STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:
APPLICATION OF NEW CINGULAR WIRELESS PCS, LLC (AT&T) FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS TOWER FACILITY AT 522 COLEBROOK ROAD IN THE TOWN OF COLEBROOK

DOCKET NO. 440

October 31, 2013

NEW CINGULAR WIRELESS PCS LLC (AT&T)
SUPPLEMENTAL INFORMATION

Applicant New Cingular Wireless PCS LLC (AT&T) respectfully submits the following supplemental information in response to information requested at the October 24, 2013 evidentiary hearing.

Q1. Would it be possible to swing the access road to the west to avoid Wetland 1?

A1. AT&T's consultants are completing the field review of an alternative access drive and expect to have the results of the review and a response by November 1, 2013.

Q2. Please refer to AT&T's three recent requests for exempt modifications to install multiband antennas in close separation and justify the argument made in the application regarding antenna separation for flush mounts. One of the exempt mods was Bushy Hill in Simsbury.

A2. As set forth in response to interrogatory 35 (AT&T's Exhibit 3, Responses to Siting Council Interrogatories Set I dated October 3, 2013) and discussed at the October 24th evidentiary hearing, a flush mount configuration would result in reduced coverage or necessitate greater antenna height while hindering future technological upgrades and opportunities for co-location. Given these constraints and potential negative impacts to the performance of the network, AT&T generally reserves use of flush mounted configurations to situations where historic or documented scenic views may be impacted by a needed facility or where obtaining a real property interest requires same.

The existing wireless facility located at 530 Bushy Hill Road in Simsbury is a flagpole facility with internally mounted antennas. This facility was the subject of Docket 279 where Sprint was the Applicant and AT&T was an intervenor. It was approved in 2004 at a time almost 10 years ago prior to the advent of the smart phone and the explosive growth in mobile broadband usage currently seen in wireless networks. The operational concerns of wireless carriers today were not as readily apparent when the decision was made by Sprint to use a flagpole facility in 2004. In any event, given that this existing

facility is a flagpole facility, AT&T's modification of its existing facility included a flush mounted configuration as t-arm mounts or a platform mount was not an option unless AT&T sought to amend the Certificate, a process that has been used in other cases to accommodate a change from flush mounts to platforms. See Docket No. 316A. As such, AT&T made a business decision to employ technology allowing it to upgrade the site which does have operational impacts on its network in comparison to the high capital cost of replacing the tower and seeking Siting Council approval for same.

As noted at the evidentiary hearing, AT&T's facility in Redding that was approved in Docket 404 is a case where AT&T designed the facility as a flagpole as a result of the municipal consultation with the Town of Redding, the proximity of the site to the Town's historic green and the Town's decision to only lease the site to AT&T in a flagpole configuration. Importantly, based on information provided by AT&T during the municipal consultation process for the Redding facility, the Town determined that a 180' taller flagpole facility that could accommodate more than one height for AT&T's antennas and co-location opportunities was the preferred facility design over a 150' monopole as sought by AT&T initially as part of the lease process.

AT&T's proposal in Norwalk that is the subject of the pending Docket 442 is a case where AT&T is proposing two 140' monopole towers with internally mounted antennas. As set forth in the Docket 442 application, the specific tower design was mandated by the State Historic Preservation Officer (SHPO) as part of historic consultation pursuant to the National Historic Preservation Act and National Environmental Policy Act. AT&T's consultations with SHPO had in fact resulted in rejection of prior proposals for a single 180' or 150' AGL monopole facility design. AT&T's Norwalk facility includes antennas mounted at three levels on one of the proposed towers and in order to address collocation, the facility has been designed for a second tower site which is consistent with prior Siting Council approvals. See Docket No. 309.

Ultimately, AT&T's reserves flush mount or internal antenna usage to cases where it cannot meet federal regulatory requirements, cannot obtain a real property interest or it is not practical to deploy a full array based on prior decisions incorporated into Siting Council approvals. As it relates to Siting Council review in specific Dockets, AT&T will have its counsel address the legal considerations in this Docket in its post hearing brief, should the Council believe a flush mount or internal antenna tower design addresses a specific visual impact that is significant within the context of Section 16-50p of the Connecticut General Statutes.

Q3. When the generator is tested during its regular "exerciser", does it operate under no load, partial load or full load? How often is it refueled?

A3. AT&T's emergency back-up generators are tested for approximately 30 minutes on a weekly basis. During the weekly test, the 50kW generator operates at 30kW, or 60% of rated capacity. This weekly testing requires approximately 66 gallons of fuel annually. AT&T's goal is to maintain the generator fuel supply at 80% full. Thus, refueling of the

50kW emergency back-up generator occurs twice per year. Re-fueling of generator fuel tanks is typically scheduled as part of the bi-annual facility maintenance visits.

With respect to a shared generator, the Applicant refers the Council to its Docket 432 Findings and Report and provides the following supplemental information regarding the impacts of a shared generator.

AT&T typically deploys a 50kW emergency backup generator for a wireless tower facility such as the one proposed in this Docket. In order to accommodate AT&T and the three other currently active wireless providers, a 200kW generator would likely be required, but those needs are speculative at this time given the lack of intervention by other carriers in this Docket.

A traffic analysis prepared by CHA and included in Attachment 1 concludes no impacts to traffic will result even assessing the site on a cumulative basis assuming four 50kw generators and monthly facility visits and the biannual generator re-fueling visits for each carrier to maintain any such facilities and generators. The refueling truck that would visit the facility twice per year for each carrier for a 50kW generator is typically a pick-up model truck that is similar in size to package delivery trucks. A large shared generator would require a larger fuel delivery truck. Of note, total traffic trips for regular visits and generator maintenance and fueling even assuming emergency usage is less than that typically associated with 1 single family residence. As such, there is simply no traffic impact at all from the tower facility regardless of the number of carriers or generators ultimately deployed at the site.

The noise evaluation included in Attachment 2 also shows that the estimated noise level associated with the simultaneous operation of four individual 50kW generators during emergency operation is only 4db different than a shared generator. As such, while speculative, assuming four carriers were all operating 50kw generators at the site at the same time, the noise would not be materially more than the noise associated with the operation of one large 200kw shared generator and certainly not an impact for purposes of environmental review. It should also be noted that the only time all four generators for each carrier would be operating at the same time is during an emergency situation that results in a prolonged power outage. However, a large shared generator would emit the estimated noise level provided in Attachment 3 which is greater than one 50kw generator during the weekly testing throughout the year.

As discussed in the Docket 432 proceeding, a shared generator can potentially adversely impact reliability as it is a single point of failure for all carriers. If the one shared generator fails, all carriers would not have emergency back-up power. Moreover, the ability to replace a failed large shared generator is very limited as typically, very few portable 200kW generators are available. A large shared generator can also fail if only one of the carriers connected to the shared generator experiences a failure, thereby causing all carriers to lose back-up power.

Given the foregoing, the Applicant submits that a large shared generator does not address adverse environmental impacts and may adversely impact reliability. Thus, the significant incremental costs associated with a large shared generator (compared to a 50KW generator for one carrier) are not warranted for the Applicant to undertake, particularly for a facility like the one proposed in this proceeding where no other carriers have expressed interest in co-location. AT&T will have its counsel further address Siting Council considerations in its legal brief post hearing.

Q4. Would the proposed project be located within the Upper Housatonic Valley National Heritage Area? If yes, would the project have any adverse impacts to this resource?

A4. The Town of Colebrook is located within the Upper Housatonic Valley National Heritage Area ("NHA"), a federally-designated NHA in the states of Connecticut and Massachusetts. In addition to Colebrook, the nine Connecticut towns also include Norfolk, North Canaan, Canaan, Salisbury, Sharon, Cornwall, Warren and Kent. The heritage area interprets and promotes the historical, cultural and scenic features of the upper Housatonic River valley in the western part of both states.

The United States Congress officially designates national heritage areas and funds them through the National Park Service budget. NHAs are designated by Congress as places where natural, cultural, historic, and scenic resources combine to form a cohesive, nationally-important landscape. Through their resources, NHAs tell nationally important stories that celebrate our nation's diverse heritage. NHAs are lived-in landscapes and NHA entities collaborate with communities to determine how to make heritage relevant to local interests and needs. Inaugurated in 1984, the NHA movement now encompasses 49 areas, ranging from factory towns and city neighborhoods to farmland and battlefields.

The NHA program is administered by National Park Service coordinators in Washington DC and seven regional offices, as well as park unit staff. NHAs further the mission of the National Park Service by fostering community stewardship of our nation's heritage. NHAs are not, however National Park units or any type of federally-owned or manage land. The National Park Service partners with, provides technical assistance, and distributes matching federal funds from Congress to NHA entities.

The Upper Housatonic Valley NHA was designated by Congress in 2006 under Public Law 109-338 to heighten appreciation of the region, preserve its natural and historical resources, and improve the quality of life and economy of the area. The upper Housatonic Valley is a singular geographical and cultural region that has made significant national contributions through its literary, artistic, musical, and architectural achievements, its iron, paper, and electrical equipment industries, and its scenic beautification and environmental conservation efforts.

Based on computer modeling and multiple balloon floats at the proposed AT&T site location, it is estimated that limited views of the top of the tower from over 0.5 mile away may be seen through the trees from select locations of the Town of Colebrook's Historic Center during that time of the year when the leaves are off the deciduous trees. When the

leaves are on the trees, the tower would not be visible from this area. The Connecticut State Historic Preservation Office has determined that the proposed facility would not have an adverse effect on the historic center. Therefore, it is our opinion that the proposed facility will not have any adverse impact to this resource or on the cultural aspects of the National Heritage Area.

According to the Council's telecommunication's database, there are a total of at least 22 communication towers located in the nine Connecticut member communities, including those used for emergency service providers, radio and television broadcasts, private dispatch and wireless telecommunications. In Colebrook, two such facilities exist today.

Q5. How many square feet of forest that would be removed within 750 feet of a vernal pool would be removed by the construction of the access road? If the result exceeds 5,000 square feet, please note if this would result in a different permit category.

A5. This response will be provided with the response to question 1 above to include this information for both the access drive as proposed and any feasible alternative access drive.

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and fifteen copies of the foregoing was sent electronically and by overnight mail to the Connecticut Siting Council and to:

Thomas D. McKeon
First Selectman
Town of Colebrook
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Dated: October 31, 2013

Lucia Chiocchio

Lucia Chiocchio

cc: Michele Briggs, AT&T
David Vivian
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Paul Lusitani
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ATTACHMENT 1

October 31, 2013

New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067

RE: Traffic Memo
Site: Colebrook
522 Colebrook Road
Colebrook, CT 06021
CHA # 18301-1025-43000

CHA completed a review of the traffic generated by the proposed telecommunications facility located at 522 Colebrook Road, Colebrook, CT. The total monthly traffic was considered for AT&T and three future carriers. Traffic associated with maintenance completed by cell technicians, generator refueling operations, and generator maintenance was considered. AT&T refuels their generators during the bi-annual generator maintenance visits to reduce trips to the facility and it was assumed all future carriers follow the same procedure. AT&T utilizes a pick-up style truck with a tank mounted in the back to refuel their generators. A traffic review was completed based on the above for the following four cases:

1. Standard annual maintenance and refueling operations with four generators on site.
2. Annual maintenance and refueling operations for standard operations and emergency operations assuming four storm events that require 48 hour full demand use of four generators on site.
3. Standard annual maintenance and refueling operations with one generator on site.
4. Annual maintenance and refueling operations for standard operations and emergency operations assuming four storm events that require 48 hour full demand use of one generator on site.

The following tables summarize the traffic associated with each of the four cases described above:

CASE 1: Four Generators Standard Operations			
Carrier	Cell Technician Maintenance Visits Per Month	Generator Maintenance & Refueling Visits per Year	Vehicles Per Month
AT&T	1	2	1.17
Future Carrier 1	1	2	1.17
Future Carrier 2	1	2	1.17
Future Carrier 3	1	2	1.17
Total	**4**	**8**	**4.67**

CASE 2: Four Generators Standard & Emergency Operations				
Carrier	Cell Technician Maintenance Visits Per Month	Generator Maintenance & Refueling Visits per Year	Emergency Refueling Visits per Year	Vehicles Per Month
AT&T	1	2	4	1.50
Future Carrier 1	1	2	4	1.50
Future Carrier 2	1	2	4	1.50
Future Carrier 3	1	2	4	1.50
Total	**4**	**8**	**16**	**6.00**

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CASE 3: One Generator Standard Operations			
Carrier	Cell Technician Maintenance Visits Per Month	Generator Maintenance & Refueling Visits per Year	Vehicles Per Month
AT&T	1	2	1.17
Future Carrier 1	1	0	1.00
Future Carrier 2	1	0	1.00
Future Carrier 3	1	0	1.00
Total	**4**	**2**	**4.17**

CASE 4: One Generator Standard & Emergency Operations				
Carrier	Cell Technician Maintenance Visits Per Month	Generator Maintenance & Refueling Visits per Year	Emergency Refueling Visits per Year	Vehicles Per Month
AT&T	1	2	4	1.50
Future Carrier 1	1	0	0	1.00
Future Carrier 2	1	0	0	1.00
Future Carrier 3	1	0	0	1.00
Total	**4**	**2**	**4**	**4.50**

For comparative purposes, a review of traffic generated by a single family residence was completed. Per the Institute for Traffic Engineers (ITE) Trip Generation Manual, a single family residence averages 9.5 trips per day or 289 trips per month.

A summary of the four telecommunications cases and the residence case is included in the following table:

Case	Trips Per Month
Case 1: Four Generators Standard Operations	4.67
Case 2: Four Generators Standard & Emergency Operations	6.00
Case 3: One Generator Standard Operations	4.17
Case 4: One Generator Standard & Emergency Operations	4.50
Residence	289.00

As indicated in the above table, the level of traffic generated by the telecommunications facility for any of the four cases does not rise to the level which requires a full traffic analysis since the traffic generated by the facility will not have a significant or material impact. Assuming that all four active carriers will locate a facility at the proposed site, the cumulative "worse case" traffic impact is four vehicles per month for cell tech maintenance, which is not significant or really even an impact. When considering the trips for standard refueling and maintenance of the emergency generator, assuming four carriers at the site each with their own generator, an additional 0.67 trips per month are required. When also considering the assumed emergency refueling needs, an additional 1.33 trips per month are required with four generators are on site. This total number of trips, assuming four carriers at the site and each has its own backup generator, is minimal and will not have a traffic impact, especially when compared to monthly trips for a typical single family residence in the area. Additionally, reducing the number of generators on site from four to one does not significantly reduce the already minimal trips per month when considering four generators. The traffic impact is insignificant for any post construction traffic scenario generated by the facility.

If you have any questions, comments or need further information, please do not hesitate to contact our office.

Very truly yours,

CLOUGH HARBOUR & ASSOCIATES LLP

Paul Lusitani, P.E.

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ATTACHMENT 2

By:	PAL		Project No.:	18301.1025.43000		
Project Name:	AT&T Colebrook		Sheet:	1	of	1
Project Location:	Colebrook, CT		Date:	October 14, 2013		
Subject:	NOISE LEVEL AT PROPERTY LINE BASED ON FOUR 50 kW GENERATORS					

Calculation to Determine Noise Level At Nearest Property Line:

Data:

Equipment:

	Item:	Noise Level (dbA)	Distance to Initial Noise Level, D_1 (ft)	Distance to Property Line, D_2 (ft)	Source Documentation:
Noise Source 1:	AT&T Generator	71	23	114	Generator Specifications
Noise Source 2:	Future Carrier 1 Generator	71	23	78	Generator Specifications
Noise Source 3:	Future Carrier 2 Generator	71	23	123	Generator Specifications
Noise Source 4:	Future Carrier 3 Generator	71	23	130	Generator Specifications

Length of Vegetation Buffer Between Noise Source and Property Line = 63 ft

Drop in Noise Level Based on Distance:

Drop in Noise Level = $20 \times \log_{10} (D_1/D_2)$ — mcsquared.com

D_1 = Distance 1

D_2 = Disatnce 2

	Drop in Noise Level (dbA)	Noise Level at D_2 (dbA)
Noise Source 1:	-13.90	57.10
Noise Source 2:	-10.61	60.39
Noise Source 3:	-14.56	56.44
Noise Source 4:	-15.04	55.96

Alternatively, everytime the distance from the noise source is doubled, the level drops by 6dbA. — mcsquared.com

Cumulative Noise Level at D_2:

When adding noise levels, the following guidelines will be followed:

$L_{Total} = 10 \log_{10} (\sum 10^{Li/10})$ — OSHA.gov Noise and Hearing Appendix I

L_{Total} = Total Noise Level

Li = Noise Level of Each Piece of Equipment

L_{Total} No Tree Buffer=	64	dbA

Alternatively, the following procedure can be used to add sound levels. Sound levels must be added in pairs of two until a final noise level is achieved. — OSHA.gov Noise and Hearing Appendix I

3 db(A) if level differs by 0 to 1 db(A)

2 db(A) if level differs by 2 to 3 db(A)

1 db(A) if level differs by 4 to 9 db(A)

0 db(A) if level differs by 10db(A) or more

This procedure is not utilized but it yields the same result.

Drop in Noise Level at D_2 Due to Tree Buffer: — fhwa.dot.gov Noise Compatible Planning Federal Approach for Audible Landscape

Tree Buffer: 3 to 5 dbA drop per every 100 feet of vegetation

Be conservative and use a drop of 3 dbA per 100 ft of vegetation

Drop due to vegetation = -1.89 dbA

L_{Total} Including Tree Buffer =	62	dbA

By:	PAL		Project No.:	18301.1025.43000	
Project Name:	AT&T Colebrook		Sheet:	1 of 1	
Project Location:	Colebrook, CT		Date:	October 14, 2013	
Subject:	NOISE LEVEL AT PROPERTY LINE BASED ON ONE 200 kW GENERATOR				

Calculation to Determine Noise Level At Nearest Property Line:

Source Documentation:

Data:

Equipment:

	Item:	Noise Level (dbA)	Distance to Initial Noise Level, D_1 (ft)	Distance to Property Line, D_2 (ft)	
Noise Source 1:	Shared Generator	75	23	135	Generator Specifications
Noise Source 2:	NA	0	0	0	
Noise Source 3:	NA	0	0	0	
Noise Source 4:	NA	0	0	0	

Length of Vegetation Buffer Between Noise Source and Property Line = 63 ft

Drop in Noise Level Based on Distance:

Drop in Noise Level = $20 \times \log_{10} (D_1/D_2)$ mcsquared.com

D_1 = Distance 1

D_2 = Disatnce 2

	Drop in Noise Level (dbA)	Noise Level at D_2 (dbA)
Noise Source 1:	-15.37	59.63
Noise Source 2:	0.00	0.00
Noise Source 3:	0.00	0.00
Noise Source 4:	0.00	0.00

Alternatively, everytime the distance from the noise source is doubled, the level drops by 6dbA. mcsquared.com

Cumulative Noise Level at D_2:

When adding noise levels, the following guidelines will be followed:

$L_{Total} = 10 \log_{10} (\sum 10^{Li/10})$ OSHA.gov Noise and Hearing Appendix I

L_{Total} = Total Noise Level

Li = Noise Level of Each Piece of Equipment

L_{Total} No Tree Buffer=	**60**	**dbA**

Alternatively, the following procedure can be used to add sound levels. Sound levels must be added in pairs of two until a final noise level is achieved. OSHA.gov Noise and Hearing Appendix I

3 db(A) if level differs by 0 to 1 db(A)

2 db(A) if level differs by 2 to 3 db(A)

1 db(A) if level differs by 4 to 9 db(A)

0 db(A) if level differs by 10db(A) or more

This procedure is not utilized but it yields the same result.

Drop in Noise Level at D_2 Due to Tree Buffer: fhwa.dot.gov Noise Compatible Planning Federal Approach for Audible Landscape

Tree Buffer: 3 to 5 dbA drop per every 100 feet of vegetation

Be conservative and use a drop of 3 dbA per 100 ft of vegetation

Drop due to vegetation = -1.89 dbA

L_{Total} Including Tree Buffer =	**58**	**dbA**