STATE OF CONNECTICUT
*CONNECTICUT SITING COUNCIL*
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

March 1, 2013

Patricia Masterson
Site Acquisition Manager
Goodman Networks
Two Willow Street, Suite 101
Southborough, MA 01745

RE: **EM-SPRINT-078-130215A** – Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at 1725 Stafford Road, Mansfield, Connecticut.

Dear Ms. Masterson:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated February 14, 2013. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut

State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Elizabeth Patterson, Mayor, Town of Mansfield
Linda M. Painter, Director of Planning and Development, Town of Mansfield

GoodmanNetworks
Network Knowledge... Delivered.

EM-SPRINT-078-130215A

February 14, 2013

ORIGINAL

Linda Roberts
Executive Director
Connecticut Siting Counsel
Ten Franklin Square
New Britain, CT 06051
Linda Roberts, Executive Director

RECEIVED
FEB 15 2013
CONNECTICUT
SITING COUNCIL

Re: Notice of Exempt Modification – Antenna Swap
1725 Stafford Road, Mansfield, Connecticut – Sprint ID CT33XC557

Dear Ms. Roberts:

Sprint Spectrum is planning to consolidate multiple network technologies into one seamless network with the goal of increasing efficiency and enhancing network coverage, call quality and data speeds for customers across Connecticut. Pursuant §16-50j-73 to of the Regulations of Connecticut State Agencies (RCSA), please accept this letter and attachments as notification of Sprint's intent to make exempt modifications, under RCSA §16-50j-72(b)(2), to its existing telecommunications facility at 1725 Stafford Road, Mansfield, Connecticut. In accordance with RCSA §16-50j-73, a copy of this letter was sent to Matthew W. Hart, Town Manager, Town of Mansfield.

Sprint currently maintains six (6) antennas at 130 feet on the existing 170 foot tower at the address referenced above. Sprint intends to replace its existing six (6) CDMA antennas with three (3) Multimodal antennas at their same current height of 130 feet. Sprint will be replacing its existing six (6) lines of coaxial cable with three (3) smaller lines of Hybriflex cable and installing six (6) RRH's. Sprint will also be swapping two (2) existing ground cabinets with two (2) new cabinets and adding one (1) cabinet and one (1) fiber junction box. This work will result in a net reduction of antennas, from six (6) to three (3), and will not increase the height of the tower or the size of the compound. Please find included with this letter compound, elevation and overhead drawings which depict Sprint's proposed modifications.

Sprint's planned modifications fall squarely within the activities permitted in RCSA §16-50j-72(b)(2) in that:

1. The proposed modifications will not increase the existing tower height;

2. The proposed modifications will not extend the boundaries of the site by any dimension;

3. The proposed modifications will not increase the noise levels at the existing facility by six (6) decibels or more;

4. The proposed modifications will not increase the total radio frequency electromagnetic radiation power density to or above the standards adopted by the Federal Communications Commission. Please find included with this letter a Radio Frequency Emissions Analysis Report.

Also included with this letter is a Structural Assessment confirming that the foundation and tower are sufficient to support Sprint's proposed modifications.

For the foregoing reasons, Sprint respectfully requests that its proposed modifications to the existing tower located at the address referenced above constitute an exempt modification under RSCA §16-50j-72(b)(2).

Please do not hesitate to contact me should you have any questions. Thank you for your consideration.

Respectfully,

Patricia Masterson
Site Acquisition Manager
Goodman Networks, *an authorized representative of Sprint Nextel*
Two Willow Street, Suite 101
Southborough, MA 01745
Office: (972) 421-5903
Mobile: (214) 534-7276

Attachments

Cc: Matthew W. Hart, Town Manager, Town of Mansfield

EBI Consulting
environmental | engineering | due diligence

# RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
# EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Sprint Existing Facility

Site ID: CT33XC557

TCP Mansfield
1725 Stafford Road
Mansfield, CT 06268

**January 9, 2013**

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

January 9, 2013

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Emissions Values for Site: **CT33XC557 – TCP Mansfield**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 1725 Stafford Road, Mansfield, CT, for the purpose of determining whether the emissions from the proposed Sprint equipment upgrades on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the cellular band is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

## CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 1725 Stafford Road, Mansfield, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all emissions were calculated using the following assumptions:

1) 2 CDMA Carriers (1900 MHz) were considered for each sector of the proposed installation.
2) 1 CDMA Carrier (850 MHz ) was considered for each sector of the proposed installation
3) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
4) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
5) The antenna used in this modeling is the RFS APXVSPP18-C-A20 and the RFS APXV9ERR18-C-A20. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSPP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXV9ERR18-C-A20 has a 14.9 dBd gain value at its main lobe at 1900 MHz and 11.9 dBd at its main lobe for 850 MHz. All `calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.

6) The antenna mounting height centerline of the proposed antennas is **130 feet** above ground level (AGL)
7) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

| Site ID | CT33XC557 - TCP Mansfield |
|---|---|
| Site Addresss | 1725 Stafford Road, Mansfield, CT, 06268 |
| Site Type | Monopole |

**Sector 1**

| Antenna Number | Antenna Make | Antenna Model | Radio Type | Frequency Band | Technology | Power Out Per Channel (Watts) | Number of Channels | Composite Power | Antenna Gain in direction of sample point (dBd) | Antenna Height (ft) | analysis height | Cable Size | Cable Loss (dB) | Additional Loss | ERP | Power Density Value | Power Density Percentage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1a | RFS | APXVSPP18-C-A20 | RRH | 1900 MHz | CDMA / LTE | 20 | 2 | 40 | 15.9 | 130 | 124 | 1/2 " | 0.5 | 0 | 1386.9474 | 32.42818 | 3.24282% |
| 1a | RFS | APXVSPP18-C-A20 | RRH | 850 MHz | CDMA / LTE | 20 | 1 | 20 | 13.4 | 130 | 124 | 1/2 " | 0.5 | 0 | 389.96892 | 9.117853 | 1.60809% |
| | | | | | | | | | | | | | | Sector total Power Density Value: | | 4.851% | |

**Sector 2**

| Antenna Number | Antenna Make | Antenna Model | Radio Type | Frequency Band | Technology | Power Out Per Channel (Watts) | Number of Channels | Composite Power | Antenna Gain in direction of sample point (dBd) | Antenna Height (ft) | analysis height | Cable Size | Cable Loss (dB) | Additional Loss | ERP | Power Density Value | Power Density Percentage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2a | RFS | APXV9ERR18-C-A20 | RRH | 1900 MHz | CDMA / LTE | 20 | 2 | 40 | 14.9 | 130 | 124 | 1/2 " | 0.5 | 0 | 1101.6915 | 25.75862 | 2.57586% |
| 2a | RFS | APXV9ERR18-C-A20 | RRH | 850 MHz | CDMA / LTE | 20 | 1 | 20 | 11.9 | 130 | 124 | 1/2 " | 0.5 | 0 | 276.07685 | 6.454946 | 1.13844% |
| | | | | | | | | | | | | | | Sector total Power Density Value: | | 3.714% | |

**Sector 3**

| Antenna Number | Antenna Make | Antenna Model | Radio Type | Frequency Band | Technology | Power Out Per Channel (Watts) | Number of Channels | Composite Power | Antenna Gain in direction of sample point (dBd) | Antenna Height (ft) | analysis height | Cable Size | Cable Loss (dB) | Additional Loss | ERP | Power Density Value | Power Density Percentage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3a | RFS | APXV9ERR18-C-A20 | RRH | 1900 MHz | CDMA / LTE | 20 | 2 | 40 | 14.9 | 130 | 124 | 1/2 " | 0.5 | 0 | 1101.6915 | 25.75862 | 2.57586% |
| 3a | RFS | APXV9ERR18-C-A20 | RRH | 850 MHz | CDMA / LTE | 20 | 1 | 20 | 11.9 | 130 | 124 | 1/2 " | 0.5 | 0 | 276.07685 | 6.454946 | 1.13844% |
| | | | | | | | | | | | | | | Sector total Power Density Value: | | 3.714% | |

| Site Composite MPE % | |
|---|---|
| Carrier | MPE % |
| Sprint | 12.280% |
| Town | 3.730% |
| T-Mobile | 1.990% |
| AT&T | 15.280% |
| Verizon Wireless | 7.700% |
| **Total Site MPE %** | **40.980%** |

EBI Consulting
environmental | engineering | due diligence

## Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the Sprint facility are **12.280% (4.851% from sector 1 and 3.714% each from sectors 2 & 3)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **40.980%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

**EBI Consulting**
21 B Street
Burlington, MA 01803

# Structural Analysis Report

## 170 ft. Tapered Monopole

## 1725 Stafford Road, Mansfield, CT 06268
## Tolland County
## (CT-5031, Mansfield Center 2)

Global Tower Services

750 Park of Commerce Boulevard
Suite 300
Boca Raton, FL 33487-3612

P: 605.422.1548
F: 605.422.1550

## Sprint
## Sprint Site Number: CT33XC557
## Sprint Site Name: TCP / Mansfield

## Prepared by:

**Global Tower Services, LLC**
**Michael T. De Boer, P.E.**
**Senior Director of Engineering**

**February 12, 2013**

Global Tower Services, LLC
February 12, 2013
Mansfield Center 2
CT-5031

## Table of Contents

**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

## INTRODUCTION

We have completed the structural analysis for the existing 170 ft. tapered monopole located in Tolland County (1725 Stafford Road, Mansfield), CT. The objective of the analysis is to determine if the existing tapered monopole design is in conformance / compliance with the current codes and standards for the proposed equipment installation.

TSTower written by TowerSoft was utilized in performing the analysis. This program is a commercially available software program which was used to create a non-linear three-dimensional beam model and calculate member stresses for various loading conditions.

## DESCRIPTION OF STRUCTURE

The existing structure is a 170 ft. tapered monopole. The original monopole manufacturer is Valmont / PennSummit, West Hazelton, PA. The existing monopole consists of four (4) sections with slip connections.

Original monopole drawings provided by Valmont / PennSummit were used to model the monopole steel. (Valmont / PennSummit Design Number 19122, December 6, 2002) The monopole shaft is manufactured from 65 ksi steel, the base plate is 55 ksi steel and the anchor bolts are A615 Grade 75 steel.

The monopole, for the purpose of analysis, is considered to be in good condition with no defects.

## DESIGN PARAMETERS

| | |
|---|---|
| - Standard: | ANSI/TIA-222-F-1996 |
| - Basic Wind Speed: | 85 mph (fastest mile)<br>105 mph (3-sec gust) |
| - Serviceability Wind Speed: | 50 mph (fastest mile) |
| - Basic Wind Speed with Ice: | 73.95 mph (fastest mile) |
| - Design Ice Thickness: | 0.50 (inch) |
| - Allowable Stress Increase: | 1/3 for wind loading conditions |

**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

## ANTENNA LOADING INFORMATION

Existing and Reserved Loading Information

| Antenna Description/Mount | Qty | Elev. (ft.) | TX Lines | Qty | Customer |
|---|---|---|---|---|---|
| DB844F90A-SX_0 / LP Platform | 6 | 170 | 1 5/8" | 6 | Verizon |
| Antel BXA-185063/12CF / LP Platform | 3 | 170 | 1 5/8" | 3 | Verizon |
| Powerwave P65-16-XL-2 / LP Platform | 3 | 170 | 1 5/8" | 3 | Verizon |
| Andrew HBX-6516DS-VTM / LP Platform | 6 | 160 | 1 5/8" | 12 | MetroPCS |
| Powerwave 7770 / LP Platform | 6 | 150 | 1 5/8" | 12 | AT&T |
| Powerwave P65-17-XLH-RR / LP Platform | 1<br>3(R) | 150 | | | AT&T |
| KMW AM-X-CD-16-65-0-0T / LP Platform | 2 | 150 | | | AT&T |
| Powerwave 21401 TMAs / LP Platform | 6 | 150 | | | AT&T |
| Powerwave 21903 Diplexers / LP Platform | 6 | 150 | | | AT&T |
| Ericsson RRUS11 / Ring Mount | 6 | 150 | ½" | 6 | AT&T |
| Raycap DC6-48-60-18-RF / LP Platform | 1 | 150 | Fiber<br>Power | 1<br>2 | AT&T |
| RET System | 1 | 150 | 3/8" RET | 1 | AT&T |
| EMS RR-90-17-02 DPL2 / LP Platform | 6 | 140 | 1 5/8" | 12 | T-Mobile |
| DB980F90E-M / LP Platform **(Temporary loading)** | 6 | 130 | 1 5/8" | 6 | Sprint |

**Note: Temporary Sprint loading will remain installed for 4 months and has been considered in this analysis.**

Proposed Loading Information

| Antenna Description/Mount | Qty | Elev. (ft.) | TX Lines | Qty | Customer |
|---|---|---|---|---|---|
| RFS APXVSPP18-C-A20 / LP Platform | 1 | 130 | 1 ¼" Hybrid | 1 | Sprint |
| RFS APXV9ERR18-C-A20 / LP Platform | 2 | 130 | 1 ¼" Hybrid | 2 | Sprint |
| ALU 800 MHz RRH / LP Platform | 3 | 130 | | | Sprint |
| ALU 1900 MHz RRH / LP Platform | 3 | 130 | | | Sprint |

**Note: Final configuration for Sprint (After temporary loading is removed): Three (3) panel antennas, six (6) RRHs, and three (3) 1 ¼" hybrid lines. All lines are considered to be on the inside of the monopole unless otherwise noted.**

**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

## ANALYSIS RESULTS

### Structure

The existing 170 ft. tapered monopole **is structurally capable** of supporting the proposed equipment. **(See table below)**

| Monopole Member | % Capacity | Results |
|---|---|---|
| Monopole Shaft | 72 | Pass |
| Monopole Base Plate | 66 | Pass |
| Anchor Bolts | 57 | Pass |

**(105 percent is considered acceptable.)**

### Foundation

The existing foundation has also been evaluated. The existing foundation was found to be **acceptable** with the proposed equipment installed. **(See table below)**

| Foundation Component | Design Reactions | Analysis Reactions | % Capacity | Results |
|---|---|---|---|---|
| Overturning Moment | 5555.0 Ft-Kips | 4015.5 Ft-Kips | 72 | Pass |
| Shear | 45.0 Kips | 30.4 Kips | 68 | Pass |

**Monopole Rating: 72%**

## SUMMARY AND CONCLUSIONS

The existing 170 ft. tapered monopole located in Tolland County (1725 Stafford Road, Mansfield), CT **is structurally acceptable** based upon the EIA-222-F 1996 Standard and the local building code with the proposed equipment installed.

If any other changes are proposed, another structural analysis should be performed to assure the tower is in compliance / conformance with the applicable codes and standards.

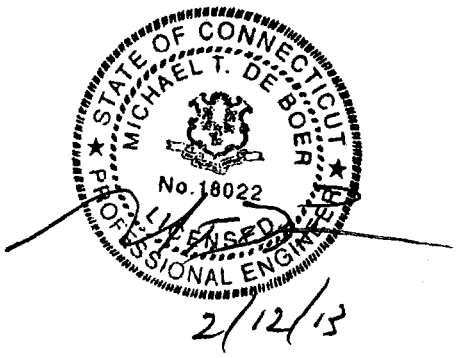
**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

**SUMMARY AND CONCLUSIONS continued**

Should any further questions arise, please contact the Global Tower Services, LLC Engineering Department at 941-400-2206.

**Global Tower Services, LLC**

Reviewed by:




Phillip Nejman, E.I.
GTS Engineering

Michael T. De Boer, P.E.
Senior Director of Engineering

**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

## Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but not necessarily limited to:

- Information supplied by the client regarding the structure itself, the antenna and transmission line loading on the structure and it components, or relevant information.

- Information from drawings in possession of Global Tower Services, LLC, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Global Tower Services, LLC and used in the performance of our engineering services is correct and complete. In the absence of information contrary, we consider that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore consider that their capacity has not significantly changed from the original design condition.

All services will be performed to the codes and standards specified by the client, and we do not imply to meet any other code and standard requirements unless explicitly agreed to in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes and standards, the client shall specify the exact requirements. In the absence of information to the contrary, all work will be performed in accordance with the revision of ANSI/TIA/EIA-222 requested.

All services are performed, results obtained and recommendations made in accordance with the generally accepted engineering principles and practices. Global Tower Services, LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

**Global Tower Services, LLC**
February 12, 2013
Mansfield Center 2
CT-5031

**Disclaimer of Warranties**

The engineering services by **Global Tower Services, LLC** in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. **Global Tower Services, LLC** does not analyze the fabrication, including welding, except as included in this report.

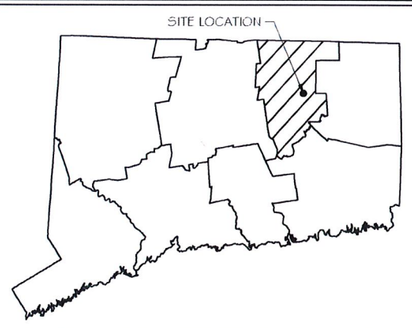
The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines. Any mention of structural modifications are reasonable estimates and should not be used a precise construction document. Precise modification drawings are obtainable from **Global Tower Services, LLC** but are beyond the scope of this report.

**Global Tower Services, LLC** makes no warranties, expressed or implied, in connection with this report and disclaim any liability arising from material, fabrication and erection of this tower. **Global Tower Services, LLC** will not be responsible whatsoever for or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of **Global Tower Services, LLC** pursuant to this report will be limited to the total fee received for preparation of this report.

## VICINITY MAP


## AERIAL VIEW OF SITE


## GENERAL LOCATION




DRIVING DIRECTIONS:

I-91 NORTH TO I-84 EAST TO EXIT 68 (ROUTE 195). TURN RIGHT ONTO ROUTE 195 SOUTH. TRAVEL FOR APPROX 3.3 MILES TO THE INTERSECTION OF ROUTE 195/32. TURN LEFT ONTO ROUTE 32. THEN TURN LEFT INTO SCHOOL BUS GARAGE.

## 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 COVERING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE 2009
2. ACCESSIBILITY CODE IBC 2009, CHAPTER 11 & ICC/ ANSI A117.1-2003
3. 2008 NATIONAL ELECTRIC CODE
4. FIRE/ LIFE SAFETY CODE- IFC 2009
5. ENERGY CODE IECC 2009

## PROJECT NOTES

1. THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY CONSISTING OF BTS EQUIPMENT AND ANTENNAS.
2. SIGNALS FROM THE ANTENNA SHALL NOT INTERFERE WITH ANY EXISTING COMMUNICATION SITES. ALL ITEMS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED.
3. THE PROPOSED ANTENNAS ARE ATTACHED TO EITHER BUILDING OR ANTENNA FRAME OR TO BOTH.
4. THE PROPOSED WORK WILL HAVE NO EFFECT ON STRUCTURAL STABILITY. ALL WORK SHALL BE PERFORMED IN STRICT ADHERENCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
5. REFERENCE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES FOR GENERAL REQUIREMENTS.
6. THIS IS AN UNMANNED FACILITY- NO SOLID WASTE. THE SITE WILL CREATE NO TRASH, THUS REQUIRES NO DUMPSTER.
7. EQUIPMENT IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS THEREFORE NOT REQUIRED.
8. OWNER & TENANT MAY, FROM TIME TO TIME AT TENANT'S OPTION, REPLACE THIS EXHIBIT WITH AN EXHIBIT SETTING FORTH THE LEGAL DESCRIPTION OF THE SITE, OR WITH ENGINEERED OR AS-BUILT DRAWING DEPICTING THE SITE OR ILLUSTRATING STRUCTURAL MODIFICATIONS OR CONSTRUCTION PLANS OF THE SITE. ANY VISUAL OR TEXTUAL REPRESENTATION OF THE EQUIPMENT LOCATED WITHIN THE SITE CONTAINED IN THESE OTHER DOCUMENTS IS ILLUSTRATIVE ONLY, AND DOES NOT LIMIT THE RIGHTS OF SPRINT AS PROVIDED FOR IN THE AGREEMENT. THE LOCATIONS OF ANY ACCESS AND UTILITY EASEMENTS ARE ILLUSTRATIVE ONLY. ACTUAL LOCATIONS MAY BE DETERMINED BY TENANT AND/OR THE SERVICING UTILITY COMPANY IN COMPLIANCE WITH LOCAL LAWS AND REGULATIONS.

## PROJECT DESCRIPTION

APPLICANT PROPOSED TO INSTALL ANTENNAS AND WEATHERPROOF EQUIPMENT CABINETS FOR AN UNMANNED PERSONAL COMMUNICATIONS SYSTEM WIRELESS CALL SITE AT AN EXISTING TELECOMMUNICATIONS FACILITY. PROPOSED FACILITY IS NOT STAFFED AND IS VISITED ONCE A MONTH FOR MAINTENANCE PURPOSES ONLY; THEREFORE, SANITARY, SEWER, GAS, POTABLE WATER AND PLUMBING ARE NOT REQUIRED.

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT

**CALL BEFORE YOU DIG 811 OR 1-800-922-4455**

CONNECTICUT PUBLIC ACT 87-71 REQUIRES MIN. 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE.

DO NOT SCALE DRAWINGS:

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

## APPROVALS

ALU CONSTRUCTION PROJECT MANAGER: _____

ALU SITE ACQUISITION: _____

ALU SPRINT REPRESENTATIVE: _____

ALU RF ENGINEER: _____

LANDLORD/ OWNER: _____

# CONSTRUCTION DRAWINGS

Sprint®

## TCP/MANSFIELD
## SITE #: CT33XC557

1725 STAFFORD ROAD
MANSFIELD, CT 06268

MONOPOLE

## SHEET INDEX

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| SP-2 | SPECIFICATIONS |
| SP-3 | SPECIFICATIONS |

SITE:

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| A-1 | EQUIPMENT PLAN |
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| A-3 | ANTENNA DETAILS & COAX SCHEDULE |
| A-4 | ANTENNA PLUMBING DIAGRAM & SPECIFICATIONS |
| A-5 | RF INFORMATION & COAX COLOR CODING |
| A-6 | EQUIPMENT DETAILS & SPECIFICATIONS |
| A-7 | EQUIPMENT DETAILS & SPECIFICATIONS |

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| E-4 | GROUNDING DETAILS |
| E-5 | GROUNDING DETAILS |

## PROJECT INFORMATION

APPLICANT ID:
SITE NAME: TCP/MANSFIELD
SITE #: CT33XC557

PROPERTY LANDLORD:
TOWN OF MANSFIELD
4 SOUTH EAGLEVILLE ROAD
STORRS, CT 06268

SITE MANAGEMENT:
GLOBAL TOWER PARTNERS
SITE NAME: MANSFIELD CENTER 2
SITE #: US-CT-5031

SITE ADDRESS:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
ZONING CLASSIFICATION:

SITE DATA:

| | |
|---|---|
| LATITUDE: | 41°-50'-09.43" N (41.835953°) |
| LONGITUDE: | 72°-18'-28.25" W (-72.307847°) |
| GROUND ELEVATION: | 350 FT AMSL |
| TOWER HEIGHT: | ±170 FT AGL |

POWER COMPANY:
CONNECTICUT LIGHT & POWER
PH.: (800) 286-2000

TELEPHONE COMPANY:
AT&T
PH.: (800) 288-2020

HOSPITAL
WINDHAM HOSPITAL
112 MANSFIELD AVENUE
WILLIAMANTIC, CT 06226
PH.:(860) 456-9116

FIRE HOUSE
EAGLEVILLE FIRE DEPARTMENT 2
1722 STORRS ROAD
STORRS, CT 06268
PH.: (860) 429-0035

APPLICANT:
SPRINT
6391 SPRINT PARKWAY
OVERLAND PARK, KS 66251

PLANS PREPARED BY:
RAMAKER & ASSOCIATES, INC.
120 DALLAS STREET
SAUK CITY, WI 53583
CONTACT: KEITH BOHNSACK, P.E., PROJECT MANAGER
PH.: (608) 643-4100
FAX: (608) 643-7999

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6391 Sprint Parkway
Overland Park, KS 66251

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RAMAKER & ASSOCIATES, INC.
1120 Dallas Street, Sauk City, WI 53583
Phone: 608-643-4100 Fax: 608-643-7999
www.Ramaker.com

NETWORK VISION
MMBTS LAUNCH
NORTHERN CT MARKET

Certification & Seal:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Connecticut.

STATE OF CONNECTICUT
JAMES R. SKOWRONSKI
No. 26266
LICENSED
PROFESSIONAL ENGINEER

Signature _____ Date: 2/14/2013

| MARK | DATE | DESCRIPTION |
|---|---|---|
| C | 2/14/13 | STAMPED PRELIMINARY PERMIT CD'S |
| B | 10/24/12 | PRELIM. FINAL CD'S |
| A | 9/25/12 | 90% CD REVIEW |

ISSUE PHASE: PRELIM PERMIT — DATE ISSUED: 02/14/2013

PROJECT TITLE:
TCP/MANSFIELD
SITE #:CT33XC557

PROJECT INFORMATION:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

SHEET TITLE:
TITLE SHEET

SCALE: NONE

PROJECT NUMBER: 23013
SHEET NUMBER: T-1



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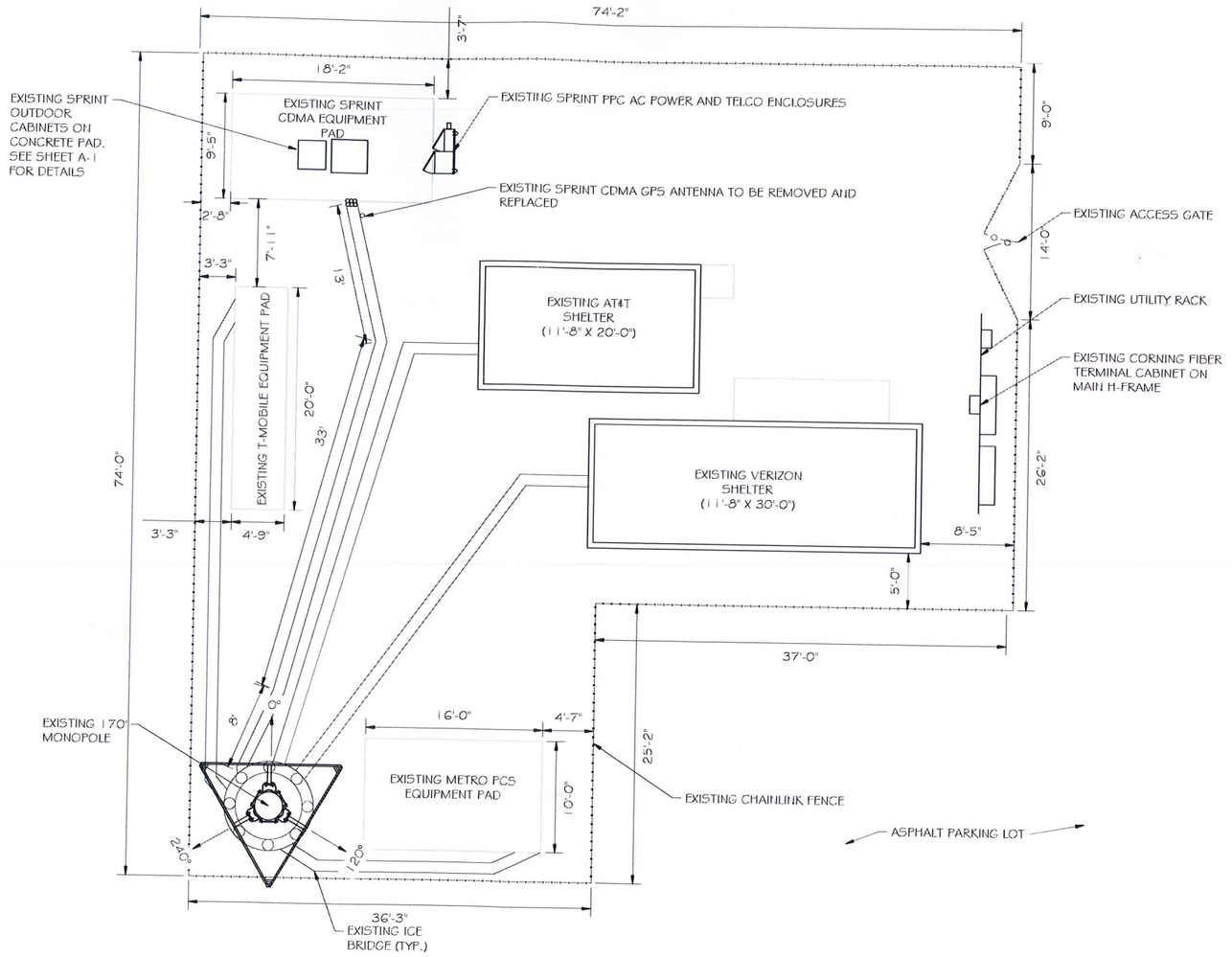
## VICINITY MAP


GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS, AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY, OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY, OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THE FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
8. TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/EIA/TIA 222-G REQUIREMENTS.
9. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
10. CONTRACTOR SHALL MAKE A UTILITY "ONE-CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
13. RAMAKER & ASSOCIATES HAS NOT PERFORMED A STRUCTURAL ANALYSIS FOR THIS PROJECT. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY SPRINT'S AGENT 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.
14. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
15. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
16. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF; THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
17. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
18. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
19. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.




SITE PLAN
SCALE: 1" = 12.5'

Sprint
6391 Sprint Parkway
Overland Park, KS 66251

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www.Ramaker.com

# NETWORK VISION MMBTS LAUNCH NORTHERN CT MARKET

Certification & Seal:
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Connecticut.

STATE OF CONNECTICUT · JAMES R. SKOWRONSKI · No. 26266 · LICENSED PROFESSIONAL ENGINEER

Signature: James R. Skowronski Date: 2/14/2013

| MARK | DATE | DESCRIPTION |
|---|---|---|
| C | 2/14/13 | STAMPED PRELIMINARY PERMIT CD'S |
| B | 10/24/12 | PRELIM FINAL CD'S |
| A | 9/25/12 | 90% CD REVIEW |

ISSUE PHASE: PRELIM PERMIT — DATE ISSUED: 02/14/2013

PROJECT TITLE:
TCP/MANSFIELD
SITE #:CT33XC557

PROJECT INFORMATION:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

SHEET TITLE:
OVERALL SITE PLAN

0 6.25' 12.5' 25'
11" x 17" - 1" = 12.5'
22" x 34" - 1" = 6.25'

PROJECT NUMBER: 23013
SHEET NUMBER: C-1



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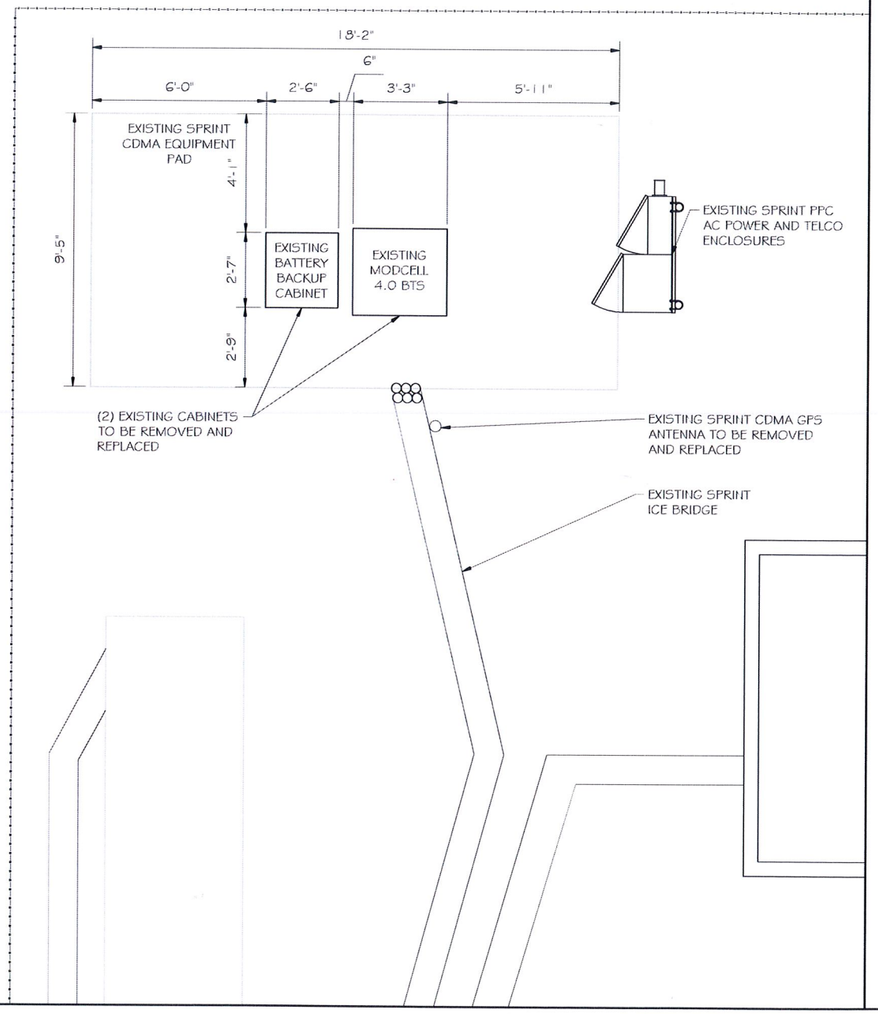
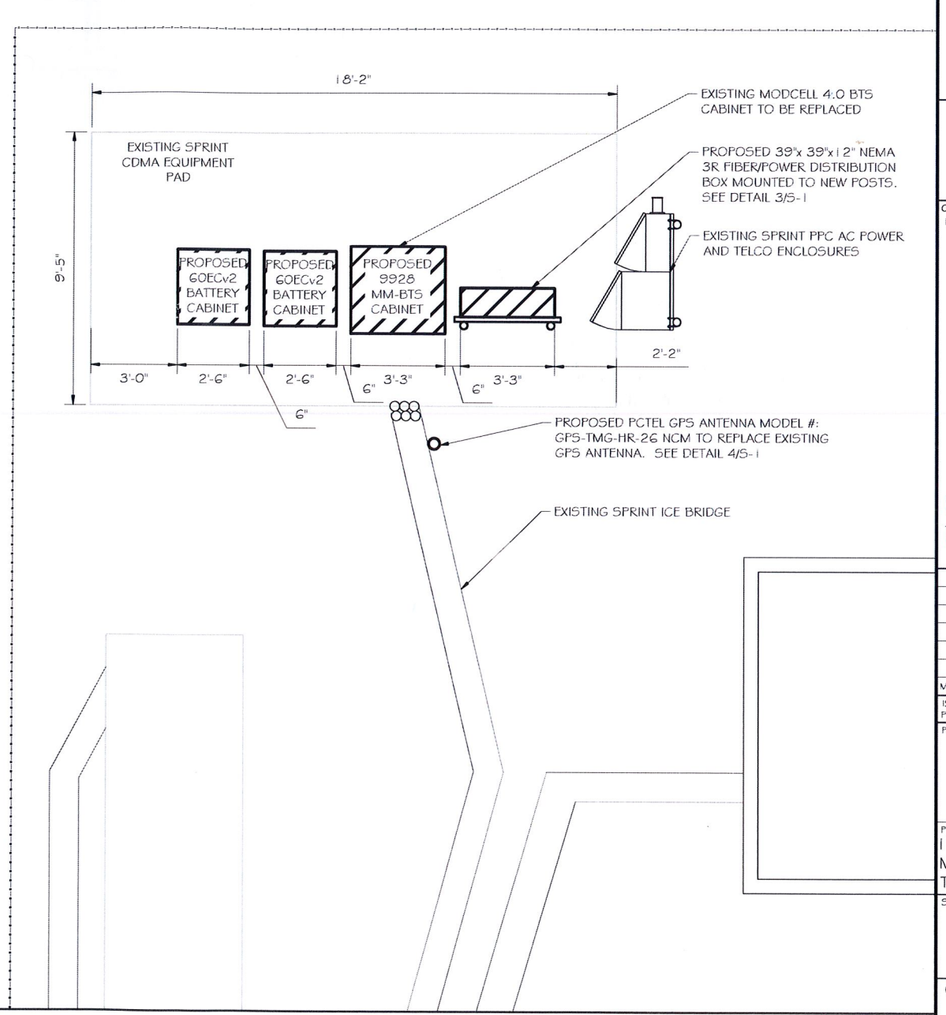



EXISTING EQUIPMENT PLAN 1
SCALE: 1" = 5'-0"




PROPOSED EQUIPMENT PLAN 2
SCALE: 1" = 5'-0"

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Signature: 2/14/2013 Date:

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PROJECT TITLE:
TCP/MANSFIELD
SITE #:CT33XC557

PROJECT INFORMATION:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

SHEET TITLE:
EQUIPMENT PLAN

0 2.5' 5' 10'
11" x 17" - 1" = 5'
22" x 34" - 1" = 2.5'

PROJECT NUMBER: 23013
SHEET NUMBER: A-1

## NOTES:

I. SCOPE

A. THIS SECTION COVERS THE SPECIFICATIONS FOR ANTENNA AND COAXIAL CABLE INSTALLATION OF: ANTENNAS, COAXIAL, CONNECTIONS, AND ICE BRIDGE.

B. REFERENCE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES FOR GENERAL REQUIREMENTS.

II. ANTENNAS:

A. ANTENNAS SHALL BE PLUMB AND INSTALLED SO THAT THE ENTIRE WHIP EXTENDS ABOVE VERTICAL PIPE MOUNT. DIRECTIONAL ANTENNAS SHALL BE ORIENTED TO PROPER AZIMUTH, PROVIDED ON THE RF SPECIFICATION SHEET. NOTE: THE ANTENNA MAY BE ORIENTED USING THE REFLECTOR AS THE REFERENCE, ADJUSTING ITS AZIMUTH 180 DEGREES FROM MAXIMUM ANTENNA RADIATION.

B. MICROWAVE ANTENNAS (DISHES) SHALL BE ASSEMBLED PER MANUFACTURER'S DRAWINGS. STIFF ARMS AND RADOMES SHALL BE INSTALLED WITH POLARIZATION PROVIDED BY RF SPECIFICATION SHEET. IF PATH IS NOT READY TO ALIGN, DISH SHOULD BE POINTED TOWARD CALCULATED AZIMUTH, OR DIRECTION OF FIELD STAKE DENOTING OPPOSITE END. 2 STIFF ARMS SHALL BE PROVIDED FOR MICROWAVE DISHES 6'-0" IN DIAMETER OR GREATER.

C. A TRANSIT SHALL BE USED TO PROPERLY ALIGN CELLULAR AND MICROWAVE ANTENNAS.

III. COAXIAL CABLE:

A. COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP-IN HANGERS. SNAP-IN HANGERS SHOULD BE USED EVERY 3 FEET THE ENTIRE HEIGHT OF THE TOWER. ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS WITH BUTTERFLY CLAMPS SHALL BE USED ELSEWHERE, I.E. SIDEARMS, PLATFORMS, AND MICROWAVE MOUNTS.

B. COAXIAL CABLE SHALL ALSO BE SUPPORTED WITH HOISTING GRIPS, INSTALLED AT MAXIMUM INTERVALS OF 200 FEET. HOISTING GRIPS SHALL BE ATTACHED WITH SHACKLES, BOLTED IN THE 7/8" HOLE OF WAVEGUIDE LADDER.

C. ALL JUMPERS USED BETWEEN COAXIAL CABLE AND ANTENNA SHALL BE SUPPORTED WITHIN 18 INCHES OF ANTENNA, USING BUTTERFLY CLAMPS WITH ANGLE ADAPTERS OR ROUND MEMBER ADAPTERS AROUND PIPES. CELLULAR ANTENNAS TYPICALLY USE 6' JUMPERS; MICROWAVE DISHES USE 3' JUMPERS.

D. COAXIAL CABLE SHALL BE NEATLY BENT WHEN REQUIRED. USING A MINIMUM BENDING RADIUS OF 10 TIMES THE DIAMETER OF THE COAXIAL CABLE. DRIP LOOPS SHOULD BEGIN AT THE ICE BRIDGE. THE END IN THE COAXIAL CABLE SHOULD BE AT A LOWER HEIGHT THAN THE ENTRY PORT.

E. COAXIAL CABLE SHALL BE SUPPORTED WITH SNAP-IN HANGERS ON THE WAVEGUIDE LADDER UNDER ICE BRIDGE. COAXIAL CABLE SHOULD BE NEATLY CUT 16" INSIDE BUILDING AND TERMINATED AT THE QUARTER WAVE SHORTS.

F. CONNECTORS WILL NORMALLY BE PROVIDED FIRST OFF REEL FROM FACTORY. CONNECTORS TERMINATED IN BUILDING SHALL BE NEATLY INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

G. COAXIAL CABLES SHOULD BE LABELED WITH TAGS INSIDE THE BUILDING.

H. USE 2" WIDE COLORED TAPE TO INDICATE SECTORS. CONTRACTOR TO USE SECTOR COLOR CODING AS INDICATED IN THESE DRAWINGS OR AS PROVIDED BY SPRINT.

I. ALL EXCEPTIONS NEED TO BE VERIFIED WITH THE PROJECT MANAGER.

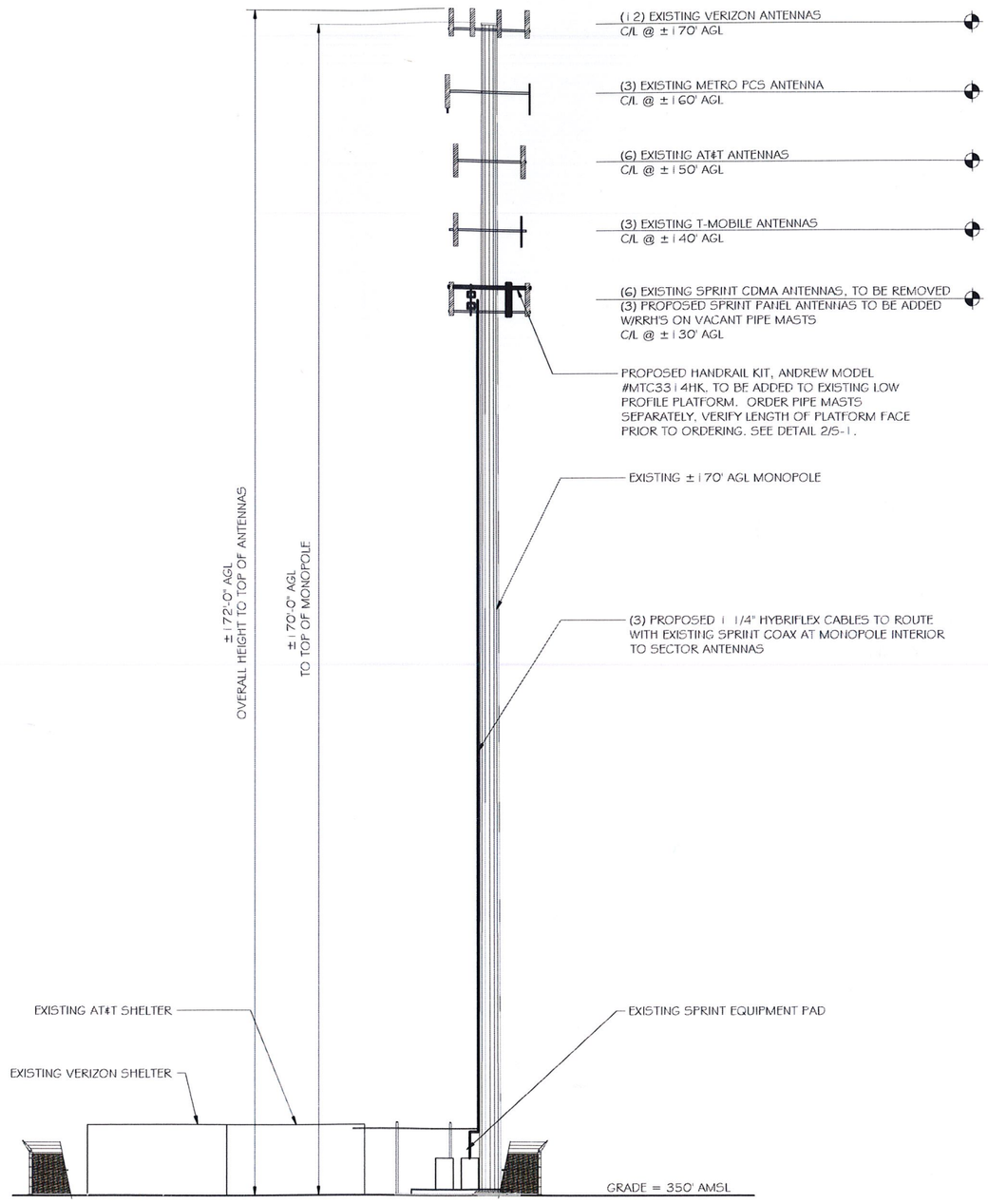
IV. CONNECTORS:

A. ALL CONNECTIONS AND GROUNDING KITS SHALL BE WEATHERPROOFED USING COLD SHRINK OR ANDREW APPROVED WEATHER STRIPPING. NOTE: NO PORTION OF CONNECTOR SHALL BE EXPOSED TO THE ELEMENTS.

B. COAXIAL CABLE SHALL BE GROUNDED USING GROUNDING KITS AT THE TOP (BELOW THE BEND), BOTTOM (ABOVE THE BEND ON TOWER GROUND BAR), AND ON BUILDING GROUND BAR BEFORE ENTRY INTO WAVEGUIDE PORTS. 4" CABLE BOOTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

C. GROUNDING KITS SHALL BE NEATLY INSTALLED SO THAT THE JUMPER RUNS IN THE SAME DIRECTION AS THE COAXIAL AND GROUND BAR. JUMPER WIRE SHOULD RUN IN A DIRECT PATH TO THE GROUND BAR/ TOWER LADDER, BUT HAVE ADEQUATE SLACK FOR EXPANSION, CONTRACTION, AND REPAIR. NON-OXIDE GREASE SHOULD BE APPLIED BETWEEN LUG AND BAR/TOWER.

D. TOWER GROUND BAR SHALL BE INSTALLED ON THE ANGLE BEHIND THE FIRST DIAGONAL WAVEGUIDE LADDER RUNG, ABOVE 8'-6". GROUND BAR SHALL BE ISOLATED FROM ANGLE USING NEWTON BUSHINGS PROVIDED.




ELEVATION 1
SCALE: 1"= 20'-0"

Sprint
6391 Sprint Parkway
Overland Park, KS 66251

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Signature: James R. Skowronski Date: 2/14/2013

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ISSUE PHASE: PRELIM PERMIT — DATE ISSUED: 02/14/2013

PROJECT TITLE:
TCP/MANSFIELD
SITE #:CT33XC557

PROJECT INFORMATION:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

SHEET TITLE:
SITE ELEVATION & NOTES

0 10' 20' 40'
11" x 17" - 1" = 20'
22" x 34" - 1" = 10'

PROJECT NUMBER: 23013
SHEET NUMBER: A-2



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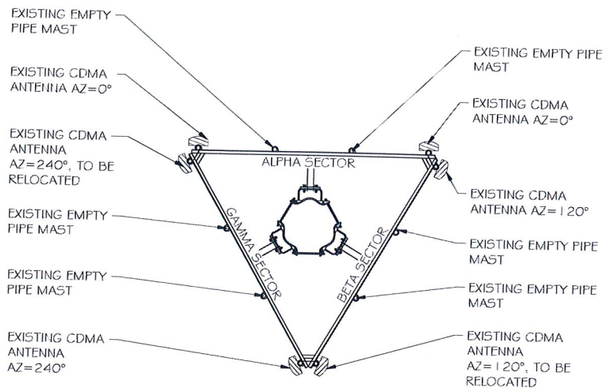
DRAWN BY: KJG CHECKED BY: KAB

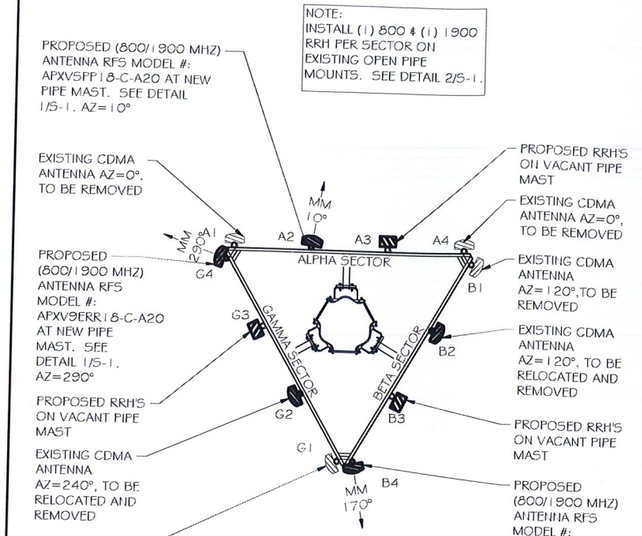
NOTE:
INSTALL (1) 800 & (1) 1900 RRH PER SECTOR ON EXISTING OPEN PIPE MOUNTS. SEE DETAIL 2/S-1.




EXISTING ANTENNA LAYOUT (1)
SCALE: NTS

NORTH

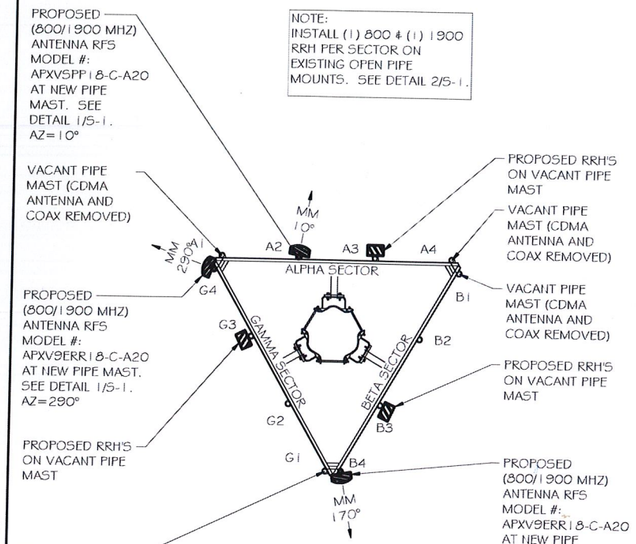
NOTE:
INSTALL (1) 800 & (1) 1900 RRH PER SECTOR ON EXISTING OPEN PIPE MOUNTS. SEE DETAIL 2/S-1.




INTERIM ANTENNA LAYOUT (2)
SCALE: NTS

NORTH

NOTE:
INSTALL (1) 800 & (1) 1900 RRH PER SECTOR ON EXISTING OPEN PIPE MOUNTS. SEE DETAIL 2/S-1.




FINAL ANTENNA LAYOUT (3)
SCALE: NTS

NORTH

## ANTENNA AND COAXIAL CABLE SCHEDULE

| SECTOR | POS. | AZIMUTH | ANTENNA CENTERLINE | ANTENNA STATUS | TECH. | ANTENNA MAKE/ MODEL | MECH. DOWNTILT (°) | ELEC. DOWNTILT (°) | RRHs | CABLE SIZE | CABLE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ALPHA | A-1 | 0° | 130'-0" | EX. TO BE REMOVED | CDMA | - | - | - | - | EX. TO BE REMOVED | ±145'-0" |
| | A-2 | 10° | 130'-0" | PROPOSED | MM | RFS/APXV5PP18-C-A20 | 1900(0), 800(0) | 1900(0), 800(0) | - | (1) 1 1/4" HYBRIFLEX MODEL #: HB114-1-08U4-M5J | ±145'-0" |
| | A-3 | - | 130'-0" | PROPOSED | RRH | - | - | - | (1) 1900, (1) 800 | - | - |
| | A-4 | 0° | 130'-0" | EX. TO BE REMOVED | CDMA | - | - | - | - | EX. TO BE REMOVED | ±145'-0" |
| BETA | B-1 | 120° | 130'-0" | EX. TO BE REMOVED | CDMA | - | - | - | - | EX. TO BE REMOVED | ±145'-0" |
| | B-2 | 120° | 130'-0" | EX. RELOCATED AND REMOVED | CDMA | - | - | - | - | EX. TO BE REMOVED | ±145'-0" |
| | B-3 | - | 130'-0" | PROPOSED | RRH | - | - | - | (1) 1900, (1) 800 | - | - |
| | B-4 | 170° | 130'-0" | PROPOSED | MM | RFS/APXV9ERR18-C-A20 | 1900(0), 800(0) | 1900(0), 800(-5) | - | (1) 1 1/4" HYBRIFLEX MODEL #: HB114-1-08U4-M5J | ±145'-0" |
| GAMMA | G-1 | 240° | 130'-0" | EX. TO BE REMOVED | CDMA | - | - | - | - | - | ±145'-0" |
| | G-2 | 240° | 130'-0" | EX. RELOCATED AND REMOVED | CDMA | - | - | - | - | EX. TO BE REMOVED | ±145'-0" |
| | G-3 | - | - | PROPOSED | RRH | - | - | - | (1) 1900, (1) 800 | - | - |
| | G-4 | 290° | 130'-0" | PROPOSED | MM | RFS/APXV9ERR18-C-A20 | 1900(0), 800(0) | 1900(0), 800(0) | - | (1) 1 1/4"HYBRIFLEX MODEL #: HB114-1-08U4-M5J | ±145'-0" |

Sprint
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Overland Park, KS 66251

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No. 28266
LICENSED PROFESSIONAL ENGINEER

James R Skowronski 2/14/2013
Signature Date:

| MARK | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
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| A | 9/25/12 | 90% CD REVIEW |

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SITE #:CT33XC557

PROJECT INFORMATION:
1725 STAFFORD ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

SHEET TITLE:
ANTENNA DETAILS & COAX SCHEDULE

SCALE: NONE

PROJECT NUMBER: 23013
SHEET NUMBER: A-3



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