# BUELL CONSULTING, INC.



Mr. Kevin Firchow Madison Department of Planning and Economic Development 215 Martin Luther King Jr. Blvd. Madison, WI 53701 November 3<sup>rd</sup>, 2009

Re: US Cellular Application for a Conditional Use to construct a Four-Carrier Monopole with an overall height of 80' and Radio Equipment Shelter at 979 Jonathon Drive owned by Vera Daniels, with a parcel identification number of 0709-353-0606-3

Dear Mr. Firchow,

US Cellular is in need of completing a new communications facility in the Greenway Crossing industrial area south of the Beltline and east of Fish Hatchery. As you will see from the enclosed radio frequency diagrams and correspondence from the radio frequency engineer, the site is needed to provide additional frequencies and channels to handle the increasing customer use of the network as well as improve in-building service for the many commercial buildings in the area. A location has been chosen and a lease agreement negotiated with Vera Daniels to incorporate a new monopole installation at 979 Jonathon Drive; an installation that will accommodate three additional telecom users should the need arise.

In addition to the information provided in this narrative and with the attachments that follow, it is necessary to mention that two attempts were made to contact Tim Bruer, Alder for District 14, on June 29<sup>th</sup> and July 2<sup>nd</sup> of 2009. No reply from Mr. Bruer has been received.

The narrative below addresses the guidelines of the City of Madison code Section 28.04(22) and its requirements for telecommunications uses. US Cellular respectfully requests your review of the application and supporting materials for the approval of a conditional use to construct the proposed facility.

#### 28.04(22) Telecommunication Facilities and Antenna

## (22) <u>Telecommunication Facilities and Antennas</u>.

(a) The purpose and intent of this ordinance is to strike a balance between the federal interest concerning the construction, modification and siting of telecommunication towers and antennas for use in providing personal wireless services, and the interest of the City of Madison (hereinafter the "City") in regulating local zoning. The regulations contained herein are designed to protect and promote the public health, safety and welfare of the community and the aesthetic quality of the City. The goals of this ordinance are to protect residential areas and land uses from the potential adverse impacts of towers and antennas; minimize the total number of towers throughout the community; encourage the joint use of new and existing tower sites as a primary siting option rather than construction of additional single-use towers; minimize the visual impact of towers and antennas; and avoid potential damage to adjacent properties from tower failure through engineering and careful siting of tower structures. It is also the intent of this section to provide a public forum to insure a balance between public concerns and private interests in establishing commercial telecommunication and related facilities.

US Cellular whenever feasible utilizes existing structures for the placement of their antennas. This is evidenced by the substantial list of collocated antennas within the City of Madison and surrounding communities on telecommunications towers owned by others, rooftops, water tanks and the like. The nearest existing tower located at 2814 Syene Road, owned by ACME Communicatios/Madison Channel 57 is located outside the ¼ mile tower distance prohibition discussed later in Section (22)(g) "Location". The insurmountable deterrent to this existing tower is the short term lease arrangement that ACME has with the property owner RD Properties of Madison, LLC which cannot guarantee a long term home for the US Cellular equipment. An email history with Brent Stephenson of ACME is included with the documentation at the end of the narrative.

(c) Registration of Telecommunications Carriers and Providers.

- 1. Registration and Application Requirements. All personal wireless service carriers and providers that offer or provide any telecommunications services for a fee directly to the public, either within the City or outside the corporate limits from telecommunications facilities within the City, and all Telecommunications tower owners, shall register and provide to the City, pursuant to this ordinance, on forms to be provided by the Building Inspection Division Director and shall provide with each conditional use application the following information:
  - The identity and legal status of the registrant, including any affiliates.
  - b. The name, address and telephone number of the officer, agent or employee responsible for the accuracy of the registration statement.
  - c. A narrative and map description of registrant's existing telecommunications facilities within the City, adjacent cities, villages and townships.
  - d. Such other information as the Building Inspection Division Director may reasonably require.

(Am. by ORD-08-00109, 10-7-08)

- 2. Purpose of Registration. The purpose of registration under this ordinance is to:
  - a. Provide the City with accurate and current information concerning personal wireless services carriers and providers and telecommunications tower owners, who offer or provide services within the City, or that own or operate telecommunication facilities within the City;
  - b. Assist the City in enforcement of this Section;
  - c. Assist the City in monitoring compliance with local, state and federal laws.
- 3. <u>Enforcement.</u> It shall be unlawful for any personal wireless services carrier or provider who offers or provides services within the City, or any telecommunications tower owner who owns or operates telecommunications facilities within the City, to fail to register and provide the information required in subdivision (c)1. above within thirty (30) days of such a request by the City.

This application includes identification of the existing US Cellular sites immediately surrounding the proposed installation. If staff is uncertain if a complete list of US Cellular's facilities is on file, a comprehensive inventory can be provided upon request and prior to the public hearing.

The legal entity requesting the conditional use is Madison Cellular Telephone Company (US Cellular). Their local project manager responsible for the Madison market is Mike Stafford, 5117 W. Terrace Drive, Madison, WI. Mike can be reached at 608-441-4175.

- 4. <u>Conditional Use Application Requirements</u>. In addition to the requirements contained in subdivision (c)1. above, the conditional use application shall address the following:
  - a. The requirements contained in subdivisions (e), (f), (g), (h) and (i) below, including a narrative and map description of the applicant's system-wide plan describing existing and applied for facilities to serve the community;
  - b. A visual analysis, which may include photo montage, field mockup, or other techniques shall be prepared by or on behalf of the applicant which identities the potential visual impacts and the design capacity of the proposed facility to the satisfaction of the Plan Commission. Consideration shall be given to views from public areas as well as from private residences. The analysis shall assess the impacts of the proposed facility and other existing telecommunication facilities in the area, and shall identify and include all feasible mitigation measures consistent with the technological requirements of the proposed personal wireless services. All costs for the visual analysis, and applicable administrative costs, shall be borne by the applicant.

As part of the Plan Commissions continuing jurisdiction over conditional uses, each registrant shall inform the City, within sixty days, of any change in the information set forth in subdivision (c)1.

Items e, f, g, h and i are addressed individually below.

A photo simulation has been provided at the end of this narrative showing the proposed light standard and radio equipment enclosure from seven off-site views. The simulation also includes an aerial reference map identifying the photo simulation vantage points.

5. Minor Alterations. Antennas affixed to an existing telecommunications tower or structure, together with the related support facilities and equipment buildings, or the replacement of a previously approved telecommunications tower and related antennas, support facilities and equipment buildings, may be authorized by issuance of a permit as a minor alteration to an existing conditional use or an existing permitted use when approved by the Director of Planning and Community and Economic Development, which are compatible with the concept approved by the City Plan Commission and/or the standards in sec. 28.12(11)(g), of these ordinances. If said minor alteration is not approved, the applicant shall apply to the Plan Commission for said approval in accordance with the conditional use standards contained herein.

The provisions of this section are not applicable to the application.

6. <u>Inventory and Tracking System</u>. The zoning administrator shall compile a list of existing telecommunications facilities within the City's jurisdiction based upon information provided by personal wireless services providers and telecommunications tower owners. The Zoning Administrator shall maintain and update said list on a regular basis. The list shall also include the location of public facilities that may be available for co-location.

As referenced in Section (c) Registration of Telecommunications Carriers and Providers above, if staff is uncertain if a complete list of US Cellular facilities is currently on file, a comprehensive inventory can be provided upon request prior to the public hearing.

7. A professional engineering consultant shall review each conditional use application for compliance with the requirements set out in Sec. 28.04(22)(g)1. and (h). (Cr. by Ord. 13,502, 2-10-04; Am. by ORD-08-00041, 4-4-08)

Please let me know if additional information is required by the engineering consultant in order to best provide a thorough analysis of the application.

(d) Abandonment. If a telecommunication facility shall cease to be used for a period exceeding one year and a day, the owner or operator of said facility shall remove the facility upon the written request of the City Building Inspection Division Director at no cost to the City within 90 days of said request. Prior to the issuance of any building or zoning permits, a performance bond shall be provided to guarantee that a facility that has ceased being used for telecommunication purposes is removed. The bond amount shall be the lesser of twenty thousand dollars (\$20,000) or an amount based on a written estimate of a person qualified to remove such structures. (Am. by Ord. 13,502, 2-10-04; ORD-08-00109, 10-7-08)

US Cellular agrees to abide by the removal requirements of the abandonment provision and shall provide the removal bond in an amount of \$20,000 prior the public hearing.

(e) Structural Requirements. Every telecommunication facility shall be designed and constructed so as to comply with the requirements of Secs. Comm 62.35 to 62.41, Wisconsin Administrative Code, as amended from time to time. If, upon inspection, the Building Inspection Division Director concludes that a tower fails to comply with such codes, in effect at the time of construction, and constitutes a danger to persons or property, then upon notice being provided to the owner of the tower, the owner shall have 30 days or such time as determined by the Building Inspection Division Director to bring such tower into compliance within said 30 days or such time as determined by the Building Inspection Division Director shall constitute grounds for the removal of the tower or antenna at owner's expense. (Am. by ORD-08-00109, 10-7-08)

US Cellular agrees to abide by the requirements of this provision.

- (f) <u>Basic Tower and Building Design</u>. All new telecommunication facilities, except exempt facilities as defined in subdivision (i), below, shall be designed to blend into the surrounding environment to the greatest extent feasible. To this end all the following measures shall be implemented.
  - Telecommunications towers shall be constructed out of metal or other nonflammable material, unless specifically permitted by the City to be otherwise.
  - 2. Telecommunication support facilities (i.e., equipment rooms, utilities, and equipment enclosures) shall be constructed out of nonreflective materials (visible exterior surfaces only) to all extent possible and, where possible, shall be sited below the ridge line or designed to minimize their impact.
  - 3. Telecommunication equipment buildings, shelters and cabinets shall be treated to look like a building or facility typically found in the area.
  - 4. The City shall have the authority to require reasonable special design (materials, architectural features and color) of the telecommunication facilities where findings of particular sensitivity are made (e.g. proximity to historic or aesthetically significant structures, views and/or community features).
  - 5. Telecommunication facilities shall insure that sufficient anti-climbing measures have been incorporated into the facility, as needed, to reduce potential for trespass and injury.
  - 6. Equipment buildings shall be located, designed and screened to reduce visual impacts to the extent feasible considering the technological requirements of the proposed personal wireless services and the need to be compatible with neighboring residences and the character of the community. 7. Antennas shall be designed to blend with its supporting structure. The color selected shall be one that in the opinion of the Plan Commission will minimize the visibility of the antennas to the greatest extent feasible
  - 1. The proposed tower is made of metal.
  - 2. The proposed radio equipment enclosure does not utilize reflective material. Its aggregate stone exterior is a reasonable material choice to blend with the multiple structure finishes of surrounding architecture including metal, concrete panel, concrete block and brick.
  - 3. The aggregate stone finish is complimentary to surrounding architecture.
  - 4. It is our opinion that there is no adverse visual impact to historic, aesthetically significant structures or community features or views.
  - 5. The tower base is fenced with 6' chain link and 3 strands of barbed wire. Climbing pegs start at a height of 10' above grade.
  - 6. The equipment shelter shall be only marginally visible from off site views as depicted in the photo simulations.
  - 7. The antennas are traditional panel shaped utilizing non-reflective metal with a grey or beige plastic face covering the antenna element.

- (g) <u>Location</u>. All new telecommunication facilities shall be located so as to minimize their visibility and the number of tower sites. To this end, a good faith effort in achieving colocation shall be required of the requestor and host entity, subject to existing co-location contracts; and all of the following measures shall be implemented for telecommunication facilities in addition to meeting the conditional use standards in sec. 28.12(11) of these ordinances:
  - No telecommunications tower shall be installed closer than one-quarter mile from 1. another telecommunications tower, measured from the base of the telecommunications tower to the base of the proposed tower, unless credible evidence to a reasonable degree of certainty acceptable to the Plan Commission is submitted showing a clear need for said new tower and the infeasibleness of co-locating it on an existing site. Such evidence may include a demonstration that no tower in the area that the applicant's equipment must be located is of sufficient height to meet applicant's requirements and the deficiency in height cannot be remedied at a reasonable cost; or the existing tower is not of sufficient strength to support applicant's equipment and the deficiency in structural strength cannot be remedied at a reasonable cost; or the applicant's equipment would electromagnetic interference with equipment on the existing telecommunications tower(s) within the area in which the applicant's equipment must be located, or the equipment on the existing telecommunications tower(s) would cause interference with the applicant's equipment and the interference, from whatever source, cannot be eliminated at a reasonable cost; or the fees, costs or contractual provisions required by the owner in order to co-locate on an existing communication tower are unreasonable relative to industry norms; or the applicant demonstrates that there are other factors that render existing communication towers unsuitable or unavailable and establishes that the public interest is best served by the placement or construction of a new telecommunications tower. For the purposes of this requirement, exempt telecommunications facilities unavailable for co-location shall not be included in the one-quarter mile computation;
  - 2. No telecommunication tower shall be located on a lot in a residence district, unless said lot is greater than two (2) acres in area and the principal use is other than residential.
  - 3. Telecommunications towers, guy wires, appurtenant equipment and buildings shall comply with the yard and set back requirements of the zoning district in which they are located and, in addition thereto, all telecommunications towers shall be set back at least one hundred feet (100') from any property devoted to residential use or two hundred feet (200') from any residential building, which ever is less.
  - 1. There are no telecommunications towers within ¼ mile of the proposed installation. The closest tower at 2814 Syene Road mentioned above is subject to short term leases rendering it unusable for US Cellular. The next closest tower located at 2995 Syene Road, also outside the ¼ mile prohibition radius, is too far away from two primary objectives; (i) offloading of wireless traffic from the existing US Cellular "Fish Hatchery" site and (ii) providing improved in-building service to the Greenway Crossing industrial area. The existing US Cellular sites are included in a site inventory and map included at the end of this narrative.
  - 2. The proposed lot is on a parcel zoned C3L.

3. The setback requirements of the district have been met and are indicated on the drawings included at the end of this narrative. There are no adjoining residential uses.

### (h) Co-located and Multiple-User Facilities.

Unless applicant is submitting an application to locate or co-locate upon an existing tower or structure, an analysis shall be prepared by or on behalf of the applicant, subject to the approval of the Plan Commission, which identifies all subject to the approval of the Plan Commission, which identifies all reasonable, technically feasible, alternative locations and/or facilities which would be useable for the proposed personal wireless services. The intention of the alternatives analysis is to present alternative strategies which would minimize the number, size and adverse environmental impacts, including aesthetics, of facilities necessary to provide the needed services to the City and surrounding rural and urban areas. The analysis shall address the potential for co-location at an existing or a new site and the potential to locate facilities as close as possible to the intended service area. It shall also explain the rationale for selection of the proposed site in view of the relative merits of any of the feasible alternatives. Approval of the project is subject to the Plan Commission making a finding that the proposed site results in fewer or less severe environmental impacts, including aesthetics, than any feasible alternative site. The City may require independent verification by a qualified engineer of this analysis at the applicant's expense.

Facilities which are not proposed to be co-located with another telecommunication facility shall provide a written explanation why the subject facility is not a candidate for co-location.

- 2. All new telecommunications towers shall be structurally and electrically designed to accommodate at least three (3) separate antenna arrays, unless credible evidence is presented that said construction is economically and technologically unfeasible or the Plan Commission determines that for reasons of aesthetics or to comply with the standards of sec. 28.12(11), a telecommunications tower of such height to accommodate three antenna arrays is unwarranted. Multi-user telecommunications towers shall be designed to allow for future rearrangement of antennas and to accept antennas mounted at varying heights. Parking areas, access roads, and utility easements shall be shared by site users, at fair market rates as determined by customary industry standards, when in the determination of the Plan Commission this will minimize overall visual impact to the community.
- 1. An evaluation of the search area yielded no existing structures within the search parameters that would accommodate an antenna centerline height required for the designed facility. All structures in the area consist of one and two story commercial and industrial buildings yielding a maximum height of +/- 35' far below the required design height of 80.0'. If the Planning Commission should choose to have an independent analysis performed by a qualified engineer, additional information if necessary can be provided at the request of the engineer.
- 2. The monopole is designed to hold antenna arrays for up to four separate providers.

Should you have any questions or require additional information, please let me know and it shall be provided in a timely manner. I look forward to discussing the proposal with the Planning Commission.

Kindly,

Nathan Ward

Buell Consulting, Agent for US Cellular

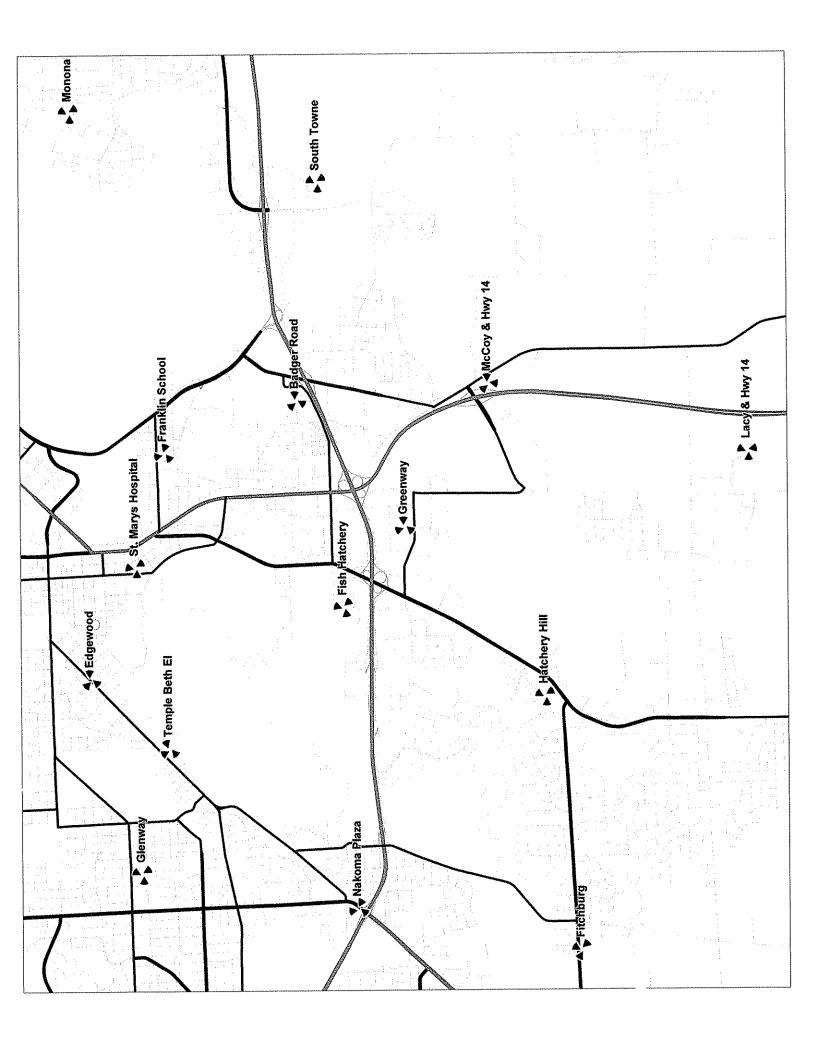
Cc (via email):

Patrick Anderson, Madison Neighborhood Preservation & Inspection

Tim Bruer, Alder District 9

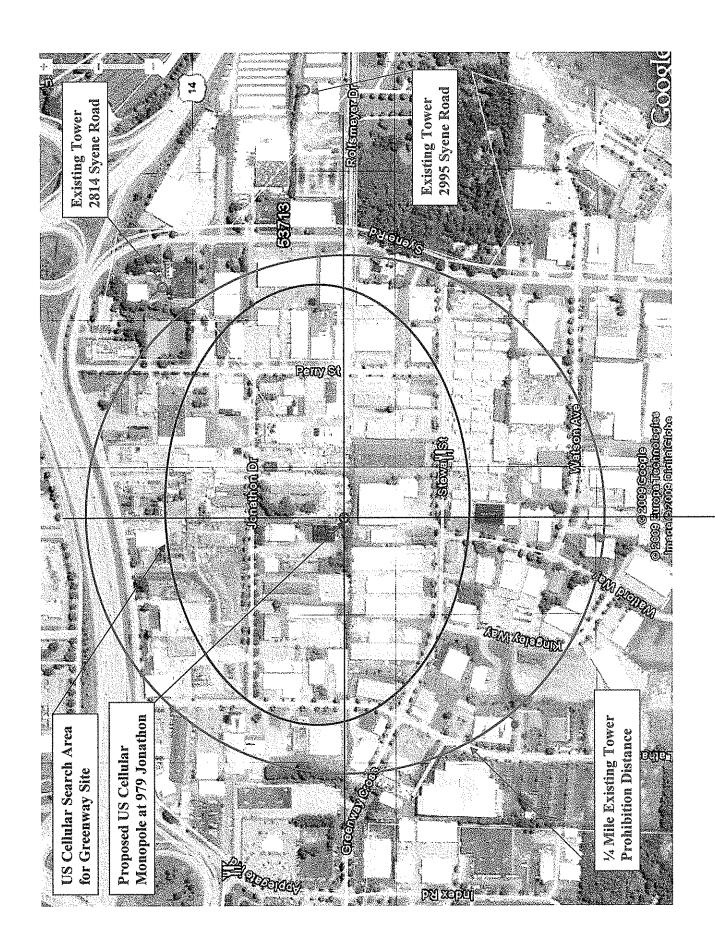
Vera Daniels, c/o Joe Daniels of Daniels Construction

Mike Stafford, US Cellular



### Sites

Site ID	Custom: Address	Custom: City	Custom: State	Custom: Zip
Badger Road	2210 S Beltline Ct.	Madison	WI	53713
Edgewood	1930 Monroe St.	Madison	WI	53711
Fish Hatchery	1752 W. Beltline Hwy	Madison	WI	53713
Fitchburg	5999 McKee Rd.	Fitchburg	WI	53719
Franklin School	305 W Lakeside St	Madison	WI	53715
Glenway	405 S. Owen Dr.	Madison	WI	53711
Hatchery Hill	5550 Caddis Bend #99	Madison	Wi	53711
McCoy & Hwy 14	3081 County Trunk MM	Madison	WI	53711
Monona Dr	5211 Schluter Rd.	Madison	WI	53716
Nakoma Plaza	1324-B Midvale Blvd.	Madison	WI	53711
South Towne	2301 Kilgust Rd.	Madison	WI	53713
St. Marys Hospital	707 S. Mills St. Rm A434	Madison	WI	53715
Temple Beth El	2702 Arbor Dr.	Madison	WI	53711





### Design Discussion for the proposed Greenway site

This is a general summary of U.S. Cellular's design criteria for our proposed site near Greenway Cross.

We are calling this site Greenway on the attached map. The map shows the location of this site along with other surrounding sites in our system.

US Cellular would like to build a site for several reasons discussed below:

- Offload existing sites
- Provide better in-building coverage

#### Offload

One aim of this site is to offload our existing sites in this area. As seen on the map, there are several sites surrounding this proposed Greenway site. These surrounding sites are increasing in call volume, and approaching their traffic limit. This new site will help take some calls traffic from these surrounding sites and delay or eliminate them reaching their call maximum. Once a site reaches its maximum, no new calls may start until existing calls are ended, so offload is important to our system.

This offloading is only needed in high traffic areas. Features that generate large amounts of traffic in this area include: a) The Beltline, b) Highway 14 and the c) Business park environment of Greenway Cross area.

#### In-building coverage

Another reason for this site is to provide in-building coverage. Often, if sites are not located close to buildings with focused amounts of cellular traffic, the cellular signal cannot propagate into the building and provide adequate coverage.

Currently we receive many complaints regarding coverage for buildings in this area. This site will be close to these buildings and be able to penetrate their walls and structure much easier.