Memorandum of Understanding Between
City of Vadnais Heights
and Vadnais Lake Area Watershed Management Organization
Regarding Development of the City-Wide Stormwater Resiliency Study

This Memorandum of Understanding ("**MOU**") is made and entered into by and between the City of Vadnais Heights ("**City**") and Vadnais Lake Area Watershed Management Organization ("**VLAWMO**") each acting by and through its duly authorized governing bodies.

WHEREAS, the City and VLAWMO have partnered on a grant application for the Minnesota Pollution Control Agency's (MPCA)'s Planning Grants for Stormwater, Wastewater, and Community Resilience to request State funding for a City-wide Stormwater Resiliency Study ("**Study**") to reduce current flooding challenges and mitigate future vulnerabilities to flooding;

WHEREAS, the grant application was awarded MPCA funding in the amount of $149,498.30, and the City and the MPCA executed a grant agreement on April 23, 2025;

WHEREAS, the City and VLAWMO mutually desire to partner on the development of the Study and preliminary designs for proposed improvements identified in the Study;

WHEREAS, SEH Inc. has provided a Supplemental Letter Agreement (SLA) describing the scope, schedule, and costs for completing the Study and additional services necessary to develop preliminary designs for proposed improvements, dated May 27, 2025 (**Attachment 1)**;

WHEREAS, the total project budget cost amount specified in the SEH Inc. SLA (for tasks 1-9 + $17,129.30 contingency for unanticipated additional technical work) is $319,498.30, which will be paid through revenue from the MPCA grant ($149,498.30) and up to $170,000 in local cash match split 50/50 between VLAWMO and the City;

WHEREAS, the parties have reviewed the SEH Inc. SLA and find that it provides the necessary tasks and services to complete the Study and prepare for implementation of this Study;

WHEREAS, the City Council approved the SEH Inc. SLA at its meeting on June 17, 2025; and

WHEREAS, the parties wish to clearly define their respective roles in the development of the Study and preparation for implementation of the Study.

Now, therefore, the parties hereby agree to enter into this MOU and to comply with the following processes with respect to the Study:

1. <u>City Responsibilities</u>. The City agrees to do each of the following:

    a. Share 50% of the local cash match for the professional services costs with VLAWMO to complete the Study and prepare for implementation, not to exceed $85,000.
    b. Coordinate the consultant's development of the Study and completion of MPCA grantee duties.
    c. Provide for management and oversight of the Study and the MPCA grant award to ensure consistency with MPCA grant agreement and reporting requirements.
    d. Serve as the fiscal agent for the MPCA grant.

e. Invoice VLAWMO at regular intervals in the Study development process for its share of the local cash match for professional services.
f. Schedule partner meetings when needed with VLAWMO staff to ensure collaboration with VLAWMO on deliverables and the completion of the Study.
g. Share and distribute Study deliverables to VLAWMO and the MPCA.
h. Communicate with affected property owners and other stakeholders as may be necessary.

2. VLAWMO Responsibilities. VLAWMO agrees to do the following:

a. Share 50% of the local cash match for professional services costs to complete the Study with the City and prepare for implementation, not to exceed $85,000.
b. Pay invoices received from the City for reimbursement of professional services costs within 60 days of receipt.
c. Attend meetings and participate in discussion related to the preparation of the Study.
d. Provide data, technical assistance, and timely review of materials during the preparation of the Study.
e. Assist the City with communications to affected property owners and other stakeholders as may be necessary.

3. Use of Study Materials. The plans or documents produced in whole or in part under this MOU will be subject to fair use and may not be the subject of an application for copyright by or on behalf of the City or VLAWMO. The City and VLAWMO may use, without restriction, the work products of the Study including, but not limited to, collected data, preliminary design plan sheets, and any associated documents.

4. Project Implementation. Partnership on the development of this Study in no way binds either party to future partnership on implementation of projects identified in the completed Study or any further work within the Study area. The two parties will further define their roles through a subsequent agreement if implementation of the Study is pursued.

5. Term. This MOU is effective on the date of the last party to execute it. This MOU shall terminate upon completion of the Study and payment for the professional services costs incurred as provided herein.

6. Termination. Each party has the right to terminate this MOU at any time and for any reason by submitting written notice of the intention to do so to the other party at least thirty (30) days prior to the specified effective date of such termination.

7. Entire Agreement; Amendments. This MOU constitutes the entire agreement between the parties regarding this matter. No amendments to this MOU are valid unless they are in writing and signed by both parties.

IN WITNESS WHEREOF, the parties have caused this MOU to be executed by their duly authorized representatives and is effective as of the date of the last party to execute it.

City of Vadnais Heights Management Organization

_____
Chairperson

Date:_____

Vadnais Lake Area Watershed Management Organization

_____
Chairperson

_____
Administrator

Date:_____

Supplemental Letter Agreement

In accordance with the Master Agreement for Professional Services between City of Vadnais Heights ("Client"), and Short Elliott Hendrickson Inc. ("Consultant"), effective January 6, 1997, renewed on January 7, 2025, this Supplemental Letter Agreement dated May 27, 2025 authorizes and describes the scope, schedule, and payment conditions for Consultant's work on the Project described as: City of Vadnais Heights Stormwater Resiliency Study.

Client's Authorized Representative: Jim Hauth
Address: 800 East County Road E, Vadnais Heights, Minnesota 55127, United States
Telephone: 651.204.6050 **email:** Jim.Hauth@cityvadnaisheights.com

Project Manager: Emily Jennings
Address: 3535 Vadnais Center Drive, St. Paul, Minnesota 55110
Telephone: 651.302.7669 **email:** ejennings@sehinc.com

Scope: The Services to be provided by Consultant:

The scope of Tasks 1-5 is described within the workplan included in the Grant Agreement provided by the Minnesota Pollution Control Agency (MPCA), as included in Attachment A.

The scope of work for Tasks 6-9 is described below:

Task 6: Additional Data Collection and Analysis
SEH staff will complete additional data collection and analysis to support Task 2, as described within the Grant Agreement. The City's current GIS system includes construction or as-built documents linked to individual features. Additional data collection for this task will include creating a database of storm sewer information from these documents to be used for model development as well as future digitization of the City's GIS system. The database will be limited to available storm sewer information including age, invert elevation, rim elevation, pipe diameter, and material. Up to three days (24 hours) of field investigation and 6 hours of post-processing time is included to collect information for storm sewer, structures, and outlets of significant ponding areas where documentation may be missing. Mainline, trunk or priority storm sewer/ponding areas will be prioritized, with lateral or other sewers collected as budget allows. Digitization of the actual GIS system is not included as part of this task.

Task 7: Preliminary Survey and Field Investigation
Task 4 of the Grant Agreement includes conceptual level designs for three to five project alternatives. Task 7 will include a preliminary design level survey and field investigation to support a preliminary design for 1 of the conceptual alternatives as chosen by the City and Vadnais Lake Area Water Management Organization (VLAWMO). Because the exact location and configuration of this is still unknown, this task assumes 3 days of surveying time with 6 hours for post-processing of the survey data. Survey will include parcel or property boundaries for any potential stormwater management areas, surface data collection, major utilities in the project area, basic roadway data for any potential storm sewer components.

It is assumed that a wetland delineation will be required. SEH will complete a Level 2 wetland delineation and map any wetlands that may be present within estimated project boundaries. After the completion of the delineation, SEH will provide a wetland map for planning purposes to VLAWMO and the City describing the site conditions, identifying boundaries, and serving as a basis for permitting should unavoidable wetland impacts occur as part of the future project. It is assumed that a final boundary review, preparation of a delineation report and approval will occur with any final design efforts.

Task 8: Preliminary Geotechnical Investigation
Task 8 will include a geotechnical investigation to support a preliminary design for the chosen conceptual alternative. It is assumed that geotechnical information and recommendations will be needed for stormwater management facilities in addition to storm sewer improvements, including a total of 6 soil borings with laboratory testing will be completed within 1 mobilization. Groundwater monitoring is not included with testing.

Task 9: Preliminary Plan Sheets
Using the information from Tasks 7 and 8, SEH will use the model and conceptual designs from Task 4 to complete the preliminary level design. SEH will prepare preliminary level design plan sheets including but not limited to storm sewer plan and profile sheets and a stormwater management facility plan, profile and detail sheets. This task does not include the preparation of specifications or other bidding documents. An engineer's estimate of proposed improvements will be prepared and an addendum to the final report from Task 5 will be prepared to summarize information from the preliminary level design.

Schedule: See below for a detailed schedule breakdown by Task. Schedules may be subject to change, however Tasks associated with the MPCA Grant must be completed on or before June 30, 2026.

Task	Schedule
Task 1: Project Management	June 2025 – June 2026
Task 2: Data Collection and Analysis	June 2025 – November 2025
Task 3: Existing Conditions Model Development	October 2025 – February 2026
Task 4: Conceptual Design Development	January 2026 – April 2026
Task 5: Final Report and Project Deliverables	April 2026 – June 2026
Task 6: Additional Data Collection and Analysis	June 2025 – November 2025
Task 7: Preliminary Survey and Field Investigation	May 2026 – November 2026
Task 8: Preliminary Geotechnical Investigation	May 2026 – November 2026
Task 9: Preliminary Plan Sheets	May 2026 – November 2026

Payment:
The proposed services for Tasks 1-5 are included in the Grant Agreement. The lump sum fee for Tasks 1-5 is $194,269.00, which includes any expenses and equipment.

The proposed services and list of assumptions for Tasks 6-9 are attached in the task breakdown based on our understanding of the desired scope of services. We propose to perform these services on an hourly basis with a maximum fee of $88,800, which includes any reimbursable expenses.

Payment for any additional services shall be based on the actual hours required to perform the services and billable rates for employees engaged directly on the project, plus actual reimbursable expenses and review and approval by the City. All services will be invoiced monthly.

The payment method, basis, frequency and other special conditions are set forth in attached Exhibits A-1, A-2, and A-3. Additional work, if required, shall be compensated in accordance with the rate schedule.

Other Terms and Conditions: Other or additional terms contrary to the Master Agreement for Professional Services that apply solely to this project as specifically agreed to by signature of the Parties and set forth herein: None.

Short Elliott Hendrickson Inc.		**City of Vadnais Heights**	
By:	Scott D. Haupt	By:	
Full Name:	Scott Haupt	Full Name:	
Title:	Principal	Title:	

FEE ESTIMATE 6M

VADNAIS HEIGHTS, MINNESOTA
City of Vadnais Heights Stormwater Resiliency Study
SEH NO. VADNA 184768
5/28/2025

NO.	TASK	HOURS									
		PROJECT MANAGER	WETLAND SCIENTIST	SR. WATER RESOURCES ENGINEER	WATER RESOURCES ENGINEER	SR. GEOTECH ENGINEER	WR TECH	PROJECT ENGINEER	SURVEY CREW CHIEF	LAND SURVEYOR	ADMIN. ASST/ ACCOUNTING REP.
	Task 6: Additional Data Collection and Analysis										
1	Storm sewer information database	2		4	80						2
2	Field investigation and post-processing time	2		4					30		
3											
4											
5											
6											
7											
8											
9											
10											
	SUBTOTAL HOURS - Task 6	**4**	**0**	**8**	**80**	**0**	**0**	**0**	**30**	**0**	**2**
	SUBTOTAL FEE - Task 6	**$21,900**									
	Task 7: Preliminary Survey and Field Investigation										
1	Preliminary project kickoff meeting with City and VLAWMO	2		2	2						
2	Survey request				4						
3	Survey and post-processing time								30	4	
4	Level 2 wetland delineation and map		16								2
5											
6											
7											
8											
9											
10											
	SUBTOTAL HOURS - Task 7	**2**	**16**	**2**	**6**	**0**	**0**	**0**	**30**	**4**	**2**
	SUBTOTAL FEE - Task 7	**$11,500**									
	Task 8: Preliminary Geotechnical Investigation										
1	Prepare boring location map, coordinate with subconsultant & observe drilling/sampling			1		4					
2	Subconsultant drilling, sampling, testing and providing factual report	1				2					1
3	Evaluate geotechnical lab data and develop design parameters					6					
4	Prepare Geotechnical Recommendations Memorandum	2		1		26					2
5											
6											
7											
8											
9											
10											
	SUBTOTAL HOURS - Task 8	**3**	**0**	**2**	**0**	**38**	**0**	**0**	**0**	**0**	**3**
	SUBTOTAL FEE - Task 8	**$25,100**									
	Task 9: Preliminary Design and Plan Sheets										
1	Finalize design of potential storm sewer and stormwater management	2		6	30						
2	Storm sewer plan/profile sheets	1		1	8	2	30	8			
3	Stormwater management plan/profile/details	1		1	8		30	8			
4	Engineer's Estimate	1		1	2		2	16			
5	Review meeting with City and VLAWMO	2		2	2	2					2
6	Addendum to Final Report from Task 5	2		4	12						1
7		`									
8											
9											
10											
	SUBTOTAL HOURS - Task 9	**9**	**0**	**15**	**62**	**4**	**62**	**32**	**0**	**0**	**3**
	SUBTOTAL FEE - Task 9	**$30,300**									
	TOTAL HOURS - Task 6-9	**18**	**16**	**27**	**148**	**42**	**62**	**32**	**60**	**4**	**10**
	TOTAL FEE - Tasks 6-9	**$88,800**									

FEE ESTIMATE ASSUMPTIONS

6M

ASSUMPTIONS:

Meeting with be virtual or include a virtual option
Data collection task will be limited to available information and prioritize mainline, trunk or priority storm sewer/ponding areas.
Geotechnical investigation will include up to 6 borings with basic laboratory testing, completed within 1 mobilization.
Groundwater monitoring is not included in geotechnical investigation.
Engineer's estimate will included estimated costs for removals, roadway reconstruction areas, and any utility relocations. Final design will be needed in the future of these components
No time is included for assistance in preparing future grant applications.

Exhibit A-1

Payments to Consultant for Services and Expenses Using the Hourly Basis Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Hourly Basis Option

The Client and Consultant select the hourly basis for payment for services provided by Consultant. Consultant shall be compensated monthly. Monthly charges for services shall be based on Consultant's current billing rates for applicable employees plus charges for expenses and equipment.

Consultant will provide an estimate of the costs for services in this Agreement. It is agreed that after 90% of the estimated compensation has been earned and if it appears that completion of the services cannot be accomplished within the remaining 10% of the estimated compensation, Consultant will notify the Client and confer with representatives of the Client to determine the basis for completing the work.

Compensation to Consultant based on the rates is conditioned on completion of the work within the effective period of the rates. Should the time required to complete the work be extended beyond this period, the rates shall be appropriately adjusted.

B. Expenses

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client. Their costs are not included in the hourly charges made for services but instead are reimbursable expenses required in addition to hourly charges for services and shall be paid for as described in this Agreement:

1. Transportation and travel expenses.

2. Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets.

3. Lodging and meal expense connected with the Project.

4. Fees paid, in the name of the Client, for securing approval of authorities having jurisdiction over the Project.

5. Plots, Reports, plan and specification reproduction expenses.

6. Postage, handling and delivery.

7. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.

8. Renderings, models, mock-ups, professional photography, and presentation materials requested by the Client.

9. All taxes levied on professional services and on reimbursable expenses.

10. Other special expenses required in connection with the Project.

11. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

The Client shall pay Consultant monthly for expenses.

C. Equipment Utilization

The utilization of specialized equipment, including automation equipment, is recognized as benefiting the Client. The Client, therefore, agrees to pay the cost for the use of such specialized equipment on the project. Consultant invoices to the Client will contain detailed information regarding the use of specialized equipment on the project and charges will be based on the standard rates for the equipment published by Consultant.

The Client shall pay Consultant monthly for equipment utilization.

City of Vadnais Heights 2025 Hourly Billing and Expense Rates

Classification	Hourly Billing Rates
Sr. Engineer/Scientist/Planner/Landscape Architect/Land Surveyor/Project Specialist	$155 – $220
Project Manager	$165 – $205
Project Engineer	$145 – $184
Lead Technician/Resident Project Representative	$150 – $195
Registered Land Surveyor	$145 – $200
GIS Analyst	$140 – $189
Sr. Technician/Crew Chief/Resident Project Representative	$125 – $158
Graduate Engineer/Scientist/Planner/Landscape Architect	$125 – $158
Technician/Jr. Scientist/Jr. Planner/Crew Chief	$105 – $146
Administrative Professional	$105 – $140
Associate Technician	$75 – $104
Miscellaneous City Engineering	
City Engineer	$182
Private Development Projects	
City Engineer	$225
Expenses	
Mileage	Current IRS Rate
Robotic Total Station	$45/hour
Global Positioning System (GPS)	$45/hour
Survey Vehicle	$7.50/hour + mileage
Resident Project Representative Vehicle Allowance	$16/day

Issued: January 7, 2025
Expires: December 31, 2025

For: City of Vadnais Heights, Minnesota

Exhibit A-2

Payments to Consultant for Services and Expenses Using the Lump Sum Basis Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Lump Sum Basis Option

The Client and Consultant select the Lump Sum Basis for Payment for services provided by Consultant. During the course of providing its services, Consultant shall be paid monthly based on Consultant's estimate of the percentage of the work completed. Necessary expenses and equipment are provided as a part of Consultant's services and are included in the initial Lump Sum amount for the agreed upon Scope of Work. Total payments to Consultant for work covered by the Lump Sum Agreement shall not exceed the Lump Sum amount without written authorization from the Client.

The Lump Sum amount includes compensation for Consultant's services and the services of Consultant's Consultants, if any for the agreed upon Scope of Work. Appropriate amounts have been incorporated in the initial Lump Sum to account for labor, overhead, profit, expenses and equipment charges. The Client agrees to pay for other additional services, equipment, and expenses that may become necessary by amendment to complete Consultant's services at their normal charge out rates as published by Consultant or as available commercially.

B. Expenses Not Included in the Lump Sum

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client and shall be paid for as described in this Agreement

1. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.

2. Other special expenses required in connection with the Project.

3. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

The Client shall pay Consultant monthly for expenses not included in the Lump Sum amount.

Exhibit A-3

Payments to Consultant for Services Using the Lump Sum Plus Expenses Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Lump Sum Plus Expenses Option

The Client and Consultant may select Lump Sum Plus Expenses for payment for services provided by Consultant. During the course of providing its services, Consultant shall be paid monthly based on Consultant's estimate of the percentage of the work completed. The Lump Sum amount includes compensation for Consultant's services and the services of Consultant's Consultants, if any, for the agreed upon Scope of Work. Appropriate amounts have been incorporated in the initial Lump Sum to account for labor, overhead, and profit, The Client agrees to pay for other additional services, equipment, and expenses that may become necessary to complete Consultant's services at their standard rates.

B. Expenses

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client and shall be paid for as described in the Agreement and this Exhibit.

1. Transportation and travel expenses.

2. Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets.

3. Lodging and meal expense connected with the Project.

4. Fees paid, in the name of the Client, for securing approval of authorities having jurisdiction over the Project.

5. Plots, Reports, plan and specification reproduction expenses.

6. Postage, handling and delivery.

7. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.

8. Renderings, models, mock-ups, professional photography, and presentation materials requested by the Client.

9. All taxes levied on professional services and on reimbursable expenses.

10. Other special expenses required in connection with the Project.

11. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

C. Equipment Utilization

The utilization of specialized equipment, including automation equipment, is recognized as benefiting the Client. The Client, therefore, agrees to pay the reasonable cost for the use of such specialized equipment on the project.

Consultant invoices will contain detailed information regarding the use of specialized equipment on the project when it is to be reimbursed by the Client. Charges will be based on the standard rates for the equipment published by Consultant.

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

Attachment A
Workplan and Budget

SWIFT Number: 266808
AI: 89892
Activity ID: PRO20250001

Project Title: City of Vadnais Heights Stormwater Resiliency Study

1. Project Summary:

Organization: City of Vadnais Heights
Contractor Contact Name: Erin Spry
Title: Public Works Project Manager
Address: 800 East County Road E,
Vadnais Heights, Minnesota 55104
Phone: 651-204-6050
Email: Erin.Spry@cityvadnaisheights.com

Minnesota Pollution Control Agency (MPCA) Contact:

MPCA Project Manager: Liz Wiese
Title: Project Manager
Address: 7678 College Road, Suite 105,
Baxter, Minnesota 56425
Phone: 651-757-2072
Email: liz.wiese@state.mn.us

Project Information

Total cost: **Grant**: $149,498.30 **Match**: $64,070.70 **Project Total**: $213,569.00

Statement of Project Purpose(s):

The purpose of the project is to complete a comprehensive stormwater resiliency study for the City of Vadnais Heights to assess stormwater infrastructure capacity, identify existing and future flooding vulnerabilities, and plan for stormwater improvement projects to increase the overall resiliency of the stormwater system. Several locations within the City experience storm sewer overflow and flooding during extreme precipitation events resulting in dangerous intersections, property damage, drinking water quality impacts, and compromised emergency service routes. Due to the effects of climate change, flooding in these areas is anticipated to become more frequent and severe.

The study will include an inventory of existing stormwater infrastructure and flooding risks, identify problem areas and vulnerabilities with the help of the local community, and model the stormwater system in current conditions and future extreme precipitation events predicted by climate change scenarios. The completed study will contain a stormwater design alternatives analysis and conceptual designs for up to five alternatives that will alleviate flooding and reduce potential impacts to public and private property and East Vadnais Lake, a drinking water supply for 450,000 people.

2. Goal Statement, Project Deliverable(s), Tasks, and Subtasks

Goal Statement: The goal of the stormwater resiliency study is to better prepare the community of Vadnais Heights for the impacts of climate change, including more severe and frequent precipitation events, by designing actionable stormwater design alternatives and updating city codes, planning, and policy. The proposed study will address known flooding as well as public health and safety risks that impact the community, directly engaging and ultimately benefiting communities within the city with a special focus on residents of environmental justice areas.

Project Deliverables: Deliverables include a final report summarizing the analysis and recommendations of the stormwater resiliency study which will include an updated inventory of the city's stormwater infrastructure; a hydraulic and hydrologic model of the city's stormwater system; stormwater design alternatives analysis; up to five concept plans for stormwater design alternatives which could include green infrastructure improvements, expansion or replacement of undersized stormwater infrastructure, and added flood storage areas; recommended changes to city codes and policies; and conceptual cost estimates and permitting considerations for the selected design alternatives.

Results of the study will be shared with partners and community members.

Task 1 of 5: Project Management.

Subtask 1a: Stakeholder Meetings
Brief description of activities involved: Conduct three stakeholder meetings with the city, its watershed partners, Ramsey County, Saint Paul Regional Water Services (SPRWS), and at least one meeting with local community members to determine the issues, priorities, and desired outcomes of the study.

Subtask 1b: Community Input
Brief description of activities involved: A user-friendly, translatable Geographic Information System (GIS) map application will be created for residents to submit flooding and stormwater concerns, known issue areas, and ideas for potential improvements. Participation will be solicited online and at public events, such as at public presentations, open houses, and at existing city events.

Subtask 1c: Confirmation of Purpose and Goal Setting
Brief description of activities involved: The consultant will review the results of the stakeholder meetings and community input with the core partnership team. The partnership team will confirm their purpose and set goals for the scope of work for the resiliency study. Further community input and data needs will be identified.

Task 2 of 5: Data Collection and Analysis
Brief description of activities involved: Data will be collected for identifying vulnerabilities and analyzing the storm sewer system. Data may include existing storm sewer and stormwater structure age, and location; analysis of as-built survey drawing of stormwater system and relevant development plan sets; existing hydrologic and hydraulic model and stormwater/water quality model data; field verification of existing stormwater infrastructure; desktop review of land use and space for potential projects; soil borings; documentation and photos of past flood events; past studies and reports relevant to the study; wetland delineations.

Task 3 of 5: Existing Conditions Model Development
Brief description of activities involved: An existing conditions hydraulic and hydrologic model will be developed by using modeling software commonly used by project partners (i.e., XPSWMM) to define flood risk and existing impacts to infrastructure within the city. The models will utilize NOAA's Atlas 14 precipitation frequency modeling for a range of return intervals (storm events) to understand existing conditions flooding such as the 10-year and 100-year events. Climate prediction modeling methods such as the 5th National Climate Assessment Interactive Atlas will be used to evaluate future conditions flooding scenarios such as 8 and 11-inch storm events. The model will contain enough detail to evaluate localized flooding at major intersections, low points, occupied structures, emergency service corridors, and other areas of interest in the city.

Task 4 of 5: Conceptual Design Development

Subtask 4a: Stormwater Design Alternatives Analysis

Brief description of activities involved: This task will include an alternatives analysis of up to five potential flood mitigations and stormwater design improvement projects in the city that will improve stormwater resilience and reduce flooding while providing other co-benefits. Potential projects will be identified based on community feedback gathered in Tasks 1b and 2 and modeling results from Task 3. Feedback will also be gathered from city staff and partners in selecting potential project locations and types of projects. A proposed conditions model will be developed to assess potential projects and their ability to improve stormwater resiliency. The selected potential projects will then be evaluated on factors including, but not limited to, constructability, major utility conflicts, estimated flood-risk and stormwater volume reduction benefits, estimated pollutant removal benefits, maintenance requirements, and other implementation considerations.

Subtask 4b: Finalize Conceptual Designs

Brief description of activities involved: Conceptual designs will be developed for three to five of the selected project alternatives from Task 4a. Conceptual design plan view layouts will be created with input from project partners and will be presented with hydrologic and hydrologic model outputs, volume rate control and storage enhancements, and estimated pollutant load reduction. Permitting requirements and planning level cost estimates will be evaluated and summarized for the final conceptual designs. A cost-benefit analysis of the final conceptual designs will determine the most cost-effective solutions to pursue for future implementation.

Subtask 4c: Identification of Areas of Improvement

Brief description of activities involved: Review of city code and policies to increase stormwater resilience to climate change and reduce drivers of flooding issues Citywide.

Consultant Model Support; Consultant Admin

Task 5 of 5: Final Report and Project Deliverables

Subtask 5a: Final Resiliency Study Report

Brief description of activities involved: Develop a report summarizing the work for Tasks 1-4 of the project, including community input results, modeling assumptions and results, stormwater design alternatives, cost estimates, and recommendations. Identify future grant opportunities to assist with implementation of the proposed alternatives in Task 4. Results of the study will be shared with partners and community members.

Subtask 5b: Submit Grant Final Report

Brief description of activities involved: The City will provide a final grant project report using the MPCA template approximately one month prior to the end of the grant agreement of June 30, 2026, or at completion of the project, whichever occurs first. The City will respond promptly to any requests by the MPCA authorized representative for additional information and/or corrections to the report.

Subtask 5c: Submit Project Deliverables

Brief description of activities involved: The City will provide electronic files of all project deliverables to the MPCA authorized representative prior to the end of the grant agreement of June 30, 2026, or at the completion of the project, whichever occurs first.

3. Budget

Cost category	Grant Funds	Budgeted Cash Match	Total Budget
Project Management	$9,270.80	$3,973.20	$13,244.00
Data Collection and Analysis	$33,745.60	$14,462.40	$48,208.00
Existing Conditions Model Development	$57,554.00	$24,666.00	$82,220.00
Conceptual Design Development	$31,790.50	$13,624.50	$45,415.00
Final Report and Project Deliverables	$17,137.40	$7,344.60	$24,482.00
Totals (Not to Exceed)	**$149,498.30**	**$64,070.70**	**$213,569.00**