City of Ramsey
Agenda
Public Works Committee
Tuesday February 21, 2012
6:00 pm
Lake Itasca Room, 7550 Sunwood Drive NW

1. **Call to Order**

2. **Citizen Input**

3. **Approve Agenda**

4. **Approve Minutes**

1. Approve Public Works Committee meeting minutes dated January 17, 2012.

5. **Committee Business**

1. Discuss Trail Easement at 15620 Krypton Street NW

2. Discuss Investigations Related to 2011 Flooding Concerns

3. Consider entrance into a Statewide Mutual Aid Agreement - MnWARN

4. Review City of Ramsey Snowplowing Policy and possible cost reductions

5. Consider 2012 Street Maintenance Program

6. **Committee/Staff Input**

7. **Adjournment**

Public Works Committee **4. 1.**

Meeting Date: 02/21/2012

By: MaryJo Warner, Engineering/Public Works

Title:

Approve Public Works Committee meeting minutes dated January 17, 2012.

Background:

The Public Works Commitee held its regular meeting on January 17, 2012

Notification:

Observations:

Funding Source:

n/a

Staff Recommendation:

Staff recommends approving attached Public Works Committee meeting minutes.

Committee Action:

Motion to approve Public Works Committee meeting minutes dated January 17, 2012.

Attachments

Minutes 01.17.12

Form Review

Inbox	Reviewed By	Date
Brian Olson	MaryJo Warner	02/15/2012 09:34 AM
Mary Jo Warner (Originator)	MaryJo Warner	02/15/2012 09:37 AM
Brian Olson	Brian Olson	02/15/2012 09:39 AM
Kurt Ulrich	Kurt Ulrich	02/16/2012 02:36 PM

Form Started By: MaryJo Warner Started On: 02/14/2012 03:56 PM

Final Approval Date: 02/16/2012

PUBLIC WORKS COMMITTEE
CITY OF RAMSEY
ANOKA COUNTY
STATE OF MINNESOTA

The Public Works Committee conducted a regular meeting on Tuesday, January 17, 2012 at the Ramsey Municipal Center, 7550 Sunwood Drive NW, Ramsey, Minnesota.

Members Present:	Chairperson Colin McGlone Councilmember Randy Backous Councilmember David Elvig
Member Absent:	None
Also Present:	City Administrator Kurtis G. Ulrich Public Works Director Brian Olson City Engineer Tim Himmer Civil Engineer II Leonard Linton Bill Fossing, LSA Design

CALL TO ORDER

Chairperson McGlone called the regular meeting of the Public Works Committee to order at 3:34 p.m.

CITIZEN INPUT

There was none.

APPROVE AGENDA

Motion by Councilmember Backous, seconded by Councilmember Elvig to add as Case #5.1 appointment of Chairperson and Vice Chairperson of the Public Works Committee for 2012 and approve the Agenda as amended.

Motion carried. Voting Yes: Chairperson McGlone and Councilmembers Backous and Elvig. Voting No: None: Absent None.

APPROVE MINUTES

Motion by Councilmember Backous, seconded Councilmember Elvig, to approve the minutes from the December 13, 2011 Public Works Committee meeting.

Motion carried. Voting Yes: Chairperson McGlone and Councilmembers Backous and Elvig. Voting No: None: Absent None.

COMMITTEE BUSINESS

Case 5.1 Election of Chairperson and Vice Chair of the Public Works Committee

Motion by Councilmember Elvig, seconded Councilmember Backous to appoint Councilmember Backous as Chairperson of the Public Works Committee.

Motion carried. Voting Yes. Councilmembers Backous and Elvig. Voting No: Chairperson McGlone: Absent None.

Motion by Councilmember Backous, seconded by Councilmember Elvig to nominate Councilmember Elvig as Vice Chair of the Public Works Committee.

Motion carried. Voting Yes: Councilmembers Backous and Elvig. Voting No: Chairperson McGlone: Absent None.

Case 5.2 Consider Stormwater Utility Rate Change for 14600 Nowthen Boulevard

Civil Engineer II Linton reviewed in the staff report that the property owner at 14600 Nowthen Boulevard came to Mayors meeting and asked about changing the stormwater utility rate. Staff reviewed that when the fee was established the property was being used as a commercial application and the rate was set accordingly. Currently, it is being used as storage and staff is recommending changing the stormwater utility rate from commercial to residential.

Public Works Director Olson stated we also look at the amount of impervious surface of a property and it is our impression that this isn't any different than any other typical residential lot.

Councilmember Elvig wants to understand that staff is recommending this property go back to residential and it seems we did collect a study on this three to four years ago and all we could find to work with was to set it up for residential.

Public Works Director Olson commented that we spent a significant amount of time with Green Valley Greenhouse proposal for current storm rate and utility credit and the question of retroactivity and how far back you go. In this case we are being very quick in our response and there won't be any case in retroactivity.

Patrick Hampton, 14600 Nowthen Boulevard NW, stated he wouldn't plan on asking for any retroactive, and his hope is just to get it reduced back to residential.

Motion by Chairperson Backous, seconded by Councilmember Elvig, to recommend to City Council to correct the stormwater utility rate from commercial to residential.

Motion carried. Voting Yes: Chairperson Backous and Councilmembers Elvig and McGlone. Voting No: None.

Case 5.3 Consider Lighting Retrofit for Parking Ramp Project

Public Works Director Olson reviewed in the staff report that attached to the case are a number of options to consider, one is to perpetuate the decision that was made in 2005 to continue with the metal halide lamps. The second is switch out the metal halide lights in the new ramp with fluorescent T5 lamps and the third option is to move forward with retrofitting the existing parking facility as well as changing the design to include new lights that are fluorescent.

Councilmember Elvig asked do you recall what savings were from when we first started the structure.

Public Works Director Olson responded he went back through the last 12 months of electric bills and priced it out based on how much we spent on electricity on that ramp today. He stated 45% of the total cost is lighting, the remainder is the HVAC system.

Councilmember Elvig asked what percentage of lighting was turned off.

Public Works Director Olson responded probably one third on the outside lights but there was a building code requirement that we have to maintain a certain level of lights for emergency purposes.

Leo Offerman from Connexus Energy was present and informed the Committee that what Connexus uses is the IES which is Illuminating Engineers Society of North America.

Mr. Offerman reviewed the RP2098 which is lighting for parking facilities and gave the short version of the standards. He stated this is what they used when they reviewed the plans and what is the recommended maintained illuminance values for parking garages from the report which is attached to the case.

What they are asking for is a minimum of one footcandle for basic light. There is actually two footcandle for daytime so we are allowing some day lighting as well, but for night is one footcandle.

Mr. Offerman stated LED works different and that changes the way they look at lighting all together, it is more important if they are meeting the minimums with good uniformity, and when we look at the plans for T5 lights, the uniformity is very good and it meets the minimums. The average is not quite as high, but that is okay, you can get the averages up by having hot spots.

He went on to explain that what they do is put the whole ramp on a point by point grid, he highlighted where the minimum requirement wasn't met, the only case is by the stairwell where there is going to be other light, so he explained they were able to meet the entire area of the lamp at the minimum level and uniformities were there.

Director of Public Works/Principal City Engineer Olson reviewed as part of his energy analysis,

Option 1 has no annual savings but the cost is going to be $26,412 dollars a year. Dusk till Dawn is 4,000 hours, we have built into that equation that we know that there are some lights that are going to be on 24 hours a day.

The second option is to change the design to include fluorescent lights. Metal halides are already built into the design. The cost to put in each fixture is roughly the same as it is to put in the fluorescent.

The third option is to change everything out with fluorescents and retrofit the existing structures. He stated it is the retrofit that is most expensive.

Director of Public Works/Principal Engineer Olson reviewed the rebates in Option 3 with the Committee.

Councilmember McGlone stated in this case the payback on the energy and the payback on the retro, all of which he cannot see doing. It would take in some cases 20 years to payback one portion of that and 4-5 years to pay back the rest.

He also stated the idea of thinking about the future in his opinion is to just do what we are doing and get into the future. Theoretically, what we want to have will be cheaper or there may be a new technology by then.

Chairperson Backous wanted to confirm what Councilmember McGlone is saying is to go with Option No 1.

Councilmember McGlone confirmed go with what we got.

Councilmember Elvig stated he ran some numbers himself and having metal halide in the future and programmed retrofitting, you have somebody to help pay for it. What he is concerned about is the exterior of the building. There has to be consistency there and staying with metal halide on the exterior. He knows we are going to be burning more lights than we have in the past and he doesn't see that the numbers are there.

Chairperson Backous wanted to double check the map and stated when he looks at it there is a 10 year payback. He asked what is the payback?

Public Works Director/Principal City Engineer Olson responded it is not a very good payback. He wanted to make sure the Committee and Council had the opportunity to comment on whether we should move forward with the same metal halide lamp fixture and confirmed it is a 10 year payback.

Councilmember McGlone commented there are two paybacks you have to look at, the energy savings payback and the payback on the initial investment of upgrades.

Mr Offerman summarized that metal halides do degrade over time; fluorescents will maintain full luminance virtually 98% until end of life. The expectancy is 24,000 hour rated lamps, these

are pulsar metal halides. At 24,000 hours, half will still be working and half will be out. Connexus does scheduled regroup lamping at 20,000 hours at dusk to dawn usage that is five years.

Motion by Councilmember McGlone, seconded by Councilmember Elvig to recommend to City Council to stay with the 100 watt metal halide light fixtures that we already have.

Motion carried. Voting Yes: Chairperson Backous and Councilmembers Elvig and McGlone. Voting No: None.

Case 5.4 Consider Guard Rail Enhancements for the Parking Ramp

Public Works Director/Principal City Engineer Olson reviewed the staff report and stated that there has been some concern with regard to the height of the guardrails, both on the top floor also in the second and third floors on the north side and the east side.

Mr. Fossing of LSA Design was present to discuss the design features and the two options being presented and the related costs. Basically, Option A is currently right now the guardrail height at the roof level is 43 inches, the concrete portion of it is 2 foot 6 and the steel portion is 13 inches above that. It is basically doubling that existing rail.

Option B would be fully enclosing levels 2 and 3 so there would be screen fencing that would go from the top of the wall to the other side of the lower wall.

Mr. Fossing reviewed the costs for Option A is 147,658 and Option B is $302,000 and then Items 3 and 4 is separate from that. Item 3 is sunscreen and Option 4 is to fill in the sloping floors.

Chairperson Backous stated they should decide between Option A and Option B first and then talk about 3 and 4.

Motion by Councilmember Elvig, seconded by Councilmember McGlone to recommend to City Council to move forward with enhancements of thirteen inch where there are none on the fourth floor. Staff was directed to bring forward that alternative in a separate case on February 14th.

Motion carried. Voting Yes: Chairperson Backous and Councilmembers Elvig and McGlone.

There were two other alternatives that were discussed that evening. The first item that was discussed was a sunscreen. The sun hits, particularly in the winter months, the eyes of the driver driving from the 1st to the second floor or from the second to third floors and thereby blinds the driver. The recommendation of the Committee was to explore alternative methods to screen the sun similar to the banners that were installed next to the temporary construction access and not spend $43,325 to provide sun screens.

The last action that was discussed was providing a chain link connection between the internal ramps. The cost of this alternative would result in a change order on the Contract for $15,911.

Motion by Councilmember Elvig, seconded by Councilmember McGlone to recommend to City Council for staff to explore alternative methods to screen the sun similar to the banners that were installed next to the temporary construction access and not spend $43,325 to provide sun screens. Also, to explore chain link connection between the internal ramps resulting in a change order on the Contract for $15,911.

Motion carried. Voting Yes: Chairperson Backous and Councilmembers Elvig and McGlone.

Case 5.5 Consider Crosswalk Signage Options along Sunwood Drive in the COR

City Engineer Himmer reviewed in the staff report that with the recent opening of the VA and The Falls Café there has been a few pedestrians that like to cross Sunwood Drive at Sapphire Street.

It was presented that we have an enforceable crosswalk in the location, which meets state standards. It was discussed a short term quick solution is to draw extra attention to this crosswalk would be to place in-ground pedestrian crossing sign, similar to what is on Alpine Drive today between Nowthen Boulevard and TH 47.

Staff is proposing a couple low cost solutions to install an in-ground pedestrian crossing sign at the intersection of Sunwood and Sapphire, which could be removed in the winter for plowing activities, and purchasing a few kid alert safety signs, which could be moved throughout the COR and City.

Councilmember Elvig stated he realizes the situation but placing anything permanent in the roadway he would be opposed to but anything that is temporary that can be moved around or taken out is fine with him.

Councilmember McGlone agrees that less signage is better; to be putting these in is ugly. He asked if we are ever going to get traffic lights there and asked if this has been issue.

Chairperson Backous stated it may be more of an issue with the VA, and wheelchair crossing and feels the problem is the curvature of the road there.

City Administrator Ulrich wanted to follow up with Councilmember McGlone's concept; like they have on west main in Anoka, and you have bookends on the east and west ends where you place a sign on a post which you don't have to move seasonally, which would be another option.

Councilmember McGlone comments were if he had to go with an option he would rather see an in-street sign placed in the middle of the road.

Motion by Councilmember Elvig, seconded by Chairperson Backous to recommend to City Council to move forward with staff's recommendation to purchase and install the kid alert safety signs and in-street pedestrian crossing signage with the COR, in an amount not to exceed $1,000.

Motion carried. Voting Yes: Chairperson Backous and Councilmembers Elvig and McGlone. Voting No: None.

Case #5.6 2011 Review of Engineering Consulting Services

City Engineer reviewed in the staff report that this is a review of how consulting dollars were spent in 2011 and additional funds were put into this fund totaling $31,500.00.

City Administrator Ulrich commented we did eliminate some full time staff and we put in some contract amounts to make sure we got the work done that was important to do, this came in surprisingly close to what we estimated it would be.

Chairperson Backous asked about the flooding investigations and is that for FEMA purposes.

City Engineer Himmer clarified that is all of the items that came in questions and concerns raised by residents that is going on and we will bring back to a future meeting showing the results and conclusions of that analysis.

Councilmember McGlone asked about some of the line items listed.

City Engineer Himmer stated we have tried to be as self sufficient as we can only going out for those services that we need, you will see some items that probably aren't really engineering services, we've used those to be creative trying to solve some of the other budget issues and not have to bring those forward to you, the intent of this is to only to go for those specialty services that we need.

Director of Public Works/Principal City Engineer Olson added the only other comment is that they intend to bring this back every year as the direction was to report on that.

No action taken, for informational purposes only.

Case #5.7 Consider Request for Moving Mailboxes on Dysprosium Street

Director of Public Works/Principal City Engineer Olson reported that he heard back from the Postmaster and the Postmaster ultimately decided that the mail carrier is not willing to change his route. There is one carrier that delivers to the neighborhood on the east side of Dysprosium Street and another carrier that delivers to the neighborhood on the west side of Dysprosium Street.

There was discussion regarding the garbage cans and recycle bins being placed close to or in the paved travel lanes and parking areas. It was also discussed that people are stopping in the drive lanes to pick up their mail. The discussion continued with sending out a mailing to the residents requesting they park and walk up to their mailboxes and also address the issue at the same time with the proper placement of the garbage cans and recycle bins.

The consensus of the Committee is to send an informational letter out to each resident outlining the request and decision on the potential mailbox relocation, as well as describing the concern related to placement of obstructions in the right-of-way.

COMMITTEE INPUT

Discuss meeting start time for future Public Works Committee meetings.

The consensus of the Committee is to change the meeting start time from 5:30 to 6:00 pm on the third Tuesday of every month.

ADJOURNMENT

Motion by Councilmember Elvig seconded by Councilmember McGlone to adjourn the Public Works Committee meeting.

Motion carried.

The regular meeting of the Public Works Committee adjourned at 5:08 p.m.

Respectfully submitted,

_____

Brian Olson
Public Works Director

Drafted by Mary Jo Warner
City of Ramsey Public Works Secretary

Public Works Committee **5. 1.**

Meeting Date: 02/21/2012

By: Tim Himmer, Engineering/Public Works

Title:

Discuss Trail Easement at 15620 Krypton Street NW

Background:

City staff was contacted recently by an individual that is considering purchasing the property at 15620 Krypton Street NW. The main topic of conversation was related to the existing bituminous trail that extends down the east property line and into the backyard. He was inquiring whether there was a purpose for this trail, and when it might be utilized in the future. Reviewing property files it was discovered that this trail was intended for a dual purpose; a maintenance access to the City's sanitary sewer system, and a pedestrian connection.

When WILDLIFE SANCTUARY 3RD was subdivided in 2003 the trail construction was an obligation of the development agreement (see attached development agreement excerpt), and was to be located along the common lot line between lots 5 and 6, Block 3. Extension of a gravity sanitary sewer was also a requirement of the project, such that an existing lift station could be eliminated when a future trunk extension was complete through a neighboring development to the north and west. During construction the sanitary sewer had to be realigned slightly due to environmental constraints, and additional sanitary sewer easements were granted for this new alignment at the time.

It appears the trail was constructed over the top of the sanitary sewer trunk line that will be used in the future, and not along the entire extents of the common lot line, as referenced. The separate recordable trail easement referenced in the development agreement does not appear to exist, therefore we currently only have rights to access the current easement area for drainage and utility purposes.

Notification:

Observations:

The potential property purchaser has submitted an offer to the current property owner and is awaiting financing approval before finalizing the purchase agreement. He is concerned about potentially having a trail through the center of his backyard forever and is requesting that the City relocate the trail into the easement along the common lot line, as it was originally intended. He understands the dual purpose of the trail and is accepting of its intended use, for utility maintenance and pedestrians, but would like to see it placed on the lot line. He has even gone so far as to state that he would be willing to work with City staff to secure the pedestrian trail easement along the common lot line (see attached e-mail). If he is unsuccessful is getting this trail relocated he is considering withdrawing his offer to purchase the property.

The potential property purchaser has offered up a solution to resolve this matter; which includes the City removing the portion of the trail that is not contained within the 15' easement along the common lot line, and the property owner restoring the area (sod of seed) and securing the required pedestrian trail easement. This seems like a reasonable request to resolve this matter in the short term, but since the City has dedicated drainage and utility easement throughout most of the backyard there is no guarantee that we would not come back in the future and utilize this space for maintenance purposes.

A paved access is preferred for utility maintenance in these situations because we often receive complaints from residents after we access their property with heavy equipment and rut up/damage their lawns and/or irrigation systems. Currently there is no need to access the sanitary sewer in this location, because it will not be utilized until the adjacent area develops, or the City decides it wants to construct this gravity system. It will most likely remain in place until such time that development of the adjacent land occurs and the final trunk alignment is reviewed with

a land use application. Staff believes it would even be appropriate to require the adjacent future development be responsible for revisions to the sanitary sewer system that would support their project, and also to construct approximately 100' of trail along the common lot line as a pedestrian connection.

Staff is looking for direction on how the Council would like to resolve this matter, and offers a couple of thoughts for consideration:

- This pedestrian trail is shown on the City's Master Park and Trail Plan, so does the Council wish to keep this designation and secure the required pedestrian trail easement previously contemplated?
- Are you open to relocating the trail to the common lot line, now and in perpetuity?

Funding Source:

Staff time has been used to research this matter to date. Should the Council direct staff to relocate portions or the trail we would most likely utilize staff time and/or corrections workers to complete the task.

Staff Recommendation:

Committee Action:

Based upon discussion. Depending on the outcome and timing, this may become a stand-alone case on the next available City Council meeting February 28th.

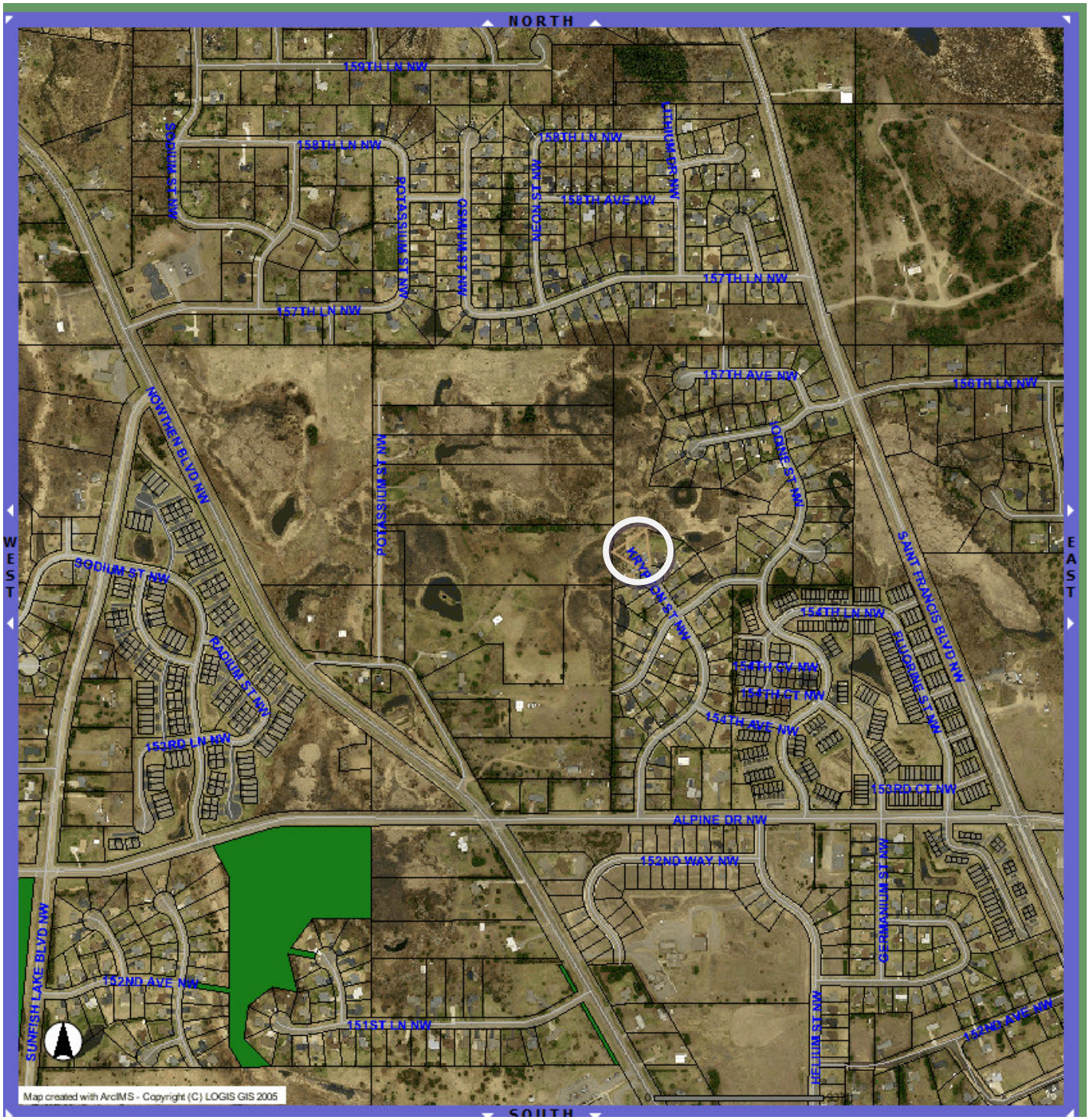
Attachments

Location Map
Property Aerial
Wildlife Sanctuary 3rd Plat
Development Agreement Excerpt
E-mail Correspondence
Sanitary Sewer Alignment
Master Park and Trail Map

Form Review

Inbox	Reviewed By	Date
Brian Olson	Brian Olson	02/15/2012 09:45 AM
Tim Himmer (Originator)	Tim Himmer	02/15/2012 10:29 AM
Brian Olson	Brian Olson	02/15/2012 11:13 AM
Kurt Ulrich	Kurt Ulrich	02/16/2012 02:36 PM
Form Started By: Tim Himmer		Started On: 02/14/2012 09:54 AM

Final Approval Date: 02/16/2012



15620 Krypton Street NW Location Map

15620 Krypton Street NW

OFFICIAL PLAT

WILDLIFE SANCTUARY THIRD ADDITION

Book 65 PAGE 34

CITY OF RAMSEY
COUNTY OF ANOKA
SEC. 23, T 32, R 25

North E S W

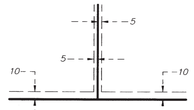
0 100 200
SCALE IN FEET
1 INCH = 100 FEET

FOR THE PURPOSES OF THIS PLAT, THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 32, RANGE 25 IS ASSUMED TO HAVE A BEARING OF SOUTH 88 DEGREES 59 MINUTES 07 SECONDS WEST.

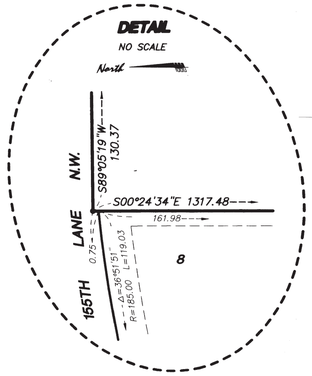
ALL MONUMENTS REQUIRED BY MINNESOTA STATUTE, AND NOT SHOWN ON THIS PLAT, WILL BE SET WITHIN ONE YEAR OF THE RECORDING DATE OF THIS PLAT, AND SHALL BE EVIDENCED BY A 1/2 INCH BY 14 INCH IRON PIPE MARKED BY R.L.S. NO. 25287.

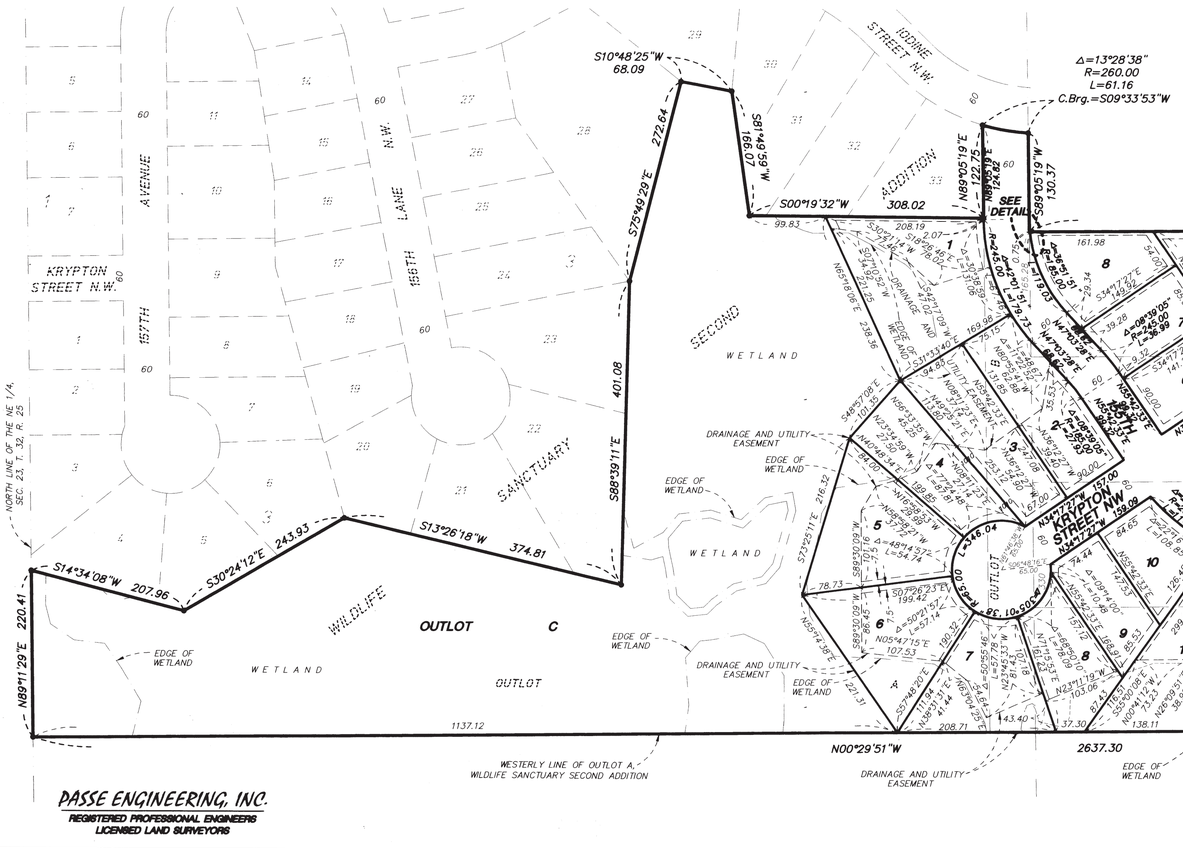
• DENOTES FOUND IRON MONUMENT

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:



BEING 5 FEET IN WIDTH AND ADJOINING SIDE LOT LINES, AND 10 FEET IN WIDTH, AND ADJOINING STREET AND REAR LOT LINES, UNLESS OTHERWISE SHOWN ON THE PLAT.





PASSE ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEERS
LICENSED LAND SURVEYORS

SHEET 2 OF 2 SHEETS

SECTION V
TRANSPORTATION AND LANDSCAPING

17. **Park Trail Development and Fees.** The City Council has established a trail development fee in the amount of Four Hundred Seventy Five Dollars and no cents ($475.00) per lot. The three (3) existing homesteads are exempt from this fee. The amount of trail fees due on the Plat is Twenty One Thousand Dollars Three Hundred Seventy Five Dollars and no cents ($21,375.00) (45 lots x $475.00 per lot). The **DEVELOPER** herein agrees to construct a sidewalk along one side of the Krypton Street N.W. cul-de-sac to the common property line of Lots 5 and 6 of Block 3. The **DEVELOPER** also agrees to construct an 8 foot wide bituminous trail along the entirety of the common property line between Lots 5 and 6 of Block 3. The **CITY** herein agrees to credit the trail development fees due on the **Plat** in an amount equal to the surface costs associated with the trail and sidewalk segments described in this paragraph. The amount of the credit shall be One Thousand Eight Hundred Sixty Dollars and no cents ($1,860.00). Therefore, a payment in the amount of Nineteen Thousand Five Hundred Fifteen Dollars and no cents ($19,515.00) is due to the **CITY** for this **Plat.**

    The **DEVELOPER** herein agrees to provide the City with a separate document, in recordable form, granting the City a fifteen foot (15') wide easement for trail and access purposes on the common property line between Lots 5 and 6 of Block 3.

18. **Sidewalk Construction.** The **DEVELOPER** herein agrees to construct and pave, in accordance with **CITY** standards, a five (5) foot wide concrete sidewalk with pedestrian ramps in locations prescribed by the **CITY,** not to exceed 5% in grade, along the east side of Krypton Street N.W., and the south side of 155th Lane N.W. and 154th Lane N.W. The costs associated with sidewalk construction are not eligible as a credit towards the Trail Development Fees and/or Park Dedication requirements due on the **Plat.**

19. **Tree and Sod Planting Plan.** Sodded boulevards, in addition to yard trees in accordance with the Final Tree Plan dated March 27, 2003, revised April 17, 2003, are required for each lot in the **Plat** prior to issuance of a Certificate of Occupancy. The **DEVELOPER** is required to submit a Final Tree Plan for **CITY** approval that identifies existing tree growth within the **Plat** that will be protected during construction, and the location and species of the new plantings. The trees to be protected must be identified on the grading plan, and the plan must require the installation of 'tree save fences' prior to land clearing or grading. In addition, the requirement for this Plan shall be fulfilled by the **DEVELOPER** as follows:

    a) Minimizing the impact of construction on trees in accordance with Minnesota Extension Service publication "Protecting Trees From Construction Damage" (Publication #NR-FO-6135-S).

    b) For trees intended to be planted between the sidewalk and the street, the specific locations must be staked in advance of planting and approved by the **CITY.** In the event the weather is not conducive to tree or planting sod in the boulevard at the time of Certificate of Occupancy, the Building Permit holder shall place a cash deposit in

Tim Himmer

From: Tim Himmer
Sent: Wednesday, February 08, 2012 11:28 AM
To: 'Josh and Shawna Dvorak'
Subject: RE: 15620 Krypton Street (backyard path)
Attachments: Northfork Trail Easement.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Josh

Consistent with our recent conversation attached is a general trail easement that the City would be seeking for pedestrian use of the trail along the common lot line between 15620 & 15625 Krypton Street. If we intend to move forward with this I would just need to revise the legal description. Feel free to contact me with any additional questions you have related to this matter. Thanks.

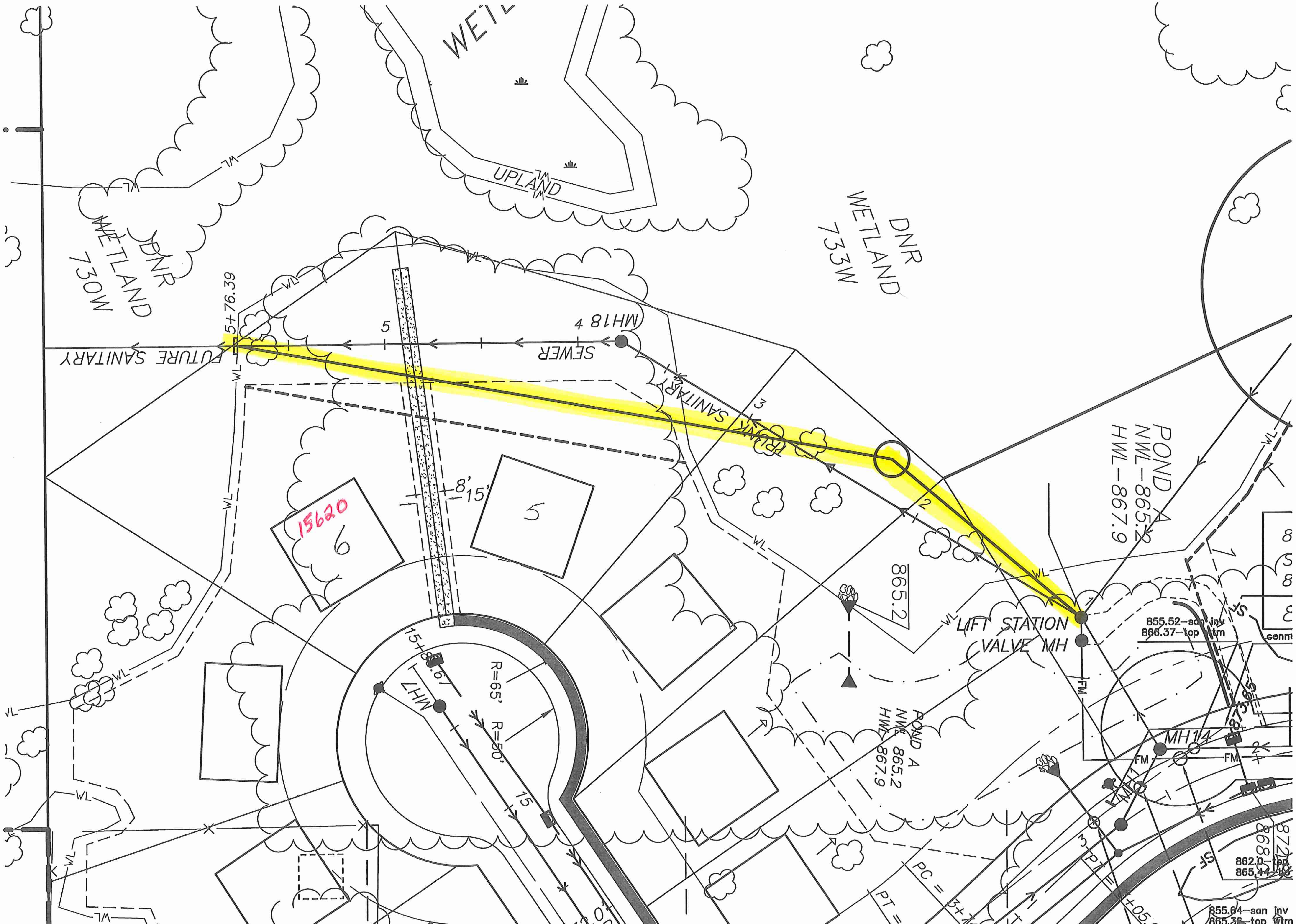
Tim Himmer
City Engineer
City of Ramsey
7550 Sunwood Drive NW
Ramsey, MN 55303
(763) 433-9893
thimmer@ci.ramsey.mn.us

From: Josh and Shawna Dvorak [mailto:joshuadvorak@msn.com]
Sent: Monday, February 06, 2012 5:34 PM
To: Tim Himmer
Subject: 15620 Krypton Street (backyard path)

Hi Tim,

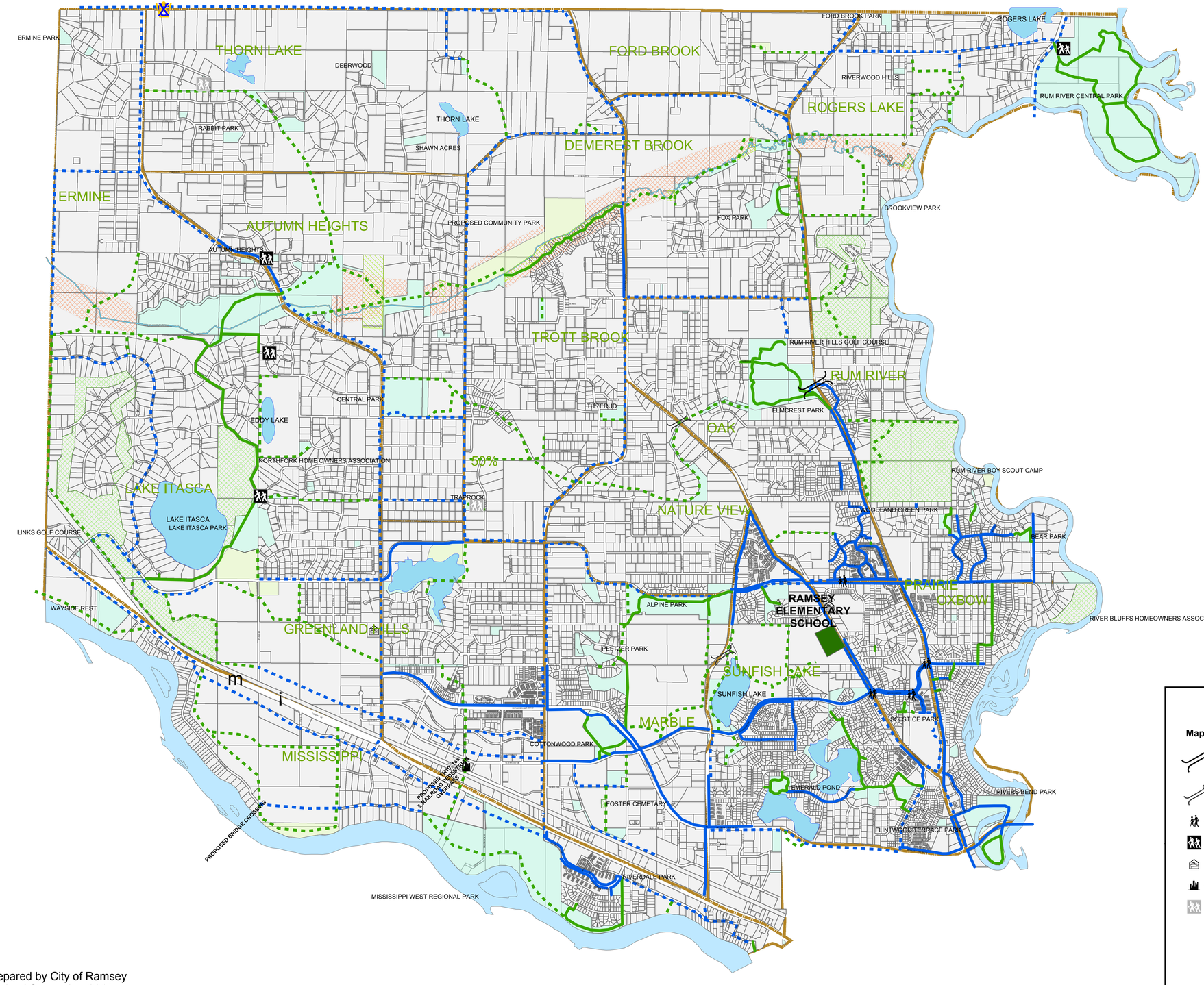
After our conversation and your advice that we would need an agreement drawn up regarding the easement I started to think that since this was the cities responsibility to begin with and it was overlooked, I was hoping the city attorney that has been looking into this matter could draw up an agreement with the appropriate parcel numbers, etc. stating the path would be approved as a straight path only, not curving into the yard. Do you think this would be a possibility? If so, I would then take the next steps and work with the homeowner who lives next door to obtain the appropriate signatures which would then need to be addressed with the council. Please advise accordingly.

Thanks again for your help on this matter.
Josh Dvorak
763-286-2373
JoshuaDvorak@msn.com



DNR WETLAND 730W
DNR WETLAND 733W
UPLAND
WL
5+76.39
FUTURE SANITARY SEWER
MH18
TRUNK SANITARY
8'
15'
15620
6
5
POND A NWL-865.2 HWL-867.9
865.2
LIFT STATION VALVE MH
855.52-san inv
866.37-top rtm
MH14
FM
MH17
R=65'
R=50'
POND A NWL 865.2 HWL 867.9
PC =
PT =
855.64-san inv
865.36-top rtm

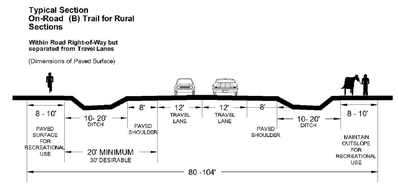
City of Ramsey Master Park and Trail Plan



Typical Section
On-Road (B) Trail for Rural Sections

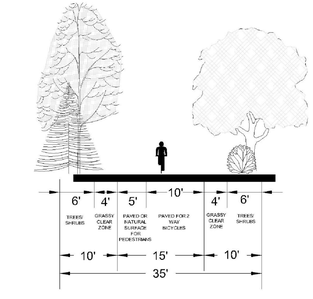
Within Road Right-of-Way but separated from Travel Lanes

(Dimensions of Paved Surface)



Typical Section
Off-Road Trail

Within MUSA Boundaries



Legend

Map Symbols

- Underpass
- Proposed Underpass
- Crosswalk
- Existing Trailhead
- Fire Station
- City Hall
- Proposed Trailhead

Existing Trails

- Off-Road
- On-Road (Separated)

Proposed Trails

- Off-Road
- On-Roadway (separated)
- Conservation Easements

Parks

- Quasi-Public
- Existing Parks
- Proposed Park
- TROTT BROOK SPECIAL PROTECTION CORRIDOR
- Ramsey Recreation Districts

Prepared by City of Ramsey
Revised September 2010

Public Works Committee **5. 2.**

Meeting Date: 02/21/2012

By: Tim Himmer, Engineering/Public Works

Title:

Discuss Investigations Related to 2011 Flooding Concerns

Background:

Last summer the City experienced several significant rainfall events that lead to many localized flooding concerns, and resident complaints. The large volumes of precipitation that occurred over a short period of time appears to have elevated the groundwater within areas of the City, and prohibited the generous rate of infiltration that typically takes place in the Anoka sandplain. Throughout the summer and fall staff worked hard at registering and responding to the calls, and evaluating the situations on an individual basis to determine whether quick fixes could be implemented (culvert obstructions, re-ditching, etc.) to alleviate the immediate concerns.

This item was discussed at the Public Works Committee on August 15, 2011, and at that time staff summarized the areas of concern that were being investigated based upon citizen complaints received. The attached summary was presented at the meeting; which outlines the concern identified, actions steps to evaluate the concern, additional investigations that would be necessary to fully understand the situation, and recommendations for specific projects that could be implemented rather quickly and inexpensively. At that time we classified the issues into 3 categories:

1. Those that required no further action. They were evaluated and corrected, or did not need correcting because the water was fully contained within a dedicated drainage & utility easement (functioning as designed).
2. Those that required additional investigation and evaluation before deciding on a long term solution, and implementing corrective actions.
3. Those that had an identified recommendation for immediate action.

At that meeting the Committee briefly discussed the areas of concern, and directed staff to prepare plans and specifications for the items identified in category 3. Once this direction was ratified by the City Council on September 13, 2011, and the plans completed, it was too late in the season to secure bids and complete the improvements in 2011. It was then decided to delay construction until 2012, where some of the improvements could be completed by inclusion in the street maintenance program.

On August 23, 2011 the City Council accepted a petition, from residents in the neighborhood near 149th Lane NW and TH 47, requesting that the City review the drainage problems associated with the wetland complex in that location. The area is largely comprised of the RAMSEY MEADOWS subdivision (5 separate subdivisions), which was built around a large wetland complex and included significant easements encompassing the 100 year flood elevation. The petition was initiated by the resident at 5410 149th Lane NW because they had a considerable amount of standing water in their backyard. Staff conducted a site visit and reviewed plat documents for the property in question, and determined that the backyard of all the homes along the east side of 149th Lane had rather large platted drainage and utility easement at the rear of their properties that corresponded to the 100 year flood elevation of the surrounding water body.

At that time staff also reviewed the wetland outfall and downstream receiving bodies (pipes, ponds, culverts, and ditches) to determine whether there was an obstruction that could be holding back the water. While no obstructions were found it was discovered that the outlet pipe from the wetland, that was installed as part of the TH 47 reconstruction project, may have been installed at an incorrect elevation. Staff immediately modified that structure, and was able to provide some relief of surface water levels. It was also determined that the property owner had constructed some improvements in their backyard (retaining wall construction and/or grading revisions) that may have reduced some of the storage capacity in the area and compounded the flooding situation on their parcel. Council direction from that meeting was to analyze the sub-watershed for this area in an effort to determine whether improvements could be made that would correct the concern identified and provide additional relief from long term

flooding.

Notification:

Observations:

Staff prepared a brief RFP, to investigate the areas of concern, and distributed it to members of the City's consultant pool in the fall of 2011. The goal of this project was to have an independent third party evaluate the areas, provide options for corrective actions, and associated estimates to implement the work. Hakanson Anderson was awarded the project to undertake these investigations, and they have recently completed their analysis and compiled a report that references potential solutions for each area identified. Attached to this case is their final report; the summaries and recommendations section in the beginning gives a brief overview of their findings and will be used as the basis of our conversation. Also in the fall of 2011, while staff was in the process of updating the City's Capital Improvement Program (CIP), we budgeted additional funds to stormwater improvement projects over the next two years in an effort to address some of these concerns. Staff is seeking input from the Council on prioritizing potential stormwater improvements for the areas that have been identified, and developing a program for implementation. The final report prepared by Hakanson Anderson presents multiple options for each specific area, which could be further refined based upon Council direction received.

As a result of some of the localized flooding that occurred Rum River Hills Golf Course filed a claim with the City seeking reimbursement for damages and loss of revenue. The claim was forwarded to the League of Minnesota Cities (LMCIT) for processing. Attached is the claim as submitted by Rum River Hills, and the LMCIT response and settlement offer.

For informational purposes, I have also attached a precipitation summary of the entire state that shows the amount of rain received in the 4 month period from April 1, 2011 through August 1, 2011. This exhibit shows that the City of Ramsey received almost twice as much rainfall over this 4 month period, as compared to the statewide average since these records began being collected. It also shows that we were one of the top three areas for amount of precipitation received during this 4 month period.

Funding Source:

The Capital Improvement Program (CIP) lists a $75,000 annual expenditure for the next 5 years to address city wide drainage enhancements. Other projects have previously been identified for corrective action, and those will be evaluated with some of the items on the attached summary list for prioritization and potential improvements; these will be brought back at a future date for Council consideration.

Staff Recommendation:

Staff recommends receiving input from the Public Works Committee to assist in prioritizing and developing a program that would address the flooding concerns identified and associated with the unprecedented 2011 spring/summer rainfall.

There may also need to be some discussion related to the Rum River Hills insurance claim settlement proposed by the LMCIT. The correspondence was forwarded to the property owner approximately one month ago, and to date there has been no response. We have invited representatives from the golf course to tonight's meeting.

Committee Action:

Based upon discussion.

Attachments

Location Map

Flooding Summary and Priority Ranking

Hakanson Anderson Report

Rum River Hills Claim

Proposed LMCIT Settlement for the Rum River Hills Claim

2011 Spring/Summer Precipitation Rankings

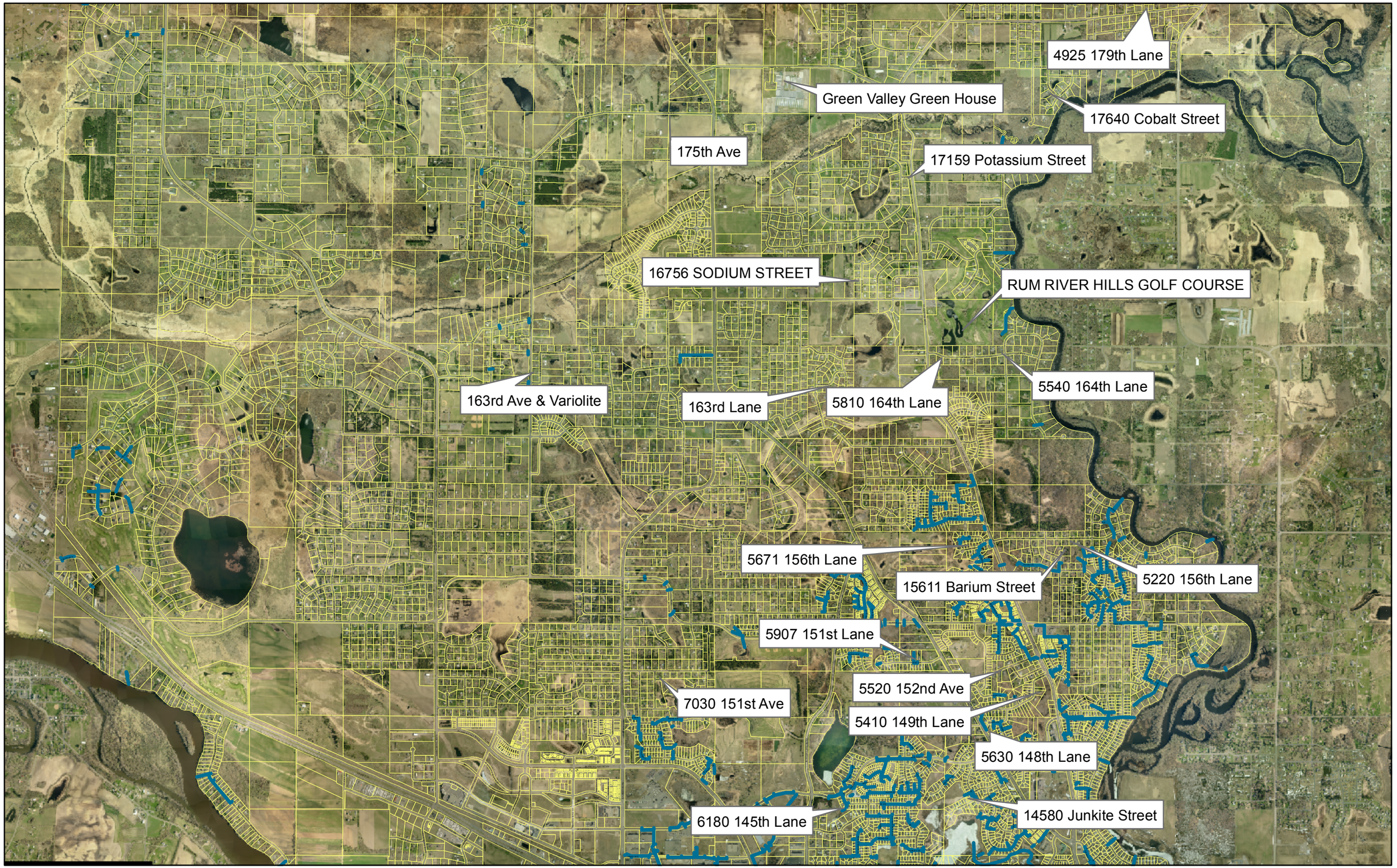
Form Review

Inbox	Reviewed By	Date
Brian Olson	Brian Olson	02/16/2012 08:24 AM
Kurt Ulrich	Kurt Ulrich	02/16/2012 01:34 PM

Form Started By: Tim Himmer Started On: 02/14/2012 09:39 AM

Final Approval Date: 02/16/2012

DRAINAGE CONCERNS PW 8-15-11



July 2011 Stormwater Visits

Address	Owner	Observations	Update	Potential Solutions
17159 Potassium Street	Stromenger, Tom & Trish	Water standing in back yard, lower than drainfield. Some water inside under front step. Water visible under floor in back through open plumbing trench. Observation of yard indicated grades slope towards house in several locations corresponding to water observed inside. Backyard drains to Fox Park. Fox Park Boardwalk approaches are under 3" of water, water pushed up through boards while walking on it. No outlet for this wetland.	Advised property owner of potential improvements to improve drainage away from their foundation (fill and/or draintile installation).	Water appears to be contained within the existing drainage & utility easement. Private improvements to improve lot drainage. No further action.
15611 Barium St	Moravetz, Paul & Carolyn	Water standing in back yard, lower than drainfield. Ponded water is in Woodland Green Park	Water contained within existing drainage & utility easement on property. Several trees show signs of stress and may be lost, both on private property (easement) and within the park.	Water appears to be contained within the existing drainage & utility easement. No further action.
5520 152nd Avenue	Gary Solmonson	Street runoff from recently completed paving project flowing down neighbors driveway and settling in low point adjacent to the house.	Corrected neighbors driveway with minimal paving to keep street runoff in the right-of-way and directed to the storm sewer. Property owner installed some natural barriers to slow down and prevent overland flow from neighbors property.	No further action.
5540 164th Lane		Water standing in rear and side lot drainage & utility easement.	Property owner pumped water over roadway into ditch along the north side. City staff cleaned the culvert under 164th, and the ditch to the north to direct water into the adjacent ponding area.	No further action.
4925 179th Lane	Sarah Chamberlain	Experiencing flooding in the basement of the home. No standing surface water; presumably an elevated water table. Property owner wanted to know if we could improve ditch flow and/or install storm sewer into the recently completed work on Ute St.	Instructed home owner that we couldn't assist with an elevated water table, and they should contact Anoka County to discuss ditch drainage in area (County Road 27).	No further action.
5630 148th Lane	Bruce Saba	Standing water in rear yard pond and drainage & utility easement. Concerned water would continue to rise into home.	Water contained within existing drainage & utility easement on property. Verified downstream culverts were open & flowing	No further action.
5671 156th Lane	Candie Hansen	Standing water in rear yard pond and drainage & utility easement. Concerned water would continue to rise into home.	Water contained within existing drainage & utility easements. Staff verified outlet structure and downstream system was free of obstructions.	No further action.
6180 145th Lane		Resident concerned with high water in rear and side yard, encroaching near deck.	It appears as if the deck was built into or near the existing drainage & utility easement. Water is contained within the easement, but may be backing up through the system from Sunfish Lake due to high water conditions.	No further action.
6530 Green Valley Road	Green Valley Greenhouse	Property owner expressed concern with ditch drainage (and wetland discharge from the north) running through the property and causing erosion to their pond outlet prior to discharge to County ditch #27.	County ditch issue (County Road 63)	No further action.
16756 Sodium Street	Kamrowski, Joel & Helen	Split Entry Walkout. Water standing on basement floor during visit. They removed all carpeting and sheet rock on block walls. Water came in at front wall at joint between block and slab. Observation of yard and discussion indicated water from roadside ditch rose and flowed towards house. Minimal grade change between bottom of ditch and grades at house. Potential solution, regrade ditch to drain to south property line, around mound system and into back yard. Backyard has standing water, this is north end of wetland/ storage area. Outlet is culvert under 167th Avenue. Observed Culvert, standing water visible at both ends, wetland south of 167th is Jon Peterson's proposed wetland banking area. It does not have an overland outlet. ****** Homeowner is pursuing a claim against City for water damage in basement.**	Surface water subsided, but still experiencing water in basement due to high groundwater. Property owner cleaned culvert in front under driveway (severely deteriorated). City verified that the culvert was free of obstructions under 167th, and removed debris from the downstream channel along the west side of Elmcrest Park. The property owner south of 167th is currently evaluating the opportunity to develop wetland banking credits, which would increase downstream capacity, and he is willing to share the results of his hydrologic study for the area.	No rear yard drainage & utility easements present - wetland at low point on adjacent lot to the south (also not encumbered by drainage & utility easement). Re-ditch boulevard areas and/or reshape property to allow pass through drainage to the wetland. Potential for downstream relief if wetland creation/banking project by private property owner is advanced. Additional information and evaluation is necessary to formulate a recommendation.

Rum River Hills Golf Course		Water standing on fairways and cart paths. Pipe Flowing 25% full at outfall. Course rented large pump to move water in preparation for event on 7/21. They were making phone calls to contacts seeking prices for installing a second pipe. The route would cross fairways to the ditch on the east side of the course. **** They asked about possible City Participation in the cost of the pipe. I said it would have to be presented to the City Council.	Removed turtles from line, improved flow. The City contracted the televising of the storm sewer lines within the golf course and found several sags in the pipe system that hold water. There is a location in one of the pipes that had extreme root growth intrusion, and the camera could not advance any further downstream.	Additional information and evaluation is necessary to formulate a recommendation.
5220 156th Lane	Jason & Ruth Obermaier	Water standing in back yard over existing drain field of septic system. Discussed on a couple of occasions with Council related to options for short term septic fix, and long term downstream drainage options.	Currently working with property owner on offer to connect them to municipal sanitary sewer - based upon Council direction.	Going through a separate process to resolve the immediate concern related to the septic system. Will continue evaluating the downstream system for potential improvements, and bring back at a future date for discussion.
5410 149th Lane	Rocky Belmonte	Water standing in back yard; appears to be slightly outside existing drainage & utility easement due to private property modifications (regrading and installation of a retaining wall).	Staff lowered the outlet from the adjacent wetland area under TH 47. Received a petition from area property owners requesting review of drainage problem - this will be brought to the City Council on August 23rd.	For the most part water appears to be contained within the existing drainage & utility easement. Awaiting Council direction on how to respond to attached resident request.
5907 151st Lane	Chris & Karla Weiss	Standing water in rear yard pond and drainage & utility easement. Concerned water would continue to rise into home.	Staff will need to perform field surveying to verify house and overflow elevations, as it appears the structure was built lower than proposed.	Clean overland overflow area to provide 1' of freeboard from lowest opening.
7030 151st Avenue	Penny Laganiere	Concerned that ditch across the street was filled and now water flows over the road through their property causing erosion. Also has water in rear yard adjacent to ponding area.	Appears water was slightly outside of drainage & utility easement. Verified downstream culverts were open & flowing.	This area is adjacent to the park and was constructed over wetland fill. Water table too high in area.
17640 Cobalt Street		Contacted regarding standing water in the front yard and encroaching onto the roadway.	Staff cleaned the culvert in the area, which was old and slightly deteriorated	Consider replacing culvert with future street maintenance activities in the area.
163rd Avenue & Variolite Street		Water standing in ditch		Evaluate & review existing culvert crossing for possible corrective action.
5810 164th Lane		Water standing in front yard, and encroaching on the roadway.	Low point in ditch along roadway. Staff pumped water over road to existing drainage & utility easement on north side of road.	Install culvert under roadway.
175th Avenue (W. of Nowthen Blvd.)		High water in pond to the south overflows the road to a pond on north side; no culvert crossing under road.	Staff pumped water over road in short term to keep travel lanes open.	Investigate County design of improvements, prior to turn back, to determine whether a culvert was supposed to be installed. If not, install a culvert under the road.
14580 Junkite Street	Molly Bauch	Standing water in rear yard pond and drainage & utility easement. Concerned water would continue to rise into home.	Overland overflow from original grading plan not executed; the trail installation was too high & does not allow for overland flow to the adjacent wetland in the park. Staff initially pumped water over the trail and advised resident we would consider a storm sewer improvement to place a culvert under the trail and/or lower the trail to provide the overland relief as designed.	Install culvert under trail and/or lower trail to provide 1' of freeboard from lowest opening.
6310 163rd Lane		Contacted regarding standing water in the front yard and encroaching onto the roadway.	Staff cleaned the culvert in the area, which was old and extremely deteriorated	Replace existing culvert under roadway

INVESTIGATION OF 2011 FLOODING CONCERNS

FOR THE

City of Ramsey
Anoka County, Minnesota

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

Tim Eggerichs, P.E.	43362 License No.	February 14, 2012 Date
Ronald J. Wagner, P.E.	26052 License No.	February 14, 2012 Date

TABLE OF CONTENTS

SUMMARIES AND RECOMMENDATIONS

148th Lane

There is an existing low area on the south side of 148th Lane. During the wet spring of 2011, stormwater would pond for extended periods in this low area. A 15" outlet exists approximately 2.5 feet above the bottom of the low area that drains the area to the east. The stormwater below the outlet pipe infiltrates into the soil. A drainage easement exists over this low area.

Different sized outlet pipes at different elevations were analyzed. These different sized outlets did not have a significant impact on the high water level in the area. Since the low area is within an existing drainage easement, it is our recommendation that nothing be changed in the area.

149th Lane

There is an existing low area on the east side of Lot 3, Block 1 of Ramsey Meadows 4th Addition (5410 149th Lane NW). This low area is connected to the large DNR Wetland to the east with a drain tile. During the wet spring of 2011, stormwater would back up through this drain tile and flooded the low area. It appears that this low area may have been constructed as part of a wetland mitigation plan and may be controlled by Wetland Conservation Act rules. A drainage easement exists over this low area.

The outlet from the DNR Wetland, which drains east under Trunk Highway 47 (TH 47), was analyzed. The current outlet has a weir structure that is approximately 0.8 feet above the invert of the 15" pipe that crosses TH 47. Additional culverts under TH 47 were analyzed, but the additional outlets did not have a significant impact on the high water levels in the DNR Wetland. Removing the weir structure was also analyzed.

It is our recommendation that the weir structure be removed from the outlet. This will not have a significant impact on the high water level of the wetland; however, the wetland will drain down to an elevation near the elevation of the bottom of the low area at 5410 149th Lane. The estimated cost to remove the weir structure is $1,265.

Rum River Hills Golf Club

Rum River Hills Golf Club has been experiencing flooding issues throughout the golf course. The large ponds near the clubhouse drain to the east through an existing outlet structure and 12" pipe. This stormwater then drains over an existing steel weir structure and over a rock dam prior to discharging to the Rum River.

Area 1

The ponds near the clubhouse have been flooding and the outlet does not seem to drain the ponds effectively. The existing 12" outlet from the large ponds near the clubhouse has several sags in it and several joints have been compromised.

It is our recommendation to replace this pipe and install a new outlet structure with removable planks that will give the golf course more flexibility in controlling the water

elevation in the ponds. This includes an 18" HDPE outlet and precast concrete outlet structure with a removable grate for access to the planks. It is proposed to leave the overflow at the same elevation as existing, which will have minimal impacts on the elevation of the standing water and the high water levels of the ponds. The estimated cost to install this new outlet is $29,853.

Area 2

Based on the high water levels in the ponds near the clubhouse, it appears flooding of the cart paths near Hole #1 may be an issue during large storm events. The existing culverts consist of a 12" CMP and 15" HDPE.

To reduce the frequency of the flooding, we recommend installing 24" diameter culverts under the two existing cart paths. The paths would continue to be inundated during storm events greater than 3.5", but would not be inundated during storm events less than 3.5". The estimated cost to replace the culverts is $6,642. If the golf course does not feel that the cart path flooding is a concern, replacing the culverts is not a necessity.

Area 3

The soil in the fairway of Hole #15 has become saturated. There is an existing rock dam southeast of this fairway and it appears that water being contained by the rock dam may be infiltrating into the soil and saturating the fairway.

We recommend lining the creek upstream of the rock dam with an impermeable liner and replacing and/or installing new drain tile in the fairway of Hole #15. Lining the creek will eliminate the infiltration into the soil and the drain tile will keep the soil from becoming saturated. The estimated cost for these improvements is $13,530.

Area 4

Holes #3 and #17 have had flooding issues. The ponds and swales near the two holes are drained through three 15" CMP culverts.

Different sized culverts at different elevations were analyzed. These different sized culverts did not have a significant impact on the high water levels in the area. Without lowering the entire swale and creating more storage, it does not appear that replacing the culverts would have a significant impact. It is our recommendation that the three culverts not be replaced.

163rd Lane

There is an existing, landlocked low area south of 163rd Lane and east of Wolfram Street. During a majority of the year, stormwater runoff infiltrates into the soil. However, during early spring when the ground is frozen and during periods of heavy rainfall, water levels have risen to levels that cause flooding of adjacent properties.

Different sized outlet pipes were analyzed to drain the low area. Installing an outlet will have a significant impact on the high water levels in the area and, most importantly, the length of inundation will be greatly reduced. We recommend directionally drilling an

18" HDPE pipe south to County Ditch #3 with an invert elevation of 872.0. Installing the pipe at an elevation of 872.0 will continue to allow 3" storm events to infiltrate into the soil. The estimated cost to install this outlet is $80,795.

156th Lane

During large storm events, the wetland in Woodland Green Park ponds water in the backyard of 5220 156th Lane. The area where water ponds was platted with a 75-foot drainage and utility easement, however, this easement has been vacated. The wetland discharges east through an existing storm sewer system to a low area and then north through another storm sewer system to the Rum River.

Different sized ponds and outlet configurations were analyzed. One alternative to reduce the high water level of the wetland in Woodland Green Park included constructing a new outlet pipe from the wetland to the low area to the east. This alternative would also require constructing a new outlet at a lower elevation from the low area directly to the Rum River. This would require the approval of the Minnesota Department of Natural Resources and does not appear viable at this time.

We recommend filling the backyard of 5220 156th Lane to an elevation equal to the 100-year high water level. Stormwater would then be contained within Woodland Green Park and would not impact this homeowner. Filling the backyard would require grading in the Woodland Green Park site to create storage to compensate for the lost volume. The estimated cost to complete the grading is $21,175.

Sodium Street

The house at 16756 Sodium Street has been experiencing water in the basement. One reason for having water in the basement could be caused by the road ditch in front of the house filling and then overflowing toward the house. The water then seeps along the basement wall and eventually into the basement. Another reason for water in the basement could be caused by a high groundwater elevation in the area.

We recommend installing a culvert under Sodium Street, regrading the west ditch of Sodium Street, constructing a berm to keep the water in the ditch, and replacing the existing driveway culvert. The ditch would be graded to drain south and a culvert would be installed near the south property line to drain the water to the west. The estimated cost to complete this project is $12,225.

Section 1
148th Lane

148th Lane

Description

As shown on Exhibit 1, a low area exists south of 148th Lane. A 15" outlet pipe drains the low area north and then east to DNR Wetland 658W. The invert of the outlet pipe is at elevation 862.3 and the bottom of the low area is at elevation 859.8. Water in the low area has to rise 2.5 feet prior to discharging. The water below the outlet infiltrates into the soil, which may take days depending on the condition of the soil.

The existing 100-year high water level (HWL) for the low area is 865.5. As shown on Exhibit 2, a drainage easement exists in the rear of Lots 2 through 5, Block 2 of Ramsey Commons 2nd Addition.

Alternatives

The following alternatives address the water elevation in the existing low area.

Alternative 1
In this alternative, a new outlet pipe would be installed between Lot 1 of Ramsey Commons 2nd Addition and Lot 2 of Sunny Ponds, as shown on Exhibit 3. It was assumed that the existing outlet pipe to the north would be removed. By installing an outlet pipe in this location, the invert of the outlet pipe can be lowered from 862.3 to 861.6. The following table summarizes the 100-year HWL's and estimated costs for each outlet pipe:

Outlet Pipe Size	100-Year HWL	Estimated Cost
Existing	865.5	N/A
15"	865.4	$16,264
18"	865.1	$31,566 *
24"	864.3	$45,381 *

* The existing pipe being connected to in Germanium Street is a 15" diamter. Installing the 18" and 24" outlets will require the removal and replacement of this pipe to match the size of the pipe being installed.

Tables 1 through 3 include the individual costs for this alternative.

Alternative 2
In this alternative, a new outlet pipe would be installed between Lots 2 and 3 of Sunny Ponds, as shown on Exhibit 4. It was assumed that the existing outlet pipe to the north would be removed. By installing an outlet pipe in this location, the invert of the outlet pipe can be lowered from 862.3 to 861.4. This alternative would require additional grading and the acquisition of a permanent easement on the property south of Ramsey Commons 2nd Addition and west of Sunny Ponds. The following table summarizes the 100-year HWL's and estimated costs for each outlet pipe:

Outlet Pipe Size	100-Year HWL	Estimated Cost
Existing	865.5	N/A
15"	865.3	$13,098
18"	865.0	$18,846 *
24"	864.3	$32,543 *

* The existing pipe being connected to in Germanium Street is a 15" diameter. Installing the 18" and 24" outlets will require the removal and replacement of this pipe to match the size of the pipe being installed.

Tables 4 through 6 include the individual costs for this alternative.

Alternative 3

In this alternative, the bottom of the low area would be filled to the same elevation as the outlet pipe invert. The pond would then drain dry and would not be sitting with water until it infiltrated. By filling the bottom of th e low area, the resultant 100-year HWL will be 866.2, 0.7 feet higher than the existing HWL. This higher HWL would end up outside the existing drainage and utility easement, creating the need for additional drainage easement.

The estimated cost to fill the low area is $15,321. Table 7 includes the individual costs for this alternative.

Further research is required to determine if this low area was designed to treat a water quality volume. The volume required would dictate if Alternatives 1 and 2 are viable options. Alternative 3 would not be viable, because the water quality volume is being eliminated in this alternative.

870

RAMSEY COMMONS
2ND ADDITION

148TH LANE

15" RCP

15" RCP

15" RCP

18" RCP

18" RCP

5

3

2

1

4

Landscaping

INV=862.3
HEADWALL

BLOCK WALL

WOOD WALL

FENCE

860

862

864

866

868

NOWTHEN BOULEVARD

2

3

SUNNY PONDS

4

5

GERMANIUM STREET

860

DNR
WETLAND
658W

N

30 0 30 60
SCALE IN FEET

EXHIBIT 1
148TH LANE EXISTING CONDITIONS

CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 2:39pm
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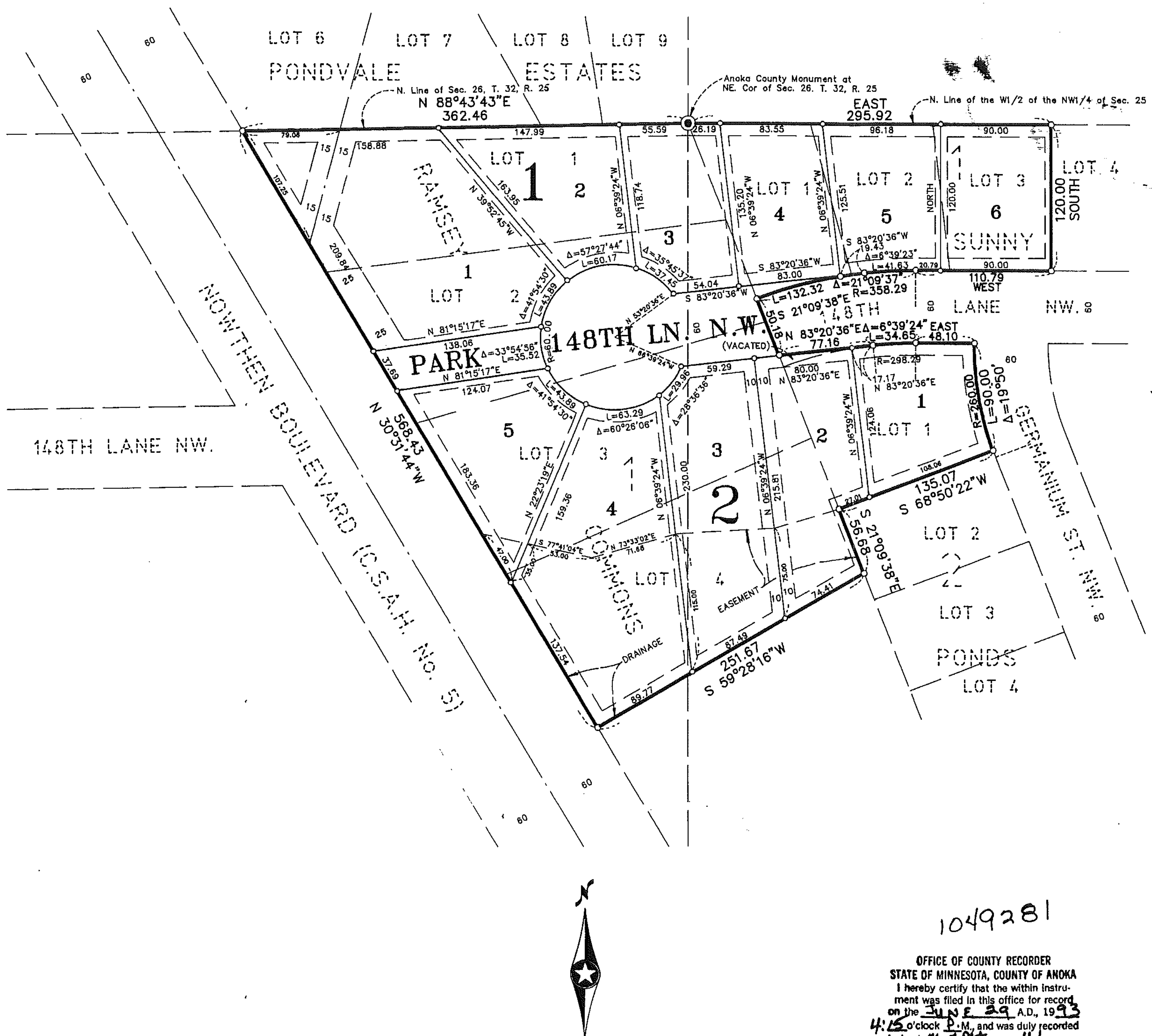
RAMSEY COMMONS 2ND ADDITION

CITY OF RAMSEY — COUNTY OF ANOKA



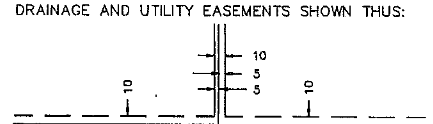
1049281	

OFFICE OF COUNTY RECORDER
STATE OF MINNESOTA, COUNTY OF ANOKA
I hereby certify that the within instrument was filed in this office for record on the JUNE 29 A.D., 1993 4:15 o'clock P.M., and was duly recorded in book 41 of Plats page 41

Edward M. Treska
County Recorder

By D. Swanson
Deputy

DRAINAGE AND UTILITY EASEMENTS SHOWN THUS:



BEING 10 FEET WIDE AND ADJOINING ALL STREET RIGHT-OF-WAY LINES AND REAR LOT LINES AND 5 FEET WIDE AND ADJOINING ALL SIDE LOT LINES, UNLESS OTHERWISE SHOWN ON THE PLAT.

SCALE IN FEET: 0 60 120 180

SCALE: 1 INCH = 60 FEET

○ DENOTES 1/2 INCH IRON PIPE SET.
◉ DENOTES ANOKA COUNTY MONUMENT.
NOTE: FOR THE PURPOSES OF THIS PLAT, THE NORTH LINE OF THE W1/2 OF THE NW1/4 OF SEC. 25, T. 32, R. 25 IS ASSUMED TO HAVE A BEARING OF EAST.

CAINE & ASSOCIATES LAND SURVEYORS, INC.

KNOW ALL PERSONS BY THESE PRESENTS: That North Suburban Development, Inc., a Minnesota Corporation, owner and proprietor, and Doloras S. Fleischer, single, mortgagee of the following described property situated in the County of Anoka, State of Minnesota, to-wit:

Lots 1, 2 and 3, Block 1, and Lot 1, Block 2, all in SUNNY PONDS, according to the recorded plat thereof, Anoka County, Minnesota,

And that part of vacated 148th Lane N.W., as dedicated in the plat of SUNNY PONDS, according to the recorded plat thereof, Anoka County, Minnesota, lying north of the north line of Lot 1, Block 2, in said SUNNY PONDS and lying south of the following described line:

Commencing at the northeast corner of said Lot 1, Block 2; thence on an assumed bearing of West, along the north line of said Lot 1, Block 2, a distance of 48.10 feet; thence westerly continuing along said north line and along a tangential curve, concave to the south having a radius of 298.29 feet and a central angle of 6 degrees 39 minutes 24 seconds, a distance of 34.65 feet to the point of beginning of the line to be described; thence South 83 degrees 20 minutes 36 seconds West, a distance of 77.16 feet to the intersection with the northerly extension of the west line of said Lot 1, Block 2, and said line there terminating.

AND that North Suburban Development, Inc., a Minnesota Corporation, owner and proprietor, and Delano Skeim, single, mortgagee of the following described property situated in the County of Anoka, State of Minnesota, to-wit:

Lots 1, 2, 3 and 4, Block 1, RAMSEY COMMONS, according to the recorded plat thereof, Anoka County, Minnesota.

Have caused the same to be surveyed and platted as RAMSEY COMMONS 2ND ADDITION and do hereby donate and dedicate to the public for public use forever the lane and park as shown on the plat. Also dedicating the drainage and/or utility easements as shown on the plat. Also dedicating to the County of Anoka the right of access onto County State Aid Highway No. 5 from Lot 1, Block 1 and from Lots 4 and 5, Block 2. In witness whereof said North Suburban Development, Inc. has caused these presents to be signed by its proper officer this 26TH day of MAY, 1993. Also in witness whereof said Doloras S. Fleischer has hereunto set her hand this 26TH day of MAY, 1993. Also in witness whereof said Delano Skeim has hereunto set his hand this 21st day of MAY, 1993.

NORTH SUBURBAN DEVELOPMENT, INC.

J. A. Menkveld, as President

SIGNED:

Doloras S. Fleischer

SIGNED:

Delano Skeim

STATE OF MINNESOTA) The foregoing instrument was acknowledged before me this 26TH day of MAY, 1993, by J. A.
COUNTY OF ANOKA) Menkveld, President of North Suburban Development, Inc., a Minnesota corporation, on behalf of the corporation.

SHIRLEY D. CHENOWETH
NOTARY PUBLIC-MINNESOTA
ANOKA COUNTY
My Commission Expires 6-24-96

Shirley D. Chenoweth
Notary Public, ANOKA County, Minnesota
My Commission expires 6-24-96

STATE OF MINNESOTA) The foregoing instrument was acknowledged before me this 26TH day of MAY, 1993, by Doloras
COUNTY OF ANOKA) S. Fleischer, single.

SHIRLEY D. CHENOWETH
NOTARY PUBLIC-MINNESOTA
ANOKA COUNTY
My Commission Expires 6-24-96

Shirley D. Chenoweth
Notary Public, ANOKA County, Minnesota
My Commission expires 6-24-96

STATE OF MINNESOTA) The foregoing instrument was acknowledged before me this 21st day of May, 1993, by Delano
COUNTY OF Anoka) Skeim, single.

MARGARET A. McINERNY
NOTARY PUBLIC—MINNESOTA
ANOKA COUNTY

Margaret A. McInerny
Notary Public, Anoka County, Minnesota
My Commission expires 2/28/96

I hereby certify that I have surveyed and platted the land described in the dedication on this plat as RAMSEY COMMONS 2ND ADDITION; that the plat is a correct representation of said survey; that all distances are correctly shown on said plat in feet and hundredths of a foot; that the monuments have been correctly placed in the ground as shown; that the outside boundaries are correctly designated on said plat; and that there are no wet lands or public highways to be designated on said plat other than as shown thereon.

Jeffrey N. Caine
Jeffrey N. Caine, Registered Land Surveyor
Minnesota Registration No. 12251

STATE OF MINNESOTA) The surveyors certificate was acknowledged before me a Notary Public, this 19th day of May, 1993,
COUNTY OF ANOKA) by Jeffrey N. Caine, Land Surveyor.

MOLLY W. CAINE
Notary Public-Minnesota
Anoka County
My Comm. Exp. 6-13-96

Molly W. Caine
Notary Public, Anoka County, Minnesota
My Commission expires 6-13-96

CITY OF RAMSEY

We hereby certify that the City Council of the City of Ramsey, Anoka County, Minnesota, duly accepted and approved the plat of RAMSEY COMMONS 2ND ADDITION at a regular meeting held this 11th day of May, 1993. If applicable, the written comments and recommendations of the Commissioner of Transportation and the County Highway Engineer have been received by the city or the prescribed 30 day period has elapsed without receipt of such comments and recommendations, as provided by Minn. Statutes, Section 505.03, Subd. 2.

By ______ Mayor By ______ Clerk

Checked and approved this 29th day of June, 1993

By ______
Anoka County Surveyor

I HEREBY CERTIFY THAT THE CURRENT AND DELINQUENT TAXES ON THE LANDS DESCRIBED WITHIN ...
ENTERED
BY ______ DEPU...

RAMSEY

EXHIBIT 2.
FINAL PLAT–RAMSEY COMMONS 2ND ADD.
CITY OF RAMSEY, MINNESOTA

001ACRA 6-29-93 # 425 $30.00

148TH LANE

15" RCP

15" RCP

PROPOSED
STORM SEWER
LOCATION
FES INV=861.6

15" RCP

Landscaping

INV=862.3
HEATER

18" RCP

18" RCP

BLOCK
WALL

WOOD
WALL

FENCE

860

862

864

866

868

870

NOWTHEN BOULEVARD

GERMANIUM STREET

DNR
WETLAND
658W

1

2

3

4

5

2

3

4

5

N

30 0 30 60
SCALE IN FEET

EXHIBIT 3
148TH LANE ALTERNATIVE 1 STORM SEWER
CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 2:42pm
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148TH LANE

NOWTHEN BOULEVARD

GERMANIUM STREET

15" RCP

15" RCP

15" RCP

18" RCP

18" RCP

INV=862.3

Landscaping

BLOCK WALL

WOOD WALL

FENCE

870

860

866

862

864

868

PROPOSED PERMANENT DRAINAGE EASEMENT

PROPOSED STORM SEWER LOCATION FES INV=861.4

DNR WETLAND 658W

1

2

3

4

5

2

3

4

5

N

30 0 30 60

SCALE IN FEET

EXHIBIT 4
148TH LANE ALTERNATIVE 2 STORM SEWER

CITY OF RAMSEY, MINNESOTA

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TABLE 1
148TH LANE
ALTERNATIVE 1A - 15" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$500.00	1	$500
2	CLEARING	TREE	$100.00	12	$1,200
3	GRUBBING	TREE	$100.00	12	$1,200
4	REMOVE STORM SEWER	LIN FT	$5.00	118	$590
5	REMOVE CONCRETE CURB	LIN FT	$10.00	20	$200
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	23	$115
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	40	$120
8	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	23	$173
9	4" BITUMINOUS PATCH	SQ YD	$28.00	23	$644
10	BULKHEAD MANHOLE	EACH	$500.00	1	$500
11	15" RC PIPE APRON	EACH	$300.00	1	$300
12	TRASH GUARD FOR 15" PIPE APRON	EACH	$150.00	1	$150
13	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	1	$1,000
14	15" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	$22.00	152	$3,344
15	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
16	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	20	$400
17	TRAFFIC CONTROL	LUMP SUM	$300.00	1	$300
18	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	12	$2,400
19	TURF ESTABLISHMENT	ACRE	$1,500.00	0.1	$150

Estimated Construction Cost	$14,786
Contingency (10%)	$1,479
Total Estimated Construction Cost	$16,264

TABLE 2
148TH LANE
ALTERNATIVE 1B - 18" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$800.00	1	$800
2	CLEARING	TREE	$100.00	12	$1,200
3	GRUBBING	TREE	$100.00	12	$1,200
4	REMOVE STORM SEWER	LIN FT	$5.00	233	$1,165
5	REMOVE CONCRETE CURB	LIN FT	$10.00	135	$1,350
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	150	$750
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	155	$465
8	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	150	$1,125
9	4" BITUMINOUS PATCH	SQ YD	$28.00	150	$4,200
10	BULKHEAD MANHOLE	EACH	$500.00	1	$500
11	18" RC PIPE APRON	EACH	$350.00	1	$350
12	TRASH GUARD FOR 18" PIPE APRON	EACH	$200.00	1	$200
13	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	2	$2,000
14	18" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$23.00	267	$6,141
15	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
16	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	135	$2,700
17	TRAFFIC CONTROL	LUMP SUM	$500.00	1	$500
18	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	12	$2,400
19	TURF ESTABLISHMENT	ACRE	$1,500.00	0.1	$150

Estimated Construction Cost	$28,696
Contingency (10%)	$2,870
Total Estimated Construction Cost	$31,566

TABLE 3
148TH LANE
ALTERNATIVE 1C - 24" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$1,300.00	1	$1,300
2	CLEARING	TREE	$100.00	12	$1,200
3	GRUBBING	TREE	$100.00	12	$1,200
4	REMOVE STORM SEWER	LIN FT	$4.00	388	$1,552
5	REMOVE CONCRETE CURB	LIN FT	$5.00	155	$775
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	195	$975
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	175	$525
8	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	195	$1,463
9	4" BITUMINOUS PATCH	SQ YD	$28.00	195	$5,460
10	BULKHEAD MANHOLE	EACH	$500.00	1	$500
11	24" RC PIPE APRON	EACH	$450.00	2	$900
12	TRASH GUARD FOR 24" PIPE APRON	EACH	$300.00	2	$600
13	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	1	$1,000
14	24" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$29.00	414	$12,006
15	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
16	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60 - 4020	LIN FT	$2,000.00	2	$4,000
17	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	155	$3,100
18	TRAFFIC CONTROL	LUMP SUM	$500.00	1	$500
19	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	12	$2,400
20	TURF ESTABLISHMENT	ACRE	$1,500.00	0.2	$300

Estimated Construction Cost	$41,256
Contingency (10%)	$4,126
Total Estimated Construction Cost	$45,381

TABLE 4
148TH LANE
ALTERNATIVE 2A - 15" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$400.00	1	$400
2	CLEARING	TREE	$100.00	2	$200
3	GRUBBING	TREE	$100.00	2	$200
4	REMOVE STORM SEWER	LIN FT	$5.00	118	$590
5	REMOVE CONCRETE CURB	LIN FT	$10.00	20	$200
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	23	$115
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	40	$120
8	COMMON EXCAVATION	CU YD	$5.00	100	$500
9	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	23	$173
10	4" BITUMINOUS PATCH	SQ YD	$28.00	23	$644
11	BULKHEAD MANHOLE	EACH	$500.00	1	$500
12	15" RC PIPE APRON	EACH	$300.00	1	$300
13	TRASH GUARD FOR 15" PIPE APRON	EACH	$150.00	1	$150
14	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	1	$1,000
15	15" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	$22.00	152	$3,344
16	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
17	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	20	$400
18	TRAFFIC CONTROL	LUMP SUM	$300.00	1	$300
19	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	2	$400
20	TURF ESTABLISHMENT	ACRE	$1,500.00	0.1	$150

Estimated Construction Cost	$11,186
Contingency (10%)	$1,119
Permanent Easement ($1.15/ sq ft)	$794
Total Estimated Construction Cost	$13,098

TABLE 5
148TH LANE
ALTERNATIVE 2B - 18" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$500.00	1	$500
2	CLEARING	TREE	$100.00	2	$200
3	GRUBBING	TREE	$100.00	2	$200
4	REMOVE STORM SEWER	LIN FT	$5.00	153	$765
5	REMOVE CONCRETE CURB	LIN FT	$10.00	55	$550
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	61	$305
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	75	$225
8	COMMON EXCAVATION	CU YD	$5.00	100	$500
9	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	61	$458
10	4" BITUMINOUS PATCH	SQ YD	$28.00	61	$1,708
11	BULKHEAD MANHOLE	EACH	$500.00	1	$500
12	18" RC PIPE APRON	EACH	$350.00	1	$350
13	TRASH GUARD FOR 18" PIPE APRON	EACH	$200.00	1	$200
14	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	2	$2,000
15	18" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$23.00	187	$4,301
16	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
17	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	55	$1,100
18	TRAFFIC CONTROL	LUMP SUM	$500.00	1	$500
19	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	2	$400
20	TURF ESTABLISHMENT	ACRE	$1,500.00	0.1	$150

Estimated Construction Cost	$16,412
Contingency (10%)	$1,641
Permanent Easement ($1.15/ sq ft)	$794
Total Estimated Construction Cost	$18,846

TABLE 6
148TH LANE
ALTERNATIVE 2C - 24" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$900.00	1	$900
2	CLEARING	TREE	$100.00	2	$200
3	GRUBBING	TREE	$100.00	2	$200
4	REMOVE STORM SEWER	LIN FT	$4.00	306	$1,224
5	REMOVE CONCRETE CURB	LIN FT	$5.00	75	$375
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	106	$530
7	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	95	$285
8	COMMON EXCAVATION	CU YD	$5.00	100	$500
9	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	106	$795
10	4" BITUMINOUS PATCH	SQ YD	$28.00	106	$2,968
11	BULKHEAD MANHOLE	EACH	$500.00	1	$500
12	24" RC PIPE APRON	EACH	$450.00	2	$900
13	TRASH GUARD FOR 24" PIPE APRON	EACH	$300.00	2	$600
14	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	1	$1,000
15	24" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$29.00	334	$9,686
16	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	1	$1,500
17	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60 - 4020	LIN FT	$2,000.00	2	$4,000
18	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	$20.00	75	$1,500
19	TRAFFIC CONTROL	LUMP SUM	$500.00	1	$500
20	CONIFEROUS TREE 4' HT B&B	TREE	$200.00	2	$400
21	TURF ESTABLISHMENT	ACRE	$1,500.00	0.2	$300

Estimated Construction Cost	$28,863
Contingency (10%)	$2,886
Permanent Easement ($1.15/ sq ft)	$794
Total Estimated Construction Cost	$32,543

TABLE 7
148TH LANE
ALTERNATIVE 3

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$500.00	1	$500
2	CLEARING	TREE	$100.00	10	$1,000
3	GRUBBING	TREE	$100.00	10	$1,000
4	COMMON EXCAVATION	CU YD	$5.00	270	$1,350
5	GRANULAR BORROW	CU YD	$8.00	1166	$9,328
6	TURF ESTABLISHMENT	ACRE	$1,500.00	0.5	$750

Estimated Construction Cost	$13,928
Contingency (10%)	$1,393
Total Estimated Construction Cost	$15,321

Section 2
149th Lane

149th Lane

Description

As shown on Exhibit 5, a low area exists on Lot 3, Block 1 of Ramsey Meadows 4th Addition. There is a drain tile that drains the low area to DNR Wetland 658W. During large storm events, DNR Wetland 658W backs up through the drain tile and into the low area. DNR Wetland 658W drains east under Trunk Highway 47 (TH 47) through a small weir structure and 15" pipe to DNR Wetland 659W. The weir structure is at an elevation of 860.9 and drains to the 15" pipe at an elevation of 860.0.

The current outlet elevation is approximately two feet above the bottom of Wetland 658W. The existing 100-year high water level (HWL) for DNR Wetland 658W is 862.1 and for DNR Wetland 659W is 860.4. As shown on Exhibit 6, there is an existing drainage and utility easement over a majority of Block 1 of Ramsey Meadows 4th Addition including the low area in question.

Alternatives

The following alternatives address the water elevation in DNR Wetland 658W.

Alternative 1
Alternative 1 will include removing the existing weir structure and leaving only the 15" culvert as the outlet from DNR Wetland 658W. By removing the weir structure, the wetland will begin to discharge at an elevation of 860.0 as opposed to 860.8.

Removing the weir structure, resulting in a lower normal water level in the wetland, will result in a 100-year HWL for DNR Wetland 658W of 862.0. The 100-year HWL for DNR Wetland 659W did not change. The estimated cost to remove the weir structure is $1,265. Table 8 includes the individual costs for this alternative.

It is our understanding that any work proposed below an elevation of 860 will need the approval of the Minnesota Department of Natural Resources (DNR). This alternative will not have any effect below an elevation of 860 and is not anticipated to need the approval of the DNR. It appears the weir structure is part of the TH 47 storm sewer system. Removing the weir structure may require Mn/DOT's approval.

Alternative 2
Alternative 2 will include removing the existing weir structure and constructing an additional outlet from DNR Wetland 658W under TH 47. The proposed additional outlet would be at the same elevation as the existing outlet, 860.0. It was assumed the additional pipe would have to be jacked under TH 47.

Three different sized additional outlet pipes were analyzed. The following table summarizes the 100-year HWL's for DNR Wetlands 658W and 659W and the estimated costs to construct each outlet pipe:

Outlet Pipe Size	100-Year HWL (658W)	100-Year HWL (659W)	Estimated Cost
Existing	862.1	860.4	N/A
Existing + 15"	861.8	861.2	$15,290
Existing + 18"	861.7	861.3	$18,755
Existing + 24"	861.6	861.4	$29,040

Tables 9 through 11 include the individual costs for this alternative.

As mentioned above, it is our understanding that any work proposed below an elevation of 860 will need the approval of the DNR. This alternative will not have any effect below an elevation of 860 and is not anticipated to need the approval of the DNR. Removing the weir structure and constructing a culvert under TH 47 will require Mn/DOT's approval.

Alternative 3

Alternative 3 will include removing the existing weir structure and constructing an additional outlet from DNR Wetland 658W under TH 47. The proposed additional outlet would be at an elevation of 859.0, one foot lower than the existing outlet. It was assumed the additional pipe would have to be jacked under TH 47.

Two different sized additional outlet pipes were analyzed. The following table summarizes the 100-year HWL's for DNR Wetlands 658W and 659W and the estimated costs to construct each outlet pipe:

Outlet Pipe Size	100-Year HWL (658W)	100-Year HWL (659W)	Estimated Cost
Existing	862.1	860.4	N/A
Existing + lower 18"	861.6	861.3	$18,755
Existing + lower 24"	861.6	861.5	$29,040

Tables 12 and 13 include the individual costs for this alternative.

As mentioned above, it is our understanding that any work proposed below an elevation of 860 will need the approval of the DNR. This alternative has work proposed below an elevation of 860 and will need the approval of the DNR. Removing the weir structure and constructing a culvert under Trunk Highway 47 will require Mn/DOT's approval.

Alternative 4

Alternative 4 will include filling the low area on Lot 3, Block 1 of Ramsey Meadows 4th Addition. Filling the low area will reduce the frequency of the backyard flooding. During large storm events, the area may be inundated by water, but will likely be less frequently and for a shorter duration than under existing conditions.

The estimated cost to fill the low area is $4,681. Table 14 includes the individual costs for this alternative.

As shown on Exhibits 7 and 8, this low area appears to have been designed as wetland mitigation area. Further research may be necessary to determine if this area is protected by the Wetland Conservation Act (WCA). If the area is protected by the WCA, filling this low area will not be a viable alternative.

RAMSEY MEADOWS
4TH ADDITION

4
WO
ELEV=863.5

3
WO
ELEV=864.8

2
WO
ELEV=863.8

1

149TH LANE

860
861
862
863
864
865
866
WALL
SHED
FENCE
DRAINTILE
9.75

DNR
WETLAND
658W

DNR
WETLAND
659W

INV=860.0
INV=859.3
15" RCP
OUTLET/WEIR
STRUCTURE
ELEV=860.8

TRUNK HIGHWAY 47

N

SCALE 30 0 30 60 IN FEET

EXHIBIT 5
149TH LANE EXISTING CONDITIONS

CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 2:51pm
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OFFICIAL PLAT

RAMSEY MEADOWS 4TH ADDITION

CITY OF RAMSEY COUNTY OF ANOKA

pg 25

KNOW ALL PERSONS BY THESE PRESENTS: That J. A. Menkveld & Associates, Inc., a Minnesota corporation, owner and proprietor and Builders Mortgage Corporation, a Minnesota corporation, mortgagee of the following described property situated in the County of Anoka, State of Minnesota, to-wit:

That part of the Southwest Quarter of Section 24, Township 32, Range 25, Anoka County, Minnesota, described as follows:

Beginning at the northeast corner of Outlot A, RAMSEY MEADOWS 3RD ADDITION, according to the recorded plat thereof, Anoka County, Minnesota; thence South 89 degrees 07 minutes 51 seconds East, assumed bearing, parallel with the south line of said Southwest Quarter, a distance of 208.50 feet to the center line of State Trunk Highway No. 47, per the plat of AMBER RIDGE, according to the recorded plat thereof, Anoka County, Minnesota; thence northerly along said center line and along the center line of said State Trunk Highway No. 47, per the plat of WILLOW RIDGE, according to the recorded plat thereof, Anoka County, Minnesota, a distance of 789.96 feet to the intersection with the northeasterly extension of the following described line:

Beginning at a point on the center line of State Trunk Highway No. 47, per the plat of GORHAM'S ADDITION, according to the recorded plat thereof, Anoka County, Minnesota, said point being distant 93.00 feet southeasterly of the northeasterly extension of the southeasterly line of Block 3, said GORHAM'S ADDITION, as measured along said center line; thence South 64 degrees 18 minutes West, parallel with the southeasterly line of Block 3, said GORHAM'S ADDITION, a distance of 376.78 feet, and said line there terminating;

thence South 64 degrees 18 minutes 00 seconds West, along said last described line, a distance of 376.83 feet to the point of termination of said line; thence southwesterly along a tangential curve concave to the southeast, having a radius of 103.25 feet and a central angle of 63 degrees 14 minutes 20 seconds, a distance of 113.96 feet; thence South 1 degree 03 minutes 40 seconds West, tangent to said curve, a distance of 345.42 feet; thence southwesterly along a tangential curve concave to northwest, having a radius of 115.75 feet and a central angle of 60 degrees 08 minutes 15 seconds, a distance of 121.49 feet; thence South 61 degrees 11 minutes 55 seconds West, tangent to said curve, a distance of 53.09 feet to the intersection with the westerly extension of the north line of said Outlot A, RAMSEY MEADOWS 3RD ADDITION; thence South 87 degrees 06 minutes 09 seconds East, along said north line and its westerly extension, a distance of 517.62 feet to the point of beginning.

AND

Outlot A, RAMSEY MEADOWS 3RD ADDITION, according to the recorded plat thereof, Anoka County, Minnesota.

Have caused the same to be surveyed and platted as RAMSEY MEADOWS 4TH ADDITION and do hereby dedicate to the public for public use forever the boulevard, lane and drainage and utility easements as shown on the plat. In witness whereof said J. A. Menkveld & Associates, Inc., a Minnesota corporation, has caused these presents to be signed by its proper officer this 7th day of Oct, 1996. Also in witness whereof said Builders Mortgage Corporation has caused these presents to be signed by its proper officer this 7th day of Oct, 1996.

SIGNED:

J. A. MENKVELD & ASSOCIATES, INC.:

J. A. Menkveld, President

BUILDERS MORTGAGE CORPORATION:

Ronald Stratton, as President

STATE OF MINNESOTA) The foregoing instrument was acknowledged before me this
COUNTY OF Anoka) 7th day of October, 1996, by J. A. Menkveld, President of J. A. Menkveld & Associates, Inc., a Minnesota Corporation, on behalf of the Corporation.

TERESA VIVIE NOTARY PUBLIC-MINNESOTA ANOKA COUNTY MY COMMISSION EXP. 01/31/2000

Teresa Vivie
Notary Public, Anoka County, Minnesota
My Commission expires 1-31-00

STATE OF MINNESOTA) The foregoing instrument was acknowledged before me this
COUNTY OF Anoka) 4th day of October, 1996, by Ronald Stratton, President of Builders Mortgage Corporation, a Minnesota corporation, on behalf of the corporation.

KATHLEEN R CAVEN NOTARY PUBLIC MINNESOTA MY COMMISSION EXPIRES 01-31-00

Kathleen R. Caven
Notary Public, Ramsey County, Minnesota
My Commission expires 1-31-2000

I hereby certify that I have surveyed and platted the land described in the dedication on this plat as RAMSEY MEADOWS 4TH ADDITION; that the plat is a correct representation of said survey; that all distances are correctly shown on said plat in feet and hundredths of a foot; that the monuments have been correctly placed in the ground as shown; that the outside boundaries are correctly designated on said plat; and that there are no wetlands or public highways to be designated on said plat other than as shown thereon.

Jeffrey N. Caine, Registered Land Surveyor
Minnesota Registration No. 12251

STATE OF MINNESOTA) The surveyors certificate was acknowledged before me a Notary
COUNTY OF ANOKA) Public, this 15 day of October, 1996, by Jeffrey N. Caine, Land Surveyor.

JILL M KENT NOTARY - MINNESOTA ANOKA COUNTY MY COMM EXPIRES 1-31-00

Jill M Kent
Notary Public, Anoka County, Minnesota
My Commission expires 01-31-00

CITY OF RAMSEY

We hereby certify that the City Council of the City of Ramsey, Anoka County, Minnesota, duly accepted and approved the plat of RAMSEY MEADOWS 4TH ADDITION at a regular meeting held this 24th day of September, 1996. If applicable, the written comments and recommendations of the Commissioner of Transportation and the County Highway Engineer have been received by the city or the prescribed 30 day period has elapsed without receipt of such comments and recommendations, as provided by Minn. Statutes, Section 505.03, Subd. 2.

By _____ Mayor By Ryan Pichowsky Clerk

Checked and approved this 7th day of MAY, 1997.

By MERLYN D. ANDERSON
Anoka County Surveyor
by Larry D. Hein deputy

I HEREBY CERTIFY THAT THE CURRENT AND DELINQUENT TAXES ON THE LANDS DESCRIBED WITHIN ARE PAID AND THIS PLAT/OR IS
DATED May 7, 1997
PROPERTY TAX ADMINISTRATOR
BY J. Culver
DEPUTY PROPERTY TAX ADMINISTRATOR

1275655

OFFICE OF COUNTY RECORDER
STATE OF MINNESOTA, COUNTY OF ANOKA
I hereby certify that the within instrument was filed in this office for record on the 7th day of MAY, 1997 at 10:10 o'clock A.M., and was duly recorded in book 54 page 25

Edward M. Iruska
County
By KHQ
Deputy

CITY OF RAMSEY MUNICIPAL CORP. ANOKA COUNTY MINN.

CAINE & ASSOCIATES LAND SURVEYORS, INC.

DRAINAGE AND UTILITY EASEMENTS SHOWN THUS:

10 5 5 10

BEING 10 FEET WIDE AND ADJOINING ALL STREET RIGHT-OF-WAY LINES AND REAR LOT LINES AND 5 FEET WIDE AND ADOINING ALL SIDE LOT LINES, UNLESS OTHERWISE SHOWN ON THE PLAT.

N

SCALE IN FEET
0 100 200 300
SCALE: 1 INCH = 100 FEET

- DENOTES IRON MONUMENT FOUND.
- DENOTES 1/2 INCH IRON PIPE SET.
- DENOTES ANOKA COUNTY MONUMENT.

NOTE: FOR THE PURPOSES OF THIS PLAT, THE SOUTH LINE OF THE SW1/4 OF SEC. 24, T. 32, R. 25 IS ASSUMED TO BEAR S 89°07'51"E

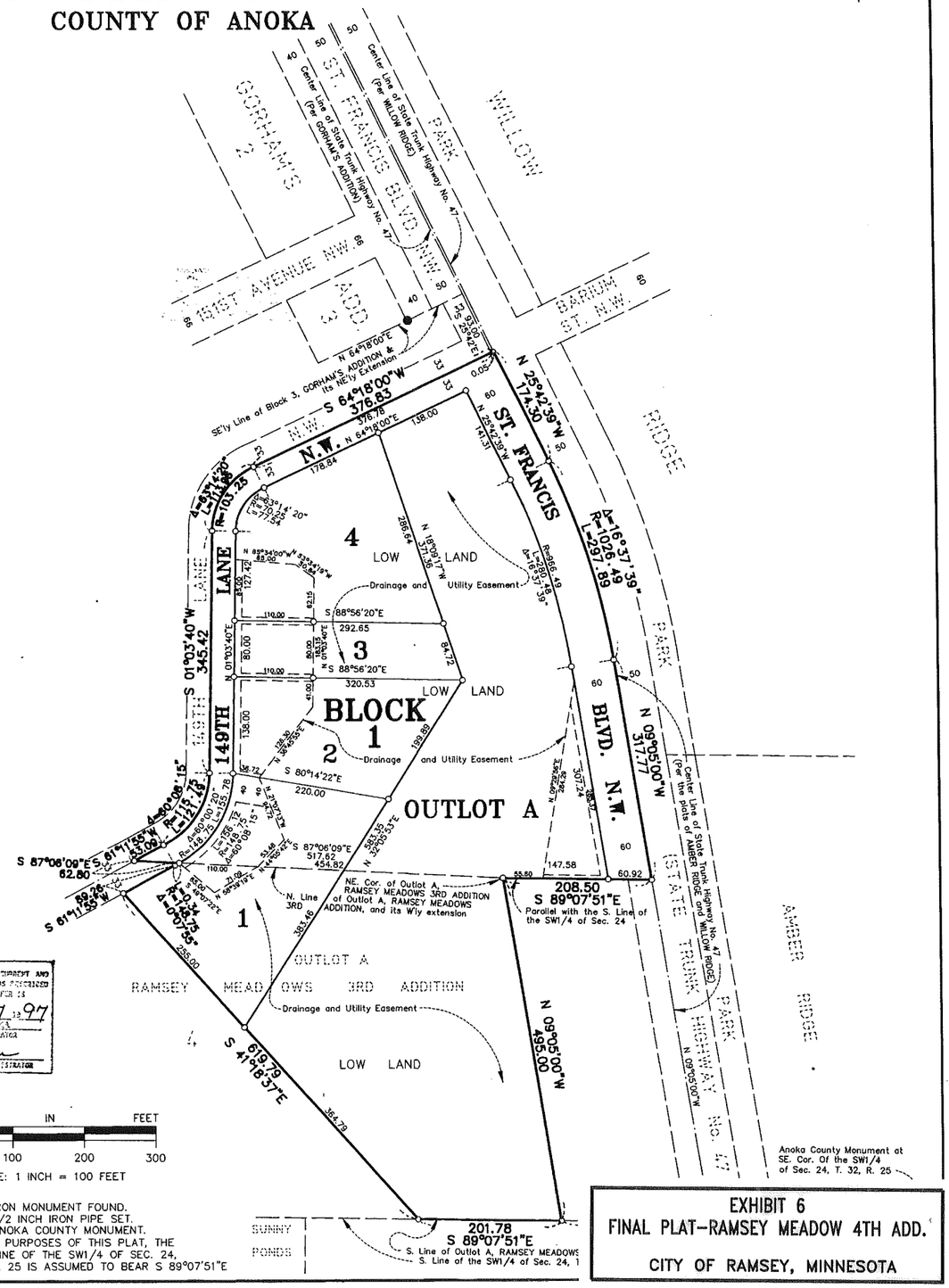
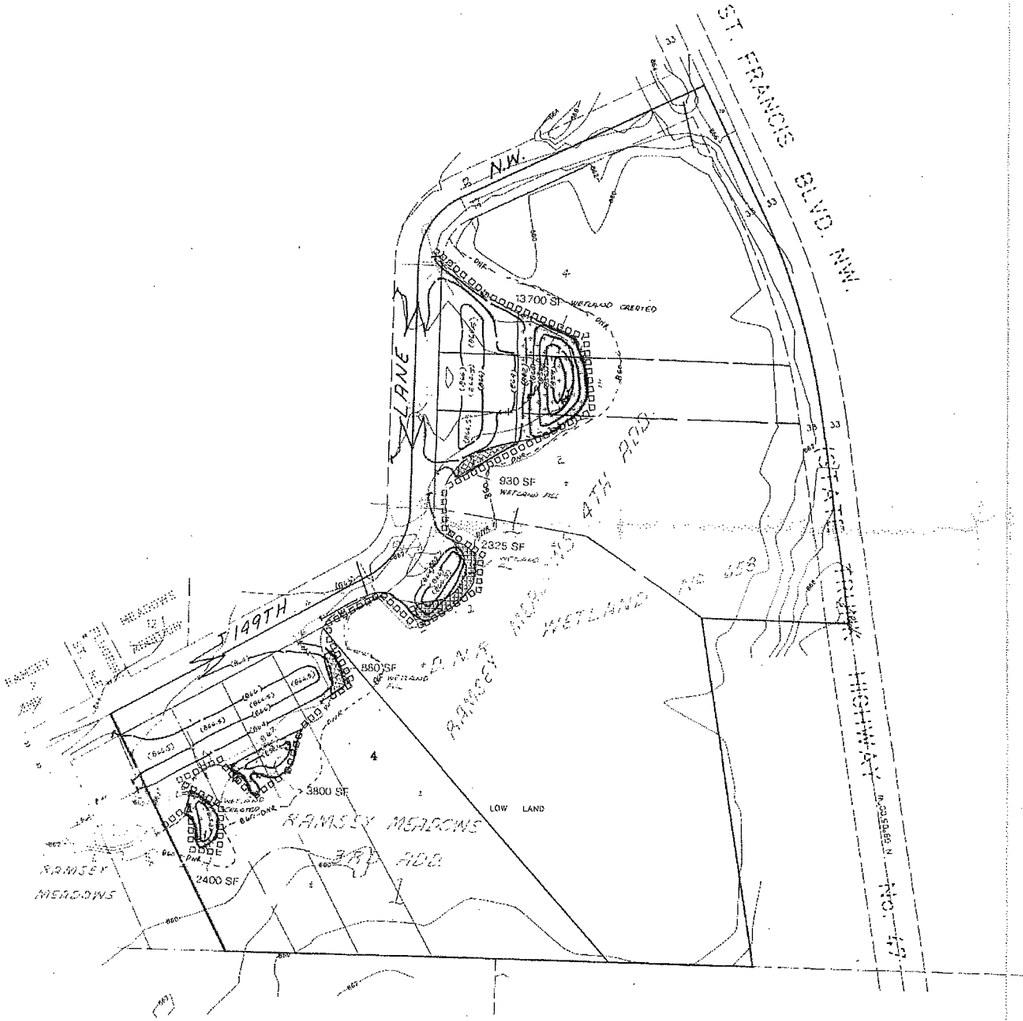


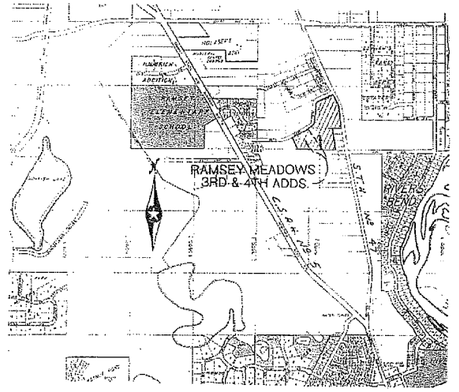
EXHIBIT 6
FINAL PLAT-RAMSEY MEADOW 4TH ADD.
CITY OF RAMSEY, MINNESOTA

30997/$245.00

PRELIMINARY GRADING, DRAINAGE & EROSION CONTROL PLAN FOR:

RAMSEY MEADOWS 3RD & 4TH ADDITIONS





EROSION CONTROL DURING CONSTRUCTION

NOTES:

1. All disturbed soils within 100 lineal feet from wetlands shall be covered with four inches (4") of topsoil and seeded with a minimum of seventy-five (75) pounds per acre of MN/DOT Specification Section 3876, Mixture No. 12, with fertilizer 12-12-12 mixture applied at 600 pounds per acre with Mulch-Type 1. This work shall be constructed in accordance with MN/DOT Specification Section 2575, within the following timeframe:

   Slopes steeper than 3:1 - 7 days
   Slopes 10:1 to 3:1 - 14 days
   Flatter than 10:1 - 21 days

2. Excavate ponding areas before upland grading.

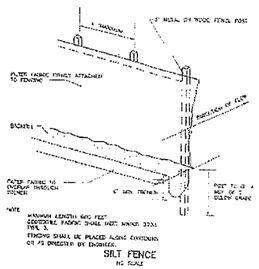
3. The bottom of all drainage ditches shall be stabilized within 100 feet of all wetlands. Stabilization must be initiated within 24 hours of connection to wetlands and be completed within five days. All pipes connecting to drainage swales must be provided with energy dissipation structures prior to connecting to wetland.

4. Sediment control structures must be in place prior to starting of grading and must be maintained until final stabilization has been established.

5. Inspect and maintain after rainfall (as required). The inspector is to be

6. Vehicle tracking onto unpaved surfaces must be minimized.

7. All silt fence shall be removed after the site has undergone final stabilization.



SILT FENCE
NO SCALE

	PROPOSED NON-DNR WETLAND DISTURBED	PROPOSED WETLAND CREATED
Ramsey Meadows 3rd Addition	880 S.F. ±	6,200 S.F. ±
Ramsey Meadows 4th Addition	4,135 S.F. ±	19,900 S.F. ±
TOTALS	5,015 S.F. ±	26,100 S.F. ±

I HEREBY CERTIFY THAT THIS SURVEY, PLAN OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

J. Gary M. Caine

DATE Jan. 23, 1995 REG. NO. 12251

x 000.0	DENOTES EXISTING SPOT ELEVATION
(000.0)	" PROPOSED " "
—— 000 ——	" EXISTING CONTOUR
—— (000) ——	" PROPOSED CONTOUR
----DNR----	DENOTES EDGE OF D.N.R. WETLAND NO 6SB.
—W—W—	DENOTES EDGE OF WETLAND AS LOCATED BY JOHN C. ANDERSON OF WETLANDS DATA, INC. & SURVEYED BY CAINE & ASSOC. LAND SURVEYORS, INC.
□□□□□□□□□□□□□□	DENOTES PROPOSED SILT FENCE

SCALE IN FEET
0 100 200 300
SCALE: 1 INCH = 100 FEET

● DENOTES IRON MONUMENT FOUND
○ DENOTES 1/2 INCH IRON PIPE SET.
BEARINGS SHOWN ARE BASED ON ASSUMED DATUM

CAINE & ASSOCIATES
LAND SURVEYORS, INC.
17720 Highway 65 N.E. – Ham Lake
434-7646

EXHIBIT 7
RAMSEY MEADOWS GRADING PLAN

CITY OF RAMSEY, MINNESOTA

RAMSEY MEADOWS 2ND ADDITION

CITY OF RAMSEY — COUNTY OF ANOKA

PRELIMINARY PLAT AND WETLAND MITIGATION PLAN

OWNER AND SUBDIVIDER: Gilbert A. Henkveld
207 E. Main St.
Box 547
Anoka, MN 55303

LAND SURVEYOR AND DESIGNER: Caine and Associates Land Surveyers, Inc.
17720 Hwy 65 N.E.
Ham Lake, MN 55304
434-7946

TOTAL AREA: 26.5 acres, more or less

PROPOSED USE: 83 Lots for R-1, U, Single Family Urban Residential, 4 outlots and 1 Park (Walkway) in two phases.

PROPOSED DENSITY: 1.8 Lots per acre

PROPOSED WATER SOURCE AND SEWAGE DISPOSAL: City water and sewer

EXISTING ZONING: R-1 Residential

MINIMUM BUILDING SET BACKS: Front = 35
Side House = 10
Side Garage = 5
Side Corner = 20 or line up with existing homes
Rear = 35

DRAINAGE AND UTILITY EASEMENTS: 10 feet wide adjoining all street lines and rear lot lines, and 5 feet wide adjoining all side lot lines, unless otherwise indicated on the plat.

DATE OF PREPARATION: 1982

Proposed Legal Description:

That part of the SW1/4 of Section 24, Township 32, Range 25, in Anoka County, Minnesota, described as follows: Beginning at a point on the South line of said SW1/4, said point being a distance of 175 feet, as measured along said South line, Westerly of the West right of way line of State Trunk Highway No. 47 as it is now laid out and travelled; thence North 9 degrees 04 minutes 41 seconds West on a line parallel to said West right of way line a distance of 295 feet; thence North 85 degrees 56 minutes 06 seconds West a distance of 516.09 feet; thence South 61 degrees 11 minutes 55 seconds West a distance of 656.98 feet; thence Southwesterly on a curve to the right having a radius of 434.27 feet a distance of 225.07 feet; thence North 69 degrees 45 minutes 25 seconds West on a line parallel to the South line of said SW1/4 a distance of 55.31 feet; thence Southerly and parallel to the West line of said SW1/4 a distance of 1277.57 feet to a point on the South line of said SW1/4, said point being 600 feet East of the Southwest corner of said SW1/4 as measured along the south line; thence Easterly on said South line a distance of 1277.57 feet to the point of beginning.

And that part of the Southwest Quarter of Section 24, Township 32, Range 25 in Anoka County, Minnesota described as follows: Commencing at the intersection of the South line of said Southwest Quarter and the center line of State Trunk Highway No. 47 as it is now laid out and travelled; thence North 9 degrees 04 minutes 41 seconds West on said center line a distance of 282.97 feet; thence of beginning of land to be described; thence North 7 degrees 58 minutes 10 seconds West on said center line a distance of 282.97 feet; thence Northwesterly along said center line on a curve to the left having a radius of 1036.48 feet, a distance of 320.64 feet; thence North 25 degrees 42 minutes West on said center line a distance of 189.24 feet to a point which is 91 feet Southeasterly as measured along said center line, from the Northeasterly extension of the Southeasterly line of Block 3 in Gorham's Addition; thence South 64 degrees 18 minutes West on a line parallel to the Southeasterly line of said Block 3 a distance of 276.78 feet; thence Southwesterly on a curve to the left having a radius of 303.25 feet a distance of 113.55 feet; thence South 1 degree 03 minutes 40 seconds West a distance of 368.42 feet; thence Southwesterly on a curve to the right having a radius of 315.75 feet a distance of 221.93 feet; thence South 61 degrees 11 minutes 55 seconds West a distance of 53.09 feet; thence South 85 degrees 56 minutes 06 seconds West a distance of 516.09 feet; thence Easterly on a line parallel to the South line of said Southwest Quarter a distance of 208.40 feet to the point of beginning.

And that part of the Southwest Quarter of Section 24, Township 32, Range 25, in Anoka County, Minnesota, described as follows:

Commencing at a point on the center line of State Trunk Highway Number 47 as it is now laid out and travelled, said point being 93 feet Southeasterly as measured along said center line from the Northeasterly extension of the Southeasterly line of Block 3 in GORHAM'S ADDITION; thence South 64 degrees 18 minutes West on a line parallel to the Southeasterly line of said Block 3 a distance of 276.78 feet; thence Southeasterly on a curve to the left having a radius of 303.25 feet a distance of 113.90 feet; thence South 1 degree 03 minutes 40 seconds West a distance of 345.62 feet; thence Southwesterly on a curve to the right having a radius of 315.75 feet a distance of 121.89 feet; thence South 61 degrees 11 minutes 55 seconds West a distance of 206.09 feet to a point, hereinafter known as Point A; thence North 1 degree 03 minutes 40 seconds East a distance of 830.42 feet to a point which is 260 feet Southeasterly of, as measured at right angles to, the Northwesterly extension of the Northwesterly line of said Block 3, said point being the point of beginning of land to be described; thence returning South 1 degree 30 minutes 40 seconds West a distance 534.62 feet more or less to said point A; thence South 61 degrees 11 minutes 55 seconds West a distance of 223.04 feet; thence Southwesterly on a curve to the right having a radius of 434.27 feet a distance of 77.71 feet to a point 600 feet East of the West line of said Southwest Quarter as measured parallel with the South line of said Southwest Quarter; thence Northerly and parallel with the West line of said Southwest Quarter to a point which is 635.8 feet North of the South line of said Southwest Quarter as measured parallel with the South line of said Southwest Quarter; thence Easterly and parallel with the South line of said Southwest Quarter a distance of 600 feet to the West line of said Southwest Quarter; thence Northerly along the West line of said Southwest Quarter and to a point, said point being 531.05 feet Southerly of the intersection of the Southeasterly extension of the center line of 152nd Avenue Northeast in said GORHAM'S ADDITION with the West line of said Southwest Quarter, said 531.05 feet being measured along the West line of said Southwest Quarter; thence Easterly at right angles to the West line of said Southwest Quarter a distance of 160 feet; thence Northerly at right angles a distance of 272.26 feet; thence Westerly at right angles a distance of 20 feet to a point which is 140 feet East of the West line of said Southwest Quarter, as measured at right angles to said West line; thence Northerly and parallel with said West line to a point, said point being 275.3 feet Southerly of the Southeasterly extension of the Southeasterly line of 152nd Avenue NW, in GORHAM'S ADDITION, as measured parallel with the West line of said Southwest Quarter; thence Easterly at right angles a distance of 280 feet; thence Northerly at right angle to a point, said point being 311 feet Southerly said Southeasterly extension of the Southeasterly line of 152nd Avenue NW., said 311 feet being measured parallel with the West line of said Southwest Quarter; thence Easterly at right angles to an intersection with a line drawn South 15 degrees 52 minutes 56 seconds East from a point on said Southeasterly extension of the Southeasterly line of 152nd Avenue NW, said point on said Southeasterly extension being distant 431 feet Northeasterly as measured at right angles to the West line of said Southwest Quarter; thence South 15 degrees 52 minutes 56 seconds East to an intersection with line 'A', said line A being described as follows:

Commencing at the Northwest corner of Lot 1, Block 3, GORHAM'S ADDITION; thence South 64 degrees 18 minutes West on the Southeasterly line of 151st Avenue NW. in said GORHAM'S ADDITION extended Southwesterly for a distance of 470 feet; thence Northwesterly on a curve to the right having a radius of 101 feet for a distance of 141.02 feet; thence North 35 degrees 42 minutes West for a distance of 21.98 feet to the actual point of beginning of the line to be described; thence South 45 degrees 18 minutes West for a distance of 240.88 feet, more or less, to the aforementioned point of intersection and there terminating; thence South 15 degrees 51 minutes 49 seconds East to an intersection with a line drawn through the point of beginning parallel with the Southwesterly extension of the Northeasterly line of said Block 3 in GORHAM'S ADDITION; thence to the point of beginning.

Excepting therefrom all that part of the above described tract which lies Southerly of a line drawn parallel with and 33 feet Northerly of the following described line:

Beginning at the aforementioned point 'A'; thence South 61 degrees 11 minutes 55 seconds West for a distance of 233.04 feet, thence Southwesterly on a curve to the right having a radius of 434.27 feet for a distance of 77.71 feet and there terminating, said parallel line being lengthened or shortened as necessary to intersect the boundaries of the above described tract.

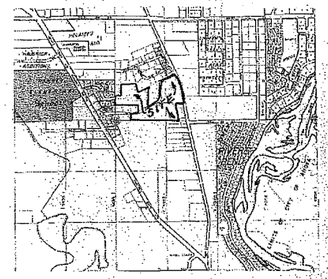
And also except:

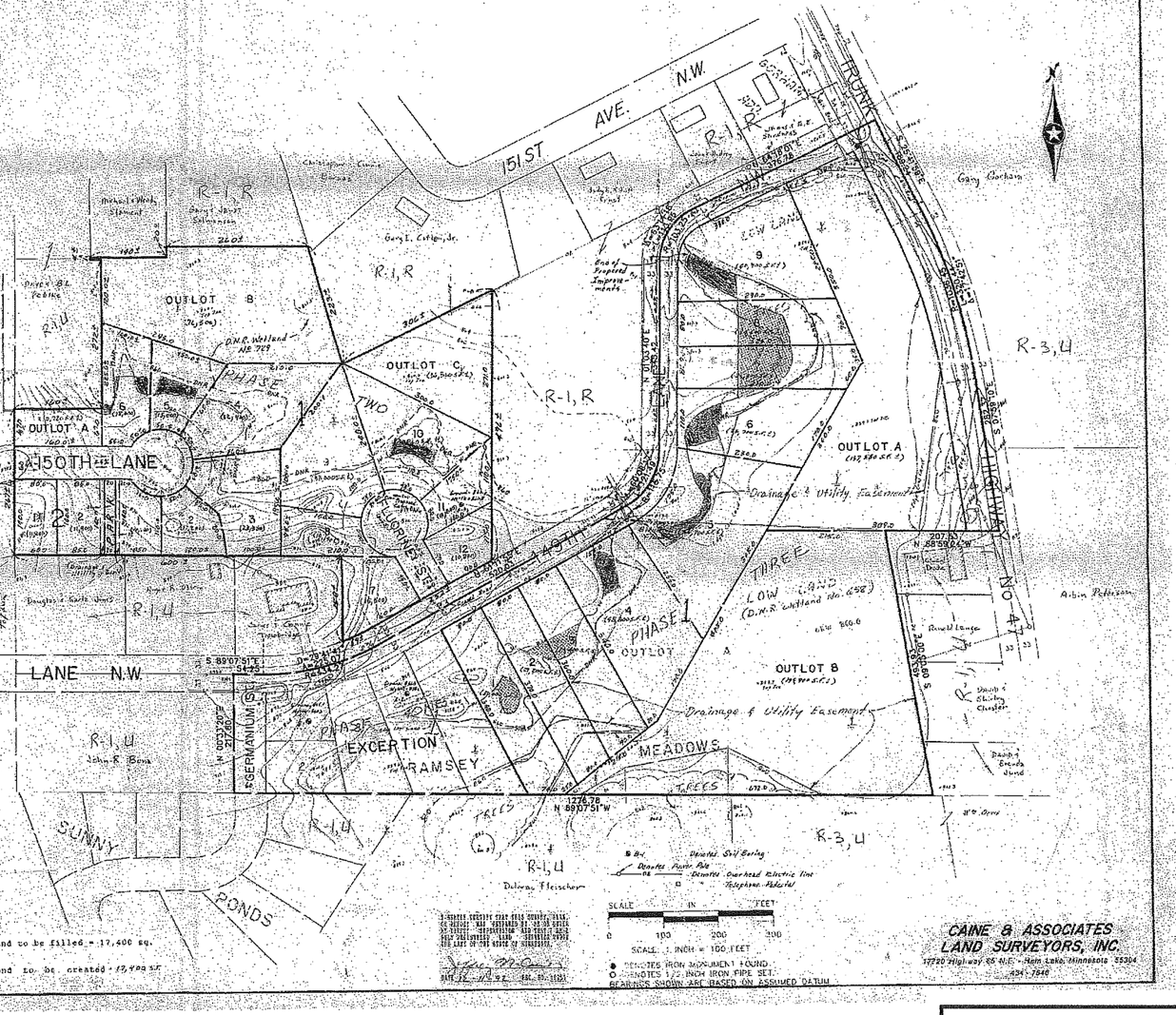
Lots 1 through 5, Block 1, RAMSEY MEADOWS, according to the recorded plat thereof, Anoka County, Minnesota;

And also except:

That part of Germanium Street N.W. and 149TH Lane N.W. as dedicated in said plat of RAMSEY MEADOWS.

VICINITY MAP





Note: Area of non - D.N.R. wetland to be filled = 17,400 sq. ft.

Area of proposed new wetland to be created = 17,400 s.f.

CAINE & ASSOCIATES
LAND SURVEYORS, INC.
17720 Highway 65 N.E. - Ham Lake, Minnesota 55304
434-7946

EXHIBIT 8
RAMSEY MEADOWS WETLAND MITIGATION PLAN
CITY OF RAMSEY, MINNESOTA

TABLE 8
149TH LANE
ALTERNATIVE 1

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$100.00	1	$100
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	1	$300
4	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
5	TURF ESTABLISHMENT	LUMP SUM	$50.00	1	$50

Estimated Construction Cost	$1,150
Contingency (10%)	$115
Total Estimated Construction Cost	$1,265

TABLE 9
149TH LANE
ALTERNATIVE 2A - 15" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$400.00	1	$400
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	3	$900
4	15" RC PIPE SEWER DESIGN 3006, CL V - JACKED	LIN FT	$100.00	118	$11,800
5	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
6	TURF ESTABLISHMENT	LUMP SUM	$100.00	1	$100

Estimated Construction Cost	$13,900
Contingency (10%)	$1,390
Total Estimated Construction Cost	$15,290

TABLE 10
149TH LANE
ALTERNATIVE 2B - 18" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$500.00	1	$500
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	1	$300
4	18" RC PIPE APRON	EACH	$350.00	2	$700
5	18" RC PIPE SEWER DESIGN 3006, CL V - JACKED	LIN FT	$125.00	118	$14,750
6	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
7	TURF ESTABLISHMENT	LUMP SUM	$100.00	1	$100

Estimated Construction Cost	$17,050
Contingency (10%)	$1,705
Total Estimated Construction Cost	$18,755

TABLE 11
149TH LANE
ALTERNATIVE 2C - 24" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$800.00	1	$800
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	1	$300
4	24" RC PIPE APRON	EACH	$450.00	2	$900
5	24" RC PIPE SEWER DESIGN 3006, CL V - JACKED	LIN FT	$200.00	118	$23,600
6	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
7	TURF ESTABLISHMENT	LUMP SUM	$100.00	1	$100

Estimated Construction Cost	$26,400
Contingency (10%)	$2,640
Total Estimated Construction Cost	$29,040

TABLE 12
149TH LANE
ALTERNATIVE 3A - 18" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$500.00	1	$500
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	1	$300
4	18" RC PIPE APRON	EACH	$350.00	2	$700
5	18" RC PIPE SEWER DESIGN 3006, CL V - JACKED	LIN FT	$125.00	118	$14,750
6	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
7	TURF ESTABLISHMENT	LUMP SUM	$100.00	1	$100

Estimated Construction Cost	$17,050
Contingency (10%)	$1,705
Total Estimated Construction Cost	$18,755

TABLE 13
149TH LANE
ALTERNATIVE 3B - 24" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$800.00	1	$800
2	REMOVE STORM STRUCTURE	EACH	$400.00	1	$400
3	15" RC PIPE APRON	EACH	$300.00	1	$300
4	24" RC PIPE APRON	EACH	$450.00	2	$900
5	24" RC PIPE SEWER DESIGN 3006, CL V - JACKED	LIN FT	$200.00	118	$23,600
6	CONNECT TO EXISTING STORM SEWER	EACH	$300.00	1	$300
7	TURF ESTABLISHMENT	LUMP SUM	$100.00	1	$100

Estimated Construction Cost	$26,400
Contingency (10%)	$2,640
Total Estimated Construction Cost	$29,040

TABLE 14
149TH LANE
ALTERNATIVE 4

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$100.00	1	$100
2	COMMON EXCAVATION	CU YD	$5.00	133	$665
3	GRANULAR BORROW	CU YD	$8.00	380	$3,040
4	TURF ESTABLISHMENT	ACRE	$1,500.00	0.3	$450

Estimated Construction Cost	$4,255
Contingency (10%)	$426
Total Estimated Construction Cost	$4,681

Section 3
Rum River Hills Golf Club

Rum River Hills Golf Club

Summary

Rum River Hills Golf Club has recently experienced flooding on some fairways and cart paths. Exhibit 9 shows the discharge points and problem areas throughout the golf course. The following will address the problem areas throughout the golf course.

Flooding along Hole #1

The first area of concern includes flooding of the large pond along Hole #1. This pond discharges through an existing concrete outlet structure and a 12" plastic pipe to the east. The outlet is labeled as Area 1 on Exhibit 9. It is our understanding that after large storm events, the pond remains elevated for long periods of time. The 100-year high water level (HWL) is 870.3.

After reviewing video recordings of the outlet pipe, it appears that the pipe has several sags in it and several joints have been compromised. The outlet pipe is relatively shallow and may have been affected by frost heave. This outlet pipe is likely causing the pond to operate inefficiently.

We believe that the best alternative for this outlet is to remove the existing outlet structure and the 12" outlet pipe and replace them with a new 4-foot diameter concrete outlet structure and 18" high density polyethylene pipe outlet in the same location as the existing pipe. Exhibit 10 shows the proposed outlet structure. The new pipe would be installed at a lower elevation than it exists now, reducing the impact of frost heave on the pipe. The polyethylene pipe is also more rigid and is solid (no air voids) and therefore more resistant to frost heave or buoyancy when soils are saturated. A removable, weir wall would be installed in the new outlet structure. We would propose to leave the weir height at the same elevation as existing. By installing the weir wall, it will allow for greater flexibility in controlling the water elevations of the pond. Installing this outlet structure would result in a 100-year HWL of 870.0.

The estimated cost to construct the new outlet pipe and structure is $29,853. Table 15 includes the individual costs for this alternative.

Cart path flooding near the clubhouse

Based on the HWL of the pond along Hole #1, it appears that there could be an issue with the cart paths flooding near the clubhouse, Areas 2A and 2B on Exhibit 9. The existing culverts under the cart paths are a 15" diameter and 12" diameter. If flooding the cart paths is an issue, the best alternative would be to install larger diameter culverts under the cart paths.

Installing 24" diameter culverts will reduce the flooding during small storm events. However, since the HWL elevation for the area is controlled by the downstream outlet structure discussed above, the paths will still flood during large storm events. To reduce the flooding during the large storm events, the cart paths would have to be raised

approximately 1.5 feet. This would, however, increase the HWL in the pond near the clubhouse, which would appear to adversely affect the fairway for Hole #18.

The estimated cost to replace the two culverts under the carts paths is $6,642. Table 16 includes the individual costs this alternative.

Saturated soil along Hole #15

Another issue is occurring along Hole #15 near the Rum River. The soil in the area is saturated. There is an existing rock dam, Area 3 on Exhibit 19, southeast of the most saturated area of the fairway. Part of the fairway was excavated to help to determine the problem and drain the area.

Based on our review, it appears that the water being contained by the rock dam may be infiltrating into the soil and causing the saturation. There is a dropped of approximately seven feet from the rock dam to the bottom of the downstream channel. We also noticed that the existing drain tile that was excavated along Hole #15 was plugged with roots and soil.

We recommend two alternatives to address the soil saturation along Hole #15. First, the drain tile should be replaced to improve the drainage in the area. Second, the area of the creek that is being contained by the rock dam should be lined with an impermeable material to eliminate the water infiltrating through the soil. Lining the creek will eliminate the infiltration into the soil and the new drain tile will help to keep the existing soil dry.

The estimated cost to replace the drain tile and line the creek bed is $13,530. Table 17 includes individual costs for this alternative.

Flooding of Hole #3 and #17

Flooding of Hole #3 and #17 is also an issue at the golf course. The stormwater drains south through three 15" culverts, labeled Area 4A, Area 4B and Area 4C on Exhibit 9, and then to the Rum River.

One alternative to lower the HWL's in the area would be to install bigger culverts. A 21" culvert was modeled to replace the culverts at Area 4A and 4B and a 24" culvert was modeled to replace the culvert at 4C. The following table summarizes the 100-year HWL's for the three areas:

Existing 100-Year HWL			Proposed 100-Year HWL		
Area 4A	Area 4B	Area 4C	Area 4A	Area 4B	Area 4C
859.3	859.3	858.5	859.1	858.7	858.3

The estimated cost to replace the three culverts is $4,990. Table 18 includes individual costs for this alternative.

EXHIBIT 9
RUM RIVER HILLS GOLF CLUB
EXISTING CONDITIONS
CITY OF RAMSEY, MINNESOTA

Feb 14, 2012 - 9:28am
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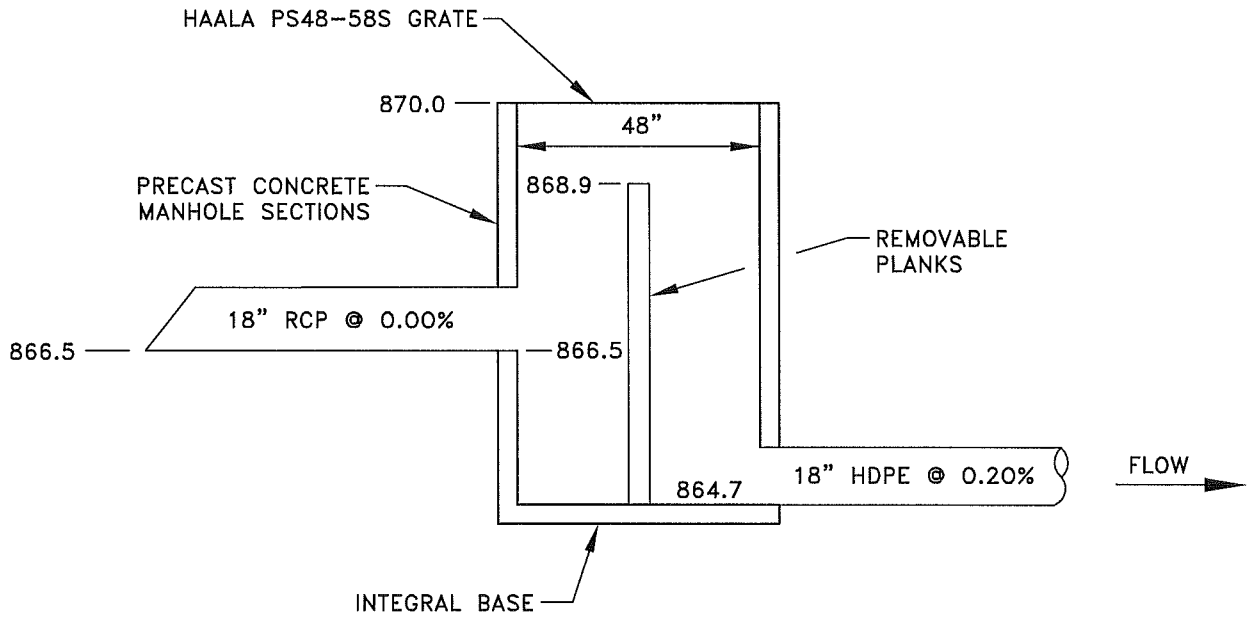

EXHIBIT 10
RUM RIVER HILLS GOLF CLUB
PROPOSED OUTLET STRUCTURE
CITY OF RAMSEY, MINNESOTA

Feb 14, 2012 - 11:42am
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TABLE 15
RUM RIVER HILLS GOLF CLUB
FLOODING AROUND HOLE #1 - NEW OUTLET STRUCTURE

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$800.00	1	$800
2	CLEARING	ACRE	$1,500.00	0.2	$300
3	GRUBBING	ACRE	$1,500.00	0.2	$300
4	REMOVE STORM SEWER	LIN FT	$1.50	856	$1,284
5	18" METAL APRON	EACH	$275.00	1	$275
6	18" RC PIPE APRON	EACH	$350.00	1	$350
7	18" HDPE PIPE SEWER	LIN FT	$22.00	850	$18,700
8	18" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$23.00	10	$230
9	OUTLET CONTROL STRUCTURE	EACH	$4,000.00	1	$4,000
10	TURF ESTABLISHMENT	ACRE	$1,500.00	0.6	$900

Estimated Construction Cost	$27,139
Contingency (10%)	$2,714
Total Estimated Construction Cost	$29,853

TABLE 16
RUM RIVER HILLS GOLF CLUB
CART PATH FLOODING NEAR CLUBHOUSE - NEW CULVERTS

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$200.00	1	$200
2	REMOVE STORM SEWER	LIN FT	$4.00	96	$384
3	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	30	$150
4	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	48	$144
5	4" AGGREGATE BASE CLASS 5	SQ YD	$8.00	30	$240
6	4" BITUMINOUS PAVEMENT	SQ YD	$34.00	30	$1,020
7	24" METAL APRON	EACH	$325.00	4	$1,300
8	24" CP PIPE CULVERT	LIN FT	$25.00	96	$2,400
9	TURF ESTABLISHMENT	LUMP SUM	$200.00	1	$200

Estimated Construction Cost	$6,038
Contingency (10%)	$604
Total Estimated Construction Cost	$6,642

TABLE 17
RUM RIVER HILLS GOLF CLUB
HOLE #15 SATURATION - CREEK LINING AND DRAIN TILE

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$350.00	1	$350
2	4" PERF PIPE DRAIN	LIN FT	$15.00	450	$6,750
3	CREEK LINING	LUMP SUM	$5,000.00	1	$5,000
4	TURF ESTABLISHMENT	LUMP SUM	$200.00	1	$200

Estimated Construction Cost	$12,300
Contingency (10%)	$1,230
Total Estimated Construction Cost	$13,530

TABLE 18
RUM RIVER HILLS GOLF CLUB
FLOODING AROUND HOLE #3 AND #17 - NEW CULVERTS

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$200.00	1	$200
2	REMOVE STORM SEWER	LIN FT	$4.00	72	$288
3	21" METAL APRON	EACH	$300.00	4	$1,200
4	24" METAL APRON	EACH	$325.00	2	$650
5	24" CP PIPE CULVERT	LIN FT	$26.00	46	$1,196
6	24" CP PIPE CULVERT	LIN FT	$27.00	26	$702
7	TURF ESTABLISHMENT	LUMP SUM	$300.00	1	$300

Estimated Construction Cost	$4,536
Contingency (10%)	$454
Total Estimated Construction Cost	$4,990

Section 4
163rd Lane

163rd Lane

Description

As shown on Exhibit 11, a low area exists south of 163rd Lane and east of Wolfram Street. The low area does not have a piped outlet to County Ditch #3. During a majority of the year, stormwater runoff infiltrates into the soil. However, during early spring when the ground is frozen and during periods of heavy rainfall, water levels have risen to levels that cause flooding of adjacent properties.

Alternatives

The following alternatives address the water elevation in the low area.

Alternative 1
In this alternative, an outlet pipe would be installed from the low area to County Ditch #3, as shown on Exhibit 12. The outlet pipe will not be installed at the bottom of the low area, rather, it will be installed at an elevation that would allow smaller storm events to continue to infiltrate into the soil. The outlet pipe invert is proposed at an elevation of 872.0, which is the approximate elevation of a 3-inch rainfall event. The following table summarizes the 100-year HWL's, the detention time above an elevation of 873.0 and estimated costs to construct each outlet pipe:

Outlet Pipe Size	100-Year HWL	Detention Time Above Elevation 873 During a 100-Year Storm Event (hours)	Estimated Cost
Existing	874.8	23.4	N/A
12"	874.3	6.2	$68,640
15"	874.0	2.9	$74,305
18"	873.8	1.5	$80,795

As shown, the area may continue to flood during large storm events; however, the duration of flooding will be much shorter.

Tables 19 through 21 include the individual costs for this alternative. It is proposed to directionally drill the pipe as shown on Exhibit 12 as opposed to open cutting a trench. A trench would require excessive cuts in the surrounding area. The outlet pipe will be approximately 700 feet long. Cleaning the pipe will require access on both ends of the pipe.

Alternative 2
Alternative 2 included draining the low area east to a ditch system in Elmcrest Park. This alternative was reviewed and deemed not feasible. There is not enough difference in elevation from the low area to the ditch in Elmcrest Park.

Alternative 3

Alternative 3 included constructing a pipe west and then south along 163rd Lane and Wolfram Street to County Ditch #3. The length of this alternative is approximately 500 feet longer than Alternative 1, therefore decreasing the pipe slope and increasing the costs. The impact of constructing the pipe along the existing streets would also add to the costs of this alternative. For these reasons, this alternative was deemed not feasible.

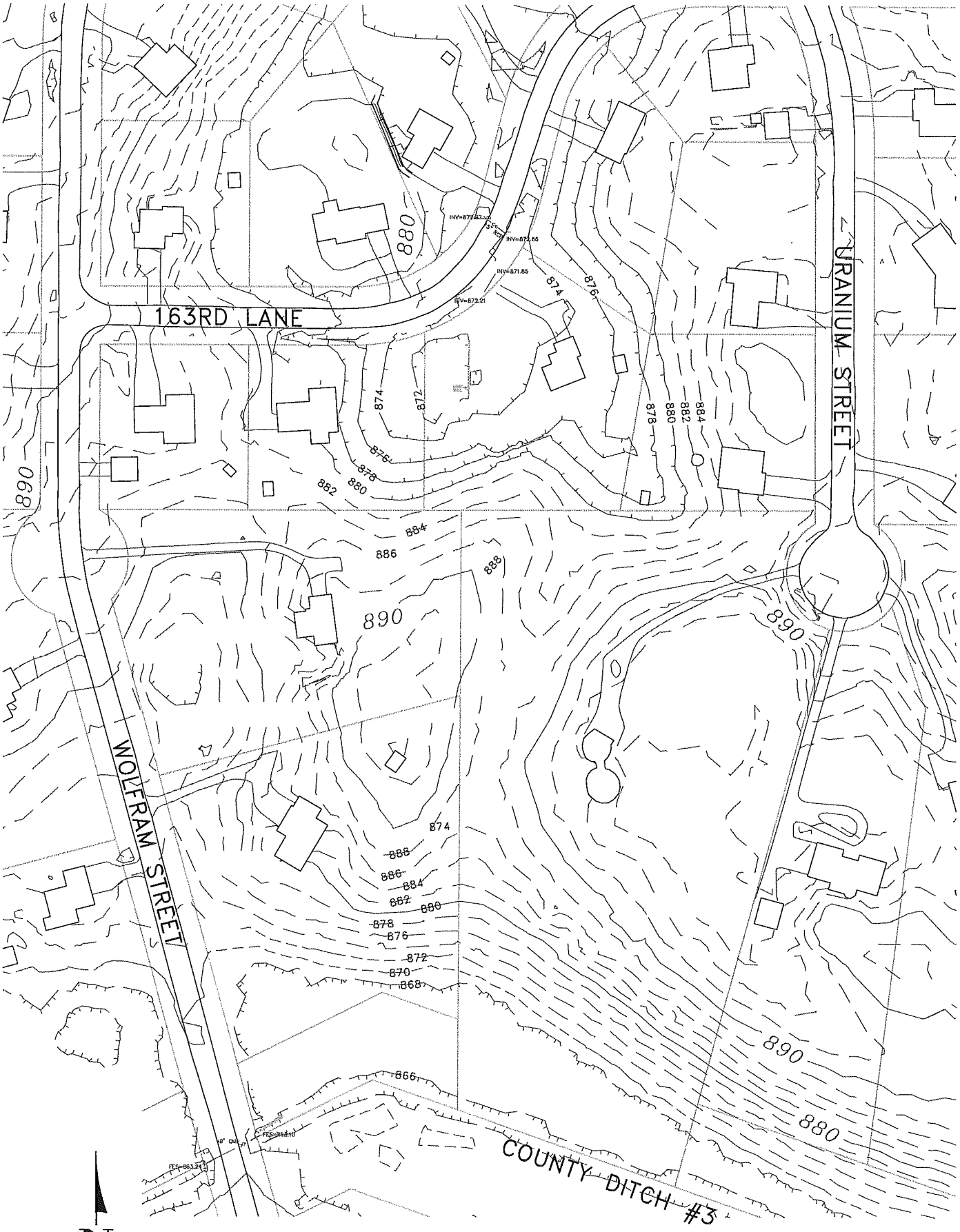

EXHIBIT 11
163RD LANE EXISTING CONDITIONS

CITY OF RAMSEY, MINNESOTA

Feb 12, 2012 – 8:55am
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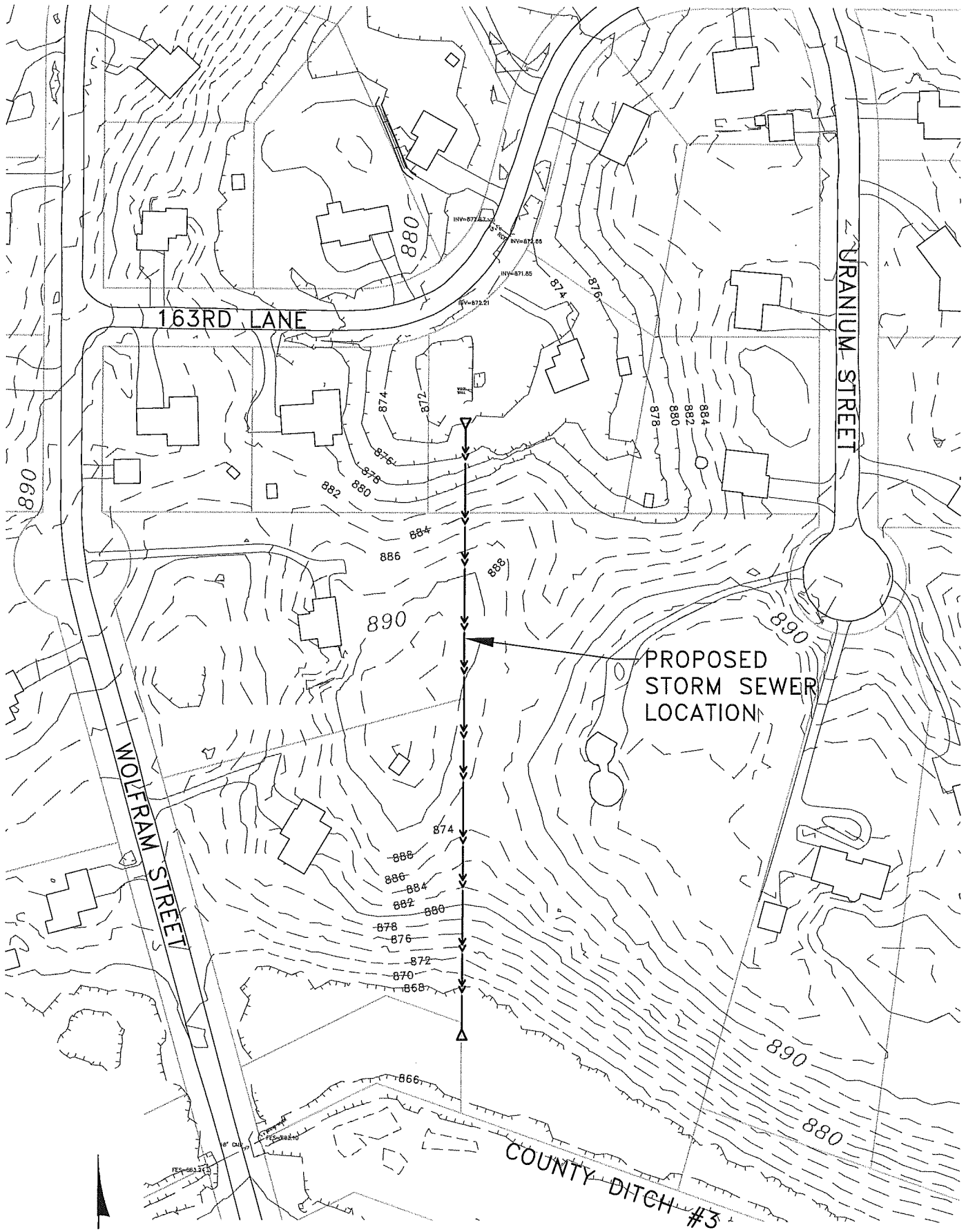

EXHIBIT 12
163RD LANE PROPOSED STORM SEWER

CITY OF RAMSEY, MINNESOTA

Feb 12, 2012 - 9:45am
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TABLE 19
163RD LANE
ALTERNATIVE 1A - 12" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$1,800.00	1	$1,800
2	COMMON EXCAVATION	CU YD	$5.00	100	$500
3	12" METAL APRON	EACH	$200.00	2	$400
4	12" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LIN FT	$85.00	700	$59,500
5	TURF ESTABLISHMENT	LUMP SUM	$200.00	1	$200

Estimated Construction Cost	$62,400
Contingency (10%)	$6,240
Total Estimated Construction Cost	$68,640

TABLE 20
163RD LANE
ALTERNATIVE 1B - 15" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$2,000.00	1	$2,000
2	COMMON EXCAVATION	CU YD	$5.00	100	$500
3	15" METAL APRON	EACH	$225.00	2	$450
4	15" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LIN FT	$92.00	700	$64,400
5	TURF ESTABLISHMENT	LUMP SUM	$200.00	1	$200

Estimated Construction Cost	$67,550
Contingency (10%)	$6,755
Total Estimated Construction Cost	$74,305

TABLE 21
163RD LANE
ALTERNATIVE 1C - 18" OUTLET

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$2,200.00	1	$2,200
2	COMMON EXCAVATION	CU YD	$5.00	100	$500
3	18" METAL APRON	EACH	$275.00	2	$550
4	18" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LIN FT	$100.00	700	$70,000
5	TURF ESTABLISHMENT	LUMP SUM	$200.00	1	$200

Estimated Construction Cost	$73,450
Contingency (10%)	$7,345
Total Estimated Construction Cost	$80,795

Section 5
156th Lane

156th Lane

Description

As shown on Exhibit 13, a low area exists south of 156th Lane and west of Yakima Street, referred to Depression 1 on Exhibit 13. Depression 1 drains south and east through an existing storm sewer system to another low area west of Juniper Ridge Drive, referred to as Depression 2 on Exhibit 13. From Depression 2 the stormwater drains north through an existing storm sewer system to the Rum River. The outlet elevations for both Depression 1 and Depression 2 are 859.8.

During storm events, water ponds in the backyard of 5220 156th Lane. The area where water ponds was platted with a 75-foot drainage and utility easement, however, this easement has been vacated. The existing 100-year high water level (HWL) for Depression 1 is 864.7.

Alternatives

The following alternatives address the stormwater in the area.

Alternative 1
Alternative 1 includes filling the backyard of 5220 156th Lane. Excavation would be required in Woodland Green Park to the south to compensate for the storage being lost by filling the backyard. The proposed grading is shown on Exhibit 14. In this alternative the proposed 100-year HWL would remain 864.7, but it would not encroach into the backyard to the extent it does under existing conditions.

The estimated cost for this alternative is $21,175. Table 22 includes the individual costs for this alternative.

Alternative 2
Alternative 2 also includes filling the backyard of 5220 156th Lane and excavating Woodland Green Park to the south to compensate for the storage being lost by filling the backyard. As opposed to Alternative 1, this alternative proposes to over-excavate the area in Woodland Green Park, which will lower the 100-year HWL by adding storage. The proposed grading is shown on Exhibit 15. In this alternative the proposed 100-year HWL would drop to 864.1.

The estimated cost for this alternative is $76,274. Table 23 includes the individual costs for this alternative.

Alternative 3
Alternative 3 includes constructing an additional 12" outlet pipe from Depression 2. As shown on Exhibit 16, the new outlet pipe would run east along 156th Lane and then north along Juniper Ridge Drive to an existing catch basin that drains to the Rum River. The

new outlet would be constructed at an elevation of 857.8, two feet lower than the existing outlet.

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 14, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	864.6
Depression 2 – Existing	866.0
Depression 2 – Proposed	865.9

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 15, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	864.0
Depression 2 – Existing	866.0
Depression 2 – Proposed	865.8

As shown, adding this additional outlet pipe has very little effect on the high water levels of the two depressions. One reason for this is that the storm sewer system downstream of Depression 2 is at or above capacity and is flowing back into Depression 2 prior to draining downstream.

The estimated cost to construct this additional outlet pipe is $158,609. Table 24 includes the individual costs for this alternative.

Alternative 4

Alternative 4 includes constructing an additional 18" outlet pipe from Depression 1. As shown on Exhibit 16, the new outlet pipe would run east from Depression 1 to Depression 2. The new outlet would be constructed at an elevation of 858.2; 1.6-feet lower than the existing outlet. This alternative assumes that the new outlet from Depression 2, as discussed in Alternative 3, would also be constructed.

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 14, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	864.6
Depression 2 – Existing	866.0
Depression 2 – Proposed	865.5

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 15, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	863.8
Depression 2 – Existing	866.0
Depression 2 – Proposed	865.3

As shown, adding this additional outlet pipe has very little effect on the high water levels of the two depressions. After adding the pipe, stormwater actually flows from Depression 2 back to Depression 1 prior to flowing downstream, lowering the HWL in Depression 2.

The estimated cost to construct this additional outlet pipe is $37,697. Table 25 includes the individual costs for this alternative.

Alternative 5

Alternative 5 includes constructing a 36" outlet pipe from Depression 2. As shown on Exhibit 16, the new outlet pipe would run east from Depression 2 to the Rum River. The new outlet would be constructed at an elevation of 857.8. As part of this alternative, the existing outlet pipe from Depression 2 will be eliminated. This alternative also assumes that the new outlet from Depression 1, as discussed in Alternative 4, would also be constructed.

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 14, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	863.8
Depression 2 – Existing	866.0
Depression 2 – Proposed	859.9

The following table summarizes the 100-year HWL's for Depression 1, assuming the pond construction shown on Exhibit 15, and Depression 2:

Location	100-year HWL
Depression 1 – Existing	864.7
Depression 1 – Proposed	862.7
Depression 2 – Existing	866.0
Depression 2 – Proposed	859.8

As shown, adding this outlet pipe has a significant effect on the high water levels of the two depressions. This alternative would have to be approved by the Minnesota Department of Natural Resources.

The estimated cost to construct this additional outlet pipe is $142,772. Table 26 includes the individual costs for this alternative.

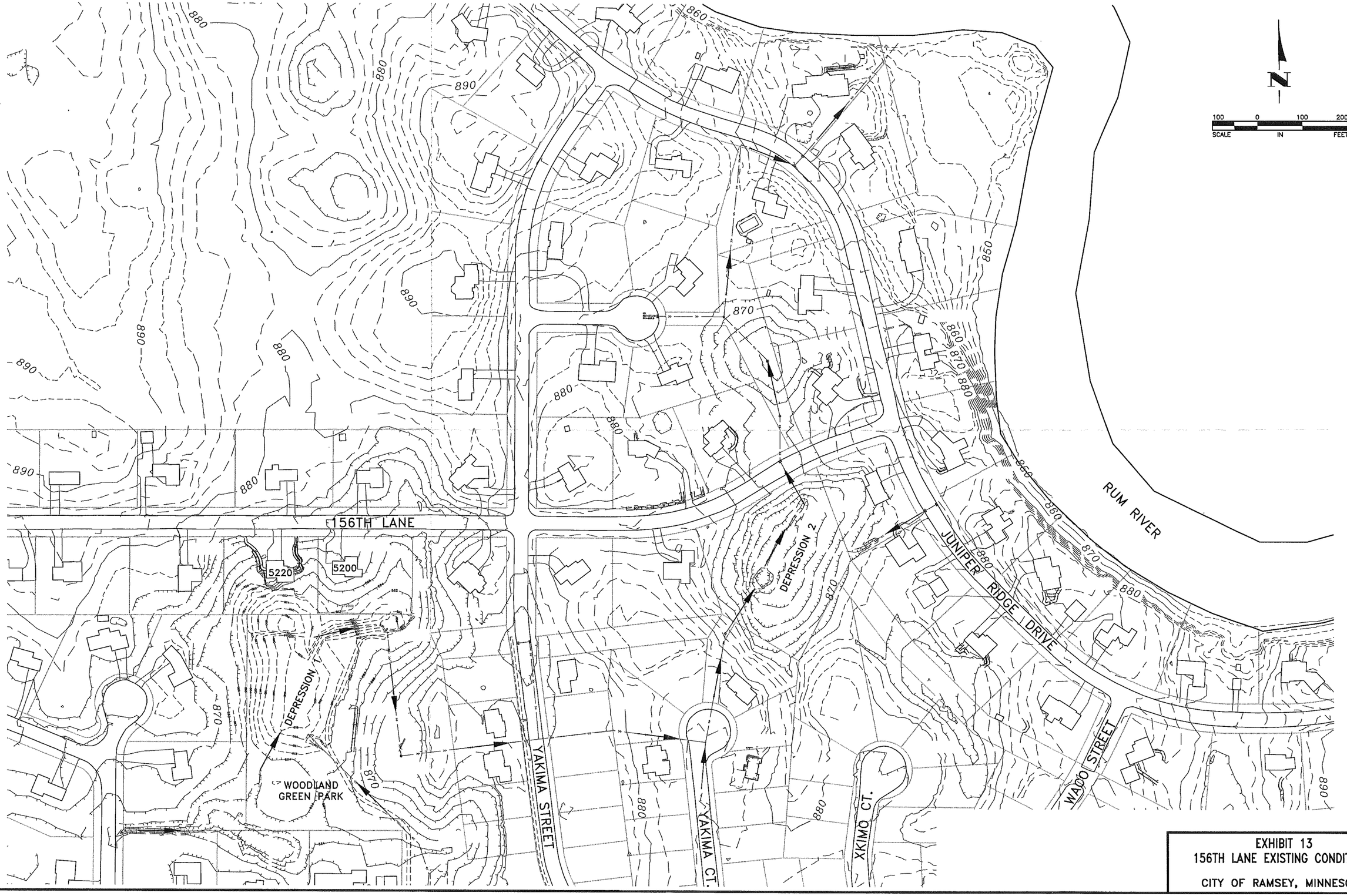

EXHIBIT 13
156TH LANE EXISTING CONDITIONS

CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 5:14pm
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156TH LANE

5220

5200

DEPRESSION 1

WOODLAND GREEN PARK

Fence

FES=857.47

INV=859.23

15" RCP

INV=859.76

SKIMMER
HIGH=863.48
LOW=862.74
BTM=858.89

FES=858.77

FES=859.89

18" PVC

21" RCP

STORM MH
RIM=872.02
INV=859.52

N

30 0 30 60
SCALE IN FEET

EXHIBIT 14
156TH LANE ALTERNATIVE 1 GRADING PLAN
CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 6:14pm
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156TH LANE

5220

5200

DEPRESSION 1

FES=857.41

INV=859.23

INV=859.76

SUMMER
PROH=863.48
LOW=862.74
BTM=855.89

FES=858.77

FES=859.89

CB
RIM=872.65
INV E=868.00

12" RCP

CB
RIM=872.66
INV W=868.74
INV S=868.52

15" RCP

18" RCP

WOODLAND
GREEN
PARK

STORM MH
RIM=872.02
INV=859.52

YAKIMA STREET

COBALT STREET

BARIUM STREET

155TH LANE

N

50 0 50 100
SCALE IN FEET

EXHIBIT 15
156TH LANE ALTERNATIVE 2 GRADING PLAN

CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 6:14pm
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N

100 0 100 200
SCALE IN FEET

ALTERNATIVE 3 & 4
PROPOSED STORM
SEWER LOCATION

ALTERNATIVE 5
PROPOSED STORM
SEWER LOCATION

ALTERNATIVE 4 & 5
PROPOSED STORM
SEWER LOCATION

156TH LANE

5220

5200

DEPRESSION 1

DEPRESSION 2

WOODLAND
GREEN PARK

YAKIMA STREET

YAKIMA CT.

YKIMO CT.

JUNIPER RIDGE DRIVE

WADO STREET

RUM RIVER

890 880 860 870 850

EXHIBIT 16
156TH LANE PROPOSED STORM SEWER

CITY OF RAMSEY, MINNESOTA

Feb 14, 2012 - 10:33am
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TABLE 22
156TH LANE
ALTERNATIVE 1

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$600.00	1	$600
2	CLEARING	ACRE	$1,500.00	0.75	$1,125
3	GRUBBING	ACRE	$1,500.00	0.75	$1,125
4	COMMON EXCAVATION	CU YD	$5.00	1820	$9,100
5	ADJUST SEWER MANHOLES	LUMP SUM	$4,000.00	1	$4,000
6	ADJUST SEWER CLEANOUTS	LUMP SUM	$500.00	1	$500
7	REINSTALL SPRINKLER SYSTEM	LUMP SUM	$1,000.00	1	$1,000
8	TURF ESTABLISHMENT	ACRE	$1,500.00	1.2	$1,800

Estimated Construction Cost	$19,250
Contingency (10%)	$1,925
Total Estimated Construction Cost	$21,175

TABLE 23
156TH LANE
ALTERNATIVE 2

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$1,900.00	1	$1,900
2	CLEARING	ACRE	$1,500.00	2.35	$3,525
3	GRUBBING	ACRE	$1,500.00	2.35	$3,525
4	COMMON EXCAVATION	CU YD	$5.00	10123	$50,615
5	ADJUST SEWER MANHOLES	LUMP SUM	$4,000.00	1	$4,000
6	ADJUST SEWER CLEANOUTS	LUMP SUM	$500.00	1	$500
7	REINSTALL SPRINKLER SYSTEM	LUMP SUM	$1,000.00	1	$1,000
8	TURF ESTABLISHMENT	ACRE	$1,500.00	2.9	$4,275

Estimated Construction Cost	$69,340
Contingency (10%)	$6,934
Total Estimated Construction Cost	$76,274

TABLE 24
156TH LANE
ALTERNATIVE 3

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$4,200.00	1	$4,200
2	SALVAGE STORM SEWER	LIN FT	$20.00	72	$1,440
3	REMOVE MANHOLE	EACH	$500.00	1	$500
4	REMOVE BITUMINOUS PAVEMENT	SQ YD	$2.00	3,290	$6,580
5	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	100	$300
6	4" AGGREGATE BASE CLASS 5	SQ YD	$7.00	3,290	$23,030
7	4" BITUMINOUS PAVEMENT	SQ YD	$21.00	3,290	$69,090
8	BITUMINOUS CURB	LIN FT	$3.00	1,850	$5,550
9	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	2	$2,000
10	12" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	$22.00	925	$20,350
11	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$2,000.00	3	$6,000
12	TRAFFIC CONTROL	LUMP SUM	$5,000.00	1	$5,000
13	TURF ESTABLISHMENT	ACRE	$1,500.00	0.1	$150

Estimated Construction Cost	$144,190
Contingency (10%)	$14,419
Total Estimated Construction Cost	$158,609

TABLE 25
156TH LANE
ALTERNATIVE 4

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$1,000.00	1	$1,000
2	SALVAGE STORM SEWER	LIN FT	$20.00	120	$2,400
3	REMOVE CONCRETE CURB	LIN FT	$10.00	60	$600
4	REMOVE MANHOLE	EACH	$500.00	1	$500
5	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	110	$550
6	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	70	$210
7	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	110	$825
8	4" BITUMINOUS PAVEMENT	SQ YD	$28.00	110	$3,080
9	18" RC PIPE APRON	EACH	$350.00	1	$350
10	TRASH GUARD FOR 18" PIPE APRON	EACH	$200.00	1	$200
11	CONNECT TO EXISTING STORM SEWER	EACH	$1,000.00	1	$1,000
12	18" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$23.00	735	$16,905
13	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48 - 4020	EACH	$1,500.00	2	$3,000
14	CONCRETE CURB AND GUTTER DESIGN B618	LIN FT	$20.00	60	$1,200
15	TRAFFIC CONTROL	LUMP SUM	$2,000.00	1	$2,000
16	TURF ESTABLISHMENT	ACRE	$1,500.00	0.3	$450

Estimated Construction Cost	$34,270
Contingency (10%)	$3,427
Total Estimated Construction Cost	$37,697

TABLE 26
156TH LANE
ALTERNATIVE 5

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$3,750.00	1	$3,750
2	REMOVE STORM SEWER	LIN FT	$4.00	72	$288
3	BULKHEAD MANHOLE	EACH	$500.00	1	$500
4	36" METAL APRON	EACH	$325.00	1	$325
5	36" RC PIPE APRON	EACH	$450.00	1	$450
6	TRASH GUARD FOR 36" PIPE APRON	EACH	$400.00	1	$400
7	36" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	$38.00	110	$4,180
8	36" HDPE PIPE SEWER (DIRECTIONALLY DRILLED)	LIN FT	$280.00	420	$117,600
9	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60 - 4020	LIN FT	$2,000.00	1	$2,000
10	TURF ESTABLISHMENT	ACRE	$1,500.00	0.2	$300

Estimated Construction Cost	$129,793
Contingency (10%)	$12,979
Total Estimated Construction Cost	$142,772

Section 6
Sodium Street

Sodium Street

Description

The house at 16756 Sodium Street has been experiencing water in the basement. Exhibit 17 shows the existing area. One reason for water in the basement could be that stormwater fills the ditch on the east side of Sodium Street, overtops the road and if the driveway culvert is blocked, the water fills up the ditch on the west side of Sodium Street and drains toward the house. The water then seeps along the basement wall and eventually into the basement. Another reason for water in the basement may be due to a high groundwater elevation in the area.

Alternatives

The following alternatives address the issue of water entering the basement from the road ditch.

Alternative 1

Alternative 1 will include installing a culvert under Sodium Street, regrading the west ditch of Sodium Street, constructing a berm to keep the water in the ditch, and replacing the existing driveway culvert. The ditch would be graded to drain to the south property line of 16756 Sodium Street and a culvert would be installed to drain the stormwater to the swale on the west side of the lot. Exhibit 18 shows the proposed construction. The culvert along the south property line is needed since a ditch cannot be graded without impacting the existing septic drainfield.

To be able to install the pipe along the south property line to the swale on the west side of the lot, a utility pole and a utility pedestal will have to be relocated from the southeast corner of 16756 Sodium Street. Moving the utilities will allow the area to be graded as needed to construct the ditch and the culvert. Regrading the ditch will prevent the stormwater from draining toward the house and reducing the chances of having water in the basement.

The estimated cost for this alternative is $12,225. Table 27 includes the individual costs for this alternative.

Alternative 2

Alternative 2 is similar to Alternative 1, but instead of installing a culvert along the south property line to the swale, a retaining wall would be constructed. This alternative would only be required if the utilities in the southeast corner of the lot were unable to be relocated.

The estimated cost for this alternative is $18,847. Table 28 includes the individual costs for this alternative.

Both alternatives would require that the property owner give an easement along the south property line. Also, temporary easements will likely be required to grade the ditch and construct the berm on the west side of Sodium Street.

SODIUM STREET

INV=876.21
12" CMP
INV=875.99

WOOD WALL
INV=875.02

GFE= 873.38
CONC
WELL

GFE= 876.96
CONC
12" RCP
INV=875.39

BLOCK WALL
CONC
16756
873.72 WO

CONTROL BOX

Septic manhole

FENCE

3' Hedge

SEPTIC MOUND

WOOD WALL
INV=876.45
12" CMP
WOOD WALL
INV=876.33
CONC

FENCE

P-OH

N

25 0 25 50
SCALE IN FEET

EXHIBIT 17
SODIUM STREET EXISTING CONDITIONS
CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 1:42pm
K:\cad_surv\Land Desktop 2008\RA432\dwg\RA432-EXHIBITS.dwg

EXHIBIT 18
SODIUM STREET PROPOSED CONSTRUCTION

CITY OF RAMSEY, MINNESOTA

Feb 13, 2012 - 1:53pm
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TABLE 27
SODIUM STREET
ALTERNATIVE 1

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$300.00	1	$300
2	REMMOVE STORM SEWER	LIN FT	$5.00	25	$125
3	REMOVE CONCRETE PAVEMENT	SQ YD	$6.00	45	$270
4	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	49	$245
5	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	44	$132
6	COMMON EXCAVATION	CU YD	$6.00	400	$2,400
7	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	94	$705
8	4" BITUMINOUS PAVEMENT	SQ YD	$28.00	49	$1,372
9	4" CONCRETE DRIVEWAY PAVEMENT	SQ YD	$13.00	45	$585
10	15" METAL APRON	EACH	$225.00	2	$450
11	12" RC PIPE APRON	EACH	$275.00	4	$1,100
12	15" CP PIPE SEWER	LIN FT	$20.00	44	$880
13	12" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	$20.00	40	$800
14	TRAFFIC CONTROL	LUMP SUM	$1,000.00	1	$1,000
15	TURF ESTABLISHMENT	ACRE	$1,500.00	0.5	$750

Estimated Construction Cost	$11,114
Contingency (10%)	$1,111
Total Estimated Construction Cost	$12,225

TABLE 28
SODIUM STREET
ALTERNATIVE 2

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	TOTAL ESTIMATED QUANTITY	TOTAL ESTIMATED COST
1	MOBILIZATION	LUMP SUM	$300.00	1	$300
2	REMMOVE STORM SEWER	LIN FT	$5.00	25	$125
3	REMOVE CONCRETE PAVEMENT	SQ YD	$6.00	45	$270
4	REMOVE BITUMINOUS PAVEMENT	SQ YD	$5.00	49	$245
5	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	$3.00	44	$132
6	COMMON EXCAVATION	CU YD	$6.00	475	$2,850
7	4" AGGREGATE BASE CLASS 5	SQ YD	$7.50	94	$705
8	4" BITUMINOUS PAVEMENT	SQ YD	$28.00	49	$1,372
9	4" CONCRETE DRIVEWAY PAVEMENT	SQ YD	$13.00	45	$585
10	12" RC PIPE APRON	EACH	$275.00	4	$1,100
11	12" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	$20.00	40	$800
12	MODULAR BLOCK RETAINING WALL	SQ FT	$23.00	300	$6,900
13	TRAFFIC CONTROL	LUMP SUM	$1,000.00	1	$1,000
14	TURF ESTABLISHMENT	ACRE	$1,500.00	0.5	$750

Estimated Construction Cost	$17,134
Contingency (10%)	$1,713
Total Estimated Construction Cost	$18,847

Rum River Hills, Inc.
16659 St Francis Blvd
Ramsey Minnesota 55303
(763) 753-3339

September 29, 2011

Tim Himmer and Leonard Linton
City Engineers
City of Ramsey
7550 Sunwood Drive NW
Ramsey, Minnesota 55303

Re: Storm sewer blockage and resulting flood damage to Rum River Hills Golf Course.

Mr. Himmer and Mr. Linton:

Please accept this letter upon your suggestion after having met with you relative to the above referenced matter.

In a 1985 development agreement between the City of Ramsey and the proposed Rum River Hills Golf Course, a planned unit development (PUD) was established that allowed for a storm water drainage easement to be routed through the Rum River Hills Golf Course. At the time of construction (summer of 1986), the City of Ramsey constructed a combination tile, culvert and ditch system to remove the storm water from a large area west of the golf course which includes the shopping center and several square miles of residential property, as well as the Rum River Hills Golf Course area. This drainage system was subsequently upgraded by the City on two separate occasions. To the best of our knowledge, the upgrades were as follows:

1. 1999-2001 - the City extended the culvert on hole #6;

2. 2006-2008 – the City installed a cement intake on the end of the culvert referred to in item number (1) above. Unfortunately, there was no grate installed over the culvert opening to prevent debris, foreign objects and turtles from entering the culvert.

The system appeared to be functioning properly and the golf course drained very quickly. We never had to reroute our customer traffic or close any portion of the course due to flooding. Then, on July 6, 2011, the system completely failed. The un-grated portion of the culvert became blocked. Turtles became trapped on debris and roots that had penetrated the walls of the culvert, which further contributed to the culvert's blockage. As a result, there was extensive flooding of the golf course, culminating in significant damage and losses to the Rum River Hills Golf Course. The golf course had to be completely closed for three days, and had limited use for several other days. We had to hire a company to unplug the culvert using a device called a "jetter", which expelled two very large turtles out the end of the culvert, along with other debris. As you can imagine, the financial stability of the golf course was severely impacted.

Listed below is a brief synopsis of the impact resulting from the flooding:

* Lost revenue as a result of business closure and limited play;
* Future lost business resulting from the negative image of the facility;
* Equipment rental necessary to remove water from the flooded areas;
* The many hours of personal time spent handling the issues with the flooding;
* The many hours of personal time spent repairing the damage;
* The thousands of dollars necessary to purchase the materials for restoration;
* The necessary dollars needed for advertising to recreate a positive image to the golfing community as turf is reestablished and the course returns to acceptable playing conditions.

As a business in Ramsey, we have enjoyed the relationship we have had with the City over the years, and assume the City, likewise, has enjoyed the opportunity to offer its citizens the use of a fine golfing and dining establishment. While we would very much like to continue this relationship with the City, we do need the City's cooperation in resolving the extensive losses sustained, and potential future losses, as a result of the flooding. Enclosed with this letter is documentation relative to the costs suffered to date, along with photographs illustrating the extent of the flooding.

We would very much appreciate the opportunity to discuss this matter further with you and look forward to your response as to an appropriate time to meet.

Sincerely,

Rum River Hills Board of Directors

RUM RIVER HILLS GOLF CLUB
16659 St. Francis Blvd. • Anoka, MN 55303 • (763) 753-3339

For the City of Ramsey,

The following is actual costs to repair the course along with estimates for future repairs and marketing to regain customers and our reputation.

Repairs

Gary Carlson Rental for pumps	$1120
General Rental Center for pumps	$ 200
Wyco repair to our pump	$ 125
Purchase of a 2" thrash pump	$ 175
Drain King Culvert clean out	$ 1600
Reindeers for seed and chemical and fertilizer	$ 5000
Plaistads for black dirt and rock	$ 4141
Labor for repairs	$10000
Total	$22361
Lost revenue during repairs and flood	$23000
(average if the last five years July 6-31)	
Future advertising and promotion	$15000
(to recapture our customer base)	
Grand total	$60361
Future lost revenue unknown at this time	?


Ramsey

LEAGUE OF MINNESOTA CITIES

CONNECTING & INNOVATING
SINCE 1913

January 19, 2012

Rum River Hills Inc.
Attn: Tom Anderson
16659 St. Francis BLVD
Ramsey, MN 55303

RE: LMCIT FILE NO.: PC0010057
TRUST MEMBER: CITY OF RAMSEY
D/OCCURRENCE: 7/16/11

Sent via E-mail, a copy of this letter has been mailed to the above address.

Dear Mr. Anderson,

The League of Minnesota Cities Insurance Trust (LMCIT) provides insurance coverage for the City of Ramsey. This letter is a follow up to the investigation into the flooding incident that occurred as a result of the extraordinary rain events in July. This letter outlines our position in regards to the city's liability as it relates to the golf course's claim for damages.

According to the weather source you provided, on July 15, the area to include your golf course received an exceptional amount of rainfall totaling 4.48 inches. To demonstrate how extreme of an event this is, the average rainfall for the month of July is 4.41 inches. This was a nearly unprecedented rain event that caused flooding throughout the metro.

On July 18th, the city was notified that there was a flooding issue on the golf course pond located near hole on the west end of hole #1. The City of Ramsey responded and met with Rum River Hills' staff to assess the flooding issue as it relates to this pond. You had already taken some measures to pump water out of this area and had asked the city if they could unblock the line that runs from this pond to a nearby ditch behind hole #6. The city feared their jetting truck would cause considerable damage to your turf due to the wet conditions and no action was taken by them to clean out this line.

The gold course hired a contractor on July 19th and 20th to bring in a tow behind jetter to clean the line. It was determined that the line was blocked with storm debris and turtle shells. Due

to the large amounts of rain which we had received and the ground being saturated it took several days for the water to recede.

This pond is designed to a 100 year storm capacity and likely would have overflowed and exceeded its banks without any blockage in the ponds outlet pipe. The maximum designed elevation of the pond is 874 ft., and those elevations exist well outside of the pond's normal banks. These areas are intended for water storage during extreme rain events.

I feel it is reasonable to reimburse the golf course for the expense of clearing the blockage as the city was not equipped to do so. We will consider the cost of unblocking the storm sewer as well as the rental of pumps used to expedite the removal of the water. The $1,600.00 invoice for Drain King to remove the blockage and the $1,395.00 of pump rental invoices are considered reasonable as these are costs that the city should have incurred. The repair costs to your pump are not being considered, as the city had no control over the pump's use or maintenance.

It also may reasonable to reimburse the course for the lost revenue incurred as a result of the delay in removing the blockage. The lost revenue claimed on the Rum River Hills Golf Club letterhead was not substantiated with sufficient documentation. In an effort to resolve this claim, I calculated the approximate revenue loss for this period using the documentation provided to me. The information you provided indicates the golf course was closed 5 days.

Using the Profit & Loss Comparison Report that you provided, I calculated the average daily revenue for Greens Fees and Carts. The comparison provides a 106 day period of the years 2010 and 2011. Dividing each revenue stream by the days in the period I determined the average daily revenue for each line item in 2010 and multiplied it by 5. This table provides the maximum loss that could have been incurred in the 5 days the golf course was closed.

18-Hole Green fees	$ 2,779.75
9-Hole Green fees	$ 956.65
Carts	$ 1,791.95
Total	$ 5,528.35

The profit and loss statement provided by the golf course shows that the revenues for the Driving Range, Memberships, Senior-Junior, and Green Fee Twilight were up from July 17th to October 23rd 2011 compared to the 2010 period. Those items will not be considered in my calculations as there was no loss. Tournament revenue was also not considered as there was no documentation showing that any loss of revenue was directly related to this flooding event.

I cannot reimburse the golf course the cost to repair turf that the flood may have directly damaged because I have not received adequate documentation proving that portion of the loss. In addition to this, some of these areas appear to fall in the designed flood plain and were intended for water storage. To prove your claim for damaged turf you must provide adequate documentation

that the area was outside of the planned flood-stage area, and that the blockage itself was the cause for that area to become submerged.

We are not considering the claims for future loss of revenue or future advertisement as these damages are speculative and have not been incurred. We also do not feel that any action or lack of action taken by the city caused harm to the golf course that would cause future damages.

While the city is not responsible for water removal on private property cause by a storm event, the delay in removing the blockage justifies the golf courses need to rent pumps and hire a contractor to remove the blockage. It could also be argued that the city was not notified of this condition until 2 days after this event, and that we do not owe for the entire 5 days that the golf course was closed. In order to try and resolve your claim we have at this time considered the loss of revenue for the full 5 days.

This table provides an itemized breakdown of our offer.

Drain King	$ 1,600.00
Pumps	$ 1,395.00
Green fees & Carts	$ 5,528.35
Total Offer	$ 8,523.35

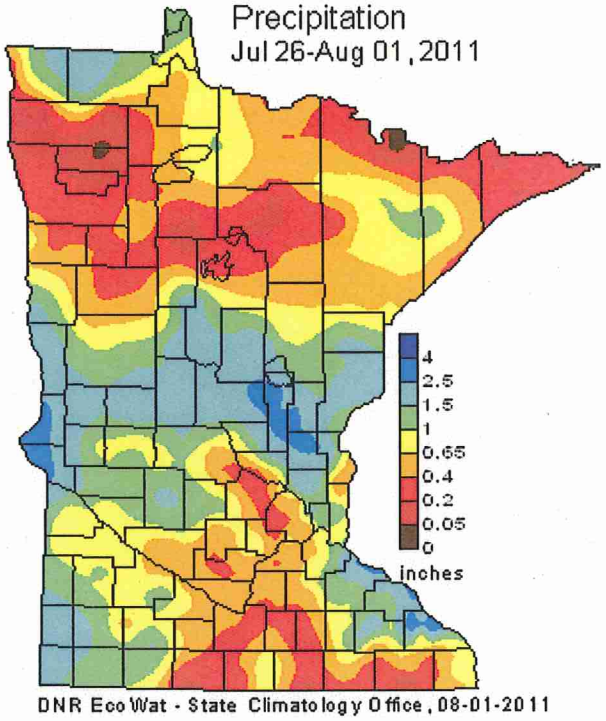
Please note that the city is not necessarily liable for the flooding of the golf course during this unusually severe storm. Any flooded land within the 100 year flood plan is expected to become submerged during a severe precipitation event.

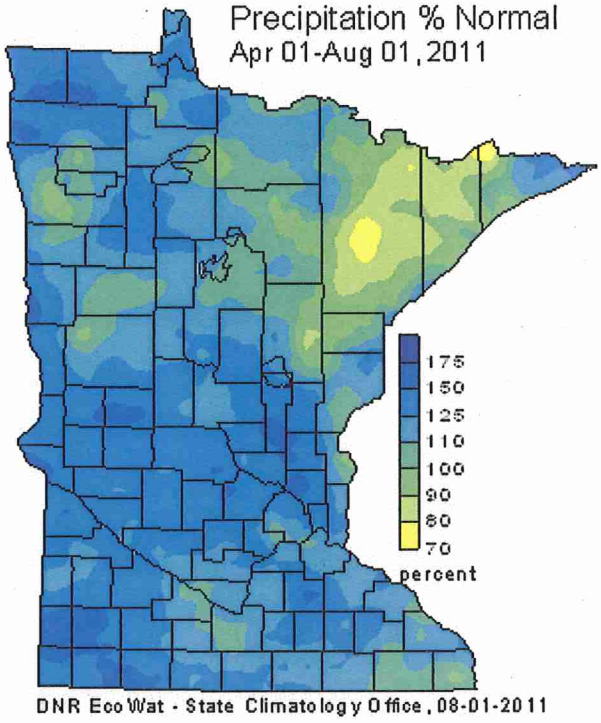
All claim settlements are global and we will not make partial payments on claims. In consideration of the documentation provided, and my calculations outlined above, my offer to settle this claim in full is $8,523.35. If you have any questions or want to discuss this further feel free to contact me at my office phone number 651-215-4060.

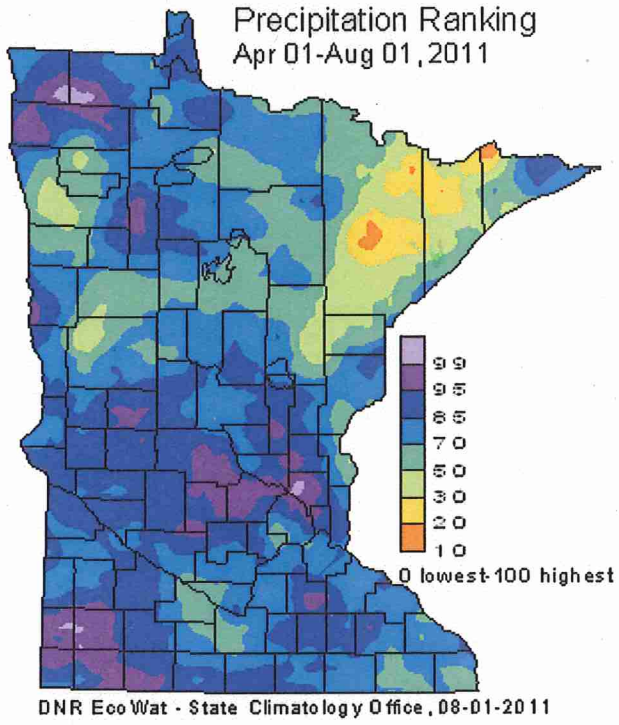
Sincerely,

Chad Linden
Claims Adjuster

Cc: City of Ramsey







Ranking maps explained

Return to Minnesota Climatology Working Group Main Page

Comments/Questions
URL: http://climate.umn.edu/doc/weekmap/weekmap_110725.htm
Last modified: August 1, 2011

Public Works Committee **5. 3.**

Meeting Date: 02/21/2012

By: Brian Olson, Engineering/Public Works

Title:

Consider entrance into a Statewide Mutual Aid Agreement - MnWARN

Background:

Over the years, the City of Ramsey has been positioned well to respond to emergency situations. With Mutual Aid agreements in the Fire and Police divisions, we are able to call on the necessary resources in the event of a disaster.

As a Public Works Department we have been able to secure a mutual Aid agreement with the City of Elk River to share services in the event of a storm event and in 2008, the City was successful in receiving a grant to purchase 800 MHz radios to improve our ability to communicate with the Police and Fire Departments during an emergency.

During the strategic planning session that was held on January 23rd, there was also discussion about the City Council's desire to look for ways to share services and consider options for contracting services or functions. Both of these planning session goals would be furthered by considering the attached MnWARN mutual Aid agreement

Notification:

Both the Police and Fire Department was consulted with this direction and support the direction.

Observations:

Whereas, the overall purpose for entering into an agreement of this nature is to secure the resources that the City of Ramsey needs during an emergency situation, it also allows for the employees that have been trained and are licensed to operate water or sewer facilities or heavy equipment, to respond to emergencies in other communities.

There is no requirement to respond when requested, but if we do respond to a situation like the flooding in 2008 in southeast Minnesota or the tornado in Hugo, we will be reimbursed for the time and materials that are spent from the time we leave the garage to the time that we return.

Funding Source:

N/A

Staff Recommendation:

Staff recommends approval of the agreement naming the City Administrator as the Authorizing Official.

Committee Action:

Motion to approve the attached Mutual Aid agreement naming the City Administrator as the Authorizing Official.

Attachments

Mutual Aid Agreement

Form Review

Inbox	Reviewed By	Date
Brian Olson (Originator)	MaryJo Warner	02/16/2012 02:59 PM
Kurt Ulrich	Kurt Ulrich	02/16/2012 03:38 PM
Form Started By: Brian Olson		Started On: 02/15/2012 09:55 AM

Final Approval Date: 02/16/2012

January 24, 2012

Dear Minnesota Community;

The Minnesota Water/Wastewater Agency Response Network (called MnWARN) is a new statewide mutual aid system comprised of cities and municipalities prepared to supply response to utility emergencies. MnWARN recognizes that utilities are highly specialized and must be self-sufficient to fill the gap until help from larger agencies arrives. Through this mutual aid system, utilities can help each other with personnel resources during natural and man-made emergencies, ranging from broken water mains or loss of power to large-scale disasters.

A community never knows when trouble will arrive. The flooding in southeastern Minnesota serves as a reminder of how suddenly emergencies of critical scope and magnitude can occur and how dependent we are as communities on one another's assistance. During those times, restoring a safe supply of water also allows fire departments, hospitals, responding agencies, and other services to operate. The ability for a community to quickly get back on its feet reduces the impact to the local economy, and clean water keeps public-health dangers to a minimum. In the wake of these experiences, Minnesota Utilities have developed a statewide group who through the use of a mutual aid agreement can help each other.

Participation in MnWARN is voluntary and membership is free. To participate in MnWARN, simply fill out the **Membership Information Form** and **Membership Application Questionnaire** and submit to MnWARN along with the **Mutual Aid Agreement** and **Resolution**. With the submittal of this information a community will have resources and assistance in time of need. The agreement among a network of utilities can complement and enhance local capabilities to prepare to respond to a broad range of threats.

This initiative is not meant to compete with any existing mutual agreements that your utility may already have in place with neighboring communities or counties. This initiative is meant to enhance the abilities of utilities to help utilities. Should you have additional questions please view our website at http://mnwarn.org .

If you have additional questions on how to become a WARN Member please feel free to contact me at mglynn@shakopeeutilities.com or call me at the Shakopee Public Utilities Water Department at (952) 233-1503.

Please forward this email to the appropriate persons.

Sincerely,

Marty Glynn

MnWARN Region 6 Director

MINNESOTA WATER AGENCY RESPONSE NETWORK (MnWARN) MUTUAL AID AGREEMENT

This Minnesota Water Agency Response Network (MnWARN) Mutual Aid Agreement is made and entered into by the undersigned Parties.

WHEREAS, the Parties hereto are authorized by law or home rule charter to establish a water, wastewater or storm water utility; and

WHEREAS, the Parties hereto have established a water, wastewater and/or storm water utility; and

WHEREAS, the Parties recognize that an Emergency may require Assistance in the form of personnel, equipment and supplies from a Utility outside the Governmental Unit; and

WHEREAS, the governing bodies of the Parties have investigated the facts and determined that it is in their best interests to authorize their Utilities to work cooperatively with another Party's Utilities when there is an Emergency; and

WHEREAS, Minnesota Statutes, Section 471.59 authorizes the Parties by agreement of their governing bodies to jointly or cooperatively exercise any power common to them.

NOW, THEREFORE, in consideration of the mutual covenants made herein, the Parties agree as follows:

ARTICLE I
PURPOSE

The Parties recognize that in an Emergency, their Utilities may require Assistance in the form of personnel, equipment and supplies from outside the area of impact. The purpose of this Agreement is to provide a framework, in the event of an Emergency, for the Parties to participate in an intrastate program for mutual aid assistance to provide water, wastewater and storm water utility services. The Parties authorize their Utilities to cooperatively assist other Party's Utilities when there is an Emergency, subject to the discretion of the Responding Party's Authorized Official as set forth in Article IV.

ARTICLE II
DEFINITIONS

A. Agreement — This Water Agency Response Network Mutual Aid Agreement.

B. Assistance — Resources, including but not limited to personnel, equipment, material and supplies that a Responding Party's Utility provides to a Receiving Party's Utility.

C. Authorized Official — An employee or official of a Party's Utility that is authorized by the Party's governing body to request Assistance or provide Assistance under this Agreement.

D. Emergency — Any occurrence that is, or is likely to be, beyond the control of the services, personnel, equipment or facilities of a Party's Utility.

E. Governmental Unit — A city, county or township in Minnesota or a city's public utilities commission.

F. MnWARN — The framework for public water, wastewater and storm water utilities in Minnesota to assist other public water, wastewater and storm water utilities when there is an Emergency that requires Assistance from another Utility. The framework includes this Agreement and other resources to be developed and coordinated by the Statewide Committee to implement the purpose of this Agreement.

G. National Incident Management System (NIMS) — A national, standardized approach to incident management and response that sets uniform processes and procedures for emergency response operations.

H. Party/Parties — One or more governmental units that has a water, wastewater or stormwater utility that executes this Agreement or adopts this Agreement by resolution pursuant to Article XIV.

I. Period of Assistance — The period of time when a Responding Party assists a Receiving Party. The period commences when personnel, equipment or supplies depart from a Responding Party's facility and ends when the resources return to their facility. All protections identified in the Agreement apply during this period. The Period of Assistance may occur during response to or recovery from an Emergency.

J. Receiving Party — A Party who requests and receives Assistance under this Agreement.

K. Responding Party — A Party that provides Assistance to another Party pursuant to this Agreement.

L. Statewide Committee — The committee responsible for overseeing MnWARN on a statewide level.

M. Steering Committee — The leadership group that established MnWARN and the development of this Agreement.

N. Utility/Utilities — A water, wastewater and/or storm water utility of a Party.

ARTICLE III
ADMINISTRATION

A. Statewide Committee.

1. Voting Members. MnWARN shall be administered through a Statewide Committee. The Statewide Committee shall be comprised of nine (9) voting members. The voting members of the Statewide Committee shall be comprised as follows: (i) an employee or official of a Utility located in Region 1 of the Minnesota Division of Homeland Security and Emergency Management Regions; (ii) an employee or official of a Utility located in Region 2 of the Minnesota Division of Homeland Security and Emergency Management Regions; (iii) an employee or official of a Utility located in Region 3 of the Minnesota Division of Homeland Security and Emergency Management Regions; (iv) an employee or official of a Utility located in Region 4 of the Minnesota Division of Homeland Security and Emergency Management Regions; (v) an employee or official of a Utility located in Region 5 of the Minnesota Division of Homeland Security and Emergency Management Regions; (vi) an employee or official of a Utility located in Region 6 of the Minnesota Division of Homeland Security and Emergency Management Regions; (vii) an employee or official of the Minnesota Rural Water Association; (viii) a representative from the Minnesota Section of the American Water Works Association; and (ix) a representative of the Minnesota Wastewater Operator's Association.

   a. Initial Voting Members. The initial voting members representing the six regions of the Minnesota Division of Homeland Security and Emergency Management Regions shall be selected by the Steering Committee. The other three voting members shall be selected by the organization they represent.

   b. Subsequent Voting Members. The appointment or election of subsequent voting members shall be done in accordance with bylaws to be adopted by the Statewide Committee.

   c. Terms. The terms of the voting members shall be established by the bylaws to be adopted by the Statewide Committee.

   d. Changes. The Statewide Committee may change the number or composition of the voting members in accordance with its bylaws.

2. Advisory Members. There shall be at least six (6) advisory members of the Statewide Committee who shall not be entitled to vote. The advisory member shall consist of a representative to be selected by each of the following organizations: (i) the Minnesota Pollution Control Agency; (ii) the Minnesota Department of Health; (iii) Minnesota Homeland Security and Emergency Management; (iv) the Association of Minnesota Emergency Managers; (v) the Minnesota Municipal Utilities Association; and (vi) the League of Minnesota Cities. The voting members of the Statewide Committee may change the number or composition of the advisory members in accordance with its bylaws. The terms of the advisory members shall be established by the bylaws of the Statewide Committee.

3. Officers. The Statewide Committee shall have the following officers: a Chair, a Vice-Chair and a Secretary. The initial officers shall be elected by the Statewide Committee at its first meeting. The terms of the initial officers and subsequently elected officers

shall be established by the bylaws of the Statewide Committee. The officers shall have the following powers:

a. Chair. The Chair shall have no more power than any other member of the Statewide Committee except that the Chair shall act as the presiding officer at all Statewide Committee meetings and may have other duties as assigned from time to time and prescribed by the Statewide Committee.

b. Vice-Chair. The Vice-Chair shall act as the presiding officer at any Statewide Committee meeting not attended by the Chair and shall perform the Chair's duties in the Chair's absence. The Vice-Chair may have other duties as assigned from time to time and prescribed by the Statewide Committee.

c. Secretary. The Secretary shall be responsible for ensuring that minutes are prepared for all Statewide Committee meetings. The Secretary shall also keep all books and records of the Statewide Committee and shall give all notices required by law, and may have other duties as assigned from time to time and prescribed by the Statewide Committee. The Statewide Committee may delegate all or part of the Secretary's duties required under this Section to another person; provided that such delegation shall not relieve the Secretary of ultimate responsibility for these duties

4. Powers. The Statewide Committee shall have the following powers:

a. To coordinate emergency planning and response activities of Utilities in coordination with the emergency management and public health system of the State;

b. To adopt policies and procedures to further the purpose of MnWARN;

c. To establish committees, including regional committees, to assist in implementing the purpose of MnWARN;

d. To develop a resource list of personnel, equipment, supplies and other resources that may be used to provide Assistance;

e. To establish a website to facilitate the Parties' use of MnWARN;

f. To develop protocols, forms or procedures for Parties to request assistance;

g. To develop educational materials; and

h. To develop training materials and conduct training for Parties.

5. Meetings. The Statewide Committee shall hold meetings as follows:

a. Organizational Meeting. An organizational meeting shall be held at a time and place to be determined by the Steering Committee.

b. Regular Meetings. Thereafter, the Statewide Committee shall meet at least annually. A schedule of regular meetings may be adopted by the Statewide

Committee at the organizational meeting. A schedule of regular meetings may be changed from time to time as deemed necessary by the Statewide Committee.

c. Special Meetings. Special meetings of the Statewide Committee may be called by the Chair and must be called by the Chair upon written request of two Statewide Committee members.

d. Quorum. The Statewide Committee shall not take official action unless a majority of the voting members are present in person or via electronic communication.

ARTICLE IV
REQUESTS FOR ASSISTANCE

A. Party Responsibility. The Parties shall identify an Authorized Official and one or more alternates; provide contact information including 24-hour access; and maintain the resource information required contained in the member information form to be developed by the Statewide Committee. The Parties shall update this information as required by the bylaws.

In the event of an Emergency, a Party's Authorized Official may request Assistance from a Party's Utility. The Authorized Official must specifically state that Assistance is being requested under MnWARN to activate the provisions of this Agreement. Requests for Assistance can be made orally or in writing. When made orally, the request for Assistance shall be prepared in writing as soon as practicable. Requests for Assistance shall be directed to the Authorized Official of a Party. Specific protocols for requesting Assistance shall be established by the Statewide Committee.

B. Response to a Request for Assistance. After a Party receives a request for Assistance, the Authorized Official should evaluate if resources are available to respond to the request for Assistance. Following the evaluation, the Responding Party's Authorized Official shall inform, as soon as possible, the Receiving Party's Authorized Official if it can provide Assistance. If Assistance is provided, the Responding Party shall inform the Receiving Party about the type of available resources and the approximate arrival time of such resources.

C. Discretion of Responding Party's Authorized Official. Adoption of this Agreement does not create any duty to provide Assistance. When a Party receives a request for Assistance, the Authorized Official shall have absolute discretion to provide Assistance or to not provide Assistance. A Party's decision to provide Assistance or not provide Assistance shall be final. No Party nor any employee or officer of any Party shall be liable to any other Party or to any person for failure of any Party to furnish Assistance or for recalling Assistance.

ARTICLE V
RESPONDING PARTY PERSONNEL

A. National Incident Management System (NIMS). When providing Assistance under this Agreement, the Requesting Party's Utility and the Responding Party's Utility shall be organized and function under NIMS.

B. Control. The personnel of a Responding Party providing Assistance shall be under the direction and control of the Receiving Party until the Responding Party's Authorized Official withdraws Assistance. The Receiving Party's Authorized Official shall coordinate response

activities with the Responding Party's Authorized Official. Whenever practical, Responding Party personnel should plan to be self sufficient for up to 72 hours.

C. Food and Shelter. The Receiving Party shall supply reasonable food and shelter for Responding Party personnel for Assistance that is provided for more than 72 hours. If the Receiving Party is unable to provide food and shelter for a Responding Party's personnel, the Responding Party's Authorized Official or designee is authorized to secure food and shelter for its personnel and shall be entitled to reimbursement for such expenses from the Receiving Party. Reimbursement for food and shelter shall reflect the actual costs incurred by the Responding Party. If receipts are not available, the Responding Party cannot request reimbursement in excess of the State per diem rates for that area.

D. Communication. The Receiving Party shall provide Responding Party personnel with radio equipment as available, or radio frequency information to program existing radios, in order to facilitate communication among personnel providing Assistance.

E. Status. Unless otherwise provided by law, the Responding Party's officers and employees retain the same privileges, immunities, rights, duties, and benefits as provided in their respective jurisdictions.

F. Licenses and Permits. To the extent permitted by law, Responding Party personnel who hold licenses, certificates, or permits evidencing professional, mechanical, or other skills shall be allowed to carry out activities and tasks relevant and related to their respective credentials during the Period of Assistance.

G. Right to Withdraw. The Responding Party's Authorized Official retains the right to withdraw some or all of its resources at any time. Notice of intention to withdraw must be communicated to the Receiving Party's Authorized Official as soon as possible.

ARTICLE VI
COST REIMBURSEMENT

Unless otherwise mutually agreed in whole or in part, the Receiving Party shall reimburse the Responding Party for each of the following categories of costs incurred while providing Assistance during the Period of Assistance.

A. Personnel. A Responding Party shall be reimbursed for its actual costs paid to personnel providing Assistance during the Period of Assistance. The Responding Party's designated supervisor(s) must keep accurate records of work performed by personnel during the Period of Assistance. Reimbursement to the Responding Party must consider all personnel costs, such as salaries or hourly wages, including overtime, and costs for fringe benefits and indirect costs.

B. Equipment. The Receiving Party shall reimburse the Responding Party for the use of equipment during a Period of Assistance pursuant to the Responding Party's rate schedule. If the Responding Party does not have a rate schedule, the rates for equipment use must be based on the Federal Emergency Management Agency's (FEMA) Schedule of Equipment Rates. If a Responding Party uses rates different from those in the FEMA Schedule of Equipment Rates, the Responding Party must provide such rates in writing to the Receiving Party prior to supplying Assistance. Reimbursement for equipment not referenced on a Party's rate schedule or the FEMA Schedule of Equipment Rates must be developed based on actual recovery of costs.

C. Materials and Supplies. The Receiving Party must reimburse the Responding Party in kind or at actual replacement cost, plus handling charges, for use of expendable or non-returnable supplies. The Responding Party must not charge direct fees or rental charges to the Receiving Party for other supplies and reusable items that are returned to the Responding Party in a clean, damage-free condition. Reusable supplies that are returned to the Responding Party with damage must be treated as expendable supplies for purposes of cost reimbursement.

D. Payment Period. The Responding Party must provide an itemized bill to the Receiving Party for all expenses it incurred as a result of providing Assistance under this Agreement. The Responding Party must send the itemized bill not later than ninety (90) days following the end of the Period of Assistance. The Receiving Party must pay the undisputed portion of the bill in full on or before the forty-fifth (45th) day following the billing date. Unpaid bills become delinquent upon the forty-sixth (46th) day following the billing date, and, once delinquent, the bill accrues interest at the standard rate of interest charged by the Responding Party for unpaid bills. If the Responding Party does not have a standard rate, the interest rate shall be the rate of prime, as reported by the *Wall Street Journal,* plus two percent (2%) per annum. Any undisputed amount must be resolved using the procedures set forth in Article VII.

ARTICLE VII
DISPUTES

The Parties agree to act in good faith to undertake resolution of disputes, in an equitable and timely manner and in accordance with the provisions of this Agreement. If disputes cannot be resolved informally by the Parties, the following procedures shall be used:

A. Mediation. If there is a failure between Parties to resolve a dispute on their own, the Parties shall first attempt to mediate the dispute. The Parties shall agree upon a mediator, or if they cannot agree, the Statewide Committee Chair shall select a mediator. If the Chair of the Statewide Committee, has a conflict of interest, the duty for selecting a mediator shall pass to the Vice-Chair.

B. Arbitration. If the dispute remains unresolved following mediation, the dispute shall be submitted to arbitration under the Uniform Arbitration Act, Minnesota Statutes, Sections 572.08-.30. If the Parties cannot agree on one or more arbitrators, the arbitrator(s) shall be selected using the same procedure set forth for selecting a mediator. The decision of the majority of the arbitrators shall not be binding upon the Parties. If the arbitration decision is not accepted, the Parties may pursue any other legal remedy to resolve the dispute.

ARTICLE VIII
RECEIVING PARTY'S DUTY TO INDEMNIFY

For the purposes Minnesota Municipal Tort Liability Act, Minnesota Statutes, Chapter 466, the employees and officers of the Responding Party are deemed to be employees (as defined in Minnesota Statutes, Section 466.01, subdivision 6) of the Receiving Party.

The Receiving Party shall defend, indemnify and hold harmless, the Responding Party, its officers, employees, volunteers and agents from all claims, loss, damage, injury, and liability of

every kind, nature, and description, directly or indirectly arising from the Responding Party's Assistance during the Period of Assistance. The scope of the Receiving Party's duty to indemnify includes, but is not limited to, suits arising from, or related to, negligent or wrongful use of equipment or supplies on loan to the Receiving Party, or faulty workmanship or other negligent acts, errors, or omissions by the Responding Party personnel. The Receiving Party shall not be required to defend and indemnify the Responding Party for any willful or wanton misconduct of the Responding Party or its officer, employees, volunteers or agents. Under no circumstances, however, shall a party be required to pay on behalf of itself and other parties, any amounts in excess of the limits of liability established in Minnesota Statutes, Chapter 466 applicable to any one party. The intent of this article is to impose on each Receiving Party a limited duty to defend and indemnify a Responding Party for claims arising within the Receiving Party's jurisdiction subject to the limits of liability under Minnesota Statutes, Chapter 466. The purpose of creating this duty to defend and indemnify is to simplify the defense of claims by eliminating conflicts among defendants and to permit liability claims against multiple defendants from a single occurrence to be defended by a single attorney.

The Receiving Party's duty to indemnify is subject to, and shall be applied consistent with, the conditions set forth in Article X.

ARTICLE IX
DAMAGE TO EQUIPMENT

Each Party shall be responsible for damages to or loss of its own equipment. Each Party waives the right to sue any other Party for any damages to or loss of its equipment, even if the damages or losses were caused wholly or partially by the negligence of any other Party or its officers, employees, or volunteers.

ARTICLE X
WORKERS' COMPENSATION

Each Party shall be responsible for injuries or death of its own personnel. Each Party will maintain workers' compensation insurance or self-insurance coverage, covering its personnel while they are providing Assistance pursuant to this Agreement. Each Party waives the right to sue another Party for any workers' compensation benefits paid to its own personnel while they are providing Assistance pursuant to this Agreement. Each Party waives the right to sue another Party for any workers' compensation benefits paid to its own employee or volunteer or their dependents, even if the injuries were caused wholly or partially by the negligence of another Party or its officers, employees or volunteers.

ARTICLE XI
INSURANCE

Parties to this Agreement shall maintain the following liability coverages: (1) commercial general liability; and (2) automobile liability, including owned, hired, and non-owned automobiles. Each policy shall have a limit at least equal to the maximum municipal liability limit in Section 466.04, subd. 1. If the policy contains a general aggregate limit, the general aggregate limit shall not be less than double the maximum municipal liability limit in Section 466.04, subd. 1.

ARTICLE XII
WITHDRAWAL

A Party may withdraw from this Agreement by providing written notice of its intent to withdraw to the Statewide Committee Secretary. Withdrawal takes effect 60 days after notice is sent.

ARTICLE XIII
INTRASTATE AND INTERSTATE MUTUAL AID AND ASSISTANCE PROGRAMS

To the extent practicable, Parties to this Agreement are encouraged to participate in mutual aid and assistance activities conducted under the State of Minnesota Intrastate Mutual Aid and Assistance Program and the Interstate Emergency Management Assistance Compact (EMAC). Parties may voluntarily agree to participate in an interstate Mutual Aid and Assistance Program for Utilities through this Agreement if such a Program were established.

ARTICLE XIV
NEW MEMBERS

Other Governmental Units may be added to this Agreement upon approval of their governing body as evidenced by adoption of the resolution attached as Exhibit I to this Agreement and execution by the Governmental Unit's authorized representatives. A Governmental Unit shall not become a Party to this Agreement until a certified copy of the resolution is received by the Statewide Committee Secretary. The Statewide Committee Secretary shall maintain a master list of all Parties to this Agreement.

ARTICLE XV
GENERAL PROVISIONS
MODIFICATION

A. Modification. No provision of this Agreement may be modified, altered or rescinded by individual parties to the Agreement. Modifications to this Agreement may be due to programmatic operational changes to support the Agreement. Modifications require a simple majority vote of the Parties to this Agreement. The Statewide Committee Secretary shall provide written notice to all Parties of approved modifications to this Agreement. Approved modifications take effect 60 days after the date upon which notice is sent to the Parties.

B. Signatory Indemnification. In the event of a liability, claim, demand, action or proceeding of whatever kind or nature arising out of a Period of Assistance, the Parties who receive and provide Assistance shall indemnify and hold harmless those Parties whose involvement in the transaction or occurrence that is the subject of such claim, action, demand or other proceeding is limited to execution of this Agreement.

C. Prohibition on Third Parties and Assignment of Rights/Duties. This Agreement is for the sole benefit of the Parties and no person or entity shall have any rights under this Agreement as a third-party beneficiary. Assignments of benefits and delegations of duties created by this Agreement are prohibited and are without effect.

D. Notice. A Party who becomes aware of a claim or suit that in any way, directly or indirectly, contingently or otherwise, affects or might affect other Parties to this Agreement shall

provide prompt and timely notice to the Parties who may be affected by the suit or claim. Each Party reserves the right to participate in the defense of such claims or suits as necessary to protect its own interests.

E. Effective Date. This Agreement shall be effective after approval by the Parties' governing body and execution by the Parties' authorized representatives.

F. Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Minnesota.

G. Captions. Article and section headings contained in this Agreement are included for convenience only and form no part of the Agreement among the Parties.

H. Waivers. The waiver by a Party of any breach or failure to comply with any provision of this Agreement by another Party shall not be construed as, or constitute a continuing waiver of such provision or a waiver of any other breach of or failure to comply with any other provision of this Agreement.

I. Counterparts. This Agreement may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

J. Savings Clause. If any court finds any article, section or portion of this Agreement to be contrary to law or invalid, the remainder of the Agreement will remain in full force and effect.

IN WITNESS WHEREOF, the Parties, by action of their respective governing bodies, caused this Agreement to be approved on the dates below.

City of _____, Minnesota

The City Council of _____, Minnesota duly approved this Agreement on the _____ day of _____, 20__.

By: _____
Its Mayor

And: _____
Its Clerk

EXHIBIT I

RESOLUTION AUTHORIZING GOVERNMENTAL
UNIT TO BE A PARTY TO MINNESOTA WATER AGENCY RESPONSE NETWORK
(MnWARN)

WHEREAS, Minnesota Statutes, Section 471.59 authorizes governmental units by agreement of their governing bodies to jointly or cooperatively exercise any power common to them;

WHEREAS, MnWARN has been established by the adoption of a Mutual Aid Agreement (the Agreement) among Governmental Units to allow their water, wastewater and storm water utilities to assist each other in case of an emergency;

WHEREAS, the Agreement allows other governmental units to become a party to the Agreement by the adoption of this Resolution and sending notice to the Secretary of the Statewide Committee for MnWARN; and

WHEREAS, the governing body of [name of governmental unit] considers it to be in the best interests of the [City][County][Town] to be a party to the Agreement.

NOW, THEREFORE, BE IT RESOLVED, that [name of governmental unit]:

1. Authorizes [position title of designated employee or official] and [position title of designated employee or official] to sign this resolution evidencing the intent of [name of governmental unit] to be a party to MnWARN; and

2. [Name of designated employee or official] is directed to send a certified copy of this resolution and a completed membership information form to the Secretary of the Statewide Committee of MnWARN; and

3. [Name of political subdivision] agrees to comply with all terms of the Agreement.

IN WITNESS WHEREOF, [name of governmental unit], by action of its governing body, caused this Resolution to be approved on [Month/Date/Year].

By: _____

Its _____

And: _____

Its _____

Public Works Committee **5. 4.**

Meeting Date: 02/21/2012

By: Grant Riemer, Engineering/Public Works

Title:

Review City of Ramsey Snowplowing Policy and possible cost reductions

Background:

With several questions being raised this season about snowplowing and how we determine what action to take, staff felt it would be a good time to review our policy and possible changes. Snowplowing is one of the few city functions that effects almost every resident. With such a wide ranging impact, comes an equally wide range of expectations. Some residents want the streets completely bare of snow and ice as soon as possible, while others are comfortable driving on hard pack for most of the winter. It is the responsibility of the the public works department to pick a course of action that provides safe driving conditions for our residents. Snow plowing is an expensive and time consuming task for the Public Work department. The following figures are for an "average" snowfall of 2-4 inches. The numbers are based on the 2010 FEMA schedule of equipment rates which include fuel, parts overhead etc...and the labor rate is based on the 2012 City of Ramsey Rates and Charges schedule. This rate is the hourly wage multiplied by a factor of 2.3 A complete table of all the charges and rates is attached to the case, but these are the main numbers:

Cost to plow 2-4" snow fall on straight time-$12,520.08
Cost to plow 2-4" snow fall on over time-$15,570.96
Cost Differential between straight time to overtime-$3050.88

A full plowing operation requires 18 people. We can and have done it with a couple people short of that number, but these figures are based on a crew of 18. One of the questions raised was why doesn't the Public Works department just start plowing after it quits snowing? If it is on a weekday it's often a question of safety and overtime. A majority of the crew has been working since 7:30 that morning. If the snow quits in the late afternoon, now you have everyone on overtime, plus working a 16 hour day. Safety of motorists is also a large concern. During plowing we are required to back out on to major county and state roads. Sunwood Dr in the COR has to be plowed against traffic to minimize damage to the streetscape due to salt. If we wait until 2 am the overtime cost is eliminated and most of the safety concerns are less. Typically on a snowfall during the weekday, crews would plow and salt the arterial roads and prepare equipment for the following morning.

If a similar snow fall were to happen on a Saturday, a skeleton crew would come in plow and salt the main roads and the full crew would be called in on Sunday morning usually at 5am. Traffic is less of a concern on the weekend, so we start later. If the snow event is on a Sunday, we would try to push city wide plowing back to Monday at 2am. On the week-end and holidays you also have the task of gathering up the plow crew from their personal activities and get them scheduled to work. Snowfalls over 2" are easy, because they are covered under our current policy. It's the 1"- 1-1/2" snow falls that Public Works staff would like the committee's thoughts on.

If it is the Public Works Committee and ultimately the full council's direction to strictly follow our 2" snow fall policy there will be some cost savings and some long term maintenance issues to consider.

WEEKEND PLOWING
Option # 1 No plowing on weekends or holidays, until snow reaches 2". All plowing would be delayed until normal work days.
Pro-cost savings-$3072.00
Con- slower response times for emergency vehicles and more hazardous driving conditions in general. Hard pack snow on all roads. Increased call outs for slippery intersections. Depending on the holiday, the time period could be as long as 4 days. Action would require increased application of salt and scraping to regain bare pavement. Increase

of resident complaints.

Option # 2 Plow and salt arterial routes only on 2” snowfalls on week-ends and holidays and delay full scale plowing until normal work days.
Pro- Arterial roads will be cleared between county and state roads. Additionally fire stations would be plowed for emergency responders.
Con-Overtime Cost-$2955.00 for 5 plow trucks with salt to plow arterial roads and a pickup plow to clear fire stations and the parking ramp.
Hard pack snow on residential roads. Increased call outs for slippery intersections. Action would require increased application of salt and scraping to regain bare pavement. Increase of resident complaints.

Option # 3 Continue to allow the PW department to use their best judgment on deciding what course of action is best to improve safety and winter driving conditions for the traveling public. Decisions would be based on snow type, amount, time of year, current temperature and expected weather conditions after the snow ends and past experience.
Pro- Increased safety for the traveling public.
Con- Impact to the general fund budget for overtime. Possible cost ranges from $2955.00-$3072.00 depending on storm event and action taken

Notification:

Observations:

Funding Source:
Cost Center 0312

Staff Recommendation:
Option # 3 Continue to allow the PW department to use their best judgment on deciding what course of action is best to improve safety and winter driving conditions for the traveling public. Decisions would be based on snow type, amount, time of year, current temperature and expected weather conditions after the snow ends and past experience.

Committee Action:
Motion to continue plowing utilizing Option # 3.

Attachments

Snow removal policy
Plow map
plow map
Plow map
plow map
Plowing Costs

Form Review

Inbox	Reviewed By	Date
Brian Olson	Brian Olson	02/13/2012 04:28 PM
Kurt Ulrich	Kurt Ulrich	02/16/2012 01:26 PM

Form Started By: Grant Riemer Started On: 01/31/2012 02:55 PM

Final Approval Date: 02/16/2012

CITY POLICY ON SNOW REMOVAL, ICE CONTROL

The control of snow and ice through quick and effective snowplowing ensures safe transportation for citizens, emergency vehicles, and the ongoing commercial activity in Ramsey. Due to the significant amount of public dollars spent on these services, it is the city's goal to manage and operate winter road maintenance in an efficient and cost-effective manner. Because timing is critical for snow and ice control, the City's goal is to achieve roads clear of snow in a reasonable time period. This is always dependent upon the type and amount of snow. The City cannot guarantee bare, dry pavement after each snowfall, or that streets will be totally free of ice or other driving hazards common to Minnesota winter conditions.

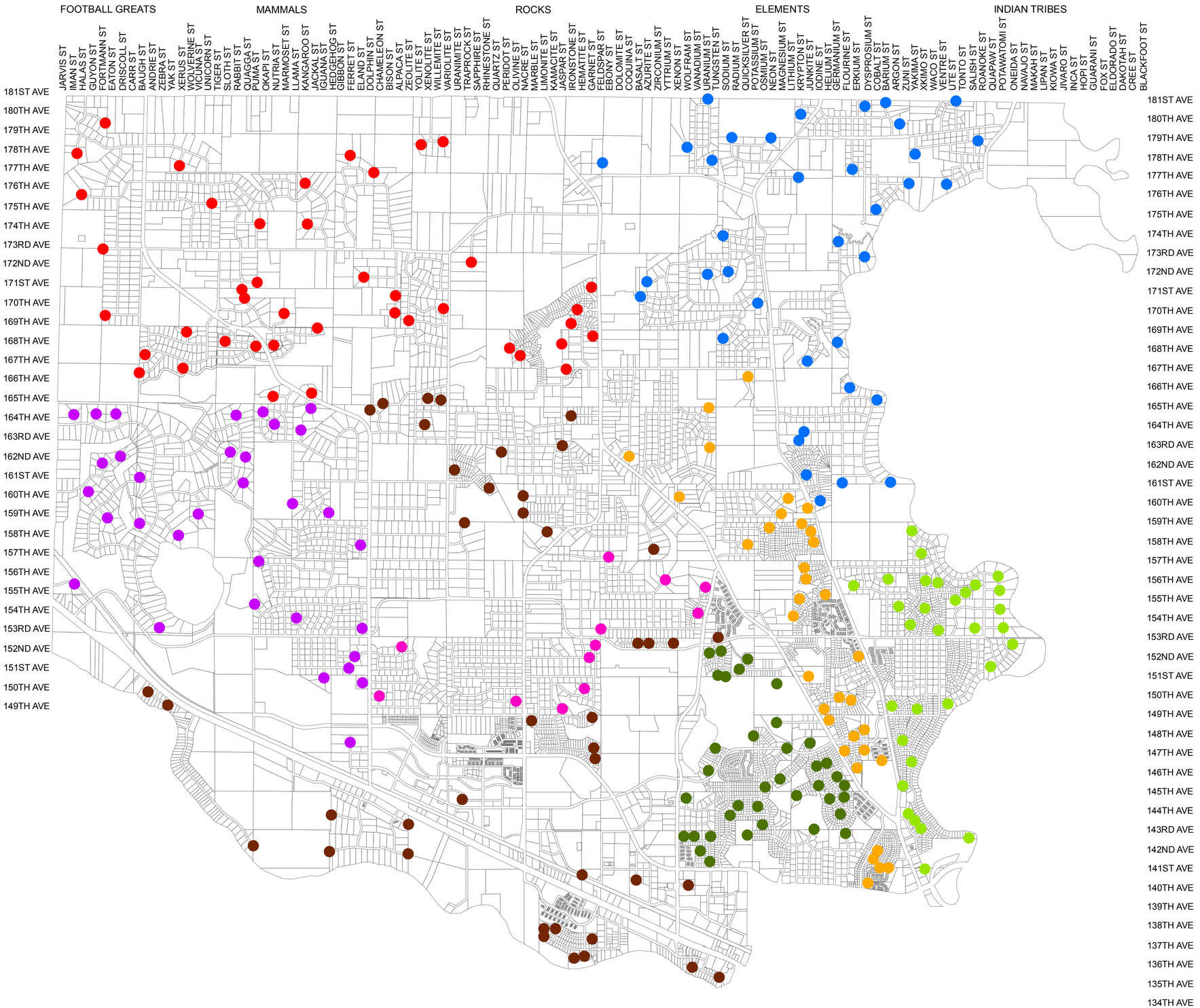
Snowplowing begins after the accumulation of two inches of snow. It takes City crews approximately eight hours to clear streets after a "normal" snowfall of two to four inches. During major snow accumulations, emergency plowing operations usually begin about 2:00 a.m. In those situations, lead personnel will begin plowing as soon as possible so that primary arterial roadways are passable by morning "rush hours".

The City is divided into seven routes. Major collector streets are plowed first. Other streets are plowed in an order determined by the driver for the quickest and most practical way to open all roads. Cul-de-sacs and short dead-end streets are divided into 7 routes and are plowed with different plows, adding speed and efficiency to the operation.

Ice control consists of distributing a salt or salt/sand mixture when and where the Police and Public Works departments deem necessary. The City sands all main intersections, dangerous curves, and steep grades as needed to control traffic. Because temperature determines the effectiveness of a salt/sand mixture, sanding will not be done on extremely cold days except in emergency situations.

Some of the main intersections along State and County roads are sanded as they are plowed. Others are sanded after all roads are cleared of snow, because the sand is needed for weight on the trucks. During ice storms when no plowing is occurring, intersections along the State and County roads are sanded first and all others are sanded immediately thereafter.

2011-12 Plow Map

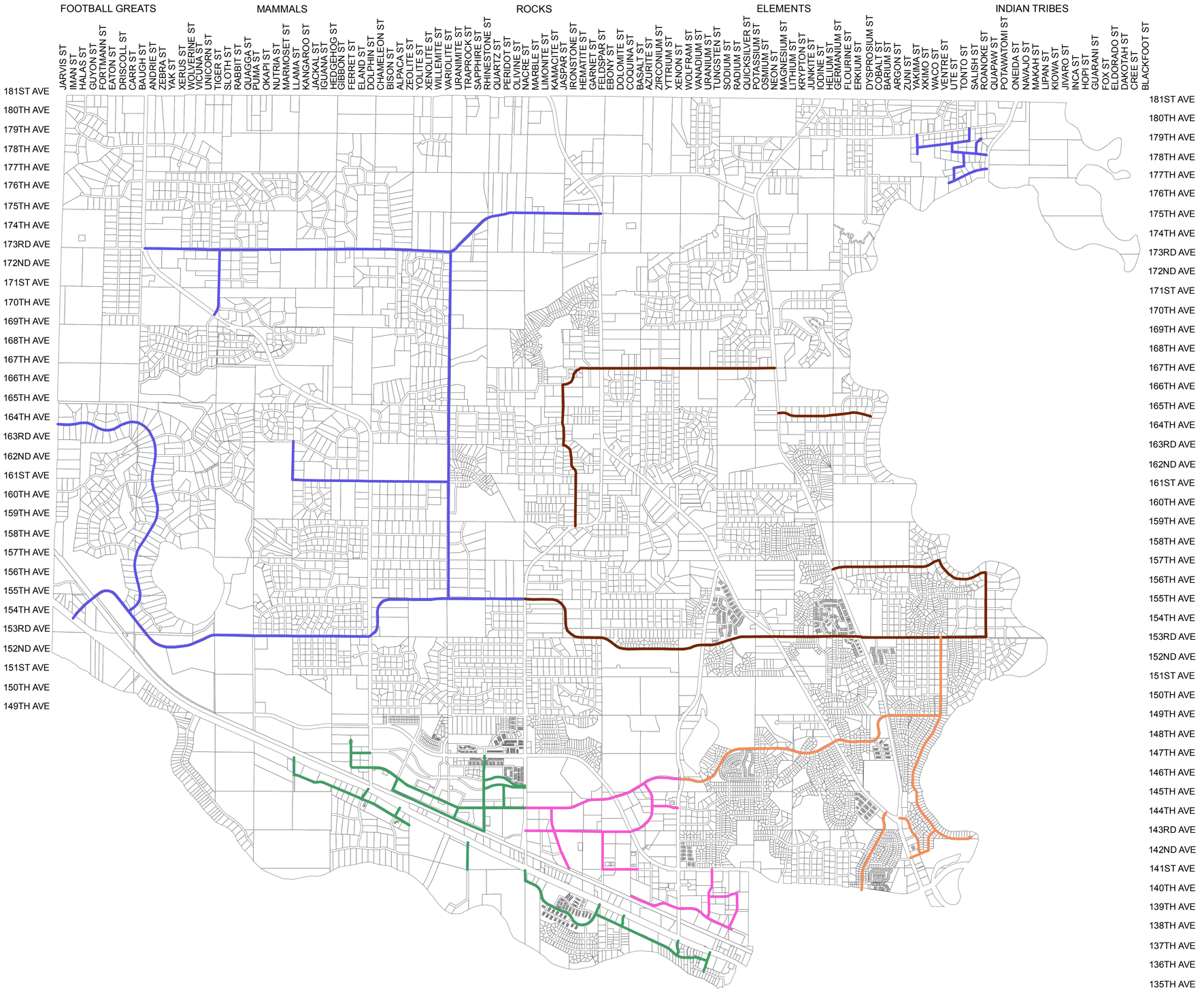


Legend

Cul-de-Sac

- 637 GRANT
- 664 MIKE BERGE
- 676 KEITH - FIRE STATION 1
- 653 MIKE NIELSEN
- 667 SEASONAL
- 675 SEASONAL
- 651 SEASONAL
- 603 MICK

2011-12 Plow Map



MAINS

632 - DYSPROSIUM ST, SUNWOOD DR

636 - WACO ST, XKIMO ST, SUNWOOD DR,
ALPINE/ROANOAKE/JUNIPER RIDGE DR/
156TH LN

672 - 167TH AVE
SALT JASPAR ST AND EAST HALF OF 601 ROUTE

603 - ALPINE DR

668 - ALPINE DR, ANDRIE ST/ 164TH LN

662 - SUNWOOD DR, CIVIC CENTER DR
RIVERDALE DR
SALT 603 ROUTE

601 - VARIOLITE ST, ALPINE DR
JASPAR ST, 167TH AVE

644 - COUNTY RD 63, TIGER ST
SALT VARIOLITE ST, WEST HALF
601 ROUTE

636 - ROUTE #1 N OF 160TH
ROUTE #2 S OR 160TH
672 - ROUTE #1 N OF 167TH
ROUTE #2 S OF 167TH

668 - ROUTE #1 N. FORK/ SOUTH OF 10
ROUTE #2 E OF N. FORK

601 - ROUTE #1 W OF VARIOLITE
ROUTE #2 E OF VARIOLITE

644 - ROUTE #1 N OF 173RD
ROUTE #2 S OF 173RD

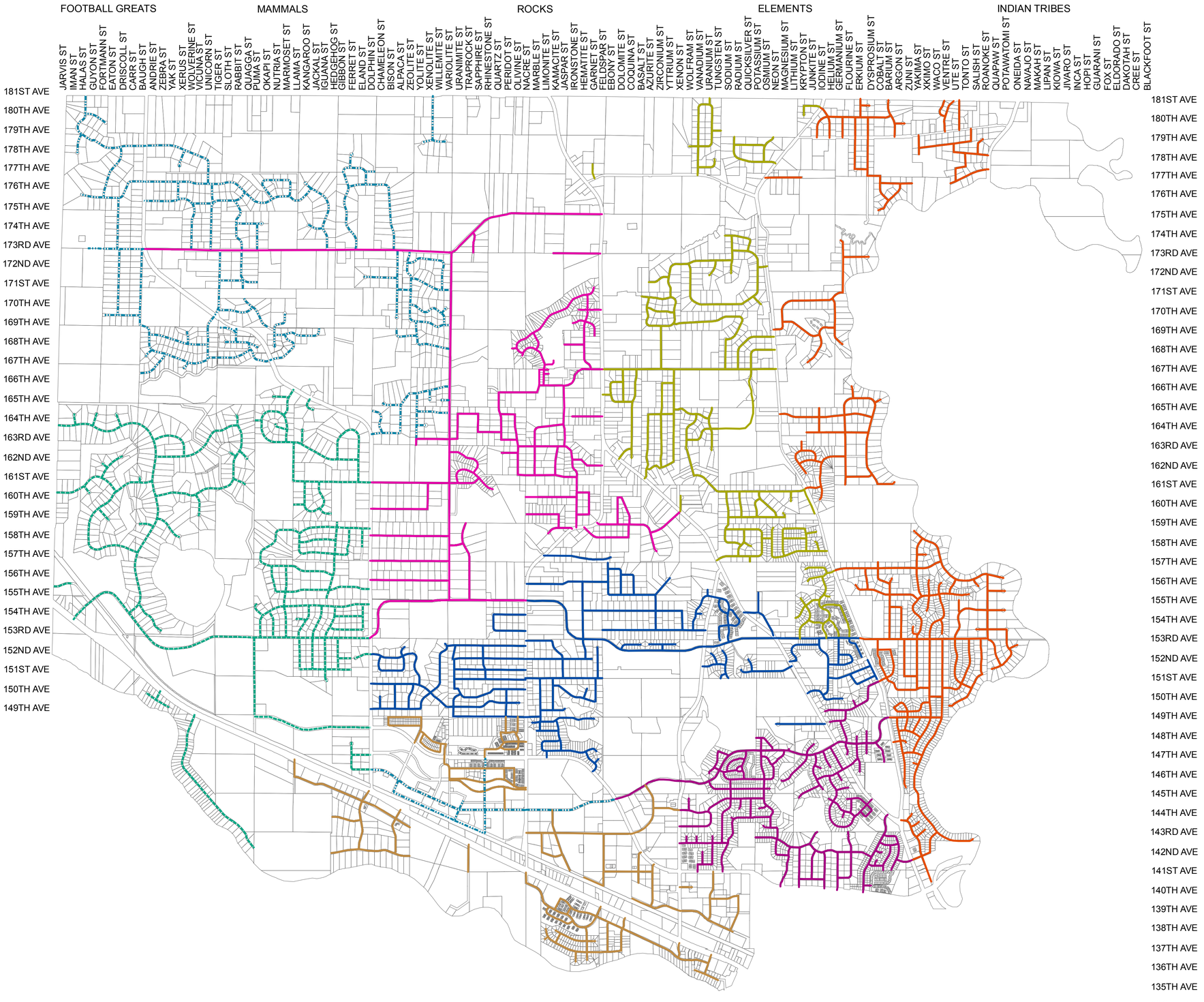
Legend

ART ROUTE

Art_Route

- 1
- 2
- 3
- 4
- 5

2011-12 Plow Map



Legend

Routes

Route

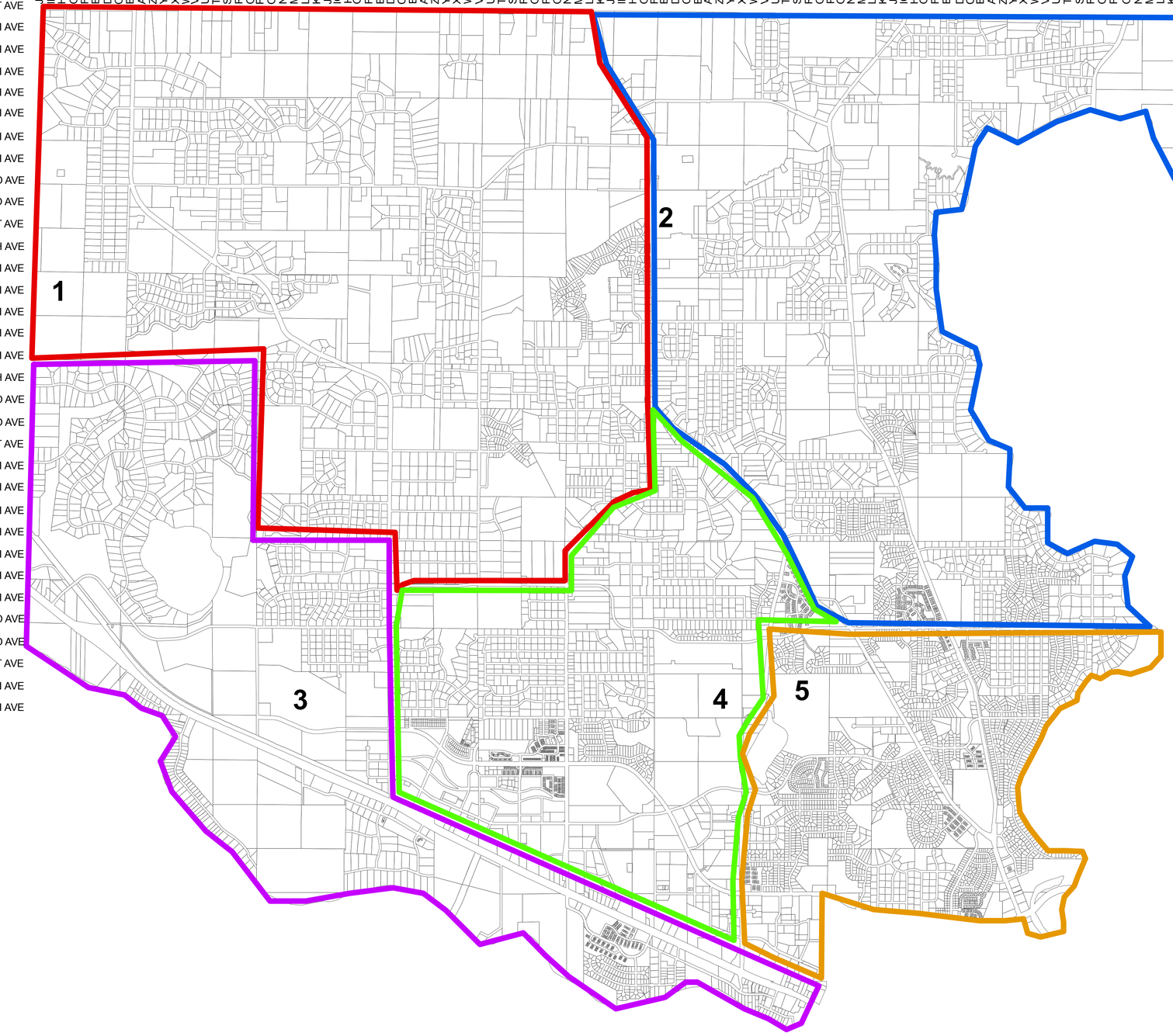
- 632 TODD N
- 636 JERRY
- 672 LONNY
- 603 MICK
- 668 GREG L
- 662 GREG T
- 601 JEFF E
- 644 LEE

2011-12 Plow Map

FOOTBALL GREATS | MAMMALS | ROCKS | ELEMENTS | INDIAN TRIBES

JARVIS ST, IMAN ST, HALAS ST, GUYON ST, FORTMANN ST, EATON ST, DRISCOLL ST, CARR ST, BAUGH ST, ANDRIE ST, ZEBRA ST, YAK ST, XERUS ST, WOLVERINE ST, VICUNA ST, UNICORN ST, TIGER ST, SLOTH ST, RABBIT ST, QUAGGA ST, PUMA ST, OKAPI ST, NUTRIA ST, MARMOSET ST, LLAMA ST, KANGAROO ST, JACKAL ST, IGUANA ST, HEDGEHOG ST, GIBBON ST, FERRET ST, ELAND ST, DOLPHIN ST, CHAMELEON ST, BISON ST, ALPACA ST, ZEOLITE ST, YOLITE ST, XENOLITE ST, WILLEMITE ST, VARIOLITE ST, URANIMITE ST, TRAPROCK ST, RHINESTONE ST, SAPPHIRE ST, QUARTZ ST, PERIDOT ST, OLIVINE ST, NACRE ST, MARBLE ST, LIMONITE ST, KAMACITE ST, JASPAR ST, IRONSTONE ST, HEMATITE ST, GARNET ST, FELDSPAR ST, EBONY ST, DOLOMITE ST, COQUINA ST, BASALT ST, AZURITE ST, ZIRCONIUM ST, YTTRIUM ST, XENON ST, WOLFRAM ST, VANADIUM ST, URANIUM ST, TUNGSTEN ST, SODIUM ST, RADIUM ST, QUICKSILVER ST, POTASSIUM ST, OSMIUM ST, NEON ST, MAGNESIUM ST, LITHIUM ST, KRYPTON ST, JUNKITE ST, IODINE ST, HELIUM ST, GERMANIUM ST, FLOURINE ST, ERKIUM ST, DYSPROSIUM ST, COBALT ST, BARIUM ST, ARGON ST, ZUNI ST, YAKIMA ST, XKIMO ST, WACO ST, VENTRE ST, UTE ST, TONTO ST, SALISH ST, ROANOKE ST, QUAPAW ST, POTAWATOMI ST, ONEIDA ST, NAVAJO ST, MAKAH ST, LIPAN ST, KIOWA ST, JIVARO ST, INCA ST, HOPI ST, GUARANI ST, FOX ST, ELDORADO ST, DAKOTAH ST, CREE ST, BLACKFOOT ST

181ST AVE, 180TH AVE, 179TH AVE, 178TH AVE, 177TH AVE, 176TH AVE, 175TH AVE, 174TH AVE, 173RD AVE, 172ND AVE, 171ST AVE, 170TH AVE, 169TH AVE, 168TH AVE, 167TH AVE, 166TH AVE, 165TH AVE, 164TH AVE, 163RD AVE, 162ND AVE, 161ST AVE, 160TH AVE, 159TH AVE, 158TH AVE, 157TH AVE, 156TH AVE, 155TH AVE, 154TH AVE, 153RD AVE, 152ND AVE, 151ST AVE, 150TH AVE, 149TH AVE



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ROUTE #2 E OF N. FORK

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ROUTE #2 E OF VARIOLITE

644 - ROUTE #1 N OF 173RD
ROUTE #2 S OF 173RD

Legend

2007 Sanding Routes

Id

1
2
3
4
5

City Wide Plowing	FEMA Schedule Base Equipment Costs/Hour	FEMA Equipment Schedule for Plow Attachments
Equipment Costs		
Single Axle Dump Truck (4)	$35.00	$18.50
Tandem Axle Dump Truck (2)	$45.00	$18.50
Motorgrader (1)	$58.00	$18.50
Wheel Loader (1)	$28.75	$18.50
1-Ton Pickup (FT Labor) (4)	$20.00	$10.75
1-Ton Pickup (Temp. Labor) (4)	$20.00	$10.75
Skidloader/Toolcat (1)	$18.00	
Trackless (1)	$25.00	
Totals	$249.75	$95.50
Labor and Equipment Costs		
Salt	Cost/ton	Salt used/Full Plow
	$67.90	35.00
Cost to Plow /8 Hour Event+Salt(ST)		
Cost to plow /8 Hour event+salt (OT)		
Cost Differential		
Cost to Plow/Salt Arterials Only		20.00

City Hall Plowing		
Holder (1)	$25.00	N/A
Walk Behind Snowblower	$3.25	N/A
ATV w/plow	$7.00	N/A
Shoveling		
Salt/Chemicals for Sidewalks		
Total Cost /Event		

Total Equipment Cost/ Hour	Labor Costs Straight Time/Hour	Labor Costs Overtime/Hour	Equipment Operations Costs ST/Hour
	$23.69x2.3	23.69x2.3x1.5	D+E=G
$53.50	$54.49	$81.73	$107.99
$63.50	$54.49	$81.73	$117.99
$76.50	$54.49	$81.73	$130.99
$47.25	$54.49	$81.73	$101.74
$30.75	$54.49	$81.73	$85.24
$30.75	$13.85	$13.85	$44.60
$18.00	$54.49	$81.73	$72.49
$18.00	$54.49	$81.73	$72.49
$338.25	$395.28	$585.96	$733.53

Total Cost
$2,376.50
$12,520.08
$15,570.96
$3,050.88
$2,767.75

	Labor Costs Straight Time/Hour	Labor Costs Overtime/Hour	Equipment Operations Costs ST/Hour
	$22.14x2.3	$22.14x2.3x1.5	
$25.00	$50.92	$76.38	$75.92
$3.25	$50.92	$76.38	$54.17
$7.00	$50.92	$76.38	$57.92
	$50.92	$76.38	$50.92

Equipment Operations Costs OT/Hour	Pieces of Equip. Used	Cost per Event per Hour	Cost per Event per Hour
D+F=H		ST	OT
$135.23	4.00	$431.96	$540.92
$145.23	2.00	$235.98	$290.46
$158.23	1.00	$130.99	$158.23
$128.98	1.00	$101.74	$128.98
$112.48	4.00	$340.96	$449.92
$44.60	4.00	$178.40	$178.40
$99.73	1.00	$72.49	$99.73
$99.73	1.00	$72.49	$99.73
$924.21	18.00	$1,565.01	$1,946.37

Equipment Operations Costs OT/Hour	Pieces of Equip. Used	Cost per Event per Hour ST	Cost/ 8 hours	Hours /Equip. Use
$101.38	1.00	$75.92	$113.88	1.50
$79.63	1.00	$54.17	$54.17	1.00
$83.38	1.00	$57.92	$86.88	1.50
$76.38	1.00	$50.92	$203.68	4.00
			$18.40	
		Total Cost	$477.01	

Public Works Committee **5. 5.**

Meeting Date: 02/21/2012

By: Tim Himmer, Engineering/Public Works

Title:

Consider 2012 Street Maintenance Program

Background:

Staff has been developing the 2012 Street Maintenance Program (SMP) for several weeks, and is seeking direction from the Council on how best to approach maintenance activities for this construction season. In light of recent discussions centered on long term road maintenance in the City, it has been difficult creating a program that would be supported by the Council and community. Until a final decision is made on long term funding to achieve the City's road maintenance goals there are limited funding available to complete all the scheduled improvements.

Attached is a map showing all the roadway segments that are due to receive some sort of maintenance treatment for calendar years 2011 and 2012. As you can see there are approximately 74 miles of roadway needing work at an estimated cost of $5,595,400, and the current budgeted amount for the 2012 SMP is $495,000. Further complicating the situation is whether the Council is considering the elimination of assessments for maintenance activities (sealcoats and overlays) and replacing it with another funding option. The current City assessment policy has 2012 sealcoats at a rate of 15% of the total project costs, which are being phased out completely by the end of 2013, and overlays at a rate of 50% of the total project costs. If the Council is considering amending this policy it is difficult to develop a program that can be supported by the residents if another option may be available in the near future. The uncertainty of funding long term road maintenance activities, coupled with the City Charter provision that allows counter-petitioning of projects by impacted residents, further intensifies the situation.

Staff has come up with a couple of options for the Council to consider in developing the 2012 SMP, and they include:

- A typical program, similar to what has historically been done on an annual basis, with a mix of overlays and sealcoats.
- A sealcoat only program.

Notification:

Observations:

Another item to consider for implementing the 2012 SMP includes the project schedule, as staff must follow the Minnesota State Statute 429 assessment process, which includes specific timing for legal notices and public hearings. Additionally, staff would like to conduct an open house with impacted residents to explain the project, process, and solicit their feedback on items of concern within the project area that may need to be included in the project scope (drainage fixes, etc.). If we intend to complete the project this summer, and assess the improvements this fall, we will need to hold a public hearing to accept the feasibility study and order the improvements in March. Following the public hearing we are required by City Charter to wait 60 days to initiate the project to determine whether or not any of the individual improvements contained within the feasibility report are going to be counter-petitioned. Following the timeline this would have us preparing plans and specifications in May, bidding the project in June/July, and undertaking the work in July/August. We cannot extend the timeline much beyond the end of August for completion, as there are restrictions for the application of sealcoat materials, and we still need to hold the public hearing to levy the assessments and allow the residents to pay in full for a period of 30 days before Anoka County certifies them to the tax roll in mid-October.

If the Council is considering to fund long term road maintenance activities in another way, which includes the elimination of assessments, staff could then forego the required Minnesota 429 public hearing process. This

would result in time savings to develop and administer the program, as the schedule is typically a function of the state required assessment process, and eliminate the City Charter counter-petition provision. Should any of the individual projects contained with the 2012 SMP be counter-petitioned, we are prohibited from undertaking those improvements for a period of one year. Due to the timing constraints outlined above we would not be able to add another area into the 2012 program if one or more projects are defeated by counter-petition, thus reducing the overall project and pushing out those needed maintenance improvements into subsequent years. Doing so only exacerbates the current problem because it defers additional street segment maintenance needs into future years, and results in the program falling farther behind.

Funding Source:

Preparation and implementation of the street maintenance program is primarily financed through the City's General Fund and TIF #4. Depending on the scope of improvements contained within the final approved program, after soliciting feedback from impacted residents and evaluating the various neighborhoods in the field, additional funding options may be included in the program. The investigation and final funding package for the 2012 SMP will be included in the feasibility study and discussed by the City Council at a public hearing.

Staff Recommendation:

Staff is seeking direction from the Council on how best to proceed with the 2012 SMP and is recommending that the 2012 Street Maintenance Program entail sealcoating only.

Committee Action:

Motion to direct Staff to move forward with the 2012 Street Maintenance Program by concentrating its efforts on sealcoating projects only this year.

Attachments

2011-12 City Maintenance Needs

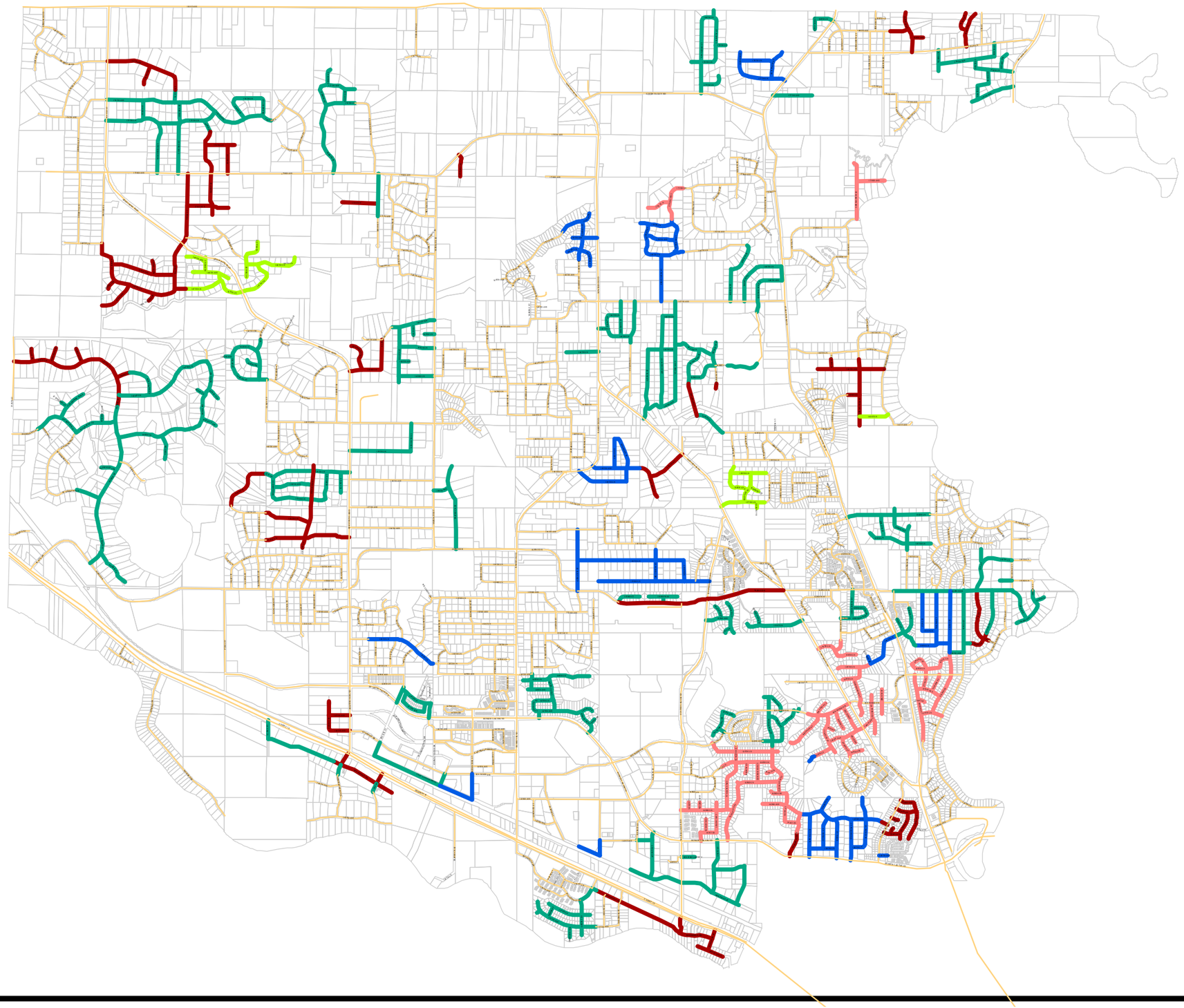
Form Review

Inbox	Reviewed By	Date
Brian Olson	Brian Olson	02/15/2012 09:49 AM
Kurt Ulrich	Kurt Ulrich	02/16/2012 02:31 PM

Form Started By: Tim Himmer Started On: 02/14/2012 09:53 AM

Final Approval Date: 02/16/2012

STREET MAINTENANCE NEEDS



Legend

Streets2012

Streets

PRG_YR, PRG_TYP

- 2011, OVERAY 14.74 Mi
- 2011, RECON 2.91 Mi
- 2011, SEAL COAT 35.98 Mi
- 2012, OVERLAY 9.67 Mi
- 2012, SEAL COAT 10.66 Mi