GRAND AVENUE NORDIC CENTER

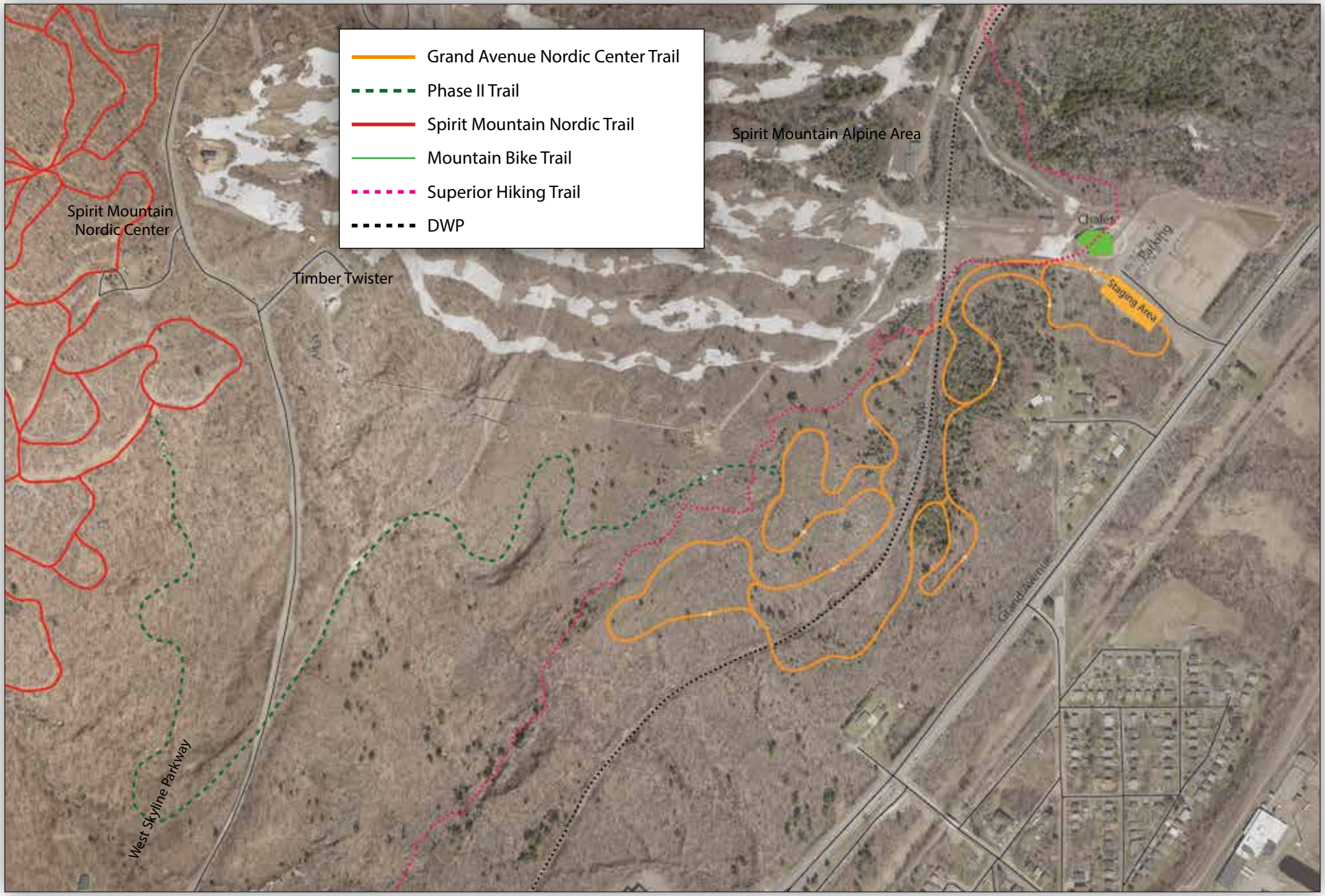
MINI-MASTER PLAN

DULUTH, MINNESOTA

APRIL 2015-DRAFT

DULUTH PARKS
Fun Places, Great Spaces!

Grand Avenue Nordic Center



Grand Avenue Nordic Center

Overview

The Grand Avenue Nordic Center will be a 3.3KM cross country ski trail with state-of-the-art snowmaking and lighting providing a dependable season-long venue for recreational skiing, youth activities and regional high school events. The location is adjacent to the Spirit Mountain alpine ski area, in West Duluth and next to their Grand Avenue Chalet. The project will become a regional center of activity for cross country skiing by extending the season early and late and provide skiing when there is inadequate natural snow. The lighting will provide the opportunity for early morning and night skiing. Phase II of the project will provide for a total of 5km of trail and connect the Grand Avenue Nordic Center to the Spirit Mountain Nordic Center by way of a two-way trail to the top of the mountain.

Classification – Special Recreational Feature Regional Park

Proposer/Implementing Agency(s)

The City of Duluth will be implementing this project. Spirit Mountain Recreation Area Authority will operate, manage and maintain the facility and the Duluth Cross Country Ski Club will provide fundraising, volunteer assistance and coordinate the programming of the activities.

Regional Context

The site is located within St. Louis County and in the western end of the City of Duluth just off of Grand Avenue at the base of the Spirit Mountain alpine ski area. The existing Spirit Mountain Grand Avenue Chalet with ample parking and accessible facilities will be the trailhead location and programing headquarters for activities.

There are other cross country ski trail options in the region but what makes this project important is the snowmaking. This will provide dependable snow for cross country skiing for the first time in the area. In addition, lighting the trails further allows recreation opportunities in the morning before sunrise and also into the evening and night. The closest trail with snowmaking is Mt. Itasca in Coleraine which is 80 miles distant. There are additionally several trails with snowmaking approximately 160 miles distant, in the Twin Cities area. *Map on page 6*

The City of Duluth currently maintains and grooms a total of 55 kilometers of cross country ski trails at 6 locations throughout the city but none with snowmaking and only one with lighting. *Map on page 7*

Site Information

The trail crosses parcels administered by the City of Duluth with a portion crossing land owned by Spirit Valley Land Company, LLC, which has agreed to provide a trail easement to the City of Duluth. There will be no land acquisition needed for this project. *Map on page 8*

The area along Grand Avenue is uniquely suited for a Nordic Center with snowmaking. Spirit Mountain is currently undertaking a project increasing their water and pumping capacity for snowmaking by drawing water directly from the St. Louis River replacing the current use of city treated water. This increased capacity will easily accommodate the water needs for making snow for the Grand Avenue Nordic Center trail. Skiers desire a trailhead building with accessible facilities that can be used for warming, meeting and staging activities and events. The Spirit Mountain Grand Avenue Chalet provides this missing amenity. There also is ample parking and easy access off of Grand Avenue along with DTA bus service. The western Duluth area currently has no cross country skiing option and this center would fill that need.

Vision, Trends, and Public Values

"Our goal is to become a regional center of activity for cross country skiers of all abilities by providing consistent season long skiing through snowmaking, lighting, and best practices grooming."

The region has a very strong outdoor winter sports heritage including; cross country and alpine skiing, hockey, snowmobiling, snowshoeing, ice fishing and winter mountain biking.

Cross country skiing is very popular and one of the healthiest winter activities for all ages and abilities. Adequate snow for grooming cross country ski trails is not a certainty, even in Duluth. Over the last several years we have seen winters with very few days of adequate snow for grooming. It is not

surprising to see why across the country and world, the increasing trend for cross country skiing centers is the addition of snowmaking.

Tourism is one of the important economic engines of the region. Duluth has poised itself to become a "trails destination" and the addition of this Nordic center will be an important winter component of that vision.

Public Input

Input on this plan will be collected from the public through the City of Duluth website and through public meetings arranged near the site of the project. Stakeholder focus group meetings have also been held with guidance from Duluth Cross Country Ski Club.

Support

At their March 23, 2015 meeting, the Duluth City Council passed a resolution supporting the continuation of planning and design of recreation and tourism projects in the St. Louis River Corridor, of which the Grand Avenue Nordic Center is one of the projects.

Anticipated Issues

Homeowners adjacent to the trail may have issues including; increased traffic to the area, noise associated with snowmaking and increased lighting early and late in the day through the winter months. These issues can be mitigated through scheduling and adjusting hours of operation. The proposed energy efficient lighting system would be motion activated so lights would be off when not being actively utilized. Increased traffic will be addressed with major work on Grand Avenue scheduled for summer 2015.

Existing mountain bike and hiking trails may be impacted by ski trail construction. Throughout the design process the mountain bike and hiking communities will be included in the planning and any conflict with existing trails will be minimized or mitigated to the satisfaction of the group.

Classification Criteria

The Grand Avenue Nordic Center will have easy access situated on Grand Avenue, (MN Highway 23) just 2 miles south of Interstate 35. Over 100,000 people live within a 13 mile radius of the Nordic Center which will be located 7 miles from the downtowns of both Duluth and Superior Wisconsin.

The trail will wind up and down through forested land along the St. Louis River valley, above and below the former Duluth, Winnipeg and Pacific Railway grade providing an aesthetic winter experience and magnificent views.

The plans calling for state-of-the-art snowmaking, grooming and lighting will provide the very best outdoor cross country experience available. For the portions of the winter when there is inadequate natural snow, the center will provide the only place with groomed skiing in the region.

Development Master Plan

A ski trail design consultant is being hired to work with local experts to produce the final design. Trail design best practices will be utilized with consideration given to making portions of the trail appropriate for use by sit-skiers, maximum 12% grade, and others with physical disabilities. A minimum 20 foot wide trail width will be maintained to allow both skate skiing and classical track. The trail surface will be flat and well drained to allow for summer activities and maintenance. Water lines will likely be above ground, being more cost effective due to the rocky character of the soil. Electrical receptacles and water hydrants will be located at intervals to allow snow being made on all portions of the trail. High efficient LED lighting will be designed to minimize light spillage and special motion sensors will be used to reduce electrical usage. Construction is planned for summer 2016. *Maps on page 8-11 and images on page 9.*

Ecological (natural/land resources) Stewardship Plan

An Environmental Assessment Worksheet (EAW) is currently in progress for the Spirit Mountain Recreation Area which includes the land that will be traversed by the Grand Avenue Nordic Center trail and will be included with this plan when available.

Research Plan

Keeping usage data and collecting user survey information when possible will be important in tracking trends. Since a trail pass will need to be purchased for use of the Nordic Center trail, accurate usage numbers will be collected and retained. When sign-up activities and events are held that information is routinely collected. Additional information will be collected, such as visitor origins, when established protocols are developed.

Implementation, Management and Sustainability Plan

Design Parameters

The design of the Nordic Center will follow guidelines for cross country ski trail development which is in practice through the International Ski Federation (FIS) and the International Paralympic Committee (IPC) homologation guidelines. Even though these organizations are primarily concerned with international level competitions, the principles they apply focus on safety and "skiability" or "flow" of ski courses which translate to a safe and enjoyable ski experience. Standard trail width will be 20 feet, which will allow for two skate skiers to pass and provide room for a single classical track. The one-way trail will be designed to provide ski terrain

for all levels of skier ability. A likely trail design will incorporate a core trail with cut-offs and additional higher difficulty loops so a variety of configurations can be explored depending on distance and difficulty interests. Of primary concern will be water runoff and trail sustainability. These factors will be a key component of construction methods and considerations. All required protection for the environment will be followed during construction.

Grooming

Grooming will be handled by the professional staff at Spirit Mountain using state-of-the-art equipment that will be donated as part of the fundraising by the Duluth Cross Country Ski Club. The expense and maintenance of the equipment will be the responsibility of Spirit Mountain. It is anticipated that the trail will be groomed on a daily basis throughout the ski season according to accepted grooming standards that will be implemented.

Snowmaking

The snowmaking system will be designed by a snowmaking consultant and engineered for maximum efficiency, ease of maintenance, seamless integration with the Spirit Mountain system and cost effectiveness. The operation and maintenance of the snowmaking system and distribution of snow will be the responsibility of the staff at Spirit Mountain. Snowmaking will begin as early as possible and at the same time as the Spirit Mountain alpine system. The goal is to cover the entire trail with 24-36 inches of snow depth. Once the entire trail has been covered with snow, the snowmakers will be moved and utilized on the Alpine hill. The snowmaking machines will be donated as part of the fundraising effort by the Duluth Cross Country Ski Club.

Project Cost

The total project cost is estimated to be nearly $1.5 million. *Project cost breakdown, page 12*

Funding

Funding needs will be met by $1,000,000 coming from the dedicated City of Duluth 1/2 and 1/2 Tax. An additional $250,000 will be raised by the city through state and federal grants with the remaining $250,000 raised by the Duluth Cross Country Ski Club.

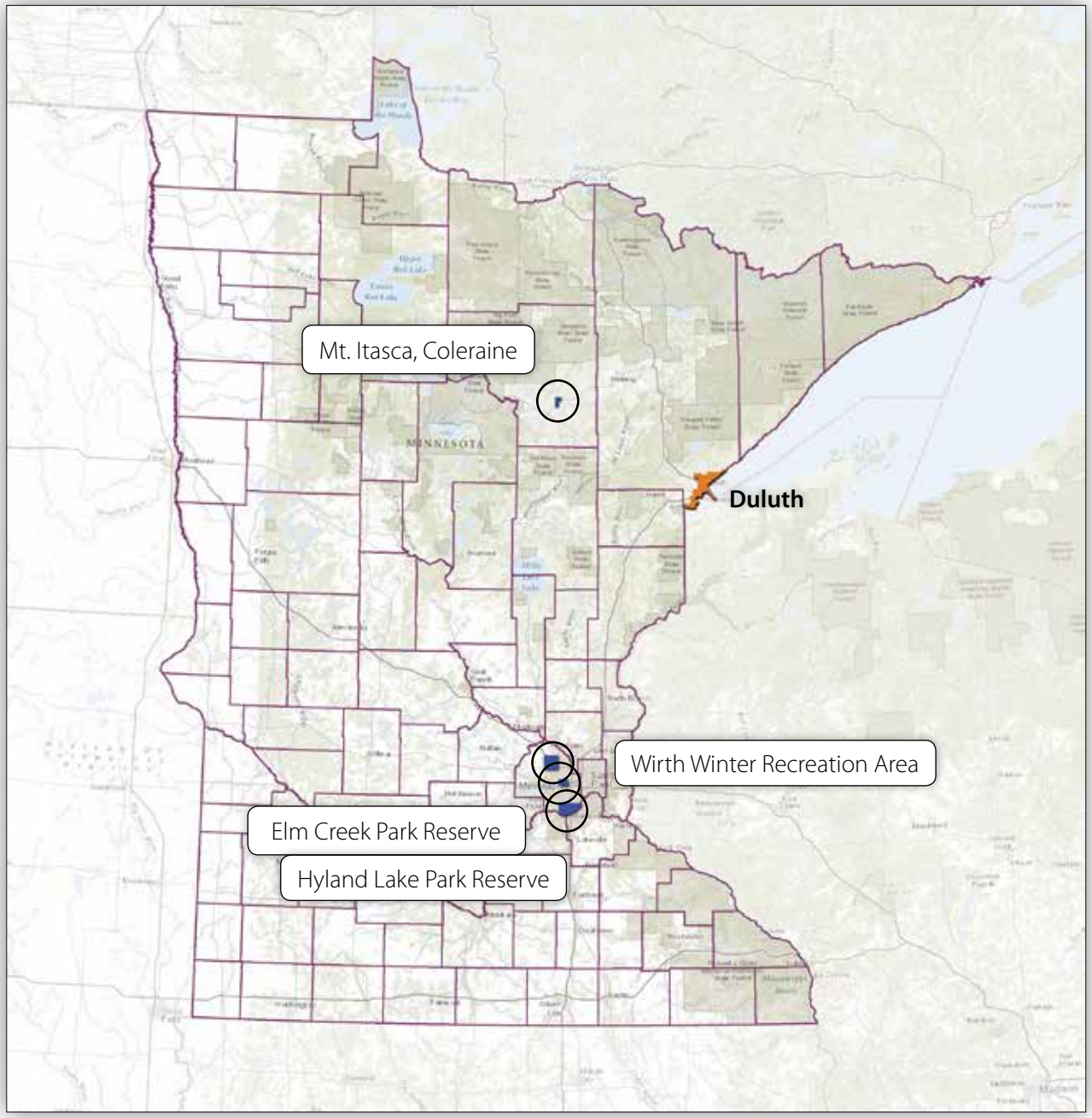
Operating Expenses

Spirit Mountain staff are putting together estimates for operating and maintenance expenses. These will include: electrical cost for snowmaking and lights, labor for snowmaking, grooming and chalet staff, fuel and maintenance for snow groomer and snowmaking machines.

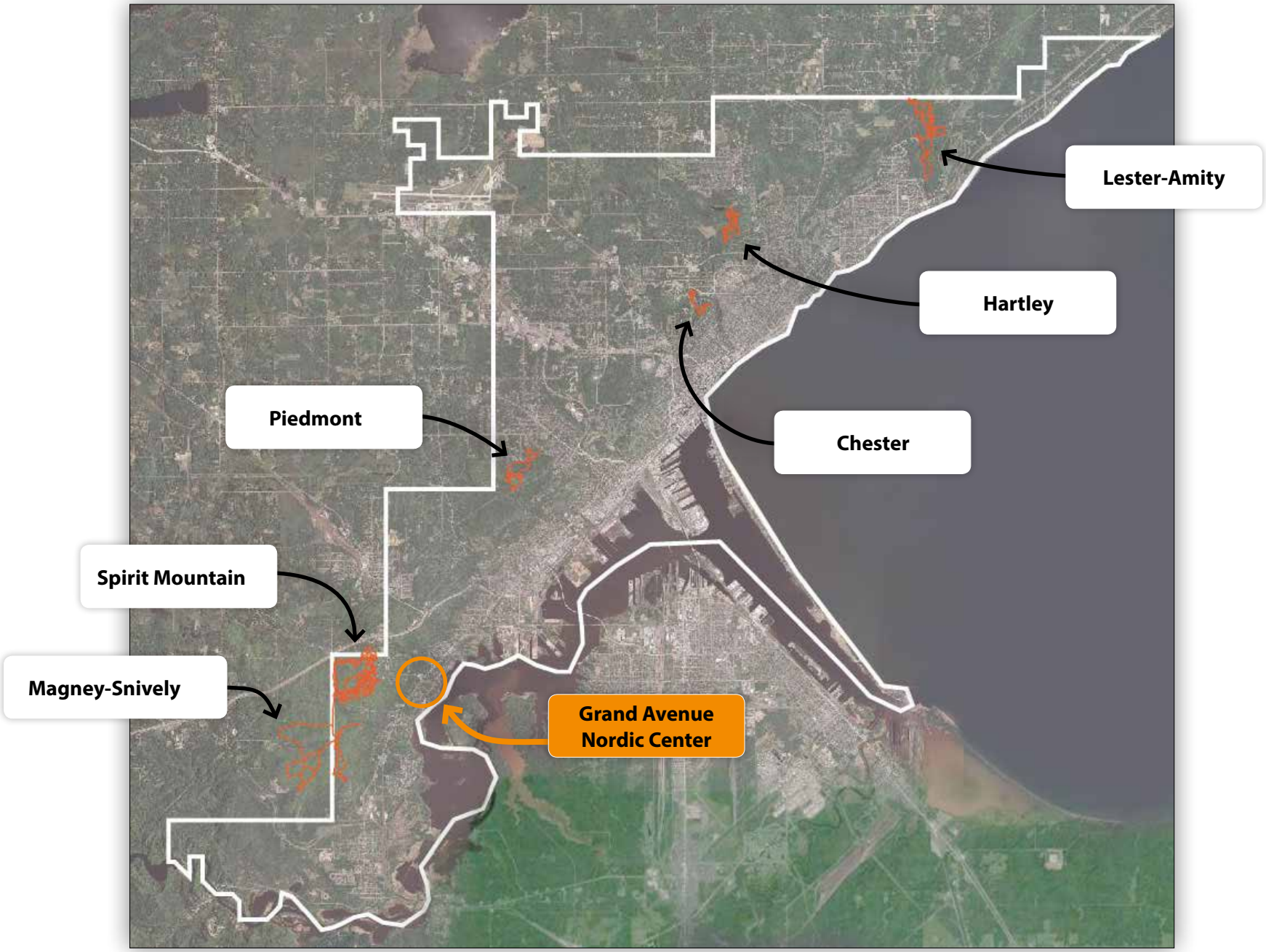
Annual Revenue

Annual revenue sources include: season pass sales to high school ski teams, individuals, families and daily ticket sales. Programs including; Kidski (youth learning), elementary and middle school learn-to-ski, Northland and Boys and Girls Clubs, Adaptive ski initiatives, Nordic North Stars, adult learn-to-ski and adult training. Events; High school races and Regional meet, DXC Nordic Spirit race, college race, Junior Olympic qualifier and weekly night races.

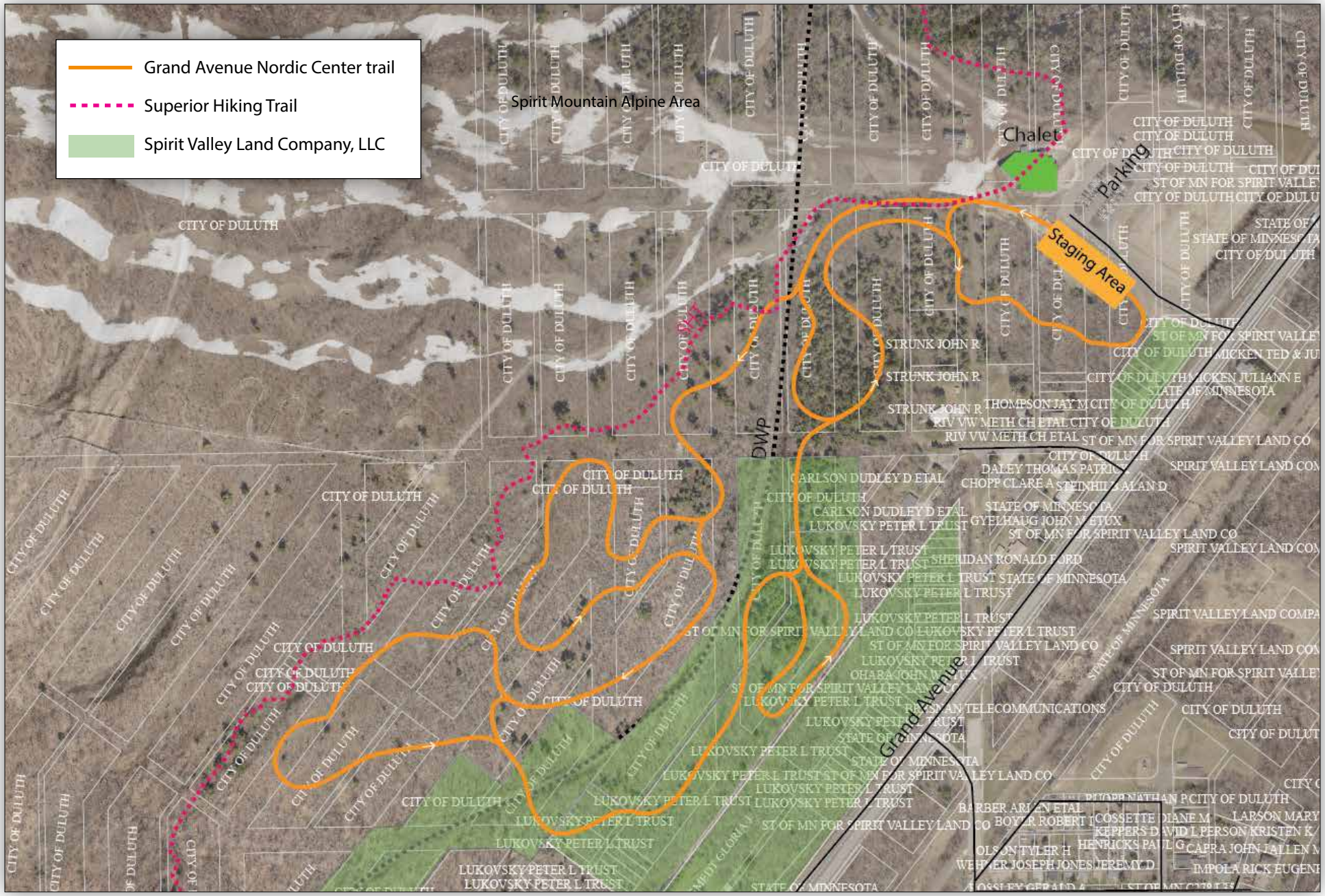
Cross Country Ski Trails with Snowmaking in Minnesota



City of Duluth Cross Country Ski Trails



Site Information



Site Images

Entrance sign at Grand Avenue.

Driveway from Grand Avenue to chalet, staging area on left.

Chalet from staging area.

Chalet from Ski hill, staging area to right.

Proposed trail corridor.

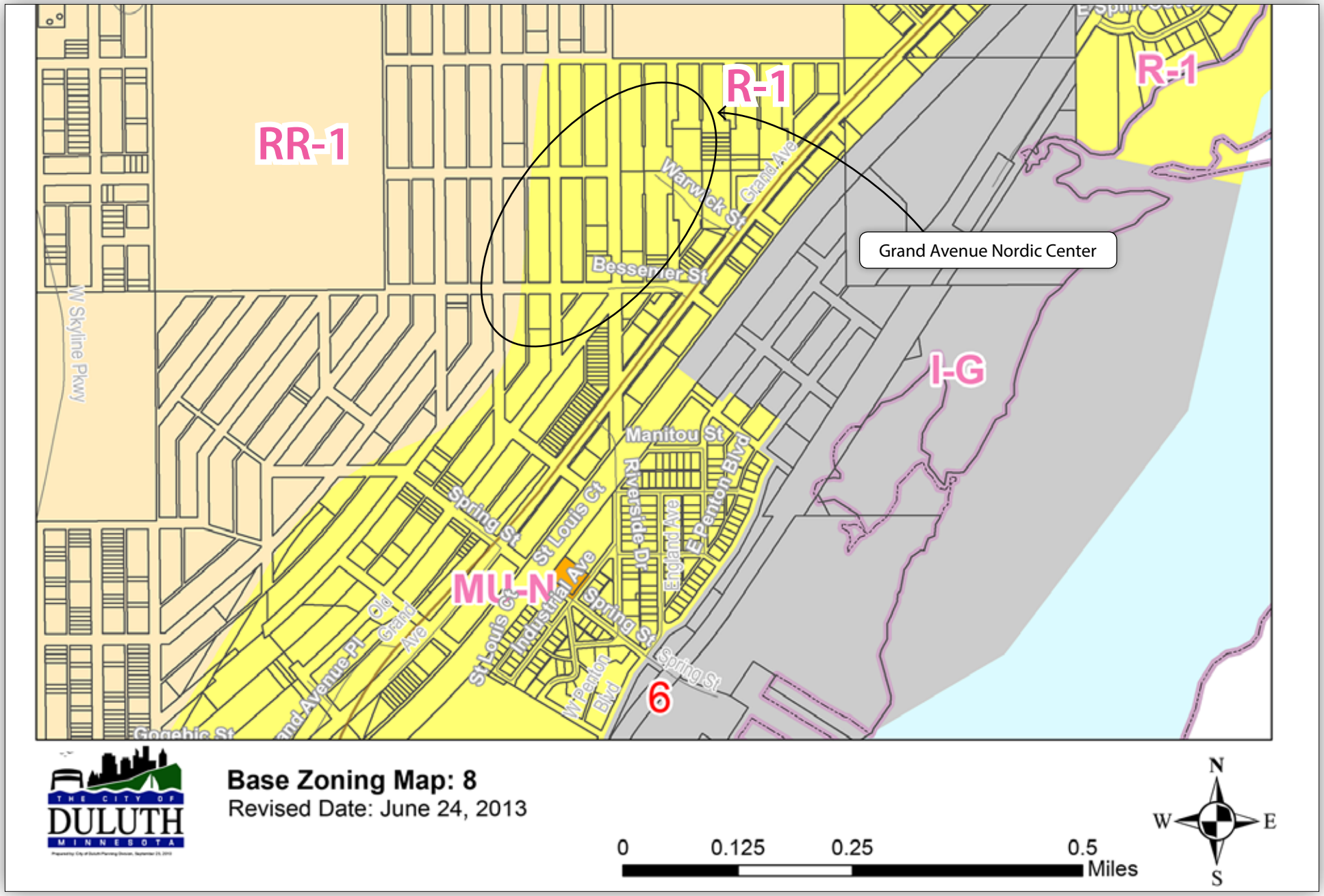
Proposed trail with St. Louis River valley overlook.

Proposed trail corridor, under large pine.

Proposed trail corridor below DWP.

Proposed trail corridor.

Zoning Map


RR-1
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R-1
I-G
MU-N
Grand Avenue Nordic Center
Warwick St
Grand Ave
Bessemer St
W Skyline Pkwy
Manitou St
Riverside Dr
E Penton Blvd
England Ave
Spring St
St Louis Ct
Industrial Ave
Old Grand Ave
W Penton Blvd
6
Base Zoning Map: 8
Revised Date: June 24, 2013
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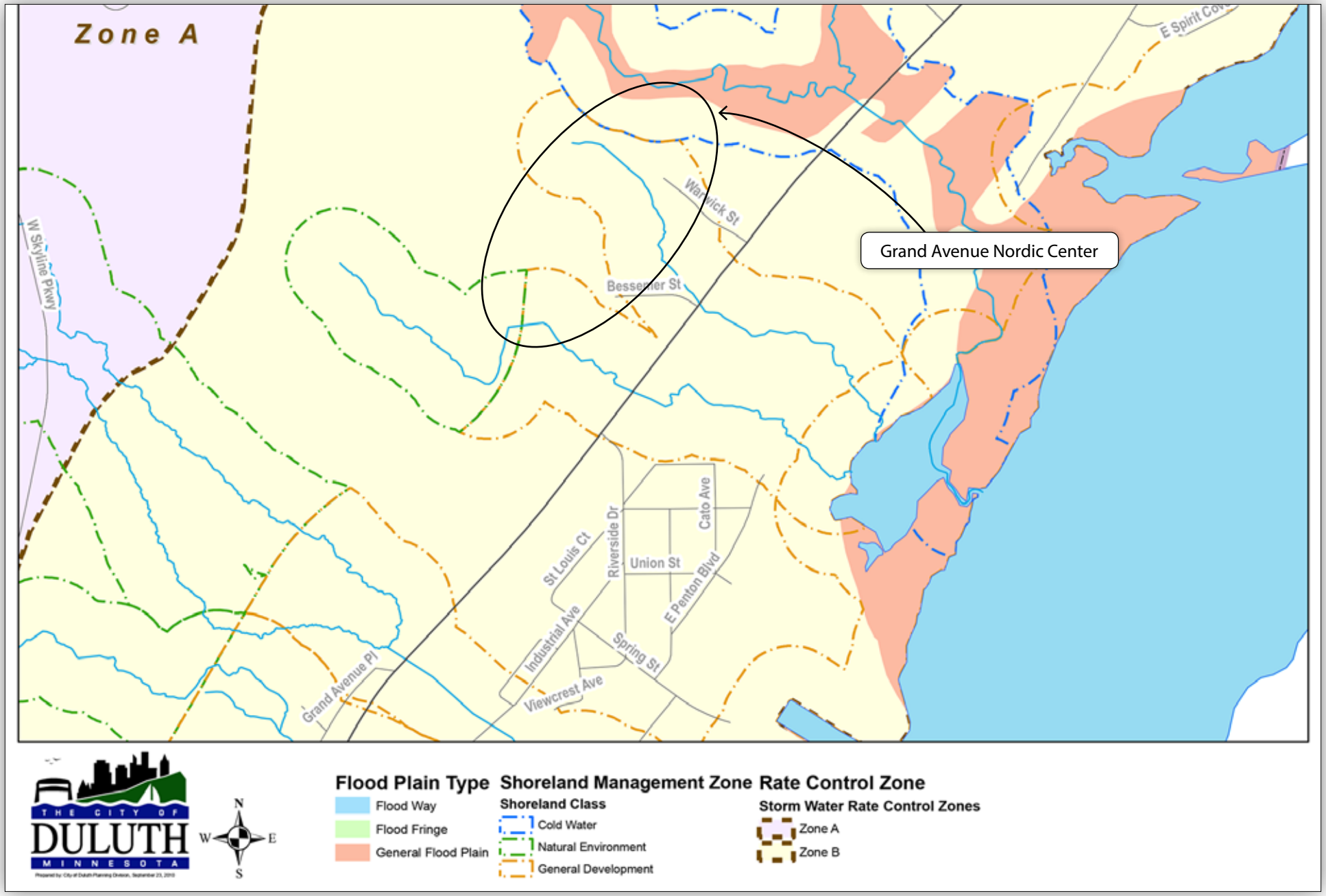
Flood Plain Map



Project Cost Budget

Spirit Mtn Project Cost Budget Nordic Trail	Project Budget Summary Jan of 2015	NOTES
Nordic Trail Lighting	$ 67,500	Based of 75 poles @ $900 each
Total Nordic Trail Lighting	$ 67,500	
Electrical Installation	$95,000	Includes all necessary electrical work
Total Electrical Installation	$95,000	
Civil Trail Construction	$180,000	Based on Jim Shoberg estimate for 3K course
Total Trail Construction	$180,000	
Snowmaking piping	$240,000	Based on Torrents estimate. 1/2 6' and 1/2 4" above ground
Total Trail Piping	$240,000	
Snow Making Equipment	$115,000	Torrents Polecat estimate
Hydrants and Pedestals	$60,000	Torrents estimate
Misc. Equipment	$50,000	
Total Equipment Estimate	$225,000	
Connecttion to Existing System	$185,000	Includes line from Trail back to 18" main New valve house at the connection point Compressor and misc controls needed
Total Cost to connect on 18" line	$185,000	
Sub Total	$992,500	
Contingency 20%	$198,500	20% contingency due to current level of design
Environmental/Permits	$35,000	Owner expenses (permits/ additional fees/etc.)
Professional Services 20%	$198,500	Based on current of unknowns
Total Soft cost and contingency	$432,000	
Project Estimated Budget	**$1,424,500**	

Submitted:

Gary Larson

Gary Larson Sports LLC

1963 Hartley Road

Duluth, Minnesota 55803

glhome64@gmail.com