From: Lisa Weygandt
To: Kim Scheafer
Subject: Letter to Canby City Coucil
Date: Tuesday, January 17, 2017 1:47:07 PM

January 16th, 2017

To the members of the Canby City Council,

My name is Lisa Weygandt. I reside at 24401 S Mulino Rd, Canby, Or. This correspondence is regarding my inclusion as a benefitted property owner of record in the SE 13th Avenue Advance Finance District.

Unfortunately, I'm unable to attend the scheduled public hearing for January 18th, 2017. However, I would like to submit this letter into record in my absence.

I don't have an objection to the formation of the AFD, however, in that this improvement is being initiated by the City of Canby, what you assess as the interest rate on the cost allocations need to be equitable and closely match the established US government inflation rate. As of Nov. 2016 that rate was 1.69%.

I would ask that, in your deliberations, you consider the broader benefit this sewer line extension/pump station will have to the City, and not exclusively the properties included in this AFD.

With that in mind, and your ability to determine the interest rate on a case to case basis, I would ask that you keep such rate close to that of current US inflation rates.

Thank you,
Lisa Weygandt

January 18, 2017

Kathleen Myron
PO Box 675
Canby, OR 97013

City Council
City of Canby, Oregon

Re: SE 13th Avenue Advance Financing District
S. Mulino Rd. (Buzz Weygandt property) Pumping Station Wet Well facility

Dear Council Members,

Thank you for this opportunity to express my concerns regarding the siting of this facility which I hope will be acted upon.

Site a Seasonal Wetland
I believe the site north of the Oregon Pacific Railroad (OPR) embankment and tracks near the stop sign on S. Mulino Rd. on the Weygandt property (as identified to me by Curt McLeod in a phone conversation last year) to be a seasonal wetland. I shared my concerns with Mr. McLeod at that time, but was not reassured that this facility would pose no threat of pollution (nutrient-loading to the associated small stream, a tributary of the Molalla River which is the habitat to anadromous salmonids, some under protection of the Endangered Species Act, I believe) should a sewage leak or overflow, or accident of any kind occur.

While I do not know that the site has been formally classified as a wetland, I am aware from my familiarity with the site over the course of many decades (since the late 1940s when my grandparents purchased a farm approximately 1.5 miles east on S. Mulino Rd.) that the site meets a number of the identifying characteristics listed by the Department of State Lands on the "Wetlands in Oregon" site section "How to identify wetlands." Among these identifiers are the following:

1. Depressions where water pools for a week or more in the spring.
2. Soggy ground in the spring inferred from the presence of standing water in the spring.

3. Many clumps of plants that grow in wetlands. The site is a camas meadow (*Camassia quamash, C. leichtlinii* identified in Hitchcock, C. Leo and Arthur Cronquist's **Flora of the Pacific Northwest,** UW Press, Seattle, 1981). These lilies are found in "…moist areas, often where dry by late spring..." (C. quamash) or in "…meadows, prairies, and hillsides where moist, at least early in spring;…" (*C. leichtlinii*). The beautiful blue flowers provide a lovely contrast to the greens of the associated wetland plants. These distinctive plants which have been an important food among the Native Americans of the West are also found along banks of the associated stream under the native Oregon white oaks (*Quercus garryana*) south of SE 13th Avenue on the former Elwood Faist property.

4. The area is avoided in the spring by heavy equipment to avoid becoming bogged down. Observations over the years appear to support this identifier.

As I recall, the site also includes native Oregon white oak and Oregon ash (*Fraxinus latifolia*) trees. Franklin and Dyrness describe the Oregon ash as "...a very characteristic species on seasonally flooded and swampy habitats in the interior valleys [of Oregon]" and also note that "several other tree species are characteristic of the floodplain, riparian, or gallery forests." Among them are the Oregon white oak, bigleaf maple (*Acer macrophyllum*) and red alder (*Alnus rubra*); camas is also noted as associated with these communities occupying "small poorly drained basins." The authors further note that these communities "often have a rich diversity of species." (Franklin, Jerry F. and C.T. Dyrness. Natural Vegetation of Oregon and Washington. USDA Forest Service General Technical Report PNW-8. Portland, OR 1973.

I have cited this reference to support my assessment of this site as one of the small remaining, functioning wetland sites in Oregon which contributes to the health of the Molalla River from which Canby draws its drinking water.

Wetlands function to filter surface waters, moderate their overland flow velocity during seasonal heavy rainstorms, and provide for that water to infiltrate the surface soils, recharging ground water resources which are known to contribute late season flows to associated downslope streams and rivers such as the Molalla River tributary, the stream which flows through the culverts under the OPR embankment and SE 13th Avenue just west of the intersection with S. Mulino Rd.

Such small wetlands with their associated riparian zones and streams have been and are being lost to agricultural practices and developments which fail to recognize the inherent values of the streams, riparian zones, and wetlands. One of the values, noted in a DSL section "*Just the Facts…About Wetland Functions and Assessment*" is "the ecological processes in wetlands, such as nitrogen cycling." Another value is "the societal importance attached to those functions, such as water quality improvement." "In Oregon, about 38% of our wetlands have been converted to other uses." Is it any surprise that over the past 3 years, Canby's drinking water quality has been experienced and described as putrid, foul-smelling, and unpotable? The cumulative effects of the loss of natural filtration processes combined with high nutrient loading from agricultural lands where riparian zones and wetlands have been converted to farmed lands, where streams have been ditched, and the allowed dumping of Molalla sewage water (treated, but still rich in algae-growing nutrients) seem apparent to this longtime Canby resident. Every small natural water-filtering and water-storing site is invaluable as a component to maintain quality potable water. The value of these areas for migratory birds and pollinating insects cannot be underestimated.

A most recent drive past the site clearly showed that water has pooled to some depth at the site, and that the site does not appear to be cleared of vegetation.

The fact that the authorizing process is continuing with apparent disregard for the inherent values of this seasonal wetland is what concerns me. I do understand that someone unfamiliar with the location, perhaps unfamiliar with identifying native plants, and uninformed as to the values of such areas. So, I have to ask, was a wetland scientist familiar with native plants and seasonal weather conditions consulted? If yes, when were the surveys conducted? Were the soils on-site identified? Wetland soils are distinctive. As per the DLS wetland questionnaire, was "an 18-inch deep hole [dug] and …a clump of soil [removed]? Was "there rusty red "veins" on a gray-background" present?

DSL states that "A "yes" answer to any of the questions ... may indicate that the area is a wetland." I can document several "yes" answers simply by driving by. With 38% of Oregon's wetlands documented as converted prior to the DLS 2004 publication coupled with the values inherent, I believe this sewage pumping station wet well is planned for the wrong location. I am not reassured that the facility would be incapable of an unplanned polluting discharge such has occurred

with sewage facility overflows at other locations. Our streams and rivers are not sewer pipes. I understand no treatment is planned prior to discharging sewage from all the properties east of the current termination point at Sequoia Parkway. The plans for this area include industrial and residential development, I understand. What volume of sewage discharge is contemplated? What level of earthquake are the pipes and facility specifically designed to withstand without failure?

I am aware it is difficult to divert a speeding train onto an unplanned track, but I had hoped that diversion would have happened following my discussion last year with Mr. McLeod. Canby is not giving due consideration to the environment in planning to site this project in an active, functioning native wetland.

While I am not a licensed or degreed wetland scientist, I am a dedicated student of the natural world's features, inhabitants, movements, and weather. As such, I have the above-noted serious concerns about destroying yet another functioning wetland and its associated plant species.

It is my hope that you take my concerns and the identified values and functions of this wetland to heart and reconsider this siting. Perhaps move it from the SE corner of the Weygandt property towards the NE corner nearer the intersection of S. Township and S. Mulino roads, away from its direct association with the adjacent Molalla River tributary, sparing this camas wetland from destruction.

Thank you for your consideration.

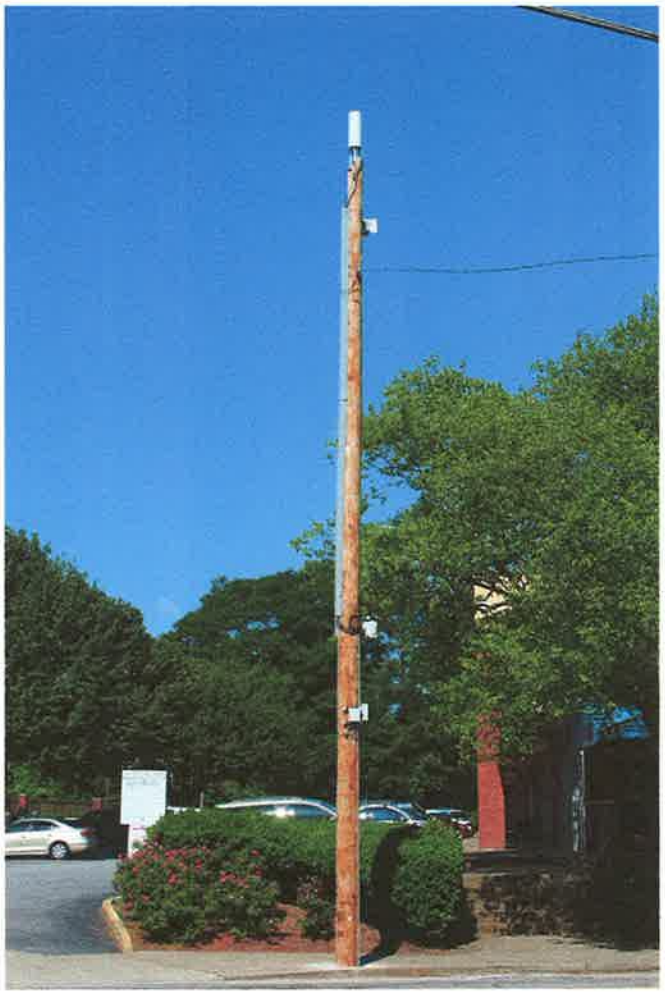
Sincerely,

Kathleen Myron
503.266.1263

Example:


view from Meyers Drive looking south at site
mobilitie
9CAB007553A
Meyers Drive, Union City, CA
Photosims Produced on 8-5-2016
Existing
Proposed
Proposed Mobilitie Installation
AdvanceSim
Photo Simulation Solutions

Our Solution - Small cell installations

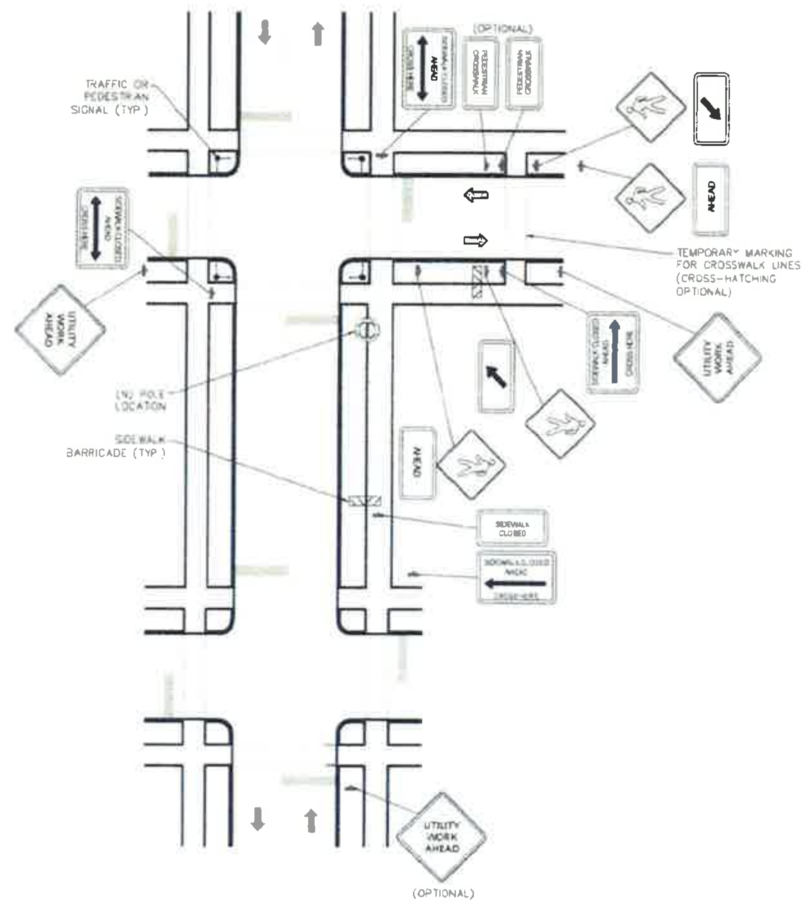


Example:


view from Meyers Drive looking south at site
mobilitie
9CAB007553A
Meyers Drive, Union City, CA
Photosims Produced on 8-5-2016
Existing
Proposed
Proposed Mobilitie Installation
AdvanceSim

TRAFFIC CONTROL GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
2. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
3. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
4. SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - PART VI "TEMPORARY TRAFFIC CONTROL" AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
5. ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IN EXCESS OF POSTED SPEED LIMITS.
6. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
7. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE (E) TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
8. ALL (E) ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE (N) TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
9. CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMENT" OR POLICE SUPERVISION, IF REQUIRED.
10. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
11. WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
12. CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
13. THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
14. DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
15. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
16. THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CANALIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CANALIZATION.
17. WHEN CANALIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CANALIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
18. TAPER LENGTHS ARE CALCULATED AS FOLLOWS:
$L = WS^2/60$ (40 MPH AND HIGHER) OR $L = WS$ (OVER 40 MPH)
WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH)



TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

SCALE: NOT TO SCALE

1

mobilitie

PROJECT NO	9ORB000945B
DRAWN BY	AL
CHECKED BY	J.P.

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

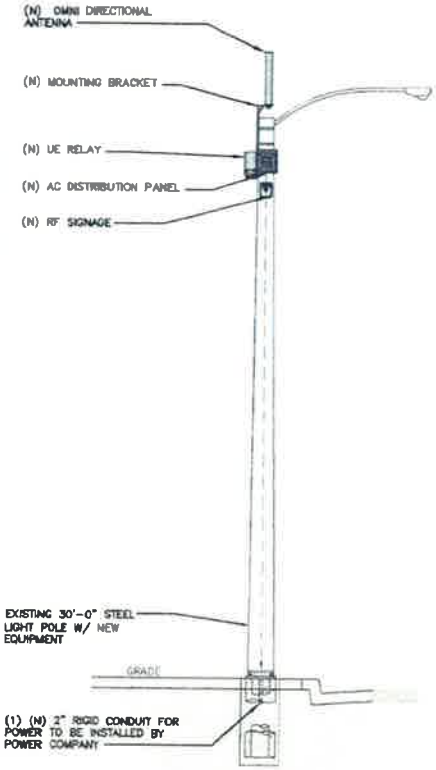
PRELIMINARY

9ORB000945B
GRANTS PASS OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
PEDESTRIAN TRAFFIC CONTROL PLAN

SHEET NUMBER
TC-2

NOTE:
1. CABLING DIAGRAM IS FOR CLARITY OF CABLE ROUTE AND TERMINATION ONLY. CONTRACTOR SHALL INSTALL CABLES WITH MINIMAL VISUAL IMPACT ON **EXISTING STEEL LIGHT POLE**. SEE ELEVATION DRAWING FOR EQUIPMENT AND ANTENNA LOCATIONS.
2. PROJECT SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THIS POLE OR STRUCTURE. (N) EQUIPMENT SHOWN ON THIS PLAN HAVE NOT BEEN EVALUATED TO VERIFY THE POLE OR STRUCTURE HAS THE CAPACITY TO ADEQUATELY SUPPORT THE EQUIPMENT. PRIOR TO ANY INSTALLATION, A STRUCTURAL EVALUATION OF THE POLE OR STRUCTURE SHOULD BE PERFORMED.



CABLING NOTES:

A) WOOD, CONCRETE AND EXISTING METALLIC POLES
 I) FROM GRADE LINE TO 11'-0" ABOVE GRADE, ALL CABLES/CONDUCTORS EXCEPT GROUNDING CONDUCTOR MUST RUN IN RIGID GALVANIZED STEEL CONDUIT (RGS)
 II) GROUNDING CONDUCTORS IN EXPOSED LOCATIONS MUST BE INSTALLED IN PVC
 III) IN EARTH INSTALL PVC CONDUIT FOR BACKHAUL AND ELECTRICAL SERVICE TRANSITION TO RGS AT GRADE LINE
 IV) ABOVE 11'-0" ALL CABLES (POWER, ETHERNET, COAXIAL) MUST RUN IN PVC UTILITY POLE RISER
  (1) AT MAJOR EQUIPMENT, EXTEND UTILITY DUCT IMMEDIATELY ADJACENT TO THE EQUIPMENT, INSTALL CABLES IN THE UTILITY POLE RISER CREATING CABLE DRIP LOOPS NOT LESS THAN THE CABLE BENDING RADIUS.
  (2) INSIDE THE UTILITY POLE RISER, UTILIZE ½" COAX BLOCKS WITH LAG SCREWS TO SUPPORT COAX, RADIO AND MW POWER, RF COAX AND ETHERNET CABLES TO WITHIN 12" OF THE EQUIPMENT BEING SERVED AND ON INTERVALS NOT TO EXCEED 6'
 V) FOR UNDERGROUND HFC/PUBLIC BACKHAUL, ROUTE ETHERNET CABLE IN CONDUIT UP THE POLE AND ENTER THE UTILITY POLE RISER. SEAL EXPOSED END OF CONDUIT WITH A CABLE TERMINATION FITTING
 VI) BY APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX. EXAMPLE: UTILITY-REQUIRED DISCONNECT ON POLE W/ AC DISTRIBUTION BOX ON OPPOSITE SIDE OF POLE.
B) (N) METALLIC POLES
 I) PROCURE (N) POLES WITH SUITABLE HAND HOLES SUCH THAT HAND HOLES EXIST AT ALL EQUIPMENT LOCATIONS.
  (1) WITH CLIENT APPROVAL IN SELECT CASES TO FACILITATE IMPROVED APPEARANCE, ½" COAXIAL CABLES MAY BE "SUPERFLEX" IN LIEU OF LDF-4
II) WHERE POSSIBLE, INSTALL POLE BASE SUCH THAT THE ELECTRICAL FEED AND BACKHAUL (IF UNDERGROUND) CIRCUIT ENTER THE POLE THROUGH THE POLE BASE. IF A DISCONNECTING MEANS SEPARATE FROM THE AC DISTRIBUTION BOX IS REQUIRED BY JURISDICTION OR UTILITY, WITH APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX

PLUMBING DIAGRAM

SCALE: 3/16" = 1'-0" (3/8" = 1'-0" ON 22"x34" SHEET)

1

EQUIPMENT CHART				
QUANTITY	DESCRIPTION	CABLE LENGTH	DIMENSIONS (HxWxD)	WEIGHT
1	ALPHA WIRELESS AW3477-S OMNI-DIRECTIONAL ANTENNA	TBD	29.5" X 4.5"ø	8.8 LBS
1	AIRSPAN IR460 UE RELAY	TBD	7"ø x 1.3"	8.8 LBS
1	TALLYSMAN TW3010-TW3012 GPS ANTENNA	TBD	2.5"ø X .8"	0.33 LBS
1	AIRSPAN AH 10000 REMOTE RADIO HEAD	TBD	18.9" x 9.6" x 7.48"	34.14 LBS
1	RAYCAP RSTAC-3111-P120 AC DISTRIBUTION PANEL	TBD	13" x 11.4" x 4.4"	~5 LBS

EQUIPMENT CHART

SCALE: NOT TO SCALE

2

NOT USED

SCALE: NOT TO SCALE

3

mobilitie

PROJECT NO: 9ORB0009458
DRAWN BY: AL
CHECKED BY: J.F.

1	09/22/18	JC INCORPORATED
2	12/04/18	90% CLIENT REVIEW

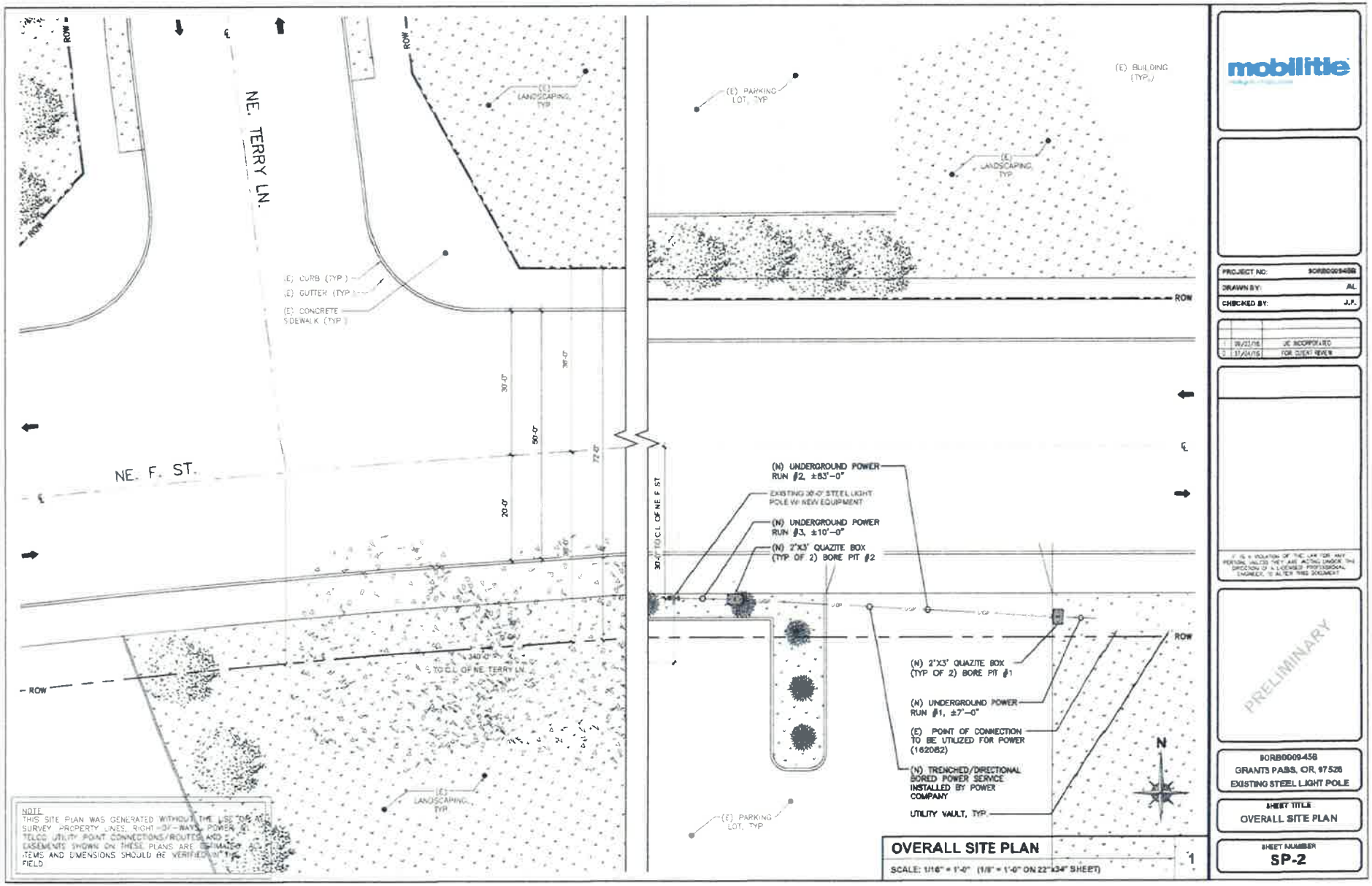
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

PRELIMINARY

9ORB0009458
GRANTS PASS, OR 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
PLUMBING & RISER DIAGRAM

SHEET NUMBER
PL-1



NOTE
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF AN SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD

OVERALL SITE PLAN

SCALE: 1/16" = 1'-0" (1/8" = 1'-0" ON 22"x34" SHEET)

1

mobilitie

PROJECT NO:	SORB0009458
DRAWN BY:	AL
CHECKED BY:	J.P.

1	09/22/15	JC INCORPORATED
0	07/24/15	FOR CLIENT REVIEW

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

PRELIMINARY

SORB0009458
GRANTS PASS, OR 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
SP-2

No Shroud

mobilitie®

intelligent infrastructure

SITE ID-CANDIDATE LETTER/CASCADE ID-CANDIDATE LETTER:

9ORB000945B/PO90XSA64B

LATITUDE/LONGITUDE:

42.433742/-123.303235

CROSS STREET:

NE. F. ST. & NE. TERRY LN.

CITY, STATE, ZIP:

GRANTS PASS, OR, 97526

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

IF YOU DIG IN ANY STATE DIAL 811 FOR THE LOCAL "ONE CALL CENTER" – IT'S THE LAW

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OF EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE. POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS (N).

SITE INFORMATION

SITE ID	9ORB000945B
CASCADE ID	PO90XSA64B
LATITUDE	42.433742
LONGITUDE	-123.303235
CROSS STREET	NE. F. ST. & NE. TERRY LN.
CITY, STATE, ZIP	GRANTS PASS, OR, 97526
COUNTY	JOSEPHINE COUNTY
JURISDICTION	GRANTS PASS
PROPERTY OWNER	PUBLIC RIGHT-OF-WAY
APPLICANT	MOBILITIE, LLC 2955 RED HILL AVENUE, STE. 200, COSTA MESA, CA 92626 APPLICANT: COLLEEN DESHAZER PHONE: 503-388-2551 EMAIL: CDESHAZER@MOBILITIE.COM

ENGINEER

KD INDUSTRIES
1572 N. BATAVIA ST. SUITE 10
ORANGE, CA 92876

JOSE FRIAS
(714) 947-3093
PROJECT NUMBER: 9ORB000945B

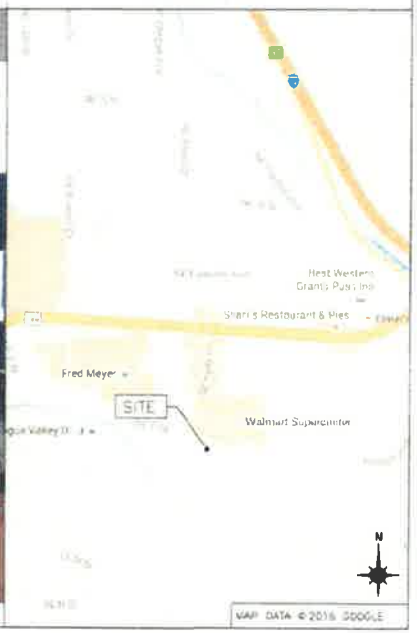
DO NOT SCALE DRAWINGS

CONTRACTORS SHALL VERIFY ALL PLANS, (E) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

LOCATION MAPS

VICINITY MAP

REGIONAL MAP



PROJECT DESCRIPTION

END USER PROPOSES TO INSTALL EQUIPMENT ON AN EXISTING STEEL POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL PROPOSED BACKHAUL TRANSPORT EQUIPMENT ON AN EXISTING STEEL LIGHT POLE

CODES

2015 INTERNATIONAL BUILDING CODE
2014 NATIONAL ELECTRICAL CODE
TIA/EIA-222-G-2 OR LATEST EDITION
LOCAL BUILDING/PLANNING CODE

DRAWING INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
SP-1	EXHIBIT PHOTO & SITE PLAN
SP-2	OVERALL SITE PLAN
EV-1	ELEVATIONS
EV-2	ELEVATIONS
PL-1	PLUMBING & RISER DIAGRAM
EQ-1	EQUIPMENT DETAILS
EQ-2	EQUIPMENT DETAILS
EX-1	EXCAVATION DETAILS
E-1	ELECTRICAL
G-1	GROUNDING
TC-1	VEHICULAR TRAFFIC CONTROL PLAN
TC-2	PEDESTRIAN TRAFFIC CONTROL PLAN

mobilitie

PROJECT NO:	9ORB000945B
DRAWN BY:	AL
CHECKED BY:	JJF

1	09/22/16	UC INCORPORATE
0	07/26/16	FOR CLIENT REVIEW

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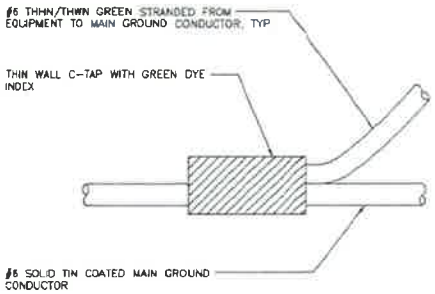
PRELIMINARY

9ORB000945B
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

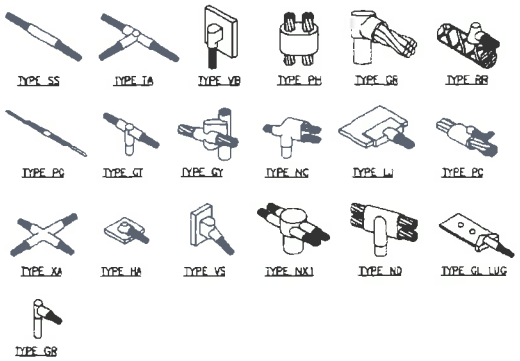
NOTE:
CONTRACTOR TO SURROUND COMPLETED CONNECTION WITH HEAT-SHRINK TUBING TO ENSURE WEATHER PROOF CONNECTION



C-TAP DETAIL

SCALE: NOT TO SCALE

1

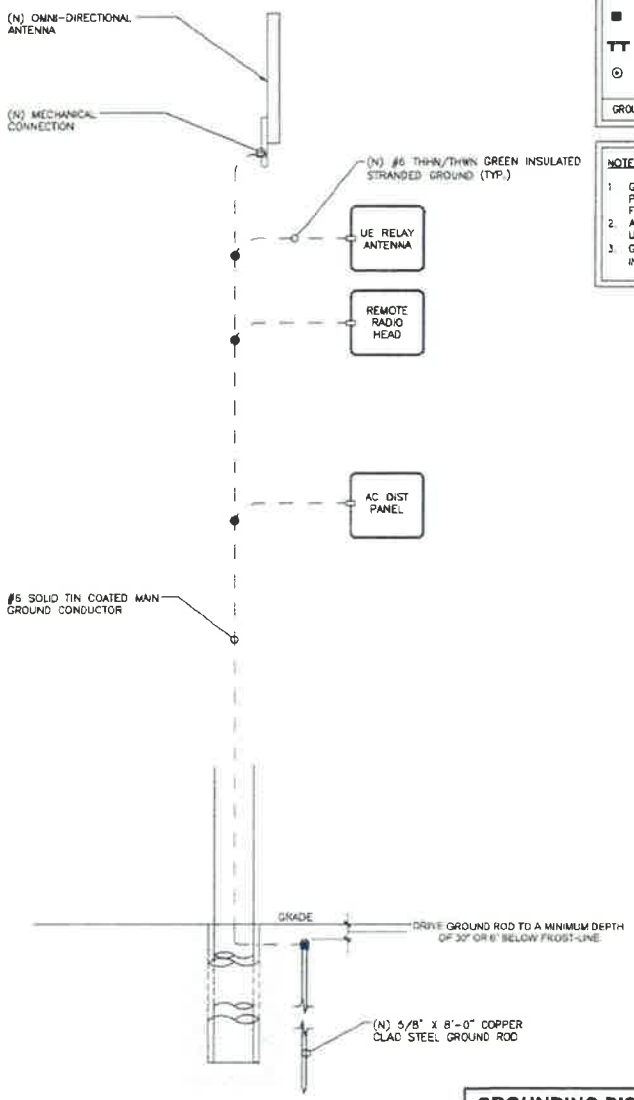


1. GROUNDING BONDS: ALL BONDS ARE TO BE MADE WITH #2 AWG STRANDED COPPER IN GREEN INSULATION. (ATT-TP-76416 7, 6.7)
2. EXTERIOR UNIT BONDS: ALL METALLIC OBJECTS SHALL BE BONDED TO THE GROUND ROD. (ATT-TP-76416 7, 12.6)
3. GROUND ROD: UL LISTED COPPER CLAD STEEL GROUND ROD WITH MINIMUM DIAMETER OF 5/8" AND MINIMUM LENGTH OF 8 FEET. ALL GROUND RODS MAY BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO A MINIMUM DEPTH OF 30" BELOW GRADE OR 6 INCHES BELOW FROST LINE. (ATT-TP-76416 14 / 22, 3, 10)

WELD CONNECTION DETAILS

SCALE: NOT TO SCALE

2



CADWELD
MECHANICAL CONNECTION
COPPER GROUND BAR (GB)
⅝" x 8' COPPER CLAD STEEL GROUND ROD
GROUND WIRE
GROUND

GROUNDING SYMBOLS

NOTES:
1. GROUNDING RISER FOR DIAGRAMMATIC PURPOSES ONLY. SEE ELEVATION DRAWING FOR EQUIPMENT AND ANTENNA LOCATIONS.
2. ALL RGS TO BE GROUNDED AT BOTH ENDS USING GROUNDING BUSHINGS.
3. GROUND WIRE BELOW 11' AGL TO BE RUN IN 1/2" SCHEDULE 40 PVC

GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

3

mobilitie

PROJECT NO:	9ORB009945B
DRAWN BY:	AL
CHECKED BY:	JF

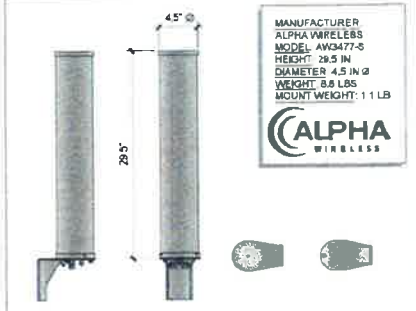
1	09/11/15	UC INCORPORATED
E	07/24/15	FOR CLIENT REVIEW

PRELIMINARY

9ORB009945E
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

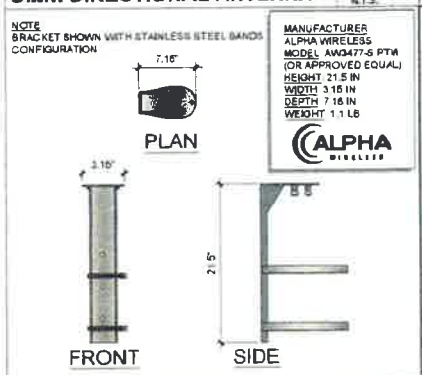
SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-1



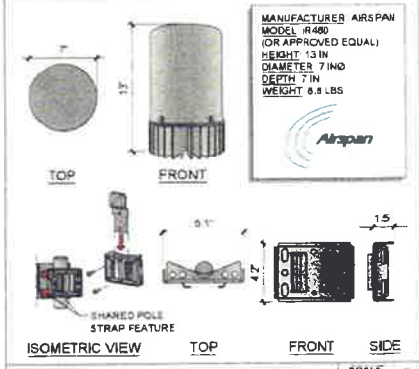
MANUFACTURER
ALPHA WIRELESS
MODEL AW3477-S
HEIGHT 29.5 IN
DIAMETER 4.5 IN Ø
WEIGHT 8.8 LBS
MOUNT WEIGHT: 1.1 LB

OMNI-DIRECTIONAL ANTENNA SCALE N.T.S. 1



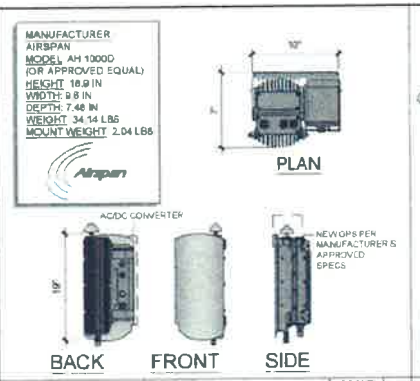
MANUFACTURER
ALPHA WIRELESS
MODEL AW3477-S PTM
(OR APPROVED EQUAL)
HEIGHT 21.5 IN
WIDTH 3.15 IN
DEPTH 7.16 IN
WEIGHT 1.1 LB

POLE-TOP MOUNT SCALE N.T.S. 2



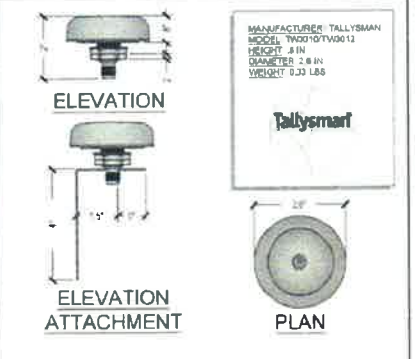
MANUFACTURER AIRSPAN
MODEL IR480
(OR APPROVED EQUAL)
HEIGHT 13 IN
DIAMETER 7 INØ
DEPTH 7 IN
WEIGHT 6.6 LBS

UE RELAY SCALE N.T.S. 3



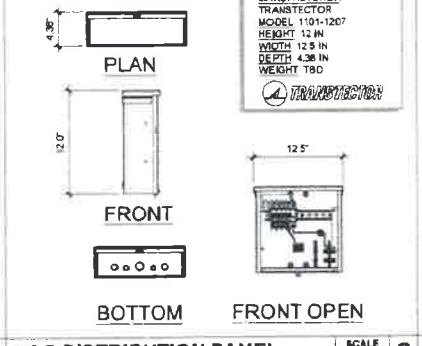
MANUFACTURER
AIRSPAN
MODEL AH 10000
(OR APPROVED EQUAL)
HEIGHT 18.9 IN
WIDTH 9.8 IN
DEPTH 7.48 IN
WEIGHT 34.14 LBS
MOUNT WEIGHT 2.04 LBS

REMOTE RADIO HEAD SCALE N.T.S. 4



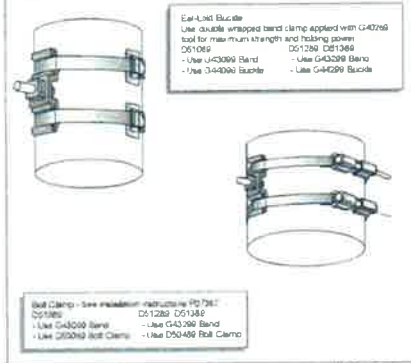
MANUFACTURER TALLYSMAN
MODEL TW3010/TW3012
HEIGHT 8 IN
DIAMETER 2.8 IN
WEIGHT 0.33 LBS

GPS ANTENNA SCALE N.T.S. 5

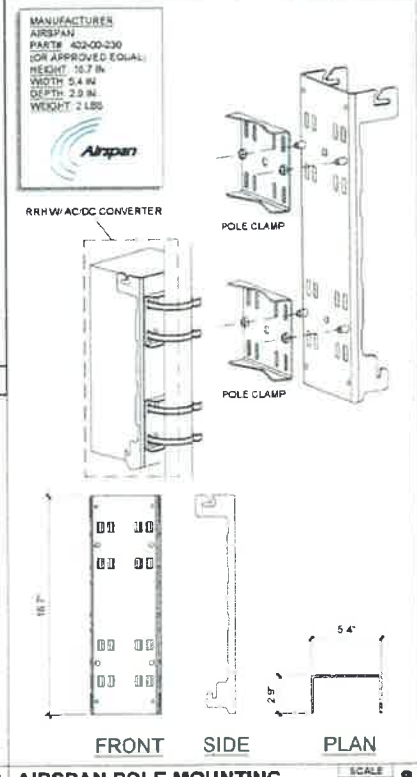


MANUFACTURER
TRANSTECTOR
MODEL 1101-1207
HEIGHT 12 IN
WIDTH 12.5 IN
DEPTH 4.38 IN
WEIGHT TBD

AC DISTRIBUTION PANEL SCALE N.T.S. 6

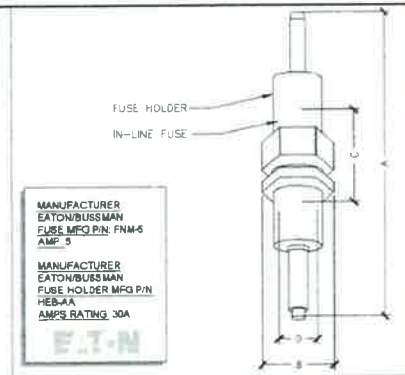


STAINLESS STEEL BANDS SCALE N.T.S. 7



MANUFACTURER
AIRSPAN
PART# 402-00-230
(OR APPROVED EQUAL)
HEIGHT 16.7 IN
WIDTH 5.4 IN
DEPTH 2.9 IN
WEIGHT 2 LBS

AIRSPAN POLE MOUNTING SCALE N.T.S. 8



MANUFACTURER
EATON/BUSSMAN
FUSE MFG P/N: FNM-5
AMP 5

MANUFACTURER
EATON/BUSSMAN
FUSE HOLDER MFG P/N
HEB-AA
AMPS RATING 30A

IN-LINE FUSE W/ FUSE HOLDER SCALE N.T.S. 9

NOT USED SCALE N.T.S. 10

NOT USED SCALE N.T.S. 11

mobilitie

PROJECT NO:	9ORB000945B
DRAWN BY:	AL
CHECKED BY:	J.P.

1	09/23/16	UC INCORPORATED
2	09/29/16	FOR CLIENT REVIEW

PRELIMINARY

9ORB000945B
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
EQ-1

SITE WORK NOTES CONT'D

8. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED.

9. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.

10. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.

11. ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.

12. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRASH, WEEDS, BRUSH, EXCESS FILL, OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.

13. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.

14. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES:

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.

3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES AS REQUIRED BY THE LOCAL JURISDICTION WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.

4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.

5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.

7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.

8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.

9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.

10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

11. CC TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEWER SYSTEM.

FOUNDATION, EXCAVATION AND BACKFILL NOTES:

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE NOTED.

2. BACKFILL OF POLE SHALL BE PERFORMED IN ONE OF THREE OPTIONS:

   A. PREFERRED: RAINBOW INDUSTRIES POLE SETTING FOAM SHALL BE INSTALLED PER MANUFACTURER SPECS. FOAM SHALL ALWAYS BE USED FOR POOR SOILS.

   B. SECONDARY: CONCRETE (REQUIRES MOBILITIE CM WRITTEN APPROVAL)
      ALLOWABLE SOIL PRESSURE = 2000 PSF (ASSUMED)
      NON-NATIVE SOILS SHALL BE REMOVE FROM BORE AREA AND SHALL NOT BE REUSED FOR BACKFILL.

9. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.

10. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF ADEQUATE BEARING CAPACITY IS NOT ACHIEVED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.

11. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.

12. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.

13. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.

14. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.

15. NEWLY GRADED GRAVEL SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY TYPAR GEOSYNTHETICS OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE NO. 57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA, UNLESS OTHERWISE NOTED.

16. IN ALL AREAS TO RECEIVE FILL: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH (E)/PREPARED SOIL SURFACE.

17. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.

18. IN AREAS WHICH (E) GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.

19. (E) GRAVEL SURFACING MAY NOT BE REUSED.

20. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.

21. PROTECT (E) GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING, MATTS OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO (E) GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.

22. DAMAGE TO (E) STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.

23. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

mobilitie
intelligent infrastructure

PROJECT NO:		SORS00145B
DRAWN BY:		AL
CHECKED BY		JF
1	09/23/16	VC INCORPORATED
0	07/04/16	FOR CLIENT REVIEW

PRELIMINARY

SORS00145B
GRANTS PASS, OR 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

STATIONARY LANE CLOSURE WITH FLAGGING

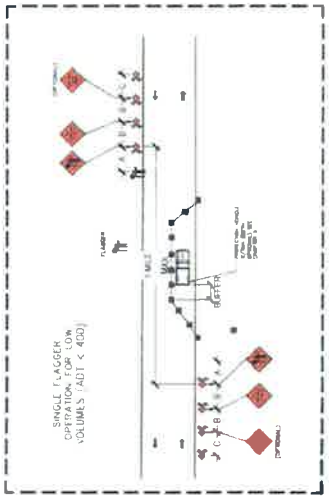
DIAGRAM 320 COVERS TOTAL CLOSURE OF ONE LANE OF A TWO-LANE, TWO-WAY ROADWAY. SEE THE DETAIL INSET FOR THE LAYOUT IF USING A SINGLE FLAGGER TO CONTROL BOTH DIRECTIONS OF TRAFFIC ON LOW VOLUME ROADS (LESS THAN 400 ADT) WITH GOOD SIGHT DISTANCE AS DISCUSSED BELOW.

1. USE TRUCK-MOUNTED FLASHING WARNING LIGHTS ON WORK AND PROTECTION VEHICLES. SEE SECTION 4.3 – LIGHTS AND LIGHTED SIGNS FOR EXCEPTIONS.
2. FOR ADDED VISIBILITY, A TRUCK-MOUNTED ARROW BOARD OR PCMS IN CAUTION MODE MAY BE USED.
3. FLAGGERS AT EACH APPROACH ARE REQUIRED IF ANY OF THE FOLLOWING CONDITIONS EXIST:
   - 3.A. NIGHT OPERATIONS.
   - 3.B. WORK SPACE IS OVER 200 FEET IN LENGTH.
   - 3.C. SIGHT DISTANCE IS LESS THAN 750 FEET FROM EACH APPROACH THROUGH THE LANE CLOSURE.
   - 3.D. TRAFFIC VOLUMES ARE GREATER THAN 400 ADT.
4. THE LENGTH BETWEEN THE FLAGGERS AHEAD SIGNS SHALL NOT EXCEED ONE MILE. USE DIAGRAM 340 – LANE CLOSURE WITH PILOT CAR IF EXCEEDING ONE MILE.
5. CONES SHOULD BE USED TO OUTLINE THE WORK SPACE WHEN CURVES OR OTHER ROADWAY ALIGNMENTS PREVENT CLEAR DIRECTION FOR THE MOTORISTS TO PASS THE WORK SPACE SAFELY.
6. CONE ALONG THE WORK SPACE ARE RECOMMENDED WHEN POSTED SPEEDS ARE 45 MPH OR GREATER, WHEN WORKING UNDER HEAVY TRAFFIC OR WHEN TRAVEL LANES ARE NARROWER THAN 11 FEET.
7. EXTENDED QUEUE SIGNING (SEE DIAGRAM 5-4) SHOULD BE USED WHEN TRAFFIC QUEUES EXTEND BEYOND THE INITIAL ADVANCE WARNING SIGN.
8. WHEN FLAGGING NEAR AN INTERSECTION, THE "FLAGGER AHEAD" (CW23-2) SIGN SHOULD BE VISIBLE TO TRAFFIC ENTERING FROM ANY SIDE ROAD. ADDITIONAL ADVANCE WARNING AND FLAGGER AHEAD SYMBOL SIGN MAY BE PLACED ON THE SIDE ROAD(S).
9. SIGN SET-UP AND FLAGGER PLACEMENT SHOWN MAY BE USED FOR INTERMITTENT FULL ROAD CLOSURE OF 20 MINUTES OR LESS.
10. THE "**ONE LANE ROAD AHEAD**" (W20-4) SIGN IS OPTIONAL AND SHOULD BE CONSIDERED ON HIGH VOLUME OR HIGH SPEED ROADS, OR WHEN EXTENDED QUEUES ARE EXPECTED.

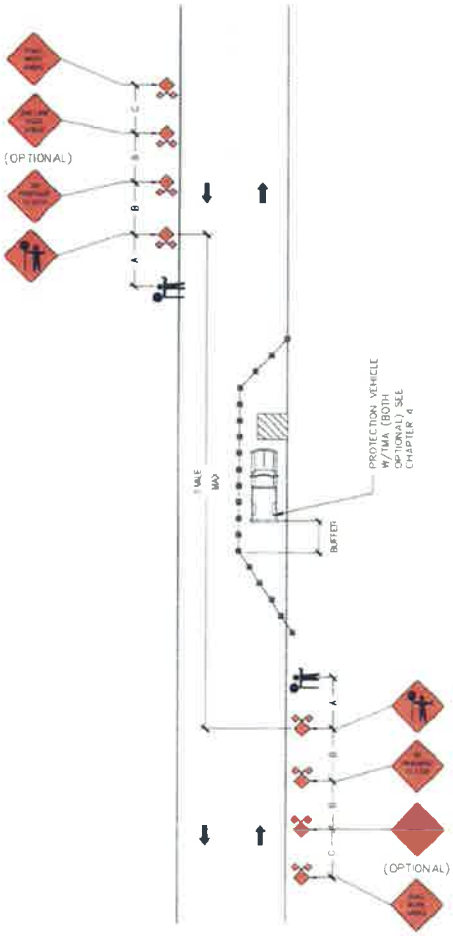
GENERAL NOTES 2

SIGN SPACING AND BUFFER LENGTHS (FEET)

POSTED SPEED	SPACING BETWEEN SIGNS A	B	C	BUFFER SPACE
20				50
25	100	100	100	75
30				100
35				125
40	350	350	350	150
45				185
50	500	500	500	210
55				250



TWO FLAGGERS OPERATION



TRAFFIC CONTROL PLAN 1

mobilitie

PROJECT NO.	90RB0009458
DRAWN BY	AL
CHECKED BY	J.F.

1	08/23/18	JC INCORPORATED
0	07/04/18	TCP CLIENT REVIEW

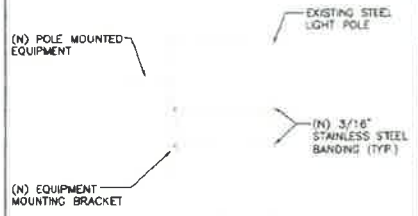
PRELIMINARY

90RB0009458
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

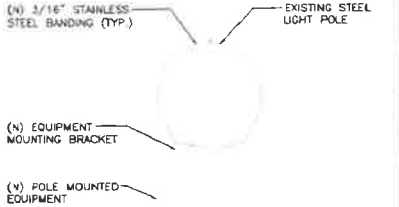
SHEET TITLE
VEHICULAR TRAFFIC CONTROL PLAN

SHEET NUMBER
TC-1

NOTE:
INSTALL BRACKETS WITH STAINLESS STEEL BANDING.



SIDE VIEW

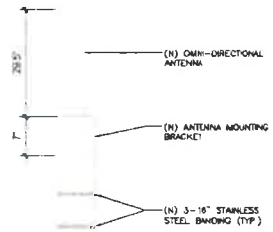


TOP VIEW

EQUIPMENT MOUNTING DETAIL — SCALE N.T.S. — 1

NOTE:

1 MOUNTING BRACKET ACCOMMODATES POLE SIZES FROM 3" TO 10" DIAMETER
2 JACOBS HAS NOT PERFORMED A STRUCTURAL EVALUATION FOR THE MOUNTING BRACKET. REFER TO THE MANUFACTURER FOR ADDITIONAL INFORMATION.



ANTENNA MOUNTING DETAIL — SCALE N.T.S. — 2

MOBILITIE, LLC

OWNER / OPERATOR NOTE:
SITE ID LABEL TO BE AFFIXED AT OR NEAR THE POINT OF POWER CONNECTION WITH TZeS241 LABELING TAPE OR EQUIVALENT BLACK ON WHITE LABELING TAPE OF AT LEAST 18mm WIDTH WITH EXTRA-STRENGTH ADHESIVE. USE ANY COMPATIBLE P-TOUCH LABEL MAKER. TEXT SHOULD BE PRINTED IN ALL CAPS WITH A MINIMUM HEIGHT OF 1/2"

EMERGENCY CONTACT SIGN

NATIONAL STANDARD

ANTENNA SIGNAGE
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT
AFFIX TO THE STRUCTURE 3'-4' BELOW THE COMMERCIAL RF ANTENNA(S) SIZE APPROX 8" x 5"

POLE MOUNTED SIGNS — SCALE N.T.S. — 3

NOT USED — SCALE N.T.S. — 4

NOT USED — SCALE N.T.S. — 5

NOT USED — SCALE N.T.S. — 6

NOT USED — SCALE N.T.S. — 7

NOT USED — SCALE N.T.S. — 8

NOT USED — SCALE N.T.S. — 9

NOT USED — SCALE N.T.S. — 10

mobilitie

PROJECT NO	9ORB000945B
DRAWN BY	AL
CHECKED BY	JF

1	09/23/16	LC INCORPORATED
0	07/01/16	FOR CLIENT REVIEW

PRELIMINARY

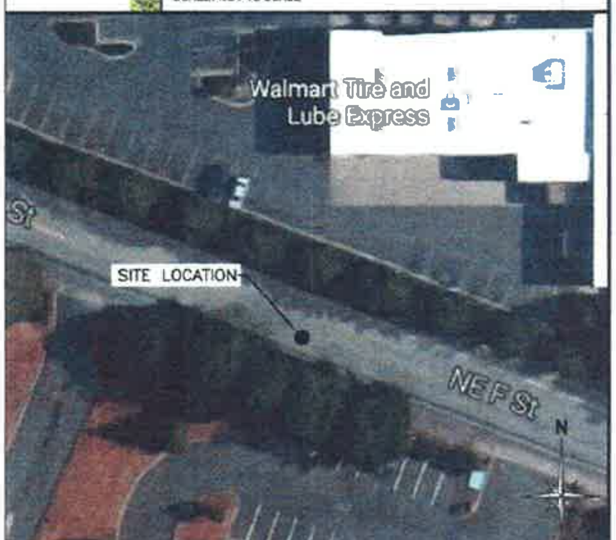
9ORB000945B
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
EQ-2

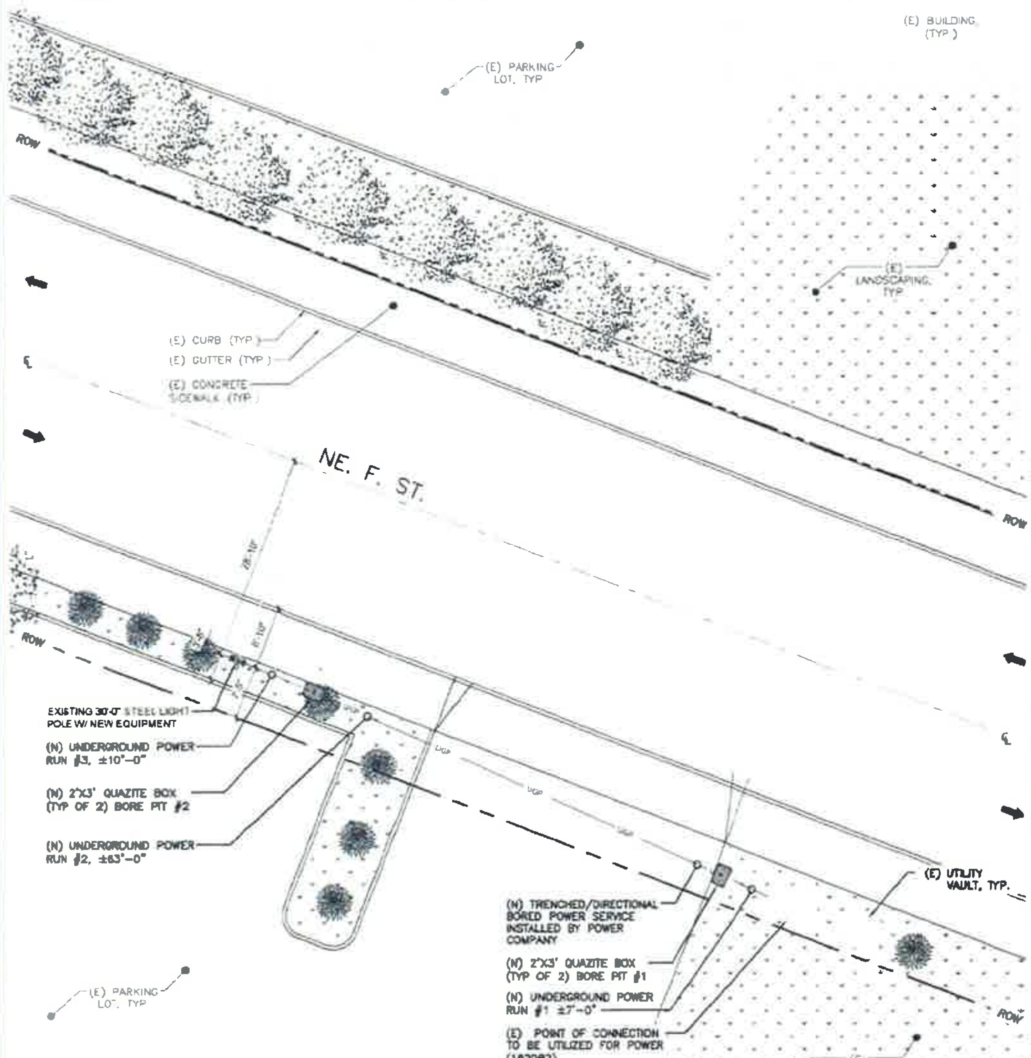
EXHIBIT PHOTO 1

SCALE: NOT TO SCALE



AERIAL SITE LOCATION 2

SCALE: NOT TO SCALE



NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD

ENLARGED SITE PLAN 3

SCALE: 1/16" = 1'-0" (1/8" = 1'-0" ON 22"x34" SHEET)

mobilitie

PROJECT NO	9ORBO00845B
DRAWN BY:	AL
CHECKED BY:	J.F.

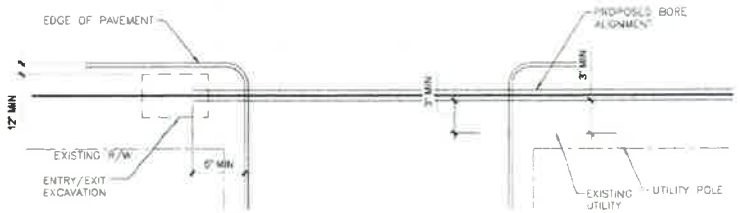
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

PRELIMINARY

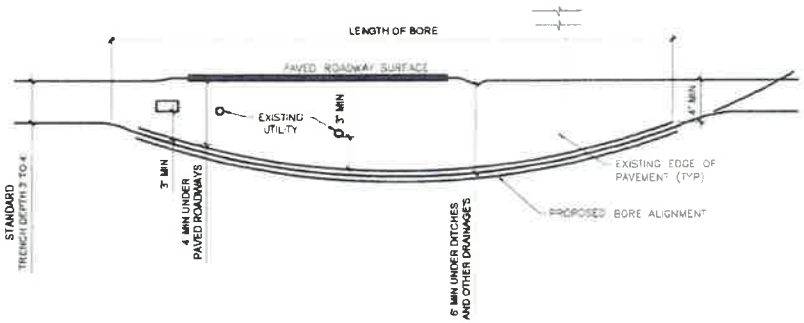
9ORBO00845B
GRANTS PASS, OR 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
EXHIBIT PHOTO & SITE PLAN

SHEET NUMBER
SP-1



SUGGESTED HORIZONTAL MINIMUM CLEARANCES

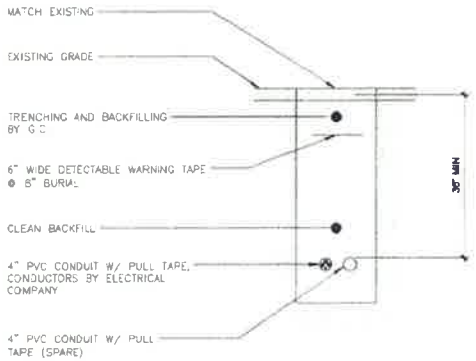


SUGGESTED VERTICAL MINIMUM CLEARANCES

DIRECTIONAL BORING DETAILS

SCALE: NOT TO SCALE

1



TRENCH SECTION DETAIL

SCALE: NOT TO SCALE

2

NOT USED

SCALE: NOT TO SCALE

3

mobilitie

PROJECT NO	SORB009945B
DRAWN BY	AL
CHECKED BY	JF

1	09/01/16	LC INCORPORTED
2	10/24/16	FOR CLIENT REVIEW

PRELIMINARY

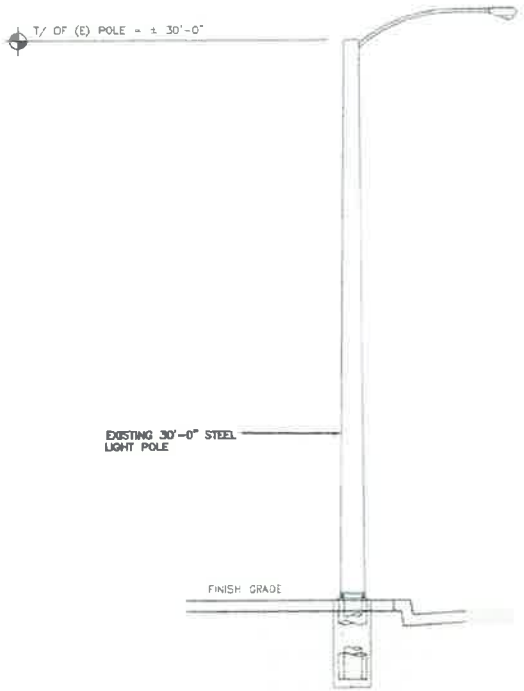
SORB009945B
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
EXCAVATION DETAILS

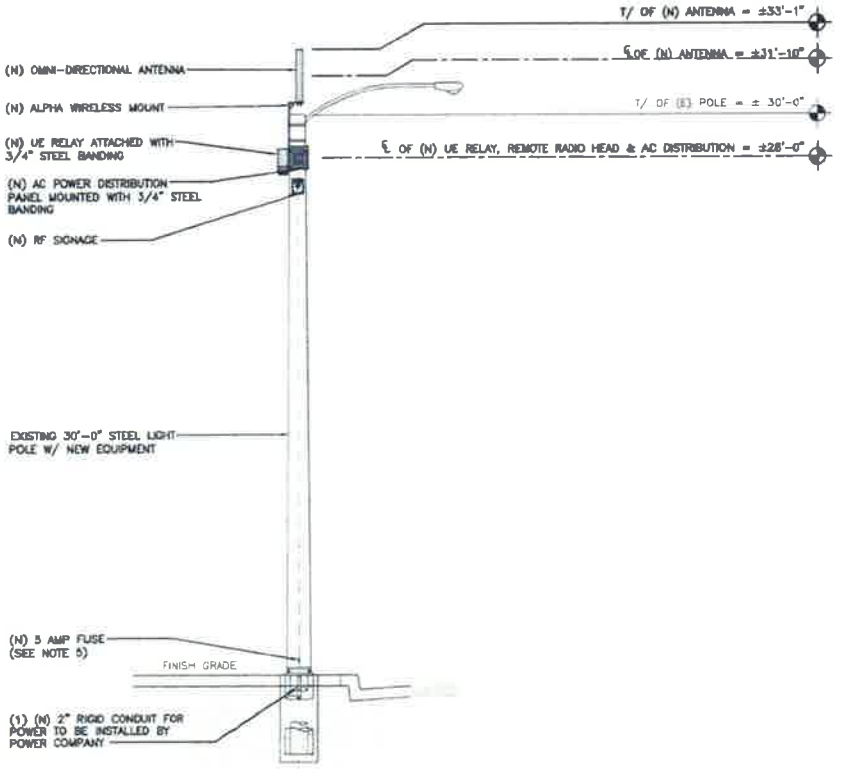
SHEET NUMBER
EX-1

NOTES.

1. ALL HARDWARE SHALL BE STAINLESS STEEL
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED
4. STRUCTURAL BACKFILL TO BE COMPACTED IN 6" MAXIMUM LAYERS TO 95% OF CONTENT IN ACCORDANCE WITH ASTM D698. ADDITIONALLY, STRUCTURAL BACKFILL MUST HAVE A MINIMUM COMPACTED UNIT WEIGHT OF 100 POUNDS PER CUBIC FOOT (16kN/m3)
5. NEW WIRE MUST BE CONNECTED TO THE PRIMARY WIRE AND MUST NOT BE CONNECTED IN-LINE WITH BSL'S FUSE. THE EXISTING BSL WIRE IS FUSED IN THE PULL-BOX AND ENERGIZES THE LUMINAIRE



EXISTING SIDE VIEW



NEW SIDE VIEW

(E) POLE ELEVATIONS

SCALE: 3/16" = 1'-0" (3/8" = 1'-0" ON 22"x34" SHEET)

1

mobilitie

PROJECT NO:	90RB0006458
DRAWN BY:	AL
CHECKED BY	JP

1	28/03/19	UE INCORPORATED
0	27/04/19	FOR CLIENT REVIEW

PRELIMINARY

90RB0006458
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
POLE ELEVATIONS

SHEET NUMBER
EV-1

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST ADOPTED EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND LATEST MOBILITIE CONSTRUCTION STANDARDS. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THE CONSTRUCTION DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITIE CM PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE (N) WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED, AS SHOWN, PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITIE CM PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS.

4. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ANY/ALL ITEMS FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM SUBJECT ONLY TO OWNER-SUPPLIED ITEMS. CONTRACTOR SHALL PROVIDE ANY/ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

5. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED AND CONTRACTOR INSTALLED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:

   A) TRANSMITTER
   B) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
   C) UHF COAX AND HANGERS
   D) INTEGRATED LOAD CENTER

6. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, (E) CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES TO THE ATTENTION OF THE MOBILITIE CM, IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK.

7. DETAILS PROVIDED ARE FOR THE PURPOSE OF SHOWING DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR SITE CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

8. CONTRACTOR SHALL PAY FOR APPLICABLE PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO ORDERING MATERIALS AND THE COMMENCEMENT OF WORK.

9. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.

10. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

11. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING ACCEPTED INDUSTRY-STANDARD SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.

13. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE MOBILITIE CM AND SCHEDULE THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.

14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.

15. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

16. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT (E) SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATE REPAIR TO NEW CONDITION. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION AT THE SOLE COST OF THE CONTRACTOR.

17. IN DRILLING HOLES, OR CORING INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE LOCATED BY THE CONTRACTOR USING APPROPRIATE METHODS AND EQUIPMENT PRIOR TO ANY DRILLING OR CORING OPERATIONS IN (E) CONCRETE.

18. CONTRACTOR SHALL REPAIR, TO NEW CONDITION, ALL (E) WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.

2. CONTRACTOR SHALL SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES OR MATERIALS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS AND SYSTEMS THAT MEET OR EXCEED THE RATING OF THE ASSEMBLY IN WHICH THE NEW PENETRATION IS PLACED.

3. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.

4. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.

5. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO (E) SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ANY EROSION CONTROL MEASURES, RECORD-KEEPING, MONITORING, AND REPORTING TO THE OWNER AND REGULATORY AUTHORITIES.

6. ALL CONSTRUCTION WORK IS TO ADHERE TO APPLICANT'S INTEGRATED CONSTRUCTION STANDARDS UNLESS STATE OR LOCAL CODE IS MORE STRINGENT.

7. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE PER STATE BUILDING STANDARDS CODE AND STATE CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY PER STATE CODE OF REGULATIONS, A SCOPE OF WORK DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK. A CHANGE ORDER FOR THAT SCOPE SHALL BE SUBMITTED TO THE MOBILITIE CM PRIOR TO PROCEEDING WITH THE WORK.

8. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.

9. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE. ANY CORRECTIVE WORK SHALL BE COMPLETED AT THE SOLE COST OF THE CONTRACTOR.

ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY MOBILITIE CM AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE MOBILITIE CM HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.

2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL (E) CONDITIONS OF ELECTRICAL EQUIP., ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF THEIR BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.

3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC, ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION, AND POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT ARE NOT BE LIMITED TO:

   A) UL - UNDERWRITERS LABORATORIES
   B) NEC - NATIONAL ELECTRICAL CODE
   C) NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
   D) OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
   E) SBC - STANDARD BUILDING CODE
   F) NFPA - NATIONAL FIRE PROTECTION AGENCY
   G) ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
   H) IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
   I) ASTM - AMERICAN SOCIETY FOR TESTING MATERIALS

4. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH MOBILITIE CM ANY SIZES AND LOCATIONS WHEN NEEDED.

5. (E) SERVICES: CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.

6. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE MOBILITIE CM, PRIOR TO BEGINNING ANY WORK.

7. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION, UNLESS OTHERWISE NOTED.

8. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.

9. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

10. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT.

11. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY FUNCTIONAL AND SHALL BE APPROVED BY THE MOBILITIE CM AND LOCAL JURISDICTION. ANY DEFICIENCIES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR AT THE SOLE COST OF THE CONTRACTOR.

12. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

mobilitie

PROJECT NO:	SORB0009458
DRAWN BY:	AL
CHECKED BY:	JJ

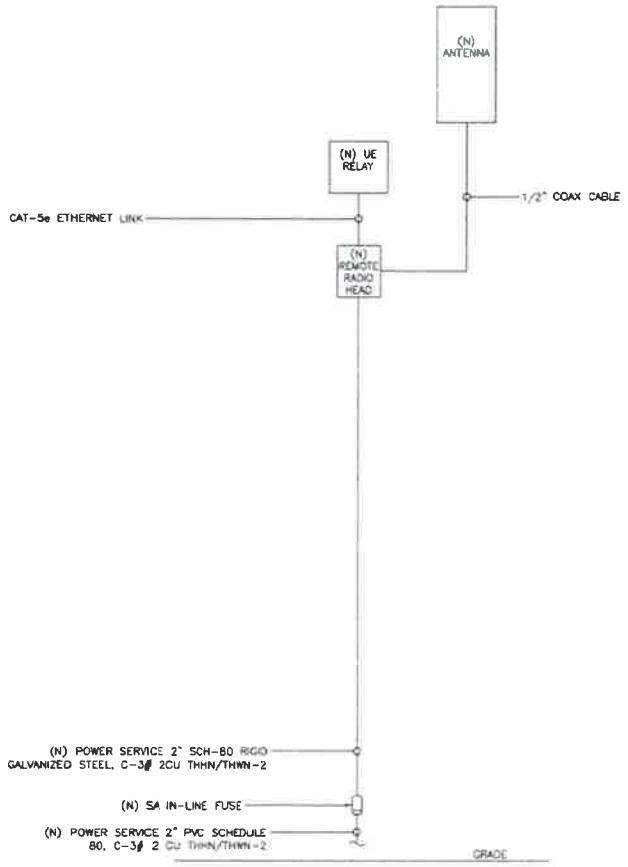
1	09/23/15	UC INCORPORATED
0	07/06/15	FOR CLIENT REVIEW

PRELIMINARY

SORB0009458
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
GENERAL NOTES

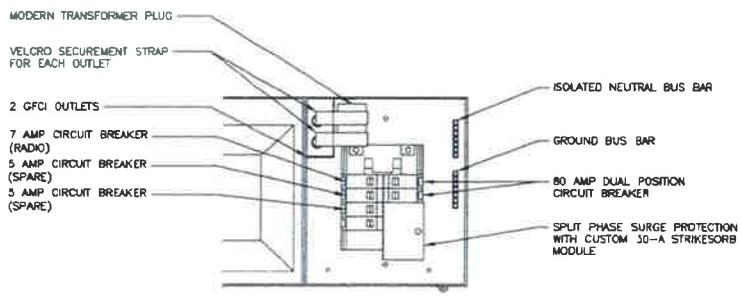
SHEET NUMBER
GN-1



ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

1



BREAKER SCHEDULE

SCALE: NOT TO SCALE

2

VOLTAGE: 120V
PHASE & WIRE: 1PH / 2W
MAIN: 20A
BUS: 20A

PANEL "A"

LOCATION: MOUNTED ON EXISTING STEEL LIGHT POLE
NEMA: NEMA-4X
CKT CODE 2 - EQUIPMENT
AIC RATING: 10,000

VOLT AMPS PHASE A	VOLT AMPS PHASE B	DESCRIPTION	POLE	BKR	CKT	A	B	CKT	BKR	POLE	DESCRIPTION	VOLT AMPS PHASE B	VOLT AMPS PHASE A
250	-	AIRSPAN AH1000 B41	1	7	1	●		2	5	1	SPARE	-	-
-	-	SPARE	1	5	3		●	4	-	-	-	-	-
-	-	-	-	-	5	●		6	-	-	-	-	-
250	-	VA/LINE										-	-
PHASE A = 250											PHASE B = 0		
CONNECTED LOAD = 250 VA DESIGN AMP = 1.5A													

NOTE:
RECTIFIER (AC/DC CONVERTER) IS FURNISHED AND INSTALLED INSIDE REMOTE RADIO HEAD (RRH)

NEW PANEL SCHEDULE

SCALE: NOT TO SCALE

3

mobilitie

PROJECT NO:	9ORB0009455
DRAWN BY:	AL
CHECKED BY:	J.F.

1	06/22/18	UC INCORPORATED
2	07/04/18	FOR CLIENT REVIEW

PRELIMINARY

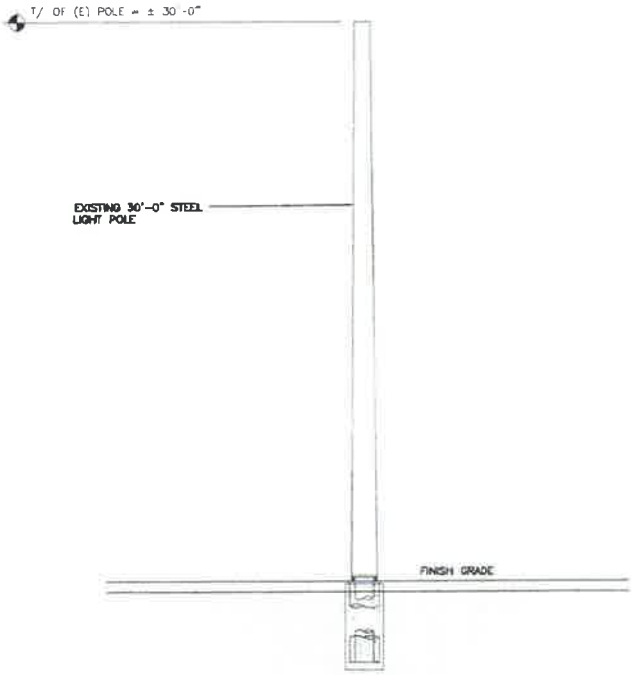
9ORB0009455
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
ELECTRICAL

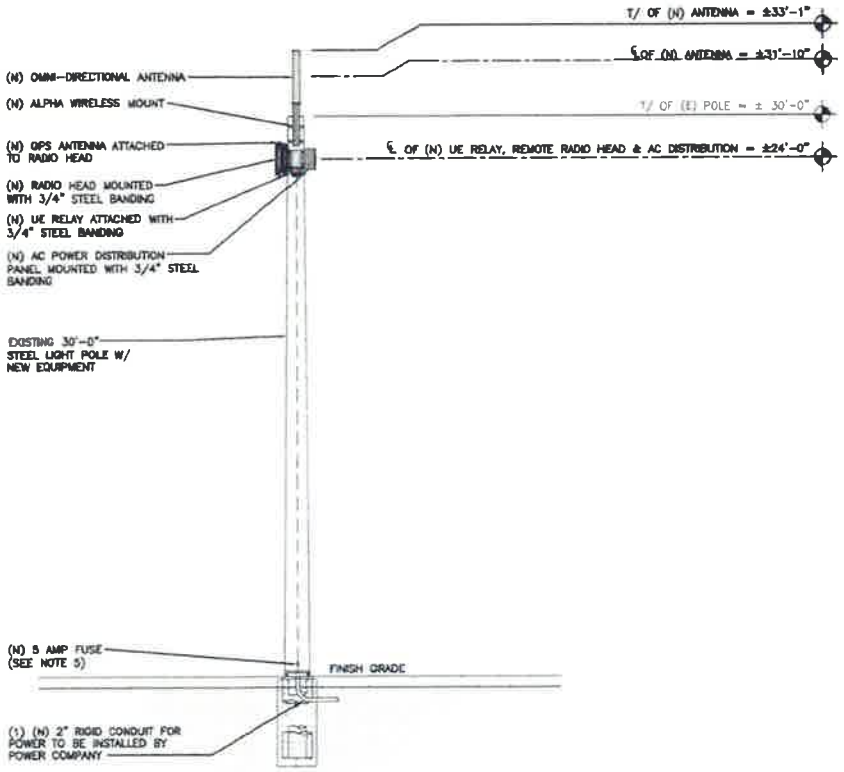
SHEET NUMBER
E-1

NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.
4. STRUCTURAL BACKFILL TO BE COMPACTED IN 6" MAXIMUM LAYERS TO 95% OF CONTENT IN ACCORDANCE WITH ASTM D698 ADDITIONALLY, STRUCTURAL BACKFILL MUST HAVE A MINIMUM COMPACTED UNIT WEIGHT OF 100 POUNDS PER CUBIC FOOT (16kN/m3)
5. NEW WIRE MUST BE CONNECTED TO THE PRIMARY WIRE AND MUST NOT BE CONNECTED IN-LINE WITH BSL's FUSE. THE EXISTING BSL WIRE IS FUSED IN THE PULL-BOX AND ENERGIZES THE LUMINAIRE.



EXISTING BACK SIDE VIEW



NEW BACK SIDE VIEW

(E) POLE ELEVATIONS

SCALE: 3/16" = 1'-0" (3/8" = 1'-0" ON 22"x34" SHEET)

1

mobilitie

PROJECT NO:	9ORB0009458
DRAWN BY:	AL
CHECKED BY:	JF

1	09/23/15	LC WORKSHEET
2	10/06/15	FOR CLIENT REVIEW

PRELIMINARY

9ORB0009458
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
POLE ELEVATIONS

SHEET NUMBER
EV-2

ELECTRICAL NOTES CONT'D

13. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.

14. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.

15. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.

16. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.

17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURER'S CATALOG INFORMATION OF ANY/ALL EQUIPMENT AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE MOBILITIE CM PRIOR TO INSTALLATION.

18. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE MOBILITIE CM UPON FINAL ACCEPTANCE.

19. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

20. DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.

21. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND KNOWN AS "NO-OXIDE A" BY DEARBORN CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE "TREATED – NO SUBSTITUTIONS.

22. RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TC2 – 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS – 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'COLD GALV'.

23. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.

24. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, UNLESS OTHERWISE NOTED, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING #NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.

25. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.

26. SERVICE: AS SPECIFIED ON THE DRAWINGS. OWNER OR OWNER'S AGENT WILL APPLY FOR POWER. ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE CONTRACTOR.

27. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.

28. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.

29. CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM"

30. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL.

GROUNDING NOTES:

1. ALL HARDWARE SHALL BE 3-16 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND, AS SPECIFIED, BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.

2. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.

3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

5. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

6. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #6 GROUND WIRES. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.

7. ALL GROUND CONNECTIONS SHALL BE #6 AWG, UNLESS OTHERWISE NOTED. ALL WIRES SHALL BE COPPER WITH THHN, UNLESS OTHERWISE NOTED. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.

8. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 10 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE MOBILITIE CM.

9. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

10. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM OF 30" BELOW GRADE/ 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT/ENGINEER.

11. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS (NOT LESS THAN 90 DEGREES).

12. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
12.A. RNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER. CADWELD, EXOTHERMIC WELDS WELDED CONNECTIONS)
12.B. ONE (1) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS

13. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHER-PROOFED WITH HEAT SHRINK.

14. ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS). ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL (E) AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE, BUT NOT LIMITED TO, GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

1. RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT TESTING WILL COMPLY WITH CURRENT INDUSTRY STANDARDS AND OR THOSE STANDARDS OF THE EQUIPMENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

2. CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT THAT MEET INDUSTRY STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.

4. ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT WILL BE REQUIRED TO HAVE BEEN TRAINED AND OR CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT.

5. ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.

6. GPS EQUIPMENT IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING, DOING SO WILL DAMAGE THE GPS UNIT.

7. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED DESIGNATED TESTING REPRESENTATIVE.

8. EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPROPRIATE AUTHORITY HAS BEEN NOTIFIED AND GIVES APPROVAL TO ENERGIZE THE EQUIPMENT.

SITE WORK NOTES:

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.

2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.

3. ALL (E) UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL (E) UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING (E) UTILITIES.

4. CONTRACTOR SHALL VERIFY ALL (E) UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR MOBILITIE CM FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATE HOT LINE, SUCH AS 811, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.

5. ALL NEW AND (E) UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK. ANY COST RELATED TO ADJUSTING (E) STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.

6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.

7. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

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PROJECT NO:	90RB000945B
DRAWN BY:	AL
CHECKED BY:	JF.

1	09/23/15	JC INCORPORATED
0	07/04/15	FOR CLIENT REVIEW

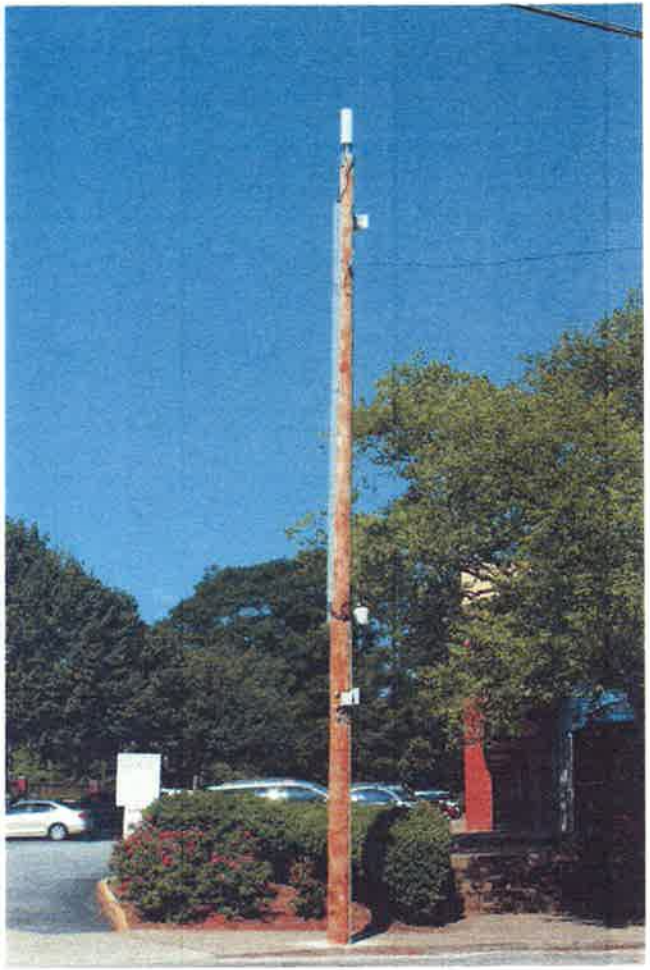
PRELIMINARY

90RB000945B
GRANTS PASS, OR, 97526
EXISTING STEEL LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

Our Solution - Small cell installations



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