



## Report to the Plan Commission

May 10, 2010

**Legistar I.D. #18048**

**117 N. Charter St. & 115 N. Mills St.**

**Charter Street Heating Plant Project**

**PUD Rezoning & Demolition Permit**

Report Prepared By:

Timothy M. Parks, Planner

Planning Division

**Requested Action:** Approval of a request to rezone 115 N. Mills Street and 117 N. Charter Street from R5 (General Residence District) and C3 (Highway Commercial District) to Planned Unit Development-General Development Plan-Specific Implementation Plan (PUD-GDP-SIP) to allow the demolition of an existing one-story physical plant shop building and allow the future construction of a biomass fuel handling and storage facility on east side of N. Mills street and the future expansion and renovation of the University of Wisconsin's Charter Street heating Plant to burn biomass and natural gas.

**Applicable Regulations & Standards:** Section 28.12(9) provides the process for zoning map amendments; Section 28.07(6) of the Zoning Ordinance provides the requirements and framework for Planned Unit Developments; Section 28.12(12) provides the guidelines and regulations for the approval of demolition permits.

**Summary Recommendation:** The Planning Division recommends that the Plan Commission recommend **approval** of Zoning Map Amendments 3483 & 3484, rezoning 115 N. Mills Street and 117 N. Charter Street from R5 and C3 to PUD-GDP-SIP, subject to input at the public hearing and the conditions from reviewing agencies beginning on page 15 of this report.

### Background Information

**Applicant & Property Owner:** University of Wisconsin–Madison, c/o Gary Brown, University Facility Planning & Management; 614 Walnut Street; Madison.

**Agent:** Bob Mangas, Potter-Lawson Architects; 15 Ellis Potter Court; Madison.

**Proposal:** The University is proposing a multi-phase project for the Charter Street Heating Plant that will include the conversion of the existing coal-burning plant into a biomass and natural gas-burning plant. The project scope calls for the construction of a biomass-burning boiler and two “package” boilers on the Charter Street site (addressed as 117 N. Charter Street), as well as the construction of a new steam turbine. On the east side of N. Mills Street, the property addressed as 115 N. Mills Street, which currently contains the University's Facilities, Planning, and Management Physical Plant Shops, will be redeveloped into a biomass storage and handling facility to serve the converted plant across the street. The applicant wishes to commence construction of the first phase of the heating plant project this August, with completion of the overall project envisioned for June 2013.

**Parcel Location:** The proposed Planned Unit Development zoning will encompass two properties located on either side of N. Mills Street and south of W. Dayton Street, including an approximately 3.6-acre parcel bounded on the north by W. Dayton Street, on the west by N. Charter Street, on the east by N. Mills Street and on the south by the Southwest Bike Path, and a triangularly shaped, approximately 1.6-acre parcel bounded by N. Mills Street on the west, by the Wisconsin Southern Railroad on the north and the Southwest Bike Path on the south. The PUD is entirely located in Aldermanic District 8 and the Madison Metropolitan School District.

The entire scope of the Charter Street Heating Plant project will also include land located outside of the proposed planned unit development site. Among the improvements related to the project include the construction of a new railroad bridge over N. Park Street and new train maneuvering sidings in the rail corridor east of the plant, the relocation of a portion of the City's bike path, and the removal of rail crossings and track located north and southwest of the plant. In all, the plant project will extend from N. Randall Avenue on the west to W. Washington Avenue on the east, which includes land in the 4<sup>th</sup> and 5<sup>th</sup> Aldermanic Districts.

**Existing Conditions:** The Charter Street Heating Plant facility on the west side of N. Mills Street is zoned R5 (General Residence District), while the property on the east side of Mills is developed with the one-story Physical Plant Shops building and surface parking, and a one-story metal-sided railroad shed in C3 (Highway Commercial District) zoning.

**Surrounding Land Use and Zoning:**

North: Multi-family residences generally north of W. Dayton Street and UW Educational Sciences, zoned R5 (General Residence District); Dayton House Apartments, zoned PUD-SIP;

South: Multi-family residences generally north of and along Spring Street, zoned R5 and PUD-SIP; Porchlight residential facility, zoned R5; Badger Campus Credit Union, zoned O-1 (Limited Office-Residence District); UW Bulk Mail Center, zoned C2 (General Commercial District);

West: UW Weeks Hall for Geological Sciences and multi-family residences, zoned R5;

East: Merit House, zoned R5; Ogg Hall, zoned PUD-SIP; MG&E Substation and surface parking, zoned M1 (Limited Manufacturing District).

**Adopted Land Use Plan:** The Comprehensive Plan generally identifies the subject sites on each side of N. Mills Street and surrounding properties as part of the University of Wisconsin Campus except the medium-density residential properties located generally southeast of the proposed PUD along Spring Street. The Campus designation is primarily intended to apply to the University of Wisconsin–Madison and Madison College campuses. The designation recognizes the “wide diversity of uses associated with the primary education mission” of those campuses, which could include campus-supporting facilities such as the Charter Street Heating Plant.

The Regent Street–South Campus Neighborhood Plan identifies the future land use of the subject site in the “university support services” category, which includes physical support facilities for the UW campus, including the physical plant and heating and cooling plant. The plan also makes urban design recommendations, which will be addressed in the body of the report.

**Environmental Corridor Status:** This property is not located within a mapped environmental corridor.

**Public Utilities and Services:** This property is served by a full range of urban services.

In addition, Bill Sullivan, Fire Protection Engineer with the Madison Fire Department, submitted the following comments for consideration with the proposed zoning map amendment related to the City's ability to provide fire protection for the Charter Street Heating Plant: “[Madison Fire Department] recognizes the complexity and challenges of this project; an industrial facility located in the center of an urban setting. MFD commends the University for their commitment to design the entire facility to a level

of safety above the minimum State of Wisconsin code requirements. MFD will continue to work with the design team in developing contemporary approaches to mitigate hazards associated with the site and operations such as but not limited to fire, explosion, and hazardous materials. MFD is confident that through the implementation of contemporary design and preventive measures, this project can safely coexist with its urban surroundings.”

**Zoning Summary:** The site will be rezoned to PUD-GDP-SIP. The proposed PUD and demolition permit for 115 N. Mills Street will be reviewed in the following sections.

Other Critical Zoning Items	
Yes:	Urban Design, Wellhead Protection (Zone B, WP-27), Utility Easements, Barrier Free
No:	Landmarks, Floodplain, Waterfront Development
<i>Prepared by: Pat Anderson, Asst. Zoning Administrator</i>	

## Project Review

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*[In addition to the materials submitted with the rezoning application by the applicant, information in this staff report was derived from a review of the Charter Street Heating Plant Draft Environmental Impact Statement (DEIS).]*

The University of Wisconsin and the Wisconsin Department of Administration are embarking on a \$251 million dollar overhaul of the Charter Street Heating Plant (CSHP), which currently occupies an approximately 3.3-acre site bounded by W. Dayton Street on the north, N. Charter Street on the west, N. Mills Street on the east and the Southwest Bike Path on the south. The heating plant is considered a supporting use for the University and falls generally under the larger conditional use for colleges and universities in the R5 General Residence District, which also includes many other nearby University parcels in the south campus area to the north and west of the subject site. In order for the proposed renovation and expansion of the CSHP to proceed, it was determined that a zoning map amendment was required to place the plant in a more appropriate zoning classification that better reflected the character of the existing and future use of the site, which is considerably more industrial in character than the other R5-zoned University uses located in the surrounding area. After discussions with City staff, it was determined that given the particular character of the project that Planned Unit Development zoning would be the best district for the plant going forward versus a rezoning of the property to M1 Limited Manufacturing District zoning, which would also accommodate the plant project.

The central objective of the proposed renovation of the CSHP will be the conversion of the plant from a coal-burning facility to one that burns biomass and natural gas with the intention of reducing the carbon footprint of the facility, which provides chilled and heated water, steam heat, compressed air, and electricity for large portions of the University campus, as well as bring the plant into compliance with the United States Clean Air Act. The CSHP will phase out coal burning by 2012 and will burn natural gas exclusively until the conversion to biomass fuel is complete in the spring of 2013. Ultimately, the project will phase out 4 existing coal-fired boilers and eliminate the prominent coal piles currently located along the southern and eastern edges of the Charter Street site and which are visible from W. Dayton Street.

The Charter Street project calls for the installation of a new biomass boiler that will be capable of burning natural gas, wood chips, wood pellets, tire-derived fuel, agricultural-derived fuel pellets, and paper-derived wood pellets to generate 350,000 pounds of steam per hour. Two new natural gas boilers capable of generating 225,000 pounds of steam per hour and a new 22-megawatt steam turbine

electric generator will also be installed. The project will also include the installation of a variety of air quality control and emissions control systems and a new bag house for the control of particulate matter emissions. An existing 300,000-pound per hour boiler that burns natural gas and ultra-low sulfur fuel will remain.

The proposed burning of biomass fuel will cause a substantial expansion of the footprint of the heating plant in order to accommodate the storage and transportation of the biomass material near the new boiler. The project calls for the construction of a biomass unloading and storage facility to be located on the east side N. Mills Street opposite the eastern edge of the existing plant site on land currently developed with the University's Facilities, Planning, and Management Physical Plant Shop building and a one-story metal train shed. The 1.1-acre site is currently zoned C3 (Highway Commercial District) and will be rezoned to the PUD district as part of the proposed zoning map amendment request pending before the Plan Commission and Common Council.

The proposed PUD will encompass 5.2 total acres of area, including the two existing parcels at 115 N. Mills Street and 117 N. Charter Street, as well as approximately 0.8-acres of land located within the adjacent rail corridors that are being rezoned to accommodate project-related facilities that will be partially located off the two parcels of land.

The CSHP will also require a number of improvements not located within the lands to be rezoned from R5 and C3 to PUD-GDP-SIP with the proposed request. Additional elements of the project include the upgrading of the existing rail corridor between the proposed PUD and W. Washington Avenue to facilitate the delivery of 2-3 trains per day with 16 cars per train at peak plant capacity. The project calls for the relocation of a portion of the Southwest Bike Path located between N. Park Street and W. Washington Avenue to accommodate the train maneuvering that will be required for the biomass delivery trains. The project also calls for the future installation of a new electric substation north of the existing Charter Street Plant and the removal of rails and the restoration of the rail corridor located southwest of the site between N. Randall Avenue and N. Charter Street. Although these improvements will be located outside the area being rezoned with this request, these additional aspects of the project are integral to the scope of the planned unit development and will be discussed within the body of this report primarily for informational purposes.

### Existing Conditions

The existing Charter Street Heating Plant was first established in 1957, with additions made in 1965, 1970, 1973 and 1986 according to information contained in the PUD materials and DEIS. The plant has burned coal as its primary fuel sources since its inception.

The existing CSHP site is characterized by approximately 45,000 square feet of structures located primarily along the northerly and westerly edges of the site, including the bag house, boilers and cooling towers and supporting office facilities. The existing buildings stand approximately seven stories in height, with a prominent 250-foot tall exhaust stack located in the center of the complex. Surface parking for 49 vehicles is located in two lots between the northern walls of the existing plant and W. Dayton Street and west of the plant adjacent to N. Charter Street, with an 8-foot chain link fence located along most of the length of those property lines. The southerly and easterly portions of the existing 3.3-acre CSHP site are occupied by coal storage piles for existing plant operations, which are screened by 12-foot tall concrete walls that extend along most of the southern and eastern property lines. The University indicates that the existing coal piles occupy approximately 36,000 square feet of the 3.3-acre site, including in an open area located beneath the existing raised bag house structure.

As noted earlier in this report, the land on the east side of N. Mills Street to be incorporated into the proposed PUD is developed with a one-story building addressed as 115 N. Mills Street. The stone-finished precast concrete building contains 17,000 square feet of space and is located on the southerly half of the triangularly shaped, 1.1-acre site. The remainder of the site is improved with 53 surface parking stalls and a small one-story metal train shed located along the easterly edge of the northerly property line formed by the adjacent Wisconsin Southern Railroad right of way. The University received conditional use approval in October 2009 for a new three-story building at 30 N. Mills Street to replace the facilities previously located in the 115 N. Mills Street building. The proposed zoning map amendment request also includes approval of a demolition permit to allow the one-story 17,000 square-foot building to be razed. The train shed is considered accessory and does not require a demolition permit to be razed.

The area surrounding the proposed PUD includes a variety of land uses either directly or indirectly related to the University. Property directly to the north of the existing plant site is developed with the Noland Zoology Building, while the northeastern corner of N. Mills and W. Dayton streets is developed with the Educational Sciences complex. Two non-University apartment buildings are also located north of the plant site, including a recently constructed six-story apartment building located at the northwestern corner of N. Charter and W. Dayton streets, and a smaller two-story, four-unit apartment building located at the northeastern corner. Properties to the south of the existing plant site are primarily developed with a mix of University support facilities, including the UW Extension Bulk Mail facility at 45 N. Charter Street, University Fleet Services Building at 27 N. Charter Street, and the new Physical Plant Shop Building at 30 N. Mills Street. Non-university uses include the two-story Badger Campus Credit Union located at the southwestern corner of N. Mills and Spring streets, and two multi-family residences containing 3 and 9 units, respectively, at 1111 and 1115 Spring Street. Porchlight operates a residential facility located on a triangularly shaped parcel located south of the plant and Southwest Bike Path at 1102 Spring Street.

A similar land use pattern exists west of the plant and N. Charter Street. The W. Dayton Street frontage of the adjacent block is developed with University uses including Weeks Hall (Geology), the Atmospheric, Oceanic and Space Sciences Building, and Schreiner Hall, while the southern half of the block along Spring Street is developed with a variety of privately owned multi-family residences that are predominantly student occupied. A forthcoming application to redevelop three of those private multi-family properties with an eight-story, 87-unit apartment building is anticipated to come before the Plan Commission later this spring.

The area southeast of the proposed PUD site is developed with a series of three- and four-story multi-family apartment buildings, which were largely constructed within the last 15 years, while the land northeast of the 115 N. Mills Street site is developed with the University's Merit House residential facility and the privately owned Dayton House Apartments. Smaller wood frame multi-family residences and the University's Bernie's House daycare facility are located further north across W. Dayton Street.

Uses north of the rail corridor that will be modified and expanded to accommodate the maneuvering of trains delivering biomass to the new Charter Street Heating Plant include the Kohl Center, Southeast Recreation Facility, the new Ogg residence hall and Art Lofts. Lands south of the rail corridor contain a variety of University and non-University uses, including the University Environmental Protection and Safety Building and Newell Smith residence hall between N. Park Street and East Campus Mall, and privately owned office buildings along the north side of Regent Street east of East Campus Mall.

### Detailed Charter Street Heating Plant Project Summary

The general development plan for the 3.3-acre CSHP site at 117 N. Charter Street ultimately includes the removal of rail spurs throughout the construction site and in the W. Dayton Street right of way; the removal of the existing coal handling, conveyance and storage systems and the coal piles; deconstruction of the existing bag house along the northern side of the existing plant, and; removal of underground fuel oil storage tanks and in the northeastern quadrant of the site. The main boiler building and one existing boiler will remain along the N. Charter Street side of the plant, while four other boilers will be disassembled in the future following completion of the new biomass boiler. The installation of the proposed new equipment and the retirement of the existing equipment will be phased to maintain campus steam capacity through the duration of the project.

Beginning along the W. Dayton Street side of the existing plant, an addition is proposed that will house two new natural gas/fuel oil-fired package boilers and a new steam turbine generator to be located on the northern end of the addition in the area currently occupied by the existing bag house. Moving south, the addition will house the new biomass boiler near the center of the expanded plant, with a new bag house, air quality control system building and control room to be located along the new eastern wall of the addition facing N. Mills Street (see Sheet A100 of the plan materials). Three of the existing cooling towers at the southwestern corner of the existing plant will be replaced with a new cooling tower in the same location. Other proposed improvements on the CSHP site will include fuel conveyance equipment, a new exhaust stack, ash handling silos, a new 32-stall surface parking lot to be located between the plant addition and N. Mills Street, and new aboveground fuel oil storage and ammonia tanks along the southern edge of the existing CSHP site.

Sheet A100 also identifies space for a future generator within the proposed addition, and space for a second new biomass boiler and second new bag house that would be located between the first addition and N. Mills Street. With the exception of the second generator, staff believes that insufficient information regarding the second new biomass boiler and bag house has been provided to merit the approval of those future elements with the subject general development plan request.

The north wall of the proposed heating plant addition will be clad in a combination of precast concrete panels with brick veneer finish and metal wall panels, while the eastern wall of the addition will be clad with a combination of metal panels and composite wall panels, with window openings shown along both of those elevations, including along most of the ground floor of the northern facade.

The biomass, which will be pre-processed off-site at as-of-yet undetermined locations in South Central Wisconsin, will primarily be delivered to the CSHP site by rail. Trains will be coming from both east and west of the CSHP along the Wisconsin Southern Railroad tracks. According to the DEIS for the project, train deliveries are estimated to be completed in a 12-hour window, either 7:00 a.m. to 7:00 p.m. or 8:00 a.m. to 8:00 p.m.

As noted in the preceding section, the CSHP project calls for a biomass handling facility to be developed at 115 N. Mills Street. The biomass handling facility will include an enclosed rail car dumping system to be located along the northerly edge of the proposed PUD, four storage silos for fuel materials, and conveyors that will transport the fuel materials from the storage silos across N. Mills Street into the new biomass boiler. The general development plan calls for a rail spur to extend into a long, enclosed rail shed building on the 115 N. Mills Street site, which will accommodate up to four rail cars at any given time. Fuel will be dumped from each rail car individually into an enclosed hopper large enough to accommodate the volume of at least one rail car. Conveyors located through the center of the site will transport the biomass into a transfer tower, where it will be segregated into the specified

storage silo. Two bag houses are proposed at the 115 N. Mills Street site to control dust related to the storage and handling operations on this site.

The proposed silos will be constructed of circular concrete walls, while the rail shed and tipping facility will be built with a combination of precast concrete and metal wall panels. Preliminary designs for the silos suggest that the silos, which will stand 12- to 15-stories in height, will reflect a modern industrial aesthetic, though final design details for all of the 115 N. Mills Street facilities will not be finalized until specific implementation plan approval is requested as part of a subsequent application.

In addition, certain "secondary" biomass fuels will be delivered to the 115 N. Mills Street site by truck. Truck delivery will also occur when rail delivery is interrupted. Materials delivered by truck will be off-loaded into a receiving pit to be located along the southerly edge of the N. Mills Street site, which will transport the fuel to the silos. The application materials indicate that between 4 and 15 trucks will deliver fuel materials to the site on an average day, not including any truck deliveries required to replace interrupted rail deliveries. The removal of bi-products generated by the burning of the biomass materials will require 4-5 trucks additional per day to serve the heating plant under normal operations.

Although not located on the two parcels to be rezoned PUD with the subject application, the CSHP project calls for the construction of new rail components to accommodate the delivery of biomass by train without impacting through-traffic on the Wisconsin Southern Railroad mainline. The CSHP project requires the extension of a new rail spur in the existing railroad right of way extending from W. Dayton Street east to W. Washington Avenue and modifications to existing rail overpasses at N. Park Street and East Campus Mall to allow full railcars to be delivered to one siding, decoupled in sections to be transported to the transfer facility at 115 N. Mills Street for emptying, and for the empty cars to be delivered to an empty parallel siding afterward. The University notes that the rail corridor between N. Mills Street and W. Washington Avenue is ideal for these operations, as there will be no interruption of vehicular and pedestrian traffic across this corridor due to the train bridges across N. Park Street and East Campus Mall. However, in order to accommodate the new rail siding needed for biomass fuel handling, the existing Southwest Bike Path will be shifted south to accommodate the new N. Park Street and East Campus Mall bridge crossings. Primary modifications to the bike path include changing the access ramps at East Campus Mall and expanding the bridge to move the bike path south, as well as modifying the pedestrian underpass.

Implementation of the CSHP project will occur in phases beginning this August, with completion of the project anticipated by the end of 2013. At the present time, the University is requesting General Development Plan-level approval for the 117 N. Charter Street and 115 N. Mills Street properties, with initial Specific Implementation Plan zoning to allow the demolition of the 115 N. Mills building and to provide zoning continuity for both properties pending the submittal of subsequent SIP amendments to provide final plan details for each project prior to construction commencing, including final architectural, site, and landscaping plans.

A general outline of the project schedule calls for demolition of the 17,000 square-foot building at 115 N. Mills Street, removal of the oil tanks in the northeastern corner of 117 N. Charter Street and site construction for the new natural gas boilers to commence this August. Construction of the new rail spur and rail bridges would begin in March 2011, while construction of the biomass handling and storage facility at 115 N. Mills Street would begin in August 2011. Construction of the biomass boiler building addition would commence in October 2011, with the first biomass shipment schedule to arrive at 115 N. Mills Street in September 2012. The new biomass boiler would begin testing in November 2012, with the biomass boiler system schedule to be fully operational in March 2013.

Note: References in the PUD and DEIS mention the potential development of a new electrical substation on an approximately 0.4 acre-parcel located on the north side of W. Dayton Street opposite the CSHP. However, plans for the proposed substation, including site, building and operation plans, have not been submitted for City approval, nor is this property included in the limits of the subject zoning map amendment. Separate land use entitlements will be required in order for this portion of the CSHP project to proceed.

## **Analysis**

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The proposed rezoning of 117 N. Charter Street and 115 N. Mills Street centers around the University of Wisconsin's desire to convert the Charter Street Heating Plant from primarily a coal-burning facility to one that burns a combination of biomass materials and natural gas to provide a large portion of the UW campus with chilled and heated water, steam, compressed air and electricity. The use of biomass will allow the University to employ a cleaner, more renewable resource as its primary fuel to meet existing and future demands for energy on campus, while reducing its carbon footprint and eliminating the use of coal.

As noted earlier in this report, the Charter Street Heating Plant has existed on the 3.3-acre parcel between N. Mills and N. Charter streets since about 1957. While it may be considered incongruous to establish an industrial land use of the scale and character of the CSHP in the midst of an area predominated by other largely University-related institutional land uses and a myriad of mostly multi-family residential land uses, the plant has existed in this context from its inception. Further, staff acknowledges that the location of the heating plant in this case is driven in large part by the efficiencies gained by having the steam, chilled and heated water, compressed air and electricity generated at the CSHP within very close proximity to the facilities that utilize them. Both the existing and proposed plant also benefit from its location along the Wisconsin Southern Railroad mainline, which adds efficiency to the delivery of the coal currently burned at the plant and the proposed future burning of biomass.

However, while Planning staff generally supports the modernization of the Charter Street Heating Plant and its conversion to non-coal fuels, its renovation and expansion will require very careful consideration of the potential impacts the proposed physical and operational expansion of the plant may have on the nearby institutional and medium-density residential properties in this dense, urban neighborhood, including the consideration of potential noise impacts and urban design. Consideration will also need to be given to the impact the project may have on existing and future multi-modal transportation in the surrounding area, including possible future commuter rail along the Wisconsin Southern Railroad mainline.

### Conformance with Adopted City Plans

As with any zoning map amendment, the Plan Commission shall not recommend the adoption of a proposed amendment unless it finds that the proposed rezoning is "in the public interest and is not solely for the interest of the applicant, and shall not recommend a proposed amendment without due recognition of the master plan of the City." In addition, Chapter 66.1001 (3) of Wisconsin Statutes requires that zoning map amendments approved after January 1, 2010 be consistent with the City's comprehensive plan.

The Comprehensive Plan generally identifies the proposed PUD sites on each side of N. Mills Street as well as surrounding properties to the north, west and southwest as part of the University of Wisconsin



Campus, while the medium-density residential properties located generally southeast of the proposed PUD along Spring Street are identified for medium-density residential uses. The Campus designation in the Comprehensive Plan is primarily intended to apply to the University of Wisconsin and Madison [Area Technical] College campuses. The designation recognizes the “wide diversity of uses associated with the primary education mission” of those campuses, which staff believes could include campus-supporting facilities such as the Charter Street Heating Plant. The Comprehensive Plan notes that campus development should be compatible with the surrounding uses and their design characteristics and mitigate potential negative impacts on adjacent uses.

The Charter Street Plant and its environs are also included within the boundaries of the 2008 Regent Street–South Campus Neighborhood Plan, which was adopted to provide more detailed neighborhood-level planning for the area of the City roughly bounded by Monroe Street and N. Randall Avenue on the west, W. Johnson Street on the north, East Campus Mall on the east and the south side of Regent Street on the south. That plan identifies the future land use of the subject site in the “university support services” category, which includes physical support facilities for the UW campus, including the physical plant and Charter Street Heating Plant. The Plan also includes recommendations on urban design, housing and transportation in the above-specified area.

The Regent Street–South Campus Neighborhood Plan makes few specific recommendations regarding the CSHP but notes that the current plant is more than twice as large as when it was originally constructed, and that it predates much of the construction around it. The Plan suggests that the CSHP is “at odds with the substantial number of residential uses bordering the UW campus, especially the medium-density student housing that has been built directly to the southeast”. However, the Plan also acknowledges the University’s plans to potentially expand the heating plant across North Mills Street and its exploration of “...alternate fuels for the Charter Street plant, including some amount of biofuel use...”

The Plan also includes urban design recommendations for the planning area, including specific recommendations for N. Mills Street, which it identifies as an important travel corridor for pedestrians and bicyclists that connects Regent Street to University Avenue through a dense student living area. Specifically, N. Mills Street is recommended for pedestrian accommodations including improved lighting to boost pedestrian and bicycle safety. The CSHP is specifically identified as one of the uses along the N. Mills Street corridor that detracts from pedestrian and bicycle safety. A general recommendation for this corridor encourages infill development oriented toward N. Mills Street with the intention of making it a more successful pedestrian corridor. Staff believes that, given the uses proposed for the two sites to be zoned PUD and their likely operational requirements (site security, vehicle access, etc.), full implementation of this goal may difficult to achieve. However, the University should incorporate lighting, screening, landscaping and streetscaping elements that achieve this planning objective as part of its final plans for CSHP project elements abutting N. Mills Street.

The Regent Street–South Campus Neighborhood Plan also makes detailed recommendations for building height within the plan boundaries. The Plan generally recommends building heights up to 8 stories and 116 feet for the two sites to be zoned PUD as well as all of the surrounding properties located south of W. Dayton Street (see map included in University materials). Many aspects of the proposed CSHP addition on the west side of N. Mills Street appear to conform to these height recommendations, including the biomass boiler, new bag house and package boiler addition (heights vary, with a maximum height of 111 feet above grade), though some elements such as the west transfer tower will be taller than recommended. On the east side of N. Mills Street, the enclosed train unloading facility along the northerly edge of the proposed PUD will generally stand between 28 and 50 feet tall. The tallest biomass storage silos, however, will stand between 134 and 156 feet above grade.

### Conformance with the Planned Unit Development Criteria & Project Design

Staff believes that PUD zoning provides the best framework for integrating an industrially oriented project like the modernized and expanded Charter Street Heating Plant within its otherwise institutional and residential surroundings by providing a higher design standard for the facilities proposed on the two sites to be rezoned than would likely exist were these properties rezoned to a conventional zoning district, such as M1 Limited Manufacturing District zoning.

As a basis for determining the acceptability of a planned unit development, the Zoning Ordinance requires that specific criteria be applied with specific consideration as to whether or not the proposed PUD “is consistent with the spirit and intent of this ordinance and has the potential for producing significant community benefits in terms of environmental and aesthetic design.” In particular, Planning staff believes that Criteria 1a and 1b require the most careful consideration by the Plan Commission as it makes its recommendation to the Common Council on the proposed CSHP project. Those criteria respectively require that the uses and their intensity, appearance and arrangement in a proposed planned unit development be of a visual and operational character compatible with the physical nature of the site or area, and; that the PUD will produce an attractive environment of sustained aesthetic desirability, economic stability and functional practicality compatible with the [Comprehensive] plan.

In general, staff believes that the University has made a concerted effort to address these criteria in the preparation of primarily general development plan-level materials for the proposed CSHP project and believes that the Plan Commission will be able to find these criteria met in order to recommend approval of the general development plan, although significant design details remain to be worked out before substantial construction begins. [As noted earlier, the University is primarily seeking GDP approval and the permission to demolish the existing Physical Plant Shops Building at 115 N. Mills Street at this time; the SIP-level approval is initially being provided for zoning continuity for the two sites pending submittal of more detailed specific implementation plans for phases of the CSHP project prior to construction.]

At the general development plan level, the University has proposed a series of new buildings and building additions that appear intended not to disguise or hide the proposed use of both the renovated CSHP on the west side of N. Mills Street or the facilities for the handling and storage of biomass materials on the east side, but rather to emphasize or “celebrate” the unique industrial and environmental aspects of the somewhat incongruous buildings and uses that will occupy the two sites.

The proposed addition to the existing CSHP on the west side of N. Mills Street, which will house the new biomass and package boilers as well as other operational and pollution control features, are designed to be modern extensions of the existing facilities on the west side of that site, with a mix of precast brick panels to generally match the brick skin of the existing building and metal cladding and composite panels to denote a more contemporary evolution of the building. A considerable amount of transparency is proposed, with large areas of vision glass on both the northern and eastern facades of the addition including at street level, which will open the CSHP facility up to its surroundings compared to the existing plant building, which is very insular. The University is also exploring making the enclosed conveyor across N. Mills Street open and transparent so that the public can see the biomass as it is transported to the biomass boiler.

On the east side of N. Mills Street, the University is proposing a modern, slender metal and brick train shed for the unloading of train cars along the northerly property line of the triangularly shaped site. Due

to the significant quantities of biomass needed to satisfy both existing and future energy demands (biomass burns faster than coal) and the limited horizontal space available for storage surrounding the plant, large storage buildings are proposed to allow the University to maintain sufficient stores of fuel at all times. The “silo” buildings proposed adjacent to the N. Mills Street frontage of the eastern PUD site will be designed in keeping with the contemporary industrial aesthetic being proposed elsewhere throughout the CSHP project. However, given the scale and mass of this storage facility, which will stand prominently throughout the south campus area and may be visible at more distant vantage points, careful consideration will need to be given during review of final SIP-level plans prior to construction to ensure that the silos are well designed and carefully integrated into the larger built environment.

The Urban Design Commission reviewed the proposed CSHP project and proposed PUD on April 7, 2010 and recommended initial approval of the project (see attached report).

### Impacts from Proposed Rail Operations: Traffic and Noise

As noted in the Project Review section, the DEIS for the CSHP project states that train deliveries and unloading are estimated to occur in a 12-hour window, either 7:00 a.m. to 7:00 p.m. or 8:00 a.m. to 8:00 p.m. The DEIS estimates that it would take the full window to unload two 16-car trains due to the time required to couple and decouple the cars during the unloading process. Trains serving the new CSHP facility will be coming to the site from both east and west of Madison along the Wisconsin Southern Railroad tracks, with the trains traveling at speeds no greater than 10 miles an hour because of the urban environment and numerous at-grade rail crossings.

The DEIS contains an analysis of the at-grade rail crossings and potential impacts from the arrival of full trains to the CSHP facilities and the removal of trains following the emptying of the biomass cars, using estimated 2013 traffic volumes with a 1.1% annual growth rate. The DEIS concluded that queues at the six intersections surrounding the CSHP would be the same as existing conditions in 2009 except at the intersection of N. Charter and W. Johnson streets, where eastbound peak hour queues would be increased in the morning, mid-day, and the evening peak periods. These impacts have not been verified by the City’s Traffic Engineering Division.

The DEIS also assumes that the traffic signals south of the W. Washington Avenue crossing, north of the N. Charter Street crossing, and north of the N. Randall Avenue crossing are in coordination with the train signals to eliminate the potential for back-ups into previous intersections. City staff has already discussed with the University the need to “block” the train signals between N. Mills Street and W. Washington Avenue within the CSHP delivery and handling corridor so that CSHP-related trains do not trigger the gates and signals at street crossings outside the delivery and handling area. Staff is aware that the State Office of the Commissioner of Railroads has placed a similar condition on the University as a condition of conditionally approving the new railroad spurs required to serve the CSHP project.

The DEIS also estimates that CSHP-related rail delivery “should have minimal impacts on future rail stops at the Kohl Center” due to the construction of the additional siding, which will preserve through rail traffic on the Wisconsin Southern mainline through the adjacent corridor. The reference to “rail stops” at the Kohl Center alludes to the Transport 2020-envisioned commuter rail service that is planned to traverse this corridor and the commuter rail stop envisioned in the Park Street/ Kohl Center area. A memo from Dave Trowbridge, Transport 2020 Project Manager, is attached, which outlines the first phase of the proposed commuter rail project, which will extend from Middleton to Sun Prairie through the UW campus and downtown area along this rail corridor.

While there are still many details to be finalized regarding how the commuter rail service will operate, including the track operations (one commuter train operating on one rail line, two trains on one rail line, or two trains on two rail lines), stop locations and designs (platform length, station entrances, etc.) and frequency of service, the DEIS indicates that the ...”CSHP has the potential to create disruptions to the commuter rail schedule, depending on the inbound/outbound schedule and beginning/ending terminals.” As such, City staff believes it would be appropriate to condition approval of the proposed planned unit development on the University demonstrating the impact their biomass delivery operations will have on existing and future passenger/ freight operations in this corridor.

The University indicates that noise from long-term operation of the expanded CSHP facility will be generated from a number of sources, including the new boilers, steam turbine generator, air inlets, exhaust stacks, pumps, conveyors, biomass unloading, train coupling/uncoupling, and compressors, and that noise generated by the project will be greater than existing conditions. However, the DEIS indicates that most of the noise generated will be confined within enclosed structures, and will contain materials to acoustically dampen the sounds. The DEIS estimates that the noise from the new buildings and equipment will be the same as the current noise level of 64 decibels in the daytime and slightly increased from 59 to 62 decibels in the nighttime, while noise from existing buildings and equipment will be the same as the current noise level of 70 decibels in the daytime and slightly increased from 69 to 70 decibels in the nighttime. The DEIS states that this noise generation would comply with the noise limits set forth in MGO Section 24.08, which requires that new equipment and buildings are subject to a 65 decibel limit, day or night, while existing equipment and buildings established before the enactment of the noise ordinance are subject to a 75-decibel limit.

A notable exception will be the increased rail traffic and associated train operating equipment, including barriers, bells, and whistles, which will increase acute noise aspects. The University suggests that rail-generated noise is exempt from the 65-decibel limit in MGO 24.08 and is instead subject to State-imposed railroad regulations. However, City staff believes that potential noise impacts from the train operations related to the new biomass delivery system on the adjacent rail corridor stand as one of the more significant concerns that exist with the proposed CSHP project and are directly related to the review of the subject planned unit development zoning.

While noise from the 2-3 16-car trains that will deliver biomass to the site from the remote processing facilities at peak plant operation will result in the sporadic and short-term need for train whistles to be blown and bells at crossing gates to sound, this condition already occurs within this corridor and the University’s deliveries should not result in a significant expansion of this condition. Of greater concern to staff is the noise that will be generated by the maneuvering of train cars between the sidings to be located between N. Park Street and W. Washington Avenue and the storage and handling facility proposed at 115 N. Mills Street. This includes not only the customarily loud noises generated when train cars are coupled and decoupled, but also the noise that may be generated by the specific equipment that will be used to move the cars between the sidings and storage and handling facility.

The University has yet not specified what that equipment will be, but has suggested in prior discussions with staff that it will be either a diesel or electric “mule” locomotive, which is a smaller locomotive than those used on long-distance rail trips, and which is specifically designed for shorter, “yard”-type operations such as the one that will move the four cars to be taken at a time to the new N. Mills Street facility for emptying. Given that the maneuvering of train sections to and from the N. Mills Street facility is anticipated to occur throughout the day from approximately 7:00 a.m. to 8:00 p.m., there is potential for both more direct, acute noise and indirect, “white” noise (as well as possibly exhaust fumes) depending on the vehicle chosen.

Staff believes that additional information will need to be provided for careful review as part of the review of the final specific implementation plan for the storage and handling facility at 115 N. Mills Street that models the noise impacts from the day-to-day maneuvering of trains between the sidings and storage and handling facility. Particular attention should be paid the University to choose the quietest piece of equipment available for use in transporting train cars to and from the N. Mills Street facility, as well as one that generates the least amount of exhaust possible.

### Agreement Between University and City Required

Finally, City staff from the City Engineering Division, Traffic Engineering Division, Planning Division and Office of Real Estate Services in consultation with the City Attorney's Office have identified the need for a formal agreement between the University and the City to facilitate implementation of the proposed Charter Street Heating Plant project. Such agreements are not customarily required with the approval of planned unit developments. However, the overall scope of the CSHP project includes elements that transcend the boundaries of the proposed PUD but are directly related to elements of the project contained in the zoning map amendment. Given the overall high rate of complexity with the project and the reliance upon City right of way and facilities such as the proposed relocation of a portion of the Southwest Bike Path, staff believes that such an agreement is necessary and appropriate to ensure the timely implementation of this important University project.

While the specific details of the agreement between the University and City will not be fully developed until after the general development plan for 117 N. Charter Street and 115 N. Mills Street is approved, the agreement will likely include the following elements:

- Reconstruction of N. Mills Street, N. Charter Street, and W. Dayton Street as required the City Engineering Division and Traffic Engineering Division, including the removal of tracks and reconstruction of W. Dayton Street pavement, staged as to not coincide with the Southwest Path detour onto W. Dayton Street;
- Reconstruction of the Spring Street/ N. Charter Street intersection, with the work zone extended far enough to remove the "hump" created by the rail elevation, as well as possible removal of the non-standard "speed table". Staff notes that the removal of the rail line, the alignment of the path and sidewalk connections through this intersection, as well as the need for special marking or other safety features, should be incorporated in the final design as reviewed by the City Engineering Division and Traffic Engineering Division.
- Construction staging for the new bridge over N. Park Street and the modification or partial reconstruction of the East Campus Mall underpass is subject to approval by Traffic Engineering with respect to the timing and duration of street closure, lane closures or interruption of pedestrian access. The vertical clearance for the new rail bridge over N. Park Street shall not be less than the existing vertical clearance.
- Final Southwest Bike Path design to maintain current functionality with respect to accesses, path width, shoulder width, minimum horizontal radii and maximum grades as approved the City Engineering Division. The main path design shall meet AASHTO criteria for a 20 MPH design speed and maximum grade on main path and all access paths shall not exceed 5%. Construction of the relocated path shall not constrict the vehicular access area between the path and the adjacent building at 600 Regent Street, particularly the curve and curb geometry

where it enters the parking area west of the building. The design vehicle that must negotiate this turn should be established in consultation with the adjacent property owner (Alexander Company), Madison Fire Department and Traffic Engineering Division, and final curb geometry must be checked with the appropriate turning template(s). Curb and gutter between the path and the private development's access drive shall be at least as wide as the existing special curb to provide physical separation between motor vehicles and the path.

- The project affects a large amount of both public and private storm sewer and sanitary sewer along the bike path. The University shall coordinate the redesign and construction of the new storm and sanitary sewer with the City Engineering Division.
- The conveyor over N. Mills Street will require a lease of air rights from the City. The conveyor shall provide a minimum of 16 feet of clearance from pavement elevation.
- A maintenance agreement is needed for several significant landscape features, including the existing rail corridor west of N. Charter Street, the planter area between the path and the screen wall for two blocks between N. Charter Street and N. Mills Street, the "rain garden" feature on the current Alexander Company lease area between East Campus Mall and W. Washington Avenue, and the pavers and special terrace treatment on W. Dayton Street. Modifications to the existing maintenance agreement for the underpass at East Campus Mall may also be required.
- The University shall also adhere to the conditions from the City as directed by the Office of the Commissioner of Rails from the hearing held on April 28, 2010.
- A feasibility study showing the location and operation of the proposed rail and bike path as it pertains to property reserved for future transportation purposes, including the future additional storage rail.
- The applicant shall show and demonstrate the rail operations and rail car storage, including a schedule of planned operations intended to minimize traffic impacts and peak hour traffic in the area (a.m. and p.m.).

## **Conclusion**

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The University of Wisconsin is requesting Planned Unit Development zoning to provide a zoning framework to guide the conversion of the Charter Street Heating Plant from a primarily coal-burning facility to one that burns a combination of biomass materials and natural gas. The plant, which was first built circa 1957, provides a large portion of the UW campus with chilled and heated water, steam, compressed air and electricity, and the conversion to biomass will allow the University to employ a cleaner, more renewable resource as its primary fuel to meet existing and future demands for energy on campus while reducing its carbon footprint and eliminating the use of coal. While the project is primarily focused on the current heating plant at 117 N. Charter Street and an adjacent parcel at 115 N. Mills Street, where a biomass storage and handling facility is proposed to replace an existing University maintenance building, the project also includes a number of other related improvements located off the proposed PUD sites.

While staff would not ordinarily encourage the establishment of an industrial land use of the scale and character of the renovated and expanded CSHP in the midst of an area predominated by institutional

and multi-family residential land uses, staff recognizes the efficiencies the University gains by having its steam, chilled and heated water, compressed air and electricity generated within close proximity to the facilities that utilize those products, as well as the efficiency that exists by having the plant adjacent to the rail system for fuel delivery purposes. Staff believes that a supporting use such as the CSHP falls within the broad parameters for allowed uses set forth in the Comprehensive Plan under the Campus designation. Additionally, the Regent Street–South Campus Neighborhood Plan includes the CSHP in the “university support services” category, which includes physical support facilities for the UW campus. The proposed CSHP project appears to largely conform to many of the design recommendations contained in the plan, with the exception of the height of some of the elements of the project. In addition, some design elements will need further review prior to construction to ensure that design objectives for N. Mills Street are being implemented to the greatest extent possible with this project.

However, while staff supports the modernization of the Charter Street Heating Plant and its conversion to non-coal fuel, and believes that the criteria for approval for planned unit developments can be met for the proposed general development plan, the renovation and expansion will require very careful consideration of the potential impacts the plant may have on the nearby land uses, including continued consideration of potential noise impacts and urban design. Consideration will also need to be given to the impact the project may have on existing and future multi-modal transportation in the surrounding area, including possible future commuter rail along the Wisconsin Southern Railroad mainline. Staff also recommends that the University enter into a formal agreement with the City to facilitate this very complex project, which will require use of City facilities and right of way off the subject PUD sites in order to be fully implemented.

### **Staff Recommendations, Conditions of Approval & General Ordinance Requirements**

Major/Non-Standard Conditions are shaded

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#### **Planning Division Recommendation** (Contact Timothy M. Parks, 261-9632)

The Planning Division recommends that the Plan Commission forward [Substitute] Zoning Map Amendment ID 3483 & 3484, rezoning 115 N. Mills Street and 117 N. Charter Street from R5 (General Residence District) and C3 (Highway Commercial District) to PUD-GDP-SIP, with a recommendation of **approval** subject to input at the public hearing, the following Planning Division conditions and the conditions from reviewing agencies:

1. That the University of Wisconsin–Madison enter into a formal agreement with the City in a form approved by the City Attorney’s Office, which addresses the off-site improvements to the City’s property and infrastructure required for implementation of the Charter Street Heating Plant project, of which the proposed Planned Unit Development zoning of 115 N. Mills Street and 117 N. Charter Street is an integral part. The University shall enter into this agreement prior to Planning Division approval of the planned unit development for recording and the commencement of any site work construction related to the expansion of the Charter Street plant or new construction on the 115 N. Mills Street site.
2. That the University submit additional information as part of the first amendment to the specific implementation plan for review by the Planning Division, City Traffic Engineer and City Engineer and approval by the Common Council, which demonstrates the impact the proposed rail delivery of biomass to the Charter Street Heating Plant will have on existing and future passenger/ freight operations on the Wisconsin Southern Railroad mainline corridor. This information shall clearly conclude that passenger/ freight services in this corridor can be accommodated.

3. That the University enter a lease of air rights with the City for the overhead conveyor across N. Mills Street prior to construction of the conveyor.
4. That the general development plan be revised per Planning Division approval prior to recording and the commencement of demolition at 115 N. Mills Street to provide a more detailed schedule for the project that includes the anticipated amendments to the specific implementation plan that will be required prior to construction of individual phases of the renovated and expanded heating plant.
5. That additional information be provided as part of the review of the final specific implementation plan for the storage and handling facility at 115 N. Mills Street that models the noise and exhaust impacts from the day-to-day maneuvering of trains between the rail sidings east of that site and the storage and handling facility. Information that shall be included to satisfy this future condition: specifications for noise and exhaust generated by the models of "mule" considered for use to transport the biomass cars between the storage/ handling facility on the west and the sidings on the east, and a noise impact analysis that models the vehicle-generated noise from that equipment throughout the maneuvering corridor bounded by W. Johnson Street on the north and Regent Street on the south. The analysis shall also contain any abatement measures that will be incorporated into the final design to limit any potential noise impacts on surrounding properties.
6. That the University submit an amended specific implementation plan for each phase of the project for approval by the Common Council following a recommendation by the Urban Design Commission and Plan Commission. Each amended SIP submittal shall contain, at a minimum, detailed plans on the proposed phase of development, including site plans, building elevations, landscaping and utility information and specific actions needed to address aesthetic concerns, service delivery needs and impacts on nearby properties. Each amended SIP shall be reviewed against the standards for Planned Unit Developments in Section 28.07 of the Zoning Ordinance.
7. Note: This PUD-GDP-SIP approval does not include the second new biomass boiler or bag house on the 117 N. Charter Street property or the electric substation north of the CSHP on the north side of W. Dayton Street.

The following conditions have been submitted by reviewing agencies:

**City Engineering Division** (Contact Janet Dailey, 261-9688)

8. An agreement will be required between the City and the University of Wisconsin to allow for off-site improvements to the City's infrastructure that are a necessity for the function of the PUD. The University shall enter into this agreement prior to City Engineering sign off of the PUD-GDP.
9. The City has identified the need for several agreements for improvements in the right of way as proposed by the University, including lease and maintenance agreements.
10. The University shall be required to enter into the agreement prior to the sign off of the PUD. The agreement shall include off-site improvements related to the overall Charter Street project as this project depends on these off-site improvements to function. No work in the City right of way shall be allowed until the agreement is in place. It is anticipated that the agreement shall include, but not limited to the following issues as identified by City Engineering Division staff:



- 10a.) Removal of tracks and reconstruction of W. Dayton Street pavement should be staged so it does not coincide with the Southwest Path detour onto W. Dayton Street.
- b.) Truck driveway onto Spring Street should be re-designed and constricted to provide only the width necessary for intended access and egress.
- c.) Limits of the Spring Street/ N. Charter Street intersection work should be extended far enough to remove the “hump” created by the rail elevation.
- d.) The Spring Street/ N. Charter Street intersection is currently designed as a “speed table” and with non-standard horizontal geometry to account for four traffic legs, two bike path legs and a rail line. With removal of the rail line, the alignment of the path and sidewalk connections through this intersection, as well as the need for special marking or other safety features, should be re-visited. Design should be done in consultation with the City Engineering Division and Traffic Engineering Division.
- e.) The width and the radius (or flare) for the three new “driveway” entrances on N. Mills Street are subject to review and approval by City Engineering Division and Traffic Engineering Division.
- f.) Additional information should be provided on the type, height and aesthetic treatment of the two screen walls between N. Charter and N. Mills streets.
- g.) Vertical clearance for the new rail bridge over N. Park Street should not be less than the existing vertical clearance.
- h.) Construction staging for the new bridge over N. Park Street and the modification or partial reconstruction of the East Campus Mall underpass is subject to approval by Traffic Engineering with respect to the timing and duration of street closure, lane closures or interruption of pedestrian access.
- i.) Final path design shall maintain current functionality of the path with respect to accesses, path width, shoulder width, minimum horizontal radii and maximum grades. In general, the main path shall be 12’ wide with 2’ wide shoulders (grass or paved depending on adjacent conditions), access paths shall be 10’ wide with 2’ wide shoulders, horizontal curves on the main path shall meet AASHTO criteria for a 20 MPH design speed and maximum grade on main path and all access paths shall not exceed 5%. The constriction of the vehicular access area between the path and the building at 600 Regent Street, particularly the curve and curb geometry where it enters the parking area west of the building, must be reviewed. The design vehicle that must negotiate this turn should be established in consultation with the property owner, Madison Fire Department and Traffic Engineering Division. Final curb geometry must be checked with the appropriate turning template(s). Curb and gutter between the path and the access drive shall be at least as wide as the existing special curb to provide physical separation between motor vehicles and the path.
- j.) This project affects a large amount of both public and private storm sewer and sanitary sewer along the bike path. The University shall coordinate the redesign and construction of the new storm and sanitary sewer with City Engineering.
- k.) Utility work near the rail corridor may encounter contaminated soils. The University shall be responsible for any required remediation or disposal.

- l.) The conveyor over N. Mills Street will require a lease from the City. Provide a minimum of 16 feet of clearance from pavement elevation.
  - m.) A maintenance agreement is needed for several significant landscape features, including:
    - 1) the existing rail corridor west of N. Charter Street
    - 2) the planter area between the path and the screen wall for two blocks between N. Charter Street and N. Mills Street
    - 3) the "rain garden" feature on the current Alexander Company lease area between East Campus Mall and W. Washington Avenue.
    - 4) the pavers and special terrace treatment on W. Dayton Street
    - 5) modifications to the existing maintenance agreement for the underpass at East Campus Mall may be required.
  - n.) The University shall adhere to the conditions from the City as directed by the Office of the Commissioner of Rails from the hearing held on April 28, 2010.
11. The private acquisition of any public easement rights necessary to relocate the existing public pedestrian/ bicycle path shall be coordinated with the appropriate City of Madison Engineering and Office of Real Estate Services staff.
12. The University of Wisconsin lease or ownership rights of any land adjacent to their property necessary for this development determines that it is their responsibility for payment of all City of Madison Stormwater Utility pervious/ impervious charges for that property.
13. The construction of this development will require removal and replacement of sidewalk, curb and gutter and possibly other parts of the City's infrastructure. The applicant shall enter into a City/ Developer agreement for the improvements required for this development. The applicant shall be required to provide deposits to cover City labor and materials and surety to cover the cost of construction. The applicant shall meet with the City Engineer to schedule the development of the plans and the agreement. The City Engineer will not sign off on this project without the agreement executed by the developer. The developer shall sign the Developer's Acknowledgement prior to the City Engineer signing off on this project.
14. The applicant shall close all abandoned driveways by replacing the curb in front of the driveways and restoring the terrace with grass.
15. The approval of this planned unit development does not include the approval of the changes to roadways, sidewalks or utilities. The applicant shall obtain separate approval by the Board of Public Works and the Common Council for the restoration of the public right of way including any changes requested by developer. The City Engineer shall complete the final plans for the restoration with input from the developer. The curb location, grades, tree locations, tree species, lighting modifications and other items required to facilitate the development or restore the right of way shall be reviewed by the City Engineer, City Traffic Engineer, and City Forester.
16. The applicant shall replace all sidewalk and curb and gutter that abuts the property, which is damaged by the construction or any sidewalk and curb and gutter that the City Engineer determines needs to be replaced because it is not at a desirable grade regardless of whether the condition existed prior to beginning construction.

17. The applicant shall obtain a privilege in streets or lease agreement for any encroachments inside the public right of way. The approval of this development does not constitute or guarantee approval of the encroachments.
18. All work in the public right of way shall be performed by a City-licensed contractor.
19. All street tree locations and tree species within the right of way shall be reviewed and approved by City Forestry. Please submit a tree planting plan (in PDF format) to Dean Kahl, of the City Parks Department – [dkahl@cityofmadison.com](mailto:dkahl@cityofmadison.com) or 266-4816.
20. The plan set shall be revised to show a proposed private internal drainage system on the site. This information shall include the depths and locations of structures and the type of pipe to be used.
21. The applicant shall demonstrate compliance with Section 37.07 and 37.08 of the Madison General Ordinances regarding permissible soil loss rates. The erosion control plan shall include Universal Soil Loss Equation (USLE) computations for the construction period. Measures shall be implemented in order to maintain a soil loss rate below 7.5-tons per acre per year.
22. Effective January 1, 2010, the Department of Commerce's authority to permit commercial sites, with over one acre of disturbance for stormwater management and erosion control has been transferred to the Wisconsin Department of Natural Resources (WDNR). The WDNR does not have an authorized local program transferring this authority to the City of Madison. The City of Madison has been required by the WDNR to continue to review projects for compliance with NR-216 and NR-151, but a separate permit submittal is now required from the WDNR for this work as well.  
  
As this site is greater than one acre, the applicant is required by State Statute to obtain a Water Resources Application for Project Permits (WRAPP) from the DNR, prior to beginning construction. This permit was previously known as a Notice of Intent Permit (NOI). Please contact Eric Rortvedt of the WDNR at 273-5612 to discuss this requirement.
23. Prior to approval, this project shall comply with Chapter 37 of the Madison General Ordinances regarding stormwater management. Specifically, this development is required to control 40% TSS (20 micron particle) off of new paved surfaces; provide oil & grease control from the first 1/2" of runoff from parking areas, and; complete an erosion control plan and complete weekly self-inspection of the erosion control practices and post these inspections to the City of Madison website as required by Chapter 37 of the Madison General Ordinances.
24. The applicant shall submit, prior to plan signoff, a digital CAD file (single file) to the Engineering Program Specialist in the Engineering Division (Lori Zenchenko). The digital CAD file shall be to scale and represent final construction. The single CAD file submittal can be either AutoCAD (dwg) Version 2001 or older, MicroStation (dgn) Version J or older, or Universal (dxf) format and contain only the following data, each on a separate layer name/level number: building footprints; internal walkway areas; internal site parking areas; other miscellaneous impervious areas lot lines; lot/ plat lines, dimensions and labels; right-of-way lines; street names, stormwater management facilities and; detail drawings associated with stormwater management facilities (including if applicable planting plans).
25. The applicant shall submit, prior to plan sign-off, digital PDF files to the City Engineering Division. The digital copies shall be to scale, shall have a scale bar on the plan set, and shall contain the following items: building footprints; internal walkway areas; internal site parking areas; lot lines and

right-of-way lines; street names, stormwater management facilities and; detail drawings associated with stormwater management facilities (including if applicable planting plans).

26. The applicant shall submit prior to plan sign-off, electronic copies of any Stormwater Management File including: SLAMM DAT files; RECARGA files; TR-55/HYDROCAD/etc., and; sediment loading calculations. If calculations are done by hand or are not available electronically the hand copies or printed output shall be scanned to a PDF file and provided.
27. The applicant's utility contractor shall obtain a connection permit and excavation permit prior to commencing the storm sewer construction.
28. Prior to approval of the issuance of a demolition permit, the owner shall obtain a permit to plug each existing sanitary sewer lateral that serves a building that is proposed for demolition. For each lateral to be plugged, the owner shall deposit \$1,000 with the City Engineer in two separate checks in the following amounts: (1) \$100 non-refundable deposit for the cost of inspection of the plugging by City staff; and (2) \$900 for the cost of City crews to perform the plugging. If the owner elects to complete the plugging of a lateral by private contractor and the plugging is inspected and approved by the City Engineer, the \$900 fee shall be refunded to the owner.

**Traffic Engineering Division** (Contact Bryan Walker, 267-8754)

29. The applicant shall reconstruct and widen both W. Dayton Street and N. Mills Street, including the intersection of Dayton and Mills, to address the new traffic impacts to these streets by the proposed new facilities. This includes new railroad signals, potential new traffic signals, wider bike lanes and space for parking if so required on N. Mills Street. The plans and financing by UW will need to be reviewed and approved by the City Traffic Engineer.
30. The applicant shall reconstruct and widen both N. Charter Street and Spring Street, including the intersection of Charter and Spring, to address the new traffic impacts to these streets by the proposed new facilities. This includes new railroad signals, potential new traffic signals, wider bike lanes and space for parking if so required on these two streets. The plans and financing by UW will need to be reviewed and approved by the City Traffic Engineer.
31. The applicant shall show the truck turning movements at the W. Dayton Street service access driveway shown on sheet C-001 using an Autoturn program. Trucks will need to ingress and egress the driveway and park at the loading dock without blocking any of the right of way or backing off of the public street. If necessary, the applicant will reconstruct and widen W. Dayton Street to accommodate the proposed new major truck service. There is a major concern that this proposal will block and congest W. Dayton Street.
32. The applicant shall show and demonstrate the rail operations and rail car storage, including a schedule of planned operations intended to minimize traffic impacts and peak hour traffic in the area (a.m. and p.m.). There is a major concern that this proposal will block and congest W. Dayton Street.
33. The applicant shall redesign the truck entrance off of Spring Street according to the design criteria for a "Street Type Entrance" driveway in accordance to MGO Section 10.08(4). The maximum permitted width of the entrance shall be 40 feet with a maximum curb cut width of 60 feet. No driveway shall encroach into the city sidewalk or crosswalk according to MGO 10.08(5)(a)6. A curb

shall be constructed at the radius of the entrance to protect the city sidewalk from encroachment. The angle of the approach shall be not less than 45-degrees, with a preference towards a 90-degree angle of approach according to MGO 10.08(4)(d). All street type entrances will need to be reviewed and approved by the City Traffic Engineer.

34. The applicant shall show all entrances, excluding the street type entrance on Spring Street, as "Class III" driveways with sidewalk access across the drive aprons.
35. The developer shall enter into an agreement with the City of Madison for the relocation and reconstruction of the bike path.
36. When the applicant submits final plans for approval, the applicant shall show the following: items in the terrace as existing (e.g., signs and street light poles), type of surfaces, existing property lines, addresses, one contiguous plan (showing all easements, all pavement markings, building placement, and stalls), adjacent driveway approaches to lots on either side and across the street, signage, percent of slope, vehicle routes, dimensions of radii, aisles, driveways, stalls including the 2-foot overhang, and a scaled drawing at 1" = 20'.
37. "Stop" signs shall be installed at a height of 7 feet at all driveway approaches behind the property line and noted on the plan. All directional/regulatory signage and pavement markings on the site shall be shown and noted on the plan.
38. All intersections shall be so designed so as not to violate the City's sight triangle preservation requirement which states that on a corner lot no structure, screening, or embankment of any kind shall be erected, placed, maintained or grown between the heights of 30 inches and 10 feet above the curb level or its equivalent within the triangle space formed by the two intersecting street lines or their projections and a line joining points on such street lines located a minimum of 25 feet from the street intersection in order to provide adequate vehicular vision clearance.
39. This is a State of Wisconsin project. As such, the applicant could note on the plan sheet or submit a letter to the Traffic Engineering Division that states: "The parking stall design is according to State of Wisconsin parking design standards and approved by the State of Wisconsin."
40. The University shall post a deposit and reimburse the City for all costs associated with any modifications to traffic signals, street lighting, signing and pavement marking, and conduit and handholes, including labor, engineering and materials for both temporary and permanent installations.
41. Public signing and marking related to the development may be required by the City Traffic Engineer for which the developer shall be financially responsible.
42. The applicant shall show dimensions for all proposed and existing parking areas for the parking stalls' items A, B, C, D, E, F, and degree of angle parking, width and backing up, according to Figures II "Medium and Large Vehicles" parking design standards in MGO Section 10.08(6)(b).
43. The developer shall note on the plans that all changes in the City of Madison right of way will need to be approved by the Board of Public Works.

44. Any changes to the railroad corridor and or modifications to adjacent sites will require minor alterations to the effected PUD's or approved site plans.
45. Provide a reuse/recycling plan, to be reviewed and approved by the City Recycling Coordinator prior to a demolition permit being issued. Sec 28.12(12)(e) of the Zoning Ordinance requires the submittal of documentation demonstrating compliance with the approved reuse and recycling plan. Please note, the owner must submit documentation of recycling and reuse within 60 days of completion of demolition.
46. Provide bicycle parking a ratio of 1 stall per 2 employees. Bike parking shall comply with MGO Section 28.11. Provide 3 bike parking stalls in a safe and convenient location on an impervious surface to be shown on the final plan. Note: A bike-parking stall is 2 feet by 6 feet with a 5-foot access area. Structures that require a user-supplied locking device shall be designed to accommodate U-shaped locking devices.
47. Off-street parking requirement shall comply with MGO Sections 28.04 (12) and 28.11: Parking lot plans with greater than twenty (20) stalls, landscape plans must be stamped by a registered landscape architect. Provide a landscape worksheet with the final plans that shows that the landscaping provided meets the point and required tree ordinances. In order to count toward required points, the landscaping shall be within 15' and 20' of the parking lot depending on the type of landscape element. All plant materials in islands shall be protected from vehicles by concrete curbs.
48. If outdoor lighting is provided, it must comply with MGO Section 10.085 outdoor lighting standards.
49. Parking requirements for persons with disabilities must comply with MGO Section 28.11 (3)6.(m) which includes all applicable State accessible requirements, including but not limited to:
  - a.) Provide minimum of two accessible stalls striped per State requirements. A minimum of one of the stalls shall be a van accessible stall 8' wide with an 8' striped out area adjacent.
  - b.) Show signage at the head of the stalls. Accessible signs shall be a minimum of 60" between the bottom of the sign and the ground.
  - c.) Show the accessible path from the stalls to the building. The stalls shall be as near the accessible entrance as possible. Show ramps, curbs, or wheel stops where required.

**Parks Division** (Contact Kay Rutledge, 266-4714)

This agency did not submit comments for this request.

**Fire Department** (Contact Bill Sullivan, 261-9658)

50. Per IFC 503.6, the security gates across the fire apparatus access road shall be a minimum 20-foot clear width and the gate(s) shall have an approved means of emergency operation provided with either an MFD approved key box or padlock that can be interlocked with the owners' lock. Where electric gate operators are provided, they shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

**City Assessor's Office** (Contact Maureen Richards, 266-4845)

This agency did not submit comments for this request.

**Water Utility** (Contact Dennis Cawley, 261-9243)

51. A portion of this property is in a Wellhead Protection District. The applicant shall provide documentation to the Madison Water Utility that the proposed use of this property is in compliance with the City of Madison wellhead protection ordinance.

52. The Water Utility shall be notified to remove the water meter prior to demolition. All wells located on this property shall be abandoned if no valid well operation permit has been obtained from the Madison Water Utility.

**Metro Transit** (Contact Tim Sobota, 261-4289)

This agency did not submit comments for this request.