



RIVERWEST DEVELOPMENT MU-P REGULATING PLAN

On Grand Avenue Corridor
Duluth, MN

City of Duluth, MN
Planning Department Submittal
August 31, 2022

<i>This plan has been reviewed and approved by the City of Duluth Land Use Supervisor.</i>	
	
Land Use Supervisor Signature	Date

Prepared for:
Spirit Valley Land Company LLC

LHB Project:150444



PERFORMANCE
DRIVEN DESIGN.

LHB Inc.
21 West Superior Street
Suite 500
Duluth, MN 55802

A. Development Land Use Plan

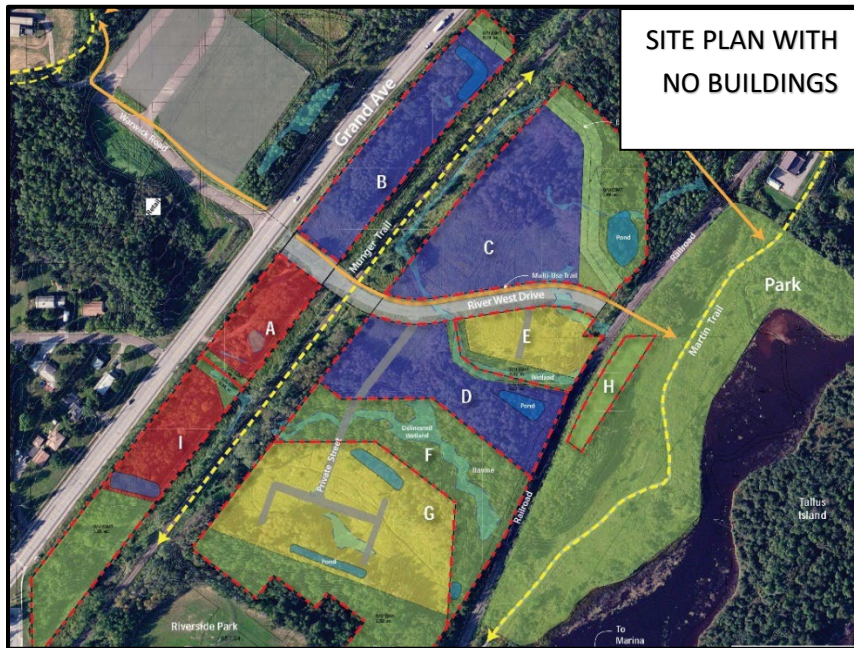
Below is a master plan illustrating the general layout of development areas and building parcels in relation to the natural features to remain, the proposed road and trails circulation systems, and proposed land use for each parcel. All regulation and code related items are included in the following pages.

Please note, if any code-related item is not specifically called out in the following pages, it is assumed that the code-related item will comply with the City of Duluth's UDC. All signage and site lighting will comply with the UDC standards. All landscaping, including parking lot landscaping, will also be in accordance with UDC standards.

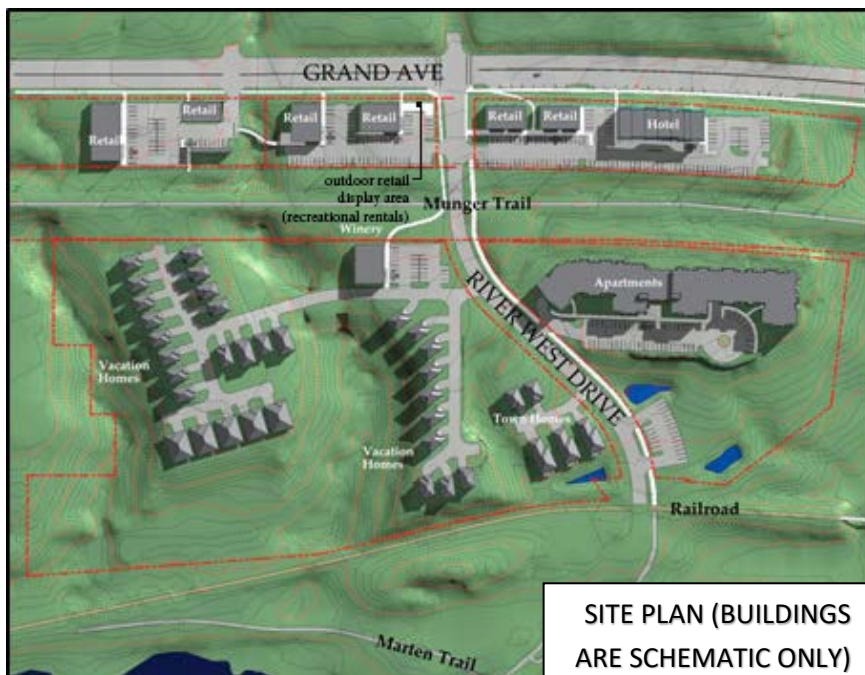


A1. Potential Site Plan Layout

Below are two site plan layouts illustrating the most recent potential development scheme. Each lot will need to go through a detailed site plan review so what is illustrated below is preliminary and subject to change.



Please note, the two access points into the development off of Grand Avenue shown below were already installed by MnDOT in 2021 as part of the Trunk Highway 23 roadway improvements project. Building placements are for schematic purposes only and will change during site plan review. Outdoor retail display area for recreational rentals, such as bikes and kayaks, are illustrated below for potential outdoor adventure retailer.



B. Dimensional Standards

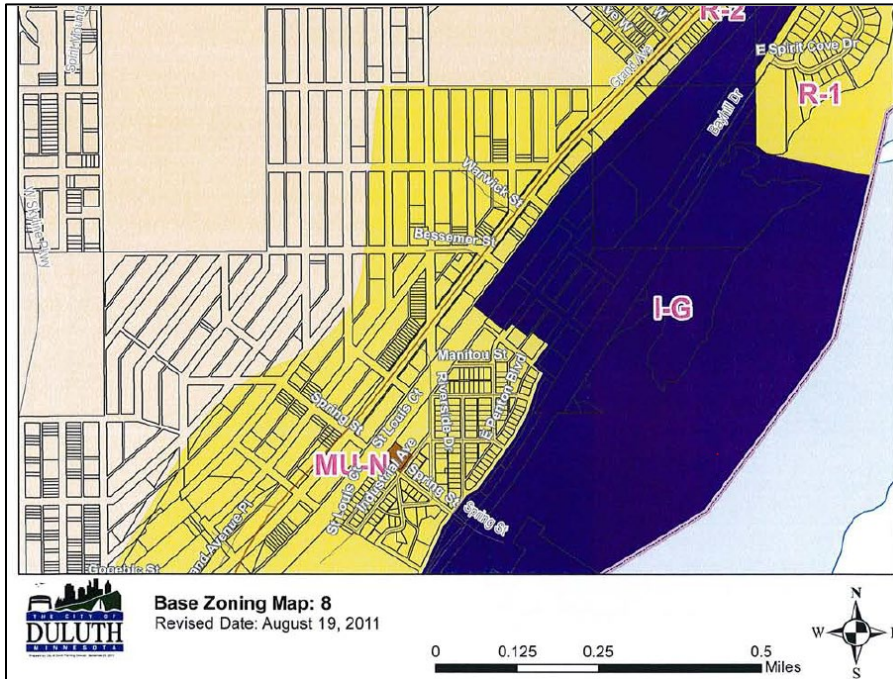
Below is a table illustrating parcel sizes, permitted uses, building setbacks, and maximum building heights for all proposed development parcels;

Parcel	Gross Acres	Open/ Green Space	Net Dev Acres	Permitted Uses <i>*See pages 13 & 14 for a list of permitted uses.</i>	Maximum Density		Max. Height	Building Setback	
					Type	Lot Standards		Type	Structure Setbacks min.
A	1.10 ac	0.08 ac	1.02 ac	Retail / Commercial	Retail	10,000 sf	25'	Front	0'
					Office	20,000 sf		Side	0'
B	2.43 ac	0.19 ac	2.24 ac	Mixed Use	Retail	25,000 sf	72'	Rear	0'
					Office	40,000 sf		Front	0'
					Multi-family	100 units		Side	0'
C	5.27 ac	1.84 ac	3.43 ac	Mixed Use	Retail	10,000 sf	72'	Rear	0'
					Multi-family	200 units		Front	0'
								Side	0'
D	2.70 ac	0.52 ac	2.18 ac	Mixed Use	Retail	10,000 sf	72'		
					One or two family	50 units			
					Multi-family	100 units		Side	0'
E	1.42 ac	0.32 ac	1.10 ac	Residential / Med Density	One or two family	4,000 sf	60'	Rear	0'
					Townhouse	2,200 sf		Front	20'
								Side	5'
F	2.91 ac	2.91 ac	0.0 ac	Open Space	N/A		N/A	N/A	
G	6.65 ac	2.32 ac	4.33 ac	Residential / Med Density	One-family	4,000 sf	72'	Front	20'
					Townhouse	2,200 sf		Side	5'
					Multi-family	200 units		Rear	10'
H	0.49 ac	0.49 ac	0.0 ac	Open Space / Stormwater Mgmt	Parking / Storage Staging / Temp Services		N/A	N/A	
I	2.67 ac	1.49 ac	1.18 ac	Retail / Commercial	Retail	10,000 sf	72'	Front	0'
					Office / Lodging	20,000 sf		Side	0'
					Multi-family	50 units		Rear	0'
ROW	1.16 ac	0.0 ac	1.16 ac	Public Street	N/A		N/A	N/A	
TOTAL	26.8 ac	10.16 ac	16.64 ac						

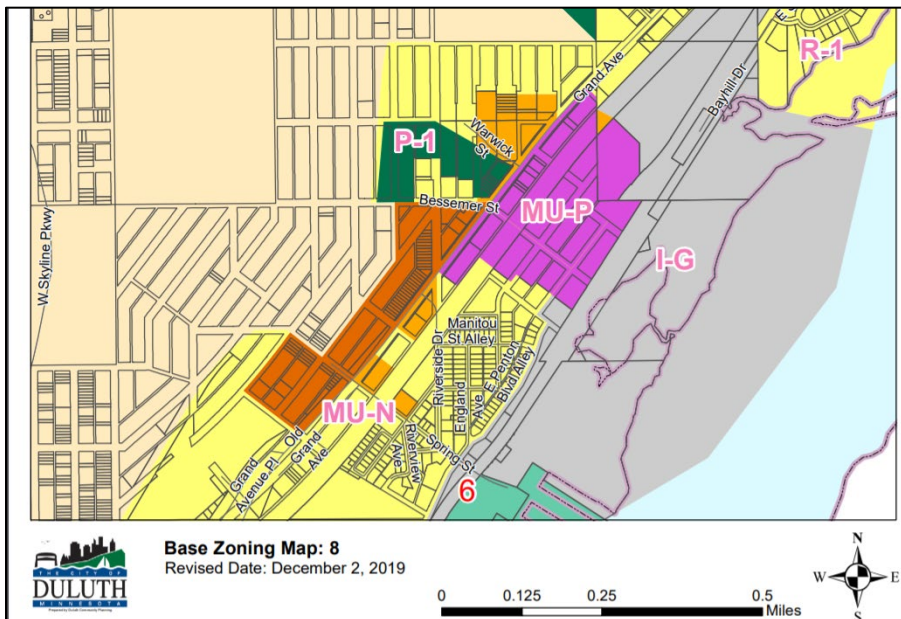
C. Previous Base Zone

Below is an exhibit showing the RiverWest parcels previous base zone district of I-G (Industrial -General) in dark blue, taken from the City's Unified Development Chapter Zoning Map 8, dated August 2011, as well as the current zone of MU-P (Mixed Use Planned) shown in purple and dated December 2019.

PREVIOUS ZONE



CURRENT ZONE



D. Traffic Impact Analysis

A traffic impact study was conducted for the RiverWest Development by Westwood, Inc. in April of 2014 to assess the need for a controlled intersection at Grand Avenue (TH 23) and the new drive into the development. The complete report can be found in the Appendix, while a summary of the traffic impact analysis findings, alternatives and recommendations are below:

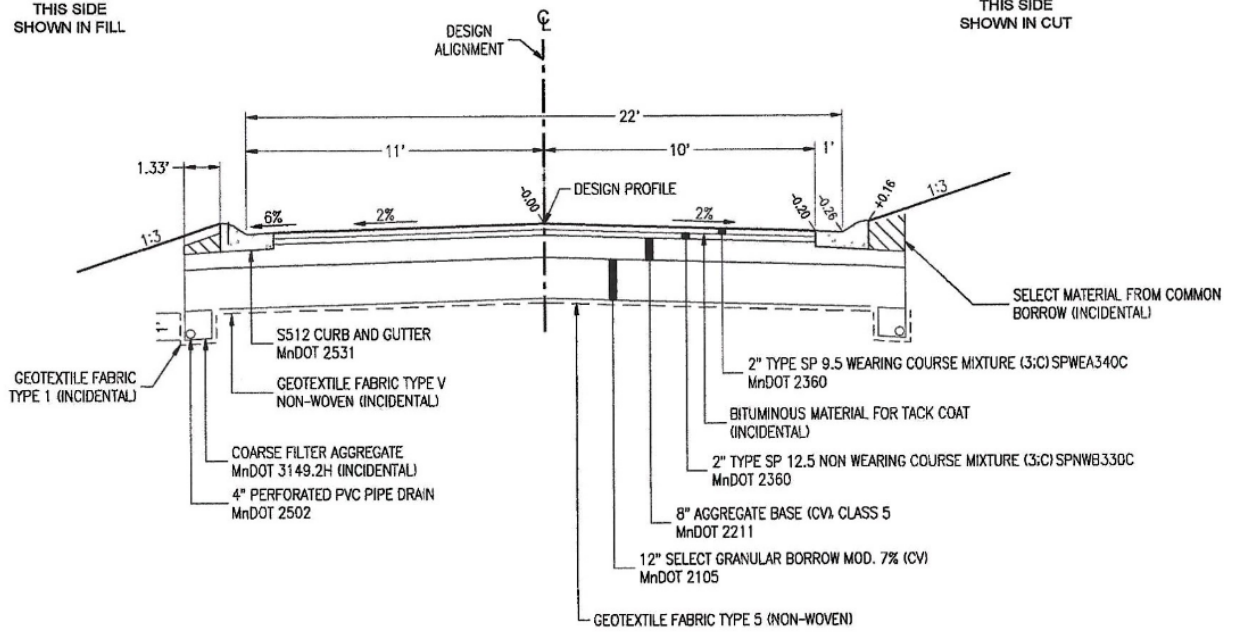
- Although development land uses and sizes have not been finalized, the general land use types and sizes can be accommodated from a traffic perspective.
- At full build-out, the total trip generation from the development is estimated to be 9,544 per day.
- Two site accesses from Grand Avenue have already been installed by MnDOT as part of the Trunk Highway 23 roadway improvement project. Below are additional details:
 - Four alternative development scenarios were looked for the site access intersection, and included: 1) two-way stop control 2) all-way stop control 3) traffic signal control and 4) round about control.
 - It was recommended that the MN TH 23 (Grand Avenue) and Warwick Street intersection be controlled by a traffic signal installation to allow for acceptable overall intersection operation and manageable queue lengths. The traffic signal is currently being installed and will accommodate changes in future traffic conditions and will be coordinated with other area interconnected signal systems for optimized flow along MN TH 23 (Grand Avenue). During winter months, the adjacent Spirit Mountain Ski Area will generate additional traffic and demand on the intersection, and the new controlled signalization will better accommodate the added traffic volumes better than other control devices and traffic mitigation strategies.
- In addition to the signalized intersection, pedestrian and bicycle at-grade safety crossings will be installed to cross the Willard Munger State Trail, as well as to access the Superior Hiking Trail and the DWP Trail. This will include pedestrian pavement striping and push buttons at the signalized intersection.

Private roads and driveways to access individual residential parcels will allow for two-way traffic, will consist of bituminous pavement with curb and gutter and will be designed to accommodate fire and safety vehicles. Road widths will be 20-24' wide, as illustrated on the next page. The typical cross section shown below is for Lot E's private driveway/road. The private road servicing parcels D, F and G has already been completed. A road association for each parcel development will be created with the individual homeowner's within that complex to ensure maintenance and upkeep of each parcel's private road(s) is addressed.

(PRIVATE)
 RIVER WEST LOT E DRIVE
 STA. 0+50.00 TO STA. 2+09.60

THIS SIDE
 SHOWN IN FILL

THIS SIDE
 SHOWN IN CUT



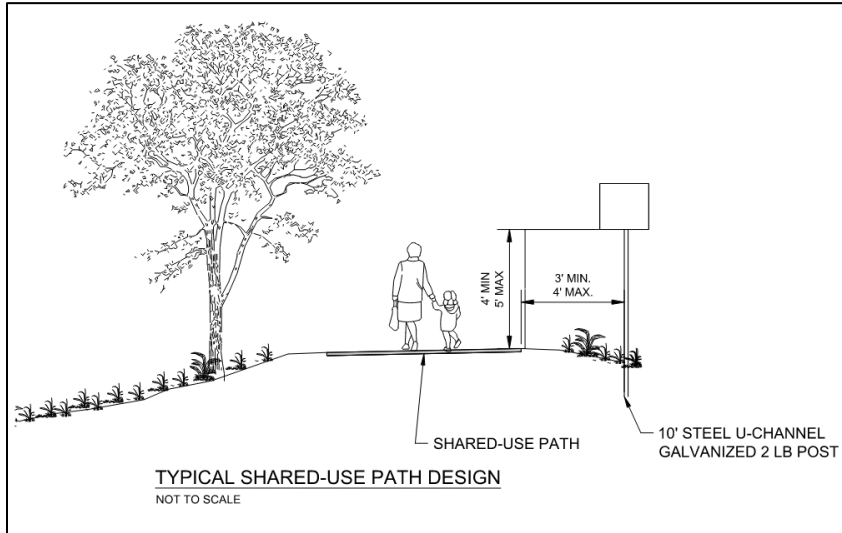
E. Circulation Plan

Below is a circulation plan overlaid on the general layout plan. The MU-P will include one new public road, named River West Drive and a few private drives providing access into individual parcels. The road will be 24' wide with two 12' lanes and will consist of asphalt pavement with concrete curb and gutter maintained by the City of Duluth.

Of particular note, the Willard Munger State Trail (Munger Trail) runs parallel to Grand Ave and intersects the development. This trail corridor will be an important circulation component connecting adjacent neighborhoods as well as offering a variety of trail networks to bike and pedestrian users.



In addition, a 10-foot wide multi-use trail runs along the north side of RiverWest Drive and will provide pedestrian and bike connection to Spirit Mountain Ski Area, the Marten Trail, The Superior Hiking Trail, The Munger Trail and the DWP Trail. The trail, which parallels the road and is separated by a grassed boulevard, consists of asphalt pavement with turfed shoulders. The trail is accessible to the general public and maintained by the City. Below is a typical cross section of the newly installed multi-use trail.



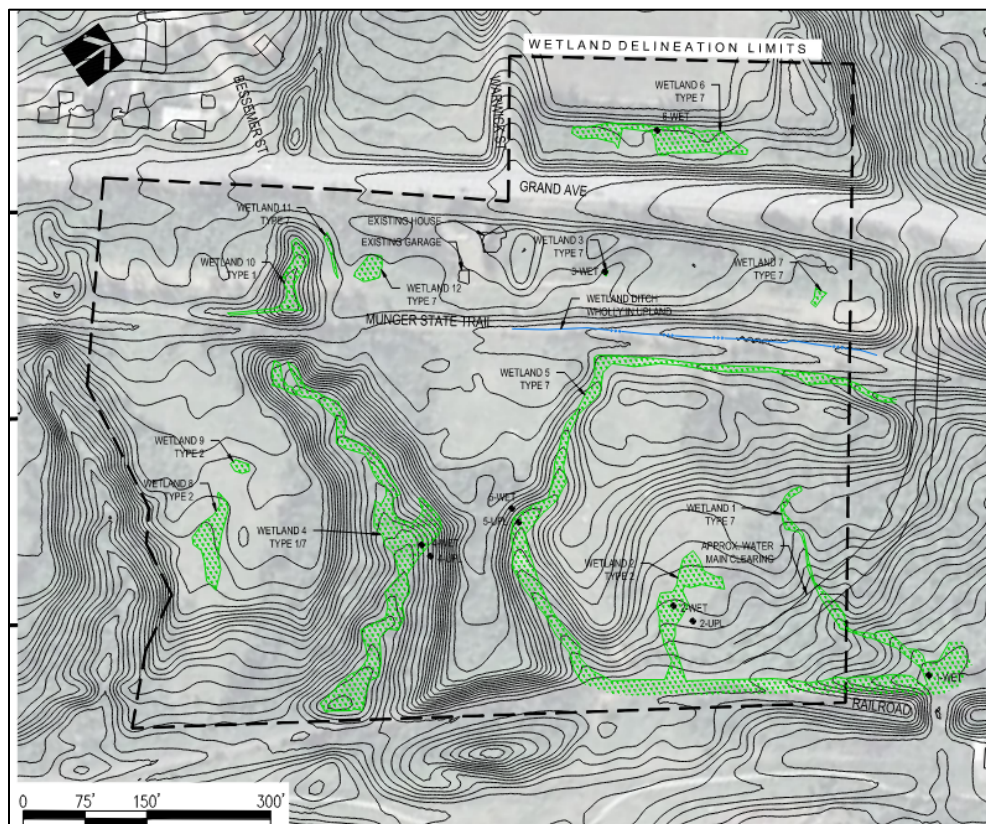
F. Natural Resources Inventory

Prior to a conceptual plan being created, a wetland delineation and comprehensive tree survey were conducted to mark natural resources within the site. With that information in hand, the overall concept plan was designed with sustainability in mind, as most wetlands have been avoided to the best extent possible and the preservation of mature vegetation and natural drainage ways have also been taken into consideration. The placement of future buildings have been sited to minimize earth-moving activities and take advantage of certain viewsheds to the river, as well as climatic conditions such as western exposures for daylighting and solar heat gain.

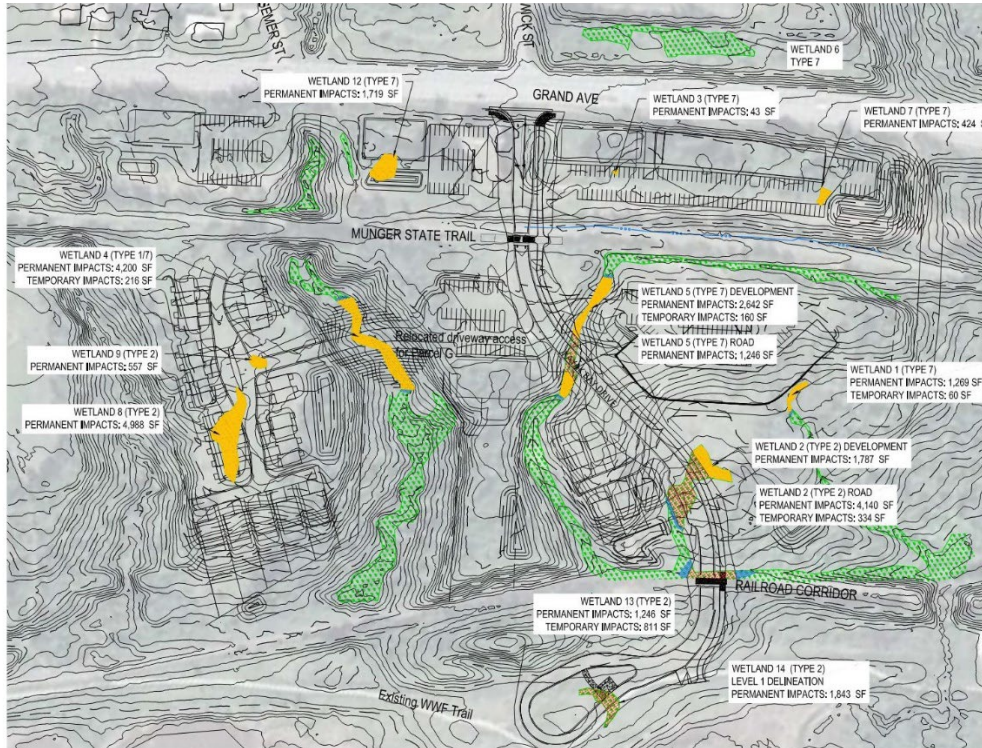
Approximately 16.64 acres (or 62%) of the MU-P property are planned for mixed-use development out of the total 26.80 acres of land. The balance of the site, which is approximately 10.16 acres (or 38%) will remain in its natural condition and/or will be designated as open green space, and consists of mature wooded vegetation and wetlands on varied topography. The majority of the ravines and naturally occurring wetlands will be undisturbed, allowing the diverse landscape to continue to act as a rich ecological feature benefiting local wildlife, and the surrounding environment.

Below is a wetland delineation exhibit showing the natural drainage ways that drain from Grand Avenue towards the St. Louis River. The majority of these wetlands and drainage ways will be preserved in the RiverWest development project as evidenced on the Wetland Impacts Exhibit on the following page.

WETLAND DELINEATION EXHIBIT



WETLAND IMPACTS EXHIBIT



SITE PLAN FOR WETLAND IMPACTS



- PERMANENT WETLAND IMPACTS FOR DEVELOPMENT = 17,629 SF
- PERMANENT WETLAND IMPACTS FOR PUBLIC ROAD = 8,475 SF
- TEMPORARY WETLAND IMPACTS (COMBINED OVERALL) = 1,581 SF

As part of the project requirements, the development must contract with a certified professional to perform post road/grading site inspection to verify that wetland impacts and tree preservations were done in accordance with the proposed plans. In accordance with these requirements, the public road that was already installed by the City, was built per plan and field inspected by MSA Professional Services, Inc, and the mass grading and utility work that occurred as part of the site preparation was done per plan and inspected by LHB during the 2021 construction season.

G. Common Open Space

The RiverWest MU-P Regulating Plan strives to maximize the natural beauty and ecological features of the site while also providing new public amenities to the St. Louis River Corridor community and nearby neighborhoods. Public access will be allowed but will be limited to access via trail and/or the public road. The areas shown in green on the concept plan are considered common open space and total 38% of the total land area (this only includes areas outside of the right-of-ways). Protection and maintenance of the open spaces will be the responsibility of the private landowners.

Lot A (1.10 ac) = Total common open space is **.08 acres (or 7%)**

Lot B (2.43 ac) = Total common open space is **.19 acres (or 7.8%)**

Lot C (5.27 ac) = Total common open space is **1.84 acres (or 35%)**

Lot D (2.70 ac) = Total common open space is **.52 acres (or 19%)**

Lot E (1.42 ac) = Total common open space is **.32 acres (or 23%)**

Lot F (2.91 ac) = Total common open space is **2.91 acres (or 100%)**

**includes stormwater pond for adjacent parcels D & G*

Lot G (6.65 ac) = Total common open space is **2.32 acres (or 35%)**

Lot H (0.49 ac) = Total common open space is **.49 acres (or 100%)**

**includes storage /parking/temporary service areas*

Lot I (2.67 ac) = Total common open space is **1.49 acres (or 56%)**

H. Permitted and Special Uses

Below is a list of permitted uses within the MU-P by Parcel:

Parcels A & I (Retail/Commercial)

- Dwelling: townhouse, multi-family, live-work, single-family
- Bank
- Office
- Medical or Dental Clinic
- Lodging (Hotel or Motel)
- Restaurant (less than 5,000 sf with or without drive-thru)
- Restaurant (5,000 sf or more with or without drive-thru)
- Retail store less than 10,000 sf
- Filling Station (with or without convenience store)
- Garden Material Sales
- Personal Services or Repair, large more than 10,000 sf
- Personal Services or Repair, small less than 10,000 sf
- Event Center
- Preschool
- Parking Lot
- Personal Care

Parcels B, C, & D (Mixed-Use)

- Dwelling: townhouse, multi-family, live-work, single-family
- Bank
- Office
- Medical or Dental Clinic
- Lodging (Hotel or Motel)
- Vacation Dwelling Community*
- Restaurant (less than 5,000 sf with or without drive-thru)
- Restaurant (5,000 sf or more with or without drive-thru)
- Retail store less than 10,000 sf
- Filling Station (with or without convenience store)
- Garden Material Sales
- Winery/Brewery
- Personal Services or Repair, large more than 10,000 sf
- Personal Services or Repair, small less than 10,000 sf
- Event Center
- Preschool
- Parking Lot
- Personal Care

Parcels E & G (Residential, Medium Density)

- Dwelling: townhouse, multi-family, live-work, single-family
- Lodging (hotel or motel)
- Vacation Dwelling Community*
- Park, playground or forest reserve
- Agriculture, community garden
- Community club or lodge (private)

Parcels F

- Common Open Space & Stormwater Management (for adjacent sites D &G)

Parcel H

- Parking
- Storage
- Temporary Services (including staging areas, temporary restrooms)

**A 'Vacation Dwelling Community' as used herein means a group of homes or other dwelling units available for short or long-term rental, serviced or managed by an on-site office within the RiverWest Community, and professionally maintained in accordance with, and as a part of RiverWest Vacation Homes LLC, or other assigned qualified entity.*

I. Maximum Density

Please refer to the Dimensional Standards & Lot Allocation table on page 3 for maximum densities, minimum lot standards, and maximum square footage for nonresidential land uses.

J. Utility Plan

Please refer to the City approved utility plans in the appendix for the detailed design of the utility components. Private and public utilities to service proposed residents and buildings have not been designed yet but will be reviewed and approved through the city planning and city permitting process.

Public utilities, including water, sanitary and storm sewer will be paid for and installed under the public road and within the public right-of-way of River West Drive and then will be turned over to be maintained by the City of Duluth, Public Works & Engineering Department through a Memorandum of Agreement (MOA). Public utilities will also be installed under the private roads within the development and maintained by the City as well. Private utility hook-ups extending from the City mainlines will be installed for each lot and will be designed to meet City engineering standards. Each private utility will be maintained and paid for by the private landowner.

See page 14 for additional information on storm water management.

K. Buffer/Transition Plan

The existing Munger Trail corridor provides a vegetative buffer between the proposed land uses along Grand Avenue (parcels A, B, and I) and the proposed land uses situated deeper into the development (parcels C, D, and G). The trail corridor parcel and land is managed by the Department of Natural Resources (DNR) and is 150 feet in width with mature vegetation on both sides of the paved trail. The below exhibits outlines the 150 foot width buffer that will be retained throughout the entire development.

In addition, the undisturbed green space along the wooded ravine in parcel F, will provide a dense vegetation buffer between parcels G and D.

The additional buffering or transitioning between parcels C, D, and E land uses of different intensities will be attained with the vegetation provided in each specific site plan design. The buffering between uses will follow section 50-25.5 of the Duluth UDC.



L. Stormwater Management Design Principles

Please refer to the stormwater plans in the appendix for detailed design of the stormwater components on site.

The RiverWest Development project will disturb 3.5 acres of land, of which 1.65 acres will be new impervious surface and will require stormwater treatment.

Storm water runoff from the new roadway will be captured by curb and gutter and directed to storm water storage basins via a storm sewer system. Storm water will collect and be treated via various filtration and sedimentation methods before being discharged to the St. Louis River. The project's receiving waters are Knowlton Creek and the St. Louis River; storm water will outlet at the required water quality and peak rate controls allowed. A summary of the stormwater requirements are below:

Stormwater Design Requirements

Requirement	Compliance	Comments / Compliance Method
No net increase of TSS/TP from predevelopment conditions.	Yes	This is in compliance by biofiltrating of rainfall from the new impervious.
Peak Discharge Rate Control-Discharging 90% or less of the 2yr storm event and 75% or less of the 10yr & 100yr storm events.	Yes	Peak discharges were controlled by limiting the amount of impervious surfaces and the underground storage facility.
Runoff Volume Control	Yes	Runoff volumes were reduced by the maximum extent practicable by the use of structural and non-structural BMP's

M. Off-Street Parking

Off-street parking will be provided in surface lots wherever there is a building, in front of hotel/restaurants, and/or in designated parking areas along private drives at residential units. In addition, parallel parking will be allowed on one side of RiverWest Drive, and on both sides where permitted.

Off-street parking requirements will comply with UDC standards. Shared parking is permissible within the UDC limits.

N. Public Amenities

A publicly accessible trail network system will be included in the MU-P, as well as common open space areas. See section D, Circulation Plan for location of the trail and see Section G, Common Open Space for the location of the recreational passive spaces.

A trail pathway will run parallel to RiverWest Drive, connecting up with the existing Munger and Marten Trail corridors to provide new connections to the adjoining neighborhoods and streets that have not otherwise existed before.

The MU-P district will also be providing a public benefit by conserving naturally sensitive areas, such as the wooded ravine and adjacent wetlands and will allow new public access to acres of green space that has previously been privately owned. Adjacent to the development is Knowlton Creek and Spirit Mountain, both which have a series of informal trails for exploration and discovery. Over time, additional footpaths and/or walking trails will develop naturally and will likely link up to these natural areas. Green space provides many natural benefits to the public; they consist of mature trees and shrubs, are home to wildlife, and act as buffers from wind and adjacent developed areas.

In addition to new accessible green space, another public amenity will be new panoramic views overlooking the St. Louis River. With the development perched on a sloped hill, the views down and out into the river will offer fresh perspectives that were not previously seen from Grand Ave. All new buildings, particularly any new residential, apartment or hotel complexes will be strategically sited within the development to maximize window views to the river looking eastward. Units with multiple stories will allow the viewer to take in sweeping vistas of the river landscape from a higher level.

Providing the opportunity to experience nature has been shown to be beneficial to human health and wellness by reducing stress, improving general mood and attitude, increase mental health, improve



Figure 1: Example of paved trail with signage



Figure 2: Example of common open space with informal footpath



Figure 3: View looking East to St. Louis River

mindfulness and creativity. It will also provide homeowners a chance to connect with each other as the presence of trees and landscape has been shown to promote community connections. Lastly, views of open space are linked to greater perceptions of well-being, neighborhood satisfaction and safety.

O. Architectural Building Standards

For all proposed buildings in the MU-P district, detailed architectural drawings illustrating building type and design features will need to be submitted to the Land Use Supervisor for review and approval to ensure they meet the visual intent of the district. Proposed buildings will comply with the UDC Chapter 50.30 to implement building design standards. All landscaping, including parking lot landscaping will also meet UDC standards.

There are no buildings designed to date, however, allowable exterior building materials include brick, stone, wood clapboard, hardboard, or vinyl siding with complimentary color choices. The use of concrete block and metal on building exteriors shall be limited. The MU-P desires durable construction techniques that are ecologically sensitive while also promoting visual harmony throughout the neighborhood and will need to be submitted to the Land Use Supervisor for review and approval.

Building design:

1. All sides of a structure open to view by the public, whether viewed from public or private property, shall display a similar level of quality and architectural interest.
2. Buildings should reduce the scale of longer facades, long and straight roof lines, or long horizontal expressions by use of divisions or breaks in materials, or by use of the following design strategies:
 - Window bays, gables, roof dormers, covered porches, and/or balconies
 - Variations in roof lines, roof pitches, or parapet detailing
 - Building setbacks or articulation of the façade
 - Recessed entries
 - Use of pillars, pilasters, or posts
3. To the maximum extent feasible, parking garages and/or other ancillary structures shall be designed so as to not detract from, or dominate, the architecture of the building and site, and with low visibility from the public street. All detached garages shall be located in area that does not block the street view and shall be designed to match the quality and appearance of the principal building.
4. Functional elements incidental to multi-family units, such as gutters, dish antennas, solar panels, or A/C units, shall be designed and placed so as to not detract from, or dominate, the architecture of the building and be integrated in a non-obstrusive way.
5. All rooftop or ground-mounted mechanical equipment and exterior trash storage areas shall be enclosed with materials with the principal building. Low profile, self-contained mechanical units which blend in with the building architecture may be allowed.

P. Phasing Plan

RiverWest Development will take shape over a 5-10 year timeframe. Phasing of the development is anticipated to be as follows:

PHASE 1: (2018- 2021)

Final Design + Construction of Public Road and Utilities Infrastructure

PHASE 2: (2022-2024)

Construction of mixed-use buildings + additional site development are subject to timing of specific development on desired lots, but will likely take place adjacent to in-place infrastructure along Grand Avenue and/or RiverWest Drive first.

PHASE 3: (2025 and beyond)

Continuation of individual parcel development.

Q. Streetscape

For all proposed buildings that interface with a public street and/or pedestrian spaces, cross sections that demonstrate the proportions of buildings and the relationship between the proposed buildings, pedestrian spaces and the streetscape will need to be submitted to the Land Use Supervisor for review and approval to ensure that spatial dimensions and desired visual elements that form the street's character are being adhered to. Please note, streetscape elements on private streets will be subject to the Homeowner's Association rules and regulations and will be paid for by adjacent property owners or the development on a stipulated basis.

Suburban design best practices, such as siting buildings so that primary entrances are visible or are marked with signage from the street and accessible from parking areas, terracing retaining walls to minimize impacts to streets, providing curb ramps and marked crosswalks for pedestrian safety, and planting street trees for shade and aesthetic beauty, will be incorporated into the site designs. In addition, site furnishings, such as bike racks, trash receptacles and outdoor seating/benches will be considered as well, depending on the types of buildings proposed.

Below are examples of typical cross sections showing spatial dimensions and street character for residential front yards, sidewalks, tree lined boulevards, pedestrian lighting, two-way traffic, on-street parking and commercial uses with off-street parking.

Specific widths for drive lanes, parking areas and sidewalks will be determined during detailed site plan design but will approximately be:

- ±11-12' drive lanes
- 20'-24' private driveway/roads
- ±9' parking stalls
- ±5' minimum sidewalks
- Frontyard setbacks to be determined by building type and setbacks listed in the dimensional standards table on page 4

See next page for typical streetscape cross sections.

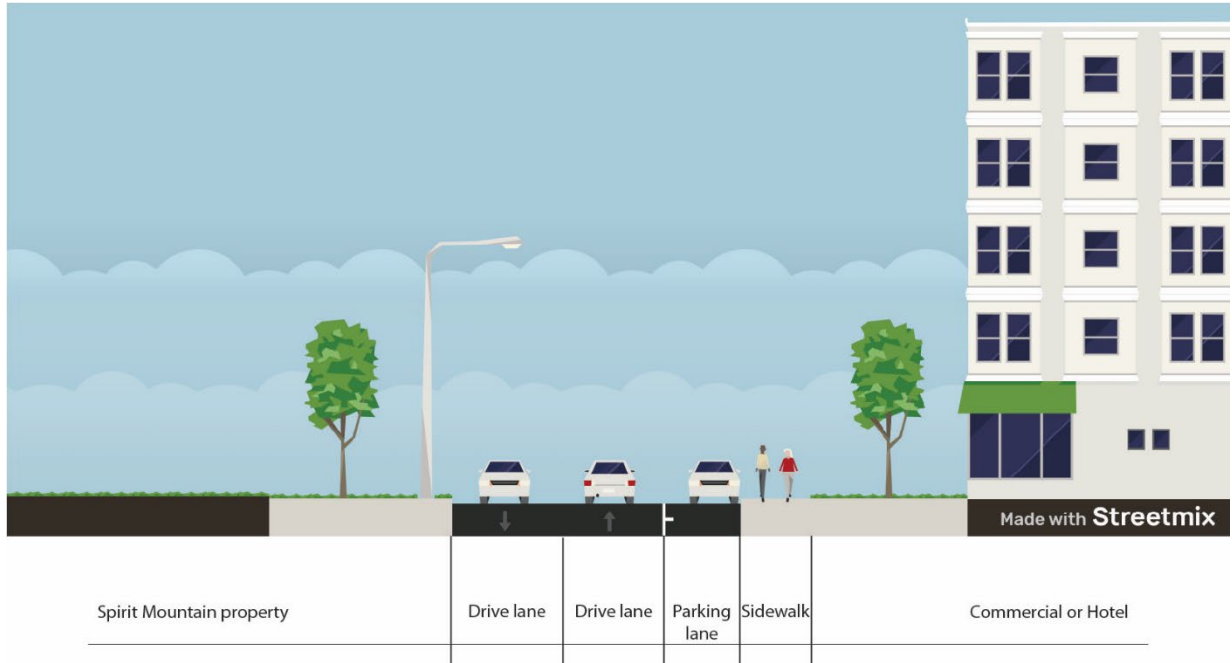


Figure 4: Example of Commercial Streetscape on public road.

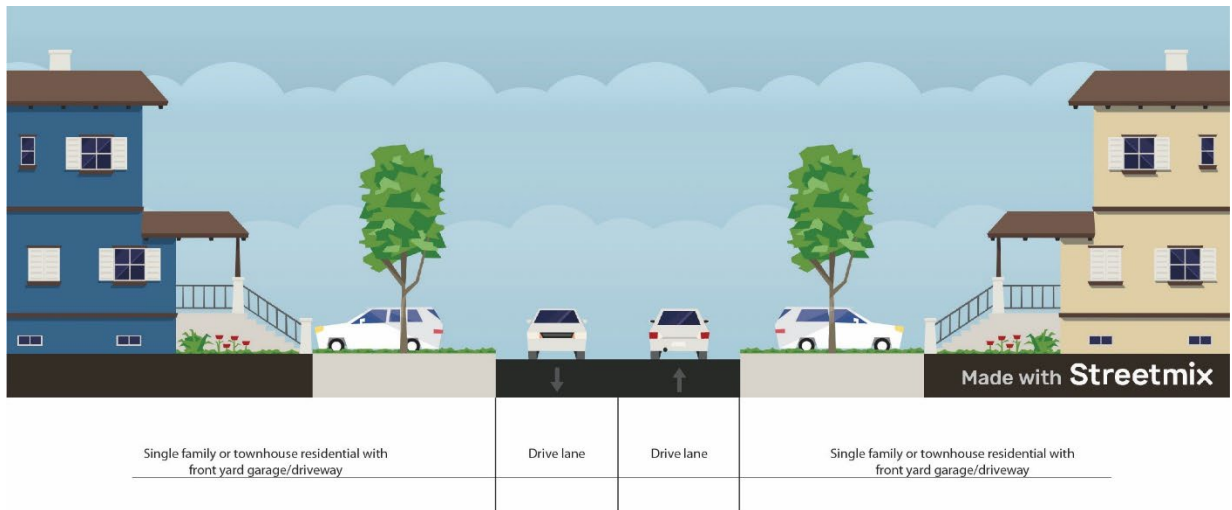


Figure 4: Example of Residential Streetscape on private driveway/road.