GENERAL NOTES:
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK AND SHALL NOTIFY AOstructures, INC - STRUCTURAL ENGINEERS, (AOstructures, INC) OF ANY DISCREPANCIES.
2. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF AOstructures, INC BEFORE PROCEEDING WITH WORK SO INVOLVED.
3. RESOLVE ANY CONFLICTS ON THE DRAWINGS WITH AOstructures, INC BEFORE PROCEEDING WITH CONSTRUCTION ALL MATERIAL AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 IBC AND ASCE 7-05.
4. PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS (ICC REPORTS) AND A LIST OF ALL.
5. PROPOSED SUBSTITUTIONS TO AOstructure, INC FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION AND/OR INSTALLATION.
6. NEITHER THE OWNER NOR AOstructures, INC WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THECONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTUCTION. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. IF A LAWSUIT IS FILED BY ONE OF THE CONTRACTOR'S OR SUBCONTRACTOR'S EMPLOYEES, OR ANY ONE ELSE, THE CONTRACTOR WILL INDEMNIFY, DEFEND AND HOLD THE OWNER AND AOstructure, INC HARMLESS OF ANY AND ALL SUCH CLAIMS.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT ALL STRUCTURAL ELEMENTS AND MEMBERS (I.E. ROOF, SLAB, COLUMNS ETC.) ARE ADEQUATELY BRACED DURING CONSTRUCTION. BRACING OF SUCH ELEMENTS AND MEMBERS SHALL REMAIN IN PLACE UNTIL THEY ARE PROPERLY SECURED.
8. CONSTRUCTION MATERIAL SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
9. SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD NOTES ON THIS SHEET. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
10. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF THE UTILITY SERVICE IN THE AREA TO BE EXCAVATED PRIOR TO BEGINNING EXCAVATION.
11. NO PIPES, DUCTS, SLEEVES, CHASE ETC., SHALL BE PLACED IN SLABS, BEAMS, COLUMNS, WALLS, ETC., UNLESSSPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

STRUCTURAL STEEL NOTES:
1. DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AISC MANUAL OF STEEL CONSTRUCTION, 14TH EDITION, AISC 360-10, AISC 341-10 AND AISC 358-10.
2. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.
3. SUBMIT STEEL SHOP DRAWINGS TO AOstructure, INC FOR REVIEW PRIOR TO FABRICATION.
4. STRUCTURAL STEEL GRADES (U.N.O):
   SHAPES AND PLATES ASTM A36 (Fy=36 KSI)
   STRUCTURAL TUBING ASTM A500, GRADE B (Fy=42 KSI)
   STEEL PIPES ASTM A53 TYPE E OR S, GRADE B (Fy=35 KSI)
   WIDE FLANGE BEAMS & COLUMNS ASTM A992, GRADE 50 (Fy=50 KSI)
   ANCHOR BOLTS & NUTS BOLT: ASTM F1554 GRADE 36; NUT: ASTM 563A HEX
   MACHINE BOLTS & NUTS (QuadPod) BOLT: GRADE 8; NUT: ASTM 563A HEX
   MACHINE BOLTS & NUTS (CASSETTE BM) BOLT: GRADE 5; NUT: ASTM 563A HEX
   HIGH STRENGTH BOLTS & NUTS BOLT: ASTM A325 TYPE 1 OR 3; NUT: ASTM 563DH HEX
   WELDED HEADED STUDS ASTM A108
1. ALL BOLTS SHALL BE MACHINE BOLTS UNLESS OTHERWISE NOTED.
2. ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION", 14TH EDITION.
3. PLACE NON-FERROUS, NON-SHRINK GROUT (BURKE OR APPROVED EQUAL) UNDER ALL BASE PLATES BEFORE ADDING VERTICAL LOAD.
4. WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION", AMERICAN WELDING SOCIETY, AND THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". E70XX ELECTRODES SHALL BE USED UNLESS OTHERWISE NOTED. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS AND ALSO HAVE CITY OF PORTLAND CERTIFICATION. ALL GROOVE OR BUTTWELDS SHALL BE COMPLETE PENETRATION WELDS. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
5. SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS. WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS REQUIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON THE DRAWINGS.

SPECIAL INSPECTION/ INSPECTOR REQUIREMENTS (CHAPTER 17, 2014 OSSC):
1. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER PER SECTION 1704.2 OF THE 2014 OSSC.
2. THE REPORT(S) PREPARED BY THE SPECIAL INSPECTOR SHALL BE SIGNED BY A LICENSED OREGON CIVIL ENGINEER AND SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND AOstructure, INC.
3. THE SPECIAL INSPECTION SHALL BE CONTINUOUS DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED.
4. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE BUILDING OFFICIAL TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED.

SUMMARY OF STRUCTURAL CONTINUOUS AND PERIODIC SPECIAL INSPECTION:
1. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE BUILDING OFFICIAL. SPECIALLY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL AND THE SPECIAL INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INFORM THE SPECIAL INSPECTION AGENCY AT LEAST 24 HOURS PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.

SPECIAL INSPECTIONS

		REQ'D IF FILLED
1.	CONCRETE (IBC 1705.3): DURING THE TAKING OF TEST SPECIMENS AND PLACING OF REINFORCED CONCRETE.	
2.	BOLTS INSTALLED IN CONCRETE (IBC 1705.3): PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS.	
3.	REINFORCING STEEL (IBC 1705.3): PRIOR TO CLOSING OF THE FORMS AND DELIVERY OF CONCRETE FOR ALL CONCRETE SPECIFIED TO HAVE SPECIAL INSPECTION.	
4.	STRUCTURAL MASONRY (IBC 1705.4 & 2105): VERIFICATION OF COMPLIANCE FOR F'M, AT THE START OF LAYING UNITS, AFTER THE PLACEMENT OF REINFORCING STEEL, GROUT SPACE PRIOR TO EACH GROUTING OPERATION, AND DURING ALL GROUTING OPERATIONS.	
5.	DIAPHRAGMS (IBC 1705.5 AND 1705.10.1): CONTINUOUS NAILING INSPECTION FOR ALL ROOF AND FLOOR DIAPHRAGMS AS NOTED ON DRAWING.	
6.	SHEAR WALLS (IBC 1705.10.1): CONTINUOUS NAILING INSPECTION FOR ALL WALLS AS NOTED ON THE SHEAR WALL SCHEDULE.	
7.	EPOXY FILLED ANCHOR BOLT HOLES: CONTINUOUS INSPECTION FOR ALL EPOXY INSTALLATION.	
8.	FOUNDATION EXCAVATIONS AND FILLS (IBC 1705.6): PERFORMED BY THE GEOTECHNICAL ENGINEER.	
9.	FIELD WELDING (IBC 1705.2): CONTINUOUS INSPECTION.	

SPECIAL STRUCTURAL OBSERVATIONS BY THE [ENGINEER] (IBC 1704.5):
1. AOstructure, INC SHALL BE NOTIFIED A MINIMUM OF 48 HOURS BEFORE OBSERVATION. DELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERING MATERIALS TO FACILITATE OBSERVATION.
2. OBSERVATIONS BY AOstructure, INC:
3. A. REINFORCEMENT BEFORE CONCRETE PLACEMENT.....
4. B. AT COMPLETION OF ROUGH FRAMING INCLUDING STRUCTURAL PANEL SHEATHING NAILING AND INSTALLATIOFRAMING HARDWARE.....
5. AOstructure, INC IS RESPONSIBLE FOR THE STRUCTURAL DESIGN (EOR) AND SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT (IBC 1704.5) THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

ABBREVIATIONS

A.B.	ANCHOR BOLT	F.O.C.	FACE OF CONCRETE	PSL	PARALLEL STRAND LUMBER
ARCH	ARCHITECTURAL	F.O.M.	FACE OF MASONRY	P.T.	PRESERVATIVE TREATED
BOT	BOTTOM	F.O.S.	FACE OF STUD	R	RADIUS
BLK'G	BLOCK(ING)	FTG	FOOTING	REINF	REINFORCEMENT
B	BEAM	GA	GAUGE	REQ'D	REQUIRED
B.O.B	BOTTOM OF BEAM	GALV	GALVANIZED	RW	RETAINING WALL
BRG	BEARING	GLB	GLU-LAMINATED BEAM	S.A.D.	SEE ARCHITECTURAL DETAILS
C.B.C.	CALIFORNIA BUILDING CODE	HDR	HEADER	SDSTS	SELF-DRILLING SELF TAPPING SCREW
C.J.	CONSTRUCTION JOINT	HORIZ	HORIZONTAL	SIM	SIMILAR
℄	CENTER LINE	INT	INTERIOR	S.N.	SHEAR NAIL
CLR	CLEARANCE	JT	JOINT	S.O.G.	SLAB ON GRADE
C.M.U.	CONCRETE MASONRY UNIT	K.P.	KING POST	SPECS	SPECIFICATION
COL.	COLUMN	LVL	LAMINATED VENEER LUMBER	SPS	STRUCTURAL PLYWOOD SHEATHING
CONC.	CONCRETE	MAX.	MAXIMUM	SQ.	SQUARE
CONN.	CONNECTION	M.B.	MACHINE BOLT	STD	STANDARD
CONT.	CONTINUOUS	MECH.	MECHANICAL	S.W.	SHEAR WALL
DBL	DOUBLE	MIN.	MINIMUM	T&B	TOP & BOTTOM
DF	DOUGLAS FIR/LARCH	M.I.W.	MALLEABLE IRON WASHER	T&G	TONGUE & GROOVE
DIA.	DIAMETER	MISC.	MISCELLANEOUS	T.N.	TOENAIL
D.O.	DITTO (REPEAT)	MNFR	MANUFACTURER	T.O.W.	TOP OF WALL
(E)	EXISTING	N/A	NOT APPLICABLE	TYP	TYPICAL
EA.	EACH	N.I.C.	NOT IN CONTRACT	U.B.C.	UNIFORM BUILDING CODE
ELEV.	ELEVATION	NO	NUMBER	U.O.N.	UNLESS OTHERWISE NOTED
EMBED	EMBEDMENT	N.T.S.	NOT TO SCALE	VERT	VERTICAL
EN	EDGE NAIL	O/	OVER	W/	WITH
EQ	EQUAL OR EQUIVALENT	O.C.	ON CENTER	W/O	WITH OUT
EXP	EXPANSION	O.D.	OUTSIDE DIAMETER	W.P.	WATERPROOF OR WORK POINT
EXT	EXTERIOR	OPP	OPPOSITE	WTS	WELDED THREADED STUD
FNDN	FOUNDATION	PL	PLATE	W.W.F.	WELDED WIRE FABRIC
F.F.	FINISHED FLOOR	PLYWD	PLYWOOD		

LOCATION

ADDRESS	PARKING DECK CANOPY 425 FORE ST, PORTLAND, ME 04101
COORDINATES	43°39'22.4"N 70°15'14.6"W
CLIENT CONTACT	

GOVERNING CODES

BUILDING	2009 INTERNATIONAL BUILDING CODE WITH ME AMENDMENTS
ELECTRICAL	
STRUCTURAL	ASCE 7-05
LOCAL	

LOADING REQUIREMENTS

EXPOSURE CATEGORY	C	
WIND LOAD	99	MPH
SNOW LOAD	50	PSF
SEISMIC SDS	0.26	G
DEAD LOAD	6.5	PSF

PROJECT QUADPOD SPECIFICATIONS

NUMBER OF QUADPODS	7	TRUSSES
AZIMUTH	150.00°	DEGREES
TILT	5.00°	DEGREES
QUADPOD TRUSS LENGTH	106' - 0"	FEET
QUADPOD CONFIGURATION	6 QUADPODS - 5 HIGH MODULES/CASSETTE - QP 85	
	1 QUADPOD - 4 HIGH MODULES/CASSETTE - QP 68	
SUB-STRUCTURE TYPE	TRIANGULATED FOUNDATION I-BEAMS	
MODULE BRAND	REC	
MODULE PART NUMBER	REC335TP72 XV	
MODULE TYPE	335	WATTS
MODULE WEIGHT	61.8	LBS
TOTAL MODULE COUNT	578	MODULES
STRING LENGTH	17	MODULES
STRING POWER	6365	WATTS
TOTAL MODULE WEIGHT	5253	LBS
TOTAL QUADPOD WEIGHT	7000	LBS
TOTAL SYSTEM WEIGHT	12253	LBS

NOTE: SPECIFIC NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD NOTES ON THIS SHEET

Reviewed for Code Compliance
Inspection Division
Date: 05/04/17

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CLIENT:
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PORTLAND, ME 04103
(207)221-6342
joshd@ReVisonEnergy.com

FORE STREET PARKING GARAGE

PARKING DECK CANOPY
425 FORE ST,
PORTLAND, ME 04101

QUADPOD CANOPY SYSTEM
193.6 kW DC
578 PV MODULES
5.00° DEGREE TILT
150.00° DEGREE AZIMUTH

#	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	04/03/2017

KEY PLAN

STATE OF MAINE
ANDREW OESTERREICHER
No. PE15104
LICENSED PROFESSIONAL ENGINEER

SEALS

GENERAL NOTES

PROJECT NUMBER	J007
DATE	03/31/2017
DRAWN BY JK	CHECKED BY WA

X-101

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