

**SECOND AMENDMENT TO THE ELEVATED WATER TANK SPACE LICENSE AGREEMENT**

**LICENSEE SITE: I.D.: GIFFORD WATER TOWER SITE #A2P0003A**

THIS SECOND AMENDMENT to the Elevated Water Tank Space License Agreement (“Second Amendment”) is made and entered into as of the \_\_\_\_ day of \_\_\_\_\_, 2017, by and between Indian River County, a Political subdivision of the State of Florida (“Licensor”) and T-Mobile South LLC, a Delaware limited liability company, as successor in interest to Omnipoint Holdings, Inc. (“Licensee”).

**Recitals**

The parties hereto recite, declare, and agree as follows:

- A. Licensor and Licensee (or as applicable, their respective predecessors in interest) entered into the Elevated Water and Tank Space License Agreement dated March 23, 2004 which was amended on December 17, 2013 (collectively the Agreement) , with respect to premises located at 4690 28<sup>th</sup> Court (north of 49<sup>th</sup> Street) in Indian River County (the “Property”).
- B. Licensor and Licensee desire to enter into this Second Amendment in order to add antennas and affiliated mounting equipment (“Additional Equipment”) at the Elevated Water Tank on the Property (the “Elevated Tank”) and amend certain provisions of the Agreement.

**NOW THEREFORE**, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Licensor and Licensee covenant and agree as follows:

- 1. Licensee will have the right to modify the Licensee Facilities as described and depicted in Exhibit A-1, which is attached hereto and by this reference incorporated herein.
- 2. Installation of the Additional Equipment shall be strictly in accordance with the construction drawings previously submitted by Licensee and approved by licensor’s outside contractor (CD’s), attached hereto as Attachment A-1. Said CD’s shall also reflect any existing equipment that will remain on the Property or the Elevated Tank.
- 3. In connection with the installation of the Additional Equipment, Licensee shall label all of its equipment, including coaxial cables, located or to be located on the Property, so that Licensor and its contractors are able to distinguish Licensee’s equipment from equipment owned by other Licensees. This requirement shall apply to all equipment/cables, not just the Additional Equipment. Verification of this requirement shall be included in the inspection report as required in Section 5, of this Second Amendment.
- 4. No later than ninety (90) days after installation of Additional Equipment, Licensee shall hire Licensor’s outside contractor at Licensee’s expense, and have Licensor’s outside contractor perform any touch up to paint and finishes that were affected by installation of Additional Equipment or relocation of existing equipment. Verification of this work shall be included in the inspection report as required in Section 5, of this Second Amendment.

5. No later than ninety (90) days after installation of Additional Equipment, Licensee shall hire Licensor's outside contractor at Licensee's expense, to perform an inspection of all of the Licensee's equipment to assure that it is mounted as per approved CD's and that all equipment, not just the additional equipment, is labeled as required in Section 3 of this Second Amendment. A copy of the inspection report shall be submitted to the Licensor within the ninety (90) day time period.
  
6. The parties hereby reaffirm their rights and obligations under the Agreement as modified by this Second Amendment. In the event of any inconsistencies between the Agreement and this Second Amendment, the terms of this Second Amendment shall control.

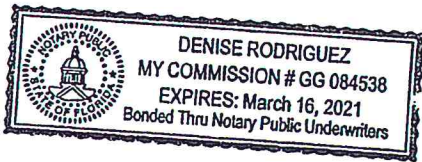
IN WITNESS WHEREOF, the parties hereto have executed this Second Amendment as of the day and year first above written.

Licensee:  
 T-Mobile South LLC  
 By: *Tony McDowell*  
 Print Name: Tony McDowell  
 As its: Sr. Director of Network Ops & Eng  
 Date: 9/5/17

Witnesses:

By: *Dolores Alcantara*  
 Print Name: Dolores Alcantara

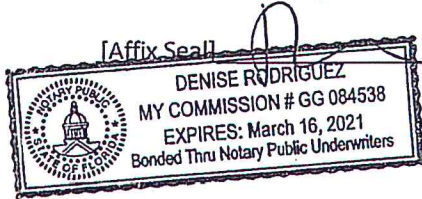
By: *Erin Foltz*  
 Print Name: Erin Foltz



STATE OF FL  
 COUNTY OF Broward

On 9/5/ 2017, before me, a Notary Public, personally appeared Dany Mc Brown, as Gen. Dir. of T-Mobile South LLC of T-Mobile South LLC, "Licensee" who executed the foregoing instrument on behalf of said entity. Said person  is personally known to me, or  produced to me satisfactory evidence in the form of \_\_\_\_\_, to be the individual whose name is subscribed to the within instrument, and acknowledged to me that (he) (she) executed same in (his) (her) capacity and that by (his) (her) signature on the instrument, is the individual or person on behalf of which the individual acted executed the instrument.

WITNESS my hand and official seal in the state and county last aforesaid.



Notary Public, State of FL  
Print Name: Denise Rodriguez  
Serial Number: GG 084538  
My commission expires: 3/16/21

ATTEST: Jeffrey R. Smith, Clerk of Court  
and Comptroller

Licenser:  
Indian River County Board of County Commissioners

By: \_\_\_\_\_  
Deputy Clerk

By: \_\_\_\_\_  
Peter D. O'Bryan, Chairman

Approved by BCC: \_\_\_\_\_, 2017

Approved:

Approved as to form and legal sufficiency:

\_\_\_\_\_  
Jason E. Brown, County Administrator

\_\_\_\_\_  
Dylan Reingold, County Attorney

Attachment A-1

(Construction Drawings to Follow)



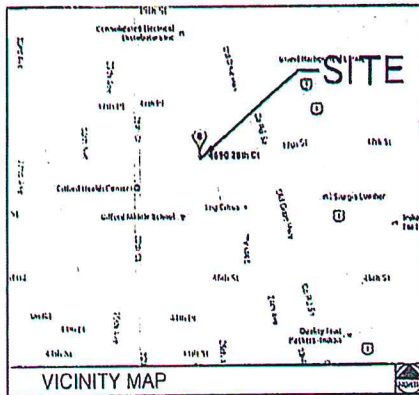
# T-Mobile

1300 CONCORD TERRACE, SUITE 200  
SUNRISE FL, 33323

A2P0003A-GIFFORD WATER TOWER  
4690 28TH COURT  
VERO BEACH, FL 32967

LATITUDE 27°40'41.90"N, LONGITUDE 80°24'45.22"W

CONSTRUCTION DRAWINGS RECEIVED,  
REVIEWED & APPROVED ON  
11-15-17 BY: *Summitt Hall*  
UTILITY SERVICE GROUP



DRIVING DIRECTIONS

FROM I-95 WEST EXIT 100 TO FLORIDA'S TURNPIKE, HEAD NORTH ON TURNPIKE FOR 4.4 MILES TO EXIT 132 (560-70/2810 BEACH). HEAD EAST ON 54-70 (ONE-LEWIS RD) FOR 0.7 MILES TO I-95. HEAD NORTH ON I-95 FOR 10 MILES TO EXIT 147 (560-60/VERO BEACH). HEAD EAST ON 86-80 FOR 4.4 MILES TO 28TH AVE. TURN LEFT AND HEAD NORTH FOR 2.6 MILES TO 45TH ST. TURN RIGHT AND HEAD EAST FOR 1.6 MILES TO 28TH CT. TURN LEFT AND HEAD NORTH FOR 0.3 MILES TO 418TH ST. TURN RIGHT AND HEAD EAST FOR 200 YARDS TO SITE AT END OF THE ROAD.

**PROJECT DESCRIPTION**

THIS IS AN APPLICATION FOR THE REPLACEMENT OF EXISTING ANTENNAS, CABINETS AND MOUNTS AND THE ADDITION OF MOUNTS AT AN EXISTING WIRELESS FACILITY.

**CODE COMPLIANCE**

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

1. 2011 FLORIDA BUILDING CODE	4. AMERICAN NORMS BY STD. CONTRACTOR SPECIFICATIONS (ANSI)
2. 2011 NATIONAL ELECTRIC CODE (NEC) WITH LOCAL ADDENDUM	7. UNDERGROUND LABORING (ONLY APPROVED ELECTRICAL PROGRAMS)
3. 2012 FLA APPLICABLE STANDARDS	8. LOCAL BUILDING CODE
4. LIFE SAFETY CODE NFPA-101-2012	9. DIFFERENT ORDINANCES
5. FLORIDA FIRE PREVENTION CODE 9A, 10	10. ANY AS AND 70 (813)

**APPLICANT/LESSEE**

INDIC NAME: T-MOBILE  
PROJECT MANAGER: CEASE COVACA (851) 601-5031  
PHONE: (851) 601-5031

**PROPERTY INFORMATION**

OWNER: INDIAN RIVER COUNTY  
1501 27TH STREET  
VERO BEACH, FL 32967

FOUD #: 323923000000000009.1

HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

**CIVIL ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
1920 NEVADA WAY, SUITE 200  
WEST PALM BEACH, FL 33411  
(561) 816-0665

**STRUCTURAL ENGINEER:**  
N/A

**ELECTRICAL ENGINEER:**  
N/A

**PROJECT INFORMATION**

CONSTRUCTION LOCATION:  OUTDOOR  INDOOR

ANTENNA LOCATION:  WATER TOWER  SELF SUPPORT TOWER  MONOPOL  ROOF TOP  NEW TOWER  OTHER

**PROJECT SUMMARY**

**SURVEYOR:**  
N/A

**TOWER ENGINEER:**  
N/A

**PROJECT TEAM**

SHEET	DESCRIPTION	REV.
T-1	COVER SHEET	0
G-1	GENERAL NOTES	0
C-1	OVERALL SITE PLAN	0
C-2	EQUIPMENT PLAN & TOWER ELEVATION	0
C-3	EXISTING ANTENNA LAYOUT	0
C-4	PROPOSED ANTENNA LAYOUT	0
C-5	EQUIPMENT MOUNTING DETAILS	0
C-6	CABLE SUPPORT MOUNTING DETAILS	0
S-1	STRUCTURAL NOTES AND PLAN VIEW DETAILS	0
E-1	ELECTRICAL SITE PLAN AND NOTES	0
E-2	DRAWING DETAILS	0
E-3	ELEVATION DC DIAGRAM	0

**SHEET INDEX**

ISSUED FOR: SECTOR ADD/L700  
DATE: OCTOBER 2017

**T-Mobile**  
1300 CONCORD TERRACE, SUITE 200  
SUNRISE FL, 33323

**PROJECT INFORMATION:**  
A2P0003A  
GIFFORD WATER TOWER  
4690 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

**EQUIPMENT ISSUE DATE:**  
OCTOBER 2017

**ISSUED FOR:**  
SECTOR ADD +L700 UPGRADE

**REV. DATE: DESCRIPTION:**


**SEAL:**

**PLANS PREPARED BY:** SYSTEMS  
**Kimley-Horn**  
© 2017 KIMLEY-HORN AND ASSOCIATES, INC.  
1920 NEVADA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 816-0665  
HTTP://WWW.KHINC.COM

**PROVIDER:**

**DRAWN BY:** GJK **APPV:**

**TYS** **KKM** **KKM**

**LICENSURE:**

KEVIN H. HANRAHAN	PC 71133
MARIA VICTORIA MARTIN	PC 72337
ANGELIO A. ANTILES	PC 70645

**SHEET TITLE:**  
COVER SHEET

**SHEET NUMBER:** T-1 **REVISION:**

**KHA Job #:**  
044328040

As shown, these drawings were prepared by Kimley-Horn and Associates, Inc. under the supervision of Kevin H. Hanrahan, P.E., No. 71133, State of Florida. The drawings were prepared for the project described herein and are not to be used for any other project without the written consent of Kimley-Horn and Associates, Inc.



**Mobile**  
1300 CHURCH TOWER, SUITE 200  
SUITE T. 3122

**PROJECT INFORMATION:**  
AZP0003A  
CIFFORD WATER TOWER  
4900 80TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

**CURRENT ISSUE DATE:**  
OCTOBER 2017

**ISSUED FOR:**  
SECTOR ADD 1700 UPGRADE

**REV. DATE: DESCRIPTION:**



**Kimley-Horn**  
2017 INDIAN RIVER COUNTY, FLORIDA, INC.  
1970 WERVA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 845-1000  
FAX 561-845-1001

**PROVIDER:**

**DRAWN BY: CHK.:** APV. KKM

**LICENSE:**  
PK 3103  
KIM K. MARSH  
MARA VICTORIA MARIN  
JENNIFER A. ATILES

**SHEET TITLE:**  
GENERAL NOTES

**SHEET NUMBER:**  
G-1

**RVA Job #:**  
044328040

**1. CONTRACTOR:**  
THE CONTRACTOR SHALL NOTIFY THE CDM AT LEAST 24 HOURS IN ADVANCE OF ANY INSPECTIONS, INSPECTIONS THAT REQUIRE THE PRESENCE OF CDM PERSONNEL SHALL BE SCHEDULED IN ADVANCE. THE CONTRACTOR SHALL PROVIDE A LIST OF ALL PERSONNEL TO PARTICIPATE IN THE INSPECTIONS.

**2. PRACTICAL COMPLETION:**  
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CDM AND THE LOCAL AGENCIES AND THE BUREAU OF PUBLIC WORKS IN A TIMELY MANNER. THE CONTRACTOR SHALL PROVIDE DISSEMINATION OF ALL INSPECTIONS.

**3. INSPECTIONS:**  
THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CDM AND THE LOCAL AGENCIES AND THE BUREAU OF PUBLIC WORKS IN A TIMELY MANNER. THE CONTRACTOR SHALL PROVIDE DISSEMINATION OF ALL INSPECTIONS.

**4. ENVIRONMENTAL PROTECTION:**  
THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**5. RESTAURATION:**  
ANY EROSION CONTROL MEASURES, CURB, DITCHES, WALLS, FENCING, STRIPES, AND EXISTING FEATURES OR OTHER PROPERTIES, IDENTIFIED IN THE CONTRACT DOCUMENTS SHALL BE RESTORED TO ORIGINAL CONDITION AT THE END OF THE PROJECT. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**6. ASSEMBLY DRAWINGS:**  
THE CONTRACTOR SHALL PREPARE A NEW SET OF ASSEMBLY DRAWINGS THAT SHALL BE SUBMITTED TO THE CDM FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**7. ELECTRICAL CONNECTIONS:**  
ALL ELECTRICAL CONNECTIONS SHALL BE MADE TO THE EXISTING ELECTRICAL SYSTEM. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**8. MATERIALS AND METHODS:**  
ALL MATERIALS AND METHODS SHALL BE APPROVED BY THE CDM. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**9. CONSTRUCTION:**  
THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION. THE CONTRACTOR SHALL MAINTAIN THE EXISTING EROSION CONTROL MEASURES AND TAKE ALL NECESSARY MEASURES TO PREVENT EROSION AND SEDIMENTATION.

**10. INSPECTIONS:**  
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**17. RESTAURATION:**  
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**19. ELECTRICAL CONNECTIONS:**  
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**23. RESTAURATION:**  
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**24. ASSEMBLY DRAWINGS:**  
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**STANDARD PROVISIONS**

**1. CONTRACT DOCUMENTS:**  
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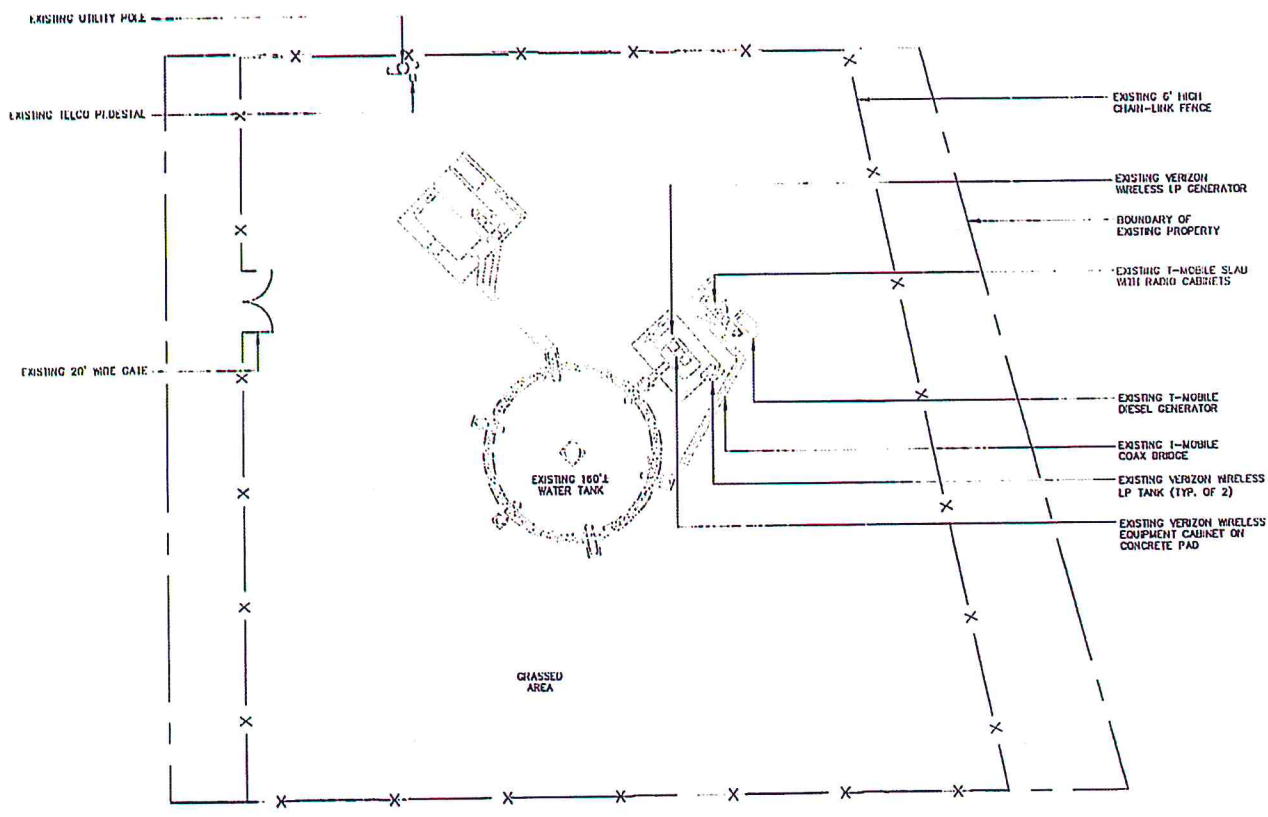
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**OVERALL SITE PLAN**



NOTE: SITE PLAN BASED ON FIELD OBSERVATIONS

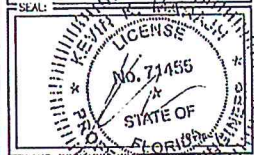


PROJECT INFORMATION:  
**A2P0003A**  
**GIFFORD WATER TOWER**  
 4690 28TH COURT  
 VERO BEACH, FL 32907  
 INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
**OCTOBER 2017**

ISSUED FOR:  
**SECTOR ADD +L700 UPGRADE**

REV.	DATE	DESCRIPTION



PLANS PREPARED BY:  
**Kimley-Horn**  
 © 2017 KIMLEY-HORN AND ASSOCIATES, INC.  
 1920 WILKINA WAY, SUITE 200  
 WEST PALM BEACH, FLORIDA 33411  
 (561) 840-0805  
 FDPE CA0000118

PROVIDER:

DRAWN BY: CHK. TVS APV. KKM

LICENSURE:  
 KEVIN R. MARABI PC 71455  
 NANCY VICTORIA MARINI PC 72337  
 ARNOLDO A. ANTILAS PC 70415

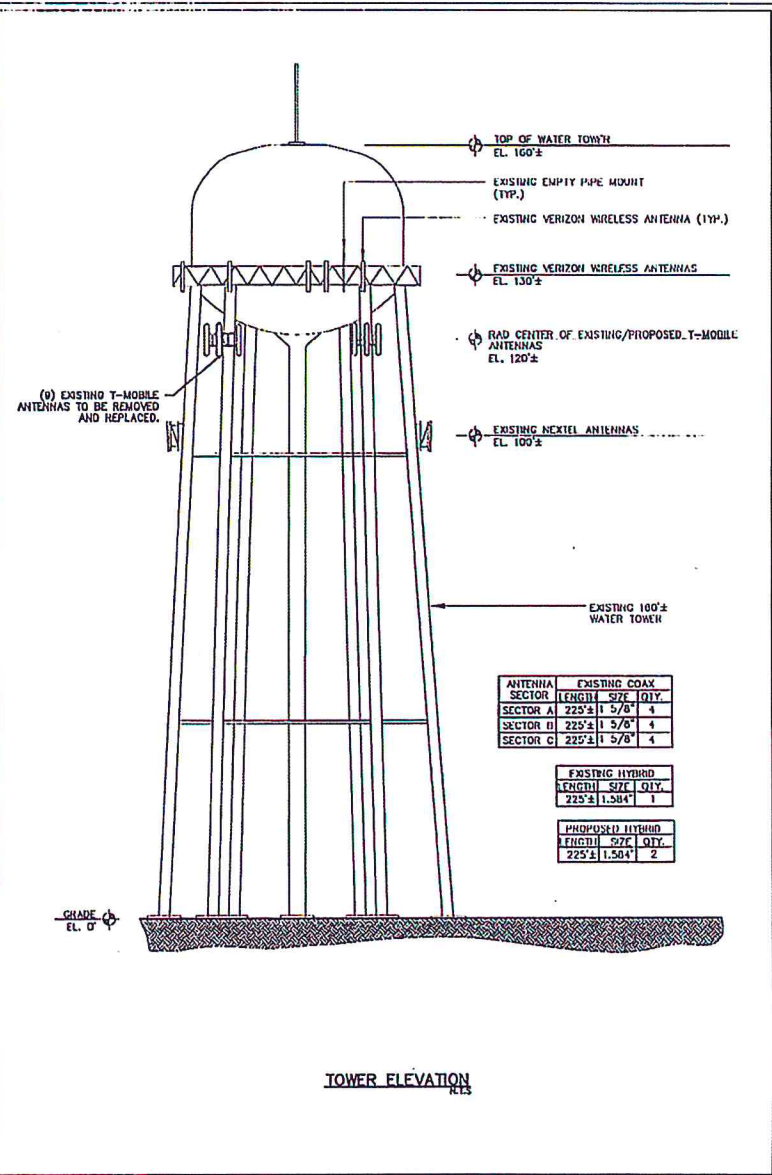
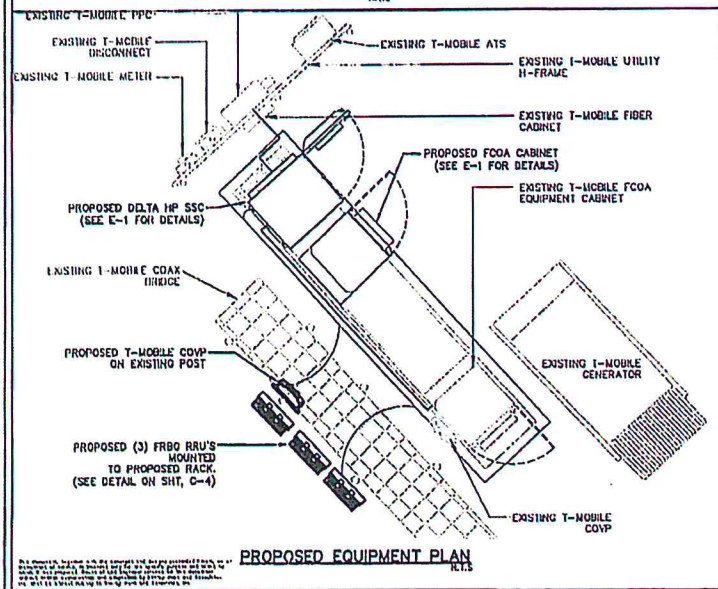
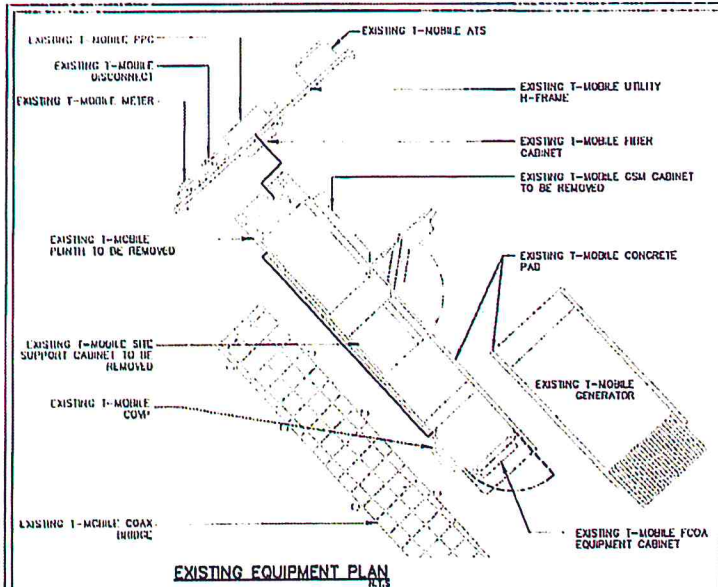
SHEET TITLE:  
**OVERALL SITE PLAN**

SHEET NUMBER: **C-1**

KHA Job #: **044328040**

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PROJECT INFORMATION:  
**A2P0003A**  
**GIFFORD WATER TOWER**  
 4690 28TH COURT  
 VERO BEACH, FL 32967  
 INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
**OCTOBER 2017**

ISSUED FOR:  
**SECTOR ADD +L700 UPGRADE**

REV. DATE DESCRIPTION:



PLANS PREPARED BY:  
**Kimley-Horn**  
 © 2017 KIMLEY-HORN AND ASSOCIATES, INC.  
 1920 WENKHA WAY, SUITE 200  
 WEST PALM BEACH, FLORIDA 33411  
 (561) 845-0905  
 FLIC 240066495

PROVIDER:

DRAWN BY: CHK. APV.:  
 TVS KKM KKM

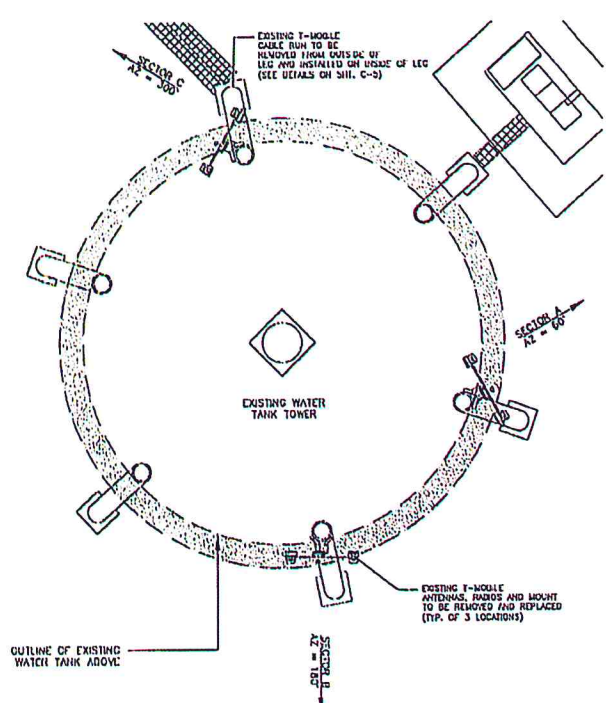
LICENSURE:  
 KEVIN R. MARAAS PE 31453  
 MARIA VICTORIA ALONSO PE 32397  
 ANDREW A. ANTILE PE 20915

SHEET TITLE:  
**EQUIPMENT PLAN & TOWER ELEVATION**

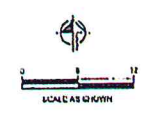
SHEET NUMBER: REVISION:  
**C-2**

KIM Job #:  
**044328040**






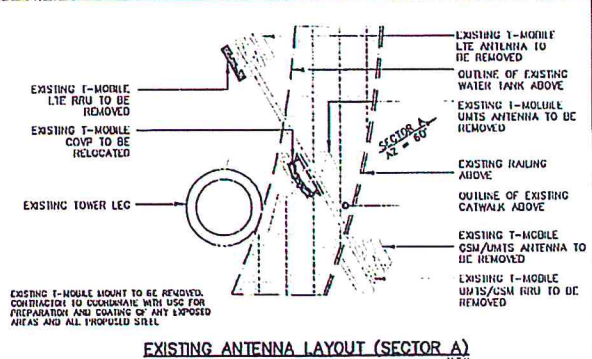
**EXISTING ANTENNA LAYOUT**



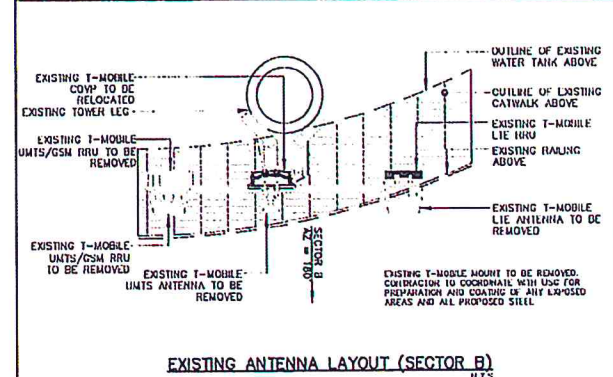
CALL 48 HOURS  
BEFORE YOU DIG  
115 THE LANE  
1-800-432-4770



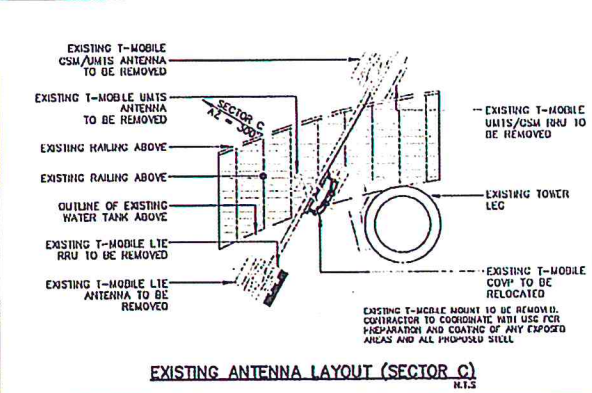
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**EXISTING ANTENNA LAYOUT (SECTOR A)**  
N.T.S.



**EXISTING ANTENNA LAYOUT (SECTOR B)**  
N.T.S.



**EXISTING ANTENNA LAYOUT (SECTOR C)**  
N.T.S.



1300 CONCORD TERRACE, SUITE 200  
SUNRIDGE FL 33323

**PROJECT INFORMATION:**

A2P0003A  
**GIFFORD WATER TOWER**  
4690 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

**CURRENT ISSUE DATE:**

OCTOBER 2017

**ISSUED FOR:**

**SECTOR ADD +1700 UPGRADE**

**REV. DATE DESCRIPTION:**

REV.	DATE	DESCRIPTION

**SEAL:**



**PLANS PREPARED BY:**

**Kimley-Horn**  
© 2017 KIMLEY-HORN AND ASSOCIATES, INC.  
1920 WENONA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 845-6665  
FAX: 561-845-6668

**PROVIDER:**

**DRAWN BY: CHK. APPV.**

TYS	KKM	KKM
-----	-----	-----

**LICENSURE:**

KEVIN A. HURDANI	PI 71455
JANEA VICTORIA MUMFORD	PI 72337
ANDREAS A. ANTILAS	PE 70815

**SHEET TITLE:**

**EXISTING ANTENNA LAYOUT**

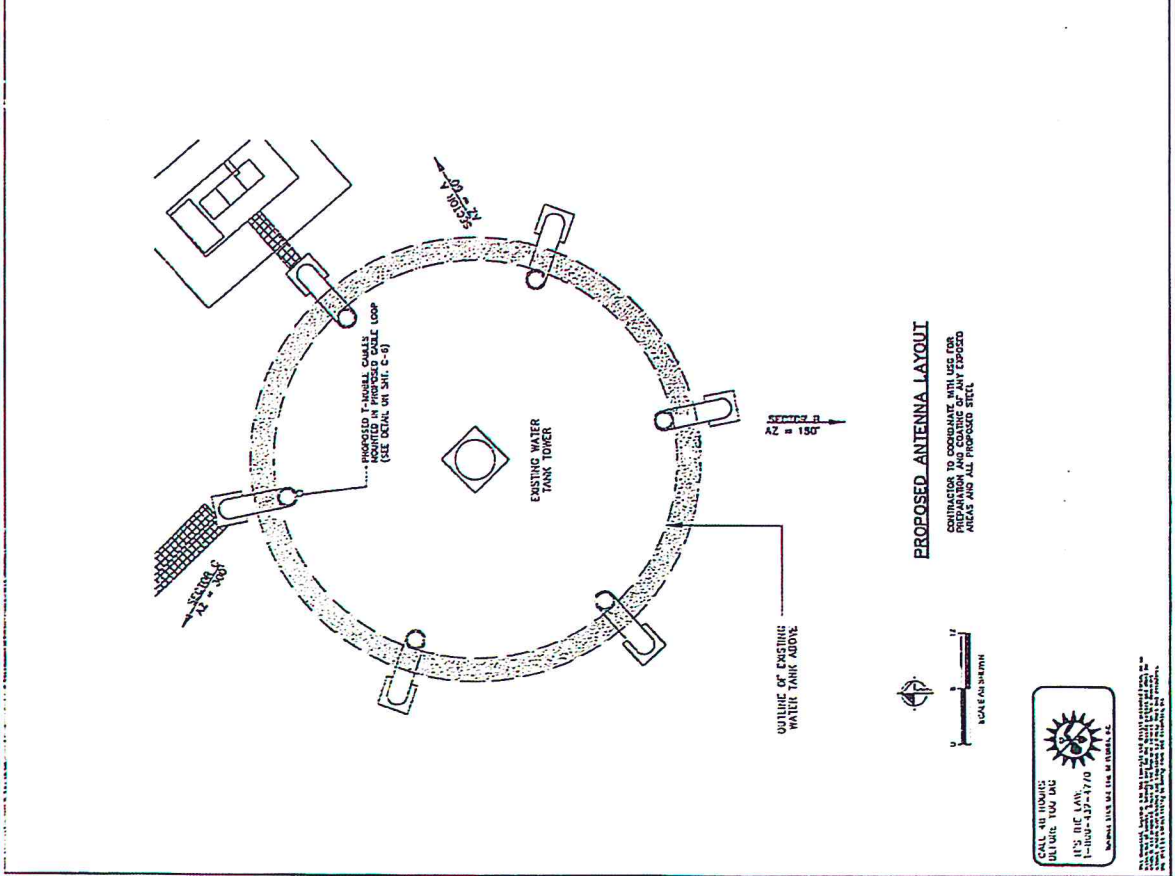
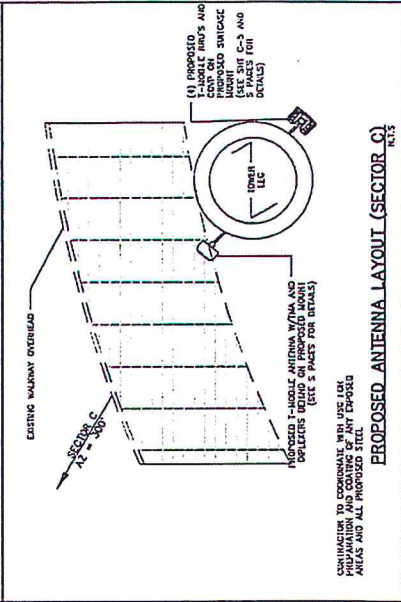
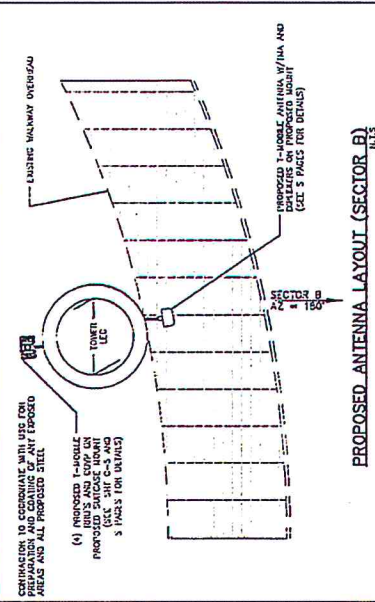
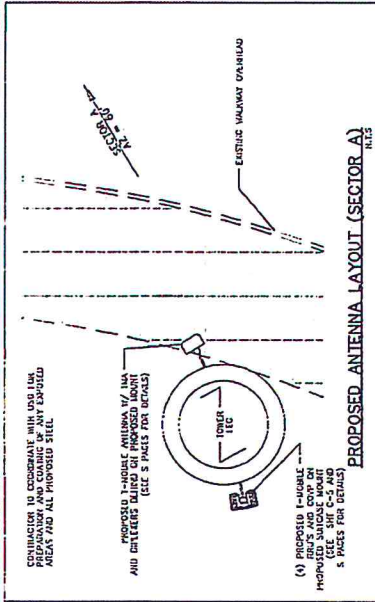
**SHEET NUMBER: REVISION:**

**C-3**

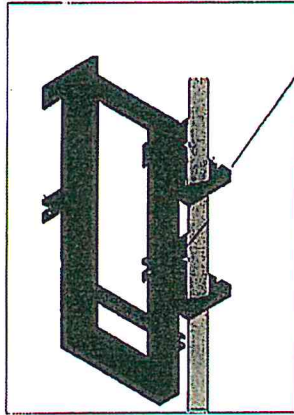
**KHA Job #:**

044328040

		1340 COLCORD TOWER, SUITE 200 BOCA RATON, FL 33433	
<b>PROJECT INFORMATION:</b> AP2P0003A <b>GIFFORD WATER TOWER</b> 4690 28TH COURT VERO BEACH, FL 33587 BROWARD COUNTY			
<b>ISSUED FOR:</b> OCTOBER 2017		<b>REV. DATE:</b> DESCRIPTION: SECTOR ADD +1700 UPGRADE	
SEAL:			
<b>PLANS PREPARED BY:</b> <b>Kimley-Horn</b> 1924 W. WEAVER WAY, SUITE 200 4631 PALM BEACH BLVD., FLORIDA 33411 (561) 845-6655 LEE, CALDWELL			
<b>PROVIDER:</b>			
DOWN BY: CHG.		APV.	
TVS		KKM	
LICENSURE:		KKM	
KIMLEY-HORN & ASSOCIATES, INC. 1924 W. WEAVER WAY, SUITE 200 4631 PALM BEACH BLVD., FLORIDA 33411 (561) 845-6655		11 1153 12 2243 12 1014	
<b>SHEET TITLE:</b> PROPOSED ANTENNA LAYOUT		<b>REVISION:</b>	
<b>SHEET NUMBER:</b>		<b>C-4</b>	
<b>RITA Job #:</b>		044328040	

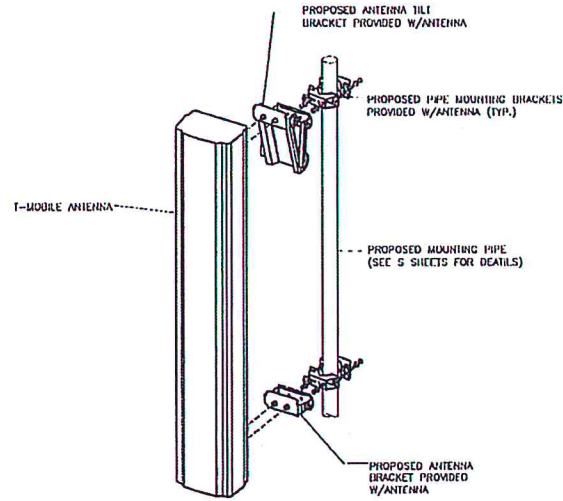




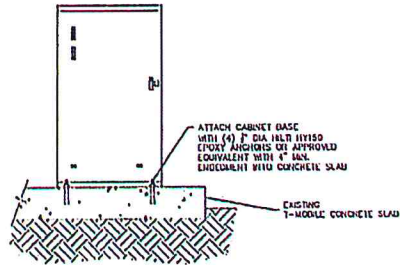


PROPOSED RRU SURFACE MOUNTING BRACKET BY HUNTER PROFESSIONAL SERVICES, TO BE ATTACHED TO PROPOSED ANTENNA MOUNT. (SEE 5 SHEETS FOR DETAILS) TYPICAL OF 3

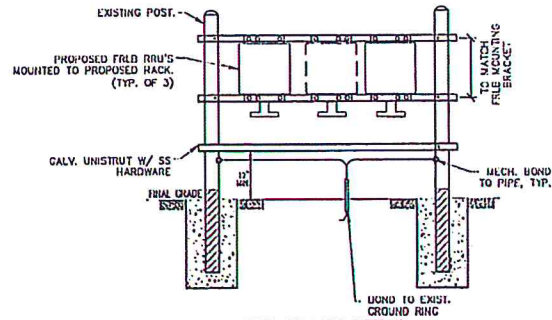
**PROPOSED RRU MOUNTING BRACKET**  
N.T.S.



**PROPOSED ANTENNA MOUNTING DETAIL**  
N.T.S.



**CABINET ATTACHMENT DETAIL**  
N.T.S.



**RRU FRAME DETAIL**  
N.T.S.

**T-Mobile**  
1300 CONCHO TOWER, SUITE 200  
SUNWALK, FL, 33523

PROJECT INFORMATION:  
A2P0003A  
GIFFORD WATER TOWER  
4690 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
OCTOBER 2017

ISSUED FOR:  
SECTOR ADD +L700 UPGRADE

REV. DATE DESCRIPTION:

REV.	DATE	DESCRIPTION



PLANS PREPARED BY:  
**Kimley-Horn**  
© 2017 KIMLEY-HORN AND ASSOCIATES, INC.  
1920 N. HAVANA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 845-0605  
FAX: (561) 845-0618

PROVIDER:

DRAWN BY: CHK. APV.  
TVS KKM KKM

LICENSEURE:  
KEVIN A. MARABI PE 71455  
NANAN M. MOYER PE 72397  
ANDREW A. METZ PE 76818

SHEET TITLE:

EQUIPMENT  
MOUNTING DETAILS

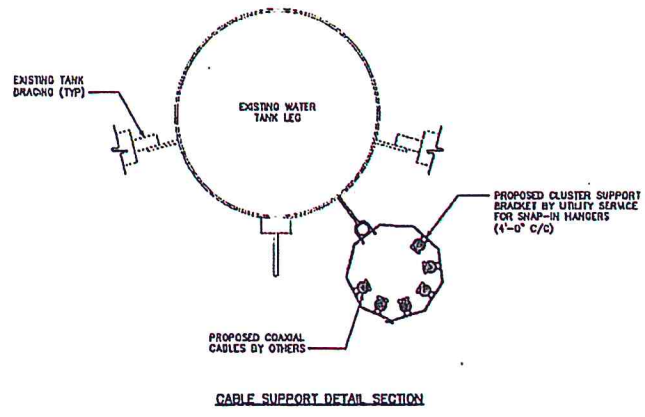
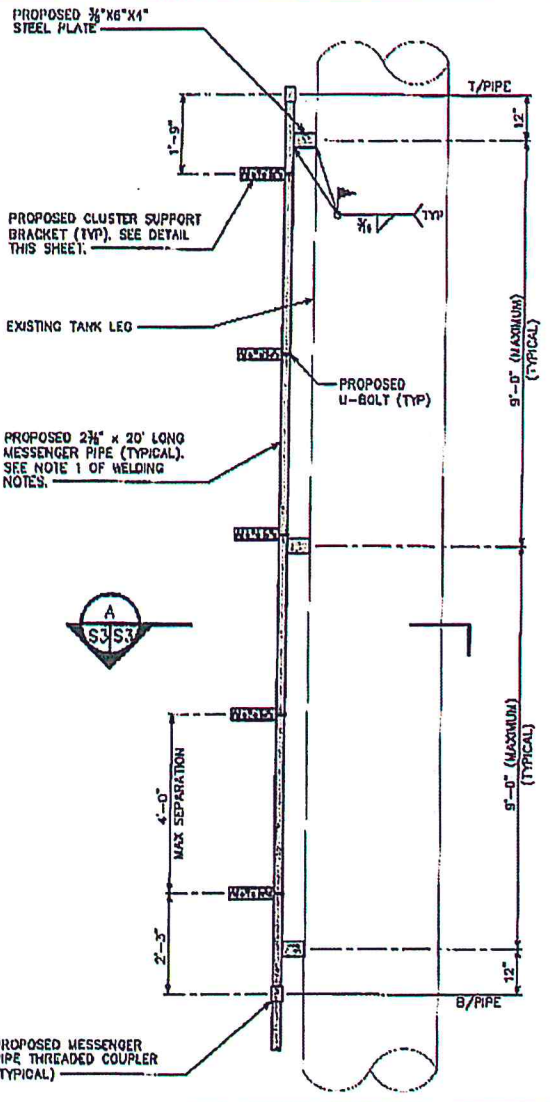
SHEET NUMBER: REVISION:

**C-5**

RFA Job #: 044328040

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CABLE SUPPORT DETAIL ELEVATION



1300 COLCORD TERRACE, SUITE 200  
SUNRISE, FL, 33323

PROJECT INFORMATION:  
A2P0003A  
GIFFORD WATER TOWER  
4600 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
OCTOBER 2017

ISSUED FOR:  
SECTOR ADD +L700 UPGRADE

REV. DATE DESCRIPTION:

--	--



PLANS PREPARED BY:  
**Kimley-Horn**  
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1920 NEKIVA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 845-0605  
TWP. CAL2000418

PROVIDER:

DRAWN BY: CHK. APV.  
TYS KKM KKM


LICENSE:  
KEVIN K. MANAJI PC 71455  
MARA VICTORIA MARTIN PC 72317  
ARIBIDIO A. HAYLES PC 70613

SHEET TITLE:  
CABLE SUPPORT MOUNTING DETAILS

SHEET NUMBER REVISION:  
**C-6**

KHA Job #:  
044328040

As a registered Professional Engineer, I am responsible for the design and construction of the project shown on this drawing. I have prepared this drawing in accordance with the Florida Engineering Code of Ethics and the Florida Engineering Code of Practice. I have not been involved in the design or construction of any other project that is similar to the one shown on this drawing. I have not been involved in the design or construction of any other project that is similar to the one shown on this drawing.



277 South County Road, SW  
Atlanta, GA 30334  
(404) 481-2000

**PROJECT INFORMATION:**

APR0000A  
GIFFORD WATER TOWER  
4690 28th COURT  
VERO BEACH, FL 33967  
INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
OCTOBER 2017

ISSUED FOR:  
CONSTRUCTION DRAWINGS

REV. DATE: DESCRIPTION:  
1 11/11/17 R1001 REVISIONS  
2 11/11/17 R1002 REVISIONS  
3 11/11/17 R1003 REVISIONS  
4 11/11/17 R1004 REVISIONS

No. 25349  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
PLANS PREPARED BY  
**JME** ENGINEERS, INC.  
3000 W. STATE ROAD 70  
SUITE 200  
FORT LAUDERDALE, FL 33409  
(954) 473-1000  
WWW.JMEENGINEERS.COM

**PRODUCT DATA:**

REV. NO. DESCRIPTION  
1 11/11/17 R1001 REVISIONS  
2 11/11/17 R1002 REVISIONS  
3 11/11/17 R1003 REVISIONS  
4 11/11/17 R1004 REVISIONS

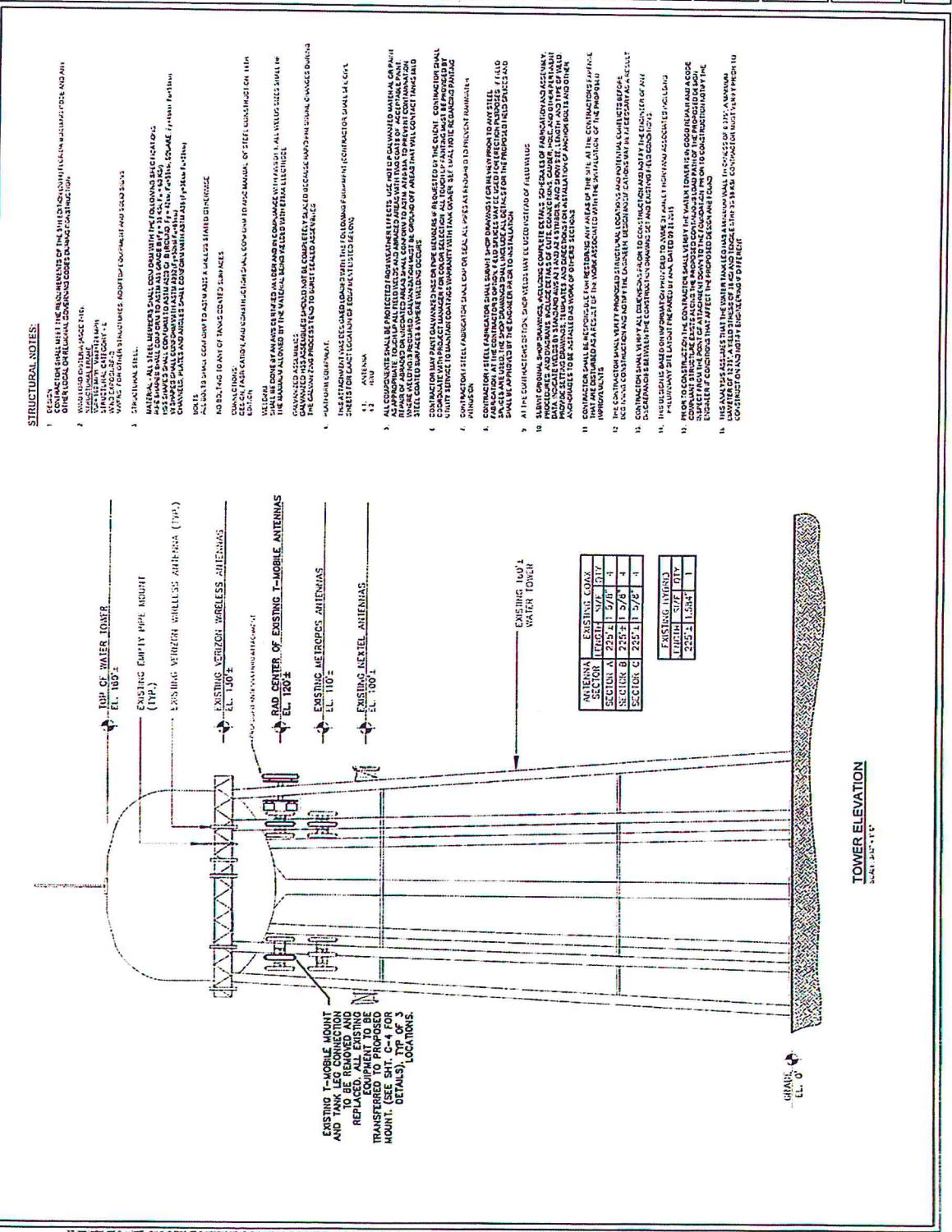
DESIGNED BY: JRM  
CHECKED BY: JRM  
APPROVED BY: JRM

QUEENSBURY: 11/11/17  
APPROVED BY: JRM  
DATE: 11/11/17

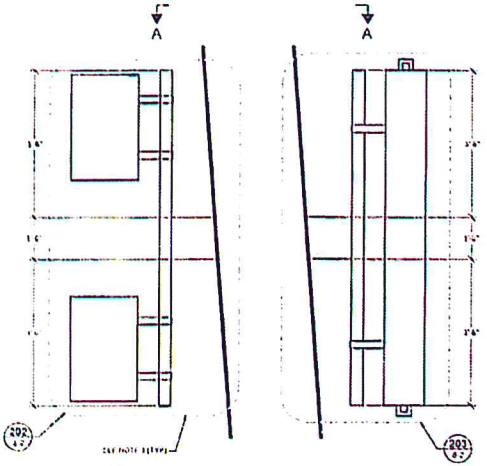
**STRUCTURAL NOTES & PLAN VIEW**

SHEET NUMBER:  
**S-1**

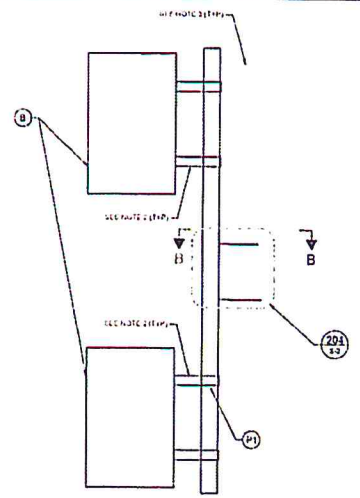
RVA JOB #:  
**Kimley-Horn 044328022**



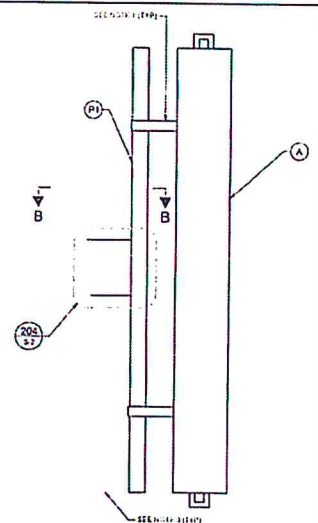




**201 ANTENNA/RRU ELEVATION DETAIL**  
SCALE: 1/8" = 1'-0"



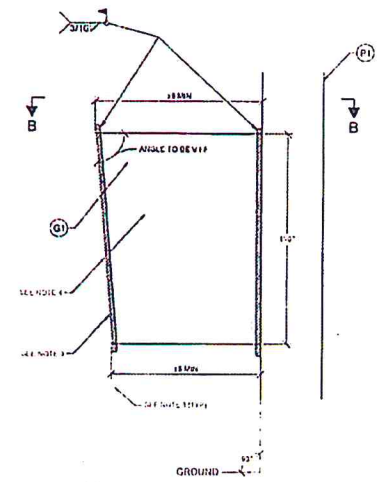
**202 RRU ATTACHMENT DETAIL**  
SCALE: 1/8" = 1'-0"



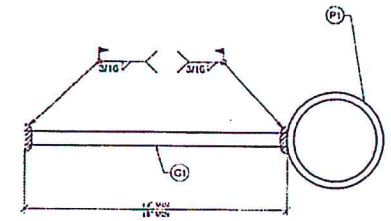
**203 ANTENNA ATTACHMENT DETAIL**  
SCALE: 1/8" = 1'-0"



**SECTION A-A**  
SCALE: 3/16" = 1'-0"



**204 ATTACHMENT DETAIL**  
SCALE: 1/8" = 1'-0"



**SECTION B-B**  
SCALE: 3/16" = 1'-0"

- LEGEND**
- (A) ANTENNA/RRU ELEVATION DETAIL (201)
  - (B) RRU ATTACHMENT DETAIL (202)
  - (P1) PROPOSED 3\"/>
  - (C) CENTER GUSSET PLATE 1/2\"/>

V.P. VERMA D.F.B.D.

- NOTES**
1. INSTALL ANTENNA/RRU AS SHOWN AND VERIFY ALL DIMENSIONS AND ASSEMBLY PER 201 & 202.
  2. INSTALL ANTENNA/RRU ATTACHMENT DETAIL (202) AND VERIFY ALL DIMENSIONS AND ASSEMBLY PER 202.
  3. VERIFY WATER TIGHTNESS AND PROTECTIVE COATING APPLICATION.
  4. CENTER GUSSET PLATE SHALL BE CENTERED ON THE ATTACHMENT DETAIL (202).
  5. CONTACT THE MANUFACTURER FOR THE CORRECT TYPE AND SIZE OF WELDS.
  6. CONTACT THE MANUFACTURER FOR THE CORRECT TYPE AND SIZE OF WELDS.

**T-Mobile**

707 PARKWAY NORTH, SUITE 600  
VERO BEACH, FL 32967  
(888) 222-2222

**PROJECT INFORMATION:**

**AZP0003A**  
**GIFFORD WATER TOWER**  
4650 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

**CURRENT ISSUE DATE:**  
OCTOBER 2017

**ISSUED FOR:**  
CONSTRUCTION DRAWINGS

**REV. DATE DESCRIPTION:**

REV.	DATE	DESCRIPTION

SEAL

JOHN W. SHOE

LICENSE

No. 25349

STATE OF

FLORIDA

REGISTERED ENGINEER

PROFESSIONAL SEAL

**PROJECT DATA:**

Site Name: \_\_\_\_\_  
 Site Address: \_\_\_\_\_  
 City/County/State: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Project No.: \_\_\_\_\_

**DRAWN BY:** CHM. **APV.:** \_\_\_\_\_  
 BH JWM AR

**LICENSURE:**

Professional Engineer License No. \_\_\_\_\_  
 State of Florida License No. \_\_\_\_\_

**SHEET TITLE:**  
DETAILS

**SHEET NUMBER:**  
**S-2**

**KHA Job #:** \_\_\_\_\_

**Kimley-Horn** 044328022



1300 SANDHURST DRIVE, SUITE 200  
SUNSHINE, FL 33423

**AZP00033A**  
**GIFFORD WATER TOWER**  
4650 28TH COURT  
WEST PALM BEACH, FL 33417  
INDIAN RIVER COUNTY

ISSUED FOR: **OCTOBER 2017**

SECTOR: **ADD +L700 UPGRADE**

**Kimley-Horn**  
2020 HAVANA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 645-0885  
TYP. CONCEPT

PROVIDER: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

REVISED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

SCALE: \_\_\_\_\_

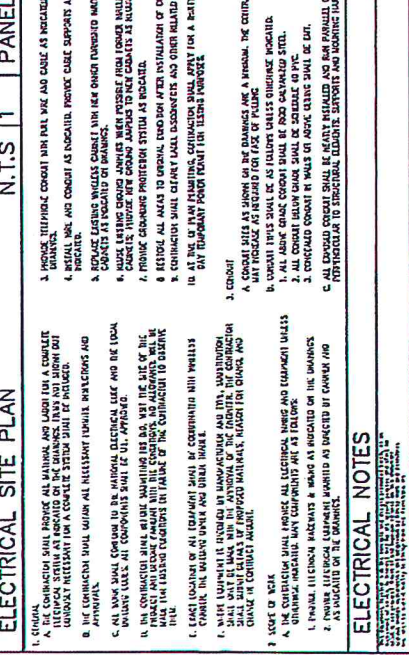
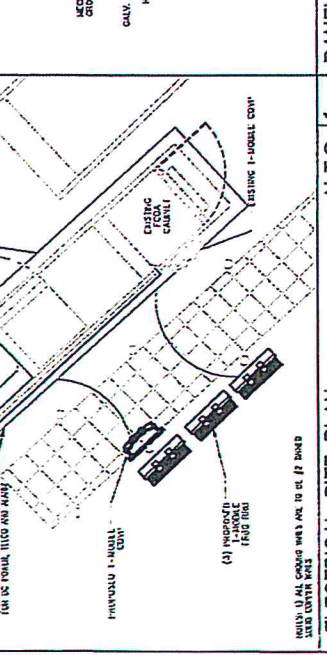
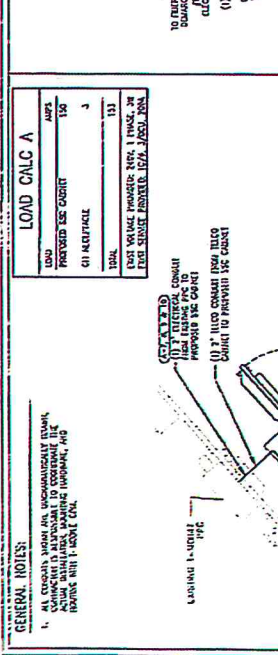
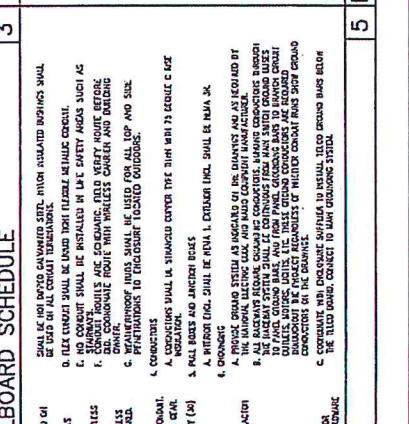
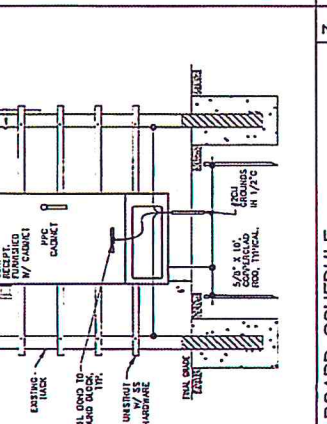
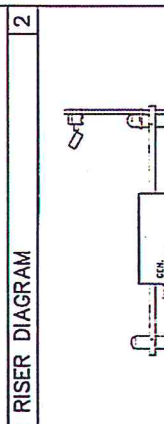
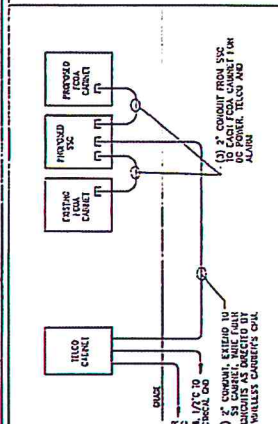
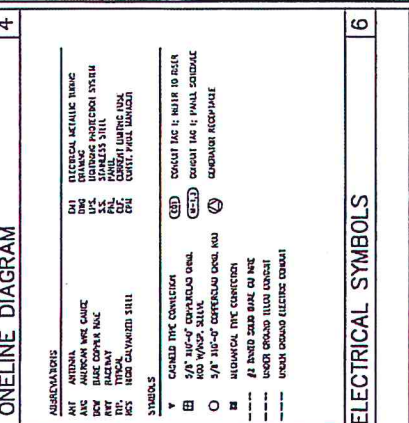
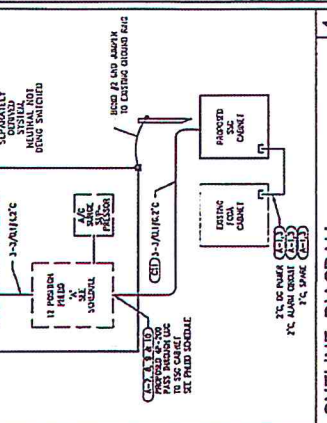
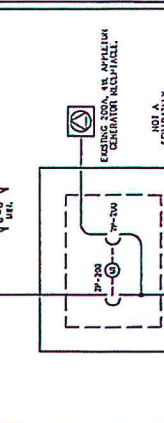
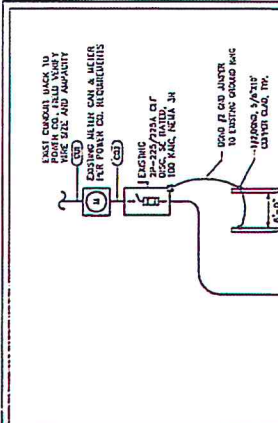
PROJECT INFORMATION:

ELECTRICAL SITE PLAN AND NOTES

SHEET NUMBER: **E-1**

REVISION: \_\_\_\_\_

PROJ. NO.: **044328040**



**LOAD CALC A**

LOAD	150
PROVIDED USE COUNT	150
ON RECEPTACLE	3
TOTAL	153

**GENERAL NOTES:**

- ALL CONDUIT SHALL BE INSTALLED IN RACE AND GAGE AS NOTED ON DRAWING.
- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.
- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.
- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.
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**ELECTRICAL NOTES**

- ALL CONDUIT SHALL BE INSTALLED IN RACE AND GAGE AS NOTED ON DRAWING.
- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.
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- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.
- PROVIDE ALL WIRING AS SHOWN ON DRAWINGS AND AS NOTED BY NOTES.

**ELECTRICAL SYMBOLS**



**GROUNDING PROTECTION SYSTEM NOTES:**

1. PROVIDE 2" X 4" (MINIMUM) GROUND BARS (GROUNDBARS) 1/2" X 6" X 1/4" WASHED AT 90 DEGREE CORNER. INSTALLATION SEE CPU.
2. PROVIDE A 1/2" BARE THINNED SOLID COPPER WIRE FOR EACH SECTION. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 1" BELOW GRADE. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 2'-0" AWAY FROM THE FOUNDATION UNLESS SIGN OF DRAINAGE.
3. USE 1/2" BARE THINNED SOLID COPPER WIRE FOR EACH SECTION. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 1" BELOW GRADE. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 2'-0" AWAY FROM THE FOUNDATION UNLESS SIGN OF DRAINAGE.
4. USE DISCONNECT SWITCH WITH, TELEPHONE CABLE AND SERVICE COORDINATES TO WASHED COPPER BARS AS THEY CROSS.
5. EACH END OF THE WAREHOUSE STRUCTURE SHALL BE INDIVIDUALLY BONDED TO THE BARED COPPER WIRE. MECHANICALLY WELD CONNECTIONS AT POINT OF WAREHOUSE STRUCTURE AND WAREHOUSE WIRE. PLACE 3/8" X 1/2" COPPERLAG OVER END AT EVERY 30' ALONG MAIN COPPER WIRE.
6. USE 1/2" BARE THINNED SOLID COPPER WIRE FOR COMMUNICATIONS AND EQUIPMENT PAD TO WAREHOUSE WIRE. MECHANICALLY WELD A 1/2" BARE SOLID COPPER CONNECTION TO THE WIRE AND CONNECT TO THE WAREHOUSE WIRE.
7. PROVIDE INSULATION SLEEVE AT MAXIMUM SPACING. EACH-SECTION CONNECTIONS.
8. PROVIDE SECTION CONNECTION FROM THE WAREHOUSE WIRE TO THE ANTENNA CABLE LINE AS AT POINT OF ANTENNA STRUCTURE. USE 1/2" BARE THINNED SOLID COPPER WIRE FOR EACH SECTION. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 1" BELOW GRADE. THE GROUND BARS SHALL BE INSTALLED A MINIMUM OF 2'-0" AWAY FROM THE FOUNDATION UNLESS SIGN OF DRAINAGE.
9. REQUIRE MECHANICALLY WELD CONNECTION TO COMMUNICATIONS STRUCTURE (EO AT 1'-0" ABOVE PAD AND BOND TO WAREHOUSE WIRE). PROVIDE A 3/4" PVC SLEEVE WITH A CRACKLE HEAD IN THE CENTER (TYPICAL).
10. 3/4" X 1/2" X 1/4" COPPER WIRE OVER END. 1/2" SPACING BETWEEN WIRE (TYPICAL). USE ALL WIRE BONDING WIRE STAINLESS STEEL WAREHOUSE WIRE APPLICABLE.
11. ELECTRICAL CONTRACTOR SHALL MAKE NECESSARY READINGS OF OHM. THE RESULTS SHALL NOT BE GREATER THAN 5 OHMS.
12. ALL CONNECTIONS TO END SYSTEM SHALL BE MADE IN LINE WITH BONDING WIRE. 1/2" READINGS IN THE DIRECTION OF CURRENT FLOW. 1-CONNECTIONS WILL NOT BE ALLOWED.
13. ALL WIRE IN END WIRE SHALL BE INSTALLED 1/2" BONDING.
14. ANTENNA CABLES SHALL BE BONDED AT EACH END. MAXIMUM GREATER THAN 150" SHALL BE BONDED TOWARDS END OF EACH. COORDINATE LOCATION WITH WIRELESS CENTER'S PROJECT MANAGER.
15. WITH APPROVAL, CONTRACTOR SHALL GROUND WIRE TO EACH GRID AND TO END WIRE VIA THE PANEL. COORDINATE WITH WIRELESS CENTER PROJECT MANAGER.
16. CONTRACTOR CAN PROVIDE ONE OF THE FOLLOWING AS DIRECTED BY THE PROJECT MANAGER. THE SECOND OPTION IS PREFERRED.
  - A. CONNECT EACH CABLE END TO THE END WIRE AS SHOWN IN EQUIPMENT END KIT.
  - B. CONNECT EACH WIRE TO A 1/4" X 1/2" X 1/4" COPPER BUS BAR LOCATED ENDING BARED CABINET. ENTER A 1/2" WIRE FROM EACH END OF COPPER BUS BAR TO END WIRE.
17. PROVIDE BARED BONDING WIRE INSIDE EACH CABLE AND POST (OPTIONAL).
18. CONTRACTOR SHALL PROVIDE CONNECTIONS TO ALL BARED GROUND BARS AND CONNECTIONS. STRUCTURE (TOWER, SERVICE BLDG), EXISTING TOWER, GROUND BARS, AND AS INSTRUCTED BY 1-MOBILE CPU.
19. CONTRACTOR SHALL PROVIDE MECHANICAL BONDING AT ALL ANTENNA SECTION GROUND BARS. ALL ELECTRICAL EQUIPMENT (TRANSFORMER, 1-ADDS, PANELS, CABLES, CABLES) AND MAIN GROUND BAR AS DIRECTED BY 1-MOBILE CPU. ALL MECHANICAL CONNECTIONS SHALL BE PROPERLY TORQUED TO 1/2" TORQUE. ALL BOLTS.
20. CONTRACTOR SHALL COAT WITH HOT-DIP GALVANIZED STEEL AT ALL PORTS OF CONTACT BETWEEN DISSIMILAR METALS.

**PROPOSED PPC MAIN PANEL**

TYPE	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY
1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
2	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
3	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
4	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
5	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
6	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
7	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
8	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
9	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
10	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
11	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
12	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
13	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
14	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
15	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
16	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
17	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
18	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
19	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
20	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1
21	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1	PROPOSED 4-POLE MAIN PANEL	1	1

NOTE: PROPOSED 4-POLE MAIN PANEL THROUGH WIRE IN POSITIONS 7, 8, & 9 FOR PROPOSED 500V MAIN CONNECTION TO PROVIDE BLOCK OF PLATES FOR ALL GROUND POSITIONS.

NOTE: ALL EXISTING CONNECTIONS OF EQUIPMENT SHALL BE INSTALLED AS PER 1-MOBILE CPU. ALL MECHANICAL CONNECTIONS SHALL BE PROPERLY TORQUED TO 1/2" TORQUE. ALL BOLTS.

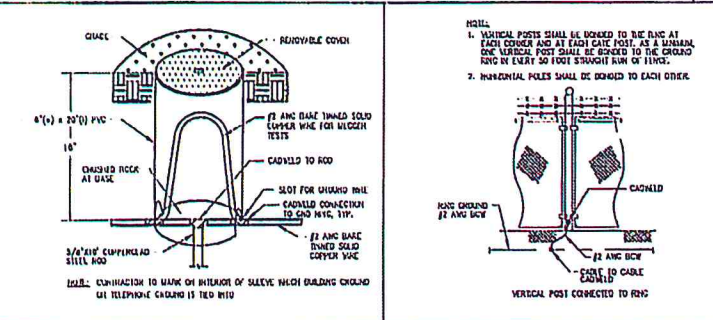
NOTE: SECTION GROUND BARS ARE TO BE MOUNTED DIRECTLY TO TOWER WITH NO INSULATION.

NOTE: ALL BONDING TO ANTENNA SECTION GROUND BAR IS MECHANICAL, THROUGH LUGS AND HARDWARE.

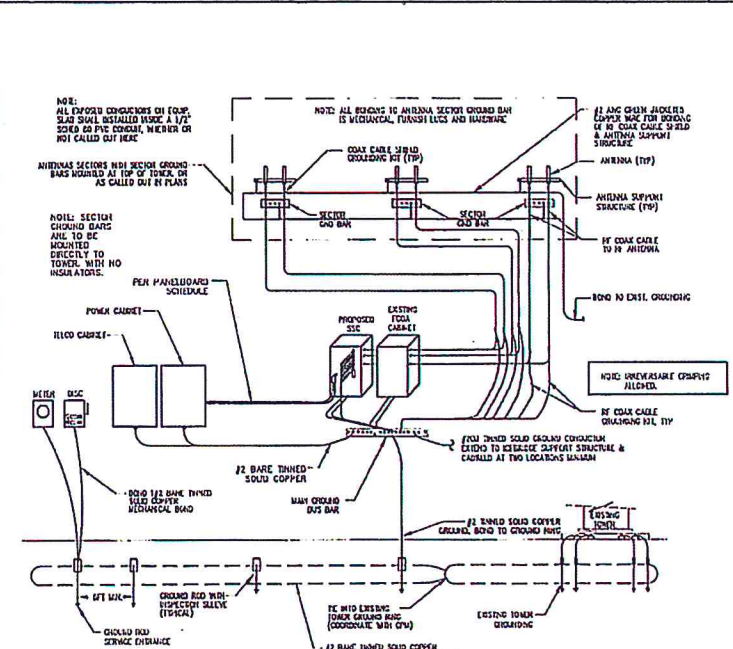
NOTE: 1/2" BARE THINNED SOLID COPPER WIRE FOR BONDING OF WIRE CABLE TO ANTENNA SUPPORT STRUCTURE.

NOTE: UNREVERSIBLE CABLES ALLOWED.

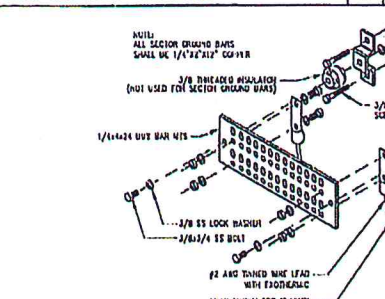
**GROUNDING NOTES**



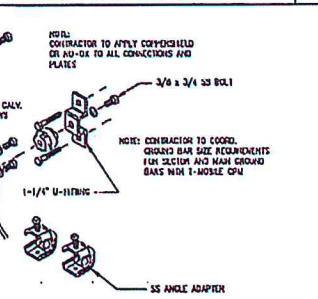
**PANEL BOARD A PPC CABINET**



**INSPECTION SLEEVE**



**FENCE GROUNDING**



**TYPICAL GROUND BAR DETAIL**



**GROUNDING RISER DIAGRAM**



1300 CONCHO TRAVEL, SUITE 200  
SUNRISE FL, 33323

**PROJECT INFORMATION:**

A2P0003A  
GIFFORD WATER TOWER  
4600 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

**CURRENT ISSUE DATE:**

OCTOBER 2017

**ISSUED FOR:**

SECTOR ADD +1700 UPGRADE

**REV. DATE DESCRIPTION:**

REV.	DATE	DESCRIPTION
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**PLANS PROVIDED:**

**Kimley Horn**  
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1920 NEVADA WAY, SUITE 200  
WEST PALM BEACH, FLORIDA 33411  
(561) 845-0865  
TEL: CAG000028

**PROVIDER:**

CHK.	APV.
TVS	KKM
KKM	KKM

**LICENSES:**

NEVA R. MARANI	15 71455
BARA MOJIB MARANI	15 72397
ANIKIAN A. ABILEK	15 70445

**SHEET TITLE:**

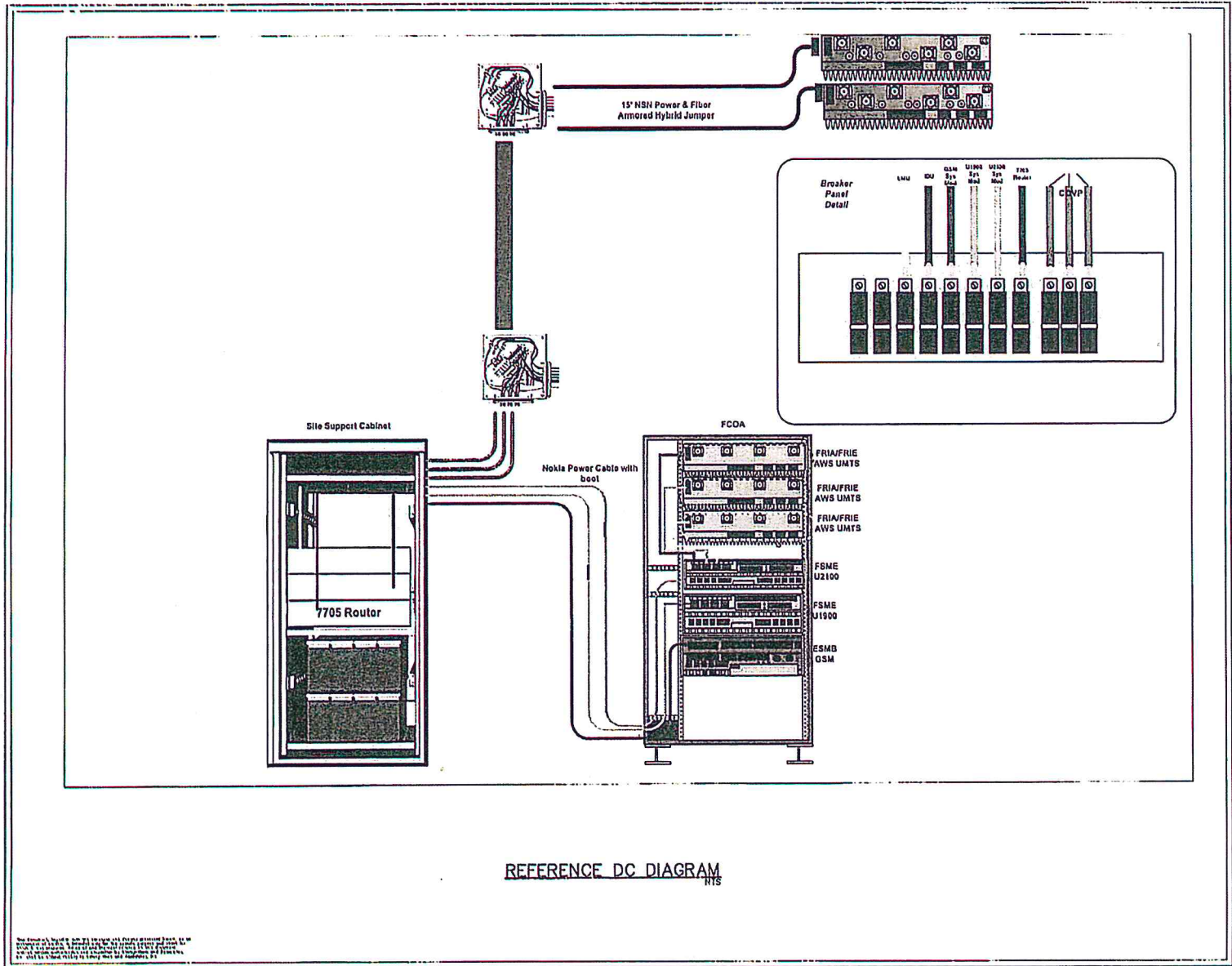
GROUNDING DETAILS

**SHEET NUMBER:**

E-2

**KVA Job #:**

044328040



1300 CONCORD TERRACE, SUITE 200  
SAURUSSE IL, 33323

PROJECT INFORMATION:  
A2P0003A  
GIFFORD WATER TOWER  
4690 28TH COURT  
VERO BEACH, FL 32967  
INDIAN RIVER COUNTY

CURRENT ISSUE DATE:  
OCTOBER 2017

ISSUED FOR:  
SECTOR ADD +L700 UPGRADE

REV.	DATE	DESCRIPTION



**Kimley-Horn**  
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WEST PALM BEACH, FLORIDA 33411  
(561) 845-0605  
ELEC. 0403000456

PROVIDER:

TVS	KKM	KKM
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LICENSURE:  
KEVIN K. MALARASH PC 71155  
MARIA VICTORIA MARIN PC 72397  
ARNDT A. ASTLES PC 70140

SHEET TITLE:  
REFERENCE DC  
DIAGRAM

SHEET NUMBER: REVISION:  
**E-3**

KIA Job #:  
044328040

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