Permit Application No.: <u>17-367</u> Rules: <u>Erosion Control, Floodplain Alteration,</u>

Shoreline & Streambank Stabilization, Wetland Protection, & Variance

Applicant: Lupient Family Trust

Project: 2 Lot Residential Subdivision

Location: Casco Point (PIDs: 2011723420003, 2011723420002,

Received:7/20//2017

Complete:5/17/2018

Noticed: 5/10/2018

& 2011723420001), Orono

### **Recommendation:**

Approval of MCWD permit application on the following conditions:

- 1. Submission of a copy of the NPDES permit number;
- 2. Identification of the Contractor responsible for implementing the erosion control plan;
- 3. Submission of a draft maintenance declaration for wetland buffers for MCWD approval, then recordation;
- 4. Submission of financial assurance for Erosion Control (\$1,500) and Wetland Protection (\$5,000);
- 5. Reimbursement of MCWD costs.
- 6. Identification of Contractor responsible for implementing the sand blanket installation plan;
- 7. Identification of the source of clean sand per section 8(a) of the Shoreline & Streambank Stabilization rule;

### And stipulations:

1. Submission of as-built survey upon project completion which documents the location and volume of both fill and compensatory storage per section 4(h) of the Floodplain Alteration rule.

### Background

The Lupient Family Trust has applied for a Minnehaha Creek Watershed District (MCWD) permit for a subdivision entailing the replatting of three existing parcels into two, along with construction of two homes on Casco Point in Orono, as well as an access road across one property to the other. The project will result in 168 square feet of permanent wetland impact but no loss of floodplain-storage capacity. The work triggers MCWD's Erosion Control, Wetland Protection, Shoreline & Streambank Stabilization and Floodplain Alteration rules, and the applicant is requesting a variance from the required applied minimum wetland buffer width for the proposed driveway installation.

The application is before the managers for approval because of the variance request.

Under section 2(a) of the rule, construction or reconstruction of a single-family home is exempt from the rule requirements; there are two single-family homes proposed, but the subdivision trigger of the Stormwater Management Rule is applicable only when three or more lots will result.

(Note, please, that the property is subject to a shoreline-maintenance declaration that was required as a condition of a prior permit. Compliance with the terms of the declaration is a separate matter, but MCWD staff have found that the proposed work will not violate the terms of the existing declaration.

### **District Rule Summary**

### **Erosion Control**

The District exercises regulatory authority for Erosion Control in the City of Orono. The Erosion Control rule is applicable for any project exceeding 5,000 square feet of land disturbance or 50 cubic yards of excavation. The proposed project involves approximately 1.7 acres of land disturbance, therefore the Erosion Control rule is triggered.

The Applicant has submitted an erosion control plan which provides best management practices to achieve erosion and sediment control including a rock construction entrance and silt fence. A vegetative stabilization plan including the incorporation of six-inches of topsoil into underlying soils prior to final stabilization has also been

provided. The Project's concrete washout will be handled off-site or contained on truck. A copy of the NPDES permit number will be submitted to MCWD per section 4(k) as listed in the recommendation for conditional approval.

The erosion control plan meets the District's rule requirements.

### Floodplain Alteration

The District exercises regulatory authority for Floodplain Alteration in the City of Orono. The District's Floodplain Alteration rule is applied to projects that propose any alteration or filling of land below the 100-year high water level (HWL) elevation of a waterbody. The District's approved 100-year HWL for Lake Minnetonka is 931.5'. Per section 3(a) and 3(b) fill shall not cause a net decrease in storage capacity below the 100-year HWL and shall not cause an increase in the 100-year flood elevation. A new driveway for the new homes and grading of the site will result in fill below the 931.5' elevation. As part of the grading plan, the applicant has provided calculations showing that the project will result in 1,228 cubic yards of fill below the 100-year HWL and will provide 1,313 cubic yards of compensatory storage between the ordinary high water level (OHWL) elevation 929.4' and the 100-year HWL elevation 931.5'. The District Engineer has confirmed that the proposed floodplain volume will be 647 cubic yards resulting in a net increase of 85 cubic yards of floodplain storage to address the mitigation requirement.

The project does not propose new impervious surface within the 10-year floodplain elevation of Lake Minnetonka (930.07') per section 3(d). The new residential structures are proposed to be constructed with first floor elevations (FFE) of 934'. Basements are not proposed to be constructed and all of the door and window openings shall be constructed above the FFE, providing the required minimum 2 feet of freeboard above the 100-year HWL per section 3(f).

Per section 4(h), projects resulting in greater than 50 cubic yards of fill are required to provide an as-built survey upon project completion which documents the location and volume of both fill and compensatory storage. Submission of an as-built survey is listed as a recommended stipulation.

The project as designed does not propose to decrease storage capacity below the 100-year HWL or increase the 100-year flood elevation, therefore, District's Floodplain Alteration rule is met.

### Shoreline & Streambank Stabilization

The District exercises regulatory authority for Shoreline and Streambank Stabilization in the City of Orono. The Shoreline and Streambank Stabilization rule is applicable to installation of a sand blanket on the shoreline of a water basin. The applicant proposes to install two sand blankets consisting of 25 linear feet each along the northeast shoreline, therefore the sand blanket requirements of section 8 are applicable to the project. The project does not propose to disturb any other areas of shoreline.

The applicant has a submitted a sand blanket application indicating that the two 25 linear feet sand blankets will be installed 10 feet waterward from the OHWL (929.4'), will not exceed 6 inches in depth and do not exceed 50 linear feet of the shoreline, fulfilling the requirements of section 8(b).

Per section 8(c), no more than two sand blanket installations can be made at an induvial site. The property has not previously installed a sand blanket. The exception criteria of section 8(d) is applicable to public beaches and does not apply to the project.

Identification of where the clean sand will be purchased from will be submitted to the District once a contractor is selected is listed as a recommended condition to fulfill the requirements of section 8(a).

The proposed sand blanket installations meet the District's Shoreline and Streambank Stabilization requirements. As long as the applicant complies with the applicable conditions in Department of Natural Resources General Permit 2001-6009, compliance with MCWD's Shoreline and Streambank Stabilization rule and this permit, if issued, will constitute meet DNR work in waters regulatory requirements.

### Wetland Conservation Act and Wetland Protection

The District is the local government unit charged with administering the Wetland Conservation Act (WCA) in the City of Orono. A WCA Notice of Decision (NOD) confirming the wetland boundary and type of 2 wetlands

(Wetland A and Wetland B) was issued on December 1<sup>st</sup>, 2016. A WCA NOD approving a de minimis exemption for 168 sf of permanent impact and complete filling to Wetland B per part 8420.0420, subpart 8 and no-loss determination for the 150 sf of temporary impact to Wetland A per part 8420.04515 was issued on May 17<sup>th</sup>, 2018 (attachment 3). (The applicant intends to avoid creating the temporary impacts to Wetland A, but applied for a no-loss determination in the event that the driveway installation results in unintended impact to the wetland.)

The District exercises regulatory authority for Wetland Protection in the City of Orono. The District's Wetland Protection rule is applicable for any project proposing to drain, fill, or excavate a wetland. Per section 2(a) the WCA, as amended, and its implementing rules as set forth in Minnesota Rules chapter 8420, as amended, specifically including sequencing requirements and all exemptions, are incorporated as a part of this rule. Since the wetland impacts from the project have been found to meet WCA exemption and no-loss criteria, no wetland replacement is required for the proposed impacts under the District's rule.

The wetland buffer provisions of the Rule are triggered for a new principal residential structure that increases the imperviousness of the subject parcel. Since two homes are proposed for the subject properties, the MCWD buffer requirements apply. Under section 5, buffer must be provided on the wetland edge that is downgradient from the land-disturbing activities and around the entirety of any wetland disturbed by the proposed activity. The project proposes to increase impervious surface by 0.42 acres, therefore the buffer provisions per section 6(f) for a new principal residential structure requiring an average applied buffer width of 25 feet are applicable to Wetland A.

Per Section 6(c) the buffer width may vary based on site constraints provided that a width of at least 50% of the applied buffer width is maintained at all points and there is no reduction in total buffer area. Additionally the area of any path or trail allowed in the buffer will be added to the total area required by the applied buffer width.

The applicant has applied buffer averaging per section 6(c) and has demonstrated that a 50% minimum buffer width and a 200% maximum buffer width is maintained at all points with the exception of 69 linear feet of the 994 linear feet of wetland where the buffer is less than 12.5 feet. The applicant has requested a variance from the minimum buffer width discussed in the Variance section of this report. The applicant has proposed a 4 foot wide mulch trail within the buffer that does not provide riparian access and has added the area to the total buffer area required by the applied buffer width. There are also two 4 foot wide trails proposed within the buffer to access the northeast riparian shoreline. Trails that do not exceed 4 feet in width to provide riparian access do not increase the required buffer area required by the applied buffer width. Permanent wetland buffer monumentation has been shown on the site plan along the contour of the wetland buffer, spaced no more than 100 feet apart and at the property lot lines in accordance with section 5(d) of the rule.

The proposed buffer area will be disturbed during the construction activities. Per section 7(c), buffer areas that are not vegetated or will be disturbed by grading or other construction actives must provide a maintenance and monitoring plan along with financial assurance based on the disturbance area. The applicant has indicated on the site plan that the areas of buffer disturbance will have soils decompacted to 18 inches, will be reseeded with native seed mixes approved by the District, and has submitted a 5 year monitoring plan in accordance with section 10 (attachment 4). Staff finds that the site plans and monitoring plan are in compliance with the rule.

Submission of financial assurance and a maintenance declaration for the wetland buffer is listed as a recommendation for conditional approval.

Aside from the requested variance, the project as proposed meets the District's Wetland Protection Rule.

### <u>Variance</u>

The applicant has submitted a signed variance application requesting a variance from compliance with the 50% minimum buffer width requirement for the installation of a 12 foot wide driveway to access the site adjacent to Wetland A (attachment 5). The proposed driveway installation will include buffer that falls short of the required 12.5 foot minimum for 69 linear feet when employing buffer averaging. Under the District's variance rule, the managers must find, based on demonstration of the applicant, that:

Because of special conditions inherent to the property that do not apply generally to other land
or structures in the District, strict compliance with a provision of the a District rule will cause
undue hardship to the applicant;

- The hardship was not created by the applicant, its owner or representative, or a contractor. Economic hardship is not grounds for issuing a variance;
- Granting the variance will not serve merely as a convenience to the applicant;
- There is no feasible and prudent alternative to the proposed activity requiring the variance; and
- Granting the variance will not impair or be contrary to the intent of the rules.

Options for access to the site are limited as the 2 parcels are on a peninsula. The means to access the site are by an existing public road adjacent to the property and an existing access easement on the property adjacent to the public road and subject property that was recorded in 1970's. The applicant investigated moving the easement further northeast, however it is not feasible due to the location of an existing private driveway and garage at the adjacent property. Strict compliance with the rule would make the site inaccessible by land. Needless to say, not providing for access to the site would render the site unbuildable. Paragraph 6(f) of the rule states that application of the MCWD buffer requirement under the New Principal Residential Structure framework may not render a property unbuildable.

Pertinent to the variance criteria: Staff finds that the space constraints present at the site could be found by the managers to constitute special conditions unique to this location and that do not apply to other land in the District. The applicant has provided redundant erosion control best management practices to protect the water quality and integrity of Wetland A, and has provided a restoration plan for any unintended wetland impacts. The applicant asserts that moving the access easement further from the wetland fringe is not feasible due the adjacent property owner's structures and land rights. The applicant has provided sufficient information to support a determination that there is no feasible or prudent alternative to the proposed location of the driveway.

Staff concurs in the factual statements and technical analysis stated above and in the variance application. Accordingly, staff finds there is an adequate technical basis to grant the requested variance.

### **Summary:**

The Lupient Family Trust has applied for a MCWD permit for Erosion Control, Wetland Protection, Shoreline & Streambank Stabilization (Sand blanket), Floodplain Alteration, and a Variance to the required applied minimum wetland buffer width for a driveway installation to access the proposed two-lot single family home subdivision to be constructed at Casco Point (PIDs: 2011723420003, 2011723420002, & 2011723420001) in the City of Orono. The project as proposed meets the applicable requirements under the District's Erosion Control, Wetland Protection, Shoreline & Streambank Stabilization (Sand blanket), and Floodplain Alteration rules with the exception of the minimum required buffer width for 69 linear feet, for which the applicant has requested a variance. Staff recommends approval of the MCWD permit application with the conditions and stipulations listed.

### Attachments:

- 1. Permit Application
- 2. Site Plan
- 3. W17-34 NOD No-Loss & De Minimis Exemption & W16-59 NOD Boundary & Type
- 4. Wetland Buffer Maintenance & Monitoring Plan
- 5. Variance Request

Heidi Quinn May 24<sup>th</sup>, 2018

17-367

JUL 2 0 2017

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Use this form to notify/apply to the Minnehaha Creek Watershed District (MCWD) of a proposed project or work which may fall within

their jurisdiction. Fill out this form completely and submit with your site plan, maps, etc. to the MCWD at: 15320 Minnetonka Blvd. Minnetonka, MN 55345.						
Keep a copy for						
YOU MUST OBTAIN ALL REQUIRED AUTHO						
1. Name of each property owner: LUPIENT FAMILY TRUST	(*LAKE WEST DEVELOPMENT, LLC is REP.)					
Mailing Address: 14525 HIGHWAY 7, SUITE #265	City: MINNETONKA State: MN Zip: 55345					
Email Address: CURTF@LWESTDEV.COM	Phone: 612-720-5690 Fax:					
2. Property Owner Representative Information (not require	ed) (licensed contractor, architect, engineer, etc)					
	presentative Name: JOEY DIEDERICHS, EIT					
	City: ST. LOUIS PARK State: MN Zip: 55416					
Email Address: JDIEDERICHS@CIVILSITEGROUP.COM ]	Phone: 612-719-1781 Fax:					
3. Project Address: 3570-3590 IVY PLACE	City: ORONO					
State: MN Zip: 55391 Qtr Section(s): S 1/2 Sec						
Lot: 1-3 Block: 1 Subdivision: CASCO POINT	ADDN PID: 2011723420001-03					
4. Size of project parcel (square feet or acres): 94,080 square	re feet					
Area of disturbance (square feet): 1.7	Volume of excavation/fill (cubic yards): 1700					
	of proposed impervious surface: 0.4					
Length of shoreline affected (feet): 890 Waterbody	(& bay if applicable): LAKE MTKA (CARMAN BAY)					
5. Type of permit being applied for (Check all that apply):						
☑ EROSION CONTROL	☐ WATERBODY CROSSINGS/STRUCTURES					
☑ FLOODPLAIN ALTERATION	☐ STORMWATER MANAGEMENT					
☑ WETLAND PROTECTION	☐ APPROPRIATIONS					
□ DREDGING	□ ILLICIT DISCHARGE					
☐ SHORELINE/STREAMBANK STABILIZATION						
6. Project purpose (Check all that apply):						
☑ SINGLE FAMILY HOME	☐ MULTI FAMILY RESIDENTIAL (apartments)					
□ ROAD CONSTRUCTION	☐ COMMERCIAL or INSTITUTIONAL					
☑ UTILITIES	☐ SUBDIVISIONS (include number of lots)					
□ DREDGING	☐ LANDSCAPING (pools, berms, etc.)					
☐ SHORELINE/STREAMBANK STABILIZATION	□ OTHER (DESCRIBE):					
7. NPDES/SDS General Stormwater Permit Number (if app	plicable): <u>N/A</u>					
8. Waterbody receiving runoff from site: LAKE MINNETON	KA					
9. Project Timeline: Start Date: Aprox Fall 2017	Completion Date: ANOX Feel 2018					
Permits have been applied for: City  County  MN	Pollution Control Agency DNR DCOE D					
Permits have been received: City County MN	Pollution Control Agency 🔲 DNR 🔲 COE 🔲					
By signing below, I hereby request a permit to authorize the activitic Rules and that the proposed activity will be conducted in compliance contained in this application and, to the best of my knowledge and bunderstand that proceeding with work before all required authorizate administrative, civil and/or criminal penalties.  Signature of Each Property Owner	belief, all information is true, complete and accurate. I tions are obtained may be subject to federal, state and/or local					

# IVY PLACE

ORONO, MINNESOTA

ISSUED FOR: CITY/WATERSHED RESUBMITTAL



### CITY OF ORONO NOTES:

SHEET NUMBER | SHEET TITLE

C0.0 TITLE SHEET

C0.1 SITE SURVEY

C1.0 REMOVALS PLAN

C3.0 GRADING PLAN

C4.0 UTILITY PLAN

C5.0 CIVIL DETAILS

L1.0 LANDSCAPE PLAN

SW1.2 SWPPP - DETAILS

SW1.3 | SWPPP - NARRATIVE

SW1.4 | SWPPP - ATTACHMENTS

SW1.5 | SWPPP - ATTACHMENTS

C0.2 FINAL PLAT

C2.0 SITE PLAN

1. THE CONTRACTOR SHOULD BE REQUIRED TO SUBMIT A SITE MANAGEMENT PLAN PRIOR TO WORK. THE PLAN SHOULD OUTLINE CONCRETE MANAGEMENT, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AND ANY WORK THAT WILL REQUIRE DEWATERING.

C2.1 SITE PLAN - DRNG & SHORE STBL EASE

C2.4 | SITE PLAN - FLOWAGE & CONSERVATION EASE

C3.1 GRADING PLAN - FLOODPLAIN ALTERATION

C3.2 GRADING PLAN - WETLAND ALTERATION

C2.2 SITE PLAN - ROADWAY EASE

C6.0 TREE PRESERVATION PLAN

SW1.0 SWPPP - EXISTING CONDITIONS

SW1.1 SWPPP - PROPOSED CONDITIONS

C2.3 | SITE PLAN - UNDGRND UTIL EASE

SHEET INDEX

### DEVELOPER / PROPERTY OWNER:

LAKE WEST DEVELOPMENT, LLC 14525 HIGHWAY 7, SUITE 265 MINNETONKA, MN 55345 952-653-1359

### ENGINEER / LANDSCAPE ARCHITECT:

CIVIL SITE GROUP 4931 W 35TH STREET SUITE 200 ST LOUIS PARK, MN 55416 612-615-0060

### SURVEYOR:

REHDER AND ASSOCIATES, INC. 3440 FEDERAL DRIVE, SUITE 110 EAGAN, MN 55122 651-452-5051

### GEOTECHNICAL ENGINEER:

NORTHERN TECHNOLOGIES, INC. 6160 CARMEN AVE E INVER GROVE HEIGHTS, MN 55076 763-433-9175

### MASTER LEGEND:

----- 1125 ----- EX. 1' CONTOUR ELEVATION INTERVAL

 $\times$  1137.12 EXISTING SPOT GRADE ELEVATION 1.0' CONTOUR ELEVATION INTERVAL SPOT GRADE ELEVATION (GUTTER/FLOW LINE 41.26 UNLESS OTHERWISE NOTED) SPOT GRADE ELEVATION TOP OF CURB (GUTTER TOP) 891.00 G 891.00 TC SPOT GRADE ELEVATION TOP OF WALL 891.00 BS/TS SPOT GRADE ELEVATION BOTTOM OF WALL DRAINAGE ARROW **EMERGENCY OVERFLOW** EOF=1135.52 SILT FENCE / BIOROLL - GRADING LIMIT **INLET PROTECTION** STABILIZED CONSTRUCTION ENTRANCE

SOIL BORING LOCATION

CURB AND GUTTER (T.O = TIP OUT)

# PROPOSED CATCH BASIN OR CATCH BASIN MANHOLE STORM PROPOSED GATE VALVE PROPOSED FIRE HYDRANT PROPOSED MANHOLE SANITARY PROPOSED SIGN PROPOSED LIGHT PROPOSED SANITARY SEWER PROPOSED STORM SEWER PROPOSED WATER MAIN EXISTING SANITARY SEWER EXISTING STORM SEWER EXISTING WATER MAIN EXISTING GAS MAIN

■ EXISTING ELECTRIC BOX

PROPOSED MANHOLE STORM

EXISTING MANHOLE

**EXISTING HYDRANT** 

☐ EXISTING CATCH BASIN

EXISTING STORM SEWER

EXISTING WATER MAIN

EXISTING GAS MAIN

EXISTING UNDERGROUND ELECTRIC

EXISTING UNDERGROUND CABLE

EXISTING STOPBOX

EXISTING GATE VALVE

EXISTING GAS METER

EXISTING GAS VALVE





DEVELOPMENT, LLC

Y PLACE, ORONO, MN 55391
T DEVELOPMENT, LL

I HEREBY CERTIFY THAT THIS PLAN,
SPECIFICATION, OR REPORT WAS
PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER
UNDER THE LAWS OF THE STATE OF
MINNESOTA

Matthew R. Pavek

DATE 04/26/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE DESCRIPTION

03/22/17 SKETCH PLAN SUBMITTAL

07/19/17 PRELIMINARY PLAT REVIEW

10/18/17 CITY RESUBMITTAL

11/09/17 PLANNING COMMISSION COMMENTS

02/20/18 CITY/WATERSHED RESUBMITTAL

03/09/18 CITY ENGINEERING REVISIONS

03/23/18 WATERSHED REVISIONS

04/24/18 WATERSHED REVISIONS

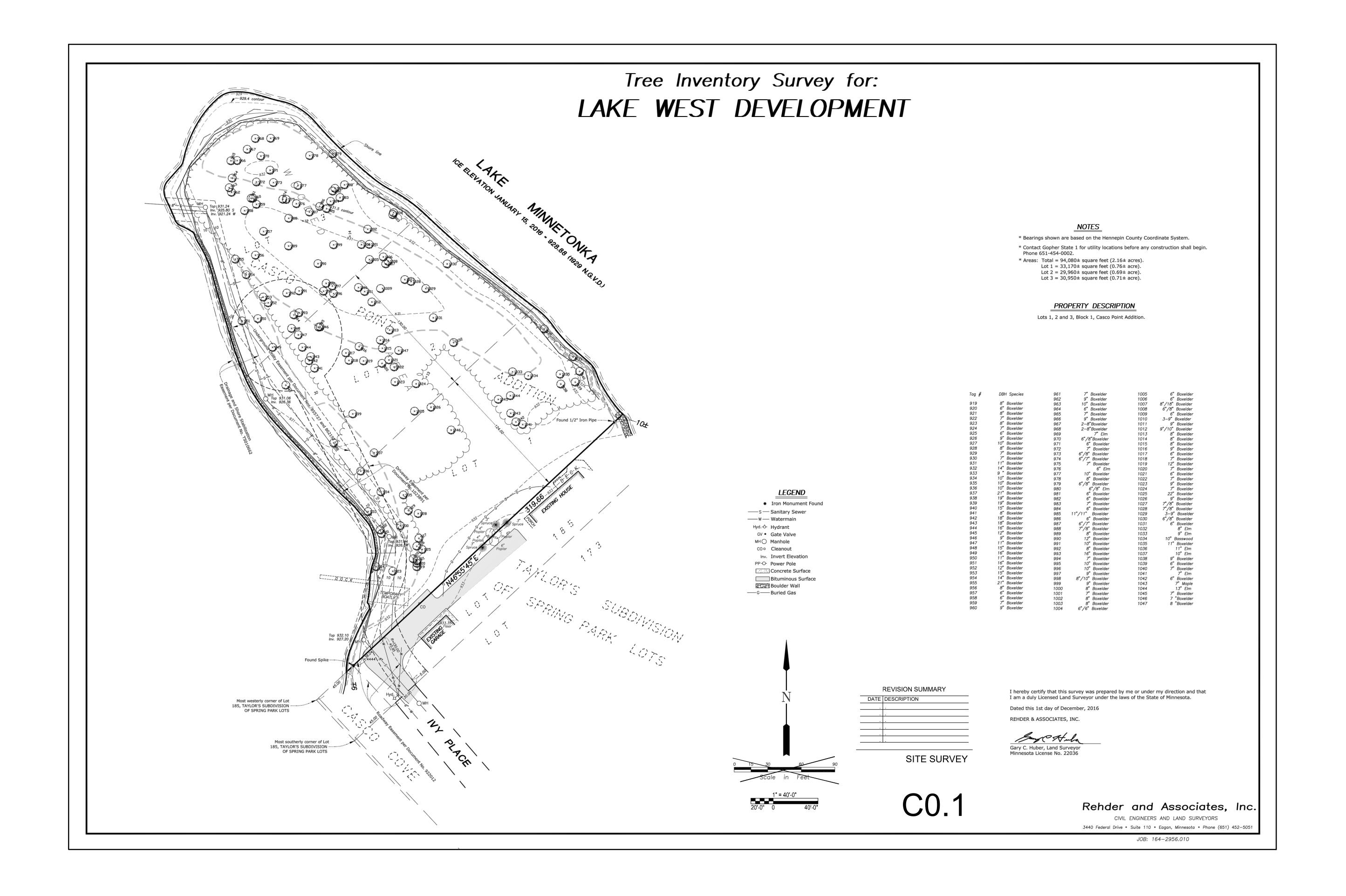
REVISION SUMMARY

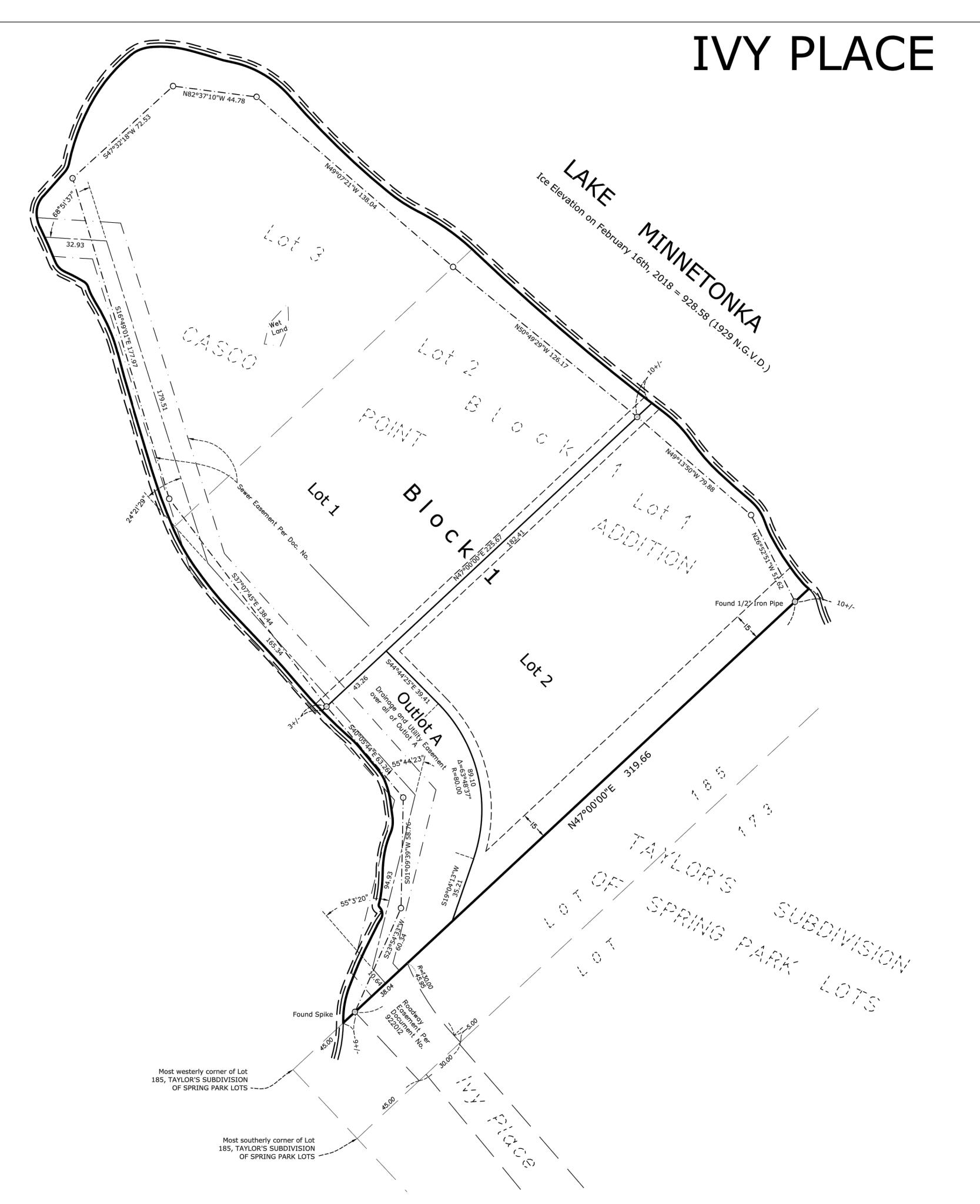
04/26/18 WATERSHED REVISIONS

ROJECT NO.: 17059

TITLE SHEET

C0.0





R.T. DOC. NO

KNOW ALL PERSONS BY THESE PRESENTS: That Barbara Lupient, Trustee, and successor Trustees, of the Barbara Lupient Revocable Trust u/a/d April 13, 2000 and Richard Lupient, fee owner of the following described property situated in the State of Minnesota, County of Hennepin, to wit:

Lots 1, 2 and 3, Block 1, Casco Point Addition

Have caused the same to be surveyed and platted as IVY PLACE and do hereby dedicate to the public for public use forever the easements for drainage and utility purposes as shown on this plat.

In witness whereof said Barbara Lupient, Trustee, and successor Trustees, of the Barbara Lupient Revocable Trust u/a/d April 13, 2000, has hereunto set her hands this \_\_\_\_\_\_day of . 2018.

Barbara Lupient, Trustee, and successor Trustees, of the Barbara Lupient Revocable Trust u/a/d April 13, 2000

STATE OF MINNESOTA, COUNTY OF HENNEPIN

The foregoing instrument was acknowledged before me this \_\_\_\_\_day of \_\_\_\_\_\_\_, 2018,

By: Barbara Lupient, Trustee, and successor Trustees, of the Barbara Lupient Revocable Trust u/a/d April 13, 200

In witness whereof said Richard Lupient, has hereunto set his hands this \_\_\_\_\_day of \_\_\_\_\_, 2018.

Richard Lupient

STATE OF MINNESOTA, COUNTY OF HENNEPIN

The foregoing instrument was acknowledged before me this \_\_\_\_\_day of \_\_\_\_\_\_\_, 2018,

By: Richard Lupient

Notary Public, Hennepin County, Minnesota

Notary Printed Name

My Commission Expires: \_\_\_\_\_\_

Notary Printed Name

### SURVEYORS CERTIFICA

I Rory L. Sysntelien do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on the plat; that all monuments depicted on the plat have been or will be set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this \_\_\_\_\_\_day of \_\_\_\_\_\_\_, 2018

Rory L. Synstelien, Licensed Land Surveyor Minnesota License No. 44565

STATE OF MINNESOTA, COUNTY OF HENNEPIN

The foregoing instrument was acknowledged before me this \_\_\_\_\_\_day of \_\_\_\_\_\_\_, 2018, by Rory L. Synstelien

Notary Public, Hennepin County, Minnesota

Notary Printed Name

My Commission Expires: \_\_\_\_\_\_

Notary Printed Name

### ORONO, MINNESO

By:\_\_\_\_\_\_\_, Mayor By:\_\_\_\_\_\_\_\_, Clerk

RESIDENT AND REAL ESTATE SERVICES, Hennepin County, Minnesota

I hereby certify that taxes payable in 2018 and prior years have been paid for land described on this plat. Dated this \_\_\_\_\_\_day of \_\_\_\_\_\_\_, 2018.

Mark V. Chapin, Hennepin County Auditor

By:\_\_\_\_\_\_, Deputy

SURVEY DIVISION, Hennepin County, Minnesota

Pursuant to Minnesota Statutes Section 383B.565 (1969), this plat has been approved this \_\_\_\_\_day of \_\_\_\_\_, 2018

Chris F. Mavis, Hennepin County Surveyor

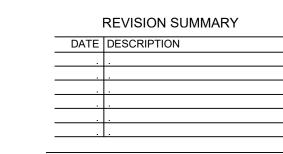
Ву:\_\_\_\_

REGISTRAR OF TITLES, Hennepin County, Minnesota

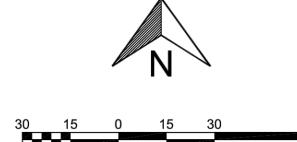
I hereby certify that the within plat of IVY PLACE was filed in this office this \_\_\_\_\_\_day of \_\_\_\_\_\_,

Martin McCormick, Registrar of Titles

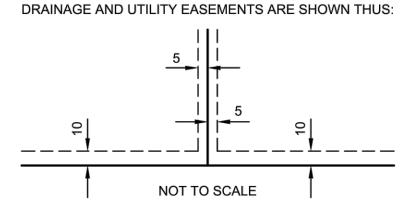
By:\_\_\_\_\_\_, Deputy



FINAL PLAT

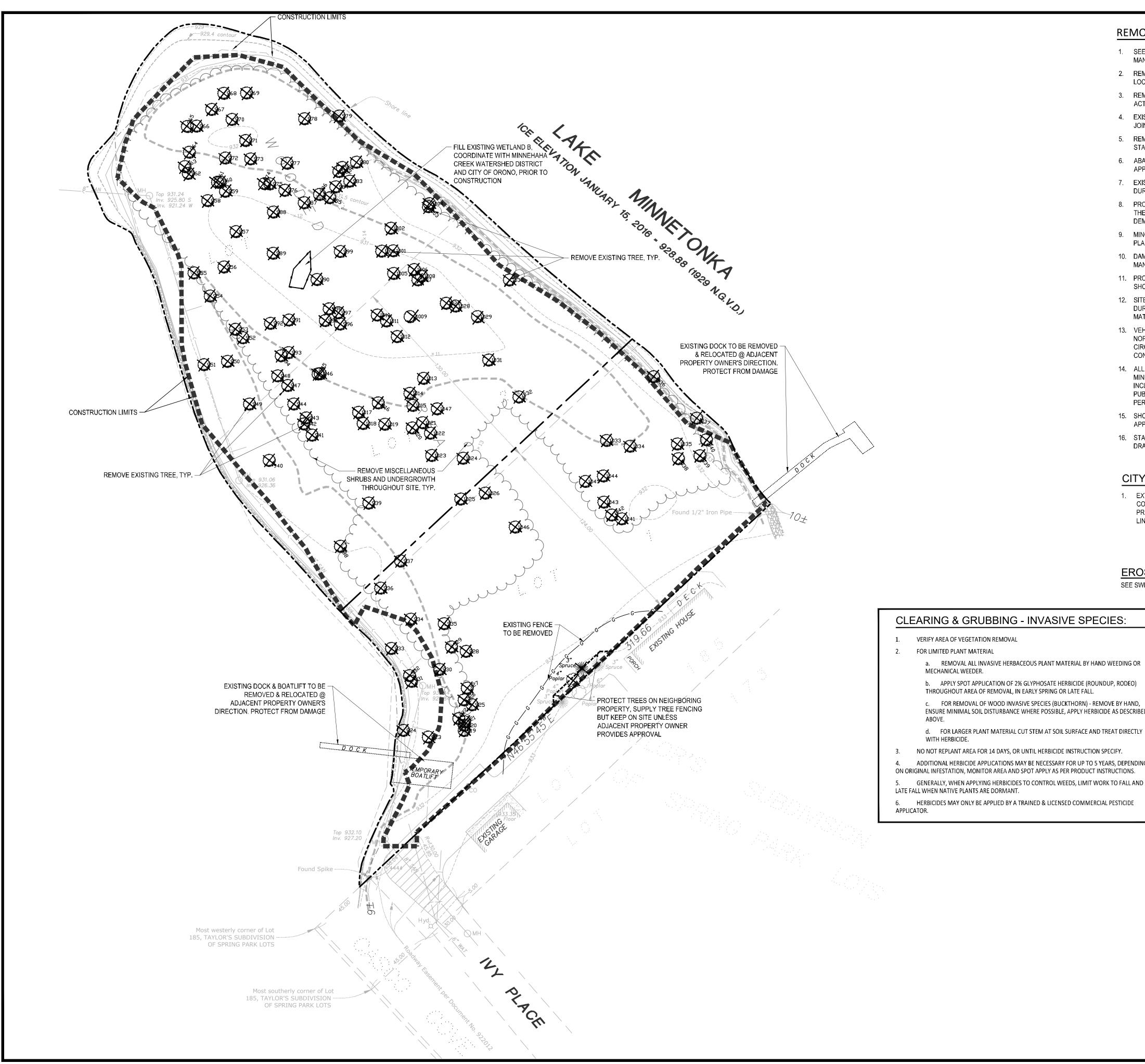


Bearings are based on the Hennepin County Coordinate System



Being 5 feet in width when adjoining side and rear lot lines, unless otherwise indicated, and 10 feet in width when adjoining right of way lines unless otherwise indicated, as shown on the

4931 W. 35TH ST. SUITE 200 ST. LOUIS PARK, MN 55416 CivilSiteGroup.com



### **REMOVAL NOTES:**

- 1. SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLAN FOR CONSTRUCTION STORM WATER
- 2. REMOVAL OF MATERIALS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH MNDOT, STATE AND LOCAL REGULATIONS.
- 3. REMOVAL OF PRIVATE UTILITIES SHALL BE COORDINATED WITH UTILITY OWNER PRIOR TO CONSTRUCTION
- 4. EXISTING PAVEMENTS SHALL BE SAWCUT IN LOCATIONS AS SHOWN ON THE DRAWINGS OR THE NEAREST JOINT FOR PROPOSED PAVEMENT CONNECTIONS.
- 5. REMOVED MATERIALS SHALL BE DISPOSED OF TO A LEGAL OFF-SITE LOCATION AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- 6. ABANDON, REMOVAL, CONNECTION, AND PROTECTION NOTES SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE WITH PROPOSED PLANS.
- 7. EXISTING ON-SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE CONTRACT.
- 8. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS CONSTRUCTION SHOWN ON THE DRAWINGS.
- 9. MINOR WORK OUTSIDE OF THE GENERAL CONSTRUCTION LIMITS SHALL BE ALLOWED AS SHOWN ON THE
- 10. DAMAGE BEYOND THE PROPERTY LIMITS CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT OR IN ACCORDANCE WITH THE CITY.
- 11. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
- 12. SITE SECURITY MAY BE NECESSARY AND PROVIDED IN A MANNER TO PROHIBIT VANDALISM, AND THEFT, DURING AND AFTER NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY.
- 13. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED WITHOUT APPROVAL BY THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
- 14. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
- 15. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS REPRESENTATIVE AND THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
- 16. STAGING, DEMOLITION, AND CLEAN-UP AREAS SHALL BE WITHIN THE PROPERTY LIMITS AS SHOWN ON THE DRAWINGS AND MAINTAINED IN A MANNER AS REQUIRED BY THE CITY.

### CITY OF ORONO REMOVAL NOTES:

EXTENT OF REMOVAL AT CONNECTION TO EXISTING PAVEMENT SHOULD BE COORDINATED IN THE FIELD WITH THE CITY AND ADJACENT PROPERTY OWNER PRIOR TO ANY WORK. PAVEMENT SHOULD BE SAW-CUT FOR CLEAN MATCH LINES.

### **EROSION CONTROL NOTES:**

SEE SWPPP ON SHEETS SW1.0-SW1.5

### **CLEARING & GRUBBING - INVASIVE SPECIES:**

- a. REMOVAL ALL INVASIVE HERBACEOUS PLANT MATERIAL BY HAND WEEDING OR
- b. APPLY SPOT APPLICATION OF 2% GLYPHOSATE HERBICIDE (ROUNDUP, RODEO)
- c. FOR REMOVAL OF WOOD INVASIVE SPECIES (BUCKTHORN) REMOVE BY HAND,
- ENSURE MINIMAL SOIL DISTURBANCE WHERE POSSIBLE, APPLY HERBICIDE AS DESCRIBED
- 3. NO NOT REPLANT AREA FOR 14 DAYS, OR UNTIL HERBICIDE INSTRUCTION SPECIFY.
- 4. ADDITIONAL HERBICIDE APPLICATIONS MAY BE NECESSARY FOR UP TO 5 YEARS, DEPENDING
- ON ORIGINAL INFESTATION, MONITOR AREA AND SPOT APPLY AS PER PRODUCT INSTRUCTIONS.
- GENERALLY, WHEN APPLYING HERBICIDES TO CONTROL WEEDS, LIMIT WORK TO FALL AND
- 6. HERBICIDES MAY ONLY BE APPLIED BY A TRAINED & LICENSED COMMERCIAL PESTICIDE

### **REMOVALS LEGEND:**

EX. 1' CONTOUR ELEVATION INTERVAL REMOVAL OF PAVEMENT AND ALL BASE MATERIAL, INCLUDING BIT., CONC., AND GRAVEL PVMTS.

REMOVAL OF STRUCTURE INCLUDING ALL FOOTINGS AND FOUNDATIONS.

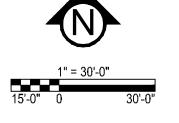


TREE PROTECTION



TREE REMOVAL - INCLUDING ROOTS AND STUMPS







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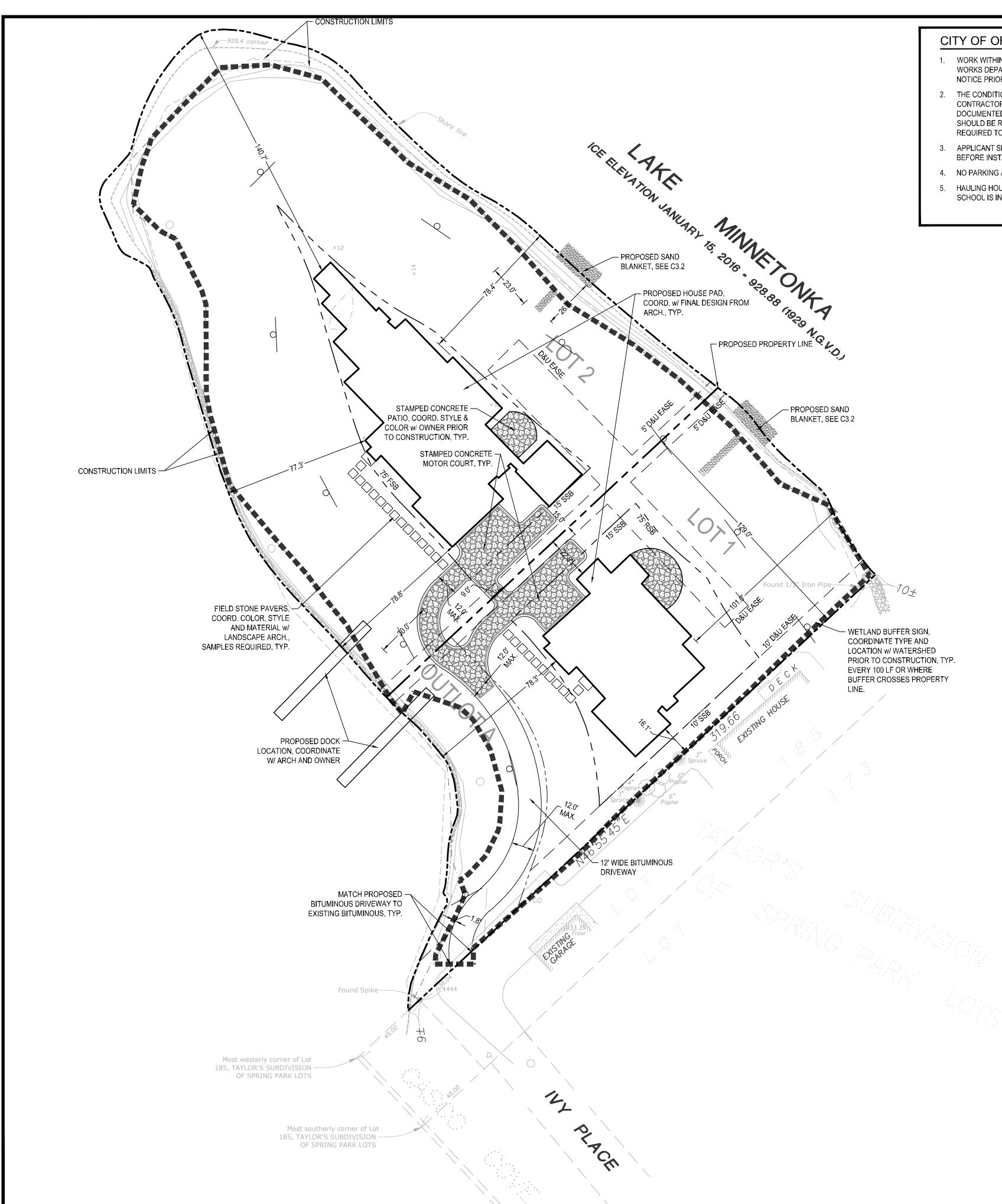
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REVISION SUMMARY DATE DESCRIPTION

04/26/18 WATERSHED REVISIONS

REMOVALS PLAN



### CITY OF ORONO SITE SPECIFIC NOTES:

- WORK WITHIN PUBLIC RIGHT-OF-WAY MUST BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT. CONTRACTOR MUST PROVIDE A MINIMUM 48 HOUR NOTICE PRIOR TO ANY WORK BEING PERFORMED.
- THE CONDITION OF IVY PLACE SHOULD BE REVIEWED BY THE CITY AND CONTRACTOR PRIOR TO ANY WORK, AND THE EXISTING CONDITION SHOULD BE DOCUMENTED WITH PICTURES. AFTER COMPLETION OF WORK, THE STREET SHOULD BE REVIEWED FOR DAMAGE, AND THE CONTRACTOR SHOULD BE REQUIRED TO REPAIR ANY DAMAGE DEEMED TO BE CAUSED BY SITE WORK.
- APPLICANT SHALL CONFIRM THE LOCATION OF THE DELINEATED WETLAND BEFORE INSTALL OF THE DRIVEWAY.
- NO PARKING ALLOWED ON IVY PLACE AT ANY TIME.
- HAULING HOURS ARE LIMITED TO 7:30AM-3:00PM AND 4:00PM-8:00PM WHILE SCHOOL IS IN SESSION.

### SITE LAYOUT NOTES:

- 1. CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS OF EXISTING AND PROPOSED PROPERTY LINES, EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCATIONAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
- 2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
- THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
- CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
- LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
- CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
- 7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
- 8. PEDESTRIAN CURB RAMPS SHALL BE CONSTRUCTED WITH TRUNCATED DOME LANDING AREAS IN ACCORDANCE WITH A.D.A. REQUIREMENTS-SEE DETAIL.
- 9. CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
- 10. CURB AND GUTTER TYPE SHALL BE B612 UNLESS OTHERWISE NOTED ON THE DRAWINGS-TAPER BETWEEN CURB TYPES-SEE DETAIL.
- 11. ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
- 12. CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
- 13. FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
- 14. PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE.
- 15. ALL PARKING LOT PAINT STRIPPING TO BE WHITE, 4" WIDE TYP.
- 16. BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
- 17. ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.

### SITE AREA TABLE:

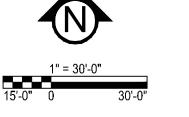
	EXISTIN	IG	PROPOSED LOT	T 1	PROPOSED	LOT 2	OUTLOT	`A
BUILDING COVERAGE	0 SF	0.0%	4,653 SF	17.5%	7,296 SF	12.2%	0 SF	0.0%
ALL PAVEMENTS	302 SF	0.3%	1,623 SF	6.1%	1,940 SF	3.2%	2,596 SF	33.2%
ALL PERVIOUS SURFACES	93,778 SF	99.7%	20,287 SF	76.4%	50,469 SF	84.5%	5,216 SF	66.8%
TOTAL SITE AREA	94,080 SF	100.0%	26,563 SF	100.0%	59,705 SF	100.0%	7,812 SF	100.0%
IMPERVIOUS SURFACE								
EXISTING CONDITION	302 SF	0.3%						
PROPOSED CONDITION LOT 1	6,276 SF	6.7%						
PROPOSED CONDITION LOT 2	9,236 SF	9.8%						
OUTLOT A	2,596 SF	2.8%						
LOT TOTAL (LOT 1 + LOT 2)	15,512 SF	16.5%						
TOTAL (LOT 1 + LOT 2 + OUTLOT A)	18,108 SF	19.2%						
LOT DIFFERENCE (EX. VS PROP.)	15,210 SF	16.2%						
TOTAL DIFFERENCE (EX. VS PROP.)	17,806 SF	18.9%						

### SITE PLAN LEGEND:

PROPERTY LINE —— — — SETBACK LINE ---- --- EASEMENT LINE WETLAND LINE

CONSTRUCTION LIMITS





GROUP 4931 W. 35TH ST. SUITE 200

ST. LOUIS PARK, MN 55416

Pat Sarver

952-250-2003

CivilSiteGroup.com Matt Pavek 763-213-3944

DEVELOPMENT, LLC

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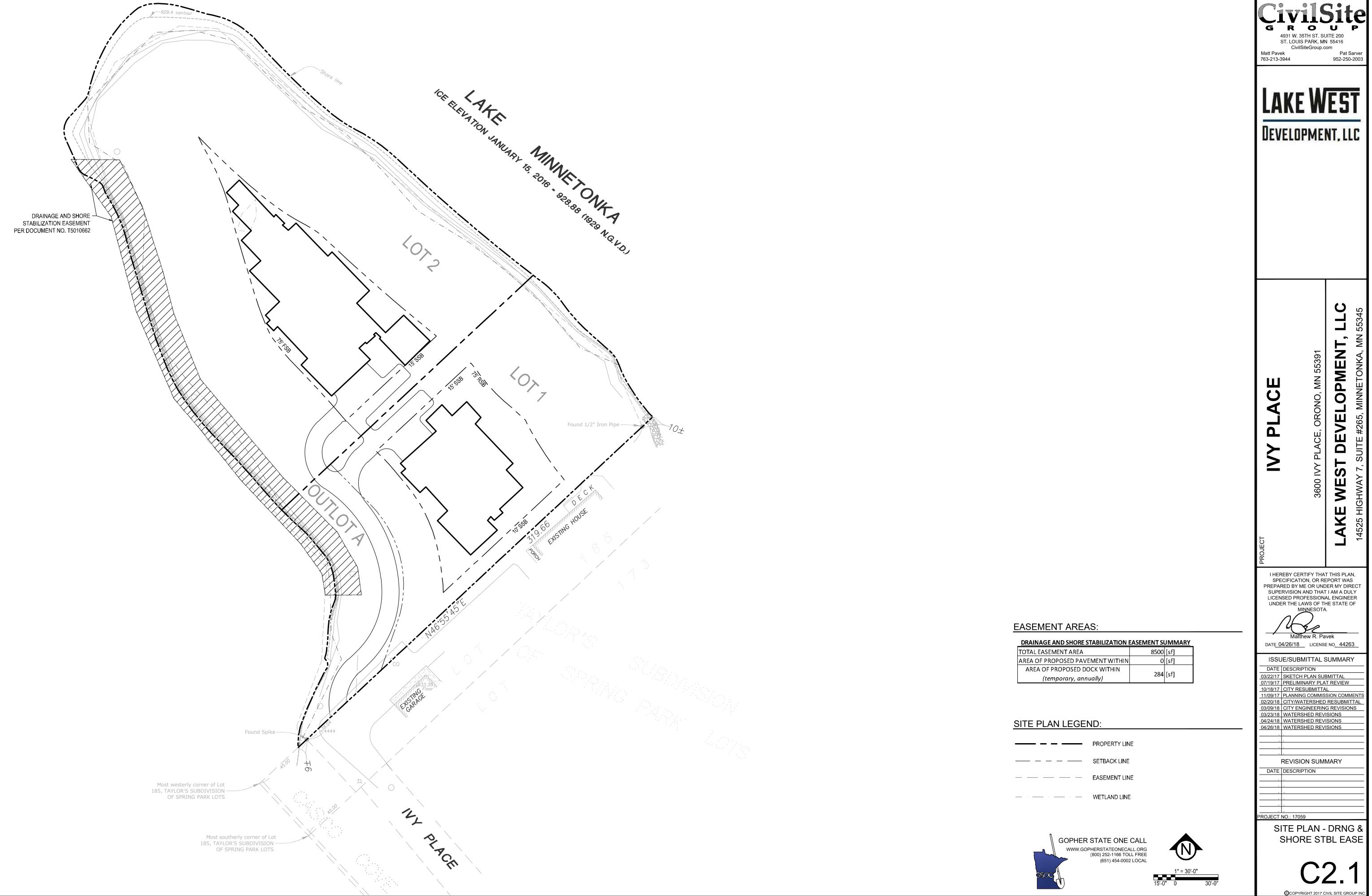
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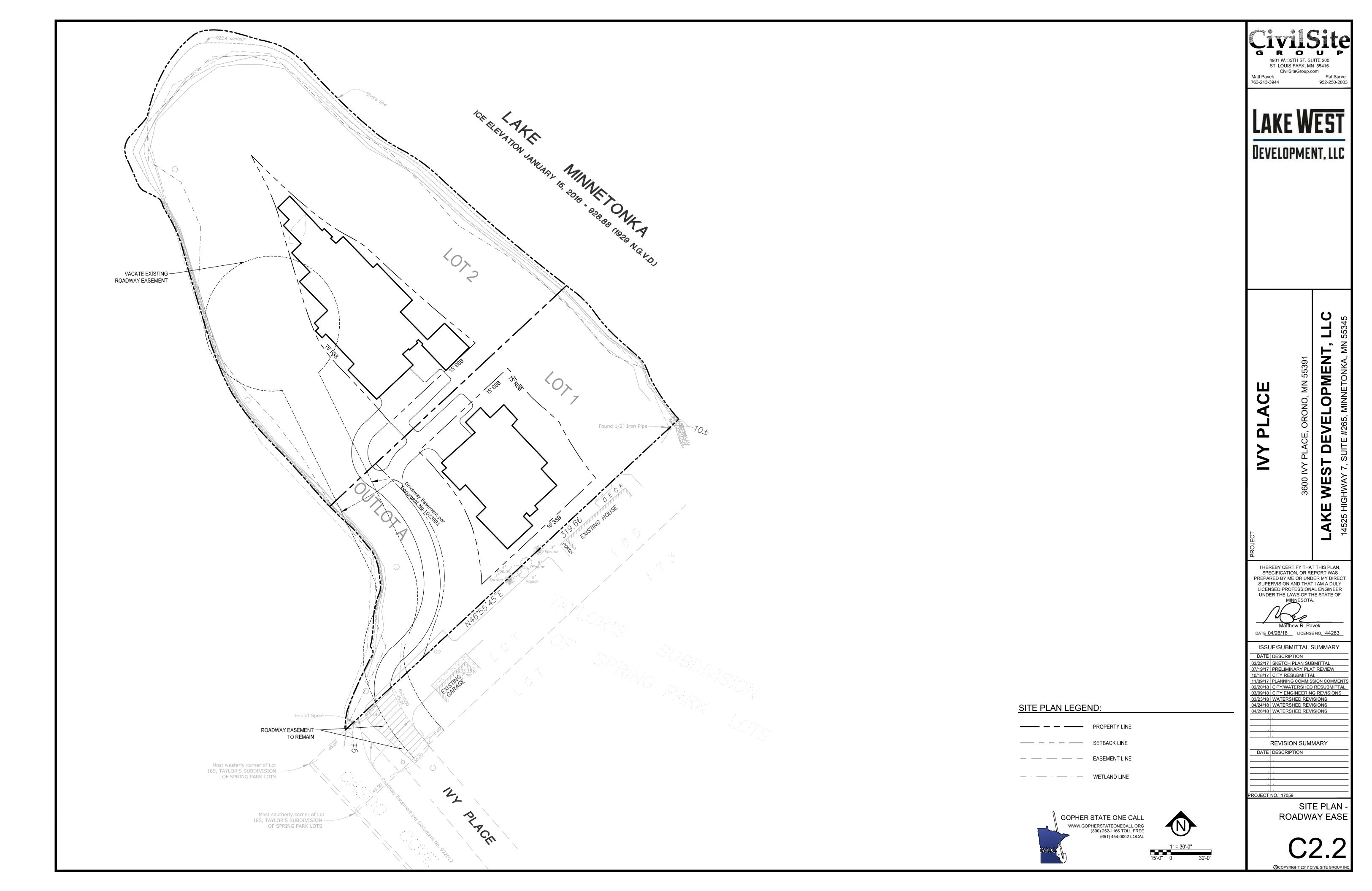
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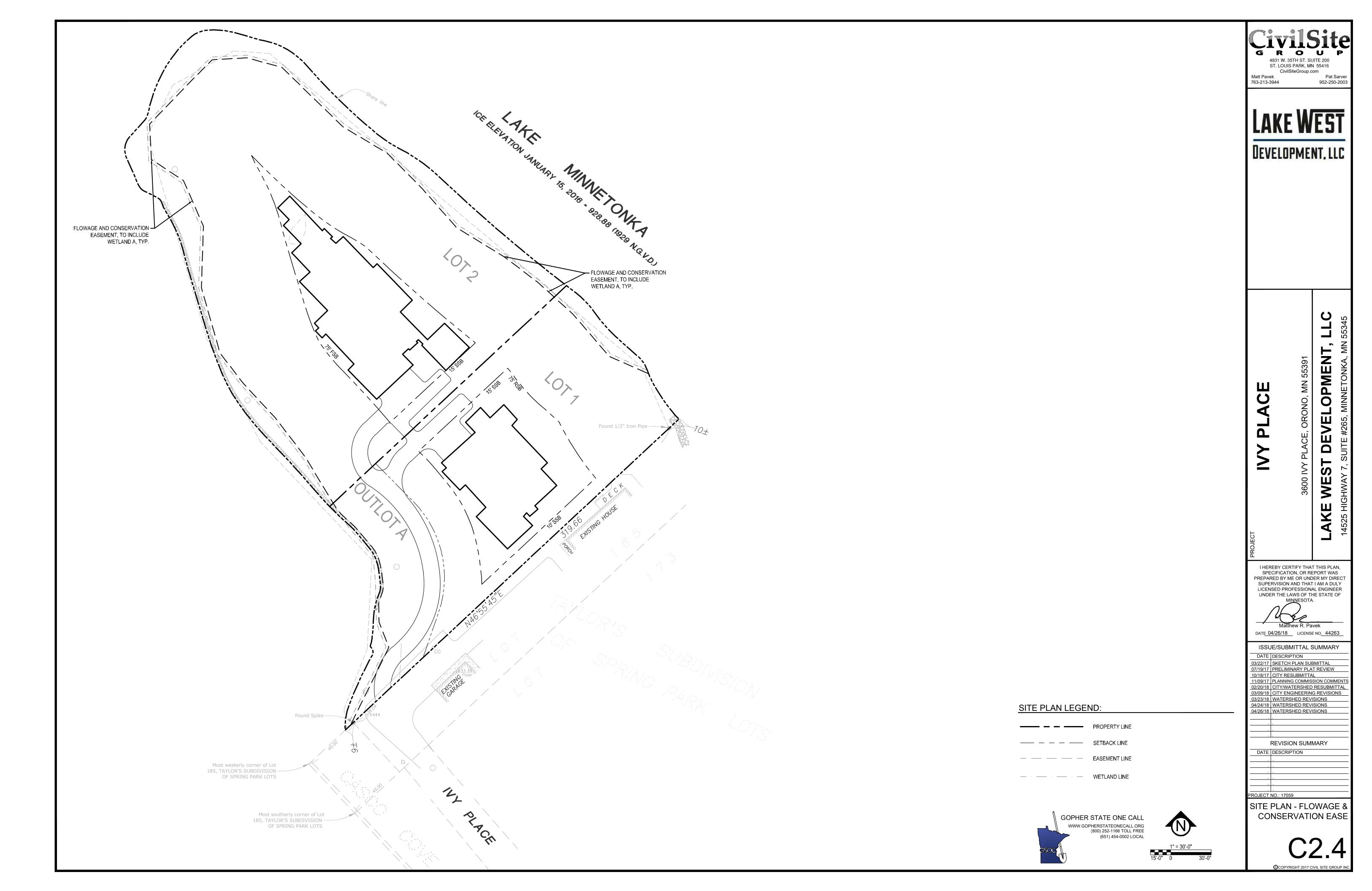
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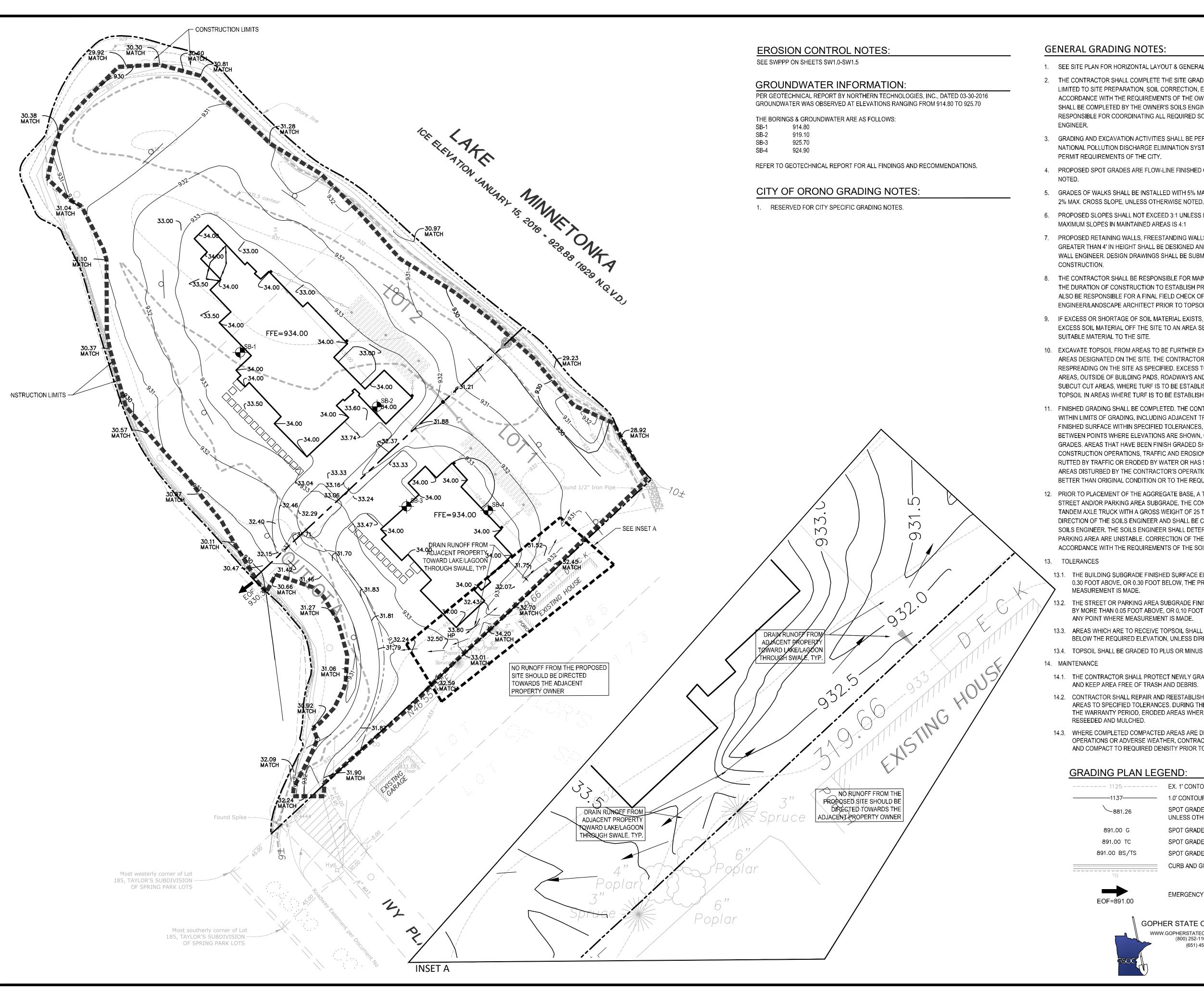
PROJECT NO.: 17059

SITE PLAN









### **GENERAL GRADING NOTES:**

- 1. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
- 2. THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS
- 3. GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
- 4. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
- GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND
- 6. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1
- 7. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
- 9. IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
- 10. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
- 11. FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
- 12. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.
- 13. TOLERANCES
- 13.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
- 13.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF
- ANY POINT WHERE MEASUREMENT IS MADE. 13.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR
- BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. 13.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
- 14. MAINTENANCE
- 14.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
- 14.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.
- 14.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

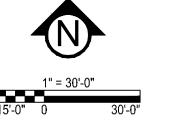
### **GRADING PLAN LEGEND:**

----- 1125 ----- EX. 1' CONTOUR ELEVATION INTERVAL 1.0' CONTOUR ELEVATION INTERVAL SPOT GRADE ELEVATION (GUTTER/FLOW LINE 881.26 UNLESS OTHERWISE NOTED) 891.00 G SPOT GRADE ELEVATION GUTTER 891.00 TC SPOT GRADE ELEVATION TOP OF CURB 891.00 BS/TS SPOT GRADE ELEVATION BOTTOM OF STAIRS/TOP OF STAIRS

CURB AND GUTTER (T.O = TIP OUT)

**EMERGENCY OVERFLOW** EOF=891.00





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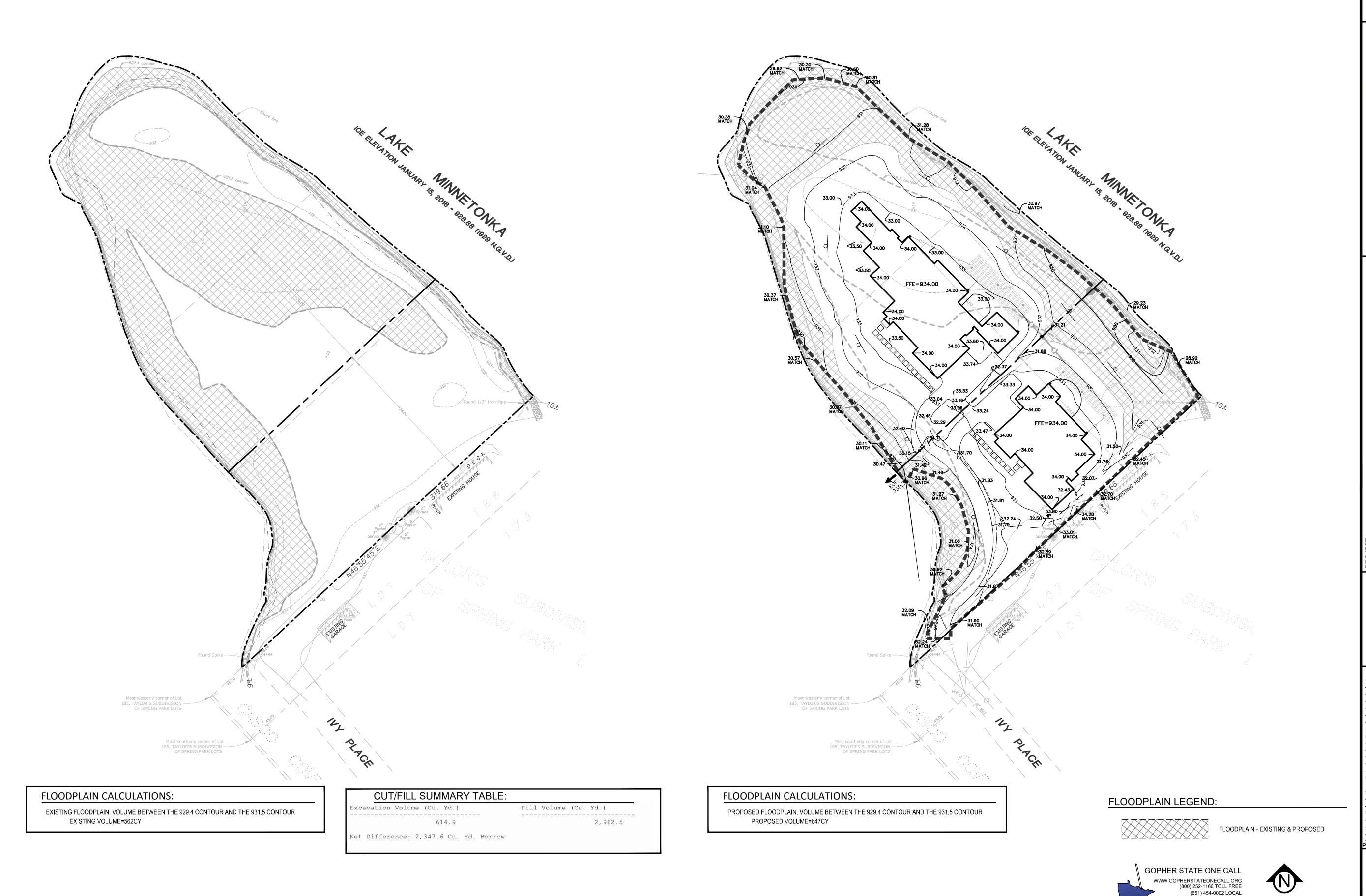
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04/24/18 WATERSHED REVISIONS 04/26/18 WATERSHED REVISIONS

03/23/18 WATERSHED REVISIONS

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**GRADING PLAN** 



4931 W. 35TH ST. SUITE 200 ST. LOUIS PARK, MN 55416 CivilSiteGroup.com

DEVELOPMENT, LLC

NO, MN 55391

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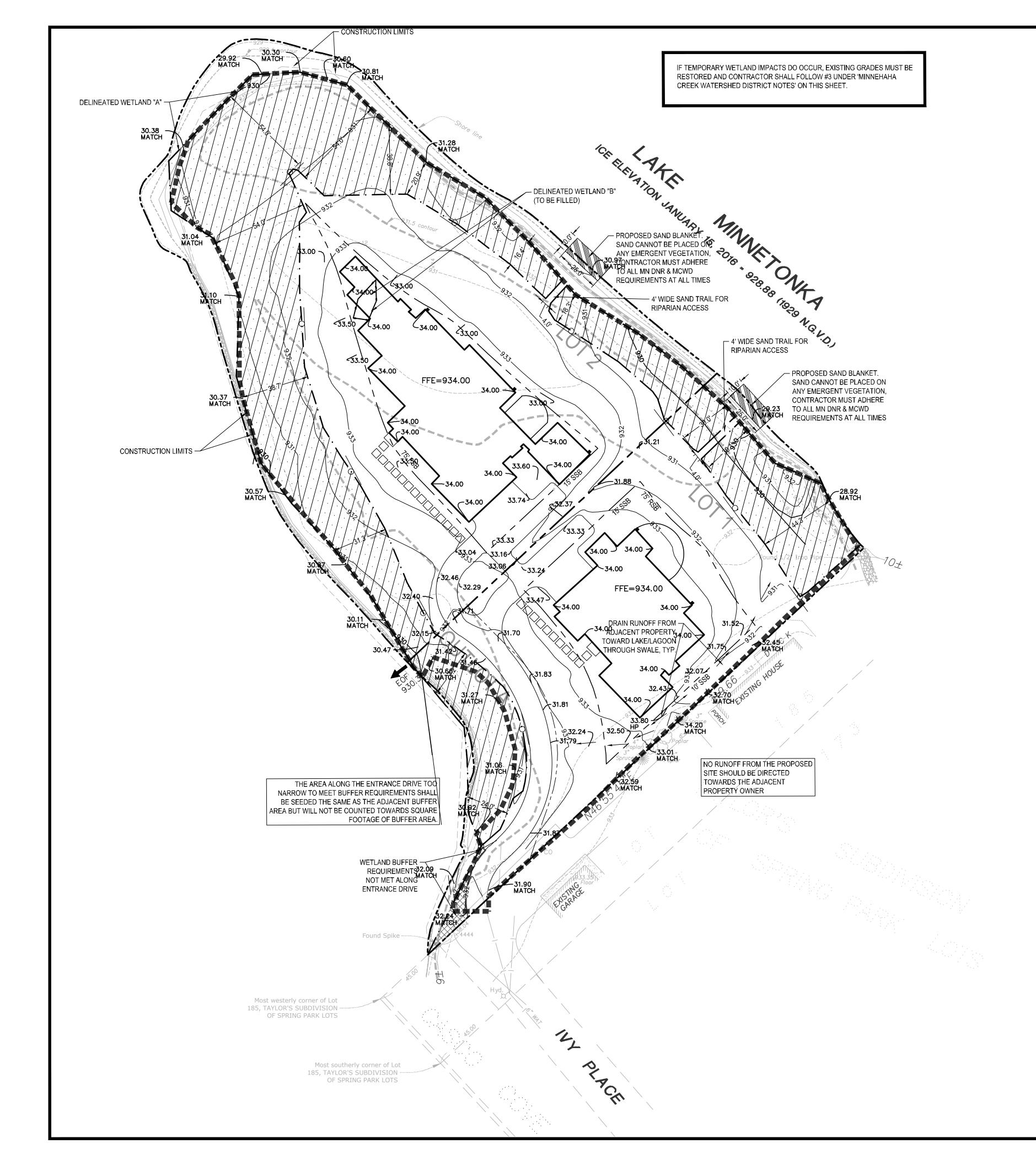
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GRADING PLAN -FLOODPLAIN ALTERATION

C3.1



### MINNEHAHA CREEK WATERSHED DISTRICT NOTES:

- 1. ALL DISTURBED SOILS WITHIN THE PROPOSED WETLAND BUFFER SHALL BE DECOMPACTED TO A DEPTH OF 18 INCHES AND ORGANIC MATTER MUST BE INCORPORATED INTO SOILS BEFORE REVEGETATION. DECOMPACTION SHALL BE ACCOMPLISHED SOLELY BY INCORPORATION OF ORGANIC MATTER WITHIN THE DRIP LINE OR CRITICAL ROOT ZONE OF TREES OR WITHIN 10 FEET OF UNDERGROUND UTILITIES.
  - CONTRACTOR MUST HAVE WETLAND A MARKED WITH FLAGS PRIOR TO CONSTRUCTION ON THE SITE.
- ANY TEMPORARY IMPACTS TO DELINEATED WETLAND A MUST BE TRACKED AND REPORTED TO THE ENGINEER AS SOON AS POSSIBLE. THESE IMPACTS WILL NEED TO BE QUANTIFIED. ONCE THE TEMPORARY IMPACT HAS COMPLETED, THE CONTRACTOR MUST FOLLOW SEQUENCING GUIDELINES TO RESTORE WETLAND TO AS CLOSE TO NATIVE CONDITION AS POSSIBLE:
- •• CONTRACTOR MUST REMOVE ANY CONSTRUCTION RELATED MATERIAL OR SOIL THAT HAS BEEN INTRODUCED TO WETLAND.
  - CONTRACTOR TO FOLLOW SOIL DECOMPACTION GUIDELINES IN #1 ABOVE.
- •• CONTRACTOR TO RE-SEED IMPACTED WETLAND AREA WITH WET MEADOW SEED MIX SPECIFIED BY LANDSCAPE CONTRACTOR.
- ANY IMPACTED AREAS OF EMERGENT VEGETATION MUST BE RE-PLANTED WITH PLUGS SPECIFIED BY THE LANDSCAPE CONTRACTOR.

### WETLAND BUFFER REQUIREMENTS TABLE:

### WETLAND BUFFER REQUIREMENTS

BUFFER WIDTH
MINIMUM 12.5 LF
MAXIMUM 50 LF

### **BUFFER AREA NOT MEETING REQUIREMENTS:**

### **BUFFER AREA NOT MEETING REQUIREMENTS**

113	DOLLEN ANEX MOLIVILLING NEGOINEM
811	LENGTH OF WETLAND A WITH LESS THAN 12.5' BUFFER
	@ SAND BLANKET (4' WIDE RIPARIAN TRAIL)
100 SF	AREA OF WETLAND A BUFFER NOT PROVIDED FOR 69'
100 31	LENGTH (25' BUFFER)
69 LF	LENGTH OF WETLAND A WITH LESS THAN 12.5' BUFFER
09	WIDTH @ ENTRANCE DRIVE
863 SF	AREA OF WETLAND A BUFFER NOT PROVIDED FOR 69'
003 31	LENGTH (25' BUFFER)
	TOTAL ADDITIONAL BUFFER AREA NEEDED TO BE
963 SF	PROVIDED FOR DUE TO NOT MEETING REQUIREMENTS
ادادود	ALONG ENTREANCE DRIVE AND FILLING IN OF BEACH
	AREAS

### PROPOSED WETLAND AREAS TABLE:

### **WETLAND AREA TABLE**

	9,871 SF TOTAL
WETLAND A (ON SITE)	9,871 SF UNDISTURBED
	0 SF FILLED
WETLAND B	168 SF FILLED

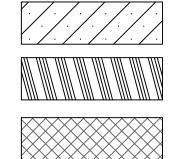
### WETLAND/BUFFER MITIGATION TABLE:

### WETLAND MITIGATION

TOTAL PROPOSED FILL AREA (WTLNDs A&B)	168 SF
REQUIRED MITIGATION - 2:1	336 SF
ON-SITE PROPOSED WETLAND MITIGATION AREA:	0 SF
(MITIGATION TO OCCUR OFFSITE)	
BUFFER INFORMATION	
EXISTING PERIMETER OF WETLAND A	994 LF
PROPOSED PERIMETER OF WETLAND A	994 LF
REQUIRED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:	
*(including entrance drive & beaches)	24,850 SF
REQUIRED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:	
*(including 4' bumpout along entirety for mulch trail)	28,826 SF
PROVIDED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:	

### LEGEND

\*(including entrance drive & beaches)



WETLAND BUFFER - MnDOT SEED MIX 34-262 WET PRAIRIE. SPREAD AT 14.5 LBS/ACRE AND PER MnDOT SEEDING MANUAL.

PROPOSED SAND BLANKET PER MN DNR

29,414 SF

REQUIREMENTS. 10' WATERWARD OF OHW MAXIMUM.
MAY NOT PLAVE ON ANY EMERGENT VEGETATION.

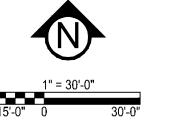
AREA LONG ENTRANCE DRIVE WHERE 12.5' WETLAND

BUFFER AREA NOT MET

0

WETLAND MONUMENT SIGN - COORDINATE TYPE AND SPACING WITH MINNEHAHA CREEK WATERSHED DISTRICT PRIOR TO CONSTRUCTION







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LAKE WEST
DEVELOPMENT, LLC

952-250-2003

, LLC

DEVELOPMENT

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03/23/18 WATERSHED REVISIONS

04/24/18 WATERSHED REVISIONS

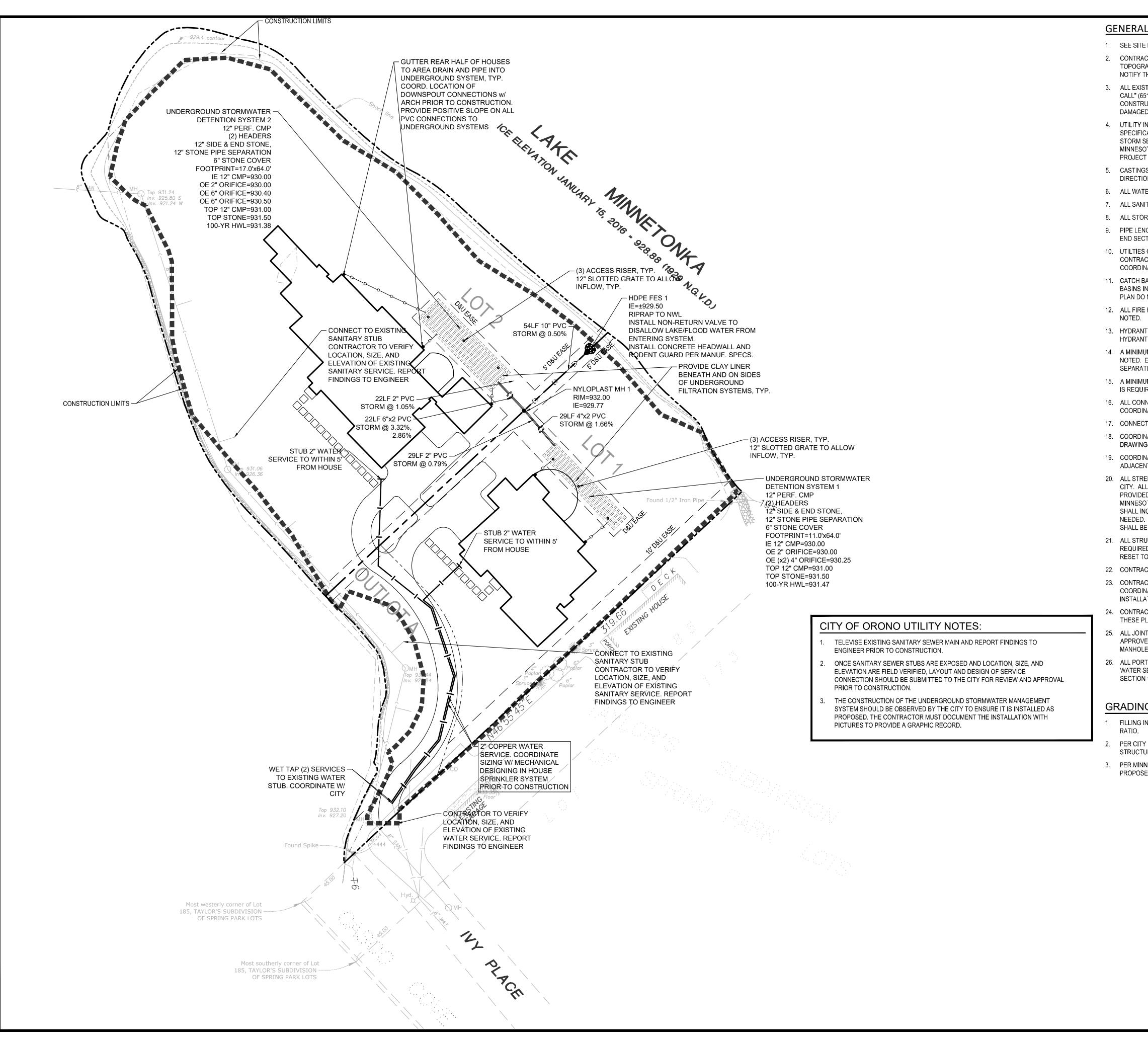
REVISION SUMMARY

DATE DESCRIPTION

PROJECT NO.: 17059

GRADING PLAN -WETLAND ALTERATION

C3.2



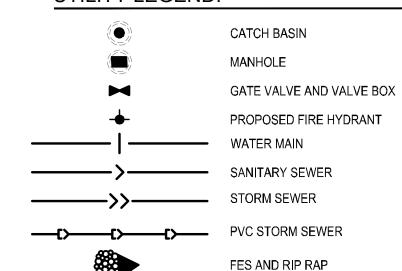
### **GENERAL UTILITY NOTES:**

- 1. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
- 2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
- 3. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- 4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
- 5. CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
- 6. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED.
- 7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) UNLESS OTHERWISE NOTED.
- 8. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED.
- 9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
- 10. UTILTIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
- 11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
- 12. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE
- 13. HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.
- 14. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL
- 15. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
- 16. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
- 17. CONNECTIONS TO EXISTING STRUCUTRES SHALL BE CORE-DRILLED.
- 18. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS
- 19. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.
- 20. ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
- 21. ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
- 22. CONTRACTOR SHALL CORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
- 23. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
- 24. CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
- 25. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.
- 26. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.

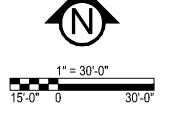
### GRADING FLOODPLAIN NOTES (CITY & WATERSHED):

- 1. FILLING IN THE FLOODPLAIN WILL BE MITIGATED ON SITE AT A 1:1 VOLUME
- 2. PER CITY OF ORONO RULES, THE LOW FLOOR ELEVATION (LFE) OF PROPOSED STRUCTURES MUST BE 932.5 OR HIGHER.
- 3. PER MINNEHAHA CREEK WATERSHED DISTRICT RULES, THE LOW OPENING OF PROPOSED STRUCTURES MUST BE 933.5 OR HIGHER.

### **UTILITY LEGEND:**









Matt Pavek

763-213-3944

DEVELOPMENT, LLC

952-250-2003

EVELOPMENT, I

I HEREBY CERTIFY THAT THIS PLAN,
SPECIFICATION, OR REPORT WAS
PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER
UNDER THE LAWS OF THE STATE OF
MINNESOTA.

Matthew R. Pavek
DATE 04/26/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE DESCRIPTION

03/22/17 SKETCH PLAN SUBMITTAL

07/19/17 PRELIMINARY PLAT REVIEW

10/18/17 CITY RESUBMITTAL

11/09/17 PLANNING COMMISSION COMMENT

02/20/18 CITY/WATERSHED RESUBMITTAL

03/09/18 CITY ENGINEERING REVISIONS

03/23/18 WATERSHED REVISIONS

04/24/18 WATERSHED REVISIONS

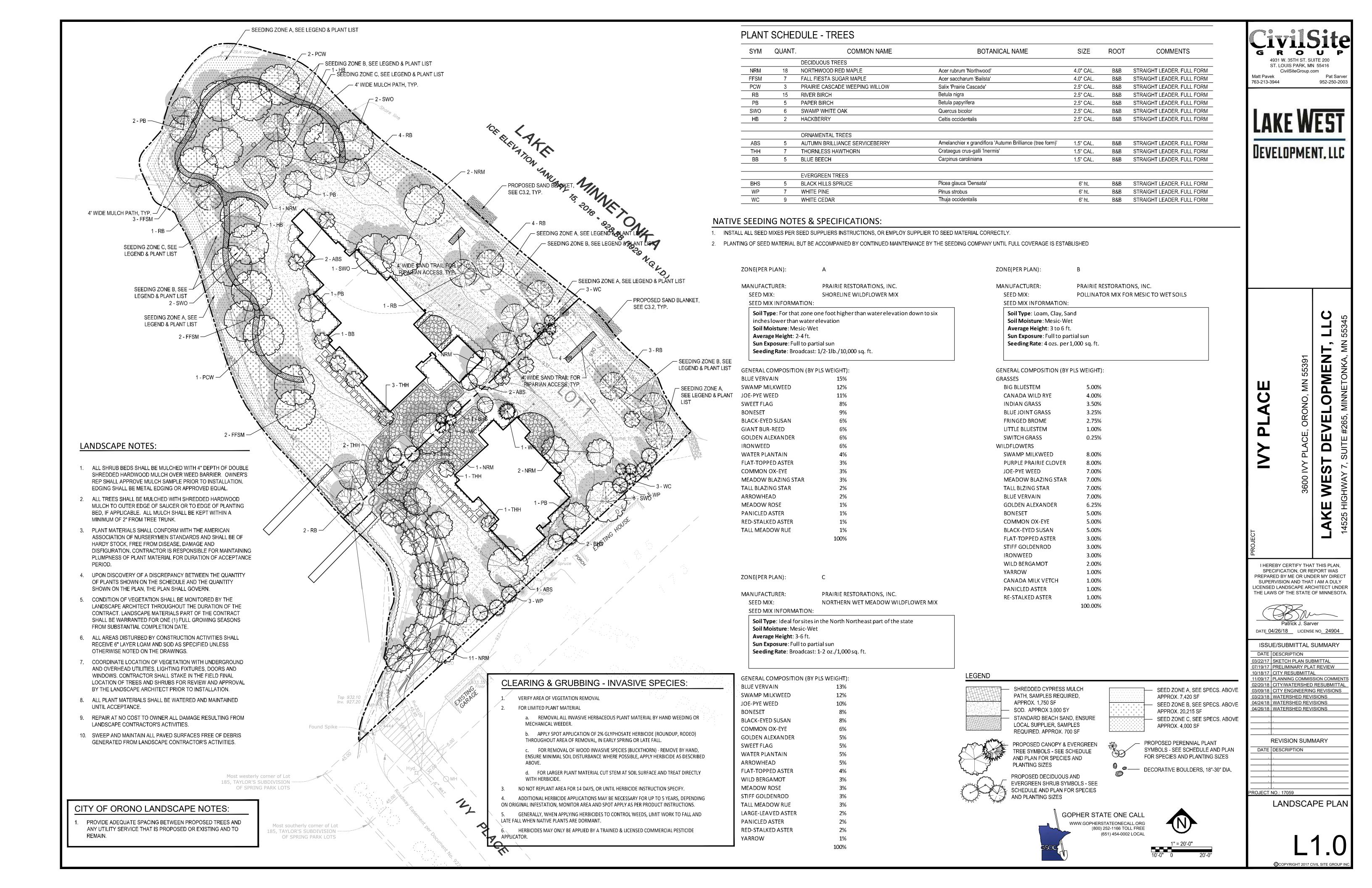
04/26/18 WATERSHED REVISIONS

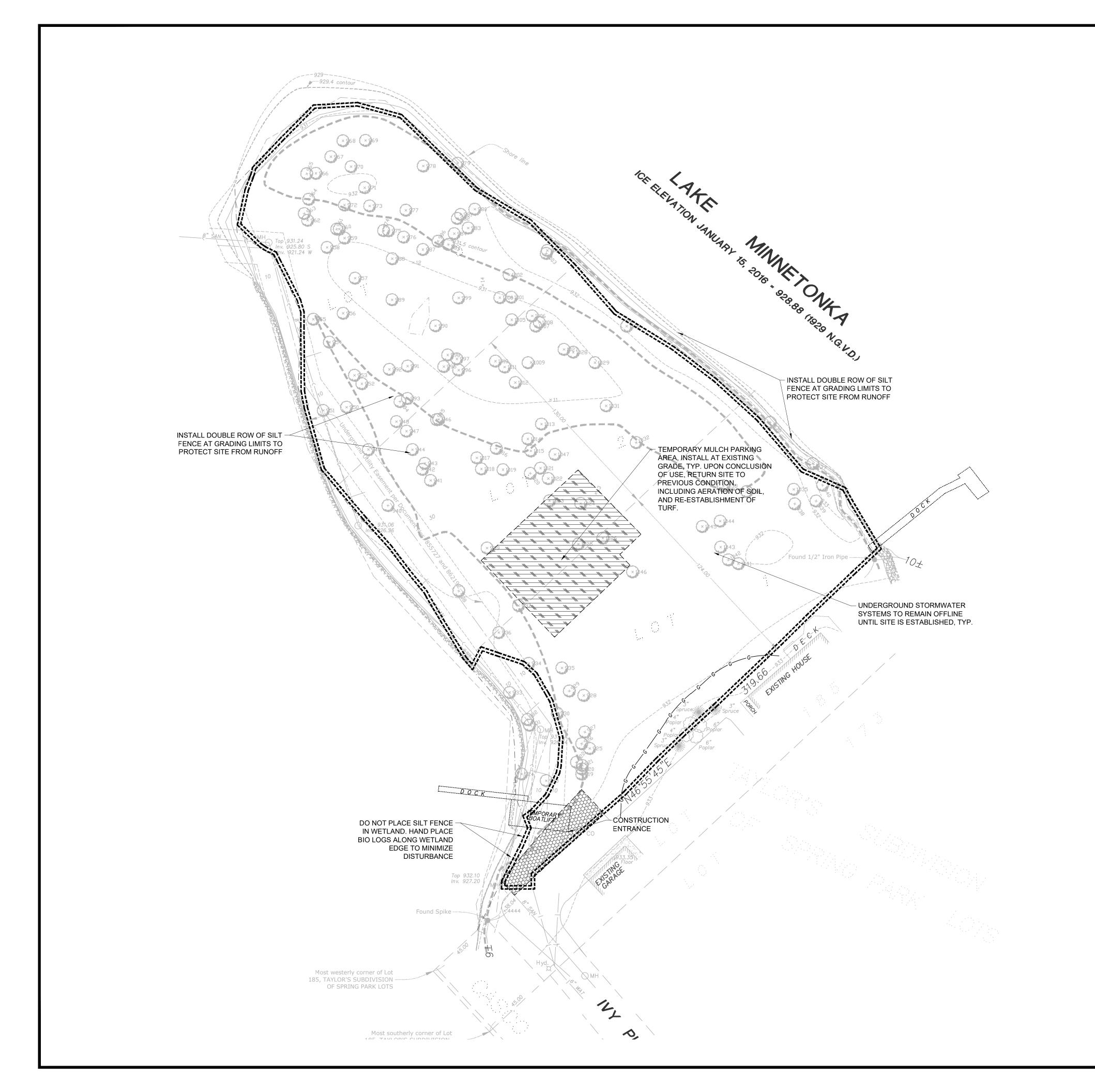
REVISION SUMMARY

DATE DESCRIPTION

UTILITY PLAN

C4.0





### SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. AN EROSION CONTROL PERMIT IS ALSO REQUIRED FROM THE CITY OF ORONO.

2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

### CITY OF ORONO EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES AND PROTECTION FENCING SHOULD BE INSTALLED BY THE CONTRACTOR AND MUST BE INSPECTED BY THE CITY PRIOR TO ANY DEMOLITION OR LAND DISTURBANCE. CONTRACTOR MUST PROVIDE MINIMUM 24-HOUR NOTICE PRIOR TO INSPECTION.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

# GROUP

4931 W. 35TH ST. SUITE 200 ST. LOUIS PARK, MN 55416 CivilSiteGroup.com Matt Pavek 763-213-3944 952-250-2003



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS
PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

DATE 04/26/18 LICENSE NO. 44263 ISSUE/SUBMITTAL SUMMARY

DATE DESCRIPTION 03/22/17 SKETCH PLAN SUBMITTAL 07/19/17 PRELIMINARY PLAT REVIEW 10/18/17 CITY RESUBMITTAL 11/09/17 PLANNING COMMISSION COMMENT 02/20/18 CITY/WATERSHED RESUBMITTAL

03/09/18 CITY ENGINEERING REVISIONS

03/23/18 WATERSHED REVISIONS 04/24/18 WATERSHED REVISIONS

04/26/18 WATERSHED REVISIONS

SILT FENCE / BIOROLL - GRADING LIMIT

STABILIZED CONSTRUCTION ENTRANCE

EX. 1' CONTOUR ELEVATION INTERVAL

1.0' CONTOUR ELEVATION INTERVAL

DRAINAGE ARROW

INLET PROTECTION

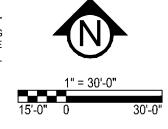
LEGEND:

TEMPORARY MULCH PARKING AREA



EROSION CONTROL BLANKET

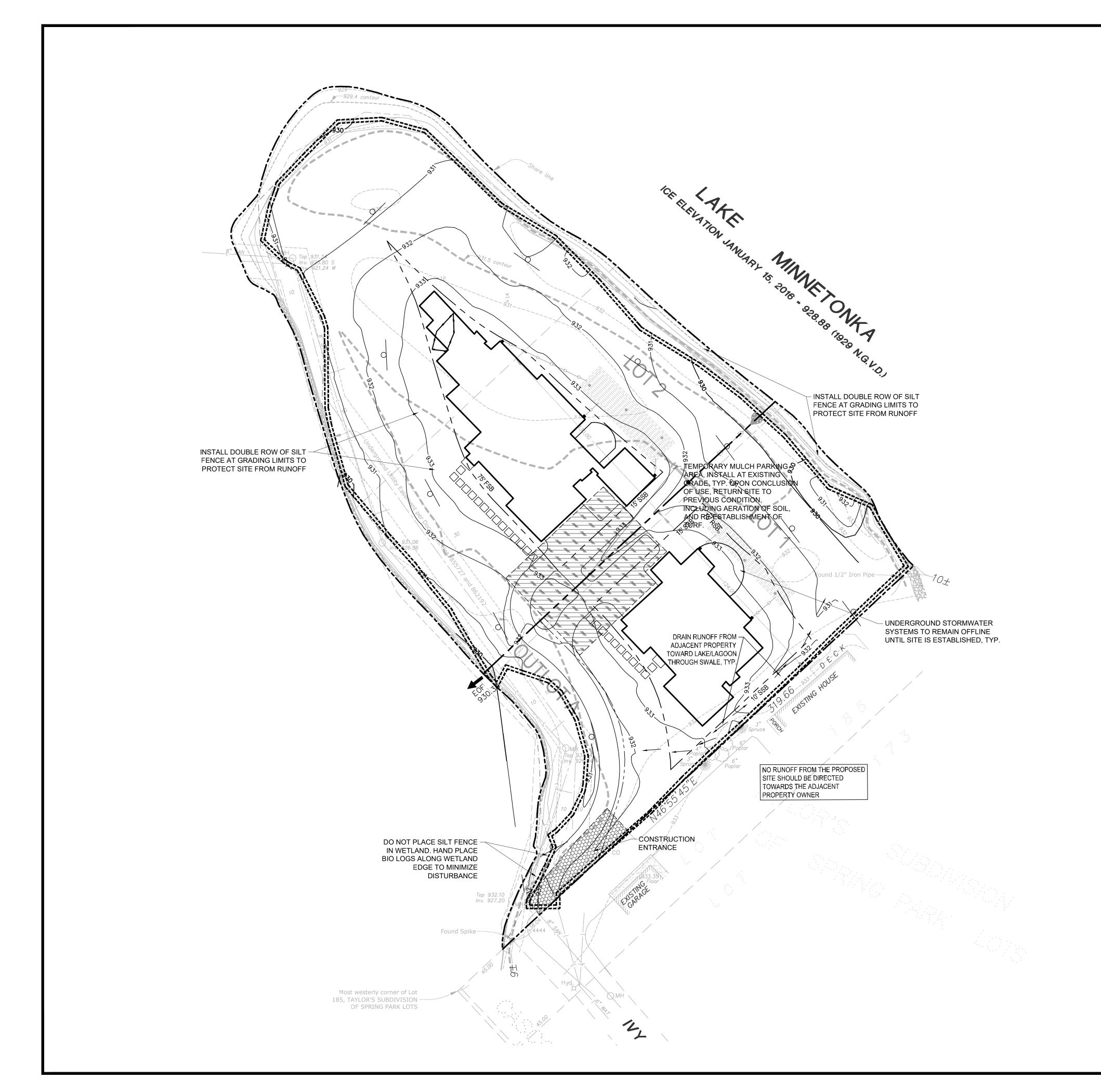




REVISION SUMMARY DATE DESCRIPTION

PROJECT NO.: 17059

SWPPP - EXISTING CONDITIONS



### SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. AN EROSION CONTROL PERMIT IS ALSO REQUIRED FROM THE CITY OF ORONO.

2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

### CITY OF ORONO EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES AND PROTECTION FENCING SHOULD BE INSTALLED BY THE CONTRACTOR AND MUST BE INSPECTED BY THE CITY PRIOR TO ANY DEMOLITION OR LAND DISTURBANCE. CONTRACTOR MUST PROVIDE MINIMUM 24-HOUR NOTICE PRIOR TO INSPECTION.

G R O U P 4931 W. 35TH ST. SUITE 200 ST. LOUIS PARK, MN 55416

952-250-2003

CivilSiteGroup.com Matt Pavek 763-213-3944



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER

UNDER THE LAWS OF THE STATE OF

DATE 04/26/18 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY DATE DESCRIPTION

03/22/17 SKETCH PLAN SUBMITTAL 07/19/17 PRELIMINARY PLAT REVIEW 10/18/17 CITY RESUBMITTAL 11/09/17 PLANNING COMMISSION COMMEN 02/20/18 CITY/WATERSHED RESUBMITTAL

03/09/18 CITY ENGINEERING REVISIONS 03/23/18 WATERSHED REVISIONS 04/24/18 WATERSHED REVISIONS 04/26/18 WATERSHED REVISIONS

REVISION SUMMARY DATE DESCRIPTION

ROJECT NO.: 17059

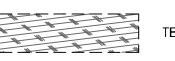
SWPPP - PROPOSED CONDITIONS

LEGEND:

----- 1125 ----- EX. 1' CONTOUR ELEVATION INTERVAL —1137——— 1.0' CONTOUR ELEVATION INTERVAL

INLET PROTECTION







EROSION CONTROL BLANKET

SILT FENCE / BIOROLL - GRADING LIMIT

DRAINAGE ARROW





# Minnesota Wetland Conservation Act **Notice of Decision**

Local Government Unit (LGU)	Address					
Minnehaha Creek Wate	15320 Minnetonka Blvd					
	Minnetonka, MN 55345					
1. PROJECT INFORMATION						
Applicant Name	Project Name		Date of	Application		
Lake West Development, LLC	Ivy Place, Orono		Application 7/19/2017	Number W17-34		
	(PIDs: 2011723420001		(Incomplete)			
	2011723420002, and 20	01172342000)	3/2/2018			
			(Incomplete) 3/23/2018			
			Complete			
			5/4/2018			
			Amended	<u> </u>		
Attach site locator map						
Type of Decision:						
☐ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing						
Replacement Plan Banking Plan						
Technical Evaluation Panel Findings and Recommendation (if any):						
Approve Appro	ve with conditions		Deny			
Summary (or attach):	Summary (or attach):					
See Attached TEP Findings						
2. LOCAL GOVERNMENT UNIT DECISION						
Date of Decision: May 17 <sup>th</sup> , 2018						
⊠ Approved □ A	approved with conditions	(include below)		Denied		

LGU Findings and Conclusions (attach additional sheets as necessary):

Joey Diederichs of Civil Site Group on the behalf of Lake West Development originally submitted an application for compensatory mitigation via wetland banking for the proposed permeant impacts to Wetlands A & B located at the properties (PIDs= 2011723420003, 2011723420002, 2011723420001) northeast of the terminus of Ivy Place in the City of Orono, Hennepin County, Minnesota. Legal description: Section 20, Township 117N, Range 23W. The application was initially received on July 19<sup>th</sup>, 2017, with a complete application received on March 23<sup>rd</sup>, 2018.

The March 23<sup>rd</sup>, 2018 application also included 150 square feet of temporary impact to Wetland A as the proposed construction limits for the driveway installation are within 2 feet of the Wetland Boundary.

W16-59 NOD dated October 31<sup>st</sup>, 2016 was issued confirming the wetland boundary and type (attached separately). Wetland A is fringe wetland to Lake Minnetonka, a Public Water.

The March 23<sup>rd</sup>, 2018 submittal provided a sequencing/alternatives analysis for avoidance & minimization for the proposed permanent wetland impacts. The applicant identified the wetland bank where the credits are proposed to be withdrawn from, known as the Mader Wetland Bank, located in the City of Minnetrista in the Minnehaha Creek Watershed District.

During the comment period the TEP met to discuss the proposed impacts. The TEP Findings are attached. At the direction of the TEP, the applicant amended the WCA application to omit the proposed permeant impacts to Wetland A. The amended application for 168 square feet of permeant impact to Wetland B and 150 square feet of temporary impact to Wetland A was received on May 4<sup>th</sup>, 2018.

MCWD approves the de minimis exemption for the 168 square feet of permanent impact to Wetland B per part 8420.0420, subpart 8 and approves the a no-loss determination for the 150 square feet of temporary impact to Wetland A per part 8420.04515.

This decision is valid for five years. A future project located on this property may require a permit from the MCWD.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for
			Withdrawal (sq. ft. or nearest
		_	.01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

Financial Assurance: For project-specific replacement that is not in-advance, a financial assurance
specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9
(List amount and type in LGU Findings).

Deed Recording: For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

Credit Withdrawal: For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

### LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as

specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.					
Name	Title				
Heidi Quinn	Permitting T	echnician			
Signature	Date	Phone Number and E-mail			
Haw Our	5/17/2018	(952) 641-4504 hquinn@minnehahacreek.org			

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

### 3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

C	nec	c	on	e.
			OIL	v.

Appeal of an LGU staff decision. Send	Appeal of LGU governing body decision.
petition and \$0 fee (if applicable) to:	Send petition and \$500 filing fee to:
Minnehaha Creek Watershed District	Executive Director
15320 Minnetonka Blvd	Minnesota Board of Water and Soil Resources
Minnetonka, MN 55345	520 Lafayette Road North
	St. Paul, MN 55155

### 4. LIST OF ADDRESSEES

<ul> <li>         ⊠ SWCD TEP member: Stacey Lijewski- Stacey.lijewski@hennepin.us          ≅ BWSR TEP member: Ben Carlson – ben.carlson@state.mn.us      </li> <li>         LGU TEP member (if different than LGU Contact):     </li> </ul>
DNR TEP member: Kate Drewry – kate.drewry@state.mn.us, Jason Spiegel –
jason.spiegel@state.mn.us
DNR Regional Office (if different than DNR TEP member): Becky Horton –
becky.horton@state.mn.us
WD or WMO (if applicable):
Applicant (notice only) and Landowner (if different): Joey Diederichs, Civil Site Group-
jdiederichs@civilsitegroup.com; Curt Fretham- curtf@lwestdev.com
Members of the public who requested notice (notice only): Melanie Curtis, City of Orono;
Christine Mattson, City of Orono; Jeremy Barnhart, City of Orono
Corps of Engineers Project Manager (notice only): Melissa Jenny –
Melissa.M.Jenny@usace.army.mil

### 5. MAILING INFORMATION

>For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA areas.pdf

> For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR TEP contacts.pdf

➤ Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess.	Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Ecol.	Div. Ecol. Resources
2115 Birchmont Beach Rd.	1201 E. Hwy. 2	Div. Ecol. Resources	261 Hwy. 15 South
NE	Grand Rapids, MN	1200 Warner Road	New Ulm, MN 56073
Bemidji, MN 56601	55744	St. Paul, MN 55106	-

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr regions.pdf

➤ For a list of Corps of Project Managers: <a href="www.mvp.usace.army.mil/regulatory/default.asp?pageid=687">www.mvp.usace.army.mil/regulatory/default.asp?pageid=687</a> or send to:

US Army Corps of Engineers St. Paul District, ATTN: OP-R 180 Fifth St. East, Suite 700 St. Paul, MN 55101-1678

▶ For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources

Wetland Bank Coordinator 520 Lafayette Road North St. Paul, MN 55155

### 6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☑ TEP Findings
Amended WCA Application
⊠ Site Plan
⊠ W16-59 NOD

### Minnesota Wetland Conservation Act Technical Evaluation Panel Findings Report

Date(s) of Site	April 18 <sup>th</sup> , 2018	LGU:	MCWD
Visit/Meeting: County:	Hennepin	LGU Contact:	Heidi Quinn
Project Name:	W17-34 Ivy Place	Phone #:	952-641-4504
Location of Project: (attach map if possible)	Casco Point, Orono PIDs: 2011723420001, 2011723420002, and 2011723420003	Email Address:	hquinn@minnehahacreek.org
TEP ATTENDEES:	OTHER ATTENDEES:	0	THER ATTENDEES:
LGU: Heidi Quinn, MCWI			
SWCD: Stacey Lijewski, Hennepin County			
BWSR: Ben Carlson			
DNR: Jason Spiegel			
The purpose of the TEP was single family home reside impact to Wetland A for filling of Wetland B. 150 that is 1.8' from the wetlawetland disturbance to the variance from the City of approving the Boundary of TYPE OF MEETING: Check of Ch	n-Site Phone Conference  MMENDATIONS 1:	cant has propose ts and 168 sf of pe ded for Wetland / ncluded as a prec ly acess point to to 6-59 NOD was issu  E-Mail	d 325 square feet (sf) of permanent ermanent impact and complete adjacnet to a proposed driveway aution as the plans do not propose ne properties and will require a led on October 31st, 2016
8420.0520, subpart 3 lmp The TEP concurred that to for the installation of two alternatives analysis. The beaches was not justified and a beach is not necess.  Per section C(4), if the LG wetlands, it must deny the	quirements of Wetland Replacement, specially a pact avoidance, section C. Alternatives and the alternatives analysis provided for the blood beach sandblankets did not meet impacted discussion concluded that the desire to least the impact is avoidable. Lake Minnet sary to provide or maintain riparian accession determines that a feasible and prudente replacement plan.	nalysis.  proposed 325 sf control  ct avoidance criter  impact a wetland  tonka can be acce  ss rights.  It alternative exist	of permanent impact to Wetland A ria per section C(2) and C(3) of the for the creation of two private ssed without impacting the wetland as that would avoid impacts to
168 sf of permanent imp	nat the applicant submit a revised WCA a act to Wetland B per part 8420.0420, sub act to Wetland A per part 8420.04515.	ppart 8 and reque	st a no-loss determination for the

Rev. 12/17/2013

<sup>&</sup>lt;sup>1</sup> TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

SIGNATURES			
Starey Lycuski	4/26/2018 Date	Ben Colon BWSR Representative	4/26/2018 Date
Do not concur		De not concur	
the own	4/25/18	Jun Especiel	4/26/18
LGU Representative	Date	DNR Representative	Date
Do not concur		Do not concur	

<sup>1</sup> TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

Rev. 12/17/2013

### **PART ONE: Applicant Information**

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: LAKE WEST DEVELOPMENT, LLC – CURT FRETHAM Mailing Address: 14525 HIGHWAY 7, SUITE #265, MINNETONKA, MN 55345

Phone: 612-720-5690

E-mail Address: CURTF@LWESTDEV.COM

Authorized Contact (do not complete if same as above):

**Mailing Address:** 

Phone:

E-mail Address:

Agent Name: CIVIL SITE GROUP - JOEY DIEDERICHS, EIT

Mailing Address: 4931 W. 35th STREET, #200, ST. LOUIS PARK, MN 55416

Phone: 612-719-1781

E-mail Address: JDIEDERICHS@CIVILSITEGROUP.COM

### **PART TWO: Site Location Information**

County: HENNEPIN City/Township: ORONO

Parcel ID and/or Address: 2011723420001-03

Legal Description (Section, Township, Range): S1/2 SEC.20 T.117 R.23

Lat/Long (decimal degrees): 44.92609167, -93.613530556

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): 2.16AC

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform 4345 2012oct.pdf

### **PART THREE: General Project/Site Information**

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted *prior to* this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

THE PROJECT BEING PROPOSED IS THE CONSTRUCTION OF 2 SINGLE FAMILY HOMES ON A CURRENTLY VACANT SITE. CONSTRUCTION OF THE HOMES WILL INCLUDE FILLING THE ENTIRETY OF AN EXISTING WETLAND (WETLAND B. OFFSITE MITIGATION THROUGH WETLAND BANK CREDITS FOR ALL FILLING WILL OCCUR. A BUFFER WILL BE CONSTRUCTED AROUND WETLAND A THAT WILL INLCUDE HIGH-QUALITY TREES AND NATIVE PLANTINGS.

### PART FOUR: Aquatic Resource Impact<sup>1</sup> Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

overhead view)	Resource Type (wetland, lake, tributary etc.)	drain or	Impact	Size of Impact <sup>2</sup>	Overall Size of Aquatic Resource <sup>3</sup>	Community Type(s) in Impact Area4	County, Major Watershed #, and Bank Service Area # of Impact Area
WETLAND B	WETLAND	FILL	Р	168sf	168sf	19B / NO VEG	7

If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

NONE

### **PART FIVE: Applicant Signature**

Check here if you are requesting a <u>pre-application</u> consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.
By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:

Date: S/1/18

I hereby authorize JOEY DIEDERICHS (CIVIL SITE GROUP) to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

<sup>1</sup> The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Minnesota Interagency Water Resource Application Form February 2014

Page 4 of 12

<sup>&</sup>lt;sup>2</sup>Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

<sup>&</sup>lt;sup>8</sup>This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A". <sup>4</sup>Use Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3<sup>rd</sup> Ed. as modified in MN Rules 8420.0405 Subp. 2. <sup>5</sup>Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

## Attachment C Avoidance and Minimization

**Project Purpose, Need, and Requirements.** Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

PROJECT PLANS, LOCATION AND OTHER INFORMATION CAN BE FOUND IN THE ATTACHED SET OF CIVIL PLANS.

THE PROPOSED PROJECT IS THE CONSTRUCTION OF TWO SINGLE FAMILY HOMES. GRADING, LANDSCAPE AND STORMWATER IMPROVEMENTS WILL OCCUR AS PART OF THIS PROJECT.

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

FILLING WETLAND B: THIS WETLAND IS BEING FILLED TO BECOME PART OF THE BUILDING PAD. AVOIDING WETLAND B WOULD NOT BE FEASIBLE WITH A PROPOSED HOME ANYWHERE ON THE SITE SIMILAR TO EXSITING HOMES ON ADJACENT SITES. THIS IS A LOW-QUALITY WETLAND WITH NO VEGETATION. SEE ATTACHED ALTERNATIVE EXHIBITS & DRAINAGE AREA MAP SHOWING THAT ANY DEVELOPMENT ON THE SITE CUTS OFF THE HYDROLOGY FROM THIS WETLAND.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

WETLAND B WILL BE FILLED IN ITS ENIRETY. WETLAND A WILL BE PROTECTED THROUGHOUT CONSTRUCTION BUT IN ANTICIPATION OF SOME TEMPORARY IMPACTS,

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

N/A - DOES NOT REALLY APPLY TO SINGLE FAMILY HOMES. THIS IS ONE OF THE FINAL RIPARIAN LOTS IN ORONO.

# Attachment D Replacement/Compensatory Mitigation

Complete this part *if* your application involves wetland replacement/compensatory mitigation <u>not</u> associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Service		Number of Credits	
1649	HENNEPIN	20	7	SWC	.0153	

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.

### SEE ATTACHED DOCUMENTATION

**Project-Specific Replacement/Permittee Responsible Mitigation**. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit <sup>1</sup>	Corps Mitigation Compensation Technique <sup>2</sup>	Acres	Credit % Requested	Credits Anticipated <sup>3</sup>	County	Major Watershed #	Bank Service Area #

<sup>&</sup>lt;sup>1</sup>Refer to the name and subpart number in MN Rule 8420.0526.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile.....) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

<sup>&</sup>lt;sup>2</sup>Refer to the technique listed in St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota.

<sup>&</sup>lt;sup>3</sup>If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

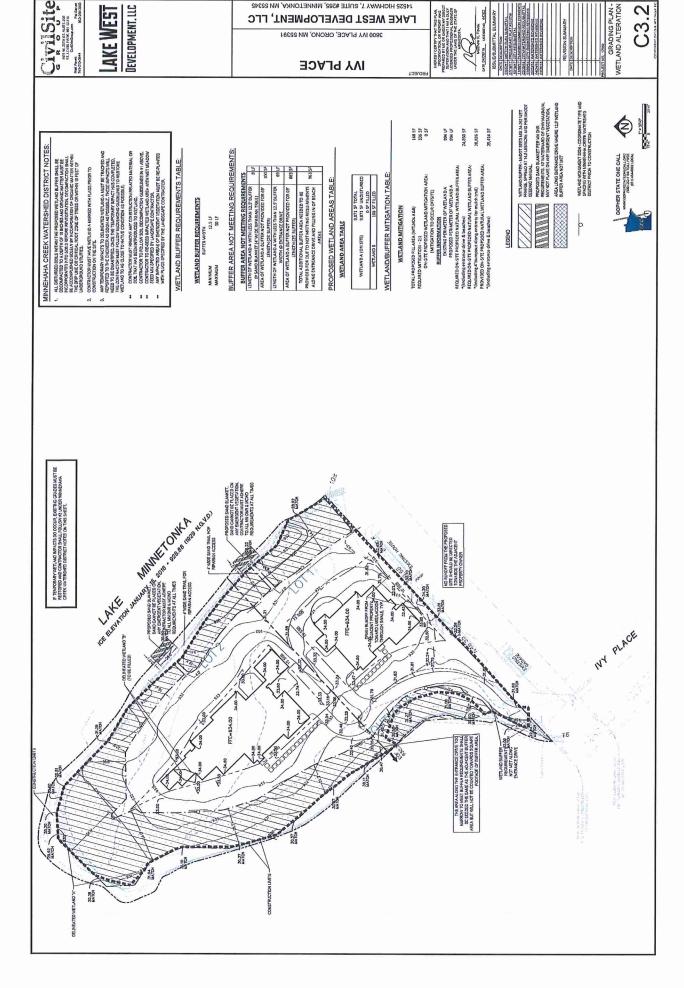
Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual
    or organization that funded the restoration and the individual or organization notifies the local government unit in
    writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of
  Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof
  of such recording to the LGU and the Corps.

Applicant or Representative:	litie:
Signature:	Date:



14525 HIGHWAY 7, SUITE #265, MINNETONKA, MN 55345

# Minnesota Wetland Conservation Act Notice of Decision

Local Government Unit (LGU)	Address	nlra Dhid			
Minnehaha Creek Wa	15320 Minneto Minnetonka, N				
	1. PROJECT INFORM	IATION			
Applicant Name  Lake West Development	Project Name Ivy Place Lots	Date of Applic 10/21/2016 (Incomplete) 10/31/2016 (Complete)		Application Number W16-59	
Attach site locator map					
Type of Decision:					
✓ Wetland Boundary or Type  ☐ Replacer	☐ No-Loss nent Plan	☐ Exemption ☐ Banking Plan		Sequencing	
Technical Evaluation Panel Finding	gs and Recommendation (it	f any):			
□ Approve     □ Approve     □ Approve    □ Approve    □ Approve    □ Approve    □ Approve    □ Approve    □ Approve    □ Approve    □ Approve    □ Approve	prove with conditions		☐ Deny		
2. LOC	AL GOVERNMENT U	NIT DECISION			
Date of Decision: 12/1/2016					
☑ Approved □	Approved with conditions	s (include below)	[	☐ Denied	
LGU Findings and Conclusions (a	ttach additional sheets as ne	ecessary):			
Lake West Development LLC ha wetlands located at the properties northeast of the terminus of Ivy F description: Section 20, Township October 21 <sup>st</sup> , 2016.	s applied for a wetland bou (PIDs=2011723420003, 2 Place in the City of Orono, I p 117N, Range 23W. The b	ndary & type confir 2011723420002, 20 Hennepin County, N boundary & type app	11723420001 Minnesota. Le proval was re	egal equested	
A wetland delineation was conducted by ISG on October 10 <sup>th</sup> , 2016. Precipitation levels were seasonally above average. A complete delineation report and WCA application were submitted to MCWD on October 31 <sup>st</sup> , 2016. Two wetlands were delineated within the project area. Wetland A was identified as a Type 2, fresh (wet) meadow wetland. The southwest boundary of Wetland A was restored by the City of Orono in 2011 with a native seed mix. Wetland B was identified as a Type 1, Seasonally Flooded Basin. Wetland A is associated with Lake Minnetonka, a public water.					
The boundaries were reviewed by MCWD on October 17 <sup>th</sup> , 2016. MCWD was in agreement with the boundaries and types identified onsite. A TEP meeting was held on November 4 <sup>th</sup> to discuss and confirm the wetland boundaries.					
MCWD approves the wetland in the delineation report submit A future project located on this	ted on October 31st, 201	6. This decision is	s valid for five		

For Replacement Plans using credits from the State Wetland Bank: Bank Service Area Bank Account # County Credits Approved for Withdrawal (sq. ft. or nearest .01 acre) Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following: Financial Assurance: For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings). Deed Recording: For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located. Credit Withdrawal: For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan. Wetlands may not be impacted until all applicable conditions have been met! LGU Authorized Signature: Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request. Name Rachel Workin Permitting Technician Signature Date Phone Number and E-mail 12/1/2016 (952) 641-4518 rworkin@minnehahacreek.org THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands. Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts. This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision. 3. APPEAL OF THIS DECISION Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated: Check one: Appeal of an LGU staff decision. Send Appeal of LGU governing body decision. petition and \$0 fee (if applicable) to: Send petition and \$500 filing fee to: Minnehaha Creek Watershed District Executive Director Minnesota Board of Water and Soil Resources 15320 Minnetonka Blvd

Minnetonka, MN 55345

520 Lafayette Road North St. Paul, MN 55155

### 4. LIST OF ADDRESSEES

SWCD TEP member: Stacey Lijewski – stacey.lijewski@hennepin.us; Tony Brough-
tony.brough@hennepin.us  BWSR TEP member: Ben Meyer – ben.meyer@state.mn.us  LGU TEP member (if different than LGU Contact):  DNR TEP Becky Horton- becky.horton@state.mn.us; Kate Drewry-
kate.drewry@state.mn.us  ☐ DNR Regional Office (if different than DNR TEP member): ☐ WD or WMO (if applicable): ☐ Applicant (notice only) and Landowner (if different): curtf@lwestdev.com; kayla@lwestdev.com ☐ Members of the public who requested notice (notice only): ISG (Lucas Mueller)-
lucas.mueller@is-grp.com; City of Orono (Christine Mattson)- cmattson@ci.orono.mn.us; City
of Orono (Melanie Curtis) mcurtis@ci.orono.mn.us; City of Orono (Mike Gaffron)-
mgaffron@ci.orono.com  Corps of Engineers Project Manager (notice only): Melissa Jenny—  melissa.m.jenny@usace.army.mil  BWSR Wetland Bank Coordinator (wetland bank plan applications only)

### 5. MAILING INFORMATION

For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA areas.pdf

>For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR TEP contacts.pdf

➤ Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess.	Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Ecol.	Div. Ecol. Resources
2115 Birchmont Beach Rd.	1201 E. Hwy. 2	Div. Ecol. Resources	261 Hwy. 15 South
NE	Grand Rapids, MN	1200 Warner Road	New Ulm, MN 56073
Bemidji, MN 56601	55744	St. Paul, MN 55106	

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr regions.pdf

➤ For a list of Corps of Project Managers: <a href="www.mvp.usace.army.mil/regulatory/default.asp?pageid=687">www.mvp.usace.army.mil/regulatory/default.asp?pageid=687</a> or send to:

US Army Corps of Engineers St. Paul District, ATTN: OP-R 180 Fifth St. East, Suite 700 St. Paul, MN 55101-1678

➤ For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources

Wetland Bank Coordinator 520 Lafayette Road North St. Paul, MN 55155

### 6. ATTACHMENTS

0. ATTACHIVIENTS	
In addition to the site locator map, list any other attachments:	
<b>◯</b> Wetland Boundary Figure	
<b>▼ TEP Meeting Notes</b>	



ISG

PN:16-19692 Source(s):
Municipaties (MNDOT, 6/24/2016)
Lakes (MN DNR, July, 2008)
Counties (MN DNR, July 2013)
PLSS (MnGeo/USGS)

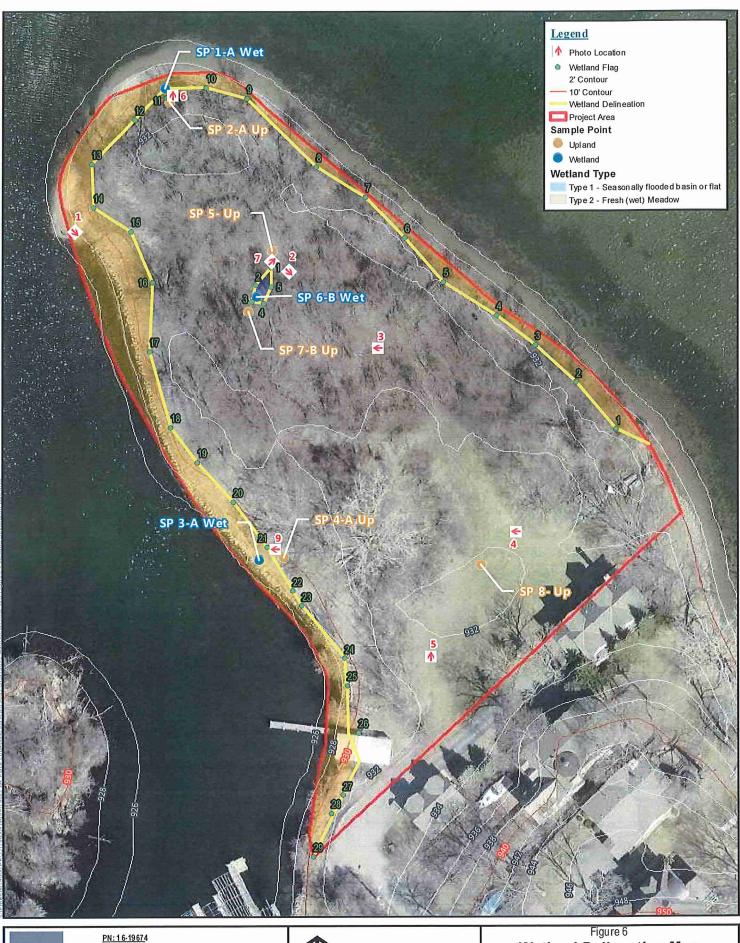


3,000 6,000 12,000 Feet

Tuesday, October 11, 2016

Figure 1 **Project Location Map**Ivy Place Lots

Wayzata, Hennepin County, Minnesota



Source(s): Hennepin County Aerial (2015) Wetland Delineation (ISG, 2016)



Wetland Delineation Map

Ivy Place Lots Wayzata, Hennepin County, Minnesota

# Minnesota Wetland Conservation Act Technical Evaluation Panel Findings Report

Date(s) of Site Visit/Meeting: County: Project Name: Location of Project: (attach map if possible)	11/04/20 Hennepin Ivy Place	<u>n</u> Lots	LGU: LGU Contact: Phone #: Email Address:	MCWD  Rachel Workin  952-641-4518  rworkin@minnehal	nacreek.org
TEP ATTENDEES: LGU: Rachel Workin (MC	WD)	OTHER ATTENDEES: Wes Boll (Wenck Associate		THER ATTENDEES:	
SWCD:	*				
BWSR: Ben Meyer	<del></del>				
DNR:					
TYPE OF MEETING: Check all	ke West De rono.   applicable -Site	evelopment's application for a		ry and type determina  Other: Off-site	ation for the lvy
		dary and type for the Ivy Plac  The TEP determined that:	e Lots (PID= 20117	723420003, 20117234	120002, and
<ol> <li>Wetland fill placed pre-</li> <li>The site did not exhibit</li> <li>Wetland B would not be</li> <li>Future development on</li> <li>On-site credit for wetlan</li> <li>On-site credit for wetlan</li> </ol>	WCA is not wetland hy e considere the site sh nd replacer nd replacer		profile; Inless unavoidable Ipland areas is reg Is regulated under	e; and gulated under 8420.09	526 Subp. 7;
SIGNATURES .			<del></del>		
SWCD Representative  Do not concur	1		BWSR Representative		

Rev. 12/17/2013

<sup>&</sup>lt;sup>1</sup> TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

Mend	Wor 11-716		
LGU Representative	Date	<b>DNR Representative</b>	Date
Do not concur		Do not concur	

<sup>&</sup>lt;sup>1</sup> TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

# LAKE WEST DEVELOPMENT, LLC







# Buffer Maintenance Plan

Ivy Place 3600 Ivy Place, Orono, MN

> April 20, 2018 AE Comm #14761







#### **Prepared For:**

Lake West Development, LLC 14525 Highway 7, Suite 265 Minnetonka, MN 55356

Perry Ryan, Vice President

Phone: 952-653-1359

Email: perry@lwestdev.com

#### **Prepared By:**

Tina Justen Environmental Scientist

Ben Hodapp Environmental Services Manager

Anderson Engineering of Minnesota, LLC 13605 1st Avenue North Suite 100 Plymouth, MN 55441 Phone: (763) 412-4000

Fax: (763) 412-4000

Website: www.ae-mn.com

### **List of Appendices**

Appendix A Site Plan

Appendix B State Seed Mix 34-262

Appendix C MCWD Wetland Buffer Template

#### **Disturbed Wetland Buffer Planting Plan**

The wetland buffer that shall be established and recorded for the lot split and residential development at 3600 lvy Place in Orono, MN will have an average applied buffer width of 25 feet with a minimum width of 12.5 feet. The proposed location of the buffer is depicted on the Site Plan included in Appendix A.

Prior to construction of the lots, a silt fence shall be installed along the edge of the area to be disturbed by construction, as indicated on the Site Plan in Appendix A. The silt fence shall be inspected and maintained until the completion of construction and re-establishment of vegetation, as applicable.

In the fall of 2018, upon completion of construction, the disturbed areas located within the wetland buffer depicted in Appendix A shall be planted with a native wet prairie seed mix according to the specifications listed below. Note that the undisturbed areas within the upland buffer will not require seeding.

- 1. Decompact the soil in the disturbed buffer areas by incorporating organic matter to a depth of 18 inches, as required by the MCWD. Decompaction shall be accomplished solely by incorporation of organic matter within the drip line or critical root zone of trees or within 10 feet of underground utilities
- 2. Purchase 11 permanent buffer monuments from MCWD and install along the edge of the buffer where required as depicted on the attached site plan.
- 3. Purchase a native wet prairie seed mix such as State Mix 34-262 (included in Appendix B) or equivalent mix of native species included in MCWD's *Wetland Buffer Template* document (included in Appendix C)
- 4. Drill or broadcast specified seed mix at recommended rate
- 5. After seeding, roll, tamp or loosely rake the seeded areas to ensure proper seed to soil contact and to lightly cover seed with approximately 1/2 to 1/4 inch of soil. Seeds should be no deeper than 1/4 inch.
- 6. Apply an erosion control blanket or weed free mulch at a rate of 1 ton/acre within the seeded area. Mulch should be ½ to 1 ½ inch deep. Mulch should be crimped into the soil to a depth of 1 to 2 inches immediately after it is applied. After mulch has been spread, apply water with a fine spray.
- After germination of the broadcast seeding, hand-seed the specified mix into the disturbed areas that did not germinate, and lightly rake the hand spread seed into the soil. Supplement planted area with suitable native potted plants as desired.

#### **Maintenance & Monitoring Plan**

The seeded buffer area will require maintenance and monitoring for up to five years to prevent growth of unwanted non-native/invasive species and to promote native species development. The following management techniques will be employed to ensure successful establishment:

#### **Monitoring Approach**

The site will be visited twice during the growing season by a biologist, landscape architect or other qualified professional. Site visits will generally be mid-June and early August. Conditions will be documented and issues noted. Issues will be communicated to owner along with recommended corrective actions.

#### **Typical Maintenance**

#### **Non-native and Invasive Plant Control**

Eradication of non-native and invasive species will be conducted as necessary to minimize competition that could prevent the establishment of native species. Non-native and invasive plants should be removed by hand or controlled with proper herbicides, as approved by MCWD or a restoration specialist.

#### Other Pests

Insects, vertebrate pests, disease and herbivore predation will be monitored. Generally speaking, there will be a moderate threshold of tolerance before control measures are considered. All applicable federal and state laws and regulations will be closely followed.

#### **Fertilization**

Fertilizer will not be applied in the wetland buffer.

#### Mowing

Mowing is an essential step in the establishment of native vegetation. Mowing at least twice during the first growing season and at least once during the second growing season is necessary for native vegetation establishment. Mowing shall commence when weed species reach 6-10 inches, before the plants form flowering heads (weeds usually reach 12-14 inches). The mowing height shall be set so that the vegetation in the restoration area is left at minimum height of 5 inches after mowing is complete. Mowing height should be raised as native plants establish. Primary goals of mowing are to allow sufficient light to reach native plant seedlings and preventing weed seed production. Care should be taken to not mow desirable species in the planting if possible (the species listed in the seed mix). For example if the weed species are 12 to 14 inches and the native species are 7 to 8 inches high, the mowing height should be set at 9-inches.

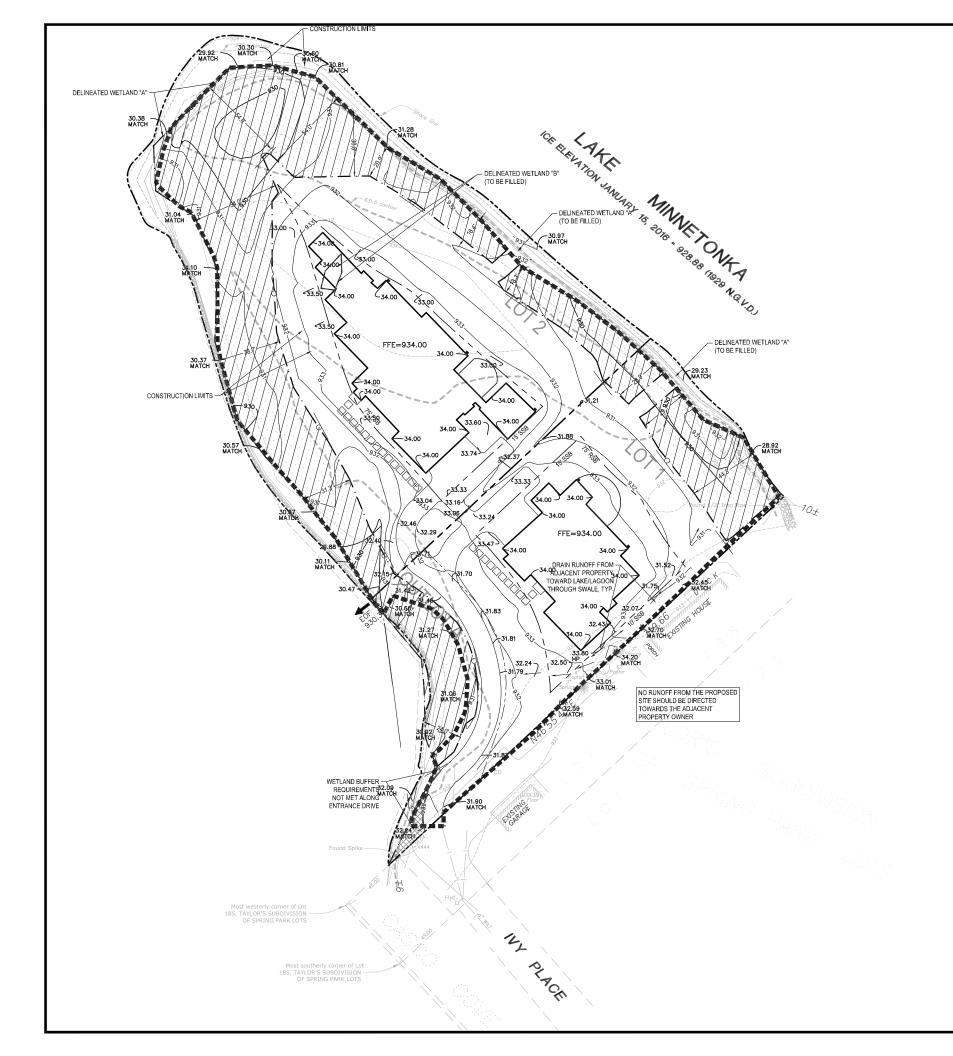
#### Annual Wetland Buffer Inspection Report

An annual Wetland Buffer Inspection Report shall by prepared and submitted to MCWD before November 15<sup>th</sup> of each year for five years (2019-2023), unless MCWD determines that the buffer is adequately established after year three. The Annual Buffer Inspection Report shall include the following:

- Photos of the buffer area taken during the growing season
- A site plan that depicts the location of the buffer as well as the photo vantage points
- Notes on areas of bare soil or erosion, areas of invasive vegetation, and location and type of any encroachments on the buffer, if applicable
- A list of dominant plant species and estimated percent cover
- A comparison of the species present to the approved planting/seeding plan
- A written narrative that identifies future management strategies

## **APPENDIX A**

Site Plan



#### MINNEHAHA CREEK WATERSHED DISTRICT NOTES:

- ALL DISTURBED SOILS WITHIN THE PROPOSED WETLAND BUFFER SHALL BE DECOMPACTED TO A DEPTH OF 18 INCHES AND ORGANIC MATTER MUST BE INCORPORATED INTO SOILS BEFORE REVEGETATION DECOMPACTION SHALL BE ACCOMPLISHED SOLELY BY INCORPORATION OF ORGANIC MATTER WITHIN THE DRIP LINE OR CRITICAL ROOT ZONE OF TREES OR WITHIN 10 FEET OF UNDERGROUND UTILITIES.
  - CONTRACTOR MUST HAVE WETLAND A MARKED WITH FLAGS PRIOR TO CONSTRUCTION ON THE SITE.
- ANY TEMPORARY IMPACTS TO DELINEATED WETLAND A MUST BE TRACKED AND REPORTED TO THE ENGINEER AS SOON AS POSSIBLE. THESE IMPACTS WILL NEED TO BE QUANTIFIED. ONCE THE TEMPORARY IMPACT HAS COMPLETED, THE CONTRACTOR MUST FOLLOW SEQUENCING GUIDELINES TO RESTORE WETLAND TO AS CLOSE TO NATIVE CONDITION AS POSSIBLE:
- CONTRACTOR MUST REMOVE ANY CONSTRUCTION RELATED MATERIAL OR SOIL THAT HAS BEEN INTRODUCED TO WETLAND.

  CONTRACTOR TO FOLLOW SOIL DECOMPACTION GUIDELINES IN #1 ABOVE.
- CONTRACTOR TO FOLLOW SOIL DECOMPACTION SUIDELINES IN #1 ABOVE.

  CONTRACTOR TO RE-SEED IMPACTED WETLAND AREA WITH WET MEADOW

  SEED MIX SPECIFIED BY LANDSCAPE CONTRACTOR.
- ANY IMPACTED AREAS OF EMERGENT VEGETATION MUST BE RE-PLANTED WITH PLUGS SPECIFIED BY THE LANDSCAPE CONTRACTOR.

#### WETLAND BUFFER REQUIREMENTS TABLE:

#### WETLAND BUFFER REQUIREMENTS

BUFFER WIDTH

 MINIMUM
 12.5 LF

 MAXIMUM
 50 LF

 AVERAGE
 25 LF

#### BUFFER AREA NOT MEETING REQUIREMENTS:

#### BUFFER AREA NOT MEETING REQUIREMENTS

BUFFER AREA NUT WEETING REQUIREM	CIN I 2	
LENGTH OF WETLAND A WITH LESS THAN 12.5' BUFFER	24	ı.
WIDTH @ BEACH	24	Li
AREA OF WETLAND A BUFFER NOT PROVIDED FOR 69'	300	SE
LENGTH (25' BUFFER)	300	3
LENGTH OF WETLAND A WITH LESS THAN 12.5' BUFFER	69	
WIDTH @ ENTRANCE DRIVE	05	LF
AREA OF WETLAND A BUFFER NOT PROVIDED FOR 69'	863	c F
LENGTH (25' BUFFER)	603	эг
TOTAL ADDITIONAL BUFFER AREA NEEDED TO BE		
PROVIDED FOR DUE TO NOT MEETING REQUIREMENTS	1163	c E
ALONG ENTREANCE DRIVE AND FILLING IN OF BEACH	1103	٦
AREAS		

#### PROPOSED WETLAND AREAS TABLE:

#### WETLAND AREA TABLE

	9,871 SF	TOTAL
WETLAND A (ON SITE)	9,546 SF	UNDISTURBED
	325 SF	FILLED
WETLAND B	168 SF	FILLED

#### WETLAND/BUFFER MITIGATION TABLE:

#### WETLAND MITIGATION

TOTAL PROPOSED FILL AREA (WTLNDs A&B)

REQUIRED MITIGATION - 2:1

ON-SITE PROPOSED WETLAND MITIGATION AREA:

(MITIGATION TO OCCUR OFFSITE)

BUFFER INFORMATION

EXISTING PERIMETER OF WETLAND A

PROPOSED PERIMETER OF WETLAND A

REQUIRED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:

\*(including entrance drive & beaches)
REQUIRED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:
\*(including 4' bumpout along entirety for mulch trail)
PROVIDED ON-SITE PROPSOED NATURAL WETLAND BUFFER AREA:

\*(including entrance drive & beaches) 29,012 SF

#### LEGEND



WETLAND BUFFER - MnDOT SEED MIX 34-262 WET PRAIRIE. SPREAD AT 14.5 LBS/ACRE AND PER MnDOT SEEDING MANI (4)



AREA LONG ENTRANCE DRIVE WHERE 12.5' WETLAND BUFFER AREA NOT MET



WETLAND MONUMENT SIGN - COORDINATE TYPE AND SPACING WITH MINNEHAHA CREEK WATERSHED DISTRICT PRIOR TO CONSTRUCTION







ILC

DEVELOPMENT,

C

PLA

3600 IVY F

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS SPECHAGE BY ME OR UNDER MY DIREC SUPERVISION AND THAT IAM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Matthew R. Pavek
ATE 03/23/18 LICENSE NO. 442

DATE 03/23/18 LICENSE NO. 44263
ISSUE/SUBMITTAL SUMMARY

DATE DESCRIPTION

3/22/17 SKETCH PLAN SUBMITTAL

7/19/11 PRELIMINARY PLAT REVIEW

10/18/17 CITY RESUBMITTAL

11/09/17 PLANNING COMMISSION COMMENTS

2/20/18 CITY/WATERSHED RESUBMITTAL

3/30/9/18 CITY PKIGNFERING REVUSIONS

11/09/17 PLANNING COMMISSION COMMENT 02/2018 CITY MATERSHED RESUBMITTAL 03/09/18 CITY ENGINEERING REVISIONS 03/23/18 WATERSHED REVISIONS

REVISION SUMMARY

GRADING PLAN - WETLAND ALTERATION

C3.2

## **APPENDIX B**

State Seed Mix 34-262

34-262 Wet Prairie

Common Name	Scientific Name	Rate (lb/ac)	Rate (kg/ha)	% of Mix (by weight)	Seeds/ sq ft
Virginia wild rye	Elymus virginicus	1.75	1.96	12.07%	2.70
fringed brome	Bromus ciliatus	1.50	1.68	10.38%	6.08
big bluestem	Andropogon gerardii	1.00	1.12	6.89%	3.67
switchgrass	Panicum virgatum	0.75	0.84	5.16%	3.85
Indian grass	Sorghastrum nutans	0.50	0.56	3.44%	2.20
prairie cordgrass	Spartina pectinata	0.50	0.56	3.41%	1.20
fowl bluegrass	Poa palustris	0.20	0.22	1.39%	9.60
tall manna grass	Glyceria grandis	0.15	0.17	1.02%	3.80
fowl manna grass	Glyceria striata	0.11	0.12	0.73%	3.50
<b>3</b>	Calamagrostis			011 0 10	
bluejoint	canadensis	0.04	0.04	0.27%	4.00
	Grasses Subtotal	6.50	7.29	44.76%	40.60
fox sedge	Carex vulpinoidea	0.10	0.11	0.66%	3.50
dark green bulrush	Scirpus atrovirens	0.10	0.11	0.72%	17.74
Broad-leaved Wooly	Compac an overest	51.5	<b>5</b> 11.1	011270	
Sedge	Carex pellita	0.05	0.06	0.32%	0.47
woolgrass	Scirpus cyperinus	0.03	0.03	0.18%	16.00
tussock sedge	Carex stricta	0.02	0.02	0.17%	0.48
	Sedges & Rushes	0.02	0.02	011170	0.10
	Subtotal	0.30	0.34	2.05%	38.19
Canada tick trefoil	Desmodium canadense	0.50	0.56	3.41%	1.00
golden alexanders	Zizia aurea	0.25	0.28	1.76%	1.03
blue vervain	Verbena hastata	0.15	0.17	1.06%	5.25
marsh milkweed	Asclepias incarnata	0.08	0.09	0.55%	0.14
maron minwood	Pycnanthemum	0.00	0.00	0.0070	0114
Virginia mountain mint	virginianum	0.08	0.09	0.55%	6.50
	Symphyotrichum	0.00	0.00	0.0070	5.55
red-stemmed aster	puniceum	0.08	0.09	0.56%	2.40
flat-topped aster	Doellingeria umbellata	0.05	0.06	0.34%	1.20
autumn sneezeweed	Helenium autumnale	0.05	0.06	0.35%	2.39
	Helianthus				
sawtooth sunflower	grosseserratus	0.05	0.06	0.38%	0.30
spotted Joe pye weed	Eutrochium maculatum	0.04	0.04	0.30%	1.50
Canada anemone	Anemone canadensis	0.03	0.03	0.21%	0.09
common boneset	Eupatorium perfoliatum	0.03	0.03	0.23%	2.00
bunched ironweed	Vernonia fasciculata	0.03	0.03	0.23%	0.30
grass-leaved goldenrod	Euthamia graminifolia	0.02	0.02	0.11%	2.00
great blazing star	Liatris pycnostachya	0.02	0.02	0.17%	0.10
g. ca. p.ag c.a.	Veronicastrum	0.02	0.02	<b>G</b> 111 / G	00
Culver's root	virginicum	0.02	0.02	0.14%	6.00
great lobelia	Lobelia siphilitica	0.01	0.01	0.05%	1.40
blue monkey flower	Mimulus ringens	0.01	0.01	0.05%	6.40
bide memory newer	Forbs Subtotal	1.50	1.68	10.45%	40.00
Oats	Avena sativa	6.20	6.95	42.74%	2.76
Juio	Cover Crop Subtotal	6.20	6.95	42.74%	2.76
	Total	14.50	16.25	100.00%	121.55
Purpose:					
Planting Area:					rest
	Provinces. Mn/DOT Distr	icts 2(west), 3B	, 4, wetro, 6, 7 &	λ <b>б</b> .	

Back to Table 3

## **APPENDIX C**

# MCWD Wetland Buffer Template

TYPICAL WETLAND PLAN WITHOUT BUFFER



Rain from mowed lawn carries fertilizer, pet waste and lawn clippings into the wetland.

💾 Wetland edge

Excess nutrients from unbuffered lawn favors growth of monoculture of invasive species in wetland.

TYPICAL
WETLAND
SECTION
WITHOUT
BUFFER

30% evaporation

15% infiltration

Shallow rooted mowed lawn:

- Dramatically lower infiltration and higher runoff from shallow rooted lawns compared to deep rooted buffers.
- Little ground water recharge.
- Little protection from erosion and sedimentation.
- Little nutrient and sediment interception before runoff enters wetland.
- Little wildlife habitat value.
- Unnatural, sterile, lifeless aesthetic.

55% runoff

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# WETLAND BUFFER TEMPLATE

Sheet 1 of 5 Produced 01/2004 Prepared for:

#### Minnehaha Creek Watershed District

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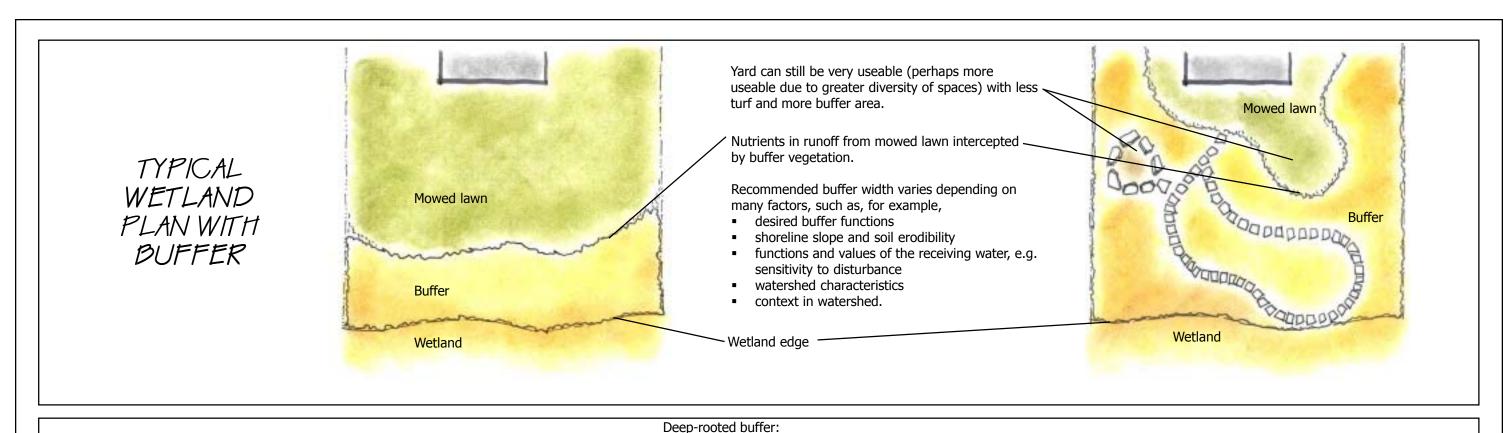


Prepared by:

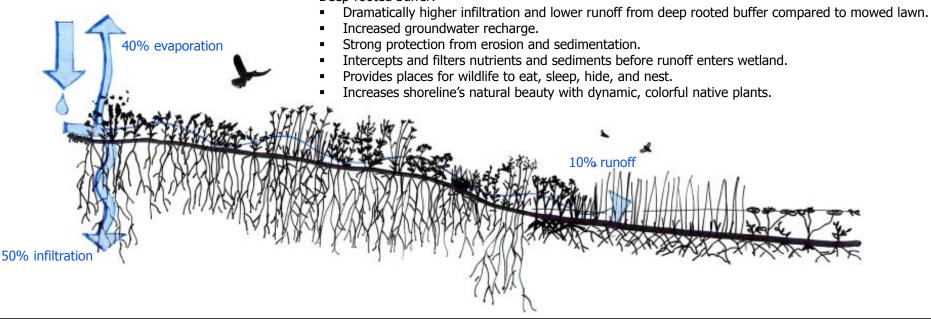
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TYPICAL
WETLAND
SECTION
WITH
BUFFER



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# WETLAND BUFFER TEMPLATE

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# COMMON WETLAND BUFFER PLANTS

#### **NATIVE BUFFER PLANTS - HERBACEOUS**

Scientific Name	<b>Common Name</b>	Sun or Shade	Height (ft.)	<b>Moisture Regime</b>
Andropogon gerardii	Big Bluestem	Sun, partial shade	2-6	um, ud
Arisaema triphyllum	Jack in the Pulpit	Partial shade, shade	1-2	w, um
Asarum canadense	Wild Ginger	Partial shade, shade	0.5	um
Aster macrophyllus	Large Leaved Aster	Sun, partial shade, shade	1-2	um, ud
Aster novae-angliae	New England Aster	Sun, partial shade, shade	3-5	w, um
Aster umbellatus	Flat-Topped Aster	Sun, partial shade	3-4	w, um
Carex bebbii	Bebb's Sedge	Sun, partial shade	2	w, um
Carex comosa	Bottlebrush Sedge	Sun, partial shade	3	f, w
Carex crinita	Fringed Sedge	Sun, partial shade	3	f, w
Carex vulpinoidea	Fox Sedge	Sun, partial shade	1-3	w, um
Elymus hystrix	Bottlebrush Grass	Partial shade, shade	2-4	w, um, ud
Eupatorium maculatum	Joe Pye Weed	Sun, partial shade	3-6	w, um
Eupatorium perfoliatum	Boneset	Sun, partial shade	2-4	w, um
Helenium autumnale	Sneezeweed	Sun, partial shade	2-5	w, um
Hydrophyllum virginianum	Virginia Waterleaf	Partial shade, shade	1	um
Liatris ligulistylus	Meadow Blazing Star	Sun, partial shade, shade	2-3	w, um
Lobelia siphilitica	Blue Lobelia	Sun, partial shade	1-3	w, um
Matteuccia struthiopteris	Ostrich Fern	Shade	2-4	w, um
Onoclea sensibilis	Sensitive Fern	Sun, partial shade	2	w, um
Osmunda claytoniana	Interrupted Fern	Partial shade, shade	3-4	w, um
Physostegia virginiana	Obedient Plant	Sun, partial shade, shade	2-4	f, w, um
Podophyllum peltatum	May Apple	Partial shade, shade	1-2	um
Silphium perfoliatum	Cup Plant	Sun, partial shade	4-7	w, um
Smilacina racemosa	False Solomon's Seal	Partial shade, shade	2	um
Solidago flexicaulis	Zig-Zag Goldenrod	Partial shade, shade	1-2	um, ud
Solidago rigida	Rigid Goldenrod	Sun, partial shade	1-5	um, ud
Spartina pectinata	Prairie Cord Grass	Sun	4-6	w, um
Thalictrum dioicum	Early Meadow Rue	Partial shade, shade	1-2	um
Verbena hastata	Blue Vervain	Sun, partial shade	2-5	w, um

## NATIVE FRINGE PLANTS

NALITAE LETINGE EF		0 0 1		
Scientific Name	Common Name	Sun or Shade	Height (ft.)	Moisture Regin
Acorus calamus	Sweet Flag	Sun	2-3.5	f, w
Carex lacustris	Lake Sedge	Sun, partial shade	2-4	f, w
Iris versicolor	Blue Flag Iris	Sun, partial shade	2-3.5	f, w
Mimulus ringens	Monkey Flower	Sun, partial shade	1-3	f, w
Pontedaria cordata	Pickerel Weed	Sun, partial shade	2-3	f
Sagittaria latifolia	Arrowhead	Sun, partial shade	2-3.5	f
Scirpus acutus	Hardstem Bulrush	Sun	3-9	d, f
Scirpus pungens	Three-square bulrush	Sun	2-4	f, w
Scirpus validus	Hardstem Bulrush	Sun	3-9	d, f
Sparganium eurycarpum	Bur Reed	Sun	2-3.5	f
Zizania aquatica	Wild Rice	Sun	6-10	d, f

#### **NATIVE BUFFER PLANTS - TREES AND SHRUBS**

Scientific Name	<b>Common Name</b>	Sun or Shade	Height (ft.)	<b>Moisture Regime</b>
Acer rubrum	Red Maple	Sun, partial shade	40-60	w, um
Alnus incana spp. rugosa	Speckled Alder	Sun, partial shade	15-30	W
Aronia melanocarpa	Black Chokeberry	Sun, partial shade, shade	3-6	w, um, ud
Betula nigra	River Birch	Sun	50-70	w, um, ud
Celtis occidentalis	Hackberry	Sun, partial shade	60-100	um
Cephalanthus occidentalis	Button Bush	Sun, partial shade	6-12	f, w
Cornus sericea	Red Osier Dogwood	Sun, partial shade, shade	6-12	w, um, ud
Populus deltoides	Eastern Cottonwood	Sun, partial shade	90	w, um, ud
Quercus bicolor	Swamp White Oak	Sun, partial shade	75-100	w, um
Salix exigua	Sandbar Willow	Sun	5-9	f, w
Salix humilis	Prairie Willow	Sun	3-9	w, um, ud
Sambucus canadensis	Common Elderberry	Sun, partial shade, shade	3-12	w, um
Sambucus pubens	Red Elderberry	Partial shade, shade	8-10	um
Spiraea alba	Meadowsweet	Sun, partial shade	2-5	f, w
Thuja occidentalis	Northern White Cedar	Sun, partial shade	40-60	w, um

#### INTRODUCED PLANTS AND CULTIVARS

INTRODUCED I EARLIS AND COLITARS				
Scientific Name	Common Name	Sun or Shade	Height (ft.)	Moisture Regime
Anemone spp.	Anemones	Sun, partial shade	1-3	um
Astilbe spp.	Astilbe	Sun, partial shade	1.5-3	um
Brunnera macrophylla	Brunnera	Partial shade, shade	1-1.5	w, um, ud
Calamagrostis x acutlflora	'Karl Foerster'	Partial shade, shade	4-5	um, ud
Hemerocallis spp.	Daylilies	Sun, partial shade	1-5	um
Hosta sieboldiana	Hosta	Partial shade, shade	2-3	um
Iris sibirica varieties	Siberian Irises	Sun, partial shade	1.5-3.5	um, w
Ligularia dentata	Bigleaf Goldenray	Partial shade, shade	2.5-5	um
Paeonia spp.	Peonies	Sun, partial shade	1-4	um
Pennisetum alopecuroides	Fountain Grass	Sun	3-4	um, ud
Rudbeckia fulgida	Goldsturm Black Eyed Susan	Sun	1.5	um

#### **COVER CROPS**

Cover crops are fast growing annual plants, typically oats (Avena sativa) or annual rye (Lolium multiflorum) that are often added to seeded buffers to reduce weed growth and prevent soil erosion until the seeded buffer is established.

#### **GUIDE TO ABBREVIATIONS**

d: Deep water plants, typically in water 14 inches to 5 feet deep

f: Fringe plants; grow in shallow water less than 14 inches deep

w: Wet soil lakeshore plants; moist year- round

um: Upland moist; upland soils that are moist but not saturated

ud: Upland dry; upland soils that are dry and well-drained

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# WETLAND BUFFER TEMPLATE

Sheet 3 of 5 Produced 01/2004 Prepared for:

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# GUIDELINES FOR DEVELOPING A PLANT PALETTE

- Trees, shrubs, and/or herbaceous plants suitable to the site's growing conditions can be included in the buffer plant palette. Leaving deadfalls and duff in place will also enhance the ecological functions of the buffer.
- Criteria considered in selecting buffer plants include growing conditions (sunlight exposure, soil type, hydrology, etc.), cold hardiness, rooting characteristics, maintenance requirements, plant availability, wildlife value, project goals, aesthetics and personal taste.
- Planting design style can range from naturalistic to formal.
- Maximizing plant diversity maximizes the buffer benefits listed on page 1 by maximizing root and above ground structural diversity. Natural lake buffers often have 20-100 species!
- So long as soils have not been extensively disturbed, native plants are adapted to local conditions and hence do not require artificial inputs and minimal maintenance. They also give a site a strong sense of regional identity.
- If you want to use native plants, use an analogous natural reference site to select the plant palette best suited to your site.
- Avoid planting invasive species at all costs!

The plant lists shown in this publication do not represent the complete spectrum of potential buffer plants. Consult with a landscape professional, plant supplier, or the references listed below for additional plant recommendations:

- Henderson, Carrol, Carolyn Dindorf, and Fred Rozumalski. Lakescaping for Wildlife and Water Quality. 1999.
   Minnesota Department of Natural Resources, St. Paul, Minnesota.
- MNDNR. Restore Your Shore CD. Includes interactive Plant Selection Guide. For sale from Minnesota's Bookstore in St. Paul. (651) 297-3000.
- Shaw, Daniel and Rusty Schmidt. Plants for Stormwater Design. 2003. Minnesota Pollution Control Agency, St. Paul, MN. Available for free by calling (651) 297-8679.
- Shaw, Daniel B. Native Vegetation in Restored and Created Wetlands. 2000. Minnesota Water and Soil Resources, St. Paul, Minnesota.
- Wovcha, D.S., B.C. Delaney and G.E. Nordquist. 1995. Minnesota's St. Croix River Valley and Anoka Sandplain: A Guide to Native Habitats. Minnesota Department of Natural Resources. University of Minnesota Press.
- Many native plant supplier catalogs are also very informative.

# POTENTIAL PLANT SUPPLIERS

Listing does not constitute endorsement.

Listing below is not an exhaustive list of suppliers.

- Bailey's Nursery, Newport, MN, (612) 459-9744
- Critical Connections Ecological Services, Inc. Nursery, Marine on St. Croix, MN, 651 433-4410
- Dragonfly Gardens, Amery, WI, (715) 268-7660, www.dragonflygardens.net
- Hild and Associates, River Falls, WI, (715) 426-5131
- Ion Exchange, Harpers Ferry, IA, (800) 291-2143, www.ionxchange.com
- Landscape Alternatives, Inc., Roseville, MN, (651) 488-3142
- Prairie Moon Nursery, Winona, MN, (507) 452-1362
- Prairie Restorations, Inc., Princeton, MN, (612) 389-4342
- Natural Shore Technologies, Champlin MN, (612) 703-7581, www.naturalshore.com
- North American Prairies, Annandale, MN, (320) 274-5316, northamerican prairies.com.
- Shooting Star Native Seed, Spring Grove, MN, (507) 498-3944, ssns@means.net.
- Woodland Plant Salvage Company, White Bear Township, MN, 651-426-8174

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# WETLAND BUFFER TEMPLATE

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# OTHER BUFFER COMPONENTS

- Hardwood shredded mulch: used only when planting live plants, not with seeded buffers; beneficial in controlling weeds and getting young plants established.
- Straw mulch: beneficial when seeding buffer vegetation; controls erosion and enhances seed germination.
- Mycorrhizae: sometimes beneficial in poor soils.
- Biodegradable erosion control blanket: often beneficial on eroding or steep slopes.
- Edging: edging minimum 6" wide or 6" deep, such as heavy duty black plastic edging, helps keep lawn grasses from invading the buffer.
- Vegetation protection fence: sometimes used to protect plants from intruders, dogs, and herbivores until plants are established (typically 2 years).
- Tree shelters: sometimes used to protect woody plants from herbivores until established (typically 2-3 years).
- Plant labels can be helpful to distinguish buffer plants from weeds.
- Wildlife habitat enhancements (tree snags, turtle logs, bird boxes, butterfly boxes).
- Soil bioengineering methods can also be used to address erosion problems but are not covered in this publication.

## POTENTIAL SUPPLIERS

Listing does not constitute endorsement.

Listing below is not an exhaustive list of suppliers.

- Hardwood shredded mulch and compost: NRG Processing, St. Paul, (612) 331-4610
- Mycorrhizae: Mycorrhizal Applications, Inc., Grants Pass, OR, (541) 476-3985, www.mycorrhizae.com
- Erosion control blanket: Brock White Company, St. Paul MN, (800) 880-3210, www.brockwhite.com/
- Tree shelters: Treessentials Co., St. Paul, MN, 1 (800) 248-8239; Oasis Tree Shelters, Salinas, CA, (800) 784-4769

## MAINTENANCE

- In the first year, when plant roots are not yet fully established, water thoroughly once a week every week that it does not rain at least one inch. In the second year, water only during severe drought. After the second year, no watering will be required if using native plants adapted to local conditions.
- Invasive species should be closely monitored and removed immediately, especially in the first 3-5 years. If not promptly removed, invasive species will rapidly spread and displace desired buffer vegetation. Eradication will be very difficult, time-consuming, and costly!
- Lists of worst invasive plants are shown to the right.
- Native plants that evolved under a periodic fire regime will benefit from periodic controlled burns.
   Mow with a mulching mower set on the highest setting where controlled burns are not feasible.
- Ensure that runoff is spread across vegetated areas and not allowed to bypass or flow into concentrated channels.
- Avoid mowing, raking, or removing leaf litter and deadfall.
- Do not dispose of yard waste in buffer zone.
- Do not use fertilizers and pesticides in buffer zones and use in other areas only when needed.
- Limit trails and structures within 25' of wetland. Where wetland access is needed, use narrow pervious trails only.
- If wetland crossing is required, install boardwalk rather than filling wetland.
- To further reduce mowing maintenance on your property, consider replacing your lawn with a nomow turf, such as a no-mow fescue mix (not native), blue gramma (native, sandy or loamy soil).
- Use low impact development techniques throughout the watershed to minimize the negative effects
  of impervious surfaces on surface water bodies (e.g. collect runoff from hard surfaces in
  raingardens, use pervious paving on driveways and paths, disconnect downspouts from storm sewer
  systems, install rain barrels on downspouts).

# INVASNE SPECIES

#### **HERBACEOUS PLANTS**

**Scientific Name** Alliaria officinalis Ambrosia trifida Botumus unbellatus Bromus inermis Centaurea maculosa Cirsium arvense Coronilla varia Euphorbia esula Iris pseudacorus Lotus corniculatus Lvthrum salicaria Melilotus alba Melilotus officinalis Mvriophvllum spicatum Phalaris arundinacea L. Plantago major Poa pratensis Polygonum cuspidatum Rumex crispus Typha spp.

# Common Name Garlic Mustard Giant Ragweed (native) Flowering Rush Hungarian Brome Spotted Knapweed Canada Thistle Crown Vetch Leafy Spurge Yellow Iris

Purple Loosestrife White Sweet Clover Yellow Sweet Clover Eurasian Water Milfoil Reed Canary Grass (native) Plantain

Bird's Foot Trefoil

Japanese Knotweed Curly Dock Hybrid Cattails

Kentucky Bluegrass

#### **WOODY PLANTS**

#### **Scientific Name**

Celastrus orbiculata Lonicera tatarica Morus alba Philadelphus spp. Rhamnus spp. Robinia pseudoaccacia

#### **Common Name**

Oriental Bittersweet Asian Honeysuckle Asian Mulberry Mockorange Buckthorn Black Locust

The following websites provide images and information about potential removal techniques for the species listed above: http://www.dnr.state.mn.us/ecological\_services/exotics/index.html http://tncweeds.ucdavis.edu/

http://www.dnr.state.wi.us/org/land/er/invasive/

# EXAMPLE WETLAND BUFFERS

Lake Nokomis Stormwater Wetlands, Minneapolis MN; Visible from Cedar Ave. in Lake Nokomis Regional Park (Installed 2001) - Funded by Minnehaha Creek Watershed District Gateway Pond, East of Cedar Ave.

Nokomis Knoll Pond, West of Cedar Ave.

Amelia Pond, West of Cedar Ave.







Natural wooded buffer at Cedar Creek Natural History Area, Bethel, MN



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## Request for Variance And Statement of Hardship

The Board of Managers may hear requests for variances from the literal provisions of these rules in instances where their strict enforcement would cause undue hardship because of circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will be keeping with the spirit and intent of these rules. An applicant granted a variance from full compliance with a requirement of the rules would be required to meet the requirement to the degree feasible short of full compliance.

In order to grant a variance, the Board of Managers shall determine that:

- the special conditions which apply to the structure or land in question do not apply generally to other land or structures in the District
- the granting of such variance will not merely serve as a convenience to the applicant,
- the variance will not impair or be contrary to the intent of these rules.

A hardship cannot be created by the landowner, the landowner's agent or representative, or a contractor, and must be unique to the property. Economic hardship are not grounds for issuing a variance.

A variance shall become void one year after it is granted if not used.

A violation of any condition set forth in a variance shall be a violation of the District rules and shall automatically terminate the variance.

Date 05/04/18

Permit # MCWD 17-367

Applicant LAKE WEST DEVELOPMENT

Address 14525 HIGHWAY 7, SUITE #265, MINNETONKA, MN 55345

Telephone number 952-653-1359

Property ID number 2011723420001-3

MCWD Rule (circle applicable rule(s)): A B C D E F G J K M N WETLAND PROTECTIONS RULE

**Description of project:** 

THE PROJECT IS THE DEVELOPMENT OF 2 SINGLE FAMILY HOMES ON CURRENTLY VACANT LAND. GRADING, AND LANDSCAPE IMPROVEMENTS WILL OCCUR AS PART OF THIS PROJECT.

#### Requirements of rule(s)

#### WETLAND PROTECTIONS RULE:

- 6.f) The Applied Buffer Width for New Principal Residential Structures shall be limited to 25 percent of the distance between the existing structure at the point that it is nearest to the wetland and the wetland, or 25 feet, whichever is greater...
- 6.c)Buffer width may vary based on demonstrated site constraints, provided that a width of at least 50 percent of the Applied Buffer Width is maintained at all points, there is no reduction in total buffer area, and the buffer provides wetland and habitat protection at least equivalent to a buffer of uniform Applied Buffer Width. Buffer width averaging calculation will exclude any part of the buffer exceeding 200 percent of the Applied Buffer Width.

#### Requested Variance

THE PROPOSED DRIVEWAY WILL REQUIRE A VARIANCE TO THE MINIMUM WETLAND BUFFER WIDTH OF 12.5'. THERE IS A 69 LINEAR FOOT LENGTH OF WETLAND WHERE MEETING THE 12.5' MINIMUM BUFFER REQUIREMENT WILL NOT BE ACHIEVABLE. WETLAND BUFFER WILL BE PROVIDED TO THE MAXIMUM EXTENT POSSIBLE ALONG THIS CORRIDOR.

#### Statement of Hardship (include any mitigating circumstances).

THE ONLY ACCESS TO THE SITE IS PROVIDED THROUGH AN ACCESS EASEMENT AT THE LOCATION WHERE THE PROPOSED DRIVEWAY WILL CONNECT TO EXISTING PAVEMENT. THIS EASEMENT WAS DRAFTED PRIOR TO ANY WETLAND BEING KNOWN ON SITE AND DID NOT ACCOUNT FOR BUFFER REQUIREMENTS. THE LENGTH OF DRIVEWAY THAT WILL BE OUT OF COMPLIANCE IS MINIMAL AS IT IS PROPOSED TO TURN NORTH (AND AWAY FROM THE WETLAND) ALMOST IMMEDIATELY AND THEREFOR PROVIDING MORE WIDTH FOR WETLAND BUFFER.

How do you propose to meet the requirements of the applicable MCWD rules?

MCWD RULES ARE MET THROUGH ON SITE STORMWATER TREATMENT, EROSION CONTROL FEATURES AND PROPOSED WETLAND BUFFERS.

Applicant name: C	URT FRETHAM	Date: 05/04/18	
Applicant signature	first for		

Staff Recommendation (For staff use only) Approve