TITLE: Frederick County Landfill—Communication Monopole

FILE NUMBER: SP-94-20, AP 14893 (APFO 14894, FRO 14895)

REQUEST: Site Development Plan Approval
The Applicant is requesting Planning Commission non-binding review and comment on a 107-ft. communication monopole, with a 2,500 square foot (50 ft. x 50 ft.) equipment compound on a portion of the Reichs Ford Road County Landfill site.

PROJECT INFORMATION:
ADDRESS/LOCATION: 9031 Reichs Ford Road, west of Bartonsville Road
TAX MAP/PARCEL: Tax Map 87, Parcel 119
COMP. PLAN: Institutional
ZONING: Agriculture
PLANNING REGION: New Market
WATER/SEWER: W-NPS/S-NPS

APPLICANT/REPRESENTATIVES:
APPLICANT: Milestone Communications
OWNER: Frederick County
ENGINEER: Entrex Communication Services, Inc./Network Building & Consulting, LLC
ARCHITECT: N/A
ATTORNEY: N/A

STAFF: Tim Goodfellow, Principal Planner II

ATTACHMENTS:
Exhibit 1-Site Plan Rendering
Exhibit 2- Photo-simulation of Monopole
Exhibit 3 – Supplementary Information
ISSUE

Development Request

The Applicant is submitting a site development plan for non-binding review and comment from the Planning Commission for the construction of a 107-ft. communication tower with a 50-ft. x 50-ft. fenced equipment compound on the County’s 500-acre landfill property on Reichs Ford Road. In addition to housing commercial telecommunication carriers, the monopole includes antenna space and ground equipment area for the needs of the County’s Emergency Communications Division. The 107-ft tower plus a 6-ft. lightning rod, results in a total height of tower and accessories of 113-ft. The 50-ft. x 50-ft. equipment compound area around the tower will be surrounded by an 8-ft. tall, chain-link fence with barbed wire and dark green slats. Equipment cabinets within the fenced compound do not show heights greater than 8 feet.

The Zoning Administrator has determined that the proposed monopole falls under Section §1-19-4.110 of the Zoning Ordinance (Exemption of Essential Services) Subsection (C), and is presented for the Planning Commission’s “nonbinding review and comment”.

BACKGROUND

Development History

In 2011, the County entered into a lease agreement with Milestone Communications to develop commercial carrier wireless services at County-owned facilities and properties. The proposed monopole at the County landfill will include Verizon Wireless as the anchor tenant, with space reserved for county public safety communications, as well as for future commercial telecommunications carriers.

Existing Site Characteristics

The County’s landfill—zoned Agricultural— is located on the south side of Reichs Ford Road, west of Bartonsville Road and bordering Bush Creek. In addition to solid waste disposal, the 500-acre facility provides a full-range of recycling and yard-waste drop-off services. Methane gas is also recovered from the capped portions of the landfill and is sold in the marketplace, but not used on-site to power any facility operations.

The location of the proposed monopole is 720 feet south of the main entrance to the landfill, approximately 180 feet east of the existing weigh station, adjacent to an existing 9-car parking lot. The tower and equipment compound is planned for an area on the western edge of a 32-acre forest complex that contains moderate and steep slopes (see aerial photo below).
Summary of Development Standards Findings and Conclusions

Based on the determination by the Zoning Administrator the application is subject to Section §1-19-4.110 of the Zoning Ordinance (Exemption of Essential Services) Subsection (C), and is therefore being presented for Planning Commission nonbinding review and comment. However, staff has utilized the criteria contained in §1-19-8.332 (Communication Towers in the Resource Conservation and Agricultural Districts) and §1-19-8.420 (Communication Towers – Scope and Criteria) of the Zoning Ordinance in the evaluation of the landfill monopole site plan.

Detailed Analysis of Findings and Conclusions

Site Development Plan evaluation and review was based upon the criteria found in §1-19-3.300.4 Site Plan Review Approval, as well as Sections §1-19-8.332 and §1-19-8.420 of the Frederick County zoning ordinance.

Site Development §1-19-3.300.4 (A): Existing and anticipated surrounding land uses have been adequately considered in the design of the development and negative impacts have been minimized through such means as building placement or scale, landscaping, or screening, and an evaluation of lighting. Anticipated surrounding uses shall be determined based upon existing zoning and land use designations.

Findings/Conclusions

1. Dimensional Requirements/Bulk Standards §1-19-6.100, §1-19-8.332, §1-19-420.2:

<table>
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<tr>
<th>Use Classification</th>
<th>Minimum Lot Area</th>
<th>Lot Width</th>
<th>Setback values</th>
<th>Height</th>
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<tr>
<td>Communications Tower</td>
<td>N.A.</td>
<td>N.A.</td>
<td>§1-19-8.332 Setbacks from all properties shall be a distance not less than 1 foot for every foot of tower height, but in no case less than 300 feet from any adjoining residential structure.</td>
<td>§ 1-19-8.332. The tower height may exceed the maximum height permitted within the RC and A Districts after a determination by the approving body that its visual profile and appearance would make no substantial change in the character of the area, provided, however, that in no event shall the maximum allowed tower height exceed 199 feet.</td>
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The Applicant has indicated a fall zone equal to the total height of the tower, 113 feet. Monopole setbacks vary from property lines (721 ft. to 2,700 ft.) and from closest adjacent dwellings (914 ft.) and the landfill’s weigh station building (180 ft.). The proposed location of the tower exceeds the minimum required setbacks. The maximum height in the Agricultural zoning district is 30’. The proposed tower exceeds the 30’ maximum in the district but does not exceed the maximum tower height of 199’. It appears based on the submitted information that no substantial change in the character of the area would be caused by the construction of the 113-ft. tall communication monopole. Photo-simulations of the tower's location were made from four vantage points within a 0.50-mile radius and are included as Exhibit No. 2.
2. **Landscaping §1-19-6.400:** The Applicant has responded positively to Staff’s request to plant White Pines and American Hollies around three (3) sides of the equipment compound, as well as around the existing parking lot, which currently lacks any landscaping. This landscaping is shown on the Site Development Plan. The landscaping will minimize the visual impact of the compound from the landfill entrance road.

3. **Lighting §1-19-6.500:** The Applicant is not proposing any lighting, other than Federal Aviation Administration (FAA) emergency lighting requirements.

**Transportation and parking §1-19-3.300.4 (B):** The transportation system and parking areas are adequate to serve the proposed use in addition to existing uses by providing safe and efficient circulation, and design consideration that maximizes connections with surrounding land uses and accommodates public transit facilities. Evaluation factors include: on-street parking impacts, off-street parking and loading design, access location and design, vehicular, bicycle, and pedestrian circulation and safety, and existing or planned transit facilities.

**Findings/Conclusions**

1. Access to the County landfill and to the site of the future monopole is from Reichs Ford Road, a collector status roadway on the Comprehensive Plan. The landfill has a 30-ft. wide entrance road to accommodate large trucks hauling solid waste. The road network is adequate for the temporary construction traffic required for the installation of the communication tower. Sufficient space is present on the 50-ft x 87-ft. parking pad directly adjacent to the tower site, as well as surrounding land, for construction related equipment and will not impact or impede landfill traffic patterns or circulation.

**Public Utilities §1-19-3.300.4 (C):** Where the proposed development will be served by publicly owned community water and sewer, the facilities shall be adequate to serve the proposed development. Where proposed development will be served by facilities other than publicly owned community water and sewer, the facilities shall meet the requirements of and receive approval from the Maryland Department of the Environment/the Frederick County Health Department.

**Findings/Conclusions**

1. The proposed monopole is an un-manned facility, so no water or sewer service is required for the proposed use.

**Natural Features §1-19-3.300.4 (D):** Natural features of the site have been evaluated and to the greatest extent practical maintained in a natural state and incorporated into the design of the development. Evaluation factors include topography, vegetation, sensitive resources, and natural hazards.
Findings and Conclusions

1. The location of the communication tower and equipment compound is primarily within a grassed area on the edge of an existing forest complex on the landfill property. Minimal grading, encroachment and disturbance of the forested area (less than 800 sq. ft.) is shown on the Site Plan.

Common Areas §1-19-300.4 (E): If the plan of development includes common areas and/or facilities, the Planning Commission as a condition of approval may review the ownership, use, and maintenance of such lands or property to ensure the preservation of such areas, property, and facilities for their intended purposes.

Findings and Conclusions

1. Although situated on public property, the proposed communication monopole is planned as a private facility, with space reserved for the County to install future antennas and ground equipment as needed. A Knox padlock device will be installed on the fence compound to allow access by emergency response personnel.

The Applicant has satisfactorily addressed the majority of the substantive items contained in §1-19-8.332 and §1-19-8.420, including the following:

- Property line and structure setbacks
- Photo documentation/simulation of the tower’s presence on the landscape
- NEPA Review/Contact with the Maryland State Historic Preservation Officer (MDSHPO) regarding historic/archaeological resources in the immediate vicinity (The Applicant has indicated to the MDSHPO in a letter dated October 8, 2014 that no archaeological investigation of the 50-ft. by 50-ft. equipment compound is required due to the prior disturbance of the site for the landfill weigh station parking lot and associated grading. The MDSHPO has until February 6, 2015 to respond to the October 8, 2014 letter and the NEPA impact analysis.)
- Height requirements
- Justification statement as to why the site was selected
- Propagation studies that show service area and system coverage (The Applicant has supplied a narrative indicating that enhanced wireless broadband service in the area will result from the construction of the monopole at the landfill, including a radio frequency propagation of the area with and without the monopole)
- Screening and fencing
- Antenna co-location potential
- Tower placement within or adjacent to mature vegetation and down slope from ridge lines

The Zoning Administrator has provided direction that posting of a monetary guarantee for future removal of the tower is not applicable to this application.

Although this Site Plan review is non-binding, Staff notes that the Applicant has not addressed the requirement to install a 6 sq. ft. sign attached to the equipment compound fence as required in §1-19-8.420.2 (“Criteria”). The sign shall identify the tower owner, providers, and a telephone number of a person to call for site emergencies.

This sign is required to be provided to address public safety issues and provide for proper notification in emergency situations.
Other Applicable Regulations

**Stormwater Management – Chapter 1-15.2:** The amount of grading and clearing for the project is just over 2,500 square feet; therefore the project is exempt from Stormwater Management requirements per the 2000 Maryland SWM Design Manual and the SWM Act of 2007.

**APFO – Chapter 1-20:**

1. **Roads, Schools, Water & Sewer.** The project is exempt from APFO testing because it would generate less than 6 peak hour trips and there are no existing escrow accounts in the area of this site plan. The project will not have public water or sewer service, nor have any impact on the public school system.

**Forest Resource – Chapter 1-21:** This application is exempt from FRO. The location of the monopole was included in the overall FRO plan for the landfill site and all required mitigation has been provided.
Exhibit #1, Site Plan Graphics of County Landfill Communication Monopole
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Exhibit #1: Site Plan Graphics of County Landfill Communication Monopole
Exhibit #2, Photo-simulation of Landfill Monopole
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**DETERMINATION OF NO HAZARD TO AIR NAVIGATION**

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

**Structure:** Monopole Frederick County Landfill Site  
**Location:** Frederick, MD  
**Latitude:** 39-22-24.44N NAD 83  
**Longitude:** 77-20-57.50W  
**Heights:**  
- 487 feet site elevation (SE)  
- 113 feet above ground level (AGL)  
- 600 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)  
- X Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 04/07/2016 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.  
(b) extended, revised, or terminated by the issuing office.  
(c) the constructor is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.
NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (816) 329-2523. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2014-AEA-5466-OE.

Signature Control No: 228231924-231281022
Steve Phillips
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC
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Why It's Needed

- Residents in the shaded area will benefit from improved coverage and capacity from Verizon.
Proposed Project Area: Reels Mill Site, 9031 Reichs Ford Road, Frederick, Frederick County, Maryland 21704

Figure 1: Project APE
Proposed Project Area: Reels Mill Site, 9031 Reichs Ford Road, Frederick, Frederick County, Maryland 21704

Figure 2: Proposed Compound Area