

Statement of Justification for T-Mobile CMPT and SPEX application for a new 130' Monopole to be located at 21260 Smith Switch Road, Ashburn

Applicant: T-Mobile

12050 Baltimore Avenue
Beltsville, MD 20705



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T-Mobile Site #WAN 493- Beaumeade
Property Owner: VIRGINIA ELECTRIC & POWER COMPANY
Tax ID #: 060-30-2345
Tax Map/Parcel: 80/13/C
Zoning Designation: PDIP
District Broad Run
Acreage: 6.01

Pursuant to Section 15.2-2232 of the Code of Virginia, Nextel Communications of the Mid Atlantic, Inc. ("Nextel"), by and through their agent, General Dynamics Information Technology ("GDIT"), hereby requests a determination that the proposed wireless telecommunication application described herein is in substantial accordance with the Loudoun County Comprehensive Plan. We appreciate your time and consideration in review of this application for Special Exception and Commission Permit.

Description of Proposed Use:

Nextel requests review and approval of a proposed telecommunications facility to be located on the northeast side of the existing VEPCO substation at 21260 Smith Switch Road. The coordinates of the site are 39° 01' 36.1"N and 77° 27' 24.2"W. The current use of the subject property is an electric utility transmission substation. The purpose of the proposed facility is to reduce load at site #VA0458-Broad Run, located at 21593 Jesse Court, and improve coverage along Loudoun County Parkway, Smith Switch Road and the surrounding area.

The proposed facility will include installation of a new 130' monopole to include antennas to be located at heights of 100' AGL and 130' AGL with space remaining for fixture antennas. Nextel will locate twelve (12) DEN antennas measuring 48" in length at a height of 100' and three (3) CDMA antennas at 130'. Additionally, the proposed facility will include one 12'x20' equipment shelter and backup power

generator. The proposed facility will be located within a 2760 sf fenced compound. The proposed facility will function as a base transmission station for Nextel's wireless telecommunication network. This digital network operates with a transmitting frequency between 851-866 megahertz and a receiving frequency between 806-821 megahertz. The proposed facility is subject to the standards of Section 5-618. The proposed facility will comply with the standards set forth in Section 5-618 as well as the general special exception standards of Section 6-1310.

5-618 Telecommunications Use And/Or Structures. The following performance standards shall be applied to telecommunication uses and/or structures.

(A) Antennas. Structure mounted and rooftop mounted antennas and related unmanned equipment may be developed subject to the performance standards below to the extent permitted by right in the district use lists.

(1) Antennas and related unmanned equipment are permitted on an existing telecommunications monopole, telecommunications tower, or structure forty (40) feet or greater in height in all zoning districts subject to the performance standards outlined in this section. The height of the proposed monopole will be 130 feet. The subject parcel is located in PDIP zoning district.

(2) Notwithstanding the height requirements in Section 5-618(A)(1), antennas and related unmanned equipment are permitted in all zoning districts on buildings and structures owned or controlled by a public use or fire and/or rescue company. N/A

(3) Such antennas and related equipment may exceed the maximum building height limitations, provided the use is in accordance with the development criteria herein. The construction and use of the proposed facility shall be in accordance with these criteria.

(4) Omni directional or whip antennas shall not exceed twenty (20) feet in height or seven (7) inches in diameter and shall be of a material or color that matches the exterior of the building or structure. N/A

(5) Directional or panel antennas shall not exceed five (5) feet in height or two (2) feet in width and shall be of a material or color which matches the exterior of the building or structure. The proposed antennas will measure less than five (5) feet in height and two (2) feet in width and appropriately blend in material and/or color with the existing surroundings and structure. Specs and/or sketches of the antennas are or will be supplied as.

(6) Satellite and microwave dish antennas shall not exceed six (6) feet in diameter and shall be screened from public view. N/A

(7) No commercial advertising shall be allowed on any antenna. No advertising shall be located on the antennas or within the proposed compound.

(8) Signals or lights or illumination shall not be permitted on any antenna, unless required by the Federal Communications Commission (FCC), the Federal Aviation Administration (FAA), State or Federal authorities, or the County. Lighting is not required by the Federal Communications Commission (FCC), the Federal Aviation Administration (FAA), State or Federal authorities, or the County. No signals, lights, or illumination will be located on the antenna.

(9) The related unmanned equipment structure(s) shall not contain more than 500 square feet of total gross floor area per user on each site. Structures shall not exceed 12 feet in height. If located within the structure upon which the antennas are mounted, they may be located in the areas which are excluded from the determination of net floor area without changing the exclusion of those areas from the calculation of the density of the structure. The structure shall be of a material or color that matches the exterior of the building or structure. As detailed in the attached drawings, the proposed equipment shelter measures 240 square feet in area and will not exceed 12 feet in height. The exterior of the proposed shelter shall be of a neutral color to blend in with the surrounding area.

(10) If the equipment structure is located on the roof of a building, the area of the equipment and structures shall not occupy more than twenty-five (25) percent of the roof area. N/A

(B) Monopoles. Monopoles and related unmanned equipment structure(s) may be developed as a permitted or special exception use, as listed below:

(1) Monopoles, Permitted By Right. Monopoles shall be permitted by right subject to the performance criteria listed in Section 5-61 8(B)(3), in the following situations:

(a) In all zoning districts, if located within an overhead utility transmission line right of way with existing structures greater than eighty (80) feet in height. N/A

(b) In the PD-OP, GB, PD-GI, PD-SA, PD-IP, PD-RDP, or MR-HI zoning districts provided it is located 750 feet or greater from an adjoining residential district. N/A.

(c) In the AR, A-10, TR, JLMA-1, JLMA-2, JLMA-3, A-3, CR-1, CR-2, CR-3, CR.-4, PD-TREC and RC zoning districts, when accessory to a fire or rescue station. N/A

(2) Monopoles, Special Exception Required. Except as provided above, telecommunications monopoles shall be permissible subject to approval of a special exception and subject to the performance standards listed in Sections 5-618(B)(3) and 5-618(B)(4), in the following situations:

(a) In the AR, A-10, TR, JLMA-1, JLMA-2, JLMA-3, A-3, CR-1, CR-2, CR-3, CR-4, PD-TREC and RC zoning districts, except as provided in Section 5-618(B)(1)(c), and in the CLI, PD-CC(CC), PD-CC(SC), PD-CC(RC), PD-TC, PD-UC, PD-TRC and PD-CV zoning districts. N/A

(b) In the PD-OP, GB, PD-GI, PD-SA, PD-IP, PD-RDP, and MR-HI zoning districts when located 750 feet or closer from an adjoining residential district

(c) In all zoning districts, except PD-H, R-districts, PD-AAAR, and PD-RV, as an accessory use to a fire and rescue station, except as provided in Section 5-618(B)(1)(c). N/A

(d) In all zoning districts, within the right of way of a private toll road. N/A

(3) Monopoles, General Performance Criteria. All telecommunications monopoles, whether permitted by right or permissible with the approval of a special exception application, shall be subject to the following criteria:

(a) The proposed telecommunications monopole shall be compatible with development in the vicinity with regards to the setting, color, lighting, topography, materials and architecture. In addition, the facility shall be located in the interior of the property and areas of existing vegetation, if applicable, shall be used to screen the facility. The proposed monopole will be compatible with development in the vicinity with regards to the setting, color, lighting, topography, materials and architecture. The monopole will be sited on the northeast side of an existing electric power substation. The galvanized steel monopole will be light grey in color and will blend with the sky. The compound will be enclosed within an 8' tail wood fence' The proposed fence will be located approximately 15 feet from the existing substation.

(b) New telecommunications monopoles shall be designed to accommodate at least three (3) providers, unless:

(i) Doing so would create an unnecessary visual impact on The surrounding area; or

(ii) No additional need is anticipated for any other potential user in the vicinity; or

(iii) There is some valid economic, technological, or physical justification as to why co-location is not possible.

(iv) The applicant shall identify the conditions under which future co-location by other service providers is permitted.

The proposed monopole will be designed to accommodate at least three (3) providers. Other service providers shall be allowed to co-locate provided that future installations will not interfere with existing antennas.

(c) The height of such monopole, including antennas, shall not exceed 199 feet, as measured from the natural ground elevation. The requested height of the proposed monopole is 130'AGL.

(d) Satellite and microwave dishes attached to monopoles shall not exceed two (2) feet in diameter. N/A

(e) Except as provided in Section 5-618(B)(3)(o) and Section 5-618(B)(4)(d), telecommunications monopoles shall not be located any closer than one (1) foot for every live (5) feet in height to any property line. Structures and buildings may be constructed within the setback areas of the monopole, provided other zoning standards are met. As shown in the attached Special Exception and Commission permit plat the setback requirements are met as proposed.

(f) The related unmanned equipment structure(s) shall not contain more than 500 square feet of total gross floor area per telecommunications provider on each site. Structures shall not exceed 12 feet in height. As indicated in the attached drawings, the proposed equipment shelter measures 240 square feet in area and will not exceed 12 feet in height

(g) Unless otherwise required by the Federal Communications Commission or the Federal Aviation Administration, monopoles shall blend with the background. The galvanized steel monopole will be light grey in color and will blend with the sky.

(h) No signals or lights or illumination shall be permitted on a monopole, unless required by the Federal Communications Commission, the Federal Aviation Administration, State or Federal authorities, or the County. Lighting is not required by the Federal Communications Commission (FCC), the Federal Aviation Administration (FAA), State or Federal authorities, or the County. No signals, lights, or illumination shall be located on the proposed monopole

(i) No commercial advertising or signs shall be allowed on a monopole. No commercial advertising or signs shall be located on the proposed monopole.

(j) A commission permit shall be required. Nextel is applying for a commission permit and special exception concurrently.

(k) No monopole shall be located within a County designated historic district. The subject property for location of the proposed monopole is not located within a County designated historic district.

(l) No monopole shall be located within a PD-H or PD-RV zoning district except as provided in Section 5-618(B)(1)(a) and Section 5-618(B)(2)(d). N/A

(m) All unused equipment and facilities from a commercial public telecommunications site shall be removed within 90 days of cessation of commercial public telecommunication use and the site shall be restored as closely as possible to its original condition. Nextel agrees to this condition.

(n) Applicants for any commercial public telecommunications facility shall demonstrate that they have complied with applicable regulations of the FCC and the FAA. A finding from the FAA that the proposed facility is not a hazard or obstruction to aviation is necessary prior to the issuance of a zoning permit. If a proposed telecommunications facility is higher than 199 feet or within five (5) miles of the property boundary of either Dulles or Leesburg Airports, the applicant shall provide verification that 1) the appropriate airport authority (Metropolitan Washington Airports Authority or the Town of Leesburg) has been notified in writing and 2) the FAA has determined that the proposed facility is neither a hazard nor an obstruction to aviation. The proposed monopole is less than 199' with a requested height of 130'. The subject property is located within five miles of the Dulles Airport as indicated on the map below. Please find attached FAA determination of hazard or obstruction.

(o) When locating on a Loudoun County or Loudoun County Sanitation Authority site or fire and/or rescue company site: 1) the telecommunications equipment shall not interfere with the existing telecommunications equipment of the primary use; and 2) the setback provisions of Section 5-61 8(B)(3)(e) shall not apply. In addition, the landscaping/buffering provisions of the Ordinance may be reduced or waived if the site has been developed in accordance with Section 5-

1409(G). N/A

(p) Applicants proposing a new telecommunications monopole within one (1) mile of a County designated historic district or Virginia Byway shall

submit a minimum of three (3) visual simulations and written justification as to why the monopole could not be sited elsewhere. This requirement shall also be applied if a telecommunications monopole is proposed on a property listed on the National Register of Historic Places. The subject property is not listed on the National Register of Historic Places. Based on the Loudoun County mapping system, the subject property is not located within one mile of a County designated historic district or Virginia Byway.

(q) Telecommunications monopoles shall not be located along ridge lines, but downslope from the top of ridge lines, to protect views of the Catoctin, Bull Run, Hogback Short Hill, and Blue Ridge Mountains. The proposed monopole will not be located along the ridgelines of these mountains.

(r) Applicants shall submit documentation, in written and graphic form, regarding the service area to be provided by the proposed telecommunications monopole. The purpose of the proposed facility is to reduce load at site #VA0458-Broad Run, 21593 Jesse Court, and improve coverage along Loudoun County Parkway, Smith Switch Road and the surrounding area. VA 0458 is located along route 28, north of West Church road and about 1.75 miles south of route 7. The third sector of VA0458 covers a 2.5 mile area west of route 28, along and north of route 625. At present, this sector has 17 radios, and sees 500 Erlangs per day causing several dropped calls and call access failures. The proposed facility will manage some of the traffic currently handled by VA0548, and subsequently improve the quality of service in this area. Propagation maps have been included with this application to serve as a graphic depiction of Nextel's coverage objective. The first propagation plot shows signal coverage from NVA 0548 and the two immediate adjacent on-air sites. Green depicts the coverage from the overloaded sector, .NVA0548-3. The second plot shows coverage from the proposed site. The last plot depicts the future coverage with the proposed and currently on-air sites. It is clear that the area now covered by NVA0548-3 has been reduced by half allowing the new site to cover the other half

(4) Monopoles, Additional Submission Requirements. The following additional information shall be submitted by applicants for monopoles required to be approved by special exception.

(a) The applicant shall provide photo imagery or other visual simulation of the proposed telecommunications monopole shown with the existing conditions of the site. This simulation shall be provided from a minimum of three (3) perspectives. The applicant shall address how the facility can be designed to mitigate the visual impact on area residents, facilities, and roads. The applicant agrees to provide requested photo imagery. The proposed monopole design is consistent with the existing use, thus reducing the visual impact

(b) Except for areas where permitted by right, an applicant for a new commercial public telecommunication monopole shall demonstrate that location on an existing telecommunications facility or structure greater than 40 feet in height is not feasible. The applicant shall evaluate telecommunications facilities and structures greater than 40 feet in height within a one (1) mile radius of the proposed facility within the Eastern Loudoun Urban Growth Area. Elsewhere in the County, the applicant shall evaluate these locations within a two (2) mile radius of the proposed facility. Technological, physical, and economic constraints may be considered in determining infeasibility. Co-location may be determined to be infeasible in the following situations:

(i) Planned equipment would exceed the structural capacity of existing and approved telecommunications facilities, considering existing planned use of those facilities, and such facilities cannot be reinforced to accommodate planned or equivalent equipment at a reasonable cost;

(ii) Planned equipment will cause interference with other existing or planned equipment for that telecommunications facility, and that interference cannot be prevented at a reasonable cost;

(iii) Existing or approved telecommunications facilities do not have space on which planned equipment can be placed so as to provide adequate service; and

(iv) Existing and approved telecommunications facilities will not provide adequate signal coverage.

The Site Selection Process:

Nextel first considered the existing monopole/transmission tower located at Smith Switch Road @ Washington & Old Dominion Trait This site was eliminated because the property does not provide sufficient space to accommodate both the EDEN and CDMA equipment. Because there were no other viable existing sites from which the network objectives could be attained, Nextel proposed a new structure to be located on VEPCO property at 21260 Smith Switch Road. This is the only area location that is suitable for our use and includes a compatible existing use. This location is the least obtrusive site for the proposed facility.

(c) In addition to those entitled to notice under the provisions of Section 6-600 of this Ordinance, all owner(s), or their agent(s), of all properties abutting or immediately and diagonally across the street or road from those properties whose owners are entitled to notice under Section 6-600, shall be provided with the same written notice. The applicant is also encouraged to meet with community and homeowners association groups in the area. The applicant

agrees.

(d) Telecommunications monopoles permissible by special exception pursuant to Section 5-61 8(B)(2)(d) shall not be subject to the lot requirements, building requirements, and open space requirements, if applicable, of the zoning district in which they are located. Site plan attached

6-1310 Issues for Consideration

In considering a special exception application, the following factors shall be given reasonable consideration. When a special exception or minor special exception application includes a request for approval of temporary special events, the following factors shall be reasonably considered taking into account the proposed special events as well as the principal special exception use. The applicant shall address all the following in its statement of justification or special exception plat unless not applicable, in addition to any other standards imposed by this Ordinance;

(A) Whether the proposed special exception is consistent with the Comprehensive Plan. T-Mobile's proposed special exception is in substantial accordance with the Comprehensive Plan. The proposed facility will be sited in PD-IP district, located beside an existing power substation. The requested use is a permitted use under 94-503. Per Chapter 3 of the Comprehensive plan, the demand for local services has doubled in Loudoun County over the past decade due to increasing growth in population. Correspondingly, this growth has caused parts of the wireless carriers' networks to become overburdened, resulting in unacceptable handling of call volume. The requested facility will cause calls to be distributed appropriately resulting in a higher quality service for area residents, businesses and visitors. This location will provide improved coverage along Loudoun County Parkway, one of the County's primary transit corridors. The requested facility further contributes to the County's vision for economic development, as the availability of quality communications can directly support existing businesses while attracting new business activity. A solid communications infrastructure will help to promote business concentration. Thus, creating a business environment conducive to growth. Additionally, the wireless telecommunications network can positively impact the quality of life for the residents. While the County wishes to promote safe, healthy lifestyles for its residents, the requested facility will improve area coverage to include coverage to the Old Dominion Trail Appropriate wireless coverage offers residents a greater level of safety and security, particularly in parks and along running h-a-ils. Families are able to communicate and emergency service responders are better able to locate those who are lost or victims of an accident

(B) Whether the proposed special exception will adequately provide

for safety from fire hazards and have effective measures of fire control. The proposed facility will be consistent with all applicable requirements, including building and fire code. The proposed facility will not present safety or fire hazards.

(C) Whether the level and impact of any noise emanating from the site, including that generated by the proposed use, negatively impacts the uses in the immediate area. The proposed facility is an unmanned facility that will not produce noise, traffic, waste, or otherwise negatively impact the surrounding uses. The site will be visited approximately once per month by a technician for regular maintenance.

(D) Whether the glare or light that may be generated by the proposed use negatively impacts uses in the immediate area. There will be no glare or light generated by the proposed use.

(E) Whether the proposed use is compatible with other existing or proposed uses in the neighborhood, and adjacent parcels. The proposed use is compatible with uses in the neighborhood and adjacent parcels. Moreover, it is highly congruent to the neighboring VEPCO substation use that includes power poles and an existing monopole. The existing use of the substation makes this the best location to site such facility.

(F) Whether sufficient existing or proposed landscaping, screening and buffering on the site and in the neighborhood to adequately screen surrounding uses. Applicant will work with staff to ensure that sufficient existing or proposed landscaping, screening and buffering will exist on the site and/or in the neighborhood to adequately screen surrounding uses. The proposed location is set back from the road and abutting properties and screened by an existing stand of mature trees. The substantial setback and sitting in conjunction with existing power poles makes the requested location ideal. Additionally, Nextel proposes placement of an 8' wood fence to enclose the compound. This additional buffer will ensure safety as well as eliminate view of the tower base and equipment shelter. The proposed wood fence will compliment the existing wood fence that surrounds the existing electric utility transmission substation.

(G) Whether the proposed special exception will result in the preservation of any topographic or physical, natural, scenic, archaeological or historic feature of significant importance. The requested facility will have no effect on any such feature.

(H) Whether the proposed special exception will damage existing animal habitat, vegetation, water quality (including groundwater) or air quality. The requested facility will not damage or generate adverse impact on any animal habitat, vegetation, water or air quality.

(I) Whether the proposed special exception at the specified location will contribute to or promote the welfare or convenience of the public. The proposed special exception at this location will contribute to and promote the welfare and convenience of the public. The requested facility will improve area coverage to include coverage to the vicinity to include Loudoun County Parkway, and along Smith Switch Road and the Old Dominion Trail. Appropriate wireless coverage offers residents a greater level of safety and security on the road and particularly in parks and along running trails. Families are better able to communicate and emergency service responders are better able to locate those who are lost or victims of an accident. Residents, businesses and commuters will experience improved service along Loudoun County Parkway and in the general vicinity.

(J) Whether the traffic expected to be generated by the proposed use will be adequately and safely served by roads, pedestrian connections and other transportation services. The proposed use will be an unmanned facility, therefore, the traffic patterns will not be adversely affected. Once the facility is constructed, normal traffic will include approximately one visit per month by a service technician for regular maintenance.

(K) Whether, in the case of existing structures proposed to be converted to uses requiring a special exception, the structures meet all code requirements of Loudoun County. N/A. Nextel requests special exception for the construction of a new structure. If approved, the new structure will comply with all code requirements of Loudoun County.

(L) Whether the proposed special exception will be served adequately by essential public facilities and services. The proposed use will not generate demand for essential public facilities and services as it is an unmanned facility, not intended for human habitation.

(M) The effect of the proposed special exception on groundwater supply. The proposed special exception will have no effect on the groundwater supply.

(N) Whether the proposed use will affect the structural capacity of the soils. A geotechnical study will be performed prior to construction of the facility. The facility will be designed so as not to affect the structural capacity of the soils.

(O) Whether the proposed use will negatively impact orderly and safe road development and transportation. The proposed use will have no impact on orderly and safe road development and transportation. Once the facility is constructed, normal traffic will include approximately one visit per month by a service technician for regular maintenance. The present ROW as shown on the

attached plat is approximately 50'. Applicant will work with staff re any road issues relevant to the application.

(P) Whether the proposed special exception use will provide desirable employment and enlarge the tax base by encouraging economic development activities consistent with the Comprehensive Plan. The proposed special exception will generate jobs during the construction phase as well as ongoing employment for maintenance of the facility. By providing wireless telecommunications service in the area, the proposed special exception can advance competition while promoting communications which is essential for business growth and development

(Q) Whether the proposed special exception considers the needs of agriculture, industry, and businesses in future growth. The proposed special exception does consider these needs and can help to advance future growth in these areas. Communications is essential for future growth and development of agriculture, industry and business. The requested special exception can directly impact those needs by providing a high quality, reliable service

(R) Whether adequate on and off-site infrastructure is available. Adequate on and off site infrastructure is available for the successful integration of the requested facility into the Nextel wireless telecommunications network

(S) Any anticipated odors which may be generated by the uses on site, and which may negatively impact adjacent uses. The proposed use will not generate any odor.

(T) Whether the proposed special exception uses sufficient measure to mitigate the impact of construction traffic on existing neighborhoods and school areas. The proposed construction will take place on site. The subject property includes an existing 20' gravel access road with a 20'x20' turnaround There is no expected impact to neighborhoods, school areas or regular traffic flow to be caused by construction traffic.