



Location
5404 Lake Mendota Drive

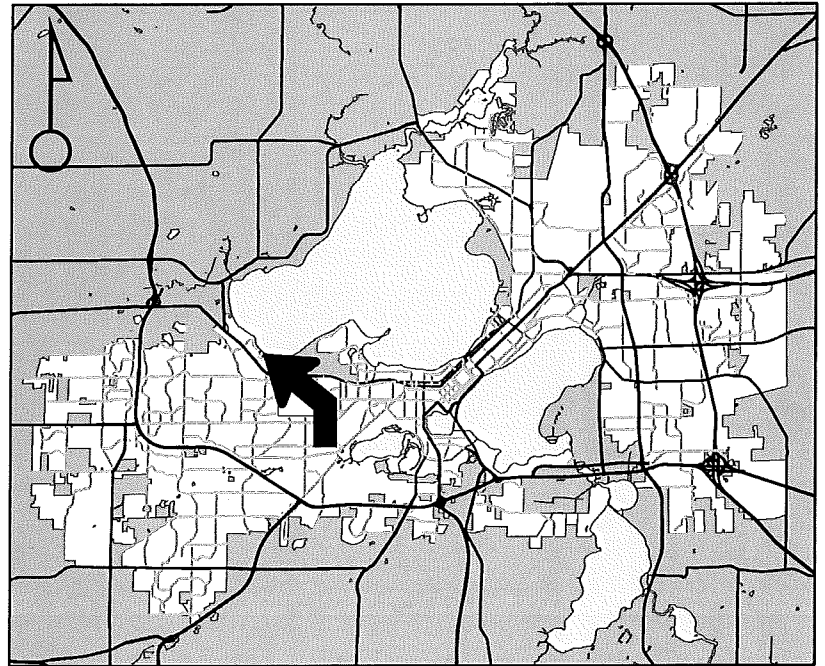
Project Name
Morgan-Sheriff Residence

Applicant
David Sheriff and Mary Morgan /
Justin Temple – Temple Builders

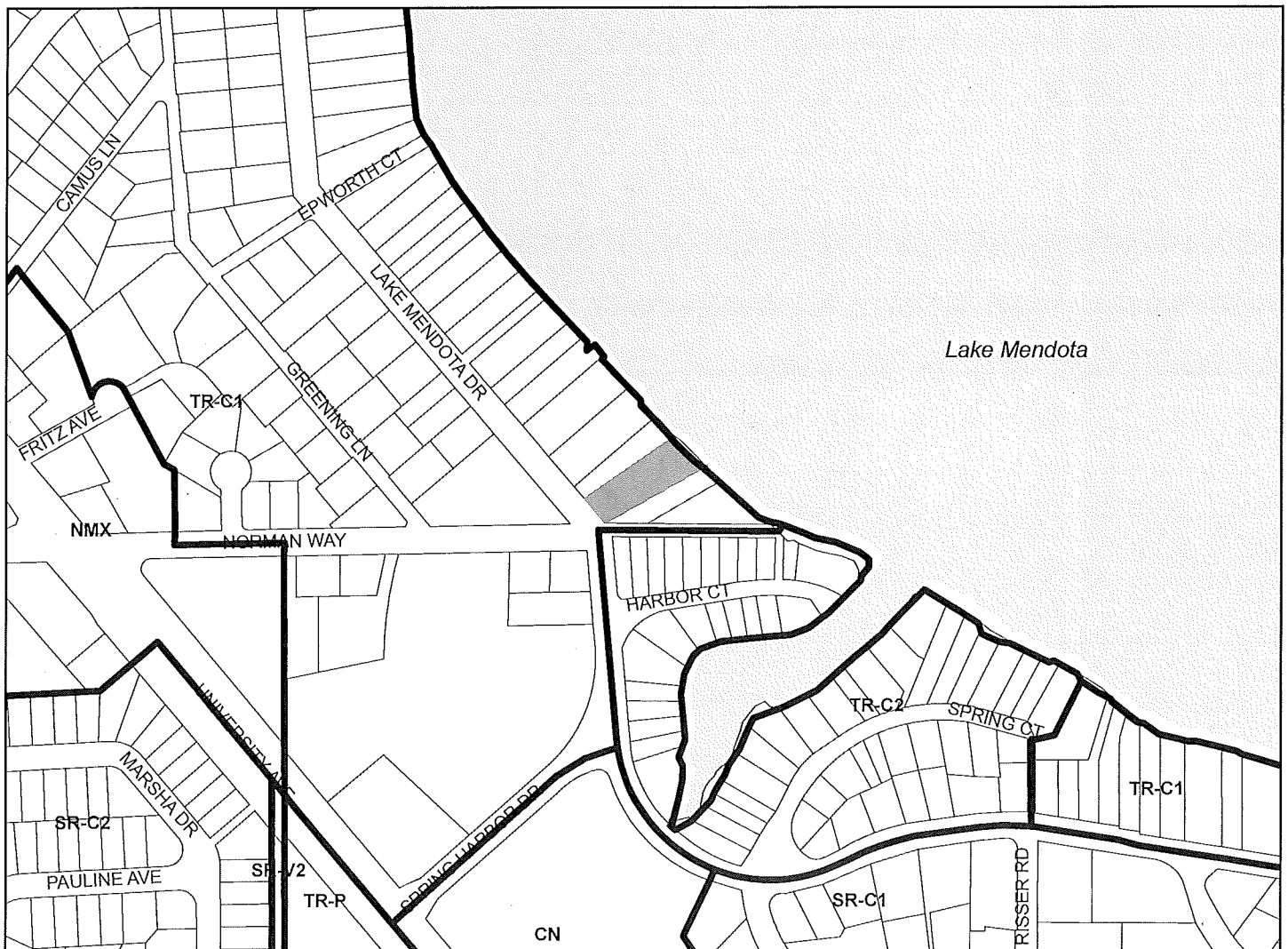
Existing Use
Single-Family Home

Proposed Use
Demolish single-family residence and
construct new single-family residence
on a lakefront lot

Public Hearing Date
Plan Commission
21 November 2016



For Questions Contact: Kevin Firchow at: 267-1150 or kfirchow@cityofmadison.com or City Planning at 266-4635



Scale : 1" = 400'

City of Madison, Planning Division : PPE : Date : 15 November 2016





LAND USE APPLICATION

CITY OF MADISON

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

- All Land Use Applications should be filed with the Zoning Administrator at the above address.
- The following information is required for all applications for Plan Commission review except subdivisions or land divisions, which should be filed using the Subdivision Application.
- This form may also be completed online at:
www.cityofmadison.com/developmentcenter/landdevelopment

FOR OFFICE USE ONLY:

Amt Paid \$ 600 Receipt No. 21844-0003

Date Received 10/12/16

Received By JLK

Parcel No. 0709-181-0409-6

Aldermanic District 19-Mark Cleaver

Zoning District TR-C1

Special Requirements water front, flood plain

Review Required By:

Urban Design Commission Plan Commission
 Common Council Other: _____

Form Effective: February 21, 2013

LNDUSE-2016-00117

1. Project Address: 5404 Lake Mendota Drive
Project Title (if any): Morgan-Sheriff Residence

2. This is an application for (Check all that apply to your Land Use Application):

- Zoning Map Amendment from _____ to _____
- Major Amendment to Approved PD-GDP Zoning Major Amendment to Approved PD-SIP Zoning
- Review of Alteration to Planned Development (By Plan Commission)
- Conditional Use, or Major Alteration to an Approved Conditional Use
- Demolition Permit
- Other Requests: _____

3. Applicant, Agent & Property Owner Information:

Applicant Name: Mary Morgan (& David Sheriff) Company: _____
 Street Address: 1213 N High Point Rd City/State: Middleton / WI Zip: 53562
 Telephone: (330) 568-5776 Fax: () Email: mary@vbs.cc

Project Contact Person: Robert Lackore Company: Bouril Design Studio, LLC
 Street Address: 6425 Odana Rd, Ste 2 City/State: Madison / WI Zip: 53719
 Telephone: (608) 833-3400 Fax: () Email: robl@bourildesign.com

Property Owner (if not applicant): _____
 Street Address: _____ City/State: _____ Zip: _____

4. Project Information:

Provide a brief description of the project and all proposed uses of the site: Demolition of existing single-family residence and detached garage. Construction of new two-story single-family residence with attached garage.

Development Schedule: Commencement December, 2016 Completion December, 2017

5. Required Submittal Information

All Land Use applications are required to include the following:

Project Plans including:*

- Site Plans (fully dimensioned plans depicting project details including all lot lines and property setbacks to buildings; demolished/proposed/altered buildings; parking stalls, driveways, sidewalks, location of existing/proposed signage; HVAC/Utility location and screening details; useable open space; and other physical improvements on a property)
- Grading and Utility Plans (existing and proposed)
- Landscape Plan (including planting schedule depicting species name and planting size)
- Building Elevation Drawings (fully dimensioned drawings for all building sides, labeling primary exterior materials)
- Floor Plans (fully dimensioned plans including interior wall and room location)

Provide collated project plan sets as follows:

- **Seven (7) copies** of a full-sized plan set drawn to a scale of 1 inch = 20 feet (folded or rolled and stapled)
- **Twenty Five (25) copies** of the plan set reduced to fit onto 11 X 17-inch paper (folded and stapled)
- **One (1) copy** of the plan set reduced to fit onto 8 ½ X 11-inch paper

* For projects requiring review by the **Urban Design Commission**, provide **Fourteen (14) additional 11x17 copies** of the plan set. In addition to the above information, all plan sets should also include: 1) Colored elevation drawings with shadow lines and a list of exterior building materials/colors; 2) Existing/proposed lighting with photometric plan & fixture cutsheet; and 3) Contextual site plan information including photographs and layout of adjacent buildings and structures. The applicant shall bring samples of exterior building materials and color scheme to the Urban Design Commission meeting.

Letter of Intent: Provide one (1) Copy per Plan Set describing this application in detail including, but not limited to:

- | | | |
|-----------------------------------------------|-------------------------------------------------|--------------------------------------------------------------|
| • Project Team | • Building Square Footage | • Value of Land |
| • Existing Conditions | • Number of Dwelling Units | • Estimated Project Cost |
| • Project Schedule | • Auto and Bike Parking Stalls | • Number of Construction & Full-Time Equivalent Jobs Created |
| • Proposed Uses (and ft ² of each) | • Lot Coverage & Usable Open Space Calculations | • Public Subsidy Requested |
| • Hours of Operation | | |

Filing Fee: Refer to the Land Use Application Instructions & Fee Schedule. Make checks payable to: *City Treasurer*.

Electronic Submittal: All applicants are required to submit copies of all items submitted in hard copy with their application as Adobe Acrobat PDF files on a non-returnable CD to be included with their application materials, or by e-mail to pcapplications@cityofmadison.com.

Additional Information may be required, depending on application. Refer to the Supplemental Submittal Requirements.

6. Applicant Declarations

Pre-application Notification: The Zoning Code requires that the applicant notify the district alder and any nearby neighborhood and business associations in writing no later than **30 days prior to FILING this request**. List the alderperson, neighborhood association(s), and business association(s) AND the dates you sent the notices:
Alder Mark Clear, District 19; Aaron Crandall, Spring Harbor Neighborhood Association, President; both were notified on 9/9/2016.

→ If a waiver has been granted to this requirement, please attach any correspondence to this effect to this form.

Pre-application Meeting with Staff: Prior to preparation of this application, the applicant is required to discuss the proposed development and review process with Zoning and Planning Division staff; note staff persons and date.

Planning Staff: Kevin Firchow Date: 8-2-2016 Zoning Staff: Jenny Kirchgatter Date: 8-2-2016

The applicant attests that this form is accurately completed and all required materials are submitted:

Name of Applicant Mary Morgan Relationship to Property: Co-owner (with David Sheriff)

Authorizing Signature of Property Owner  Date 10/12/2016

LETTER OF INTENT

FOR

MARY MORGAN AND DAVID SHERIFF

5404 LAKE MENDOTA DRIVE • SPRING HARBOR NEIGHBORHOOD • MADISON WI

Property Description

The property is located at 5404 Lake Mendota Drive in the Spring Harbor Neighborhood, 19th Aldermanic District. The zoning district is TR-C1. The 2016 assessed value is \$984,500. Detailed property information from the City Assessor is in Annex F.

Project Description

We intend to demolish the existing single-family residence, detached garage, asphalt driveway, concrete walk, concrete apron, and rear deck. The only structure to remain is the existing concrete pier apron in the northwest corner of the property.

New construction includes a two-story single-family home with attached garage, a rear patio, and a narrow side deck with walkway to join the side entrance to the rear patio. The roofs are flat, with the exception of a raised barrel vault above the northeast corner of the second story. A detailed analysis of the project costs has not been performed, but our preliminary construction cost estimate is approximately \$1,500,000.

Demolition is expected to begin in December, 2016. Site preparation will commence thereafter, with general construction following in the spring of 2017. Completion is scheduled for December, 2017. Final landscaping may not be fully established until the spring of 2018.

Project History

A previous proposal was submitted to the Planning Division in 2015; please reference the *Planning Division Staff Report*, Legistar File ID #37368, dated December 7, 2015. This previous proposal was presented to the Spring Harbor Neighborhood Association (SHNA) in May and July of 2015.

Several concerns were raised by the SHNA that we have addressed in the new proposal. These changes are bordered with a solid line throughout this document.

The Spring Harbor Neighborhood Plan (SHNP) adopted several goals with recommendations. Aspects of the new proposal that help achieve these goals are bordered with a dashed line throughout this document.

A pre-application meeting was held with Kevin Firchow, Planner, and Jenny Kirchgatter, Assistant Zoning Administrator, on August 2, 2016.

Pre-application notifications were delivered to the District 19 Alder and the SHNA President on September 9, 2016 (Annex A).

A Demolition Permit Notification was submitted on September 9, 2016 (Annex A).

The new proposal was presented to the SHNA Board of Directors and the District 19 Alder on September 13, 2016. Since that time several minor revisions have been made, though the general intent and project scope is unchanged. A follow-up presentation to the SHNA is planned to review the revisions and to brief the neighborhood on the materials as submitted with this application.

Project Goals

- Design a unique, attractive, high-quality home for Mary, David, and their children.
- Improve the view from the street with custom landscaping and unique architectural features.
- Improve the water quality of Lake Mendota by capturing storm-water run-off on-site.

Project Team

Architect

Robert Bouril, AIA
Bouril Design Studio, LLC
Madison, WI
www.bourildesign.com

BDS has 28 years of experience designing custom homes and commercial buildings of the highest quality. Their portfolio encompasses single-family, multi-family, hospitality, restaurant, institutional, medical, and office projects.

Landscape Architect

Steven Ziegler, PLA
ZDA Inc
Middleton, WI
www.zdainc.com

ZDA is an award-winning team of designers with extensive experience in private and civic projects. Their reputation is built on providing sustainable, environmentally sensitive solutions that are both functional and beautiful.

Civil Engineer

Erik Sorensen, PE
MSA Professional Services
Madison, WI
www.msa-ps.com

MSA is a consulting firm with a team of architects, engineers, surveyors, and multi-discipline design professionals. They have a vast amount of experience in private and municipal projects and can provide a comprehensive solution to site design and storm-water management.

Demolition

Demolition of the property presents no significant problems and should be fairly straightforward. Drawings C1.1 and L1.0 illustrate the extent of demolition of the existing structures and exterior elements. Briefly, everything is being removed, with the exception of the concrete pier apron on the northwest corner of the lot.

In accordance with the SHNP Goal #21, Recommendation #53, we propose to remove the overhead utility lines that bisect the property from east to west, and bury them below ground. This work will be coordinated with the adjacent property owners.

A walk-through was performed on Thursday, September 22, 2016 with Frank Byrne, Deconstruction Manager, Habitat for Humanity Restore, to identify materials for re-use. A draft *Re-use and Recycling Plan* was submitted for review and comment to Bryan Johnson, Recycling Coordinator, on October 5, 2016. Mr. Johnson returned comment on October 10, 2016. The final plan will be re-submitted to Mr. Johnson pending Plan Commission approval. The draft is included with this application.

The *Report of the Preservation Planner*, dated October 30, 2015, required evidence that the project would not disturb any burial sites. Chip Brown, Senior Compliance Officer, State Historic Preservation Office, assessed the property for archeological significance and concluded the State's human burial site preservation law does not apply (Annex B).

New Construction

The property is located at 5404 Lake Mendota Drive, across from the Spring Harbor Beach parking lot, and one lot west of the intersection of Lake Mendota Drive and Harbor Court. The property is in the TR-C1 zoning district. The assessed lot area is 23,719 square feet (SF). All required zoning limits are met (Drawing T1.1 and L1.1).

The overall form and character of the home has been changed significantly from the previous proposal (Annex C, and Drawing E1.0). Rectilinear forms are joined at shallow angles to provide interest and depth, and to reduce the appearance of a single, monolithic façade. Extensive areas of glass further break up the form and provide a level of perceived transparency. There is only one pitched roof – a small barrel vault on the northeast corner at the second floor.

Several members of the SHNA objected to the previous proposal's massive, monolithic appearance. It lacked character and didn't respect the precedent of other unique designs along Lake Mendota Drive. We've taken an entirely different approach to the new design. To an extent we've allowed the form to drive the function, placing a greater emphasis on the exterior elements than the pure functionality of the interior spaces. We've chosen several natural materials to vary the color and texture of the façade. There are very few 90-degree wall intersections, and many changes in direction and height; these subtle variations reduce the visual impact of the structure and create a more organic, descriptive aesthetic.

There were concerns about the risks and hazards associated with excavating living space below the water table. We acknowledge these risks and have removed the basement from the project; this requires us to move to the first floor some of the functional areas that are normally in a basement, e.g. mechanical equipment; bonus space, etc. *Despite this necessity we have reduced the first floor area by 325 square feet.*

The SHNA also asked us to examine the long, two-story continuous walls along the property lines. We have designed numerous breaks in the lengths and heights of the side walls. The longest overall dimension along the east side yard and within 20 feet of the property line is 66 feet, with no single wall exceeding 27 feet in length. The longest overall dimension along the west side yard and within 20 feet of the property line is 77 feet, with no single wall exceeding 28 feet in length.

In accordance with the SHNP Priority #5 we propose to greatly improve the site's ability to infiltrate, store, and release storm-water run-off in a controlled and responsible manner. We've developed a storm water management strategy to improve the surface flow and subterranean transport of released run-off. Generally speaking the site has approximately 12" of top soil over a mix of organics, silt, and clay. The rate of infiltration is very low; soils of this type typically infiltrate less than 1/10th of 1 inch of rainfall per hour. This slow rate of infiltration results in a great deal of overland sheet flow that carries a high level of dissolved solids and contaminants into Lake Mendota. Our proposal has four primary objectives:

1. Capture and store "clear" roof run-off for re-use and irrigation.
2. Improve the ability of the site to direct, infiltrate, store, filter, and control the release of on- and off-site overland flow.
3. Adequately deal with emergency storm events.
4. Improve the water quality of Lake Mendota and protect the shoreline.

The plan is implemented through several methods:

- Install a new concrete ribbon curb along Lake Mendota Drive to better direct flows from the south into the existing box culvert that extends along Norman Way.
- Channel overland flow to side-yard drainage swales along the east and west side yards. The east channel is composed of stone. The west channel is lawn. Both channels are designed to slow, cool, infiltrate, and filter the run-off.

- Use permeable surfaces wherever possible, e.g. driveways, aprons, patios, walks, etc. This element alone will “scrub” the run-off passing through and reduce total dissolved solids by 65% and phosphorus by 35%. This is before the additional filtration provided by the storage reservoirs and drainage channels.
- Install sub-surface storage reservoirs beneath all permeable surfaces, and beneath the side yard drainage swales. These reservoirs retain run-off, giving it time to infiltrate into the sub-soil; any excess is filtered and released through underdrains. The east underdrain releases into a bio-retention rain garden. These methods help preserve the site and protect the adjacent properties from flooding.
- Install a vegetated storm water roof over the garage and first floor areas. These roofs have a combined storage capacity of at least 5,021 gallons. Run-off from the second floor roofs will be directed to the storm water roofs for re-use in irrigation. This system has more than enough storage capacity to retain the roof run-off from a 1-1/2” rainfall event.

In accordance with the SHNP Priority #5, which addresses storm-water run-off, we are greatly reducing the amount of impervious surface area. A common metric that is used to measure a site’s ability to infiltrate storm-water run-off is Impervious Surface Ratio (ISR). An impervious surface is any surface that releases rainfall as run-off, e.g. concrete driveways, roofs, etc. ISR is calculated as Impervious Surface Area ÷ Lot Area. The City’s definition of *Lot Coverage* closely approximates ISR. The existing ISR is 0.38. Our management strategy improves the ISR to 0.15, a 60% reduction from the existing value.

A SHNA concern is to preserve view corridors within the side yards. Annex D contains images that illustrate the existing view corridors at the time of the previous proposal; it’s clear that the existing view corridors are obstructed by trees, utility poles, etc. along the west side and by an existing wood fence and a line of evergreens along the east side (these evergreens have since been cleared and no longer obstruct the view corridor). The trees along the west and the majority of the fence along the east side are on the neighboring properties and cannot be removed. New plantings along both sides have been selected for growth habits that minimize visual obstruction at eye-level height and below. Drawing E1.1 illustrates four conceptual perspective views along the east and west property lines. The west view corridor may have some improvement, but the greatest visual obstruction is from the neighbor’s trees. The east corridor will improve, but again the greatest visual obstruction is from the neighbor’s fence.

The *Planning Division Staff Report #37368* identified 10 neighboring properties for evaluating the bulk of the new home. Figure 1 is a table that calculates the Floor Area Ratio (FAR) of the properties and compares them against the median FAR and the proposed development FAR (for both the old and new proposals).

Figure 1 – Comparison of Bulk with Closest Ten Lakefront Properties*

House #	Street	Total Area (SF)	Lot Area (SF)	Floor Area Ratio
5426	Lake Mendota Dr	1,780	12,044	0.15
5422	Lake Mendota Dr	2,065	16,962	0.12
5418	Lake Mendota Dr	3,768	26,037	0.14
5412	Lake Mendota Dr	4,981	24,951	0.20
5406	Lake Mendota Dr	3,096	15,180	0.20
5400	Lake Mendota Dr	3,498	12,700	0.28
5212	Harbor Ct	856	3,662	0.23
5206	Harbor Ct	4,293	16,774	0.26
5209	Harbor Ct	2,178	7,257	0.30
5217	Harbor Ct	2,258	4,519	0.50
Median		2,677	13,940	0.22
5404	<i>Lake Mendota Dr (Old)</i>	10,876	23,719	0.46
5404	<i>Lake Mendota Dr (New)</i>	6,968	23,719	0.29

*Data taken from Planning Division Staff Report, Registrar ID #37368, dated December 7, 2015.

Beyond the data, the SHNA was concerned with the perceived bulk and visual impact of the previous proposal. The new proposal uses architectural design and landscape design to minimize this impact, resulting in a lower, more aesthetically pleasing, less massive appearance. The Contextual Massing Perspectives on Drawing E1.1 place the proposed home in relation to the street, lake, and neighboring properties. Removing the existing detached garage is a key to opening up the front yard and improving the sight lines from the street. Site placement, architectural design, and landscaping help reduce the home's apparent size.

We were asked to reduce the project's size, particularly in regard to the Floor Area Ratio (FAR). We have reduced the FAR from the previous proposal by 37%, and are now within 32% of the median; in fact the proposed FAR of 0.29 compares favorably to other properties in the neighborhood of similar size and value, as shown in Figure 2.

Figure 2 – Comparison of Bulk with Similar Properties*

Property	Built	Value	Total Area (SF)	Lot Area (SF)	FAR
4922 Lake Mendota Dr	1994	\$2,100,000	8,892	23,614	0.38
5430 Lake Mendota Dr	2013	\$1,925,000	7,973	18,860	0.42
5434 Lake Mendota Dr	2004	\$1,600,000	6,274	16,533	0.38
5536 Lake Mendota Dr	1999	\$1,548,000	5,696	17,221	0.33
Median		\$1,793,250	7,209	19,057	0.38
5404 Lake Mendota Dr	2017**	\$2,484,500**	6,968	23,719	0.29

*Data taken from City Assessor Website; information current as of 9/13/16.

**These are projections based on the estimated construction schedule and construction cost.

The point of Figure 2 is to show that we're not setting a precedent. The selected properties are not unique in the neighborhood, they are representative. As property values have risen, especially along the lakefront, homes have increased in size and FAR. This is an obvious, predictable (probably inevitable) trend. The *Statement of Purpose for Traditional Residential-Consistent Districts* is a constantly evolving target, as evidenced by the development along Lake

Mendota Drive. The Spring Harbor lakefront is an eclectic mix of new and old, modest and large, traditional and contemporary. There is no single prevailing aesthetic or style. However, our proposal shares certain architectural elements and features with other homes in the neighborhood (Annex E), such as flat or low-slope roofs, varied roof and floor heights, angled wall intersections, etc.

The SHNA requested a reduction in the overall height of the project. We have lowered the first floor elevation from 860.75 feet to 855.30 feet, a 5.45 foot drop. We have lowered the highest point of the highest roof from 34.00 feet to 29.33 feet, a 4.70 foot drop; note that this measures the highest point of the new barreled roof, which is a small architectural feature - the main roof is much lower at 23.75 feet. Using flat roofs for the majority of the home helps reduce the actual and apparent heights. Drawing E1.2 illustrates the height in relation to those of the adjacent properties.

Conclusion

The project team has worked diligently to prepare a proposal that provides an attractive, functional home that adds value to the neighborhood. The concerns raised by the Spring Harbor Neighborhood Association members have prompted a dialog within the team that has driven our desire to improve our proposal in every respect. We appreciate this opportunity place our proposal before the Plan Commission for consideration.

Questions regarding this proposal and submitted materials may be directed to the Architectural Project Manager:

Robert Lackore
Bouril Design Studio, LLC
6425 Odana Rd, Suite 2
Madison WI 53719
www.bourildesign.com
608-833-3400
robl@bourildesign.com

ANNEX A – NOTIFICATIONS

9/9/2016

Robert Lackore
Bouril Design Studio, LLC
6425 Odana Rd, Suite 2, Madison WI 53719

Mark Clear
Alder, District 19

Sir,

On behalf of David Sheriff and Mary Morgan I would like to notify your District of a new single-family residence proposed for 5404 Lake Mendota Drive. A previous proposal was presented to the District in 2015; the revised proposal differs substantially and addresses several issues identified by the Spring Harbor Neighborhood Association and its members.

The scope of work includes:

- Removal of the existing single family home and detached garage.
- Erection of a new single family home with attached garage.

Features of the new proposal include:

- A new two-story home of unique design.
- Custom landscape design.
- A comprehensive storm-water management strategy.

Our design team includes:

- Bouril Design Studio, LLC. – architecture.
- ZDA, Inc. – landscape design.
- MSA Professional Services – civil engineering and storm-water management.

We will submit the Land Use Application by 10/12/16 for consideration by the Plan Commission on 11/21/16. It is our intent to provide David, Mary, and the Spring Harbor neighborhood with a unique, quality project of lasting value.

Sincerely,



Robert Lackore
Project Manager
Bouril Design Studio, LLC

9/9/2016

Robert Lackore
Bouril Design Studio, LLC
6425 Odana Rd, Suite 2, Madison WI 53719

Aaron Crandall
President, Spring Harbor Neighborhood Association

Sir,

On behalf of David Sheriff and Mary Morgan I would like to notify the Spring Harbor Neighborhood Association of a new single-family residence proposed for 5404 Lake Mendota Drive. A previous proposal was presented to the Association in 2015; the revised proposal differs substantially and addresses several issues identified by the Association and its members.

The scope of work includes:

- Removal of the existing single family home and detached garage.
- Erection of a new single family home with attached garage.

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Sincerely,



Robert Lackore
Project Manager
Bouril Design Studio, LLC

Robert Lackore

From: noreply@cityofmadison.com
Sent: Friday, September 9, 2016 12:32 PM
To: robl@bourildesign.com
Subject: City of Madison Demolition Notification Approved

Dear applicant,

Please be advised that your demolition permit notification message was sent to all interested parties registered with the City of Madison on September 9, 2016 at 12:30 PM. Your demolition permit application can be filed with the Zoning Office, Room LL-100 of the Madison Municipal Building, 215 Martin Luther King Jr. Blvd. on the next business day following 30 or 60 days of the posting of this notification message based on the year the building or buildings were constructed. Please consult the annual Plan Commission schedule for application deadline days and the corresponding Plan Commission hearing dates. For more information on filing your Plan Commission application for a demolition permit, please contact the City of Madison Planning Division at (608) 266-4635.

Comments:

If you have not discussed this request with staff from Planning and Zoning, please contact 266.4635 to schedule a meeting.

ANNEX B – STATE HISTORIC PRESERVATION OFFICE ASSESSMENT

Robert Lackore

From: CHIP BROWN <chip.brown@wisconsinhistory.org>
Sent: Monday, August 29, 2016 10:04 AM
To: robl@bourildesign.com
Cc: Amy Scanlon (ascanlon@cityofmadison.com)
Subject: RE: Burial Site Locations - Spring Harbor Area

Hello Mr. Lackore,

Thank you very much for his updated information. My review of your project materials is complete; we have no concerns with this action. The archeological site that you may be affecting through project implementation is not a human burial site; therefore the State's human burial site preservation law at Wis. Stat. § 157.70 does not apply. Because there is no State or Federal agency permitting, financing, or other involvement required, we have no further review authority under any additional State or Federal historic preservation laws.

I appreciate your forwarding project materials to me for review. By copy of this message, I am notifying Amy Scanlon of the City of Madison's Preservation Commission of these findings.

With question, please contact me. Good luck with your project! Thank you very much for your attention to this matter.

Sincerely,

Chip Brown

Chip Harry L. Brown III, J.D.
Senior Compliance Officer
State Historic Preservation Office
(608) 264-6508 (O)

Wisconsin Historical Society
816 State St.
Madison WI 53706

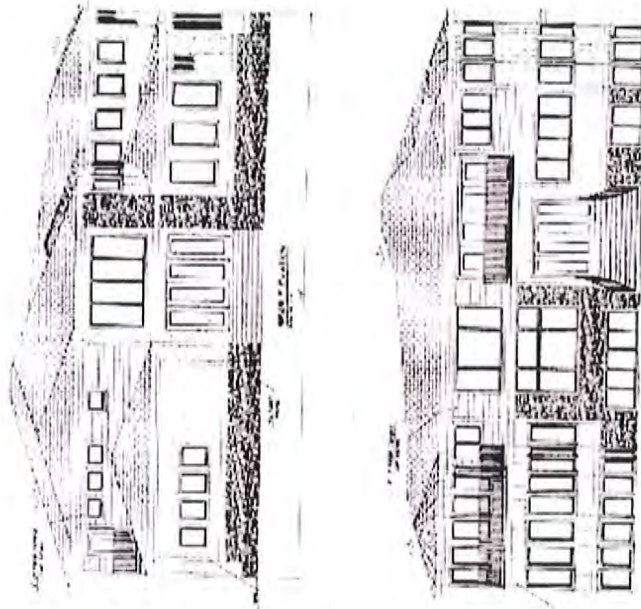
Wisconsin Historical Society
[Collecting, Preserving, and Sharing Stories Since 1846](#)

ANNEX C – AMERICAN DESIGN CONCEPTS DRAWINGS (PREVIOUS PROPOSAL)

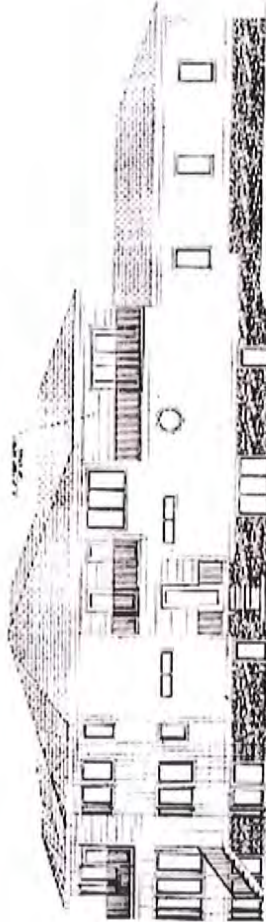
AMERICAN DESIGN CONCEPTS
TEMPLE CONSTRUCTION
SHERIFF / MORGAN RESIDENCE

AMERICAN DESIGN CONCEPTS
TEMPLE CONSTRUCTION
SHERIFF / MORGAN RESIDENCE

AMERICAN DESIGN CONCEPTS
TEMPLE CONSTRUCTION
SHERIFF / MORGAN RESIDENCE



AMERICAN DESIGN CONCEPTS
TEMPLE CONSTRUCTION
SHERIFF / MORGAN RESIDENCE



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ANNEX D – EXISTING VIEW CORRIDORS ALONG THE PROPERTY LINES



View down the west property line (between 5404 and 5406 Lake Mendota Drive)



View down the east property line (between 5405 and 5400 Lake Mendota Drive)

ANNEX E – SHARED ARCHITECTURAL ELEMENTS AND FEATURES



1729 Camelot Drive. This Modern home features flat roofs and stream-lined geometry.



5040 Lake Mendota Drive. This Transitional home features mixed materials and a "popped up" second-story roof form.



5046 Lake Mendota Drive. This Modern home varies the height of the roofs to create interest and to delineate the interior space using the exterior form.



5457 Lake Mendota Drive. Another Modern home that features flat roofs and discrete, horizontal elements and forms.



5510 Lake Mendota Drive. More flat roofs and strong horizontal geometry.



5521 Lake Mendota Drive. A home in the Modern style: varied roof heights and projections are characteristic of the style.



5020 Merrill Springs Road. This unique, elegant attached garage doesn't detract from the home's overall style or curb presence.



5130 Minoqua Crescent. Though there is no obvious connection between this Dome home and our proposal, it demonstrates the eclectic quality of the Spring Harbor neighborhood.



5105 Spring Court. This home demonstrates a that mixing styles can work.



5110 Spring Court. A Transitional home with traditional exterior millwork mixed with Contemporary forms.



5013 Tomahawk Trail. A flat roof and effective use of a color and material transition that complements the simple architecture.



5122 Tomahawk Trail. Landscaping, a low slope roof, and a horizontal ribbon of glass reduce the visual impact of this home.

ANNEX F – CITY ASSESSOR PARCEL INFORMATION

City of Madison Property Information
Property Address: 5404 Lake Mendota Dr
Parcel Number: 070918104096

Information current as of: 10/8/16 01:00AM

OWNER(S)

SHERIFF, DAVID B
 MARYROSE N MORGAN
 1213 N HIGH POINT RD
 MIDDLETON, WI 53562-3681

REFUSE COLLECTION

District: 10A

SCHOOLS

District: Madison
 • Crestwood
 • Jefferson
 • Memorial

CITY HALL

Aldermanic District: 19
 Alder Mark Clear

PROPERTY VALUE

Assessment Year	Land	Improvements	Total
2015	\$801,500	\$183,000	\$984,500
2016	\$801,500	\$183,000	\$984,500

2015 TAX INFORMATION

Net Taxes:	\$23,633.85
Special Assessment:	\$0.00
Other:	\$0.00
Total:	\$23,633.85

PROPERTY INFORMATION

Property Use:	Single family	Property Class:	Residential
Zoning:	TR-C1	Lot Size:	23,719 sq ft
Frontage:	66 - Lake Mendota Dr	Water Frontage:	YES
TIF District:	0	Assessment Area:	82

RESIDENTIAL BUILDING INFORMATION

EXTERIOR CONSTRUCTION

Home Style:	Contemporary	Dwelling Units:	1
Stories:	1.0	Year Built:	1948
Exterior Wall:	Wood		
Foundation:	Concrete		
Roof:	Asphalt	Roof Replaced:	1948
Garage 1:	Attached	Stalls:	2.0
Garage 2:	Detached	Stalls:	2.5
Driveway:	Concrete	Shared Drive:	NO

INTERIOR INFORMATION

Bedrooms:	2	Full Baths:	2
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David Sheriff & Mary Morgan Residence Letter of Intent

Fireplace:	2	Half Baths:	1
LIVING AREAS (Size in sq ft)			
Description:	Living Area:	Total Living Area:	2,660
1st Floor:	2,660		
2nd Floor:	0		
3rd Floor:	0		
Above 3rd Floor:	0		
Attic Area:	Finished: 0		
Basement:	Finished: 0	Total Basement:	0
Crawl Spaces:	0		
OTHER STRUCTURES (Size in sq ft)			
Open Porch:	165		
Patio:	455		
Deck:	486		
MECHANICALS			
Central A/C:	YES		

Property Information Questions?

Assessor's Office
210 Martin Luther King, Jr. Boulevard, Room 101
Madison, Wisconsin 53703-3342
Phone: (608) 266-4531
Email: assessor@cityofmadison.com

RE-USE AND RECYCLING PLAN

FOR

MARY MORGAN AND DAVID SHERIFF

5404 LAKE MENDOTA DRIVE • SPRING HARBOR NEIGHBORHOOD • MADISON WI

Project Description

We intend to demolish the existing single-family residence, detached garage, asphalt driveway, concrete walk, concrete apron, and rear deck. New construction includes a two-story single-family home with attached garage, a rear patio, and a narrow side deck with walkway to join the side entrance to the rear patio.

Materials for Re-use

A walk-through was performed on Thursday, September 22, 2016 with Frank Byrne, Deconstruction Manager, Habitat for Humanity Restore, to identify materials for re-use:

Item #	Description	Qty	Disposition
1	1x6 T&G Knotty Pine Paneling	250 sqft	Owner
		Remainder	Restore
2	Bathroom Mirrors	1	Restore
3	Kitchen Cabinets	18-20	Restore
4	Laundry Room Cabinets	7	Restore
5	Vanity Cabinet and Tall Cabinet	2	Restore
6	Six-panel Pine Doors	9	Restore
7	Accordion Doors	4	Restore
8	Miscellaneous 1x4 Cedar Trim	36 lineal ft	Owner
		Remainder	Restore
9	Medicine Cabinets	2	Restore
10	Cast Iron Sink	1	Restore
11	Miscellaneous Light Fixtures	All	Restore
12	Built-in Pine Cabinet	1	Restore
13	Additional Vanity Cabinets	4	Restore
14	Ceiling Fan	1	Restore
15	Miscellaneous Copper & Aluminum	1	Restore
16	Heating Grilles	10	Restore
17	Exterior Doors	2	Restore
18	Fireplace Timber Mantels	3	Owner

It is anticipated that selective demolition (to salvage the identified items) will be performed prior to general demolition activities. All items salvaged by Habitat for Humanity will be immediately

removed from the premises. All salvaged items to be turned over to the Owner will be stored on-site (in the detached garage) until the start of general demolition, at which point they will be the responsibility of the general contractor.

Appliance Recycling

Appliances will be recycled through the City's large-item curb pickup service.

Mercury Recovery and Recycling

There are no mercury-containing materials on site. The thermostats are electronic, and the lighting fixtures are incandescent. If any fluorescent lamps are discovered (in storage, etc.) they will be returned to an area retailer for recycling.

General Demolition and New Construction Recycling

Demolished materials and construction waste will be removed as separated or mixed loads for off-site separation and recycling. The general contractor will be responsible for contracting a City Certified Construction and Demolition Material Recycler.

Documentation and Reporting

All materials hauled off-site for recycling, whether demolition materials or new construction waste, will be documented using either the WasteCapTRACE program or by submitting written documentation to the Recycling Coordinator; the choice of reporting option will be left to the general contractor.



APPENDIX A – SELECTED PHOTOGRAPHS



Front (street side).



Rear (lake side).



Detached garage (street side).



Item #1 T&G Paneling, and Item #8 Cedar Trim.



Item #18 Fireplace Timber Mantels.

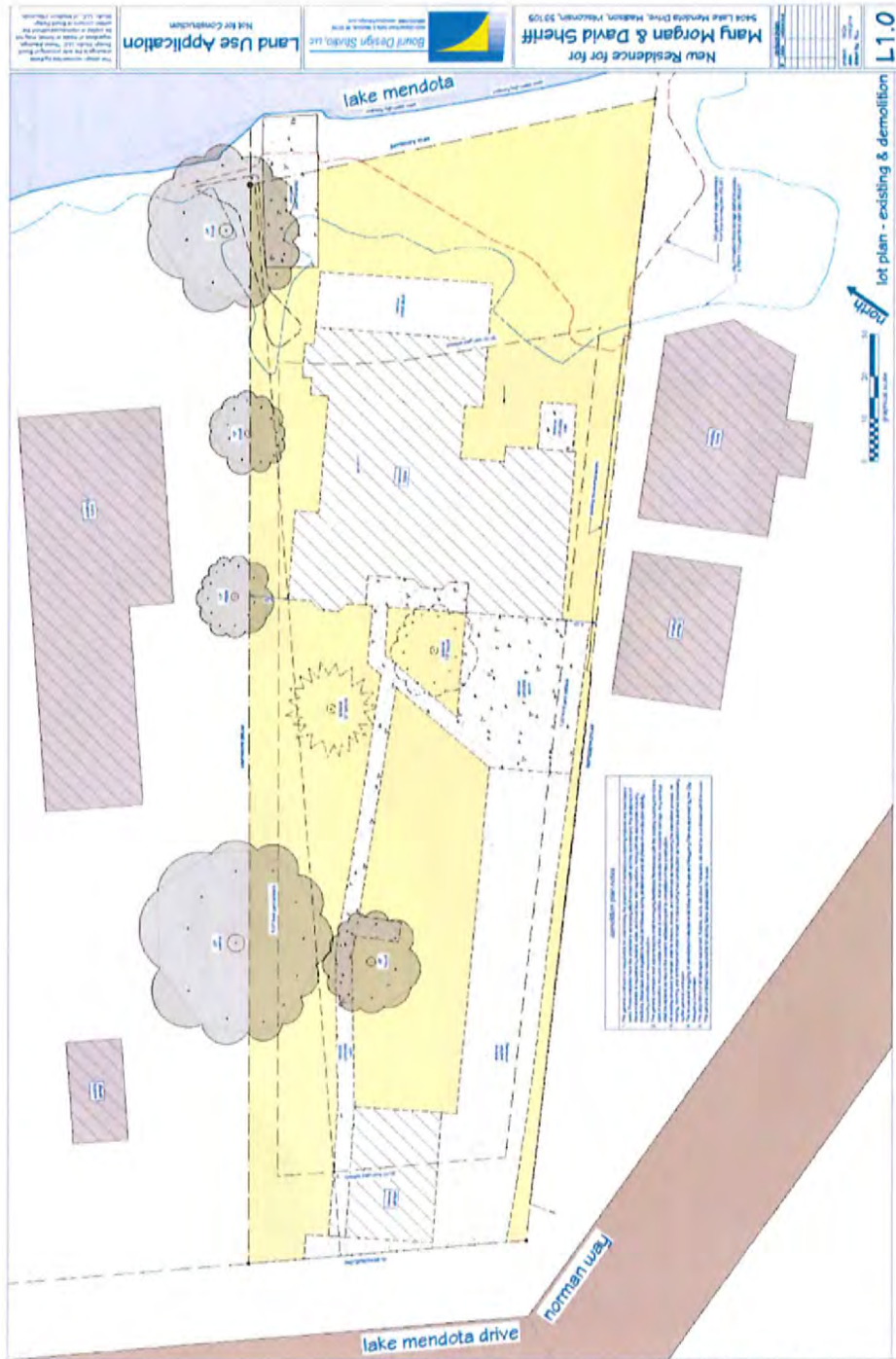


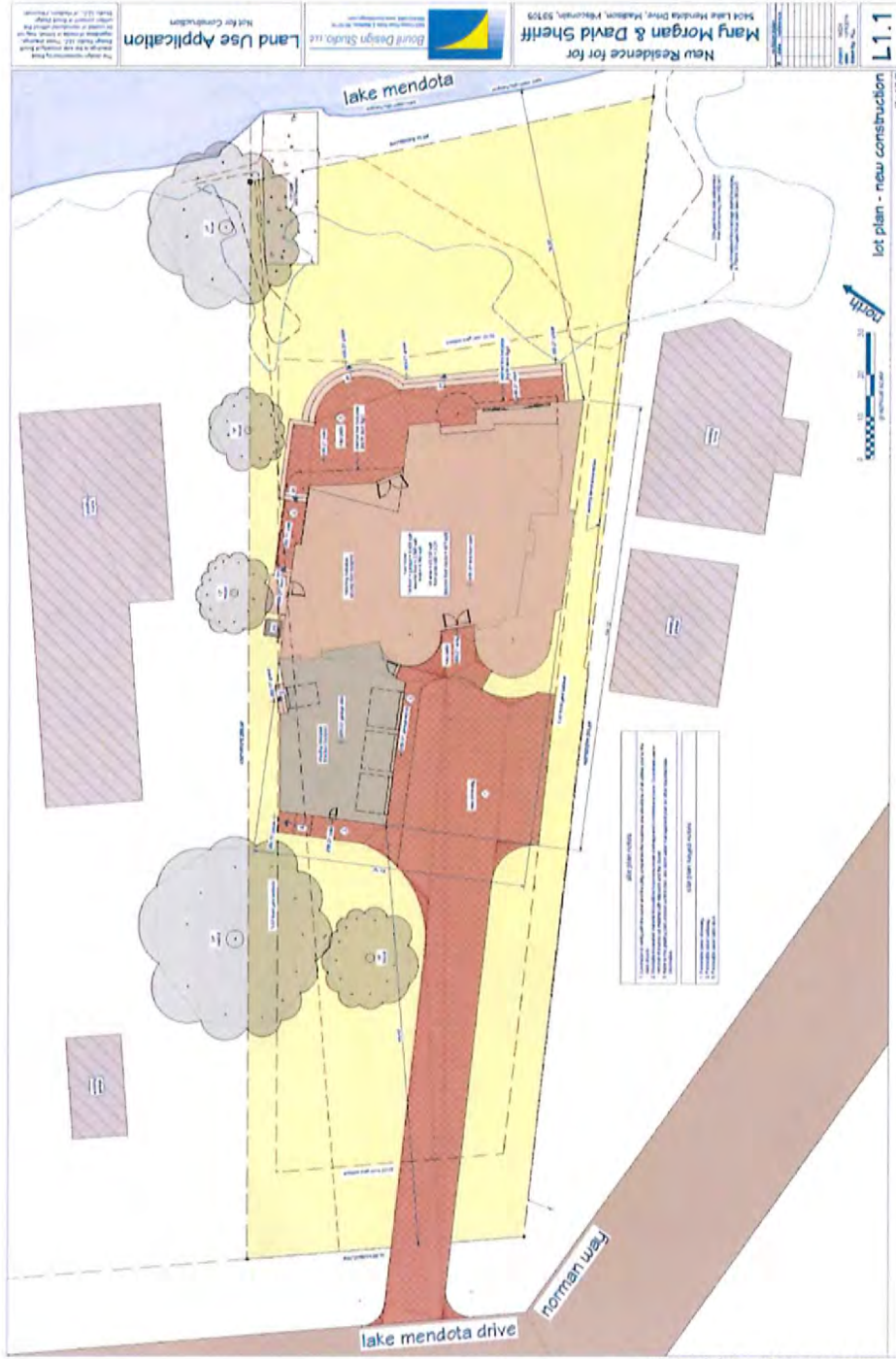
Item #18 Fireplace Timber Mantels.



Item #3 Kitchen Cabinets

APPENDIX B – PLANS





MEMO

To: Robert Lackore – Bouril Design Studio
David Sheriff and Mary Morgan – Owners

From: Erik Sorensen, PE, Senior Project Engineer

Subject: Morgan/Sheriff Residence Stormwater Management
5404 Lake Mendota Drive, Madison, Wisconsin

Date: October 11, 2012

Purpose

This memorandum along with supporting documentation summarizes the stormwater management, site grading, and construction site erosion control measures for a single family residence to be constructed at 5404 Lake Mendota Drive in the City of Madison, Wisconsin. This memorandum will be submitted to the City in support of permit applications for Demolition and Conditional Use to construct a single family home on a lakefront lot.

Site and Project Description

The site is located along the east side of Lake Mendota Drive just north of its intersection with Norman Way, and includes approximately 98 ft. of frontage on Lake Mendota. The lot includes approximately 0.505 acres measured to the Ordinary High Water Mark (OHWM) of Lake Mendota.

The site is flanked by existing residences and accepts runoff from off-site. Portions of both of the adjacent lots, as well as a portion of the Lake Mendota Drive Right-of-Way (ROW), drain through the site. The narrow lot width presents concerns related to maintaining the site's ability to pass flood flows through the site without damaging the proposed home or either of the neighboring residences.

The existing residential lot includes 8,991 sq. ft. of impervious area and is approximately 41% impervious. The bulk of the area within the shoreline setback is turf grass, with a rock stabilized shoreline and a concrete pad extending to the OHWM. The redeveloped site will include approximately 9,240 sq. ft. of roof, pavements and hardscaped area. However, the project will employ a pervious pavement system for both the driveway and lake side patio area, as well as green roof system above the garage and a part of the first floor. This results in a **net reduction** in impervious area from the existing condition to approximately 3,370 sq. ft., or approximately 15% of the site. The redevelopment will also result in a **net reduction** in impervious area of approximately 200 sq. ft. within the adjacent Lake Mendota Drive ROW.

Offices in Illinois, Iowa, Minnesota, and Wisconsin

2901 International Lane, Suite 300, Madison, WI 53704-3133

(608) 242-7779 (800) 446-0679

FAX: (608) 242-5664 WEB ADDRESS: www.msa-ps.com

Stormwater Management Requirements

The development must meet the requirements of Chapter 28.138 – Lakefront Development of the City Zoning Code. As a residential site which is not adding impervious area, the development is not required to meet any post-construction stormwater management requirements. Regardless of the lack of requirements, the owners directed MSA to develop a plan which manages stormwater to a very high level.

Data Collection & Analysis

For this stormwater management plan MSA utilized:

- Field survey data collected by MSA in September 2015 and September 2016.
- Certified Survey Map and Site Plan prepared by D'Onofrio Kottke and Associates, dated April 24 2015 and May 7, 2015, respectively.
- 2-ft. interval LIDAR contours provided by Dane County (flown 2009).
- Storm Sewer base data provided by the City of Madison.
- Aerial photography of varying dates from Google Earth.

Off-Site Watershed

MSA analyzed the watershed which drains to a 3 ft. by 4 ft. concrete box culvert directly adjacent to the site. The box culvert extends along the Norman Way ROW and outlets to Lake Mendota just south of Spring Harbor Beach. The box culvert's watershed (depicted on Exhibit 1) encompasses approximately 41.1 acres at the inlet structure immediately south of the site's driveway.

MSA determined that the box culvert can convey approximately 95 CFS downstream of this inlet structure, prior to overtopping. This compares to estimated flood flows of 83 CFS for the 25-yr storm event and 130 CFS for the 100-yr storm event. MSA discussed the characteristics of the watershed and its storm water infrastructure with Greg Fries of City Engineering. Mr. Fries indicated that the system is also limited by upstream inlet capacity – that there are not enough inlets in the proper locations to get the runoff into the storm sewer network. Stormwater flows which are not carried by the sewer network will flow overland until reaching Lake Mendota. He also indicated, however, that City Engineering does not have record of complaints of flooding in this area from the neighborhood residents.

MSA surveyed the topography within the Lake Mendota Drive ROW in the area, and determined that overland flows from the bulk of the watershed are routed from the intersection of Norman Way and Lake Mendota Drive southerly toward Harbor Court and then easterly toward Spring Harbor/Lake Mendota.

Site Grading Design

Although overland flows from the bulk of the off-site watershed are not routed through the site, it is possible (due to unpredictable conditions such as snow storage or debris dams) that a larger

portion of the overland flow from off site could end up routed through the site. Because of this possibility, and because of concerns voiced by the site's neighbors, MSA prepared a grading plan which increases the overland conveyance capacity of the side yards on both sides of the proposed house. The proposed residence will be slightly wider than the existing structure, however, the side yards will be graded to a lower elevation than in the existing condition, which will provide for improved cross sectional area and conveyance capacity during an emergency flood flow situation.

Cross sections shown on Sheet C3.3 of the plans, included in Exhibit 4, show the increased cross sectional areas of the side yard swales in the redeveloped condition. Photographs of the existing side yards are also provided as Exhibit 5. We note that both neighboring properties exist at higher elevation than subject site, and that the property to the southeast has installed a landscape timber wall which effectively forces all shared side yard drainage through subject property.

Grading limits will be at the property line along the northwest and southeast sides of the property. Grading will also be undertaken within the Lake Mendota ROW, both to remove existing driveway pavement and to install a new concrete ribbon curb to better direct flows from the ROW into the existing box culvert. The existing rock stabilized shoreline and concrete pad will remain in place and will not be disturbed.

The home will have a minimum low opening and first floor elevation of 855.30 ft., and there will be no basement or crawl space. This compares to the regulatory 100-yr flood elevation for Lake Mendota of 852.6. The grade adjacent to the structure will typically be set at 854.3 ft. or lower along the northwest and southeast sides, and at 853.2 adjacent to the lake side patio.

The summer lake management target elevation range for Lake Mendota is 849.4 to 849.9, and the OHWM elevation at the site is approximately 850.7. Soil borings advanced for the project indicated groundwater levels ranging from approximately 850.0 to 853.0 in four locations on the site.

The lake side of the lot includes areas lying within the City's Flood Storage Zoning District. The proposed home and lake side patio are designed to avoid encroachment into the Flood Storage District (FSD). There will, however, be minor grading undertaken within the FSD – a small amount of earth fill will be placed near the eastern corner of the patio, and a small amount of earth cut will result from the installation of a rain garden in the eastern corner of the property. MSA calculates that between the normal lake elevation and the 100-yr flood elevation, the total volume of fill placed will be approximately 2.1 cu. yds., and the total volume of cut is approximately 5.3 cu. yds. for a net gain of approximately 3.2 cu. yds. of floodplain storage on the site.

Proposed Stormwater Management Features

The design includes pervious pavements for the driveway, lake side patio and walk areas. Green roof systems will also be installed above the garage and a portion of the first floor. The side yard swales will include underdrains through which overflow from the pervious pavements will be

routed. The northwest swale will daylight to existing grade and the southeast swale will drain to a small rain garden to be installed in the east corner of the site. The swale underdrains will be routed to a bubbler inlet within the rain garden.

Pervious Pavements

The entire driveway and the adjacent front walk areas will be constructed of a pervious paver system. A rock filled storage reservoir will be constructed beneath approximately 1,520 sq. ft. of the driveway. The reservoir will have a storage depth of 9 inches beneath a tile underdrain system for overflows. The underdrains will discharge to the tile beneath the southeast side swale.

The entire lake side patio will also be constructed of a pervious paver system, with an approximately 310 sq. ft. rock filled storage reservoir, also with a storage depth of 9 inches, beneath the patio. The tile underdrain from this storage reservoir will also be routed to the tile beneath the southeast side swale.

Additional walk areas along the northwest side of the house and southwest side of the garage will also utilize a pervious paver system but will not include tile underdrains.

Green Roof Systems

A green roof system will be installed above the garage. The system will include an additional storage reservoir approximately 4.4 inches deep, and the stored runoff will be utilized for irrigation of site landscaping, including the green roof system itself. Runoff from the main roof (approximately 2,550 sq. ft.) will also be routed through the green roof system above the garage. When full, the volume of the storage reservoir can be used for an approximate 0.4 inch depth of landscaping irrigation. Overflows from the system will be routed overland to the northwest side swale.

A green roof system will also be installed on the roof above the first floor (approximately 550 sq. ft.), with an additional storage reservoir approximately 2.2 inches deep. The stored runoff will be utilized for green roof system irrigation only, and overflows will be routed overland to the southeast side swale.

Swales and Rain Garden

The side yard swales will include tile underdrains placed in a granular trench. The underdrains will help to keep the swale surfaces dry and traversable. Swale geometry was designed to increase the stormwater conveyance capacity over the ground surface alongside the house during a flood flow event.

A rain garden will be installed adjacent to the rock stabilized shoreline. The rain garden will consist of a 100 sq. ft., 4-inch deep depression with a one foot depth of engineered planting medium at the floor. It is anticipated that the rain garden will infiltrate both vertically and laterally towards the lake. No tiled or piped outlet will be provided for the rain garden.

Stormwater Management System Performance

Storage volumes for the systems described above were designed to capture approximately 1.5 inches of rainfall from the site impervious areas without any surface discharge. MSA also analyzed the system performance on an average annual basis, using the 1981 annual rainfall record for Madison (for the regulatory standard non-winter period).

MSA prepared a WinSLAMM model to analyze the capture of runoff and pollutants from the pervious pavements. Pervious pavements not lying above the storage reservoirs were conservatively modeled as standard (impervious) pavement. The WinSLAMM modeling inputs and outputs are attached as Exhibit 3. The isolated walk areas were assumed to capture 100% of the annual rainfall due to the absence of any “run-on” areas to the pavements.

Pollutant capture for the green roof systems was estimated by reviewing the annual rainfall record, and deducting the captured stormwater volume for any rainfall events above 1.5 inches over a two-day period. The remaining runoff and associated pollutants were then considered fully captured (recycled for irrigation purposes).

Due to the site’s adjacency to Lake Mendota, an analysis of peak runoff rates and infiltration from the site is somewhat meaningless, however, we note that due to the large decrease in effective impervious area, peak runoff rates will decrease while infiltration rates will increase. The on-site soils are mapped as Sable silty clay loam, and the soil borings advanced for the project generally showed a thin layer of sandy or clayey sand fill soils above peaty and organic soils to depths of 10 to 12 feet. Infiltration rates are anticipated to be very low due to the clay content of the soil and the proximity to seasonal high groundwater. An infiltration rate of 0.02 inches per hour was used to model the native soils beneath the pervious pavements.

The performance of the stormwater management systems serving the site’s impervious areas are presented in the table below. The site pervious areas were not included in the analysis. Performance of the site’s swales and the rain garden were also not included in the analysis, however these features will provide a secondary level of pollutant filtering and capture, over and above the performance levels estimated below.

Table 1 – Performance Summary

Source Area	Total Suspended Solids (TSS) (in pounds)			Total Phosphorus (TP) (in pounds)		
	Load In	Load Out	% reduction	Load In	Load Out	% reduction
Driveway	52.5	3.2	93.9 %	0.17	0.02	88.2 %
Patio	9.2	1.5	83.7 %	0.04	0.01	75.0 %
Isolated Walk Areas	5.0	0.0	100 %	0.02	0.00	100 %
Green Roofs	18.7	2.0	89.5 %	0.08	0.01	89.5 %
Total	85.4	6.7	92.2 %	0.31	0.04	87.1 %

Construction Site Erosion Control

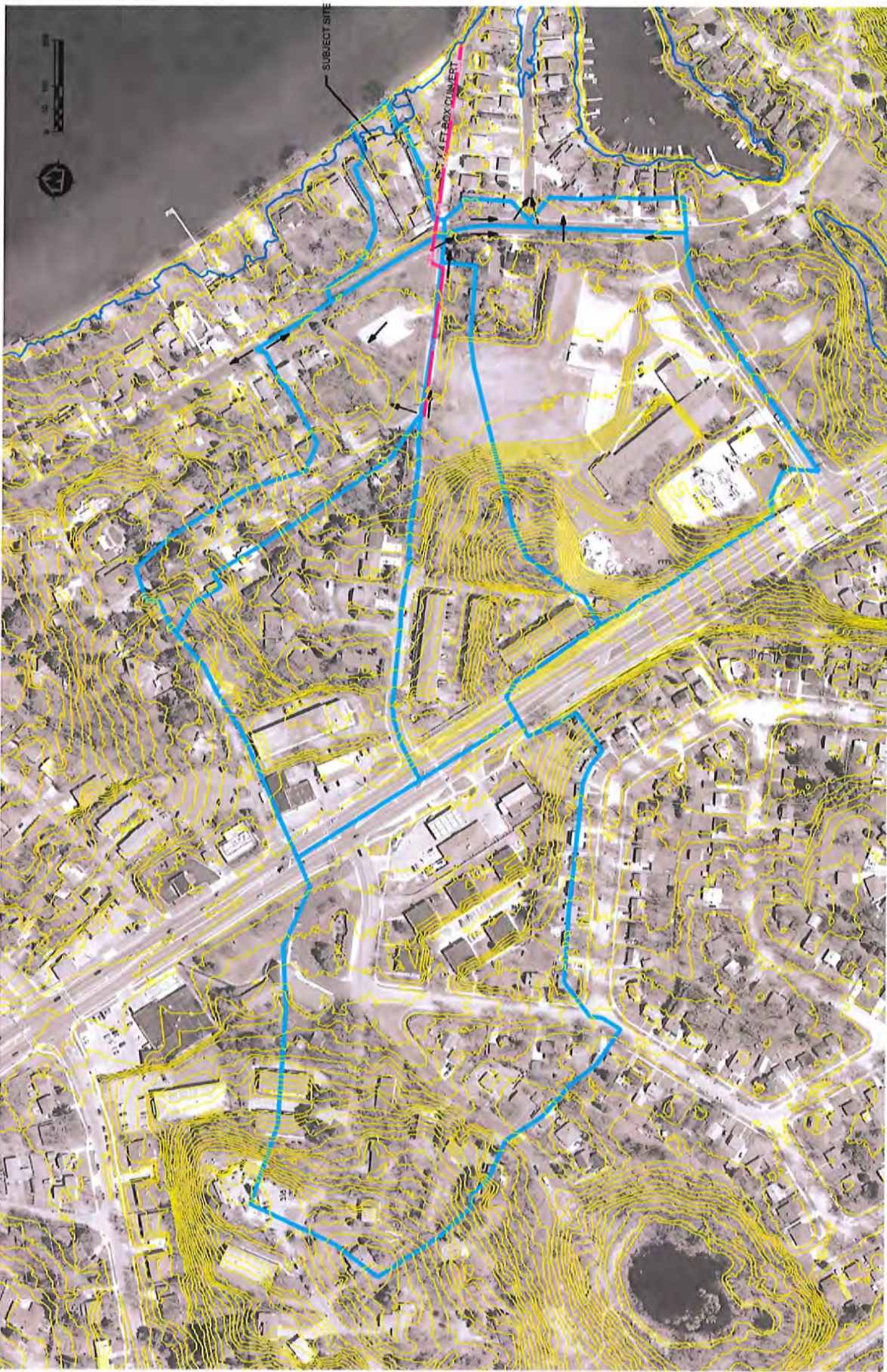
A site erosion control plan is included with the project plans in Exhibit 4. It is anticipated that most of the 22,000 sq. ft. site will be disturbed by construction. No tentative construction schedule has been developed and as such, an erosion control permit application has not yet been prepared. The site is relatively flat, and no atypical problems are anticipated with construction site erosion control.

Conclusions

The owners desire a site design that goes above and beyond typical stormwater management requirements. The proposed design treats runoff from the site to exemplary 92.2% TSS and 87.1% TP performance levels. Further, the site is designed to improve flood conveyance through the side yards in an emergency flood situation. Albeit on a small scale, the site will do an excellent job of improving the water quality of the adjacent Lake Mendota.

**MORGAN/SHERIFF RESIDENCE
STORMWATER MANAGEMENT**

Exhibit 1 – Off-Site Watershed



PROJECT NO. 6344002
 MORGAN / SHERIFF RESIDENCE
 504 LAKE MENDOTA DRIVE
 MADISON, WISCONSIN

OFF-SITE WATERSHEDS
 (TO 3 X 4 BOX CULVERT)

MSA
 ENGINEERING & ARCHITECTURE
 2021 University Ave. Madison, WI 53706
 608-263-7779 • 608-263-8070 • Fax 608-263-0686
 www.msa-engineering.com

NO.	DATE	BY	REVISION
1	08/08/2013	MSA	ISSUED FOR PERMIT
2	08/08/2013	MSA	REVISED
3	08/08/2013	MSA	REVISED
4	08/08/2013	MSA	REVISED
5	08/08/2013	MSA	REVISED
6	08/08/2013	MSA	REVISED
7	08/08/2013	MSA	REVISED
8	08/08/2013	MSA	REVISED
9	08/08/2013	MSA	REVISED
10	08/08/2013	MSA	REVISED

MORGAN/SHERIFF RESIDENCE STORMWATER MANAGEMENT

Exhibit 2 – Proposed Site

**MORGAN/SHERIFF RESIDENCE
STORMWATER MANAGEMENT**

Exhibit 3 – WinSLAMM Data

Commercial Street Delivery file name: C:\WinSLAMM Files\WJ_Corn Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WJ_Corn Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WJ_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WJ_GEO03.ppd
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:

Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 10-11-2016 Time: 09:00:17

Site information:

Morgan - Sheriff Home Site
LU# 1 - Residential: Driveway Total area (ac): 0.072
2S - Driveways 1: 0.072 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz PP-CP#1

LU# 2 - Residential: Patio Total area (ac): 0.026
31 - Sidewalks 1: 0.026 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz PP-CP#2

LU# 3 - Residential: Roof Total area (ac): 0.101
1 - Roofs 1: 0.101 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: Walk Total area (ac): 0.014
31 - Sidewalks 1: 0.014 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: Drive no PP Total area (ac): 0.072
2S - Driveways 1: 0.072 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Residential: Patio no PP Total area (ac): 0.026
31 - Sidewalks 1: 0.026 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Porous Pavement CP# 1 (SA) - SA Device, LU# 1, SA# 2S

Porous pavement area (ac): 0.035
Inflow hydrograph peak to average flow ratio: 3.8
Porous pavement thickness (in): 4
Porous pavement porosity: 0.25
Aggregate bedding thickness (in): 5
Aggregate bedding porosity: 0.3
Aggregate base reservoir thickness (in): 15
Aggregate base reservoir porosity: 0.3
Porous pavement surface area to aggregate base area ratio: 1
Underdrain diameter (in): 6
Underdrain outlet invert elevation (ft above datum): 9
Number of underdrains: 2
Subgrade seepage rate (in/hr): 0.02
Use random number generation to account for uncertainty in seepage rate: 0

Subgrade seepage rate COV: 0
Surface pavement initial infiltration rate (in/hr): 100
Surface Pavement Percent Solids Removal Upon Cleaning: 90
Porous pavement surface clogging load (lbs/sf): 0.06
Poros pavement restorative cleaning frequency: Annually
TSS concentration reduction percentage through underdrain: 0
Poros pavement particle size distribution file name: Not needed - calculated by program

Control Practice 2: Porous Pavement CP# 2 (SA) - SA Device, LUM# 2, SA# 31

Porous pavement area (ac): 0.007
Inflow hydrograph peak to average flow ratio: 3.8
Porous pavement thickness (in): 4
Poros pavement porosity: 0.25
Aggregate bedding thickness (in): 5
Aggregate bedding porosity: 0.3
Aggregate base reservoir thickness (in): 15
Aggregate base reservoir porosity: 0.3
Poros pavement surface area to aggregate base area ratio: 1
Underdrain diameter (in): 6
Underdrain outlet invert elevation (ft above datum): 9
Number of underdrains: 1
Subgrade seepage rate (in/hr): 0.02
Use random number generation to account for uncertainty in seepage rate: 0
Subgrade seepage rate COV: 0
Surface pavement initial infiltration rate (in/hr): 100
Surface Pavement Percent Solids Removal Upon Cleaning: 90
Poros pavement surface clogging load (lbs/sf): 0.06
Poros pavement restorative cleaning frequency: Annually
TSS concentration reduction percentage through underdrain: 0
Poros pavement particle size distribution file name: Not needed - calculated by program

Control Practice 3: Other Device CP# 1 (DS) - Driveway

Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 0.00
Runoff volume reduction fraction = 0

Control Practice 4: Other Device CP# 2 (DS) - Patio

Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 0.00
Runoff volume reduction fraction = 0

Control Practice 5: Other Device CP# 3 (DS) - Roof

Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 0.00
Runoff volume reduction fraction = 0

Control Practice 6: Other Device CP# 4 (DS) - Walk

Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 0.00
Runoff volume reduction fraction = 0

Control Practice 7: Other Device CP# 5 (DS) - Drive no PP
 Fraction of drainage area served by device (ac) = 1.00
 Concentration reduction fraction = 0.00
 Runoff volume reduction fraction = 0

Control Practice 8: Other Device CP# 6 (DS) - Patio no PP
 Fraction of drainage area served by device (ac) = 1.00
 Concentration reduction fraction = 0.00
 Runoff volume reduction fraction = 0

WinSLAMM Output Data

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 10-11-16 Time: 8:59:37 AM

Site Description: Morgan - Sheriff Home Site

Residential: Driveway Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Driveways	Rv	Total Losse	Calculated CN*
Minimum:	0	0	0	0	0	0
Maximum:	2.59	299	299	0.79	1.44	98.1
Average:	0.26	16	16	0.54	0.73	91.2
Total:	28.81	1766	1766		22.06	

Residential: Patio Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Sidewalks/	Rv	Total Losse	Calculated CN*
Minimum:	0	0	0	0	0	0
Maximum:	2.59	178	178	0.81	0.89	98.7
Average:	0.26	10	10	0.65	0.44	95.3
Total:	28.81	1140	1139		16.72	

Residential: Roof Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Roofs	1 Rv	Total Losse	Calculated CN*
Minimum:	0	0	0	0	0	0
Maximum:	2.59	875	875	0.92	0.2	99.2
Average:	0.26	74	74	0.82	0.15	98.6
Total:	28.81	8103	8109		6.76	

Residential: Walk Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Sidewalks/	Rv	Total Losse	Calculated CN*
Minimum:	0	0	0	0	0	0
Maximum:	2.59	121	121	0.92	0.23	99.8
Average:	0.26	10	10	0.76	0.19	98.1
Total:	28.81	1063	1060		7.94	

Residential: Drive no PP Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Driveways	Rv	Total Losse	Calculated	CN*
Minimum:	0	0	0	0	0	0	0
Maximum:	2.59	620	620	0.92	0.23	99.8	
Average:	0.26	50	50	0.76	0.19	98.1	
Total:	28.81	5465	5466		7.94		

Residential: Patio no PP Areas - Runoff Volume (cu. ft)
 Summary for All Events

	Rain Total	Land Use	T Sidewalks/	Rv	Total Losse	Calculated	CN*
Minimum:	0	0	0	0	0	0	0
Maximum:	2.59	224	224	0.92	0.23	99.8	
Average:	0.26	18	18	0.76	0.19	98.1	
Total:	28.81	1974	1968		7.94		

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 10-11-16 Time: 8:59:38 AM

Site Description: Morgan - Sheriff Home Site

Residential: Driveway - Source Area Percentage Contribution of Runoff Volume

Summary for Runoff Producing Events

	Rain Total	Land Use	T Driveways 1
Minimum:	0	0	0
Maximum:	2.59	21.9	21.9
FLWt Ave:	N/A	16.09	16.09

Residential: Patio - Source Area Percentage Contribution of Runoff Volume

Summary for Runoff Producing Events

	Rain Total	Land Use	T Sidewalks/	Walks 1
Minimum:	0	0	0	0
Maximum:	2.59	9.4	9.4	
FLWt Ave:	N/A	7.568	7.568	

Residential: Roof - Source Area Percentage Contribution of Runoff Volume

Summary for Runoff Producing Events

	Rain Total	Land Use	T Roofs 1
Minimum:	0	0	0
Maximum:	2.59	51.9	51.9
FLWt Ave:	N/A	42.64	42.64

Residential: Walk - Source Area Percentage Contribution of Runoff Volume

Summary for Runoff Producing Events

	Rain Total	Land Use	T Sidewalks/	Walks 1
Minimum:	0	0	0	0
Maximum:	2.59	12.5	12.5	
FLWt Ave:	N/A	5.574	5.574	

Residential: Drive no PP - Source Area Percentage Contribution of Runoff Volume

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
 Minimum: 0 0
 Maximum: 2.59 64.3 64.3
 Fl Wt Ave: N/A 28.69 28.69

Residential: Patio no PP - Source Area Percentage Contribution of Runoff Volume
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0 0
 Maximum: 2.59 23.2 23.2
 Fl Wt Ave: N/A 10.36 10.36

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:38 AM
 Site Description: Morgan - Sheriff Home Site

Residential: Driveway Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
 Minimum: 0 0
 Maximum: 2.59 55.61 55.61
 Fl Wt Ave: N/A 29.16 29.16

Residential: Patio Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0 0
 Maximum: 2.59 36.34 36.34
 Fl Wt Ave: N/A 21.16 21.16

Residential: Roof Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
 Minimum: 0 0
 Maximum: 2.59 37 37
 Fl Wt Ave: N/A 37 37

Residential: Walk Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0 0
 Maximum: 2.59 75 75
 Fl Wt Ave: N/A 75 75

Residential: Drive no PP Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
 Minimum: 0 0
 Maximum: 2.59 154 154
 Fl Wt Ave: N/A 154 154

Residential: Patio no PP Areas - Particulate Solids Concentration (mg/L)
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum:	0	0	0
Maximum:	2.59	75	75
Fl Wt Ave:	N/A	75	75

Data File: P:\181005\181605\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:38 AM
 Site Description: Morgan - Sheriff Home Site

Residential: Driveway Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total Land Use T Driveways 1			
Minimum:	0	0	0
Maximum:	2.59	0.94	0.9409
Flow Wt Av N/A	0.4448	0.4448	0.4448
Total:	28.81	3.21	3.215

Residential: Patio Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total Land Use T Sidewalks/ Walks 1			
Minimum:	0	0	0
Maximum:	2.59	0.3	0.3006
Flow Wt Av N/A	0.1312	0.1312	0.1312
Total:	28.81	1.51	1.505

Residential: Roof Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total Land Use T Roofs 1			
Minimum:	0	0	0
Maximum:	2.59	2.02	2.021
Flow Wt Av N/A	0.8356	0.8356	0.8356
Total:	28.81	18.71	18.71

Residential: Walk Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total Land Use T Sidewalks/ Walks 1			
Minimum:	0	0	0
Maximum:	2.59	0.56	0.5644
Flow Wt Av N/A	0.227	0.227	0.227
Total:	28.81	4.98	4.976

Residential: Drive no PP Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total Land Use T Driveways 1			
Minimum:	0	0	0
Maximum:	2.59	5.96	5.96
Flow Wt Av N/A	2.397	2.397	2.397
Total:	28.81	52.54	52.54

Residential: Patio no PP Areas - Particulate Solids Yield (lbs)
 Summary for All Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum:	0	0
Maximum:	2.59	1.05
Flow Wt Av N/A	0.4215	0.4215
Total:	28.81	9.24

Data File: P:\181000\181600\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:38 AM
 Site Description: Morgan - Sheriff Home Site

Residential: Driveway - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum:	0	0
Maximum:	2.59	16.8
Fl Wt Ave: N/A	7.195	7.195

Residential: Patio - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum:	0	0
Maximum:	2.59	3.9
Fl Wt Ave: N/A	2.271	2.271

Residential: Roof - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1

Minimum:	0	0
Maximum:	2.59	24.1
Fl Wt Ave: N/A	21.2	21.2

Residential: Walk - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum:	0	0
Maximum:	2.59	7.5
Fl Wt Ave: N/A	5.536	5.536

Residential: Drive no PP - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum:	0	0
Maximum:	2.59	78.7
Fl Wt Ave: N/A	58.51	58.51

Residential: Patio no PP - Source Area Percentage Contribution of Particulate Solids Yield Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum:	0	0
Maximum:	2.59	13.8
Fl Wt Ave: N/A	10.28	10.28

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:40 AM
 Site Description: Morgan - Sheriff Home Site

Control Practice Type ==>		CP# 1 - Porous Pavement				CP# 2 - Porous Pavement				CP# 3 - Other Device				CP# 4 - Other Device			
Control Practice Name/Location ==>		SA Device, LU# 1 ,SA# 25				SA Device, LU# 2 ,SA# 31				Driveway				Patio			
Rain Numb	Start Date	Rain Total (in)	Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red	Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red	Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red
Minimum:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum:	2.59	299.4	100	233.9	177.5	100	100	299.4	299.4	299.4	0.01	0.01	177.5	177.5	177.5	0.01	0.01
Average:	0.26	16.2	76.29	18.11	10.46	67.22	0	16.2	16.2	16.2	0	0	10.46	10.46	10.46	0	0
Total:	28.81	1766	67.69	1974	1140	42.24	0.01	1766	1766	1766	0.01	0.01	1140	1140	1140	0.01	0.01

CP# 5 - Other Device		CP# 6 - Other Device				CP# 7 - Other Device				CP# 8 - Other Device				
Roof		Walk				Drive no PP				Patio no PP				
Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red	Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red	Influent Ru	Effluent Ru	Pa Part.	Yield	Percent Red
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
875.1	875	0.01	120.5	120.5	619.9	619.9	0.01	223.9	223.8	223.9	223.8	0.01	0.01	0.01
74.34	74.33	0.01	9.75	9.75	50.14	50.14	0.01	18.11	18.1	18.11	18.1	0.01	0.01	0.01
8103	8101	0.01	1063	1063	5465	5465	0.01	1974	1974	1974	1973	0.01	0.01	0.01

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:40 AM
 Site Description: Morgan - Sheriff Home Site

Control Practice Type ==>		CP# 1 - Porous Pavement				CP# 2 - Porous Pavement				CP# 3 - Other Device				CP# 4 - Other Device			
Control Practice Name/Location ==>		SA Device, LU# 1 ,SA# 25				SA Device, LU# 2 ,SA# 31				Driveway				Patio			
Rain Numb	Start Date	Rain Total (in)	Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red	Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red	Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red
Minimum:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum:	2.59	0.9409	100	1.048	0.3006	100	100	0.9409	0.9408	0.9409	0.01	0.01	0.3006	0.3006	0.3006	0.01	0.01
Average:	0.26	0.482	0.02949	0.08478	0.01381	78.99	0	0.02949	0.02949	0.02949	0.001468	0	0.01381	0.01381	0.01381	0.002661	0
Total:	28.81	52.54	3.215	93.88	9.24	1.505	83.71	3.215	3.214	3.215	0.01	0.01	1.505	1.505	1.505	0.01	0.01

CP# 5 - Other Device		CP# 6 - Other Device				CP# 7 - Other Device				CP# 8 - Other Device				
Roof		Walk				Drive no PP				Patio no PP				
Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red	Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red	Influent Pa	Effluent Pa	Pa Part.	Yield	Percent Red
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.021	2.021	0.01	0.5644	0.5643	5.96	5.959	0.01	1.048	1.048	1.048	1.048	0.01	0.01	0.01
0.1717	0.1717	0.006422	0.04565	0.04564	0.482	0.482	0.008257	0.08478	0.08477	0.08478	0.08477	0.008257	0.008257	0.008257
18.71	18.71	0.01	4.976	4.975	52.54	52.54	0.01	9.24	9.24	9.24	9.24	0.01	0.01	0.01

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb
 Rain File: WisReg - Madison WI 1981.RAN
 Date: 10-11-16 Time: 8:59:40 AM
 Site Description: Morgan - Sheriff Home Site

Residential: Roof Areas - Pollutant Concentration: Particulate Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
Minimum: 0 0
Maximum: 2.59 0.1218 0.1218
Fl Wt Ave: N/A 0.1218 0.1218

Residential: Walk Areas - Pollutant Concentration: Particulate Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0
Maximum: 2.59 0.1826 0.1826
Fl Wt Ave: N/A 0.1826 0.1826

Residential: Drive no PP Areas - Pollutant Concentration: Particulate Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0
Maximum: 2.59 0.3748 0.3748
Fl Wt Ave: N/A 0.3748 0.3748

Residential: Patio no PP Areas - Pollutant Concentration: Particulate Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0
Maximum: 2.59 0.1826 0.1826
Fl Wt Ave: N/A 0.1826 0.1826

Residential: Driveway Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0
Maximum: 2.59 0.1139 0.1139
Fl Wt Ave: N/A 0.07799 0.07799

Residential: Patio Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0
Maximum: 2.59 0.1176 0.1176
Fl Wt Ave: N/A 0.09592 0.09592

Residential: Roof Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)
Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
Minimum: 0 0
Maximum: 2.59 0.04 0.04
Fl Wt Ave: N/A 0.04 0.04

Residential: Walk Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.12 0.12
Fl Wt Ave: N/A 0.12 0.12

Residential: Drive no PP Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0 0
Maximum: 2.59 0.12 0.12
Fl Wt Ave: N/A 0.12 0.12

Residential: Patio no PP Areas - Pollutant Concentration: Filterable Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.12 0.12
Fl Wt Ave: N/A 0.12 0.12

Residential: Driveway Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0 0
Maximum: 2.59 0.2553 0.2553
Fl Wt Ave: N/A 0.191 0.191

Residential: Patio Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.2085 0.2085
Fl Wt Ave: N/A 0.1715 0.1715

Residential: Roof Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1

Minimum: 0 0
Maximum: 2.59 0.1618 0.1618
Fl Wt Ave: N/A 0.1618 0.1618

Residential: Walk Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.3026 0.3026
Fl Wt Ave: N/A 0.3026 0.3026

Residential: Drive no PP Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0
Maximum: 2.59 0.4948 0.4948
Fl Wt Ave: N/A 0.4948 0.4948

Residential: Patio no PP Areas - Pollutant Concentration: Total Phosphorus (mg/L)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0
Maximum: 2.59 0.3026 0.3026
Fl Wt Ave: N/A 0.3026 0.3026

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 10-11-16 Time: 8:59:39 AM

Site Description: Morgan - Sheriff Home Site

Residential: Driveway Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0
Maximum: 2.59 0.00229 0.00229
Fl Wt Ave: N/A 0.001083 0.001083
Total: 28.81 0.007824 0.007824

Residential: Patio Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0
Maximum: 2.59 7.32E-04 7.32E-04
Fl Wt Ave: N/A 3.19E-04 3.19E-04
Total: 28.81 0.003664 0.003664

Residential: Roof Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
Minimum: 0 0 0

Maximum: 2.59 0.006656 0.006656
Fl Wt Ave: N/A 0.002752 0.002752
Total: 28.81 0.06163 0.06163

Residential: Walk Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 0.001374 0.001374
Fl Wt Ave: N/A 5.52E-04 5.52E-04
Total: 28.81 0.01211 0.01211

Residential: Drive no PP Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0 0
Maximum: 2.59 0.01451 0.01451
Fl Wt Ave: N/A 0.005834 0.005834
Total: 28.81 0.1279 0.1279

Residential: Patio no PP Areas - Pollutant Yield: Particulate Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 0.002551 0.002551
Fl Wt Ave: N/A 0.001026 0.001026
Total: 28.81 0.02249 0.02249

Residential: Driveway Areas - Pollutant Yield: Filterable Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
Minimum: 0 0 0
Maximum: 2.59 0.002243 0.002243
Fl Wt Ave: N/A 0.001687 0.001687
Total: 28.81 0.01323 0.01323

Residential: Patio Areas - Pollutant Yield: Filterable Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 0.00133 0.00133
Fl Wt Ave: N/A 7.02E-04 7.02E-04
Total: 28.81 0.008539 0.008539

Residential: Roof Areas - Pollutant Yield: Filterable Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
Minimum: 0 0 0
Maximum: 2.59 0.002185 0.002185

Fl Wt Ave: N/A 9.03E-04 9.03E-04
Total: 28.81 0.02023 0.02023

Residential: Walk Areas - Pollutant Yield: Filterable Phosphorus (lbs)
Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 9.03E-04 9.03E-04
Fl Wt Ave: N/A 3.63E-04 3.63E-04
Total: 28.81 0.007961 0.007961

Residential: Drive no PP Areas - Pollutant Yield: Filterable Phosphorus (lbs)

Summary for Runoff Producing Events
Rain Total | Land Use T Driveways 1
Minimum: 0 0 0
Maximum: 2.59 0.004644 0.004644
Fl Wt Ave: N/A 0.001868 0.001868
Total: 28.81 0.04094 0.04094

Residential: Patio no PP Areas - Pollutant Yield: Filterable Phosphorus (lbs)

Summary for Runoff Producing Events
Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 0.001677 0.001677
Fl Wt Ave: N/A 6.74E-04 6.74E-04
Total: 28.81 0.01478 0.01478

Residential: Driveway Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events
Rain Total | Land Use T Driveways 1
Minimum: 0 0 0
Maximum: 2.59 0.00432 0.00432
Fl Wt Ave: N/A 0.00277 0.00277
Total: 28.81 0.02105 0.02105

Residential: Patio Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events
Rain Total | Land Use T Sidewalks/ Walks 1
Minimum: 0 0 0
Maximum: 2.59 0.002062 0.002062
Fl Wt Ave: N/A 0.001021 0.001021
Total: 28.81 0.0122 0.0122

Residential: Roof Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events
Rain Total | Land Use T Roofs 1
Minimum: 0 0 0
Maximum: 2.59 0.008841 0.008841
Fl Wt Ave: N/A 0.003655 0.003655

Total: 28.81 0.08186 0.08186

Residential: Walk Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.002277 0.002277
Fl Wt Ave: N/A 9.16E-04 9.16E-04
Total: 28.81 0.02007 0.02007

Residential: Drive no PP Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0 0
Maximum: 2.59 0.01915 0.01915
Fl Wt Ave: N/A 0.007702 0.007702
Total: 28.81 0.1688 0.1688

Residential: Patio no PP Areas - Pollutant Yield: Total Phosphorus (lbs)

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0 0
Maximum: 2.59 0.004228 0.004228
Fl Wt Ave: N/A 0.0017 0.0017
Total: 28.81 0.03727 0.03727

Data File: P:\18100s\18160s\18161\18161000\Calculations\models\proposed site.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 10-11-16 Time: 8:59:39 AM

Site Description: Morgan - Sheriff Home Site

Residential: Driveway Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0.01 0.1 0.1
Maximum: 2.59 15.8 15.8
Fl Wt Ave: N/A 6.8 3.3

Residential: Patio Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0.01 0.1 0.1
Maximum: 2.59 3.7 3.7
Fl Wt Ave: N/A 2.1 1.6

Residential: Roof Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
 Minimum: 0.01 0.2 0.2
 Maximum: 2.59 30.1 30.1
 Fl Wt Ave: N/A 26.7 26.2

Residential: Walk Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0.01 4.4 4.4
 Maximum: 2.59 7.5 7.5
 Fl Wt Ave: N/A 5.2 5.1

Residential: Drive no PP Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
 Minimum: 0.01 46.1 46.1
 Maximum: 2.59 78.7 78.7
 Fl Wt Ave: N/A 54.5 54.3

Residential: Patio no PP Areas - Pollutant Yield Source Area Contribution: Particulate Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0.01 8.1 8.1
 Maximum: 2.59 13.8 13.8
 Fl Wt Ave: N/A 9.6 9.5

Residential: Driveway Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1
 Minimum: 0.01 2.1 2.1
 Maximum: 2.59 28.3 28.3
 Fl Wt Ave: N/A 21.2 12.5

Residential: Patio Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0.01 0.5 0.5
 Maximum: 2.59 13.2 13.2
 Fl Wt Ave: N/A 10.3 8.1

Residential: Roof Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1
 Minimum: 0.01 0.2 0.2
 Maximum: 2.59 26.5 26.5
 Fl Wt Ave: N/A 20.1 19.1

Residential: Walk Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus
 Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1
 Minimum: 0.01 5.8 5.8
 Maximum: 2.59 12.5 12.5
 Fl Wt Ave: N/A 7.8 7.5

Residential: Drive no PP Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0.01 29.9 29.9
Maximum: 2.59 64.3 64.3
Fl Wt Ave: N/A 39.9 38.7

Residential: Patio no PP Areas - Pollutant Yield Source Area Contribution: Filterable Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0.01 10.8 10.8
Maximum: 2.59 23.2 23.2
Fl Wt Ave: N/A 14.4 14

Residential: Driveway Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0.01 0.7 0.7
Maximum: 2.59 20 20
Fl Wt Ave: N/A 11.6 6.2

Residential: Patio Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0.01 0.1 0.1
Maximum: 2.59 6.3 6.3
Fl Wt Ave: N/A 4.7 3.6

Residential: Roof Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Roofs 1

Minimum: 0.01 0.2 0.2
Maximum: 2.59 29.1 29.1
Fl Wt Ave: N/A 24.6 24

Residential: Walk Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0.01 4.8 4.8
Maximum: 2.59 8.9 8.9
Fl Wt Ave: N/A 5.9 5.9

Residential: Drive no PP Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Driveways 1

Minimum: 0.01 40.8 40.8
Maximum: 2.59 74.6 74.6
Fl Wt Ave: N/A 49.9 49.5

Residential: Patio no PP Areas - Pollutant Yield Source Area Contribution: Total Phosphorus

Summary for Runoff Producing Events

Rain Total | Land Use T Sidewalks/ Walks 1

Minimum: 0.01 9 9
Maximum: 2.59 16.5 16.5

Fl Wt Ave: N/A

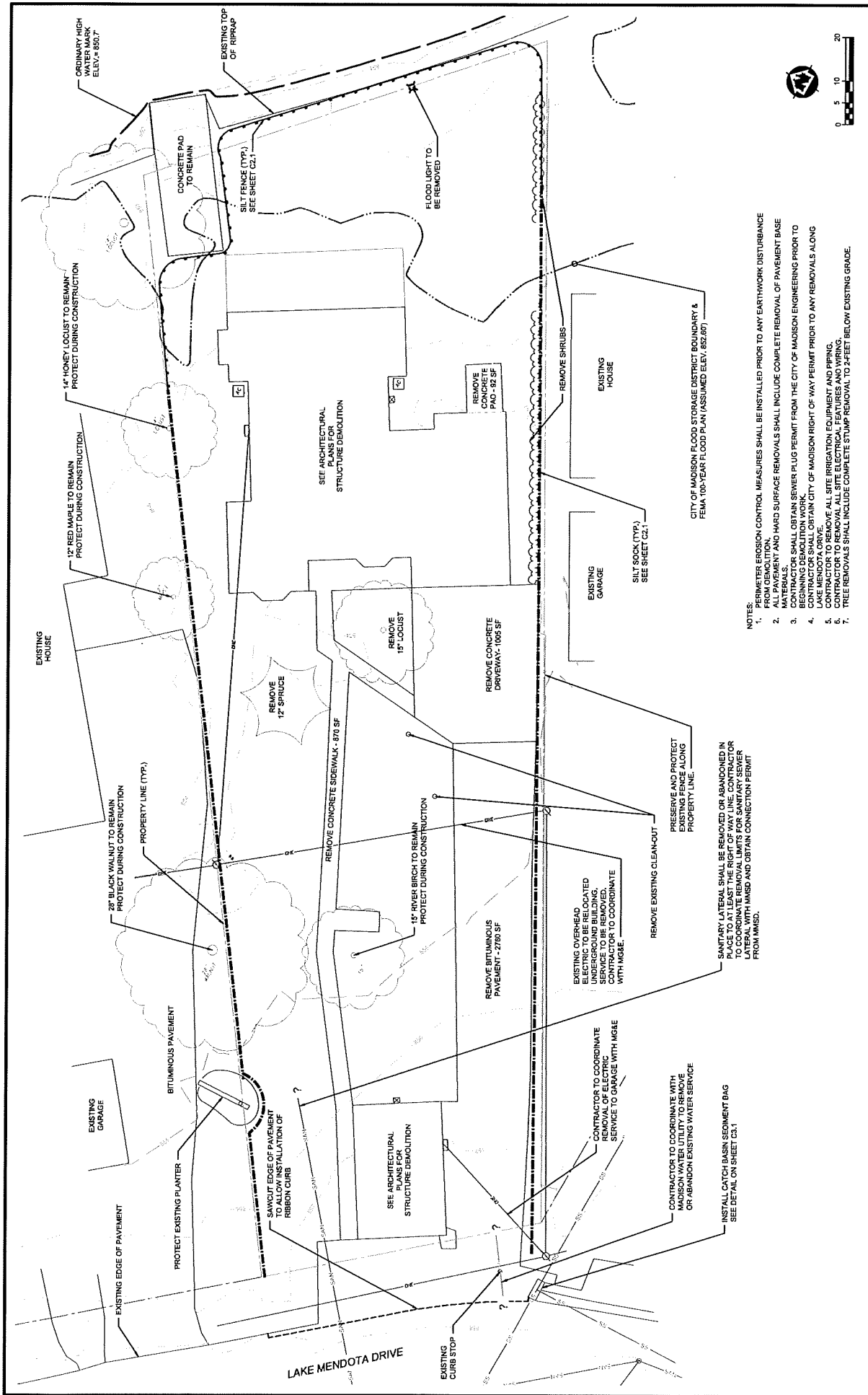
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10.9



MORGAN/SHERIFF RESIDENCE STORMWATER MANAGEMENT

Exhibit 4 – Project Plans



- NOTES:**
1. PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTHWORK DISTURBANCE FROM DEMOLITION.
 2. ALL PAVEMENT AND HARD SURFACE REMOVALS SHALL INCLUDE COMPLETE REMOVAL OF PAVEMENT BASE MATERIAL.
 3. CONTRACTOR SHALL OBTAIN SEWER PLUG PERMIT FROM THE CITY OF MADISON ENGINEERING PRIOR TO BEGINNING DEMOLITION WORK.
 4. CONTRACTOR SHALL OBTAIN CITY OF MADISON RIGHT OF WAY PERMIT PRIOR TO ANY REMOVALS ALONG LATERAL WITH MMSD AND OBTAIN CONNECTION PERMIT FROM MMSD.
 5. CONTRACTOR TO REMOVE ALL SITE IRRIGATION EQUIPMENT AND PIPING.
 6. CONTRACTOR TO REMOVE ALL SITE ELECTRICAL FEATURES AND WIRING.
 7. TREE REMOVALS SHALL INCLUDE COMPLETE STUMP REMOVAL TO 2-FEET BELOW EXISTING GRADE.

PROJECT NO.	SCALE	DATE	REV.	DATE	DESCRIPTION
18161000	AS SHOWN	10/27/24	1		
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		

NEW RESIDENCE FOR MARY MORGAN & DAVID SHERIFF
 5404 LAKE MENDOTA DRIVE
 CITY OF MADISON, DANE COUNTY, WISCONSIN

ARCHITECT: MARY MORGAN & DAVID SHERIFF
 292 International in Madison, WI 53704
 (608) 240-2400
 WWW.MMSD.COM

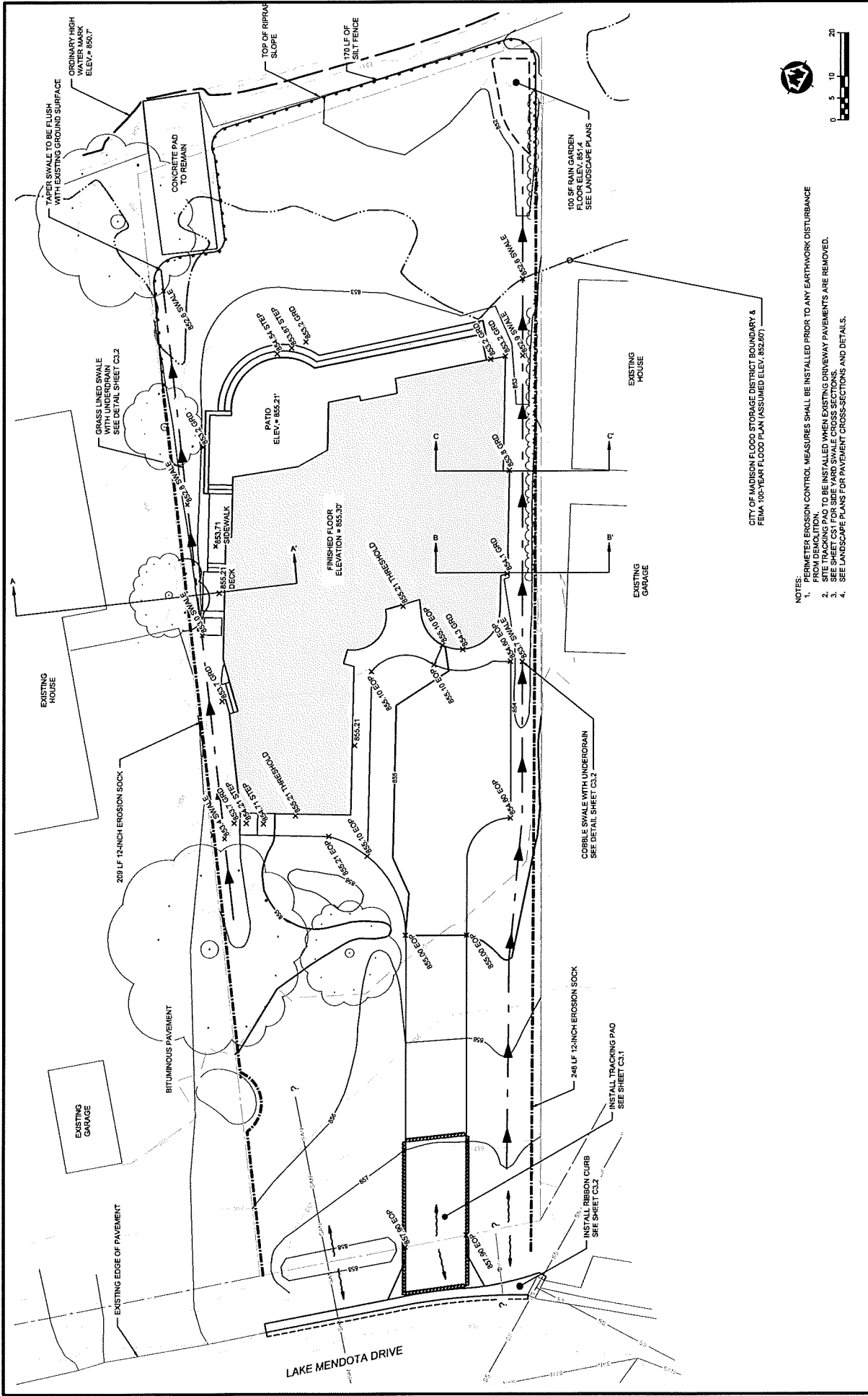
EXISTING SITE DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

DATE: 10/27/24

PROJECT NO: 18161000

SHEET: C1.1



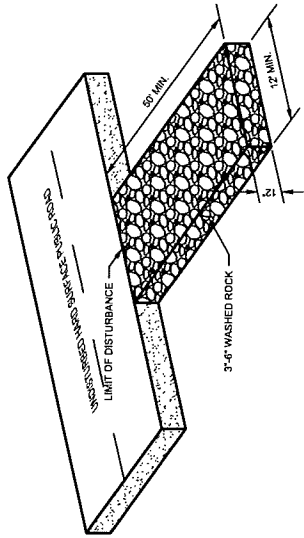
CITY OF MADISON FLOOD STORAGE DISTRICT BOUNDARY & FEMA 100-YEAR FLOOD PLAN (ASSUMED ELEV. 852.87)

- NOTES:
- PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTHWORK DISTURBANCE FROM DEMOLITION.
 - SITE TRACKING PAD TO BE INSTALLED WHEN EXISTING DRIVEWAY PAVEMENTS ARE REMOVED.
 - SEE SHEET C31 FOR SIDEYARD SWALE CROSS SECTIONS.
 - SEE LANDSCAPE PLANS FOR PAVEMENT CROSS-SECTIONS AND DETAILS.

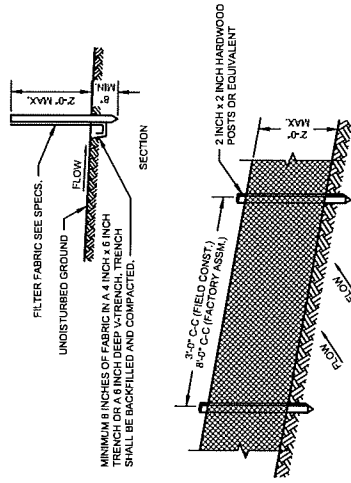
PROJECT NO.	18161000	DATE	11/20/24
CLIENT	MARY MORGAN & DAVID SHERIFF	SCALE	AS SHOWN
DESIGNED BY	DAVID SHERIFF	DRAWN BY	DAVID SHERIFF
CHECKED BY	DAVID SHERIFF	DATE	11/20/24
MSA ARCHITECTURE ENGINEERING ENVIRONMENTAL PLANNING SURVEYING 5404 LAKE MENDOTA DRIVE MADISON, WISCONSIN 53706 (608) 262-2779 FAX (608) 444-6975 WWW.MSA-PS.COM Web Address: www.msa-ps.com			
NEW RESIDENCE FOR MARY MORGAN & DAVID SHERIFF 5404 LAKE MENDOTA DRIVE CITY OF MADISON, DANE COUNTY, WISCONSIN			
SITE GRADING & EROSION CONTROL PLAN			

**CONSTRUCTION SITE
EROSION CONTROL REQUIREMENTS**

- SECTION NR216.06 OF WISCONSIN STATE ADMINISTRATIVE CODE IDENTIFIES REQUIREMENTS FOR CONSTRUCTION SITE AND POST-CONSTRUCTION EROSION CONTROL. IT IS THE INTENT OF THESE REQUIREMENTS TO IDENTIFY BEST MANAGEMENT PRACTICES (BMP'S) AND STRUCTURES USED TO CONTROL EROSION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL IMPLEMENT AN APPROPRIATE MEANS OF CONTROLLING EROSION DURING SITE OPERATION AND UNTIL THE VEGETATION IS RE-ESTABLISHED. ADJUSTMENTS TO THE CONTROL SYSTEM SHALL BE MADE AS REQUIRED.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WISCONSIN OHNR'S CONSERVATION PRACTICE STANDARDS. THESE STANDARDS ARE PERIODICALLY UPDATED AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND REFERENCE THE MOST RECENTLY RELEASED STANDARD.
- THIS INFORMATION IS ONLY ONE PART OF THE OVERALL EROSION CONTROL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY ALSO BE SHOWN ON THE CONTRACT DRAWINGS AND IN THE CONTRACT SPECIFICATIONS.
- ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE OWNER'S ENGINEER, SHALL BE INSTALLED AND MAINTAINED.
- THE AREA OF EROSION AND EXPOSED TO THE ELEMENTS BY GRUBBING, EXCAVATION, TRENCHING, BORROW AND FILL OPERATIONS AT ANY ONE TIME SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING. ALL DISTURBED AREAS SHALL BE TREATED WITH PERMANENT STABILIZATION MEASURES WITHIN 3 WORKING DAYS OF FINAL GRADING.
- ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AND NOTED WITHIN 24 HOURS OF THE TIME 1/2 INCHES OF RAIN HAS OCCURRED.
- ALL NECESSARY INSPECTIONS SHALL BE CONDUCTED AT THE INSPECTION TIME.
- ALL EROSION CONTROL DEVICES AND/OR STRUCTURES SHALL BE MAINTAINED PRIOR TO CLEARING AND GRUBBING OPERATIONS WITHIN THEIR RESPECTIVE ORANGE AREAS. THESE SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS RE-ESTABLISHED.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY INSTALLED PRIOR TO ANY SOIL DISTURBANCE.
- ANY SLOPES STEEPER THAN 3H:1V SHALL BE STAKED WITH EROSION CONTROL FABRIC UNLESS INDICATED ON THE PLAN.
- ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DERRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
- FOR A TACKLING RENT MAY BE USED TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH, OR CHANNELIZED RUNOFF ENTERING THE PROJECT SITE FROM ADJACENT AREAS SHALL BE DIVERTED THROUGH NATURALLY OR ARTIFICIALLY EROSION-RESISTANT CONVEYANCES. IF CHANNELIZED RUNOFF CANNOT BE DIVERTED, SITE BEST MANAGEMENT PRACTICES MUST ACCOUNT FOR THE ADDITIONAL FLOW RATES AND EROSION POTENTIAL THAT SUCH RUNOFF PRESENTS.
- THE CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS TO PREVENT SOILS FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADSWAYS, PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEEP AND/OR SCRAPPED (NOT FLUSHED) PERIODICALLY TO REMOVE SOIL, DIRT, AND/OR DUST.
- EROSION CONTROLS SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF TEMPORARY STOCKPILES. ANY SOIL STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH EROSION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
- ALL STOCKPILES SHALL BE COVERED WITH EROSION CONTROL FABRIC OR MULCH.
- ADDITIONAL EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.) SHALL INCLUDE THE FOLLOWING:
 - PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
 - BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
 - DISCHARGE OF TRENCH WATER OR DEWATERING EFFLUENT MUST BE PROPERLY TREATED TO REMOVE SEDIMENT IN ACCORDANCE WITH THE WDRN CONSERVATION PRACTICE STANDARD 1001 - DEWATERING OR A SUBSEQUENT WDRN DEWATERING STANDARD PRIOR TO DISCHARGE INTO A STORM SEWER, DITCH, DRAINAGEWAY, OR WETLAND OR LAKE.
 - ALL DRAINAGE CULVERTS, STORM DRAIN INLETS, MANHOLES, OR ANY OTHER EXISTING STRUCTURES THAT COULD BE DAMAGED BY SEDIMENTATION SHALL BE PROTECTED ACCORDING TO THE VARIOUS WDRN CONSERVATION PRACTICE STANDARDS.
 - ANY SOIL EROSION IN THE PRINTED WORK CONSERVATION PRACTICE STANDARDS SHALL BE REPAIRED AND THE STABILIZATION WORK RE-DONE.
 - ALL SOIL EROSION IN THE PRINTED WORK CONSERVATION PRACTICE STANDARDS SHALL BE REPAIRED AND THE STABILIZATION WORK RE-DONE.
 - DURING THE FIRST SIX WEEKS AFTER INITIAL STABILIZATION OF A DISTURBED AREA WATERING OF ALL NEWLY SEEDS AND MULCHED AREAS SHALL BE PROVIDED WHENEVER 7 DAYS ELAPSE WITHOUT A RAIN EVENT.
 - WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY BMP'S SUCH AS SILT FENCES, STRAW BALES, AND SEDIMENT TRAPS SHALL BE REMOVED AND THESE AREAS STABILIZED.
 - ALL TEMPORARY BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED.
 - ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH SEED AND MULCH UNLESS OTHERWISE SPECIFIED. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE APPLIED TO ALL AREAS TO BE SEEDS ON SODDED.



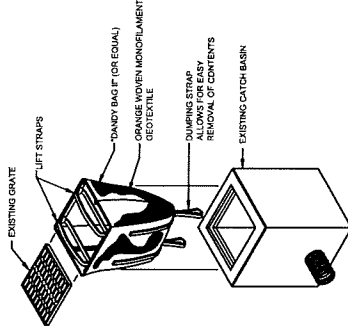
VEHICLE TRACKING PAD
NO SCALE



GENERAL NOTES:

- ENDS OF FENCE SHALL BE TURNED UPSLOPE 1 TO 2 FEET IN ELEVATION TO PREVENT PLUNGING.
- STAPLE FABRIC WITH 1/2 INCH (MINIMUM) STAPLES TO THE UPSLOPE SIDE OF THE POSTS.
- WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

TYPICAL SILT FENCE INSTALLATION AT SITE PERIMETER DETAIL
NO SCALE



MAINTENANCE REQUIREMENT: MONITOR BAGS, IF NECESSARY, REMOVE ALL ACCUMULATED SEDIMENT & DEBRIS FROM THE UNIT AT THE END OF EACH WORKING DAY. SEDIMENT ACCUMULATED MATERIAL REACHES TO OF THE HEIGHT OF THE SEDIMENT BAG.

CATCH BASIN SEDIMENT
BAG INSERT TYPE DETAIL
NTS

MSA
ARCHITECTURAL ENGINEERING & ENVIRONMENTAL
2005 International La Marone, WI 53004
(608) 243-2434
www.msa-ae.com

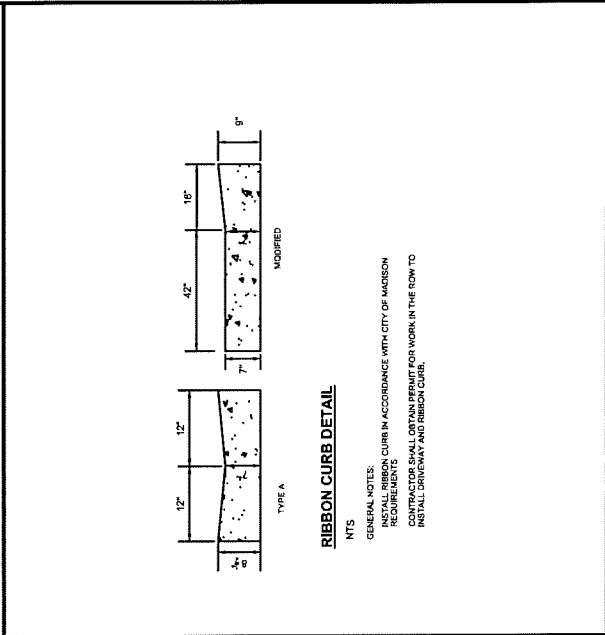
NEW RESIDENCE FOR MARY MORGAN & DAVID SHERIFF
5406 LAKE MENDOTA DRIVE
CITY OF MADISON, DANE COUNTY, WISCONSIN

EROSION CONTROL NOTES & DETAILS

PLAN
18161000
SHEET
CS-1

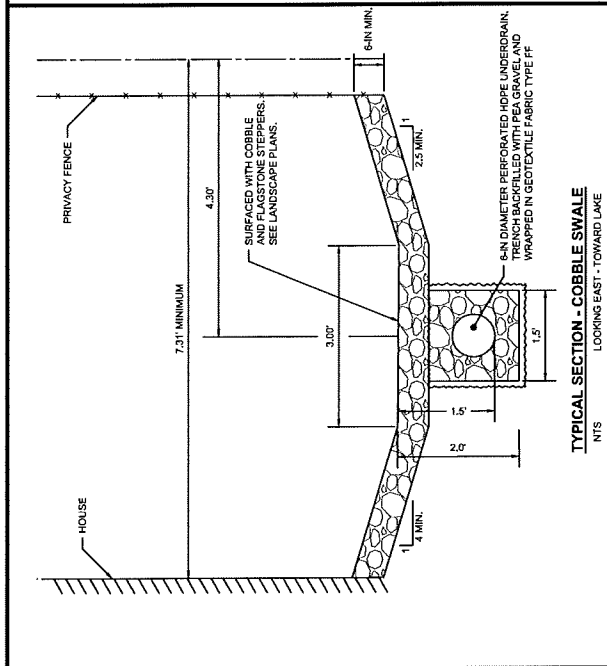


TYPICAL SECTION - COBBLE SWALE
NTS
LOOKING EAST - TOWARD LAKE

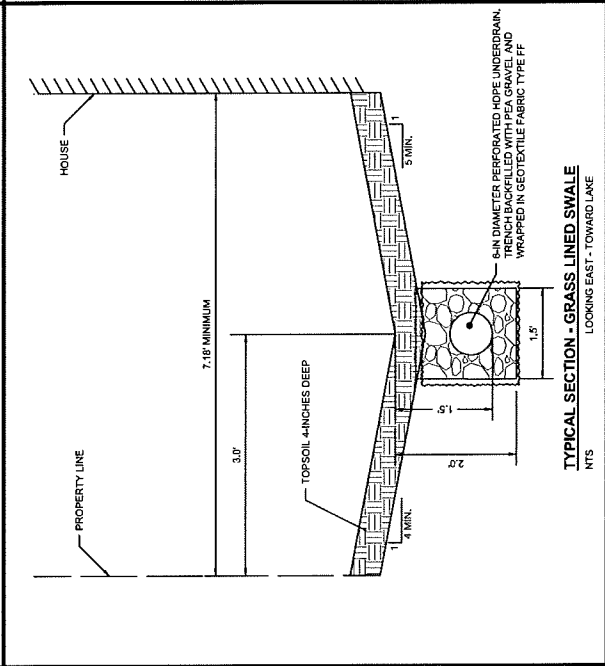


RIBBON CURB DETAIL

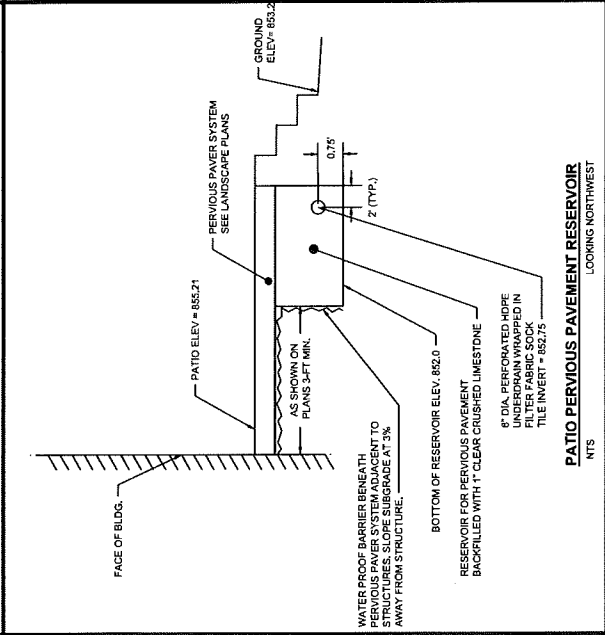
GENERAL NOTES:
INSTALL RIBBON CURB IN ACCORDANCE WITH CITY OF MADISON ACCOMPANYING SPECIFICATIONS. SEE PLAN SHEET FOR WORK IN THE ROW TO INSTALL DRIVEWAY AND RIBBON CURB.



TYPICAL SECTION - GRASS LINED SWALE
NTS
LOOKING EAST - TOWARD LAKE



DRIVEWAY PERMEABLE PAVEMENT RESERVOIR
NTS
LOOKING NORTHWEST



PATIO PERVIOUS PAVEMENT RESERVOIR
NTS
LOOKING NORTHWEST

PROJECT NO. 18161000		SHEET C3.3	
SITWORK DETAILS			
NEW RESIDENCE FOR MARY MORGAN & DAVID SHERIFF 5404 LAKE MENDOTA DRIVE CITY OF MADISON, DANE COUNTY, WISCONSIN		ARCHITECTURE ENGINEERING LANDSCAPE PLANNING PLUMBING ELECTRICAL 2325 UNIVERSITY AVENUE, SUITE 200 (608) 242-7779 (608) 442-0939 FAX: (608) 242-5664 www.morganmiller.com	
PROJECT NO.	SCALE	AS SHOWN	NO. DATE
PROJECT DATE	DESIGNED BY	CHECKED BY	DATE
DATE	DATE	DATE	DATE

**MORGAN/SHERIFF RESIDENCE
STORMWATER MANAGEMENT**

Exhibit 5 – Site Photography

Exhibit 5
Morgan/Sheriff Residence
Site Photography - August 28, 2015



South property line from street and looking towards lake



South property line looking towards lake
(View of landscape timber wall, fence, and downspout discharge on adjacent property)



South property line looking towards lake
(View of downspout discharge from adjacent property)

Exhibit 5
Morgan/Sheriff Residence
Site Photography - August 28, 2015



North property line looking towards lake



North property line looking towards street