City of Millersburg **April 5, 2024**
DECISION

File No: SP 24-01 T Mobile Communications Facility Modifications

Proposal: The applicant is proposing a minor modification to an approved communictaions facility permit, last modified in 2001, by co-locating 6 new antennas to an existing cell tower and to build an additional equipment shelter within the existing lease area.

I. BACKGROUND

A. Applicant: Vinh Dinh for ATC and T Mobile

B. Location: 3025 NE Kathryn Street

C. Review Type: The proposed Site Development Review Minor Modification, pursuant to the Development Code section 5.16.060, requires a Type I permit. A Type I permit is a staff level, ministerial review, and does not require a hearing or public notice. The Development Code explains that the Planning Director has the ability to determine if a Site Development Minor Modification requires a Type I or II process. Staff has elected to use the Type I review because the proposal will have no impacts on any neighbors. The difference between a major and minor modification is discussed below in more detail.

D. Public Notice and Hearing: No notice is required for a Type I permit.

E. Review Criteria: Chapter 5.16.060 Modifications to approved plans and conditions.

F. Current Zoning: Light Industrial (LI)

G. Proposed Zoning: N/A

H. Property Size: The communications facilities are on a leased portion of a property that also features a warehouse. The entire site is 2.93 acres. The leased area is 2,500 square feet.

I. Background: The site currently features two approved communications towers and two equipment shelters. T Mobile is proposing to add service to one of the existing towers by adding a new array of 6 antennas, located 5 feet below the existing array. The site is located behind an existing warehouse and is generally not visible by any residential area. The proposal will not make the existing tower any taller. The proposal will add a new shelter to the site, to house T Mobile equipment, however, that will not be visible from any public right of way. The same project was submitted to the City and approved as SP 22-01 in 2022, but the entitlement expired. The 2024 submitted application differs slightly from the version that was approved by the City in 2022, but is substantially the same.

II. AFFECTED AGENCY, PUBLIC NOTICE, AND PUBLIC COMMENTS

Agencies:
The applicant's Site Development Review modification did not have any impacts to other agencies.

Public:
No notice is required.

III. CRITERION

CITY OF MILLERSBURG DEVELOPMENT CODE

The applicable CUP criterion are from Code Section 5.16.060. All analysis and findings below are in addition to those provided by the applicant, which are included by reference.

5.16.060 Modifications to Approved Plans and Conditions.

(2) Applicability. This Section applies when an applicant proposes to modify an approved application or condition of approval.

ANALYSIS: The applicant is proposing to add a new array of 6 antennas to an existing communications tower and to add a new equipment shelter to the existing lease area.

FINDINGS: The proposal meets the qualifications above and is therefore considered a modification to approved plans.

(3) Major Modification. The Planning Commission reviews applications for major modifications through the Type III procedure under Section 5.19. Any one of the following changes constitutes a major modification:

a. A change in land use, from a less intensive use to a more intensive use, as evidenced by parking, paved area, an estimated increase in automobile or truck trips (peak and/or average daily trips), an increase in hours of operation, an increased demand for parking, additional paved area, or similar factors, where the increase is 10 percent or more, provided the standards of Article II and Article III are met;

b. A reduction in required setbacks, or an increase in lot coverage, by 10 percent or more, provided the standards of Article II and Article III are met;

c. A change in the type and/or location of vehicle access points or approaches, driveways, or parking areas affecting off-site traffic when the roadway authority determines the change could cause a significant adverse impact on traffic operations or safety (i.e., requiring mitigation);

d. A reduction to screening, or a reduction to the area reserved for common open space or landscaping by 10 percent or more;

e. Change to a condition of approval, or a change similar to subsections a-d, above, that could have a detrimental impact on adjoining properties. The City Manager shall have discretion in determining detrimental impacts triggering a major modification; or

f. Other changes similar to those in subsections a-e, above, in scale, magnitude, or impact to adjacent properties, as determined by the City Manager.

ANALYSIS: The proposed modifications do not qualify as a major modification. The proposal is not changing land uses. The proposal will intensify the use of the site because it will add more antennas and equipment; however, subsection a above specifically lists the kinds of impacts that qualify as triggering a major modification. The entre communications facility is not open to the public and is unmanned except for occasional maintenance. Therefore, the additional equipment will not result in more traffic at the location of the site, additional operating hours, or more parking need. The equipment may result in an intensification of more than 10% of the existing use (measured in terms of equipment), however the nature of the project is such that the change will not increase human interaction to a level that would trigger a major modification. There are no requests for a reduction in any setbacks or access. No screening was, or is, needed due to the location of the facility behind a warehouse. No condition of approval changes are requested. Finally, the proposal will not have an impact in scale or magnitude that will impact or effect the neighbors in any way.

FINDINGS: The proposal does not meet the qualifications above for a major modification and, therefore, qualifies as a minor modification.

(4) Major Modification Applications. Applications for modifications to approved plans shall include a description of the approved project proposed for changes, the proposed changes, the existing conditions, a site plan, information on any existing and any proposed restrictions or covenants, and the same information required in Section 5.06.040. An application for modifications to approved plans shall also contain a narrative report or letter responding to the applicable approval criteria.

FINDINGS: This section does not apply.

(5) Major Modification Approval Criteria. Requests for major modifications shall conform to all of the following procedures and criteria:

a. The application shall be subject to the same approval criteria used for the initial project approval; except that a modification adding a conditional use to a project approved without a conditional use shall require findings in conformance with Section 5.04.050;

b. The scope of review shall be limited to the modification request. For example, a request to modify a commercial development's parking lot shall require site design review only for the proposed parking lot and any changes to associated access, circulation, etc.; and

c. The Planning Commission shall approve, deny, or approve with conditions an application for major modification based on written findings on the applicable Code criteria.

FINDINGS: This section does not apply.

(6) Minor Modification. The Planning Director through a Type I or II procedure, depending on whether the proposal involves the exercise of discretion, shall review proposals for minor modifications. Minor modifications include technical corrections to comply with codes and regulations, and changes that fall below the thresholds in 5.16.060(3) as determined by the Planning Director. A minor modification is a change to an approved plan or condition of approval that does not meet any of the thresholds for a major modification listed in Section 5.16.060(3).

ANALYSIS: As discussed in Section 1 of this staff report, the proposal will have no impacts to the neighboring properties and is located behind a warehouse placed to the east of the lease area. The site is not visible by any public right of way (except the antennae). Therefore, the proposed changes all fall below the thresholds of 5.16.060(3).

FINDINGS: As determined by the Community Development Director, the project does not meet the thresholds established in the Development Code Section 5.16.060(3) and is therefore a Minor Modification.

(7) Minor Modification Applications. An application for minor modification shall include an application form, filing fee, letter describing the modification, and site plan using the same plan format as in the original approval. The Planning Director may require other relevant information, as necessary, in evaluating the request.

ANALYSIS: All required materials were submitted.

FINDINGS: The requirements for the application were met and the application was deemed complete on April 1, 2024.

(8) Minor Modification Approval Criteria. The Planning Director, or the Planning Commission in the case of an appeal of a Type II decision, shall approve, deny, or approve with conditions an application for minor modification based on findings of compliance or noncompliance with the applicable requirements of the Development Code and the conditions of approval of the original decision.

ANALYSIS: The proposal is consistent with the original conditions of approval for the 2001 approval. The project does not comply with all development standards, however, that is irrelevant because Federal Regulations do not allow a local jurisdiction to deny a permit for a modification if the modification is less than substantial. See the analysis below.

FINDINGS: While the proposed project is not consistent with the City's development standards, the proposal is not considered a substantial change pursuant to federal regulations, therefore the City is not permitted to deny a permit based an inconsistency with the development standards.

IV. STANDARDS

Chapter 3.27 regulates wireless communications facilities in Millersburg. As discussed below in detail, the project does not comply with all City regulations. The following analysis is a summary of only the applicable standards or items that required additional explanation.

CHAPTER 3.27. WIRELESS COMMUNICATION FACILITIES

3.27.030 Review Procedures: Use Permits and Review Processes.

As noted in the table below, Wireless Communications Facilities are permitted by a variety of use permits and review processes, depending on the type or scope of development activity.

Table 21 Wireless Communication Facility Permits	
Wireless Communication Facility Permits	
Type of Use Permit and Review Process	***Type or Scope of Development Activity***
Outright Permitted other than Required Building Permits	**Co-Location on an existing WCF**
Administrative Review (Type I)	**• Attachment to an existing structure within the parameters of the zone requirements • Modifications to an existing WCF accessory structure or equipment within the parameters of the zone requirements**
Conditional Use (Type III)	**• New WCF • Modifications of an existing WCF that exceed the standards of the zone**
Conditional Use and Variance (Type III)	**• New WCF or modification of an existing WCF that exceeds the height standard of a zone**
Notes: 1. Height standards for each zone are found in Article II. 2. The maximum permissible height, even though the variance process, is 150 feet for a WCF in any zone. 3. In the Industrial zones, the maximum permissible height for a WCF is 150 which does not require a variance.	

ANALYSIS: As outlined in the table above, because the applicant is proposing to co-locate antennae and build an additional equipment shelter, the review is a Type 1 review.

FINDINGS: The project is being processed as a Type I administrative review.

3.27.040 Siting Requirements.

(1) WCFs shall be sited in accordance with the following priorities. If the applicant proposes a facility of lower priority, the applicant shall demonstrate that each of the higher priorities has been considered and found to be not feasible.

(2) Priority #1: Co-location on an existing WCF.

(3) Priority #2: Use of an attached WCF.

(4) Priority #3: Siting of a new Wireless Communications Tower (WCT), in a visually obscure location, using design techniques maximizing "Visual Compatibility Characteristics."

(5) Priority #4: Siting of a new WCT in a visually prominent location (e.g., along arterials and collectors, on hills and ridges), using design techniques maximizing "Visual Compatibility Characteristics."

(6) Priority #5: Siting of a WCT in a visually prominent location (e.g., along arterials and collectors, on hills and ridges), not employing design techniques maximizing "Visual Compatibility Characteristics."

(7) Exemptions: Wireless communications facilities for emergency services (police, fire, and emergency management) are exempt from the above requirements if the siting agency can demonstrate the need for an exemption based on public safety and welfare issues. The review authority may also exempt local, state, and federal facilities, as well as facilities owned and operated by federally licensed amateur radio station operators (i.e., "ham" radio operations).

ANALYSIS: The proposal is fully consistent with the highest priority, which is to co-locate.

FINDINGS: This standard is met.

3.27.050 Standards and Requirements.

(1) Code Compliance Requirements. All WCFs shall meet all requirements established by the provisions of this Code, other applicable City codes, and other applicable standards.

(2) State and Federal Requirements. All WCFs shall comply with all applicable federal (e.g., Federal Communication Commission and Federal Aviation Administration) and State standards.

ANALYSIS: As outlined in this staff report, the project does not meet all Millersburg Development Code requirements. The applicant has provided materials with the application showing full consistency with all Federal requirements.

FINDINGS: While the proposed project is not consistent with the City's development standards, the proposal is not considered a substantial change pursuant to federal regulations, therefore the City is not permitted to deny a permit based an inconsistency with the development standards.

(3) Height.

a. A WCF may not exceed the height standards of a zone, except where permitted through the variance process.

b. Except in the Industrial zones, the maximum permissible height (even through the variance process) is 150 feet for a WCF in any zone.

c. In the Industrial zones, the maximum permissible height for a WCF is 150 feet which does not require a variance.

d. The height of a WCF shall be measured as per building code standard procedures from the center of the base of the proposed facility to the topmost portion of the WCF (e.g., the tip of the highest antenna or other transmission or reception device).

e. Airport Overlay Zones: All lands within the airport overlay zones (e.g., approach surface, transitional zone) shall be subject to additional height restrictions and development standards.

ANALYSIS: The tower height is not changing. The existing tower is under 150 feet (the existing tower is 100 feet tall). The facility is located within the Airport Approach Area Overlay Zone (AAO). This was addressed during the approval of the project previously, and the height of the tower is not changing as a result of this proposal. The project is located within the horizontal surface zone. This requires the proposal to be under 372 feet above sea level. The site is 216 feet above sea level.[1] If the tower is 100 feet tall, the total height for the project is 316 feet above sea level.

FINDINGS: This standard is met.

(4) Co-Location.

a. New WCFs, if technically feasible, will be designed and constructed for at least three antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights. At a minimum, WCFs up to 120 feet in height shall accommodate at least two facilities/providers.

b. A facility may be attached to any existing structure as long as the height of that structure is not increased by more than 10 feet and so long as it meets all relevant requirements of this Chapter, consistent with applicable building codes.

c. A free-standing WCF shall be approved only if the applicant demonstrates that it is not feasible to site the facility on an existing structure. The application shall contain documentation that alternative sites within a radius of least 2,000 ft have been considered and are technologically unfeasible or unavailable. The application also must document why co-location is impractical on existing structures for one or more of the following reasons: structural support limitations; safety considerations; lack of available space; failure to meet service coverage area needs; or unreasonable economic constraints.

ANALYSIS: The proposal is to co-locate antennae on an existing tower. The new antennae will be added 5 feet lower than the existing antennae.

FINDINGS: These standards are met.

(5) Construction.

[1] Found using https://www.freemaptools.com/elevation-finder.htm

a. All facilities must meet the requirements of the Uniform Building Code (UBC), the International Building Code (IBC) and/or the Oregon Structural Specialty Code, and all other relevant and applicable building codes.

b. Noise-generating equipment shall be sound-buffered by means of baffling, barriers, or other suitable means to reduce the sound level measured at the property line to no more than 30 dBA above the level of ambient background noise when adjacent to residential uses and 45 dBA above the level of ambient background noise in other areas.

c. It is prohibited to attach any communications facility or portion thereof to a tree.

d. WCFs shall be set back at least 25% of the tower height from all property lines or shall meet the setbacks of the underlying zone, whichever is greater.

e. Design: Where possible new facilities will be located in such a manner that they blend in with the background around them, using techniques to ensure visual compatibility characteristics.

i. All new WCF towers shall be a monopole or lattice tower structure constructed out of metal or other nonflammable material. The height and mass of the structure shall not exceed that which is essential for its intended use and public safety.

ii. All accessory structures (i.e., vaults, equipment rooms, utilities, and equipment enclosures) shall be concealed, buffered, or screened with mature vegetation and/or sight obscuring fencing, shall be consistent with the underlying zone, or may be placed underground. Underground placement of equipment shelters is encouraged and should be considered in each case.

iii. WCFs shall be painted in a non-reflective color to match the existing or attached structure and/or to blend into the surrounding environment to the greatest extent possible as seen from abutting uses, roadways or other public ways. Alternative colors or treatments of the external surfaces of any and all components of a WCF may be approved through the conditional use process to minimize the visual impact of the facilities, and such approved alternatives shall become part of the conditions of approval.

ANALYSIS: The existing tower was approved in 2001 and constructed in 2003. The City Development Code requirements outlined above were adopted in 2019. The existing facility is consistent with some of the provisions above, specifically a, because building permits were issued for the tower, b, because it will generate no noise, and c, because no trees are used. However, the existing facility and the proposed modifications do not comply with d or e.

Item D requires the facility to be setback from the property line by 25% the height of the tower. The tower is 100 feet tall, so the facility must be set back at least 25 feet from the property line. The 'facility' includes the tower and all equipment shelters. As designed, the new equipment shelter does not comply with this requirement. The proposed new shelter is 12.5 feet from the property line. The tower pole itself is also considered part of the facility and the pole is only 21 feet from the property line, which also does not comply. The code explains that the setbacks from the zone could be used if they are

greater; however, they are not. There are no setbacks to the west of this lot, so 25% of the pole height is the appropriate standard to employ.

In this case, however, the inconstancy with the local development standards are irrelevant. The Federal Government has regulations that dictate when a local government may or may not deny a permit for a co-location or modification of a wireless communications facility permit.

First, Title 47, Chapter I, Subchapter A, Part 1, Subpart U, Section 1.6100(b)(7) explains the definition of a substantial change to an existing wireless communications facility:

> ***(b)(7) Substantial change.*** *A modification substantially changes the physical dimensions of an eligible* ***support structure*** *{emphasis added} if it meets any of the following criteria:*
>
> *(iii) For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets;*
>
> *(iv) It entails any excavation or deployment outside of the current site, except that, for towers other than towers in the public rights-of-way, it entails any excavation or deployment of transmission equipment outside of the current site by more than 30 feet in any direction. The site boundary from which the 30 feet is measured excludes any access or utility easements currently related to the site.*

Second, the Federal regulations go on to explain that if the changes are not substantial the local government cannot deny a modification request:

> ***(c) Review of applications.*** *A State or local government may not deny and shall approve any eligible facilities request for modification of an eligible support structure that does not substantially change the physical dimensions of such structure.*

It should be noted that the term 'eligible support structure' is confusing in this context. The definition of substantial change in section (b)(7) explains that the term 'support structure' also includes site and cabinet changes.

To explain further, see the structure of the definitions section in (b)(7). The introduction to the definition of substantial change in section (b)(7) explains that a substantial change to a 'support structure' includes the criteria that follow the semicolon. The proceeding criteria includes 1) the numbers of equipment cabinets and 2) the excavation and deployment of the site. An analysis of each of these is detailed below.

First, the definition of substantial change includes a standard for the number of cabinets within the site. Criteria iii explains that a change is substantial if the applicant installs more than the standard number of cabinets on the site. The text explains that the standard number of cabinets is four. The site currently has two cabinets. The applicant is proposing to add a third. Thus, the addition of another equipment cabinet, which is considered a support structure, is not considered a substantial change. Again, this is critical to the review because if the proposal is not a substantial change, the City cannot deny the proposal.

Second, for purposes of this review staff considers the 'excavation and deployment' to include the construction of new equipment shelters, and staff considers the 'site' to mean the lease area. Therefore, because the proposed modifications are entirely

within the lease area, they do not trigger the criteria listed in the Federal regulations, and are therefore not a substantial change and the City of Millersburg does not have the ability to deny the permit based on any of these proposed changes.

In order to be clear, the following facts are established:

- The modifications proposed by the applicant are not considered substantial changes because:
    - The proposed modifications do not exceed 4 equipment cabinets on the site (the applicant is proposing the third).
    - All of the proposed modifications are within the existing lease area.
- Federal Regulations do not allow a local government to deny a permit if the proposed modification to an existing, approved communications facility are not substantial changes.

FINDINGS: While the proposed project is not consistent with the City's development standards, the proposal is not considered a substantial change pursuant to Federal Regulations, therefore the City is not permitted to deny a permit based an inconsistency with the development standards.

(6) Landscaping/Screening. All ground-level facilities associated with a WCF shall be landscaped and/or screened in accordance with the provisions of Article III of this Code. The facilities must be fully screened before operations can begin.

ANALYSIS: Screening is required when visible from residential areas. This site is not visible from any residential areas.

FINDINGS: This standard does not apply.

(7) Lighting. No lighting shall be permitted on a WCF except as required for security and as required by the Federal Aviation Administration.

ANALYSIS: No additional lighting is proposed.

FINDINGS: This standard is met.

(8) Location.

a. No communications facility shall be installed on an exposed ridge line unless it blends with the surrounding existing natural and man-made environment in such a manner as to be visually compatible with the environment.

b. No communication facility shall be installed within 250 feet of a residential zone.

ANALYSIS: The project is not on a ridge, it is located behind a warehouse facility. The project is located within 250 feet of a residentially zoned area, however, as stated above, Federal Code Title 47, Chapter I, Subchapter A, Part 1, Subpart U, Section 1.6100(c) explains that a local government cannot deny a request for modification of facility if it is deemed to be a less than substantial change, which this is.

FINDINGS: While the proposed project is not consistent with the City's development standards, the proposal is not considered a substantial change pursuant to federal regulations, therefore the City is not permitted to deny a permit based an inconsistency with the development standards.

(9) Signs. Signs shall comply with the requirements set forth in this Code.

ANALYSIS: No additional signage is proposed.

FINDINGS: This standard does not apply.

(10) Twenty-Four Hour Emergency Contact Information. As part of the submittal requirements, all owners of WCFs shall provide 24-hour contact information to the City so as to facilitate emergency response. Such information must be kept current and on file with the City, Sheriff's Office, and Fire District.

ANALYSIS: All required information has been provided.

FINDINGS: This standard is met.

(11) Facilities on City-Owned Property. When a proposed WCF would be sited on property owned by the City, the City shall exercise its zoning authority under this Code independently from and without regard to the terms and conditions of any agreement allowing the facility.

ANALYSIS: The lease area is not on City property.

FINDINGS: This standard does not apply.

V. ACTION

Based on the above findings of fact, and the conditions of approval, the proposed project does not satisfy all the applicable City criteria and standards, however, Federal Regulations require a local government to approve any modifications to a communications facility if the change is not considered a substantial change as defined in the Federal Regulations. The proposed change is not considered a substantial change, therefore, the City approves the application.

VI. CONDITIONS OF APPROVAL

General Conditions:

1. This land use approval shall substantially comply with the submitted preliminary plans included as Exhibit A, except as indicated in the following conditions. Additional development or change of use may require a new development application and approval.

2. Copies of any required federal or state permits that may be required shall be filed in the Record File of this application.

3. This approval does not negate the need to obtain permits as appropriate from other local, state, or federal agencies, even if not specifically required by this decision.

4. Stormwater:
   a. Obtain a 1200C Erosion Control Permit and a City of Millersburg Erosion Prevention and Sediment Control (EPSC) Permit for all the disturbed ground, both on and off site that is in excess of one acre. A minor EPSC Permit is required for disturbances under 1 acre. The applicant shall follow the latest requirements from DEQ for NPDES 1200-C Permit submittals.
   b. Stormwater facilities shall be designed and constructed in accordance with the City of Millersburg Engineering Standards. A grading permit is required for earthwork in excess of 50 cubic yards; a storm drainage report and grading plan shall be submitted for review. A final grading and stormwater inspection will be required prior to issuance of a certificate of occupancy.

Prior to Grading:

5. The applicant must obtain a City of Millersburg Erosion Control Permit and Grading Permit prior to construction.

6. Stormwater:
   - Obtain a 1200C Erosion Control Permit and a City of Millersburg Erosion Prevention and Sediment Control (EPSC) Permit for all the disturbed ground, both on and off site that is in excess of one acre. A minor EPSC Permit is required for disturbances under 1 acre. The applicant shall follow the latest requirements from DEQ for NPDES 1200-C Permit submittals.
   - Stormwater facilities shall be designed and constructed in accordance with the City of Millersburg Engineering Standards. A City of Millersburg Grading Permit is required for this work.

VII. NOTICES TO THE APPLICANT

The applicant should also be aware of the following standards and processes that are required for development. These are not part of the decision on this land use case and are provided as a courtesy to the applicant. Please contact City Hall with any questions.

1. Compliance with the Conditions of Approval is the responsibility of the developer or its successor in interest.

2. Dust shall be controlled within the development during construction and shall not be permitted to drift onto adjacent properties.

3. **This approval is valid for a period of two (2) years from the date of the decision notice.** Extensions may be granted by the City as afforded by the Millersburg Development Code.

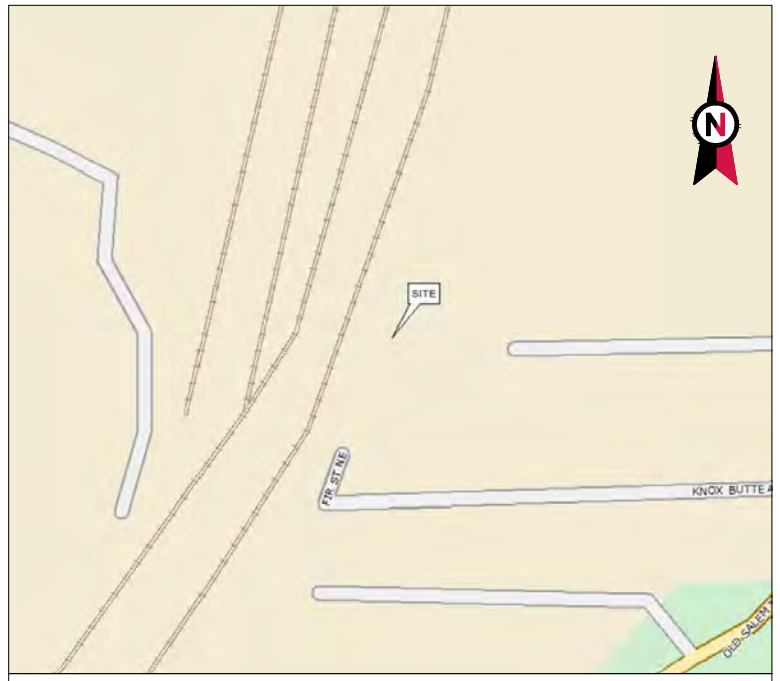
4. The continual operation of the property shall comply with the applicable requirements of the Millersburg Development Code.

5. Noise shall be kept at the minimum level possible during construction. The developer shall agree to aggressively ensure that all vehicles working in the development shall have adequate and fully functioning sound suppression devices installed and maintained at all times.

6. All construction sites shall be maintained in a clean and sanitary condition at all times. Construction debris includes food and drink waste. All waste shall be contained on-site in proper containers or construction fencing enclosures and shall leave the construction site in proper disposal containers. Failure to comply with this condition may result in a "Stop Work" order until deficiencies have been corrected to the satisfaction of the City.

VIII. EXHIBITS

A. Applicant's Site and development plans



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: MILLERSBURG1 OR
ATC SITE NUMBER: 413487
T-MOBILE SITE NAME: TALKING WATER - ATC
T-MOBILE SITE NUMBER: PO06009A
SITE ADDRESS: 3025 KATHRYN ST
ALBANY, OR 97321-4515

LOCATION MAP

T-MOBILE COVERAGE STRATEGY COLLOCATION PLAN
56790EAH_SR_T_6x24 CONFIGURATION

COMPLIANCE CODE

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

1. 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
2. 2021 OREGON ELECTRICAL SPECIALTY CODE (OESC)
3. 2021 INTERNATIONAL BUILDING CODE (IBC)
4. 2020 NATIONAL ELECTRIC CODE (NEC)
5. LOCAL BUILDING CODE
6. CITY/COUNTY ORDINANCES

PROJECT LOCATION DIRECTIONS

FROM T-MOBILE OFFICE (8960 NE ALDERWOOD RD) : GET ON I-84 W/US-30 W FROM NE ALDERWOOD RD, NE 105TH AVE AND NE 102ND AVE. FOLLOW I-5 S TO OLD SALEM RD NE IN MILLERSBURG. TAKE EXIT 235 FROM I-5 S. CONTINUE ON OLD SALEM RD NE. DRIVE TO FIR ST NE

UTILITY COMPANIES

POWER COMPANY: PACIFICORP
PHONE: (888) 221-7070

TELEPHONE COMPANY: CENTURYLINK
PHONE: (844) 712-1506

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

PROJECT SUMMARY

SITE ADDRESS:

3025 KATHRYN ST

ALBANY, OR 97321-4515

COUNTY: LINN

GEOGRAPHIC COORDINATES:

LATITUDE: 44.6454

LONGITUDE: -123.0676

GROUND ELEVATION: 219' AMSL

ZONING INFORMATION:

JURISDICTION: CITY OF MILLERSBURG

TAXLOT NUMBER: 11S03W04BC00201

PROJECT TEAM

TOWER OWNER:
AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:
T-MOBILE
8960 NE ALDERWOOD RD
PORTLAND, OR 97002

ENGINEER:
TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530

T-MOBILE PM:
KATE ETZEL
KATE.ETZEL@T-MOBILE.COM

PROPERTY OWNER:
SULLIVAN ALTON E & DIXIE G
3075 KATHRYN ST NE

PLANNING APPLICANT:
VINH DINH
VINHD@TEPGROUP.NET
(206) 295-5926

PROJECT DESCRIPTION

TOWER SCOPE:
INSTALL (1) RMQP-496-HK PLATFORM MOUNT W/ HANDRAIL KIT
INSTALL (3) FFVV-65C-R3-V1 ANTENNAS
INSTALL (3) AEHC ANTENNAS
INSTALL (3) AHLOB RRHs
INSTALL (3) AHFII RRHs
INSTALL (2) 6/24 4AWG HYBRID TRUNKS (LENGTH: 40m)
INSTALL (9) 15' FIBER JUMPERS

GROUND SCOPE:
INSTALL (1) 10 FT X 15 FT CONCRETE PAD
INSTALL (1) ICE BRIDGE
INSTALL (1) 10' X 10' ICE CANOPY WITH (2) SITE LIGHTS AND GFI IN WEATHERPROOF HOUSING
INSTALL (1) H-FRAME WITH (1) 225A PPC, (1) LEC CUBE, AND (1) TIMER/SWITCH
INSTALL (1) NEW METER NEXT TO EXISTING PACIFICORP METER
INSTALL (1) PURCELL HPL3.1 600A SITE SUPPORT CABINET AND (1) PURCELL LB3 BATTERY CABINET
INSTALL (1) 2" CONDUIT FOR POWER
INSTALL (1) 2" CONDUIT FOR FIBER
INSTALL IN HPL3.1 600A:
(1) ASIA, (2) ASILs, (2) AMIAs, (3) ABIAs, (3) ABILs, (1) ABIO, AND (1) CSR IXRE V2

RFDS VERSION: 1
DATE: 01/17/2024

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

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AMERICAN TOWER®

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24
1	100% CONSTRUCTION	EGG	01/30/24
2	100% CONSTRUCTION	SSP	02/27/24

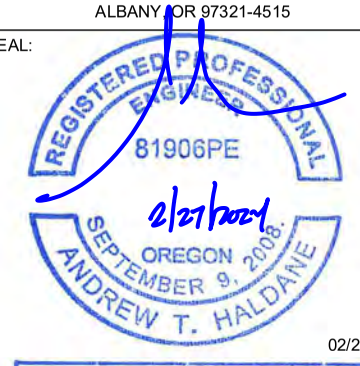
ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-4515

SEAL:



02/27/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	2

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   - G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
   - H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
   - I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T-MOBILE PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
2. MIX DESIGN SHALL BE APPROVED BY T-MOBILE REP PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C150, TYPE 2
REINFORCEMENT:	ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE:	ASTM C33
WATER:	ASTM C 94/C 94M
WELDED WIRE FABRIC:	ASTM A185
ADMIXTURES:	
-WATER-REDUCING AGENT:	ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGENT:	ASTM C 260/C 260M
-SUPERPLASTICIZER:	ASTM C494, TYPE F OR TYPE G
-RETARDING:	ASTM C 494/C 494M, TYPE B

5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
16. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
18. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
22. SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

1. ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF ATC. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

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TOWER ENGINEERING PROFESSIONALS
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www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24

ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-4515

SEAL:

01/15/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	01/15/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

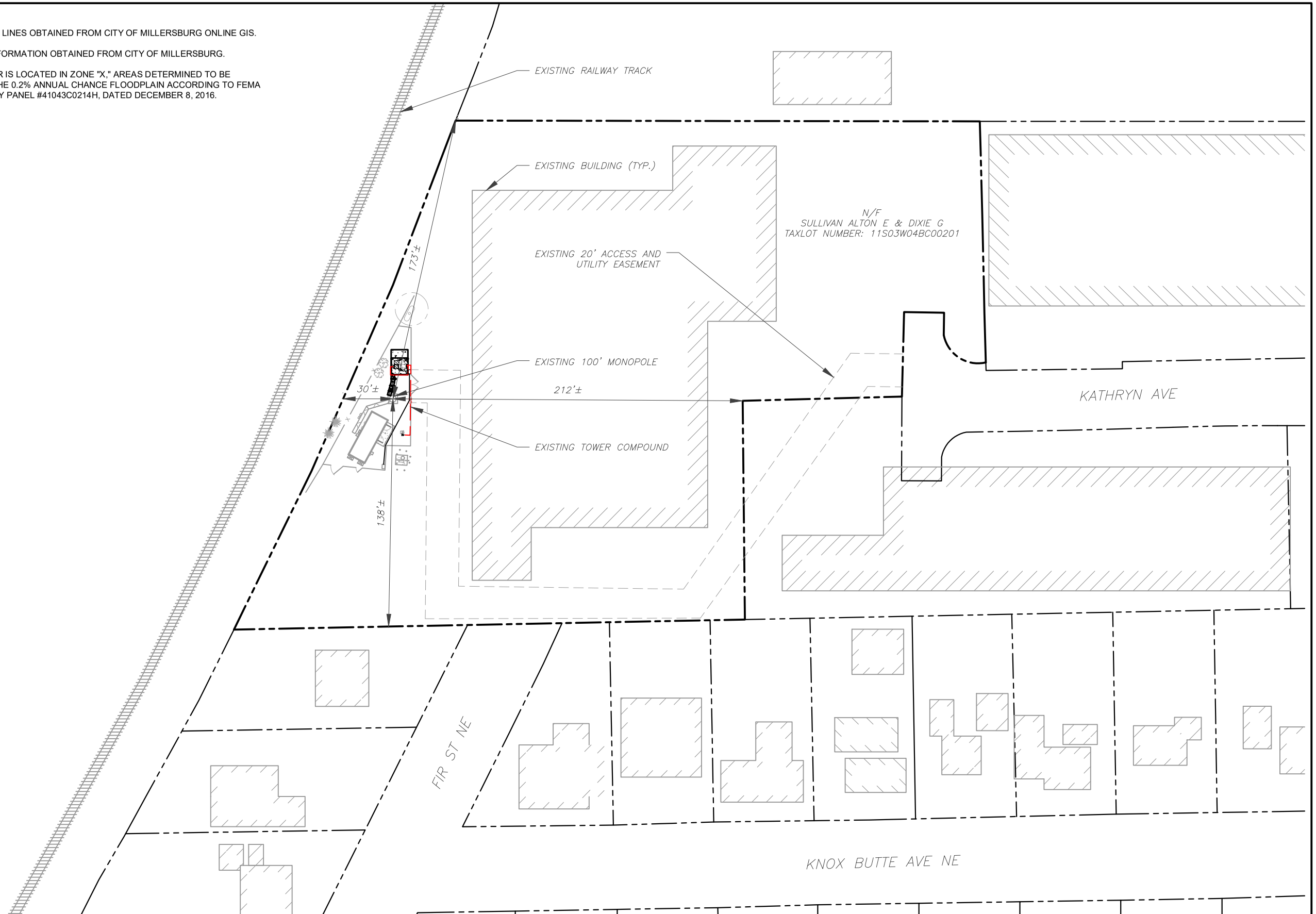
GENERAL NOTES

SHEET NUMBER: G-002

REVISION: 0

NOTES:

1. BOUNDARY LINES OBTAINED FROM CITY OF MILLERSBURG ONLINE GIS.
2. ZONING INFORMATION OBTAINED FROM CITY OF MILLERSBURG.
3. THE TOWER IS LOCATED IN ZONE "X," AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEMA COMMUNITY PANEL #41043C0214H, DATED DECEMBER 8, 2016.



LEGEND

- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING LEASE AREA

1 OVERALL SITE PLAN
SCALE: 1" = 60'

0 60' 120'

SCALE: 1"=60' (11X17)
1"=30' (22X34)

N

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RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24
1	100% CONSTRUCTION	EGG	01/30/24
2	100% CONSTRUCTION	SSP	02/27/24
△			

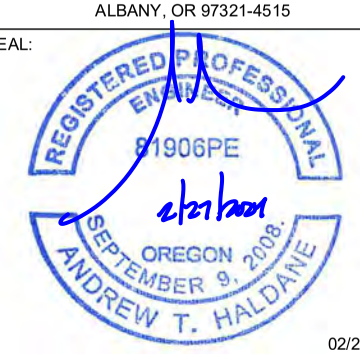
ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-4515

SEAL:



02/27/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
C-001	2

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

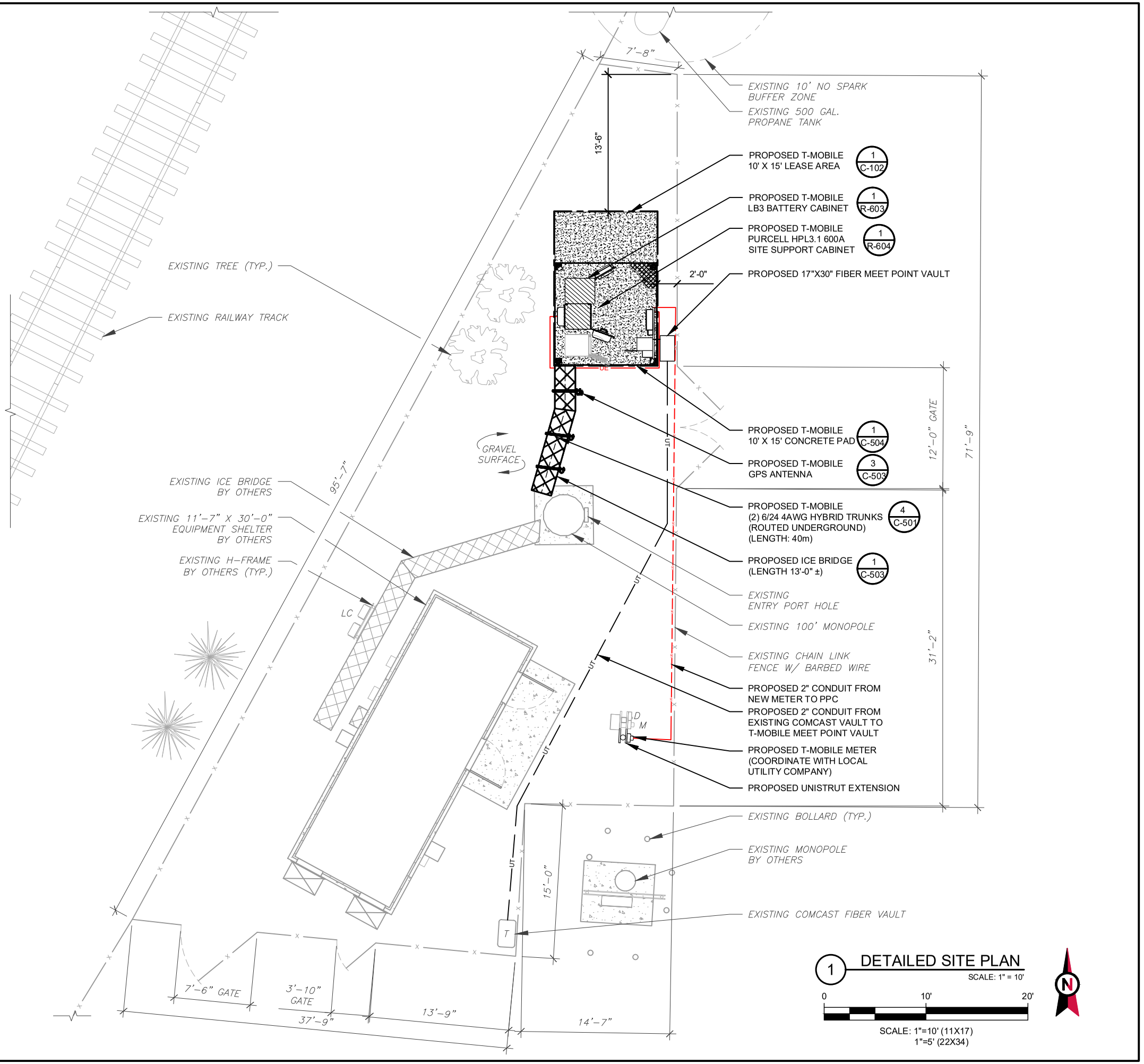
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—— x ——	CHAINLINK FENCE

PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **40m**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.



1 DETAILED SITE PLAN
SCALE: 1" = 10'
0 10' 20'
SCALE: 1"=10' (11X17)
1"=5' (22X34)

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2	100% CONSTRUCTION	SSP	02/27/24

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ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-4515

SEAL:

REGISTERED PROFESSIONAL ENGINEER
81906PE
2/21/2024
OREGON
SEPTEMBER 9, 2008
ANDREW T. HALDANE

02/27/24

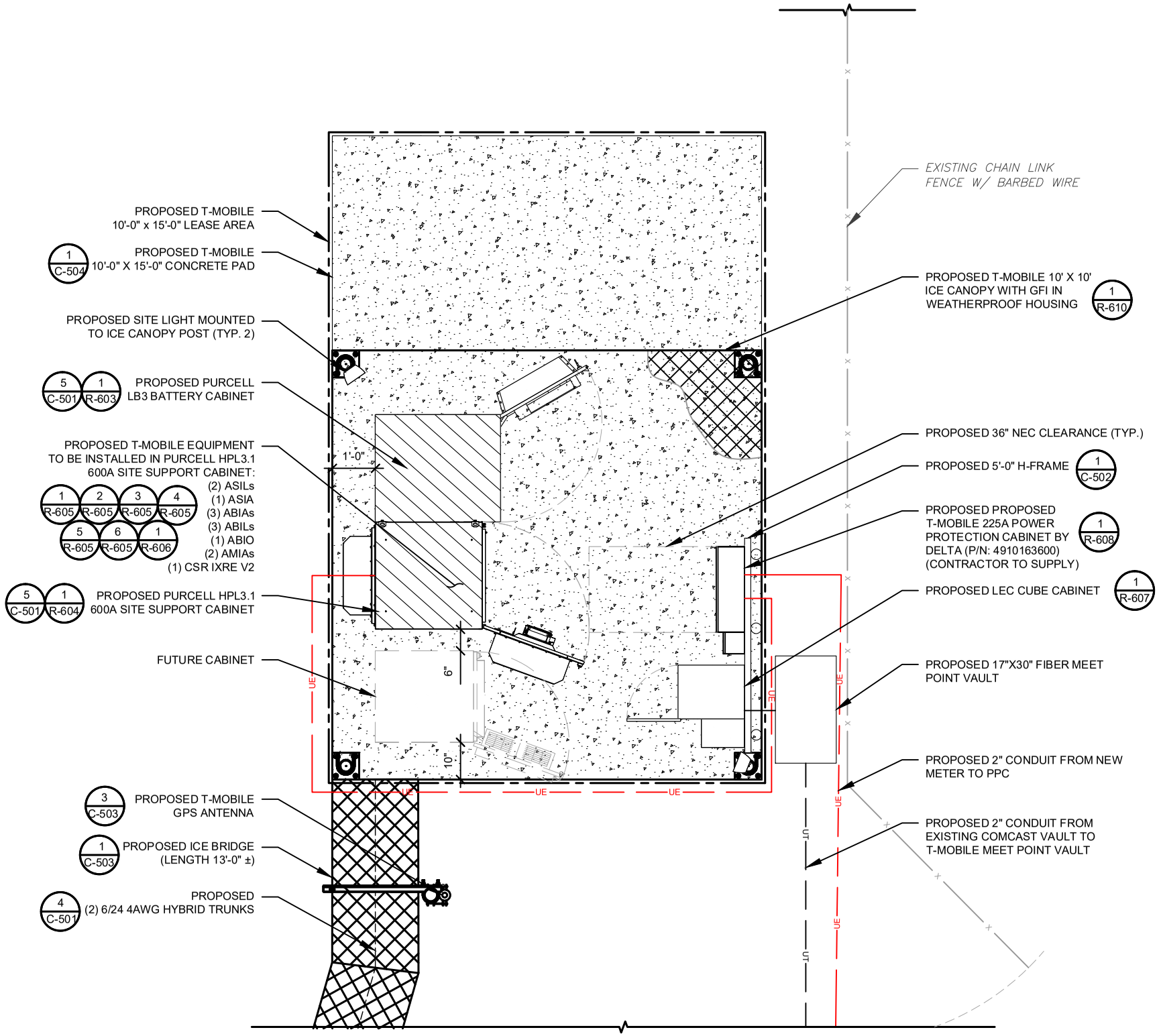
EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	2



1 PROPOSED GROUND EQUIPMENT LAYOUT

SCALE: 1" = 3'

0 3' 6'

SCALE: 1"=3' (11X17)
1"=1.5' (22X34)

N

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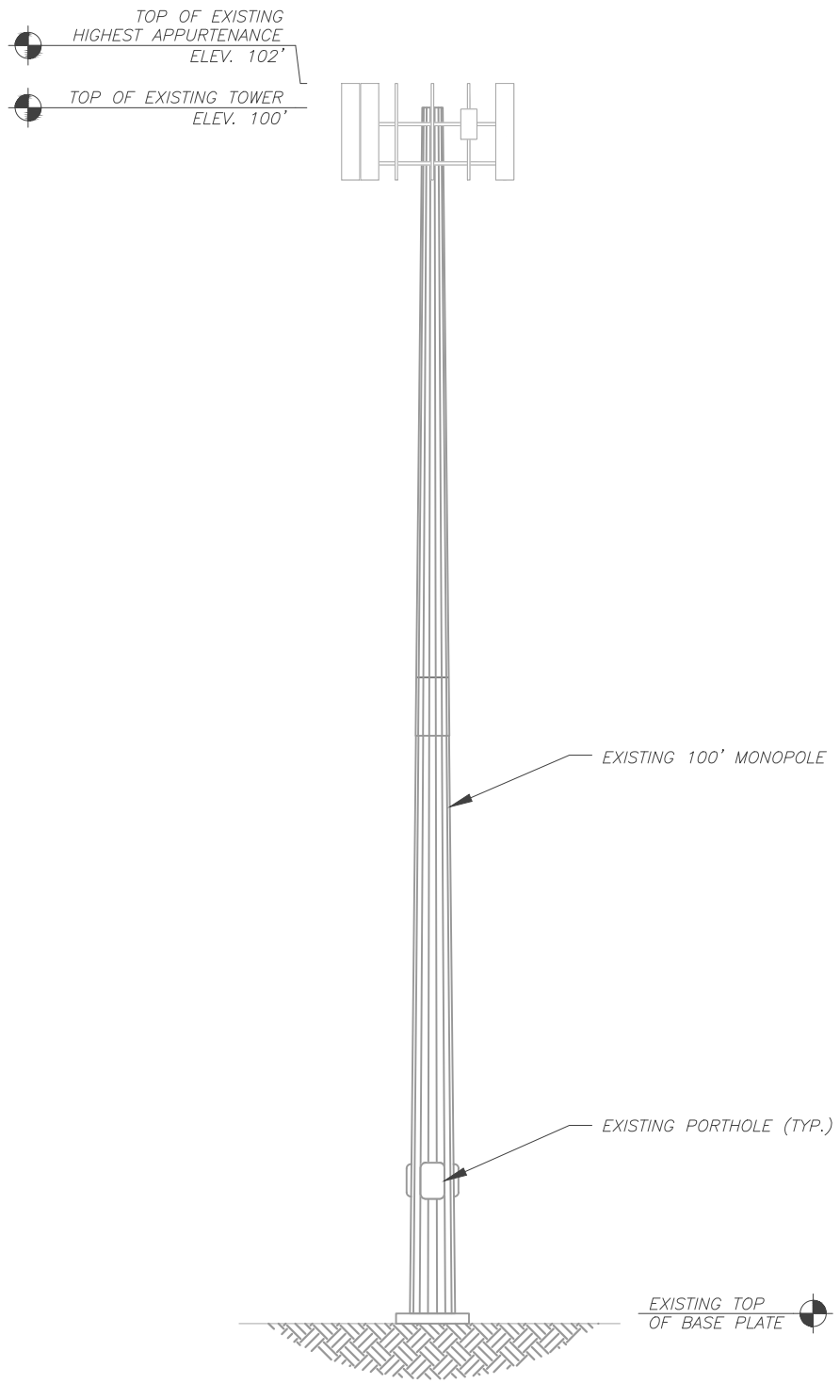
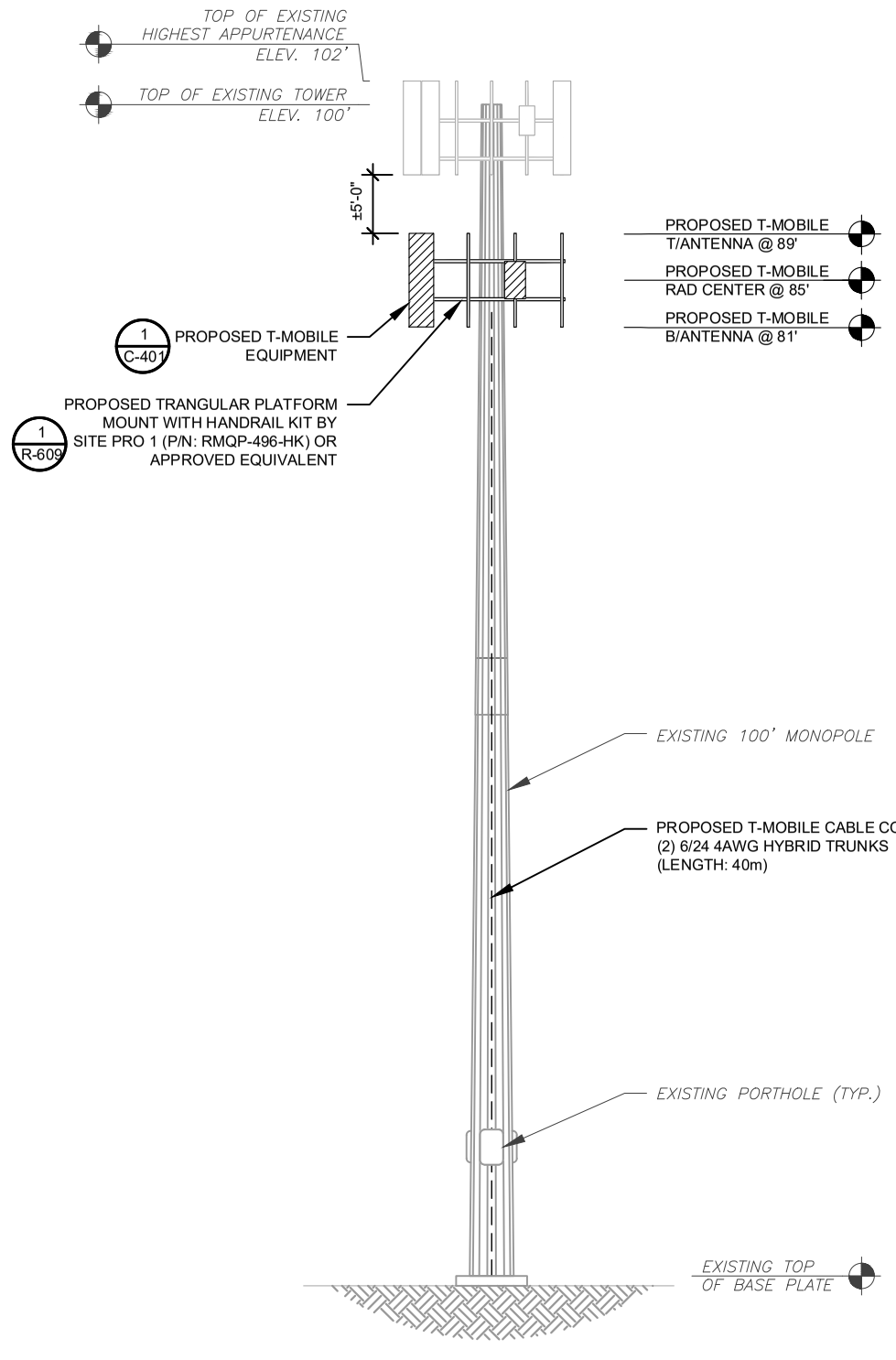
CUSTOMER ID:	PO06009A

DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	2



1 EXISTING TOWER ELEVATION
SCALE: N.T.S.



2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.

ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.

TOWER NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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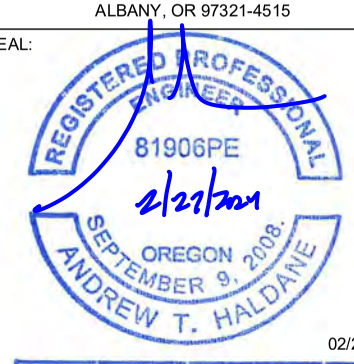


02/27/24

EXPIRES: 06/30/2025

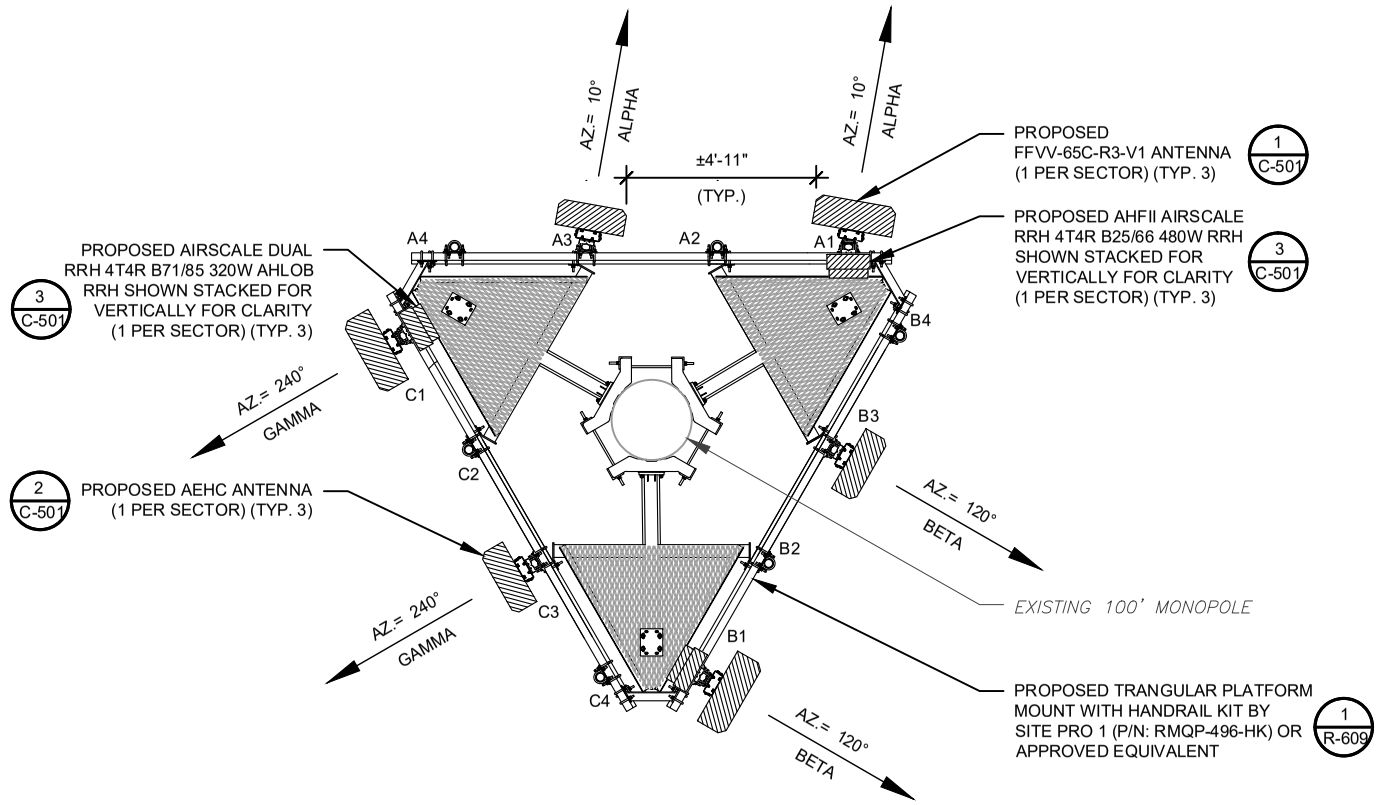
T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	2

ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.



1 FINAL ANTENNA PLAN
SCALE: N.T.S.

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY		CABLE SUMMARY			
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	JUMPERS	LENGTH	STATUS	PROPOSED CABLE SUMMARY
ALPHA	85'	10°	A1	FFVV-65C-R3-V1	L600/L700/N600/L2100/ L1900/N1900/N2100	-	ADD	(1) AHFII AIRSCALE RRH 4T4R B25/66 480W (1) AIRSCALE DUAL RRH 4T4R B71/85 320W AHLOB	ADD ADD	(2) FIBER JUMPER	15FT	ADD	(2) 6/24 HCS 4AWG (LENGTH: 40m)
			A2	-	-	-	-	-	-	-	-	-	
			A3	AEHC	N2500	-	ADD	-	-	(1) FIBER JUMPER	15FT	ADD	
			A4	-	-	-	-	-	-	-	-	-	
BETA	85'	120°	B1	FFVV-65C-R3-V1	L600/L700/N600/L2100/ L1900/N1900/N2100	-	ADD	(1) AHFII AIRSCALE RRH 4T4R B25/66 480W (1) AIRSCALE DUAL RRH 4T4R B71/85 320W AHLOB	ADD ADD	(2) FIBER JUMPER	15FT	ADD	
			B2	-	-	-	-	-	-	-	-	-	
			B3	AEHC	N2500	-	ADD	-	-	(1) FIBER JUMPER	15FT	ADD	
			B4	-	-	-	-	-	-	-	-	-	
GAMMA	85'	240°	C1	FFVV-65C-R3-V1	L600/L700/N600/L2100/ L1900/N1900/N2100	-	ADD	(1) AHFII AIRSCALE RRH 4T4R B25/66 480W (1) AIRSCALE DUAL RRH 4T4R B71/85 320W AHLOB	ADD ADD	(2) FIBER JUMPER	15FT	ADD	
			C2	-	-	-	-	-	-	-	-	-	
			C3	AEHC	N2500	-	ADD	-	-	(1) FIBER JUMPER	15FT	ADD	
			C4	-	-	-	-	-	-	-	-	-	

1. BASED ON APPROVED ATC APPLICATION 14482324. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIPMENT DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

2 ANTENNA SCHEDULE

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/OVP TO RRU: 15'
RRU TO COMBINER: 10'
COMBINER TO ANTENNA: 10'

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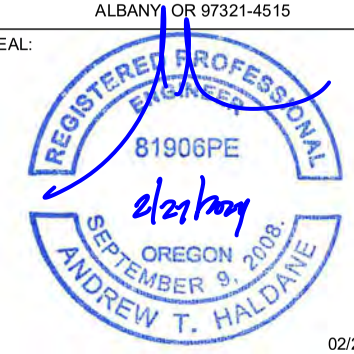


02/27/24

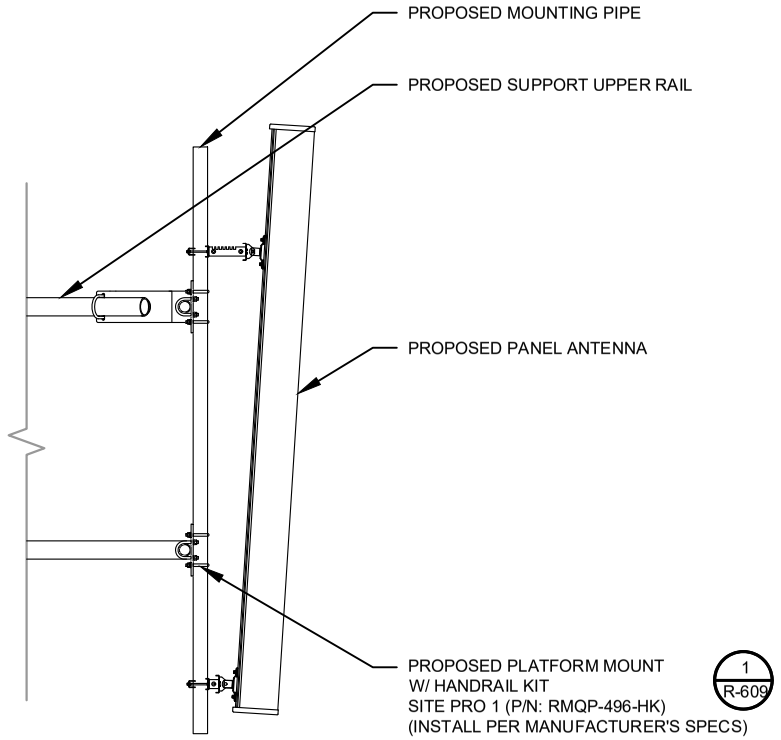
EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

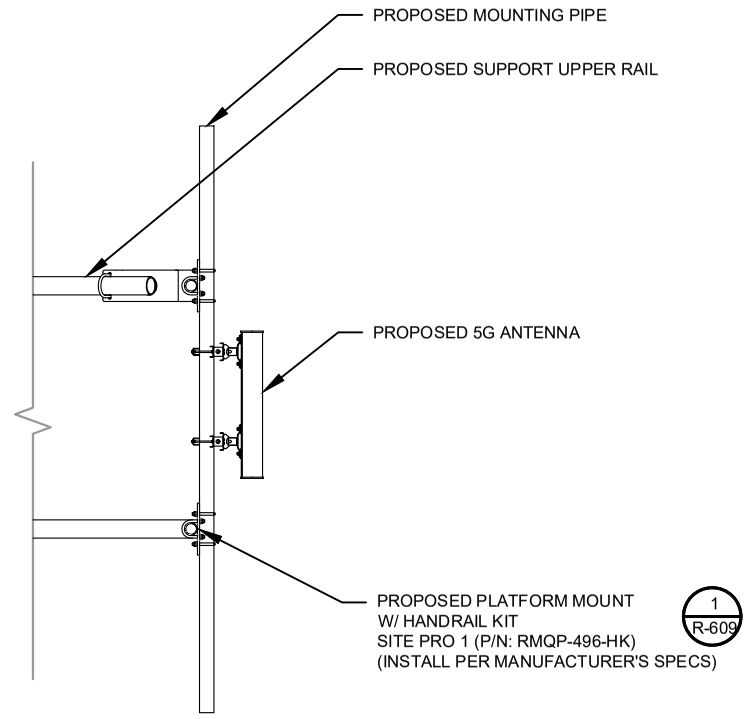
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	2



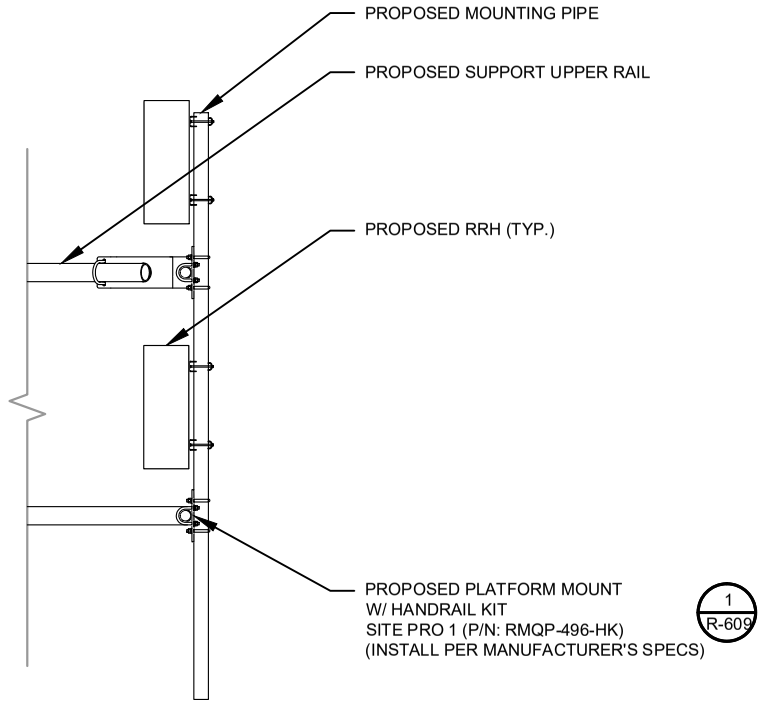
1 PROPOSED ANTENNA MOUNTING DETAIL

SCALE: N.T.S.



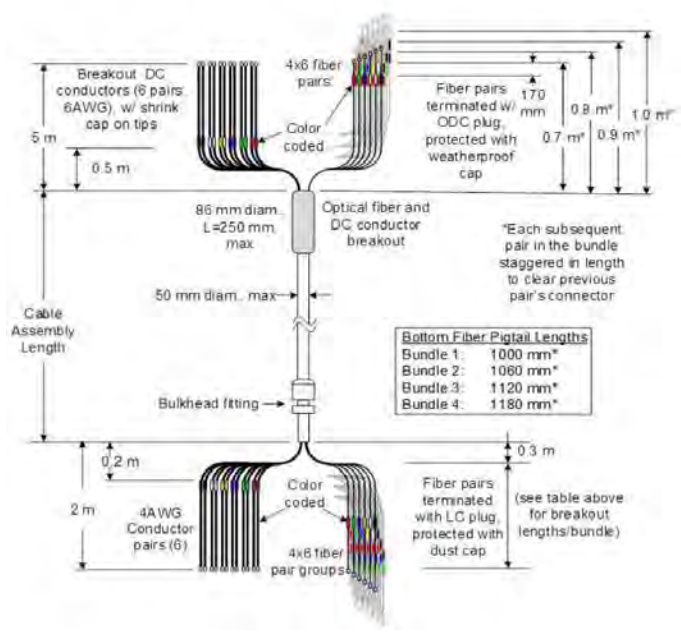
2 PROPOSED 5G ANTENNA MOUNTING DETAIL

SCALE: N.T.S.



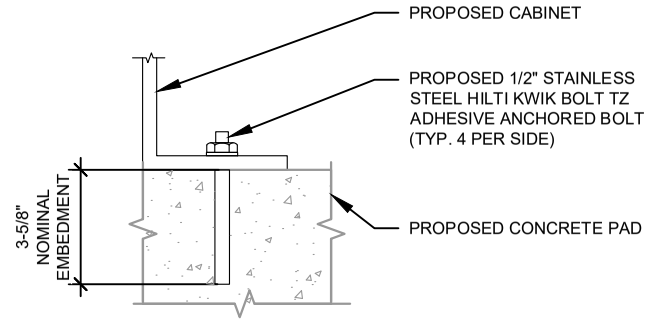
3 PROPOSED RRH MOUNTING DETAIL

SCALE: N.T.S.



4 PROPOSED NWS HCS DETAIL

SCALE: N.T.S.



NOTE:

INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE. SPECIAL INSPECTION IS REQUIRED.

5 CABINET ATTACHMENT DETAIL

SCALE: N.T.S.

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SEPTEMBER 9, 2008
ANDREW T. HALDANE

02/27/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	02/27/24
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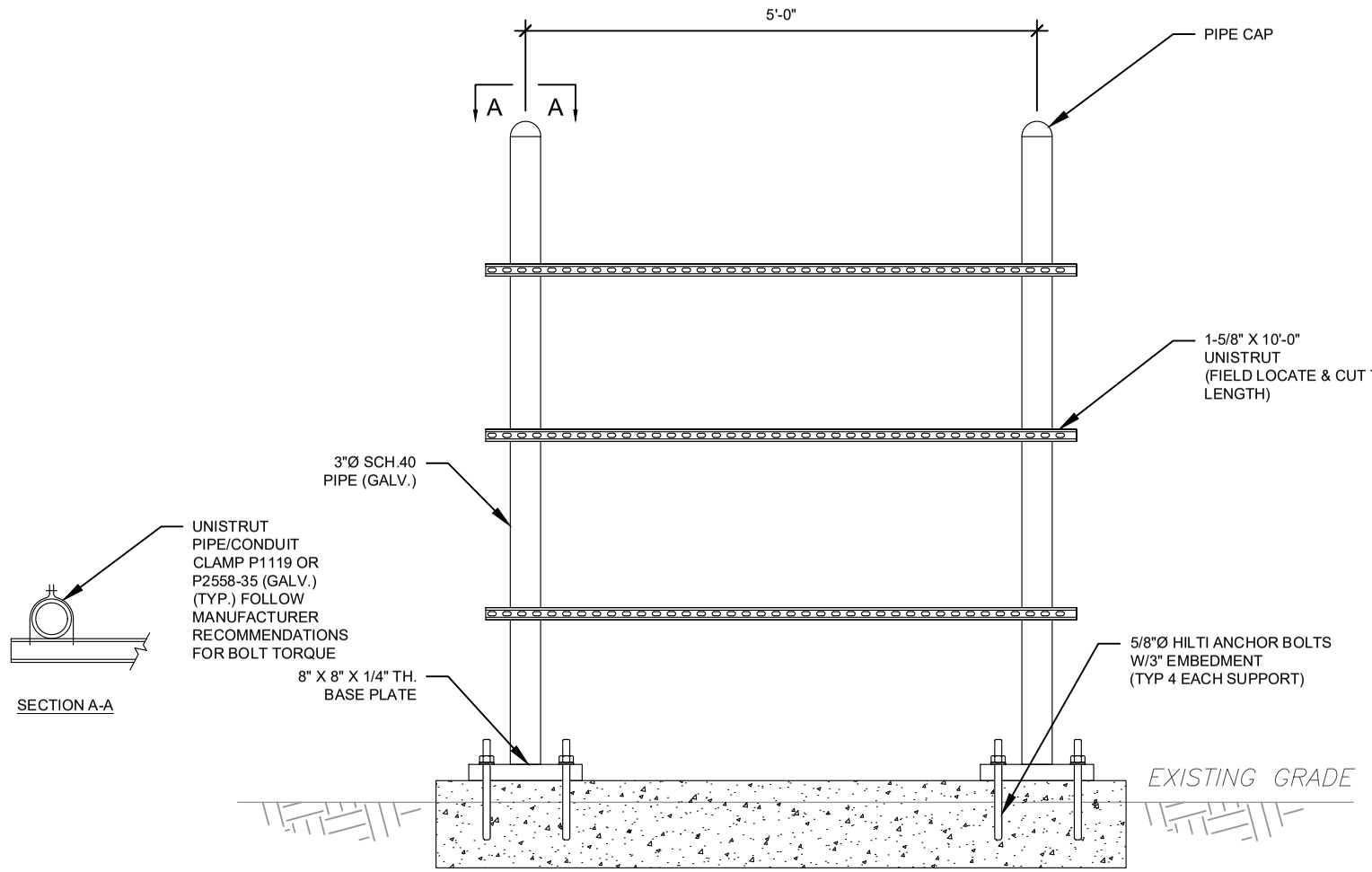
CUSTOMER ID:	PO06009A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	2

H-FRAME NOTES:

1. IF IT IS NECESSARY TO EXTEND THE H-FRAME, AN ADDITIONAL POST WILL ALWAYS BE REQUIRED.
2. PROPOSED UNISTRUTS TO BE FIELD CUT AND SHOULD NOT EXTEND MORE THAN 6 INCHES BEYOND THE LAST POST.
3. SPRAY ENDS OF UNISTRUT WITH COLD GALVANIZING SPRAY PAINT, ALLOW TO DRY, THEN COVER WITH RUBBER PROTECTIVE CAPS FOR SAFETY.
4. UNISTRUT TO BE CUT FLUSH WITH NO SHARP OR JAGGED EDGES.
5. ALL PROPOSED HARDWARE TO BE MOUNTED PER MANUFACTURERS SPECS.



1 PROPOSED H-FRAME DETAIL
SCALE: N.T.S.

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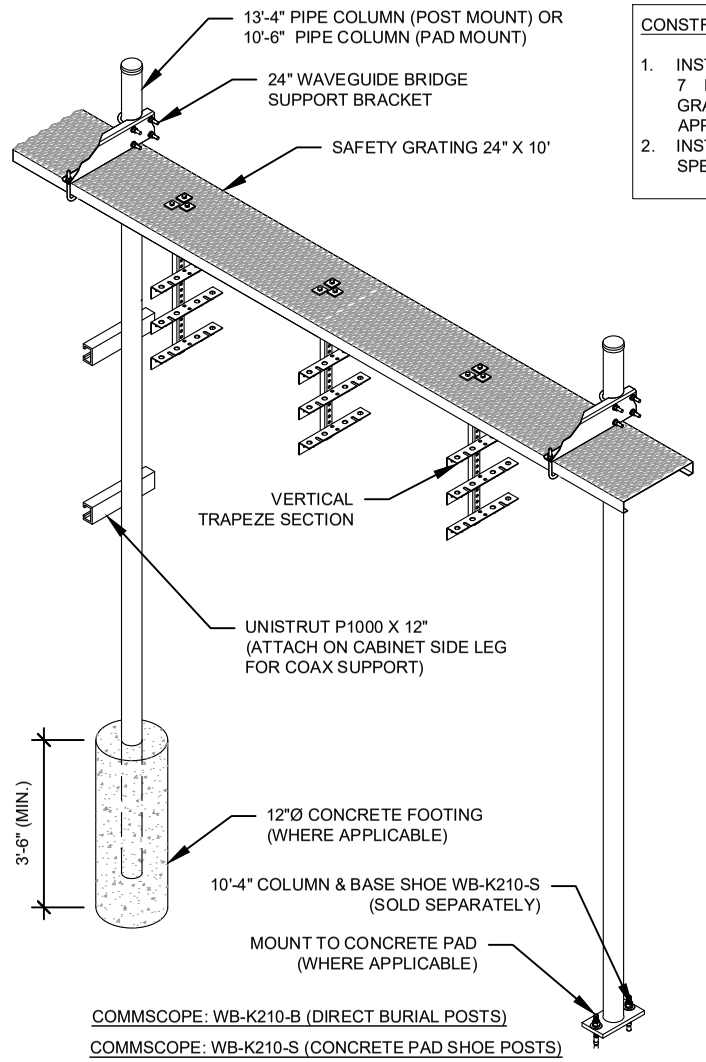
CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	2



CONSTRUCTION NOTES:

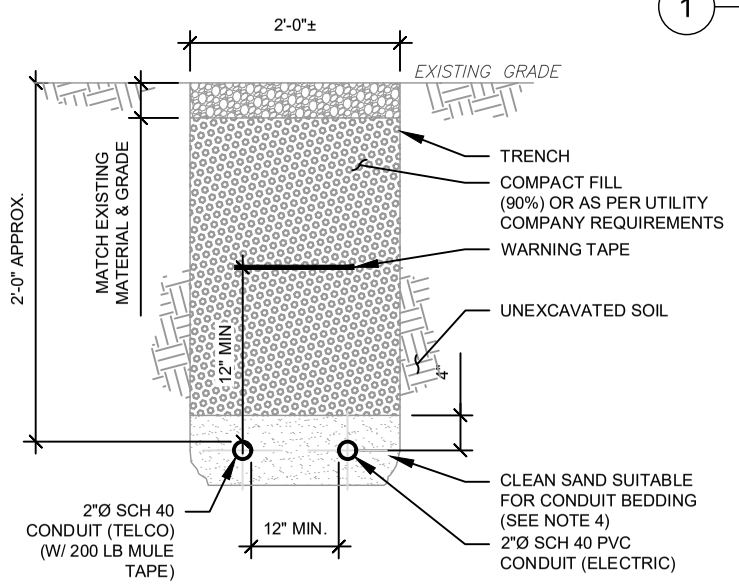
1. INSTALL ICE BRIDGE TO ALLOW 7 FEET CLEARANCE ABOVE GRADE TO LOWEST APPURTENANCE.
2. INSTALL PER MANUFACTURES SPECIFICATION.

1 WAVEGUIDE BRIDGE KIT

SCALE: NOT TO SCALE

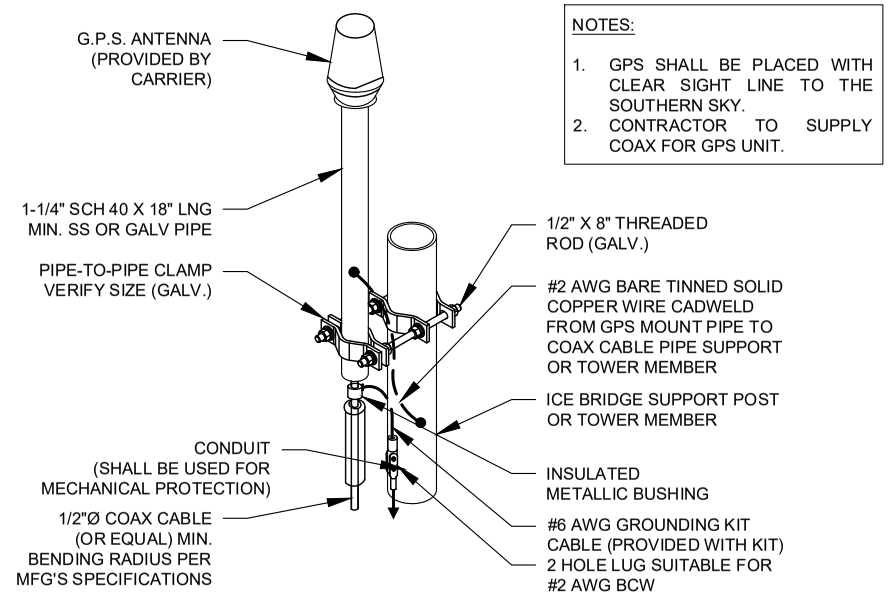
TRENCH NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.



2 TELCO AND POWER CONDUIT JOINT TRENCH

SCALE: N.T.S.



NOTES:

1. GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
2. CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL

SCALE: N.T.S.

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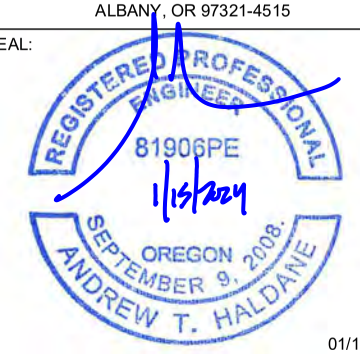
ALBANY, OR 97321-4515

SEAL:



01/15/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	01/15/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-503	0

FOUNDATION NOTES:

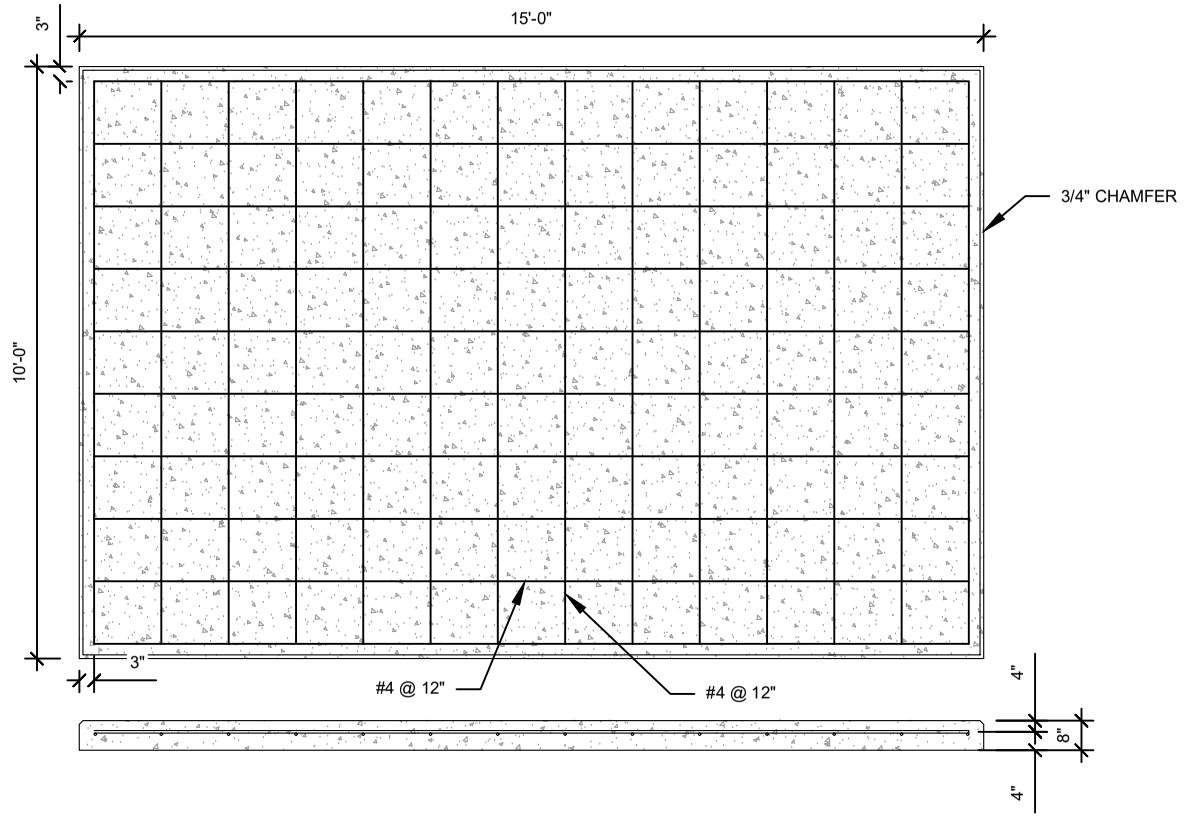
1. FOUNDATION BASED ON 2,000 PSF SOIL BEARING CAPACITY.
2. CONCRETE SHALL BE MIN. 4,000 PSI AFTER 28 DAYS.
3. REINFORCING STEEL F_y = 60,000 PSI.
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN 1/4".
6. CONTRACTOR SHALL VERIFY MANUFACTURER ACTUAL DIMENSIONS OF CABINET PRIOR TO LAYING OUT FOUNDATION.
7. MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED 1 INCH; SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED; OR ONE-THIRD CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING.
8. REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED.
9. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
10. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
11. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL BE 3 INCHES MINIMUM.
12. FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS, AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
13. FOUNDATION DESIGN ASSUMED CONTINUOUS CONCRETE PLACEMENT WITHOUT CONSTRUCTION JOINTS.
14. WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS, (NOT ROLLED).
15. TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAYS CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH ASTM C39.
16. TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02" OF ELEVATION SPECIFIED BY THE CUSTOMER.

GENERAL STRUCTURAL NOTES:

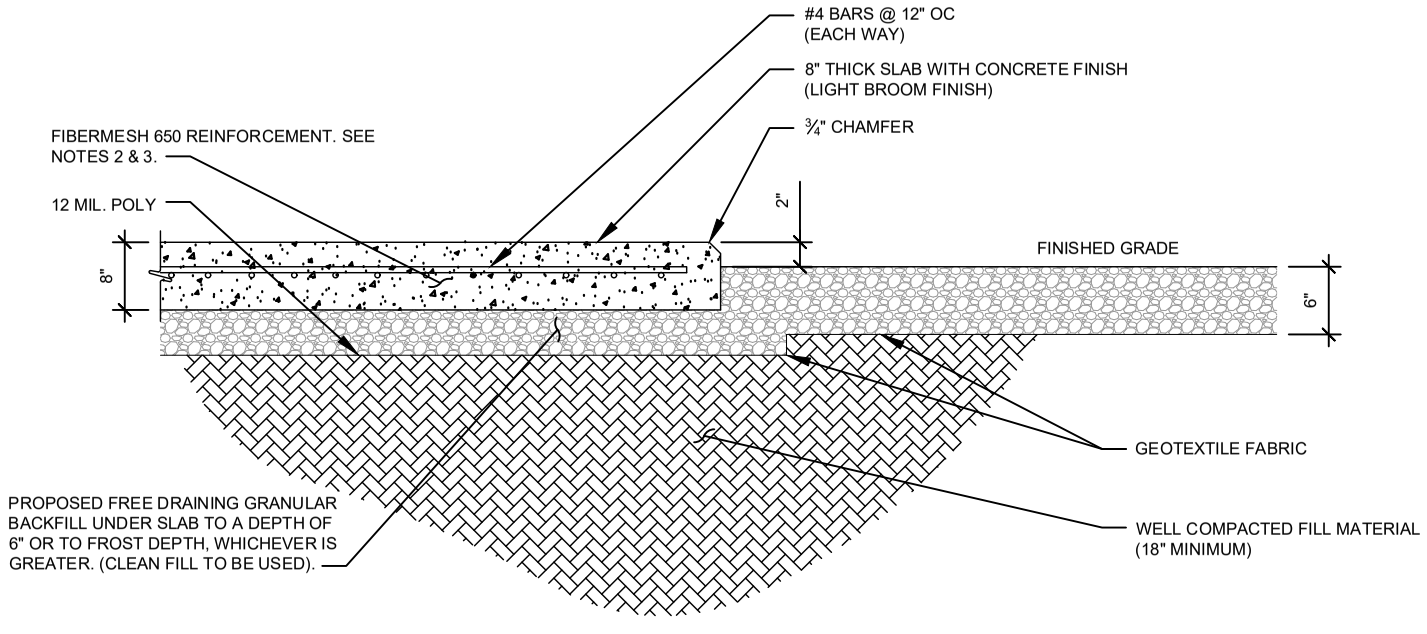
1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318-14.
2. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".

NOTES:

1. FROST DEPTH FOR LINN COUNTY IS 10 INCHES.
2. APPLICATION RATE OF FIBERS SHALL BE DETERMINED BY THE READY MIX CONCRETE SUPPLIER.
3. THE CONCRETE SUPPLIER SHALL FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR FIBERMESH APPLICATION INCLUDING MINIMUM APPLICATION RATE OF 3LBS/YD^3.



1 REINFORCED PAD LAYOUT
SCALE: N.T.S.



2 FOUNDATION SECTION VIEW
SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24

ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-4515

SEAL:

REGISTERED PROFESSIONAL ENGINEER
81906PE
1/15/2024
OREGON
SEPTEMBER 9, 2008
ANDREW T. HALDANE

01/15/24

EXPIRES: 06/30/2025

T-Mobile

DATE DRAWN:	01/15/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-504	0

GROUNDING NOTES:

1. ALL EQUIPMENT ENCLOSURES, DEVICES AND CONDUITS SHALL BE GROUNDED TO CONFORM WITH THE LATEST REQUIREMENTS OF THE NEC BY THE INSTALLATION OF A SEPARATE, GREEN, INSULATED GROUND CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS. GROUND CONDUCTORS SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS. GROUND CONDUCTORS SHALL BE CONTINUOUS IN LENGTH AND SHALL BE BONDED TO EACH ENCLOSURE THEY PASS THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR.

2. GROUNDING CONDUCTORS SHALL:
   - A. BE #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL GROUNDING SYSTEM WIRE UNLESS OTHERWISE NOTED, OR OTHERWISE REQUIRED BY CODE.
   - B. BE MINIMUM 12" BEND RADIUS. KEEP NUMBER OF BENDS TO A MINIMUM.
   - C. AVOID LONG BONDING CONNECTION RUNS. MAKE DIRECT AS POSSIBLE.
   - D. NOT HAVE ANY U-SHAPED RUNS.
   - E. BE IN NON-METALLIC CONDUIT ONLY, IF IN CONDUIT.
   - F. BE PLACED THROUGH NON-METALLIC SLEEVES IN FLOORS, WALLS, CEILINGS, ETC.
   - G. PROTECTED IN NON-METALLIC CONDUIT WHERE EXPOSED ABOVE GRADE.

3. INSTALL ALL GROUNDING RINGS AND RADIALS WITH CONDUCTIVE CEMENT, SANKOSHA AS DISTRIBUTED BY ELECTRIC MOTION COMPANY, INC., WINSTED, CT 06098, OR AS SPECIFICALLY INDICATED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

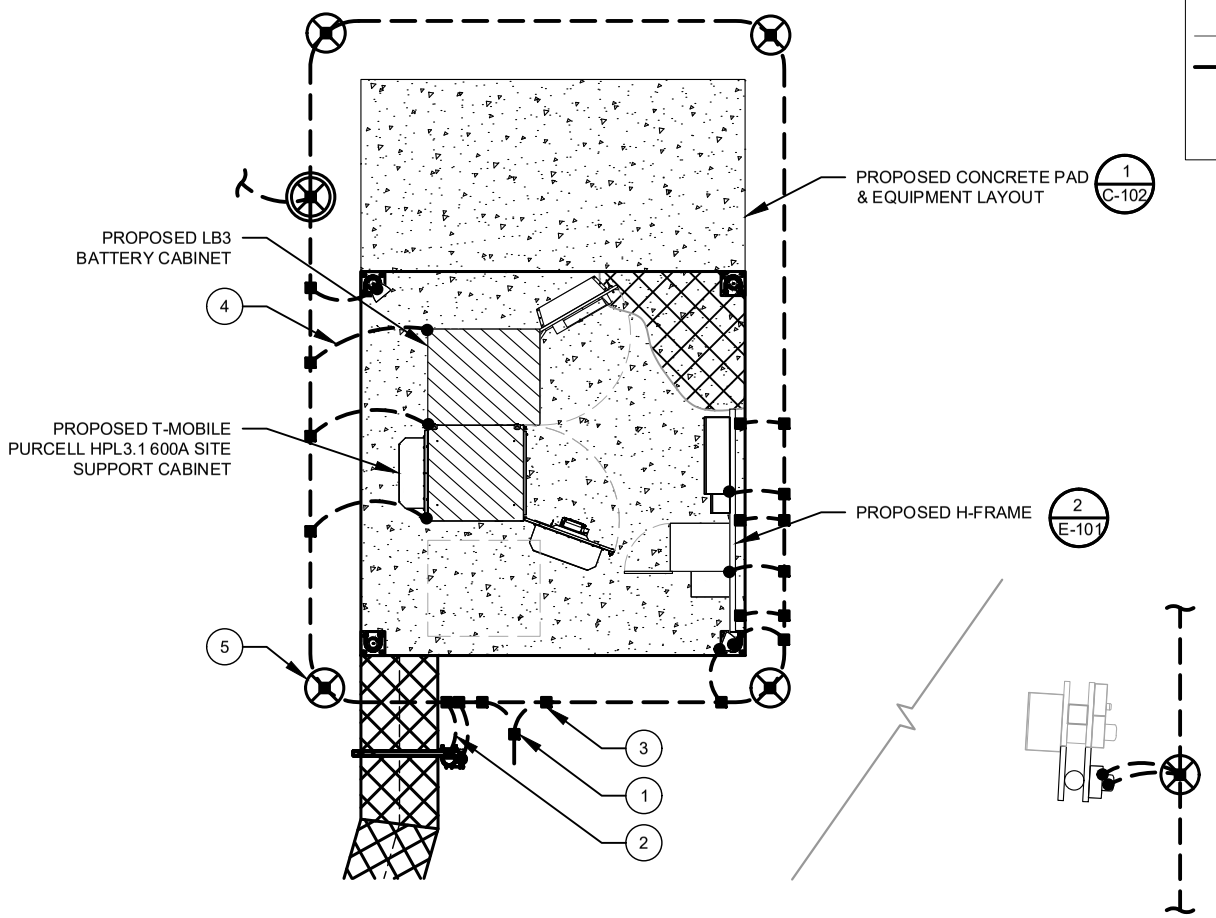
4. GROUND RINGS SHALL BE:
   - A. MINIMUM 30" BELOW GRADE, OR BELOW FROST LINE WHICHEVER IS DEEPER.
   - B. MINIMUM 2' FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS AND ALL CONDUCTIVE OBJECTS.
   - C. WITH MINIMUM 12" BEND RADII.
   - D. WITH ALL CONNECTIONS IN CONTACT WITH EARTH, BONDED BY EXOTHERMIC WELDING.
   - E. BONDED TO A SINGLE POINT GROUND (SPG) WITH A SINGLE WIRE AS INDICATED ON DRAWINGS.

5. GROUND RODS SHALL BE:
   - A. MINIMUM 5/8" DIAMETER.
   - B. MINIMUM 10' LONG.
   - C. COPPER-CLAD GALVANIZED STEEL OR STAINLESS STEEL.
   - D. PLACED IN UNDISTURBED SOIL AND BELOW THE FROST LINE.
   - E. INSTALLED WITH MINIMUM SEPARATION DISTANCE OF TWICE THE DEPTH OF THE ROD(S), OR AS INDICATED ON DRAWINGS.
   - F. MINIMUM TWO (2) RODS ON THE TOWER RING OR ONE (1) PER LEG WHICHEVER IS LARGER, MINIMUM FOUR (4) RODS ON VERY EQUIPMENT BUILDING RING WITH ONE AT EACH CORNER OR AS INDICATED, MINIMUM ONE (1) ROD FOR POWER SERVICE GROUNDING ELECTRODE, AND MINIMUM ONE (1) ROD AT END OF EACH RADIAL.

6. CONDUCTIVE OBJECTS, SUCH AS FENCES, SHALL BE BONDED TO THE GROUNDING SYSTEM IF WITHIN 20' OF THE TOWER GROUNDING SYSTEM, OR 5' OF ANY OTHER GROUNDED COMPONENT.

EQUIPMENT POWER NOTES:

1. 2" CONDUIT WITH (3) #3/0 AND (1) #6 AWG G FOR PPC POWER
2. INCOMING TELCO FIBER. 2" CONDUIT WITH (2) CAT6 CABLES TO DEMARC LOCATION (LOCATION TO BE VERIFIED)
3. PROPOSED 2" CONDUIT WITH (2) CAT6 CABLES
4. PROPOSED (3) #3/0 AWG CU AND (1) #6 AWG CU G IN A 2" CONDUIT
5. 2" CONDUIT FOR CAT6
6. PROPOSED (3) 1-1/4" CONDUIT WITH (3) #3 AWG CU & (1) #8 GND



1 DETAILED GROUNDING PLAN

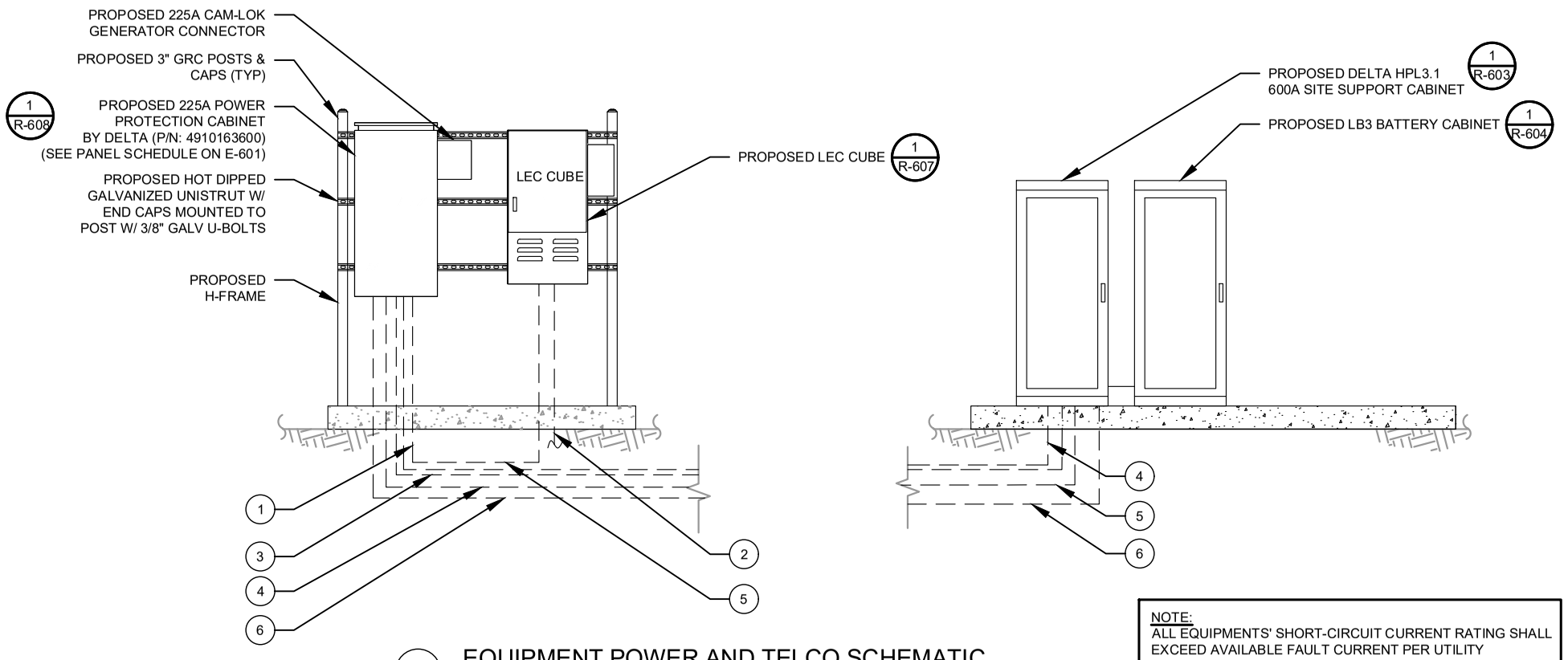
SCALE: N.T.S.

GROUNDING PLAN LEGEND:

- EXISTING GROUND WIRE
- GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL WELD
- 5/8"Ø X 10' COPPER GROUND ROD
- TEST WELL

GROUNDING KEYED NOTES:

1. BOND TO TOWER GROUND RING
2. #2 AWG BOND FROM VERTICAL H-FRAME AND ICE BRIDGE POST TO EXTERNAL GROUND RING (TYP. EVERY POST).
3. #2 AWG SBTC BOND FROM TOWER GROUND RING TO EQUIPMENT.
4. EQUIPMENT BOND TO GROUND RING (TYP.)
5. 5/8Ø" X 10 FT GROUND ROD (tTYP)



2 EQUIPMENT POWER AND TELCO SCHEMATIC

SCALE: N.T.S.

NOTE:
ALL EQUIPMENTS' SHORT-CIRCUIT CURRENT RATING SHALL EXCEED AVAILABLE FAULT CURRENT PER UTILITY

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24
1	100% CONSTRUCTION	EGG	01/30/24
2	100% CONSTRUCTION	SSP	02/27/24

ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97321-1515

SEAL:

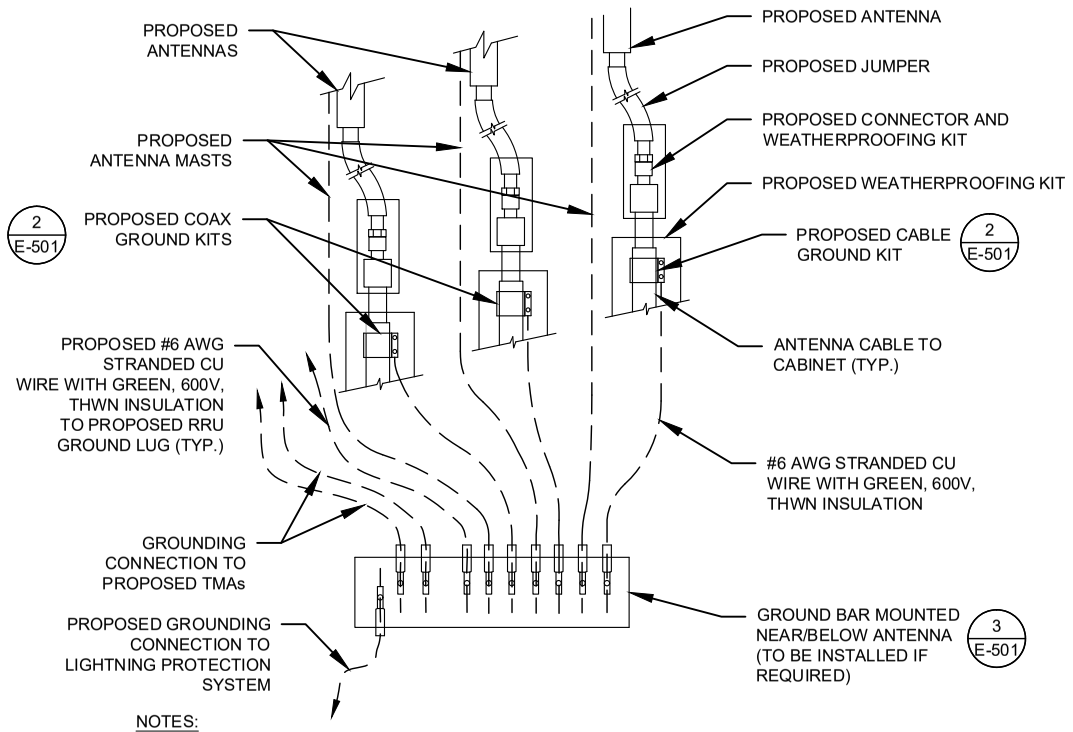
REGISTERED PROFESSIONAL ENGINEER
94439PE
OREGON
JANUARY 8, 2019
MARK S. QUAKENBUSH
02/27/24

T-Mobile

DATE DRAWN:	02/27/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

GROUNDING DETAILS & ELECTRICAL SCHEMATIC

SHEET NUMBER:	REVISION:
E-101	2

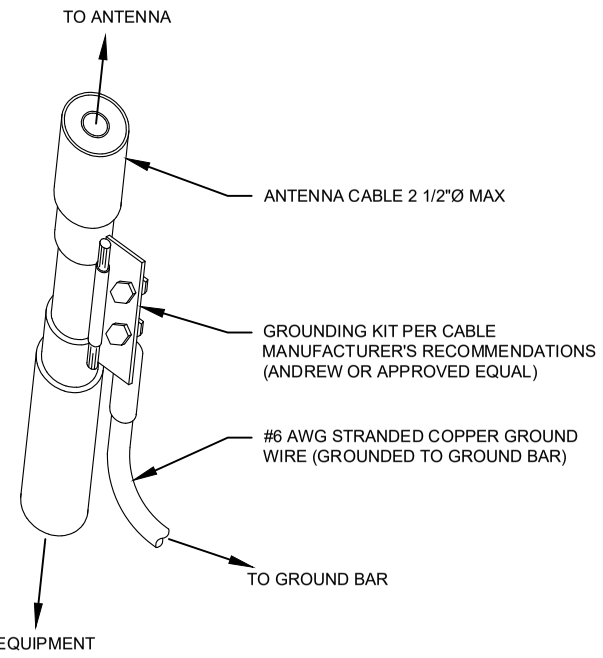


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

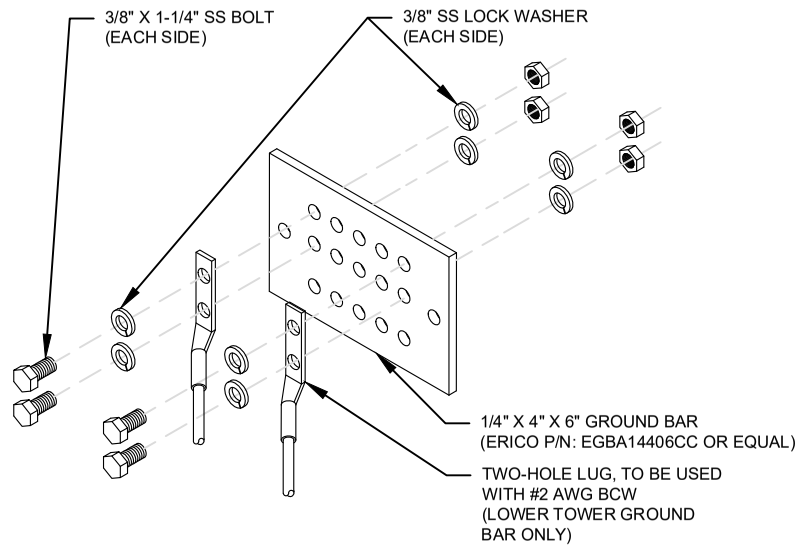


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.

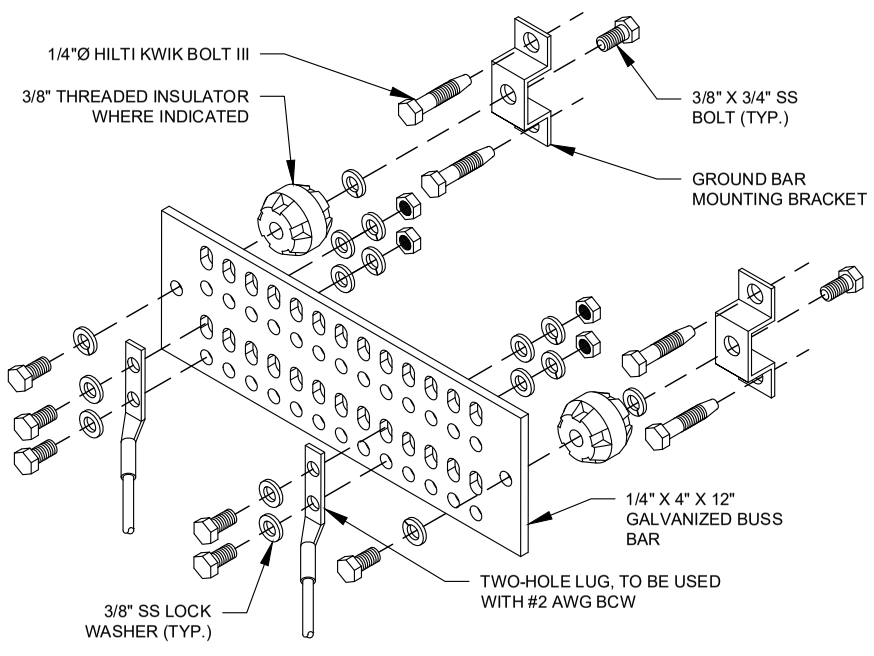


GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

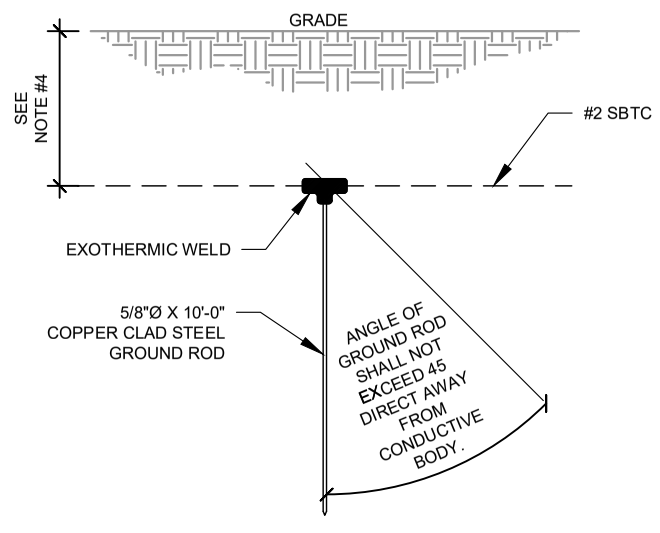


GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.

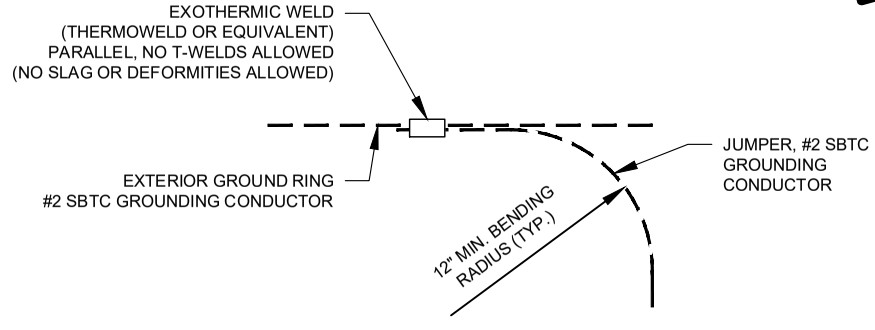


NOTES:

1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
3. CONDUIT TRENCHING DEPTHS AT 36" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
4. ALL RING AND RADIAL DEPTHS AT 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.

5 GROUND ROD DETAIL

SCALE: N.T.S.



6 TIE CONNECTION DETAIL

SCALE: N.T.S.

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REV.	DESCRIPTION	BY	DATE
A	PRELIMINARY	KKP	12/04/23
0	100% CONSTRUCTION	GV	01/15/24

ATC SITE NUMBER:
413487

ATC SITE NAME:
MILLERSBURG1 OR

T-MOBILE SITE NAME:
TALKING WATER - ATC

SITE ADDRESS:
3025 KATHRYN ST
ALBANY, OR 97322-9615

SEAL:

REGISTERED PROFESSIONAL ENGINEER
94439PE
OREGON
JANUARY 8, 2019
MARK S. QUAKENBUSH
01/15/24

T-Mobile

DATE DRAWN:	01/15/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

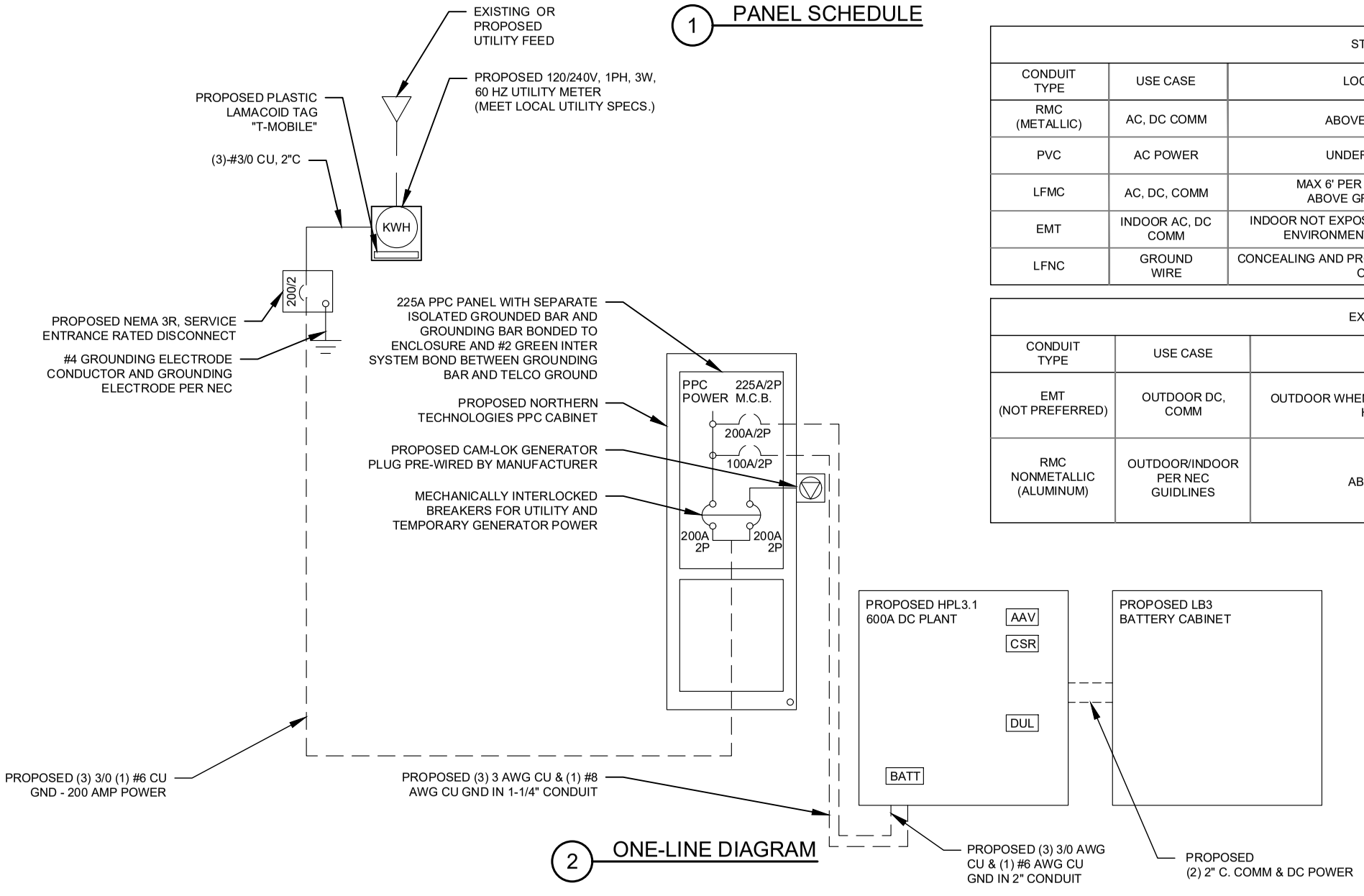
PANEL DESIGNATION:	***PPC***	TYPE:	LIGHTING & APPLIANCE	SYSTEM:	120/240V, 1Ø, 3W, 20 CKT
		MOUNTING:	SURFACE	MAIN BREAKER (MB):	225A MCB
		ENCLOSURE:	NEMA 3R	MAIN BUS RATING:	225A
				MIN. A.I.C. RATING:	22KAIC

LOCATION:	T-MOBILE LEASE AREA
PANEL NOTES:	INTERGRATED COMMUNICATION
	POWER PANEL (PPC)

CONNECTED LOAD (KVA)	BRIEF DESCRIPTION	FEEDER OR BRANCH CIRCUIT														BRIEF DESCRIPTION	CONNECTED LOAD (KVA)	
		BREAKER		CIRCUIT			POLE NO.	CIRC. NOTES		CIRC. NOTES	POLE NO.	CIRCUIT			BREAKER			
B		AMPS	POLES	WIRE	GND	COND.						COND.	GND	WIRE	POLES	AMPS		A	B
							1				2	3/4"	(2) #12	(1) #12	1	15	RECEPTACLE	0.18	
5.02	DELTA HPL3.1 SSC PRIMARY	200	2	(3) #3/0	(1) #6	2"	3				4	3/4"	(2) #12	(1) #12	1	15	LIGHT		0.50
							5				6						SPACE	0.00	
0.0							7				8						SPACE		0.00
	DELTA HPL3.1 SSC SECONDARY	100	2	(3) #3	(1) #8	1-1/4"	9				10						SPACE	0.00	
2.51							11				12						SPACE		0.00
	SPACE						13				14						SPACE	0.00	
0.0	SPACE						15				16						SPACE		0.00
	SPACE						17				18						SPACE	0.00	
0.0	SPACE						19				20						SPACE		0.00
7.23								A	B	TOTAL								0.18	0.50
								7.41	7.73	15.14	CONNECTED LOAD (kVA)								
								7.41	7.73	15.14	DEMAND LOAD (kVA)								
							TOTAL LOAD (AMPS)	78.88		18.93	125% DEMAND LOAD (kVA)								

NOTE:
CONTRACTOR TO VERIFY THE LOCATION AND SIZE OF THE EXISTING NEUTRAL GROUND BOND PRIOR TO CONSTRUCTION. IF THE EXISTING METERBANK SHARES A COMMON NEUTRAL-GROUND BOND, THE CONTRACTOR MAY REUTILIZE THE EXISTING GEC IF IT IS SIZED FOR ALL SERVICES AND WILL BE UPGRADED IF INSUFFICIENT.

1 PANEL SCHEDULE



2 ONE-LINE DIAGRAM

STANDARD CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
RMC (METALLIC)	AC, DC COMM	ABOVE GROUND	ABOVE GROUND PPC TO SSC
PVC	AC POWER	UNDERGROUND	UNDERGROUND PPC TO SSC OR BACKHAUL TRANSPORT HUB TO SSC
LFMC	AC, DC, COMM	MAX 6' PER CONDUIT RUN, ABOVE GROUND ONLY	TIGHT LOCATIONS BETWEEN HUB AND CONDUIT BUT NOT TO BE USED WHERE IT CAN BE STEPPED ON
EMT	INDOOR AC, DC COMM	INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY)	CIRCUIT PANEL TO JUNCTION BOX
LFNC	GROUND WIRE	CONCEALING AND PROTECTING BTCW RISERS ONLY	GROUND RING TO MGB OR SSC

EXCEPTION CONDUIT USE TABLE			
CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
EMT (NOT PREFERRED)	OUTDOOR DC, COMM	OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY	BETWEEN EQUIPMENT AND BATTERY CABINET OR EQUIPMENT TO EQUIPMENT CABINETS FOR INTER CABINET CONNECTION
RMC NONMETALLIC (ALUMINUM)	OUTDOOR/INDOOR PER NEC GUIDLINES	ABOVE GROUND	MAT BE USED AS A LOWER COST ALTERNATIVE TO METALLIC RMC, MUST MEET OR EXCEED FEDERAL SPEC: WW-C-540C, UL-6A, ANSI C80.5, NEC 344.10 (A) ALLOWS THE USE OF EITHER ALUMINUM OR GALVANIZED FITTINGS

3 CONDUIT USE TABLES

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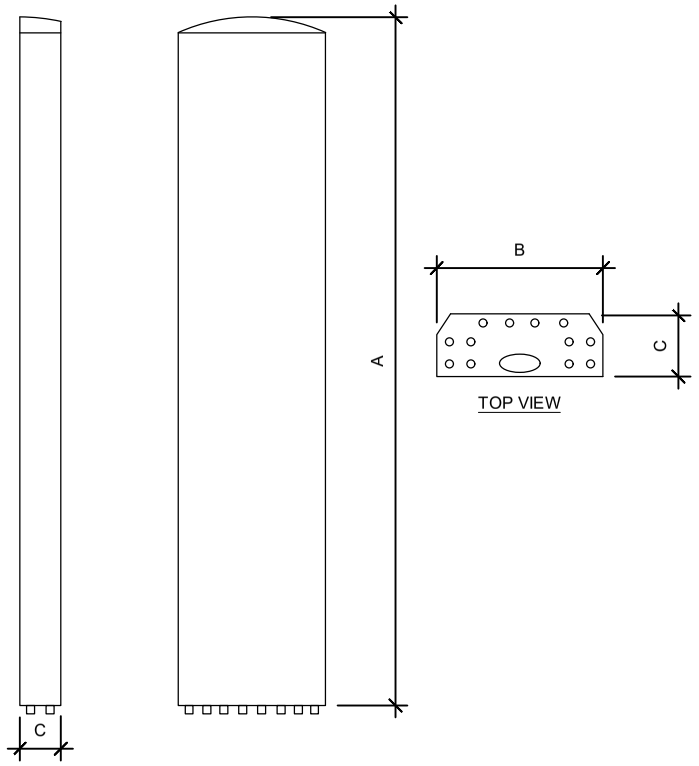
T-Mobile

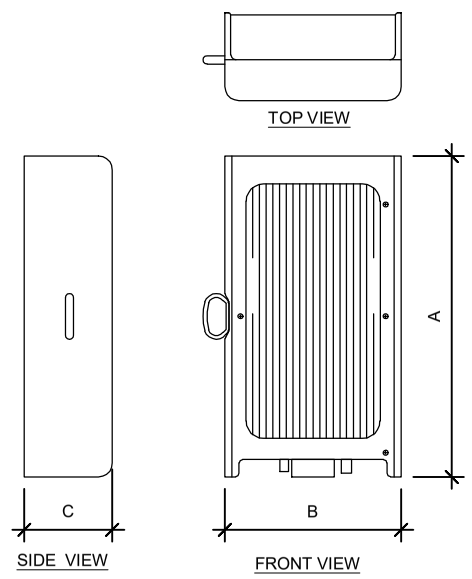
DATE DRAWN:	01/30/24
ATC JOB NO:	14543848
CUSTOMER NAME:	TALKING WATER - ATC
CUSTOMER ID:	PO06009A

PANEL SCHEDULE & ONE-LINE DIAGRAM

SHEET NUMBER:	REVISION:
E-601	1



ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
FFVV-65C-R3-V1	95.9"	25.2"	9.3"	124.6
AEHC	38.2"	21.5"	8.1"	103.6



RRH SPECIFICATIONS				
RRH MODEL	A	B	C	WEIGHT (LBS)
AIRSCALE DUAL RRH 4T4R B71/85 320W AHLOB	26.6"	14.5"	6.2"	70.6
AHFII AIRSCALE RRH 4T4R B25/66 480W	25.2"	13.5"	4.6"	70.6

- EQUIPMENT SPECIFICATIONS

SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: -

Proposed RAN Equipment

Template: 56790EBH_SR_T_6x24

Enclosure	1	2	3	4
Enclosure Type	Tower Top Mount (Nokia)	Purcell HPL3.1 600A Site Support Cabinet	Ancillary Equipment (Nokia)	Purcell LB3 Battery Cabinet (4 strings)
Radio	AHFII (x3): N1900, N2100 (DARK), L1900, L2100 / AHLOB (x3): N600, L600, L700			
Baseband	ASIA: L600, L700, L1900, L2100 / ASIL: N600, N1900, N2100 (DARK) / ASIL: N2500			
Baseband Submodule	ABIA (x2): L1900, L2100 / ABIA: L600, L700 / ABIL (x2): N1900, N2100 (DARK) / ABIL: N600 / ABIO: N2500			
Baseband Subrack	AMIA: N600, N1900, N2100 (DARK), N2500 / AMIA: L600, L700, L1900, L2100			
Transport System		CSR IXRe V2 (Gen2)		
Hybrid Cable System			Hybrid Trunk 6/24 4AWG 40m (x2)	

RAN Scope of Work:

01/16/2024: as per regional
AHLOA changed to AHLOB
Purcell HPL3 swap with Purcell HPL3.1
removed raycap booster & SPD tray
Template & Plumbing updated

05/18/2023--AHFII updated (2) HCS 6X24 added. RAN config updated to EAH template. Image updated.
12/7/2021
56790EZ_SR_T
3 AHLOA and 3 AHFIG RRU
Cabinets will be HPL3 LB3 with 2 AMIAs
Booster + Amplifier needed
2 HCS2.0 @ 125'

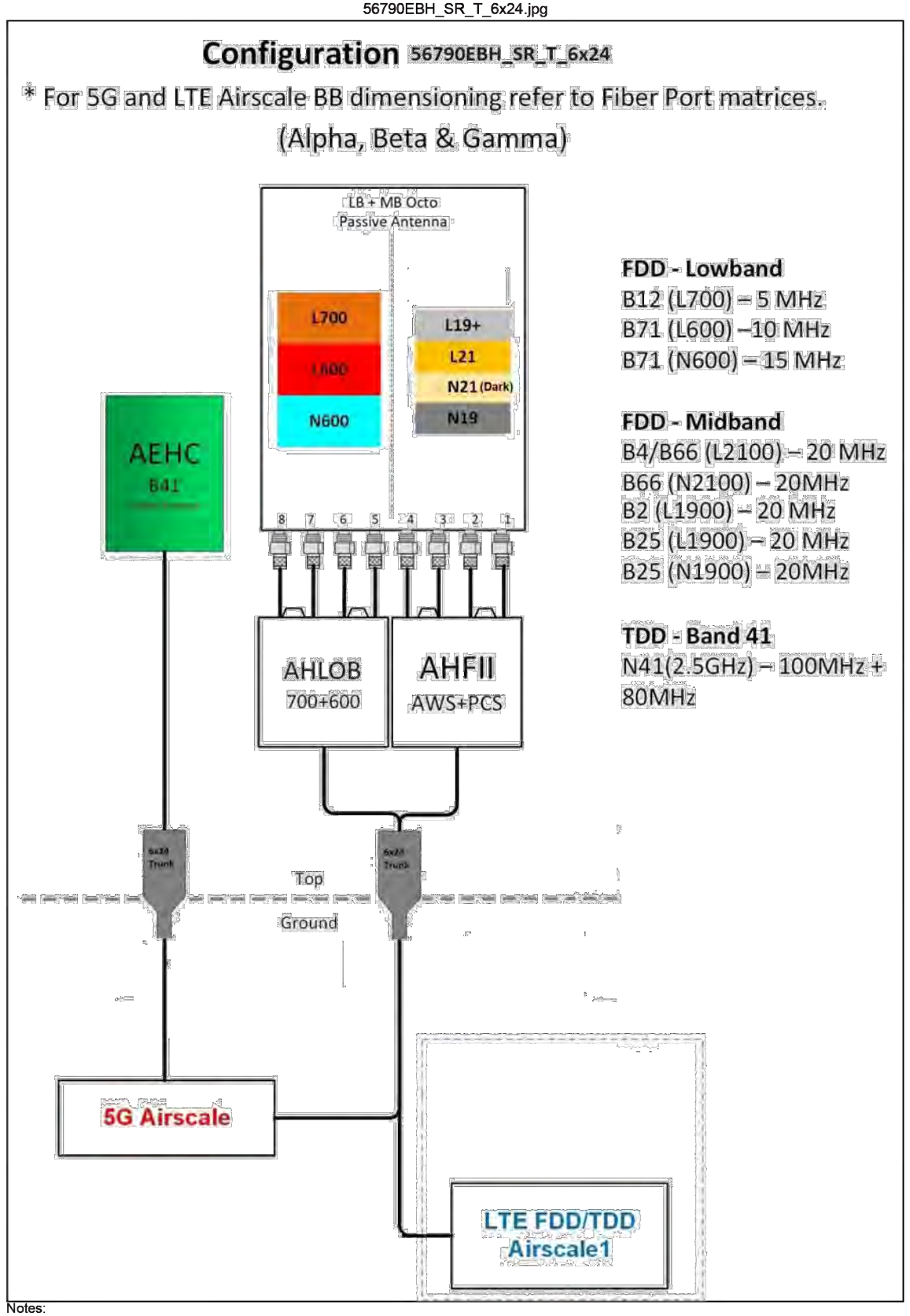
05/10/2022:- Revised RFDS to reflect Phase4 design here as per new guidelines.
07/12/2022:- Revised RFDS to reflect Purcell HPL3-LB3 cabinets here
08/15/2022:- Revised RFDS to reflect Phase 2Y Design as per new guidelines.

08/17/2022 : Updated to Phase 2Y design.

1 PROPOSED CABINET CONFIGURATION
SCALE: N.T.S.

Section 3 - Proposed Template Images

56790EBH_SR_T_6x24.jpg



Notes:

2 PROPOSED ANTENNA CONFIGURATION
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-602

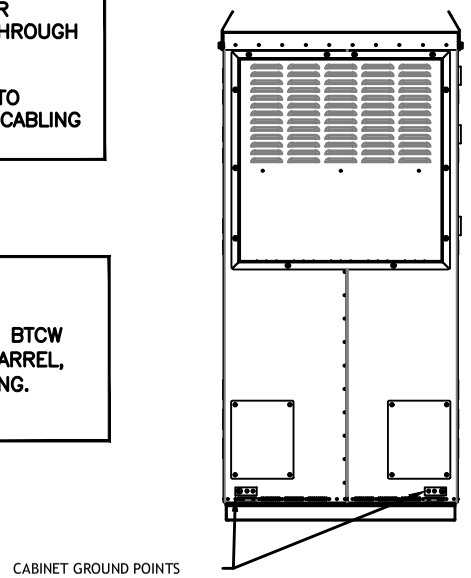
REVISION: -

MANUFACTURER:	PURCELL
MODEL:	LB3 BATTERY SUPPORT CABINET
DIMENSIONS:	60.4" x 30" x 31.6" (H x W x D)
WEIGHT:	350 LBS (WITHOUT EQUIPMENT)

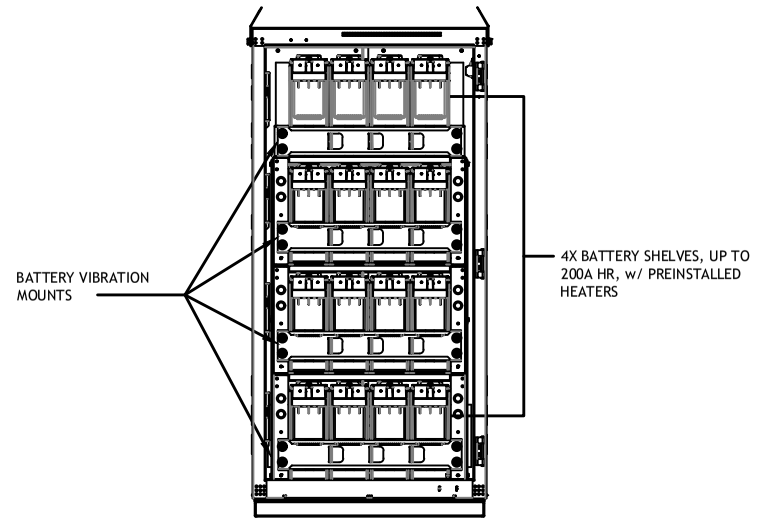
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

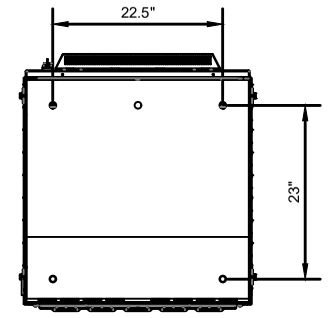
GROUNDING NOTE:

"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

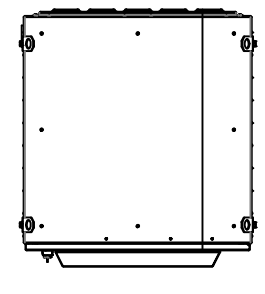


PLAN VIEW

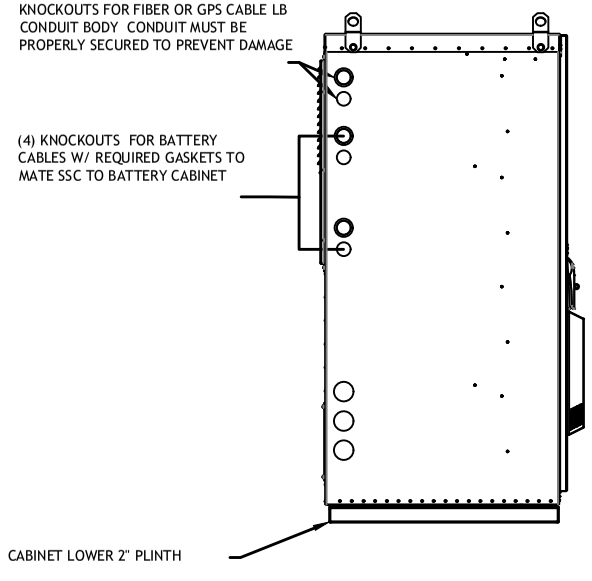




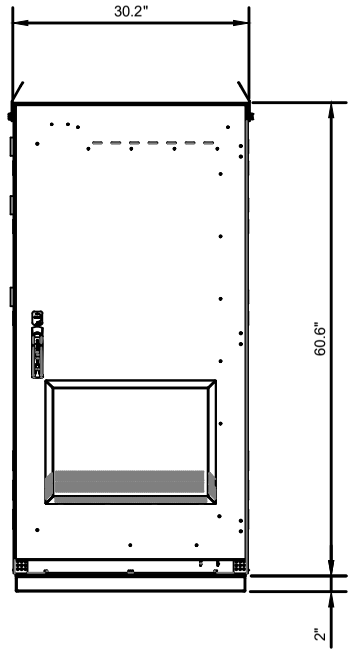
BOLT DOWN PATTERN



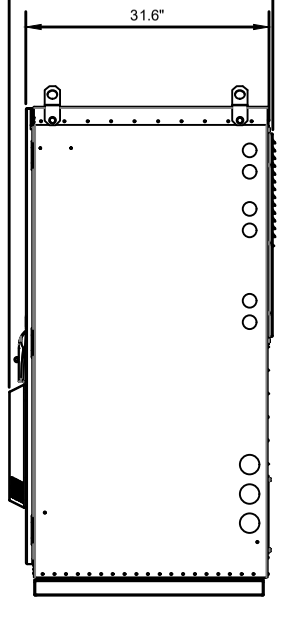
TOP VIEW



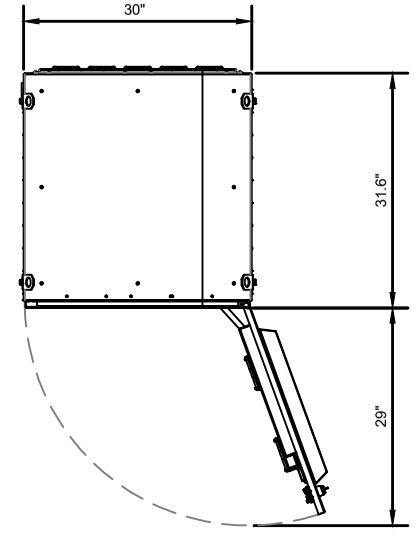
LEFT VIEW



FRONT VIEW



RIGHT VIEW



DOOR SWING

1 PURCELL LB3 BATTERY CABINET SPECIFICATIONS

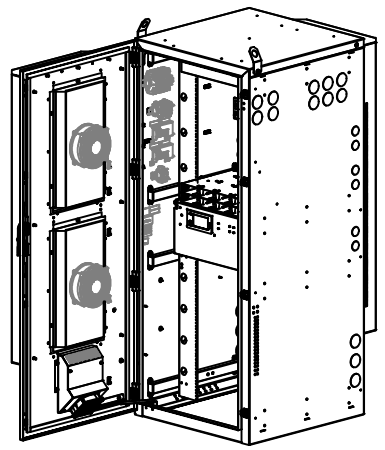
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

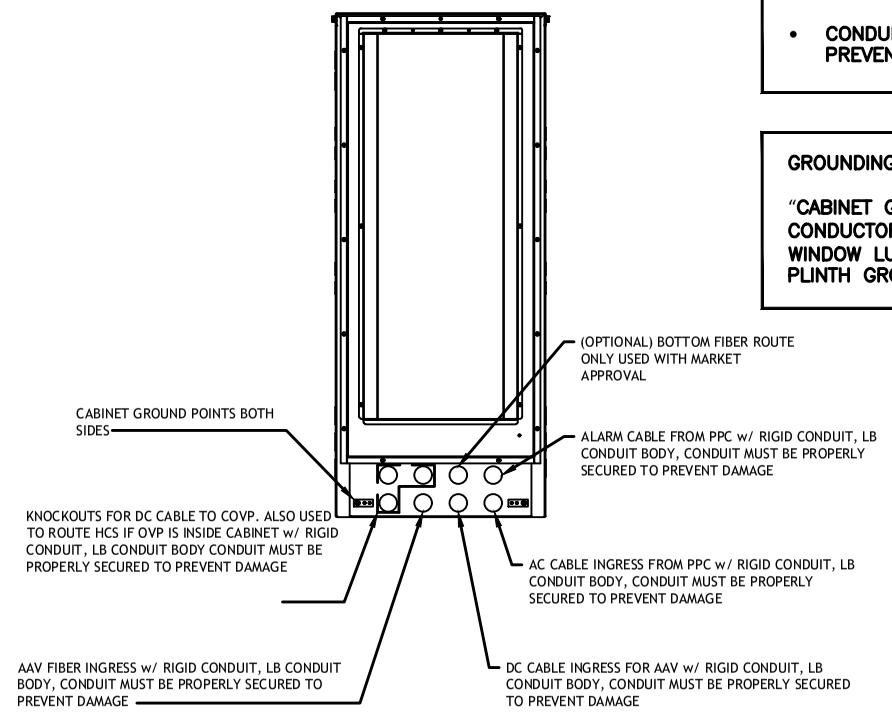
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	-

MANUFACTURER:	PURCELL
MODEL:	HPL3 600A LARGE SITE SUPPORT CABINET
DIMENSIONS:	72" x 30" x 32" (H x W x D)
WEIGHT:	450 LBS



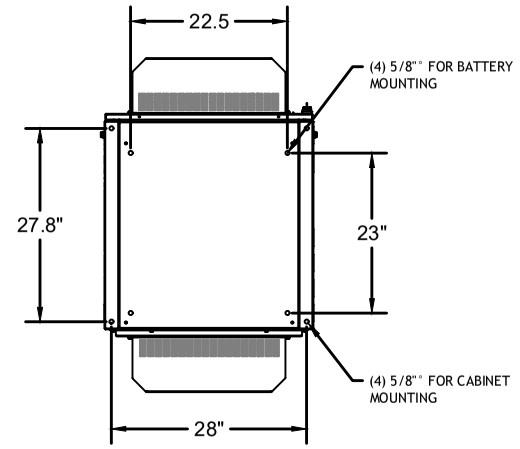
REAR VIEW



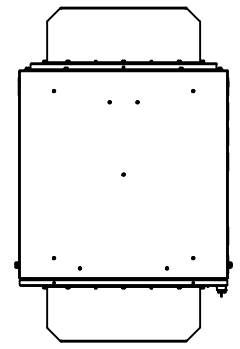
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

GROUNDING NOTE:

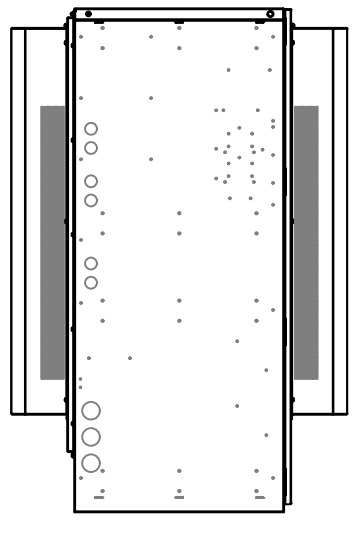
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



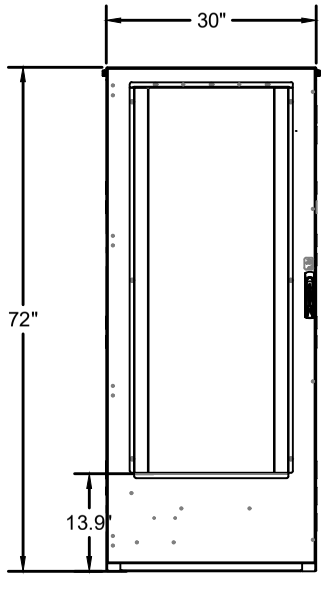
BOLT DOWN PATTERN



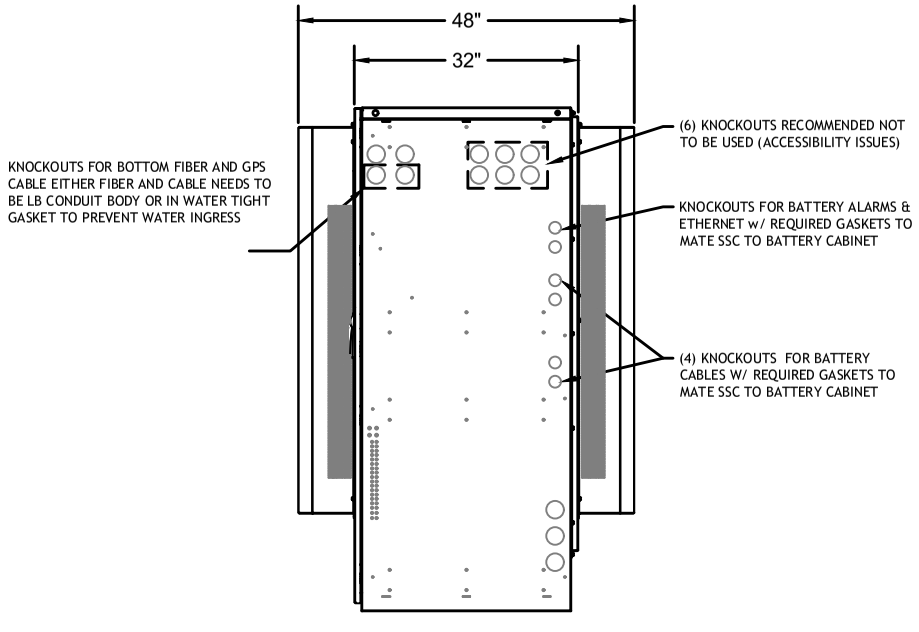
TOP VIEW



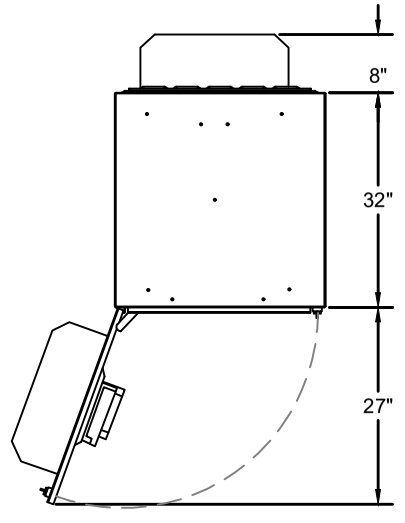
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW w/DOOR SWING

1 PURCELL HPL3 600A SITE SUPPORT CABINET SPECIFICATIONS

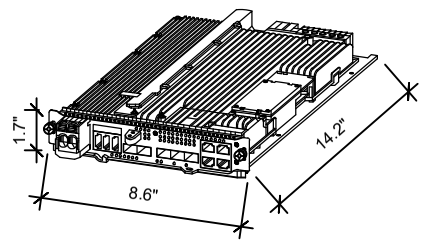
SCALE: N.T.S.

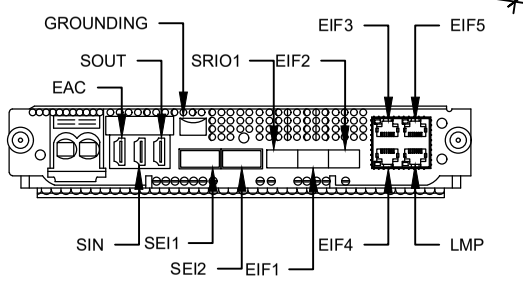
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

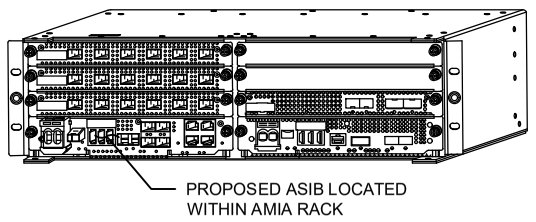
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	-

MANUFACTURER:	NOKIA
MODEL:	ASIA
WEIGHT:	6.8 LBS
DIMENSIONS:	8.6"X14.2"X1.7"

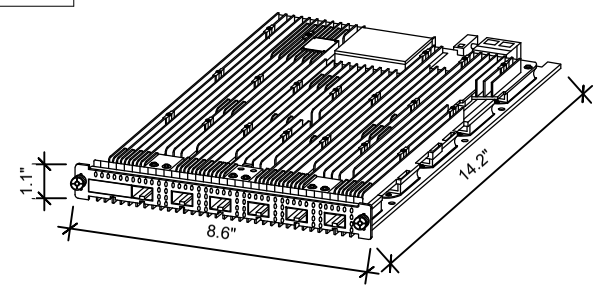


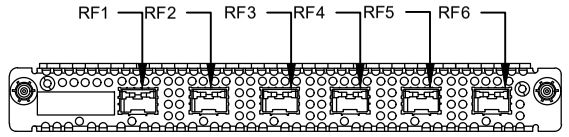


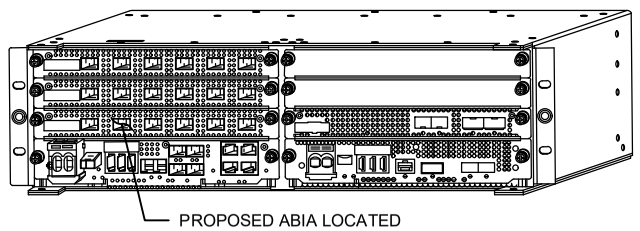


1 ASIA DETAIL
SCALE: N.T.S.

MANUFACTURER:	NOKIA
MODEL:	ABIA
WEIGHT:	4.6 LBS
DIMENSIONS:	8.6"X14.2"X1.1"

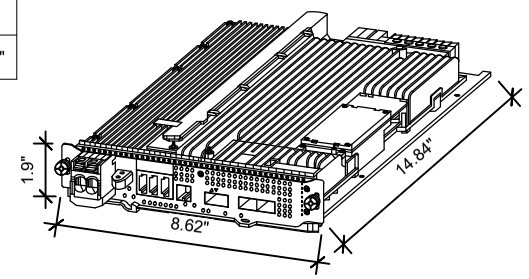


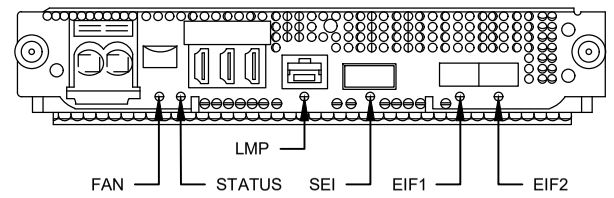


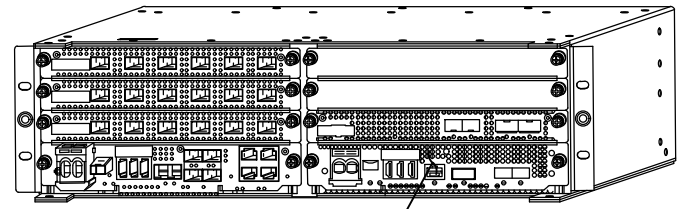


2 ABIA DETAIL
SCALE: N.T.S.

MANUFACTURER:	NOKIA
MODEL:	ASIL
WEIGHT:	6.8 LBS
DIMENSIONS:	1.9"X8.62"X14.84"

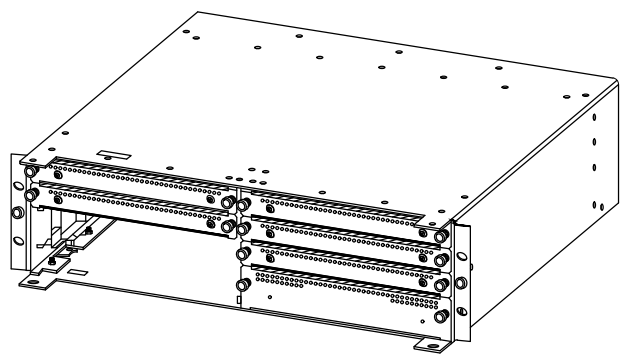






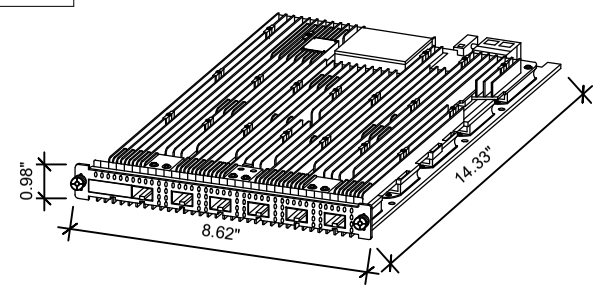
3 ASIL DETAIL
SCALE: N.T.S.

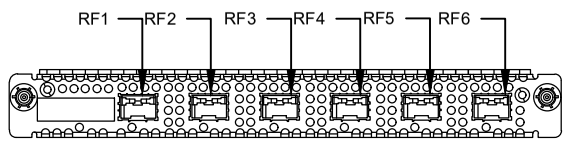
MANUFACTURER:	NOKIA
MODEL:	AMIA
WEIGHT:	11.2 LBS (UNIT ONLY)
DIMENSIONS:	5.1"X15.7"X17.6"

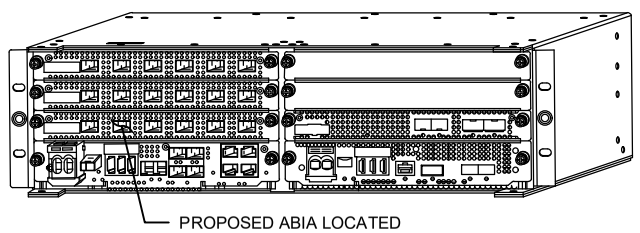


4 AMIA DETAIL
SCALE: N.T.S.

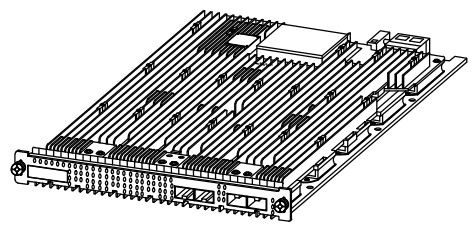
MANUFACTURER:	NOKIA
MODEL:	ABIO
WEIGHT:	5.84 LBS
DIMENSIONS:	0.98"X8.62"X14.33"

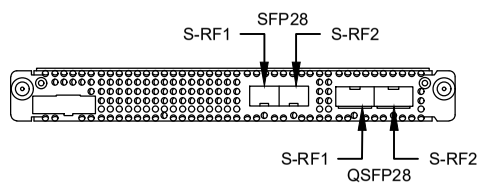


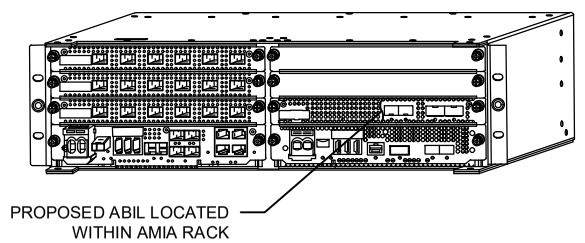




5 ABIO DETAIL
SCALE: N.T.S.







6 ABIL DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	-

MANUFACTURER: NOKIA
MODEL: IXR-e
DIMENSIONS: 17.25"x10.0"x1.75"
WEIGHT: TBD

1 CSR IXRE DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-606

REVISION: -

Charles Universal Broadband Enclosures (CUBE)
RL1000 Series Backhaul Cabinets

(Shown with optional slide-out tray)

CUBE RL 1000 Series cabinets provide environmental protection of Ethernet equipment and other electronics for wireless backhaul applications at cellsites and other remote outdoor applications. With 14RU of rack space, these compact enclosures can be flexibly mounted in small spaces. An optional slide-out tray (97-001990-A) provides storage of equipment that is not rack mountable.

Overall Dimensions	26”H x 22”W x 20”D
Rack Space	14RU
Rack Width	19” EIA Standard
Hole Spacing on Racks	EIA 12-24
Bonding & Grounding	(1) 8 Position, 2-Hole Ground Bars
Fuse Panel	(1) Wallmount 10 Position GMT Type
Cable Entrance	(5) 1.75/2.5” Double Knockouts
Color	Off-White
Construction	Welded Aluminum
Mounting	Wall or H-Frame, Pole Mount with optional kit
Thermal Management Options	580W 24VDC/48VDC/120VAC HX, 750W 48VDC HX, 2K BTU HVAC, Vented with Fans

Note: RL1003 Models have Heat Exchanger positioned on the side of the cabinet, RL1141 Models have Heat Exchanger positioned on the front of the cabinet.

Charles Part #	Overall Dimensions	RU	Mounting Rails	Equipment Chamber Door	Equip. Chamber Dimensions	Battery Chamber Dimensions	Handoff Chamber Dimensions	Load Center	Thermal Specs	Integrated Power	Weight Empty (lbs.)
CUBE-RL1003-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 24V DC HX	—	90
CUBE-RL1003A-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 48V DC HX	—	90
CUBE-RL1003B-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	None	—	75
CUBE-RL1003C-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 120VAC HX	—	90
CUBE-RL1003D-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 24VDC HX	—	90
CUBE-RL1003E-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	2K BTU HVAC	—	105
CUBE-RL1003VF-A	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	Vented with Fans	—	105
CUBE-RL11411AN1	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 48V DC HX	—	90
CUBE-RL11411CN1	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	580W 24V DC HX	—	90
CUBE-RL11411DN1	26x22x20	14	19" Fixed Rail	Front	26x22x20	—	—	None	750W 48V DC HX	—	105

For additional product information, please visit **www.charlesindustries.com**

OG-OSP021-K16

INNOVATIVE ENCLOSED SOLUTIONS™

Charles Industries, Ltd.
5600 Apollo Drive
Rolling Meadows IL 60008

Phone: (847) 806-6300
Fax: (847) 806-6231
Web: www.charlesindustries.com

1 PROPOSED LEC CUBE DETAIL
SCALE: N.T.S.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: R-607

REVISION: -

Power Protection Cabinet (PPC) 225A
with Generator Input and AC Alarm

Product Features

- Single wall Aluminum enclosure
- Powder coated finish
- Pad lockable 3-point door latch
- Type 3R & IP55 rated
- Metal oxide varistor surge protection
- Camlok generator connection
- Main AC Input Detection Alarm

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Smarter. Greener. Together.

Specifications

Model / Part Number **4910163600**

1. General	
Construction	Single layer Aluminum enclosure, Type 3R
Dimensions (W x H x D)	20.2 x 39 x 11.2 inch excludes generator connections 29.7 x 39 x 11.2 inch including RH Camlok generator box
Weight	71 lbs (without packaging)
Finish	Polyester Powder Paint
Door Latch	3-Point latching, pad lockable
Safety	UL50 (Cabinet) UL891 Dead Front Switchboard Listed Suitable for Use as Service Equipment (N-G Bonding kit included)
2. Environment	
Operating temperature	-40˚C to +46˚C (-40˚F to 115˚F)
Humidity (relative)	95%, non-condensing (Max.)
Protection class	Type 3R
3. AC Section	
Voltage	240/120 Single Phase (3 wire + Ground)
Current	225A
AIC Rating	Utility 65,000 Amps
Other features	Generator Interface: Camlok Connections (Right Mount) Service Disconnect: Square D 225 Amp (65kAIC) Mechanical Slide Bar Interlock Load Center: Square D 225 Amp, QO Series, 24 Position Surge Protection Device (SPD) - 1 ea. AC2080M-02 Square D 30 Amp, 2-Pole Breaker for SPD Ground Bar Silkscreen Dead-Front Lift Off Style Captive Dead-Front Fasteners Loss of AC Input Alarm

5. Ordering information		
PPC	4910163600	Power Pedestal Cabinet - 225A w/ AC Alarm
AC Alarm Relay Kit FRU	5630102506	Alarm Monitoring Retrofit Kit for PPC

Delta Group Website:
www.deltaww.com

Product Website:
www.deltapowersolutions.com

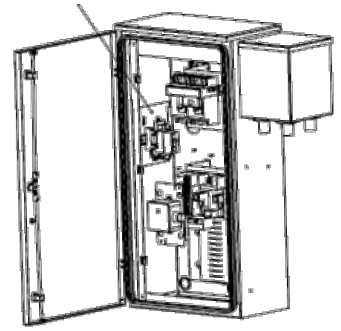
United States of America & Canada:
Delta Electronics (USA) Inc.
2925 E. Plano Parkway
Plano, TX (Texas) 75074

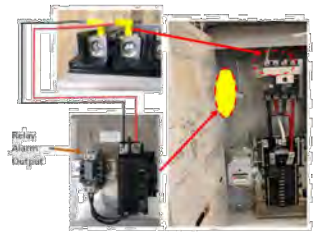
Sales and Orders:
DEUSTPS.Sales@deltaww.com
DEUSTPS.Orders@deltaww.com

Field Support:
1-877-DELTA-08 option 3
(877-335-8208 option 3)
DEUSTPS.Support@deltaww.com

Installation Services:
DEUSTPS.Services@deltaww.com

RMA:
DEUSTPS.RMA@deltaww.com





GENERATOR INPUT

*Male Receptacle Twist Lock Panel Mount connectors (not included)

*All specifications are subject to change without prior notice.

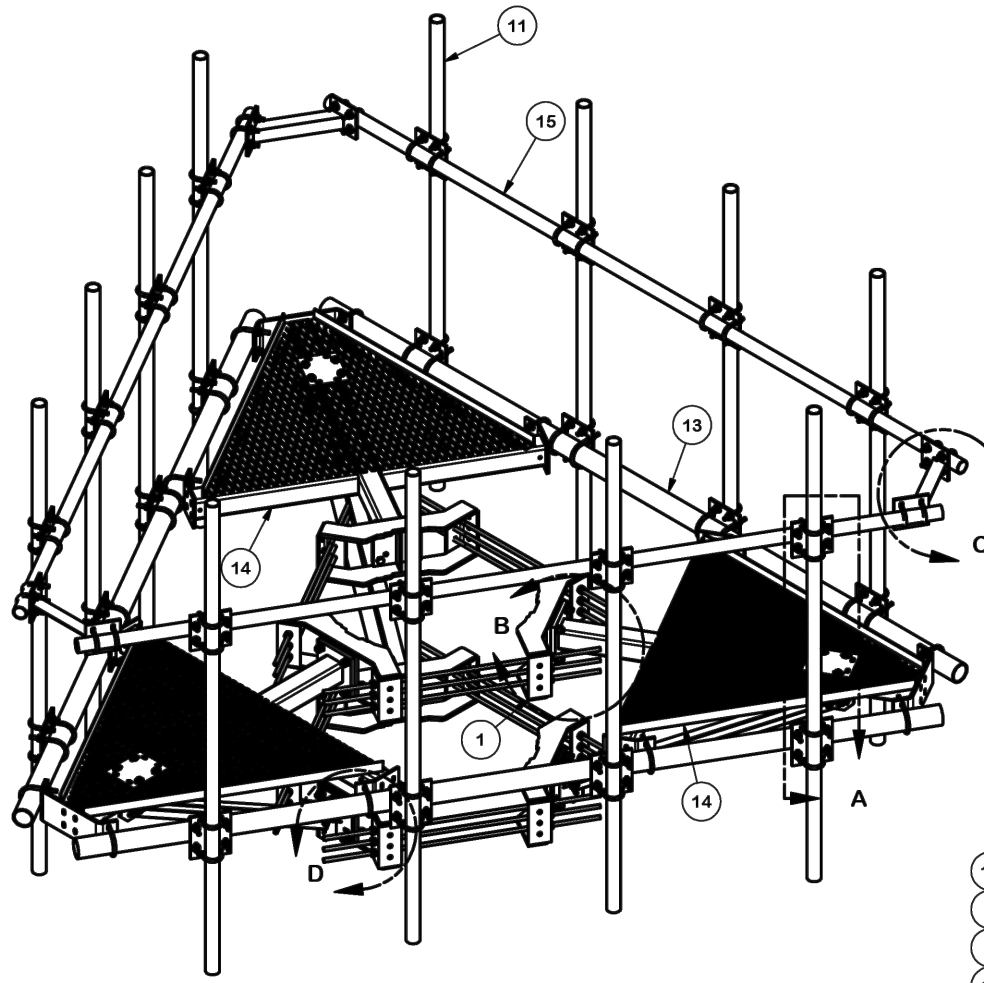
EN_z23n2P17/ FH

1 PROPOSED 225A PPC DETAIL
SCALE: N.T.S.

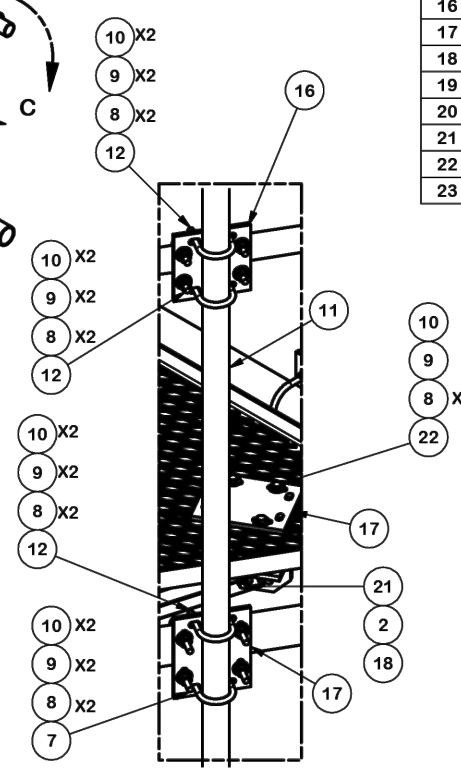
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

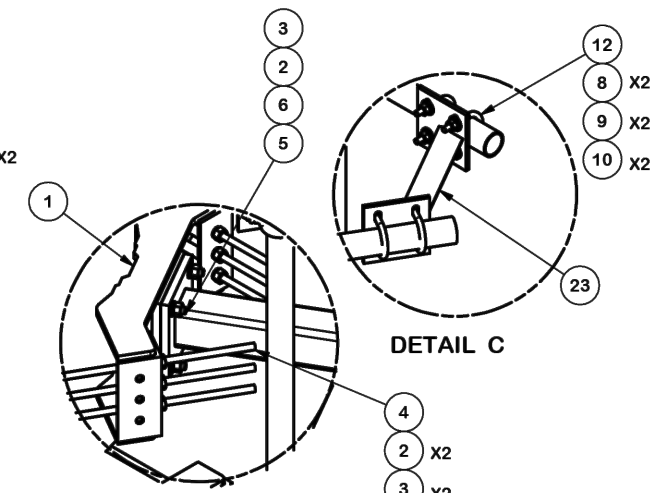
SHEET NUMBER:	REVISION:
R-608	-



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	6	X-LWRM	RING MOUNT WELDMENT		68.81	412.85
2	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
3	60	A58NUT	5/8" HDG A325 HEX NUT		0.13	7.79
4	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)		2.09	37.63
4	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)		4.18	75.27
5	24	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	8.54
6	24	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.82
7	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.83	29.82
8	264	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	9.00
9	252	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	3.50
10	252	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	18.05
11	12	P296	2-3/8" X 96" SCH. 40 GALVANIZED PIPE	96 in	30.76	369.08
12	84	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	50.17
13	3	P3150	3-1/2" X 150" (3" SCH 40) GALVANIZED PIPE	150 in	94.80	284.40
14	3	X-SV196	LOW PROFILE PLATFORM CORNER		212.10	636.31
15	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
16	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
17	15	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	90.32
18	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
19	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
20	6	X-TBW	T-BRACKET WELDMENT		13.60	81.60
21	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
22	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	5 1/2 in	0.41	4.91
23	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
					TOTAL WT. #	2445.81

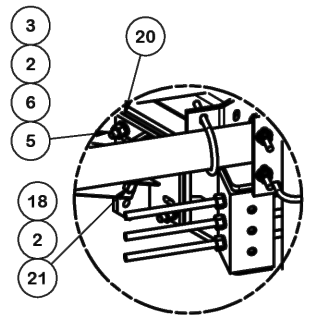


DETAIL A



DETAIL B

DETAIL C



DETAIL D

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	CHANGED X-253992 TO X-TBW	4488	CEK	9/20/2018
REVISION HISTORY				

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' 6" LOW PROFILE PLATFORM
WITH TWELVE 2-3/8" ANTENNA MOUTING
PIPES, AND HANDRAIL

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4488	CEK 7/14/2014		RMQP-496-HK	1 OF 3
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER	BMC 7/14/2014	RMQP-496-HK	

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

1 PROPOSED PLATFORM MOUNT DETAIL
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

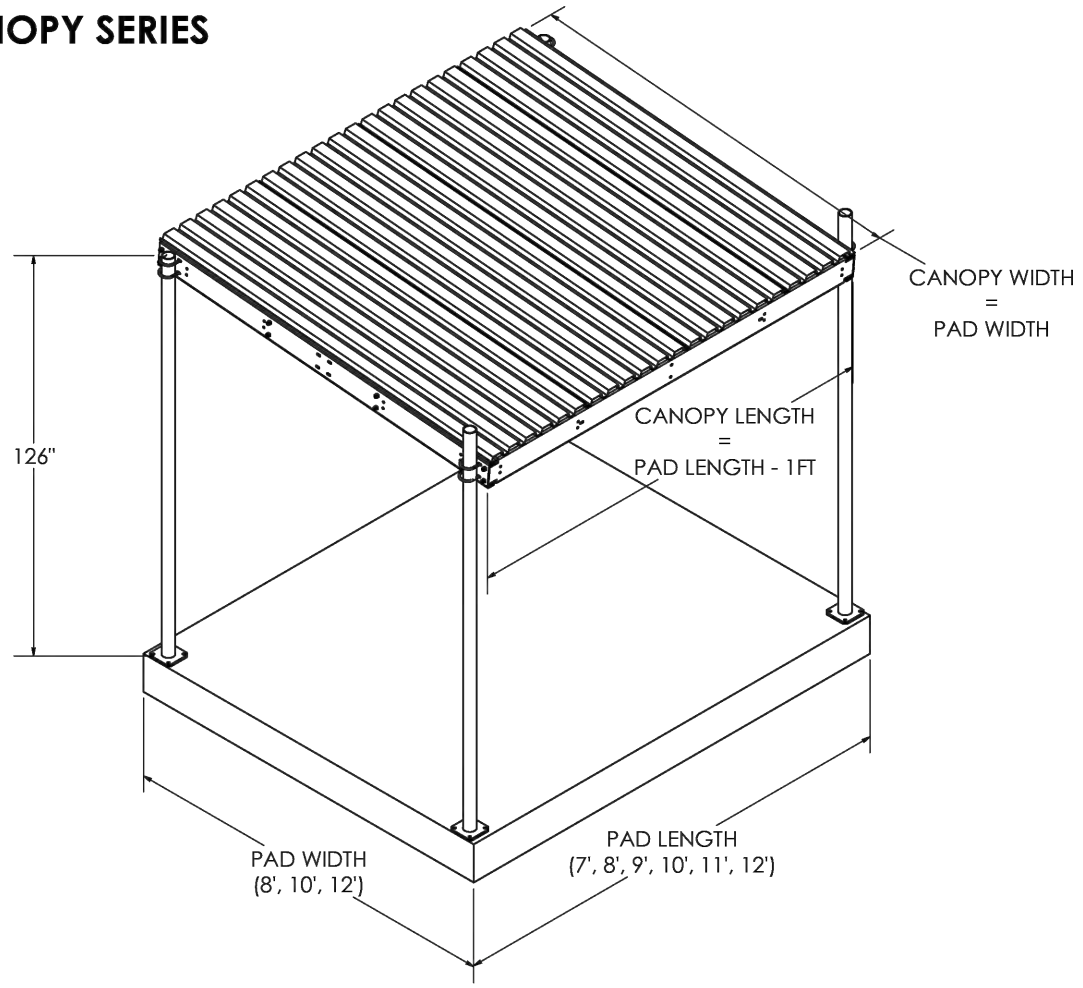
SUPPLEMENTAL

SHEET NUMBER: R-609

REVISION: -

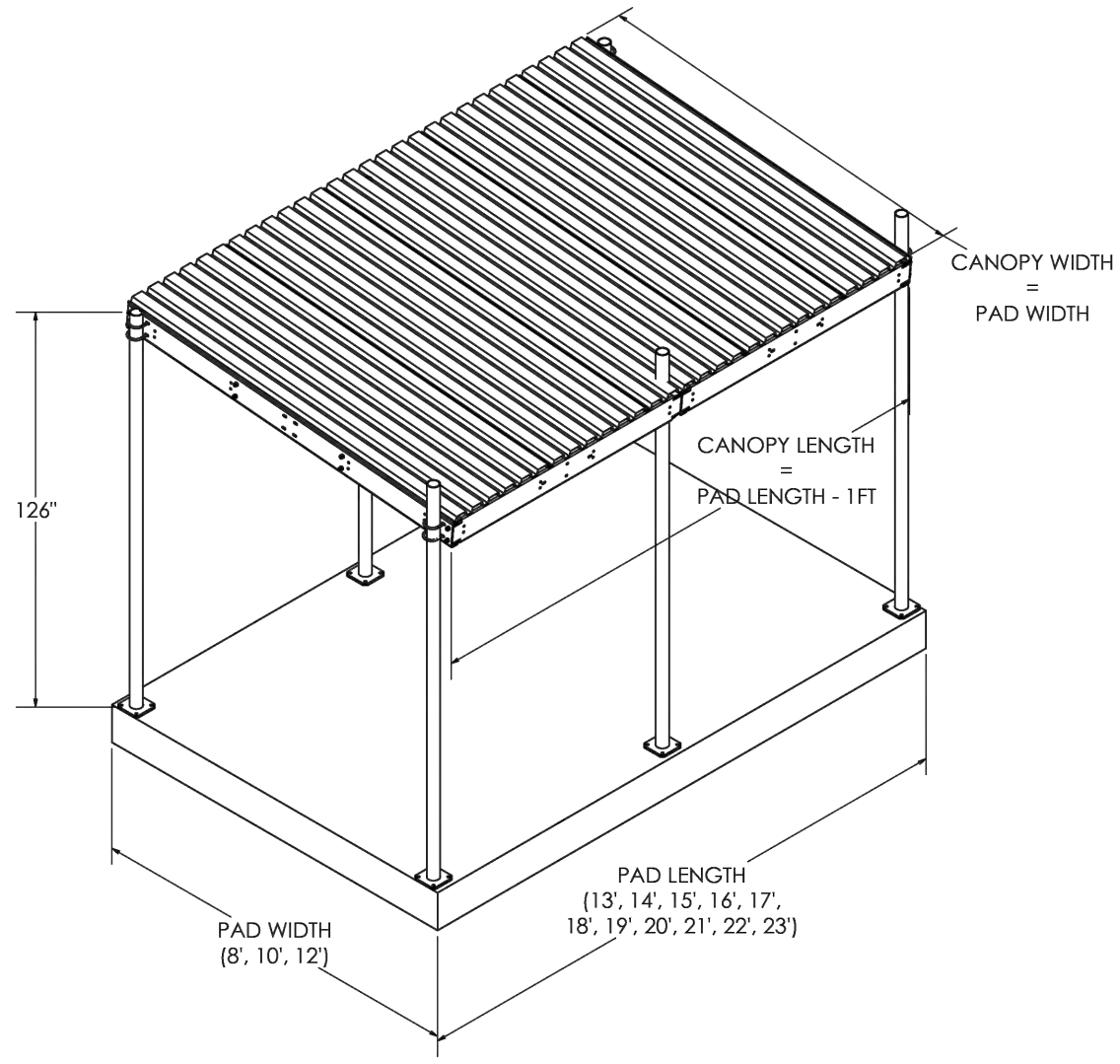
WEATHER CANOPY SERIES

SERIES OVERVIEW



4 POST WEATHER CANOPY

Weather Canopy Size Options						
		Pad Width (Roof Slope Direction)				
		8 '		10 '		12 '	
Pad Length	7 '	PV-WC0807-B	809 lbs	PV-WC1007-B	935 lbs	PV-WC1207-B	1061 lbs
	8 '	PV-WC0808-B	857 lbs	PV-WC1008-B	997 lbs	PV-WC1208-B	1137 lbs
	9 '	PV-WC0809-B	904 lbs	PV-WC1009-B	1057 lbs	PV-WC1209-B	1211 lbs
	10 '	PV-WC0810-B	950 lbs	PV-WC1010-B	1117 lbs	PV-WC1210-B	1284 lbs
	11 '	PV-WC0811-B	998 lbs	PV-WC1011-B	1179 lbs	PV-WC1211-B	1361 lbs
	12 '	PV-WC0812-B	1045 lbs	PV-WC1012-B	1240 lbs	PV-WC1212-B	1436 lbs
	13 '	PV-WC0813-B	1355 lbs	PV-WC1013-B	1584 lbs	PV-WC1213-B	1815 lbs
	14 '	PV-WC0814-B	1404 lbs	PV-WC1014-B	1648 lbs	PV-WC1214-B	1893 lbs
	15 '	PV-WC0815-B	1450 lbs	PV-WC1015-B	1708 lbs	PV-WC1215-B	1966 lbs
	16 '	PV-WC0816-B	1496 lbs	PV-WC1016-B	1766 lbs	PV-WC1216-B	2038 lbs
	17 '	PV-WC0817-B	1545 lbs	PV-WC1017-B	1830 lbs	PV-WC1217-B	2116 lbs
	18 '	PV-WC0818-B	1591 lbs	PV-WC1018-B	1890 lbs	PV-WC1218-B	2190 lbs
	19 '	PV-WC0819-B	1636 lbs	PV-WC1019-B	1949 lbs	PV-WC1219-B	2262 lbs
	20'	PV-WC0820-B	1685 lbs	PV-WC1020-B	2012 lbs	PV-WC1220-B	2340 lbs
	21 '	PV-WC0821-B	1732 lbs	PV-WC1021-B	2072 lbs	PV-WC1221-B	2414 lbs
	22'	PV-WC0822-B	1777 lbs	PV-WC1022-B	2131 lbs	PV-WC1222-B	2492 lbs
	23 '	PV-WC0823-B	1829 lbs	PV-WC1023-B	2198 lbs	PV-WC1223-B	2568 lbs



6 POST WEATHER CANOPY

SHEET 1 OF 11	THIRD ANGLE PROJECTION	CATEGORY 07_Equipment Platforms & Canopies	5	UPDATED MEMBER LAYOUT, ADDED PLATFORM SIZES, ADDED JACK LEG	2/15/18
		SERIES 01_Equipment Platforms & Canopies	4	EQ USABLE AREA TABLE	2/2/17
3/30/2018	SCALE 1:40	TYPE PV-WC / PV-EQ Series	3	ADDED PV-EQ-STEP	1/25/17
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY DJN	2	UPDATED PV-WC-BRACE	9/19/16
		CHECKED SJS	1	ADDED POST KITS	4/7/16
		STATUS APPROVED	REV	DESCRIPTION	DATE

PERFECTVISION MANUFACTURING

EQUIPMENT PLATFORM AND CANOPY

DOCUMENT NUMBER WCEQ-ENG-01-R5 | REV 5

C:\PVMSteel\PVM Sales Catalog\SW Working Files\Engineering Details\

1 PROPOSED CANOPY DETAIL
SCALE: N.T.S.

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SUPPLEMENTAL

SHEET NUMBER: R-610 | REVISION: -

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:
413487

Site Name:
Millersburg 1 OR

Location:
Albany, Oregon

Tenants:
T-Mobile, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

December 20th, 2023

114781 P-414869

Prepared By:

Adam Carlson MS, CBRE, CPI
Program Manager RF Design & Service
Tower Engineering Professionals

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Contents

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Non-Ionizing Electromagnetic Radiation (NIER) Study

413487 Millersburg 1 OR
Albany, Oregon

INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

SITE AND FACILITY CONSIDERATIONS

Site 413487 Millersburg 1 OR is located at 3025 Kathryn St., in Albany, Oregon at coordinates 44.645446, -123.067525. The support structure is a 101' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are T-Mobile (T-Mobile) & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 413487 MILLERSBURG 1 OR.RF NIER Study 12/01/23.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

COMPLIANCE DETERMINATION

This installation ***IS*** in compliance with current FCC MPE limits as described in FCC OET-65.

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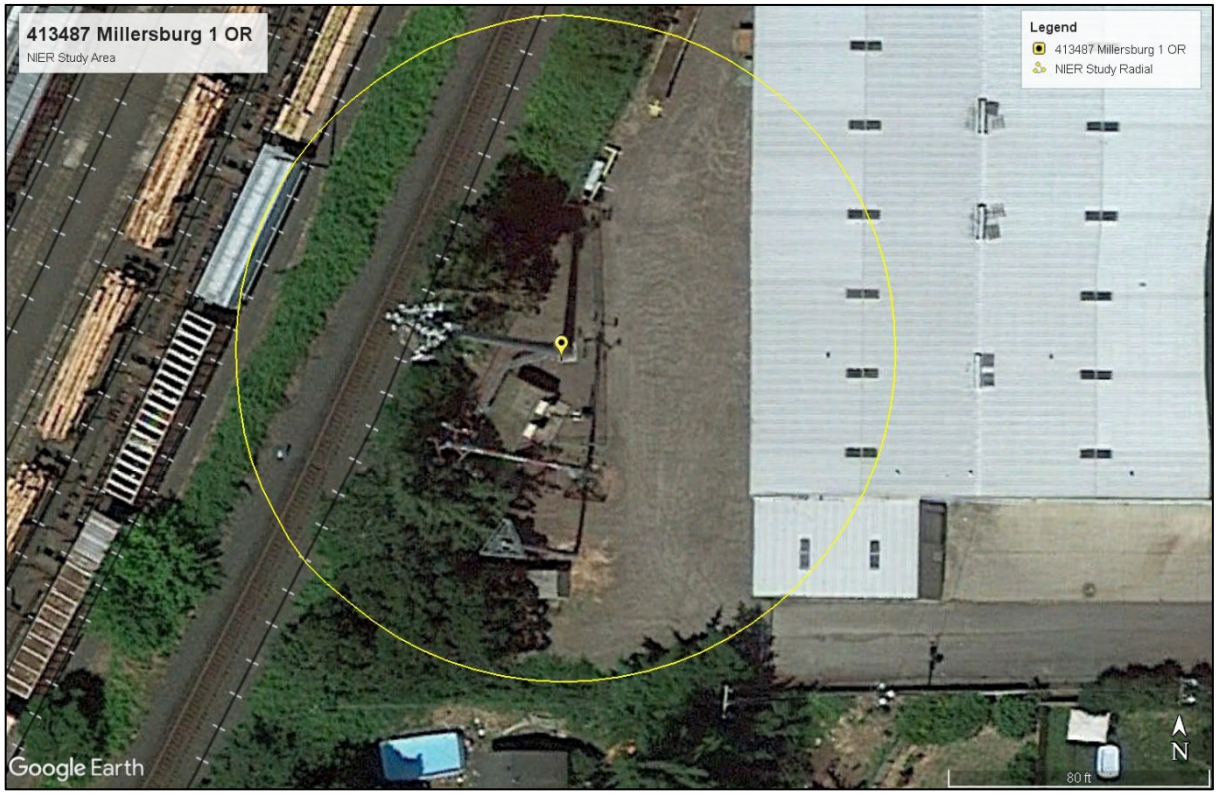
APPENDIX 1 Site Photos



Aerial View of Site

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Appendix 2 Antenna Inventory

413487 Millersburg 1 OR							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	Verizon	Ericsson	Radio 4480	3500-3700	020	243	98.0
2	Verizon	Ericsson	Radio 4480	3500-3700	140	243	98.0
3	Verizon	Ericsson	Radio 4480	3500-3700	250	243	98.0
4	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	100	48843	98.0
5	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	180	48843	98.0
6	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	260	48843	98.0
7	Verizon	Antel	QXW-458X4516XBF	800	150	23119	98.0
8	Verizon	Antel	QXW-458X4516XBF	800	235	23119	98.0
9	Verizon	Ericsson	Air 6449	3700-3900	020	71639	98.0
10	Verizon	Ericsson	Air 6449	3700-3900	140	71639	98.0
11	Verizon	Ericsson	Air 6449	3700-3900	250	71639	98.0
12	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	025	48843	98.0
13	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	025	48843	98.0
14	Verizon	Antel	BXA-70080-8CF	800	020	15310	98.0
15	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	085	48843	97.8
16	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	261	48843	97.8
17	Verizon	Commscope	NHH-65B-R2B	700/800/1900/2100	260	48843	97.8
18	T-Mobile	Nokia	AEHC	2500-2700	010	34358	85.0
19	T-Mobile	Nokia	AEHC	2500-2700	120	34358	85.0
20	T-Mobile	Nokia	AEHC	2500-2700	240	34358	85.0
21	T-Mobile	Commscope	FVV-65C-r3-V1	600/700/1900/2100	010	33126	85.0
22	T-Mobile	Commscope	FVV-65C-r3-V1	600/700/1900/2100	230	33126	85.0
23	T-Mobile	Commscope	FVV-65C-r3-V1	600/700/1900/2100	240	33126	85.0

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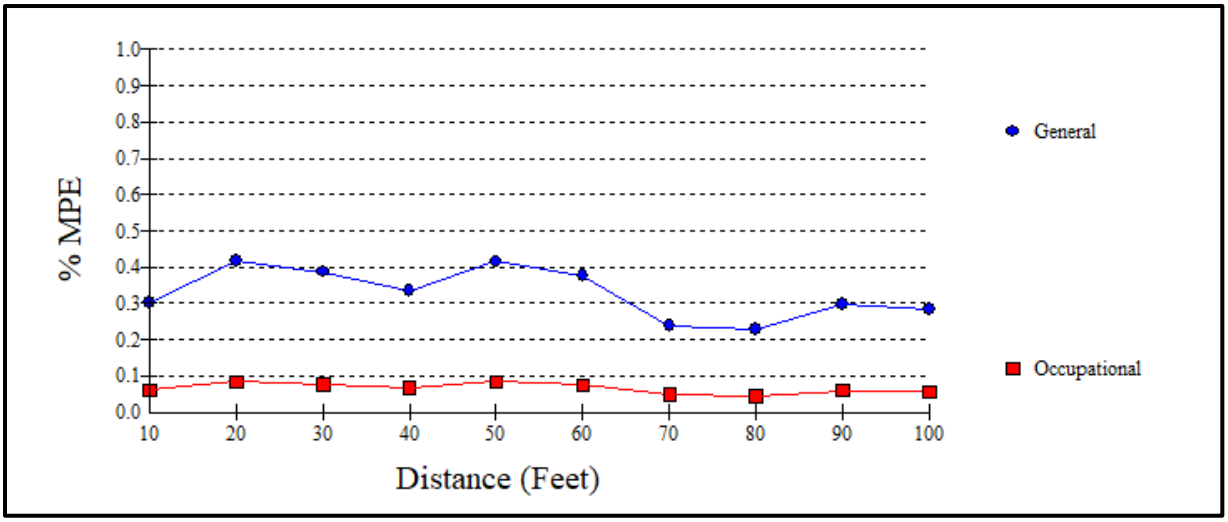
Appendix 3.1 MPE Limit Study



Maximum Power Density (@20'):	0.028 mW/cm²
General Population MPE (@20'):	0.4186%
Occupational MPE (@20'):	0.0837%

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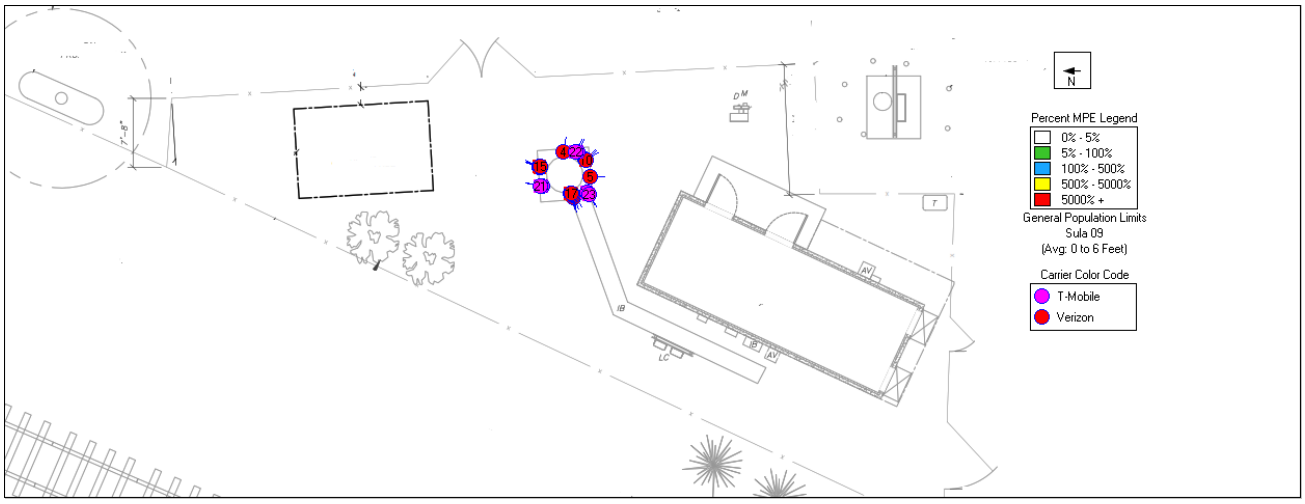
Appendix 3.2 MPE Limit Study



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Appendix 4 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

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Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

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The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	$900/F^2$	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

* = Plane-wave equivalent power density

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Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	$180/F^2$	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

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The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

RF Design and Services
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Raleigh, North Carolina 27603
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Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

Date: March 15, 2024

City of Millersburg
Community Development
4222 NE Old Salem Road
Albany OR 973211

Subject: Type I administrative site development review modification: Collocation (Spectrum Act Exempt)

Site No: 413487 Millersburg1 OR PO06009A
Site Address: 3025 KATHRYN ST., ALBANY, OR 97321
Parcel #: 11S03W04BC00201

Dear Community Development,

Infinigy is representing American Tower Corporation (ATC) regarding T-Mobile's collocation on an existing wireless telecommunications facility, referenced above.

TOWER SCOPE:

- INSTALL (1) RMQP-496-HK PLATFORM MOUNT W/ HANDRAIL KIT
- INSTALL (3) FFVV-65C-R3-V1 ANTENNAS
- INSTALL (3) AEHC ANTENNAS
- INSTALL (3) AHLOB RRHs
- INSTALL (3) AHFII RRHs
- INSTALL (2) 6/24 4AWG HYBRID TRUNKS (LENGTH: 40m)
- INSTALL (9) 15' FIBER JUMPERS

GROUND SCOPE:

- INSTALL (1) 10 FT X 15 FT CONCRETE PAD
- INSTALL (1) ICE BRIDGE
- INSTALL (1) 10' X 10' ICE CANOPY WITH (2) SITE LIGHTS AND GFI IN
- WEATHERPROOF HOUSING
- INSTALL (1) H-FRAME WITH (1) 225A PPC, (1) LEC CUBE, AND
- TIMER/SWITCH
- INSTALL (1) NEW METER NEXT TO EXISTING PACIFICORP METER
- INSTALL (1) PURCELL HPL3.1 600A SITE SUPPORT CABINET AND
- PURCELL LB3 BATTERY CABINET
- INSTALL (1) 2" CONDUIT FOR POWER
- INSTALL (1) 2" CONDUIT FOR FIBER
- INSTALL IN HPL3.1 600A:
- ASIA, (2) ASILs, (2) AMIAs, (3) ABIAs, (3) ABILs, (1) ABIO, AND
- CSR IXRE V2
  RFDS VERSION: 1 DATE: 01/17/2024

There will be no change in the existing tower height and there will be no expansion of the existing compound.

Enclosed you will find:

- completed Type I Application,
- Letter of authorization with Land lease
- construction drawings with site plans,
- original land use approval
- original building permit
- NIER Report

Project valuation is $40,000. Once you have processed the application and determine planning permit fee, please contact so that I may pay the fees over the phone or online with a credit card.

If you have any questions or need additional information, please let me know.

Thank you,

Vinh Dinh
m-(206)295-5926
vinhd@tepgroup.net