

**MINUTES  
CITY OF ORMOND BEACH  
CITY COMMISSION  
WIRELESS FACILITY WORKSHOP**

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**October 18, 2016**

**5:30 p.m.**

**City Commission Conference Room**

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**I. CALL TO ORDER**

Mayor Ed Kelley called the meeting to order at 5:30 p.m.

Present were Mayor Ed Kelley, Commissioners James Stowers, Troy Kent, Rick Boehm and Bill Partington, City Manager Joyce Shanahan, Assistant City Manager and Public Works Director Ted MacLeod, City Attorney Randy Hayes, City Engineer John Noble, Susan Rabold, Project Manager, CityScape Consultants, and Elizabeth Herington-Smith, Government Relations Manager, CityScape Consultants.

Ms. Joyce Shanahan, City Manager, explained that earlier this year the city had brought an ordinance to the City Commission about telecommunications in the city's right-of-way. She noted that that ordinance was held in abeyance until such time as a wireless communication workshop could be held and consultants could be available to answer questions. She stated that during that time, two firms had registered with the city and would endeavor to receive permits from the city's engineering department regarding placing telecommunication facilities in the right-of-way. She noted that this workshop was more informational in nature and that staff was not seeking any specific direction from the Commission.

Mr. John Noble, City Engineer, stated that the key objective for this workshop was for CityScape Consultants to discuss the telecommunications market, current and future technology trends, and communication laws which affected what the city could do with regards of controlling what went in their right-of-ways. He noted that while the city obviously wanted to provide services, they were also concerned with aesthetics. He stated that they would also look at the pros and cons of moving forward with a telecommunications master plan.

Ms. Susan Rabold, Project Manager, CityScape Consultants, stated that CityScape Consultants was based out of Florida but had offices in Georgia, North Carolina, and Washington, D.C. She noted that she was out of the North Carolina office and that Ms. Herington-Smith was out of the Florida office. She explained that they only served local government clientele so that they could provide unbiased information, noting that they neither owned or built networks. She stated that they assisted local governments with wireless master planning, site application reviews, ordinance reviews, and leasing and development of public land.

**II. INTRODUCTION TO WIRELESS TELECOMMUNICATIONS**

Ms. Rabold stated that the industry started with a phone that looked like a suitcase, which was the first generation, or 1G. She noted that it operated in a low megahertz (MHz) frequency and operated much like an AM or FM radio station. She stated that the second generation, or 2G, came about in the 1990s, and was in the higher frequency range with much smaller handsets. She noted that they had a few features to them. She

stated that in the early 2000s, the third generation, or 3G, service began being offered and explained that those were about improving data speeds. She stated that 4G and LTE, with the advent of the iPhone, smartphones, and tablets. She noted that now it was not only about coverage, as it was with the earlier generations, but also about network capacity. She stated that there needed to be a lot of broadband for the internet now in order for the handsets and tablets to interconnect and utilize all of their features.

Ms. Rabold stated that three variables impacted the efficiency of a network – spectrum, coverage, and capacity. She explained that spectrum determined a lot about what a network could provide. She stated that the low frequency networks, which were first generation, could provide great coverage because the signal propagated a great distance. She explained that one site could have an antenna that could propagate close to five miles around here because there was not a lot of topography or ambient tree height. She noted that with the higher frequencies, just changing that variable decreases the distance in which the network coverage would cover. She gave an example of the same geographic radius described for the low frequency facility, and noted that it would require about three to four antennas to cover it. She noted that the spacing of the sites was greatly dependent on which operating frequency they had, which was based on the spectrum.

Ms. Rabold stated that providing coverage to the subscriber base was the primary goal with the first and second generations. She explained that now the coverage area continued to shrink because of the number of subscribers using the network and the amount of data that they were using. She noted that the only way to fill in those gaps was to add more facilities. She explained that for a rural area there could generally be fewer sites but in a more urbanly dense area the footprint would be more facilities which were closer together.

Ms. Rabold stated that the need for network capacity was skyrocketing. She noted that the amount of data being used was increasing, which put a tremendous burden on the existing infrastructure. She explained that in order for handsets and mobile devices to work efficiently, there had to be more facilities. She stated that a lot of times people would ask whether there were already enough towers or already enough antennas. She stated that they would continue to be built in order to provide efficiencies to the networks that they had.

Ms. Rabold stated that the most common infrastructure were free-standing towers. She noted that the equipment on them could be microwave, which were dish antennas commonly used for backhaul, omni-directional whip antennas, and panel antennas with remote radio head units added to them to boost power.

Commissioner Boehm asked what backhaul was; whereby, Ms. Rabold explained that backhaul was actually the landline back end connection of the facility to the mainland. She noted that the towers were not freestanding networks and explained that they tied into coax fiber optic cable and switching stations. She further explained that the distance between the facility and the switching station, which could be a mile away, was the backhaul. She noted that those antennas had to be mounted above building height and above the ambient tree height in order for them to maximize their network coverage and capacity. She stated that they did not operate alone and explained that each of those antennas had a feed line that they were connected to.

Ms. Rabold noted that the feed line went into the equipment cabinet, where the signal was processed. She stated that the size of the equipment cabinet varied on the spectrum. She noted that the lower frequency service providers had a much larger footprint for their equipment cabinet. She explained that the reason for that was that it generated a lot more heat, noting that the equipment inside the shelter did not consume the entire shelter and that a lot of the space inside there was to allow for cooling.

Mayor Kelley asked if the federal government had limited the amount of low frequencies that could be used; whereby, Ms. Rabold stated that they controlled the spectrum. Mayor Kelley stated that the 800 and 900 MHz had been restricted for emergency communications.

Ms. Rabold noted that they still used 700 and other lower frequencies. She noted that lower frequency encompassed a wide range of spectrum.

Mayor Kelley stated that that was the frequency that could go the greatest distance; whereby, Ms. Rabold confirmed this. She noted that that frequency could also penetrate buildings better but explained that it did not have the capacity that higher frequencies did. She stated that a lot of service providers were trying to own and operate in both low and high frequencies. She explained that the high frequency ground equipment was much smaller.

Mayor Kelley noted that there had to be more units closer together for high frequency.

Ms. Rabold stated that the ground space was smaller as those cabinets were usually about two feet by four feet. She stated that the challenges for cell siting became locating the sites where people were living working and playing, because that was where the subscriber base was, as well as speed to market and finding structurally sound locations on which to mount the equipment. She noted that the antennas did not weight very much but the coax cable weighed a lot. She stated that the infrastructure that was deployed for the first and second generations became the building blocks for the third, fourth, fifth, and sixth generations. She noted that the network did not have to be rebuilt each time that they launched a new service.

### **III. WIRELESS TELECOMMUNICATIONS REGULATORY PARAMETERS**

Ms. Rabold stated that what local governments were permitted to do was defined by federal guidelines and state legislation. She referenced the Telecommunications Act of 1996, which preserved local zoning authority, provided that the local government did not discriminate between service providers. She noted that less infrastructure was used for low frequency and more was used for high frequency. She explained that there were localities that were trying to create spacing requirements which had the effect of discriminating against the higher frequency service providers, because they could not operate on the same footprint as the spectrum made it impossible. She stated that there could not be policies that offered restrictions that not all of the service providers could meet because of functionality in how their network operated.

Mayor Kelley stated that a lot of the demand would increase because a lot of the cell providers were offering unlimited data. He noted that they controlled the

amount of usage by limiting the amount of data that could be transferred. He stated that unlimited data plans would only increase demand.

Ms. Rabold stated that the applications available and the streaming video and sharing services increased the amount of bandwidth that was needed, which required more and more sites. She noted that written decisions had to be provided for applications, whether the application was approved or denied. She explained that the service providers must be allowed to deploy their systems, and the city had to act expeditiously on the request. She noted that the city could have development standards but that they could not supersede or undermine federal jurisdiction. She stated that the enabling legislation also opened up the use of federal properties, rights-of-way, and easements for the leasing of new telecommunications infrastructure, which promoted the use of public properties.

Ms. Rabold noted that there were certain things that could not be regulated. She stated that the city could not regulate the lighting, and explained that if the Federal Aviation Administration required a facility to be lit then it must remain lit. She noted that the city could negotiate certain aspects however, such as having a red light by night and a white light by day. She stated that the city could not regulate the radio frequency emissions. She noted that a request could not be denied based on concerns of emissions. She explained that the federal government had done a lot of work in that area and stated that the power from these facilities was low power and therefore non-ionizing so it would not change the molecular structure of a cell. She stated that the World Health Organization and American Cancer Study had performed independent studies and reached the same conclusion, noting that the radio frequency exposure was so low that human and animal health was not affected.

Commissioner Kent asked Ms. Rabold if she had any of those studies available; whereby, Ms. Rabold indicated that she did and would be happy to provide them to Commissioner Kent.

Ms. Rabold stated that recently the government implemented Section 6409(a) of the Spectrum Act. She explained that service providers had been complaining that they were not able to deploy their networks expeditiously. She noted that the original language indicated that local governments had to expeditiously consider cases but explained that no time factor had been delineated. She explained that as of a year ago, there existed new regulations specifying that state and local governments could not deny, and must approve, eligible facility requests for modifications, collocations, and replacements on existing wireless towers and base stations that do not substantially change the physical dimensions of each tower or base station.

Ms. Rabold further explained that it went on to say that the existing facility, if it had been reviewed by a local government review process, was considered eligible. She noted that it was now important to distinguish whether facilities were eligible. She stated that they had reviewed local government inventories and found rooftop antenna attachments and towers that actually did not go through

an eligible facility process. She explained that that could have been due to there being no regulations existing at the time or because the facilities were installed with just an electrical permit and did not go through a building review process. She noted that those were not eligible and had a different review criteria in place. She explained that if they were eligible it would be a different process.

Ms. Rabold stated that there was a new definition for transmission equipment, which was “equipment that facilitates transmission of any Commission-licensed or authorized wireless communications service,” including but not limited to antennas, receivers, cables, cabinets, and power supplies. She noted that it used to be that they only looked at personal wireless service equipment. She stated that now they looked at hotspots and Wi-Fi and a host of other types of facilities that were not necessarily covered before. She noted that when the city re-did their ordinance, they needed to make sure that they were not just regulating personal wireless service equipment, or if they were, they needed to separate it out and clearly state that.

Mayor Kelley gave an example of Bright House Networks wanting to provide hotspots; whereby, Ms. Rabold noted that that would now come under the definition of transmission. She stated that that could be included or separated and given their own set of development standards. She noted that either way it had to be clear.

Ms. Rabold stated that a wireless tower was now defined as a structure built for the sole or primary purpose of supporting any Commission licensed or authorized antennas and their associated facilities. She stated that a base station was equipment and non-tower supporting structure at a fixed location. She noted that it used to be that attachments on water tanks were called attachments or collocations. She stated that now wireless towers were structures built just for that purpose and base stations were everything else. She noted that examples of transmission equipment that were towers were non-concealed, commercial and private mobile, and amateur radio. She stated that other transmission equipment now included satellite, emergency services, broadcast facilities, and microwave. She noted that dispatch radio, which did not used to be considered part of the definition, was now included, as were Wi-Fi hotspots.

Ms. Rabold stated that wireless towers, which were built for the sole purpose of the equipment, included non-concealed monopole self-support towers, lattice self-support towers, and guyed towers. She noted that there were different strategies to try and conceal the poles, such as wrapping and painting. She stated that there were some fully concealed facilities such as flag poles, slick sticks, and three-legged poles. She noted that those antennas were flush-mounted tightly inside with fiberglass casing. She stated that examples of other concealed towers included silos, cover over top, and bricks and louvers. She noted that there were also dual purpose concealed towers such as a banner pole with functioning lighting. She also noted a faux fire tower and a faux tree as examples of concealed wireless towers.

Ms. Rabold stated that examples of non-concealed base stations included light stanchions, water tank attachments, and silo attachments. She noted that other examples of non-concealed base stations included rooftop antennas and towers, and billboard attachments. She stated that base stations could also be concealed and provided clock tower, rooftop, and water tank examples. She displayed examples of utility easements being utilized in rights-of-ways. She noted that they could be freestanding facilities or be mounted.

Ms. Rabold explained that some clarifications were recently made in the Federal Communication Commission (FCC)'s Report and Order which dictated how modifications of these facilities had to be approved. She explained that if a facility was existing, and eligible by virtue of going through an approval process for the site, any collocations or changes – provided that they met the definition of not being a substantial change – had to be approved. She noted that for towers outside of the right-of-way, they would be allowed to increase that tower by 20 feet or 10 percent, whichever was greater. She stated that for towers in the right-of-way, or any base station, they were allowed to increase the height of the tower or base station by 10 percent, or 10 feet, whichever was greater.

Commissioner Boehm asked if that was a onetime only thing.

Ms. Rabold noted that it was intended to be one time only but explained that that had yet to be challenged. She stated that they would not know for sure until that happened. She explained that antenna averaged around eight feet in height. She noted that if a tower was 150 feet, then increasing it ten percent would be an additional 15 feet, so they could increase it to the higher of the 10 percent or 20 feet, so they could increase it 20 feet to 170 feet. She explained that that would still meet the threshold of a non-substantial change.

Ms. Rabold explained that for base station medication, the increase could be 10 percent or ten feet, whichever was greater. She noted that that meant that they could increase the height of a 30 foot facility up to 40 feet. She explained that once an antenna went on a building and had been approved that entire facility would then become a base station. She clarified that it was not just that specific location where the antenna was placed, but the entire rooftop which would be designated as a base station. She stated that any service provider that wanted to be included in that facility had a right to do so, provided that it was an eligible facility and they met the criteria. She explained that it was very important that concealment be part of the ordinance and part of the approval process if the city wanted any future base stations to have to be concealed.

Ms. Shanahan asked if a more strict approval process would have to be undertaken if they were not eligible.

Ms. Rabold stated that if they were not eligible they could be required to go through a more substantial review process. She noted that one of the other criteria was the dimensions of the tower or base station. She stated that for towers outside of the right-of-way, if the proposed collocation protruded more

than 20 feet, or if a base station was in the right-of-way protruding more than six feet, then it did not meet the criteria. She explained that if it met those dimensional requirements in width, then it had to be allowed. She stated that the particular guide tower in the example was about three feet wide, and noted that the existing antenna was ten feet typically from the edge of the tower, explaining that it could actually go out to 20 feet. She noted that if it went beyond that, it would be a substantial change. She stated that if it fell within that threshold and that criteria however, it had to be allowed.

Commissioner Boehm stated that he assumed that when Ms. Rabold said protrude, she meant protrusion at a level above where humans might interact with it. He noted that he believed she did not mean where the protrusion could be a hindrance to individuals walking on sidewalks or the like.

Ms. Rabold stated that that needed to be stated in the city's development ordinance. She explained that it was not so much the antenna that may intrude, although she had seen that occur with ones that were mounted rather low, but the equipment cabinet that could be an issue. She stated that it needed to be stated in the city's ordinance that that should not interfere with street signage and directional signage.

Commissioner Kent stated that he was looking at the photograph that Ms. Rabold had displayed in her presentation and thought about how unattractive it was.

Ms. Rabold noted that that picture depicted a non-concealed facility. She stated that the city could put in their ordinance that it needed to be concealed.

Commissioner Kent noted that there were some parts of the community which had underground utilities.

Ms. Rabold stated that deciding what to do with underground facilities was a complex issue. She explained that these were all standards that could be discussed as a community and be adjusted through policies. She noted that more and more facilities would be located in the right-of-way.

Mayor Kelley stated that he did not think the city currently had any antennas located on top of utility poles.

Ms. Rabold noted that she and Ms. Herington-Smith drove around the city that day and could not recall seeing any. She stated that they observed a lot of base stations with antenna located on buildings. She explained that those were the first two criteria but noted that there were six other criteria that had to be met in order to get the expedited review. She noted that the installation could not exceed the standard number of new equipment cabinets and could not involve any additional excavation outside of the current site. She explained that if the site was concealed and the addition of the equipment would make it no longer concealed or would alter it in such a way that it no longer met the concealment criteria, then that would not be permitted. She noted that if it did not comply with

the conditions prior to the approval of that site, it would be considered a substantial change. She explained that the important of that in the timing, noting that she would elaborate further on that.

Ms. Rabold explained that in Florida there was another layer of standards in addition to the federal ones. She stated that Florida Statute 365.172(12) was enacted to facilitate implementation and quicker deployment of collocations and services for E911 service. She stated that collocation was encouraged by the state of Florida. She stated that collocations that did not increase tower height, ground space or compound, and were similar to the initial installation, were only subject to building permit review. She explained that the modification and replacement of a tower was not subject to public hearing *if* no height increase was occurring and if it a non-concealed facility was being replaced with a concealed facility. She stated that collocations and modifications must comply with pre-existing land development regulations, including aesthetics from the original request. She noted that some of this was contrary to what the federal government put into place.

Ms. Rabold explained that there were some nuances in Florida. She stated that setback requirements needed to be only the minimum necessary to satisfy aesthetic or safety concerns. She noted that they could only exclude placement in residential districts if they could demonstrate that the exclusion in the residential did not have the effect of prohibiting service. She stated that that would become more and more difficult to demonstrate, especially when the majority of households no longer had landline telephone service and were using their wireless phones as they primary or only source of telephone service. She stated that fees, including outside review fees, must be limited to specifically identified reasonable expenses. She noted that local government could only request applicant certified compliance with FCC and FAA regulations, explaining that they could not ask anything further. She stated that the city could not inquire about the applicant's business plans or site justifications.

Ms. Rabold stated that the city could continue to have zoning standards that discussed the placement and noted that the city could require the applicant to show existing locations within their search area. She reiterated that they could not get into discussing their actual business or service plan.

Mayor Kelley asked if that meant not asking whether they were going to provide service to one provider over another; whereby, Ms. Rabold confirmed that was correct. Mayor Kelley noted that you could not restrict based on service provider.

Ms. Rabold stated that if an applicant met all six qualifiers of FCC Section 6409(a) it had to be approved within 60 calendar days, but explained that in Florida, according to Florida Statutes 365.172(12), provided that there was no height increase or ground space change, the approval had to be issued in 45 business days. She explained that for a non-eligible facility, 6409(a) provided 90 calendar days whereas Florida was still 45 business days. She explained that for new towers, 6409(a) provided 150 calendar days whereas Florida allotted 90



business days. She noted that the business days did not include the tolling. She explained that if an incomplete application was submitted the clock would stop and would not restart until they resubmitted a complete application. She noted that eligible facility requests had to be approved or they would be deemed granted.

Ms. Rabold stated that Florida also had statutes relative to the use of right-of-way for utilities. She noted that there would be more and more requests to use the right-of-way. She explained that this was due to the initial tower deployment being built primarily for the coverage, noting that they were limited in the way in which they could meet capacity needs in densely populated areas, or areas where the subscriber base was using a lot of data. She explained that the only way that they could meet that demand was through smaller facilities, which they needed a lot more of. She stated that their strategy was to maximize the use of the rights-of-ways and utility easements by going on that infrastructure. She stated that Florida Statute 337.401 defined any electric transmission, telephone, telegraph or other communication service lines, pole lines, poles, railways, ditches, sewers, water, heat or gas mains, pipelines, fences, gasoline tanks and pumps, or other structures, as a utility.

**IV. INTRODUCTION TO WIRELESS TELECOMMUNICATIONS MASTER PLANNING**

**V. QUESTIONS AND OPEN DISCUSSION**

**VI. ADJOURNMENT**

The meeting was adjourned at 6:56 p.m.

Transcribed by: Colby Cilento