April 30, 2025

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Permitting Program Manager and Permitting Technician
Minnehaha Creek Watershed District
15320 Minnetonka Blvd
Minnetonka, MN

Re: Permit Application for the 53rd Street W and York Avenue S Outfall and Flood Improvement Project

Dear Andrew and Veronica:

The City of Minneapolis Public Works Department (City) intends to complete an outfall replacement and flood improvement project within the 53rd Street W and York Avenue S (53rd and York) study area shown in Figure A. The 33.1-acre study area is located within the Fulton neighborhood in southwest Minneapolis and has a history of urban flooding, due in part to an undersized storm water system, that impacts 3 habitable structures and over 15 secondary structures (e.g., garages). The existing outfall, a concrete sluiceway which extends to the bottom of Minnehaha Creek (Figure B) is over 90 years old. The sluiceway is in disrepair and has required emergency repairs by City crews. The York Avenue sluiceway outfall was specifically highlighted within the Minneapolis Park and Recreation Board (MPRB) Minnehaha Parkway Regional Trail Master Plan (MPRB, 2020) as an example of a key infrastructure improvement location along Minnehaha Creek. The major objectives of this flood project are to:

1. Improve public safety and protect homes and secondary structures by draining stormwater from roadways and alleys.
2. Protect Minnehaha Creek by (a) maintaining the hydraulic connection between the creek and surrounding drainage area in a safe and sustainable way and (b) implementing storm water quality best management practices (BMPs) to the maximum extent practicable.

The City and Barr Engineering Co. (Barr) shared initial concepts outlined in the 53rd Street W and York Avenue S Flood Project – Alternatives Assessment (Barr, 2024; Attachment A) with MCWD at a pre-application meeting on June 5, 2024. Following input from MCWD staff and continued stakeholder engagement, the design alternative included in the attached 90% Construction Plans (Attachment B) was selected as the preferred alternative.

A summary of key elements of the preferred alternative included as the basis for this permit application (Attachment B) is below:

- Upsizing of storm sewer along 53rd Street W, York Avenue S, and tributary alleys
- Four (4) underground storage systems along 53rd Street W (total volume: 18,830 cubic feet) to provide conveyance, rate control, and water quality benefit. Three (3) of the underground storage systems include infiltration abstraction volume (total infiltration abstraction volume: 3,500 cubic feet).
- Custom curb and high-capacity inlet at the York Avenue S cul-de-sac to convey up to the Atlas 14 100-year, 24-hour flows to the creek via the storm sewer system without overtopping the curb or down the slope.

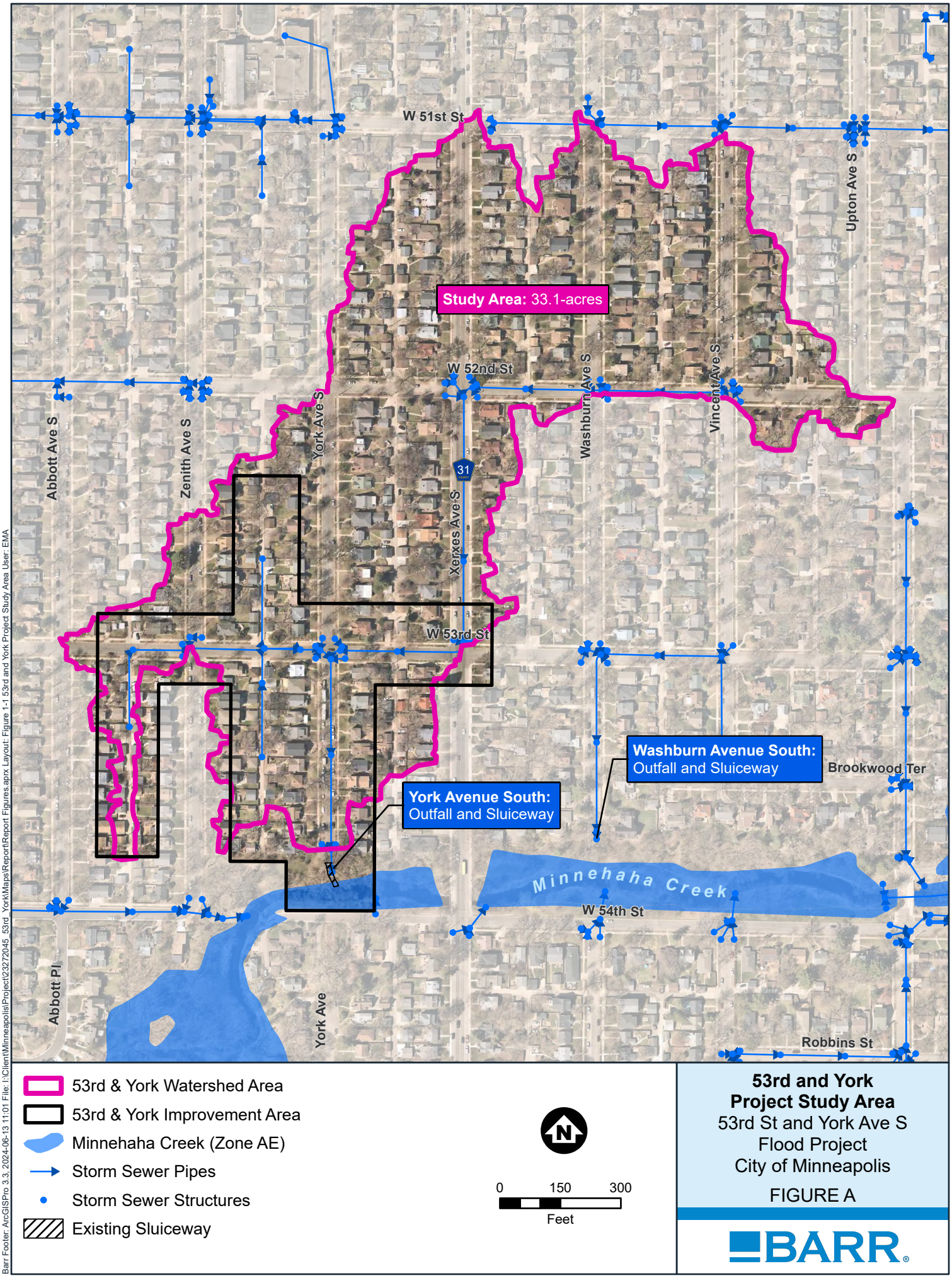
- Replacement of the existing sluiceway with a drop structure and 42-inch RCP outfall capable of conveying up to the 100-year event.

Based on the discussion from the pre-application meeting and the current design (Attachment B), Table A provides a summary of potentially applicable MCWD rules and how each is addresses within this permit application.

The following sections summarize applicability of MCWD rules, including all required exhibits and submittals.

Table A Summary of Applicable Rules

MCWD Rule	Applicable?	Reasoning	Requirements and References
3. Erosion & Sediment Control	Yes	• Land disturbance greater than 5,000 SF or moving 50 CY of material	• Section 3 • Erosion and Sediment Control Plan (ESC) included in Attachment B.
4. Floodplain Alteration Rule	Yes	• Fill / excavation / grading within floodplain	• Section 4 • Storm sewer outlet grading plan included in Attachment B.
5. Stormwater Management Rule	No	• Utility replacement project •	• Section 5 •
6. Waterbody Crossing & Structures Rule	Yes	• Replacement of structure below top of bank	• Section 6 • Project grading plan and ECS included in Attachment B
7. Wetland Protection Rule	No	• No wetlands identified above OHWL, no WCA-regulated wetland impacts	• Section 7 • WCA Notice of Decision and OHWL determination in Attachment C
8. Shoreline & Streambank Stabilization Rule	No	• Stabilization required below OHWL during/post construction; however, exempt from rule per Section 2(b)3 as riprap is below culvert/outfall for energy dissipation.	• Section 8 • Construction and restoration plan in Attachment B



Bar Footer: ArcGISPro 3.3, 2024-06-13 11:01 File: I:\Client\Minneapolis\Project\23272045_53rd_York\Maps\Report\Report Figures.aprx Layout: Figure 1-1 53rd and York Project Study Area User: EMA

Figure B **Site Photos: York Avenue S Outfall (left), Concrete Sluiceway (middle), and outfall of Sluiceway to Minnehaha Creek (right).**

3 Erosion & Sediment Control Rule

The project will expose more than 5,000 square feet of soil and move more than 50 CY of material. An erosion and sediment control plan (ESC Plan) including all required information outlined in MCWD rules is included in Appendix B (sheets C-01 to C-07).

4 Floodplain Alteration Rule

The project will include temporary construction and grading below the 100-year floodplain of Minnehaha Creek in the vicinity of the outfall (853.99-feet NGVD29 per MCWD modeling). This will include removal of the existing concrete sluiceway (see Figure A included in Attachment B for existing sluiceway details) and replacing this with a proposed 42-inch RCP pipe, flared end section, and riprap outfall in generally the same location/alignment. The proposed restored slope will match the existing slope. The storm sewer outlet grading plan is included on sheet C-21 of the attached construction plans (Attachment B) and a summary of cut/fill below the Ordinary High-Water Level (OHWL per MCWD), the 100-year floodplain (per MCWD), and the entire slope from cul-de-sac to bottom of creek is included in Table B.

Table B Cut/Fill Summary for Slope From York Ave S to Minnehaha Creek

Summary Location	Cut/Fill Summary (CY)		
	Total Cut	Total Fill	Net Cut
OHWL (851.06 ft MSL)	16	1	15
100-year Floodplain (853.99 ft MSL)	24	1	23
Entire Slope	34	4	30

5 Stormwater Management Rule

A permit under the stormwater management rule is not required because the project is a utility replacement project, and the impervious area that will be removed and replaced is limited to what is required to remove the existing storm sewer and sluiceway and to install the proposed storm sewer. According to the definitions on the District's Regulations webpage, this type of work is not considered to be reconstructed surface.

Although the MCWD stormwater management rule does not apply to this project, rate control was a key consideration of the City during all phases of alternative development and design. Under existing conditions during small events, the majority of runoff from the 33-acre watershed flows toward the outfall at York Ave S; however, during larger storm events, surface flows along Xerxes Avenue S split and flow along 53rd Street to the east and west, ultimately discharging at both the York Avenue S outfall as well as the outfall at Washburn Avenue S to Minnehaha Creek.

Per MCWD rules, rate control was considered in aggregate for all storm events for the Atlas 14 2-, 10-, and 100-, 24-hour events. During larger events, the proposed storm sewer and inlet modifications along 53rd Street, shift a portion of flow that would have previously flowed to the Washburn Avenue S outfall to the York Avenue S outfall (see Figure A). As a result, we evaluated rate control considering the cumulative outflow from these two outfall locations to Minnehaha Creek. The four underground storage systems and internal control structures (e.g., internal weirs and orifices) (Attachment B) were sized to

meet rate control goals. Additionally, these underground systems also go "above and beyond" requirements by providing the maximum water quality infiltration abstraction volume practicable, based on the observed soil types and separation from the observed groundwater based on piezometer data (Attachment D).

Table C, below provides a summary the total outflow rate for the York and Washburn outfalls and the cumulative outflow rate to Minnehaha Creek for both existing and proposed conditions, demonstrating that rate control is achieved for all design events. Cumulative outflow rate is calculated through summation of all outflow hydrographs to Minnehaha Creek (i.e., not the simple addition of peak flows in Table C). In addition to achieving rate control, note that the proposed condition also eliminates overflows down the slope from the York Avenue outfall, fully containing the 100-year flows within the pipe system. Models and model result files, including individual and cumulative hydrographs, referenced in this section and Table C are included in Appendix E.

Table C Rate Control Summary

Model Condition	Outfall	Peak Flow Summary (cfs)		
		2-year	10-year	100-year
Existing Condition	York Ave S: Pipe	22	22	23
	York Ave S: Overflow	11	45	129
	Washburn Ave S: Pipe	12	25	25
	Washburn Ave S: Overflow	0	2	58
	Total to Minnehaha Creek	44	94	235
Proposed Condition (see Attachment B)	York Ave S: Pipe	33	71	156
	York Ave S: Overflow	0	0	0
	Washburn Ave S: Pipe	12	24	25
	Washburn Ave S: Overflow	0	0	53
	Total to Minnehaha Creek	43	91	233
Change in Aggregate Peak Flow to Minnehaha Creek:		**-0.5**	**-3**	**-2**

6 Waterbody Crossing & Structures Rule

The project will replace an existing storm sewer outfall (i.e., the storm sewer outfall and concrete sluiceway shown in Figure B) with a new 42-inch storm sewer outfall located within the same extents and alignment of the existing concrete sluiceway, and will discharge at a similar elevation as the bottom of the existing concrete sluiceway. The project will not impact the hydraulic capacity of Minnehaha Creek, as (a) the project will not decrease the cross-sectional area of the creek in the vicinity of the outfall, and (b) the project results in an aggregate reduction in peak flow rate to the creek as demonstrated in Table C between the York Ave S and Washburn Ave S outfalls. Additionally as shown in Table C, the high-capacity inlets and storm sewer have been sized to capture and fully convey the runoff up to the 100-year storm event through the proposed drop structure and 42-inch storm sewer, reducing the potential for bypassing of the outfall and uncontrolled runoff down the vegetated slope to the creek (Figure B and site photos shows evidence that runoff bypasses the sluiceway, resulting in bank erosion on either side of the existing concrete sluiceway). Additionally, review of site photos suggests that the channel bank on the opposite side of the Minnehaha Creek from the existing sluiceway outfall is stable and not eroding as a

result of the location of this outfall (see Figure B); as proposed we do not anticipate any further impacts to this creek bank opposite the outfall.

Project grading plans and ESC plan outlining erosion control and project grading within the creek corridor are included in Attachment B.

7 Wetland Protection Rule

There are no wetlands within the project area construction limits above the OHWL. The approved Wetland Conversation Act (WCA) Notice of Decision and Minnesota Department of Natural Resources (DNR) approval of the provisional OHWL are included in Attachment C.

8 Shoreline & Streambank Stabilization Rule

As described in the introduction and Section 6, the proposed 42-inch storm sewer outfall will follow the same alignment of the existing concrete sluiceway, the existing concrete sluiceway will be removed, and the slope upstream of the pipe outfall will be restored with native woodland vegetation at a slope similar to the existing slope. There will be no impacts to the stream channel banks across from the outfall as part of this project, and there will be no impacts to the stream banks immediately upstream and downstream of the outfall except in the location of the removal of the existing sluiceway and replacement with the pipe outfall with riprap for protecting the outfall and providing energy dissipation and reducing scour from flows along Minnehaha Creek. Because of this riprap is being placed at the culvert outfall for this purpose, this is exempt from the MCWD Shoreline and Streambank Stabilization rule per Section 2(b)3.

Additionally, a sheet pile wall with concrete cap will be embedded below the riprap to support the flared end at the outfall to the creek. Generally, the existing cross section is being maintained with no net fill in the floodplain. Excavated and filled bank areas adjacent to the outfall and within the alignment of the existing concrete sluiceway will be graded to conform with the natural alignment and channel bank slope. Details of the 42-inch RCP outfall are included in the construction plans (Sheets C-13, C-21, C-31, C-33 to C-35 in Attachment B). The landscape restoration plan for restored portions of the slope down to Minnehaha Creek is included in Attachment B (Sheet C-23).

ATTACHMENT A

53RD Street W and York Avenue S Flood Project – Alternatives Assessment (Barr, 2024)

ATTACHMENT B

53rd St W And York Ave S Flood Project 90% Construction Plans

ATTACHMENT C

Minnesota Wetland Conservation Ace Notice of Decision and Minnesota DNR OHWL Decision

ATTACHMENT D

Soil Boring and Piezometer Survey Data for York and 53rd Study Area

ATTACHMENT E

York and 53rd Study Area Electronic Deliverables