Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201
More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 14744	**Project Address:** 1230 SW Park Ave
Hearing Date: 3/8/17	**Appellant Name:** Sara Treber
Case No.: B-001	**Appellant Phone:** 503-816-5490
Appeal Type: Building	**Plans Examiner/Inspector:** Arthur Graves, Lisa Buellesbach
Project Type: commercial	**Stories:** NA **Occupancy:** Utility **Construction Type:** II-B
Building/Business Name:	**Fire Sprinklers:** No
Appeal Involves: Addition to an existing structure	**LUR or Permit Application No.:** 17-104243- CO
Plan Submitted Option: pdf [File 1] [File 2] [File 3] [File 4]	**Proposed use:** Unmanned telecommunication facility

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	Section 2612(8)(7) of the Oregon Structural Specialty Code
Requires	Verizon Wireless intends to install an unmanned telecommunications facility to enhance their wireless cellular network. The proposed project includes the screening of proposed antennas on the rooftop of the existing building with proposed equipment in the basement. The project has completed the CUP phase and is moving into permit submittal phase. Per the antenna screening guideline provided by the City of Portland, screening utilizing FRP materials cannot exceed the maximum screen of 10'-0" above the finished roof.
Proposed Design	As per the CUP LU 16-147440 DZ, the design requirement states that the design must remain symmetrical and architecturally integrated with the rest of the building. Per the FRP screening guidelines the screening must not exceed 25% of the length of the building on the west side. Per the design review we were to install a 28' screening enclosure to meet the design standards. This puts us at 32% of the length of the building on the west side.
Reason for alternative	The proposed design meets the 10' required set back from property lines and allowable lineal and square footage allotment requirements per City screening guidelines. Proposed screen walls will not block fire access or existing venting. The roof loading has been checked and the existing structure is adequate to support the proposed loading. Proposed screen wall materials will be specified to meet or exceed LA-RR standards requirements for flammability and flame spread. In our opinion, the screen wall will meet the visual screen requirements of the CUP while maintaining the safety requirements of the screening guidelines of the City of Portland. We would like to request pre-permit approval for design purposed to the approval of the proposed finished screen wall with a length of 32% of the overall building length on the West side.

Appeal item 2

Code Section	Section 2612(8)(7) of the Oregon Structural Specialty Code
Requires	Verizon Wireless intends to install an unmanned telecommunications facility to enhance their wireless cellular network. The proposed project includes the screening of proposed antennas on the rooftop of the existing building with proposed equipment in the basement. The project has completed the CUP phase and is moving into permit submittal phase. Per the antenna screening guideline provided by the City of Portland, screening utilizing FRP materials cannot exceed the maximum screen of 10'-0" above the finished roof.
Proposed Design	As per the CUP LU 16-147440 DZ, the design requirement states the top of the screening shall be equal to the existing elevator penthouse in order to provide symmetrical views from the East and West. The existing elevator penthouse is 12' 9" above the existing finished roof. The finished height of the proposed screening is required to be 12' 9" in order to match the existing elevator penthouse structure. Per the attached cross section of the proposed screen wall design, the FRP screen face material will be 12' 6" in vertical height but will be finished out at 12' 9" above the existing roof deck. A 3" gap at the base of the screen structure will allow for storm water to drain and organized passage of cabling under the screen while the existing parapet beyond will provide the additional visual screening of the antennas.
Reason for alternative	The proposed design meets the 10' required set back from property lines and allowable lineal and square footage allotment requirements per City screening guidelines. Proposed screen walls will not block fire access or existing venting. The roof loading has been checked and the existing structure is adequate to support the proposed loading. Proposed screen wall materials will be specified to meet or exceed LA-RR standards requirements for flammability and flame spread. In our opinion, the screen wall will meet the visual screen requirements of the CUP while maintaining the safety requirements of the screening guidelines of the City of Portland. We would like to request pre-permit approval for design purposed to the approval of the proposed finished screen wall approximately 12' 9" above the existing finished roof.

APPEAL DECISION

1. FRP screening width exceeding 25% of the building's wall length: Denied. Extent of enclosure exceeds intent for limited use of FRP material.

2. FRP screening exceeding 10' height: Granted as proposed at 12'-6" on small shrouds.

Appellant may contact Lisa Buellesbach (503-823-7704) with questions.

For the item granted, the Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

50 116th Ave SE, Bellevue, WA 98004

02.27.2017

APPEALS
Bureau of Development Services
1900 SW 4th Ave Suite 5000
Portland, OR 97201

Project Name: Verizon Wireless – POR Skidmore (CUP LU 16-147440 DZ)
Project Address: 1200 SW Park Ave, Portland, OR 97205

Verizon Wireless intend to install an unmanned telecommunications facility to enhance their wireless cellular network. The proposed project noted above includes the screening of proposed antennas mounted on side if existing building with proposed equipment mounted on rooftop.

This project has completed the CUP phase and is currently in the permit submittal phase. Per the FRP screening guideline provided by the city of Portland, screening utilizing FRP materials cannot exceed the maximum screen of 10'-0" above the finished roof.

As per the CUP LU 16-147440 DZ, the design was allowed to install a 12'-6" FRP enclosure on the roof top as long as it was architecturally integrated into the existing building. The new FRP enclosures are to be flush with the existing height of the penthouse.

Per the FRP screening guideline regarding the calculation of length of side of screen not exceeding 25% of length of the building on the west side.

As per the CUP LU 16-147440 DZ, The design was also allowed to install a 28'-0" screening enclosure that is mounted on the west side of existing roof top, as long as it was architecturally integrated with the existing penthouse. The new length will be at 32%.

This design has been approved for zoning. However, the structural review was not aware of this approval. We would like to request that the height and length restriction be waived as long as the exterior design meets the architectural design of the building.

Sincerely,

Paul Danneberg
A&E Program Manager

811 Know what's **below.** **Call 811** before you dig.

AT LEAST THREE WORKING DAYS BEFORE DIGGING

verizon

POR OREGONIAN

1230 SW PARK AVE and 1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

PROJECT TEAM

PLANNING

COMPANY:	SMARTLINK, LLC
ADDRESS:	621 SW ALDER #660
CITY, STATE, ZIP:	PORTLAND, OR 97205
CONTACT:	AMANDA HOFFMAN
PHONE:	(503) 476-4883
E-MAIL:	amanda.hoffman@smartlinkllc.com

SITE AQUISITION

COMPANY:	SMARTLINK, LLC
ADDRESS:	621 SW ALDER #660
CITY, STATE, ZIP:	PORTLAND, OR 97205
CONTACT:	GERMAINE BAZAN
PHONE:	(503) 522-0050
E-MAIL:	germaine.bazan@smartlinkllc.com

PROFESSIONAL OF RECORD

ENGINEER:	CHRIS WARREN (P.E.)
COMPANY:	INFINIGY, LLC
ADDRESS:	50 116TH AVE. SE, SUITE 210
CITY, STATE, ZIP:	BELLEVUE, WA 98004
CONTACT:	PAUL DANNEBERG
PHONE:	(206) 375-3798
E-MAIL:	pdanneberg@infinigy.com

PROJECT SURVEYOR

COMPANY:	AMBIT CONSULTING
ADDRESS:	245 ST HELENS AVE, SUITE 3A,
CITY, STATE, ZIP:	TACOMA, WA 98402-2519
CONTACT:	SCEAN RIPLEY
PHONE:	(253) 314-2452
E-MAIL:	sceanripley@ambitconsulting.us

SIGNATURE BLOCK

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

DISCIPLINE:	SIGNATURE:	DATE:
SITE ACQUISITION MANAGER:		
CONSTRUCTION MANAGER:		
RF ENGINEER:		

PROJECT SUMMARY

LESSEE

COMPANY:	VERIZON WIRELESS
ADDRESS:	5430 NE 122ND AVE
CITY, STATE, ZIP:	PORTLAND, OR 97230
CONTACT:	NOAH GRODZIN
EMAIL:	noah.grodzin@verizonwireless.com

APPLICANT'S REPRESENTATIVE

COMPANY:	SMARTLINK, LLC
ADDRESS:	621 SW ALDER #660
CITY, STATE, ZIP:	PORTLAND, OR 97205
CONTACT:	AMANDA HOFFMAN
PHONE:	(503) 476-4883
E-MAIL:	amanda.hoffman@smartlinkllc.com

PROPERTY OWNER:

NAME:	OREGON HISTORICAL SOCIETY
ADDRESS:	1230 SW PARK AVE
CITY, STATE, ZIP:	PORTLAND, OR 97205
CONTACT:	LISA NOAH
PHONE:	(503) 306-5225
E-MAIL:	lisa.noah@ohs.org

CONSTRUCTION MANAGER

COMPANY:	VERZON WIRELESS
ADDRESS:	5430 NE 122ND AVE
CITY, STATE, ZIP:	PORTLAND, OR 97230
CONTACT:	JASON FALLAU
PHONE:	(541) 981-3542
E-MAIL:	jason.fallau@verizonwireless.com

PROPERTY INFORMATION:

LEGAL DESCRIPTION:	SEE LS-1
APN #:	R246416 AND R246417
COUNTY:	MULTNOMAH
JURISDICTION:	CITY OF PORTLAND
CURRENT ZONING:	RXd (CENTRAL RESIDENTIAL WITH DESIGN OVERLAY)

CONSTRUCTION INFORMATION:

IMPERVIOUS SURFACE:	72 SQ. FT. (ANTENNA SHROUDS)
IMPERVIOUS SURFACE:	224 SQ. FT. (EQUIPMENT ENCLOSURE)
TYPE OF CONSTRUCTION:	IIB (NON RATED)
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

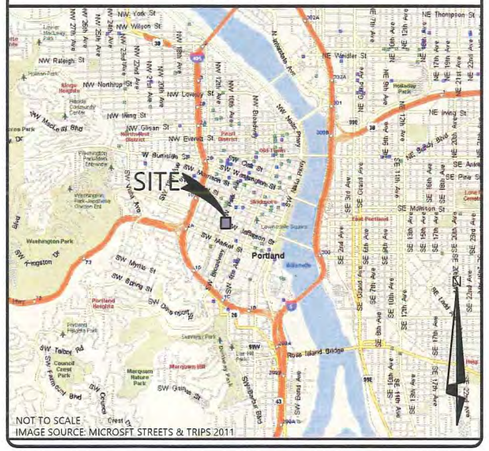
GEODETIC COORDINATES (PER 1A LETTER):

ALPHA SECTOR:	45.515833°N / -122.682333°W
BETA SECTOR:	45.515861° / -122.682083°W
GAMMA SECTOR:	45.515639° / -122.682444°W

ELEVATIONS (NAVD88):
GROUND ELEVATION AT SW BUILDING CORNER = 120.5'
HIGHEST FIXED STRUCTURE (TOP OF LADDER) = 184.9'
FINISHED ROOF SURFACE = 180.0'

HEIGHTS (ABOVE GROUND LEVEL):
GROUND ELEVATION AT SW BUILDING CORNER TO HIGHEST FIXED STRUCTURE = 64.4' AGL
GROUND ELEVATION AT SW BUILDING CORNER TO FINISHED ROOF SURFACE = 59.5' AGL
GROUND ELEVATION AT SW BUILDING CORNER TO TOP OF PARAPET = 51.9' AGL
GROUND ELEVATION AT SW BUILDING CORNER TO TOP OF PENTHOUSE PARAPET = 61.8' AGL

VICINITY MAP



NOT TO SCALE
IMAGE SOURCE: MICROSFT STREETS & TRIPS 2011

DRIVING DIRECTIONS

FROM VERIZON WIRELESS OFFICE 5430 NE 122ND AVE, PORTLAND, OR 97230:

HEAD SOUTHWEST ON NE 122ND AVE TOWARD NE WHITAKER WAY	1.0 MI
TURN RIGHT ONTO NE FREMONT ST	1.0 MI
TURN LEFT ONTO NE 102ND AVE	1.0 MI
TURN RIGHT ONTO NE WEIDLER ST	0.1 MI
USE ANY LANE TO TURN SLIGHTLY RIGHT ONTO NE HALSEY ST	1.0 MI
USE THE RIGHT LANE TO TAKE THE INTERSTATE 84 W/U.S. 30 RAMP TO CITY CENTER	0.2 MI
MERGE ONTO I-84/U.S. 30 W	4.3 MI
USE THE MIDDLE LANE TO TAKE THE I-5 S EXIT TOWARD BEAVERTON/SALEM/CITY CENTER	0.3 MI
KEEP RIGHT, FOLLOW SIGNS FOR CITY CENTER	0.4 MI
CONTINUE ONTO SE MORRISON BRIDGE	0.2 MI
USE THE RIGHT LANE TO TAKE THE NAITO PARKWAY S RAMP TO INTERSTATE 5 S	0.1 MI
MERGE ONTO SW NAITO PKWY/PACIFIC HWY W	0.4 MI
TURN RIGHT ONTO SW JEFFERSON ST	0.4 MI
TURN RIGHT ONTO SW PARK AVE	79 FT
DESTINATION WILL BE ON THE RIGHT; ARRIVE AT 1230 SW PARK AVE PORTLAND, OR 97205	

PROJECT DESCRIPTION

VERIZON WIRELESS PROPOSES TO CONSTRUCT AN UNMANNED TELECOMMUNICATIONS FACILITY CONSISTING OF VERIZON WIRELESS PROPOSES TO ADD A 3-SECTOR ANTENNA ARRAY WITH (6) PANEL ANTENNAS (2 PER SECTOR), (12) RRUS , AND (3) OVPs MOUNTED BEHIND NEW 3'x8' FRP SCREENED ENCLOSURE MOUNTED ON EXISTING PENTHOUSE. NEW SCREENS TO BE PAINTED AND TEXTURED TO MATCH EXISTING BUILDING FASCADE. ALSO (3) EQUIPMENT CABINETS, (3) OVPs WITHIN CABINET, (1) GPS ANTENNA, AND UTILITY H-FRAME WITHIN A NEW 7'-10"X28' FRP SCREENED ENCLOSURE MOUNTED ON EXISTING BUILDING ROOFTOP.

SHEET	DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
T-3	LEGEND & ABBREVIATIONS
LS-1	ROOFTOP SURVEY
A-1	OVERALL SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	EXISTING & PROPOSED WEST ELEVATION
A-4	EXISTING & PROPOSED SOUTH ELEVATION
A-5	EXISTING & PROPOSED NORTH ELEVATION
A-6	EXISTING & PROPOSED EAST ELEVATION
A-7	CONSTRUCTION DETAILS
A-8	CONSTRUCTION DETAILS
A-9	BATTERY SPECIFICATIONS
A-10	BATTERY SPECIFICATIONS
A-11	SIGNAGE DETAILS
RF-1	RF DETAILS
RF-2	RF INFORMATION
RF-3	PLUMBING DIAGRAM
E-1	UTILITY ROUTING PLAN □ DETAILS
G-1	SCHEMATIC GROUNDING PLAN & NOTES
G-2	GROUNDING DETAILS
S1	GENERAL NOTES
S2	PLATFORM LOCATION PLAN
S3	FRAMING PLANS AND ELEVATIONS
S4	FRAMING ELEVATIONS
S5	FRP ENCLOSURE

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

1. 2014 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2. 2014 OREGON MECHNICAL SPECIALTY CODE (OMSC)
3. 2014 OREGON PLUMBING SPECIALTY CODE (OPSC)
4. 2014 OREGON FIRE CODE (OFC)
5. 2014 OREGON ELECTRICAL SPECIALTY CODE (OESC)
6. 2014 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
7. TIA-EIA-22-G OR LATEST EDITION
8. LOCAL AMENDMENTS TO THE ABOVE, WHERE APPLICABLE CITY/COUNTY ORDINANCES
9. LIFE SAFETY CODE NFPA-101

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: T-1 | **REV.:** 2

GENERAL

1. THIS FACILITY IS AN UNMANNED WIRELESS TELECOMMUNICATIONS E□UIPMENT FACILITY. THE OCCUPANCY CLASSIFICATION IS U.
2. THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. ACCESSIBILITY ACCESS AND RE□UIREMENTS ARE NOT RE□UIRED IN ACCORDANCE WITH 2015 IBC.
3. THE CONTRACTOR SHALL VERIFY ALL E□ISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ARCHITECT OR ENGINEER PRIOR TO SUBMITTING BIDS. AND PROCEEDING WITH ANY WORK.
4. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, □NOTES PRIOR TO STARTING CONSTRUCTION. INCLUDING BUT NOT LIMITED BY DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY E□PENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT.
5. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL E□ISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE E□PENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE E□ECUTION OF THE WORK. CONTACT USA DIG ALERT □ □00.227.2600
6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR E□ISTING SURFACES, STRUCTURES OR E□UIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE E□PENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.
7. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR□S RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS□BUILT CHANGES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS□BUILT/HIRED DRAWINGS TO THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT AT THE CONCLUSION OF THE PROJECT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
9. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS RE□UIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
10. ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST IBC AND ALL OTHER GOVERNING CODES. THE MOST RESTRICTIVE CODE SHALL GOVERN.
11. THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA RE□UIREMENTS.
12. WHEN RE□UIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO E□CEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
13. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNI□UES, PROCEDURES AND SE□UENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR AUTHORIZED AGENT. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.
15. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCES.
16. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
17. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL OR U.L APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
18. □ NEW CONSTRUCTION ADDED TO E□ISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TE□TURE, MATERIAL AND PAINT COLOR E□CEPT AS NOTED IN THE PLANS.
19. THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE E□TINGUISHERS HAVING A MINIMUM 2A□0□B□C RATING WITHIN 75FT. OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.
20. MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS RE□UIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
21. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM RE□UIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
22. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
23. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING AND CONSTRUCTION EFFORT AS MANDATED BY THE GOVERNING AGENCY.
24. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A □UESTION REGARDING THEIR E□ACT MEANING THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT SHALL BE NOTIFIED FOR CLARIFICATIONS.

SPECIFICATIONS

SITEWORK (IF APPLICABLE)

1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.
2. BACKFILLING AT NEW TRENCHES SHALL BE OF CLEAN, STERILE SOIL HAVING A SAND EQUIVALENT OF 30 OR GREATER. BACKFILLING SHALL BE DONE IN 8 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED TO SPECIFIED COMPACTION PERCENTAGE PER ASTM D1557 (90% MIN.). ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER THESE RECOMMENDATIONS ARE APPROVED BY THE PROJECT MANAGER AND ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT.
3. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
4. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR OWNER'S REPRESENTATIVE AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

CONCRETE

REINFORCEMENT

1. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 40, DEFORMED UNLESS OTHERWISE NOTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD U.N.O.
2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS.
3. BARS NOTED "CONT.", TYPICAL WALL REINFORCING, AND VERTICAL COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE EQUAL 40 BAR DIAMETERS LAP, OR 24" WHICHEVER IS GREATER.
4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. SPLICE AT OTHER LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4'-0" MINIMUM UNLESS OTHERWISE NOTED.
6. ALL REINFORCING, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE OR GROUTING MASONRY.
7. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE ENGINEER.
8. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE:

BELOW GRADE (UNFORMED)	3"	CLEAR
BELOW GRADE (FORMED)	2"	CLEAR
WALLS	1"	CLEAR
COLUMNS	1 1/2"	CLEAR
BEAMS AND GIRDERS	1 1/2"	CLEAR
STRUCTURAL SLAB (ABOVE GRADE)	3/4"	CLEAR

CONCRETE (GENERAL)

1. STRUCTURAL FILL AND BACKFILL SHOULD CONSIST OF A NON□E□PANSIVE GRANULAR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER AND PLACED IN UNIFORM 6" LIFTS.
2. STRUCTURAL FILL PLACED FOR SUPPORT OF FOUNDATION SHALL BE COMPACTED TO AT LEAST 95□ OF MA□IMUM DENSITY FROM ASTM D69□ □STANDARD PROCTOR□
3. STRUCTURAL FILL UNDERNEATH FOUNDATIONS AND SLABS SHALL BE COMPACTED WITH A SMOOTH VIBRATORY COMPACTION DEVICE PRIOR TO CONCRETE PLACEMENT.
4. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 31□.
5. ALL CONCRETE SHALL HAVE A MINIMUM 2□□DAY COMPRESSIVE STRENGTH OF 2500 PSI, UNLESS OTHERWISE SPECIFIED. WATER CEMENTITIOUS MATERIAL/RATIO AND AIR CONTENT SHALL COMPLY WITH ACI 31□ SECTION 4.1 □ 4.2.
6. CEMENT FOR CONCRETE OR MASONRY MORTAR SHALL BE TYPE V "PORTLAND CEMENT" AND CONFORM TO ASTM C□150 STANDARDS. UNLESS OTHERWISE SPECIFIED IN GEOTECH REPORT OR IN THE DRAWINGS.
7. AGGREGATE FOR CONCRETE SHALL CONFORM TO ASTM C□33 STANDARDS.
8. CONCRETE SHALL BE DEPOSITED IN ACCORDANCE WITH 31□ SECTION 5.10 RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE.
9. COLD WEATHER AND HOT WEATHER CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 31□ SECTION 4.2, AND SECTIONS 5.12 □ 5.13.
10. AFTER PLACEMENT, THE CONCRETE SHALL BE COVERED WITH A PLASTIC VAPOR BARRIER FOR A 4 TO 7 DAY INITIAL CURING PERIOD.
11. A MINIMUM OF THREE CONCRETE TEST CYLINDERS SHALL BE TAKEN. ONE SHALL BE TESTED AT 7 DAYS, ONE AT 2□ DAYS, AND ONE HOLD CYLINDER, UNLESS OTHERWISE SPECIFIED BY GOVERNING AGENCY.
12. FLOOR SLABS SHALL CONFORM TO ASTM C□3□ STANDARDS AND SHALL BE 3 1/2 INCHES MINIMUM THICK □SEE FOUNDATION PLANS FOR REINFORCEMENT, BASE, UNDERLAYMENT, VAPOR BARRIER OR OTHER SPECIFIC RE□UIREMENTS.
13. FLOOR SLABS SHALL BE LEVEL OR TRUE SLOPES AS SHOWN ON DRAWINGS. TOLERANCE□1/□INCH IN 10 FEET.
14. TOP OF CONCRETE SLAB TO BE 6" MINIMUM ABOVE FINISH GRADE, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS
15. ALL E□POSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER.
16. ALL E□TERIOR CONCRETE WALLS, PORCHES AND PLATFORMS ON SITE TO HAVE A ROCK SALT FINISH, □U.O.N.□
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATE PLACEMENT OF ALL ROUGH HARDWARE AND ALL ITEMS OF OTHERTRADES RE□UIRED TO BE EMBEDDED IN CONCRETE WORK.

ELECTRICAL

1. REFER TO DRAWINGS FOR SITE SPECIFIC INFORMATION
2. ALL ELECTRIC WORK TO COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE. (REFER TO THE COVER SHEET)
3. ALL INTERIOR SEISMIC UNISTRUT SHALL BE GROUNDED WITH #6 STRANDED COPPER WITH GREEN JACKET. ALL CONNECTIONS TO BE DOUBLE LUG.
4. BEFORE STARTING TRENCHING, THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING LINES AFFECTED BY THE CONTRACT AND IMMEDIATELY NOTIFY THE PROJECT MANAGER IF ANY REROUTING OF EXISTING LINES IS NECESSARY.

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

NOTES 1-5 BELOW REPRESENT KEY MINIMUM REQUIREMENTS FOR CONSTRUCTION BMP'S

1. SUFFICIENT BMP'S MUST BE IMPLEMENTED TO PREVENT SILT, MUD, OR OTHER CONSTRUCTION DEBRIS FROM BEING TRACKED INTO THE ADJACENT STREET(S) OR STORM WATER CONVEYANCE SYSTEM DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY SUCH DEBRIS THAT MAY BE IN THE STREET AT THE END OF EACH WORK DAY OR AFTER A STORM EVENT THAT CAUSES A BREECH IN THE INSTALLED CONSTRUCTION MBP'S.
2. A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS THAT ARE TO BE POURED INTO PLACE ON THE SITE.
3. ALL EROSION/SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN WORKING ORDER AT ALL TIMES.
4. ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONSTRUCTION ACTIVITY MUST BE PROTECTED AGAINST EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.
4. THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.

IBC / 26/□.1 FIBER REINFORCED PLASTIC MATERIAL FOR ROOFTOP SCREENING APPLICATIONS

A. GENERAL
1. ALL FRP ROOFTOP SCREENING PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE BUILDING OFFICIAL AND FIRE MARSHAL PRIOR TO PERMIT ISSUANCE.

2. FIBER REINFORCED PLASTIC □FRP□ PRODUCTS PROPOSED FOR USE WITHIN THE JURISDICTION OF THE CITY OF PORTLAND SHALL HAVE A VALID APPROVAL REPORT SUCH AS AN INTERNATIONAL CODE COUNCIL EVALUATION SERVICE □ICC□ES□ REPORT OR CITY OF LOS ANGELES RESEARCH REPORT □LA□RR□□ THIS REPORT MUST BE CURRENT AND MUST BE BASED ON THE ACCEPTANCE CRITERIA FOR ANTENNA ENCLOSURE SYSTEMS GIVEN IN ICBO □AC 141, REPORTS VALIDATING THE ALLOWABLE USE OF AN FRP PRODUCT MUST BE MADE AVAILABLE TO THE CITY OF PORTLAND, BUREAU OF DEVELOPMENT SERVICES.

3. THE FABRICATION OF THE FRP PRODUCT MUST BE IN ACCORDANCE WITH MANUFACTURER'S □UALITY CONTROL MANUAL. A COPY OF THE MANUAL MUST BE ON FILE WITH THE CITY OF PORTLAND, BUREAU OF DEVELOPMENT SERVICES.

4. THE ENGINEER OF RECORD FOR THE FRP SCREEN DESIGN MUST SPECIFY THE MANUFACTURER OF ALL FRP PRODUCTS THAT ARE TO BE USED IN THE CONSTRUCTION OF ANY FRP SCREEN STRUCTURE. THIS INFORMATION MUST BE SHOWN ON THE PERMIT DOCUMENTS. ALL FRP PRODUCTS USED MUST BE LABELED WITH THE NAME OF THE PRODUCT MANUFACTURER.

5. FOR CASES WHERE THE RE□UIREMENTS OF THIS GUIDE AND A PRODUCT SPECIFIC TEST REPORT ARE IN CONFLICT, THE MORE RESTRICTIVE RE□UIREMENT MUST BE MET.

6. A COMPLETE PERMIT APPLICATION WILL INCLUDE PLANS AND STRUCTURAL CALCULATIONS PREPARED, STAMPED AND SIGNED BY AN ENGINEER LICENSED IN THE STATE OF OREGON.

7. IN ADDITION TO ALL THE RE□UIREMENTS LISTED IN THIS GUIDE, THE ROOFTOP SCREENING MUST MEET THE HEIGHT, DESIGN AND OTHER RE□UIREMENTS OF THE PORTLAND ZONING CODE.

□. THE BUILDING OFFICIAL AND FIRE MARSHAL, AT THEIR DISCRETION, MAY APPROVE PLANS THAT VARY FROM THE RE□UIREMENTS OF THIS GUIDE, AS LONG AS THE ALTERNATE DESIGN MEETS THE INTENT OF THIS GUIDE

B. DESIGN AND CONSTRUCTION
1. THE FRP SCREEN SYSTEMS SHALL NOT INCLUDE ANY TYPE OF ROOF STRUCTURE.

2. THE DESIGN OF THE FRP SCREEN MUST MEET ALL OF THE RE□UIREMENTS GIVEN IN THE TEST REPORT FOR THE FRP PRODUCT BEING SPECIFIED. ENGINEERING DESIGN MUST BE BASED ON THE PROPERTIES AND SAFETY FACTORS GIVEN IN THE APPROVAL DOCUMENTATION □ICC□ES OR LA□RR□FOR THE PRODUCT SPECIFIED ON THE DESIGN DRAWINGS, THE DESIGN MUST PROVIDE A COMPLETE LOAD PATH FOR ALL CODE PRESCRIBED LOADS ON THE SCREEN STRUCTURE.

3. MOMENT CONNECTIONS ARE NOT ALLOWED FOR RESISTING LATERAL OR VERTICAL LOADS.

4. FRP PANELS MAY NOT BE USED AS SHEAR PANELS TO RESIST LATERAL LOADS.

5. ALL CONNECTIONS MUST BE MADE WITH FRP OR STEEL BOLTS OR THREADED RODS AND NUTS. PLASTIC EPO□Y OR ADHESIVE MAY NOT BE USED WHEN DESIGNING CONNECTIONS.

6. IN APPLICATIONS WHERE E□TREME TEMPERATURES ARE E□PECTED, THE DESIGN MUST CONSIDER THE REDUCED CAPACITIES OF FRP AT ELEVATED TEMPERATURES.

7. THE HEIGHT OF THE FRP SCREEN SHALL NOT EXCEED 10'-0" ABOVE THE ELEVATION OF THE ROOF AT ANY POINT WHERE THE FRP SCREEN IS ATTACHED.

□. THE TOTAL VERTICAL SURFACE AREA OF THE SCREEN PANELS SHALL NOT E□CEED 10□ OF THE AREA OF THE ROOF.

9. THE MA□IMUM LENGTH OF ANY SIDE OF A ROOFTOP SCREEN SHALL NOT E□CEED 25□ OF THE LENGTH OF THE BUILDING WALL PARALLEL TO THAT SIDE OF THE SCREEN WALL.

10.THE ROOFTOP SCREENING MUST BE LOCATED AT LEAST 10'-0" FROM ANY INTERIOR PROPERTY LINE.

11.THE ROOFTOP SCREENING MUST BE LOCATED NO CLOSER THAN 5'-0" CLEAR FROM ANY MECHANICAL EQUIPMENT. VERIFY WHETHER ANY SPECIFIC E□UIPMENT RE□UIRES LARGER CLEARANCES AND PROVIDE AS NECESSARY.

12.THE ROOFTOP SCREENING MUST NOT OBSTRUCT ACCESS TO THE ROOF BY THE FIRE DEPARTMENT.

13.THE ROOFTOP SCREENING MUST NOT BLOCK ANY MEANS OF EGRESS OR EMERGENCY ESCAPE AND RESCUE FOR THE OCCUPANTS OF THE BUILDING.

14.THE ROOFTOP SCREENING MUST NOT OBSTRUCT ROOF DRAINAGE.

15.ACCESS PATHWAYS SHALL BE PROVIDED AS DESCRIBED IN THIS DOCUMENT. ACCESS PATHWAYS SHALL BE CLEAR OF ANY SMOKE AND HEAT VENTS, OTHER ROOF VENTS, DRAINS OR OTHER SMALL OBSTRUCTIONS. ACCESS PATHWAYS SHALL BE A MINIMUM OF 5'-0" WIDE AND HAVE A MINIMUM OVERHEAD CLEARANCE OF 7'-0".

16.THE ROOFTOP SCREENING MUST BE LOCATED SUCH THAT AN ACCESS PATHWAY IS MAINTAINED ON THREE SIDES OF THE ROOFTOP SCREEN. THE BOTTOM EDGE OF SLOPED ROOFS □SLOPE □2/12□SHALL NOT BE USED AS A PATHWAY.

17.ACCESS PATHWAYS MUST BE PROVIDED AT 50'-0" MAXIMUM ALONG EACH LENGTH OF SCREEN WALL.

1□.FRP MATERIAL USED IN ROOFTOP SCREENING APPLICATIONS SHALL BE CLASSIFIED AS CC1 OR BETTER AND HAVE A MA□IMUM FLAME SPREAD OF 50.

19.SCREENING SHALL NOT BE ILLUMINATED OR ELECTRIFIED.

20.FRP STRUCTURES SHALL BE BUILT IN THE SHOP AS MUCH AS POSSIBLE. IF ANY FIELD CUTTING IS RE□UIRED, ALL CUT EDGES AND DRILLED HOLES MUST BE SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.

SPECIAL INSPECTION MUST BE PROVIDED FOR FRP INSTALLATIONS.

1. THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.

2. THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.

3. THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.

1 GENERAL NOTES

verizon

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2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: T-2

REV.: 2

1 NOT USED

2 LEGEND

NEW ANTENNA	GRID REFERENCE
EXISTING ANTENNA	DETAIL REFERENCE DETAIL NO. X ON SHEET X-X
NEW RRU	ELEVATION REFERENCE
NEW LIGHT	SECTION REFERENCE
LIGHT POLE	CONCRETE
POWER POLE	EARTH
FND. MONUMENT	GRAVEL
SPOT ELEVATION	SAND
PULL BOX	CENTERLINE
METER PEDESTAL	PROPERTY/LEASE LINE
NEW POST	WOOD OR WROUGHT IRON FENCE
MECHANICAL GROUND CONN.	CHAIN LINK FENCE
EXOTHERMIC GROUND CONN. (CADWELD)	COAXIAL CABLE
GROUND ROD	ELECTRICAL (POWER) CONDUIT
GROUND ROD WITH ACCESS WELL	TELEPHONE (TELCO) CONDUIT
XIT GROUND ROD	ELECTRIC AND TELCO CONDUIT
REVISION	OVERHEAD SERVICE CONDUCTORS

3 ABBREVIATIONS

ABBREVIATION	DEFINITION
A.B.	ANCHOR BOLT
ABV.	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADD'L	ADDITIONAL
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
ALUM.	ALUMINUM
ALT.	ALTERNATE
ANT.	ANTENNA
APPRX.	APPROXIMATE(LY)
ARCH.	ARCHITECT(URAL)
AWG.	AMERICAN WIRE GAUGE
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.N.	BOUNDARY NAILING
BTCW.	BARE TINNED COPPER WIRE
B.O.F.	BOTTOM OF FOOTING
B/U	BACK-UP CABINET
C	CONDUIT
CAB.	CABINET
CANT.	CANTILEVER(ED)
C.I.P.	CAST IN PLACE
CLG.	CEILING
CLR.	CLEAR
CO	CONDUIT ONLY
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION(OR)
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
d	PENNY (NAILS)
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DWG.	DRAWING(S)
DWL.	DOWEL(S)
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMT.	ELECTRICAL METALLIC TUBING
E.N.	EDGE NAIL
ENG.	ENGINEER
EQ.	EQUAL
EXP.	EXPANSION
EXST.(E)	EXISTING
EXT.	EXTERIOR
FAB.	FABRICATION(OR)
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
FIN.	FINISH(ED)
FLR.	FLOOR
FDN.	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
F.S.	FINISH SURFACE
FT.(')	FOOT(FEET)
FTG.	FOOTING
G.	GROWTH (CABINET)
GA.	GAUGE
GEN.	GENERATOR
GI.	GALVANIZE(D)
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER
GLB.(GLU-LAM)	GLUE LAMINATED BEAM
GPS	GLOBAL POSITIONING SYSTEM
GRND.	GROUND
HDR.	HEADER
HGR.	HANGER
HT.	HEIGHT
ICGB.	ISOLATED COPPER GROUND BUS
IGR.	INTERIOR GROUND RING (HALO)
IN.(")	INCH(ES)
INT.	INTERIOR
LB.(#)	POUND(S)
L.B.	LAG BOLTS
L.F.	LINEAR FEET (FOOT)
L.	LONG(ITUDINAL)
MAS.	MASONRY
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIGB.	MASTER INSULATED GROUND BAR
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTL.	METAL
(N)	NEW (PROVIDE AND INSTALL U.N.O.)
NO.(#)	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG.	OPENING
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PLY.	PLYWOOD
PPC	POWER PROTECTION CABINET
PRC	PRIMARY RADIO CABINET
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE CONDUIT
PWR.	POWER (CABINET)
QTY.	QUANTITY
RAD.(R)	RADIUS
REF.	REFERENCE
REINF.	REINFORCEMENT(ING)
REQ'D.	REQUIRED
RGS.	RIGID GALVANIZED STEEL
RWY.	RACEWAY
SCH.	SCHEDULE
SHT.	SHEET
SIM.	SIMILAR
S.L.D.	SINGLE LINE DIAGRAM
SPEC.	SPECIFICATION(S)
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STRUC.	STRUCTURAL
TEMP.	TEMPORARY
TEL.	TELE
THK.	THICK(NESS)
T.N.	TOE NAIL
T.O.A.	TOP OF ANTENNA
T.O.C.	TOP OF CURB
T.O.F.	TOP OF FOUNDATION
T.O.P.	TOP OF PLATE (PARAPET)
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.G.	UNDER GROUND
U.L.	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
W	WIDE(WIDTH)
W/	WITH
WD.	WOOD
W.P.	WEATHERPROOF
WT.	WEIGHT
℄	CENTERLINE
℗	PLATE; PROPERTY LINE

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2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN

EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

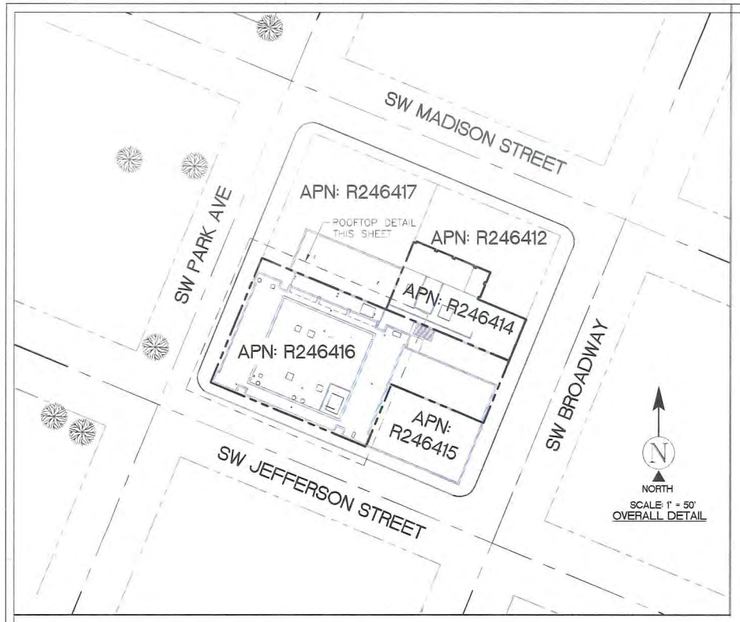
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

LEGEND &
ABBREVIATIONS

SHEET NUMBER: T-3

REV.: 2



SURVEY DATE
09/15/2015

DIRECTIONS TO SITE

FROM PORTLAND INTERNATIONAL AIRPORT:
START OUT GOING SOUTH ON NE AIRPORT WAY TOWARD PORTLAND AIRPORT PARKING. SLIGHT RIGHT ONTO I-205 S; TAKE EXIT 21B FOR I-84 W/ US-30 W TOWARD PORTLAND; MERGE ONTO I-84 / U.S. 30W; TAKE I-5 S EXIT ON THE LEFT TOWARD BEAVERTON/SALEM/CITY CENTER; KEEP RIGHT, FOLLOW SIGNS FOR CITY CENTER; CONTINUE ONTO SE MORRISON BRIDGE; TAKE NAITO PARKWAY S RAMP TO I-5 S; MERGE ONTO SW NAITO PKWY/PACIFIC HWY W; TURN RIGHT ONTO SW JEFFERSON ST AND THE DESTINATION WILL BE ON YOUR RIGHT AT 1320 SW PARK AVE PORTLAND, OREGON.

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM OREGON STATE PLANE COORDINATE NORTH ZONE, DETERMINED BY REAL TIME KINEMATIC (RTK) GPS DATA PROCESSED/CORRECTED ON THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) CORS NETWORK.

BENCHMARK

PROJECT ELEVATIONS ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS BY APPLICATION OF NGS 'GEOID 12A' MODELED SEPARATIONS TO ELLIPSOID HEIGHTS DETERMINED BY REAL TIME KINEMATIC (RTK) GPS DATA PROCESSED/ CORRECTED ON THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) CORS NETWORK. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD88.

FLOOD ZONE

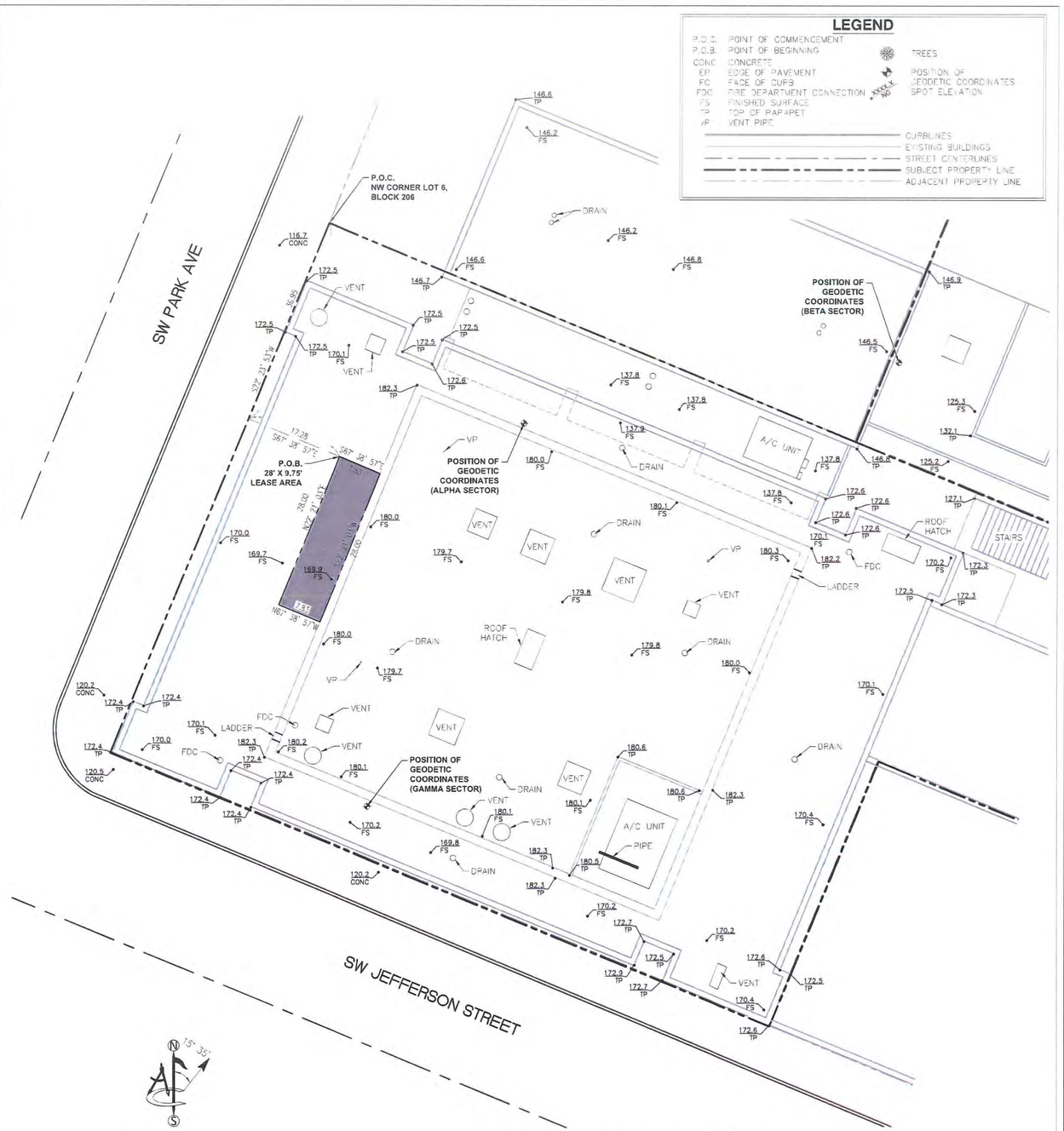
THIS PROJECT APPEARS TO BE LOCATED WITHIN FLOOD ZONE "X" AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN; ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, PANEL 93 OF 250, MAP NUMBER #41018300093E, MAP REVISED DATE OCTOBER 19, 2004.

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS ARE DEFINITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT BLUE STAKE AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND / OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES

SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.



GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

POSITION OF GEODETIC COORDINATE (ALPHA SECTOR)
LATITUDE 45° 30' 57.0" NORTH (45.515833) (NAD83)
LONGITUDE 122° 40' 56.4" WEST (122.682333) (NAD83)
ELEVATION = 179.8' (NAVD88)

POSITION OF GEODETIC COORDINATE (BETA SECTOR)
LATITUDE 45° 30' 57.1" NORTH (45.515861) (NAD83)
LONGITUDE 122° 40' 55.5" WEST (122.682083) (NAD83)
ELEVATION = 179.8' (NAVD88)

POSITION OF GEODETIC COORDINATE (GAMMA SECTOR)
LATITUDE 45° 30' 56.3" NORTH (45.515639) (NAD83)
LONGITUDE 122° 40' 56.8" WEST (122.682444) (NAD83)
ELEVATION = 179.8' (NAVD88)

verizon

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE
& 1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

ORIGINAL ISSUE DATE:
09/23/2015

REV.:	DATE:	DESCRIPTION:	BY:
0	09/23/2015	INITIAL SUBMITTAL	SAB
1	09/30/2015	PROPOSED SECTORS	SAB
2	06/17/2016	REVISE SECTORS (C)	AC
3	08/12/2016	REVISE SECTORS (C)	CK
4	12/12/2016	ADD TITLE (C)	CK
5	12/14/2016	CHG ADD TITLE (A) APN TO R246414	SR

PLANS PREPARED BY:

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14432 SE EASTGATE WAY, SUITE 260
BELLEVUE, WA 98007-6493
TEL: 425.274.4444 FAX: 425.274.4449

CONSULTANT:

ambit consulting
245 SAINT HELENS AVE.
SUITE 3A
TACOMA, WASHINGTON 98402
PH. (253) 572-9181
www.ambitconsulting.us

DRAWN BY:	CHK.:	APV.:
SAB	MF	DG

LICENSER:

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 11, 2000
DAN L. GILBERT
60121
EXPIRES: 06/30/2017

SHEET TITLE:
ROOFTOP SURVEY

SHEET NUMBER:
LS-1

LESSOR'S LEGAL DESCRIPTION (APN: R246416)

LOT 3, THE WEST 25 FEET OF LOT 4, AND ALL OF LOTS 5 AND 6, BLOCK 206, CITY OF PORTLAND, IN THE CITY OF PORTLAND, MULTNOMAH COUNTY, OREGON.

SCORE REPORT NOTES (APN: R246416)

REFERENCE IS MADE TO THE TITLE REPORT REFERENCE NO. NXOR-0195619, ISSUED BY NEXTITLE A TITLE & ESCROW COMPANY, EFFECTIVE DATE JULY 29, 2015. ALL SURVEY RELATED EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED.

3. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY DZ 67-83, A CERTIFIED COPY OF WHICH WAS RECORDED: DECEMBER 8, 1983, RECORDING NO.: B 1711; P 1103. (NOT PLOTTABLE)

4. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY FILE NO. LUR 93-00040, A CERTIFIED COPY OF WHICH WAS RECORDED: AUGUST 19, 1993, RECORDING NO.: B 2741; P 173. (NOT PLOTTABLE)

5. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY FILE NO. LUP 94-00208 DZ, A CERTIFIED COPY OF WHICH WAS RECORDED: JUNE 20, 1994, RECORDING NO.: 94094792. (NOT PLOTTABLE)

6. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY CASE FILE NO. LU 02-126431 DZM CU, A CERTIFIED COPY OF WHICH WAS RECORDED: SEPTEMBER 27, 2002, RECORDING NO.: 2002-172537. (NOT PLOTTABLE)

7. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY CASE FILE NO. LU 03-101666 DZ, A CERTIFIED COPY OF WHICH WAS RECORDED: MARCH 12, 2003, RECORDING NO.: 2003-05568.7 (NOT PLOTTABLE)

8. OPERATIONS AND MAINTENANCE PLAN, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: NOVEMBER 5, 2007, RECORDING NO.: 2007-192742. (NOT PLOTTABLE)

LESSOR'S LEGAL DESCRIPTION (APN: R246414)

A TRACT OF LAND BEING A PORTION OF LOTS 1 AND 2, BLOCK 206, "CITY OF PORTLAND", MULTNOMAH COUNTY PLAT RECORDS, BEING ALL OF THAT TRACT OF LAND DESCRIBED IN DEED TO OREGON HISTORICAL SOCIETY, AN OREGON NON-PROFIT CORPORATION RECORDED JUNE 20, 1986 IN BOOK 1915, PAGE 607 AND A PORTION OF THAT TRACT OF LAND DESCRIBED IN DEED TO JEFFERSON-MADISON CORPORATION (REGISTRY NO. 076889-97), AN OREGON CORPORATION IN DOCUMENT NO. 2002-177257, MULTNOMAH COUNTY DEED RECORDS, LOCATED IN THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 1 EAST, WILLAMETTE MERIDIAN, CITY OF PORTLAND, MULTNOMAH COUNTY, OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID JEFFERSON-MADISON TRACT, BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF SW BROADWAY AVENUE (80 FEET WIDE). SAID POINT BEARS SOUTH 22°30'09"WEST 66.67 FEET FROM THE NORTHEAST CORNER OF SAID LOT 1; THENCE ALONG THE SOUTHERLY LINE OF SAID JEFFERSON-MADISON TRACT NORTH 67°29'51"WEST 39.24 FEET; THENCE LEAVING SAID SOUTHERLY LINE NORTH 22°18'43"EAST 1.90 FEET; THENCE SOUTH 67°41'17"EAST 1.20 FEET; THENCE NORTH 22°18'43"EAST 9.98 FEET; THENCE NORTH 67°41'17"WEST 1.20 FEET; THENCE NORTH 22°18'43"EAST 1.90 FEET; THENCE SOUTH 67°41'17"EAST 1.20 FEET; THENCE NORTH 22°18'43"EAST 8.20 FEET; THENCE NORTH 67°29'53"WEST 11.17 FEET; THENCE SOUTH 22°30'07"WEST 1.20 FEET; THENCE NORTH 67°29'53"WEST 1.90 FEET; THENCE NORTH 22°30'07"EAST 1.20 FEET; THENCE NORTH 67°29'53"WEST 15.52 FEET; THENCE SOUTH 22°30'07"WEST 1.20 FEET; THENCE NORTH 67°29'53"WEST 1.90 FEET; THENCE NORTH 22°30'07"EAST 1.20 FEET; THENCE NORTH 67°29'53"WEST 12.47 FEET; THENCE SOUTH 22°30'07"WEST 1.20 FEET; THENCE NORTH 67°29'53"WEST 1.90 FEET; THENCE NORTH 22°30'07"EAST 1.20 FEET; THENCE NORTH 67°29'53"WEST 15.06 FEET; THENCE SOUTH 22°30'07"WEST 1.20 FEET; THENCE NORTH 67°29'53"WEST 1.96 FEET TO THE WESTERLY LINE OF SAID LOT 1; THENCE ALONG SAID WESTERLY LINE OF SAID LOTS 1 AND 2 SOUTH 22°30'09"WEST 54.11 FEET TO THE SOUTHWEST CORNER OF SAID LOT 2; THENCE ALONG THE SOUTHERLY LINE OF SAID LOT 2 SOUTH 67°29'51"EAST 100.00 FEET TO SAID WESTERLY RIGHT-OF-WAY LINE OF SW BROADWAY AVENUE; THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE NORTH 22°30'09"EAST 33.33 FEET TO THE POINT OF BEGINNING.

SCORE REPORT NOTES (APN: R246414)

REFERENCE IS MADE TO THE TITLE REPORT REFERENCE NO. NXOR-0248360, ISSUED BY NEXTITLE A TITLE & ESCROW COMPANY, EFFECTIVE DATE NOVEMBER 29, 2016. ALL SURVEY RELATED EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED.

3. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY HLDZ 38-87 AND DZ 65-87, A CERTIFIED COPY OF WHICH WAS RECORDED: FEBRUARY 22, 1988, RECORDING NO.: B 2081; P 1361 (NOT PLOTTABLE)

4. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY FILE NO. HLDZ 98-87, A CERTIFIED COPY OF WHICH WAS RECORDED: JUNE 27, 1989, RECORDING NO.: B 2215; P 436 (NOT PLOTTABLE)

5. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY FILE NO. LUR 93-00040, A CERTIFIED COPY OF WHICH WAS RECORDED: AUGUST 19, 1993, RECORDING NO.: B 2741; P 173 (NOT PLOTTABLE)

6. ESTOPPEL CERTIFICATE AND SUBORDINANATION AGREEMENT, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: OCTOBER 11, 1994, RECORDING NO.: 94151261, BY AND BETWEEN: JEFFERSON-MADISON CORPORATION; AND WEST ONE BANK, OREGON. AFFECTS A PORTION OF THE HEREIN DESCRIBED PREMISES (NOT PLOTTABLE)

7. ESTOPPEL CERTIFICATE AND SUBORDINATION AGREEMENT, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: OCTOBER 11, 1994, RECORDING NO.: 94151262, BY AND BETWEEN JEFFERSON-MADISON CORPORATION; WILLIAM H. SALVESON AND WEST ONE BANK, OREGON. AFFECTS A PORTION OF THE HEREIN DESCRIBED PREMISES (NOT PLOTTABLE)

8. ESTOPPEL CERTIFICATE AND SUBORDINATION AGREEMENT, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: OCTOBER 11, 1994, RECORDING NO.: 94151263, BY AND BETWEEN: JEFFERSON-MADISON CORPORATION; THE OREGON HISTORICAL SOCIETY; AND WEST ONE BANK, OREGON. AFFECTS A PORTION OF THE HEREIN DESCRIBED PREMISES (NOT PLOTTABLE)

9. TRUST DEED, TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW, AND ANY OTHER OBLIGATIONS SECURED THEREBY, RECORDED: OCTOBER 11, 1994, RECORDING NO.: 94151264, GRANTOR: JEFFERSON-MADISON CORPORATION, TRUSTEE: VALERIE T. AUERBACH, BENEFICIARY: WEST ONE BANK, AMOUNT: $605,000.00. AFFECTS A PORTION OF THE HEREIN DESCRIBED PREMISES THE BENEFICIAL INTEREST IN THE TRUST DEED SET FORTH NEXT ABOVE WAS ASSIGNED BY INSTRUMENT, RECORDED: NOVEMBER 6, 1996, RECORDING NO.: 96168690, TO: PACIFIC ONE BANK. THE ABOVE TRUST DEED WAS MODIFIED BY INSTRUMENT, INCLUDING THE TERMS AND PROVISIONS THEREOF, ENTITLED: MODIFICATION OF DEED OF TRUST, RECORDED: JUNE 26, 2003, RECORDING NO.: 2003-147552.10. ASSIGNMENT OF RENTS, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: OCTOBER 11, 1994, RECORDING NO.: 94151265, GIVEN AS ADDITIONAL SECURITY TO THE DEED OF TRUST, RECORDED THE SAME DATE, RECORDING NO.: 94151264. AFFECTS A PORTION OF THE HEREIN DESCRIBED PREMISES (NOT PLOTTABLE)

11. CONDITIONS, RESTRICTIONS AND/OR EASEMENTS CONTAINED IN AND IMPOSED BY CASE FILE NO.: LU 02-126431 DZM CU, A CERTIFIED COPY OF WHICH WAS RECORDED: SEPTEMBER 27, 2002, RECORDING NO.: 2002-172537 (NOT PLOTTABLE)

12. RECIPROCAL EASEMENT AGREEMENT AND RESTRICTIVE COVENANT, INCLUDING THE TERMS AND PROVISIONS THEREOF, RECORDED: MAY 30, 2014, RECORDING NO.: 2014-051717. (NOT PLOTTABLE)

LEASE AREA LEGAL DESCRIPTION

THAT PORTION OF LOT 6, BLOCK 206, CITY OF PORTLAND, IN THE CITY OF PORTLAND, MULTNOMAH COUNTY, OREGON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 6;
THENCE GOING SOUTH 22°23'53" WEST ALONG THE WESTERLY LINE THEREOF A DISTANCE OF 38.95 FEET;
THENCE LEAVING SAID WESTERLY LINE SOUTH 67°38'57" EAST A DISTANCE OF 17.28 FEET TO THE POINT OF BEGINNING;
THENCE SOUTH 67°38'57" EAST, A DISTANCE OF 7.83 FEET;
THENCE SOUTH 22°21'03" WEST, A DISTANCE OF 28.00 FEET;
THENCE NORTH 67°38'57" WEST, A DISTANCE OF 7.83 FEET;
THENCE NORTH 22°21'03" EAST, A DISTANCE OF 28.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 219 SQUARE FEET MORE OR LESS.

verizon

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE
& 1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

ORIGINAL ISSUE DATE:

09/23/2015

REV.:	DATE:	DESCRIPTION:	BY:
0	09/23/2015	INITIAL SUBMITTAL	SAB
1	09/30/2015	PROPOSED SECTORS	SAB
2	06/17/2016	REVISE SECTORS (C)	AC
3	08/12/2016	REVISE SECTORS (C)	CK
4	12/12/2016	ADD TITLE (C)	CK
5	12/14/2016	CHG ADD TITLE (A) APN TO R246414	SR

PLANS PREPARED BY:

smartlink

14432 SE EASTGATE WAY, SUITE 260
BELLEVUE, WA 98007-6493
TEL: 425.274.4444 FAX: 425.274.4449

CONSULTANT:

428 MAIN STREET
SUITE 206
HUNTINGTON BEACH, CA 92648
PH. (480) 659-4072
www.ambitconsulting.us
ambit consulting

DRAWN BY:	CHK.:	APV.:
SAB	MF	DG

LICENSER:

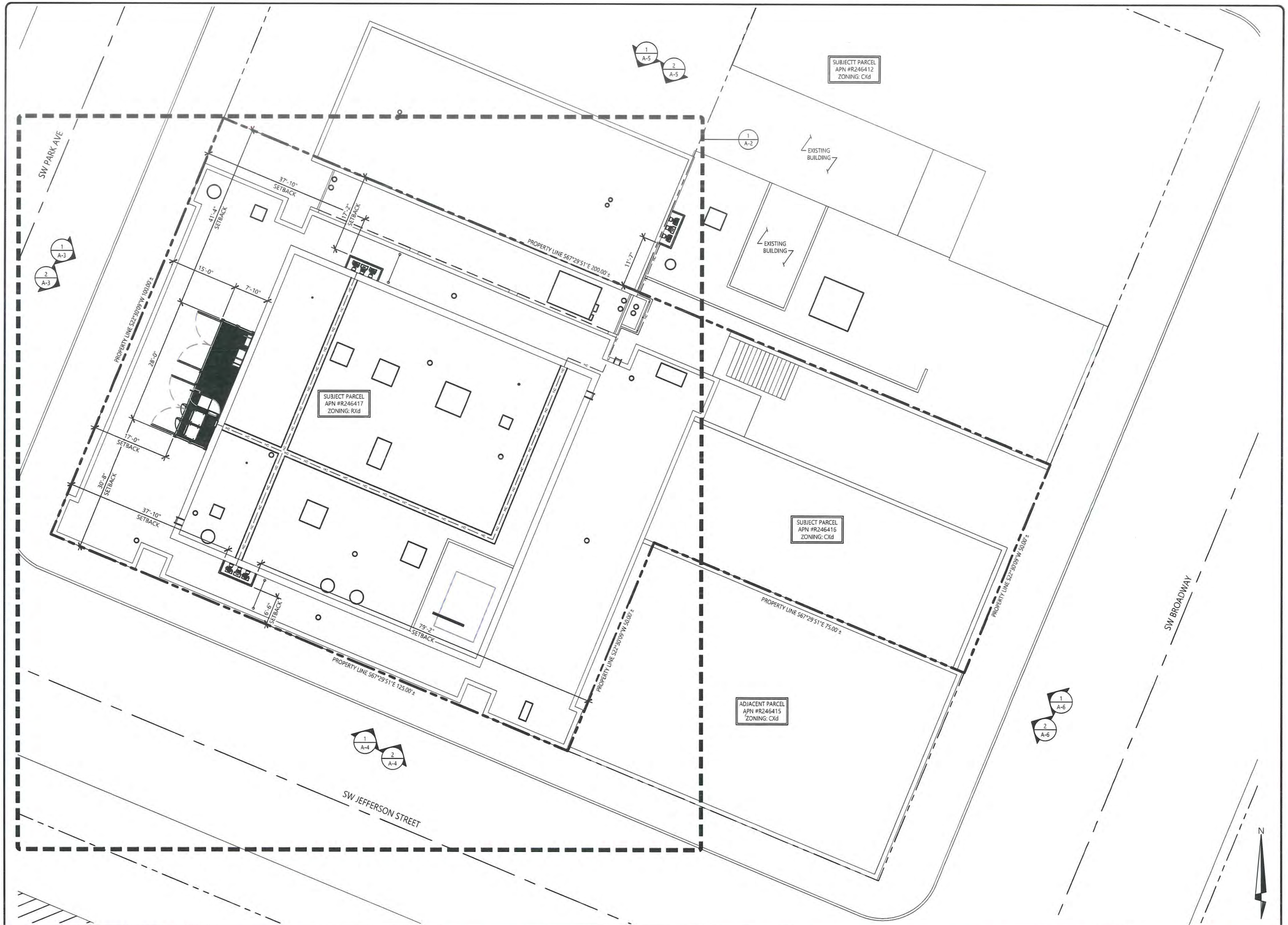
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 11, 2000
DAN L. OLSEN
60181
EXPIRES: 06/30/2017

SHEET TITLE:

ROOFTOP SURVEY

SHEET NUMBER:

LS-2



1 OVERALL SITE PLAN

22"x34" SCALE: 1" = 10'-0"
11"x17" SCALE: 1" = 20'-0"

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

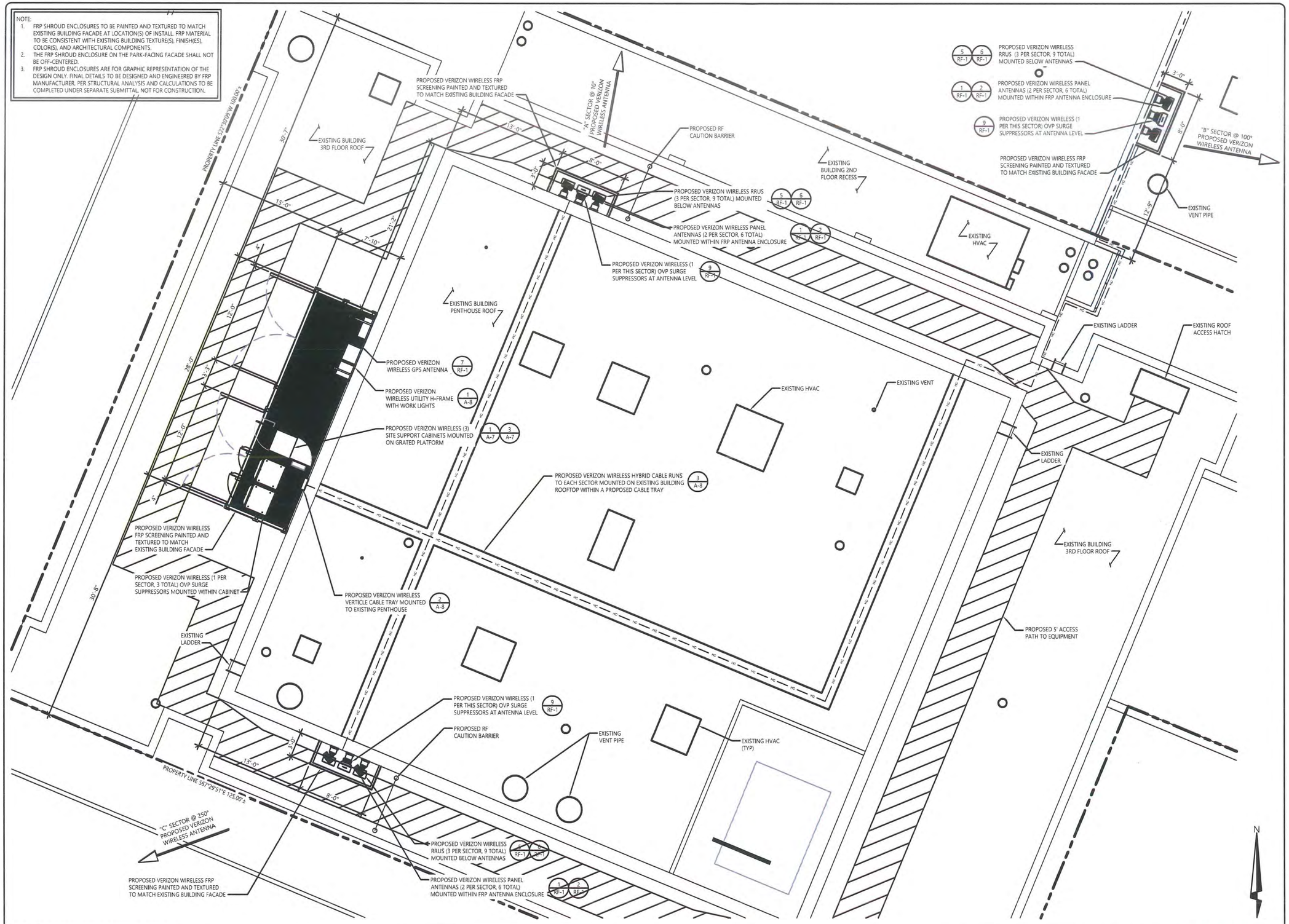
SHEET TITLE:

OVERALL
SITE PLAN

SHEET NUMBER: A–1

REV.: 2

NOTE:
1. FRP SHROUD ENCLOSURES TO BE PAINTED AND TEXTURED TO MATCH EXISTING BUILDING FACADE AT LOCATION(S) OF INSTALL. FRP MATERIAL TO BE CONSISTENT WITH EXISTING BUILDING TEXTURE(S), FINISH(ES), COLOR(S), AND ARCHITECTURAL COMPONENTS.
2. THE FRP SHROUD ENCLOSURE ON THE PARK-FACING FACADE SHALL NOT BE OFF-CENTERED.
3. FRP SHROUD ENCLOSURES ARE FOR GRAPHIC REPRESENTATION OF THE DESIGN ONLY. FINAL DETAILS TO BE DESIGNED AND ENGINEERED BY FRP MANUFACTURER, PER STRUCTURAL ANALYSIS AND CALCULATIONS TO BE COMPLETED UNDER SEPARATE SUBMITTAL. NOT FOR CONSTRUCTION.



1 ENLARGED SITE PLAN

22"x34" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

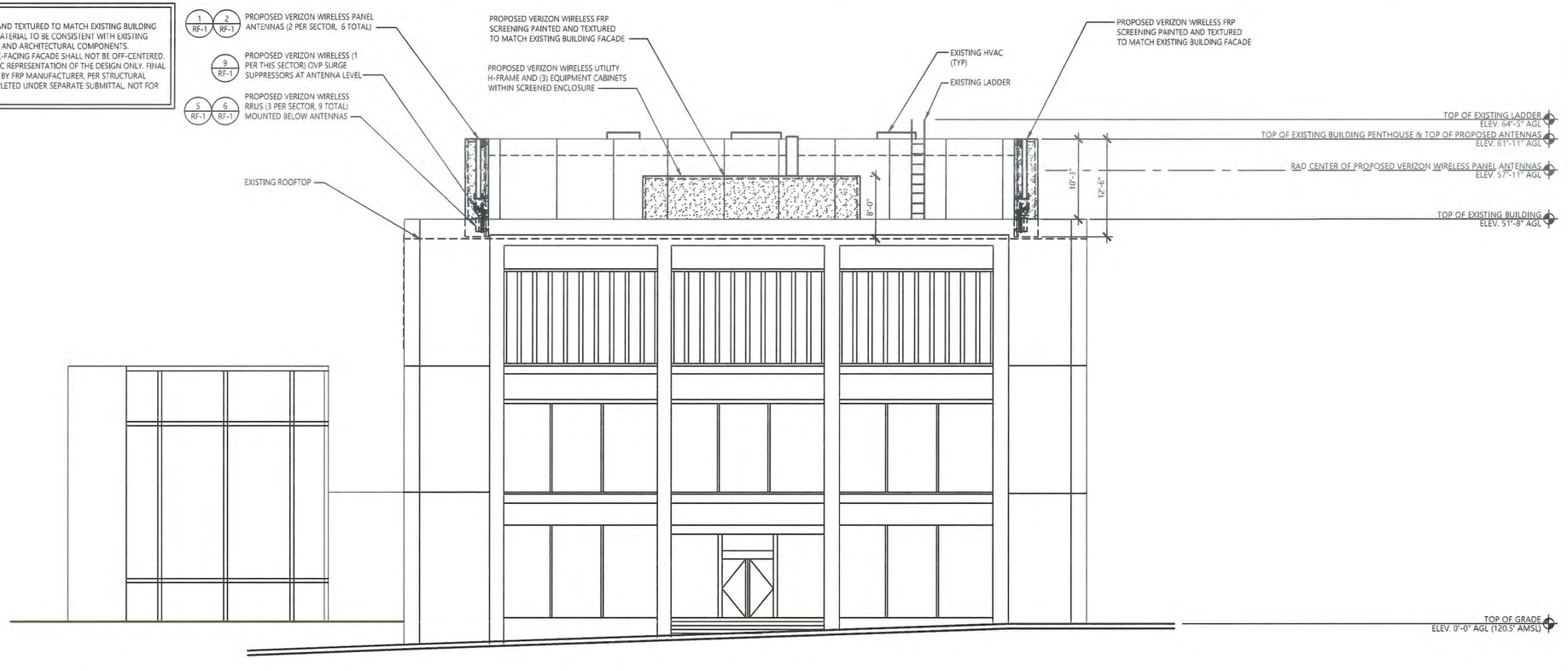
PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER: A-2

REV.: 2

NOTE:
1. FRP SHROUD ENCLOSURES TO BE PAINTED AND TEXTURED TO MATCH EXISTING BUILDING FACADE AT LOCATION(S) OF INSTALL. FRP MATERIAL TO BE CONSISTENT WITH EXISTING BUILDING TEXTURE(S), FINISH(ES), COLOR(S), AND ARCHITECTURAL COMPONENTS.
2. THE FRP SHROUD ENCLOSURE ON THE PARK-FACING FACADE SHALL NOT BE OFF-CENTERED.
3. FRP SHROUD ENCLOSURES ARE FOR GRAPHIC REPRESENTATION OF THE DESIGN ONLY. FINAL DETAILS TO BE DESIGNED AND ENGINEERED BY FRP MANUFACTURER, PER STRUCTURAL ANALYSIS AND CALCULATIONS TO BE COMPLETED UNDER SEPARATE SUBMITTAL, NOT FOR CONSTRUCTION.



2 PROPOSED WEST ELEVATION

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

1 EXISTING WEST ELEVATION

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

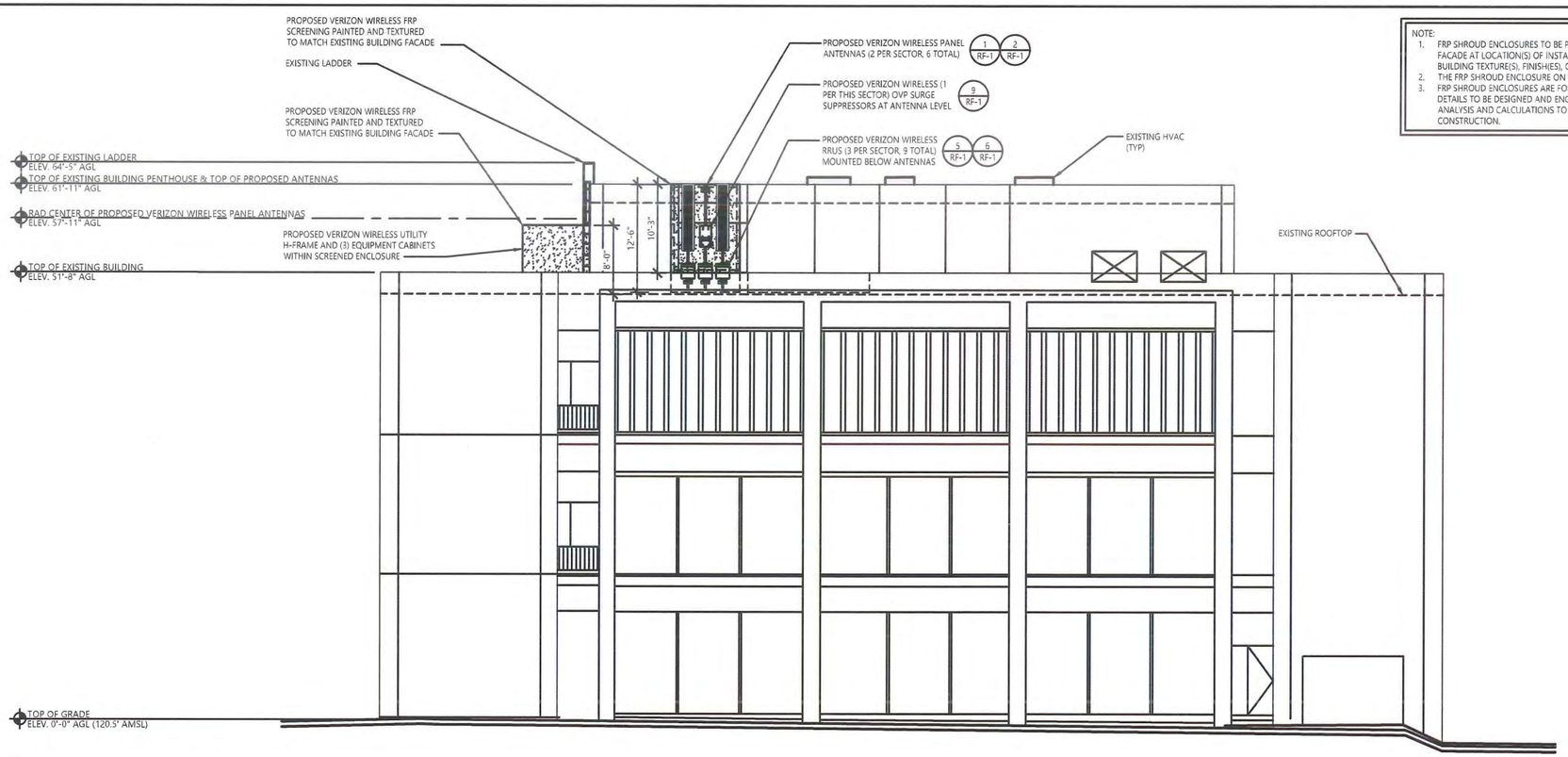
DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
EXISTING & PROPOSED WEST ELEVATION

SHEET NUMBER: A-3
REV.: 2



NOTE:
1. FRP SHROUD ENCLOSURES TO BE PAINTED AND TEXTURED TO MATCH EXISTING BUILDING FACADE AT LOCATION(S) OF INSTALL. FRP MATERIAL TO BE CONSISTENT WITH EXISTING BUILDING TEXTURE(S), FINISH(ES), COLOR(S), AND ARCHITECTURAL COMPONENTS.
2. THE FRP SHROUD ENCLOSURE ON THE PARK-FACING FACADE SHALL NOT BE OFF-CENTERED.
3. FRP SHROUD ENCLOSURES ARE FOR GRAPHIC REPRESENTATION OF THE DESIGN ONLY. FINAL DETAILS TO BE DESIGNED AND ENGINEERED BY FRP MANUFACTURER, PER STRUCTURAL ANALYSIS AND CALCULATIONS TO BE COMPLETED UNDER SEPARATE SUBMITTAL. NOT FOR CONSTRUCTION.

2 PROPOSED SOUTH ELEVATION

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 0' 4' 2' 0' 8'

1 EXISTING SOUTH ELEVATION

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 0' 4' 2' 0' 8'

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
EXISTING & PROPOSED SOUTH ELEVATION

SHEET NUMBER: A-4

REV.: 2

NOTE:
1. FRP SHROUD ENCLOSURES TO BE PAINTED AND TEXTURED TO MATCH EXISTING BUILDING FACADE AT LOCATION(S) OF INSTALL. FRP MATERIAL TO BE CONSISTENT WITH EXISTING BUILDING TEXTURE(S), FINISH(ES), COLOR(S), AND ARCHITECTURAL COMPONENTS.
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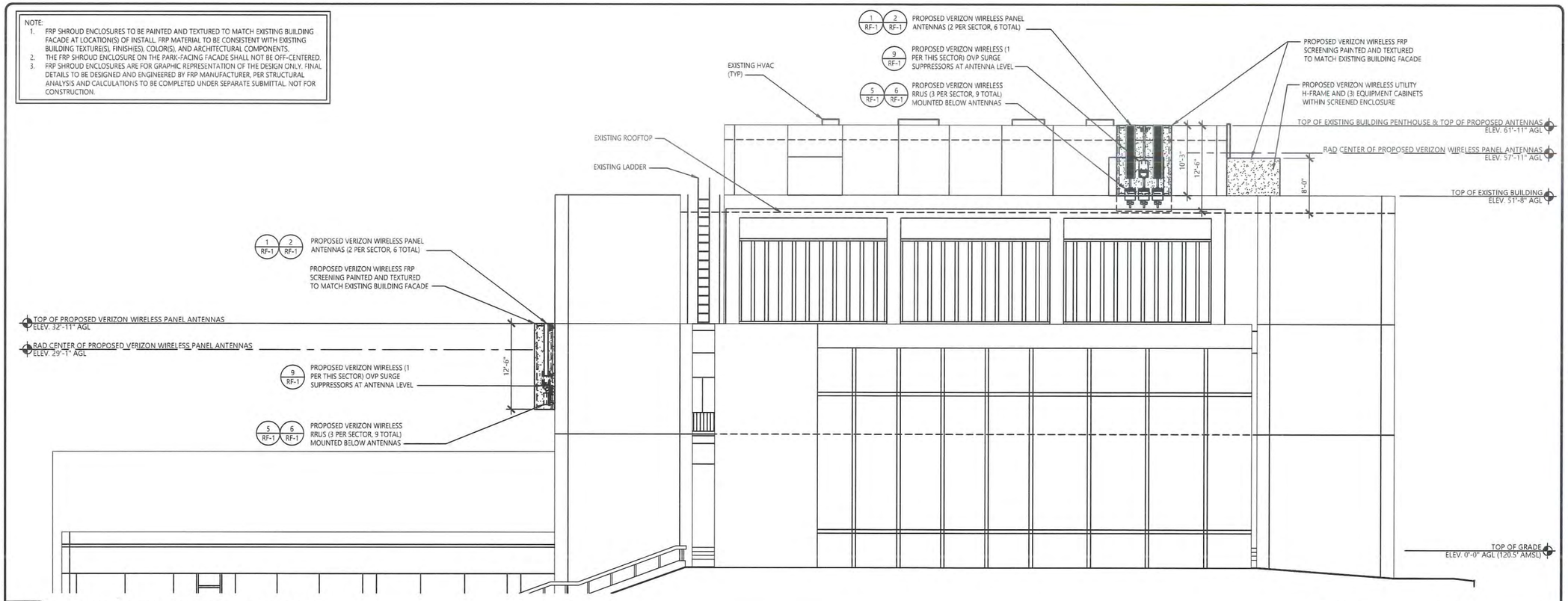
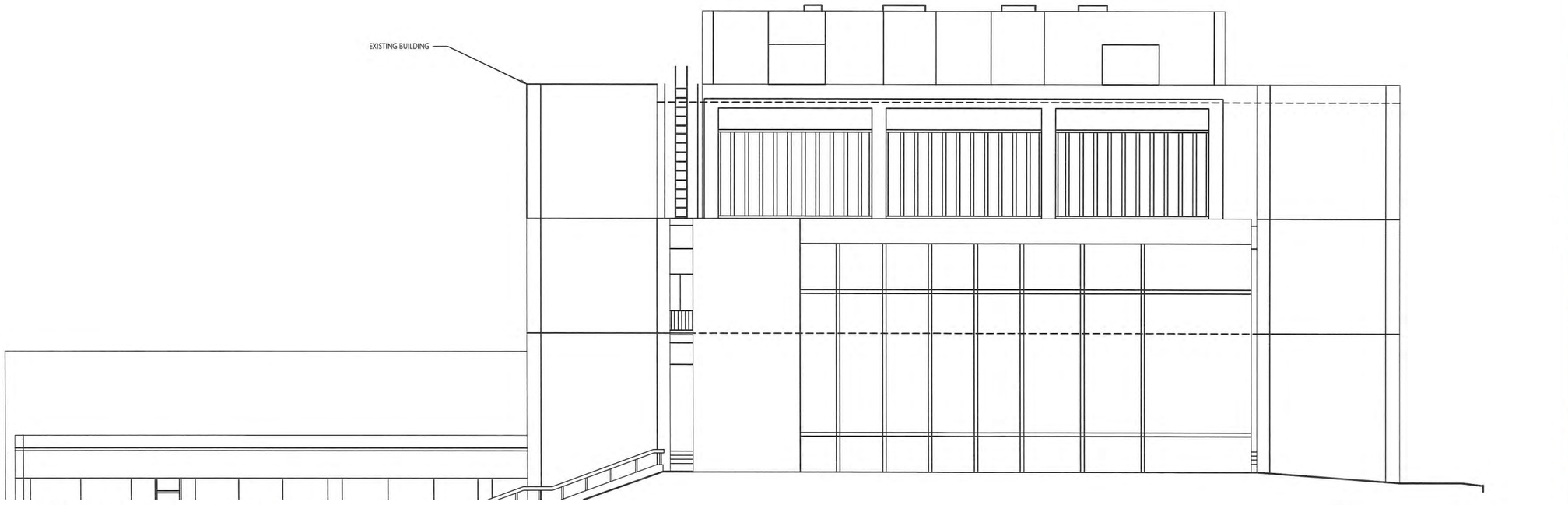


2 PROPOSED NORTH ELEVATION

22"x34" SCALE 1/8" = 1'-0"
11"x17" SCALE 1/16" = 1'-0"



1 EXISTING NORTH ELEVATION

22"x34" SCALE 1/8" = 1'-0"
11"x17" SCALE 1/16" = 1'-0"

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smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

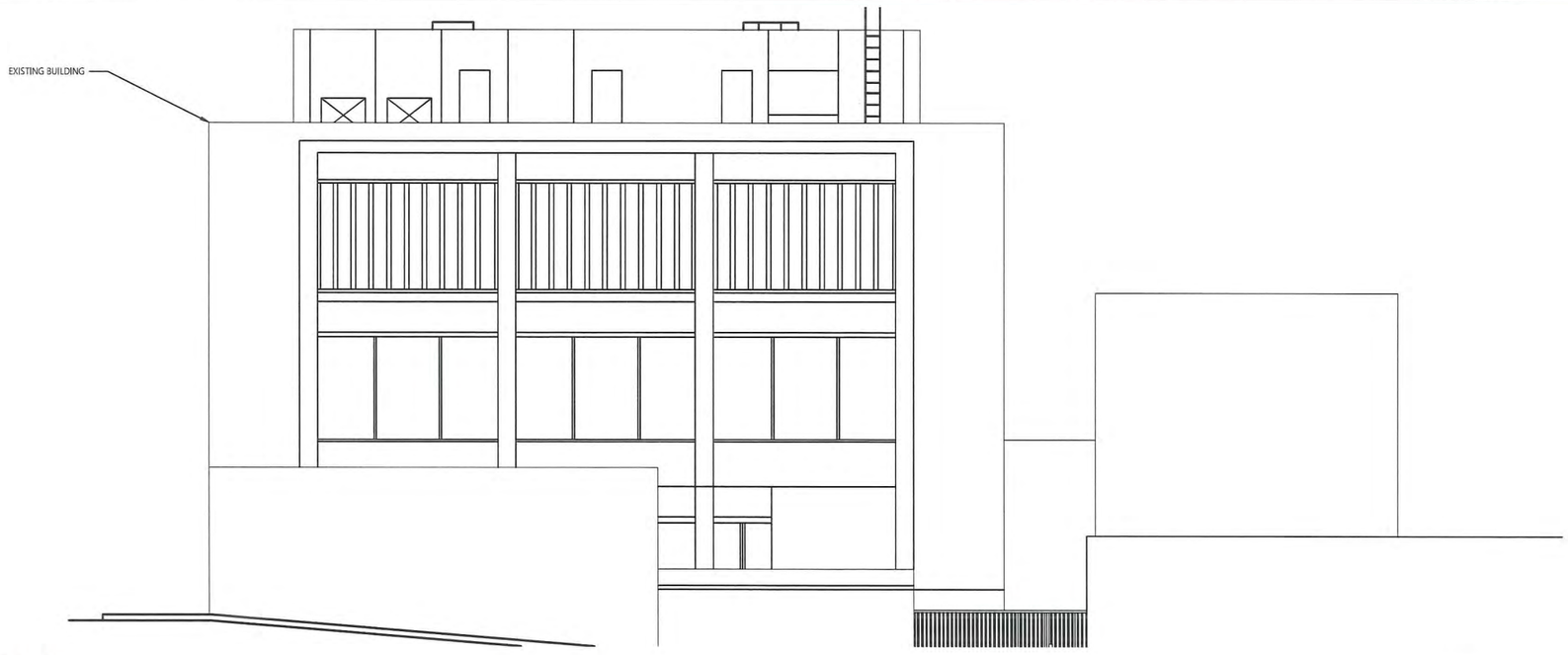
REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
EXISTING & PROPOSED NORTH ELEVATION

SHEET NUMBER: A-5
REV.: 2

2 PROPOSED EAST ELEVATION



1 EXISTING EAST ELEVATION

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smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
EXISTING & PROPOSED EAST ELEVATION

SHEET NUMBER: A-6 | REV.: 2

THERMAL RUNAWAY PROCEDURE POSTING
ATTACHMENT A TO THERMAL RUNAWAY PROCEDURE

HANDLING OVERHEATING BATTERIES OR THERMAL RUNAWAY IN VERIZON WIRELESS

□A COPY OF THIS PAGE SHALL BE LAMINATED OR PLACE IN A PLASTIC SHEET PROTECTOR AND POSTED IN ALL BATTERY AREA.

IF YOU ENCOUNTER BATTERIES TOO HOT TO TOUCH OR THAT MAKE HISSING OR WHISTLING NOISES FROM THEIR VENTS.

- THERE IS A FIRE OR SMOKE.
- IF THE FIRE ALARMS ARE GOING.
- IF THERE IS A STRONG ROTTEN EGG A□HYDROGEN SULFIDE □ODOR

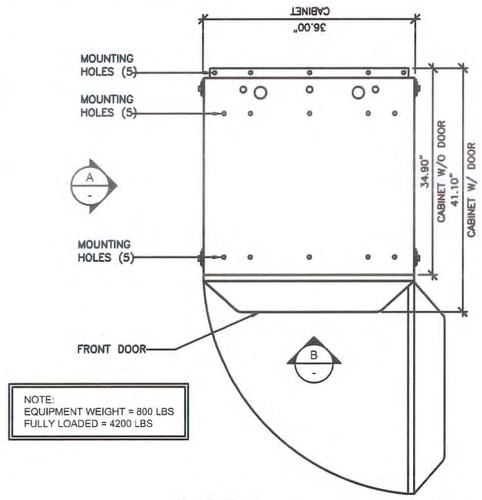
IMPORTANT□TAKE NO ACTION THAT COULD PRODUCE A SPARK AND IGNITE AIRBORNE HYDROGEN

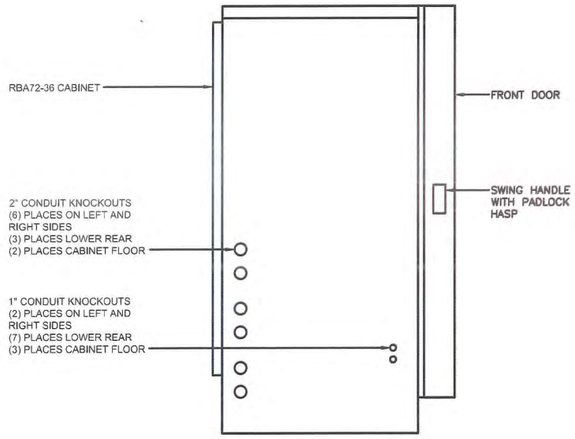
IF YOU ENCOUNTER BATTERIES TOO HOT TO TOUCH BUT THERE IS NO SMOKE AND IT IS SAFE TO REMAIN IN FACILITY.

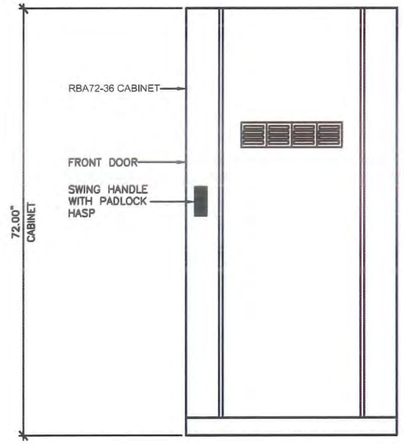
- CALL FOR HELP.
- INCREASE VENTILATION IN BATTERY AREA.
- REDUCE CHARGE CURRENT EITHER BY TURNING OFF ENOUGH RECTIFIERS SO THAT THE LOAD BARELY IS COVERED OR BY LOWERING THE FLOAT VOLTAGE.
- INCREASE COOLING IN THE BATTERY AREA IF POSSIBLE.
- IF THERE IS A SPILL OR OTHER HAZARDOUS SITUATION CALL THE ENVIRONMENTAL HOTLINE AT 1□00□4□□7900

DO NOT OVER□REACT TO BATTERY EMERGENCIES. BURNING BATTERIES RELEASE POTENTIALLY LEATHAL CONCENTRATIONS OF TO□IC GASSES OR OTHER CHEMICALS AND SHOULD BE HANDLED BY TRAINED FIRST RESPONDERS □FIRE DEPARTMENT□WITH APPROPRIATE PROTECTIVE CLOTHING AND SELF CONTAINED BREATHING APPAARATUS □SCBA□

4 THERMAL RUNAWAY PROCEDURE







BATTERY NOTES:
MARATHON M12V155FTX - VALUE REGULATED LEAD-ACID BATTERY OPTIMIZED FOR HIGH TEMP. OPERATION:

NOMINAL VOLTAGE:	12 VOLTS
NOMINAL CAPACITY:	155 AMP–HOURS; 8 HOUR RATE TO 1.75 VOLTS PER CELL @ 25°C (77°F)
ALLOY:	POSITIVE: LEAD, TIN, CALCIUM AND SILVER NEGATIVE: LEAD CALCIUM
TERMINAL:	FRONT ACCESSIBLE, HEAVY DUTY THREADED (M6) COPPER ALLOY
CONTAINER:	REINFORCED FLAME RETARDANT POLYPROPYLENE UL94 V–0; 28% L.O.I
SAFETY VENT:	ONE–WAY, SELF–RESEALING VENT. RECESSED DESIGN ACCOMMODATES APPLICATIONS REQUIRING CENTRAL DEGASSING
FLOAT VOLTAGE:	2.25 VPC TO 2.30 VOLT PER CELL RANGE. RECOMMENDED 2.27 VPC @ 25°C (77°F)
DIMENSIONS:	22" (559 MM) LENGTH X 4.90" (124 MM) WIDTH X 11.15" (283 MM) HEIGHT
WEIGHT:	119 LBS (53.8KG)
QUANTITY BATTERIES:	12
ELECTROLYTES:	23.8 LBS (2.17 GAL) PER BATTERY, 26.04 GALLONS TOTAL ON SITE
LEAD WEIGHT:	36.8 kg (81.0 lbs)
SULFURIC ACID WEIGHT:	4.53 kg (9.98 lbs)
SULFURIC ACID VOLUME:	2.46 l (0.65 gal)

RBA72-36 ELEVATION (A)

RBA72-36 ELEVATION (B)

22"x34" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"

3 BATTERY CABINET SPECIFICATION

PROJECT BATTERY SYSTEM DATA

BATTERY TYPES	VALVE REGULATED LEAD ACID □VRLA **20 YEAR**□
NO. OF BATTERIES	30 **(PER CABINET) (15 STRINGS)**
MANUFACTURER	C□D **TECHNOLOGIES POWER SOLUTIONS**
MODEL NO.	TEL12□1□0F
DIMENSIONS	22.01"W□12.60"H□4.95"DP

# OF CELLS PER UNIT	SPECIFIC GRAVITY	LEAD WT PER CELL (LBS)	ELECTROLYTE WT PER CELL □LBS□	ELECTROLYTE VOLUME PER CELL (GAL)	ELECTROLYTE VOLUME TOTAL □GAL□
GRID TYPE	1.300	102.37	37.62	3.40	102

BATTERY RE□UIREMENTS

RE□UIREMENTS	NONRECOMINANT BATTERIES: FLOODED LEAD ACID BATTERIES	NONRECOMINANT BATTERIES: FLOODED NICKEL–CADMIUM (Ni–Cd) BATTERIES	NONRECOMINANT BATTERIES: VALVE REGULATED LEAD ACID (VRLA) BATTERIES	NONRECOMINANT BATTERIES: LITHIUM–ION CELL
SAFETY CAPS	N/A	N/A	YES (608.2.2)	N/A

COMMENTS: PER MANUFACTURER, THE TEL12–180F UTILIZES A COMBINATION FLAME ARRESTOR/VENT CAP

THERMAL RUNWAY	N/A	N/A	YES (608.3)	N/A

COMMENTS□THERMAL RUNAWAY IS CONTROLLED BY COMMSCOPE POWER PLANT

SPILL CONTROL	N/A	N/A	N/A	N/A

COMMENTS□**SPILL CONTROL NOT REQUIRED BY IFC FOR THIS TYPE OF BATTERY. HOWEVER THE CITY OF PORTLAND REQUIRES SPILL CONTROL FOR BATTERIES CONTAINING MORE THAN 50 GALLONS OF ACCUMULATIVE ELECTROLYTE VOLUME.**

NEUTRALIZATION	N/A	N/A	YES (608.5.2)	N/A

COMMENTS□**NEUTRALIZATION PILLOWS OR SOCKS AS MANUFACTURED FOR SUCH PURPOSES SHALL BE EMPLOYED AND PLACED AT THE INTERIOR BASE OR PERIMETER OF ENCLOSURE AS PER NEUTRALIZATION DEVICE MANUFACTURERS RECOMMENDATION.**

VENTILATION	N/A	N/A	YES (608.8.1, 608.8.2)	N/A

COMMENTS□**CONTINUOUS VENTILATION SHALL BE PROVIDED AT A RATE OF NOT LESS THAN 1 CUBIC FOOT PER MINUTE PER SQUARE FOOT (1 FT3/MIN/FT2) AS NOTED IN IFC 508.6.1 NO. 2. ENVIRONMENTAL CONTROLS ASSOCIATED WITH PROPOSED ENCLOSURE HAVE BEEN SHOWN TO MEET REQUIRED CODE REQUIREMENTS.**

SIGNAGE	N/A	N/A	YES (608.7)	N/A

COMMENTS□**CODE SPECIFIED BATTERY SAFETY SIGNAGE, HAZARDOUS MATERIAL SIGNAGE (4 DIAMOND) AND THERMAL RUNAWAY PROCEDURE SIGNAGE SHALL BE CLEARLY POSTED IN ALL BATTERY AREAS.**

SEISMIC PROTECTION	N/A	N/A	YES (608.8)	N/A

COMMENTS□**BATTERY STORAGE ENCLOSURE CABINET AND ANCHORAGE ARE BEEN DESIGN TO EXCEED ALL IBC CODE REQUIRED SEISMIC FORCES FOR SITE SPECIFIC INSTALLATIONS.**

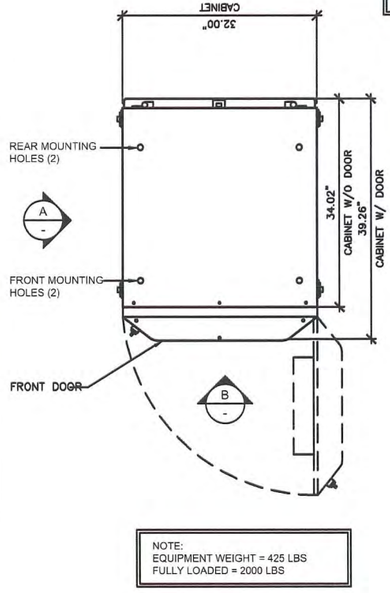
SMOKE DETECTION	N/A	N/A	YES (608.9)	N/A

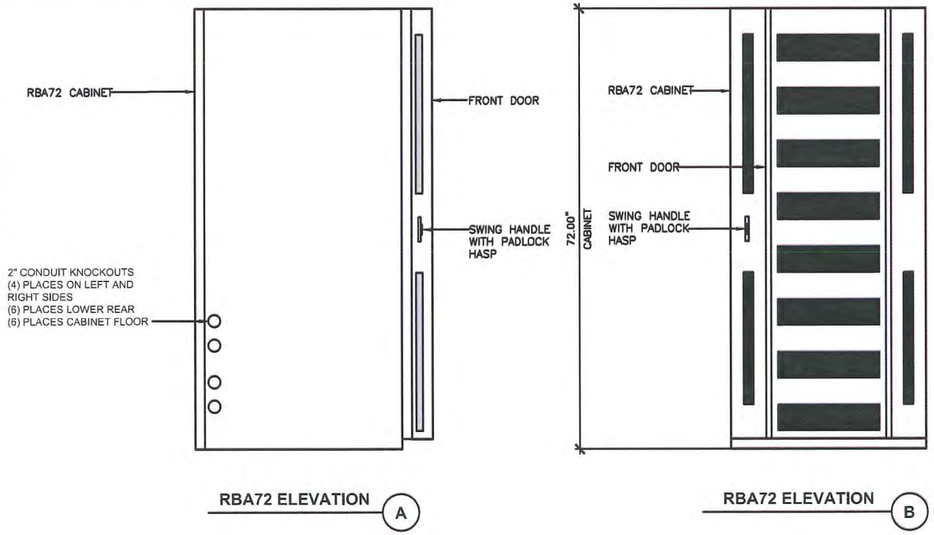
COMMENTS□**N/A OUTDOOR APPLICATION**

NOTE: CODE REFERENCES ARE TO 2014 INTERNATIONAL FIRE CODE FOR STATIONARY STORAGE BATTERY SYSTEMS.

2 BATTERY SYSTEMS IMFORMATION

THERMAL RUNAWAY DEVICE:
THE COMMSCOPE RBA72 POWER CABINET SHALL BE PROVIDED WITH THE FOLLOWING EQUIPMENT
- (1) GE CONTROLLER TO PROBE (GE #CC848817024 FOR 10' OR CC109157434 FOR 20')
- (2) BATTERY PROBES (GE #CC109142980)
- (1) PROBE TO PROBE JUMPER (GE #CC848822321)





RBA72 ELEVATION (A)

RBA72 ELEVATION (B)

22"x34" SCALE: 1" = 1'-0"
11"x17" SCALE: 1/2" = 1'-0"

1 POWER CABINET SPECIFICATION

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

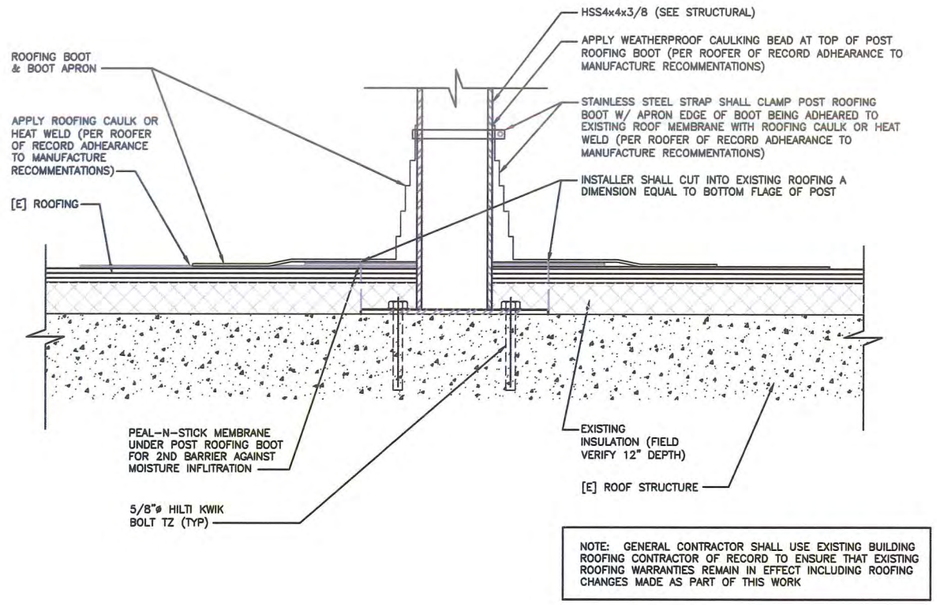
REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER: A–7

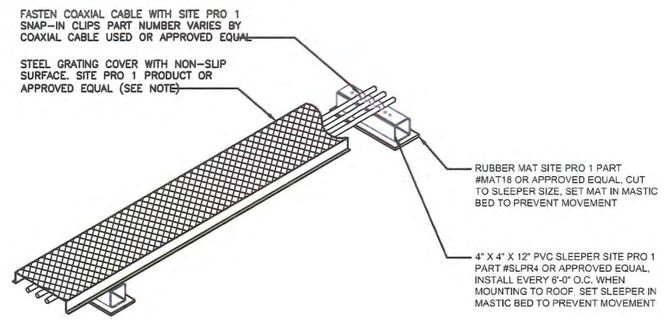
REV.: 2



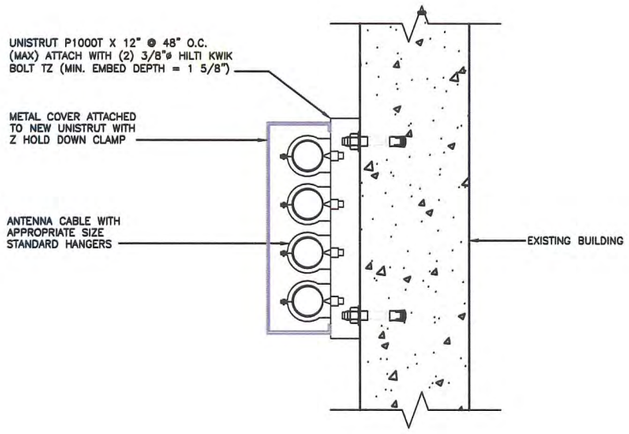
NOTE: GENERAL CONTRACTOR SHALL USE EXISTING BUILDING ROOFING CONTRACTOR OF RECORD TO ENSURE THAT EXISTING ROOFING WARRANTIES REMAIN IN EFFECT INCLUDING ROOFING CHANGES MADE AS PART OF THIS WORK

4 WEATHERPROOFING

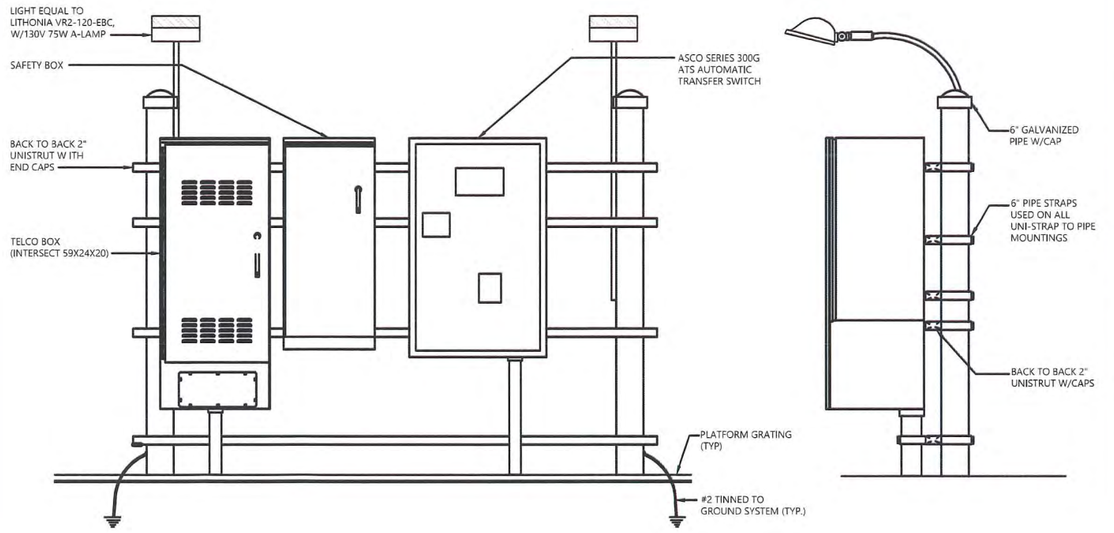
NOTE:
MICROFLECT COAX GRATING BRIDGE KIT INCLUDES PVC SLEEPERS AND STEEL GRATING COVER WITH MOUNTING HARDWARE
PART #SP1542 (4 COAX) OR APPROVED EQUAL
#SP1543 (7 COAX) OR APPROVED EQUAL
#SP1595 (12 COAX) OR APPROVED EQUAL



3 CABLE TRAY SPECIFICATION



2 VERTICAL CABLE TRAY



1 UTILITY RACK SPECIFICATION

22"x34" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER: A-8

REV.: 2

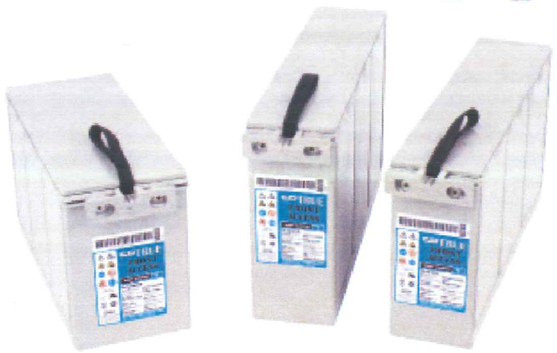
C&D TECHNOLOGIES
Power Solutions

C&D TECHNOLOGIES® TEL

12-1022

C&D TRUE FRONT ACCESS®

TEL12-160FW
TEL12-160F
TEL12-180F



THE MOMENT OF TRUTH HAS ARRIVED

TRUE Performance - 100% out of box capacity ratings at installation
TRUE Front Access Terminals - ensuring reliability & connection versatility
TRUE High Energy Density - highest true energy density solution in the market
TRUE Long life design - Telcordia SR-4228 industry leading 13 year service life
TRUE Seismic System - highest capacity energy storage system seismic NEBS tested
TRUE Flexibility - multiple models to fit each customers unique power system demands

PRODUCT LINE EXTENSION TO
C&D TEL VALVE REGULATED LEAD ACID (VRLA) BATTERY SERIES

APPLICATIONS

- Wireline
- Wireless
- Customer Premise / PBX
- Broadband
- Microwave Repeater
- Fiber Optic Regen Sites

INDOOR/OUTDOOR INSTALLATIONS

- Cabinet Systems
- Rack Systems

FEATURES & BENEFITS

- Long life alloy and design Telecordia certified exceeding 13 years service life.
- Tested and qualified by Telecordia to meet SR-4228 requirements.
- True Front Access threaded copper alloy inserts for reduced maintenance and increased safety.
- Terminal versatility - ease of diagnostic readings with Ohmic Ring®
- Reduced headspace driving higher energy density, in cabinet or rack applications
- Removable handles for ease of installation
- Innovative front terminal design maximizing energy density with direct connect extrusion fusion weld technology.
- Thermally welded case-to-cover bond to ensure a leak-proof seal.
- Flame-retardant polypropylene case and cover compliant with UL94 V-O with an Oxygen Limiting Index of greater than 28.
- Absorbent Glass Mat (AGM) technology for efficient gas recombination 99% plus.
- Flame-arresting, one-way pressure-relief vent for safety and long life.
- Complies with UL1778, 924, 1989 and 94 V-0. BS6290PT4, IEC-896-2.
- UL-recognized component.
- Multicell design for ease of installation and maintenance.
- Not restricted for air transport - Complies with IATA/ICAO Special Provision A67.
- Not restricted for surface transport - classified as non-hazardous material as related to DOT-CFR Title 49 parts 17 1-189.
- Not restricted for water transport - classified as non-hazardous material per Amendment 27.

SPECIFICATIONS

Ampere Hour Capacity to 1.75 Volts per Cell @ 77°F (25°C)

	Discharge in Hrs.																	
Model	1	2	3	4	5	6	7	8	9	10	12	16	20	24	36	48	72	100
TEL12-160FW	111.1	127.4	137.2	143.8	149.0	153.1	156.7	159.7	162.1	164.1	167.6	172.9	176.6	179.6	185.4	189.0	193.2	196.8
TEL12-160F	107.1	124.4	134.6	141.5	146.7	150.8	154.3	157.3	159.5	161.5	164.7	169.4	172.6	174.9	179.2	181.4	183.4	183.8
TEL12-180F	123.1	143.5	155.2	163.2	169.2	174.0	177.9	181.2	184.0	186.4	190.4	196.3	200.3	203.3	208.9	211.9	214.8	215.5

Operating Temperature Range with temperature compensation	Discharge: -40°F (-40°C) to +160°F (71°C) Charge: -10°F (-23°C) to +140°F (60°C)
Nominal Operating Temperature Range	+74°F (23°C) to +80°F (27°C)
Recommended Maximum Charging Current Limit	C_{20}/5 Amperes (40.1A for TEL12-180F; 34.5A for TEL12-160F; 35.3A for TEL12-160FW)
Float Charging Voltage	13.5 to 13.8 VDC average per 12V unit
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C_{20}/20
Self Discharge	Battery can be stored up to 6 months at 77°F (25°C) before a freshening charge is required. Batteries stored at temperatures greater than 77°F (25°C) will require recharge sooner than batteries stored at lower temperatures. See C&D bulletin 41-7272, Self-Discharge and Inventory Control for details.
Equalize charge and cycle service voltage	14.40 to 14.80 VDC average per 12V unit @ 77°F (25°C)
Terminal: Inserted - Inter-unit connector provided	Threaded copper alloy insert terminal to accept 1/4-20 UNC bolt
Terminal Hardware Initial Torque:	110 in.-lbs. (12.4 N-m)
Telcordia Part Numbers	**Battery Part Number** / **CLEI Code** / **CPR** TEL12-160FW / PBMBC10FRA / 212312 TEL12-160F / PBMBB10FRA / 212304 TEL12-180F / PBMBD10FRA / 212314

Battery	Voltage Per Unit	Ampere Hour Capacity 8 Hour Rate @ 77°F (25°C) to 1.75 v/c	Ampere Hour Capacity 10 Hour Rate @ 68°F (20°C) to 1.80 v/c	Maximum Discharge Current	Short Circuit Current	Ohms Impedance 60 Hz (Ω)	Battery Weight
TEL12-160FW	12 V Monobloc	160 Ah	153 Ah	800 Amperes	5600 Amperes	0.0027 Ohms	121 lbs / 55 kg
TEL12-160F	12 V Monobloc	157 Ah	151 Ah	800 Amperes	4700 Amperes	0.0031 Ohms	115 lbs / 53 kg
TEL12-180F	12 V Monobloc	181 Ah	174 Ah	800 Amperes	4500 Amperes	0.0037 Ohms	131 lbs / 60 kg

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
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2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

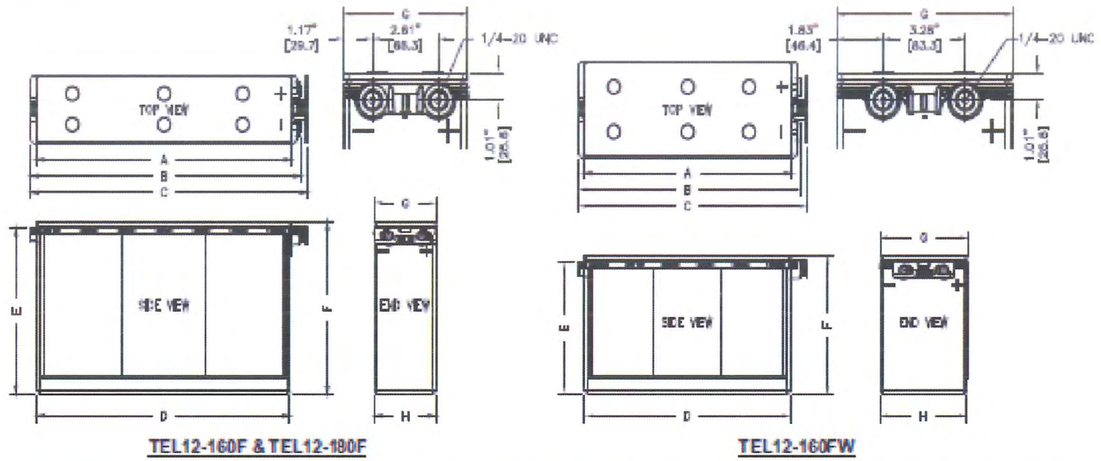
REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
BATTERY SPECIFICATIONS

SHEET NUMBER: A–9 | REV.: 2

DIMENSIONS



TEL12-160F & TEL12-180F

TEL12-160FW

	A		B		C		D		E		F		G		H	
MODEL	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
TEL12-160FW	16.56	420.57	17.72	449.99	18.22	462.79	16.37	415.90	9.69	246.05	10.10	256.54	6.94	176.33	6.86	174.70
TEL12-160F	20.35	516.86	21.51	546.25	22.01	559.05	20.16	512.17	10.73	272.47	11.14	282.96	4.95	125.73	4.86	123.39
TEL12-180F	20.35	516.86	21.51	546.25	22.01	559.05	20.16	512.17	12.19	309.55	12.60	320.04	4.95	125.73	4.86	123.39

* All dimensions in inches and (millimeters). All dimensions are for reference only. Contact a C&D Representative for complete dimensions information.
* Note: Batteries to be mounted with 0.5 IN (12.5mm) spacing minimum and free air ventilation.

CONSTANT CURRENT RATINGS - AMPERES @ 77°F (25°C)

TEL12-160FW

End point volts/cell	Operating Time (hr)																	
	1	2	3	4	5	6	7	8	9	10	12	16	20	24	36	48	72	100
1.75	111.1	63.7	45.7	36.0	29.8	25.5	22.4	20.0	18.0	16.4	14.0	10.8	8.8	7.5	5.2	3.9	2.7	2.0
1.80	107.1	62.0	44.7	35.3	29.3	25.1	22.0	19.7	17.7	16.2	13.8	10.6	8.7	7.4	5.1	3.9	2.6	1.9
1.85	99.2	58.6	42.6	33.7	28.1	24.1	21.2	18.9	17.1	15.6	13.3	10.3	8.4	7.1	4.8	3.7	2.5	1.8
1.90	87.0	52.7	38.8	30.9	25.8	22.2	19.6	17.5	15.8	14.4	12.3	9.5	7.7	6.6	4.4	3.3	2.2	1.6

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypower.net

TEL12-160F

End point volts/cell	Operating Time (hr)																	
	1	2	3	4	5	6	7	8	9	10	12	16	20	24	36	48	72	100
1.75	107.1	62.2	44.9	35.4	29.3	25.1	22.0	19.7	17.7	16.1	13.7	10.6	8.6	7.3	5.0	3.8	2.5	1.8
1.80	102.7	60.3	43.7	34.5	28.7	24.6	21.6	19.3	17.4	15.9	13.5	10.4	8.5	7.2	4.9	3.7	2.5	1.8
1.85	96.2	56.9	41.6	33.0	27.5	23.6	20.8	18.5	16.7	15.3	13.0	10.0	8.2	6.9	4.7	3.5	2.4	1.7
1.90	83.7	51.2	37.7	30.1	25.2	21.7	19.1	17.1	15.4	14.1	12.0	9.2	7.5	6.3	4.3	3.2	2.1	1.5

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypower.net

TEL12-180F

End point volts/cell	Operating Time (hr)																	
	1	2	3	4	5	6	7	8	9	10	12	16	20	24	36	48	72	100
1.75	123.1	71.7	51.7	40.8	33.8	29.0	25.4	22.6	20.4	18.6	15.9	12.3	10.0	8.5	5.8	4.4	3.0	2.2
1.80	117.3	68.6	50.6	40.0	33.3	28.6	25.0	22.3	20.2	18.4	15.6	12.1	9.8	8.3	5.6	4.3	2.9	2.1
1.85	107.3	66.5	48.0	38.3	31.9	27.4	24.1	21.5	19.4	17.7	15.1	11.6	9.5	8.0	5.4	4.1	2.7	2.0
1.90	96.1	59.1	43.8	35.1	29.4	25.3	22.3	19.9	18.0	16.4	14.0	10.8	8.8	7.4	5.0	3.7	2.5	1.8

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
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DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
BATTERY SPECIFICATIONS

SHEET NUMBER: A–10

REV.: 2

12 NOT USED

11 NOT USED

10 NOT USED

9 NOT USED

8 NOT USED

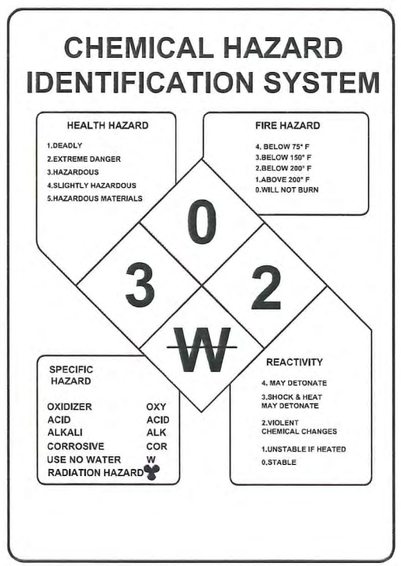
7 NOT USED

6 NOT USED

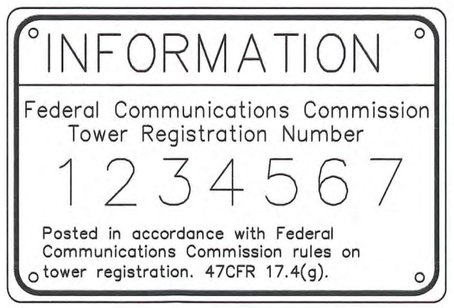
5 NOT USED

4 NOT USED

3 BATTERY HAZ MAT SIGN



2 FCC TOWER REGISTRATION SIGN



NOTES:
1. 12" X 8 ALUMINUM
2. REQUIREMENT IS SPECIFIED IN SECTION 4 OF CNTP.
3. POSTED AT BASE OF TOWER AND AT EACH ENTRANCE POINT.
4. SEE SIGN PLACEMENT TABLE FOR ADDITIONAL INFORMATION.

1 NO TRESPASSING SIGN

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
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1	12/27/16	100% CONSTRUCTION DRAWINGS
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1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

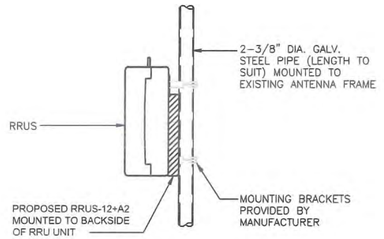
SHEET TITLE:
SIGNAGE DETAILS

SHEET NUMBER: A–11

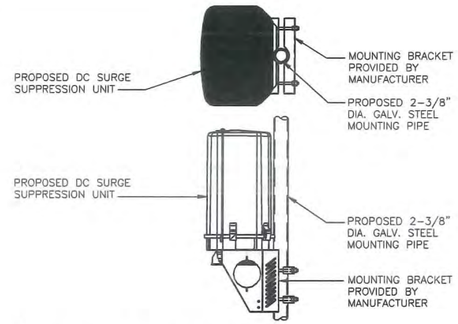
REV.: 2

12 NOT USED

11 NOT USED

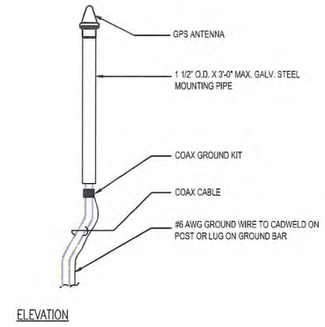


10 RRU SPECIFICATION

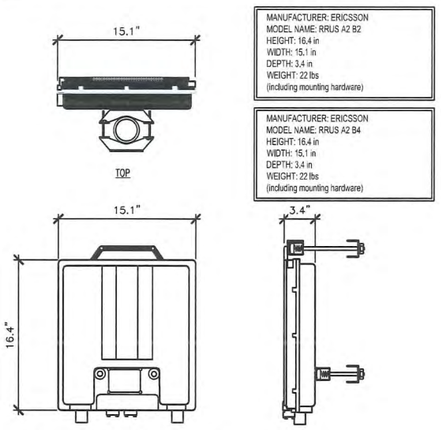


9 OVP SPECIFICATION

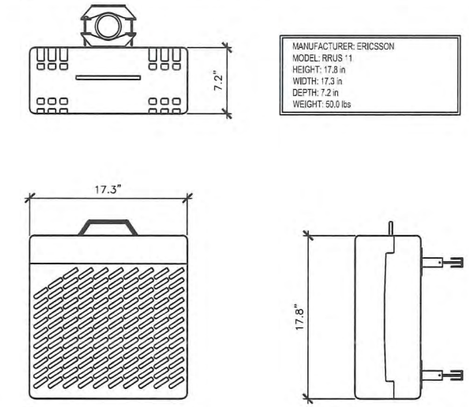
8 NOT USED



7 GPS ANTENNA



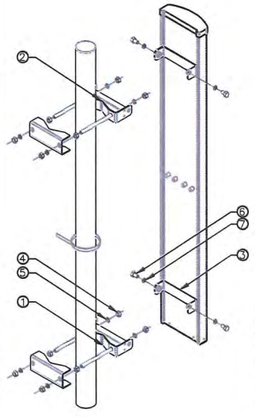
6 RRU SPECIFICATION



5 RRU SPECIFICATION

4 NOT USED

3 NOT USED



NOTES:

1) INSERT SCISSOR BRACKETS BETWEEN THE UPPER ANTENNA MOUNTING BRACKET AND THE UPPER POLE ADAPTER BRACKET. SECURE USING 1/2 INCH HARDWARE PROVIDED.

2) TO SET THE DEGREE OF DOWNTILT, ALIGN THE DESIRED HOLES ON THE SCISSOR BRACKETS AND SECURE USING 5/16 INCH HARDWARE PROVIDED.

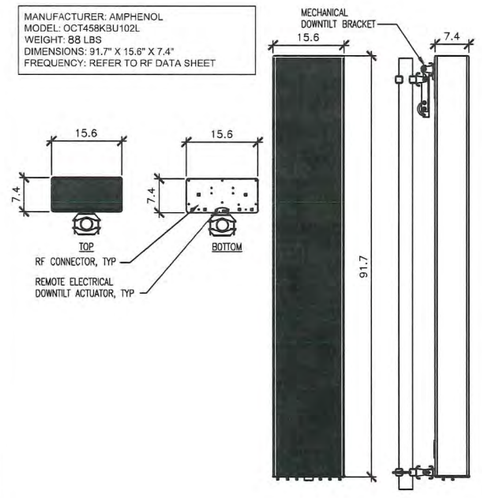
3) THE NUMBER OF CONNECTORS WILL VARY BASED ON ANTENNA TYPE.

4) INSTALLATION TO BE CONFIRMED BY GC PER MANUFACTURER

PARTS:

Item	QTY	Description
①	1	Adaptor, Pole, Lower
②	1	Bracket, Downtilt, Pole
③	1	Bracket, Downtilt, Antenna
④	4	1/2 X 1 Hex Head Bolt
⑤	4	1/2 Split Washer
⑥	2	5/16 X 1 Hex Head Bolt
⑦	2	5/16 Split Washer

2 ANTENNA MOUNTING



1 ANTENNA SPECIFICATION

verizon

smartlink

50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

RF
DETAILS

SHEET NUMBER: RF-1

REV.: 2

GridExport

POR Oregonian
Updated - 11/28/2016

Name	Antenna Type	Status	Tower Equipment Manufacture	Tower Equipment Model	Sector	Antenna Centerline	Antenna Azimuth	Mechanical Tilt	Electrical Tilt	Cable Type	Cable Diameter	Cable Quantity	Contains 700 Service	Contains 850 Service	Contains 1900 Service	Contains 2100 Service
ANT 700/AWS1/3 LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	1	58	10	3	0				All Call Signs	None	None	All Call Signs
ANT 700/PCS LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	1	58	10	3	0				All Call Signs	None	Select Call Signs	None
ANT 700/AWS1/3 LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	2	29	100	3	0				All Call Signs	None	None	All Call Signs
ANT 700/PCS LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	2	29	100	3	0				All Call Signs	None	Select Call Signs	None
ANT 700/AWS1/3 LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	3	58	250	3	0				All Call Signs	None	None	All Call Signs
ANT 700/PCS LTE	Panel (RET)	Proposed	AMPHENOL	OCT458KBU102L	3	58	250	3	0				All Call Signs	None	Select Call Signs	None
RRH AWS 1/3	RRU	Proposed	ERICSSON	RRUS 32 B66	1	58	0	0	0				None	None	None	None
RRH PCS	RRU	Proposed	ERICSSON	RRUS 32 B2	1	58	0	0	0				None	None	None	None
RRH 700	RRU	Proposed	ERICSSON	RRUS 11 B13 w/A2	1	58	0	0	0				None	None	None	None
RRH 850 (Leased)	RRU	Proposed	ERICSSON	RRUS 2212 + 2212 B5	1	58	0	0	0				None	None	None	None
RRH AWS 1/3	RRU	Proposed	ERICSSON	RRUS 32 B66	2	29	0	0	0				None	None	None	None
RRH PCS	RRU	Proposed	ERICSSON	RRUS 32 B2	2	29	0	0	0				None	None	None	None
RRH 700	RRU	Proposed	ERICSSON	RRUS 11 B13 w/A2	2	29	0	0	0				None	None	None	None
RRH 850 (Leased)	RRU	Proposed	ERICSSON	RRUS 2212 + 2212 B5	2	29	0	0	0				None	None	None	None
RRH AWS 1/3	RRU	Proposed	ERICSSON	RRUS 32 B66	3	58	0	0	0				None	None	None	None
RRH PCS	RRU	Proposed	ERICSSON	RRUS 32 B2	3	58	0	0	0				None	None	None	None
RRH 700	RRU	Proposed	ERICSSON	RRUS 11 B13 w/A2	3	58	0	0	0				None	None	None	None
RRH 850 (Leased)	RRU	Proposed	ERICSSON	RRUS 2212 + 2212 B5	3	58	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	1	58	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	1	0	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	2	29	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	2	0	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	3	58	0	0	0				None	None	None	None
OVP Sector Box	HTTA Box	Proposed	HUBER & SUHNER	6-OVP (3315)	3	0	0	0	0				None	None	None	None
BAS Filter AWS	BAS Filter	Proposed	ISCO	15200-175 AWS	1	58	0	0	0				None	None	None	None
BAS Filter AWS	BAS Filter	Proposed	ISCO	15200-175 AWS	1	58							None	None	None	None
BAS Filter AWS	BAS Filter	Proposed	ISCO	15200-175 AWS	2	29							None	None	None	None
BAS Filter AWS	BAS Filter	Proposed	ISCO	15200-175 AWS	2	29							None	None	None	None

verizon

smartlink

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SUITE 210
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TEL: (425) 201-4215
FAX: (425) 274-4449

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1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

RF
INFORMATION

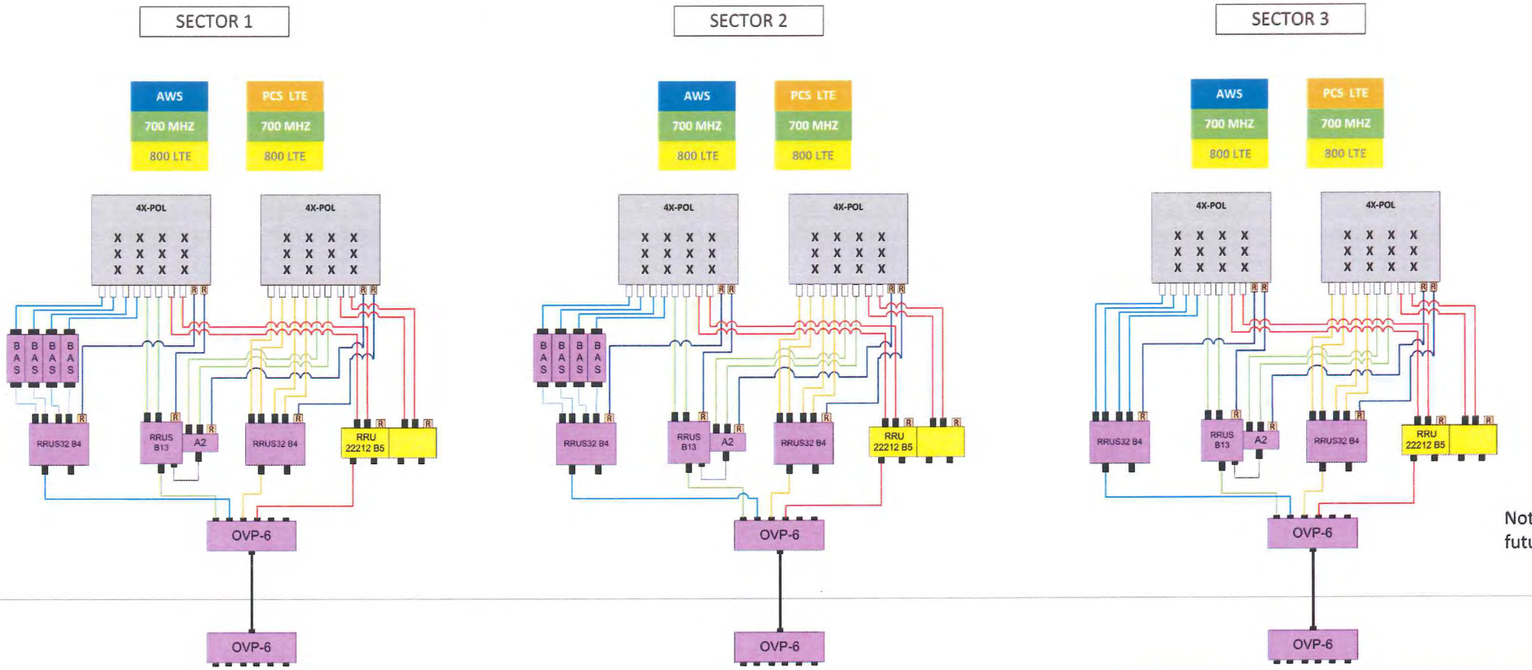
SHEET NUMBER: RF-2

REV.: 2

POR – Oregonian - ANTENNA [3 Sector – 700, 800, AWS, PCS LTE]

November 28, 2016

Arrangement of Antennas may not match arrangement on the tower



Note: Yellow highlight are future leased components

RRU Bands:
700 – RRUS Band 13
AWS – RRUS Band 4
PCS – RRUS Band 2
850 – RRUS Band 5
AWS-3 – RRUS Band 66A

D102	2212, RRUS32, o	2212 or
BB option 3-3-5	AIR32	AIR32
B13	B4	B2
Bandwidth (MH	up to 20	up to 20
	cont or split	cont or split
Rx	4	4	4

BB option 3-3-5; must have L16B drop 2 if all split

	BB1	ABW	Branches cont	Branches split	Cells cont	Cells split
port A	o XMU1 port	120	8	12	2	3
port B	o XMU1 port	120	8	12	2	3
port C	o XMU1 port	120	8	12	2	3
port D	o XMU2 port	80	4	8	1	2
port E	o XMU2 port	80	4	8	1	2
port F	o XMU2 port	80	4	8	1	2
Total ABW		600	36	60	9	15

port	XMU 1	ABW	port	XMU 1	ABW	LR
1	to BB1 port A	120	16	700 alpha	40	2.5
	Link Rate	7.5	15	AWS alpha	80	5
			14			
			13			
2	to BB1 port E	120	12	700 beta	40	2.5
	Link Rate	7.5	11	AWS beta	80	5
			10			
			9			
3	to BB1 port C	120	7	700 gamma	40	2.5
	Link Rate	7.5	6	AWS gamma	80	5
			5			
			4			

port	XMU 2	ABW	port	XMU 2	ABW	LR
1	to BB1 port D	80	16	PCS alpha	80	5
	Link Rate	5	15			
			14			
			13			
2	to BB1 port F	80	12	PCS beta	80	5
	Link Rate	5	11			
			10			
			9			
3	to BB1 port F	80	7	PCS gamma	80	5
	Link Rate	5	6			
			5			
			4			

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0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

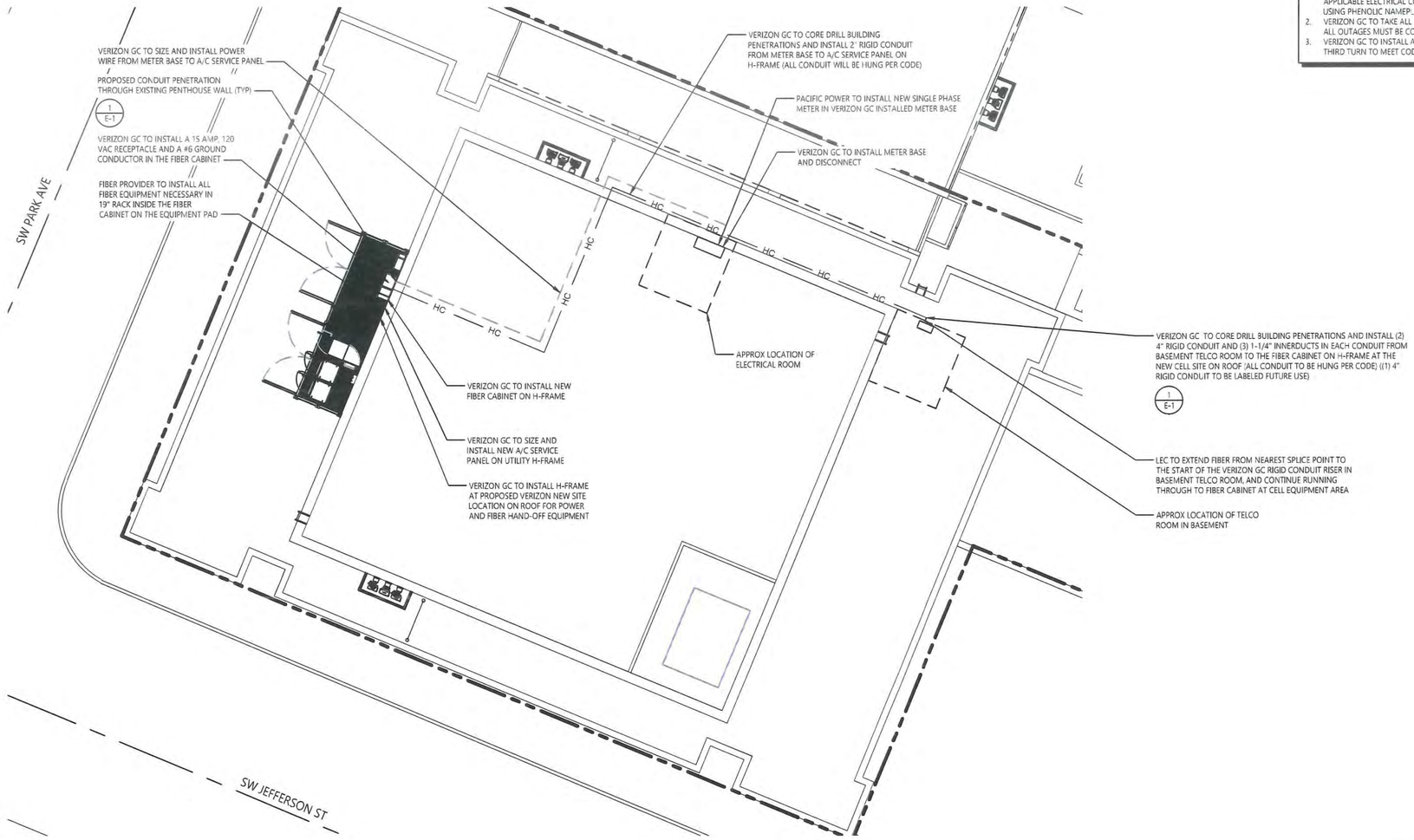
REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
RF PLUMBING DIAGRAM

SHEET NUMBER: RF–3

REV.: 2



NOTES:

1. NEW ELECTRICAL EQUIPMENT SHALL BE SET IN ACCORDANCE WITH CURRENTLY APPLICABLE ELECTRICAL CODE AND BUILDING SPECIFICATIONS, AND LABELED PROPERLY USING PHENOLIC NAMEPLATES.
2. VERIZON GC TO TAKE ALL NECESSARY PRECAUTIONS NOT TO DISTURB TENANTS, AND ALL OUTAGES MUST BE COORDINATED WITH PROPERTY MANAGEMENT.
3. VERIZON GC TO INSTALL A J-BOX TO ACCOMMODATE 90° BENDS IN CONDUIT AT EVERY THIRD TURN TO MEET CODE.

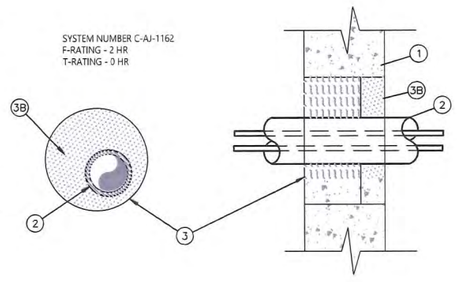
3 UTILITY PLAN

2 NOT USED

1. CMU/CONCRETE WALL 140 ASSEMBLY - MIN 4-1/2" THICK REINFORCED NORMAL WEIGHT (100-150 PCF) CMU/CONCRETE WALL MAX DIAMETER OF OPENING IS 8"
2. THROUGH PENETRANTS - PIPE, CONDUIT, OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR. A MAX OF ONE PIPE, CONDUIT, OR TUBING TO BE INSTALLED WITHIN THE OPENING. THE ANNULAR SPACE SHALL BE MINIMUM 1" TO MAXIMUM 2-7/8". PIPE, CONDUIT, OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS, OR TUBING MAY BE USED:
   - A. STEEL PIPE - NOMINAL 4"Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   - B. CONDUIT - NOMINAL 4"Ø (OR SMALLER) ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
   - C. COPPER TUBING - NOMINAL 4"Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   - D. COPPER PIPE - NOMINAL 4"Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
   - A. PACKING MATERIAL - MINIMUM 3-1/2" THICKNESS OF MINIMUM 3.0 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   - B. FILL MATERIAL* - CAULK - MINIMUM 1" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR. TREMCO INC - TREMSTOP - WBM

*BEARING THE UL CLASSIFICATION MARKING

SYSTEM NUMBER C-AJ-1162
F-RATING - 2 HR
T-RATING - 0 HR



1 CONDUIT PENETRATION

verizon

smartlink
50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

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1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

UTILITY ROUTING PLAN & DETAILS

SHEET NUMBER: E-1

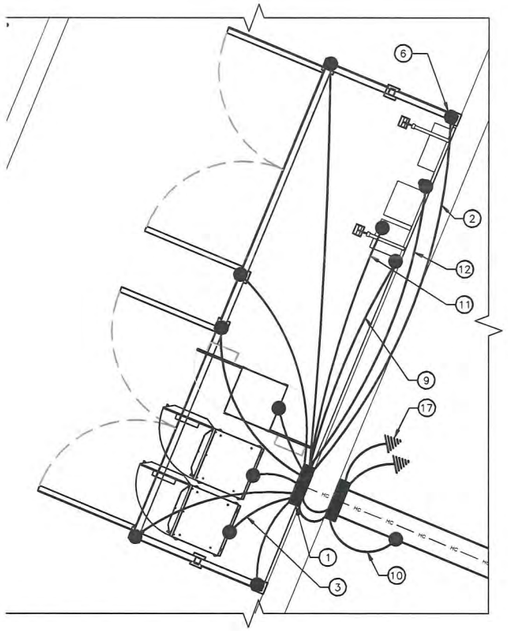
REV.: 2

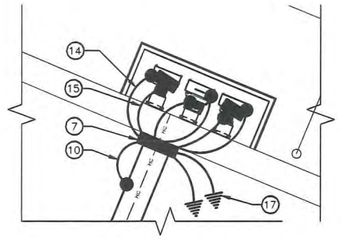
GROUNDING KEYED NOTES:

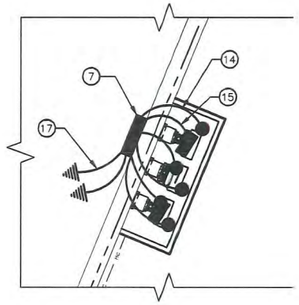
1. MAIN GROUND BUS BAR MOUNTED ON PLATFORM. SEE DETAIL 5/G-2 FOR GROUND BAR CONSTRUCTION AND 9/G-2 FOR GROUND WIRE CONNECTIONS.
2. #6 AWG GROUND FROM PLATFORM TO GROUND BUS BAR.
3. #6 AWG GROUND FROM EQUIPMENT CABINET TO EQUIPMENT GROUND BAR MOUNTED ON PLATFORM, TYP. SEE DETAIL 9/G-2
4. NOT USED
5. NOT USED
6. CAD WELD (TYP). SEE DETAIL 3/G-2.
7. ANTENNA GROUND BAR, TYP. SEE DETAIL 9/G-2
8. #2 AWG GROUND FROM EQUIPMENT GROUND BAR TO GROUND BAR. SEE DETAIL 9/G-2
9. #2 AWG GROUND FROM EACH H-FRAME POST TO GROUND BAR. SEE DETAIL 9/G-2
10. #2 AWG GROUND FROM CABLE TRAY TO GROUND BAR.
11. #2 AWG GROUND FROM TELCO BOX TO MAIN GROUND BAR. SEE DETAIL 9/G-2
12. #6 AWG GROUND FROM GPS ANTENNA MOUNT TO ANTENNA GROUND BAR. SEE DETAIL 9/G-2
13. NOT USED
14. #6 AWG RRU MOUNT GROUND TO ANTENNA GROUND BUS BAR (TYP). SEE DETAIL 4/G-2.
15. #6 AWG ANTENNA MOUNT GROUND TO ANTENNA GROUND BUS BAR (TYP). SEE DETAIL 4/G-2.
16. #6 AWG SURGE SUPPRESSION UNIT MOUNT GROUND TO ANTENNA GROUND BAR (TYP OF (3) PLACES). SEE DETAIL 4/G-2
17. CONTRACTOR SHALL VERIFY (2) #2 AWG THHN GROUND LEADS FROM ALL REMOTE INDIVIDUAL BUSES TO BE COLLECTED AT ONE MAIN MCB AND FURTHER ROUTED TO BUILDING STEEL OR OTHER DESIGNATED BUILDING GROUNDING SYSTEM (FINAL DESIGNATED POINT OF GROUNDING TO BE COORDINATED WITH BUILDING OWNER)

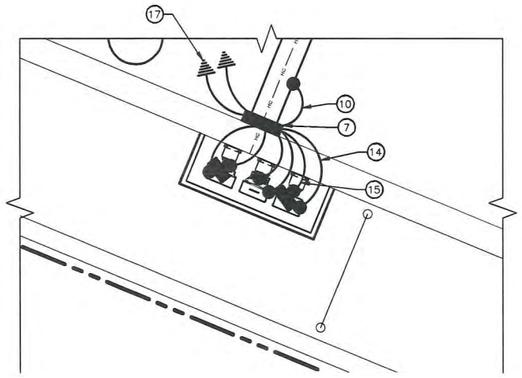
GROUNDING NOTES:

1. CONTRACTOR SHALL CAREFULLY REVIEW GROUNDING NOTES AND CONSULT WITH TOWER OWNER FOR SITE SPECIFIC CONDITIONS IF THERE SHOULD BE ANY FURTHER CLARIFICATIONS NEEDED
2. VERIZON GROUNDING LEADS COMING FROM BOTH ANTENNAS AND COAX GROUND KITS SHALL BE DIRECTED TO A DEDICATED VERIZON BUS BARS AND SHALL BE LOCATED UP ON A GIVEN POLE OR TOWER NEAR THE BOTTOM OF ANTENNAS BEING DIRECTLY FASTENED TO THE STEEL STRUCTURE WITH STAINLESS STEEL HARDWARE AND / OR ANGLE ADAPTERS (E.G. PIROD / VALMONT GROUNDING BUS BAR PART NUMBER B2981 [VERIZON CONSTRUCTION MANAGER SHALL CONFIRM BUS BAR PART PRIOR TO CONTRACTOR PURCHASE OF PART] BEING ANCHORED TO A MOUNTING BRACKET KIT FOR B2372 OR EQUIVALENT OR BEING MOUNTED WITH UNIVERSAL CLAMP NUMBER B1852 OR EQUIVALENT [W/O CHERRY INSULATORS]).
3. ANCHORING OF VERIZON UPPER BUS BAR SHALL NOT EMPLOY THE USE OF DRILLING, WELDING OR CUTTING INTO THE EXISTING POLE OR TOWER (ALL NEW ATTACHMENT BRACKETS SHALL BE CLAMPED OR MECHANICALLY FASTENED TO POLE OR TOWER).
4. VERIZON ANTENNA AND COAX GROUND LEADS SHALL TERMINATE AT UPPER BUS BAR W/O INSULATORS AT THE NEAR ANTENNA LOCATION WITH LEADS NOT CONTINUING DOWN THE POLE SHAFT OF TOWER LEG (TOWER STRUCTURE SHALL SERVE AS GROUNDING MEDIUM IN ORDER TO ENSURE THAT ALL EQUIPMENT ON THE TOWER IS ON THE SAME GROUND POTENTIAL MAINTAINING ONE COMMON GROUND PLANE).
5. A SECOND VERIZON BUS BARS WITH STAND OFF INSULATORS (E.G. PIROD / VALMONT GROUNDING BUS BAR PART NUMBER B2981 [VERIZON CONSTRUCTION MANAGER SHALL CONFIRM BUS BAR PART PRIOR TO CONTRACTOR PURCHASE OF PART] BEING ANCHORED TO A MOUNTING BRACKET KIT FOR B2372 OR EQUIVALENT OR BEING MOUNTED WITH UNIVERSAL CLAMP NUMBER B1852 OR EQUIVALENT [WITH STANDOFF CHERRY INSULATORS]) SHALL BE ADDED AT THE BASE OF THE TOWER TO CAPTURE ANY ADDITIONAL TOWER SURFACE LIGHTNING RESIDUAL SHEETING WITH A DEDICATED VERIZON GROUND LEAD BEING DIRECTED TO GROUND AND ATTACHED TO THE EXISTING TOWER GROUND RING (FINAL LOCATION OF BOTTOM OF TOWER GROUND BUS BAR SHALL BE APPROVED BY TOWER REPRESENTATIVE PRIOR TO INSTALLATION).
6. VERIZON GROUND LEAD FROM LOWER VERIZON BUS BAR SHALL BE NO. 2 OR 2/0 AWG WIRE AND SHALL ATTACHED TO EXISTING POLE / TOWER GROUND RING WITH PARALLEL THRU WIRE MOLD (E.G. PIROD / VALMONT PART NUMBER 171791 OR EQUIVALENT).
7. VERIZON GROUND LEADS MAY NOT BE ATTACHED TO EXISTING GROUND RINGS WITH ANY CONFIGURATION OTHER THAN THE "PARALLEL THRU WIRE MOLD" WITH THE LEAD SWEEPING INTO THE GROUND RING IN THE CONFIGURATION SHOWN ON THE GROUNDING PLAN.
8. VERIZON GROUND LEADS FROM BOTH ANTENNAS AND COAX GROUND KITS WHERE THERE IS AN ESTABLISHED GROUND BUS BAR POSITIONED AT THE TOP OF A NONCONDUCTIVE POLE OR STRUCTURE (E.G. WOOD UTILITY POLES, PRE-CAST CONCRETE POLES, BUILDINGS, FIBERGLASS STRUCTURES, ETC.) SHALL EMPLOY THE USE OF SEPARATE GROUND LEAD CONDUCTORS RUNNING DOWN THE POLE OR STRUCTURE TO A BUS BAR AT THE BASE OF THE POLE OR STRUCTURE AND FURTHER RUNNING INTO AN EXISTING GROUND RING.









ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBING
GEN	GENERATOR
IGR	INTERIOR GROUND RING (HALO)
IMC	INTERMEDIATE METALLIC CONDUIT
MGB	MASTER GROUND BAR
PCS	PERSONAL COMMUNICATION SYSTEM
PTS	POWER TRANSFER SWITCH
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY
TYP	TYPICAL

ELECTRICAL SYMBOLS

- GROUND BAR
- GROUND ROD WITH ACCESS
- CHEMICAL GROUND ROD
- GROUND ROD
- DISCONNECT SWITCH
- METER
- CIRCUIT BREAKER
- CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- GROUNDING WIRE
- REPRESENTS DETAIL NUMBER
- REFERENCE SHEET NUMBER

1 SCHEMATIC GROUNDING PLAN

22"x34" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

0' 8' 4' 2' 0' 8'

verizon

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1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:

SCHEMATIC GROUNDING PLAN & NOTES

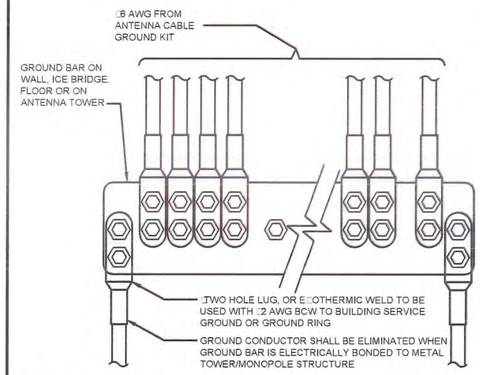
SHEET NUMBER: G-1

REV.: 2

12 NOT USED

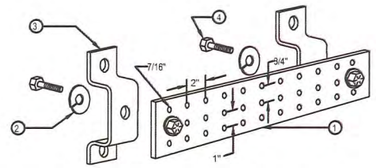
11 NOT USED

10 NOT USED



NOTE□
GROUND BARS AT BOTTOM OF TOWERS/MONOPOLES SHALL ONLY USE E□OTHERMIC WELDS.

9 GROUND WIRE INSTALLATION



1□ COPPER GROUND BAR, 1/4"□4"□20", NEWTON INSTRUMENT CO. CAT. NO. B□6142 OR APPROVED E□UAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. □ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS□

2□ 5/□" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015□ OR APPROVED E□UAL

3□ WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A□6056 OR APPROVED E□UAL

4□ 5/□11 □ 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012□ OR APPROVED E□UAL

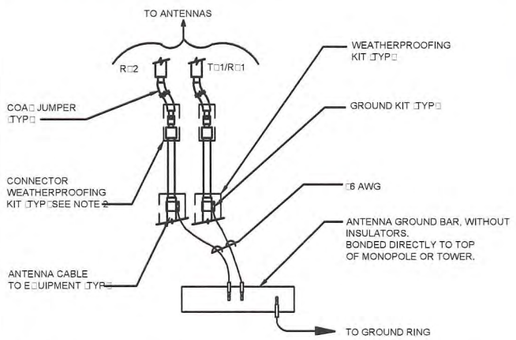
NOTE□
GROUND BAR TO BE BONDED DIRECTLY TO TOWER STRUCTURE. NO INSULATORS USED. CONNECTION TO TOWER STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

5 TYPICAL GROUND BAR

8 NOT USED

7 NOT USED

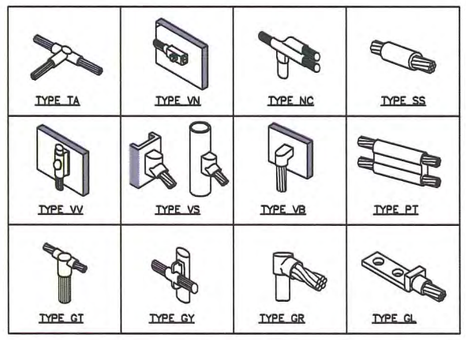
6 NOT USED



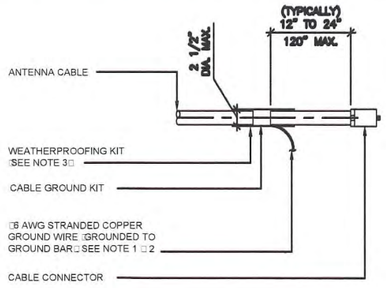
NOTES□
DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.

WEATHER PROOFING SHALL BE TWO□PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTIONS



3 CADWELD GROUNDING CONNECTIONS



NOTES□

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

   GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

   WEATHER PROOFING SHALL BE TWO□PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

2 CABLE GROUND KIT CONNECTION

1 NOT USED

verizon

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2	02/27/17	LIFE SAFETY COMMENTS
1	12/27/16	100% CONSTRUCTION DRAWINGS
0	11/22/16	90% CONSTRUCTION DRAWINGS

DRAWN BY: PD | CHECKED BY: AM

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-28-17
OREGON
NOVEMBER 13, 2003
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:
POR OREGONIAN
1230 SW PARK AVE &
1215 SW BROADWAY
PORTLAND, OR 97205
MULTNOMAH COUNTY

SHEET TITLE:
GROUNDING DETAILS

SHEET NUMBER: G–2

REV.: 2

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325-X. Fu=120 KSI, U.N.O.
   - U-BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E80XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE - HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE - HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE - RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 30 KSI (LW), 7 KSI (CW) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE - CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE - CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH - CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
   - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

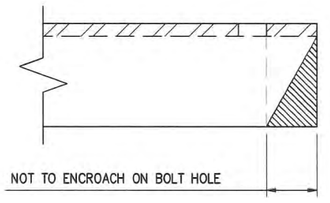
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
   c. MECHANICAL AND EPOXIED ANCHORAGES.
   d. FIBER REINFORCED POLYMER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



verizon

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TEL: (425) 201-4215
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REV.	DATE	REVISION DESCRIPTION
1	2/15/2017	PER COMMENTS
0	12/14/2016	FOR REVIEW

DRAWN BY: VEB CHECKED BY: JRJ

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-11-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

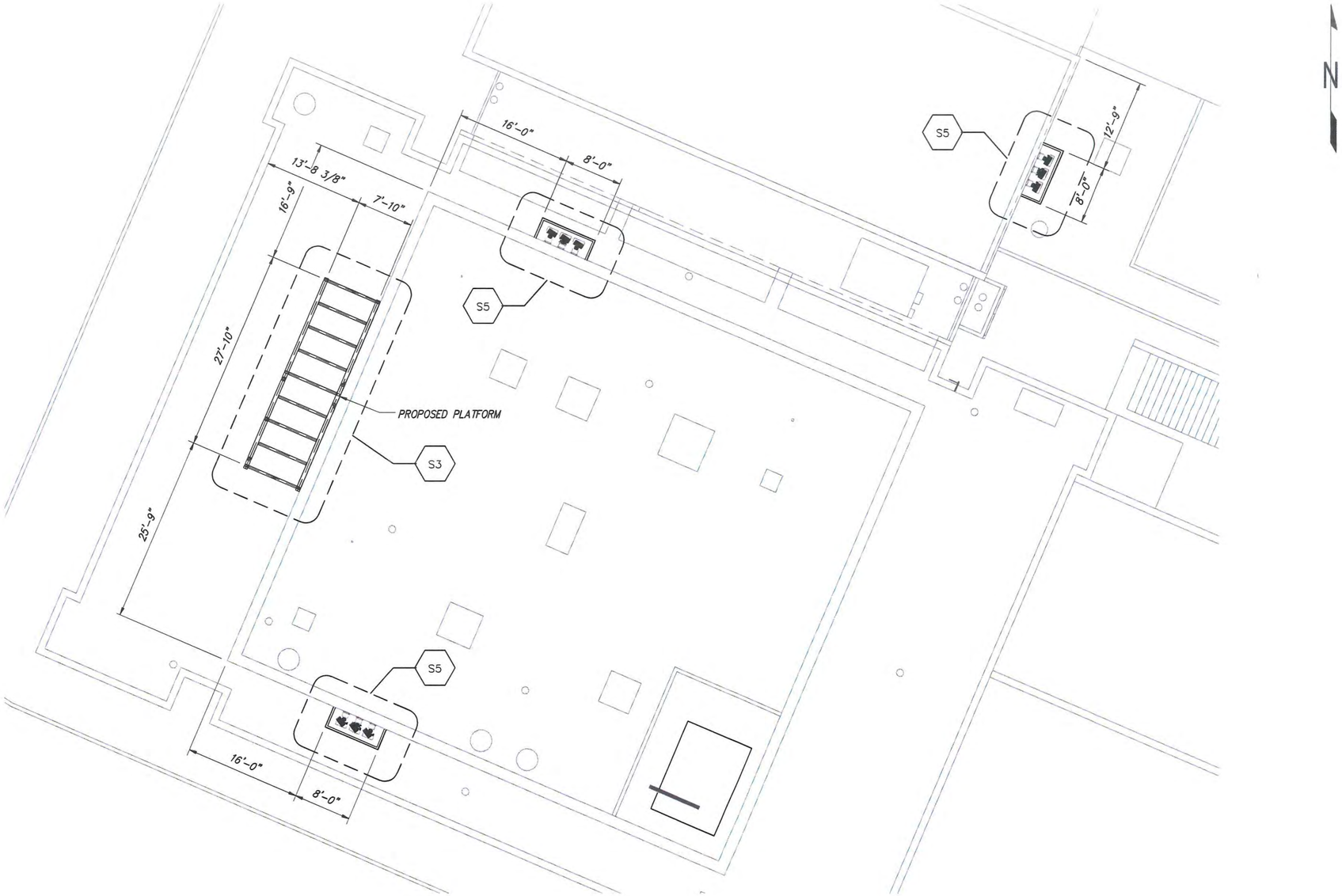
POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

CANDIDATE NAME:
POR OREGONIAN

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER: **S1**

REV.: 0



1 LOCATION PLAN
SCALE: NOT TO SCALE

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50 116TH AVENUE SE
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BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

REV.	DATE	REVISION DESCRIPTION
1	2/15/2017	PER COMMENTS
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REGISTERED PROFESSIONAL ENGINEER
74093PE
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

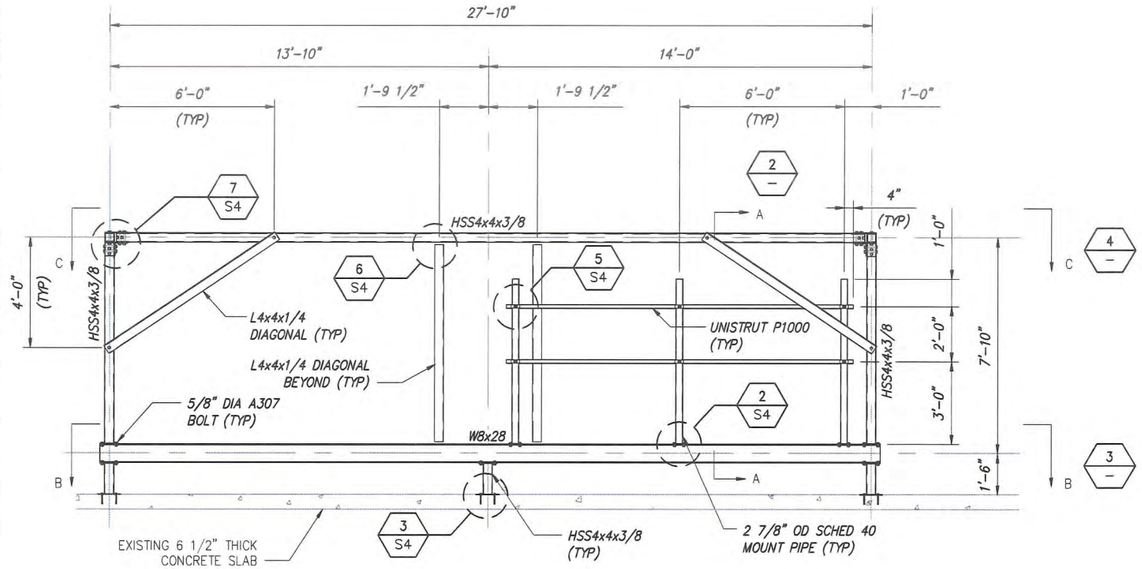
CANDIDATE NAME:
POR OREGONIAN

SHEET TITLE:

PLATFORM LOCATION PLAN

SHEET NUMBER: **S2**

REV.: 0



1 -- FRONT ELEVATION
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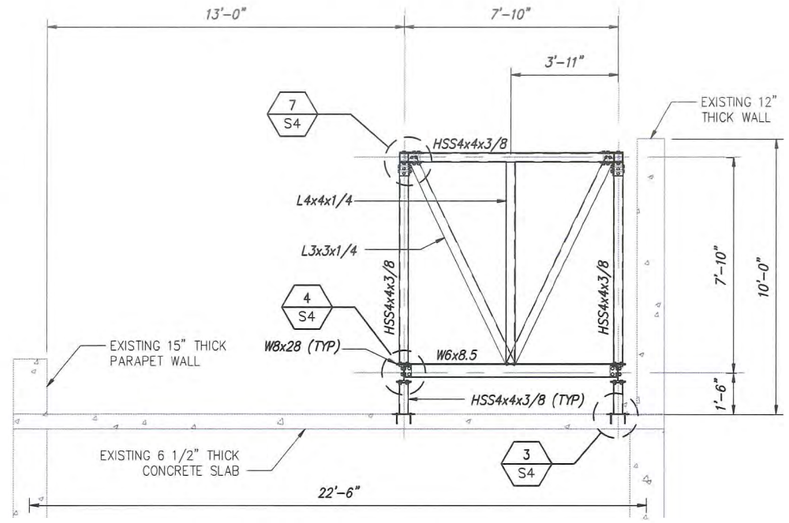

2 -- SECTION A–A
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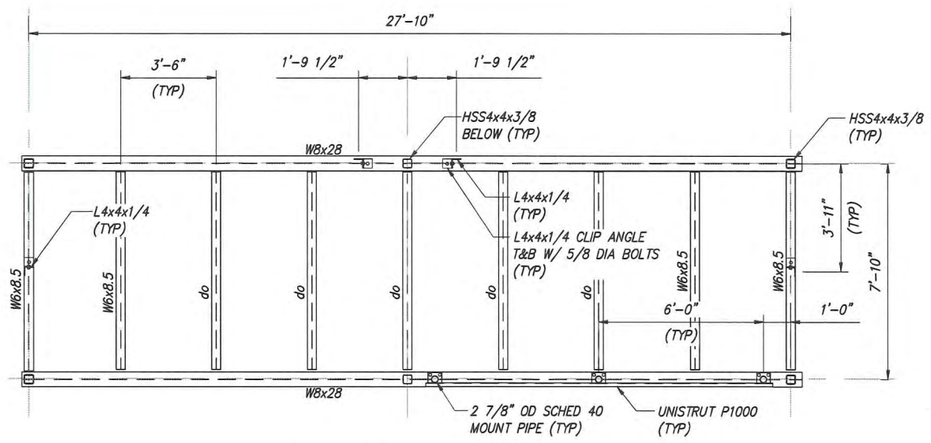

3 -- SECTION B–B
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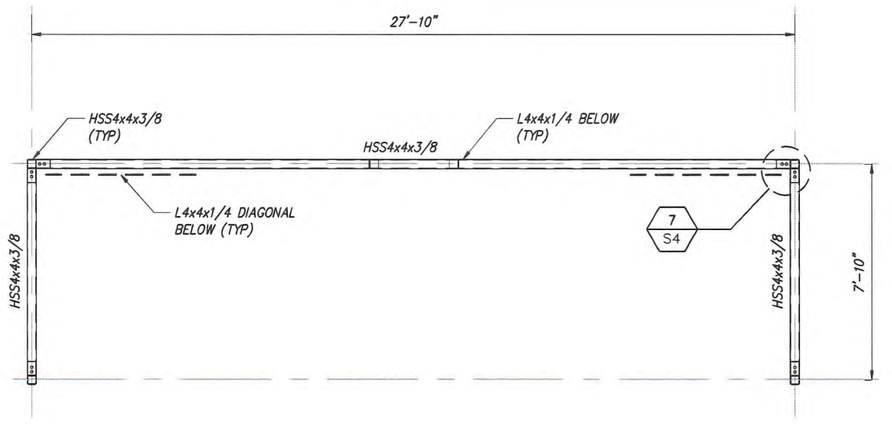

4 -- SECTION C–C
SCALE: NOT TO SCALE

ALL MEMBERS SHOWN ARE STEEL UNLESS OTHERWISE NOTED

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BELLEVUE, WA 98004
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REV.	DATE	REVISION DESCRIPTION
1	2/15/2017	PER COMMENTS
0	12/14/2016	FOR REVIEW

DRAWN BY: VEB CHECKED BY: JRJ

REGISTERED PROFESSIONAL ENGINEER
74093PE
OREGON
NOVEMBER 13, 2008
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

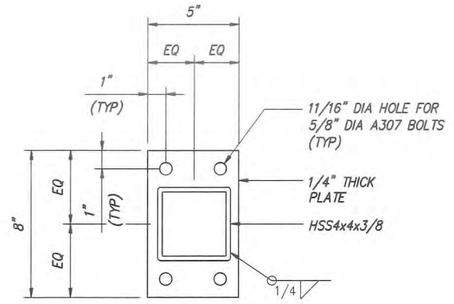
POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

CANDIDATE NAME:
POR OREGONIAN

SHEET TITLE:
FRAMING PLANS AND ELEVATIONS

SHEET NUMBER: **S3**

REV.: 0



1 DETAIL
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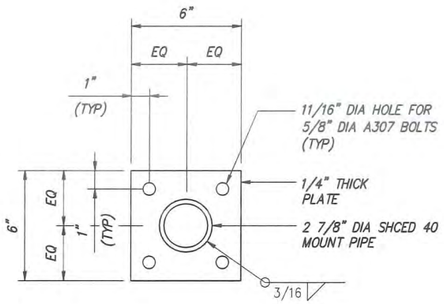

2 MOUNT PIPE BASE
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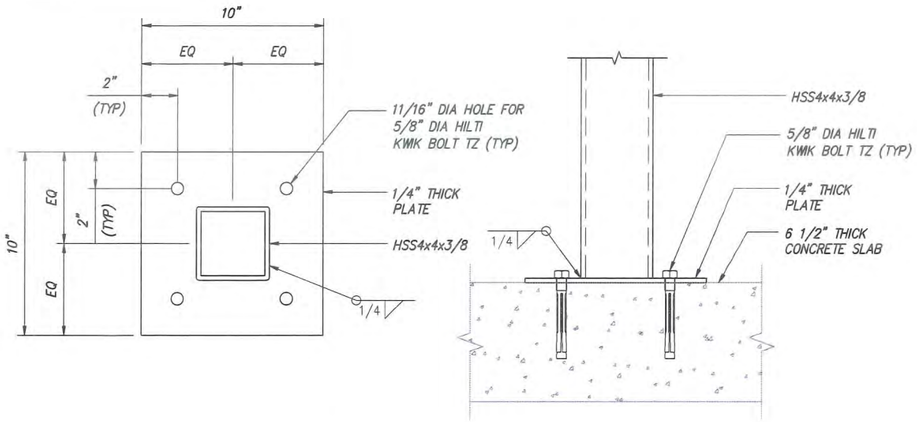

3 BASE PLATE
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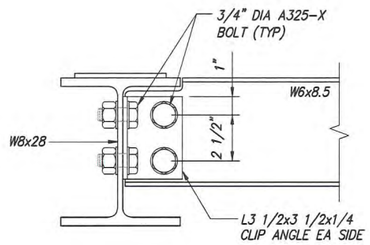
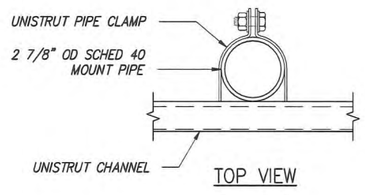
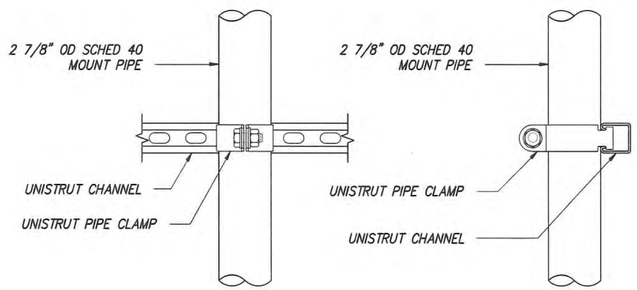


4 BM TO BM CONNECTION
SCALE: NOT TO SCALE

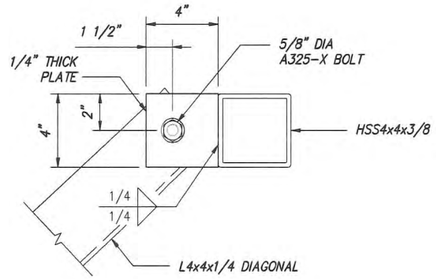


TOP VIEW



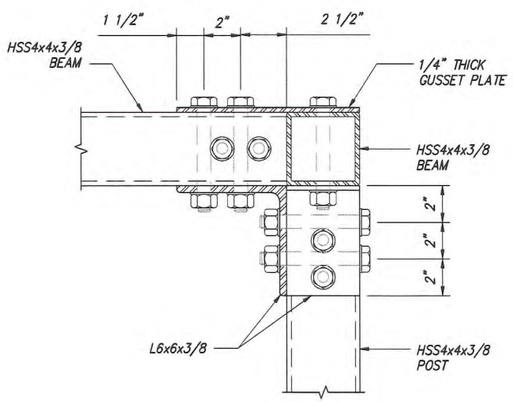
FRONT VIEW SIDE VIEW

5 UNISTRUT CONNECTION
SCALE: NOT TO SCALE



NOTE: CONNECTION AT W8x28 SIMILAR

6 DIAGONAL CONNECTION
SCALE: NOT TO SCALE



7 TUBE STEEL CONNECTION
SCALE: NOT TO SCALE

ALL MEMBERS SHOWN ARE STEEL UNLESS OTHERWISE NOTED

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FAX: (425) 274-4449

REV.	DATE	REVISION DESCRIPTION
1	2/15/2017	PER COMMENTS
0	12/14/2016	FOR REVIEW
DRAWN BY:	VEB	CHECKED BY: JRJ

REGISTERED PROFESSIONAL ENGINEER
74093PE
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-17

PROJECT INFORMATION:

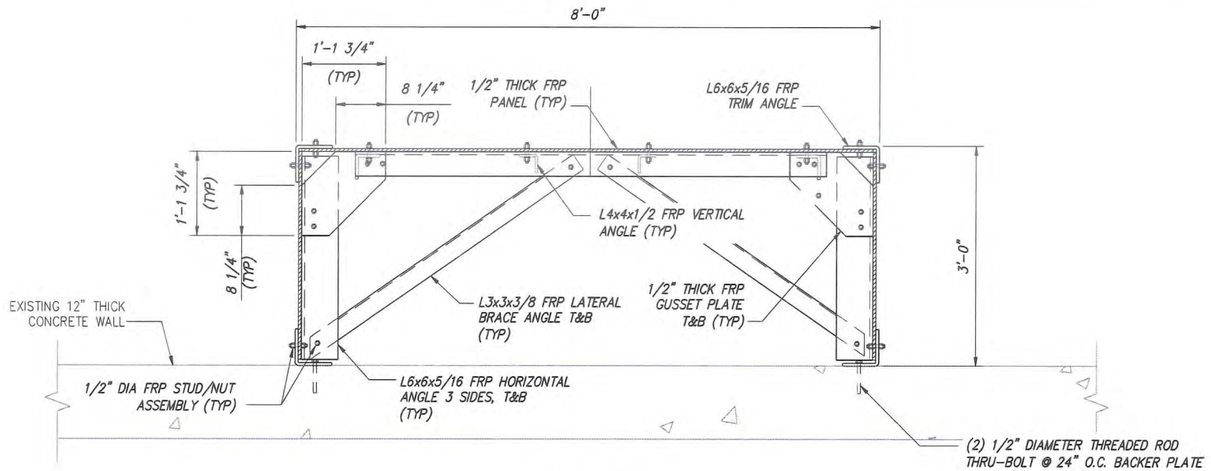
POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

CANDIDATE NAME:
POR OREGONIAN

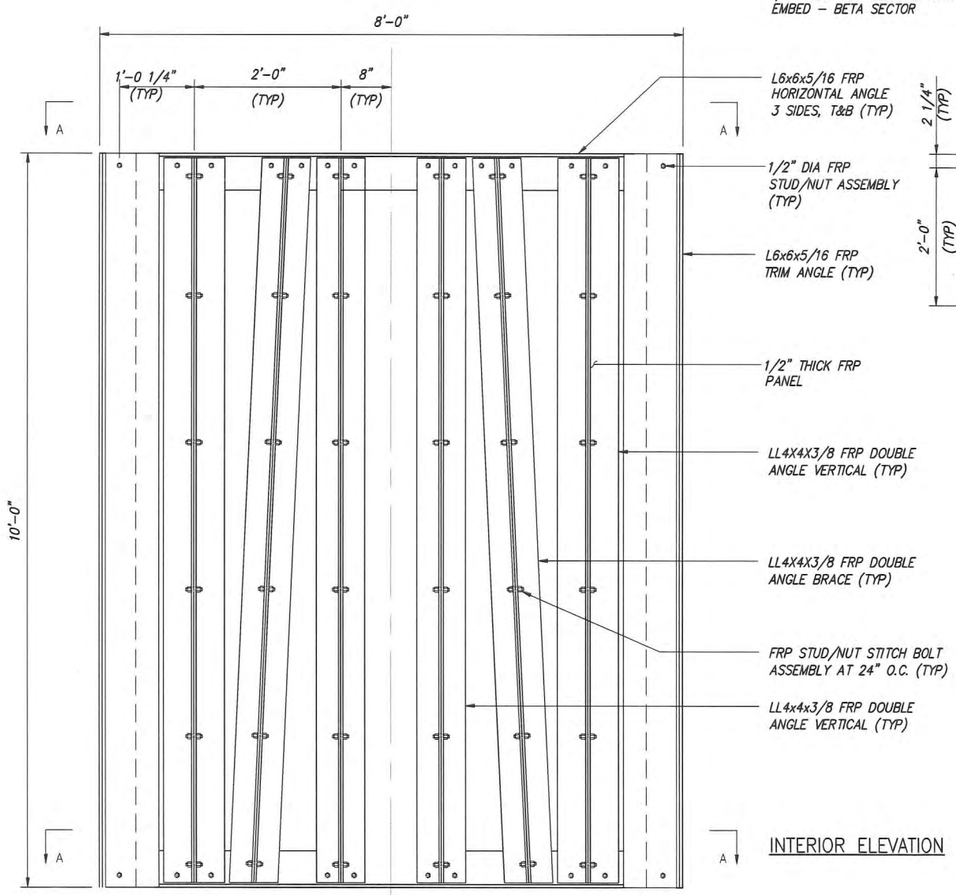
SHEET TITLE:
FRAMING ELEVATIONS

SHEET NUMBER: **S4**

REV.: 0



SECTION A-A



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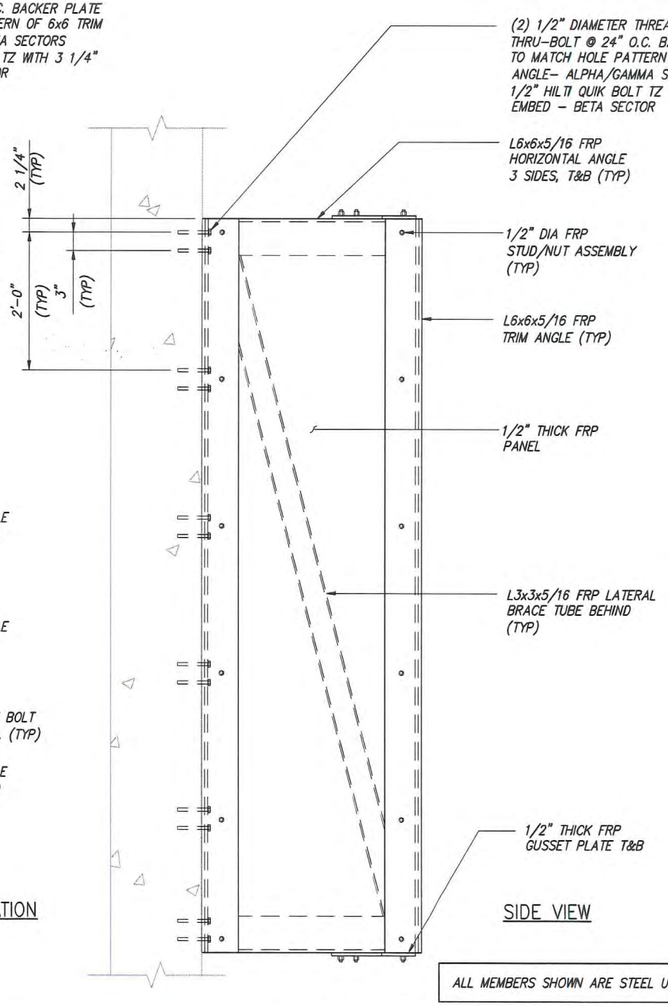


SIDE VIEW

ALL MEMBERS SHOWN ARE STEEL UNLESS OTHERWISE NOTED

verizon

smartlink

50 116TH AVENUE SE
SUITE 210
BELLEVUE, WA 98004
TEL: (425) 201-4215
FAX: (425) 274-4449

REV.	DATE	REVISION DESCRIPTION
1	2/15/2017	PER COMMENTS
0	12/14/2016	FOR REVIEW

DRAWN BY: VEB CHECKED BY: JRJ

REGISTERED PROFESSIONAL ENGINEER
74093PE
2-11-17
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

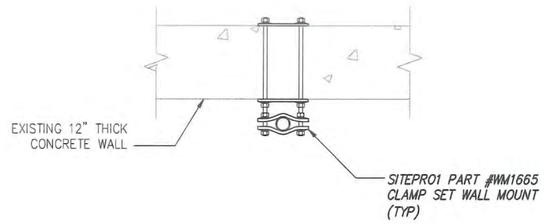
POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

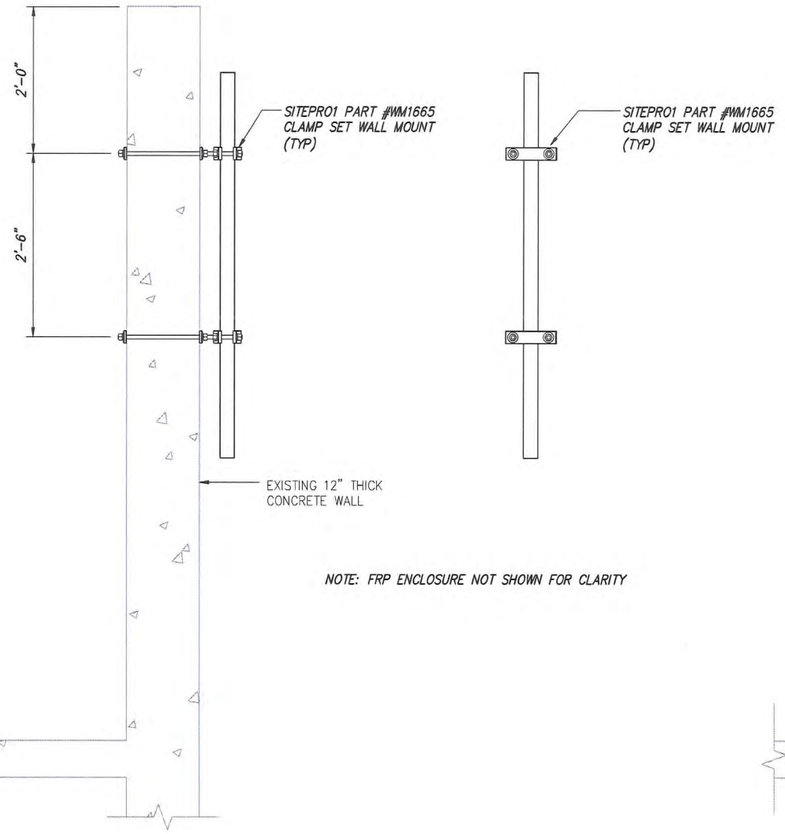
CANDIDATE NAME: POR OREGONIAN

SHEET TITLE: **FRP ENCLOSURE**

SHEET NUMBER: **S5**

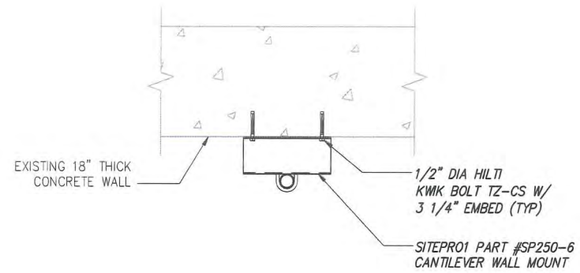
REV.: 0

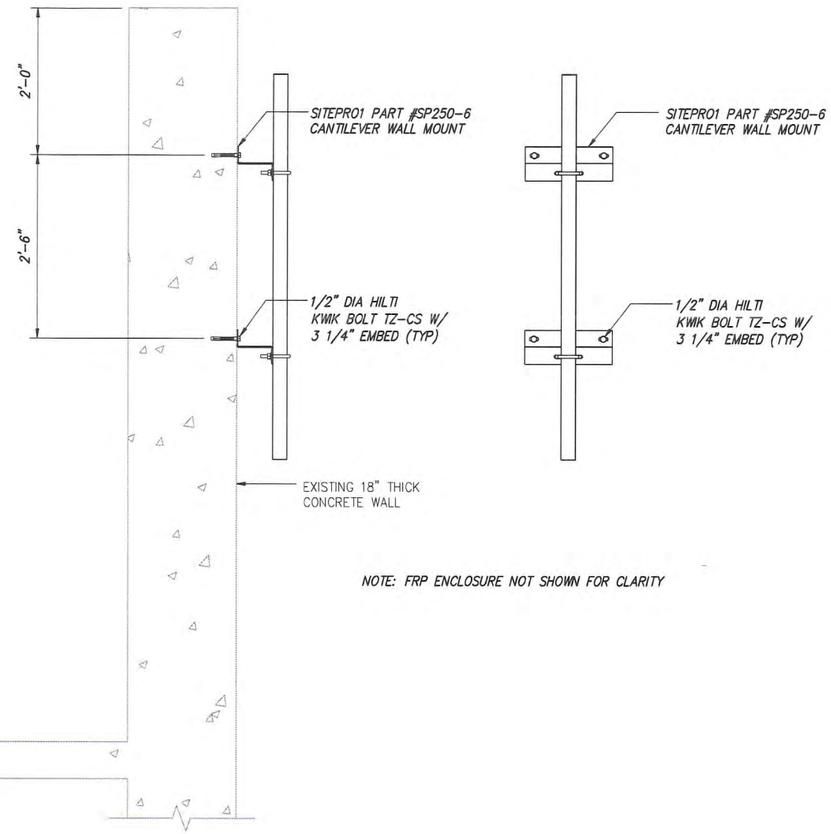




NOTE: FRP ENCLOSURE NOT SHOWN FOR CLARITY

1 ALPHA/GAMMA SECTOR ANTENNA MOUNT
SCALE: NOT TO SCALE





NOTE: FRP ENCLOSURE NOT SHOWN FOR CLARITY

2 BETA SECTOR ANTENNA MOUNT
SCALE: NOT TO SCALE

ALL MEMBERS SHOWN ARE STEEL UNLESS OTHERWISE NOTED

verizon

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REV.	DATE	REVISION DESCRIPTION
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DRAWN BY: VEB CHECKED BY: JRJ

REGISTERED PROFESSIONAL ENGINEER
74093PE
OREGON
NOVEMBER 13, 2009
CHRISTOPHER J. WARREN
EXPIRATION DATE: 6-30-18

PROJECT INFORMATION:

POR OREGONIAN
1230 SW PARK AVE.
PORTLAND, OR 97205
MULTNOMAH COUNTY

CANDIDATE NAME:
POR OREGONIAN

SHEET TITLE:
ANTENNA MOUNT DETAILS

SHEET NUMBER: **S6**

REV.: 0