



City of Portland, Oregon
Bureau of Development Services
Land Use Services
 FROM CONCEPT TO CONSTRUCTION

Amanda Fritz, Commissioner
 Paul L. Scarlett, Director
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www.portlandoregon.gov/bds

Date: February 26, 2015
To: Interested Person
From: Amanda Rhoads, Land Use Services
 503-823-7837 / Amanda.Rhoads@portlandoregon.gov

NOTICE OF A TYPE II DECISION ON A PROPOSAL IN YOUR NEIGHBORHOOD

The Bureau of Development Services has **approved** a proposal in your neighborhood. The mailed copy of this document is only a summary of the decision. The reasons for the decision, including the written response to the approval criteria and to public comments received on this application, are included in the version located on the BDS website <http://www.portlandonline.com/bds/index.cfm?c=46429>. Click on the District Coalition then scroll to the relevant Neighborhood, and case number. If you disagree with the decision, you can appeal. Information on how to do so is included at the end of this decision.

CASE FILE NUMBER: LU 14-230997 DZ
REPLACEMENT ANTENNA ON 3 WORLD TRADE CENTER

GENERAL INFORMATION

Applicant: Allen Potter / Eagle Consulting Group
 1750 Delta Water Road, No. 102-36 / Medford OR 97504

Owner: IEH Portland LLC
 121 SW Salmon St / Portland OR 97204-2901

Site Address: 26 SW SALMON ST

Legal Description: BLOCK 6 LOT 1-8, PORTLAND
Tax Account No.: R667700970
State ID No.: 1S1E03BD 00200
Quarter Section: 3129
Neighborhood: Portland Downtown, contact Rani Boyle at 503-725-9979.
Business District: None
District Coalition: Neighbors West/Northwest, contact Mark Sieber at 503-823-4212.
Plan District: Central City - Downtown
Zoning: CXd – Central Commercial with “d” Design Overlay Zone
Case Type: DZ – Design Review
Procedure: Type II, an administrative decision with appeal to the Design Commission.

Proposal:
 The applicant requests Design Review approval for changes to an existing AT&T Mobility wireless telecommunications facility on the site. The applicant proposes to remove 1 panel antenna measuring 51 inches tall by 10.5 inches wide by 5.2 inches deep, and replace it with 1 panel antenna in the same location on the north elevation of the building. The new antenna will measure 68.7 inches tall by 22.2 inches wide by 5 inches deep and will double sit capacity. New accessory equipment will include a tower-mounted amplifier (TMA), new cables and a new indoor equipment cabinet (which is not subject to review). The antenna will be mounted using the existing mounting device, on the outside of the building’s parapet.

Because the proposal will result in exterior alterations to a site that has “d” Design Overlay zoning, a Type II Design Review is required.

Relevant Approval Criteria:

In order to be approved, this proposal must comply with the approval criteria of Title 33. The relevant criteria are:

- Central City Fundamental Design Guidelines

ANALYSIS

Site and Vicinity: The site is a 152,701-square-foot office building in Portland’s downtown, known as Building 3 of the World Trade Center. It occupies an entire city block, bounded by SW Salmon Street to the north, SW Main Street to the south, SW 1st Avenue to the west, and SW Naito Parkway to the east. These three buildings are tied together with skybridges and together form an ensemble of modernist forms. This building is five stories high, with a smaller two stories of enclosed space above the five stories of office space. This structure is modern in design with an emphasis on building volume rather than ornamentation. The top two stories are set back and the cornice line at the fifth story is very clean. Previous land use reviews have allowed installation of RF equipment just below this cornice, painted to match the gray exterior walls.

The site is adjacent to SW Naito Parkway and Governor Tom McCall Waterfront Park near the west end of the Hawthorne Bridge. This building is particularly visible from points south and east. The entire site is located within the Central City Plan District and the Downtown Pedestrian District.

SW 1st Avenue is a designated Central City Transit/Pedestrian Street and a Transit Access Street. SW Taylor, SW Salmon, and SW Naito Parkway are designated Traffic Access Streets. The site is within the Downtown Pedestrian District and is across the street from Governor Tom McCall Waterfront Park and the Willamette River.

Zoning: The Central Commercial Zone (CX) is intended to provide for commercial development within Portland’s most urban and intense areas. A broad range of uses is allowed to reflect Portland’s role as a commercial, cultural and governmental center. Development is intended to be very intense with high building coverage, large buildings, and buildings placed close together. Development is intended to be pedestrian-oriented with a strong emphasis on a safe and attractive streetscape.

The Design Overlay Zone [d] promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value. This is achieved through the creation of design districts and applying the Design Overlay Zone as part of community planning projects, development of design guidelines for each district, and by requiring design review. In addition, design review ensures that certain types of infill development will be compatible with the neighborhood and enhance the area.

Land Use History: City records indicate that prior land use reviews include the following:

- LU 13-212050 DZ: Design Review approval to install 20 new antennas behind a wireless-transparent shroud on the roof of the existing building.
- LU 12-204621 DZ: Design Review approval to replace 6 antennas for 6 larger antennas and associated equipment.
- LU 11-124367 DZ: Design Review approval to replace 3 antennas with 3 larger antennas and associated equipment.
- LU 09-105706 DZ: Design Review to install rooftop antennas and microwave dishes. City approval of two microwave dishes but denial of six panel antennas.
- LU 05-137747 DZ: Design Review case to install 12 PCS antennas and associated equipment cabinets on the building.
- LUR 99-00457 DZ: Design Review approval to install 9 panel antennas and associated

equipment in 3 sectors.

- LUR 96-00230 DZ: Design Review approval with conditions to mount 3 antenna arrays to the roof parapet, to be painted to match the building's color.
- LUR 95-00240 DZ: Design review approval of new signage program.
- DZ 6-85: Design review approval for two microwave dish antennas.
- CU 030-82: Conditional Use approval with conditions for parking
- DZ 5-74: Design review approval for new building complex.
- SR 33-69: Sign approval.

Neighborhood Review: A "Notice of Proposal in Your Neighborhood" was mailed on **January 13, 2015**. No written responses were received from either the Neighborhood Association or notified property owners in response to the proposal.

ZONING CODE APPROVAL CRITERIA

Chapter 33.825 Design Review

Section 33.825.010 Purpose of Design Review

Design review ensures that development conserves and enhances the recognized special design values of a site or area. Design review is used to ensure the conservation, enhancement, and continued vitality of the identified scenic, architectural, and cultural values of each design district or area. Design review ensures that certain types of infill development will be compatible with the neighborhood and enhance the area. Design review is also used in certain cases to review public and private projects to ensure that they are of a high design quality.

Section 33.825.055 Design Review Approval Criteria

A design review application will be approved if the review body finds the applicant to have shown that the proposal complies with the design guidelines for the area.

Findings: The site is designated with design overlay zoning (d); therefore, the proposal requires Design Review approval. Because of the site's location, the applicable design guidelines are the Central City Fundamental Design Guidelines.

Central City Fundamental Design Guidelines

These guidelines provide the constitutional framework for all design review areas in the Central City.

The Central City Fundamental Design Guidelines focus on four general categories. **(A) Portland Personality**, addresses design issues and elements that reinforce and enhance Portland's character. **(B) Pedestrian Emphasis**, addresses design issues and elements that contribute to a successful pedestrian environment. **(C) Project Design**, addresses specific building characteristics and their relationships to the public environment. **(D) Special Areas**, provides design guidelines for the four special areas of the Central City.

Central City Plan Design Goals

These goals were developed to guide development throughout the Central City. They apply within all of the Central City policy areas. The nine goals for design review within the Central City are as follows:

1. Encourage urban design excellence in the Central City;
2. Integrate urban design and preservation of our heritage into the development process;
3. Enhance the character of the Central City's districts;
4. Promote the development of diversity and areas of special character within the Central City;
5. Establish an urban design relationship between the Central City's districts and the Central City as a whole;
6. Provide for a pleasant, rich and diverse pedestrian experience for pedestrians;
7. Provide for the humanization of the Central City through promotion of the arts;
8. Assist in creating a 24-hour Central City which is safe, humane and prosperous;
9. Ensure that new development is at a human scale and that it relates to the scale and desired character of its setting and the Central City as a whole.

Staff has considered all guidelines and has addressed only those guidelines considered applicable to this project.

C2. Promote Quality and Permanence in Development. Use design principles and building materials that promote quality and permanence.

C3. Respect Architectural Integrity. Respect the original character of an existing building when modifying its exterior. Develop vertical and horizontal additions that are compatible with the existing building, to enhance the overall proposal's architectural integrity.

C5. Design for Coherency. Integrate the different building and design elements including, but not limited to, construction materials, roofs, entrances, as well as window, door, sign, and lighting systems, to achieve a coherent composition.

C11. Integrate Roofs and Use Rooftops. Integrate roof function, shape, surface materials, and colors with the building's overall design concept. Size and place rooftop mechanical equipment, penthouses, other components, and related screening elements to enhance views of the Central City's skyline, as well as views from other buildings or vantage points. Develop rooftop terraces, gardens, and associated landscaped areas to be effective stormwater management tools.

Findings for C-2, C-3, C-5 and C-11: AT&T Mobility proposes to remove one antenna on the north side of the building and replace it with a single antenna that is larger in both height and width. Despite the increase in size, the existing and proposed antennas will be mounted at the existing roof parapet at a height approximately 108 feet above ground level. Because of their relatively small size in relation to the area of the entire building elevation, the change in one panel antenna will have little visual impact on the architectural features beyond what is already caused by the parapet-mounted arrays.

Because the proposed installation is utilizing the existing mounting bar, the visual impact will be reduced. A condition of approval will require the new antenna is painted a color to match the building. If the paint color differs from the existing antennas and mounting structures within the sector, the entire sector will need to be painted to match. The antenna will be placed below the top of the lower parapet to further reduce its visibility. With the condition of approval, the proposal does not significantly detract from the architecture of the building beyond what is already caused by the existing antennas. *Therefore, these guidelines are met.*

DEVELOPMENT STANDARDS

Unless specifically required in the approval criteria listed above, this proposal does not have to meet the development standards in order to be approved during this review process. The plans submitted for a building or zoning permit must demonstrate that all development standards of Title 33 can be met, or have received an Adjustment or Modification via a land use review prior to the approval of a building or zoning permit.

CONCLUSIONS

The Design Review process exists to promote the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value. This building is designed as a grouping of clean geometric forms. There are no good places to add RF equipment on the façade of this building; previous installations have reduced the purity of the architecture. The applicant explored options to install an antenna that better matched the surrounding ones in size, but found no other antennas to provide the same increase in capacity without increasing the number of antennas. Painting the new panel antenna to match the exterior building walls and the adjacent antennas will reduce the visual impact of the larger antenna. The proposal meets the relevant design guidelines and should be approved.

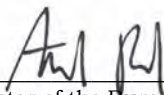
ADMINISTRATIVE DECISION

Design Review approval of exterior alterations to a building in the Central City Plan District to allow replacement of one existing panel antenna on the north façade of the building with a new,

larger panel antenna, measuring 68.7 inches tall by 22.2 inches wide by 5 inches deep, with associated equipment mounted behind the parapet, per the approved site plans, Exhibits C.1 through C.4, and C.10 through C.11, signed and dated February 24, 2015, subject to the following conditions:

- A. As part of the building permit application submittal, the following development-related condition B must be noted on each of the 4 required site plans or included as a sheet in the numbered set of plans. The sheet on which this information appears must be labeled "ZONING COMPLIANCE PAGE - Case File LU 14-230997 DZ. No field changes allowed." All requirements must be graphically represented on the site plan, landscape, or other required plan and must be labeled "REQUIRED."
- B. All antennas must be painted to match the building surface. If the chosen paint color does not match with the other AT&T Mobility antennas on the north façade, all AT&T Mobility antennas will be painted to match.

Staff Planner: Amanda Rhoads

Decision rendered by:  **on February 24, 2015**
By authority of the Director of the Bureau of Development Services

Decision mailed: February 26, 2015

About this Decision. This land use decision is **not a permit** for development. A Final Plat must be completed and recorded before the proposed lots can be sold or developed. Permits may be required prior to any work. Contact the Development Services Center at 503-823-7310 for information about permits.

Procedural Information. The application for this land use review was submitted on October 28, 2014, and was determined to be complete on **January 7, 2015**.

Zoning Code Section 33.700.080 states that Land Use Review applications are reviewed under the regulations in effect at the time the application was submitted, provided that the application is complete at the time of submittal, or complete within 180 days. Therefore this application was reviewed against the Zoning Code in effect on October 28, 2014.

ORS 227.178 states the City must issue a final decision on Land Use Review applications within 120-days of the application being deemed complete. The 120-day review period may be waived or extended at the request of the applicant. In this case, the applicant did not waive or extend the 120-day review period. Unless further extended by the applicant, **the 120 days will expire on: May 7, 2015.**

Some of the information contained in this report was provided by the applicant.

As required by Section 33.800.060 of the Portland Zoning Code, the burden of proof is on the applicant to show that the approval criteria are met. The Bureau of Development Services has independently reviewed the information submitted by the applicant and has included this information only where the Bureau of Development Services has determined the information satisfactorily demonstrates compliance with the applicable approval criteria. This report is the decision of the Bureau of Development Services with input from other City and public agencies.

Conditions of Approval. If approved, this project may be subject to a number of specific conditions, listed above. Compliance with the applicable conditions of approval must be documented in all related permit applications. Plans and drawings submitted during the permitting process must illustrate how applicable conditions of approval are met. Any project elements that are specifically required by conditions of approval must be shown on the plans, and labeled as such.

These conditions of approval run with the land, unless modified by future land use reviews. As used in the conditions, the term "applicant" includes the applicant for this land use review,

any person undertaking development pursuant to this land use review, the proprietor of the use or development approved by this land use review, and the current owner and future owners of the property subject to this land use review.

Appealing this decision. This decision may be appealed to the Design Commission, which will hold a public hearing. Appeals must be filed **by 4:30 PM on March 12, 2015** at 1900 SW Fourth Ave. Appeals can be filed at the Development Services Center Monday through Wednesday and Fridays between 8:00 am to 3:00 pm and on Thursdays between 8:00 am to 12:00 pm. After 3:00 pm Monday through Wednesday and Fridays, and after 12:00 pm on Thursdays, appeals must be submitted at the reception desk on the 5th floor. **An appeal fee of \$250 will be charged.** The appeal fee will be refunded if the appellant prevails. There is no fee for ONI recognized organizations appealing a land use decision for property within the organization's boundaries. The vote to appeal must be in accordance with the organization's bylaws. Assistance in filing the appeal and information on fee waivers is available from BDS in the Development Services Center. Please see the appeal form for additional information.

The file and all evidence on this case are available for your review by appointment only. Please call the Request Line at our office, 1900 SW Fourth Avenue, Suite 5000, phone 503-823-7617, to schedule an appointment. I can provide some information over the phone. Copies of all information in the file can be obtained for a fee equal to the cost of services. Additional information about the City of Portland, city bureaus, and a digital copy of the Portland Zoning Code is available on the internet at www.portlandonline.com.

Attending the hearing. If this decision is appealed, a hearing will be scheduled, and you will be notified of the date and time of the hearing. The decision of the Design Commission is final; any further appeal must be made to the Oregon Land Use Board of Appeals (LUBA) within 21 days of the date of mailing the decision, pursuant to ORS 197.620 and 197.830. Contact LUBA at 775 Summer St NE, Suite 330, Salem, Oregon 97301-1283, or phone 1-503-373-1265 for further information.

Failure to raise an issue by the close of the record at or following the final hearing on this case, in person or by letter, may preclude an appeal to the Land Use Board of Appeals (LUBA) on that issue. Also, if you do not raise an issue with enough specificity to give the Design Commission an opportunity to respond to it, that also may preclude an appeal to LUBA on that issue.

Recording the final decision.

If this Land Use Review is approved, the final decision must be recorded with the Multnomah County Recorder.

A few days prior to the last day to appeal, the City will mail instructions to the applicant for recording the documents associated with their final land use decision.

- *Unless appealed*, The final decision may be recorded on or after **March 13, 2015 – the day following the last day to appeal.**
- A building or zoning permit will be issued only after the final decision is recorded.

The applicant, builder, or a representative may record the final decision as follows:

- By Mail: Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.
- In Person: Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034. For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625.

Expiration of this approval. An approval expires three years from the date the final decision is rendered unless:

- A building permit has been issued, or
- The approved activity has begun, or
- In situations involving only the creation of lots, the land division has been recorded.

Where a site has received approval for multiple developments, and a building permit is not issued for all of the approved development within three years of the date of the final decision, a new land use review will be required before a permit will be issued for the remaining development, subject to the Zoning Code in effect at that time.

Applying for your permits. A building permit, occupancy permit, or development permit may be required before carrying out an approved project. At the time they apply for a permit, permittees must demonstrate compliance with:

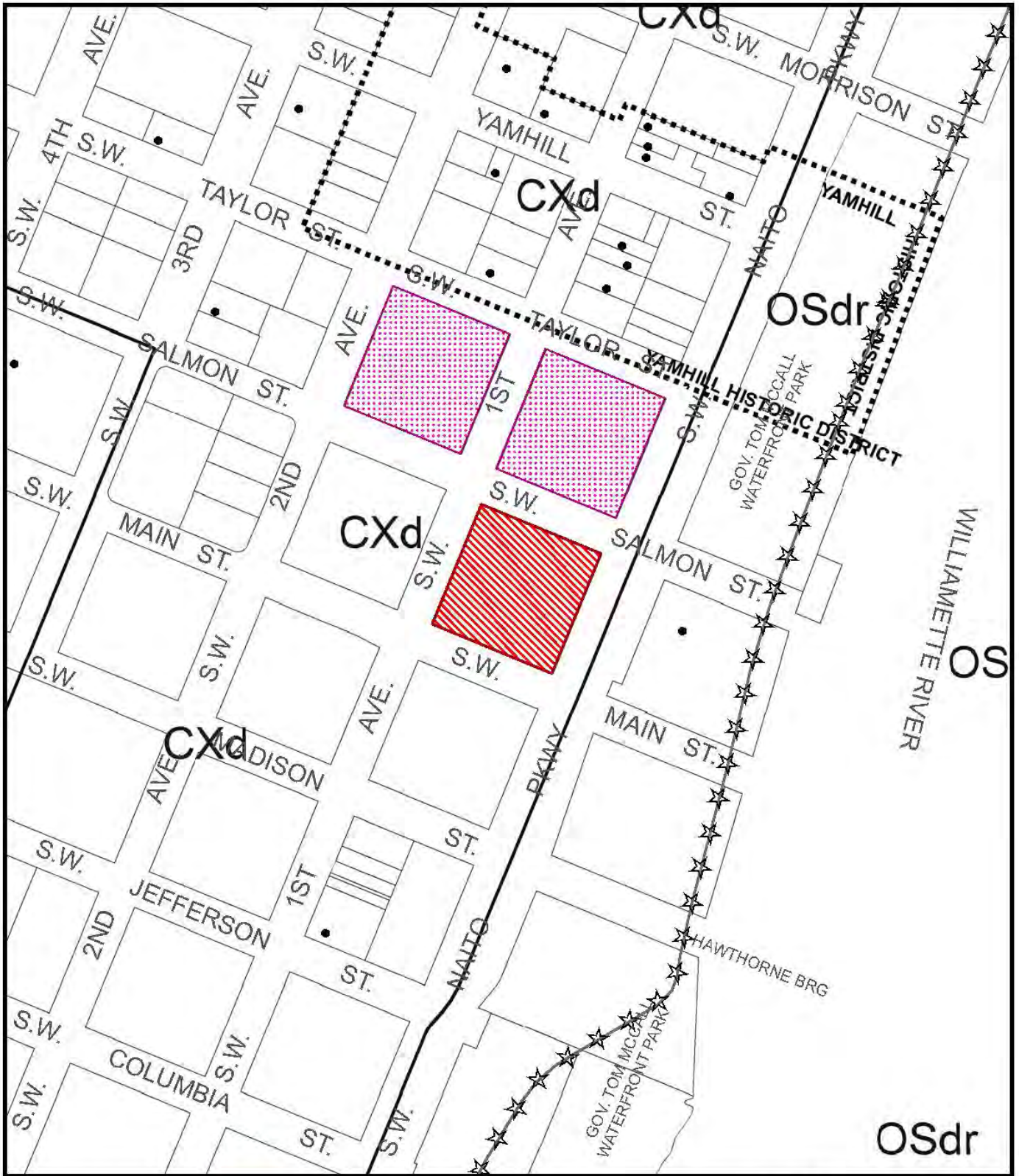
- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code of the City of Portland, and all other applicable ordinances, provisions and regulations of the City.

EXHIBITS

NOT ATTACHED UNLESS INDICATED

- A. Applicant's Statement
 - 1. Applicant Narrative
 - 2. Facilities Lease Agreement
 - 3. Email from Applicant, December 22, 2014
- B. Zoning Map (attached)
- C. Plans/Drawings:
 - 1. Overall Site Plan (attached)
 - 2. Antenna Mounting Details (attached)
 - 3. Proposed Enlarged Site Plan
 - 4. Existing and Proposed North Elevations (attached)
 - 5. Existing Enlarged Site Plan
 - 6. Existing and Proposed West Elevations
 - 7. Existing and Proposed South Elevations
 - 8. Antenna Details
 - 9. Antenna Plan
 - 10. Antenna Specifications
 - 11. Tower-Mounted Amplifier Specifications
- D. Notification information:
 - 1. Mailing list
 - 2. Mailed notice
- E. Agency Responses: none required
- F. Correspondence: none received
- G. Other:
 - 1. Original Land Use Application
 - 2. Incomplete Letter, November 18, 2014

The Bureau of Development Services is committed to providing equal access to information and hearings. Please notify us no less than five business days prior to the event if you need special accommodations. Call 503-823-7300 (TTY 503-823-6868).



ZONING

-  Site
-  Also Owned
-  Historic Landmark
-  Recreational Trail



This site lies within the:
CENTRAL CITY PLAN DISTRICT
DOWNTOWN SUBDISTRICT

File No.	LU 14-230997 DZ
1/4 Section	3129
Scale	1 inch = 200 feet
State_Id	1S1E03BD 200
Exhibit	B (Oct 30, 2014)



Your world. Delivered.

PROJECT CONSULTANTS



PLANS PREPARED BY



REG. PROFESSIONAL ENGINEERS, LICENSE #15027
1600 N. CENTRAL AVENUE, SUITE #110
DALLAS, TEXAS 75208
PHONE: (214) 417-1700
FAX: (214) 417-1705
WWW.COMMUNITYENGINEERS.COM

PROJECT INFO

PL45

SALMON & SW FIRST

3815 SW SALMON STREET
PORTLAND, OR 97201
MULTNOMAH COUNTY

DESIGNED FOR

CONSTRUCTION

REVISED DATE

PREPARED FOR

BY	
DATE	
SCALE	
PROJECT NUMBER	
SHEET NUMBER	
TITLE	
DATE	
BY	CS
DATE	10-15-14
PROJECT NUMBER	14-101-00-000-1
TITLE	PLANS
DATE	10-15-14
BY	CS
DATE	10-15-14

CURRENT ISSUE DATE

05-15-14

SCALE



DRAWING INFORMATION

THIS DRAWING IS A PRELIMINARY DRAWING. IT IS NOT TO BE USED FOR CONSTRUCTION. ANY INFORMATION CONTAINED HEREIN IS FOR INFORMATIONAL PURPOSES ONLY. THE DRAWING SHALL NOT BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF WEST OMEGA COMMUNICATIONS.

DRAWING TITLE

SITE PLAN

DRAWING NUMBER

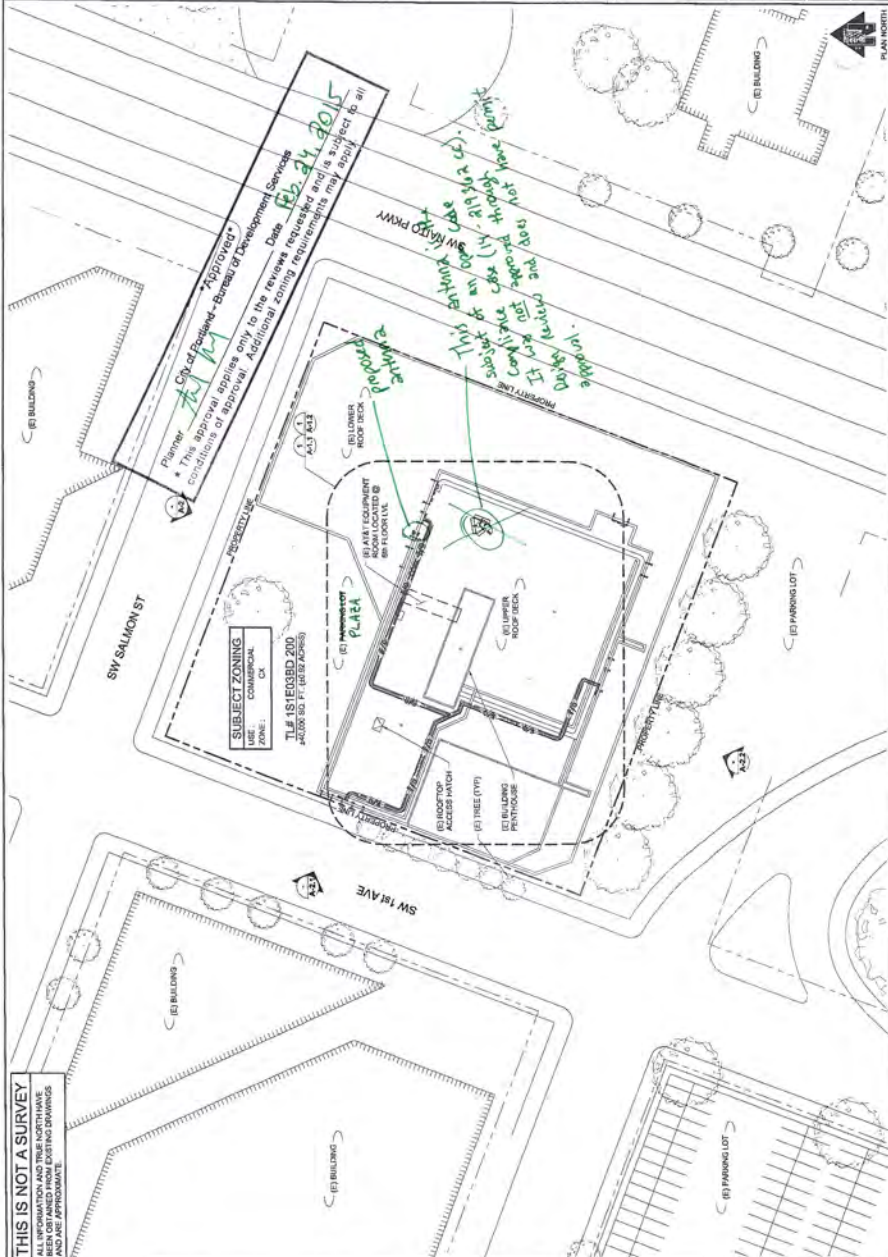
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B

CS 108 NUMBER

14-101-00-000-1

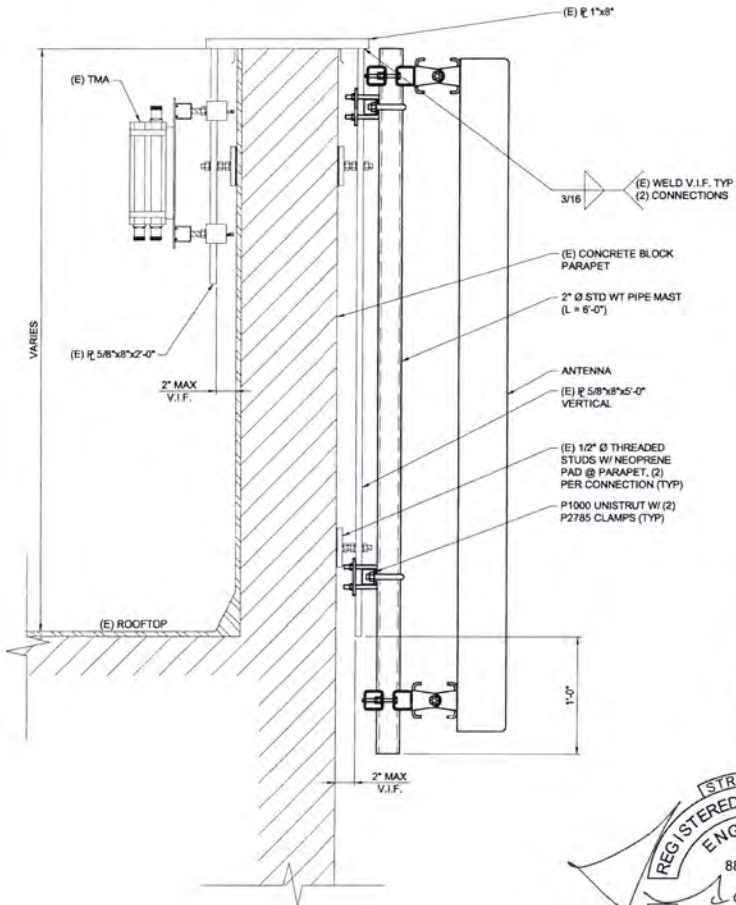
THIS IS NOT A SURVEY
ALL INFORMATION AND TRUE NORTH HAVE
BEEN OBTAINED FROM EXISTING SURVEYS
AND ARE APPROXIMATE



SITE PLAN
DRAWN SCALE: 1" = 32'-0"

1

PLAN NUMBER

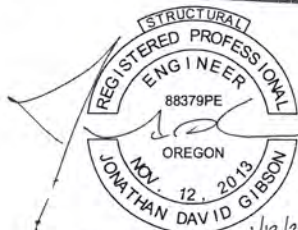


Approved

Planner AKM City of Portland - Bureau of Development Services

* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

Date Feb. 24 2015



EXPIRES: 06/30/15 1/12/2015

PLANS PREPARED BY: CORNERSTONE ENGINEERING, INC. 16926 WOODINVILLE-REDMOND RD NE, SUITE 210 WOODINVILLE, WA 98072 PHONE: (425) 487-1732	DRAWINGS PREPARED FOR: at&t Your world. Delivered.	SITE ID: <u>PL45 SALMON & SW 1st</u> DRAWING NAME: <u>DETAIL</u> APVD BY: <u>JDG</u> DRAWN BY: <u>AJB</u>	DWG SCALE: <u>1" = 1'-0"</u> DWG NO: SK1
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Product Specifications

COMMScope®

POWERED BY

ANDREW

2UNPX203.6R2

Argus® Dual Band Twin Beam Antenna, 698-894 and 1710-2170 MHz, 37° horizontal beamwidth, internal electrical tilt.

ARGUS

- Single panel design supporting two separate beams perfectly optimized at horizontal pointing angles of +27 degrees and -27 degrees from boresite

Approved

City of Portland - Bureau of Development Services

Planner AMMDate Feb. 24, 2015

* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

Electrical Specifications

Frequency Band, MHz

	698-790	790-894	1710-1920	1920-2170
Gain, dBi	13.8	14.5	16.2	17.5
Beam Centers, Horizontal, degrees	±28	±28	±30	±30
Beamwidth, Horizontal, degrees	40	33	42	35
Beamwidth, Vertical, degrees	24.0	21.0	12.0	11.0
Beam Tilt, degrees	1-16	1-16	0-10	0-10
USLS, dB	15	15	15	15
Front-to-Back Ratio at 180°, dB	20	20	30	30
Isolation, dB	22	22	20	20
VSWR Return Loss, dB	1.43 15.0	1.43 15.0	1.43 15.0	1.43 15.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150
Input Power per Port, maximum, watts	500	500	300	300
Polarization	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm

General Specifications

Antenna Brand	Argus®
Antenna Type	DualPol® twin beam with internal RET
Band	Multiband
Brand	Argus® DualPol®
Operating Frequency Band	1710 - 2170 MHz 698 - 894 MHz

Mechanical Specifications

Lightning Protection	dc Ground
Radome Material	Polyester fiberglass pultrusion
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	8
Wind Loading, maximum	1364.0 N @ 150 km/h 306.6 lbf @ 150 km/h
Wind Speed, maximum	200.0 km/h 124.3 mph

Dimensions

Depth	127.0 mm 5.0 in
Length	1745.0 mm 68.7 in
Width	564.0 mm 22.2 in

Product Specifications

COMMScope®

2UNPX203.6R2

POWERED BY



Net Weight

29.5 kg | 65.0 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Single RET)
RET Interface	8-pin DIN Male
RET Interface, quantity	2 male

Included Products

T-029-GL-E — Argus® Adjustable Tilt Pipe Mounting Kit for 2.9"–4.5" (75–115mm) OD round members for panel antennas. Includes 2 clamp sets.

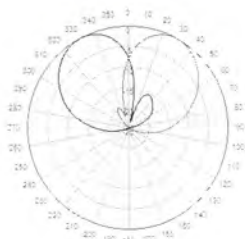
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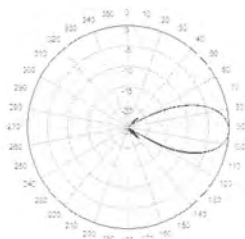


Horizontal Pattern

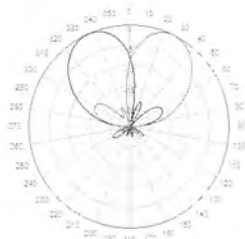
Vertical Pattern



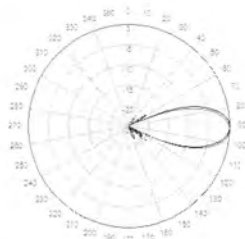
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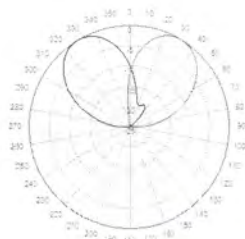
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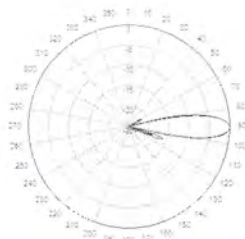
Freq: 850 MHz, Tilt: 1°



Freq: 850 MHz, Tilt: 1°



Freq: 1785 MHz, Tilt: 0°



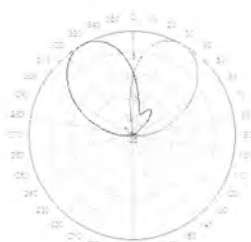
Freq: 1785 MHz, Tilt: 0°

Product Specifications

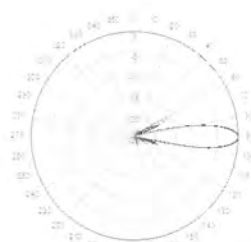
COMMSCOPE®

2UNPX203.6R2

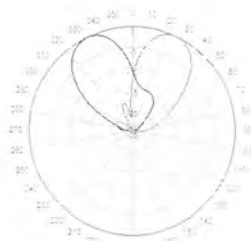
POWERED BY



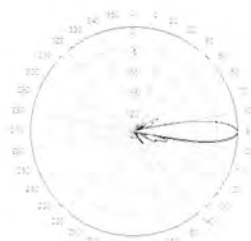
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2110 MHz, Tilt: 0°



Freq: 2110 MHz, Tilt: 0°

POWERED BY

ANDREW

T-029-GL-E

Argus® Adjustable Tilt Pipe Mounting Kit for 2.9"-4.5" (75-115mm) OD round members for panel antennas. Includes 2 clamp sets.



General Specifications

Antenna Brand	Argus®
Mount Type	Pipe mounts
Application	Outdoor
Includes	Brackets Hardware
Package Quantity	1

Mechanical Specifications

Color	Silver
Material Type	Galvanized steel
Mechanical Tilt	0°-8°

Dimensions

Antenna-to-Pipe Distance	85.0 mm 3.3 in
Bracket-to-Bracket Distance	1400.0 mm 55.1 in
Compatible Diameter, maximum	115.0 mm 4.5 in
Compatible Diameter, minimum	75.0 mm 3.0 in
Compatible Length, maximum	2850.0 mm 112.2 in
Compatible Length, minimum	1500.0 mm 59.1 in
Net Weight	6.0 kg 13.2 lb

Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2008

Classification

Compliant
Below Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system



POWERED BY



PCS Twin Tower Mounted Amplifier with 700-850 Bypass

Twin 1900 MHz Tower Mounted Amplifier with 700-850 MHz Bypass and AISG

Designed for the highest reliability even in the most demanding installation environments.

The tower mounted amplifiers from Andrew Solutions help optimize network performance and represent the ideal solution for coverage and capacity enhancement.

By improving uplink performance, Andrew Solutions tower mounted amplifiers (TMAs) ensure optimum coverage of fringe areas, weak spots, and indoor locations. The unit is easy to install in any wireless system and provides:

Improved sensitivity—reducing dropped calls and failed connection attempts. Enhanced signal quality—improving voice clarity and data transmission speed. Lower handset output—extending talk time and reducing interference in GSM/EDGE, UMTS, and CDMA systems.

The self-contained body is engineered to ensure the highest reliability in severe environments while featuring a very compact size and attractive appearance. The PCS twin TMA/duplexer includes pole mounting hardware. It can be wall mounted with user-provided fasteners.

- In-line connectors
- Failsafe low noise amplifier (LNA) bypass
- RET antenna port
- Conventional PDU compatible
- Field upgradeable firmware

Approved

City of Portland - Bureau of Development Services

Planner

Ann M

Date

Feb 24, 2015

* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

E15S09P78**Tower Mounted Amplifier, Twin Diplexed 1900/700-850 Bypass with AISG**

Electrical Specifications Rx (Uplink)

Bandwidth	60.00 MHz
License Band	PCS
Frequency Band	1850 – 1910 MHz
Gain	12 dB
Gain Tolerance	±1
Noise Figure, Mid Band, typical	1.20 dB @ 12 dB
Noise Figure, Full Band, typical	1.50 dB @ 12 dB
Output IP3, minimum	22 dBm @ 12 dB
Return Loss, minimum	18 dB
Insertion Loss, Bypass Mode, typical	2.00 dB
Return Loss, Bypass Mode, typical	18 dB
Group Delay Variation, maximum	50 ns @ 5.00 MHz
Total Group Delay, maximum	150 ns

Electrical Specifications Tx (Downlink)

Bandwidth	60.00 MHz
Insertion Loss, maximum	0.70 dB
License Band	PCS
Frequency Band	1930 – 1990 MHz
Return Loss, minimum	18 dB
3rd Order IMD	-107 dBm
3rd Order IMD Test Method	Two +43 dBm carriers
Input Power, RMS, maximum	300 W
Input Power, PEP, maximum	3000 W
Group Delay Variation, maximum	15 ns @ 5.00 MHz
Total Group Delay, maximum	50 ns

Electrical Specifications 2 Tx (Downlink)

Insertion Loss, maximum	0.30 dB
Frequency Band	698 – 894 MHz
Return Loss, minimum	18 dB
Input Power, RMS, maximum	500 W
Input Power, PEP, maximum	5000 W
Group Delay Variation, maximum	6 ns @ 5.00 MHz
Total Group Delay, maximum	7 ns

E15S09P78

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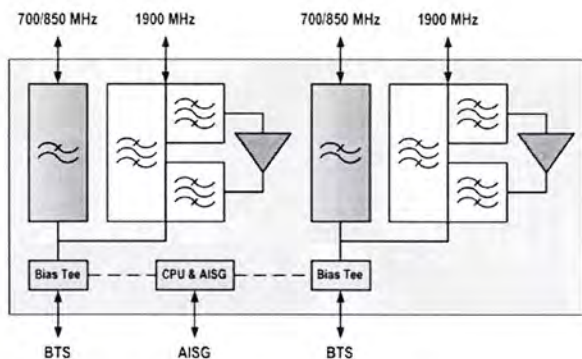
Electrical Specifications

Default Protocol	AISG 2.0
Protocol	AISG 1.1 AISG 2.0
Voltage	7-30 Vdc
Operating Current at Voltage	135 mA @ 12 V 75 mA @ 24 V
Operating Current Tolerance	±15 mA
Alarm Functionality	AISG CWA
Failure Current Consumption	180-200 mA @ 10-18 V
RET System Compatible	1 Output, 24 Vdc and RS-485
Lightning Surge Capability Test Method	IEEE C62.42-1991
Lightning Surge Current	20 kA

E15509P78



Block Diagram



Mechanical Specifications

Connector Interface	7-16 DIN Female
Connector Interface Style	Long neck
Ground Screw Diameter	6.00 mm
Wind Loading, maximum	54 N @ 115 km/h 12 lbf @ 115 km/h
AISG Connector Standard	IEC 60130-9
Finish	Painted
Color	Gray
Mounting Pipe Hardware	Band clamps
Mounting Pipe Diameter	40-160 mm

Environmental Specifications

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Relative Humidity	Up to 100%
Ingress Protection Test Method	IEC 60529:2001, IP67

Dimensions

Height	274.0 mm 10.8 in
Width	210.0 mm 8.3 in
Depth	94.0 mm 3.7 in
Weight	7.9 kg 17.4 lb

Product Specifications

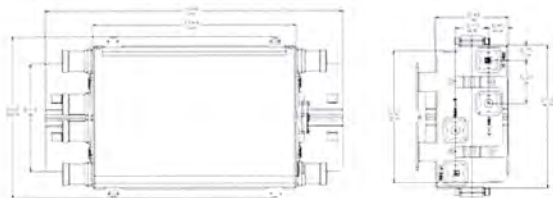
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Outline Drawing



Regulatory Compliance/Certifications

Agency

ISO 9001:2008

Classification

Designed, manufactured and/or distributed under this quality management system