

**Elm Creek Watershed Management Commission
Capital Improvement Project Submittal**

*(This submittal will be rated on its completeness and adherence to the goals of the Commission.
A second page may be used to provide complete responses.)*

City	Plymouth	
Contact Name	Ben Scharenbroich	
Telephone	763-509-5527	
Email	bscharenbroich@plymouthmn.gov	
Address	3400 Plymouth Blvd, Plymouth MN 55447	
Project Name	Brockton Lane Water Quality Improvements	
	1. Is project in Member's CIP? (<input checked="" type="checkbox"/>) yes () no	Proposed CIP Year = 2020
	2. Has a feasibility study or an engineering report (circle one) been done for this project? (<input checked="" type="checkbox"/>) yes () no	
		Amount
	Total Estimated Project Cost	\$150,000
	Estimated Commission Share (up to 25%, not to exceed \$250,000)	\$37,500
	Other Funding Sources (name them) City of Plymouth	\$112,500
		\$
	3. What is the scope of the project? The proposed project would incorporate underground treatment practices such as a hydrodynamic separator or underground filtration/infiltration device which will reduce rates and pollutant loading to Elm Creek and Rice Lake.	
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? The purpose of the project is to provide additional water quality treatment before water is discharged off the Brockton Lane project site into a wetland that drains directly into Elm Creek.	
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) Modeled pollutant removal information would be provided to the Elm Creek Watershed Management Commission as part of the final project review.	
	6. How does the project contribute to achieving the goals and programs of the Commission? Elm Creek is part of the Rice Lake watershed and the goal of the project is to reduce phosphorus and total suspended solids levels in Elm Creek as part of the reductions needed to satisfy TMDL requirements.	
0/10	7. Does the project result from a regulatory mandate? (<input checked="" type="checkbox"/>) yes () no How? TMDL for Elm Creek and Rice Lake	
0/10/20	8. Does the project address one or more TMDL requirements? (<input checked="" type="checkbox"/>) yes () no Which? Rice Lake – Nutrient/Eutrophication Elm Creek – Dissolved Oxygen	
0/10/20	9. Does the project have an educational component? () yes (<input checked="" type="checkbox"/>) no Describe.	
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (<input checked="" type="checkbox"/>) yes () no Identify the LGUs. City of Plymouth	
10/20	11. Is the project in all the LGUs' CIPs? (<input checked="" type="checkbox"/>) yes () no	
1-34	(For TAC use) 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)

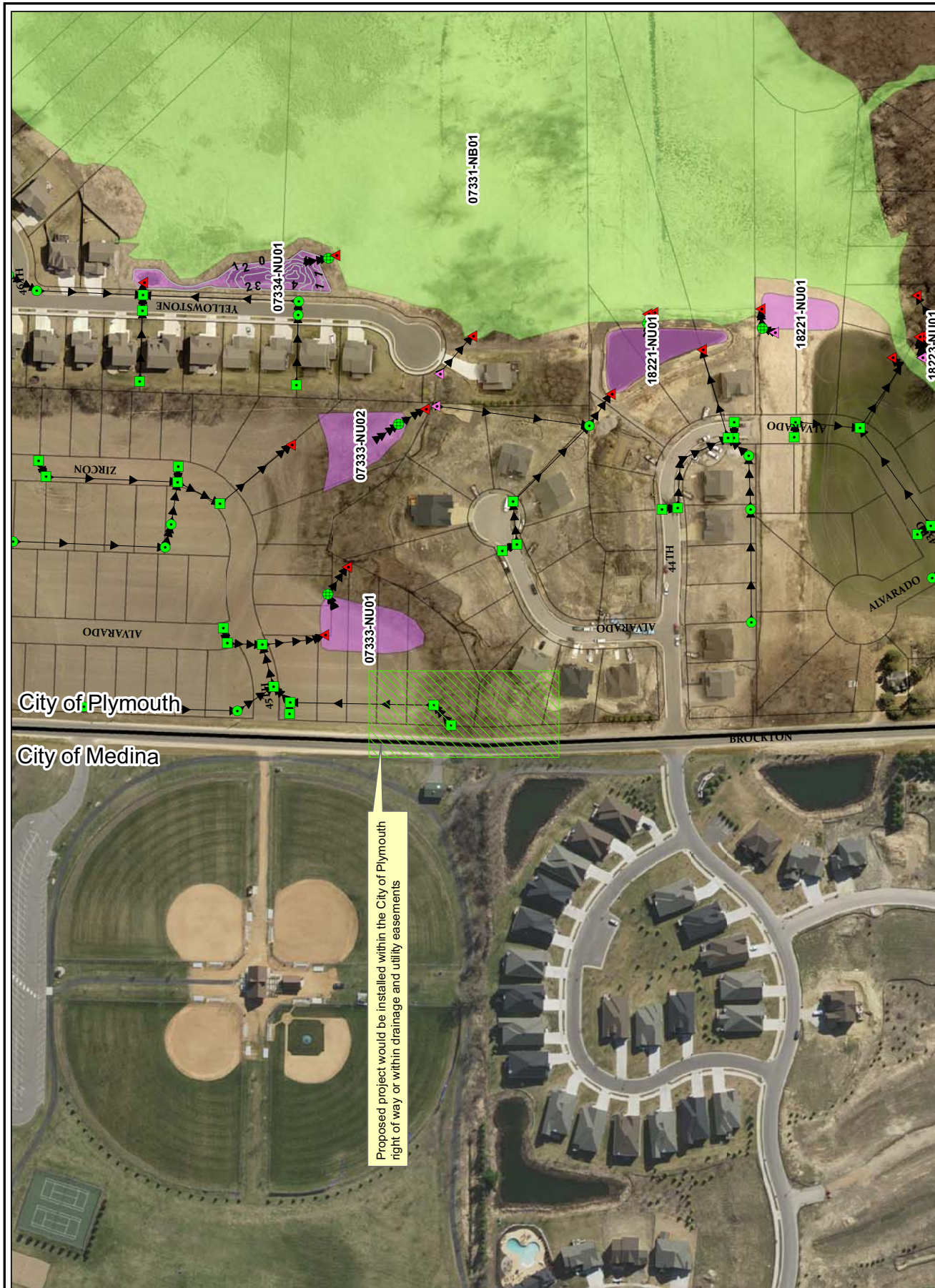
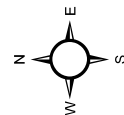
revised

TOTAL (poss 114)	Adopted April 11, 2012
------------------	------------------------

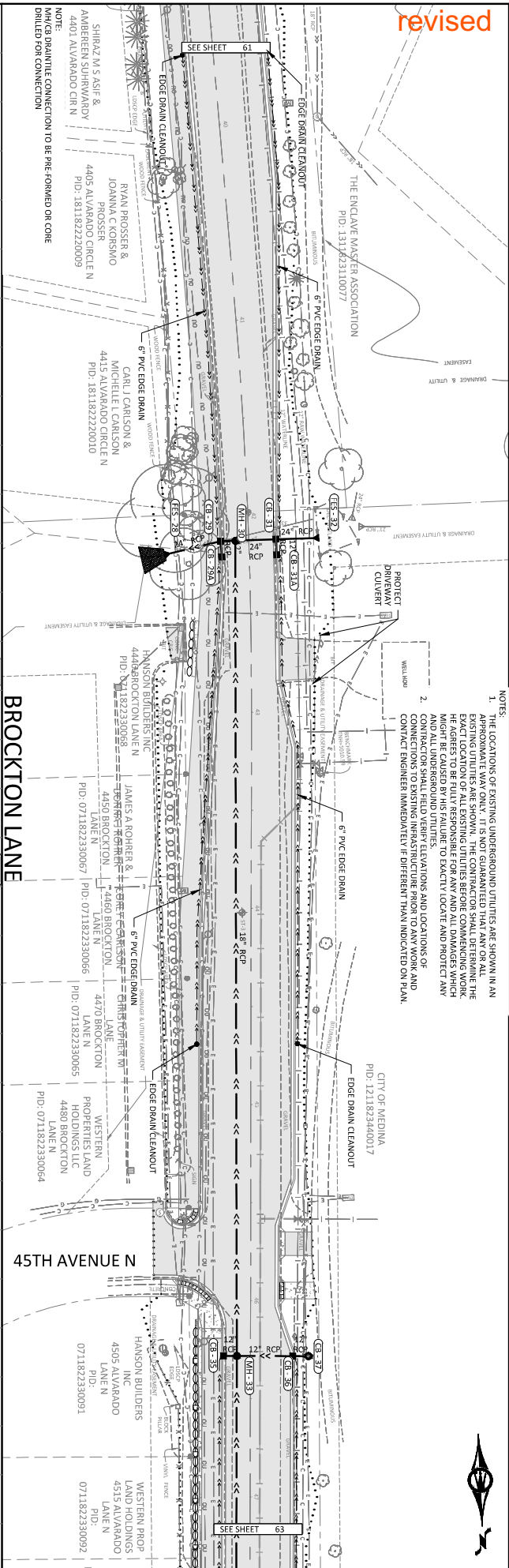
Brockton Lane Water Quality Improvements

Legend

- BAP
- EAP
- Storm_CatchBasin
- Storm_CBMH
- Storm_Manhole
- Storm_Outlet
- Storm_Sumps
- Storm_LiftStation
- Storm_Main
- Storm_Culvert
- Water Quality Pond
- Wetland Mitigation
- Wetland
- Green Roof
- Infiltration/Filtration Basin
- Pervious Pavers
- Rain Garden
- Sand Filter
- Underground Storage
- Lakes
- Creek
- Parcels



revised

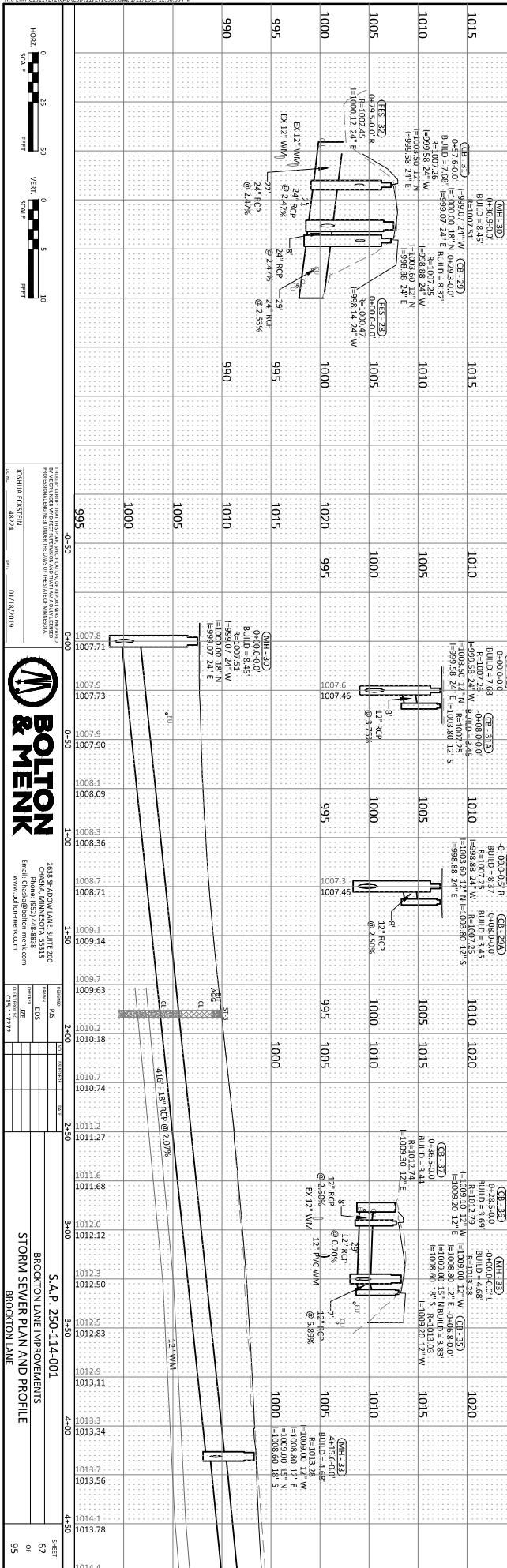


NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED THAT ANY OR ALL EXISTING UTILITIES WILL BE FOUND AT THE LOCATIONS SHOWN. THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL TEST, EXCAVATE AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY WORK TO BE DONE. CONTRACT ENGINEER IMMEDIATELY IF DIFFERENT THAN INDICATED ON PLAN

BROCKTON LANE

45TH AVENUE N


**BOLTON
& MENK**

2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
www.bolton-menk.com

CLIENT	CHRYSLER
PROJECT	CHRYSLER
DATE	CHRYSLER
BY	CHRYSLER

S.A.P. 250-114-001
BROCKTON LANE IMPROVEMENTS
STORM SEWER PLAN AND PROFILE
BROCKTON LANE

--	--	--

Elm Creek Watershed Management Commission
Capital Improvement Project Submittal

*(This submittal will be rated on its completeness and adherence to the goals of the Commission.
A second page may be used to provide complete responses.)*

City	Plymouth	
Contact Name	Ben Scharenbroich	
Telephone	763-509-5527	
Email	bscharenbroich@plymouthmn.gov	
Address	3400 Plymouth Blvd, Plymouth, MN 55447	
Project Name	Enhanced Street Sweeper	
	1. Is project in Member's CIP? (<input checked="" type="checkbox"/>) yes () no	Proposed CIP Year = 2020
	2. Has a feasibility study or an engineering report (circle one) been done for this project? () yes (<input checked="" type="checkbox"/>) no	
		Amount
	Total Estimated Project Cost	\$350,000
	Estimated Commission Share (up to 25%, not to exceed \$250,000)	\$75,000
	Other Funding Sources (name them) Single Creek Watershed Management Commission, Bassett Creek Watershed Management Commission & Minnehaha Creek Watershed District	\$225,000
	City of Plymouth	\$50,000
	3. What is the scope of the project? The City is looking to purchase a high-efficiency street sweeper to improve street sweeping efficiency and reduce pollutant loading to Elm Creek.	
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? Street sweeping is one of the most cost effective best management practices for improving water quality and reducing pollutant loading to Elm Creek and Rice Lake. Plymouth is bringing our street sweeping program in-house in 2019 and is committed to expanding our street sweeping program to address water quality concerns.	
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) There are 44 centerline (88 curb miles) in the City of Plymouth within the Elm Creek Watershed. As such, the following are the estimated pollutant removals from this practice based on the Minnesota Stormwater Manual. Phosphorus = 65 pounds per sweep or 260 pounds per year Nitrogen = 435 pounds per sweep or 1,740 pounds per year Chloride = 11 pounds per year or 44 pounds per year. The City will also analyze its sweeping frequencies as recommended by the Minnesota Stormwater Manual and make adjustments as necessary	
	6. How does the project contribute to achieving the goals and programs of the Commission? The goal of this purchase is to help reduce pollutant loading to Elm Creek and eventually Rice Lake to work towards TMDL goals. A secondary goal would to expand public education regarding street sweeping.	
0/10	7. Does the project result from a regulatory mandate? (<input checked="" type="checkbox"/>) yes () no How? TMDL for Elm Creek and Rice Lake	
0/10/20	8. Does the project address one or more TMDL requirements? (<input checked="" type="checkbox"/>) yes () no Which? Rice Lake – Nutrient/Eutrophication	
0/10/20	9. Does the project have an educational component? (<input checked="" type="checkbox"/>) yes () no Describe. The City is committed to educating the public on the benefits of street sweeping for water quality	

	through our website, newsletters and videos. Plymouth would also include graphics on the street sweeper to promote the benefits of street sweeping and can include the Elm Creek Watershed Management Commissions logo on the sweeper.	
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (<input checked="" type="checkbox"/>) yes (<input type="checkbox"/>) no Identify the LGUs.	
10/20	11. Is the project in all the LGUs' CIPs? (<input checked="" type="checkbox"/>) yes (<input type="checkbox"/>) no	
1-34	<i>(For TAC use)</i> 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)
TOTAL (poss 114)		Adopted April 11, 2012

Z:\ELM CREEK\MANAGEMENT PLAN\EXHIBIT A_APRIL 2012F.DOC

**Elm Creek Watershed Management Commission
Capital Improvement Project Submittal**

*(This submittal will be rated on its completeness and adherence to the goals of the Commission.
A second page may be used to provide complete responses.)*

City	Plymouth	
Contact Name	Ben Scharenbroich	
Telephone	763-509-5527	
Email	bscharenbroich@plymouthmn.gov	
Address	3400 Plymouth Blvd, Plymouth MN 55447	
Project Name	The Meadows Playfield & Water Quality Improvements	
	1. Is project in Member's CIP? () yes (X) no *will be added to city CIP in 2019	Proposed CIP Year = 2022
	2. Has a feasibility study or an engineering report (circle one) been done for this project? () yes (X) no	
		Amount
	Total Estimated Project Cost	\$5,300,000
	Estimated Commission Share (up to 25%, not to exceed \$250,000)	\$250,000
	Other Funding Sources (name them) City of Plymouth Parks & Recreation , Transit & Water Resources	\$5,300,000
		\$
	3. What is the scope of the project? This project is a collaboration between the Plymouth Parks & Recreation, Transit and Water Resources Departments to construct the cities 10th Playfield at the intersection of County Road 47 and Peony Lane. The project is proposed to construct a multi-use stadium, splash pad, pickle ball courts and a Plymouth Metrolink (transit) park and ride to serve the residents in the northwest portion of the city. Water quality improvements with the project will be vetted through the design process, however, potential best management practices to be utilized could include; underground hydrodynamic separators, underground storage and filtration/infiltration, water reuse (irrigation and grey water), pervious pavement, iron enhanced sand filters, rain gardens and tree trenches. Any funds received from the watershed for this project would be used to provide water quality improvements above and beyond what is required for the project.	
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? The intent of this project would be to provide as much rate control and water quality treatment on the project site as possible due to the proximity to Elm Creek. The city is committed to exploring all options for water quality and quantity improvements and providing education about the site to visitors. There are 3 delineated wetlands on this project, 2 of which could be impacted by the construction of this project. The City will work with the required permitting agencies to ensure any impacts are approved.	
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) Modeled pollutant removal information would be provided to the Elm Creek Watershed Management Commission as part of the final project review.	
	6. How does the project contribute to achieving the goals and programs of the Commission? Elm Creek is part of the Rice Lake watershed and the goal of the project is to reduce phosphorus and total suspended solids levels in Elm Creek as part of the reductions needed to satisfy TMDL requirements.	






















revised

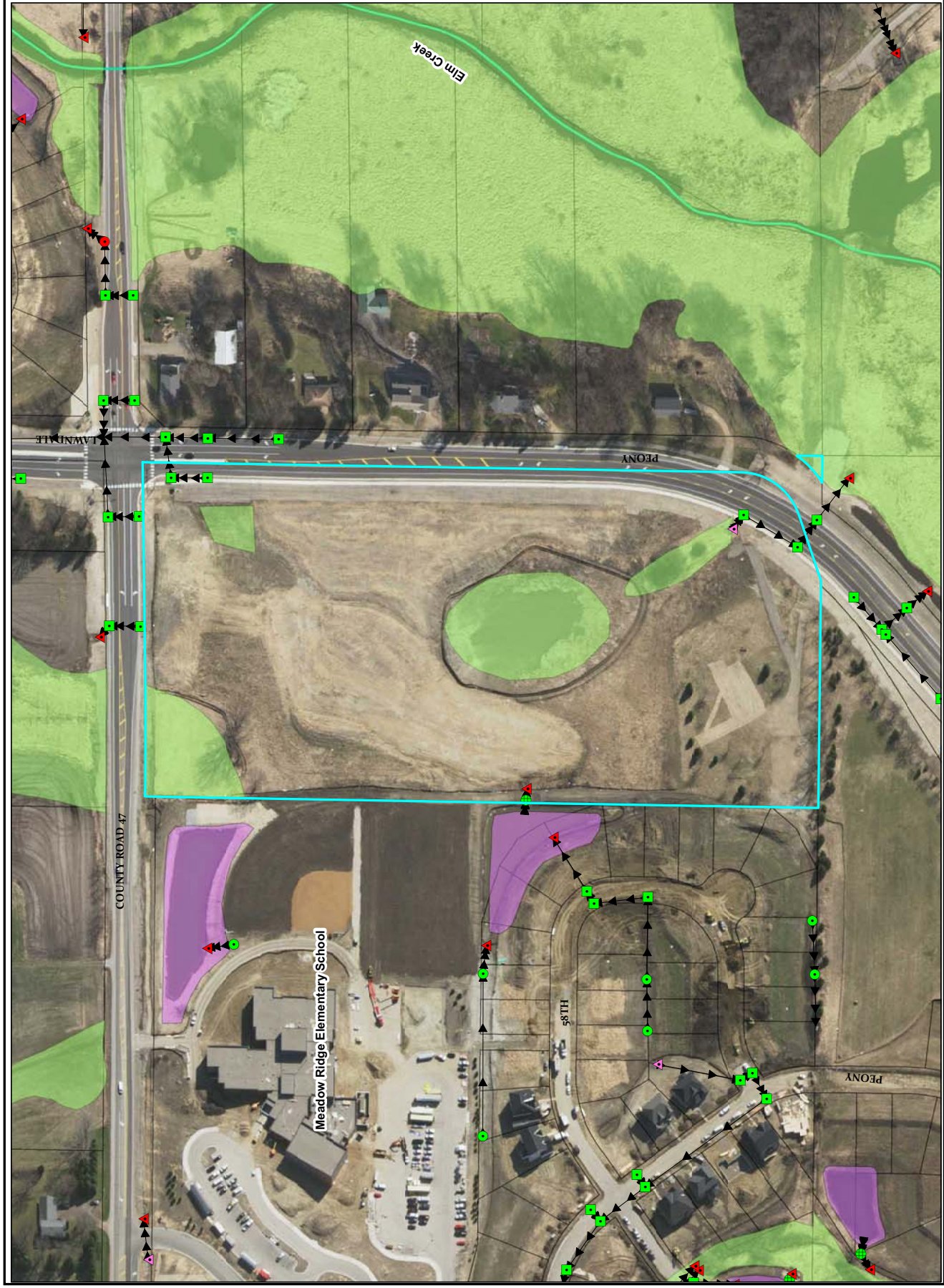
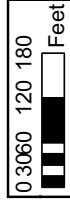
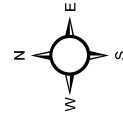
0/10	7. Does the project result from a regulatory mandate? (X) yes () no How? TMDL for Elm Creek and Rice Lake	
0/10/20	8. Does the project address one or more TMDL requirements? (X) yes () no Which? Rice Lake – Nutrient/Eutrophication Elm Creek – Dissolved Oxygen	
0/10/20	9. Does the project have an educational component? (X) yes () no Describe. This facility will be a multi-use facility and as such, Plymouth is committed to providing education about the water quality improvement components of the project. Educational components at the project site could be, but would not be limited to educational brochures & signage explaining what is installed and how it improves water quality and promotes conservation.	
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (X) yes () no Identify the LGUs. City of Plymouth	
10/20	11. Is the project in all the LGUs' CIPs? (X) yes () no Will be added in 2019	
1-34	<i>(For TAC use)</i> 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)
TOTAL (poss 114)		Adopted April 11, 2012

Z:\ELM CREEK\MANAGEMENT PLAN\EXHIBIT A_APRIL 2012F.DOC

The Meadows Playfield

Legend

-  BAP
-  EAP
-  Storm_CatchBasin
-  Storm_CBMH
-  Storm_Manhole
-  Storm_Outlet
-  Storm_Sumps
-  Storm_LiftStation
-  Storm_Main
-  Storm_Culvert
-  Water Quality Pond
-  Wetland Mitigation
-  Wetland
-  Green Roof
-  Infiltration/Filtration Basin
-  Pervious Pavers
-  Rain Garden
-  Sand Filter
-  Underground Storage
-  Creek
-  Parcels





THE MEADOWS PLAYFIELD

CITY OF PLYMOUTH



Soccer Field Layout



Football Field Layout



Soccer Field Layout



Football Field Layout



Soccer Field Layout



Baseball/Softball Layout

ALTERNATE FIELD LAYOUT OPTIONS

Table 4.5. Elm Creek Third Generation Plan Capital Improvement Program

Description	Location	Priority	Est Proj Cost		Partners	Funding Source(s)	Estimated Commission Cost					
				2015			2016	2017	2018	2019	2020-2024	
Special Studies												
TMDL implementation special study	Watershed	H	\$225,000.00		Cities, HCEED	Operating budget	0	25,000	25,000	25,000	25,000	125,000
Stream segment prioritization	Watershed	H	\$20,000.00		Cities, HCEED, TRPD	Operating budget	10,000	0	0	0	10,000	0
High Priority Stream Restoration Projects												
					Cities, TRPD	Cities, TRPD, county levy, grants						
Elm Cr Reach E	Plymouth	H	\$1,086,000.00		Commission, Plymouth	County Levy - levied in 2015	250,000					
CIP-2016-RO-01 Fox Cr, Creekview	Rogers	H	\$321,250.00		Commission, Rogers	County Levy - levied in 2016	0	80,312	0	0	0	0
Mississippi Point Park Riverbank Repair	Champlin	M	\$300,000.00			County Levy - levied in 2016	0	75,000	0	0	0	0
Elm Creek Dam	Champlin	H	\$7,001,220.00			County Levy - levied in 2016	0	187,500	0	0	0	0
Tree Thinning and Bank Stabilization Project	Watershed	H	\$50,000.00				0		50,000	50,000	50,000	250,000 300,000
Fox Cr, Hyacinth	Rogers	M	\$360,000.00			County Levy - levied in 2017	0	0	90,000 112,500	0	0	0
Fox Cr, South Pointe, Rogers MOVED TO 2021	Rogers	M	\$90,000.00				0	0	22,500	0	22,500	22,500
Other High Priority Stream Project	Watershed	H	\$500,000.00				0	0	0	125,000	125,000	250,000
CIP-2016-MG-02 Rush Creek Main	Maple Grove		\$1,650,000.00			County Levy - levied in 2016		75,000	75,000	75,000	25,000	
CIP-2016-MG-03 Rush Creek South	Maple Grove		\$675,000.00							168,750		
CIP-2017-PL-01 EC Stream Restoration Reach D	Plymouth		\$850,000.00		City, County, Comm	City, County, Comm				212,500		
High Priority Wetland Improvements												
					Cities	Cities, Commission						
DNR #27-0437	Maple Grove	L	\$75,000.00				0	0	0	0	0	18,750
Stone’s Throw Wetland REMOVED 2019	Corcoran	M					0	0	112,500	112,500	112,500	0
Other High Priority Wetland Projects	Watershed	L	\$100,000.00				0	0	0	0	0	25,000
CIP-2016-MG-01 Ranchview Wetland Restoration MOVED TO 2019	Maple Grove		2,500,000.00						250,000	250,000	250,000	
Lake TMDL Implementation Projects												
					Cities, lake assns.	Cities, Comm, grants, owners						
Mill Pond Fishery and Habitat Restoration	Champlin	H	\$5,000,000.00			County Levy - levied in 2017	0	0	250,000	0	0	0
Other Priority Lake Internal Load Projects	Watershed	M	\$100,000.00				0	0	0	0	0	25,000
	Maple Grove	H	\$300,000.00		City, TPRD, Comm, lake assn	County Levy - levied in 2016		75,000				
Stonebridge	Maple Grove	M			retrofit of some addl stormsewer treatment systems will not occur during street reconstruction project		0		50,000	0	0	0
Rain Garden at Independence Avenue	Champlin	L	\$300,000.00			County Levy - levied in 2017	0		75,000	0	0	0
CIP-2016-CH-01 Mill Pond Rain Gardens	Champlin	M	\$400,000.00				0	0		100,000	100,000	0
Other Priority Urban BMP Projects	Watershed	L	\$200,000.00				0	0	0	0	0	50,000
Other												
Livestock Excluss, Buffer & Stabilized Access	Watershed	M	\$50,000.00		Cities, owners, U Extension, NRCS	Cities, owners, Comm, NRCS	0	0	0	50,000	0	50,000
Agricultural BMPs Cost Share	Watershed	H	\$50,000.00		Cities, owners, U Extension, NRCS	Cities, owners, Comm, NRCS	0		50,000	50,000	50,000	100,000 150,000
CIP-2016-RO-04-CIP-2017-RO-1 Ag BMPs-Cowley-Sylvan Connections BMPs	Rogers		\$300,000.00		City, Comm	City, Comm, BWSR				75,000		
CIP-2016-RO-03 Downtown Pond Exp & Reuse	Rogers		\$406,000.00							101,500		
Hickory Drive Stormwater Improvement CITY WILL PROVIDE ADJUSTED COST	Medina		\$225,000.00		City. Comm, Grants						56,250	
SE Corcoran Wetland Restoration	Corcoran		\$400,000.00		City. Comm, 319 Grant						100,000	100,000
Downtown Regional Stormwater Pond REQUIRES FEASIBILITY STUDY	Corcoran		\$50,000.00		City. Comm						10,000	
Elm Creek Stream Restoration Phase III	Champlin	H	\$400,000.00							100,000		
Downs Road Trail Raingarden	Champlin	H	\$300,000.00							75,000		
Elm Creek Stream Restoration Phase IV	Champlin	H	\$600,000.00								150,000	
Lowell Pond Raingarden	Champlin	H	\$400,000.00								100,000	
Rush Creek Headwaters SWA BMP Implementation	Corcoran/Rogers	H	\$200,000.00		cities, county, TRPD	cities, county, TRPD, owners						50,000
Hydrologic & Hydraulic Modeling	Watershed	L	\$25,000.00		HCEE	Commission	0	0	0	25,000	0	0
Brockton Lane Water Quality improvements NEW	Plymouth		\$150,000.00								0	37,500
Mill Pond Easement NEW	Champlin		\$64,000.00								16,000	
The Meadows Playfield NEW	Plymouth		5,300.00									250,000
Enhanced Street Sweeper NEW	Plymouth		\$350,000.00									75,000
Fourth Generation Plan	Watershed	L	\$70,000.00			Commission	0	0	0	0	0	\$70,000
TOTAL STUDIES			245,000			COMM SHARE TOTAL STUDIES	10,000	25,000	25,000	25,000	35,000	125,000
TOTAL CIPS			25,898,470			COMM SHARE TOTAL CIPS	\$ 250,000	\$ 492,812	\$ 935,000	\$ 1,032,750	\$ 932,250	\$ 1,403,750
									\$ 437,500	462,500		
Projects levied in prior years	Projects added/ revised in 2017				Projects levied 2017, payable 2018	Projects added/ revised in 2018	Projects added/ revised in 2019					

elm creek

Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
E-mail: judie@jass.biz

TECHNICAL OFFICE
Hennepin County Public Works
Department of Environment and Energy
701 Fourth Ave. South, Suite 700
Minneapolis, MN 55415
PH: 612.348.7338
E-mail: james.kujawa@hennepin.us

2019 Rogers High School Tennis Court **Rogers, Project #2019-003**

Project Overview: This project is located on the Rogers High School property east of Highway 101 and on the north side of CR144. The school district will construct 8 tennis courts on 3.1 acres located on the north side of the east drive/bus staging area of the school. It is currently a grass athletic field. 1.54 acres of new impervious area will be created. This review will be for Rules D (stormwater management) and E (erosion and sediment controls) from the Commission's 3rd Generation Watershed Management Plan, Appendix C.

Applicant: ISD #728, Attn. Thomas Baranick, 11500 93rd Ave. N., Elm River, MN 55330. Phone: 763-241-3405. Email: Thomas.baranick@isd728.org.

Agent/Engineer: BKBM Engineers, Attn. Kevin Bohl, 6120 Earle Brown Drive, Suite 700, Minneapolis, MN 55305. Phone: 763-843-0427. Email: kbohl@bkbm.com

Exhibits:

- 1) Rogers High School Tennis Court ECWMC Request for Plan Review and Approval received February 4, 2019.
- 2) Project fees (\$777.50) for disturbing 2.91 acres for redevelopment on an institutional/government project.
- 3) Hydrology Calculations for 2019 Rogers High School Tennis Courts, by BKBM dated January 17, 2019.
- 4) Civil Site Plan dated January 17, 2019.
 - a. Sheet C100, Selective Site Demolition and Erosion Control Plan
 - b. Sheet C200, Grading, Drainage and Erosion Control Plan
 - c. Sheet C300, Utility Plan
 - d. Sheet C400, Paving and Geometric Plan
 - e. Sheets C500 and C501, Details
 - f. Sheet C600 Storm Water Pollution Prevention Plan.
- 5) Landscape Plan
 - a. Sheet L3.0, Landscape and Equipment Layout Plan, dated January 25, 2019
 - b. Sheet L3.1, Landscape Details, dated January 30, 2019
 - c. Sheet L3.2, Landscape Details, dated January 8, 2019.

- 6) Correspondence from BKBM to ECWMC dated March 1, 2019, regarding stormwater management plan assumptions, design and conclusions.
- 7) Regional Pond original and modified HydroCAD models for the 2, 10 and 100-year 24-hour storm based on old (TP40) vs new (Atlas 14) storm event modeling. Received March 1, 2019.

Findings:

- 1) A complete application was received on March 1, 2019. The initial 60-day decision period expires on April 30, 2019.
- 2) No floodplain or wetland impacts are identified or apparent within the project site.

Stormwater Management

- 3) This site drains to the north into an existing regional stormwater pond constructed by the High School in 2000.
- 4) The H.S. is proposing to use the excess treatment volume of the existing regional pond for its stormwater management controls.
- 5) The Rogers High School and its stormwater plans were reviewed and approved by the ECWMC when it was built in 2000-2001. At that time a large regional infiltration pond was constructed to take care of the stormwater management from this site.
 - a. Total watershed area to the Regional H.S. pond = 552-acre watershed,
 - b. H. S. area draining into regional pond = 58 acres
 - c. Soil infiltration rate in the pond = 8.3” per hour
 - d. Impervious area from H.S. draining to pond;
 - i. Before this project = 17.8 acre (23% impervious)
 - ii. After the project = 19.3 acres (25% impervious)
 - e. Existing regional pond abstraction (infiltration) volume
 - i. Abstraction treatment volume from H.S. before this project = 1.63-acre feet
 - ii. Abstraction treatment volume required after this project = 1.77-acre feet.
 - iii. Total pond abstraction volume available = 6.2-acre feet. This exceeds the required volume by 4.5-acre feet.
 - f. Because abstraction requirements are met through infiltration in the regional pond, total Phosphorus and Suspended Solids are met per the Commission’s stormwater criteria.
- 6) The 1.54 acre increase in impervious areas equates to a slight increase in rates leaving the regional pond. Unless the City of Rogers is concerned with these slight increases, staff believes they are within the margin of error in the HydroCAD model used and recommends the Commission approve rate controls. The flow rate summary is as follows;

	2-yr (cfs)	10-yr (cfs)	100-yr (cfs)
Pre-Development Rates	26.53	62.02	141.41
Post-Development Rates	26.62	62.15	141.69

Erosion and Sediment Controls

- 7) Inlet protection is necessary in front of STMH #4
- 8) We recommend turf sod, with staking be established to 25 feet east of the easterly tennis court. This would extend the sod into the newly established channel on the east side of the tennis court and prevent any channel scour/erosion.

Recommendation: Approval contingent upon final erosion control approvals by staff.

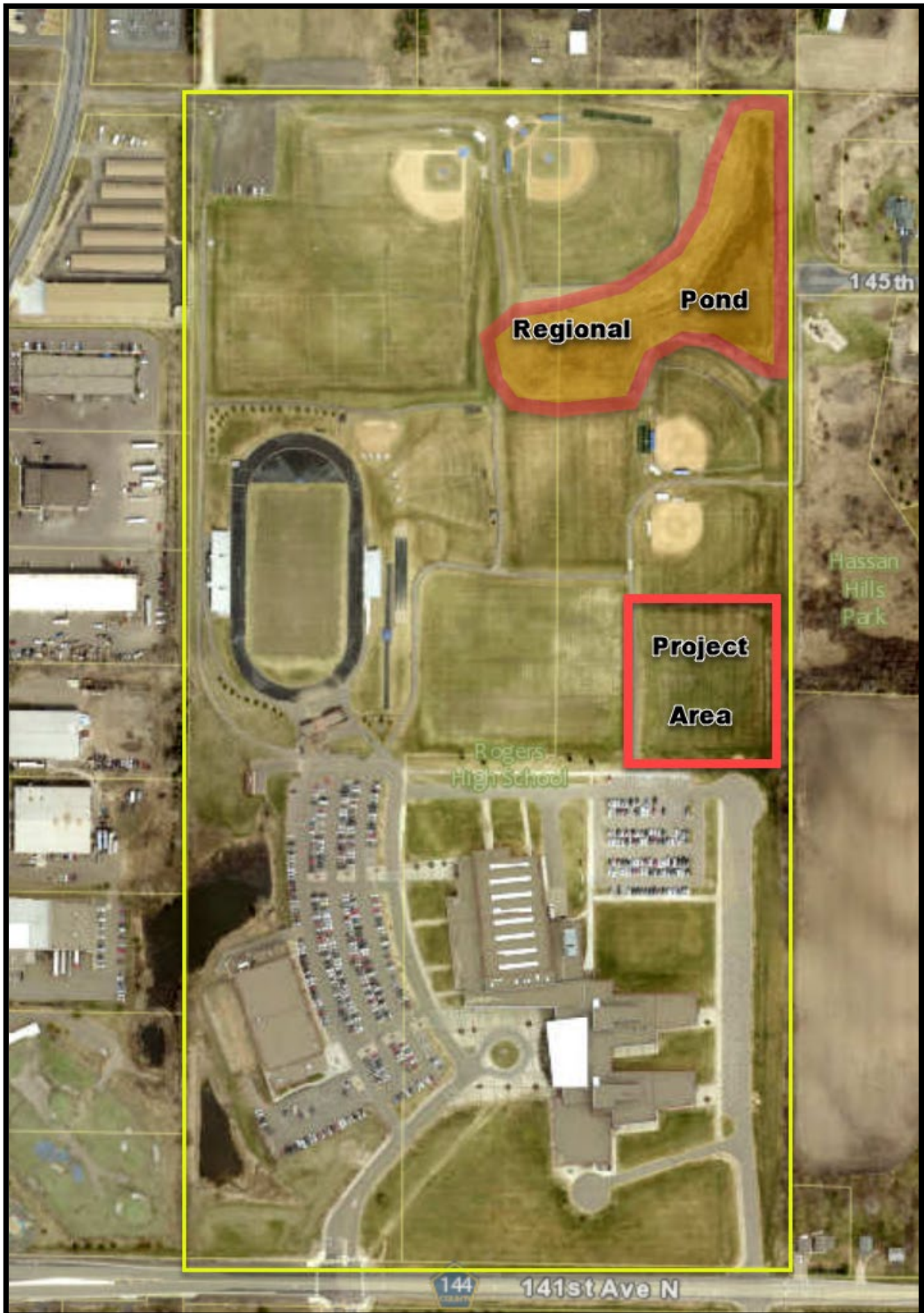
Hennepin County
Department of Environment and Energy
Advisor to the Commission



March 7, 2019

Location Map





Site Grading

