



PLANNING COMMISSION AGENDA

October 2, 2017

7:00 pm

1. **CALL TO ORDER -**
2. **PLEDGE OF ALLEGIANCE –**
3. **ROLL CALL -**
 - Barbara Ronningen (Chair)
 - a) Sally Doherty
 - b) Kris Kopitzke
 - c) Mark Nelson
 - d) Lucia Wroblewski
 - e) Scott Patten
 - f) Jim Langan
 - g) Roger Bowman
4. **APPROVAL OF AGENDA –**
5. **APPROVAL OF MINUTES -**
 - A. September 11, 2017 Meeting Minutes –
6. **REPORTS AND PRESENTATIONS – None**
7. **PUBLIC HEARINGS –**
 - A. Kevin Murphy Minor Subdivision Application at 4969 Neal Avenue
 - B. Will Carlson Rezoning, Preliminary Plat and Conditional Use Permit Application (for a Preservation and Land Conservation Development - PLCD) on 218 acres of land at 14220 60th Street and parcels with PID Numbers 33.028.20.33.0005, 33.028.20.33.0004, 33.028.20.32.0001, 32.028.20.41.0002, 32.028.20.42.0004, and 32.028.20.43.0001.
8. **NEW BUSINESS – None**
9. **OLD BUSINESS -**
 - A. Comprehensive Plan Update Process
 - B. Michael and Carolyn Johnson Variance Application at 771 Indan Trail – **Withdrawn**
 - C. Update on City Council Actions –
 1. Council Highlights from the September 19, 2017 Council meeting - attached.
10. **ADJOURN –**

-- This agenda is not exclusive. Other business may be discussed as deemed necessary. --

A quorum of the City Council or Other Commissions may be present to receive information.

CITY OF AFTON
DRAFT PLANNING COMMISSION MINUTES
September 11, 2017

- 1
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3
4
5 1. **CALL TO ORDER** – Chair Barbara Ronningen called the meeting to order at 7:00 PM
6
7 2. **PLEDGE OF ALLEGIANCE** – was recited.
8
9 3. **ROLL CALL** – Present: Chair Barbara Ronningen, Sally Doherty, Kris Kopitzke, Lucia Wroblewski, Mark
10 Nelson, Scott Patten. A Quorum was present. Absent: Roger Bowman, Jim Langan (both excused).
11
12 **ALSO IN ATTENDANCE** – Council Member Joe Richter, City Administrator Ron Moore, City Clerk
13 Julie Yoho
14
15 4. **APPROVAL OF AGENDA** – Move item 6A. “Bonnie Power” after 7A. “Public Hearing”.
16 **Motion/Second: Ronningen/Nelson To approve agenda as amended. Motion passed 6-0-0.**
17
18 5. **APPROVAL OF MINUTES** –
19 A. August 7, 2017 Meeting Minutes – Delete “on” from line 47.
20 **Motion/Second: Patten/Wroblewski To approve minutes of August 7, 2017 as amended. Motion**
21 **passed 5-0-1. (Doherty abstain due to absence.)**
22

23 **(Items presented out of order)**
24

- 25 6. **REPORTS AND PRESENTATIONS** –
26 Bonnie Power, Chair, Citizens Climate Lobby, St. Croix Valley Group.
27 Bonnie presented suggestions for the Comprehensive Plan update for the Planning Commission to consider.
28 Most of the suggestions were for the Energy and Environmental Resources Goals and Policies sections.
29
30 7. **PUBLIC HEARINGS** –
31 A. **Michael and Carolyn Johnson Variance Application at 771 Indian Trail.** The Johnsons are proposing
32 to build a new house in the location of a previous house and pool which were recently removed. The
33 previous house was a nonconforming structure located approximately 75 feet from Metcalf Lake, with the
34 pool approximately 40 feet away from Metcalf Lake. The variance requested is to allow a 67.94 foot setback
35 to the OHWL of Metcalf Lake for the new house vs. the required 200 feet.
36
37 Chair Ronningen opened the public hearing at 7:04pm.
38
39 Jim Kubiak, neighbor to west. Jim stated he would encourage the Planning Commission to allow Mr.
40 Johnson to build on this site.
41
42 Neighbor across Indian Trail from the property. Stated he is supportive of the building. The old house was
43 nonconforming, this one will be also but not AS nonconforming.
44
45 **Motion/Second: Patten/Nelson To close public hearing. Passed 6-0-0.**
46 Public hearing closed at 7:10pm.
47
48 Nelson asked what the total acreage is (14.91) and asked for 11x17 contour map.
49 Wroblewski asked when property was purchased (1 ½ years ago).
50 Michael Johnson, owner, stated the new septic was built to specifications for the new house planned for
51 property. The old house and pool were removed 2 months ago.
52 Chair Ronningen asked whether the owner sought advice from the City prior to demolition.
53 Mr. Johnson replied no, the builder obtained the demo permit.
54 Wroblewski asked if any other sites had been considered for the house.
55 Mr. Johnson replied that there are wetlands in each direction, and they wouldn’t be able to meet setback.

56 Doherty asked for clarification that no location on the property would meet the 200' setback.
57 Mr. Johnson confirmed that building in the same footprint is the best they can do.
58 Chair Ronningen requested that an 11x17 contour map for the whole property be provided.
59

60 **Motion/Second: Ronningen/Nelson To continue review to the October 2, 2017 meeting with owner**
61 **providing certification that there are 2.5 acres buildable and an 11x17 contour map to the Planning**
62 **Commission.**

63 Discussion

64 Discussion was held regarding the statute that covers teardowns and building on the same footprint. It was
65 also noted that if one wall of the old structure would have been kept, a variance wouldn't be necessary.
66 Currently, they may need additional variances from the DNR and Valley Branch Watershed District.

67 **Motion vote: passed 6-0-0.**

68 Additional information will be provided for the October meeting.
69

70 **8. NEW BUSINESS - None**

71
72 **9. OLD BUSINESS -**

73 **A. Comprehensive Plan Update Process**

74 Discussion was held on the proposed updates to the Background Information and Environmental Resources
75 sections. It was decided to remove the tax levy data from the Background Information section to keep the
76 focus on the documents use as a long term guide. The section on Housing and Land Use along with the
77 remaining sections will be reviewed at the October meeting.
78

79 **B. Update on City Council Actions**

80 Council Member Richter provided a summary of the August City Council meeting.
81 General discussion was held on the status of the park restroom construction.
82

83 Discussion was held regarding the annual river cruise which is being held Thursday, September 14. Chair
84 Ronningen is unable to attend. Administrator Moorse will provide information to the other members of
85 the Planning Commission so that someone else can attend.
86

87 **10. ADJOURN**

88 **Motion/Second: Patten/Doherty To adjourn.**

89
90 Meeting adjourned 8:50 PM
91
92
93

94 Respectfully submitted by:

95
96 _____
97 Julie Yoho, City Clerk
98
99

100 **To be approved on October 2, 2017 as (check one): Presented: _____ or Amended: _____**

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Planning Commission Memo

Meeting: October 2, 2017

To: Chair Ronningen and members of the Planning Commission
From: Ron Moore, City Administrator
Date: September 22, 2017
Re: Kevin Murphy Minor Subdivision Application at 4969 Neal Avenue

Kevin Murphy has applied for a minor subdivision to divide a 5-acre parcel from the existing 40 acre parcel (quarter-quarter section). The property is currently farmed and does not have steep slopes. The proposed 5-acre parcel (Parcel 2) includes the homestead area of the larger parcel. A survey showing the proposed new lot is attached. The survey also shows a possible home site and driveway location in the southeast corner of the larger parcel (Parcel 1). The proposed parcels meet all requirements for a conforming lot, including the minimum 5-acre lot size, 2.5 acres of buildable area, 300 feet of frontage on a public road and access directly onto a public road. The existing house on the proposed Parcel 2 meets side and rear yard setbacks.

Minimum Requirements

The two proposed parcels meet all minimum requirements, including the following

1. 300 feet of width on a public road right-of-way
2. Five acre lot size
3. 2.5 acres of contiguous buildable area
4. Land suitable for driveway access

Septic System Sites

A septic system permit has been obtained for a new septic system on Parcel 2. The applicant is in the process of obtaining information to demonstrate suitable soils for a future septic system on Parcel 1. The County's septic inspector has indicated there should be no problem finding suitable soils for a future septic system on Parcel 1.

Park Dedication. Recognizing that the new parcel will impact the City's park system, park dedication will be required. The 2012 Parks Plan does not appear to direct any land dedication to occur at or near the subject site. This being the case, a cash contribution in lieu of land dedication may be required (7.5 percent of the pre-development value with a minimum of \$5,000 per lot and a maximum of \$10,000 per lot). The Park Committee will address the question of land dedication vs. a cash contribution at its September 27 meeting, and the Committee's recommendation will be provided to the Planning Commission.

Dedication of Easements. The City Engineer has indicated drainage and utility easements are required along the perimeter of each parcel – 10 feet wide along the front and rear property lines and 5 feet wide along the side property lines. The dedication of drainage and utility easements as required by the City Engineer should be a condition of approval.

Natural Features. The Subdivision Ordinance (Section 12-1257) directs the preservation of natural site features including large trees. While it does not appear that the proposed subdivision will have any significant impacts in this regard; home, accessory building and driveway placement should give due consideration to the preservation of significant trees.

Findings

1. The subject property is located in the Agricultural zone, as is all property surrounding it
2. The Agricultural zone allows residential use with five-acre minimum lot size and a density of three lots per quarter-quarter section
3. The subdivision meets all subdivision and density requirements
4. The existing house on the proposed Parcel 2 meets side and rear yard setbacks

Conditions

If the Planning Commission recommends approval of the subdivision application, it is recommended that the following conditions be placed on the approval, as well as additional conditions the Planning Commission may include.

1. Easements as required by the City Engineer shall be granted
2. All drainage and utility easements shall be subject to the review and approval of the City Engineer.
3. All grading, drainage and erosion control issues shall be subject to review and approval by the City Engineer, and by the Valley Branch Watershed District if they meet permit thresholds.
4. Park dedication requirements shall be satisfied at the time of final subdivision approval in accordance with Section 12-1270 of the Subdivision Ordinance
5. The property owner shall demonstrate that there is a suitable site for a septic system in the area shown as a potential new home site on Parcel 1. If a new home is to be constructed on Parcel 1, a permit for an individual septic system to serve the new home shall be obtained from the Washington County Public Health Department at the time of application for building permit for the new home, and all requirements of the septic permit shall be met.
6. All driveways shall comply with Section 12-84 of the Zoning Ordinance and be subject to review and approval by the City Engineer.

Planning Commission Direction Requested:

Motion regarding a recommendation concerning the Kevin Murphy Minor Subdivision application at 4969 Neal Avenue, including findings, and conditions if applicable.

RECEIVED

Z17-25

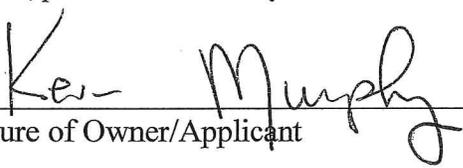
SEP 05 2017
CITY OF AFTON

CITY OF AFTON

MINOR SUBDIVISION PERMIT APPLICATION
(Reference Sections: 12-1256, 12-1260)

Owner	Address	City	State	Zip	Phone
Kevin Murphy	5805 Manning Ave So	Afton	Mn	55001	651-459-8007
Applicant (if different than owner)	Address	City	State	Zip	Phone
Project Address	4969 Neal Ave So AFTON MN 55001				
Zoning Classification	Existing Use of Property	PID# or Legal Description			
AG	Agricultural	29.028.20.33.0001			
Description of Request	Divide 5 acre parcel from 40 acre parcel				

By signing this application, the applicant agrees to pay all expenses incurred by the City of Afton. In connection with this request, your signature constitutes permission for a representative of the City of Afton to enter your property, during business hours, to evaluate this request. This may involve minor excavating or soil borings. If you would like to be present during this evaluation, please contact the City.


9-5-2017
 Signature of Owner/Applicant Date

Make checks payable to **City of Afton:**

FEES:	Escrow:		
Minor Subdivision \$250.00	Minor Subdivision \$1,500.00	TOTAL:	\$1,750.00
		DATE PAID:	9-5-17
		CHECK #:	1019
		RECVD. BY:	B/M

ATTACH COPY OF DEED OR PROOF OF OWNERSHIP TO APPLICATION



Department of Property Records and Taxpayer Services

14949 62nd Street North PO Box 200
Stillwater, MN 55082-0200
(651) 430-6175 www.co.washington.mn.us

Property ID: **29.028.20.33.0001** Bill#: **698820**

Taxpayer: KEVIN MURPHY
5805 MANNING AVE S
AFTON MN 55001-9644



02000821



40

TAX STATEMENT 2017			
2016 Values for Taxes Payable in 2017			
VALUES AND CLASSIFICATION			
Step 1	Taxes Payable Year:	2016	2017
	Estimated Market Value:	732,700	700,000
	Homestead Exclusion:	12,900	15,900
	Taxable Market Value:	533,500	497,800
Step 2	New Improvements/ Expired Exclusions:		
	Property Classification:	Frac. Ag Hstd	Frac. Ag Hstd
	<i>This parcel is enrolled in Green Acres and has deferred taxes</i>	Frac. Ag Non-Hstd Res Hstd	Frac. Ag Non-Hstd Res Hstd
	Sent in March 2016		
Step 2	PROPOSED TAX		\$4,622.00
Did not include special assessments or referenda approved by the voters at the November election			
Sent in November 2016			
Step 3	PROPERTY TAX STATEMENT		
	First half taxes due	May 15	\$2,296.00
	Second half taxes due	November 15	\$2,296.00
	Total Taxes Due in 2017:		\$4,592.00



02000821

\$\$\$
REFUNDS?

You may be eligible for one or even two refunds to reduce your property tax. Read the back of this statement to find out how to apply.

Property Address:

969 NEAL AVE S
AFTON MN 55001

Description:

Section 29 Township 028 Range 020 SW1/4-SW1/4

Line 13 Special Assessment Detail:

COUNTY ENVIRONMENTAL CHARGE PHE DEP 3.00

Tax Detail for Your Property:				
Taxes Payable Year:		2016	2017	
1. Use this amount on Form M1PR to see if you are eligible for a property tax refund. File by August 15. If this box is checked, you owe delinquent taxes and are not eligible.		<input type="checkbox"/>	\$3,011.00	
2. Use these amounts on Form M1PR to see if you are eligible for a special refund.		\$3,543.91		
Tax and Credits	3. Property taxes before credits	\$5,117.00	\$4,589.00	
	4. Credits that reduce property taxes			
	A. Agricultural market value credit	\$0.00	\$0.00	
	B. Other Credits	\$0.00	\$0.00	
	5. Property taxes after credits	\$5,117.00	\$4,589.00	
Property Tax by Jurisdiction	6. WASHINGTON COUNTY	A. County General	\$1,258.13	\$1,146.33
		B. County Regional Rail Authority	\$10.19	\$9.15
	7. CITY OF AFTON		\$1,209.86	\$1,215.11
	8. State General Tax		\$0.00	\$0.00
	9. ISD 833 SOUTH WASHINGTON	A. Voter approved levies	\$1,767.78	\$1,473.85
		B. Other Local Levies	\$666.56	\$559.47
	10. Special Taxing Districts	A. Metropolitan Council	\$38.38	\$32.25
		B. Metropolitan Mosquito Control	\$20.08	\$17.41
		C. Valley Branch Watershed	\$72.53	\$70.98
		D. County HRA	\$62.97	\$55.47
	11. Non-school voter approved referenda levies	\$10.52	\$8.98	
	12. Total property tax before special assessments	\$5,117.00	\$4,589.00	
	13. Special assessments	\$3.00	\$3.00	
	14. TOTAL PROPERTY TAX AND SPECIAL ASSESSMENTS	\$5,120.00	\$4,592.00	

-pd 5/11/17 # 11224

Principal: 3.00
Interest: 0.00

PAYABLE 2017 2nd HALF PAYMENT STUB

TO AVOID PENALTY PAY ON OR BEFORE: November 15

Property ID: **29.028.20.33.0001** Bill #: **698820**



Taxpayer:
KEVIN MURPHY
5805 MANNING AVE S
AFTON MN 55001-9644

Detach at perforation & mail this stub with your 2nd half payment in the enclosed green envelope
Res Hstd Frac. Ag Non-Hstd Frac. Ag Hstd

SECOND HALF TAX AMT

\$2,296.00

MAKE CHECKS PAYABLE TO:

Washington County
P.O. Box 200
Stillwater MN 55082-0200

CHECK
 CASH



DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

14949 62nd Street North P.O. Box 6

Stillwater, MN 55082-0006

Office: 651-430-6655 TTY: 651-430-6246 Fax: 651-430-6730

Community City Of Afton

Permit Number 2017-0633

Owner Murphy Keith Etal

Owner Address 5805 Manning Ave S , Afton Mn 55001

Applicant Rick Reamer

PERMISSION IS HEREBY GRANTED

To execute the work specified in this permit on the following identified property upon express condition that said persons and their agents, and employees shall conform in all respects to the provisions of Ordinance #196, Washington county Development Code, Chapter Four, Subsurface Sewage Treatment System Regulations. This permit may be revoked at any time upon violation of any of the provisions of said ordinance.

Project Address 4969 Neal Ave S, City Of Afton

Geo Code 2902820330001

Designer Arkay's Services Inc

Type of System: Replacement System Mound

Design Criteria	Mound Sizing	Pressure Distribution
Percolation Rate: 30.00 MPI	Rock Bed Width: 10.00 Feet	Number of Laterals: 3
Depth to Restriction: 18 Inches	Rock bed Length: 60.00 Feet	Perforation Spacing: 3.0 Feet
Land Slope 1.00 %	Absorption Width: 20.00 Feet	Perforation Diameter: 1/4 Inch
Flow Rate: 600.00 GPD	Depth of Clean Sand: 1.50 Feet	Lateral Diameter: 1-1/2 Inches
	Downslope Dike Width: 12.00 Feet	Total Dynamic Head: 17 Feet
	Upslope Dike: 12.00 Feet	Pump 1: 45 GPM
Tank Sizes	Length of Dike: 84.00 Feet	
Tank 1: 1500 Gallons		
Tank 2: 1000 Gallons		
Pump Tank 1: 1000 Gallons		

Authorized Work/Special Conditions

The granting of this permit does not alleviate the applicant from obtaining any other Federal, State, or local permits required by law for this project.

Abandon old tank(s) properly., Back-up area for second future on-site system must be protected from all traffic., Building sewer can be no closer than 20 feet from well and must be pressure tested Schedule 40 within 50 feet., Call at least 24 hours before the time you need an inspection., Domestic strength waste only. Industrial waste and hazardous wastes cannot enter the septic system., Effluent Filter & Alarm Required on outlet of last tank in series, Establish a vegetative cover over the soil treatment area within 30 days of the installation. Protect the soil treatment area from erosion until the vegetative cover is established., Install a meter to monitor wastewater flow., Installer must verify head and elevation so the proper pump size is used., Install individual sewage treatment system as per approved design in area tested and shown on the site plan., Install only when soil is below the plastic limit (dry soil conditions),. Install water meter., Insulate tank lids to a value of R-10 if tanks are 2 feet or less from the surface., Minimum 50 feet from septic tank to well., Pressurized laterals can be no further apart than 36 inches and require accessible cleanouts at the end of each lateral., System cannot be installed if frozen at trench depth., This system must be installed by a certified/licensed sewage treatment system installer holding a current license with the Minnesota Pollution Control Agency. , Use of tanks registered with the Minnesota Pollution Control Agency required.

Required Inspections:

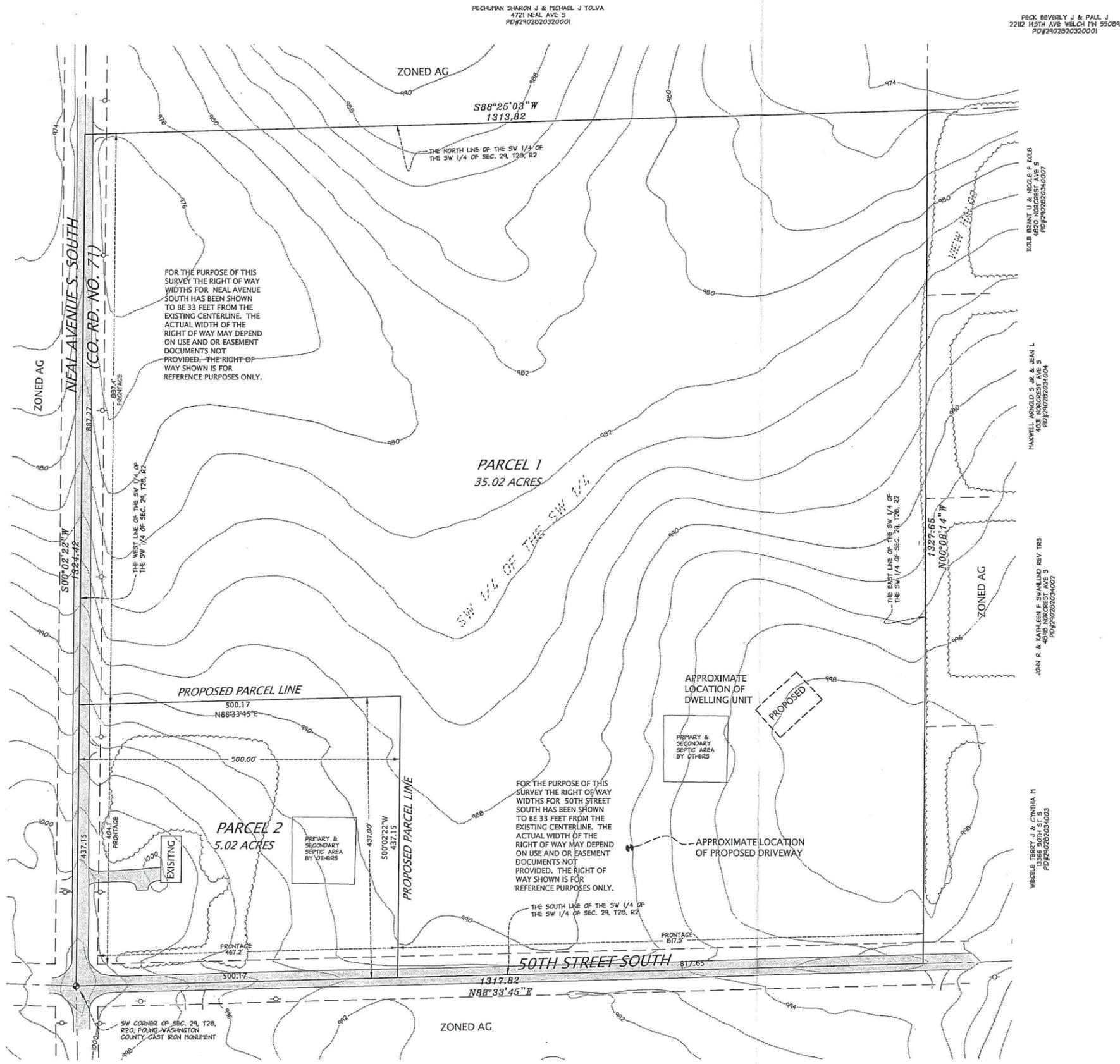
Permit Issuance Date: 09/20/2017

Permit Expiration Date: 09/20/2018

ca54477dda2ab5191b9ef3ee05c3af9d

bb8525d91530140c02a904d84a18374f

Christopher W. LeClair REHS 09/20/2017 - Issued



EXISTING LEGAL DESCRIPTION:

The Southwest Quarter of the southwest Quarter of Section 29, Township 28, Range 20, Washington County, Minnesota.

EASEMENT INFORMATION

EASEMENTS SHOWN ARE LIMITED TO THOSE SHOWN ON COUNTY HALF SECTION MAPPING OR LISTED IN THE ABOVE LEGAL DESCRIPTION. NO TITLE COMMITMENT WAS PROVIDED TO US FOR REVIEW. OTHER EASEMENTS MAY EXIST THAT ARE NOT SHOWN.

DEVELOPMENT DATA:

TOTAL AREA = 40.04 ACRES

PROPOSED PARCEL 1 = 35.02 ACRES
 AREA LESS THAN 13% SLOPES = 35.02 ACRES
 AREA BETWEEN 13% - 18% SLOPES = 0 ACRES
 AREA ABOVE 18% SLOPES = 0 ACRES
 AREA OF EXISTING RIGHT OF WAY = 1.29 ACRES
 BUILDABLE = 33.73 ACRES

PROPOSED PARCEL 2 = 5.02 ACRES
 AREA LESS THAN 13% SLOPES = 5.02 ACRES
 AREA BETWEEN 13% - 18% SLOPES = 0 ACRES
 AREA ABOVE 18% SLOPES = 0 ACRES
 AREA OF EXISTING RIGHT OF WAY = 0.69 ACRES
 BUILDABLE = 4.33 ACRES

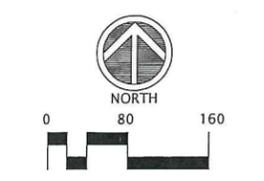
PROPOSED LEGAL DESCRIPTION:

PARCEL 1
The Southwest Quarter of the Southwest Quarter of Section 29, Township 28, Range 20, Washington County, Minnesota EXCEPT the south 437.00 feet of the west 500.00 feet thereof.

PARCEL 2
The south 437.00 feet of the west 500.00 feet of the Southwest Quarter of the Southwest Quarter of Section 29, Township 28, Range 20, Washington County, Minnesota.

SURVEY NOTES:

1. BEARINGS ARE BASED ON COORDINATES SUPPLIED BY THE WASHINGTON COUNTY SURVEYORS OFFICE.
2. UNDERGROUND UTILITIES NOT SHOWN.
3. CONTOURS SHOWN PER MINTOPO WEBSITE. 2012 DNR LIDAR GENERATED CONTOURS.
4. SEPTIC AREAS BY OTHERS.
5. LOCATION OF BUILDINGS, DRIVEWAY, ROADS AND TREELINES SHOWN PER WASHINGTON COUNTY ORTHO PHOTO.



CALL BEFORE YOU DIG!
Gopher State One Call
 TWIN CITY AREA: 651-454-0602
 TOLL FREE: 1-800-552-1166

CONTACT:

KEVIN MURPHY
 4969 NEAL AVE. N.
 AFTON, MN 55001
 651-459-8007

COUNTY/CITY:

WASHINGTON COUNTY
 CITY OF AFTON

REVISIONS:

DATE	REVISION
9-8-17	INITIAL ISSUE

CERTIFICATION:

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Land Surveyor under the laws of the state of Minnesota.

D. Thurnes
 Daniel J. Thurnes Registration Number: 25718
 Date: 9-8-17

PROJECT LOCATION:

4969
NEAL AVE. S.
 PID#2902820330001

Suite #1
 6750 Stillwater Blvd. N.
 Stillwater, MN 55082
 Phone 651.275.8969
 Fax 651.275.8976
 dan@cssurvey.net

CORNERSTONE
 LAND SURVEYING, INC.

FILE NAME: SURVLC71
 PROJECT NO.: LC17071

MINOR
 SUBDIVISION

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Planning Commission Memo

Meeting: October 2, 2017

To: Chair Ronningen and members of the Planning Commission
From: Ron Moorse, City Administrator
Date: September 27, 2017
Re: Will Carlson Rezoning, Preliminary Plat and Conditional Use Permit Application (for a Preservation and Land Conservation Development - PLCD) on 218 acres of land at 14220 60th Street and parcels with PID Numbers 33.028.20.33.0005, 33.028.20.33.0004, 33.028.20.32.0001, 32.028.20.41.0002, 32.028.20.42.0004, and 32.028.20.43.0001.

Will Carlson has applied for a Preservation and Land Conservation Development (PLCD) Subdivision on a 219 acre site north of 60th Street and West of Trading Post Trail. The proposed subdivision would preserve 113 acres of open space through a conservation easement, and would create nineteen 5-acre lots on the remainder of the site. Attached is a report regarding the PLCD proposal by Bob Kirmis, the City's Planning Consultant.

PLANNING COMMISSION RECOMMENDATION REQUESTED:

Please see the report from Bob Kirmis, Planning Consultant.



PLANNING REPORT

TO: Afton Mayor and City Council
Afton Planning Commission

FROM: Bob Kirmis

DATE: September 5, 2017

SUBJECT: Afton - Afton Creek Preserve - Rezoning, Preliminary Plat
and Conditional Use Permit (for PLCD)

CASE NO: 280.02 - 17.03

Date Application Determined Complete:	August 14, 2017
Planning Commission Meeting Date:	October 2, 2017
City Council Meeting Date:	October 17, 2017
60-day Review Deadline:	October 13, 2017
120-day Review Deadline:	December 12, 2017

Note: Extensions to the 60-day review deadline for the rezoning and conditional use permit applications have taken place

BACKGROUND

Joe Bush, on behalf of J.P Bush Homes, has requested preliminary plat approval of a 19 lot, preservation and land conservation development (PLCD) entitled "Afton Creek Preserve." The subject site overlays 219 acres of land located north of 60th Street South (along the City's southern boundary) and west of Trading Post Trail South.

All proposed single family residential lots measure a minimum of 5 acres in size and are located primarily on the eastern half of the site. Of the 219 acres which comprise the subject site, 113 acres are proposed to lie within a conservation easement (intended to protect a trout stream and protect open space).

The subject site overlays seven individual parcels of land. With the exception of a 5-acre parcel located in the extreme southeast corner of the site (14220 60th Street), all parcels which comprise the subject site are zoned Ag, Agricultural. The 5-acre parcel in the southeast corner is zoned RR, Rural Residential.

That portion of the site which overlays the trout stream and adjacent flowage lie within the City's Shoreland Management Area, the boundaries of which measure 1,000 feet from each side of stream banks.

Also, to be noted is that the trout stream, as well as an adjacent flowage, lies within the City's Conservancy Overlay District, the intent of which is to manage areas with unique natural and biological characteristics.

To accommodate the proposed subdivision, the following approvals are necessary:

1. The rezoning of the 5-acre parcel located in the extreme southeast corner of the site (14220 60th Street) from RR, Rural Residential to Ag, Agricultural.
2. Preliminary Plat.
3. A conditional use permit to allow a PLCD in an Ag, Agricultural zoning district.
4. A conditional use permit to allow a subdivision identification sign (associated with the conditional use).

Attached for Reference:

Exhibit A: Applicant Narrative
Exhibit B: Site Location
Exhibit C: Zoning Map Detail
Exhibit D: Preliminary Plat
Exhibit E: Landscape Plan
Exhibit F: Seeding Plan
Exhibit G: Scenic Easements
Exhibit H: Grading, Drainage and Erosion Control Plan

See also the supplemental exhibits submitted by the applicant (The applicant's Exhibits A, B and C are included in the Exhibits listed above. The applicant's Exhibit D. Soil Borings Report and Exhibit E. Traffic Study, which are detailed technical reports, and Exhibits F. EAW report, and G. Home Owners Association Documents were not included in the hardcopy packet to limit the size of the packet, but are available on the City's website.)

ISSUES AND ANALYSIS

Environmental Assessment Worksheet (EAW)

According to both Minnesota Statutes (Rules 4410.4300 Subpart 36) and the Afton City Code, an Environmental Assessment Worksheet (EAW) must be prepared for projects which result in the permanent conversion of 80 or more acres of agricultural, native prairie, forest, or naturally vegetated land to a more intensive developed land use.

As a qualifying project, an EAW was prepared for the proposed subdivision and such document was subject to review and comment by various agencies.

The purpose of the EAW process is to disclose information about potential environmental impacts of a project. Information disclosed in the EAW process is intended to determine whether a more detailed Environmental Impact Statement (EIS) is needed and to indicate how the project can be modified to lessen its environmental impacts.

Based upon a detailed review of the EAW and consideration of received comments from various agencies, the Afton City Council made a negative declaration regarding the need for an EIS at their September 19, 2017 Council meeting based on the following findings:

1. The City of Afton finds that the environmental effects of the project can be adequately anticipated, controlled and mitigated as a result of the environmental review, planning and permitting processes.
2. Environmental impact mitigation measures include the seeding of nearly all unwooded areas on the site to prevent erosion and create wildlife habitat, the establishment of conservation easements and scenic easements to protect wooded areas, steep slopes and the Trout Brook stream, and stormwater management facilities to control stormwater, protect water quality and prevent erosion.

To be noted is that the City Council's negative declaration for an EIS was made with an understanding that the following minimum conditions will be imposed to address environmental impacts:

1. Pre-development seeding will be provided on nearly all unwooded areas on the site
2. Conservation easements and scenic easements will be established to protect wooded areas, steep slopes and the trout Brook Stream.
3. Storm water management facilities will be provided to control storm water, protect water quality and prevent erosion.

Rezoning

To ensure that all property within the subdivision is afforded the same development rights (via zoning and CUP for the PLCD), a rezoning of the 14220 60th Street parcel located in the extreme southeast corner of the site from RR, Rural Residential to A, Agricultural is necessary.

The location of 5-acre site in question is illustrated on attached Exhibit C. As shown, the site is bordered by A, Agricultural zoned property to the north and west, by RR, Rural Residential zoned property to the east and Denmark Township to the south.

The majority of the 219-acre subject site (six of the seven included parcels) is guided for "agricultural" use by the City's Land Use Plan. Such land use designation directs a maximum density of one dwelling unit per 10 acres of land. Unlike all other parcels which comprise the subject site, the Land Use Plan directs "Rural Residential" use of the five-acre parcel located in the extreme southeast corner of the site. Such land use designation imposes a minimum 5-acre lot size requirement with a minimum of 2.5 acres of contiguous buildable area.

While minimum lot area standards in the A, Agricultural District for PLCD subdivisions are the same as those imposed within the RR, Rural Residential District (5 acres), it should be recognized that the zoning of the existing RR parcel is tied to its current legal description. The submitted preliminary plat calls for the reconfiguration of the RR parcel such that it will include public right-of-way and a portion of abutting Lot 2 to the west and Lot 19 to the north. Also, to be noted is that the RR District does not make an allowance for PLCDs.

The City Code does not establish a specific set of evaluation criteria for rezoning requests. It is believed however, that the following considerations justify the proposed zoning change:

1. PLCDs are not listed as a permitted use in the RR zoning district.
2. The 5-acre parcel is part of the proposed PLDC and its land area has been used in the calculation of allowed development density.
3. The City's Land Use Plan (map) designates the parcel in question for "Rural Residential" use, with minimum 5-acre lot sizes. No change to the existing use is proposed. Thus, the physical use of the land is consistent with its Land Use Plan designation.
4. The parcel in question lies between lands guided "Rural Residential" and "Agricultural" uses. An original intention of the Land Use Plan related to the desired separation of these uses would not change as a result of the rezoning.
5. The configuration of the RR parcel in question will change as a result of the proposed subdivision. Without the zoning change, Lots 2 and 19 would hold two zoning designations (an undesirable condition).

In consideration of the preceding, Planning Staff recommends approval of the rezoning with a condition that such action not take effect until such time as the conditional use permit for the PLCD and the final plat are approved.

Preliminary Plat

Streets

Access. As shown on Exhibit B, access to most of the lots (18) within the subdivision is proposed via two cul-de-sacs which intersect 60th Street at a single point near Trading Post Trail. In review of the preliminary plat application materials, the City Engineer has found the proposed street intersection location and associated sight distances to be acceptable.

Aside from the 18 lots to be accessed via the 60th Street cul-de-sac, an additional lot is proposed in the extreme southwest corner of the site along 60th Street. Direct driveway access for such lot is proposed via 60th Street.

Access-related issues are also subject to comment and recommendation by the City Engineer.

Cul-de-Sac Length. As mentioned, 18 lots within the subdivision are proposed to be accessed via two cul-de-sacs. The proposed 60th Street roadway access technically splits into two cul-de-sacs. The longest of the two cul-de-sacs measures approximately 3,400 feet in length which significantly exceeds the maximum cul-de-sac requirement of 1,320 feet imposed in the City's Subdivision Ordinance.

In previous review of the sketch plan, feedback was requested from City Officials related to the acceptability of the proposed cul-de-sac length. As part of such consideration, Planning

Staff noted that the Ordinance makes an allowance for cul-de-sac lengths within PLCD subdivisions which exceed the referenced cul-de-sac length requirement (provided that the preservation of the rural character and natural resources will result). The allowance for cul de sac length also allows for a proportional increase in the number of lots served by the cul de sac.

Planning Staff highlighted pros and cons associated with excessive cul-de-sac lengths. Ultimately, City Officials expressed general support for the cul-de-sac lengths as illustrated on the preliminary plat.

Right-of-Way Width. Consistent with City Code requirements, right-of way widths of 60 feet are illustrated for the two internal cul-de-sacs. Such right-of-way widths are consistent with local street classification requirements as outlined in the Subdivision Ordinance.

To be noted however, is that a right-of-way width of 66 feet is proposed along 60th Street. While it is assumed such dedication is intended to “match” the existing right-of-way width, this issue should be subject to further comment by the City Engineer.

Construction Requirements. Details related to street construction and any necessary improvements, including but not limited to 60th Street and/or Trading Post Trail, should be subject to comment and recommendation by the City Engineer, and may be included in the conditions placed on an approval of the proposed project.

Lots

Lot Area. The Ag, Agricultural District imposes a minimum lot size requirement of five acres. In addition, a minimum width and depth requirement of 300 feet is imposed. All proposed lots meet minimum area, width and depth requirements of the Ag, Agricultural District and Shoreland Management District.

The Zoning Ordinance states that each proposed single-family lot must have a buildable area of at least 2.5 acres. The Zoning Ordinance defines “buildable area” as land having a slope of 13 percent or less and having enough suitable soil for the installation of two on-site sewage treatment systems. The Ordinance also notes that “buildable area” may include required building setbacks. The submitted preliminary plat identifies the buildable area contained in each proposed lot. The buildable area within all lots has been found to exceed the minimum 2.5-acre requirement.

Lot Configuration. In regard to the proposed lot configuration, two design-related issues are considered worthy of notation.

Lot 1. As shown on the preliminary plat, proposed Lot 1, located in the southwest area of the subject site, is segregated from the balance of the lots in the subdivision. Unlike Lots 2-19, Lot 1 is provided direct access to 60th Street and is surrounded on three sides by a conservation easement. While the appeal of Lot 1 is appreciated (in terms of isolation from neighbors, scenic views etc.), its location in the western one-third of the site isolates it from the balance of the subdivision lots and encroaches upon an area of the site primarily devoted to undisturbed open space.

Also, to be noted is that the placement of Lot 1 appears to contradict a general theme conveyed in the City Comprehensive Plan. Specifically, the City’s Land Use Plan

promotes a transition from “rural residential” uses east of the site to “agricultural” uses to the west.

An option that could be considered to address this issue, is that the “developable” land area devoted to Lot 1 be relocated north of Lots 9 through 12 and a “replacement” lot be provided along the proposed cul-de-sac.

Lot 19. While Lot 19, located in the southeast corner of the site, meets applicable lot area and width requirements of the Ordinance, it is oddly configured. Of specific issue is the southernmost area of the lot (triangular-shaped) which is provided frontage on 60th Street. As shown on the preliminary plat, such area of the lot is segregated from the buildable portion of the lot to the north. Also, to be noted is that a stormwater pond is proposed in such area.

Considering that the lot exceeds the minimum lot area requirements of the Ordinance (the lot measures 5.6 acres in size), it is recommended that the area of Lot 19 which is devoted to stormwater storage be placed within an outlot to be owned by the Homeowners Association, and should be overlaid with a drainage and utility easement. An assurance should be made however, that the area of Lot 19 is not less than five acres in size as a result of such change. This issue should be subject to further comment and recommendation by the City Engineer.

Setbacks. Within the Ag, Agricultural District and the Shoreland Management District, the following minimum setbacks apply:

Side Yard:	50 feet
Front Yard:	105 feet (from roadway centerline)
Rear Yard:	50 feet
From OHWL of Trout Stream:	300 feet

It appears that all proposed lots illustrate an ability to meet the aforementioned setbacks (via illustrated building pads).

Landscaping. The submitted landscape plan calls for a total of 80 trees to be planted within the subdivision. Such trees are proposed to be dispersed in the front yards of Lots 4-19. No trees are proposed in the front yards of Lots 1, 2 and 3. It is assumed that existing vegetation on such lots does not lend themselves to additional front yard tree plantings. This should however, be confirmed by the applicant.

Proposed tree varieties (per the landscape plan) include the following:

- River Birch
- American Linden
- Blue Spruce
- White Pine
- Norway Spruce
- Sugar Maple
- Autumn Blaze maple
- Hackberry
- Red Oak

- Newport Flowering Plum
- Japanese Lilac
- Red Bud

To be noted is that the City Code does not impose minimum size requirements for proposed landscaping (including trees).

As noted previously, the City Council made a negative declaration regarding the need for an EIS with an understanding that pre-development seeding with a prairie grass/wildflower mix will be provided on all lots and on the open space parcels. The applicant has provided a pre-development seeding plan in addition to the landscape plan.

Wetlands. According to the EAW, wetlands comprise 13 acres of the 219-acre subject site. Such wetlands lie along the trout stream and presently lie within conservation easements. In this regard, the proposed lot layout is not expected to impact any existing wetlands.

Wetland-related issues should be subject to further comment and recommendation by the City Engineer.

Easements

Conservation Easements. According to the Subdivision Ordinance, conservation easements must be established over designated open space within PLCDs. Attached Exhibit F illustrates two proposed conservation easement locations. In total, the two easement areas are proposed which overlay a total of 112.5 acres of land. Specifically, the proposed westerly easement measures 102.8 acres in size while the smaller easement located on the eastern half of the site measures 9.7 acres in size.

As a condition of PLCD (conditional use permit) approval, proposed conservation easements must run with the land in perpetuity to the following:

- The City of Afton
- All owners of the lots within the PLCD
- Landowners within Afton which abut the PLCD
- Minnesota Land Trust

Scenic Easements. In addition to the referenced conservation easements, Exhibit F also illustrates a number of scenic easements which overlay portions of proposed lots. Such easements correspond to existing woodland areas and will ensure that such areas will be protected from development.

Access Easements. Also proposed within the subdivision are two access easements. Such easements provide an area within which pedestrian connections can be made between the proposed cul-de-sac and designated open spaces. To be noted is that the width of the proposed access easements is not specified on the preliminary plat. Desired access easement widths should be subject to recommendation by the City Engineer and/or Fire Chief.

Drainage and Utility Easements. According to Section 12-1384 of the Subdivision Ordinance, easements at least 20 feet wide, centered on rear and other lot lines, must be

provided where necessary as recommended by the City Engineer. Further, the Ordinance states that easements for drainage must be provided of a sufficient width to provide for stormwater runoff.

Easements for drainage and utilities should be provided over individual lots as recommended by the City Engineer.

Septic Systems. The preliminary plat and related engineering plans illustrate “septic system testing area” locations upon individual lots. To be noted however, is that Section 12-413 of the Zoning Ordinance stipulates that primary and secondary septic sites must be illustrated on preliminary plat drawings. This issue should be subject to comment and recommendation by the City Engineer and/or Washington County Department of Public Health. The applicant has provided a soil boring report that shows suitable soils for septic systems for each lot, except lot 1, which was relocated to the east after the soil borings were done. Additional soil borings will be completed for lot 1. Permits for individual sewage treatment systems will be issued by the Washington County Department of Public Health. In this regard, review of proposed septic designs and final septic permits must be received from Washington County prior to building permit approval.

Park Dedication. According to Section 12-1270 of the Subdivision Ordinance, subdividers must dedicate to the City a reasonable portion of the land being subdivided for park purposes or in lieu thereof, a cash equivalent. The form of dedication, land or cash, (or any combination) must be decided by the City and dedicated or paid prior to the City signing the final plat.

While it is recognized that the applicant wishes to allow public access to designated open spaces, it is City Staff's position that the granting of a conservation easement over the permanent open space parcels within the plat is not considered fulfillment of the City's parkland dedication requirements. Rather, the granting of a conservation easement over the permanent open space provides the means to subdivide the subject property (agriculturally zoned) in the manner proposed.

The City's 2012 Park Plan does not illustrate any future parks or trails within the subject site. With this in mind, a calculation of a possible cash contribution (as opposed to land dedication) is considered worthwhile. According to the Ordinance, a cash park dedication fee, in lieu of land dedication, shall be equivalent to 7.5 percent of the predevelopment value of the land to be subdivided, subject to a minimum fee of \$5,000 per dwelling unit and a maximum fee of \$10,000 per dwelling unit.

The City's Parks Committee is scheduled to consider the preliminary plat at their September 27, 2017 meeting and provide a recommendation related to park dedication. Because such meeting date follows the date of the Planning Commission meeting packet distribution, conveyance of the Park Commission's recommendations will be provided at the October 2, 2017 Planning Commission meeting.

Planning Staff supports the dedication of land rather than a cash contribution. In this regard, it is suggested that the current Lot 1 location be considered as a possible park land dedication for the following reasons:

- Permanent and highly desirable views to the north, east and west would be provided which extend well beyond the boundaries of the suggested park site. As a public park, such views would be available for all citizens of Afton to enjoy.

- The suggested park location would be provided suitable public access (along 60th Street) which would not require park patron encroachment into the proposed residential neighborhood.
- Such a park location may result in the relocation of a single family residential lot which would otherwise be isolated from the proposed neighborhood to the east.

Based in part upon the recommendations of the Parks Committee and City Staff, the Planning Commission should recommend, and the City Council determine, desired park land dedication and/or equivalent cash contribution requirements.

Signage. As part of the application for subdivision, the applicant has proposed a subdivision identification sign.

Section 12-211.B of the Ordinance states that for uses which are allowed by conditional use permit, a sign for such use shall require a conditional use permit. Considering that PLCDs are allowed only by conditional use permit in agricultural zoning districts, approval of a conditional use permit for the proposed monument sign will be necessary. It is Planning Staff's opinion that such allowance can be made in tandem with the processing of the PLCD conditional use permit.

While the only detail provided regarding the sign at this time is its location in the median, staff included the sign discussion at this time because its location will influence the street design (if it is a median sign) or it may require the establishment of an easement if it is to be located on a portion of lot 2.

Comments related to proposed site signage are provided below within the conditional use permit section of this report.

Development Agreement. As part of future final plat approval, the applicants will be required to enter into a development agreement with the City and post any financial securities required by it. This issue should be subject to further comment by the City Attorney.

Conditional Use Permit

Purpose of PLCD. Within the A, Agricultural zoning district, PLCD's are listed as a conditional use. As a result, the approval of a conditional use permit is required.

According to the City Code (Section 12-2373), preservation and land conservation developments (PLCD), are intended to:

- Permit subdivisions in the Agricultural Zoning District which require the construction of a new public street.*
- Encourage a more creative and efficient development of land and its improvements through the preservation of agricultural land, natural features and amenities than is possible under the more restrictive application of zoning requirements, while at the same time, meeting the standards and purposes of the comprehensive plan and preserving the health, safety, and welfare of the citizens of the City.*
- Preserve open space, to preserve the natural resources of the site and to preserve*

wildlife habitat and corridors.

D. Facilitate the economical provision of streets and public utilities.

E. Allow the transfer of development rights (density) within a subdivision in order to preserve agricultural land, open space, natural features and amenities.

Provided certain conditions are satisfied, Staff believes that the proposed subdivision will fulfill the preceding PLCD objectives.

Development Density. Within PLCD developments, specific density requirements are imposed. Specifically, at least 50 percent of the total site must be preserved as an undeveloped parcel. Further, the maximum density of the underlying zoning district must not be exceeded.

As shown on the preliminary plat, a total of 19 lots are proposed upon the 218.6 acres subject site. The A, Agricultural District imposes a minimum density requirement of one dwelling unit per 10 acres of land. The development density requirements of the Ordinance have been satisfied (218.6 acres / 19 units = 11.5 acres per unit).

Use of Open Space. As part of formal subdivision processing, the intended use of the designated open space should be conveyed by the applicant. Of specific interest are any intended recreational purposes and the future construction of facilities intended to accompany such uses.

According to the PLCD requirements of the Ordinance (Section 12-2383), buildings, structures and improvements located upon the undeveloped parcel (conservation easement areas) must be designed in a manner which conserve and enhance the amenities of the parcel about its topography and its unimproved condition.

Also, to be noted is that Section 12-2381 of the Ordinance stipulates that construction of recreational facilities shown on the PLCD development plan must proceed at the same time as the construction of the dwelling units.

Homeowner's Association Requirements. Section 12-2382 of the Ordinance states that, if a homeowner's association is to be created, its various requirements (ownership requirements, bylaws, etc.) must be submitted as part of the PLCD for City review.

The applicant has provided a copy of proposed covenants, restrictions and conditions which would apply to property owners within the subdivision. Requirements include, but are not limited to, the following:

- Association duties
- Assessments
- Architectural controls
- Use of common properties
- Prohibited uses
- Water maintenance/management

Homeowner's association-related issues should be subject to further comment by the City Attorney.

Subdivision Identification Sign. As previously indicated, signs associated with conditional uses may only be allowed via conditional use permit.

As shown on the submitted landscape plan, a subdivision identification (entrance) sign is illustrated in the southeast corner of proposed Lot 2. Since the submission of the landscape plan however, the applicant has expressed a desire to erect the subdivision identification sign within an entrance median located at the subdivision's entrance along 60th street. In this regard, the sign is proposed to be located within the public right-of-way.

Generally speaking, private improvements (including signs) are discouraged within public rights-of-way. The City Engineer should provide comment regarding the proposed placement of the subdivision identification sign.

If the sign location illustrated on the landscape plan is no longer proposed, the landscape plan should be revised to illustrate the correct location.

Regardless of the proposed location, the subdivision identification sign should satisfy the applicable requirements of Section 12-2111 of the Zoning Ordinance related to signs.

If the sign is to be located upon private property, it is recommended that it be located within an easement which grants the homeowner's association the right to conduct such activities upon the privately-owned lot. This issue should be subject to further comment and recommendation by the City Attorney.

RECOMMENDATION

Based on the preceding review, Planning Staff recommends the following:

- A. Approval of the **rezoning** of five-acre site located in the extreme southeast corner of the subject property (14220 60th Street and PID # 3302820330002) from RR, Rural Residential to A, Agriculture subject to the following condition:
 - 1. The rezoning action not take effect until such time as the Afton Creek Preserve final plat and conditional use permit for the PLCD have been approved.

- B. Approval of the Afton Creek Preserve **preliminary plat** subject to the following conditions:
 - 1. The City approve the rezoning of 14220 60th Street (PID # 3302820330002) from RR, Rural Residential to Ag, Agriculture.
 - 2. Access-related issues shall be subject to further comment and recommendation by the City Engineer.
 - 3. The City Engineer provide comment and recommendation regarding 60th Street right-of-way width requirements.

4. Details related to street construction and any necessary street improvements, including but not limited to 60th Street and/or Trading Post Trail, shall be subject to comment and recommendation by the City Engineer.
6. The southernmost area of Lot 19 which is devoted to stormwater storage be placed within an outlot and overlaid with a drainage and utility easement. In no case however, shall the area of Lot 19 be less than 5 acres in size. This issue shall be subject to further comment and recommendation by the City Engineer.
7. The applicant provide explanation (acceptable to the City) regarding the lack of proposed front yard tree plantings for Lots 1, 2 and 3.
8. Note predevelopment seeding plan.
9. Wetland-related issues shall be subject to further comment and recommendation by the City Engineer.
10. Desired access easement widths shall be subject to recommendation by the City Engineer and/or Fire Chief.
11. Easements for drainage and utilities shall be provided over individual lots as recommended by the City Engineer.
12. The City Engineer and/or Washington County Department of Public Health provide comment and recommendation regarding the need to illustrate primary and secondary septic sites upon the preliminary plat.
13. Review of proposed septic designs and final septic permits shall be received from Washington County prior to building permit approval.
14. City Officials determine desired park land dedication and/or equivalent cash contribution requirements.
15. Comments of other City Staff.

C. Approval of the **conditional use permit** to allow a PLCD within an AG, Agriculture zoning District subject to the following conditions:

1. The City approve the Afton Creek Preserve final plat.
2. Proposed conservation easements shall run with the land in perpetuity to the following:
 - The City of Afton
 - All owners of the lots within the PLCD
 - Landowners within Afton which abut the PLCD
 - Minnesota Land Trust

3. Intended use (or uses) of conservation easement areas shall be described by the applicant, approved by the City and made conditions of conditional use permit approval.
3. Buildings, structures and improvements located within conservation easement areas shall be designed in a manner which conserve and enhance the amenities of the parcel about its topography and its unimproved condition.
4. Construction of recreational facilities within conservation easement areas shall proceed at the same time as the construction of the dwelling units.
5. Homeowner's association-related issues shall be subject to further comment by the City Attorney.
6. Comments of other City Staff.

D. Approval of the **conditional use permit** to allow a sign associated with a conditional use subject to the following conditions:

1. The City approve the Afton Creek Preserve final plat.
2. The City Engineer provide comment and recommendation regarding the proposed placement of the subdivision identification sign in the public right-of way.
3. If the sign location illustrated on the landscape plan is no longer proposed, the landscape plan shall be revised to illustrate the correct location.
4. The sign shall satisfy the applicable requirements of Section 12-2111 of the Zoning Ordinance related to signs.
5. If the sign is to be located upon private property, it shall be located within an easement which grants the homeowner's association the right to conduct such activities upon the privately-owned lot. This issue shall be subject to further comment and recommendation by the City Attorney.
6. Comments of other City Staff.

pc. Ron Moorse, City Administrator



J.P. Bush H O M E S

August 14, 2017

City of Afton Preliminary Plat Application Narrative.

Property: 14220 60th St S Afton MN 55001
Will Carlson owned 218.6 Acres

Usage: Previously operated under Agriculture Zoning.
Request to Use Ordinance Article XII Sec. 12-2371
PRESERVATION AND LAND CONSERVATION DEVELOPMENTS

Proposer: Will Carlson, Land Owner.
JP Bush Homes, Developer.

The proposed subdivision called "Afton Creek Preserve" describes this PRESERVATION AND LAND CONSERVATION DEVELOPMENT (PLCD) in its own title. Afton Minnesota and its residence have kept their community and developments well preserved for its rural character and Preservation of open space and parks.

Per the 2008 Comprehensive Plan, later Adopted **2012 Afton Parks Plan**. A priority for the acceptance of land in lieu of Park Dedication funds should be to obtain designated open spaces to provide for wildlife corridors, as well as to protect locally important water resources and scenic and natural features. Open space is defined as public land for use by the public.

Article XII. Sec 12-2371 PRESERVATION AND LAND CONSERVATION DEVELOPMENTS (PLCD) States Sec. 12-2373. Purpose. A. To permit subdivisions in the Agricultural Zoning District which require the construction of a new public street. B. To encourage a more creative and efficient development of land and its improvements through the preservation of agricultural land, natural features and amenities than is possible under the more restrictive application of zoning requirements, while at the same time, meeting the standards and purposes of the comprehensive plan and preserving the health, safety, and welfare of the citizens of the City. C. To preserve open space, to preserve the natural resources of the site and to preserve wildlife habitat and corridors. D. To facilitate the economical provision of streets and public utilities. E. To allow the transfer of development rights (density) within a subdivision to preserve agricultural land, open space, natural features and amenities.

Will Carlson and the Developer, JP Bush Homes desire to keep **The Afton City Code** and **2012 Parks Plan** by creating an allowed **PLCD** development at the location located at 14220 60th St S. Named **Afton Creek Preserve**, a well-planned model of this Code provision and Parks Plan. The developer has followed the proper steps and guidelines with the City of Afton City Administration in preparation for a PLCD platting. The developer has followed, organized and done the items listed to allow for Preliminary Plat application.

1. On site meeting in the fall of 2016 with, Members of the City of Afton administration, The Minnesota land Trust, Minnesota DNR, South Washington County watershed, The Developer, and Owner Will and Sandra Carlson.
2. Attended meetings and noted recommendations by both the Afton City Parks Committee and the NRGC Committee.
3. Scheduled informal work session meetings and noted recommendations by neighbors, City administration and City Engineering.
4. Scheduled additional on site walks with Neighbors, City Administration, City Engineers, DNR, South Washington Watershed, Minnesota Land Trust, Planning and Council members to discuss concerns, procedures, and vital input.
5. Completed EAW report by a licensed Environmentalist along with proper Public notifications and all required copies to governing agencies for proper feedback. Replied to all written comments from Metropolitan Council, MPCA, Water Shed, DNR, City Council and Neighbors.
6. Completed comprehensive Road Study. The City Administration and City Engineer worked closely to ensure our traffic study was performed with techniques that WSB thought appropriate. The traffic study results submitted to City and WSB on 8-1-2017 for Review. The results show The designed entrance location meets MINDOT and AASHTO for a safe entry and exit for the Afton Creek Preserve Development. Traffic Study Provided by Spack Consulting. A company with five engineers that have the credentials of Authoring two industry manuals which are used by traffic engineers around the world.
7. Coordinated submissions to Minnesota land Trust for the acceptance and subsequent acknowledgment to hold Afton Creek Preserve in trust. This acknowledgment meets requirements of the PLCD.
8. Coordinated support, design, and regulations in support of the PLCD from Minnesota DNR, South Washington County Watershed, Department of Agriculture, MPCA, Lakeland Fire Department.
9. Performed legal Survey work and documents to show site plan that outlines the intended purpose,

Boundaries, Conservation open space, Roads, Lot configuration, Public access and usage, trails and overlooks. In addition: all the requirements listed for CUP and major Subdivisions with the Afton City Code.

10. Performed required soil borings from engineer as stated in the City Code for Platting.
11. Completed a full Septic testing and report for all 19 lots. Results and report are currently being reviewed by the Department of Health at Washington County.
12. Completed Grading and Storm Water management plan. This Engineered Plan shows a significant positive performance between the current AG land and the new PLCD Open Space. Our engineers Used software approved and used by the LGU (South Washington Watershed) called Hydro CAD, Win Slam, Rules2 etc. Our Proposed Prairie grass planting schedule thru out the entire development reverses the damages currently under AG usage. This eliminates concerns previously discussed by neighbors, DNR, Watershed and Wild Life Management officials.
13. Completed a planting design and contract from the Prairie Restoration Company to install, Manage And maintain the entire conservation area. This includes the developer installing Plantings on the entire open space and areas for lots 1-19. Immediately upon development Construction, all areas including conservation space and all lots 1-19 will be fully planted. Not until such time a lot is sold and construction of a Home begins will the individual lots be disturbed from the wild flower plantings. At which time the individual lot owners must submit to the Architectural Committee a full landscape plan that does not allow more than 50% of the wild Flower plantings to be disturbed.
14. Written and attached a "AFTON CREEK PRESERVE HOMEOWNERS ASSOCIATION DRAFT AND RESTRICTIVE COVENANTS" dated AUGUST 10, 2017. This document Outlines the restrictions, and Homeowners Association control of the land as required in the PLCD City Code and meets the requirements of connection with base acknowledgment provided by Minnesota Land Trust.
15. Developer completed the Site Plan of the development in accordance With recommendations noted from all meetings formal and informal. The provided Site Plan Is Attached Exhibit "A"

The documents listed below are required and include added support information for the PLCD Preliminary plat Application.

1. All required copies of Maps, size and count. Site Plan, Grading plan, Septic Designs, Landscape Plan, Scenic Easement Plan, plan for 50% lot restrictions for wildflower plantings.
2. Soil Borings report.
3. Traffic Study Report.
4. EAW Final Report.
5. AFTON CREEK PRESERVE HOMEOWNERS ASSOCIATION DRAFT AND RESTRICTIVE COVENANTS.
6. Minnesota land Trust Acknowledgement.
7. Prairie Restoration contract outline.
8. Supporting Documents, Emails, Letters, from Metropolitan Council. DNR, Watershed, MPCA, Department of Agriculture, Lakeland Fire Dept., City of Afton Committee reports, recommendations NRG and Parks,
9. Mailing labels from Washington County of all Neighbors within 500 feet.
10. Completed applications along with required fees for CUP, PLCD, Major Subdivision, Rezoning of 5-acre parcel existing Homestead.

(ATTACHED SEPERATLY IS AN EXHIBIT SCHEDULE OF DOCUMENTS ABOVE)

Brief property description: PLCD Preservation and Land Conservation Development

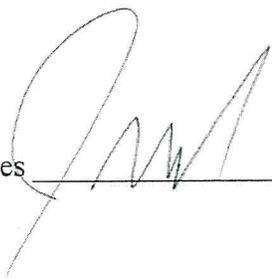
Afton Creek Preserve project is currently AG land and abutting Rural Residential and AG land. Our 19-lot single-family development on 218.6 acres with 109.7 acres of conservation easement to protect the Trout Brook. Each lot is 5 acres and has a minimum of 2.5 acres of buildable area on each lot. The development will have individual wells and septic systems. 50% of the area will remain in open space. Grading activities scheduled to begin after City of Afton and Developer sign and agree to developer's agreement. The project will be carried out using an array of best management practices including special native grass, wildflower, and shrub vegetative buffer strips to protect steep slopes. The main stream on the south is Trout Brook. Trout Brook is Protected with a Land Trust conservation and Scenic Easements on both sides of the stream, as are all wetlands along the stream. The above description along with all the required documents and planning that have been performed is the best use of the land using the allowed PLCD code. Lastly, it is our goal to decrease the amount of agricultural land in the Trout Brook Watershed. This will reduce erosion and stream contamination from animal waste, large number of herbicides and pesticides used in the current agricultural land which has resulted in higher than normal Escherichia coli and unwanted chemical levels.

DEDICATION:

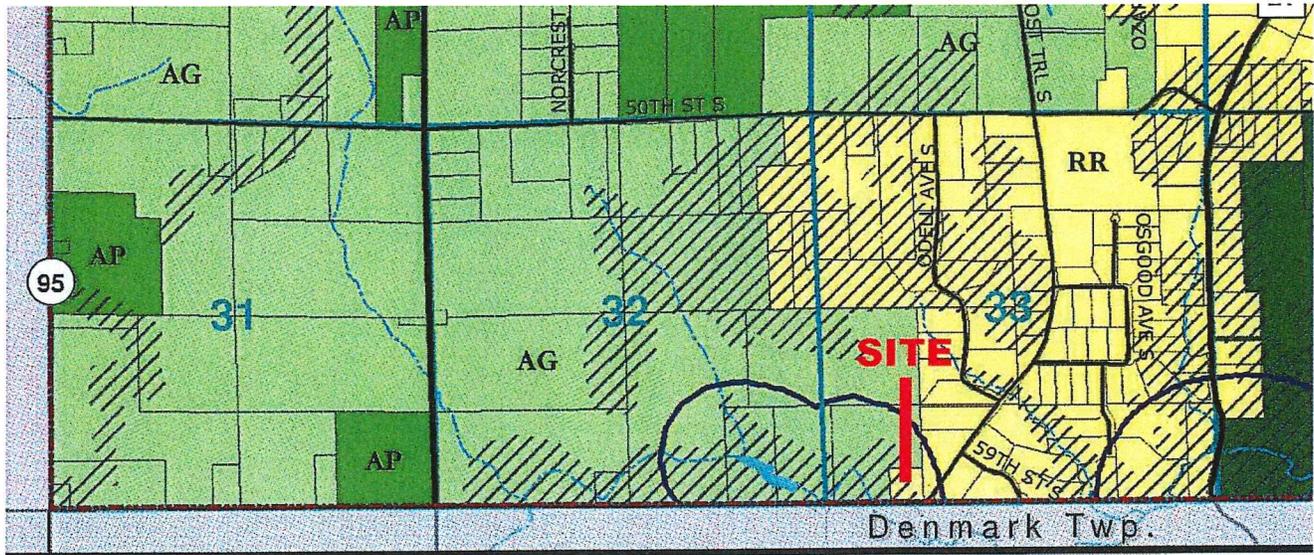
With this entire design and land development called AFTON CREEK PRESERVE Protects the Trout Brook and Surrounding natural features. **Albert Wilmer Carlson hereby grants a Conservation Easement which shall run with the land in perpetuity to the City of Afton**, All of the owners of the lots and parcels to be created in the PLCD, all land owners of property within Afton abutting the PLCD and the Minnesota Land Trust which restricts the lots and parcels, as well as the development rights on the undeveloped parcel, within the PLCD to the number of dwelling units approved for the PLCD and the land cover and use approved by the City of Afton as a part of this PLCD . All land shown on the final development plan as an undeveloped parcel must be conveyed to a homeowner's association provided in an indenture for the maintenance of the planned development. The undeveloped parcel must be conveyed to the homeowner's association subject to covenants to be approved by the City Council which restrict the undeveloped parcel to the uses specified on the final development plan and which provide for the maintenance of the undeveloped parcel in a manner which assures it continuing use for its intended purpose.

Please accept our PLCD Preliminary Plat Application to the City of Afton Planning Commission and City Council.

Joseph P Bush
J.P. Bush Homes



Albert Wilmer Carlson

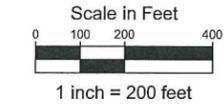


Zoning Districts

- Agriculture
- Ag Preserve
- Village Historic Site- Commercial
- Industrial
- Village Historic Site- Residential
- Rural Residential

- State Park
- Marina Services
- Conservancy Overlay
- St. Croix River Bluffland
- Floodplain Overlay (100 Year)
- Shoreland Management Areas

- City of Afton
- Parcel Boundaries
- Section Lines
- Major Road
- Local Road
- Streams
- Lakes & Rivers



Engineering: PLOWE ENGINEERING INC.
Soil Testing: MIDWEST SOIL TESTING

PRELIMINARY PLAT - AFTON CREEK PRESERVE EXHIBIT A

Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

Property Identification Numbers
3302820330002
3302820330004
3302820330005
3302820320001
3302820410002
3302820420004
3302820430001

Developer:



**J.P. Bush
HOMES**
Lakeland, Minnesota

Property Owner: Will Carlson

TOTAL PARCEL AREA = 218.6 acres

Proposed Conservation Easements
OPEN SPACE = 112.5 acres
(51.4% gross parcel area)

Proposed Lots (19 total) = 97.8 acres

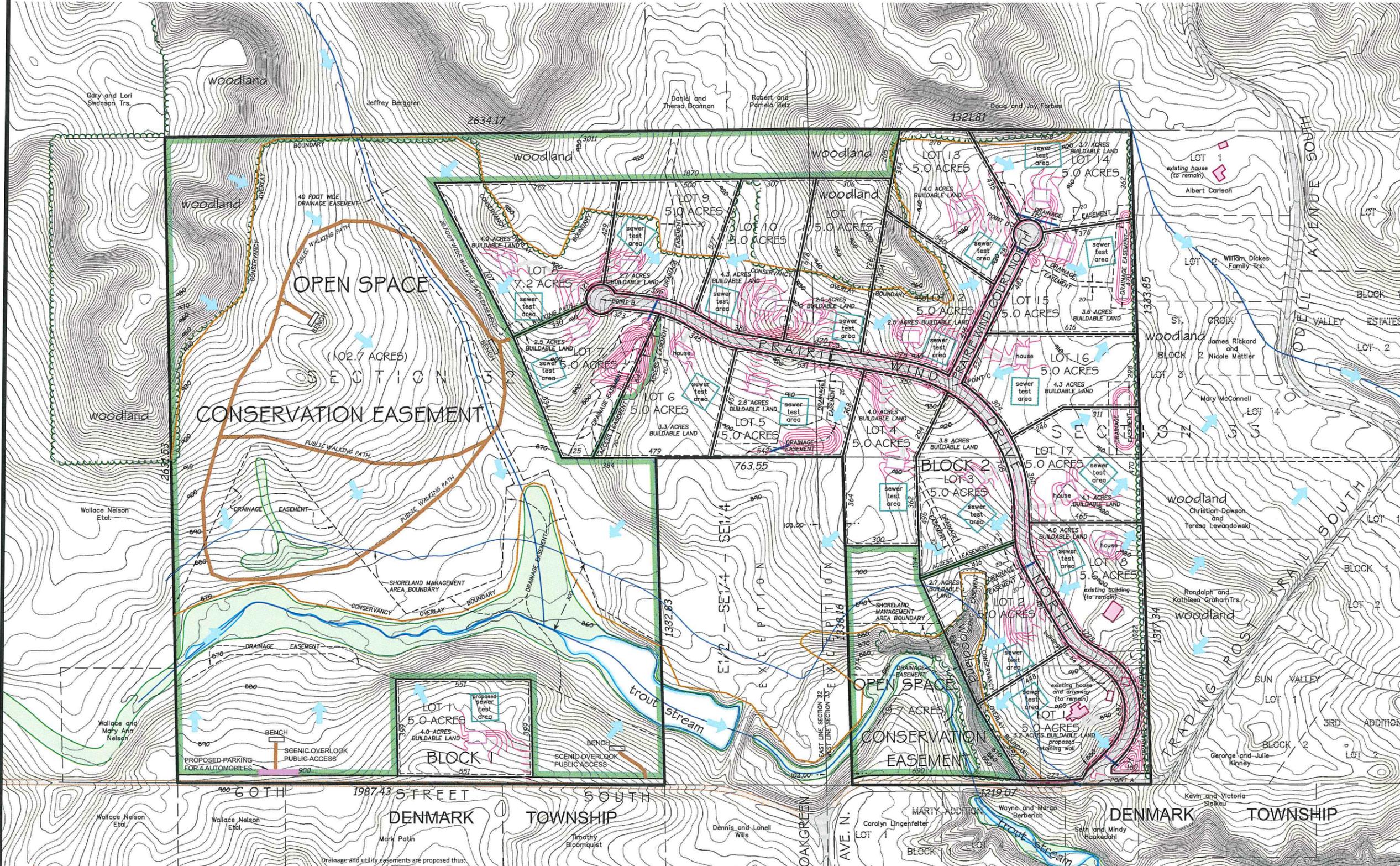
Proposed Road Right of Way = 8.3 acres

Proposed Road Right of Way Width = 60 feet

Proposed Road Right of Way Width
(60th Street South) = 33 feet from center line

Proposed Length of Cul-De-Sac -
Point A to Point B = 3,430 lineal feet
Point C to Point D = 690 lineal feet

Proposed Road Type - 24 foot wide rural section

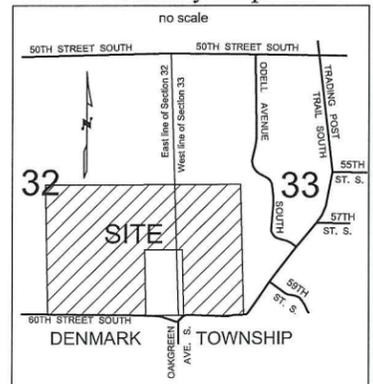


Legend

- Denotes slopes 12% to 17.9%
- Denotes slopes over 18%
- Denotes wetland location per U.S. Fish and Wildlife Service National Wetlands Inventory.
- Denotes stream.
- Denotes general surface water flow.
- Denotes proposed contours, see grading plan for additional details.
- Denotes proposed culvert location.
- Denotes proposed house site.
- Denotes proposed septic area.
- Denotes proposed driveway location.
- Denotes Carlson "farm road" property.
- Denotes proposed walking path.

Contours are at two foot intervals and are based on data published by the Minnesota Department of Natural Resources.

Vicinity Map

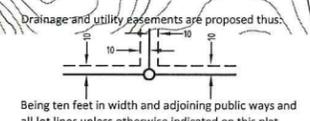


OFFICIAL COPIES OF THIS MAP ARE CRIMP SEALED

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Landmark Surveying, Inc.
mil Horak
Milo B. Horak, Minnesota License No. 52577 August 14, 2017 Date

Landmark Surveying, Inc.
21090 Olinda Trail North
P.O. Box 65
Scandia, Minnesota 55073
Office number: 651-433-3421
Cell number: 651-755-5760
E-mail: inthefield@frontiernet.net



The following minimum setbacks were observed:
Buildings - 200 feet from the stream bank.
Septic Areas - 150 feet from the stream bank.
Buildings and Septic Areas - 40 feet from a bluff line.

Note:
The 1 rod strip of land located along the north line of the Southeast Quarter of the Southwest Quarter of Section 33 contains approximately 0.40 acres of land and this area was not included in overall area or density calculations for this PLCD.

Note: Easements for stormwater facility access and inspections will be conveyed along the lot lines (10 feet either side) common between Lot 4 and Lot 5, Lot 14 and Lot 15, Lot 16 and Lot 17, all in Block 2. All other currently proposed stormwater facilities have direct access from a public street via the proposed drainage or drainage and utility easements.

REVISED: SEPTEMBER 22, 2017

PRELIMINARY PLAT - AFTON CREEK PRESERVE

Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

LANDSCAPE PLAN

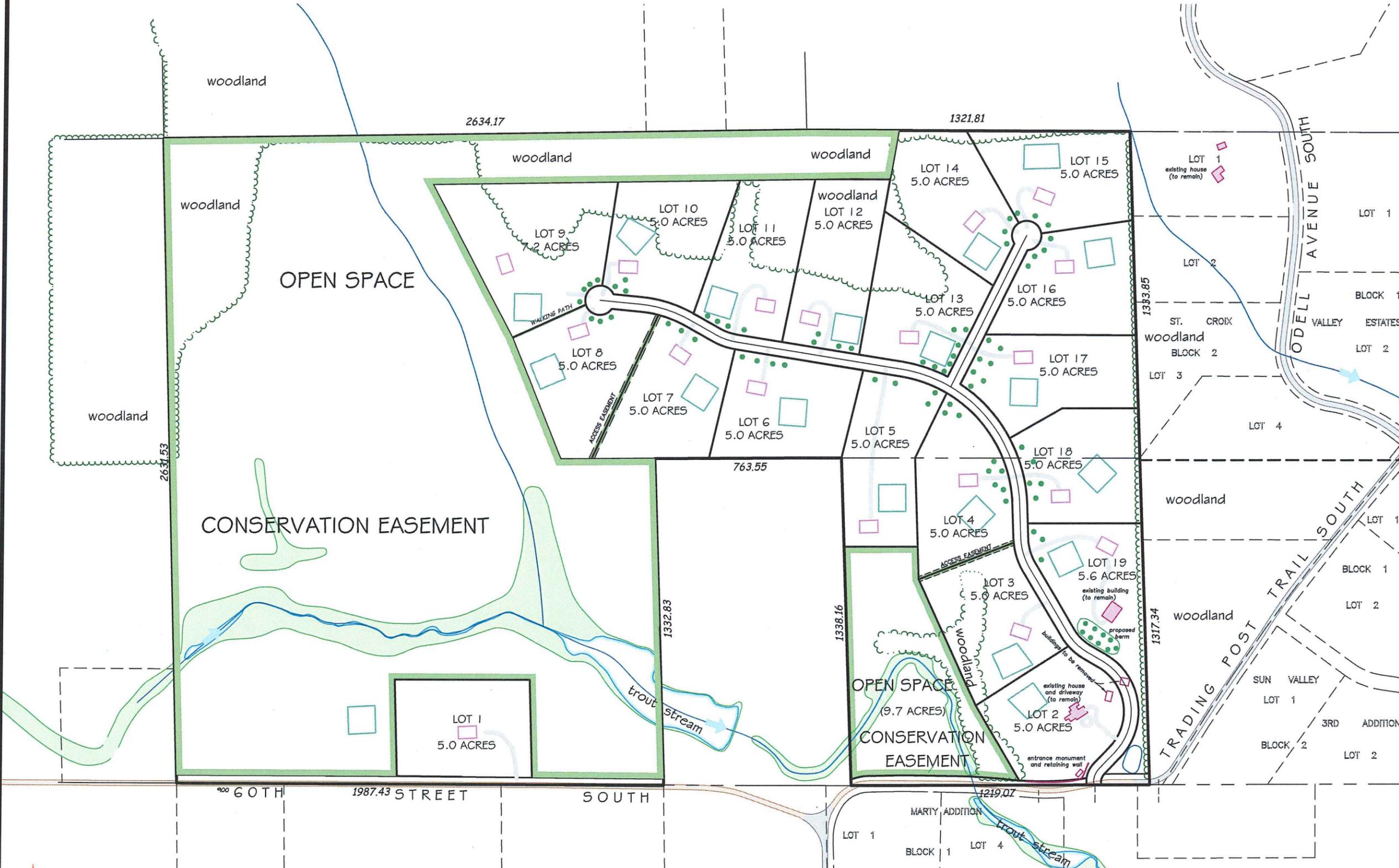
Developer:



J.P. Bush
HOMES

Property Owner: Will Carlson

Lakeland, Minnesota

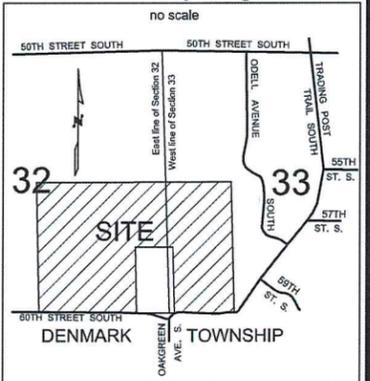


Legend

- Denotes wetland location see note below.
- Denotes stream.
- Denotes general surface water flow.
- Denotes proposed house site.
- Denotes proposed septic area.
- Denotes proposed driveway location.
- Denotes a River Birch, American Linden, Blue Spruce, White Pine, Norway Spruce, Sugar Maple, Autumn Blaze Maple, Hackberry, Red Oak, White Oak, Newport Flowering Plum, Illic Japanese Tree-White, or Red Bud (Cercis Canadensis).

Wetland, Shoreland and stream locations are approximate and are based on data obtained through the National Wetlands Inventory - V2 online interface and the City of Afton Zoning Map (MAP 11).

Vicinity Map



Landmark Surveying, Inc.
21090 Olinda Trail North
P.O. Box 65
Scandia, Minnesota 55075
Office number: 651-433-3421
Cell number: 651-755-5760
E-mail: inthefield@frontiernet.net

PRELIMINARY PLAT - AFTON CREEK PRESERVE

Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

SEEDING PLAN

59.0 acres ± to be seeded in Conservation Easement areas.
75.0 acres ± to be seeded in Residential area.

Final calculations will be determined at or or above those shown hereon by the South Washington Watershed District at the time of installation.

Developer:



J.P. Bush
HOMES

Property Owner: Will Carlson

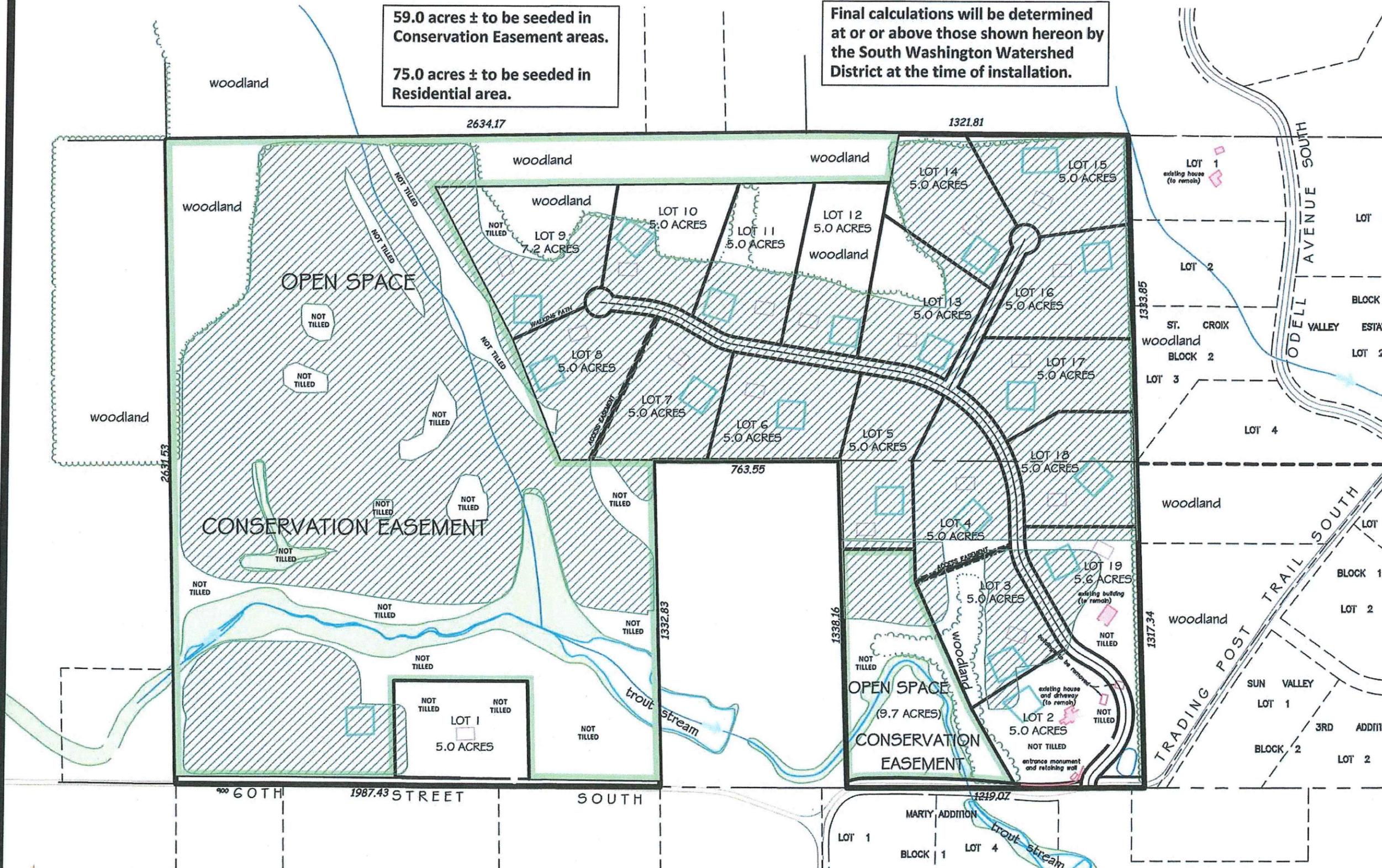
Seed mixes, species and amounts

Grass Seed lbs / acre	Amount
PRI Mixed Height Mesic Grass Mix:	
35% Big bluestem, 23% Little bluestem, 22% Indian grass, 12% Side oats grama, 5% Canada wild rye, 2% June grass, 1% Switch grass all by PLS weight	10
<i>Note: A cover crop will be sown along with the native grasses at a rate of approximately 25 lbs./acre. Cover crop is an annual grass species that germinates quickly and will reduce the risk of soil erosion on the site. Oats will be used for a spring or summer seeding, and winter wheat will be used for a fall seeding.</i>	
Wildflower Seed oz / acre	
Butterfly weed (<i>Asclepias tuberosa</i>)	1/4
Partridge pea (<i>Chamaecrista fasciculata</i>)	1/2
Wild lupine (<i>Lupinus perennis</i>)	1
Yellow coneflower (<i>Rotifida pinata</i>)	1/2
PRI Mixed Height Mesic Wildflower Mix:	
19% Purple prairie clover, 18% Hoary vervain, 15% Black-eyed Susan, 10% Leadplant, 8% Common on-eyes, 5% Golden Alexander, 3% Canada milk vetch, 3% White prairie clover, 3% Canada tick trefoil, 3% Wild bergamot, 3% Still goldenrod, 3% Blue vervain, 2% Common milkweed, 1% Yarrow, 1% Prairie rose, 1% Gray goldenrod, 1% Western spideewort, all by PLS weight	24

Legend

- Denotes wetland location see note below.
 - Denotes stream.
 - Denotes proposed house site.
 - Denotes proposed septic area.
 - Denotes proposed driveway location.
 - Denotes area currently in row crop and to be seeded.
- Wetland, Shoreland and stream locations are approximate and are based on data obtained through the National Wetlands Inventory - V2 online interface and the City of Afton Zoning Map (MAP 11).

Vicinity Map



Landmark Surveying, Inc.
21090 Ojuda Trail North
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Scandia, Minnesota 55073
Office number: 651-433-3421
Cell number: 651-755-5760
E-mail: info@landmark.net

PRELIMINARY PLAT - AFTON CREEK PRESERVE

Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

SCENIC EASEMENTS

Developer:



J.P. Bush
HOMES

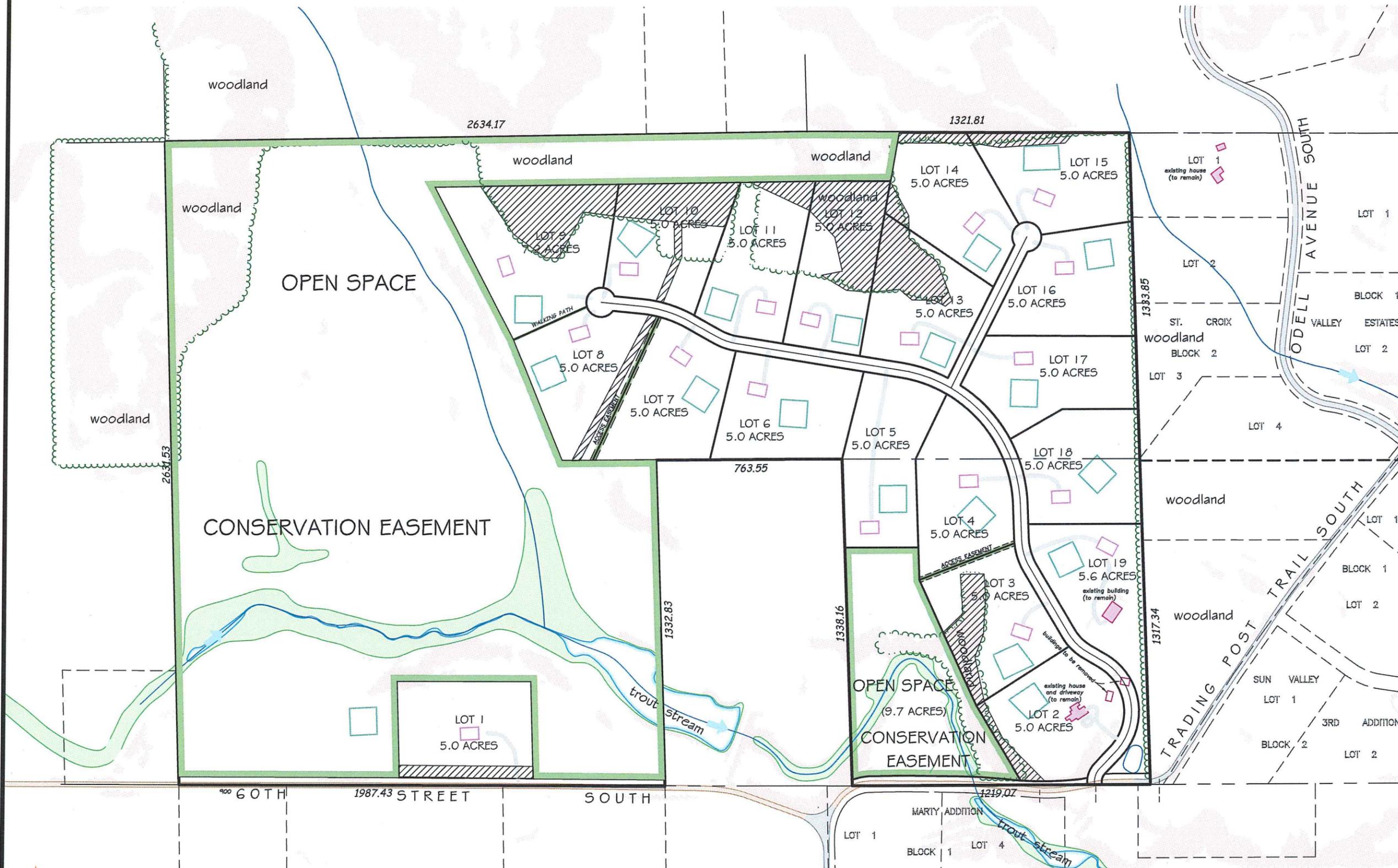
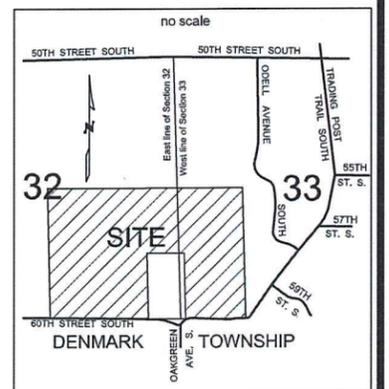
Property Owner: Will Carlson

Legend

- Denotes slopes over 18%.
- Denotes wetland location, see note below.
- Denotes stream.
- Denotes general surface water flow.
- Denotes proposed house site.
- Denotes proposed septic area.
- Denotes proposed driveway location.
- Denotes area of scenic easement.

Wetland, Shoreland and stream locations are approximate and are based on data obtained through the National Wetlands Inventory - V2 online interface and the City of Afton Zoning Map (MAP 11).

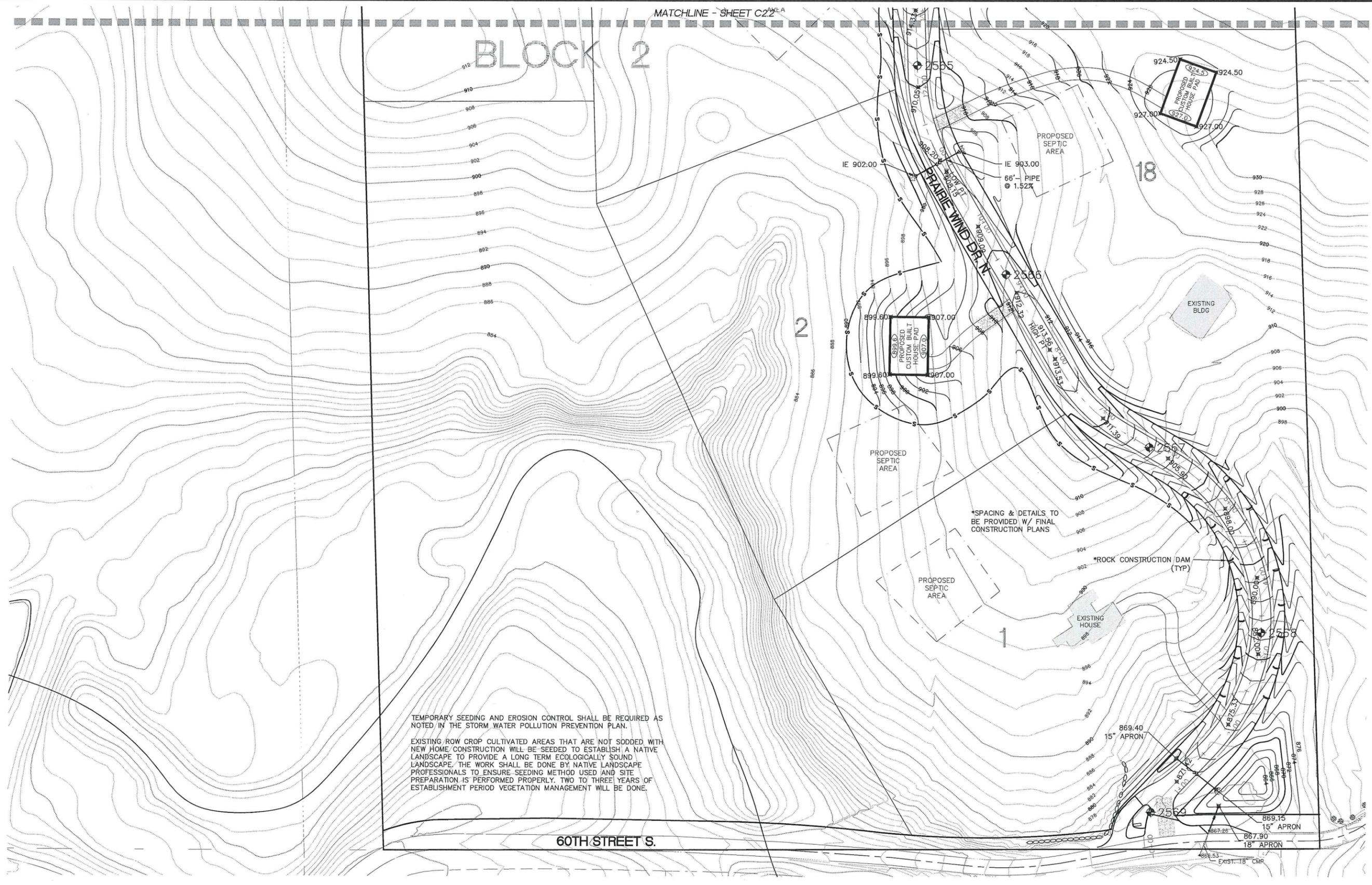
Vicinity Map



Landmark Surveying, Inc.
21,090 Olinda Trail North
P.O. Box 65
Scandia, Minnesota 55073
Office number: 651-433-3421
Cell number: 651-755-5760
E-mail: inthefield@frontrnet.net

MATCHLINE - SHEET C22

BLOCK 2



TEMPORARY SEEDING AND EROSION CONTROL SHALL BE REQUIRED AS NOTED IN THE STORM WATER POLLUTION PREVENTION PLAN.

EXISTING ROW CROP CULTIVATED AREAS THAT ARE NOT SODDED WITH NEW HOME CONSTRUCTION WILL BE SEED TO ESTABLISH A NATIVE LANDSCAPE TO PROVIDE A LONG TERM ECOLOGICALLY SOUND LANDSCAPE. THE WORK SHALL BE DONE BY NATIVE LANDSCAPE PROFESSIONALS TO ENSURE SEEDING METHOD USED AND SITE PREPARATION IS PERFORMED PROPERLY. TWO TO THREE YEARS OF ESTABLISHMENT PERIOD VEGETATION MANAGEMENT WILL BE DONE.

60TH STREET S.

NOTE: HOUSE PAD GRADING CONCEPTUAL ONLY. FINAL GRADING TO BE DETERMINED WITH ACTUAL HOUSE PLAN AND LOCATION.

- S— PROPOSED SILT FENCE
- ▨ PROPOSED ROCK CONSTRUCTION ENTRANCE*
*TO BE INSTALLED PRIOR TO START OF HOUSE PAD GRADING

DRAWN BY:	DESIGN BY:
C.M.	C.W.P.
CHKD BY:	PROJ. NO.
C.W.P.	17-1707
ORIGINAL DATE:	
AUGUST 14, 2017	

DATE	REVISION DESCRIPTION
9/5/17	REVISED ENTRANCE
9/21/17	PONDS ADDED/GRADING REVISIONS

I hereby certify that this plan 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.

Charles W. Plowe
CHARLES W. PLOWE
DATE: 09.21.2017 LIC. NO. 18227

AFTON CREEK PRESERVE
AFTON, MINNESOTA
GRADING, DRAINAGE & EROSION CONTROL PLAN

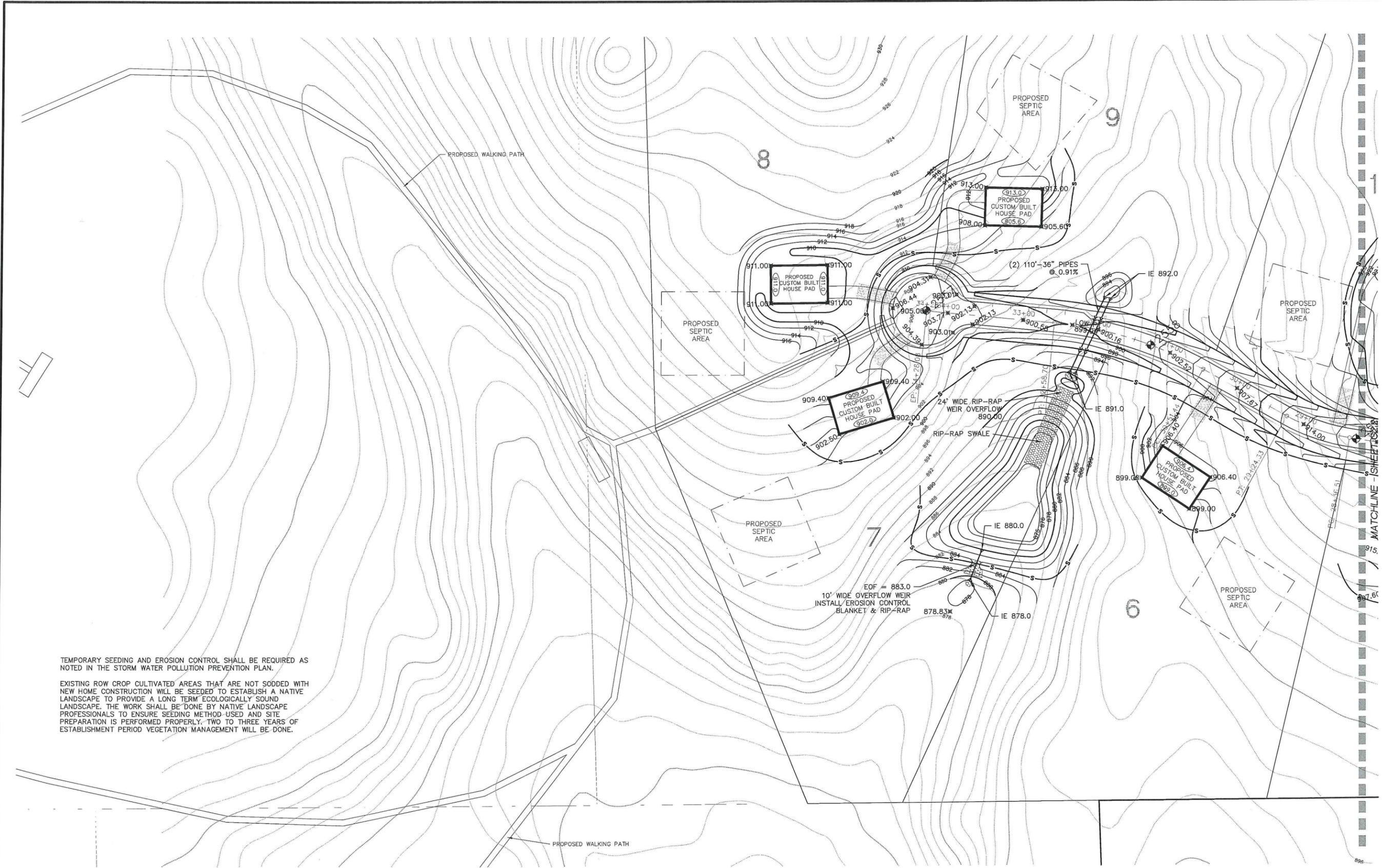
PREPARED FOR:
JOE BUSH



PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701



C2.1



TEMPORARY SEEDING AND EROSION CONTROL SHALL BE REQUIRED AS NOTED IN THE STORM WATER POLLUTION PREVENTION PLAN.

EXISTING ROW CROP CULTIVATED AREAS THAT ARE NOT SODDED WITH NEW HOME CONSTRUCTION WILL BE SEED TO ESTABLISH A NATIVE LANDSCAPE TO PROVIDE A LONG TERM ECOLOGICALLY SOUND LANDSCAPE. THE WORK SHALL BE DONE BY NATIVE LANDSCAPE PROFESSIONALS TO ENSURE SEEDING METHOD USED AND SITE PREPARATION IS PERFORMED PROPERLY. TWO TO THREE YEARS OF ESTABLISHMENT PERIOD VEGETATION MANAGEMENT WILL BE DONE.

NOTE: HOUSE PAD GRADING CONCEPTUAL ONLY. FINAL GRADING TO BE DETERMINED WITH ACTUAL HOUSE PLAN AND LOCATION.

—s— PROPOSED SILT FENCE
 PROPOSED ROCK CONSTRUCTION ENTRANCE*
 *TO BE INSTALLED PRIOR TO START OF HOUSE PAD GRADING

DRAWN BY: C.M.
 CHECKD BY: C.W.P.
 ORIGINAL DATE: AUGUST 14, 2017

DATE	REVISION DESCRIPTION
9/5/17	ADDED WALKING PATH & PARKING
9/21/17	PONDS ADDED/GRADING REVISIONS

I hereby certify that this plan 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.

 CHARLES W. PLOWE
 LIC. NO. 16227
 DATE: 09.21.2017

AFTON CREEK PRESERVE
 AFTON, MINNESOTA
 GRADING, DRAINAGE & EROSION CONTROL PLAN

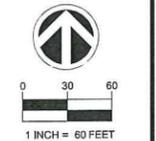
PREPARED FOR:
 JOE BUSH



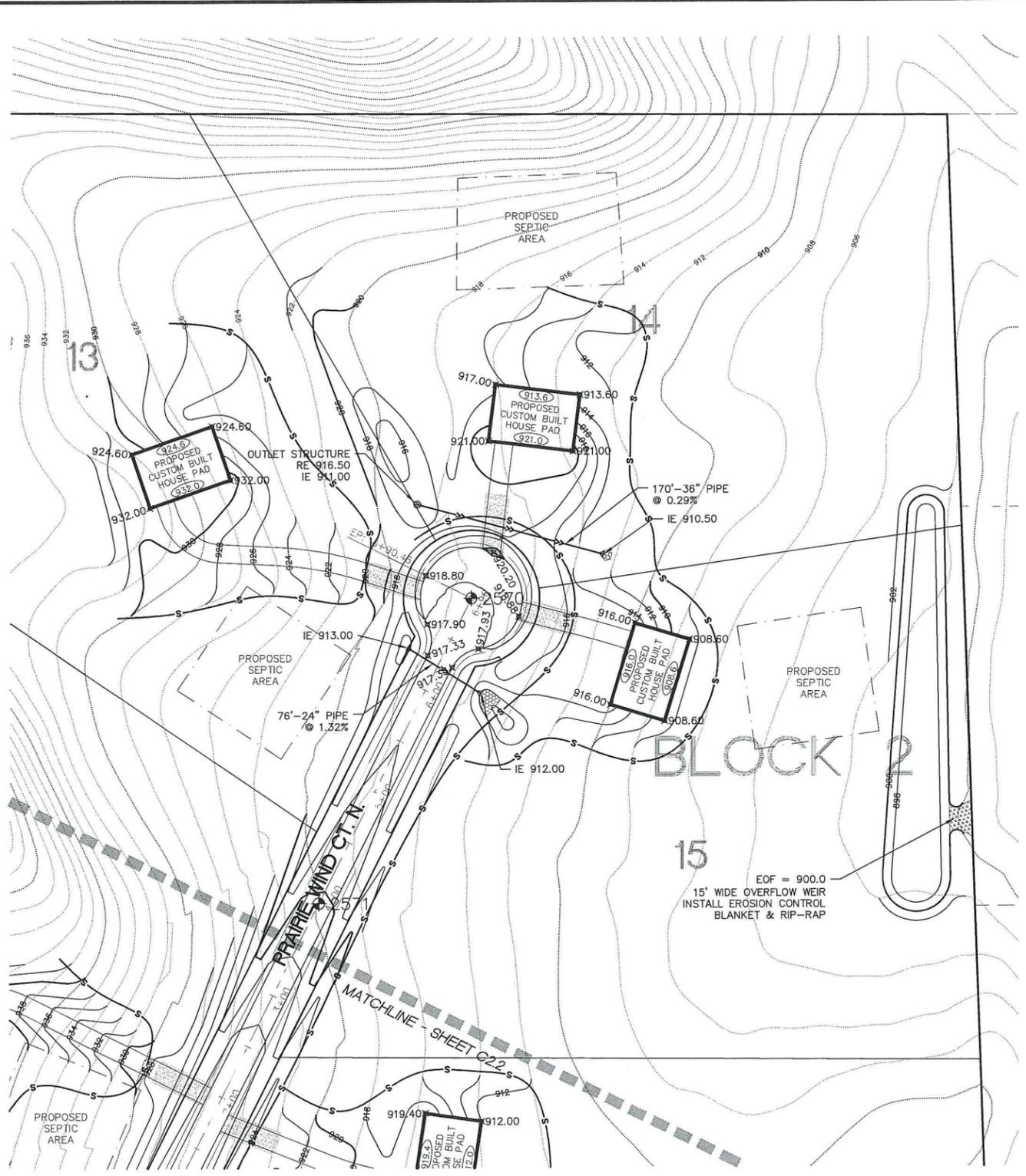
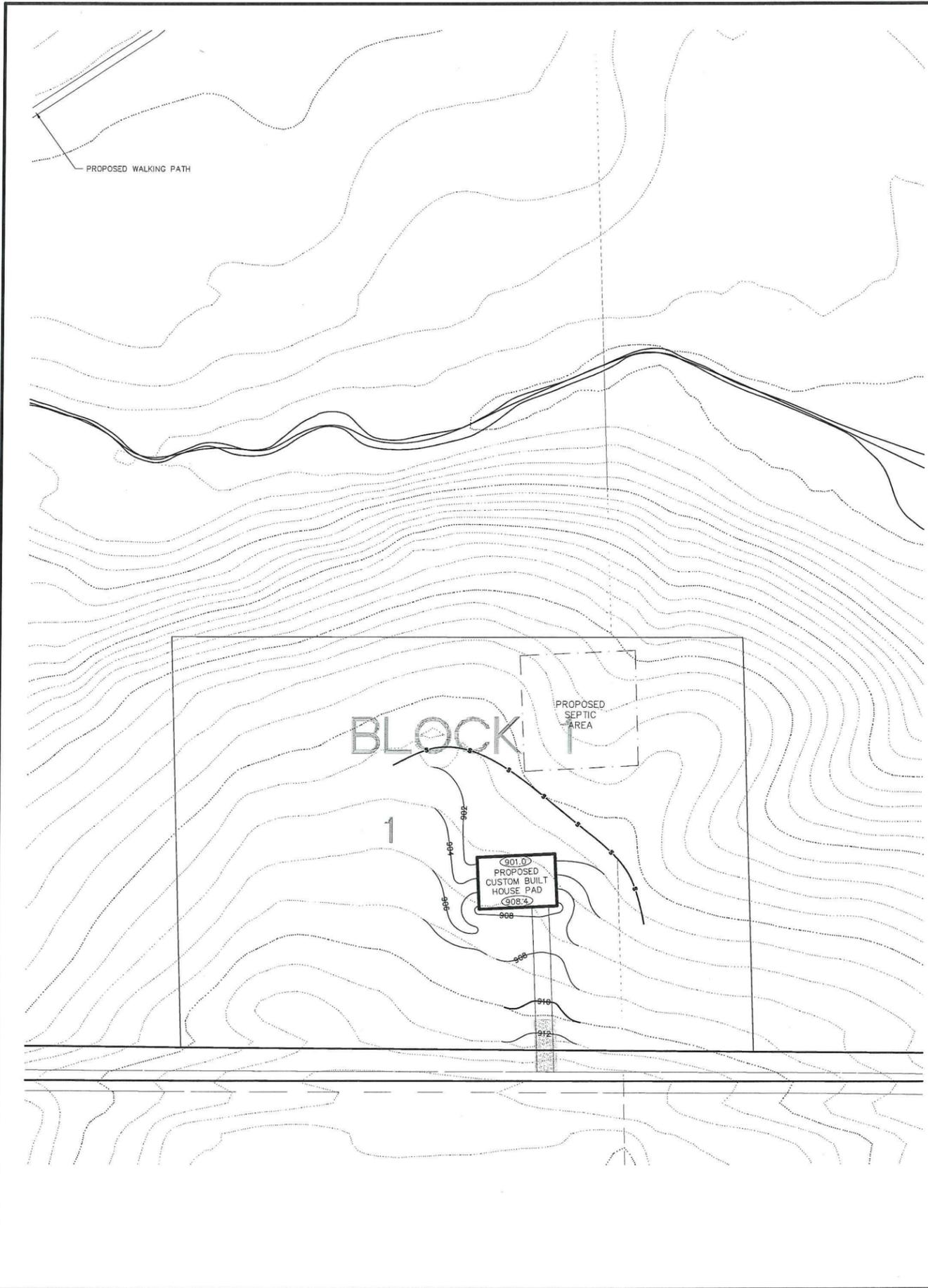
PLOWE ENGINEERING, INC.

6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

NORTH



C2.3



TEMPORARY SEEDING AND EROSION CONTROL SHALL BE REQUIRED AS NOTED IN THE STORM WATER POLLUTION PREVENTION PLAN.

EXISTING ROW CROP CULTIVATED AREAS THAT ARE NOT SODDED WITH NEW HOME CONSTRUCTION WILL BE SEED TO ESTABLISH A NATIVE LANDSCAPE TO PROVIDE A LONG TERM ECOLOGICALLY SOUND LANDSCAPE. THE WORK SHALL BE DONE BY NATIVE LANDSCAPE PROFESSIONALS TO ENSURE SEEDING METHOD USED AND SITE PREPARATION IS PERFORMED PROPERLY. TWO TO THREE YEARS OF ESTABLISHMENT PERIOD VEGETATION MANAGEMENT WILL BE DONE.

NOTE: HOUSE PAD GRADING CONCEPTUAL ONLY. FINAL GRADING TO BE DETERMINED WITH ACTUAL HOUSE PLAN AND LOCATION.

- S — PROPOSED SILT FENCE
- ▨ PROPOSED ROCK CONSTRUCTION ENTRANCE*
*TO BE INSTALLED PRIOR TO START OF HOUSE PAD GRADING

DRAWN BY: C.M.
 CHKCD BY: C.W.P.
 ORIGINAL DATE: AUGUST 14, 2017

DATE	REVISION DESCRIPTION
9/17/17	ADDED LOT 1
9/21/17	PONDS ADDED/GRADING REVISIONS

I hereby certify that this plan 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.

Charles W. Plowe
 CHARLES W. PLOWE
 LIC. NO. 18227
 DATE: 09.21.2017

AFTON CREEK PRESERVE
 AFTON, MINNESOTA
 GRADING, DRAINAGE & EROSION CONTROL PLAN

PREPARED FOR:
 JOE BUSH

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

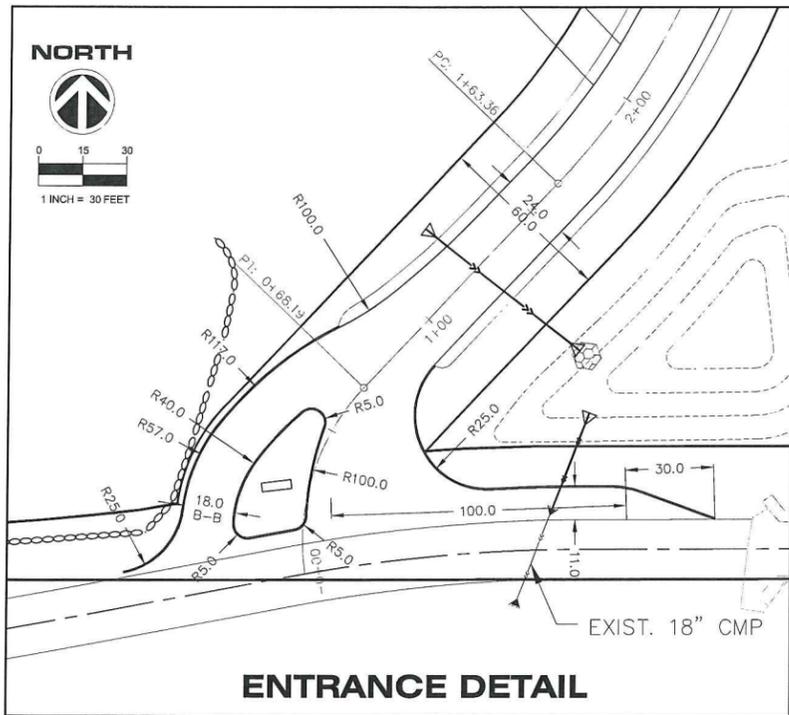
6775 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

NORTH

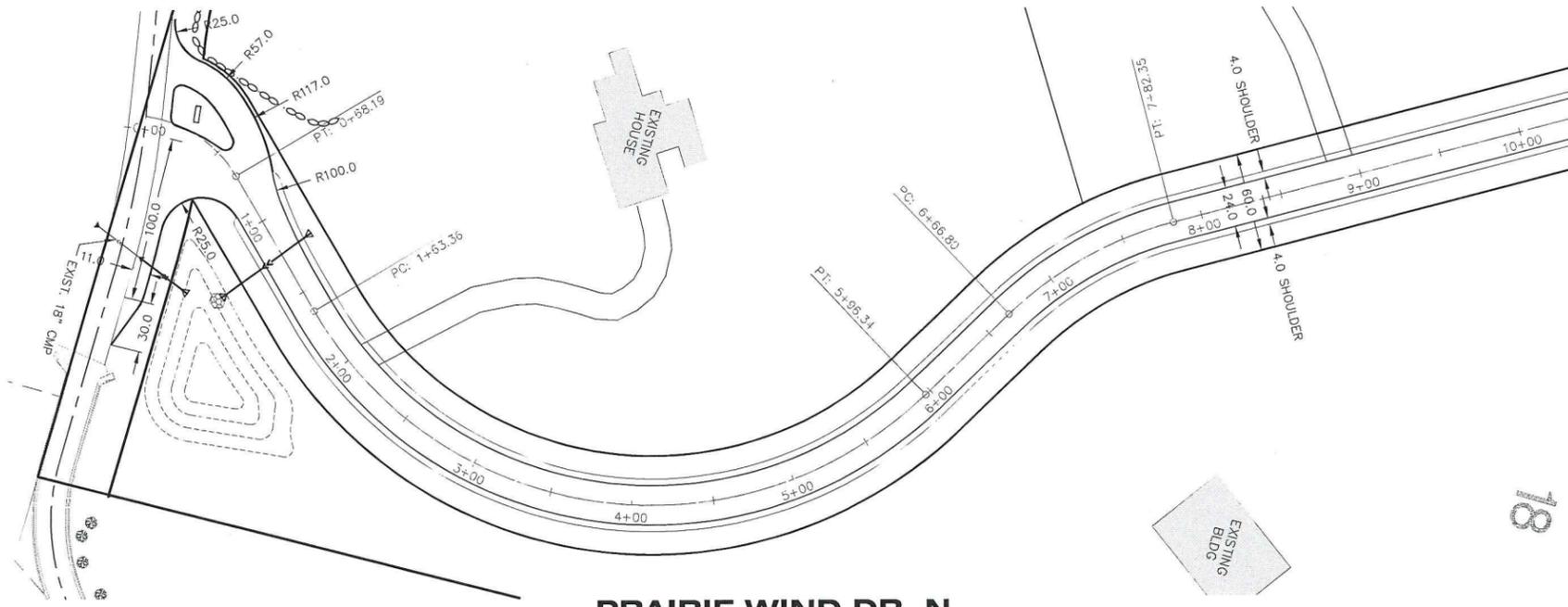
0 30 60
 1 INCH = 60 FEET

C2.4

NORTH

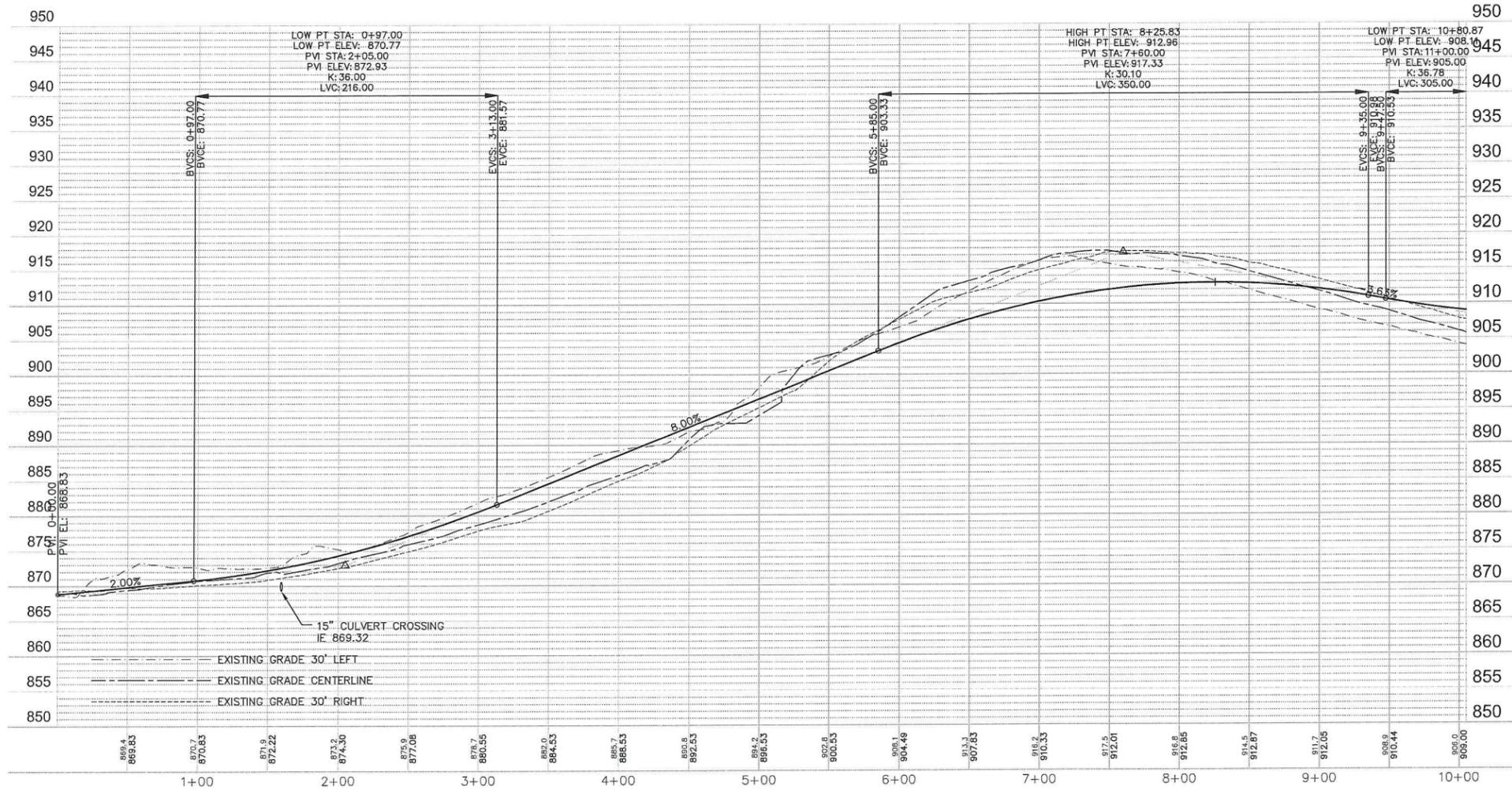
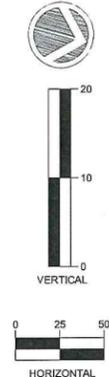


ENTRANCE DETAIL



PRAIRIE WIND DR. N.

NORTH



PLAN & PROFILE - PRAIRIE WIND DR. N. (0+00 TO 10+00) AFTON CREEK PRESERVE

DRAWN BY:	DESIGN BY:
C.M.	C.W.P.
CHKD BY:	PROJ. NO.
C.W.P.	17-1707
ORIGINAL DATE:	
AUGUST 14, 2017	

DATE	REVISION DESCRIPTION
9/5/17	REVISED ENTRANCE
9/27/17	MISC REVISIONS

I hereby certify that this plan 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.

Charles W. Plowe
 CHARLES W. PLOWE
 LIC. NO. 16227
 DATE: 09.21.2017

AFTON CREEK PRESERVE
 AFTON, MINNESOTA
 PLAN & PROFILE
 PRAIRIE WIND DR. N. (0+00 TO 10+00)

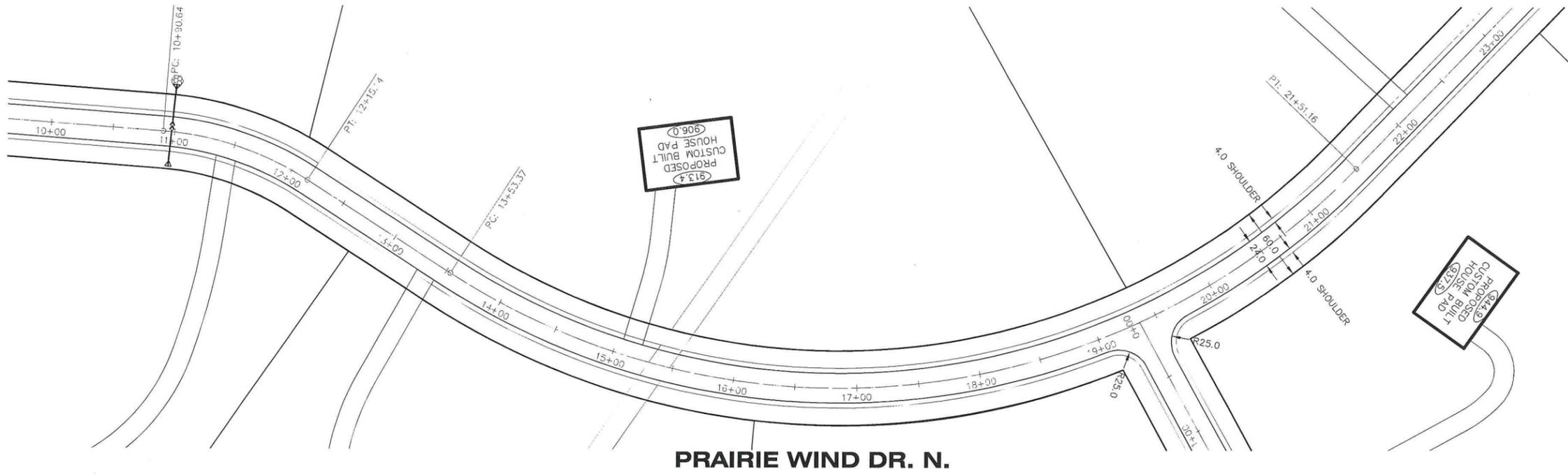
PREPARED FOR: JOE BUSH

SITE PLANNING & ENGINEERING
PLOWE ENGINEERING, INC.
 6775 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

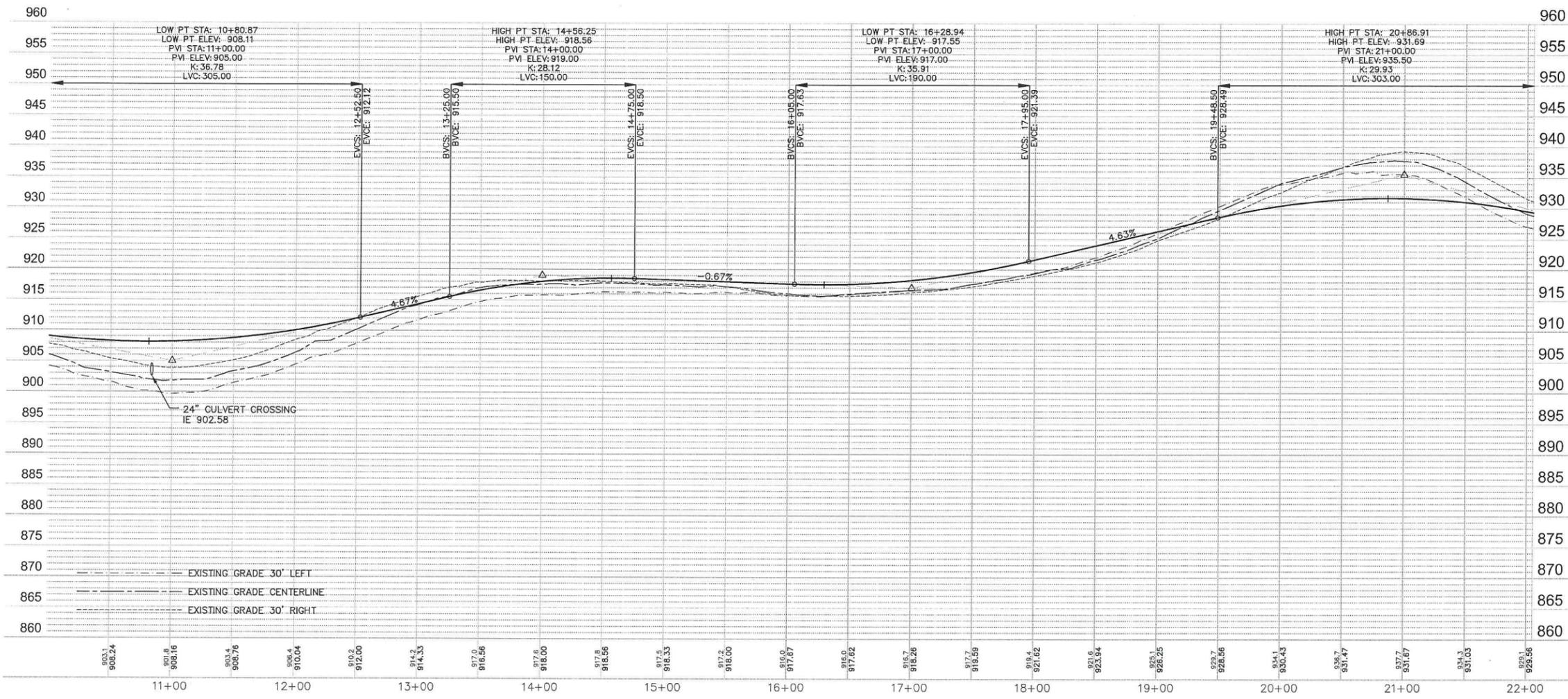
C3.1

9/27/2017

NORTH



PRAIRIE WIND DR. N.



PLAN & PROFILE - PRAIRIE WIND DR. N. (10+00 TO 22+00) AFTON CREEK PRESERVE

DRAWN BY:	DESIGN BY:
C.M.	C.W.P.
CHKD BY:	PROJ. NO.
C.W.P.	17-1707
ORIGINAL DATE:	
AUGUST 14, 2017	

DATE	REVISION DESCRIPTION
9/11/17	ADDED DIMENSIONS
9/21/17	MISC REVISIONS

I hereby certify that this plan 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.

Charles W. Plowe
 CHARLES W. PLOWE
 LIC. NO. 16227
 DATE: 08.21.2017

AFTON CREEK PRESERVE
 AFTON, MINNESOTA
 PLAN & PROFILE
 PRAIRIE WIND DR. N. (10+00 TO 22+00)

PREPARED FOR: JOE BUSH

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

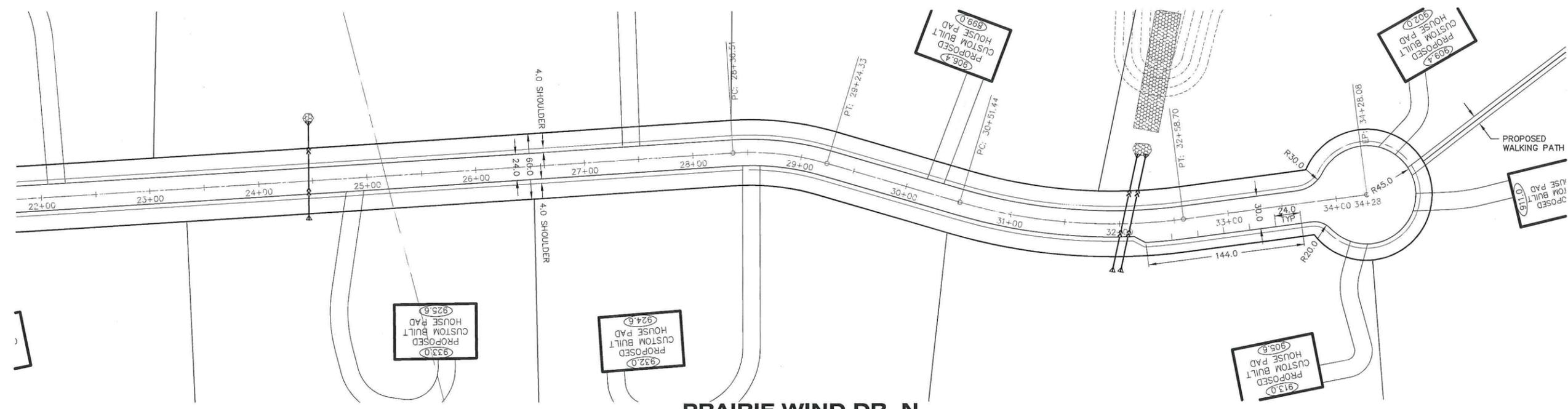
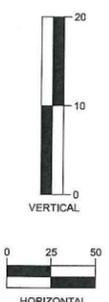
6776 LAKE DRIVE
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 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

C3.2

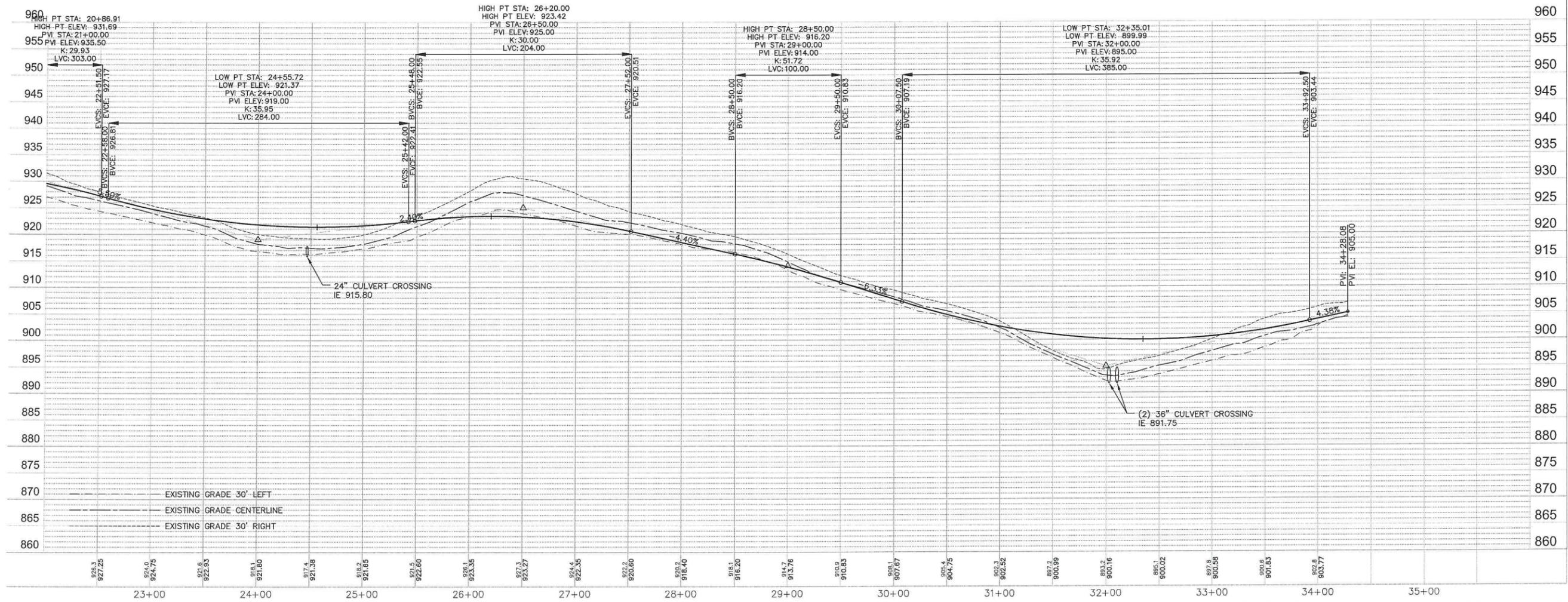
EXHIBIT H

S:\mwa\2017\1707-AFTON-CREEK-PRESERVE\17-1707-CAD\17-1707-BASE_4.dwg 9/21/2017

NORTH



PRAIRIE WIND DR. N.



PLAN & PROFILE - PRAIRIE WIND DR. N. (22+00 TO 34+28) AFTON CREEK PRESERVE

DRAWN BY: C.M. DESIGN BY: C.W.P.
CHKD BY: C.W.P. PROJ. NO. 17-1707
ORIGINAL DATE: AUGUST 14, 2017

DATE	REVISION DESCRIPTION
9/5/17	ADDED WALKING PATH & PARKING
9/21/17	MISC REVISIONS

I hereby certify that this plan 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.
Charles W. Plowe
CHARLES W. PLOWE
LIC. NO. 16227
DATE: 08.21.2017

AFTON CREEK PRESERVE
AFTON, MINNESOTA
PLAN & PROFILE
PRAIRIE WIND DR. N. (22+00 TO 34+28)

PREPARED FOR:
JOE BUSH

SITE PLANNING & ENGINEERING
PLOWE ENGINEERING, INC.
8776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

C3.3

DRAWN BY: C.M.
 DESIGN BY: C.W.P.
 CHCKD BY: C.W.P.
 PROJ. NO. 17-1707
 ORIGINAL DATE: AUGUST 14, 2017

DATE	REVISION DESCRIPTION
9/11/17	ADDED DIMENSIONS
9/21/17	MISC REVISIONS

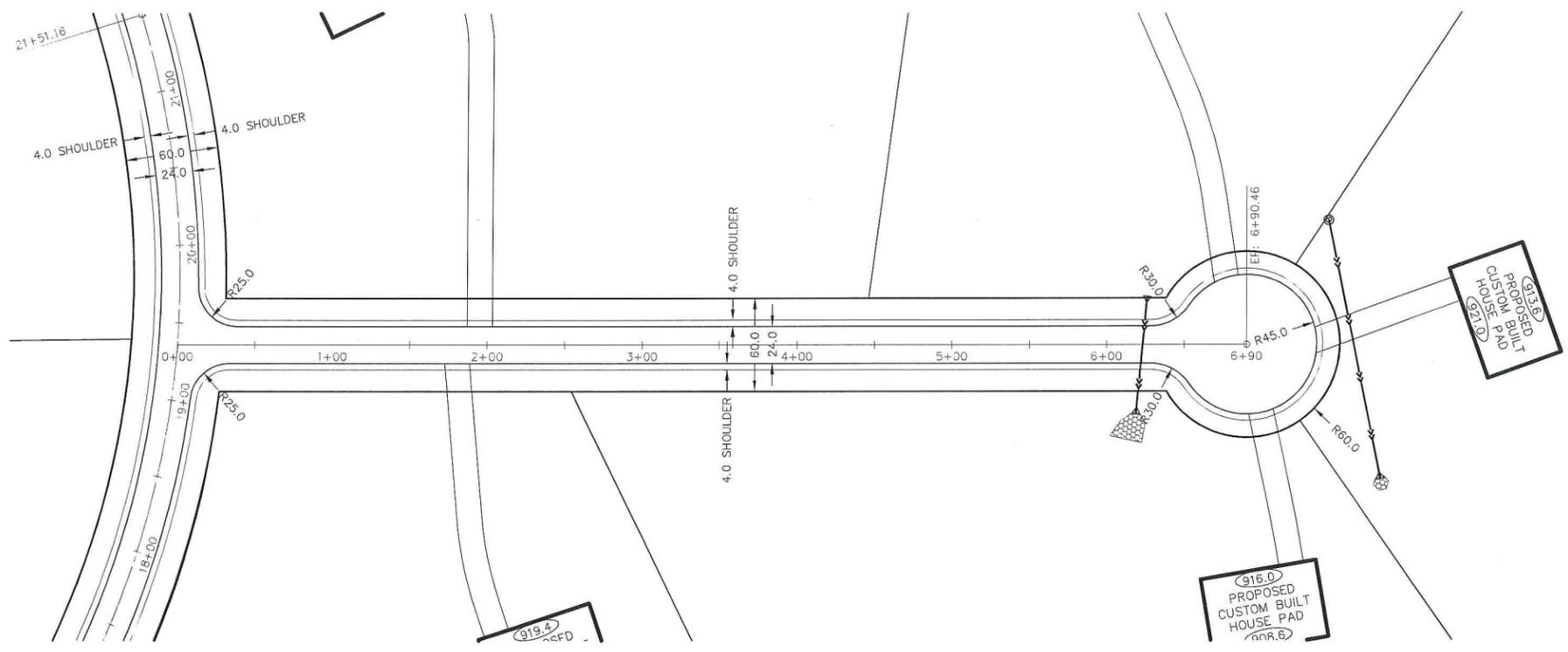
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Charles W. Plowe
 CHARLES W. FLOWE
 LIC. NO. 16227
 DATE: 08.21.2017

AFTON CREEK PRESERVE
 AFTON, MINNESOTA
 PLAN & PROFILE
 PRAIRIE WIND CT. N. (0+00 TO 6+90)

PREPARED FOR:
JOE BUSH

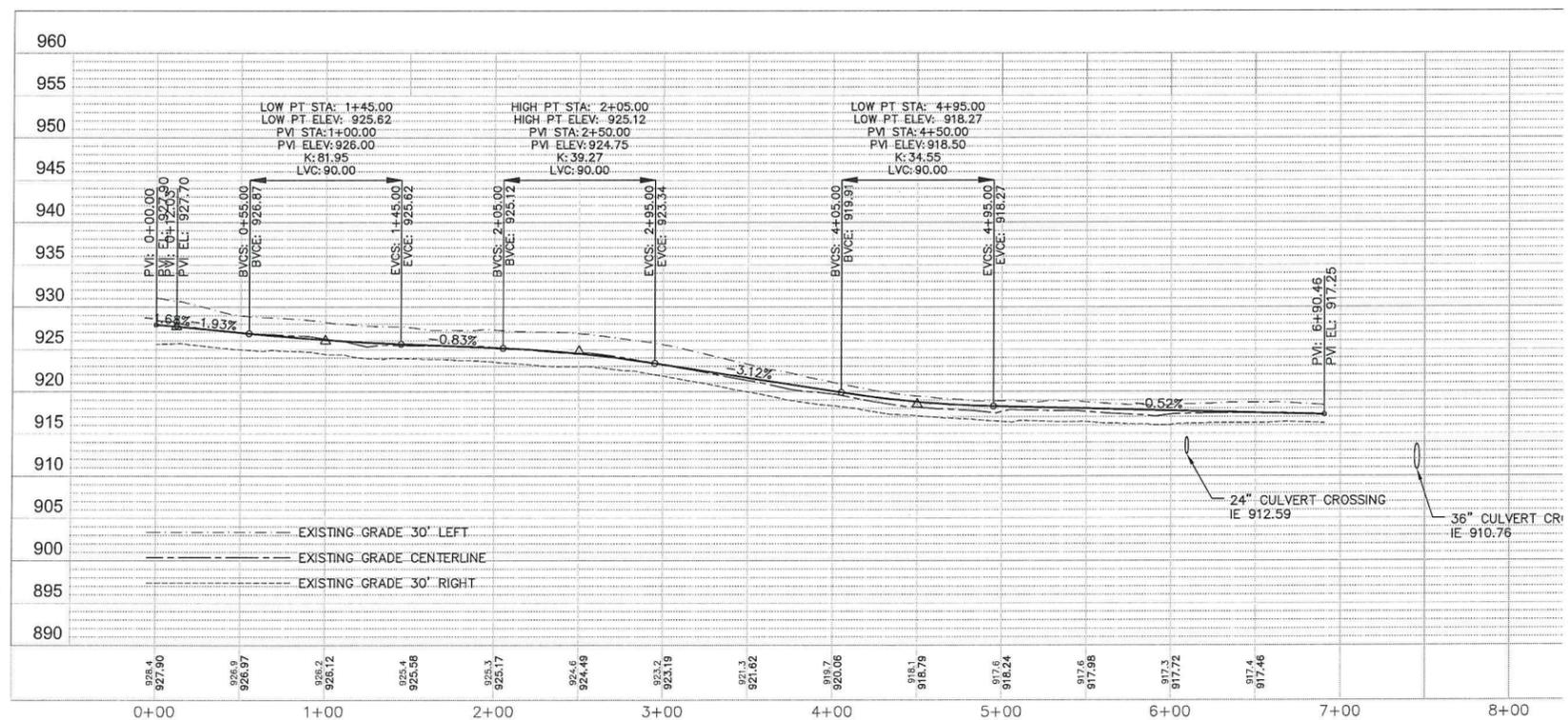
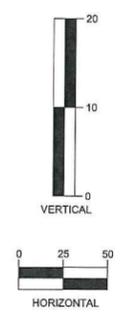
PLOWE ENGINEERING, INC.
 SITE PLANNING & ENGINEERING
 6775 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

C3.4



PRAIRIE WIND CT. N.

NORTH



**PLAN & PROFILE - PRAIRIE WIND CT. N. (0+00 TO 6+90)
 AFTON CREEK PRESERVE**

EXHIBIT H

C:\Users\jplow\OneDrive\Documents\17-1707-AFTON CREEK PRESERVE\17-1707 CAD\17-1707_BASF_4.dwg 9/21/2017



Memorandum

To: Ron Moose, City Administrator
From: Nick Guilliams, Project Manager
Date: September 27, 2017
Re: Afton Creek Preserve Preliminary Plat
Plan Resubmittal Review Comments
WSB Project No. 010641-000

We have reviewed the resubmittal documents provided by Plowe Engineering, Inc. on 09/22/2017 and comment responses on 09/19/2017 for the Afton Creek Preserve Preliminary Plat Submittal.

This is a preliminary review of items that must be addressed for the subdivision. These items are subject to additional comments and will follow in subsequent submittals. Based on preliminary review of Afton Creek Preserve Preliminary Plat Submittal, the development appears to be technically feasible subject to the following conditions:

Procedural Comments:

1. Prior to the start of any construction, permits may need to be obtained from the following agencies:
 - a. MPCA Construction General Permit
 - b. South Washington Watershed District
 - c. City of Afton Stormwater Management Permit
2. Provide a maintenance agreement to ensure that the permanent stormwater basins will be inspected and maintained long term. The agreement at a minimum shall include the following:
 - a. Who will conduct maintenance
 - b. Inspection frequency.
 - c. Maintenance necessary to ensure effective performance.
 - d. Maintenance intervals.
 - e. Removal of settled materials.
 - f. Maintenance of vegetation.

Drainage, Grading, & Erosion Control Comments:

1. Structural calculations for retaining walls greater than 4.0 feet in height need to be submitted for review prior to construction of the walls. The submittal will need to include:
 - a. Certification of a qualified MN licensed professional
 - b. Soil boring logs and geotechnical recommendation for support
 - c. Identify the type of material for the wall and design details
 - d. Provide details of the wall construction

Stormwater Management Comments:

Culverts:

1. Provide culvert sizing calculations.

Permanent Stormwater Modeling and Reporting:

2. Applicant will need to follow all South Washington Watershed District (SWWD), City of Afton, and MPCA rules for permanent stormwater design and calculations including rate control, volume, and water quality. See Section 13-54 of Afton City Code for conflicts between provisions. Provide a report that addresses the following:
 - a. Identify receiving water body per SWWD Rule 7.3.3.
 - b. Demonstrate phosphorus and total suspended solids (TSS) loading compliance per SWWD Rule 7.3.3 Stormwater Quality.
 - c. Demonstrate with calculations and in the report that the requirements of the NPDES Construction Stormwater General Permit for permanent stormwater management systems (infiltration basins and wet ponds) are being met (Part III.D). The modeling, new impervious, and other calculations from the lots along 60th Street South need to be included. The report currently contains a volume comparison table which does not demonstrate compliance with regulatory requirements.
 - d. Provide hydrologic calculations for the 1, 2, 10, and 100-year 24-hour design storm events to demonstrate rate control as required by the regulatory agencies.
3. Provide the HydroCAD model file.
4. The CN for "prairie seeding for perm turf" used in the proposed model is 65, while the other areas labeled as being prairie seeded have a CN of 74.
5. Additional borings in the locations of the basins are needed per the Minnesota Stormwater Manual and the NPDES Construction Stormwater General Permit. When the borings are obtained, the exfiltration value in HydroCAD may need to be modified.
6. Identify what pretreatment method is being used for each permanent stormwater basin.

Plans:

7. Label basin bottom, NWL, HWL, and top of berm on plans.
8. Label EOF location and elevation for Pond P5. The pond's contours in the plans are not reflecting HydroCAD's top of berm at 872. Keep the top of berm below the roadway elevation.
9. Ensure all EOF elevations match HydroCAD modeling. For example, HydroCAD says Pond P2b's overflow weir is at 883.50 but the plans say 883.0.
10. Attach infiltration basin and wet pond details, sections, insets, and other pertinent data.
11. Top berm of ponds should be a minimum of 2 feet above the HWL.

Wetlands:

12. Walking trails appear to be proposed in areas that are shown as wetland by the NWI (Block 2, west of the cul-de-sac). Wetlands should be formally delineated using the USACE methodology and submitted to the WCA LGU and USACE for review and approval. Any wetland impacts (permanent and temporary) must also be permitted through the WCA LGU and USACE.

Street Comments:

1. The minimum length of the vertical curve is 100 feet (12-1380 H.). See sheet C3.4
2. It is recommended as a condition of the development that the applicant pave 60th street from the end of pavement near the development entrance west to Neal Avenue. These improvements shall be shown on the final plat submittal and will be included as part the development agreement. All street improvements shall meet City standards.
3. The proposed median presents a potential hazard to motorists exiting the development. Given the steep grade coming down to the stop condition, motorists will have to quickly maneuver to the west to miss the island while they are trying to stop. The median design will need to be revised or removed to address these concerns.
4. Provide truck turning movements for trucks leaving the site.
5. Provide calculations, including information from the soils report, demonstrating the proposed 7-ton street section design.

Utility Comments:

1. Provide for two (primary and secondary) 10,000 square feet septic systems, supported by four soil borings by a certified soil tester, for each lot.

Development Agreement:

1. Required with Final Plat.

Please let me know if you have any questions.

Sincerely,

WSB & Associates, Inc.

APPLICANT'S

EXHIBIT LIST

FOR AFTON CREEK PRESERVE PLAT APPLICATION

EXHIBIT "A" - Landmark Surveyors Site plan showing all required information for CUP PLCD and Major subdivision.

- a) Location of property within the City.
- b) List of all Property owners within 500 feet.
- c) Boundaries, dimensions, and size of original parcels and proposed new lots
Legal description of property (including separate descriptions of all lots)
Dedication of road easements and right-of-way Drainage easements Water and wetland delineation Woodlands Existing topography at 2 foot intervals (illustrate the locations of slopes between 13 and 18 percent and 18 and greater)
Buildable area (minimum 2.5. contiguous acres) Driveway access points
- d) Completion of the calculation (for PLCD refer to Sec. 12-2376) used to determine the 19 dwelling units permitted in the subdivision
- e) Wetland inventory as required by SWWD LGU.
- f) Landscape plan.
- g) Conservation planting areas.
- h) Scenic easements.

EXHIBIT "B" - Site Plan with Landscape and Wild flower plantings, Scenic Easements, and 50% individual lot wild flower coverage.

EXHIBIT "C"- Grading and Storm Water Management Plan. Plowe Engineering.

EXHIBIT "D"- Soil Borings report.

EXHIBIT "E"- Traffic Study Report.

EXHIBIT "F"- Final EAW reply report.

EXHIBIT "G"- AFTON CREEK PRESERVE HOMEOWNERS ASSOCIATION DRAFT AND RESTRICTIVE COVENANTS.

EXHIBIT "H"- Minnesota Land Trust Acknowledgement.

EXHIBIT "I"- Prairie Restoration Planting and proposed contract.

EXHIBIT "J"- DNR Letters and E-Mails.

EXHIBIT "K"- South Washington Watershed E-mails, Letters.

EXHIBIT "L"- MPCA Letters, E-mails.

EXHIBIT "M"- Department of Agriculture E-mail.

EXHIBIT "N"- Lower Saint Croix Fire Chief E-mail.

EXHIBIT "O"- Meeting Date June 20 2017 Council Action Memo. NRGU Unanimously Approved Recommendations.

EXHIBIT "P"- Mailing labels for Residence within 50 feet.

EXHIBIT "Q"- E-mails from City Staff.

EXHIBIT "R"- Supplementary Narrative for Park Dedication, land Trust, and Code. JP Bush Homes.

EXHIBIT "S"- Highlighted pages from City Code.

EXHIBIT "T"- Letter from Metropolitan Council Letter.

EXHIBIT "U"- NORTHWEST ASSOCIATED CONSULTANTS, Planning Report, May 22nd, 2017

EXHIBIT "V"- Highlighted pages from 2012 PARK PLAN.

EXHIBIT "H"

Joe Bush

From: Wayne Ostlie [wayneostlie@minnesotalandtrust.org]
Sent: Thursday, May 25, 2017 3:50 PM
To: Joe Bush
Subject: Call

1 of 3

Joe:

I received your voicemail, and will respond here. We are in the midst of intensive grant proposal week, with 8 of them due by next Wednesday. I have one done.

I ran your questions past Ann Thies, our Stewardship Director, and will provide our joint thoughts.

1. Trails in open space west of development. Mowed trails should not be a problem as long as they are not too wide and there are not too many of them. We can work with you to define what that system looks like and where it is placed.

2. Overlook. This is probably also OK. Is the parking lot still part of the plan? You mentioned that this might be for bicyclists. As long as we keep the footprint small (not too obtrusive), the amenity is a good idea for general public use. Again, we can discuss details.

We should discuss at some point the costs associated with the Land Trust managing this easement over time so that you are aware of that and can have that fully integrated into discussions. You mentioned the planting of flowers in the open space area - is this intended to be native prairie or savanna - what is the plan?

Thanks again. Please feel free to touch base if I have not addressed all of your questions. Thursday next week would be ideal! :-)

Wayne

--

Wayne Ostlie
Director of Land Protection
Minnesota Land Trust
2356 University Ave W., Suite 240
St. Paul, MN 55114

Office: (651) 917-6292
Cell: (651) 894-3870
wostlie@mnland.org
www.mnland.org

Protecting the places you treasure...forever.



EXHIBIT "H"

2 of 3

June 20, 2017

Joe Bush
J.P. Bush Homes
1980 Quasar Ave S
Lakeland MN 55043

RE: Afton Creek Preserve

Dear Mr. Bush:

Thank you for the opportunity to work with you during the design stage of the proposed Afton Creek Preserve to craft open space that both meets the requirements set forth by the City of Afton and maximizes the benefits to wildlife and offers protection to Trout Brook. Over time, *this open space will become an important asset to the residents of the community.*

As you know, the Minnesota Land Trust works with municipalities to position proposed developments to elevate the ecological attributes of open space. As such, our recommendations are firmly grounded in this perspective. To that end, it is the Land Trust's opinion that the current open space design for the proposed Afton Creek Preserve best offers protection to Trout Brook and creates open space in the manner that will afford greatest habitat value to wildlife. Our previous recommendations at the time were:

- Make protection of Trout Brook the focus of the open space.
- Acquire additional land along (south of) Trout Brook and reconfigure the initial layout of lots to provide for greater protection of the brook and efficacy in monitoring the easement. This additional land would, in turn, provide for greater flexibility in the design to further enhance open space values.
- Retain, as designed, a large block of open space on the west edge of the property to provide maximum wildlife benefits.
- Eliminate development of the north portion of the proposed easement area to protect the integrity of the intermittent stream valley that feeds Trout Brook from the north.

We believe that the current proposed design of Afton Creek Preserve fully meets our recommendations and best positions the project ecologically. Access along the west edge of the property, crossing Trout Brook, and crossing the block of open space north of the brook would have significant ecological impacts to the brook and wildlife habitat on the property.

That said, we acknowledge that the City must consider a variety of factors when determining if and under what circumstances a proposed development should move forward. Whatever the outcome of this project, the Minnesota Land Trust will work with the City to best position such projects ecologically as it considers them going forward.

Sincerely,

Wayne R. Ostlie
Director of Land Protection

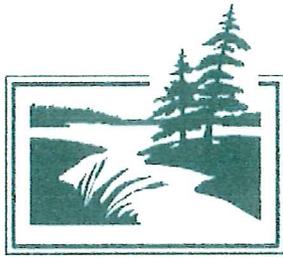


EXHIBIT "H"

1 of 1

MINNESOTA LAND TRUST

August 11, 2017

To:

City of Afton, City Administrator, 3033 St. Croix Trail S., Afton, MN 55001
J.P. Bush Homes, Developer, 1980 Quasar Avenue South, Lakeland, MN 55043
Will Carlson, Landowner

Re: Afton Creek Preserve Conservation Easement- Letter of Acknowledgement

Dear Sirs:

The Minnesota Land Trust (Land Trust) has reviewed the design of the Preliminary Plat (dated August 7, 2017) of Afton Creek Preserve, a proposed Preservation and Land Conservation Development (PLCD) within the City of Afton designed by J.P. Bush Homes (Developer) for Albert Wilmer Carlson (Landowner). In addition, the Land Trust has had various discussions with the City of Afton and Developer.

At this time, the Land Trust acknowledges that it is willing and able to accept a conservation easement over Open Space granted by the Landowner, as identified on the attached Preliminary Plat of Afton Creek Preserve contingent upon the following:

- approval of the proposed Preservation and Land Conservation Development by the City of Afton,
- approval of the conservation easement project by the Land Trust Board,
- execution of an engagement letter between the Developer and Land Trust that governs the conservation easement project and process and establishes the funding and costs necessary to both complete the easement project and funds the long-term stewardship of the conservation easement,
- agreement between the Developer, City of Afton and Land Trust on the terms of the easement,
- approval by the Land Trust of final Homeowner's Association Bylaws, Restrictive Covenants, title work and other documents and due diligence regarding the development and the easement,
- receipt of required funding prior to closing and successful closing on the easement.

Sincerely,

Kris Larson
Executive Director

Proposal to Create a Native Landscape at the
Afton Creek Park Reserve
Afton, MN

Prepared for:

Joe Bush – Developer

Site Address:

14220 60th St
Afton, MN

Prepared by:

Jeff West
Site Manager
jwest@prairieresto.com

Project Area:

Conservation Easement Area: Approx 60 acres
Future Residential Area: Approx 75 acres

Prairie Restorations, Inc. 

Two Oaks Office
PO Box 95
Scandia MN 55073
www.prairieresto.com

A. Company Background: <http://www.prairieresto.com/mission.shtml> (Follow the blue links to learn more)

Prairie Restorations, Inc. (PRI) has been dedicated to the restoration and management of native plant communities for over 40 years. We are fortunate to have worked with thousands of clients on a wide variety of projects in both the public and private sectors throughout the Upper Midwest.

The PRI staff currently consists of 54 full-time professionals and about an equal number of seasonal employees which operate out of six Minnesota locations. Most of the staff has B.S. degrees in natural resource related fields such as biology, forestry, horticulture or wildlife. As a full service restoration company, PRI is able to provide our clients expertise and service in all facets of native landscape restoration. Along with consulting, design, installation and land management services, we also produce our own local ecotype seed and plant materials which are used on all of our projects.

The PRI Team is committed to and passionate about protecting and enhancing our valuable natural resources. It is this dedication that is brought to each and every one of our projects. We are proud to offer the best expertise, services and products available in the industry and appreciate the opportunity to provide you with this proposal.

B. Project Overview:

1. Establishing a native landscape (http://www.prairieresto.com/establish_landscape.shtml) in this area will provide a long term, ecologically sound landscape that is adapted to the existing conditions of the site. This native landscape will not require irrigation, black dirt or other soil amendments. It will add a distinctive look to the property as well as provide valuable habitat for songbirds, butterflies, bees and other pollinators.
2. To establish this planting, the site will be seeded using a drill seeder after the row crops are removed. Only areas currently in row crops will be seeded at this time. If additional weedy or fallow areas need to be seeded a different process may be required.
3. An estimate for 3 years of Establishment Period Vegetation Management is included in this proposal.

C. Project Dimensions and Planting Zones:

1. For purposes of vegetation restoration, the project area is separated into two zones, the **Conservation Easement Area** and the **Residential Lots Area**.
2. **The Conservation Easement Area** in total is 109.7 acres. Approximately 60 of these acres are currently in row crops and will be seeded.
3. **The Residential Lots Area** in total is 100.6 acres. Approximately 75 of these acres are currently in row crops and will be seeded as a part of this plan. As the lots are developed the construction disturbance will be limited to less than 50% of the prairie area leaving the remaining in prairie. Areas beyond the 50% can and will be reseeded as necessary after construction of each house/property.

D. Site preparation: http://www.prairieresto.com/installation_preparation.shtml

1. The project area will be harvested for crops before seeding. In addition it should be stalk chopped (especially the corn) to allow for easier seeding. If possible the corn field areas could be baled to remove crop residue as the corn leaves much more debris behind than the bean fields and this can cause issues with the seeding.

E. Seed and Seeding: http://www.prairieresto.com/installation_seeding.shtml

1. Acceptable seeding dates for native species are in the spring or summer before August 10th or in the fall between September 20th and freeze-up.
2. All grass seed will be applied with a seed drill designed for native seeding (Truax[®] or equivalent).
3. All flower seed will be broadcast with a tractor broadcast seeder designed for native seeding (Vicon[®] or equivalent).

4. The seed mixes will consist of the following species and amounts:

Grass Seed	lbs / acre
PRI Mixed Height Mesic Grass Mix:	
35% Big bluestem, 23% Little bluestem, 22% Indian grass, 12% Side oats grama, 5% Canada wild rye, 2% June grass, 1% Switch grass all by PLS weight.....	10

<http://www.prairieresto.com/CategoryList.php?clD=12>

Note: A cover crop will be sown along with the native grasses at a rate of approximately 25 lbs./acre. Cover crop is an annual grass species that germinates quickly and will reduce the risk of soil erosion on the site. Oats will be used for a spring or summer seeding, and winter wheat will be used for a fall seeding.

Wildflower Seed	oz / acre
Butterfly weed (<i>Asclepias tuberosa</i>).....	1/4
Partridge pea (<i>Chamaecrista fasciculata</i>)	1/2
Wild lupine (<i>Lupinus perennis</i>)	1
Yellow coneflower (<i>Ratibida pinnata</i>)	1/2

PRI Mixed Height Mesic Wildflower Mix:	
19% Purple prairie clover, 18% Hoary vervain, 15% Black-eyed Susan, 10% Leadplant, 8% Common ox-eye, 6% Golden Alexander, 3% Canada milk vetch, 3% White prairie clover, 3% Canada tick trefoil, 3% Wild bergamot, 3% Stiff goldenrod, 3% Blue vervain, 2% Common milkweed, 1% Yarrow, 1% Prairie rose, 1% Gray goldenrod, 1% Western spiderwort, all by PLS weight	24

<http://www.prairieresto.com/CategoryList.php?clD=13>

F. Erosion Control: http://www.prairieresto.com/installation_erosion.shtml

1. Cover crop will be sown along with the native grasses.

G. Management: http://www.prairieresto.com/management_overview.shtml

1. Management (maintenance) plays a vital role in the eventual success of any native landscape installation, especially during the establishment period. Active management of your native landscape is highly recommended to give the project the best opportunity for long term success.
2. During the germination year, the project area may need to be mowed to control annual weed development. If a “closed” canopy of weed cover develops, it should be mowed to aid in the growth of the prairie seedlings by reducing competition. Mowing may also be necessary if the weeds are about to set seed. Optimum cutting height, depending on the wildflower species present, is typically 4 to 6 inches. It is important that the clippings are finely mulched in order to prevent smothering. PRI can provide the mowing services if desired. Please refer to the cost section of this proposal for a mowing quote.
3. In years following the first growing season, Integrated Plant Management (IPM) services are utilized to control annual, biennial and perennial weed species within the developing native landscape. Typical IPM services include spot herbicide spraying, spot mowing, herbicide wicking or hand weeding. These services are billed on a per trip cost agreed upon prior to the growing season. Rough estimates are provided in the cost section of this proposal for these future management activities.
4. Prescribed burning is a highly effective management tool and may be recommended for your project as it matures. Burning stimulates native species to grow more robustly and also help to deter the presence of many non-native and/or woody species. Prescribed burning, when recommended, will be provided as a separate lump sum cost.
5. In lieu of burning, or during years when the site is not burned, a Spring Dormant Mowing can be used to “clean up” previous year’s growth and set the table for the new growing season. This mowing would occur early in the spring, as soon as conditions permit. Spring Dormant Mowing, when recommended, will be provided as a separate lump sum cost.

H. Anticipated Management:

The following table conveys the anticipated management procedures for your project during the first 4 growing seasons. Estimates for these procedures are provided in the cost section of this proposal.

Year	Projected Management Procedures
2018	Complete site mowings to control annual weed canopy (2 or 3 mowings as needed). Project monitoring
2019	Complete site mowing Integrated Plant Management (IPM) – includes spot spraying, spot mowing, wicking, hand weeding, and other techniques to control weeds and invasive species (3 visits are typical) Project monitoring
2020	Integrated Plant Management (IPM) – includes spot spraying, spot mowing, wicking, hand weeding, and other techniques to control weeds and invasive species (3 visits are typical) Project monitoring
2021	Spring burn to encourage native plant growth and to help deter the presence of non-native and woody species. Integrated Plant Management (IPM) – 3 visits are typical Project monitoring

I. Costs:

Project Installation:

Unit Pricing

Seeding.....	\$175 / acre
Seed as specified	\$625 / acre
Erosion blanket (if necessary)	\$1.25 / sq yd
Straw Mulching (if necessary)	\$850 / acre

Conservation Easement Area (est 60 acres)

Seeding 60 acres @ \$175/acre.....	\$10,500
Seed as specified 60 acres @ \$625/acre	\$37,500

Conservation Easement Installation Total.....\$48,000

Residential Lots Area (est 75 acres)

Seeding 75 acres @ \$175/acre.....	\$13,125
Seed as specified 75 acres @ \$625/acre	\$46,875

Residential Lots Installation Total..... \$60,000

Conservation Easement Vegetation Management:

Germination year management quote (2018):

Complete site mowings as needed (1-3 is typical)	\$100/acre
Full site mow (60 acres @ \$90/acre).....	\$6,000

Future Management Estimates:

Growing season 2019 (assumes 3 IPM visits).....	\$30,000
Growing season 2020 (assumes 3 IPM visits).....	\$30,000
Growing season 2021 (assumes 3 IPM visits and a prescribed burn)	\$36,000

Please note: The *Future Management Estimates* are meant to convey typical management costs for projects of similar size and characteristics. Prior to each growing season, you will receive a specified quote from your project manager detailing the recommended management strategies and associated costs for your project.

PRI will provide a follow-up consultation approximately 1 month after the completion of the project (if the project was seeded in the fall, the consultation will occur the following spring). The Restorationist (or salesperson) will meet with the project owner to assess the status of the project, answer any questions, and provide any necessary recommendations. This follow-up consultation will be provided at no additional cost.

- J. Guarantee:** Prairie Restorations, Inc. (PRI) has a great tradition of successfully installing native landscapes throughout the Upper Midwest. We feel our expertise in this industry is second to none and we stand behind every one of our projects. Because we are confident in our abilities to provide you with the best possible materials and services, we are proud to offer the following guarantee:

On projects installed by PRI crews within the specified dates, we will guarantee successful establishment within three full growing seasons, given the following conditions:

- 1. That PRI materials and PRI installation services are used on the project.*
- 2. That the failure of the project is not due to the actions of others.*
- 3. That PRI staff has been consistently involved with the maintenance of the project (consultation with the client or direct utilization of PRI management services) from the time of germination until the end of the third growing season (i.e. mowing, spot spraying, and controlled burning).*

This outline provides a step-by-step plan for accomplishing the restoration of this site. If successful establishment does not occur within three full growing seasons, all necessary steps will be taken to ensure the eventual success of the project, at no additional charge. For purposes of this guarantee, successful establishment is defined as follows: That the presence of at least 75% of the original seeded or planted species can be found on site, and that the overall density of vegetation is comprised of no less than 75% native species.

K. Contract:

If you accept the proposal as written and want to proceed with the project, please sign the contract below.

Owner (print): _____ **Date:** _____

Signed: _____ **Title:** _____

Project Name: _____ **Contract Value: \$** _____

Contractor: *Prairie Restorations, Inc.*

Signed: _____ **Date:** _____

Jeff West – Site Manager
Prairie Restorations, Inc.
PO Box 95
21120 Ozark Court North
Scandia MN 55073

- L. Notes:** Please note that this proposal is valid for 1 month (from the date on the proposal). If the proposal is accepted after the 1 month period, PRI reserves the right to modify the proposal based on cost fluctuations and material availability.

Restoration outline prepared by Prairie Restorations, Inc. (PRI), Princeton, Minnesota

EXHIBIT "I"

Prairie
Restorations Inc. 

Two Oaks Office
PO Box 95, Scandia MN 55073
Office: 651.433.1435 Fax: 651.433.1436

1 of 1

August 3, 2017

To: Joe Bush
Afton Creek Park Reserve Developer

From: Jeff West
Two Oaks Office Site Manager
Prairie Restorations Inc.

RE: Former Schuster Property Project Recap

To whom it may concern,

This letter is a summary of the work that has been completed at the former Schuster property at 14220 60th St., Afton MN. The project was proposed, approved and contracted in late summer of 2015 in coordination with Washington conservation district. Site prep, seeding, and 2 years of maintenance were included in the contract. One additional maintenance visit in 2017 is planned. After this final visit our contracted work is complete. We would however recommend continued maintenance in 2018 and beyond to ensure successful establishment of the native planting area.

2015:

9/14 Site Prep Spray
9/22 Touch up of site prep spray
10/27 Soil prep, seeding and straw mulching.

2016:

Monthly site visits for monitoring
6/22 Complete site mow

2017:

Monthly site visits for monitoring
7/26 Complete site mow
1 additional visit schedule for 2017

Please let me know if you need any additional information.

Thank you,

Jeff West



Minnesota Department of Natural Resources
Ecological and Water Resource
1200 Warner Road
St. Paul, MN 55106

1 of 2

May 24, 2017

Transmitted Electronically

Ronald Moorse
City Administrator
3033 St. Croix Trail S
Afton, MN 55001

Re: Afton Creek Preserve EAW

Dear Ronald Moorse,

The Minnesota Department of Natural Resources (DNR) has reviewed the Environmental Assessment Worksheet (EAW) for the Afton Creek Preserve residential development located in Afton, MN. We offer the following comments for your consideration.

Land Use - Page 6 (Question 9.b.):

- The current placement of the access road into the development is located at the southeast corner of the property, which avoids the need to construct a crossing over Trout Brook. If the road into the development were located elsewhere along 60th Street South, construction of a road crossing over Trout Brook would be required, potentially impacting the stream itself and associated adjacent wetland areas, including areas where groundwater recharges the stream. Groundwater is an important source of cold water to streams like Trout Brook that support coldwater fish species (i.e. trout).
- Provide a narrative to justify the statement made that this development is in concert with Afton's comprehensive plan and growth plan.

Water Resources - Page 8 (Question 11.a.ii.):

- In this section, note whether the woodland area located adjacent to Trout Brook in the open space conservation easement and Lots 3 and 4 was examined for springs and if any springs were identified. Include a narrative in this section describing the potential for increased groundwater flow at this location due to topography and proximity to the water table. Wood land areas like this, with steeper topography draining toward a stream, may have springs where groundwater is coming to the surface. Even if there is not surface water in the form of springs, the likelihood is high that this area has shallow groundwater that is migrating toward Trout Brook and which provides groundwater recharge to the stream.
- In agricultural areas that have been farmed for 160 years, old wells are often found that no one knew existed. If any unknown wells are found on site, these must be sealed in accordance with the regulations of the Minnesota Department of Health.

Water Resources – Page 8 (Question 11.b.ii.)

- Show on a map where the vegetative buffer strips will be located on Lots 1 – 10 and Lots 16 – 17.

Water Resources – Page 9 (Question 11.b.iii.)

"J"

2 of 2

- Please note that any dewatering of volumes that exceed 10,000 gallons per day, or one million gallons per year need to be approved by a DNR Water Appropriation Permit. This includes dewatering for grading, installing footings for structures, and to install pipes for sanitary systems. The use of more than 10,000 gallons of water per day for watering trees, grass, and landscaping using watering trucks needs approval under a DNR Water Appropriation Permit as well. A Water Appropriation Permit may be applied for online using the following website: <http://www.dnr.state.mn.us/mpars/>
- Lot sizes in this development are approximately 5 acres. During drought, the irrigation of 1.5 acres of landscaping will use more than 1 million gallons of water per year. The new homes should be designed to minimize irrigated landscaping to avoid the need to obtain a DNR Water Appropriation Permit.

Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features) – Page 13 (Question 13.c):

- Provide a more detailed explanation of how the buffer plan will assist with onsite erosion and sedimentation created by development. Describe how the buffer will enhance wildlife habitat. Explain what types of invasive species management will be done on disturbed areas and what plant communities will be located in these disturbed areas post-development. Explain what specific habitat enhancement will be done to protect state listed species during construction.

Figure 3 – Site Sketch – Page 21:

- The shoreland district boundary shown on the concept plan should be 300 feet wide on both sides of Trout Brook (the width of shoreland districts for rivers and streams), not 1,000 feet wide.
- The conservancy overlay boundary, which designates sensitive areas within Afton, is shown as approximate. Adjust this boundary to reflect the terrain and resources on this specific site.
- There are sensitive areas covering much of Lots 3 and 4 (wooded areas and steep slopes). This woodland area is directly adjacent to Trout Brook and likely contains springs that supply cold groundwater to the stream. DNR recommends inclusion of these sensitive areas into the open space conservation easement to protect this habitat and source of groundwater to the stream.

Appendix B – Lot Buffer Plan

- The buffer plan is not complete and needs to include a narrative and maps that explain the details of the plan. Why are individual landowners responsible for planting buffers rather than the developer? Wouldn't it make more sense to get the buffers established early rather than at an unknown point in the future when lots are sold? How will the buffers be monitored over time to ensure that they become established? Will there be a buffer easement that keeps the buffers in place long-term and prevents encroachment into the buffer areas?

Thank you for the consideration of our comments.

Sincerely,

/s/ Rebecca Horton

CC: Jen Sorenson, Area Hydrologist

Joe Richter, Appropriations Hydrologist

EXHIBIT "K"

Joe Bush

From: Schilling, Andrew <andrew.schilling@woodburymn.gov>
Sent: Thursday, August 10, 2017 2:49 PM
To: Joe Bush
Subject: Efforts to date on conservation projects on former Schuster Property
Attachments: Former Schuster Property_Cost-share Projects.pdf

Hello Joe –

I am writing to provide a status update on the two conservation projects implemented on the former Schuster property. Maintenance of the turf conversion is ongoing through 2017. Buckthorn resprout management is scheduled for week of September 18th using the Minnesota Conservation Corp.

See attached document for more information.

Thanks,

Andy

Andy Schilling

Watershed Restoration Specialist



SOUTH WOODBURY
WATERSHED DISTRICT

aschilling@ci.woodbury.mn.us

651-714-3717

[Click for Directions](#)

FORMER SCHUSTER PROPERTY: COST-SHARE PROJECTS OVERVIEW



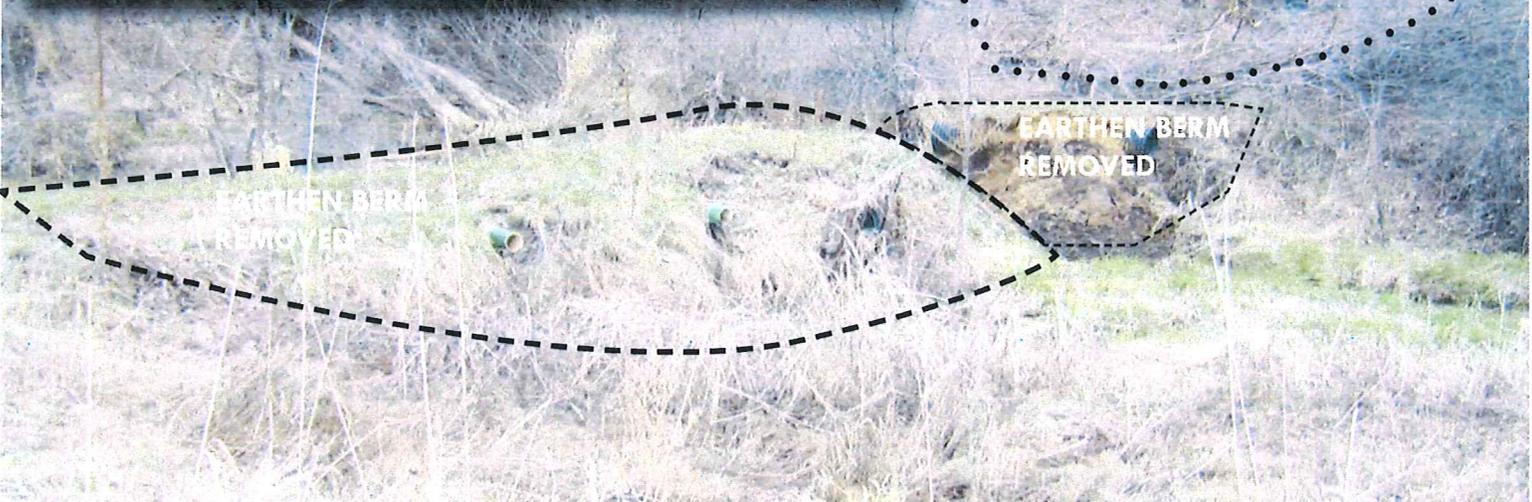
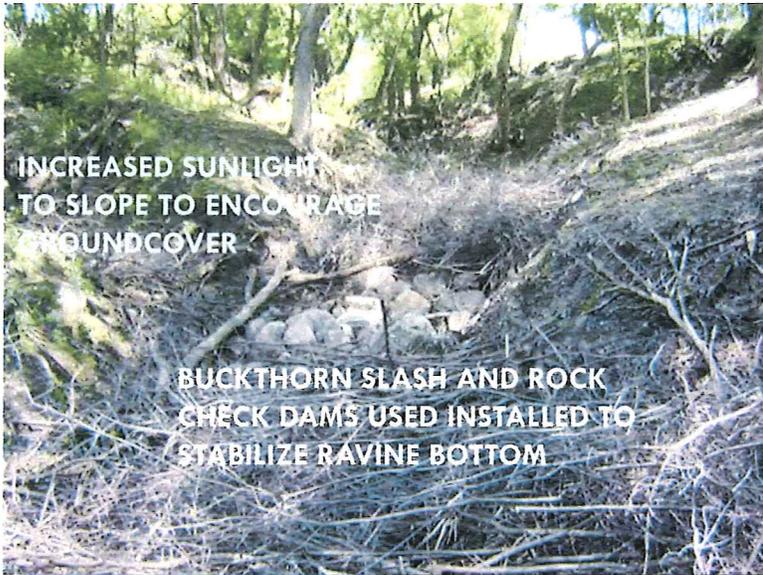
RAVINE STABILIZATION

BLUFF STABILIZATION - TURF
CONVERSION TO PRAIRIE
~1.5 ACRES

BERM BLOWOUT REMOVAL

Oakgreen Ave S

Trading Post Tr S



SCHUSTER: TOP OF BLUFF TURF CONVERSION TO PRAIRIE, 2015



COST-SHARE AGREEMENTS



WATER QUALITY COST SHARE APPLICATION/CONTRACT

General Information (to be completed by SWWD)

Organization SWWD	Contract Number	Other federal or other state funds? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amendment <input type="checkbox"/> Board meeting date(s) _____	Canceled <input type="checkbox"/> Board meeting date: _____
----------------------	-----------------	--	---	--

*If contract amended, attach amendment form(s) to this contract.

Applicant

Land Occupier Name Robert Schuster	Address 14220 60th St.	City/State Afton	Zip code 55033
Email N/A	Phone 651-436-5436 651-334-2430		

*If a group contract, this must be filed and signed by the group spokesperson as designated in the group agreement and the group agreement attached to this form.

Project Location (if different)

Address	City/State	Zip code
---------	------------	----------

Contract Information

I (we), the undersigned, do hereby request cost-share assistance to help defray the cost of installing the following practice(s) listed on the second page of this contract. It is understood that:

- SWWD's Water Quality Cost Share Program is a Reimbursement Program.** Applicants will be reimbursed for the contract amount upon successful completion of the project and submission of all required documentation.
- The land occupier is responsible for full establishment, operation, and maintenance of all practices and upland treatment criteria applied under this program to ensure that the conservation objective of the practice is met and the effective life, a **minimum of 10 years**, is achieved. The specific operation and maintenance requirements for the conservation practice listed are described in the operation and maintenance plan prepared for this contract by the organization technical representative.
- Should the land occupier fail to maintain the practice during its effective life, the land occupier is liable to the South Washington Watershed District for the amount up to 100% of the amount of financial assistance received to install and establish the practice unless the failure was caused by reasons beyond the land occupier's control, or if conservation practices are applied at the land occupier's expense that provide equivalent protection of the soil and water resources.
- Practice(s) must be planned and installed in accordance with technical standards and specifications of the Technical Representative.
- Increases in the practice units or cost must be approved by the organization board through amendment of this contract as a condition to increase the cost share payments.
- This contract, when approved by the SWWD board, will remain in effect unless canceled by mutual agreement, except where installations of practices covered by this contract have not been started within **1 year following Board approval of this contract**, this contract will be automatically terminated on that date. Practices will be installed by **2 years following Board approval of this contract** unless this contract is amended by mutual consent to reschedule the work and funding.
- Items of cost for which reimbursement is claimed are to be supported by invoices/receipts for payments and will be verified by the organization board as practical and reasonable. The organization board has the authority to make adjustments to the costs submitted for reimbursement.

Applicant Signatures

The land occupier's signature indicates agreement to:

1. Grant the organization's representative(s) access to the parcel where the conservation practice will be located.
2. Obtain all permits required in conjunction with the installation and establishment of the practice prior to starting construction of the practice.
3. Be responsible for the operation and maintenance of conservation practices applied under this program in accordance with an operation and maintenance plan prepared by the organization technical representative.
4. Not accept cost-share funds, from state and federal sources combined, that are in excess of **100%** percent of the total cost to establish the conservation practice and provide copies of all forms and contracts pertinent to any other state or federal programs that are contributing funds toward this project.

Date 5/22-15	Land Occupier 
Date	Landowner, if different from applicant Address, if different from applicant information:

Conservation Practice (to be completed by Technical Representative)

The primary practice for which cost-share is requested is Turf to Prairie

Practice standards or eligible component(s) Turf conversion to native	1.50 acres	Engineered Practice <input type="checkbox"/> yes or <input type="checkbox"/> no Ecological practice <input checked="" type="checkbox"/> yes or <input type="checkbox"/> no	Total Project Cost Estimate \$9,300. ⁰⁰
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The estimated benefits of this project are:

Total Phosphorus Captured 0.75 lbs yr	Nitrogen Captured 2.5 lbs.	Runoff Volume Reduction N/A
--	-------------------------------	--------------------------------

Technical Assessment and Cost Estimate

I have the appropriate technical expertise and have reviewed the site where the above listed practice is to be installed and find it is needed and that the estimated benefits and costs are practical and reasonable.

Date 4/20/15	Technical Representative 
-----------------	---

Amount Authorized for Financial Assistance (to be completed by SWWD)

The SWWD Board has authorized the following for financial assistance, total not to exceed the overall percent listed indicated in 4, above.

\$ 2,325.⁰⁰ from South Washington WD Cost Share 2015 25%
Enter program name and fiscal year
~~\$ 6,975.⁰⁰~~ from ~~FY 2013 MN Clean Water Fund Grant~~ ~~75%~~
Enter program name and fiscal year
 \$ _____ from _____
Enter program name and fiscal year

Board Meeting Date	Authorized Signature	Total Amount Authorized \$
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RAVINE STABILIZATION AND BERM BLOWOUT REMOVAL
PROJECT - 2014

WATER QUALITY FUNDING CONTRACT

General Information (to be completed by SWWD)

Organization SWWD	Contract Number CWF-TB01	Other federal or other state funds? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amendment <input type="checkbox"/> Board meeting date(s) _____	Canceled <input type="checkbox"/> Board meeting date: _____
----------------------	-----------------------------	--	---	--

*If contract amended, attach amendment form(s) to this contract.

Applicant

Land Occupier Name Robert W. Schuster	Address PO Box 337	City/State Afton, MN	Zip code 55001
Email		Phone 651-436-5436	

*If a group contract, this must be filed and signed by the group spokesperson as designated in the group agreement and the group agreement attached to this form.

Project Location (if different)

Address 14220 60 th St. S.	City/State Afton, MN	Zip code 55001
--	-------------------------	-------------------

Contract Information

I (we), the undersigned, do hereby request funding to install the following practice(s) listed on the second page of this contract. It is understood that:

1. The land owner grants permission to SWWD staff and its representatives to access the property to implement, inspect, and maintain the practice(s).
2. The land owner will ensure the practice(s) remains in place for the effective life of the practice(s), a **minimum of 10 years**.
3. Should the land owner remove the practice(s) during its effective life, the land owner is liable to the South Washington Watershed District for the amount up to 100% of the amount of the project cost to install and establish the practice unless the removal was caused by reasons beyond the land owner's control, or if conservation practices are applied at the land owner's expense that provide equivalent protection of the soil and water resources.
4. SWWD will implement the practice(s) and inspect and maintain the practice(s) for a minimum of 10 years.
5. This contract is void if the project is not underway prior to June 1, 2014.

Robert Schuster

Signatures

Date	Land Occupier
Date	Landowner, if different from applicant Address, if different from applicant information:

Conservation Practice (to be completed by Technical Representative)

The primary practice for which cost-share is requested is _____

Practice standards or eligible component(s) Grade Stabilization Structure, Brush Management	Engineered Practice <input checked="" type="checkbox"/> yes or <input type="checkbox"/> no Ecological practice <input checked="" type="checkbox"/> yes or <input type="checkbox"/> no	Total Project Cost Estimate \$33,018.80
--	--	--

The estimated benefits of this project are:

Total Phosphorus Captured 19 lbs	Nitrogen Captured	Runoff Volume Reduction
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Technical Assessment and Cost Estimate

I have the appropriate technical expertise and have reviewed the site where the above listed practice is to be installed and find it is needed and that the estimated benefits and costs are practical and reasonable.

Date	Technical Representative
------	--------------------------

Amount Authorized for Funding (to be completed by SWWD)

The SWWD Board has authorized the following for funding, total not to exceed.

Keep Funding Separate <

\$ 24,764.10 from FY 2012 MN Clean Water Assistance Grant (75%) - 02.05. 4200
Enter program name and fiscal year
 \$ 8,254.70 from SWWD LSC SUF (25%) - 02.05. 4200
Enter program name and fiscal year
 \$ _____ from _____
Enter program name and fiscal year

02.05. 4200 - Expense Recd

Board Meeting Date 11/12/13	Authorized Signature 	Total Amount Authorized \$ 33,018.80
--------------------------------	---	---

MAINTENANCE RECORDS

TURF TO PRAIRIE PROJECT

- The prairie installation contractor - Prairie Restorations, Inc. - is contracted for maintenance for the 2016 and 2017 growing season
- attached is an incomplete record of mtc. efforts to date

RAVINE STABILIZATION

- Contractor buckthorn resprout management, using cut-stump treatment method, is scheduled for week of September 18th, 2017

Prairie Restorations, Inc. 

Work Record

Prairie Restorations, Inc.
31646 128th Street
Princeton MN 55371
United States
763-389-4342

#3895

09/07/2016

Bill To

Amount Due

Tara Kelly
South Washington Watershed District
Office
2302 Tower Dr.
Woodbury MN 55125
United States

\$0.00

Ship To

PO #

Sales Rep

Tara Kelly
South Washington Watershed District Office
2302 Tower Dr.
Woodbury MN 55125
United States

ETF

Project

Item

Options

PRJ2087 Schuster (SWWD) 2016-2017 IPM WRO	Schuster Residence (SWWD) - 2016 Integrated Plant Management Work Record Only; See Memo for Work Information
--	---

Memo

Complete Site Mowing on 6/29/2016 to Reduce Noxious Weeds in New Prairie Planting.

Prairie Restorations, Inc.

Work Record

Prairie Restorations, Inc.
31646 128th Street
Princeton MN 55371
United States
763-389-4342

#7890

08/02/2017

Bill To

Tara Kelly
South Washington Watershed District
2302 Tower Dr.
Woodbury MN 55125
United States

Amount Due

\$0.00

Ship To

Tara Kelly
South Washington Watershed District
2302 Tower Dr.
Woodbury MN 55125
United States

PO #

Sales Rep

ETF

Project

Item

Options

PRJ4248 Mgmt 2017 IPM Prairie Management on 7/25/2017
WRO Schuster

Complete Site Mowing at the Schuster Prairie Planting to Reduce Non-Native Weed Cover.

Memo

EXHIBIT "K"

Joe Bush

From: Schilling, Andrew [andrew.schilling@woodburymn.gov]
Sent: Thursday, June 08, 2017 1:04 PM
To: Joe Bush
Subject: RE: Joe Bush

Joe,

During our site analysis and construction of the ravine stabilization and turf conversion to prairie above the bluff, we did not identify any fresh water springs.

Thanks,

Andy

Andy Schilling

Watershed Restoration Specialist



aschilling@ci.woodbury.mn.us

651-714-3717

[Click for Directions](#)

From: Joe Bush [mailto:joe@joebushmn.com]
Sent: Thursday, June 8, 2017 8:14 AM
To: Schilling, Andrew <andrew.schilling@woodburymn.gov>
Subject: Joe Bush

Andrew

Thank you for the feedback about the restoration project on the ravine and bluff. After reading comments back from you and Jen I understand that a meeting may not be needed.

The answer I was trying to obtain is; during the restoration project did any on site reports show fresh water springs?

If not I will proceed without additional concern. Is that a question you can answer?

Joe

Joseph Bush

Real Estate Professional

Designer & Builder

of Memorable Homes

Direct: [651.775.4222](tel:651.775.4222)

jpbushhomes.com

SWWD

EXHIBIT "K"

Joe Bush

From: Loomis, John [john.loomis@woodburymn.gov]
Sent: Monday, June 05, 2017 2:52 PM
To: Joe Bush
Cc: Schilling, Andrew
Subject: RE: Joe Bush and Afton Creek Preserve 1of2 emails

Joe, we agree that the development as proposed will help to protect Trout Brook, as was intended with the previous SWWD/WCD/CWF projects.

John Loomis/SWWD
651-714-3714

From: Joe Bush [mailto:joe@joebushmn.com]
Sent: Monday, June 05, 2017 1:07 PM
To: 'Sorensen, Jenifer (DNR)'; 'Walsh, Rick J (DNR)'; Loomis, John; Schilling, Andrew
Subject: Joe Bush and Afton Creek Preserve 1of2 emails

Jenifer, Rick, John, Andy

I found the document I was looking for. Attached is a copy of the information. Do you think that the work performed and the agreement helps the concerned comments in the DNR report to the EAW?

I have also attached a copy of the DNR report that is highlighted to show my reference.

The attached site plan shows lot 4 has a portion of the improved areas on the improved areas.

It is my opinion; our proposed restrictive covenants (attached and highlighted on page 8) will enhance the Bluff stabilization program and actually help improve The program. I am interested in your opinion and or comments to that affect. I am meeting with The city planning Commission tonight

In addition, would appreciate anything you could add to what I am referencing.

Sincerely

Joe Bush.

Sincerely

Joe bush

Joseph Bush

Real Estate Professional

Designer & Builder

of Memorable Homes

Direct: [651.775.4222](tel:651.775.4222)

jpbushhomes.com

6/20/2017

EXHIBIT "K"

Joe Bush

From: Loomis, John [john.loomis@woodburymn.gov]
Sent: Thursday, May 25, 2017 8:54 AM
To: 'joe@joebushmn.com'
Subject: Trout Brook overlook at Afton Preserve

Joe,

Got your message. I have no problem with an overlook within the easement. I will just want to make sure it meets bluff setback rules—ours is 60 feet from edge of bluff—and doesn't concentrate runoff anywhere running toward the bluff. Shouldn't be a problem.

John Loomis

Water Resources Program Manager
[South Washington Watershed District](#)
[@SoWashWD](#)
2302 Tower Drive
Woodbury, MN 55125
P: (651) 714-3714

EXHIBIT "K"

From: Loomis, John [<mailto:john.loomis@woodburymn.gov>]
Sent: Thursday, August 10, 2017 2:02 PM
To: 'joe@joebushmn.com' <joe@joebushmn.com>; inthefield@frontiernet.net
Cc: Schilling, Andrew <andrew.schilling@woodburymn.gov>
Subject: RE: Joe Bush and Afton creek

Joe,

We have no requirements for streams to be delineated in the field for a preliminary plat (or final). Nor do we have any requirements for wetland to be delineated at this stage of development. SWWD and the State do have requirements protecting streams and wetlands from disturbance activities. From that standpoint, you may be best served by having your environmental consultant write a letter stating that the stream and any associated wetlands are within the proposed easement area and not in the proposed lots.

John Loomis
Water Resources Program Manager
South Washington Watershed District
@SoWashWD
2302 Tower Drive
Woodbury, MN 55125
P: (651) 714-3714

SWWD



EXHIBIT "K"
SOUTH WASHINGTON
WATERSHED DISTRICT



May 22, 2017

VIA EMAIL

Mr. Ron Moorse
Administrator
3033 St. Croix Trail S
Afton, MN 55001

RE: Afton Creek Preserve EAW

Dear Mr. Moorse:

I am writing in regards to the Environmental Assessment Worksheet prepared for the Afton Creek Preserve project. The EAW as prepared is generally accurate and complete. Further, we would agree that there is low likelihood for adverse environmental impact resulting from the project and that further investigation through an Environmental Impact Statement is not necessary.

It is our hope that this effort serves as a model for future developments in Afton and the surrounding communities in southern Washington County. The proposed project will protect and improve not only the water quality of Trout Brook, but the surrounding terrestrial habitat as well. The City of Afton is to be commended for the development and promotion of its Preservation and Land Conservation Development ordinance. We greatly appreciate the efforts of the developer and City to protect Trout Brook by locating the easement in the areas most critical for protection of the stream. To maintain the habitat and protection benefits of the proposed easement, we strongly discourage development of any infrastructure within its currently identified boundaries.

If you have questions or need additional information please contact me at 651-714-3714 or jloomis@ci.woodbury.mn.us.

Sincerely,
South Washington Watershed District

John Loomis
Water Resources Program Manager

Cc: Joe Bush/J.P. Bush Homes.



EXHIBIT "L"

1 of 2

Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

May 17, 2017

Mr. Ronald Moore, Administrator
City of Afton
3033 St. Croix Trail South
Afton, MN 55001

Re: Afton Creek Preserve Environmental Assessment Worksheet

Dear Mr. Moore:

Thank you for the opportunity to review and comment on the Environmental Assessment Worksheet (EAW) for the Afton Creek Preserve project (Project) located in the city of Afton, Washington County, Minnesota. The Project consists of an approximately 100-acre residential development. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

Low Impact Design

The MPCA advocates the use of Low Impact Design (LID) practices to aid in the minimization of stormwater impacts. LID is a stormwater management approach and site-design technique that emphasizes water infiltration, values water as a resource, and promotes the use of natural systems to treat water runoff. Examples include:

- Special ditches, arranged in a series, that soak up more water
- Vegetated filter strips at the edges of paved surfaces
- Trees or swales between rows of cars
- Residential or commercial rain gardens designed to capture and soak in stormwater
- Porous pavers, concrete, and asphalt for sidewalks and parking lots
- Narrower streets
- Rain barrels and cisterns
- Green roofs

LID concepts may be found in the [State of Minnesota Stormwater Manual](http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html) dated November 2005 located on the MPCA website at: <http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html>.

In addition, the MPCA LID webpage provides a description and examples of LID features such as permeable pavement, rain gardens, and green roofs. Links to other resources on LID are available as well. The website is located at: <https://www.pca.state.mn.us/water/stormwater-management-low-impact-development-and-green-infrastructure>.

Mr. Ronald Moorse
Page 2
May 17, 2017

We appreciate the opportunity to review this Project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EAW, please contact me at 651-757-2508.

Sincerely,



Karen Kromar
Planner Principal
Environmental Review Unit
Resource Management and Assistance Division

KK:bt

cc: Dan Card, MPCA, St. Paul
Teresa McDill, MPCA, St. Paul

EXHIBIT "M"

Joe Bush

From: Ron Moorse [rmoorse@ci.afton.mn.us]
Sent: Wednesday, June 07, 2017 4:50 PM
To: Joe Bush
Subject: RE: Alleged soil contamination

1 of 2

Thanks Joe.

From: Joe Bush [mailto:joe@joebushmn.com]
Sent: Wednesday, June 07, 2017 11:33 AM
To: Ron Moorse <rmoorse@ci.afton.mn.us>
Subject: FW: Alleged soil contamination

RON
HERE IS INFORMATION THAT WILL HELP THE NRGCC AND THE PLANNING
COMMISSION.
JOE

From: Joe Bush [<mailto:joe@joebushmn.com>]
Sent: Monday, June 05, 2017 11:40 PM
To: Joe Bush
Subject: Fwd: Alleged soil contamination

Sent from my iPhone.

Begin forwarded message:

From: "CARLSON, WILL" <will@customdrywall.net>
Date: May 10, 2017 at 6:05:51 PM CDT
To: "joe@joebushmn.com" <joe@joebushmn.com>, Sandra Carlson <spograce1@comcast.net>
Subject: Fwd: Alleged soil contamination

Sent from my iPhone

Begin forwarded message:

From: "Haiker, Paul (MDA)" <paul.haiker@state.mn.us>
Date: May 10, 2017 at 2:52:15 PM CDT
To: "will@customdrywall.net" <will@customdrywall.net>
Subject: Alleged soil contamination

Will,

It was a pleasure speaking with you yesterday. Per your request, I will summarize the information I presented you with yesterday.

About 3 weeks ago the MDA received a report alleging that sometime around the year 2000, the complainant noted a chemical smell in the air around their residence. The complainant observed an application being made to a nearby corn field located west of Odell Ave S and north of Trading post road. The complainant stated he spoke with the applicator who said they accidentally applied 50 gallons of atrazine to 40 acres of corn thus the strong odor. The complainant stated that you are now in possession of the field and intend to develop it soon.

If what the complainant is saying is true, the application would have been 2-3 times the intended rate. While this would have been excessive and should have been reported to the state at the time, there is no reason to suspect that this product could still be found in the subject field these 17 years later.

If you have further concerns or questions feel free to contact me.

Sincerely,

Paul Haiker

Agricultural Chemical Advisor

Pesticide & Fertilizer Management Division

651-201-6247

www.mda.state.mn.us

 Square-logo-
for-email-
signature-
100x82



EXHIBIT "O"

9A2

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Meeting Date June 20, 2017

Council Action Memo

1 of 3

To: Mayor Bend and Members of the City Council
From: Ron Moorse, City Administrator
Date: June 8, 2017
Re: Will Carlson Afton Creek Preserve Sketch Plan for a Preservation and Land Conservation Development Subdivision North of 60th Street and West of Trading Post Trail – **Resolution 2017-XX**

Will Carlson has applied for a Preservation and Land Conservation Development (PLCD) Subdivision on a 219 acre site north of 60th Street and West of Trading Post Trail. The proposed subdivision would preserve 110 acres of open space through a conservation easement, and would create twenty 5-acre lots on the remainder of the site. Attached is a report regarding the PLCD proposal by Bob Kirmis, the City's Planning Consultant, as well as a number of related materials. The list of materials is as follows:

- Letter from the Neighborhood Group adjacent to the PLCD dated 2/3/2017
- Letter from the Neighborhood Group dated 2/14/2017
- Letter from the Neighborhood Group dated 3/29/2017
- Letter from the Neighborhood Group dated 5/23/2017
- Agency comment letters regarding the Environmental Assessment Worksheet (EAW)
- Minutes of the April 4, 2017 Natural Resources and Groundwater Committee (NRGC) meeting, at which the Committee approved recommendations regarding the PLCD sketch plan
- Meeting notes from the May 24 Park Committee meeting at which the Carlson PLCD was discussed.
- Memo from Kathy and Randy Graham regarding a possible easement to provide adequate sight distance for the proposed access to the subdivision off 60th Street in the southeast corner of the subdivision site
- Materials related to proposed park and trail amenities to be provided by the developer
- Letter from the adjacent Neighborhood Group to the Park Committee regarding the proposed bike trail plan
- Email from Paul Haiker of the Minnesota Department of Agriculture regarding an atrazine over-application in the year 2,000.
- Emails from John Loomis and Andrew Schilling of the South Washington Watershed District indicating no evidence of springs along the bluff on lots 3 and 4.
- Technical Memorandum from Bryant Ficek, with Spack Consulting, a traffic consultant for the developer, regarding a review of the access for the subdivision.
- Proposed covenants to be placed on each lot in the subdivision.

Environmental Assessment Worksheet (EAW)

An Environmental Assessment Worksheet (EAW) was prepared for the proposed subdivision. Rather than providing a hard copy of the EAW in the Council's meeting packet, the following is a link to the EAW on the City's website.

http://www.ci.afton.mn.us/vertical/sites/%7B255148F5-88B9-45F6-9726-DD95D24AA11D%7D/uploads/Afton_Creek_Preserve_Environmental_Assessment_Worksheet.pdf

The EAW was published in the EQB Monitor and a notice of this publication and the opportunity and timing for providing comments regarding the EAW was published in the City's Official Newspaper. The period for providing comments expires on May 24. Comment letters received from agencies responsible for commenting on the EAW are attached.

Recommendations from the NRG

The NRG recommendations are set out in the minutes of the April 4, 2017 NRG meeting, which are attached.

Recommendations from the Park Committee

The Park Committee discussed the PLCD Sketch Plan at its May 24 meeting, and its recommendations are as follows:

“Based on the current development plan presented, the Committee recommends dedication of limited land to the City as a park for the purpose of future use and the balance as a park dedication fee. This assumes the developer will provide public access at the end of the cul-de-sac and along 60th street to the open space areas. Access points will have infrastructure, such as benches, off street parking off 60th and natural informational signage.” Approved Unanimously by the Committee

Public Hearing

A public hearing was held at the June 5 Planning Commission meeting. The minutes of the Planning Commission meeting, which are included in the Council meeting packet, include an outline of the public comments regarding the proposal. A summary of the public comments is as follows.

Public Comments

- Does the proposed street access require grading in an area of 18% slope to meet sightline requirements?
- Is the bridge on 60th and Trading Post adequate for the additional traffic that would be generated by the proposal?
- Concerns were expressed regarding the safety of the access intersection
- It was suggested that the City obtain land vs. a cash contribution for the park dedication requirement
- The length of cul de sac streets proposed to serve the development is substantially longer than is generally allowed by ordinance, although the PLCD allows flexibility in cul de sac length.
- The five-acre lots will have a negative effect on the rural character of the area.
- The proposal does not match the purpose of the PLCD ordinance, which includes preserving the health, safety and welfare of adjacent residents.
- Much of the land included in the PLCD is environmentally sensitive
- Neighbors to the east of the proposed development have an erosion issue due to drainage coming from the PLCD site. There is no indication on the sketch plan regarding a solution to this problem
- The proposal undermines the Comprehensive Plan in regard to the preservation of rural character and open space

Planning Commission Review of the PLCD Sketch Plan

As indicated in the planning consultant's report, the Planning Commission was not asked to provide a recommendation regarding the PLCD proposal at this time, but was asked to provide comments to guide the applicant in preparing the Preliminary Plat application, which is the next step in the PLCD application process.

Planning Commission Comments

The Planning Commission raised a number of questions regarding the proposal. These are outlined in the Planning Commission meeting minutes, and are also summarized below.

- Vegetative Buffers should be installed by the developer, not by the owners of the individual lots. [The developer indicated vegetative buffers would be installed on all vacant lots by the developer]
- Can the City limit the amount of trees that can be removed? (The City's Shoreland Management regulations allow trees to be removed to construct a house, septic system and driveway. [Other cities have more strict tree preservation regulations, or place conditions on subdivisions, that minimize the amount of tree removals for homes and driveways, and that require driveways to be located in a way that screens the houses from the street.]
- Atrazine spill (over-application). [Please see the attached email from Paul Haiker, Agricultural Chemical Advisor with the State Department of Agriculture indicating that if the atrazine over-application occurred about 17 years ago, it would no longer be in the soil.]

- What is the planned use of the 16.5 foot wide strip owned by the developer that runs from the PLCD property to Trading Post Trail? [The developer has indicated the use has not been determined. The developer has suggested it could be a public bike trail or an emergency access for public safety vehicles. The City Attorney has indicated the strip is owned in fee by the developer and could be used for a number of uses, including a pedestrian and/or bike trail. It cannot be used as a public road. The use of this strip should be determined as part of the preliminary plat process, so that any special conditions deemed necessary for the use can be addressed as part of the preliminary plat review process.]
- How will the accelerated run-off from the increased impervious surface be managed? [The developer will be required to manage the drainage from all new impervious surfaces through a grading and drainage plan. The developer has been provided with the City's Stormwater Management Ordinance which incorporates Minimal Impact Design Standards.]
- Who will own and maintain the open space area? [The Home Owners Association will own and maintain the open space area.]
- Do all changes to architectural controls in the covenants require city approval? The conditions of approval of the plat and the CUP, as well as the development agreement, could require city approval of changes to architectural controls and particularly the items of most interest to the City.]
- Who will enforce the maintenance of plantings? [The Home Owners Association will be responsible for the maintenance of plantings. The City would also enforce the maintenance of plantings through conditions placed on the plat and the CUP.]
- Any public access to the open space area needs to be clearly and strongly set out in the conservation easement and in any approval documents
- Lots 3 and 4 have steep slopes and potential springs that feed the trout stream. The DNR expressed the same concern. [Please see the attached emails from John Loomis and Andrew Schilling of the South Washington Watershed District (SWWD) indicating the SWWD completed a ravine stabilization project in this area and did not find any evidence of springs.]
- Is the Home Owners Association (HOA) responsible for the maintenance of trails, etc? [Yes.]
- It is important to ensure the safety of the intersection that provides the access to the development. [Please see the attached technical memorandum from Bryant Ficek of Spack Consulting. The City Engineer is reviewing this memorandum and will provide comments for the Council meeting.]
- The 5-acre RR-zoned parcel in the southeast corner of the sketch plan needs to be rezoned prior to action regarding the preliminary plat
- Much more detail needs to be provided regarding the buffer zones as part of the preliminary plat
- How are unbuilt lots going to be vegetated? [The developer will seed all lots with a seed mix based on the seed mix used by the DNR and the South Washington Watershed District (SWWD). This seeding will be included in the development agreement, which includes an escrow deposit to ensure it is completed.]
- Lot 20 has a very irregular shape. [The City code, in 12-1387 Lot requirements, provides that "Side lot lines shall be substantially at right angles to straight street lines or radial to curved street lines or radial to lake or stream shores unless topographic conditions necessitate a different arrangement.]
- Do the covenants require 50% of the buildable area to be vegetated or only 50% of the total lot? [The developer indicated 50% of the total lot needs to be vegetated]
- Do the covenants allow barns, farm animals (chickens, etc.) and similar rural/agricultural items? [The developer indicated these would be restricted]

Council Direction Requested

The Council is not being asked to take action regarding the PLCD proposal at this time, but is being asked to provide comments to guide the applicant in preparing the Preliminary Plat application, which is the next step in the PLCD application process. It is important that, if the Council has significant questions, concerns or objections regarding the proposal, they should be communicated to the applicant at this time, so that they can be considered by the applicant in the preparation of a preliminary plat.

EXHIBIT "Q"

1 of 2

Joe Bush

From: Ron Moore <rmoorse@ci.afton.mn.us>
Sent: Thursday, August 10, 2017 11:27 AM
To: Wayne Ostlie; Joe Bush
Subject: RE: Joe bush Afton creek

Wayne and Joe,
Regarding who is to have an interest in the conservation easement , here is the language from our PLCD ordinance.

"The applicant(s) shall grant a Conservation Easement which shall run with the land in perpetuity to the City of Afton, all of the owners of the lots and parcels to be created in the PLCD, all land owners of property within Afton abutting the PLCD and the Minnesota Land Trust (or similar independent third party approved by the City of Afton), which restricts the lots and parcels, as well as the development rights on the undeveloped parcel(s), within the PLCD to the number of dwelling units approved for the PLCD and the land cover and use approved by the City of Afton as a part of this PLCD."

Regarding who will own and maintain the area in the conservation easement, this will be the Homeowners Association. The ordinance language is as follows:

"All land shown on the final development plan as an undeveloped parcel must be conveyed to a homeowners association or similar organization provided in an indenture establishing an association or similar organization for the maintenance of the planned development. The undeveloped parcel must be conveyed to the homeowners association or similar organization subject to covenants to be approved by the City Council which restrict the undeveloped parcel to the uses specified on the final development plan and which provide for the maintenance of the undeveloped parcel in a manner which assures it continuing use for its intended purpose."

Ron

-----Original Message-----

From: Wayne Ostlie [mailto:wayneostlie@minnesotalandtrust.org]
Sent: Wednesday, August 09, 2017 9:48 PM
To: Joe Bush <joe@joebushmn.com>
Cc: Ron Moore <rmoorse@ci.afton.mn.us>
Subject: Re: Joe bush Afton creek

Thanks Joe.

And Ron, one additional question as well. Is the City of Afton intending to co-hold the easement with the Minnesota Land Trust, or would the Land Trust be sole holders?

Thanks much!

Wayne

> On Aug 9, 2017, at 9:45 PM, Joe Bush <joe@joebushmn.com> wrote:

>
> Ron
> I have an important question that was raised by Wayne at Minnesota
> land trust

>
> I need the very specific language or close to the specific language in regards to the ownership of the conservation land after Minnesota land trust is contracted.

>
> If I am correct the property ownership is deeded to the homeowners association as the property owners.

>

EXHIBIT "Q"

2 of 2

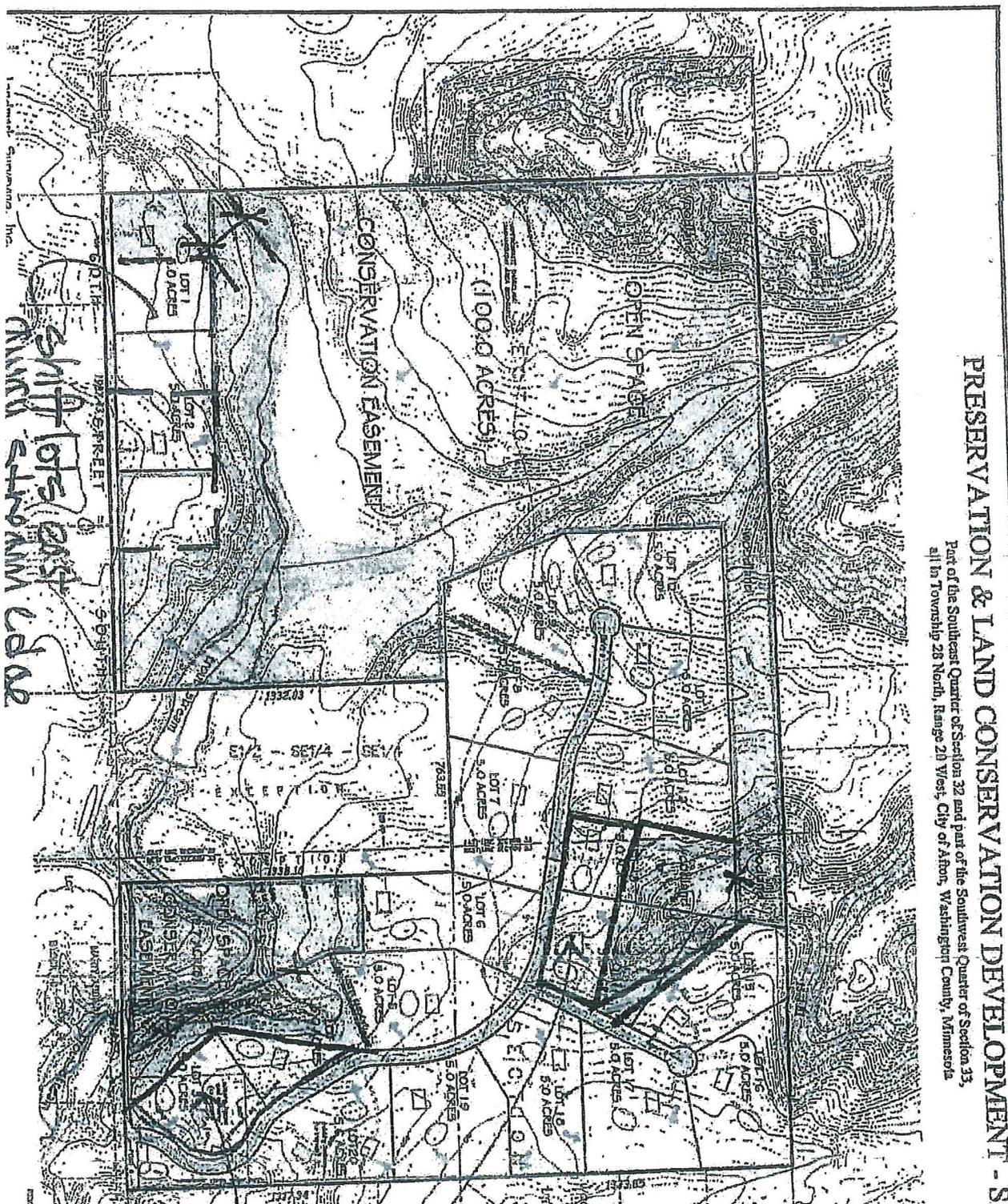


Figure 3 - Post-Construction Site Plan

PRESERVATION & LAND CONSERVATION DEVELOPMENT - S
Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

EXHIBIT "Q"

Joe Bush

From: Ron Moorse <rmoorse@ci.afton.mn.us>
Sent: Thursday, August 03, 2017 3:25 PM
To: Joe Bush
Subject: 60th Street paving

Joe,
I talked to our Public Works Supervisor about the segment of 60th Street that was removed from the 2017 paving project. The segment is from the end of the pavement on Trading Post Trail to the "Y" at Oakgreen in Denmark Township. The segment was removed from the project for two reasons. One was that we found that a portion of that segment was saturated with groundwater and we didn't have time to resolve that problem in time to be ready for the paving project. The second reason is that some or all of 60th street is located in Denmark Township. Particularly, the segment near the "Y" is located 100% in Denmark Township.
Ron



J.P. Bush
H O M E S

August 14, 2017

SUPPLEMENTARY NARRATIVE FOR PARK DEDICATION, LAND TRUST, AND CITY CODE

Property: 14220 60th St S Afton MN 55001
Will Carlson owned 218.6 Acres

Usage: Previously operated under Agriculture Zoning.
Request to Use Ordinance Article XII Sec. 12-2371
PRESERVATION AND LAND CONSERVATION DEVELOPMENTS

Proposer: Will Carlson, Land Owner.
JP Bush Homes, Developer.

Afton Creek Preserve Owner Will Carlson Dedicated Land, Open Space, and Conservation Easements to The City of Afton, Minnesota Land Trust, and HOA. The Site Plan and Development Plan include "Open Space" "Public Access in Three Locations" "Conservancy" "Waterway Protection" "Wildlife Protection" "Scenic Easements" "Trails" "Benches" "Wild Flower Buffers" "Walking Trails" "Permanent Protection and HOA funded maintenance" "Elimination of Lot #1. To Protect the Scenic views per the NRGC"

Per the City code and Parks Plan. The following documents are evidence That the Dedicated land in the Afton Creek Preserve Meets the requirements of City Code for Park Dedication Fees and or Land acquisition for Park or open Space.

Afton Creek Preserve dedication of, Conservancy, Land Trust, Open Space are by "definition" listed in the **2012 Afton Parks Plan.**

Highlighted pages and Language. From 2012 Parks Plan

1. (Page 6) Due to this fact, the committee feels that most parcels the city owns are not suitable for development as parks, either active or passive, and as a whole do not meet the intention of the Park Dedication requirement. The exceptions to these findings are noted below. For this reason the committee recommends the city very carefully consider accepting land donations in the future, and have a clear and defined use for any land received in lieu of park dedication funds.

2. (Page 6) Per the 2008 Comprehensive Plan, a priority for the acceptance of land in lieu of Park Dedication funds should be to obtain designated open spaces to provide for wildlife corridors, as well as to protect locally important water resources and scenic and natural features.
3. (Page 7) In all areas, and as resources permit, the city should work to reduce the negative impact of invasive species, most notably buckthorn in our parks
4. (Page 8) The preservation of appropriate recreational and scenic areas, natural resources, wildlife habitat and unique landforms is a vital responsibility for all sectors of government. This obligation becomes increasingly apparent as the Twin Cities Metropolitan Area expands outwards and reduces open space.
5. (Page 8) Open space is defined as public land owned by the city and/or private land leased by the city for use by the general public. Open space can be used as a buffer between uses, a connector of recreational facilities or simply a natural area, which is preserved for its resources, landforms, wildlife habitat or aesthetic value. Open space can be a visual entity as well as a physical entity. Such an area need not be a vast expanse of land to be considered open space. A narrow strip of land, in some cases, can afford the visual effect of openness, while acting as a physical connector. Scenic roadways, trails and bicycle paths, although not extremely wide, can supply visual open space and act as linkage between recreational areas, thus providing the active aspect of recreation, while at the same time providing the passive form - open space. Afton's approach toward building a parks, recreation and open space system is to evaluate open space for its recreational and scenic values, natural resources, wildlife habitat and unique landforms, and to coordinate acquisition and development. The plan is intended to chart a course and provide a framework for developing and maintaining the Afton Park system. The Plan will also serve as a guide for city commissioners, the City Council and the citizens of Afton. Afton will coordinate its planning efforts with other governmental units, foundations, agencies and individuals that plan or provide recreational or open space affecting Afton.
6. (Page 9) C. Conservancy Park - Park that has unusual topography, flood plain, shore line, fragile soils, wetland, unique soil or rock formations, ravines. Serves limited passive use, trails, plant and animal viewing, interpretation, areas, canoe landings, swimming areas, picnicking
7. (Page 9) E. Open Space Park - Open space can be thought of as a divider of uses, a connector to active or passive recreation or simply a natural area that is preserved for its aesthetic, natural or scenic value. It also may be parkland the city has acquired in the past and elected not to develop
8. (Page 22) **FUTURE CONSERVANCY PARK**
The 2008 Afton Comprehensive Plan Highlights several areas for preservation and protection. These are Creeks, coulees and Mounds.

9. (Page 24-25) SUMMARY OF RECOMMENDATIONS
Entire Paragraph Letter "A" "D" "E" "K" "L" "O"

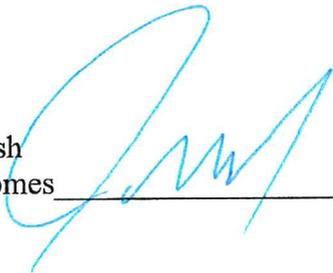
10. Page (26) ADDENDUM:
Items 1, 2, 7, 8 of "Open Space Goals"
Items 1, 5 of City of Afton Established Parks and Open Space Policies:

The above Listed Items Show, City of Afton's desires, Policy and Code to Protect and Preserve.

AFTON CREEK PRESERVE

The Development is not a Burden to the Parks System and is actually a significant Contributor to the Parks System. **Therefore:** No Park Dedication Fee or Park dedication of land is required by the Owner and Developer.

Joseph P Bush
J.P. Bush Homes



Will Carlson

EXHIBIT'S

Secs. 12-2356 – 12-2370. Reserved.⁴⁵²

ARTICLE XII. PRESERVATION AND LAND CONSERVATION DEVELOPMENTS.⁴⁵³

Sec. 12-2371. Scope.

This article applies to Preservation and Land Conservation Developments (PLCD) in the Agricultural (AG) zoning district.

Sec. 12-2372. General provisions.

A PLCD is a tract of land that is developed as a unit under single or unified ownership or controls. A Preservation and Land Conservation Development may be allowed in the AG zoning district to preserve prime agricultural land, woodland, wildlife habitat, vistas, groundwater recharge areas, areas with sensitive soils or geological limitations and areas identified in the Comprehensive Plan. Uses not otherwise allowed in the zoning district are prohibited within a planned development unless specifically permitted by provisions of this ordinance.

Sec. 12-2373. Purpose.

The purposes of this article are:

- A. To permit subdivisions in the Agricultural Zoning District which require the construction of a new public street.
- B. To encourage a more creative and efficient development of land and its improvements through the preservation of agricultural land, natural features and amenities than is possible under the more restrictive application of zoning requirements, while at the same time, meeting the standards and purposes of the comprehensive plan and preserving the health, safety, and welfare of the citizens of the City.
- C. To preserve open space, to preserve the natural resources of the site and to preserve wildlife habitat and corridors.
- D. To facilitate the economical provision of streets and public utilities.
- E. To allow the transfer of development rights (density) within a subdivision in order to preserve agricultural land, open space, natural features and amenities.

Sec. 12-2374. Permitted uses.

The Permitted Uses are:

- A. Those uses that are permitted in the underlying zoning district;
- B. Subdivisions that require the construction of a new public street in the AG zoning district;

Sec. 12-2375. General standards for approval.

- A. A Conditional Use Permit shall be required for all preservation and land conservation developments. The City may approve the preservation and land conservation development only if it finds that the development satisfies all of the following standards:
 1. The preservation and land conservation development is consistent with the comprehensive plan of the City.

⁴⁵² Ord. 97-55, 6/18/02, Ord 04-2009, 5/19/2009

⁴⁵³ Ord 06-2008, 4/15/2008; Ord 02-2014, 5/20/2014

AFTON CODE

2. The preservation and land conservation development is an effective and unified treatment of the development possibilities on the project site and the development plan provides for the preservation of unique natural amenities.
 3. The preservation and land conservation development can be planned and developed to harmonize with any existing or proposed development in the areas surrounding the project site.
- B. The tract is a minimum of eighty (80) contiguous acres in size and that all of the following conditions exist:
1. The proposal better adapts itself to the physical and aesthetic setting of the site and with the surrounding land uses than could be developed using strict standards and land uses allowed within the underlying zoning district.
 2. The proposal would benefit the area surrounding the project to a greater degree than development allowed within the underlying zoning district.
 3. The proposal would provide land use and/or site design flexibility while enhancing site or building aesthetics to achieve an overall higher quality of development than would otherwise occur in the underlying zoning district.
 4. The proposal would ensure the concentration of open space into more workable or usable areas and would preserve the natural resources of the site more effectively than would otherwise occur in the underlying zoning district.
- C. At least fifty (50) percent of the total tract is preserved as an undeveloped parcel.

Sec. 12-2376. Density, Frontage on a Public Street and Length of Cul-de-sac requirements.⁴⁵⁴

- A. The average density over the proposed PLCD shall not exceed the maximum density permitted in the underlying zoning district.
- B. The maximum length of cul-de-sacs may be exceeded to accommodate curvilinear streets and other design elements that tend to preserve the rural character or other resources within the PLCD.

Sec. 12-2377. Coordination with subdivision regulations.

- A. It is the intent of this article that subdivision review under Chapter 12 be carried out simultaneously with the review of a planned development under this article.
- B. The plans required under this article must be submitted in a form that will satisfy the requirements of Chapter 12 for the preliminary and final plats.
- C. Parcels which contain their maximum permitted density or have been previously subdivided to their permitted density may not be joined to a PLCD.

Sec. 12-2378. Pre-application meeting.

Prior to the submission of any plan to the Planning Commission, the potential applicant is encouraged to meet with the City Administrator to discuss the contemplated project relative to community development objectives for the area in question and to learn the procedural steps and exhibits required. This includes the procedural steps for an Administrative Permit and a preliminary plat. The potential applicant may submit a simple sketch plan at this stage for informal review and discussion. The potential applicant is urged to seek the advice and assistance of the City staff to facilitate the informal review of the simple sketch plan. The pre-application meeting process is entirely optional for the potential applicant and does not constitute an application within the meaning of this section.

Sec. 12-2379. General development plan.

- A. An applicant shall make an application for an Administrative Permit following the procedural steps as set forth in Section 12-78.
- B. In addition to the criteria and standards set forth in Sec. 12-78 of this article for the granting of Administrative Permits, the following additional findings shall be made before the approval of the outline development plan:

⁴⁵⁴ Ord 02-2014, 5/20/2014

- D. The City Council shall review the final development plan and final plat. If the final development plan is approved by the City Council, the City Administrator shall issue a Conditional Use Permit to the applicant.
- E. The applicant(s) shall grant a Conservation Easement which shall run with the land in perpetuity to the City of Afton, all of the owners of the lots and parcels to be created in the PLCD, all land owners of property within Afton abutting the PLCD and the Minnesota Land Trust (or similar independent third party approved by the City of Afton), which restricts the lots and parcels, as well as the development rights on the undeveloped parcel(s), within the PLCD to the number of dwelling units approved for the PLCD and the land cover and use approved by the City of Afton as a part of this PLCD. If neither Minnesota Land Trust nor any comparable organization will accept the Conservation Easement the City of Afton, in its sole discretion, may upon a specific finding that no conservation organization will accept a Conservation Easement, waive such requirement. In the case of such waiver, the applicant(s) shall be required to extend the grant of a Conservation Easement to the owners of property that abuts all abutting property to the PLCD.

Sec. 12-2381. Enforcement of development schedule.

The construction and provisions of all of the common open spaces and public and recreational facilities that are shown on the final development plan must proceed at the same phase as the construction of dwelling units. At least once every six (6) months following the approval of the final development plan, the City Administrator shall review all of the building permits issued for the planned development and examine the construction which has taken place on the site. If he shall find that the rate of construction of dwelling units is greater than the rate at which common open space and public and recreational facilities have been constructed and provided, he shall forward this information to the City Council, which may revoke the PLCD permit.

Sec. 12-2382. Conveyance and maintenance of undeveloped parcel.

- A. All land shown on the final development plan as an undeveloped parcel must be conveyed to a homeowners association or similar organization provided in an indenture establishing an association or similar organization for the maintenance of the planned development. The undeveloped parcel must be conveyed to the homeowners association or similar organization subject to covenants to be approved by the City Council which restrict the undeveloped parcel to the uses specified on the final development plan and which provide for the maintenance of the undeveloped parcel in a manner which assures its continuing use for its intended purpose.
- B. If a homeowners association is created, the applicant shall submit plans at the time of final plan of development and documents which explain:
 - 1. Ownership and membership requirements.
 - 2. Articles of incorporation and bylaws.
 - 3. Time at which the developer turns the association over to the homeowners.
 - 4. Specific listing of items owned in common including such items as roads, recreation facilities, parking, common open space grounds, and utilities.

Sec. 12-2383. Standards for undeveloped parcel.

No open area may be approved as common undeveloped parcel under the provisions of this article unless it meets the following standards:

- A. The location, shape, size, and character of the undeveloped parcel must be suitable for the planned development.
- B. The undeveloped parcel must be used for amenity or recreational purposes. The uses authorized for the undeveloped parcel must be appropriate to the scale and character of the planned development, considering its size, density, expected population, topography, and the number and type of dwellings to be provided.
- C. The undeveloped parcel must be suitably improved for its intended use but common space containing natural features worthy of preservation may be left unimproved. The buildings, structures and improvements which are permitted in the undeveloped parcel must be appropriate to the uses which are authorized for the

AFTON CODE

- B. Economic considerations alone shall not constitute a practical difficulty if reasonable use for the property exists under the terms of this article.
- C. Applications for any such variance shall be made in writing by the subdivider at the time when the plat is filed for consideration. Such application shall state fully all facts relied upon by the subdivider, and shall be supplemented with maps, plans or other additional data which may aid the Planning Commission and the City Council in the analysis of the proposed project. Such variances shall be considered at the next regular meeting held by the Planning Commission. The plans for such development shall include any covenants, restrictions, or other legal provisions necessary to guarantee the full achievement of the proposed plat. Any variance or modifications thus granted shall be recorded and entered in the minutes setting forth the reasons for granting the variance.

Sec. 12-1267. Security interest.³⁴⁶

Creation of a security interest in a portion of a parcel less than the entire parcel does not entitle the property to subdivision even upon foreclosure of the security interest, unless otherwise approved by the City Council and the parcel is in conformance with this article and the zoning ordinance, article II of this chapter.

Sec. 12-1268. Building permits.³⁴⁷

No building permit shall be issued for any construction, enlargement, alteration, or repair, demolition or moving of any building or structure on any lot or parcel until all the requirements of this article have been fully met.

Sec. 12-1269. Violation and penalties.³⁴⁸

Any person who violated any of the provisions of this article, or who sells, or offers for sale any lot, block or tract of land herewith regulated before all the requirements of this article have been complied with shall be guilty of a misdemeanor, and upon conviction thereof be subject to fine and/or imprisonment. Each day that a violation is permitted to exist shall constitute a separate offense.

Sec. 12-1270. Park and open space dedication.³⁴⁹

- A. *Purpose.* The City Council recognizes that it is essential to the health, safety, and the welfare of the residents of this City to provide for the preservation of land for parks, playgrounds, public open space, and trails. The City Council also finds that it is appropriate that each subdivision within the City contribute toward the City's parks, playgrounds, open spaces, and trails in proportion to the burden it will place upon the City's park and open space system. Therefore, this park and open space dedication requirement is established to require new developments at the time of subdivision to contribute toward the City's park and open space system in rough proportion to the relative burden they will place upon that system, and:
1. To develop a limited number of major public green spaces which shall retain the natural and scenic features of the land and serve as a wilderness environment for City residents to enjoy; and
 2. To create multiple use, non-motorized trails along roads or as a link between various points of interest and public facilities where such trails would enhance the recreational opportunities for residents and provide a safe alternative means of travel within the City; and
 3. If future development creates a need for a neighborhood park, land may be acquired for that purpose pursuant to this article.
- B. *Requirements.* Subdividers, as a prerequisite to approval of a subdivision, shall dedicate to the City for park or playground purposes or for public open space or trail systems a reasonable portion of the land being subdivided or in lieu thereof a cash equivalent. The form of dedication, land or cash, (or any combination) shall be decided by the City and dedicated or paid prior to City signing the final plat, or prior to final City Council approval of minor subdivisions.

³⁴⁶ Code 1982, § 305.1011

³⁴⁷ Code 1982, § 305.1100, **Cross reference(s)**--Building permits, inspections and fees, § 12-1804.

³⁴⁸ Code 1982, § 305.1102

³⁴⁹ Ord 47-2004, 8/17/2004

LAND USE

1. Reasonable portion of land shall be that portion of land which could be purchased with the amount of park dedication fee payment owed by the subject subdivision on a per dwelling unit basis.
 2. Land to be dedicated shall be reasonably adaptable to use for active park and recreation purposes, shall be at a location convenient to the people to be served, and shall be consistent with the general locations as indicated in the official parks map and/or comprehensive parks plan. Factors used in evaluating the adequacy of proposed park and recreation areas shall include size, shape, topography, geology, hydrology, tree cover, access and location.
 3. Where a proposed park, playground, recreational area, or open space that has been indicated in the official park map and/or comprehensive park plan is located in whole, or in part, within a proposed subdivision the site must be dedicated to the City. If the subdivider chooses not to dedicate an area in excess of the land required hereunder for such proposed public site, the City shall not be required to act to approve or disapprove the preliminary plat of the subdivision for a period of sixty (60) days after the subdivider meets all the provisions of the Subdivision Ordinance in order to permit the Council to consider the proposed plat and to consider taking steps to acquire, through purchase or condemnation, all or part of the public site proposed under the official park map in the comprehensive parks plan.
 4. Land area conveyed or dedicated hereunder may not be included by a subdivider as an allowance for purposes of calculating the density requirements of the subdivision as set out in the City Zoning Ordinance and shall be in addition to and not in lieu of scenic easement, conservation easements, and open space requirements pursuant to the City Zoning Ordinance.
 5. The City may determine that land not distinguished in its official parks map and/or comprehensive parks plan is needed as a neighborhood park. Should this determination be made, an amendment to the official parks map and/or comprehensive parks plan shall be made identifying the neighborhood park. Should the City determine that land in excess of what can be obtained via Section 12-1270 (B) (1) is required, the remaining area shall be purchased from the applicant by the City via its park and trail fund at a fair market value.
 6. When a cash park dedication fee is paid in lieu of a dedication of land, the subdivider shall pay a per dwelling unit fee as described in Section 12-1270 (C) (3) and (D).
 7. The City shall maintain a separate fund into which all cash park dedication fees received from owners or subdividers in lieu of conveyance or dedication of land for park or playground, public open space or trail purposes shall be deposited and shall make, from time to time, appropriations from such fund for acquisition of land for park and playground purposes, for developing existing park and playground sites, for public open space and trails, or for debt retirement in connection with land previously acquired for parks and playgrounds, which will benefit the residents of the City.
- C. *Administrative Procedure.* When an application for subdivision is submitted, the City Administrator and City Planner shall evaluate its location with that of the official parks map and the comprehensive parks plan to determine whether land is to be recommended for dedication.
1. Should the subject site be located within an area designated for future parkland, open space, or trail corridor, as designated in the official parks map and comprehensive parks plan, the City Administrator and City Planner shall submit the proposed subdivision to the Park Committee for its review and recommendation.
 2. The Park Committee shall make a determination as to what portion or portions of the site may be dedicated to the City for parkland, open space, or trail use as described in the official park map in the City's Comprehensive Park plan. The subdivider shall be made aware of this recommendation which will be forwarded to the Planning Commission for their review and recommendation to the City Council.
 3. Should the subject site be outside of any future proposed parkland, open space, trail or wildlife corridors, or wildlife habitat areas as defined in the official park map and the comprehensive park plan, the City Administrator shall inform the subdivider and the process will continue with the recommendation for a cash park dedication fee in lieu of land dedication in a per dwelling unit amount as defined in Section 12-1270 (D).
 4. Though the subject site may not be located in an area identified for future parkland, open space, trail or wildlife corridor, or wildlife habitat area in the official park map and comprehensive park plan, the Planning Commission may recommend and the City Council may require that a reasonable portion of the land be dedicated to the City, at which time the subdivision will be sent to the Parks Committee for their review and recommendation as to the sites location. Reasonable portion of the land shall be defined as that portion of land in which could be purchased with the amount of park dedication fee payment owed by the subject subdivision per dwelling unit being proposed.

LAND USE

- B. The annual probability of increased rate of surface runoff due to new construction shall not exceed one percent.
1. Annual probability shall not exceed one percent means that a 100-year storm of appropriate duration should be used for design but that storms of lesser magnitude (e.g., two-year or ten-year storms) should be examined as well.
 2. Surface runoff is the water leaving the property on or very near the surface (e.g., including the gravel subgrade of a parking lot).
 3. Surface runoff rate is the peak discharge as calculated by the S.C.S. T R 20 for a storm of critical duration.

Sec. 12-1384. Easements.³⁷²

- A. *Provided for utilities.* Easements of at least 20 feet wide, centered on rear and other lot lines as required, shall be provided for utilities where necessary as recommended by the City Engineer. Where underground utilities are being installed, a ten-foot wide front or side yard easement may be required.
- B. *Provided for drainage.* Easements shall be provided along each side of the centerline of any watercourse or drainage channel, whether or not shown on the comprehensive plan, to a sufficient width to provide proper maintenance and protection and to provide for stormwater runoff and installation and maintenance of storm sewers.
- C. *Dedication.* Utility and drainage easements shall be dedicated for the required use.
- D. *Trails.* Trail easements shall be provided as required by the City Council in compliance with the comprehensive plan.
- E. *Scenic easements.* Scenic easements shall be required on slopes of 18 percent and greater, wetlands, drainageways, and other lands and soils judged to be fragile by the soil conservation service. Scenic easements also shall be required on slopes greater than 12 percent if the land is unbuildable or heavily wooded and would be affected adversely by development. Such easements shall be required as a condition of subdivision approval, and shall prohibit the following activities: Dumping, burning, grading, grazing of domesticated farm animals, vegetative cutting in excess of prudent forestry practices as approved by the Forestry Division of the Minnesota Department of Natural Resources, motorized vehicles, construction of any structure including driveways. Such scenic easements shall be recorded against the affected lots in the subdivision.
1. The City shall have the right to reasonable access to easement areas to verify compliance with the restrictions, and to cross adjacent lands in common ownership with the easement area to obtain such access.
 2. A scenic easement prohibits the owner from engaging in harmful activities in the area subject to the easement, but does not grant the general public any right of access to the land.

Sec. 12-1385. Street names.³⁷³

Names of new streets shall not duplicate existing or platted street names unless a new street is a continuation of or in alignment with the existing or platted street, if it shall bear the same name of the existing or platted street so in alignment. Street names shall conform to the county uniform street naming and property numbering system as applicable.

Sec. 12-1386. Block design.³⁷⁴

- A. Block length and width or acreage within bounding streets shall be such as to accommodate the size of residential lots required in the area by the zoning ordinance, article II of this chapter, and to provide for convenient access, circulation control, and safety of street traffic.

³⁷² Code 1982, § 305.711; Res 1997-16, § 20, 6-17-97, Ord 1997-13, 9-22-98

³⁷³ Code 1982, § 305.713, **Cross reference** – Streets and sidewalks, Ch. 20.

³⁷⁴ Code 1982, § 305.714

Exhibit N

Joe Bush

From: Jim Stanley - Lower St. Croix Valley Fire Dept. <Jim.Stanley@lscvfd.com>
Sent: Friday, August 11, 2017 1:35 PM
To: Joe Bush
Cc: rmorris@ci.afton.mn.us
Subject: Roads

1 of 1

Joe To answer your question about roads and FD response. We have worked with city of Afton to develop there road specs with our response in mind. They developed these specifications with our vehicle size, weight, and turning radius. So as far as the fire deptment is concerned if you follow the road specs from the city of Afton there should be no issues with our response.

Jim Stanley, Chief
Lower St. Croix Valley Fire Dept.
1560 St. Croix Tr. S. P.O. Box 234
Lakeland, Minnesota 55043
Phone: (651) 436-7033 Fax: (651) 436-1682
Direct Phone: (651) 248-5103

EXHIBIT "T"

1 of 2

May 17, 2017

Ronald Morse, City Administrator
City of Afton
3033 St. Croix Trail S
Afton, MN 55001

RECEIVED
MAY 23 2017
CITY OF AFTON

RE: City of Afton Environmental Assessment Worksheet (EAW) – Afton Creek Preserve
Metropolitan Council Review No. 21714-1
Metropolitan Council District 12

Dear Mr. Morse:

The Metropolitan Council received an EAW for a proposed residential project on April 17, 2017. The EAW is for a proposed residential cluster (20) lot single-family development on 218.6 acres with 109.7 acres of conservation easement protection for Trout Brook. The development will have individual wells and septic systems, and special vegetative buffers protecting steep slopes. The development site was previously used for farming, pasture, hay land and forest land.

The proposed project area is zoned Agriculture, along with Shoreland Management areas and a Conservancy Overlay. The City's 2030 Comprehensive Plan Current Land Use Map identifies this area as including existing land uses such as deciduous tree cover, cultivated, pasture, grassland, residential, bluff areas, streams and wetlands. The City's 2030 Future Land Use Map guides this area as Agriculture which allows a maximum density of 4 units per 40 acres.

Council staff has conducted a review of this EAW to determine its adequacy and accuracy in addressing regional concerns and the potential for significant environmental impact. The staff review finds that the EAW is complete and accurate with respect to regional concerns and does not raise issues of consistency with Council policies. The following section offers advisory comments for the City's consideration.

Item 13 – Fish, wildlife, plant communities, and sensitive ecological resources (rare features)
(Jim Larsen, 651-602-1159)

The EAW states that the proposed 60-foot vegetative “backyard” lot buffers will protect steep slope areas (identified as “bluff areas of over 18% slopes” on page 12, and “steep slope areas” of unspecified slope elsewhere in the document) against erosion, and increase wooded/forest and brush/grassland areas on lots within the development. Appendix B is referenced for plans of the buffer program, but it is not clear from the information provided, if all lots or only a portion will contain 60-foot buffer protection areas, precisely where the boundaries of the buffer will begin, and what level of preservation will be extended to site amenities “behind” the buffer. It appears from the Council's GIS database slope overlay information, that the only proposed lots containing existing mapped slopes in excess of 18% are lots 3 and 4 in the southeast corner (lot 3 contains an existing home which is to remain), the very north edge of lots 15 and 16 in the northeast portion of the site, and a few isolated areas within the proposed 100-acre open space conservation easement area in the northwest corner of the site.

While we agree that avoiding impacts to steep slope areas on the site by application of a protection buffer to those areas will be beneficial, Council staff is also concerned about protection of areas within proposed lots to be developed that are dominated by mature native oak woodlands. The woodlands have been mapped by the Council and Minnesota Department of Natural Resources in their Natural Resources Inventory/Assessment program as supporting native red and white oak and sugar maple communities of "moderate" assessed quality. Large portions of lots 10 through 14 along the northern site boundary – in some cases, more than half of each lot's platted area, and smaller portions of lots 15 and 16, consist of these mature woodlands. We recommend these woodland areas be specifically protected from impacts by future land owners within the development, either by redrawing of proposed lot lines to include (more or all of) the wooded areas within the proposed development's conservation easement area, or by affording them a similar level of protection as provided by the conservation easement from future impacts in some fashion.

While we understand the importance of and mechanism by which the stream channel areas within the proposed 100-acre open space conservation easement area will be protected, we do not have a similarly clear understanding of precisely what protection mechanisms will be utilized with the 60-foot buffers to protect natural resource woodland stands behind those buffers that will be located on privately held land.

This concludes the Council's review of the EAW. The Council will not take formal action on the EAW. If you have any questions or need further information, please contact Corrin Wendell, Principal Reviewer, at 651-602-1832.

Sincerely,

 for:
LisaBeth Barajas, Manager
Local Planning Assistance

CC: Steve O'Brien, MHFA
Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Harry Melander, Metropolitan Council District 12
Corrin Wendell, Sector Representative/Principal Reviewer
Raya Esmaeili, Reviews Coordinator

PLANNING REPORT

TO: Afton Planning Commission

FROM: Bob Kirmis

DATE: May 22, 2017

SUBJECT: Afton - Afton Creek Preserve Sketch Plan

CASE NO: 280.02 - 17.02

BACKGROUND

Joe Bush, on behalf of J.P Bush Homes, has submitted a sketch plan for a preservation and land conservation development (PLCD) entitled "Afton Creek Preserve." The subject site overlays 219 acres of land located north of 60th Street South (along the City's southern boundary) and west of Trading Post Trail South.

The subdivision calls for the creation of 20 single family residential lots all of which measure 5 acres in size and are mainly located on the eastern half of the site. Of the 219 acres which comprise the subject site, 110 acres are proposed to lie within a conservation easement (intended to protect a trout stream and protect open space).

The subject site overlays seven individual parcels of land. With the exception of a 5-acre parcel located in the extreme southeast corner of the site (14220 60th Street), all parcels which comprise the subject site are zoned A, Agricultural. Conservation subdivisions (PLCD's) are allowed within Agricultural zoning districts as a conditional use. The 5-acre parcel in the southeast corner is zoned RR, Rural Residential.

That portion of the site which overlays the trout stream and adjacent flowage lie within the City's Shoreland Management Area, the boundaries of which measure 1,000 feet from each side of stream banks.

Also, to be noted is that the trout stream, as well as flowage which lies along stream, lies within the City's Conservancy Overlay District, the intent of which is to manage areas with unique natural and biological characteristics.

The purpose of the sketch plan review procedure is to inform applicants of the City's procedural requirements for subdivision and applicable zoning and subdivision standards and convey the extent to which proposed subdivisions conform with such regulations. In this regard, no formal action on the submitted sketch plan will be taken. Informal feedback on the submitted sketch plan is intended to precede the preparation of a formal preliminary plat application.

Attached for Reference:

- Exhibit A: Applicant Narrative
- Exhibit B: Site Location
- Exhibit C: Sketch Plan
- Exhibit D: Concept Plan Alternative (prepared by Natural Resources and Groundwater Committee)

ISSUES

Environmental Assessment Worksheet (EAW). According to both Minnesota Statutes (Rules 4410.4300 Subpart 36) and the Afton City Code, an Environmental Assessment Worksheet (EAW) must be prepared for projects which result in the permanent conversion of 80 or more acres of agricultural, native prairie, forest, or naturally vegetated land to a more intensive developed land use. Thus, the proposed subdivision has prompted the preparation of an EAW.

The purpose of the EAW process is to disclose information about potential environmental impacts of a project. Information disclosed in the EAW process is intended to determine whether a more detailed Environmental Impact Statement (EIS) is needed and to indicate how the project can be modified to lessen its environmental impacts. To be specifically noted is the EAW process is not intended to represent project approval.

The completed EAW has been sent to various agencies as identified on the Environmental Quality Board's distribution list for review and comment. The 30-day comment period for the EAW ends on May 24, 2017. Thus, comments will be received prior to the June 6, 2017 Planning Commission meeting. Such comments should be taken into account by the applicant as part of the development (refinement) of various plans to be provided with forthcoming preliminary and final plat applications.

Based on information provided in the EAW, the preparation of an Environmental Impact Statement (EIS) is not expected. To be noted however, is that comments and recommendations received on the EAW related to the mitigation of potential environmental impacts should be taken into account by the applicant in the preparation of detailed subdivision plans. Received comments can be made conditions of forthcoming subdivision approval by the City.

Processing. Following sketch plan review, the following approvals are minimally necessary to accommodate the project:

1. Subdivision (preliminary plat and final plat)
2. Conditional use permit for PLCD development

Issues associated with the possible rezoning of the 5-acre parcel (14220 60th Street) from RR, Rural Residential to A, Agricultural in conjunction with the forthcoming subdivision application shall be discussed in a later section of this report.

Purpose of PLCD. According to the City Code (section 12-2373), preservation and land conservation developments (PLCD), are intended to:

- A. *Permit subdivisions in the Agricultural Zoning District which require the construction of a new public street.*
-  B. *Encourage a more creative and efficient development of land and its improvements through the preservation of agricultural land, natural features and amenities than is possible under the more restrictive application of zoning requirements, while at the same time, meeting the standards and purposes of the comprehensive plan and preserving the health, safety, and welfare of the citizens of the City.*
-  C. *Preserve open space, to preserve the natural resources of the site and to preserve wildlife habitat and corridors.*
- D. *Facilitate the economical provision of streets and public utilities.*
- E. *Allow the transfer of development rights (density) within a subdivision in order to preserve agricultural land, open space, natural features and amenities.*

While it appears that the proposed subdivision fulfills the preceding objectives, such finding should be made by City Officials as part of formal action on the forthcoming subdivision and conditional use permit applications.

Comprehensive Plan. According to the City's 2008 Land Use Plan, the majority of the 219-acre subject site is guided for "Agricultural" use. Such land use designation directs a maximum density of one dwelling unit per 10 acres of land.

The Land Use Plan also directs "Rural Residential" use of the five-acre parcel located in the extreme southeast corner of the site. Such land use designation imposes a minimum 5-acre lot size requirement with a minimum of 2.5 acres of contiguous buildable area.

Zoning. Reflective of its designation within the Comprehensive Plan, the majority of land within the subject site is zoned A, Agricultural. Within A, Agricultural Districts,

conservation subdivisions (PLCD's) are allowed by conditional use permit.

As indicated, the existing 5-acre parcel located in the southeast corner of the site (14220 60th Street) is zoned RR, Rural Residential. While minimum lot area standards in the A, Agricultural District for PLCD subdivisions are the same as those imposed within the RR, Rural Residential District (5 acres), it should be recognized that the zoning of the existing RR parcel is tied to its current legal description. The submitted sketch plan calls for the reconfiguration of the RR parcel such that it includes public right-of-way as well as the conveyance of a portion of the lot to abutting Lot 20 to the north. Without a rezoning action, proposed Lots 3 and 20 would have two zoning designations (A and RR). This is typically an undesirable condition.



To ensure that all proposed lots within the subdivision are afforded the same property rights (via zoning), consideration should be given to the rezoning of the 14220 60th Street parcel from RR, Rural Residential to A, Agricultural as part of the formal application for subdivision.

While the City's Land Use Plan (map) designates the parcel in question for "Rural Residential" use, it is believed the following findings can be made in support zoning change without the need for the processing a Land Use Plan amendment.

1. The guided density of the 5-acre "area" in question is consistent with that proposed via the PLCD and no change to the existing use is proposed.
2. The 5-acre parcel is clearly part of the proposed PLDC and its land area has been used in the calculation of allowed development density.
3. PLCD's are not listed as a permitted use in the RR zoning district.
4. The parcel in question lies between lands guided "Rural Residential" and "Agricultural" uses. The original intent related to the separation of these uses would not change as a result of the rezoning.
5. The land use categories depicted on the Land Use Plan map correspond to individual parcels. The configuration of the parcel in question will change slightly as a result of the proposed subdivision. Without the zoning change, Lots 3 and 20 will hold two zoning designations and be inconsistent with the balance of the lots within the subdivision.

This issue, and specifically the need for such action and Land Use Plan impacts, should be subject to further comment and recommendation by the City Attorney.

Streets

Access. As shown on Exhibit B, access to the majority of the lots (18) within the subdivision is proposed via two cul-de-sacs which intersect 60th Street at a single

point near Trading Post Trail. The acceptability of the street intersection location should be subject to comment and recommendation by the City Engineer.

To be noted is that some concerns exist related to the proximity of the access to steep slopes in the immediate area. As a condition of subdivision approval, an assurance should be made that slopes in excess of 18 percent will not be disturbed. This issue should be subject to further comment and recommendation by the City Engineer.

Aside from the 18 lots proposed to be accessed via the 60th Street cul-de-sac, two additional lots in the extreme southwest corner of the site are proposed to be provided direct driveway access via 60th Street.

Cul-de-Sac Length. As mentioned, 18 lots within the subdivision are proposed to be accessed via two cul-de-sacs. The 60th Street roadway access technically splits into two cul-de-sacs. The longest of the two cul-de-sacs measures approximately 3,400 feet in length which significantly exceeds the maximum cul-de-sac requirement of 1,320 feet imposed in the City's Subdivision Ordinance.

While the Ordinance states that cul-de-sac lengths within PLCD subdivisions may exceed the referenced cul-de-sac length requirement (provided that the preservation of the rural character and natural resources will result), immediate feedback on the acceptability of the proposed cul-de-sac length is requested of City Officials.

In the opinion of Planning Staff, there are both pros and cons associated with the cul-de-sac as currently proposed. These are summarized below:

Pros:

1. Flexibility from the referenced cul-de sac length requirement of the Ordinance is allowed in PLCD subdivisions provided preservation of natural resources will result. Remedy to the excessive cul-de-sac length would likely be the creation of a street connection to Odell Avenue. Such street connection could have negative impacts upon natural resources in the area.
2. Numerous cul-de-sacs presently exist within the City which exceed the maximum 1,320-foot length requirement of the Subdivision Ordinance. Thus, the proposed condition does not differ from that previously allowed by the City.
3. A second access to the subdivision via Odell Avenue may introduce negative traffic impacts on residents located east of the subject site along Trading Post Trail and Odell Avenue.
4. A second access to Odell Avenue would result in increased street

In addition, a minimum width and depth requirement of 300 feet is imposed. All proposed lots meet minimum area, width and depth requirements of the A, Agricultural District and Shoreland Management District.

To be noted is that the applicant will be required to demonstrate that each proposed single family lot will have a buildable area of at least 2.5 acres. The Zoning Ordinance defines "buildable area" as land having a slope of 13 percent or less and having enough suitable soil for the installation of two on-site sewage treatment systems. The Ordinance also notes that "buildable area" may include required building setbacks.

In regard to the proposed lot configuration, it is important to note that the Natural Resources and Groundwater Committee has suggested that the subdivision design be modified to better preserve environmentally sensitive lands (steep slopes and the trout stream). Specifically, the Committee has recommended that the open space area be expanded to include the following areas:



- The northern one-half of Lots 13 and 14
- The western one-half of Lot 4
- The western one-third of Lot 3

The Natural Resources and Groundwater Committee has also prepared an alternative concept plan which incorporates the preceding recommendations (attached as Exhibit C): The alternative concept plan calls for the elimination of two lots within the subdivision.

The recommendations of the Natural Resources and Groundwater Committee should be taken into account as part of the forthcoming formal application for subdivision.

Jennifer Sorensen, East Metro Hydrologist for the Department of Natural Resources (DNR), has indicated the comments from the DNR will also include increased protection of the stream and the areas from which the stream is spring-fed, which include Lots 3 and 4.

Setbacks. Within the A, Agricultural District and the Shoreland Management District, the following minimum setbacks apply:

Side Yard:	50 feet
Front Yard:	105 feet (from roadway centerline).
Rear Yard:	50 feet
From OHWL of Trout Stream:	200 feet

It appears that all proposed lots illustrate an ability to meet the aforementioned setbacks (via illustrated building pads).

Use of Open Space. As part of formal subdivision processing, the intended use of the designated open space should be conveyed by the applicant. Of specific interest are

any intended recreational purposes and the future construction of facilities intended to accompany such uses.

According to the PLCD requirements of the Ordinance (Section 12-2383), buildings, structures and improvements located upon the undeveloped parcel must be designed in a manner which conserve and enhance the amenities of the parcel in regard to its topography and its unimproved condition.

Also to be noted is that Section 12-2381 of the Ordinance stipulates that construction of recreational facilities shown on the PLCD development plan must proceed at the same time as the construction of the dwelling units.

Homeowner's Association Requirements. Section 12-2382 of the Ordinance states that, if a homeowner's association is to be created, its various requirements (ownership requirements, bylaws, etc.) must be submitted as part of the PLCD for City review.

The applicant has provided a copy of proposed covenants, restrictions and conditions which would apply to property owners within the subdivision. Requirements include, but are not limited to, the following:

- Association duties
- Assessments
- Architectural controls
- Use of common properties
- Prohibited uses
- Water maintenance/management

Homeowner's association-related issues should be subject to further comment by the City Attorney.

Wetlands. According to the EAW, wetlands comprise 13 acres of the 219-acre subject site. Such wetlands lie along the trout stream and presently lie within the proposed conservation easements. In this regard, the proposed lot layout is not expected to impact any existing wetlands.

Wetland-related issues should be subject to further comment and recommendation by the City Engineer.

Easements. As a condition of subdivision approval, a conservation easement must be established over the designated open space. Such easement must run with the land in perpetuity to the following:

- The City of Afton
- All owners of the lots within the PLCD
- Landowners within Afton which abut the PLCD
- Minnesota Land Trust

In addition to the referenced conservation easement, easements for drainage, utilities and scenic preservation should be provided over individual lots as may be recommended by the City Engineer.

Septic Systems. As part of the forthcoming preliminary plat submission, primary and secondary septic sites must be illustrated in compliance with City specifications as provided in Section 12-413 of the Zoning Ordinance.

Permits for individual sewage treatment systems will be issued by the Washington County Department of Public Health. In this regard, review of proposed septic designs and final septic permits must be received from Washington County prior to building permit approval.

Park Dedication. According to Section 12-1270 of the Subdivision Ordinance, subdividers must dedicate to the City a reasonable portion of the land being subdivided for park purposes or in lieu thereof, a cash equivalent. The form of dedication, land or cash, (or any combination) must be decided by the City and dedicated or paid prior to City signing the final plat.

To be noted is that the Natural Resources and Groundwater Committee has recommended that the southwest corner of the subject site, south of the trout stream, be dedicated as City parkland.

Prior to preliminary plat consideration by the Planning Commission, the submitted sketch plan must be subject to review and recommendation by the City's Park Committee.

The City's 2012 Park Plan does not illustrate any future parks or trails within the subject site. With this in mind, a calculation of a possible cash contribution (as opposed to land dedication) is considered worthwhile. According to the Ordinance, a cash park dedication fee, in lieu of land dedication, shall be equivalent to 7.5 percent of the predevelopment value of the land to be subdivided, subject to a minimum fee of \$5,000 per dwelling unit and a maximum fee of \$10,000 per dwelling unit.

Preliminary Plat Data Requirements. As part of preliminary plat processing, informational requirements as provided in Section 12-1328 of the Subdivision Ordinance must be satisfied. Required information includes, but is not limited to, the following:

- Existing Conditions (site survey)
- Preliminary Plat
- Grading and Drainage Plan
- Erosion/Sediment Control Plan

Additional Comments. In addition to the comments provided above, any comments received from the following must also be considered as part of the sketch plan

evaluation and in the preparation of the preliminary plat:

- City Engineer
- City Attorney
- Natural Resources and groundwater Committee
- Park Committee
- Washington Soil and Water Conservation District
- Watershed District
- Natural gas, electric and cable communications utilities
- Fire District
- School District
- Other agencies not identified above but included on the EAW distribution list.

This material is scheduled to be discussed at the forthcoming June 5, 2017 Planning Commission meeting.

pc. Ron Moore, City Administrator

EXHIBIT "V"

2012 Afton Parks Plan

Planning Commission review 1/7/2013
Public Hearing scheduled 2/4/2013
Edit to Pop chart, p.10 2/5/2013
City Council meeting 2/19/2013

2011-2012 PARK COMMITTEE MEMBERS

Bill Palmquist, Council Member Ward 1
Randy Nelson, Council Member Ward 4
Ken Johnson, Afton Public Works Supervisor
Bonnie-Lee Blackley
Julianne Berg
Darcy Cernohous
Steve Dorgan
Nathan Shaw
Karen Weiss

Sara Irvine, City Administrator (2011)
Ron Moore, City Administrator (2012)

CITY OF AFTON, MINNESOTA

Afton City Hall — 3033 St. Croix Trail South — P.O. Box 219

Afton, Minnesota 55001

Phone — 651-436-5090 Fax — 651-436-1453

AFTON PARKS, RECREATION AND OPEN SPACE PLAN

1. 2012 SUMMARY:

In preparation for this update to Afton's Park Plan, the Park Committee met monthly for one year to review the existing plan and to tour each of the listed parks. In discussions, it became clear that, historically, the city had accepted marginal land from developers in lieu of paying the park dedication fee. Due to this fact, the committee feels that most parcels the city owns are not suitable for development as parks, either active or passive, and as a whole do not meet the intention of the Park Dedication requirement. The exceptions to these findings are noted below. For this reason the committee recommends the city very carefully consider accepting land donations in the future, and have a clear and defined use for any land received in lieu of park dedication funds. Areas of the city where land donations would be encouraged are the western edge of the city along Manning Avenue and the southwest area of the city. Currently no city parkland is located in either of these areas. Per the 2008 Comprehensive Plan, a priority for the acceptance of land in lieu of Park Dedication funds should be to obtain designated open spaces to provide for wildlife corridors, as well as to protect locally important water resources and scenic and natural features.

The committee attempted to view city property as it related to planned trail expansion by other government agencies or potential trail construction by the city and found little ability to map out a way to use many of these parcels as part of a larger trail system. The committee did identify three additional trail routes to those already part of the trail plan. These trail routes would be off road trails and serve to connect with existing and planned trails or access to locally significant natural resources. Adding these routes would allow Afton residents access to an expansive system of trails throughout the city and neighboring communities. These routes would be located along Manning Avenue, Hudson Road/Industrial Boulevard, 50th Street and Old Putnam Road.

The Park Committee recommends the city use available Park Dedication funds to mark the city's existing parks with signage as "Afton City Park Land," noting that the parcel is "permanently protected as open space" and marking the corners of each parcel to indicate where the public space ends and private property begins. These signs should also include a map of the parcel to assist any residents who enter the park to remain within the park

boundary. One sign is recommended at the following locations: Steamboat Park, Meadow Ridge Park, Aftonwood Park and Rinta Park. Two signs are recommended for Remus Park. This process could begin immediately. The committee believes most residents are unaware that the city owns these park areas, therefore it recommends making an announcement in the city newsletter that park locations have been marked.

The Park Committee also felt that the city should consider marking historical sites within the city. Although not included as part of the Park Plan the committee felt that some of these sites are of regional significance and should be noted as an addendum to this plan. An effort should be made to coordinate with the Afton Historical Society to create the appropriate text for the signage of these historic sites and the city should work with private landowners to gauge their interest in participating and having their buildings or land included in this effort. For sites within existing city parks this process could start immediately.

In all areas, and as resources permit, the city should work to reduce the negative impact of invasive species, most notably buckthorn in our parks. Although not a named park in this plan, special attention should be paid to the public land on which Mount Hope Cemetery is located, as the presence of buckthorn there is seriously threatening the survival of that historic site.

Of the parcels noted in this plan, three stood out as having potential to meet the intent of the park dedication process in providing residents with public open spaces; they are:

1. Meadow Ridge - This park is the second largest park in the city at 10.4 acres. The committee recommends development of this park to include off street parking, adding walking trails and benches.
2. Remus - This park is restricted to passive uses until 2026. The committee felt the city could work with the neighborhood to see if adding park benches along the current trail would be desirable.
3. Rinta - This park is the location for a community garden initiative begun in the fall of 2012 with first planting scheduled for the spring of 2013.

2. INTRODUCTION AND PURPOSE:

This plan has been prepared by the Afton Parks Committee and incorporates the goals and policies of past plans, the 2008 Afton Comprehensive Plan, the Washington County 2005 Master Plan for the St. Croix Valley Trail, the Green Corridor Project, and the Metropolitan Council 2030 Regional Parks Policy. The preservation of appropriate recreational and scenic areas, natural resources, wildlife habitat and unique landforms is a vital responsibility for all sectors of government. This obligation becomes increasingly apparent as the Twin Cities Metropolitan Area expands outwards and reduces open space.

Recreational needs are not limited to any age group. Recreational needs and desires are constantly changing. New interests create a demand for new facilities that will satisfy the needs of the community. The challenge is to provide a system, which satisfies a broad range of both passive and active recreational needs for all age participants.

Open space is defined as public land owned by the city and/or private land leased by the city for use by the general public. Open space can be used as a buffer between uses, a connector of recreational facilities or simply a natural area, which is preserved for its resources, landforms, wildlife habitat or aesthetic value. Open space can be a visual entity as well as a physical entity. Such an area need not be a vast expanse of land to be considered open space. A narrow strip of land, in some cases, can afford the visual effect of openness, while acting as a physical connector. Scenic roadways, trails and bicycle paths, although not extremely wide, can supply visual open space and act as linkage between recreational areas, thus providing the active aspect of recreation, while at the same time providing the passive form - open space.

Afton's approach toward building a parks, recreation and open space system is to evaluate open space for its recreational and scenic values, natural resources, wildlife habitat and unique landforms, and to coordinate acquisition and development. The plan is intended to chart a course and provide a framework for developing and maintaining the Afton Park system. The Plan will also serve as a guide for city commissioners, the City Council and the citizens of Afton. Afton will coordinate its planning efforts with other governmental units, foundations, agencies and individuals that plan or provide recreational or open space affecting Afton.

3. **DEFINITIONS:**

A. Belwin Conservancy - Foundation for Nature Conservancy and Land Preservation and a Minnesota non-profit organization.

B. Community Park - Serves community-wide active and passive recreation needs as well as preserving unique landscapes and open space. Active uses include ball fields, courts, informal play space, skating, play equipment etc. Passive use includes trails, picnicking, and nature study gardens.

C. Conservancy Park - Park that has unusual topography, flood plain, shore line, fragile soils, wetland, unique soil or rock formations, ravines. Serves limited passive use, trails, plant and animal viewing, interpretation, areas, canoe landings, swimming areas, picnicking.

D. Neighborhood Park - Serves active, passive and social uses for those living within 1/2 mile of the park (neighborhood walking distance). Active park uses are informal and include, for example, pick-up baseball, soccer, and playing catch.

E. Open Space Park - Open space can be thought of as a divider of uses, a connector to active or passive recreation or simply a natural area that is preserved for its aesthetic, natural or scenic value. It also may be parkland the city has acquired in the past and elected not to develop.

F. Recreation - Any form of play, amusement or diversion used for refreshment of body and mind.

G. SCVAP - St. Croix Valley Athletic Partnership. SCVAP is a volunteer athletic association and a Minnesota non-profit corporation.

H. State Park - Land owned by the State for nature-oriented recreation.

I. Trail – Trails may have a variety of topping materials including pavement, gravel, woodchips, dirt or grass. Serves non-motorized travel, walking, bicycling, horseback riding, roller-blading, roller-skiing, jogging.

9. FUTURE CONSERVANCY PARK

The 2008 Afton Comprehensive Plan highlights several areas for preservation and protection. These areas are creeks, coulees and mounds.

Bissel Mounds is good candidate to start the process to establish a conservancy park. Bissel Mounds are several large hills found in the northwest section of Afton. The Mounds are all held in private ownership. The mounds (erosional outliers) are unique to Washington County and are a recognized landmark to the city. Due to the unusual formation of the mounds and topography there is an interest in preserving and protecting the mounds. One avenue to preservation is to obtain the property and designate it as a Conservancy Park. Any facilities or activities would be passive.

The reality of this park is totally dependent upon availability of the property and an acceptable purchase price. The owners have met with the Afton City Administrator and were interested in subdividing the property, but because of the Mounds a Minor Subdivision was not feasible.

SIZE: 5 to 10 acres

EXPECTED COMPLETION: If the City decides to purchase any of this property it should do so within 5 years, before land prices are unaffordable. The City may want to consider acquiring Conservation Easements over the Mounds as an alternative. They would preserve the Mounds and the vista at a much-reduced cost.

COST: \$120,000 (projected cost estimate based on land prices)

AFTON CREEK PRESERVE HOA
FUNDS

11. SUMMARY OF RECOMMENDATIONS:

- A. Use available ~~Park Dedication funds~~ to mark these public lands with signage as "Afton City Park Land", noting that the parcel is "permanently protected as open space" and marking the corners of each parcel to indicate where the public space ends and private property begins. These signs should also include a map of the parcel to assist any residents who enter the park to remain within the park boundary.
- B. Consider adding historical sites within the city as part of the Park Plan. The City should encourage property owners to participate in having their historical structures or land included.
- C. Coordinate with the Afton Historical Society to create the appropriate text for the signage of historic sites in Afton.
- D. Work to reduce the negative impact of invasive species, most notably Buckthorn.
- E. Identify and recommend preservation of open space and wildlife habitat; local historic and cultural features or landmarks; unique, scenic or environmentally sensitive areas.
- F. Recommend park land acquisition at an early date, so that appropriate parcels or sites can be obtained to meet long-range needs before developmental pressures render the property too expensive.
- G. Recommend parkland acquisition through collection of park dedication fees in subdivisions, appropriations from the General Fund, donations and government grants.
- H. Plan parks based on input from residents and a needs assessment to develop goals and priorities for acquisition, development and use of parks, open space and recreational facilities. Information about present and future parks and recreational needs will be collected and evaluated on a regular basis. Because recreational needs and practices change over time, a periodic review and update of the Park Plan including these objectives and recommendations will be needed.
- I. Provide a forum for public participation and open discussion of issues to ensure early and continuing public support and participation in park planning.
- J. Cooperate with other governmental units, commissions, foundations, and athletic associations, agencies and individuals that plan or provide recreation or open space affecting Afton.
- K. Develop parks and recreational facilities with respect to existing conditions, natural features, wildlife habitat and environmentally sensitive areas; and provide a variety of facilities. Wherever practical, parks will include open space areas that preserve and protect wetlands, natural habitat diversity, unique landforms and cultural resources that have

recreational potential, scenic and environmentally sensitive areas.

- L. Provide a safe, convenient and coordinated system of trails for non-motorized use throughout the city.
- M. Develop non-motorized trails according to public safety concerns and to be environmentally sensitive. Width, location and surfacing shall be adjusted for the terrain and amount and type of projected trail use, with a preference being for low-maintenance impervious surfaces.
- N. Link trails, where possible, to existing or planned regional, state and adjacent community trails and to connect public open space areas. Mark trail routes where they utilize roadways. Seek private, county, state, and federal funds to develop trails along and parallel to city, county, and state roads.
- O. Coordinate efforts with the Minnesota Department of Natural Resources to improve fish and wildlife habitat.
- P. Coordinate efforts with the Design Review & Historic Preservation Commission to preserve and enhance locally significant cultural and historic resources.
- Q. Develop a Master Plan for Town Square Park, Steamboat Park and the new parkland acquired as part of the Flood Mitigation Project to have a unified plan of use and design when Main Street is reconstructed.

12. **ADDENDUM: (from the 2008 Afton Comprehensive Plan)**

A. Parks and Open Space Goals, Policies and Strategies

The City of Afton establishes the following parks and open space goals:

1. Preserve adequate amounts of open space to maintain a rural atmosphere (from Afton's 2000 Park Plan).
2. Obtain and maintain designated open spaces to provide for wildlife habitat and migration.
3. Reconnect Afton's historical linkages to the St. Croix River.
4. Provide expanded access to the City docks to all residents.
5. Provide safe areas to ride bicycles within the City.
6. Provide safe areas to ride horses within the City.
7. Provide pedestrian friendly means of enjoying Afton's scenic views, wildlife, and connections to the St. Croix River.
8. Preserve locally important water resources, natural and scenic features.
9. Periodically identify the recreational needs of Afton citizens and evaluate ways to meet them.
10. Consider using the Afton Bluffs Regional Trail to create an east-west connection from Afton's Old Village to the City of Woodbury.

The City of Afton establishes the following parks and open space policies:



1. Preserve open spaces and natural resources for passive use and create non-motorized trails through direct purchase, subdivision, scenic and/or conservation easements and other means to include the seeking of grants and the use of matching funds when they are available, but not the use of eminent domain.
2. Maintain central community places.
3. Maintain safe environments for children to play and for the community to gather.
4. Maintain designated open spaces to provide for wildlife habitat and migration.
5. Work cooperatively with Washington County, the Belwin Conservancy, the Science Museum of Minnesota, and other quasi-public and private entities to preserve sensitive lands and open space.
6. Develop a park plan to provide for the five small parcels obtained by the City through park dedication.

The City of Afton establishes the following parks and open space strategies:

1. Develop signage and pedestrian-friendly connections to the St. Croix River.
2. Protect Steamboat Park as a nature preserve and passive use area.

Inspect Minnesota & Midwest Soil Testing

Brian Humpal - President - MPCA Licensed Designer, Inspector, Installer, and Pumper

July 7, 2017

Mr. Joe Bush
Joe Bush Homes
1980 Quasar Ave S
Lakeland, MN 55043

Subject: Sub-surface sewage treatment system site evaluations Carlson Sub-Division - Part of the southeast quarter of section 32 and part of the southwest quarter of section 33, township 28 north, range 20 west, City of Afton, Washington County, MN

Dear Joe:

Please find the soil testing logs, soil survey data, and a copy of the survey showing the soil test locations relative to the subject property. Four soil borings surrounding an area of approximately 12,000 square feet were performed on each of the twenty proposed lots. Washington County requires each lot to contain at least 10,000 square feet of area with suitable soils for long-term sewage treatment.

It is my opinion that each of the proposed lots will support primary and future sub-surface sewage treatment systems that will meet state and county requirements. Of the twenty lots, one boring on each of the proposed lots two; three (existing house lot), and four indicated less than twelve inches of suitable soil. The additional three borings on each of these lots indicated suitable soils. I feel that a significant amount of adjacent area with suitable soils exists and the bedrock areas could be isolated. Additionally, based on past experience as well as information gathered while performing the testing, I was able to confirm that the downslope areas contained more soil overlying the bedrock. This thicker layer of soil in the downslope areas most likely occurred during the glacial and postglacial periods and was caused by wind moving the fine soil particles and re-depositing this soil in downslope areas; this condition is referred to as loess.

Should the proposed lots or building sites change, based on the soil tests, it is my opinion that nearly all areas on the property within the set-backs will support sub-surface sewage treatment systems. Percolation rates in the upper 12-24 inches, where most systems would be installed, are expected to be less than 45 minutes per inch. After the exact lot configurations have been determined and the location/size of the homes have been determined, a complete system design showing tank sizes, soil treatment system size and location, etc. will be required by the county. Additional soil borings and percolation tests will be required once the exact locations of improvements to the property have been determined.

Areas that may be used for sewage treatment systems must be fenced off prior to construction to prevent access by construction equipment, which may harm the soils, rendering the area(s) unsuitable for a sub-surface sewage treatment system.

Please be advised that the findings herein are based on my interpretation of the site and soils. In no way can I guarantee that Washington County will approve the installation of sub-surface sewage treatment systems on this property. I recommend obtaining a soil review from

Washington County to insure that they will approve the soils for the installation of sub-surface sewage treatment systems on this property; a Washington County soil review application is attached. In addition, no interpretation of the soils relative to the construction of roads, drainage features, building footings, etc. has been given. Nor has any indication been given relative to the future use of this property beyond the suitability of the soils for sub-surface sewage treatment systems. I recommend contacting Washington County and The City of Afton to verify that the proposed property improvements will be acceptable.

Thank you very much for allowing me to do this work. Please contact me should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Brian Humpal".

Brian Humpal

Cc: Mr. Milo Horak, Landmark Surveying

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Planning Commission Memo

Meeting: October 2, 2017

To: Chair Ronningen and members of the Planning Commission
From: Ron Moore, City Administrator
Date: September 27, 2017
Re: Comprehensive Plan Update

Staff is in the process of incorporating all edits received from the Planning Commission members into the Comprehensive Plan document. When all edits have been incorporated, staff will provide the updated Comprehensive Plan to the Commission members as a Word document and/or as a hardcopy, depending on the preferences of the members.

PLANNING COMMISSION RECOMMENDATION REQUESTED:

Motion to provide direction regarding the next steps in the Comprehensive Plan update process.

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Planning Commission Memo

Meeting: October 2, 2017

To: Chair Ronningen and members of the Planning Commission
From: Ron Moore, City Administrator
Date: September 22, 2017
Re: Michael and Carolyn Johnson Variance Application at 771 Indian Trail - **Withdrawn**

As requested by the Planning Commission, staff confirmed with the City Attorney that the former house could be replaced by a new house in the same location without a variance if the replacement is begun within one year of the demolition of the former house. Based on this confirmation, the applicants revised the location of the house to match the location of the former house and withdrew their variance application.

PLANNING COMMISSION RECOMMENDATION REQUESTED:

No recommendation is required.

September 19, 2017 City Council Meeting Highlights

- The Council approved Change Order No. 3 for the Pavement Management Project to Park Construction in the amount of \$62,120.50.
- The Council approved the extension of the sidewalk on St Croix Trail from 36th Street to 37th Street.
- The Council adopted Resolution 2017-44 issuing a negative declaration regarding the need for an EIS for the proposed Afton Creek Preserve development.
- The Council adopted the 2018 Preliminary Budget and Tax levy.
- The Council set the date and time for the final 2018 Budget and Tax Hearing which will be December 19, 2017 at 7:00 pm.
- The Council approved the purchase of a decibel meter for motor vehicle noise data collection.
- The Council waived the noise ordinance until 11:00 p.m. for a special event at 15106 50th St. S. on October 14, 2017.
- The Council approved payment of Pay Voucher No.5 for the Downtown Village Improvement Project from Geislinger and Sons Inc. in the amount of \$694,787.29.
- The Council approved payment of Payment Request No. 6 for the Wastewater Treatment System Project from Ellingson, Inc. in the amount of \$80,651.20
- The Council approved payment of Pay Voucher No. 3 for the Pavement Management Project from Park Construction Co in the amount of \$848,608.22.
- The Council approved a change order request for the deputy's garage facility to provide floor drains and a rough-in for future restroom in the amount of \$2625.00.
- The Council held a closed session regarding the resolution of assessment appeals.

Additional Applicant Exhibits

The applicant's Exhibits D,E, F and G were not included in the hardcopy of the agenda packet provided to Planning Commission members. These exhibits are attached here.

EXHIBIT "D"

Report of Geotechnical Exploration

Afton Project

Afton, Minnesota

August 11, 2017

Allied Project 17068

ITCO Allied Engineering Company

7125 West 126th Street, Suite 500

Savage, Minnesota 55378

Ph: 952-890-5909

Fax: 952-890-5883

SUBGRADE EXPLORATION

FOR

AFTON PROJECT

Afton, Minnesota

Allied Project No. 17068

August 11, 2017

INTRODUCTION

This report presents the results of subgrade exploration performed by our firm for a proposed large lot residential development. This work was requested by Mr. Charles Plowe of Plowe Engineering, Inc. on July 26, 2017 and authorized by Mr. Joseph Bush of J.P. Bush Homes on July 27, 2017. Our work was performed as described in our proposal for subgrade exploration dated July 26, 2017.

PROJECT INFORMATION

The project site is approximately 200 acres in size and is located in the NW quadrant of the intersection of Trading Post Trail and 60th Street South, Afton, Washington County, Minnesota. A twenty lot residential development, a roadway, and 100 acres of open space are proposed for the project. Our work consisted of soil borings and a geotechnical report for the proposed roadway.

BORING LOCATIONS AND ELEVATIONS

The borings were located as shown on the site plan included in the appendix. The boring locations were marked in the field by Landmark Surveying, Inc. Ground elevations at the boring locations were provided on the site plan. The elevations listed on the boring logs are in accordance with the ground elevations at each boring location.

FIELD EXPLORATION

Twelve Standard Penetration Test (SPT) borings were put down to a depth of 10 feet. One SPT boring was put down to a depth of 15 feet. Three additional SPT borings were intended to be drilled to either 10 or 15 feet, but auger refusal occurred and they were actually drilled to depths of 9.5 feet, 6.5 feet, and 5.3 feet of depth. The borings were put down in accordance with ASTM 1586-99: "Standard Method for Penetration Test and Split-Barrel Sampling of Soils". Using this procedure, a 2" O.D. split barrel sampler is driven into the soil by a 140-lb weight falling a distance of 30 inches. After an initial set of 6", the number of blows required to drive the sampler an additional 12 inches is known as the standard penetration resistance or N-value. The N-value provides an indication of the relative density of cohesionless (coarse grained) soils or of the consistency of cohesive (fine-grained) soils.

As the samples were obtained in the field, they were visually and manually classified. Representative portions of the samples were then sealed in clean glass soil jars and returned to the laboratory for further examination and verification of the field classification. The recovered soil samples were classified in accordance with the Unified Soil Classification System, ASTM D: 2488-00. A chart illustrating this classification method is included in the appendix to this report. Logs of the test borings indicating the depth and identification of the various strata, measured penetration resistances, soil classifications and the results of water level checks are included in the appendix to this report.

Bag samples were obtained from the 10 feet deep borings from the soil layers just below the topsoil. Four of the borings were intended to be drilled to 15 feet because an approximate cut of 5 feet was shown on the profile: borings 2559, 2560, 2564, and 2566. Bag samples from these borings were obtained at 5-6.5 feet. Gradation tests and plasticity index tests were run on some of the samples in order to make pavement recommendations for the roadway. Not all samples were tested, however, because they were the same as samples that were tested.

SUBSURFACE CONDITIONS

Boring B-2557

Boring B-2557 consisted of 24 inches of topsoil, underlain by silty clay (AASHTO A-6) from at least 2.5 feet to at least 5 feet of depth, clayey sand from at least 5 feet to 6 feet of

depth, medium sand with clay to at least 9 feet of depth, and sandy clay from at least 10 feet to 11.5 feet of depth.

Boring B-2558

Boring B-2558 consisted of 8 inches of topsoil, underlain by silty sand with gravel (AASHTO A-2-4) to 7.5 feet of depth, fine sand to at least 9 feet of depth, medium sand with clay from at least 10 feet to 10.25 feet of depth, and clayey sand to 11.5 feet of depth.

Boring B-2559

Boring B-2559 consisted of 6 inches of topsoil, underlain by slightly organic sandy silt to at least 2 feet of depth, silt (loess) to 5 feet of depth, silt with sandstone pieces to 7.5 feet of depth, silty sand with sandstone pieces to at least 9 feet of depth, and fine to medium sand and sandstone pieces from at least 9.5 feet to 11 feet of depth.

Boring B-2560

Boring B-2560 consisted of 5 inches of topsoil, underlain by silt (loess) to 5 feet of depth, silt with sandstone pieces (AASHTO A-4) to 7.5 feet of depth, sandy silt with sandstone pieces to at least 11.5 feet of depth, silty sand with sandstone pieces from at least 12.5 feet to 15 feet of depth, and silty sand with sandstone pieces to 16.5 feet of depth.

Boring B-2561

Boring B-2561 consisted of 6 inches of topsoil, underlain by moist clay to 2.7 feet of depth, fine sand with silt to 5.25 feet of depth, moist sandy silt (AASHTO A-4) to 8 feet of depth, silt to 10 feet of depth, and sandy silt with some sandstone pieces to 11.5 feet of depth.

Boring B-2562

Boring B-2562 consisted of 8 inches of topsoil, underlain by 10 inches of moist clay to 1.5 feet of depth, sandy silt to 2.5 feet of depth, and silty fine sand to 6.5 feet of depth. Auger refusal occurred at 5.3 feet of depth.

Boring B-2563

Boring B-2563 consisted of 16 inches of topsoil, underlain by clay (AASHTO A-6) to at least 2.5 feet of depth, silty sandy clay with some gravel to 4 feet of depth, clay/silt (AASHTO A-4) to 6 feet of depth, silt with some gravel from at least 7.5 feet to 9 feet of depth, and silty sandy clay from at least 10 feet to 11.5 feet of depth.

Boring B-2564

Boring B-2564 consisted of 10 inches of topsoil, underlain by moist clay to at least 2 feet of depth, silt with sandstone pieces from at least 2.5 feet to at least 4 feet of depth, and silty

sand with sandstone pieces from at least 5 feet to 6.5 feet of depth, and auger refusal at 6.5 feet of depth.

Boring B-2565

Boring B-2565 consisted of 4 inches of topsoil, underlain by silty clay to at least 2 feet of depth, sandy silt (loess) from at least 2.5 feet to 5 feet of depth, sandy silt with sandstone pieces to 7.5 feet of depth, sandy silt to 10 feet of depth, and sandy silt with sandstone pieces to 10.9 feet of depth.

Boring B-2566

Boring B-2566 consisted of 10 inches of topsoil, underlain by moist silt to at least 2 feet of depth, sandy silt (loess) to 7.5 feet of depth, sandy silt with sandstone pieces to 10 feet of depth, and sandy silt with some sandstone pieces to 11.5 feet of depth.

Boring B-2567

Boring B-2567 consisted of 14 inches of topsoil, underlain by sandy clay to at least 2 feet of depth, sandy silt from at least 2.5 feet to 2.83 feet of depth, sandy silt with sandstone pieces to at least 4 feet of depth, sandy silt from at least 5 feet to 5.5 feet of depth, sandy silt with sandstone pieces to at least 6.5 feet of depth, silt from at least 7.5 feet to at least 9 feet of depth, sandy silt from at least 10 feet to 10.33 feet of depth, and sandy silt with sandstone pieces to 11.5 feet of depth.

Boring B-2568

Boring B-2568 consisted of 6 inches of topsoil, underlain by slightly organic silt to at least 2 feet of depth, moist silt from at least 2.5 feet to at least 6.5 feet of depth, silty sand from at least 7.5 feet to 10 feet of depth, and silty sand with some sandstone pieces to 11.5 feet of depth.

Boring B-2569

Boring B-2569 consisted of at least 2 feet of topsoil, underlain by clayey sandy silt (AASHTO A-4) from at least 2.5 feet to 5 feet of depth, moist silty sandy clay with some sandstone pieces to 8.4 feet of depth, silty clay to at least 9 feet of depth, and silt with some sandstone pieces from 10 feet to 11.5 feet of depth.

Boring B-2570

Boring B-2570 consisted of 8 inches of topsoil, underlain by slightly organic clay to at least 2 feet of depth, silt (loess) from at least 2.5 feet to 5 feet of depth, silt with some sandstone

pieces to 7.5 feet of depth, silty sand with some sandstone pieces to 10 feet of depth, and silty sand and sandstone pieces to 10.9 feet of depth.

Boring B-2571

Boring B-2571 consisted of 10 inches of topsoil, underlain by clay to at least 2 feet of depth, clayey sand from at least 2.5 feet to 2.75 feet of depth, silt (loess) to 10.75 feet of depth, and silty sand and sandstone pieces to 11.5 feet of depth.

Boring B-2572

Boring B-2572 consisted of 8 inches of topsoil, underlain by slightly organic clay to 2 feet of depth, silt (loess) from at least 2.5 feet to 7.5 feet of depth, silt with some sandstone pieces to 10.6 feet of depth, and silt with sandstone pieces to 11.5 feet of depth.

N-values ranged from 5 to 72, indicating that the soils ranged from medium to very dense in consistency.

Groundwater was not encountered in the borings. Groundwater conditions may vary both seasonally and annually based on precipitation amounts, patterns, and both surface and subsurface drainage in the local area.

Included in the appendix to this report are logs of the test borings, which describe the conditions, encountered at each drilling location. The depth of the individual strata of soil may vary at and between the drilling locations due to unsampled intervals, the occurrence of transitions between soil layers and the natural variability of the subsurface conditions.

CONCLUSIONS AND RECOMMENDATIONS

Organic topsoil, peat, organic soils, and any soft soil layers, which may be encountered, should not be relied upon for support of the proposed roadway or controlled fills that will support the roadway. These materials should be removed and replaced below the proposed roadway. A qualified soil technician should examine the excavated areas before suitable fill material is placed. ITCO Allied Engineering can provide this service during construction.

The non-root infested and inorganic on-site soils would generally be suitable for reuse as controlled and compacted fill material. The topsoil or other materials, which would not be suitable for use as

controlled fill, may be able to be used as surface fill in the lawn and landscaping areas. Additional recommendations are presented in the following sections:

1. EXCAVATION

In general, grubbing and stripping operations should remove all significantly organic or root infested soils from the areas to be worked. Frozen material, soft consistency clays or otherwise unsuitable soil and debris should be removed. Where undocumented fill or otherwise unsuitable soils are exposed in the base of excavations, which will support slabs, pavements or footings, these materials should also be removed. Frozen soils resulting from frost penetration may turn soft upon thawing and would need to be removed.

For the support of fill sequences, slabs, or footings it will be important to remove unsuitable soils prior to the placement of the controlled and compacted fill to make grade for concrete foundations and slabs. Once the organic topsoil layers and otherwise unsuitable materials have been removed, the completed excavations should be observed by an experienced soil engineer or technician and the conditions judged to be suitable prior to the placement of controlled and compacted fill to make grade for concrete footings or slabs. The following areas should be observed at the time of construction and unsuitable soil removed and replaced as necessary to obtain suitable soil and adequate compaction of the soil for the proposed roadway or other facilities.

Soil Boring	Soil depth associated with soils requiring modification
B-2557	Remove topsoil to 24"
B-2558	Remove topsoil to 8"
B-2559	Remove to roadway subgrade
B-2560	Remove to roadway subgrade
B-2561	Remove topsoil to at least 6"*
B-2562	Remove topsoil to at least 8"*
B-2563	Remove topsoil to at least 14"*
B-2564	Remove to roadway subgrade
B-2565	Remove topsoil to at least 4"*

B-2566	Remove to roadway subgrade
B-2567	Remove topsoil to at least 14''*
B-2568	Remove topsoil to at least 6''*
B-2569	Remove topsoil to at least 24''
B-2570	Remove topsoil to at least 8''*
B-2571	Remove topsoil to at least 10''*
B-2572	Remove topsoil to at least 8''*

*The layers immediately below the topsoil in these borings are dark clays and are likely "Horizon B" layers, which can be variable as far as organic content. A decision will need to be made as to whether or not to remove these layers or to use them for roadway subgrade.

2. FILL PLACEMENT

In the event that unsuitable soils are encountered and need to be replaced, the fill material should be mineral soil, preferably granular, and free of debris, boulders and organic material. The non-organic on-site soils would be suitable for reuse as controlled fill material provided that they are dry enough to meet compaction requirements. It may be difficult to dry wet soils sufficiently and it may be necessary to replace some of this material with off site material.

Fill should be placed and compacted in a manner that will allow complete compaction of the entire fill layer to a minimum of 95% of the Standard Proctor Density according to ASTM D: 698 in the building pad area. Required compaction should be increased to 98% for the top 4 feet of fill below final grade and below all footings. For roadway construction, the top 3 feet of roadway subgrade should be compacted to 100%. A minimum of one representative field density test should be performed for each two feet of fill placed at a time in a given work area. Density tests in mass fill areas should be performed at a rate judged sufficient to represent the fill sequence as a whole. Where sand fills are to be compacted, smooth "drum" type vibratory equipment would be preferred, however, a sheepsfoot roller with short wide pads may provide adequate compaction.

Fill areas should be properly oversized to provide for adequate distribution of the imposed loads. The fill supporting structural elements should extend at least one foot horizontally beyond the structure, slab or edge of the footing. Fill surfaces should extend downward and outward on a 1:1

slope to competent soil. If the fill slope is unconfined by other soils, the downward and outward slope should be flattened and stabilized. Also, no unremediated excavations should be carried out within the fill oversize areas.

3. PAVEMENT

The results of our work indicate that conditions are suitable for the construction of flexible bituminous pavements if the design of the roadway sections and preparation of the subgrades take into account the nature of the subsurface soils present. The material types most influencing the pavement design would be the soil layers located just below the layers that will be removed. The classifications of these layers are as follows:

<u>AASHTO Classification</u>	<u>USC Classification</u>	<u>Boring Nos.</u>
A-2-4	Silty Sand, SM	2558, 2559
A-4	Silt, ML & Silty Sand, SM	2560, 2564, 2566, 2568, 2569
A-6	Silty Sandy Clay, CL	2557, 2561*, 2562*, 2563*, 2565*, 2567*, 2568*, 2570*, 2571*, 2572*

*If the layer immediately below the topsoil ends up being removed, then the soil layer below the removed layer would dictate the pavement section. These would be A-4 soils.

The AASHTO A-2-4 material would likely provide a soil factor of 75 or an R-value of 30. Using MnDOT's soil factor design method and a light traffic 7-ton design (less than 400 Average Daily Traffic) with a soil factor of 75 would require a Granular Equivalent (G.E) of 9.38 inches. A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 6 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value. For a 9-ton design, using a soil factor of 75, the minimum G.E. is 13.9 inches for a light traffic roadway (less than 150 Heavy Commercial Average Annual Daily Traffic). A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 7 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value

The AASHTO A-4 material would likely provide a soil factor of 130 or an R-value of 20. Using MnDOT's soil factor design method and a light traffic 7-ton design (less than 400 Average Daily

Traffic) with a soil factor of 130 would require a Granular Equivalent (G.E) of 14 inches. A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 7 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value. For a 9-ton design, using a soil factor of 130, the minimum G.E. is 22 inches for a light traffic roadway (less than 150 Heavy Commercial Average Annual Daily Traffic). A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 15 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value. AASHTO A-4 soils are frost susceptible and silts can wick up moisture from lower layers. Several local communities require a 2 feet sand layer be placed on top of the silt, then at least 6 inches of class 5 and the asphalt layers previously described. The City of Afton should be contacted to determine their requirements. If they do not require a two feet sand layer this should still be considered.

The AASHTO A-6 material would likely provide a soil factor of 100 or an R-value of 12. Using MnDOT's soil factor design method and a light traffic 7-ton design (less than 400 Average Daily Traffic) with a soil factor of 100 would require a Granular Equivalent (G.E) of 11.5 inches. A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 6 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value. For a 9-ton design, using a soil factor of 100, the minimum G.E. is 17.5 inches for a light traffic roadway (less than 150 Heavy Commercial Average Annual Daily Traffic). A pavement section consisting of a 1½-inch wear course (MnDOT 2360), a 2-inch base course (MnDOT 2360), and 10.5 inches of class 5 aggregate (MnDOT 3138) would provide a G.E. that would exceed the required value

In using the soil factor method for pavement design, it is essential that the subgrade be constructed of uniform soil across the pavement section and compacted at a moisture content and to a density in accordance with MN/DOT spec. 2105 and be capable of passing test rolling, in accordance with MN/DOT Spec. 2111. The completed subgrade should be observed and judged suitable by an experienced individual prior to the placement of the aggregate base or paving. Compaction of the upper 3 feet of the subgrade to a minimum of 100% of the standard proctor density within appropriate moisture limits, (65 to 102% of optimum), should provide the necessary stability required for proof rolling.

4. FINAL SITE TOPOGRAPHY

The final soil surfaces should be graded to provide adequate drainage away from structures and pavements in order to minimize deleterious effects associated with water infiltration. The areas adjacent to footing walls should be adequately compacted (not loosely placed) and provided with drainage outlets to avoid this zone acting as a "sump" and creating nuisance water conditions.

Compliance with the building code provision for positive surface drainage away from the structure should also aid in reducing the quantity of infiltration into the backfill zones adjacent to foundation walls.

STANDARD OF CARE

The recommendations contained in this report are professional opinions. These opinions were arrived at in accordance with generally accepted engineering practices currently in use at this time, location and for projects of this type. Other than this, no warranty is implied or intended. Soil samples recovered from the test borings will be retained in our offices for a period of thirty days from the date of this report. After that time they will be discarded unless prior written instructions to the contrary are received.

I hereby certify that this report and/or specification has been prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota. If you have any further questions or we can be of any further assistance, please do not hesitate to phone or write.

ITCO ALLIED ENGINEERING COMPANY


Robert Sullentrop, P.E.

Minnesota Registration No. 17823

APPENDIX A

Boring Location Plan

FIELD WORKSHEET - JULY 31, 2017

City of Afton, Washington County, Minnesota

PROPOSED ROAD BORING LOCATIONS - PNEZD FORMAT

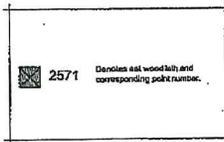
Point Number, Northing, Easting, Elevation, Description

Coordinates are based on the Washington County Coordinate System,
Nad 83, 1986 Adjustment.

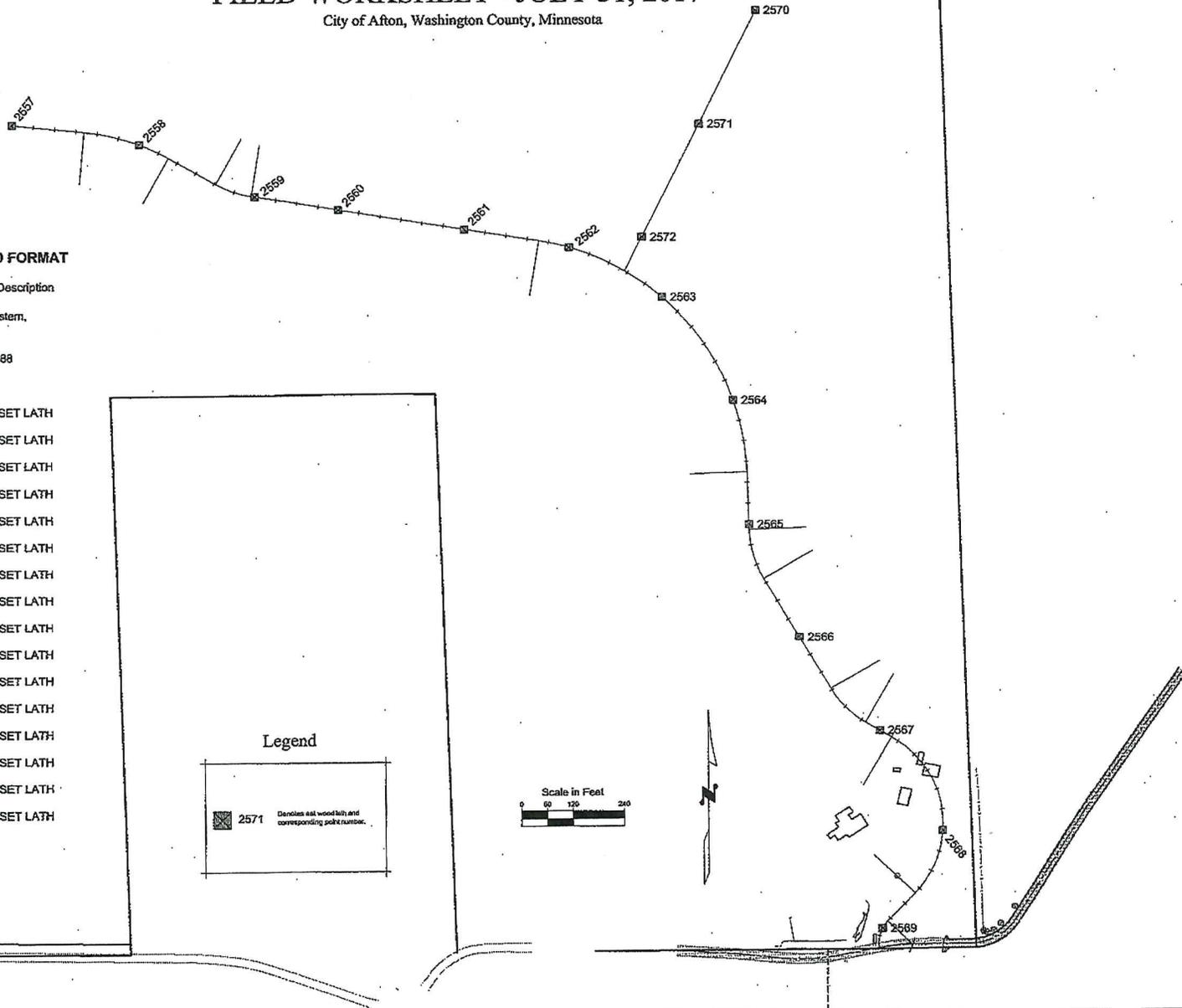
Elevations are based on the North American Vertical Datum of 1988

2557,	144308.7130,	502074.8630,	904.3260,	SET LATH
2558,	144259.7270,	502371.1150,	899.3340,	SET LATH
2559,	144134.7950,	502641.8200,	918.8710,	SET LATH
2560,	144102.8260,	502839.1310,	928.0530,	SET LATH
2561,	144054.8480,	503135.0130,	922.6760,	SET LATH
2562,	144008.5730,	503383.5580,	937.5790,	SET LATH
2563,	143890.6510,	503598.0300,	920.3240,	SET LATH
2564,	143644.2020,	503764.4180,	917.1680,	SET LATH
2565,	143348.1420,	503800.4860,	908.3380,	SET LATH
2566,	143078.1510,	503917.7520,	909.6970,	SET LATH
2567,	142851.1880,	504105.8380,	911.9870,	SET LATH
2568,	142609.8530,	504252.2190,	880.2560,	SET LATH
2569,	142376.4640,	504109.5170,	869.2210,	SET LATH
2570,	144570.7630,	503819.6090,	917.2810,	SET LATH
2571,	144302.3310,	503685.5870,	919.8570,	SET LATH
2572,	144034.1130,	503551.5510,	926.2360,	SET LATH

Legend



Scale in Feet
0 60 120 240



Landmark Surveying, Inc.

21090 Olinda Trail North
P.O. Box 65
Scandia, Minnesota 55073

Office Number: 651-433-3421
Cell number: 651-725-0760
E-mail: info@lmsi.net

July 31, 2017

Job No. 2016-04

APPENDIX B

Boring Logs

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2557**

Sheet 1 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION

B-2557

DRY ON COMPLETION ?

Yes

DATE August 2, 2017 SURFACE ELEV. 904.3 FT.

REFUSAL: No DEPTH _____ FT. ELEV. _____ FT.

SAMPLED 11.5 FT. 3.5 M

BORING TIME: 11:40 AM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 894.3 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH _____ FT.

ELEV. _____ FT.

After 24 Hours DEPTH _____ FT.

ELEV. _____ FT.

Cave-in DEPTH 9.9 FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	904.3										24" Dark Brown Clayey Topsoil
		0.0	2.0	1	Grab						
2.5	901.8										Brown Silty Clay, CL AASHTO A-6
		2.5	4.0	2	SS	10					
5.0	899.3										Reddish Brown Clayey Sand, SC
		5.0	6.5	3	SS	19					Reddish Brown Medium Sand W/Clay, SP-SC
7.5	896.8										
		7.5	9.0	4	SS	18					
10.0	894.3										Reddish Brown Sandy Clay, CL
		10.0	11.5	5	SS	10					

REMARKS:

ITCO ALLIED ENGINEERING CO.

Project: Afton Project

LOG OF BORING **B-2558**

Sheet 2 of 16

DRILLER Mike

TECHNICIAN Tom

DRY ON COMPLETION ? Yes

BORING NO. / LOCATION B-2558

DATE August 2, 2017 SURFACE ELEV. 899.3 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 11.5 FT. 3.5 M

BORING TIME: 12:30 PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 889.3 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.

ELEV. FT.

After 24 Hours DEPTH FT.

ELEV. FT.

Cave-in DEPTH 9.9 FT.

STRATUM DEPTH	SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
	FROM	TO			N-Value	Qp	LL	PI	%M	
FT. ELEV.	FT.	FT.								
0.0 899.3	0.0	2.0	1	Grab						8" Dark Brown Sandy Silty Topsoil Reddish Brown Silty Sand W/Gravel, SM AASHTO A-2-4
2.5 896.8	2.5	4.0	2	SS	10					Brown Silty Sand & Gravel, SM AASHTO A-2-4
5.0 894.3	5.0	6.5	3	SS	9					
7.5 891.8	7.5	9.0	4	SS	16					Brown Fine Sand, SP
10.0 889.3	10.0	11.5	5	SS	14					3" Brn Med Sand W/Clay, SP-SC Brown Clayey Sand, SC

REMARKS: _____

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2559**

Sheet 3 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION

B-2559

DRY ON COMPLETION ?

Yes

DATE August 2, 2017

SURFACE ELEV. 918.9 FT.

REFUSAL: Yes DEPTH 9.5 FT.

ELEV. _____ FT.

SAMPLED 11.0 FT.

3.4 M

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH _____ FT.

ELEV. _____ FT.

After 24 Hours DEPTH _____ FT.

ELEV. _____ FT.

Cave-in DEPTH 9.6 FT.

BORING TIME: 1:10 PM

BOTTOM OF HOLE DEPTH 9.5 FT.

ELEV. 909.4 FT.

BORING ADVANCED BY:

POWER AUGERING X

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	918.9										6" Dark Brown Silty Topsoil
		0.0	2.0	1	Grab						Brown Slightly Organic Sandy Silt, ML
2.5	916.4										Yellow/Brown Silt, ML (Loess)
		2.5	4.0	2	SS	15					
5.0	913.9										Yellow/Brown Silt W/Sandstone Pieces, ML
		5.0	6.5	3	SS	15					
7.5	911.4										Red/Brown Silty Sand W/Sandstone Pieces, SM
		7.5	9.0	4	SS	7					
9.5	909.4										Brown Fine to Medium Sand & Sandstone Pieces, SP
		9.5	11.0	5	SS	51					

REMARKS:

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2560**

Sheet 4 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION B-2560

DRY ON COMPLETION ? Yes

DATE August 2, 2017 SURFACE ELEV. 928.1 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 16.5 FT. 5.0 M

BORING TIME: 3:00 PM

BOTTOM OF HOLE DEPTH 15.0 FT. ELEV. 913.1 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-in DEPTH 14.8 FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	928.1										5" Brown Silty Sandy Topsoil
		0.0	2.0	1	Grab.						Yellow Silt, ML (Loess)
2.5	925.6										Yellow/Brown Silt, ML (Loess)
		2.5	4.0	2	SS	72					
5.0	923.1										Red Silt W/Sandstone Pieces, SM AASHTO A-4
		5.0	6.5	3	SS	12					
7.5	920.6										Yellow Sandy Silt W/Sandstone Pieces, ML
		7.5	9.0	4	SS	11					
10.0	918.1										Yellow/Brown Silty Sand W/Sandstone Pieces, SM
		10.0	11.5	5	SS	18					
12.5	915.6										Red Silty Sand W/Sandstone Pieces, SM
		12.5	14.0	6	SS	31					
15.0	913.1										
		15.0	16.5	7	SS	24					

REMARKS: _____

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2561**

Sheet 5 of 16

Project: Afton Project

DRILLER Mike
TECHNICIAN Tom

BORING NO. / LOCATION B-2561

DRY ON COMPLETION? Yes

DATE August 7, 2017 SURFACE ELEV. 922.7 FT.
REFUSAL: No DEPTH FT. ELEV. FT.
SAMPLED 11.5 FT. 3.5 M

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-in DEPTH FT.

BORING TIME: 2:20 PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 912.7 FT.

BORING ADVANCED BY: POWER AUGERING X

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
FT.	ELEV.	FROM FT.	TO FT.			N-Value	Qp	LL	PI	%M	
0.0	922.7										6" Dark Brown Clayey Topsoil
		0.0	2.0	1	Grab						Moist Brown Clay, CL
2.5	920.2										2" Moist Brown Clay, CL
		2.5	4.0	2	SS	5					Brown Fine Sand W/Silt, SP-SM
5.0	917.7										3" Brown Fine Sand W/Silt, SP-SM
		5.0	6.5	3	SS	10					Moist Yellow Sandy Silt, SM AASHTO A-4
7.5	915.2										Light Grey Silt, ML
		7.5	9.0	4	SS	14					
10.0	912.7										Moist Grey Sandy Silt W/Some Sandstone Pieces, ML
		10.0	11.5	5	SS	15					

REMARKS:

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2565**

Sheet 9 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION B-2565

DRY ON COMPLETION? Yes

DATE August 8, 2017 SURFACE ELEV. 908.3 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 10.9 FT. 3.3 M

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-in DEPTH FT.

BORING TIME: 10:00 AM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 898.3 FT.

BORING ADVANCED BY: POWER AUGERING X

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
FT.	ELEV.	FROM FT.	TO FT.			N-Value	Qp	LL	PI	%M	
0.0	908.3	0.0	2.0	1	Grab						4" Brown Sandy Clayey Topsoil Reddish Brown Silty Clay, CL
2.5	905.8	2.5	4.0	2	SS	17					Grey/Brown Sandy Silt, ML (Loess)
5.0	903.3	5.0	6.5	3	SS	17					White/Grey Sandy Silt W/ Sandstone Pieces, ML
7.5	900.8	7.5	9.0	4	SS	62					Yellow/Grey Sandy Silt, ML
10.0	898.3	10.0	10.9	5	SS	50+					Brown/Grey Sandy Silt W/ Sandstone Pieces, ML

REMARKS: An N-value of 50+ means that the sampler didn't advance at least 6 inches after 50 blows and is likely due to a rock or bedrock.

ITCO ALLIED ENGINEERING CO.

Project: Afton Project

LOG OF BORING **B-2566**

Sheet 10 of 16

DRILLER Mike
TECHNICIAN Tom

DRY ON COMPLETION? Yes

BORING NO. / LOCATION: B-2566

DATE August 7, 2017 SURFACE ELEV. 909.9 FT.

REFUSAL: Yes DEPTH 11.3 FT. ELEV. _____ FT.

SAMPLED 11.3 FT. 3.4 M

BORING TIME: 12:30 PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 899.9 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH _____ FT.
ELEV. _____ FT.

After 24 Hours DEPTH _____ FT.
ELEV. _____ FT.

Cave-in DEPTH _____ FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	909.9	0.0	2.0	1	Grab						10" Dark Brown Silty Clayey Topsoil Reddish Brown Silty Clay, CL Moist Brown Silt, ML
2.5	907.4	2.5	4.0	2	SS	12					Yellow/Brown Sandy Silt, ML (Loess)
5.0	904.9	5.0	6.5	3	SS	28					2" Yellow/Brown Sandy Silt, ML White/Grey Sandy Silt, ML
7.5	902.4	7.5	9.0	4	SS	58					Yellow/Grey Sandy Silt, ML W/Sandstone Pieces
10.0	899.9	10.0	11.3	5	SS	50+					Yellow/ Grey Sandy Silt W/Some Sandstone Pieces, ML

REMARKS: An N-value of 50+ means that the sampler didn't advance at least 6 inches after 50 blows and is likely due to a rock or bedrock.

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2567**

Sheet 11 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION

B-2567

DRY ON COMPLETION ?

Yes

DATE August 7, 2017

SURFACE ELEV. 912.0 FT.

REFUSAL: No DEPTH FT.

ELEV. FT.

SAMPLED 11.5 FT. 3.5 M

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.

ELEV. FT.

After 24 Hours DEPTH FT.

ELEV. FT.

Cave-in DEPTH FT.

BORING TIME: 11:40 AM

BOTTOM OF HOLE DEPTH 10.0 FT.

ELEV. 902.0 FT.

BORING ADVANCED BY:

POWER AUGERING X

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	912										14" Dark Brown Silty Topsoil
		0.0	2.0	1	Grab						Light Brown Sandy Clay, CL
2.5	909.5										4" Brown Sandy Silt, ML
		2.5	4.0	2	SS	13					Yellow/Brown Sandy Silt W/ Sandstone Pieces, ML
5.0	907.0										Dark Brown Sandy Silt, ML
		5.0	6.5	3	SS	6					Yellow/Brown Sandy Silt W/Sandstone Pieces, ML
7.5	904.5										Yellow/Grey Silt, ML
		7.5	9.0	4	SS	24					
10.0	902.0										4" Brown Sandy Silt, ML
		10.0	11.5	5	SS	19					White/Grey Sandy Silt W/ Sandstone Pieces, ML

REMARKS:

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2568**

Sheet 12 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

DRY ON COMPLETION? Yes

BORING NO. / LOCATION B-2568

DATE August 8, 2017 SURFACE ELEV. 880.3 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 11.5 FT. 3.5 M

BORING TIME: 11:00 AM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 870.3 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.

ELEV. FT.

After 24 Hours DEPTH FT.

ELEV. FT.

Cave-in DEPTH FT.

STRATUM DEPTH	SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION	
	FROM	TO			N-Value	Qp	LL	PI	%M		
FT.	ELEV.	FT.	FT.								
0.0	880.3	0.0	2.0	1	Grab						6" Dark Brown Silty Topsoil Dark Brown Slightly Organic Silt, ML
2.5	877.8	2.5	4.0	2	SS	6					Moist Brown Silt, ML
5.0	875.3	5.0	6.5	3	SS	6					
7.5	872.8	7.5	9.0	4	SS	14					Reddish Brown Silty Sand, SM
10.0	870.3	10.0	11.5	5	SS	20					Reddish Brown Silty Sand W/Some Sandstone Pieces, SM

REMARKS:

ITCO ALLIED ENGINEERING CO.

LOG OF BORING **B-2569**

Sheet 13 of 16

Project: Afton Project

DRILLER Mike

TECHNICIAN Tom

BORING NO. / LOCATION B-2569

DRY ON COMPLETION ? Yes

DATE August 7, 2017 SURFACE ELEV. 869.2 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 11.5 FT. 3.5 M

BORING TIME: 11:00 AM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 859.2 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-in DEPTH FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	869.2	0.0	2.0	1	Grab						Dark Brown Sandy Clayey Topsoil
2.5	866.7	2.5	4.0	2	SS	6					Brown Clayey Sandy Silt, CL-ML AASHTO A-4
5.0	864.2	5.0	6.5	3	SS	6					Moist Brown Silty Sandy Clay W/Some Sandstone Pieces, CL
7.5	861.7	7.5	9.0	4	SS	22					11" Moist Brown Silty Sandy Clay W/Some Sandstone Pieces, CL Brown Silty Clay, CL
10.0	859.2	10.0	11.5	5	SS	23					Yellow/Brown Silt W/Some Sandstone Pieces, ML

REMARKS: _____

ITCO ALLIED ENGINEERING CO.

Project: Afton Project

LOG OF BORING **B2570**

Sheet 14 of 16

DRILLER Mike
TECHNICIAN Tom

BORING NO. / LOCATION B-2570

DRY ON COMPLETION? Yes

DATE August 7, 2017 SURFACE ELEV. 917.3 FT.

REFUSAL: Yes DEPTH 11.3 FT. ELEV. _____ FT.

SAMPLED 10.9 FT. 3.3 M

BORING TIME: 4:30-PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 907.3 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)
DRILLING: DEPTH _____ FT.
ELEV. _____ FT.
After 24 Hours DEPTH _____ FT.
ELEV. _____ FT.
Cave-in DEPTH _____ FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
FT.	ELEV.	FROM FT.	TO FT.			N-Value	Qp	LL	PI	%M	
0.0	917.3	0.0	2.0	1	Grab						8" Dark Brown Silty Sandy Topsoil Dark Brown Slightly Organic Clay, CL
2.5	914.8	2.5	4.0	2	SS	17					Yellow/Grey Silt, ML (Loess)
5.0	912.3	5.0	6.5	3	SS	11					Grey/Brown Silt W/Some Sandstone Pieces, ML
7.5	909.8	7.5	9.0	4	SS	37					Brown Silty Sand W/ Some Sandstone Pieces, SM
10.0	907.3	10.0	10.9	5	SS	50+					Yellow/Brown Silty Sand & Sandstone Pieces, SM

REMARKS: An N-value of 50+ means that the sampler didn't advance at least 6 inches after 50 blows and is likely due to a rock or bedrock.

ITCO ALLIED ENGINEERING CO.

Project: Afton Project

LOG OF BORING **B-2571**

Sheet 15 of 16

DRILLER Mike
TECHNICIAN Tom

BORING NO. / LOCATION B-2571

DRY ON COMPLETION ? Yes

DATE August 7, 2017 SURFACE ELEV. 919.9 FT.

REFUSAL: No DEPTH FT. ELEV. FT.

SAMPLED 11.5 FT. 3.5 M

BORING TIME: 3:40 PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 909.9 FT.

BORING ADVANCED BY: POWER AUGERING X

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-In DEPTH FT.

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	919.9										10" Dark Brown Clayey Topsoil
		0.0	2.0	1	Grab						Brown Clay, CL
2.5	917.4										3" Brown Clayey Sand, SC
		2.5	4.0	2	SS	11					Yellow Silt, ML (Loess)
5.0	914.9										Yellow/Brown Silt, ML
		5.0	6.5	3	SS	13					
7.5	912.4										Grey/Green Silt, ML
		7.5	9.0	4	SS	17					
10.0	909.9										9" Grey/Green Silt, ML
		10.0	11.5	5	SS	42					Reddish Brown Silty Sand & Sandstone Pieces, SM

REMARKS: _____

ITCO ALLIED ENGINEERING CO.

Project: Afton Project

LOG OF BORING **B-2572**

sheet 16 of 16

DRILLER Mike
TECHNICIAN Tom

BORING NO. / LOCATION B-2572 DRY ON COMPLETION? Yes

DATE August 7, 2017 SURFACE ELEV. 926.2 FT.
REFUSAL: No DEPTH FT. ELEV. FT.
SAMPLED 11.5 FT. 3.5 M

WATER LEVEL DATA (IF APPLICABLE)

DRILLING: DEPTH FT.
ELEV. FT.

After 24 Hours DEPTH FT.
ELEV. FT.

Cave-in DEPTH FT.

BORING TIME: 5:10 PM

BOTTOM OF HOLE DEPTH 10.0 FT. ELEV. 916.2 FT.

BORING ADVANCED BY: POWER AUGERING X

STRATUM DEPTH		SAMPLE DEPTH		SAMPLE NUMBER	SAMPLE TYPE	FIELD RESULTS		LABORATORY RESULTS			STRATUM DESCRIPTION
		FROM	TO			N-Value	Qp	LL	PI	%M	
FT.	ELEV.	FT.	FT.								
0.0	926.2	0.0	2.0	1	Grab						8" Dark Brown Clayey Topsoil Brown Slightly Organic Clay, CL
2.5	923.7	2.5	4.0	2	SS	11					Light Yellow/Grey Silt, ML (Loess)
5.0	921.2	5.0	6.5	3	SS	12					Orange Silt, ML
7.5	918.7	7.5	9.0	4	SS	17					Yellow/Grey Silt W/ Some Sandstone Pieces, ML
10.0	916.2	10.0	11.5	5	SS	26					7" Orange Silt W/Some Sandstone, ML Light Yellow/Grey Silt W/ Sandstone Pieces, ML

REMARKS: _____

APPENDIX C

Labratory Test Results

ITCO ALLIED ENGINEERING CO.

AN ALLIANCE OF INSTANT TESTING COMPANY AND ALLIED TEST DRILLING
Jobsite and Laboratory Testing, Geotechnical Services, Commercial, Residential and Municipal
7125 West 126th Street, Suite #500 - Savage, MN 55378

Telephone: (952) 890-7366

Fax: (952) 890-5883

GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017

Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-102 % Passing
Sampled From Boring No:	2557
Sample Depth:	2.5' - 5'
4.75mm=#4	100
2.00mm=#10	100
850 μ m=#20	100
425 μ m=#40	99
180 μ m=#80	96
75 μ m=#200	93.6
Liquid Limit	37
Plastic Limit	22
Plasticity Index	15
AASHTO Soil Classification	A-6
Unified Soil Classification	CL

Remarks:

Signed: 
Gordon J. Kopacek, Professional Engineer - Registration No. 7254

Copies To:
Charge Codes: Gradation #314 - 1, 308-1

ITCO ALLIED ENGINEERING CO.

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GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017

Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-103 % Passing
Sampled From Boring No:	2558
Sample Depth:	8" - 5'
4.75mm=#4	81
2.00mm=#10	77
850 μ m=#20	73
425 μ m=#40	58
180 μ m=#80	30
75 μ m=#200	19.1
Liquid Limit	Couldn't be Determined
Plastic Limit	Couldn't be Determined
Plasticity Index	NP
AASHTO Soil Classification	A-2-4
Unified Soil Classification	SM

Remarks:

Signed:



Gordon J. Kopacek, Professional Engineer - Registration No. 7254

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GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017
Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-104 % Passing
Sampled From Boring No:	2560
Sample Depth:	5' - 9'
4.75mm=#4	91
2.00mm=#10	85
850 μ m=#20	82
425 μ m=#40	79
180 μ m=#80	72
75 μ m=#200	37.9
Liquid Limit	Couldn't be Determined
Plastic Limit	Couldn't be Determined
Plasticity Index	NP
AASHTO Soil Classification	A-4
Unified Soil Classification	SM

Remarks:

Signed:



Gordon J. Kopacek, Professional Engineer - Registration No. 7254

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GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017

Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-107 % Passing
Sampled From Boring No:	2561
Sample Depth:	5' - 6.5'
4.75mm=#4	96
2.00mm=#10	95
850 μ m=#20	93
425 μ m=#40	84
180 μ m=#80	60
75 μ m=#200	38.6
Plasticity Index	NP
AASHTO Soil Classification	A-4
Unified Soil Classification	SM

Remarks:

Signed: 

Gordon J. Kopacek, Professional Engineer - Registration No. 7254

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GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017
Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-106 % Passing
Sampled From Boring No:	2566
Sample Depth:	5' - 6.5'
4.75mm=#4	100
2.00mm=#10	100
850 μ m=#20	97
425 μ m=#40	95
180 μ m=#80	92
75 μ m=#200	72.9
Plasticity Index	NP
AASHTO Soil Classification	A-4
Unified Soil Classification	ML

Remarks:

Signed:


Gordon J. Kopacek, Professional Engineer - Registration No. 7254

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GRADATION and PLASTICITY INDEX TEST REPORT

Mr. Joseph Bush
J.P. Bush Homes
1989 Quasar Avenue South
Lakeland, Minnesota 55043

Re: Revised Afton Project

Reported: 8-10-017
Sample By: ITCO Allied Engineering Co. Project 17068

Performed By: Dale Schmiesing

Sieve Size	Lab. No. 2017-108 % Passing
Sampled From Boring No:	2569
Sample Depth:	2.5' -5'
4.75mm=#4	98
2.00mm=#10	96
850 μ m=#20	95
425 μ m=#40	90
180 μ m=#80	75
75 μ m=#200	55.3
Liquid Limit	23
Plastic Limit	16
Plasticity Index	7
AASHTO Soil Classification	A-4
Unified Soil Classification	CL-ML

Remarks:

Signed:



Gordon J. Kopacek, Professional Engineer – Registration No. 7254

Copies To:
Charge Codes: Gradation #314 – 1, 308-1

APPENDIX D

Soil Classification System

ALLIED TEST DRILLING COMPANY SOIL CLASSIFICATION SYSTEMS

Unified Soil Classification System ASTM: D 2488-84				
Major Divisions			Group Symbol	Typical Group Names
COARSE-GRAINED SOILS Granular soils More than 50% retained on the No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	Clean gravels < 5% passing No. 200 sieve	GW	Well-graded gravels, Well-graded gravel with sand ¹
		Gravel with fines >12% passing No. 200 sieve	GP	Poorly-graded gravel, Poorly-graded gravel with sand ¹
			GM	Silty gravel, Silty gravel with sand ¹
		GC	Clayey gravel, Clayey gravel with sand ¹	
	SANDS 50% or more of coarse fraction passes No. 4 sieve	Clean sands < 5% passing No. 200 sieve	SW	Well-graded sand, Well-graded sand with gravel ²
		Sand with fines >12% passing No. 200 sieve	SP	Poorly-graded sand, Poorly graded sand with gravel ²
			SM	Silty sand, Silty sand with gravel ²
			SC	Clayey sand, Clayey sand with gravel ²
FINE-GRAINED SOILS Cohesive soils 50% or more passes the No. 200 sieve	SILTS AND CLAYS Liquid limit less than 50	ML	Silt, Silt with sand ³ , Sandy silt ⁴	
		CL	Lean clay, Lean clay with sand ³ , Sandy lean clay ⁴	
		OL	Organic silt, Organic clay	
	SILTS AND CLAYS Liquid limit more than 50	MH	Elastic silt, Elastic silt with sand ³ , Sandy elastic silt ⁴	
		CH	Fat clay, Fat clay with sand ³	
		OH	Organic clay, Organic silt	
HIGHLY ORGANIC SOILS			PT	Peat

Boundary classifications are designated by dual group symbols. For example, (SP-SM) for Poorly-graded sand with silt.
¹More than 15% sand ²More than 15% gravel ³15% to 30% retained on No. 200 sieve ⁴30% retained on No. 200 sieve

AASHTO Soil Classification System

	Granular Materials (35% or less passing No. 200 sieve)							Silt-Clay Materials (>35% passing No. 200 sieve)				A-8
	A-1		A-3	A-2				A-4	A-5	A-6	A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7					
Sieve Analysis: Percent Passing												
No. 10	50 max		51 min									
No. 40	30 max	50 max	10 max	35 max	35 max	35 max	35 max	36 min	36 min	36 min	36 min	
No.200	15 max	25 max										
Characteristics of Fraction Passing No. 40:												
Liquid limit				40 max	41 min	40 max	41 min	40 max	41 min	40 max	41 min	
Plastic Limit Index	6 max		NP	10 max	10 max	11 min	11 min	10 max	10 max	11 min	11 min	
Usual Types of Significant Constituents	stone fragments gravel and sand		fine sand	silty or clayey gravel and sand				silty soils		clayey soils		Peat, highly organic soils
General Subgrade Rating	Excellent to good							Fair to poor				Unsatisfactory

Technical Memorandum

To: Joe Bush, JP Bush Custom Homes
From: Bryant Ficek, P.E., P.T.O.E.
Date: July 26, 2017
Re: Technical Memorandum - Afton Homes Sight Distance Review

JP Bush has proposed a 20-lot residential home development in Afton, Minnesota on the north side of Trading Post Trail. A previous memorandum by Spack Consulting, dated June 2, 2017, discussed the proposed access to the development, specifically, sight distance issues and improvement options. The necessary sight distances discussed in this previous memorandum were based upon a 30-mph vehicle speed and an available sight distance of 260 feet roughly measured off a site drawing. The purpose of this memorandum is to complete field measurements for the westbound approach to the proposed access to better determine the necessary sight distance requirements based upon actual conditions on-site.

Conclusions and Recommendations

Field data was collected to determine actual vehicle speeds and sight distance for the proposed driveway location. Based on this data, the following was concluded:

- The 85th percentile vehicle speed was measured at 25 mph on Trading Post Trail just west of the curve and east of the proposed driveway.
- Drivers implicitly account for the roadway factors in this area, pavement, grades, roadway width, etc. in choosing their vehicle speeds regardless of posted, statutory, or assumed speed limits.
- At 25-mph, the necessary intersection sight distance based on Minnesota Department of Transportation (MnDOT) policy is 275 feet for left turn movements and 240 feet for right turn movements.
- The sight distance for the proposed driveway location is 280 to 290 feet as measured in the field.
- Measuring on the design plan for the proposed driveway, the sight distance is at least 275 feet, satisfying the requirement for a 25-mph vehicle.

Based on these measurements of actual vehicle speeds and sight distance, the proposed driveway satisfies the requirement for sight distance and is expected to have safe intersection movements. Safety could be further improved by paving Trading Post Trail from the existing paved section west through the proposed driveway location, which is the intended plan of the development.

Field Work

Sight distance requirements are provided by the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*. In this AASHTO manual, sight distance requirements are provided in terms of a time gap in the major road traffic and are related to the speed of approaching vehicles. For approaching vehicles at any speed, a vehicle stopped at an intersection requires a minimum time gap of 7.5 seconds in either direction to complete a left turn movement. In other words, an average driver needs to see an approaching vehicle at least 7.5 seconds away to know if they have sufficient time to complete a left turn. In order to complete a right turn movement, the time gap is reduced by one second to 6.5 seconds. MnDOT adopted these measurements and distances as official policy in 2013.

To translate this time factor into a distance, the AASHTO formula is:

$$\text{Intersection Sight Distance} = 1.47 * \text{Major Street Vehicle Speed (mph)} * \text{time gap}$$

As mentioned, the previous work assumed a 30-mph vehicle speed. Field work therefore focused on measurements to determine the actual speed of the vehicles on Trading Post Trail, including:

- the radius of the roadway curve to determine the corresponding vehicle speed.
- the actual vehicle speeds of approaching vehicles.

A field survey completed for the development including Trading Post Trail and its curve to the east of the proposed driveway. Every roadway curve is associated with a design speed based upon the length of the curve radius. The survey indicated the Trading Post Trail curve to the east of the proposed site access has a centerline radius of 125 feet. Using chapter 3 of the MnDOT Road Design Manual, the corresponding design speed of the roadway curve is between 20- and 25-mph depending upon the exact factors assumed, such as urban or rural and side friction factor.

Road tube counters were installed on Trading Post Trail, west side of the roadway curve. These tube counters captured vehicle counts and speeds over the course of one week, which included weekdays and weekend days. The road tube counter collected the vehicle speeds of over 700 vehicles during the course of the week. Using data for the westbound vehicles only, the 85th percentile speed (speed at which 85 percent of the vehicles are traveling at or below) was calculated at 25.0 mph. The 85th percentile speed is an important value as MnDOT generally uses the 85th percentile speed as its determinant in posting regulatory speed limits.

Sight Distance Impacts

The two measurements confirm that, regardless of posted, statutory, or assumed speed limit, vehicles are travelling around the Trading Post Trail curve at a lower rate of speed. This field result speed should therefore be considered in determining sight distance. Using 25 mph as the approaching vehicle speed, the necessary sight distance is approximately 275 feet for a left turn movement (needing 7.5 seconds) and approximately 240 feet for a right turn movement (needing 6.5 seconds).

The available sight distance to the east from the proposed driveway access was then measured in the field. Standing at the location of a vehicle on the proposed driveway and measuring distance to when a vehicle could be seen approaching from the east provided a sight distance of between 280 and 290 feet depending upon the exact height of eye and height of object. This distance is above the necessary sight distance based upon a 25-mph vehicle speed.

The minimum distance of 275 feet was further confirmed through the computer design work. The attached drawing shows the required sight distance for the proposed driveway based upon the measured 25-mph vehicle speeds. Thus, the proposed driveway has sufficient sight distance for intersection movements.

Other Factors

Other factors that could impact the travel speeds, and thus the sight distance requirements, such as grades, roadway width, and other characteristics are already accounted for in the field measurements. Drivers implicitly account for these factors and drive their vehicle accordingly.

However, the gravel section on Trading Post Trail could be an issue if mainline drivers would be forced to slow or stop due to another driver miscalculating the appropriate gap in traffic for their turn. Due to the relatively low traffic on Trading Post Trail, less than 150 vehicles per day, the opportunities for conflicts between vehicles exiting the proposed development and mainline vehicles are minimal. Upon further discussion with the development, the intent is to pave this section from the existing paved road by the Trading Post Trail curve west through the proposed driveway location. Paving the road will eliminate this potential risk.

Attachments

- Tube Counter Results
- Site Plan with Measurements

Daily West Bound Speeds (MPH)

Study Date: Thursday, 06/29/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 - 04:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:00 - 09:59	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
10:00 - 10:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	5
11:00 - 11:59	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2
12:00 - 12:59	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
13:00 - 13:59	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	6
14:00 - 14:59	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	7
15:00 - 15:59	1	1	2	3	0	0	0	0	0	0	0	0	0	0	0	4
16:00 - 16:59	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	6
17:00 - 17:59	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	9
18:00 - 18:59	1	1	5	1	1	0	0	0	0	0	0	0	0	0	0	7
19:00 - 19:59	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00 - 21:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
22:00 - 22:59	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Totals	10	15	27	16	2	0	70									
Percent of Total	14.3	21.4	38.6	22.9	2.9	0.0	100									
Percent of AM	21.4	28.6	14.3	28.6	7.1	0.0	100									
Percent of PM	12.5	19.6	44.6	21.4	1.8	0.0	100									

Standard Deviation: 6.1 MPH Ten Mile Pace: 20 to 29 MPH 85th Percentile: 27.2 MPH
 Mean Speed: 21.1 MPH Percent in Ten Mile Pace: 61.4% 15th Percentile: 15.0 MPH
 Median Speed: 21.8 MPH 90th Percentile: 28.3 MPH
 Modal Speed: 22.5 MPH 95th Percentile: 29.4 MPH

Daily West Bound Speeds (MPH)

Study Date: Friday, 06/30/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	4
08:00 - 08:59	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
09:00 - 09:59	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
10:00 - 10:59	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 - 11:59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:00 - 12:59	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
13:00 - 13:59	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
14:00 - 14:59	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
15:00 - 15:59	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	6
16:00 - 16:59	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	5
17:00 - 17:59	2	2	5	1	0	0	0	0	0	0	0	0	0	0	0	10
18:00 - 18:59	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
19:00 - 19:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00 - 20:59	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
22:00 - 22:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Totals	17	19	14	9	2	0	61									
Percent of Total	27.9	31.1	23.0	14.8	3.3	0.0	100									
Percent of AM	52.6	21.1	10.5	10.5	5.3	0.0	100									
Percent of PM	16.7	35.7	28.6	16.7	2.4	0.0	100									

Standard Deviation:	6.8 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	25.8 MPH
Mean Speed:	18.5 MPH	Percent in Ten Mile Pace:	54.1%	15th Percentile:	10.1 MPH
Median Speed:	18.4 MPH			90th Percentile:	27.4 MPH
Modal Speed:	17.5 MPH			95th Percentile:	29.1 MPH

Daily West Bound Speeds (MPH)

Study Date: Saturday, 07/01/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00 - 09:59	1	0	4	1	0	0	0	0	0	0	0	0	0	0	0	6
10:00 - 10:59	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
11:00 - 11:59	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
12:00 - 12:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
13:00 - 13:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	4
14:00 - 14:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
15:00 - 15:59	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	2
16:00 - 16:59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
17:00 - 17:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
19:00 - 19:59	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	5	12	18	7	0	0	0	0	0.0	100						
Percent of Total	11.9	28.6	42.9	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	5.6	38.9	38.9	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	16.7	20.8	45.8	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	5.3 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	25.1 MPH
Mean Speed:	20.4 MPH	Percent in Ten Mile Pace:	71.4%	15th Percentile:	15.3 MPH
Median Speed:	21.0 MPH			90th Percentile:	26.6 MPH
Modal Speed:	22.5 MPH			95th Percentile:	28.1 MPH

Daily West Bound Speeds (MPH)

Study Date: Sunday, 07/02/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 - 07:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 - 08:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00 - 09:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00 - 10:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 - 11:59	0	3	5	3	0	0	0	0	0	0	0	0	0	0	0	11
12:00 - 12:59	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	5
13:00 - 13:59	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
14:00 - 14:59	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	5
15:00 - 15:59	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	6
16:00 - 16:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
17:00 - 17:59	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	6
18:00 - 18:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
19:00 - 19:59	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:00 - 22:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	4	13	23	12	0	52										
Percent of Total	7.7	25.0	44.2	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	0.0	35.3	47.1	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	11.4	20.0	42.9	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	5.0 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.5 MPH
Mean Speed:	21.4 MPH	Percent in Ten Mile Pace:	69.2%	15th Percentile:	16.3 MPH
Median Speed:	21.8 MPH			90th Percentile:	27.6 MPH
Modal Speed:	22.5 MPH			95th Percentile:	28.7 MPH

Daily West Bound Speeds (MPH)

Study Date: Monday, 07/03/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 - 11:59	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:59	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	5
13:00 - 13:59	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
14:00 - 14:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:00 - 15:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
16:00 - 16:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:00 - 17:59	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
18:00 - 18:59	1	1	4	1	0	0	0	0	0	0	0	0	0	0	0	7
19:00 - 19:59	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	11	16	8	5	0	40										
Percent of Total	27.5	40.0	20.0	12.5	0.0	100										
Percent of AM	27.3	45.5	18.2	9.1	0.0	100										
Percent of PM	27.6	37.9	20.7	13.8	0.0	100										

Standard Deviation:	6.1 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	24.1 MPH
Mean Speed:	17.7 MPH	Percent in Ten Mile Pace:	60.0%	15th Percentile:	10.0 MPH
Median Speed:	17.7 MPH			90th Percentile:	25.5 MPH
Modal Speed:	17.5 MPH			95th Percentile:	27.5 MPH

Daily West Bound Speeds (MPH)

Study Date: Tuesday, 07/04/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00 - 08:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00 - 10:59	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 - 11:59	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	8
12:00 - 12:59	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	4
13:00 - 13:59	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	10
14:00 - 14:59	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
15:00 - 15:59	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	4
16:00 - 16:59	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
17:00 - 17:59	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
18:00 - 18:59	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
19:00 - 19:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
20:00 - 20:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00 - 22:59	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
23:00 - 23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	6	20	19	13	0	0	0	0	0	0	0	0	0	0	0	58
Percent of Total	10.3	34.5	32.8	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	0.0	37.5	37.5	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	14.3	33.3	31.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	5.4 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.5 MPH
Mean Speed:	20.6 MPH	Percent in Ten Mile Pace:	67.2%	15th Percentile:	15.6 MPH
Median Speed:	20.7 MPH			90th Percentile:	27.6 MPH
Modal Speed:	17.5 MPH			95th Percentile:	28.7 MPH

Daily West Bound Speeds (MPH)

Study Date: Wednesday, 07/05/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
09:00 - 09:59	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
10:00 - 10:59	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
11:00 - 11:59	1	1	4	1	0	0	0	0	0	0	0	0	0	0	0	7
12:00 - 12:59	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	5
13:00 - 13:59	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
14:00 - 14:59	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	5
15:00 - 15:59	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1
16:00 - 16:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
17:00 - 17:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
19:00 - 19:59	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	4
20:00 - 20:59	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	5
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	7	13	18	11	3	0	0	0	0	0	0	0	0	0	0	52
Percent of Total	13.5	25.0	34.6	21.2	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	15.0	15.0	50.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	12.5	31.3	25.0	28.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	6.3 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	27.6 MPH
Mean Speed:	21.2 MPH	Percent in Ten Mile Pace:	59.6%	15th Percentile:	15.1 MPH
Median Speed:	21.5 MPH			90th Percentile:	28.8 MPH
Modal Speed:	22.5 MPH			95th Percentile:	29.8 MPH

Daily East Bound Speeds (MPH)

Study Date: Thursday, 06/29/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
06:00 - 06:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
09:00 - 09:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:59	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:00 - 11:59	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
12:00 - 12:59	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	6
13:00 - 13:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
14:00 - 14:59	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
15:00 - 15:59	2	2	2	4	0	0	0	0	0	0	0	0	0	0	0	10
16:00 - 16:59	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	7
17:00 - 17:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:00 - 18:59	1	1	3	3	0	0	0	0	0	0	0	0	0	0	0	8
19:00 - 19:59	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
20:00 - 20:59	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
22:00 - 22:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	9	20	17	1	0	64									
Percent of Total	26.6	14.1	31.3	26.6	1.6	0.0	100									
Percent of AM	53.3	0.0	6.7	33.3	6.7	0.0	100									
Percent of PM	18.4	18.4	38.8	24.5	0.0	100										

Standard Deviation:	7.1 MPH	Ten Mile Pace:	20 to 29 MPH	85th Percentile:	27.3 MPH
Mean Speed:	19.9 MPH	Percent in Ten Mile Pace:	57.8%	15th Percentile:	10.4 MPH
Median Speed:	21.4 MPH			90th Percentile:	28.3 MPH
Modal Speed:	22.5 MPH			95th Percentile:	29.2 MPH

Daily East Bound Speeds (MPH)

Study Date: Friday, 06/30/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00 - 04:59	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1
05:00 - 05:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00 - 06:59	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
07:00 - 07:59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:00 - 09:59	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 - 10:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
11:00 - 11:59	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
13:00 - 13:59	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
14:00 - 14:59	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	7
15:00 - 15:59	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	7
16:00 - 16:59	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	7
17:00 - 17:59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
19:00 - 19:59	0	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
20:00 - 20:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
21:00 - 21:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
22:00 - 22:59	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
23:00 - 23:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	21	17	14	9	3	1	0	65								
Percent of Total	32.3	26.2	21.5	13.8	4.6	1.5	0.0	100								
Percent of AM	42.9	28.6	9.5	14.3	4.8	0.0	100									
Percent of PM	27.3	25.0	27.3	13.6	4.5	2.3	0.0	100								

Standard Deviation:	7.5 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.5 MPH
Mean Speed:	18.5 MPH	Percent in Ten Mile Pace:	47.7%	15th Percentile:	9.4 MPH
Median Speed:	18.2 MPH			90th Percentile:	28.3 MPH
Modal Speed:	10.0 MPH			95th Percentile:	30.4 MPH

Daily East Bound Speeds (MPH)

Study Date: Saturday, 07/01/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00 - 09:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 - 10:59	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3
11:00 - 11:59	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
12:00 - 12:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
13:00 - 13:59	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
14:00 - 14:59	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
15:00 - 15:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
16:00 - 16:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00 - 17:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
18:00 - 18:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
19:00 - 19:59	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21:00 - 21:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	4	11	17	2	0	34										
Percent of Total	11.8	32.4	50.0	5.9	0.0	100										
Percent of AM	25.0	33.3	33.3	8.3	0.0	100										
Percent of PM	4.5	31.8	59.1	4.5	0.0	100										

Standard Deviation:	4.8 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	23.9 MPH
Mean Speed:	19.7 MPH	Percent in Ten Mile Pace:	82.4%	15th Percentile:	15.3 MPH
Median Speed:	20.4 MPH			90th Percentile:	24.4 MPH
Modal Speed:	22.5 MPH			95th Percentile:	24.5 MPH

Daily East Bound Speeds (MPH)

Study Date: Sunday, 07/02/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00 - 09:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00 - 10:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
11:00 - 11:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
12:00 - 12:59	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
13:00 - 13:59	0	1	3	0	1	0	0	0	0	0	0	0	0	0	0	5
14:00 - 14:59	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
15:00 - 15:59	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	6
16:00 - 16:59	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3
17:00 - 17:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:00 - 18:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
19:00 - 19:59	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
22:00 - 22:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	9	16	14	7	1	0	47									
Percent of Total	19.1	34.0	29.8	14.9	2.1	0.0	100									
Percent of AM	15.4	46.2	30.8	7.7	0.0	100										
Percent of PM	20.6	29.4	29.4	17.6	2.9	0.0	100									

Standard Deviation:	6.1 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	25.3 MPH
Mean Speed:	19.3 MPH	Percent in Ten Mile Pace:	63.8%	15th Percentile:	12.3 MPH
Median Speed:	19.4 MPH			90th Percentile:	27.0 MPH
Modal Speed:	17.5 MPH			95th Percentile:	28.7 MPH

Daily East Bound Speeds (MPH)

Study Date: Monday, 07/03/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 - 07:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 - 08:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 - 11:59	1	2	4	0	1	0	0	0	0	0	0	0	0	0	0	8
12:00 - 12:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13:00 - 13:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14:00 - 14:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
15:00 - 15:59	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
16:00 - 16:59	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
17:00 - 17:59	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	3
18:00 - 18:59	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	2
19:00 - 19:59	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
20:00 - 20:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00 - 23:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	8	11	12	3	2	1	0	37								
Percent of Total	21.6	29.7	32.4	8.1	5.4	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	11.1	22.2	55.6	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	25.0	32.1	25.0	10.7	3.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	7.1 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	24.9 MPH
Mean Speed:	19.6 MPH	Percent in Ten Mile Pace:	62.2%	15th Percentile:	11.3 MPH
Median Speed:	19.5 MPH			90th Percentile:	28.0 MPH
Modal Speed:	22.5 MPH			95th Percentile:	31.6 MPH

Daily East Bound Speeds (MPH)

Study Date: Tuesday, 07/04/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 - 07:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 - 10:59	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	7
11:00 - 11:59	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	3
12:00 - 12:59	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1
13:00 - 13:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
14:00 - 14:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
15:00 - 15:59	3	1	2	2	0	0	0	0	0	0	0	0	0	0	0	3
16:00 - 16:59	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00 - 17:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
19:00 - 19:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
20:00 - 20:59	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
22:00 - 22:59	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
23:00 - 23:59	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	46
Totals	10	12	15	9	0	0.0	0.0	0.0	100							
Percent of Total	21.7	26.1	32.6	19.6	0.0	100										
Percent of AM	8.3	33.3	25.0	33.3	0.0	100										
Percent of PM	26.5	23.5	35.3	14.7	0.0	100										

Standard Deviation:	6.3 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	25.9 MPH
Mean Speed:	19.4 MPH	Percent in Ten Mile Pace:	58.7%	15th Percentile:	11.4 MPH
Median Speed:	20.2 MPH			90th Percentile:	27.2 MPH
Modal Speed:	22.5 MPH			95th Percentile:	28.4 MPH

Daily East Bound Speeds (MPH)

Study Date: Wednesday, 07/05/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:00 - 07:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00 - 09:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5
10:00 - 10:59	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	6
11:00 - 11:59	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:59	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	4
13:00 - 13:59	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
14:00 - 14:59	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	3
15:00 - 15:59	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2
16:00 - 16:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
17:00 - 17:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
18:00 - 18:59	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
19:00 - 19:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
20:00 - 20:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21:00 - 21:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	5	23	20	3	0	51										
Percent of Total	9.8	45.1	39.2	5.9	0.0	100										
Percent of AM	0.0	44.4	55.6	0.0	100											
Percent of PM	15.2	45.5	30.3	9.1	0.0	100										

Standard Deviation:	4.5 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	23.7 MPH
Mean Speed:	19.3 MPH	Percent in Ten Mile Pace:	84.3%	15th Percentile:	15.5 MPH
Median Speed:	19.3 MPH			90th Percentile:	24.4 MPH
Modal Speed:	17.5 MPH			95th Percentile:	24.9 MPH

Daily Total Speeds (MPH)

Study Date: Thursday, 06/29/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 - 04:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 - 05:59	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
06:00 - 06:59	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
07:00 - 07:59	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00 - 08:59	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
09:00 - 09:59	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	5
10:00 - 10:59	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	10
11:00 - 11:59	4	2	0	4	0	0	0	0	0	0	0	0	0	0	0	8
12:00 - 12:59	3	0	3	2	0	0	0	0	0	0	0	0	0	0	0	10
13:00 - 13:59	1	2	6	1	0	0	0	0	0	0	0	0	0	0	0	11
14:00 - 14:59	0	1	8	2	0	0	0	0	0	0	0	0	0	0	0	17
15:00 - 15:59	3	3	4	7	0	0	0	0	0	0	0	0	0	0	0	11
16:00 - 16:59	0	2	7	2	0	0	0	0	0	0	0	0	0	0	0	7
17:00 - 17:59	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	17
18:00 - 18:59	2	2	8	4	1	0	0	0	0	0	0	0	0	0	0	11
19:00 - 19:59	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	6
20:00 - 20:59	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
21:00 - 21:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
22:00 - 22:59	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	134
Totals	27	24	47	33	3	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of Total	20.1	17.9	35.1	24.6	2.2	0.0	100									
Percent of AM	37.9	13.8	10.3	31.0	6.9	0.0	100									
Percent of PM	15.2	19.0	41.9	22.9	1.0	0.0	100									

Standard Deviation: 6.6 MPH
 Mean Speed: 20.5 MPH
 Median Speed: 21.6 MPH
 Modal Speed: 22.5 MPH

Ten Mile Pace: 20 to 29 MPH
 Percent in Ten Mile Pace: 59.7%

85th Percentile: 27.3 MPH
 15th Percentile: 12.3 MPH
 90th Percentile: 28.3 MPH
 95th Percentile: 29.4 MPH

Daily Total Speeds (MPH)

Study Date: Friday, 06/30/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 - 04:59	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1
05:00 - 05:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
06:00 - 06:59	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6
07:00 - 07:59	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	7
08:00 - 08:59	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7
09:00 - 09:59	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	5
10:00 - 10:59	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	8
11:00 - 11:59	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:59	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	8
13:00 - 13:59	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	12
14:00 - 14:59	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	10
15:00 - 15:59	1	4	3	2	0	0	0	0	0	0	0	0	0	0	0	12
16:00 - 16:59	1	3	5	3	0	0	0	0	0	0	0	0	0	0	0	12
17:00 - 17:59	3	2	6	1	0	0	0	0	0	0	0	0	0	0	0	6
18:00 - 18:59	1	2	0	1	2	0	0	0	0	0	0	0	0	0	0	5
19:00 - 19:59	0	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
20:00 - 20:59	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
22:00 - 22:59	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4
23:00 - 23:59	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	126
Totals	38	36	28	18	5	1	0	0	0	0	0	0	0.0	0.0	0.0	100
Percent of Total	30.2	28.6	22.2	14.3	4.0	0.8	0.0	100								
Percent of AM	47.5	25.0	10.0	12.5	5.0	0.0	100									
Percent of PM	22.1	30.2	27.9	15.1	3.5	1.2	0.0	100								

Standard Deviation:	7.2 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.3 MPH
Mean Speed:	18.5 MPH	Percent in Ten Mile Pace:	50.8%	15th Percentile:	9.8 MPH
Median Speed:	18.4 MPH			90th Percentile:	28.0 MPH
Modal Speed:	10.0 MPH			95th Percentile:	29.8 MPH

Daily Total Speeds (MPH)

Study Date: Saturday, 07/01/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 - 04:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 - 05:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00 - 06:59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:00 - 07:59	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 - 08:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
09:00 - 09:59	1	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6
10:00 - 10:59	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	7
11:00 - 11:59	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	4
12:00 - 12:59	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	9
13:00 - 13:59	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	7
14:00 - 14:59	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	4
15:00 - 15:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
16:00 - 16:59	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
17:00 - 17:59	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	5
19:00 - 19:59	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
20:00 - 20:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1
21:00 - 21:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
23:00 - 23:59	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	76
Totals	9	23	35	9	0	100										
Percent of Total	11.8	30.3	46.1	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	13.3	36.7	36.7	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	10.9	26.1	52.2	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

Standard Deviation:	5.1 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	24.6 MPH
Mean Speed:	20.1 MPH	Percent in Ten Mile Pace:	76.3%	15th Percentile:	15.4 MPH
Median Speed:	20.8 MPH			90th Percentile:	25.5 MPH
Modal Speed:	22.5 MPH			95th Percentile:	27.6 MPH

Daily Total Speeds (MPH)

Study Date: Sunday, 07/02/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00 - 08:59	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
09:00 - 09:59	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
10:00 - 10:59	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	15
11:00 - 11:59	1	4	7	3	0	0	0	0	0	0	0	0	0	0	0	9
12:00 - 12:59	1	2	2	4	0	0	0	0	0	0	0	0	0	0	0	8
13:00 - 13:59	0	1	5	1	1	0	0	0	0	0	0	0	0	0	0	9
14:00 - 14:59	1	4	3	1	0	0	0	0	0	0	0	0	0	0	0	12
15:00 - 15:59	4	1	5	2	0	0	0	0	0	0	0	0	0	0	0	5
16:00 - 16:59	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	7
17:00 - 17:59	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00 - 18:59	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6
19:00 - 19:59	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	4
20:00 - 20:59	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	4
21:00 - 21:59	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2
22:00 - 22:59	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	99
Totals	13	29	37	19	1	0	100									
Percent of Total	13.1	29.3	37.4	19.2	1.0	0.0	100									
Percent of AM	6.7	40.0	40.0	13.3	0.0	100										
Percent of PM	15.9	24.6	36.2	21.7	1.4	0.0	100									

Standard Deviation:	5.7 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.2 MPH
Mean Speed:	20.4 MPH	Percent in Ten Mile Pace:	66.7%	15th Percentile:	15.2 MPH
Median Speed:	20.9 MPH			90th Percentile:	27.5 MPH
Modal Speed:	22.5 MPH			95th Percentile:	28.8 MPH

Daily Total Speeds (MPH)

Study Date: Monday, 07/03/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:00 - 07:59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:00 - 10:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	14
11:00 - 11:59	2	6	5	0	1	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:59	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
13:00 - 13:59	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
14:00 - 14:59	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	9
15:00 - 15:59	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	5
16:00 - 16:59	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	7
17:00 - 17:59	0	2	0	4	1	0	0	0	0	0	0	0	0	0	0	10
18:00 - 18:59	1	1	6	1	0	1	0	0	0	0	0	0	0	0	0	5
19:00 - 19:59	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2
20:00 - 20:59	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
21:00 - 21:59	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23:00 - 23:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	77
Totals	19	27	20	8	2	1	0	100								
Percent of Total	24.7	35.1	26.0	10.4	2.6	1.3	0.0	100								
Percent of AM	20.0	35.0	35.0	5.0	5.0	0.0	100									
Percent of PM	26.3	35.1	22.8	12.3	1.8	1.8	0.0	100								

Standard Deviation:	6.6 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	24.7 MPH
Mean Speed:	18.6 MPH	Percent in Ten Mile Pace:	61.0%	15th Percentile:	10.8 MPH
Median Speed:	18.5 MPH			90th Percentile:	26.8 MPH
Modal Speed:	17.5 MPH			95th Percentile:	29.2 MPH

Daily Total Speeds (MPH)

Study Date: Tuesday, 07/04/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 - 06:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
07:00 - 07:59	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 - 08:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00 - 09:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6
10:00 - 10:59	0	3	1	2	0	0	0	0	0	0	0	0	0	0	0	15
11:00 - 11:59	1	2	7	5	0	0	0	0	0	0	0	0	0	0	0	7
12:00 - 12:59	1	1	1	4	0	0	0	0	0	0	0	0	0	0	0	11
13:00 - 13:59	1	2	6	2	0	0	0	0	0	0	0	0	0	0	0	5
14:00 - 14:59	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	12
15:00 - 15:59	4	2	2	4	0	0	0	0	0	0	0	0	0	0	0	6
16:00 - 16:59	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	4
17:00 - 17:59	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	7
18:00 - 18:59	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	4
19:00 - 19:59	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	5
20:00 - 20:59	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	6
21:00 - 21:59	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
22:00 - 22:59	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:00 - 23:59	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	104
Totals	16	32	34	22	0	100										
Percent of Total	15.4	30.8	32.7	21.2	0.0	100										
Percent of AM	3.6	35.7	32.1	28.6	0.0	100										
Percent of PM	19.7	28.9	32.9	18.4	0.0	100										

Standard Deviation:	5.9 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	26.3 MPH
Mean Speed:	20.1 MPH	Percent in Ten Mile Pace:	63.5%	15th Percentile:	14.4 MPH
Median Speed:	20.5 MPH			90th Percentile:	27.5 MPH
Modal Speed:	22.5 MPH			95th Percentile:	28.7 MPH

Daily Total Speeds (MPH)

Study Date: Wednesday, 07/05/2017

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00 - 06:59	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
07:00 - 07:59	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
08:00 - 08:59	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	6
09:00 - 09:59	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	9
10:00 - 10:59	1	5	2	1	0	0	0	0	0	0	0	0	0	0	0	13
11:00 - 11:59	1	4	7	1	0	0	0	0	0	0	0	0	0	0	0	11
12:00 - 12:59	1	4	4	2	0	0	0	0	0	0	0	0	0	0	0	8
13:00 - 13:59	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	9
14:00 - 14:59	2	1	3	3	0	0	0	0	0	0	0	0	0	0	0	4
15:00 - 15:59	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
16:00 - 16:59	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	6
17:00 - 17:59	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	7
18:00 - 18:59	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0	4
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22:00 - 22:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23:00 - 23:59	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	103
Totals	12	36	38	14	3	0	100									
Percent of Total	11.7	35.0	36.9	13.6	2.9	0.0	100									
Percent of AM	7.9	28.9	52.6	5.3	5.3	0.0	100									
Percent of PM	13.8	38.5	27.7	18.5	1.5	0.0	100									

Standard Deviation:	5.6 MPH	Ten Mile Pace:	15 to 24 MPH	85th Percentile:	25.4 MPH
Mean Speed:	20.3 MPH	Percent in Ten Mile Pace:	71.8%	15th Percentile:	15.4 MPH
Median Speed:	20.4 MPH			90th Percentile:	27.2 MPH
Modal Speed:	22.5 MPH			95th Percentile:	29.1 MPH

Weekly Volumes

Unit ID: 08080608

Location: 60th St at Trading Post Rd (on straightaway)

Week of 06/29/2017

Start Time	06/29 Thursday		06/30 Friday		07/01 Saturday		07/02 Sunday		07/03 Monday		07/04 Tuesday		07/05 Wednesday		Daily Average	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	1	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
05:00	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	1
06:00	1	1	1	2	1	1	0	1	1	0	1	0	1	1	1	1
07:00	1	2	4	2	2	2	0	1	1	0	3	0	1	2	2	1
08:00	1	2	4	3	1	1	2	1	1	0	0	1	3	2	2	1
09:00	3	0	5	3	6	1	2	2	0	0	1	0	4	2	3	1
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12:00	2	6	3	3	2	2	5	4	5	1	4	3	5	6	4	4
13:00	8	2	3	5	4	5	3	5	3	1	10	1	4	4	5	3
14:00	6	5	5	7	4	3	5	4	2	3	3	2	5	4	4	4
15:00	7	10	6	4	2	2	6	6	2	7	4	8	1	3	4	6
16:00	4	7	5	7	2	1	2	3	1	4	3	3	2	2	3	4
17:00	6	1	10	2	3	1	6	1	3	4	3	1	2	4	5	2
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20:00	3	3	3	2	2	2	1	3	1	1	4	5	0	2	1	2
21:00	0	2	1	2	1	0	1	3	2	1	5	1	0	2	1	2
22:00	3	1	1	2	0	0	1	1	0	0	0	4	0	0	1	1
23:00	1	0	2	2	1	2	1	0	0	1	2	3	1	1	1	1
Lane Total	70	64	62	65	42	34	52	47	40	37	59	46	52	51	54	50
Day Total		134		127		76		99		77		105		103		104
AM Peak	10:41	10:25	07:02	10:57	08:43	10:56	10:30	10:27	10:43	10:52	10:53	10:58	10:17	10:07	11:00	11:00
AM Count	6	6	5	6	6	5	12	6	7	8	9	7	8	7	6	6
PM Peak	17:47	15:36	15:18	13:25	13:11	12:15	14:41	14:14	17:51	14:57	12:51	14:56	12:15	12:00	13:00	15:00
PM Count	10	13	10	8	5	5	8	7	7	7	10	8	8	6	5	6

EXHIBIT "F"

RESOLUTION NO. 17-~~XXXX~~

A RESOLUTION ISSUING A NEGATIVE DECLARATION OF NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT FOR THE AFTON CREEK PRESERVE PROJECT

- WHEREAS, pursuant to Minnesota Environmental Quality Board (EQB) Rules, Chapter 4410, part 4410.1000, Subpart 2, the City of Afton as the responsible governmental unit completed an Environmental Assessment Worksheet (EAW) for the Afton Creek Preserve project; and
- WHEREAS, pursuant to Minnesota EQB Rules, Chapter 4410.4300 Subpart 36, the project meets the thresholds for an EAW for projects resulting in the permanent conversion of 80 or more acres of agricultural, native prairie, forest, or naturally vegetated land; and
- WHEREAS, copies of the EAW were distributed to all persons and agencies on the official EQB mailing list prior to April 17, 2017; and
- WHEREAS, notice of the availability of the EAW for public review for a 30-day comment period was published in the *EQB Monitor* on April 24, 2017; and
- WHEREAS, a press release was published in the *St. Paul Pioneer Press* on April 17, 2017 to announce the availability of the EAW to interested parties; and
- WHEREAS, the 30-day comment period ended on May 24, 2017 and all comments received have been considered; and
- WHEREAS, the EAW, in conjunction with comment responses, identified that the establishment of 60 foot buffers on all lots and woodland conservation easements on lots 10-16, if met, will address environmental effects caused as a result of the project.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Afton:

That it should and hereby does make a negative declaration on the need for an Environmental Impact Statement for the improvements included in the Afton Creek Preserve EAW, provided all mitigation measures of the EAW are implemented by the developer as part of the project, and all local, state, and federal environmental standards are followed and incorporated into the final site plans for the project.

Record of Decision

Afton Creek Preserve

City of Afton

July 24, 2017

Prepared by:

Wayne E Jacobson
Jacobson Environmental, PLLC
Brooklyn Center, Minnesota

I. ADMINISTRATIVE BACKGROUND

Pursuant to Minnesota Rule 4410.4500, the City of Afton has prepared an Environmental Assessment Worksheet (EAW) for the proposed Afton Creek Preserve. This Record of Decision addresses State of Minnesota environmental review requirements as established in Minnesota Rule 4410.1700. The City of Afton is the project proposer for this project. The City of Afton is also the Responsible Governmental Unit (RGU).

The EAW was filed with the Minnesota Environmental Quality Board (EQB) and circulated for review and comments to the required EAW distribution list. A Notice of Availability for the initial EAW was published in the EQB Monitor on April 24, 2017. Notices of Availability and Press Releases were published in the *St. Paul Pioneer Press* on April 17, 2017.

The public comment period ended May 24, 2017. Comments were received from the Minnesota Pollution Control Agency, the Metropolitan Council, Northwest Associated Consultants, the Southwest Washington Watershed District, and the Minnesota Department of Natural Resources. All comments were considered in determining the potential for significant environmental impacts. Summaries of the comments received, and the City of Afton's responses to those comments, are provided in Section III, below.

II. FINDINGS OF FACT AND CONCLUSIONS

As to the need for an Environmental Impact Statement (EIS) on this project and based on the record in this matter, including the EAW and comments received, the City of Afton makes the following Findings of Fact and Conclusions:

A. PROJECT DESCRIPTION

The Afton Creek Preserve project is a 20 lot single family clustered development on 218.6 acres with 109.7 acres of conservation easement to protect Trout Brook. The development will have individual wells and septic systems, and special vegetative buffers protecting steep slopes against erosion. Currently no wetland impacts are planned and over 50% of the area will remain in open space.

B. PROJECT HISTORY

- The project was subject to a mandatory EAW per Minnesota Rule 4410.4300 Subpart 36.
- The EAW was distributed to the EQB and to the EQB mailing list on April 17, 2017.
- Public notices containing information about the availability of the EAW for public review were provided to the *St. Paul Pioneer Press* for publication in the April 17, 2017 papers.
- Hard copies of the EAW were provided for public review at Afton City Hall.
- A notice was published for the EAW in the April 24, 2017 EQB Monitor. The public comment period ended May 24, 2017. Comments were received from the Minnesota Pollution Control Agency, the Metropolitan Council, Northwest Associated Consultants, the Southwest Washington Watershed District, and the Minnesota Department of Natural Resources. Copies of these comment letters are hereby incorporated for reference and included in **Attachment A**.

- Corrections to the EAW – None

C. CRITERIA FOR DETERMINING THE POTENTIAL FOR SIGNIFICANT ENVIRONMENTAL EFFECTS.

Minnesota Rule 4410.1700, subp. 1, states "An EIS [Environmental Impact Statement] shall be ordered for projects that have the potential for significant environmental effects." In deciding whether a project has the potential for significant environmental effects, the City of Afton must consider the four factors set out in Minnesota Rule 4410.1700, subpart. 7. With respect to each of these factors, the City of Afton finds the following:

1. MINNESOTA RULE 4410.1700, SUBP. 7.A - TYPE, EXTENT, AND REVERSIBILITY OF ENVIRONMENTAL EFFECTS

- a. The type of environmental impacts and mitigation efforts anticipated as part of this project include:

A summary of mitigation measures includes the establishment of 60 foot buffers on all lots and woodland conservation easements on lots 10-16.

- b. The mitigation measures were put into place to better control erosion and protect water quality while protecting and enhancing wildlife habitat on the project in an effort to make the post project condition better than the pre project condition in these key areas.

2. MINNESOTA RULE 4410.1700, SUBP. 7.B - CUMULATIVE POTENTIAL EFFECTS OF RELATED OR ANTICIPATED FUTURE PROJECTS

There are no future projects planned and no negative cumulative effects were identified in the EAW.

3. MINNESOTA RULE 4410.1700, SUBP. 7.C - THE EXTENT TO WHICH ENVIRONMENTAL EFFECTS ARE SUBJECT TO MITIGATION BY ONGOING PUBLIC REGULATORY AUTHORITY

- a) The following permits or approvals will be required for the project:

Unit of government	Type of application	Status
City of Afton	Plat approval	Pending
City of Afton	Septic system approval	Pending
Washington County	Plat/Access approval	Pending
Washington County Highway	Plan review	Pending
South Washington Watershed	Erosion/stormwater permit	Pending
MPCA	NPDES permit	Pending
MDH	Well permit	Pending

- b) The City of Afton finds that the potential impacts identified as part of the proposed Afton Creek Preserve project are minimal and can be addressed through the regulatory agencies as part of the permitting process. As a result, additional analysis of these impacts is not required.

4. MINNESOTA RULE 4410.1700, SUBP. 7.D - THE EXTENT TO WHICH ENVIRONMENTAL EFFECTS CAN BE ANTICIPATED AND CONTROLLED AS A RESULT OF OTHER AVAILABLE ENVIRONMENTAL STUDIES UNDERTAKEN BY PUBLIC AGENCIES OR THE PROJECT PROPOSER, INCLUDING OTHER EISs.

The City finds:

1. The Afton Creek Preserve project is similar in scope or nature to other nearby small housing projects.
2. An EIS has not been developed for similar small housing projects nearby recently
3. In light of the results of environmental review and permitting processes for similar projects, the City of Afton finds that the environmental effects of the project can be adequately anticipated, controlled, and mitigated.

The City of Afton finds that the environmental effects of the project can be anticipated and controlled as a result of the environmental review, planning, and permitting processes.

D. CONCLUSIONS

The Afton Creek Preserve EAW and comments received have generated information adequate to determine that the proposed project does not have the potential for significant environmental effects.

The EAW has identified areas where the potential for environmental effects exist; appropriate mitigation measures have been incorporated into the project plans and the required approvals and permits to mitigate these effects are being obtained. The project will comply with all county, city, and federal review agency requirements.

Based on the criteria established in Minnesota Rule 4410.1700, the project does not have the potential for significant environmental effects.

Based on the Findings of Fact and Conclusions, the project does not have the potential for significant environmental impacts.

Therefore, an EIS is not required for the Afton Creek Preserve project.

III. AGENCY COMMENTS AND CITY OF AFTON'S RESPONSES

A 30-day comment period for the above-referenced EAW ended on May 24, 2017. Comments were received from the Minnesota Pollution Control Agency, the Metropolitan Council, Northwest Associated Consultants, the Southwest Washington Watershed District, and the Minnesota Department of Natural Resources. On behalf of the City of Afton as the RGU, comment responses are provided below.

These letters and a response letter is included in **Attachment A**. Comments received and responses are summarized in **Attachment A**.

Attachment A

Afton Creek Preserve No EIS Determination Letter and EAW
Comment Letters

5821 Humboldt Avenue North, Brooklyn Center, MN 55430
Email: jacobsonenv@msn.com

(612) 802-6619 Cell

July 12, 2017

Ronald Moorse
Administrator
City of Afton
3033 St. Croix Trail South
Afton, MN 55001

**RE: Afton Creek Preserve EAW No EIS Determination Letter
Afton, Minnesota
Comm. No. 2017-188**

Dear Mr. Moorse:

As requested, we are submitting a letter response to the comments received on the Afton Creek Preserve EAW. We are requesting a No EIS Determination by the City of Afton.

The Afton Creek Preserve EAW was distributed to the Minnesota Environmental Quality Board (EQB) and persons and agencies on the official EQB distribution list in accordance with EQB rules. The 30 day comment period ended on May 24, 2017. The City received 5 letters on the EAW as follows:

1. Minnesota Pollution Control Agency – Letter dated May 17, 2017 from Karen Kromar, Planner Principal from the Environmental Review Unit
2. Metropolitan Council – Letter dated May 17, 2017 from LisaBeth Barajas, Manager Local Planning Assistance
3. Northwest Associated Consultants, Inc. – Letter dated May 22, 2017 from Bob Kirmis, Planner
4. South Washington Watershed District – Letter dated May 22, 2017 from John Loomis, Water Resources Program Manager
5. Minnesota Department of Natural Resources – Letter dated May 24, 2017 from Rebecca Horton, Environmental Review Specialist

The comments on the above letters and the responses are detailed below:

Letter 1: Minnesota Pollution Control Agency (MPCA)

Comment 1.1

The MPCA advocates the use of low impact design (LID) practices in construction of projects to aide in the minimization of stormwater impacts. The LID practices noted were as follows:

5821 Humboldt Avenue North, Brooklyn Center, MN 55430
Email: jacobsonenv@msn.com

(612) 802-6619 Cell

- a. Special ditches, arranged in a series, that soak up more water
- b. Vegetated filter strips at the edges of paved surfaces
- c. Trees or swales between rows of cars
- d. Residential or commercial rain gardens designed to capture and soak in stormwater
- e. Porous pavers, concrete, and asphalt for sidewalks and parking lots
- f. Narrower streets
- g. Rain barrels and cisterns
- h. Green roofs

Response 1.1

The Afton Creek Preserve project will use designed roadway ditches that will control erosion better than typical ditches in a typical development. The project will also use vegetative buffers on all of the house lots as well as minimized lawn areas in conjunction with native grass plantings to further enhance erosion control and infiltration. Native trees and shrubs will be planted in the buffer areas as well. The long cul-de-sac streets will be narrower than typical streets in the area. The project as designed is therefore using a number of LID practices.

Letter 2: Metropolitan Council:

Comment 2.1

The Met Council identified four lots that had slopes in excess of 18% which would be protected by 60' vegetated buffers, and they are concerned that these are the only areas which would be protected by the buffers.

Response 2.1

The Afton Creek Preserve project will actually protect all lots in the rear portion with 60' vegetated buffers and with minimized lawn areas to maximize erosion control and water quality protection.

Comment 2.2

The Met Council is also concerned about moderate quality woodlands being impacted by lots 10-14 and smaller portions of lots 15 and 16.

Response 2.2

The developer is proposing conservation easements to protect these woodland areas on lots 10-14 and lots 15 and 16.

Comment 2.3

The Met Council is concerned about the protection mechanisms for the 60' vegetated buffers and the moderate quality woodlands behind them.

Response 2.3

The developer will have a homeowners association that will be charged with maintaining the 60' buffers and the protection of the woodlands behind them.

Letter 3: Northwest Associated Consultants

Comment 3.1

Northwest Associated Consultants stated that the cul-de-sac length is longer than the maximum cul-de-sac length as imposed in the Cities Subdivision Ordinance.

Response 3.1

Longer cul-de-sacs have been allowed in the past by the City within PLCD subdivisions as long as there is preservation of the rural character and natural resources of the area which is the case here.

Comment 3.2

It was noted by Northwest Associated Consultants that the City of Afton Natural Resources and Groundwater Committee has suggested that the subdivision design include more open space in the following areas:

1. The northern half of lots 13 and 14
2. The western half of lot 4
3. The western one third of lot 3

Response 3.2

The developer's response is that the 60' vegetated buffers and conservation easements will protect the woodland and bluff areas on lots 13 and 14, and the western portions of lots 3 and 4.

Comment 3.3

Northwest Associated Consultants stated that the preparation of an Environmental Impact Statement (EIS) is not expected.

Response 3.3

The developer agrees that an EIS is not needed for this project.

5821 Humboldt Avenue North, Brooklyn Center, MN 55430
Email: jacobsonenv@msn.com

(612) 802-6619 Cell

Letter 4: South Washington Watershed District

Comment 4.1

The South Washington Watershed District states that this EAW serves as a model for future developments in Afton and the surrounding communities in southern Washington County. The proposed project will protect and improve not only the water quality of Trout Brook, but the surrounding terrestrial habitat as well. The City of Afton is to be commended for the development and promotion of its Preservation and Land Conservation Development ordinance.

Response 4.1

The developer thanks the South Washington Watershed District for their comments and is looking forward to building this model project.

Letter 5: Minnesota Department of Natural Resources (DNR)

Comment 5.1

The DNR states that they are in favor of an access road in its current location instead of one that would create a crossing over Trout Brook.

Response 5.1

The developer is also in favor of the access road being in its current location instead of a crossing over Trout Brook which could impact the trout stream.

Comment 5.2

The DNR is concerned about spring water protection on lots 3 and 4 adjacent to Trout Brook.

Response 5.2

The developer notes that there are no springs in this area and he reports that a project summarized in Appendix A was implemented recently in this area by the South Washington Watershed District which improved this area, and he is determined to protect these areas with conservation easements on these lots as well as with the 60' vegetated buffers.

Comment 5.3

The DNR is concerned about old wells being present in the area.

Response 5.3

The developer is not aware of any old wells in the area and if they are present they would be sealed in accordance with the regulations of the Minnesota Department of Health.

Comment 5.4

The DNR requests that the 60' vegetated buffer strips be shown on a map for lots 1-10 and 16-17.

Response 5.4

The developer would be mapping the 60' vegetated buffer strips in the preliminary plat process.

Comment 5.5

The DNR is concerned that a DNR water appropriation permit may be needed to irrigate the lawn and landscape areas on the 2.5 acre buildable portions of the lots.

Response 5.5

The developer is committed to minimizing lawn and landscape areas on each lot with a requirement that there will be large areas of native grass beyond the 60' vegetated buffer areas. Because of these minimized lawn and landscape areas, the developer does not believe that a drought condition would ever create a scenario where a DNR water appropriation permit would be necessary for lawn and landscape irrigation on this project.

Comment 5.6

The DNR wants a more detailed explanation of how the buffer plan will assist with the following four items:

1. Controlling erosion and sedimentation
2. Enhancing wildlife habitat
3. Types of invasive species management
4. Describe state listed species habitat enhancement

Response 5.6

The developer states that the native grass, tree and shrub plantings in the 60' vegetated buffer areas will assist in controlling erosion and sedimentation by intercepting overland particulates and infiltrating water in these areas. Because the buffers will be planted in a native plant community, we expect that they will enhance wildlife habitat and habitat for state listed species because of the native plant community design. The invasive species management program will include annual monitoring and maintenance which may include hand pulling, controlled burning, or chemical spraying to target and remove invasive species as they are seen.

Comment 5.7

The DNR states that the shoreland district boundary should be 300' wide on either side of Trout Brook. They also state that the conservation overlay boundary is shown as approximate and should be adjusted to reflect the terrain and natural resources on this specific site.

Response 5.7

The developer agrees with the above two comments and will show the shoreland district boundary and conservation overlay boundary as requested by DNR above.

Comment 5.8

The DNR states that the western portions of lots 3 and 4 may contain springs adjacent to Trout Brook. The DNR recommends that these areas be included as part of the open space conservation easement in this project.

Response 5.8

The developer states that the western portions of lots 3 and 4 do not contain springs that are important to Trout Brook and he feels that the 60' vegetated buffers and the conservation easements on these lots is adequate to protect these areas. This information was provided by the South Washington Watershed District and it is included as Attachment A.

Comment 5.9

The DNR states that they are concerned about the generalized nature of the buffer plans. They are also concerned about when the buffer areas will be established, how the buffers will be monitored and maintained, and whether there will be buffer easements that will keep the buffers in place long-term.

Response 5.9

Each buffer area may be slightly different and will be custom designed for that particular lot situation. The buffers will be monitored and maintained annually, and the homeowners association will be charged with keeping the buffers in place long-term. Prairie Restorations has recently repaired a ravine area in the Lot 4 area and planted a native plant mix which the developer will use in the buffer areas, and the documentation on this area is included in Appendix A.

Jacobson Environmental, PLLC
Environmental Consultants

www.jacobsonenvironmental.com
Wayne Jacobson, P.S.S., W.D.C., P.W.S., A.F.S.

5821 Humboldt Avenue North, Brooklyn Center, MN 55430
Email: jacobsonenv@msn.com

(612) 802-6619 Cell

Based on the content of the EAW and the comments received along with the above responses, we believe the City of Afton should declare that an EIS is not necessary for this project.

Thank you for the opportunity to provide environmental services on this important project.

Sincerely,



Wayne Jacobson, P.S.S., W.D.C., P.W.S., A.F.S.
Senior Scientist

cc: Joe Bush, J.P. Bush Homes

Appendix A Finding of No Springs and Ravine Repair and Bluff Prairie Establishment
Appendix B Location of Lots 3 and 4
Appendix C Comment Letters 1-5 received on EAW

APPENDIX A

Finding of No Springs and Ravine Repair and Bluff Prairie
Establishment

Joe Bush

From: Schilling, Andrew [andrew.schilling@woodburymn.gov]
Sent: Thursday, June 08, 2017 1:04 PM
To: Joe Bush
Subject: RE: Joe Bush

Joe,

During our site analysis and construction of the ravine stabilization and turf conversion to prairie above the bluff, we did not identify any fresh water springs.

Thanks,

Andy

Andy Schilling
Watershed Restoration Specialist

SWWD
aschilling@ci.woodbury.mn.us
651-714-3717
[Click for Directions](#)

From: Joe Bush [mailto:joe@joebushmn.com]
Sent: Thursday, June 8, 2017 8:14 AM
To: Schilling, Andrew <andrew.schilling@woodburymn.gov>
Subject: Joe Bush

Andrew

Thank you for the feedback about the restoration project on the ravine and bluff. After reading comments back from you and Jen I understand that a meeting may not be needed.

The answer I was trying to obtain is; during the restoration project did any on site reports show fresh water springs?

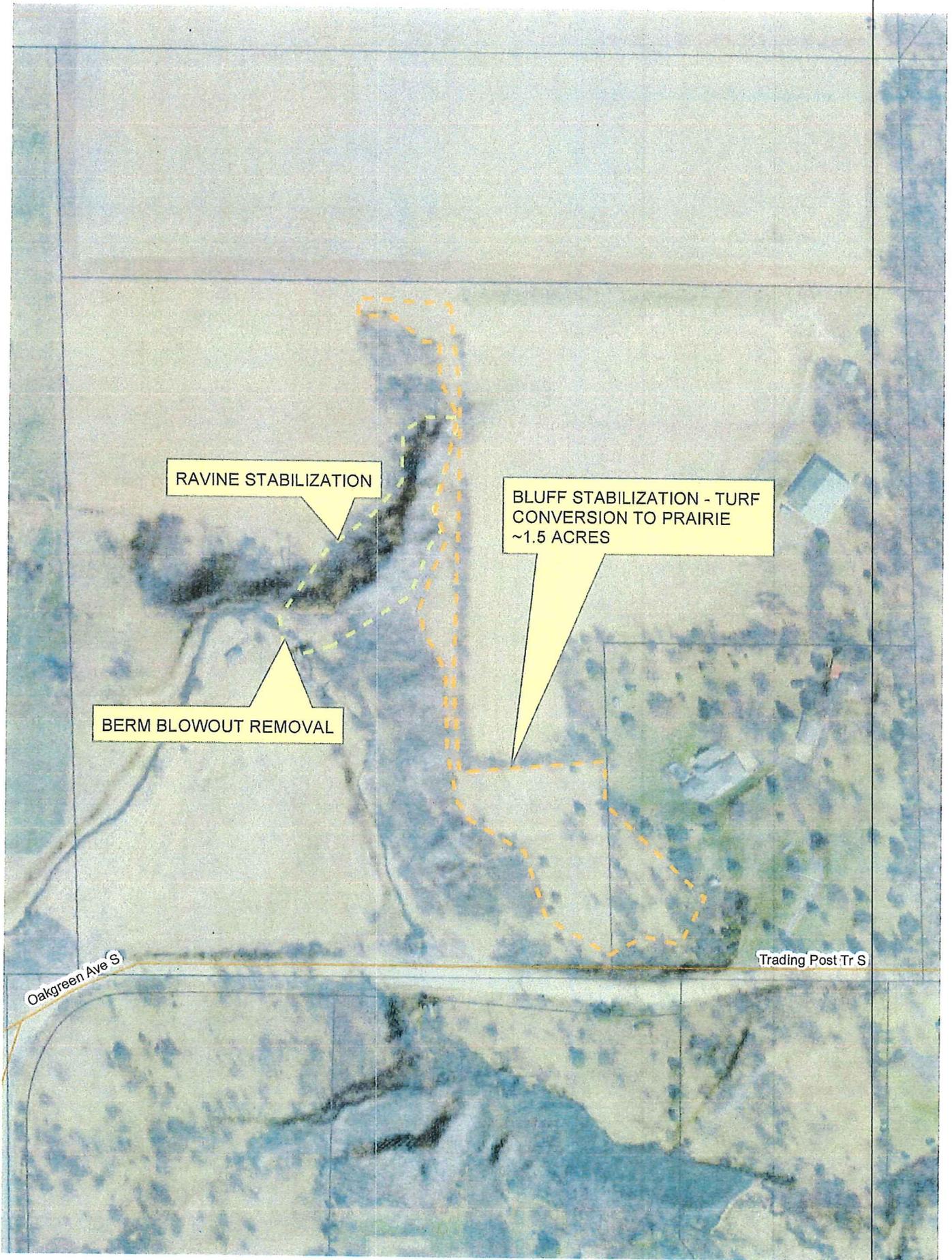
If not I will proceed without additional concern. Is that a question you can answer?

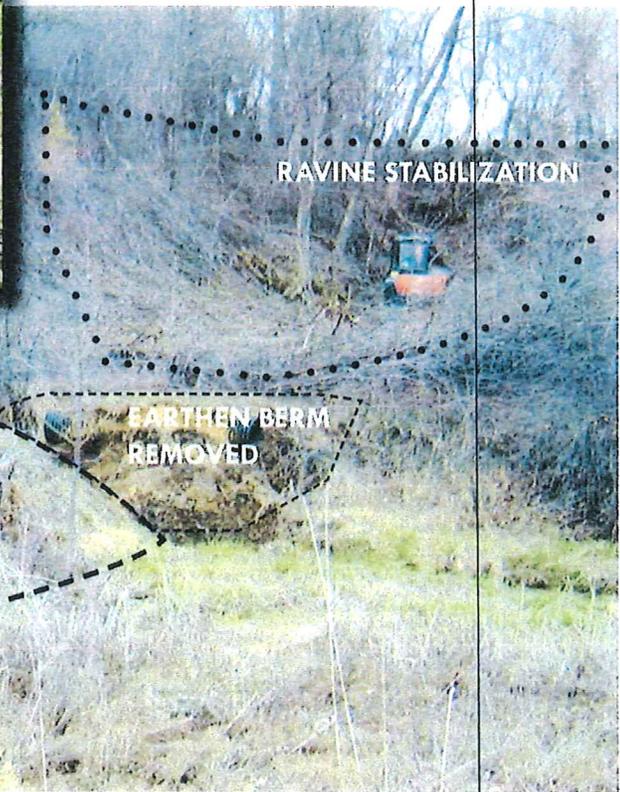
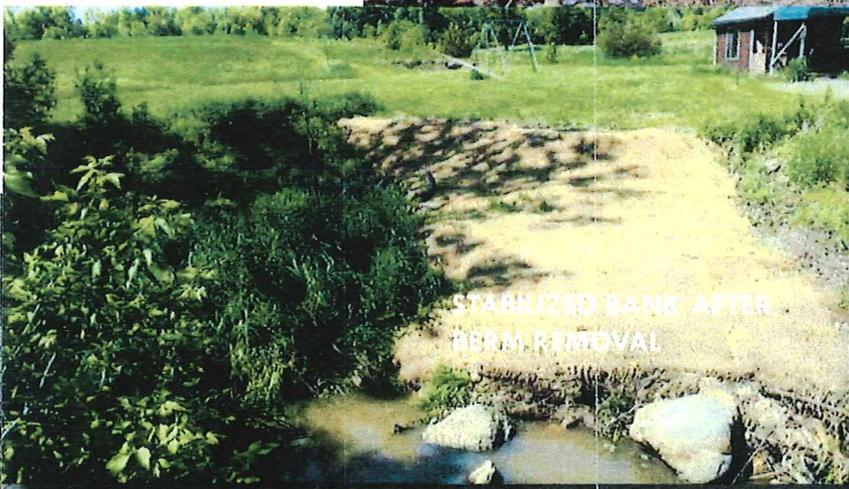
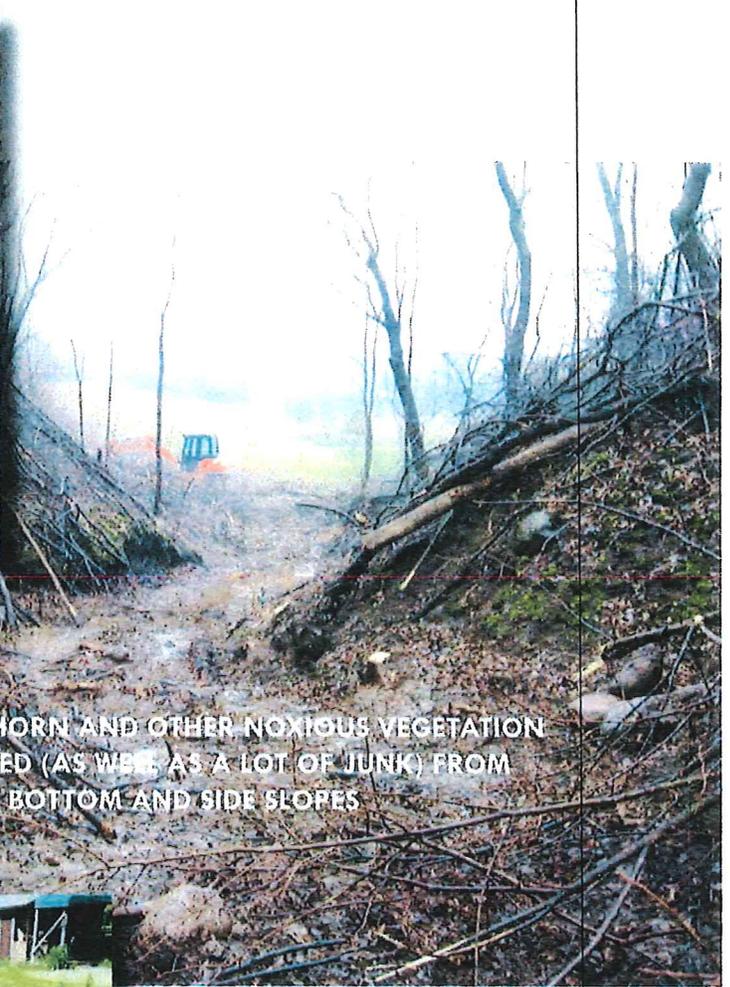
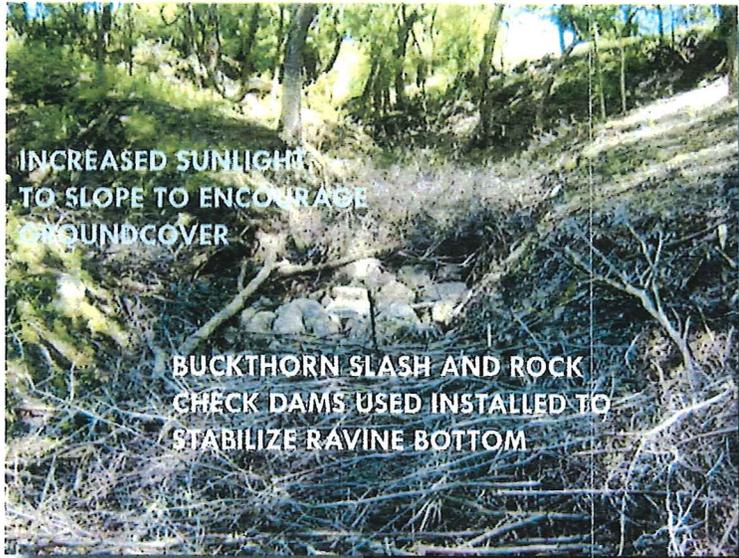
Joe

Joseph Bush
Real Estate Professional
Designer & Builder
of Memorable Homes
Direct: [651.775.4222](tel:651.775.4222)
jpbushhomes.com

6/15/2017

FORMER SCHUSTER PROPERTY: COST-SHARE PROJECTS OVERVIEW





SCHUSTER: TOP OF BLUFF TURF CONVERSION TO PRAIRIE, 2015



COST-SHARE AGREEMENTS



WATER QUALITY COST SHARE APPLICATION/CONTRACT

General Information (to be completed by SWWD)

Organization SWWD	Contract Number	Other federal or other state funds? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amendment <input type="checkbox"/> Board meeting date(s) _____	Canceled <input type="checkbox"/> Board meeting date: _____
----------------------	-----------------	--	---	--

*If contract amended, attach amendment form(s) to this contract.

Applicant

Land Occupier Name Robert Schuster	Address 14220 60th St.	City/State Afton	Zip code 55033
Email N/A	Phone 651-436-5436 651-334-2430		

* If a group contract, this must be filed and signed by the group spokesperson as designated in the group agreement and the group agreement attached to this form.

Project Location (if different)

Address	City/State	Zip code
---------	------------	----------

Contract Information

I (we), the undersigned, do hereby request cost-share assistance to help defray the cost of installing the following practice(s) listed on the second page of this contract. It is understood that:

1. **SWWD's Water Quality Cost Share Program is a Reimbursement Program.** Applicants will be reimbursed for the contract amount upon successful completion of the project and submission of all required documentation.
2. The land occupier is responsible for full establishment, operation, and maintenance of all practices and upland treatment criteria applied under this program to ensure that the conservation objective of the practice is met and the effective life, a minimum of **10 years**, is achieved. The specific operation and maintenance requirements for the conservation practice listed are described in the operation and maintenance plan prepared for this contract by the organization technical representative.
3. Should the land occupier fail to maintain the practice during its effective life, the land occupier is liable to the South Washington Watershed District for the amount up to 100% of the amount of financial assistance received to install and establish the practice unless the failure was caused by reasons beyond the land occupier's control, or if conservation practices are applied at the land occupier's expense that provide equivalent protection of the soil and water resources.
4. Practice(s) must be planned and installed in accordance with technical standards and specifications of the Technical Representative.
5. Increases in the practice units or cost must be approved by the organization board through amendment of this contract as a condition to increase the cost share payments.
6. This contract, when approved by the SWWD board, will remain in effect unless canceled by mutual agreement, except where installations of practices covered by this contract have not been started within **1 year following Board approval of this contract**, this contract will be automatically terminated on that date. Practices will be installed by **2 years following Board approval of this contract** unless this contract is amended by mutual consent to reschedule the work and funding.
7. Items of cost for which reimbursement is claimed are to be supported by invoices/receipts for payments and will be verified by the organization board as practical and reasonable. The organization board has the authority to make adjustments to the costs submitted for reimbursement.

Applicant Signatures

The land occupier's signature indicates agreement to:

1. Grant the organization's representative(s) access to the parcel where the conservation practice will be located.
2. Obtain all permits required in conjunction with the installation and establishment of the practice prior to starting construction of the practice.
3. Be responsible for the operation and maintenance of conservation practices applied under this program in accordance with an operation and maintenance plan prepared by the organization technical representative.
4. Not accept cost-share funds, from state and federal sources combined, that are in excess of **100%** percent of the total cost to establish the conservation practice and provide copies of all forms and contracts pertinent to any other state or federal programs that are contributing funds toward this project.

Date 04-22-15	Land Occupier 
Date	Landowner, if different from applicant Address, if different from applicant information:

Conservation Practice (to be completed by Technical Representative)

The primary practice for which cost-share is requested is Turf to Prairie

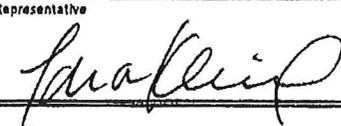
Practice standards or eligible component(s) Turf conversion to native	1.50 acres	Engineered Practice (<input type="checkbox"/> yes or <input type="checkbox"/> no) Ecological practice (<input checked="" type="checkbox"/> yes or <input type="checkbox"/> no)	Total Project Cost Estimate \$9,300. ⁰⁰
--	------------	---	---

The estimated benefits of this project are:

Total Phosphorus Captured 0.75 lbs/yr	Nitrogen Captured 2.5 lbs.	Runoff Volume Reduction N/A
--	-------------------------------	--------------------------------

Technical Assessment and Cost Estimate

I have the appropriate technical expertise and have reviewed the site where the above listed practice is to be installed and find it is needed and that the estimated benefits and costs are practical and reasonable.

Date 4/20/15	Technical Representative 
-----------------	---

Amount Authorized for Financial Assistance (to be completed by SWWD)

The SWWD Board has authorized the following for financial assistance, total not to exceed the overall percent listed indicated in 4, above.

\$ 2,325.⁰⁰ from South Washington WD Cost Share 2015 25%
Enter program name and fiscal year
~~\$ 6,975.⁰⁰~~ from ~~FY 2013 MN Clean Water Fund Grant~~ ~~75%~~
Enter program name and fiscal year
 \$ _____ from _____
Enter program name and fiscal year

Board Meeting Date	Authorized Signature	Total Amount Authorized \$
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RAVINE STABILIZATION AND BERM BLOWOUT REMOVAL PROJECT - 2014

WATER QUALITY FUNDING CONTRACT

General Information (to be completed by SWWD)

Organization SWWD	Contract Number CWF-TB01	Other federal or other state funds? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amendment <input type="checkbox"/> Board meeting date(s) _____	Canceled <input type="checkbox"/> Board meeting date: _____
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* If contract amended, attach amendment form(s) to this contract.

Applicant

Land Occupier Name Robert W. Schuster	Address PO Box 337	City/State Afton, MN	Zip code 55001
Email		Phone 651-436-5436	

* If a group contract, this must be filed and signed by the group spokesperson as designated in the group agreement and the group agreement attached to this form.

Project Location (if different)

Address 14220 60 th St. S.	City/State Afton, MN	Zip code 55001
--	-------------------------	-------------------

Contract Information

I (we), the undersigned, do hereby request funding to install the following practice(s) listed on the second page of this contract. It is understood that:

1. The land owner grants permission to SWWD staff and its representatives to access the property to implement, inspect, and maintain the practice(s).
2. The land owner will ensure the practice(s) remains in place for the effective life of the practice(s), a **minimum of 10 years**.
3. Should the land owner remove the practice(s) during its effective life, the land owner is liable to the South Washington Watershed District for the amount up to 100% of the amount of the project cost to install and establish the practice unless the removal was caused by reasons beyond the land owner's control, or if conservation practices are applied at the land owner's expense that provide equivalent protection of the soil and water resources.
4. SWWD will implement the practice(s) and inspect and maintain the practice(s) for a minimum of 10 years.
5. This contract is void if the project is not underway prior to June 1, 2014.

Robert Schuster

Signatures

Date	Land Occupier
Date	Landowner, if different from applicant
Address, if different from applicant information:	

Conservation Practice (to be completed by Technical Representative)

The primary practice for which cost-share is requested is _____

Practice standards or eligible component(s) Grade Stabilization Structure, Brush Management	Engineered Practice <input checked="" type="checkbox"/> yes or <input type="checkbox"/> no Ecological practice <input checked="" type="checkbox"/> yes or <input type="checkbox"/> no	Total Project Cost Estimate \$33,018.80
--	--	--

The estimated benefits of this project are:

Total Phosphorus Captured 19 lbs	Nitrogen Captured	Runoff Volume Reduction
-------------------------------------	-------------------	-------------------------

Technical Assessment and Cost Estimate

I have the appropriate technical expertise and have reviewed the site where the above listed practice is to be installed and find it is needed and that the estimated benefits and costs are practical and reasonable.

Date	Technical Representative
------	--------------------------

Amount Authorized for Funding (to be completed by SWWD)

The SWWD Board has authorized the following for funding, total not to exceed.

Keep Funding separate

\$ 24,764.10 from FY 2012 MN Clean Water Assistance Grant (75%) - 02.05.4200
Enter program name and fiscal year
 \$ 8,254.70 from SWWD LSC SUF (25%) - 02.05.4200
Enter program name and fiscal year
 \$ _____ from _____
Enter program name and fiscal year

02.05.4200 - Expense Acct

Board Meeting Date 11/12/13	Authorized Signature <i>[Signature]</i>	Total Amount Authorized \$ 33,018.80
--------------------------------	--	---

TURF TO PRAIRIE CONTRACTOR MAINTENANCE RECORDS

- The prairie installation contractor - Prairie Restorations, Inc. - is contracted for maintenance for the 2016 and 2017 growing season

Prairie Restorations, Inc. 

Work Record

Prairie Restorations, Inc.
31646 128th Street
Princeton MN 55371
United States
763-389-4342

#3895

09/07/2016

Bill To

Tara Kelly
South Washington Watershed District
Office
2302 Tower Dr.
Woodbury MN 55125
United States

Amount Due

\$0.00

Ship To

Tara Kelly
South Washington Watershed District Office
2302 Tower Dr.
Woodbury MN 55125
United States

PO #

Sales Rep

ETF

Project

Item

Options

PRJ2087 Schuster (SWWD) 2016-2017 IPM WRO	Schuster Residence (SWWD) - 2016 Integrated Plant Management Work Record Only: See Memo for Work Information
--	---

Memo

Complete Site Mowing on 6/29/2016 to Reduce Noxious Weeds in New Prairie Planting.

APPENDIX B

Location of Lots 3 and 4

PRESERVATION & LAND CONSERVATION DEVELOPMENT - SKETCH

Part of the Southeast Quarter of Section 32 and part of the Southwest Quarter of Section 33,
all in Township 28 North, Range 20 West, City of Afton, Washington County, Minnesota

Developer:



J.P. Bush
HOMES
Lakeband, Minnesota

Property Owner: Will Carlson

TOTAL PARCEL AREA = 218.6 acres

Proposed Conservation Easements

OPEN SPACE = 109.7 acres

(50.2% gross parcel area)

Proposed Lots (20 total) = 100.6 acres

Proposed Road Right of Way = 8.3 acres

Proposed Road Right of Way Width = 60 feet

Proposed Road Right of Way Width (60th Street South) = 33 feet from center line

Proposed Length of Cul-De-Sac -

Point A to Point B = 3,400 lineal feet

Point C to Point D = 690 lineal feet

Proposed Road Type - 24 foot wide rural section

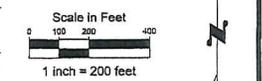
All proposed lots have a minimum of 2.5 acres of buildable area.

Legend

- Denotes slopes 12% to 17.3%
- Denotes a slope over 18%
- Denotes wetland location
- Denotes stream
- Denotes general surface water flow
- Denotes proposed street location
- Denotes proposed house site
- Denotes proposed septic area
- Denotes proposed driveway location

Contours are at 10 foot intervals and are based on data provided by the Minnesota Department of Natural Resources.

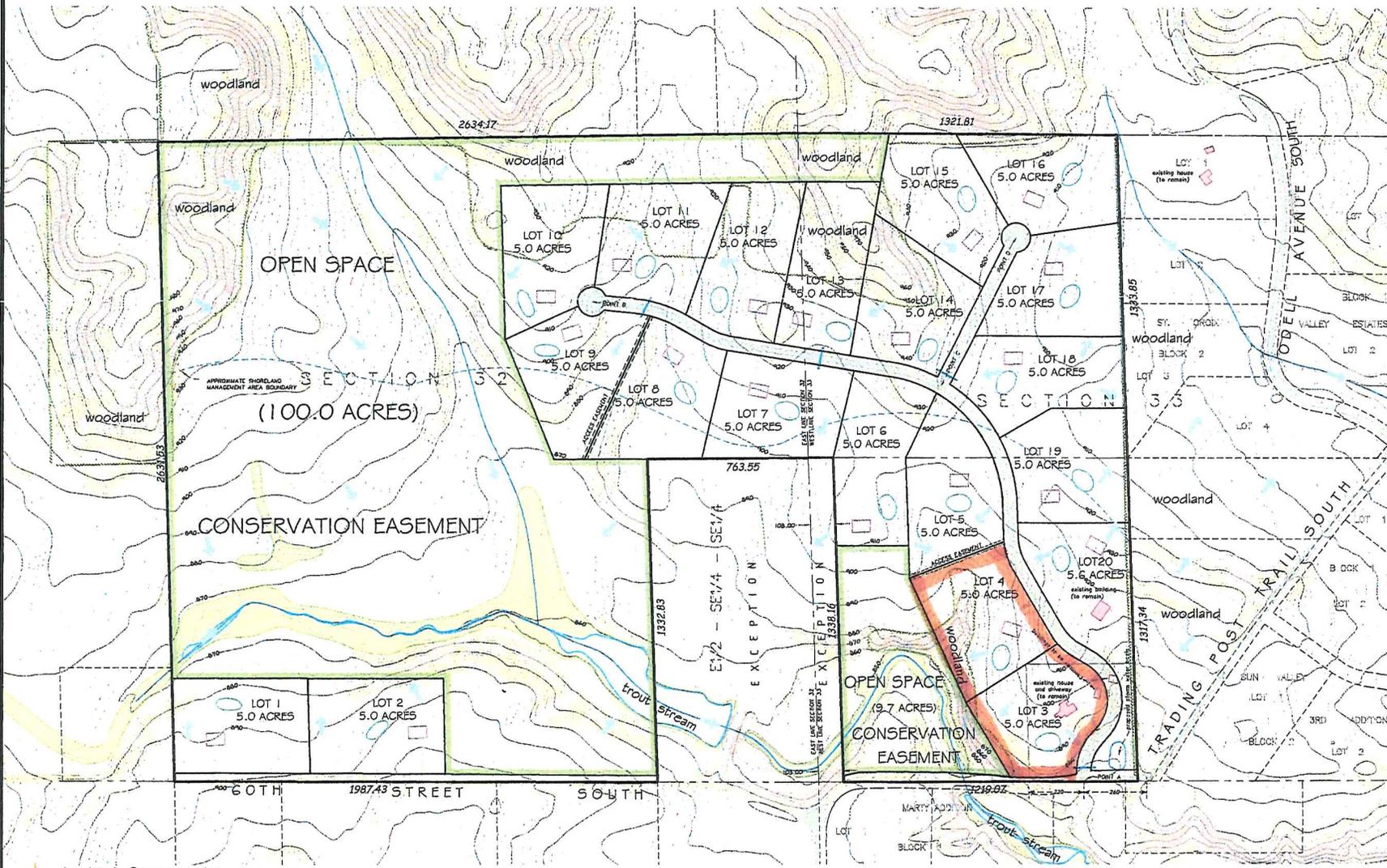
Wetland, Shaded and stream locations are approximate and are based on data obtained through the National Wetlands Inventory. Wet stream location is the City of Afton Zoning Map (ZMAP 11).



OFFICIAL COPIES OF THIS MAP ARE CRIMP SEALED

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Landmark Surveying, Inc.
mlh
MIG B Horak, Minnesota License No. 92577
Date



Landmark Surveying, Inc.
21000 Quaker Trail North
P.O. Box 55
Scandia, Minnesota 55073
Office phone: 651-434-3427
Cell number: 651-759-5730
Email: mshelley@lmsurvey.net

REVISED MARCH 01, 2017: Revised man road center to location.

APPENDIX C

Comment Letters 1-5 received on EAW



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

May 17, 2017

Mr. Ronald Moore, Administrator
City of Afton
3033 St. Croix Trail South
Afton, MN 55001

Re: Afton Creek Preserve Environmental Assessment Worksheet

Dear Mr. Moore:

Thank you for the opportunity to review and comment on the Environmental Assessment Worksheet (EAW) for the Afton Creek Preserve project (Project) located in the city of Afton, Washington County, Minnesota. The Project consists of an approximately 100-acre residential development. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

Low Impact Design

The MPCA advocates the use of Low Impact Design (LID) practices to aid in the minimization of stormwater impacts. LID is a stormwater management approach and site-design technique that emphasizes water infiltration, values water as a resource, and promotes the use of natural systems to treat water runoff. Examples include:

- Special ditches, arranged in a series, that soak up more water
- Vegetated filter strips at the edges of paved surfaces
- Trees or swales between rows of cars
- Residential or commercial rain gardens designed to capture and soak in stormwater
- Porous pavers, concrete, and asphalt for sidewalks and parking lots
- Narrower streets
- Rain barrels and cisterns
- Green roofs

LID concepts may be found in the [State of Minnesota Stormwater Manual](#) dated November 2005 located on the MPCA website at: <http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html>.

In addition, the MPCA LID webpage provides a description and examples of LID features such as permeable pavement, rain gardens, and green roofs. Links to other resources on LID are available as well. The website is located at: <https://www.pca.state.mn.us/water/stormwater-management-low-impact-development-and-green-infrastructure>.

Mr. Ronald Moorse
Page 2
May 17, 2017

We appreciate the opportunity to review this Project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EAW, please contact me at 651-757-2508.

Sincerely,



Karen Kromar
Planner Principal
Environmental Review Unit
Resource Management and Assistance Division

KK:bt

cc: Dan Card, MPCA, St. Paul
Teresa McDill, MPCA, St. Paul

May 17, 2017

Ronald Morse, City Administrator
City of Afton
3033 St. Croix Trail S
Afton, MN 55001

RECEIVED

MAY 23 2017

CITY OF AFTON

RE: City of Afton Environmental Assessment Worksheet (EAW) – Afton Creek Preserve
Metropolitan Council Review No. 21714-1
Metropolitan Council District 12

Dear Mr. Morse:

The Metropolitan Council received an EAW for a proposed residential project on April 17, 2017. The EAW is for a proposed residential cluster (20) lot single-family development on 218.6 acres with 109.7 acres of conservation easement protection for Trout Brook. The development will have individual wells and septic systems, and special vegetative buffers protecting steep slopes. The development site was previously used for farming, pasture, hay land and forest land.

The proposed project area is zoned Agriculture, along with Shoreland Management areas and a Conservancy Overlay. The City's 2030 Comprehensive Plan Current Land Use Map identifies this area as including existing land uses such as deciduous tree cover, cultivated, pasture, grassland, residential, bluff areas, streams and wetlands. The City's 2030 Future Land Use Map guides this area as Agriculture which allows a maximum density of 4 units per 40 acres.

Council staff has conducted a review of this EAW to determine its adequacy and accuracy in addressing regional concerns and the potential for significant environmental impact. The staff review finds that the EAW is complete and accurate with respect to regional concerns and does not raise issues of consistency with Council policies. The following section offers advisory comments for the City's consideration.

Item 13 – Fish, wildlife, plant communities, and sensitive ecological resources (rare features)
(Jim Larsen, 651-602-1159)

The EAW states that the proposed 60-foot vegetative “backyard” lot buffers will protect steep slope areas (identified as “bluff areas of over 18% slopes” on page 12, and “steep slope areas” of unspecified slope elsewhere in the document) against erosion, and increase wooded/forest and brush/grassland areas on lots within the development. Appendix B is referenced for plans of the buffer program, but it is not clear from the information provided, if all lots or only a portion will contain 60-foot buffer protection areas, precisely where the boundaries of the buffer will begin, and what level of preservation will be extended to site amenities “behind” the buffer. It appears from the Council's GIS database slope overlay information, that the only proposed lots containing existing mapped slopes in excess of 18% are lots 3 and 4 in the southeast corner (lot 3 contains an existing home which is to remain), the very north edge of lots 15 and 16 in the northeast portion of the site, and a few isolated areas within the proposed 100-acre open space conservation easement area in the northwest corner of the site.

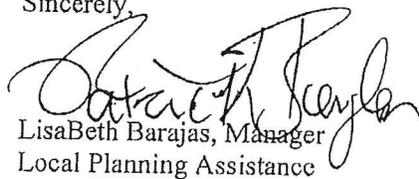
Ronald Morse
May 17, 2017
Page 2

While we agree that avoiding impacts to steep slope areas on the site by application of a protection buffer to those areas will be beneficial, Council staff is also concerned about protection of areas within proposed lots to be developed that are dominated by mature native oak woodlands. The woodlands have been mapped by the Council and Minnesota Department of Natural Resources in their Natural Resources Inventory/Assessment program as supporting native red and white oak and sugar maple communities of "moderate" assessed quality. Large portions of lots 10 through 14 along the northern site boundary – in some cases, more than half of each lot's platted area, and smaller portions of lots 15 and 16, consist of these mature woodlands. We recommend these woodland areas be specifically protected from impacts by future land owners within the development, either by redrawing of proposed lot lines to include (more or all of) the wooded areas within the proposed development's conservation easement area, or by affording them a similar level of protection as provided by the conservation easement from future impacts in some fashion.

While we understand the importance of and mechanism by which the stream channel areas within the proposed 100-acre open space conservation easement area will be protected, we do not have a similarly clear understanding of precisely what protection mechanisms will be utilized with the 60-foot buffers to protect natural resource woodland stands behind those buffers that will be located on privately held land.

This concludes the Council's review of the EAW. The Council will not take formal action on the EAW. If you have any questions or need further information, please contact Corrin Wendell, Principal Reviewer, at 651-602-1832.

Sincerely,

 for:
LisaBeth Barajas, Manager
Local Planning Assistance

CC: Steve O'Brien, MHFA
Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Harry Melander, Metropolitan Council District 12
Corrin Wendell, Sector Representative/Principal Reviewer
Raya Esmaeili, Reviews Coordinator

PLANNING REPORT

TO: Afton Planning Commission

FROM: Bob Kirmis

DATE: May 22, 2017

SUBJECT: Afton - Afton Creek Preserve Sketch Plan

CASE NO: 280.02 - 17.02

BACKGROUND

Joe Bush, on behalf of J.P Bush Homes, has submitted a sketch plan for a preservation and land conservation development (PLCD) entitled "Afton Creek Preserve." The subject site overlays 219 acres of land located north of 60th Street South (along the City's southern boundary) and west of Trading Post Trail South.

The subdivision calls for the creation of 20 single family residential lots all of which measure 5 acres in size and are mainly located on the eastern half of the site. Of the 219 acres which comprise the subject site, 110 acres are proposed to lie within a conservation easement (intended to protect a trout stream and protect open space).

The subject site overlays seven individual parcels of land. With the exception of a 5-acre parcel located in the extreme southeast corner of the site (14220 60th Street), all parcels which comprise the subject site are zoned A, Agricultural. Conservation subdivisions (PLCD's) are allowed within Agricultural zoning districts as a conditional use. The 5-acre parcel in the southeast corner is zoned RR, Rural Residential.

That portion of the site which overlays the trout stream and adjacent flowage lie within the City's Shoreland Management Area, the boundaries of which measure 1,000 feet from each side of stream banks.

Also, to be noted is that the trout stream, as well as flowage which lies along stream, lies within the City's Conservancy Overlay District, the intent of which is to manage areas with unique natural and biological characteristics.

The purpose of the sketch plan review procedure is to inform applicants of the City's procedural requirements for subdivision and applicable zoning and subdivision standards and convey the extent to which proposed subdivisions conform with such regulations. In this regard, no formal action on the submitted sketch plan will be taken. Informal feedback on the submitted sketch plan is intended to precede the preparation of a formal preliminary plat application.

Attached for Reference:

- Exhibit A: Applicant Narrative
- Exhibit B: Site Location
- Exhibit C: Sketch Plan
- Exhibit D: Concept Plan Alternative (prepared by Natural Resources and Groundwater Committee)

ISSUES

Environmental Assessment Worksheet (EAW). According to both Minnesota Statutes (Rules 4410.4300 Subpart 36) and the Afton City Code, an Environmental Assessment Worksheet (EAW) must be prepared for projects which result in the permanent conversion of 80 or more acres of agricultural, native prairie, forest, or naturally vegetated land to a more intensive developed land use. Thus, the proposed subdivision has prompted the preparation of an EAW.

The purpose of the EAW process is to disclose information about potential environmental impacts of a project. Information disclosed in the EAW process is intended to determine whether a more detailed Environmental Impact Statement (EIS) is needed and to indicate how the project can be modified to lessen its environmental impacts. To be specifically noted is the EAW process is not intended to represent project approval.

The completed EAW has been sent to various agencies as identified on the Environmental Quality Board's distribution list for review and comment. The 30-day comment period for the EAW ends on May 24, 2017. Thus, comments will be received prior to the June 6, 2017 Planning Commission meeting. Such comments should be taken into account by the applicant as part of the development (refinement) of various plans to be provided with forthcoming preliminary and final plat applications.

Based on information provided in the EAW, the preparation of an Environmental Impact Statement (EIS) is not expected. To be noted however, is that comments and recommendations received on the EAW related to the mitigation of potential environmental impacts should be taken into account by the applicant in the preparation of detailed subdivision plans. Received comments can be made conditions of forthcoming subdivision approval by the City.

Processing. Following sketch plan review, the following approvals are minimally necessary to accommodate the project:

1. Subdivision (preliminary plat and final plat)
2. Conditional use permit for PLCD development

Issues associated with the possible rezoning of the 5-acre parcel (14220 60th Street) from RR, Rural Residential to A, Agricultural in conjunction with the forthcoming subdivision application shall be discussed in a later section of this report.

Purpose of PLCD. According to the City Code (section 12-2373), preservation and land conservation developments (PLCD), are intended to:

- A. *Permit subdivisions in the Agricultural Zoning District which require the construction of a new public street.*
- B. *Encourage a more creative and efficient development of land and its improvements through the preservation of agricultural land, natural features and amenities than is possible under the more restrictive application of zoning requirements, while at the same time, meeting the standards and purposes of the comprehensive plan and preserving the health, safety, and welfare of the citizens of the City.*
- C. *Preserve open space, to preserve the natural resources of the site and to preserve wildlife habitat and corridors.*
- D. *Facilitate the economical provision of streets and public utilities.*
- E. *Allow the transfer of development rights (density) within a subdivision in order to preserve agricultural land, open space, natural features and amenities.*

While it appears that the proposed subdivision fulfills the preceding objectives, such finding should be made by City Officials as part of formal action on the forthcoming subdivision and conditional use permit applications.

Comprehensive Plan. According to the City's 2008 Land Use Plan, the majority of the 219-acre subject site is guided for "Agricultural" use. Such land use designation directs a maximum density of one dwelling unit per 10 acres of land.

The Land Use Plan also directs "Rural Residential" use of the five-acre parcel located in the extreme southeast corner of the site. Such land use designation imposes a minimum 5-acre lot size requirement with a minimum of 2.5 acres of contiguous buildable area.

Zoning. Reflective of its designation within the Comprehensive Plan, the majority of land within the subject site is zoned A, Agricultural. Within A, Agricultural Districts,

conservation subdivisions (PLCD's) are allowed by conditional use permit.

As indicated, the existing 5-acre parcel located in the southeast corner of the site (14220 60th Street) is zoned RR, Rural Residential. While minimum lot area standards in the A, Agricultural District for PLCD subdivisions are the same as those imposed within the RR, Rural Residential District (5 acres), it should be recognized that the zoning of the existing RR parcel is tied to its current legal description. The submitted sketch plan calls for the reconfiguration of the RR parcel such that it includes public right-of-way as well as the conveyance of a portion of the lot to abutting Lot 20 to the north. Without a rezoning action, proposed Lots 3 and 20 would have two zoning designations (A and RR). This is typically an undesirable condition.

To ensure that all proposed lots within the subdivision are afforded the same property rights (via zoning), consideration should be given to the rezoning of the 14220 60th Street parcel from RR, Rural Residential to A, Agricultural as part of the formal application for subdivision.

While the City's Land Use Plan (map) designates the parcel in question for "Rural Residential" use, it is believed the following findings can be made in support zoning change without the need for the processing a Land Use Plan amendment.

1. The guided density of the 5-acre "area" in question is consistent with that proposed via the PLCD and no change to the existing use is proposed.
2. The 5-acre parcel is clearly part of the proposed PLDC and its land area has been used in the calculation of allowed development density.
3. PLCD's are not listed as a permitted use in the RR zoning district.
4. The parcel in question lies between lands guided "Rural Residential" and "Agricultural" uses. The original intent related to the separation of these uses would not change as a result of the rezoning.
5. The land use categories depicted on the Land Use Plan map correspond to individual parcels. The configuration of the parcel in question will change slightly as a result of the proposed subdivision. Without the zoning change, Lots 3 and 20 will hold two zoning designations and be inconsistent with the balance of the lots within the subdivision.

This issue, and specifically the need for such action and Land Use Plan impacts, should be subject to further comment and recommendation by the City Attorney.

Streets

Access. As shown on Exhibit B, access to the majority of the lots (18) within the subdivision is proposed via two cul-de-sacs which intersect 60th Street at a single

point near Trading Post Trail. The acceptability of the street intersection location should be subject to comment and recommendation by the City Engineer.

To be noted is that some concerns exist related to the proximity of the access to steep slopes in the immediate area. As a condition of subdivision approval, an assurance should be made that slopes in excess of 18 percent will not be disturbed. This issue should be subject to further comment and recommendation by the City Engineer.

Aside from the 18 lots proposed to be accessed via the 60th Street cul-de-sac, two additional lots in the extreme southwest corner of the site are proposed to be provided direct driveway access via 60th Street.

Cul-de-Sac Length. As mentioned, 18 lots within the subdivision are proposed to be accessed via two cul-de-sacs. The 60th Street roadway access technically splits into two cul-de-sacs. The longest of the two cul-de-sacs measures approximately 3,400 feet in length which significantly exceeds the maximum cul-de-sac requirement of 1,320 feet imposed in the City's Subdivision Ordinance.

While the Ordinance states that cul-de-sac lengths within PLCD subdivisions may exceed the referenced cul-de-sac length requirement (provided that the preservation of the rural character and natural resources will result), immediate feedback on the acceptability of the proposed cul-de-sac length is requested of City Officials.

In the opinion of Planning Staff, there are both pros and cons associated with the cul-de-sac as currently proposed. These are summarized below:

Pros:

1. Flexibility from the referenced cul-de sac length requirement of the Ordinance is allowed in PLCD subdivisions provided preservation of natural resources will result. Remedy to the excessive cul-de-sac length would likely be the creation of a street connection to Odell Avenue. Such street connection could have negative impacts upon natural resources in the area.
2. Numerous cul-de-sacs presently exist within the City which exceed the maximum 1,320-foot length requirement of the Subdivision Ordinance. Thus, the proposed condition does not differ from that previously allowed by the City.
3. A second access to the subdivision via Odell Avenue may introduce negative traffic impacts on residents located east of the subject site along Trading Post Trail and Odell Avenue.
4. A second access to Odell Avenue would result in increased street

construction costs and decrease the amount of “developable” land within the subdivision.

Cons:

1. The longest of the two cul-de sacs (as proposed), is nearly three times that allowed by the City’s Subdivision Ordinance. The allowance of the proposed cul-de-sac length (as part of a new development) could establish an undesirable precedent in the City.
2. A single street access to 18 of the subdivision’s 20 lots would limit emergency vehicle accessibility to the subdivision. A primary reason for the establishment of a maximum cul-de-sac length requirement is to ensure safety via emergency vehicle access.
3. The allowance of the cul-de-sac of excessive length, as proposed, may be considered inconsistent with the following transportation goal as provided in the City's Comprehensive Plan:
 - *Provide for the possible extension of all local streets in new subdivisions to avoid the need for cul-de-sacs*

Again, it suggested that City Officials provide feedback to the applicant regarding the acceptability of the proposed cul-de-sac length.

Right-of-Way Width. Consistent with City Code requirements, right-of way widths of 60 feet are illustrated for the two internal cul-de-sacs. Such right-of-way width is consistent with local street classification requirements as outlined in the Subdivision Ordinance.

To be noted however, is that a right-of-way width of 66 feet is proposed along 60th Street. While it is assumed such dedication is intended to “match” the existing right-of-way width, this issue should be subject to further comment by the City Engineer.

Construction Requirements. Details related to street construction and any necessary improvements, including but not limited to 60th Street and/or Trading Post Trail, should be subject to comment and recommendation by the City Engineer.

Development Density. A total of 20 lots are proposed upon the 218.6 acres subject site. The A, Agricultural District imposes a minimum density requirement of one dwelling unit per 10 acres of land. This requirement has been satisfied (218.6 acres / 20 units = 10.9 acres per unit).

Lots. The A, Agricultural District imposes a minimum lot size requirement of five acres.

In addition, a minimum width and depth requirement of 300 feet is imposed. All proposed lots meet minimum area, width and depth requirements of the A, Agricultural District and Shoreland Management District.

To be noted is that the applicant will be required to demonstrate that each proposed single family lot will have a buildable area of at least 2.5 acres. The Zoning Ordinance defines "buildable area" as land having a slope of 13 percent or less and having enough suitable soil for the installation of two on-site sewage treatment systems. The Ordinance also notes that "buildable area" may include required building setbacks.

In regard to the proposed lot configuration, it is important to note that the Natural Resources and Groundwater Committee has suggested that the subdivision design be modified to better preserve environmentally sensitive lands (steep slopes and the trout stream). Specifically, the Committee has recommended that the open space area be expanded to include the following areas:

- The northern one-half of Lots 13 and 14
- The western one-half of Lot 4
- The western one-third of Lot 3

The Natural Resources and Groundwater Committee has also prepared an alternative concept plan which incorporates the preceding recommendations (attached as Exhibit C). The alternative concept plan calls for the elimination of two lots within the subdivision.

The recommendations of the Natural Resources and Groundwater Committee should be taken into account as part of the forthcoming formal application for subdivision.

Jennifer Sorensen, East Metro Hydrologist for the Department of Natural Resources (DNR), has indicated the comments from the DNR will also include increased protection of the stream and the areas from which the stream is spring-fed, which include Lots 3 and 4.

Setbacks. Within the A, Agricultural District and the Shoreland Management District, the following minimum setbacks apply:

Side Yard:	50 feet
Front Yard:	105 feet (from roadway centerline)
Rear Yard:	50 feet
From OHWL of Trout Stream:	200 feet

It appears that all proposed lots illustrate an ability to meet the aforementioned setbacks (via illustrated building pads).

Use of Open Space. As part of formal subdivision processing, the intended use of the designated open space should be conveyed by the applicant. Of specific interest are

any intended recreational purposes and the future construction of facilities intended to accompany such uses.

According to the PLCD requirements of the Ordinance (Section 12-2383), buildings, structures and improvements located upon the undeveloped parcel must be designed in a manner which conserve and enhance the amenities of the parcel in regard to its topography and its unimproved condition.

Also to be noted is that Section 12-2381 of the Ordinance stipulates that construction of recreational facilities shown on the PLCD development plan must proceed at the same time as the construction of the dwelling units.

Homeowner's Association Requirements. Section 12-2382 of the Ordinance states that, if a homeowner's association is to be created, its various requirements (ownership requirements, bylaws, etc.) must be submitted as part of the PLCD for City review.

The applicant has provided a copy of proposed covenants, restrictions and conditions which would apply to property owners within the subdivision. Requirements include, but are not limited to, the following:

- Association duties
- Assessments
- Architectural controls
- Use of common properties
- Prohibited uses
- Water maintenance/management

Homeowner's association-related issues should be subject to further comment by the City Attorney.

Wetlands. According to the EAW, wetlands comprise 13 acres of the 219-acre subject site. Such wetlands lie along the trout stream and **presently** lie within the proposed conservation easements. In this regard, the proposed lot layout is not expected to impact any existing wetlands.

Wetland-related issues should be subject to further comment and recommendation by the City Engineer.

Easements. As a condition of subdivision approval, a conservation easement must be established over the designated open space. Such easement must run with the land in perpetuity to the following:

- The City of Afton
- All owners of the lots within the PLCD
- Landowners within Afton which abut the PLCD
- Minnesota Land Trust

In addition to the referenced conservation easement, easements for drainage, utilities and scenic preservation should be provided over individual lots as may be recommended by the City Engineer.

Septic Systems. As part of the forthcoming preliminary plat submission, primary and secondary septic sites must be illustrated in compliance with City specifications as provided in Section 12-413 of the Zoning Ordinance.

Permits for individual sewage treatment systems will be issued by the Washington County Department of Public Health. In this regard, review of proposed septic designs and final septic permits must be received from Washington County prior to building permit approval.

Park Dedication. According to Section 12-1270 of the Subdivision Ordinance, subdividers must dedicate to the City a reasonable portion of the land being subdivided for park purposes or in lieu thereof, a cash equivalent. The form of dedication, land or cash, (or any combination) must be decided by the City and dedicated or paid prior to City signing the final plat.

To be noted is that the Natural Resources and Groundwater Committee has recommended that the southwest corner of the subject site, south of the trout stream, be dedicated as City parkland.

Prior to preliminary plat consideration by the Planning Commission, the submitted sketch plan must be subject to review and recommendation by the City's Park Committee.

The City's 2012 Park Plan does not illustrate any future parks or trails within the subject site. With this in mind, a calculation of a possible cash contribution (as opposed to land dedication) is considered worthwhile. According to the Ordinance, a cash park dedication fee, in lieu of land dedication, shall be equivalent to 7.5 percent of the predevelopment value of the land to be subdivided, subject to a minimum fee of \$5,000 per dwelling unit and a maximum fee of \$10,000 per dwelling unit.

Preliminary Plat Data Requirements. As part of preliminary plat processing, informational requirements as provided in Section 12-1328 of the Subdivision Ordinance must be satisfied. Required information includes, but is not limited to, the following:

- Existing Conditions (site survey)
- Preliminary Plat
- Grading and Drainage Plan
- Erosion/Sediment Control Plan

Additional Comments. In addition to the comments provided above, any comments received from the following must also be considered as part of the sketch plan

evaluation and in the preparation of the preliminary plat:

- City Engineer
- City Attorney
- Natural Resources and groundwater Committee
- Park Committee
- Washington Soil and Water Conservation District
- Watershed District
- Natural gas, electric and cable communications utilities
- Fire District
- School District
- Other agencies not identified above but included on the EAW distribution list.

This material is scheduled to be discussed at the forthcoming June 5, 2017 Planning Commission meeting.

pc. Ron Moore, City Administrator



SOUTH WASHINGTON
WATERSHED DISTRICT

May 22, 2017

VIA EMAIL

Mr. Ron Moorse
Administrator
3033 St. Croix Trail S
Afton, MN 55001

RE: Afton Creek Preserve EAW

Dear Mr. Moorse:

I am writing in regards to the Environmental Assessment Worksheet prepared for the Afton Creek Preserve project. The EAW as prepared is generally accurate and complete. Further, we would agree that there is low likelihood for adverse environmental impact resulting from the project and that further investigation through an Environmental Impact Statement is not necessary.

It is our hope that this effort serves as a model for future developments in Afton and the surrounding communities in southern Washington County. The proposed project will protect and improve not only the water quality of Trout Brook, but the surrounding terrestrial habitat as well. The City of Afton is to be commended for the development and promotion of its Preservation and Land Conservation Development ordinance. We greatly appreciate the efforts of the developer and City to protect Trout Brook by locating the easement in the areas most critical for protection of the stream. To maintain the habitat and protection benefits of the proposed easement, we strongly discourage development of any infrastructure within its currently identified boundaries.

If you have questions or need additional information please contact me at 651-714-3714 or jloomis@ci.woodbury.mn.us.

Sincerely,
South Washington Watershed District

A handwritten signature in black ink that reads 'John Loomis'. The signature is written in a cursive, flowing style.

John Loomis
Water Resources Program Manager

Cc: Joe Bush/J.P. Bush Homes

DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
Ecological and Water Resource
1200 Warner Road
St. Paul, MN 55106

May 24, 2017

Transmitted Electronically

Ronald Moose
City Administrator
3033 St. Croix Trail S
Afton, MN 55001

Re: Afton Creek Preserve EAW

Dear Ronald Moose,

The Minnesota Department of Natural Resources (DNR) has reviewed the Environmental Assessment Worksheet (EAW) for the Afton Creek Preserve residential development located in Afton, MN. We offer the following comments for your consideration.

Land Use - Page 6 (Question 9.b.):

- The current placement of the access road into the development is located at the southeast corner of the property, which avoids the need to construct a crossing over Trout Brook. If the road into the development were located elsewhere along 60th Street South, construction of a road crossing over Trout Brook would be required, potentially impacting the stream itself and associated adjacent wetland areas, including areas where groundwater recharges the stream. Groundwater is an important source of cold water to streams like Trout Brook that support coldwater fish species (i.e. trout).
- Provide a narrative to justify the statement made that this development is in concert with Afton's comprehensive plan and growth plan.

Water Resources - Page 8 (Question 11.a.ii.):

- In this section, note whether the woodland area located adjacent to Trout Brook in the open space conservation easement and Lots 3 and 4 was examined for springs and if any springs were identified. Include a narrative in this section describing the potential for increased groundwater flow at this location due to topography and proximity to the water table. Wood land areas like this, with steeper topography draining toward a stream, may have springs where groundwater is coming to the surface. Even if there is not surface water in the form of springs, the likelihood is high that this area has shallow groundwater that is migrating toward Trout Brook and which provides groundwater recharge to the stream.
- In agricultural areas that have been farmed for 160 years, old wells are often found that no one knew existed. If any unknown wells are found on site, these must be sealed in accordance with the regulations of the Minnesota Department of Health.

Water Resources – Page 8 (Question 11.b.ii.)

- Show on a map where the vegetative buffer strips will be located on Lots 1 – 10 and Lots 16 – 17.

Water Resources – Page 9 (Question 11.b.iii.)

- Please note that any dewatering of volumes that exceed 10,000 gallons per day, or one million gallons per year need to be approved by a DNR Water Appropriation Permit. This includes dewatering for grading, installing footings for structures, and to install pipes for sanitary systems. The use of more than 10,000 gallons of water per day for watering trees, grass, and landscaping using watering trucks needs approval under a DNR Water Appropriation Permit as well. A Water Appropriation Permit may be applied for online using the following website: <http://www.dnr.state.mn.us/mpars/>
- Lot sizes in this development are approximately 5 acres. During drought, the irrigation of 1.5 acres of landscaping will use more than 1 million gallons of water per year. The new homes should be designed to minimize irrigated landscaping to avoid the need to obtain a DNR Water Appropriation Permit.

Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features) – Page 13 (Question 13.c.):

- Provide a more detailed explanation of how the buffer plan will assist with onsite erosion and sedimentation created by development. Describe how the buffer will enhance wildlife habitat. Explain what types of invasive species management will be done on disturbed areas and what plant communities will be located in these disturbed areas post-development. Explain what specific habitat enhancement will be done to protect state listed species during construction.

Figure 3 – Site Sketch - Page 21:

- The shoreland district boundary shown on the concept plan should be 300 feet wide on both sides of Trout Brook (the width of shoreland districts for rivers and streams), not 1,000 feet wide.
- The conservancy overlay boundary, which designates sensitive areas within Afton, is shown as approximate. Adjust this boundary to reflect the terrain and resources on this specific site.
- There are sensitive areas covering much of Lots 3 and 4 (wooded areas and steep slopes). This woodland area is directly adjacent to Trout Brook and likely contains springs that supply cold groundwater to the stream. DNR recommends inclusion of these sensitive areas into the open space conservation easement to protect this habitat and source of groundwater to the stream.

Appendix B – Lot Buffer Plan

- The buffer plan is not complete and needs to include a narrative and maps that explain the details of the plan. Why are individual landowners responsible for planting buffers rather than the developer? Wouldn't it make more sense to get the buffers established early rather than at an unknown point in the future when lots are sold? How will the buffers be monitored over time to ensure that they become established? Will there be a buffer easement that keeps the buffers in place long-term and prevents encroachment into the buffer areas?

Thank you for the consideration of our comments.

Sincerely,

/s/ Rebecca Horton

CC: Jen Sorenson, Area Hydrologist

Joe Richter, Appropriations Hydrologist

EXHIBIT "G"

AFTON CREEK PRESERVE
HOMEOWNERS ASSOCIATION DRAFT AND
RESTRICTIVE COVENANTS
AUGUST 10 2017

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DECLARATION OF COVENANTS,
CONDITIONS AND RESTRICTIONS

AFTON CREEK PRESERVE

THIS DECLARATION, made this 8th day of May 2017 by (Developer) Custom Homes by JP Bush and (Declarant) Will Carlson as holders of the encumbrance recited in the consent and joinders attached hereto.

WITNESSETH:

WHEREAS, Declarant is the owner of the real property described in Article II of the Declaration; and

WHEREAS, Declarant desires to provide for the preservation of the values and amenities in the community and for the maintenance of the private open spaces and to this end desires to subject the real property described in Article II, Section 1 to the

easements, restrictions, covenants, conditions, charges and liens set forth in this Declaration, each and all of which is and are for the benefit of the property and each owner thereof; and

WHEREAS, Declarant has deemed it desirable for the efficient preservation of the values and amenities in the community to create an agency to which should be delegated and assigned the power of maintaining the open spaces, administering and enforcing the covenants and restrictions contained in this Declaration and collection and disbursing the assessments and charges created by this Declaration.

WHEREAS, Declarant will incorporate, under the laws of the State of Minnesota, as a non-profit corporation, Afton Creek Preserve Homeowners Association for exercising these functions;

NOW, THEREFORE, Declarant declares that the real property described in Article II Section 1 hereof is, and shall be, held, transferred, sold, conveyed and occupied subject to the following covenants, conditions, restrictions, easements, charges and liens (sometimes referred to as “covenants and restrictions”), which covenants and restrictions shall run with the real property and be binding on all parties having any right, title or interest in the hereinafter described properties or any part thereof, their heirs, successors and assigns, and shall inure to the benefit of each owner thereof.

ARTICLE 1 DEFINITIONS

The following words, when used in this Declaration (unless the context shall prohibit) shall have the following meanings:

(a) CONDITIONAL USE PERMIT SEC. 12-78

A. Purpose. The purpose of a conditional use permit is to provide the City of Afton with a reasonable degree of discretion in determining the suitability of certain designated uses upon the general welfare, public health and safety. In making this determination, whether or not the conditional use is to be allowed, the City may consider the nature of the adjoining land or buildings, the effect upon traffic into and from the

premises or on any adjoining roads, and all other factors the City shall deem a prerequisite of consideration in determining the effect of the general welfare, public health and safety. Conditional Use permits may be granted in accordance with this subdivision for any use or purpose listed as a conditional use for the zoning districts per Section 12-134 of the Zoning Ordinance.

- (b) **PLCD:** A PLCD is a tract of land that is developed as a unit under single or unified ownership or controls. A Preservation and Land Conservation Development may be allowed in the AG zoning district to preserve prime agricultural land, woodland, wildlife habitat, vistas, groundwater recharge areas, areas with sensitive soils or geological limitations and areas identified in the Comprehensive Plan.
- (c) **Minnesota Land Trust:** The Minnesota Land Trust is a member-supported, nonprofit conservation organization protecting natural and scenic land in Minnesota. *Established in 1993* working with landowners and local communities to protect shoreline on lakes, rivers, streams and wetlands.
- (d) **PLCD Land Dedication:** The land owner will grant a Conservation Easement which shall run with the land in perpetuity to the City of Afton, Homeowners Association, and the Minnesota Land Trust which restricts the lots and parcels, as well as the development rights on the undeveloped parcel, within the PLCD to the number of dwelling units approved for the PLCD and the land cover and use approved by the City of Afton as a part of the PLCD **ARTICLE XII. LAND USE SECTION OF THE CITY CODE**. In Addition: All land shown on the final development plan as an undeveloped parcel must be conveyed to a homeowners association for the maintenance of the planned development. The undeveloped parcel must be conveyed to the homeowners association to be approved by the City Council which restrict the undeveloped parcel to the uses specified on the final development plan and which provide for the maintenance of the undeveloped parcel in a manner which assures it continuing use for its intended purpose.

- (e) **Scenic Easements:** A part of the land being developed that has sensitive slopes, soils, and unique features is allowed to have a protection layer called a Scenic easement. For the purposes of this PLCD application and plan the Scenic Easements are indicated on the site plan and cover mostly the North Boundary of lots 9-15 and a part of lot 2 and 3 in the location of the restoration project by South Washington Watershed and Prairie restoration in 2015.
- (f) **Association:** Afton Creek Preserve Homeowners Association, a Minnesota non-Profit Corporation.
- (g) **Declarant:** Albert Wilmer Carlson, its successors and assigns, if such successor or assign shall acquire more than one Lot from the Declarant for the purpose of development. Notwithstanding the foregoing, no individual or entity acquiring a Lot from the Declarant shall become the Declarant solely by such acquisition, but only because of specific assignment of Declarant rights, which assignment shall be effective unless incorporated in the instrument of conveyance.
- (h) **Mortgagee:** any entity or person named as mortgagee in any mortgage deed Granting a lien (“Mortgage”) on any Lot.
- (i) **Afton Creek Preserve or the Property:** the property subject to this Declaration, and any additions subject to this Declaration or any Supplementary Declaration, pursuant to Article II.
- (j) **Living Unit:** a residential housing unit consisting of a group of rooms and Hallways and attached garage, which are designed and intended for use as Quarters for one family and located on a lot.
- (k) **Lot:** any Lot contained on a recorded plat of Afton Creek Preserve.
- (l) **Member:** each Owner entitled to membership in the Association pursuant to the provisions of Article III.
- (m) **Owner:** the record Owner or contract vendee of the fee simple title to any Lot, but excluding contract vendors, mortgagees or any others having such interest merely as security for the performance of an obligation.
- (n) **Developer:** a person or entity designated by the Declarant to supervise and manage the initial development and approval of Afton creek Preserve.
- (o) **Common Property:** Property owned by the Association.
Natural Planting Areas: Planting areas of natural and ornamental grasses, Wildflowers and groves of trees and shrubs that must cover 50% or more Of each lot and the areas shown on the site plan known as the Minnesota Land Trust Conservation, excluding the buildings and hard surface areas such as patios In addition, driveways. Areas that adjoin designated wetlands or natural drainage Swales shall be a low maintenance filter strip of grasses or vegetation In addition, ground covers mulches.

- (p) **Limited Common Areas:** Those areas of the public right-of-way and Individual lots that have landscaping or pathway easements that are Designed to benefit the owner and the Association.

ARTICLE II PROPERTY SUBJECT TO THIS DECLARATION

Section 1. **The plat Afton Creek Preserve.**

The real estate subject to this Declaration is Located in Washington County, Minnesota and is described on the attached Exhibit A,

ARTICLE III MEMBERSHIP AND VOTING RIGHTS IN THE ASSOCIATION

Section 1. **Membership.** Each Owner of a Lot is a Member of the Association. Membership shall be appurtenant to and may not be Separated from ownership.

Section 2. **Voting Rights.** The Association shall have two (2) classes of Voting membership:

Class A. Class A Members shall be all Owners of one or more Lots, except Declarant. When more than one person or entity shares ownership of a Lot, the vote shall be exercised as they determine among themselves.

Class B. The Class B Member shall be the Declarant. The Class B Member shall be entitled to three (3) votes for each Lot owned by it.

The Class B membership shall cease and be converted to Class A membership when the Declarant conveys fee title to the last of the Lots in Afton Creek Preserve which the Declarant currently owns.

Section 3. **Suspension of Voting Rights.** The right of any Member to vote shall be Suspended during any period in which such Member shall be delinquent in the Payment of any assessment levied by the Association. Such rights may also be Suspended, after notice and hearing, for a period not to exceed sixty (60) days For any infraction of any rules or regulations published by the Association.

ARTICLE IV DUTIES OF ASSOCIATION

Section 1. General Requirments for PLCD

All land shown on the final development plan as an undeveloped parcel must be conveyed to a homeowners association for the maintenance of the planned development. The undeveloped parcel must be conveyed to the Homeowners association subject to covenants to be approved by the City Council which restrict the undeveloped parcel to the uses specified on the final development plan and which provide for the maintenance of the undeveloped parcel in a manner which assures it continuing use for its intended purpose.

Section 2. Landscaping and seeding of conservation and development.

The Declarant shall initially install immediately as weather and road construction permits Landscaping and Prairie grass seeding and the Association shall maintain such landscaping

On public areas and open space (conservation areas) consisting of street islands, entrance monuments, and parts Of boulevards, and lots until such time as either lots are sold or Association takes control.

Section 3. **Collection of Garbage.** Should City of Afton not provide garbage Collection services to the Owners, the Association shall be empowered to Contract with private vendors for the collection of garbage in Afton creek Preserve.

Section 4. Enforcement of Covenants and Restrictions; Architectural Control.

The Association shall be responsible for the enforcement of the covenants and Restrictions contained in this Declaration, and of the architectural controls.

Section 5. **Common Property.** The Association, subject to the rights of the Owners set forth in this Declaration, shall be responsible for the exclusive Management and control of the Common Property, if any, and all improvements Thereon (including furnishings and equipment related thereto) and shall keep the Same in good, clean, attractive and sanitary condition order and repair.

ARTICLE V ASSESSMENTS

Section 1. **Creation of Assessments.** The Declarant, for each Lot owned by it hereby covenants, and each Owner of any Lot, by acceptance of a deed for a Lot, whether or not it shall be so expressed in the deed or any conveyance, is deemed to agree to pay to the Association: (a) annual assessments, and (b) any Individual Lot Maintenance Assessments levied against the Owner's Lot pursuant to the provisions of this Declaration.

Section 2. **Purpose of Annual Assessments.** The annual assessments shall be levied for paying the costs associated with the duties of the Association as set forth in Article IV hereof, together with the incidental costs of operating the Association.

Section 3. **Levy of Annual Assessments.** The annual assessment must be fixed at a uniform rate for each Lot. The annual assessment shall be due and payable each May 1, beginning on May 1, 2018. The annual assessment for each lot due May 1, 2018 shall not exceed \$xxx.xx plus the actual cost of garbage removal service. For the following years, the annual assessment shall be levied by the Association, based upon a proposed budget. The annual assessment may be increased, without a vote of the Membership, by not more than \$xx.xx per Lot, per year; provided that the costs of garbage removal service shall always be in addition to such increases. In order to increase the annual assessment more than the maximum amount established in this Section, a vote of 67% of the votes of each class of membership cast by the members present, in person or by proxy at a meeting of the Association called for that purpose shall be necessary. The Board of Directors of the Association shall fix the amount of the annual assessment in an amount not in excess of the maximum. The annual assessment for each year shall be fixed, and written notice provided to each Owner at least thirty (30) days prior to May 1 of the year in which the assessment is due. Failure to provide such notice, however, shall not render the assessment invalid.

Section 4. **Individual Lot Maintenance Assessments.** In the event that any Owner violates any covenant or fails to perform any condition contained in this Declaration, the Association may perform the act, remove the defect or correct the violation upon thirty (30) days written notice to the Owner, and, as appropriate, pursuant to the procedures contained in Article VI. If the Association so acts on behalf of an Owner, the Association may levy an assessment (hereinafter, "Individual Lot Maintenance Assessment") against the Lot for the cost of the performance or correction

Section 5. **Special Assessments for Capital Improvements.** In addition to the Annual Assessments authorized above, the Association may levy, in any assessment year, a special assessment applicable to that year only for the purpose of defraying, in whole or in part, the cost of any construction, repair or replacement of any capital improvement upon the Common Property, including fixtures and personal property related thereto, provided that each such assessment shall have the assent of Members holding two-thirds (2/3) of the votes in each class of voting membership who are voting in person or by proxy at a meeting duly called for this purpose.

Section 6. **Effect of Nonpayment of Assessment; Remedies of Association.** The annual assessments and Individual Lot Maintenance Assessments shall be fixed as provided in this Declaration. If any such assessment is not paid when due, it shall become delinquent and shall, together with interest at a rate of eight percent 8% per annum, any cost of collection and any attorney's fees, become a continuing lien on the Lot and shall also be the personal obligation of the Owner of the Lot at the time the assessment is made. The lien may be enforced and foreclosed by action in the same manner in which mortgages may be foreclosed in Minnesota. Each Owner, by acceptance of a deed for any Lot, shall be deemed to give full and complete power of sale to the Association and to consent to a foreclosure of the lien by advertisement. The Association may elect to bring an action at law against the Owner personally obligated to pay the assessment.

Section 7. **Subordination of Lien to First Mortgages.** The lien of assessments provided for herein shall be subordinate to the lien of any first Mortgage, and the sale or transfer of any Lot shall not affect the assessment lien. However, the sale or transfer of any Lot pursuant to the foreclosure of a First Mortgage, or pursuant to any other proceeding or arrangement in lieu of such foreclosure, shall extinguish the lien of such assessments as to installments which became due prior to the effective date of such sale, transfer or acquisition by the Mortgagee to the end that no assessment liability shall accrue to an acquiring Mortgagee except with respect to installments of assessments becoming due after possession has passed to such acquiring Mortgagee, whether such possession has passed at the termination of any period of redemption or otherwise. In the event of the extinguishment of such assessment lien as aforesaid, the entire amount of such unpaid assessment shall be reallocated and assessed against, and payable by the Owners of all other Lots exclusive of such mortgaged Lot. No such sale, transfer or acquisition of possession shall relieve an Owner or a Lot from liability for any assessments thereafter becoming due or from the lien thereof, or shall relieve the person personally obligated to pay the assessments, which were levied prior to the transfer of such property from the personal obligation to pay the same.

Section 8. **Exempt Property.** The following property subject to this Declaration shall be exempted from the assessments, charges and liens created herein:

- (a) All properties to the extent of any easement or other interest therein dedicated to and accepted by the local public authority and devoted to public use;
- (b) All properties exempted from taxation by the laws of the State of Minnesota upon the terms and to the extent of such legal exemption; and
- (c) All Common Property.

Notwithstanding any provision herein, no land or improvements devoted to Dwelling use shall be exempt from said assessments, charges or liens.

ARTICLE VI ARCHITECTURAL CONTROL

Section 1. **Architectural Control Committee.** There shall be established an Architectural Control Committee (ACC) consisting of three persons. The members of the ACC shall be appointed by Declarant until Declarant no longer owns any lots or until December 31, xxxx, whichever is sooner. For purposes of this section, "Lots" shall include any property annexed by Declarant pursuant to annexed by Declarant pursuant to Article II. After the termination of Declarant's right to appoint the ACC members, members shall be appointed and serve at the pleasure of the Board of Directors of the Association.

Section 2. **Original Construction.** A site plan, landscaping plan and plans and specifications for the construction of a Living Unit on any Lot shall be submitted to the ACC for its written approval before any construction activity is begun.

Section 3. **Review of Modifications.** After the completion of the original Living Unit on a Lot, the construction or modification of any building or structure, including fences and mailboxes or the retaining walls or monuments constructed by the Declarant, shall require prior written approval by the ACC of the plans and specifications for the construction, in accordance with the standards set forth in Section 4 hereof.

Section 4. **Standard of Review.** The ACC may promulgate detailed standards and procedures governing its areas of responsibility and practice. In addition, the following shall apply: the plans and specifications shall be reviewed as to the quality of workmanship, design and harmony of external design with existing structures, topography, and finish grade elevation. No permission or approval shall be required to repaint in accordance with an originally approved color scheme, or to rebuild in accordance with originally approved plans and specifications. Nothing contained herein shall be construed to limit the right of an Owner to remodel the interior of the owners' residence or to paint the interior of the owners' residence any color desired.

Section 5. **Procedure.** If the ACC fails to approve or disapprove plans and specifications within thirty (30) days after the submission of the same to it, approval will be deemed to have been granted. In the event of disapproval by the ACC, the requesting Owner may give written notice that the Owner wishes to appeal the ACC decision and request a hearing by the Association's Board of Directors. Such notice must be furnished to the ACC within ten (10) days of its decision. The hearing shall be at a special meeting of the Board of Directors to be held within thirty (30) days of the receipt of the Owner's notice of appeal.

Section 6. **Removal and Abatement.** The ACC or the Association shall have the right to order an Owner to remove or alter any structure on any Lot erected in violation of the terms of this Declaration, and to employ appropriate judicial proceedings to compel the alteration or demolition of any non-conforming construction or other violation. Any cost incurred by the ACC shall be levied as an Individual Lot Maintenance Assessment as provided in Article V.

Section 7. **Variances.** Reasonable variances to the covenants, conditions and restrictions may be granted by the ACC after review, in order to overcome practical difficulties or to prevent unnecessary hardship. A variance may only be granted if it is not detrimental to other property and shall not defeat the purpose of this Declaration.

ARTICLE VII

RESERVED RIGHTS OF DECLARANT IN THE COMMON PROPERTY

Declarant shall have the following rights in the Common Property:

- (a) To be determined in land agreements with Minnesota land trust and The Minnesota DNR.

ARTICLE VII

PROPERTY RIGHTS IN THE COMMON PROPERTIES

Section 1. **Easements.** Subject to the provisions of Section 2 hereof, there shall exist the following easements in favor of each Owner and appurtenant to such Owners' Lots or Outlots across and upon the Common Property:

- (a) Non-exclusive easements to construct, install, repair and replace sanitary and storm sewer, water, gas, electric, telephone, cable television and other utility lines serving such Lot or Outlot in the location the same shall be initially constructed or installed by the Declarant, or such other location as may be approved by the Board of Directors of the Association;
- (b) A non-exclusive easement for the use and enjoyment of the Common Property developed for open-space or recreational purposes;
- (c) A non-exclusive easement over the Limited Common Properties;
- (d) A non-exclusive easement for pathway and/or landscaping purposes over part of Lots described in Exhibit B.

Section 2. **Extent of Members' Easements.** The rights and easements created Hereby and the title of the Association to the Common Property shall be subject to the following, and as further provided herein:

- (a) The right of the Association, in accordance with its Articles and Bylaws, to borrow money for the purpose of improving the Common Property, and in aid thereof to mortgage said Common Property; however, the rights of such mortgagee in the Common Property shall be subordinate to the rights of the Members hereunder;
- (b) The right of the Association to take such steps as are reasonable necessary to protect the Common Property against foreclosure;
- (c) The right of the Association, as provided in its Articles and Bylaws, to suspend the voting and enjoyment rights of any Member for any period during which any assessment remains unpaid, as provided in the Association's Bylaws;
- (d) The right of the Declarant to make use of such portions of the Common Property as may be necessary and incidental to the construction of any incidental improvements upon the property and such other rights as are contained in Article IV hereof;

(e) The rights of the Association to dedicate or transfer all or any part of the Common Property to any public agency, authority or utility such purposes and subject to such conditions as may be agreed to by the Members, provided that no such dedication or transfer, determination as to the purposes or as to the conditions thereof shall be effective unless an instrument signed by Members entitled to cast two thirds (2/3) of the votes of each class of membership has been recorded agreeing to such dedication, transfer, purpose or condition, and unless written notice of the proposed agreement and action thereunder is sent to every Member at least ninety (90) days in advance of any action taken. The consent requirements of Articles XII, Section 3, if applicable, must also be satisfied to effect a valid dedication

Nothing herein contained shall be construed as a dedication of any part of the Common Property to the public or to public use.

Section 3. **Title to Common Property.** Declarant shall convey legal title to the Common Property, if any, to the Association prior to December 31, xxxx.

Section 4. **Taxes and Special Assessments on Common Property.** Taxes and special assessments that would normally be levied against the Common Property shall be divided and levied in equal amounts against the Lots or Outlots or as the governmental taxing authorities shall determine, which levies shall be a lien against such individual Lots and Outlots.

Section 5. **Delegation of Rights.** Any Owner may delegate the Owners right and easement of enjoyment in and to the Common Property to the members of the Owners family, guests or to tenants who reside on the Lot.

ARTICLE IX INSURANCE

Section 1. **Liability Insurance; Fidelity Bonds.** The Board of Directors of the Association, or its duly authorized agent, shall obtain a broad form of public liability insurance covering all of the Common Property insuring the Association, with such limits of liability as the Association shall determine to be necessary. Such insurance policy shall contain a “severability of interest” clause, which shall preclude the insurer from denying the claim of an owner because of the negligence of the Association or other Owner. Any policy or bond contained hereunder shall provide that it may not be canceled or substantially modified (including cancellation for nonpayment of premium) without at least thirty (30) days’ prior written notice to First Mortgagees.

Section 2. **Casualty Insurance on Insurable Common Property.** The Association shall keep all insurable improvements and fixtures on the Common Property insured against loss or damage by fire for the full insurance replacement cost thereof, and may obtain insurance against such other hazards and casualties, as the Association may deem desirable. The Association may also insure any other property whether real or personal, owed by the Association, against loss or damage by fire and such other hazards as the Association may deem desirable, with the Association as the owner and beneficiary of such insurance. The insurance coverage with respect to the Common Property shall be written in the name of, and the proceeds thereof shall be payable to, the Association for the repair or replacement of property for which the insurance was carried. Premiums for all insurance carried by the Association are common expense included in the annual assessments.

Section 3. **Replacement or Repairs of Common Property.** In the event of damage to or destruction of any part of the Common Property, the Association shall repair or replace the same from the insurance proceeds available. If such insurance proceeds are insufficient to cover the cost or repair or replacement of the property damaged or destroyed, the Association may make a reconstruction assessment against all Owners to cover the additional cost of repair or replacement not covered by the insurance proceeds, in addition to any other assessments made against such Owners. Mortgagees shall receive notice from the Association to n the event of any damage or destruction to the Common Property in excess of \$xxxx. Any reconstruction assessed hereunder shall be adopted in accordance with the procedures set forth in Article V of this Declaration with respect to annual assessments and special assessments, as therein provided, and the lien of any reconstruction assessment levied hereunder shall be subordinate to the lien of any Mortgage, in the same manner and to the same extent as the subordination of annual assessments and special assessments, as provided in Article V, of this Declaration.

Section 4. **Annual Review of Policies.** All insurance policies shall be reviewed at least annually by the Board of Directors in order to ascertain whether the coverage contained in the policies is sufficient to make any necessary repairs or replacements of the Common Property, which may have been damaged or destroyed.

ARTICLE X PROHIBITED USES

Section 1. **Use.** No Lot shall be used except for residential purposes; no Living Unit shall be erected, altered, placed or permitted to remain on any Lot other than one single family dwelling, not to exceed two (2) stories in height, and an attached garage for at least two (2) cars and on-site parking spaces to accommodate at least two (2) cars. No garages shall be erected on any site except attached garages and no attached garage for more than three (3) cars shall be permitted without the express written approval of the Architectural Control Committee. Provided, however, that these provisions do not apply to the existing residences and garages on Lot 3 and lot 20. Detached Garages and out buildings may be considered in this declaration at a later date.

Section 2. **Subdivision.** No Lot shall be subdivided or split by any means whatsoever into any greater number of residential Lots, nor into any residential plots of smaller size without the express written consent of Afton City.

Section 3. **Standards.** All uses of the Lots shall, as a minimum, comply with the zoning and other applicable ordinances and regulations of Afton. The standards herein contained shall be considered as requirements in addition to said zoning and other applicable ordinances and regulations.

Section 4. **Minimum Square Footage and Set Back Provisions.** The Architectural Control Committee shall have the right to restrict setbacks.

Section 5. **Signage.** No sign shall be placed on any Lot or within the Property without the express written consent of the Architectural Control Committee, except that one “for sale” sign may be placed on a Lot by an Owner of the Developer without Committee approval.

Section 6. **Pets and Animals.** TBD

Section 7. **Home Occupation.** No profession or home industry shall be conducted in any Living Unit or on any Lot without the specific written approval of the Declarant as herein before defined or by the Architectural Control Committee thereafter. The Declarant of the Committee, whichever has authority at the time in question, in its discretion, upon consideration of the circumstances in each case, and particularly the effect on surrounding property, may permit a Lot to be used in whole or in part for the conduct of a profession or home industry. No such profession or home industry shall be permitted, however, unless it is considered by the Declarant or by the Architectural Control Committee, whichever then has authority, to be compatible with the residential neighborhood. Home occupations are permitted within the home that does not create a nuisance or excessive vehicular traffic within the neighborhood.

Section 8. **Nuisances.** No clothesline or drying yards or pet control lines shall be permitted unless concealed by hedges or screening acceptable to the Committee. No weeds or other unsightly growths shall be permitted to grow or remain upon the premises. No refuse pile or unsightly objects shall be allowed to be placed or suffered to remain anywhere thereon. In the event that an Owner of any Lot shall fail or refuse to keep such premises free from weeds, or refuse piles or other unsightly objects, then the Declarant or the Association may enter upon such lands and remove the same at the expense of the Owner and such entry shall not be deemed as trespass and in the event of such a removal, a lien shall arise and be created in favor of the Association and against such Lot for the full amount chargeable to such Lot and such amount shall be due and payable within thirty days after the Owner is billed therefor. No Lot shall be used in whole or in part for the storage of rubbish of any character whatsoever, nor for the storage of any property of thing that will cause such Lot to appear in an unclean or untidy condition or that will be obnoxious to the eye; nor shall any substance, thing, or material be kept upon any Lot that will emit foul or obnoxious odors, or that will cause any noise that will or might disturb the peace, quiet, comfort, or serenity of the occupants of surrounding property. The outside storage of an unlicensed motor vehicle upon the premises shall also be considered a nuisance.

Section 10. **Leasing.** Any lease between an Owner and non-Owner occupant shall be in writing and shall provide that the terms of the lease shall be subject in all respects to the provisions of this Declaration, the Articles of Incorporation and By-Laws of the Association, and shall provide that any failure by the Non-Owner occupant to comply

with the terms of such documents shall be default under the lease. Other than the forgoing, there shall be no restrictions on the use of a Living Unit by a non-Owner occupant.

Section 11. **Fences, Walls and Hedges.** Boundary walls and fences are inconsistent with the intended plan of development for the Property. No wall or fence shall be constructed or hedge planted on any Lot until the height, type, design, and location have been approved in writing by the Committee. Under no circumstances shall a boundary wall, fence or hedge be permitted with a height of more than six (6) feet. The height or elevation of any wall, fence or hedge shall be measured from the existing elevations on the property at or along the applicable point or lines. Any question as to such heights may be completely determined by the Committee. The height limitations as set forth in this paragraph shall not be applicable to tennis courts enclosures provided such enclosures have been approved by the Committee. A refusal by the Committee to allow or permit a fence, wall or hedge (including tennis court enclosures and swimming pool fences) on any particular Lot or in any particular location shall not be construed to be an abuse of discretion.

Section 12. **Storage Tanks.** No permanent storage tanks of any kind shall be erected, placed or permitted on any Lot unless buried or effectively screened from view outside the Lot.

Section 13. **Temporary Structures.** No structure of temporary character, trailer, basement, tent, shack, garage, barn or other building shall be used on any Lot at any time as a residence, either temporarily or permanently.

Section 14. **Auxiliary Structures.** No detached dog kennels, runs or enclosures shall be permitted unless design and location of it shall be approved by the Architectural Control Committee. No detached storage buildings shall be permitted except those approved by the Architectural Control Committee as conforming in design and appearance to the dwelling, and which are located in the proximity of the dwelling or garage.

Section 15. **Driveways.** Driveways must be constructed of concrete, bituminous or other hard surface material. Material and installation shall be subject to approval of the Architectural Control Committee. Driveways must be installed within one year of the date of a Certificate of Occupancy issued for any dwelling constructed upon a Lot.

Section 16. **Exterior Lighting.** All exterior lighting fixtures and standards shall be shown on submitted plans and shall comply with the overall lighting plan of the Declarant. All forms of exterior lighting shall be subject to approval of the Committee.

Section 17. **Exterior Ornaments.** Exterior ornaments including but not limited to precast concrete, plastic or wood figurines, wishing wells and windmills shall be prohibited unless approved by the Committee prior to installation or construction.

Section 18. **Antennas.** Except with the prior written approval and authorization of the Committee, no satellite dishes over 24” in diameter, no exterior television or radio antenna of any sort shall be placed, allowed or maintained upon any portion of a Lot or the improvements or structures located thereon.

Section 19. **Completion of Construction of Improvements.** All construction work shall, upon approval of plans by the Committee, be carried on with dispatch; all improvements shall be constructed in conformity with the then existing building codes of Afton Minnesota; and all building plans shall be prepared by or under supervision of a registered architect, a builder or qualified design professional. If any structure is begun after approval of the plans provided in Article VI and is not completed within one year after the commencement of said construction, and in the judgment of the Developer of the Architectural Control Committee, it is offensive or unsightly in appearance, the Developer or the Committee, may take such steps as may be necessary to make the Property harmonious with other properties, such steps including completion of the exterior of the structure, screening or covering the structure or any combination thereof, or similar operations. The amount of any expenditure made in so doing shall be the personal, joint and several obligations of the Owner or Owners, shall be a lien on the Lot, and may be foreclosed in the same manner as proved in Article V. The lien herein shall not be valid as against a subsequent bona fide purchaser of the Lot in question unless a statement setting forth the claim had been filed for record in the office of the County

\Recorder and/or Registrar of Titles of Washington County, whichever is appropriate, or unless a suit and appropriate Lis Pendens to foreclose the lien shall have been filed of record in the office of the County Recorder and/or Registrar of Titles of Washington County prior to the recordation of the Deed conveying the Lot in question to said purchaser.

ARTICLE XI OWNER'S DUTIES

Section 1. **Minimum landscape plan.** Each owner is required to submit a landscape plan for approval. Owners shall be charges with the maintenance or enhancement of natural plantings. In addition, all lots must be sodded, seeded, mulched, or retained as natural areas within 90 days after substantial completion of the living unit, except those living units completed from November to March of each year shall have until the following June to complete the minimum landscape plan. Should an Owner fail to respect these duties, the Association reserves the right to seed, sod or plant an area and levy an Individual Lot Maintenance Assessment against such Lot for the costs incurred by the Association.

Section 2. **Mailboxes.** Each Owner shall maintain a mailbox of the design and type initially installed by the Declarant or as on file with the Association. The mailboxes shall be on public right-of-way, and may be located in groups of two (2) or more. The Association reserves the right to levy an Individual Lot Maintenance Assessment against a Lot, pursuant to the provisions of Section 4, Article V hereof, should an Owner fail to maintain the mailbox.

Section 3. **Maintenance and Repair.** In order to preserve the uniform and high-standard appearance of the Property, each Owner undertakes responsibility for maintenance and repair of the exterior of his Living Unit, private yard area and private driveway on the Lot. Such responsibility for maintaining the Lot and improvements thereon shall include, but not be limited to the following: the maintenance and repair of exterior surfaces of all buildings on the Lot, including without limitation, the painting of the same as often as necessary, the replacement of trim and caulking, the maintenance or repair of roofs, gutters, downspouts and overhangs, the maintenance and repair of exterior windows and doors, necessary painting, staining and repair of patio structures; in maintain Private Yard Areas and private driveways an Owner shall be required to mow,

trim, water or otherwise care for grass, trees or other plants located on a Lot and shall be required to remove snow from the private driveways, parking areas and walkways to the Living Unit. Maintenance, painting and construction shall be in the original colors and materials, or according to approved color boards on file with the Association. Other colors and materials may be approved by the Architectural Control Committee.

ARTICLE XII GENERAL PROVISIONS

Section 1. **Association Easement.** The Association shall have an easement to enter upon any Lot in order to perform any obligations or duties of the Association hereunder, or to exercise any right or remedy of the Association hereunder.

Section 2. **Duration of Declaration of Covenants, Restrictions and Easements.** The covenants, restrictions, and easements of this Declaration shall run with and bind the land and shall inure to the benefit of and be enforceable by the Association or the Owner of any Lot subject to this Declaration, or their respective legal representatives, heirs, successors and assigns. The easements set forth herein shall be perpetual. The covenants and restrictions herein set forth shall have a term of twenty (20) years from the date this Declaration is recorded, after which time, said covenants and restrictions shall be automatically renewed for successive periods of ten (10) years. The covenants and restrictions of this Declaration may be amended during the first twenty (20) year period by an instrument signed by not less than seventy-five percent (75%) of the Owners and thereafter by an instrument signed by not less than sixty-seven percent (67%) of the Owners. Any amendment must be properly recorded.

Section 3. **Enforcement.** In the event, any Owner fails to comply with the provisions of this Declaration, or the Bylaws or Articles of Incorporation of the Association or with decisions of the Association which are made pursuant thereto, such failure will give rise to a cause of action on the part of the Association, or any aggrieved Owner for the recovery of damages or for injunctive relief, or both. Owners shall have a similar right of action against the Association. Enforcement of these covenants and restrictions may be by any proceeding at law in equity.

Section 4. **Severability.** Invalidation of any one of these covenants or restrictions by judgment or court order shall in no wise affect any other provision, which shall remain in full force and effect.

Section 5. **Rules and Regulations.** The Board of Directors of the Association may, from time to time, adopt such rules and regulations as the Board, in its sole discretion, deems appropriate or necessary, including, without limiting the generality of the foregoing, additional rules and regulations concerning the use of parking areas, maintenance of the Common Areas, reservation policies for the tennis courts and additional rules and regulations concerning the appearance of each Lot and utilization of ponding areas. Furthermore, the Association will adopt stocking, catch, and release Policies for any fishing allowed by DNR on the Trout Brook. To help insure the continuing water quality of the Trout brook, the Association will adopt rules and regulations limiting the use of chemical fertilizers.

Section 6. **Rights of Declarant.** Until the last Lot is sold and conveyed to an Owner other than a Declarant, the following activities by Declarant or with the written consent of Declarant will not be deemed violations of restrictions contained in this Declaration:

- (a) The use of a Lot or Lots for model and sales office purposes;
- (b) The storage of a construction trailer, equipment, materials and earth during the construction of new Living Units;
- (c) The display of signs advertising the Property, or new Living Units and the maintenance of temporary fencing, walkways, landscaping and berming in the vicinity of model and sales units.

ARTICLE XII RIGHTS OF MORTGAGEES

Section 1. **Mortgagee is Rights.** Notwithstanding any other provisions of this Declaration, the Articles of Incorporation or the By-Laws of the Association, the

provisions of this Article XI shall control, and in the event of a conflict between the provision of this article and the provisions of such Declaration, Articles or By-Laws, the provisions of this article shall control.

Section 2. **Notice of Default.** Any Mortgagee holding a first Mortgage on a Lot, and who shall have previously filed a written request with the Association, shall be entitled to written notification of any default by the mortgagor or Owner of such Lot or his, or their, heirs, successors or assigns in the payment of any assessments or the performance of any other duties or obligations herein set forth which shall have remained in default for a period of thirty (30) days or more. The neglect or failure of the Association to tender such notice to the Mortgagee shall toll the running of any time limits applicable to the procedure for the collection of such assessment of remedies available to the Association because of such default.

Section 3. **Consent Required.** Without the prior written approval of sixty-six and two-thirds percent (66-2/3%) of the holders of mortgage liens against all Lots, the Association shall not be entitled to:

- (a) By act or omission, seek to abandon, partition, subdivide, encumber, sell or transfer any Property which the Association shall have acquired for the benefit of the Owners;
- (b) Change the method of determining the obligations, assessments, dues or other charges which may be levied against a Lot;
- (c) By act or omission, change, waive or abandon the scheme of exterior and architectural controls, as hereinabove set forth.

ARTICLE XIV ADDITIONAL RIGHTS OF DECLARANT

Notwithstanding the reference to the authority of the Association to levy assessments for the enforcement of covenants and restrictions hereinabove or for

maintenance, capital improvements, or any other remedies of the Association, Declarant declares that in addition to the real property which may coincident herewith or subsequent hereof be conveyed to the Association as common property, that additional properties not dedicated for such common area but rather dedicated in fee or as public easement to the municipality having jurisdiction over the premises comprising the entire subdivision of which the lots and the common area properties described hereon are a part, have nonetheless been or will be dedicated for the benefit of the individual lot owners and association. Individual lots may be contiguous to such dedicated lands, and such dedicated lands (or to be dedicated lands) may contain municipally mandated improvements. Declarant as owner is obligated pursuant to a certain "Developer's Agreement" with Afton to provide repairs for any damages to such improvements on such dedicated (or to be dedicated) properties during the period of construction and for a defined term thereafter. Declarant reserves the right to assess any individual lot owner for monies expended by Declarant to repair damage to such improvements by such lot owner, his agents, assigns, vendors, contractors and subcontractors. Such assessment shall constitute a lien in the same manner as such is described in Section 4 or Article V herein.

ARTICLE XV

WATER MAINTENANCE AND MANAGEMENT

Section 1. **Access.** All owners within Afton Creek Preserve shall have access to open space and Trout Brook according to the easements described in Exhibit B of this Declaration.

Section 3. **Afton Creek Preserve Maintenance and Water Management.** In addition to Afton creek Preserve, property owners the City of Afton, The South Washington County Watershed District and the Minnesota DNR have restrictions regarding water maintenance and management. The Afton Creek Preserve Association may enter into agreement(s) for management responsibilities, which relate to the maintenance and water management for Afton Creek Preserve and especially the Trout Brook and its contribution to the Waterways down Stream.

Section 4. **Trout Brook Maintenance and Water Management.** The Association shall be responsible for maintaining the environmental quality of the congruent open space that has Trout Brook connection for the benefit of the Owner of

any Lot. Maintenance of environmental quality shall include, without limitation, testing the waters for oxygen, chemical content and clarity, aerating the water, establishing fish habitat, stocking fish, removing nuisance vegetation, and any other activities deemed appropriate by the Association and directed by the Minnesota Land trust, South Washington County Watershed District and the Minnesota DNR.

Section 5. **Surface Water Use.** The surface water of Trout Brook shall be restricted to non-petroleum fueled motors.

Section 6. **Docks.** Docks or Scenic walk ways may only be allowed if granted by the City of Afton parks, Minnesota land Trust, South Washington County Watershed, Minnesota DNR, and strictly enforces the intended use of any allowed structures for the purpose of nature viewing or education of Wildlife.

Section 7. **Water Management Rules and Regulations.** As provided in Article XII, Section 5, the Association shall promulgate rules and regulations regarding the maintenance and use of Trout Brook. Said rules may limit If necessary, erosion control policies may be adopted. Owners must adhere to the policies and regulations of the Minnesota Department of Natural Resources and the Washington County Shoreland Ordinances.

IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has executed this Declaration of Covenants, Conditions and Restrictions this xxx day Of xxxx

Will Carlson
