



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0388-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [] New [X] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: Skytron LLC.

Manufacturer's Technical Representative: Bob Vreeland

Mailing Address: Skytron US, 5085 Corporate Exchange Blvd SE, Grand Rapids, MI 49512

Telephone: (616) 656-1189 Email: bvreeland@skytron.us

Product Information

Product Name: Skytron Sterling Washers

Product Type: Hospital washer

Product Model Number: P1500-208E, P1500-208S, P1500-480E, P1500-480S

General Description: Skytron Sterling Washers are designed for the low to intermediate level thermal disinfection of reusable surgical devices.

Applicant Information

Applicant Company Name: ISAT Seismic Bracing

Contact Person: William V Joerger

Mailing Address: 1020 Crews Road, Suite Q, Matthews NC 28105

Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: [Signature] Date: 09/15/2017

Title: Principal Structural Engineer Company Name: ISAT Seismic Bracing

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





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FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations

Company Name: ISAT Seismic Bracing

Name: William V Joerger California License Number: S4545

Mailing Address: 1020 Crews Rd, Matthews NC 28105

Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- Special Seismic Certification is not preapproved

Certification Method(s)

- Testing in accordance with: ICC-ES AC156 FM 1950-16
- Other* (Please Specify): _____

Equipment is considered to be rugged. OPM is for anchorage to concrete slabs.

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 may be used when approved by OSHPD prior to testing.

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

DATE: 02/15/2018

List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
- Other(s) (Please Specify): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature:  Date: 02-15-2018

Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable): _____

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INTERNATIONAL SEISMIC APPLICATION TECHNOLOGY

A Division of Tomarco Contractor Specialties

Submittal Documents

OPM-0388-13

OSHPD OPM-0388-13

SUPPORT AND ATTACHMENT CONSTRUCTION DRAWINGS SKYTRON STERLING WASHERS

SKYTRON, LLC

ISAT
1020 Crews Road Suite Q
Matthews, N.C. 28105
704-841-4080



FILE NO.: CLT-0716-095

"Empowered by Experience"

REV 1

OSHPD OPM-0388-13 CONST DWG - i

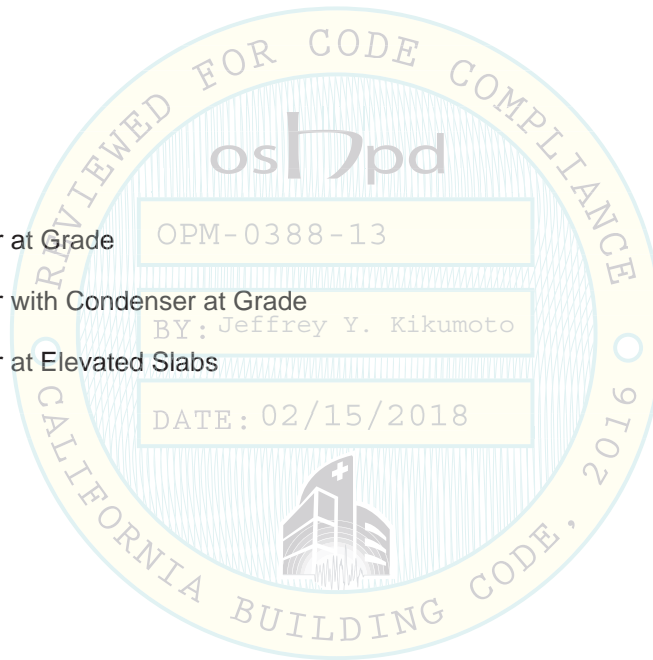


OSHPD OPM-0388-13

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OSHDP OPM-0388-13

MANUFACTURE: SKYTRON

EQUIPMENT TYPE: WASHERS

GENERAL NOTES:

1. THIS OSHDP PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2013. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2013.
2. SEISMIC CRITERIA USED: $S_{DS} = 2.5$ $I_p = 1.5$ $a_p = 1.0$ $R_p = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0$ $F_pH = 1.13$ AND FOR $z/h \leq 1.0$ $F_pH = 3.00$ AND $F_pV = 0.50$.
3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-10 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $\Omega_0 = 1.5$ IS USED FOR CONCRETE MATERIALS PER ASCE 7-10 SUPPLEMENT 1 TABLE 13.6-1. LOADS SHOWN ARE STRENGTH DESIGN LOADS PER CBC 2013 SECTION 1909A.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: ANGLES ASTM A36, ALL THREAD ROD ASTM F1554 GRADE36 ($F_u = 58$ KSI). BOLTS SUPPLIED BY SKYTRON ARE CLASS 12.9 CAP SCREWS ($F_u = 1100$ MPa).
6. CONCRETE SLABS:
 - a. FOR ELEVATED SOLID CONCRETE SLABS: 6" THICKNESS OF NORMAL WEIGHT CONCRETE WITH 3000 PSI MINIMUM STRENGTH.
 - b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAGE MINIMUM, 4 1/2 INCH MINIMUM BOTTOM FLUTE WIDTH AND 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 TZ (ESR-1917) STAINLESS STEEL 5/8" DIAMETER x 4 3/4" MIN. HOLE DEPTH (4" EFFECTIVE EMBEDMENT) AND 60 FT-LBS INSTALLATION TORQUE (SUPPLIED BY INSTALLATION CONTRACTOR).
8. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS.

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.
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 2013 AND WITH THE OPM-0388-13 DETAILS INCLUDING MATERIALS AND DIMENSIONS OF THE SUPPORT WHERE THE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN.
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 THESE DETAILS.

OPM-0388-13 SKYTRON STERLING P1500 WASHERS GENERAL NOTES
MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S



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 International Seismic Application Technology**
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SCALE N.T.S.	PAGE GEN NOTES

OSHPD OPM-0388-13

MANUFACTURE: SKYTRON
EQUIPMENT TYPE: WASHERS

ATTACHMENT NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2013. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2013.
2. PERIODIC SPECIAL INSPECTION PER CBC 2013 SECTION 1705A AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. IN ADDITION, FOLLOW THE PROVISIONS OF THE 2013 CALIFORNIA BUILDING CODE SECTION 1913A.7.2 BY CONFIRMING THE INSTALLATION TORQUE SPECIFIED BY THE MANUFACTURER. TESTING IS NOT TO OCCUR UNTIL A MINIMUM OF 24 HOURS HAS ELAPSED AFTER THE INSTALLATION OF THE SUBJECT ANCHORS. TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. USING A CALIBRATED TORQUE WRENCH VERIFY THE INSTALLATION TORQUE IS OBTAINED WITHIN 1/2 TURN OF THE NUT. REPORT OF TEST RESULTS ARE TO BE SUBMITTED TO THE ENFORCEMENT AGENCY. THE SEOR SHALL PROVIDE REMEDIAL ANCHORAGE DETAILS IN THE EVENT THAT AN ANCHOR FAILS TO MEET THE TEST REQUIREMENTS.
3. STRENGTH DESIGN WAS USED FOR ANCHOR FORCE CALCULATIONS INCLUDING ϕ_0 PER ACI 318-11 WHERE REQUIRED FOR ATTACHMENT TO CONCRETE.

Equipment Data			Seismic Design Forces at Grade			Seismic Design Forces at Elevated		
Model Series	Weight	ex (in)	ey (in)	ez (in)	Vu (lbs.)	Tu (lbs.)	Vu (lbs.)	Tu (lbs.)
1500	1500	0.00	0.125	0.44	420	2,980	1,130	5,830

1. WEIGHTS AND MOMENTS ARE FACTORED LOADS USING STRENGTH DESIGN AND INCLUDE THE FOLLOWING FACTORS: DL = 0.9, FpH AT GRADE = 1.13, FpH ELEVATED = 3.0 AND FpV = 0.5.
2. FORCES ARE AT STRENGTH DESIGN LEVEL AND INCLUDE A CONCRETE OVERSTRENGTH FACTOR $\phi_0 = 1.5$.

MODEL NUMBERS INCLUDED IN THIS OPM:

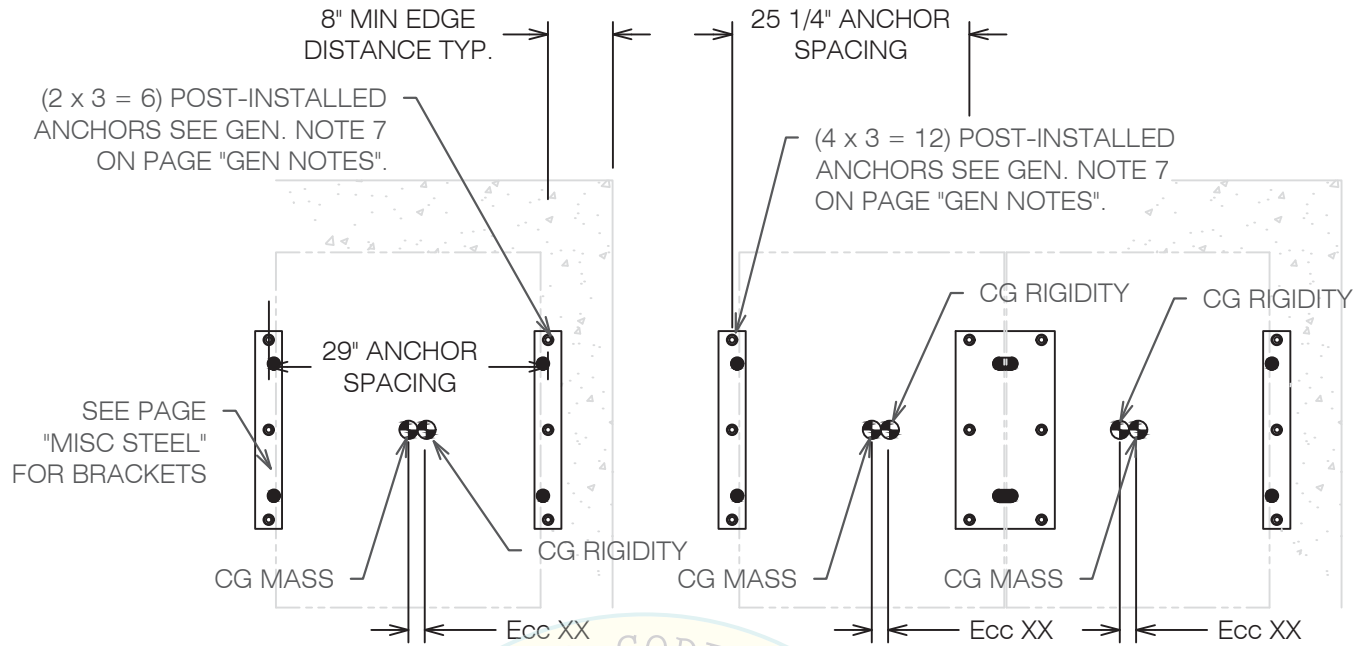
P1500-208E P1500-208S P1500-480E P1500-480S

OPM-0388-13 SKYTRON STERLING WASHERS ATTACHMENT NOTES
MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S



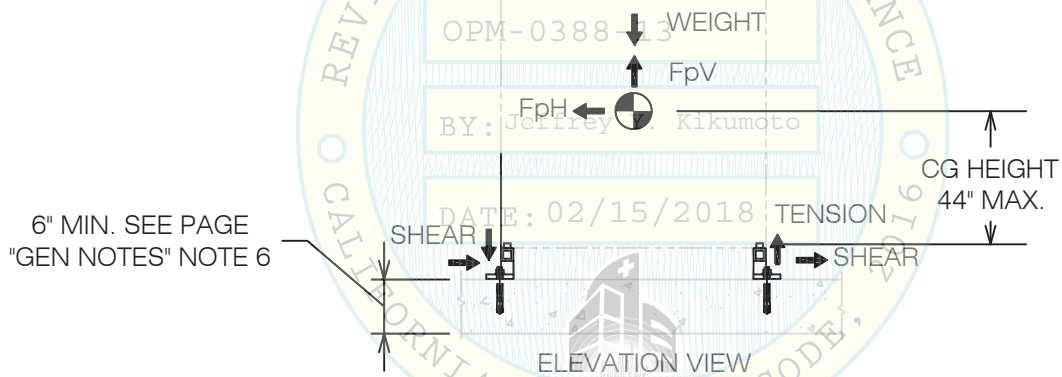
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ATTACHMENT PLAN VIEW
SINGLE WASHER

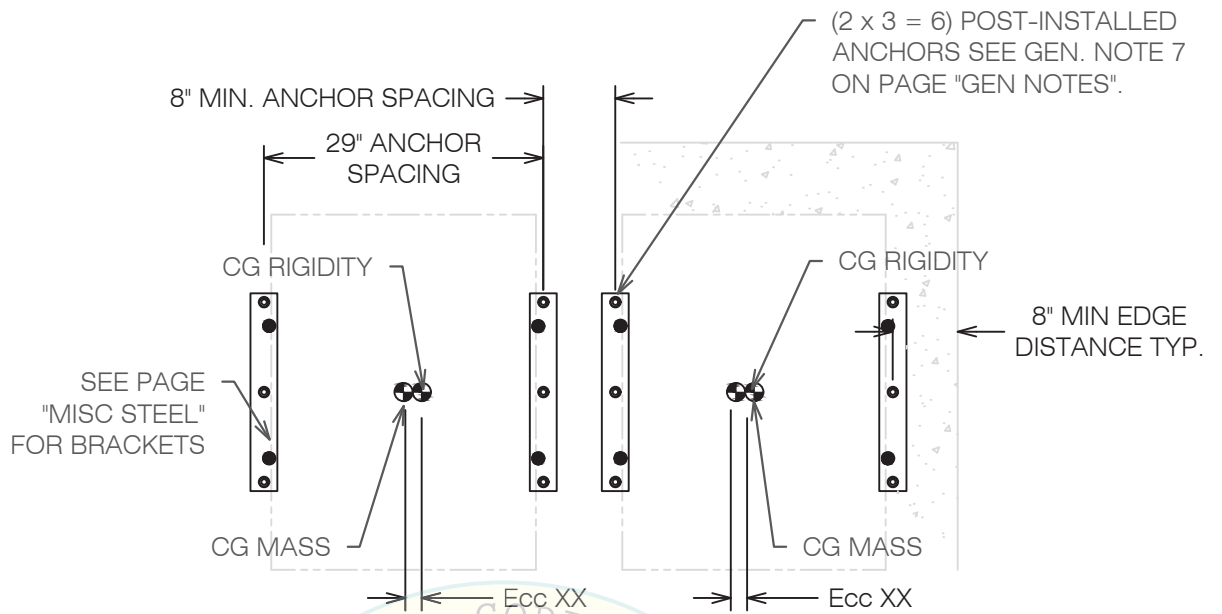
ATTACHMENT PLAN VIEW
SIDE-BY-SIDE WASHERS



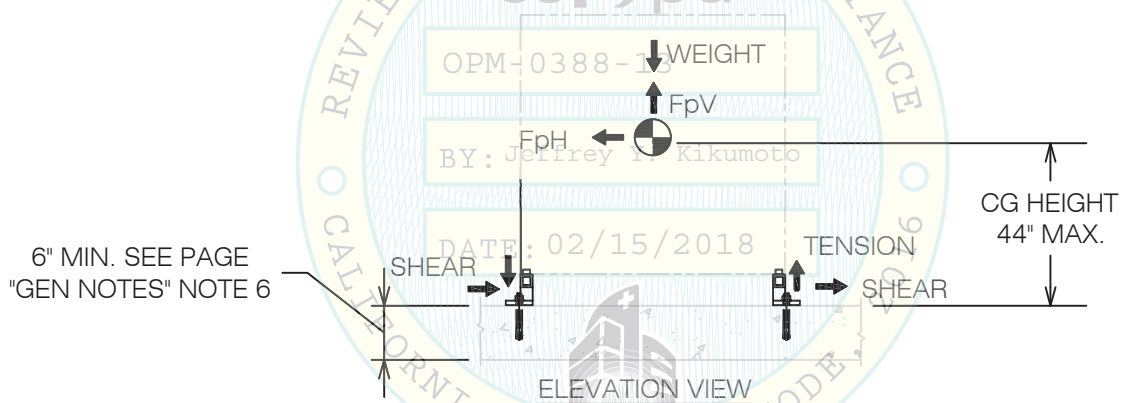
OPM-0388-13 STERLING WASHER AT SLAB ON GRADE
MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S

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ATTACHMENT PLAN VIEW SIDE-BY-SIDE WASHERS WITH CONDENSER

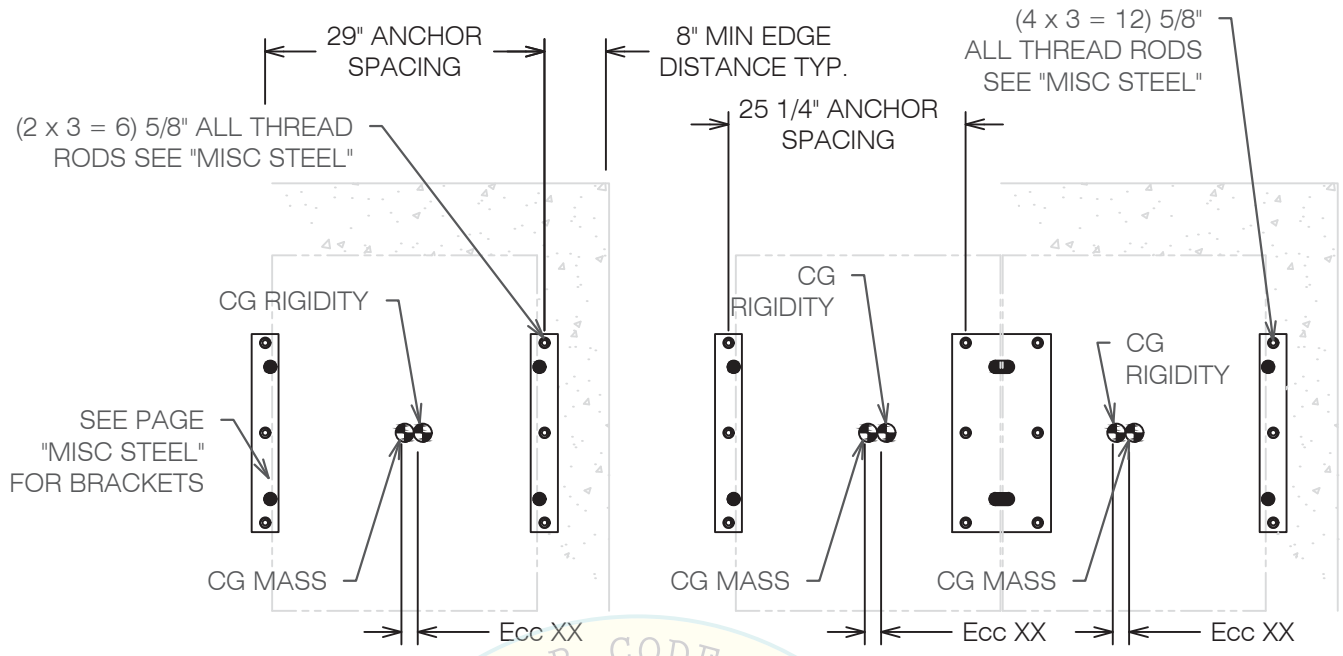


OPM-0388-13 STERLING DUAL WASHER WITH CONDENSER AT SLAB ON GRADE
 MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S



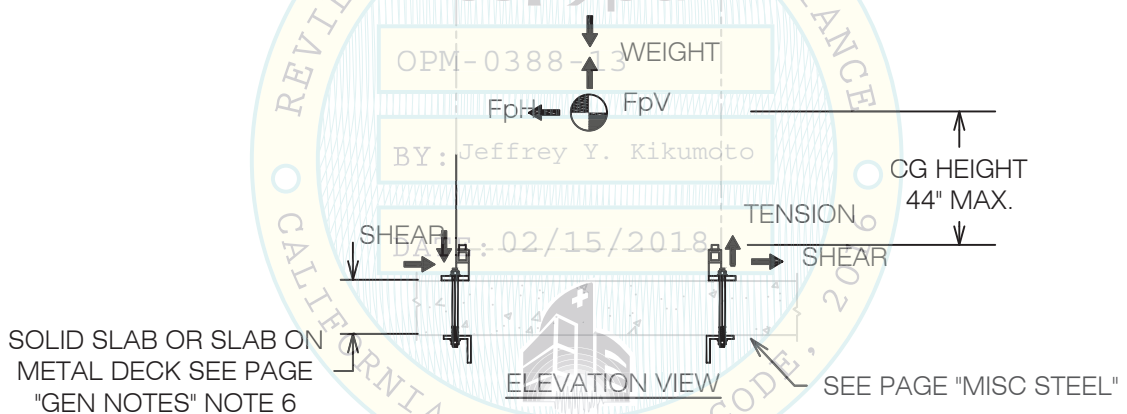
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ATTACHMENT PLAN VIEW
SINGLE WASHER

ATTACHMENT PLAN VIEW
SIDE-BY-SIDE WASHERS

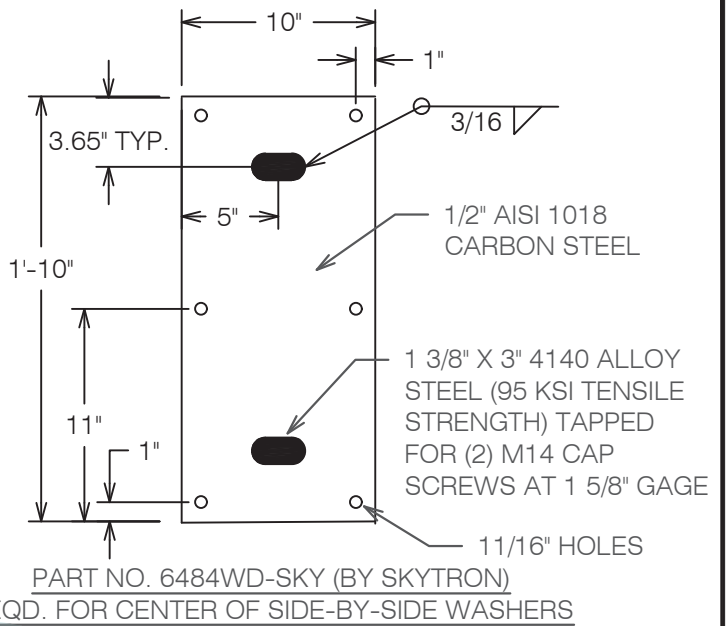
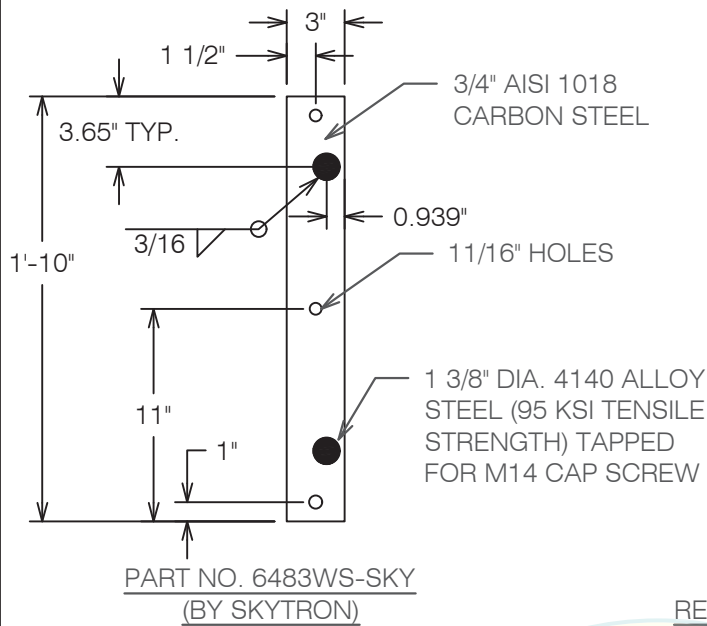


OPM-0388-13 STERLING WASHER AT ELEVATED SLAB
MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S

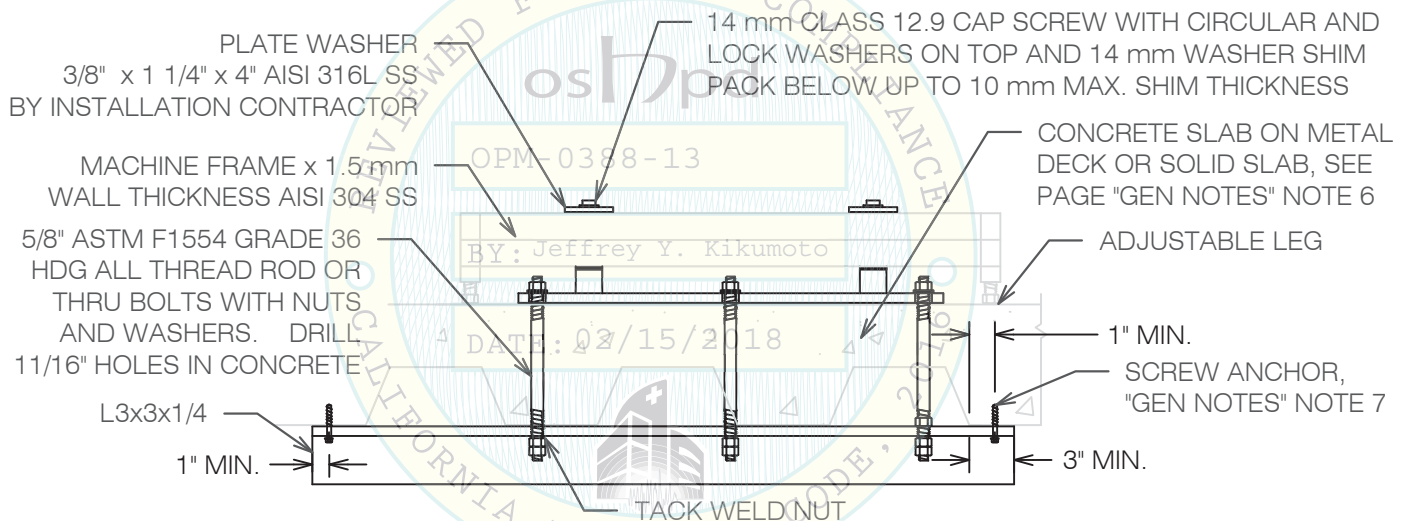


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DETAIL OF ATTACHMENT BRACKETS PROVIDED BY SKYTRON



OPM-0388-13 STERLING WASHER MISCELLANEOUS STEEL
MODELS P1500-208E, P1500-208S, P1500-480E, P1500-480S



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