

SUPPLEMENTAL PACKET

9.A.

3/5/2018

Ron Moorse
Afton City Administrator
3033 St. Croix Trail South
Afton, MN 55001

Re: MNDNR Comments to Afton Planning Commission for Variance Application for 3988 River Road South, Afton

Ron –

Thank you for the opportunity to comment on the variance application for 3988 River Road South. While the application does not specify what variances are being applied for, I think that the following variance requests to the standards in the City's Lower St. Croix Riverway ordinance would be required for this project:

- Variance to bluff setback
- Variance for grading on slopes greater than 12%
- Variance to height

Variance to Bluff Setback:

- The proposed addition and driveway appear to extend closer to the bluff on the back and side of the existing house, likely requiring that dirt be removed and a new retaining wall be constructed. Please request that the applicant provide additional details on where and how the retaining wall would be constructed and how drainage from the retaining wall would be managed.
- At a minimum, MNDNR would recommend that a condition be included on the variance that the retaining wall design must be approved by the City prior to excavation on the bluff and construction of a retaining wall.

Variance for Grading on Slopes Greater than 12%:

- As part of the application, a request to move the location of the existing driveway was submitted, which would require a variance for grading on slopes greater than 12%. The proposed driveway alignment is steep, similar to the existing driveway. Is there a way to realign a driveway on this lot to reduce the slope of the driveway?
- At a minimum, DNR would recommend that a condition be included on the variance that a grading plan for the driveway and associated soil and erosion control plan must be approved by the City prior to driveway construction.
- DNR recommends that the applicant provide more information on how runoff from the driveway will be managed onsite.

Variance to Height:

- The application does not provide the height of the existing building and does not specify what the height of the addition would be.
- Below is the language in the City's riverway ordinance that addresses exceptions to substandard structures (Sec. 12-580 C2):

An improvement to an existing structure or facility may be allowed to extend laterally (parallel to the river or bluff) when the improvement is in compliance with the dimensional standards of this article and the side yard standards of the zoning ordinance, article II of this chapter.

Since, by its very nature, a substandard structure cannot meet all the dimensional standards of the riverway language to get the exception, MNDNR's approach to interpreting this language is to consider the following specific standards in evaluating whether an improvement meets the substandard structure exception.

- OHW setback
- Bluff setback
- Height restriction (i.e, no increase in height over existing structure)
- Continues to meet percent impervious requirement of 20%

These are the standards that MNDNR sees as most tied to maintaining development that meets the intent of the Lower St. Croix Riverway rules, specifically those standards that address screening of structures as seen from the river.

- DNR's expectation is that the applicant would justify why there would be any height increase for the addition over the height of the existing structure prior to the City approving a variance for a height increase, and that the height increase would be kept to the minimum necessary.

I'd like to better understand the details of this project prior to making a comment on whether DNR finds this expansion (both laterally and possibly up) of an existing substandard structure in the riverway to be a reasonable proposal. I'll plan to also provide a comment letter to the Afton City Council after further discussion with you on this proposal.

Sincerely,



Jenifer Sorensen
MN Department of Natural Resources
East Metro Area Hydrologist
1200 Warner Road, St. Paul, MN 55106
651-259-5754
jenifer.sorensen@state.mn.us

9.C.

Ron Moore

From: karen@littlefootfarm.com
Sent: Monday, March 05, 2018 1:41 PM
To: Ron Moore
Subject: Carlson PLCD Park

Ron-

After public comments and committee discussion a motion was made by Chairperson Weiss that "The park committee recommend that the city accept the 5 ac parcel directly adjacent to the proposed Carlson PLCD, as dedicated parkland, with the condition that the committee has the opportunity to review and approve the development/landscaping plan prior to completion. The motion was seconded by Erin Smilie and approved by all members.

Technical Memorandum

To: Joseph Bush, JP Bush Homes
From: Max Moreland, P.E.
Bryant Ficek, P.E., P.T.O.E.
Date: February 26, 2018
Re: Afton Creek Preserve Housing Updated Traffic Assessment

Purpose

JP Bush Homes has proposed a single-family home development in Afton, Minnesota. This development is proposed to be located at 14220 60th Street South in Afton, Minnesota. The purpose of this memorandum is to determine the traffic associated with the development and evaluate the access points. An initial sight distance review was completed in the summer of 2017 by Spack Consulting; that review will be referenced in this memorandum.

Proposed Development

The proposed 218-acre development is a single-family home development with areas of open space. Two access points to the development are proposed. One access is proposed to be a full movement access located at 5550 Odell Avenue South. The other access is located at 14220 60th Street South and is proposed to allow entering vehicles from both directions with exiting vehicles limited to right turns only (no outbound left turns).

The proposed development layout can be seen in the attached concept site plan.

Study Area and Existing Conditions

60th Street is a local, two-lane undivided east-west road. Currently a gravel road in the area of the proposed access, 60th Street is proposed to be paved by the developer in conjunction with the residential construction. The existing pavement to the east of the site will be extended west through the intersection with Oakgreen Avenue. 60th Street extends west where it terminates at Manning Avenue. Just east of the proposed development access, 60th Street curves to the north and becomes Trading Post Trail.

Trading Post Trail is a local, two-lane undivided road. Trading Post Trail extends approximately four miles north of 60th Street where it terminates at the intersection with Valley Creek Trail.

Odell Avenue is a local, two-lane undivided road. Odell Avenue extends less than a mile from Trading Post Trail providing a connection to 50th Street.

50th Street is a local, two-lane undivided east-west road located north of the development. 50th Street extends west from Odell Avenue over two miles to Manning Avenue where it becomes Dale Road which extends approximately four more miles west to where it terminates at Radio Drive. 50th Street extends east from Odell Avenue over two miles until it reaches the St. Croix River and curves north to become River Road.

Just west of the proposed access at 14220 60th Street South, 60th Street has an intersection with Oakgreen Avenue which is a local, two-lane undivided road. This road extends South from 60th Street nearly two miles south to an intersection with 80th Street.

Speeds

Posted speeds are available in several locations on the study area roadways. Trading Post Trail has a posted 30-mph speed limit on its south end, a 35-mph speed limit north of 59th Street and a 45-mph speed limit north of 55th Street. Oakgreen Avenue has a posted 45-mph speed limit. Just west of Odell Avenue, eastbound 50th Street has a 30-mph truck advisory speed limit sign for the vertical curve.

The three roadways in this study area that do not have posted regulatory speed limit signs are 50th Street, 60th Street and Odell Avenue. However, with the posted 30-mph speed limit on southbound Trading Post Trail being within a quarter of a mile of the curve to where the road becomes 60th Street, from a driver's perspective, the speed limit of the road on westbound 60th Street at the site access is 30 mph.

2017 Minnesota Statute 169.14 Subdivision 1 states "No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the conditions. Every driver is responsible for becoming and remaining aware of the actual and potential hazards then existing on the highway and must use due care in operating a vehicle. In every event speed shall be so restricted as may be necessary to avoid colliding with any person, vehicle or other conveyance on or entering the highway in compliance with legal requirements and the duty of all persons to use due care."

2017 Minnesota Statute 169.14 Subdivision 2 list statutory speed limits for different types of roads and situations. For roads in a rural residential district, if adopted by the road authority having jurisdiction over the residential roadway by erecting signs designating the speed limit, the speed limit should be 35 mph. For roadways that are not specified in Minnesota Statute 169.14 Subdivision 2 and that have not had the road authority with jurisdiction over the road erect signs designating the speed limit of the road, the statutory speed limit of 55 mph becomes the default speed limit.

Odell Avenue, with over a half mile of dwelling house access points averaging a spacing of less than 300 feet, could fall under the category of a rural residential district. While not signed by the City as having a 35-mph speed limit, Minnesota Statute 169.14 Subdivision 1 and the characteristics of the road suggest the speed limit on the road should be 35 mph.

According to Minnesota Statute 169.14 Subdivision 2, the statutory speed for 50th Street would be 55 mph. 50th Street may be able to accommodate vehicles going up to 55 mph due to a lack of horizontal curves or other characteristics that would force drivers to slow.

On 60th Street and Odell Avenue, 55 mph is well over a safe travelling speed due to sharp horizontal curves. Referring to Minnesota Statute 169.14 Subdivision 1, no persons shall drive at speeds greater than reasonable and prudent under the conditions. Furthermore, many of the existing accesses along 60th Street or Odell Avenue in the study area do not appear to satisfy the criteria for a 55-mph roadway in terms of sight distance. Actual travelling speeds on the roadways would lend some guidance for any new access point considerations.

The previous Spack Consulting review in the summer of 2017 included collecting vehicle speeds using pneumatic tubes on 60th Street west of the bend and the transition to Trading Post Trail. These tubes

recorded the speeds of all passing vehicles during the several days study. The 85th percentile speed of westbound vehicles over the course of a week at that location was found to be 25.0 mph. The current characteristics of this curve demonstratively slowed vehicles from the statutory speed limit.

The time of the summer of 2017 data collection included a holiday weekend, which likely had an impact on volumes of the roadway. However, the purpose of getting speed data was to understand the speed of vehicles west of the curve and the volumes were not analyzed. At the same time, pavement work was occurring further north along Trading Post Trail, but not at the curve itself. This work also may have impacted the volume on the road, but not the speed of the vehicles that did cross the tubes. A third potential issue, paving the gravel road on 60th Street, may impact speeds in the future. However, the width of the road and radius of the curve will not change. Both factors have a significantly higher impact on vehicle speeds in this area compared to the road surface. Due to these factors, the gathered speed data remains valid.

Additional speed limit samples were taken in February of 2018. These samples were conducted on 60th Street west of the Trading Post Trail curve as well as on Odell Avenue near the proposed site access location. Due to the winter conditions (snow, ice, and snowplowing activities), pneumatic tubes are not used in the winter and were not used for this additional speed data. Instead, samples were collected with hand held radar devices for each of the vehicles in a one-hour afternoon period. This yielded an admittedly small sample size of vehicle speeds, three westbound vehicles on 60th Street and three vehicles on Odell Avenue, and were recorded as follows:

- Northbound Odell Avenue – 31 mph
- Southbound Odell Avenue – 28 mph, 29 mph
- Westbound 60th Street – 19 mph, 20 mph, 20 mph

As shown, these speeds are well below 55 mph and confirm our earlier speed samples completed with the pneumatic tubes. Based on these and earlier results, the appropriate design speeds used in calculations for this study are 30 mph on westbound 60th Street and 35 mph on Odell Avenue. Again, with the posted 30-mph speed limit on southbound Trading Post Trail being within a quarter of a mile of the curve to where it becomes 60th Street, 30 mph is an appropriate speed for the section of 60th Street near the site access.

Trip Generation and Distribution

A trip generation analysis was performed for the development site based on the methods published in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition* as well as local data collected by Spack Consulting.

The ITE manual compiles studies from across the country to provide a national average traffic for various land uses. Spack Consulting collects current average traffic volumes for various land uses in the Twin Cities regional area for use in our studies. Local data is considered more relevant than the ITE national data as it is generally newer and accounts for our area's specific characteristics and driving habits. Per the procedure in the *Trip Generation Manual*, local trip generation data is preferred when possible and supplemented with national ITE data when local data is not available.

The resultant new trips generated by the proposed development are shown in Table 1.

Table 1 – New Trip Generation

Land Use Code – Source ¹	Description & Size	Daily		AM Peak Hour		PM Peak Hour	
		In	Out	In	Out	In	Out
210 - ITE	Single-Family Detached Housing (18 Units)	85	85	3	10	11	7
Local	Single Family Homes (18 Units)	83	83	3	9	10	7

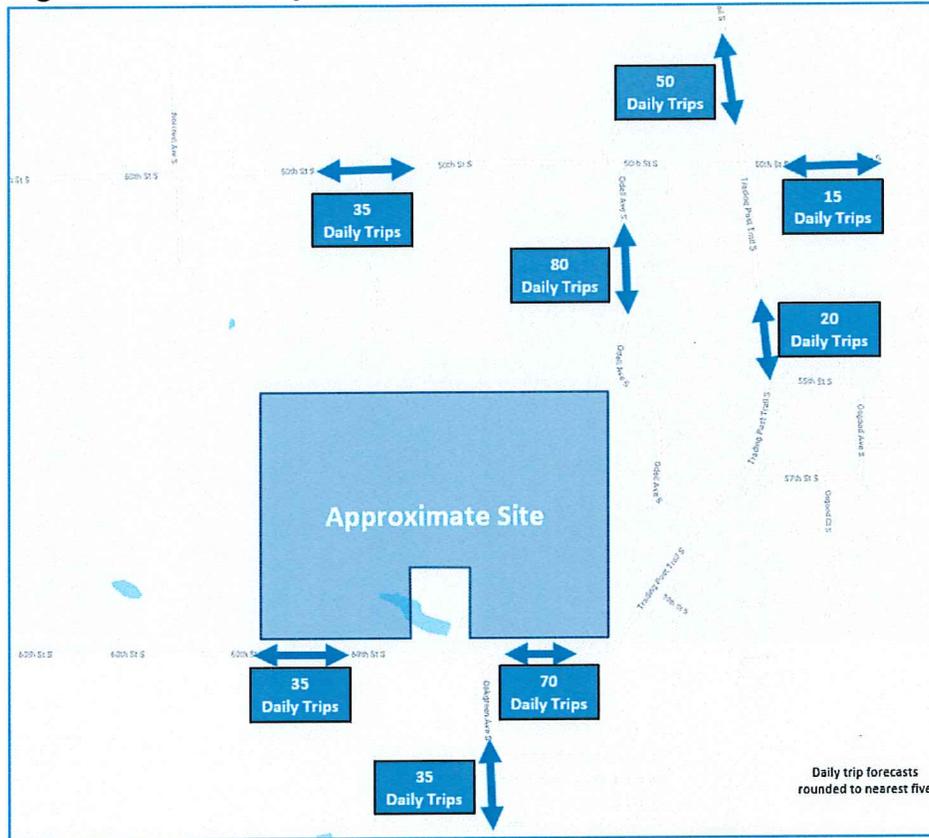
¹ Local = Trip generation data collected by Spack Consulting in this regional area.

As shown, the local data closely matches the national data, suggesting this proposed residential development will generate approximately 170 daily vehicle trips on the surrounding roadway system. To put this level of traffic in context, ITE guidelines suggest a traffic study is necessary when the peak hour volumes exceed 100 vehicles per hour. At a peak of 18 vehicles per hour, the proposed development is well under a national threshold, suggesting this level of traffic is not a significant impact to the surrounding roadway system.

A trip distribution pattern was developed for the generated traffic going to and from the proposed development. This general trip generation pattern is based on site access, access to the regional transportation system, and observations of existing traffic operations. The generated trips were assigned to the network surrounding the site with this trip distribution. Rounding to the nearest five vehicles, the forecast daily trips on the surrounding network are listed below and shown in Figure 1.

- i. 35 daily trips to/from the west on 60th Street.
- ii. 35 daily trips to/from the west on 50th Street.
- iii. 15 daily trips to/from the east on 50th Street.
- iv. 50 daily trips to/from the north on Trading Post Trail.
- v. 35 daily trips to/from the south on Oakgreen Avenue.

Figure 1 – Forecast Trip Distribution



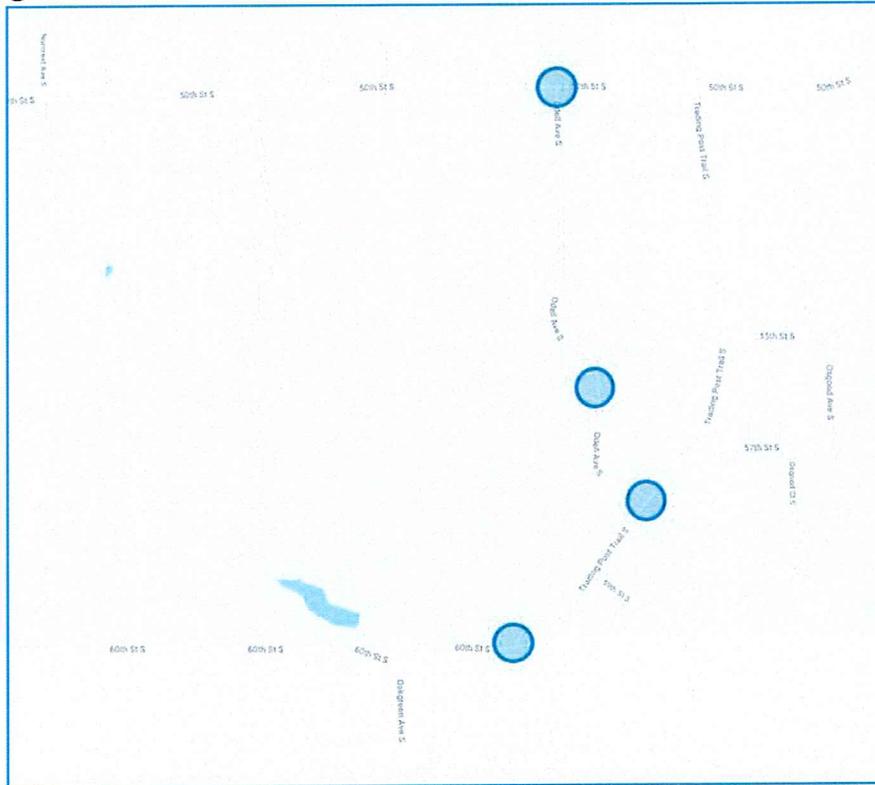
As shown, the highest daily volume on any one road is expected to be about 80 vehicles. With the p.m. peak hour typically being about ten percent of the daily volume, this translates into about eight vehicles in the busiest peak hour, or about one car every 7.5 minutes.

Intersection Assessment

The volume of traffic expected from the proposed development will not impact intersection operations due to the relatively low volumes that are well within the capacity of the surrounding roads and intersections. Rather than examining capacity, the sight distance was reviewed to ensure operations can be safely accommodated.

Sight distances were evaluated at four locations; the access points on 60th Street and Odell Avenue per the attached site plan as well as the Odell Avenue intersections at 50th Street and Trading Post Trail. These locations will have the greatest concentration of vehicles to/from the proposed development. Figure 2 shows those locations.

Figure 1 – Intersection Assessment Locations



According to the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets* (commonly referred to as the Green Book), "The designer (of a roadway) should provide sight distance of sufficient length that drivers can control the operation of their vehicles to avoid striking an unexpected object in the traveled way." Translated, this text means that a motorist should be able to see cars, deer, kids, etc. in intersections or roadways in enough time to stop before hitting them.

This sight distance explanation can be further broken down depending on the specific movement the vehicle is making as well as the location of the vehicle in the roadway. Below are the key AASHTO sight distance definitions and summary definition.

Passing Sight Distance

- "The passing driver should be able to see a sufficient distance ahead, clear of traffic, so the passing driver can decide whether to initiate and to complete the passing maneuver without cutting off the passed vehicle before meeting an opposing vehicle that appears during the maneuver." (AASHTO)
- Enough sight distance should be provided to assure drivers have sufficient sight distance to perform a safe passing maneuver without cutting off any vehicles.

Stopping Sight Distance

- "The available sight distance on a roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path." (AASHTO)

- Sight distance along a roadway should provide enough distance for a driver to come to a complete stop after seeing a condition requiring the stop.

Decision Sight Distance

- “Decision sight distance is the distance needed for a driver to detect an unexpected or otherwise difficult-to-perceive information source or condition in a roadway environment that may be visually cluttered, recognize the condition or its potential threat, select an appropriate speed and path, and initiate and complete complex maneuvers” (AASHTO)
- Similar to Stopping Sight Distance, but generally referring to operations in more difficult driving areas, such as interchanges and other locations with heavy traffic or areas with heavy signage. It assures drivers that enough sight distance is provided to notice a condition requiring a stop in a more complex environment, select a path to proceed or stop, and then complete the chosen maneuver safely.

Intersection Sight Distance

- “The driver of a vehicle approaching an intersection should have an unobstructed view of the entire intersection, including any traffic-control devices, and sufficient lengths along the intersecting highway to permit the driver to anticipate and avoid potential collisions.” (AASHTO)
- Sight distance provided at intersections and driveways to allow drivers to perceive the presence of potentially conflicting vehicles and when the appropriate gap in traffic is provided to safely perform their movement.

Of these four types of sight distance, stopping sight distance and intersection sight distance are appropriate for this proposed development. Stopping sight distance ensures a driver on the mainline can safely stop if another vehicle turns in front of them. Intersection sight distance ensures a driver on the side street can safely turn onto the mainline without a mainline vehicle needing to stop. Passing sight distance is not applicable as the proposed development does not require nor encourage passing. Decision sight distance is not applicable as it is more appropriate for urban areas where there is apt to be “visual noise”, areas of concentrated demand where sources of information compete (roadway elements, traffic, traffic control devices, and advertising signs). Therefore, only stopping sight distance and intersection sight distance are evaluated.

Stopping Sight Distances

Vehicles approaching these four intersections on the mainlines are not required to stop. However, drivers require sufficient time to stop if needed if there is an object in the intersection. In the AASHTO manual, consideration of road speed, braking reaction time, grade of the road and deceleration factors are considered in the stopping sight distance. Standard braking reaction times and deceleration rates were used while the grades of the roads were measured in the field.

Utilizing the measured grades as well as factors provided by AASHTO and AASHTO formula 3-3, the minimum stopping sight distance for each mainline approach to the four intersections was calculated. Since stopping sight distances are impacted by grade, the specific grades measured were utilized in these calculations rather than using approximate grades from AASHTO Table 3-2. Field measurements on-site then obtained the currently provided stopping sight distance for each approach. Table 2 shows a comparison of the measured to the minimum needed stopping sight distances. The minimum stopping

sight distance needs for 50th Street were calculated using a 55-mph road speed to show the upper bounds of need. Speeds of 30-mph were used to calculate the stopping sight distance on 60th Street. Speeds of 35-mph were used to calculate the stopping sight distance on Odell Avenue and Trading Post Trail.

Table 2 – Stopping Sight Distances

Location	Approach	Mainline Speed	Minimum SSD Needed (feet)	Measured SSD (feet)
60 th St at Site Access	Westbound (east of Site Access)	30 mph	220	330
60 th St at Site Access	Eastbound (west of Site Access)	30 mph	182	245
Odell Ave at Site Access	Northbound (south of Site Access)	35 mph	230	370
Odell Ave at Site Access	Southbound (north of Site Access)	35 mph	260	360
Trading Post Rd at Odell Ave	Northbound (south of Odell Ave)	35 mph	293	880
Trading Post Rd at Odell Ave	Southbound (north of Odell Ave)	35 mph	270	775
50 th St at Odell Ave	Westbound (east of Odell Ave)	55 mph	495	770
50 th St at Odell Ave	Eastbound (west of Odell Ave)	55 mph	606	740

As shown in Table 2, all approaches to these four study intersections exceed the minimum stopping sight distance needs for vehicles on the mainline. Drivers approaching the intersections on the mainline have adequate time and distance to stop if they see an object in the roadway at the intersection.

Intersection Sight Distances

Intersection sight distance requirements are provided in terms of both a physical distance and a time gap in the mainline traffic related to the speed of approaching vehicles. For approaching vehicles at any speed, per Table 9-5 of the AASHTO Green Book, a passenger car 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. To complete a right turn movement, per Table 9-7 of the AASHTO Green Book, the time gap is reduced to 6.5 seconds and applicable only to vehicles approaching from the left of the stopped driver. With the proposed development being residential, the design vehicle is a passenger car.

Per Section 9.5.3 of the AASHTO Green Book, for intersections with stop control on the minor road, no adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major and minor road vehicle will be on the same grade when departing from the intersection. Additionally, the adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds three percent when the vehicle is at the stop line of the minor-road approach. With these descriptions not fitting the situation of the study intersections, grades are not factored into the ISD calculations.

MnDOT adopted these measurements and distances as official policy in 2013 per MnDOT Technical Memorandum No. 13-09-TS-02.

To translate this time factor into a distance, the AASHTO formula 9-1 is:

$$ISD = 1.47 * \text{Major Street Vehicle Speed (mph)} * \text{time gap}$$

Field measurements of intersection sight distance were obtained at the same four study intersections and included measuring both the physical sight distances as well as measuring the time for vehicles on the mainline passing the stop-controlled approach. Several mainline vehicle measurements were made for each approach and averaged. Table 3 shows the minimum intersection sight distances in terms of time and distance along with the field measured values. Left turn measurements are facing down the approach to the right of the stopped vehicle and right turn measurements are facing down the approach to the left of the stopped vehicle. The minimum needs for 50th Street were calculated using a 55-mph speed limit to show the upper bounds of needs. Speeds of 30-mph were used in calculations at 60th Street. Speeds of 35-mph were used to calculate the intersection sight distance along Odell Avenue and Trading Post Trail. Locations that do not meet the minimums are in red. A map sketching the sight distances that are shown in Table 3 is attached.

Along with the field measurements taken, photos were taken from each of the four stop-controlled approaches being analyzed. These photos were taken at the same location of the ISD measurements looking both ways down each mainline. Photos showing a vehicle at different distances are attached.

Table 3 – Intersection Sight Distances

Location	Mainline Speed	Movement	Minimum ISD Needed* (feet)	Measured ISD (feet)	Minimum ISD Needed (seconds)	Measured ISD (seconds)
SB Site Access at 60 th St	30 mph	Right Turn	290	320	6.5	9.9
EB Site Access at Odell Ave	35 mph	Left Turn	390	710	7.5	15.6
EB Site Access at Odell Ave	35 mph	Right Turn	335	360	6.5	8.3
Odell Ave at Trading Post Rd	35 mph	Left Turn	390	140	7.5	3.2
Odell Ave at Trading Post Rd	35 mph	Right Turn	335	315	6.5	7.8
NB Odell Ave at 50 th St	55 mph	Left Turn	610	725	7.5	15.1
NB Odell Ave at 50 th St	55 mph	Right Turn	530	405	6.5	8.1

*Design Intersection Sight Distance rounded up from the calculated Intersection Sight Distance

As shown in Table 3, three locations do not meet the minimum requirements.

The eastbound Site Access at Odell Avenue approach is shown to have adequate sight distance needs. It is noted that recent clearing of vegetation at this area increased the sight distance compared to previous measurements.

The eastbound Odell Avenue at Trading Post Trail approach is short of the needed ISD to make a left turn onto Trading Post Trail. This is due to some vegetation as well as a transformer box blocking the view to the south on Trading Post Trail from the stop on Odell Avenue. See the attached photos for a visualization of this. As part of this proposed development, the transformer box is planned to be moved. This relocation combined with clearing some vegetation away from the road within the public road right-of-way would improve the intersection sight distance. This is an existing intersection and any sight distance deficiencies should be addressed regardless of this proposed development.

The eastbound Odell Avenue at Trading Post Trail approach is short of the minimum in terms of physical distance for right turns but does have enough in terms of time values. The difference is due to the physical distance calculation based on a 35-mph speed. Since the measured time is sufficient, vehicles are traveling at lower speeds than 35-mph. The intersection sight distance is therefore functional at this location. This is an existing intersection and any sight distance deficiencies should be addressed regardless of this proposed development.

The northbound Odell Avenue at 50th Street approach is also short of the minimum in terms of physical distance for right turns. The photos show this is due to some vegetation slightly obscuring the view. As with the previous location described, the approach does have sufficient intersection sight distance based on measured time, suggesting vehicles are not travelling at 55 mph. The intersection sight distance is therefore functional at this location based on the actual traveling speed of vehicles as opposed to the statutory speed limit. This is an existing intersection and any sight distance deficiencies should be addressed regardless of this proposed development.

As mentioned, the intersections of Odell Avenue/Trading Post Trail and Odell Avenue/50th Street are both existing intersections. Any sight distance concerns should be addressed by the City regardless of the status of this development.

Conclusions

The proposed single-family home development is forecast to generate approximately 170 new daily trips, 13 new a.m. peak hour trips and 18 new p.m. peak hour trips. This volume is below a national threshold for requiring a traffic study, suggesting little to no operational impacts on the surrounding roads.

The highest volume on any one road around the proposed site is about 80 vehicles per day with approximately eight during the busiest p.m. peak hour. This peak hour volume translates into one car every 7.5 minutes.

Of the key types of sight distances defined by the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*, stopping sight distance and intersection sight distance are the appropriate measures. Decision sight distance is more appropriate for urban areas where various sources of information compete for a driver's attention (roadway elements, traffic, traffic control devices, and advertising signs).

Adequate stopping sight distance exists on each main line approach at the intersections of 60th Street/Site Access, Odell Avenue/Site Access, Odell Avenue/Trading Post Trail and 50th Street/Odell Avenue.

Intersection sight distance based on time measurements is adequate for all movements from the side street stop except for the left turn movement of eastbound Odell Avenue at Trading Post Trail. This existing deficiency is due to a transformer box located at the intersection and some surrounding vegetation in the right-of-way. The transformer box is proposed to be moved with this development which, combined with clearing of vegetation, will improve the intersection sight distance.

For all intersections, clearing tall and overgrown vegetation in the public right-of-way will increase intersection sight distances and is recommended to improve overall safety in the area. At the intersections of Odell Avenue/Trading Post Trail and Odell Avenue/50th Street, both existing intersections, any sight distance concerns should be addressed by the City regardless of the status of this development.

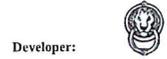
Attachment

- Site Plan
- Intersection Sight Distance Map
- Intersection Sight Distance Photos

AFTON CREEK PRESERVE CONCEPT 1-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 Parcel Numbers
 33020010010
 33020010004
 33020010005
 33020010001
 33020010002
 33020010004



Developer:

J.P. Bush
HOMES
Leblond, Minnesota

Property Owner: Will Carlson

TOTAL PARCEL AREA = 198.05 acres

Proposed Conservation Easements
 OPEN SPACE = 99.50 acres
 (50.5% gross parcel area)

Proposed Lots (10 lots) = 90.73 acres

Proposed Road Right of Way Width = 7.7 acres

Proposed Road Right of Way Width = 60 feet

Proposed Road Right of Way Width (60th Street South) = 23 feet from center line

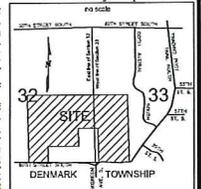
Proposed Length of Cul De Sac = 1,550 feet

Proposed Road Type = 24 foot wide rural section

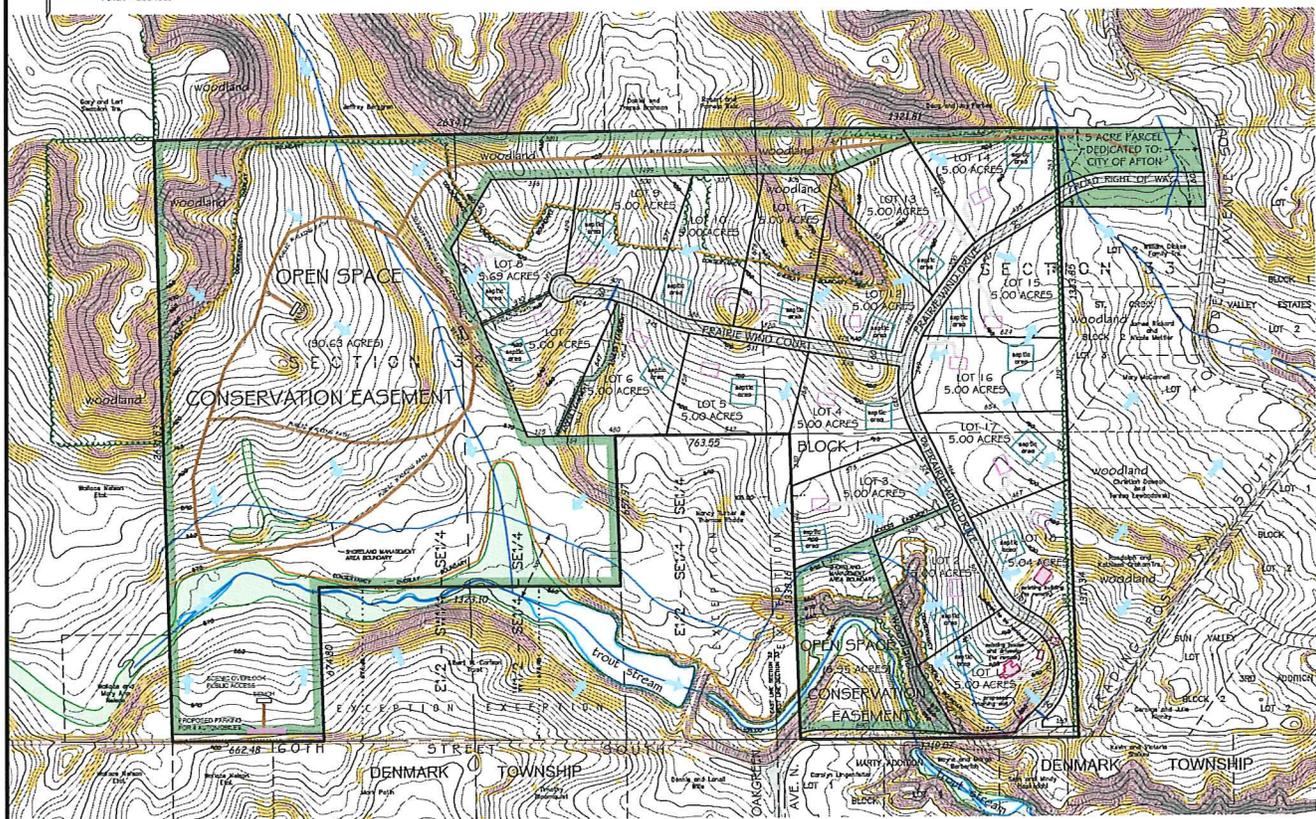
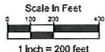
Legend

- Develop 40% OFA in OFA

Vicinity Map



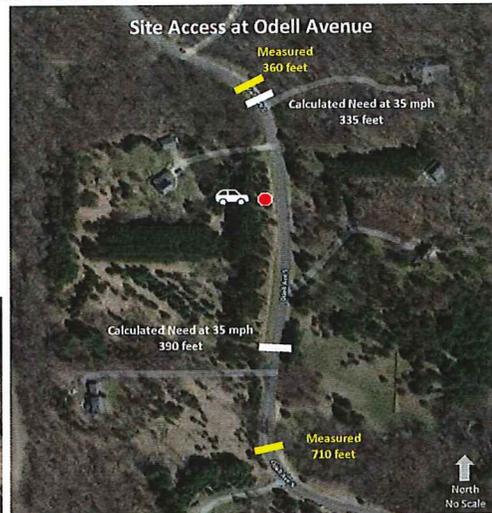
OFFICIAL COPIES OF THIS MAP ARE CRIMP SEALED
 I hereby certify that this survey plan or report was prepared by me
 or under my direct supervision and that I am a duly Licensed Land
 Surveyor under the laws of the State of Minnesota.
 Landmark Surveying, Inc. Surveyor No. 2577
 2/16/2017



Landmark Surveying, Inc.
 2120th Du-4 Trail North
 P.O. Box 43
 Slayton, Minnesota 55773
 Office phone: 651.413.1417
 Cell number: 651.729.2100
 Email: info@landmark.net

The following abbreviations and symbols were observed:
 Buildings - 200 feet from the stream bank.
 Septic Areas - 100 feet from the stream bank.
 Buildings and Septic Areas - 40 feet from a 100 ft line.
 NOTE:
 All proposed lots have a minimum of 2.0 acres of buildable land.

Intersection Sight Distances - Distance Measurements



Legend

-  Vehicle on stop-control approach where ISD is measured from
-  Calculated Needed ISD Location
-  Measured ISD Location

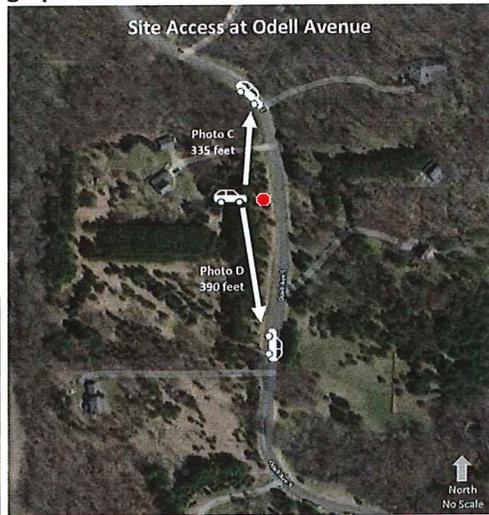
Intersection Sight Distances - Time Measurements



Legend

-  Vehicle on stop-control approach where ISD is measured from
-  ISD time measurement vehicle and it's travel direction
- Need # Seconds** Time needed between measurement vehicle being seen from stop-controlled approach and crossing stop-controlled approach
- Measured # Seconds** Average time measured between measurement vehicle being seen from stop-controlled approach and crossing stop-controlled approach

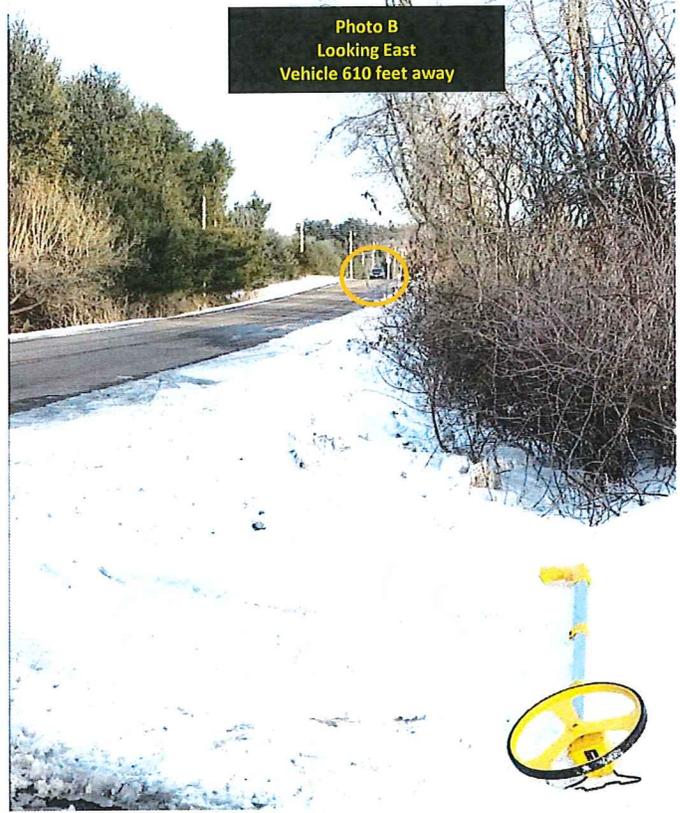
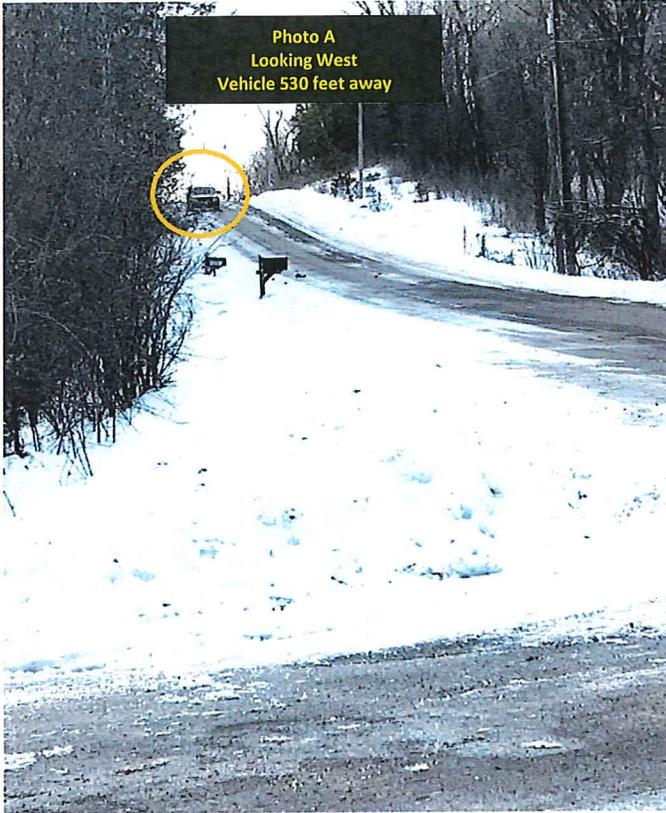
Intersection Sight Distances - Photograph Locations



Legend

-  Vehicle on stop-control approach where photo is taken from
-  Photo Identification

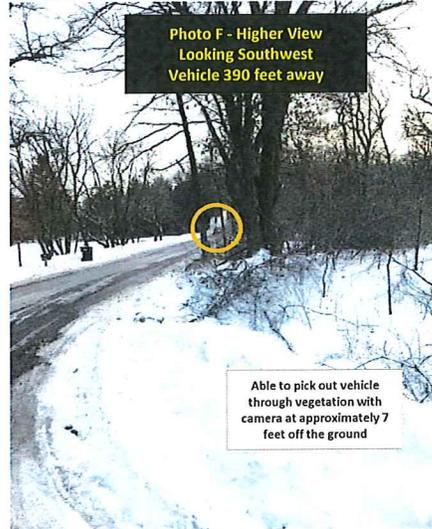
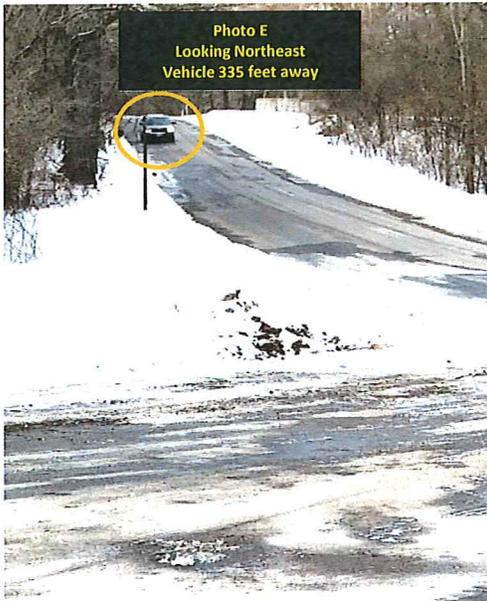
Odell Avenue at 50th Street Photographs



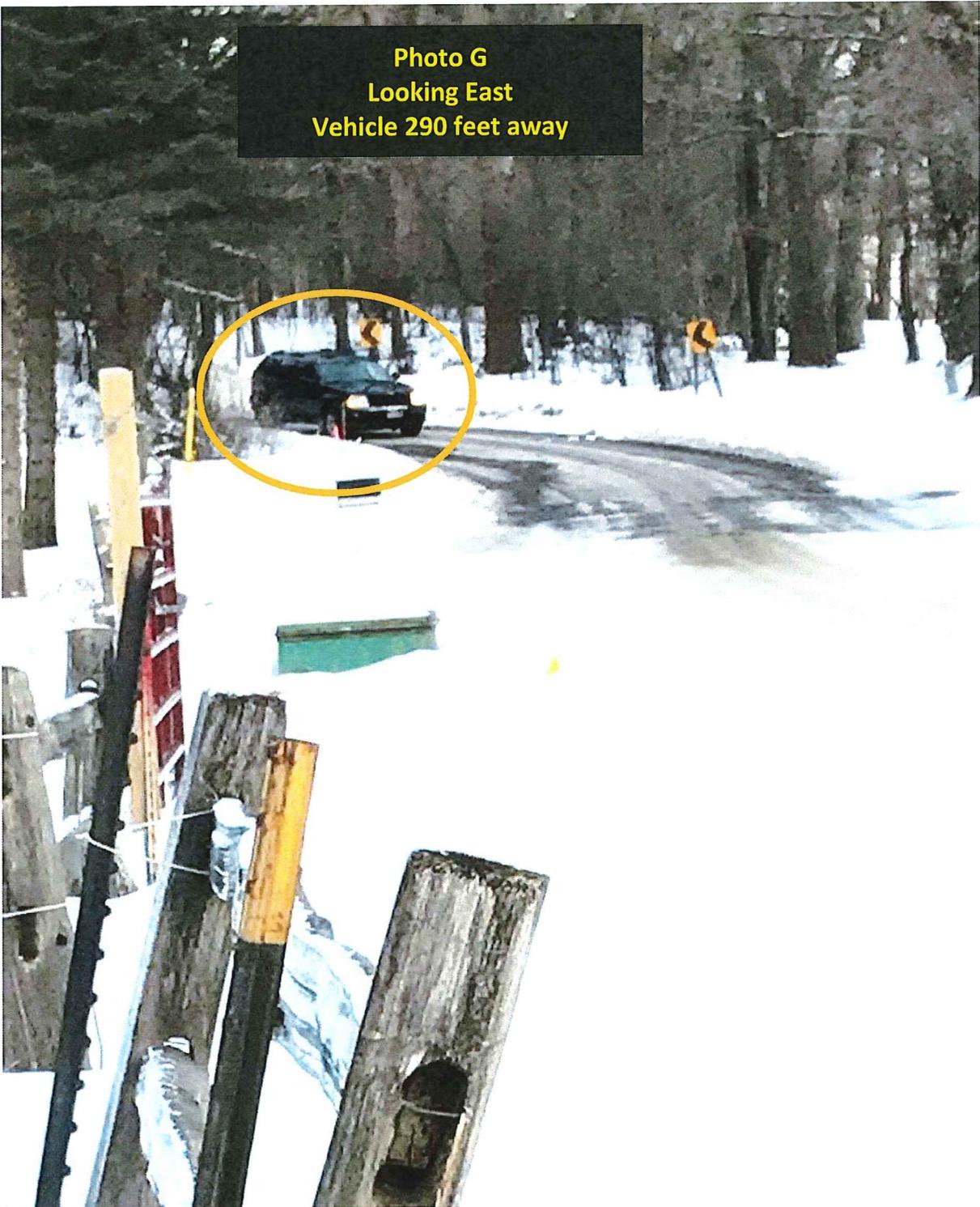
Site Access at Odell Avenue Photographs



Odell Avenue at Trading Post Trail Photographs



Site Access at 60th Street Photographs





STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION Page 1 of 1 Page(s)
LOCAL STREET OR HIGHWAY SPEED LIMIT AUTHORIZATION

Road Authority	City of Afton	Date	July 18, 2008
Road Name or No.	Trading Post Trail		
Termini of Zone: From	60 th Street South		
To	42 nd Street South	Date of Request	August 29, 2006

As authorized in Minnesota Statutes, Section 169.14, it is hereby ordered that the following speed limits are approved and shall be put into effect on the described roadway or sections thereof.

30 miles per hour between the intersection with 60th Street South and a point approximately 200 feet north of the intersection with 59th Street South

35 miles per hour between a point approximately 200 feet north of the intersection with 59th Street South and a point approximately 450 feet north of the intersection with 55th Street South

45 miles per hour between a point approximately 450 feet north of the intersection with 55th Street South and the intersection with 42nd Street South

NOTE:

The speed limits, described in this authorization, are authorized contingent upon curves and hazards being signed with the appropriate advance curve or warning signs, including appropriate speed advisory plates. The roadway described shall be reviewed for traffic control devices impacted by the authorized speed limits before posting the signs. Warning signs and speed limit signs shall be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

Mn/DOT Authorized Signature

- () White - Road Authority
- () Pink - Central Office Traffic
- () Blue - District Traffic Engineer

for Road Authority use only
 Date traffic control devices changed implementing this authorization

Month-Day-Year	Signature	Title
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Ron Moore

From: Nicole Rickard <nmettler_05@hotmail.com>
Sent: Friday, March 02, 2018 7:25 PM
To: Ron Moore; mayor; ward1; ward2; ward3; ward4
Subject: Comments on Odell Access of Carlson PLCD on 60th Street West of Trading Post

To: City Council Members
Planning Commission Members
City Administrator
City of Afton, MN

From: Nicole Rickard
5650 Odell Ave S

RE: Carlson Proposed PLCD on 60th Street West of Trading Post Trail – Odell Access

Date: March 2, 2018

Mr. Moore, please forward to the Planning Commission Members

As a concerned resident of Afton and property owner adjacent to the proposed Carlson development, I am very disappointed that the City would even entertain Mr. Bush's (return) proposal for breaking up an existing, 20 year old, APPROVED subdivision to put in an access road in the middle of Odell Avenue S. There are many other concerns that have been discussed over the past 18 months, but the Odell access is what I want to focus on.

12-2375. General standards for approval. 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:

- 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. (*comment: Breaking up an approved, established, platted development does not harmonize with an existing development*). ***This proposal clearly does not satisfy all of the standards as required by the ordinances.***

Sec. 12-2379

- paragraph B.2, further requires that "The uses proposed will not have an undue and adverse impact on the reasonable enjoyment of neighboring property and will not be detrimental to potential surrounding uses."
- paragraph B.4 requires that "The PLCD will not create an excessive burden on parks, schools, streets, and other public facilities and utilities that serve or are proposed to serve the district."
 - With the intersection at 60th street being proposed as a right turn only exit, the majority of these 18 homes will exit on Odell, which will more than double the traffic on Odell, not to mention additional traffic from adding a park.
 - Doubling traffic on a street with hills and curves will make it unsafe to walk, run, bike as many of us do today, which would most definitely "...have an adverse impact on the reasonable enjoyment of neighboring properties". The recent snows have been a reminder of how unsafe it would be. The hill and curves almost require driving down the middle of the road when there is any ice/snow on the road to avoid sliding into the banks and the increased traffic with more than double the risk of oncoming traffic. Have any of you driven that section, when there is snow/ice on the road?

- With the increase in online shopping, the number of delivery trucks that will be added to Odell with this increased number of homes will impact further, the safety and noise, again will "...have an adverse impact on the reasonable enjoyment of neighboring properties". I recently had a UPS truck drive by me without even slowing down slightly. I had to climb into the middle of the snowbank.
- When we were looking for property and a home in Afton, we had some key criteria as to the environment and neighborhood we wanted to invest in. One of the key criteria was to be in an established neighborhood which had known access points and a low risk of becoming a main road. With only one available residential lot as part of the established subdivision, we had confidence in the property on Odell Ave S.
- We expected that the land behind us would be developed at some point, but with limited access, felt development would be reasonable. The land owner and developer purchased the land, knowing where their access points were. The burden should not fall to the residents and neighbors because the owner/developer didn't do or chose not to do their homework.
- The City attorney has suggested that an access at 5550 Odell could be considered without the need for a variance if there was a pre-existing road on the parcel. Had there been plans for a road or any indication that it would ever be allowed, we likely would not have invested in this property on Odell Ave S.
- The residents of Afton (and neighbors), who don't want this park and road will be the one's who end up having to pay for the maintenance of them and pay the price of the additional traffic and noise.

Because the Odell Access is currently on a RR lot and is not part of the PLCD, the park and road to nowhere would need to be approved before the preliminary plat can be approved. How can the city, ethically or logically, justify approving a road to nowhere that breaks up an existing neighborhood (except to benefit a developer)?

As has already been brought up a number of times, approving a park and road in a long established, approved, platted subdivision, that went through all of the proper approvals to develop, **sets a very destructive precedent**. No piece of land will be protected from random individuals or developers putting in a road, and who knows what else. We will turn into any other town who encourages development, which the majority of Afton residents moved here to avoid.

Please, do not approve an Odell access road and set a destructive precedent to allow anyone to purchase any lot for random purposes, impacting the safety and enjoyment of their neighborhood. In my opinion, approving the access road will destroy the neighborhood we invested in. Who knows, next time it might be in your backyard! Mr. Bush obviously has other plans in his pocket that he has shared with the neighborhood; including one that meets the ordinances, density and safety concerns of those of us most impacted.

Is negatively impacting EXISTING residents and setting a bad precedence more important than approving some variance for number of homes on a cul-de-sac?

February 25, 2018

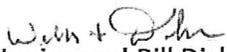
Ronald J Moore

Afton City Administrator

We are owners of property (St. Croix Valley Estate-Lot 2, Block2) contiguous to the proposed access road at 5550 Odell. We acquired the property 30 years ago; it being in an established, platted, residential neighborhood. We are also long ^{time} Afton residents. The purpose of this communication is to inform you that we are not in favor of the proposed access road and are opposed to its placement.

- 1.) We purchased the lot specifically for its quiet country setting. The proposed placement of this road with associated traffic and noise would make our lot less desirable and marketable, in part by creating a corner lot. In essence this is the public taking of value from the property
- 2.) The proposed road would increase storm runoff across our property. Even with provision for holding ponds, additional runoff would increase from construction of impervious surfaces.
- 3.) The creation of a road at 5550 Odell would effectively be a subsidy to accommodate a land speculator/developer; it comes at the expense of current residents' property values and quality of life. This violates the spirit and letter of Afton ordinances and comprehensive plan.
- 4.) Importantly, the proposed intersection's placement is not well chosen. Even casual inspection of the area reveals it is unsuitable and likely would be hazardous. The nature of Odell is winding with associated hills and does not lend itself to a safe intersection. This is only common sense.

Developers know, or should know, pertinent issues related to access when purchasing land. Sadly, the only plausible explanation for considering this flawed proposal is to accommodate the developer or perhaps to give a pass for lack of research prior to purchasing acreage.


Janice and Bill Dickes

Ron Moore

From: Mary McConnell <marymcconnell@comcast.net>
Sent: Thursday, March 01, 2018 10:30 AM
To: mayor; ward1; ward2; ward3; ward4; 'Randy'; 'Joe Richter'
Cc: Ron Moore
Subject: Carlson PLCD-Revised Bush Proposal and Neighborhood Support
Attachments: CarlsonPLCD.BushConceptFeb2018ReducedSize.jpg

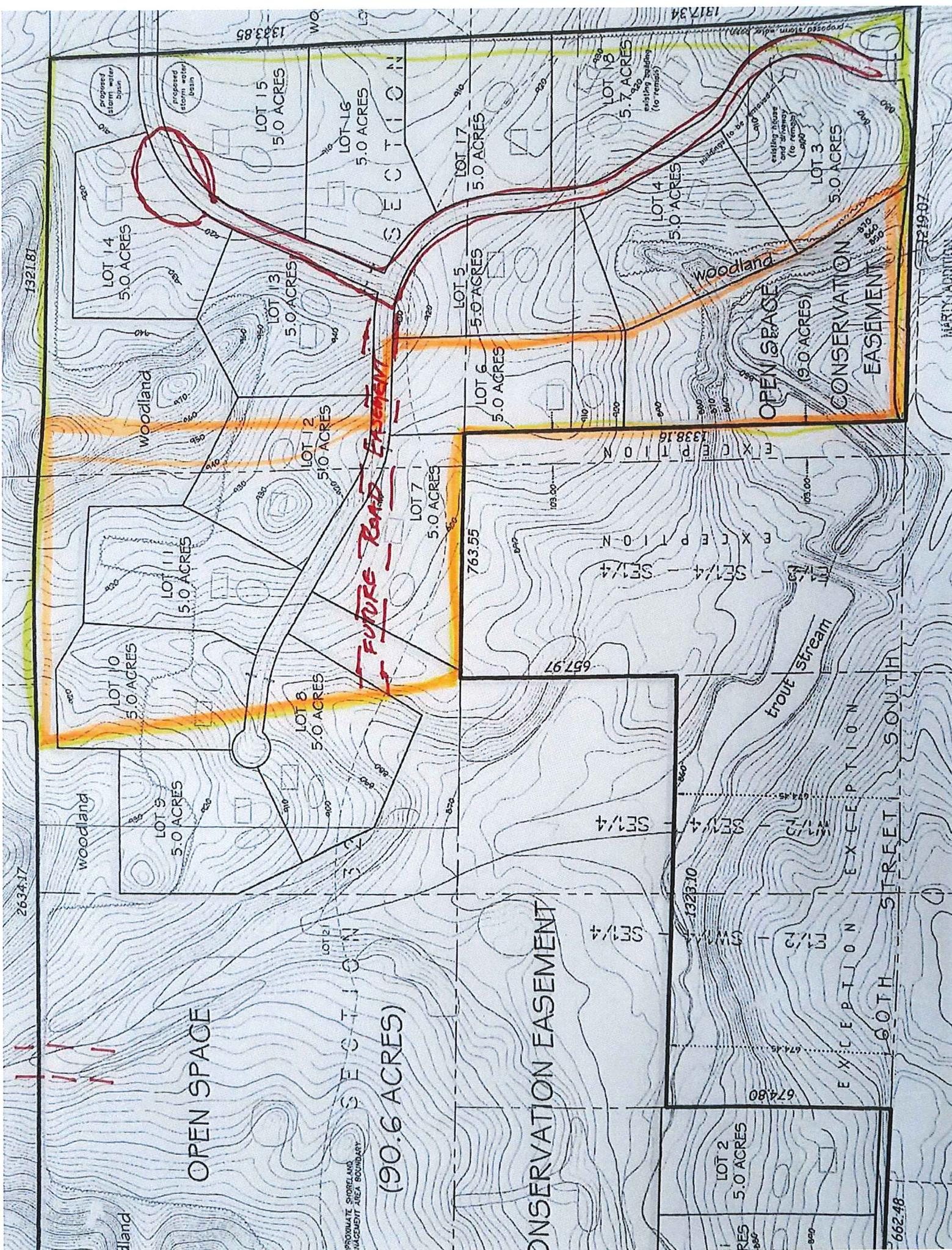
Mayor and City Council Members: A group of neighbors met with Joe Bush this past Sunday at his request where he proposed a new concept plan. The concept plan shows 9 lots on a cul-de-sac utilizing the single Schuster access with a 50-acre conservation easement east of the development and north of the Turner property. I have attached a rough drawing of the proposal we viewed. The neighbors can support this concept layout and we hope you will too. We think it addresses the community concerns about road safety, density and the impacts on the Turner/Rhode horse sanctuary in a meaningful way. This plan also does not require a variance from our ordinances as we understand it. Its reduced size also exposes the City to less financial risk.

We appreciate the thought that went into this layout by the developer and your efforts to encourage the developer to address our concerns with this revised plan.

While some may be concerned that this smaller plan does not lock up the entire 100 acres in a conservation easement at this time, Mr. Bush has indicated that the remaining 50 acres will not be farmed in row crops but will remain in native grasses and pollinator plants and possibly be used for a bee operation mitigating any water quality concerns.

Thank you.

Mary McConnell
Kathy Graham
Randy Graham
Teresa Lewandowski
Christian Dawson
James Rickard
Nicole Ricard
Patrick Leahy
Nancy Turner
Tom Rhode



OPEN SPACE
(90.6 ACRES)

CONSERVATION EASEMENT

FUTURE ROAD EASEMENT

OPEN SPACE
CONSERVATION
EASEMENT
(9.0 ACRES)



LOT 14
5.0 ACRES

LOT 11
5.0 ACRES

LOT 10
5.0 ACRES

LOT 9
5.0 ACRES

LOT 8
5.0 ACRES

LOT 12
5.0 ACRES

LOT 13
5.0 ACRES

LOT 15
5.0 ACRES

LOT 16
5.0 ACRES

LOT 17
5.0 ACRES

LOT 5
5.0 ACRES

LOT 7
5.0 ACRES

LOT 6
5.0 ACRES

LOT 4
5.0 ACRES

LOT 3
5.0 ACRES

LOT 18
5.7 ACRES
existing building
(to remain)

Woodland

woodland

Woodland

trout stream

1321.81

2634.17

1333.85

SECTION

SECTION

EXCEPTION

EXCEPTION

EXCEPTION

EXCEPTION

1328.10

674.80

662.48

1219.07

MARTY ADDITION

60TH STREET SOUTH

662.48

Ron Moore

From: Joe Bush <joe@joebushmn.com>
Sent: Thursday, March 01, 2018 4:24 PM
To: 'Joe Dudley'; Ron Moore
Subject: RE: Carlson PLCD-Revised Bush Proposal and Neighborhood Support
Attachments: EPSON042.pdf

Ron
Regarding the letter from the neighbors.

1. That plan that Mary McConnell has attached **is not my drawing.**
2. The plan Mary attached has significant discrepancies and misrepresentations to anything I have ever drawn.
3. No copy of my designs were distributed.
4. I stated that no written discussions or replies with DNR, Minnesota Land Trust, South Washington Watershed or Washington Conservation District had occurred yet.
5. As of Tuesday Feb 27th Minnesota Land Trust replied to my sketch. (see attached)

Joe

From: Ron Moore [mailto:rmoorse@ci.afton.mn.us]
Sent: Thursday, March 01, 2018 10:38 AM
To: Joe Bush <joe@joebushmn.com>
Subject: FW: Carlson PLCD-Revised Bush Proposal and Neighborhood Support

FYI

From: Mary McConnell [mailto:marymccconnell@comcast.net]
Sent: Thursday, March 01, 2018 10:30 AM
To: mayor <mayor@ci.afton.mn.us>; ward1 <ward1@ci.afton.mn.us>; ward2 <ward2@ci.afton.mn.us>; ward3 <ward3@ci.afton.mn.us>; ward4 <ward4@ci.afton.mn.us>; 'Randy' <rpnelson501@gmail.com>; 'Joe Richter' <joerichter@mac.com>
Cc: Ron Moore <rmoorse@ci.afton.mn.us>
Subject: Carlson PLCD-Revised Bush Proposal and Neighborhood Support

Mayor and City Council Members: A group of neighbors met with Joe Bush this past Sunday at his request where he proposed a new concept plan. The concept plan shows 9 lots on a cul-de-sac utilizing the single Schuster access with a 50-acre conservation easement east of the development and north of the Turner property. I have attached a rough drawing of the proposal we viewed. The neighbors can support this concept layout and we hope you will too. We think it addresses the community concerns about road safety, density and the impacts on the Turner/Rhode horse sanctuary in a meaningful way. This plan also does not require a variance from our ordinances as we understand it. Its reduced size also exposes the City to less financial risk.

Joe Bush

From: Wayne Ostlie <wayneostlie@minnesotalandtrust.org>
Sent: Tuesday, February 27, 2018 9:11 AM
To: Joe Bush
Subject: Re: Please call joe bush

Joe:

Thanks for passing along the revised site plan for our review. After a review, here are my thoughts:

- The revised plan does far less for protection of Trout Brook than any of the previous plans, and is inferior in that regard. The original design created a substantial buffer of habitat along Trout Brook. Although this design retains that buffer along the lower portion of the design, the upstream section is no longer addressed through this site plan.
- The shape of the proposed conservation easement is very irregular with significantly more edge than would be optimal from ecological and easement enforcement standpoints. As you recall, one of the main elements we addressed in the previous designs was the creation of a large block of habitat (to the extent possible) that would provide habitat for wildlife. That gets sacrificed to a significant degree through this proposed site plan.
- The site plan also places 4 lots in positions that back up to the proposed easement area. We have found that these situations often create long-term enforcement headaches through encroachment from adjacent landowners. Although there are ways to ameliorate this threat to some degree (fencing, etc.), it is unclear whether those measures are proposed here. The previous site plan also had four lots, but the conservation benefit was significantly greater.
- Finally, the potential for a road to cut across the heart of the easement area is problematic. To accommodate the potential for this road, this thoroughfare would need to be incorporated into the design of the easement area. Our preference would be to excluded it altogether from the easement area. This would effectively split the easement into two parts, which would again be a detriment to any habitat values for wildlife and add enforcement risk and associated costs going forward.

Overall, this is a significant step backward in terms of conservation value when compared with previous plans. Quite frankly, this proposed site plan would not meet the Land Trust's mission and we would not be interested in holding an easement as designed.

Thanks for the opportunity to review.

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

Ron Moore

From: Joe Richter <joerichter@me.com>
Sent: Friday, March 02, 2018 11:25 AM
To: Ron Moore
Subject: Re: Sunday meeting with Joe Bush

Ron,

Please attach my thoughts on the letter from Joe Bush concerning last Sunday's meeting with the residents to anyone that has received this communication, especially the City Council and Planning Commission. As you know, Joe Bush initiated the meeting and through your office, asked if I would be willing to attend. I accepted in good faith to help facilitate and provide a venue for the discussion on the Carlson Development. Here is a summary of my thoughts about the meeting, and the March 1st letter you have received from Joe Bush.

- The drawing attached by Mary McConnell on behalf of the neighbors is a rough representation of the crude sketch plan Joe Bush showed us at the meeting. Although not exact, it is a very fair representation of the concept Joe Bush presented. Mary's email said it was a rough version of the plan that was viewed. The 9-lot sketch that Joe Bush presented was for concept only. I did not see enough detail to even suggest the lack of significant discrepancies and misrepresentations he purports and if I misunderstood what Joe Bush said I would like to know what those discrepancies are.
- Joe Bush was asked if the road easement through the Conservation Land would be a problem for the Land Trust, and his response indicated that he had already talked to the MN Land Trust, and the road easement through the Conservation Easement would not be a problem. While his #4 point states that no "written" discussions had occurred, he said he had already checked with the Land Trust and they had no objection to the Easement. This must have been a verbal discussion.
- I am saddened by the response from MN Land Trust in the attempt to reach an agreement in concept between the residents and the developer. From the beginning, the Land Trust has stated that they knew the City had many issues to consider, and they would work with us for a positive outcome. It appears we have "the tail wagging the dog" again.
- My impression of the Sunday meeting was positive, and we all felt as though it answered many of the concerns which we have been struggling with. I was sure, at that time, it was going to put us on a path leading to a satisfactory resolution. This plan would have satisfied the developer's investment opportunities, while alleviating the well-founded and legitimate concerns of the residents so greatly affected.
- My hope would be that the City and the developer take another look at the 9-lot concept. The Minnesota Land Trust is not needed as a 3rd party to hold the land in a conservation easement. Other organizations exist that would offer the same protections.
- It is concerning how quickly the 9-lot concept was swept off the table. Joe Bush seemed legitimately excited about resolving the issues of the residents and moving forward with a 2-phase plan. To mischaracterize the meeting and discussion only leads to further mistrust and division.

Joe Richter
Council member - Ward 2

11.A.

February 20, 2018 City Council Meeting Highlights

The Council:

- Denied an application by USS Rambo Solar LLC for a text amendment to the Zoning Code to allow solar farms as a conditional use or interim use in the Agricultural District.
- Determined that a PLCD (Preservation and Land Conservation Development) is not a PUD (Planned Unit Development).
- Discussed a proposal to dedicate 5550 Odell parcel as parkland.
- Recognized Barbara Ronnigens dedicated service to the city.
- Awarded landscaping bid for the downtown village improvement project to Great Northern Landscapes, with work to begin in the spring.
- Requested bids be collected for work on the 30th ST culvert replacement project.
- Approved expansion of Peterson Management Company maintenance contract to include downtown lift stations.
- Approved contract with Malley's Sunshine Kennels for Animal impound services.
- Approved payment of Pay Voucher No. 10 from Geislinger and Sons Inc. for the Downtown Improvement Project.
- Appointed David Husebye to the Natural Resources and Groundwater Committee.
- Approved Position reclassifications and pay adjustments for City Staff.