

January 26, 2023

Ms. Jessica Wilson
Water Resources Coordinator
City of Edina
Engineering Department
7450 Metro Boulevard
Edina, MN 55439

Re: Proposal for Stormwater Infrastructure Assets Inspections (City and non-City Owned)

Dear Ms. Jessica Wilson:

This letter presents our proposed scope of work and budget for the Edina Stormwater Asset Inspection Program, which includes the inspection, conditions inventory, and maintenance recommendations of stormwater assets; both those owned or otherwise operated and maintained by the City of Edina (City), as well those not owned, operated or maintained by the City. The project's primary objective is to ensure that all City stormwater assets are providing water quality function as originally designed.

The project will also include updates to the design and data of the iPad-based asset inspection application previously developed by Barr; as well as conducting field condition assessments, documentation of all asset conditions and maintenance recommendations, and includes the inspection of structural stormwater assets and constructed ponds, as required by the City's Water Resources Management Plan. The inspection of conveyance assets is not included in this scope.

The project will help the City meet the minimum requirements of the Minnesota Pollution Control Agency (MPCA) municipal separate storm sewer system (MS4) permit.

The scope of professional consulting services we will provide for your project includes the following tasks:

Task 1: Asset inspection protocol and data updates

1. Review the existing stormwater inspection protocol/checklists and determine if any updates are needed to improve the inspection process. Barr will develop a short list of recommended changes to the inspection protocol for review and comment from City staff. This will include inspection form recommendations for two new asset types, "manhole sump/grit chamber" and "green roof."
2. Meet with City staff to discuss inspection needs and application updates recommended in step 1.
3. Update asset location GIS data. A breakdown of assets by type, ownership (public/private), and those to be inspected are listed in the attached Table 1.
4. Update asset inspection data entry forms based on discussion with City staff.
5. Update the AGOL map to be used on the iPad Collector Application. These updates will be required to implement any changes made to the database and data entry forms identified above.

Task 2: AGOL dashboard updates

Barr will update the AGOL dashboard to display the 2023 completion status of inspection and maintenance activities. Updates will also address the new asset types discussed in Task 1.

Task 3: Asset inspection and maintenance recommendations

At the conclusion of Tasks 1 and 2 in winter 2023, Barr will begin asset inspections to identify maintenance needs at each, if applicable. We will inspect each asset for structural concerns, general functional/operational issues, debris/sediment accumulation, and other factors as agreed upon with City staff. This will include inspections at 54 City-owned and 93 non-City-owned assets, as shown in Table 1.

1. Collect and review any asset as-builts and repair records.
2. Meet with City staff to discuss site inspection protocol and coordination, including, but not limited to, site access and resources for additional project information while in the field. This meeting will take place in winter 2023 in advance of any inspections.
3. City will provide an initial draft inspection notification letter for Barr's review. The letter will be similar to the letter used last year, and the City will primarily look for Barr to comment on the inspection timeframe. City staff will place on City letterhead and mail to property owners two weeks in advance of inspections. We assume that the City will provide the list of individuals or organizations that need to be notified and that the City will mail the final letters.
4. Barr staff will inspect each asset on the list following the predefined inspection form for a number of conditions that can impact functionality, including, but not limited to, sedimentation and erosion, slow infiltration/filtration rates, and failing infrastructure such as aging catch basins or other outlet structures. Barr staff trained in National Association of Sewer Service Companies (NASSCO) inspection protocols will lead or oversee the inspections and provide observations of structural elements consistent with NASSCO terminology and rating systems (e.g., "Reinforcement Visible," "Multiple Cracks").

Other site features, such as surrounding pavements and associated plantings or trees, will also be assessed and documented working with our landscape architecture staff. For the purposes of the cost estimate, we have assumed those assets identified in Table 1 will be inspected.

5. Infiltration tests will be completed at the two city-owned permeable paver assets.
6. Maintenance recommendation – we will review field-collected notes/photos and recommend maintenance needs. A brief 2-5 sentence narrative describing the recommended maintenance will be provided as well as a recommended timeframe for completion of maintenance. Up to 5 separate maintenance activities could be assigned to each asset. Each maintenance activity will be assigned both a frequency (single event, monthly, quarterly, annually, etc.) and an urgency (immediately, this month, this year, 1-2 years, 2-5 years, 5-10 years). Finally, a rating consistent with the NASSCO approach will be used, on a rating scale of 1 to 5, and a qualitative assessment on the spectrum of "Good" to "Urgent."
7. A draft one-page summary of each asset inspection will be prepared and provided to the City within 2 weeks of the inspection. These will be finalized and included in the final report in Task 4 as an appendix.

Task 4: Reporting and recommendations

1. Barr will prepare a report summarizing the work performed and findings and recommendations.
2. In an appendix to the report, Barr will include the one-page summary inspection report for each inspected asset location. The one-page summary reports will include a summary of data collected during the inspection, including photos and responses to inspection questions.
3. Comments on findings and recommendations for maintenance activities, maintenance frequency, and recommended completion date will be included with the summary report.

Costs

For cost-estimating purposes, we've assumed that the assets listed in Table 1 will be inspected. Any additional work not included in this scope of work document will be discussed with City staff prior to proceeding with the work. In addition, we will provide regular project status and budget updates to City staff and will not exceed \$89,000 without authorization from the City.

Task	Labor Fees		Expenses		Total Fees		
	City	Non-City	City	Non-City	City	Non-City	Total
1. Asset Inspection Protocol, Data and App Updates	\$2,500	\$2,500	--	--	\$2,500	\$2,500	\$5,000
2. Update AGOL Dashboard	\$2,500	\$2,500	--	--	\$2,500	\$2,500	\$5,000
3. Asset Inspections	\$25,000	\$29,000	\$1,500	\$1,500	\$26,500	\$30,500	\$57,000
4. Reporting/ Recommendations	\$10,000	\$12,000	--	--	\$10,000	\$12,000	\$22,000
TOTAL					\$41,500	\$47,500	\$89,000

Schedule

The expected schedule, approximate level of effort (hours), and approximate cost for each of the above tasks are listed in the table below. Please note that the cost estimate for each task below includes project management and associated meetings.

Task	Estimated Schedule	Deliverable
Asset Inspection App Updates	February-March 2023	ArcGIS Collector application for City
Update AGOL Dashboard	March 2023	Updated AGOL Dashboard.
Asset Inspections	June-August 2023	Weekly email update of completed inspections. Final inspection summaries within two weeks of inspection.
Reporting/ Recommendations	September-November 2023	One page inspection summary for each of the asset locations. Including maintenance recommendations.

Project Team

The key project team members include:

Nathan Campeau, principal in charge. Nathan has 18 years of stormwater design, operations, and maintenance experience. Nathan is registered Professional Engineer, NASSCO certified, and Envision accredited.

Aaron Mielke, project manager. Aaron has 16 years of GIS application development and infrastructure database experience, helping to develop and manage inspections and data collection.

Sarah Stratton, technical advisor. Sarah has over 20 years of stormwater management experience, much of that working with the City of Edina. Sarah will provide continuity and coordination between the several ongoing stormwater-related projects within the City.

Josh Phillips and Tyler Olsen inspection leads. Josh and Tyler are water resources engineers that each have several years of infrastructure operations and inspection services, focusing on above and belowground water quality stormwater systems.

Brendan Dougherty landscape architect inspection lead. Brendan has over nine years of experience in ecological planning, native plant community restoration, sustainable landscape design, alternative stormwater management, and environmental site restoration. He assists with development of construction plans for green infrastructure, landscape design, and creek stabilization projects.


Maureen McFarlane GIS application developer. Maureen has several years of web and GIS application development experience and has assisted several cities and watershed organizations with AGOL development.

Barr will complete the proposed scope of work in accordance with the Master Agreement for Professional Engineering Services. We appreciate the opportunity to continue providing engineering services to the City of Edina and look forward to working with you on this project.

If the proposed scope of services is satisfactory, please sign a copy of this letter in the space provided and return it to us at your earliest convenience. If you have any questions about the scope of services, please contact Aaron Mielke (Project Manager) at 952-832-2965 or amielke@barr.com or Nathan Campeau at 612-710-8140 or ncampeau@barr.com.

Sincerely yours,

BARR ENGINEERING CO.



Nathan Campeau, Vice President

Accepted this _____ day of _____, 20____

City of Edina

By _____
Its _____

Table 1 Assets to Inspect



Unique_ID	Type	Address	Owner	MaintPlan
FI_001	Filtration	4303 W 58th St	City	
FI_002	Filtration	4303 W 58th St	City	
FI_004	Filtration	5230 MINNEHAHA BLVD	City	
FI_005	Filtration	5230 MINNEHAHA BLVD	City	
FI_006	Filtration	5230 MINNEHAHA BLVD	City	
FI_007	Filtration	5230 MINNEHAHA BLVD	City	
FI_008	Filtration	5230 MINNEHAHA BLVD	City	
FI_009	Filtration	5230 MINNEHAHA BLVD	City	
FS_001	Filter Strips and Swales	Olinger Blvd and Sherman Cir	City	
FS_002	Filter Strips and Swales	6216 PARKWOOD RD	City	
FS_003	Filter Strips and Swales	Fred Richards	City	
FS_004a	Filter Strips and Swales		City	
FS_004b1	Filter Strips and Swales		City	
FS_004b2	Filter Strips and Swales		City	
FS_004c1	Filter Strips and Swales	Fred Richards	City	
FS_004c2	Filter Strips and Swales	Fred Richards	City	
FS_004c3	Filter Strips and Swales	Fred Richards	City	
IN_001	Infiltration Basins and Trenches	4820 Larkspur Ln	City	
IN_003	Infiltration Basins and Trenches	4232 Oakdale Ave	City	
IN_004	Infiltration Basins and Trenches	4232 Lynn Ave	City	
IN_005	Infiltration Basins and Trenches		City	
OT_001	Other	6250 Tracy Ave	City	
PO_024	Pond	5060 INTERLACHEN BLUFF	City	
PP_001	Permeable Pavement	Jay Place	City	
PP_003	Permeable Pavement	3925 MARKET ST	City	
RG_016	Rain Garden	Lakeview Dr	City	
RG_017	Rain Garden	Lakeview Dr	City	
RG_018	Rain Garden		City	
RG_019	Rain Garden	W 54th St and York Ave	City	
RG_020	Rain Garden	7450 Metro Blvd	City	
RG_029	Rain Garden		City	
TT_001a	Tree Trench	4601 TOWNES RD	City	
TT_001b	Tree Trench	4601 TOWNES RD	City	
TT_001c	Tree Trench	4053 SUNNYSIDE RD	City	
TT_001d	Tree Trench	4049 SUNNYSIDE RD	City	
TT_001e	Tree Trench	4047 SUNNYSIDE RD	City	
TT_001f	Tree Trench	4058 SUNNYSIDE RD	City	
TT_001g	Tree Trench	4060 SUNNYSIDE RD	City	
TT_001h	Tree Trench	4511 GRIMES AVE	City	
TT_001i	Tree Trench	4511 GRIMES AVE	City	
TT_001j	Tree Trench	4013 SUNNYSIDE RD	City	
TT_001k	Tree Trench	4511 GRIMES AVE	City	
TT_001l	Tree Trench	4411 GRIMES AVE	City	
TT_001m	Tree Trench	4419 GRIMES AVE	City	
TT_001n	Tree Trench	4508 GRIMES AVE	City	
TT_001o	Tree Trench	4418 CURVE AVE	City	
TT_001p	Tree Trench	4418 CURVE AVE	City	

Table 1 Assets to Inspect



Unique_ID	Type	Address	Owner	MaintPlan
UI_002	Underground Infiltration	Cornelia Dr	City	
UI_009	Underground Infiltration		City	
US_013	Underground Storage Chamber/Gallery	Blake Cir	City	
US_017	Underground Storage Chamber/Gallery	Sidell Tr	City	
US_019	Underground Storage Chamber/Gallery		City	
US_030	Underground Storage Chamber/Gallery	7600 Braemar Blvd	City	
US_031	Underground Storage Chamber/Gallery	W 58th St	City	
FS_006	Filter Strips and Swales	6525 DREW AVE S	Non-City Owned	Y
FS_007	Filter Strips and Swales	6525 DREW AVE S	Non-City Owned	Y
FS_008	Filter Strips and Swales	3650 HAZELTON RD	Non-City Owned	Y
GR_001	Green Roof	4010 65TH ST W	Non-City Owned	Y
GR_002	Green Roof	4010 65TH ST W	Non-City Owned	Y
IN_002	Infiltration Basins and Trenches	5120 EDINA INDUSTRIAL BLVD	Non-City Owned	Y
IN_006	Infiltration Basins and Trenches	5995 LINCOLN DR	Non-City Owned	Y
IN_007	Infiltration Basins and Trenches	5995 LINCOLN DR	Non-City Owned	Y
IN_008	Infiltration Basins and Trenches	6950 FRANCE AVE S	Non-City Owned	Y
IN_009	Infiltration Basins and Trenches	6950 FRANCE AVE S	Non-City Owned	Y
IN_010	Infiltration Basins and Trenches	6950 FRANCE AVE S	Non-City Owned	Y
IN_012	Infiltration Basins and Trenches	5251 74TH ST W	Non-City Owned	Y
IN_013	Infiltration Basins and Trenches	4010 65TH ST W	Non-City Owned	Y
IN_014	Infiltration Basins and Trenches	7711 COMPUTER AVE	Non-City Owned	Y
IN_015	Infiltration Basins and Trenches	3650 HAZELTON RD	Non-City Owned	Y
OT_002	Other	4500 FRANCE AVE S	Non-City Owned	Y
PO_006	Pond	6300 COLONIAL WAY	Non-City Owned	Y
PO_007	Pond	4100 Minnesota Dr	Non-City Owned	Y
PP_OO4	Permeable Pavement	3650 HAZELTON RD	Non-City Owned	Y
RG_012	Rain Garden	7151 York Ave	Non-City Owned	Y
RG_013	Rain Garden	7151 York Ave	Non-City Owned	Y
RG_024a	Rain Garden	5140 HANKERSON AVE	Non-City Owned	Y
RG_024b	Rain Garden	5140 HANKERSON AVE	Non-City Owned	Y
RG_025	Rain Garden	6308 WARREN AVE	Non-City Owned	Y
RG_026	Rain Garden	8050 78TH ST W	Non-City Owned	Y
RG_027	Rain Garden	6101 BLAKE CIR	Non-City Owned	Y
RG_028	Rain Garden	6109 BLAKE CIR	Non-City Owned	Y
RG_032	Rain Garden	4015 INGLEWOOD AVE	Non-City Owned	Y
RG_033	Rain Garden	6500 FRANCE AVE S	Non-City Owned	Y
RG_034	Rain Garden	6500 FRANCE AVE S	Non-City Owned	Y
RG_035	Rain Garden	6800 YORK AVE S	Non-City Owned	Y
RG_036	Rain Garden	6800 YORK AVE S	Non-City Owned	Y
RG_037	Rain Garden	6800 YORK AVE S	Non-City Owned	Y
RG_039	Rain Garden	3330 66TH ST W	Non-City Owned	Y
RG_040	Rain Garden	7171 FRANCE AVE S	Non-City Owned	Y
UI_001a	Underground Infiltration	3451 Parklawn Ave	Non-City Owned	Y
UI_001b	Underground Infiltration	3451 Parklawn Ave	Non-City Owned	Y
UI_003a	Underground Infiltration	5240 HIGHWOOD DR W	Non-City Owned	Y
UI_003b	Underground Infiltration	5240 HIGHWOOD DR W	Non-City Owned	Y
UI_003c	Underground Infiltration	5240 HIGHWOOD DR W	Non-City Owned	Y

Table 1 Assets to Inspect



Unique_ID	Type	Address	Owner	MaintPlan
UI_003d	Underground Infiltration	5240 HIGHWOOD DR W	Non-City Owned	Y
UI_008	Underground Infiltration	7161 France Ave S	Non-City Owned	Y
UI_012	Underground Infiltration	6500 FRANCE AVE S	Non-City Owned	Y
UI_014	Underground Infiltration	6950 FRANCE AVE S	Non-City Owned	Y
UI_015	Underground Infiltration	6801 FRANCE AVE S	Non-City Owned	Y
UI_016	Underground Infiltration	7725 WASHINGTON AVE S	Non-City Owned	Y
UI_017	Underground Infiltration	5633 TRACY AVE	Non-City Owned	Y
UI_018	Underground Infiltration	5639 TRACY AVE	Non-City Owned	Y
UI_019	Underground Infiltration	6600 YORK AVE S	Non-City Owned	Y
UI_020	Underground Infiltration	6800 YORK AVE S	Non-City Owned	Y
UI_021	Underground Infiltration	6800 YORK AVE S	Non-City Owned	Y
UI_022	Underground Infiltration	7000 FRANCE AVE S	Non-City Owned	Y
UI_023	Underground Infiltration	6996 FRANCE AVE S	Non-City Owned	Y
UI_024	Underground Infiltration	6401 FRANCE AVE S	Non-City Owned	Y
UI_025	Underground Infiltration	6028 HANSEN RD	Non-City Owned	Y
UI_026	Underground Infiltration	6028 HANSEN RD	Non-City Owned	Y
UI_027	Underground Infiltration	250 Southdale Center	Non-City Owned	Y
UI_028	Underground Infiltration	3650 Hazelton Rd	Non-City Owned	Y
UI_029	Underground Infiltration	5251 74TH ST W	Non-City Owned	Y
UI_030	Underground Infiltration	4425 VALLEY VIEW RD	Non-City Owned	Y
US_001	Underground Storage Chamber/Gallery	6725 York Ave	Non-City Owned	Y
US_002	Underground Storage Chamber/Gallery	6725 York Ave	Non-City Owned	Y
US_003	Underground Storage Chamber/Gallery	3121 69th St W	Non-City Owned	Y
US_004	Underground Storage Chamber/Gallery	3121 69th St W	Non-City Owned	Y
US_005	Underground Storage Chamber/Gallery	4113 W 54th St	Non-City Owned	Y
US_007	Underground Storage Chamber/Gallery	6308 WARREN AVE	Non-City Owned	Y
US_008	Underground Storage Chamber/Gallery	6750 VALLEY VIEW RD	Non-City Owned	Y
US_009	Underground Storage Chamber/Gallery	5201 76TH ST W	Non-City Owned	Y
US_010	Underground Storage Chamber/Gallery	5201 76TH ST W	Non-City Owned	Y
US_011	Underground Storage Chamber/Gallery	5201 76TH ST W	Non-City Owned	Y
US_012	Underground Storage Chamber/Gallery	7355 YORK AVE S	Non-City Owned	Y
US_014	Underground Storage Chamber/Gallery	7700 France Ave	Non-City Owned	Y
US_015	Underground Storage Chamber/Gallery	6603 France Ave	Non-City Owned	Y
US_016	Underground Storage Chamber/Gallery	6544 Drew Ave S	Non-City Owned	Y
US_018	Underground Storage Chamber/Gallery	6868 France Ave	Non-City Owned	Y
US_021	Underground Storage Chamber/Gallery	4901 HAWTHORNE CT	Non-City Owned	Y
US_022	Underground Storage Chamber/Gallery	7171 France Ave S	Non-City Owned	Y
US_023	Underground Storage Chamber/Gallery	5505 DONCASTER WAY	Non-City Owned	Y
US_025	Underground Storage Chamber/Gallery	4971 W 77th St	Non-City Owned	Y
US_026	Underground Storage Chamber/Gallery	4951 W 77th St	Non-City Owned	Y
US_027	Underground Storage Chamber/Gallery	4941 W 77th St	Non-City Owned	Y
US_028	Underground Storage Chamber/Gallery	4911 W 77t St	Non-City Owned	Y
US_029	Underground Storage Chamber/Gallery	5995 LINCOLN DR	Non-City Owned	Y
US_032	Underground Storage Chamber/Gallery	4010 65TH ST W	Non-City Owned	Y
US_033	Underground Storage Chamber/Gallery	4010 65TH ST W	Non-City Owned	Y
US_034	Underground Storage Chamber/Gallery	7075 AMUNDSON AVE	Non-City Owned	Y
US_035	Underground Storage Chamber/Gallery	3250 66TH ST W	Non-City Owned	Y

Table 1 Assets to Inspect



Unique_ID	Type	Address	Owner	MaintPlan
US_036	Underground Storage Chamber/Gallery	3250 66TH ST W	Non-City Owned	Y
US_037	Underground Storage Chamber/Gallery	6645 MCCAULEY TR	Non-City Owned	Y
US_038	Underground Storage Chamber/Gallery	6401 GLEASON RD	Non-City Owned	Y
US_039	Underground Storage Chamber/Gallery	6401 GLEASON RD	Non-City Owned	Y
US_040	Underground Storage Chamber/Gallery	4100 76TH ST W	Non-City Owned	Y
US_041	Underground Storage Chamber/Gallery	6800 BRITTANY RD	Non-City Owned	Y