Minnesota River Valley

Natural and Cultural Systems Plan

CITY OF BLOOMINGTON MINNESOTA

City Council

August 6, 2018

Credits

- **Sustainability Commission & Volunteers**

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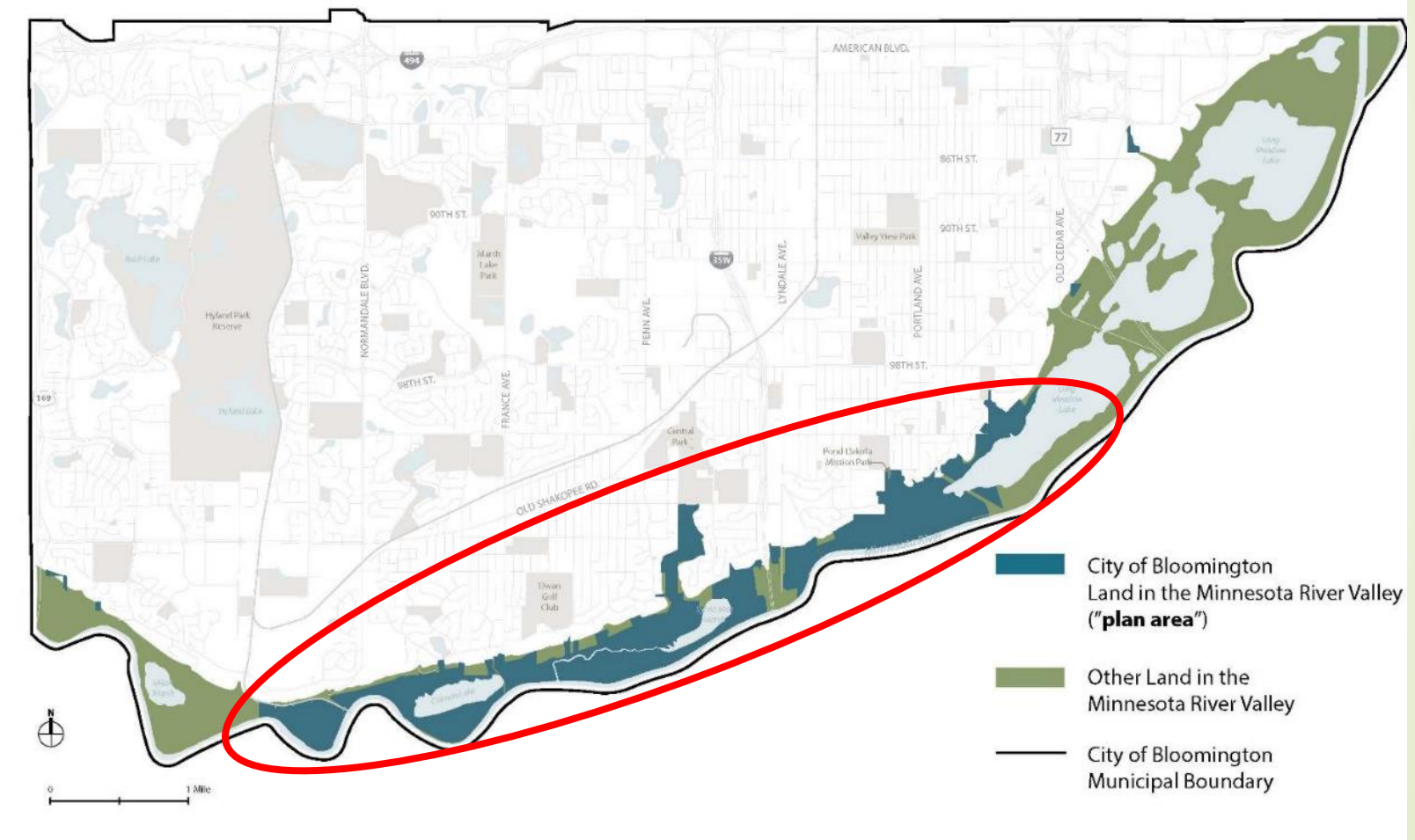
Purpose

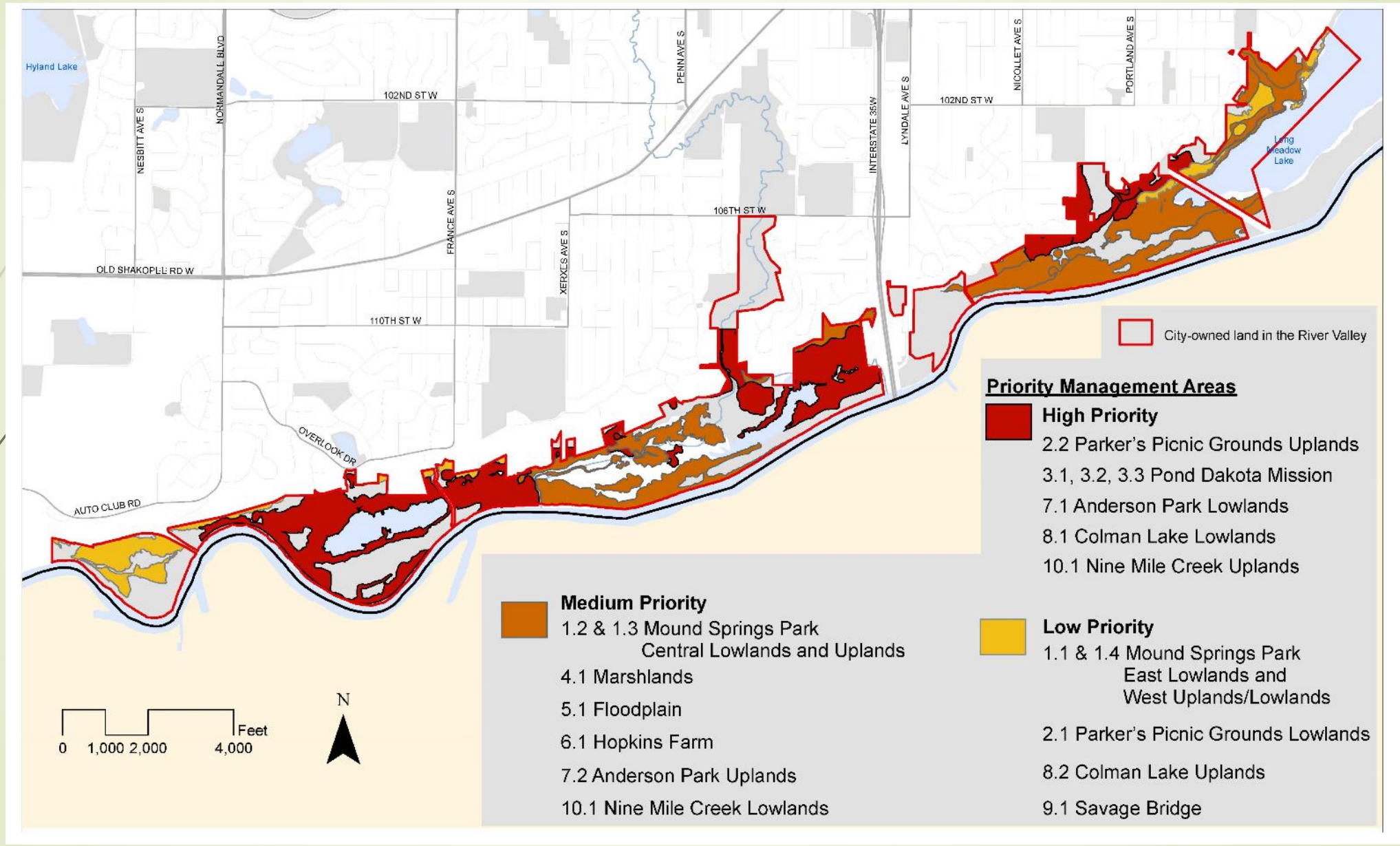
To identify city-owned areas in the River Valley that are of highest priority for resource enhancement, and to recommend management strategies and priorities



Management Goals

- Maintain and Enhance Existing Accomplishments
- Foster the Growth of Desirable, Native Species
- Strengthen Potential for Biodiversity
- Establish Continuous Ground-Level Vegetation
- Reintroduce Natural Disturbances
- Provide Education & Awareness Opportunities

Priority Areas



Habitat Assessment (Appendix A)

Area 1. Mound Springs Park

Context: Mound Springs Park is the eastern most portion of the Minnesota River Valley that is owned by the City. The site is located south of Indian Mounds Elementary School. The existing bluff trail traverses this area and a boardwalk crosses unique calcareous wetlands.

Site Size: 56.65 acres (25.63 acres lowlands, 31.02 acres uplands)

Site Access: The site is best accessed at 102nd Street East & 10th Avenue South. The pavement leads down to a derelict parking lot. For the uplands, there is also access from 11th & 13th Avenues south of the school.

Machine Accessibility: The boardwalk and narrow trails limit management to mostly hand work. The central lowlands are level enough for tree clearing by machine. The uplands are steep, but a skid steer could be used. In the western portion, machinery can drive down to the lowlands and work around the edges of the uplands.

Site 1.2 Mound Springs Park - Central Lowlands

Survey Dates: 8/19/2007 & 5/25/2017

	Ecological Community Description	2007 Quality Ranking	2017 Quality Ranking
29F	**Lowland hardwood forest**	**D**	**F**
39B	**Floodplain Forest**	**D**	**F**
39C	**Floodplain Forest**	**D**	**F**

* **Bold** rows show areas of **significant** change

**Flora species list for this area is found in Appendix F

Current State:


Bare soils above 29F


Stream too spread out


Looking upstream from 39B

Oak Woodland

Although the 2007 inventory lists this area as a lowland forest, this report proposes a reclassification of 29F as part of the uplands due to the excessively drained and typical upland soil type found here. The largest trees are sugar maple, red oak and basswood with some displaying greater than 32" dbh. The forest vegetation along the spring stream includes sugar maple, wild leek, Dutchman's breeches, nodding trillium, early meadow rue, Virginia waterleaf, snow trillium, rue anemone, wood anemone, yellow trout lily, and hepatica. Many of these species are ephemerals, and their presence might represent a natural succession of this forest type (Grime 2001). Despite the unique forest vegetation, the overall ground cover is sparse.

Floodplain Forest

Further downstream at the transition of 29F and 39B, the vegetation changes according to topography and hydrology. Cottonwood trees and silver maples replace the sugar maple and oak from uphill. Open growth cottonwood and oak occur along a sandy plain where a bridge once crossed the stream. The older trees are subsumed by dense, young, woody vegetation such as boxelder, hackberry, green ash, red elm, and cottonwood. There are a few prairie crabapple and American plum trees, which cling to small gaps in the canopy along the stream and trails. The main shrub layer is buckthorn, at times so dense as to make walking difficult. The rich soils facilitate the domination of shade tolerant, nitrophilic species such as garlic mustard and wood nettle. There is also excessive dead, fallen wood.

Priority Management Recommendations

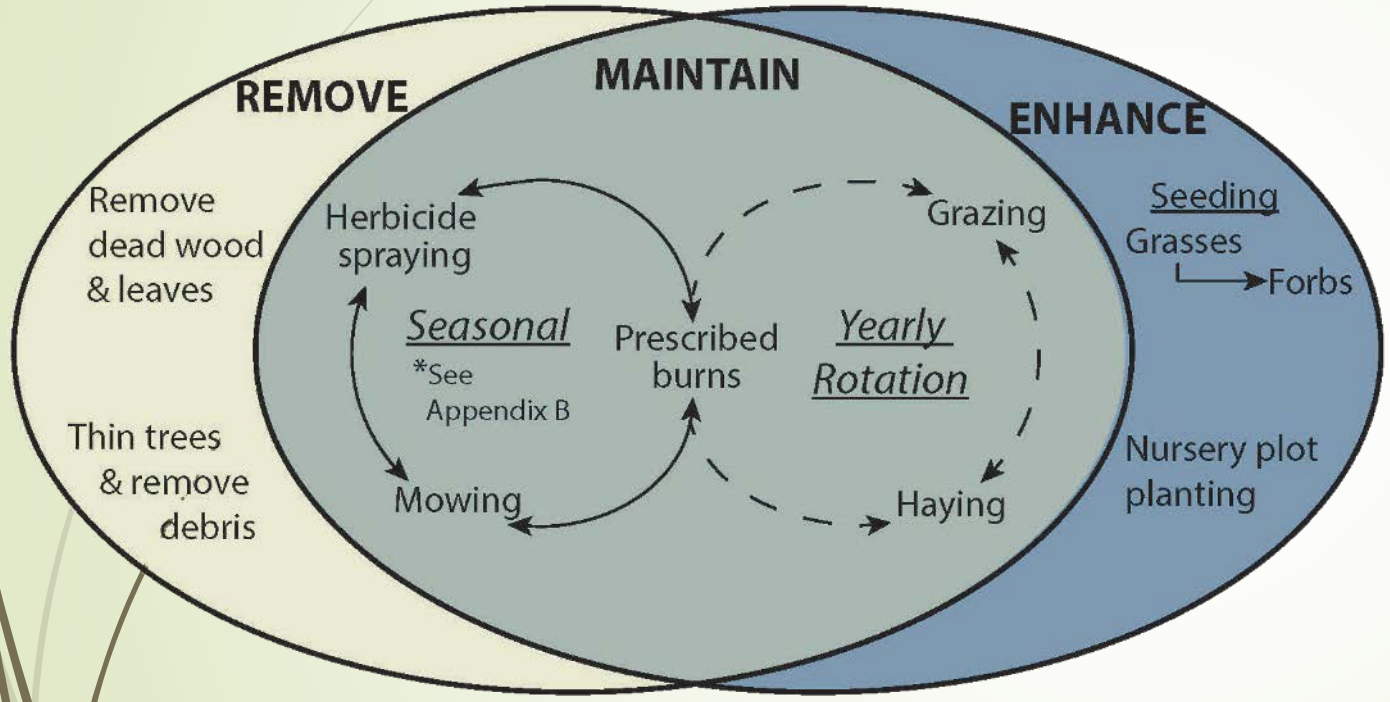
1. **Restore ravine slopes & spring streams**
   - Revegetate shoreland & slopes
   - Reconnect upstream channels

   Notes: Earthwork is needed to prevent the stream from spreading over a wide area. A designed pool and cascade single-channel stream would greatly improve stream flow and water quality.
2. **Maintain and enhance rue anemone**
   - Remove excessive dead, fallen wood and leaf litter
3. **Restore a ground layer vegetation**
   - Cut & stump treat buckthorn
4. **Maintain & expand unique forest wildflowers**
   - Remove excessive dead wood & leaf litter

1. **Restore cottonwood/oak grove**
   - Thin dense trees by machine (young cottonwood, green ash, boxelder, hackberry)
   - Seed moist mesic grass mix (including shade tolerant species)
2. **Maintain by managing Invasive species**
   - Mow
   - Prescribed burn
   - Haying and/or grazing

Potential Model Site: This site's afforested lowlands could be converted to a meadow along a stream and would provide a unique restoration model to guide work in other lowland areas.

Management Strategies (Appendix B)



1. **Remove Undesired Plants & Material**
   - Thin Trees
   - Mow
   - Herbicide Spray
2. **Continued Maintenance**
   - Mow
   - Herbicide Spray
   - Prescribed Burn
   - Haying
   - Grazing
3. **Site Enhancement**
   - Seed native grasses & forbs
   - Nursery plot planting
4. **Continued Monitoring**

Stakeholder & Public Outreach

- **Meeting with agencies**
  - Need for continued communication
  - Tiered education – cross promote programs & events
- **Stakeholder meeting**
  - Interest in Master Trails & Signage Systems Plans
  - Need to fill gaps in cultural history section
- **Open House**
  - Interest in implementation
- **Recommended approval by Sustainability, PARC, and Planning Commissions**

Plan Updates

- Unique City Asset
- Utility in all City Parks & Open Spaces
- Relation to other plans
- Relation of River Valley Priority Sites to other City parks (ie, Ike's Creek)
- River Valley & Bloomington History
- Water Quality Monitoring

Implementation

- Perform Management Strategies at Priority Management Sites
- Continued Communication with Partners & Stakeholders
- Education Efforts
- Update Bluff District Overlay Zones
- Review of City’s Prohibited Trees

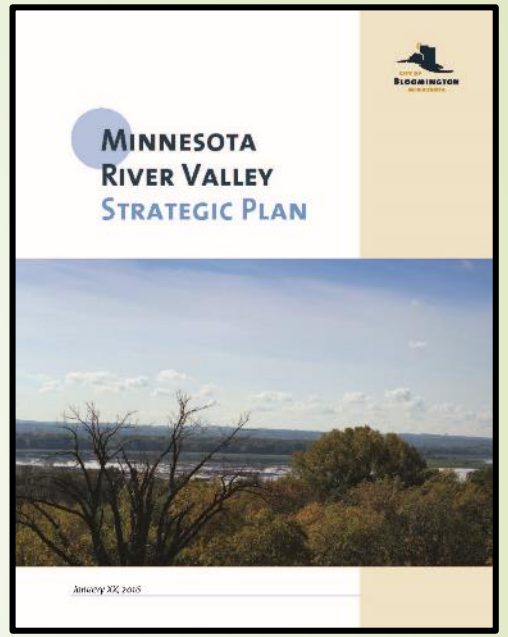
Strategic Plan Next Steps

System Plans

- Master trail plan
- Master signage plan
- Comprehensive maintenance plan

Process & Management Related Activities

- Update Memorandum of Understanding with USFWS
- Institute intentional communication strategies
- Pursue Regional Park Reserve designation
- Strengthen partnerships



Discussion & Questions

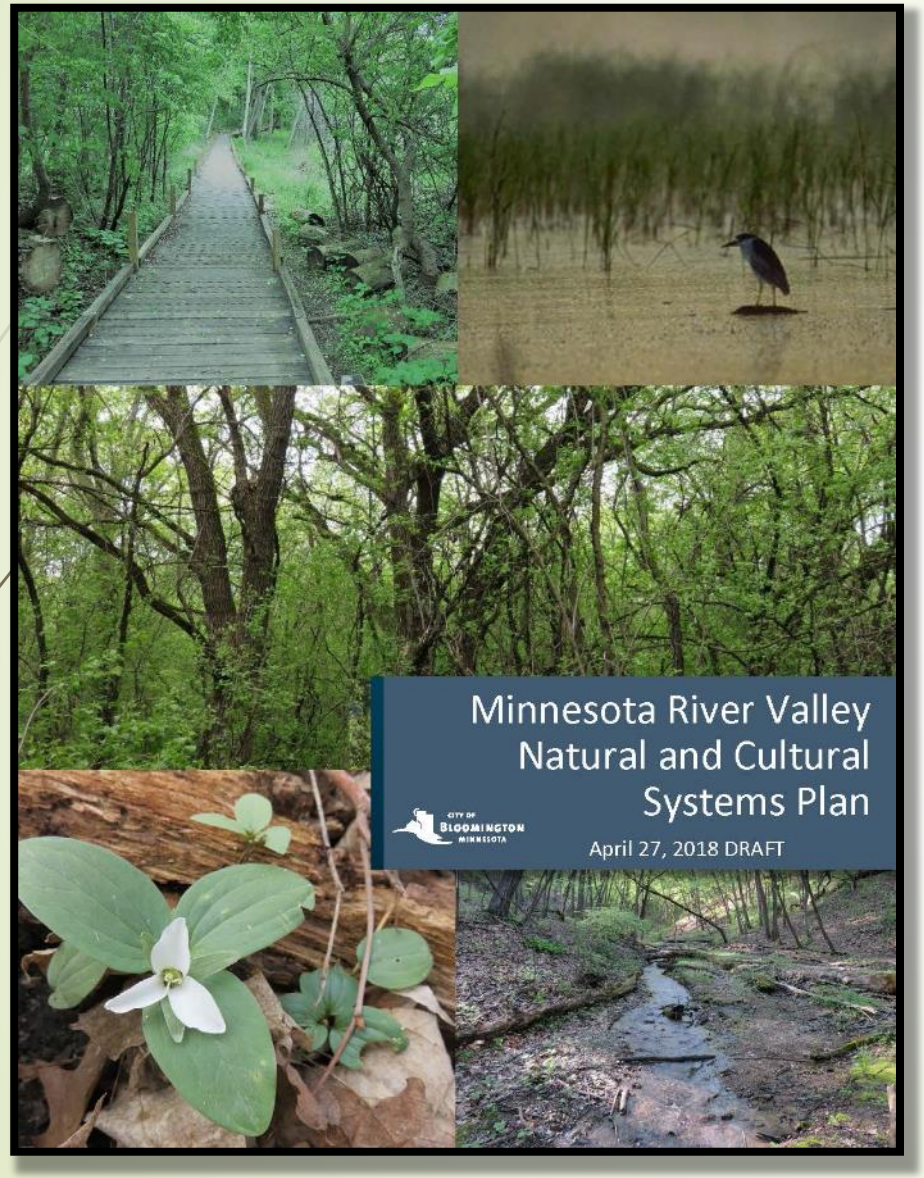
Recommendation

Staff recommends approval via the following motion:

In Case PL2018-215, I move to adopt a resolution approving the *Minnesota River Valley Natural and Cultural Systems Plan* attached via hyperlink in the staff report.

Extra Slides

Overview of Plan



Sections

- Purpose
- Historical Perspective
- Current Conditions
- Resource Management
- Education
- Implementation

Priority Areas - Criteria

1. Improvement and/or Expansion of Existing Efforts
2. Quality of Vegetative Community
3. Visibility and Public Perception
4. Technical Viability of Initial Management
5. Technical Viability of Long-term Management
6. Presence of Biological Resources of Special Significance

Funding Sources

- **Capital Improvement Plan**

Funds allocated to natural resource restoration city-wide

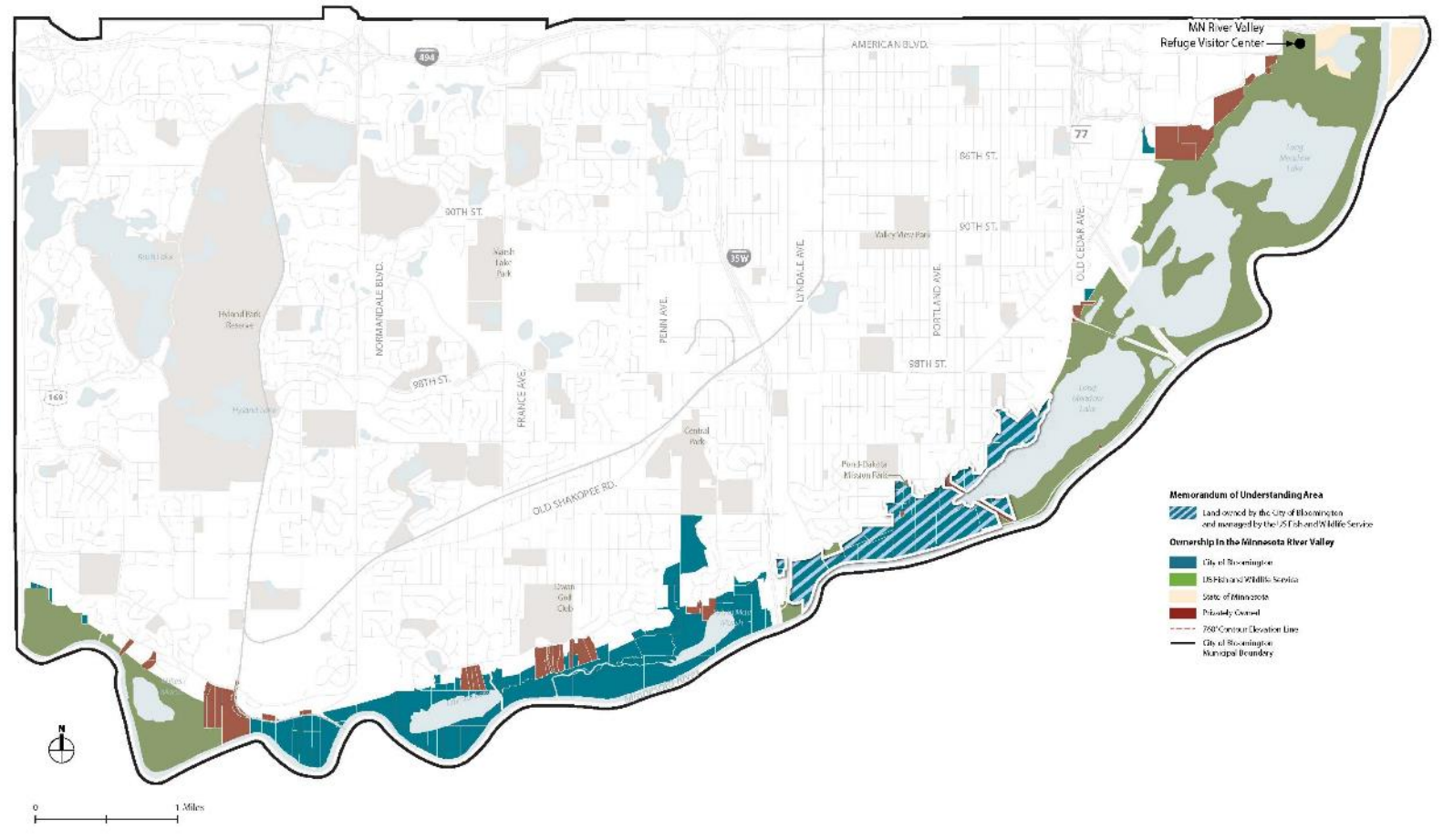
  - 2019 - $65,000
  - 2021 - $70,000
  - 2024 - $75,000
  - 2025 - $65,000
  - 2026 - $65,000
  - 2027 - $65,000

- **State Resources**
  - Environment and Natural Resources Trust Fund
  - Legacy Funds
- **Regional Resources**
- **Federal Resources**

Oak Savanna

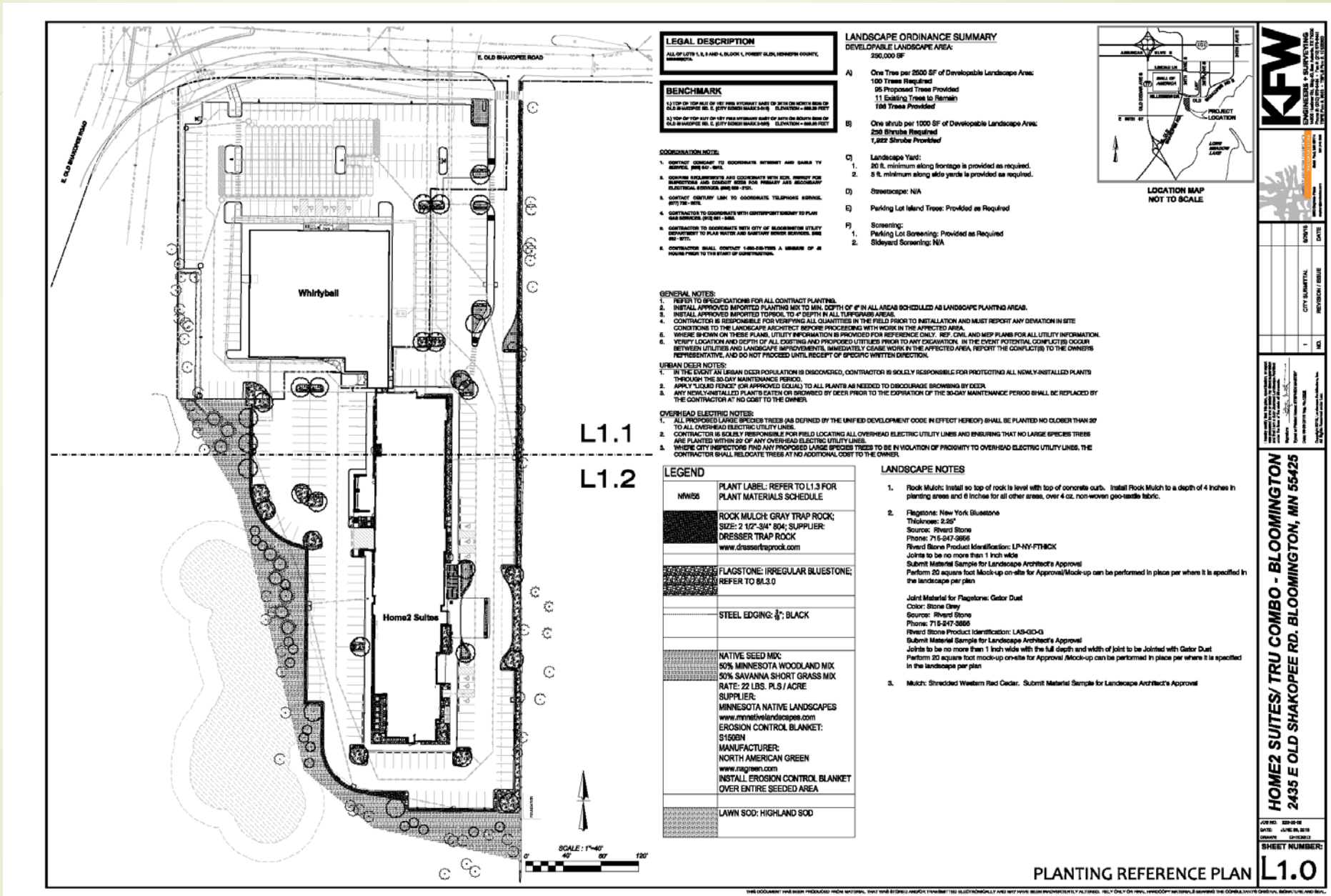
- 25 – 50% Canopy Cover
- 12 mature trees/acre
- Continuous Ground Cover

Implementation

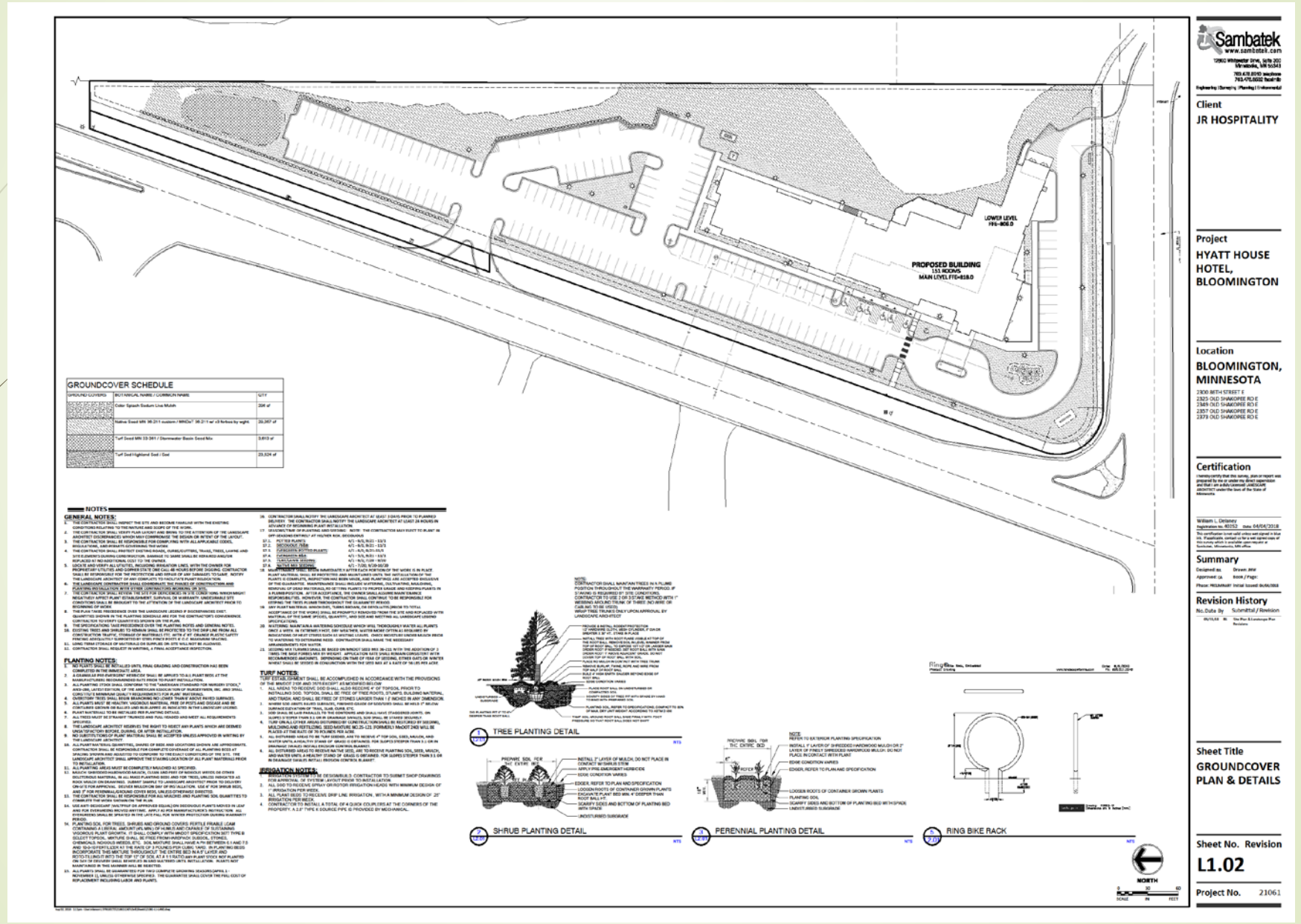


1. **Strategic Partnerships**
2. **Review outdated City regulations & guidelines**
   - Bluff Report District Plan (1982)
   - Bluff Protection Overlay Districts
   - Prohibited Trees
3. **Funding**

Whirlyball


E. OLD SHAKOPEE ROAD
Whirlyball
Home2 Suites
L1.1
L1.2
SCALE : 1"=40'
0'
40'
80'
120'
LEGAL DESCRIPTION
ALL OF LOTS 1, 2, 3 AND 4, BLOCK 1, FOREST GLEN, HENNEPIN COUNTY, MINNESOTA.
BENCHMARK
COORDINATION NOTE:
1. CONTACT COMCAST TO COORDINATE INTERNET AND CABLE TV SERVICE. (800) 647 - 1912.
2. CONTACT XCEL ENERGY TO ARE COORDINATE WITH XCEL ENERGY FOR SUBSTATIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (800) 895 - 2121.
3. CONTACT CENTURY LINK TO COORDINATE TELEPHONE SERVICE. (877) 756 - 5575.
4. CONTRACTOR TO COORDINATE WITH CENTERPOINT ENERGY TO PLAN GAS SERVICES. (612) 321 - 5400.
5. CONTRACTOR TO COORDINATE WITH CITY OF BLOOMINGTON UTILITY DEPARTMENT TO PLAN WATER AND SANITARY SEWER SERVICES. (952) 992 - 9777.
6. CONTRACTOR SHALL CONTACT 1-800-252-1166 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
LANDSCAPE ORDINANCE SUMMARY
DEVELOPABLE LANDSCAPE AREA:
250,000 SF
A) One Tree per 2500 SF of Developable Landscape Area:
100 Trees Required
95 Proposed Trees Provided
11 Existing Trees to Remain
106 Trees Provided
B) One shrub per 1000 SF of Developable Landscape Area:
250 Shrubs Required
1,222 Shrubs Provided
C) Landscape Yard:
1. 20 ft. minimum along frontage is provided as required.
2. 5 ft. minimum along side yards is provided as required.
D) Streetscape: N/A
E) Parking Lot Island Trees: Provided as Required
F) Screening:
1. Parking Lot Screening: Provided as Required
2. Sideyard Screening: N/A
LOCATION MAP
NOT TO SCALE
PROJECT LOCATION
GENERAL NOTES:
1. REFER TO SPECIFICATIONS FOR ALL CONTRACT PLANTING.
2. INSTALL APPROVED IMPORTED PLANTING MIX TO MIN. DEPTH OF 6" IN ALL AREAS SCHEDULED AS LANDSCAPE PLANTING AREAS.
3. INSTALL APPROVED IMPORTED TOPSOIL TO 4" DEPTH IN ALL TURFGRASS AREAS.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES IN THE FIELD PRIOR TO INSTALLATION AND MUST REPORT ANY DEVIATION IN SITE CONDITIONS TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH WORK IN THE AFFECTED AREA.
5. WHERE SHOWN ON THESE PLANS, UTILITY INFORMATION IS PROVIDED FOR REFERENCE ONLY. REF. CIVIL AND MEP PLANS FOR ALL UTILITY INFORMATION.
6. VERIFY LOCATION AND DEPTH OF ALL EXISTING AND PROPOSED UTITLIES PRIOR TO ANY EXCAVATION. IN THE EVENT POTENTIAL CONFLICT(S) OCCUR BETWEEN UTILITIES AND LANDSCAPE IMPROVEMENTS, IMMEDIATELY CEASE WORK IN THE AFFECTED AREA, REPORT THE CONFLICT(S) TO THE OWNER'S REPRESENTATIVE, AND DO NOT PROCEED UNTIL RECEIPT OF SPECIFIC WRITTEN DIRECTION.
URBAN DEER NOTES:
1. IN THE EVENT AN URBAN DEER POPULATION IS DISCOVERED, CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTING ALL NEWLY-INSTALLED PLANTS THROUGH THE 30-DAY MAINTENANCE PERIOD.
2. APPLY "LIQUID FENCE" (OR APPROVED EQUAL) TO ALL PLANTS AS NEEDED TO DISCOURAGE BROWSING BY DEER.
3. ANY NEWLY-INSTALLED PLANTS EATEN OR BROWSED BY DEER PRIOR TO THE EXPIRATION OF THE 30-DAY MAINTENANCE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
OVERHEAD ELECTRIC NOTES:
1. ALL PROPOSED LARGE SPECIES TREES (AS DEFINED BY THE UNIFIED DEVELOPMENT CODE IN EFFECT HEREOF) SHALL BE PLANTED NO CLOSER THAN 20' TO ALL OVERHEAD ELECTRIC UTILITY LINES.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD LOCATING ALL OVERHEAD ELECTRIC UTILITY LINES AND ENSURING THAT NO LARGE SPECIES TREES ARE PLANTED WITHIN 20' OF ANY OVERHEAD ELECTRIC UTILITY LINES.
3. WHERE CITY INSPECTORS FIND ANY PROPOSED LARGE SPECIES TREES TO BE IN VIOLATION OF PROXIMITY TO OVERHEAD ELECTRIC UTILITY LINES, THE CONTRACTOR SHALL RELOCATE TREES AT NO ADDITIONAL COST TO THE OWNER.
LEGEND
NMI56 PLANT LABEL: REFER TO L1.3 FOR PLANT MATERIALS SCHEDULE
ROCK MULCH: GRAY TRAP ROCK; SIZE: 2 1/2"-3/4" 804; SUPPLIER: DRESSER TRAP ROCK www.dressertraprock.com
FLAGSTONE: IRREGULAR BLUESTONE; REFER TO 8/L3.0
STEEL EDGING: 3/16"; BLACK
NATIVE SEED MIX: 50% MINNESOTA WOODLAND MIX 50% SAVANNA SHORT GRASS MIX RATE: 22 LBS. PLS / ACRE SUPPLIER: MINNESOTA NATIVE LANDSCAPES www.mnnativelandscapes.com EROSION CONTROL BLANKET: S150BN MANUFACTURER: NORTH AMERICAN GREEN www.nagreen.com INSTALL EROSION CONTROL BLANKET OVER ENTIRE SEEDED AREA
LAWN SOD: HIGHLAND SOD
LANDSCAPE NOTES
1. Rock Mulch: Install so top of rock is level with top of concrete curb. Install Rock Mulch to a depth of 4 inches in planting areas and 6 inches for all other areas, over 4 oz. non-woven geo-textile fabric.
2. Flagstone: New York Bluestone
Thickness: 2.25"
Source: Rivard Stone
Phone: 715-247-3666
Rivard Stone Product Identification: LP-NY-FTHICK
Joints to be no more than 1 inch wide
Submit Material Sample for Landscape Architect's Approval
Perform 20 square foot Mock-up on-site for Approval/Mock-up can be performed in place per where it is specified in the landscape per plan
Joint Material for Flagstone: Gator Dust
Color: Stone Grey
Source: Rivard Stone
Phone: 715-247-3666
Rivard Stone Product Identification: LAS-GD-G
Submit Material Sample for Landscape Architect's Approval
Joints to be no more than 1 inch wide with the full depth and width of joint to be Jointed with Gator Dust
Perform 20 square foot mock-up on-site for Approval /Mock-up can be performed in place per where it is specified in the landscape per plan
3. Mulch: Shredded Western Red Cedar. Submit Material Sample for Landscape Architect's Approval
KFW ENGINEERS + SURVEYING
CITY SUBMITTAL
NO. REVISION / ISSUE DATE
HOME2 SUITES/ TRU COMBO - BLOOMINGTON
2435 E OLD SHAKOPEE RD. BLOOMINGTON, MN 55425
SHEET NUMBER: L1.0
PLANTING REFERENCE PLAN

Whirlyball


PROPOSED BUILDING
153 ROOMS
MAIN LEVEL FFE=818.0
LOWER LEVEL
FFE=806.0
GROUNDCOVER SCHEDULE
NOTES
GENERAL NOTES:
PLANTING NOTES:
TURF NOTES:
IRRIGATION NOTES:
TREE PLANTING DETAIL
SHRUB PLANTING DETAIL
PERENNIAL PLANTING DETAIL
RING BIKE RACK
NORTH
Sambatek
Client
JR HOSPITALITY
Project
HYATT HOUSE HOTEL, BLOOMINGTON
Location
BLOOMINGTON, MINNESOTA
Certification
Summary
Revision History
Sheet Title
GROUNDCOVER PLAN & DETAILS
Sheet No. Revision
L1.02
Project No. 21061

Resource Threats

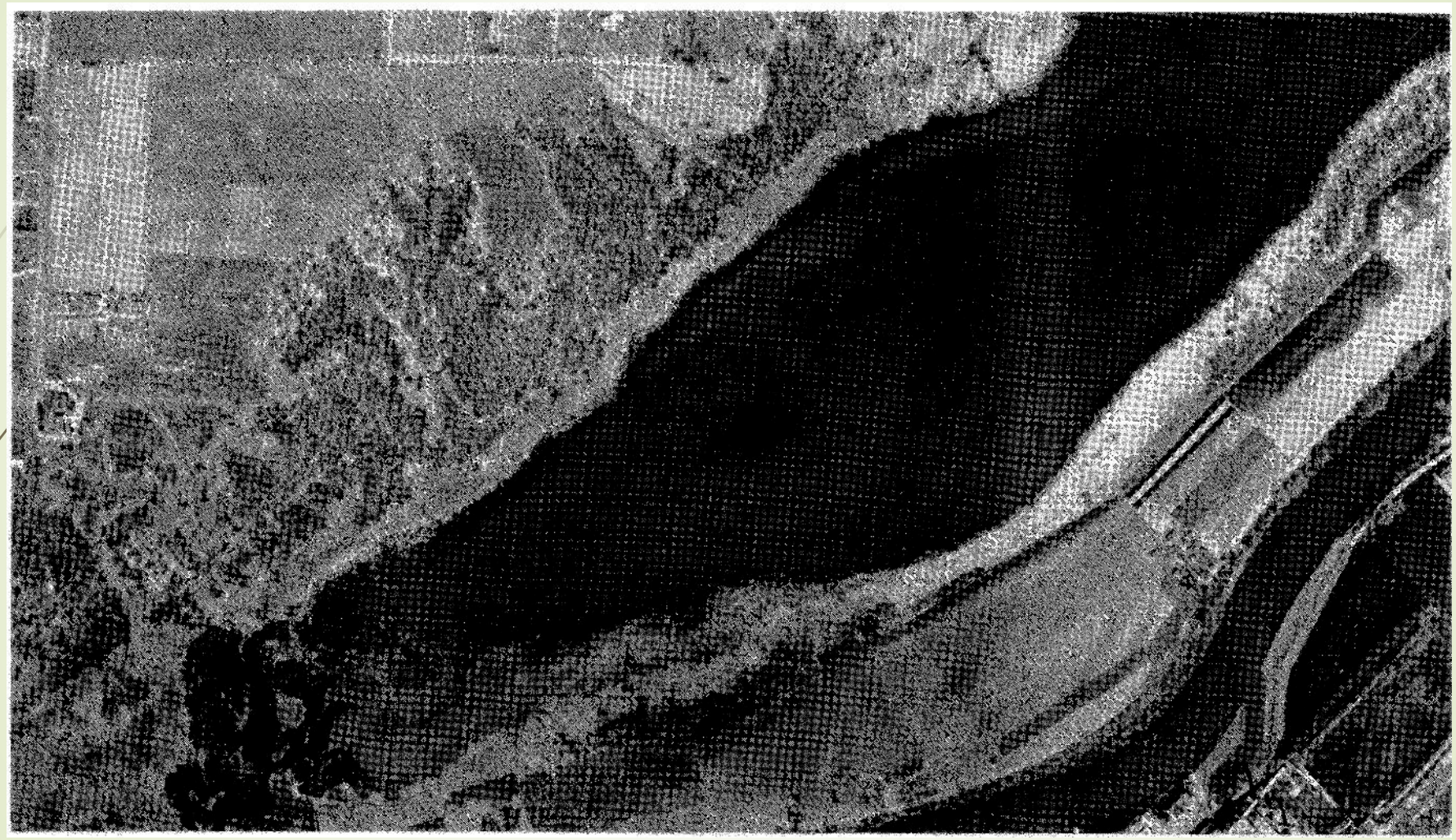
- Climate Change
- Flooding
- Excessive Dead, Fallen Wood
- Overgrown plant populations, bare soils, and erosion
- Undesirable Species
- Dumping
- Human Disturbance

Historic Perspective

Seth Eastman painting (1847) of River Valley

Aerial Photos

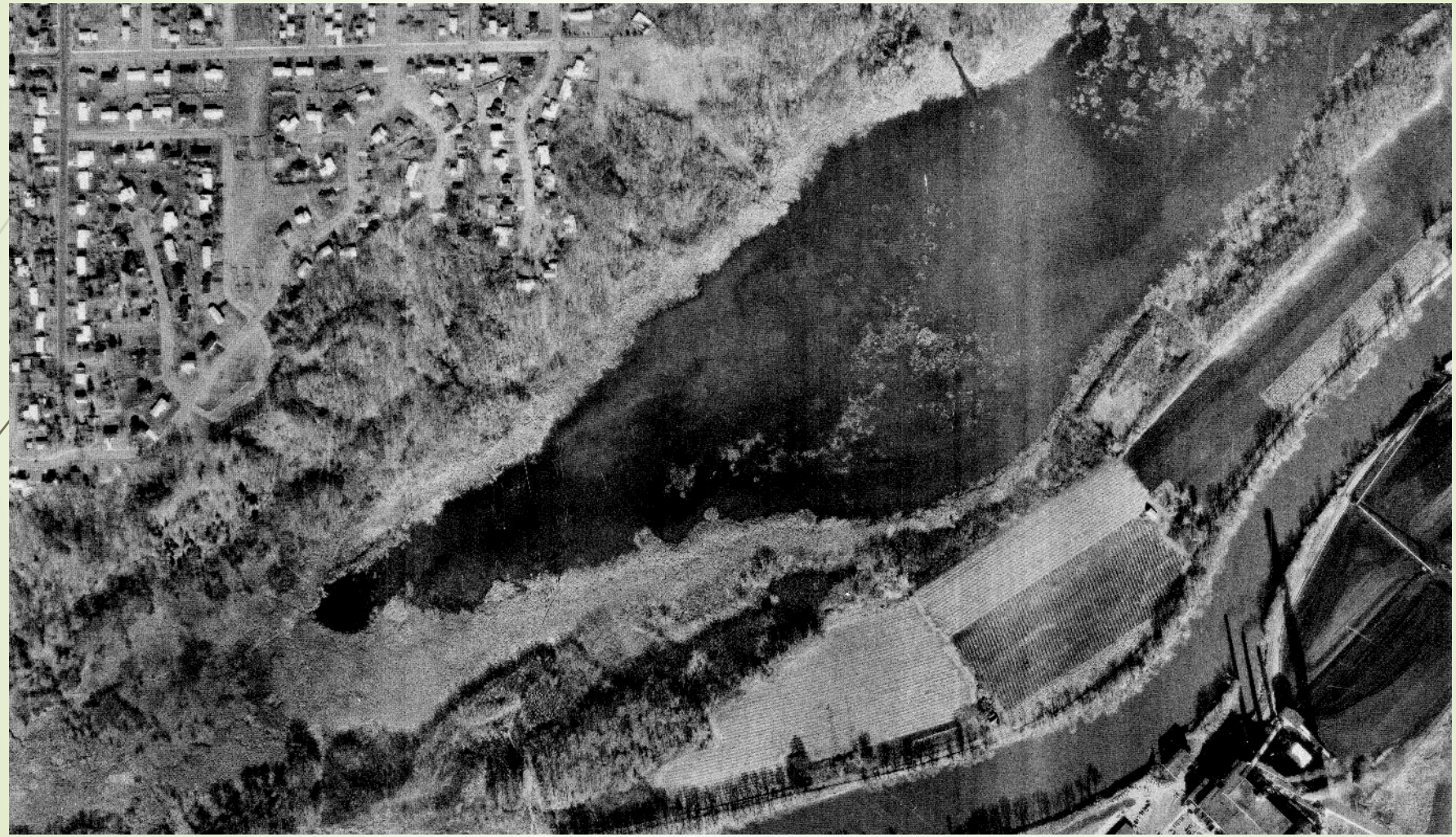
Parker's Picnic Grounds



1957

Aerial Photos

Parker's Picnic Grounds



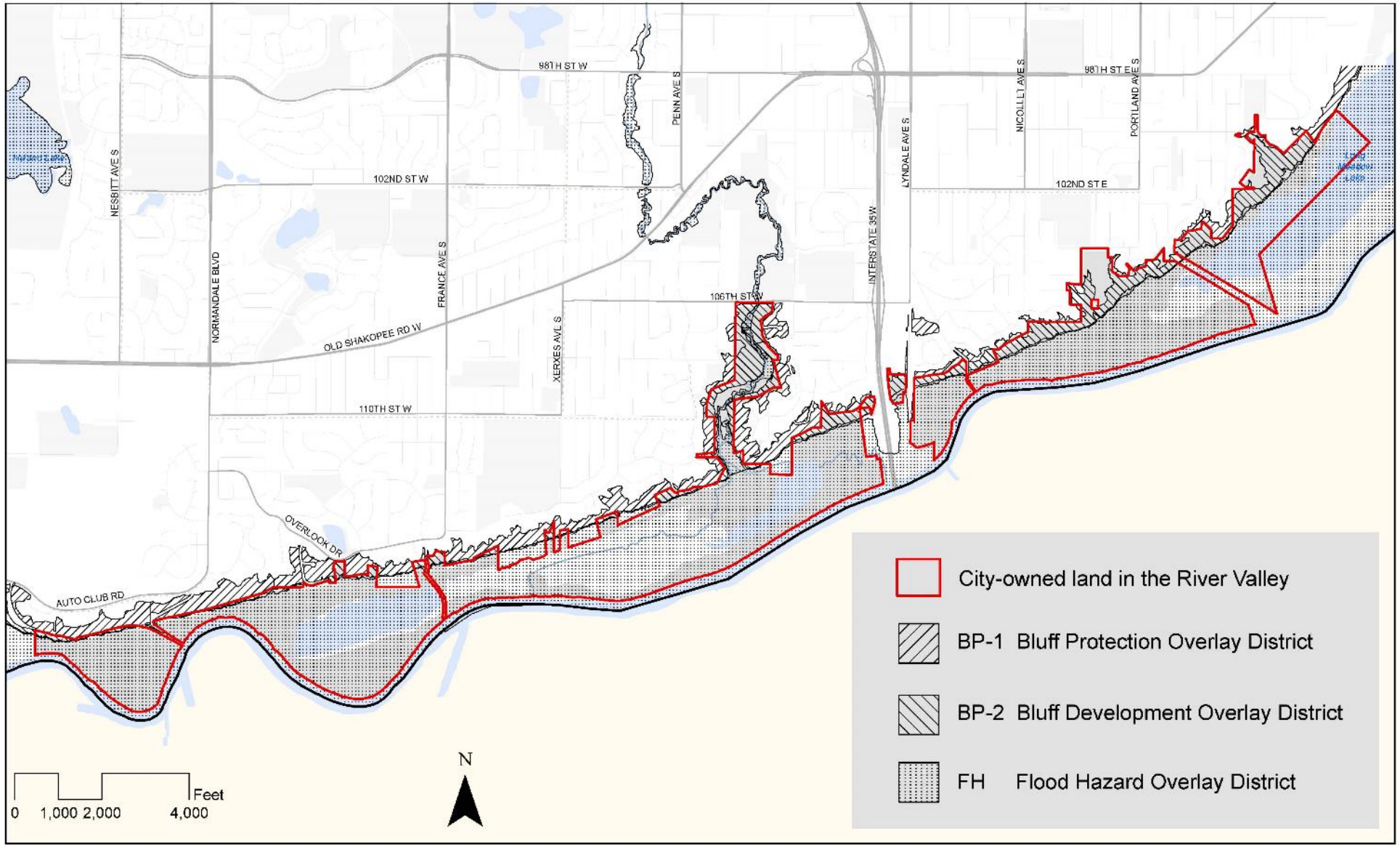
1975

Aerial Photos

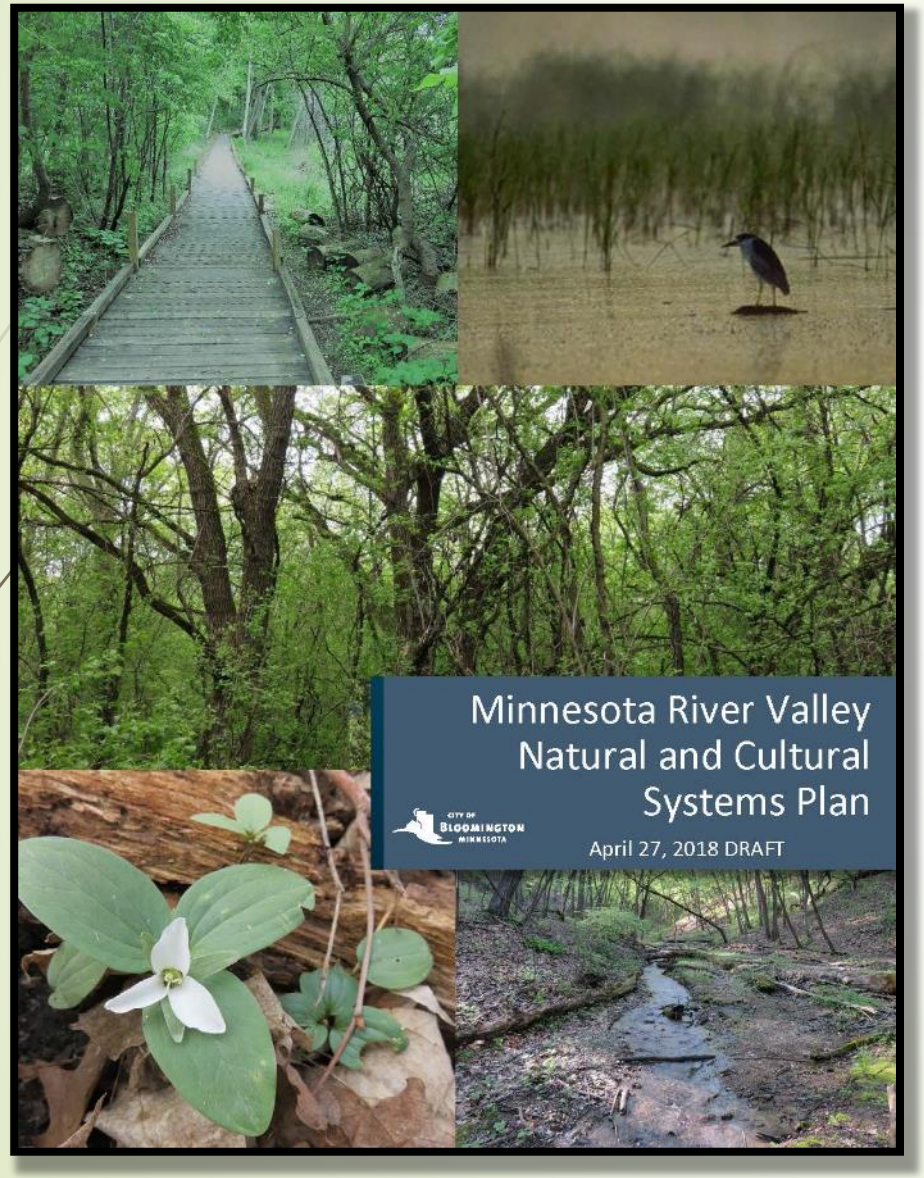
Parker's Picnic Grounds

2015

Figure X.X - Overlay Districts



Overview of Plan



Sections

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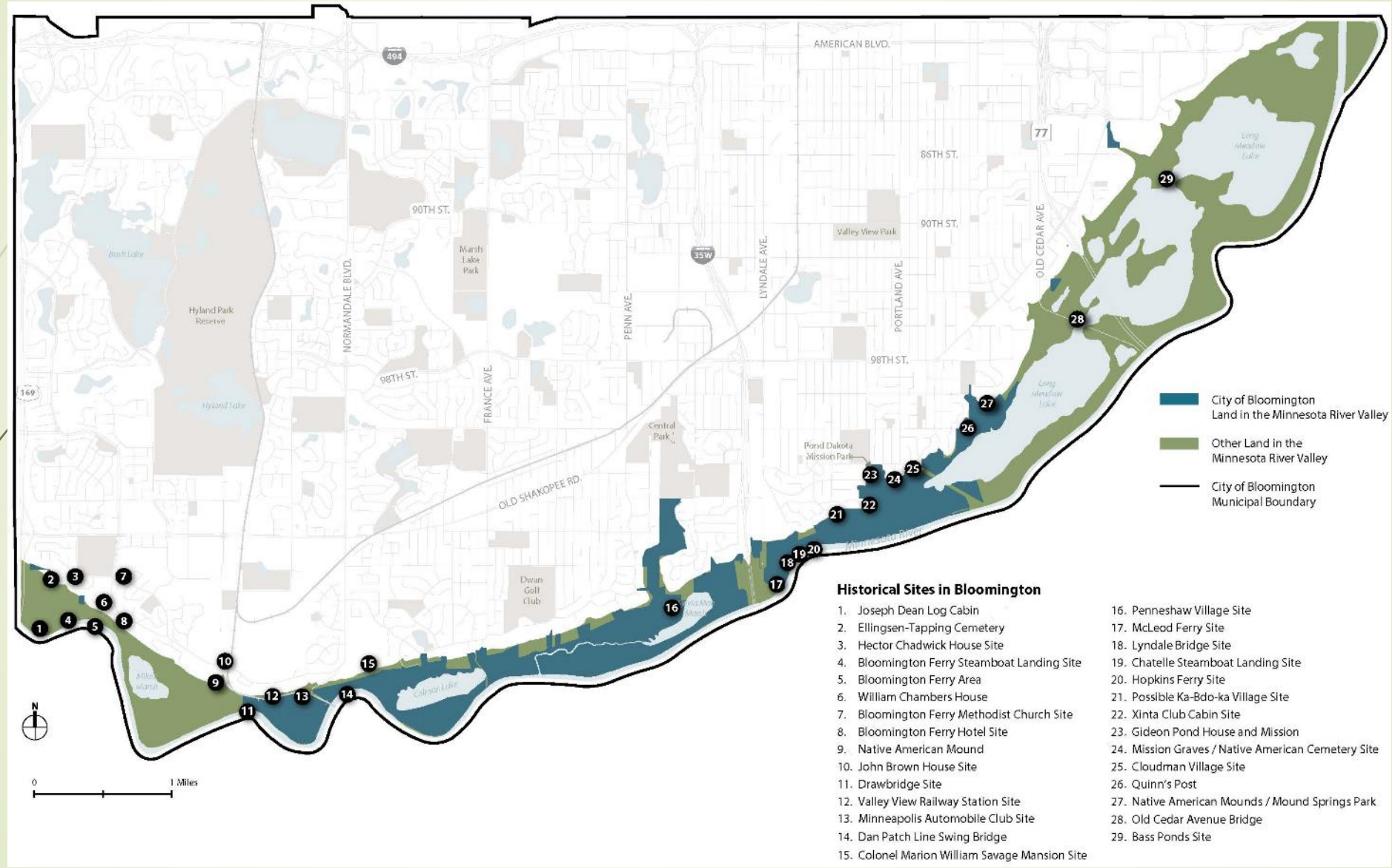
Current Conditions – Cultural Resources



Considerations - Management Areas