



# Environmental Assessment Worksheet

## *DeCola Ponds B & C Improvement Project*

Prepared for  
City of Golden Valley, Minnesota

December 2018

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Environmental Assessment Worksheet  
DeCola Ponds B & C Improvement Project  
December 2018

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## ENVIRONMENTAL ASSESSMENT WORKSHEET

**This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:**

<http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

**Cumulative potential effects** can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

### 1. Project Title

[DeCola Ponds B & C Improvement Project](#)

### 2. Proposer

[City of Golden Valley](#)

Contact person: Jeff Oliver

Title: City Engineer

Address: 7800 Golden Valley Rd.

City, State, ZIP: Golden Valley, MN 55427

Phone: 763-593-8034

Email: [joliver@goldenvalleymn.gov](mailto:joliver@goldenvalleymn.gov)

### 3. RGU

[City of Golden Valley](#)

Contact person: Marc Nevinski

Title: Physical Development Director

Address: 7800 Golden Valley Road

City, State, ZIP: Golden Valley, MN 55427

Phone: 763-593-8008

Email: [mnevinski@goldenvalleymn.gov](mailto:mnevinski@goldenvalleymn.gov)

#### 4. Reason for EAW Preparation

Required:

- EIS Scoping
- Mandatory EAW

Discretionary:

- Citizen petition
- RGU discretion
- Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):  
[Subpart 27 – Wetlands and Public Waters](#)

#### 5. Project Location

- County: [Hennepin](#)
- City/Township: [Golden Valley](#)
- PLS Location (¼, ¼, Section, Township, Range): [NW¼, Section 29, Township 118N, Range 21W](#)

Watershed (81 major watershed scale): [20 – Mississippi River](#)

GPS Coordinates: [Latitude: 45.003666, Longitude: -93.376362](#)

Tax Parcel Numbers: [2911821230002, 2911821220005](#)

**At a minimum attach each of the following to the EAW:**

- County map showing the general location of the project (**Figure 1**)
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (**Figure 2**)
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

[Figures are included in the “Figures” section at the end of the document text.](#)

#### 6. Project Description

- a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The City of Golden Valley is proposing a flood mitigation Project at DeCola Ponds B and C. The proposed Project would reduce flooding around the low point at Medicine Lake Road and Rosalyn Court and around DeCola Ponds A through D while reducing flood damages to

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structures and infrastructure. It would also improve water quality both within the DeCola Ponds and downstream of the DeCola Ponds by trapping additional sediment and pollutants in the ponds and expanded storage areas, thus minimizing sediment passing downstream to Bassett Creek. The proposed Project would also improve habitat diversity and public recreation opportunities.

- b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

### **Project Background**

The Bassett Creek Watershed Management Commission's (BCWMC's) current Capital Improvement Program (CIP) identifies a number of projects within the City of Golden Valley to help reduce flooding and improve water quality. The first project of this CIP is the DeCola Ponds B & C Improvement Project. A feasibility study was completed to evaluate improvement options in May 2018 (reference (1)). The feasibility study examined the feasibility of developing flood storage volumes in the Pennsylvania Woods area around Ponds B & C, developing additional water quality treatment volume, modifying the DeCola Pond C outlet structure, and removing accumulated sediment that has collected at the storm sewer outfall on the north end of DeCola Pond B. Improvements to habitat and recreation opportunities were also considered.

The DeCola Ponds B & C Improvement Project (proposed Project) builds on the City of Golden Valley's (City's) Liberty Crossing flood storage and conveyance project that was completed in 2017. The Liberty Crossing project was the first in a series of flood mitigation projects identified in the Medicine Lake Road and Winnetka Avenue Area Long-Term Flood Mitigation Plan Report (reference (2)).

The City is supportive of the proposed Project (and the larger long-term flood mitigation plan) as it is consistent with the flood mitigation projects included in the City's CIP. The City's Natural Resources Management Plan, adopted in 2015, specifically listed the proposed flood mitigation goals for DeCola Ponds B and C as well as the adjacent Pennsylvania Woods Nature Area. The proposed Project was the City's top legislative priority for 2018, and flood mitigation projects continue to be on the City's priority list. The proposed Project is included in the Minnesota state bonding bill within Minnesota Department of Natural Resources (MnDNR) flood damage reduction projects, due to continued efforts by City staff.

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The goal of the proposed Project is to reduce flooding around the low point at Medicine Lake Road and Rosalyn Court and around DeCola Ponds A through D while reducing flood damages to structures and infrastructure. It would also improve water quality within the Decola Ponds and downstream of the DeCola Ponds by trapping additional sediment and pollutants in the ponds and expanded storage areas, thus minimizing sediment passing downstream to Bassett Creek. The proposed Project would also improve ecology and wildlife habitat, enhance active and passive recreation opportunities, and provide educational opportunities.

### **Project Overview**

The proposed Project carries forward concept 3 (the recommended alternative) from the feasibility study (**Figure 3**). This alternative best meets flood storage goals while minimizing tree impacts. The proposed Project includes the following elements:

- A 14-foot by 4-foot box culvert would be installed at the upstream end of the proposed Project. This culvert would connect the Liberty Crossing flood storage features to expanded storage in the Dover Hill easement area (now under permanent drainage and utility easement) and DeCola Ponds B and C areas. A weir would be constructed on the upstream end of the box culvert system at elevation 896.0 mean sea level (MSL) to prevent water in the forebay pond (described below) from backing up into the Liberty Crossing site during normal, smaller storm events. The existing storm sewer along Rhode Island Avenue would tie into this box culvert system.
- A sediment forebay would be constructed in an area currently under easement from Dover Hill, located north of DeCola Pond B at the outlet of the proposed box culvert system. Approximately 8,400 cubic yards of material would be excavated to form the 0.76-acre sediment forebay. This area would provide approximately 5.2 acre-feet of water quality treatment volume and would be separated from DeCola Pond B by a berm and a channel overflow connection. This feature is intended to minimize larger-scale sedimentation of DeCola Pond B, a MnDNR public water which requires permitting to perform maintenance activities. The sediment forebay would include a maintenance access to allow the City to perform more frequent, routine sediment removal from the forebay area.
- The proposed Project would lower the normal water level (NWL) of DeCola Ponds A, B, and C from 893.8 MSL to 893.5 MSL. Lowering the NWL 0.3 feet would provide additional flood mitigation volume while avoiding the need for excavation to gain the additional volume that the lowering action provides. The sediment forebay feature allows the NWL to be lowered without reducing the volume of water quality treatment provided

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by the DeCola Pond system. It does this by allowing the forebay to also provide storage and treatment.

- The open water area of DeCola Ponds B and C would be increased by 1.9 acres (including the sediment forebay area), which would increase associated water quality treatment by 2.3 acre-feet through dredging approximately 3,040 cubic yards of accumulated sediment in DeCola Pond B and through expanding contours below the NWL of both ponds. The proposed expansion would not change the overall depth of the existing ponds as originally designed, while providing additional water quality treatment volume and enhancing habitat diversity for fish, macroinvertebrates, and macrophytes. Additionally, 32,560 cubic yards of soil would be excavated in adjacent upland areas to develop additional flood storage. The total anticipated flood storage increase across the entire proposed Project is approximately 22 acre-feet.
- The DeCola Pond C outlet structure and overflow would be lowered to an elevation of 893.5 MSL to maintain the proposed NWL and provide additional flood storage volume. The emergency overflow elevation on the south end of DeCola Pond C would be increased to an elevation of 901.5 MSL to increase flood storage in DeCola Ponds A, B, and C for larger design storm events. The modified Pond C outlet structure would prevent the accumulation of debris on the inlet pipe, which has been an ongoing maintenance issue. The outlet modification would also reduce the amount of water level fluctuation (also known as “bounce”) on DeCola Ponds A, B, and C during smaller storm events (1 to 2-year events) while maintaining the 10-year and 100-year flood elevations in DeCola Ponds D, E, and F (**Figure 4**), located downstream of the proposed Project. The more consistent water elevations that would result from the outlet modification would allow for enhanced shoreline vegetation along DeCola Ponds B and C by reducing hydrologic variability.
- The existing berm between DeCola Ponds B and C would be maintained to allow a trail loop to be constructed at elevations greater than the 10-year flood elevation without requiring a boardwalk or floating system. Nearly 1,400 feet of new, Americans with Disabilities Act (ADA)-compliant trail would be constructed through the Pennsylvania Woods Nature Area and Dover Hill public easement area as part of the proposed Project

The proposed Project would increase total flood mitigation volume in the project area by approximately 22 acre-feet from existing conditions through a combination of lowering the normal water level elevation (as noted above) in combination with excavating and regrading low-lying portions of the Dover Hill public easement area and Pennsylvania Woods Nature Area.

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Although the proposed Project would require some tree removal in the Pennsylvania Woods Nature Area, the proposed Project has been designed to preserve trees throughout the area, including on the knoll between DeCola Ponds A, B, and C (primarily hardwood species) and screening trees along the west and south sides of Pond B and the east side of Pond C. To mitigate these effects, approximately 1.0 acre of upland area would be enhanced with native vegetation upon completion of ground-disturbing activities. This area is anticipated to be planted with a mix of native trees, shrubs, forbs, and grasses that could be savanna and/or forest species. In addition, the proposed Project would create 1.7 acres of wetland habitat.

### **Proposed Construction Methods and Sequencing**

Bidding for the proposed Project is anticipated to occur in June 2019, with construction work anticipated to begin in early September 2019. Construction sequencing would begin with blocking the outlet from Pond A into Pond B, preventing water from Pond A from flowing into the construction area during normal rain events. Water would be pumped from Pond A as needed to avoid flooding in Pond A during construction. Turtle fencing would then be installed around the perimeter of the work area to minimize potential for turtle movement associated with the water level drawdown described next. The fencing would have strategic openings to encourage turtles to move either into Pond A or D for overwintering.

Ponds B and C would be dewatered through use of either a gravity drain, pump, or combination thereof. Ponds B and C are expected to be dewatered prior to September 15 to minimize potential impacts to turtles as they enter their overwintering period. Ponds B and C may be dewatered for the duration of construction.

Simultaneous to pond dewatering, the new outlet would be constructed at Pond C. Trees would be cleared next as needed to accommodate work in the ponds. Ponds B and C would then be expanded according to project plans (**Appendix A**). Work in Pond C is expected to occur first, followed by dredging and expansion work in Pond B. Approximately 3,040 cubic yards of accumulated sediment would be dredged from Pond B. Dredge spoils would be dewatered on-site using appropriate containment, erosion, and sediment control measures. Once dewatered, dredge spoils would be hauled to an appropriate disposal location. Upon completion of dredging, wetland would be created at Pond B.

The forebay is expected to be constructed once work is completed at Ponds B and C. The forebay would be graded according to project plans and would require excavation and removal of approximately 40,960 cubic yards of earthen material. Once grading is complete the forebay area would be vegetated with a mix of native vegetation (trees, shrubs, forbs, and grasses) consistent with the rest of the project. Once the forebay construction is complete, the box

culvert connection upstream of the forebay would be installed, providing a connection between the proposed Project and the Liberty Crossing stormwater management system. The construction activities described above are anticipated to occur across a 4-month period in fall/winter 2019.

Final construction activities would occur in summer 2020, once seasonal conditions allow. These activities include construction of the new trail loop through the Pennsylvania Woods Nature Area, as well as final site restoration. Final site restoration would include seeding and tree and shrub plantings.

c. Project magnitude:

**Table 1** provides a summary of the proposed Project’s magnitude.

**Table 1 Project Magnitude Summary**

Component	Size
Total project acreage	17.2 acres
Linear project length	Not applicable
Number and type of residential units	Not applicable
Commercial building area (in square feet)	Not applicable
Industrial building area (in square feet)	Not applicable
Institutional building area (in square feet)	Not applicable
Other uses—specify (in square feet)	Not applicable
Structure height(s)	Not applicable

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of the proposed Project is to reduce the amount of flooding on Medicine Lake Road during intense rain events so that emergency vehicles can safely traverse the area and to reduce the amount of flooding and flood damage to structures and infrastructure in the area. The project proposes to accomplish this by increasing flood storage in the DeCola Ponds system. Beneficiaries of this project include residents in the Rosalyn Court Condominiums in New Hope and Dover Hill Apartments in Golden Valley, which likewise experience residential flooding during these types of intense rain events. Additional beneficiaries include: residents directly adjacent to DeCola Ponds A through F; other residents in the vicinity of DeCola Ponds; emergency responders, drivers, cyclists, and pedestrians traveling on Medicine Lake Road and nearby local streets; and users of the Pennsylvania Woods Nature Area.

- e. Are future stages of this development including development on any other property planned or likely to happen?  Yes  No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

- f. Is this project a subsequent stage of an earlier project?  Yes  No

If yes, briefly describe the past development, timeline and any past environmental review.

## 7. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development: [An assessment of land cover types was estimated using geographic information systems \(GIS\); the results are summarized in Table 2 and shown in Figure 5.](#)

Table 2 Summary of Cover Types (in acres)<sup>1</sup>

Cover Type	Before	After
Wetlands	0.1	1.4
Deep water/streams	0	0
Wooded/forest	9.1	6.5
Brush/grassland	0	0
Cropland	0	0
Lawn/landscaping	1.4	1.5
Impervious Surface	0.7	0.7
Stormwater Pond	5.9	7.1
Other – Vacant lot/sparse vegetation	0	0
<b>Total Area</b>	<b>17.2</b>	<b>17.2</b>

<sup>1</sup> The estimates shown in the table reflect pre- and post-project conditions, not pre-settlement or pre-urbanization conditions. Historic aerial photography indicates there was less forest/woodland in this area prior to urban development.

## 8. Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax

Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

**Table 3** lists permits and approvals required.

**Table 3 Permits and Approvals Required**

Unit of Government	Type of Application	Status
U.S. Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> <li>Section 404 Permit</li> <li>Section 401 Water Quality Certification</li> </ul>	<ul style="list-style-type: none"> <li>To be obtained</li> <li>To be obtained</li> </ul>
U.S. Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> <li>Section 7 of Endangered Species Act compliance</li> </ul>	<ul style="list-style-type: none"> <li>To be obtained as part of Section 404 Permit</li> </ul>
Minnesota Department of Natural Resources (MnDNR)	<ul style="list-style-type: none"> <li>Work in Public Waters Permit</li> </ul>	<ul style="list-style-type: none"> <li>To be obtained</li> </ul>
State Historic Preservation Office	<ul style="list-style-type: none"> <li>Section 106 of Historic Preservation Act</li> </ul>	To be obtained as part of Section 404 Permit
Minnesota Pollution Control Agency	<ul style="list-style-type: none"> <li>Construction Stormwater General Permit</li> <li>Compliance for Managing Dredged Materials</li> <li>Compliance for Managing Contaminated Material and Debris-Containing Fill</li> </ul>	<ul style="list-style-type: none"> <li>To be obtained</li> <li>To be obtained</li> <li>To be obtained</li> </ul>
City of Golden Valley	<ul style="list-style-type: none"> <li>Approval by City of Golden Valley</li> <li>Right-of-Way (ROW) Permit</li> <li>Compliance with Minnesota Wetland Conservation Act</li> <li>Stormwater Management Permit</li> </ul>	<ul style="list-style-type: none"> <li>To be obtained</li> <li>To be obtained</li> <li>To be obtained</li> <li>To be obtained</li> </ul>
Bassett Creek Watershed Management District	<ul style="list-style-type: none"> <li>Project Approval</li> <li>Construction/Erosion Plan</li> </ul>	<ul style="list-style-type: none"> <li>Obtained in September 2018</li> <li>To be obtained</li> </ul>

**Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19**

All potential cumulative impacts are discussed in EAW Item 19, Cumulative Potential Effects.

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## 9. Land Use

### a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

The proposed Project work would take place in two stormwater ponds, DeCola Ponds B and C (MnDNR Public Waters Index #27064700), which are located within Pennsylvania Woods Nature Area in the city of Golden Valley. Construction of the forebay area would take place on a portion of land on the Dover Hill property for which the City has acquired a permanent easement. Residential, commercial, and industrial land uses primarily surround the nature area. The proposed Project is located just east of Rhode Island Avenue North and south of the Dover Hill Apartment and Townhomes complex and Medicine Lake Road. The Pennsylvania Woods Nature Area is 22.9 acres and is mostly open water ponds along with floodplain forest and upland hardwood (maple-basswood) forest, and walking paths that connect to nearby residential areas. The City's 2013 natural resources inventory (reference (3)) identified 50 to 75 percent buckthorn cover throughout the wooded areas of the nature area.

The Canadian Pacific Railroad runs directly to the east of DeCola Pond C and is bordered by an industrial area. DeCola Pond B is on the west side of the nature area, along Rhode Island Avenue North and bordering a high-density residential area.

There are no prime or unique farmlands located inside or adjacent to the proposed Project boundary.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

Comprehensive land-use planning applicable to the proposed Project is discussed below. Unless noted, the proposed Project area would be located within the boundary of these plans. The planned land use in the proposed Project area is not anticipated to change based on City of Golden Valley comprehensive land-use planning.

### **City of Golden Valley 2040 Comprehensive Plan (Draft) (reference (4))**

The City of Golden Valley 2040 Comprehensive Plan (Comprehensive Plan) was approved by City Council on December 4, 2018 and is expected to be finalized by Metropolitan Council in early 2019. The 2040 Comprehensive Plan will serve as a guide to future policies as development continues over the next decades. During the planning process, Golden Valley community members identified top priorities that provided a foundation for the goals and objectives

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outlined in the Comprehensive Plan. The priorities as identified in the Plan are listed below. Community members identified that Golden Valley should:

- Support a dynamic town center
- Showcase the city as a “green” community by:
  - Preserving parks and nature areas
  - Embracing sustainability
- Emphasize all aspects of a multi-modal transportation system
- Ensure policies, procedures, and decisions are inclusive by:
  - Supporting racial, cultural and economic diversity
  - Accommodating the needs of an aging population
- Make important investments in infrastructure

The Comprehensive Plan also includes sections which specifically address future policy goals for land use, water resources, natural resources, and sustainability. Several sections of the Comprehensive Plan are applicable to the proposed Project, including land use policy and implementation plans, a natural resources management plan, a resilience and sustainability plan, and a surface water management plan. These portions of the Comprehensive Plan are discussed in detail below.

#### **City of Golden Valley Land Use Policy & Implementation Plans (reference (4))**

Section 2 of the Comprehensive Plan addresses land use in Golden Valley and policy priorities for optimized land use. In the coming years, the City will focus on land redevelopment in key corridors to promote growth. The Comprehensive Plan outlines specific goals for land use policy and implementation, which will be used for decision making in the future. Goals that are applicable to the proposed Project include minimizing conflicts and impacts of change and protecting the environment.

#### **City of Golden Valley Natural Resource Management Plan (reference (4))**

Included as part of the Comprehensive Plan, the Natural Resource Management Plan proposes specific goals which will provide direction for Golden Valley’s natural resource policy and decision making in the future. As part of this plan, Golden Valley set goals in order to achieve its vision of a balance of urban and natural spaces, with the community coming together to preserve, protect, restore and enhance natural resources. These goals will guide policy and City

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priorities regarding natural resource management in the coming years. Natural resources management goals that are applicable to the proposed Project are listed below:

- Protect, preserve, restore, enhance and acquire natural areas and open space
- Protect and manage wildlife
- Provide access and connectivity
- Maintain and monitor natural resources
- Foster partnerships and inter-governmental cooperation

#### **City of Golden Valley Resilience and Sustainability Plan (reference (4))**

As part of the Comprehensive Plan, strategies are outlined for reducing vulnerabilities and protecting community resources against the threat of climate change. In order to maintain the economic and social well-being of community members and promote environmentally sustainable practices, this plan outlines a set of long-term goals that will be fulfilled through specific actions and policy decision. The goals in this document provide direction to the city in developing policies, programs, and improvements to invest in for improved resilience and sustainability. Goals from the Resilience and Sustainability Plan that apply to the proposed Project include: protect and enhance the natural environment, plan for resilient and sustainable infrastructure, and increase community resilience and preparedness.

#### **City of Golden Valley Surface Water Management Plan (reference (4))**

Another element of the Comprehensive Plan, the Golden Valley Surface Water Management Plan, was developed to provide direction concerning the administration and implementation of stormwater and surface water resources within the City. The plan identifies a number of goals related to surfacewater management. Those that are applicable to the proposed Project are listed below.

- Sustain and improve water quality
- Maintain and rehabilitate infrastructure
- Protect and enhance aquatic resources
- Reduce the risk and impact of floods
- Ensure capacity of systems meet future needs

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### **Bassett Creek Watershed Management Plan (2015–2025) (reference (5))**

The *Watershed Management Plan* (BCWMC, 2015) sets the vision, guidelines, and proposed tasks for managing surface water within the jurisdictional boundaries of the BCWMC. The BCWMC is a joint powers watershed management organization (WMO). The Metropolitan Surface Water Management Act states that the purposes of WMO water management programs are as follows (quoted from Minnesota Statutes 103B.201):

- Protect, preserve, and use natural surface and groundwater storage and retention systems.
- Minimize public capital expenditures needed to correct flooding and water quality problems.
- Identify and plan for means to effectively protect and improve surface and groundwater quality.
- Establish more uniform local policies and official controls for surface and groundwater management.
- Prevent erosion of soil into surface water systems.
- Promote groundwater recharge.
- Protect and enhance fish and wildlife habitat and water recreational facilities.
- Secure the other benefits associated with the proper management of surface and groundwater.

### **Metropolitan Council 2040 Water Resources Policy Plan (reference (6))**

The *2040 Water Resources Policy Plan* (Metropolitan Council, 2015) is a framework for building strategies that integrate wastewater, water supply, and surface water as related areas of a comprehensive water picture. The plan carries forward the vision of *Thrive MSP 2040*, the long-range plan for the Twin Cities region that is updated every 10 years. Thrive's regional vision includes five desired outcomes that provide policy direction for the *2040 Water Resources Policy Plan*:

- *Stewardship* – advancing the Council's longstanding mission of orderly and economical development by responsibly managing the region's natural and financial resources and making strategic investments in our region's future.
- *Prosperity* – investing in infrastructure and amenities that make our region competitive in attracting and retaining successful businesses, a talented workforce, and strong economic opportunities.

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- *Equity* – connecting all residents to opportunity and creating viable housing, transportation, and recreation options for people of all races, ethnicities, incomes, and abilities so that all communities share the opportunities and challenges of growth and change.
  - *Livability* – focusing on the quality of our residents’ lives and experiences in the region, and how places and infrastructure create and enhance the quality of life that makes our region a great place to live.
  - *Sustainability* – protecting our regional vitality for generations to come by preserving our capacity to maintain and support our region’s well-being and productivity over the long term.

### **Soil and Water Conservation District**

As of February 2014, Hennepin County assumed the role of soil and water conservation district (SWCD) and is responsible for all duties and authorities of an SWCD. The Hennepin County Natural Resources Strategic Plan includes a goal to protect and restore lakes, rivers, streams, and wetlands to preserve the health of aquatic ecosystems, meet applicable standards for fishing and recreation, and ensure that water supplies are sustainable. A strategy to meet this goal includes working with partners to implement water quality restoration and protection projects to improve impaired water resources.

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

The proposed Project is located in areas zoned by the City of Golden Valley as I-4 (**Figure 6**). Zone I-4 is an institutional district including parks, playgrounds, golf courses, or government offices. The areas directly surrounding the proposed Project are zoned R-1 and R-3 residential. Zone R-1 is classified as single-family homes, and Zone R-3 is medium-density residential areas.

The proposed Project is located in an area that experiences chronic flooding and receives stormwater from a one-square mile area located in three cities. Based on its size, the watershed area is not quite large enough to be included in the Federal Emergency Management Agency (FEMA) special flood hazard area. As such, the proposed Project is located in an area mapped by FEMA as Zone X. Zone X represents areas of minimal flood hazard typically located between the limits of the base and 500-year floods.

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- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

The proposed Project would be compatible with the nearby land uses, zoning, and plans previously described in EAW Item 9a.ii.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

The proposed Project would be compatible with current land uses.

## 10. Geology, Soils and Topography/Land Forms

- a. Geology – Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

Bedrock in the proposed Project area is the St. Peter Sandstone formation (Minnesota Geological Survey, 1989). The upper half to two-thirds of this formation is fine- to medium-grained friable quartz sandstone. Exposures are limited in this part of the unit and commonly exhibit case-hardened weathered surfaces. The lower part of the St. Peter Sandstone contains multicolored beds of mudstone, siltstone, and shale with interbedded very coarse sandstone. Depth to bedrock in the proposed Project area is up to 150 feet below ground surface. Surficial geology consists of glacial till of mixed composition, which is primarily loam to sandy loam, and locally includes small areas underlain of thick reddish-brown till and thick loamy to sandy colluvium (reference (5)).

No karst features or other geologically sensitive features are known to occur in the vicinity of the proposed Project area.

- b. Soils and topography – Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

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The topography in the proposed Project area is mostly flat, with steep slopes adjacent to the ponds that lead into the open water. A knoll is located in between the two ponds in the Pennsylvania Woods Nature Area.

Soil in the proposed Project area is mapped as Urban land- Lester complex, 2 to 18 percent slopes (map unit L52C); and Urban land- Udorthents, wet substratum, complex, 0 to 2 percent slopes (map unit U1A).

The dredging of the DeCola Pond B is expected to remove approximately 3,040 yards of accumulated sediment. The area of open water surface of DeCola Ponds B and C would increase by 1.9 acres for a total of 6.7 acres of open water.

As part of the proposed Project, minor grading would take place to provide safe construction and maintenance accesses and to transition between the pond and buffer areas. During construction, ground disturbance would be limited to the extent possible to minimize the potential for erosion. Temporary erosion and sediment control best management practices (BMPs) would be installed and designed to minimize erosion onsite and to prevent construction-related sediment from migrating offsite. BMPs would be installed prior to soil disturbance, and the contractor would be responsible for their inspection and maintenance.

## 11. Water Resources

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
  - i. Surface water – lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The proposed Project is located in DeCola Ponds B and C, which are MnDNR Public Waters (PWI #27064700) (**Figure 7**).

The Main Stem of Bassett Creek is located approximately 0.83 miles south of the proposed Project site. Bassett Creek is a BCWMC Priority Stream and is included on the Minnesota Pollution Control Agency's (MPCA's) Impaired Waters 303 (d) list as impaired for aquatic life and aquatic recreation due to fishes bioassessments and elevated levels of chloride and fecal coliform. DeCola Ponds A, B, and C discharge downstream to DeCola Ponds D, E and F, which continues to Honeywell Pond and ultimately discharges to Bassett Creek.

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The proposed Project is located in an area that experiences chronic flooding and receives stormwater from just under one-square-mile area located in three cities. Based on its size, the watershed area is not quite large enough to be included in the Federal Emergency Management Agency (FEMA) special flood hazard area. As such, the proposed Project is located in an area mapped by FEMA as Zone X. Zone X represents areas of minimal flood hazard typically located between the limits of the base and 500-year floods.

In 2015, a wetland delineation was completed for the Liberty Crossing Apartments and Townhomes site, including a delineation along DeCola Pond B and in the Dover Hill area. This wetland delineation identified one wetland in the Dover Hill area, north of DeCola Pond B, as well as Pond B itself. The delineated wetland in the Dover Hill area was 0.12 acres in size and classified as a non-vegetated, seasonally flooded basin. The delineated wetland area associated with Pond B was 2.55 acres in size and was primarily a shallow, open water wetland with a wet meadow fringe in some areas.

In 2017, the delineation was expanded to include field wetland delineations around DeCola Pond C and the northern edge of DeCola Pond A. This wetland delineation identified one wetland, approximately 2.55 acres in size, associated with DeCola Pond C. This wetland was classified primarily as a shallow open water wetland with a wet meadow fringe in some areas. A second wetland, classified as a shallow, open water wetland, was delineated along the northern edge of DeCola Pond A.

Although the wetland delineations indicated that DeCola Ponds A, B, and C exhibited characteristics sufficient to classify these areas as wetland, the ponds are man-made, excavated stormwater ponds. As such, they are not naturally occurring wetland areas. The 2015/2017 wetland delineation was approved by the technical evaluation panel (TEP) on November 22, 2017.

- ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

The depth to groundwater in the proposed Project area is recorded as 0-20 feet, and the proposed Project is located about the St. Peter Aquifer. There are no known springs or seeps within the proposed Project area. The proposed Project is not located within a Minnesota Department of Health (MDH) wellhead protection area. The nearest wellhead protection area is the Robbinsdale Wellhead Protection Area, which is located approximately 0.75 miles northeast

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of the proposed Project site. The Plymouth Wellhead Protection Area and the Saint Louis Park Wellhead Protection Area are each located approximately 1.5 miles from the proposed Project site (**Figure 8**). According to the Minnesota County Well Index (reference (7)), there are no groundwater wells in the proposed Project area; however, there are two wells within 500 feet of the proposed Project area (**Figure 8**). The Unique Well ID Numbers and their primary functions are listed below.

- ID 477636: Monitoring well, 15 feet deep, located 455 feet northwest of proposed Project.
  - ID 510051: Monitoring well (sealed), 51 feet deep, located 483 feet northwest of proposed Project.
- b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.
- i. Wastewater – For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.
- 1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.
  - 2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.
  - 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

The proposed Project would not produce any sanitary, municipal/domestic, or industrial wastewater.

- ii. Stormwater – Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and

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potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

DeCola Ponds B and C are stormwater ponds that receive stormwater from surrounding lands and are part of a series of ponds that provide stormwater storage and treatment before discharging to Bassett Creek. The proposed Project would not generate additional stormwater; instead, it would provide enhanced capacity to treat and store stormwater from surrounding areas and upstream. In addition, the proposed forebay treatment pond would intercept and help treat stormwater from areas upstream before discharging into the DeCola Ponds system and Bassett Creek, thereby improving the quality of public waters. The enhanced stormwater treatment provided by the proposed Project would reduce phosphorus loads by an additional 9.0 pounds of total phosphorus per year.

As proposed, the Project would remove approximately 3,040 cubic yards of accumulated sediment and native soils from within DeCola Pond B. Excavation would be completed during the winter months when water levels and flow through the pond is also expected to be low. To improve erosion control, riprap will be placed at the inlet and outlet of each box culvert, at the overflow between the forebay and DeCola Pond B, and at the outlet of DeCola Pond C. Additional erosion control measures that may be incorporated by the proposed Project include, but are not limited to, a rock construction entrance (as opposed to an earthen entrance), inlet protection, and the use of silt curtains and silt fencing.

- iii. Water appropriation – Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

The proposed Project would not appropriate surface or groundwater.

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iv. Surface Waters

- a) Wetlands – Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

The proposed Project would increase the DeCola Pond B and C open water area by 1.9 acres. Additionally, the proposed Project would involve expanding flood mitigation and treatment volume in DeCola Ponds B and C. This increase in volume would be completed through expanding contours below the normal water level and dredging accumulated sediment in DeCola Pond B. The proposed expansion would not change the overall depth of the existing ponds, but would provide additional water quality treatment volume and provide additional aquatic habitat for fish, macroinvertebrates, and macrophytes.

The proposed Project would temporarily impact approximately 2.5 acres of wetlands associated with the existing constructed stormwater ponds, primarily due to disturbance by excavation. No wetland type conversion is anticipated, and new wetland areas created by the proposed Project would result in a net gain of 0.9 acres of wetland. As a result of these factors, no mitigation is expected to be required; however, coordination would be required with regulatory agencies during the permitting process to confirm that mitigation is not necessary.

Upland creation and wetland creation by implementing buffers would be considerable components of the proposed Project. A 25-foot wetland buffer of enhanced native vegetation would be placed around the proposed open water area within the projected disturbed limits. Additionally, all areas outside of the buffer areas that fall below elevation 896.0 feet MSL would become wetland habitats. In total, 1.7 acres of wetland habitat would be created adjacent to the ponds, and 1.0 acre of native upland consisting of a mix of trees, shrubs, forbs, and grasses would be enhanced in the Pennsylvania Woods Nature Area adjacent to the site.

- b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss

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direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

The proposed Project would include construction within DeCola Ponds B and C, resulting in temporary impacts to these surface waters during construction. Surface water impacts would be minimized through the use of silt curtains, silt fencing, and dewatering sediment in a contained environment. The open water area of DeCola Ponds B and C would increase by 1.9 acres as part of the proposed Project. Temporary impacts are primarily related to increased turbidity in the water column due to movement of materials in the ponds. Appropriate BMPs would be implemented during construction to minimize the potential impacts to DeCola Ponds B and C and downstream water bodies.

Neither DeCola Ponds B nor C are navigable by watercraft. As such, the proposed Project is not expected to impact recreational navigation.

## 12. Contamination/Hazardous Materials/Wastes

- a. Pre-project site conditions – Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The MPCA's What's in My Neighborhood and Environmental Protection Agency's Cleanups in My Community databases were reviewed to determine if sites with regulatory listings for contamination such as dumps, landfills, storage tanks, or hazardous liquids are located within or adjacent to the proposed Project area. There were no sites of contamination were located within proposed Project boundary; however, two sites of contamination, an industrial stormwater site and a multiple programs site (one inactive petroleum remediation and one active underground storage tank), occur within approximately 100 feet of the project boundary. A total of 20 environmental hazard sites are located within 500 feet of the proposed Project (**Figure 9**). Of the 20 contamination sites, there are seven hazardous waste generators (five active and two

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inactive), three construction stormwater sites (two active and one inactive), one active industrial stormwater site, and eight active multiple programs sites. Seven contamination sites reported past leaks; however, these leak sites are now reported as closed.

Based on the sediment sampling investigation that was completed in 2015 for the feasibility study, the southern portion of DeCola Pond B and DeCola Pond C meet guidelines for unregulated fill and is suitable for reuse under MPCA's Unregulated Fill Policy (reference (8)). However, analytical results from one of the sediment cores collected from the northern portion of DeCola Pond B, near the existing storm sewer outfall, indicate the presence of polycyclic aromatic hydrocarbon (PAH) contaminants measures to a value of 6.29 mg/kg (using a Benzo(a)pyrene (BaP) equivalents value). This value is greater than both the current Residential soil reference value (SRV) (2 mg/kg) and Industrial SRV (3 mg/kg). This value also exceeds the MPCA's Residential SRV and Industrial SRV; therefore, sediment from that portion of Pond B will require landfill disposal. The presence of PAH in the northwestern part of Pond B is likely associated with accumulated sediments entering the pond through stormwater inflow from the culvert in the northwest corner. Concentrations of all compounds analyzed in Pond C sediment were below both the current and proposed MPCA's Residential SRVs and Industrial SRVs.

A Phase II site investigation and response action plan was completed for the adjacent City of Golden Valley Liberty Crossing project in September 2015 (reference (9)). Portions of the proposed Project area were evaluated as part of this effort, including a test trench in the forebay area and three soil borings in the Pennsylvania Woods area between DeCola Ponds B and C. This investigation discovered heightened levels of arsenic in the test trench. Debris was found throughout the investigation area, with the highest percentage of debris observed in the upper 5 feet of the test trench. No debris was observed in the Pennsylvania Woods area. Chemical concentrations at the three soil boring locations were within state standards.

A Phase II site investigation was completed for the proposed Project in February 2018, which included four test trenches in the area north of DeCola Pond B (Dover Hill area). This is adjacent to a closed leaking underground storage tank (LUST) site, where a former 15,000 gallon fuel oil tank was removed (reference (10); reference (11)). Volatile organic compounds (VOCs) were detected in the LUST basin, and the investigation indicated the extent of petroleum impact was delineated (Peer, 2011). Debris (including trace metals and plastic) were observed in the northern test trenches. Debris-containing fill must be disposed at a permitted landfill. A composite of both Pond B samples was also analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Resource Conservation and Recovery Act (RCRA) metals; all results were below TCLP limits for hazardous waste, indicating the material may be disposed of as RCRA non-hazardous materials, if landfilled.

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- b. Project related generation/storage of solid wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

The dredging of Pond B is expected to result in removal of approximately 3,040 cubic yards of accumulated sediment and native soils. As described in the previous section, testing confirmed that portions of the dredged sediment qualifies as unregulated fill. The northern portion of DeCola Pond B is anticipated to require landfill disposal. Proper disposal of the generated materials will be the contractor's responsibility, in accordance with local and state requirements. During construction, the contractor would also collect accumulated woody debris, abandoned culvert sections, and other trash. The contractor would be responsible for removing these materials from the proposed Project area and disposing of them at an appropriate location.

- c. Project related use/storage of hazardous materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

Hazardous material storage would include secondary containment of fuels during construction of the proposed Project. Fuels, oils, lubricants, and other materials typically used by construction equipment would be used during construction. No other chemicals or hazardous materials would be needed for or generated by the proposed Project.

Refueling spills and equipment failures, such as a broken hydraulic line, could introduce contaminants into soil and surface waters during construction. A spill could result in potentially adverse effects to on-site soils and surface waters. However, the amounts of fuel and other lubricants and oils would be limited to that needed by the equipment onsite. Supplies and equipment needed to quickly limit any contamination (i.e. spill kits) would also be located onsite.

To minimize the likelihood of potential spills and leaks of petroleum and hydraulic fluids during construction, equipment would be inspected daily for leaks and petroleum contamination, fuels for construction would be stored at staging areas in upland locations, and equipment refueling and maintenance would be performed in locations away from the DeCola Ponds. In addition, the

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contractor would be required to use double-walled tanks or secondary containment for single-walled tanks used to store petroleum products onsite. Any bulk lubricants would also be stored with secondary containment protection. All petroleum and lubricant storage containers would be inspected on a weekly basis and the inspections would be documented.

- d. Project related generation/storage of hazardous wastes – Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

Construction and operation of the proposed Project is not anticipated to generate any hazardous waste.

### **13. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)**

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

The proposed Project area primarily consists of aquatic habitat, with three shallow open water wetlands (Type 5), a small non-vegetated seasonally flooded basin (Type 1), and upland areas consisting of floodplain forest with green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), peach-leaf willow (*Salix amygdaloides*), silver maple (*Acer saccharinum*), and eastern cottonwood (*Populus deltoides*) trees and a higher quality remnant hardwood forest consisting of mainly maple (*Acer* sp.), basswood (*Tilia americana*), and oak (*Quercus* sp.) trees. This area also includes invasive species; the City's 2013 natural resources inventory (reference (3)) identified approximately 50 to 75 percent buckthorn cover throughout the wooded area.

The habitat within the proposed Project area is important to fish, turtles, amphibians such as frogs, toads and salamanders, various birds such as waterfowl, raptors and eagles, wading birds, and song birds, as well as mammals, such as fox, deer, squirrels, beavers, and muskrats.

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- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-\_\_\_\_) and/or correspondence number (ERDB \_\_\_\_\_) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

Barr Engineering Co. (Barr) has a license agreement (LA-898) with the MnDNR for access to the Natural Heritage Information System (NHIS) database, which was queried in October of 2018 to determine if any rare species could potentially be affected by the proposed Project. The NHIS database indicates that no state-listed (endangered, threatened or special concern) species, native plant communities, or Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources have been recorded within vicinity 1-mile radius of the proposed Project area.

The USFWS technical assistance website and the USFWS Information, Planning, and Conservation (IPaC) System website list one federally listed species as occurring in Hennepin County, which includes the federally threatened northern long-eared bat (*Myotis septentrionalis*; state-special concern). According to the NHIS database, no northern long-eared bats have been documented within one mile of the proposed Project.

The northern long-eared bat roosts in trees (both live and dead) greater than 3 inches in diameter at breast height (dbh) that have loose or peeling bark, cavities, or crevices. During the winter the northern long-eared bat hibernates in caves and mines, and utilizes forested areas for roosting and foraging during the active season of April through September. According to data provided by the MnDNR and USFWS, there are no known, occupied roost trees or hibernacula located with several miles of the proposed Project site. Additionally, northern long-eared bats are unlikely to use trees in a highly developed area as is present in the proposed Project area.

Because the proposed Project occurs within the range of the northern long-eared bat and approximately 4.4 acres of trees will be cleared to create flood storage and more diverse native habitat, the possibility of direct and indirect impacts cannot be completely discounted. Therefore, the proposed Project may effect, but is not likely to adversely affect the northern long-eared bat. Additionally, per the final 4 (d) rule, no prohibited take of the northern long-eared bat will occur as part of the proposed Project due to the lack of roost trees and hibernacula in the project vicinity.

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- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

There may be minor temporary adverse impacts on wildlife and fisheries within the proposed Project area. Temporary impacts on wildlife may include increased noise and human activity during construction. Many species could temporarily abandon habitats near the proposed Project area until the work is completed. These temporary impacts are not expected to irreparably harm wildlife or fisheries species or populations.

Many of the aquatic organisms found within DeCola ponds are most likely to avoid and move away from the work area during construction. It is expected that fish and other mobile aquatic organisms would generally be relocated to adjacent aquatic habitats as construction activities initiate. Direct impacts may occur to the more sessile aquatic organisms that are unable to remove themselves or retreat from the construction area. Once complete, the proposed Project would likely enhance habitat for fish, turtles, amphibians, and other aquatic organisms by improving water quality and habitat diversity.

Turtles may be present in DeCola Ponds B and C and could be impacted by the proposed Project if the pond drawdown is not complete by September 15. If the drawdown occurs after September 15, turtles may hibernate in the ponds and ultimately not have enough water above them to provide the insulation to survive winter. It is anticipated that drawdown associated with the proposed Project would occur before September 15 so that turtles could likely choose another adjacent habitat for hibernation. Turtle fencing would be installed around the perimeter of the work area to minimize potential for turtle movement associated with the water level drawdown. The fencing would have strategic openings to encourage turtles to move either into Pond A or D for overwintering.

Aquatic invasive species can have both an ecological and recreational impact on Minnesota waters. According to the Minnesota NHIS database, the Chinese mystery snail (*Cipangopaludina chinensis*) was found in DeCola Pond A and purple loosestrife (*Lythrum salicaria*) was observed within 1,500 feet of the proposed Project. The contractor will be required to properly decontaminate all construction equipment before entering and exiting the work site, consistent with Minnesota law.

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Approximately 4.4 acres of trees would be cleared as part of the proposed Project to create flood storage, while approximately 1.0 acres of more diverse tree and other vegetation species would be planted as part of site restoration.

- d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Potential impacts to fish can and would be minimized by avoiding in-pond construction during spawning and migration periods (March 15 to June 15). As described in EAW #6, erosion and sediment control BMPs, as well as turtle fencing would be installed around the perimeter of the work area to minimize potential for turtle movement. Additional measures to avoid, minimize, or mitigate any adverse effects to turtles include dewatering the ponds prior to September 15<sup>th</sup>, to minimize impacts as the turtles begin their overwintering periods.

A prudent, but not mandatory, avoidance measure to avoid all direct impacts to the northern long-eared bat is to clear all trees outside of the active season that is typically considered April through September in Minnesota.

The proposed Project also intends on preserving mature trees within the knoll and surrounding high ground areas in the Pennsylvania Woods Nature Area between DeCola Ponds A, B, and C. To mitigate adverse effects to the upland and wetland plant and ecological communities, a total of 1.7 acres of wetland would be created and 1.0 acre of upland would be enhanced with native vegetative communities.

#### **14. Historic Properties**

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

On November 1, 2018, a request for data from the Minnesota State Historic Preservation Office (SHPO) was conducted to identify known archaeological and historic resources within 1 mile of the proposed Project. Historic aerial imagery from the MDNR Landview and General Land Office and survey maps from the Bureau of Land Management were also reviewed. According to the data SHPO provided, there are no archaeological sites and 47 historical structures located within 1 mile of the proposed Project. Recorded resources include: one high school, one industrial building, one railroad segment, one roadway segment, two office buildings, one water tower,

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one service station, one church, one farmhouse, and 32 residences. Of these resources, only the church is considered eligible for listing on the National Register of Historic Places (NRHP). This NRHP eligible resource is located approximately 0.8 miles southeast of the proposed Project.

The nearest SHPO-recorded resources occur approximately 0.4 miles east and west of the proposed Project boundary. These structures have not been evaluated for eligibility in the NRHP. No historic or archaeological resources were identified within the proposed Project area. Due to the design of the proposed Project, it is not likely the proposed Project would adversely affect any archaeological sites or historic properties.

## 15. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The DeCola Ponds B and C are located within the Pennsylvania Woods Nature Area, a popular walking area which can be seen from residences, commercial properties, and roadways located adjacent to the proposed Project. With the conversion of floodplain forest areas to pond and wetland habitat in the Dover Hill public easement area and the north and east portions of the Pennsylvania Woods Nature Area, the views and sightlines in some areas may be expanded during construction and immediately following until the newly planted vegetation reaches maturity. However, no long-term negative visual effects are anticipated as a result of the proposed Project.

The goal is to preserve healthy, mature hardwood trees in this area to the extent practicable. Existing trees would be preserved in key areas, such as the knoll with remnant maple, basswood, and oak hardwoods between DeCola Ponds A, B and C and preserving natural screening trees along the south and west sides of DeCola Pond B and the east side of Pond C. Upon completion of ground-disturbing activities, approximately 1.0 acre of upland area will be enhanced and planted with native vegetation, which could include a mix of trees, shrubs, forbs, and grasses. The new vegetation would be strategically planned and planted to consider views, sightlines, and screening. Since a portion of the walking trails would be impacted by the construction activities within DeCola Ponds B and C and Pennsylvania Woods, it would be necessary to close the trail loop during construction activities. Trail closure signs and barricades would be installed and a pedestrian detour route would be determined which could potentially result in temporary visual effects during construction. Efforts would be made to minimize the duration of the trail closure, including considering winter construction to minimize impacts to park users.

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During construction, the viewshed would temporarily be disrupted due to the presence of construction equipment and materials staging. The visual impact would be temporary in nature and would not affect the permanent viewshed of Pennsylvania Woods and the surrounding landscape.

## 16. Air

- a. Stationary source emissions – Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project’s effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

Not Applicable – no stationary source emissions would be created by the proposed Project.

- b. Vehicle emissions – Describe the effect of the project’s traffic generation on air emissions. Discuss the project’s vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The proposed Project would result in short-term, localized air-quality impacts due to emissions from construction vehicles during restoration activities. These activities are expected to last approximately 4 months, with re-vegetation activities potentially extending into the following growing season. Emissions from the powered equipment would be minor and temporary in nature during the construction and are expected to have an overall negligible impact on air quality.

- c. Construction traffic related to the delivery of project materials and the hauling off-site of excess soil would temporarily increase traffic during construction. To minimize vehicle emissions. Dust and odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

During site grading and preparation activities, the proposed Project would generate limited amounts of dust. No impacts to quality of life are anticipated as any fugitive dust emissions from construction activities would be minimized through control measures such as use of watering

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trucks during dry conditions, sweeping, and other methods as deemed appropriate by the contractor. The proposed Project is not expected to generate dust upon construction completion.

The proposed Project is not anticipated to generate any odors other than those typically associated with pond and wetland environments.

## 17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Existing noise in the vicinity of the proposed Project is typical of a suburban setting. Surrounding areas consist of residences, commercial buildings, industrial uses, railroad, and roadways. Noise is generated primarily by local roadway and rail traffic.

Construction noise is expected to be minimal and limited to the noise generated by equipment and workers accessing the proposed Project area. The equipment associated with the proposed Project is expected to be limited to general earthmoving equipment (dozers, loaders, excavators, etc.) and trucks used to haul material (i.e., dredged sediment and other materials) to and from the proposed Project area.

No change in long-term noise level is expected after completion of project activities.

## 18. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

There is no parking presently associated with the proposed Project, and the addition of parking is not planned.

Neither of the adjacent roadways are major roadways. Winnetka Avenue North/County Highway 156 runs a block west of the proposed Project area and has a functional classification of A-Minor Augmenter. This type of roadway is intended to provide alternative travel routes to interstates or

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other principal arterial roadways (i.e. major roadways) in areas of high-density development. Medicine Lake Road/County Highway 70 runs just north of the site and is classified as an A-Minor Reliever. This type of roadway is intended to provide an alternate travel route to principal arterial roadways. All other nearby roadways are classified as local roadways. Trucks hauling material would likely access the site from the cul-du-sac south of the site on Pennsylvania Avenue North, and the cul-du-sac located north of DeCola Pond B on Rhode Island Avenue North.

The daily truck traffic would be dependent on contractor equipment availability and detailed work schedule. It is expected that truck traffic would include approximately 120 truckloads of sediment per day for up to 40 working days, Truck traffic will be distributed at a relatively even rate throughout working days as sediment is excavated from the ponds. The estimates for the amount of truckloads necessary are based on 44,000 cubic yards of total sediment (3,040 cubic yards for Pond B and 40,960 cubic yards for the forebay area) to be excavated at a rate of 1,200 CY per day. This estimate results in 120 truckloads of 10 cubic yards each to be hauled per day. Some additional traffic will be generate from tree removal and hauling, which will last approximately 5 working days.

These trips are expected to be spaced throughout the work day with traffic beginning as early as 7 a.m. and abiding by City work hours. The proposed work will primarily occur in winter, which has a shorter timeframe of available daylight. Other commercial vehicles may also be intermittently needed for specific tasks through the course of the proposed Project, but are not anticipated to be a constant traffic source. Project-generated traffic is expected to be temporary, lasting only for the duration of construction activities.

The proposed Project is accessible by public transit with at least two bus routes serving the area as well as alternative transportation modes, including walking and biking. The proposed Project area is served by the Metro Bus Routes 705 and 755, with the closest stop at the corner of Winnetka Avenue near 23<sup>rd</sup> Avenue North. The proposed Project is not expected to impact public transit.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system.

*If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual,*

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Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance,

Based on expected low traffic volumes, the proposed Project is not anticipated to impact local traffic flow and no roadway improvements are warranted to accommodate traffic generated by the proposed Project. Construction of the proposed Project is not anticipated to require any vehicular detours.

- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

The proposed Project would generate small, temporary increases in traffic for the duration of construction activities. It is expected that the contractor would abide by local load restrictions and speed limits. The contractor would be responsible for ensuring the roadways are kept clean and clear of construction-related debris. Additional measures to minimize or mitigate project-related transportation effects are not proposed due to the minimal level of impact.

## 19. Cumulative Potential Effects

(Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

- a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The geographic scale with which cumulative effects were assessed for the proposed Project includes portions of the watershed within five miles of the proposed Project, as well as developed areas within several blocks. Projects planned for completion in the next 5 years and projects currently in progress were considered in the cumulative effects analysis.

- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

The potential for negative effects resulting from the proposed Project would be temporary, lasting only for the duration of construction. Once construction is complete, the proposed Project would positively affect water quality and habitat diversity in the proposed Project area as well as positively affect storage capacity in DeCola Ponds B and C by reducing flood levels in the area.

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Present and reasonably foreseeable future projects that could potentially intersect with the environmental effects of the proposed Project include projects in Golden Valley and within nearby surface waters.

### Projects in Golden Valley

Numerous construction projects of townhomes, residential, and office buildings are currently under construction within the city of Golden Valley. Multiple projects are either under review or approved for construction in the foreseeable future. There are also a number of small highway improvement and resurfacing projects occurring within a 5-mile radius of the proposed Project area, but none are adjacent to the proposed Project.

### Bassett Creek Watershed Management Commission (BCWMC) Projects

The BCWMC plans capital improvement projects (CIP) within the Bassett Creek watershed, several of which are located within five miles of the proposed Project. The City of Plymouth and BCWMC have designed and begun construction on restoring streambanks along Plymouth Creek from Medicine Lake to 26<sup>th</sup> Ave. and Annapolis Lane upstream through Plymouth Creek Park, located 2.5 miles upstream of the proposed Project. Construction was completed in the winter of 2017 through 2018, and vegetation management is currently ongoing. An additional project currently in progress with goals of stabilizing streambanks for the BCWMC is the Bassett Creek Main Stem Erosion Repair Project located 4 miles downstream of the proposed Project and is scheduled for completion in winter of 2018. In addition, the BCWMC's Medicine Lake Road and Winnetka Avenue Flood Mitigation Study identified over \$22 million in projects that are needed to reduce the effect of repeat flooding on the roadway and adjacent properties. These projects are planned to be constructed in phases, including projects in 2019, 2020, 2022, and 2023.

Numerous ongoing BCWMC-supported projects such as Medley Park Water Quality Treatment in Golden Valley, Schaper Pond Diversion in Golden Valley, Twin Lake In-Lake Alum Treatment located in Golden Valley, and Bassett Creek Park Pond & Winnetka Pond Dredging Projects in Crystal all aim to reduce sediment and nutrient loads in their respective sub-watersheds.

Reasonably foreseeable projects such as the Four Seasons Area, Bryn Mawr Meadows, and Westwood Lake Water Quality Projects aim to implement and develop better water quality improvement practices to treat stormwater runoff within residential areas.

- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

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The cumulative effects analysis for the proposed Project assesses both negative and beneficial potential environmental effects.

### **Negative Effects**

Any potential for negative effects from the proposed Project would be temporary, and only last the duration of construction. These effects are discussed in detail in the resource-specific sections above. Since these effects would be temporary and localized in nature and would be mitigated by the Project to the extent practicable, they are not likely to interact with any of the present or reasonably foreseeable projects described above.

### **Beneficial Effects**

As described above, the proposed Project would positively affect the storage capacity of DeCola Ponds B and C and improve the flooding concerns surrounding the proposed Project area. The BCWMC capital improvement projects described above all result in better implementation and management to water quality and stormwater treatment. These projects, in conjunction with the proposed project, will provide water quality benefits within the entirety of the Bassett Creek Watershed. The proposed Project would also improve habitat and recreational opportunities in the area around DeCola Ponds B and C.

## **20. Other Potential Environmental Effects**

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

The proposed Project is not anticipated to cause any additional environmental effects beyond those addressed above.

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**RGU CERTIFICATION.** *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

**Signature:**



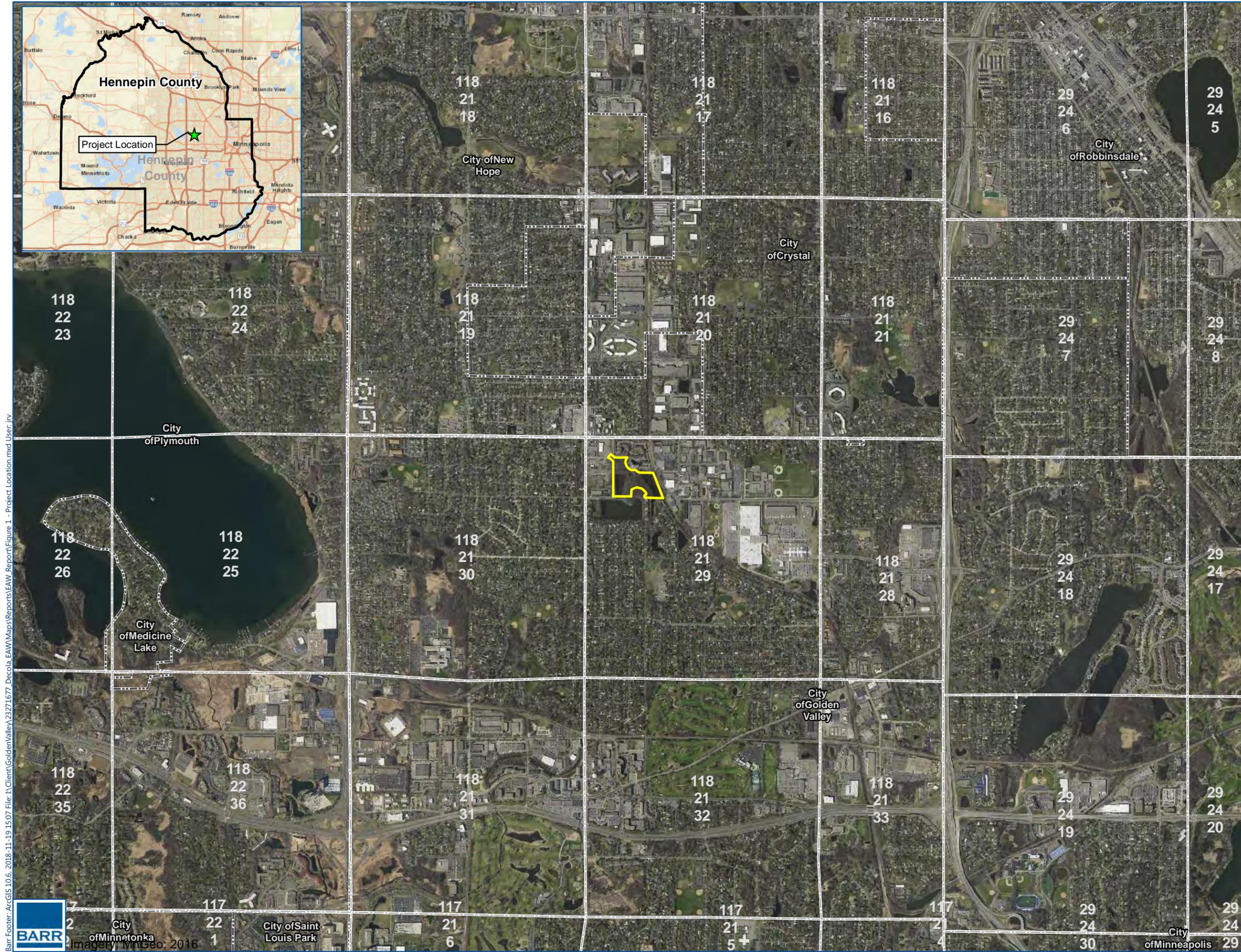
Marc Nevinski

**Date:**

12-7-18

**Title:** Physical Development Director  
City of Golden Valley

## Figures



-  Project Area
-  Municipal Boundary
-  Public Land Survey Sections

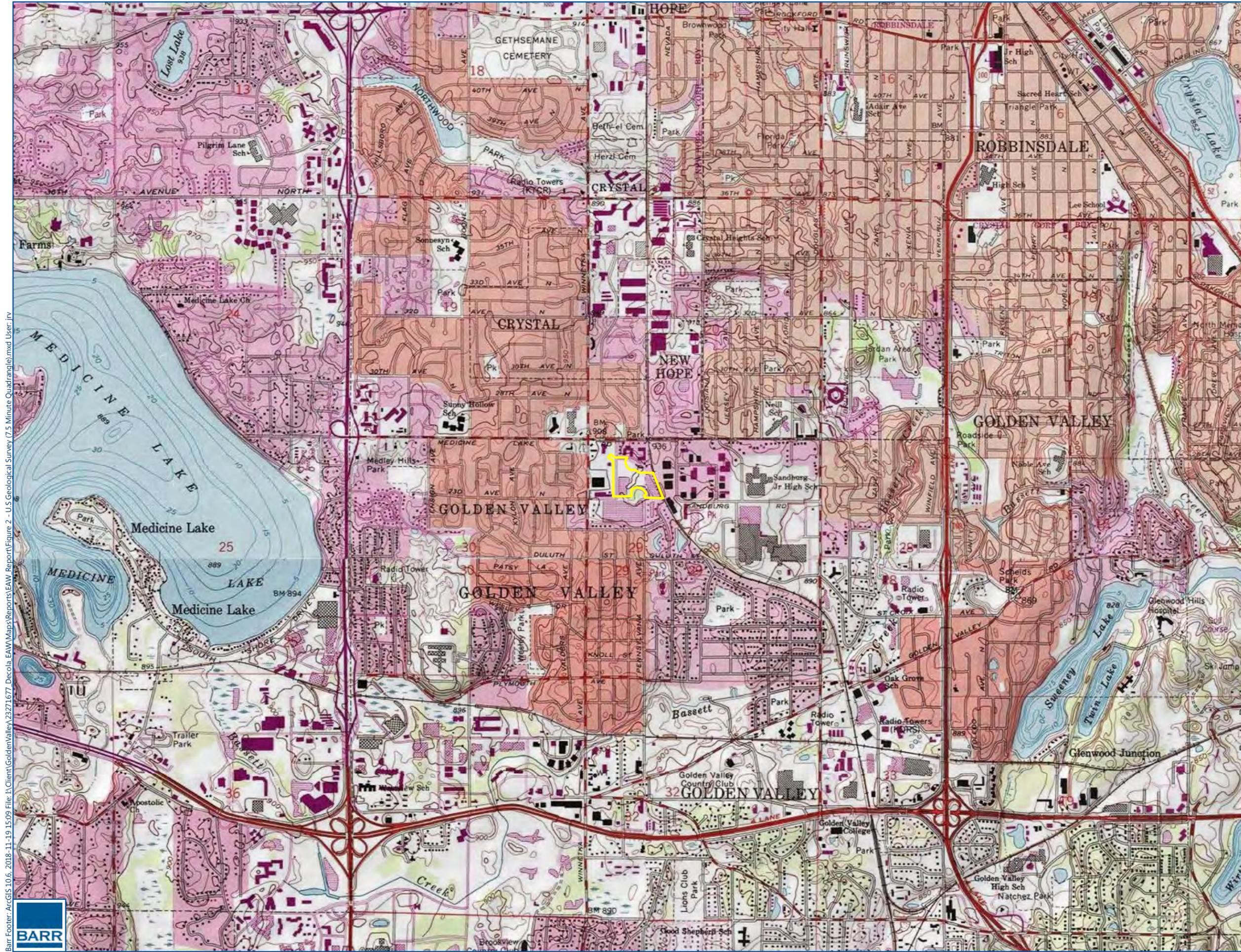


2,000 1,000 0 2,000  
Feet

PROJECT LOCATION  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

FIGURE 1





 Project Area



2,000 1,000 0 2,000  
Feet

U.S. GEOLOGICAL SURVEY  
(7.5 MINUTE QUADRANGLE)  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

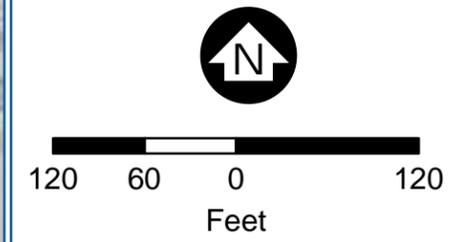
FIGURE 2



Barr Footer: ArcGIS 10.6, 2018-12-06 14:45 File: I:\Client\GoldenValley\23271677\_DeCola\_EAW\Maps\Reports\EAW\_Report\Figure 3 - Project Overview.mxd User: jrv



- Project Area
- Project Grading Extents
- Dover Hill Easement Area
- Expanded Open Water
- Existing Pond Footprint
- Proposed Wetland Habitat Creation
- Proposed Upland Habitat Enhancement
- Vegetation Preservation Area
- Vegetation Clearing Area
- 14' x 4' Box Culvert
- Modified Outlet Structure
- Existing Paved Trails
- Proposed Paved Trail



PROJECT OVERVIEW  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

FIGURE 3

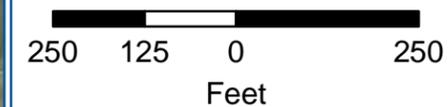
Barr Footer: ArcGIS 10.6, 2018-12-06 14:48 File: I:\Client\GoldenValley\23271677\_Decola EAW\Maps\Reports\EAW\_Report\Figure 4 - Decola Ponds Overview.mxd User: jrv



Imagery: MnGeo, 2016



-  Project Area
-  Dover Hill Easement Area



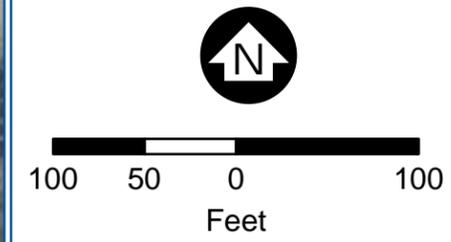
DECOLA PONDS OVERVIEW  
 DeCola Ponds B & C  
 Improvement Project  
 City of Golden Valley

FIGURE 4



- Project Area
- Dover Hill Easement Area
- Stormwater Pond
- Wetland
- Lawn/Landscaping
- Wooded/Forest <sup>1</sup>
- Impervious Surface

<sup>1</sup>Forest on the knoll is remnant hardwood forest (Maple - Basswood). Forest in the lower areas include floodplain forest species.



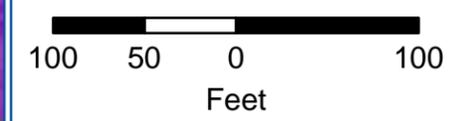
**LAND COVER**  
 DeCola Ponds B & C  
 Improvement Project  
 City of Golden Valley

**FIGURE 5**





- Project Area
- Dover Hill Easement Area
- Golden Valley Zoning Description
  - Single Family (R-1)
  - Medium Density Residential (R-3)
  - High Density Residential (R-4)
  - Light Industrial
  - Industrial
  - Institutional (I-4)

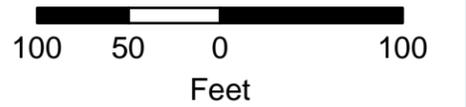


ZONING  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

FIGURE 6



- Project Area
- Dover Hill Easement Area
- Delineated Wetland Boundary
- Temporary Wetland Impacts
- Wetland Creation

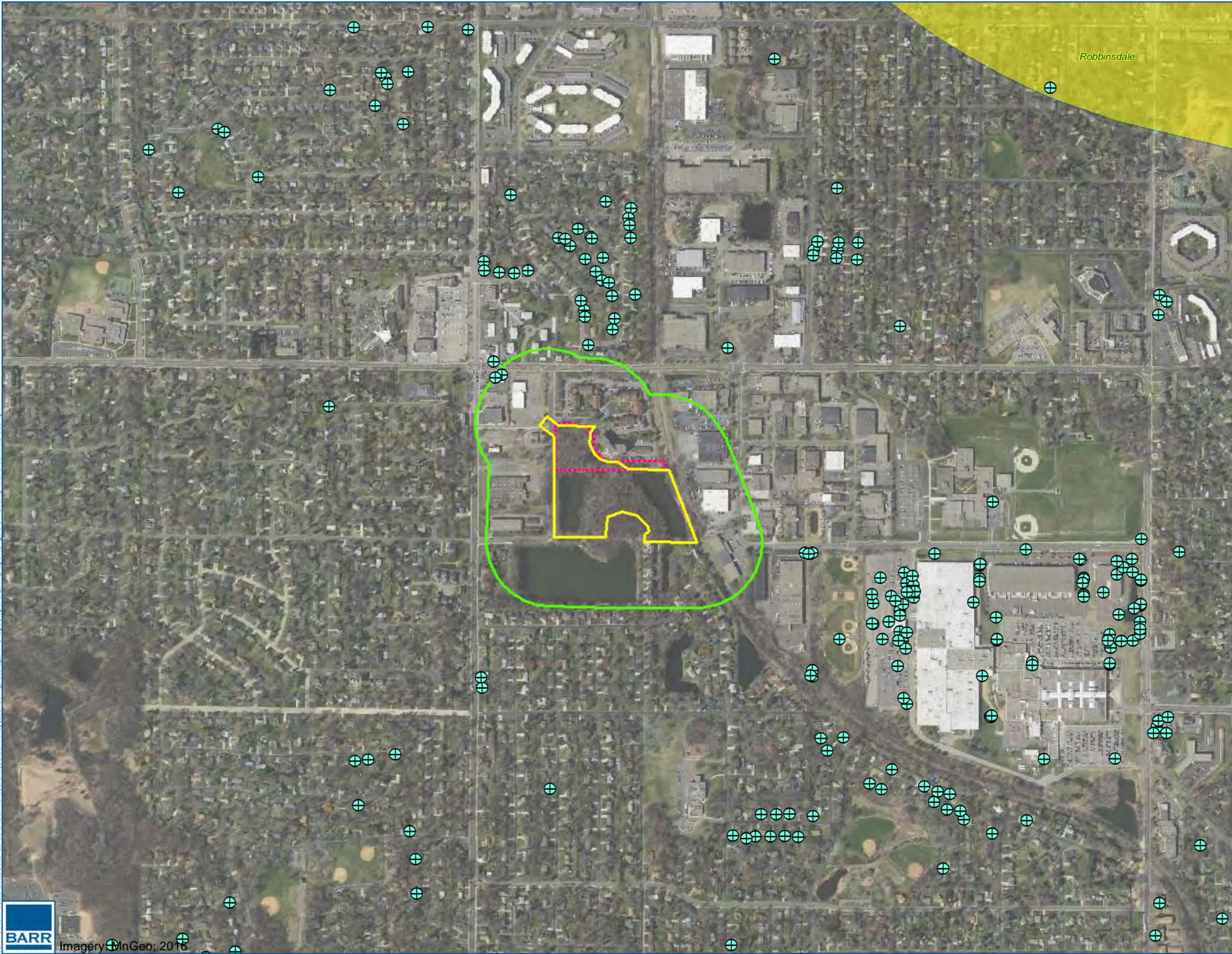


**WETLANDS**  
 DeCola Ponds B & C  
 Improvement Project  
 City of Golden Valley

FIGURE 7



Barr Footer: ArcGIS 10.6, 2018-12-06 14:51 File: I:\Client\GoldenValley\23271677\_Decola EAW\Maps\Reports\EAW\_Report\Figure 8 - County Well Index.mxd User: jrv



- Project Area
- Dover Hill Easement Area
- 500-Foot Buffer
- + Well - County Well Index
- Wellhead Protection Area



700 350 0 700  
Feet

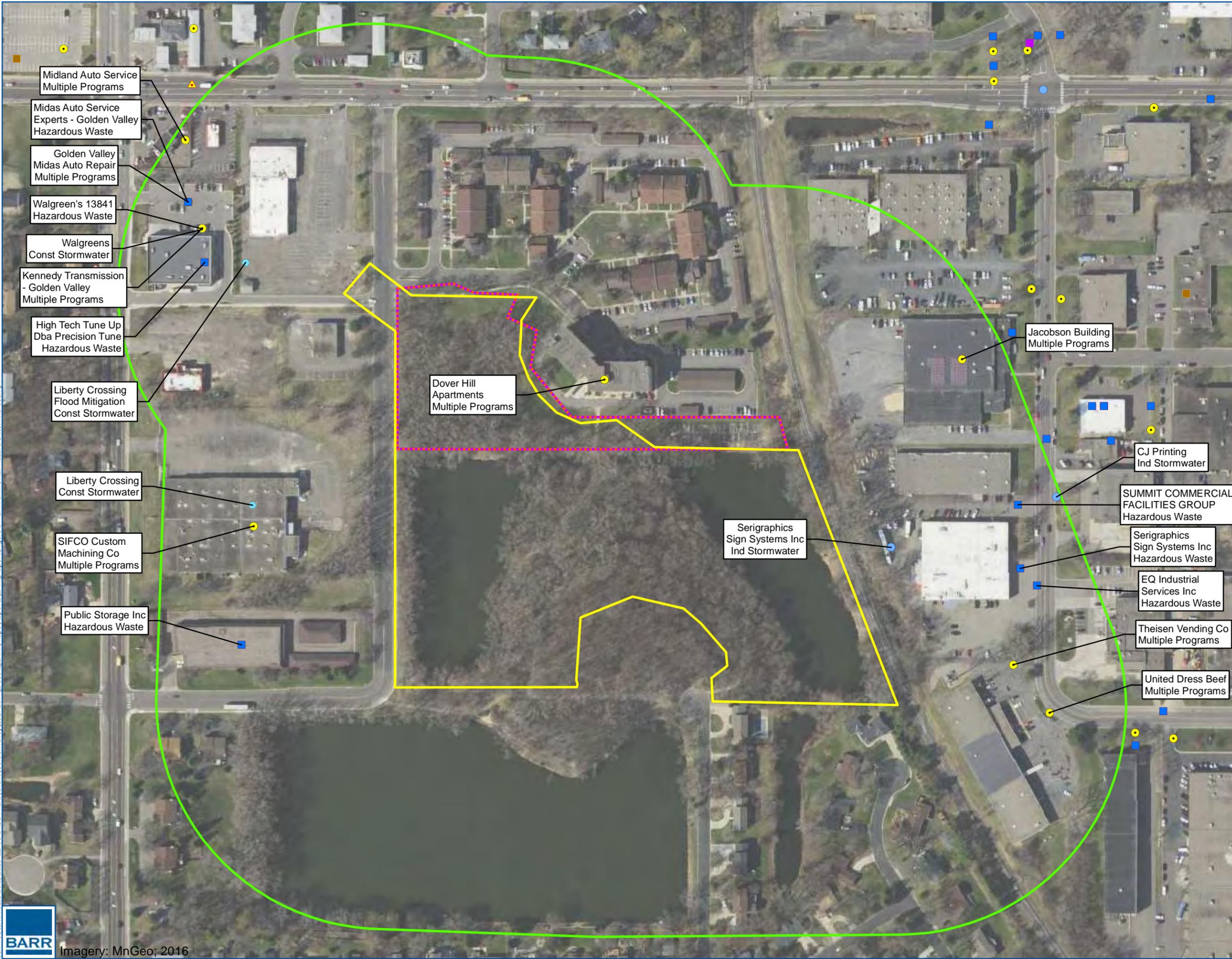
COUNTY WELL INDEX  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

FIGURE 8

Barr Footer: ArcGIS 10.6, 2018-12-06 14:52 File: I:\Client\GoldenValley\23271677\_Decola EAW\Maps\Reports\EA\ Report\Figure 9 - Environmental Hazard Sites.mxd User: jrv



Imagery: MnGeo, 2016



- Project Area
- Dover Hill Easement Area
- 500-Foot Buffer
- MPCA Interests
- ◆ Unknown
- ◆ Air
- Brownfields
- Const Stormwater
- Hazardous Waste
- Ind Stormwater
- Multiple Programs
- ▲ Petroleum Remediation



200 100 0 200  
Feet

ENVIRONMENTAL HAZARD SITES  
DeCola Ponds B & C  
Improvement Project  
City of Golden Valley

FIGURE 9

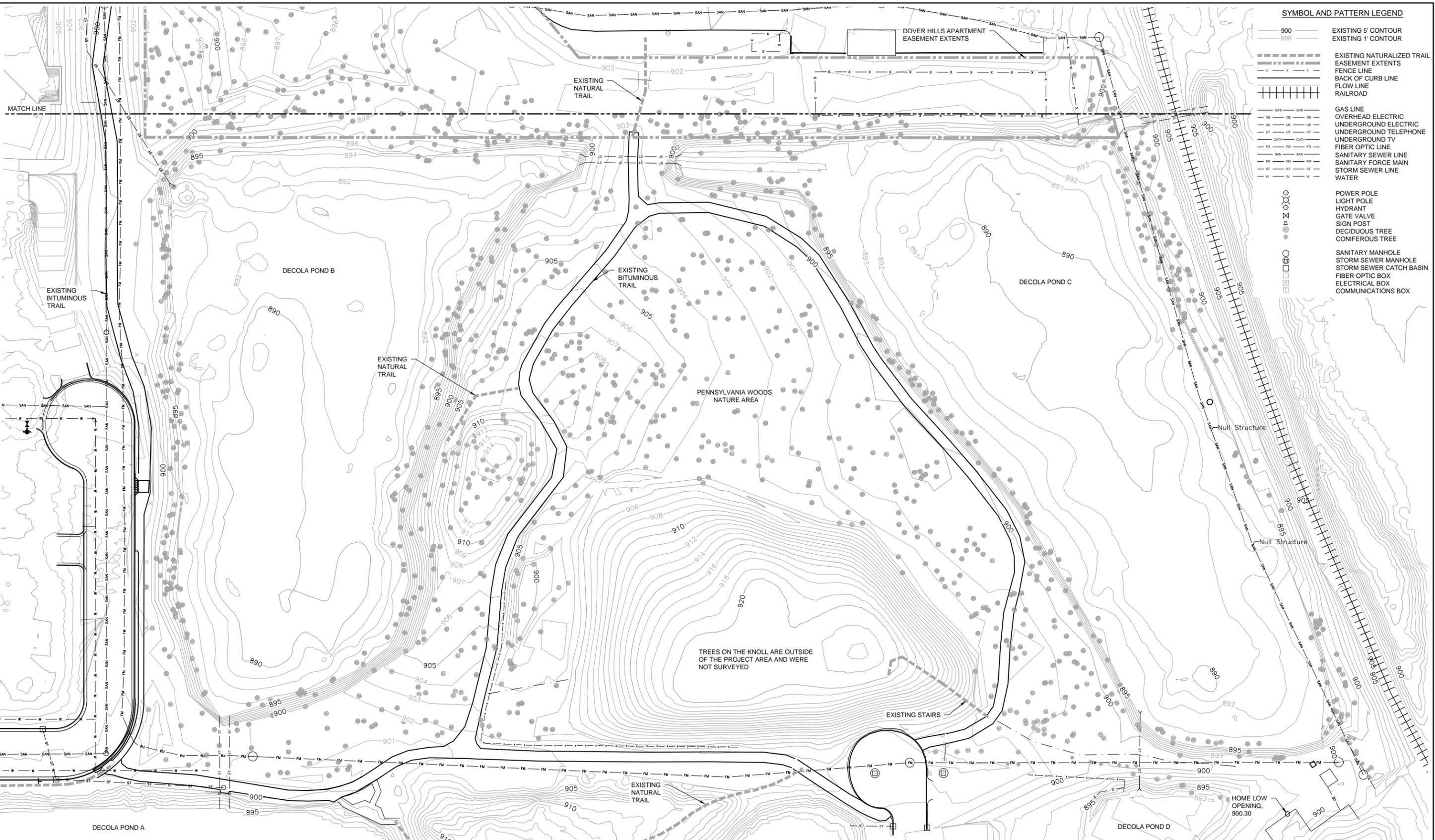
## Appendix A

### 30% Design Plans





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SYMBOL AND PATTERN LEGEND	
900	EXISTING 5' CONTOUR
898	EXISTING 1' CONTOUR
(Dashed line)	EXISTING NATURALIZED TRAIL
(X-X-X-X)	EASEMENT EXTENTS
(---)	FENCE LINE
(---)	BACK OF CURB LINE
(---)	FLOW LINE
(---)	RAILROAD
(---)	GAS LINE
(---)	OVERHEAD ELECTRIC
(---)	UNDERGROUND ELECTRIC
(---)	UNDERGROUND TELEPHONE
(---)	UNDERGROUND TV
(---)	FIBER OPTIC LINE
(---)	SANITARY SEWER LINE
(---)	SANITARY FORCE MAIN
(---)	STORM SEWER LINE
(---)	WATER
(Circle with cross)	POWER POLE
(Circle with dot)	LIGHT POLE
(Circle with X)	HYDRANT
(Circle with dot)	GATE VALVE
(Circle with dot)	SIGN POST
(Circle with dot)	DECIDUOUS TREE
(Circle with dot)	CONIFEROUS TREE
(Square with X)	SANITARY MANHOLE
(Square with X)	STORM SEWER MANHOLE
(Square with X)	STORM SEWER CATCH BASIN
(Square with X)	FIBER OPTIC BOX
(Square with X)	ELECTRICAL BOX
(Square with X)	COMMUNICATIONS BOX

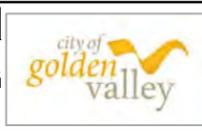
1 PLAN: EXISTING CONDITIONS - DECOLA PONDS B AND C  
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 SCALE IN FEET  
 0 40 80

30% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	DATE RELEASED



Scale	AS SHOWN
Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY  
GOLDEN VALLEY, MN

DECOLA PONDS B&C  
 IMPROVEMENT PROJECT  
 EXISTING CONDITIONS  
 DECOLA PONDS B & C

BARR PROJECT No.	23/27-1677.00
CLIENT PROJECT No.	#18-06
DWG. No.	C-02
REV. No.	A

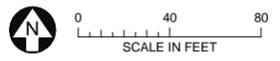
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**SYMBOL AND PATTERN LEGEND**

EXISTING CONDITIONS	
900	EXISTING 5' CONTOUR
898	EXISTING 1' CONTOUR
---	EXISTING NATURALIZED TRAIL
---	EASEMENT EXTENTS
---	FENCE LINE
---	BACK OF CURB LINE
---	FLOW LINE
---	RAILROAD
---	GAS LINE
---	OVERHEAD ELECTRIC
---	UNDERGROUND ELECTRIC
---	UNDERGROUND TELEPHONE
---	UNDERGROUND TV
---	FIBER OPTIC LINE
---	SANITARY SEWER LINE
---	SANITARY FORCE MAIN
---	STORM SEWER LINE
---	WATER
○	POWER POLE
○	LIGHT POLE
○	HYDRANT
○	GATE VALVE
○	SIGN POST
○	DECIDUOUS TREE
○	CONIFEROUS TREE
○	SANITARY MANHOLE
○	STORM SEWER MANHOLE
○	STORM SEWER CATCH BASIN
○	FIBER OPTIC BOX
○	ELECTRICAL BOX
○	COMMUNICATIONS BOX
EROSION AND SEDIMENT CONTROL	
■	INLET PROTECTION
---	SILT FENCE
---	SILT CURTAIN
---	ORANGE CONST. FENCE
---	CONSTRUCTION LIMITS

1 PLAN: EROSION AND SEDIMENT CONTROL - DOVER HILLS APARTMENTS' EASEMENT AREA  
1"=40'-0"



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PRINTED NAME: \_\_\_\_\_  
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 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

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CITY OF GOLDEN VALLEY									
CONSTRUCTION									



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Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY  
GOLDEN VALLEY, MN

DECOLA PONDS B&C IMPROVEMENT PROJECT	
EROSION AND SEDIMENT CONTROL DOVER HILLS APARTMENT EASEMENT AREA	

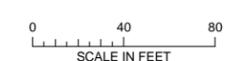
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23/27-1677.00	
CLIENT PROJECT No.	
#18-06	
DWG. No.	REV. No.
C-03	A



**SYMBOL AND PATTERN LEGEND**

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898	EXISTING 1' CONTOUR
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(Dashed line)	EASEMENT EXTENTS
(Dashed line)	FENCE LINE
(Dashed line)	BACK OF CURB LINE
(Dashed line)	FLOW LINE
(Dashed line)	RAILROAD
(Dashed line)	GAS LINE
(Dashed line)	OVERHEAD ELECTRIC
(Dashed line)	UNDERGROUND ELECTRIC
(Dashed line)	UNDERGROUND TELEPHONE
(Dashed line)	UNDERGROUND TV
(Dashed line)	FIBER OPTIC LINE
(Dashed line)	SANITARY SEWER LINE
(Dashed line)	SANITARY FORCE MAIN
(Dashed line)	STORM SEWER LINE
(Dashed line)	WATER
(Circle with cross)	POWER POLE
(Circle with cross)	LIGHT POLE
(Circle with cross)	HYDRANT
(Circle with cross)	GATE VALVE
(Circle with cross)	SIGN POST
(Circle with cross)	DECIDUOUS TREE
(Circle with cross)	CONIFEROUS TREE
(Circle with cross)	SANITARY MANHOLE
(Circle with cross)	STORM SEWER MANHOLE
(Circle with cross)	STORM SEWER CATCH BASIN
(Circle with cross)	FIBER OPTIC BOX
(Circle with cross)	ELECTRICAL BOX
(Circle with cross)	COMMUNICATIONS BOX
EROSION AND SEDIMENT CONTROL	
(Dashed line)	INLET PROTECTION
(Dashed line)	SILT FENCE
(Dashed line)	SILT CURTAIN
(Dashed line)	ORANGE CONST. FENCE
(Dashed line)	CONSTRUCTION LIMITS

1 PLAN: EROSION AND SEDIMENT CONTROL - DECOLA PONDS B AND C  
1"=40'-0"



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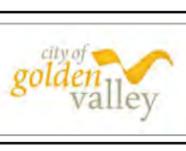
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RELEASED TO/FOR	A	B	C	0	1	2	3

**BARR**  
 Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277



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Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY  
 GOLDEN VALLEY, MN

DECOLA PONDS B&C  
 IMPROVEMENT PROJECT  
 EROSION AND SEDIMENT CONTROL  
 DECOLA PONDS B & C

BARR PROJECT No.	23/27-1677.00
CLIENT PROJECT No.	#18-06
DWG. No.	C-04
REV. No.	A







**SYMBOL AND PATTERN LEGEND**

EXISTING CONDITIONS	
900	EXISTING 5' CONTOUR
898	EXISTING 1' CONTOUR
(Symbol)	EXISTING NATURALIZED TRAIL EASEMENT EXTENTS
(Symbol)	FENCE LINE
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(Symbol)	RAILROAD
(Symbol)	GAS LINE
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(Symbol)	DECIDUOUS TREE
(Symbol)	CONIFEROUS TREE
(Symbol)	SANITARY MANHOLE
(Symbol)	STORM SEWER MANHOLE
(Symbol)	STORM SEWER CATCH BASIN
(Symbol)	FIBER OPTIC BOX
(Symbol)	ELECTRICAL BOX
(Symbol)	COMMUNICATIONS BOX

**DRAW DOWN PLAN**

900	PROPOSED 5' CONTOUR
899	PROPOSED 1' CONTOUR
(Symbol)	PROPOSED STORM SEWER
(Symbol)	PROPOSED STORM MANHOLE

1 PLAN: DRAW DOWN PLAN - DECOLA PONDS B AND C  
1"=40'-0"



30% DESIGN DRAFT

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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE # \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	A	B	C	0	1	2	3



Scale	AS SHOWN
Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

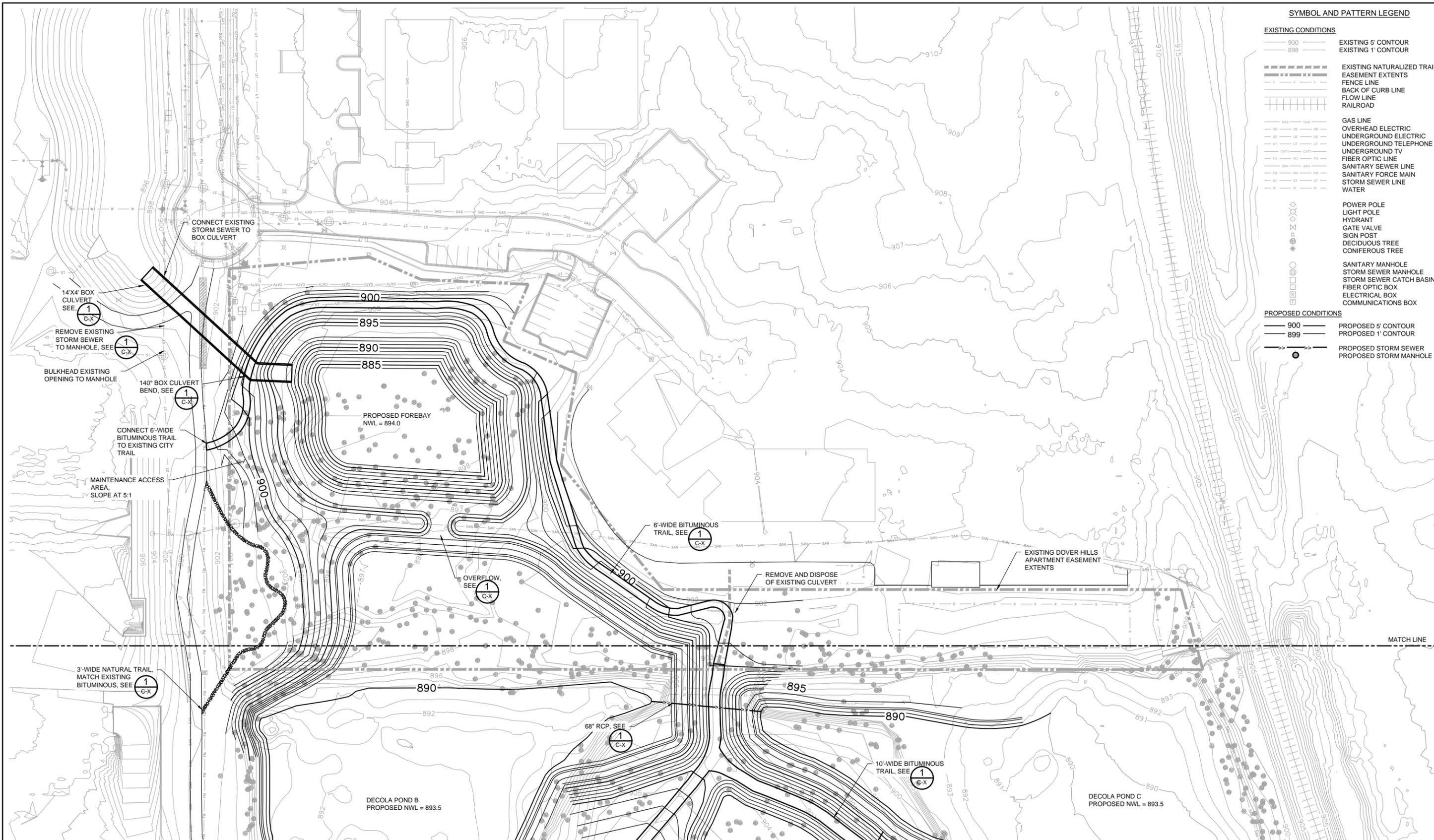
CITY OF GOLDEN VALLEY  
GOLDEN VALLEY, MN

DECOLA PONDS B&C IMPROVEMENT PROJECT  
DRAW DOWN PLAN  
DECOLA PONDS B & C

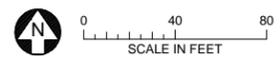
BARR PROJECT No.	23/27-1677.00
CLIENT PROJECT No.	#18-06
DWG. No.	C-08
REV. No.	A

**SYMBOL AND PATTERN LEGEND**

EXISTING CONDITIONS	
900	EXISTING 5' CONTOUR
898	EXISTING 1' CONTOUR
(Dashed line)	EXISTING NATURALIZED TRAIL EASEMENT EXTENTS
(Dashed line)	FENCE LINE
(Dashed line)	BACK OF CURB LINE
(Dashed line)	FLOW LINE
(Dashed line)	RAILROAD
(Dashed line)	GAS LINE
(Dashed line)	OVERHEAD ELECTRIC
(Dashed line)	UNDERGROUND ELECTRIC
(Dashed line)	UNDERGROUND TELEPHONE
(Dashed line)	UNDERGROUND TV
(Dashed line)	FIBER OPTIC LINE
(Dashed line)	SANITARY SEWER LINE
(Dashed line)	SANITARY FORCE MAIN
(Dashed line)	STORM SEWER LINE
(Dashed line)	WATER
(Symbol)	POWER POLE
(Symbol)	LIGHT POLE
(Symbol)	HYDRANT
(Symbol)	GATE VALVE
(Symbol)	SIGN POST
(Symbol)	DECIDUOUS TREE
(Symbol)	CONIFEROUS TREE
(Symbol)	SANITARY MANHOLE
(Symbol)	STORM SEWER MANHOLE
(Symbol)	STORM SEWER CATCH BASIN
(Symbol)	FIBER OPTIC BOX
(Symbol)	ELECTRICAL BOX
(Symbol)	COMMUNICATIONS BOX
PROPOSED CONDITIONS	
900	PROPOSED 5' CONTOUR
899	PROPOSED 1' CONTOUR
(Symbol)	PROPOSED STORM SEWER
(Symbol)	PROPOSED STORM MANHOLE



1 PLAN: PROPOSED CONDITIONS - DOVER HILLS APARTMENTS' EASEMENT AREA  
1"=40'-0"



30% DESIGN DRAFT

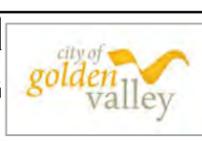
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	A	B	C	0	1	2	3



Scale	AS SHOWN
Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

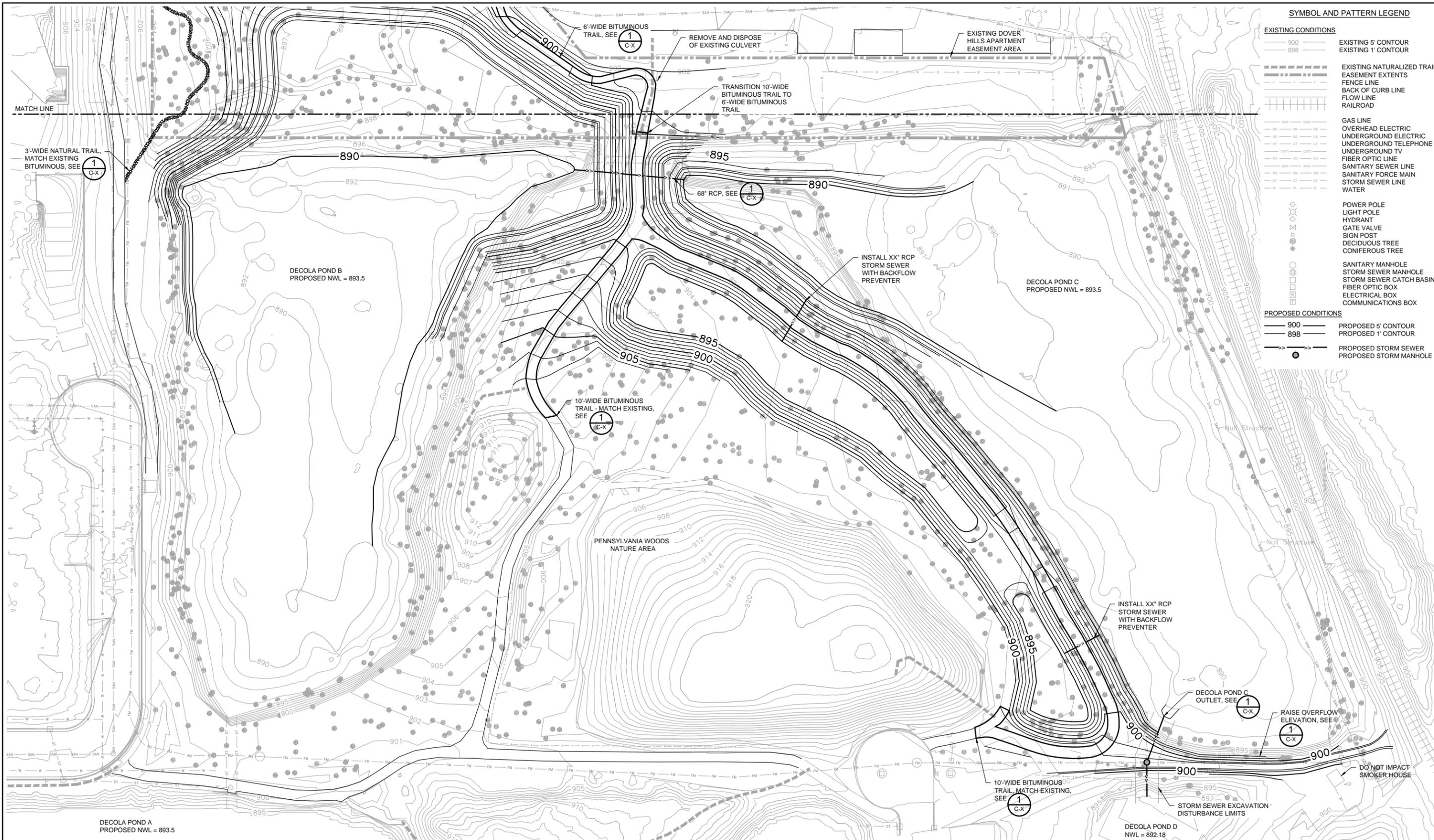
CITY OF GOLDEN VALLEY  
GOLDEN VALLEY, MN

DECOLA PONDS B&C  
IMPROVEMENT PROJECT

PROPOSED GRADING AND STORM SEWER  
DOVER HILLS APARTMENT EASEMENT AREA

BARR PROJECT No.	23/27-1677.00
CLIENT PROJECT No.	#18-06
DWG. No.	C-09
REV. No.	A

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 KJN2 M:\Design\23271677\002327167700\_C-10\_ProposedPlan\_DecolaB\_C.dwg



SYMBOL AND PATTERN LEGEND	
<b>EXISTING CONDITIONS</b>	
	EXISTING 5' CONTOUR
	EXISTING 1' CONTOUR
	EXISTING NATURALIZED TRAIL
	EASEMENT EXTENTS
	FENCE LINE
	BACK OF CURB LINE
	FLOW LINE
	RAILROAD
	GAS LINE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	SANITARY FORCE MAIN
	STORM SEWER LINE
	WATER
	POWER POLE
	LIGHT POLE
	HYDRANT
	GATE VALVE
	SIGN POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SANITARY MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN
	FIBER OPTIC BOX
	ELECTRICAL BOX
	COMMUNICATIONS BOX
<b>PROPOSED CONDITIONS</b>	
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED STORM SEWER
	PROPOSED STORM MANHOLE

PLAN: PROPOSED CONDITIONS - DECOLA PONDS B AND C  
 1"=40'-0"  
 SCALE IN FEET  
 0 40 80

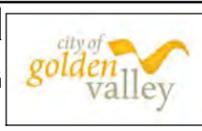
30% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	A	B	C	0	1	2	3

**BARR**  
 Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277



Scale	AS SHOWN
Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

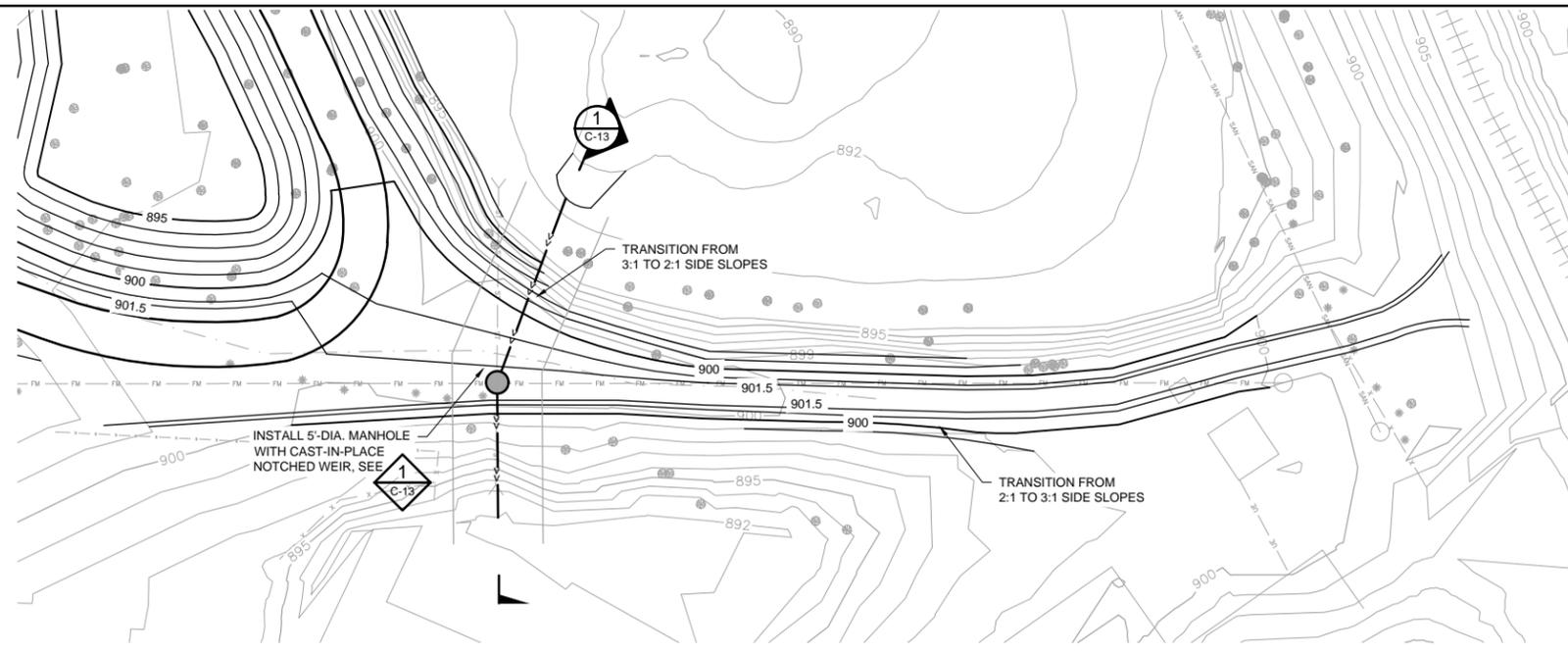
CITY OF GOLDEN VALLEY  
 GOLDEN VALLEY, MN

DECOLA PONDS B&C  
 IMPROVEMENT PROJECT  
 PROPOSED GRADING AND STORM SEWER  
 DECOLA PONDS B & C

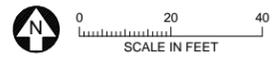
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CLIENT PROJECT No.	#18-06
DWG. No.	C-10
REV. No.	A

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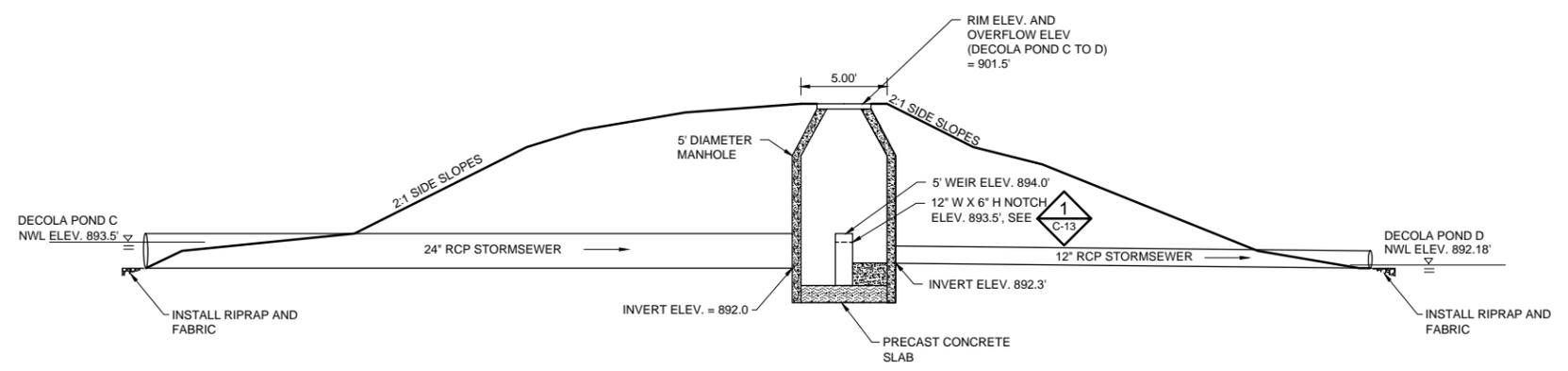
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	EXISTING 1' CONTOUR
	EXISTING NATURALIZED TRAIL
	EASEMENT EXTENTS
	FENCE LINE
	BACK OF CURB LINE
	FLOW LINE
	RAILROAD
	GAS LINE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	SANITARY SEWER MAIN
	STORM SEWER LINE
	WATER
	POWER POLE
	LIGHT POLE
	HYDRANT
	GATE VALVE
	SIGN POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SANITARY MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN
	FIBER OPTIC BOX
	ELECTRICAL BOX
	COMMUNICATIONS BOX
<b>PROPOSED CONDITIONS</b>	
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED STORM SEWER
	PROPOSED STORM MANHOLE



**1 PLAN: DECOLA POND C OUTLET AND OVERFLOW BERM**  
 1"=20'-0"



**1 DETAIL: CAST-IN-PLACE NOTCHED WEIR**  
 1"=1'-0"



**1 SECTION: DECOLA C OUTLET CONFIGURATION**  
 1"=5'-0"



30% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	DATE RELEASED



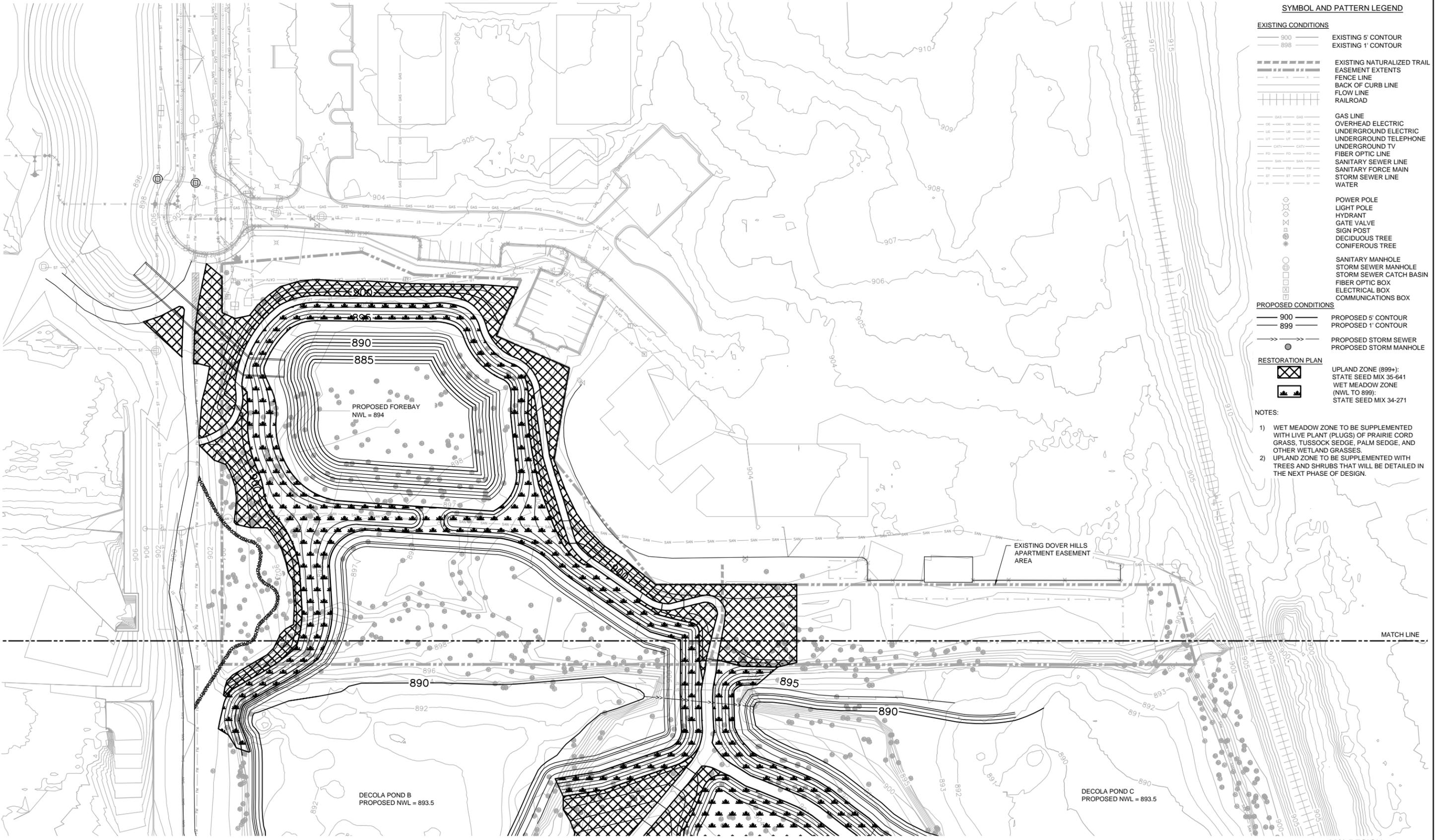
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Checked	JAK2
Designed	JAK2
Approved	KAL

**CITY OF GOLDEN VALLEY**  
 GOLDEN VALLEY, MN

**DECOLA PONDS B&C IMPROVEMENT PROJECT**  
 PLAN AND SECTION  
 DECOLA POND C OUTLET AND OVERFLOW

BARR PROJECT No.	CLIENT PROJECT No.	DWG. No.	REV. No.
23/27-1677.00	#18-06	C-15	A

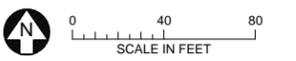
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SYMBOL AND PATTERN LEGEND	
<b>EXISTING CONDITIONS</b>	
	EXISTING 5' CONTOUR
	EXISTING 1' CONTOUR
	EXISTING NATURALIZED TRAIL
	EASEMENT EXTENTS
	FENCE LINE
	BACK OF CURB LINE
	FLOW LINE
	RAILROAD
	GAS LINE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	SANITARY FORCE MAIN
	STORM SEWER LINE
	WATER
	POWER POLE
	LIGHT POLE
	HYDRANT
	GATE VALVE
	SIGN POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SANITARY MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN
	FIBER OPTIC BOX
	ELECTRICAL BOX
	COMMUNICATIONS BOX
<b>PROPOSED CONDITIONS</b>	
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED STORM SEWER
	PROPOSED STORM MANHOLE
<b>RESTORATION PLAN</b>	
	UPLAND ZONE (899+): STATE SEED MIX 35-641
	WET MEADOW ZONE (NWL TO 899): STATE SEED MIX 34-271

- NOTES:**
- 1) WET MEADOW ZONE TO BE SUPPLEMENTED WITH LIVE PLANT (PLUGS) OF PRAIRIE CORD GRASS, TUSsock SEDGE, PALM SEDGE, AND OTHER WETLAND GRASSES.
  - 2) UPLAND ZONE TO BE SUPPLEMENTED WITH TREES AND SHRUBS THAT WILL BE DETAILED IN THE NEXT PHASE OF DESIGN.

**1 PLAN: RESTORATION - DOVER HILLS APARTMENTS' EASEMENT AREA**  
1"=40'-0"



**30% DESIGN DRAFT**

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_ LICENSE # \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	A	B	C	0	1	2	3



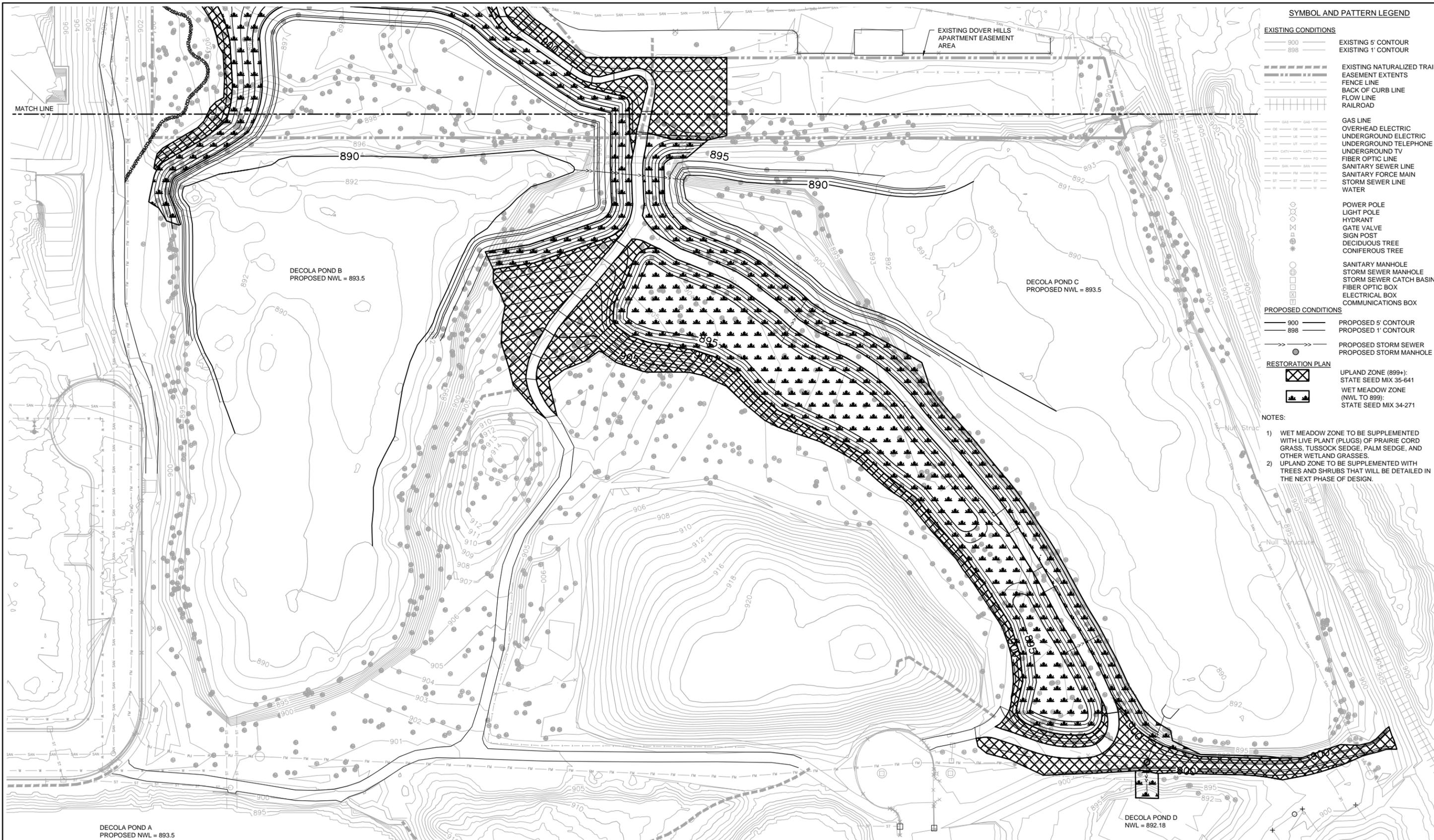
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Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	FJR
Approved	KAL

**CITY OF GOLDEN VALLEY**  
GOLDEN VALLEY, MN

**DECOLA PONDS B&C IMPROVEMENT PROJECT**  
RESTORATION AND LANDSCAPE PLAN  
DOVER HILLS APARTMENT EASEMENT AREA

BARR PROJECT No.	
23/27-1677.00	
CLIENT PROJECT No.	
#18-06	
DWG. No.	REV. No.
L-01	A

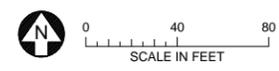
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SYMBOL AND PATTERN LEGEND	
<b>EXISTING CONDITIONS</b>	
	EXISTING 5' CONTOUR
	EXISTING 1' CONTOUR
	EXISTING NATURALIZED TRAIL EASEMENT EXTENTS
	FENCE LINE
	BACK OF CURB LINE
	FLOW LINE
	RAILROAD
	GAS LINE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	FIBER OPTIC LINE
	SANITARY SEWER LINE
	SANITARY FORCE MAIN
	STORM SEWER LINE
	WATER
	POWER POLE
	LIGHT POLE
	HYDRANT
	GATE VALVE
	SIGN POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SANITARY MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN
	FIBER OPTIC BOX
	ELECTRICAL BOX
	COMMUNICATIONS BOX
<b>PROPOSED CONDITIONS</b>	
	PROPOSED 5' CONTOUR
	PROPOSED 1' CONTOUR
	PROPOSED STORM SEWER
	PROPOSED STORM MANHOLE
<b>RESTORATION PLAN</b>	
	UPLAND ZONE (899+): STATE SEED MIX 35-641
	WET MEADOW ZONE (NWL TO 899): STATE SEED MIX 34-271

- NOTES:**
- 1) WET MEADOW ZONE TO BE SUPPLEMENTED WITH LIVE PLANT (PLUGS) OF PRAIRIE CORD GRASS, TUSsock SEDGE, PALM SEDGE, AND OTHER WETLAND GRASSES.
  - 2) UPLAND ZONE TO BE SUPPLEMENTED WITH TREES AND SHRUBS THAT WILL BE DETAILED IN THE NEXT PHASE OF DESIGN.

**1 PLAN: RESTORATION - DECOLA PONDS B AND C**  
1"=40'-0"



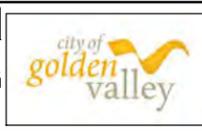
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NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE #: \_\_\_\_\_

CLIENT	BID	CONSTRUCTION	RELEASED TO/FOR	DATE RELEASED
			A B C 0 1 2 3	



Scale	AS SHOWN
Date	12/06/2018
Drawn	KJN2
Checked	JAK2
Designed	FJR
Approved	KAL

**CITY OF GOLDEN VALLEY**  
GOLDEN VALLEY, MN

**DECOLA PONDS B&C IMPROVEMENT PROJECT**  
RESTORATION AND LANDSCAPE PLAN  
DECOLA PONDS B & C

BARR PROJECT No.	
23/27-1677.00	
CLIENT PROJECT No.	
#18-06	
DWG. No.	REV. No.
L-02	A

## Appendix B

### References

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## References

1. Barr Engineering Co. DeCola Ponds B and C Improvement Project Feasibility Study. MY 2018.
  2. —. Medicine Lake Road and Winnetka Avenue Area: Long-Term Flood Mitigation Plan. May 31, 2016.
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  4. City of Golden Valley, Minnesota. 2040 Comprehensive Plan. May 15, 2018.
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