

# TowerCo and AT&T Proposed Wireless Tower Facility Rose Hill Road

Public Information Meeting

March 30, 2015

# Tonight's Community Meeting

TowerCo and AT&T Presentation - Review of the project, application process and information presented in the Technical Report on file with Branford

Public Q&A after the Presentation



## TowerCo and AT&T Project Professionals

Kelly Wade-Bettuchi, AT&T External & Government Affairs

Christopher Fisher, Cuddy & Feder, Counsel

Dan Goulet, C Squared, AT&T's Consulting Engineer

David Weisman, Vertical Development LLC, Real Estate Specialist

David Archambault, Smartlink, Real Estate Specialist

Doug Roberts, Hudson Design Group, Site Civil Engineer

Russ Dasta, Virtual Site Simulations, Visual Consultant

# Wireless Infrastructure - Federal, State and Municipal Roles

## Wireless Infrastructure

Wireless carriers conduct site searches in areas where there is a need for new infrastructure to reliably serve the public and typically enter into lease agreements with property owners.

## State Siting Policies & Municipal Wireless Facility Preferences

TowerCo and AT&T take into consideration Connecticut policies regarding tower siting as set forth in Section 16-50aa of the General Statutes and also review municipal preferences articulated in local zoning regulations or municipal plans of conservation and development as part of infrastructure planning.

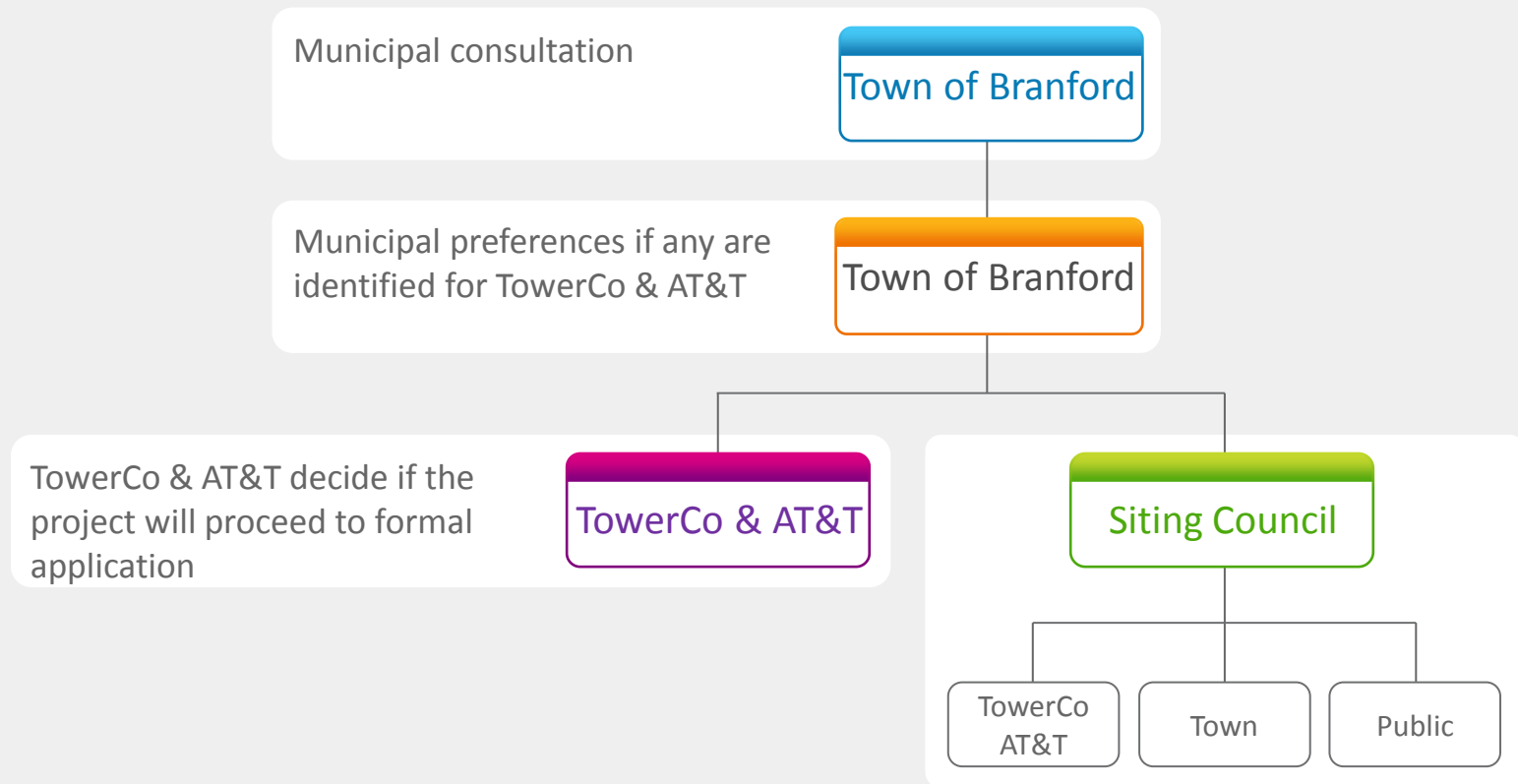
## State & Local Zoning Jurisdiction

In the State of Connecticut, municipalities regulate rooftop antenna attachments and the Siting Council regulates towers. The Legislature has determined that the Siting Council, which regulates energy and communications infrastructure throughout the state, should have jurisdiction over communications towers.

## Federal Policies & Laws

All State Siting Council and local zoning proceedings are subject to various federal policies and laws regarding wireless infrastructure that are intended to ensure services can be reliably provided to the public by wireless carriers that are licensed by the Federal Communications Commission.

# State Tower Siting - Application Process Overview



# State of Connecticut – Municipal Consultation Process

1

Prepare and share a Technical Report with municipal officials

TowerCo & AT&T submitted to Branford and adjacent East Haven on 1/16/15.

2

Meet with municipal officials and obtain any local comments or preferences

90 day time frame for comments and feedback to TowerCo & AT&T

3

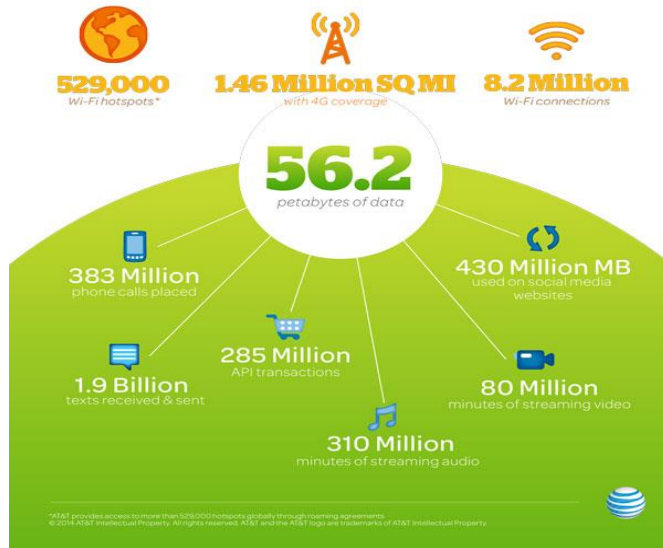
Host a public information session if requested

Public information meetings are optional and Branford officials requested TowerCo & AT&T conduct this March 30 public information meeting.

# Wireless Demand

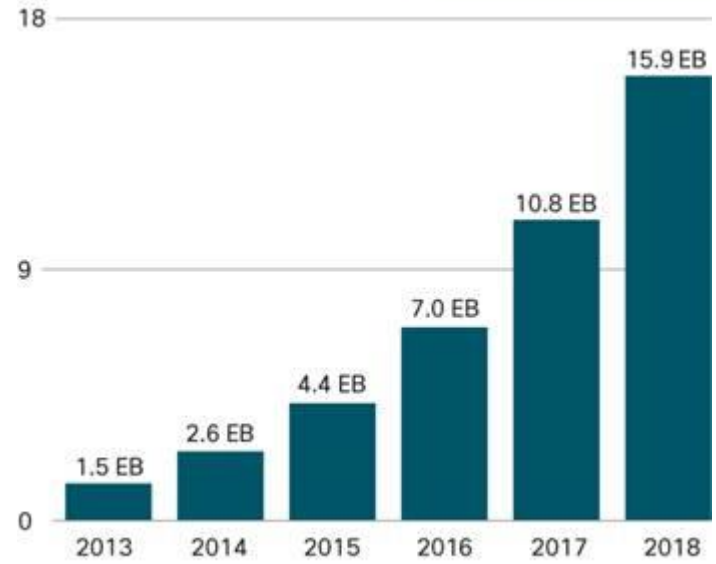
## Our Network in a Day

In 1914, *our network* allowed millions of Americans to connect via voice with one another. One hundred years later, *our network* represents billions of devices connecting hundreds of millions of people – allowing communication that extends far beyond hearing another person's voice.



## Exabytes per Month

61% CAGR 2013-2018



Source: Cisco VNI Mobile, 2014

# Wireless Services



Voice, Text, E911



Data – 4G LTE Services – High Speed Mobile Broadband



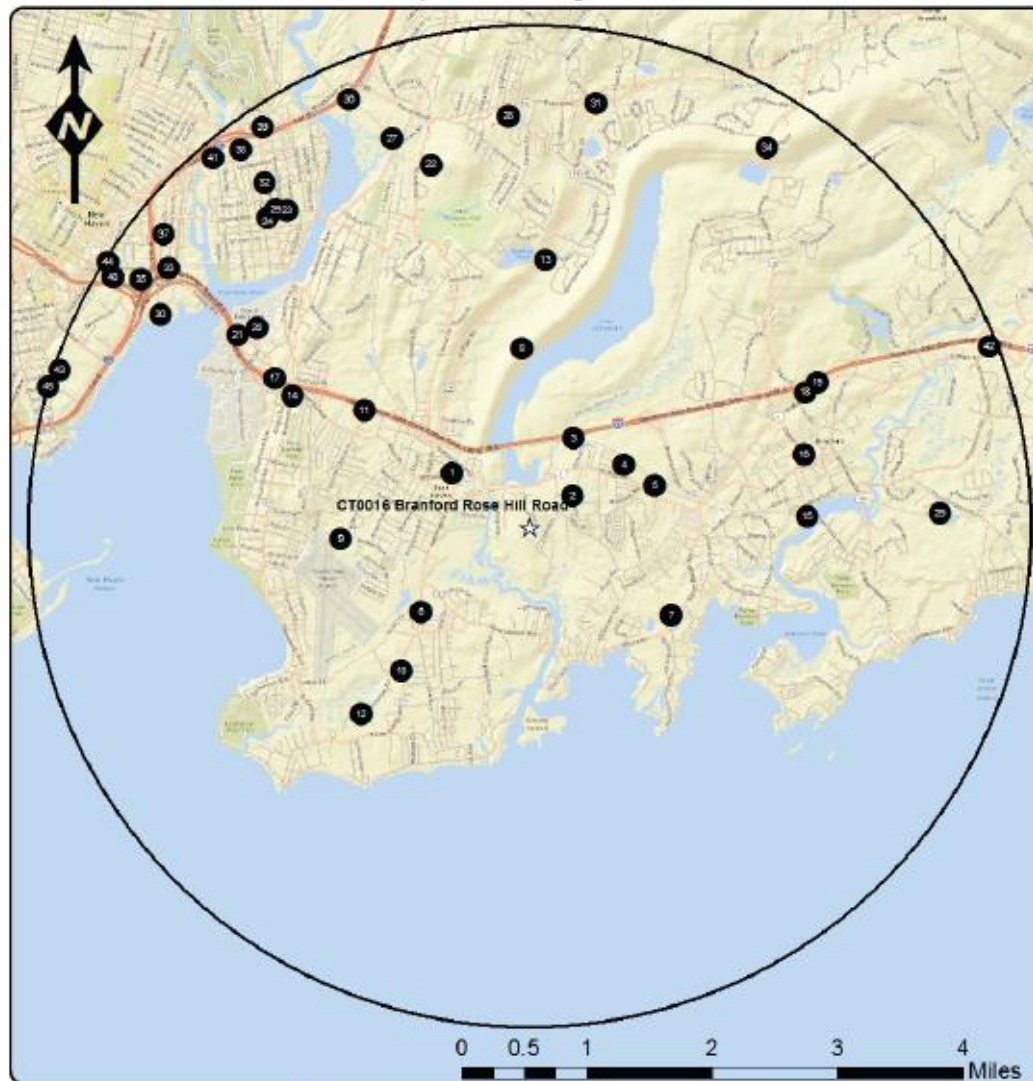
M2M – Healthcare, Energy Transportation and Other Economic Sectors



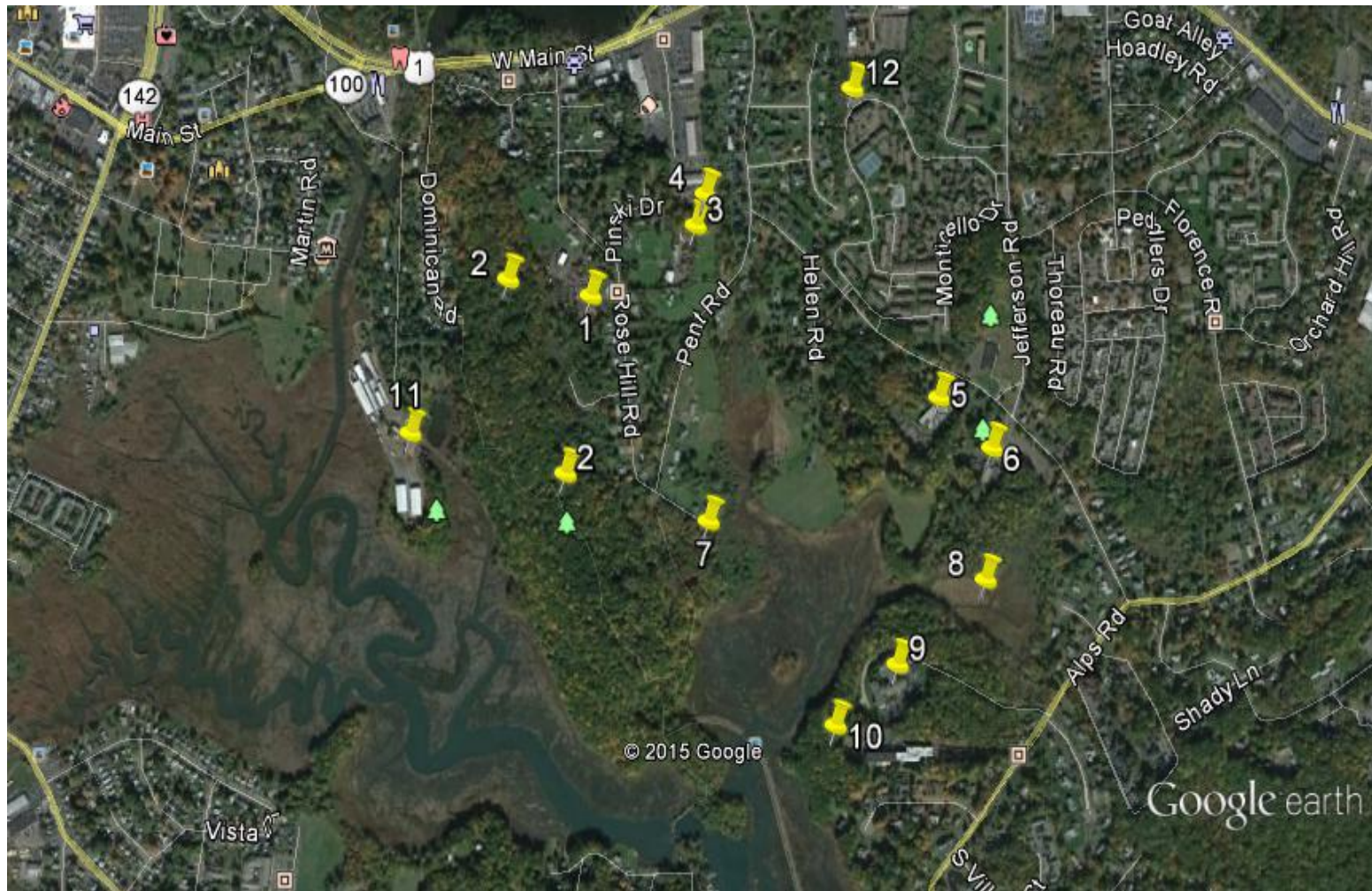
Public Safety Applications



## Existing Wireless Site Locations

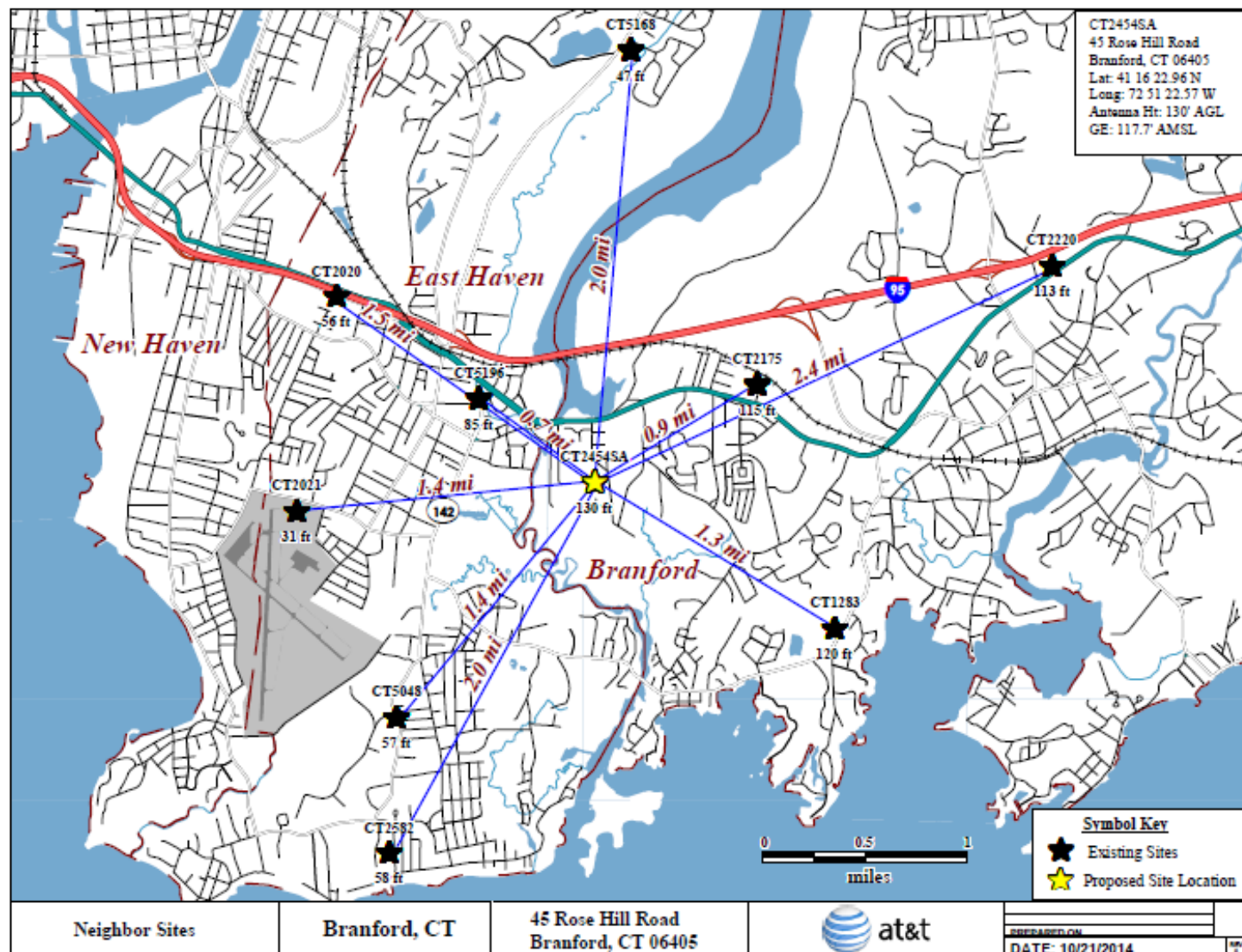


## Locations Evaluated for this Search Area

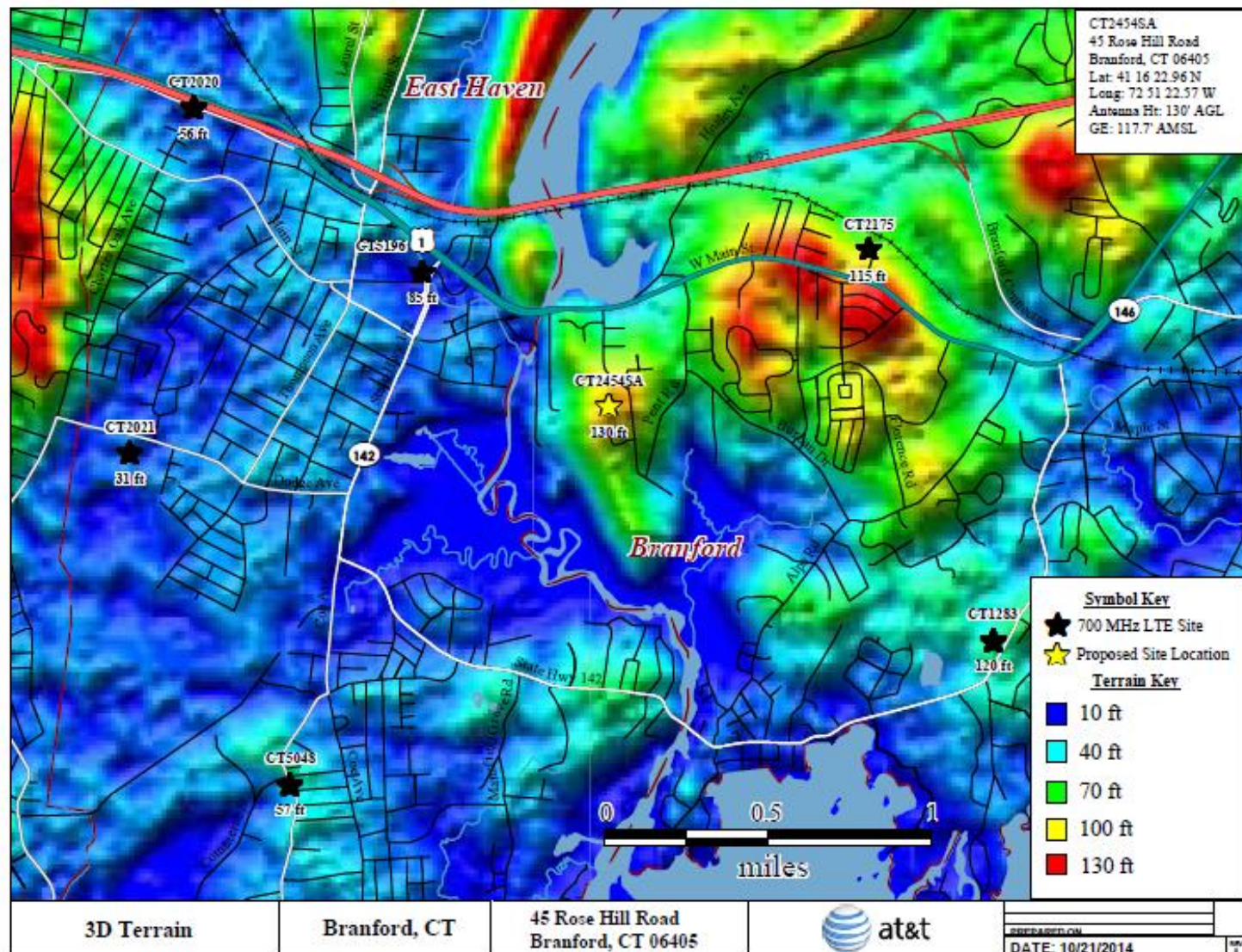




# Neighboring Sites

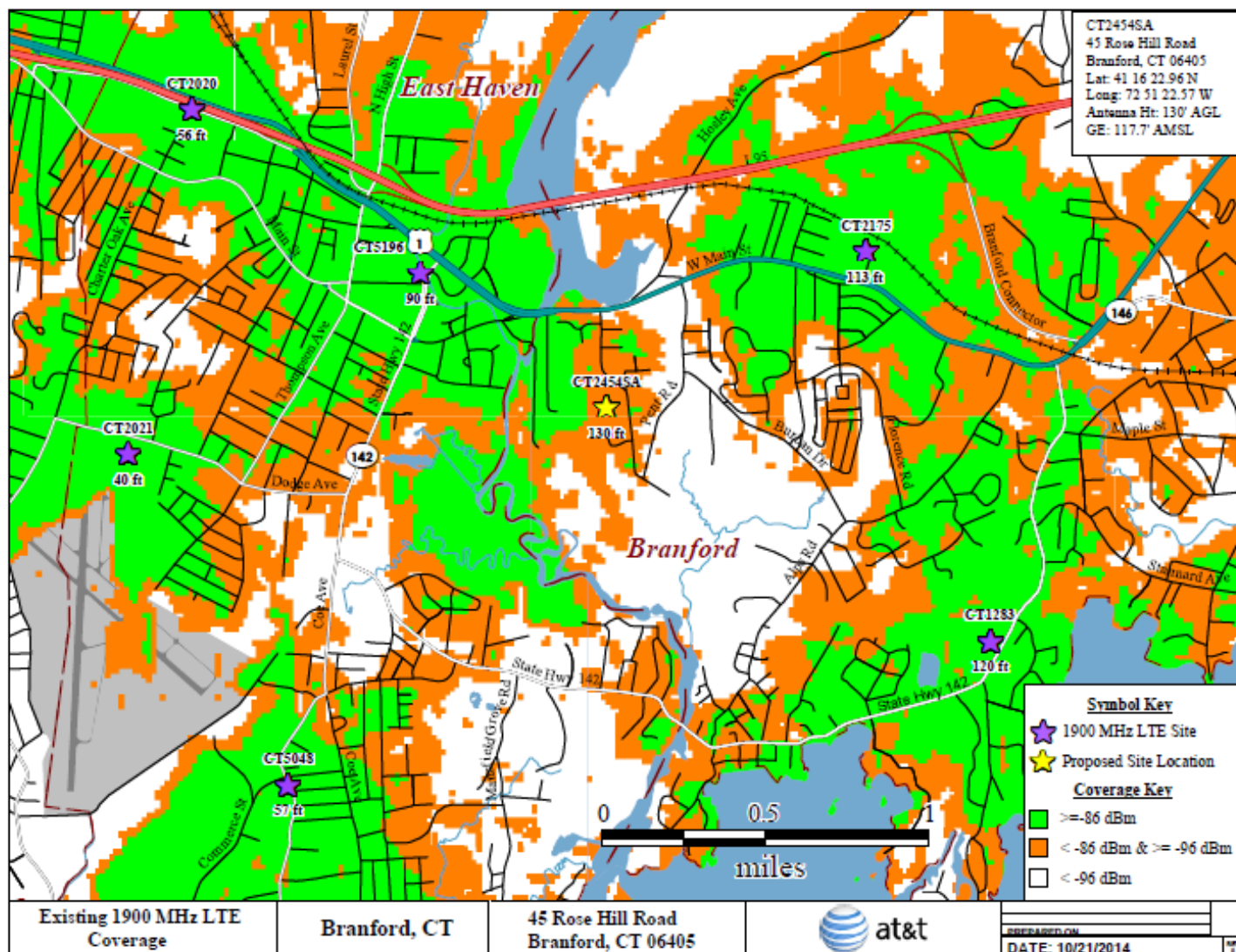


# Terrain Map

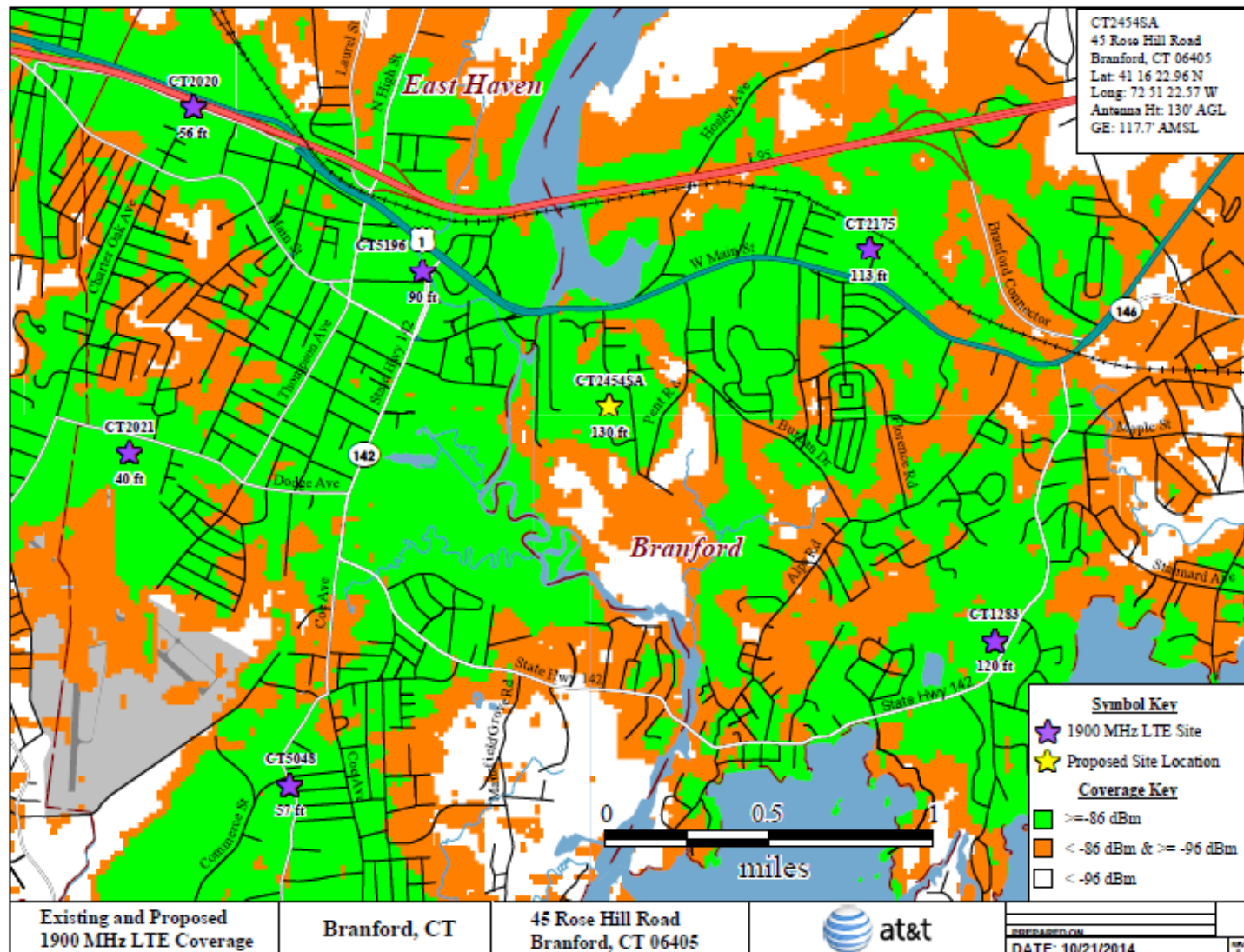




# Existing Coverage

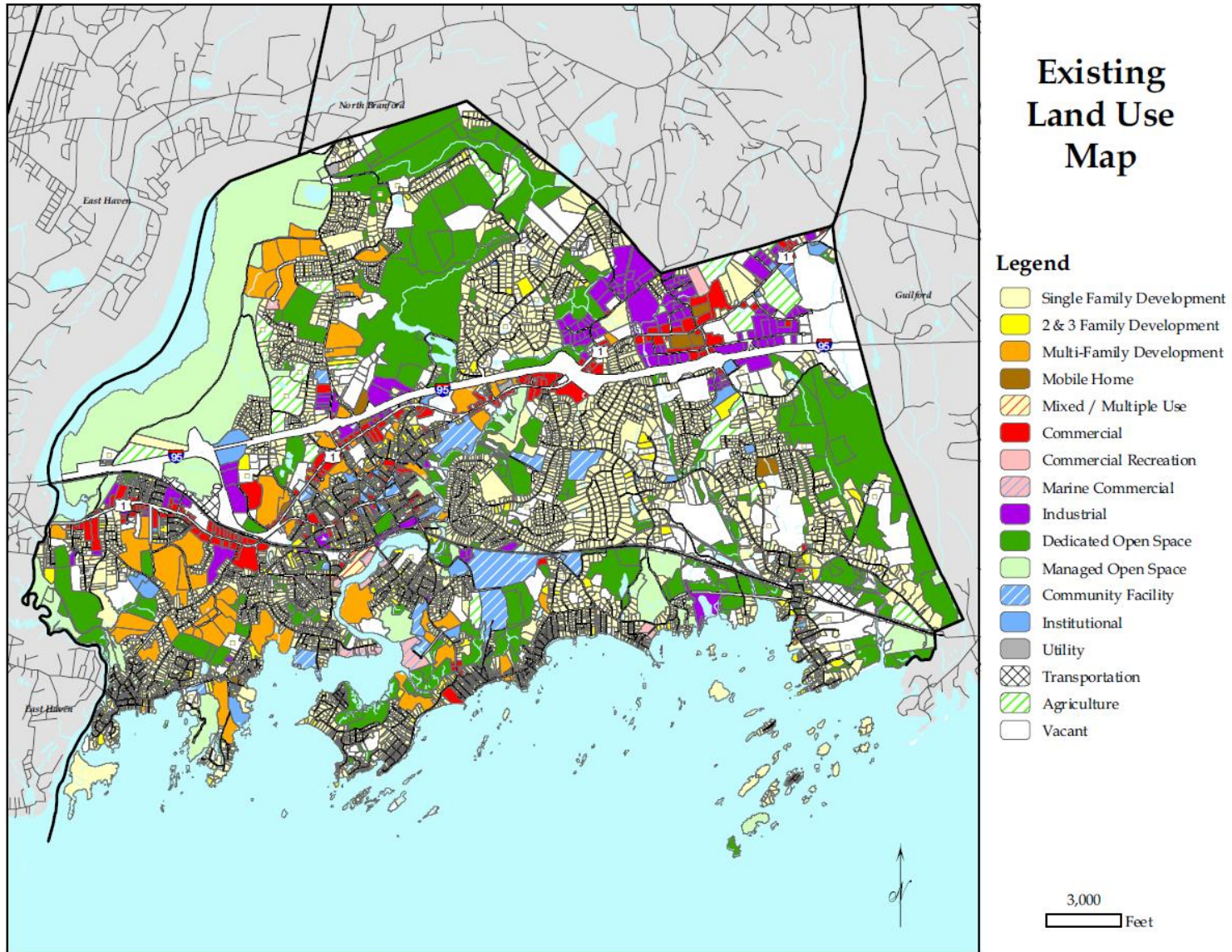


# Existing and Proposed Coverage





# Town of Branford Land Use Map





## Aerial – Project Site



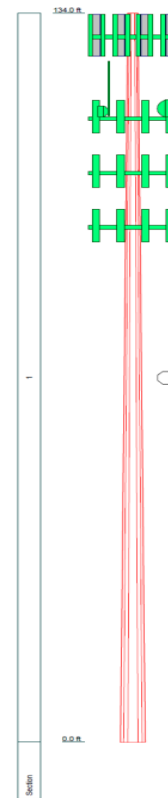
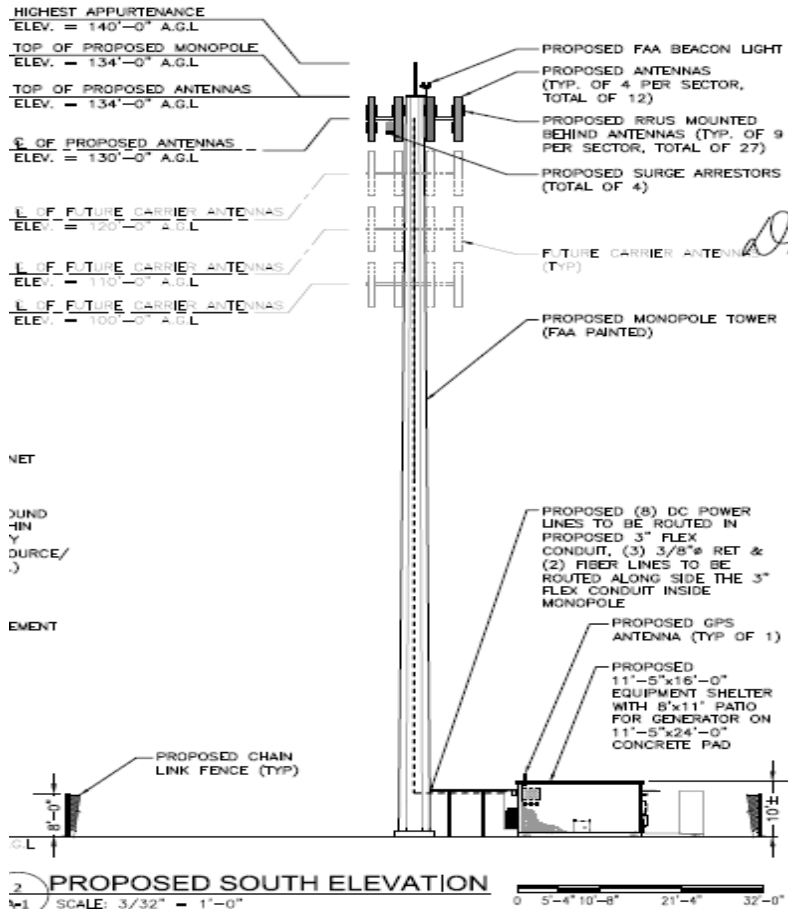
Google earth

feet  
meters 200 800





# Tower Elevation



DESIGNED APPURTENANCE LOADING			
TYPE	ELEVATION	TYPE	ELEVATION
(A) CCI HPA-65R-BUJ-HS w/ MP (ATZ)	130	10' Omni (City)	130, 125
(A) CCI HPA-65R-BUJ-HS w/ MP (ATZ)	130	Radioaves HPC3-4.7 (City)	116.5
(A) CCI HPA-65R-BUJ-HS w/ MP (ATZ)	130	Radioaves HPC3-4.7 (City)	116
(A) CCI HPA-65R-BUJ-HS w/ MP (ATZ)	130	Satara 12.8 Low Profile Platform (City)	115
Satara 12.8 Low Profile Platform (ATZ)	130	1145 sq ft EPA (City)	115
(3) 30 RET (ATZ)	130	(3) 708 (AVAS-50P-X) (City)	115
(2) 10 Fiber (ATZ)	130	(114 sq ft EPA)	105
(B) 304 Power (ATZ)	130	Satara 12.8 Low Profile Platform	105
		(114 sq ft EPA)	95
		Satara 12.8 Low Profile Platform	95

**Vertical Solutions Inc.**  
113 Edinburgh South Drive, Suite 130  
Cary, NC 27511  
Phone: (888) 321-6167  
FAX: (919) 321-1728

**CT0016-TP**  
Project: **ENG-21278**  
Client: **TowerCo, LLC**  
Code: **TIA-222-G**  
Path: **Unclassified - Data Not for external release/commercial use**

Drawn by: **rdoolittle**  
Date: **03/25/15**  
Scale: **NTS**  
Appr:   
Dwg No: **E-1**

## Existing Site Photographs



## Existing Site Photographs



# Wireless Infrastructure - Safety

**Wireless Infrastructure** - *There are no known adverse health effects from cell sites and no health risks to the general public have been shown.*

**FCC** - You can find the full FCC guidelines for Cellular and PCS Sites at:  
<http://www.fcc.gov/cgb/consumerfacts/rfexposure.html>

**American Cancer Society**- affirms the FCC's conclusion stating "at ground level near typical cellular base stations, the amount of RF energy is thousands of times less than the limits for safe exposure set by the FCC and other regulator authorities". You can find the full ACS report at:

<http://www.cancer.org/Cancer/CancerCauses/OtherCarcinogens/AtHome/cellular-phone-towers>

**World Health Organization** – confirms that RF emissions diminish rapidly with distance. The WHO states that studies have not shown a correlation between exposure to RF emissions from base stations and an increased risk of cancer or any adverse long or short-term health effects. You can find the full WHO report at: <http://www.who.int/mediacentre/factsheets/fs304/en/index.html>



# Wireless Safety Analysis – Rose Hill Road

Due to the directional nature of the proposed AT&T antennas, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to the Attachment for the vertical patterns of the proposed AT&T antennas. The calculated results below include a nominal 10 dB off-beam pattern loss to account for the lower relative gain directly below the antennas.

Location	Carrier	Vertical Distance to Antenna (Ft.)	Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Power Density (mw/cm <sup>2</sup> )	Limit	%MPE
Ground Level	AT&T UMTS	130	880	1	1028	0.0024	0.5867	0.41%
	AT&T UMTS	130	1900	1	1265	0.0030	1.0000	0.30%
	AT&T LTE	130	710	2	1254	0.0059	0.4733	1.24%
	AT&T LTE	130	880	1	1542	0.0036	0.5867	0.61%
	AT&T LTE	130	1900	2	1897	0.0089	1.0000	0.89%
	AT&T LTE	130	2300	1	2179	0.0051	1.0000	0.51%
	<b>Total</b>							<b>3.96%</b>

**Summary:** Under worst-case assumptions, RF Power Density levels for the proposed AT&T antenna arrays will not exceed **3.96%**<sup>1</sup> of the FCC MPE limit for General Public/Uncontrolled Environments.

# Property Values

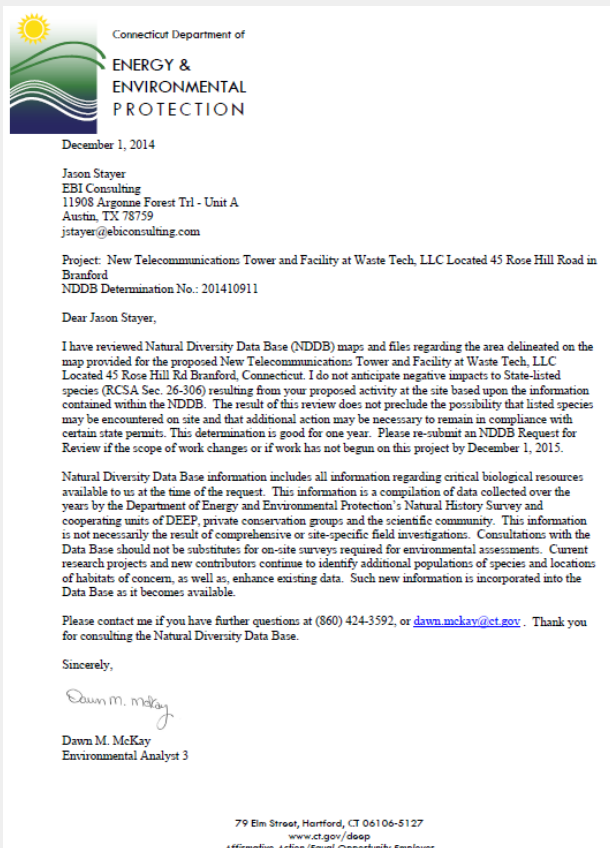
Home buyers want access to wireless phone and broadband technology. Over one-third of Americans do not have landlines and rely solely on wireless.<sup>1</sup> The new generation of home buyers relies an even greater percentage on wireless.

According to the National Association of Realtors, affordable high-speed broadband is quickly becoming as important as electric and water service, and the absence of broadband makes a community a less attractive location for new investment and development.<sup>2</sup>

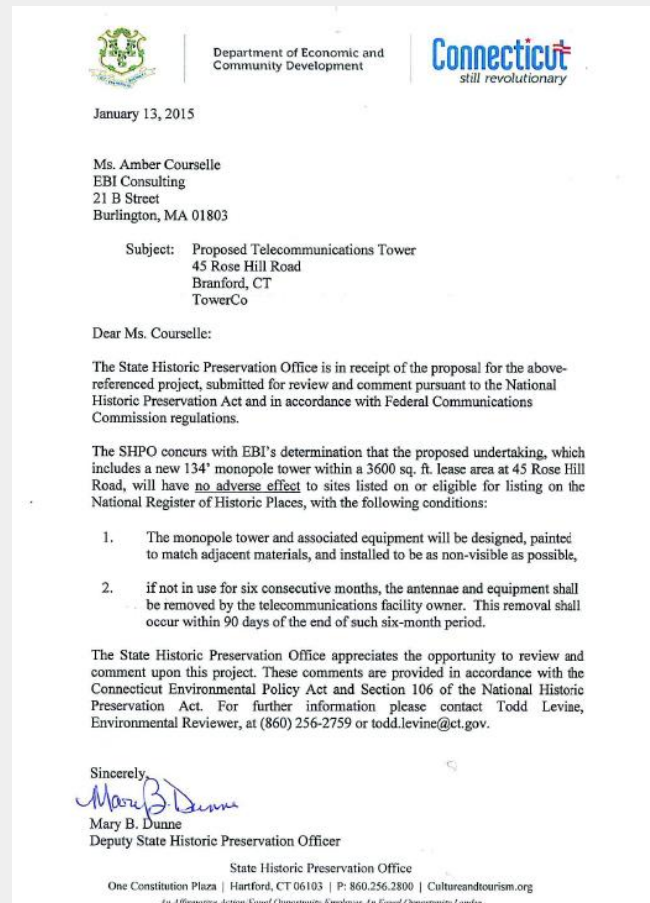
The National Association of Realtors not only supports broadband infrastructure, but also refers to a study showing that communities that have access to it have 6 percent higher property values.<sup>3</sup>

<sup>1</sup> CDC Wireless Substitution: Early release of estimates from the National Health Interview Survey, July-December 2011, National Center for Health Statistics, p.1, June 2012. <sup>2</sup> National Association of Realtors, Broadband Access-Issue Summary, (2011) <sup>3</sup> Gillett, Sharon, "Measuring the Economic Impact of Broadband Deployment Final Report," National Technical Assistance, Training, Research and Evaluation Project #99-07-13829, p.4, (Feb. 28, 2006)

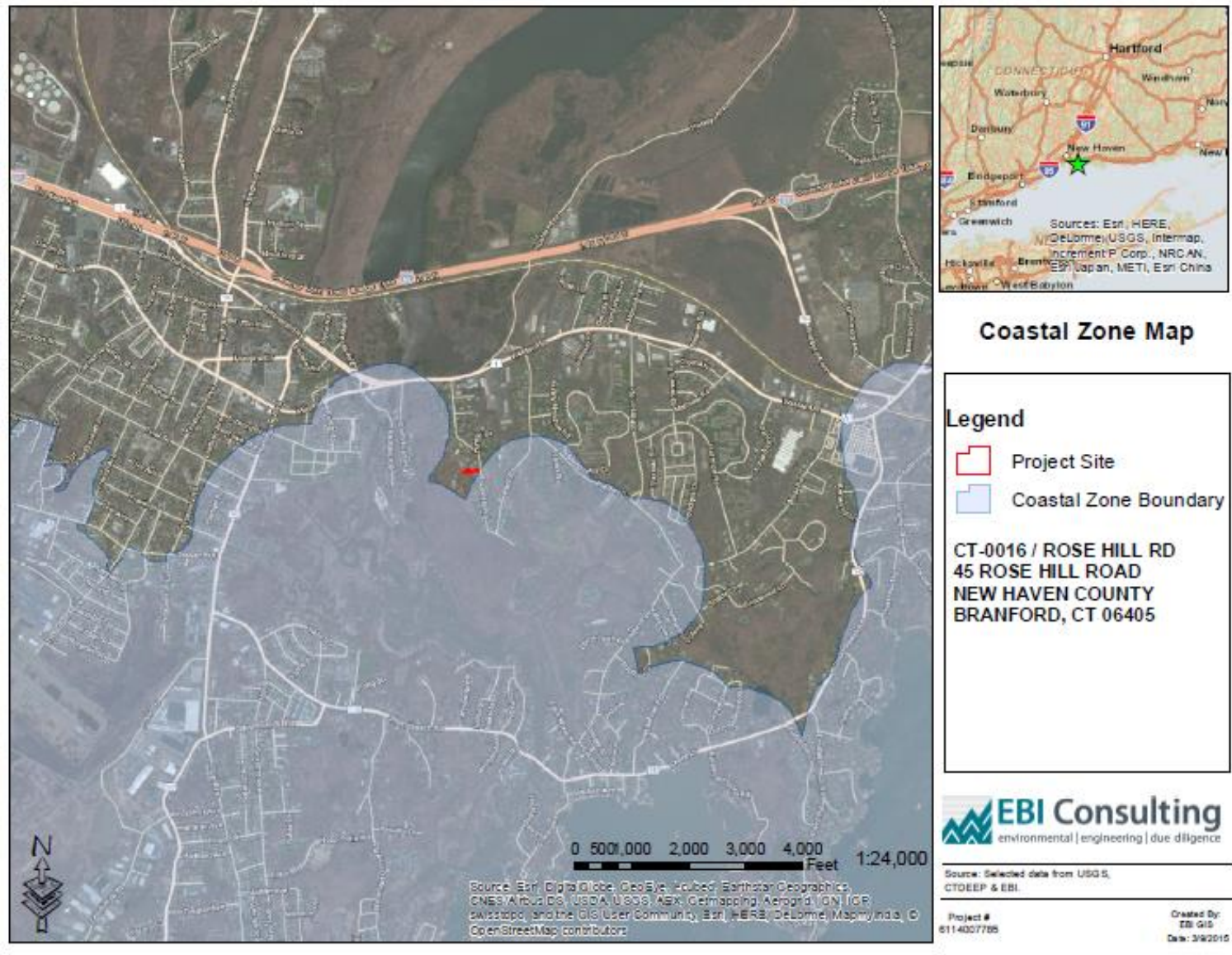
# DEEP



# SHPO

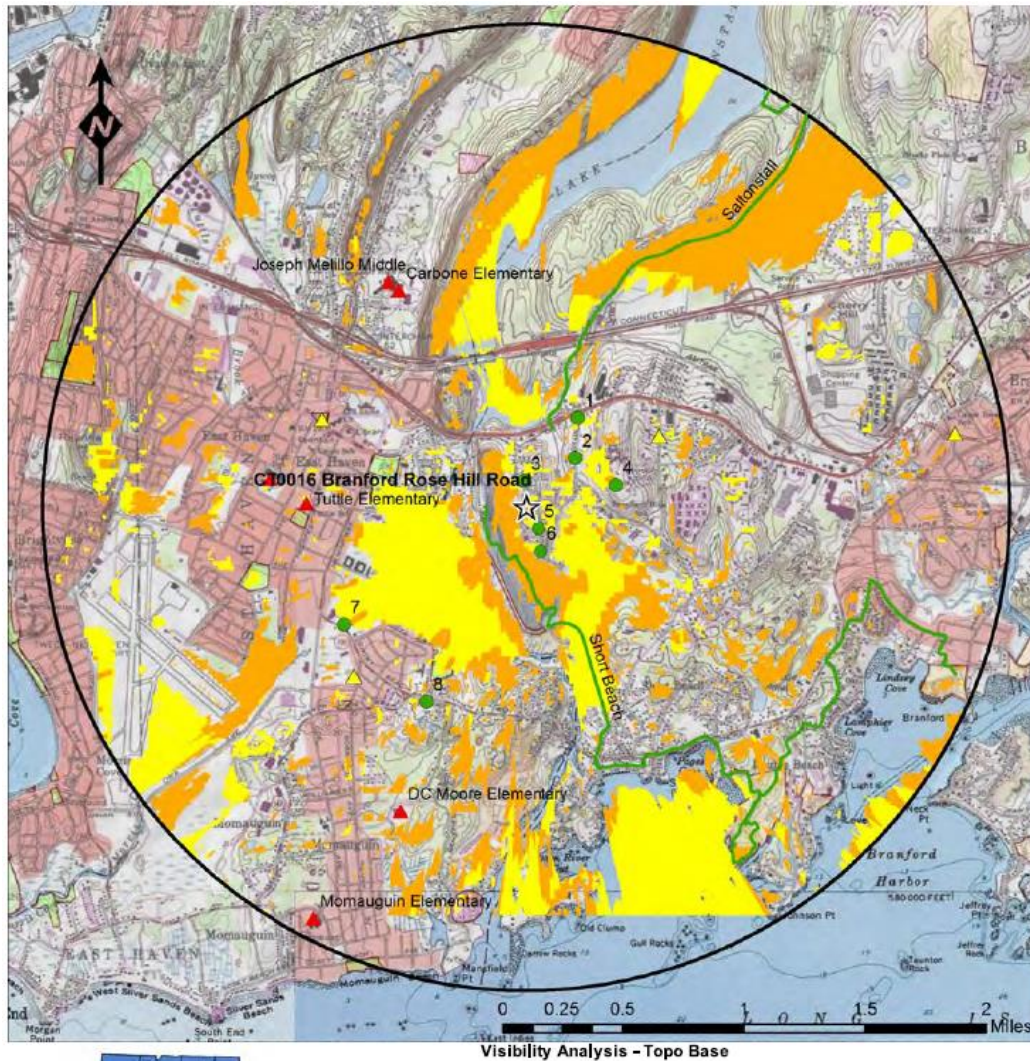


# Coastal Zone Map

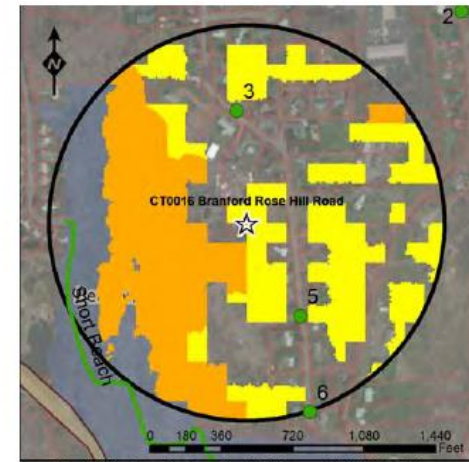




# Viewshed Map



Proposed AT&T Wireless Communications Facility  
 CT0016 Branford Rose Hill Road  
 45 Rose Hill Road  
 Branford, CT 06405



## Legend:

- ☆ CT0016 Tower Location
- Picture Location
- 2 Mile Radius Study Area
- Predicted Year Round Visibility (leaf on) +/-858 Acres
- Predicted Seasonal Visibility (leaf off) +/-984 Acres
- Protected Properties (State, CTDEP, May 2007)
- Protected Properties (Municipal, CTDEP, May 2007)
- Protected Properties (Municipal, CTDEP, May 2007)
- Federal Open Space (CTDEP, May 2007)
- Blue Blazed Trails (CFPA 2014)
- CT Statewide Trail System
- ▲ Schools (CTDEP 2008)
- ▲ Licensed Daycare Facilities (CT.Gov DB 2014)

## Notes:

- Map compiled by VSS November 2014
- Viewshed analysis completed using ESR|ArcGIS Spatial Analyst
- Proposed monopole tower height of 134.0' ALG
- Tree Canopy estimated at an average height of 50'
- Viewing height assumed to be 5' AGL
- Study area defined as 2 mile radius centered at proposed tower
- Data sources noted on Documentation page of Viewshed report
- Visibility analysis maps and representations contained herein depict where proposed facility may potentially be visible based on best data available and site conditions at the time data was collected. This study does not claim to depict all locations where facility may be visible.





# Photolog Map



# Pent Road 2

Existing



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
1	Pent Road 2	41.27842 -72.85204	+/- 0.44 Miles	North West	207.65	Year Round

Site: CT0016 Branford Rose Hill Road

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution



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# Pent Road 2

Simulation



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
1	Pent Road 2	41.27842 -72.85204	+/- 0.44 Miles	North West	207.65	Year Round

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# Pent Road 1



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
2	Pent Road 1	41.27601 -72.85225	+/- 0.30 Miles	North West	227.34	Seasonal

Site: CT0016 Branford Rose Hill Road

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# Pent Road 1



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
2	Pent Road 1	41.27601 -72.85225	+/- 0.30 Miles	North West	227.34	Seasonal

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# Rose Hill Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
3	Rose Hill Rd	41.27463 -72.85639	+/- 0.11 Miles	North	181.53	Year Round

Site: CT0016 Branford Rose Hill Road

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# Rose Hill Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
3	Rose Hill Rd	41.27463 -72.85639	+/- 0.11 Miles	North	181.53	Year Round

Site: CT0016 Branford Rose Hill Road

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# Monticello Drive



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
4	Monticello Dr	41.27440 -72.84903	+/- 0.40 Miles	West	251.04	Seasonal

Site: CT0016 Branford Rose Hill Road

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# Monticello Drive

Simulation



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
4	Monticello Dr	41.27440 -72.84903	+/- 0.40 Miles	West	251.04	Seasonal

Site: CT0016 Branford Rose Hill Road

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# Rose Hill Road South



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
5	Rose Hill Rd South	41.27178 -72.85522	+/- 0.11 Miles	South West	324.26	Year Round

Site: CT0016 Branford Rose Hill Road

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# Rose Hill Road South



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
5	Rose Hill Rd South	41.27178 -72.85522	+/- 0.11 Miles	South West	324.26	Year Round

Site: CT0016 Branford Rose Hill Road

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# Rose Hill Road South



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
6	Rose Hill Rd south	41.27046 -72.85503	+/- 0.19 Miles	South	338.33	Seasonal

Site: CT0016 Branford Rose Hill Road

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# Rose Hill Road South



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
6	Rose Hill Rd south	41.27046 -72.85503	+/- 0.19 Miles	South	338.33	Seasonal

Site: CT0016 Branford Rose Hill Road

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# Short Beach Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
7	Short Beach Rd	41.26602 -72.87066	+/- 0.88 Miles	South East	58.55	Year Round

Site: CT0016 Branford Rose Hill Road

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# Short Beach Road

Simulation



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
7	Short Beach Rd	41.26602 -72.87066	+/- 0.88 Miles	South East	58.55	Year Round

Site: CT0016 Branford Rose Hill Road

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# Short Beach Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
8	Short Beach Road	41.26139 -72.86411	+/- 0.90 Miles	South East	26.97	Year Round

Site: CT0016 Branford Rose Hill Road

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# Short Beach Road



Photo #	Location	Gps Coordinates	Distance to site	Orientation	Bearing to site	Visibility
8	Short Beach Road	41.26139 -72.86411	+/- 0.90 Miles	South East	26.97	Year Round

Site: CT0016 Branford Rose Hill Road

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# Q&A

Thank you.

