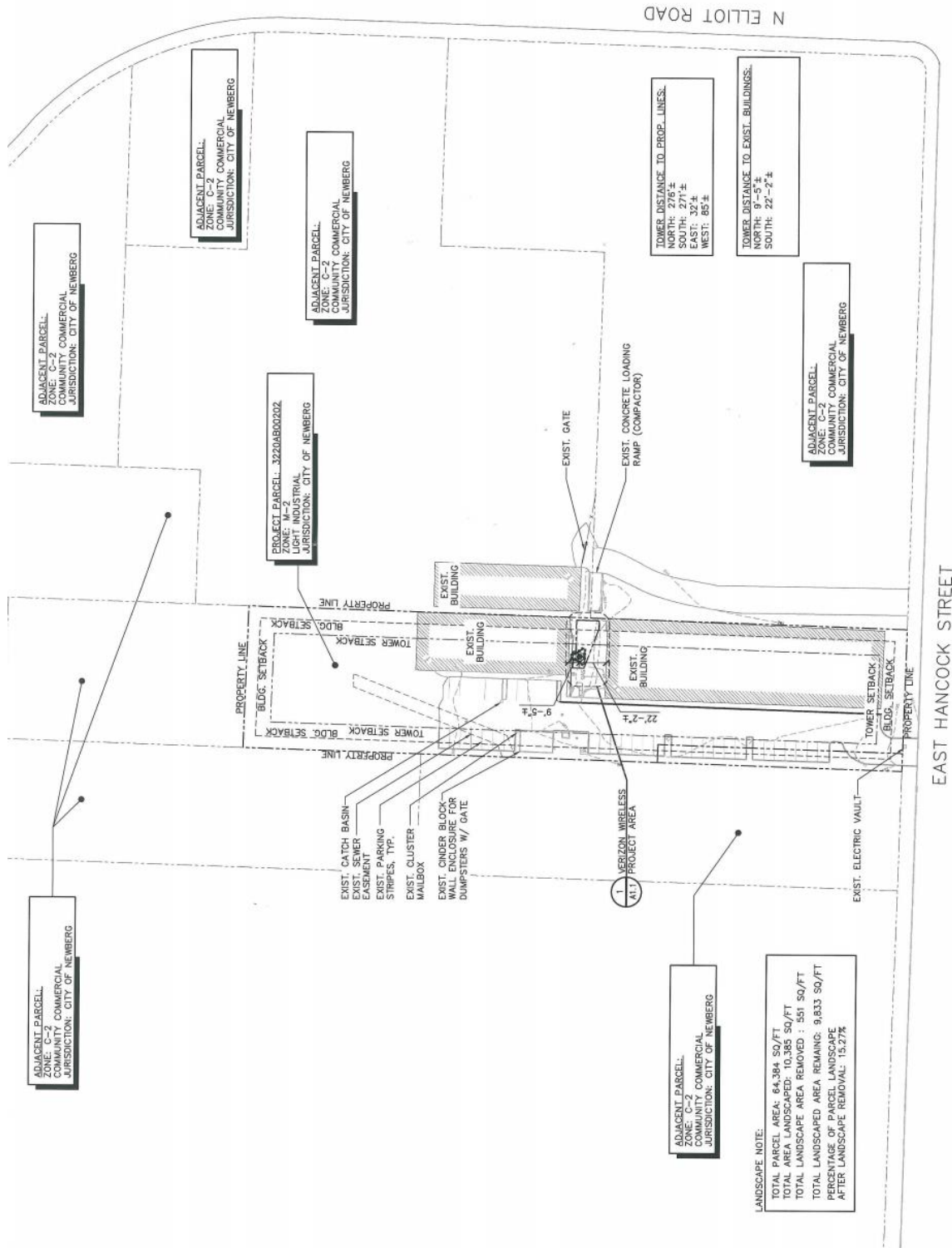


## Attachment 2: Site Plan





Mail Processing Center  
Federal Aviation Administration  
Southwest Regional Office  
Obstruction Evaluation Group  
2601 Meacham Boulevard  
Fort Worth, TX 76193

Aeronautical Study No.  
2015-ANM-542-OE  
Prior Study No.  
2014-ANM-667-OE

Issued Date: 04/02/2015

Mikhail Raznobriadsev  
Verizon Wireless (VAW) LLC  
1120 Sanctuary Prkwy  
Suite 150 GASA5REG  
Alpharetta, GA 30004

**\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole POR Hancock
Location:	Newberg, OR
Latitude:	45-18-07.25N NAD 83
Longitude:	122-57-19.64W
Heights:	195 feet site elevation (SE)
	70 feet above ground level (AGL)
	265 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☐ At least 10 days prior to start of construction (7460-2, Part 1)  
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 10/02/2016 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (310) 725-6591. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2015-ANM-542-OE.

**Signature Control No: 243862325-247981100**  
Tamera Burch  
Technician

( DNE )

Attachment(s)  
Frequency Data

cc: FCC

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W





# Oregon

Kate Brown, Governor



3040 25th Street, SE  
Salem, OR 97302-1125  
Phone: (503) 378-4880  
Toll Free: (800) 874-0102  
FAX: (503) 373-1688

June 8, 2015

Steve Olson, AICP  
Interim Planning and Building Director  
Planning Division  
PO Box 970  
Newberg, Oregon, 97132

SUBJECT: DR2-15-003/VAR-15-001 (Verizon – Hancock Street)

This letter is in response to the city of Newberg's application for a new Verizon cell tower located between two industrial buildings at 2401 East Hancock Street, north of Sportsman Airpark. After a preliminary review of the proposed application the Oregon Department of Aviation (ODA) has prepared the following comments.

The proposed cell tower would cause a disruption to the operations of the Sportsman Airpark specifically the approach/departure procedures from runway 17-35. In addition, due to its location and height, the applicant would be required to file a FAA form 7460-1 with the Oregon Department of Aviation, as required in OAR 738-70. ODA would recommend the cell tower be relocated or lowered away from the approach/departure to ensure safety to air navigation.

Thank you for allowing ODA to comment on this development proposal. If you have any questions or need further information please feel free to contact me at 503-378-2529 or [Jeff.Caines@aviation.state.or.us](mailto:Jeff.Caines@aviation.state.or.us) or Heather Peck – Projects and Planning Manager at 503-378-3168 or [Heather.Peck@aviation.state.or.us](mailto:Heather.Peck@aviation.state.or.us).

Sincerely,

Jeff Caines, AICP  
Aviation Planner

RECEIVED

JUN 10 2015

June 9, 2015

City of Newberg  
Community Development Department  
PO Box 970  
Newberg, Oregon 97132

Initial: \_\_\_\_\_

RE: Written comments on File No. DR2-15-003/VAR-15-001

This letter is in regards to the application by ProLand LLC, on behalf of Verizon Wireless, for the installation of a 70 foot tall cellular communication tower on property owned by Total Concept Development LLC. As an adjacent property owner I have three concerns that I feel need to be properly addressed and answered by the City of Newberg before the application move any further in the process.

The following written comments are provided by me on File No. DR2-15-003/VAR-15-001 addressing my concerns;

The first two are in regards to what I feel are public safety issues.

Number one. The height of the cellular tower at a proposed height of seventy (70) feet is potentially in the flight patterns of the local airport, Sportsman Airpark, and may demonstrate potential hazards to both aircraft and the immediate area of the tower. Certified documentation needs to be provided by the applicant, demonstrating that there is no potential conflict or danger to aircraft, the immediate property owners, or general public as a result of its proposed height.

The second safety concern is the possibility of radiation emissions in the immediate area from the proposed cellular tower as a result of the of the proposed antenna array. Currently in the City of Portland there is ongoing discussions concerning radiation omissions from cellular towers, and the potential health issues associated with them. As an adjacent property owner, I know that there will be persons in the immediate vicinity of the tower, both on the property of the proposed tower location, and on my adjacent property, that may be exposed to any radiation emissions from it. I feel the petitioner needs to provide the City of Newberg the adequate information certifying there is, or there is not the presence of any potential health hazards, or radiation being emitted from this tower.

Finally, the applicants request for a variance on the location of the proposed tower raises my third concern. Current city ordinance requires a minimum 21 foot setback from nearby buildings. Granting a variance of nearly 50% less than the required 21 feet seems excessive, and

I think that this may establish a precedent that that could come back to haunt the city at a later date. The granting of a variance this large may be used in the future by other applicants, citing this as an example of why any future variance requests should be granted, which may be detrimental to the community as a whole.

A handwritten signature in cursive script, appearing to read "Fred Casey", written in dark ink.

Fred L. Casey

PO Box 188

Newberg, Oregon 97132



June 7, 2015

Written Comments: File No. DR2-15-003/VAR-15-001

City of Newberg  
Community Development Dept.  
P.O. Box 970  
Newberg, OR 97132

RECEIVED

JUN 10 2015

Initial: \_\_\_\_\_

Dear Sirs:

We believe that a cellular communications tower would visually and possibly <sup>pose</sup> health risks to the other land owners in that vicinity.

We are the owners of Family Pet Clinic of Newberg, LLC at 131 N. Elliott Road which is very close to the proposed site. Next to our clinic is a children's daycare center. As no one knows what the long term health risks of close proximity to cell phone towers may be, we strongly urge that the city not grant the applicant a variance to the setback standard.

Thank You,

Masha A. Matthieson

Daniel J. Matt, D.V.M.

Randall J. Matthieson, D.V.M.



June 1, 2015

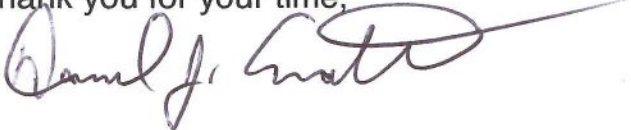
Dear City of Newberg,

We are writing to protest the variance of the setback standard requested by Verizon Wireless for their new cellular communications tower for several reasons.

The proposed location for the cell tower is extremely close to a high density residential area as well as a well-established day-care facility (lot #141). The residents of the neighborhood as well as the children at the day-care may be adversely affected by the radiation known to be emitted from all cellular towers. It is not acceptable to allow a variance for something that can harm our city's citizens. We are also concerned about the proximity to Newberg's airport. It is foolish, not to mention dangerous, to build such a tall structure so close to an airport. A cellular communications tower will not only pose a threat to our people and our airport, but it will lower the property values all around it—why should we allow that in town? Our last concern is this: the 21 foot set-back rule was established for a reason: to protect the privacy, value, and efficacy of the buildings lived in and businesses run by the tax-paying citizens of Newberg. If we change the rules for large companies like Verizon, which can well afford to build in a more appropriate location, what does that say to other big companies who want to build here at the expense of our citizens.

There is no compelling reason to allow a variance in the setback standard yet every reason to deny it—mainly the safety and well-being of the residents and businesses of Newberg. Let Verizon find a building site that doesn't require a variance; our locally owned businesses are expected to so they can as well!

Thank you for your time,



Daniel and Jennifer Matthiesen  
Family Pet Clinic  
131 N. Elliott Rd.  
Newberg, OR 97132

DR2-15-003  
VAR-15-001

## TYPE II APPLICATION (LAND USE) -- 2015

File #: \_\_\_\_\_

## TYPES - PLEASE CHECK ONE: X

X Design review  
 \_\_\_\_\_ Tentative Plan for Partition  
 \_\_\_\_\_ Tentative Plan for Subdivision

X Type II Major Modification  
 \_\_\_\_\_ Variance  
 \_\_\_\_\_ Other: (Explain) \_\_\_\_\_

## APPLICANT INFORMATION:

APPLICANT: **Proland LLC representing Verizon Wireless**ADDRESS: **S. 2607 Southeast Blvd., B-214**EMAIL ADDRESS: **Spokane, WA 99203**PHONE: \_\_\_\_\_ MOBILE: **509-939-6202**

FAX: \_\_\_\_\_

OWNER (if different from above): **Total Concepts Development LLC**PHONE: **503-550-6497**ADDRESS: **P.O. Box 927 Newberg, OR 97132**ENGINEER/SURVEYOR: **Duncanson Company**PHONE: **206-244-4141**ADDRESS: **145 SW 155th St. Suite 102, Seattle, WA 98166**

## GENERAL INFORMATION:

PROJECT NAME: **POR Hancock** PROJECT LOCATION: **2401 East Hancock St., Newberg, OR 97132**PROJECT DESCRIPTION/USE: **Installation of a 70' communications tower and related equipment on an M-2 zoned parcel**MAP/TAX LOT NO. (i.e. 3200AB-400): **3220AB00202**ZONE: **M-2** SITE SIZE: **64364** SQ. FT. ☐ ACRE ☐COMP PLAN DESIGNATION: **Mixed Use**TOPOGRAPHY: **Flat**CURRENT USE: **M-2 Warehouse/Industrial**

## SURROUNDING USES:

NORTH: **Industrial**SOUTH: **Industrial**EAST: **Industrial**WEST: **Industrial**

## SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

General Checklist: ☐ Fees ☐ Public Notice Information ☐ Current Title Report ☐ Written Criteria Response ☐ Owner Signature

For detailed checklists, applicable criteria for the written criteria response, and number of copies per application type, turn to:

Design Review .....p. 12  
 Partition Tentative Plat .....p. 14  
 Subdivision Tentative Plat .....p. 17  
 Variance Checklist .....p. 20

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. Tentative plans must substantially conform to all standards, regulations, and procedures officially adopted by the City of Newberg. All owners must sign the application or submit letters of consent. Incomplete or missing information may delay the approval process.

Derek Budig 1/31/15  
 Applicant Signature Date

Derek Budig  
 Print Name

Myrah Jean Nilles 1-30-2015  
 Owner Signature Date

MYRAH JEAN NILLES  
 Print Name  
Total Concepts Development LLC  
Debra Neeser

Attachments: General Information, Fee Schedule, Criteria, Checklists





# TYPE II APPLICATION (LAND USE) -- 2015

File #: \_\_\_\_\_

## TYPES -- PLEASE CHECK ONE: X

X Design review

\_\_\_ Tentative Plan for Partition

\_\_\_ Tentative Plan for Subdivision

X Type II Major Modification

\_\_\_ Variance

\_\_\_ Other: (Explain) \_\_\_\_\_

### APPLICANT INFORMATION:

APPLICANT: **Proland LLC representing Verizon Wireless**

ADDRESS: **S. 2607 Southeast Blvd., B-214**

EMAIL ADDRESS: **Spokane, WA 99203**

PHONE: \_\_\_\_\_ MOBILE: **509-939-6202**

FAX: \_\_\_\_\_

OWNER (if different from above): **Total Concepts Development LLC**

PHONE: **503-550-6497**

ADDRESS: **P.O. Box 927 Newberg, OR 97132**

ENGINEER/SURVEYOR: **Duncanson Company**

PHONE: **206-244-4141**

ADDRESS: **145 SW 155th St. Suite 102, Seattle, WA 98166**

### GENERAL INFORMATION:

PROJECT NAME: **POR Hancock** PROJECT LOCATION: **2401 East Hancock St., Newberg, OR 97132**

PROJECT DESCRIPTION/USE: **Installation of a 70' communications tower and related equipment on an M-2 zoned parcel**

MAP/TAX LOT NO. (i.e. 3200AB-400): **3220AB00202** ZONE: **M-2** SITE SIZE: **64364** SQ. FT. ☒ ACRE ☐

COMP PLAN DESIGNATION: **Mixed Use** TOPOGRAPHY: **Flat**

CURRENT USE: **M-2 Warehouse/Industrial**

#### SURROUNDING USES:

NORTH: **Industrial** SOUTH: **Industrial**

EAST: **Industrial** WEST: **Industrial**

### SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

General Checklist: ☒ Fees ☐ Public Notice Information ☒ Current Title Report ☒ Written Criteria Response ☒ Owner Signature

For detailed checklists, applicable criteria for the written criteria response, and number of copies per application type, turn to:

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Partition Tentative Plat .....	p. 14
Subdivision Tentative Plat .....	p. 17
Variance Checklist .....	p. 20

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. Tentative plans must substantially conform to all standards, regulations, and procedures officially adopted by the City of Newberg. All owners must sign the application or submit letters of consent. Incomplete or missing information may delay the approval process.

Applicant Signature

Date

Owner Signature

Date

Print Name

Print Name

Attachments: General Information, Fee Schedule, Criteria, Checklists



**First American**

**First American Title Company of Oregon**

825 NE Evans Street  
McMinnville, OR 97128  
Phn - (503)376-7363  
Fax - (866)800-7294

**FOR ALL QUESTIONS REGARDING THIS PRELIMINARY REPORT, PLEASE CONTACT:**

**Clayton Carter**, Title Officer

Phone: (503)376-7363 - Fax: (866)800-7294 - Email: ctcarter@firstam.com

Pro Land LLC  
2607 SE BLVD STE B214  
Spokane, WA 99223

Order No.: 1039-2189631

January 30, 2015

Attn: Derek Budig  
Phone No.: (509)220-4155  
Email: budig.d@gmail.com

**Supplemental Preliminary Title Report**

**County Tax Roll Situs Address:** 2401 E Hancock Street, Newberg, OR 97132

**Proposed Insured Lender:**

2006 ALTA Owners Standard Coverage	Liability \$	To Come	Premium \$	To Come
2006 ALTA Owners Extended Coverage	Liability \$		Premium \$	
2006 ALTA Lenders Standard Coverage	Liability \$		Premium \$	
2006 ALTA Lenders Extended Coverage	Liability \$		Premium \$	
Endorsement 9, 22 & 8.1			Premium \$	
Govt Service Charge			Cost \$	20.00
Other			Cost \$	

We are prepared to issue Title Insurance Policy or Policies of First American Title Insurance Company, a Nebraska Corporation in the form and amount shown above, insuring title to the following described land:

The land referred to in this report is described in Exhibit A attached hereto.

and as of January 27, 2015 at 8:00 a.m., title to the fee simple estate is vested in:

Total Concept Development LLC

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

This report is for the exclusive use of the parties herein shown and is preliminary to the issuance of a title insurance policy and shall become void unless a policy is issued, and the full premium paid.



2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

**The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.**

**In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:**

- A. Survey or alternative acceptable to the company
- B. Affidavit regarding possession
- C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
  - i. Satisfactory evidence that no construction liens will be filed; or
  - ii. Adequate security to protect against actual or potential construction liens;
  - iii. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon
6. Water rights, claims to water or title to water, whether or not such rights are a matter of public record.
7. Taxes for the year 2014-2015
 

Tax Amount	\$	854.06
Unpaid Balance:	\$	854.06, plus interest and penalties, if any.
Code No.:		29.0
Map & Tax Lot No.:		P15008
Property ID No.:		546880

Taxes for the year 2013-2014		
Unpaid Balance:	\$	709.20, plus interest

Taxes for the year 2013-2014		
Unpaid Balance:	\$	707.06, plus interest

8. Taxes for the year 2014-2015
 

Tax Amount	\$	470.09
Unpaid Balance:	\$	470.09, plus interest and penalties, if any.
Code No.:		29.0
Map & Tax Lot No.:		P16180
Property ID No.:		556546
9. The rights of the public in and to that portion of the premises herein described lying within the limits of streets, roads and highways.
10. Access Restrictions, including terms and provisions thereof.  
Recorded: June 16, 1962 in Film Volume 23, Page 213
11. Slope Easement, including terms and provisions thereof.  
Recorded: June 16, 1962 in Film Volume 23, Page 213
12. Sewer Easement Agreement, including terms and provisions thereof.  
Recorded: August 8, 1977 in Film Volume 122, Page 504
13. Sewer Easement Agreement, including terms and provisions thereof.  
Recorded: April 27, 1979 in Film Volume 139, Page 811
14. Easement for utility and power purposes as contained in contract, including terms and provisions thereof.  
Recorded: February 21, 1980 in Film Volume 148, Page 871
15. Subject to easement improvement, maintenance costs as contained in contract recorded February 21, 1980 in Film Volume 148, Page 871
16. Storm and Sanitary Sewer Easement, including terms and provisions thereof.  
Recorded: April 30, 1982 in Film Volume 169, Page 847  
  
Limited Release of said Easement recorded June 11, 2009 as Instrument No. 200908924.
17. Easement, including terms and provisions contained therein:  
Recording Information: June 30, 2000 as Instrument No. 200008989  
In Favor of: City of Newberg, a municipal corporation  
For: Sanitary Sewer Easement

18. Line of Credit Trust Deed, including the terms and provisions thereof, given to secure an indebtedness of up to \$1,750,000.00  
 Grantor: Total Concept Development LLC  
 Beneficiary: Columbia River Bank  
 Trustee: First American Title Insurance Company of Oregon  
 Dated: May 29, 2008  
 Recorded: June 02, 2008  
 Recording Information: 200809419, Deed and Mortgage Records
- Modification and/or amendment by instrument:  
 Recording Information: December 31, 2008, Instrument No. 200820428
- Modification and/or amendment by instrument:  
 Recording Information: March 20, 2009, Instrument No. 200903871
19. Restrictive Covenant to Waive Remonstrance, pertaining to land use regulations including the terms and provisions thereof  
 Recorded: October 07, 2008 as Instrument No. 200816844
20. Easement, including terms and provisions contained therein:  
 Recording Information: June 11, 2009 as Instrument No. 200908925  
 In Favor of: Rivermark Community Credit Union and Northwest Property Investment Group, LLC, an Oregon limited liability company  
 For: Storm and sewer pipeline
21. Easement, including terms and provisions contained therein:  
 Recording Information: July 10, 2009 as Instrument No. 200910879  
 In Favor of: City of Newberg, a municipal corporation  
 For: Fire hydrant and water line
- And Re-Recorded: August 11, 2009 as Instrument No. 200913105
22. Unrecorded leases or periodic tenancies, if any.

- END OF EXCEPTIONS -

NOTE: According to the public record, the following deed(s) affecting the property herein described have been recorded within 24 months of the effective date of this report: NONE

NOTE: We find no judgments or United States Internal Revenue liens against Total Concept Development LLC

Preliminary Report

Order No.: **1039-2189631**

Page 5 of 8

NOTE: Taxes for the year 2014-2015 PAID IN FULL

Tax Amount: \$17,225.10  
Map No.: R3220AB-00202  
Property ID: 377675  
Tax Code No.: 29.0

NOTE: Taxes for the year 2014-2015 PAID IN FULL

Tax Amount: \$295.88  
Map No.: P0714  
Property ID: 543067  
Tax Code No.: 29.0

NOTE: Taxes for the year 2014-2015 PAID IN FULL

Tax Amount: \$512.00  
Map No.: P0797  
Property ID: 543451  
Tax Code No.: 29.0

NOTE: Taxes for the year 2014-2015 PAID IN FULL

Tax Amount: \$0.00  
Map No.: P16065  
Property ID: 556060  
Tax Code No.: 29.0

Situs Address as disclosed on Yamhill County Tax Roll:

2401 E Hancock Street, Newberg, OR 97132

**THANK YOU FOR CHOOSING FIRST AMERICAN TITLE!**  
**WE KNOW YOU HAVE A CHOICE!**

**RECORDING INFORMATION**

Filing Address: **Yamhill County**  
535 NE Fifth Street  
McMinnville, OR 97128

Recording Fees: \$ **41.00** for the first page  
\$ **5.00** for each additional page





## First American Title Insurance Company

### SCHEDULE OF EXCLUSIONS FROM COVERAGE

#### ALTA LOAN POLICY (06/17/06)

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
  - (a) a fraudulent conveyance or fraudulent transfer, or
  - (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

#### ALTA OWNER'S POLICY (06/17/06)

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
  - (a) a fraudulent conveyance or fraudulent transfer; or
  - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

### SCHEDULE OF STANDARD EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

NOTE: A SPECIMEN COPY OF THE POLICY FORM (OR FORMS) WILL BE FURNISHED UPON REQUEST

TI 149 Rev. 7-22-08



*First American Title*

#### Privacy Information

##### We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

#### Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

#### Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

#### Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

#### Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

#### Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

#### Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.

In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.

There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

#### Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

#### Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.

[FirstAm.com](http://FirstAm.com) uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

#### Fair Information Values

**Fairness** We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.

**Public Record** We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.

**Use** We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.

**Accuracy** We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.

**Education** We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.

**Security** We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.



**Exhibit "A"**

Real property in the County of Yamhill, State of Oregon, described as follows:

**PARCEL 1:**

A tract of land in the Richard Everest Donation Land Claim in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, Oregon, being part of that certain tract of land described in Deed to Chester Leonard Erickson, et ux, recorded January 20, 1960 in Film Volume 9, Page 180, Deed and Mortgage Records of Yamhill County, being more particularly described as follows:

BEGINNING at a point on the East line of said Erickson Tract that is North 577.92 feet from the Southeast corner thereof; thence North 89°57'10" West 117.47 feet to the West line of said Erickson Tract; thence South, along the said West line, 547.92 feet to an iron rod that is North 30 feet from the Southwest corner of said Erickson Tract; thence South 89°57'10" East 117.47 feet, parallel with the South line of said Erickson Tract, to an iron rod in the East line of said Tract; thence North 547.92 feet to the place of beginning.

**PARCEL II:**

A NON-EXCLUSIVE EASEMENT for road and utilities purposes, over and across the following described tract of land, including the tenements, hereditaments and appurtenances thereto as being adjacent to Parcel I above described:

A tract of land in the Richard Everest Donation Land Claim in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, Oregon, being part of that certain tract of land described in Deed to Chester Leonard Erickson, et ux., recorded January 20, 1960 in Film Volume 9, Page 180, Deed and Mortgage Records of Yamhill County, and being described as follows:

BEGINNING at an iron rod at the intersection of the West line of said Erickson Tract with the South line of U.S. Highway 99W; thence South along the West line of said Erickson Tract, 267.57 feet to the North boundary of Parcel I above described; thence South 89°57'10" East 25.00 feet along the North boundary of Parcel I above described to a point; thence North parallel with and 25.00 feet distant from the West line of said Erickson Tract, 338.09 feet, more or less, to the South line of said Highway 99W; thence South 65°53'10" West, along said South line to the place of beginning.

**Provide a written response that specifies how your project meets the following criteria:**

ATTACHMENT 5

- (1) *Design compatibility.* The proposed design review request incorporates an architectural design which is compatible with and/or superior to existing or proposed uses and structures in the surrounding area. This shall include, but not be limited to, building architecture, materials, colors, roof design, landscape design, and signage. ***The telecommunication facility is less than 200 feet and will be painted in accordance with the FAA and Oregon State Department of Aviation regulations.***
- (2) *Parking and on-site circulation.* Parking areas shall meet the requirements of § 15.440.010. Parking studies may be required to determine if adequate parking and circulation are provided for uses not specifically identified in § 15.440.010. Provisions shall be made to provide efficient and adequate on-site circulation without using the public streets as part of the parking lot circulation pattern. Parking areas shall be designed so that vehicles can efficiently enter and exit the public streets with a minimum impact on the functioning of the public street. ***A minimum of two parking spaces are provided to the west of the tower no greater than 400 feet from proposed use and shown on Sheet A1.0. A further explanation of this requirement can be found in the application narrative.***
- (3) *Setbacks and general requirements.* The proposal shall comply with §§ 15.415.010 through 15.415.060 dealing with height restrictions and public access; and §§ 15.410.010 through 15.405.040 dealing with setbacks, coverage, vision clearance, and yard requirements. ***All required setbacks have been met according to section 15.445.220, except for the north existing structure setback. A variance has been respectfully requested and further explanation of this requirement are located in the application narrative and variance request.***
- (4) *Landscaping requirements.* The proposal shall comply with § 15.420.010 dealing with landscape requirements and landscape screening. ***All landscaping requirements are shown on Sheet A1.0 and A1.1 of the zoning drawings. A further application is located in the application narrative.***
- (5) *Signs.* Signs shall comply with § 15.435.010 et seq. dealing with signs. ***Will comply with the FCC and FAA regulations regarding signage.***
- (6) *Manufactured home, mobile home and RV parks.* Manufactured home, mobile home, and recreational vehicle parks shall also comply with the standards listed in §§ 15.445.050 et seq., in addition to the other criteria listed in this section. ***N/A. Proposing a telecommunication facility***
- (7) *Zoning district compliance.* The proposed use shall be listed as a permitted or conditionally permitted use in the zoning district in which it is located as found in §§ 15.304.010 through 15.328.040. Through this site review process, the Director may make a determination that a use is determined to be similar to those listed in the applicable zoning district, if it is not already specifically listed. In this case, the Director shall make a finding that the use shall not have any different or more detrimental effects upon the adjoining neighborhood area than those specifically listed. ***According to Section 15.305 of the Zoning Use Table, a 100-foot telecommunication facility is permitted through a Special Use Permit if the facility is greater than 2,000 feet from the nearest facility. The facility is greater than 2,000 feet from the nearest telecommunication facility.***
- (8) *Sub-district compliance.* Properties located within sub-districts shall comply with the provisions of those sub-districts located in §§ 15.340.010 through 15.348.060. ***N/A. The proposed site is not located within a sub-district.***
- (9) *Alternative circulation, roadway frontage improvements and utility improvements.* Where applicable, new developments shall provide for access for vehicles and pedestrians to adjacent properties which are currently developed or will be developed in the future. This may be accomplished through the provision of local public streets or private access and utility easements. At the time of development of a parcel, provisions shall be made to develop the adjacent street frontage in accordance with city street standards and the standards contained in the transportation plan. At the discretion of the city, these improvements may be deferred through use of a deferred improvement agreement or other form of security. ***N/A. The proposed site has existing improved roadway frontage. There will be appropriate utilities added to support the proposed telecommunication facility.***
- (10) *Traffic study improvements.* If a traffic study is required, improvements identified in the traffic study shall be implemented as required by the Director. ***The only traffic will be during construction and periodically for testing of equipment.***



## Variance Request

### 15.215.040 Type II variance criteria.

The Type II procedure shall be used to process a variance request. The hearing body shall grant the variance if the following criteria are satisfied:

***According to Section 15.445.2209(B), the required tower setbacks is 30 percent of the height of the tower from any existing structure on the site, abutting properties, and public rights-of-way. The tower meets all setback requirements except for the existing commercial structure to the north that is located on the subject parcel the telecommunication facility is located on. Verizon Wireless is respectfully requesting 11.5 foot variance where 21 feet is required.***

A. That strict or literal interpretation and enforcement of the specified regulation would result in practical difficulty or unnecessary physical hardship inconsistent with the objectives of this code.  
***The strict interpretation of the required structure setback result in a physical hardship that is inconsistent with the code because of the zoning the facility is located in. The site is zoned light industrial, which allow for a high intense use and density. The existing site is covered mostly with existing industrial buildings to maximize the use of the commercial property. The undue hardship exists because of the existing buildings on site in relation to the proposed facility. The setback requirements for telecommunication facilities are inconsistent with the setback requirements for the underlying zone that the facility is located in.***

B. That there are exceptional or extraordinary circumstances or conditions applicable to the property involved or to the intended use of the property which do not apply generally to other properties classified in the same zoning district.  
***The exceptional or extraordinary circumstances is that the site is zoned light industrial and due to the commercial use the existing buildings take up a large portion of the subject parcel creating a hardship when meeting existing building setback standards.***

C. That strict or literal interpretation and enforcement of the specified regulation would deprive the applicant of privileges enjoyed by the owners of other properties classified in the same zoning district.  
***The literal interpretation of the setback standards for existing structures would deprive the applicant of privileges enjoyed by the owners of properties classified in the same zone. Telecommunication facilities are only allowed in the M-2 zone and the proposed height of 70 feet is the minimum necessary to achieve the Radio Frequency requirements in order to provide reliable service.***

D. That the granting of the variance will not constitute a grant of special privilege inconsistent with the limitations on other properties classified in the same zoning district.

***Granting of the setback variance from existing structures would not constitute a grant of special privilege inconsistent with the limitations on other properties classified in the same zone. Setback standards in the industrial zone are less than the tower setbacks and setbacks for the industrial zone are being meet. The setback variance is the minimum to reduce the undue hardship because all other setbacks are being meet, with the exception of the north setback .***

E. That the granting of the variance will not be detrimental to the public health, safety or welfare or materially injurious to properties or improvements in the vicinity. [Ord. 2451, 12-2-96. Code 2001 § 151.163.]

***Granting this variance will be in compliance with the general purpose and intent of this title, and will not be detrimental to the public health, safety or welfare or materially injurious to the properties in the vicinity. The requested setback variance will be consistent with the surrounding commercial uses and industrial zoned properties. The placement of the proposed telecommunication has the least amount of impact because it is being proposed between two existing buildings and will be partially blocked from the public's view.***

**15.215.050 Conditions may be attached.**

The director may attach any condition to the variance if such condition relates directly and specifically to the request for variance. [Ord. 2451, 12-2-96. Code 2001 § 151.164.]

**15.215.060 Variance must be exercised to be effective.**

A variance granted under this code shall be effective only when the exercise of the right granted thereunder shall be commenced within one year from the effective date of the decision. The director may authorize an extension of the duration of the decision for an additional six months upon written application. In case such right is not exercised, or extension obtained, the variance decision shall be void. Any variance granted pursuant to this code is transferable to subsequent owners or contract purchasers of the property unless otherwise provided at the time of granting such variance. [Ord. 2451, 12-2-96. Code 2001 § 151.165.]



**Re: Telecommunication Facilities requirements for proposed site located at 2401 East Hancock Street**

**15.445.190 Approval criteria.**

New transmission towers or replacement of existing towers may be allowed, based on findings by the approval authority that the following criteria are met:

A. A good faith effort has been made to demonstrate that an existing tower cannot accommodate the proposed antennas and/or transmitter.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. However, owners of all existing towers have been contacted with regards to shared space.***

***Please refer to Radio Frequency letter for further explanation.***

B. The tower and associated structures meet the setback, landscaping, parking and vegetation requirements of NMC 15.445.220.

***The tower and associated structures meet the setback, landscaping, parking and vegetation requirements as stated in Section 15.445.220. A setback variance for existing structures on site has been requested.***

C. The proposed tower has been structurally designed to accommodate the maximum number of additional users technically practicable.

***As shown on sheet A2.0 of the zoning drawings the proposed tower is structurally designed to accommodate two additional careers.***

D. The tower has minimal visual impact on the environment.

***Based on the underlining zone of Light Industrial (M - 2), the proposed tower is in compliance with its surrounding land uses and is an appropriate height according to the City of Newberg Municipal Code.***

E. The tower meets the design review provisions of NMC 15.220.030.

***The zoning drawings meet the design review provisions of NMC 15.220.030.***

F. The tower does not intrude into the airport imaginary surface areas as defined in NMC 15.05.030. [Ord. 2536, 11-6-00. Code 2001 § 151.671.]

***The tower does not intrude into the airport imaginary surface areas as defined in Section 15.05.030. FAA Determination has been provided and is attached.***

**15.445.200 Application requirements.**

An application for approval of a Type II or Type III decision for a radio or television transmission tower shall contain at least the following information before it is complete:

A. Site Plan. Site plan or plans to scale specifying the location of tower(s), guy anchors (if any), transmission building and/or other accessory uses, access, parking, fences, landscaped areas, and adjacent land uses. Such plan shall also demonstrate compliance with NMC 15.445.220(B) and (C).

***Zoning drawings have been provided that address the referenced site plan requirements as shown above. The site plan is in compliance with the required section 15.445.220(B)(C), please see below response below.***

B. Landscape Plan. Landscape plan to scale indicating size, spacing and type of plantings required in NMC 15.445.220(H).

***Please see response in Section 15.445.220(H).***

C. Engineer's Report. Report from a professional engineer licensed in the State of Oregon, documenting the following:

1. Tower height and design, including technical, engineering, economic, and other pertinent factors governing selection of the proposed design. A cross-section of the tower structure shall be included.

***OR Stamped Engineering drawings have been provided, per the code requirement.***

2. Total anticipated capacity of the structure, including number and types of antennas which can be accommodated.

***OR Stamped Engineering drawings have been provided, per the code requirement. The tower will accommodate two additional carriers and is shown on sheet A2.0 of the zoning drawings.***

3. Evidence of structural integrity of the tower structure as required by the building official.

***OR Stamped Engineering drawings have been provided, per the code requirement.***

4. Failure characteristics of the tower and demonstration that the site and setbacks are of adequate size to contain debris.

***OR Stamped Engineering drawings have been provided, per the code requirement.***

5. Ice hazards and mitigation measures which have been employed, including increased setbacks and/or de-icing equipment.

***OR Stamped Engineering drawings have been provided, per the code requirement.***

6. Specific design and reconstruction plans indicating the means by which the shared use provisions of this section will be met. This submission is required only in the event that the applicant intends to meet the shared use requirements of this section by subsequent reinforcement and reconstruction of the tower.

***This section shall be satisfied if at the time of Building Permit for the tower is issued a proposed collocation is proposed by another carrier. Please see Section 15.445.220(A)(3)(a-e) for further explanation.***

7. The requirement of subsection (C)(6) of this section may be deferred if:

a. At the time the building permit for the tower is issued, there are no applications before the FCC that could use the tower; or

b. The applications which are before the FCC have contractual arrangements for the use of other towers.

D. Letter of Intent.

1. The applicant shall provide a letter of intent to lease excess space on the tower structure and to lease additional applicant-controlled excess land on the tower site when the shared-use potential of the tower is absorbed, if structurally and technically possible. A reasonable pro rata charge may be made for shared use, consistent with an appropriate sharing of construction, financing and maintenance costs. Fees may also be charged for any structural or RF changes necessitated by such shared use. Such sharing shall be a condition of approval if approval is granted.

***This was provided on 4/30/15.***

2. The applicant shall base charges on generally accepted accounting principles and shall explain the elements included in the charge, including, but not limited to, a pro rata share of actual site selection and processing costs, land costs, site design, construction and maintenance costs, finance costs, return on equity, and depreciation.



***If and when an additional carrier propose to collocate on the proposed tower an fully executed Tower Lease Agreement shall be negotiated and or obtained by the tower owner. Letter of Intent submitted on 4/30/15.***

E. Tower Capacity. The applicant shall quantify the additional tower capacity anticipated, including the approximate number and types of antennas. The applicant shall also describe any limitations on the ability of the tower to accommodate other uses, e.g., radio frequency interference, mass height, frequency or other characteristics. The applicant shall describe the technical options available to overcome those limitations and reasons why the technical options considered were not chosen to be incorporated. The approval authority shall approve those limitations if they cannot be overcome by reasonable technical means.

***Engineered construction drawings and an engineered structural analysis shall have been provided to satisfy this requirement.***

F. Evidence of Lack of Space. Evidence of the lack of space on all suitable existing towers to locate the proposed antenna and of the lack of space on existing tower sites to construct a tower for the proposed antenna.

***All tower owners in the City of Newberg have been contacted with regards to shared space.***

G. Written Authorization. Written authorization from adjoining property owners if needed, under NMC 15.445.220(C).

Written authorization from adjoining property owners is not needed under NMC 15.445.220(C).

H. Written Evidence. Written evidence from the Federal Communications Commission related to a request for approval of a reduction in the capacity of the proposed tower under NMC 15.445.220(D), if needed. [Ord. 2536, 11-6-00. Code 2001 § 151.672.]

***A Radio Frequency letter with prorogation maps has been provided to satisfy this requirement.***

#### **15.445.210 Conditions of approval.**

The following conditions of approval must be met prior to issuance of a building permit for any telecommunications facility:

A. Agency Statements. The applicant shall provide the following information in writing from the appropriate responsible official:

1. Confirmation that a Federal Communications Commission (FCC) antenna structure registration application (FCC 854 Form) has been approved, or a statement that an application is not required.

***A Radio Frequency letter with prorogation maps has been provided to satisfy this requirement.***

2. Confirmation that the Federal Aviation Administration (FAA) has been notified and that the facility has not been found to be a hazard to air navigation under FAA regulations, or a statement that compliance is not required.

***The applicant has filed with FAA and has requested an FAA determination. This requirement shall be satisfied once the FAA has made a determination.***

3. A statement from the Oregon State Department of Aviation (OSDA) that the application has been found to comply with the applicable regulations of the Department, or a statement that no such compliance is required.

***The applicant has filed with FAA and has requested an FAA determination. This requirement shall be satisfied once the FAA has made a determination***

4. The director may waive the statements in subsections (A)(1) through (3) of this section when the applicant demonstrates that a good faith, timely effort was made to obtain such responses but that no such response was forthcoming, provided the applicant conveys any response received; and further, provided any subsequent response that is received is conveyed to the approval authority as soon as possible.

B. Franchise Agreement. The applicant shall complete a franchise or license agreement with the city if the facility is located within the public right-of-way. [Ord. 2536, 11-6-00. Code 2001 § 151.673.]

***The proposed facility is not located within the public right-of-way.***

#### **15.445.220 Installation standards.**

A. Shared Use of Existing Towers. The applicant shall make a good faith effort to substantially demonstrate that no existing tower can accommodate the applicant's proposed antenna/transmitter as described below.

1. The applicant shall contact the owners of all existing towers, of a height roughly equal to or greater than the height of the tower proposed by the applicant. A list shall be provided of all owners contacted, the date of such contact, and the form and content of such contact.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

2. Such contact shall be made in a timely manner; that is, sufficiently before the filing of an application for a hearing to include a response into the application when filed.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

a. Where an existing tower is known to have capacity for additional antennas of the sort proposed, the application for a new tower shall not be deemed complete until the owner of the existing tower responds. Failure of a listed owner to respond shall not be relevant to the approval authority if a timely, good faith effort was made to obtain a response and a response was not received within 30 days of the request.

b. The director shall maintain and provide, on request, records of responses from each owner.

c. Once an owner demonstrates an antenna of the sort proposed by the applicant cannot be accommodated on the owner's tower as described below, the owner need not be contacted by future applicants for antennas of the sort proposed.

3. The applicant shall provide the following information from each owner contacted:



a. Identification of the site by location, tax lot number, existing uses, and tower height.

b. Whether each such tower could structurally accommodate the antenna proposed by the applicant without requiring structural changes be made to the tower. To enable the owner to respond, the applicant shall provide each such owner with the height, length, weight, and other relevant data about the proposed antenna.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

c. Whether each such tower could structurally accommodate the proposed antenna if structural changes were made, not including totally rebuilding the tower. If so, the owner shall specify in general terms what structural changes would be required.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

d. If structurally able, would shared use by such existing tower be precluded for reasons related to RF interference. If so, the owner shall describe in general terms what changes in either the existing or proposed antenna would be required to accommodate the proposed tower, if at all.

***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

e. If shared use is possible based on subsections (A)(3)(a) through (d) of this section, the fee an owner of an existing tower would charge for such shared use.

4. Shared use is not precluded simply because a reasonable fee for shared use is charged, or because of reasonable costs necessary to adapt the existing and proposed uses to a shared tower. The approval authority may consider expert testimony to determine whether the fee and costs are reasonable. Costs exceeding new tower development are presumed unreasonable. ***There are no existing telecommunication facilities within one mile of the proposed tower that meet Radio Frequency Engineer requirements. Please refer to Radio Frequency letter for further explanation. All existing tower owners have been contacted regarding shared space.***

#### B. Tower Setbacks.

1. Only one tower per lot is authorized. Towers shall be set back from any existing structure on the site, abutting properties, and public rights-of-way a minimum distance equal to 30 percent of the height of the tower, measured from the base of the tower to the structure, abutting property or public right-of-way. All towers shall be set back from a residential zone a distance equal to or greater than 100 percent of the tower height, measured from the base of the tower to the nearest property line of a residentially zoned lot. The setback requirements of this section shall not apply towards:

a. Antennas incorporated into, and no more than 18 feet above, existing or new buildings;

b. Antennas incorporated into, and no more than 18 feet above, existing structures;

c. Antenna support structures incorporated into, and no more than 18 feet above, existing or new buildings.

2. Towers must meet all setback, design and landscape requirements of the code.  
***The setback requirement equal to 30 percent of the height of the tower form abutting properties, public rights-of-way and adjacent existing structures outside the property lines have been satisfied. Please see sheet A1.0 and A1.1 of the zoning drawings for details. Verizon Wireless is respectfully requesting a setback variance from the existing structures that are located on the proposed site and are owned by the property owner. All other structure setbacks have been meet. Please see Variance request in Section 15.215.040. For design and landscape requirements please see Section 15.445.220(E-H)***

3. No new tower may be installed closer than 2,000 feet from any existing or proposed tower, unless approved through the Type III conditional use permit process.

***The proposed tower is not located within 2,000 feet of any existing or proposed tower.***

#### C. Guy Setback.

1. Guy anchors shall be set back a minimum of 25 feet from any property line, public property or street abutting the site.

***There are no guy anchors proposed for the telecommunication facility.***

2. A guy anchor may be located on an adjoining property when:

***There are no guy anchors proposed for the telecommunication facility.***

a. The owner of the adjoining property on which it is to be placed authorizes it in writing; and

b. The guy anchor meets the requirements of subsection (C)(2)(a) of this section as to all other setback requirements.

c. Guy anchors may be located within required landscape areas.

D. Required Sharing of New Towers. All new towers shall be designed to structurally accommodate the maximum number of additional users technically practicable, but in no case less than the following:

1. For television antenna towers, at least three high-power television antennas and one microwave facility or two FM antennas, and at least one two-way radio antenna for every 10 feet of the tower over 200 feet.

***The applicant is not proposing a television antenna tower.***

2. For any other towers, at least one two-way radio antenna for every 10 feet of the tower, or at least one two-way radio antenna for every 20 feet of the tower and at least one microwave facility.

***The applicant is not proposing a two-way radio antenna.***

3. Such other combination as found by the approval authority to provide the maximum possible number of foreseeable users.

a. Such requirements may be reduced if the Federal Communications Commission provides a written statement that no more licenses for those broadcast frequencies that could use the tower will be available in the foreseeable future.



b. Such requirements may be reduced if the size of the tower required significantly exceeds the size of the existing towers in the area and would create an unusually onerous visual impact that would dominate and alter the visual character of the area when compared to the impact of other existing towers. This provision is only to be applied in unusual circumstances not resulting from the applicant's action or site selection unless no other site is possible.

4. Additional antennas and accessory uses to existing antennas may be added to an existing tower, under a Type I application, if the existing tower meets the setback and landscaping requirements of subsections (B), (C) and (G) of this section. Accessory uses shall include only such buildings and facilities necessary for transmission function and satellite ground stations associated with them, but shall not include broadcast studios, offices, vehicle storage areas, nor other similar uses not necessary for the transmission function. Accessory uses may include studio facilities for emergency broadcast purposes or for other special, limited purposes found by the approval authority not to create significant additional impacts nor to require construction of additional buildings or facilities exceeding 25 percent of the floor area of other permitted buildings.

***A new telecommunication facility is proposed.***

5. If a new tower is approved, the applicant shall:

a. Record the letter of intent required in NMC 15.445.200(D) in miscellaneous deed records of the office of the county recorder;

b. Respond in a timely, comprehensive manner to a request for information from a potential shared use applicant required under subsection (A) of this section;

c. Negotiate in good faith for shared use by third parties; and

d. Allow shared use where the third party seeking such use agrees in writing to pay reasonable pro rata charges for sharing, including all charges necessary to modify the tower and transmitters to accommodate shared use, but not total tower reconstruction, and to observe whatever technical requirements are necessary to allow shared use without creating interference.

e. Grounds for Suspension or Revocation.

i. Willful, knowing failure of an owner whose tower was approved after November 6, 2000, to comply with the requirement of subsections (D)(5)(a) through (d) of this section shall be grounds for suspension or revocation of the use. Following report of such failure, the director shall schedule a hearing to determine whether the use should be suspended or revoked. The hearing shall be processed as a Type III public hearing before the planning commission.

ii. Such conditions shall run with the land and be binding on subsequent purchasers of the tower site.

E. Visual Impact. The applicant shall demonstrate that the tower can be expected to have the least visual impact on the environment, taking into consideration technical, engineering, economic and other pertinent factors. Towers shall be painted and lighted as follows:

1. Towers 200 feet or less in height shall be painted in accordance with regulations of the Federal Aviation Administration and/or Oregon State Department of Aviation. Where such regulations do not apply, towers shall be camouflaged. All new towers and antennas must either be camouflaged or employ appropriate stealth technologies that are visually compatible with a host building or structure, or the surrounding natural environment. The type of camouflage may include trees, flagpoles, bell towers, smoke stacks, steeples; however, other types of camouflage may be approved at the discretion of the decision making body.

***The proposed tower will meet all required FAA and or Oregon State Department of Aviation requirements associated with painting the tower.***

2. Towers more than 200 feet in height shall be painted in accordance with regulations of the Federal Aviation Administration and the Oregon State Department of Aviation.

***The proposed tower is less than 200 feet.***

3. Towers shall be illuminated as required by the Federal Aviation Administration and the Oregon State Department of Aviation.

***The proposed tower will meet all required FAA and or Oregon State Department of Aviation requirements associated with illumination.***

4. Towers shall be the minimum height necessary to provide parity with existing similar tower-supported antennas and shall be freestanding where the negative visual effect is less than would be created by use of a guyed tower.

***The proposed facility is in parity with other existing telecommunication facilities and is freestanding where the negative visual effects is less than would be created by use of a guyed tower.***

F. Parking. A minimum of two parking spaces shall be provided on each site; an additional parking space for each two employees shall be provided at facilities which require on-site personnel. The director may authorize the joint use of parking facilities subject to the requirements of NMC 15.440.050.

***There are a minimum of two parking spaces located on site. The facility is unmanned.***

G. Vegetation. Existing landscaping on the site shall be preserved to the greatest practical extent. The applicant shall provide a site plan showing existing significant vegetation to be removed, and vegetation to be replanted to replace that lost.

***The existing landscaping will be preserved to the greatest practical extent. Please see landscape note on sheet A1.0 location of existing landscaping on Sheet A1.1 of zoning drawings.***

H. Landscaping. Landscape material shall include the following:

1. For towers 200 feet tall or less, a 20-foot-wide landscape buffer is required immediately adjacent to the structure containing the telecommunications facility. At least one row of evergreen trees or shrubs, not less than four feet high at the time of planting, and spaced not more than 15 feet apart, shall be provided within the landscape buffer. Shrubs should be of a variety which can be expected to grow to form a continuous hedge at least five feet in height within two years of planting. Trees and shrubs in the vicinity of guy wires shall be of a kind that would not exceed 20 feet in height or would not affect the stability of the guys, should they be uprooted, and shall not obscure visibility of the anchor from the transmission building or security facilities and staff.

***Verizon Wireless doesn't propose any additional landscaping because the existing vegetation will be preserved and meets the landscaping standards. Please see Sheet A1.0 and A1.1 of zoning drawings.***



2. For towers more than 200 feet tall, a 40-foot-wide landscape buffer shall be provided immediately adjacent to the structure containing the telecommunications facility. Provide at least one row of evergreen shrubs spaced not more than five feet apart which will grow to form a continuous hedge at least five feet in height within two years of planting; one row of deciduous trees, not less than one-and-one-half-inch caliper measured three feet from the ground at the time of planting, and spaced not more than 20 feet apart; and at least one row of evergreen trees, not less than four feet at the time of planting, and spaced not more than 15 feet apart. Trees and shrubs in the vicinity of guy wires shall be of a kind that would not exceed 20 feet in height or would not affect the stability of the guys, should they be uprooted, and shall not obscure visibility of the anchor from the transmission building or security facilities and staff.  
***The proposed tower is less than 200 feet.***

3. In lieu of these standards, the approval authority may allow use of an alternate detailed plan and specifications for landscaping, screening, plantings, fences, walls, structures and other features designed to camouflage, screen and buffer towers and accessory uses. The plan shall accomplish the same degree of screening achieved in subsections (H)(1) and (2) of this section, except as lesser requirements are desirable for adequate visibility for security purposes.  
***Verizon Wireless doesn't propose any additional landscaping because the existing vegetation will be preserved and meets the landscaping standards. Please see Sheet A1.0 and A1.1 of zoning drawings. The facility will be enclosed within a chain link fence with privacy screening.***

4. Grounds maintenance, including landscaping, shall be provided and maintained for the duration of the use, to encourage health of plant material and to protect public health and safety. The maintenance shall be the responsibility of the property owner, and/or the lessee of the property, and/or the owner of the tower.  
***Ground maintenance, including landscaping will be maintained for the duration of the proposed use. Please see Sheet A1.1 for irrigation plan.***

I. Utility Pole Setback. When a telecommunications facility is located on an existing utility pole, the standards identified in subsections (A) through (D) and (F) through (H) of this section do not apply. [Ord. 2709 § 1, 2-17-09; Ord. 2536, 11-6-00. Code 2001 § 151.674.]  
***The proposed facility is not being proposed on an existing utility pole.***





Federal Aviation  
Administration

## Notice of Proposed Construction or Alteration - Off Airport

Add a new Case Off Airport - Desk Reference Guide V\_2015.1.0

Add a New Case Off Airport for Wind Turbines - Met Towers - Desk Reference Guide V\_2015.1.0

**Project Name:** VERIZ-000305854-15

**Sponsor:** Verizon Wireless (VAW) LLC

### Details for Case : POR Hancock

Show Project Summary

Case Status		
<b>ASN:</b>	2015-ANM-542-OE	<b>Date Ac</b>
<b>Status:</b>	Accepted	<b>Date De</b>
		<b>Letters:</b>
		<b>Docume</b>
<b>Public Comments:</b>	None	
Construction / Alteration Information		Structu
<b>Notice Of:</b>	Construction	<b>Structur</b>
<b>Duration:</b>	Permanent	<b>Structur</b>
<b>if Temporary :</b>	Months: Days:	<b>FDC NO</b>
<b>Work Schedule - Start:</b>		<b>NOTAM</b>
<b>Work Schedule - End:</b>		<b>FCC Nun</b>
<i>*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.</i>		<b>Prior AS</b>
<b>State Filing:</b>		
Structure Details		
<b>Latitude:</b>	45° 18' 7.25" N	<b>Commc</b>
<b>Longitude:</b>	122° 57' 19.64" W	<b>Low Freq</b>
<b>Horizontal Datum:</b>	NAD83	698
<b>Site Elevation (SE):</b>	195 (nearest foot)	806
<b>Structure Height (AGL):</b>	70 (nearest foot)	824
<b>Current Height (AGL):</b>	(nearest foot)	851
<i>* For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal</i>		869
		896
		901
		930
		931
<b>Max Operating Height (AGL):</b>	(nearest foot)	932
<i>* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the</i>		935
		940

**Structure Height (AGL).** Additionally, provide the maximum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and maximum operating height are the same enter the same value in both fields.

1850  
1930  
2305  
2345**Nacelle Height (AGL):**

(nearest foot)

**Specific****\* For Wind Turbines 500ft AGL or greater****Requested Marking/Lighting:**

None

**Other :****Recommended Marking/Lighting:****Current Marking/Lighting:**

N/A Proposed Structure

**Other :****Nearest City:**

Newberg

**Nearest State:**

Oregon

**Description of Location:**2401 East Hancock Street, Newberg, OR  
97132**On the Project Summary page upload any certified survey.****Description of Proposal:**Updating overall height of proposed  
monopole per new site plan.[← Previous](#)[Back to  
Search  
Result](#)[Next →](#)



Verizon Wireless  
5430 NE 122nd Avenue  
Portland, OR 97230

April 29, 2015

City of Newberg – Planning & Building Department

Attn. Steve Olson

P.O. Box 970

Newberg, OR 97132

**Re: Letter of Intent – Type II Land Use Application, File No. BU 826283,  
POR Hancock**

Dear City of Newberg,

The purpose of this letter of intent is to satisfy the City of Newberg's Chapter 15.445 SPECIAL USE STANDARDS section D. Letter of Intent.

In accordance with the above referenced section the applicant will make a good faith effort to lease space on the proposed communication tower structure and to lease additional applicant-controlled excess land on the tower site when the shared-use potential of the tower is absorbed, if structurally and technically possible. A reasonable pro rata charge will be made for shared use, consistent with an appropriate sharing of construction, financing and maintenance costs. Fees may also be charged for any structural or RF changes necessitated by such shared use. Such sharing shall be a condition of approval if approval is granted.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sarah Grant", written in black ink.

Verizon Wireless





Hancock T Mobile now Crown Tower

Hancock-tower SBA

ATT T Mobile Tower

300 N Lincoln Street SBA and Crown Towers (2)

POR Hancock Proposed Verizon Tower Alt #2

Newberg



**From:** [Andrews, Erica](#)  
**To:** [Derek Budig](#)  
**Cc:** [Hanson, Scott](#); [Steve Olson](#); [Andrews, Erica](#)  
**Subject:** RE: Available Tower Space Newberg, Oregon - BU 826283  
**Date:** Wednesday, April 15, 2015 11:53:04 AM  
**Attachments:** [856521-Ground Lease.pdf](#)  
[CCI SCIP 856521 Apr 15 2015 143816.pdf](#)  
[CCI SCIP 856521 Apr 15 2015 143817 A.pdf](#)  
[CCI SCIP 856521 Apr 15 2015 143817 site.pdf](#)  
[CCI SCIP 826283 Aug 08 2014 153809.pdf](#)  
[CCI SCIP 826283 Aug 08 2014 153812 A.PDF](#)  
[CCI SCIP 826283 Aug 08 2014 153812 site.pdf](#)

---

BU 856521: Newberg East

I have attached a site info sheet along with tower and site plans.

Highest available RAD: 70'

Ground space: Per our ground lease (redacted copy attached), the LL requires that any subtenants lease space directly with the them (Section 16b). Leasing with Crown would be tower only.

BU 826283: North Newberg

I have attached a site info sheet along with tower and site plans.

Highest available RAD: 85' and below (may require 2 RAD – flush mount)

Ground space: Space available within existing Crown compound. Notice to LL required for subleasing.

Leasing with Crown would be tower and ground.

If you need anything else, please let me know.

Thanks,

**ERICA ANDREWS**

Project Manager - Seattle

T: (206) 336-3207 | M: 412-953-9776

---

**From:** Derek Budig [<mailto:dbudig@prolandllc.com>]  
**Sent:** Tuesday, April 14, 2015 2:30 PM  
**To:** Andrews, Erica  
**Cc:** Hanson, Scott; Steve Olson  
**Subject:** RE: Available Tower Space Newberg, Oregon - BU 826283

Erica,

Yes this for Verizon.

Per the attached ASRs, please document whether or not antenna space is available for shared use on these communication support structure and if so at what centerlines?

Best regards,

*Derek Budig*

**ProLand, LLC**

2607 S. Southeast Blvd., Suite B214

Spokane, WA 99223

**(509) 939-6202**

---

**From:** Andrews, Erica [<mailto:Erica.Andrews@crowncastle.com>]  
**Sent:** Friday, April 10, 2015 2:18 PM  
**To:** Derek Budig  
**Cc:** Andrews, Erica; Hanson, Scott  
**Subject:** RE: Available Tower Space Newberg, Oregon - BU 826283

Hi Derek –

Is this for a Verizon Wireless colocation?

Thank you,

**ERICA ANDREWS**  
Project Manager - Seattle  
T: (206) 336-3207 | M: 412-953-9776

---

**From:** Derek Budig [<mailto:dbudig@prolandllc.com>]  
**Sent:** Friday, April 10, 2015 1:53 PM  
**To:** Andrews, Erica; [Department@Crowncastle.com](mailto:Department@Crowncastle.com)  
**Cc:** Steve Olson  
**Subject:** Available Tower Space Newberg, Oregon

To whom it may concern:

Per the attached ASR, please document whether or not antenna space is available on this communication support structure and if so at what centerlines?

If so, please let us know what the fees are and what procedure will need to be followed going forward.

**Best regards,**

*Derek Budig*

**ProLand, LLC**

2607 S. Southeast Blvd., Suite B214

Spokane, WA 99223

**(509) 939-6202**

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ASR Registration Search

**Registration 1262727** [Map Registration](#)**Registration Detail**

Reg Number	1262727	Status	Constructed
File Number	A0902408	Constructed	05/21/2008
EMI	No	Dismantled	
NEPA	No		

**Antenna Structure**

Structure Type POLE - Any type of Pole

**Location** (in NAD83 Coordinates)

Lat/Long	45-18-39.1 N 122-57-09.7 W	Address	2400 DOUGLAS AVENUE
City, State	NEWBERG , OR		
Zip	97132	County	YAMHILL
Center of AM Array		Position of Tower in Array	

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
69.1	27.7
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
96.8	27.4

**Painting and Lighting Specifications**

None

**FAA Notification**

FAA Study	2008-ANM-237-OE	FAA Issue Date	02/17/2008
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**Owner & Contact Information**

FRN	0023254592	Owner Entity Type	Limited Liability Company
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**Owner**

CCATT LLC	P: (724)416-2000
Attention To: Regulatory Department	F:
2000 Corporate Drive	E: Regulatory.Department@CrownCastle.com
Canonsburg , PA 15317	

**Contact**

Verre , Christine A	P: (336)643-2524
Attention To: Regulatory Dept.	F:
2000 Corporate Drive	E: Christine.Verre@CrownCastle.com
Canonsburg , PA 15317	

**Last Action Status**

Status	Constructed	Received	04/17/2014
Purpose	Admin Update	Entered	04/17/2014
Mode	Interactive		

**Related Applications**

04/17/2014 A0902408 - Admin Update (AU)

02/03/2014      A0890733   - Admin Update (AU)  
01/10/2014      A0873058   - Change Owner (OC)

Related applications (10)

#### Comments

#### Comments

None

#### History

Date	Event
04/18/2014	Registration Printed
04/17/2014	ASR Application receipt email sent: Tower email
04/17/2014	Administrative Update Received

All History (26)

#### Automated Letters

04/18/2014	Authorization, Reference
02/04/2014	Authorization, Reference
01/11/2014	Authorization, Reference

All letters (9)

CLOSE WINDOW



ASR Registration Search

**Registration 1261188** [Map Registration](#)**Registration Detail**

Reg Number	1261188	Status	Constructed
File Number	A0823500	Constructed	02/18/2005
EMI	No	Dismantled	
NEPA	No		

**Antenna Structure**

Structure Type TOWER - Free standing or Guyed Structure used for Commu

**Location** (in NAD83 Coordinates)

Lat/Long	45-18-57.9 N 122-57-40.1 W	Address	2151 N. Alice Way (PO03900A)
City, State	Newberg , OR		
Zip	97132	County	YAMHILL
Center of AM Array		Position of Tower in Array	

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
63.1	31.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
94.2	31.1

**Painting and Lighting Specifications**

None

**FAA Notification**

FAA Study	2007-ANM-3760-OE	FAA Issue Date	12/07/2007
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**Owner & Contact Information**

FRN	0022193262	Owner Entity Type	Limited Liability Company
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**Owner**T-Mobile West Tower LLC  
Attention To: FCC Regulatory Compliance  
12920 S.E. 38th Street  
Bellevue , WA 98006P: (425)383-8401  
F:  
E: FCCRegulatoryComplianceContact@t-mobile.com**Contact**Attention To: Regulatory Departmen  
2000 Corporate Drive  
Canonsburg , PA 15317P: (724)416-2000  
F:  
E: Regulatory.Department@CrownCastle.com**Last Action Status**

Status	Constructed	Received	01/22/2013
Purpose	Admin Update	Entered	01/22/2013
Mode	Interactive		

**Related Applications**

01/22/2013	A0823500	- Admin Update (AU)
12/17/2012	A0807809	- Change Owner (OC)

08/19/2012 A0783395 - Admin Update (AU)

Related applications (7)

**Comments****Comments**

None

**History**

<b>Date</b>	<b>Event</b>
01/23/2013	Registration Printed
01/22/2013	ASR Application receipt email sent: Tower email
01/22/2013	ASR Application receipt email sent: Tower email

All History (19)

**Automated Letters**

01/23/2013	Authorization, Reference
12/18/2012	Authorization, Reference
12/18/2012	Ownership Change, Reference 736976

All letters (7)

[CLOSE WINDOW](#)



**From:** [Joe Rozanc](#)  
**To:** [Derek Budig](#)  
**Cc:** [steve.olson@newbergoregon.gov](mailto:steve.olson@newbergoregon.gov)  
**Subject:** SBA OR47645-A (Mac576 Hs) Tower Space Newberg, Oregon  
**Date:** Tuesday, April 14, 2015 3:16:45 PM  
**Importance:** High

---

Derek,

This is a 90' monopole (photos attached)

Sprint @ 88'

Lighting approx. 70' to 80'

OPEN @ 65' and below

Compound is 14'8"x26'6" – space looks tight. If you can't make it work SBA would go out and secure additional space

All of SBA's pricing is done at the corporate level, so collocation application will need to be completed. I will need you to go to SBA's online portal and fill the application out. Please use link below

**SBA officially launch the new collocation portal. Please go to [www.sbasite.com/siteleasing](http://www.sbasite.com/siteleasing) and submit the application.**

**There are five eLearning Modules on the site leasing page that have been designed to assist with learning the new system**

SBA does not have an application fee

SBA has a \$2,500 structural analysis fee

Any questions please give me a call

Thanks

Please reference the SBA Site ID # in the subject line

**Joe Rozanc**

*Site Marketing Manager*



**SBA COMMUNICATIONS CORPORATION**

8975 S. Pecos Road

Suite 8C

Henderson, NV 89074

702.581.2663 + C

[jrozanc@sbasite.com](mailto:jrozanc@sbasite.com)

*Your Signal Starts Here.*

Begin forwarded message:

**From:** Derek Budig <[dbudig@prolandllc.com](mailto:dbudig@prolandllc.com)>

**Date:** April 14, 2015 at 5:43:53 PM EDT

**To:** PropertyMgmt <[PropertyMgmt@sbsite.com](mailto:PropertyMgmt@sbsite.com)>, Ed Roach <[ERoach@sbsite.com](mailto:ERoach@sbsite.com)>

**Cc:** Steve Olson <[steve.olson@newbergoregon.gov](mailto:steve.olson@newbergoregon.gov)>

**Subject:** Available Tower Space Newberg, Oregon

To whom it may concern:

Per the attached ASR, please document whether or not antenna space is available for shared use on this communication support structure and at what centerlines?

If space is available, please let us know what the fees are and what procedure needs to be followed going forward.

**Best regards,**

*Derek Budig*

**ProLand, LLC**

2607 S. Southeast Blvd., Suite B214

Spokane, WA 99223

**(509) 939-6202**



ASR Registration Search

**Registration 1269711** [Map Registration](#)**Registration Detail**

Reg Number	1269711	Status	Constructed
File Number	A0813180	Constructed	07/15/2004
EMI	No	Dismantled	
NEPA	No		

**Antenna Structure**

Structure Type TOWER - Free standing or Guyed Structure used for Commu

**Location** (in NAD83 Coordinates)

Lat/Long	45-18-41.8 N 122-57-11.4 W	Address	2400 DOUGLAS AVE
City, State	Newburg , OR		
Zip	97132	County	YAMHILL
Center of AM Array		Position of Tower in Array	

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
85.0	29.2
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
114.2	27.4

**Painting and Lighting Specifications**

None

**FAA Notification**

FAA Study	2009-ANM-1403-OE	FAA Issue Date	08/05/2009
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**Owner & Contact Information**

FRN	0018530147	Owner Entity Type	Limited Liability Company
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**Owner**SBA 2012 TC Assets, LLC  
Attention To: Edward G. Roach  
5900 Broken Sound Pkwy NW  
Boca Raton , FL 33487P: (561)995-7670  
F:  
E: ERoach@sbsite.com**Contact**Attention To: Edward G. Roach  
5900 Broken Sound Pkwy NW  
Boca Raton , FL 33487P: (561)995-7670  
F:  
E: ERoach@sbsite.com**Last Action Status**

Status	Constructed	Received	01/09/2013
Purpose	Admin Update	Entered	01/09/2013
Mode	Interactive		

**Related Applications**

01/09/2013 A0813180 - Admin Update (AU)

08/11/2009	A0646433 - New (NE)
08/11/2009	A0646435 - Notification (NT)

**Comments****Comments**

None

**History****Date****Event**

01/10/2013	Registration Printed
01/09/2013	ASR Application receipt email sent: Tower email
01/09/2013	ASR Application receipt email sent: Tower email

All History (7)

**Automated Letters**

01/10/2013	Authorization, Reference
08/12/2009	Authorization, Reference

[CLOSE WINDOW](#)

**From:** [Ryan Flanagan](#)  
**To:** [Derek Budig](#)  
**Cc:** [Ryan Flanagan](#)  
**Subject:** Newberg  
**Date:** Tuesday, April 14, 2015 4:50:40 PM  
**Attachments:** [image001.png](#)

---

Please give me a call at your convenience regarding our Newberg site.

Thank you,

*Ryan Flanagan*  
Sites Specialist  
Day Wireless Systems  
Phone: (503) 659-1240 x: 2276  
[rflanagan@daywireless.com](mailto:rflanagan@daywireless.com)  
[www.daywireless.com](http://www.daywireless.com)



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ASR Registration Search

**Registration 1271487** [Map Registration](#)**Registration Detail**

Reg Number	1271487	Status	Constructed
File Number	A0655074	Constructed	10/26/2009
EMI	No	Dismantled	
NEPA	No		

**Antenna Structure**

Structure Type TOWER - Free standing or Guyed Structure used for Commu

**Location** (in NAD83 Coordinates)

Lat/Long	45-18-09.2 N 122-58-50.4 W	Address	300 N. Lincoln Street, Newberg, OR 97132
City, State	Newberg , OR		
Zip	97132	County	YAMHILL
Center of AM Array		Position of Tower in Array	

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
52.7	33.5
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
86.2	30.4

**Painting and Lighting Specifications**

None

**FAA Notification**

FAA Study	2009-ANM-1853-OE	FAA Issue Date	10/21/2009
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**Owner & Contact Information**

FRN	0001553585	Owner Entity Type	
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**Owner**

Day Wireless Systems	P: (503)659-1240
Attention To: Dean Ballew	F:
4700 SE International Way	E: dballew@daywireless.com
P.O. Box 22169	
Milwaukie , OR 97222	

**Contact**

Feldsher , Travis	P: (503)659-1240
4700 SE International Way	F:
P.O. Box 22169	E: tfeldsher@daywireless.com
Milwaukie , OR 97222	

**Last Action Status**

Status	Constructed	Received	10/26/2009
Purpose	Notification	Entered	10/26/2009
Mode	Interactive		

**Related Applications**

10/26/2009	A0655070 - New (NE)
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10/26/2009      A0655074   - Notification (NT)

**Comments****Comments**

None

**History****Date****Event**

10/27/2009

Registration Printed

10/26/2009

Construction Notification Received

10/26/2009

New Application Received

**Automated Letters**

10/27/2009

Authorization, Reference

CLOSE WINDOW



5430 NE 122<sup>nd</sup> Avenue  
Portland, OR 97230

April 27, 2015

City of Newberg  
**Permit Center**  
Street Address  
Newberg OR Zip code

Dear Planner:

This letter will serve to justify a proposed Verizon Wireless site called *POR Hancock* to be located at 2401 East Hancock, Newberg, OR 97132. The proposed location was chosen by Verizon Wireless to improve the quality of voice and data service as well as 911 services, for its customers living and traveling on 99W between Newberg and Sherwood, as well service quality at the Providence Newberg Medical Center.

### **Design Criteria & Results**

When designing an existing or new area for coverage or capacity, Verizon Wireless will first attempt to utilize an existing tower or structure for collocation at the desired antenna height. If an existing tower or structure is not available or not attainable because of space constraints or unreliable structural design, Verizon Wireless will propose a new tower. In this instance, our real estate group with the help of outside consultants did several searches and concluded there is no existing structure inside the search/define area for collocation, to meet the *POR Hancock* capacity objective. The existing SBA tower near Newberg High School (45.310775, -122.952898) is located too far north, and will not provide our customers the necessary service south of highway 99W. The existing Crown tower on N. Alice Way (45.316066, -122.961217) is over one mile away from our intended coverage/ capacity improvement, and will not improve service for our customers. The existing towers on 300 N Lincoln Street (45.302477, -122.980590) are over one mile away as well from our intended coverage area, and will not improve service for our customers in east Newberg. The proposed location of the new monopole structure is shown in Exhibit 1. In addition, all our future/planned sites for City of Newberg are depicted Exhibit 2.

To analyze our network design, Verizon Wireless uses a propriety Radio Frequency (RF) propagation tool called "Geoplan". Our objective is to improve call quality and data throughput speeds. A plot of our existing network coverage without the new *OR1 Hancock* monopole tower is shown in Exhibit 3. Red and orange shaded polygons represent high-quality signal. Areas shaded yellow have moderate signal, with slower data speeds. Polygons colored green and blue have lower-quality signal, with potential coverage issues inside buildings. Note that the Providence Newberg Medical Center is within this marginal service area.



Exhibit 4 depicts Verizon's coverage with the proposed *POR Hancock* site integrated into our network system for that area. The exhibit clearly shows the proposed location improving the signal strength to the east and west along highway 99W, and south towards highway 219. Service at the Newberg Medical Center is significantly improved in this propagation model.

Verizon Wireless strives for a network design that provides high RF signal strength resulting in quality service inside buildings and vehicles, for a particular area and environment. Please note that higher RF signal strengths such as those mentioned above promote reliable voice calls and higher data speeds throughout a given licensed area.

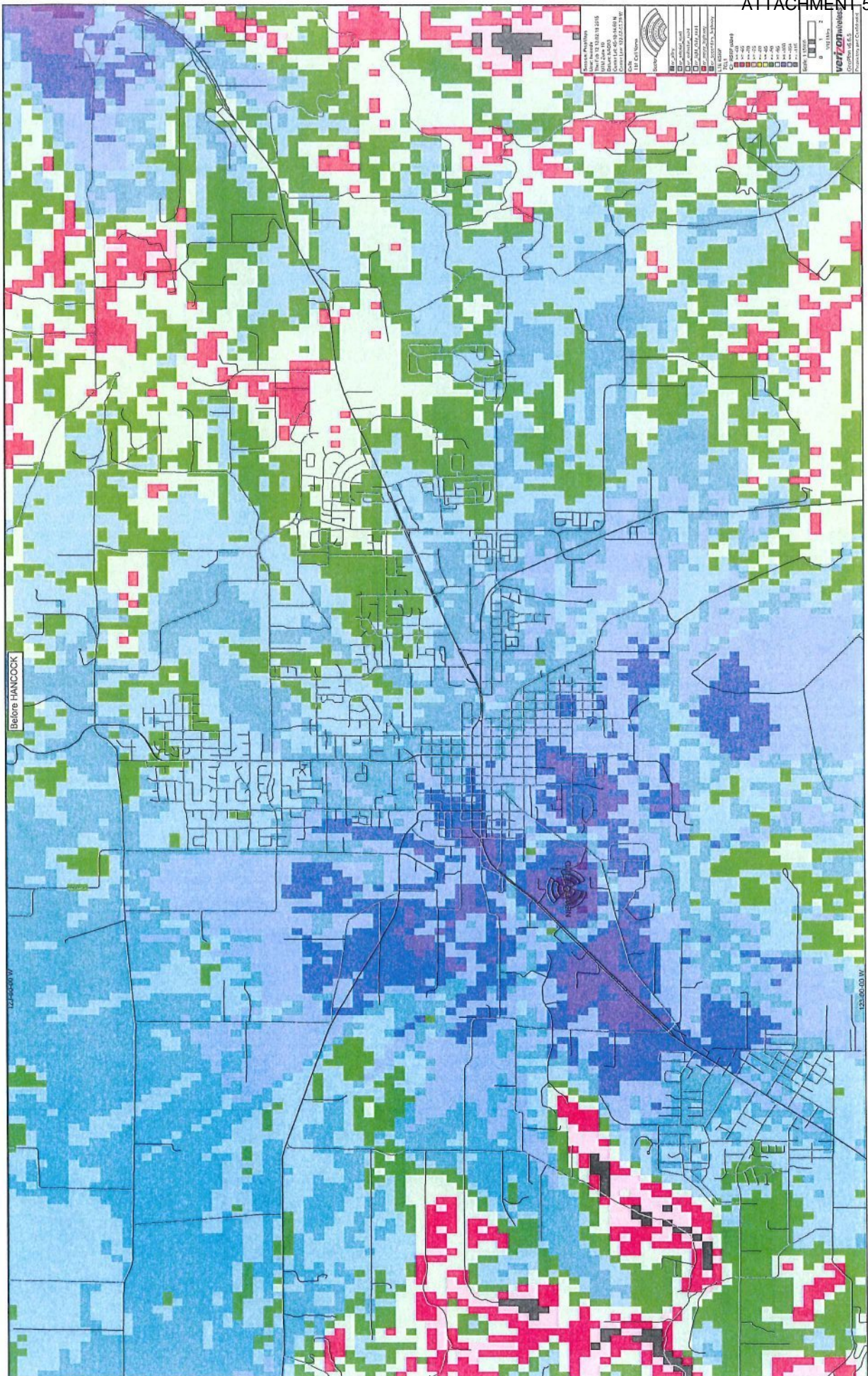
### **Summary**

The proposed site is a necessary communication facility as it provides the desired public service needed to complete the Verizon Wireless network in the area and to comply with the obligations of our FCC license. This site once built and operational will provide necessary public voice and data, including 911 services in a large area centered at the intersection of highway 99W and S. Springbrook road.

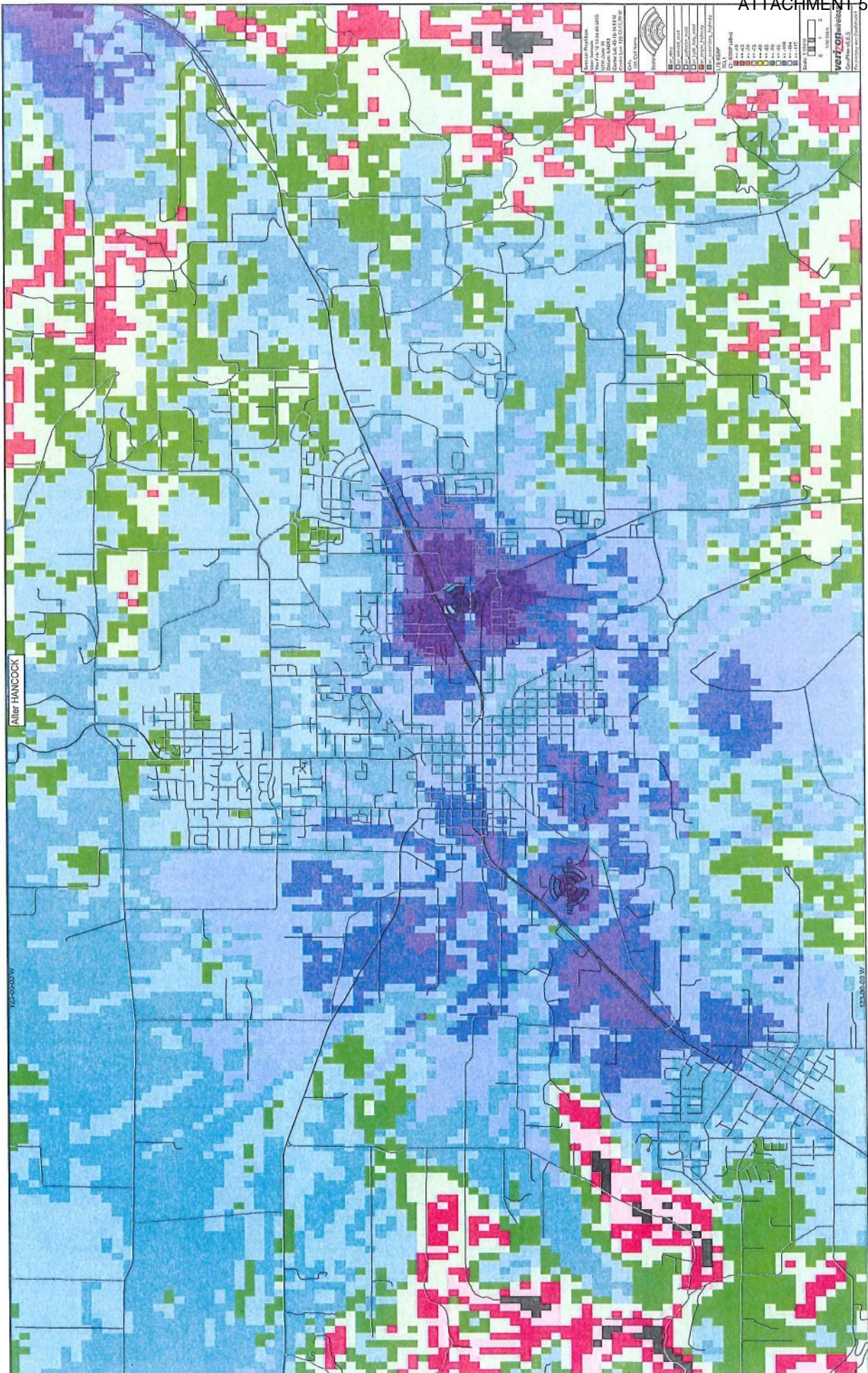
Sincerely,

John Dassan  
Verizon Wireless  
Pacific Northwest Region  
Network Department – System Design

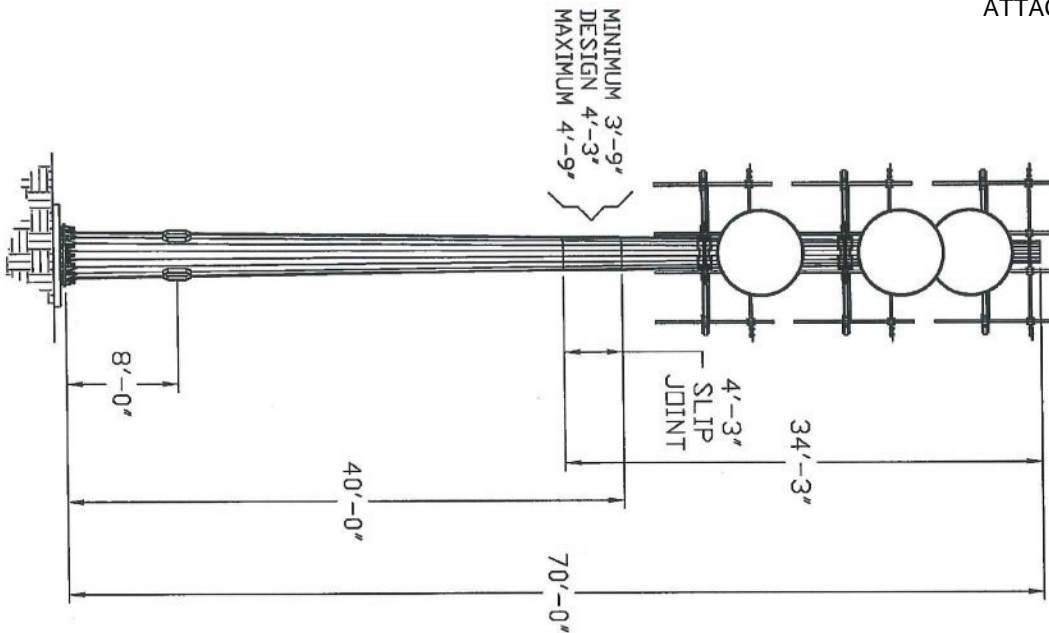










**MONOPOLE DESIGN LOADS:**

120 MPH WIND & NO ICE (3 SEC GUST)  
 120 MPH WIND & 1/2" ICE (3 SEC GUST)  
 60 MPH WIND & NO ICE (SERVICE)  
 STRUCTURE CLASS II  
 EXPOSURE CATEGORY C  
 TOPOGRAPHIC CATEGORY 1

**SITE INFORMATION:**

COORDINATES: LATITUDE: 45° 18' 07.33" N  
 LONGITUDE: 122° 57' 19.91" W  
 ADDRESS: 2401 EAST HANCOCK STREET  
 NEWBERG, OR 97132

MAXIMUM	BASE MOMENT & FORCES
MOMENT (FT-KIPS)	SHEAR (KIPS)
2,750	50
	28

ELEV.	ITEM	RAD.	AZ.	FEEDLINES
66'	12" LRV PROFILE PLATFORM V/RAIL	---	(D2) 1 5/8" CINSIDE POLE	---
66'	(D2) 8' X 2' X 6' PANELS	---	(D) HYBRID CINSIDE POLE	---
66'	(D8) RRU RADD 19.7" X 17" X 7.2"	---	---	---
66'	(3) 1' X 1' TMA	---	---	---
65'	6" DISH	---	(D) 1 5/8" CINSIDE POLE	---
60'	6" DISH	---	YES	---
60'	12" LRV PROFILE PLATFORM V/RAIL	---	(D) 1 5/8" CINSIDE POLE	---
56'	(D2) 8' X 2' X 6' PANELS	---	(D2) 1 5/8" CINSIDE POLE	---
56'	(D2) RRU 21" X 12.2" X 10.8"	---	(3) HYBRID CINSIDE POLE	---
56'	(4) DC6-48 60-18-8"	---	---	---
50'	6" DISH	---	YES	---
46'	12" LRV PROFILE PLATFORM V/RAIL	---	(D) 1 5/8" CINSIDE POLE	---
46'	(D2) 8' X 1' X 6' PANELS	---	(D2) 1 5/8" CINSIDE POLE	---

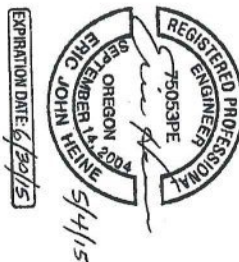
POLE DATA				
ELEV.	WALL THICKNESS	TAPER	TUBE LENGTH	TOP DIA.
35'-9"-70'	5/16"	3/23"/FT.	34'-3"	18"
0'-40'	3/8"	3/23"/FT.	40'-0"	27 1/16"
				40"

**ANCHOR BOLT DATA:**

(18x) 1 3/4" ASTM F1554 GRADE 105 KSI  
 X 6'-0" LG DN A 47" BOLT CIRCLE  
 TEMPLATE O.D. = Ø52" A36

**BASE PLATE DATA:**

34"Ø, 1 3/4" THICK, ROUND  
 ASTM A572 50 KSI  
 (18x) 1/2" THICK X 10" TALL GUSSETS  
 ASTM A572 50 KSI



EXPIRATION DATE: 6/30/15

**NOTES:**

- POLE DESIGN ACCORDING TO TIA-222-G.
- ANTENNA LOADS FROM MANUFACTURING SPECIFICATIONS.
- WELD CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY A5.1, D 11.
- ALL POLE MEMBERS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OR IRON AND STEEL HARDWARE, ASTM A333.
- BOLTS IN TENSION ASTM A325
- STEP BOLTS ASTM A329
- ORIENT V-NUTCH ON TOP OF TEMPLATE AND REFERENCE TAB ON BASE PLATE & 0'.
- STAMP EEI 94200 ON TOP OF BASE PLATE NEAR FLAT #14 WITH 1/2" STEEL STAMPS.
- ALL ITEMS MUST BE INVENTORIED AT THE TIME OF DELIVERY TO THE JOB SITE/STORAGE FACILITY. ANY SHORTAGES REPORTED AFTER THIS DELIVERY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR/DIVNER.
- ALL STRUCTURAL COMPONENTS SHALL BE VERIFIED FOR PROPER ASSEMBLY BY THE FIELD CREW PRIOR TO INSTALLATION, REPAIRS AND/OR MISSING MATERIALS BECOME THE CONTRACTOR'S RESPONSIBILITY OF THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR IF EEI IS NOT NOTIFIED PRIOR TO INSTALLATION.
- ANY PROBLEMS THAT OCCUR WITH SCHEDULING, FOUNDATION INSTALLATION, ERECTION OR ANY ITEMS FURNISHED BY EEI MUST BE REPORTED IMMEDIATELY TO ALLOW EEI TIME TO TAKE CORRECTIVE MEASURES. EEI WILL MAKE EVERY EFFORT TO REPAIR/REPLACE NECESSARY ITEMS IN AN EXPEDITED MANNER, AND/OR WILL PURSUE CORRECTIVE MEASURES IN THE MOST ECONOMICALLY VAY POSSIBLE AT OUR DISCRETION. HOWEVER, UNDER NO CIRCUMSTANCES WILL EEI PAY FOR, OR BE RESPONSIBLE FOR, ANY DOWN TIME OR EXPENSES INCURRED DUE TO DOWN TIME.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF EHI. THEY ARE TO BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF EHI.

**SITE: PUR HANCOCK, OR**

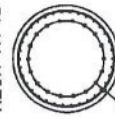
70' EHRESMANN  
 MONOPOLE

EHRESMANN ENGINEERING, INC. CONSULTING ENGINEERS 4400 WEST 31st. STREET YANCTON, SD 57078 (605) 665-7932 (605) 665-9780	DATE: 05/01/15
BY: GE	CHECKED:
JD: 94200	DWG #: 94200E01
	SHEET E01 OF

## PRELIMINARY

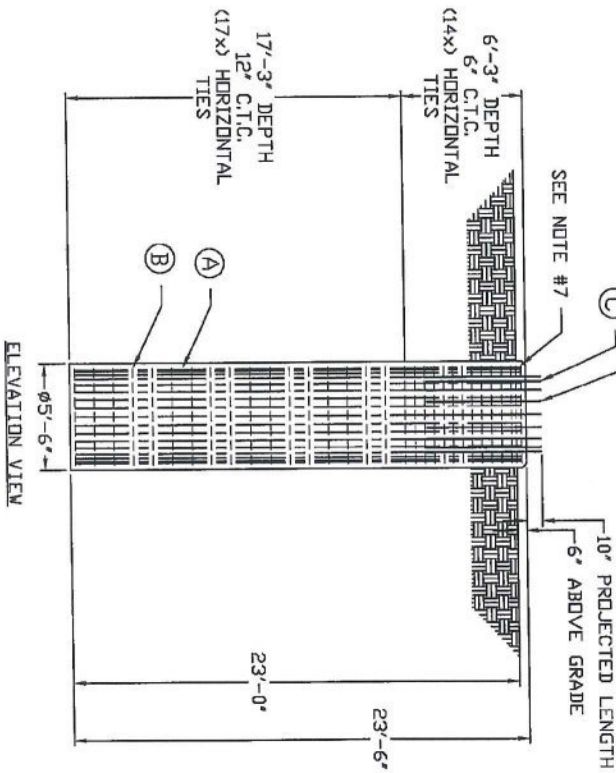


PLAN VIEW



(18X) 1 3/4" Ø ANCHOR BOLTS  
ON A Ø47" BOLT CIRCLE.  
USE TEMPLATE FURNISHED WITH  
MONPOLE TO CORRECTLY PLACE  
ANCHOR BOLTS AS SHOWN.  
SEE DWG #94200E03 FOR PROPER  
ANCHOR BOLT & TEMPLATE ASSEMBLY.

THE CLEAR DISTANCE FROM THE  
TOP OF CONCRETE TO THE BOTTOM  
LEVELING NUT IS NOT TO EXCEED 1.0  
TIMES THE DIAMETER OF THE ANCHOR BOLT



ELEVATION VIEW

## MATERIAL LIST

ITEM	QTY	GRADE	DESCRIPTION	
A	34	60	#8 BARS	23'-0"
B	32	40	#4 BARS	5'-0" LAP 20" SPLICE
C	18	105	1 3/4" Ø X 6'-0"	6'-0"

QUANTITIES SHOWN ABOVE ARE FOR ONE (1)  
PIER TYPE FOUNDATION.

## NOTES:

- 1.) CONCRETE SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- 2.) REBAR SHALL HAVE 3" CONCRETE COVER AND SHALL CONFORM TO THE ASTM GRADES SPECIFIED.
- 3.) TIE AND SECURE ALL REBAR AND ANCHOR BOLTS BEFORE PLACING CONCRETE.
- 4.) BASE OF EXCAVATION SHALL BE CLEAN AND FREE OF ALL DEBRIS.
- 5.) CHAMFER ALL EXPOSED CONCRETE EDGES 1' X 45°.
- 6.) ATTENTION SHALL BE GIVEN TO FINAL SITE DRAINAGE AND COMPACTION OF FILL PLACED AROUND THE FOUNDATION TO MINIMIZE SURFACE WATER INFILTRATION AROUND THE PIER.
- 7.) LATERAL REINFORCEMENT, CONSISTING OF TWO (2) HORIZONTAL TIES SHALL BE DISTRIBUTED WITHIN 5" OF THE TOP OF THE COLUMN PER ACI 318, SEC. 7.10.5.7.
- 8.) FOUNDATION DESIGN BASED NORMAL SOILS.
- 9.) 20.68 CUBIC YARDS CONCRETE REQUIRED THIS FOUNDATION.
- 10.) MONPOLE BASE REACTIONS:  
MOMENT = 2,750 FT-KIPS  
SHEAR = 50 KIPS  
AXIAL = 28 KIPS

THESE DRAWINGS AND SPECIFICATIONS ARE THE  
PROPERTY OF EHRESMANN ENGINEERING, INC.  
AND SHALL NOT BE REPRODUCED OR USED IN  
WHOLE OR IN PART AS THE BASIS OF THE  
DESIGN OR CONSTRUCTION OF ANY OTHER  
STRUCTURE WITHOUT WRITTEN PERMISSION.

SITE: PDR HANDOCK, DR

70' EHRESMANN MONPOLE  
PIER TYPE FOUNDATION DESIGN

EHRESMANN ENGINEERING, INC.  
CONSULTING ENGINEERS  
4400 WEST 31ST STREET  
YANKTON, SD 57078  
(605) 665-7532  
(605) 665-9780

DATE: 05/01/15

BY: GE

CHECKED:

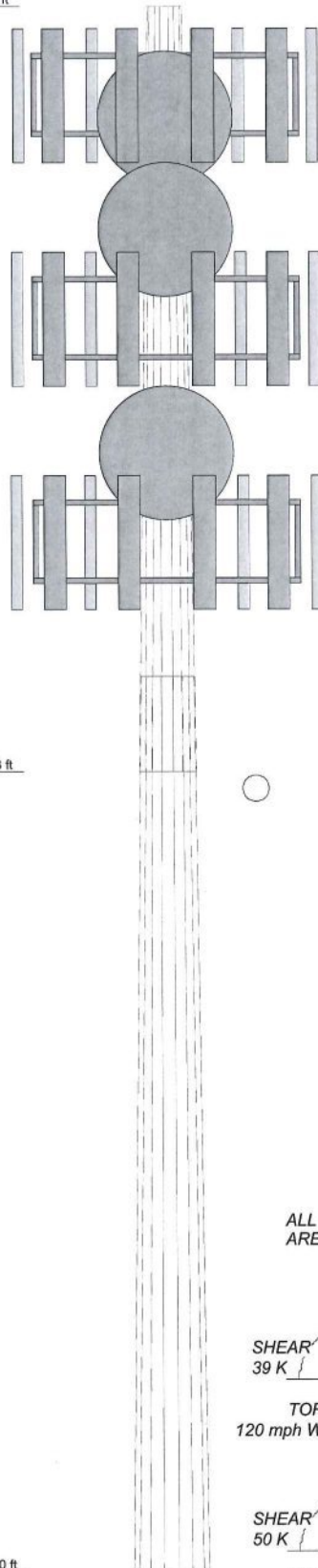
JOB 94200

DWG # 94200E02

SHEET E02 OF



70.0 ft



## DESIGNED APPURTENANCE LOADING

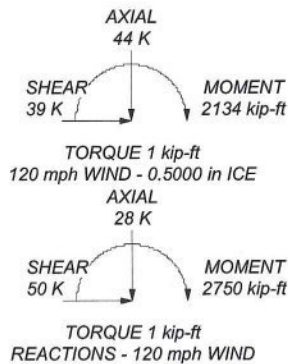
TYPE	ELEVATION	TYPE	ELEVATION
12' Low Profile Platform w/rail	66	(8) RRH 21" X 12.2" X 10.8"	56
(4) 8' X 2' X 6" PANEL	66	(8) RRH 21" X 12.2" X 10.8"	56
(4) 8' X 2' X 6" PANEL	66	(8) RRH 21" X 12.2" X 10.8"	56
(4) 8' X 2' X 6" PANEL	66	DC6-48 60-18-8F	56
(6) RRU RADIO 19.7" x 17" x 7.2"	66	DC6-48 60-18-8F	56
(6) RRU RADIO 19.7" x 17" x 7.2"	66	DC6-48 60-18-8F	56
(6) RRU RADIO 19.7" x 17" x 7.2"	66	DC6-48 60-18-8F	56
(3) 1' x 1' TMA	66	12' Low Profile Platform w/rail	56
(3) 1' x 1' TMA	66	(4) 8' X 2' X 6" PANEL	56
(3) 1' x 1' TMA	66	Andrew 6' w/Radome	50
Andrew 6' w/Radome	65	(4) 8' x 1' Panel	46
Andrew 6' w/Radome	60	12' Low Profile Platform w/rail	46
(4) 8' X 2' X 6" PANEL	56	(4) 8' x 1' Panel	46
(4) 8' X 2' X 6" PANEL	56	(4) 8' x 1' Panel	46

## MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

## TOWER DESIGN NOTES

1. Tower is located in Yamhill County, Oregon.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 120 mph basic wind with 0.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Weld together tower sections have slip joint connections.
9. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
10. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
11. Welds are fabricated with ER-70S-6 electrodes.
12. TOWER RATING: 99.1%

ALL REACTIONS  
ARE FACTORED

0.0 ft

Ehresmann Engineering Inc.

4400 West 31st. Street  
Yankton, SD 57078  
Phone: (605) 665-7532  
FA 256/332-5-9780

Job: POR HANCOCK, OR

94200-15

Project: 70 FT EHRESMANN MONOPOLE

Client: VERIZON WIRELESS

Drawn by: CD

App'd:

Code: TIA-222-G

Date: 05/04/15

Scale: NTS

Path: Z:\POCKET\QUOTES\_0505\Project\LLG\Drawn By\GIPOR HANCOCK, OR\94200-15 - POR HANCOCK, OR.dwg

Dwg No. E-1



<b>tnxTower</b>  <b>Ehresmann Engineering Inc.</b> 4400 West 31st. Street Yankton, SD 57078 Phone: (605) 665-7532 FAX: (605) 665-9780	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	1 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

## Tower Input Data

There is a pole section.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

- Tower is located in Yamhill County, Oregon.
- Basic wind speed of 120 mph.
- Structure Class II.
- Exposure Category C.
- Topographic Category 1.
- Crest Height 0.00 ft.
- Nominal ice thickness of 0.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 120 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- Weld together tower sections have slip joint connections..
- Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..
- Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
- Welds are fabricated with ER-70S-6 electrodes..
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>✓ Use Code Stress Ratios</li> <li>✓ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>✓ Include Bolts In Member Capacity</li> <li>✓ Leg Bolts Are At Top Of Section</li> <li>✓ Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>Add IBC .6D+W Combination</li> </ul> | <ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>Assume Rigid Index Plate</li> <li>Use Clear Spans For Wind Area</li> <li>Use Clear Spans For KL/r</li> <li>Retension Guys To Initial Tension</li> <li>Bypass Mast Stability Checks</li> <li>Use Azimuth Dish Coefficients</li> <li>✓ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>✓ SR Members Have Cut Ends</li> <li>Sort Capacity Reports By Component</li> <li>✓ Triangulate Diamond Inner Bracing</li> <li>Use TIA-222-G Tension Splice Capacity Exemption</li> </ul> | <ul style="list-style-type: none"> <li>Treat Feedline Bundles As Cylinder</li> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>✓ Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>SR Leg Bolts Resist Compression</li> <li>✓ All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>Consider Feedline Torque</li> <li>Include Angle Block Shear Check</li> <li style="text-align: center;">Poles</li> <li>Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> </ul> |
|--|---|---|

## Tapered Pole Section Geometry

<b>tnxTower</b>  <b>Ehresmann Engineering Inc.</b> 4400 West 31st. Street Yankton, SD 57078 Phone: (605) 665-7532 FAX: (605) 665-9780	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	2 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	70.00-35.75	34.25	4.25	18	18.0000	29.0730	0.3125	1.2500	A572-65 (65 ksi)
L2	35.75-0.00	40.00		18	27.0740	40.0059	0.3750	1.5000	A572-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L1	18.2777	17.5438	693.4158	6.2791	9.1440	75.8329	1387.7441	8.7736	2.6180	8.378
	29.5215	28.5268	2981.1490	10.2100	14.7691	201.8506	5966.2208	14.2661	4.5668	14.614
L2	28.8869	31.7785	2861.9336	9.4781	13.7536	208.0864	5727.6330	15.8922	4.1050	10.947
	40.6231	47.1707	9360.0691	14.0690	20.3230	460.5648	18732.4545	23.5899	6.3810	17.016

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 70.00-35.75				1	1.03	1.01		
L2 35.75-0.00				1	1.03	1.01		

### Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	F1554-105
Anchor bolt size	1.7500 in
Number of bolts	18
Embedment length	60.0000 in
f <sub>c</sub>	4 ksi
Grout space	0.0000 in
Base plate grade	A572-50
Base plate thickness	1.7500 in
Bolt circle diameter	47.0000 in
Outer diameter	54.0000 in
Inner diameter	33.0000 in
Base plate type	Stiffened Plate
Bolts per stiffener	1
Stiffener thickness	0.5000 in
Stiffener height	10.0000 in

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C <sub>A</sub> A <sub>A</sub>	Weight plf
LDF7-50A (1-5/8)	C	No	Inside Pole	66.00 - 0.00	13	No Ice	0.00

<b>tnxTower</b>  <b>Ehresmann Engineering Inc.</b> 4400 West 31st. Street Yankton, SD 57078 Phone: (605) 665-7532 FAX: (605) 665-9780	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	3 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		$C_A A_A$ ft <sup>2</sup> /ft	Weight plf
FOAM)						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8	C	No	Inside Pole	65.00 - 0.00	1	No Ice	0.00	0.82
FOAM)						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8	C	No	Inside Pole	56.00 - 0.00	15	No Ice	0.00	0.82
FOAM)						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8	C	No	Inside Pole	46.00 - 0.00	12	No Ice	0.00	0.82
FOAM)						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8	C	No	Inside Pole	60.00 - 0.00	1	No Ice	0.00	0.82
FOAM)						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8	C	No	Inside Pole	50.00 - 0.00	1	No Ice	0.00	0.82
FOAM)						1/2" Ice	0.00	0.82

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
L1	70.00-35.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.73
L2	35.75-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.26

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
L1	70.00-35.75	A	1.046	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.73
L2	35.75-0.00	A	0.938	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.26

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
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### Discrete Tower Loads



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	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K
12' Low Profile Platform w/rail	C	None		0.0000	66.00	No Ice	25.00	25.00	2.50
(4) 8' X 2' X 6" PANEL	A	From Face	3.87 0.00 0.00	0.0000	66.00	1/2" Ice	30.00 22.40 23.18	30.00 6.80 7.38	3.00 0.10 0.20
(4) 8' X 2' X 6" PANEL	B	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	22.40 23.18	6.80 7.38	0.10 0.20
(4) 8' X 2' X 6" PANEL	C	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	22.40 23.18	6.80 7.38	0.10 0.20
(6) RRU RADIO 19.7" x 17" x 7.2"	A	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	3.26 3.50	1.38 1.56	0.03 0.05
(6) RRU RADIO 19.7" x 17" x 7.2"	B	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	3.26 3.50	1.38 1.56	0.03 0.05
(6) RRU RADIO 19.7" x 17" x 7.2"	C	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	3.26 3.50	1.38 1.56	0.03 0.05
(3) 1' x 1' TMA	A	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	1.40 1.56	0.70 0.82	0.01 0.02
(3) 1' x 1' TMA	B	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	1.40 1.56	0.70 0.82	0.01 0.02
(3) 1' x 1' TMA	C	From Face	3.87 0.00 0.00	0.0000	66.00	No Ice	1.40 1.56	0.70 0.82	0.01 0.02
12' Low Profile Platform w/rail	C	None		0.0000	56.00	No Ice	25.00	25.00	2.50
(4) 8' X 2' X 6" PANEL	A	From Face	3.87 0.00 0.00	0.0000	56.00	1/2" Ice	30.00 22.40 23.18	30.00 6.80 7.38	3.00 0.10 0.20
(4) 8' X 2' X 6" PANEL	B	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	22.40 23.18	6.80 7.38	0.10 0.20
(4) 8' X 2' X 6" PANEL	C	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	22.40 23.18	6.80 7.38	0.10 0.20
(8) RRH 21" X 12.2" X 10.8"	A	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.49 2.71	2.21 2.42	0.05 0.07
(8) RRH 21" X 12.2" X 10.8"	B	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.49 2.71	2.21 2.42	0.05 0.07
(8) RRH 21" X 12.2" X 10.8"	C	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.49 2.71	2.21 2.42	0.05 0.07
DC6-48 60-18-8F	A	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.57 2.80	2.10 2.32	0.03 0.05
DC6-48 60-18-8F	B	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.57 2.80	2.10 2.32	0.03 0.05
DC6-48 60-18-8F	C	From Face	3.87 0.00 0.00	0.0000	56.00	No Ice	2.57 2.80	2.10 2.32	0.03 0.05

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	VERIZON WIRELESS	CD

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
DC6-48 60-18-8F	A	From Face	0.00 3.87 0.00 0.00	0.0000	56.00	No Ice 1/2" Ice	2.57 2.80	2.10 2.32	0.03 0.05
12' Low Profile Platform w/rail	C	None		0.0000	46.00	No Ice 1/2" Ice	25.00 30.00	25.00 30.00	2.50 3.00
(4) 8' x 1' Panel	A	From Face	3.87 0.00 0.00	0.0000	46.00	No Ice 1/2" Ice	11.47 12.08	7.58 8.17	0.03 0.10
(4) 8' x 1' Panel	B	From Face	3.87 0.00 0.00	0.0000	46.00	No Ice 1/2" Ice	11.47 12.08	7.58 8.17	0.03 0.10
(4) 8' x 1' Panel	C	From Face	3.87 0.00 0.00	0.0000	46.00	No Ice 1/2" Ice	11.47 12.08	7.58 8.17	0.03 0.10

### Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft <sup>2</sup>	Weight K
Andrew 6' w/Radome		Paraboloid w/Radome	None		Worst		65.00	6.00	No Ice 1/2" Ice	28.27 29.07
Andrew 6' w/Radome		Paraboloid w/Radome	None		Worst		60.00	6.00	No Ice 1/2" Ice	28.27 29.07
Andrew 6' w/Radome		Paraboloid w/Radome	None		Worst		50.00	6.00	No Ice 1/2" Ice	28.27 29.07

### Tower Pressures - No Ice

$$G_H = 1.100$$

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
L1 70.00-35.75	51.82	1.102	38	68.213	A	0.000	70.260	70.260	100.00	0.000	0.000
					B	0.000	70.260		100.00	0.000	0.000
					C	0.000	70.260		100.00	0.000	0.000
L2 35.75-0.00	17.40	0.876	31	103.541	A	0.000	106.647	106.647	100.00	0.000	0.000
					B	0.000	106.647		100.00	0.000	0.000
					C	0.000	106.647		100.00	0.000	0.000

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### Tower Pressure - With Ice

$$G_H = 1.100$$

Section Elevation	z	K <sub>Z</sub>	q <sub>z</sub>	t <sub>z</sub>	A <sub>G</sub>	F <sub>a c e</sub>	A <sub>F</sub>	A <sub>R</sub>	A <sub>leg</sub>	Leg %	C <sub>A</sub> A <sub>A</sub> In Face	C <sub>A</sub> A <sub>A</sub> Out Face
ft	ft		psf	in	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
L1 70.00-35.75	51.82	1.102	38	1.0462	74.185	A	0.000	76.411	76.411	100.00	0.000	0.000
						B	0.000	76.411		100.00	0.000	0.000
						C	0.000	76.411		100.00	0.000	0.000
L2 35.75-0.00	17.40	0.876	31	0.9380	109.774	A	0.000	113.068	113.068	100.00	0.000	0.000
						B	0.000	113.068		100.00	0.000	0.000
						C	0.000	113.068		100.00	0.000	0.000

### Tower Pressure - Service

$$G_H = 1.100$$

Section Elevation	z	K <sub>Z</sub>	q <sub>z</sub>	A <sub>G</sub>	F <sub>a c e</sub>	A <sub>F</sub>	A <sub>R</sub>	A <sub>leg</sub>	Leg %	C <sub>A</sub> A <sub>A</sub> In Face	C <sub>A</sub> A <sub>A</sub> Out Face
ft	ft		psf	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
L1 70.00-35.75	51.82	1.102	9	68.213	A	0.000	70.260	70.260	100.00	0.000	0.000
					B	0.000	70.260		100.00	0.000	0.000
					C	0.000	70.260		100.00	0.000	0.000
L2 35.75-0.00	17.40	0.876	7	103.541	A	0.000	106.647	106.647	100.00	0.000	0.000
					B	0.000	106.647		100.00	0.000	0.000
					C	0.000	106.647		100.00	0.000	0.000

### Tower Forces - No Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F <sub>a c e</sub>	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
L1 70.00-35.75	0.73	2.71	A	1	0.65	38	1	1	70.260	1.93	56.42	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	31	1	1	106.647	2.40	67.16	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	141.90 kip-ft	4.33		

### Tower Forces - No Ice - Wind 60 To Face



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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 70.00-35.75	0.73	2.71	A	1	0.65	38	1	1	70.260	1.93	56.42	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	31	1	1	106.647	2.40	67.16	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	141.90 kip-ft	4.33		

### Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 70.00-35.75	0.73	2.71	A	1	0.65	38	1	1	70.260	1.93	56.42	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	31	1	1	106.647	2.40	67.16	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	141.90 kip-ft	4.33		

### Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 70.00-35.75	0.73	3.80	A	1	1.2	38	1	1	76.411	3.88	113.27	C
			B	1	1.2		1	1	76.411			
			C	1	1.2		1	1	76.411			
L2 35.75-0.00	1.26	6.88	A	1	1.2	31	1	1	113.068	4.70	131.45	C
			B	1	1.2		1	1	113.068			
			C	1	1.2		1	1	113.068			
Sum Weight:	1.99	10.68						OTM	282.80 kip-ft	8.58		

### Tower Forces - With Ice - Wind 60 To Face

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Section Elevation  ft	Add Weight  K	Self Weight  K	F a c e	e	C <sub>F</sub>	q <sub>z</sub>  psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>  ft <sup>2</sup>	F  K	w  plf	Ctrl. Face
L1 70.00-35.75	0.73	3.80	A	1	1.2	38	1	1	76.411	3.88	113.27	C
			B	1	1.2		1	1	76.411			
			C	1	1.2		1	1	76.411			
L2 35.75-0.00	1.26	6.88	A	1	1.2	31	1	1	113.068	4.70	131.45	C
			B	1	1.2		1	1	113.068			
			C	1	1.2		1	1	113.068			
Sum Weight:	1.99	10.68						OTM	282.80 kip-ft	8.58		

### Tower Forces - With Ice - Wind 90 To Face

Section Elevation  ft	Add Weight  K	Self Weight  K	F a c e	e	C <sub>F</sub>	q <sub>z</sub>  psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>  ft <sup>2</sup>	F  K	w  plf	Ctrl. Face
L1 70.00-35.75	0.73	3.80	A	1	1.2	38	1	1	76.411	3.88	113.27	C
			B	1	1.2		1	1	76.411			
			C	1	1.2		1	1	76.411			
L2 35.75-0.00	1.26	6.88	A	1	1.2	31	1	1	113.068	4.70	131.45	C
			B	1	1.2		1	1	113.068			
			C	1	1.2		1	1	113.068			
Sum Weight:	1.99	10.68						OTM	282.80 kip-ft	8.58		

### Tower Forces - Service - Wind Normal To Face

Section Elevation  ft	Add Weight  K	Self Weight  K	F a c e	e	C <sub>F</sub>	q <sub>z</sub>  psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>  ft <sup>2</sup>	F  K	w  plf	Ctrl. Face
L1 70.00-35.75	0.73	2.71	A	1	0.65	9	1	1	70.260	0.43	12.62	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	7	1	1	106.647	0.54	15.02	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	31.74 kip-ft	0.97		

### Tower Forces - Service - Wind 60 To Face

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 70.00-35.75	0.73	2.71	A	1	0.65	9	1	1	70.260	0.43	12.62	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	7	1	1	106.647	0.54	15.02	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	31.74 kip-ft	0.97		

### Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 70.00-35.75	0.73	2.71	A	1	0.65	9	1	1	70.260	0.43	12.62	C
			B	1	0.65		1	1	70.260			
			C	1	0.65		1	1	70.260			
L2 35.75-0.00	1.26	5.43	A	1	0.65	7	1	1	106.647	0.54	15.02	C
			B	1	0.65		1	1	106.647			
			C	1	0.65		1	1	106.647			
Sum Weight:	1.99	8.14						OTM	31.74 kip-ft	0.97		

### Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M <sub>x</sub> kip-ft	Sum of Overturning Moments, M <sub>z</sub> kip-ft	Sum of Torques kip-ft
Leg Weight	8.14					
Bracing Weight	0.00					
Total Member Self-Weight	8.14			-0.07	0.12	
Total Weight	23.48			-0.07	0.12	
Wind 0 deg - No Ice		-0.01	-31.01	-1687.80	0.61	-0.38
Wind 30 deg - No Ice		15.50	-26.85	-1461.45	-843.60	-0.44
Wind 60 deg - No Ice		26.86	-15.50	-843.51	-1461.74	-0.38
Wind 90 deg - No Ice		31.02	0.01	0.42	-1688.17	-0.22
Wind 120 deg - No Ice		26.87	15.51	844.22	-1462.23	0.00
Wind 150 deg - No Ice		15.52	26.86	1461.79	-844.45	0.22
Wind 180 deg - No Ice		0.01	31.01	1687.66	-0.36	0.38
Wind 210 deg - No Ice		-15.50	26.85	1461.30	843.85	0.44
Wind 240 deg - No Ice		-26.86	15.50	843.37	1461.99	0.38
Wind 270 deg - No Ice		-31.02	-0.01	-0.56	1688.42	0.22
Wind 300 deg - No Ice		-26.87	-15.51	-844.36	1462.48	0.00
Wind 330 deg - No Ice		-15.52	-26.86	-1461.93	844.70	-0.22
Member Ice	2.54					
Total Weight Ice	39.30			-0.19	0.33	
Wind 0 deg - Ice		-0.01	-39.41	-2067.58	0.85	-0.46



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Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, $M_x$ kip-ft	Sum of Overturning Moments, $M_z$ kip-ft	Sum of Torques kip-ft
Wind 30 deg - Ice		19.70	-34.13	-1790.34	-1033.21	-0.53
Wind 60 deg - Ice		34.13	-19.70	-1033.44	-1790.34	-0.46
Wind 90 deg - Ice		39.42	0.01	0.33	-2067.65	-0.27
Wind 120 deg - Ice		34.14	19.71	1033.95	-1790.85	0.00
Wind 150 deg - Ice		19.72	34.13	1790.48	-1034.11	0.27
Wind 180 deg - Ice		0.01	39.41	2067.20	-0.19	0.46
Wind 210 deg - Ice		-19.70	34.13	1789.96	1033.87	0.53
Wind 240 deg - Ice		-34.13	19.70	1033.05	1791.00	0.46
Wind 270 deg - Ice		-39.42	-0.01	-0.71	2068.31	0.27
Wind 300 deg - Ice		-34.14	-19.71	-1034.33	1791.51	0.00
Wind 330 deg - Ice		-19.72	-34.13	-1790.86	1034.77	-0.27
Total Weight	23.48			-0.07	0.12	
Wind 0 deg - Service		-0.00	-6.94	-377.59	0.23	-0.08
Wind 30 deg - Service		3.47	-6.01	-326.96	-188.60	-0.10
Wind 60 deg - Service		6.01	-3.47	-188.74	-326.87	-0.08
Wind 90 deg - Service		6.94	0.00	0.04	-377.52	-0.05
Wind 120 deg - Service		6.01	3.47	188.78	-326.98	0.00
Wind 150 deg - Service		3.47	6.01	326.92	-188.79	0.05
Wind 180 deg - Service		0.00	6.94	377.45	0.02	0.08
Wind 210 deg - Service		-3.47	6.01	326.81	188.85	0.10
Wind 240 deg - Service		-6.01	3.47	188.59	327.12	0.08
Wind 270 deg - Service		-6.94	-0.00	-0.18	377.77	0.05
Wind 300 deg - Service		-6.01	-3.47	-188.93	327.23	0.00
Wind 330 deg - Service		-3.47	-6.01	-327.07	189.04	-0.05

### Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp

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Comb. No.	Description
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	70 - 35.75	Pole	Max Tension	36	0.00	-0.00	-0.00
			Max. Compression	26	-33.78	0.36	0.21
			Max. Mx	20	-16.78	825.04	0.31
			Max. My	2	-16.78	0.37	824.71
			Max. Vy	20	-46.45	825.04	0.31
			Max. Vx	2	-46.43	0.37	824.71
			Max. Torque	16			-0.70
			Max Tension	1	0.00	0.00	0.00
L2	35.75 - 0	Pole	Max. Compression	26	-44.16	0.36	0.21
			Max. Mx	20	-28.10	2749.21	0.88
			Max. My	2	-28.10	0.95	2748.23
			Max. Vy	20	-49.68	2749.21	0.88
			Max. Vx	2	-49.66	0.95	2748.23
			Max. Torque	16			-0.70

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	36	44.16	39.42	0.01
	Max. H <sub>x</sub>	20	28.17	49.64	0.01
	Max. H <sub>z</sub>	2	28.17	0.01	49.62
	Max. M <sub>x</sub>	2	2748.23	0.01	49.62
	Max. M <sub>z</sub>	8	2748.90	-49.64	-0.01
	Max. Torsion	4	0.70	-24.81	42.97

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. Vert	5	21.13	-24.81	42.97
	Min. H <sub>x</sub>	8	28.17	-49.64	-0.01
	Min. H <sub>z</sub>	14	28.17	-0.01	-49.62
	Min. M <sub>x</sub>	14	-2748.05	-0.01	-49.62
	Min. M <sub>z</sub>	20	-2749.21	49.64	0.01
	Min. Torsion	16	-0.70	24.81	-42.97

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	23.48	0.00	0.00	-0.07	0.12	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	28.17	-0.01	-49.62	-2748.23	0.95	-0.60
0.9 Dead+1.6 Wind 0 deg - No Ice	21.13	-0.01	-49.62	-2735.26	0.90	-0.60
1.2 Dead+1.6 Wind 30 deg - No Ice	28.17	24.81	-42.97	-2379.65	-1373.69	-0.70
0.9 Dead+1.6 Wind 30 deg - No Ice	21.13	24.81	-42.97	-2368.42	-1367.26	-0.69
1.2 Dead+1.6 Wind 60 deg - No Ice	28.17	42.98	-24.80	-1373.47	-2380.20	-0.60
0.9 Dead+1.6 Wind 60 deg - No Ice	21.13	42.98	-24.80	-1366.98	-2369.03	-0.60
1.2 Dead+1.6 Wind 90 deg - No Ice	28.17	49.64	0.01	0.71	-2748.90	-0.35
0.9 Dead+1.6 Wind 90 deg - No Ice	21.13	49.64	0.01	0.73	-2735.99	-0.35
1.2 Dead+1.6 Wind 120 deg - No Ice	28.17	42.99	24.82	1374.67	-2380.99	0.00
0.9 Dead+1.6 Wind 120 deg - No Ice	21.13	42.99	24.82	1368.21	-2369.82	0.00
1.2 Dead+1.6 Wind 150 deg - No Ice	28.17	24.83	42.98	2380.27	-1375.06	0.35
0.9 Dead+1.6 Wind 150 deg - No Ice	21.13	24.83	42.98	2369.07	-1368.62	0.35
1.2 Dead+1.6 Wind 180 deg - No Ice	28.17	0.01	49.62	2748.05	-0.64	0.60
0.9 Dead+1.6 Wind 180 deg - No Ice	21.13	0.01	49.62	2735.13	-0.68	0.60
1.2 Dead+1.6 Wind 210 deg - No Ice	28.17	-24.81	42.97	2379.47	1373.99	0.70
0.9 Dead+1.6 Wind 210 deg - No Ice	21.13	-24.81	42.97	2368.29	1367.48	0.69
1.2 Dead+1.6 Wind 240 deg - No Ice	28.17	-42.98	24.80	1373.29	2380.51	0.60
0.9 Dead+1.6 Wind 240 deg - No Ice	21.13	-42.98	24.80	1366.85	2369.26	0.60
1.2 Dead+1.6 Wind 270 deg - No Ice	28.17	-49.64	-0.01	-0.88	2749.21	0.35
0.9 Dead+1.6 Wind 270 deg - No Ice	21.13	-49.64	-0.01	-0.86	2736.22	0.35
1.2 Dead+1.6 Wind 300 deg - No Ice	28.17	-42.99	-24.82	-1374.85	2381.30	0.00
0.9 Dead+1.6 Wind 300 deg - No Ice	21.13	-42.99	-24.82	-1368.35	2370.05	0.00



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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>y</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>y</sub> kip-ft	Torque kip-ft
1.2 Dead+1.6 Wind 330 deg - No Ice	28.17	-24.83	-42.98	-2380.44	1375.37	-0.35
0.9 Dead+1.6 Wind 330 deg - No Ice	21.13	-24.83	-42.98	-2369.21	1368.85	-0.35
1.2 Dead+1.0 Ice+1.0 Temp	44.16	0.00	0.00	-0.21	0.36	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	44.16	-0.01	-39.41	-2133.31	0.91	-0.47
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	44.16	19.70	-34.13	-1847.27	-1066.02	-0.54
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	44.16	34.13	-19.70	-1066.30	-1847.21	-0.47
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	44.16	39.42	0.01	0.32	-2133.33	-0.27
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	44.16	34.14	19.71	1066.79	-1847.74	0.00
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	44.16	19.72	34.13	1847.37	-1066.94	0.27
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	44.16	0.01	39.41	2132.88	-0.16	0.47
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	44.16	-19.70	34.13	1846.83	1066.77	0.54
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	44.16	-34.13	19.70	1065.87	1847.96	0.47
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	44.16	-39.42	-0.01	-0.75	2134.08	0.27
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	44.16	-34.14	-19.71	-1067.23	1848.49	0.00
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	44.16	-19.72	-34.13	-1847.80	1067.69	-0.27
Dead+Wind 0 deg - Service	23.48	-0.00	-6.94	-383.52	0.24	-0.08
Dead+Wind 30 deg - Service	23.48	3.47	-6.01	-332.09	-191.56	-0.10
Dead+Wind 60 deg - Service	23.48	6.01	-3.47	-191.70	-332.00	-0.08
Dead+Wind 90 deg - Service	23.48	6.94	0.00	0.04	-383.45	-0.05
Dead+Wind 120 deg - Service	23.48	6.01	3.47	191.74	-332.11	0.00
Dead+Wind 150 deg - Service	23.48	3.47	6.01	332.05	-191.75	0.05
Dead+Wind 180 deg - Service	23.48	0.00	6.94	383.37	0.02	0.08
Dead+Wind 210 deg - Service	23.48	-3.47	6.01	331.94	191.82	0.10
Dead+Wind 240 deg - Service	23.48	-6.01	3.47	191.55	332.26	0.08
Dead+Wind 270 deg - Service	23.48	-6.94	-0.00	-0.19	383.70	0.05
Dead+Wind 300 deg - Service	23.48	-6.01	-3.47	-191.89	332.37	0.00
Dead+Wind 330 deg - Service	23.48	-3.47	-6.01	-332.20	192.01	-0.05

### Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-23.48	0.00	0.00	23.48	0.00	0.000%
2	-0.01	-28.17	-49.62	0.01	28.17	49.62	0.000%
3	-0.01	-21.13	-49.62	0.01	21.13	49.62	0.000%
4	24.81	-28.17	-42.97	-24.81	28.17	42.97	0.000%
5	24.81	-21.13	-42.97	-24.81	21.13	42.97	0.000%
6	42.98	-28.17	-24.80	-42.98	28.17	24.80	0.000%
7	42.98	-21.13	-24.80	-42.98	21.13	24.80	0.000%
8	49.64	-28.17	0.01	-49.64	28.17	-0.01	0.000%
9	49.64	-21.13	0.01	-49.64	21.13	-0.01	0.000%
10	42.99	-28.17	24.82	-42.99	28.17	-24.82	0.000%
11	42.99	-21.13	24.82	-42.99	21.13	-24.82	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
12	24.83	-28.17	42.98	-24.83	28.17	-42.98	0.000%
13	24.83	-21.13	42.98	-24.83	21.13	-42.98	0.000%
14	0.01	-28.17	49.62	-0.01	28.17	-49.62	0.000%
15	0.01	-21.13	49.62	-0.01	21.13	-49.62	0.000%
16	-24.81	-28.17	42.97	24.81	28.17	-42.97	0.000%
17	-24.81	-21.13	42.97	24.81	21.13	-42.97	0.000%
18	-42.98	-28.17	24.80	42.98	28.17	-24.80	0.000%
19	-42.98	-21.13	24.80	42.98	21.13	-24.80	0.000%
20	-49.64	-28.17	-0.01	49.64	28.17	0.01	0.000%
21	-49.64	-21.13	-0.01	49.64	21.13	0.01	0.000%
22	-42.99	-28.17	-24.82	42.99	28.17	24.82	0.000%
23	-42.99	-21.13	-24.82	42.99	21.13	24.82	0.000%
24	-24.83	-28.17	-42.98	24.83	28.17	42.98	0.000%
25	-24.83	-21.13	-42.98	24.83	21.13	42.98	0.000%
26	0.00	-44.16	0.00	0.00	44.16	0.00	0.000%
27	-0.01	-44.16	-39.41	0.01	44.16	39.41	0.000%
28	19.70	-44.16	-34.13	-19.70	44.16	34.13	0.000%
29	34.13	-44.16	-19.70	-34.13	44.16	19.70	0.000%
30	39.42	-44.16	0.01	-39.42	44.16	-0.01	0.000%
31	34.14	-44.16	19.71	-34.14	44.16	-19.71	0.000%
32	19.72	-44.16	34.13	-19.72	44.16	-34.13	0.000%
33	0.01	-44.16	39.41	-0.01	44.16	-39.41	0.000%
34	-19.70	-44.16	34.13	19.70	44.16	-34.13	0.000%
35	-34.13	-44.16	19.70	34.13	44.16	-19.70	0.000%
36	-39.42	-44.16	-0.01	39.42	44.16	0.01	0.000%
37	-34.14	-44.16	-19.71	34.14	44.16	19.71	0.000%
38	-19.72	-44.16	-34.13	19.72	44.16	34.13	0.000%
39	-0.00	-23.48	-6.94	0.00	23.48	6.94	0.000%
40	3.47	-23.48	-6.01	-3.47	23.48	6.01	0.000%
41	6.01	-23.48	-3.47	-6.01	23.48	3.47	0.000%
42	6.94	-23.48	0.00	-6.94	23.48	-0.00	0.000%
43	6.01	-23.48	3.47	-6.01	23.48	-3.47	0.000%
44	3.47	-23.48	6.01	-3.47	23.48	-6.01	0.000%
45	0.00	-23.48	6.94	-0.00	23.48	-6.94	0.000%
46	-3.47	-23.48	6.01	3.47	23.48	-6.01	0.000%
47	-6.01	-23.48	3.47	6.01	23.48	-3.47	0.000%
48	-6.94	-23.48	-0.00	6.94	23.48	0.00	0.000%
49	-6.01	-23.48	-3.47	6.01	23.48	3.47	0.000%
50	-3.47	-23.48	-6.01	3.47	23.48	6.01	0.000%

### Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00004674
3	Yes	4	0.00000001	0.00002572
4	Yes	5	0.00000001	0.00003331
5	Yes	4	0.00000001	0.00091002
6	Yes	5	0.00000001	0.00003441
7	Yes	4	0.00000001	0.00093907
8	Yes	4	0.00000001	0.00002935
9	Yes	4	0.00000001	0.00001622
10	Yes	5	0.00000001	0.00003390
11	Yes	4	0.00000001	0.00092579
12	Yes	5	0.00000001	0.00003361

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13	Yes	4	0.00000001	0.00091811
14	Yes	4	0.00000001	0.00004432
15	Yes	4	0.00000001	0.00002441
16	Yes	5	0.00000001	0.00003450
17	Yes	4	0.00000001	0.00094139
18	Yes	5	0.00000001	0.00003339
19	Yes	4	0.00000001	0.00091207
20	Yes	4	0.00000001	0.00003144
21	Yes	4	0.00000001	0.00001735
22	Yes	5	0.00000001	0.00003392
23	Yes	4	0.00000001	0.00092617
24	Yes	5	0.00000001	0.00003422
25	Yes	4	0.00000001	0.00093412
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00092191
28	Yes	5	0.00000001	0.00013565
29	Yes	5	0.00000001	0.00013842
30	Yes	4	0.00000001	0.00091891
31	Yes	5	0.00000001	0.00013713
32	Yes	5	0.00000001	0.00013640
33	Yes	4	0.00000001	0.00092129
34	Yes	5	0.00000001	0.00013870
35	Yes	5	0.00000001	0.00013590
36	Yes	4	0.00000001	0.00091964
37	Yes	5	0.00000001	0.00013740
38	Yes	5	0.00000001	0.00013815
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.00000001	0.00001354
41	Yes	4	0.00000001	0.00001507
42	Yes	4	0.00000001	0.00002039
43	Yes	4	0.00000001	0.00001425
44	Yes	4	0.00000001	0.00001386
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00001522
47	Yes	4	0.00000001	0.00001364
48	Yes	4	0.00000001	0.00000001
49	Yes	4	0.00000001	0.00001431
50	Yes	4	0.00000001	0.00001476

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	70 - 35.75	5.843	49	0.6566	0.0006
L2	40 - 0	2.064	49	0.4734	0.0003

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
66.00	12' Low Profile Platform w/rail	49	5.277	0.6370	0.0005	22597
65.00	Andrew 6' w/Radome	49	5.136	0.6320	0.0005	22597
60.00	Andrew 6' w/Radome	49	4.442	0.6064	0.0005	11299
56.00	12' Low Profile Platform w/rail	49	3.905	0.5846	0.0004	8070



<b>tnxTower</b>  <b>Ehresmann Engineering Inc.</b> 4400 West 31st. Street Yankton, SD 57078 Phone: (605) 665-7532 FAX: (605) 665-9780	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	16 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
50.00	Andrew 6' w/Radome	49	3.147	0.5481	0.0004	5649
46.00	12' Low Profile Platform w/rail	49	2.682	0.5206	0.0003	4707

### Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	70 - 35.75	41.825	20	4.7033	0.0040
L2	40 - 0	14.784	20	3.3922	0.0018

### Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
66.00	12' Low Profile Platform w/rail	20	37.772	4.5631	0.0037	3192
65.00	Andrew 6' w/Radome	20	36.764	4.5276	0.0036	3192
60.00	Andrew 6' w/Radome	20	31.799	4.3446	0.0032	1595
56.00	12' Low Profile Platform w/rail	20	27.958	4.1879	0.0029	1139
50.00	Andrew 6' w/Radome	20	22.532	3.9271	0.0025	796
46.00	12' Low Profile Platform w/rail	20	19.208	3.7305	0.0022	663

### Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension K	Actual Allowable Ratio Concrete Stress ksi	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Critical Ratio
in		in						
1.7500	18	1.7500	119.22	3.515	37.454	22.856	Conc fc	0.86
			169.12	4.080	45.000	45.000		✓
			0.70	0.86	0.83	0.51		

### Compression Checks

### Pole Design Data

<b>tnxTower</b>  <b>Ehresmann Engineering Inc.</b> 4400 West 31st. Street Yankton, SD 57078 Phone: (605) 665-7532 FAX: (605) 665-9780	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	17 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
L1	70 - 35.75 (1)	TP29.073x18x0.3125	34.25	70.00	86.4	27.1640	-16.77	819.58	0.020
L2	35.75 - 0 (2)	TP40.0059x27.074x0.375	40.00	70.00	59.7	47.1707	-28.10	2260.54	0.012

### Pole Bending Design Data

Section No.	Elevation ft	Size	M <sub>ux</sub> kip-ft	φM <sub>ux</sub> kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M <sub>uy</sub> kip-ft	φM <sub>uy</sub> kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	70 - 35.75 (1)	TP29.073x18x0.3125	825.19	1132.54	0.729	0.00	1132.54	0.000
L2	35.75 - 0 (2)	TP40.0059x27.074x0.375	2749.69	2811.28	0.978	0.00	2811.28	0.000

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V <sub>u</sub> K	φV <sub>n</sub> K	Ratio $\frac{V_u}{\phi V_n}$	Actual T <sub>u</sub> kip-ft	φT <sub>n</sub> kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	70 - 35.75 (1)	TP29.073x18x0.3125	46.46	1009.07	0.046	0.00	2267.85	0.000
L2	35.75 - 0 (2)	TP40.0059x27.074x0.375	49.68	1727.58	0.029	0.00	5629.44	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	70 - 35.75 (1)	0.020	0.729	0.000	0.046	0.000	0.751	1.000	4.8.2 ✓
L2	35.75 - 0 (2)	0.012	0.978	0.000	0.029	0.000	0.991	1.000	4.8.2 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP <sub>allow</sub> K	% Capacity	Pass Fail
L1	70 - 35.75	Pole	TP29.073x18x0.3125	1	-16.77	819.58	75.1	Pass
L2	35.75 - 0	Pole	TP40.0059x27.074x0.375	2	-28.10	2260.54	99.1	Pass
Summary								
Pole (L2)							99.1	Pass
Base Plate							86.2	Pass
RATING =							99.1	Pass

<b><i>tnxTower</i></b>  <b><i>Ehresmann Engineering Inc.</i></b> <i>4400 West 31st. Street</i> <i>Yankton, SD 57078</i> <i>Phone: (605) 665-7532</i> <i>FAX: (605) 665-9780</i>	<b>Job</b>	POR HANCOCK, OR 94200-15	<b>Page</b>	18 of 18
	<b>Project</b>	70 FT EHRESMANN MONOPOLE	<b>Date</b>	14:09:20 05/04/15
	<b>Client</b>	VERIZON WIRELESS	<b>Designed by</b>	CD

---

Program Version 6.1.3.1 - 3/21/2014 File:Z:/POCKETS/QUOTES JOBS/Proland LLC/Derek Budig/POR HANCOCK, OR/94200-15 - POR HANCOCK, OR.eri



verizonwireless  
POR HANCOCK  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132

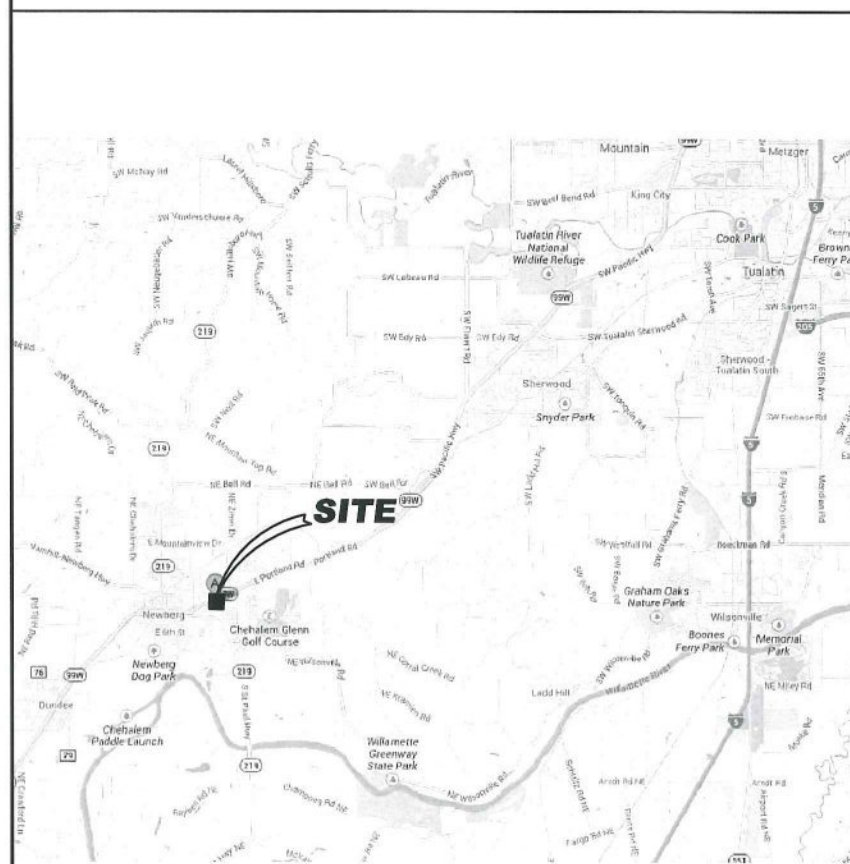
ATTACHMENT 5



PROLAND LLC

Drawings Produced By:

GPA  
ARCHITECTS LLC  
2701 NW Vaughn, Suite 764  
Portland, OR 97210  
503-274-7800



**DRIVING DIRECTIONS:**  
FROM PORTLAND: TAKE I-5 SOUTH APPROX. 5.5 MI TO EXIT 294 AND TURN RIGHT ONTO OREGON 99 TOWARD NEWBERG. KEEP STRAIGHT ONTO OR-99W / SW PACIFIC HWY (4 MI). KEEP STRAIGHT ONTO OR-99W S/SW PACIFIC HWY (8.8 MI). TURN LEFT ONTO S ELLIOT (2.7 MI). FOLLOW TO NEXT BLOCK AND GO RIGHT ON E HANCOCK ST. SITE IS ON THE RIGHT, ONE BLOCK DOWN.



**SITE ADDRESS:**  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132

LAT: 45° 18' 07.33" N  
LONG: 122° 57' 19.91" W

GROUND ELEVATION: 195.5' AMSL  
OVERALL HEIGHT: 70' AGL

**JURISDICTION:**  
CITY OF NEWBERG

**ZONING:**  
M-2 (LIGHT INDUSTRIAL)

T1.0 TITLE SHEET  
SV1 EXISTING SITE SURVEY  
SV2 EXISTING SITE SURVEY  
A1.0 OVERALL SITE PLAN  
A1.1 ENLARGED SITE PLAN  
A2.0 ELEVATION

**PROPERTY OWNER:**

TOTAL CONCEPTS DEVELOPMENT, LLC  
CONTACT: JEAN NILLES  
PHONE: (503) 550-6497

**APPLICANTS:**

VERIZON WIRELESS (VAW) LLC dba VERIZON WIRELESS  
5430 NE 122ND AVENUE  
PORTLAND, OREGON 97230

**SITE DEVELOPMENT & PERMITTING:**

PROLAND LLC  
CONTACT: DEREK BUDIG  
PHONE: (509) 939-6202

**CONSTRUCTION MANAGEMENT:**

VERIZON WIRELESS (VAW) LLC dba VERIZON WIRELESS  
5430 NE 122ND AVENUE  
PORTLAND, OREGON 97230  
CONTACT: JOE AHSING

**SURVEYOR:**

DUNCANSON COMPANY, INC  
145 SW 155TH ST, STE 102  
SEATTLE, WA 98166  
PHONE: (206) 244-4141

**ARCHITECT:**

GPA ARCHITECTS, LLC  
2701 NW VAUGHN STREET, SUITE 764  
PORTLAND, OREGON 97210  
CONTACT: MICHAEL RUDIS  
PHONE: 503-274-7800 X229

No. Date By Revisions

File no.	13-342
Date	05/12/15
Designed by	MR
Drawn by	GLS
Checked by	MR
Approved by	SMNP

Date issued :	
Date issued for Zoning Permit :	
Date issued for Building Permit :	
Date issued for Bid :	
Date issued for Construction :	

Project title :  
**POR HANCOCK**  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132

Sheet title :  
**TITLE SHEET**

Sheet no. :  
**T1.0**

**SHEET INDEX**

TITLE	SIGNATURE	DATE
RF ENGINEER		
PROJECT MANAGER		
RE SPECIALIST		
PROPERTY OWNER		

**PROJECT TEAM**

TITLE	SIGNATURE	DATE
RF ENGINEER		
PROJECT MANAGER		
RE SPECIALIST		
PROPERTY OWNER		

**ADA COMPLIANCE:**

THE FACILITY IS UNSTAFFED AND UNOCCUPIED

**PROJECT SUMMARY:**

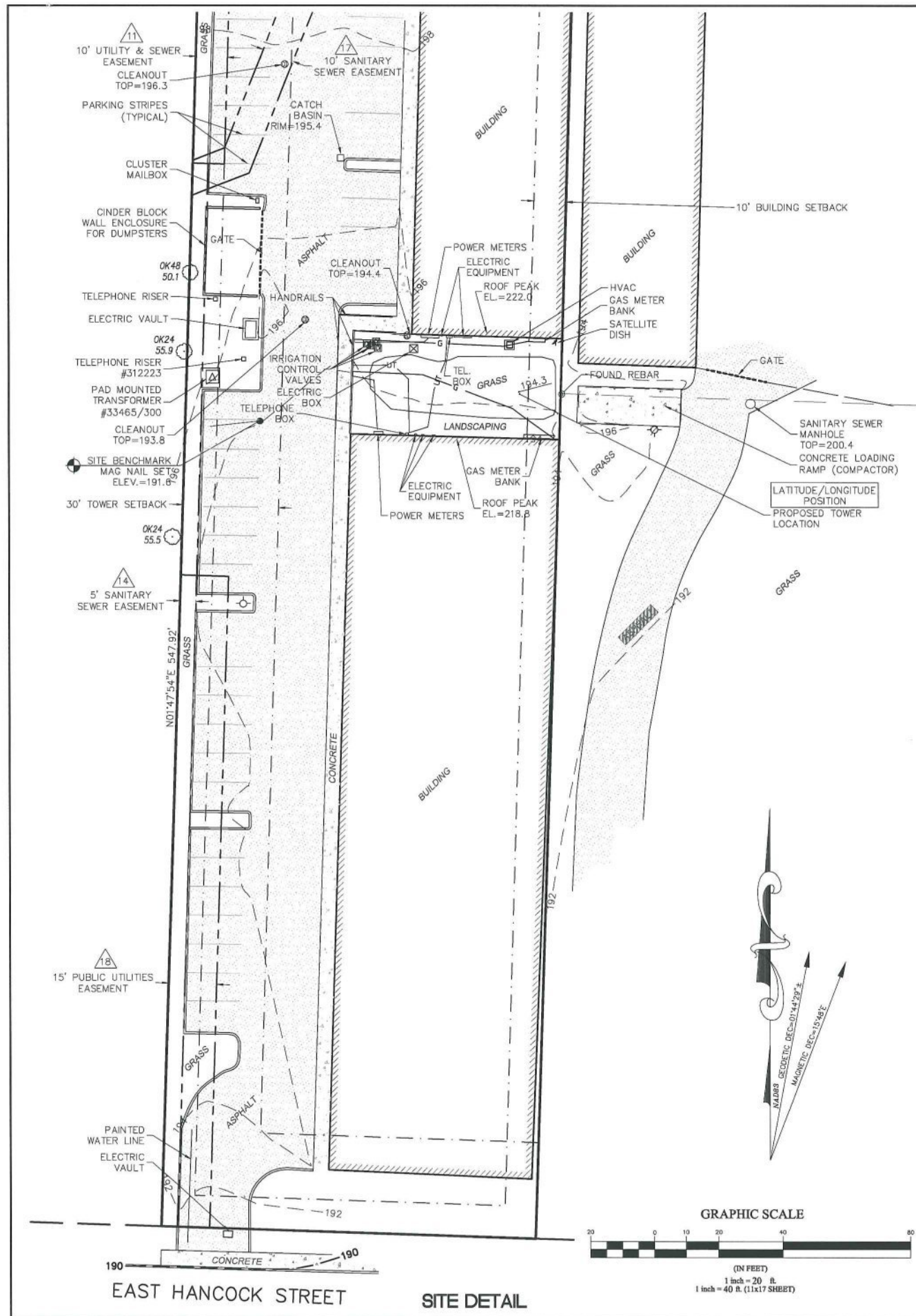
THE PROJECT CONSISTS OF INSTALLATION OF NEW ANTENNAS & EQUIPMENT ON A NEW 70'-0" MONOPOLE AND NEW OUTDOOR EQUIPMENT CABINETS WITHIN A NEW WIRELESS COMPOUND.

**APPROVALS**

**VICINITY MAP**

**PROJECT SUMMARY**





### LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT PROPOSED TOWER LOCATION:  
NAD 83  
LAT - 45°18'07.25" N NAVD 88  
LONG - 122°57'19.64" W ELEV.= 194.3 FEET



BENCHMARK IS "PDXA"  
WSRN GPS CORS STATION.  
ELEV.=59.4'

ELEVATION DERIVED USING GPS. ACCURACY  
MEETS OR EXCEEDS 1A STANDARDS AS DEFINED  
ON THE FAA ASAC INFORMATION SHEET 91:003.

### NOTES

- 1) TITLE RESEARCH PROVIDED BY FIRST AMERICAN TITLE COMPANY DATED DECEMBER 9, 2013, ORDER NO. 1039-2189631.
- 2) FIELD WORK CONDUCTED IN JANUARY, 2014.
- 3) BASIS OF BEARING: OREGON COORDINATE SYSTEM, NORTH (NAD83).
- 4) UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
- 5) FEMA DESIGNATION: ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), PANEL 237 OF 675, FIRM MAP NUMBER 41071C0237D, EFFECTIVE DATE MARCH 2, 2010.

### LEGEND

---	SUBJECT BOUNDARY LINE
---	RIGHT-OF-WAY CENTERLINE
---	RIGHT-OF-WAY LINE
---	ADJACENT BOUNDARY LINE
---	SECTIONAL BREAKDOWN LINE
OP	OVERHEAD POWER LINE
UP	BURIED POWER LINE
G	BURIED GAS LINE
OT	OVERHEAD TELEPHONE LINE
UT	BURIED TELEPHONE LINE
W	BURIED WATER LINE
SS	BURIED SANITARY SEWER
SD	BURIED STORM DRAIN
---	DITCH LINE/FLOW LINE
---	ROCK RETAINING WALL
---	VEGETATION LINE
---	CHAIN LINK FENCE
---	WOOD FENCE
---	BARBED WIRE/WIRE FENCE
Δ	TRANSFORMER
X	LIGHT STANDARD
P	POWER VAULT
⊠	UTILITY BOX
⊠	UTILITY POLE
⊠	POLE GUY WIRE
⊠	GAS VALVE
⊠	GAS METER
⊠	TELEPHONE VAULT
⊠	TELEPHONE RISER
⊠	FIRE HYDRANT
⊠	GATE VALVE
⊠	WATER METER
⊠	FIRE STAND PIPE
⊠	CATCH BASIN, TYPE I
⊠	CATCH BASIN, TYPE II
⊠	SIGN
⊠	BOLLARD
⊠	MAIL BOX
⊠	SPOT ELEVATION

### NOTE:

- 1) ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL) AND ARE REFERENCED TO THE NAVD88 DATUM.
- 2) ALL TOWER, TREE AND APPURTENANCE HEIGHTS ARE ABOVE GROUND LEVEL (AGL) AND ARE ACCURATE TO ± 3 FEET OR ± 1% OF TOTAL HEIGHT, WHICHEVER IS GREATER.

### TREE LEGEND

DECIDUOUS TREE	AL=ALDER
AL12	MP=MAPLE
← TRUNK DIAMETER (IN)	DS=DECIDUOUS
TYPE	MA=MADRONA
	OK=OAK
	CH=CHERRY
EVERGREEN TREE	CE=CEDAR
DF18	DF=DOUGLAS FIR
195.2	HE=HEMLOCK
↑ HEIGHT AGL IF MEASURED	PI=PINE
	EVG=EVERGREEN

NOTE:  
TREE DRIP LINES ARE NOT TO SCALE. TREE SYMBOLS  
REFERENCE TRUNK LOCATION ONLY. TRUNK DIAMETERS  
WERE APPROXIMATED AT 3.5' TO 4' ABOVE GROUND LEVEL.  
TREES SHOWN ARE FOR REFERENCE ONLY AND OTHER  
TREES AND VEGETATION MAY EXIST.

### SITE INFORMATION

TAX LOT NUMBER	3220AB00202
SITE ADDRESS	2401 EAST HANCOCK STREET NEWBERG, OR 97132
SITE CONTACT	JEAN NILLES
PHONE NUMBER	505-550-6497
ZONING	LIGHT INDUSTRIAL (M-2) (CITY OF NEWBERG)
TOTAL LOT AREA	64,364± S.F. (1.48 AC.)
PROJECT AREA	TO BE DETERMINED

### SURVEY REFERENCE

- 1) RECORD OF SURVEY NO. CS-10538, RECORDS OF YAMHILL COUNTY.
- 2) RECORD OF SURVEY NO. CSP-7503, RECORDS OF YAMHILL COUNTY.

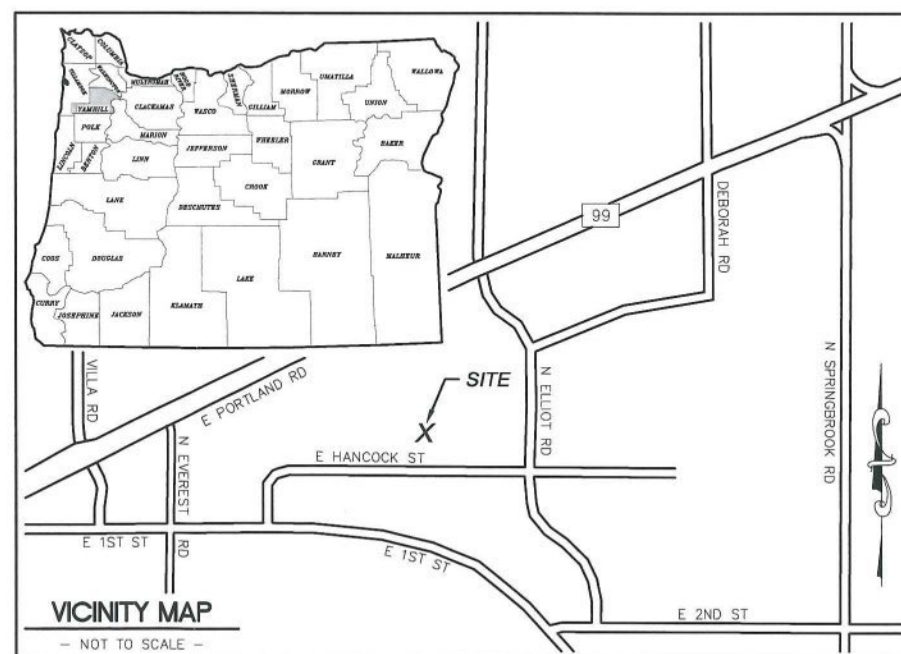
### BOUNDARY DISCLAIMER

THIS PLAN DOES NOT REPRESENT A BOUNDARY  
SURVEY. SUBJECT AND ADJACENT PROPERTY LINES  
ARE DEPICTED USING FIELD-FOUND EVIDENCE AND  
RECORD INFORMATION.

### CAUTION!

UNDERGROUND UTILITIES EXIST IN THE AREA AND  
UTILITY INFORMATION SHOWN MAY BE INCOMPLETE.  
STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE  
ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48  
HOURS BEFORE STARTING ANY CONSTRUCTION.

1-800-424-5555



### VICINITY MAP

- NOT TO SCALE -

### ATTACHMENT 5

verizon wireless

**GPA**  
ARCHITECTS LLC  
2701 NW Vaughn, Suite 764  
Portland, OR 97210  
503-274-7800



DUNCANSON

Company, Inc.

145 SW 15th Street, Suite 102  
Seattle, Washington 98166  
Phone 206.244.4141  
Fax 206.244.4455

SITE  
FOR  
HANCOCK

2401 EAST HANCOCK STREET  
NEWBERG, OR 97132  
YAMHILL COUNTY

THIS DRAWING WAS CREATED FOR THE  
EXCLUSIVE USE OF THE CLIENT NAMED HEREON  
AND IS NOT TO BE USED IN WHOLE OR IN PART  
WITHOUT WRITTEN AUTHORIZATION FROM  
SAID CLIENT.  
©2013 DUNCANSON COMPANY, INC.

FLD. CREW:	CR/CT
FLD. BOOK:	308/62
DRAWN BY:	LAC
JOB #:	99544.843
DATE:	01/17/14

### REVISIONS

DATE	DESCRIPTION	BY

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
MAY 10, 2011  
JONATHAN MARLO BECKER  
84870

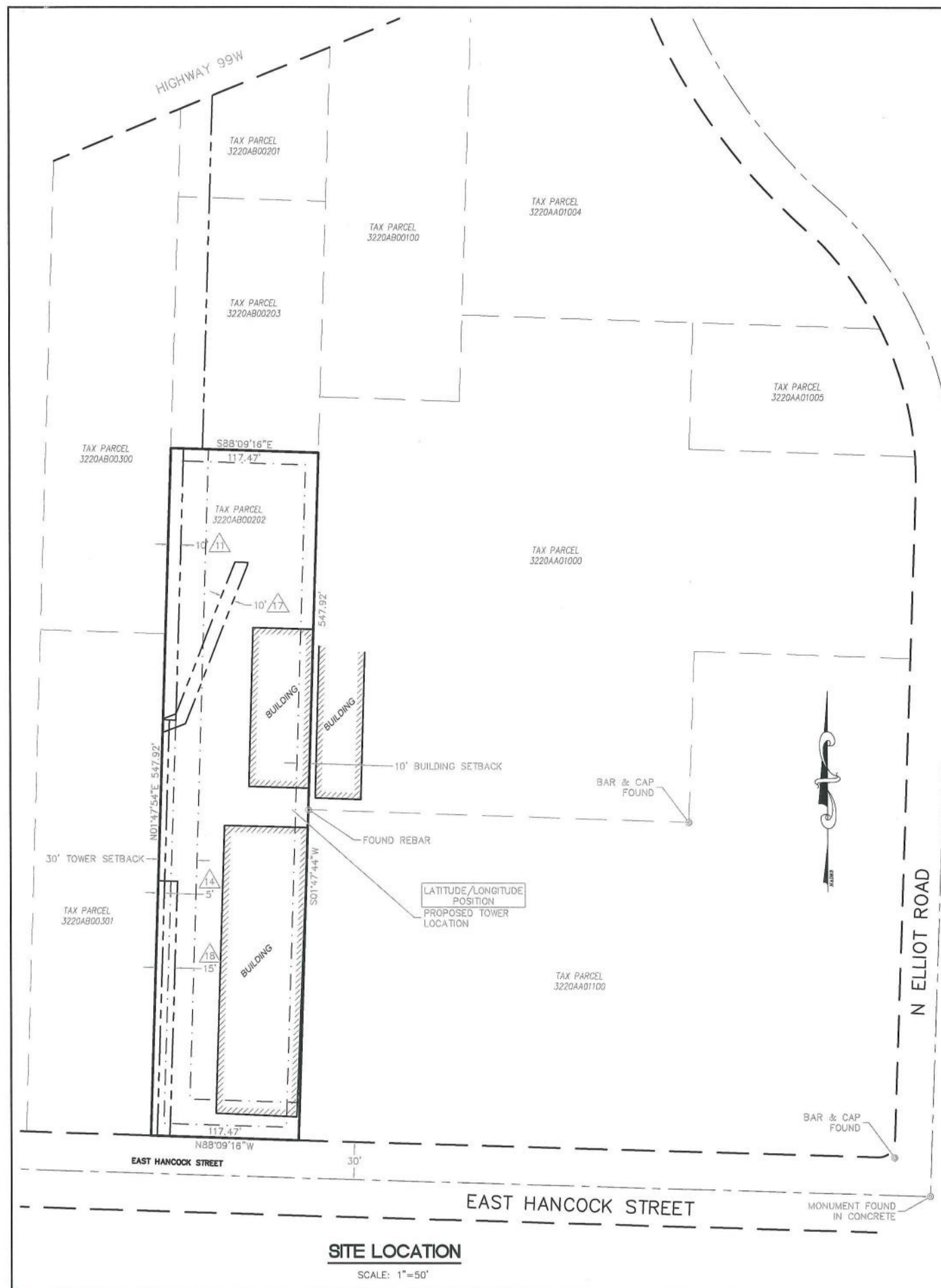
RENEWS: 12/31/

SHEET TITLE  
EXISTING SITE SURVEY  
SEC 20, TWP 3 S, RNG 2 W, WM

SHEET NUMBER

SV1





### LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT PROPOSED TOWER LOCATION:  
NAD 83  
LAT - 45°18'07.25" N NAVD 88  
LONG - 122°57'19.64" W ELEV. = 194.3 FEET



BENCHMARK IS "PDXA"  
WSRN GPS CORS STATION.  
ELEV. = 59.4'

ELEVATION DERIVED USING GPS. ACCURACY  
MEETS OR EXCEEDS 1A STANDARDS AS DEFINED  
ON THE FAA ASAC INFORMATION SHEET 91:003.

### NOTES

- 1) TITLE RESEARCH PROVIDED BY FIRST AMERICAN TITLE COMPANY DATED DECEMBER 9, 2013, ORDER NO. 1039-2189631.
- 2) FIELD WORK CONDUCTED IN JANUARY, 2014.
- 3) BASIS OF BEARING: OREGON COORDINATE SYSTEM, NORTH (NAD83).
- 4) UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
- 5) FEMA DESIGNATION: ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), PANEL 237 OF 675, FIRM MAP NUMBER 41071C02370, EFFECTIVE DATE MARCH 2, 2010.

### EASEMENTS

# CORRESPONDS WITH ITEM NUMBER IN 'SCHEDULE B' OF TITLE REPORT.

THE FOLLOWING EASEMENTS FROM THE REFERENCED TITLE REPORT CONTAIN SUFFICIENT INFORMATION TO BE DEPICTED ON THE PLAN. OTHER EASEMENTS OR ENCUMBRANCES, IF ANY, MAY AFFECT THE PROPERTY, BUT LACK SUFFICIENT INFORMATION TO BE SHOWN.

- 1) ACCESS RESTRICTIONS AND SLOPE EASEMENT PER FILM VOLUME 23, PAGE 213, RECORDS OF YAMHILL COUNTY - AFFECTS AREA TO THE NORTH ALONG HIGHWAY 99, NOT SHOWN.
- 2) SEWER EASEMENT PER FILM VOLUME 122, PAGE 504, RECORDS OF YAMHILL COUNTY - AFFECTS PROPERTY TO THE WEST, NOT SHOWN.
- 3) SEWER EASEMENT AGREEMENT PER FILM VOLUME 139, PAGE 811, RECORDS OF YAMHILL COUNTY - DOCUMENT CONTAINS NO DESCRIPTION, NOT SHOWN.
- 4) UTILITY AND SEWER EASEMENT PER FILM VOLUME 148, PAGE 871, RECORDS OF YAMHILL COUNTY - SHOWN.
- 5) STORM AND SEWER EASEMENT PER FILM VOLUME 169, PAGE 847, RECORDS OF YAMHILL COUNTY - EASEMENT WAS VACATED BY INSTRUMENT NO. 200908924, RECORDS OF YAMHILL COUNTY, NOT SHOWN.
- 6) SEWER EASEMENT PER INSTRUMENT NO. 200008989, RECORDS OF YAMHILL COUNTY - SHOWN.
- 7) STORM AND SEWER EASEMENT PER INSTRUMENT NO. 200908925, RECORDS OF YAMHILL COUNTY - SHOWN.
- 8) PUBLIC UTILITIES EASEMENT PER INSTRUMENT NO. 200910879 (RE-RECORDED AS INSTRUMENT NO. 200913105), RECORDS OF YAMHILL COUNTY - SHOWN.

### LEGAL DESCRIPTION

PARCEL 1:  
A TRACT OF LAND IN THE RICHARD EVEREST DONATION LAND CLAIM IN TOWNSHIP 3 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN YAMHILL COUNTY, OREGON, BEING PART OF THAT CERTAIN TRACT OF LAND DESCRIBED IN DEED TO CHESTER LEONARD ERICKSON, ET UX, RECORDED JANUARY 20, 1960 IN FILM VOLUME 9, PAGE 180, DEED AND MORTGAGE RECORDS OF YAMHILL COUNTY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID ERICKSON TRACT THAT IS NORTH 577.92 FEET FROM THE SOUTHEAST CORNER THEREOF; THENCE NORTH 89°57'10" WEST 117.47 FEET TO THE WEST LINE OF SAID ERICKSON TRACT; THENCE SOUTH, ALONG THE SAID WEST LINE, 547.92 FEET TO AN IRON ROD THAT IS NORTH 30 FEET FROM THE SOUTHWEST CORNER OF SAID ERICKSON TRACT; THENCE SOUTH 89°57'10" EAST 117.47 FEET, PARALLEL WITH THE SOUTH LINE OF SAID ERICKSON TRACT, TO AN IRON ROD IN THE EAST LINE OF SAID TRACT; THENCE NORTH 547.92 FEET TO THE PLACE OF BEGINNING.

PARCEL II:  
A NON-EXCLUSIVE EASEMENT FOR ROAD AND UTILITIES PURPOSES, OVER AND ACROSS THE FOLLOWING DESCRIBED TRACT OF LAND, INCLUDING THE TENEMENTS, HEREDITAMENTS AND APPURTENANCES THERETO AS BEING ADJACENT TO PARCEL I ABOVE DESCRIBED:

A TRACT OF LAND IN THE RICHARD EVEREST DONATION LAND CLAIM IN TOWNSHIP 3 SOUTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN IN YAMHILL COUNTY, OREGON, BEING PART OF THAT CERTAIN TRACT OF LAND DESCRIBED IN DEED TO CHESTER LEONARD ERICKSON, ET UX, RECORDED JANUARY 20, 1960 IN FILM VOLUME 9, PAGE 180, DEED AND MORTGAGE RECORDS OF YAMHILL COUNTY, AND BEING DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON ROD AT THE INTERSECTION OF THE WEST LINE OF SAID ERICKSON TRACT WITH THE SOUTH LINE OF U.S. HIGHWAY 99W; THENCE SOUTH ALONG THE WEST LINE OF SAID ERICKSON TRACT, 267.57 FEET TO THE NORTH BOUNDARY OF PARCEL I ABOVE DESCRIBED; THENCE SOUTH 89°57'10" EAST 25.00 FEET ALONG THE NORTH BOUNDARY OF PARCEL I ABOVE DESCRIBED TO A POINT; THENCE NORTH PARALLEL WITH AND 25.00 FEET DISTANT FROM THE WEST LINE OF SAID ERICKSON TRACT, 338.09 FEET, MORE OR LESS, TO THE SOUTH LINE OF SAID HIGHWAY 99W; THENCE SOUTH 65°53'10" WEST, ALONG SAID SOUTH LINE TO THE PLACE OF BEGINNING.

### LEGEND

---	SUBJECT BOUNDARY LINE
---	RIGHT-OF-WAY CENTERLINE
---	RIGHT-OF-WAY LINE
---	ADJACENT BOUNDARY LINE
---	SECTIONAL BREAKDOWN LINE
OP	OVERHEAD POWER LINE
UP	BURIED POWER LINE
G	BURIED GAS LINE
OT	OVERHEAD TELEPHONE LINE
UT	BURIED TELEPHONE LINE
W	BURIED WATER LINE
SS	BURIED SANITARY SEWER
SD	BURIED STORM DRAIN
---	DITCH LINE/FLOW LINE
---	ROCK RETAINING WALL
---	VEGETATION LINE
---	CHAIN LINK FENCE
---	WOOD FENCE
---	BARBED WIRE/WIRE FENCE
Δ	TRANSFORMER
X	LIGHT STANDARD
P	POWER VAULT
⊗	UTILITY BOX
⊕	UTILITY POLE
←	POLE GUY WIRE
⊞	GAS VALVE
⊞	GAS METER
T	TELEPHONE VAULT
□	TELEPHONE RISER
⊙	FIRE HYDRANT
⊞	GATE VALVE
⊞	WATER METER
⊞	FIRE STAND PIPE
⊞	CATCH BASIN, TYPE I
⊞	CATCH BASIN, TYPE II
⊞	SIGN
⊞	BOLLARD
⊞	MAIL BOX
234.21	SPOT ELEVATION

### NOTE:

- 1) ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL) AND ARE REFERENCED TO THE NAVD88 DATUM.
- 2) ALL TOWER, TREE AND APPURTENANCE HEIGHTS ARE ABOVE GROUND LEVEL (AGL) AND ARE ACCURATE TO ± 3 FEET OR ± 1% OF TOTAL HEIGHT, WHICHEVER IS GREATER.

### TREE LEGEND

DECIDUOUS TREE	AL=ALDER
MP=MAPLE	DS=DECIDUOUS
MA=MADRONA	OK=OAK
CH=CHERRY	
EVERGREEN TREE	CE=CEDAR
DF=DOUGLAS FIR	HE=HEMLOCK
PI=PINE	EVG=EVERGREEN
AL12	TRUNK DIAMETER (IN)
TYPE	
DF18	HEIGHT AGL IF MEASURED

NOTE:  
TREE DRIP LINES ARE NOT TO SCALE. TREE SYMBOLS REFERENCE TRUNK LOCATION ONLY. TRUNK DIAMETERS WERE APPROXIMATED AT 3.5' TO 4' ABOVE GROUND LEVEL. TREES SHOWN ARE FOR REFERENCE ONLY AND OTHER TREES AND VEGETATION MAY EXIST.

### SITE INFORMATION

TAX LOT NUMBER	3220AB00202
SITE ADDRESS	2401 EAST HANCOCK STREET NEWBERG, OR 97132
SITE CONTACT	JEAN NILLES
PHONE NUMBER	505-550-6497
ZONING	LIGHT INDUSTRIAL (M-2) (CITY OF NEWBERG)
TOTAL LOT AREA	64,364± S.F. (1.48 AC.)
PROJECT AREA	TO BE DETERMINED

### SURVEY REFERENCE

- 1) RECORD OF SURVEY NO. CS-10538, RECORDS OF YAMHILL COUNTY.
- 2) RECORD OF SURVEY NO. CSP-7503, RECORDS OF YAMHILL COUNTY.

### BOUNDARY DISCLAIMER

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY. SUBJECT AND ADJACENT PROPERTY LINES ARE DEPICTED USING FIELD-FOUND EVIDENCE AND RECORD INFORMATION.

### CAUTION!

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

1-800-424-5555

### ATTACHMENT 5



**GPA**  
**ARCHITECTS LLC**  
2701 NW Vaughn, Suite 764  
Portland, OR 97210  
503-274-7800



**DUNCANSON**  
Company, Inc.  
145 SW 155th Street, Suite 102  
Seattle, Washington 98166  
Phone 206.244.4141  
Fax 206.244.4455

**SITE FOR HANCOCK**  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132  
YAMHILL COUNTY

THIS DRAWING WAS CREATED FOR THE EXCLUSIVE USE OF THE CLIENT NAMED HEREON, AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT WRITTEN AUTHORIZATION FROM SAID CLIENT.

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FLD. CREW:	CR/CT
FLD. BOOK:	308/62
DRAWN BY:	LAC
JOB #:	99544.843
DATE:	01/17/14

### REVISIONS

DATE	DESCRIPTION	BY

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
MAY 10, 2011  
JONATHAN MARLO BECKER  
84870

RENEW: 12/31/

**SHEET TITLE**  
**EXISTING SITE SURVEY**  
**SEC 20, TWP 3 S, RNG 2 W, WM**

**SHEET NUMBER**

**SV2**



[illegible]

No.	Date	By	Revisions
File no.	<b>13-342</b>		
Date	<b>05/12/15</b>		
Designed by	<b>MR</b>		
Drawn by	<b>GLS</b>		
Checked by	<b>MR</b>		
Approved by	<b>SMNP</b>		

Date issued :  
Date issued for  
Zoning Permit :  
Date issued for  
Building Permit :  
Date issued  
for Bid :  
Date issued  
for Construction :

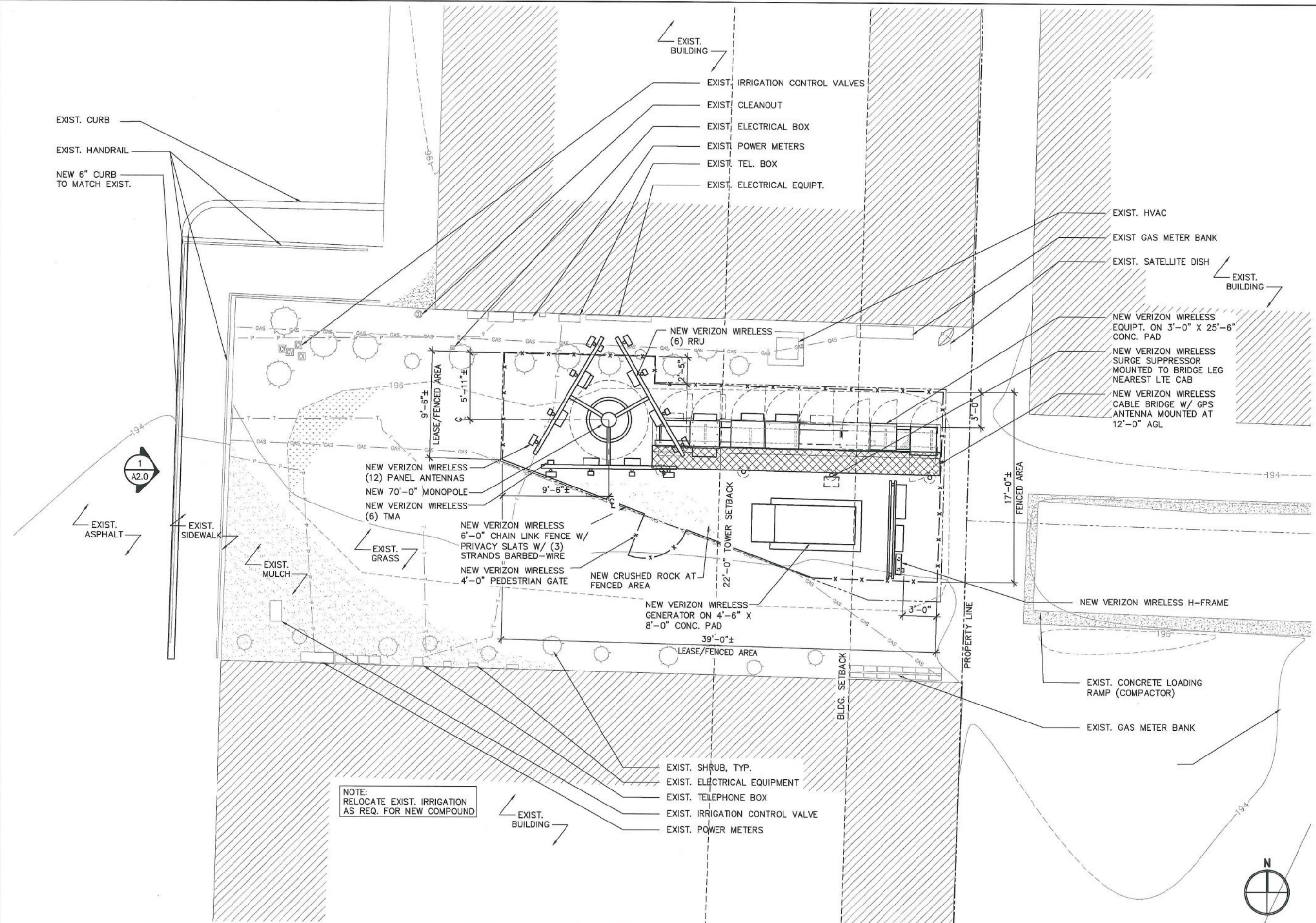
Project title :  
**POR  
HANCOCK**  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132

Sheet title : **OVERALL SITE PLAN**

Sheet no. : **A1.0**







PROLANB, LLC

Drawings Produced By:

**GPA**  
ARCHITECTS LLC  
2701 NW Vaughn, Suite 764  
Portland, OR 97210  
503-274-7800



No.	Date By	Revisions
01/31/14	GLS	ZONING REVIEW
03/04/14	LTW	REVISED ZONING REVIEW
04/12/04	LTW	REVISED ZONING REVIEW
10/30/15	LTW	REVISED ZONING REVIEW
12/15/15	LTW	REVISED ZONING REVIEW

File no. **13-342**  
Date **05/12/15**  
Designed by **MR**  
Drawn by **GLS**  
Checked by **MR**  
Approved by **SMNP**

Date issued :  
Date issued for Zoning Permit :  
Date issued for Building Permit :  
Date issued for Bid :  
Date issued for Construction :

Project title :  
**POR HANCOCK**  
2401 EAST HANCOCK STREET  
NEWBERG, OR 97132

Sheet title :  
**ENLARGED SITE PLAN**

Sheet no. :  
**A1.1**



No.	Date	By	Revisions
-----	------	----	-----------

Date issued :  
Date issued for  
Zoning Permit :  
Date issued for  
Building Permit :  
Date issued  
for Bid :  
Date issued  
for Construction:

Sheet title :  
**ELEVATION**

Sheet no. : **A2.0**



22X34 SCALE: NTS  
11X17 SCALE: NTS

2



22X34 SCALE:  $1/16" = 1'-0"$   
11X17 SCALE:  $1/32" = 1'-0"$

1

**NOT USED**

22X34 SCALE: NTS  
11X17 SCALE: NTS

3

## A2.0





Mail Processing Center  
Federal Aviation Administration  
Southwest Regional Office  
Obstruction Evaluation Group  
2601 Meacham Boulevard  
Fort Worth, TX 76193

Aeronautical Study No.  
2015-ANM-542-OE  
Prior Study No.  
2014-ANM-667-OE

Issued Date: 04/02/2015

Mikhail Raznobriadsev  
Verizon Wireless (VAW) LLC  
1120 Sanctuary Prkwy  
Suite 150 GASA5REG  
Alpharetta, GA 30004

**\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole POR Hancock
Location:	Newberg, OR
Latitude:	45-18-07.25N NAD 83
Longitude:	122-57-19.64W
Heights:	195 feet site elevation (SE)
	70 feet above ground level (AGL)
	265 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☐ At least 10 days prior to start of construction (7460-2, Part 1)  
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 10/02/2016 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (310) 725-6591. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2015-ANM-542-OE.

**Signature Control No: 243862325-247981100**

( DNE )

Tamera Burch  
Technician

Attachment(s)  
Frequency Data

cc: FCC



LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W



# Oregon

Kate Brown, Governor



3040 25th Street, SE  
Salem, OR 97302-1125  
Phone: (503) 378-4880  
Toll Free: (800) 874-0102  
FAX: (503) 373-1688

June 8, 2015

Steve Olson, AICP  
Interim Planning and Building Director  
Planning Division  
PO Box 970  
Newberg, Oregon, 97132

SUBJECT: DR2-15-003/VAR-15-001 (Verizon – Hancock Street)

This letter is in response to the city of Newberg's application for a new Verizon cell tower located between two industrial buildings at 2401 East Hancock Street, north of Sportsman Airpark. After a preliminary review of the proposed application the Oregon Department of Aviation (ODA) has prepared the following comments.

The proposed cell tower would cause a disruption to the operations of the Sportsman Airpark specifically the approach/departure procedures from runway 17-35. In addition, due to its location and height, the applicant would be required to file a FAA form 7460-1 with the Oregon Department of Aviation, as required in OAR 738-70. ODA would recommend the cell tower be relocated or lowered away from the approach/departure to ensure safety to air navigation.

Thank you for allowing ODA to comment on this development proposal. If you have any questions or need further information please feel free to contact me at 503-378-2529 or [Jeff.Caines@aviation.state.or.us](mailto:Jeff.Caines@aviation.state.or.us) or Heather Peck – Projects and Planning Manager at 503-378-3168 or [Heather.Peck@aviation.state.or.us](mailto:Heather.Peck@aviation.state.or.us).

Sincerely,

Jeff Caines, AICP  
Aviation Planner





Kate Brown, Governor

# Oregon



July 9, 2015

Verizon Wireless  
2401 East Hancock Street  
Newberg, OR 97132

3040 25th Street, SE  
Salem, OR 97302-1125  
Phone: (503) 378-4880  
Toll Free: (800) 874-0102  
FAX: (503) 373-1688

**Subject: Oregon Department of Aviation comments regarding new construction of a antenna tower 70' in height located in Newberg Oregon.**

**Aviation Reference: 2015-ODA-133-OE**

The Oregon Department of Aviation (ODA) has conducted an aeronautical study of these proposed new structure(s) and has determined that notice to the FAA is required. The structure does exceed Obstruction Standards of OAR 738-70-0100 and Exceeds FAA FAR 77.9 for RWY 17.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes to the original application will void this determination. Any future construction or alteration to the original application will require a separate notice from ODA.

This determination will expire (12) months from the date of this letter if construction has not been started.

**Mitigation Recommendation:**

- ☒ We do not object with conditions to the construction described in this proposal. This determination does not constitute ODA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.
- ☒ Marking and lighting are necessary for aviation safety do to proximity to Newberg airport. We recommend it be installed and maintained in accordance with FAA Advisory Circular AC70/7460-1K Change 2
- ☐ The proposed obstruction should to be lower to a height that is no longer a hazard to the airport primary and horizontal surface FAA FAR 77
- ☐ The proposed obstruction should be relocate outside the airport primary and horizontal surface FAA FAR 77

Sincerely,

John P. Wilson Jr, Airport Operation & Tall Structure Specialist.

RECEIVED

JUN 10 2015

June 9, 2015

City of Newberg  
Community Development Department  
PO Box 970  
Newberg, Oregon 97132

Initial: \_\_\_\_\_

RE: Written comments on File No. DR2-15-003/VAR-15-001

This letter is in regards to the application by ProLand LLC, on behalf of Verizon Wireless, for the installation of a 70 foot tall cellular communication tower on property owned by Total Concept Development LLC. As an adjacent property owner I have three concerns that I feel need to be properly addressed and answered by the City of Newberg before the application move any further in the process.

The following written comments are provided by me on File No. DR2-15-003/VAR-15-001 addressing my concerns;

The first two are in regards to what I feel are public safety issues.

Number one. The height of the cellular tower at a proposed height of seventy (70) feet is potentially in the flight patterns of the local airport, Sportsman Airpark, and may demonstrate potential hazards to both aircraft and the immediate area of the tower. Certified documentation needs to be provided by the applicant, demonstrating that there is no potential conflict or danger to aircraft, the immediate property owners, or general public as a result of its proposed height.

The second safety concern is the possibility of radiation emissions in the immediate area from the proposed cellular tower as a result of the of the proposed antenna array. Currently in the City of Portland there is ongoing discussions concerning radiation omissions from cellular towers, and the potential health issues associated with them. As an adjacent property owner, I know that there will be persons in the immediate vicinity of the tower, both on the property of the proposed tower location, and on my adjacent property, that may be exposed to any radiation emissions from it. I feel the petitioner needs to provide the City of Newberg the adequate information certifying there is, or there is not the presence of any potential health hazards, or radiation being emitted from this tower.

Finally, the applicants request for a variance on the location of the proposed tower raises my third concern. Current city ordinance requires a minimum 21 foot setback from nearby buildings. Granting a variance of nearly 50% less than the required 21 feet seems excessive, and

I think that this may establish a precedent that that could come back to haunt the city at a later date. The granting of a variance this large may be used in the future by other applicants, citing this as an example of why any future variance requests should be granted, which may be detrimental to the community as a whole.

A handwritten signature in cursive script, appearing to read "Fred Casey", written in dark ink.

Fred L. Casey

PO Box 188

Newberg, Oregon 97132



June 7, 2015

Written Comments: File No. DR2-15-003/VAR-15-001

City of Newberg  
 Community Development Dept.  
 P.O. Box 970  
 Newberg, OR 97132

RECEIVED

JUN 10 2015

Initial: \_\_\_\_\_

Dear Sirs:

We believe that a cellular communications tower would visually and possibly <sup>pose</sup> health risks to the other land owners in that vicinity.

We are the owners of Family Pet Clinic of Newberg, LLC at 131 N. Elliott Road which is very close to the proposed site. Next to our clinic is a children's daycare center. As no one knows what the long term health risks of close proximity to cell phone towers may be, we strongly urge that the city not grant the applicant a variance to the setback standard.

Thank You,

Masha A. Matthieson

Daniel J. Matt, D.V.M.

Randall J. Matthieson, D.V.M.

June 1, 2015

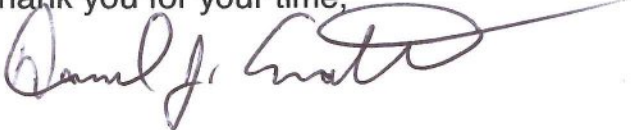
Dear City of Newberg,

We are writing to protest the variance of the setback standard requested by Verizon Wireless for their new cellular communications tower for several reasons.

The proposed location for the cell tower is extremely close to a high density residential area as well as a well-established day-care facility (lot #141). The residents of the neighborhood as well as the children at the day-care may be adversely affected by the radiation known to be emitted from all cellular towers. It is not acceptable to allow a variance for something that can harm our city's citizens. We are also concerned about the proximity to Newberg's airport. It is foolish, not to mention dangerous, to build such a tall structure so close to an airport. A cellular communications tower will not only pose a threat to our people and our airport, but it will lower the property values all around it—why should we allow that in town? Our last concern is this: the 21 foot set-back rule was established for a reason: to protect the privacy, value, and efficacy of the buildings lived in and businesses run by the tax-paying citizens of Newberg. If we change the rules for large companies like Verizon, which can well afford to build in a more appropriate location, what does that say to other big companies who want to build here at the expense of our citizens.

There is no compelling reason to allow a variance in the setback standard yet every reason to deny it—mainly the safety and well-being of the residents and businesses of Newberg. Let Verizon find a building site that doesn't require a variance; our locally owned businesses are expected to so they can as well!

Thank you for your time,



Daniel and Jennifer Matthiesen  
Family Pet Clinic  
131 N. Elliott Rd.  
Newberg, OR 97132