ STERILIZER BRACKET



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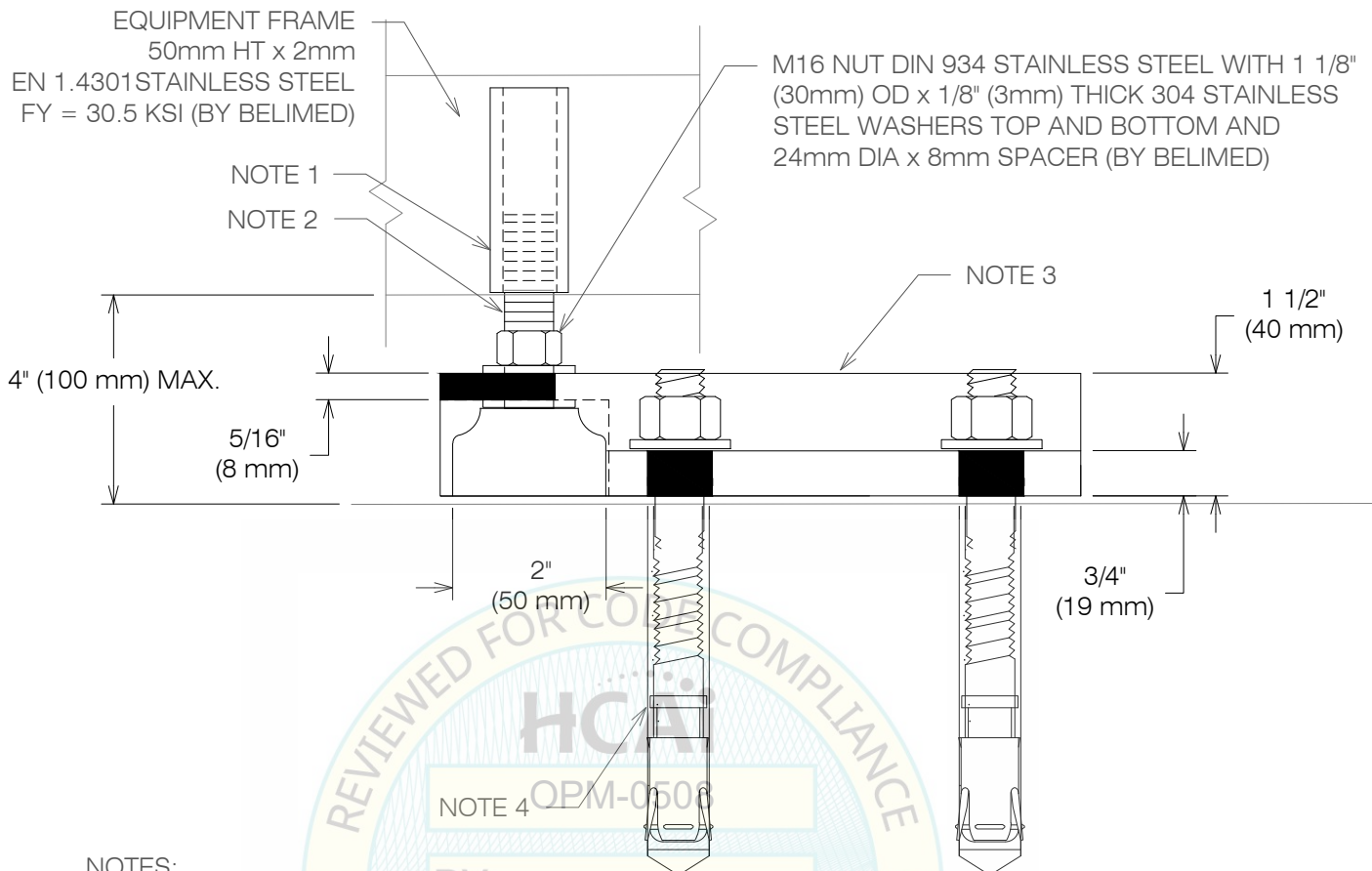
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#230860 OSHPD OPM-0508 DWG - 6



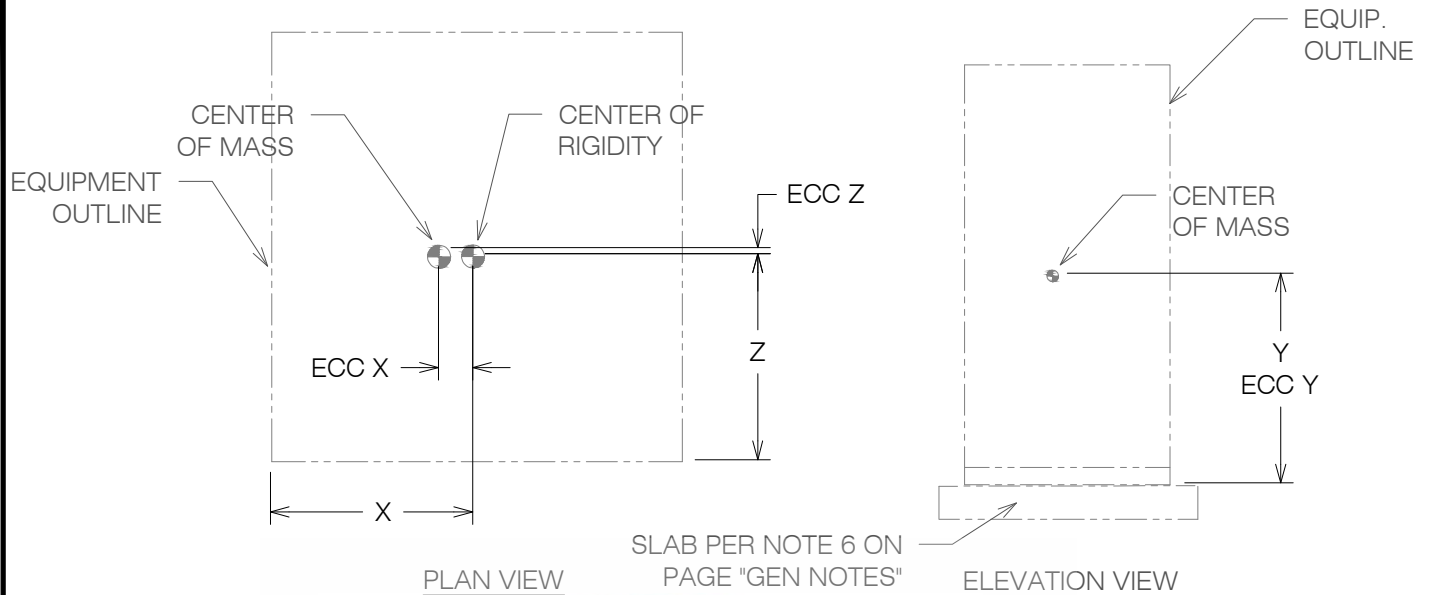
NOTES:

1. SOCKET BY BELIMED, PART NO. 70428 EN 1.4301 304 STAINLESS STEEL (FY = 30.5 KSI), 25 mm DIA. x 70 mm LONG.
2. ADJUSTABLE LEG BY BELIMED, PART NO. 1045834, EN 1.4301 M16 (16 mm) Fy = 30.5 KSI THREADED ROD AND BLACK POLYAMIDE MATERIAL BASE; FULL THREAD ENGAGEMENT INTO UNIT.
3. ATTACHMENT BRACKET BY BELIMED - SEE PAGE "BRACKET".
4. FASTENER - SEE PAGES "GRADE" OR THRU BOLTS SEE PAGE "ELEVATED".

OPM-0508 BELIMED WD 290 IQ
ADJUSTABLE LEG DETAILS

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#230860 OSHPD OPM-0508 DWG - 7



EQUIPMENT WEIGHTS AND DIMENSIONS				
Model and Weight		Center of Mass		
Tag No.	Weight lbs	X in	Y in	Z in
ED 290 IQ W/O CONSTRUCTIONS	1466	17.4	36.1	17.7
ED 290 IQ WITH CONSTRUCTIONS	1845	17.6	44.2	17.7

EQUIPMENT ECCENTRICITIES AND FORCES PER LEG							
Model and Weight		Eccentricities			Forces at Grade		Forces at Elevated
Tag No.		ex - in	ey - in	ez - in	Vu Lbs.	Tu Lbs.	Vu Lbs.
ED 290 IQ W/O CONSTRUCTIONS		2.93	36.8	0.02	664	907	1770
ED 290 IQ WITH CONSTRUCTIONS		3.13	42.4	0.02	836	1465	2228

1. WEIGHTS AND MOMENTS ARE FACTORED LOADS USING STRENGTH DESIGN AND INCLUDE THE FOLLOWING FACTORS: DL = 0.9, FpH AT GRADE = 0.79 AND FpH ELEVATED = 2.10 AND FpV = 0.35.
2. TABULATED FORCES ARE PER LEG AT STRENGTH DESIGN LEVEL. FOR ANCHOR DESIGN A SHEAR AND TENSION OVERSTRENGTH FACTOR $\Omega = 1.5$ IS USED. FOR THROUGH BOLTS ON ELEVATED SLABS A TENSION OVERSTRENGTH FACTOR OF 1.0 IS USED.

OPM-0508 BELIMED WD 290 IQ STERILIZER DIMENSIONS AND ANCHORAGE FORCES



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