

# Development Review Staff Report

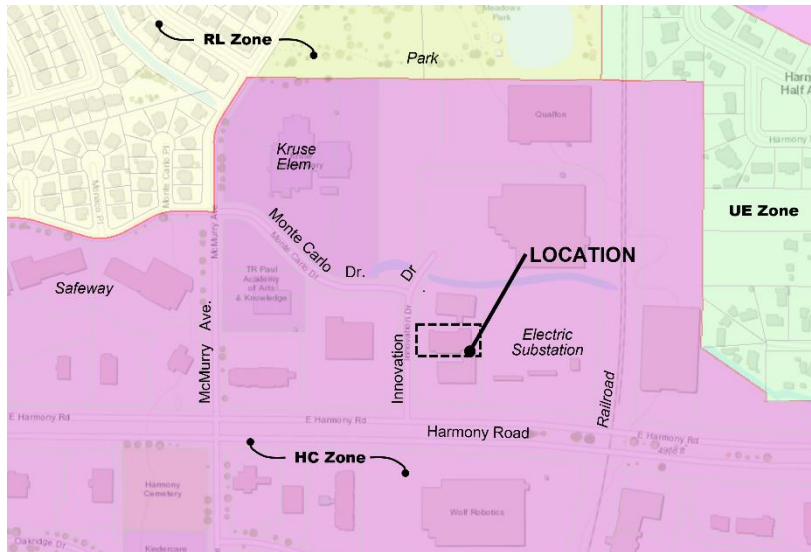
Administrative Hearing: January 24, 2022

## 4518 Innovation Drive Wireless Telecommunication Facility #PDP210010

### Summary of Request

This is a request for a Project Development Plan (PDP) for an 85-foot cell tower on a lot within an existing business park along Harmony Road.

### Zoning Map



### Next Steps

If approved by the Hearing Officer, the applicant will be eligible to proceed to filing of final plans and then to a building permit.

### Site Location

4518 Innovation Dr., on the second lot north of Harmony Road, in the Golden Meadows Business Park subdivision  
Parcel ##8731406010

### Zoning

Harmony Corridor (HC) zone district, within the Basic Industrial Non-Retail Employment Activity Center land use designation in the HC zone

### Owner

Vertical Bridge - Lessee  
750 Park of Commerce Drive Ste. 200  
Boca Raton, FL 33487

### Applicant/Representative

Mike Bieniek, AICP  
LCC Telecom Services  
10700 W. Higgins Rd., Ste. 240  
Rosemont, Illinois, 60018

### Staff

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### Contents

1. Project Introduction .....	2
2. Land Use Code Article 2 Procedural Requirements .....	4
3. Land Use Code Article 3 - Applicable Standards .....	4
4. Land Use Code Article 4 – Applicable Standards .....	7
5. Findings of Fact/Conclusion .....	7
6. Recommendation .....	8
7. Attachments .....	8

### Staff Recommendation

Approval of the PDP, with a condition.

## 1. Project Introduction

### A. PROJECT DESCRIPTION

- This is a request for a Project Development Plan (PDP) to construct an 85-foot tall wireless monopole facility (cell tower) for use by T-Mobile at the rear southeast corner of the Rocky Mountain Archery building which exists on the subject lot.
- The antenna array is a typical 3-axis triangular array approximately 17 feet wide, with no concealment or “stealth” design.
- The location is adjacent to an electric substation and a large power transmission line. Those adjacent facilities create a setting that is already characterized by an assortment of similar-height poles.

The image below is from the applicants’ narrative and shows the public view with the highest visibility of adjacent poles, on westbound Harmony Road. The antennas atop the powerline pole on the left are no longer there; the proposal is related to replacing lost coverage due to their removal.



**Westbound Harmony Road View with Proposed Facility**

- The subject lot is in a business park with supply/distribution/light industrial buildings.
- The specific location in the rear of the lot is an existing stormwater detention area. A raised platform has been designed to accommodate equipment and walkway access through design iterations with stormwater utility staff to accommodate the facility without harm to the detention function.
- Needed access easements are shown on the plans.

## B. SITE CHARACTERISTICS

### 1. Surrounding Zoning and Land Use

	North	South	East	West
<b>Zoning</b>	HC, Harmony Corridor, Basic Industrial Non-Retail Activity Center	HC, Harmony Corridor, Basic Industrial Non-Retail Activity Center	HC, Harmony Corridor, Basic Industrial Non-Retail Activity Center	HC, Harmony Corridor, Basic Industrial Non-Retail Activity Center
<b>Land Use</b>	Supply/distribution warehouse/office next door, and a converted large light industrial building now used for a charter school	Supply/distribution warehouse/office	Electric substation	Supply/distribution warehouse/office

### 2. Site History

The land was annexed in 1977 as part of the Harmony Annexation. The site is within the Golden Meadows Business Park approved in 2003.

## C. OVERVIEW OF MAIN CONSIDERATIONS IN STAFF'S REVIEW

**Location.** This was the first consideration starting about two years ago. Staff encouraged the applicants to seek a different location that could possibly offer more opportunity for a “stealth” facility to be incorporated into an existing structure. Staff’s understanding is that applicants have explored other potential alternatives for a year or more. No other property owners in the area have been interested according to the applicants. Furthermore, few buildings in the adjacent area are more than a single story, so suitable architectural opportunities appear to be very limited.

The specific location on the lot involved technical issues of vehicle access, utility easements and a platform for ground equipment over an existing stormwater detention area on the lot. Those engineering issues were resolved with staff support.

**Appearance.** After the question of location was resolved, the next fundamental consideration has been consistency with the surrounding “architectural character” and “natural environment” as required by a standard, subsection 3.8.13(C)(2). This is a basic consideration that is not resolved with staff support at the time of hearing. It is the primary consideration for the City in its local government role. For the hearing, staff is recommending a condition of approval for this aspect of the facility.

Staff initially commented that a pole-form antenna array should be used because of the opportunity for such a facility to be consistent and blend with the numerous metal poles in the adjacent substation and transmission line. Staff sees numerous examples of this approach to cell tower facilities with ‘unipoles’, cylinder shaped canisters, or slimline arrays with antennas tucked tight to the pole. Also, staff has spoken with a concealment engineering firm that provides these kinds of solutions.

A recently adopted Wireless Telecommunications Master Plan for the City calls for concealment or semi-concealment of antenna arrays; and it includes a variety of example solutions that could comply with code standards. That plan document is attached. Page 5, 10, page 32, page 59, and pages 67-129 are notably pertinent to the issue.

The applicants have stated a slim pole-form approach is no longer feasible in a situation like this because of increasing demands from smartphones. They explain that corresponding increases in equipment are needed to maintain reliable service, and this generates more heat, which makes the slim configurations unworkable. Page 16 of the Applicants Narrative, and the 2-page Explanation of Infeasibility (attachments 1 and 2) summarize the applicants’ contentions.

The applicants also contend that the proposed facility is consistent with the character of the area given the prominence of the abutting electric substation and powerline with metal poles and large equipment.

Staff acknowledges this contention. However, the simulations show how the array is visually apparent and staff was not able to find that a complete lack of stealth/concealment is warranted by the industrial setting.

Staff is not able to confirm or deny the applicants' contentions from a wireless engineering standpoint. However, because of this specific location, in a business park, abutting a large electric substation with poles of similar height, staff finds that the visual sensitivity of this proposal is relatively low, and because of that, staff finds that an alternative to the pole-form approach using a monopine is supportable to provide concealment.

The applicants do not object, and the monopine allows for the array(s) as desired from an RF engineering standpoint.

**For the hearing, staff recommends approval of the proposed facility with a condition that prior to Final Plan approval, the tower will be redesigned as a monopine for concealment of the antenna array(s), using the design details used on the most recent monopine installation in the City, including branch density, tufting, and color and on the pole and antennas.**

**Lack of Setback.** A basic consideration has been a requirement that a tower be engineered to collapse rather than topple in an unlikely catastrophic event, if the tower is not set back from property lines by a distance equal to the height. The applicants are providing documentation signed by a licensed engineer regarding this issue.

**Access.** A technical consideration has involved confirmation of necessary access and utility easements across the existing development.

## 2. Land Use Code Article 2 Procedural Requirements

### A. PROJECT DEVELOPMENT PLAN PROCEDURAL OVERVIEW

#### 1. Conceptual Review – CDR 200009

A conceptual review meeting was held on February 6, 2020.

#### 2. Neighborhood Meeting

A neighborhood meeting was not required, nor held, for this Type 1 review process.

#### 3. Submittal

The project was submitted on June 4, 2021. The project was routed to all reviewing departments with two rounds of review conducted to reach the proposed plan.

#### 4. Notice (Posted, Written and Published)

Posted notice: June 16, 2021, Sign #640

Written notice: September 15, 2021, 283 letters sent.

Published Notice: October 22, 2021, Confirmation #4966214.

## 3. Land Use Code Article 3 - Applicable Standards

Because the plan involves a facility on an existing fully developed property in a fully developed business park, the only applicable development standards in Land Use Code are those in Section 3.8.13 as reviewed below.

### A. SECTION 3.8.13 – WIRELESS TELECOMMUNICATION

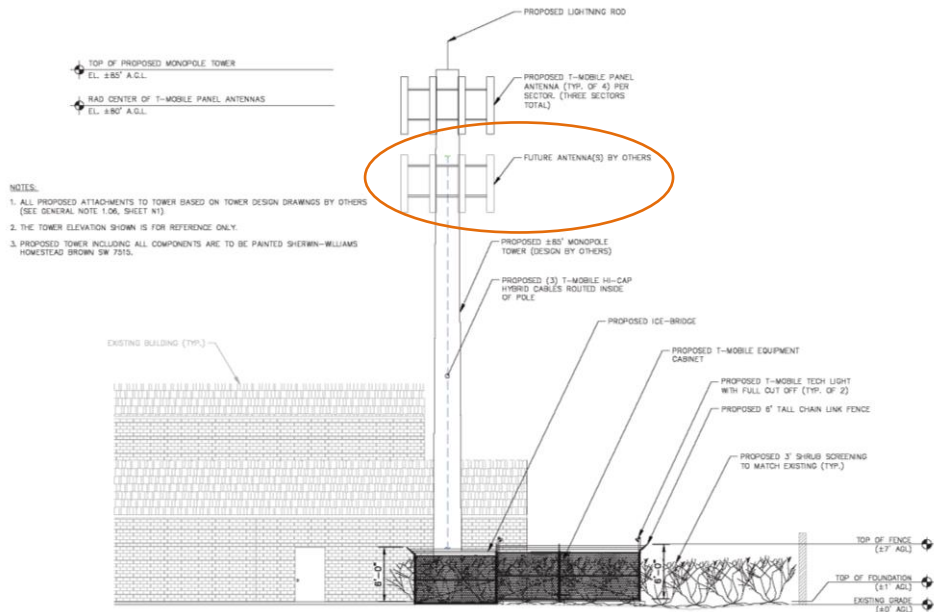
Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
<b>Co-location</b>	This standard requires that a facility or owner or lessee must not attempt to exclude any other wireless telecommunication provider from using the same	Complies

**3.8.13(B)**

structure or location. Applicants shall cooperate in good faith to achieve co-location of wireless telecommunication facilities and equipment.

Any application for the approval of a plan for the installation of wireless telecommunication facilities or equipment shall include documentation of the applicant's good faith efforts toward such cooperation.

- The plans indicate space for potential future antennas by others; and the applicants narrative acknowledgeges this requirement.



Staff finds that if an alternative stealth design is proposed in Final Plans in response to the proposed condition of approval, and the alternative precludes this co-location, this documentation fulfills the requirement.

**Setbacks**  
**3.8.13(C)(1)**

This subsection requires towers to be set back from property lines by one foot for every foot of height unless it can be demonstrated that the structure will collapse rather than topple, in which case this requirement can be waived by the Director.

- A fall zone letter from the pole manufacturer, signed by a licensed engineer, is attached and explains that there is no threat of collapse due to engineering of the pole.

It states that in the unlikely event of failure, the monopole is designed to buckle at a designated point rather than collapse or fall.

The top portion would bend down onto the bottom portion of the tower and the cabling inside the tower would act like a hinge to hold the upper portion in place until it could be repaired. The foundation is designed based on the existing soil conditions for the site. A geotechnical study determines the type of footing and how deep it must go into the ground.

Staff interprets this to indicate no threat to the abutting electric substation or the property next door to the south.

Complies

	<ul style="list-style-type: none"> <li>At ground level, all fencing and equipment is set back from the side lot line further than the existing building, with six feet of landscape area for shrub screening.</li> </ul>	
<p><b>Wireless Telecomm Facilities</b> <b>Subsection 3.8.13(C)(2)</b></p>	<p>This subsection requires wireless telecommunication facilities to be “consistent with the architectural style of the surrounding architectural environment”. Considerations are to include “materials, roof form, scale, mass, color, texture and character”. Facilities must also be “compatible with the surrounding natural environment.”</p> <p>Staff interprets the standard to invoke the built environment in its totality inclusive of building architecture, landscape architecture, and infrastructure design, with the purpose to mitigate visual impact on the cityscape and skyline.</p> <p>In this particular case, the adjacent electric substation and power transmission line to the east comprise an assortment of steel poles similar in height to the proposed tower, as well as other large equipment within the substation.</p> <p>The site is within the Golden Meadows Business Park in which the architectural environment comprises light industrial and supply/distribution buildings.</p> <p>A number of trees including pines exist in the landscaped setback along Harmony Road, and a few trees exist on nearby properties in the business park.</p> <p>The applicants contend that the proposed steel tower and antenna array is consistent with the assortment of poles and equipment in the abutting electric substation and the nearby power transmission line to the east.</p> <p>However, staff finds that the contrast in form of the high antenna array prevents it from blending with the linear form of the poles in the substation and the adjacent power transmission line.</p> <ul style="list-style-type: none"> <li>The applicants and staff have agree to revise the tower to a monopine tower to provide concealment of the antennas and associated equipment.</li> </ul> <p>Staff recommends a condition of approval as explained in other sections of this report.</p>	<p>Complies With a Condition</p>
<p><b>Landscaping</b> <b>subsection 3.8.13(C)(4)</b></p>	<p>This standard requires landscaping based on the unique nature of wireless telecommunication facilities. Landscaping may be required to achieve a total screening effect at the base of such facilities to screen the mechanical characteristics. A heavy emphasis on coniferous plants for year-round screening may be required.</p> <ul style="list-style-type: none"> <li>The location is a rear area with very low public visibility between commercial/light industrial buildings in the business park. Nevertheless, shrub plantings are provided to as a buffer along the ground equipment.</li> </ul>	<p>Complies</p>
<p><b>Stealth Technology</b> <b>subsection 3.8.13(C)(15)</b></p>	<p>This standard requires that to the extent reasonably feasible, the applicant shall employ "stealth technology" so as to convert the wireless telecommunication tower into wireless telecommunication <i>equipment</i> integrated into an existing structure, as the best method by which to mitigate and/or camouflage visual impacts.</p> <p>The standard mentions examples such as using grain bins, silos or elevators, church steeples, water towers, clock towers, bell towers, false penthouses or other similar "mimic" structures.</p>	<p>Complies</p>

	<ul style="list-style-type: none"> <li>As explained previously in discussion of main considerations, a search of possible suitable structures found none.</li> </ul>	
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## B. DIVISION 3.3 - ENGINEERING

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
<b>Plats and Easements</b>  <b>Section 3.3.1</b>	<p>This Section requires dedication of easements as necessary for drainage, utilities, and access as needed to serve the development. A number of easements are needed on for access, drainage, and temporary construction access on abutting property.</p> <ul style="list-style-type: none"> <li>The plan set shows necessary easements, with the easement documents to be recorded in conjunction with approval of Final Plans.</li> </ul>	<p>Complies</p>

### 4. Land Use Code Article 4 – Applicable Standard

Article 4 of the Land Use Code contains standards for the various zoning districts throughout the City. The subject lot is zoned Harmony Corridor (HC) Division 4.26 of the Land Use Code, within the Basic Industrial Non-Retail Activity Center land use designation.

The purpose of the zone is to implement the design concepts and land use vision of the Harmony Corridor Plan -- that of creating an attractive and complete mixed-use area with a major employment base.

The proposed wireless telecommunication facility is permitted subject to review by a Hearing Officer at a public hearing (Type 1 review). No other zone district standards pertain to the facility.

### 5. Findings of Fact/Conclusion

In evaluating the request for the 4518 Innovation Drive Wireless Telecommunication Facility #PDP210010, staff makes the following findings of fact:

1. The PDP complies with process requirements located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.
2. The PDP complies with pertinent standards located in Article 3 – General Development Standards, with the exception of subsection 3.8.13(C)(2), which is addressed in the conditional recommendation by staff.
3. The proposed Wireless Telecommunication Facility is a permitted use subject to Type 1 review and hearing in the Harmony Corridor Zone District in Article 4 – Districts.
4. The 85-foot height is the absolute maximum permissible height; is warranted only due to the nearby electric system poles of similar height and not warranted by consistency with nearby trees; and any greater height would defeat the purpose of the monopine concealment.

## 6. Recommendation

Staff recommends that the Hearing Officer approve the 4518 Innovation Drive Wireless Telecommunication Facility Project Development Plan #PDP210010 based on the Findings of Fact and supporting explanations found in the staff report with the following condition:

**Prior to Final Plan approval, the tower will be redesigned as a monopine for concealment of the antenna array(s), using the design details that were used on the most recent monopine installation in the City, including branch density, tufting, and color on the pole and color and texture on the antennas.**

## 7. Attachments

1. Applicants Narrative
2. Applicants Explanation of Infeasibility of Slim Pole
3. Site Plan set
4. Photo Simulations
5. Fall Zone Collapse Letter