

Mayor:
Dan Roe



Address:
2660 Civic Center Dr.
Roseville, MN 55113

Councilmembers:
Jason Etten
Lisa Laliberte
Tammy McGehee
Robert Willmus

**City Council Agenda
Monday, October 15, 2018
City Council Chambers**

Phone:
651-792-7000

Website:
www.cityofroseville.com

1. 6:00 P.M. Roll Call
Voting & Seating Order: Willmus, Etten, McGehee, Laliberte and Roe
2. 6:01 P.M. Pledge of Allegiance
3. 6:02 P.M. Approve Agenda
4. 6:05 P.M. Public Comment
5. Recognition, Donations and Communications
6. 6:10 P.M. Items Removed from Consent Agenda
7. Business Items
 - 7.A. 6:15 P.M. Receive Update on Roseville Area Circulator Bus and Consider Continued Funding of Program

Documents:

[REQUEST FOR CITY COUNCIL ACTION AND ATTACHMENTS.PDF](#)
 - 7.B. 6:35 P.M. Guidant John Rose Minnesota OVAL Condition Assessment Report Discussion

Documents:

[REQUEST FOR CITY COUNCIL ACTION AND ATTACHMENTS.PDF](#)
 - 7.C. 7:15 P.M. Discuss Roseville's 2019 Legislative Priorities

Documents:

[REQUEST FOR CITY COUNCIL ACTION AND ATTACHMENTS.PDF](#)
 - 7.D. 7:45 P.M. Discuss the creation of provisions addressing the subdivision of large lots

Documents:

[REQUEST FOR CITY COUNCIL ACTION.PDF](#)
 - 7.E. 7:55 P.M. Discuss the Requirements of §1011.10 Solar Energy Systems Outlined in City Code

Documents:

[REQUEST FOR CITY COUNCIL ACTION.PDF](#)

8. Approve Minutes
9. Approve Consent Agenda
10. 8:05 P.M. Council and City Manager Communications, Reports and Announcements
11. 8:10 P.M. Councilmember Initiated Future Agenda Items and Future Agenda Review
12. 8:15 P.M. Adjourn



REQUEST FOR COUNCIL ACTION

Date: 10/15/2018

Item No.: 7.a

Department Approval

City Manager Approval

Item Description: Receive Update on Roseville Area Circulator Bus and Consider Continued Funding of Program

1 **BACKGROUND**

2 At the January 8, 2018 City Council meeting, the City Council received a presentation from Scott
3 Olson of NewTrax about creating a pilot Roseville Area Circulator Bus in conjunction with the
4 Roseville Community Health Awareness Team (CHAT). The circulator bus would provide a
5 regular weekly route for residents at senior residential facilities to be dropped off at a variety of
6 local retail and community destinations. On April 9, 2018, the City Council authorized a six-month
7 pilot project for the circulator bus route and also directed staff to look at expanding the route into
8 SE Roseville to meet the needs of the residents in that area.

9
10 The new circulator bus route began on Tuesday, April 10 and has operated every Tuesday morning
11 from 10:00 a.m. to 12:30 p.m. since that time. Over that period, through Oct. 9th, rides have been
12 given to 339 persons with the average daily ridership of 12 people. It was hoped that there would
13 be many more riders but for those that rode, they found it to be a valuable service.

14
15 The City Manager convened several meetings over the summer with stakeholders in SE Roseville
16 to talk about transportation issues facing the residents of area. From those discussions, it was
17 determined that reliable transportation options are a great need for the residents of SE Roseville in
18 order to get to work and to access stores and educational facilities. Based on that discussion, the
19 group looked at how the existing Roseville Area Circulator Bus could help address the identified
20 needs. From the group conversation, it was felt that providing service in SE Roseville for residents
21 to better access grocery stores would be most practical and beneficial.

22
23 Scott Olson of NewTrax, who attended and participated in the SE Roseville transportation
24 meetings, has revised the existing route to add a stop in SE Roseville and have the circulator bus
25 go up Rice Street to access the Cub Foods and Aldi's. (See Attachment A). As part of the revised
26 route, several stops at were removed due to low or no participation from people at those facilities.
27 Mr. Olson also believes that the route would be able to accommodate 6-8 additional riders living
28 in their homes near the route into the bus service through a reservation process.

29
30 To date, the new route has not been implemented. With the six month pilot period ending in
31 October, the City Manager did not want to start the new route for a short time and then have it
32 potentially cease operation. In addition, there needs to be significant outreach to the residents in
33 the area to make them aware of the circulator bus service. The SE Roseville Transportation
34 working group has indicated they would be willing to spread the word through their networks and
35 door-knocking as well as helping with translation of the information to other languages.

36

37 Scott Olson of NewTrax and Mark Nichols of the SE Roseville Transportation group have
38 successfully received a commitment from Cub Foods of \$1,000 to offset the costs of continuing
39 the circulator and is in active conversations with two other organizations for additional donations.
40

41 Staff would like the City Council to consider extending the Roseville Area Circulator Bus service
42 for another six months with the proposed alterations to the route to serve residents in SE Roseville.
43

44 **POLICY OBJECTIVES**

45 Provision of a circulator bus provides needed transportation options for residents of Roseville
46 and allow persons otherwise homebound to be able to participate in shopping, recreational, and
47 educational activities.
48

49 **BUDGET IMPLICATIONS**

50 To date, the costs of the programs are as follows:

51
52 Cost of Circulator Bus Program: \$ 7,432.85
53 Less Rider Donations: \$ 713.00
54 \$ 6,719.85
55

56 For an additional six months it estimated the cost would be:

57
58 Cost of Circulator Bus Program: \$ 7,500.00
59 Less Rider Donations \$ 700.00
60 Cub Food Donation \$ 1,000.00
61 \$ 5,800.00*
62

63 *Additional donations currently being solicited may result in another \$1,600 in donations,
64 reducing the cost for six month extension to \$4,200.
65

66 **STAFF RECOMMENDATION**

67 Staff recommends that the City Council extend funding for the Roseville Area Circulator Bus
68 program with the revised route to serve SE Roseville for an additional six months.
69

70 **REQUESTED COUNCIL ACTION**

71 The City Council should review the information and make a motion to extend the funding for the
72 Roseville Area Circulator Bus program with the revised route to serve SE Roseville for an
73 additional six months.



Prepared by: Patrick Trudgeon, City Manager (651) 792-7021

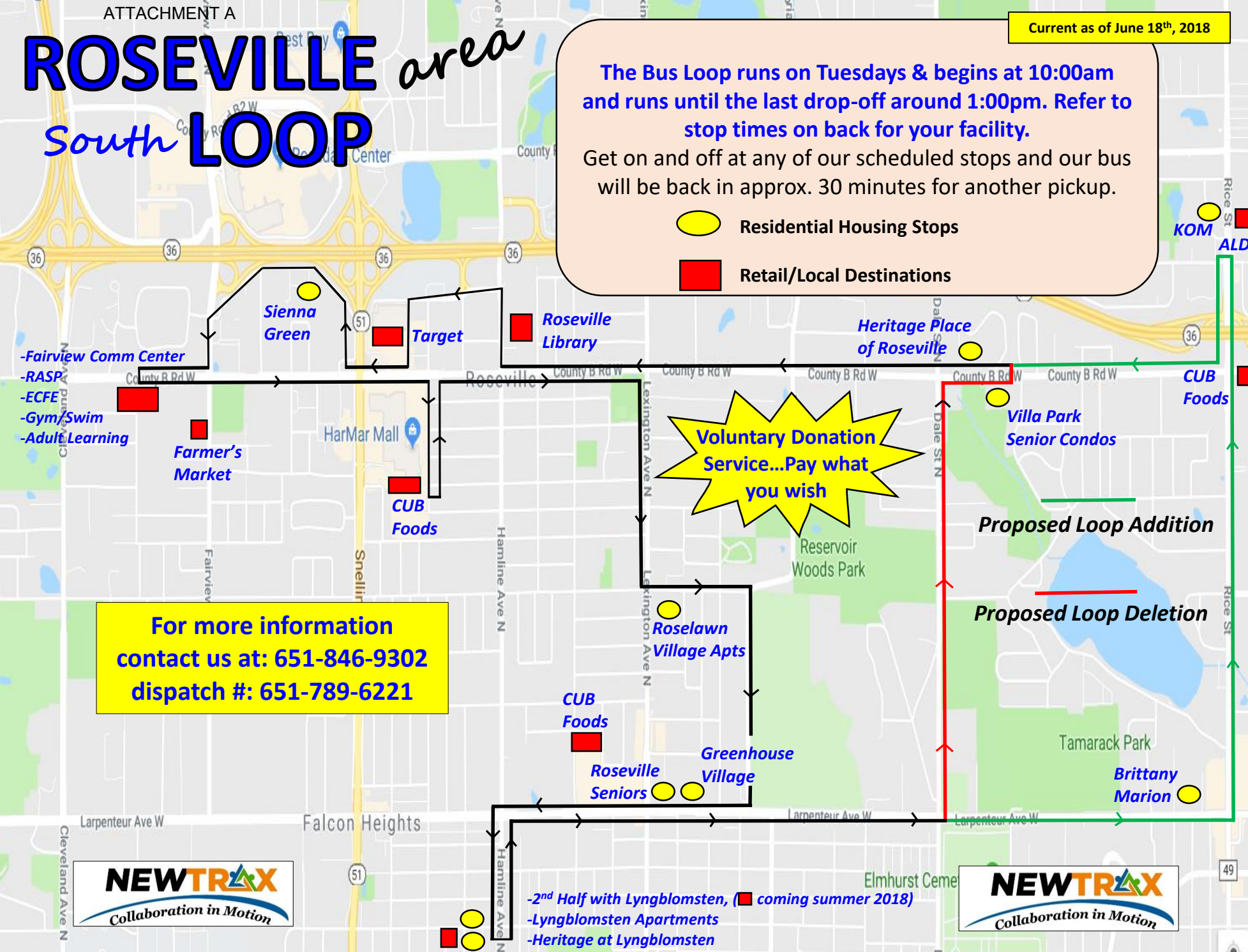
Attachments: A: Revised Route for Roseville Area South Loop Circulator Bus

ROSEVILLE *area* South LOOP

Current as of June 18th, 2018

The Bus Loop runs on Tuesdays & begins at 10:00am and runs until the last drop-off around 1:00pm. Refer to stop times on back for your facility.
Get on and off at any of our scheduled stops and our bus will be back in approx. 30 minutes for another pickup.

-  Residential Housing Stops
-  Retail/Local Destinations



- Fairview Comm Center
- RASP
- ECFE
- Gym/Swim
- Adult Learning

Sienna Green

Target

Roseville Library

Heritage Place of Roseville

KOM

ALDI

CUB Foods

Voluntary Donation Service...Pay what you wish

Proposed Loop Addition

Proposed Loop Deletion

Villa Park Senior Condos

For more information contact us at: 651-846-9302 dispatch #: 651-789-6221

HarMar Mall

Farmer's Market

CUB Foods

Reservoir Woods Park

Roselawn Village Apts

CUB Foods

Greenhouse Village

Roseville Seniors

Tamarack Park

Brittany Marion



- 2nd Half with Lyngblomsten, (coming summer 2018)
- Lyngblomsten Apartments
- Heritage at Lyngblomsten



ROSEVILLE area South Loop



On **Tuesdays** this fixed route loop will service the south end of the Roseville area communities near the **County Road B** corridor & south. From restaurants to retail to grocery to our local Fairview Community Center, the bus circular will provide a safe and convenient way to get around town. Come aboard to take care of your errands or just take a ride to stop and get a cup of coffee. See our schedule below for stop times and locations...

Senior Facility Stops Retail/Local Destinations

Voluntary Donation Service...Pay what you wish

	Villa Park Condos	Heritage Place of Rsvl	Roseville Library	Target	Sienna Green	Fairview Comm Center	Farmer's Market	Cub Foods Har Mar	Roselawn Village Apts	Greenhouse Village	Roseville Seniors	Cub Foods Larpenteur	Lyngblomsten Apts	The Heritage	Cub Foods Larpenteur
Bus-1									10:00	10:06	10:08	10:12	10:18	10:20	10:26
Bus-2	10:00	10:03	10:08	10:12	10:16	10:20	10:23	10:29	10:38	10:44	10:46	10:50	10:56	10:58	11:04
Bus-1	10:33	10:36	10:41	10:45	10:49	10:53	10:56	11:02	11:11	11:17	11:19	11:23	11:29	11:31	11:37
Bus-2	11:11	11:14	11:19	11:23	11:27	11:31	11:34	11:40	11:49	11:55	11:57	12:01	12:07	12:09	last stop Bus #2
Bus-1	11:44	11:47	11:53	11:57	12:01	12:05	12:08	12:14	12:23	12:29	12:31	12:35	12:41	12:43	12:49
Bus-1	12:56	12:59	1:05	1:09	1:13	1:17	1:20	1:26	1:35	1:41	1:43	1:47	1:53	1:55	

Times in GREEN are for pickups from senior facilities to travel to retail/local locations.

Times in RED are ONLY designated for return drop-offs at senior facility locations

Times in WHITE are for drop-offs & pickups at retail/local locations

ROSEVILLE
REQUEST FOR COUNCIL ACTION

Date: **10/15/2018**
Item No.: **7.b**

Department Approval



City Manager Approval



Item Description: Guidant John Rose Minnesota OVAL Condition Assessment Report Discussion

1
2 **BACKGROUND**

3 The Guidant John Rose Minnesota OVAL (Minnesota OVAL) opened in December of 1993 (25
4 years ago this year).

5
6 The initial construction of the Minnesota OVAL was funded jointly by the State of Minnesota and
7 the City of Roseville. It is officially owned and operated by the City of Roseville.

8
9 Because of the metropolitan, regional, state and beyond significance of the Minnesota OVAL, the
10 city has received assistance from the State of Minnesota on a number of occasions to include funding
11 for expansion of the facilities to general Capital Improvement needs.

12
13 The city has been responsible for the operating costs but has relied on the State of Minnesota to help
14 with the Capital Costs.

15
16 Given the age of the facility, significant Capital Improvements are necessary in the next few years.

17
18 The city has a General Facilities Capital Improvement Plan (CIP) outlining the Roseville Skating
19 Center's (RSC) needs and more specifically the Guidant John Rose Minnesota OVAL.

20
21 In December of 2017, the City Council identified city legislative priorities with one of those being to
22 seek funding through the State of Minnesota Capital Bonding Bill for Capital Improvements to the
23 Minnesota OVAL.

24
25 In preparation for the 2020 Legislative Session, the city engaged Stantec Inc. to conduct a Condition
26 Assessment Report. This is in an effort to more specifically identify upcoming capital needs and cost
27 estimates.

28
29 Included in your packet is a:

- 30
- 31 • Draft Condition Assessment Report for the Guidant John Rose Minnesota OVAL
 - 32 • Capital Improvement Program (CIP) reflecting details of the Condition Assessment Report
 - 33 • Draft Guidant John Rose Minnesota OVAL Project and Cost List 10-15-18
 - 34 • PowerPoint

35 Staff will be at your meeting to discuss this with you further.

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POLICY OBJECTIVE

This effort has been identified as a Legislative Priority by the City Council.

FINANCIAL IMPLICATIONS

The city has handled all operating costs for the Guidant John Rose Minnesota OVAL but has received assistance in Capital Improvement areas from the State of Minnesota to reflect the broad users of the facility.

STAFF RECOMMENDATION

Staff is bringing this item forward for information and discussion. No formal action needs to be taken at this time.

REQUESTED COUNCIL ACTION

Staff is bringing this item forward for information and discussion. No formal action needs to be taken at this time.

Prepared by: Lonnie Brokke, Director of Parks and Recreation

- Attachments:
- A: Draft Condition Assessment Report for the Guidant John Rose Minnesota OVAL
 - B: Capital Improvement Program (CIP) reflecting details of the Condition Assessment Report
 - C: Draft Guidant John Rose Minnesota OVAL Project and Cost List 10-15-18
 - D: PowerPoint

DRAFT

Condition Assessment Report
for the
Guidant John Rose Minnesota OVAL



June 2018

Condition Assessment of Guidant John Rose Oval

General Introduction

The city of Roseville is seeking to better understand the current condition of the fundamental systems of the 25-year-old Guidant John Rose Minnesota Oval (Oval), formerly the John Rose Minnesota Oval, outdoor skating facility. The facility was originally designed and constructed to accommodate speed skating and bandy, both of which at the time needed a reliable skating facility to call their home. The facility has been operating for approximately twenty-five (25) years from mid-November to early March since December of 1993. Most of the outdoor components are original except for some minor replacements.

A few improvements have been made to the support areas adjacent to the facility, however, for the most part, the facility operates as originally designed. A snowmelt pit was added in 2010, brine pumps and headers were replaced in 2005 along with the re-tubing of the chiller vessel. All the refrigerated rink piping and transmission mains are original along with the screw compressors and the evaporative condenser. One condenser water pump was replaced, and the brine pumps have been serviced and maintained but otherwise are original. The rink and surrounding infrastructure and surfaces including lighting, seating and skate friendly surfacing is original however the electronic scoreboard has been replaced.

The condition report was developed from many inspections of the refrigeration plant equipment, refrigerated rink surfaces, and surrounding surfaces. Numerous discussions between City Staff and Stantec ice experts were conducted to establish the relative condition and remaining life expectancy of the facilities systems. The condition assessment then served as a basis for determining a prioritized capital improvement program and appropriate budgets and schedules for needed replacements and repairs. The capital improvement plan includes scheduled improvements, budget requirements, recommended testing procedures, and necessary construction or technology changes to improve energy efficiency and modernize overall operations of the system.

The ice system was originally installed by Commercial Refrigeration, a Minnesota-based company, and includes an ammonia, indirect-refrigeration plant using calcium-chloride brine for the rink-cooling loops. The rink-refrigeration piping and transmission mains are fusion-welded polyethylene piping and tubing, imported from Sweden, which was the first use of this type of fusion welded material for ice rink refrigeration systems in North America. Fusion welded polyethylene piping is now the standard for ice rink construction.

Condition Assessment General

The Condition assessment was completed from the fall of 2017 to spring of 2018 allowing observations of the facility from dry floor summer activity through to the end of the ice skating season. This allowed for observation of system performance on the shoulder seasons, when the refrigeration system was most challenged as well as the transition period from dry floor to ice and ice out. Photographs and notes

were taken throughout this period to provide a good basis of information to evaluate the overall facility condition.

The most significant repairs needed for the rink include replacement of equipment that has reached the end of its useful life and removing standing drainage from the edge of the rink. Technologies that improve operating efficiencies and save energy are being considered wherever possible. The lack of defined and effective drainage systems due to frost heave of the perimeter surfaces is causing damage to the rink surface, particularly the expansion joints on the south end of the ribbon. The movement of the rink slab, due to thermal expansion and contraction, is causing stress and damage to the pavement and fencing abutting the rink edge. It has also been noted that the turf areas on each end of the bandy rink are settling and much of the surface drainage from these surfaces is now flowing directly to the rink edge and ultimately under the rink slab where it freezes and causes the rink to heave in these areas. The perimeter drainage issues have reached a point where they must be corrected to avoid serious damage to the rink slab and expansion joints.

Condition Assessment and Recommended Improvements

Refrigeration Plant

The refrigeration plant is an 800-ton ammonia/brine, industrial grade, custom-designed refrigeration plant with primarily Vilter Refrigeration equipment that delivers chilled brine refrigerant to 6 zones of cooling. The zones include four equal-sized zones covering the bandy rink area with two additional zones created by the radius loops on both ends of the Oval. The components and condition of the refrigeration system are outlined as follows:

Compressors

The system is powered by three (3) industrial grade Vilter 1201 ammonia screw compressors that are original, 25 years old, and still functioning well. Two of the three original microprocessor controls are still functioning, with one replaced in 2015 with a new Vilter Vision 20/20 controller. The remaining two 25-year old microprocessor controls are no longer manufactured so service and function has been problematic. They should also be replaced with Vision 20/20 controllers. All three of the Vilter industrial grade screw compressors are working well and with continued maintenance potentially have another 10 years or more of useful life.

An energy-saving idea for the compressors could include an enhanced overall refrigeration system control that allow the compressors to run with floating head control, i.e. adjusting the condensing temperature to a lower value during cooler weather months to reduce horsepower requirements of the compressor motors. This type of control can be provided by many control manufacturers and would function as an overall control for the system not just the compressor control. The Vision 20/20 would not be needed with this type of more comprehensive control system. Other benefits of an enhanced overall control system could include proactive control of the rink brine temperature by monitoring real time ambient air temperature or even forecast information and automatically controlling brine temperature to maintain the best ice at the

most economical price. The flexibility of a control like this is almost endless and the ability for remote monitoring and control provide a robust control for the entire refrigeration plant that can be uniquely programmed to maximize efficiency of the ice system at the Oval. A control like this should provide 15 to 20 years of service.

Flooded Chiller

The flooded chiller and attached surge drum, manufactured by Vilter Refrigeration, is also original, with the exception of the internal chiller tubes which were replaced in 2005 due to excessive corrosion. The fiberglass insulation, covering the chiller vessel and surge drum, was also replaced in 2005 due to excessive exterior vessel corrosion caused by moisture that was trapped in the insulation. The insulation was replaced with a less water-absorptive urethane insulation that appears to have resolved the corrosion issue.

While the flooded chiller is 25 years old, it was re-tubed in 2005 and depending on the condition of the tubes and the insides of the vessel could operate for another 10-15 years of service. We recommend that the vessel be opened, and the tube condition be verified prior to proceeding with any improvements to the refrigeration plant.

If the tubes are found to be in poor condition, then several reasonable options are available moving forward. Simply re-tubing the vessel in place, as was done in 2005, could be one approach. A re-tubed chiller could result in another 15-20 years of service. The cost of re-tubing a chiller vessel, however, could approach the cost of purchasing an entirely new chiller vessel. The challenges with bringing in a new chiller vessel are significant. Removing the existing vessel is not that difficult for it can be cut apart into smaller pieces and hauled out the existing double pedestrian doors of the refrigeration room. More complex and expensive is bringing in a new vessel, requiring either partial roof removal or removing the end wall to accommodate placement of the large vessel into the room.

Another option, possibly an energy savings idea, would be to use a flat plate heat exchanger and surge drum in lieu of a traditional shell-in-tube chiller, reducing the size of equipment that needs to be placed in the room to a fraction of what it currently exists. A flat plate heat exchanger would best operate with an ethylene glycol brine rather than the calcium-chloride brine currently being used, with a reduced potential for fouling. Determining the feasibility of this type of installation is not within the scope of this report but there could be many benefits. A few include: 1) equipment could be brought into the refrigeration room through the existing double pedestrian doors; 2) a significantly reduced ammonia charge; 3) elimination of the complexities related to stabilizing the calcium chloride brine; and 4) possible energy efficiencies greater than the existing system. A flat plate heat exchanger would be more efficient than the current shell and tube condenser and a fraction of its size making installation much easier. The less efficient ethylene glycol brine would impact the overall efficiency of the design, so this would need to be weighed against the efficiencies of the flat plate heat exchanger to see how the net overall efficiency compares to the existing system. There are many operational

advantages with this type of system that would benefit the City. We recommend prior to proceeding with an improvement plan for the refrigeration plant at the Oval, this option be further studied to determine its feasibility.

High Pressure Receiver

The Vilter High Pressure Receiver is original, in good condition, and could provide service for another ten years with proper maintenance.

Evaporative Condenser

The evaporative condenser is the original Baltimore Aircoil unit and it has reached its useful life and should be replaced. A cooling tower leak would most likely occur in the heat transfer coils where ammonia gas leakage would be directly into the atmosphere where area residents could be affected. The ammonia piping from the compressors to the condenser is original and should be considered for replacement as well. A potential exists for improving efficiency of the evaporative condenser by utilizing a Variable Frequency Drive (VFD) motor on the condenser fan which will allow the fan to operate at the minimum needed speed to maintain appropriate operating conditions, saving electrical energy from the fan motor.

Condenser Water Pumps

There are two submersible type pumps located in the indoor remote condenser sump in the refrigeration room that pump water to the evaporative condenser spray nozzles. Water from the nozzles cools the condenser coils then gravity flows back to the remote sump. One pump was replaced about five years ago and could easily operate for another 10 years. The remaining original pump has reached its useful life and should be replaced. If the evaporative condenser is replaced as recommended above, we recommend that the cooling water piping from the pumps to the evaporative condenser be replaced since all equipment is original. At that time, we would also suggest replacing both condenser water pumps.

Remote Condenser Sump

The remote condenser sump is a cast-in-place concrete tank and still has many years of function remaining before replacement would be necessary.

Chemical Treatment System

The chemical treatment system for the condenser water was replaced several years ago with WalChem equipment and has at least 10 years of useful life before it will need to be replaced.

Electrical Power and Controls

The Cutler-Hammer Motor Control Center is original, yet should have about 10 years of useful life remaining. The starter for Compressor No. 2 was replaced a few years ago and it is has become apparent to City Staff that parts for the starters are difficult to find. If replacement parts for the starters continue to be problematic, it may be necessary to replace the Compressor Starters No. 1 & 3 sooner.

Ammonia Detection System

The ammonia detection system is original, has reached its useful life and should be replaced. New and better technology exists that would provide improved safety, reliability, and more sophisticated alarming levels.

Brine Pumping System

The brine pumping system pumps the chilled brine from the refrigeration plant to the rink slab then back to the refrigeration plant to be recharged. The system consists of brine, insulated transmission mains, brine pumps, and expansion tanks all performing a critical function in this important component of the cooling process.

Brine

The brine in the system was originally a 1.26 CaCl/Water mix. Much of the brine is original and some has been supplemented over the years for brine leaks and system repairs. The operator of the system indicated that they were noticing a lot of residual iron in the system. This could be due to several conditions including low pH and a low level of inhibitor in the brine. We have noted low pH levels in the brine over the past several years. Residual iron sludge tends to neutralize the inhibitor which then can then accelerate the development of more iron. We understand the City has been filtering residual materials from the brine over the past ten years, however it has been challenging, given some of the shortfalls of the retrofit equipment, its location, and time challenges with this maintenance effort. The City has been filtering during the summer months whenever it can, however it appears that the amount of residual iron is still quite high.

The brine is typically sampled twice a year. Once, around the beginning of the calendar year near the beginning of the ice skating season, and again about the time the ice system is shut down for the year, around March. We did receive detailed brine tests from the past 13 years which indicate ongoing issues with residual metals, low pH, lack of brine clarity which was also confirmed in a discussion with Frank Garber, the City's brine treatment consultant for the facility.

The City installed a coupon sampling system in 2005 to measure steel corrosion impacts of the brine by measuring metal loss on the coupons. The coupon testing is done at approximately the same frequency as the brine testing and it has consistently provided acceptable levels of corrosion. Frank Garber indicated that their approach to treatment has been if the coupon test results are less than 2 mpy (mils per year) and there is a residual level of inhibitor present then they leave the brine alone. They did originally recommend the filtration of the brine but that has not been effective due to operational problems with the equipment.

Stantec has concerns with the current condition of the brine. There is not clarity to the brine, residual metals are present, pH is low, and we are uncertain how effective the inhibitor is functioning given the high residual iron that is currently in the system. While it does not appear that the residual iron is plugging up the cooling pipes in the ice rink floor, we have concerns that

this could happen if brine cannot be better stabilized and residuals cleaned from the system. The current approach of leaving the brine alone if it is not corrosive is allowing residuals to build up in the system and we feel at some point this will eventually result in plugging of the cooling pipes and significant performance loss of the ice system cooling capabilities.

A good program of testing should include: 1) regular testing; 2) results and analysis of the results; and 3) recommended adjustments to the brine. Key characteristics of the brine that should be monitored include: 1) level of inhibitor present; 2) dissolved copper and iron; 3) residual copper, iron and ammonia; 4) specific gravity; 5) pH; 6) clarity; 7) total Iron; 8) %calcium-chlorine; 9) freezing point; and 10) suspended solids concentrations. Recommendations for adjustment to the brine should be included with every test.

Depending upon what improvements to the system are considered, it may be recommended that the brine be changed out when major improvements are made to the ice system. While disposal of the brine can be expensive, a well-balanced brine can provide for a more efficient operation. Other options to consider include a potential change to an ammonia/glycol system using a flat plate heat exchanger. Ethylene-glycol brine does not have the corrosion potential of calcium-chloride brine but is more expensive and has a reduced efficiency in heat transfer so overall efficiency cannot be determined without a more extensive study.

The brine filtering system discussed earlier is constructed from iron materials and becomes challenging to operations due to excessive corrosion. We recommend a poly or fiberglass filtration system that is non-corrosive be installed with needed containment systems that would improve the efficiency of the brine filtration operation and result in a better stabilized brine. We suggest this upgrade occur only if calcium-chloride brine is used when major improvements are made to the ice system.

Transmission Mains and Headers

The buried transmission mains and headers are all fusion welded polyethylene from a Swedish manufacturer. The insulated transmission mains, ranging in size from four-inch diameter to eight-inch diameter, supply chilled brine from the refrigeration plant to the six zones of cooling found in the rink slab. The headers evenly distribute the brine from the transmission mains into the closely spaced one-inch diameter cooling pipes located in each zone of the rink slab. The pipe uses metric dimensioning and may require conversion fittings if connected to American-made pipe. There have only been a few leaks in the transmission mains over the past 25 years, with both occurring where the transmission mains connect to the headers for each end loop of the Oval. Both leaks occurred at the interface of the transmission main to the rink header and were the result of differential heaving of the rink slab and perimeter soils at that location that caused a shear stress on the pipe.

We do not believe there has been any degradation of the polyethylene transmission pipe itself, but we have some concerns that the pipe may possibly be silting in from a slurry of precipitants,

mineral build-up or corroded metal from refrigeration system and piping located within the refrigeration room. There is no evidence of this happening other than in the accumulation of sediments in the compression tank located in the mechanical room and the higher level of residual metals shown in the brine testing. It would be appropriate to keep an eye on the potential of this occurrence which would result in a decrease in cooling capabilities of the rink slab. From discussions with the City of Roseville ice system operating staff, it does not appear the ice rink cooling slab has seen any decrease in performance to date.

Brine Pumps

The brine pumps, motors and associated piping and headers in the refrigeration room were all replaced in 2005. The pump impellers were trimmed down some at that time to better match the pumping head. Since that reconstruction occurred, one pump motor was replaced, and occasional pump seals and bearings replacements have been made. The metal pump bases have been corroding badly where they come in contact with the concrete equipment pad. It appears the corrosion is the result of brine leakage which gets trapped next to the pump bases on the equipment pad and causes accelerated corrosion to the pump-base metal. With almost fifteen years of service since the pumps were reworked, these could use some upgrading. Whether or not the pumps are fully replaced or partially replaced could be evaluated at the time of replacement. Three of the five pump bases are badly corroded but not to the point of being structurally compromised. We feel the pumps, motors, and bases, could be cleaned up, painted, and kept in service for another five years when full or partial replacement should occur.

Expansion Tanks

The original two large bladder expansion tanks were provided primarily to take up the brine system expansion resulting from the winter-to-summer fluid expansion from the seasonal temperature changes. Another expansion tank, specifically a compression tank, was more recently added at the high point of the brine piping to allowing operating personnel to monitor air levels in the brine piping system more easily. At the current time only one bladder expansion tank is functional since the bladder in one tank has failed and not been replaced. The use of only one bladder tank could cause a release of brine from the high-pressure relief valve if temperatures reach a level where fluid expansion exceeds the available capacity of one tank. While this will not harm the system, the released brine must be monitored along with the air levels in the brine piping system to understand if losses in brine are significant enough to require replacement for proper and safe operation. Certainly, low levels of brine should be avoided for low levels allow excess air to accumulate in the brine circulation system where corrosion of the iron piping systems in the refrigeration room is accelerated.

Refrigerated Rink

The key components of the refrigerated rink are the refrigerated concrete slab and the rink floor insulation.

Refrigerated Concrete Slab

The refrigerated concrete slab was placed in 6 large monolithic pours which ultimately are joined in a way to provide a “bandy” rink slab and two end loop slabs that form the radiused ends of the speed skating oval. The bandy slab, approximately 365’ x 230’, acts as one large slab and is an assembly of four reinforced concrete rink cooling zones cold jointed together with continuous steel reinforcement bars. The two end loops are not directly connected. Rather they are seamed together with four refrigerated expansion joints at the four corners of the bandy slab. The expansion joints accommodate the large thermal movements to minimize stress in the 110,000 square-foot refrigerated concrete slab.

The rink slab is generally in good shape given its 25 years of operation. There is some surface staining of the concrete, small hairline cracks in many locations, and some deterioration of the expansion joints. But it remains reasonably level over the whole of the slab. The refrigeration capability is good, maintaining skatable ice into the warm 60-degree days at the end of the skating season. The center-header trench, which runs perpendicular to the length of the Oval, has settled somewhat, but not to the point of causing any real performance issues.

There have been a few leaks in the one-inch diameter rink-floor cooling tubes. The only in-slab leak occurred immediately after the rink floor was put into operation in 1993. There has been some leakage from the small diameter tubing in the refrigerated expansion joints over the years but that has been easily repaired since leakage was not actually located in the concrete refrigerated floor. Rather leakage was located in sand which is part of the expansion joint. The cooling tubes are also metric pipe manufactured in Sweden with a thinner pipe wall than what is typically used in the USA. This tubing is more easily damaged during installation but because of its thinner pipe wall has better thermal heat transfer and efficiency than that currently used in the USA.

The expansion joints have seen some stress over the years and currently the two southerly joints are heaving during the winter skating months while for the most part, returning to their original elevation after all the sub slab ice melts. The southeast joint has some residual displacement across the joint near the outer 8 feet due to soils that have migrated under the slab and prevented it from resettling back in place. The heave at the southwest joint has been significant and has resulted in some permanent damage to the concrete slab.

The south end of the bandy rink also heaves along with a few other areas where water migrates under the slab edges from ice resurfacer water, melting snow, winter rains and other sources of perimeter moisture. The heaving is all a result of these winter water sources finding an easy path under the refrigerated slab, overwhelming the subsurface drainage systems, backing up and coming in direct contact with the refrigerated concrete surfaces, and ultimately freezing and expanding on those cold concrete surfaces. The activity is primarily the result of the degradation of the adjacent asphalt and grass surfaces that no longer are draining the water away from the refrigerated slab.

The expansion joints are also degrading from inadvertent use of the wrong dry-floor expansion joint plate to cover the refrigeration tubing in the expansion joint channel. The joint was originally designed with two slightly different width plates. The wider of the two plates was to be used during the cooler months of the non-ice season, designed to provide an acceptable expansion joint gap for roller blades to navigate during the air temperatures normally seen during the first and final few months of the dry-floor, inline skating season. The narrower plate was to be used during the heat of summer, to provide an acceptable gap during those months. Unfortunately, the smaller plate was abandoned many years ago and currently the larger plate is being used for the entire roller blade season, pinching the expansion joint gap tight during the warm summer days when the concrete rink slab expansion is the greatest. The stress of the plate pushing against the adjacent steel expansion joint stops has caused the welds to fail on both sides of the plate as well as the adjacent concrete surfaces. Degradation of the expansion joints from this practice seems to be worse on the two southerly joints.

The northwest expansion joint concrete is degrading in the recessed channel area of the joint where the refrigerated pipe and sand is placed during the ice skating season. The concrete in the channel is breaking up and we are not exactly sure what is causing this. One possible cause is that the concrete in the channel may have not been totally consolidated during the original installation, allowing further degradation as water supplied to this joint potentially infiltrates into the porous concrete and, upon freezing and expanding, spalls the concrete surface.

The hairline cracks were reviewed, and while none appear to currently require any repair, their frequency has significantly grown over the past twenty-five years. We feel most of the hairline cracks are the result of the repetitive stresses induced on the concrete slab when thermal movements occur, summer heat-to-winter refrigeration cooling. The cracks have been slow to develop, for there were few observed in the initial years of operation. While the hairline cracks at this time are not serious enough to require reconstruction of the rink slab, they will continue to grow and expand over time and will, at some point, need to be addressed to maintain a usable surface for summer inline skating activity. It is difficult to predict when this may be required but our intuition says that the rink slab is good for at least 10 years before to needing a major overhaul or reconstruct. The biggest concern for the concrete degradation at the hairline cracks is that water infiltration into the cracks followed by freeze/thaw cycles will begin to spall the concrete surface adjacent to the cracks. Unfortunately, the end of the ice skating season in early to mid-March leaves the slab exposed to many freeze/thaw cycles each year. While the hairline cracks are not everywhere, they are beginning to cover a more significant area of the slab and should be monitored to document surface degradation.

The refrigerated slab, when designed, had significant budget restraints and as a result did not include perimeter slab movement expansion joints, rather design allowed the slab to simply push the perimeter soils and pavement when movement occurred. While this saved initial construction dollars it is now causing issues with the rink-edge condition that allows water to easily get under the slab at rink edge. This condition, along with the degradation of the drainage

on the perimeter asphalt and grass surfaces, is feeding an excessive amount of water into the rink subgrade. The warmer winter months of recent years is also resulting in more mid-winter snow melt and even rain, which further contributes to the amount of water feeding into the rink subgrade.

We strongly recommend that any future renovation improvements place a high priority on improved perimeter drainage, including an insulated grade beam located around all outside edges of the refrigerated slab and the expansion joint between the grade beam and the rink slab, providing a more sealed edge condition. This type of edge condition has been used successfully in many refrigerated outdoor rink projects (since Guidant John Rose Oval construction) and will minimize water access beneath the refrigerated slab and frost heave adjacent to the slab by vertically insulating and containing refrigeration beneath the slab. Once a more sophisticated edge condition is installed, the perimeter drainage system and pavement can be more effectively reconstructed to keep surface water draining away from the rink and into the perimeter storm sewer.

In general, the expansion joints are all in need of some repair. We recommend a minimum improvement to the rink slab include reconstruction of all four expansion joint areas. We feel that this improvement would provide, at minimum, another ten years of service for the ice rink slab. The hairline cracking of the ice slab has become more significant over the years and, as discussed above, will need to be addressed at some point to maintain an acceptable surface for summer inline skating. Total reconstruction of the rink slab seems premature at this time and the recommended improvements outlined in the evaluation would postpone future reconstruction of the ice slab for 10-15 years.

Rink Floor Insulation

The rink slab was originally constructed with three-inch-thick extruded polystyrene below the refrigerated rink to control frost heave over the approximately four-month long skating season. The insulation has aged, but still appears to be controlling the frost heave under the slab. The areas of slab that currently heave are not due to the underperformance of the subfloor insulation. Rather the excessive water that flows under the slab, overwhelming the capacity of the subsurface drainage system, and backing water levels up until they meet the refrigeration slab and freeze are responsible for heaving. We do not recommend replacement of the insulation at this time, only spot replacement in areas where the expansion joints are reconstructed.

Perimeter Paving

The condition of the perimeter paving adjacent to the rink is badly degraded. The bituminous surface has significantly heaved and settled and otherwise been disrupted to the point where positive drainage away from the ice refrigeration slab over the paving has been compromised, and simply doesn't occur adjacent to most areas of the rink. Pavement conditions are poor, particularly adjacent to the rink slab, with much of the surface breaking up. Poor perimeter drainage adjacent to the ice refrigeration slab has caused several failures of the refrigeration slab at the refrigerated expansion joints as described above.

The damage to date has been primarily limited to the expansion joints at the two southerly corners where the heave impacts the quality of the ice during the skating season and where any residual heave in the summer can complicate inline skating activity. To date, the heaved areas of the rink have primarily returned to their original elevation in the summer months and have allowed most programmed inline skating activity to occur. Without making improvements to restore good perimeter pavement drainage, heaving will continue to become worse and at some point, be detrimental to both winter and summer skating use. We strongly recommend perimeter drainage improvement be prioritized and be included in any initial improvements considered for the facility. Perimeter pavement and turf will need to be reconstructed if the grade beam and expansion-joint improvements recommended above are pursued.

Perimeter Drainage System

The perimeter drainage system consists of shallow-bury piping systems and catch basins. Much of this area has been subject to frost heave over the years and while the system still moves water we are not sure of the integrity of the piping. According to City operations staff, the piping seems to work but sometimes water can be seen standing in the catch basins. Televising the piping would help to better understand the integrity of the pipe and provide further information to establish the appropriate level of reconstruction needed to maintain positive drainage. We recommend the perimeter drainage system be reconstructed as part of any future improvement to the facility and particularly if the grade beam and expansion joint improvements described above are pursued. Televising the piping is not essential but would be helpful information for any redesign and reconstruction of the system.

Underdrain System

The underdrain system is primarily located under the refrigerated ice slab. An extensive array of 4" and 8" perforated tile is installed in the granular base beneath the slab. The 4" piping grid is arranged at 20 feet on center spacing in an east-west alignment (perpendicular to the long direction of the oval). The 4" piping terminates into an 8" perimeter drain which circles the rink alignment. The 8" perforated tile is connected into the gravity storm sewer system that flows into the storm pond just west of the oval. The underdrain system was designed to keep the subsoils beneath the rink slab dry. It appears the system is doing its job in most conditions from our discussions with City staff. As mentioned earlier in the report, it appears that the system is not capable of removing an excessive amount of subsurface water, particularly when a large amount of surface water quickly infiltrates under the slab from the perimeter of the rink. This excess water condition is most notably observed when surface water from winter snowmelt or rains enters the rink slab subsoils along the south end of the bandy slab and results in heaving of the bandy slab adjacent to this area. We feel this problem will be eliminated if a perimeter grade beam and expansion joint is installed around the entire rink slab and the adjacent areas are regraded to establish positive drainage away from the slab. We do not feel the underdrain system needs repair; however some enhancements to the system at critical areas could be considered with the improvements recommended in the report.

Perimeter Fence

The perimeter fence was designed to accommodate some movement from slab expansion and contraction. Over the years the stresses have had some impact on the fence alignment. Currently some of the fence has lost its vertical alignment. If the perimeter grade beam and expansion joint is installed,

it will be necessary to completely reconstruct the perimeter fence and any defective areas of the fence would be corrected at that time.

Hockey Net Screening

The hockey net screening between the speed skating oval and the temporary hockey rinks in the middle of the oval has degraded and in need of some repair. The net cable support columns need some repair to their concrete bases and both the cable support and netting should be replaced.

Perimeter Crash Pads

Crash Pads have a scheduled maintenance and replacement plan that spreads annual budgets out over time by staged replacement. The pads can be reused with a proper fence redesign as outlined above and should not need to be addressed outside their scheduled replacement plan.

Sports Lighting System

Sports lighting is original and appears to be adequately addressing night time skating needs. There is no plan for replacing the sports lighting at this time but as lighting technology improves certainly the system could be replaced to save energy if desired.

Scoreboard

The scoreboard video screen was replaced a few years ago with a much more robust and efficient system and currently is not in need of replacement.

Summary of Recommended Improvements

The condition assessment and recommended improvements to the Guidant John Roe Minnesota Oval are discussed in detail above. To provide a recap of improvements, they are concisely outlined below.

Refrigeration Plant

1. Compressors

- a. The (3) - compressors have 10 or more years of life remaining with minor rebuilding. The rebuilding requirements should be verified by a certified Vilter refrigeration mechanic inspection of the compressors.
- b. Replace the two original outdated microprocessor controls on the compressor with new Vision 20/20 controllers. These controllers would provide 15-20 years of service.
- c. *Energy saving idea:* An enhanced control system could be installed to allow the compressors to be reprogrammed to "Floating Head Control" which automatically adjusts the condensing temperature to a lower value during cooler weather months to reduce horsepower requirements of the compressor motors. This option would be in lieu of the Vision 20/20 controllers for they are not require with this proposed improvement. The enhanced control system would function as an "overall" control, controlling the compressors, as currently provided by the Vision 20/20 controllers,

and all other ice systems operational components. This control would provide 15-20 years of service.

2. *Flooded Chiller*

- a. The Vilter chiller has at least another 10-15 years of life in the chiller tubes are inspected and in good condition.
- b. The chiller tubes should be inspected and if found in poor condition could be replaced and provide another 15-20 years of service.
- c. A potential “*energy savings option*” for replacing the flooded chiller could include a modified design using a flat-plate chiller that operates with ammonia and ethylene-glycol brine in lieu of a traditional shell-and-tube chiller and calcium-chloride brine. This option will require a more detailed study than included in the scope of this report to determine its feasibility.

3. *High Pressure Receiver*

- a. The Vilter High Pressure Receiver is in good condition and could provide service for another 10 years with proper maintenance.

4. *Evaporative Condenser*

- a. The evaporative condenser and related water and refrigeration piping should be replaced within the next five years.
- b. *Energy saving idea:* The efficiency of the condenser could be enhanced by utilizing a Variable Frequency Drive (VFD) motor on the condenser fans.

5. *Condenser Water Pumps*

- a. The cooling water piping from the pumps to the evaporative condenser is all original and should be replaced along with the pumps in the next five years.

6. *Remote Condenser Sump*

- a. The cast-in-place concrete sump is in good shape and has many years of useful life before it will need to be replaced.

7. *Chemical Treatment System*

- a. The chemical treatment system for the condenser water has at least 10 years of useful life before it will need to be replaced.

8. *Electrical Power and Controls*

- a. The Cutler-Hammer Motor Control Center is original and should have about 10 years of useful life remaining. However, the starter for Compressor No. 2 was replaced a few years ago and it is has become apparent to City staff that parts are difficult to find. If sourcing replacement parts continues to be problematic, it may be necessary to replace Motor Control Center in its entirety. The magnitude of the replacement requirements can be more effectively evaluated as part of the final design of an improvement project in the future.
- b. *Energy saving idea:* The efficiency of the refrigeration system can be enhanced by utilizing Variable Frequency Drive (VFD) motors on the brine pumps, in addition to the condenser fan motors as previously discussed.

9. *Ammonia Detection System*

- a. The ammonia detection system should be replaced in the next five years.

Brine Pumping System

1. *Brine*

- a. The brine should be replaced in the next five years pending further testing and evaluation of the brine. The City should consider getting a second opinion of the brine condition from an independent brine testing and treatment contractor.
- b. A new polyethylene or fiberglass brine filtration system that is non-corrosive, should be installed to replace the steel system within the next five years.
- c. *Energy saving idea:* If upon further evaluation a flat plate chiller design is proven feasible the brine should be changed to ethylene-glycol brine should be installed and the existing calcium-chloride brine should be completely flush out of the piping system.

2. *Transmission Mains*

- a. Transmission mains are in good shape and should provide another 20 years of service.

3. *Brine Pumps*

- a. The brine pumps, motors, and bases could be cleaned up, painted, and kept in service for another five years. Replacement should be evaluated at that time.
- b. *Energy saving idea:* The brine pumps could be replaced with motors with VFD starters to minimize horsepower when full capacity is not needed.

4. *Expansion Tanks*

- a. The failed bladder expansion tank should be replaced when improvements to the facility are made.
- b. The accumulative volume of brine system releases should be monitored until the failed bladder tank is replaced to make sure that brine releases don't exceed a volume that needs to be replaced for proper operation.

Refrigerated Rink

1. *Refrigerated Concrete Slab*

- a. The expansion joints are all in need of some repair. We recommend they be reconstructed as part of any renovation process.
- b. Any future renovation improvements should include an insulated grade beam located around all outside edges of the refrigerated slab with an expansion joint located between the grade beam and the rink slab to accommodate rink slab movements.

Perimeter Paving

1. In conjunction with installing a perimeter grade beam and expansion joint, the paving and turf surrounding the ice rink slab should be reconstructed to provide positive drainage to the perimeter drainage system.

Perimeter Drainage System

1. The perimeter drainage system should be televised to further evaluate its condition and identify specific areas needing special attention when reconstructed.
2. The perimeter drainage system should be reconstructed as part of major improvements to improve the perimeter drainage.

Underdrain System

1. The underdrain system is working and not in need of reconstruction. Yet opportunities for enhancements to the system to benefit overall improvements should be considered.

Perimeter Fence

1. The perimeter fence will need to be reconstructed to accommodate the grade beam. Expansion joint improvements are recommended.

Hockey Net Screening

1. The net cable support columns need some repair to their concrete bases and both the cable support and netting should be replaced.

Sports Lighting System

1. While no improvements are recommended at this time to the sports lighting, sports lighting technology has improved and should be considered for its energy efficiency.

Priorities

Priorities for improvement were developed by first identifying all critical systems at the Guidant John Rose Minnesota Oval establishing life expectancies for those systems and mapping the actual service life available for each. This spreadsheet was used in addition to field inspections of conditions, discussions with operating staff and our experience with similar systems to establish the urgency of each proposed improvement. The spreadsheet is included at the back of the report.

Priority ratings are as follows:

High Priority – Five or less years of life expectancy

Medium Priority – Greater than five or less than ten years of life expectancy

Low Priority – 10 or more years of life expectancy

Preliminary cost estimates were developed for all proposed improvements. Improvements with associated costs were grouped into three priority levels outlined above for the Capital Improvement Program.

Cost Estimates

Construction cost estimates are based on very preliminary information. Therefore, estimates should be considered accurate to plus/minus 20%. Further testing and equipment inspections are suggested for some improvements to provide information for more accurate cost estimates in the future, if desired. All costs are based on spring 2018 construction and construction cost estimates and should be adjusted by approximately three percent per year for inflation. We recommend that a 20% construction contingency be included to account for the preliminary nature of this evaluation as discussed above and that soft costs included at a budget of 15% of total construction costs.

Costs for the recommended improvements can be found on the following page. Costs include a 20% contingency and 15% for soft costs. The base costs are shown in black with an optional cost for a flat plate chiller shown in brown. The costs are categorized in the three priority levels outlined above. Red is the highest priority and includes efforts that should be undertaken in the next five years. Yellow is considered a medium priority and should be undertaken in the next five to ten years. For phasing purposes these improvements could be considered at the same time as the highest priority for the overall improvement project may benefit from least down time from construction and most cost-effective bidding if packaged together. The lowest priority, green, is a short list and could be accomplished cost effectively at any time.

Guidant John Rose Oval Cost Estimates and Priority				Priority		
	5/9/2018			High	Medium	Low
		Title	Construction Cost	<5	5+ to 10-	10+
Refrigeration Plant						
1.	Compressors					
a.	Three Rebuilt Vilter Screw Compressors	\$ 50,000		\$ 50,000		
b.	Two new Vision 20/20 controllers	\$ 40,000	\$ 40,000			
c.	Energy saving idea: Custom Control System with Floating Head Control in lieu of Vision 20/20 controller	\$ 50,000	\$ 50,000			
2.	Flooded Chiller					
a.	Vilter chiller inspection of tubes	\$ 30,000	\$ 30,000			
b.	Retubed Vilter chiller	\$ 600,000		\$ 600,000		
c.	Flat Plate Chiller Option	\$ 800,000		\$ 800,000		
3.	High Pressure Receiver					
a.	The Vilter High Pressure Receiver good for 10-15 years	\$ -				
4.	Evaporative Condenser					
a.	Standard Evaporative condenser and related refrigeration piping	\$ 250,000	\$ 250,000			
b.	Energy saving idea: Evaporative Condenser with Variable Frequency Drive (VFD) motor on the condenser fans.	\$ 20,000	\$ 20,000			
5.	Condenser Water Pumps					
a.	Cooling water piping and pumps	\$ 70,000	\$ 70,000			
6.	Chemical Treatment System					
a.	New, good for at least 10 years	\$ 20,000				\$ 20,000
7.	Electrical Power and Controls					
a.	Replace Motor Control Panel using VFD starters for energy savings.	\$ 200,000	\$ 200,000			
8.	Ammonia Detection System					
a.	The ammonia detection system should be replaced in the next five years.	\$ 30,000	\$ 30,000			
Brine Pumping System						
1.	Brine					
a.	Replace brine pending further testing and evaluation of the brine. Getting a second opinion.	\$ 30,000	\$ 30,000			
b.	New non-metallic brine filtration system	\$ 30,000	\$ 30,000			
2.	Brine Pumps					
a.	New brine pumps, motors, and bases with VFD Motors	\$ 100,000		\$ 100,000		
3.	Expansion Tanks					
a.	New bladder expansion tanks	\$ 24,000	\$ 24,000			
b.	New compression tank	\$ 8,000	\$ 8,000			
Reinforced Concrete Refrigerated Rink						
1.	Refrigerated Concrete Slab					
a.	Repair of all expansion joints	\$ 200,000	\$ 200,000			
b.	New insulated grade beam with expansion joint	\$ 525,000	\$ 525,000			
Perimeter Paving						
1.	Perimeter paving and turf improvements	\$ 90,000	\$ 90,000			
Perimeter Drainage System						
1.	Televised perimeter drainage system piping	\$ 7,000	\$ 7,000			
2.	Reconstructed perimeter stormwater drainage system	\$ 115,000	\$ 115,000			
Underdrain System						
1.	Enhance underdrain system as needed	\$ 20,000	\$ 20,000			
Perimeter Fence						
1.	Reconstructed perimeter fence to accommodate the grade beam	\$ 66,000	\$ 66,000			
Hockey Net Screening						
1.	Repair support column, replace netting	\$ 66,000	\$ 66,000			
Sports Lighting System						
1.	Considerations should be made to install a more efficient sports lighting system to save energy	NA	NA			
		Construction Cost	\$ 2,641,000	\$ 1,871,000	\$ 750,000	\$ 20,000
		20% Construction Contingency	\$ 528,200	\$ 374,200	\$ 150,000	\$ 4,000
		Total Construction Cost	\$ 3,169,200	\$ 2,245,200	\$ 900,000	\$ 24,000
		15% Soft Costs	\$ 475,380	\$ 336,780	\$ 135,000	\$ 3,600
		Total Project Cost	\$ 3,644,580	\$ 2,581,980	\$ 1,035,000	\$ 27,600
Optional Medium Priority Cost						
		Construction Cost	\$ 950,000			
		20% Construction Contingency	\$ 190,000			
		Total Construction Cost	\$ 1,140,000			
		15% Soft Costs	\$ 171,000			
		Total Project Cost	\$ 1,311,000			

Capital Improvement Program

The capital improvement program is recommended to include both the high and medium priority improvement for the most cost effective and least disruptive schedule to programs. We would anticipate final design efforts be accomplished the year prior to construction with bidding either late in that year or early the following year. We would anticipate that the recommended inspection and testing of various refrigeration equipment components be completed shortly after spring shut down of the ice system so that clear design requirements are understood before design begins. Construction can be completed the following spring thru fall the year after design with a completion date that allows for a usable skating facility by mid-November of that year.

When high and medium priorities are considered together the total project budget would be as follows:

Base Project Present Day Cost (High and Medium priority items)

Construction Cost	\$2,621,000
20% Construction Contingency	\$ 524,200
Total Construction Cost	\$3,145,200
15% Soft Costs	\$ 471,780
Total Project Cost	\$3,616,980

Notes:

- 1) If the optional flat plate chiller was considered the Total Project Cost would be **\$3,892,980**.
- 2) The construction costs should be inflated by 3% per year for inflation. The costs as presented are all based on present day spring 2018 costs.

END

Appendix A – Photos



Wide angle picture of the refrigerated ice slab.



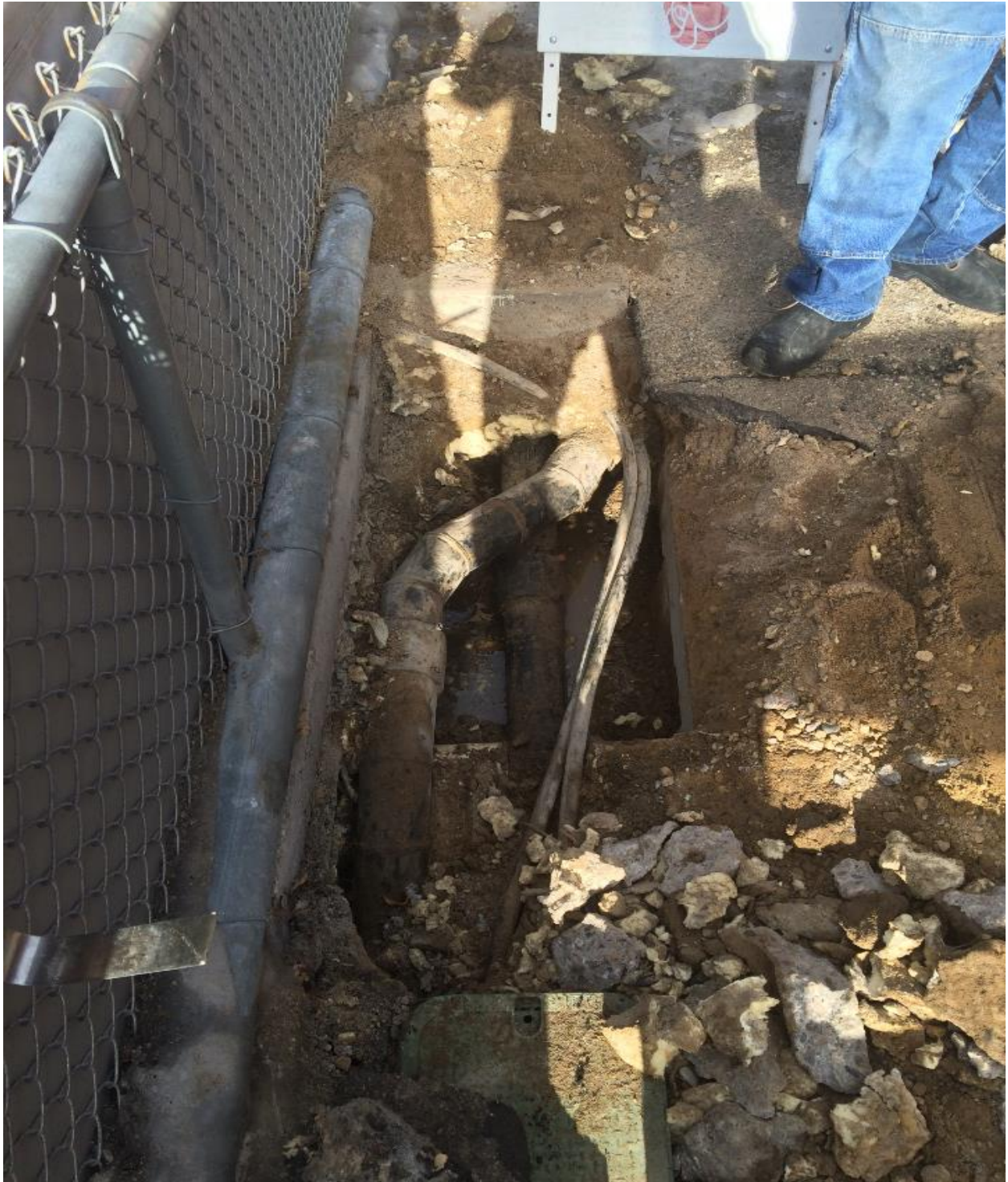
Evaporative condenser adjacent refrigeration room



Perimeter pavement damage adjacent refrigeration slab due to refrigeration slab movement



Perimeter pavement damage adjacent refrigeration slab due to refrigeration slab movement



Excavation of leaking refrigeration pipe at northeast corner of rink at end loop header



Lifting expansion joint plate at southeast corner of rink near end loop header



Lifting expansion joint plate at southeast corner of rink near end loop header



Hairline cracking of ice rink slab near southeast corner of rink on end loop



Deteriorating expansion joint channel at northwest corner of slab near end loop



Worn and weathered netting between speed skating loop and center hockey rinks



Settled center header for bandy rink



Skewed perimeter fence and pavement damage at southeast corner of rink slab



Concrete damage adjacent expansion joint due to wrong expansion plate use



Perimeter pavement damage and skewed fence alignment from rink slab movement



Expansion joint heaving from excess water beneath rink slab



Expansion joint heaving from excess water getting beneath rink slab and freezing



Expansion joint heaving from excess water getting beneath rink slab and freezing



Poor perimeter pavement drainage



Poor perimeter pavement drainage



Poor perimeter pavement drainage



Poor perimeter pavement drainage



Poor perimeter drainage from ice slab movement



Poor perimeter drainage from ice slab movement



Pool ice slab drainage due to winter frost heave



Perimeter slab damage and poor perimeter drainage due to ice slab movement



Frost heave in southeast expansion joint due to water infiltration and freezing below ice slab



Twenty-five-year-old Vilter Screw Compressors



Outdated original Vilter microprocessor control for compressors



Newer replaced Vision 20/20 Vilter microprocessor control for compressors



Bladder expansion tanks (bladder on one tank has failed)



Brine pumps (note corroded steel base against concrete pump base)



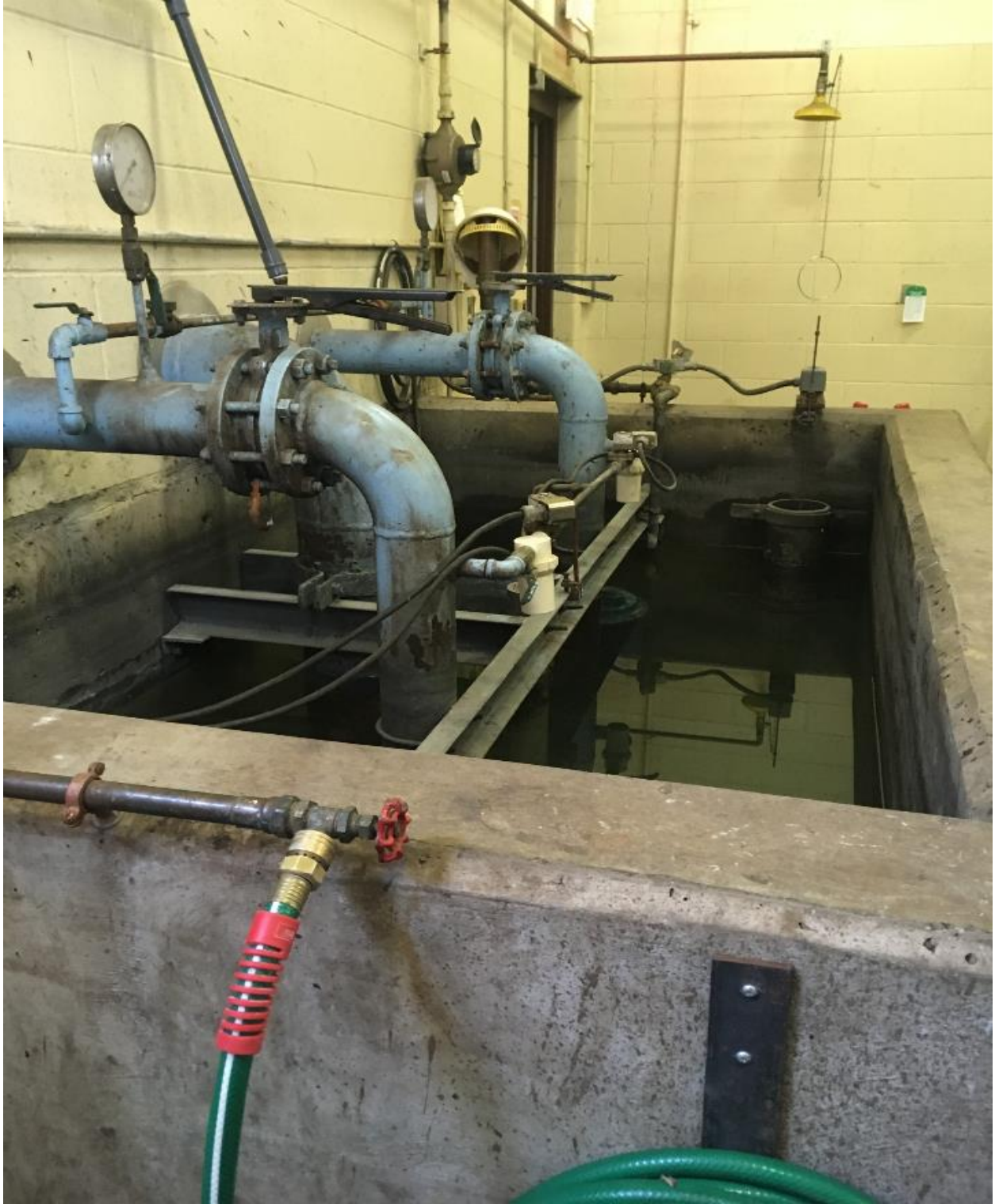
Brine pumps (note corroded steel base against concrete pump base)



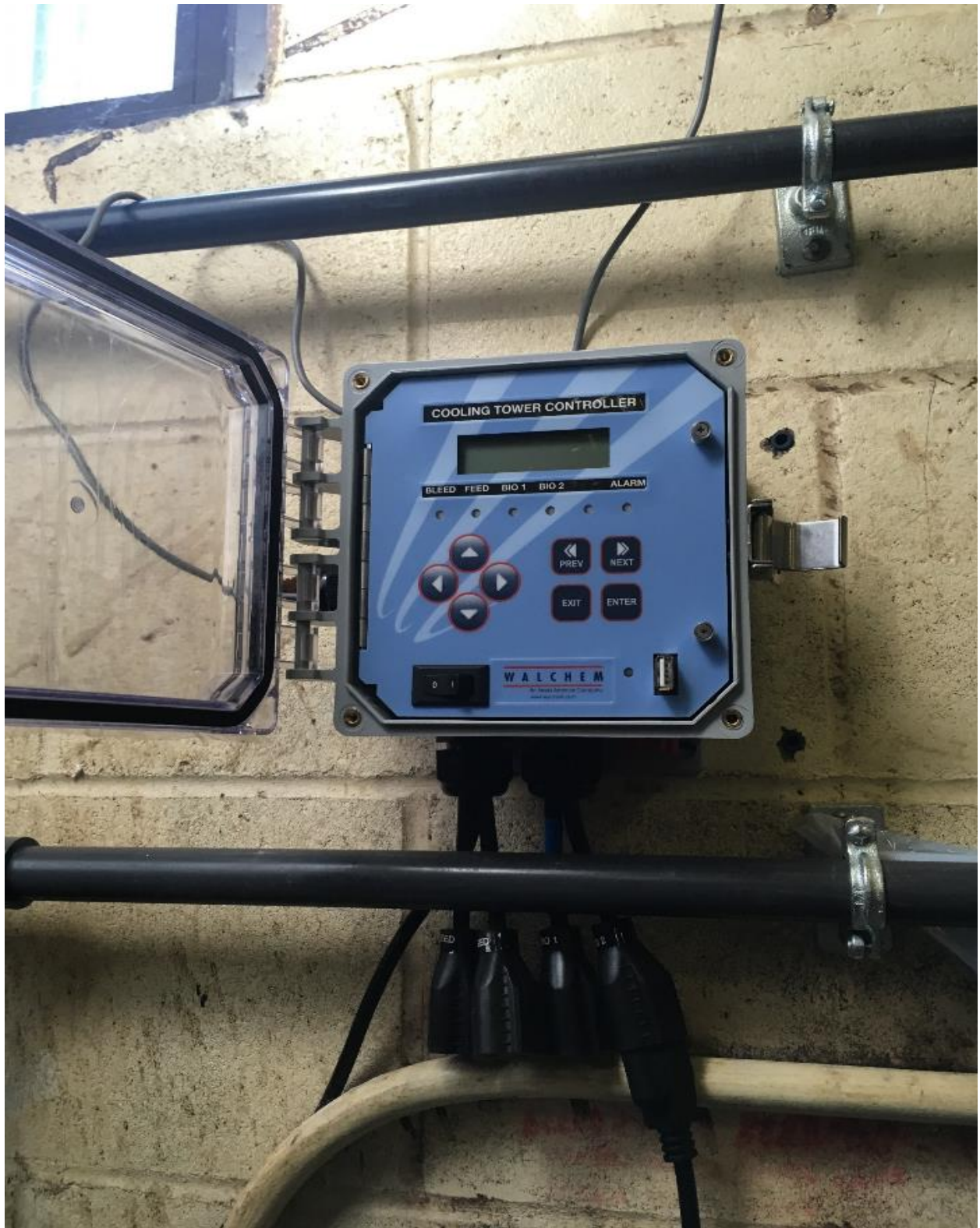
Chiller (above) and high-pressure receiver (below)



Remote condenser sump in refrigeration room



Remote condenser sump with submersible pumps and piping to condenser



Evaporative condenser water treatment system in refrigeration room



Failed condenser pump from remote evaporative condenser sump



Motor control center for refrigeration system equipment

Appendix B – Life Expectancies Matrix for Setting Improvement Priorities

Ice System Equipment Assessment and Replacement Plan

Guidant John Rose Oval



Component Description	Brand & Model	Current Condition	Age (Yrs.)	Typ. Life Expectancy	Yrs. To Replacement (2,3)	Priority	Comments
Compressor 1	Vilter 1201 Screw Compressor	Average. Starter may need replacing.	25	35	10	MED	Using original microprocessor, processor starting to have issues
Compressor 2	Vilter 1201 Screw Compressor	Average.	25	35	10	MED	New Microprocessor installed in 2015
Compressor 3	Vilter 1201 Screw Compressor	Average. Starter may need replacing	25	35	10	MED	Using original microprocessor
Evaporative Condenser	BAC		25	15	-10	HIGH	Belts and nozzles replaced. Caulking to prevent water leaks. Outside of coils appear to be in good condition. Ammonia emergency relief valves added to condenser in 2005
Flooded Chiller	ChillCon	Determined vessel wall thickness at time of tube replacement in 2005	25	25	0	HIGH	Original vessel, tubes replaced in 2015. Original surge drum and high pressure receiver.
Brine Pump 1	B&G		25	25	0	HIGH	Original. Base corroding. All brine pumps "retooled" in 2005.
Brine Pump 2	B&G		25	25	0	HIGH	Base corroding.
Brine Pump 3	B&G		25	25	0	HIGH	
Brine Pump 4	B&G		25	25	0	HIGH	Base corroding.
Brine Pump 5	B&G		25	25	0	HIGH	Base corroding.
Cond. Water Pump 1	Submersible		25	25	0	HIGH	
Cond. Water Pump 2	Submersible		25	25	0	HIGH	
Compressor Cooling System	Ammonia		0	15	15	LOW	Refrigerant cooled, no dedicated equipment
Condenser Water Tank	CIP Concrete		25	40	15	LOW	Concrete tank looked in good condition
Rink Floor	Commercial Refrigeration		25	35	10	MED	
Refrigerant Piping	Commercial Refrigeration		25	35	10	MED	Original. New pressure relief valves in 2015, but there is no way to determine if they go off.
Brine Piping	Commercial Refrigeration		25	35	10	MED	Common pump header replaced and re-insulated in 2005, added new valves.
Cond. Chem. Treatment	WalChem		2	12	10	MED	
Elec Power & Controls	?		25	35	10	MED	All original except new starter on compressor #2
Rink Floor	Swedish Poly Pipe?		25	40	15	LOW	
Subsoil Drainage	Perforated Drain Tile?		25	40	15	LOW	
Perimeter Rink Fence	?		25	30	5	HIGH	
Perimeter Rink Crash Pads	?		25	15	-10	HIGH	
Bladder Expansion Tank 1	Amtrol		25	20	-5	HIGH	Bad bladder, isolated from system
Bladder Expansion Tank 2	Amtrol		25	20	-5	HIGH	
Expansion Tank	B&G		13	20	7	MED	Airtrol fitting. When operator tried to drain tank, had to rod out "gunk" on bottom of tank to get flow.
Ammonia Leak Detection	Commercial Refrigeration	Original system with sensors serviced and calibrated regularly.	25	20	-5	HIGH	New sensor by chiller in 2005. Fans turn on at 100 ppm but do not turn off automatically. Staff has to manually turn fans off. Only staff is alerted when level reaches 200 ppm. One staff member drives down to investigate leak when alarm trips, they have to go into room to determine level. They have a formalized plan but do not know it or know where to find it. If there is a catastrophic release, fire department will be called and area evacuated.
Crash pads	??		20	20	0	HIGH	10-20% of pads get re-skinned every year. Roughly 100 have been reskinned so far. 300-320 on fence, 80 for rink ends, 14 across for rink dividers. All original foam.
Scoreboard	Daktronics		8	15	20	LOW	
Sports Lighting	??	Original.	25	35	10	MED	Original, only used a couple of hours per night during the skating season. May replace as necessary if problems arise but do not plan to include lighting in any rink upgrades.

Key to Color Code (1)

Priority	Yrs. To Replacement
LOW	X > 10
MED	10 ≥ X > 5
HIGH	X ≤ 5

- Notes:** 1) Color is typically based on year to replacement however overruled by conditions observed in some cases.
 2) Years to replacement is age of component minus average typical life expectancy
 3) Negative number in years to replacement indicates number of years past life expectancy
 4) Replacement costs shown assume replacement in year 2017. Add 4% inflation per year for work completed in later years.

City of Roseville

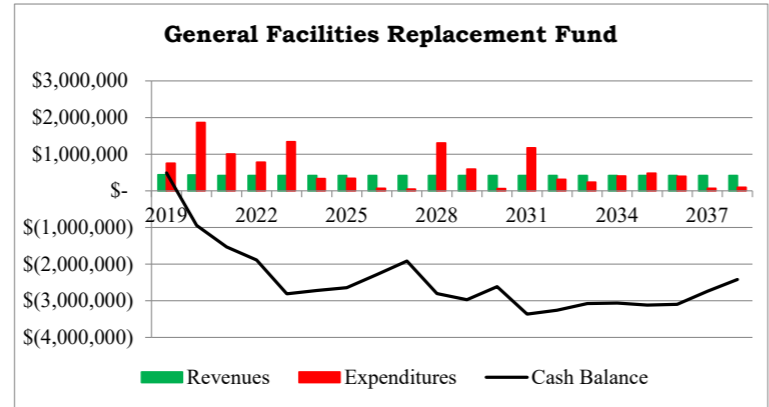
Capital Improvement Plan: **General Facilities Replacement Fund (410)**
2019-2038

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
Tax Levy: Current	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	
Tax Levy: Add/Sub (a)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sale of Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Interest Earnings	16,158	9,793	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Revenues	\$ 437,158	\$ 430,793	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	\$ 421,000	
Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Furniture & Fixtures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Buildings	755,400	1,867,000	1,005,000	780,000	1,340,300	334,000	341,500	67,000	49,400	1,305,500	593,500	60,500	1,171,900	316,000	237,800	404,000	481,500	398,000	68,000	95,000	
Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Expenditures	\$ 755,400	\$ 1,867,000	\$ 1,005,000	\$ 780,000	\$ 1,340,300	\$ 334,000	\$ 341,500	\$ 67,000	\$ 49,400	\$ 1,305,500	\$ 593,500	\$ 60,500	\$ 1,171,900	\$ 316,000	\$ 237,800	\$ 404,000	\$ 481,500	\$ 398,000	\$ 68,000	\$ 95,000	
Beginning Cash Balance	\$ 807,885	\$ 489,643	\$ (946,564)	\$ (1,530,564)	\$ (1,889,564)	\$ (2,808,864)	\$ (2,721,864)	\$ (2,642,364)	\$ (2,288,364)	\$ (1,916,764)	\$ (2,801,264)	\$ (2,973,764)	\$ (2,613,264)	\$ (3,364,164)	\$ (3,259,164)	\$ (3,075,964)	\$ (3,058,964)	\$ (3,119,464)	\$ (3,096,464)	\$ (2,743,464)	
Annual Surplus (deficit)	(318,242)	(1,436,207)	(584,000)	(359,000)	(919,300)	87,000	79,500	354,000	371,600	(884,500)	(172,500)	360,500	(750,900)	105,000	183,200	17,000	(60,500)	23,000	353,000	326,000	
Cash Balance	\$ 489,643	\$ (946,564)	\$ (1,530,564)	\$ (1,889,564)	\$ (2,808,864)	\$ (2,721,864)	\$ (2,642,364)	\$ (2,288,364)	\$ (1,916,764)	\$ (2,801,264)	\$ (2,973,764)	\$ (2,613,264)	\$ (3,364,164)	\$ (3,259,164)	\$ (3,075,964)	\$ (3,058,964)	\$ (3,119,464)	\$ (3,096,464)	\$ (2,743,464)	\$ (2,417,464)	

5-Year Funding Status 51% 10-Year Funding Status 64% Long-Term Funding Status 79%

5-Year Funding Sources (Rev + Beg Cash Balance) \$ 2,938,836 10-Year Funding Sources (Rev + Beg Cash Balance) \$ 5,043,836 Long-Term Funding Sources (Rev + Beg Cash Balance) \$ 9,253,836

Cash Balance (Year-End)	\$ 756,000	2017
Planned CIP Surplus/Deficit	51,885	2018
Adjust for Delayed CIP Items	-	2018
Cash Balance (Beg. Year)	\$ 807,885	2019



(a) \$160K in 2018, \$30K, \$25K from PR Fund in 2019

Expenditure Detail

Key	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
B	Replace Rooftop Heat/AC	\$ -	\$ -	\$ -	\$ -	\$ 275,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 290,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
B	Replace garage Co Ra Vac Heaters	-	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,000	-	-	-
B	Door Card Reader	-	-	-	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-	-	-	-
B	Heating boilers Police	-	-	-	-	-	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B	Liebert condensing unit (IT Server Rm)	-	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	60,000	-	-	-	-
B	Liebert AHV (IT Server Room)	-	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	-	-	-
B	Make Up Air Units (Maintenance C)	90,000	-	-	35,000	-	-	-	-	-	-	35,000	-	-	-	-	-	-	35,000	-	-
B	Circulating pumps	-	-	15,000	-	-	-	-	-	-	-	-	15,500	-	-	-	-	-	-	-	-
B	Water heaters (CH and Maintenance)	-	-	-	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	-
B	Replace boiler City Hall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,000	-	-	-
B	Police & PW garage Co2/No2 detector	-	-	-	10,000	-	-	-	-	10,000	-	-	-	-	-	-	10,000	-	-	-	-
B	Exhaust fans (10)	-	30,000	-	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-	-	-	-
B	Unit heaters (4)	-	-	-	-	-	-	-	-	-	-	6,500	-	-	-	-	-	-	-	-	-
B	VAV's heat/cool	-	-	10,000	-	-	-	-	25,000	-	-	-	-	-	-	25,000	-	-	-	-	-
B	VAV/s cool	-	-	10,000	-	-	-	-	25,000	-	-	-	-	-	-	25,000	-	-	-	-	-
B	Update Flooring CH/PD	-	-	-	-	-	-	-	-	-	100,000	-	-	50,000	-	-	-	-	-	-	-
B	Update Restrooms CH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100,000	-	-

City of Roseville
Capital Improvement Plan: **General Facilities Replacement Fund (410)**
2019-2038

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
B workstation replacement city hall	-	-	-	350,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Overhead door replacement	-	20,000	-	-	-	25,000	-	-	-	-	-	25,000	-	-	-	25,000	-	-	-	-
B Roof Rehab/Replace Park Maintenance Building	120,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Rehab of north roof PW building	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120,000	-	-	-	-
B City Hall Entrance Walkway Improvement	-	-	-	-	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Card access system replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40,000	-	-	-
B Replace new Roof City Hall	-	-	-	-	-	-	-	-	-	-	225,000	-	-	-	-	-	-	-	-	-
B Emergency generator	-	-	-	-	-	-	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-
B Tables and chairs City Hall	-	-	-	-	-	-	-	-	30,000	-	-	-	-	-	-	-	-	30,000	-	-
B Fuel system tank replacement	220,000	-	-	-	-	-	-	-	-	-	-	20,000	-	-	-	-	-	-	-	-
B Maintenance Yard Security Gate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Paint walls city hall	-	-	25,000	-	-	-	15,000	-	-	-	25,000	-	-	-	20,000	-	-	-	-	-
B LED conversion CH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,000	-	-	-
B Geothermal Expansion to PW Building	-	-	200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B City Hall Elevator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Brimhall gymnasium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Central Park gymnasium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Gymnastics Center	-	70,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Exterior Painting (2014)	-	-	-	-	-	50,000	-	-	-	-	-	-	-	-	50,000	-	-	-	-	-
B Commons: Water Heater- Domestic H2O	-	8,000	-	-	-	-	-	-	-	-	-	-	-	8,000	-	-	-	-	-	-
B Commons: Water Heater- Zamboni (2007)	-	10,000	-	-	-	-	-	-	-	-	-	-	-	10,000	-	-	-	-	-	-
B Commons: Water Storage Tank	-	8,000	-	-	-	-	-	-	-	-	-	-	-	8,000	-	-	-	-	-	-
B Commons: South Entry RTU (2007)	-	-	-	20,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Parking Lot - North (2007)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Parking Lot - South (2007)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Parking Lot Lighting - North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Parking Lot Lighting - South	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-	-	-	-	-	-	-
B Commons: County Road C Sign (2007)	-	-	-	40,000	-	-	-	-	-	-	-	-	-	-	-	-	40,000	-	-	-
B Commons: Entry way rubber flooring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Commons: Electronic Lock System	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Roof Top units (2) (2008)	-	-	-	-	165,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Rubber flooring - changing room	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Rubber flooring - locker room	-	-	-	20,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Dehumidification	95,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Mezzanine HP (2009)	-	-	-	-	-	45,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Roof (2004)	-	-	-	300,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Mezzanine glass system	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: refrigeration system (2008)	-	-	-	-	-	-	-	-	-	-	-	-	700,000	-	-	-	-	-	-	-
B Arena: Fluid Cooler (2008)	-	-	-	-	-	-	-	-	-	-	-	-	125,000	-	-	-	-	-	-	-
B Arena: Concrete Floor (2008)	-	-	-	-	-	-	-	-	-	-	-	-	125,000	-	-	-	-	-	-	-
B Arena: Dasher Boards (2008)	-	-	-	-	135,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Zamboni (2014)	-	-	-	-	-	-	115,000	-	-	-	-	-	-	-	-	-	115,000	-	-	-
B Arena: Locker Room HP (2008)	-	-	-	30,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Scoreboard Large	-	15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Ice Show Curtain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Zamboni Foyer Divider Wall	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Arena: Restroom Remodeling	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B Variable speed pump-skating center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Compressors (1993)	-	-	-	-	-	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Scoreboard (2008)	-	-	-	250,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Lighting (1993)	-	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: lobby rubber flooring	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Lobby HP (2008)	-	-	-	-	35,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Micro Processors	-	20,000	-	20,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,000	-
B OVAL: Soft Starts	-	35,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Garage Doors (2)	-	-	-	-	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Lobby Roof (1993)	-	-	85,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Mech. Bldg Roof (1993)	-	-	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Bathroom Partitions	-	-	-	-	-	-	-	5,000	-	-	-	-	-	-	-	-	-	-	-	-
B OVAL: Snow Melt Pit	-	-	-	-	-	-	-	-	-	-	-	50,000	-	-	-	-	-	-	-	-
B OVAL: Zamboni (2003)	140,000	-	-	-	-	-	-	-	-	-	145,000	-	-	-	-	-	-	-	-	-
B OVAL: Inline Hockey Rink	-	25,000	-	-	-	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-	-

City of Roseville

Capital Improvement Plan: **General Facilities Replacement Fund (410)**

2019-2038



**DRAFT Guidant John Rose Minnesota OVAL Project and Cost List 10-15-18
Based on Professional Condition Assessment**

1. Condenser and Components	\$ 540,000
<ul style="list-style-type: none"> • Current condenser (evaporation tower) is original to system, has outlived its useful life and is in need of replacement 	
2. Repair, Replace and Insulate Expansion Joints	\$ 725,000
<ul style="list-style-type: none"> • Expansion joints are being undermined and in need of repair and upgrade to newer technology 	
3. Various Mechanical Items/Needs	\$ 366,000
<ul style="list-style-type: none"> • Ammonia Alarm System (\$30K), Brine Filtration System (\$30K), Expansion Tank Replacement (\$24k), Piping Drain System (\$132K), Replace Brine (\$30K), Chiller Tube Inspection (\$30K), Microprocessors (\$40K), Compressors (\$50k) 	
4. Perimeter Paving/Turf Improvements and Fencing/Netting - Training Track	\$ 210,000
<ul style="list-style-type: none"> • Mill and blacktop perimeter (training Track) of OVAL/turf improvements • All this is done to also improve drainage systems to prevent water from undermining the slab 	
5. Padding and Fence System	\$ 450,000
<ul style="list-style-type: none"> • Replace fence surrounding the OVAL to secure padding system • Replace padding system around to OVAL to better meet world competition standards 	
6. Renovate Banquet Facility and Rooftops	\$ 205,000
<ul style="list-style-type: none"> • Replace carpet, divider door • Replace Rooftop units 	
7. Lobby/Mechanical Room and Banquet Center Roof Replacement	\$ 245,000
8. Replace OVAL rink divider pads	\$ 30,000
<ul style="list-style-type: none"> • Replace aging pads used to divide infield from track activities • New pads provide latest materials to prevent injury 	
9. Bathroom Remodel	\$ 95,000
<ul style="list-style-type: none"> • To improve condition and access to upper level bathrooms from the OVAL for major events and large crowds in the facility 	
10. Scoreboard Replacement	<u>\$ 250,000</u>
Subtotal before Contingency and Soft Costs	\$ 3,116,000
Contingency and Soft Costs (35%)	<u>\$ 1,090,600</u>
TOTAL WITH CONTINGENCY AND SOFT COSTS	<u>\$ 4,206,600</u>

Guidant John Rose Minnesota OVAL Condition Assessment Report

- Aging Facility
- Newer Technologies/Systems
- Partnerships
- History of Funding
- Condition Assessment



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



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Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report



Guidant John Rose Minnesota OVAL Condition Assessment Report Discussion

Financials

Condenser and Components	\$540,000
Repair, Replace and Insulate Expansion Joints	\$725,000
Various Mechanical Items/Needs	\$366,000
Perimeter Paving/Turf Improvements and Fencing/Netting - Training Track	\$210,000
Padding and Fence System	\$450,000
Renovate Banquet Facility and Rooftops	\$205,000
Lobby/Mechanical Room and Banquet Center Roof Replacement	\$245,000
Replace rink divider pads	\$30,000
Bathroom Remodel	\$95,000
Scoreboard Replacement	<u>\$250,000</u>
Subtotal before Contingency and Soft Costs	\$3,116,000
Contingency and Soft Costs (35%)	<u>\$1,090,600</u>
TOTAL WITH CONTINGENCY AND SOFT COSTS	\$4,206,600

ROSEVILLE
REQUEST FOR COUNCIL ACTION

Date: **10/15/2018**
Item No.: **7.c**

Department Approval

City Manager Approval



Item Description: Discuss Roseville's 2019 Legislative Priorities

BACKGROUND

Last year, the City Council adopted Legislative Priorities in anticipation of the legislative session of the Minnesota Legislature. The adopted document is shown in Attachment A.

Below is a listing of the previously adopted priorities:

- Seek financial support for capital improvements at the Guidant John Rose Minnesota OVAL and support facilities through the 2020 State Bonding Bill
- Enact Statewide Licensing of Massage Therapists
- Allowing a Taproom and Cocktail Room on the same premise
- Allow Municipal Hotel Licensing
- Amend State Building Code Chapter 1306 to Allow Municipalities to Require Sprinkler Systems in R-2 (Multi-Family) Occupancy Groups
- Reimburse Deputy Registrars for excess costs associated with the deployment of the Minnesota Licensing and Registration System (MNLARS)
- Expand "Pathways to Policing" Program
- Advocate for an increase in Transportation Funding
- Improve Absentee Balloting
- Fund the DEED Redevelopment Grant Program and the Demolition Loan Program
- Create presumptive coverage for Firefighters diagnosed with cancer
- Improve transparency of information on property tax notice sent by counties

Supplemental material to the 2018 Legislative Priorities are included as Attachment B.

In order to be ready for the 2019 Legislative Session, which runs from January 8 to May 20, 2019, staff is bringing forward a discussion about Roseville's Legislative Priorities in order to be better prepared to advocate for the issues that are important for the City of Roseville.

To create Roseville's 2019 Legislative Priorities, staff would like the City Council to review the 2018 Legislative Priorities and make a determination if any of them should be changed or removed. Additionally, the City Council should identify other topics that should be added to Roseville's Legislative Priorities.

Staff is bringing forward a couple of new items for City Council consideration to add to the City's Legislative Priorities. One is regarding Presidential Primaries in Minnesota (Attachment C) and special legislation to allow for the Cedarholm Community Building to have a full liquor license.

32 **POLICY OBJECTIVE**

33 Advocating for Roseville’s Legislative Priorities will provide a voice to the Minnesota Legislature
34 and Governor on items and issues that are important to the community and city operations.

35 **BUDGET IMPLICATIONS**

36 Not directly applicable to the Legislative Agenda. However individual items may have a cost impact
37 to the City, either negatively or positively, depending on the topic and outcome.

38 **STAFF RECOMMENDATION**

39 Staff recommends the City Council should review 2018 Legislative Priorities and discuss what
40 should be included as part of the 2019 Legislative Priorities

41 **REQUESTED COUNCIL ACTION**

42 The City Council should discuss and provide direction on Roseville’s 2019 Legislative Priorities.

Prepared by: Patrick Trudgeon, City Manager (651) 792-7021

Attachments: A: 2018 Roseville Legislative Priorities
B: Supplemental Information to 2018 Legislative Priorities
C: Presidential Primary Legislative Priority Information



2018

LEGISLATIVE PRIORITIES

- Seek financial support for capital improvements for the state and regional asset of the Guidant John Rose Minnesota OVAL and support facilities through the 2020 State Bonding Bill.
- Enact Statewide Licensing of Massage Therapists
- Allowing a Taproom and Cocktail Room on the same premise.
- Allow Municipal Hotel Licensing
- Amend State Building Code Chapter 1306 to Allow Municipalities to Require Sprinkler Systems in R-2 (Multi-Family) Occupancy Groups.
- Reimburse Deputy Registrars for excess costs associated with the deployment of the Minnesota Licensing and Registration System (MNLARS)
- Expand “Pathways to Policing” Program
- Advocate for an increase in Transportation Funding
- Improve Absentee Balloting
- Fund the DEED Redevelopment Grant Program and the Demolition Loan Program
- Create presumptive coverage for Firefighters diagnosed with cancer
- Improve transparency of information property tax notices sent by counties

Seek financial support for capital improvements for the state and regional asset of the Guidant John Rose Minnesota OVAL and support facilities through the 2020 State Bonding Bill

The Guidant John Rose Minnesota OVAL and support facilities have been an ongoing financial partnership with the State of Minnesota since its inception and construction. Specially, the OVAL was constructed in 1993 after receiving \$1.9 million from the State of Minnesota. General capital improvements were made in 2006 and 2008 after receiving an additional \$1.1 million from the State of Minnesota.

The OVAL is home to local Hockey organizations, Greater MN Speedskating, Midway Speedskating, USA and MN Bandy.

Due to the state and regional nature of the Guidant John Rose Minnesota OVAL and the ongoing financial partnership with the State of Minnesota, it is again time to consider seeking financial support for upcoming capital improvement needs. It is important that this financial partnership continue as time and depreciation warrants capital improvements to the facility.

An assessment of the mechanical systems and infrastructure condition is underway and is expected to be completed early in 2018. This report will have an estimate of the capital costs needed for the Guidant John Rose Minnesota OVAL. In addition, staff is working with OVAL affiliated groups to determine their future needs.

The deadline to be considered in the 2020 State of Minnesota Bonding Bill is June, 2019.

The City of Roseville supports legislation to include the Guidant John Rose Minnesota OVAL and support facilities in the 2020 State of Minnesota Bonding Bill for necessary capital improvements.

Enact Statewide Licensing of Massage Therapists

Currently, the State of Minnesota does not license or register massage therapists. As a result, most cities, including Roseville, license massage therapists locally. Massage therapists often work in multiple cities. This fact, coupled with the lack of a statewide database of massage therapists, put cities at a disadvantage in knowing about any past violations of the law by a massage therapist.

On June 19, 2017, the Roseville City Council adopted Resolution #11423 supporting statewide licensing of massage therapists.

The City of Roseville supports legislation that requires statewide licensure or registration of massage therapists. The City of Roseville supports retaining the ability to regulate massage therapy establishments.

**EXTRACT OF MINUTES OF MEETING
OF THE
CITY COUNCIL OF THE CITY OF ROSEVILLE**

* * * * *

Pursuant to due call and notice thereof, a regular meeting of the City Council of the City of Roseville, County of Ramsey, Minnesota, was duly held on the 19th day of June, 2017, at 6:00 p.m.

The following members were present: McGehee, Willmus, Laliberte, Etten and Roe and the following members were absent: None

Councilmember Laliberte introduced the following resolution and moved its adoption:

RESOLUTION No. 11423

RESOLUTION SUPPORTING STATEWIDE LICENSING OF MASSAGE THERAPISTS

WHEREAS, the State of Minnesota does not currently license or register massage therapists; and

WHEREAS, in the absence of any required statewide standards and regulations, cities, including Roseville, have entered into the traditional state domain of health-care licensure by requiring all massage therapists operating in the city to obtain a local license; and

WHEREAS, as a result of local licensing for massage therapists, city staff and law enforcement has spent numerous hours conducting criminal background checks, researching massage therapist accreditation programs to ensure legitimacy and credibility, and monitoring the massage therapy establishments due to citizen complaints and concerns regarding activities of massage therapists; and

WHEREAS, massage therapists often work in multiple establishments in multiple cities; and

WHEREAS, due to the lack of a statewide database of massage therapists, problems occurring in one city may not be known by staff and law enforcement of other cities despite their best efforts to conduct criminal background checks.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ROSEVILLE, MINNESOTA, that the City of Roseville supports legislation that requires statewide licensure or registration of massage therapists by the State of Minnesota that would not pre-empt the ability of cities to regulate massage therapy establishments.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember McGehee and upon vote being taken thereon, the following voted in favor thereof: McGehee, Willmus, Laliberte, Etten and Roe and the following voted against the same: none.

WHEAREUPON said resolution was declared duly passed and adopted.

Allow a Taproom and Cocktail Room on the same premise

Last session, legislation was introduced that remove the restriction from a single entity holding both a cocktail room and taproom license and from having a cocktail room and taproom in the same location. The bill, HF 2128 never had a hearing in committee. Rep. Becker Finn, who was a co-author of the bill, has indicated that the bill is still eligible to be taken up in the 2018 Session. Roseville's Bent Brewstillery has indicated that they would like to be able to have a cocktail room license allow for spirits that are distilled on-site to be sold at their current tap room. This bill will help support small businesses in Roseville and Minnesota.

The City of Roseville supports HF 2128 and any legislation that removes the restriction contained in Minnesota Statutes 2016, Section 340A.22 (2) that a single entity from holding both a cocktail room and taproom license and the restriction from having a cocktail room and taproom being collocated in the same premise.

This Document can be made available in alternative formats upon request

State of Minnesota
HOUSE OF REPRESENTATIVES
 NINETIETH SESSION
H. F. No. 2128

03/06/2017 Authored by McDonald, Zerwas, Smith, Franke, Becker-Finn and others
 The bill was read for the first time and referred to the Committee on Commerce and Regulatory Reform

1.1 A bill for an act

1.2 relating to liquor; repealing a restriction on holding both taproom and cocktail

1.3 licenses; amending Minnesota Statutes 2016, section 340A.22, subdivision 2.

1.4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.5 Section 1. Minnesota Statutes 2016, section 340A.22, subdivision 2, is amended to read:

1.6 Subd. 2. **Cocktail room license.** (a) A municipality, including a city with a municipal

1.7 liquor store, may issue the holder of a microdistillery license under this chapter a

1.8 microdistillery cocktail room license. A microdistillery cocktail room license authorizes

1.9 on-sale of distilled liquor produced by the distiller for consumption on the premises of or

1.10 adjacent to one distillery location owned by the distiller. Nothing in this subdivision precludes

1.11 the holder of a microdistillery cocktail room license from also holding a license to operate

1.12 a restaurant at the distillery. Section 340A.409 shall apply to a license issued under this

1.13 subdivision. All provisions of this chapter that apply to a retail liquor license shall apply to

1.14 a license issued under this subdivision unless the provision is explicitly inconsistent with

1.15 this subdivision.

1.16 (b) A distiller may only have one cocktail room license under this subdivision, and may

1.17 not have an ownership interest in a distillery licensed under section 340A.301, subdivision

1.18 6, clause (a).

1.19 (c) The municipality shall impose a licensing fee on a distiller holding a microdistillery

1.20 cocktail room license under this subdivision, subject to limitations applicable to license fees

1.21 under section 340A.408, subdivision 2, paragraph (a).

2.1 (d) A municipality shall, within ten days of the issuance of a license under this
2.2 subdivision, inform the commissioner of the licensee's name and address and trade name,
2.3 and the effective date and expiration date of the license. The municipality shall also inform
2.4 the commissioner of a license transfer, cancellation, suspension, or revocation during the
2.5 license period.

2.6 ~~(e) No single entity may hold both a cocktail room and taproom license, and a cocktail~~
2.7 ~~room and taproom may not be collocated.~~

2.8 **EFFECTIVE DATE.** This section is effective the day following final enactment.

Allow Municipal Hotel Licensing

Over the past several years, both City Council and staff have expressed interest in the ability to establish a hotel/motel licensing program similar to the current multi-family licensing program. Business organizations have asked the City's help in improving the quality and safety of Roseville hotels & motels. In response staff began investigating available options for a potential municipal hotel/motel licensing program.

Following extensive investigation and conversations at the local, county, and state, levels it was determined that best course of action would be through establishing new legislation allowing for municipal licensing.

In March 2017 the Fire Department received Council approval to take over local inspections of all hotels and motels from the State Fire Marshal's office. The Fire Department will begin the first inspections this fall.

As part of the 2017 Legislative session H.F. 777/SF 699 was introduced to allow municipal hotel licensing. This legislation was supported by the City of Waite Park, MN.

The City of Roseville supports the passage of HF 777/SF 699 and other legislation that allows for municipal hotel licensing.

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State of Minnesota
HOUSE OF REPRESENTATIVES
NINETIETH SESSION

H. F. No. 777

02/02/2017 Authored by Theis, Knobloch, Howe, O'Driscoll and Pinto
The bill was read for the first time and referred to the Committee on Government Operations and Elections Policy

1.1 A bill for an act
1.2 relating to local government; allowing cities and towns to require additional
1.3 licensing for hotels; proposing coding for new law in Minnesota Statutes, chapter
1.4 471.

1.5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.6 Section 1. [471.585] MUNICIPAL HOTEL LICENSING.

1.7 (a) A statutory or home rule charter city or a town may adopt an ordinance requiring
1.8 hotels operating within the boundaries of the city or town to have a valid license issued by
1.9 the city or town.

1.10 (b) An ordinance adopted under this section is limited to requiring compliance with state
1.11 and local laws as a condition of licensure. No other licensing conditions or requirements
1.12 are permitted.

1.13 (c) A city or town that has adopted an ordinance under this section may refuse to issue
1.14 a license, or may revoke an existing license, if the licensee fails to comply with the conditions
1.15 of the license.

1.16 (d) This section applies to a city or town under the jurisdiction of a community health
1.17 board. A city or town that is not under the jurisdiction of a community health board may
1.18 adopt a hotel licensing ordinance with any requirements otherwise permitted by law.

Amend State Building Code Chapter 1306 to Allow Municipalities to Require Sprinkler Systems in R-2 (Multi-Family) Occupancy Groups

On March 27, 2017 the Roseville City Council adopted Minnesota State Building Code Chapter 1306 provisions requiring sprinkling in certain building occupancy groups. At that time, the City Council discussed the possible expansion of sprinkler requirements to multi-family buildings. Following much research and communications with the State Fire Marshal's office, it was determined expansion was not possible under current statute and code.

If the City Council has interest in expansion of sprinkler requirements under Building Code 1306, legislative action would be needed.

The City of Roseville supports legislation that allows for local governments to require sprinkler systems in R-2 (Multi-Family) occupancy groups.

Reimburse Deputy Registrars for excess costs associated with the deployment of the Minnesota Licensing and Registration System (MNLARS)

On July 24, 2017, the State of Minnesota Driver & Vehicle Services (DVS) division officially launched its new Licensing and Registration System (MNLARS), despite widespread and repeated concerns expressed by MN Deputy Registrar Agents regarding the operability of the System.

Upon being launched, the System experienced immediate and catastrophic failure causing the halt of multiple types of vehicle-related transactions. Even when then the system was operational, significant design and programming deficiencies prevented basic transactions from being completed without assistance from State DVS employees. Since deployment, the System has repeatedly crashed rendering local Deputy Registrars unable to process transactions for several hours at a time. Transactions that routinely had been performed in minutes prior to the new system launch, can now take in excess of an hour even with a functioning system.

The repeated system failures and slow processing times have resulted in excessive and on-going staffing costs without the ability to recoup those costs. In addition, customer-initiated online transactions that failed during processing, required local Deputy Registrars to complete the transaction without collecting the customary filing fee.

The City of Roseville supports legislation that will reimburse Deputy Registrars for their excessive costs associated with the MNLARS deployment. This should include documented costs for the period of August, 2017 through June, 2018 or until such time that filing fees are adjusted accordingly.

The City further supports legislation that will increase the filing fees retained by Deputy Registrars to an amount sufficient to offset the costs of providing licensing activities on behalf of the State of Minnesota.

Expand “Pathways to Policing” Program

Last session the Minnesota Legislature enacted a two-year funding program (2018-2019) to remove some barriers faced by non-traditional law enforcement candidates in order to gain employment as law enforcement officers. The Pathways to Policing program is only offered to candidates who already possess an Associates or Bachelor’s Degree in a non-law enforcement degree and students must attend their mandatory final police training at Hennepin Technical College in Brooklyn Park.

Candidates lacking the funds to obtain an Associate’s degree or higher are barred from the program. In addition, candidates lacking the ability to attend training in Brooklyn Park also cannot take part in the program.

The City of Roseville supports legislation that broadens the eligibility of participants in the “Pathways to Policing” program and the locations where final police training can occur in order to open the important program to other non-traditional law enforcement candidates currently unable to take part in the current program because of the mentioned barriers.

Advocate for an increase in Transportation Funding

Minnesota has been experiencing a funding gap due to aging transportation infrastructure, rising costs for labor and road materials, and inflation. Costs have increased 55 percent over the last 20 years, but the federal gas tax (18.4 cents per gallon) has remained stagnant since 1993. The 28.5 cents per gallon Minnesota gas tax, last increased in 2012 as the final phase-in of legislation enacted in 2008, has not been indexed for inflation and is not keeping up with needs. Aging infrastructure is also a major factor. Maintenance costs increase as road systems age, and no city—large or small—is spending enough on roadway capital improvements to maintain a 50-year lifecycle.

The Minnesota Transportation Finance Advisory Committee (TFAC) convened by Governor Mark Dayton in 2012 concluded that the state has a \$21 billion shortfall in transportation funding over the next 20 years—and that is just to keep the transportation system at its current level of service. The report estimates the annual funding gap (AFG) for Municipal State Aid (MSA) system is conservatively estimated at \$100 million, while the non-MSA city street system AFG is between \$250 million to \$400 million. There is not adequate funding available and, even with MnDOT efforts to increase efficiencies, savings do not cover the funding deficit. Long-term, dedicated, and sustainable investments are needed.

The City of Roseville receives an allocation of Municipal State Aid funds annually to fund our larger volume streets that are within our jurisdiction. These MSA funds are a percentage of the overall gas tax, license fees and motor vehicle sales tax collected annually by the state.

Over the past 10 years the City of Roseville has received the following allocations of funds from the MSA Account:

Year	Total Allocation	% Increase from Previous Year
2007	\$961,507	
2008	\$912,398	-5.1%
2009	\$971,046	6.4%
2010	\$1,028,306	5.9%
2011	\$1,112,860	8.2%
2012	\$1,134,369	1.9%
2013	\$1,156,722	2.0%
2014	\$1,211,822	4.8%
2015	\$1,323,592	9.2%
2016	\$1,342,878	1.5%
2017	\$1,362,945	1.5%

These funds can only be used on our MSA designated streets (20% of our total street mileage) and on “off system” roads such as State Aid designated County Roads (Lexington Ave, Rice St) and State Highways (Snelling Ave, 35W, 36). However our current funding levels are barely

enough to allow us to perform mill and overlays on our existing State Aid system. We see some longer term funding gaps as large County project come due (i.e. Rice Street, County Road B2) and the City is forced to participate in the costs of those projects.

Finally, as more Cities surpass the 5,000 population threshold to participate as a Municipal State Aid city, the MSA Fund continues to erode as more Cities compete for the same amount of dollars.

Additionally, more and more Roseville residents are asking for better transit service for Roseville. Our new Comprehensive Plan will identify transit deficiencies on key corridors such as Larpenteur Ave. The key to adding additional service and resources is ultimately funding. Metro Transit would like to increase service, but is faced with prioritizing routes due to gaps in current funding levels.

The City of Roseville supports additional comprehensive transportation funding.

Improve Absentee Balloting

Eligible voters in Minnesota may vote by absentee ballot prior to Election Day. Starting 46 days before the election, a voter can request an application for an absentee ballot, receive and cast an absentee ballot in one visit to their election office. For those voting absentee in-person, the application process is burdensome and confusing as voters expect the same process they encounter in their polling place on Election Day. There is often confusion and frustration that they are not allowed to place their ballots directly into a tabulator if they are voting more than seven days before Election Day.

The City of Roseville supports legislation that seeks to streamline voter check-in procedures and increase efficiency and decrease the time voters spend in line waiting to cast their absentee ballots. To improve the voter experience and respond to the voter demand to vote early, the city supports extending the time period for those who choose to vote absentee in-person to place their ballots directly into a tabulator from seven days to the full 46 days before Election Day. The city also supports eliminating the option to place an in-person absentee ballot in a series of envelopes instead of the tabulator in order to increase efficiency.

Fund the DEED Redevelopment Grant Program and the Demolition Loan Program

Currently both the Redevelopment Grant Program and Demolition Loan Program, offered through the Department of Employment and Economic Development (DEED), are out of funds and no additional funding was allocated during the 2017 legislative session. Redevelopment Grant Program grants pay up to half of redevelopment costs for eligible sites, with a 50-percent local match. These grants are available to cities and Economic Development Authorities (EDAs), and can be used to pay for land acquisition, demolition, infrastructure improvements, soil stabilization, ponding or other environmental infrastructure and adaptive reuse of buildings, including remedial activities at sites where a subsequent redevelopment will occur.

The Demolition Loan Program helps development authorities (including cities and EDAs) with the costs of demolishing blighted buildings on sites that have future development potential but where there are no current development plans.

The Roseville EDA has taken a more aggressive role in redeveloping blighted and underutilized sites, and these programs would become an additional economic development tool in those efforts.

The City of Roseville supports funding for both the Redevelopment Grant Program and the Demolition Loan Program to assist the City/EDA in proactive economic development efforts of blighted properties.

Create presumptive coverage for Firefighters diagnosed with cancer

There is a growing evidence linking cancer rates to firefighters due to their frequent interaction with harmful and hazardous chemicals during the course of their career. While measures can be taken to limit their exposure, toxins can remain in their body and build up over time putting them at greater risk. A study conducted in 2006 (LeMasters Meta-Analysis) indicates that fire fighters have the following increased risk in contracting specific types of cancer when compared to the general population:

- Testicular (102% greater risk)
- Multiple myeloma (53% greater risk)
- Non-Hodgkin lymphoma (51% greater risk)
- Skin (39% greater risk)
- Prostate cancer (28% greater risk)
- Malignant melanoma (32% greater risk)
- Brain (32% greater risk)
- Rectum (29% greater risk)
- Stomach (22% greater risk)
- Colon (21% greater risk)

Currently, 36 states have “presumption laws” in place that allow for workers compensation coverage for fire fighters who are diagnosed with certain types of cancer during their career. Current Minnesota state law requires employee to prove a cancer link to their occupation in order to receive workers compensation.

HF 2106 was introduced in 2017 that created a presumption of occupational disease for firefighters with certain forms of cancer. It did not receive a hearing.

It should be noted that the City of Roseville is self-funded for workers compensation of its employees. Therefore any expansion of presumptive coverage will require additional expenditure by the city.

The City of Roseville supports HF 2106 and any legislation that would create presumptive coverage for firefighters that are found to have cancer during their employment.

This Document can be made available in alternative formats upon request

State of Minnesota
HOUSE OF REPRESENTATIVES
NINETIETH SESSION

H. F. No. **2106**

03/06/2017 Authored by Howe and Theis
The bill was read for the first time and referred to the Committee on Commerce and Regulatory Reform

1.1 A bill for an act
1.2 relating to workers' compensation; creating a presumption of occupational disease
1.3 for firefighters with certain forms of cancer; amending Minnesota Statutes 2016,
1.4 section 176.011, subdivision 15.

1.5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.6 Section 1. Minnesota Statutes 2016, section 176.011, subdivision 15, is amended to read:

1.7 Subd. 15. **Occupational disease.** (a) "Occupational disease" means a mental impairment
1.8 as defined in paragraph (d) or physical disease arising out of and in the course of employment
1.9 peculiar to the occupation in which the employee is engaged and due to causes in excess of
1.10 the hazards ordinary of employment and shall include undulant fever. Physical stimulus
1.11 resulting in mental injury and mental stimulus resulting in physical injury shall remain
1.12 compensable. Mental impairment is not considered a disease if it results from a disciplinary
1.13 action, work evaluation, job transfer, layoff, demotion, promotion, termination, retirement,
1.14 or similar action taken in good faith by the employer. Ordinary diseases of life to which the
1.15 general public is equally exposed outside of employment are not compensable, except where
1.16 the diseases follow as an incident of an occupational disease, or where the exposure peculiar
1.17 to the occupation makes the disease an occupational disease hazard. A disease arises out of
1.18 the employment only if there be a direct causal connection between the conditions under
1.19 which the work is performed and if the occupational disease follows as a natural incident
1.20 of the work as a result of the exposure occasioned by the nature of the employment. An
1.21 employer is not liable for compensation for any occupational disease which cannot be traced
1.22 to the employment as a direct and proximate cause and is not recognized as a hazard
1.23 characteristic of and peculiar to the trade, occupation, process, or employment or which

2.1 results from a hazard to which the worker would have been equally exposed outside of the
2.2 employment.

2.3 (b) If immediately preceding the date of disablement or death, an employee was employed
2.4 on active duty with an organized fire or police department of any municipality, as a member
2.5 of the Minnesota State Patrol, conservation officer service, state crime bureau, as a forest
2.6 officer by the Department of Natural Resources, state correctional officer, or sheriff or
2.7 full-time deputy sheriff of any county, and the disease is that of myocarditis, coronary
2.8 sclerosis, pneumonia or its sequel, and at the time of employment such employee was given
2.9 a thorough physical examination by a licensed doctor of medicine, and a written report
2.10 thereof has been made and filed with such organized fire or police department, with the
2.11 Minnesota State Patrol, conservation officer service, state crime bureau, Department of
2.12 Natural Resources, Department of Corrections, or sheriff's department of any county, which
2.13 examination and report negated any evidence of myocarditis, coronary sclerosis, pneumonia
2.14 or its sequel, the disease is presumptively an occupational disease and shall be presumed
2.15 to have been due to the nature of employment. If immediately preceding the date of
2.16 disablement or death, any individual who by nature of their position provides emergency
2.17 medical care, or an employee who was employed as a licensed police officer under section
2.18 626.84, subdivision 1; firefighter; paramedic; state correctional officer; emergency medical
2.19 technician; or licensed nurse providing emergency medical care; and who contracts an
2.20 infectious or communicable disease to which the employee was exposed in the course of
2.21 employment outside of a hospital, then the disease is presumptively an occupational disease
2.22 and shall be presumed to have been due to the nature of employment and the presumption
2.23 may be rebutted by substantial factors brought by the employer or insurer. Any substantial
2.24 factors which shall be used to rebut this presumption and which are known to the employer
2.25 or insurer at the time of the denial of liability shall be communicated to the employee on
2.26 the denial of liability.

2.27 (c) A firefighter on active duty with an organized fire department who is unable to
2.28 perform duties in the department by reason of a disabling cancer of a type caused by exposure
2.29 to heat, radiation, or a known or suspected carcinogen, as defined by the International
2.30 Agency for Research on Cancer, and the carcinogen is reasonably linked to the disabling
2.31 cancer, is presumed to have an occupational disease under paragraph (a). If a firefighter
2.32 who enters the service after August 1, 1988, is examined by a physician prior to being hired
2.33 and the examination discloses the existence of a cancer of a type described in this paragraph,
2.34 the firefighter is not entitled to the presumption unless a subsequent medical determination
2.35 is made that the firefighter no longer has the cancer.

3.1 (d) Notwithstanding paragraph (c), an active duty firefighter or volunteer firefighter
 3.2 with an organized fire department, who has been employed with the fire department at least
 3.3 five years before the date of disablement, and who is examined by a physician prior to being
 3.4 hired and the examination does not disclose the existence of one of the cancers listed in
 3.5 clauses (1) to (14), is presumed to have an occupational disease under paragraph (a) if the
 3.6 firefighter is found to have one of the following types of cancer:

3.7 (1) testicular cancer;

3.8 (2) multiple myeloma;

3.9 (3) non-Hodgkin's lymphoma;

3.10 (4) brain cancer;

3.11 (5) malignant melanoma;

3.12 (6) skin cancer;

3.13 (7) breast cancer;

3.14 (8) leukemia;

3.15 (9) colon cancer;

3.16 (10) prostate cancer;

3.17 (11) mesothelioma;

3.18 (12) bladder cancer;

3.19 (13) kidney cancer; or

3.20 (14) rectal cancer.

3.21 A retired firefighter, including a retired volunteer firefighter, is entitled to the presumption
 3.22 under this paragraph if the firefighter was employed by an organized fire department at least
 3.23 five years, and one of the cancers listed in clauses (1) to (14) is discovered up to five years
 3.24 past the last date of employment.

3.25 ~~(d)~~ (e) For the purposes of this chapter, "mental impairment" means a diagnosis of
 3.26 post-traumatic stress disorder by a licensed psychiatrist or psychologist. For the purposes
 3.27 of this chapter, "post-traumatic stress disorder" means the condition as described in the most
 3.28 recently published edition of the Diagnostic and Statistical Manual of Mental Disorders by
 3.29 the American Psychiatric Association. For purposes of section 79.34, subdivision 2, one or
 3.30 more compensable mental impairment claims arising out of a single event or occurrence
 3.31 shall constitute a single loss occurrence.

4.1 Sec. 2. **REVISOR'S INSTRUCTION.**

4.2 The revisor of statutes shall make any cross-reference changes to Minnesota Statutes
4.3 needed as a result of the relettering of paragraphs in section 1.

Improve transparency of information property tax notices sent by counties

Currently, under state law, counties are required to mail property tax notices to every taxpayer between November 10 and November 24. The form, among other things, must show the amount of property taxes each taxing authority proposes to collect for the following year and indicate a time and date for when public input about the levy and budget will occur.

State statutes prescribe in detail what needs to be shown on the property tax notice. The statutes also require that the notice state that proposed taxes do not include levies (such as school bond referendums) approved after the preliminary levy is established by the end of September.

In municipalities where local tax levies are approved, the tax notices sent by counties are inaccurate and people will potentially receive a much larger tax bill than they were expecting.

In addition, when cities have a EDA or HRA levy, it does not show up under the relevant city portion of the statement. Instead, it is displayed on separate portion of the statement under “other taxing authorities”.

The City of Roseville supports legislation that requires property tax notices sent to taxpayers to show impacts of voter levies that may be approved after certification of preliminary tax levies and show city HRA and EDA levies under the relevant city portion of the statement rather than under “other taxing authorities”.

MCPA

2018-19 Legislative SUPPORT item

Support items are legislative actions taken by the MCPA or taken by other organizations and
Supported by the MCPA

Issue: Inability of cities to license/regulate hotels and motels

Law enforcement agency or organization: Roseville PD

Contact: Chief Rick Mathwig 651-792-7203

Proposed Legislation/Statute change: 471.585

Organization/Stakeholder group Sponsoring Legislation (if applicable):
Lodging Associations, etc

Reasons MCPA should Support this Proposal (please include any documentation when you submit this form): See attached

Impacts on public safety or law enforcement: See attached

Has the MCPA supported this legislation/position in the past? Unknown

MCPA positions

Below are positions and their respective definitions that the MCPA Legislative Committee will consider for the item listed above.

- **Actively Lead** – MCPA will seek legislators to author a bill and will testify at hearings
- **Support** – MCPA will support the bill, which could be in a limited role if another organization takes action, and may testify
- **Neutral** – MCPA will not take a position and will not provide testimony
- **Monitor** – MCPA will closely watch the issue and prepare to take a position if the timing is appropriate

**Please return to Andy Skoogman at andy@mnchiefs.org Questions? Call
Andy @ 651-485-7667**



MEMORANDUM

DATE: September 10, 2018

TO: MN Chiefs of Police- Legislative Committee

FROM: Chief Rick Mathwig, Roseville Police Department

SUBJECT: Municipal Hotel Licensing

Hotels can significantly affect the quality of life and crime that plague our communities. For example, three of the eleven hotels in Roseville comprise a significant number of felony criminal offenses and other quality of life issues that negatively influence the surrounding areas. Two of these hotels have lost multiple corporate sponsorships over the years and now act as independent businesses. The owners of two of the hotels also own multiple hotel properties spread across the metropolitan area of the Twin Cities.

One of the mentioned hotels was the scene of the first murder conviction in Ramsey County related to an unintentional drug overdose case. The convicted murderer had been the paid, on-site maintenance worker for the hotel.

Many communities in our state share the issue of problematic hotels and would benefit in a change in state law in order to affect positive change in their communities.

Currently, cities in Minnesota are unable to license hotels unless they also operate a community health board. Enacting another advisory board can be problematic for many smaller communities for a variety of reasons. The obvious hurdle is the additional cost of the advisory health board. The cities of Bloomington, Richfield and Edina currently operate a shared health board at a total annual cost of over \$4 million. An additional \$1 million to enact a community health board is not affordable for most cities and towns across Minnesota.

The attached House File 777 was introduced in the 2017 legislative session and did not make it out of the Committee on Governmental Operations and Elections Policy. The language in House File 777 is applicable today and addresses the appropriate language.

I ask the MN Chiefs of Police Legislative Committee Actively Lead this potential law change and would be happy to entertain questions from the group.



Current Fire Department Steps for Elimination of Occupational Cancer

- Decontamination kits
 - Supplies for personal and immediate decontamination after being in an immediately dangerous to life and health (IDLH) environment.
- Gross decontamination of firefighter turnout gear and equipment on the fire scene
- Gear washing and contaminant extraction at the fire station
 - Coupled with a gear dryer
- Immediate showering after return to the fire station
- A second set of clean turnout gear for each firefighter to use while their gear is cleaned.
- Enhanced annual physical exams:
 - Examinations now include blood tests for heavy metals, chest x-ray, and a full cardiac stress test.

Future Opportunities for Cancer Prevention

- Building upon our current annual physical exams.
 - Increased funding needed
- Detoxification sauna for faster and improved release of toxins.
 - Specialized sauna: Currently establishing a community grant

Cancer Types and Increased Risk of Cancer Compared to General Population

LeMasters Meta-Analysis, 2006

- Testicular (102% greater risk)
- Multiple myeloma (53% greater risk)
- Non-Hodgkin lymphoma (51% greater risk)
- Skin (39% greater risk)
- Prostate cancer (28% greater risk)
- Malignant melanoma (32% greater risk)
- Brain (32% greater risk)
- Rectum (29% greater risk)
- Stomach (22% greater risk)
- Colon (21% greater risk)

Recommendations

- Remove rebuttal language from state statute
 - Current language allows employer to deny claim and require employee to prove cancer link.
 - Arizona and Maryland have established this.
- Improve current City worker's compensation policy to recognize occupational disease for firefighters.

Presidential Primary

Background

In 2016, the legislature passed into law a process for the state of Minnesota to conduct a presidential primary in 2020, replacing the party caucus system. This election will be administered by cities and counties much the same way other elections are conducted.

Minn. Stat. § 207A.15 provides a process for local units of government to be reimbursed for expenses incurred from conducting the primary. The Office of the Secretary of State (OSS) will submit to the Department of Management and Budget (MMB) an estimated cost of administering the election, and MMB will provide funding to the OSS. That funding will then be distributed to local units of government as a reimbursement based on expense reporting submitted to the OSS.

Because the election is a partisan activity administered on behalf of political parties, it is critical that local units of government be reimbursed fully and that the cost of the election not be borne by Minnesota taxpayers. When a voter participates in the primary, they will choose either a republican or a democratic ballot. This party declaration will be included in public information lists which are designated as public information. Though the election is a political activity, it is anticipated that voters will be very concerned that this information will be accessible by anyone.

The last time the state of Minnesota held a presidential primary was in 1992 and turn-out was very low. There is concern that this could happen in 2020 and would therefore be an inefficient use of resources, particularly staffing thousands of precincts throughout the state. Conducting the election by mail could conserve resources and potentially increase voter participation.

Position Statement

The current process for conducting a presidential primary in 2020 needs to be improved to ensure an efficient and positive voting experience for those who choose to participate. To do so, the City of Roseville supports:

- a) Exploring expanding the list of reimbursable items currently outlined in statute to ensure that local units of government are fully reimbursed for conducting the primary;**
The following expenses are eligible for reimbursement: preparation and printing of ballots; postage for absentee ballots; publication of the sample ballot; preparation of polling places in an amount not to exceed \$150 per polling place; preparation of electronic voting systems in an amount not to exceed \$100 per precinct; compensation for temporary staff or overtime payments; salaries of election judges; and compensation of county canvassing board members.
- b) Restricting the dissemination of party declaration information to the political parties only and not including it on the public information lists; and**
- c) Allowing the presidential primary to be conducted via mail balloting.**



REQUEST FOR COUNCIL DISCUSSION

Agenda Date: 10/15/2018

Agenda Item: 7.d

Department Approval

City Manager Approval

Item Description: Discuss the creation of provisions addressing the subdivision of large lots

1

2 COUNCIL INITIATED DISCUSSION

3 In early 2007, the City Council convened a Community Advisory Group (CAG) to study
4 Roseville’s regulations pertaining to subdivisions and lot size standards for single-family parcels.
5 To encourage community input, the CAG implemented a project web page, sent a survey to
6 residents neighboring recent lot split projects, held a Community Open House, and received
7 public comment on the draft recommendations. On May 14, 2007, the CAG presented its
8 recommendations to the City Council; the recommendations related to establishing minimum lot
9 sizes that would be greater than Roseville’s historical standards were as follows:

10 Recommendation B.1. The City Council should not determine lot size using a formula
11 (“sliding scale”) based on the relative sizes of surrounding residential lots. (Consensus
12 Recommendation)

13 Recommendation C.1. The City Council should designate three levels of single-family
14 residential zoning districts, which include the following districts: (Consensus
15 Recommendation)

- 16 • Small lot single-family residential, which would have standards less than the current
17 standards; *[This was initially implemented as a zoning overlay, which was eliminated*
18 *as part of the comprehensive zoning code update in 2010.]*
- 19 • Standard single-family residential, which would have the same standards as the
20 current R1 district; and
- 21 • Lakeshore single-family residential, which would have standards equal to that set
22 forward in the City’s Shoreland Zoning Ordinance. *[No action was needed to*
23 *implement this recommendation.]*

24 Recommendation C.2. The City Council should not create a large lot zoning district.
25 (Consensus Recommendation)

26 At the City Council’s August 20, 2007, work session, discussion of the CAG’s recommendations
27 included whether to implement a “sliding scale” or other approach to preserve areas of large lots.
28 Ultimately, staff was instructed to develop amendments to the zoning and subdivision codes to
29 implement several of the CAG’s recommendations, not including any regulations that would
30 increase existing minimum lot size standards. Although individual Councilmembers continued to
31 request further consideration of large lot provisions during subsequent City Council discussions
32 of proposed code amendments in November and December of that year, City Council Ordinance

33 1359 was adopted on January 28, 2008, to update the zoning and subdivision codes pursuant to
34 the CAG's recommendations.

35 Following the adoption of the 2030 Comprehensive Plan, Roseville began the process to
36 substantially rewrite the City's zoning code. This process also included discussions by the City
37 Council about creating "sliding scale" lot size standards, but the City Council chose to adopt the
38 zoning code update in December 2010 without provisions that would increase minimum lot size
39 standards.

40 The subject of creating a special provisions for large lots was raised by a Councilmember during
41 the consideration of a proposed minor subdivision in July 2016, but the City Council did not
42 direct staff to do so at that time. In September of that year, the City Council adopted an interim
43 ordinance prohibiting residential minor subdivisions until Roseville's subdivision code could be
44 updated. The subdivision code update was completed in July 2017, however the only adjustment
45 to lot sizes made in the subdivision code update was a revision to the standard (and method of
46 measuring) minimum width at the rear of a lot.

47 **RECOMMENDED ACTION**

48 **Discuss the creation of provisions addressing the subdivision of large lots and provide**
49 **direction to staff.**

Exhibits: none

Prepared by: Senior Planner Bryan Lloyd 651-792-7073 bryan.lloyd@cityofroseville.com





REQUEST FOR CITY COUNCIL DISCUSSION

Agenda Date: 10/15/2018
Agenda Item: 7.e

Department Approval

[Signature]

City Manager Approval

[Signature]

Item Description: Discuss the Requirements of §1011.10 Solar Energy Systems Outlined in City Code

COUNCIL INITIATED DISCUSSION

Solar panel systems are becoming more and more common with one of the most recent systems being installed at Corpus Christi Church located at 2131 Fairview Ave N. The City of Roseville issued 45 permits for solar installations over the past four years (2015 – 10, 2016 – 7, 2017 – 16, and 2018 - 12). Recently, City Councilmember McGehee expressed a desire to review and discuss how solar energy systems are regulated in City Code.

§1011.10 Solar Energy Systems in All Districts reads as follows:

- A. Solar energy systems are allowed as accessory uses in all zoning classifications where structures of any sort are allowed.
B. Active solar energy systems shall be allowed as accessory uses in all zoning classifications where structures of any sort are allowed, subject to certain requirements as set forth below:
1. Height: Active solar systems must meet the following height requirements:
a. Building- or roof- mounted solar energy systems shall not exceed the maximum allowed building height in any zoning district. For purposes for height measurement, solar energy systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other such mechanical devices.
b. Ground- or pole-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt.
2. Setback: Active solar energy systems must meet the accessory structure setback for the zoning district and primary land use associated with the lot on which the system is located.
a. Roof-mounted Systems: Consistent with the required building setback, the collector surface and mounting devices for roof-mounted solar systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure.
b. Ground-mounted Systems: Ground-mounted solar energy systems shall not extend into the required side- or rear-yard setback when oriented at minimum design tilt.

- 32 3. Visibility: Active solar energy systems shall be designed to blend into the architecture
33 of the building or be screened from routine view from public rights-of-way other than
34 alleys. The color of the solar collector is not required to be consistent with other
35 roofing materials.
- 36 a. Building-integrated Photovoltaic Systems: Building integrated photovoltaic
37 systems shall be allowed regardless of visibility, provided the building component
38 in which the system is integrated meets all required setback, land use, and
39 performance standards for the district in which the building is located.
- 40 b. Solar Energy Systems with Mounting Devices: Roof- or ground-mount solar
41 energy systems shall not be restricted if the system is not visible from the closest
42 edge of any public right-of-way other than an alley. Roof-mounted systems that
43 are visible from the nearest edge(s) of the street frontage right(s)-of-way shall be
44 reviewed and approved by Community Development staff to ensure the system
45 meets the wind load standards for the roof and there are not major aesthetic
46 impacts with the system to the surrounding properties.
- 47 c. Coverage: Roof- or building- mounted systems, excluding building-integrated
48 systems, shall not cover more than 80% of the south-facing or flat roof upon
49 which the panels are mounted, and shall be set back from the roof edge by a
50 minimum of 1 foot. The surface area of pole or ground mount systems shall not
51 exceed half the building footprint of the principal structure.
- 52 4. Approved Components: Electric solar energy system components must have a UL
53 listing.
- 54 5. Plan Approval Required: All solar energy systems shall require administrative plan
55 approval by the Community Development Department.
- 56 a. Applications: Plan application for solar energy systems shall be accompanied by
57 scaled horizontal and vertical (elevation) drawings. The drawings must show the
58 location of the system on the building, or on the property for a ground-mount
59 system, including the property lines.
- 60 b. Pitched-roof-mounted Systems; For all roof mounted systems other than a fl at
61 roof the elevation drawings shall show the highest finished slope of the solar
62 collector and the slope of the finished roof surface on which it is mounted.
- 63 c. Flat-roof-mounted Systems: For flat-roof applications a drawing shall be
64 submitted showing the distance to the roof edge and any parapets on the building
65 and shall identify the height of the building on the street frontage side, the shortest
66 distance of the system from the street frontage edge of the building, and the
67 highest finished height of the solar collector above the finished surface of the
68 roof.
- 69 6. Plan Approvals: Applications that meet the design requirements of this policy shall be
70 granted administrative approval by the Community Development Department and
71 shall not require Planning Commission review. Plan approval does not indicate
72 compliance with Building Code or Electric Code.
- 73 7. Compliance with Building Code: All active solar energy systems shall require
74 building permits.

- 75 8. Compliance with State Electric Code: All photovoltaic systems shall comply with the
76 Minnesota State Electric Code.
- 77 9. Utility Notification: No grid-intertie photovoltaic system shall be installed until
78 evidence has been given to the Community Development Department that the owner
79 has submitted notification to the utility company of the customer's intent to install an
80 interconnected customer owned generator. Off -grid systems are exempt from this
81 requirement.

82 **SUGGESTED CITY COUNCIL ACTION**

83 Review the current requirements, discuss, and direct the Planning Division accordingly regarding
84 any further analysis or desired amendments.

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