# Land Use Application

Applicant(s): New Cingular Wireless PCS, LLC  
Property Owner(s): Oregon-Washington  
C/o Smartlink Group  
Rail-Road & Navigation Co  
Mailing Address: 11232 120th Ave NE, Ste 200  
Mailing Address: 1400 Douglass, Stop 1640  
Kirkland, WA 98033  
Omaha, NE 68179-1640  
Phone: (541) 602-5003  
Phone: (817) 352-0206  
Email: leah.stout@smartlinkgroup.com  

## Location of property:

<table>
<thead>
<tr>
<th>Township</th>
<th>Range</th>
<th>Parcel address</th>
<th>Adjacent to the Burlington Northern MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2N</td>
<td>15E</td>
<td>Facility H, Goldendale WA 98620</td>
<td></td>
</tr>
<tr>
<td>Section &amp; Qtr. Section</td>
<td>10</td>
<td>County: Klickitat</td>
<td></td>
</tr>
<tr>
<td>Tax Lot No(s):</td>
<td>02150300000800</td>
<td>Parcel Size (acres):</td>
<td>0.92</td>
</tr>
<tr>
<td>Existing use of parcel:</td>
<td>Telecommunications tower</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Use of adjacent parcels: | Public utilities |

## Project description:

This should include all proposed activities and details on size, height, exterior colors, and construction materials of proposed structures. Any areas of ground disturbance and landscaping details should also be described. It is important to describe all aspects of your project so that you may gain approval for all of the development activities you plan to do.

Adding LTE 4C project is comprised of removing (3) existing antennas and replacing with (3) new antennas measuring 72.4" high, 27.2" wide, and 7.7" deep; removing (3) RRH units, and replacing with (3) new RRHs measuring 28.7" high, 15.3" wide, and 9.4" deep; removing DC6 surge protection at top of tower and replacing with new DC9 squid, and new DC cable. New steel pipes measuring 8’ will be installed to support new equipment weight. Current concealment elements will be observed with new equipment. There will be no change to the overall height of the support tower, nor will any impact be made to ground footprint.
Site Plan

A plan drawn in black ink at a scale of 1 inch equals 200 feet (1:2400) or at a scale providing greater detail must be included with the application.

If the parcel is very large, you may show on the portion of the parcel affected by the proposed use. Be sure, however, to show enough of the parcel or some adjacent features, such as roads, so that the planners can orient themselves on your map. A small vicinity map showing the subject parcel and surrounding parcels may help.

At a minimum, you must show the following features; other site plan information may be required depending on the type or location of development being proposed.

- applicant(s) name
- location and width of existing and proposed roads, driveways, and trails
- scale and north arrow
- location and size of all existing and proposed structures
- boundaries of parcel with dimensions and size
- location of existing and proposed services including wells or other water supplies, sewage disposal systems, power and telephone poles and lines and outdoor lighting
- significant terrain features or landforms
- location and depth of all proposed grading and ditching
- groupings and species of trees or other vegetation on the parcel
- location and species of vegetation that would be removed or planted
- bodies of water and water courses
1. EXISTING ANTENNA PLAN

2. PROPOSED ANTENNA PLAN

[Diagram of existing and proposed antenna plans with textual annotations and dimensions]
## HRO4 Antenna and Equipment Schedule HRO4 L2 PCS BWE

### Existing Antenna Schedule

<table>
<thead>
<tr>
<th>Sector</th>
<th>Tech</th>
<th>Azimuth</th>
<th>Manufacturer</th>
<th>Model No. (Ports)</th>
<th>Size &amp; Weight</th>
<th>Status</th>
<th>Rack/Tray</th>
<th>Cables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USG/1000</td>
<td>L107</td>
<td>Kyocera</td>
<td>60010705</td>
<td>700x172x64 (130 Ib)</td>
<td>Existing</td>
<td>35-0.0</td>
<td>-</td>
</tr>
</tbody>
</table>

### New Antenna Schedule

<table>
<thead>
<tr>
<th>Sector</th>
<th>Tech</th>
<th>Azimuth</th>
<th>Manufacturer</th>
<th>Model No. (Ports)</th>
<th>Size &amp; Weight</th>
<th>Status</th>
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<td>60010705</td>
<td>700x172x64 (130 Ib)</td>
<td>Existing</td>
<td>35-0.0</td>
<td>-</td>
</tr>
</tbody>
</table>

* Denote equipment on ground.

## SITE INFORMATION

- **SITE ID:** HRO4
- **RFDS NAME:** HRO4 L2 PCS BWE
- **SITE NAME:** Haystack Butte
- **SITE ADDRESS:** Adjacent to the Burlington Northern Rail Facility H Goldendale, WA 98620

## SHEET DESCRIPTION

- **ANTENNA AND EQUIPMENT SCHEDULE**
- **Sheet No.:** A-6

### Scale Information

- **Driving Scale:** 1/1000 scale on 1/4" = 1'-0"
- **Drawing Scale:** 1/1000 scale on 1/4" = 1'-0"
- **Drawing Title:** HRO4 L2 PCS BWE

### Notes

- DC 7/8" Cable
- DC Power Cable
- Fire Proof Cable
### Mechanical Specification:

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>8 x 4.3 -10 female</td>
</tr>
<tr>
<td>Connector Position</td>
<td>Bottom</td>
</tr>
<tr>
<td>Lightning Protection</td>
<td>DC grounded</td>
</tr>
<tr>
<td>Height mm (inch)</td>
<td>1840 (72.4)</td>
</tr>
<tr>
<td>Width mm (inch)</td>
<td>690 (27.2)</td>
</tr>
<tr>
<td>Depth mm (inch)</td>
<td>196 (7.7)</td>
</tr>
<tr>
<td>Antenna Weight kg (lb)</td>
<td>36 (78)</td>
</tr>
</tbody>
</table>

**NOTE:** RADIO NOT SHOWN FOR CLARITY

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**PROPOSED CMA-UBTULBULBH-6512-17-21 ANTENNA DETAIL**

**PROPOSED RRH B2S/B66 4T4R 320W (AA118) DETAIL**

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**PROPOSED ANTENNA MOUNTING DETAIL**

**PROPOSED RRH MOUNTING DETAIL**

**PROPOSED MOUNTING BRACKET**

**PROPOSED AT&T JC PANEL ANTENNA**

**NOTE:** RADIO NOT SHOWN FOR CLARITY

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**SITE INFORMATION**

**SITE ID:** HR04

**RFDS NAME:** HR04 L2 PCS BNE

**SITE NAME:** HAYSTACK BUTTE

**SITE ADDRESS:**

ADJACENT TO THE BURLINGTON NORTHERN PACIFIC FACILITY H

GOLDENHILL, WA 98820

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**EQUIPMENT DETAILS**

**Sheet No.:** A-7
INSTALLATION NOTES:
- Install a new 2.375" 50440 pipe face horizontal at 9° below the existing single angle top face horizontal.
- Connect all the proposed/existing antenna pipe mounts to the new face horizontal, using pipe to pipe clamps.
- Replace the antenna pipe mounts from Alpha sector, Pos. A6, and Beta & Gamma sectors, Pos. A1, with a new pipe configuration. If possible, the new pipe mounts should be vertically centered between the current and new pipe mounts, and the new pipe mounts should be horizontally centered between the current and new pipe mounts. The new pipe mounts should be installed on the lower leg.
- Add a new SPS-1 stabilizer ke connecting the proposed face horizontal to the tower leg.

COMPONENT NOT SHOWN FOR CLARITY.

ONLY ONE SECTOR SHOWN FOR CLARITY.

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>QTY</th>
<th>Kit No./Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td></td>
<td>Proposed pipe to pipe</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>23.375&quot; x 0.25&quot;, 8' long</td>
</tr>
<tr>
<td>1</td>
<td>92302</td>
<td>Sector frame reinforcement kit</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>2-3/8&quot; U bolt</td>
</tr>
<tr>
<td>3</td>
<td>92301</td>
<td>2-3/8&quot; x 0.25&quot;, 8' long</td>
</tr>
</tbody>
</table>

GENERAL NOTES:
1. All pipe steel to be ASTM A606 Grade C.

EQUIPMENT NOT SHOWN FOR CLARITY.
ONLY ONE SECTOR SHOWN FOR CLARITY.
GEOTECHNICAL REPORT

Client Site Number: HR04
Site USID: 11056
FA Number: 10092226
Site Name: Haystack Butte

Site Data: Adjacent to the Burlington Northern MW Facility H
Goldendale (Klickitat County), Washington 98620
Latitude 45° 40' 46.891'' N, Longitude 120° 54' 50.378'' W
Existing 80-ft 4-Legged Self-Support Tower

GPD Group is pleased to submit this Geotechnical Report for the aforementioned tower. The purpose of the following report is to summarize the soil/rock conditions encountered during the subsurface exploration at this site and provide geotechnical engineering parameters for structural evaluation of the existing tower foundation system.

We at GPD Group appreciate the opportunity to provide continuing professional services to you. Please feel free to contact us with any questions or if you need additional assistance.

Respectfully Submitted,

[Signature]

Jordan S. Kirkendoll, P.E.
GPD Group, Professional Corporation

Attachments: Site Location Map
Satellite Photograph
Topographic Map
Boring Log
GEOTECHNICAL EXPLORATION

Drilling and soil sampling was performed by Western States Soil Conservation, Inc. using a truck-mounted CME-75 drill rig with hollow-stem augers and an automatic SPT hammer. One (1) sample boring was drilled near the tower foundation. Representative samples were obtained by the split-barrel sampling procedure in general accordance with appropriate ASTM standards. In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N). Sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the attached boring log. The samples were sealed and mailed to our laboratory for soil classification in general accordance with appropriate ASTM standards.

The subsurface conditions encountered at the boring location are indicated on the attached boring log. The stratification boundaries on the boring log represent the approximate location of changes in soil/rock types; in-situ, the transition between materials may be gradual. The boring log includes visual classifications of the materials encountered during drilling as well as the driller’s interpretation of the subsurface conditions between samples.

ROCK EXPLORATION

The boring was advanced into the rock using core drilling procedures in general accordance with the appropriate ASTM standard. The rock was classified in the field and the “percent recovery” and rock quality designation (RQD) values were determined.

The “percent recovery” is the ratio of the sample length retrieved to the drilled length, expressed as a percent. An indication of the actual in-situ rock quality is provided by calculating the sample’s RQD. The RQD is the percentage of the length of broken cores retrieved which have core segments at least 4 inches in length compared to each drilled length. The percent recovery and RQD are related to rock soundness and quality as illustrated below:

<table>
<thead>
<tr>
<th>Table 1: Rock Quality Designation (RQD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relation of RQD and In-situ Rock Quality</td>
</tr>
<tr>
<td>RQD (%)</td>
</tr>
<tr>
<td>90 - 100</td>
</tr>
<tr>
<td>75 - 90</td>
</tr>
<tr>
<td>50 - 75</td>
</tr>
<tr>
<td>25 - 50</td>
</tr>
<tr>
<td>0 - 25</td>
</tr>
</tbody>
</table>

Classification and descriptions of rock core samples are based on visual and tactile observations. Petrographic analysis of thin sections may indicate other rock types. Percent recovery and rock quality designation (RQD) were calculated for these samples and are noted at their depths of occurrence on the boring log.

SOIL CLASSIFICATION

The soil samples were classified in general accordance with the appropriate ASTM standard based on visual observation, texture and plasticity. Estimated group symbols according to the Unified Soil Classification System are given on the attached boring log.
GROUNDWATER

Groundwater was not encountered during drilling operations as noted on the attached boring log. It should be noted that fluctuations in the groundwater level can occur and perched water can develop over low permeability soil or rock strata following periods of heavy or prolonged precipitation. Long term monitoring in cased holes or piezometers would be necessary to accurately evaluate the potential range of groundwater conditions on the site.

GEOTECHNICAL RECOMMENDATIONS

Based on the results of this study, the following net design parameters may be used to evaluate the capacity of the foundation system. A factor of safety of 3 should be applied to the ultimate bearing pressure values provided below. The cohesion, internal angle of friction and unit weight parameters along with the vertical modulus of subgrade reaction and sliding friction coefficient values given in the following table are based on the results of the sample boring, published values and our past experience with similar soil/rock types. These values should, therefore, be considered approximate.

Table 2: Self-Support Tower – Individual Pad and Pier – Ultimate Design Parameters

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>USCS</th>
<th>Unit Weight (pcf)</th>
<th>Ultimate Bearing Pressure (psf)</th>
<th>Sliding Friction Coefficient @ Base</th>
<th>Vertical Modulus of Subgrade Reaction (pci)</th>
<th>Internal Angle of Friction (Degrees)</th>
<th>Cohesion (psf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 3</td>
<td>SP</td>
<td>115</td>
<td>Ignore</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3 – 6</td>
<td>SP</td>
<td>120</td>
<td>3,000</td>
<td>0.40</td>
<td>50</td>
<td>34</td>
<td>0</td>
</tr>
<tr>
<td>6 – 9.5</td>
<td>SP</td>
<td>115</td>
<td>6,000</td>
<td>0.35</td>
<td>100</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>9.5 – 13</td>
<td>SP</td>
<td>115</td>
<td>12,000</td>
<td>0.35</td>
<td>200</td>
<td>32</td>
<td>0</td>
</tr>
</tbody>
</table>

*Highly weathered Basalt sampled as poorly graded sand.

The above parameters are provided for the evaluation of the existing tower foundation system. In the event that modifications or new tower construction is required, these parameters are not considered valid and GPD Group should be notified immediately to provide appropriate design parameters, as warranted.

QUALIFICATIONS

The analysis and recommendations presented in this report are based upon the data obtained from the boring performed at this site and from other information discussed in this report. This report does not reflect variations that may occur across the site or due to the modifying effects of weather.

This report has been prepared for the exclusive use of Smartlink Group for specific application to the project discussed herein and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either expressed or implied, are intended or made. In the event that changes in the nature or design as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless GPD Group reviews the changes and either verifies or modifies the conclusions of this report in writing.

The scope of services for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken.
GPD Job Number: 2021723.11056.01
Date: December 2020

SITE LOCATION MAP
Site Name: Haystack Butte
Site USID: 11056
GPD Job Number: 2021723.11056.01
Date: December 2020
GPD Job Number: 2021723.11056.01

Date: December 2020

Site Name: Haystack Butte
Site USID: 11056
GPD Job Number: 2021723.11056.01
Date: December 2020
**Boring Number: B-1**

**CLIENT**  Smartlink Group  
**PROJECT NUMBER**  2021723.11056.01  
**PROJECT NAME**  Hastack Butte  
**PROJECT LOCATION**  Goldendale, Washington  

**DATE STARTED**  November 23, 2020  
**COMPLETED**  November 23, 2020  
**GROUND ELEVATION**  [ ]  
**HOLE SIZE**  [ ]  
**GROUND WATER LEVELS:**  

**DRILLING CONTRACTOR**  Western States Soil Conservation, Inc.  
**DRILLING METHOD**  Hollow Stem Auger & Rock Coring  

**LOGGED BY**  Tyler Gaebler  
**CHECKED BY**  Dustin Vincent  
**AT TIME OF DRILLING**  --- DRY  
**AT END OF DRILLING**  --- DRY  

**NOTES**  CME-75 Drill Rig with Automatic SPT Hammer

<table>
<thead>
<tr>
<th>DEPTH (ft)</th>
<th>MATERIAL DESCRIPTION</th>
<th>SAMPLE TYPE NUMBER</th>
<th>RECOVERY %</th>
<th>BLOW COUNTS (N VALUE)</th>
<th>POCKET PEN. (tsf)</th>
<th>MOISTURE CONTENT (%)</th>
<th>LIQUID LIMIT</th>
<th>PLASTIC LIMIT</th>
<th>ATTERBERG LIMITS</th>
<th>PLASTICITY INDEX</th>
<th>FINES CONTENT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Highly weathered BASALT sampled as: Medium Dense dark red medium to coarse SAND (SP) with highly weathered basalt fragments</td>
<td>SS 1</td>
<td></td>
<td>11-11-10 (21)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Dense below 3 feet</td>
<td>SS 2</td>
<td></td>
<td>8-14-17 (31)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Medium dense below 6 feet</td>
<td>SS 3</td>
<td></td>
<td>18-12-12 (24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Very dense below 13 feet</td>
<td>SS 4</td>
<td></td>
<td>15-13-11 (24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Dark red, vuggy, highly weathered, BASALT</td>
<td>SS 5</td>
<td></td>
<td>19-10-9 (19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Weathered below 23 feet</td>
<td>SS 6</td>
<td></td>
<td>38-35-20 (55)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SS 7</td>
<td></td>
<td>50/6^*</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RC 8</td>
<td></td>
<td>25 (0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Boring terminated at 28.0 feet