CONNECTICUT SITING COUNCIL

AMENDED PETITION OF NEW)	
CINGULAR WIRELESS PCS, LLC)	1
("AT&T") TO THE CONNECTICUT)	PETITION NO. 443A
SITING COUNCIL FOR RELOCATION)	
OF AN EXISTING WIRELESS)	NOVEMBER 30, 2015
TELECOMMUNICATIONS FACILITY ON)	
A HIGH TENSION POWER LINE	•)	
STRUCTURE WITHIN AN EXISTING)	
EVERSOURCE TRANSMISSION)	
EASEMENT OFF OF SOUND VIEW)	
DRIVE, GREENWICH, CONNECTICUT)	

AMENDED PETITION FOR DECLARATORY RULING TO RELOCATE A WIRELESS TELECOMMUNICATIONS FACILITY FROM TRANSMISSION TOWER #1292 TO TRANSMISSION TOWER #1279 SOUND VIEW DRIVE, GREENWICH, CONNECTICUT

I. <u>Introduction</u>

New Cingular Wireless PCS, LLC ("AT&T"), the "Petitioner", hereby petitions the Connecticut Siting Council ("Council") pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies ("R.C.S.A.") for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50k of the Connecticut General Statutes ("C.G.S.") in order to relocate an existing wireless telecommunications facility approved by the Siting Council in Petition #443. A copy of the Council's staff report in Petition 443 is annexed hereto in Attachment A. AT&T is being required by Eversource to permanently relocate from existing transmission tower structure #1292 to an adjacent transmission tower structure #1279 located adjacent to the electric substation off of Sound

Shore Drive, Greenwich, Connecticut (the "Site"). AT&T has been advised by Eversource that it must remove its existing facility approved in Petition 443 by February 1, 2016. In order to avoid disruptions in AT&T's wireless services, AT&T has planned for a temporary tower facility and, if at all feasible in coordination with Eversource and state and local agencies, to construct the relocation site during an upcoming planned line outage already scheduled for January 13-20, 2016. Accordingly, AT&T is filing this Amended Petition for both a permanent relocation of its facilities to adjacent transmission tower structure #1279 ("Relocation Facility") and temporary tower locations ("Temporary Tower") and seeking Siting Council approval of the amended plan for the site approved in Petition 443 at its December 10, 2015 meeting.

II. Existing Facility

The existing AT&T facility was approved by the Siting Council fifteen years ago in Petition #443. The antennas are part of a powermount installed on transmission tower #1292 with equipment located in an existing Eversource right-of-way ("ROW") in the Town of Greenwich ("Existing Facility"). structure #1292 is a lattice tower structure and is part of a transmission line at an existing electric substation. AT&T's existing power mount extends approximately 20' above the top of the existing transmission line lattice tower. AT&T's equipment is located in a 30' x 30' fenced compound beneath the lattice tower. Access to the Existing Facility is from Sound Shore Drive over an existing gravel access drive which includes a parking area. Power is routed equipment underground from an the existing existing utility pole. Eversource's plans at this electric substation require AT&T's Existing Facility to be relocated. Eversource has notified AT&T that the Existing Facility must be permanently removed by February 1, 2016. AT&T and Eversource have coordinated on permanent relocation plans and collaborated on ways to avoid disruptions in AT&T's wireless services which are incorporated into this Amended Petition for the Relocation Facility.

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¹ Please see Attachment I for Eversource authorizations.

III. AT&T Relocation Facility and Temporary Tower Details

AT&T is licensed by the Federal Communications Commission ("FCC") to provide wireless services in this area of the State of Connecticut. The Existing Facility has provided AT&T wireless services to a large area of Greenwich for 15 years. To avoid disruptions in service to its customers as part of Eversource's mandatory relocation of the Existing Facility, AT&T is coordinating to deploy a temporary tower by February 1, 2016 and/or construct the Relocation Facility as part of a planned outage in January 2016.

The Relocation Facility is in the same substation area located off Sound Shore Drive in the Town of Greenwich. Adjacent land uses include the Eversource electric substation, transmission towers and rights-of-way, a Town park and Connecticut DOT railway bridge and facilities. A similar Sprint power mount is also located approximately 440' away on transmission tower #1281, approved by the Council in Petition No. 399.

AT&T's proposed permanent relocation to existing transmission tower structure #1279 consists of installing an approximately 161' tall powermount within the center of the existing lattice tower structure, extending with antennas to approximately 13' above the top of the structure. The extension will support 6 panel antennas, along with 12 tower mounted amplifiers ("TMAs") at a centerline height of approximately 160' AGL, with antennas at an overall height of 163' above grade level ("AGL"). A 12' x 20' elevated steel platform within a 50' x 50' fenced lease area at the base of the existing structure is proposed for AT&T's outdoor equipment cabinets.

Access to the Relocation Facility would be via a 20' wide easement over the existing paved access drive from Sound Shore Drive and then along a proposed 12' wide gravel access drive to the equipment compound. Utilities are proposed to extend underground from an on-site distribution pole. All of the improvements are located within an existing CL&P easement.

Included as Attachment B are detailed drawings prepared by Centek Engineering, last revised November 30, 2015, which include an abutters map, topographic map, plans, elevations, site details, site utility plans and other aspects of the proposed AT&T Relocation Facility and Temporary Tower options. Annexed hereto as Attachment C is a Structural Analysis report dated November 20, 2015, also prepared by Centek Engineering, concluding that the new pole, together with reinforcements and modifications to the foundation and lattice steel work on the existing transmission tower, will meet the State Building Code and Eversource requirements and be adequate to support AT&T's proposed facility.²

IV. <u>The Relocated Facility and Temporary Tower Will Not Have a</u> <u>Substantial Adverse Environmental Effect</u>

A. <u>Site Footprint, Coastal Consistency and Tidal Wetlands</u>

A comparison of existing and proposed conditions as part of Petition 443 and this amendment to the approved plans reveals no substantial adverse environmental impacts associated with the mandatory relocation of AT&T's Existing Facility. The Relocation Facility consists of a similar powermount and an equipment compound that will all be constructed within the limits of the existing transmission tower's footprint and within an existing CL&P easement. No tree clearing is proposed. A gravel driveway extension to existing transmission tower #1279 is proposed for limited access to support both construction, utilities and ongoing maintenance visits by AT&T personnel.

Cos Cob Harbor is just east of the existing transmission tower and Relocation Facility. The AT&T equipment is outside of the 100 year flood zone. AT&T, through its consultants All-Points Technology ("APT") conducted a

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² Please note that due to size considerations four (4) copies the full report with all attachments and reinforcement plans are being bulk filed with the Council as part of this Amended Petition.

Coastal Consistency Review and Tidal Wetlands Delineation which is included in Attachment D. As noted therein, the Relocation Facility is consistent with Connecticut's applicable coastal management policies and will not adversely impact tidal wetlands which are well defined by a rip-rap armored shoreline. APT's recommendation for additional soil and erosion control measures and wetlands monitoring has been incorporated by AT&T into this Amended Petition. APT's professional opinion is that the Relocation Facility will not adversely impact coastal resources or tidal wetlands.

B. <u>Compliance with MPE Limits</u>

A power density report is included in Attachment E which notes the facility will be less than 2% of federal and state standards for the general public. As such, the total radio frequency power density will be well within standards adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and the MPE limits established by the Federal Communications Commission for the public.

C. Visibility

As demonstrated in the visual materials included in Attachment F (which include more antennas than proposed), the proposed AT&T installation will not materially alter the viewshed which includes the existing lattice tower, other Connecticut DOT catenary structures and CL&P electric transmission structures and powermounts of other wireless carriers. The Relocation Facility requires no FAA lighting or marking as per the TOWAIR report included in Attachment F. As such, AT&T respectfully submits that the 16' incremental change in visibility associated with AT&T's proposed extension above the existing 147' AGL Eversource transmission structure is neither significant nor adverse for purposes of the Council's regulatory considerations in ruling on this amended petition for a declaratory ruling.

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D. <u>Temporary Tower</u>

AT&T is concurrently pursuing temporary tower locations which are identified in the drawings included in Attachment B as option A or option B. Either location would involve an 85' tall ballast mounted tower with removable equipment shelter in a 40' x 30' temporary tower compound. Only one location would be developed as a temporary tower location to minimize loss in service associated with mandatory removal of AT&T's Existing Facility. Both options are being presented for Council approval due to the ongoing nature of this project and logistics associated with removal and relocation in coordination with Eversource.

V. Public Need

Annexed hereto in Attachment G are radio frequency coverage plots which depict the lack of reliable coverage without an AT&T facility in this area of Greenwich and replacement coverage from the Relocation Facility. As demonstrated therein, AT&T's wireless network in this part of the Town of Greenwich would not be adequate without a facility in this part of the community. As such, while the Council does not have to find a public need for the relocation facility as part of a ruling on this Amended Petition, it is respectfully submitted that the enclosed information fully demonstrates the need for the relocated facility to continue to provide reliable wireless services to the public. This project is further consistent with state policy to avoid the proliferation of towers.

VI. Notice

Pursuant to R.C.S.A. Section 16-50j-40(a), notice of AT&T's intent to file this Amended Petition was sent to each person appearing of record as an owner of property that abuts the site, as well as the appropriate municipal officials and government agencies as listed in Section 16-50e of the C.G.S. Certification of such notice, a copy of the notice and the list of property owners

and municipal officials and government agencies to whom the notice was sent are included in Attachment H.

VII. Conclusion

As set forth above, the proposed relocated AT&T wireless facility and associated ground equipment are wholly consistent with legislative findings outlined in Section 16-50g and 16-50aa of the General Statutes of Connecticut that seek to avoid the unnecessary proliferation of towers in the State. Further, there are no known adverse environmental effects associated with the Relocation Facility or Temporary Tower locations. Therefore and for all the foregoing reasons, AT&T petitions the Connecticut Siting Council for an amended approval in Petition #443 and not require a Certificate of Environmental Compatibility and Public Need for the relocation or temporary tower and that the Council issue an order approving the Amended Petition.

Respectfully Submitted,

Christopher B. Fisher

On behalf of the Petitioner

cc: Peter Tesei, First Selectman Town of Greenwich
Katie Deluca, Director of Planning, Town of Greenwich
Michael J. Green, Eversource
Michele Briggs, AT&T
Dan Bilezikian, SAI for AT&T
Daniel M. Laub, Esq.

ATTACHMENT A

Petition No. 443 AT&T Wireless PCS, Inc. Staff Report February 2, 2000

On January 28, 2000, Connecticut Siting Council (Council) representatives Edward S. Wilensky, Joel Rinebold, and Steve Levine met AT&T Wireless PCS (AT&T) representatives Michael Murphy and Daniel Garber for inspection of a Connecticut Light & Power Company (CL&P) electric transmission line structure located off Sound Shore Drive in Greenwich. AT&T, with the agreement of CL&P, proposes to modify the transmission structure for telecommunications use and is petitioning the Council for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the modification. AT&T submits that the proposed modification will not have a substantial adverse environmental effect.

AT&T proposes to construct a PowerMount pole, antennas, and associated equipment within the 23 ft. by 23 ft. base of existing CL&P transmission line structure no. 1292. Structure no. 1292 is an approximately 99-ft. high lattice structure located within the CL&P right of way near the Cos Cob Metro North Railroad Station and Interstate 95. Land uses surrounding the facility include electric substations owned by CL&P and the Connecticut Department of Transportation, as well as vacant land and abandoned industrial buildings.

As proposed, the PowerMount pole would extend upward from grade, along the centerline of structure no. 1292, to approximately 21 feet above the top of the structure. A low-profile platform carrying 12 PCS panel antennas would extend approximately two feet above the top of the pole, therefore, to about 23 feet above the top of the CL&P transmission structure. The PCS equipment would be installed in cabinets mounted on a steel frame located beneath the existing lattice structure. A 30 ft. by 30 ft., 8-foot high chain link fence would surround the site. Access from Sound Shore Drive would be along an existing gravel access road. A gravel parking area would be added to the site. Power would be routed to the equipment underground from an existing utility pole. All proposed construction would be within the existing CL&P right-of-way.

A similar Sprint PowerMount is located approximately 440 feet away on adjacent CL&P transmission structure no. 1281. The Council approved this PowerMount in Petition No. 399. AT&T asserts that the sharing of the existing Sprint PowerMount is impracticable due to the PowerMount's single-carrier design specifications. Moreover, AT&T reports that its antennas would not cause radio interference with the existing Sprint facility.

The proposed PowerMount and associated equipment will not increase the noise levels at the existing site, under normal operating conditions, by six decibels or more. The worst case power density for the telecommunications operations at the site has been calculated to be less than 2% of the applicable standard for uncontrolled environments. AT&T contends that the proposed installation will not cause a substantial adverse environmental effect, and for this reason would not require a Certificate.

ATTACHMENT B



WIRELESS COMMUNICATIONS FACILITY

CT5103
EVERSOURCE STRUCT. NO. 1279
COS COB RELO.
SOUND SHORE DRIVE
GREENWICH, CT 06830

SITE DIRE	SITE DIRECTIONS				
FROM:	500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT	TO: SOUND SHORE DRIVE GREENWICH, CT 06830			
2. TURN LEFT O 3. USE THE LEF 4. TURN LEFT T 5. MERGE ONTO 6. TAKE EXIT 17 7. TAKE EXIT 52 8. KEEP LEFT A ONTO CT-8S 9. TAKE THE IN 10. MERGE ONTO 11. TAKE EXIT 4 12. TURN RIGHT	7 TO MERGE ONTO CT-15S/WIL 2 FOR STATE ROUTE 108S/STAT T THE FORK, FOLLOW SIGNS FO TERSTATE 95S EXIT TOWARD NY	DNTO STATE HWY 411 BUR CROSS PKWY TE ROUTE 8S TOWARD BRIDGEPORT DR CT-8S/BRIDGEPORT AND MERGE ' CITY	0.3 MI. 0.2 MI. 0.3 MI. 0.3 MI. 9.4 MI. 30.2 MI. 0.6 MI. 5.2 MI. 0.2 MI. 25.0 MI. 0.2 MI. 82 FT 0.4 MI.		

GENERAL NOTES

1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY AT&T.

SITE INFORMATION

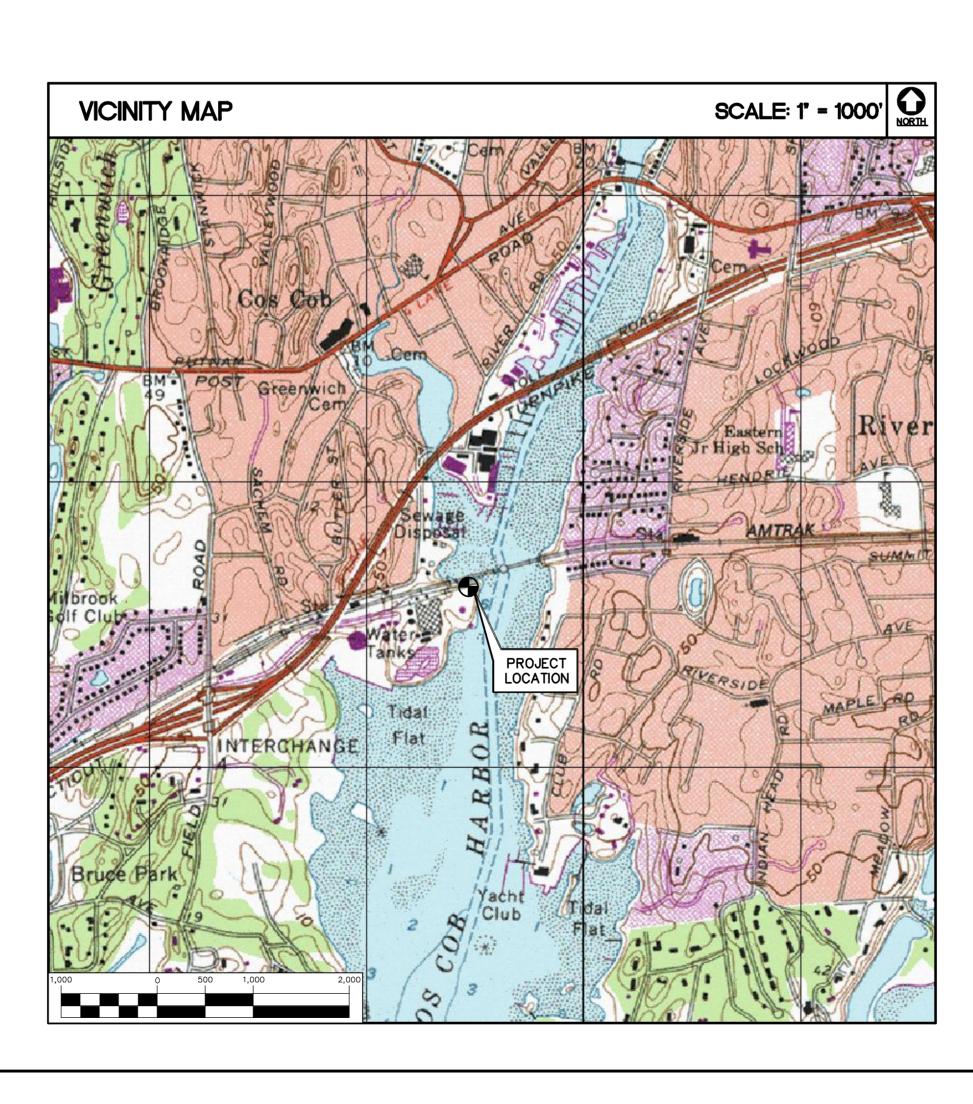
- THE SCOPE OF WORK SHALL INCLUDE:
- THE INSTALLATION OF A WIRELESS COMMUNICATION TOWER SUPPORTED ON AN EXISTING EVERSOURCE TRANSMISSION TOWER, AT&T EQUIPMENT RADIO AND BATTERY CABINETS WITHIN A ±50'x50' GRAVEL FENCED COMPOUND AREA. ALSO THE INSTALLATION OF A TEMPORARY BALLAST TOWER AND ±12'x20' EQUIPMENT SHELTER TO BE UTILIZED DURING THE DECOMMISSIONING OF THE EXISTING SITE AND CONSTRUCTION OF PROPOSED.
- 2. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
- 3. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM RESPECTIVE DEMARCS TO THE PROPOSED UTILITY BACKBOARD. FINAL DEMARC LOCATION AND UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES. UTILITIES WILL BE ROUTED UNDERGROUND FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x20' AT&T WIRELESS ELEVATED EQUIPMENT STEEL PLATFORM LOCATED WITHIN FENCED COMPOUND AREA.

1.49 mi.

MISCELLANEOUS SITE INFORMATION				
SCHOOL/DAYCARE FACILITY: 1. PUTNAM INDIAN FIELD SCHOOL 2. EASTERN MIDDLE SCHOOL 3. RIVERSIDE SCHOOL 4. GREENWICH HIGH SCHOOL 5. FIRST CHURCH PRESCHOOL 6. THE PRESCHOOL AT SECOND	DISTANCE: 0.53 mi. 0.67 mi. 0.83 mi. 1.07 mi. 1.45 mi.			

CONGREGATIONAL CHURCH

7. GREENWICH COUNTRY DAY SCHOOL

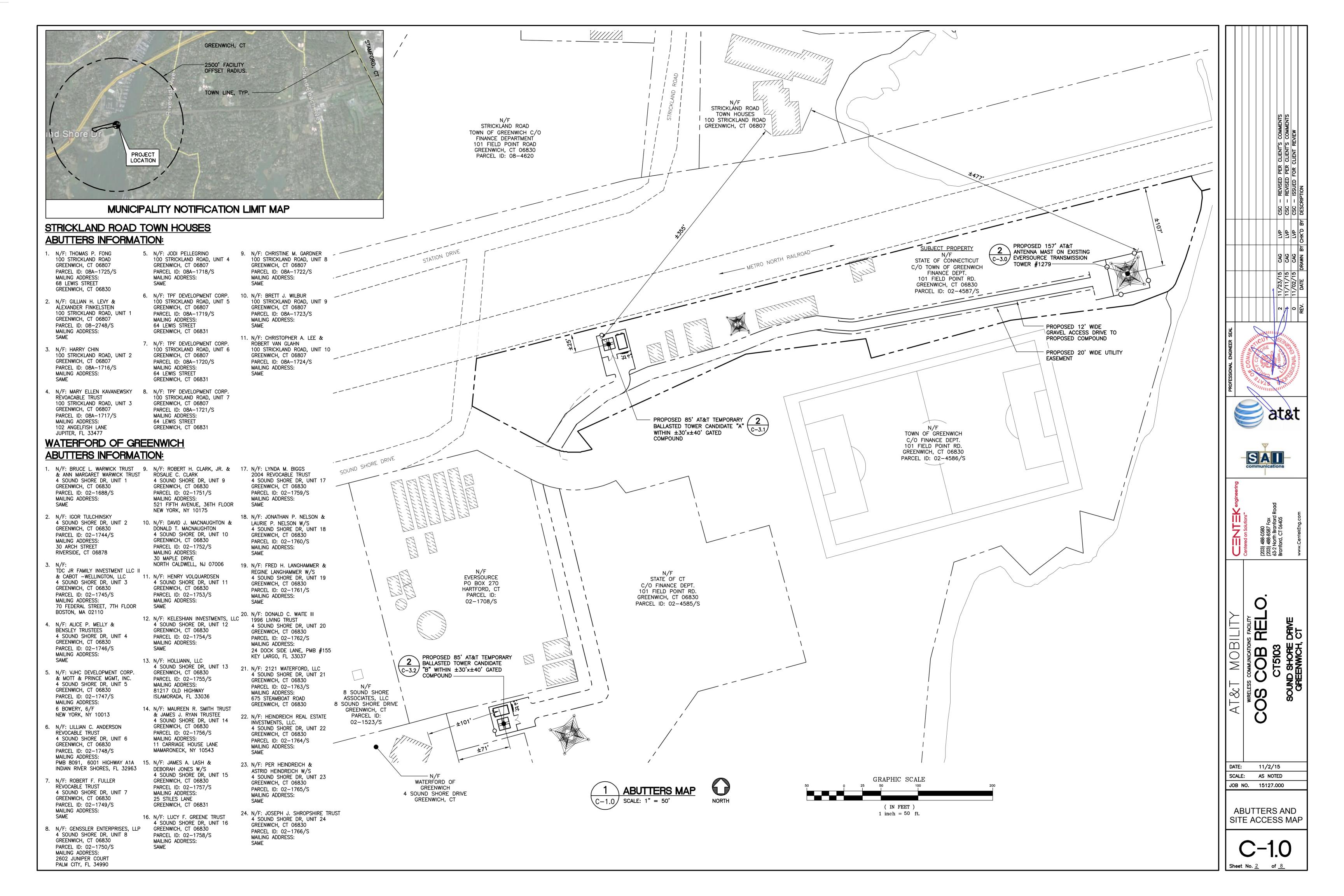


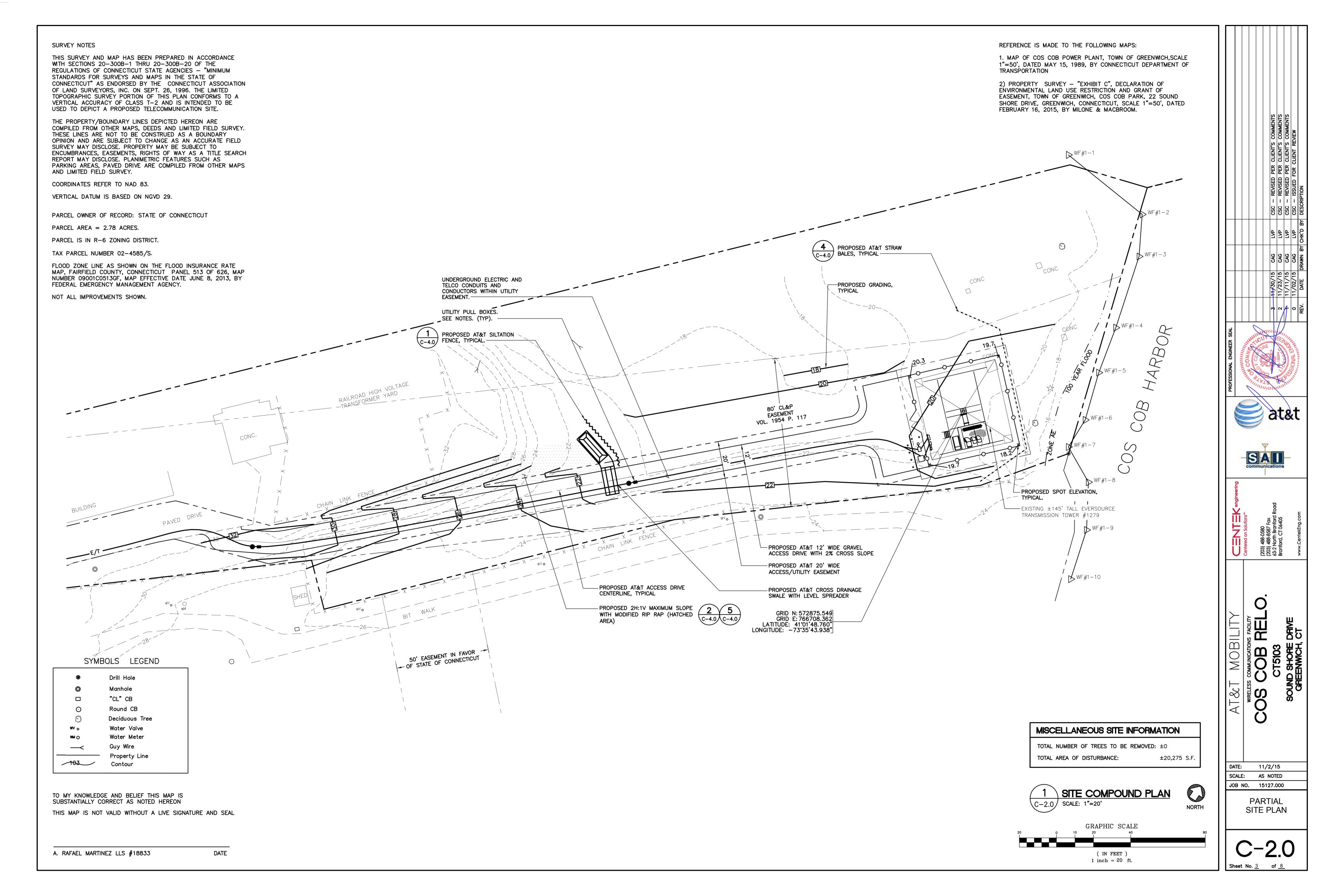
SITE NAME:	COS COB RELO - CT5103
SITE ADDRESS:	EVERSOURCE STRUCT. NO. 1279 SOUND SHORE DRIVE GREENWICH, CT 06830
PROPERTY OWNER:	STATE OF CONNECTICUT TOWN OF GREENWICH C/O FINANCE DEPARTMENT 101 FIELD POINT ROAD GREENWICH, CT 06830
LESSEE/TENANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
CONTACT PERSON:	DAN BILEZIKIAN SAI COMMUNICATIONS (401) 368-0006
ENGINEER:	CENTEK ENGINEERING 63–2 NORTH BRANFORD ROAD, BRANFORD, CT 06405 (203) 488–0580
TOWER COORDINATES:	LATITUDE: 41°-01'-48.760" N LONGITUDE: 73°-35'-43.935" W EX. GROUND ELEVATION: 18.8'± A.M.S.L. COORDINATES AND GROUND ELEVATION BASED ON FAA 1- SURVEY CERTIFICATION PREPARED BY MARTINEZ COUCH
	AND ASSOCIATES, DATED OCTOBER 6, 2015.
TEMP. TOWER "A" COORDINATES:	LATITUDE: 41°-01'-48.10" N LONGITUDE: 73°-35'-53.06" W EX. GROUND ELEVATION: 26'± A.M.S.L. COORDINATES AND GROUND ELEVATION BASED ON GOOGLE
	EARTH-PRO SOFTWARE.
TEMP. TOWER "B" COORDINATES:	LATITUDE: 41°-01'-43.73" N LONGITUDE: 73°-35'-52.98" W EX. GROUND ELEVATION: 36'± A.M.S.L. COORDINATES AND GROUND ELEVATION BASED ON GOOGLI EARTH-PRO SOFTWARE.

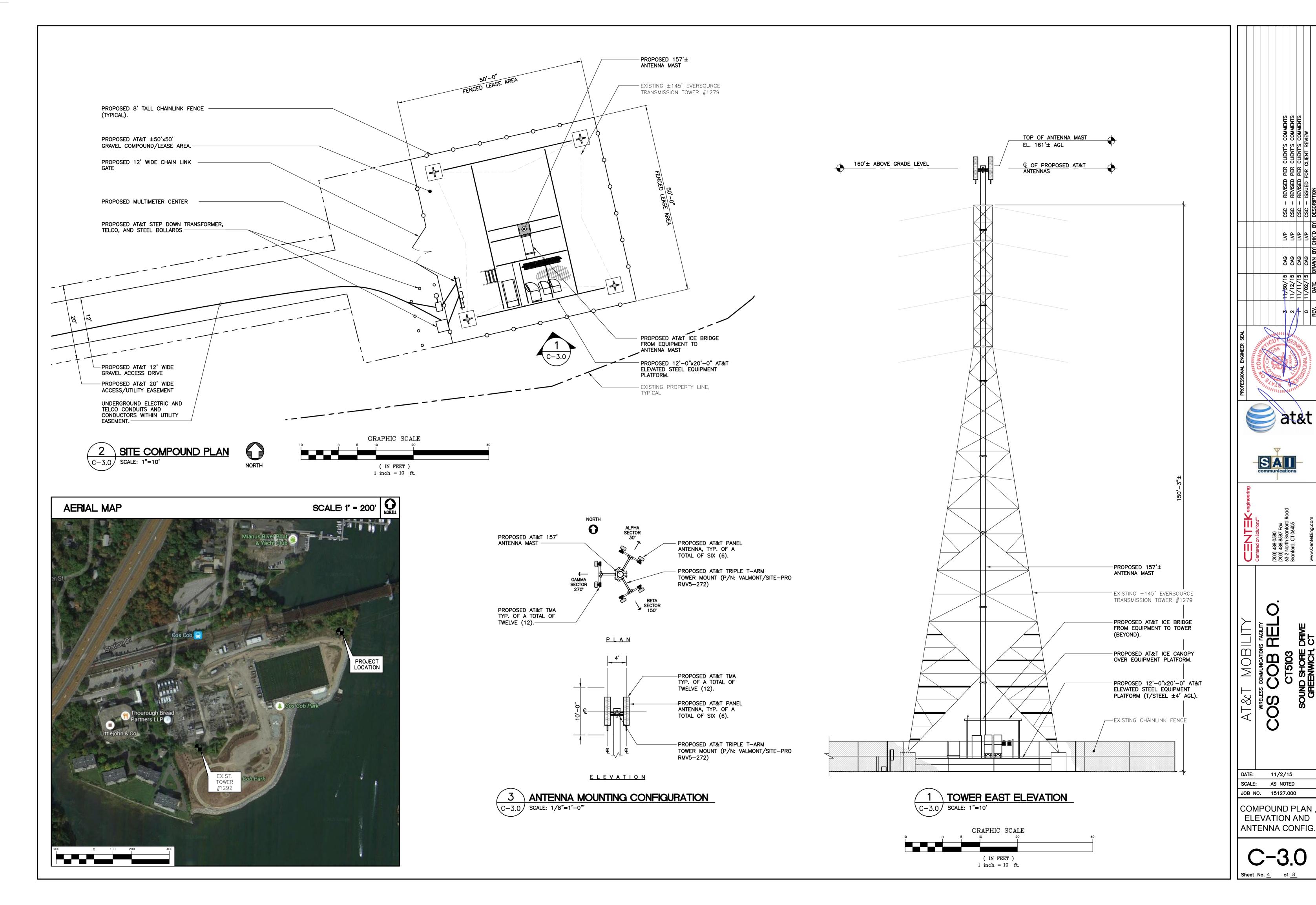
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SHT. NO.	DESCRIPTION	REV. NO.	
T-1	TITLE SHEET	5	
C-1.0	ABUTTERS MAP	2	
C-2.0	PARTIAL SITE PLAN	3	
C-3.0	COMPOUND PLAN, ELEVATION & ANTENNA CONFIGURATION	3	
C-3.1	TEMP TOWER A COMPOUND PLAN AND ELEVATION	1	
C-3.2	TEMP TOWER B COMPOUND PLAN AND ELEVATION	1	
C-4.0	SITE CONSTRUCTION, S&E CONTROL NOTES AND DETAILS	0	
C-5.0	SITE DETAILS	2	

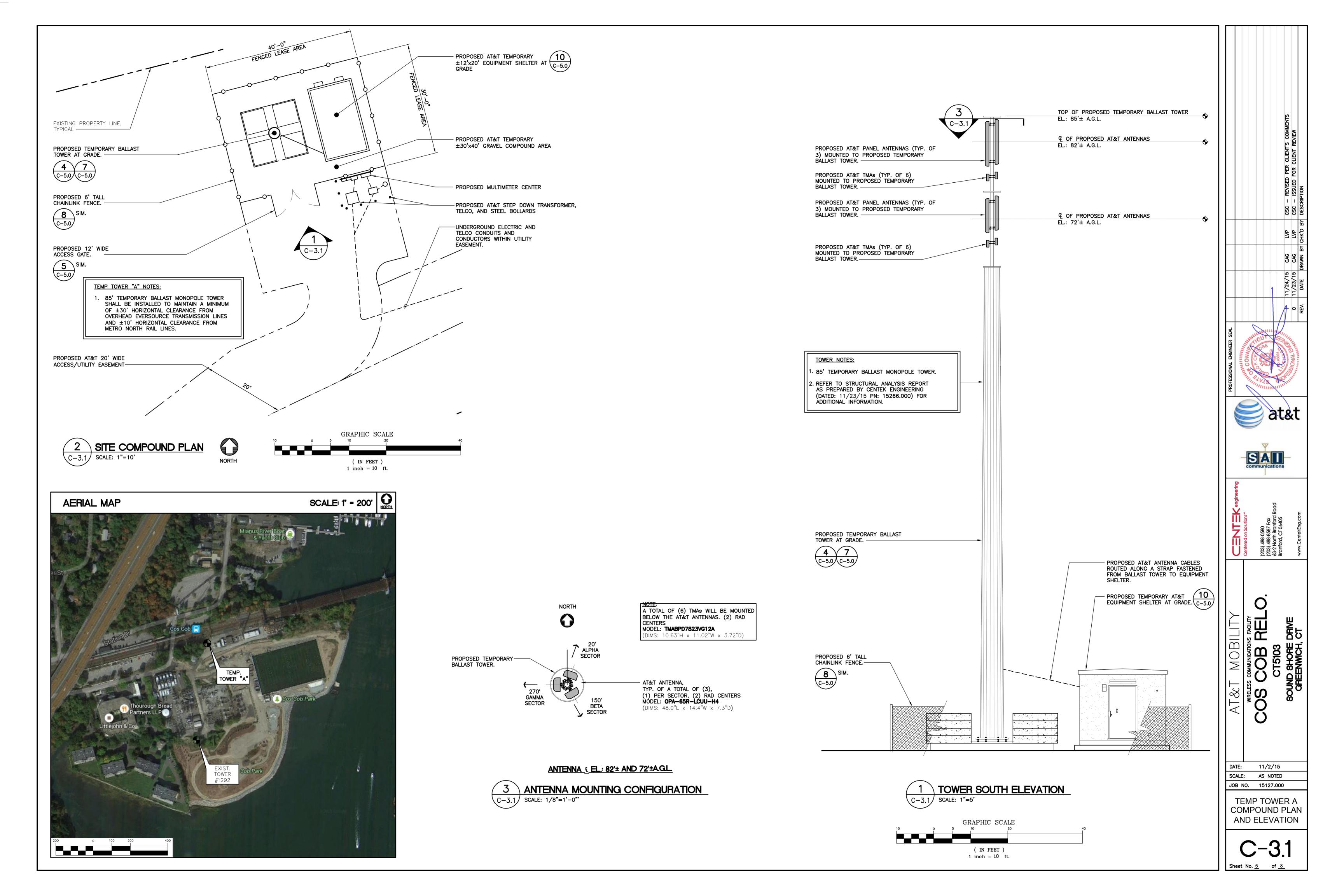
			5 11/30/15 CAG LVP CSC - REVISED PER CLIENT'S COMMENTS	4 11/24/15 CAG LVP CSC - REVISED PER CLIENT'S COMMENTS	3 11/23/15 CAG LVP CSC - REVISED PER CLIENT'S COMMENTS	2 11/12/15 CAG LVP CSC - REVISED PER CLIENT'S COMMENTS	11/11/15 CAG LVP CSC - REVISED PER CLIENT'S COMMENTS	0 11/02/15 CAG LVP CSC - ISSUED FOR CLIENT REVIEW	REV. DATE DRAWN BY CHK'D BY DESCRIPTION
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		Centered on Solutions**	(202) 489 0590	(203) 488-9580 (203) 488-8587 Fox	63-2 North Branford Road	Branford, CT 06405			www.CentekEng.com
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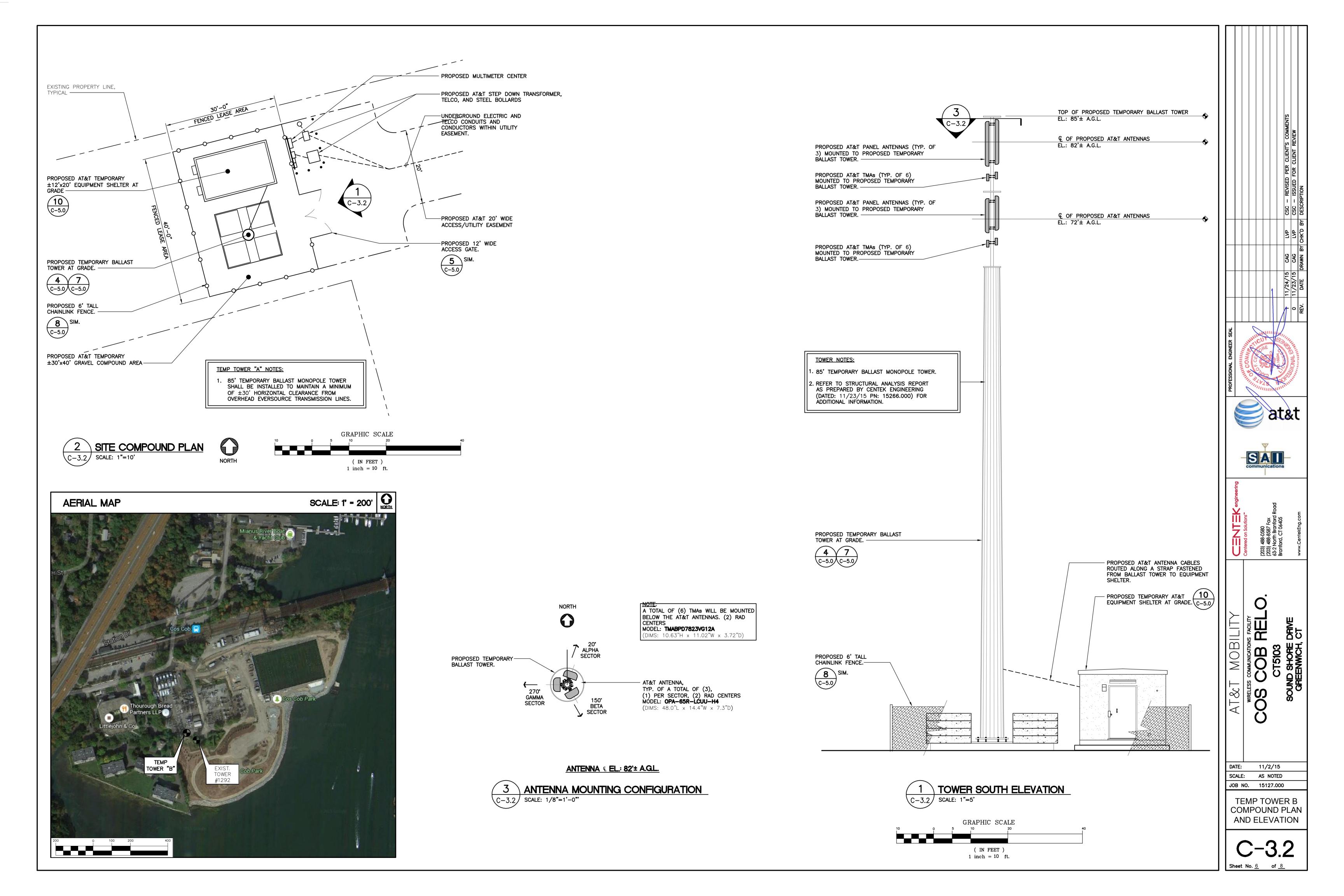
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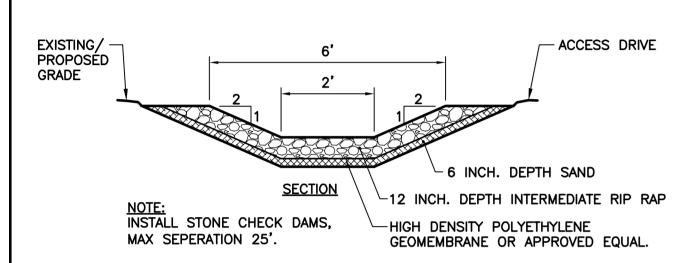


RIP RAP STABILIZATION TOP OF BANK / ORIGINAL GROUND LINE PROPOSED -DRIVEWAY FILTER BLANKET OR-

BEDDING LAYER 6" MINIMUM THICKNESS RIP RAP LAYER 30-INCHES THICHNESS 15 12 INCH. DEPTH MODIFIED RIP RAP INCHES MIN. NONWOVEN GEOTEXTILE MIRAFI N-SERIES OR EQUAL







MODIFIED RIP R	AP SIZE CHAR
STONE SIZE	% OF MASS
10" AND OVER	0
6" TO 10"	30-50
4" TO 6"	30-50
2" TO 4"	20-30
1" TO 2"	10-20
LEES THAN 1"	0-10

RIP RAP SWALE

STABILIZATION CRITERIA

CONTRACTOR SHALL IMPLEMENT RIP RAP SLOPE STABILIZATION & SWALE CONSTRICTION IN LOCATIONS WHERE LEDGE OR UNSTABLE SUBGRADES WITH LARGE AMOUNTS OF ROCK ARE PREVALENT OR AS SPECIFICALLY INDICATED ON THE PLANS.

RIP RAP ON SLOPES AND CHANNELS

PREPARE THE SUBGRADE FOR RIP RAP. BEDDING, FILTER OR GEOTEXTILE TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE IN 12-INCHES LIFTS TO 95% OF STANDARD PROCTOR DENSITY. REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL

2. IMMEDIATELY AFTER SLOPE OR CHANNEL PREPARATION, INSTALL THE FILTER OR BEDDING MATERIALS. SPREAD THE FILTER OR BEDDING MATERIALS IN A UNIFORM LAYER TO THE SPECIFIED DEPTH.

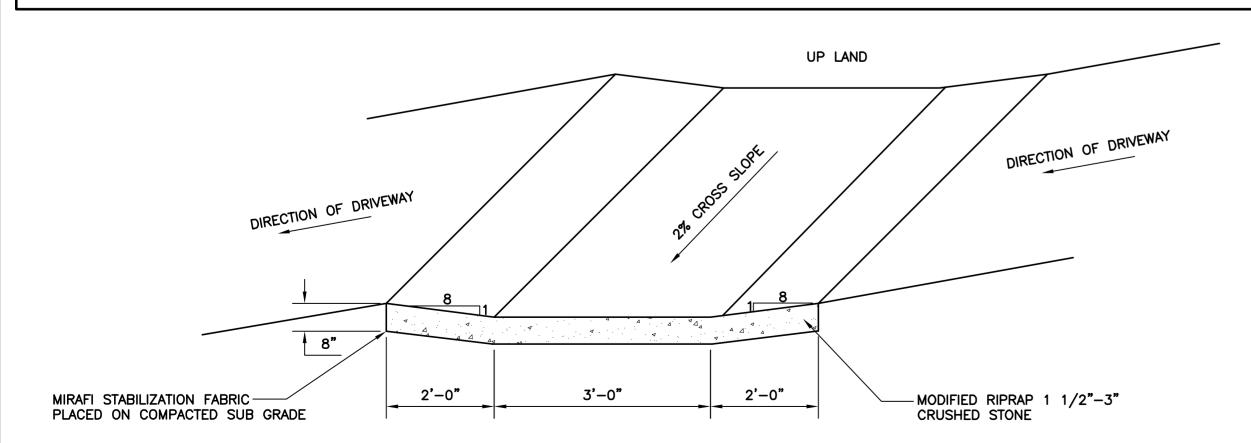
3. IMMEDIATELY AFTER PLACEMENT OF THE FILTER BLANKET, BEDDING, PLACE THE RIP RAP TO ITS FULL COURSE THICKNESS IN ONE OPERATION SO THAT IT PRODUCES A DENSE WELL GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING THE FINAL PLACING, OR BY A COMBINATION OF THESE METHODS. DO NOT PLACE RIP RAP IN LAYERS OR USE CHUTES OR SIMILAR METHODS TO DUMP THE RIP RAP WHICH ARE LIKELY TO CAUSE SEGREGATION OF THE VARIOUS STONES.

4. TAKE CARE NOT TO DISLODGE THE UNDERLYING MATERIAL WHEN PLACING THE STONES. WHEN PLACING RIP RAP ON A FILTER FABRIC TAKE CARE NOT TO DAMAGE THE FABRIC. IF DAMAGE OCCURS, REMOVE AND REPLACE THE DAMAGED SHEET. FOR LARGE STONE, 12 INCHES OR GREATER, USE A 6 INCH LAYER OF FILTER OR BEDDING MATERIAL TO PREVENT DAMAGE TO THE MATERIAL FROM PUNCTURE.

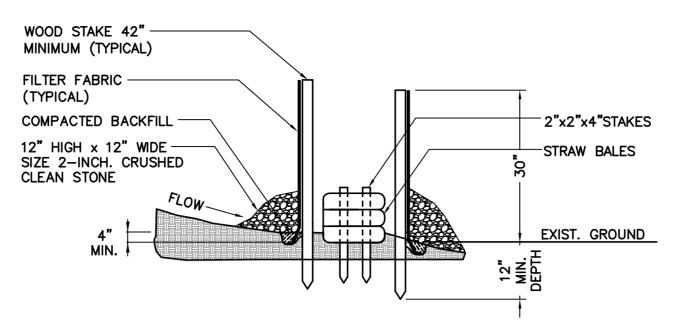
ENSURE THE FINISHED SLOPE OR CHANNEL IS FREE OF POCKETS OF SMALL STONES OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE REQUIRED GRADES AND A GOOD DISTRIBUTION OF STONE SIZES. ENSURE THE FINAL THICKNESS OF THE RIP RAP BLANKET IS WITHIN PLUS OR MINUS 0.25 OF THE SPECIFIED THICKNESS.

MAINTENANCE

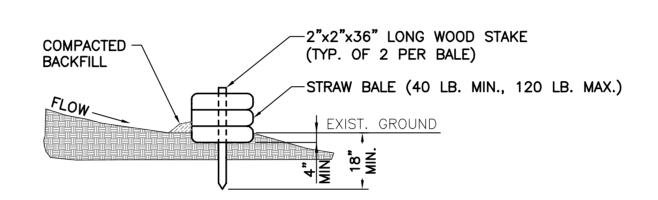
VERIZON WIRELESS SHALL PERIODICALLY INSPECT RIP RAP STABILIZED SLOPES & CHANNELS DETERMINE IF HIGH FLOWS HAVE CAUSED SCOUR BENEATH THE RIP RAP OR FILTER BLANKET MATERIALS. REMOVE TREES THAT DEVELOP IN THE PROTECTED SLOPES.



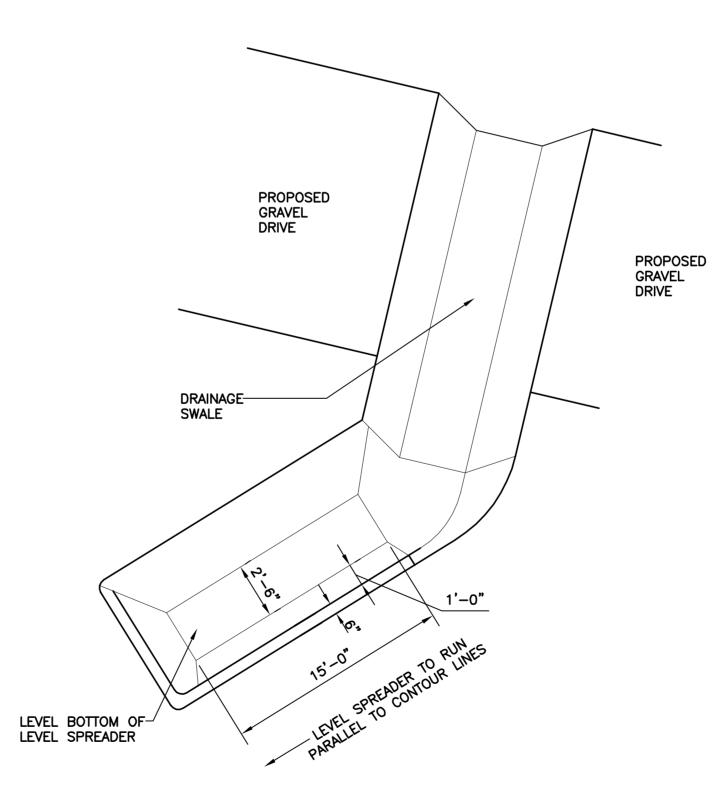




SILTATION FENCE/STRAW BALE SILTATION FENCE "SANDWICH" EROSION CONTROL $\backslash C-4.0/$ NOT TO SCALE







ARMORED STONE SURFACE SHALL BE FREE OF ORGANICS AND CONSIST SOLELY OF CRUSHED GRAVEL WITH THE FOLLOWING GRADATION:

SIEVE: 3 1/2" % PASSING: 100 % PASSING: 35-70 SIEVE: 1 1/2" % PASSING: 0-15 SIEVE: 1/2" % PASSING: 0-5 SIEVE: NO. 4 % PASSING: 0

LEVEL SPREADER W/ CROSS DRAINAGE SWALE NOT TO SCALE

GENERAL CONSTRUCTION / PRE-CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMNENT OF ANY CONSTRUCTION ACTIVITIES, A MANDITORY ON-SITE PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED WITH THE VERIZON WIRELESS CONSTRUCTION MANAGER, CONTRACTOR'S CONSTRUCTION MANAGER, THE PROJECT EROSION AND SEDIMENTATION CONTROL/ENVIRONMENTAL MONITOR AND THE ENGINEER OF RECORD.

GENERAL CONSTRUCTION SEQUENCE

THIS IS A GENERAL CONSTRUCTION SEQUENCE OUTLINE SOME ITEMS OF WHICH MAY NOT APPLY TO PARTICULAR

- 1. CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION
- INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
- 3. REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
- 4. CONSTRUCT CLOSED DRAINAGE SYSTEM. PRECEPT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
- 5. CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILITATION FENCES AS REQUIRED TO CONTROL SOIL EROSION.
- 6. INSTALL UNDERGROUND UTILITIES.
- 7. BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION. NO AREA SHALL BE LEFT UNSTABILIZED FOR A TIME PERIOD OF MORE THAN 30 DAYS.
- 8. DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING.
- 9. BEGIN EXCAVATION FOR AND CONSTRUCTION OF TOWERS AND PLATFORMS.
- 10. FINISH PAVING ALL ROADWAYS, DRIVES, AND PARKING AREAS.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 12. NO FLOW SHALL BE DIVERTED TO ANY WETLANDS UNTIL A HEALTHY STAND OF GRASS HAS BEEN ESTABLISHED IN REGARDED AREAS.
- 13. AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

SOIL EROSION AND SEDIMENT CONTROL SEQUENCE

- 1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS CONSTRUCTION ENTRANCE / ANTI TRACKING PAD, SILTATION FENCE, AND SILTATION FENCE / STRAW BALE SHALL BE IN PLACE PRIOR TO ANY GRADING ACTIVITY, INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. MEASURES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND/OR AREA IS STABILIZED.
- 2. THE ENTRANCE TO THE PROJECT SITE IS TO BE PROTECTED BY STONE ANTI TRACKING PAD OF ASTM Z-53, SIZE NO. 2 OR 3, OR D.O.T. 2" CRUSHED GRAVEL. THE STONE ANTI TRACKING PAD IS TO BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
- 3. LAND DISTURBANCE WILL BE KEPT TO A MINIMUM AND RESTABILIZATIONS WILL BE SCHEDULED AS SOON AS
- 4. ALL SOIL EROSION AND SEDIMENT CONTROL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL INCLUDING THE LATEST DATE FROM THE COUNCIL ON SOIL AND WATER CONSERVATION.
- 5. ANY ADDITIONAL EROSION/SEDIMENTATION CONTROL DEEMED NECESSARY BY TOWN STAFF DURING CONSTRUCTION, SHALL BE INSTALLED BY THE DEVELOPER. IN ADDITION, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE TOWN STAFF.
- 6. IN ALL AREAS, REMOVAL OF TREES, BUSHES AND OTHER VEGETATION AS WELL AS DISTURBANCE OF THE SOIL IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE. DURING CONSTRUCTION, EXPOSE AS SMALL AN AREA OF SOIL AS POSSIBLE FOR AS SHORT A TIME AS
- SILTATION FENCE SHALL BE PLACED AS INDICATED BEFORE A CUT SLOPE HAS BEEN CREATED. SEDIMENT DEPOSITS SHOULD BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDES OF SILTATION FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR TO BE USED IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. SILTATION FENCE IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE FENCE IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.
- 8. SWALE DISCHARGE AREA WILL BE PROTECTED WITH RIP RAP SPLASH PAD/ ENERGY DISSIPATER.
- 9. ALL FILL AREAS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
- 10. THE SOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING.
- 11. AFTER CONSTRUCTION IS COMPLETE AND GROUND IS STABLE, REMOVE SILTS IN THE RIP RAP ENERGY DISSIPATERS. REMOVE OTHER EROSION AND SEDIMENT DEVICES.

CONSTRUCTION SPECIFICATIONS - SILT FENCE

- 1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- 2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- 3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- 4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.
- 5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
- 6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
- 7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BUILD UP IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

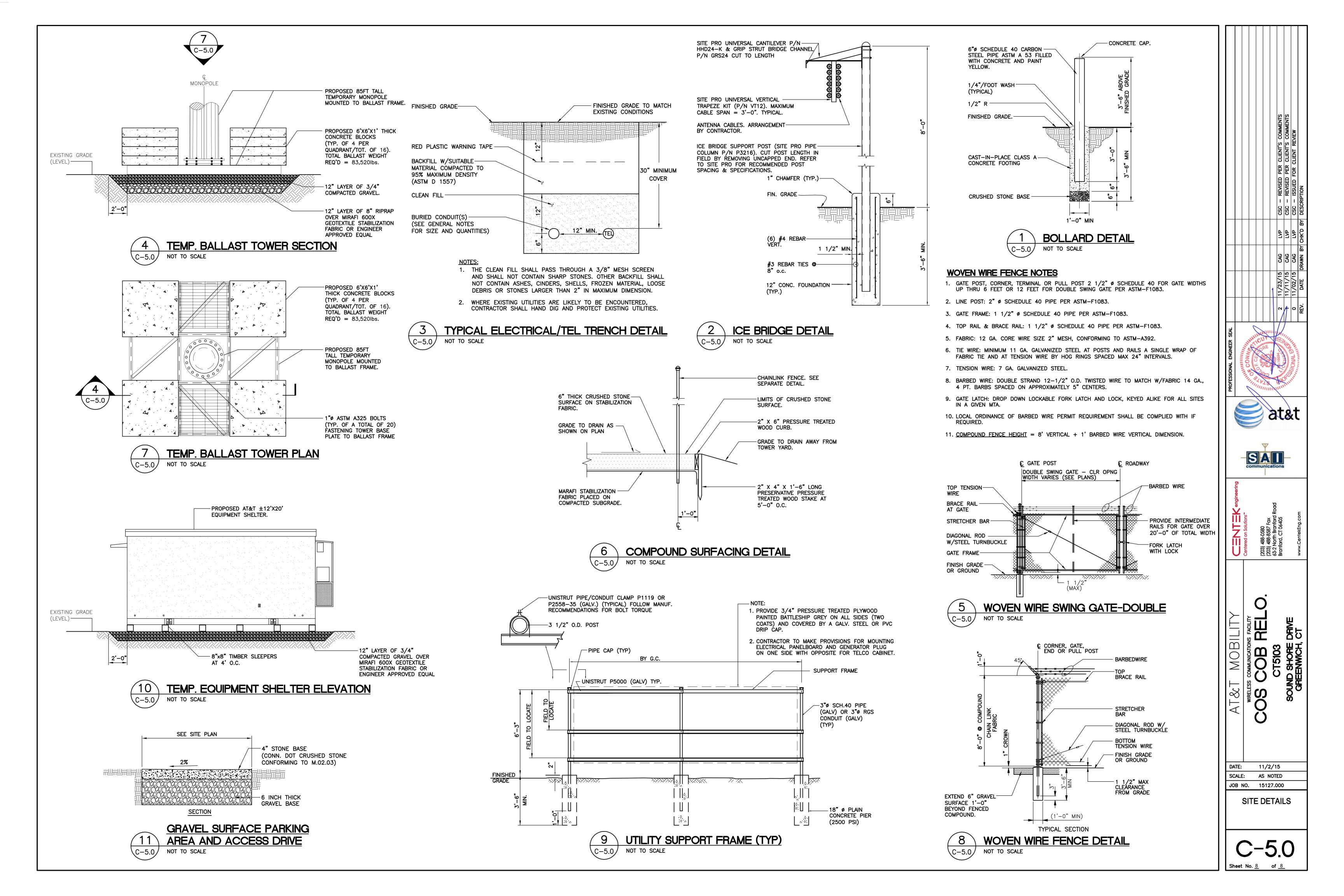
MAINTENANCE - SILT FENCE

- 1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
- 2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3. SEDIMENT SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.



11/2/15 AS NOTED JOB NO. 15127.000

SITE CONSTRUCTION S&E CONTROL NOTES AND DETAILS



ATTACHMENT C



Centered on Solutions[™]

<u>Structural Design of</u> <u>Antenna Mast and Analysis</u> <u>of Eversource Tower</u>

AT&T Site Ref: CT5103

Eversource Structure No. 1279 145' Electric Transmission Lattice Tower

> Sound Shore Drive Greenwich, CT

CENTEK Project No. 15127.000

Date: October 22, 2015

Rev 1: October 30, 2015

Rev 2: November 20, 2015



Prepared for:

AT&T Mobility 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067 CENTEK Engineering, Inc. Structural Analysis – 145-ft Eversource Tower # 1279 AT&T Antenna Installation –CT5103 Greenwich, CT Rev 2 – November 20, 2015

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Structural Analysis – 145-ft Eversource Tower # 1279 AT&T Antenna Installation –CT5103 Greenwich, CT Rev 2 – November 20, 2015

Introduction

The purpose of this report is to design a proposed Antenna Mast and analyze the existing 145' utility tower located on Sound Shore Drive in Greenwich, CT for the proposed antenna and equipment installation by AT&T.

The loads considered in this analysis consist of the following:

AT&T MOBILITY (Proposed):

Antennas: Six (6) CCI OPA-65R-LCUU-H6 panel antennas and twelve (12) CCI TMABPDB7823VG12A TMA's mounted on Site Pro Triple T-Arm p/n RMV5-272 with a RAD center elevation of 160-ft above grade.

<u>Coax Cables:</u> Twenty-Four (24) 1-5/8" \varnothing coax cables running on/within the proposed antenna mast.

<u>Antenna Mast:</u> HSS16x0.5 x 157-ft long pipe mast conforming to ASTM A500 Grade 42, F_y = 42 ksi.

<u>Primary assumptions used in the analysis</u>

- Allowable steel stresses are defined by AISC-ASD 9th edition for design of the Antenna Mast and antenna supporting elements.
- ASCE Manual No. 10-97, "Design of Latticed Steel Transmission Structures", defines allowable steel stresses for evaluation of the utility tower.
- All utility tower members are adequately protected to prevent corrosion of steel members.
- All proposed antenna mounts are modeled as listed above.
- All coaxial cable will be installed within the Antenna Mast unless specified otherwise.
- Antenna Mast will be properly installed and maintained.
- No residual stresses exist due to incorrect tower erection.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds conform to the requirements of AWS D1.1.
- Antenna Mast and utility tower will be in plumb condition.
- Utility tower was properly installed and maintained and all members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
- Any deviation from the analyzed loading will require a new analysis for verification of structural adequacy.

Structural Analysis – 145-ft Eversource Tower # 1279 AT&T Antenna Installation –CT5103 Greenwich, CT Rev 2 – November 20, 2015

Analysis

Structural design of the antenna mast and steel support frame was independently completed using the current version of RISA-3D computer program licensed to CENTEK Engineering, Inc. The RISA-3D program contains a library of all AISC shapes and corresponding section properties are computed and applied directly within the program. The program's Steel Code Check option was also utilized.

The proposed Antenna Mast consisting of a HSS16"x0.5" pipe conforming to ASTM A500 Grade 42 (Fy = 42ksi) connected at six elevations to the existing tower and supported on s structural steel support frame was designed for its ability to resist loads prescribed by the TIA/EIA standard. Section 5 of this report details these gravity and lateral wind loads. Load cases and combinations used in RISA-3D for TIA/EIA loading are listed in report Section 6.

Structural analysis of the existing Eversource tower structure was completed using the current version of PLS-Tower computer program licensed to CENTEK Engineering, Inc. The NESC program contains a library of all AISC angle shapes and corresponding section properties are computed and applied directly within the program. The program's Steel Code Check option was also utilized.

The existing 145-ft tall Eversource lattice tower was analyzed for its ability to resist loads prescribed by the NESC standard. Maximum usage for the tower was calculated considering the additional forces from the Antenna Mast and associated appurtenances. Section 7 of this report details these gravity and lateral wind loads.

Design Basis

Our analysis was performed in accordance with EIA-222-F-1996, ASCE Manual No. 10-97, "Design of Latticed Steel Transmission Structures", NESC C2-2007 and Northeast Utilities Design Criteria.

The utility tower structure, considering existing and future conductor and shield wire loading, with the proposed antenna mast was analyzed under two conditions:

UTILITY TOWER ANALYSIS

The purpose of this analysis is to determine the adequacy of the existing utility structure to support the proposed antenna loads. The loading and design requirements were analyzed in accordance with the NU Design Criteria Table, NESC C2-2007 ~ Construction Grade B, and ASCE Manual No. 10-97, "Design of Latticed Steel Transmission Structures".

Load cases considered:

Wind P Radial Vertica Wind C	ase 1: NESC Heavy ressure Ice Thickness I Overload Capacity Factor Overload Capacity Factor ension Overload Capacity Factor	4.0 psf 0.5" 1.50 2.50 1.65
Wind S	ase 2: NESC Extreme peed1 Ice Thickness1	10 mph ⁽¹⁾ 0"
Note 1:	NESC C2-2007, Section25, Rule 250C: Extre Loading, 1.25 x Gust Response Factor (wind second gust)	

Structural Analysis – 145-ft Eversource Tower # 1279 AT&T Antenna Installation –CT5103 Greenwich, CT Rev 2 – November 20, 2015

ANTENNA MAST ANALYSIS

Antenna Mast, appurtenances and connections to the utility tower were analyzed and designed in accordance with the NU Design Criteria Table, TIA/EIA-222-F, and AISC-ASD standards.

Load cases considered:

Load Case 1:

Wind Speed. 85 mph (2)

Radial Ice Thickness.......0"

Load Case 2:

Radial Ice Thickness...... 0.5"

Note 2: Per NU Mast Design Criteria Exception 1.

ANTENNA MAST

The Antenna Mast was determined to be structurally **adequate**.

Member	Stress Ratio (% of capacity)	Result
HSS16x0.5"	26.3%	PASS
L3-1/2x3-1/2x1/4 Brace	34.0%	PASS
W21x48	75.5%	PASS
Mast Connection to Tower	60.3%	PASS
Support Frame Seat Connection	93.8%	PASS

Note 1 – 1/3 increase in allowable stress not used for connection to tower per OTRM 059.

UTILITY TOWER

This analysis finds that the subject utility structure is adequate to support the existing proposed mast and related appurtenances. The tower stresses meet the requirements set forth by the ASCE Manual No. 10-97, "Design of Latticed Steel Transmission Structures", for the applied NESC Heavy and Hi-Wind load cases. The detailed analysis results are provided in Section 9 of this report. The analysis results are summarized as follows:

With the proposed tower reinforcements detailed in Section 4 of this report a maximum usage of 99.27% occurs in the utility tower under the NESC Extreme loading condition.

TOWER SECTION:

The utility structure with the proposed tower reinforcements detailed in Section 4 of this report was found to be within allowable limits.

Tower Member	Stress Ratio (% of capacity)	Result
Angle g18p	99.27%	PASS

FOUNDATION AND ANCHORS

The existing foundation consists of three (3) 4-ft square x 11.83-ft long piers on three (3) 8-ft square x 3.17-ft thick pads and one (1) 5.67-ft square x 11.83-ft long pier on one (1) 8-ft square x 3.17-ft thick pad. Tower legs are connected to the foundation with four (4) 7/8" dia. ASTM A432 bolts per leg. Foundation information was obtained from NUSCO drawing # 01037-600010.

Structural Analysis – 145-ft Eversource Tower # 1279 AT&T Antenna Installation –CT5103 Greenwich, CT Rev 2 – November 20, 2015

BASE REACTIONS:

From PLS-Tower analysis of utility tower based on NESC/NU prescribed loads.

Load Case	Shear	Uplift	Compression
NESC Heavy Wind	16.98 kips	46.64 kips	71.59 kips
NESC Extreme Wind	28.29 kips	85.46 kips	104.86 kips

Note 1 – 10% increase to be applied to the above tower base reactions for foundation verification per OTRM 051

ANCHOR BOLTS:

The anchor bolts with the proposed reinforcements detailed in Section 4 of this report were found to be within allowable limits.

Anchor Bolts	Design Limit	Stress Ratio (% of capacity)	Result
Existing	Tension	97.70%	PASS
Proposed	Tension	68.30%	PASS

FOUNDATION:

The foundation was found to be within allowable limits.

Foundation	Design Limit	Allowable Limit	Proposed Loading ⁽²⁾	Result
Reinforced Conc. Pad and Pier	Uplift	1.0 FS ⁽¹⁾	1.25 FS ⁽¹⁾	PASS

Note 1: FS denotes Factor of Safety

Note 2: 10% increase to PLS base reactions used in foundation analysis per OTRM 051.

Conclusion

This analysis shows that the subject utility tower with the proposed reinforcements detailed in Section 4 of this report is adequate to support the proposed At&t equipment installation.

The analysis is based, in part on the information provided to this office by Eversource and At&t Mobility. If the existing conditions are different than the information in this report, CENTEK engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE Structural Engineer

ATTACHMENT D



COASTAL CONSISTENCY REVIEW

November 20, 2015

New Cingular Wireless PCS, LLC dba AT&T Site Acquisitions, Inc. 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067

APT Project No.: CT1931420

Re: Proposed Cos Cob Relo Facility
AT&T Site No. CT5103
Sound Shore Drive
Greenwich, Connecticut

On behalf of Site Acquisitions Inc. ("SAI") and New Cingular Wireless PCS, LLC ("AT&T"), All-Points Technology Corporation, P.C. ("APT") performed an evaluation to demonstrate that the proposed AT&T project meets the requirements of the Connecticut Coastal Management Act ("CCMA")¹ and is adequately protective of the interests of these regulations and the State's coastal resources and policies. This analysis was performed because the proposed project is located within the Coastal Boundary as defined in CGS section 22a-94(b); please refer to the enclosed Coastal Boundary Map in Attachment 1 - Figures. The initial step in assuring consistency with the State's coastal policies for any use or activity subject to the CCMA is to determine the coastal resources on or near a project site which may be affected. The next step is to review the coastal use policies to determine if there are potential conflicts regarding the proposed use or activity under consideration.

Project Information

APT understands that SAI is securing a lease area (the "Site") that would allow AT&T to install a new wireless telecommunications facility (the "Facility") on portions of the Host Property. The Facility would be constructed to relocate an existing Facility that is currently located on an Eversource Energy transmission lattice tower (structure #1292). The existing Facility is located on a separate parcel of property located south of the Host Property. The proposed Facility would consist of a 160-foot tall tower mast (top of antennas would extend to approximately 165 feet) to be constructed within an existing 147-foot tall Eversource Energy transmission lattice tower (structure #1279) located on the eastern portion of the Host Property. A proposed 50-foot by 50-foot gravel compound/ground lease area would be located at the base of the existing Eversource Energy transmission tower. The compound/ground lease area would be enclosed by a proposed 6-foot tall chain link fence with a proposed 4-foot wide access gate located on the western-facing side. Proposed AT&T equipment cabinets would be located on a 12-foot by 20-foot concrete slab-on-grade to be covered with a 12-foot by 15-foot canopy. A proposed 50-kW diesel-fueled emergency standby generator would be located on a concrete pad adjacent to the equipment shelters. The Facility would also include a pad-mounted electrical transformer and a utility backboard located within the compound/ground lease area immediately west of the equipment cabinets. The Site also includes proposed access within a 20-foot wide access/utility easement. The access/utility easement would extend

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¹ CGS Section 22a-90 through 22a-112

approximately 1,000 feet eastward to the proposed compound over an existing gravel access road that currently serves the existing transmission structure.

Coastal Resources

An APT Wetland Scientist inspected the Host Property to field-verify on-site and adjacent coastal resources. Prior to the field inspection, the Connecticut Department of Energy and Environmental Protection ("DEEP") Coastal Resources Map² for Greenwich was reviewed. The following Coastal Resources are located on or adjacent to the Host Property:

Coastal Resources	On Site	Adjacent to Property	Off Site but Potentially Affected by Project	Not Applicable
General Resources*	\boxtimes			
Beaches & Dunes				\boxtimes
Bluffs & Escarpments				
Coastal Hazard Area	\boxtimes			
Coastal Waters & Estuarine Embayments				
Developed Shorefront	\boxtimes			
Freshwater Wetlands and Watercourses				\boxtimes
Intertidal Flats		\boxtimes		
Islands				\boxtimes
Rocky Shorefront	\boxtimes			
Shellfish Concentration Areas		\boxtimes		
Shorelands				\boxtimes
Tidal Wetlands		\boxtimes		

^{*} applicable to all proposed activities

Federal or state-regulated tidal wetlands and watercourse were identified and delineated at the east end of the Host Property. Refer to the enclosed Wetland Inspection report provided in Attachment 2. The DEEP Coastal Resource Map identifies the following coastal resources on or adjacent to the Host Property: Coastal Flood Hazard Area, Developed Shorefront and Estuarine Embayments. Please refer to the enclosed Coastal Boundary and Coastal Resources Maps in the Attachment 1 - Figures. The Coastal Flood Hazard Area is associated with Cos Cob Harbor's 100-year flood plain (Zone VE [coastal flood zone with velocity hazard (wave action) with Base Flood Elevations determined] with a Base Flood Elevation of 14 feet) as shown on the FEMA Flood Insurance Rate Map, Fairfield County, Connecticut, Panel 531 of 626, Map Number 09001C0531G, revised July 8, 2013, which is included in the Attachment 1 - Figures. Field observations of Developed Shorefront consisted of rip rap armored banks of the Cos Cob Harbor. The Estuarine Embayments resource is associated with Cos Cob Harbor, a tidally influenced section of the Mianus River, and its connection to Captain Harbor and Long Island Sound located to the south. Small disconnected areas of Intertidal Flats and Tidal Wetlands (small patches of saltwater cordgrass [Spartina alternifloria] were observed adjacent to the Host Property. Representative photographs of the Host Property and coastal resources are enclosed in the Attachment 3 – Photo Documentation.

APT consulted with the CT DEEP Natural Diversity Data Base ("NDDB") to determine what, if any, State and/or Federal Listed Species might occur at the site. According to the NDDB Determination Letter Number: 201508398, there are no anticipated negative impacts to State and Federal Listed Species (RCSA Sec. 26-306) resulting from the

² Connecticut Department of Environmental Protection (now known as Department of Energy & Environmental Protection), Coastal Area Management Program. *Coastal Resources, Norwalk South Quadrangle*. 1979.

proposed activity at the site. See NDDB Determination Letter dated November 1, 2015 which is included in the Attachment 4 - NDDB Correspondence.

The proposed project will not generate any significant additional stormwater beyond current conditions, as the Facility will be installed within the developed footprint of the existing Eversource Energy transmission tower.

Applicable Coastal Use and Activity Policies

Section 22a-92 of the Coastal Management Act identifies all statutory activities applicable to the proposed activity. One of these activities applies to the proposed AT&T project:

\boxtimes	General Development ³ [CGS Sections 22a-92(a)(1), 22a-92(a)(2), 22a-92(a)(9)]
	Water-Dependent Uses [CGS Sections 22a-92(a)(3), 22a-92(b)(1)(A)]
	Ports and Harbors [CGS Section 22a-92(b)(1)(C)]
	Coastal Structures and Filling [CGS Section 22a-92(b)(1)(D)]
	Dredging and Navigation [CGS Sections 22a-92(c)(1)(C), 22a-92(c)(1)(D)]
	Boating [CGS Section 22a-92(b)(1)(G)]
	Fisheries [CGS Section 22a-92(c)(1)(I)]
	Coastal Recreation and Access [CGS Sections 22a-92(a)(6), 22a-92(c)(1)(J), 22a-92(c)(1)(K)]
	Sewer and Water Lines [CGS Section 22a-92(b)(1)(B)]
	Fuel, Chemicals and Hazardous Materials [CGS Sections 22a-92(b)(1)(C), 22a-92(b)(1)(E), 22a-92(c)(1)(A)]
	Transportation [CGS Sections 22a-92(b)(10)(F), 22a-92(c)(1)(F), 22a-92(c)(1)(G), 22a-92(c)(1)(H)]
	Solid Waste [CGS Section 22a-92(a)(2)]
	Dams, Dikes and Reservoirs [CGS Section 22a-92(a)(2)]
	Cultural Resources [CGS Section 22a-92(b)(J)]
	Open Space and Agricultural Lands [CGS Section 22a-92(a)(2)]

Consistency with Applicable Statutory Coastal Use and Activity Policies

A primary policy of the CCMA is to insure that the proposed development proceeds in a responsible manner to allow for economic growth without significantly disrupting coastal resources. The CCMA identifies eight potential adverse impacts to coastal resources. The proposed AT&T project will not result in adverse impacts to coastal resources or associated policies. This section provides an explanation of how the proposed activity is consistent with the applicable statutory coastal resource policies and describes any mitigation necessary to offset adverse impacts.

Potential Resource Impacts	Applicable	Not Applicable
1. Characteristics & Functions of Resources - CGS Section 22a-93(15)(H)	\boxtimes	
2. Coastal Flooding - CGS Section 22a-93(15)(E)	\boxtimes	
3. Coastal Waters Circulation Patterns - CGS Section 22a-93(15)(B)		
4. Drainage Patterns - CGS Section 22a-93(15)(D)		
5. Patterns of Shoreline Erosion and Accretion - CGS Section 22a-93(15)(C)		\boxtimes
6. Visual Quality - CGS Section 22a-93(15)(F)	\boxtimes	
7. Water Quality - CGS Section 22a-93(15)(A)	\boxtimes	
8. Wildlife, Finfish, Shellfish Habitat - CGS Section 22a-93(15)(G)	\boxtimes	

_

³ applicable to all proposed activities

1) Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments by significantly altering their natural characteristics or function.

The proposed project will not alter the natural characteristics of any coastal resource area. The proposed Facility would be located within the developed footprint of the existing Eversource Energy transmission tower. Erosion control measures will comply with the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control to protect nearby coastal waters and resource areas during construction. Due to the close proximity of development activities to AT&T's proposed facility, a tidal wetland protection plan is recommended to be implemented during construction to ensure protection of sensitive coastal resources. A Tidal Wetland Protection Plan is provided in Attachment 5.

2) Increasing the hazard of coastal flooding by significantly altering shoreline configurations or bathymetry, particularly within high velocity flood zones.

The proposed project will not alter shoreline configurations or bathymetry and will not increase coastal flooding. Although the Host Property is identified within the 100-year flood hazard zone (Coastal Flood Hazard Area), the proposed Facility would be located at ground elevation of ±18.8 feet (National Geodetic Vertical Datum of 1929 ["NGVD 29"]); a copy of the FAA 1-A Survey Certification is provided in Attachment 6. The FEMA Flood Insurance Rate Map depicts Zone VE at the eastern end of the Host Property with a Base Flood Elevation of 14 feet (North American Vertical Datum of 1988 ["NAVD 88"]). A conversion factor is applied to the reported NGVD 29 elevation to calculate the elevation referenced to NAVD 88 so a direct comparison can be made to the FEMA-reported base flood elevation. Utilizing this conversion tool, the ground elevation at the proposed Facility location of ±18.8 feet (NGVD 29) would equate to an elevation of ±17.698 feet (NAVD 88). Therefore, the proposed Facility would be located ±3.698 feet above the 100-year base flood elevation. Therefore, the project would not increase coastal flooding.

3) Degrading existing circulation patterns of coastal waters by impacting tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours.

Being located within the developed footprint of the existing Eversource Energy transmission tower, the proposed project is located outside of tidally influenced coastal water areas and as such will not impact current drainage or circulation patterns to tidally influenced areas.

4) Degrading natural or existing drainage patterns by significantly altering groundwater flow and recharge and volume of runoff.

Existing drainage patterns, groundwater flow, recharge and stormwater runoff will not be altered by the proposed Facility due to its location within the developed footprint of the existing Eversource Energy transmission tower. No significant additional impervious surfaces will be created by the proposed project.

5) Degrading natural erosion patterns by significantly altering littoral transport of sediments in terms of deposition or source reduction.

The proposed project would not affect littoral transport of sediments (i.e., patterns of sand deposition) since the Facility location is not on a shoreline.

6) Degrading visual quality by significantly altering the natural features of vistas and viewpoints.

Views of coastal resources will not be obstructed by the proposed Facility from scenic overlooks or public parks. Principal views from Cos Cob Park are to the east and south onto Cos Cob Harbor, Captain Harbor and Long Island

⁴ National Oceanic and Atmospheric Administration VERTCON Orthometric Height Conversion Tool. http://www.ngs.noaa.gov/cgi-bin/VERTCON/vert_con.prl

Sound. These views include both unobstructed and obstructed lines of sight; obstructed views are associated with the existing Eversource Energy transmission line infrastructure and Metro North railroad tracks (catenary lines and bridge over Cos Cob Harbor). APT's Visual Report (November 2015) provided under separate cover, concludes that the viewshed of the relocated Facility will not substantially increase when compared to that of the existing transmission tower. Very few new views would be created by the installation of the proposed Facility, as the existing lattice structure is one of several prominent visual features in the immediate area of the Project Site. Near-range views (within approximately 0.25 mile) would experience a modest alteration as the proposed Facility height would extend an additional 20+ feet, but the mast's profile is significantly narrower than the existing lattice tower top. Where the Facility will be visible, other existing utility infrastructure and wireless facilities can also be seen. Based on the results of this analysis, it is our opinion that the proposed relocated Facility would not result in an adverse visual impact to the surrounding environment or result in degradation of visual quality by significantly altering vistas or viewpoints of coastal resources.

7) Degrading water quality of coastal waters by introducing significant amounts of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity.

The proposed project will not adversely affect water quality of Cos Cob Harbor or associated coastal resources. Since the proposed Facility is located within the developed footprint of the existing Eversource Energy transmission tower, no significant additional impervious surfaces would be created and as a result no significant additional stormwater runoff will be generated by the proposed project. Erosion control measures will comply with the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control to protect nearby coastal waters and resource areas during construction. Due to the close proximity of development activities to AT&T's proposed facility, a tidal wetland protection plan is recommended to be implemented during construction to ensure protection of sensitive coastal resources (see Attachment 5).

8) Degrading or destroying essential wildlife, finfish or shellfish habitat by significantly altering the composition, migration patterns, distribution, breeding or other population characteristics of the natural species or significantly altering the natural components of the habitat.

The proposed facility will not degrade or destroy essential coastal wildlife, finfish or shellfish habitat. Erosion control measures will comply with the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control to protect nearby coastal waters and resource areas during construction. As discussed above, a tidal wetland protection plan is recommended to be implemented during construction to ensure protection of sensitive coastal resources (see Attachment 5).

Impact to Future Water-Dependent Development Activities and Opportunities

"Adverse impacts on future water-dependent development opportunities" and "adverse impacts on future water-dependent development activities" include but are not limited to (A) locating a non-water-dependent use at a site that (i) is physically suited for a water-dependent use for which there is a reasonable demand or (ii) has been identified for a water-dependent use in the plan of development of the municipality or the zoning regulations; (B) replacement of a water dependent use with a non-water-dependent use; and (C) siting of a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters.⁵

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⁵ CGS Section 22a-93(17)

Potential Impacts on Water Dependent Uses	Applicable	Not Applicable
Locating a non-water-dependent use on a site suited to or planned for	П	\boxtimes
a water-dependent use - CGS Section 22a-93(17)]	
Replacing an existing water-dependent use with a non-water-	П	\bowtie
dependent use - CGS Section 22a-93(17)		
Siting a non-water-dependent use which reduces or eliminates public		\bowtie
access to marine or tidal waters - CGS Section 22a-93(17)		

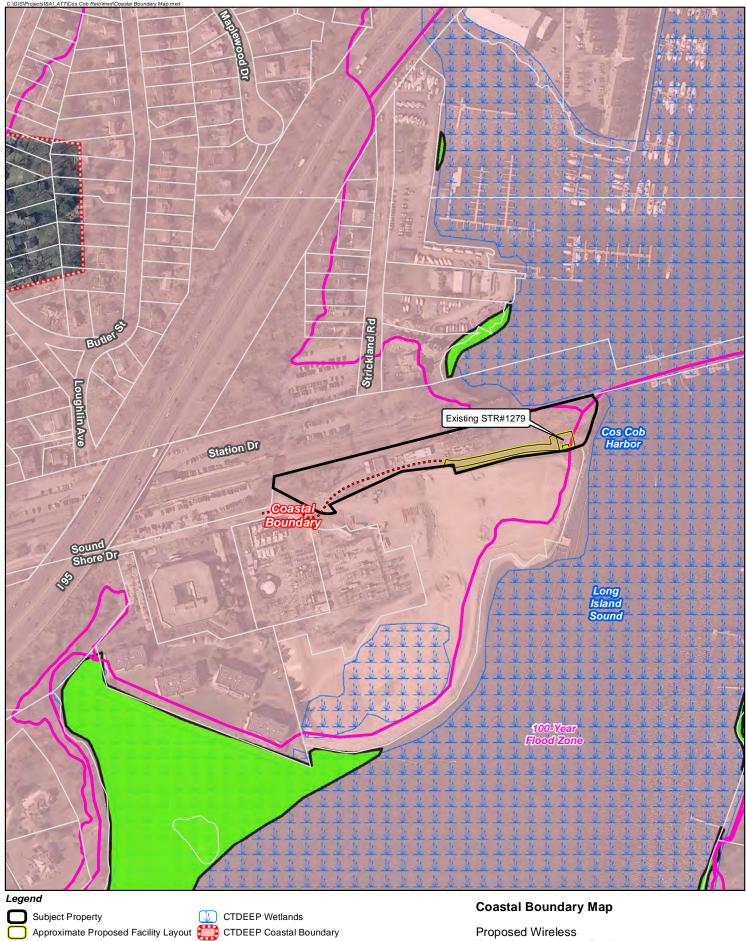
The Host Property has direct access to the Cos Cob Harbor, a tidal waterway, and is therefore physically suited for a water-dependent use. However, Cos Cob Park does not contain a water-dependent use such as a marina or boat launch. With AT&T's proposed development located within the existing Eversource Energy transmission tower and corridor, the proposed project would not reduce, eliminate or in any way hinder public access to Cos Cob Harbor or possible future water-dependent development activities or opportunities on the Host Property.

Conclusion

The activity proposed by AT&T is found to be consistent with all applicable policies in Section 22a-92 of the Connecticut Coastal Management Act and will not adversely impact coastal resources.

Attachment 1 Figures

- Coastal Boundary Map
- Coastal Resources Map
- > FEMA Flood Insurance Rate Map, Map Number 09001C0531G



Map Notes: Base Map Source: 2012 Aerial Photograph (CTECO) Map Scale: 1 inch = 300 feet Map Date: November 2015

Existing Gravel Access Road

CTDEEP Tidal Wetland (1990)

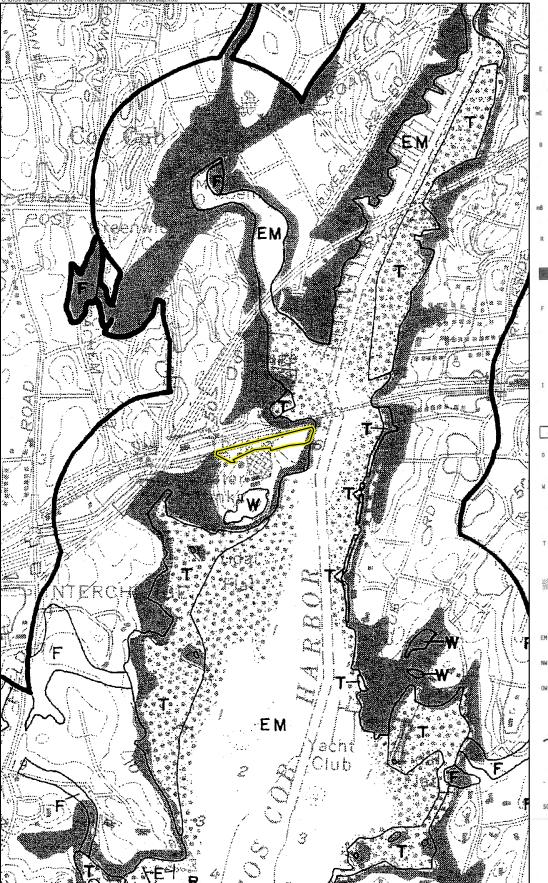
100-Year Flood Zone

Approximate Parcel Boundary (CTDEEP GIS)

300 150 0 300 Feet

Telecommunications Facility CT1503A Cos Cob Relo Eversource Structure #1279 Sound Shore Drive Greenwich, Connecticut





Coastal Resources Map

Telecommunications Facility CT1503A Cos Cob Relo Eversource Structure #1279 Sound Shore Drive Greenwich, Connecticut





Proposed Wireless

1.000

500

Map Notes: Base Map Source: Coastal Resources Map; 1979 Prepared by Coastal Area Management Program, CTDEEP. Map Scale:1 inch = 1,000 feet Man Date: November 2015

Legend

Subject Property

COASTAL BLUFFS AND ESCARPMENTS: Steep, seaward sloping marine cliffs or escarpments composed of unconsolidated bouldery to stray or sandy to gravelly soils. The slopes are active and the shores retreating(eroding). The slopes may be mantled with a sparse shrub or herb cover of salt spray tolerant plants. (Sources: 1,2)

Coastal Resources Legend LEGEND COASTAL LAND RESOURCES

modified BLUFFS AND ESCARPMENTS: Bluffs and escarpments which have been temporarily stabilized by erosion control structures (revertment, bulkhead or seawall) positioned seaward of the marine cliff or escarpment. (Source: 1)

BEACHES AND DUNES: Moderately sloping shores composed of Mater worked sand, gravel or cobble deposits(beach) and when present, wind deposited sands(dunes or sand flats). The beach (proper) is positioned between mean low water and coastal bluffs/ascarpments or dures or wegetation. The map designations include all areas of sandy beach fill. Dunes and sand flats positioned landward and elevated above the beach, support coastal grasslands dominated by beach grass (asmophila breviligulata). (Sources: 1,2,3,4)

modified BEACHES AND DUNES: Beach systems temporarily stabi-lized by an erosion control structure (revetment, seawall or bulkhead) positioned between the dune ridge and the beach. (Source: 1)

ROCKY SHOREFRONIS: Shorefront composed of bedrock or armored with a dense aggregate of boulder and stone. Includes rugged nearly vertical rock cliffs or gently seaward sloping rock and bouldery lands.

COMSTAL 'FLOOD' HAZARD AREA: 100 year coastal flood hazard area as identified by the Federal Emergency Management Agency (FPA), on those coastal islands currently unmapped by FEMA, the flood hazard area is conservatively approximate by the 10' contour interval. 'Sources: 2.5)

FRESHATER METLANDS AND UNDESIGNATED TIDAL METLANDS: Areas defined in Section 22a-33 of the Connecticut General Statutes as "land, including submerged land, on the regulated pursuant to sections 22a-28 to 22a-35("Idal" Wetlands and Natercourses Act), inclusive, which consists of any of the soil types designated as poorly drained, we reportly drained, which consists of any of the soil types designated as poorly drained with the section of the section of

ISLANDS: A land mass of bedrock or till encircled by coastal waters. (Note: All ortical coastal resource components of the Island such as bluffs and escarpments, beaches and dumes, rocky shorefront and wetlands should be managed accordingly whether or not these are displayed on this map) (Symrest.1.2)

(Sources: 1,2)

SHORELANDS: Upland areas at elevations in excess of the 100 year still water flood level and located within the coastal boundary. (Sources: 2,5)

DEVELOPED SHOREFRONT: Port and harbor areas which have been highly engineered and developed resulting in the functional impairment or substantial alteration of their natural physiographic features or systems.

(Sources: 1,3,4,7)

WATER: Open water bodies such as but not limited to lakes and ponds subject to regulation under Sections 22a-36 to 22a-45 of the Connecticut General Statutes. (Source: 2)

INTERTIDAL RESOURCES

REBULATED TIDAL WETLANDS: Official state designated and regulated tidal wetlands located within the coastal boundary. The areas depicted on this map shall in no way superside the official state regulated tidal wetland maps at the scale of 1:2400.

INTERTIDAL FLATS: Level to gently sloping areas subjected to alternating periods of tidal inundation and exposure. Sediment is variable ranging from mud to sand. (Source: 2) (Source: 2)

COASTAL WATERS

ESTUARINE EMBAYMENTS: Protected coastal water bodies with an open connection to the Sound including tidal rivers, bays, coves and lagoons. (Source: 2)

NEARSHORE WATERS: Those waters and submerged lands between mean low water and a depth approximated by the 10 meter bathwhetric contour. (Source: 2) bathymetric contour.

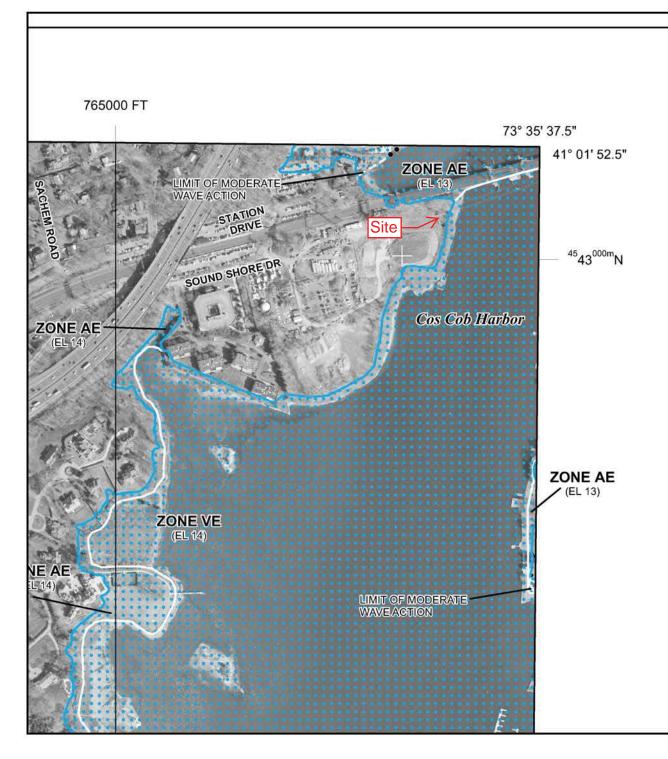
OFFSHORE WATERS: Those waters and submerged lands seaward of a depth approximated by the 10 meter bathymetric contour. (Source: 2)

COASTAL BOUNDARY: As defined in Section 22a-94 of the Connecticut General Statutes as amended by Public Act 79-535. (Lands and waters seawerd of the inside edge of this line are subject to the provisions of the Connecticut Coastal Management Act.

SOURCES:

S:
False Color Infrared Aerial Photographs (1:12000), 1974
-U-S-G-S-7hy Minute-Quadrangle
Surficial Geology Maps (U.S.G.S. or Connecticut Geological and
Natural History Survey)
Scil Conservation Service, Coastal Soil Maps (1:24000), 1979
Flood Insurance Maps Prepared by the Federal Emergency
Management Agency (hazard boundary maps, preliminary flood
insurance rate maps or final flood insurance rate maps.
whichever ones were most current at this printing)
State Regulated Tidal Walland Maps (1:2400)
Coastal Area Management, Land Use Overlays (1:24000)

This map is intended as a guide to identify the approximate locations of coastal resources. Map designations conform to the resource definitions in Section 22a-93 of the Connecticut General Statutes as amended by Public Act 79-935. Boundary lines are as precise this map and source information permit. This are as precised any existing and more precise or EMA flood insurance map. Specific quality and the property of EMA flood insurance map. Specific quality and the property of the property o





MAP SCALE 1" = 500'

1000

FEET

250

PANEL 0513G

FIRM

FLOOD INSURANCE RATE MAP FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS)

PANEL 513 OF 626

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY NUMBER PANEL SUFF GREENWICH, TOWN OF 090008 0513 G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER 09001C0513G MAP REVISED JULY 8, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Attachment 2 Wetland Inspection Report



WETLAND INSPECTION

November 20, 2015 APT Project No.: CT1931420

Prepared For: New Cingular Wireless PCS, LLC dba AT&T

Site Acquisitions, Inc.

500 Enterprise Drive, Suite 3A

Rocky Hill, CT 06067

AT&T Site Name: Cos Cob Relo, Site No. CT5103

Site Address: Sound Shore Drive

Greenwich, Connecticut

Date(s) of Investigation: 11/7/2015

Field Conditions: Weather: sunny, mid 60's

Soil Moisture: dry

Wetland/Watercourse Delineation Methodology*:

☐ Connecticut Inland Wetlands and Watercourses

☑ Connecticut Tidal Wetlands☑ U.S. Army Corps of Engineers

The wetlands inspection was performed by t:

Dean Gustafson, Senior Wetland Scientist

Dean Yustapan

Enclosures: Wetland Delineation Field Form & Wetland Inspection Map

This report is provided as a brief summary of findings from APT's wetland investigation of the referenced study area that consists of proposed development activities and areas generally within 200 feet.[‡] If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.

^{*} Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.

[†] All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

[‡] APT has relied upon the accuracy of information provided by AT&T, SAI and its contractors regarding proposed lease area and access road/utility easement locations for identifying wetlands and watercourses within the study area.

Attachments

- Wetland Delineation Field Form
- Wetland Inspection Map

Tidal Wetland Delineation Field Form

Wetland I.D.:	Wetland 1							
Flag #'s:	WF 1-01 to 1-10							
Flag Location Method:	Site Sketch ⊠			GPS (sub-meter) located ⊠				
TIDAL WETLAN	ND HVDROL	OGV.						
TIDAL WETLAND HYDROLOGY: Subtidal □ Regul			ularly Flooded ⊠		Irregularly Flooded □			
Irregularly Flood	led □		-					
Comments: None	e							
	AD WADE							
TIDAL WETLAN Coastal Salt Mar			Common Reed Marsh ☐ Scrub/Shrub/Emergent ☐			argant 🗆		
Brackish Marsh			Other: None					
Distance from Subject Property:			±20 feet to the east					
			er cordgrass occupy up	nar tida	l zana aharaatarizad	hry stone armand		
shorefront	ed patches of sa	anwan	er coragrass occupy up	per nua	ii zone characterized	by stone-armored		
	COURSE/EST		INE EMBAYMENT T	TYPE:				
Perennial		Intermittent □			Tidal ⊠			
Watercourse/Em	bayment Name	: Cos (Cob Harbor					
Distance from Subject Property: Approximately 20 feet to the east								
	ed shorefront c	onsists	zone is located just eas s of a rip rap armored sl pper tidal zone.					
SOILS:								
Are field identified soils consistent with			th NRCS mapped soils?		Yes ⊠	No □		
DOMINANT PL	ANTS:							

^{*} denotes Connecticut Invasive Plants Council invasive species

Tidal Wetland Delineation Field Form (Cont.)

Coastal Resources	On Site	Adjacent to Property	Off Site but Potentially Affected by Project	Not Applicable
General Resources*	\boxtimes			
Beaches & Dunes				\boxtimes
Bluffs & Escarpments				\boxtimes
Coastal Hazard Area	\boxtimes			
Coastal Waters & Estuarine Embayments		\boxtimes		
Developed Shorefront	\boxtimes			
Freshwater Wetlands and Watercourses				\boxtimes
Intertidal Flats		\boxtimes		
Islands				\boxtimes
Rocky Shorefront	\boxtimes			
Shellfish Concentration Areas			\boxtimes	
Shorelands				\boxtimes
Tidal Wetlands		\boxtimes		

GENERAL COMMENTS:

APT understands that AT&T proposes to construct a ± 165 foot tall tower mast within existing Eversource Energy transmission tower structure #1279 to relocate its existing facility from structure #1292 located nearby to the southwest. AT&T proposes to construct a 50 by 50 foot gravel equipment compound/lease area within the foundation base of structure #1279. Access to the proposed facility would consist of using an existing gravel road that serves the Eversource Energy substation just west of the proposed AT&T facility and construction of a proposed 12-foot-wide gravel access leading to the proposed compound within a 20-foot-wide utility easement.

Cos Cob Harbor is an intertidal zone located approximately 20 feet to the east of transmission structure #1279. Wetland 1 is defined as the top of high tide zone as evidenced by a steep topographic break, water stained rocks and highest wrack line located along the rip rap armored shoreline. In addition, small patches of saltwater cordgrass were observed in the upper tidal zone within the armored shoreline and tidal mud flats, mussels and oyster shellfish beds were noted along the lower tidal zone and attached to the lower section of the stone-armored shoreline.

Due to the close proximity of development activities to AT&T's proposed facility, a tidal wetland protection plan is recommended to be implemented during construction to ensure protection of sensitive coastal resources.



Host Property

Approximate Proposed Facility Layout

•••• Existing Gravel Access Road

Zone AE 100-Year Flood Line

Approximate Parcel Boundary (CTDEEP GIS)

Map Notes: Base Map Source: 2012 Aerial Photograph (CTECO) Map Scale: 1 inch = 220 feet Map Date: November 2015







Proposed Wireless Telecommunications Facility CT1503A Cos Cob Relo Eversource Structure #1279 Sound Shore Drive Greenwich, Connecticut



Attachment 3 Photo Documentation



PHOTO DOCUMENTATION AT&T Cos Cob Relo CT5103 Sound Shore Drive, Greenwich, CT Photos taken on November 7, 2015



Photo 1: View of proposed AT&T compound at base of Eversource Energy structure #1279, looking east.



Photo 2: View of proposed access looking east with Eversource Energy structure #1279 in background (Cos Cob Park turf field in right side of photo).



PHOTO DOCUMENTATION AT&T Cos Cob Relo CT5103 Sound Shore Drive, Greenwich, CT Photos taken on November 7, 2015



Photo 3: View of Cos Cob Harbor developed shorefront looking north at rip rap armored bank with Metro North railroad bridge in background.



Photo 4: View of steep slope looking west towards Eversource Energy structure #1279 from wetland flag WF 5.



PHOTO DOCUMENTATION AT&T Cos Cob Relo CT5103 Sound Shore Drive, Greenwich, CT Photos taken on November 7, 2015



Photo 5: View of stone-armored bank of Cos Cob Harbor and saltwater cordgrass tidal wetland patch in upper tidal zone.



Photo 6: View of intertidal flat and shellfish area (mussels and oysters attached to rocks) in lower tidal zone looking northeast.

Attachment 4 NDDB Correspondence

➤ NDDB Determination Letter No.: 201508398 dated November 1, 2015



November 1, 2015

Dean Gustafson All-Points Technology Corporation, P.C. 30 Bogg Lane Lebanon, CT 06249 dgustafson@allpointstech.com

Project: AT&T Site CT1503A Cos Cob Relo, Cellular Communications Tower Installation and

Maintenance on Sound Shore Drive in Greenwich.

NDDB Determination No.: 201508398

Dear Dean Gustafson,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed AT&T Site CT1503A Cos Cob Relo, Cellular Communications Tower Installation and Maintenance on Sound Shore Drive in Greenwich., Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for one year. Please resubmit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by November 1, 2016.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Coun M. moka

Environmental Analyst 3

Attachment 5 Tidal Wetland Protection Plan



TIDAL WETLAND PROTECTION PROGRAM

Portions of the proposed Project are located in close proximity to tidal wetlands and coastal resources. As a result, the following protective measures shall be followed to help avoid degradation of the nearby coastal waters, wetlands and resource areas.

It is of the utmost importance that the Contractor complies with the requirement for the installation of protective measures and the education of its employees and subcontractors performing work on the project site. These measures will also provide protection to a nearby coastal resources. This protection program shall be implemented regardless of time of year the construction activities occur. All-Points Technology Corporation, P.C. ("APT") will serve as the Environmental Monitor for this project to ensure that wetland protection measures are implemented properly. The Contractor shall contact Dean Gustafson, Senior Environmental Scientist at APT, at least 5 business days prior to the pre-construction meeting. Mr. Gustafson can be reached by telephone at (860) 663-1697 ext. 201 or via email at dgustafson@allpointstech.com.

The tidal wetland protection program consists of several components: use of appropriate erosion control measures to control and contain erosion while avoiding/minimizing wildlife entanglement; periodic inspection and maintenance of isolation structures and erosion control measures; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and, reporting.

1. Erosion and Sedimentation Controls

- a. Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including reptiles, amphibians, birds and small mammals. No permanent erosion control products or reinforced silt fence will be used on the project. Temporary Erosion control products will use either erosion control blankets and fiber rolls composed of processed fibers mechanically bound together to form a continuous matrix (net less) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.
- b. Installation of erosion control measures shall be performed by the Contractor prior to any earthwork. The Environmental Monitor will inspect the work zone area prior to and following barrier installation to ensure erosion controls are properly installed.
- c. In addition to required daily inspection by the Contractor, the fencing will be inspected for tears or breeches in the fabric following installation periodically by the Environmental Monitor throughout the course of the construction project.
- d. The extent of the erosion controls will be as shown on the site plans. The Contractor shall have additional erosion control materials should field conditions warrant extending the fencing as directed by the Environmental Monitor.
- e. All silt fencing and other erosion control devices shall be removed within 30 days of completion of work and permanent stabilization of site soils. If fiber rolls/wattles, straw bales, compost filter socks or other natural material erosion control products are used, such devices will not be left in place to biodegrade and shall be promptly removed after soils are stable so as not to create a barrier or entanglement hazard to migrating wildlife. Seed from seeding of soils should not spread over fiber rolls/wattles/filter socks as it makes them harder to remove once soils are stabilized by vegetation.

2. Contractor Education

a. Prior to work on site, the Contractor shall attend an environmental awareness training program at the pre-construction meeting with the Environmental Monitor. This orientation and educational session will consist of an introductory meeting with the Environmental Monitor to understand the environmentally sensitive nature of the development site and the need to follow these protective measures.

3. Petroleum Materials Storage and Spill Prevention

- a. Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill due to the project's location in proximity to sensitive coastal resources.
- b. A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.
- c. The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.
 - i. Petroleum and Hazardous Materials Storage and Refueling
 - 1. Refueling of vehicles or machinery shall occur a minimum of 100 feet from wetlands or watercourses and shall take place on an impervious pad with secondary containment designed to contain fuels.
 - 2. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.

ii. Initial Spill Response Procedures

- 1. Stop operations and shut off equipment.
- 2. Remove any sources of spark or flame.
- 3. Contain the source of the spill.
- 4. Determine the approximate volume of the spill.
- 5. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
- 6. Ensure that fellow workers are notified of the spill.

iii. Spill Clean Up & Containment

- 1. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
- 2. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
- 3. Isolate and eliminate the spill source.

- 4. Contact appropriate local, state and/or federal agencies, as necessary.
- 5. Contact a disposal company to properly dispose of contaminated materials.

iv. Reporting

- 1. Complete an incident report.
- 2. Submit a completed incident report to appropriate local, state and/or federal agencies, as necessary.

4. Herbicide and Pesticide Restrictions

a. The use of herbicides and pesticides at the proposed wireless telecommunications facility is strictly prohibited.

5. Reporting

- a. Any incidents of sediment release into the nearby coastal waters or tidal wetlands will be reported to the Connecticut Siting Council.
- b. Daily inspection reports will be completed by the Environmental Monitor and provided to AT&T and its contractor(s).
- c. A summary report will be completed by the Environmental Monitor following the completion of construction activities and provided to AT&T and the Connecticut Siting Council.

Attachment 6 FAA 1-A Survey Certification

FAA 1-A SURVEY CERTIFICATION

Applicant:	New Cingular Wireless PCS, LLC 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067
Site Name:	COS COB RELO CT5103
Address:	Sound Shore Drive Greenwich, Connecticut
Horizontal Datum:	NAD 83
Vertical Datum:	NGVD 1929 (A.M.S.L.)
Structure Type:	Existing Eversource Transmission Tower
Latitude: Longitude:	41°- 01'-48.760''N NAD 83 73°- 35'-43.938''W NAD 83
Ground Elevation:	18.8'± feet A.M.S.L.
Top of Existing Eversource Tower	147.0'± feet A.G.L. (165.8'± A.M.S.L.)
Top of Proposed AT&T Antennas:	165.0'± feet A.G.L. (183.8'± A.M.S.L.)

Certification:

I certify that the Latitude and Longitude noted hereon are accurate to within ± 3 feet horizontally and that the site elevation is accurate to within ± 1 foot vertically. With a top of proposed AT&T antenna height of 165.0' \pm feet A.G.L. (183.8' \pm A.M.S.L.). The overall height is the top of proposed AT&T antenna. The horizontal datum (coordinates) are in terms of the North American Datum of 1983 (NAD 83) and are expressed in degrees minutes and seconds to the nearest thousandth of a second. The vertical datum (heights) are in terms of the National Geodetic Vertical Datum of 1929 and expressed to the nearest foot.

Company: Martinez Couch and Associates L.L.C.

Signature:

Surveyor/seal:

Date: October 6, 2015

Angel R. Martinez L. S. 18833

ATTACHMENT E

Daniel L. Goulet C Squared Systems, LLC 65 Dartmouth Drive Auburn, NH 03032 603-644-2800 dan.goulet@csquaredsystems.com



October 27, 2015

Connecticut Siting Council

Subject: New Cingular Wireless PCS, LLC ("AT&T") – (CT5103) – Sound Shore Drive, Greenwich, CT

Dear Connecticut Siting Council:

C Squared Systems has been retained by New Cingular Wireless PCS, LLC ("AT&T") to investigate RF Power Density levels for the AT&T antenna arrays, to be installed on the existing Eversource Transmission Tower, located on Sound Shore Drive, Greenwich, CT.

Calculations were done in accordance with FCC OET Bulletin 65. These worst-case calculations assume that all transmitters are simultaneously operating at full power and that there is 0 dB of cable loss. The calculation point is 6 feet above ground level to model the RF power density at the head of a person standing at the base of the tower.

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/cm²)	Limit	%MPE
Ground Level	AT&T UMTS	160	880	1	711	0.0011	0.5867	0.18%
	AT&T LTE	160	710	2	887	0.0027	0.4733	0.57%
	AT&T LTE	160	880	1	1067	0.0016	0.5867	0.28%
	AT&T LTE	160	1900	2	1854	0.0056	1.0000	0.56%
	AT&T LTE	160	2300	1	2129	0.0032	1.0000	0.32%
							Total	1.91%

Summary: Under worst-case assumptions, RF Power Density levels for the proposed AT&T antenna arrays will not exceed 1.91% of the FCC MPE limit for General Public/Uncontrolled Environments.

Sincerely,

Daniel L. Goulet

C Squared Systems, LLC

¹ The total %MPE is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

Attachment: AT&T's Antenna Data Sheets and Electrical Patterns

750 MHz

Manufacturer: CCI Products

Model #: OPA-65R-LCUU-H6

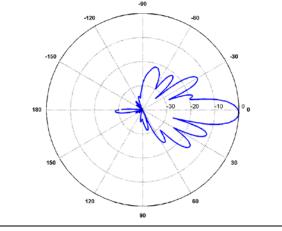
Frequency Band: 698-787 MHz

Gain: 11.7 dBd

Vertical Beamwidth: 12.2° Horizontal Beamwidth: 66°

Polarization: Dual Pol $\pm 45^{\circ}$

Size L x W x D: 72.0" x 14.8" x 7.4"



850 MHz

Manufacturer: CCI Products

Model #: OPA-65R-LCUU-H6

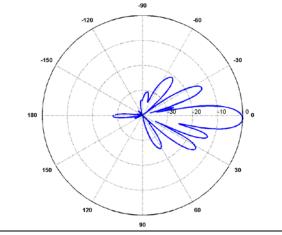
Frequency Band: 824-894 MHz

Gain: 12.5 dBd

Vertical Beamwidth: 10.3° Horizontal Beamwidth: 61°

Polarization: Dual Pol $\pm 45^{\circ}$

Size L x W x D: 72.0" x 14.8" x 7.4"



1900 MHz

Manufacturer: CCI Products

Model #: OPA-65R-LCUU-H6

Frequency Band: 1850-1990 MHz

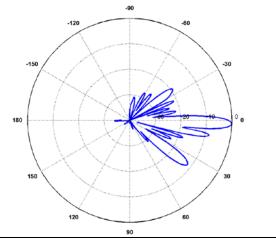
Gain: 14.9 dBd

Vertical Beamwidth: 5.7°

Horizontal Beamwidth: 60°

Polarization: Dual Pol $\pm 45^{\circ}$

Size L x W x D: 72.0" x 14.8" x 7.4"



2300 MHz

Manufacturer: CCI Products

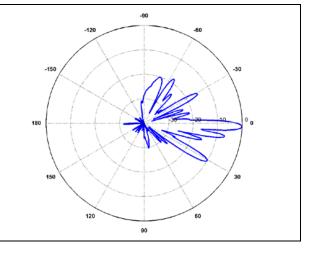
Model #: OPA-65R-LCUU-H6

Frequency Band: 2305-2360 MHz

Gain: 15.4 dBd

Vertical Beamwidth: 4.5° Horizontal Beamwidth: 60°

Polarization: Dual Pol $\pm 45^{\circ}$ Size L x W x D: 72.0" x 14.8" x 7.4"



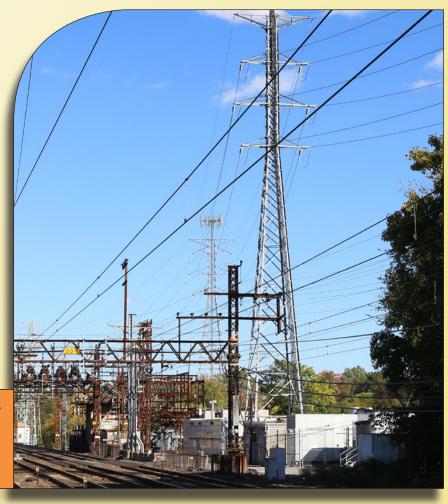
ATTACHMENT F

Visibility Analysis

COS COB RELO
CT5103
SOUND SHORE DRIVE
GREENWICH, CT

Prepared in November 2015 by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06141

Prepared for AT&T





Project Introduction

New Cingular Wireless PCS, LLC, d/b/a AT&T is seeking to relocate an wireless communications facility ("Facility") off Sound Shore Drive in Greenwich, Connecticut (the "Project Site"). At the request of AT&T, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visual impacts associated with the proposed Facility relocation from within a two-mile radius (the "Study Area").

Site Description and Setting

The Project Site consists of multiple, abutting properties that are currently developed with electrical transmission infrastructure operated by Eversource Energy and Metro North Railroad. AT&T's existing Facility is mast-mounted on Eversource Energy's transmission tower #1292, located south of the Cos Cob Substation. The proposed replacement Facility would be similarly constructed on Eversource Energy structure #1279, located to the northeast of the Substation.

The proposed Facility would be located at an approximate ground elevation of one (1) foot Above Mean Sea Level ("AMSL") and would include a 160-foot tall steel tower mast within the existing 147-foot tall lattice tower. A 50-foot by 50-foot fenced compound would surround the transmission tower's four (4) concrete piers. AT&T would mount its antenna array at a centerline height of 160 feet above ground level ("AGL"), such that the tops of the antennas would extend to a total height of approximately 163 feet AGL.

Existing wireless facilities are located on nearby transmission structures at the Project Site. Land use within the immediate vicinity is a mix of residential condominium development and commercial properties (to the west), State of Connecticut owned property and the Metro North Railroad (to the north) and a Town park to the east. Long Island Sound is located immediately south of the Project Site. The topography within the Study Area is characterized as generally level with gently rising land north of the rail line and Interstate 95. Ground elevations range from approximately sea level (0 feet AMSL) to 205 feet AMSL. The tree cover within the Study Area (consisting of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately 3,266 acres of the 8,042-acre study area (±41%).

Methodology

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private

properties and other areas inaccessible for direct observations. The in-field analyses included a reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory visible and nonvisible locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

Computer modeling tools were used to predict those areas where at least a portion of the Facility is estimated to be visible including TerrSet, an image analysis program developed by Clark Labs at Clark University. Project- and Study Area-specific data were incorporated into the computer model, including the site location, its ground elevation and the proposed Facility height, as well as the surrounding topography and existing vegetation, which are the primary features that can block direct lines of sight.

Information used in the model included lidar¹-based digital elevation data and customized land use data layers developed specifically for this analysis. Lidar is a remote-sensing technology that develops elevation data in meters by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the returns can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building." The system is also designed to capture many more data points than older radar-based systems. Thus, lidar-based digital elevation models ("DEM"s) have a much finer resolution and can also identify the different features of the landscape at the time that it was captured.

Viewshed analysis using lidar data provide a much more detailed view of the potential obstacles (especially trees and buildings), and therefore the viewshed modeling produces results with many smaller areas of visibility than those produced by using radar-based DEMs. Its precision makes lidar a superior source of data, but at present it is only available for limited areas of the state. The viewshed results are also checked against the most current aerial photographs in case significant changes (a new housing development, for example) have occurred since the time the lidar data was captured.

The lidar-based DEM created for this analysis represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the years 2007 through 2012 and has a horizontal resolution of approximately two (2) feet. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial photography (1-meter resolution, flown in 2012) using IDRISI image processing tools. The IDRISI tools develops light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, surface water and other distinct land use features.

¹ Lidar (a word invented to mean "light radar") may also be referred to as LiDAR, an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

With these data inputs, the model is then gueried to determine where the top of the Facility can be seen from any point(s) within the Study Area, given the intervening existing topography and vegetation. The results of the preliminary analysis are depicted on the attached maps and are intended to provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of 5 feet above the ground and the combination of intervening topography and tree canopy (year-round) and tree trunks (seasonally, when the leaves are off the deciduous trees). The shaded areas of predicted visibility shown on the map denote locations from within the Study Area which the proposed Facility may potentially be visible year-round (in yellow) above the tree canopy and/or seasonally, through the trees (during "leaf-off" conditions; depicted in orange). The Facility however may not necessarily be visible from all locations within those shaded areas. It is important to note that the computer model cannot account for mass density, the height, diameter and branching variability of the trees, or the degradation of views that occur with distance. In addition, each point - or pixel - represents about one square meter in area, and thus is not predicting visibility from all viewpoints through all possible obstacles. Although large portions of the predicted viewshed may theoretically offer visibility of the Facility, because of these unavoidable limitations the quality of those views may not be sufficient for the human eye to recognize the tower or discriminate it from other surrounding objects. Visibility also varies seasonally with increased, albeit obstructed, views occurring during "leaf-off" conditions. Beyond the density of woodlands found within the given Study Area, each individual tree has its own unique trunk, pole timber and branching pattern characteristics that provide varying degrees of screening in leafless conditions which cannot be precisely modeled.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Facility might be visible. Additional data was reviewed and incorporated into the visibility analysis, including protected private and public open space, parks, recreational facilities, hiking trails, schools, and historic districts. Two (2) trail systems are located within the Study Area, including: the Hemlock Grove system, approximately 1.75 miles to the north of the Project Site; and several portions of the Greenwich municipal trails system. The Greenwich municipal trails system includes a short loop approximately 1.8 miles to the west of the Project Site and more extensive linear features that run north to south through the easternmost part of the Study Area and then generally follow the coastline east to west, passing within close proximity to the Project Site.² Based on a review of publicly-available information, no designated state scenic roads exist within the Study Area.

Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a vehicular and pedestrian reconnaissance, and photo-documentation.

Field Reconnaissance

APT completed an in-field analysis on October 15, 2015 to evaluate the visibility associated with the existing transmission structure (#1279) and determine what, if any, changes would occur with the addition of the proposed relocation of the Facility. The in-field analysis included a vehicular reconnaissance to record

² This coast trail is not depicted on the viewshed maps because municipal GIS data does not register properly on topo and aerial graphics.

existing conditions, inventory locations where the existing structure could be seen above/through the trees, and to provide photographic documentation for developing photo-simulations of the proposed Facility relocation from publicly accessible locations.

Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

Photographic Documentation and Simulations

During the field reconnaissance, APT drove the public roads within the Study Area and recorded observations, including photo-documentation, of those areas where the existing structure is visible today. Photographs were obtained from several vantage points to document the views of a proposed Facility. The geographic coordinates of the camera's position at each photo location were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens, with the lens set to 50 mm.

"The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.³"

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including visuals observations of the existing transmission structure, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over-predict visibility. Once the additional data was integrated into the model, APT re-calculated the visibility of the proposed Facility from within the Study Area to assist in producing the final viewshed map.

Photographic Simulations

Nine (9) photographic simulation s were generated to portray a scaled rendering of the proposed relocated Facility from where it will be visible on a year-round basis. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the site area and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs⁴.

For presentation purposes in this report, the photographs were taken with a 50 mm focal length and produced in an approximate 7-inch by 10.5-inch format. When viewing in this format size, we believe it is important to

³ Warren, Bruce. Photography, West Publishing Company, Eagan, MN, c. 1993, (page 70).

⁴ As a final step, the accuracy and scale of select simulations are tested against photographs of similar existing facilities with recorded camera position, focal length, photo location, and tower location.

provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph.

Photo-documentation of existing conditions and the photo-simulation of the proposed Facility are presented in the attachment at the end of this report. The photo-simulations are intended to provide the reader with a general understanding of the different views that might be achieved of the Facility.

Photograph Locations

The table below summarizes characteristics of the photographs and simulations presented in the attachment to this report including a description of each location, view orientation, and the distance from where the photo was taken relative to the proposed Facility. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

View	Location	Orientation	Distance to Site
1	Cos Cob Park	Northeast	±0.10 Mile
2	Cos Cob Park	Northeast	±0.16 Mile
3	Cos Cob Train Station	East	±0.19 Mile
4	Mianus River Boat and Yacht Club	Southeast	±0.19 Mile
5	Indian Field Road	Northeast	±0.50 Mile
6	Chapel Lane	Southwest	±0.25 Mile
7	Miltiades Avenue	Southwest	±0.17 Mile
8	Glen Avon Drive	Northwest	±0.18 Mile
9	Riverside Yacht Club	Northwest	±0.55 Mile

Visibility Analysis Results

Results of this analysis are graphically displayed on the viewshed maps provided in the attachment at the end of this report. Areas from where the proposed Facility would be visible year-round comprise a total of approximately 525 acres, the majority of which is the Project Site and neighboring areas over open water and immediate shoreline (Mianus River and Cos Cob Harbor) where unobstructed lines of sight occur. There are also select locations within approximately 0.25 mile to the east and west along the transportation corridors where the transmission tower is visible today. The combination of relatively flat terrain and dense, mature tree canopy assist in limiting views of the Facility beyond these locations.

When the leaves are off the trees, seasonal views through intervening tree trunks and branches are anticipated to occur over some nearby locations within an area of 205± additional acres.

The viewshed of the relocated Facility will not substantially increase when compared to that of the existing transmission tower. Very few new views would be created by the installation of the proposed Facility, as the

existing lattice structure is one of several prominent visual features in the immediate area of the Project Site. Near-range views (within approximately 0.25 mile) would experience a modest alteration as the proposed Facility height would extend an additional 20+ feet, but the mast's profile is significantly narrower than the existing lattice tower top. Where the Facility will be visible, other existing utility infrastructure and wireless facilities can also be seen.

Based on the results of this analysis, it is our opinion that the proposed relocated Facility would not result in an adverse visual impact to the surrounding environment.

Limitations

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The simulations provide a representation of the Facility under similar settings as those encountered during the field reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the reconnaissance included mostly sunny skies and the photo-simulation presented in this report provides an accurate portrayal of the Facility during comparable conditions.

ATTACHMENTS



■ Site ● Photo Location

350 0 700
Feet

1 inch = 700 feet

1 inch = 700 feet















PHOTO LOCATION ORIENTATION DISTANCE TO SITE

2 COS COB PARK NORTHEAST +/- 0.16 MILE







PHOTO LOCATION ORIENTATION DISTANCE TO SITE

2 COS COB PARK NORTHEAST +/- 0.16 MILE

































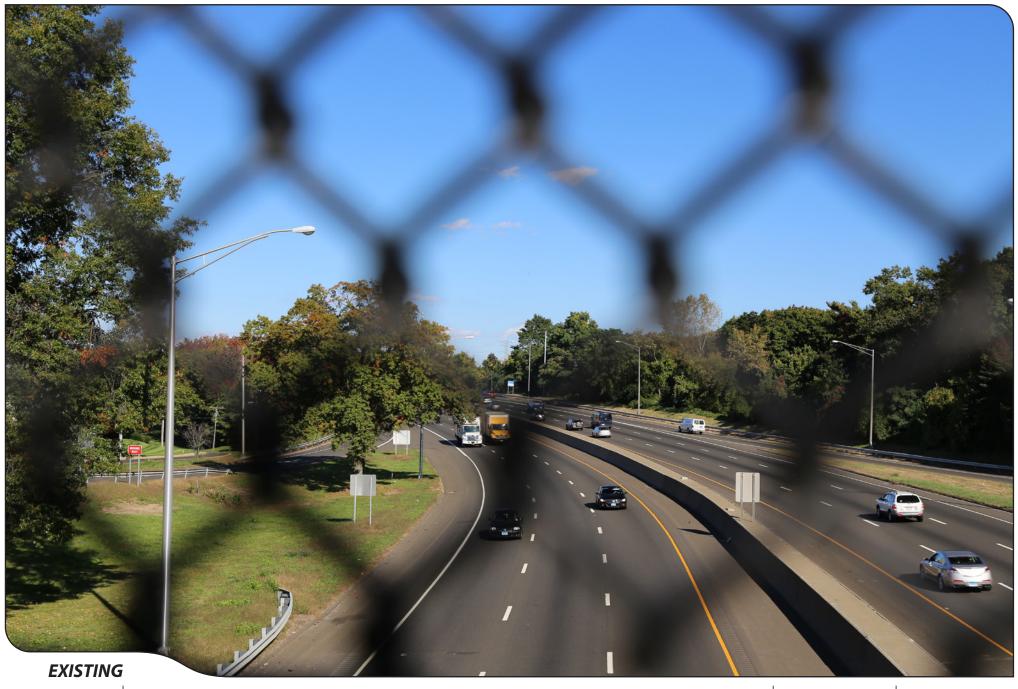
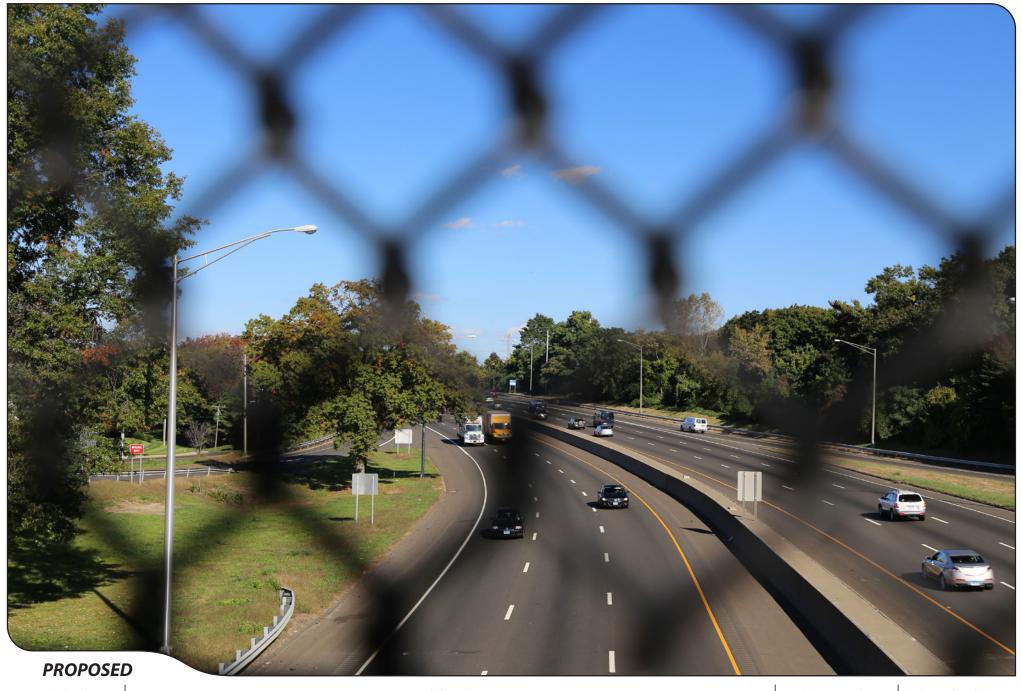


PHOTO LOCATION ORIENTATION DISTANCE TO SITE
5 INDIAN FIELD ROAD NORTHEAST +/- 0.57 MILE







PHOTOLOCATIONORIENTATIONDISTANCE TO SITE5INDIAN FIELD ROADNORTHEAST+/- 0.57 MILE



















PHOTOLOCATIONORIENTATIONDISTANCE TO SITE7MILTIADES AVENUESOUTHWEST+/- 0.17 MILE



























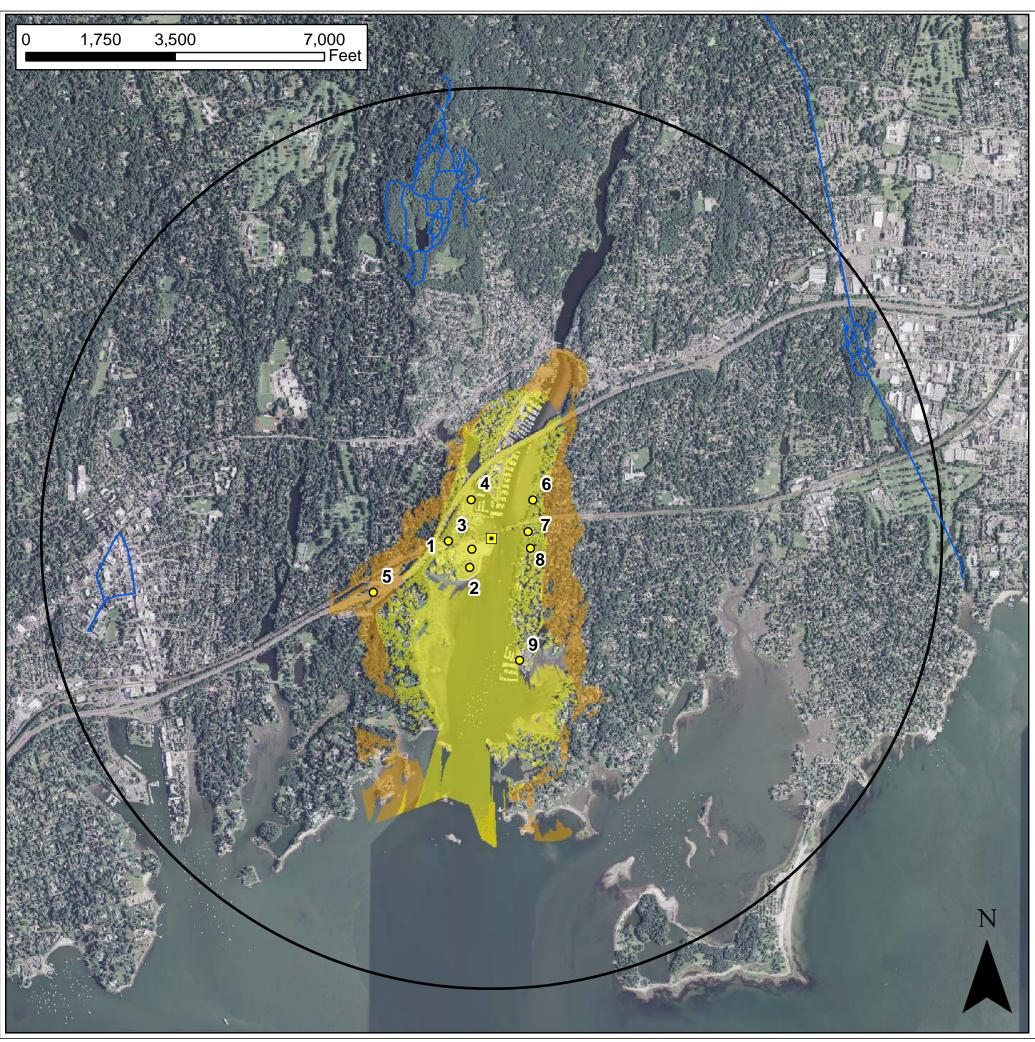


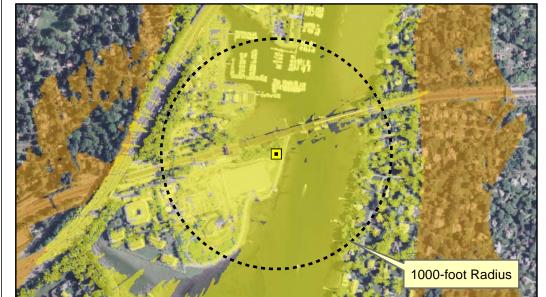












Viewshed Map – Aerial Base

Proposed Wireless Telecommunications Facility
Cos Cob Relo
Sound Shore Drive, Greenwich, CT

Proposed facility height is 160 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 11/18/2015

Map information field verified by APT on 10/15/2015.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

Proposed Tower

Photo Locations

Year-round Views

Municipal Trails*

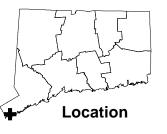
Predicted Seasonal Visibility (205 Acres)

Predicted Year-Round Visibility (525 Acres)

Towns

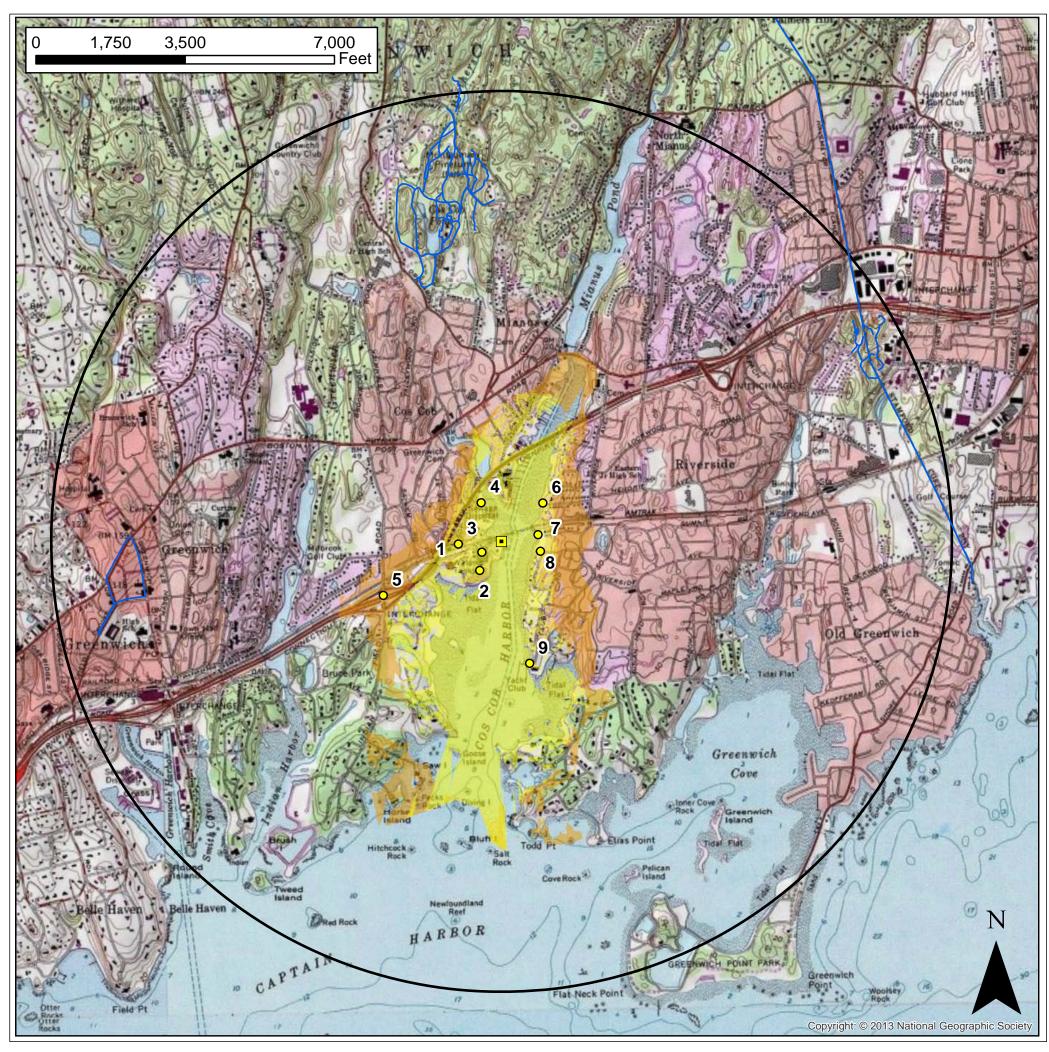
2-Mile Study Area

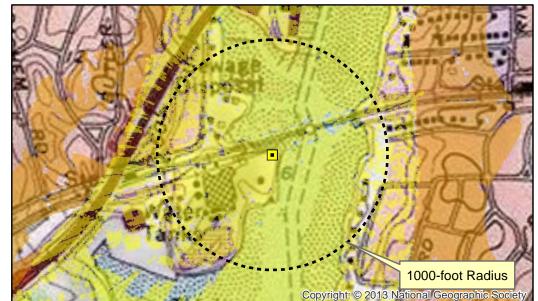
*Coastline trails not shown











Viewshed Map – Topo Base

Proposed Wireless Telecommunications Facility
Cos Cob Relo
Sound Shore Drive, Greenwich, CT

Proposed facility height is 160 feet AGL.
Forest canopy height is derived from lidar data.
Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 11/18/2015

Map information field verified by APT on 10/15/2015.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

Proposed Tower

Photo Locations

Year-round Views

Municipal Trails*

Predicted Seasonal Visibility (205 Acres)

Predicted Year-Round Visibility (525 Acres)

Towns

2-Mile Study Area

*Coastline trails not shown







DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS Sound Shore Drive Greenwich, Connecticut

Physical Geography / Background Data

Center for Land Use Education and Research, University of Connecticut (http://clear.uconn.edu)

*Land Use / Land Cover (2006)

*Coniferous and Deciduous Forest (2006)

*LiDAR data – topography (2000)

United States Geological Survey

*USGS topographic quadrangle maps – Stamford (1984)

National Resource Conservation Service

*NAIP aerial photography (2012)

Department of Transportation data

^State Scenic Highways (updated monthly)

Heritage Consultants

^Municipal Scenic Roads

Cultural Resources

Heritage Consultants

^National Register

^ Local Survey Data

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP)

*DEEP Property (May 2007)

*Federal Open Space (1997)

*Municipal and Private Open Space (1997)

*DEEP Boat Launches (1994)

Connecticut Forest & Parks Association

^Connecticut Walk Books East -

The Guide to the Blue-Blazed Hiking Trails of Western Connecticut, 19th Edition, 2006.

Other

^ConnDOT Scenic Strips (based on Department of Transportation data)

- *Available to the public in GIS-compatible format (some require fees).
- ^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

NOTE Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

LIMITATIONS

The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy heights and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The photo-simulations in this report are provided for visual representation only. Actual visibility depends on various environmental conditions, including (but not necessarily limited to) weather, season, time of day, and viewer location.

TOWALR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	41-01-48.8 north
Longitude	073-35-43.9 west

Measurements (Meters)

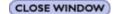
Overall Structure Height (AGL)	50.3
Support Structure Height (AGL)	NaN
Site Elevation (AMSL)	5.7

Structure Type

LTOWER - Lattice Tower

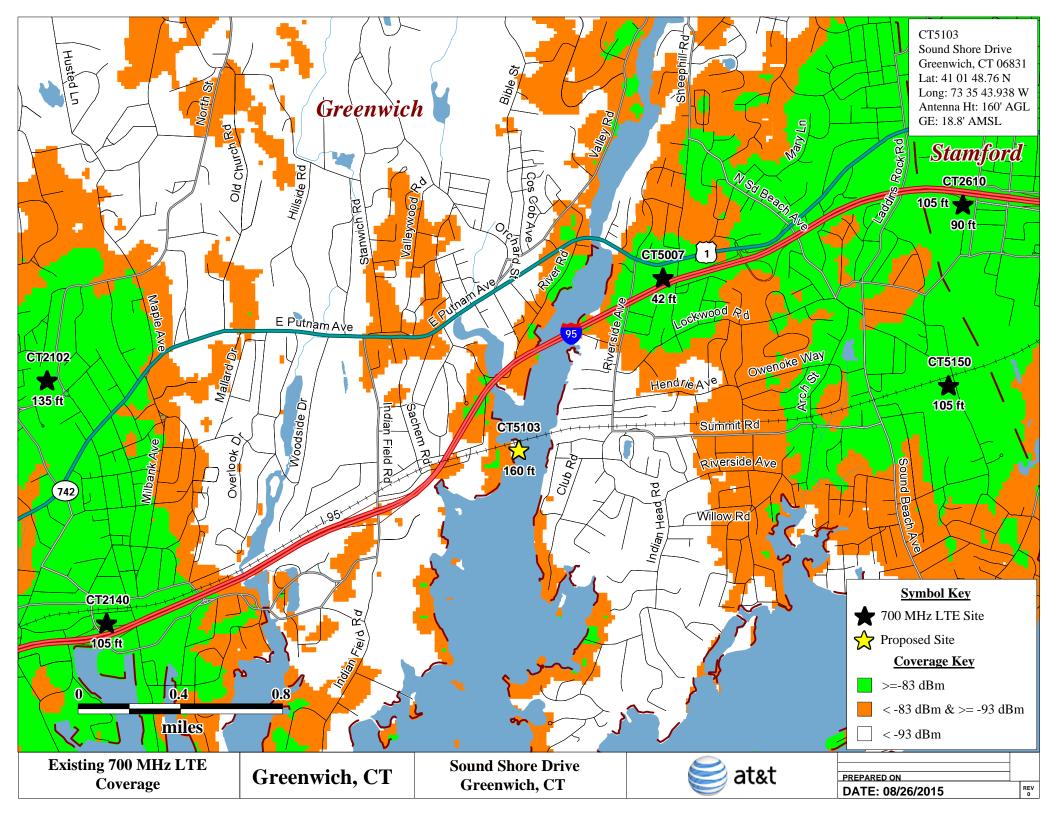
Tower Construction Notifications

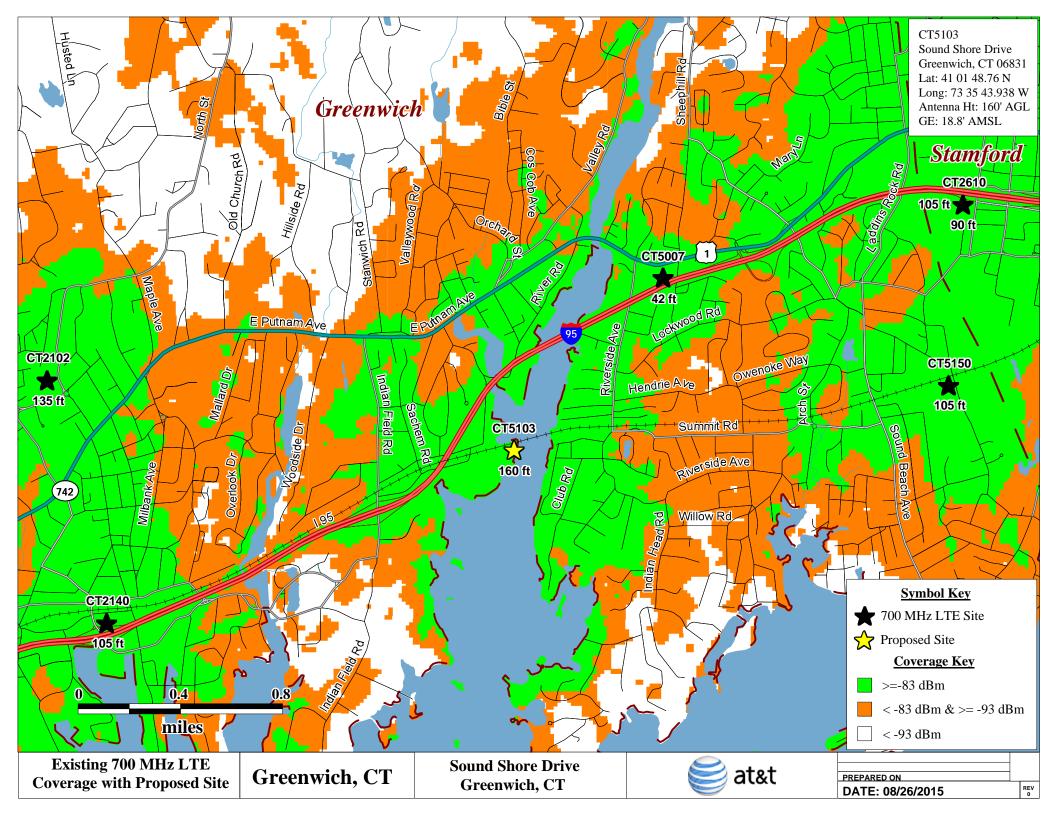
Notify Tribes and Historic Preservation Officers of your plans to build a tower.

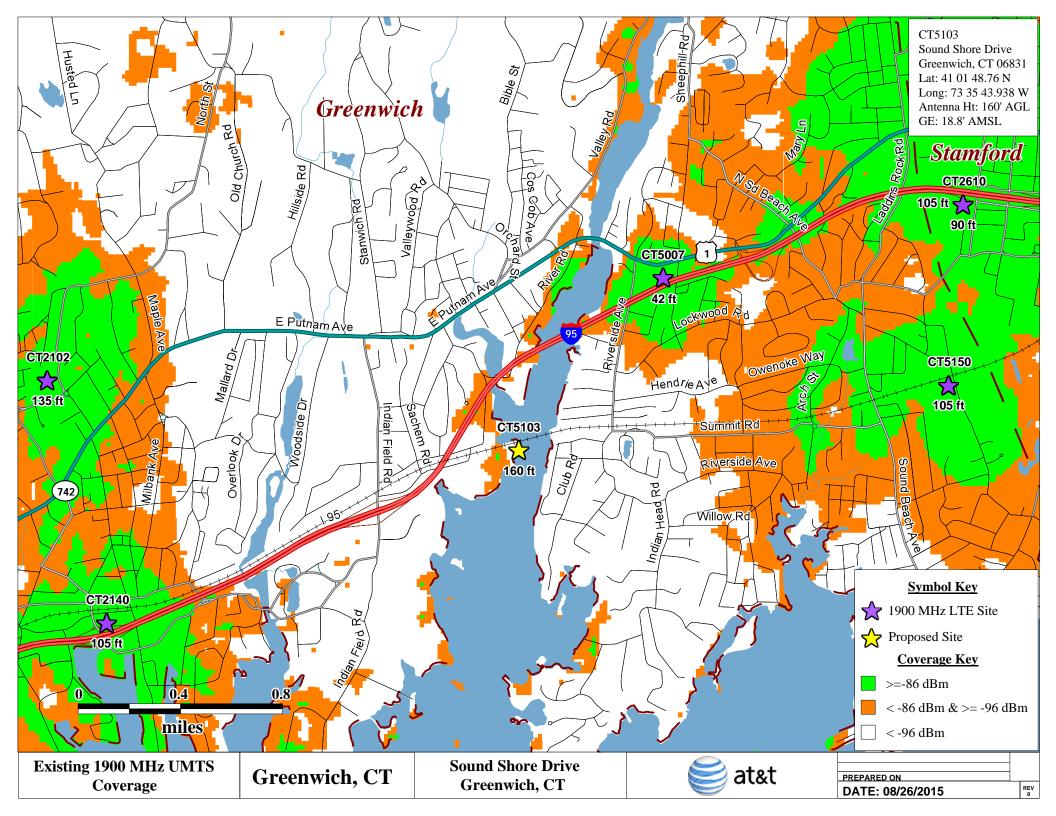


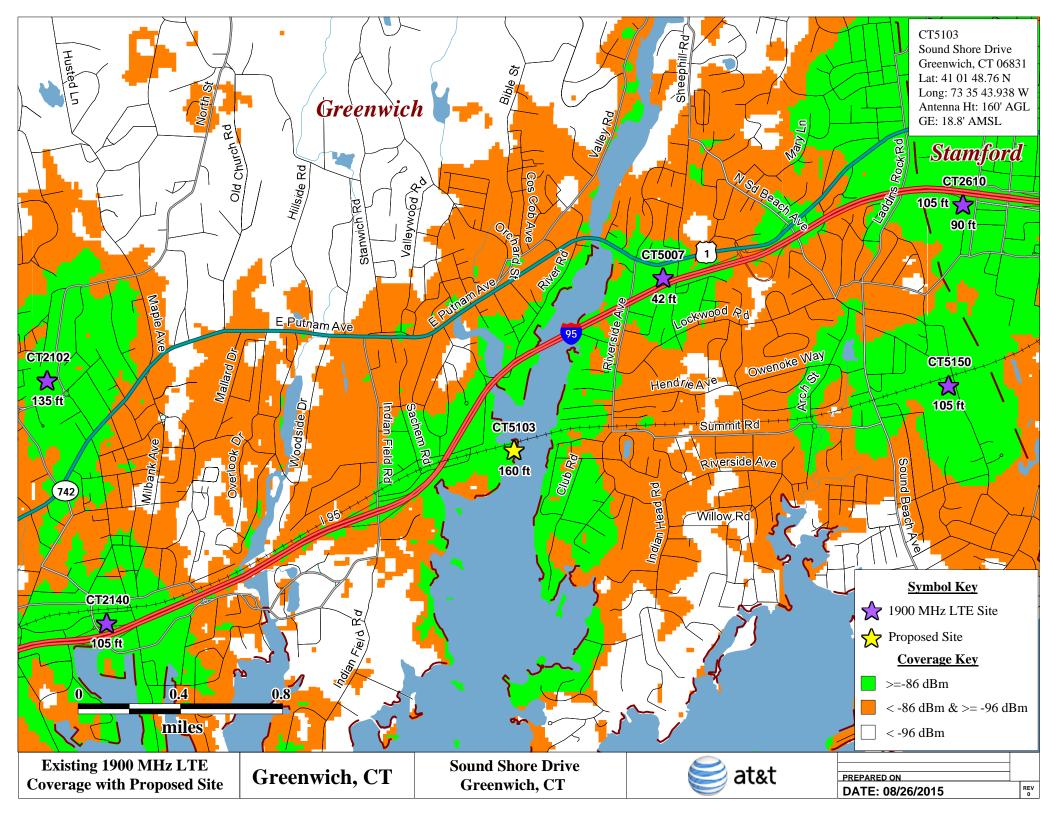
1 of 1 11/30/2015 1:59 PM

ATTACHMENT G









ATTACHMENT H



445 Hamilton Avenue, 14th Floor White Plains, New York 10601 Tel 914.761.1300 Fax 914.761.5372 www.cuddyfeder.com

November 24, 2015

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

Re:

New Cingular Wireless PCS, LLC ("AT&T")

Proposed Relocation of a Wireless Telecommunications Facility

Sound Shore Drive, Greenwich Connecticut

Dear Sir or Madam,

We are writing to you on behalf of New Cingular Wireless PCS, LLC ("AT&T") with respect to the above referenced matter and AT&T's intent to file an amended Petition with the State of Connecticut Siting Council for approval of the relocation of its existing communications facility from one transmission tower to an adjacent transmission tower at an existing Eversource power substation (the "Facility") within the Town of Greenwich.

State law requires that record owners of property abutting a parcel on which a facility is proposed be sent notice of an applicant's intent to file a Petition with the Siting Council. The electric utility requires that AT&T permanently remove its existing installation from its current location and relocate it to a nearby high tension tower.

Included with this letter please find a Notice with details of the proposed Facility and the Applicants' intent to file an amended Petition with the State. Of note, the location, height and other features of the Facility are subject to review and potential change by the Connecticut Siting Council under the provisions of Connecticut General Statutes §16-50g et seq. Additionally, AT&T may deploy a temporary tower to avoid any disruption in service to its wireless customers.

If you have any questions concerning this amended Petition, please contact the Connecticut Siting Council or the undersigned after December 1, 2015, the date which the Petition is expected to be on file.

Very truly yours,

Christopher B. Fisher

Enclosure

NOTICE

Notice is hereby given, pursuant to Section 16-50j-40(a) of the Regulations of Connecticut State Agencies of an Amended Petition to be filed with the Connecticut Siting Council ("Siting Council") on or after November 30, 2015 by New Cingular Wireless PCS, LLC ("AT&T" or the "Petitioner"). AT&T will seek a declaratory ruling that no certificate of environmental compatibility and public need is required for the relocation of its facility from one Eversource transmission tower (#1292) to an adjacent Eversource transmission tower (#1279) at the same sub-station located off of Sound Shore Drive in the Town of Greenwich, Connecticut (the "Site").

AT&T is planning a permanent relocation to adjacent Eversource transmission tower #1279 in order to avoid a disruption in service as part of a mandatory relocation by the electric utility company. AT&T's existing facility, approved in Petition #443, must be permanently removed from tower #1292.

AT&T's relocated facility will utilize the existing 150' AGL Eversource transmission tower #1279 by installing a 161' tall support structure within the center of the existing lattice transmission tower to support up to 6 antennas at a centerline height of 160' AGL. The top of AT&T's antennas will be 13' above the top of the 150' AGL transmission tower. A 120' x 70' gravel equipment compound would be located at the base of the transmission tower, enclosed by an 8' high chain link fence, and include an AT&T unmanned 12' x 20' equipment shelter. Access to the facility would be over a proposed gravel driveway from Sound Shore Drive. Utility connections would be run underground from an existing onsite distribution pole.

The Amended Petition will provide details of the facility and explain why the Petitioner submits that the proposed relocation to an adjacent transmission tower presents no significant adverse environmental effects. The location, height and other features of the facility are subject to review and potential change under provisions of the Connecticut General Statutes Sections 16-50g et. seq. Additionally, a temporary tower facility may be deployed during construction to avoid AT&T wireless customer outages.

Copies of the Petition will be available for review during normal business hours on or after December 1, 2015 at the Connecticut Siting Council:

Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051 Town of Greenwich Town Hall Carmella C. Budkins, Town Clerk 101 Field Point Road Greenwich, CT 06830

or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Ave, 14th Floor White Plains, New York 10601 (914) 761-1300 Attorneys for the Petitioner

CERTIFICATION OF SERVICE

I hereby certify that on the <u>24nt</u> of November 2015, a copy of the foregoing letter and notice were mailed by certified mail, return receipt requested to each of the abutting properties owners on the accompanying list.

100mmen cs, 2015

Daniel M. Laub

Cuddy & Feder LLP

445 Hamilton Avenue, 14th Floor White Plains, New York 10601

Attorneys for:

New Cingular Wireless PCS, LLC (AT&T)

ADJACENT PROPERTY OWNERS Sound Shore Drive

Thomas P. Fong	TPF Development Corp.
68 Lewis Street	64 Lewis Street
Greenwich, CT 06830	Greenwich, CT 06831
Gillian H. Levy &	Christine M. Gardner
Alexander Finkelstein	100 Strickland Road, Unit 8
100 Strickland Road, Unit 1	Greenwich, CT 06807
Greenwich, CT 06807	Greenwich, er oooor
Harry Chin	Brett J. Wilbur
100 Strickland Road, Unit 2	100 Strickland Road, Unit 9
Greenwich, CT 06807	Greenwich, CT 06807
Mary Ellen Kavanewsky Revocable Trust	Christopher A. Lee & Robert Van Glahn
102 Angelfish Lane	100 Strickland Road, Unit 10
Jupiter, FL 33477	Greenwich, CT 06807
Jodi Pellegrino	Bruce L Warwick Trust &
100 Strickland Road, Unit 4	Ann Margaret Warwick Trust
Greenwich, CT 06807	4 Sound Shore Dr. Unit 1
Sideminion, OI 00007	Greenwich, CT 06830
Igor Tulchinsky	TDC Jr Family Investment LLC II
30 Arch Street	& Cabot - Wellington LLC
Riverside, CT 06878	70 Federal Street. 7th Floor
Tavolstae, O1 00070	Boston, MA 02110
Alice P. Melly & Bensley Trustees	VJHC Development Corp. & Mott
4 Sound Shore Dr. Unit 4	& Prince Mgmt, Inc.
Greenwich, CT 06830	6 Bowery, 6/F
	New York, NY 10013
Lillian C. Anderson Revocable Trust	Robert F. Fuller Revocable Trust
PMB 8091, 6001 Highway A1A	4 Sound Shore Dr. Unit 7
Indian River Shores, FL 32963	Greenwich, CT 06830
Genssler Enterprises, LLP	Robert H. Clark, Jr. & Rosalie C. Clark
2602 Juniper Court	521 Fifth Avenue, 36th Floor
Palm City, FL 34990	New York, NY 10175
David J. MacNaughton & Donald T. MacNaughton	Henry Volquardsen
30 Maple Drive	4 Sound Shore Dr. Unit 11
North Caldwell, NJ 07006	Greenwich, CT 06830
Keleshian Investments, LLC	Holliann, LLC
4 Sound Shore Dr. Unit 12	81217 Old Highway
Greenwich, CT 06830	Islamorada, FL 33036
Maureen R. Smith Trust &	James A. Lash & Deborah Jones W/S
James J. Ryan Trustee	25 Stiles Lane
11 Carriage House Lane	Greenwich, CT 06831
Mamaroneck, NY 10543	

Lucy F. Greene Trust	Lynda M. Biggs 2004 Revocable Trust
4 Sound Shore Dr. Unit 15	4 Sound Shore Dr. Unit 17
Greenwich, CT 06830	Greenwich, CT 06830
Jonathan P. Nelson & Laurie P. Nelson W/S	Fred H. Langhammer &
4 Sound Shore Dr. Unit 18	Regine Langhammer w/s
Greenwich, CT 06830	4 Sound Shore Dr. Unit 19
	Greenwich, CT 06830
Donald C. Waite III 1996 Living Trust	2121 Waterford, LLC
24 Dock Side Lane, PMB No. 155	675 Steamboat Road
Key Largo, FL 33037	Greenwich, CT 06830
Heindreich Real Estate Investments, LLC	Per Heindreich & Astrid Heindreich w/s
4 Sound Shore Dr. Unit 22	4 Sound Shore Dr. Unit 23
Greenwich, CT 06830	Greenwich, CT 06830
Joseph J. Shropshire Trust	State of Connecticut
4 Sound Shore Dr. Unit 24	Secretary of State Denise W. Merrill
Greenwich, CT 06830	30 Trinity Street
	Hartford, CT 06106
State of Connecticut DOT Office of Rails	8 Sound Shore Associates LLC
Attn. Carl D. Rosa	8 Sound Shore Dr.
50 Union Ave,	Greenwich, CT 06830
3rd Floor	
West New Haven, CT 06519	
Town of Greenwich	
c/o Finance Department	
101 Field Point Road	
Greenwich, CT 06830	

CERTIFICATION OF SERVICE

I hereby certify that on the 2411 day of November 2015, a copy of the foregoing notice of the filing of an Amended Petition with the Connecticut Siting Council for a declaratory ruling was sent by certified mail, return receipt requested, to the Jist below:

Cuddy & Feder LLP

45 Hamilton Avenue, 14th Floor White Plains, New York 10601

Attorneys for:

New Cingular Wireless PCS, LLC (AT&T)

State and Regional

The Honorable George Jepsen	Department of Economic and
Attorney General	Community Development
Office of the Attorney General	Catherine Smith, Commissioner
55 Elm Street	505 Hudson Street
Hartford, CT 06106	Hartford, CT 06106
Department of Public Health	Department of Energy and
Dr. Jewel Mullen, Commissioner	Environmental Protection
410 Capitol Avenue	Public Utilities Regulatory Authority
P.O. Box 340308	Chairman Arthur House
Hartford, CT 06134	Ten Franklin Square
	New Britain, CT 06051
Council on Environmental Quality	Department of Transportation
Karl J. Wagener, Executive Director	James P. Redeker, Commissioner
79 Elm Street	2800 Berlin Turnpike
Hartford, CT 06106	Newington, CT 06111

Department of Energy & Environmental	Department of Agriculture
Protection	Steven K. Reviczky, Commissioner
Rob Klee, Commissioner	165 Capitol Avenue
79 Elm Street	Hartford, CT 06106
Hartford, CT 06106	
Office of Policy and Management	State House Representative - 150 th
Benjamin Barnes, Secretary	General Assembly District
450 Capitol Avenue	Mike Bocchino
Hartford, CT 06106	Legislative Office Building
	Room 4200
	Hartford, CT 06106
Department of Emergency Services &	State Senator - 36 th District
Public Protection	L. Scott Frantz
Division of Emergency Management and	Legislative Office Building
Homeland Security	Room 3400
William Shea, Deputy Commissioner	Hartford, CT 06106
25 Sigourney Street, 6 th Floor	
Hartford, CT 06106-5042	
Department of Economic and Community	Western Connecticut Council of
Development-Offices of Culture and	Governments
Tourism	Executive Director: Francis Pickering
Daniel Forrest, State Historic Preservation	888 Washington Boulevard - 3 rd Floor
Officer	Stamford, Connecticut 06901
One Constitution Plaza, 2 nd Floor	
Hartford, CT 06103	
Department of Economic and Community	
Development-Offices of Culture and	
Tourism	
Todd Levine, State Historic Preservation	
Officer, Historian/Environmental Reviewer	
One Constitution Plaza, 2 nd Floor	
Hartford, CT 06103	

Federal

Federal Communications Commission	Federal Aviation Administration
445 12 th Street SW	800 Independence Avenue, SW
Washington, D.C. 20554	Washington, DC 20591
U.S. Congressman Jim Himes	U.S. Senator Richard Blumenthal
211 State Street, 2 nd Floor	90 State House Square, 10th Floor
Bridgeport, CT 06604	Hartford, CT 06103
U.S. Senator Christopher Murphy	
One Constitution Plaza, 7th Floor	
Hartford, CT 06103	

Town of Greenwich

First Selectman Peter Tesei	Chairman Donald Heller
Town Hall, First Floor	Planning & Zoning Commission
101 Field Point Road	Town Hall, First Floor
Greenwich, CT 06830	101 Field Point Road
	Greenwich, CT 06830
Town Clerk Carmella C. Budkins	William Rutherford, Chair
Town Hall, First Floor	Conservation Commission
101 Field Point Road	Town Hall, 2nd Floor
Greenwich, CT 06830	101 Field Point Road
	Greenwich, CT 06830
Director Katie DeLuca, AICP	Chairman David Weisbrod
Planning and Zoning Department	Planning & Zoning Board of Appeals
Town Hall, Second Floor	Town Hall
101 Field Point Road	101 Field Point Road
Greenwich, CT 06830	Greenwich, CT 06830
Chairman Brian Harris	
Inland Wetlands & Watercourses Agency	
Town Hall, Second Floor	
101 Field Point Road	
Greenwich, CT 06830	

ATTACHMENT I



107 Selden Street Berlin, CT 06037 (860) 665-6926 michael.green@eversource.com

November 25, 2015

Mr. Tim Burks
Site Acquisition Manager- New England
SAI Communications, Consultant for
AT&T Mobility (a/k/a New Cingular Wireless
500 Enterprise Drive
Rocky Hill, CT 06067

Re: Site Permitting Authorization Sound Shore Drive, Greenwich, CT Telecommunications Site

Dear Mr. Burks:

Authorization is hereby given to New Cingular Wireless PCS, LLC (New Cingular), its employees and its duly authorized agents and independent contractors (hereinafter collectively referred to as "New Cingular"), to apply for any and all local municipal, state and federal licenses, permits and approvals, including but not limited to Connecticut Siting Council, building permits, zoning variances, zoning special exceptions, site plan and subdivision approvals, driveway, wetlands and terrain alteration permits, which are or may be necessary or required for New Cingular to construct, operate and maintain a wireless communications system (PCS System), and/or antenna site on the following property over which The Connecticut Light & Power Company (CL&P) has easement rights:

CL&P Structure #1279, FA #10553968 Sound Shore Drive Greenwich, Connecticut

The foregoing authorization is given subject to the following conditions:

- 1. This authorization shall be nonexclusive. Nothing herein shall prevent or restrict CL&P from authorizing any other person or entity to apply for any similar licenses, permits or approvals to construct, operate and maintain any other communication system or facility of any type on the property at any time.
- 2. This authorization shall not obligate CL&P to pay for or reimburse any costs or expenses or to provide any assistance of any kind in connection with any applications, or bind or obligate CL&P to agree or be responsible for any on-site or off-site improvements, development restrictions, impact fees or assessments, capital improvement charges, bonds or other security, or any other fee, assessment, charge or expense imposed or required as a condition of any license, permit or approval. New Cingular shall be solely and fully responsible for all fees, charges costs and expenses of any kind in connection with any applications. CL&P agrees to reasonably cooperate with New Cingular in signing such applications or other similar documents as may be required in order for New Cingular to apply for any license, permit or approval.
- 3. This authorization shall not be deemed or construed to grant or transfer to New Cingular any interest in the property, whatsoever, and shall not in any respect obligate or require CL&P to sell, lease or license the Property to New Cingular or otherwise allow New Cingular to use or occupy the property for any purpose, regardless of whether any licenses, permits and approvals applied for by New Cingular for the property are granted. New

Cingular understands and acknowledges that any and all applications filed by New Cingular for the property at New Cingular's sole risk and without any enforceable expectation that the property will be made available for New Cingular's use.

- 4. New Cingular shall be required to supply to CL&P, free of charge and contemporaneous with New Cingular's filing of same, a complete copy of any and all applications, plans, reports and other public filings made by New Cingular with any local, municipal, state or federal governmental or regulatory officer, agency board, bureau, commission or other person or body for any licenses, permits or approvals for the property, and to keep CL&P fully informed on a regular basis of the status of New Cingualr's applications.
- 5. This authorization shall automatically expire six (6) months after the date of this letter, unless extended in writing by mutual agreement of CL&P and New Cingular.

Very truly yours,

Michael J. Green, Senior Real Estate Analyst

Michael of freez

Transmission & Distribution ROW & Survey Engineering

AGREED TO ON BEHALF OF New Cingular Wireless PCS, LLC

Bv:	Tuitte M.	Burks
,	0	Duly Authorized

11/20/2015 Date:



56 Prospect Street, Hartford, CT 06103

P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5000

November 25, 2015

Mr. Tim Burks AT&T Wireless. 500 Enterprise Drive Rocky Hill, CT 06067

RE: AT&T Antenna Site, CT-5103, Sound Shore Dr., Greenwich CT, CL&P structure 1279.

Dear Mr. Burks:

Based on our reviews of the site drawings, the structural and foundation analysis provided by Centek Engineering and, along with a third party review performed by Commonwealth Associates we have reviewed for acceptance this modification.

Since there are no outstanding structural issues to resolve at this time please contact Mr. Green (860-665-6933) to resolve any lease issues

Sincerely

Robert Gray

Transmission Line Engineering

ref: 15127.000 - CT5103 Structural Analysis Rev2.pdf