CITY OF MARLBOROUGH MEETING POSTING

Meeting Name: City Council Wireless Communications Committee

Date: October 1, 2018

Time: 7:00 PM

Location: City Council Chamber, 2nd Floor, City Hall, 140 Main Street

Agenda Items to be addressed:

1. 06-18-2018 – **Order No. 18-1007321**: Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, Francis Street and East Main Street, Utility Pole #11-50.
   -Refer to Wireless Communications Committee
   -Public Hearing: August 27, 2018

2. 06-18-2018 – **Order No. 18-1007322**: Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, 10 Neil Street Utility Pole 1.
   -Refer to Wireless Communications Committee
   -Public Hearing: August 27, 2018

3. 10-16-2017 – **Order No. 17-1007055:** Petition of AT & T to deploy a small cell site which will be mounted on existing utility pole at 28 Concord Road.
   -Refer to Wireless Communications Committee
   -Public Hearing: November 13, 2017

4. 09-25-2017 – **Order No. 17-1007034:** Petition of AT & T to deploy one small cell site which will be mounted on existing utility poles at 319 East Main Street.
   -Refer to Wireless Communications Committee
   -Public Hearing: November 13, 2017

THE LISTING OF TOPICS THAT THE CHAIR REASONABLY ANTICIPATES WILL BE DISCUSSED AT THE MEETING IS NOT INTENDED AS A GUARANTEE OF THE TOPICS THAT WILL HAVE BEEN DISCUSSED. NOT ALL TOPICS LISTED MAY IN FACT BE DISCUSSED, AND OTHER TOPICS NOT LISTED MAY ALSO BE BROUGHT UP FOR DISCUSSION TO THE EXTENT PERMITTED BY LAW.

The public should take due notice that the Marlborough City Council may have a quorum in attendance due to Standing Committees of the City Council consisting of both voting and non-voting members. However, members attending this duly posted meeting are participating and deliberating only in conjunction with the business of the Standing Committee.

Electronic devices, including laptops, cell phones, pagers, and PDAs must be turned off or put in silent mode upon entering the City Council Chamber, and any person violating this rule shall be asked to leave the chamber. Express authorization to utilize such devices may be granted by the President for recordkeeping purposes.

INTRODUCING SMALL CELL ANTENNAE AND DISTRIBUTED ANTENNA SYSTEMS IN PUBLIC RIGHTS OF WAY AND MUNICIPAL FACILITIES: CONSIDERATIONS AND RECOMMENDATIONS FOR MUNICIPAL COUNSEL

By Amanda Zuretti, Esq., Petrini & Associates, P.C.
Massachusetts Municipal Association, June 21, 2018

I. INTRODUCTION

As discussed at the outset of this presentation, municipal attorneys frequently field requests for advice when a municipality receives an inquiry or an application from a telecommunications provider seeking:

A. a building permit to place a small cell antenna on an existing utility pole owned by a traditional utility company, e.g., Verizon or Eversource, within a public way pursuant to M.G.L. c. 166, §§ 22, 25A);

B. a license or lease to place small cell antennae and/or distributed antenna systems ("DAS") in public ways and on public facilities (which may include the need for street trenching and placement of equipment cabinets on public sidewalks); or

C. a grant of location to construct new utility poles or antennae towers within public ways.

With respect placement of small cell antennae or DAS on an existing utility pole owned by one of the traditional utility companies (as opposed to poles owned by a municipality), M.G.L. c. 166, §25A, mandates that utility companies allow wireless providers access to their poles located within public ways.

The greater challenge arises when telecommunications providers approach municipalities with requests to install small cell antennae and/or distributed antenna systems ("DAS") in public ways and on municipal facilities, e.g., streetlight poles, traffic signal poles, catenary poles, sign posts and easements held by the city or town, or within public ways. These requests generate further questions from municipal officials asking for advice of counsel on:

1. the extent to which local control of telecommunications facilities are subordinate to federal law, specifically, the Telecommunications Act of 1996 ("TCA") 47 U.S.C. § 253, as amended, including Section 332(c)(7) (which preserves local zoning controls) and Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 (the "Spectrum Act");

2. the scope and content of the proposed agreements (particularly as to what compensation and benefits the municipality may expect from a telecommunications provider); and

3. the applicability of public procurement procedures under M.G.L.c. 30B.

The goal of this memorandum is to describe the framework of Massachusetts and federal law applicable to the introduction of small cell antennae and DAS in rights of way or on municipal facilities.

II. SMALL CELL ANTENNAE AND DAS IN PUBLIC RIGHTS OF WAY AND MUNICIPAL FACILITIES

A. Utility poles not owned by municipalities

1. Grants of Location

Grants of location for the placement and relocation of utility poles in public ways is governed by M.G.L. c. 166, § 22, which "provides procedures--including procedures for public notice and hearings on local permitting of right-of-way telecommunications installations--for such municipal management of local rights-of-way." MCLE Massachusetts Municipal Law § 18.1.1 (2012). Massachusetts General Laws chapter 166, § 22 provides in relevant part that

> A company desiring to construct a line for such transmission upon, along, under or across a public way shall in writing petition the board of aldermen of the city or the selectmen of the town where it is proposed to construct such line for permission to erect or construct upon, along, under or across said way the wires, poles, piers, abutments or conduits necessary therefor.

Historically, grants of location have been sought by traditional utility companies seeking to install or relocate utility poles to string physical electrical transmission or telephone lines. More recently, wireless telecommunications providers have attempted to argue that they, too, are entitled to access to public ways to erect telecommunications poles for wireless transmission antennae.

The procedural requirements under M.G.L. c. 166, § 22A are straightforward:

a. the applicant files a petition for a grant of location to place or relocate a utility pole in the public way;

b. the clerk of the city or by the selectmen of the town send written notice "to all owners of real estate abutting upon that part of the way upon, along, across or under which the line is to be constructed, as such ownership is determined by the last preceding assessment for taxation" seven days prior to a public hearing on the petition;

c. a public hearing shall be held on the petition, and

d. the board of aldermen of city or the selectmen of a town, may by order grant to the petitioner "a location for such line, specifying therein where the poles, piers, abutments or conduits may be placed, and in respect to overhead lines may also specify the kind of poles, piers or abutments which may be used, the number of wires or cables which may be attached thereto, and the height to which the wires or cables may run." M.G.L. c. 166, § 22A, paragraph first.

After the erection or construction of such line, the board of aldermen or selectmen may, after giving the company or its agents an opportunity to be heard, or upon petition of the company without notice or hearing, by order permit an increase in the number of wires or cables, and direct an alteration in the location of the poles, piers, abutments or conduits or in the height of the wires or cables. M.G.L. c. 166, § 22A, paragraph second.

"Issuance of a proper grant of location order or agreement can spell out requirements concerning performance bond, indemnification, insurance, construction schedule, safety practices, police detail, shadow conduit, dig-safe, and other right-of-way management terms and conditions." MCLE Massachusetts Municipal Law § 18.1.1 (2012). See, City of Framingham Order No. 2018-14.

To the extent that grants of location may involve requests for street opening and trench opening permits and requests to place equipment cabinets within sidewalks, further review is may be required under M.G.L. c. 82A § 1 and 520 CMR 7.00 et. seq., as amended. If placement of proposed equipment may reduce the width of the sidewalk, local bylaws or ordinances and local public way construction standards may apply. (As an example, Framingham's Roadway Construction Standards require that sidewalks and wheelchair ramps be a minimum of five feet wide.) Accordingly, local requirements should be discussed with the petitioner at the time of application.

2. Placement of small cell antennae or DAS on existing utility poles

Placement of small cell antennae or DAS on an existing utility poles within a public way owned by one of the traditional utility companies is governed by M.G.L. c. 166, § 25A, which provides that

> [a] utility shall provide a wireless provider with nondiscriminatory access to any pole or right-of-way used or useful, in whole or in part, owned or controlled by it for the purpose of installing a wireless attachment. . . . This paragraph shall not apply to municipal lighting plants (emphasis added).

"The Massachusetts Supreme Judicial Court has held that under § 22 no notice or hearing is necessary for a municipality to grant authority to another company to employ existing utility poles for new uses, specifically including cable television. Cablevision of Boston, Inc. v. Public Improvement Comm'n, 38 F. Supp. 2d 46, 62 (D. Mass. 1999) (citing Gillis v. Mass. Cablevision, Inc., 369 Mass. 526, 528, 533-34, 340 N.E.2d 872 (1976)).

Requests to mount small cell antennae or DAS may be directed to the building inspector for zoning review and/or a request for building permits. Some municipalities, e.g., the Town of Dartmouth, may also require hearings on such applications. Massachusetts General laws chapter 166, § 25A, paragraph third, imposes a threshold requirement that

> No attachments shall be made without the consent of the utility to the poles, towers, piers, abutments, conduits, manholes, and other fixtures necessary to sustain, protect, or operate the wires or cables of any lines used principally for the supply of electricity in bulk.

The owner of the utility pole is entitled to compensation for allowing access for small cell antennae or DAS: the Massachusetts Department of Telecommunications and Energy "shall determine a just and reasonable rate for the use of poles and communication ducts and conduits of a utility for attachments of a licensee by assuring the utility recovery of not less than the additional costs of making provision for attachments nor more than the proportional capital and operating expenses of the utility attributable to that portion of the pole, duct, or conduit occupied by the attachment. Such portion shall be computed by determining the percentage of the total usable space on a pole or the

total capacity of the duct or conduit that is occupied by the attachment." M.G.L. c. 166, § 25A, paragraph fourth.

B. Small cell antennae or DAS in public ways and on public facilities

1. TCA at 47 U.S.C. § 253(a)(c) and (d)

Requests to place small cell antennae or DAS in public ways and on public facilities may invoke the TCA, which "seeks to balance the dual goals of providing for reasonable regulation of the right-of-way and promoting telecommunications. The TCA provides a framework that simultaneously preserves municipal management of a telecommunications company's use of the right-of-way and makes clear that such local right-of way management can be neither prohibitive nor unduly discriminatory. 47 U.S.C. § 253(a), (c)." MCLE Massachusetts Municipal Law § 18.1.1 (2012).

Under the TCA at 47 U.S.C. § 253 (d) the Federal Communications Commission ("FCC") is authorized to determine "after notice and an opportunity for public comment" whether "a State or local government has permitted or imposed any statute, regulation, or legal requirement that violates subsection (a) or (b)" and provides that the [FCC] shall preempt the enforcement of such statute, regulation, or legal requirement to the extent necessary to correct such violation or inconsistency." See, 47 U.S.C.S. § 253. "Any state or local law that is inconsistent with the requirements of § 253(a) will be null and void, unless it falls under one of the safe harbor provisions in § 253." Puerto Rico Tel. Co. v. Municipality of Guayanilla, 450 F.3d 9, 16 (1st Cir. 2006).

a. FCC's Declaratory Ruling dated October 21, 2014 [FCC 14-153] distinguishes when municipality acts in a regulatory, i.e., permit granting, capacity

The FCC's Declaratory Ruling dated October 21, 2014 [FCC 14-153] https://docs.fcc.gov/public/attachments/FCC-14-153A1.pdf at Paragraph 239 distinguishes between actions taken by a municipality acting in a proprietary capacity from those taken when the municipality acts in a regulatory, i.e., permit granting, capacity:

> . . . [C]ourts have consistently recognized that in "determining whether government contracts are subject to preemption, the case law distinguishes between actions a State entity takes in a proprietary capacity— actions similar to those a private entity might take—and its attempts to regulate." As the Supreme Court has explained, "[i]n the absence of any express or implied implication by Congress that a State may not manage its own property when it pursues its purely proprietary interests, and when analogous private conduct would be permitted, this Court will not infer such a restriction." Like private property owners, local governments enter into lease and license agreements to allow parties to place antennas and other wireless service facilities on local-government property, and we find no basis for applying Section 6409(a) in those circumstances. We find that this conclusion is consistent with judicial decisions holding that Sections 253 and 332(c)(7) of the Communications Act do not preempt "non regulatory decisions of a state or locality acting in its proprietary capacity." (internal citations omitted) (emphasis added).

A reasonable reading of FCC 14-153 is that a municipality is not required to enter into an agreement with a telecommunications provider to license or lease municipal facilities, when the municipality acts in a proprietary capacity, i.e., as the owner of public ways, structures or other interests in real estate, such as easements.

b. FCC's 2017 anticipated ruling on local requirements for gaining access to rights of way and prohibiting municipalities from imposing excessive charges for access to public rights of way

The FCC's October 21, 2014 Declaratory Ruling may be subject to change depending on the outcome of the Petition for Declaratory Ruling filed by Mobilitie, LLC ("Mobilitie") on November 15, 2016.

On February 6, 2017, the FCC's Wireless Telecommunications Bureau ("WTB") opened public comment on "Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Facilities Siting Policies", WTB Docket No. 16-421, the purpose of which is to develop guidance on how federal law applies to local government review of wireless facility siting applications and local requirements for gaining access to rights of way. In addition, the WTB seeks to develop guidance on prohibiting municipalities from imposing excessive charges for access to public rights of way, as set forth in Mobilitie's Petition. Although the public comment period closed on March 8, 2017, no Declaratory Ruling has yet been issued.

On June 1, 2018, T-Mobile filed a letter with the WTB in which it stated: "Consistent with our filings in these proceedings, T-Mobile urged the Commission to accelerate its Section 332 shot clocks; clarify that they cover all aspects of local approval; and adopt a deemed granted remedy for shot clock violations. We further urged the Commission to ensure that fees charged by state and local governments are cost-based, nondiscriminatory, and publicly available; clarify that the regulation of need, technology, or other business issues (e.g., use of "substantial gap in coverage" or "least intrusive means" tests) violates Section 332; and clarify that while siting authorities may consider aesthetic and safety issues, they must do so pursuant to published, objective standards that are applied on a nondiscriminatory basis."
https://www.fcc.gov/ecfs/search/filings?proceedings_name=16-421&sort=date_disseminated,DESC

i. Fees must be "*related* to the actual use of rights of way"

"Massachusetts allows recovery of certain right-of-way management administrative costs and user fees to the extent consistent with state law. Boston Gas Co. v. City of Newton, 425 Mass. 697, 699 (1997); *see also* DTE 98-22, § C, P 1 (Aug. 26, 1999) (Adopting Standards to be Employed by Public Utility Operators When Restoring any of the Streets, Lanes, and Highways in Municipalities). Some utilities offer in-kind benefits--such as a conduit for municipal use, or enhanced street restorations and mitigation terms--that provide value to the municipality." MCLE Massachusetts Municipal Law § 18.1.1 (2012)

There is a limit to the fees that a municipal entity may impose, however. In Puerto Rico Telephone Company, Inc. v. Municipality of Guayanilla, 450 F.3d 9 (2006), the Court, in striking down a municipal ordinance imposing a 5% gross revenue fee 5% gross revenue fee on telecommunications providers for their use of public rights of way wrote that "fees should be, at the

very least, *related* to the actual use of rights of way and that "the costs [of maintaining those rights of way] are an essential part of the equation." . . . "Section 253(c) requires compensation to be reasonable essentially to prevent monopolistic pricing by towns. Without access to local government rights-of-way, provision of telecommunications service using land lines is generally infeasible, creating the danger that local governments will exact artificially high rates. As the district court noted in this case, "[a]bsent evidence of costs, the Court cannot determine whether the Ordinance results in fair and reasonable compensation as opposed to monopolistic pricing." Puerto Rico Tel. Co. v. Municipality of Guayanilla, 450 F.3d 9, 22 (1st Cir. 2006) (internal citations omitted).

ii. If a municipality receives compensation access to public ways must be offered on a competitively neutral and nondiscriminatory basis

The TCA at 47 U.S.C. § 253(c) allows local government to manage the public rights-of-way or to require fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis if the compensation required is publicly disclosed by such government. See, Cablevision of Boston v. Public Improvement Com'n, 38 F. Supp. 2d 46 (D. Mass. 1999) (Examining plaintiff's assertion that § 253(c) of TCA required the City regulate the use of conduit and cables under streets in a manner which is "competitively neutral" and "nondiscriminatory." Section 253(c)'s requirement of competitive neutrality applies only to the question of compensation, not management of public rights of way.)

iii. Procurement

Public ways are generally under the custody and control of town boards of selectmen. Under M.G.L. c. 40, §3, a town "may by its selectmen let or lease for not more than 30 years, on such terms as the selectmen determine, a public building or part thereof . . ." However, M.G.L. c. 30B, § 1 (a) (2) requires a public bidding process through a request for proposals for "disposing of, by sale or rental to any person, real property or any interest therein, determined in accordance with paragraph (b) to exceed $35,000 dollars in value." "Rental" implies that public bidding procedures must be followed when real property valued at $35,000.00 or more is offered for lease. Municipal agreements for small cell and DAS, however, are often titled as "licenses" which are agreements that do not extend a possessory use the holder of the license.

The Office of the Massachusetts Inspector General clarifies that: "A license is a permit to use real property and is not subject of M.G.L. c. 30B, because it is not an interest in real property. A license is revocable at the will of the licensor and is generally non-assignable. A license often grants permission to enter property only for a certain well-defined purpose and may be of limited duration. . . The usual test of whether a right to use space is a lease is whether the instrument gives the lessee exclusive possession of the premises. If it does, then most likely it is a lease." Inspector General's Procurement Bulletin, vol. 17, no. 2, pp. 2-3 (2011) ("IG Bulletin").

Counsel for municipalities may wish to consider the value, duration, and revocability of licenses presented for review as they advise their clients during negotiations with telecommunications providers.

c. Neither TCA nor Spectrum Act preempt "non regulatory decisions of a state or locality acting in its proprietary capacity" – but that may change

As stated in FCC 14-153 at Paragraph 239, supra, the neither the TCA nor the Spectrum Act preempt "non regulatory decisions of a state or locality acting in its proprietary capacity", meaning that as of the date of this memorandum the Town is not required to allow a telecommunications provider to attach to municipally owned streetlight poles, traffic signal poles, catenary poles, and sign posts.

There is, however, a possibility that the Spectrum Act may limit a municipality's ability to prohibit a telecommunications provider from attaching its equipment to municipal structures equipped with telecommunications devices, specifically, Supervisory Control and Data Acquisition ("SCADA") systems (such as the Town's water tanks), after review by the Town's land use permitting authorities. See, Portland Cellular P'ship v. Inhabitants of the Town of Cape Elizabeth, 139 F. Supp. 3d 479, 2015 U.S. Dist. LEXIS 132521, 63 Comm. Reg. (P & F) 783 (D. Me. 2015) (determining that because the Portland Water District's SCADA equipment had been installed without review by the Town of Cape Elizabeth's zoning authorities, the water tower did not meet the definition of an "eligible facility" or "base station" and that the Spectrum Act did not preempt the Town's Zoning Ordinances.)

d. Zoning and Permitting and the FCC's 2009 "Shot Clock" ruling regarding zoning review

Generally, a telecommunications provider is not exempt from compliance with local zoning when it seeks to mount wireless facilities on municipal facilities. If zoning bylaws or ordinances include provisions defining and governing wireless communications facilities which may include a Special Permit process. Pursuant to G.L.c. 40A, § 7, the building commissioner has the authority to interpret local zoning bylaws or ordinances. If the building commissioner determines that the proposed installation of wireless communications facilities satisfies, or is exempt from, the requirements of zoning bylaws or ordinances, s/he may issue a building permit

With regard to zoning review, the 2009 Declaratory Ruling at Paragraph 45 created the so-called "shot clock" rule, finding "90 days to be a generally reasonable timeframe for processing collocation applications and 150 days to be a generally reasonable timeframe for processing applications other than collocations. Thus, a lack of a decision within these timeframes presumptively constitutes a failure to act under Section 332(c)(7)(B)(v)." (citations omitted). See, e.g., New Cingular Wireless PCS v. Town of Stoddard, 2012 DNH 46, 853 F. Supp. 2d 198 (2012). The "shot clock" timing does not, as yet, apply to requests by wireless telecommunications providers to attach equipment owned by municipalities that is located within public ways.

C. Requests for grants of location to construct new utility poles and antennae within public ways

Although many municipalities report that they have received requests (or demands) construct new utility poles and antennae within public ways, there is currently no federal requirement that municipalities, allow wireless telecommunications providers to install new poles or antenna towers in public rights of way, although the legal landscape may be changing.

IV. CONCLUSION AND RECOMMENDATIONS

Telecommunications providers must enter into written agreements with municipalities to mount its wireless facilities on municipal facilities. Municipalities should consider, in addition to examining their zoning bylaws or ordinances, developing written polices for the placement of small cell wireless telecommunications facilities on municipal facilities. In considering whether it is in the in the best interests of the city or town to enter into a license or lease agreements with one or more telecommunications providers, the executive of the city or town may wish to:

1. determine whether to offer licenses or leases;

2. develop an RFP for offer licenses or leases to comply with M.G.L. c. 30B;

3. develop a competitively neutral and non-discriminatory policy for the placement of small cell antennae and DAS on municipal facilities:

4. complete an inventory of the municipal facilities;

5. procure a technical evaluation of the carrying capacity of the municipality's telecommunications networks or include a requirement for such evaluation from a successful bidder responding to a Request for Proposals;

6. develop written, competitively neutral and nondiscriminatory bases for use of public rights-of-way that complies with the TCA;

7. develop a capital asset management protocol for licenses or leases of municipal facilities;

8. adopt or amend bylaws for grants of location for utility poles in public ways and for placement of wireless antennae on municipal property (limiting pole height, joint poles, double poles, and pig tails and imposing decommissioning requirements are topics that are ripe for consideration);

9. develop a template license or lease agreement that includes the following:

    a. compensation from licensees or lessees that is related to the actual use of rights of way or municipal facilities;

    b. compensation from licensees or lessees in the event of co-location, sub-licensing or subleasing, and requiring that such terms be incorporated into sublicenses or subleases; and

    c. agreement from wireless telecommunications providers that the attachment of a wireless facility shall neither change the primary purpose of municipal facilities nor cause any of the Town's facilities to be a "wireless tower or base station," within the meaning of Section 6409(a) of the Spectrum Act, 47 U.S.C. § 1455.

From: Donald Rider
Sent: Thursday, September 27, 2018 4:42 PM
To: City Council
Cc: Sara Corbin
Subject: Notices of Recent FCC Decisions on Wireless Infrastructure Deployment
Attachments: Notice of FCC's 8.2.18 Decision Speeding Wireless Carriers' Access to Utility Poles.pdf; Notice of FCC's 9.26.18 Decision Removing Regulatory Barriers to 5G Deployment.pdf

Karen-

Attached are FCC notices (press releases) of 2 recent decisions issued by the FCC on deployment of wireless infrastructure, including within public rights of way:

- The 1st attachment is an FCC decision issued August 2, 2018.
    - Part but not all of the decision takes effect on October 14, 2018 (i.e., 30 days after the publication in the Federal Register on September 14, 2018).
    - As it pertains to state and local governments, this 120-page decision rules that:
        - the FCC "will not allow state and local laws to stand in the way of post-disaster restoration of essential communications networks;" and
        - rules that state and local moratoria on the deployment of telecom services or facilities would violate federal law.

- The 2nd attachment is an FCC decision issued yesterday, September 26, 2018.
    - The decision will take effect 30 days after its eventual publication in the Federal Register.
    - As it pertains to state and local governments, this 99-page decision:
        - clarifies that the appropriate standard for determining whether a state or local law prohibits or effectively prohibits wireless infrastructure deployment is whether the state or local law "materially inhibits" that deployment;
        - clarifies the particular standard that governs state and local fees and charges that violate federal law, ruling that state and local fees are only permitted to the extent the fees are nondiscriminatory and represent a reasonable approximation of the locality's reasonable costs;
            - and identifies "specific fee levels for the deployment of Small Wireless Facilities that presumptively comply with this standard."
        - allows state and local governments to impose "aesthetic requirements" on wireless infrastructure deployment if such requirements:
            - are reasonable;
            - are no more burdensome than those applied to other types of infrastructure deployments; and
            - are published in advance.

Thanks.

-Don Rider
City Solicitor

FCC NEWS from the Federal Communications Commission

Media Contact:
Mark Wigfield, (202) 418-0253
mark.wigfield@fcc.gov

For Immediate Release

FCC SPEEDS ACCESS TO UTILITY POLES TO PROMOTE BROADBAND, 5G DEPLOYMENT

Access to Poles Must Be Swift, Predictable, and Affordable

WASHINGTON, August 2, 2018—The Federal Communications Commission continued its efforts to promote broadband deployment and competition by speeding the process and reducing the costs of attaching new network facilities to utility poles.

To enable broadband providers to enter new markets and deploy high-speed networks, access to poles must be swift, predictable, safe, and affordable. Pole access also is essential in the race to deploy fast 5G wireless service, which relies on small cells and wireline backhaul.

The Commission fundamentally reformed the federal framework governing pole attachments by adopting a process in which the new attacher moves existing attachments and performs all other work required to make the pole ready for a new attachment. Called "one-touch, make-ready," this process speeds and reduces the cost of broadband deployment by allowing the party with the strongest incentive—the new attacher—to prepare the pole quickly, rather than spreading the work across multiple parties.

By some estimates, one-touch, make-ready alone could result in approximately 8.3 million incremental premises passed with fiber and about $12.6 billion in incremental fiber capital expenditures. The process will not apply to more complicated attachments, or above the "communications space" of a pole, where safety and reliability risks are greater, but the Order improves current processes for attachments in these spaces.

The Commission also addressed two forms of state and local regulatory barriers to the deployment of wireline and wireless facilities. The Report and Order makes clear that the FCC will preempt, on a case-by-case basis, state and local laws that inhibit the rebuilding or restoration of broadband infrastructure after a disaster. And in a Declaratory Ruling, the FCC made clear that blanket state and local moratoria on telecommunications services and facilities deployment are barred by the Communications Act because they, in the language of Section 253(a), "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."

Action by the Commission August 2, 2018 by Report and Order and Declaratory Ruling (FCC 18-111). Chairman Pai, Commissioners O'Rielly, and Carr approving. Commissioner Rosenworcel approving in part and dissenting in part. Chairman Pai, Commissioners O'Rielly, Carr, and Rosenworcel issuing separate statements.

WC Docket No. 17-84; WT Docket No. 17-79

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TTY: (888) 835-5322
Twitter: @FCC
www.fcc.gov/media-relations

FCC NEWS from the Federal Communications Commission

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Cecilia Sulhoff, (202) 418-0587
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For Immediate Release

FCC FACILITATES DEPLOYMENT OF WIRELESS INFRASTRUCTURE FOR 5G CONNECTIVITY

Action Removes Regulatory Barriers to Infrastructure Investment

WASHINGTON, September 26, 2018—Today, the Federal Communications Commission took another important step in its ongoing efforts to remove regulatory barriers that inhibit the deployment of infrastructure necessary for 5G and other advanced wireless services. This action, which builds upon those already taken by states and localities to streamline deployment, underscores the FCC's commitment to ensuring that the United States wins the global race to 5G.

The first part of the Commission's decision, a Declaratory Ruling, focuses primarily on local fees for the authorizations necessary to deploy small wireless facilities. Specifically, the Declaratory Ruling:

- Explains when a state or local regulation of wireless infrastructure deployment constitutes an effective prohibition of service prohibited by Sections 253 or 332(c)(7) of the Communications Act;
- Concludes that Section 253 and 332(c)(7) limit state and local governments to charging fees that are no greater than a reasonable approximation of objectively reasonable costs for processing applications and for managing deployments in the rights-of-way.
- Removes uncertainty by identifying specific fee levels for small wireless facility deployments that presumably comply with the relevant standard; and
- Provides guidance on when certain state and local non-fee requirements that are allowed under the Act—such as aesthetic and undergrounding requirements—may constitute an effective prohibition of service.

The second part of the Commission's decision, the Third Report & Order in the Wireless Infrastructure Docket:

- Establishes two new shot clocks for small wireless facilities (60 days for collocation on preexisting structures and 90 days for new builds);
- Codifies the existing 90 and 150 day shot clocks for wireless facility deployments that do not qualify as small cells that were established in 2009;
- Concludes that all state and local government authorizations necessary for the deployment of personal wireless service infrastructure are subject to those shot clocks; and
- Adopts a new remedy for missed shot clocks by finding that a failure to act within the new small wireless facility shot clock constitutes a presumptive prohibition on the provision of services.

Action by the Commission September 26, 2018 by Declaratory Ruling and Report and Order (FCC 18-133). Chairman Pai, Commissioners O'Rielly and Carr approving. Commissioner Rosenworcel approving in part and dissenting in part. Chairman Pai, Commissioners O'Rielly, Carr, and Rosenworcel issuing separate statements.

WT Docket No. 17-79; WC Docket No. 17-84

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www.fcc.gov/office-media-relations

IN CITY COUNCIL

Marlborough, Mass., JUNE 18, 2018

ORDERED:

That there being no objection thereto set **MONDAY AUGUST 27, 2018** as **DATE FOR PUBLIC HEARING** On the Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, Francis Street and East Main Street, Utility Pole #11-50, be and is herewith refer to **WIRELESS COMMUNICATION COMMITTEE.**

ADOPTED

ORDER NO. 18-1007321

IN CITY COUNCIL

Marlborough, Mass., AUGUST 27, 2018

ORDERED:

That the PUBLIC HEARING On the Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, Francis Street and East Main Street, Utility Pole #11-50, Order No. 18-1007321, all were heard who wish to be heard, hearing closed at 8:12 PM.

Councilors Present: Delano, Doucette, Dumais, Tunnera, Irish, Clancy, Landers, Juaire, Oram, Ossing & Robey.

PUBLIC SPEAKING IN FAVOR

Michael Dolan from the law firm of Brown Rudnick appeared on behalf of the petitioner, AT&T. AT&T has licenses to operate a wireless network throughout the country and in Massachusetts, they proposed a small cell antennae installation on a utility pole at One Francis Street to deal with the rapidly increasing demand on their network. The small cell facility will be mounted on an existing National Grid utility pole in the public right of way. The AT&T engineers identified the proposed location due to its high data demand on its network in that area. Existing AT&T macro sites in the vicinity are unable to provide adequate coverage for AT&T customers. The facility consists of a small antennae and small equipment cabinet with some fiber optics cables connecting it. The have two other applications before the Council scheduled to be heard by the Wireless Communications Committee as well as an additional petition that evening.

There is no one else speaking in favor. That part of the Public Hearing is closed.

QUESTIONS FROM THE PUBLIC

There are no questions from the public. That part of the Public Hearing is closed.

PUBLIC SPEAKING IN OPPOSITION

There is no one speaking in opposition. That part of the Public Hearing is closed.

QUESTIONS FROM THE CITY COUNCIL

✓ Councilor Landers asked what the height from the ground of the boxes. Mr. Dolan stated the bottom of the electric meters is eight feet off the ground, but the substance of the utility is eleven and a half feet to the bottom of their equipment cabinet. Councilor Landers wondered why that height was chosen. Mr. Dolan stated National Grid dictates their location on the poles and because of existing lines and safety features this is where they are situated on poles throughout the Commonwealth.

IN CITY COUNCIL

Marlborough, Mass., AUGUST 27, 2018

ORDERED:

✓ Councilor Delano requested clarification on the capability of this equipment and whether it did help with cell service which Mr. Dolan confirmed it did. Councilor Delano asked the range of the equipment and Mr. Dolan approximated it to be at most a half-mile as macro sites are upwards of two- to two-and-a-half miles. These are much smaller and targeted for a specific niche where Marlborough customers are requiring more data capacity. Councilor Delano commented there are several areas within the City that have horrible cell service and he wanted to know how they could help those people get better cell service because it sounds like these will be in higher service areas and not where the service is already poor or non-existent. Mr. Dolan could not speak to those areas specifically with regards to AT&T customers and they may be other carriers with a larger customer base in those areas, but their goal is to cover all of Marlborough. Their engineers felt these locations were the ones with largest demand from AT&T Marlborough customers that need more and better coverage.

✓ Councilor Doucette stated this petition would be going to the Wireless Communications Committee and made a full disclosure of his status as a Verizon Wireless Customer. Councilor Doucette agreed with the points made by Councilor Delano but also wanted to know how these sites were determined is it an issue of traffic, customer location, dropped calls, etc. Also, he wished to understand how these stations will communicate, is fiber connected to it or is it a wireless connection to another macro station? Mr. Dolan stated there is fiber coming into each of the small cells and explained there is a group at AT&T that collects information from customer usage and traffic patterns, so they can identify where the most need is to alleviate the complaints by their customers.

There are no further questions from members of City Council. That part of the Public Hearing is closed.

That ends the entire Public Hearing. This is currently in the Wireless Communications Committee.

ADOPTED

ORDER NO. 18-1007321A

City Council
140 Main Street
2nd Floor
Marlborough, MA 01752

RE: Petition of New Cingular Wireless PCS, LLC ("AT&T") for Grant of Location for Telecommunication Wires and Wireless Attachments and Appurtenances: **Project: Area5_144A : Location: Francis St and E. Main St, 42.350350 N 71.541444 W, Utility Pole: #11-50**

Dear Honorable Members of the City Council:

Pursuant to Massachusetts General Laws Chapter 166, Sections 21, 22 and 25A, please find enclosed the petition (the "Petition") of New Cingular Wireless PCS, LLC ("AT&T") for a grant of location for telecommunication wires and wireless attachments and appurtenances to be attached to existing utility poles owned by National Grid within the City of Marlborough. Included with the Petition are detailed plans that identify the locations where AT&T's proposed attachments will be placed. This includes an area map of all locations as well as the utility pole profiles depicting the equipment attachment heights and specs.

AT&T requests that the City schedule a public hearing on this Petition, subject to the requirements of Chapter 166 of the Massachusetts General Laws. Those requirements prescribe that the City mail "written notice of the time and place of the hearing at least seven days prior to all owners of real estate abutting upon that part of the way upon, along, across or under which the line is to be constructed, as such ownership is determined by the last preceding assessment for taxation". It is my understanding that the City will be able to produce this list and I will work with the City Clerk to ensure the letters are sent per these requirements.

Project Description

AT&T proposes to deploy four (4) small cell sites in the City of Marlborough in order to deal with the rapidly increasing demand on AT&T's wireless network. All four (4) small cell sites will be mounted on existing National Grid utility poles located within the public rights of way. The small cell sites will work in conjunction with the existing macro sites installed on rooftops, towers and other structures in and around the City of Marlborough. This Petition specifically addresses the following location:

Project: Area5_144A : Location: Francis St and E. Main St, 42.350350 N 71.541444 W, Utility Pole: #11-50

AT&T's radio frequency engineers targeted the proposed location due to the high traffic and data demands on AT&T's network. AT&T's existing macro cell sites are not providing adequate data capacity in this location due to increased population, vehicular and foot traffic, multiple wireless devices used by each person and other contributing factors. This small cell site will work to offload the demand on the macro sites and allow for increased data capacity and speed within the immediate vicinity of the proposed small cell site.

The small cell site will be installed using standard commercially accepted methods in accordance with all applicable federal, state and local laws and regulations. All proposed attachments are to existing poles owned and maintained by National Grid. AT&T has entered into a Pole Attachment Agreement with National Grid.

95 Ryan Drive, Suite 1 • Raynham, MA 02767 • T: 508.821.6509 • F: 508.819.2017 • E: dford@clinellc.com

The small cell installation on each existing utility pole will include: fiber optic cable(s); remote nodes in a small equipment cabinet H32" x W18" x D12" mounted to the pole at least 8' above ground level; an unobtrusive pole top antenna measuring 24.7" long and 10" in diameter ; conduits and cable protectors; and, an electrical meter with shutoff switch. Attached please find design sketches for each site showing the proposed location, pole height, mounting height, equipment specifications and utility plan.

The Telecommunications Act of 1996 (the "Act")

Without the installation, AT&T would be unable to provide specifically established coverage and capacity objectives. The utility pole is located within the limited geographic area whereby AT&T's radio frequency engineers determined that a wireless facility is required. The Act imposes substantial restrictions affecting the standard for granting the requested relief. The ACT provides that: no laws or actions by any local government or planning or zoning board may prohibit, or have the effect of prohibiting, the placement, construction, or modification of communications towers, antennas, or other wireless facilities in any particular geographic area, see 47 U.S.C. §332(c)(7)(B)(i); local government or planning or zoning boards may not unreasonably discriminate among providers of functionally equivalent services, see 47 U.S.C. §332(c)(7)(B)(i); health concerns may not be considered so long as the emissions comply with the applicable standards of the FCC, see 47 U.S.C. §332(c)(7)(B)(iv); and, decisions must be rendered within a reasonable period of time, see 47 U.S.C. §332(c)(7)(B)(ii) and the FCC's Declaratory Ruling commonly referred to as the "shot clock".

We have attached to this petition a generic emissions report demonstrating that the low power antenna will comply with applicable FCC standards with respect to emissions.

For the convenience of the City Council, AT&T has provided a proposed Form of Order for your consideration.

Should you have any questions, or would like any additional information prior to the public hearing please do not hesitate to contact me at (774) 261-0043 or jiacoviello@clinellc.com. AT&T will be present at the public hearing to answer any questions you may have as well.

Thank you,

Jeff Iacoviello

CENTERLINE COMMUNICATIONS

Jeffrey Iacoviello | Site Acquisition Consultant
750 W Center St, Floor 3 | West Bridgewater, MA 02379
Mobile: 774.261.0043 | Fax: 617.249.0819
jiacoviello@clinellc.com | www.centerlinecommunications.com

PETITION FOR LOCATIONS FOR TELECOMUNICATIONS WIRES AND WIRELESS ATTACHMENTS AND APPURTENANCES

To THE CITY COUNCIL OF THE CITY OF MARLBOROUGH, MASSACHUSETTS

Pursuant to Massachusetts General Laws, Chapter 166, Sections 21, 22 and 25A, and the City Ordinances of the City of Marlborough, Massachusetts, NEW CINGULAR WIRELESS PCS, LLC ("AT&T") requests that it be granted locations for and permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas to be attached to existing National Grid utility poles, located upon and along the following public ways within the City of Marlborough, as depicted on the attached plans. In addition, AT&T seeks permission to install conduit or direct bury cable(s) as depicted on the plans submitted.

Wherefore, AT&T requests that, after due notice and public hearing as provided by law, that it be granted locations for permission to construct the telecommunications wires and wireless attachments and appurtenances upon, along and under the public ways within the City of Marlborough as depicted on the plans filed herewith. AT&T also submitted additional information in support of this Petition.

Respectfully submitted,

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")

By: Jeff Iacoviello
Site Acquisition Consultant
Centerline Communications, LLC

ORDER FOR LOCATION FOR TELECOMMUNICATIONS WIRES AND WIRELESS ATTACHMENTS AND APPURTENANCES

By the City Council

Of the City of Marlborough, Massachusetts, _____, 2018

ORDERED:

That pursuant to Massachusetts General Laws, Chapter 166, NEW CINGULAR WIRELESS PCS, LLC ("AT&T") is hereby granted locations for and permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas, to be attached to existing National Grid utility poles, located upon, along and under the public ways within the City of Marlborough, as substantially shown on the plans filed with said Petition. In addition, AT&T is hereby granted permission to install conduit or direct bury fiber cable(s) as depicted on the plans submitted.

The forgoing permission is subject to the following conditions:

1. The telecommunications wires and wireless attachments and appurtenances shall be installed and operated in compliance with all applicable federal and state laws and regulations.
2. AT&T shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of AT&T or its agents or servants, or in any manner arising from the rights and privileges granted by the City.
3. AT&T shall comply with the requirements of existing City Ordinances, as may be applicable and such as may hereafter be adopted governing the construction and maintenance of said telecommunications wires and wireless attachments and appurtenances, so far as the same are not inconsistent with the laws of the United States or of the Commonwealth of Massachusetts.

I hereby certify that the foregoing was adopted at a meeting of the City Council of the City of Marlborough, Massachusetts, held on the _____ day of _____, 2018.

_____
City Clerk

APPROVED

_____

We hereby certify that on _____, 2017, at _____, o'clock at _____, a public hearing was held on the Petition of NEW CINGULAR WIRELESS PCS, LLC ("AT&T") for permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas, to be attached to existing utility poles, located upon, along and under the public ways within the City of Marlborough and to install conduit or direct bury fiber cable(s) as indicated in the plans described in the order herewith recorded, that we mailed at least seven days before said hearing a written notice of the time and place of said hearing to each of the owners of real estate (as determined by the last preceding assessment for taxation) along the ways or parts of ways upon which the Company is permitted to construct the telecommunications wires and appurtenances of AT&T under said order, and that thereupon said order was duly adopted.

_____

_____

_____

_____

_____

_____

_____

_____

_____

City Council of the City of Marlborough

CERTIFICATE

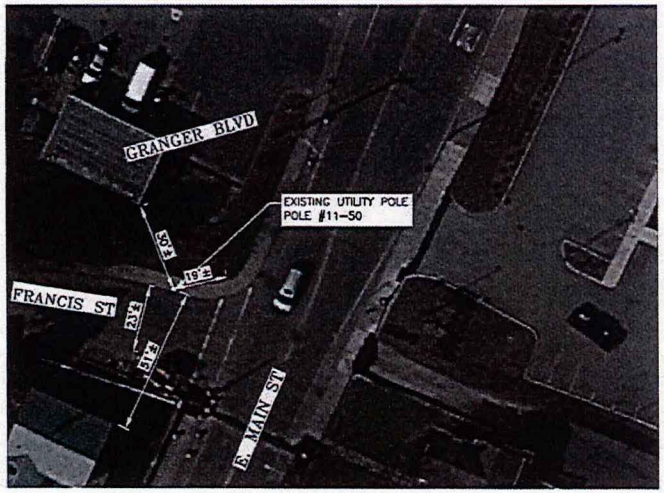
I hereby certify that the forgoing is a true copy of a grant of location order and certificate of hearing with notice adopted by the City Council of the City of Marlborough, Massachusetts, on the _____ day of _____, 2018, and recorded with records of location orders of said City, Book _____, Page _____. This certified copy is made under the provisions of Chapter 166 of the Massachusetts General Laws, as amended.

Attest:

_____

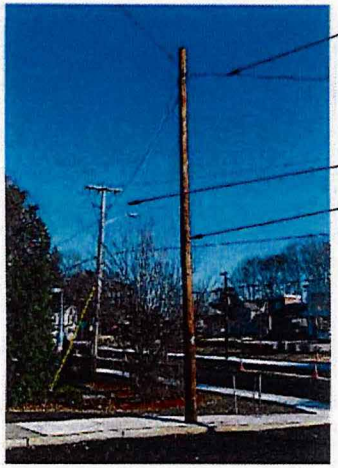
City Clerk

APPROXIMATE COORDINATES:	LAT:	42.350350° N
	LONG:	71.541444° W

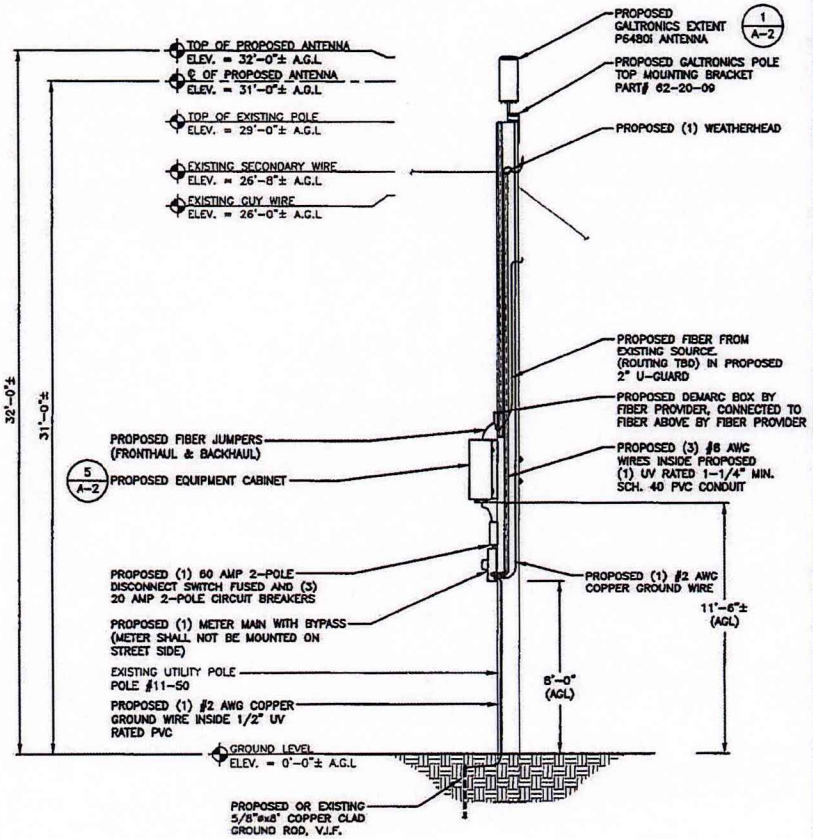


KEY PLAN (1 / A-1)
22x34 SCALE: 1"=20'
11x17 SCALE: 1"=40'

GRAPHIC SCALE
0 10 20 40 60 FEET



EXISTING CONDITIONS PHOTO DETAIL (2 / A-1)
SCALE: N.T.S



ELEVATION (3 / A-1)
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

CENTERLINE COMMUNICATIONS
95 RYAN DRIVE
RAYNHAM, MA 02767

HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5364

CHECKED BY: AT
APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	01/04/16	ISSUED FOR REVIEW	SB

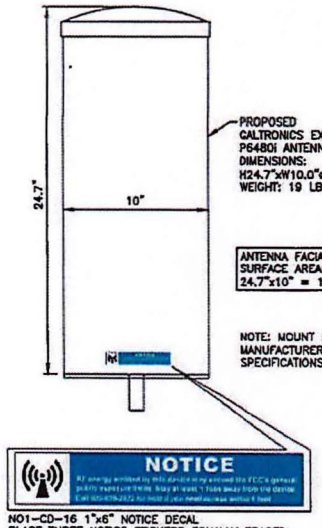
CLUSTER AND NODE NUMBER:
AREA 5_144A

SITE ID:
AREA 5_144A

SITE ADDRESS:
FRANCIS ST & E. MAIN ST
MARLBOROUGH, MA 01752
MIDDLESEX COUNTY

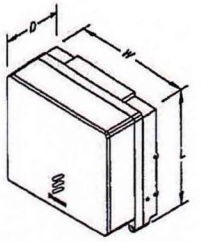
SHEET TITLE
KEY PLAN AND ELEVATION

SHEET NUMBER
A-1



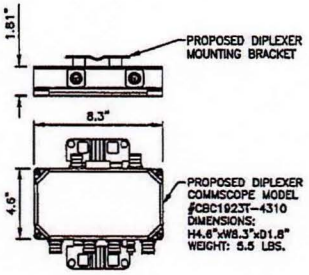
NO1–CD–16 1"x6" NOTICE DECAL
PLACE THREE NOTICE STICKERS EQUALLY SPACED AROUND THE BOTTOM OF ANTENNA RADOME

ANTENNA DETAIL (1 / A–2)
SCALE: N.T.S

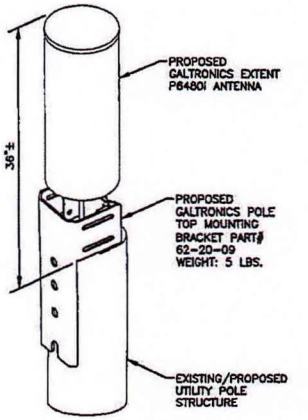


MODEL	QTY	L	W	D	WGT.
2203	3	8.0"	8.0"	4.0"	11 LB
2205	1	8.0"	8.0"	4.0"	11 LB

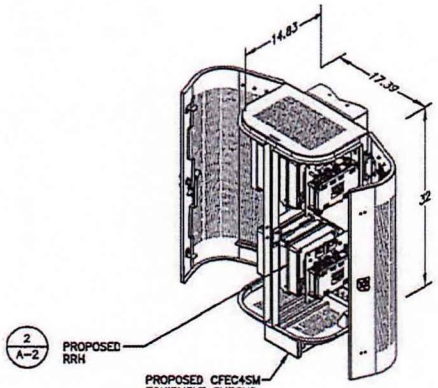
RRH (2203/2205) DETAIL (2 / A–2)
SCALE: N.T.S



DIPLEXER DETAIL (AS REQUIRED) (3 / A–2)
SCALE: N.T.S



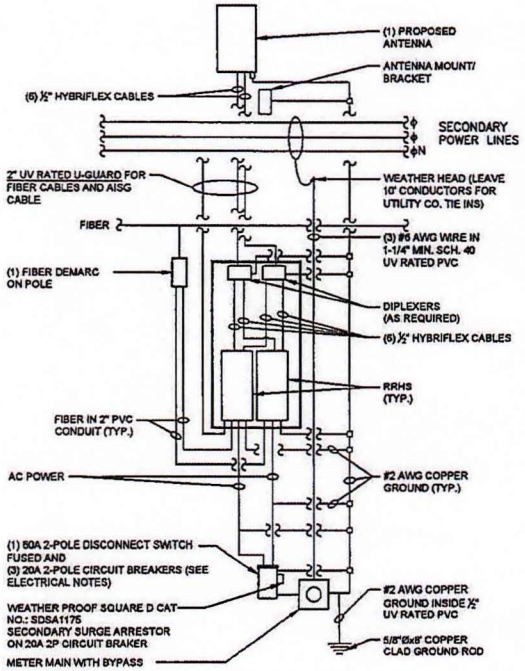
ANTENNA MOUNT DETAIL (4 / A–2)
SCALE: N.T.S



NO BATTERY BACKUP OR AUXILIARY OUTLETS FOR BACKUP POWER ARE BEING PROVIDED IN THIS DESIGN

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

EQUIPMENT CABINET DETAIL (5 / A–2)
SCALE: N.T.S



GENERAL WIRING DIAGRAM - DUAL RRHs (6 / A–2)
SCALE: N.T.S

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

CENTERLINE
95 RYAN DRIVE
RAYNHAM, MA 02767

HDG HUDSON Design Group LLC
45 RESEARCH DRIVE
HAVERHILL, MA 01845
TEL: (978) 557-4553
FAX: (978) 336-5356

CHECKED BY: AT
APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	01/04/16	ISSUED FOR REVIEW	SB

CLUSTER AND NODE NUMBER:
AREA 5_144A

SITE ID:
AREA 5_144A

SITE ADDRESS:
FRANCIS ST & E. MAIN ST
MARLBOROUGH, MA 01752
MIDDLESEX COUNTY

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-2

DONALD L. HAES, JR., PH.D., CHP
Radiation Safety Specialist
Registered Health Physics Services Provider in NH and MA
PO Box 198, Hampstead, NH 03841 603-303-9959 Email: donald_haes_chp@comcast.net

January 17, 2018

I have reviewed the information pertinent to the hypothetical installation of an AT&T Personal Wireless Services (PWS) omni-directional panel antenna installation on a utility pole. I have analyzed the scenario where there would be one antenna mounted with a centerline height of 30' above ground level (AGL). This analysis considers the contributions of the AT&T PWS transmitters operating at the following supplied parameters:

PWS Service	Frequency (MHz)	Transmit Power (ERP: Watts)	Antenna Manufacturer / Model Number	Antenna Gain (dBd)
PCS LTE	1930-1950	40	EXTENT™ P6480i (See Appendix A)	7.33
5G: U-NII-1	5150-5250	1		7.53
5G: U-NII-3	5725-5850			

The calculated values of RF fields are presented as a percent of current Maximum Permissible Exposures (%MPE) as adopted by the Federal Communications Commission (FCC). Theoretical RF field calculations for the near proximity of RF source terms (in this case the AT&T transmit antennas), however, are not straight forward. For these theoretical calculations, a cylindrical model was used, where "spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the net antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna". Calculations using "far-field" formula would considerably overestimate the resultant power densities. The calculations performed for this analysis still accurately represent the "worst case" and assume 100% usage of all the antennas.

The power density estimates can be calculated by using the formula:

$$S = \frac{P_{net}}{2 \cdot \Pi \cdot R \cdot h}$$

Where: P_{net} = Net power to antenna (watts)
R = Distance (range) from antenna
h = aperture height of the antenna

The results of the RF field calculations for a single antenna are depicted in Figure 1 showing a side view representation demonstrating the directionality of the RF energy propagating from the antenna.

Note: The analyses, conclusions and professional opinions are based upon the precise parameters and conditions of this typical AT&T "small cell" installation on a utility pole with a mounting centerline height of 30' AGL. Utilization of these analyses, conclusions and professional opinions for any personal wireless services installation, existing or proposed, other than the aforementioned has not been sanctioned by the author, and therefore should not be accepted as evidence of regulatory compliance.

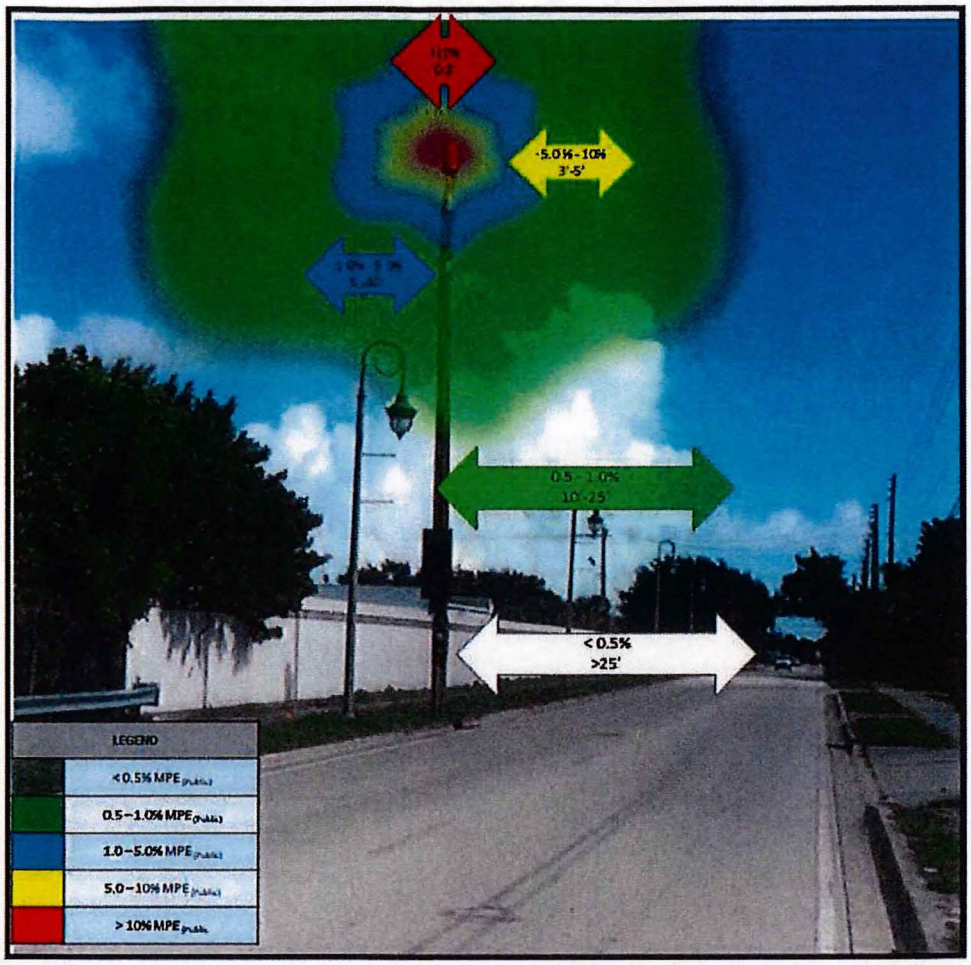


Figure 1: Results of RF field calculations for a typical AT&T antenna installation on a utility pole at 30' (AGL) showing profile view

CONCLUSION

Theoretical RF field calculations data indicate the summation of the AT&T RF contributions on a typical utility pole would be well within the established RF exposure guidelines; see Figure 1. Although the calculations assume a typically low mounting height of 30' AGL, some applications may require the antenna to be mounted higher. In these circumstances, the increased separation between the ground and antenna would result in an even lower general public exposure levels. These results indicate there could be more similar installations at these locations, and still be within Federal and State guidelines for RF exposure. This report provides written proof that the proposed facilities would comply with the FCC RF exposure guidelines. These small cell antenna installations proposed by AT&T would not produce significant changes to the ambient RF environment.

DONALD L. HAES, JR., PH.D., CHP
Radiation Safety Specialist
Registered Health Physics Services Provider in NH and MA
PO Box 198, Hampstead, NH 03841 603-303-9959 Email: donald_haes_chp@comcast.net

STATEMENT OF CERTIFICATION

1. I certify to the best of my knowledge and belief, the statements of fact contained in this report are true and correct.

2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are personal, unbiased professional analyses, opinions and conclusions.

3. I have no present or prospective interest in the property that is the subject of this report and I have no personal interest or bias with respect to the parties involved.

4. My compensation is not contingent upon the reporting of a predetermined energy level or direction in energy level that favors the cause of the client, the amount of energy level estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

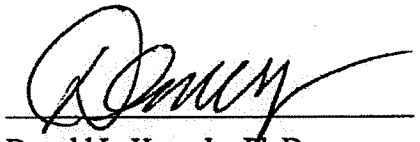
5. This assignment was not based on a requested minimum environmental energy level or specific power density.

6. My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.

7. The consultant has accepted this assessment assignment having the knowledge and experience necessary to complete the assignment competently.

8. My analyses, opinions, and conclusions were developed and this report has been prepared, in conformity with the *American Board of Health Physics* (ABHP) statements of standards of professional responsibility for Certified Health Physicists.

Date: January 17, 2018



Donald L. Haes, Jr., Ph.D
Certified Health Physicist

APPENDIX A

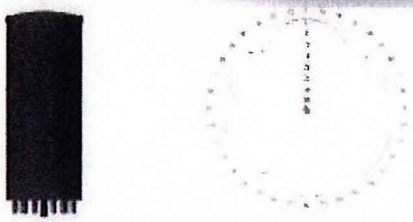
GALTRONICS
WE'RE MAKING WAVES™
A BAYLIN TECHNOLOGIES COMPANY

10" x 24" Outdoor Pseudo Omni Canister Antenna [1695-2400, 3550-3700 and 5150-5950 MHz]

EXTENT™ P6480i

Description:

- Pseudo Omni Canister Antenna for Outdoor DAS and Small Cells.
- 4x ports for AWS/PCS/WCS Band 1695-2400 MHz
- 4x ports for CBRS Band 3550-3700 MHz
- 2x ports for 5GHz Band 5150-5950 MHz



1695-2400, 3550-3700 and 5150-5950 MHz Pseudo Omni Canister Antenna

Electrical Specifications

Frequency Band [MHz]	1695-2180	2180-2400	3550-3700	5150-5950
Input Connector Type	4x 4.3-10 DIN(F)		4x 4.3-10 DIN(F)	2x 4.3-10 DIN(F)
Isolation (typ.)	-20 dB		-25 dB	-25 dB
Inter-band Isolation	-30 dB (typ)		-30 dB (typ)	-30 dB (typ)
VSWR/Return Loss	1.5:1(Typ.) 1.7:1(Max.) / 14.0 dB(Typ.) 11.8dB(Max.)			
Impedance	50 Ω			
Polarization	Dual slant 45° (±45°)			
Horizontal Beamwidth	Omni (360°)			
Vertical Beamwidth	15°	12°	15°	19°
Max. Gain	9 dBi	9.5 dBi	8.5 dBi	6 dBi(Max.)
Avg. Gain	7.5 dBi	8 dBi	8 dBi	3 dBi
Downtilt	0°			
Max Power / Port	150 Watts		100 Watts	10 Watts
PIM @ 2x43 dBm	<-153 dBc		N/A	N/A

Mechanical Specifications

Operating Temperature	-40° to 158°F (-40° to +70°C)
Antenna Weight	19 lbs (9 kg)
Antenna Diameter	10" (254 mm)
Antenna Height	24.7" (628 mm)
Radome Material	ASA
RoHS	Compliant
Radome Color	Gray, Brown, 3M™ Conceal Film, Custom Colors Possible
Ingress Protection	Outdoor (IP65)
Wind Survival Rating	150 mph (241 km/h)
Shipping Dimensions - L x W x D	30"x19"x19" (762x483x483 mm)
Shipping Weight (Gross Weight)	26 lbs (12 kg)

Release Date: March 02, 2017; Revision: 5-1 ; RFD#6480

WWW.GALTRONICS.COM

IN CITY COUNCIL

Marlborough, Mass., JUNE 18, 2018

ORDERED:

That there being no objection thereto set **MONDAY AUGUST 27, 2018** as **DATE FOR PUBLIC HEARING** On the Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, 10 Neil Street Utility Pole 1, be and is herewith refer to **WIRELESS COMMUNICATION COMMITTEE.**

ADOPTED

ORDER NO. 18-1007322

IN CITY COUNCIL

Marlborough, Mass., AUGUST 27, 2018

ORDERED:

That the PUBLIC HEARING On the Petition of AT & T to grant a location for Telecommunication Wires and Wireless Attachments and Appurtenances, 10 Neil Street Utility Pole 1, Order No. 18-1007322, all were heard who wish to be heard, hearing closed at 8:14 PM.

Councilors Present: Delano, Doucette, Dumais, Tunnera, Irish, Clancy, Landers, Juaire, Oram, Ossing & Robey.

PUBLIC SPEAKING IN FAVOR

Michael Dolan from the law firm of Brown Rudnick appeared on behalf of the petitioner, AT&T. This is a small cell application from AT&T for Ten Neil Street. This is one of the four sites being pursued in the City of Marlborough. The reasons for the petition are the same as those previously mentioned in the just completed public hearing for One Francis Street.

There is no one else speaking in favor. That part of the Public Hearing is closed.

QUESTIONS FROM THE PUBLIC

There are no questions from the public. That part of the Public Hearing is closed.

PUBLIC SPEAKING IN OPPOSITION

There is no one speaking in opposition. That part of the Public Hearing is closed.

QUESTIONS FROM THE CITY COUNCIL

✓ Councilor Doucette asked with the small cell sites, is there a battery backup in case of a power outage. Mr. Dolan did not think that was the case but will confirm and clarify for the Wireless Communications Committee meeting.

There are no further questions from members of City Council. That part of the Public Hearing is closed.

That ends the entire Public Hearing. This is currently in the Wireless Communications Committee.

ADOPTED

ORDER NO. 18-1007322A

at&t

City Council
140 Main Street
2nd Floor
Marlborough, MA 01752

RE: Petition of New Cingular Wireless PCS, LLC ("AT&T") for Grant of Location for Telecommunication Wires and Wireless Attachments and Appurtenances: **Project: Area5_46A: Location: 10 Neil St, 42.34594 N, -71.547100 W, Utility Pole: #1**

Dear Honorable Members of the City Council:

Pursuant to Massachusetts General Laws Chapter 166, Sections 21, 22 and 25A, please find enclosed the petition (the "Petition") of New Cingular Wireless PCS, LLC ("AT&T") for a grant of location for telecommunication wires and wireless attachments and appurtenances to be attached to existing utility poles owned by National Grid within the City of Marlborough. Included with the Petition are detailed plans that identify the locations where AT&T's proposed attachments will be placed. This includes an area map of all locations as well as the utility pole profiles depicting the equipment attachment heights and specs.

AT&T requests that the City schedule a public hearing on this Petition, subject to the requirements of Chapter 166 of the Massachusetts General Laws. Those requirements prescribe that the City mail "written notice of the time and place of the hearing at least seven days prior to all owners of real estate abutting upon that part of the way upon, along, across or under which the line is to be constructed, as such ownership is determined by the last preceding assessment for taxation". It is my understanding that the City will be able to produce this list and I will work with the City Clerk to ensure the letters are sent per these requirements.

Project Description

AT&T proposes to deploy four (4) small cell sites in the City of Marlborough in order to deal with the rapidly increasing demand on AT&T's wireless network. All four (4) small cell sites will be mounted on existing National Grid utility poles located within the public rights of way. The small cell sites will work in conjunction with the existing macro sites installed on rooftops, towers and other structures in and around the City of Marlborough. This Petition specifically addresses the following location:

Project: Area5_46A: Location: 10 Neil St, 42.34594 N, -71.547100 W, Utility Pole: #1

AT&T's radio frequency engineers targeted the proposed location due to the high traffic and data demands on AT&T's network. AT&T's existing macro cell sites are not providing adequate data capacity in this location due to increased population, vehicular and foot traffic, multiple wireless devices used by each person and other contributing factors. This small cell site will work to offload the demand on the macro sites and allow for increased data capacity and speed within the immediate vicinity of the proposed small cell site.

The small cell site will be installed using standard commercially accepted methods in accordance with all applicable federal, state and local laws and regulations. All proposed attachments are to existing poles owned and maintained by National Grid. AT&T has entered into a Pole Attachment Agreement with National Grid.

95 Ryan Drive, Suite 1 • Raynham, MA 02767 • T: 508.821.6509 • F: 508.819.2017 • E: dford@clinellc.com

The small cell installation on each existing utility pole will include: fiber optic cable(s); remote nodes in a small equipment cabinet H32" x W18" x D12" mounted to the pole at least 8' above ground level; an unobtrusive pole top antenna measuring 24.7" long and 10" in diameter ; conduits and cable protectors; and, an electrical meter with shutoff switch. Attached please find design sketches for each site showing the proposed location, pole height, mounting height, equipment specifications and utility plan.

The Telecommunications Act of 1996 (the "Act")

Without the installation, AT&T would be unable to provide specifically established coverage and capacity objectives. The utility pole is located within the limited geographic area whereby AT&T's radio frequency engineers determined that a wireless facility is required. The Act imposes substantial restrictions affecting the standard for granting the requested relief. The ACT provides that: no laws or actions by any local government or planning or zoning board may prohibit, or have the effect of prohibiting, the placement, construction, or modification of communications towers, antennas, or other wireless facilities in any particular geographic area, see 47 U.S.C. §332(c)(7)(B)(i); local government or planning or zoning boards may not unreasonably discriminate among providers of functionally equivalent services, see 47 U.S.C. §332(c)(7)(B)(i); health concerns may not be considered so long as the emissions comply with the applicable standards of the FCC, see 47 U.S.C. §332(c)(7)(B)(iv); and, decisions must be rendered within a reasonable period of time, see 47 U.S.C. §332(c)(7)(B)(ii) and the FCC's Declaratory Ruling commonly referred to as the "shot clock".

We have attached to this petition a generic emissions report demonstrating that the low power antenna will comply with applicable FCC standards with respect to emissions.

For the convenience of the City Council, AT&T has provided a proposed Form of Order for your consideration.

Should you have any questions, or would like any additional information prior to the public hearing please do not hesitate to contact me at (774) 261-0043 or jiacoviello@clinellc.com. AT&T will be present at the public hearing to answer any questions you may have as well.

Thank you,

Jeff Iacoviello

CENTERLINE COMMUNICATIONS

Jeffrey Iacoviello | Site Acquisition Consultant
750 W Center St, Floor 3 | West Bridgewater, MA 02379
Mobile: 774.261.0043 | Fax: 617.249.0819
jiacoviello@clinellc.com | www.centerlinecommunications.com

PETITION FOR LOCATIONS FOR TELECOMUNICATIONS WIRES AND WIRELESS ATTACHMENTS AND APPURTENANCES

To THE CITY COUNCIL OF THE CITY OF MARLBOROUGH, MASSACHUSETTS

Pursuant to Massachusetts General Laws, Chapter 166, Sections 21, 22 and 25A, and the City Ordinances of the City of Marlborough, Massachusetts, NEW CINGULAR WIRELESS PCS, LLC ("AT&T") requests that it be granted locations for and permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas to be attached to existing National Grid utility poles, located upon and along the following public ways within the City of Marlborough, as depicted on the attached plans. In addition, AT&T seeks permission to install conduit or direct bury cable(s) as depicted on the plans submitted.

Wherefore, AT&T requests that, after due notice and public hearing as provided by law, that it be granted locations for permission to construct the telecommunications wires and wireless attachments and appurtenances upon, along and under the public ways within the City of Marlborough as depicted on the plans filed herewith. AT&T also submitted additional information in support of this Petition.

Respectfully submitted,

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")

By: Jeff Iacoviello
Site Acquisition Consultant
Centerline Communications, LLC

ORDER FOR LOCATION FOR TELECOMMUNICATIONS WIRES AND WIRELESS ATTACHMENTS AND APPURTENANCES

By the City Council

Of the City of Marlborough, Massachusetts, _____, 2018

ORDERED:

That pursuant to Massachusetts General Laws, Chapter 166, NEW CINGULAR WIRELESS PCS, LLC ("AT&T") is hereby granted locations for and permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas, to be attached to existing National Grid utility poles, located upon, along and under the public ways within the City of Marlborough, as substantially shown on the plans filed with said Petition. In addition, AT&T is hereby granted permission to install conduit or direct bury fiber cable(s) as depicted on the plans submitted.

The forgoing permission is subject to the following conditions:

1. The telecommunications wires and wireless attachments and appurtenances shall be installed and operated in compliance with all applicable federal and state laws and regulations.
2. AT&T shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of AT&T or its agents or servants, or in any manner arising from the rights and privileges granted by the City.
3. AT&T shall comply with the requirements of existing City Ordinances, as may be applicable and such as may hereafter be adopted governing the construction and maintenance of said telecommunications wires and wireless attachments and appurtenances, so far as the same are not inconsistent with the laws of the United States or of the Commonwealth of Massachusetts.

I hereby certify that the foregoing was adopted at a meeting of the City Council of the City of Marlborough, Massachusetts, held on the _____ day of _____, 2018.

_____
City Clerk

APPROVED

_____

We hereby certify that on _____, 2017, at _____, o'clock at _____, a public hearing was held on the Petition of NEW CINGULAR WIRELESS PCS, LLC ("AT&T") for permission to construct and maintain telecommunications wires and wireless attachments and appurtenances, including fiber optic cable(s), remote nodes and pole top antennas, to be attached to existing utility poles, located upon, along and under the public ways within the City of Marlborough and to install conduit or direct bury fiber cable(s) as indicated in the plans described in the order herewith recorded, that we mailed at least seven days before said hearing a written notice of the time and place of said hearing to each of the owners of real estate (as determined by the last preceding assessment for taxation) along the ways or parts of ways upon which the Company is permitted to construct the telecommunications wires and appurtenances of AT&T under said order, and that thereupon said order was duly adopted.

_____

_____

_____

_____

_____

_____

_____

_____

_____

City Council of the City of Marlborough

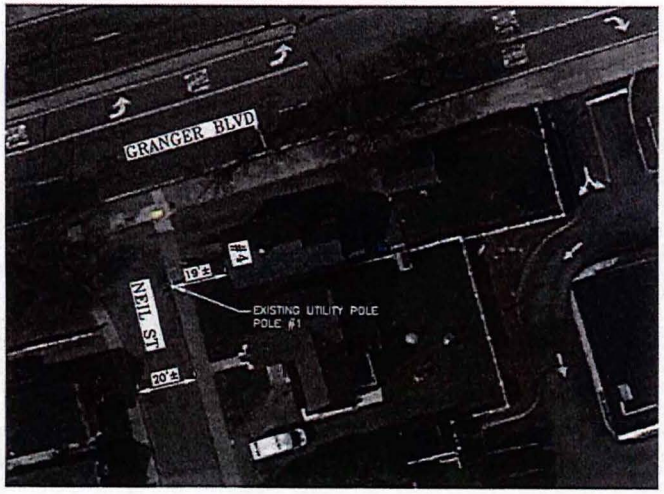
CERTIFICATE

I hereby certify that the forgoing is a true copy of a grant of location order and certificate of hearing with notice adopted by the City Council of the City of Marlborough, Massachusetts, on the _____ day of _____, 2018, and recorded with records of location orders of said City, Book _____, Page _____. This certified copy is made under the provisions of Chapter 166 of the Massachusetts General Laws, as amended.

Attest:

_____

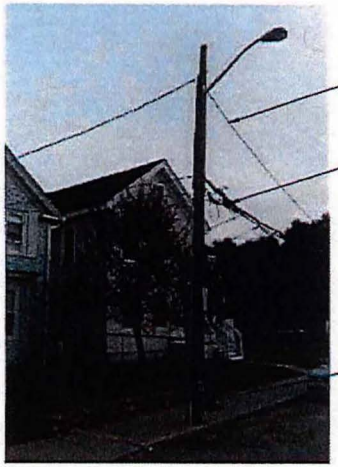
City Clerk



MAGNETIC NORTH 14°27' TRUE NORTH

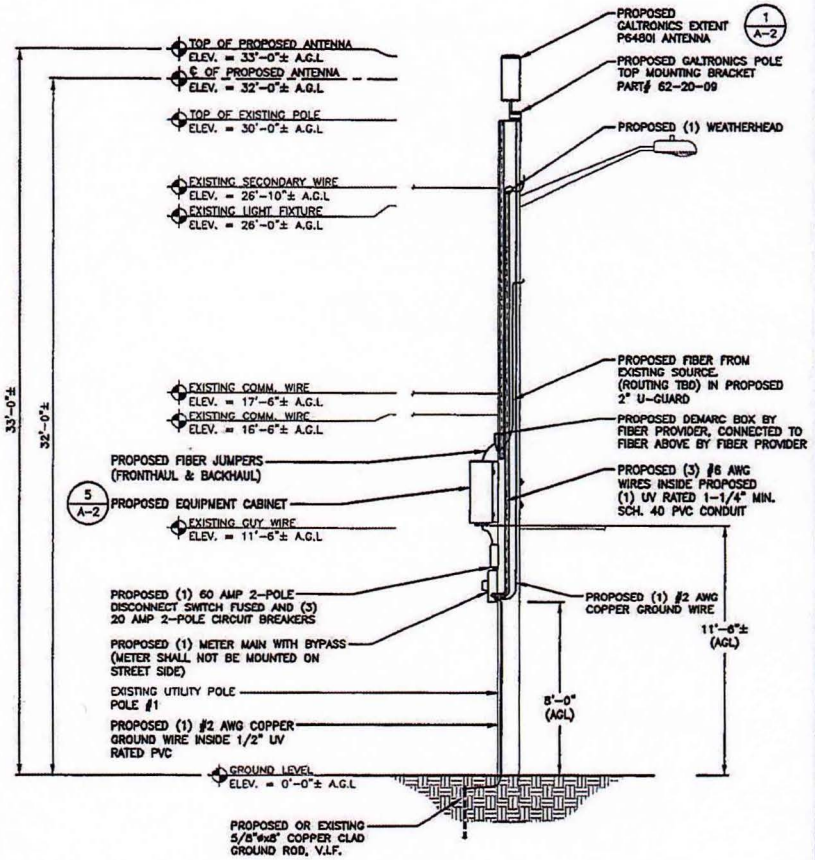
KEY PLAN (1 / A-1)
22x34 SCALE: 1"=20'
11x17 SCALE: 1"=40'

GRAPHIC SCALE
0 10 20 40 60 FEET



EXISTING CONDITIONS PHOTO DETAIL (2 / A-1)
SCALE: N.T.S

APPROXIMATE COORDINATES:	LAT:	42.345494° N
	LONG:	71.547100° W



ELEVATION (3 / A-1)
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

CENTERLINE
95 RYAN DRIVE
RAYNHAM, MA 02767

HDG
HUDSON
Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CHECKED BY: AT
APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	11/12/17	ISSUED FOR REVIEW	SB

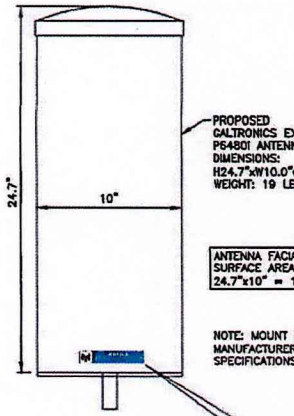
CLUSTER AND NODE NUMBER:
AREA 5_46A

SITE ID:
AREA 5_46A

SITE ADDRESS:
10 NEIL ST
MARLBOROUGH, MA 01752
MIDDLESEX COUNTY

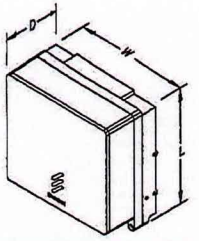
SHEET TITLE
KEY PLAN AND ELEVATION

SHEET NUMBER
A-1



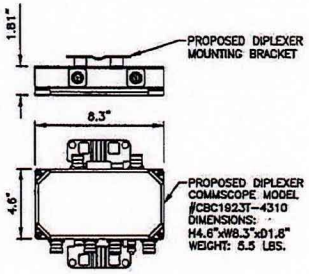
NO1-CD-16 1"x6" NOTICE DECAL
PLACE THREE NOTICE STICKERS EQUALLY SPACED AROUND THE BOTTOM OF ANTENNA RADOME

ANTENNA DETAIL (1 / A-2)
SCALE: N.T.S

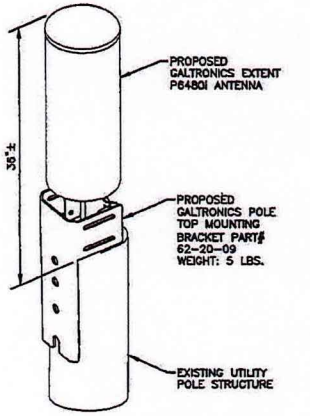


MODEL	QTY	L	W	D	WGT.
2203	3	8.0"	8.0"	4.0"	11 LB
2205	1	8.0"	8.0"	4.0"	11 LB

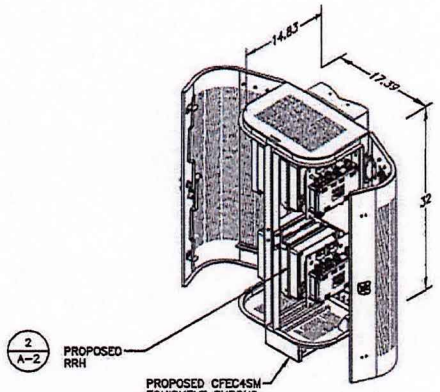
RRH (2203/2205) DETAIL (2 / A-2)
SCALE: N.T.S



DIPLEXER DETAIL (AS REQUIRED) (3 / A-2)
SCALE: N.T.S



ANTENNA MOUNT DETAIL (4 / A-2)
SCALE: N.T.S

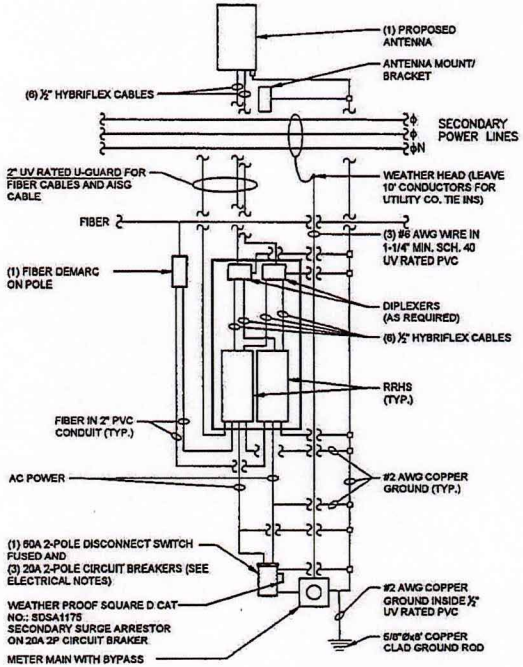


2 / A-2 PROPOSED RRH

NO BATTERY BACKUP OR AUXILIARY OUTLETS FOR BACKUP POWER ARE BEING PROVIDED IN THIS DESIGN

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

EQUIPMENT CABINET DETAIL (5 / A-2)
SCALE: N.T.S



GENERAL WIRING DIAGRAM - DUAL RRHs (6 / A-2)
SCALE: N.T.S

at&t
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

CENTERLINE COMMUNICATIONS
95 RYAN DRIVE
RAYNHAM, MA 02767

HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-6553
FAX: (978) 336-5586

CHECKED BY: AT
APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	12/13/17	ISSUED FOR REVIEW	SB

CLUSTER AND NODE NUMBER:
AREA 5_46A

SITE ID:
AREA 5_46A

SITE ADDRESS:
10 NEIL ST
MARLBOROUGH, MA 01752
MIDDLESEX COUNTY

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-2

DONALD L. HAES, JR., PH.D., CHP

Radiation Safety Specialist

Registered Health Physics Services Provider in NH and MA

PO Box 198, Hampstead, NH 03841 603-303-9959 Email: donald_haes_chp@comcast.net

January 17, 2018

I have reviewed the information pertinent to the hypothetical installation of an AT&T Personal Wireless Services (PWS) omni-directional panel antenna installation on a utility pole. I have analyzed the scenario where there would be one antenna mounted with a centerline height of 30' above ground level (AGL). This analysis considers the contributions of the AT&T PWS transmitters operating at the following supplied parameters:

PWS Service	Frequency (MHz)	Transmit Power (ERP: Watts)	Antenna Manufacturer / Model Number	Antenna Gain (dBd)
PCS LTE	1930-1950	40	EXTENT™ P6480i (See Appendix A)	7.33
5G: U-NII-1	5150-5250	1		7.53
5G: U-NII-3	5725-5850			

The calculated values of RF fields are presented as a percent of current Maximum Permissible Exposures (%MPE) as adopted by the Federal Communications Commission (FCC). Theoretical RF field calculations for the near proximity of RF source terms (in this case the AT&T transmit antennas), however, are not straight forward. For these theoretical calculations, a cylindrical model was used, where "spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the net antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna". Calculations using "far-field" formula would considerably overestimate the resultant power densities. The calculations performed for this analysis still accurately represent the "worst case" and assume 100% usage of all the antennas.

The power density estimates can be calculated by using the formula:

$$S = \frac{P_{net}}{2 \cdot \Pi \cdot R \cdot h}$$

Where: P_{net} = Net power to antenna (watts)
R = Distance (range) from antenna
h = aperture height of the antenna

The results of the RF field calculations for a single antenna are depicted in Figure 1 showing a side view representation demonstrating the directionality of the RF energy propagating from the antenna.

Note: The analyses, conclusions and professional opinions are based upon the precise parameters and conditions of this typical AT&T "small cell" installation on a utility pole with a mounting centerline height of 30' AGL. Utilization of these analyses, conclusions and professional opinions for any personal wireless services installation, existing or proposed, other than the aforementioned has not been sanctioned by the author, and therefore should not be accepted as evidence of regulatory compliance.

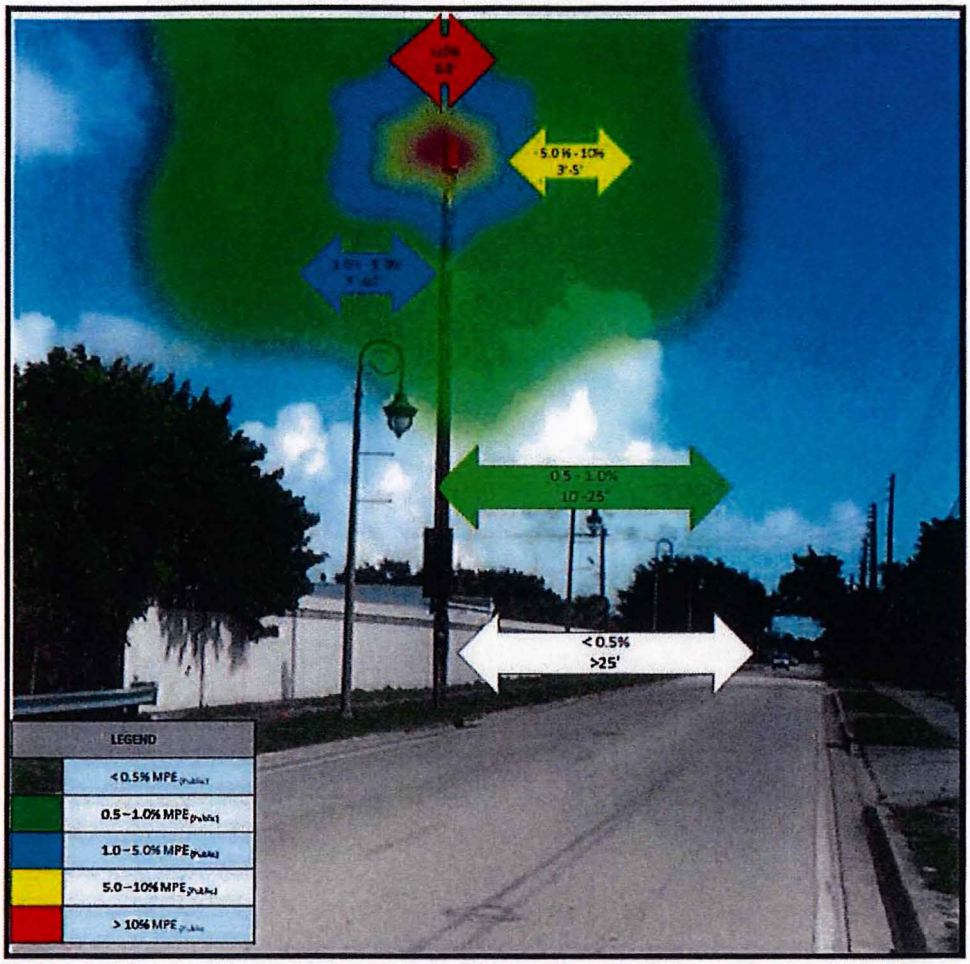


Figure 1: Results of RF field calculations for a typical AT&T antenna installation on a utility pole at 30' (AGL) showing profile view

CONCLUSION

Theoretical RF field calculations data indicate the summation of the AT&T RF contributions on a typical utility pole would be well within the established RF exposure guidelines; see Figure 1. Although the calculations assume a typically low mounting height of 30' AGL, some applications may require the antenna to be mounted higher. In these circumstances, the increased separation between the ground and antenna would result in an even lower general public exposure levels. These results indicate there could be more similar installations at these locations, and still be within Federal and State guidelines for RF exposure. This report provides written proof that the proposed facilities would comply with the FCC RF exposure guidelines. These small cell antenna installations proposed by AT&T would not produce significant changes to the ambient RF environment.

DONALD L. HAES, JR., PH.D., CHP
Radiation Safety Specialist
Registered Health Physics Services Provider in NH and MA
PO Box 198, Hampstead, NH 03841 603-303-9959 Email: donald_haes_chp@comcast.net

STATEMENT OF CERTIFICATION

1. I certify to the best of my knowledge and belief, the statements of fact contained in this report are true and correct.

2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are personal, unbiased professional analyses, opinions and conclusions.

3. I have no present or prospective interest in the property that is the subject of this report and I have no personal interest or bias with respect to the parties involved.

4. My compensation is not contingent upon the reporting of a predetermined energy level or direction in energy level that favors the cause of the client, the amount of energy level estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

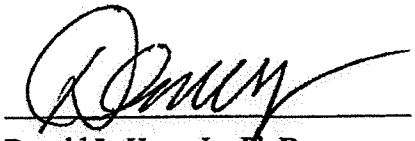
5. This assignment was not based on a requested minimum environmental energy level or specific power density.

6. My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.

7. The consultant has accepted this assessment assignment having the knowledge and experience necessary to complete the assignment competently.

8. My analyses, opinions, and conclusions were developed and this report has been prepared, in conformity with the *American Board of Health Physics* (ABHP) statements of standards of professional responsibility for Certified Health Physicists.

Date: January 17, 2018



Donald L. Haes, Jr., Ph.D
Certified Health Physicist

APPENDIX A

GALTRONICS
WE'RE MAKING WAVES™
A BAYLIN TECHNOLOGIES COMPANY

10" x 24" Outdoor Pseudo Omni Canister Antenna [1695-2400, 3550-3700 and 5150-5950 MHz]

EXTENT™ P6480i

Description:

- Pseudo Omni Canister Antenna for Outdoor DAS and Small Cells.
- 4x ports for AWS/PCS/WCS Band 1695-2400 MHz
- 4x ports for CBRS Band 3550-3700 MHz
- 2x ports for 5GHz Band 5150-5950 MHz

1695-2400, 3550-3700 and 5150-5950 MHz Pseudo Omni Canister Antenna

Electrical Specifications

Frequency Band [MHz]	1695-2180	2180-2400	3550-3700	5150-5950
Input Connector Type	4x 4.3-10 DIN(F)		4x 4.3-10 DIN(F)	2x 4.3-10 DIN(F)
Isolation (typ.)	-20 dB		-25 dB	-25 dB
Inter-band Isolation	-30 dB (typ)		-30 dB (typ)	-30 dB (typ)
VSWR/Return Loss	1.5:1(Typ.) 1.7:1(Max.) / 14.0 dB(Typ.) 11.8dB(Max.)			
Impedance	50 Ω			
Polarization	Dual slant 45° (±45°)			
Horizontal Beamwidth	Omni (360°)			
Vertical Beamwidth	15°	12°	15°	19°
Max. Gain	9 dBi	9.5 dBi	8.5 dBi	6 dBi(Max.)
Avg. Gain	7.5 dBi	8 dBi	8 dBi	3 dBi
Downtilt	0°			
Max Power / Port	150 Watts		100 Watts	10 Watts
PIM @ 2x43 dBm	<-153 dBc		N/A	N/A

Mechanical Specifications

Operating Temperature	-40° to 158°F (-40° to +70°C)
Antenna Weight	19 lbs (9 kg)
Antenna Diameter	10" (254 mm)
Antenna Height	24.7" (628 mm)
Radome Material	ASA
RoHS	Compliant
Radome Color	Gray, Brown, 3M™ Conceal Film, Custom Colors Possible
Ingress Protection	Outdoor (IP65)
Wind Survival Rating	150 mph (241 km/h)
Shipping Dimensions - L x W x D	30"x19"x19" (762x483x483 mm)
Shipping Weight (Gross Weight)	26 lbs (12 kg)

Release Date: March 02, 2017; Revision: 5-1 ; RFD-P6480

WWW.GALTRONICS.COM

IN CITY COUNCIL

Marlborough, Mass., OCTOBER 16, 2017

ORDERED:

That there being no objection thereto set **MONDAY NOVEMBER 13, 2017** as **DATE FOR PUBLIC HEARING** On the Petition of AT & T to deploy a small cell site which will be mounted on existing utility pole at 28 Concord Rd., be and is herewith refer to **WIRELESS COMMUNICATION COMMITTEE.**

ADOPTED

ORDER NO. 17-1007055

at&t

City Council
City of Marlborough
City Hall
140 Main Street
Marlborough, MA 01752

October 5, 2017

RE: Petition of New Cingular Wireless PCS, LLC ("AT&T") for Grant of Location for Telecommunication Wires and Appurtenances: **Area5_87:** 28 Concord Road, Marlborough, MA
(42.352556, -71.529969) – NGRID Guyed Stub Pole

Dear Members of the City Council:

Pursuant to Massachusetts General Laws Chapter 166 section 22, please find enclosed the petition of New Cingular Wireless PCS, LLC ("AT&T") for a grant of location for telecommunication wires and appurtenances to be attached to existing utility poles owned by National Grid within the City of Marlborough. Included with the petition are detailed plans that identify the locations where AT&T's proposed pole attachments will be placed. This includes an area map of all locations as well as the Utility pole profiles depicting the equipment attachment heights and specs.

AT&T requests that the City schedule a public hearing on this petition, subject to the requirements of Massachusetts General Laws, Section 22. Those requirements prescribe that the city provide written notice to all owners of real estate, abutting that part of each street upon or across which, wires appurtenances are proposed to be located. It is my understanding that the City will be able to produce this list, and I will work with the City Clerk to ensure the letters are sent per the requirements of the City.

For the convenience of the City Council, AT&T has provided a proposed form of order.

Should you have any questions, or would like any additional information prior to the public hearing please do not hesitate to contact me at (508) 821-6509 or dford@clinellc.com. I will be present at the public hearing to answer any questions you may have as well.

Thank you,

CENTERLINE COMMUNICATIONS

David Ford | Site Acquisition Lead - Manager
Mobile: 508.821.6509 | Fax: 508.819.3017
dford@clinellc.com | www.centerlinecommunications.com

PETITION FOR LOCATIONS FOR TELECOMUNICATIONS WIRES AND APPURTENANCES

To the CITY COUNCIL OF THE CITY OF MARLBOROUGH, MASSACHUSETTS

Pursuant to Massachusetts General Laws, Chapter 166 and the City Ordinance of the City of Marlborough, Massachusetts, NEW CINGULAR WIRELESS PCS, LLC ("AT&T"), requests that it be granted locations for and permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas; to be attached to existing National Grid utility poles, located upon and along the following public ways within the City of Marlborough, as indicated on the attached plans. In addition, the petitioner seeks permission to install conduit or direct bury cable as indicated in the attached plans.

Wherefore, Petitioner requests that, after due notice and hearing as provided by law, that it be granted locations for and permission to construct the telecommunications wires and appurtenances upon and along the public ways within the City of Marlborough, shown on the plan, filed herewith. AT&T also submitted additional information in support of this petition.

Respectfully submitted,

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")

By: David Ford
Project Manager – Small Cell
Centerline Communications, LLC

ORDER FOR LOCATION FOR TELECOMMUNICATIONS WIRES AND APPURTENANCES

By the City Council

Of the City of Marlborough, Massachusetts, _____, 2017

ORDERED:

That NEW CINGULAR WIRELESS PCS, LLC ("AT&T") is hereby granted locations for and permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas, to be attached to existing National Grid utility poles, located upon and along the public ways within the City of Marlborough, as substantially shown on the plan filed with said petition. In addition, the petitioner is hereby granted permission to install conduit or direct bury fiber cable as indicated in the plans.

The forgoing permission is subject to the following conditions:

1. The telecommunications wires and appurtenances shall be of such material and construction and all work done in such manner as to be satisfactory to the City Council or to such municipal officers as may be appointed to the supervision of the work.
2. Said company shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of said Company, its agents or servants, or in any manner arising from the rights and privileges granted it by the City.
3. Said Company shall comply with the requirements of existing City ordinances, as may be applicable and such as may hereafter be adopted governing the construction and maintenance of said telecommunications wires and appurtenances, so far as the same are not inconsistent with the laws of the Commonwealth of Massachusetts.

I hereby certify that the foregoing was adopted at a meeting of the City Council of the City of Marlborough, Massachusetts, held on the _____ day of _____, 2017.

_____
City Clerk

APPROVED

_____

We hereby certify that on _____, 2017, at _____, o'clock at _____, a public hearing was held on the Petition of NEW CINGULAR WIRELESS PCS, LLC ("AT&T") for permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas, to be attached to existing utility poles, located upon and along the public ways within the City of Marlborough; and to install conduit or direct bury fiber cable as indicated in the plans described in the order herewith recorded, that we mailed at least seven days before said hearing a written notice of the time and place of said hearing to each of the owners of real estate (as determined by the last preceding assessment for taxation) along the ways or parts of ways upon which the Company is permitted to construct the telecommunications wires and appurtenances of said Company under said order, and that thereupon said order was duly adopted.

_____

_____

_____

_____

_____

_____

_____

_____

_____

City Council of the City of Marlborough

CERTIFICATE

I hereby certify that the forgoing is a true copy of a grant of location order and certificate of hearing with notice adopted by the City Council of the City of Marlborough, Massachusetts, on the _____ day of _____, 2017, and recorded with records of location orders of said City, Book _____, Page _____. This certified copy is made under the provisions of Chapter 166 of the Massachusetts General Laws, as amended.

Attest:

_____

City Clerk

Applicable State Law

Municipal Approval of the Construction and Placement of AT&T's Wires and Related Pole Attachments is governed by Massachusetts General Laws Chapter 166, Sections 21-22. As a FCC regulated provider of intrastate telecommunications services, AT&T is authorized under Chapter 166, Section 21 to construct lines and other facilities upon, along, under and across the public ways. Such construction must not incommode the public use of public ways.

In order to obtain municipal permission to construct its telecommunications facilities in public ways, AT&T must file a written petition with the selectmen of a town or the board of alderman or like body of a city, such as the AT&T City Council, pursuant to Chapter 166, Section 22. This same process has been employed routinely by the City of Marlborough in the case of Verizon and Massachusetts Electric Company, in the case of poles, wires, conduits and related appurtenances. In carrying out the permit-granting authority conferred by the General Court, municipalities act as public officers under a delegation of power from the General Court and not as agents of the municipality. Municipalities may adopt reasonable regulations for the erection of facilities by telecommunications carriers having authority to place their facilities in or under public ways. AT&T stands ready, willing and able to comply with the reasonable requirements of the City under General Laws Chapter 166, Sections 21-22 and related requirements imposed by the City applicable to grants of location by the City Council.

Project Description

AT&T proposes to deploy (4) small cell sites in the City of Marlborough in order to deal with ongoing demand on the wireless network. All (4) will be mounted on existing National Grid utility poles located within the public right of way. The small cell sites will work in conjunction with the existing macro sites installed on city rooftops, towers and other structures. This petition specifically addresses the following location:

Area5_87: 28 Concord Road, Marlborough, MA **– (42.352556, -71.529969) – NGRID Guyed Stub Pole**

AT&T's radio frequency engineers targeted the proposed location due to the high traffic nature and data demand on the network. The existing macro cell sites are having difficulty providing adequate data capacity in the location due to a number of reasons relating to increased population, vehicle and foot traffic, multiple devices per person and other contributing factors. The small cell site will work to offload the demand on the macro sites and allow for increased LTE data capacity and speed within the immediate vicinity of the proposed site.

The network will be installed using typical and commercially accepted methods. Currently no new poles are proposed to be installed. All other poles in this development are existing poles, and are owned and maintained by National Grid through a Pole Attachment Agreement.

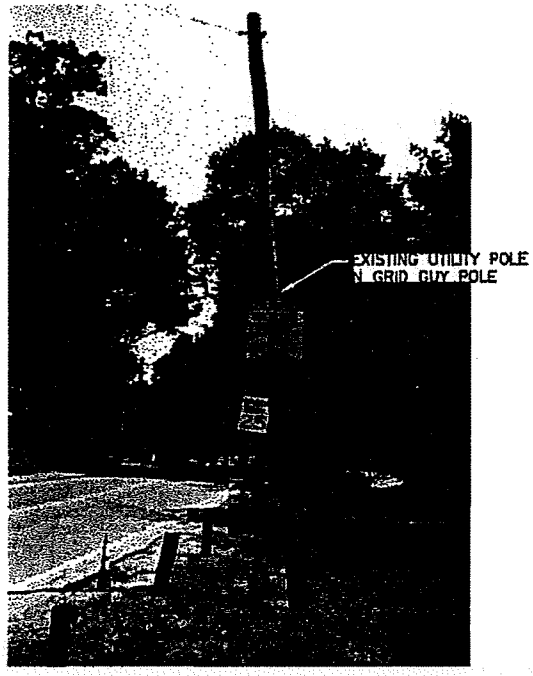
Installed telecommunication facilities will include fiber optic cable and small remote nodes for transmitting RF signal, with an unobtrusive pole top antenna on utility poles. Specifically, a small antenna on top of each pole measuring 24.7" x 10" along with an equipment cabinet mounted further down the pole. Attached please find design sketches at each site showing the proposed location, pole height, mounting height, equipment specifications and utility plan.

Abutters 28 Concord Rd NGRID Guyed S

Map	Map Cut	Block	Block Cut	Lot	Lot Cut	Unit	Unit Cut	Grantee	Co_grantee's Name
58		42						COMMONWEALTH CLUB LLC	ATTN MILES GILBERT
58		44						MELVIN SHAWNA	CHRIS MELVIN
58		123						MCLAUGHLIN BRIAN J	
58		124						DANGELO INC	C/O PROPERTY TAX DEPT #81
59		1						MARLBOROUGH COUNTRY CLUB INC	

Node: Area5_87

Target Site: NGRID Stub Pole
Coordinates: 42.3524864, -71.5306541



at&t

Node: Area5_87 Map

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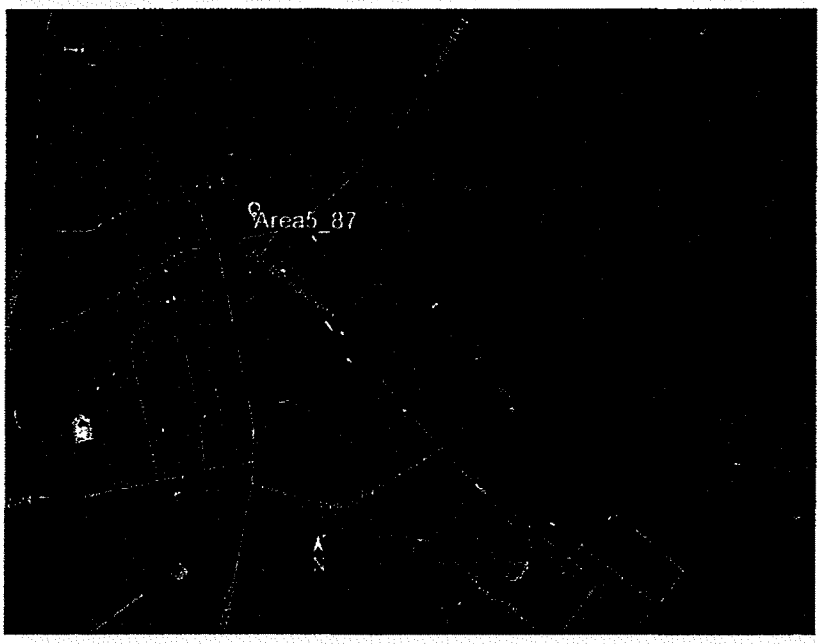


at&t

KATHREIN

840 10510 840 10511

Dual Band Omni Antenna with GPS

	Antenna 1	Antenna 2
Dual Band (MHz)	698–894	1710–2180
Dual Polarization	X	X
HPBW	360°	360°

General specifications:

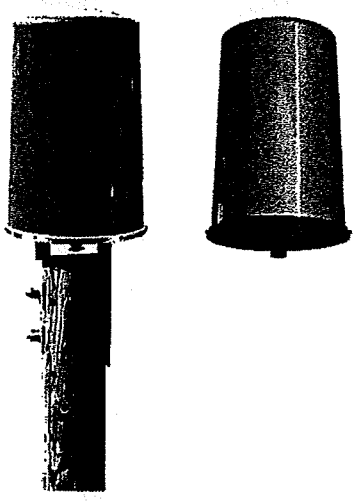
Frequency range	698–894 MHz 1710–2180 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150 dBc
Polarization	+45° upper and lower band -45° upper and lower band
Connector	4 x 7-16 DIN female
Isolation intrasystem intersystem	>30 dB >40 dB (698–894 // 1710–2180 MHz)
Radome color	Brown or grey
Weight	45 lb (20.4 kg)
Height	24 inches (609 mm)
Radome diameter	16 inches (407 mm)
Wind load Side	at 93 mph (150kph) 32 lbf (138 N)
Wind survival rating*	150 mph (241.4 kph)
Shipping dimensions	32 x 20 x 19 inches (813 x 508 x 483 mm)
Shipping weight	52 lb (23.6 kg)
Mounting	Designed to be mounted on top of a utility pole using a custom mounting bracket supplied by the customer.

See reverse for order information.

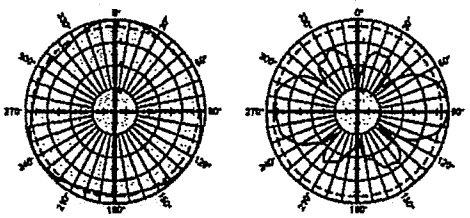
*Mechanical design is based on environmental conditions as stipulated in TIA-222-G-2 (December 2009) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

GPS specifications:

Frequency range	1575.42 ± 3 MHz
LNA gain	27 dB Typical
Pre-amp filte ing	-30 dB at ± 100 MHz
Polarization	Righthand circular
H-plane beamwidth	Omni
E-plane beamwidth	105 degrees (half-power)
Connector	N female
DC power	+3–5.5 Vdc, 22 mA ± 3 Through N output connector
Temperature range	-35° C to +70° C



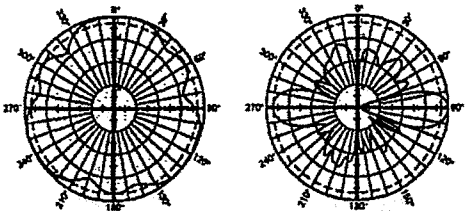
698–894 MHz



Horizontal pattern ±45°-polarization

Vertical pattern ±45°-polarization

1710–2180 MHz



Horizontal pattern ±45°-polarization

Vertical pattern ±45°-polarization

Specifications:	698–806 MHz	806–894 MHz	1710–1880 MHz	1850–1990 MHz	1920–2180 MHz
Gain (typical)	4.5 dBi (with 1–4 dB nulls, typical)	6.5 dBi	9 dBi	9 dBi (with 6–10 dB nulls, typical)	8.5 dBi
Maximum input power	250 watts (at 50°C)	250 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)
+45° and -45° polarization vertical beamwidth	37° (half-power)	30° (half-power)	19° (half-power)	17° (half-power)	17.5° (half-power)

11202-L

RoHS Lead-Free

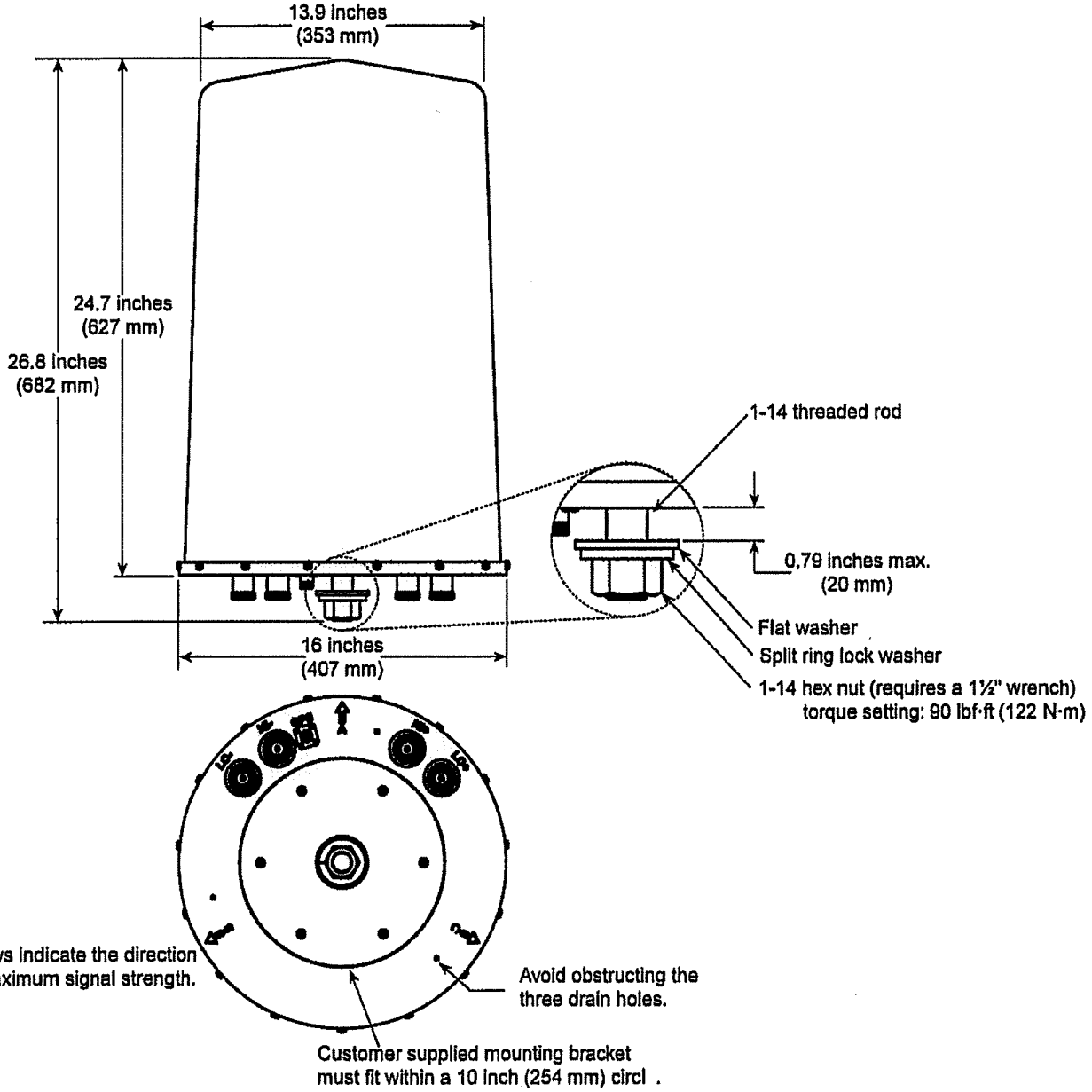
All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

KATHREIN

840 10510 840 10511

Dual Band Omni Antenna with GPS



Order Information:

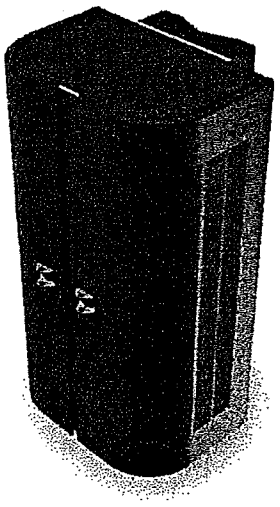
Model	Description
840 10510	Brown Dualband X-pol Omni Antenna
840 10511	Grey Dualband X-pol Omni Antenna

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

ERICSSON

Curved Shroud

Technical Product Description



Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design, and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

IN CITY COUNCIL

Marlborough, Mass., NOVEMBER 13, 2017

ORDERED:

That the Public Hearing on the Petition of AT & T to deploy a small cell site which will be mounted on existing utility pole at 28 Concord Rd., Order No. 17-1007055, hearing recessed at 8:28 p.m.

Councilors Present: Doucette, Tunnera, Irish, Clancy, Landers, Juaire, Oram, Ossing & Robey.

PUBLIC SPEAKING IN FAVOR

Michael Dolan from the law firm of Brown Rudnick appeared on behalf of the petitioner, AT&T. AT&T proposed another wireless facility at this location and deferred to the Council for its location. President Clancy noted is it located across from Firefly's parking lot on Concord Road and it cannot be missed as it is at a severe angle.

There is no one else speaking in favor. That part of the Public Hearing is closed.

QUESTIONS FROM THE PUBLIC

There are no questions from the public. That part of the Public Hearing is closed.

PUBLIC SPEAKING IN OPPOSITION

There is no one speaking in opposition. That part of the Public Hearing is closed.

QUESTIONS FROM THE CITY COUNCIL

✓ Councilor Juaire requested in all three petitions, that they reference the pole number and provide the information to the City Council Office.

✓ Councilor Doucette noted in consideration of the current angle of the pole and the proposed additional weight that it should be straightened prior to the installation of the hardware. Carly Cowher, Project Manager at Centerline Communications, explained when an application is submitted for a specific pole, if it is existing, when National Grid does their survey for the pole, they will mock up their make ready cost which is any existing attachment on that pole or any pole next to it. They will return and confirm the hardware to be placed on the pole, note what the pole can structurally support, and whether it needs to be re-guided or straightened as part of the make ready process. That pole will be not crooked when work is complete. President Clancy asked if power is needed at the pole. Ms. Cowher stated no as they can drop secondary power from the pole next to it or across from it because this pole is a guide pole.

IN CITY COUNCIL

Marlborough, Mass., NOVEMBER 13, 2017

ORDERED:

✓ Councilor Robey had several points of clarification. The information provided to the City Council does list the pole numbers on each of the three applications. Also, the City of Boston has a map showing over three hundred small cell sites by six providers so they are probably one of the bigger ones in the Commonwealth.

There are no further questions from members of City Council. That part of the Public Hearing is closed.

That ends the entire Public Hearing. This is currently in the Wireless Communications Committee.

ADOPTED

ORDER NO. 17-1007055A

IN CITY COUNCIL

Marlborough, Mass., DECEMBER 18, 2017

ORDERED:

Councilor Tunnera orally reported the following out of the Personnel Committee:

Suspension of the Rules requested - granted

That the Appointment of William Dunbar to the Conservation Commission for a three-year term, replacing longtime member Lawrence Roy who has stepped down, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007051A

Suspension of the Rules requested - granted

That the Appointment of Joseph Bisol to the Council on Aging for a term of four years, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007112A

Councilor Oram orally reported the following out of the Wireless Communications Committee:

Suspension of the Rules requested - granted

That the Petition of AT & T to deploy one small cell site which will be mounted on existing utility pole at 319 East Main Street, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007034B

Suspension of the Rules requested - granted

That the Petition of AT & T to deploy a small cell site which will be mounted on existing utility pole at 28 Concord Rd, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007055B

Councilor Elder orally reported the following out of the Operations & Oversight Committee:

Suspension of the Rules requested - granted

That the Mayor hire a full time and permanent Code Enforcement Officer for the City of Marlborough within 90 days of approval of this Order, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007044A
AFTER ORDER NO. 17-1007127

IN CITY COUNCIL

Marlborough, Mass., SEPTEMBER 25, 2017

ORDERED:

That there being no objection thereto set **MONDAY NOVEMBER 13, 2017** as **DATE FOR PUBLIC HEARING** On the Petition of AT & T to deploy one small cell site which will be mounted on existing utility poles at 319 East Main Street, be and is herewith refer to **WIRELESS COMMUNICATION COMMITTEE.**

ADOPTED

ORDER NO. 17-1007034

at&t

City Council
City of Marlborough
City Hall
140 Main Street
Marlborough, MA 01752

August 9, 2017

RE: Petition of New Cingular Wireless PCS, LLC ("AT&T") for Grant of Location for Telecommunication Wires and Appurtenances: **Area5_124: 319 East Main Street**
(42.351319, -71.533467) – NGRID Pole #35-84

Dear Members of the City Council:

Pursuant to Massachusetts General Laws Chapter 166 section 22, please find enclosed the petition of New Cingular Wireless PCS, LLC ("AT&T") for a grant of location for telecommunication wires and appurtenances to be attached to existing utility poles owned by National Grid within the City of Marlborough. Included with the petition are detailed plans that identify the locations where AT&T's proposed pole attachments will be placed. This includes an area map of all locations as well as the Utility pole profiles depicting the equipment attachment heights and specs.

AT&T requests that the City schedule a public hearing on this petition, subject to the requirements of Massachusetts General Laws, Section 22. Those requirements prescribe that the city provide written notice to all owners of real estate, abutting that part of each street upon or across which, wires appurtenances are proposed to be located. It is my understanding that the City will be able to produce this list, and I will work with the City Clerk to ensure the letters are sent per the requirements of the City.

For the convenience of the City Council, AT&T has provided a proposed form of order.

Should you have any questions, or would like any additional information prior to the public hearing please do not hesitate to contact me at (508) 821-6509 or dford@clinellc.com. I will be present at the public hearing to answer any questions you may have as well.

Thank you,

CENTERLINE COMMUNICATIONS

David Ford | Site Acquisition Lead - Manager
Mobile: 508.821.6509 | Fax: 508.819.3017
dford@clinellc.com | www.centerlinecommunications.com

95 Ryan Drive, Suite 1 • Raynham, MA 02767 • T: 508.821.6509 • F: 508.819.2017 • E: dford@clinellc.com

PETITION FOR LOCATIONS FOR TELECOMUNICATIONS WIRES AND APPURTENANCES

To the CITY COUNCIL OF THE CITY OF MARLBOROUGH, MASSACHUSETTS

Pursuant to Massachusetts General Laws, Chapter 166 and the City Ordinance of the City of Marlborough, Massachusetts, NEW CINGULAR WIRELESS PCS, LLC ("AT&T"), requests that it be granted locations for and permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas; to be attached to existing National Grid utility poles, located upon and along the following public ways within the City of Marlborough, as indicated on the attached plans. In addition, the petitioner seeks permission to install conduit or direct bury cable as indicated in the attached plans.

Wherefore, Petitioner requests that, after due notice and hearing as provided by law, that it be granted locations for and permission to construct the telecommunications wires and appurtenances upon and along the public ways within the City of Marlborough, shown on the plan, filed herewith. AT&T also submitted additional information in support of this petition.

Respectfully submitted,

NEW CINGULAR WIRELESS PCS, LLC ("AT&T")

By: David Ford
Project Manager – Small Cell
Centerline Communications, LLC

ORDER FOR LOCATION FOR TELECOMMUNICATIONS WIRES AND APPURTENANCES

By the City Council

Of the City of Marlborough, Massachusetts, _____, 2017

ORDERED:

That NEW CINGULAR WIRELESS PCS, LLC ("AT&T") is hereby granted locations for and permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas, to be attached to existing National Grid utility poles, located upon and along the public ways within the City of Marlborough, as substantially shown on the plan filed with said petition. In addition, the petitioner is hereby granted permission to install conduit or direct bury fiber cable as indicated in the plans.

The forgoing permission is subject to the following conditions:

1. The telecommunications wires and appurtenances shall be of such material and construction and all work done in such manner as to be satisfactory to the City Council or to such municipal officers as may be appointed to the supervision of the work.
2. Said company shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of said Company, its agents or servants, or in any manner arising from the rights and privileges granted it by the City.
3. Said Company shall comply with the requirements of existing City ordinances, as may be applicable and such as may hereafter be adopted governing the construction and maintenance of said telecommunications wires and appurtenances, so far as the same are not inconsistent with the laws of the Commonwealth of Massachusetts.

I hereby certify that the foregoing was adopted at a meeting of the City Council of the City of Marlborough, Massachusetts, held on the _____ day of _____, 2017.

_____
City Clerk

APPROVED

_____

We hereby certify that on _____, 2017, at _____, o'clock at _____, a public hearing was held on the Petition of NEW CINGULAR WIRELESS PCS, LLC ("AT&T") for permission to construct and maintain telecommunications wires and appurtenances, including fiber optic cable, remote nodes and pole top antennas, to be attached to existing utility poles, located upon and along the public ways within the City of Marlborough; and to install conduit or direct bury fiber cable as indicated in the plans described in the order herewith recorded, that we mailed at least seven days before said hearing a written notice of the time and place of said hearing to each of the owners of real estate (as determined by the last preceding assessment for taxation) along the ways or parts of ways upon which the Company is permitted to construct the telecommunications wires and appurtenances of said Company under said order, and that thereupon said order was duly adopted.

_____

_____

_____

_____

_____

_____

_____

_____

_____

City Council of the City of Marlborough

CERTIFICATE

I hereby certify that the forgoing is a true copy of a grant of location order and certificate of hearing with notice adopted by the City Council of the City of Marlborough, Massachusetts, on the _____ day of _____, 2017, and recorded with records of location orders of said City, Book _____, Page _____. This certified copy is made under the provisions of Chapter 166 of the Massachusetts General Laws, as amended.

Attest:

_____

City Clerk

Applicable State Law

Municipal Approval of the Construction and Placement of AT&T's Wires and Related Pole Attachments is governed by Massachusetts General Laws Chapter 166, Sections 21-22. As a FCC regulated provider of intrastate telecommunications services, AT&T is authorized under Chapter 166, Section 21 to construct lines and other facilities upon, along, under and across the public ways. Such construction must not incommode the public use of public ways.

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Area5_124: 319 East Main Street – (42.351319, -71.533467) – NGRID Pole #35-84

AT&T's radio frequency engineers targeted the proposed location due to the high traffic nature and data demand on the network. The existing macro cell sites are having difficulty providing adequate data capacity in the location due to a number of reasons relating to increased population, vehicle and foot traffic, multiple devices per person and other contributing factors. The small cell site will work to offload the demand on the macro sites and allow for increased LTE data capacity and speed within the immediate vicinity of the proposed site.

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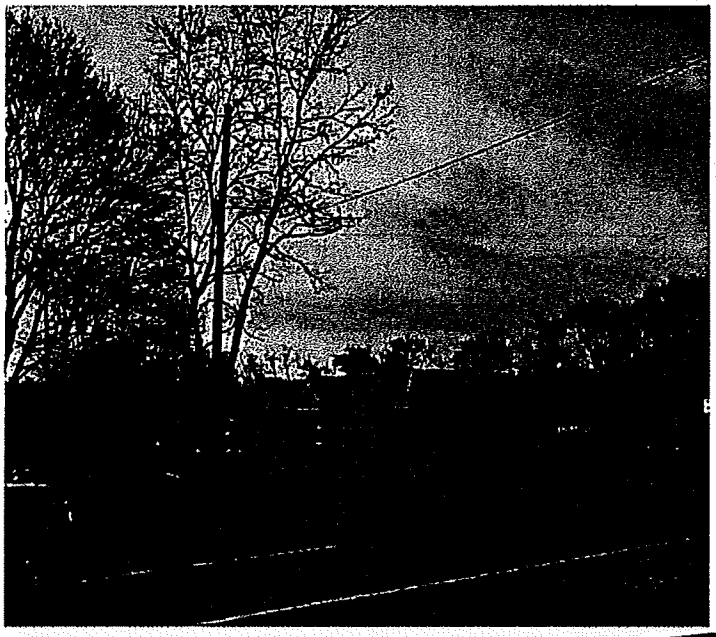
Node: Area5_124
Address: 319 East Main St, Marlborough, MA
Target Site: NGRID POLE # 35/84
Coordinates: 42.351291, -71.533434



at&t

KATHREIN

840 10510 840 10511

Dual Band Omni Antenna with GPS

	Antenna 1	Antenna 2
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Dual Polarization	X	X
HPBW	360°	360°

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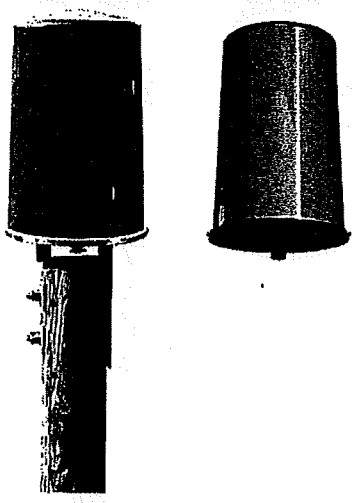
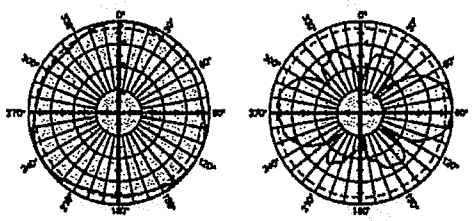


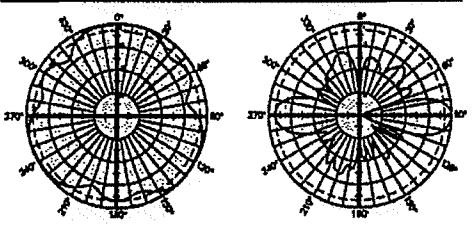
698–894 MHz



Horizontal pattern ±45°-polarization

Vertical pattern ±45°-polarization

1710–2180 MHz



Horizontal pattern ±45°-polarization

Vertical pattern ±45°-polarization

Specifications:	698–806 MHz	806–894 MHz	1710–1880 MHz	1850–1990 MHz	1920–2180 MHz
Gain (typical)	4.5 dBi (with 1–4 dB nulls, typical)	6.5 dBi	9 dBi	9 dBi (with 6–10 dB nulls, typical)	6.5 dBi
Maximum input power	250 watts (at 50°C)	250 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)
+45° and -45° polarization vertical beamwidth	37° (half-power)	30° (half-power)	19° (half-power)	17° (half-power)	17.5° (half-power)

TÜV 11202-L

RoHS Lead-Free

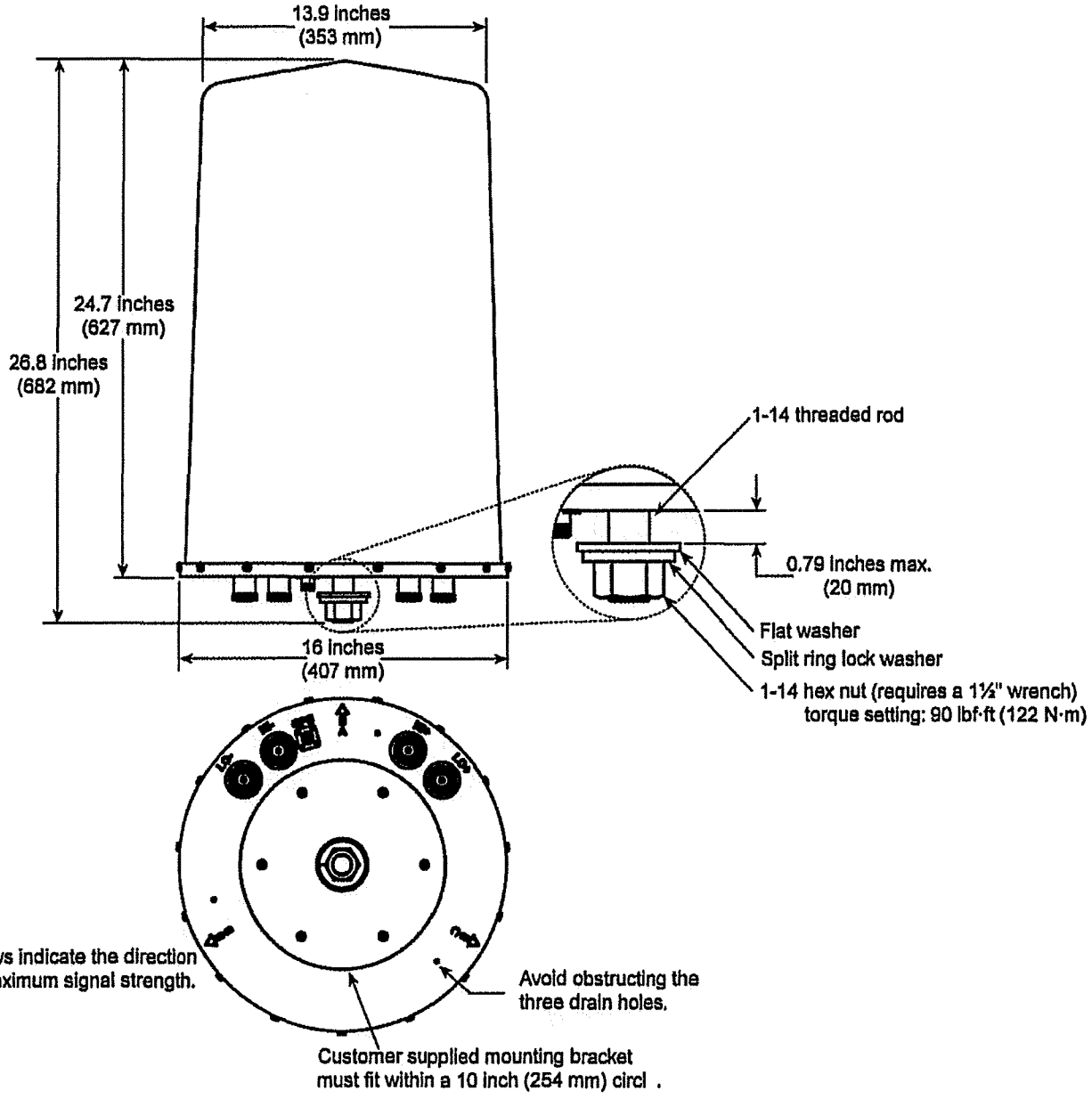
All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

KATHREIN

840 10510 840 10511

Dual Band Omni Antenna with GPS



Order Information:

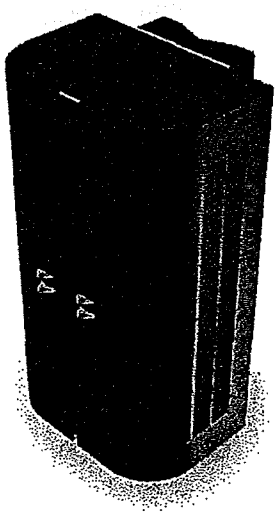
Model	Description
840 10510	Brown Dualband X-pol Omni Antenna
840 10511	Grey Dualband X-pol Omni Antenna

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

ERICSSON

Curved Shroud

Technical Product Description



Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design, and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

DESCRIPTION

The Curved Shroud is a pole mounted radio concealment. Its compact rounded shape design and variable powder coat finishes blends with surrounding infrastructure.

TECHNICAL SPECIFICATION

COMPLIANCE

Telcordia GR-487-CORE:	Exposure to High-Temperature Environmental Induced Vibration Seismic Test Transportation Vibration (for configuration with up to 4x 2203 radios)

MECHANICAL

Width x Depth x Height:	18" x 12" x 32"
Weight:	70 lbs. (enclosure only)
Internal Volume:	3.8 cu. ft.

MOUNTING

Pole Mounting:	Wood/Steel (6" offset available) metal banding or thru bolt

FINISH

Variable Powder Coat Finishes

GROUNDING

Isolated ground bar with ¼-in stud, 5/8 ctr-ctr, copper ground bar

CABLE ENTRY

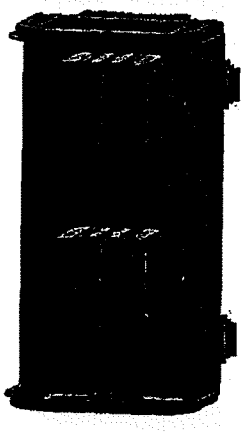
6 cable egress/ingress knock-out

OPTIONAL EQUIPMENT CONFIGURATIONS

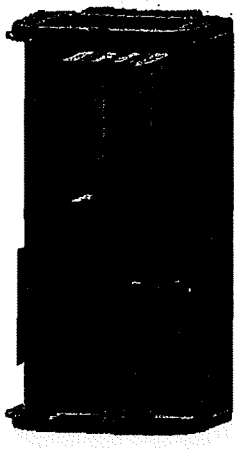
Up to 4x Ericsson 2203
Up to 2x 2203 and 1x mRRUS12
Integrated bracket for up to 2x twin-diplexer
Integrated bracket for outdoor rated fiber termination box

ENCLOSURE CONFIGURATIONS

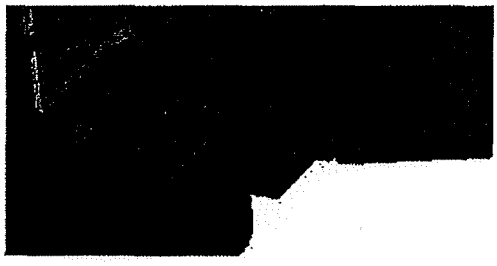
- 4x 2203, 2x twin-diplexer, 1x Fiber termination box

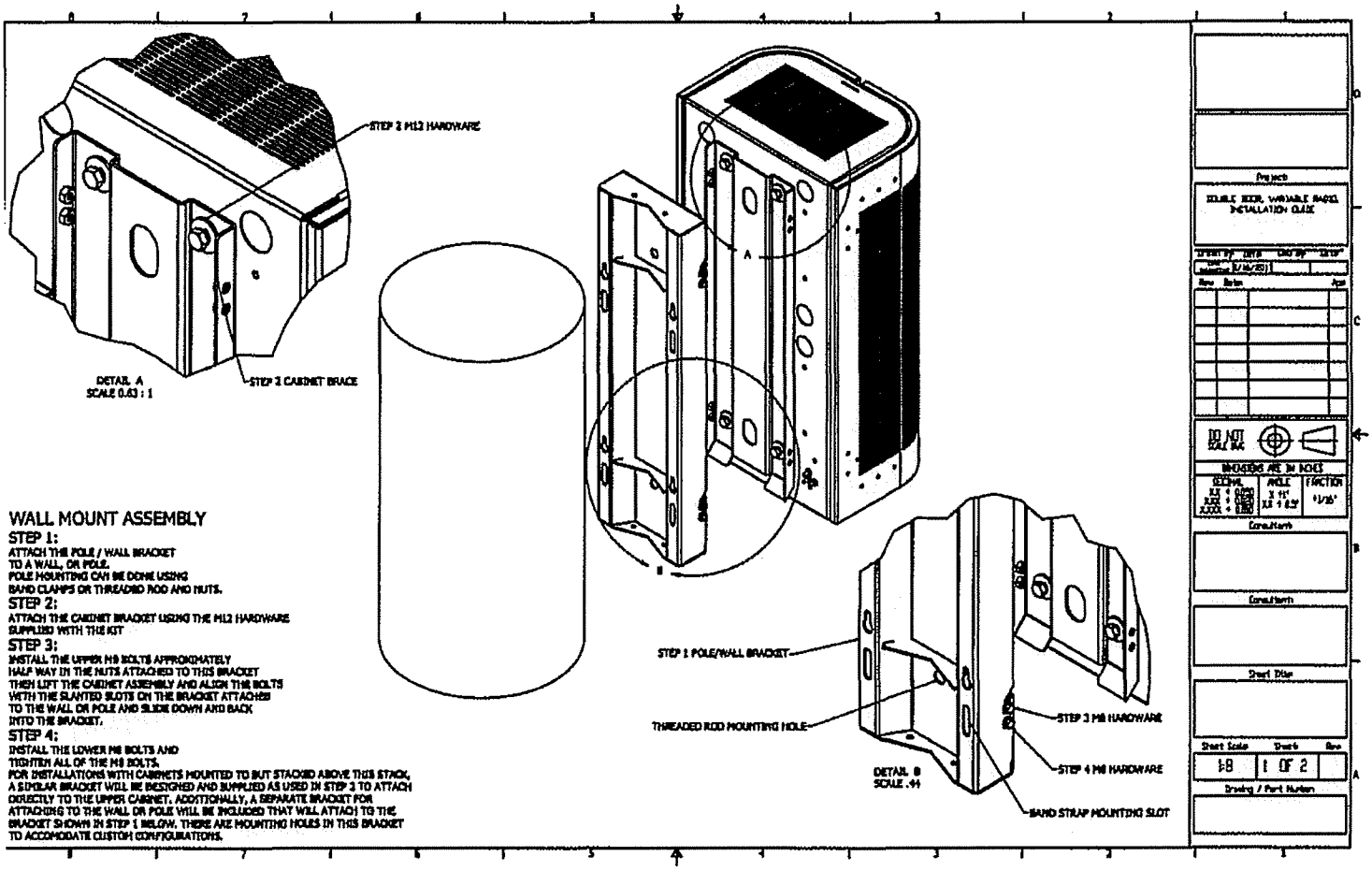


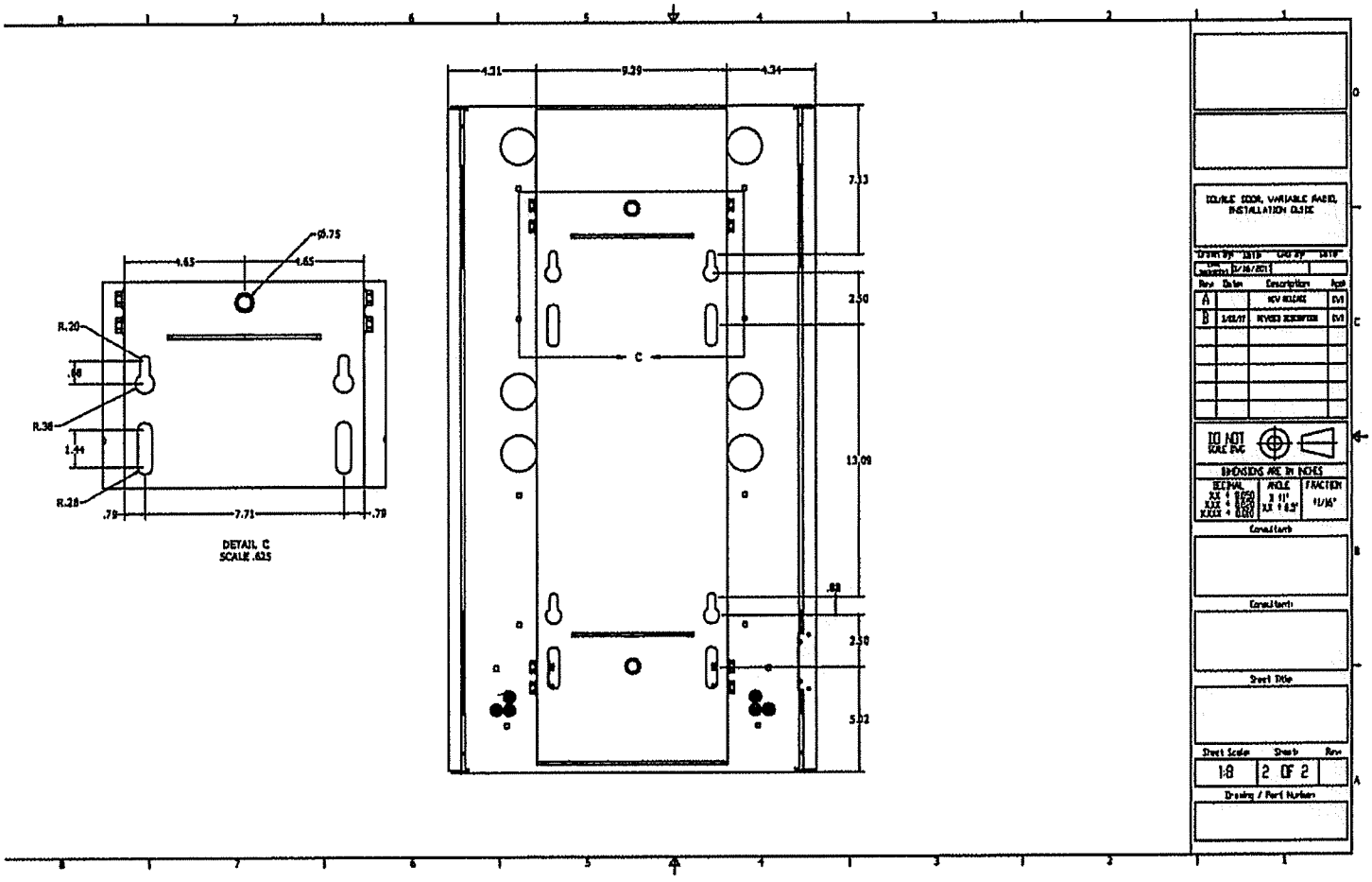
- 2x 2203, 1x mRRUS12, Fiber termination box, twin-diplexer

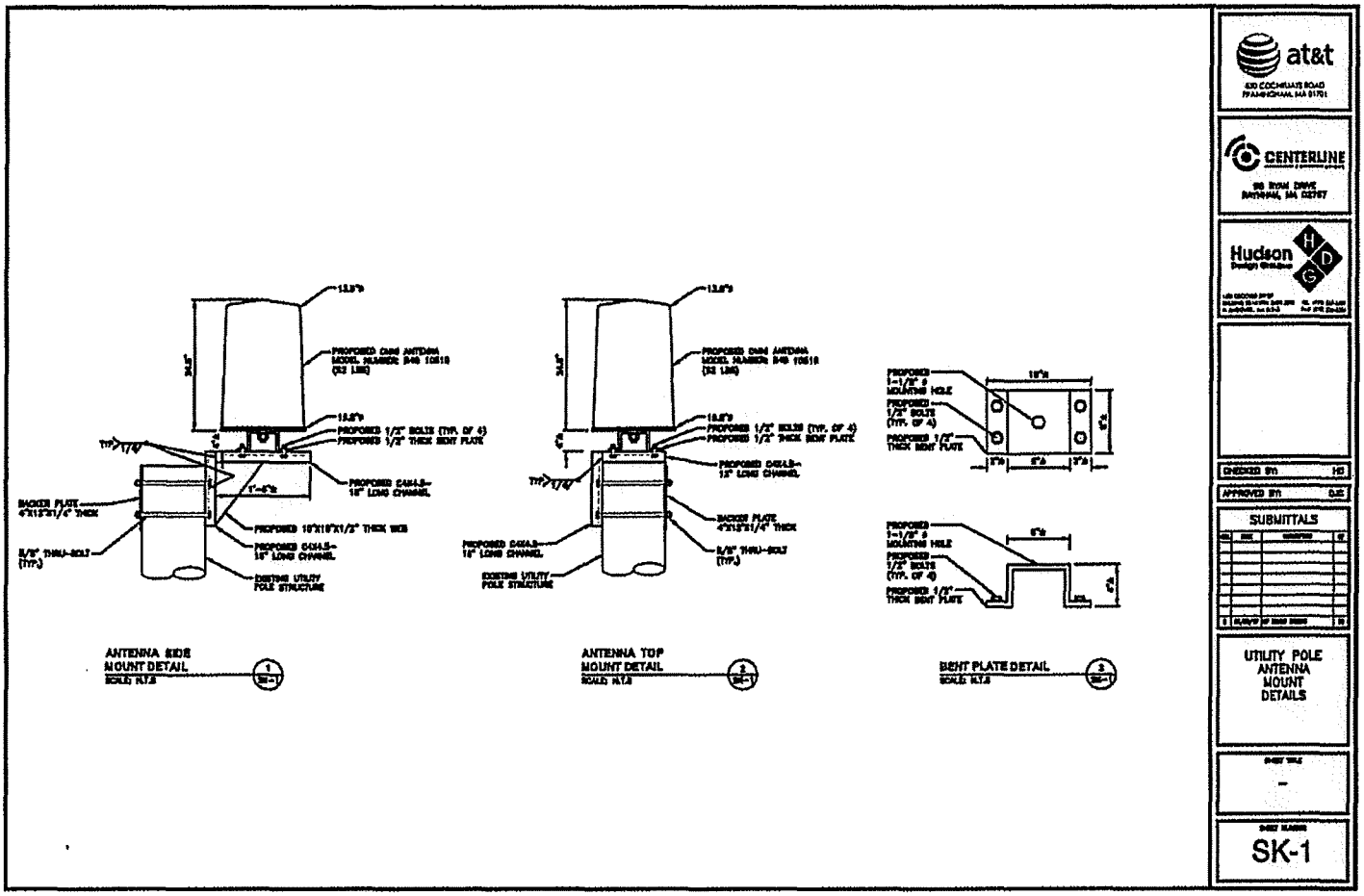


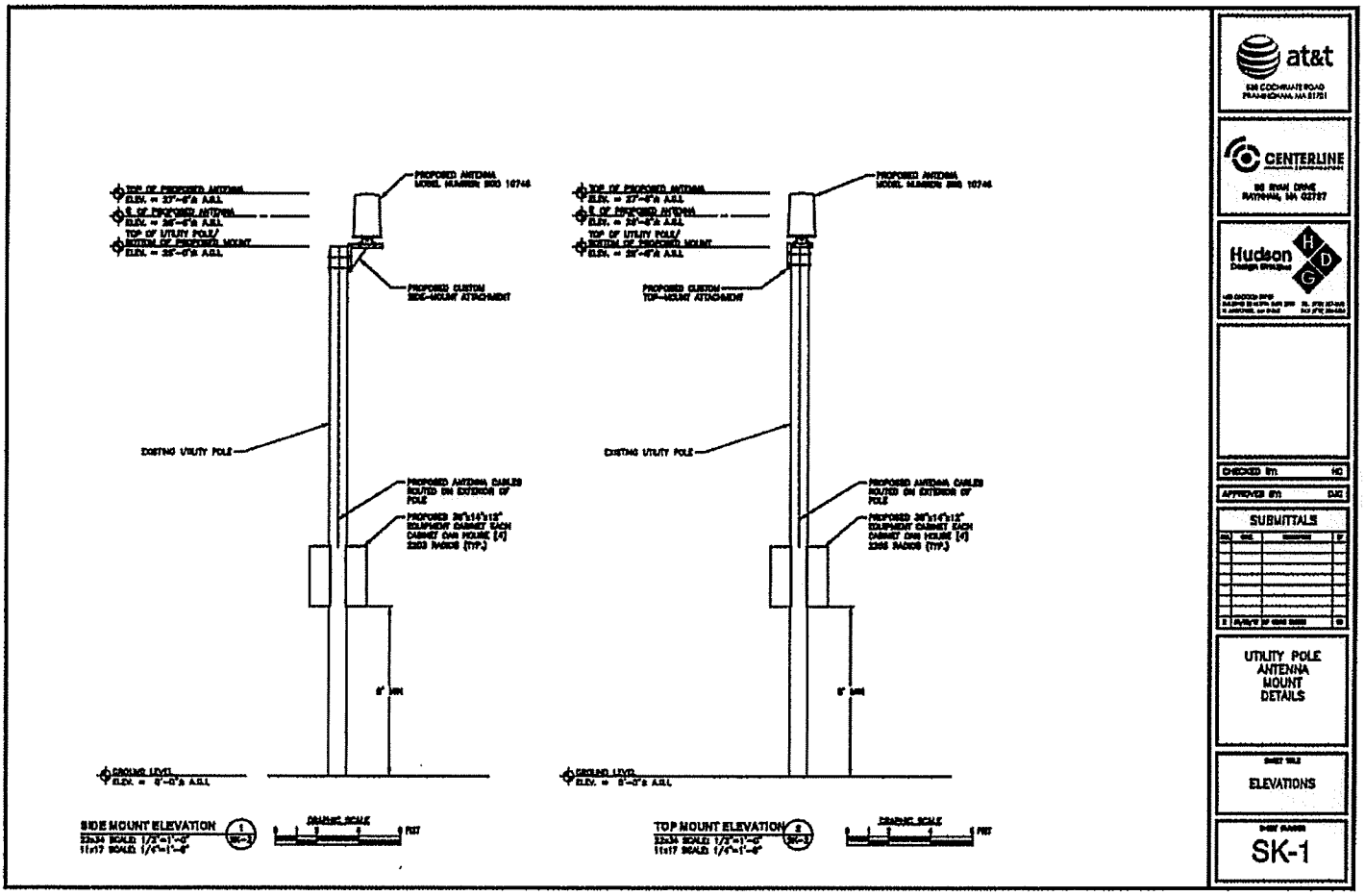
- Additional feature: mounting provision for AC distribution box




STEP 2 M12 HARDWARE
STEP 2 CABINET BRACE
DETAIL A
SCALE 0.63 : 1
A
B
STEP 1 POLE/WALL BRACKET
THREADED ROD MOUNTING HOLE
STEP 3 M8 HARDWARE
STEP 4 M8 HARDWARE
BAND STRAP MOUNTING SLOT
DETAIL B
SCALE .44
WALL MOUNT ASSEMBLY
STEP 1:
ATTACH THE POLE / WALL BRACKET
TO A WALL, OR POLE.
POLE MOUNTING CAN BE DONE USING
BAND CLAMPS OR THREADED ROD AND NUTS.
STEP 2:
ATTACH THE CABINET BRACKET USING THE M12 HARDWARE
SUPPLIED WITH THE KIT
STEP 3:
INSTALL THE UPPER M8 BOLTS APPROXIMATELY
HALF WAY IN THE NUTS ATTACHED TO THIS BRACKET
THEN LIFT THE CABINET ASSEMBLY AND ALIGN THE BOLTS
WITH THE SLANTED SLOTS ON THE BRACKET ATTACHED
TO THE WALL OR POLE AND SLIDE DOWN AND BACK
INTO THE BRACKET.
STEP 4:
INSTALL THE LOWER M8 BOLTS AND
TIGHTEN ALL OF THE M8 BOLTS.
FOR INSTALLATIONS WITH CABINETS MOUNTED TO BUT STACKED ABOVE THIS STACK,
A SIMILAR BRACKET WILL BE DESIGNED AND SUPPLIED AS USED IN STEP 2 TO ATTACH
DIRECTLY TO THE UPPER CABINET. ADDITIONALLY, A SEPARATE BRACKET FOR
ATTACHING TO THE WALL OR POLE WILL BE INCLUDED THAT WILL ATTACH TO THE
BRACKET SHOWN IN STEP 1 BELOW. THERE ARE MOUNTING HOLES IN THIS BRACKET
TO ACCOMODATE CUSTOM CONFIGURATIONS.
Project
DOUBLE DOOR, VARIABLE PANEL
INSTALLATION GUIDE
DO NOT SCALE DRAWING
DIMENSIONS ARE IN INCHES
DECIMAL
ANGLE
FRACTION
Consultants
Sheet Title
Sheet Scale
Sheet
Rev
1:8
1 OF 2
Drawing / Part Number


4.31
9.39
4.34
7.33
2.50
13.08
.88
2.30
5.02
DETAIL C
SCALE .625
DOUBLE DOOR, VARIABLE RADIO, INSTALLATION GUIDE
DIMENSIONS ARE IN INCHES
Sheet Scale
Sheet
Rev
1:8
2 OF 2
Drawing / Part Number


PROPOSED CAMS ANTENNA
MODEL NUMBER: B4B 10610
(32 LBS)
PROPOSED 1/2" BOLTS (TYP. OF 4)
PROPOSED 1/2" THICK BENT PLATE
PROPOSED CAMLS-
12' LONG CHANNEL
BACKER PLATE
4"X12"X1/4" THICK
5/8" THRU-BOLT
(TYP.)
PROPOSED 10"X10"X1/2" THICK WEB
EXISTING UTILITY
POLE STRUCTURE
ANTENNA SIDE
MOUNT DETAIL
SCALE: N.T.S
ANTENNA TOP
MOUNT DETAIL
SCALE: N.T.S
BENT PLATE DETAIL
SCALE: N.T.S
at&t
CENTERLINE
Hudson
CHECKED BY:
APPROVED BY:
SUBMITTALS
UTILITY POLE
ANTENNA
MOUNT
DETAILS
SK-1



at&t

CENTERLINE

Hudson Design Group LLC

CHECKED BY: MD

APPROVED BY: DJC

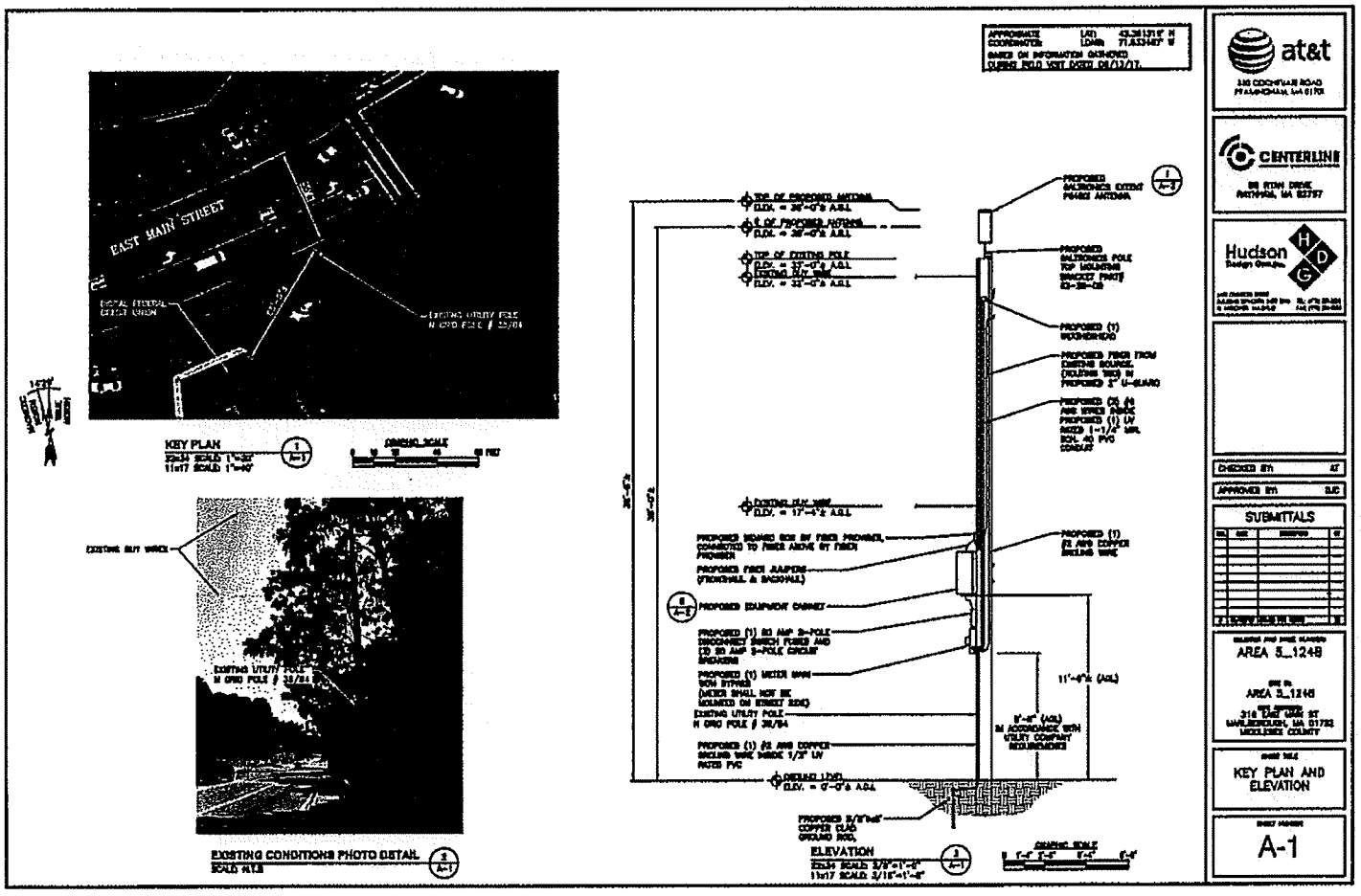
SUBMITTALS

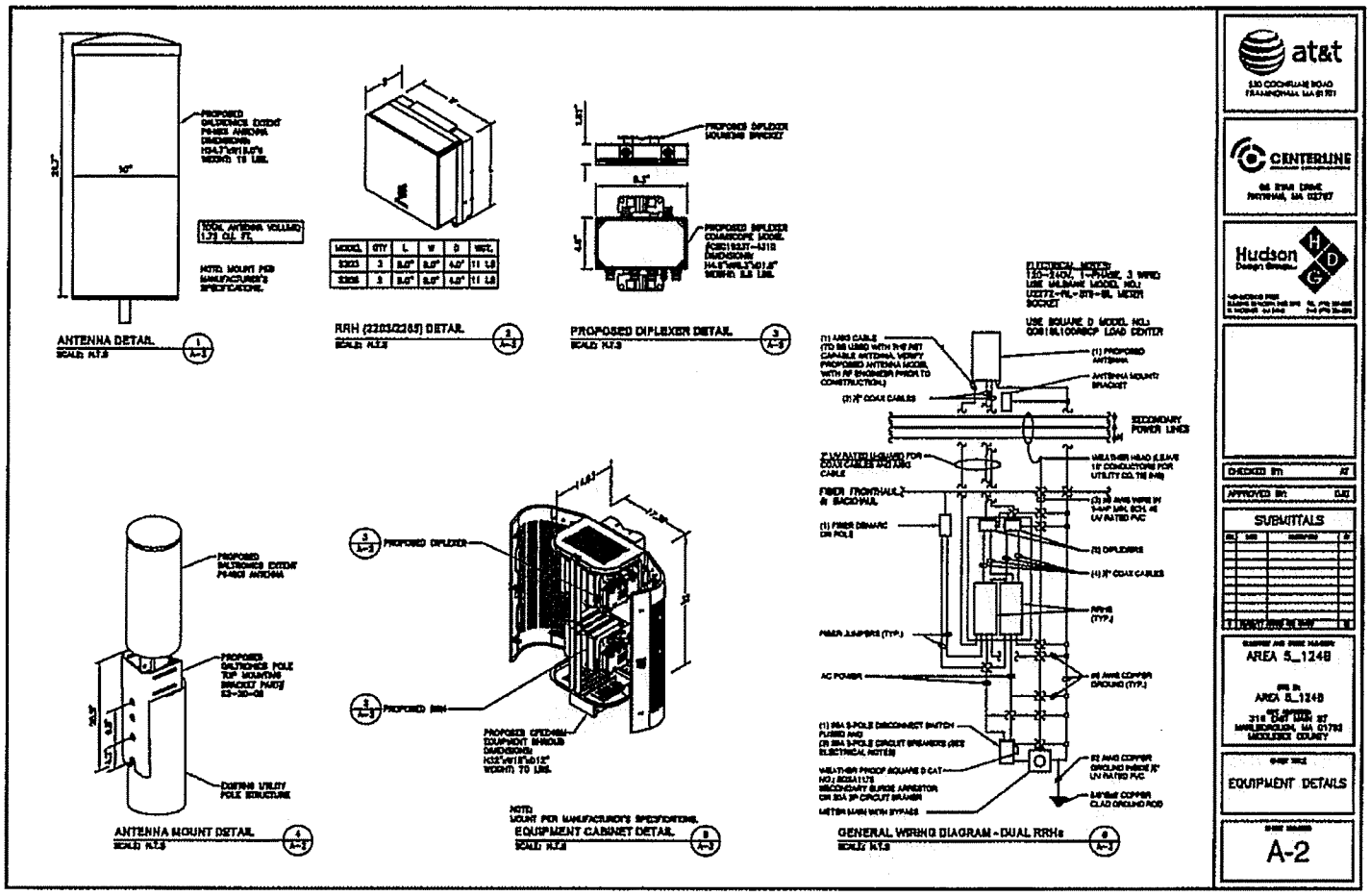
NO.	DATE	DESCRIPTION	BY
1	03/09/17		

UTILITY POLE ANTENNA MOUNT DETAILS

ELEVATIONS

SK-1


EAST MAIN STREET
KEY PLAN
EXISTING CONDITIONS PHOTO DETAIL
ELEVATION
at&t
CENTERLINE
Hudson
CHECKED BY:
APPROVED BY:
SUBMITTALS
AREA 3_1248
KEY PLAN AND ELEVATION
A-1


ANTENNA DETAIL
RRH (2203/2265) DETAIL
PROPOSED DIPLEXER DETAIL
ANTENNA MOUNT DETAIL
EQUIPMENT CABINET DETAIL
GENERAL WIRING DIAGRAM - DUAL RRHs
at&t
CENTERLINE
Hudson Design Group
SUBMITTALS
AREA 5_1248
EQUIPMENT DETAILS
A-2

IN CITY COUNCIL

Marlborough, Mass., NOVEMBER 13, 2017

ORDERED:

That the Public Hearing on the Petition of AT & T to deploy one small cell site which will be mounted on existing utility pole at 319 East Main Street, Order No. 17-1007034, hearing recessed at 8:25 p.m.

Councilors Present: Doucette, Tunnera, Irish, Clancy, Landers, Juaire, Oram, Ossing & Robey.
Absent: Delano & Elder

PUBLIC SPEAKING IN FAVOR

Michael Dolan from the law firm of Brown Rudnick appeared on behalf of the petitioner, AT&T. AT&T proposed a small cell facility at this location. President Clancy requested they explain where the location is or he could do it for them. President Clancy stated it is directly across from Hosmer Street by Mitrakas Realty.

There is no one else speaking in favor. That part of the Public Hearing is closed.

QUESTIONS FROM THE PUBLIC

Andre Coullard asked a question regarding if the boxes are located on the street side of the utility pole, how can they be mounted on the street side if the pole is in the middle of the intersection. Mr. Dolan stated all the utility poles are on the side of the road with the boxes being mounted opposite the street side so it is not an issue.

Thomas Byrnes asked if this were part of a larger plan, the first three of a larger initiative to alleviate the dead spots within Marlborough or a very targeted action. Mr. Dolan indicated it is currently a targeted initiative, but it will aid carriers in filling in those gaps. He suspected these will be done in more cities and towns on a targeted basis.

Mr. Byrnes stated there are several dead spots throughout Marlborough and asked if anyone collects that information to study it. Mr. Dolan confirmed there are people who review that information and AT&T customers should call their customer service representative to point out problem areas so that data can be collected by them. They go by complaints and where the small cell sites are needed the most.

There are no further questions from the public. That part of the Public Hearing is closed.

PUBLIC SPEAKING IN OPPOSITION

There is no one speaking in opposition. That part of the Public Hearing is closed.

IN CITY COUNCIL

Marlborough, Mass., NOVEMBER 13, 2017

ORDERED:

QUESTIONS FROM THE CITY COUNCIL

✓ Councilor Oram stated the petition is in the Wireless Communications Committee for review.

There are no further questions from members of City Council. That part of the Public Hearing is closed.

That ends the entire Public Hearing. This is currently in the Wireless Communications Committee.

ADOPTED

ORDER NO. 17-1007034A

IN CITY COUNCIL

Marlborough, Mass., DECEMBER 18, 2017

ORDERED:

Councilor Tunnera orally reported the following out of the Personnel Committee:

Suspension of the Rules requested - granted

That the Appointment of William Dunbar to the Conservation Commission for a three-year term, replacing longtime member Lawrence Roy who has stepped down, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007051A

Suspension of the Rules requested - granted

That the Appointment of Joseph Bisol to the Council on Aging for a term of four years, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007112A

Councilor Oram orally reported the following out of the Wireless Communications Committee:

Suspension of the Rules requested - granted

That the Petition of AT & T to deploy one small cell site which will be mounted on existing utility pole at 319 East Main Street, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007034B

Suspension of the Rules requested - granted

That the Petition of AT & T to deploy a small cell site which will be mounted on existing utility pole at 28 Concord Rd, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007055B

Councilor Elder orally reported the following out of the Operations & Oversight Committee:

Suspension of the Rules requested - granted

That the Mayor hire a full time and permanent Code Enforcement Officer for the City of Marlborough within 90 days of approval of this Order, be and is herewith **CARRY OVER TO THE 2018-2019 LEGISLATIVE SESSION.**
ADOPTED
ORDER NO. 17-1007044A
AFTER ORDER NO. 17-1007127