



# URBAN DESIGN COMMISSION APPLICATION CITY OF MADISON

This form may also be completed online at:  
<http://www.cityofmadison.com/planning/documents/UDCapplication.pdf>

215 Martin Luther King Jr. Blvd; Room LL-100  
PO Box 2985; Madison, Wisconsin 53701-2985  
Phone: 608.266.4635 | Facsimile: 608.267.8739

Please complete all sections of the application, including the desired meeting date and the type of action requested.

Date Submitted: <u>Wednesday, January 17, 2018</u>	<input type="checkbox"/> Informational Presentation
UDC Meeting Date: <u>March 7, 2018</u>	<input type="checkbox"/> Initial Approval
Combined Schedule Plan Commission Date (if applicable): <u>March 19, 2018</u>	<input checked="" type="checkbox"/> Final Approval

1. Project Address: 7102 U.S. Highway 12 & 18, Madison, WI 53718  
Project Title (if any): Biogas Facility (Dane County Landfill Site No. 2)

2. This is an application for (Check all that apply to this UDC application):

New Development  Alteration to an Existing or Previously-Approved Development

**A. Project Type:**

- Project in an Urban Design District\* (public hearing-\$300 fee)
- Project in the Downtown Core District (DC) or Urban Mixed-Use District (UMX) (\$150 fee, Minor Exterior Alterations)
- Suburban Employment Center (SEC) or Campus Institutional District (CI) or Employment Campus District (EC)
- Planned Development (PD)
  - General Development Plan (GDP)
  - Specific Implementation Plan (SIP)
- Planned Multi-Use Site or Planned Residential Complex

**B. Signage:**

- Comprehensive Design Review\* (public hearing-\$300 fee)  Street Graphics Variance\* (public hearing-\$300 fee)
- Signage Exception(s) in an Urban Design District (public hearing-\$300 fee)

**C. Other:**

Please specify: \_\_\_\_\_

**3. Applicant, Agent & Property Owner Information:**

Applicant Name: <u>Dane County</u>	Company: <u>Dane County - Solid Waste Division</u>
Street Address: <u>1919 Alliant Energy Center Way</u>	City/State: <u>Madison, WI</u> Zip: <u>53713</u>
Telephone: <u>(608) 516-4154</u> Fax: <u>(608) 267-1533</u>	Email: <u>Welch@countyofdane.com</u>

Project Contact Person: <u>John Welch</u>	Company: <u>Dane County - Solid Waste Division</u>
Street Address: <u>Same as above</u>	City/State: _____ Zip: _____
Telephone: (____) _____ Fax: (____) _____	Email: _____

Project Owner (if not applicant) : _____	City/State: _____ Zip: _____
Street Address: _____	Email: _____
Telephone: (608) _____ Fax: (608) _____	

**4. Applicant Declarations:**

A. Prior to submitting this application, the applicant is required to discuss the proposed project with Urban Design Commission staff. This application was discussed with Janine Glaeser on 1/16/18.  
(name of staff person) (date of meeting)

B. The applicant attests that all required materials are included in this submittal and understands that if any required information is not provided by the application deadline, the application will not be placed on an Urban Design Commission agenda for consideration.

Name of Applicant <u>John Welch</u>	Relationship to Property <u>County staff - Solid Waste Manager</u>
Authorized Signature <u></u>	Date <u>1/16/18</u>

## 5. Submission Requirements

**Application:** Each submittal must include **14 collated paper copies** (11" x 17" max.) and an **electronic copy** of all application materials. The electronic copy must include individual Adobe Acrobat PDF files compiled either on a non-returnable CD-ROM submitted with the paper copies, or in an e-mail sent to: [UDCApplications@cityofmadison.com](mailto:UDCApplications@cityofmadison.com). The transmittal shall include the name of the project, address, and applicant. Applicants unable to provide the materials electronically should contact the Secretary of the Urban Design Commission at 267-8740 for assistance. For an application to be considered complete and scheduled for a UDC meeting, both the paper copies and electronic copy need to be submitted prior to the application deadline. Late materials will not be accepted. An application is required for each UDC appearance. For projects also requiring Plan Commission approval, applicants must have submitted an accepted application for Plan Commission consideration prior to obtaining any formal action (initial or final approval) from the UDC. All plans must be easily read when reduced.

**Fees:** Fees are required to be paid with the first application for either initial or final approval of a project, unless the project is part of the combined application process involving the Urban Design Commission in conjunction with Plan Commission and/or Common Council consideration. Make checks payable to City Treasurer, Madison, Wisconsin.

**Project Plans:** The items listed below are minimal application requirements for the type of approval indicated. Please note that the UDC and/or staff may require additional information in order to have a complete understanding of the project.

### 1. Informational Presentation

- Locator Map
- Brief Narrative Description of the Project, Site Plan, and 2-dimensional images of proposed buildings or structures. Additional information may provide for a greater level of feedback from the Commission.
- Contextual site information, including photographs and layout of adjacent buildings/structures
- Any and all relevant plans and information on which feedback from the UDC is requested.

### 2. Initial Approval

- Locator Map
- Contextual site information, including photographs and layout of adjacent buildings/structures
- Site Plan showing location of existing and proposed buildings, walks, drives, bike lanes, bike parking, and existing trees over 18" diameter
- Landscape Plan and Plant List
- Building Elevations for all building sides
- PD text and letter of intent (if applicable)

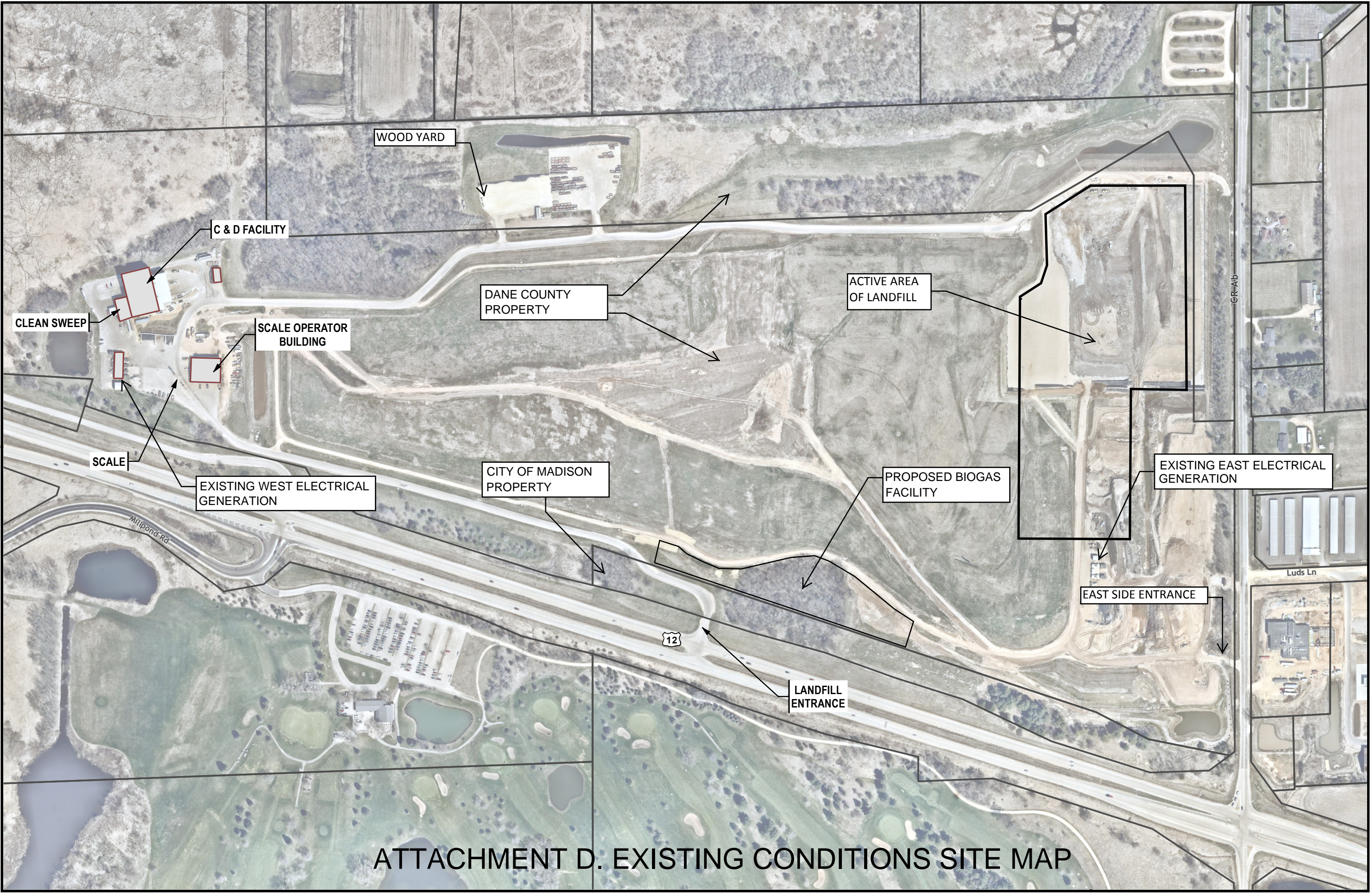
### 3. Final Approval

- Locator Map
- Site Plan showing location of existing and proposed buildings
- Grading Plan
- Landscape Plan
- Plant List, including scientific name, size at planting, quantity and root condition for each species.
- Building Elevations for all building sides, colored with shadow lines, including exterior building materials and colors.
- Proposed Signage
- Lighting Plan, including fixture cut sheets and photometrics plan
- Utility/HVAC equipment location and screening details
- PD text and letter of intent (if applicable)
- Samples of the exterior building materials (presented at the UDC meeting)



Attachment C – Vicinity Map





# ATTACHMENT D. EXISTING CONDITIONS SITE MAP



## SECTION 3

### LETTER OF INTENT

#### **Subsection 3.1 - Project Description**

Dane County hereby states its intention to construct and operate a biogas cleaning facility at the Dane County Rodefild Landfill (Site No. 2; DNR Operating License No. 3018). Dane County is the current owner and operator of the landfill facility. The existing landfill property is currently zoned PD (Planned Development District). The County proposes an alteration to the PD to allow construction and operation of the proposed biogas facility.

The landfill is located at 7102 USH 12 & 18, Madison, WI 53718. Maps showing the existing site conditions and the proposed biogas cleaning facility layout are included as Attachments D and E, respectively. A legal description of the 217 acres presently owned by Dane County is included as Attachment B.

The biogas cleaning facility will consist of mechanical equipment (pressure swing adsorption, desulfurization towers, compressors, thermal oxidizer, etc) and associated piping. The compressors, all rotary equipment, and all electrical components will be housed in small equipment housings. There will also be smaller buildings resembling sheds, which will house metering, monitoring, and reporting equipment. The proposed site changes would include a small new sedimentation pond. The facility will include an off-loading station. The off-loading station will allow off-site sources of biogas, such as local digesters, to bring biogas to this facility via tube trailer for off-loading into the pipeline. The system will include an interconnection to a transmission natural gas line that currently traverses the site via an easement. Processed gas will ultimately be used locally by Dane County for renewable CNG vehicle fuel or injected into the pipeline and sold to CNG stations elsewhere.

#### **Project Team**

Owner: Dane County Public Works Department  
1919 Alliant Energy Center Way  
Madison, WI 53713  
John Welch – Solid Waste Manager  
(608) 267-8815

Consultant: BIOFerm USA, Inc.  
440 Science Drive, Suite 300  
Madison, WI 53711  
Dina Bertolini – Project Manager  
(608) 467-5523

Consultant: Cornerstone Environmental Group LLC  
8413 Excelsior Drive, Suite 160  
Madison, WI 53717  
Lee Daigle – Project Manager  
(630) 633-5849

#### **Existing Conditions**

Dane County currently owns parcels totaling 217 acres, which includes a 104.6 acre landfill. Also on the property are several landfill gas-to-electric generation buildings and associated support structures, a compressed natural gas (CNG) fueling station, a diesel and gasoline fuel island, a construction & demolition recycling facility, a Clean Sweep (Household Hazardous Waste) facility, the landfill shop and scale house, three sedimentation basins, shingle and tire recycling areas, a yard waste compost area, a wood recycling area, and various soil stockpiles necessary

for the operation of the landfill. A portion of the existing property is also being used by private haulers as a container (roll off boxes) storage area. The existing landfill property is currently zoned PD (Planned Development District).

Much of the northeastern portions of the site are wetlands and/or heavily wooded areas. Most of the northern edge of the property is wetlands, open space, and wooded area. Along the eastern and southern edge of the property are berms and narrow strips of wooded areas, which are primarily used to visually screen the landfill.

The proposed biogas cleaning facility would be sited immediately to the east of the current landfill entrance. Most of this area is heavily wooded. Immediately to the south of the biogas facility, is a portion of a small parcel of land which is owned by the City of Madison. This parcel is heavily wooded.

### **Project Schedule**

Dane County and its consultants are currently in the middle of final design for the biogas cleaning facility, Dane County would like to start initial site grading activities in early Spring 2018, with major construction starting in April. If this start date is met, construction would be completed by October 2018, with commissioning and start-up finished by the end of 2018. See Attachment F.

### **Proposed Uses (and area of each)**

The property, in its entirety, will be used as or in support of the landfill and/or waste disposal/recycling efforts. The following is an estimate of the proposed uses of the property. All areas are approximate.

	Proposed
Total Site Area	217 Acres
Landfill	105 Acres
Open Area and/or Wooded Area	94.5 Acres
Drive/Parking/Building Areas	262,000 SF
Yard Waste Compost Site	75,000 SF
Proposed Biogas Facility Footprint	110,000 SF
Wood waste yard	85,000 SF
Container Storage Area	85,000 SF
Sedimentation Basins	140,000 SF

### **Hours of Operation**

Landfill operations will continue to utilize the same hours as current operations.

The County shall only operate the landfill between 6:00 a.m. and 5:00 p.m., Monday through Friday, and 6:00 a.m. and 12:00 noon on Saturdays; where operation of the landfill is defined to mean the operation of any equipment or trucks. Waste can be received Monday through Friday from 7:00 a.m. until 3:00 p.m. and on Saturday from 7:00 a.m. until 11:00 a.m. During operating hours listed above that fall outside the waste acceptance hours listed above, the County may operate equipment and do Work necessary for site maintenance. The landfill may be operated from 7:00 a.m. to 5:00 p.m. on Saturdays following either:

1. A week within which New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas Day or other legal holidays occur; or,

2. A week within which adverse weather conditions (such as high winds, rain, ice or heavy snow) have prevented the County from operating the landfill for an aggregate period of more than five (5) hours in any one day.

Subject to applicable City Ordinances, the County reserves the right to conduct construction activity in a manner to achieve an expedited schedule based upon seasonal and weather conditions. The above operating hours are not applicable to construction activity. The above operating hours are also not applicable when it is necessary for the landfill to extend the hours to be able to accept waste from a natural disaster or for a solid waste emergency.

The proposed biogas facility will be a 24/7 operation, 365 days per year. Biogas is being produced 24/7 at the landfill site, and, per State and Federal regulations, it must be collected and managed continuously. These proposed operating hours are consistent with operating hours of the current landfill gas-to-electricity facility on this site. Although the biogas facility will be operating 24/7, there will be minimal activity at the site, especially after the hours listed above for normal landfill operation. There will be a minimal amount of activity at the facility for routine maintenance, monitoring, gas quality testing, and compliance reporting. Most of this activity will take place during normal worktime hours.

The off-loading station will be available for trailers to unload at all times of the day, but we anticipate that most of this will occur during daytime hours. At full capacity, the off-loading station will be capable of unloading 20 trailers per day, assuming the trailers' arrival times are scheduled perfectly.

#### **Number of Employees**

It is anticipated that this project will add 3-5 employees to the site. Much of the work by these employees will be related to increased monitoring and management of the gas collection system on the landfill, so they will not often be at the actual facility.

#### **Building Square Footage**

There are currently eleven buildings on the existing Dane County landfill property. These buildings include the shop/scale office, construction & demolition recycling facility, clean sweep facility, generator and blower buildings, mechanical building, and a cold storage facility. The total square footage for these buildings is approximately 25,000 square feet. The locations of all buildings are shown on the Existing Conditions map.

The proposed facility would add several small buildings/structures, ranging in size from 196 sq. ft. to 1,500 sq. ft., for a total of approximately 7,900 sq. ft. of new structures/buildings. These structures will be used to house compressors and electrical equipment, for spare parts storage, and to house monitoring/metering/data collection equipment. Most of these structures are the size of small sheds or shipping containers. Staff will go into these structures for routine maintenance and operations, but the structures will typically be unoccupied spaces.

Two existing generators, an associated control structure, and a blower building will need to be relocated on the site at some point in the future (approximately 5 years from now). Dane County will submit the plans to relocate these facilities for approval in advance of their relocation.

#### **Number of Dwelling Units**

There are no dwelling units (existing or proposed) at the facility.

## **Auto and Bike Parking Stalls**

Parking for 20-30 automobiles is currently provided on the landfill site per a parking lot plan previously approved by the City. There are two new parking stalls planned at the new facility for maintenance/operations vehicles and two parking stalls for tube trailers to use while they are being unloaded. As mentioned earlier, most of the maintenance/operations staff will be performing duties on the landfill gas collection system. Also, the site is not open to the public, with the gate controlled by a FOB keypad. Therefore, there is no demand for additional parking. A small bike rack (10-15 bikes) is also present at the southeast corner of the shop building.

## **Visual Screening**

Along much of the eastern and southern edge of the property are berms, narrow strips of wooded areas, and some thicker wooded areas. These existing features are used to visually screen the landfill, and they will also provide excellent screening of the proposed biogas facility.

The proposed biogas cleaning facility would be sited immediately to the east of the current landfill entrance (see Attachment E). Most of this area is heavily wooded. Immediately to the south of the biogas facility, is a small parcel of land which is owned by the City of Madison and leased to Dane County. This parcel is heavily wooded, and it will provide excellent screening of the proposed facility. Attachment L shows photosimulations of the proposed facility from 3 different locations. As shown on the photosimulations, the facility will be almost completely hidden by the existing trees. A Certified Master Arborist from Dane County Parks Department performed an evaluation of the overall size, diversity, and health of this grove of trees. His report is included as Attachment G.

In addition to the existing trees, Dane County will provide additional screening at the actual entrance to the facility. This will incorporate additional plantings and a privacy style fence and gate at the front entrance (west end of project). The locations and types of proposed trees are shown on the landscaping plan, which is part of Attachment E, and an artist's rendering of the new landscaping is shown in Appendix L.

## **Signage**

No new signage is being proposed on the site for this project.

### **Subsection 3.2 - Pre-application Notification**

Dane County submitted a pre-application notification to Alderperson Denise DeMarb on 11/21/17 (Attachment A).

### **Subsection 3.3 - Legal Description**

See Attachment B for legal description of Dane County property.

### **Subsection 3.4 - Vicinity Map**

See Attachment C for vicinity map.

### **Subsection 3.5 - Existing Conditions Site Plan**

See Attachment D for existing conditions site plan.

### **Subsection 3.6 - Development Plan Set**

See Attachment E for development plan set.



## SECTION 5

### SUPPLEMENTAL REQUIREMENTS

#### **Subsection 5.1 – Vicinity Map**

An accurate map of the area covered by the Specific Implementation Plan (SIP), including the relationship to the overall General Development Plan (GDP), is located in Attachment C.

#### **Subsection 5.2 – Traffic Circulation Map**

Traffic circulation information is located in Attachment E. Information includes public and private roads, driveways, walkways and parking facilities, traffic projections, and mitigation measures. The facility currently has 400-500 customer and employee vehicles visit the site each day. This facility is anticipated to increase the number of vehicles visiting the site by no more than 25 per day.

#### **Subsection 5.3 – Detailed Lot Layout**

Detailed lot layout and subdivision plat, including the location and description of any areas to be dedicated to the public, is not applicable for this project.

#### **Subsection 5.4 – Building Aesthetics**

Building materials and colors are being proposed to match the existing eleven buildings on this site. Full screening of the biogas facility site is provided via a thick grove of trees, the landfill hill, landfill screening trees, landfill screening berms, fencing, and new screening plantings near the entrance gate. Line of sight drawings are included in the submittal packet as Attachment L. The facility will not be accessible or visible to the public.

#### **Subsection 5.5 – Financing Capability and Construction Schedule**

This project is funded by government bonding as part of the Dane County approved 2017 & 2018 capital budgets. The construction schedule is included as Attachment F. The schedule has been developed by our two consultant companies, both of which have a long history of completing projects of a similar nature on time.

#### **Subsection 5.6 – Specific Zoning Text**

Specific zoning text for the portion of the Planned Development (PD) district to be developed under the SIP, is included in Attachment H. Attachment H includes a description of the proposed land uses, height and floor area ratios, lot area, yard requirements, landscaping, parking and loading, lighting, signage, and alterations and revisions.

#### **Subsection 5.7 – Supplementary Agreements**

Additional agreements, bylaws, provisions, or covenants which govern the organizational structure, use, maintenance, and continued protection of the development and any of its common services, common open areas, or other facilities is included in Attachment I. This includes the County's lease for use of the City's parcel to the immediate south of the project area.