

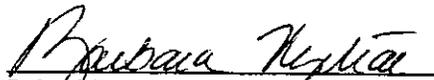
**MEMORANDUM OF LEASE AGREEMENT**

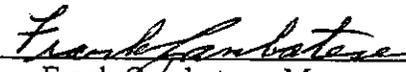
**THIS MEMORANDUM**, made this \_\_\_ day of \_\_\_\_\_, 2014, between the Township of South Brunswick, a municipal corporation of New Jersey, located at the Municipal Complex, 540 Ridge Road, Monmouth Junction, NJ 08852 ("Lessor") and New York SMSA Limited Partnership d/b/a Verizon Wireless ("Lessee"), located at One Verizon Way, Basking Ridge, NJ 07920.

1. Lessor and Lessee entered into a Lease Agreement on \_\_\_\_\_ for an initial term of five (5) years commencing on January 1, 2015, with three (3) additional (5) year options unless Lessor or Lessee exercise a right not to renew one year prior to the expiration of the respective five (5) year term.
  
2. In consideration of the rental set forth in the Agreement, Lessor hereby leases to Lessee a portion of that certain Property located at 3960 Route 1, Township of South Brunswick, County of Middlesex, State of New Jersey, and is designated as Lot 8.04, Block 85, as shown on the tax maps of the Township of South Brunswick together with the non-exclusive right for ingress and egress, all as is more particularly set forth on Exhibit A attached hereto and made a part hereof.
  
3. A copy of the Lease is on file in the office of the Lessor and Lessee.
  
4. The terms, covenants and provisions of the Agreement of which this is a Memorandum, shall extend to and be binding upon the respective executors, administrators, heirs, successors and assigns of Lessor and Lessee.

**ATTEST:**

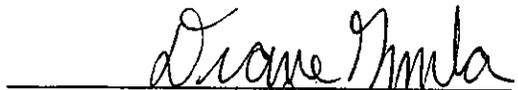
**LESSOR: Township of South Brunswick**

  
Print Name: Barbara Nyitrai  
Township Clerk

By:   
Frank Gambatese, Mayor  
Date: 11/21/14

**ATTEST/WITNESS:**

**LESSEE: New York SMSA Limited  
Partnership d/b/a Verizon Wireless  
By Celco Partnership, Its General Partner**

  
Print Name: Diane Gazzola

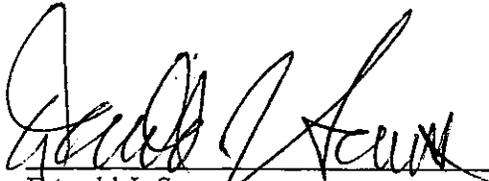
By:   
David R. Heverling  
Area Vice President Network  
Date: 11/10/14

STATE OF NEW JERSEY:  
SS  
COUNTY OF MIDDLESEX:

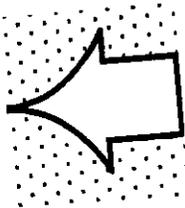
I CERTIFY that on *Nov. 24*, 2014, BARBARA NYITRAI personally came before me and she acknowledged under oath, to my satisfaction, that:

- (a) she is the Township Clerk of the Township of South Brunswick, the municipal corporation named in this document;
- (b) she is the attesting witness to the signing of this document by Frank Gambatese, who is the Mayor of the Township of South Brunswick;
- (c) this document was signed and delivered by the Township of South Brunswick as its voluntary act duly authorized by a proper resolution of the Township Council;
- (d) she knows the proper seal of the Township of South Brunswick which was affixed to this document; and
- (e) she signed this proof to attest to the truth of these facts.

Signed and sworn to before me  
On *Nov. 24*, 2014

  
\_\_\_\_\_  
Donald J. Sears  
An Attorney at Law  
In the State of New Jersey

  
\_\_\_\_\_  
Barbara Nyitrai, Township Clerk



**ACKNOWLEDGMENT**

Commonwealth of Massachusetts)

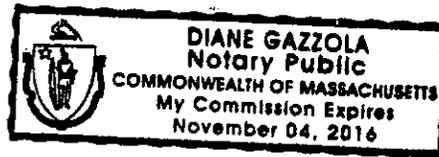
:ss.:

County of Worcester )

On this 10 day of Nov., 2014, before me, the undersigned personally appeared David R. Heverling, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity as Area Vice President Network, that by his signature on the instrument, the individual, or the entity, New York SMSA Limited Partnership, d/b/a Verizon Wireless, upon behalf of which the individual acted, executed the instrument, and that such individual made such appearance before the undersigned in the Town of Westborough, County of Worcester, Commonwealth of Massachusetts.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at my office in said county and state of the day and year first above written.

Diane Gazzola  
Notary Public of Massachusetts





**KEY MAP**  
 1:1117 SCALE: NTS  
 22x34 SCALE: NTS

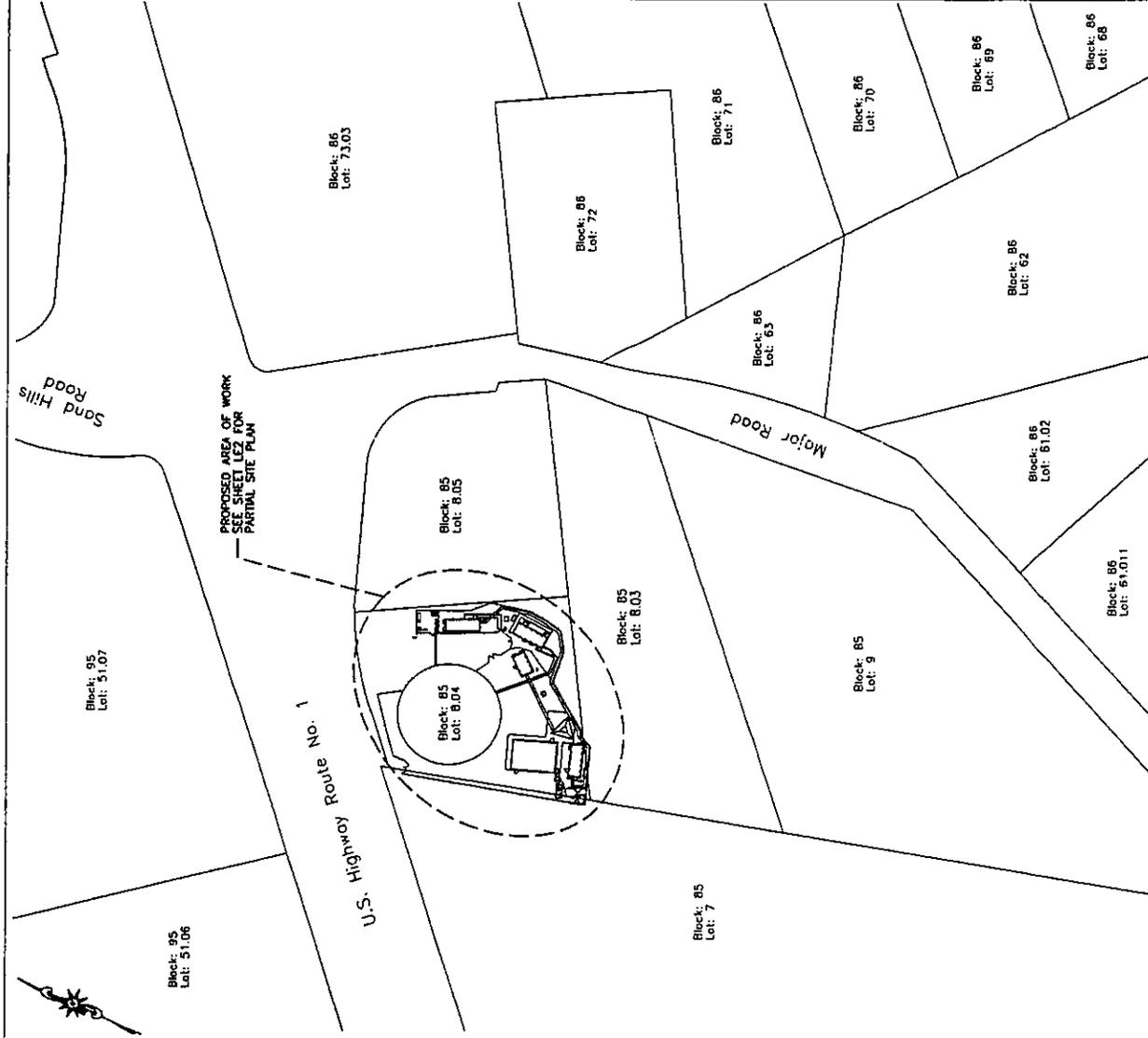
**GENERAL NOTES:**

- EXHIBIT "A" AS SUBMITTED IS A CONCEPTUAL REPRESENTATION OF THE LEASE AGREEMENT ONLY. FINAL CONSTRUCTION DRAWINGS MAY VARY TO COMPLY WITH APPLICABLE BUILDING CODES AND ZONING APPROVALS AND WILL SUPERSEDE EXHIBIT "A".
- TRUE NORTH DETERMINATION, GROUND (AMSL) ELEVATION AND LATITUDE AND LONGITUDE COORDINATES ARE BASED ON USGS MAP INFORMATION. MEASUREMENTS BY MALICK & SCHERER ON 07/22/13.
- INFORMATION SHOWN ON THIS DRAWING IS BASED ON LIMITED FIELD SURVEY DATA.
- THE LOCATIONS ON LESSEE'S PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE RESPECTIVE UTILITY COMPANIES AND MAY NEED TO BE RELOCATED.
- DO NOT SCALE THIS EXHIBIT UNLESS OTHERWISE NOTED.

**SITE INFORMATION:**

- PROPERTY OWNER/LESSOR: TOWNSHIP OF SOUTH BRUNSWICK  
 P.O. BOX 190  
 WORMMOUTH JUNCTION, NJ 08852
- CONTACT: N/A
- TOWER OWNER/LESSOR: N/A
- CONTACT: N/A
- LESSEE: NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 c/o V/ Verizon Wireless  
 411 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08876
- SITE ADDRESS: 3960 ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901
- LOT: B.04  
 BLOCK: B.05  
 ZONE: "OFFICE PARK"  
 COORDINATES: N40724.18.02"  
 DATUM: NAD83  
 GROUND ELEVATION: 250.0' +/- AMSL

**OVERALL SITE PLAN**  
 1:1117 SCALE: 1" = 100'-0"  
 22x34 SCALE: 1" = 30'-0"



**OVERALL SITE PLAN**  
 DRAWING NO.: LE1  
 PAGE NO.: 1 of 3

**M&S**  
**Mallick & Scherer, P.C.**  
 Consulting Engineers-Contractors-Inspectors-Land Surveyors  
 Parsippany (NJ Corporate Center)  
 53 Franchise Road, Suite 250  
 Hampton, NJ 08827  
 PH: 908.231.1331 FAX: 908.231.1336  
 www.mallickscherer.com

CLIENT: SCHERER  
 NJ PROFESSIONAL ENGINEER  
 # 10528811  
 LESSEE:  
 NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 c/o V/

**verizonwireless**  
 411 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08876

NO.	ISSUE OR REVISION	DATE	BY
B	REVISION LESSEE INFORMATION	08/01/13	ZNF
A	AS-BUILT	07/20/13	ZNF

PROJECT TITLE:  
 EXHIBIT A

SITE NAME:  
 SOUTH BRUNSWICK  
 SITE ADDRESS:  
 3960 ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901

M&S PROJECT #: 13VA-T081  
 SCALE: AS NOTED  
 DATE: 07/30/13  
 DRAWN BY: ZNR  
 CHECKED BY: TS

DRAWING TITLE:  
 OVERALL SITE PLAN

DRAWING NO.: LE1  
 PAGE NO.: 1 of 3



**Mallicki Scherer, P.C.**  
 53 Hampton Road, Suite 260  
 Hampton, NJ 08027  
 Ph: 908.537.1300 Fax: 908.537.1398  
 www.mallickischerer.com

CLIENT/LESSEE:  
 PROFESSIONAL ENGINEER  
 # 020020

LESSEE:  
 NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 0004

**verizon wireless**  
 141 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08876

NO	ISSUE OR REVISION	DATE	BY
B	REVISED LESSEE INFORMATION	08/01/13	ZNR
A	AS-BUILT	07/30/13	ZNR

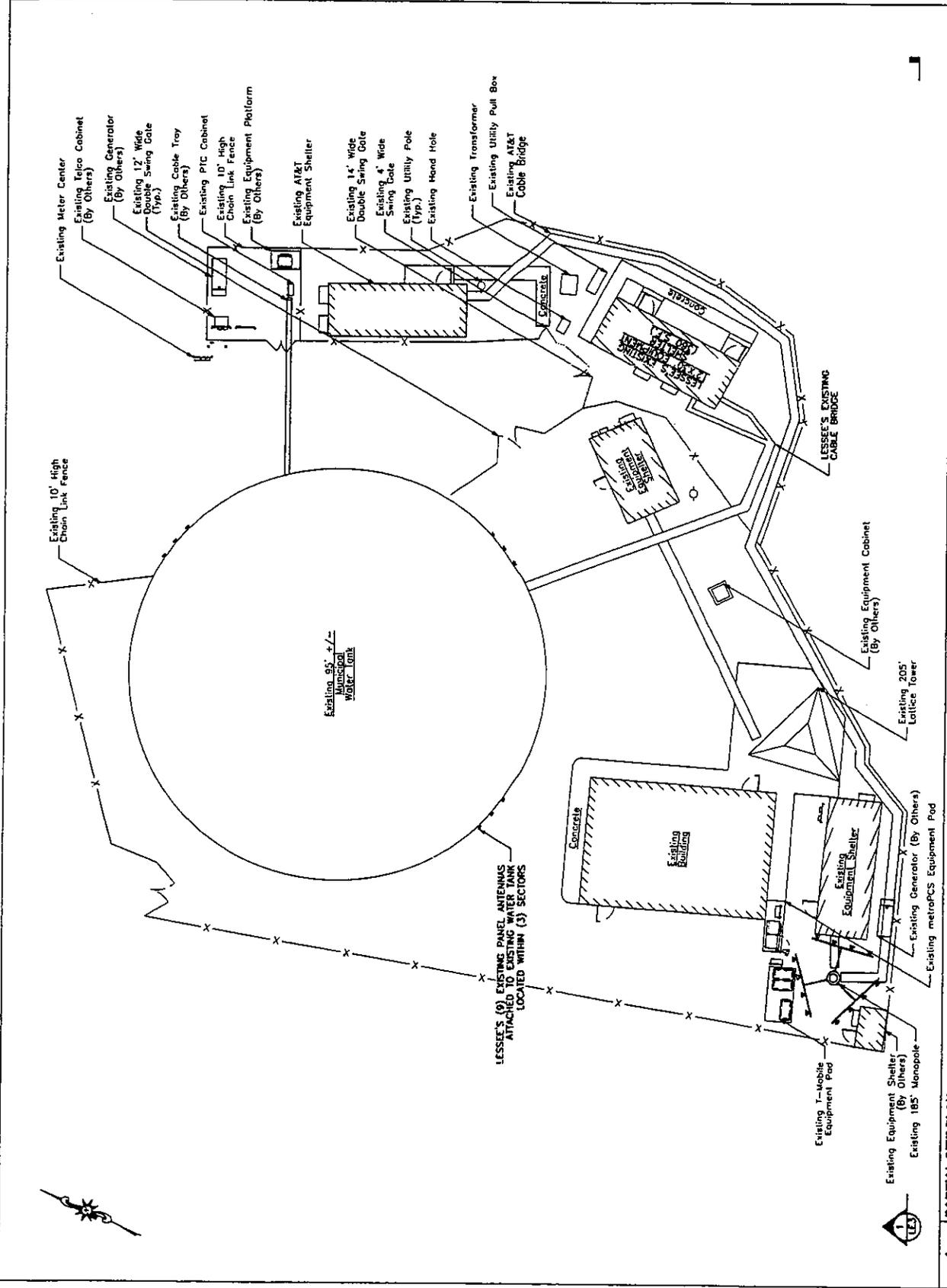
PROJECT TITLE:  
 EXHIBIT A

SITE NAME:  
 SOUTH BRUNSWICK  
 SITE ADDRESS:  
 3980 ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901

M&S PROJECT #: 19VLT081  
 SCALE: AS NOTED DATE: 07/30/13  
 DRAWN BY: ZNR CHECKED BY: TS

DRAWING TITLE:  
 PARTIAL SITE PLAN

DRAWING NO.:  
 LEZ  
 PAGE NO.:  
 2 of 3



**PARTIAL SITE PLAN**  
 11/17 SCALE: 1" = 60'-0"  
 22/34 SCALE: 1" = 60'-0"



**Malicki Scherer, P.C.**  
 Planning & Construction Services  
 53 Frontage Road, Suite 200  
 Parsippany, NJ 08859  
 PH: 908.537.1300  
 www.malickscherer.com

DEBRA J. SCHERER  
 NJ PROFESSIONAL ENGINEER  
 J 1030001

LESSEE:  
 NEW YORK & NEW JERSEY  
 UNITED PARTNERSHIP  
 07033



141 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08901

NO	ISSUE OR REVISION	DATE	BY
B	REVISED LESSEE INFORMATION	08/01/13	ZNR
A	AS-BUILT	07/26/13	ZNR

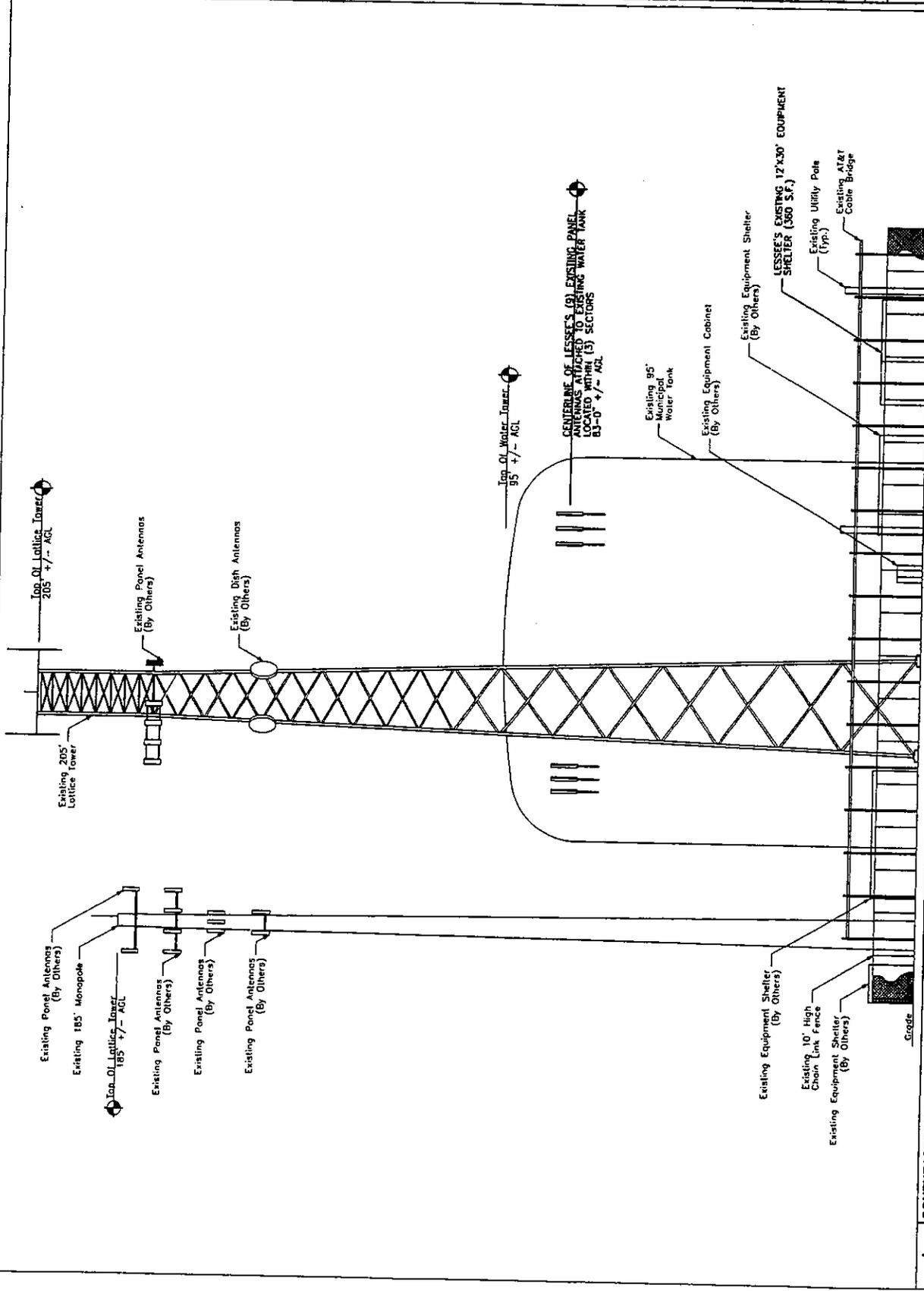
PROJECT TITLE:  
 EXHIBIT A

SITE NAME:  
 SOUTH BRUNSWICK  
 SITE ADDRESS:  
 SOUTH BRUNSWICK, NJ 08901

MAS PROJECT #: 1301.0081  
 SCALE: AS NOTED  
 DATE: 07/26/13  
 DRAWN BY: ZNR  
 CHECKED BY: TS

DRAWING TITLE:  
 ELEVATION

DRAWING NO.:  
 LE3  
 PAGE NO.:  
 3 of 3



1 **SOUTHEASTERN ELEVATION**  
 1/16" SCALE, 3/4" = 1'-0"  
 2x-34 SCALE, 3/32" = 1'-0"

TELECOMMUNICATIONS LEASE AGREEMENT  
(Major Road/Route 1)

This lease agreement ("Agreement") is entered into this \_\_\_ day of \_\_\_\_\_, 2014, between the Township of South Brunswick, a municipal corporation of New Jersey, located at the Municipal Complex, 540 Ridge Road, Monmouth Junction, NJ 08852 ("Lessor") and New York SMSA Limited Partnership d/b/a Verizon Wireless ("Lessee"), located at One Verizon Way, Basking Ridge, NJ 07920.

In consideration of the mutual covenants contained herein, and for good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Premises. Lessor is the owner of the following parcel:  
Lot 8.04 in Block 85, located at 3960 Route 1, South Brunswick Township, on which is located a water storage facility and 2 radio towers, ("Land"). Lessor hereby leases the following portion of said property to Lessee: A 12' x 30' portion of ground space located on the Southeast corner of the property for the location of an equipment enclosure and space for twelve (12) antennas on the existing water storage facility at an elevation of 83± feet. The ground space and water storage facility space are collectively referred to as the Premises, as depicted in Exhibit A.
2. Use. The Premises may be used by Lessee only in connection with the provision of communications services, including without limitation, the transmission and the reception of radio communication signals on various frequencies, and for the construction, maintenance and operation of necessary facilities, including but not limited to twelve (12) antennas and an air conditioned equipment shelter. Lessor agrees to cooperate with Lessee, at Lessee's expense, in making application for obtaining all licenses, permits and any and all other necessary approvals that may be required for Lessee's intended use of the Premises.
3. Tests and Construction. Lessee shall have the right at any time following the full execution of this Agreement to enter upon the Land for the purpose of making necessary engineering surveys and inspections and soil test borings and other reasonably necessary tests ("Tests"), if needed, and for the purpose of constructing the Lessee's Facilities (as defined in Paragraph 6(a) below) and installing the Site Equipment (as defined in Paragraph 9(a) below) (collectively "Construction"). During any Tests or Construction, Lessee will provide Lessor with a certificate of insurance naming Lessor as an additional insured and evidencing liability insurance in the amounts set forth in Paragraph 14 of this Agreement. In conducting any Tests or Construction, Lessee will coordinate the scheduling of same with Lessor as well as cooperate with Lessor so as to minimize any interference with the business operations currently conducted by Lessor on the Land.
4. Term. The term of this Agreement shall be five (5) years commencing on January 1, 2015 ("Commencement Date") and terminating on the fifth anniversary of the Commencement Date (the "Term") unless otherwise terminated as provided in Paragraph 12. This Agreement shall automatically be extended for three (3) successive five (5) year periods (the "Renewal Terms"), unless either party notifies the other not less than one (1) year prior to the respective

expiration date of its intention not to extend.

5. Rent.

(a) Within 15 days after the Commencement Date and on the first day of each month thereafter, Lessee shall pay to the Lessor as rent Three Thousand One and 00/100 Dollars (\$3,001.00) per month ("Rent"). If the Commencement Date is a date other than the first of the month, the Rent for the first calendar month shall be prorated on the basis of the number of actual days in such partial month. Rent shall be payable to Lessor at Township of South Brunswick, 540 Ridge Road, P.O. Box 190, Monmouth Junction, NJ 08852, Attention: Township Treasurer.

(b) For any Renewal Term, Lessee shall pay the current Rent, increased by fifteen percent (15%) or any percentage increase which occurred in the Consumer Price Index ("CPI") for the New York-Northeastern New Jersey Metropolitan Statistical Area during the preceding five (5) year period, whichever is higher, which calculations shall be provided by the Township.

For purposes of the calculation of the increase in the CPI, the following formula shall apply:

$$\text{Renewal Rent} = (\text{Basic Rent}) + ((\text{IR} - \text{IL}) / \text{IL} \times \text{Basic Rent})$$

Definitions: IR is the Consumer Price Index for the month which is three (3) months immediately preceding the month in which the Renewal Term commences.

IL is the Consumer Price Index for the month which is three (3) months immediately preceding the month in which this Lease commenced.

"Consumer Price Index" shall mean the Consumer Price Index published by the Bureau of Labor Statistics of the United States Department of Labor for the New York-Northeastern New Jersey Metropolitan Statistical Area or shall mean the successor thereto. In the event the Consumer Price Index is converted to a different standard reference base or otherwise revised, the determination of Renewal Rent for the Renewal Term shall be made with the use of such conversion factor, formula or table for converting the Consumer Price Index as may be published by the Bureau of Labor Statistics, or if the Bureau should fail to publish the same, then with the use of such conversion factor, formula or table for converting the Consumer Price Index as may be published by any nationally recognized publisher of similar statistical information. If the Consumer Price Index ceases to be published and there is no successor thereto, such other index as Lessor and Lessee may agree upon shall be substituted for the Consumer Price Index, and if they are unable to agree, then such matter shall be submitted to arbitration in accordance with the then existing commercial rules of arbitration of the American Arbitration Association at the American Arbitration Association office nearest the Premises.

(c) If this Agreement is terminated prior to its expiration, Rent shall be prorated as of the date of termination.

6. Improvements; Liability; Utilities; Access.

(a) Lessee has the right to erect, maintain and operate on the Premises

communications facilities including utility lines, an air conditioned equipment shelter, radio transmitting and receiving antennas and supporting structures thereto ("Lessee Facilities"). In connection therewith, Lessee has the right to do all work necessary to prepare, maintain and alter as per approved site plan, the Premises for Lessee's business operations and to install transmission lines connecting the antennas to the transmitters and receivers. All of Lessee's construction and installation work shall be performed at Lessee's sole cost and expense and in a good and workmanlike manner. Title to the Lessee Facilities shall be held by Lessee. All of the Lessee Facilities shall constitute personal property and are not fixtures. Lessee has the right to remove the Lessee Facilities at its sole expense on or before the expiration or earlier termination of the Term or any Renewal Term. At the end of the Agreement, Lessee shall remove all facilities which it placed or allowed to be placed on the site and Lessee shall restore the Premises to its current condition, reasonable wear and tear excepted.

(b) Whenever Lessee desires to undertake any construction, repairs or maintenance work upon or about the antenna location it shall:

- (1) Provide a work schedule to the South Brunswick Township Information Manager at least seven (7) days in advance, listing the dates that the work will be done on the property;
- (2) Take all reasonable corrective actions at the conclusion of the work day to prevent the work area from becoming an attractive nuisance which could invite entry by members of the public into the work area;
- (3) Restore the entire area disturbed by the work at least to the condition in which it had existed prior to the work; and
- (4) Comply with all ordinances, regulations and statutes governing the work and obtain all necessary permits therefor, and post performance and/or maintenance bonds if required by the Lessor or any other governmental entity or agency having an interest in the work.

(c) Lessee shall have the right to draw electricity from the electric supply on the land, if available. If Lessee submeters its power from Lessor's electric supply, Lessee shall reimburse Lessor for the actual electricity it consumes at the rate paid by Lessor to the utility company. Lessee shall have the right, at its option and expense, to obtain electrical service from any utility company that provides electric service to the Premises, including the installation of a separate meter and main breaker. Lessee has the right to improve the present utilities on the Premises and to install new utilities (including a standby power generator for Lessee's exclusive use at a location on the Premises acceptable to both parties). Lessee also has the right to bring utilities to the Land in order to service the Premises as per the plan to be approved by the Township. The location of the utility lines shall be as required by Lessee and the applicable utility company. At Lessee's reasonable request, Lessor shall execute necessary documents evidencing such utility easement rights, including a utility easement in favor of Lessee or the applicable utility company. Lessee shall pay for the electricity it consumes in its operations.

(d) Lessor shall provide to Lessee, Lessee's employees, agents and subcontractors access over the Land to the Premises twenty-four (24) hours a day, seven days a week, at no additional charge to Lessee. Prior notice must be given to South Brunswick Police Dispatch before entering the property except in cases of emergency, in which event the Police shall be notified in a reasonable period of time.

7. Inspections. Lessee agrees, during construction, to bear the reasonable cost and expense incurred by Lessor for inspection of the operation conducted hereunder and the Lessor shall have the right, in its sole discretion, to designate such inspectors and engineers or specialized engineering firm deemed necessary for the protection of its property rights and the rights of the public. Said inspectors, engineers, or specialized engineering firm so retained shall not be considered agents, servants or employees of either Lessee or the Lessor and their duties shall be limited to the inspection of the operation and the submission to the Lessor of reports concerning the status of the work.

8. Interference.

(a) Lessee shall not operate the Lessee Facilities in a manner that will cause interference to Lessor and other lessees of the land whose installation predates the Lessee Facilities. All operations by Lessee shall be lawful and in compliance with all Federal Communications Commission ("FCC") requirements.

(b) Subsequent to the installation of the Lessee Facilities, Lessor shall not permit itself, its lessees or licensees to install new equipment at the Premises if such equipment is likely to cause interference with the operations of Lessee's Facilities. Such interference shall be deemed a material breach of this Agreement by Lessor, and Lessee shall have the right to bring a court action against the interfering party of terminate this Agreement.

9. Equipment.

(a) Lessee shall provide all transmitters and receivers and all related electronic equipment ("Site Equipment") required by the installation and operation of Lessee's system. The Site Equipment is and shall remain the sole property of the Lessee and may be removed from the Premises at any time by the Lessee. Lessee shall remove all Site Equipment from the Premises at Lessee's expense upon the termination of this Agreement.

(b) Lessee shall provide all of the equipment and labor necessary for the installation of Lessee's system including the antennas, associated feed lines, isolation equipment and electrical terminals. The equipment provided by Lessee shall remain the sole personal property of Lessee and shall not be deemed fixtures.

(c) Lessee shall, at its sole cost and expense, maintain and repair its Site Equipment.

(d) Title to the Site Equipment placed on the Premises by Lessee shall be held by Lessee. All of the Site Equipment shall remain the property of Lessee and are not fixtures.

Lessee has the right to remove all the Site Equipment at its sole expense on or before the expiration or termination of this Agreement. Lessor acknowledges that Lessee may enter into financing arrangements including promissory notes and financial and security agreements for the financing of the Site Equipment (the "Collateral") with a third party financing entity and may in the future enter into additional financing arrangements with other financing entities. In connection therewith, Lessor (i) consents to the installation of the Collateral to the extent that the Collateral is part of the approved Lessee's Facilities; (ii) disclaims any interest in the Collateral, as fixtures or otherwise, whether arising at law or otherwise, including, but not limited to any statutory landlord's lien ; and (iii) agrees that the Collateral shall be exempt from execution, foreclosure, sale, levy, attachment, or distress for any Rent due or to become due and that such Collateral may be removed at any time without recourse to legal proceedings. No financing arrangements permitted by this section shall in any way act or serve as a lien or encumbrance on the Premises, Land or any other real or personal property not owned by Lessee.

10. Indemnification.

(a) Lessee hereby agrees to defend, indemnify and save harmless Lessor, its officials, servants and employees, and each and every one of them from and against all suits, costs, claims, expenses, and judgments of every kind and description against Lessor by agents, servants, employees and contractors of Lessee and from and against all damages and expenses to which the Lessor or any of its officials, servants and employees may be subject to the extent caused by the construction, reconstruction, maintenance, repair, alteration or operations of the Lessee Facilities, except to the extent that such damage or expense is caused by the negligence or willful misconduct of Lessor or any of its officials, servants, employees, agents or contractors.

(b) Lessor agrees to defend, indemnify and save harmless Lessee, its officers, employees, contractors and subcontractors from and against any claims, suits, losses, damages, liabilities and expenses arising out of or in connection with Lessor's negligent acts or omissions or willful misconduct.

11. Restoration; Removal of Antenna System. Lessee agrees that it shall, at its sole cost and expense, restore all of Lessor's real or personal property which is in any way disturbed by the construction and installation herein authorized or by any future maintenance of the installation to at least the condition it was in prior to entry by the Lessee reasonable wear and tear excepted. If the restoration has not been completed within ninety (90) days of completion of the construction or maintenance, the Lessor may give notice to the Lessee and thirty (30) days thereafter may perform the restoration with its own or a contracted work force at Lessee's sole cost and expense. Within ninety (90) days of termination of this Agreement, or any renewal thereof, subject to any force majeure event, Lessee shall remove the Lessee Facilities and Site Equipment from the Premises. If Lessee fails to remove the Lessee Facilities or Site Equipment, the Lessor may effect such removal, with its own or a contracted work force at Lessee's sole cost and expense.

12. Termination.

(a) This Agreement may be terminated without further liability on thirty (30) days prior written notice as follows: (i) by either party upon a default of any covenant or term hereof

by the other party, which default is not cured within sixty (60) days of receipt of written notice of default, provided that the grace period for any monetary default is fifteen (15) days from receipt of notice; or (ii) by Lessee for any reason or for no reason provided Lessee delivers written notice of early termination to Lessor prior to the Commencement Date of this Agreement; or (iii) by Lessee if it does not obtain or maintain any license, permit or approval necessary to the construction and operation of Lessee Facilities; or (iv) by Lessee if Lessee is unable to occupy and utilize the Premises due to an action of the FCC, including without limitation, a take back of channels or change in frequencies; or (v) by Lessee if Lessee determines that the Premises are not appropriate for its operations for economic, environmental or technological reasons, including, without limitation, signal interference.

13. Termination in the Event of Casualty or Condemnation.

(a) In the event of any damage, destruction or condemnation of the Premises or any part thereof, which renders the Premises unusable or inoperable, Lessee shall have the right, but not the obligation, to terminate this Agreement and all of its duties and obligations herein by giving written notice to Lessor within thirty (30) days after such damage, destruction or condemnation, if by virtue of such casualty or condemnation the Premises are no longer adequate for Lessee to continue its operations or any repairs to the Premises have not been completed or cannot reasonably be completed within sixty (60) days from the date of the damage. Rent shall abate as of the date of the damage, destruction or condemnation.

(b) If Lessee does not terminate this Agreement: (1) the Rent payable herein shall be reduced or abated in proportion to the actual reduction or abatement of use of the Premises; and (2) within sixty days from the date of such damage or destruction, Lessor shall make any necessary repairs to the Premises caused by any such damage or destruction.

(c) In the event of condemnation, unless Lessee is allowed by the condemning authority to continue its operations on the Premises, this Agreement shall terminate as of the date title to the land vests in the condemning authority or Lessee is required to cease its operations, whichever is earlier. Lessee shall be entitled to share in the proceeds of any condemnation to the extent that the proceeds include the value of any of Lessee's improvements which are transferred to the condemning authority, moving expenses, prepaid rent and business dislocation expenses.

14. Insurance.

(a) Lessee, at Lessee's sole cost and expense, shall procure and maintain on the Premises and on Lessee's Site Equipment, bodily injury and property damage insurance with a combined single limit of at least One Million and 00/100 Dollars (\$1,000,000.00) per occurrence. Such insurance shall insure, on an occurrence basis, against all liability of Lessee, its employees, and agents arising out of or in connection with Lessee's use of the Premises, all as provided for herein. Lessor shall be named as an additional insured on Lessee's policy. Lessee shall provide to Lessor a certificate of insurance evidencing the coverage required by this paragraph.

(b) All insurance required under this Agreement shall:

(1) Be issued as a primary policy; and

(2) Contain an endorsement requiring thirty (30) days written notice from the insurance company to both parties before cancellation or change in the coverage, scope, and amount of any policy. Each certification of the policy shall be deposited with Lessor within thirty (30) days of the Commencement Date. The renewal policy shall be effective on the anniversary of the Commencement Date. On renewal of the policy, the certification of the policy shall be deposited with Lessor not less than thirty (30) days after the expiration of the expiring term of the policy.

(c) Lessor shall procure and maintain commercial general liability and property insurance in commercially reasonable amounts.

15. Waiver of Subrogation. Lessor and Lessee release each other and their respective principals, employees, representatives and agents, from any claims for damage to any person or the Premises or to the Lessee Facilities or Site Equipment thereon caused by, or resulting from, risks insured against under any insurance policies carried by the parties and in force at the time of such damage. Lessor and Lessee shall cause each insurance policy obtained by it to provide that the insurance company waives all right of recovery by way of subrogation against the other in connection with any damage covered by any policy. Neither Lessor nor Lessee shall be liable to the other for damage caused by fire or any of the risks insured against under the insurance policy required by paragraph 14.

16. Premises. Lessee shall maintain the Premises and operate its facilities thereon in such a manner as will best enable it to fulfill its service requirements, and in accordance with the specifications herein mentioned. Lessor reserves the right to support antenna systems for its emergency and government communications systems, including the utilization of sufficient space in the Land for an equipment building. Except for emergencies, Lessor shall provide Lessee with at least 48 hours prior notice, via telephone, mail, fax or e-mail, of any maintenance or other work to be performed by Lessor within ten (10') feet of Lessee's antennas in order to allow Lessee to power down its antennas, if necessary. Lessee shall provide Lessor with a telephone number(s) where Lessee's representative can be reached 24 hours per day, 7 days per week. Lessee shall have a non-exclusive right of access to and from the site 7 days a week, 24 hours a day, on foot or motor vehicle, including small trucks and vans. Lessee has the right to survey the property, which survey shall be attached as a lease exhibit. Cost for such work shall be borne by the Lessee.

17. Assignment. The Agreement shall not be sold, transferred or assigned by Lessee without prior approval of Lessor, except to Lessee's principals, affiliates, subsidiaries or to any entity which acquires all or substantially all of the Lessee's assets in the wireless communications market by reason of a merger, acquisition or other business reorganization. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the Lessor, which consent will not be unreasonably withheld or delayed. Notwithstanding anything to the contrary contained in this Agreement, Lessee may assign,

mortgage, pledge, hypothecate or otherwise transfer without consent, but upon thirty (30) days written notice to Lessor, its interest in this Agreement to any financing entity, or agent on behalf of any financing entity to whom Lessee (i) has obligations for borrowed money or in respect of guaranties thereof, (ii) has obligations evidenced by loans, bonds, debentures, notes or similar instruments, or (iii) has obligations under or with respect to letters of credit, bankers acceptances and similar facilities or in respect of guaranties thereof, provided Lessee remains primarily liable under the terms and conditions of the Agreement. In every Assignment of Lessee's interests in this Agreement, Lessee shall notify Lessor of the name and address of the assignee within ten (10) days of the effective date of the Assignment.

18. Warranty of Title.

(a) Lessor warrants that: (i) Lessor owns the land in fee simple or has an easement thereon and has rights of access thereto; (ii) Lessor has full right to make this Agreement.

(b) Lessor warrants that the making of this Agreement and the performance thereof will not violate any laws, ordinances, restrictive covenants, or the provision of any mortgage, lease, or other agreements under which Lessor is bound and which restricts the Lessor in any way with respect to the use or disposition of the Land.

19. Repairs. Lessee shall not be required to make any repairs to the Premises or Land unless such repairs shall be necessitated by reason of the default or negligence of Lessee, its agent, servants or employees as specified herein.

20. Environmental Conditions. Lessor states that to the best of its knowledge the Land has not been used for the generation, storage, treatment or disposal of hazardous substances or hazardous wastes. In addition, Lessor states that to the best of its knowledge no hazardous substances, hazardous wastes, pollutants, asbestos, polychlorinated biphenyls (PCBs) petroleum or other fuels (including crude oil or any fraction or derivative thereof) or underground storage tanks (collectively "Environmental Hazards") are located on or about the Land. For purposes of this Agreement, the term "hazardous substances" shall be as defined in the Comprehensive Environmental Response Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) (CERCLA), and any regulation promulgated pursuant thereto. The term "hazardous wastes" shall be as defined in the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 et seq.) (RCRA), any regulations as defined in the Clean Water Act (33 U.S.C. Section 1251 et seq.), and any regulations promulgated pursuant thereto.

21. Miscellaneous.

(a) This Agreement, the Notice of Public Auction and Specific Instructions attached hereto as Exhibit B, constitute the entire agreement and understanding between the parties, and supersedes all offers, negotiations and other agreements concerning the subject matter contained herein. There are no representations or understandings of any kind not set forth herein. Any amendments to this Agreement must be made in writing and executed by both parties.

(b) If any provision of this Agreement is invalid or unenforceable with respect to any party, the remainder of this Agreement or the application of such provision to persons other than those as to whom it is held invalid or unenforceable, shall not be affected and each provision of this Agreement shall be valid and enforceable to the fullest extent by law.

(c) This Agreement shall be binding on and inure to the benefit of the successors and permitted assignees of the respective parties.

(d) The captions of this Agreement have been inserted for convenience only and are not to be construed as part of this Agreement or in any way limiting the scope or intent of its provision.

(e) Any notice or demand required to be given herein (except for the notice required under paragraph 16) shall be made by certified or registered mail, return receipt requested, or reliable overnight courier to the address of the respective parties set forth below:

Lessor: Township of South Brunswick  
540 Ridge Road  
P.O. Box 190  
Monmouth Junction NJ 08852  
Attention: Township Manager

With a Copy to: Township of South Brunswick  
540 Ridge Road  
P.O. Box 190  
Monmouth Junction NJ 08852  
Attention: Information Technology Manager

Lessee: New York SMSA Limited Partnership d/b/a Verizon Wireless  
180 Washington Valley Road  
Bedminster, New Jersey 07921  
Attention: Network Real Estate

Lessor or Lessee may from time to time designate any other address for this purpose by written notice to the other party.

(f) This Agreement shall be construed in accordance with the laws of the State of New Jersey, and the laws of the State of New Jersey will apply to any dispute concerning or arising out of it. The Superior Court of New Jersey with venue in Middlesex County shall be the forum for resolving any dispute concerning or arising out of this Agreement.

(g) Except as specifically provided herein, all rentals paid to the termination date shall be retained by the Lessor.

(h) Lessor acknowledges that a Memorandum of Agreement may be recorded by

Lessee in the Official Records of the County where the Land is located. A copy of any proposed Memorandum of Agreement shall be provided by Lessee to Lessor at least seven (7) days prior to any recording thereof.

22. Quiet Enjoyment. Lessor covenants that Lessee, on paying the rent and performing the covenants, shall peaceably and quietly have, hold and enjoy the Premises.

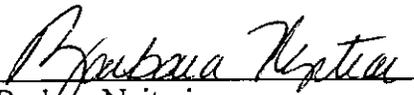
(a) Mortgage Subordination. At Lessor's option, this Agreement shall be subordinate to any mortgage by Lessor provided, however, that every such mortgage shall recognize the validity of this Agreement in the event of foreclosure of Lessor's interest and Lessee's right to remain in occupancy of and have access to the Land as long as Lessee is not in default of this Agreement. At Lessee's request, Lessor will furnish to Lessee a non-disturbance agreement for each such mortgage encumbering the Land. Lessee shall execute whatever instruments may reasonably be required to evidence this subordination clause.

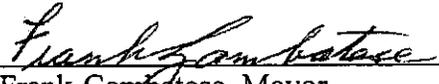
23. PRIOR TERMINATED AGREEMENT. LESSOR and LESSEE agree that upon the Commencement Date, this Agreement replaces the agreement between the Township of South Brunswick and Bell Atlantic Mobile Systems of Northern New Jersey, Inc. dated December 31, 1994 referenced by LESSEE as Contract #2189 ("Terminated Agreement"). LESSOR and LESSEE acknowledge that notwithstanding the termination of the Terminated Agreement and the commencement of this Agreement, LESSEE may continue to make, and the LESSOR may continue to receive, rental and other payments pursuant to the Terminated Agreement. In such event, any rental or other payments made pursuant to the Terminated Agreement after its termination shall be applied and credited against any rentals or other payments due under this Agreement.

IN WITNESS WHEREOF, the parties have executed this agreement as of the date first above written.

ATTEST:

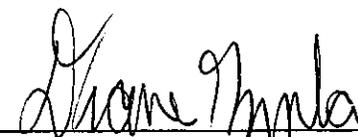
LESSOR: Township of South Brunswick

  
Barbara Nyitrai  
Township Clerk

By:   
Frank Gambatose, Mayor

ATTEST/WITNESS:

LESSEE: New York SMSA Limited  
Partnership d/b/a Verizon Wireless  
By Celco Partnership, Its General Partner

  
\_\_\_\_\_

By:   
David R. Heverling  
Area Vice President Network

**KIOM**

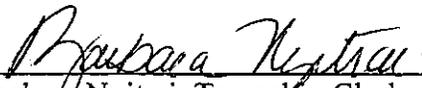
STATE OF NEW JERSEY:  
SS  
COUNTY OF MIDDLESEX:

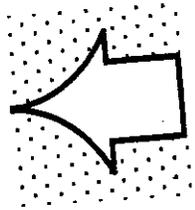
I CERTIFY that on *Nov. 24*, 2014, BARBARA NYITRAI personally came before me and she acknowledged under oath, to my satisfaction, that:

- (a) she is the Township Clerk of the Township of South Brunswick, the municipal corporation named in this document;
- (b) she is the attesting witness to the signing of this document by Frank Gambatese, who is the Mayor of the Township of South Brunswick;
- (c) this document was signed and delivered by the Township of South Brunswick as its voluntary act duly authorized by a proper resolution of the Township Council;
- (d) she knows the proper seal of the Township of South Brunswick which was affixed to this document; and
- (e) she signed this proof to attest to the truth of these facts.

Signed and sworn to before me  
On *Nov. 24*, 2014

  
\_\_\_\_\_  
Donald J. Sears  
An Attorney at Law  
In the State of New Jersey

  
\_\_\_\_\_  
Barbara Nyitrai, Township Clerk



## ACKNOWLEDGMENT

Commonwealth of Massachusetts)

:ss.:

County of Worcester )

On this 10 day of Nov, 2014 before me, the undersigned personally appeared David R. Heverling, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity as Area Vice President Network, that by his signature on the instrument, the individual, or the entity, New York SMSA Limited Partnership, d/b/a Verizon Wireless, upon behalf of which the individual acted, executed the instrument, and that such individual made such appearance before the undersigned in the Town of Westborough, County of Worcester, Commonwealth of Massachusetts.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at my office in said county and state of the day and year first above written.

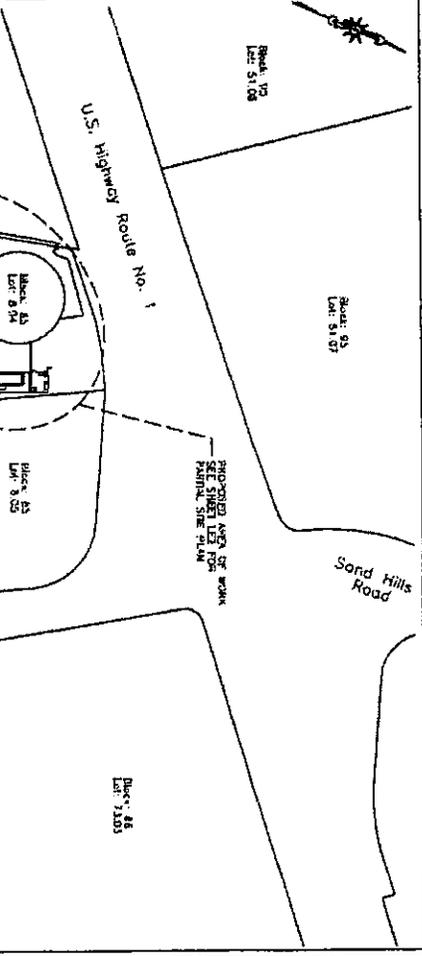
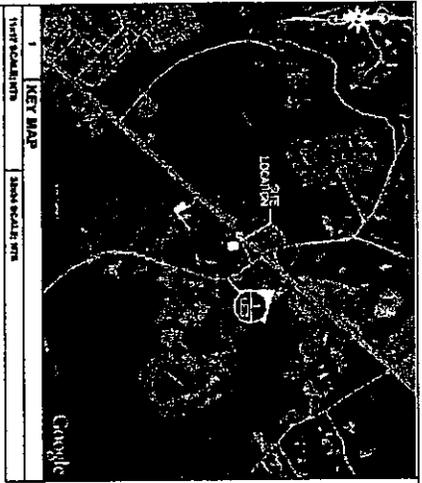
*Diane Gazzola*  
Notary Public of Massachusetts



EXHIBIT A

(Approved site plan)

Please see attached.



- 1) KEY MAP**
- GENERAL NOTES:**
- 1) EXHIBIT "A" AS SUBMITTED IS A CONCEPTUAL REPRESENTATION OF THE LAYOUT OF THE PROPOSED BUILDING, DRIVEWAYS AND PARKING AREAS AND WILL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE TOWNSHIP ENGINEER AND LOCAL AGENCIES.
  - 2) THE EXHIBIT REPRESENTS THE PROPOSED LAYOUT AND LOCATION AND LOCATIONS OF UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION.
  - 3) INFORMATION SHOWN ON THIS DRAWING IS BASED ON LIMITED FIELD INVESTIGATION BY THE ENGINEER ON 07/27/11.
  - 4) THE LOCATION OF LESSEE'S PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE RESPECTIVE UTILITY COMPANIES AND MAY NEED TO BE MODIFIED.
  - 5) DO NOT SCALE THIS EXHIBIT UNLESS OTHERWISE NOTED.
- SITE PREPARATION:**
- 1) PROPERTY OWNER/LESSOR: TOWNSHIP OF SOUTH BRUNSWICK P.O. BOX 100 SOUTH BRUNSWICK, NJ 08902
  - 2) CONTACT: N/A
  - 3) TOWER OWNER/LESSOR: N/A
  - 4) CONTACT: N/A
  - 5) LESSEE: N/A
  - 6) SITE ADDRESS: 3960 ROUTE 1 SOUTH BRUNSWICK, NJ 08901
  - 7) LOT: 80
  - 8) BLOCK: 80
  - 9) COORDINATES: 40°21'19.81" N 74°23'31.26" W
  - 10) CIRCUM ELEVATION: 250.0 +/- MFL

**1) OVERALL SITE PLAN**

TOWNSHIP OF SOUTH BRUNSWICK  
3960 ROUTE 1

NO.	ISSUE OR REVISION	DATE	BY
A	AS-BUILT	07/27/11	DM
B	REVISIONS		
C	REVISIONS		
D	REVISIONS		
E	REVISIONS		
F	REVISIONS		
G	REVISIONS		
H	REVISIONS		
I	REVISIONS		
J	REVISIONS		
K	REVISIONS		
L	REVISIONS		
M	REVISIONS		
N	REVISIONS		
O	REVISIONS		
P	REVISIONS		
Q	REVISIONS		
R	REVISIONS		
S	REVISIONS		
T	REVISIONS		
U	REVISIONS		
V	REVISIONS		
W	REVISIONS		
X	REVISIONS		
Y	REVISIONS		
Z	REVISIONS		

**PROJECT TITLE:** EXHIBIT A

**SITE NAME:** SOUTH BRUNSWICK

**SITE ADDRESS:** 3960 ROUTE 1

**TOWNSHIP:** SOUTH BRUNSWICK, NJ 08901

**DATE PROJECTED:** 10/10/11

**SCALE (AS NOTED):** DATE: 07/27/11

**DRAWN BY:** CHECKED BY:

**DRAWING TITLE:** OVERALL SITE PLAN

**DRAWING NO.:** PAGE NO. 1 of 3

**OWNER:** TOWNSHIP OF SOUTH BRUNSWICK

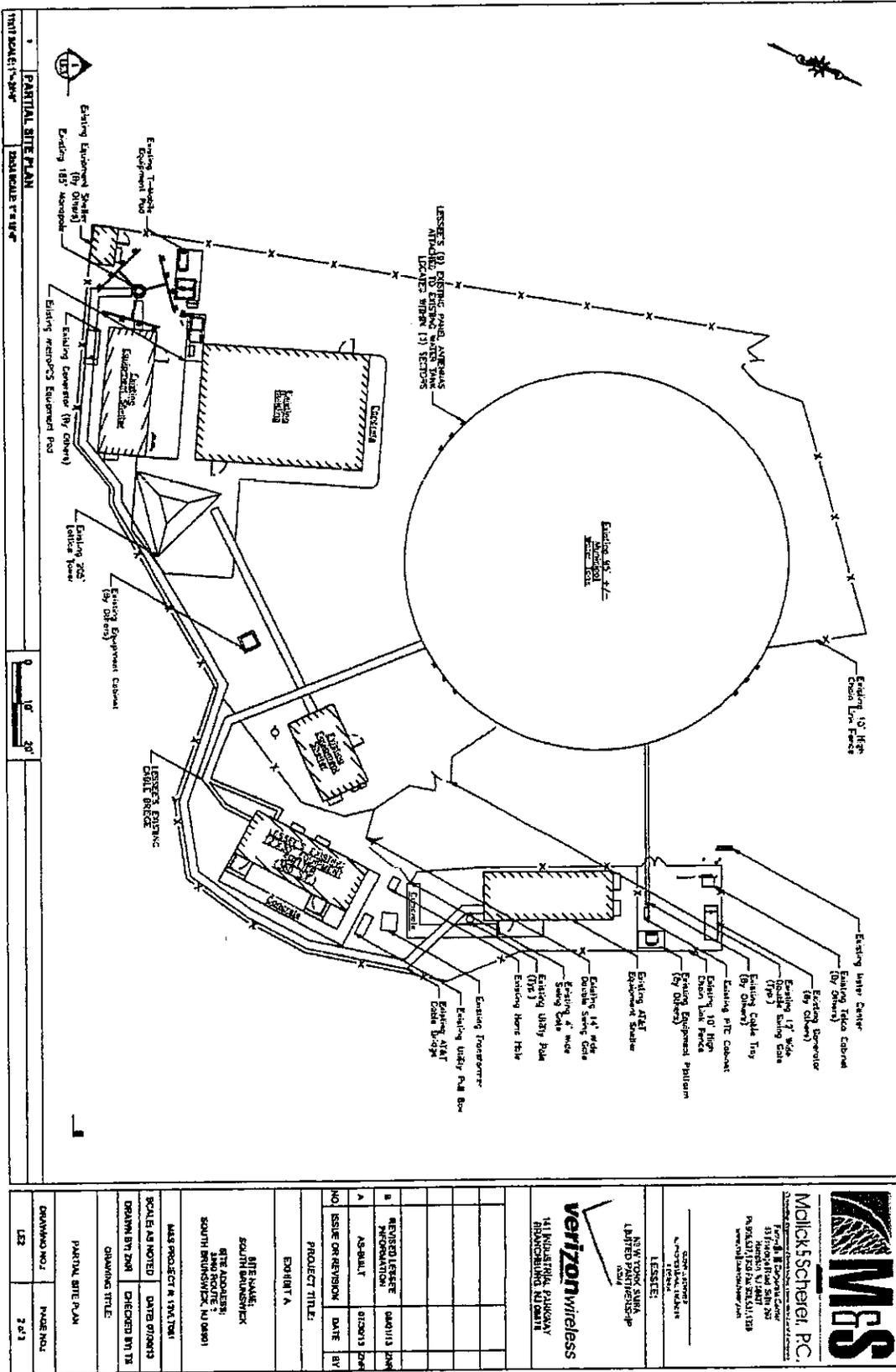
**LESSOR:** TOWNSHIP OF SOUTH BRUNSWICK

**NEW YORK STATE LICENSED ENGINEER:** DANIEL M. SCHRIENER, P.E.

**NEW YORK STATE LICENSED PROFESSIONAL LANDSCAPE ARCHITECT:** DANIEL M. SCHRIENER, P.L.A.

**VERTIZONWIRELESS**

411 INDUSTRIAL PARKWAY  
BRUNSWICK, NJ 08901



PARTIAL SITE PLAN  
 SOUTH BRUNSWICK TOWER

0 10 20  
 FEET

<b>Mollick &amp; Scherel, P.C.</b> 1000 Rte 1 South Brunswick, NJ 08901 Tel: 732-349-1100 Fax: 732-349-1101 www.mollickscherel.com	
<b>VERTIZON WIRELESS</b> 11 INDUSTRIAL PARKWAY BRUNSWICK, NJ 08901	
CONTRACT NO. 04-0000000000 PROJECT NO. 04-0000000000	
LESSOR: NEW YORK STATE LIMITED PARTNERSHIP ASIA	
LESSEE: VERIZON WIRELESS	
PROJECT TITLE: SOUTH BRUNSWICK TOWER	
EXHIBIT A	
SITE NAME: SOUTH BRUNSWICK	
SITE ADDRESS: 3960 ROUTE 1 SOUTH BRUNSWICK, NJ 08901	
HAS PROJECT R. 136.12(b)	
SCALE AND NOTED DATE DURING DRAWING BY DATE CHECKED BY DATE	
DRAWING TITLE: PARTIAL SITE PLAN	
DRAWING NO. PAGE NO. 123 2 of 1	



EXHIBIT B

**NOTICE OF INVITATION TO BID**

The Township of South Brunswick will be accepting sealed bids for the lease of space on its communications tower, with accompanying ground space for an equipment enclosure, located at 3960 Route 1, Monmouth Junction (South Brunswick Township), New Jersey, 08852, also known as Lot 8.04 in Block 85 on the tax maps of the Township of South Brunswick. This auction has been authorized under Ordinance No. 44-94.

All bids must be received no later than Tuesday, October 7, 2014 at 2:00 p.m. Bids shall be opened on Thursday, October 9, 2014 at 2:00 p.m. in the South Brunswick Municipal Building, 540 Ridge Road (Route 522), Monmouth Junction, New Jersey.

The minimum bid price shall be \$3,000.00 per month. Before any construction or site work is started, a site plan must be submitted to the Information Technology Manager for review and approval. The Township of South Brunswick already leases space at this location. Any equipment installed as a result of this lease shall not cause any interference with the existing operation on the site.

The successful bidder will be required to maintain liability insurance naming the Township of South Brunswick as an additional insured in an amount not less than a combined single limit of \$1,000,000.00 for injury or damage to one or more persons or property.

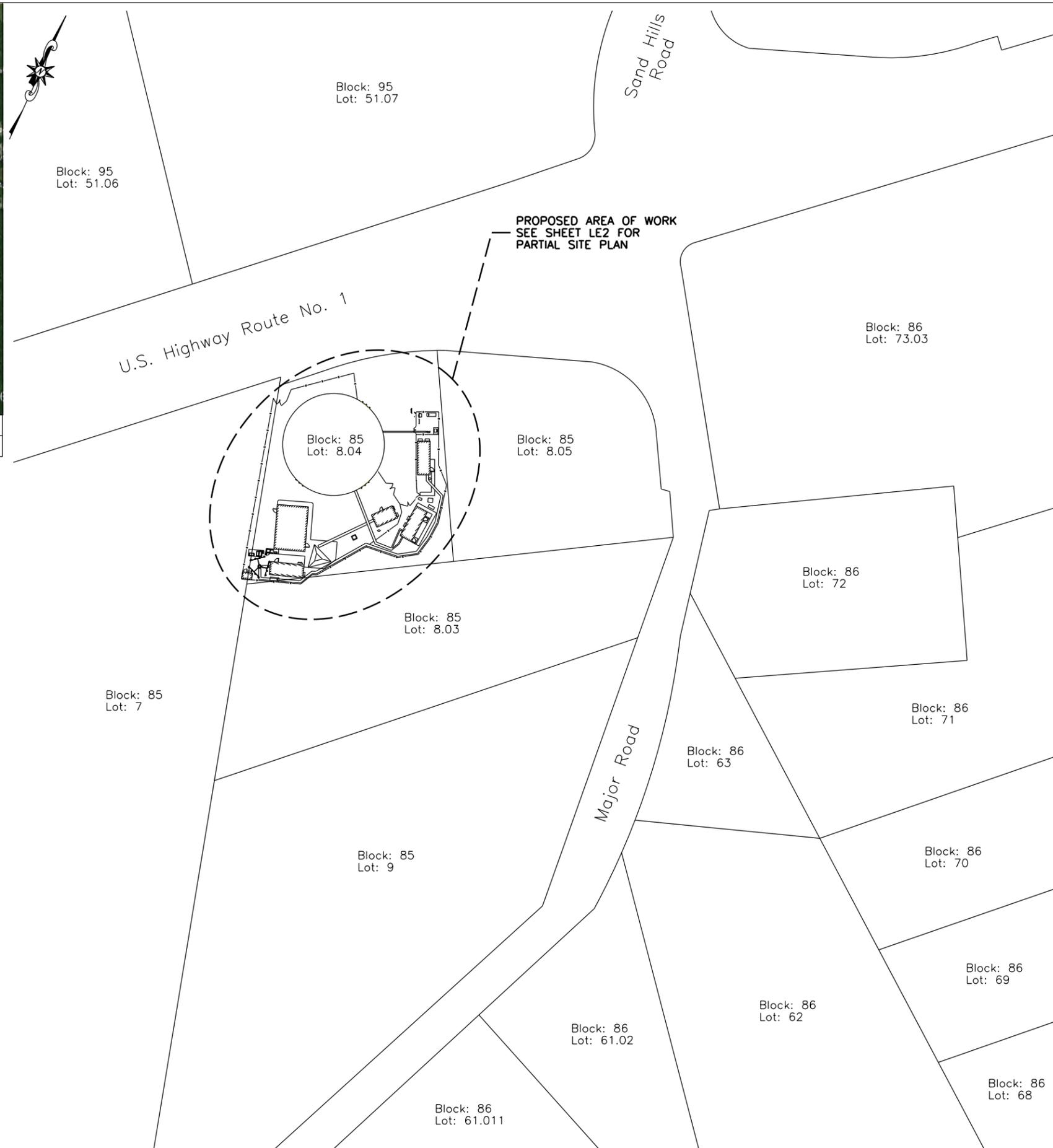
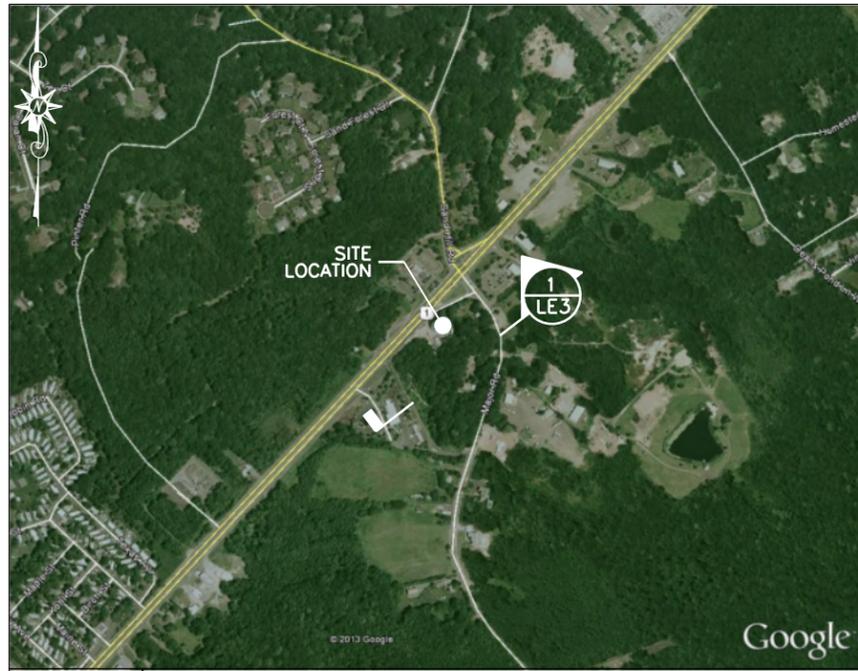
The successful bidder shall be subject to such other terms and conditions as are contained in a Telecommunications Tower Lease Agreement, a copy of which may be obtained from the Township's website at [www.sbtnj.net](http://www.sbtnj.net) or in the Township Clerk's office. Interested parties may make arrangements to inspect the site during the week prior to the submission deadline by contacting the Information Technology Manager at 732-329-4000, Ext.7317.

Robert J. Mitchell  
Purchasing Agent

To be advertised:      Friday, September 12, 2014  
                                 Friday, September 26, 2014  
                                 **South Brunswick Post**

Monday, September 15, 2014  
**Home News**

To be posted:            Beginning Friday, September 12, 2014  
                                 Ending Tuesday, October 7, 2014  
                                 [www.sbtnj.net](http://www.sbtnj.net)



**Malick & Scherer, P.C.**

*Consulting Engineers-Construction Inspectors-Land Surveyors*

Perryville III Corporate Center  
53 Frontage Road, Suite 260  
Hampton, NJ 08827  
Ph 908.537.1300 Fax 908.537.1398  
www.mallickandscherer.com

GLENN J. SCHERER  
NJ PROFESSIONAL ENGINEER  
# GE38930

LESSEE:

NEW YORK SMSA  
LIMITED PARTNERSHIP  
d/b/a



141 INDUSTRIAL PARKWAY  
BRANCHBURG, NJ 08876

NO.	ISSUE OR REVISION	DATE	BY
B	REVISED LESSEE INFORMATION	08/01/13	ZNR
A	AS-BUILT	07/30/13	ZNR

PROJECT TITLE:

EXHIBIT A

SITE NAME:  
SOUTH BRUNSWICK

SITE ADDRESS:  
3960 ROUTE 1  
SOUTH BRUNSWICK, NJ 08901

M&S PROJECT #: 13VLT081

SCALE: AS NOTED      DATE: 07/30/13

DRAWN BY: ZNR      CHECKED BY: TS

DRAWING TITLE:

OVERALL SITE PLAN

DRAWING NO.:      PAGE NO.:

LE1      1 of 3

**1 KEY MAP**

11x17 SCALE: NTS      22x34 SCALE: NTS

GENERAL NOTES:

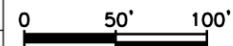
- EXHIBIT "A" AS SUBMITTED IS A CONCEPTUAL REPRESENTATION OF THE LEASE AGREEMENT ONLY. FINAL CONSTRUCTION DRAWINGS MAY VARY TO COMPLY WITH APPLICABLE BUILDING CODES AND ZONING APPROVALS AND WILL SUPERSEDE EXHIBIT "A".
- TRUE NORTH DETERMINATION, GROUND (AMSL) ELEVATION AND LATITUDE AND LONGITUDE COORDINATES ARE BASED ON USGS MAP INFORMATION.
- INFORMATION SHOWN ON THIS DRAWING IS BASED ON LIMITED FIELD MEASUREMENTS BY MALICK & SCHERER ON 07/22/13.
- THE LOCATIONS ON LESSEE'S PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE RESPECTIVE UTILITY COMPANIES AND MAY NEED TO BE RELOCATED.
- DO NOT SCALE THIS EXHIBIT UNLESS OTHERWISE NOTED.

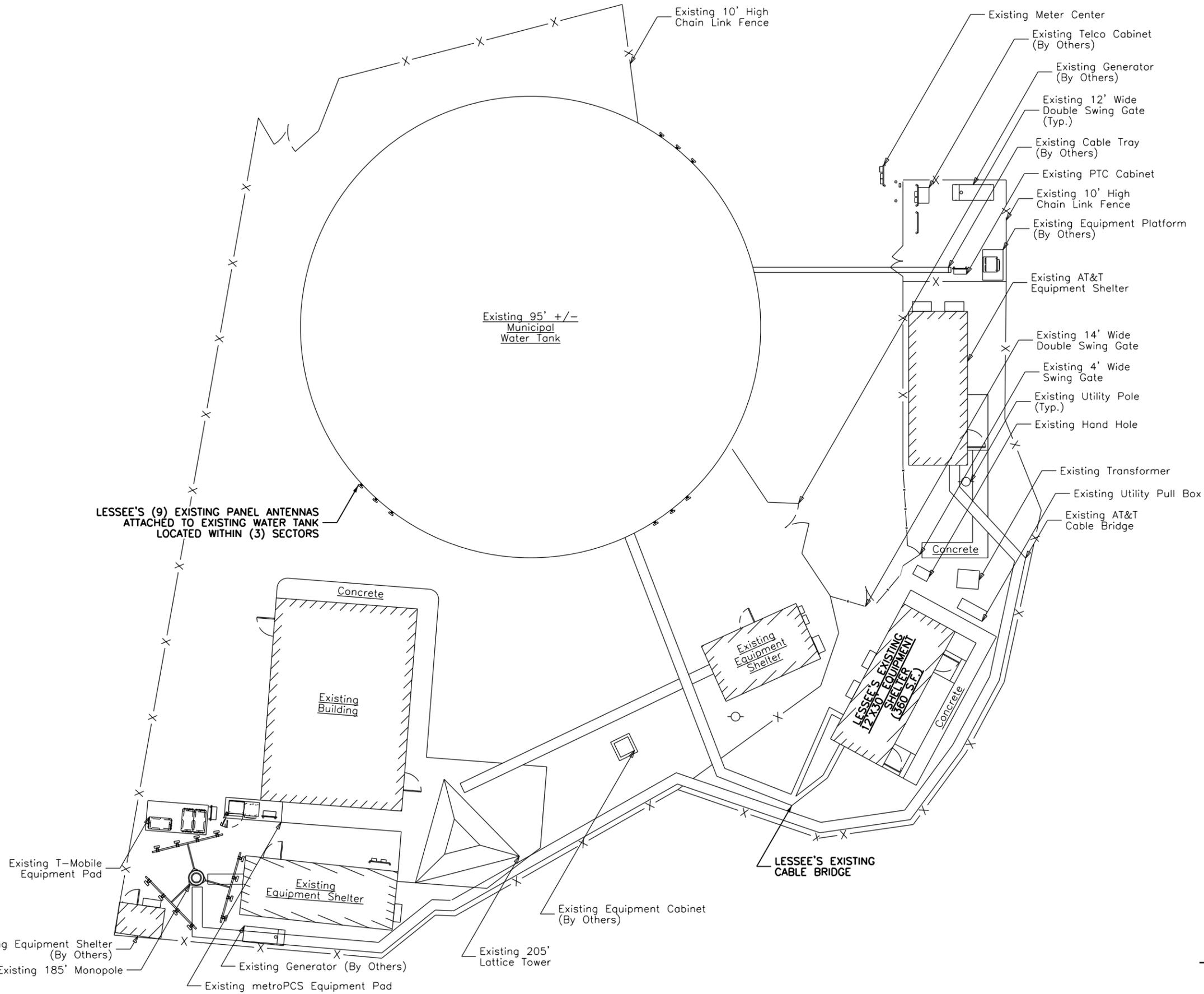
SITE INFORMATION:

- PROPERTY OWNER/LESSOR: TOWNSHIP OF SOUTH BRUNSWICK  
P.O. BOX 190  
MONMOUTH JUNCTION, NJ 08852
- CONTACT: N/A
- TOWER OWNER/LESSOR: N/A
- CONTACT: N/A
- LESSEE: NEW YORK SMSA  
LIMITED PARTNERSHIP  
d/b/a VERIZON WIRELESS  
141 INDUSTRIAL PARKWAY  
BRANCHBURG, NJ 08876
- SITE ADDRESS: 3960 ROUTE 1  
SOUTH BRUNSWICK, NJ 08901
- LOT: 8.04  
BLOCK: 85  
ZONE: OP - "OFFICE PARK"  
COORDINATES: N40°24'18.82"  
W74°32'51.20"  
DATUM: NAD83
- GROUND ELEVATION: 250.0' +/- AMSL

**1 OVERALL SITE PLAN**

11x17 SCALE: 1"= 100'-0"      22x34 SCALE: 1" = 50'-0"





**Malick & Scherer, P.C.**  
*Consulting Engineers-Construction Inspectors-Land Surveyors*

Perryville III Corporate Center  
 53 Frontage Road, Suite 260  
 Hampton, NJ 08827  
 Ph 908.537.1300 Fax 908.537.1398  
 www.mallickandscherer.com

GLENN J. SCHERER  
 NJ PROFESSIONAL ENGINEER  
 # GE38930

LESSEE:

NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 d/b/a



141 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08876

NO.	ISSUE OR REVISION	DATE	BY
B	REVISED LESSEE INFORMATION	08/01/13	ZNR
A	AS-BUILT	07/30/13	ZNR

PROJECT TITLE:

EXHIBIT A

SITE NAME:  
 SOUTH BRUNSWICK

SITE ADDRESS:  
 3960 ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901

M&S PROJECT #: 13VLT081

SCALE: AS NOTED      DATE: 07/30/13

DRAWN BY: ZNR      CHECKED BY: TS

DRAWING TITLE:

PARTIAL SITE PLAN

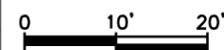
DRAWING NO.:      PAGE NO.:

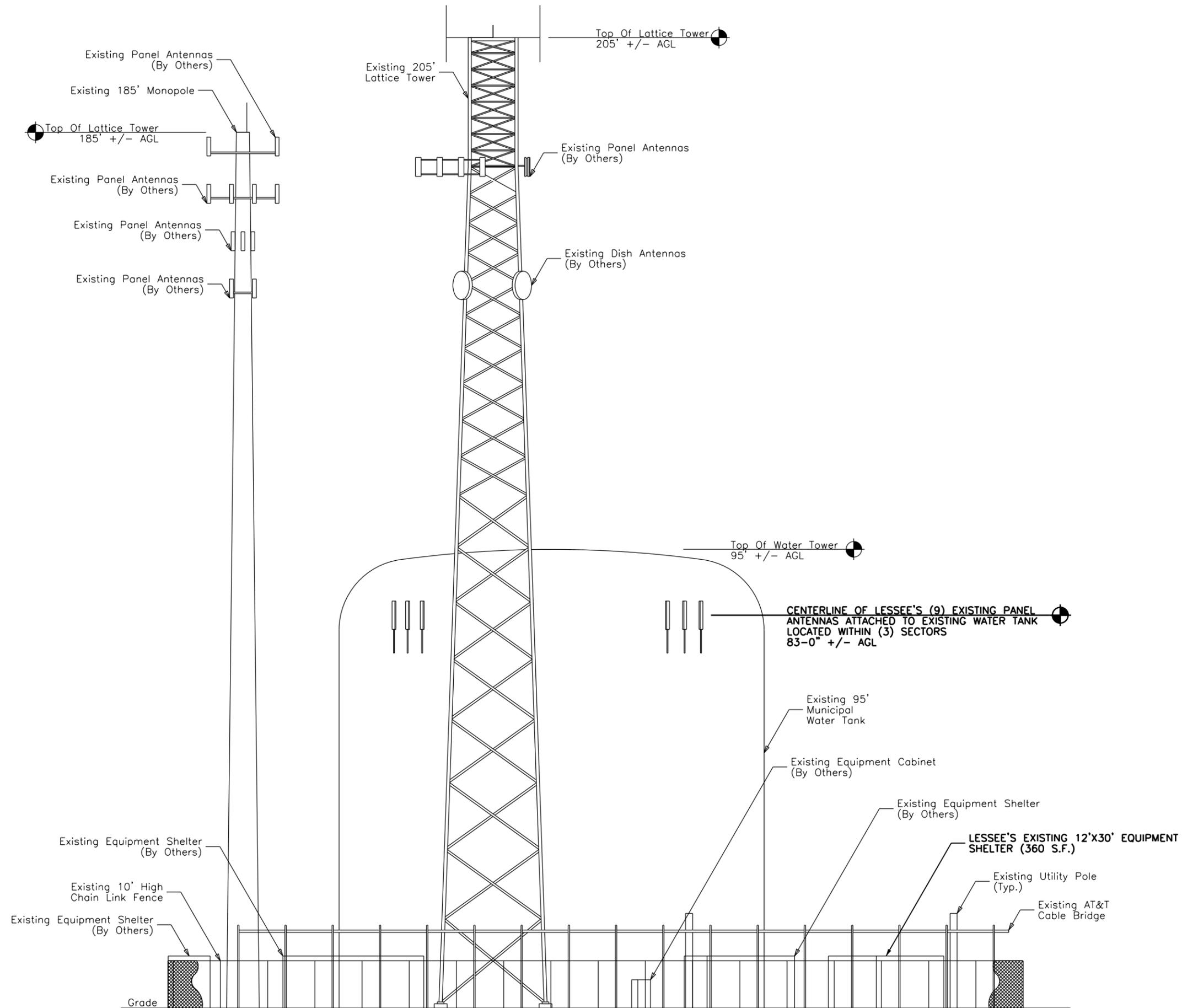
LE2      2 of 3

1      PARTIAL SITE PLAN

11x17 SCALE: 1" = 20'-0"

22x34 SCALE: 1" = 10'-0"





**Malick & Scherer, P.C.**  
*Consulting Engineers-Construction Inspectors-Land Surveyors*

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 53 Frontage Road, Suite 260  
 Hampton, NJ 08827  
 Ph 908.537.1300 Fax 908.537.1398  
 www.mallickandscherer.com

GLENN J. SCHERER  
 NJ PROFESSIONAL ENGINEER  
 # GE38930

**LESSEE:**  
 NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 d/b/a  
  
 141 INDUSTRIAL PARKWAY  
 BRANCHBURG, NJ 08876

NO.	ISSUE OR REVISION	DATE	BY
B	REVISED LESSEE INFORMATION	08/01/13	ZNR
A	AS-BUILT	07/30/13	ZNR

**PROJECT TITLE:**

**EXHIBIT A**

**SITE NAME:**  
 SOUTH BRUNSWICK  
**SITE ADDRESS:**  
 3960 ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901

M&S PROJECT #: 13VLT081

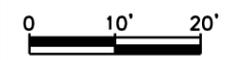
SCALE: AS NOTED      DATE: 07/30/13

DRAWN BY: ZNR      CHECKED BY: TS

**DRAWING TITLE:**

**ELEVATION**

DRAWING NO.: LE3      PAGE NO.: 3 of 3



Resubmission  yes  no  
 Fee paid 30 Receipt # 233613

B: \_\_\_\_\_ L: \_\_\_\_\_  
 For Office Use Only - Do not write above

**TOWNSHIP OF SOUTH BRUNSWICK ZONING PERMIT APPLICATION**

ZONING PERMIT APPLICATION FEE: \$30.00  
 In-ground pool permit is \$50.00  
 (Cash or check payable to South Brunswick Township)

**BEFORE COMPLETING THIS APPLICATION PLEASE READ THE FOLLOWING:**

A copy of the original survey to scale of the entire property must be provided and must show all existing structures and all proposed structures, drawn to scale. It should contain all property lines, easements and lot restrictions. The Survey cannot be enlarged, reduced or altered in any way.

**2 sets of construction plans must be submitted**

Details and dimensions of all proposed structures, showing their total square footage, height and materials (if applicable, i.e. fences, sheds, decks). For new single family residential construction or additions a calculation of the Floor Area Ratio shall be provided

Prior to obtaining a construction permit for a residential dwelling Freehold Soil Certification or Exemption must be provided to the Construction Office with the building permit application

1. Date of Application: 8/14/2021 Block 85 Lot 8.04  
 Property Owner Name: Township of South Brunswick  
 Property Address: 3960 Rt. 1 Water Tank Town: Monmouth Junction Zip: 08852  
 (Do NOT put SOUTH BRUNSWICK. Use Post Office mailing address, i.e. Monmouth Junction, Kendall Park, Dayton, Kingston, etc.)  
 Owner Phone #: 732-329-4000 Fax# NA Cell# NA



2. Contact Name: Township Manager / Mr. Bidlack Contact Phone # 732-329-4000 x 7301  
 Contact Address: 540 Ridge Rd. Monmouth Junction, NJ 08852 Contact Fax# \_\_\_\_\_

3. Description of proposed work (indicate all that apply):
- Shed \_\_\_\_\_ L: \_\_\_\_\_ x W: \_\_\_\_\_ x H: \_\_\_\_\_ to peak
  - Addition \_\_\_\_\_ L: \_\_\_\_\_ x W: \_\_\_\_\_ x H: \_\_\_\_\_ to peak
  - Deck \_\_\_\_\_ L: \_\_\_\_\_ x W: \_\_\_\_\_ or Diameter \_\_\_\_\_
  - Pool\* \_\_\_\_\_ L: \_\_\_\_\_ x W: \_\_\_\_\_ or Diameter \_\_\_\_\_
  - Fence \_\_\_\_\_ H: \_\_\_\_\_ Type \_\_\_\_\_
  - Other  If other, please describe & supply appropriate dimensions
  - Dwelling \_\_\_\_\_ Prior Approval Attached \_\_\_\_\_ F.A.R. \_\_\_\_\_

→ Replace 9 of the 12 existing antennas with updated antennas.  
 replace 3 existing remote radio heads with 3 new radio heads.  
 add 3 new radio head.  
 add 2 hybrid cables  
 \*no ground disturbance

4. Has a variance been granted for the proposed work from the Zoning Board of Adjustment? yes  no   
 If yes, Please attach a copy of the resolution. like by the antennas on the water tank

5. Are there any Easements on your property?  yes  no. If yes, what type T&E

- An **Indemnification Agreement** must be completed if proposing to erect a fence on a Township Easement. (Form is available at the Planning/Zoning Dept. window)
- If the easement is deeded to an entity other than the Township (i.e. TransCo, PSE&G, etc.), a letter granting permission to erect a fence on the easement must be attached.

**It is the responsibility of the property owner to notify any Homeowner's Association of the proposed construction**

For Department use only: (Signature) Date: 9/17/21 Zone: OP  
 Approved Denied

Comments: \_\_\_\_\_





**SITE NAME: SOUTH BRUNSWICK**

3960 ROUTE 1  
SOUTH BRUNSWICK, NJ 08901  
TOWNSHIP OF SOUTH BRUNSWICK  
MIDDLESEX COUNTY

9/17/20  
**APPROVED**  
Zoning

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
VEVA 17, SUITE 400  
BLUE BELL, PA 19422  
(267) 460-0122

NEW YORK SMSA  
LIMITED PARTNERSHIP d/b/a  
VERIZON WIRELESS  
**verizon**  
400 WARREN CORPORATE  
CENTER DRIVE  
BUILDING D  
WARREN, NJ 07059

**SOUTH BRUNSWICK**  
3960 US ROUTE 1  
SOUTH BRUNSWICK, NJ 08901  
TWP OF SOUTH BRUNSWICK  
MIDDLESEX COUNTY

REVISIONS			
REV	DATE	DESCRIPTION	BY
1	08/30/21	FINAL CDs	DS
0	06/24/21	PRELIMINARY CDs	DS

PROFESSIONAL STAMP  
  
STATE OF NEW JERSEY CERTIFICATE OF  
AUTHORIZATION #246GA28226400 EXP 08/31/22

ENGINEER  
KRUPAKARAN KOLANDAIVELU, P.E.  
STATE OF NEW JERSEY  
PROFESSIONAL ENGINEER  
LICENSE #24GE04945200

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

**SITE INFORMATION**

SCOPE OF WORK: PROJECT CONSISTS OF INSTALLING ADDITIONAL EQUIPMENT AND/OR ANTENNAS TO AN EXISTING WIRELESS TELECOMMUNICATIONS FACILITY.

SITE ADDRESS: 3960 ROUTE 1  
SOUTH BRUNSWICK, NJ 08901

JURISDICTION: TOWNSHIP OF SOUTH BRUNSWICK  
MIDDLESEX COUNTY

LATITUDE (NAD 83): 40-24-19.17N (40.405325°)  
LONGITUDE (NAD 83): 74-32-51.75W (-74.547708°)

BLOCK NUMBER: 85  
LOT NUMBER: 8.04  
PARCEL NUMBER: 21-00085-000-0008-04

PROPERTY OWNER: TOWNSHIP OF SOUTH BRUNSWICK  
540 RIDGE ROAD  
MONMOUTH, NJ 08852

VZW SITE ID: BB1-269

FUZE PROJECT ID: 16228285

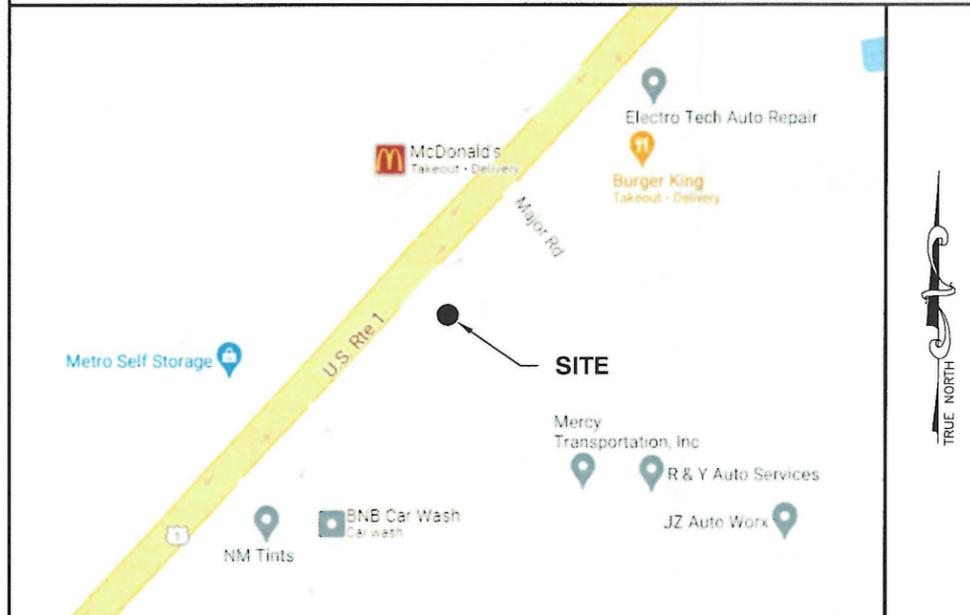
STRUCTURE TYPE: WATER TANK

CONSTRUCTION TYPE: IIB

USE GROUP: U

GROUND ELEVATION: 251.0' (AMSL)

**VICINITY MAP**



**DIRECTIONS**

FROM WARREN, NJ: TAKE DUBOIS RD TO MT BETHEL RD, HEAD NORTH ON PARK VIEW DR TOWARD DUBOIS RD, TURN RIGHT ONTO DUBOIS RD, TURN LEFT ONTO MT BETHEL RD, TURN RIGHT ONTO MOUNTAIN BLVD, CONTINUE ONTO MOUNTAIN BLVD EXT, CONTINUE ONTO WASHINGTON VALLEY RD, TURN LEFT ONTO MORNING GLORY RD, CONTINUE ONTO MOUNTAIN AVE, KEEP LEFT TO STAY ON MOUNTAIN AVE, TURN LEFT ONTO E UNION AVE, TURN RIGHT ONTO EAST ST, CONTINUE ONTO BOLMER BLVD, AT THE TRAFFIC CIRCLE CONTINUE STRAIGHT ONTO S MAIN ST, TURN RIGHT ONTO CANAL RD, TURN LEFT ONTO ELIZABETH ST, TURN LEFT ONTO WESTON RD, TURN RIGHT ONTO CEDAR GROVE LN, USE THE LEFT 2 LANES TO TURN LEFT ONTO AMWELL RD, TURN RIGHT ONTO S MIDDLEBUSH RD, TURN RIGHT ONTO NJ-27 S, TURN LEFT ONTO NEW RD, TURN LEFT ONTO US-1 N.

LEADS TO LATITUDE 40.40562° AND LONGITUDE -74.54757°. (DRIVEWAY TO COMPOUND)

**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 THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2018 INTERNATIONAL BUILDING CODE(NJ EDITION)
- 2014 NATIONAL ELECTRICAL CODE
- 2015 NATIONAL STANDARD PLUMBING CODE
- 2009 NFPA 101, LIFE SAFETY CODE
- 2015 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 15TH EDITION
- ANSI/TIA-222-H
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

**DRAWING INDEX**

T-1	TITLE SHEET
C-1	COMPOUND PLAN
C-2	ELEVATION
A-1	EXISTING ANTENNA PLAN AND SCHEDULE
A-2	PROPOSED ANTENNA PLAN AND SCHEDULE
A-3	ANTENNA DETAILS
A-4	EQUIPMENT SPECIFICATIONS
A-5	PLUMBING DIAGRAM
A-6	ALARM WIRING DIAGRAM & COLOR CODING
A-7	SCOPE OF WORK
G-1	SCHEMATIC AND GROUNDING DIAGRAM
GN-1	PMI REQUIREMENTS

**DO NOT SCALE DRAWINGS**

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

**APPROVAL BLOCK**

	DATE	APPROVED	APPROVED AS NOTED	DISAPPROVED/REVISE
CONSTRUCTION MANAGER	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SITE ACQUISITION	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RF ENGINEER	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LESSOR/LESSOR REP	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PROJECT TEAM**

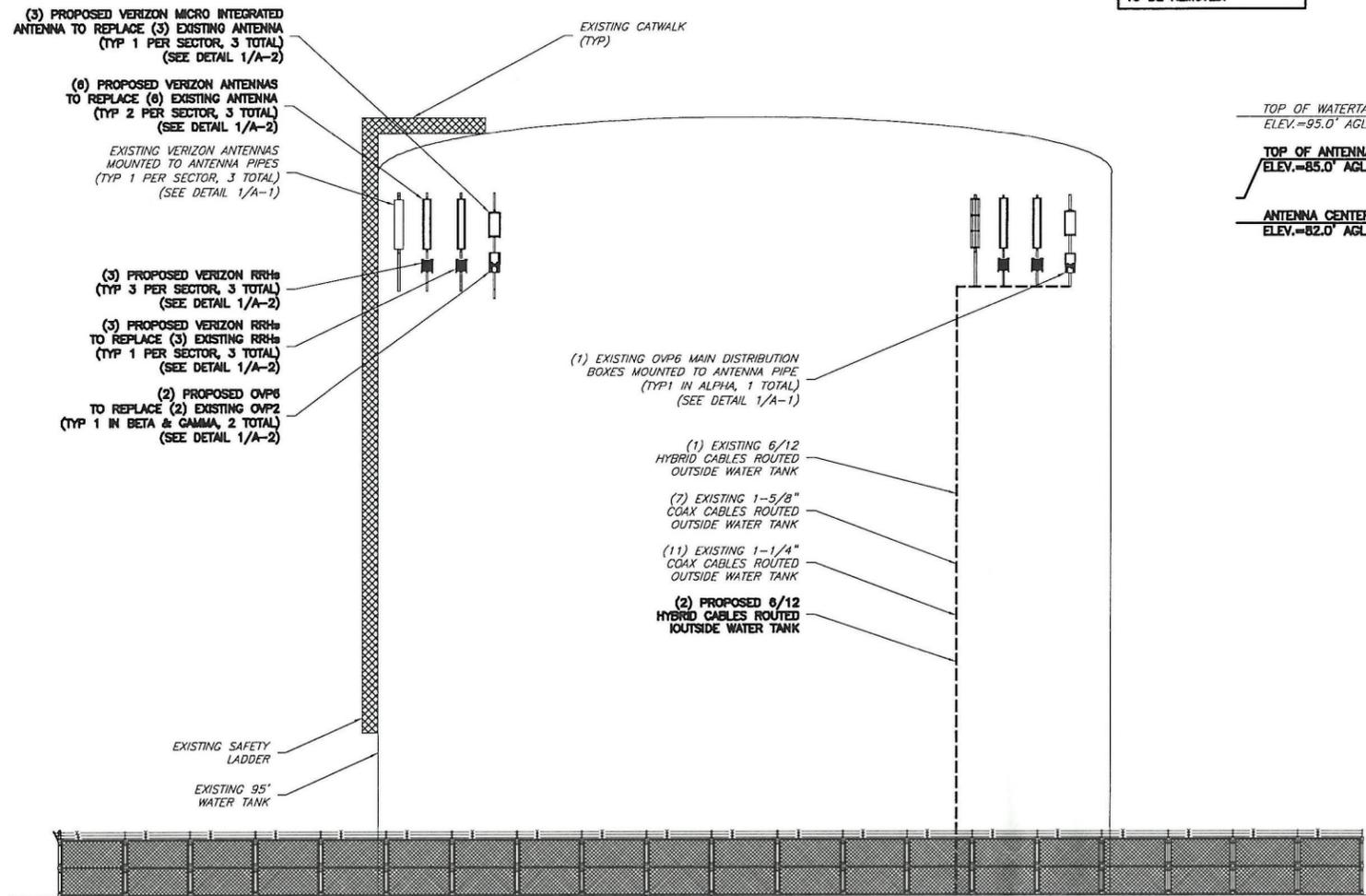
APPLICANT: NEW YORK SMSA LIMITED PARTNERSHIP  
D/B/A VERIZON WIRELESS  
400 WARREN CORPORATE CENTER DRIVE  
BUILDING D  
WARREN, NJ 07059

PROJECT MANAGEMENT FIRM: NETWORK BUILDING + CONSULTING  
1777 SENTRY PARKWAY WEST  
VEVA 17, SUITE 400  
BLUE BELL, PA 19422  
(267) 460-0122

SITE ACQ.: KRISTY BURKHOLDER

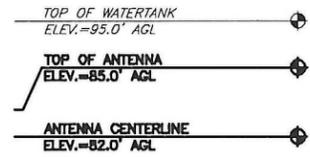
ENGINEERING FIRM: NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
VEVA 17, SUITE 400  
BLUE BELL, PA 19422  
(267) 460-0122



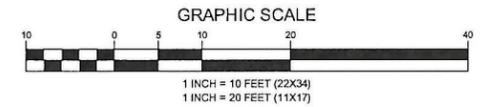


**NOTE:**  
 POST-MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO SHEET GN-1 OF THESE CONSTRUCTION DRAWINGS, AS WELL AS THE MOUNT ANALYSIS PREPARED BY NB&C DATED 08/29/21 FOR ADDITIONAL DETAILS.

**NOTE:**  
 ALL EXISTING TMA UNITS ARE TO BE REMOVED.



1 ELEVATION  
 C-2 SCALE: 1" = 10' (22X34)  
 SCALE: 1" = 20' (11X17)



**ENGINEER**

**NB+C**  
 TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.  
 1777 SENTRY PARKWAY WEST  
 SUITE 117, SUITE 400  
 BLUE BELL, PA 19422  
 (267) 460-0122

**APPLICANT**

NEW YORK SMSA  
 LIMITED PARTNERSHIP d/b/a  
 VERIZON WIRELESS

**verizon**

400 WARREN CORPORATE  
 CENTER DRIVE  
 BUILDING D  
 WARREN, NJ 07059

**SITE INFORMATION**

SOUTH BRUNSWICK  
 3960 US ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901  
 TWP OF SOUTH BRUNSWICK  
 MIDDLESEX COUNTY

**DESIGN RECORD**

REVISIONS			
REV	DATE	DESCRIPTION	BY
1	083021	FINAL CDs	DS
0	062421	PRELIMINARY CDs	DS

**PROFESSIONAL STAMP**

STATE OF NEW JERSEY CERTIFICATE OF  
 AUTHORIZATION #246GA28226400 EXP 08/31/22

**ENGINEER**

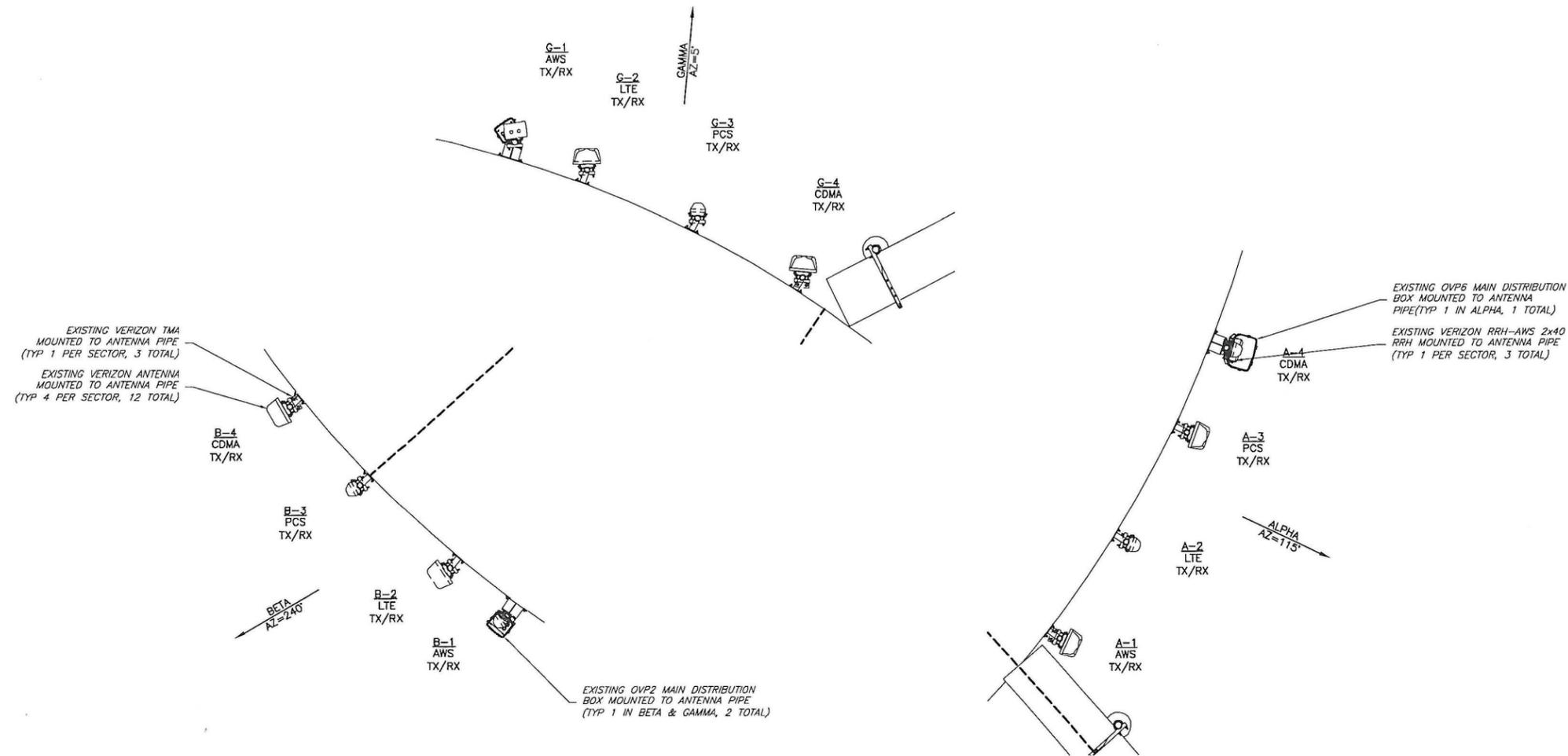
KRUPAKARAN KOLANDAIVELU, P.E.  
 STATE OF NEW JERSEY  
 PROFESSIONAL ENGINEER  
 LICENSE #24GE04945200

**SHEET TITLE**

ELEVATION

**SHEET NUMBER**

C-2



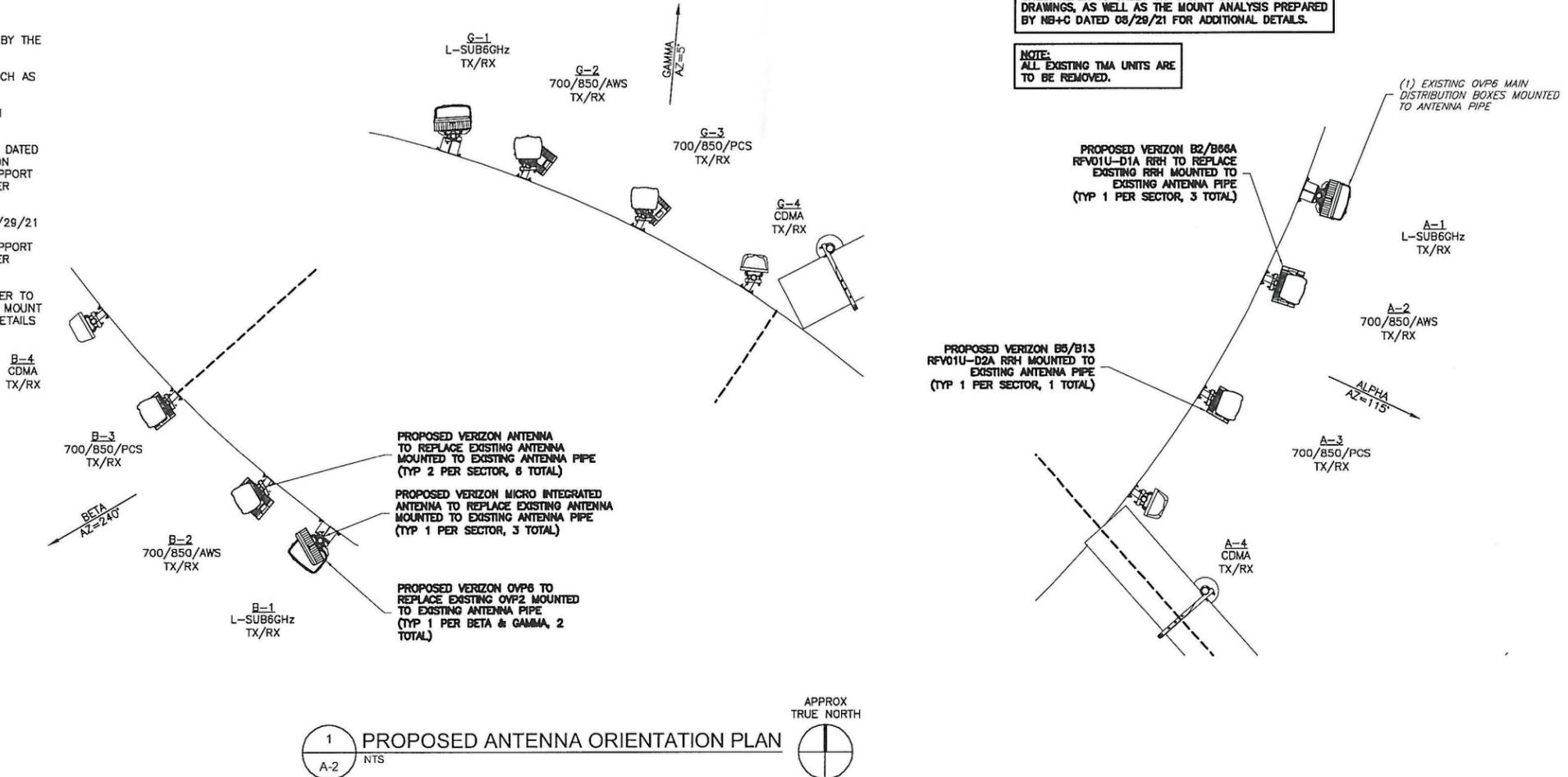
1 EXISTING ANTENNA ORIENTATION PLAN  
A-1 NTS

ANTENNA POSITION	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	DOWN TILT		RRH QUANTITY & MODEL	TECHNOLOGY	CABLE SIZE, LENGTH & QUANTITY
					MECH	ELEC			
A-1	CSS	AXP18-80	82.00'	115°	0°	0°	RRH-AWS 2X40	AWS	(2) 1-5/8" COAX (250')
A-2	CSS	X7C-665-0	82.00'	115°	0°	0°	-	LTE	(4) 1-1/4" COAX (250')
A-3	CSS	AXP19-60	82.00'	115°	0°	0°	-	PCS	(1) 1.43" HYBRID CABLE (250')
A-4	CSS	X7C-665-0	82.00'	115°	0°	0°	-	CDMA	(250')
B-1	CSS	AXP19-60	82.00'	240°	0°	0°	RRH-AWS 2X40	AWS	(2) 1-5/8" COAX (250')
B-2	CSS	X7C-680-0	82.00'	240°	0°	0°	-	LTE	(4) 1-1/4" COAX (250')
B-3	CSS	AXP19-60	82.00'	240°	0°	0°	-	PCS	SHARED THROUGH HYBRIFLEX
B-4	CSS	X7C-680-0	82.00'	240°	0°	0°	-	CDMA	
G-1	CSS	AXP19-60	82.00'	5°	0°	0°	RRH-AWS 2X40	AWS	(4) 1-5/8" COAX (250')
G-2	CSS	X7C-665-0	82.00'	5°	0°	0°	-	LTE	(3) 1-1/4" COAX (250')
G-3	CSS	AXP19-60	82.00'	5°	0°	0°	-	PCS	SHARED THROUGH HYBRIFLEX
G-4	CSS	X7C-665-0	82.00'	5°	0°	0°	-	CDMA	

ENGINEER	<b>NB+C</b> TOTALLY COMMITTED. <small>NB+C ENGINEERING SERVICES, LLC.          1777 SENTINEL PARKWAY WEST          VEVA 17, SUITE 400          BLUE BELL, PA 19422          (267) 450-9122</small>																
APPLICANT	NEW YORK SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS 400 WARREN CORPORATE CENTER DRIVE BUILDING D WARREN, NJ 07059																
SITE INFORMATION	SOUTH BRUNSWICK 3960 US ROUTE 1 SOUTH BRUNSWICK, NJ 08901 TWP OF SOUTH BRUNSWICK MIDDLESEX COUNTY																
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ENGINEER	KRUPAKARAN KOLANDAIVELU, P.E. STATE OF NEW JERSEY PROFESSIONAL ENGINEER LICENSE #24GE04945200																
SHEET TITLE	<b>EXISTING ANTENNA PLAN &amp; SCHEDULE</b>																
SHEET NUMBER	<h1 style="margin: 0;">A-1</h1>																

**GENERAL ANTENNA NOTES**

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH RF ENGINEER.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'.
3. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
4. CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
6. COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
7. CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH VERIZON REPRESENTATIVE.
8. A STRUCTURAL ANALYSIS REPORT HAS BEEN ISSUED BY NB+C, LLC, DATED 08/29/21 TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
9. A MOUNT ANALYSIS REPORT HAS BEEN ISSUED BY NB+C DATED 08/29/21 TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
10. POST-MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO SHEET GN-1 OF THESE CONSTRUCTION DRAWINGS, AS WELL AS THE MOUNT ANALYSIS PREPARED BY NB+C DATED 08/29/21 FOR ADDITIONAL DETAILS



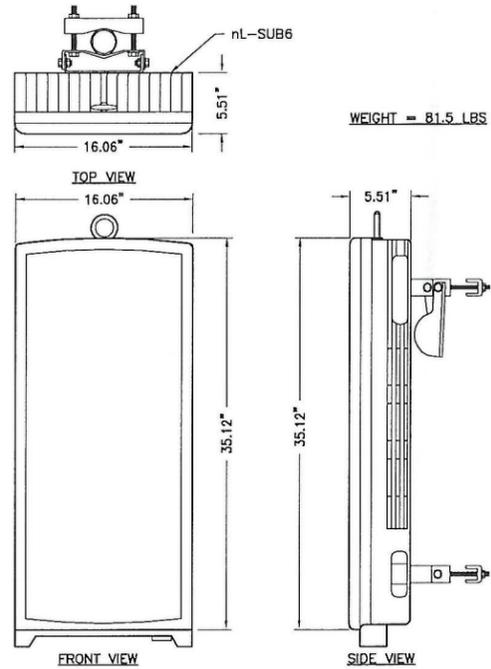
PROPOSED ANTENNA & RRH SCHEDULE									
ANTENNA POSITION	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	DOWN TILT		RRH QUANTITY & MODEL	TECHNOLOGY	CABLE SIZE, LENGTH & QUANTITY
					MECH	ELEC			
A-1	SAMSUNG	MT6407-77A	82.00'	115°	0'	3'	-	L-SUB6GHz	(2) 1-5/8" COAX (250')
A-2	QUINTEL	QS6856-5	82.00'	115°	0'	4'	B2/B68A RFV01U-D1A	700/850/AWS	(4) 1-1/4" COAX (250')
A-3	QUINTEL	QS6856-5	82.00'	115°	0'	4'	B5/B13 RFV01U-D2A	700/850/PCS	(1) 1.43" HYBRID CABLE (250')
A-4	CSS	X7C-665-0	82.00'	115°	0'	2'	-	CDMA	(250')
B-1	SAMSUNG	MT6407-77A	82.00'	240°	2'	3'	-	L-SUB6GHz	(2) 1-5/8" COAX (250')
B-2	QUINTEL	QS6856-5	82.00'	240°	2'	4'	B2/B68A RFV01U-D1A	700/850/AWS	(4) 1-1/4" COAX (250')
B-3	QUINTEL	QS6856-5	82.00'	240°	2'	4'	B5/B13 RFV01U-D2A	700/850/PCS	(1) 1.43" HYBRID CABLE (250')
B-4	CSS	X7C-680-0	82.00'	240°	0'	2'	-	CDMA	(250')
G-1	SAMSUNG	MT6407-77A	82.00'	5°	2'	3'	-	L-SUB6GHz	(4) 1-5/8" COAX (250')
G-2	QUINTEL	QS6856-5	82.00'	5°	4'	6'	B2/B68A RFV01U-D1A	700/850/AWS	(3) 1-1/4" COAX (250')
G-3	QUINTEL	QS6856-5	82.00'	5°	4'	6'	B5/B13 RFV01U-D2A	700/850/PCS	(1) 1.43" HYBRID CABLE (250')
G-4	CSS	X7C-665-0	82.00'	5°	0'	2'	-	CDMA	(250')

- NOTES:**
1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.
  2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.
  3. CONTRACTOR IS RESPONSIBLE TO BUILD FROM THE LATEST RF SHEET.

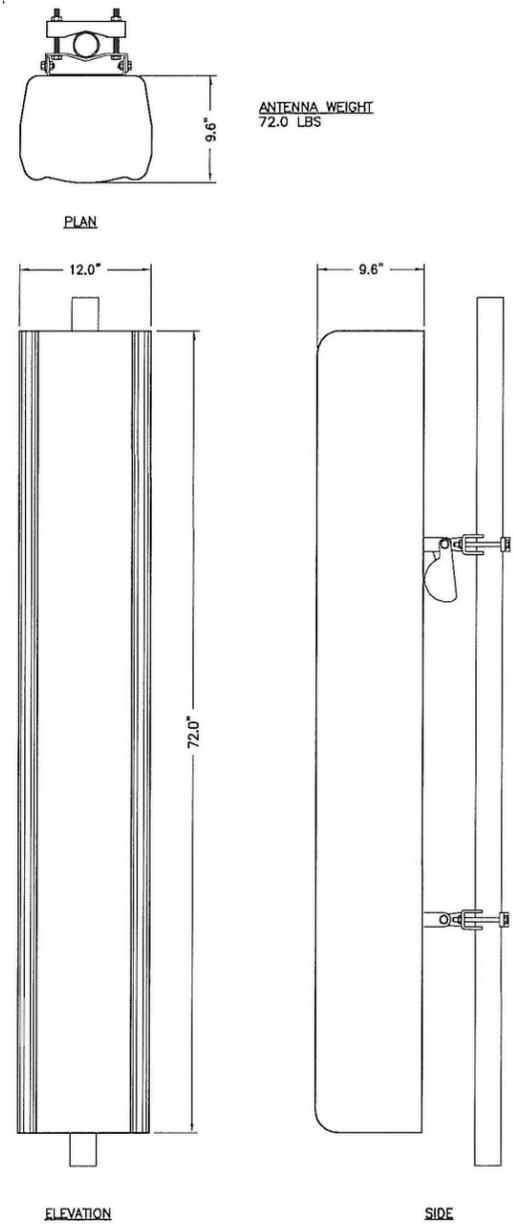
ENGINEER	<p><b>TOTALLY COMMITTED.</b></p> <p>NB+C ENGINEERING SERVICES, LLC. 1777 SENTRY PARKWAY WEST VEVA 17, SUITE 400 BLUE BELL, PA 19422 (267) 460-1122</p>												
APPLICANT	<p>NEW YORK SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS</p> <p>400 WARREN CORPORATE CENTER DRIVE BUILDING D WARREN, NJ 07059</p>												
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ENGINEER	<p>KRUPAKARAN KOLANDAIVELU, P.E. STATE OF NEW JERSEY PROFESSIONAL ENGINEER LICENSE #24GE04945200</p>												
SHEET TITLE	<p><b>PROPOSED ANTENNA PLAN &amp; SCHEDULE</b></p>												
SHEET NUMBER	<p><b>A-2</b></p>												

**STRUCTURAL NOTES**

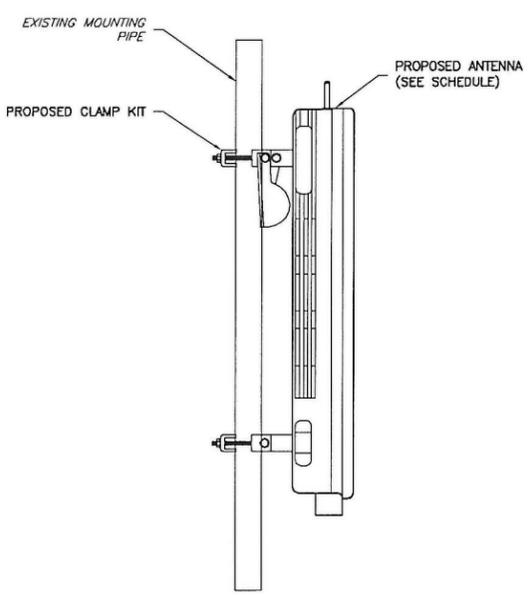
- DESIGN REQUIREMENTS PER INTERNATIONAL BUILDING CODE 2018 AND THE ANSI/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM THE EXISTING STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.
- STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A992. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE - STEEL WELD ELECTRODES SHALL BE E70XX.
- ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED.
- NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.



1 MT6407-77A INTEGRATED ANTENNA  
A-3 NTS



3 QUINTEL QS6656-5 ANTENNA DETAILS  
A-3 NTS



2 ANTENNA MOUNTING DETAILS  
A-3 NTS

PROPOSED ANTENNA SPECIFICATIONS						
ANTENNA MANUFACTURER	ANTENNA MODEL	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
SAMSUNG	MT6407-77A	3	35.12"	16.06"	5.51"	81.5 LBS
QUINTEL	QS6656-5	6	72.00"	12.00"	9.60"	72.0 LBS

EXISTING ANTENNA SPECIFICATIONS						
ANTENNA MANUFACTURER	ANTENNA MODEL	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
CSS	X7C-665-0	2	72.0"	12.5"	7.1"	30.0 LBS
CSS	* X7C-665-0	2	72.0"	12.5"	7.1"	30.0 LBS
CSS	X7C-680-0	1	72.0"	12.5"	7.1"	29.2 LBS
CSS	* X7C-680-0	1	72.0"	12.5"	7.1"	29.2 LBS
CSS	* AXP19-60	5	69.1"	6.7"	4.1"	15.0 LBS
CSS	* AXP18-80	1	69.0"	6.7"	4.1"	19.2 LBS

\* TO BE REMOVED

ENGINEER	 <b>TOTALLY COMMITTED.</b> NB+C ENGINEERING SERVICES, LLC. <small>1777 SENTRY PARKWAY WEST                  VISA-17, SUITE 400                  BLUE BELL, PA 19422                  (267) 460-9122</small>																
APPLICANT	NEW YORK SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS  400 WARREN CORPORATE CENTER DRIVE BUILDING D WARREN, NJ 07059																
SITE INFORMATION	SOUTH BRUNSWICK 3960 US ROUTE 1 SOUTH BRUNSWICK, NJ 08901 TWP OF SOUTH BRUNSWICK MIDDLESEX COUNTY																
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ENGINEER	KRUPAKARAN KOLANDAIVELU, P.E. STATE OF NEW JERSEY PROFESSIONAL ENGINEER LICENSE #24GE04945200																
SHEET TITLE	<b>ANTENNA                  DETAILS</b>																
SHEET NUMBER	<b>A-3</b>																

REVISIONS

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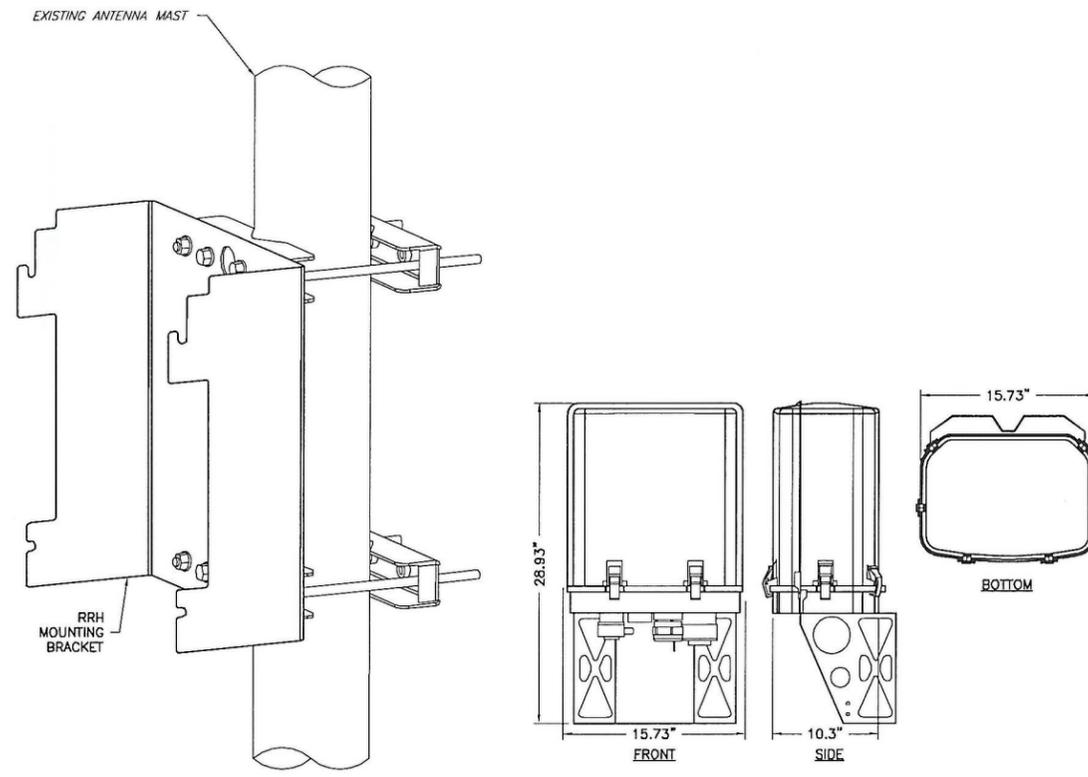
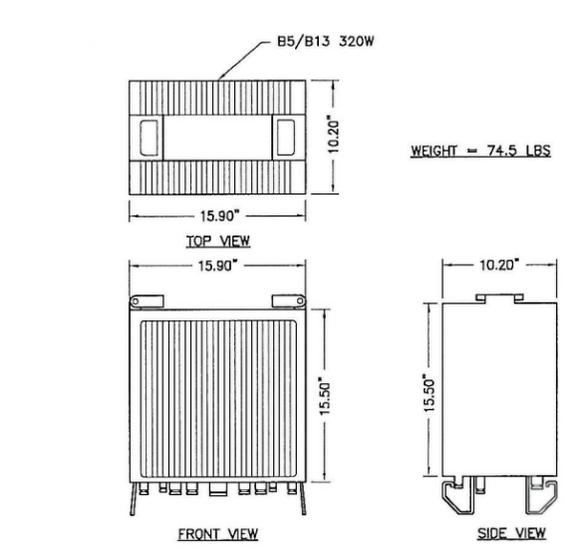
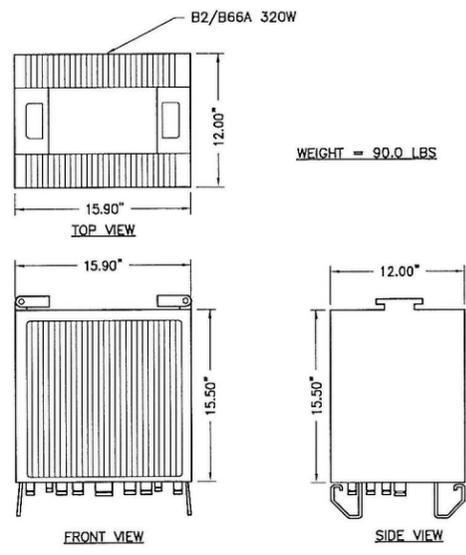
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STATE OF NEW JERSEY CERTIFICATE OF  
AUTHORIZATION #246GA28226400 EXP 08/31/22

ENGINEER  
KRUPAKARAN KOLANDAIVELU, P.E.  
STATE OF NEW JERSEY  
PROFESSIONAL ENGINEER  
LICENSE #24GE04945200

EQUIPMENT  
SPECIFICATIONS  
& DETAILS

A-4

ENGINEER  
APPLICANT  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
ENGINEER  
SHEET TITLE  
SHEET NUMBER



1 B2/B66A RFV01U-D1A (REMOTE RADIO HEAD)  
A-4 NTS

2 B5/B13 RFV01U-D2A (REMOTE RADIO HEAD)  
A-4 NTS

3 RRH MOUNTING DETAIL  
A-4 NTS

4 OVP6 DISTRIBUTION BOX DETAIL  
A-4 NTS

PROPOSED RRH EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
SAMSUNG	B2/B66A RFV01DU-D1A	WATER TANK	3	15.50"	15.90"	12.00"	90.0 LBS
SAMSUNG	B5/B13 RFV01DU-D2A	WATER TANK	3	15.50"	15.90"	10.20"	74.5 LBS

EXISTING RRH EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
LUCENT	* RRH-AWS 2X40-4R	WATER TANK	3	24.4"	10.63"	6.7"	44.0 LBS

\* TO BE REMOVED

PROPOSED DISTRIBUTION  
EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
RAYCAP	RC3DC-3315-PF-48	WATER TANK	2	28.93"	15.73"	10.3"	32.0 LBS

EXISTING DISTRIBUTION  
EQUIPMENT SPECIFICATIONS

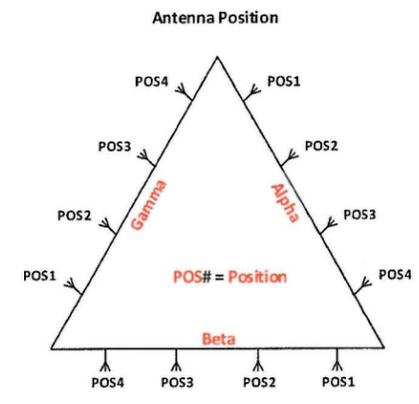
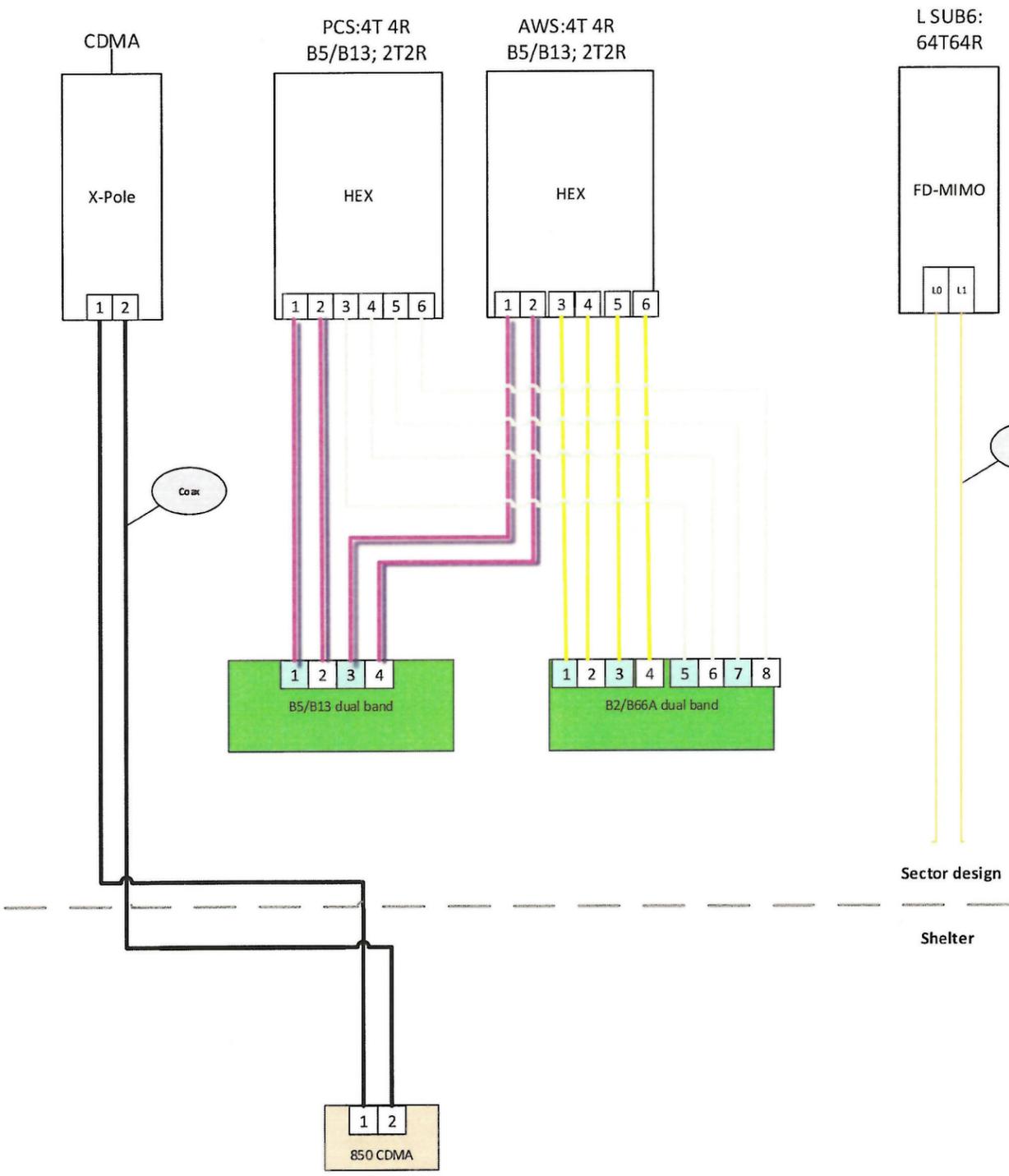
MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
RAYCAP	RRFDC-3315-PF-48	WATER TANK	1	29.00"	15.73"	10.25"	32.0 LBS
RAYCAP	* RRFDC-1064-PF-48	WATER TANK	2	20.58"	10.15"	8.22"	14.0 LBS

\* TO BE REMOVED

EXISTING COMBINER  
EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
WESTELL	* AWC-TTMA-700C	WATER TANK	3	9.0"	6.7"	8.9"	28.0 LBS

\* TO BE REMOVED

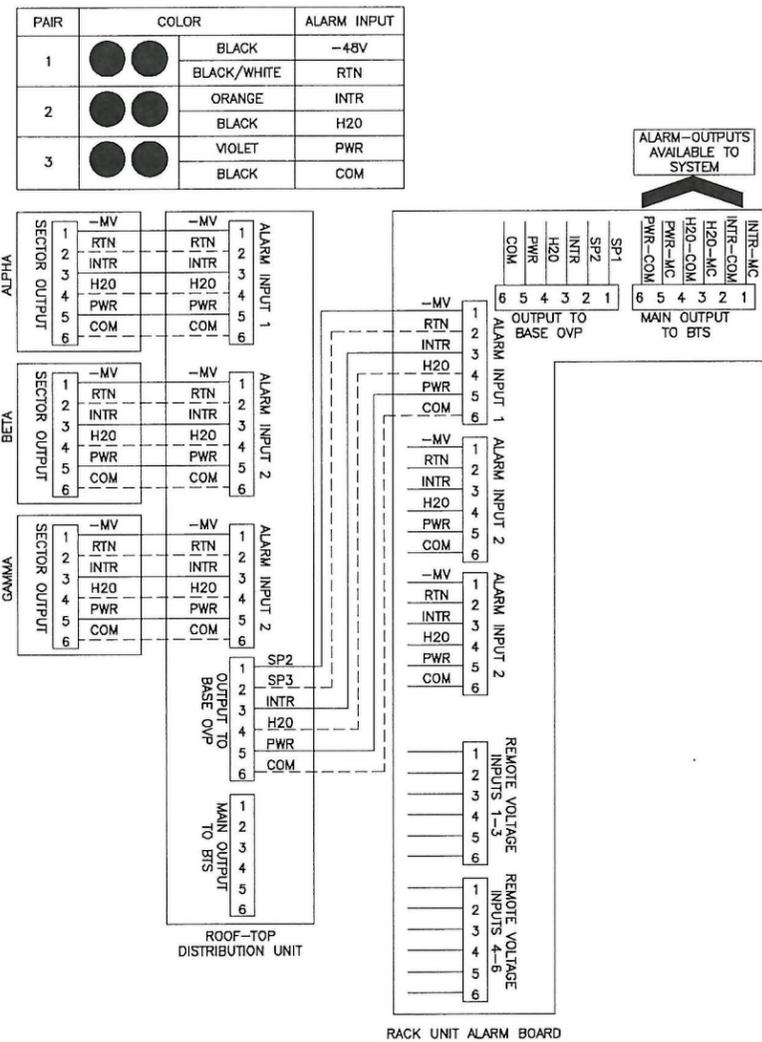


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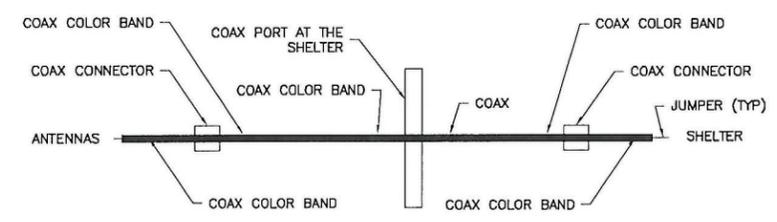
- Antenna view is from the back of the antennas
- Colors of connection are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimension

RFDS DATED 06/23/2021, 18:56:35

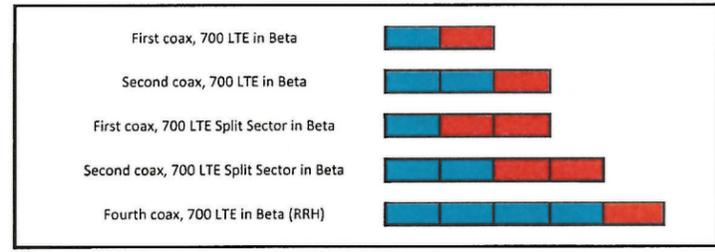
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SHEET TITLE	PLUMBING DIAGRAM																
SHEET NUMBER	A-5																



1 RAYCAP ALARM WIRING DIAGRAM  
A-6 NTS



COLOR CODE PLACEMENT DIAGRAM



Northern New Jersey	
Technology - Band	Sector
LTE-700-Band 13 - Color Code: Sector Color + Red	ALPHA - White
	BETA - Blue
	GAMMA - Green
LTE-AWS-Band 4 - Color Code: Sector Color + Orange	ALPHA - White
	BETA - Blue
	GAMMA - Green
LTE-PCS-Band 2 - Color Code: Sector Color + Brown	ALPHA - White
	BETA - Blue
	GAMMA - Green
EVDO - PCS Band - Color Code: Sector Color + Purple	ALPHA - White
	BETA - Blue
	GAMMA - Green
1X - 850 Band - Color Code: Sector Color	ALPHA - White
	BETA - Blue
	GAMMA - Green
GPS - All Bands	Yellow

2x4 Power	
Wire Color	Black Red Black Red
Stripe Color	Blue Purple

Fiber			
First Level (Primary Color)	Blue Purple Green Brown	Pair 1	Pair 2
Second Level (Secondary Color)	No Color	Pair 3	Pair 4

18AWG Alarm Wires (Twisted pairs)										
Wire Color	Black	Black w/ white	Black	Orange	Black	Violet	Black	Yellow	Black	Red
	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8	Pair 9	Pair 10

2 HYBRIFLEX COLOR CODING  
A-6

**NB+C**  
TOTALLY COMMITTED.  
NB+C ENGINEERING SERVICES, LLC.  
1777 SENTRY PARKWAY WEST  
VISTA 17, SUITE 400  
BLUE BELL, PA 19422  
(267) 450-0122

NEW YORK SMSA  
LIMITED PARTNERSHIP d/b/a  
VERIZON WIRELESS  
**verizon**  
400 WARREN CORPORATE  
CENTER DRIVE  
BUILDING D  
WARREN, NJ 07059

SOUTH BRUNSWICK  
3960 US ROUTE 1  
SOUTH BRUNSWICK, NJ 08901  
TWP OF SOUTH BRUNSWICK  
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STATE OF NEW JERSEY CERTIFICATE OF AUTHORIZATION #246GA28226400 EXP 08/31/22

ENGINEER  
KRUPAKARAN KOLANDAIVELU, P.E.  
STATE OF NEW JERSEY  
PROFESSIONAL ENGINEER  
LICENSE #24GE04945200

SHEET TITLE  
**ALARM WIRING DIAGRAM & COLOR CODING**

SHEET NUMBER  
**A-6**

ENGINEER  
APPLICANT  
SITE INFORMATION  
DESIGN RECORD  
PROFESSIONAL STAMP  
ENGINEER  
SHEET TITLE  
SHEET NUMBER

# VERIZON WIRELESS CONTRACTOR SCOPE OF WORK

# MOP FOR RET INSTALLS

- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL THE PROPOSED CABLE JUMPER (WITH LC TO LC CONNECTORS) FROM THE PROPOSED FIBER TRAYS TO THE PROPOSED MAIN DISTRIBUTION BOX (BOTTOM).
- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL ALL MOUNTING HARDWARE AND 1/2" ANTENNA JUMPER CABLES AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED MAIN DISTRIBUTION BOXES (BOTTOM) INSIDE OF THE EXISTING EQUIPMENT SHELTER. THE CONTRACTOR IS TO VERIFY THE LOCATION IN THE EQUIPMENT SHELTER PRIOR TO CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED MAIN DISTRIBUTION BOXES (TOP) IN BETA & GAMMA SECTORS/MOUNTED ON THE FRONT SIDE OF ANTENNA PIPE.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL (2) RUNS OF 6/12 HYBRID CABLE FROM THE PROPOSED MAIN DISTRIBUTION BOXES (BOTTOM) TO THE MAIN DISTRIBUTION BOXES (TOP) FOLLOWING THE PATH OF THE EXISTING CABLES.
- VERIZON WIRELESS CONTRACTOR IS TO MAKE ALL ALARM CONNECTIONS TO THE DISTRIBUTION BOXES AND LEAVE A 40' COIL FOR OTHERS TO PUNCH INTO ALARM BLOCK.
- VERIZON WIRELESS CONTRACTOR IS TO SEAL ALL DISTRIBUTION BOXES AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL (9) RUNS OF HELIAX 1/1 HYBRID CABLE FROM THE PROPOSED MAIN DISTRIBUTION BOXES TO THE REMOTE RADIO HEAD UNITS.
- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL 1/2" ANTENNA JUMPERS FROM EACH PROPOSED REMOTE RADIO HEAD UNIT (RRH) TO THE PROPOSED ANTENNAS IN ALL SECTORS (36 TOTAL 1/2" ANTENNA JUMPERS).
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED REMOTE RADIO HEAD UNITS IN ALL SECTORS ON THE ANTENNA PIPE.
- VERIZON WIRELESS CONTRACTOR IS TO GROUND ALL REMOTE RADIO HEAD UNITS (RRH) AND DISTRIBUTION BOXES TO THE EXISTING GROUND BARS AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO GROUND ALL PROPOSED ANTENNAS TO THE EXISTING GROUND BARS AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO COMPLETE THE INSTALLATION OF THE PROPOSED ANTENNAS AND HYBRIFLEX CABLE SYSTEM.
- VERIZON WIRELESS CONTRACTOR IS TO PERFORM THE FOLLOWING OPTICAL SWEEP TESTS; OTDR AND OPTICAL LOSS. RECOMMENDED UNITS – ANRITSU MT9090, JDSU, EXFO FTB-1/FTB-720 OTDR.
- VERIZON WIRELESS CONTRACTOR IS TO PERFORM THE FOLLOWING ANTENNA SYSTEM SWEEP TESTS: SYSTEM VZWR / dB RL.
- VERIZON WIRELESS CONTRACTOR IS TO PROVIDE ALL CLOSE OUT DOCUMENTS AS REQUIRED BY VERIZON WIRELESS.

### SAMSUNG RRH

- DUAL RRH B2/B66A RFV01DU-D1A HELIAX 1/1 HYBRID CABLE CABLE MUST BE CONNECTED TO THE LO PRIMARY PORT AND (1) EXTRA PAIR OF FIBER CONNECTED TO L1 SECONDARY PORT.
- DUAL RRH B5/B13 RFV01DU-D2A HELIAX 1/1 HYBRID CABLE MUST BE CONNECTED TO THE LO PRIMARY PORT.

### INTEGRATED ANTENNA

- MT6407-77A 1/1 HYBRID CABLE MUST BE CONNECTED TO OPT1 PORT AND (2) EXTRA FIBER CABLE TO THE SECONDARY OPT2 PORT.

### ANTENNA CREW

1. REVIEW ANTENNA SCHEDULE WITH CELL TECH
  2. FOR EACH SECTOR, LAY ANTENNAS OUT ON THE GROUND AS THEY WILL BE INSTALLED ACCORDING TO THE ANTENNA SCHEDULE
  3. LABELED EACH ANTENNA WITH FACE AND POSITION WITH A SHARPIE (EX:"ALPHA-4")
  4. LABEL ALL MOTORS WITH SHARPIE WITH BAND AND TECHNOLOGY (EX:"700LTE", "AWSLTE", "PCSLTE", "850VOICE", ETC)
  5. CONNECT ALL AISG CABLES (INCLUDING JUMPERS THAT WILL BE USED IN FINAL ASSEMBLY) PER THE ANTENNA SCHEDULE
    - A. WHEN DAISY CHAINING IS INEVITABLE, AS A GENERAL RULE...
      - I. KEEP LOW AND HIGH BANDS ON SEPARATE AISG CHAINS AS MUCH AS POSSIBLE
      - II. MINIMIZE AMOUNT OF MOTORS PER CHAIN AS MUCH AS POSSIBLE (MAX IS 6)
    - B. WHEN COMPLETED ALL RET MOTOR PORTS NEED TO BE CONNECTED, INCLUDING THE MOTORS NOT BEING USED YET. THE ONLY UNUSED PORT WILL BE THE LAST IN THE DAISY CHAIN, WHICH NEEDS TO BE CAPPED AND WEATHERPROOFED.
  6. ON LAPTOP, FILL OUT THE SOFTCOPY OF THE RET DEPLOYMENT FORM AND SAVE IT, REPLACING THE "#####" WITH THE 6-DIGIT ENB NUMBER IN THE FILENAME (EX: RET DEPLOYMENT FORM\_0981234.XLSX")
  7. GIVE A SOFTCOPY OF THE RET DEPLOYMENT FORM TO VZW CELL TECH AND GC/CONSULTANT (EITHER BY EMAIL OR USB STICK)
  8. USING THE SAME LAPTOP WHICH HAS THE RET DEPLOYMENT FORM OPENED, CONNECT THE CONTROL MODULE AND PROVISION EACH MOTOR RESPECTIVELY
 

NOTE: CREWS MUST USE SOFTWARE THAT IS SPECIFIC TO THE MOTOR TYPE BEING PROVISIONED (IE- JMA SOFTWARE SHOULD ONLY BE SUED FOR JMA MOTORS)

    - A. COPY AND PASTE "RET FRIENDLY NAME" FROM SPREADSHEET (COLUMN A) TO THE "SECTOR ID" FIELD OF EACH MOTOR
    - B. POPULATE "SET RET TILT"
    - C. POPULATE "MECHANICAL TILT"
  9. CALIBRATE ALL MOTORS
  10. DISCONNECT NECESSARY AISG JUMPERS TO TRANSPORT ANTENNAS SAFELY TO ASSEMBLY
  11. INSTALL ANTENNAS ACCORDING TO THE ANTENNA SCHEDULE, USING THE SHARPIE LABELS AS REFERENCE
  12. RECONNECT ALL AISG JUMPERS
  13. BEFORE PLUGGING INTO EACH RRH, CONNECT MAIN AISG CABLE INTO CONTROLLER TO ENSURE ALL MOTORS ARE STILL SEEN IN THE DAISY CHAIN
  14. PLUG AISG INTO RRH AND NOTIFY VZW TECH OF COMPLETION
- VZW TECH (USER HELP GUIDE: \\WIN-VZWNET\NORTHEAST\PAPM\_IMPLEMENTATION\SYSTEM PERFORMANCE\USERS\MOSERGA\RET\)
15. POWER ON RADIO EQUIPMENT AND RUN ANY NECESSARY WOS
  16. "DISCOVER" THE RETS
    - A. LOG INTO SAM
      - I. VERIFY RET LICENSE ALLOCATION IN SAM
        - ENBEQUIPMENT>ENB>ACTIVATIONSERVICE>ISAISGALLOWED=CHECKED
      - II. ENABLE BUS SCAN
        - CONFIGURATION> ENABLE AISG BUS SCAN
      - III. ALLOCATE CONFIG RIGHTS
        - CONFIGURATION>ALLOCATION CONFIGURATION RIGHTS
      - IV. VERIFY CORRECT NUMBER OF RETS ARE DISCOVERED
    17. "COMMISSION" THE RETS
      - A. LOG INTO NEM LOCAL
        - I. GO TO TREE VIEW AND HIGHLIGHT RET SUBUNIT
        - II. ENABLE BUS SCAN
          - CONFIGURATION> ENABLE AISG BUS SCAN
        - III. ALLOCATE CONFIG RIGHTS
          - CONFIGURATION>ALLOCATION CONFIGURATION RIGHTS
        - IV. VERIFY CORRECT NUMBER OF RETS ARE DISCOVERED
    18. "PROVISION" THE RETS
      - A. LOG INTO SAM
        - I. OPEN UP THE ENB PROPERTIES AND COMPLETE A FULL RESYNC
        - II. IN THE SEARCH TEXTBOX, SEARCH FOR "RETSUBUNIT"
        - III. VERIFY ALL RETS ARE ACCOUNTED FOR AND "RETSUBUNIT:SECTORNAME", "ANTENNAELECTICALTILT", AND "RETSUBUNIT:MECHANICALTILT " ARE ACCURATE

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SHEET TITLE	<h2>SCOPE OF WORK</h2>																
SHEET NUMBER	<h1>A-7</h1>																

**NOTE:**  
 1) TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER VERIZON SPECIFICATIONS (SEE RF SCHEDULE).  
 2) SEE A-1 & A-2 FOR CABLE LEIGHTS.

**NOTE:**  
 INSTALL GROUNDING KIT TO ALL PROPOSED HYBRID FEEDER CABLES.

**GROUNDING NOTES**

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.



**NB+C ENGINEERING SERVICES, LLC.**  
 1777 SENTRY PARKWAY WEST  
 VISA-17, SUITE 400  
 BLUE BELL, PA 19422  
 (267) 460-9122

NEW YORK SMSA  
 LIMITED PARTNERSHIP d/b/a  
 VERIZON WIRELESS

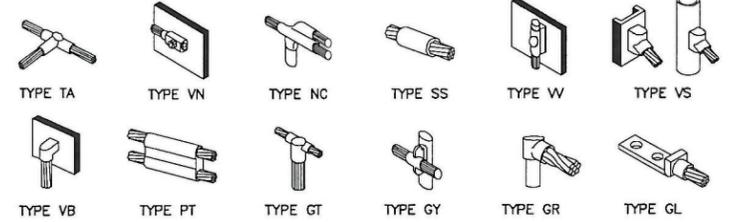
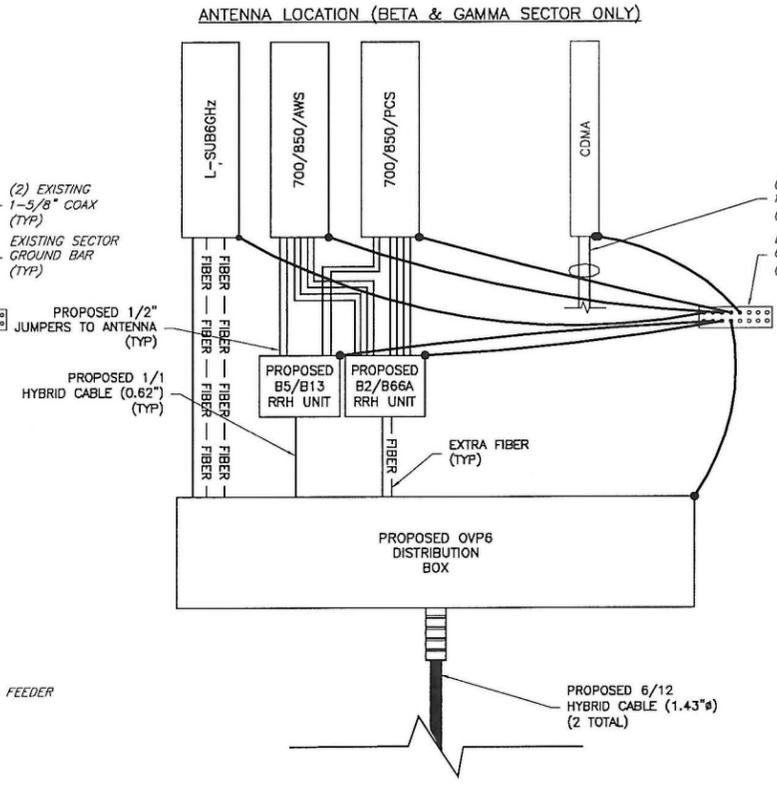
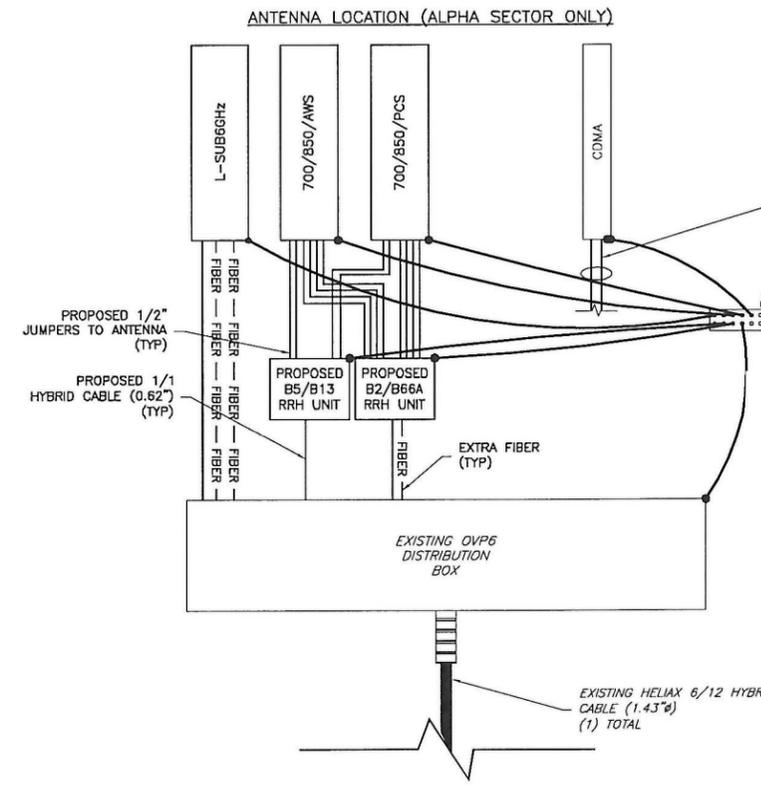


400 WARREN CORPORATE  
 CENTER DRIVE  
 BUILDING D  
 WARREN, NJ 07059

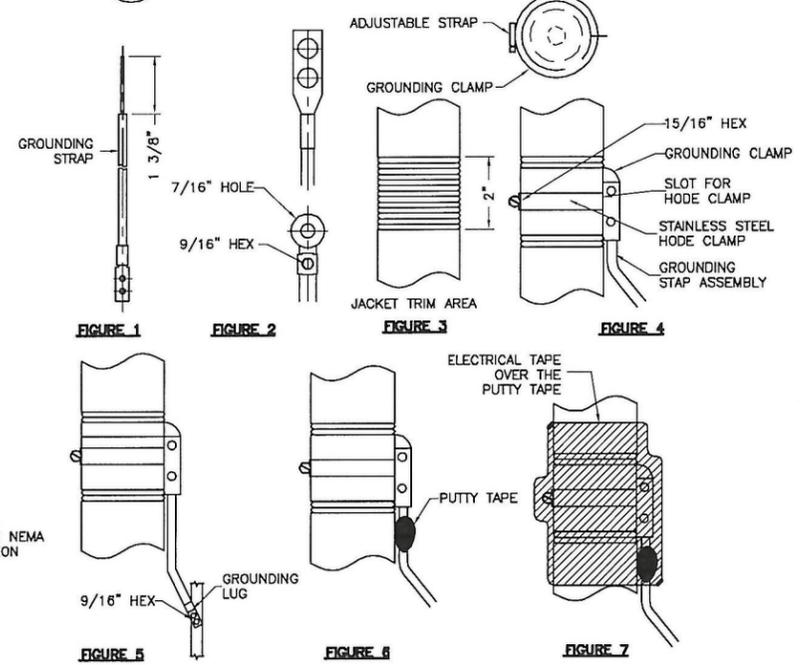
SOUTH BRUNSWICK  
 3960 US ROUTE 1  
 SOUTH BRUNSWICK, NJ 08901  
 TWP OF SOUTH BRUNSWICK  
 MIDDLESEX COUNTY

**REVISIONS**

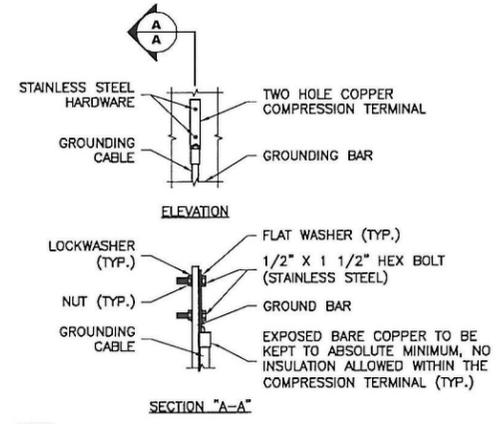
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0	06/24/21	PRELIMINARY CDs	DS



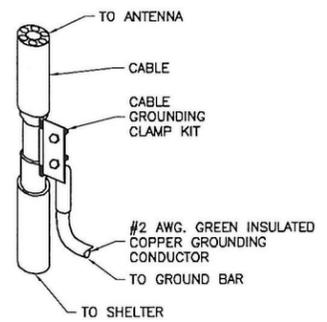
**2 CADWELD GROUNDING CONNECTION DETAILS**  
 NTS



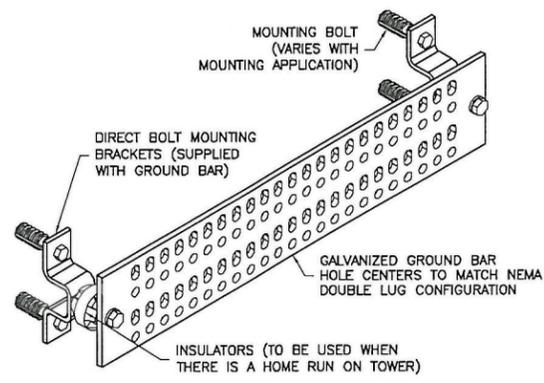
**1 GROUNDING RISER DIAGRAM**  
 NTS



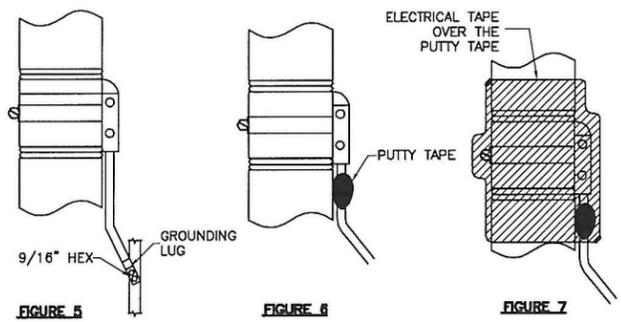
**4 CABLE GROUNDING DETAIL**  
 NTS



**5 GROUND BAR DETAIL**  
 NTS



**6 GROUNDING STRAP WEATHERPROOFING DETAIL**  
 NTS



**3 GROUND BAR CONNECTION DETAIL**  
 NTS

**NOTE:**  
 1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.  
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

STATE OF NEW JERSEY CERTIFICATE OF AUTHORIZATION #246GA28226400 EXP 08/31/22

KRUPAKARAN KOLANDAIVELU, P.E.  
 STATE OF NEW JERSEY  
 PROFESSIONAL ENGINEER  
 LICENSE #24GE04945200

**GROUNDING DETAILS & NOTES**

**G-1**

## POST-MODIFICATION INSPECTION (PMI) REQUIREMENT

1. PMI REQUIRED FOR ALL SITES, REFER TO VERIZON NSTD-446 SECTIONS 1.5 AND 2.3 FOR MORE INFORMATION.
2. REFER TO THE MOUNT ANALYSIS BY NB&C DATED 08/29/21 FOR ADDITIONAL DETAILS.
3. GENERAL CONTRACTOR SHALL PROVIDE THE BELOW DOCUMENTATION TO THE ENGINEER OF RECORD VIA EMAIL TO [VZWMOUNTS@NBCLLC.COM](mailto:VZWMOUNTS@NBCLLC.COM), DROPBOX, OR OTHER FILESHARE METHOD. PROVIDE HIGH RESOLUTION PHOTOS (DO NOT COMPRESS).
4. ENGINEER OF RECORD WILL CONDUCT A REVIEW OF THE PROVIDED DOCUMENTS TO PREPARE A PMI REPORT. ENGINEER OF RECORD WILL NOTIFY GENERAL CONTRACTOR IF ANY ADDITIONAL DOCUMENTATION IS REQUIRED TO COMPLETE THE PMI.
5. PMI DOCUMENTATION SHALL BE SUFFICIENT TO CONFIRM THE UPGRADE WAS BUILT AS DESIGNED, INCLUDING EQUIPMENT CHANGES AND STRUCTURAL MODIFICATIONS, AND IS IN ADDITION TO ANY OTHER REQUIRED CLOSEOUT PACKAGE DOCUMENTATION.
6. REQUIRED DOCUMENTATION FOR PMI INCLUDES THE FOLLOWING AT A MINIMUM. REFER TO THE MOUNT ANALYSIS FOR POSSIBLE ADDITIONAL INFORMATION. IF STRUCTURAL MODIFICATIONS ARE REQUIRED, REFER TO THE MODIFICATION DRAWINGS FOR POSSIBLE ADDITIONAL REQUIREMENTS.

6A. PROVIDE PRE-AND-POST CONSTRUCTION PHOTOS OF EACH SECTOR FROM THE MOUNT ELEVATION AND THE GROUND. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PHOTOS PROVIDED PROVIDE POSITIVE CONFIRMATION THAT THE MODIFICATION/UPGRADE WAS COMPLETED IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS AND ANY STRUCTURAL/MOUNT MODIFICATION DRAWINGS. CONTRACTOR SHALL RELAY ANY DATA THAT CAN IMPACT THE PERFORMANCE OF THE MOUNT OR MOUNT MODIFICATION, INCLUDING SAFETY ISSUES. PHOTOS SHALL HAVE A DATE/TIME STAMP IN THE PHOTO. REFER TO THE MOUNT ANALYSIS FOR FILE STRUCTURE SCHEDULE OF PHOTOS. PROVIDE PHOTOS OF THE GATE SIGNS AND CARRIER SHELTER TO IDENTIFY THE TOWER OWNER, SITE NAME, SITE NUMBER, ETC.

6B. VERIFICATION OF THE MEMBER CONNECTIONS, BRACING, AND RELEVANT DIMENSIONS.

6C. VERIFICATION OF THE ANTENNA AND OTHER EQUIPMENT CONFIGURATION (PHOTOS OF MODEL NUMBERS/TAGS FOR ALL EQUIPMENT, AS WELL AS THE FEEDLINE CONFIGURATION). TAKE PHOTOS OF THE BACK SIDE OF EACH SECTOR AS WELL AS CLOSE-UPS OF ALL EQUIPMENT. PHOTOS SHOULD CONFIRM THE HORIZONTAL AND VERTICAL POSITIONING OF THE ANTENNAS AND EQUIPMENT AND SHALL HAVE TAPE MEASURES IN THE PHOTOS TO CONFIRM.

6D. FOR TIE-BACKS, STRUTS, MOUNT PIPES, PHOTOS TO CONFIRM THE ANGLES AND LOCATION OF ATTACHMENT POINT AT BOTH ENDS OF MEMBER, AS WELL AS DIMENSIONS, THICKNESS, AND LENGTHS OF THE MEMBERS. REFER TO THE CHECKLIST IN THE MOUNT ANALYSIS FOR ADDITIONAL INFORMATION.

6E. MOUNT ATTACHMENT TO THE SUPPORTING STRUCTURE, INCLUDING ANY KICKERS OR SUPPORTS, OR TIEBACKS.

6F. MATERIALS USED (TYPE, STRENGTH, DIMENSIONS, ETC). PROVIDE BILL OF MATERIALS AND MATERIAL SPEC TO CONFIRM MATERIAL GRADES AND SIZES. PROVIDE DOCUMENTATION FOR GALVANIZATION OF MEMBERS WHETHER HOT-DIPPED OR COLD-GALVANIZED. IF MATERIALS DIFFER FROM THOSE SPECIFIED ON THESE DRAWINGS, PROVIDE DOCUMENTATION THAT THE "EQUIVALENT" MATERIAL HAS THE SAME SPECIFICATIONS.

6G. MOUNT ORIENTATION/AZIMUTH AND ELEVATION. PROVIDE TAPE DROP PHOTOS OF ANTENNA CENTERLINE(S) AND MOUNT ATTACHMENT POINTS TO THE SUPPORTING STRUCTURE. IF THERE ARE MULTIPLE RAD CENTERS, PROVIDE PHOTOS OF ALL ELEVATIONS.

## POST-MODIFICATION INSPECTION (PMI) REQUIREMENT CONT.

6H. VERIFICATION THAT THE INSTALL HAS NOT CAUSED DAMAGE TO OR UNPLANNED OBSTRUCTION OF THE FOLLOWING:

- CLIMBING FACILITIES
- SAFETY CLIMB IF PRESENT, INCLUDING PHOTOS ABOVE AND BELOW THE MOUNT.
- LIGHTING SYSTEM
- OTHER INSTALLED SYSTEMS ON THE STRUCTURE.
- CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS SUPPORTED AND NOT ADVERSELY AFFECTED BY THE INSTALLATION OF NEW COMPONENTS. THIS MAY INVOLVE THE INSTALLATION OF WIRE ROPE GUIDES OR OTHER ITEMS TO PROTECT THE WIRE ROPE.

6I. OTHER ITEMS DETERMINED BY THE STRUCTURAL ENGINEER TO ENSURE THE MOUNT WILL PERFORM AS DESIGNED. PHOTOS OF RELEVANT MEASUREMENTS, WITH SUFFICIENT DETAILS TO CONFIRM CONNECTION DETAILS, PLACEMENT OF EQUIPMENT, WALL ANCHOR DETAILS, BALLAST QUANTITIES, STRUCTURAL MODIFICATIONS ETC. DIAMETERS AND THICKNESSES OF BOLTS/THREADED RODS/ANGLES/TUBES ETC SHALL HAVE PHOTOS CONFIRMING CALIPER MEASUREMENTS.

- CONFIRMATION THAT ALL HARDWARE WAS PROPERLY INSTALLED, AND EXISTING HARDWARE WAS INSPECTED FOR ANY ISSUES.
- FOR BALLAST SLEDS, DOCUMENTATION OF THE WEIGHT OF BALLAST IN EACH SECTOR.
- FOR WALL ANCHORS, PHOTOS AND MEASUREMENTS OF OUTSIDE AND INSIDE OF CONNECTIONS. DOCUMENTATION OF ADHESIVE USED, SIZE AND LENGTH OF ANCHORS, EFFECTIVE EMBEDMENT DEPTH OF THE ANCHORS, GROUTING OF HOLLOW WALLS, SPACING AND EDGE DISTANCE MEASUREMENTS, AND ANY THROUGH-BOLTS OR BACKING PLATES.
- FOR STUD WELD CONNECTIONS, DOCUMENTATION TO CONFIRM SURFACE PREPARATION, STUD WELD SIZE, GRADE, LENGTH, AND SPACING.
- FOR FABRICATED PARTS, SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
- FOR WELDED PARTS, CERTIFIED WELD INSPECTION.
- FOR BOLTED PARTS, BOLT INSTALLATION AND TORQUE.

7. CONTRACTOR SHALL PROVIDE, IN ADDITION TO THE ABOVE, AS-BUILT CDS WITH REDLINES IDENTIFYING ANY CHANGES. THE AS-BUILTS SHALL THE CONTRACTOR'S NAME, PREPARER'S SIGNATURE, AND DATE.

8. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PMI ("FAILED PMI"), THE CONTRACTOR SHALL WORK WITH THE ENGINEER OF RECORD TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

8A. CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENTAL PMI.

8B. OR, WITH THE EOR'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT/UPGRADE USING THE AS-BUILT CONDITION.

9. NOTE: IF LOADING IS DIFFERENT THAN THAT SHOWN IN THESE CONSTRUCTION DRAWINGS OR STRUCTURAL/MOUNT MODIFICATION DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION.

10. THE ENGINEERING FIRM PERFORMING AN ANALYSIS SHALL PROVIDE A CONTRACTOR'S PHOTO LOG AND CHECKLIST TO BE COMPLETED BY THE INSTALLING CONTRACTOR. THE CONTRACTOR SHALL THEN PROVIDE POST-INSTALLATION INFORMATION TO THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL REVIEW THE DOCUMENTS FOR ANY DEFICIENCIES THAT CAN BE DETERMINED FROM THE DESKTOP REVIEW OF THE DATA. THE ENGINEERING FIRM SHALL THEN PROVIDE DOCUMENTATION TO VZW THAT THE SITE IS COMPLETED, AND THE PMI REPORT IS APPROVED.

ENGINEER	 <b>TOTALLY COMMITTED.</b> <small>NB+C ENGINEERING SERVICES, LLC.                  1777 SENTRY PARKWAY WEST                  SUITE 117, SUITE 400                  BLUE BELL, PA 19422                  (267) 460-0122</small>																
APPLICANT	<small>NEW YORK SMSA                  LIMITED PARTNERSHIP d/b/a                  VERIZON WIRELESS</small>  <small>400 WARREN CORPORATE                  CENTER DRIVE                  BUILDING D                  WARREN, NJ 07059</small>																
SITE INFORMATION	<small>SOUTH BRUNSWICK                  3960 US ROUTE 1                  SOUTH BRUNSWICK, NJ 08901                  TWP OF SOUTH BRUNSWICK                  MIDDLESEX COUNTY</small>																
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