Art Commission Application Form

You must submit the following along with this form as a single PDF.

- Individual or organizational statement (250 word max)
- Letter of intent that includes history of project and its impact on the community (500 word max)
- Visual materials (See Art Commission Guidelines for requirement)
- Budget describing cost of materials, artist fees, maintenance, installation, etc.
- Two letters of support from project partners or neighborhood organizations
- One letter of support from the Department of Public Works or Department of Mobility & Infrastructure

Notes:

- You may be required to hold a Development Activities Meeting with the applicable Registered Community Organization prior to Hearing. For more information, visit pittsburghpa.gov/cpcico.
- After receiving Art Commission approval, any necessary permits, certificates of occupancy, legal agreements, or other city approvals are still required. These must be applied for separately at the appropriate City departments and are the responsibility of the applicant.
- Application format is a digital copy of full application form, required documents, and the presentation to be projected at the Hearing as one single PDF. Send all documents to paco@pittsburghpa.gov.

Project Information

Type of Project:  
- [X] Conceptual Review
- [ ] Conceptual/Final Review
- [ ] Final Review
- [ ] Courtesy Review

Has this project been done before Art Commission before?  
- [X] No
- [ ] Yes, when: ______________________

Duration of project:  
From ___/___/2022 to ___/___/2022. Construction timeline for permanent site

Permanent?  
- [ ] No
- [X] Yes
Project Location

Address: Forbes Avenue and Wood Street

Cross Streets or other relevant information: Existing pole replacement in Right of Way at PNC

Plaza approximately Forbes Avenue and Wood Street

Neighborhood: Downtown Pittsburgh

Applicant Information

Name: Paul Whitley for Extenet Systems

Mailing Address: 6905 Marshalee Drive, Suite 300

City: Elkridge
State: MD
Zip: 21075

Phone: 443-752-0338
Email: pwhitley@nbcllc.com

Relationship or Role in Project: Agent for Extenet

Co-Applicant (optional)

Name: Matt Sturgill

Mailing Address: 3030 Warrenville Road, Suite 340

City: Lisle
State: IL
Zip: 60532

Phone: 724-816-7883
Email: msturgill@extenetsystems.com

Relationship or Role in Project: Senior Project Manager for Extenet Systems

Presenter at Hearing if different than applicant:
Letter of Intent (Project Description)

11/30/2021

City of Pittsburgh
Art Commission
200 Ross Street, 4th Floor
Pittsburgh PA 15219

Re: Extenet SC19 Proposed Pole Replacement at Forbes Ave and Wood St in Right of Way

To Whom It May Concern,

In an effort to improve 4G coverage and add 5G service in the downtown Pittsburgh area, Extenet Systems is proposing to remove an existing City of Pittsburgh-owned streetlight will be removed and replace it with a new pole to accommodate 4G and 5G antennas for multiple carriers. The new pole will be metal powder dipped black and consist of a 4G and 5G antenna within a matching shroud covering mounted to the top of the pole. Two streetlights will be added to match the general aesthetics of the streetlights in the surrounding area. One set of banner arms and parking signage on the existing pole will be transferred to the new pole. The pedestal at the base will conceal power equipment, and all cabling will be run inside the pole itself as to not be visible from the outside. The existing pole is slightly taller than 18', and the height of the overall proposed pole will be 24'. The City of Pittsburgh has published extensive placement and design guidelines for small cell equipment and Extenet feels like this proposed design meets the spirit and intent of those requirements and specifications.

Sincerely,

Matt Sturgill
ExteNet Systems, Inc.
Senior Project Manager
3030 Warrenville Rd., Ste. 340
Lisle, Illinois  60532
724-816-7883
Hi Paul – I am so sorry that I keep missing your calls. This is the busiest time of year for us, and it’s been hectic. You have satisfied your requirements for the art commission. The city was on the call taking notes which will be given to the art commission as a record that you had the meeting with us. There is no need for us to give you a letter of support.

Caitlin Fadgen
Director of Economic Development Initiatives
Pittsburgh Downtown Partnership
The Bank Tower
307 Fourth Avenue, Floor 2
Pittsburgh, PA 15222
Cell: (412) 956-5147
Office: (412) 325-0157
www.DowntownPittsburgh.com

Celebrate summer in the city: subscribe to our free weekly e-newsletter to learn about the Allegheny Overlook, Good Eats Outdoors, markets, music, and more happening all season long in Downtown Pittsburgh.
Letter of Support 2

December 1, 2021

Re: Letter of Support—Art Commission of Pittsburgh

Dear Commissioners:

It is my pleasure to write a letter in support of the ExteNet small cell node at Forbes and PNC Plaza. The proposed small cell will be part of the much larger existing network, within the City of Pittsburgh. An existing City of Pittsburgh streetlight will be removed and replaced in accordance with the City of Pittsburgh’s permitting and design guidelines.

In conclusion, Verizon Wireless fully supports the efforts of ExteNet Systems Inc. in bringing forth an application for review and approval with the Art Commission of Pittsburgh.

Sincerely,

Nicole D. Talak
Senior Engineer IV - RE/Regulatory
OPW Network Real Estate
(M) 412-977-3962
Plans, drawings, and/or models which clearly describe the scale of the project
Site plan, renderings, elevations, and isometric drawings (as applicable)
PROPOSED NODE LOCATION
40.440050°, -80.009573°
REPLACE EXISTING 18'-2" AGL PIT METAL POLE
WITH NEW 18'-4" AGL PIT METAL POLE

NOTES ON UTILITIES:
The locations of existing underground utilities are
shown in an approximate way only and have not been
independently verified by the owner or its
representative. The contractor shall determine the
exact location of all existing utilities before
commencing work, and shall be fully responsible for
any and all damages which might be occasioned by the
contractor's failure to exactly locate and preserve
any and all underground utilities.

LEGEND
- PROPOSED NODE
- CATV MH
- COMM MH
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- ELECTRICAL VERTICA...
1. EXISTING SITE UPGRADE - REAR VIEW
   LOOKING SOUTHWEST TOWARDS FORBES AVE

2. EXISTING SITE UPGRADE - SIDE VIEW
   LOOKING SOUTHEAST ALONG FORBES AVE
Photographs of the proposed project location and the adjacent uses/surroundings
Description or samples of materials and colors to be used
## 5G NR AU Product Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>28GHz (AT1K01)</th>
<th>39GHz (AT1K02)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integrated AU</strong></td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>Operating frequency</td>
<td>26.5 ~ 29.5GHz</td>
<td>37 ~ 40GHz</td>
</tr>
<tr>
<td>IBW/OBW</td>
<td>850MHz/800MHz</td>
<td>1.4GHz/800MHz</td>
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<tr>
<td>EIRP</td>
<td>60dBm</td>
<td>59dBm</td>
</tr>
<tr>
<td>Antenna Gain</td>
<td>28dBi</td>
<td>27dBi</td>
</tr>
<tr>
<td>Tx/Rx</td>
<td>4T4R</td>
<td></td>
</tr>
<tr>
<td>Antenna Elements</td>
<td>1,024</td>
<td></td>
</tr>
<tr>
<td>Beam Scan Range</td>
<td>120H / 60V</td>
<td></td>
</tr>
<tr>
<td>Size/Weight</td>
<td>9.6 x 16.8 x 6.9 in (18.1L)</td>
<td>16.8x427 x 9.6x243</td>
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<tr>
<td>Weight</td>
<td>14.5Kg (32lbs)</td>
<td>15Kg (33.1lbs)</td>
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<tr>
<td>Input Voltage</td>
<td>-48VDC / 100 ~ 240VAC</td>
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<tr>
<td>Midhaul (gNB-CU Interface)</td>
<td>10G Optic x 2 ports</td>
<td></td>
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<tr>
<td>Installation</td>
<td>Outdoor Pole/Wall Mount</td>
<td></td>
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<tr>
<td>Clock Synchronization</td>
<td>GPS and IEEE 1588v2</td>
<td></td>
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<tr>
<td>Operating Temperature</td>
<td>-40 deg C to +55 deg C with solar load</td>
<td></td>
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<tr>
<td>Cooling</td>
<td>Natural Convection</td>
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</table>
AC DISCONNECT WITH INTEGRATED SURGE PROTECTION
**Color**
- Value: NCS S 1002-B

**Description**
- **Power input**: 200–250 V AC (Line-Neutral or Line-Line)\(^{1,2}\)
- **Total power output**: 2300 W
- **Maximum power on one output port**: 815 W

**Dimensions**
- **Height**: 353 mm
- **Width**: 300 mm
- **Depth**: 101 mm

**Weight**
- **Value**: 9 kg

---

**ERICSSON POWER 6302**

**SMALL CELL RECTIFIER**
Description of Design/Completion Process (planned or as occurred)

ExteNet is prepared to begin constructing this small cell within a week of the City’s required permits being obtained. Installation should last no longer than 30 days total. Traffic and parking disruptions will be minimal, as work will be completed in phases to minimize impact. The sidewalk where the pole is located will not need to be closed. The traffic lane closest to the sidewalk will require a partial closure, and ExteNet will work with the City and PennDOT to arrange the safest and least obtrusive solution.

Prospective Budget

- Pole Cost = $27,000
- Civil Construction = $24,000

**Total Cost** = $51,000
Dear Commissioners:

This letter shall serve as a supplement to ExteNet’s Application and Presentation to the Commission for the deviation from the City’s design standards for its Streetlight Modification.

ExteNet’s request is for the Commission to grant a one-time deviation to accommodate our customer’s required equipment. Please note that the Streetlight Modification accommodates both the 4G and 5G equipment of our carrier customer, eliminating the need for separate installations in the designated area in order to accommodate our customers required equipment and to provided enhanced wireless services within the area.

At this time, ExteNet does not have any requests for this type of installation by any of its customers, which would necessitate a variance from the design standards.

We appreciate your attention to this matter. Please confirm that this matter will be placed on the Arts Commission Agenda for its next scheduled meeting on January 26, 2021.

Sincerely,

Linda Rooney

Linda Rooney,
Senior Counsel, Legal and Regulatory
ExteNet : Enhancing Pittsburgh’s Wireless Networks

Existing Site Upgrade / Small Cell Installation

Site Name: PIT_Triangle_SC_19
Approximate Address: the Right-Of-Way at 472 Wood Street
Who Extenet Is:

ExteNet Systems Inc. was founded in 2002 and is a leader in distributed wireless and wired telecommunications solutions. They currently have over 600 distributed networks in operation across North America that serve AT&T, Sprint, T-Mobile, Verizon Wireless, Fortune 100 enterprises, and the U.S. Federal Government to bring 4GLTE and now 5G services to some of the most prominent venues and metro areas in the country.

A portion of the important work they do is to strategize with wireless service providers to design, construct, and operate solutions that meet or exceed requirements for system coverage and performance in areas where the availability or efficacy of traditional commercial cell towers might be limited. One of the options to help the public enjoy increased network coverage and capacity is to build infrastructure called Small Cells in areas where networks are struggling. ExteNet owns the small cell and makes the structure available to all of the carriers to utilize. This unique approach benefits the public in two ways: first, ExteNet provides a solution for network enhancement that wasn’t available in the area previously, and second, only one small cell is constructed that can be shared, instead of one small cell needing to be built for each carrier.
The purpose of this project is to improve 4G coverage and add 5G service in the downtown Pittsburgh area.

The problem ExteNet is solving with this new small cell is twofold:

First, the tall buildings that make up the beautiful Pittsburgh skyline can prevent the signal from existing sources to provide the required coverage in some areas. The signal must reach a device in order to use the service. Situations where you have “no bars” or a call drops are indicative of having less-than-optimal network coverage.

Second, the demand for data has grown exponentially. People are using huge amounts of data by streaming music and movies, having video conference meetings, and relying on GPS to navigate. Additionally, this demand is multiplied further by the sheer number of devices per person, like smartphones, tablets, and smart watches. This explosive demand puts stress on the capacity of the network. Capacity relates to the number of users who can use the network to access data, and how quickly that data can be delivered to their device. If you’ve ever been in a situation where could not get a web page or app to load despite having “full bars”, you have experienced an instance of less-than-optimal network capacity.
The Two-Part Problem:
1.) Architecture in Downtown Pittsburgh limits network coverage.
2.) Increased demand for data challenges limited network capacity.
What's the Solution?

If we can’t change the position of the buildings Downtown, and we can’t reduce the demand for data, what’s the solution?

The solution is to construct a small cell in the area of the network that requires support. A small cell improves coverage because the signal is closer to users to avoid being blocked by tall buildings and improves capacity because it is designed to serve a small area, making it much less likely that the network will get overwhelmed by demand. Small cells also will improve network service for Pittsburgh first responders across a broad range of emergency situations from the police.
What is a Small Cell?

Generally, a small cell is composed of a small, low power antenna and electrical equipment, and are attached to a structure like a utility pole or streetlight. The structure could be brand-new, or an existing utility pole or streetlight could be removed and replaced in the same location. In order for them to function, they need to be connected to the electrical and fiber service already installed underground. They occupy less space and are significantly less intrusive than a traditional cell tower. The final location and appearance of a small cell is influenced heavily by the surrounding area’s aesthetics and the city’s guidelines.
The Proposed Location

This small cell is proposed on Forbes Avenue along the south side of the Tower at PNC Plaza. This specific spot was chosen because network performance analytics clearly showed an ongoing issue with coverage and capacity along Forbes and Wood streets in this exact area.
A Tool to Help Pinpoint Areas of Network Stress- A propagation map illustrates a model of coverage showing an approximation of network signal strength. When someone makes a call or sends a text, data like whether the call was dropped or if the text failed to send is stored and analyzed by carriers. In the image on the left, you can see the quality of network coverage and capacity represented by different areas of color. The areas with inadequate coverage and or capacity are represented by dark purple, blue, and red, and are the reason this area was chosen for the installation. With the addition of the proposed small cell, you can see that network quality in the immediate area and surrounding blocks of the Forbes Avenue and Wood Street corridors are changed to a solid circular area of improved coverage represented by the color orange.
What Will it Look Like?

The new pole will be metal powder dipped black and consist of a 4G and 5G antenna within a matching shroud covering mounted to the top of the pole. Two streetlights will be added that match the streetlights in the surrounding area, and one set of banner arms and parking signage on the existing pole will be transferred to the new pole. The pedestal at the base will conceal power equipment, and all cabling will be run inside the pole itself as to not be visible from the outside. The existing pole is slightly taller than 18’, and the height of the overall proposed pole will be 24’. The City of Pittsburgh has published extensive placement and design guidelines for small cell equipment, and the design proposed meets all of the requirements and specifications.
What is the Plan for Installation?
Questions?

Existing Site Upgrade / Small Cell Installation

Site Name: PIT_Triangle_SC_19
Approximate Address: the Right-Of-Way at 472 Wood Street

Presented By:
Paul Whitley– Land Use Project Manager
Network Building + Consulting
Authorized Representative for ExteNet Systems, Inc
pwhitley@nbcllc.com
443-752-0338