

# Wetland Delineation Report

Quality West Construction:  
Netherwood Road Wetland  
Delineation

Cardno Project Number: J178357800



Prepared for  
Quality West Construction/ Gary Karls

August 11, 2017

## Contact Information

### Cardno

Robb Roos, PWS  
6140 Cottonwood Drive, Suite A  
Fitchburg, WI 53719

Telephone: 608-661-2955 (office)  
Telephone: 608-301-6455 (cell)  
robb.roos@cardno.com  
www.cardno.com

Author(s): Trae Hoeske  
Technician

Approved By:   
Robb Roos  
Senior Consultant, PWS

## Document Information

Prepared for	Quality West Construction/ Gary Karls
Project Name	Quality West Construction: Netherwood Road Wetland Delineation
File Reference	N/A
Cardno Project Number:	J178357800
Date	11 August 2017
Version Number	1.0
Effective Date	August 11, 2017
Date Approved:	August 11, 2017

## Document History

Version	Effective Date	Description of Revision	Prepared by:	Reviewed by:
1.0	8/11/2017	Wetland Delineation Report	Trae Hoeske	Robb Roos

© Cardno. Copyright in the whole and every part of this document belongs to Cardno and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with Cardno.

This document is produced by Cardno solely for the benefit and use by the client in accordance with the terms of the engagement. Cardno does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.

## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>4</b>
<b>2</b>	<b>Methods</b>	<b>5</b>
2.1	Background Information	5
2.1.1	USGS Topographical Map	5
2.1.2	Soil Survey	5
2.1.3	Mapped Wetlands	6
2.1.4	Current, Historic, and High-Resolution Aerial Imagery	6
2.2	Investigation Methodology	6
2.2.1	Naming Protocol	6
2.2.2	Site Photographs	6
2.2.3	Delineation Data Forms	6
2.2.4	Survey of Wetland Boundary	6
<b>3</b>	<b>Results and Discussion</b>	<b>8</b>
3.1	Recent Climatic Conditions and Precipitation Data	8
3.2	General Site Conditions	8
3.3	Uplands	8
3.4	Wetlands	8
3.5	Naturally Problematic and Significantly Disturbed Data Points	9
3.6	Other Water Resources and Additional Observations	9
<b>4</b>	<b>Summary and Conclusion</b>	<b>10</b>
<b>5</b>	<b>Literature Cited</b>	<b>11</b>

## Figures

1. Location Map
2. Topographic Map
3. Mapped Soil Units
4. Wisconsin Wetland Inventory (WWI) Mapped Wetlands
5. Delineated Wetlands

## Appendices

- A. Site Photographs
- B. Wetland Delineation Data Forms – Northcentral and Northeast Region

# 1 Introduction

---

Cardno was contracted by Quality West Construction, Inc. to perform a wetland delineation of a privately owned parcel located along Netherwood Road, within the Town of Oregon, Dane County, Wisconsin (Figure 1). The proposed site development of a residential home and driveway were flagged by the Wisconsin Department of Natural Resources (WDNR) as potentially impacting wetlands. Therefore a wetland delineation will be used to support future development planning and identify potential project permits.

Based on a field investigation conducted by Cardno on August 10, 2017 and review of related resource maps, it is Cardno's professional opinion that one wetland complex totaling 0.77 acres exists within the project area.

This report outlines the wetland delineation investigation, methodology, and its findings as completed by Cardno staff. This report has been compiled by the following staff that are trained and experienced in delineation methodologies and applicable regulations:

- **Robb Roos – Senior Consultant, PWS; Lead Field Delineator and Report Author:** Robb has been working in the field of wetland ecology and ecological restoration for ten years. He holds a Master of Science degree in Biology with an emphasis in Restoration Ecology from Grand Valley State University. Robb has been leading wetland delineation field teams for over six years with Cardno on projects throughout the Midwest. Robb has also completed WDNR and USACE-based wetland delineation trainings and is currently certified as a Wetland Professional by the Society of Wetland Scientists. Currently, Robb leads wetland delineations, habitat surveys, report writing, permitting and project management.
- **Trae Hoeske – Technician:** Trae has several years of experience in environmental restoration. He holds a Bachelor's of Science degree in Environmental Science from the University of Dubuque. Currently, Trae works as a field technician supporting various consulting and restoration activities including wetland delineations, monitoring and report writing.

## 2 Methods

---

### 2.1 Background Information

Sources of information that were consulted to identify potential wetlands within the project area prior to field investigation are listed below:

- United States Geological Survey (USGS) Topographical Map (Figure 2)
- USDA-NRCS Web Soil Survey Database for Dane County, Wisconsin (Figure 3)
- WDNR Wisconsin Wetland Inventory (WWI) Mapping (Figure 4)
- National Agricultural Imagery Program (NAIP) Aerial Imagery (Figures 3 and 4)

These maps identify potential wetlands and hydric soil units within the project area. The sole use of any of these maps to make wetland determinations is not acceptable. Descriptions of findings from the review of this background information is provided in the subsections, below.

#### 2.1.1 USGS Topographical Map

The USGS topographic map (Figure 2) identified a somewhat flat, low-lying area along the northern part of the project area. This spot is the low spot in the surrounding landscape. The project area quickly increases in elevation to the south and west of this area. Based on this review, the northern area is potentially in a concave or flat position that will collect water shedding from the convex, higher elevation areas located to the south and west.

#### 2.1.2 Soil Survey

The NRCS soil map of the project area (Figure 3) identified the four soil types outlined in Table 2-1, below. In total, approximately 0.87 (17%) of the 4.92 acre project area contains mapped hydric soil units. Hydric soil units are restricted to the northeastern half of the project area and are correlated with the topographic break noted in Section 2.1.1.

**Table 2-1 Mapped Soil Units within the Project Area**

Symbol	Description	Hydric Soil Unit?	Acres within Project Area
<b>BbB</b>	Batavia silt loam, gravelly substratum, 2 to 6 percent slopes	No	3.33
<b>TrB</b>	Troxel silt loam, 1 to 3 percent slopes	Yes	0.87
<b>KdC2</b>	Kidder loam 6 to 12 percent slopes, eroded	No	0.70
<b>BoD2</b>	Boyer sandy loam, 12 to 20 percent slopes, eroded	No	0.02
		<b>Total</b>	<b>4.92</b>

### **2.1.3 Mapped Wetlands**

The Wisconsin Wetland Inventory (WWI) map of the project area (Figure 4) identified an area of wetland that was too small to delineate. The mapped wetland is depicted on the northern end of the site.

### **2.1.4 Current, Historic, and High-Resolution Aerial Imagery**

Historic aerial imagery ranging from 2000 to 2014 was reviewed in order to evaluate the project area for wetland signatures. Based on historic imagery review, wetland signature was identified along the northern project area boundary. Observations of potential hydrology are evident including saturation and differences in vegetation.

## **2.2 Investigation Methodology**

The delineation of wetlands and other waters of the State were based on the methodology described in the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) January 2012 as required by current policy.

Prior to the field work, background information was reviewed to establish the probability and potential location of wetlands and waterways within the project area. On August 10, 2017, a general reconnaissance of the entire project area was conducted to evaluate site conditions. Next, the project area was walked with the specific intent of determining wetland boundaries. Data points were sampled during this time at locations within and near the wetland areas to document soil characteristics, evidence of hydrology, and dominant vegetation. Soils were examined to assess soil characteristics, site hydrology, and comparison to known NRCS hydric soil indicators. Complete descriptions of typical soil series can be found in the soil survey for this county. Data point locations are identified on the Wetland Delineation Figure (Figure 5).

Delineation in the field occurred within the project area boundary provided to Cardno. This project area is depicted on all figures that accompany this report. The project area is defined as the parcel located on Nertherwood Road.

### **2.2.1 Naming Protocol**

Features identified on attached figures and appendices are named in the following manner:

- DP = Data Point (includes photos of these areas)
- PP = Photo Point

### **2.2.2 Site Photographs**

Photographs of data point and general photo point locations are located in Appendix A. These photographs are the visual documentation of site conditions at the time of inspection. The photographs are intended to provide representative visual samples of wetland and upland data points, as well as general site conditions.

### **2.2.3 Delineation Data Forms**

The Northcentral and Northeast Region Wetland Determination Data Forms used in the wetland delineation process are located in Appendix B. These forms are the written documentation of how representative sample stations meet or do not meet each of the wetland criteria. Plant species nomenclature follows the Northcentral and Northeast 2016 Regional Wetland Plant List (Lichvar et al., 2016). Soils were identified using the methods outlined in the USDA NRCS Field Indicators of Hydric Soils in the United States, Version 8.1 (USDA-NRCS 2017).

### **2.2.4 Survey of Wetland Boundary**

Cardno GPS surveyed all data point locations and wetland boundary locations. The field data collection settings, within GPS units, use available satellites, including two DGPS (Differential Global Positioning System) satellites, to capture location data. Using the WAAS (Wide Area Augmentation System), satellite readings generally

provide sub-meter accuracy of data point locations and wetland boundaries. Cardno's GPS units acquire multiple readings per data point to increase accuracy.

Please note that while Cardno's GPS survey provides reasonably accurate spatial information regarding the wetlands delineated, it does not constitute the same accuracy as a professional land survey. The St. Paul District USACE and WDNR may require an official survey be completed by a Professional Land Surveyor or Professional Engineer in order to verify the delineation boundaries for impact and regulatory purposes. In order to facilitate this process, wetland boundaries were marked with pink pin flags in the field.

## 3 Results and Discussion

### 3.1 Recent Climatic Conditions and Precipitation Data

Recent precipitation data was compared with historic precipitation data from a 46-year dataset (1971-2017) from a nearby weather station (Stoughton, WI) to determine if normal hydrologic and climatic conditions were present on-site during the delineation. When compared to the WETS Station data, the observed precipitation data from three months prior to the delineation indicated antecedent precipitation conditions were wet at the time of the delineation on August 10, 2017. The antecedent hydrologic condition analysis is provided below:

WETS Station: Stoughton, WI	Month	Long-term rainfall records (1971 - 2017)			Actual	Condition	Condition Value	Month Weight Value	Condition Value X Month Weight
		<30%	Mean	>30%					
3rd Prior Month	May	2.42	3.63	4.35	3.62	Normal	2	1	2
2nd Prior Month	June	2.76	4.38	5.28	7.55	Wet	3	2	6
1st Prior Month	July	2.91	4.02	4.74	6.60	Wet	3	3	9
								Sum:	17
If sum is:						Condition Values:	Conditions Onsite:		
6 to 9						(1) Dry			
10 to 14						(2) Normal			
15 to 18						(3) Wet			

### 3.2 General Site Conditions

Based on this field investigation, and review of related resource maps, it is our professional opinion that one wetland totaling approximately 0.77 acres (15%) exists within the project area (Figure 5). Descriptions of the upland and wetland areas are provided below.

### 3.3 Uplands

Upland within the project area consisted primarily of old field, fallow pastureland vegetation. These areas were free of shrubs and trees. Dominant species include the following:

- Great plantain (*Plantago major*)
- Canadian thistle (*Cirsium arvense*)
- Common milkweed (*Asclepias syriaca*)
- Alfalfa (*Medicago sativa*)
- Eastern daisy fleabane (*Erigeron annuus*)
- Common dandelion (*Taraxacum officinale*)
- Creeping wild rye (*Elymus repens*)
- Red clover (*Trifolium pratense*)
- Straw-color flat sedge (*Cyperus strigosus*).

Upland areas do not contain any signs of wetland hydrology, including concave depressions or other questionable landforms. Data points taken within these areas were usually at the shoulder of slope that gradually declined into wetland areas more suitable for collecting water. Hydric soils were present at all upland and wetland data point locations. Upland vegetation species dominated these areas, however, at time the wetland species straw-color flat sedge (*Cyperus strigosus*) was also dominant.

### 3.4 Wetlands

Across the entire project area, a total of one wetland complex was identified that contained fresh (wet) meadow. Total delineated wetland area within the project area is approximately 0.77 acres (15% of the entire project area). The completed wetland delineation data forms are included as Appendix B. Figure 5 depicts the wetland boundaries.



The wetland boundary occurs along the foot slope of the upland/wetland transition area located at the northern end of the project area where topography becomes flat and depressed below the surrounding landscape. The wetland boundary was delineated primarily by areas where the local relief transitions from a convex to a concave position. Although not present immediately along the wetland boundary at data point locations, it is evident that a shallow aquitard (D3) of tightly packed clay soils perch the water table for extended periods of time following rainfall events in these wetland areas. Soil investigations identified no saturation or water table below the surface to a depth of 24-inches. Other indicators of hydrology within this wetland area includes geomorphic position (D2) and passing of the FAC-neutral test (D5). The dominant hydrophytic vegetation within this wetland complex includes reed canary grass (*Phalaris arundinacea*), straw-color flat sedge (*Cyperus strigosus*), and large barnyard grass (*Echinochloa crus-galli*). While vegetation was always dominated by wetland species in these areas, the presence of the upland species creeping wild rye (*Elymus repens*) was also dominant in portions of the wetland area.

### **3.5 Naturally Problematic and Significantly Disturbed Data Points**

During the site delineation there were no naturally problematic or significantly disturbed data points. Normal circumstances were considered to be present due to the fallow nature of the previously hayed field.

### **3.6 Other Water Resources and Additional Observations**

No other water resources were identified on site. Although not explained in detail in the above wetland descriptions, it appears the adjacent property to the east of the project area may contain portions of wetland. Significant water ponding was evident immediately north of Netherwood Road. However, there was no evidence of culvert or other connection between these areas and the wetland identified within the project area.

Within the project site a culverted gravel drive entrance has been installed. This was placed across the roadside ditch with permissions from the Town of Oregon.

## 4 Summary and Conclusion

---

Cardno was contracted by Quality West Construction, Inc. to perform a wetland delineation of a privately owned parcel located along Netherwood Road, within the Town of Oregon, Dane County, Wisconsin. Prior to the field work, background information was reviewed to establish the probability and potential location of wetlands and waterways within the project area. On August 10, 2017, a general reconnaissance of the entire project area site was conducted to evaluate site conditions. The project area was then walked with the specific intent of delineating and documenting wetland boundaries.

Based on this field investigation, and review of related resource maps, it is our professional opinion that one wetland totaling approximately 0.77 acres (15%) exists within the project area (Figure 5). This fresh (wet) meadow boundary was primarily delineated based on the presence of geomorphic position (D2) and shallow aquitard (D3). Hydric soils were present throughout all data point locations. Vegetation transitioned from a dominance of hydrophytic vegetation in the wetland areas to that of upland vegetation in the upland areas.

The wetlands identified for this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers, state regulation under the jurisdiction of Wisconsin DNR, and local jurisdiction under the county, town, city or village.

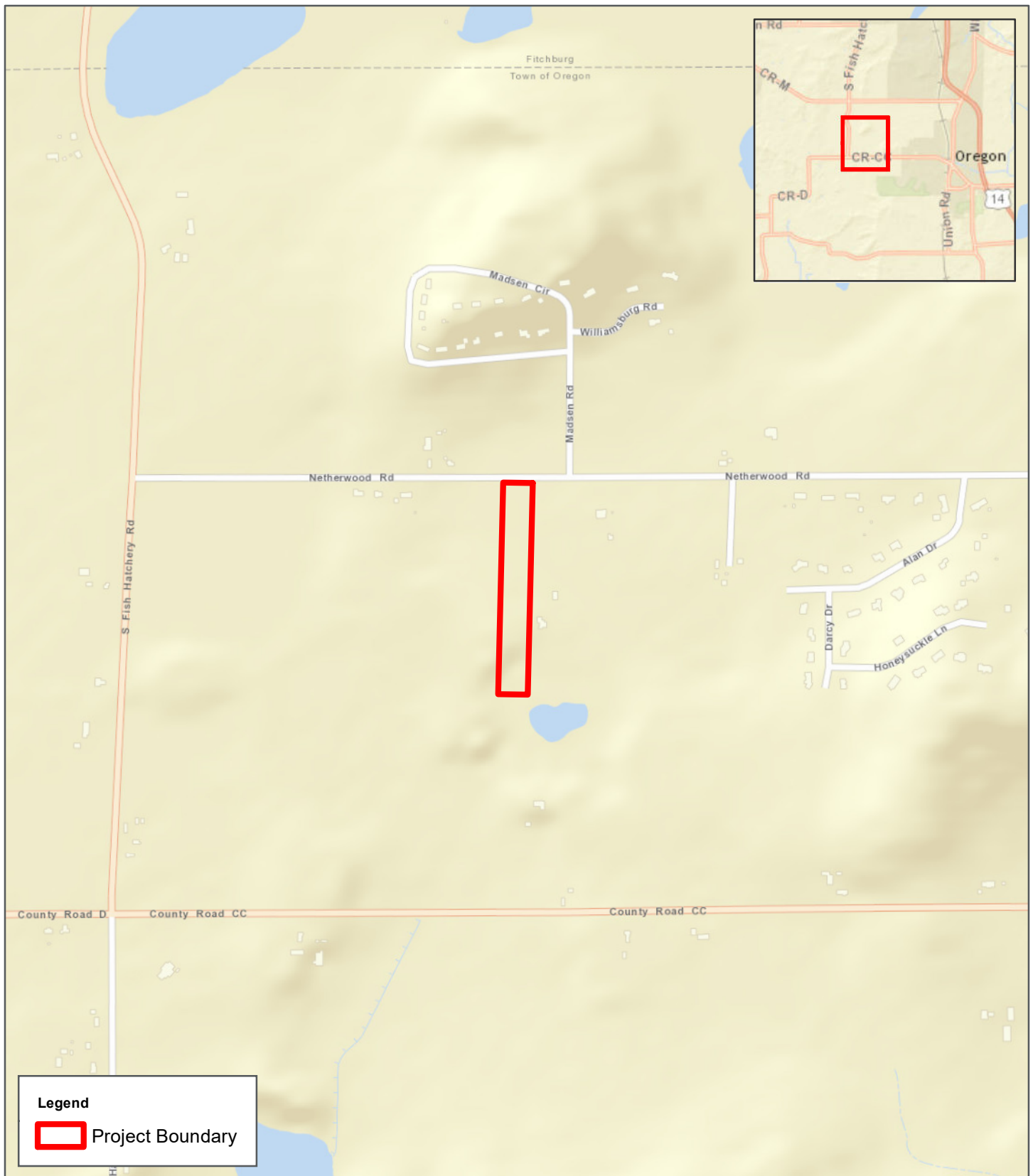
## 5 Literature Cited

---

- Eggers, S. and D. Reed. 2014. *Wetland Plants and Plant Communities of Minnesota and Wisconsin (Version 3.1)*. Published by U.S. Army Corps of Engineers, St. Paul District. Available online at: <http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/WetlandBook/Part%201%20-%20Introduction,%20Key%20to%20Plant%20Communities,%20Shallow%20Open%20Water%20Communities.pdf>, accessed June 20, 2017.
- Environmental Laboratory. 1987. *U.S. Army Corps of Engineers' Wetland Delineation Manual*, Technical Report Y-87-1, U.S. Waterways Experiment Station, Vicksburg, MS.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. Available online at <http://wetland-plants.usace.army.mil/>.
- U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center
- United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). Web Soil Survey. *Soil Survey of Dane County, WI*. Accessed April 2017.
- USDA Field Office Climate Data. Available online at <http://agacis.rcc-acis.org/?fips=55011>, accessed April 2017.
- USDA-NRCS. 2016. *Field Indicators of Hydric Soils in the United States*, Version 8.0. Edited by L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- United States Army Corps of Engineers, Minnesota Board of Water and Soil Resources. 2016. *Guidance for Offsite Hydrology/Wetland Determinations*. Published 1 July 2016.

Quality West Construction:  
Netherwood Road Wetland Delineation

FIGURES



**Legend**

 Project Boundary



Section: 4  
Township: 5N  
Range: 9E  
Project No. J178357800

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

## Location Map

### Netherwood Drive Wetland Delineation Quality West Construction, Inc. Dane County, Wisconsin

0 500 1,000 Feet

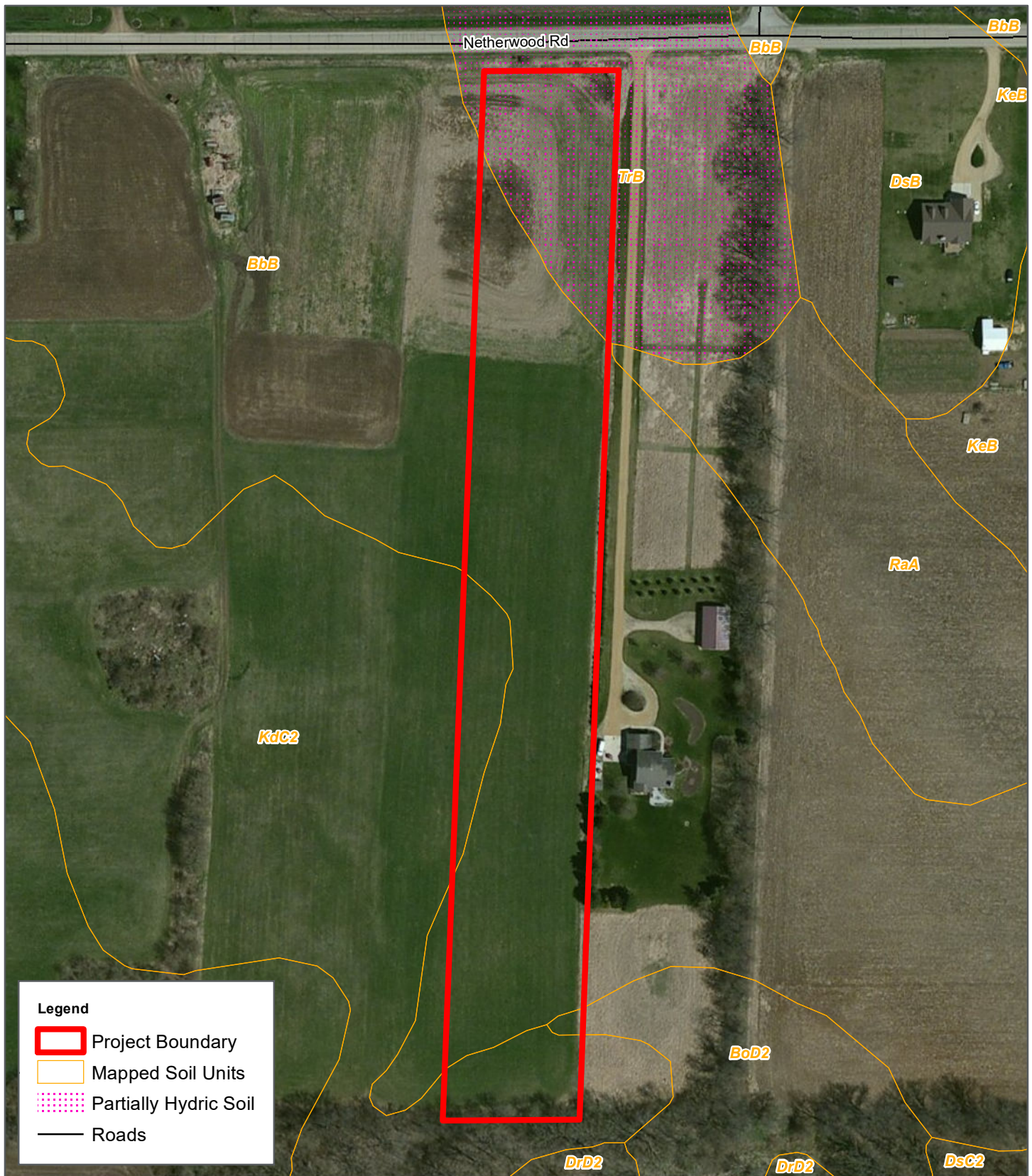


6140 Cottonwood Dr., Suite A, Fitchburg, WI 53719 USA  
Phone (+1) 608-661-2955 Fax (+1) 608-661-2961  
[www.cardno.com](http://www.cardno.com)









#### Legend

- Project Boundary
- Mapped Soil Units
- Partially Hydric Soil
- Roads



Section: 4  
Township: 5N  
Range: 9E  
Project No. J178357800

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

## Mapped Soil Units

### Netherwood Drive Wetland Delineation

### Quality West Construction, Inc.

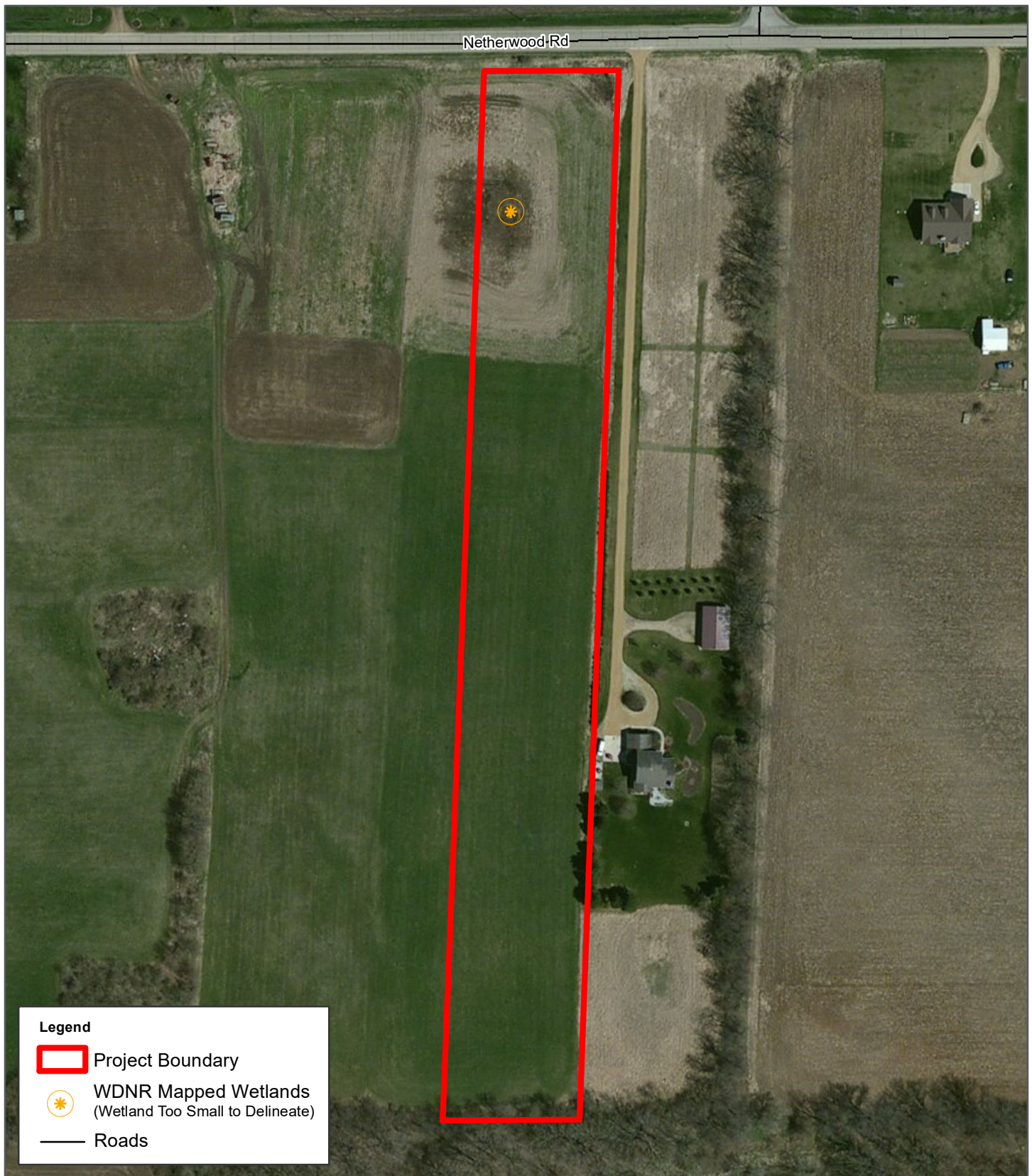
### Dane County, Wisconsin

0 100 200 Feet



6140 Cottonwood Dr., Suite A, Fitchburg, WI 53719 USA  
Phone (+1) 608-661-2955 Fax (+1) 608-661-2961  
[www.cardno.com](http://www.cardno.com)





#### Legend



Project Boundary



WDNR Mapped Wetlands  
(Wetland Too Small to Delineate)

— Roads



Section: 4  
Township: 5N  
Range: 9E  
Project No. J178357800

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

## WWI Mapped Wetlands

### Netherwood Drive Wetland Delineation

### Quality West Construction, Inc.

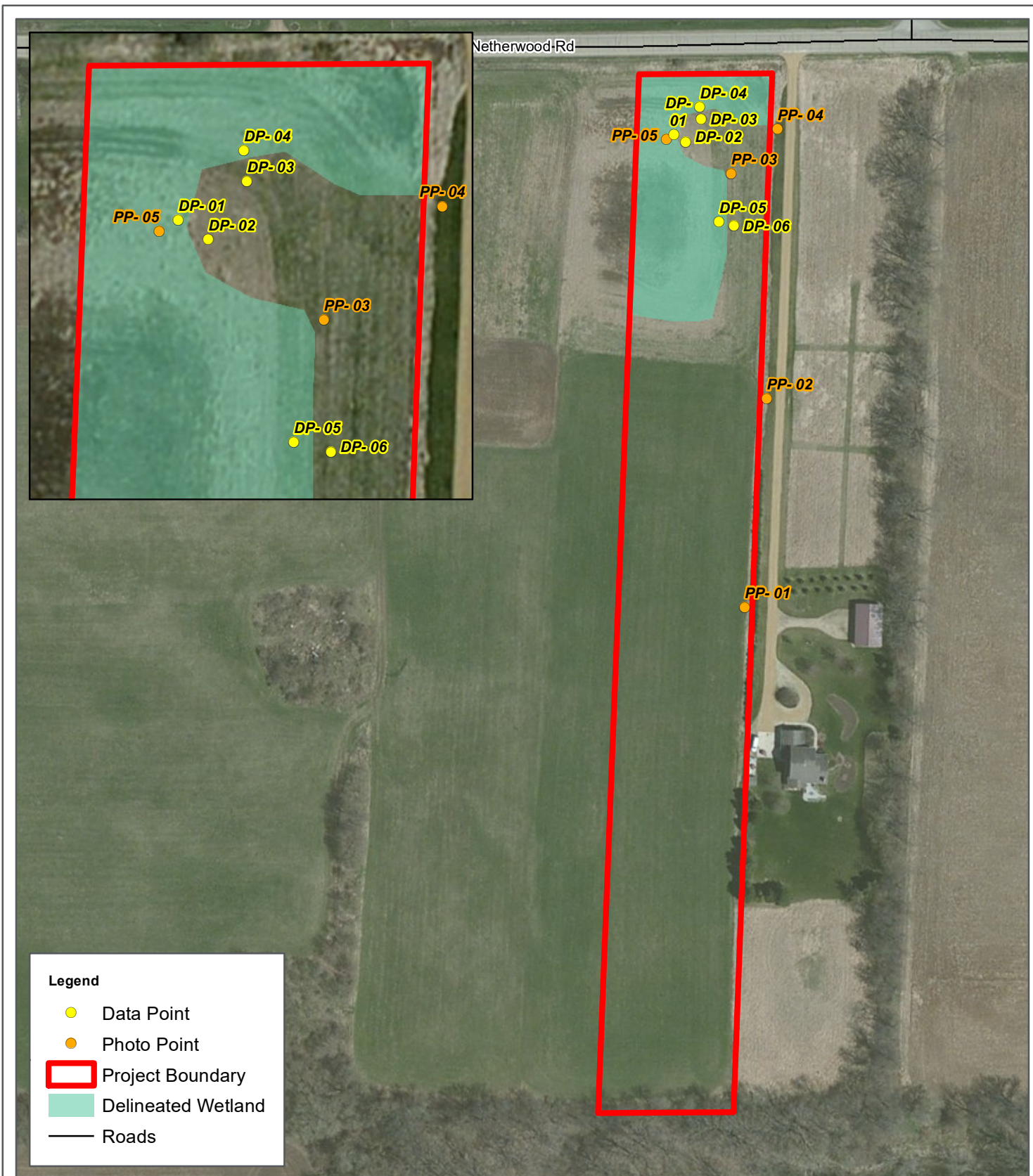
### Dane County, Wisconsin

0 100 200 Feet



6140 Cottonwood Dr., Suite A, Fitchburg, WI 53719 USA  
Phone (+1) 608-661-2955 Fax (+1) 608-661-2961  
[www.cardno.com](http://www.cardno.com)





Section: 4  
Township: 5N  
Range: 9E  
Project No. J178357800

This map and all data contained within are supplied as is with no warranty. Cardno, Inc. expressly disclaims responsibility for damages or liability from any claims that may arise out of the use or misuse of this map. It is the sole responsibility of the user to determine if the data on this map meets the user's needs. This map was not created as survey data, nor should it be used as such. It is the user's responsibility to obtain proper survey data, prepared by a licensed surveyor, where required by law.

**Delineated Wetlands**  
Netherwood Drive Wetland Delineation  
Quality West Construction, Inc.  
Dane County, Wisconsin

0 100 200 Feet

**Cardno**  
Shaping the Future

6140 Cottonwood Dr., Suite A, Fitchburg, WI 53719 USA  
Phone (+1) 608-661-2955 Fax (+1) 608-661-2961  
www.cardno.com

GIS Analyst: Jameson Loesch

Quality West Construction:  
Netherwood Road Wetland Delineation

APPENDIX

A

Site Photographs





DP-01, view north



DP-01, view east



DP-01, view south



DP-01, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







DP-02, view north



DP-02, view east



DP-02, view south



DP-02, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI



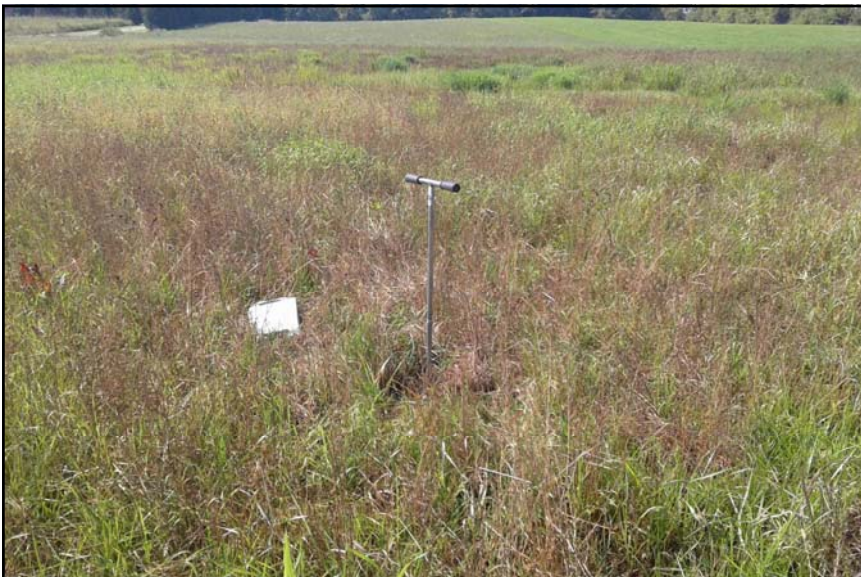




DP-03, view north



DP-03, view east



DP-03, view south



DP-03, view west

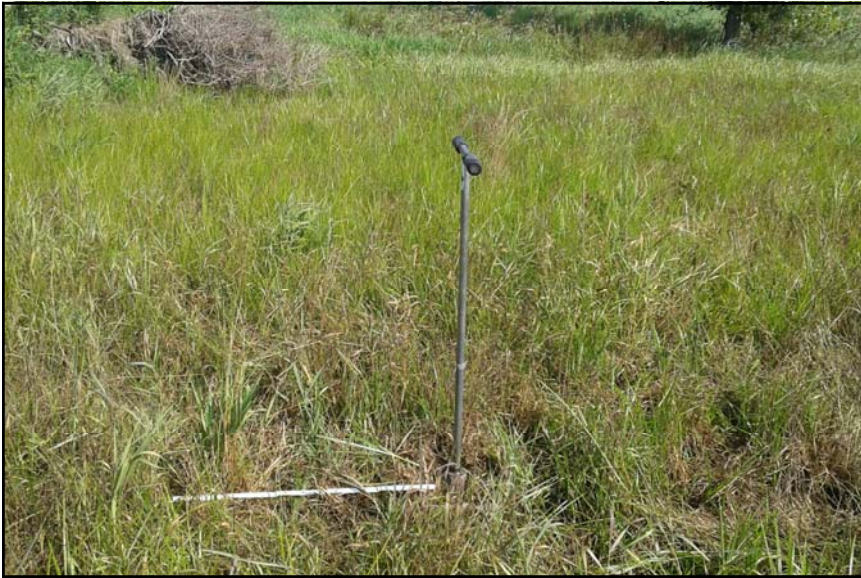
Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







DP-04, view north



DP-04, view east



DP-04, view south



DP-04, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







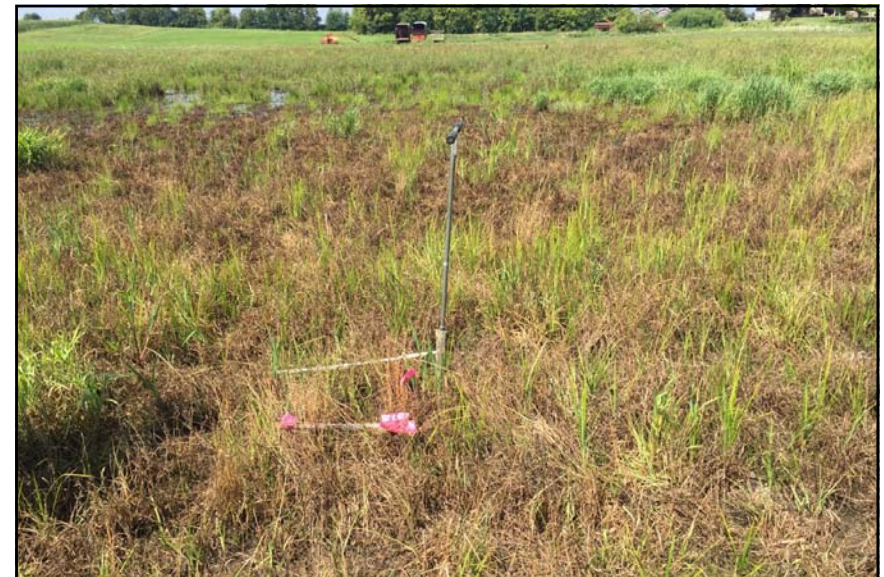
DP-05, view north



DP-05, view east



DP-05, view south



DP-05, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







DP-06, view north



DP-06, view east



DP-06, view south



DP-06, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







PP-01, view north



PP-02, view northwest



PP-03, view south



PP-03, view west

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI







PP-04, view southwest



PP-04, view west



PP-05, view east

Project No.  
J178357800

Site Photographs  
August 10, 2017

Netherwood Road Wetland Delineation  
Quality West Construction, Inc.  
Town of Oregon, Dane County, WI



Quality West Construction:  
Netherwood Road Wetland Delineation

APPENDIX

B

Wetland Delineation Data Forms -  
Northcentral and Northeast Region

# **WETLAND DETERMINATION DATA FORM -- Northcentral Northeast Region**

Project/Site: Quality West Construction - Netherwood Drive City/County: Dane County, Town of Oregon Sampling Date: 8/10/2017  
 Applicant/Owner: Quality West Construction State: WI Sampling Point: 1  
 Investigator(s): R. Roos, T. Hoeske Section, Township, Range: T5N, R9E, S4  
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave  
 Slope (%): 1% Lat: 42.936055 Long: -89.428901 Datum: NAD83  
 Soil Map Unit Name: TrB - Troxel silt loam, 1 to 3 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No X (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>    </u>
Hydric Soil Present?	Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u>    </u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.		

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:   		
Remarks: Soils contained heavy packed clay that created a shallow aquitard at the soil surface. This aquitard was perching water nearby. This soil type also appeared to limit movement of water through the soil itself which led to no water table or saturation present even after the soil pit was open for >1 hour.		

**VEGETATION** - Use scientific names of plants.

 Sampling Point: 1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																																								
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
	= Total Cover																																											
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>35</u></td> <td>x 2 =</td> <td><u>70</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>16</u></td> <td>x 3 =</td> <td><u>48</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>25</u></td> <td>x 4 =</td> <td><u>100</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>5</u></td> <td>x 5 =</td> <td><u>25</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>81</u> (A)</td> <td></td> <td><u>243</u> (B)</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A =</td> <td><u>3.00</u></td> <td></td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>35</u>	x 2 =	<u>70</u>		FAC species	<u>16</u>	x 3 =	<u>48</u>		FACU species	<u>25</u>	x 4 =	<u>100</u>		UPL species	<u>5</u>	x 5 =	<u>25</u>		Column Totals:	<u>81</u> (A)		<u>243</u> (B)		Prevalence Index = B/A =			<u>3.00</u>	
Total % Cover of:		Multiply by:																																										
OBL species	<u>0</u>	x 1 =	<u>0</u>																																									
FACW species	<u>35</u>	x 2 =	<u>70</u>																																									
FAC species	<u>16</u>	x 3 =	<u>48</u>																																									
FACU species	<u>25</u>	x 4 =	<u>100</u>																																									
UPL species	<u>5</u>	x 5 =	<u>25</u>																																									
Column Totals:	<u>81</u> (A)		<u>243</u> (B)																																									
Prevalence Index = B/A =			<u>3.00</u>																																									
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
	= Total Cover																																											
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				<b>Hydrophytic Vegetation Indicators:</b>  _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
1. <u>Cyperus strigosus</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																									
2. <u>Elymus repens</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																																									
3. <u>Echinochloa crus-galli</u>	<u>15</u>	<u>No</u>	<u>FAC</u>																																									
4. <u>Trifolium pratense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																																									
5. <u>Medicago sativa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																																									
6. <u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																																									
7. <u>Persicaria virginiana</u>	<u>1</u>	<u>No</u>	<u>FAC</u>																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
12. _____	_____	_____	_____																																									
13. _____	_____	_____	_____																																									
14. _____	_____	_____	_____																																									
15. _____	_____	_____	_____																																									
16. _____	_____	_____	_____																																									
17. _____	_____	_____	_____																																									
18. _____	_____	_____	_____																																									
19. _____	_____	_____	_____																																									
20. _____	_____	_____	_____																																									
	<u>81</u>	= Total Cover																																										
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 inches DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.																																								
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
	= Total Cover																																											
<b>Hydrophytic Vegetation Present ?</b> <span style="float: right;">Yes <u>  x  </u>      No <u>      </u></span>																																												
Remarks: (Include photo numbers here or on a separate sheet.)     																																												

## SOIL

Sampling Point: 1

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- \_\_\_\_\_ Histosol (A1)
- \_\_\_\_\_ Histic Epipedon (A2)
- \_\_\_\_\_ Black Histic (A3)
- \_\_\_\_\_ Hydrogen Sulfide (A4)
- \_\_\_\_\_ Stratified Layers (A5)
- \_\_\_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_\_\_ Thick Dark Surface (A12)
- \_\_\_\_\_ Sandy Mucky Mineral (S1)
- \_\_\_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_\_\_ Sandy Redox (S5)

- \_\_\_\_\_ Stripped Matrix (S6)
- \_\_\_\_\_ Dark Surface (S7)
- \_\_\_\_\_ High Chroma Sands (S11) (LRR L)
- \_\_\_\_\_ Loamy Mucky Mineral (F1) (LRR L)
- \_\_\_\_\_ Loamy Gleyed Matrix (F2)
- \_\_\_\_\_ X Depleted Matrix (F3)
- \_\_\_\_\_ Redox Dark Surface (F6)
- \_\_\_\_\_ Depleted Dark Surface (F7)
- \_\_\_\_\_ Redox Depressions (F8)
- \_\_\_\_\_ Marl (F10) (LRR L)
- \_\_\_\_\_ Very Shallow Dark Surface (F22) (MLRA 145)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (Test) (LRR L)  
☐ 5 cm Mucky Peat or Peat (S3) (Test)  
☐ Polyvalue Below Surface (S8)  
☐ Thin Dark Surface (S9)  
☐ Iron-Manganese Masses (F12) (Test)  
☐ Mesic Spodic (TA6) (Test in MLRA 144A and 145 of LRR R)  
☐ Other (Explain in Remarks)

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Clay Aquitard

Depth (inches): Surface

Hydric Soil Present? Yes X No           

Remarks:

Project/Site:	Quality West Construction - Netherwood Drive		City/County:	Dane County, Town of Oregon		Sampling Date:	8/10/2017	
Applicant/Owner:	Quality West Construction			State:	WI	Sampling Point:	2	
Investigator(s):	R. Roos, T. Hoeske			Section, Township, Range:	T5N, R9E, S4			
Landform (hillslope, terrace, etc.):	Backslope			Local relief (concave, convex, none):	concave			
Slope (%):	1%	Lat:	42.936029	Long:	-89.428846	Datum:	NAD83	
Soil Map Unit Name:	TrB - Troxel silt loam, 1 to 3 percent slopes			NWI classification:	None			
Are climatic / hydrologic conditions on the site typical for this time of year?				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	(If no, explain in Remarks.)
Are Vegetation	<input type="checkbox"/>	Soil	<input type="checkbox"/>	or Hydrology	<input type="checkbox"/>	significantly disturbed?		Are "Normal Circumstances" present?
Are Vegetation	<input type="checkbox"/>	Soil	<input type="checkbox"/>	or Hydrology	<input type="checkbox"/>	naturally problematic?		(If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.			

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)				<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

**VEGETATION** - Use scientific names of plants.

 Sampling Point: 2

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )																																												
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																																								
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
		= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>20</u></td> <td>x 2 =</td> <td><u>40</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>2</u></td> <td>x 3 =</td> <td><u>6</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>42</u></td> <td>x 4 =</td> <td><u>168</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>64</u> (A)</td> <td></td> <td><u>214</u> (B)</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A =</td> <td><u>3.34</u></td> <td></td> </tr> </table>	Total % Cover of:		Multiply by:			OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>20</u>	x 2 =	<u>40</u>		FAC species	<u>2</u>	x 3 =	<u>6</u>		FACU species	<u>42</u>	x 4 =	<u>168</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals:	<u>64</u> (A)		<u>214</u> (B)		Prevalence Index = B/A =			<u>3.34</u>	
Total % Cover of:		Multiply by:																																										
OBL species	<u>0</u>	x 1 =	<u>0</u>																																									
FACW species	<u>20</u>	x 2 =	<u>40</u>																																									
FAC species	<u>2</u>	x 3 =	<u>6</u>																																									
FACU species	<u>42</u>	x 4 =	<u>168</u>																																									
UPL species	<u>0</u>	x 5 =	<u>0</u>																																									
Column Totals:	<u>64</u> (A)		<u>214</u> (B)																																									
Prevalence Index = B/A =			<u>3.34</u>																																									
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
		= Total Cover		<b>Hydrophytic Vegetation Indicators:</b>  _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																								
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )																																												
1. <u>Elymus repens</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>		<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 inches DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.																																							
2. <u>Trifolium pratense</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																																									
3. <u>Cyperus strigosus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																																									
4. <u>Plantago major</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																																									
5. <u>Rumex crispus</u>	<u>2</u>	<u>No</u>	<u>FAC</u>																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
12. _____	_____	_____	_____																																									
13. _____	_____	_____	_____																																									
14. _____	_____	_____	_____																																									
15. _____	_____	_____	_____																																									
16. _____	_____	_____	_____																																									
17. _____	_____	_____	_____																																									
18. _____	_____	_____	_____																																									
19. _____	_____	_____	_____																																									
20. _____	_____	_____	_____																																									
		= Total Cover																																										
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )																																												
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present ?</b> Yes <u>      </u> No <u>  X  </u>																																								
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
		= Total Cover																																										
Remarks: (Include photo numbers here or on a separate sheet.)																																												



## SOIL

Sampling Point: 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- \_\_\_\_\_ Histosol (A1)
- \_\_\_\_\_ Histic Epipedon (A2)
- \_\_\_\_\_ Black Histic (A3)
- \_\_\_\_\_ Hydrogen Sulfide (A4)
- \_\_\_\_\_ Stratified Layers (A5)
- \_\_\_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_\_\_ Thick Dark Surface (A12)
- \_\_\_\_\_ Sandy Mucky Mineral (S1)
- \_\_\_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_\_\_ Sandy Redox (S5)

\_\_\_\_\_ Stripped Matrix (S6)  
 \_\_\_\_\_ Dark Surface (S7)  
 \_\_\_\_\_ High Chroma Sands (S11) (LRR L)  
 \_\_\_\_\_ Loamy Mucky Mineral (F1) (LRR L)  
 \_\_\_\_\_ Loamy Gleyed Matrix (F2)  
 \_\_\_\_\_ X Depleted Matrix (F3)  
 \_\_\_\_\_ Redox Dark Surface (F6)  
 \_\_\_\_\_ Depleted Dark Surface (F7)  
 \_\_\_\_\_ Redox Depressions (F8)  
 \_\_\_\_\_ Marl (F10) (LRR L)  
 \_\_\_\_\_ Very Shallow Dark Surface (F22) (MLRA 145)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (Test) (LRR L)  
☐ 5 cm Mucky Peat or Peat (S3) (Test)  
☐ Polyvalue Below Surface (S8)  
☐ Thin Dark Surface (S9)  
☐ Iron-Manganese Masses (F12) (Test)  
☐ Mesic Spodic (TA6) (Test in MLRA 144A and 145 of LRR R)  
☐ Other (Explain in Remarks)

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No           

Remarks:

# WETLAND DETERMINATION DATA FORM -- Northcentral Northeast Region

Project/Site: Quality West Construction - Netherwood Road City/County: Dane County, Town of Oregon Sampling Date: 8/10/2017  
 Applicant/Owner: Quality West Construction State: WI Sampling Point: 3  
 Investigator(s): R. Roos, T. Hoeske Section, Township, Range: \_\_\_\_\_ T5N, R9E, S4  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Backslope \_\_\_\_\_ Local relief (concave, convex, none): convex  
 Slope (%): 2% Lat: 42.936107 Long: -89.428775 Datum: NAD83  
 Soil Map Unit Name: TrB - Troxel silt loam, 1 to 3 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION** - Use scientific names of plants.

Sampling Point: 3

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>52</u></td> <td>x 4 = <u>208</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>82</u> (A)</td> <td><u>298</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.63</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>52</u>	x 4 = <u>208</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>82</u> (A)	<u>298</u> (B)	Prevalence Index = B/A = <u>3.63</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>20</u>	x 2 = <u>40</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>52</u>	x 4 = <u>208</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>82</u> (A)	<u>298</u> (B)																			
Prevalence Index = B/A = <u>3.63</u>																				
		= Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> )</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover																		
<b>Herb Stratum (Plot size: <u>5 ft.</u> )</b>																				
1. <u>Trifolium pratense</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Elymus repens</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Cyperus strigosus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Medicago sativa</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
5. <u>Plantago major</u>	<u>1</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Taraxacum officinale</u>	<u>1</u>	<u>No</u>	<u>FACU</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
		= Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30 ft.</u> )</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		= Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_\_\_ Rapid Test for Hydrophytic Vegetation  
 \_\_\_\_\_ Dominance Test is >50%  
 \_\_\_\_\_ Prevalence Index is ≤ 3.0<sup>1</sup>  
 \_\_\_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
  
**Tree** - Woody plants 3 inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/shrub** - Woody plants less than 3 inches DBH and greater than 3.28 ft (1 m) tall.  
  
**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation**  
 Present ?      Yes \_\_\_\_\_      No X

## SOIL

Sampling Point: 3

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- \_\_\_\_\_ Histosol (A1)
- \_\_\_\_\_ Histic Epipedon (A2)
- \_\_\_\_\_ Black Histic (A3)
- \_\_\_\_\_ Hydrogen Sulfide (A4)
- \_\_\_\_\_ Stratified Layers (A5)
- \_\_\_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_\_\_ Thick Dark Surface (A12)
- \_\_\_\_\_ Sandy Mucky Mineral (S1)
- \_\_\_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_\_\_ Sandy Redox (S5)

\_\_\_\_\_ Stripped Matrix (S6)  
 \_\_\_\_\_ Dark Surface (S7)  
 \_\_\_\_\_ High Chroma Sands (S11) (LRR L)  
 \_\_\_\_\_ Loamy Mucky Mineral (F1) (LRR L)  
 \_\_\_\_\_ Loamy Gleyed Matrix (F2)  
 \_\_\_\_\_ X Depleted Matrix (F3)  
 \_\_\_\_\_ Redox Dark Surface (F6)  
 \_\_\_\_\_ Depleted Dark Surface (F7)  
 \_\_\_\_\_ Redox Depressions (F8)  
 \_\_\_\_\_ Marl (F10) (LRR L)  
 \_\_\_\_\_ Very Shallow Dark Surface (F22) (MLRA 145)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

\_\_\_\_\_ 2 cm Muck (A10) (Test) (LRR L)  
 \_\_\_\_\_ 5 cm Mucky Peat or Peat (S3) (Test)  
 \_\_\_\_\_ Polyvalue Below Surface (S8)  
 \_\_\_\_\_ Thin Dark Surface (S9)  
 \_\_\_\_\_ Iron-Manganese Masses (F12) (Test)  
 \_\_\_\_\_ Mesic Spodic (TA6) (Test in MLRA 144A and  
 \_\_\_\_\_ 145 of LRR R)  
 \_\_\_\_\_ Other (Explain in Remarks)

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes   X   No           

Remarks:

# **WETLAND DETERMINATION DATA FORM -- Northcentral Northeast Region**

Project/Site: Quality West Construction - Netherwood Road City/County: Dane County, Town of Oregon Sampling Date: 8/10/2017  
 Applicant/Owner: Quality West Construction State: WI Sampling Point: 4  
 Investigator(s): R. Roos, T. Hoeske Section, Township, Range: T5N, R9E, S4  
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave  
 Slope (%): 2% Lat: 42.936147 Long: -89.428779 Datum: NAD83  
 Soil Map Unit Name: TrB - Troxel silt loam, 1 to 3 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No X (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>    </u>
Hydric Soil Present?	Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u>    </u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.		

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:   		
Remarks: Soils contained heavy packed clay that created a shallow aquitard at the soil surface. This aquitard was perching water nearby. This spoil type also appeared to limit movement of water through the soil itself which led to no water table or saturation present even after the soil pit was open for >1 hour.		

**VEGETATION** - Use scientific names of plants.

 Sampling Point: 4

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>4</u></td> <td>x 3 = <u>12</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>74</u> (A)</td> <td><u>192</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.59</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>4</u>	x 3 = <u>12</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>74</u> (A)	<u>192</u> (B)	Prevalence Index = B/A = <u>2.59</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>50</u>	x 2 = <u>100</u>																			
FAC species <u>4</u>	x 3 = <u>12</u>																			
FACU species <u>20</u>	x 4 = <u>80</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>74</u> (A)	<u>192</u> (B)																			
Prevalence Index = B/A = <u>2.59</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )																				
1. <u>Cyperus strigosus</u>	35	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b>  _____ Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Elymus repens</u>	15	Yes	FACU																	
3. <u>Phalaris arundinacea</u>	15	Yes	FACW																	
4. <u>Trifolium pratense</u>	5	No	FACU																	
5. <u>Rumex crispus</u>	2	No	FAC																	
6. <u>Echinochloa crus-galli</u>	2	No	FAC																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
74		= Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		= Total Cover																		
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 inches (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 inches DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.				<b>Hydrophytic Vegetation Present ?</b>																
				Yes <u>  x  </u> No <u>      </u>																
Remarks: (Include photo numbers here or on a separate sheet.)     																				

Sampling Point: 4

[illegible]

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR L)
	<input type="checkbox"/> Very Shallow Dark Surface (F22) (MLRA 145)

☐ 2 cm Muck (A10) (Test) (LRR L)  
☐ 5 cm Mucky Peat or Peat (S3) (Test)  
☐ Polyvalue Below Surface (S8)  
☐ Thin Dark Surface (S9)  
☐ Iron-Manganese Masses (F12) (Test)  
☐ Mesic Spodic (TA6) (Test in MLRA 144A and 145 of LRR R)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes   X   No       

Northcentral Northeast - Version 2.0

# **WETLAND DETERMINATION DATA FORM -- Northcentral Northeast Region**

Project/Site: Quality West Construction - Netherwood Road City/County: Dane County, Town of Oregon Sampling Date: 8/10/2017  
 Applicant/Owner: Quality West Construction State: WI Sampling Point: 5  
 Investigator(s): R. Roos, T. Hoeske Section, Township, Range: T5N, R9E, S4  
 Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): concave  
 Slope (%): 1% Lat: 42.935756 Long: -89.428694 Datum: NAD83  
 Soil Map Unit Name: TrB - Troxel silt loam, 1 to 3 percent slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No X (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>    </u>
Hydric Soil Present?	Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u>    </u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.		

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:   		
Remarks: Soils contained heavy packed clay that created a shallow aquitard at the soil surface. This aquitard was perching water nearby. This soil sype also appeared a limit movement of water through the soil itself which led to no water table or saturation present even after the soil pit was open for >1 hour.		



**VEGETATION** - Use scientific names of plants.

 Sampling Point: 5

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )																				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>50</u> (A)</td> <td><u>135</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.70</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>50</u> (A)	<u>135</u> (B)	Prevalence Index = B/A = <u>2.70</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>15</u>	x 4 = <u>60</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>50</u> (A)	<u>135</u> (B)																			
Prevalence Index = B/A = <u>2.70</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		= Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )																				
1. <u>Cyperus strigosus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b>  <u>      </u> Rapid Test for Hydrophytic Vegetation <u>X</u> Dominance Test is >50% <u>X</u> Prevalence Index is ≤ 3.0 <sup>1</sup> <u>      </u> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Elymus repens</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Trifolium Pratense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Echinochloa crus-galli</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
		= Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )																				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation</b> <b>Present ?</b> Yes <u>  x  </u> No <u>      </u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		= Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)          																				

## SOIL

Sampling Point: 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

- \_\_\_\_\_ Histosol (A1)
- \_\_\_\_\_ Histic Epipedon (A2)
- \_\_\_\_\_ Black Histic (A3)
- \_\_\_\_\_ Hydrogen Sulfide (A4)
- \_\_\_\_\_ Stratified Layers (A5)
- \_\_\_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_\_\_ Thick Dark Surface (A12)
- \_\_\_\_\_ Sandy Mucky Mineral (S1)
- \_\_\_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_\_\_ Sandy Redox (S5)

- \_\_\_\_\_ Stripped Matrix (S6)
- \_\_\_\_\_ Dark Surface (S7)
- \_\_\_\_\_ High Chroma Sands (S11) (LRR L)
- \_\_\_\_\_ Loamy Mucky Mineral (F1) (LRR L)
- \_\_\_\_\_ Loamy Gleyed Matrix (F2)
- \_\_\_\_\_ Depleted Matrix (F3)
- \_\_\_\_\_ X Redox Dark Surface (F6)
- \_\_\_\_\_ Depleted Dark Surface (F7)
- \_\_\_\_\_ Redox Depressions (F8)
- \_\_\_\_\_ Marl (F10) (LRR L)
- \_\_\_\_\_ Very Shallow Dark Surface (F22) (MLRA 145)

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 2 cm Muck (A10) (Test) (LRR L)  
☐ 5 cm Mucky Peat or Peat (S3) (Test)  
☐ Polyvalue Below Surface (S8)  
☐ Thin Dark Surface (S9)  
☐ Iron-Manganese Masses (F12) (Test)  
☐ Mesic Spodic (TA6) (Test in MLRA 144A and 145 of LRR R)  
☐ Other (Explain in Remarks)

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Clay Aquitard

Depth (inches): Surface

Hydric Soil Present? Yes   X   No           

Remarks:

Project/Site:	Quality West Construction - Netherwood Drive		City/County:	Dane County, Town of Oregon		Sampling Date:	8/10/2017	
Applicant/Owner:	Quality West Construction			State:	WI	Sampling Point:	6	
Investigator(s):	R. Roos, T. Hoeske			Section, Township, Range:	T5N, R9E, S4			
Landform (hillslope, terrace, etc.):	Backslope			Local relief (concave, convex, none):	convex			
Slope (%):	2%	Lat:	42.935744	Long:	-89.428626	Datum:	NAD83	
Soil Map Unit Name:	TrB - Troxel silt loam, 1 to 3 percent slopes				NWI classification:	None		
Are climatic / hydrologic conditions on the site typical for this time of year?				Yes	No	(If no, explain in Remarks.)		
Are Vegetation		Soil		or Hydrology		significantly disturbed?	Are "Normal Circumstances" present?	Yes
Are Vegetation		Soil		or Hydrology		naturally problematic?	(If needed, explain any answers in Remarks.)	No

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS Table Analysis was completed for the project area. Comparison of recent precipitation data to that of historic rainfalls in the area (from 1971 - 2017) revealed climatic conditions on site were atypical for this time of year. This analysis revealed site conditions at the time of delineation were wetter than normal.			

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> Saturation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/> (includes capillary fringe)				<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

**VEGETATION** - Use scientific names of plants.

 Sampling Point: 6

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )																												
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
		= Total Cover																										
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )																												
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 20%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species <u>97</u></td> <td>x 4 =</td> <td><u>388</u></td> </tr> <tr> <td>UPL species <u>6</u></td> <td>x 5 =</td> <td><u>30</u></td> </tr> <tr> <td>Column Totals: <u>103</u> (A)</td> <td></td> <td><u>418</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td><u>4.06</u></td> </tr> </table>	Total % Cover of:	Multiply by:		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>0</u>	x 2 =	<u>0</u>	FAC species <u>0</u>	x 3 =	<u>0</u>	FACU species <u>97</u>	x 4 =	<u>388</u>	UPL species <u>6</u>	x 5 =	<u>30</u>	Column Totals: <u>103</u> (A)		<u>418</u> (B)	Prevalence Index = B/A =		<u>4.06</u>
Total % Cover of:	Multiply by:																											
OBL species <u>0</u>	x 1 =	<u>0</u>																										
FACW species <u>0</u>	x 2 =	<u>0</u>																										
FAC species <u>0</u>	x 3 =	<u>0</u>																										
FACU species <u>97</u>	x 4 =	<u>388</u>																										
UPL species <u>6</u>	x 5 =	<u>30</u>																										
Column Totals: <u>103</u> (A)		<u>418</u> (B)																										
Prevalence Index = B/A =		<u>4.06</u>																										
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
		= Total Cover																										
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )																												
1. <u>Elymus repens</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b>  _____ Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Trifolium pratense</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																									
3. <u>Medicago sativa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																									
4. <u>Erigeron annuus</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																									
5. <u>Taraxacum officinale</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																									
6. <u>Plantago major</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																									
7. <u>Asclepias syriaca</u>	<u>1</u>	<u>No</u>	<u>UPL</u>																									
8. <u>Cirsium arvense</u>	<u>1</u>	<u>No</u>	<u>FACU</u>																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
13. _____	_____	_____	_____																									
14. _____	_____	_____	_____																									
15. _____	_____	_____	_____																									
16. _____	_____	_____	_____																									
17. _____	_____	_____	_____																									
18. _____	_____	_____	_____																									
19. _____	_____	_____	_____																									
20. _____	_____	_____	_____																									
<u>103</u>		= Total Cover																										
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )																												
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present ?</b> Yes <u>      </u> No <u>  X  </u>																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
		= Total Cover																										
Remarks: (Include photo numbers here or on a separate sheet.)																												

Sampling Point: 6[illegible]

### Hydric Soil Indicators:

<u>          </u> Histosol (A1)	<u>          </u> Stripped Matrix (S6)
<u>          </u> Histic Epipedon (A2)	<u>          </u> Dark Surface (S7)
<u>          </u> Black Histic (A3)	<u>          </u> High Chroma Sands (S11) (LRR L)
<u>          </u> Hydrogen Sulfide (A4)	<u>          </u> Loamy Mucky Mineral (F1) (LRR L)
<u>          </u> Stratified Layers (A5)	<u>          </u> Loamy Gleyed Matrix (F2)
<u>          </u> Depleted Below Dark Surface (A11)	<u>          </u> Depleted Matrix (F3)
<u>          </u> Thick Dark Surface (A12)	<u>          </u> X Redox Dark Surface (F6)
<u>          </u> Sandy Mucky Mineral (S1)	<u>          </u> Depleted Dark Surface (F7)
<u>          </u> Sandy Gleyed Matrix (S4)	<u>          </u> Redox Depressions (F8)
<u>          </u> Sandy Redox (S5)	<u>          </u> Marl (F10) (LRR L)
	<u>          </u> Very Shallow Dark Surface (F22) (MLRA 145)

3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes   X   No           

Remarks: