December 8, 2015

Mr. John Butler
Development Services Planner
Chatham County-Savannah Metropolitan Planning Commission
110 East State Street
Savannah, Georgia 31412

RE: Verizon Wireless – DAS – Small Cell Implementation
MPC Case # T-15-004236-COA

Dear Mr. Butler,

At your request, on behalf of the Chatham County – Savannah Metropolitan Planning Commission (“MPC”), CityScape Consultants, Inc. (“CityScape”), in its capacity as telecommunications consultant for MPC, has considered the merits of an application provided on behalf of Cellco Partnership d/b/a Verizon Wireless (“Applicant”) for the implementation of a Franchise Agreement for newer technology commonly referenced as DAS (Distributed Antenna System) or Small Cell deployment. The project name is Verizon Neutral Host ODAS (“ODAS”). The City worked with Verizon to identify specific locations in the downtown area and is creating a public/private working arrangement to facilitate the project; see figure 1. The City has entered a Master Lease arrangement with Cellco Partnership initially to develop fourteen (14) facilities as part of Phase 1 of the project. Twelve (12) proposed poles will be replacements of existing 29.5 foot wooden poles with new concealed 31 foot metal poles designed for the purpose of providing internal space for electronic equipment and a top mounted antenna; see figures 2a, 2b & 2c. The two (2) remaining poles (SV19 and SV21) will attach a new top mounted antenna to the existing pole and mount an equipment box at ground level. The Applicant has identified a total of twenty-six (26) potential ODAS locations of which 12 of the 26 locations may be addressed at a future date as part of Phase 2 of the project.

The identification of usable wireless facilities within the Savannah Historic District is a complicated undertaking. The Telecommunications Act of 1996 (“The Act”), the controlling document for all wireless telecommunications deployment, has carved out strong limitations for deployment of wireless facilities within any registered historic district, as to not alter the character and protect the visual impact accordingly. CityScape developed the MPC’s Wireless Telecommunications Master Plan in 2007 (“Master Plan”). It was identified the historic districts had existing wireless service limitations and improvements were required. At the time of the Master Plan small cells did not exists and there was a concern the only option could be use of existing Church Steeples, but that would not satisfy the projected future requirements. As this newer small cell technology has evolved it became clear that would be a viable option; and this proposal will fill the needs of four (4) carriers, yet the area has seven carriers currently. It is anticipated additional mergers will resolve much of the needs, if not more poles could be constructed.
Each proposed pole shall be designed to accommodate Verizon and up to three (3) additional wireless service providers. The Applicant submitted a drawing of a ConcealFab Corporation pole. The information on the drawing states the examples are proprietary information, but once it was submitted to the MPC the information became public. The drawing is somewhat limited but appears to show the mounting for broadband power amplifiers and receivers sufficient for the frequency bands used in Chatham County to provide the wireless services currently utilized for Cellular/PCS/CDMA/GSM/SMR/UTMS/LTE/AWS technologies. The proposed antennas are also multi-band devices with a center of radiation on each replaced pole of thirty (30) feet-two (2) inches in height. This height is an acceptable antenna elevation for small cell service and will be a sufficient distance to eliminate any public exposure concerns, to include, but not limited to double decker busses even with up to four (4) wireless service providers operating simultaneously. For the facility to be concealed it must resemble a standard streetlight, and the submittals do appear to support that. The existing wooden poles to be modified for sites SV19 and SV21 are to add a new antenna to the pole top and there will be a new equipment box installed at ground level. The questions remain: Will the proposed equipment box be sufficient ground space for four total wireless providers, and will the proposed antennas be sufficient bandwidth for four total wireless providers? It should be noted there is limited ground space at each location; see example ground area space for sites SV19 and SV21 in figures 3a and 3b.

The Master Plan clearly illustrates a definitive need for future facilities in the subject area, which stretches from the river through downtown, business zoning districts to residential zoning districts. The planning and details in this proposed public/private venture has been extensive and CityScape can find minimal aspects that have not been considered. The electrical power needs appear to be computed and appropriately absorbed into the leasing document.

The Applicant did not provide the current service level however that was not necessary because the purpose of this application has an immediate need in times of increased downtown populations such as the Georgia History Festival Parade, Veterans Day Parade, Christmas Parade and famous St. Patrick’s Day Parade. These events in the past have required the installation of COW’s (carriers on wheels) to provide the required service into the downtown area. The heights of the downtown buildings and intertwined historic parks and houses cause a strain for all wireless service providers to assure a steady signal and continuous quality service throughout the entire metropolitan area. Savannah has substantial pedestrian traffic from tourists that continually use their smartphones not only as a guide throughout the historic district, but takes photos and then sends them out over the internet, all requiring more wireless bandwidth. All of these considerations and the transition from the standard cellphone voice/text activity to newer technology of high speed wireless broadband make this an easy decision for the wireless providers to use Savannah as one of the first communities nationwide to undertake this wide-area plan and development for new infrastructure. The Savannah Historic District will become a model for modern technology design. The projected small cell service area for Phase 1 coverage is illustrated in figure 4a. Figure 4b represents the total projected coverage of the full small cell system upon completion of Phase 1 and Phase 2.
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There is no requirement for FAA (Federal Aviation Authority) documentation and therefore CityScape finds that the Applicant’s submittals meet all standards to justify the requested total support structure heights as specified at each location. CityScape further confirms that the submitted designs and plans for the proposed new facilities were developed according to accepted practices of Radio Frequency propagation engineering and the persons completing all work are sufficiently qualified within their respective disciplines. The proposed plans, if built as designed, should be sufficient to provide improved service to not only Verizon but for up to three additional wireless service collocators in the foreseeable future. The Applicant provided an all-encompassing FCC compliance statement for all proposed facilities; figure 5.

The Applicant is currently in process of producing the relevant State Historical Preservation Office (SHPO) documentation required for all new wireless support structures. A passing structural analysis report for each proposed structure shall be submitted with each building permit application.

Based upon the submitted documentation by the Applicant, compliance with all aspects of federal, state and local codes, CityScape recommends the approval of this application with the following condition:

1. All feed lines shall be installed within the spine of the support structures and all access ports shall be sealed to prevent access by birds and other wildlife; and,

2. The Applicant shall separately submit for site plan approval for each individual facility to ascertain which type of lighting configuration is required to provide the necessary level of public lighting safety; and,

3. The Applicant shall confirm the ground mounted equipment boxes at sites SV19 and SV21 will be sufficient in size to accommodate all four (4) service providers; and,

4. Each support structure shall be designed and constructed to allow access only by authorized personnel.

I certify that to the best of my knowledge all of the information included herein is accurate at the time of this report.

Respectfully submitted,

[Signature]

Richard L. Edwards  
FCC Licensed  
PCIA Certified  
CityScape Consultants, Inc.
Figure 1 – Identified Site Locations
Colors Red, Orange, Green represents (Phase 1) and Yellow represents (Phase 2)
Figure 2a – Support Structure Type A
Figure 2b – Support Structure Type B
Figure 2c – Support Structure Type C
Figure 3a – Ground Area Space SV19
Figure 3b – Ground Area Space SV21
Figure 4a – Initial Coverage Phase 1
Exclude White Area
Figure 4b – Total Projected Coverage
Applicant Certification

This affidavit acknowledges that the applicant represents and certifies that the following are true and accurate:

1. All statements, certifications and representations supplied in this application are true and correct and the person(s) signing the application is/are duly authorized to execute this application and otherwise to act on behalf of the applicant;

2. The proposed WTF will comply with FCC regulations regarding susceptibility to radio frequency interference (RFI), frequency coordination requirements, general technical standards for power, antennas, bandwidth limitations, frequency stability, transmitter measurements, operating requirements and any and all other federal statutory and regulatory requirements relating to RFI;

3. Where a collocation is proposed, the applicant, together with the owner of the facility have provided a composite analysis of all users of the facility to determine that the additional antenna will not cause RFI.

4. The proposed WTF will comply with and at all times will be maintained and operated in accordance with, all applicable FCC rules and regulations with respect to environmental effects of electromagnetic emissions.

5. All improvements constructed as part of the WTF will comply with all applicable building codes.

Laura E. Mayers 7/28/2015
Applicant Signature Date

Printed Name

Figure 5. FCC Compliance Statement