

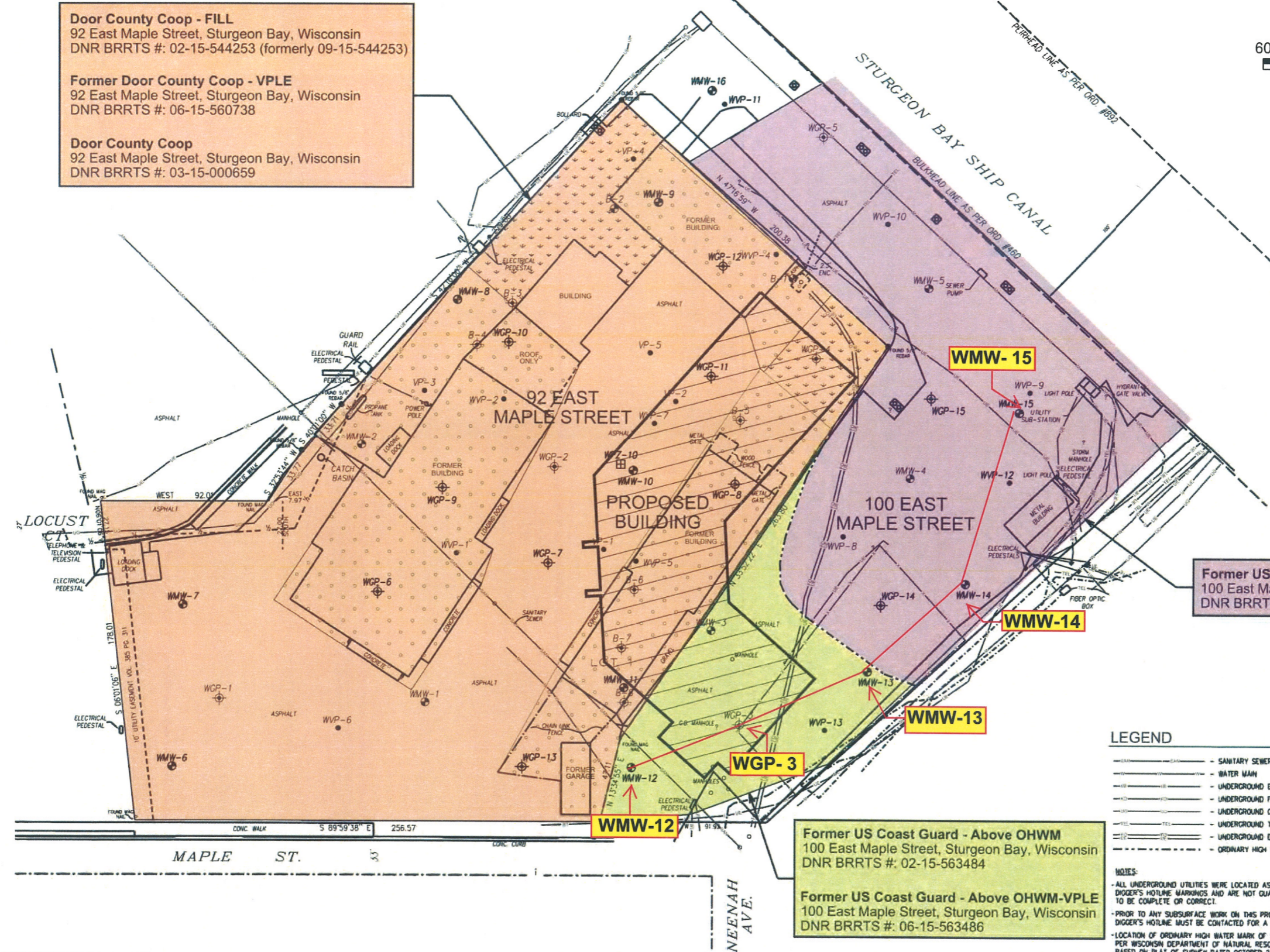
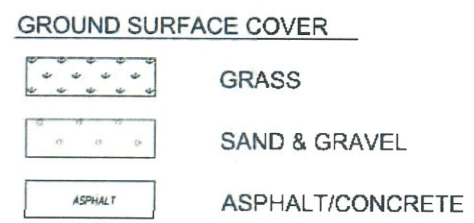
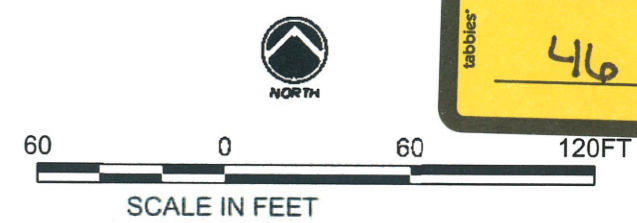
GEOLOGICAL CROSS SECTION C-C'

EXHIBIT  
46

**Door County Coop - FILL**  
92 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 02-15-544253 (formerly 09-15-544253)

**Former Door County Coop - VPLE**  
92 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 06-15-560738

**Door County Coop**  
92 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 03-15-000659



**Former US Coast Guard - Below OHWM**  
100 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 02-15-563485

**Former US Coast Guard - Above OHWM**  
100 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 02-15-563484

**Former US Coast Guard - Above OHWM-VPLE**  
100 East Maple Street, Sturgeon Bay, Wisconsin  
DNR BRRTS #: 06-15-563486

**LEGEND**

- SANITARY SEWER LINE
- WATER MAIN
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC & FIBER OPTIC
- ORDINARY HIGH WATER MARK

**NOTES:**

- ALL UNDERGROUND UTILITIES WERE LOCATED AS PER DIGGER'S HOTLINE MARKINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT.
- PRIOR TO ANY SUBSURFACE WORK ON THIS PROPERTY, DIGGER'S HOTLINE MUST BE CONTACTED FOR A RE-LOCATE.
- LOCATION OF ORDINARY HIGH WATER MARK OF STURGEON BAY PER WISCONSIN DEPARTMENT OF NATURAL RESOURCES BASED ON PLAT OF SURVEY DATED OCTOBER 2, 2014

- WMW-5 - MONITORING WELL
- WCP-4 - GEOPROBE
- WVP-9 - VAPOR PROBE
- WP7-10 - PEZOMETER
- B-5 - MONITORING WELL (BY STS CONSULTANTS 2004)
- B-4 - GEOPROBE (BY STS CONSULTANTS 2004)
- VP-1 - VAPOR PROBE (BY STS CONSULTANTS 2004)

Avres, p.c. file: 15-01-01-01  
 ES: map\_15-01-01-01.dwg  
 9/8/2015  
 L:\Sturgeon Bay\CGN\Site Map w/ Prop Building.dgn

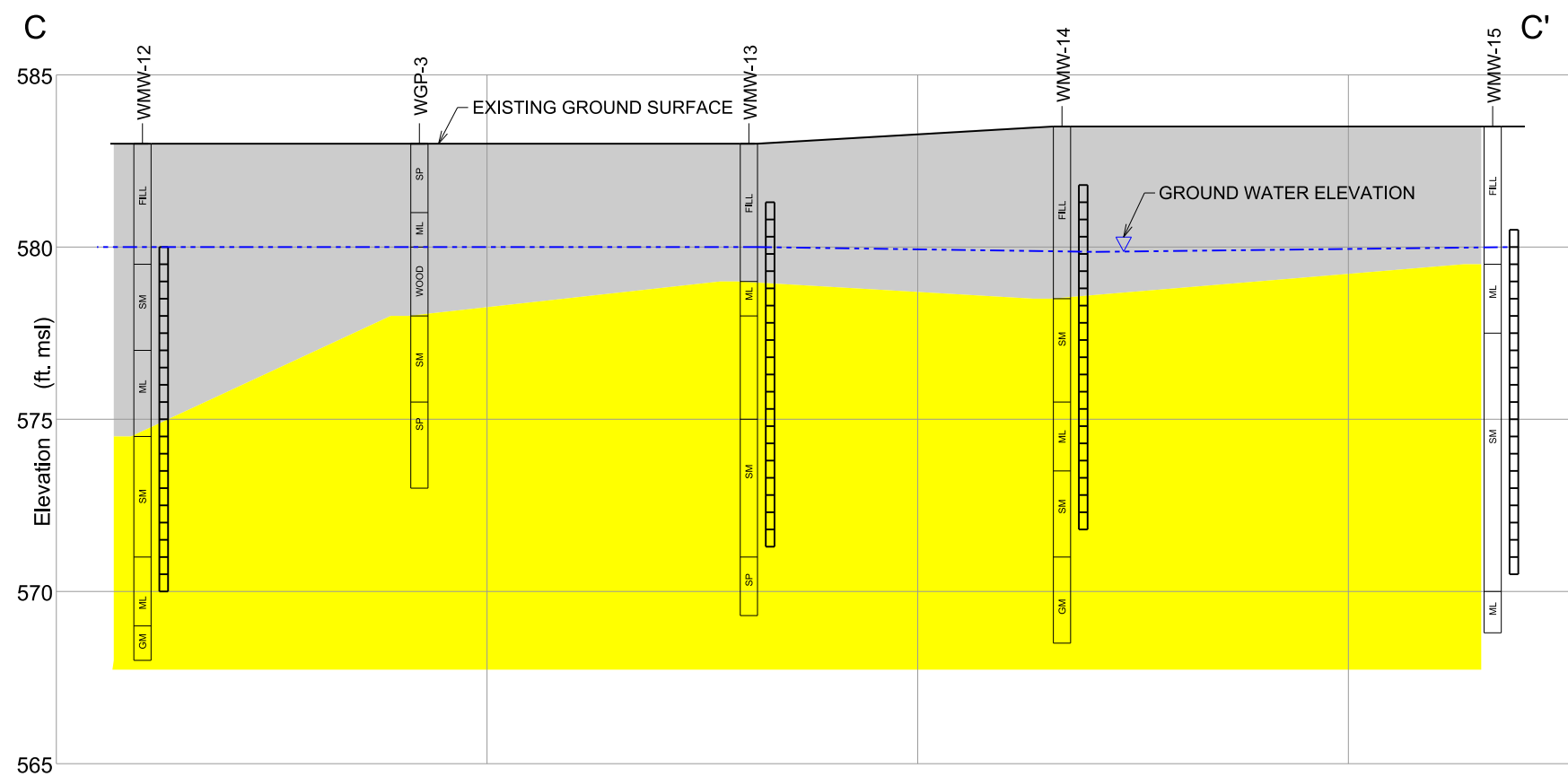
DES BY	BOOK NO	NO	DATE	REVISION	NO	DATE	REVISION
J. STEINER	1	02-11-2015	ADDED ORDINARY HIGH WATER MARK FOR STURGEON BAY				
T. SHUPERT	2	06-11-2015	ADDED WCP-13 - 15, WMW-12 - 16, WVP-11 - 13				
J. STEINER	3	08-25-2015	ADDED GROUND SURFACE COVER INFORMATION				
J. STEINER		JUNE 2015					

WEST WATERFRONT REDEVELOPMENT PROJECT  
CITY OF STURGEON BAY  
STURGEON BAY, WISCONSIN

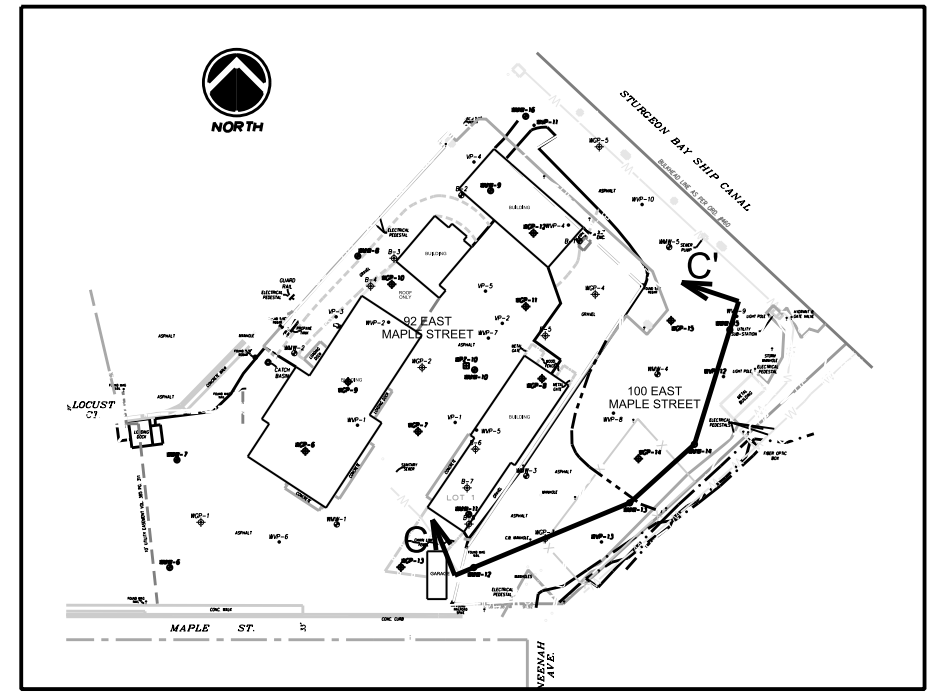
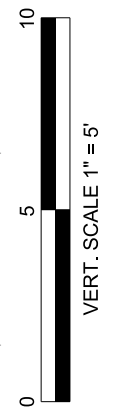


SITE MAP





SECTION C - C'



SECTION LOCATION MAP  
NTS

**LEGEND**

- WATER LEVEL MEASURED IN WATER TABLE OBSERVATION WELL
- MONITORING WELL SCREEN INTERVAL
- CL INORGANIC CLAYS OF LOW PLASTICITY
- CH INORGANIC CLAYS OF HIGH PLASTICITY
- ML INORGANIC SILTS AND VERY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
- SC CLAYEY SANDS, SAND - CLAY MIXTURES
- SM SILTY SANDS, SAND - SILT MIXTURES
- SP POORLY - GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- GM SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
- GP POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
- $K=4.9 \times 10^{-3}$  HYDRAULIC CONDUCTIVITY (cm/sec)

Ayres\_pdr.ctb  
 ES: jst  
 6/29/2015  
 V:\ENV\CAD\Sturgeon Bay\GNN\GeologicSections B.dgn

DES BY	J. STEINER	BOOK NO	
DR BY	T. SHUPERT	JOB NO	19-0422.00
CHK BY	J. STEINER	DATE	JUNE 2015
		NO	DATE
		REVISION	
		NO	DATE
		REVISION	

WEST WATERFRONT REDEVELOPMENT PROJECT  
CITY OF STURGEON BAY  
STURGEON BAY, WISCONSIN



GEOLOGICAL CROSS SECTIONS C - C'

DRAWING NO  
5

Route to:  
 Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name <b>West Waterfront Redevelopment Project</b>			License/Permit/Monitoring Number		Boring Number <b>WMW-12</b>
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: <b>Dusty</b> Last Name:			Date Drilling Started <b>5/15/2015</b> M/D/Y	Date Drilling Completed <b>5/15/2015</b> M/D/Y	Drilling Method <b>4.25" ID Hollow Stem Auger</b>
Firm: <b>On Site Environmental Drilling Inc.</b>		Well Name <b>WMW-12</b>		Final Static Water Level <b>3.21</b>	Surface Elevation <b>583</b>
WI Unique Well No.	DNR Well Id No.	Local Grid Origin (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/>		Local Grid Location (If applicable)	
<b>NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E</b>		State Plane <b>N</b> , <b>E</b>		Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W	
Facility Id.		County <b>Door</b>	County Code <b>15</b>	Civil Town/City/or Village <b>City of Sturgeon Bay</b>	

SAMPLE			SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES					ROD/Comments
Number and Type	Length Att. & Recovered (in)	Blow Counts						Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			Paved Lot FILL, brick, gravel	FILL			0		M				
			FILL, SAND, silty, trace clay, wet, medium gr no odor, dark brown	SM			1.2		W				
			FILL, SILT, trace wood, some organics, wet, course grained, no odor, black	ML			1.4		W				
			SAND, silty, wet, med-course grained, wet, no odor, black	SM			1.5		W				
			SILT, clayey, trace organics (peat), wet, slight plasticity, no odor, black	ML			1.2		W				
			GRAVEL and sand, silty, wet, med - v. course grained, no odor, brown	GM			1.1		W				
			EOB @ 15 feet bgs Well set @ 13 feet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
 Signature *Evan Gross* Firm **AYRES ASSOCIATES**

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Route to:  
 Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name <b>West Waterfront Redevelopment Project</b>				License/Permit/Monitoring Number				Boring Number <b>WGP-3</b>							
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: <b>Tony</b> Last Name: <b>Kapugi</b> Firm: <b>On_Site Environmental Drilling Inc.</b>				Date Drilling Started <b>5/23/2013</b> M/D/Y		Date Drilling Completed <b>5/23/2013</b> M/D/Y		Drilling Method <b>Geoprobe</b>							
WI Unique Well No.		DNR Well Id No.		Well Name		Final Static Water Level		Surface Elevation		Borehole Dia. <b>2-inch</b>					
Local Grid Origin L (estimated) <input type="checkbox"/> or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E <b>NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E</b>				Lat. _____ " _____ "		Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W									
Facility Id.		County <b>Door</b>		County Code <b>15</b>		Civil Town/City/or Village <b>City of Sturgeon Bay</b>									
SAMPLE		Blow Counts	Depth in feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES					RQD/Comments	
Number and Type	Length Att. & Recovered (ft)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P-200		
			-1	Asphalt (4") FILL, SAND, some gravel, trace silt, dry, medium grained, no odor, brown	FILL/SP			0							
			-2												
			-3	FILL, SILT, some fine sand, moist, no odor, black to brown	FILL/ML										
			-4	Fill, Concrete	FILL			0							
			-5												
			-6	SAND, silty, wet, medium grained, no odor, brown	SM			0.2							
			-7	some organics at 7 feet, no odor, black											
			-8	SAND, trace silt, wet, very fine grained, no odor, gray	SP			0							
			-9												
			-10												
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips											
			-12												
			-13												
			-14												
			-15												
			-16												
			-17												
			-18												
			-19												
			-20												
			-21												
			-22												
			-23												
			-24												
			-25												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Firm **AYRES ASSOCIATES**

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Route to:  
 Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name <b>West Waterfront Redevelopment Project</b>			License/Permit/Monitoring Number			Boring Number <b>WMW-13</b>		
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: <b>Dusty</b> Last Name: Firm: <b>On Site Environmental Drilling Inc.</b>			Date Drilling Started <b>5/15/2015</b> M/D/Y		Date Drilling Completed <b>5/15/2015</b> M/D/Y		Drilling Method <b>4.25" ID Hollow Stem Auger</b>	
WI Unique Well No.	DNR Well Id No.	Well Name <b>WMW-13</b>	Final Static Water Level <b>2.98</b>		Surface Elevation <b>583</b>		Borehole Dia. <b>8-inch</b>	
Local Grid Origin L (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E <b>NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E</b>			Lat. _____ Long. _____		Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W Feet _____ Feet _____			
Facility Id.		County <b>Door</b>		County Code <b>15</b>		Civil Town/City/or Village <b>City of Sturgeon Bay</b>		

SAMPLE			Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES					ROD/Comments
Number and Type	Length Att. & Recovered (in)	Blow Counts							Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			-1	Paved Lot	FILL			3.5		M				
			-2	FILL, gravel, silty clay, some sand, moist, no odor, dk brown										
			-3											
			-4	Wet at 3 feet										
			-5	SILT, trace clay, some fibrous organics, wet, plastic, black	ML			2.6		W				
			-6	NO RECOVERY	No Recovery					W				
			-7											
			-8	SAND, silty, some gravel, wet, coarse gravel, no odor, black	SM			3.1		W				
			-9											
			-10											
			-11											
			-12											
			-13	SAND, some coarse gravel, trace silt, wet, med-course grained sand, somewhat well graded, no odor, brown	SP			1.7		W				
			-14											
			-15											
			-16	EOB @ 13.7 feet bgs										
			-17	Well set @ 11.7 feet										
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
 Signature Evan Gross Firm **AYRES ASSOCIATES**

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Route to:  
Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>West Waterfront Redevelopment Project</b>			License/Permit/Monitoring Number		Boring Number <b>WMW-14</b>
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: <b>Dusty</b> Last Name: Firm: <b>On_Site Environmental Drilling Inc.</b>			Date Drilling Started <b>5/15/2015</b> M/D/Y	Date Drilling Completed <b>5/15/2015</b> M/D/Y	Drilling Method <b>4.25" ID Hollow Stem Auger</b>
WI Unique Well No.	DNR Well Id No.	Well Name <b>WMW-14</b>	Final Static Water Level <b>3.65</b>	Surface Elevation <b>583.5</b>	Borehole Dia. <b>8-inch</b>
Local Grid Origin (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E <b>NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E</b>			Lat. _____ Long. _____	Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility Id.		County <b>Door</b>	County Code <b>15</b>	Civil Town/City/or Village <b>City of Sturgeon Bay</b>	

Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in feet (below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES					ROD/Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			-1	Paved Lot FILL, silty sand, some gravel, dry, hydrocarbon odor, brown	FILL			8.7		D					
			-2												
			-3												
			-4												
			-5	SAND, silty, some gravel, wet, slight hydrocarbon odor, brown	SM			2.2		D					
			-6												
			-7												
			-8	SILT, trace clay, wet, non- plastic, no odor, black	ML			3.5		W					
			-9												
			-10	SAND, silty, wet, fine-med grained, slight hydrocarbon odor, dk brown	SM			3.0		W					
			-11												
			-12												
			-13	Gravel, some sand, trace-some silt, wet, med-course grained sand, fine-med gravel, somewhat well graded, no odor, brown	GM			1.6		W					
			-14												
			-15												
			-16	EOB @ 15 feet bgs Well set @ 11.7 feet				1.8		W					
			-17												
			-18												
			-19												
			-20												
			-21												
			-22												
			-23												
			-24												
			-25												

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
Signature *Evan Geoss* Firm **AYRES ASSOCIATES**

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Route to:  
 Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name <b>West Waterfront Redevelopment Project</b>			License/Permit/Monitoring Number		Boring Number <b>WMW-15</b>
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: <b>Dusty</b> Last Name: Firm: <b>On_Site Environmental Drilling Inc.</b>			Date Drilling Started <b>5/15/2015</b> M/D/Y	Date Drilling Completed <b>5/15/2015</b> M/D/Y	Drilling Method <b>4.25" ID Hollow Stem Auger</b>
WI Unique Well No.	DNR Well Id No.	Well Name <b>WMW-15</b>	Final Static Water Level <b>3.45</b>	Surface Elevation <b>583.5</b>	Borehole Dia. <b>8-inch</b>
Local Grid Origin (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E <b>NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E</b>			Lat. _____ " _____ "	Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility Id.		County <b>Door</b>	County Code <b>15</b>	Civil Town/City/or Village <b>City of Sturgeon Bay</b>	

SAMPLE				SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES					RQD/Comments
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (below ground surface)						Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			-1	Paved Lot FILL, silty sand, some gravel, moist, no odor, brown	FILL			2.6		M				
			-4	SILT, trace gravel, trace clay, moist, slight plasticity, no odor, black	ML			1.9		M				
			-6	SAND, silty, trace gravel, wet, med-course grained, oily appearance, moderate hydrocarbon odor, black	SM			17.5		W				
			-10	Finer grained with depth				43		W				
			-12					6.4		W				
			-13					2.1		W				
			-14	SILT, trace clay and sand, wet, slight plasticity, no odor, black	ML									
			-16	EOB @ 14.7 feet bgs Well set @ 12.7 feet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
 Signature *Evan Gross* Firm **AYRES ASSOCIATES**

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