

# UPPER HARBOR TERMINAL

## FINAL ALTERNATIVE URBAN AREAWIDE REVIEW (AUAR)



JULY 2021

PREPARED FOR:



PREPARED BY:



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## Final Alternative Urban Areawide Review

This Alternative Urban Areawide Review (AUAR) follows the format of an Environmental Assessment Worksheet (EAW) (July 2013 version). Where the AUAR guidance provided by the Minnesota Environmental Quality Board (EQB) indicates that an AUAR response should differ notably from what is required for an EAW, the guidance is noted in *italics*.

### 1. PROJECT TITLE

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Upper Harbor Terminal

### 2. PROPOSER

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**Proposer:** United Properties  
**Contact Person:** Brandon Champeau  
**Title:** Senior Vice President  
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### 3. RGU

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**RGU:** City of Minneapolis  
**Contact Person:** Hilary Dvorak  
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#### 4. REASON FOR PREPARATION

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*AUAR Guidance: Not applicable to an AUAR.*

#### 5. PROJECT LOCATION

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**County:** Hennepin

**City/Township:** Minneapolis

**PLS Location (¼, ¼, Section, Township, Range):** SW ¼ of Section 3, Township 29N, Range 24W and NE ¼ of Section 10, Township 29N, Range 24W

**Watershed (81 major watershed scale):** Mississippi River – Twin Cities

**Tax Parcel Number:** 0302924340008; 0302924340026; 1002924210002; 1002924210048; 1002924240065; 0302924340007; 0302924340028; 0302924340029; 0302924340031

**At a minimum, attach each of the following to the AUAR:**

- **US Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries** (see Figure 1)
- **Map depicting the boundaries of the AUAR and any subdistricts used in the AUAR analysis** (see Figure 2 through Figure 4)
- **Cover type map as required for Item 7** (Figure 5)
- **Land use and planning and zoning maps as required in conjunction with Item 9** (see Figure 6 through Figure 10)

Figure 1: USGS Map

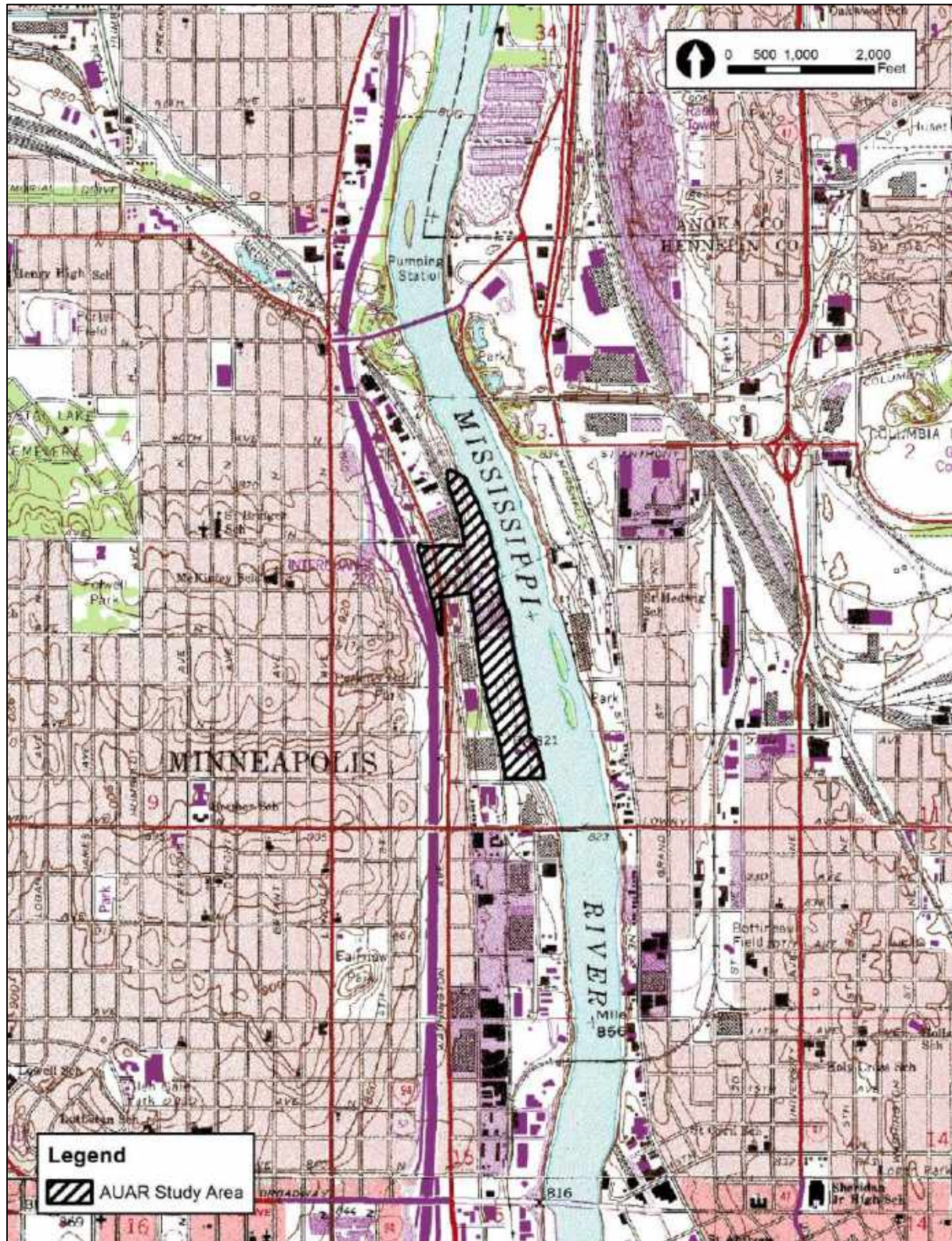




Figure 2: AUAR Study Area



## 6. PROJECT DESCRIPTION

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*AUAR Guidance: Instead of the information called for on the EAW form, the description section of an AUAR should include the following elements for each major development scenario included:*

- *Anticipated types and intensity (density) of residential and commercial/warehouse/light industrial development throughout the AUAR area*
- *Infrastructure planned to serve development (roads, sewers, water, stormwater system, etc.). Roadways intended primarily to serve as adjoining land uses within an AUAR area are normally expected to be reviewed as part of an AUAR. More “arterial” types of roadways that would cross an AUAR area are an optional inclusion in the AUAR analysis; if they are included, a more intensive level of review, generally including an analysis of alternative routes, is necessary.*
- *Information about the anticipated staging of various developments, to the extent known, and of the infrastructure, and how the infrastructure staging will influence the development schedule*

The AUAR study area encompasses an area totaling approximately 53 acres (shown on Figure 2). United Properties, in partnership with First Avenue Productions, Minneapolis Park and Recreation Board (MPRB), and the City of Minneapolis, is proposing to redevelop the 53-acre Upper Harbor Terminal site, which was formerly used as a barge shipping terminal and is currently made up of city-owned land and quasi-public entities, including utilities and Canadian Pacific (CP) rail lines. The proposed development would include residential, hospitality, retail/service, office/employment, light industrial, community performing arts center (includes an outdoor amphitheater), and recreational land uses.

### *Development Scenarios*

Three scenarios are evaluated in the AUAR as outlined in Table 1. The No Build Scenario represents the existing conditions of the Upper Harbor Terminal site. Under this scenario, no redevelopment would occur. Scenario 1 represents the density of the development proposed in the *Upper Harbor Coordinated Development Plan* (Final Draft, February 2021) (illustrated in Figure 3). Scenario 2 represents the maximum density allowed under the *Minneapolis 2040 Comprehensive Plan*.

The intent of the AUAR is to identify the worst-case potential impacts and the mitigation required to compensate for those impacts. One of the primary factors influencing site density is the site-generated traffic volumes, which are driven by the proposed mix of land uses. If changes in the market require adjustments to the proposed land use, adjustments could be made as long as the total traffic generated under Scenario 2 is not exceeded and the proposed development is still compatible with the *Minneapolis 2040 Comprehensive Plan*.

**Scenario 1 and Scenario 2**

Redevelopment of the site would include new infrastructure, including water service, sewer, stormwater, streets, sidewalks, trails, and other utilities, and most of the new services would be extensions to existing infrastructure or upgrading existing systems to support the new land uses. Both build scenarios would also include relocating the existing overhead electric transmission lines.

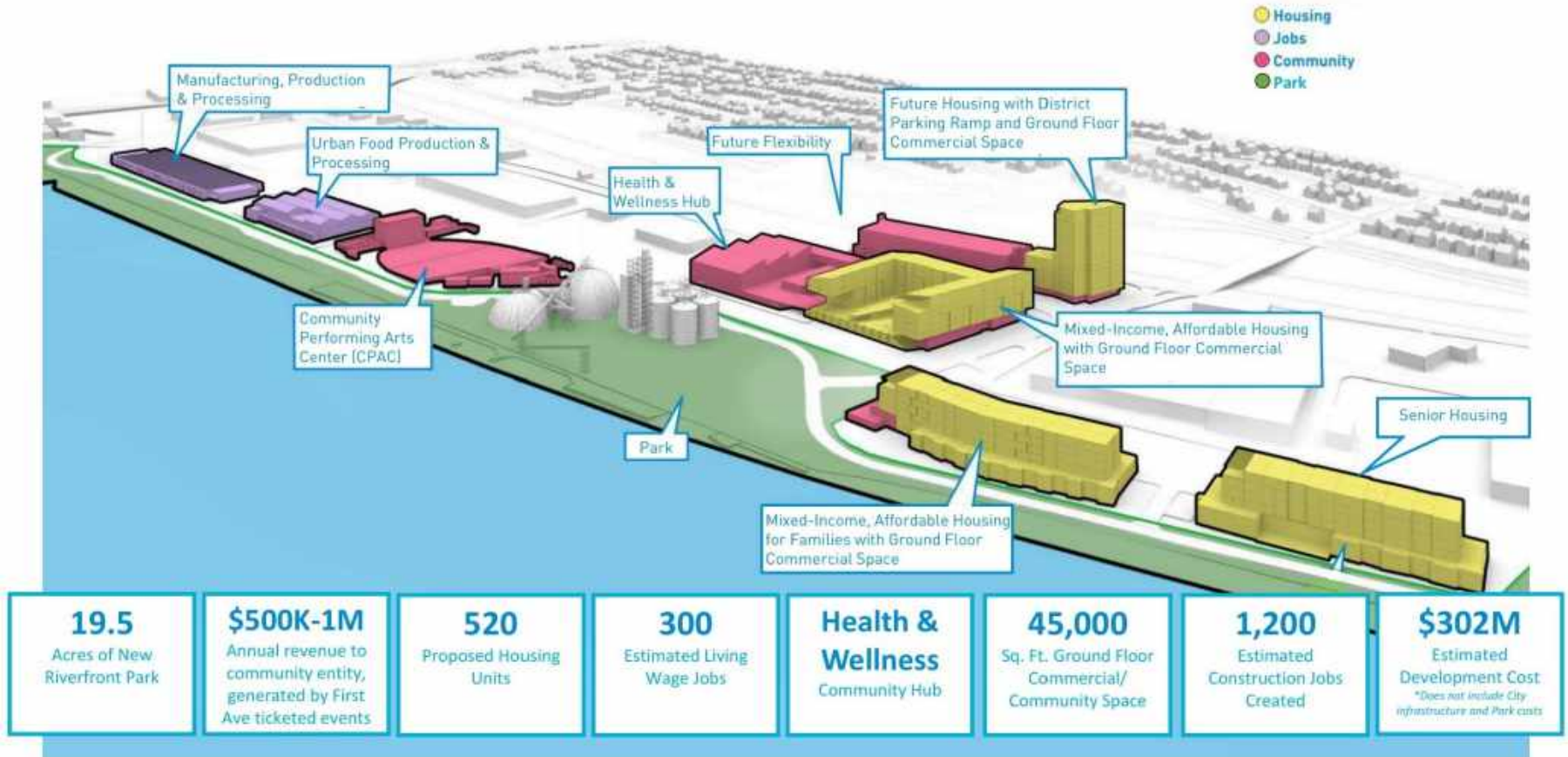
Scenario 1 and 2 would also improve access to the Upper Harbor Terminal site near Lowry Avenue North. In coordination with CP Rail, both scenarios include improvements to the two railroad crossings on 33rd Avenue North.

**Table 1: Development Scenarios**

Component	No Build Scenario	Scenario 1: Draft Coordinated Development Plan	Scenario 2: Maximum Density Allowable under the Comprehensive Plan
Residential units	0	520	890
Commercial (square feet)	0	50,000	55,000
Non-commercial: office, industrial (square feet)	110,000	315,000	640,000
Industrial storage (acres)	37	0	0
Music venue (peak attendance)	0	10,000	10,000
Recreation (acres)	0	19.5	19.5



Figure 3: Development Overview from the Draft Coordinated Development Plan



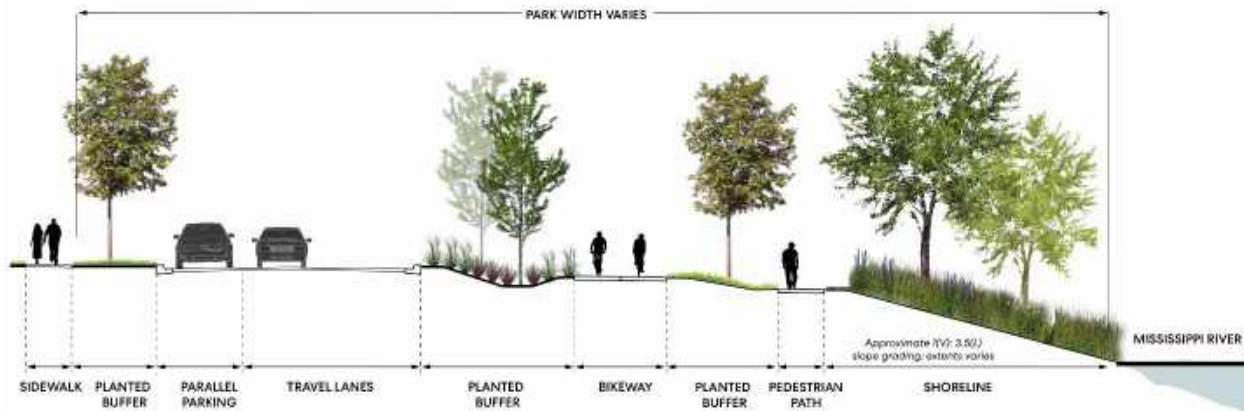
*Riverfront Park*

A proposed 19.5-acre public park is included in Scenario 1 and Scenario 2 (see Figure 4). The park will provide contiguous public space along the water and will include upland shoreline restoration work. Shared use paths or separated bikeways and pedestrian circulation will connect to the existing and proposed city transportation network. Near the main public entrance from Dowling Avenue North, the main park area will include a small building with public indoor space, restrooms, and staff areas. The park will also include flexible plaza and lawn, picnic and play areas, public gardens, restored vegetation, and riverfront educational areas, accessible water access for small watercraft, pathways along the riverwall, and stormwater treatment areas. Much of the existing industrial infrastructure will be removed; however, the grain elevators, riverwalls, mooring cells, and barge docks will remain in place. As part of the ecological restoration approach, outside of the riverwall areas, the steep shoreline will be regraded to a flatter slope (approximately 1V:3.5H). Depending on the available shoreline width between the pedestrian path and the shoreline, the grading could extend down to the normal water level, which is below the ordinary high water level. In places where there is not sufficient room, the regrading will terminate higher. As part of the shoreline restoration, debris will be selectively removed and native plantings will be used to stabilize the slopes (see Figure 5 for a cross section showing the approximate areas of shoreline restoration).

Figure 4: Proposed Riverfront Park



Figure 5: Linear Park Cross Section



*Development Schedule*

The proposed development for Scenario 1 and Scenario 2 is anticipated to start in 2022 and will be conducted in two separate phases, Phase 1 and Phase 2, over the next five years, depending on the market (see Table 2). For both scenarios, stormwater will either be managed using individual stormwater systems for each parcel or by using a district stormwater management system that creates a shared stormwater system for the AUAR study area.

Phase 1 includes development on Parcel 1B, Parcel 2, Parcel 3, Parcel 5, and Parcel 6A. The phasing plans for utility and transportation infrastructure as well as a portion of the park are anticipated to be completed in conjunction with Phase 1 development. A portion of the north-south parkway will be built in Phase 1. Improvements to 33rd Avenue North will occur in Phase 1 and will include walking/biking facilities and improvements to the CP Rail crossings.

Phase 2 includes development on Parcel 1A, Parcel 4, Parcel 6B, Parcel 7A, and Parcel 7B. The remainder of the north-south parkway, stormwater management associated with the parkway, and the remaining park area are anticipated to be completed in Phase 2. The timeline for Phase 2 infrastructure has not yet been determined.

**Table 2: Scenario 1 and Scenario 2 Build Out Timeline<sup>1</sup>**

	2021				2022				2023				2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1 Infrastructure	█	█	█	█	█	█	█	█	█	█	█	█	█											
Parcel 1A													█	█	█	█	█	█	█	█	█	█	█	█

<sup>1</sup> Schedule from the Coordinated Development Plan (February 2021). The schedule is subject to change.



	2021	2022	2023	2024	2025	2026
Parcel 1B	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 2	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 3	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 4	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 5	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 6A	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 6B	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment	Predevelopment
Parcel 7A				Predevelopment	Predevelopment	Predevelopment
Parcel 7B				Predevelopment	Predevelopment	Predevelopment

<b>Predevelopment</b>	Planning, design, engineering, marketing, leasing, land appraisal, financing, redevelopment agreement, community benefits agreement, replatting, demolition, City approvals, and closing.
<b>Construction</b>	Site work, core and shell, and interior construction.
<b>Occupancy</b>	Construction close-out, occupancy permits, and tenant/resident move-in.

## 7. COVER TYPES

*AUAR Guidance: The following information should be provided:*

- *A cover type map, at least at the scale of a USGS topographic map, depicting:
 
  - *Wetlands (identified by Circular 39 type)*
  - *Watercourses (rivers, streams, creeks, ditches)*
  - *Lakes (identify public waters status and shoreland management classification)*
  - *Woodlands (break down by classes where possible)*
  - *Grassland (identify native and old field)*
  - *Cropland*
  - *Current development**
  
- *An overlay map showing anticipated development in relation to the cover types. This map should also depict any “protection areas,” existing or proposed, that will preserve sensitive cover types. Separate maps for each major development scenario should be generally provided.*

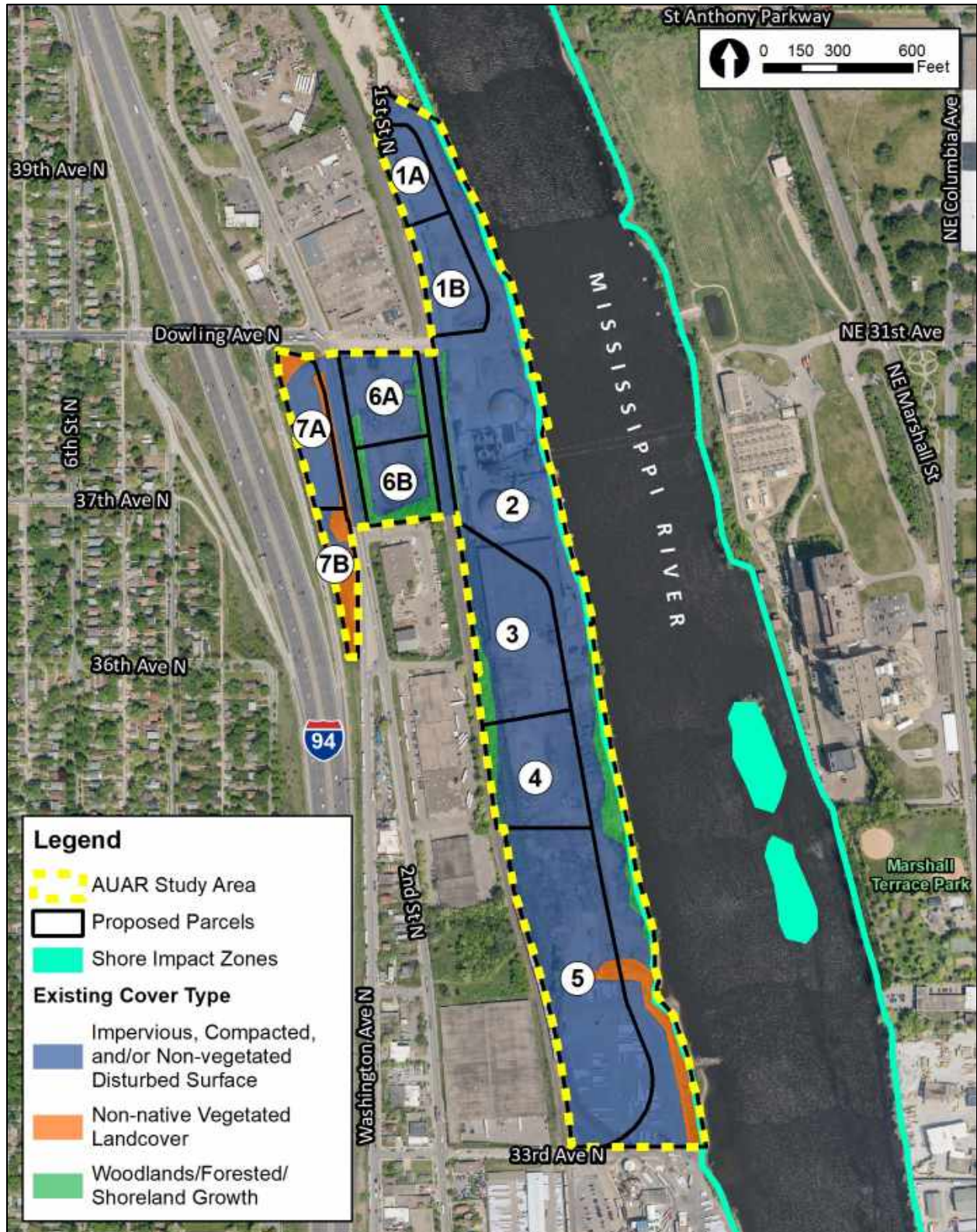
The AUAR study area is approximately 53 acres of urban land. This area is currently used for industrial purposes including stockpiling, construction staging, and storage. There are several structures on site, including grain silos, storage domes, an elevator tower, and steel conveyors, some of which will be preserved and potentially repurposed. Existing cover types within the study area are shown on Figure 6 and Table 3 and were determined by reviewing aerial photography, survey information, land cover classification maps, and on-site assessments. Proposed cover types are high level estimates based on concept plans for development and the proposed park and may change as plans are finalized.

The Hennepin County Wetland Inventory and National Wetland Inventory identified a wetland area on Parcel 5; however, based on a review of 2020 aerial photography, the identified location is currently an impervious surface parking and storage area (see Figure 6). Therefore, no wetlands are located within the AUAR study area. The Mississippi River lies just east of the site and is the only existing water body adjacent to the AUAR study area.

**Table 3: Existing and Proposed Cover Types**

Cover Type	Existing Conditions – No Build (acres)	Scenario 1 (acres)	Scenario 2 (acres)
Impervious, compacted, and/or non-vegetated disturbed surface	40	35	35
Lawn/landscaping	9	18	18
Native upland vegetation	0	5.5	5.5
Stormwater management areas	0	1.45	1.45
Woodland/forested	4	3.73	3.73
<b>Total</b>	<b>53</b>	<b>53</b>	<b>53</b>

Figure 6: Cover Types



## 8. PERMITS AND APPROVALS REQUIRED

*AUAR Guidance: A listing of major approvals (including any comprehensive plan amendments and zoning amendments) and public financial assistance and infrastructure likely to be required by the anticipated types of development projects should be given for each major development scenario. This list will help orient reviewers to the framework that will protect environmental resources. The list can also serve as a starting point for the development of the implementation aspects of the mitigation plan to be developed as part of the AUAR.*

### Public Financial Assistance

#### No Build Scenario

The No Build Scenario would not involve any public or private infrastructure improvements; therefore, it would not receive any public financial assistance.

#### Scenario 1 and Scenario 2

Both Scenarios 1 and 2 are anticipated to receive public financial assistance, including State General Obligation Bond funds for the community performing arts center and proposed parkway, and federal HOME Investment Partnerships Program funds and Low-Income Housing Tax Credits for affordable housing. Various development components may also qualify for tax increment financing from the City that developer(s) could apply for.

### Permits and Approvals

Table 4 lists the anticipated permits and approvals for Scenario 1 and Scenario 2.

**Table 4: Anticipated Permits and Approvals**

Unit of Government	Type of Application	Status
<b>Federal</b>		
U.S. Army Corps of Engineers	Section 404	To be applied for, if needed
<b>State</b>		
Minnesota Department of Natural Resources	Water Appropriation Permit	To be applied for, if needed
	Public Waters Permit	To be applied for, if needed
Minnesota Pollution Control Agency	National Pollutant Discharge Elimination System Stormwater Permit for Construction Activities	To be applied for
	Section 401 Water Quality Certification	To be applied for, if needed
	Sanitary Sewer Extension Permit	To be applied for
	Industrial Stormwater Permit	To be applied for, if needed
	Notice of Intent of Demolition	To be applied for

Unit of Government	Type of Application	Status
	Construction Contingency Plan and Response Action Plan approval	To be applied for, if needed
Minnesota Department of Health	Water Main Installation Permit	To be applied for
<b>Regional</b>		
Metropolitan Council	Sewer Connection Permit	To be applied for
	Standard Industrial Discharge Permit	To be applied for
	Encroachment Agreement	To be applied for
Hennepin County	Right-of-Way Permits	To be applied for
	Road Access Permits	To be applied for
<b>Local</b>		
City of Minneapolis	Plumbing Permits	To be applied for
	Water Main Installation	To be applied for
	Alternative Urban Areawide Review	In process
	Development Agreements	To be applied for
	Land Use Applications, including but not limited to comprehensive plan amendments, rezonings, conditional use permits, variances, site plan review, etc.	To be applied for, if needed
	Permit for Stormwater Management, Erosion and Sediment Control, Wetland Management	To be applied for
	Preliminary and Final Plat	To be applied for
	Zoning code text amendment to allow outdoor amphitheaters	To be applied for
	Sign Permit	To be applied for
	Building Permit	To be applied for
	Excavation and Grading Permit	To be applied for
	Certificate of Occupancy	To be applied for
	Emergency Generator Fuel Storage Permit	To be applied for
	Erosion and Sedimentation Control Plan Approval and Grading Permit	To be applied for
	Demolition Permit	To be applied for
	Right-of-Way and Utility Easement Vacations	To be applied for, if needed
	Temporary Water Discharge Permit	To be applied for, if needed
	After Hours Work Permit	To be applied for, if needed
	Lane Obstruction Permit	To be applied for, if needed
	Utility Repair Permit	To be applied for, if needed
Sidewalk Construction Permit	To be applied for, if needed	
Testing and Inspection Permit	To be applied for, if needed	
Floodplain – No Rise Certificate	To be applied for, if needed	



Unit of Government	Type of Application	Status
	Water Discharge for Dewatering or Storm Water Ponds	To be applied for, if needed
	Well Permit	To be applied for, if needed
	Tank Permit	To be applied for, if needed
	Temporary On-Site Storage of Impacted Soil Approval	To be applied for, if needed
	Approval of Impacted Soil Reuse	To be applied for, if needed
	Noise permit for amphitheater events	To be applied for, if needed
	Coordinated Development Plan Approval	In process
	Mississippi River Corridor Critical Area (MRCCA) Vegetation Removal Permit	To be applied for, if needed
	MRCCA Land Alteration Permits	To be applied for, if needed
<b>Other</b>		
CP Rail	Flagging Agreement Permit	To be applied for
	Minimum safety Requirements Permit	To be applied for
	Right of Entry Permit	To be applied for
	Funding Agreement with MnDOT Permit	To be applied for
	Crossing Agreement in coordination with MnDOT	To be applied for

**9. LAND USE**

**a. Describe:**

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

The AUAR study area consists of nine existing tax parcels and public and private infrastructure. The 53-acre industrial site is located north of downtown Minneapolis along the west bank of the Mississippi River between the shoreline and Interstate 94 (I-94). The Upper Harbor Terminal has operated since the 1960s as an inter-modal barge shipping terminal and was used for storage and transfer of commodities such as scrap metal, aggregate, fertilizer, coal, and grain. The barge terminal remained in operation until the end of 2014 when barging ceased due to the planned closure of the Upper St. Anthony Falls Lock in spring of 2015, but portions of the site continue to operate as a storage facility via temporary lease agreements. The majority of the study area is disturbed land with a strip of grass and trees around the edge and limited vegetation.

The site is generally bounded by 40<sup>th</sup> Avenue North on the north, the Mississippi River on the east, 33rd Avenue North on the south, and the CP Rail/2nd Street North/I- 94/1<sup>st</sup> Street North on the west. Industrial land uses surround the property to the north, south, and west. There are also pockets of low-density residential homes and low-density commercial uses to the west.

The majority of the site is within the boundary of the Mississippi National River and Recreation Area and a portion of the site is also within the boundary of the Above the Falls Regional Park; however, the site is not currently being used for any recreation or conservation purposes.

On-street bike lanes exist on North 2nd Street /Washington Avenue North and Dowling Avenue North. Dowling Avenue North also provides sidewalks on both sides of the road. There are sidewalks on 33rd Avenue North between North 2nd Street and Washington Avenue North in the study area.

There is no farmland within or adjacent to the study area.

ii. **Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.**

*Minneapolis 2040: Future Land Use and Built Form*

*Minneapolis 2040 – The City’s Comprehensive Plan* is Minneapolis’s comprehensive plan that was adopted in 2019. This plan defines a range of density and land uses for the development of the Upper Harbor Terminal site. Scenario 1 represents the density of the development proposed in the Draft *Upper Harbor Coordinated Development Plan* and is generally within the range as defined in the 2040 Comprehensive Plan. Scenario 2 represents the maximum density allowable under the 2040 Comprehensive Plan. The study area contains three future land uses as summarized in Table 5 and shown in Figure 7.

The 2040 Comprehensive Plan’s future land use regulations are used to inform future development in terms of allowable uses within every parcel in the city, while the built form regulations are used to guide the scale of development within these parcels. These two regulations work in tandem with each other to provide a range of allowable uses and acceptable building scales to regulate future development.

All changes to the use of land within the city must be consistent with the guidelines in the Minneapolis 2040 Future Land Use Map and the Built Form Map.<sup>2</sup> At the Upper Harbor Terminal site, the 2040 land use map identifies Parcels 1A, 1B, 6A, 6B, 7A, and 7B as Corridor Mixed Use, Parcel 2 as Parks and Open Space, and Parcels 3, 4, and 5 as Production Mixed Use (see Figure 7). The uses allowed in Corridor Mixed Use include

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<sup>2</sup> Minneapolis 2040 Future Land Use Map: <https://minneapolis2040.com/topics/land-use-built-form/>

commercial, retail, mixed use, and residential. Parks and Open Space allows amphitheaters, food service, parkways, and equipment rentals. The uses allowed within Production Mixed Use include production and non-production uses, retail, commercial, and residential.

The 2040 Built Form Map identifies Parcels 1A, 1B, 3, 4, 5, 6A, 6B, 7A, and 7B as Corridor 6. The Corridor 6 district is typically applied along high frequency transit routes. Building heights of new and remodeled buildings within this district should be between 2 and 6 stories to take advantage of access to the transit, jobs, and goods and services provided by this district. The 2040 Built Form Map identifies Parcel 2 as Parks. New and remodeled buildings within the Parks district should be designed to support park activities and not exceed 2.5 stories in height.

#### *Minneapolis 2040: Mississippi River Corridor Critical Area*

The majority of the AUAR study area is located within the Mississippi River Corridor Critical Area (MRCCA) (see Figure 8), which is a joint state, regional, and local program that provides coordinated planning and management for the 72-mile stretch of the Mississippi River through the seven-county metropolitan area. The purpose of the MRCCA is to preserve, enhance, and protect the river corridor while providing a tool for coordinated planning and management. The MRCCA shares a boundary with the Mississippi National River and Recreation Area (MNRRA), a unit of the National Park Service. Minnesota Statute 116G.15 establishes Minnesota policy and authority for the MRCCA rules (Minnesota Rules, part 6106.0010 – 6106.0180) requiring the development of local government plans and ordinances. Within the AUAR study area, the boundary of the MRCCA is the same as the City of Minneapolis’s MR Mississippi River Corridor Critical Area Overlay District, which is a zoning overlay district that implements the MRCCA rules within the city.

The City of Minneapolis’s MRCCA Plan is included within the City’s 2040 Comprehensive Plan and all proposed parcels, except for Parcels 7A and 7B, are located within the MRCCA CA-Urban Mixed (UM) 3 District. Scenarios 1 and 2 propose land uses within the MRCCA’s CA-UM3 District that are consistent with the intent of the district, which includes institutional, commercial, production, and residential areas and parks and open space. Development within the CA-UM3 District is intended to allow “future growth and potential transition of intensely developed areas that does not negatively affect public river corridor views and that protects bluffs and floodplains.”<sup>3</sup>

The MRCCA Plan identifies the Upper Harbor Terminal site as an opportunity for redevelopment, with a “goal to transform [Upper Harbor Terminal] from its historic use as a barge shipping terminal to a combination of riverfront park amenities and private

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<sup>3</sup> Source: City of Minneapolis. *Minneapolis 2040: Appendix A - Mississippi River Corridor Critical Area Plan*. [https://minneapolis2040.com/media/1479/pdf\\_minneapolis2040-just-app-a.pdf](https://minneapolis2040.com/media/1479/pdf_minneapolis2040-just-app-a.pdf)



development. Further, the Upper Harbor Terminal project also provides the opportunity to implement many of the goals of the MRCCA Plan.”<sup>3</sup> One of the relevant policies of the MRCCA Plan is to “maximize public access to and enjoyment of the river corridor, public appreciation of the river’s many resources, and protection and enhancement of the river corridor’s natural, scenic, and cultural resources.” The plan states that these policies “reflect recognition of the river’s changing role [from industrial uses] and seek further benefits by improving it as a natural, cultural, and recreational resource.”<sup>3</sup>

#### *Minneapolis 2040: Policies*

Minneapolis 2040 contains a number of policies to support the goals laid out in the comprehensive plan. Several of these policies should be used to inform the redevelopment of the Upper Harbor Terminal site. The most relevant of these policies include:

- Policy 1: Access to Housing – This policy seeks to increase the supply and diversity of the City’s housing choices. There is currently no housing within the study area.
- Policy 18 and Policy 19: Pedestrians and Bicycling – Together, these policies strive to improve the City’s pedestrian and bicycle environment by expanding and enhancing the City’s alternative transportation networks. The existing study area contains very limited bike and pedestrian opportunities (see Section 18).
- Policy 29: Arts and Creative Spaces, Venues, and Districts – This policy seeks to ensure growth and sustainability in the creative sector economy by providing artists, creative workers, and cultural organizations with the resources and support they need to create and thrive.
- Policy 43: Housing Displacement – This policy seeks to minimize the involuntary displacement of people of color and vulnerable populations. The plan identifies the census tract surrounding the Upper Harbor Terminal site as an area experiencing early stages of gentrification.
- Policy 61: Environmental Justice and Green Zones – According to this policy, because low income residents, indigenous people, and people of color are often disproportionately affected by cumulative environmental hazards, the City will strive to achieve environmental justice for its residents through the fair treatment and meaningful involvement of all people. The Upper Harbor Terminal is located within the boundaries of the Northside Green Zone.
- Policy 70: Ecology and Habitat – This policy states that the City’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions.

- Policy 76: New Parks – This policy states that it is important for the City to coordinate with the MPRB to acquire parkland and create parks in underserved areas. There are no parks within or adjacent to the study area.
- Policy 87: Northside – This policy seeks to “reverse institutional harm the City and other governing systems have had on the community in North Minneapolis” through community wealth building.<sup>4</sup> The Upper Harbor Terminal site is located on the Northside.
- Policy 97: Preserving and Enhancing Public Lakes and Waterways – Under this policy, the City seeks to “ensure ongoing preservation and improvement of the natural and built environment near the City’s lakes and waterways.”<sup>4</sup> The study area is located next to the Mississippi River.

#### *Above the Falls Regional Park Master Plan*

In 2020, the Metropolitan Council adopted the *Above the Falls Regional Park Master Plan*<sup>5</sup> which was also approved by the MPRB in December 2019. This plan is an overarching guide for developing the upper Mississippi riverfront into a regional park amenity and enhancing the ecological function of the river corridor and is used to guide MPRB decisions regarding parkland acquisition, park development, and management for the areas along the Mississippi River between the Plymouth Avenue Bridge and the Camden Bridge.<sup>6</sup> This plan calls for creating a continuous regional park system along the Mississippi River in the city and identifies the Upper Harbor Terminal area as a key location to achieve this goal. At the Upper Harbor Terminal site, the plan identifies 19.5 acres of public park that includes linear park amenities such as a parkway, trails, and shoreline restoration. Additionally, the park at the Upper Harbor Terminal site also includes a larger park area at the end of Dowling Avenue that could accommodate additional park features such as public gathering spaces.

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<sup>4</sup> Source: City of Minneapolis: *Minneapolis 2040: Policies*. <https://minneapolis2040.com/policies/>

<sup>5</sup> Source: Minneapolis Park and Recreation Board: *Above the Falls Regional Park Master Plan*: [https://www.minneapolisparkeandrecreation.org/park\\_care\\_improvements/park\\_projects/current\\_projects/above-the-falls-regional-park-master-plan-update/](https://www.minneapolisparkeandrecreation.org/park_care_improvements/park_projects/current_projects/above-the-falls-regional-park-master-plan-update/)

<sup>6</sup> Source: Minneapolis Park and Recreation Board: *Above the Falls Regional Park Master Plan*. [https://www.minneapolisparkeandrecreation.org/wp-content/uploads/2021/03/afrmpm\\_above\\_the\\_falls\\_master\\_plan.pdf](https://www.minneapolisparkeandrecreation.org/wp-content/uploads/2021/03/afrmpm_above_the_falls_master_plan.pdf)

Table 5: Land Use Summary from the Minneapolis 2040 Comprehensive Plan<sup>7</sup>

District Name	Description	Land Uses	Percent Residential	Density Allowed	Parcels Applicable
Corridor Mixed Use	Commercial zoning is appropriate, mixed use multi story development is encouraged, and contiguous expansion of commercial zoning is allowed	Commercial, retail, mixed use, and residential	85%	50-300 dwelling units (DU) per acre	1, 6a, 6b, 7a, 7b
Production Mixed Use	Residential uses are allowed as part of mixed-use buildings that provide production space; adaptive re-use of older industrial property is encouraged	Production and non-production uses, employment uses (includes industrial, retail, commercial), and residential	50%	50-300 DU/acre	3, 4, 5
Parks and Open Space	Applies to land or water areas generally free from development. Primarily used for park and recreation, natural resource conservation, transportation, historic, or scenic purposes.	Park related uses including amphitheaters, food service, parkways, and equipment rental	0%	Not applicable	2

<sup>7</sup> Source: City of Minneapolis. *Minneapolis 2040: Land Use and Built Form*. <https://minneapolis2040.com/topics/land-use-built-form/>

Figure 7: City of Minneapolis 2040 Future Land Use Map





Figure 8: MRCCA Boundary



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

*AUAR Guidance: Water-related land use management districts should be delineated on appropriate maps, and the land use restrictions applicable in those districts should be described. If any variances or deviations from these restrictions within the AUAR area are envisioned, this should be discussed.*

**Zoning**

The AUAR study area is currently zoned as I2 - Medium Industrial and I3 - General Industrial (see Figure 9). The permitted uses allowed in these existing primary zoning districts include general industrial and manufacturing uses such as processing of raw materials, production of materials, metal/glass working, etc.

**Built Form Overlay Districts**

In January 2021, the Built Form Overlay Districts were added to the City's zoning code to implement the 2040 Comprehensive Plan. This zoning policy was created to ensure the City's zoning code conformed with the changes described in the comprehensive plan. The Built Form Overlay Districts guide the scale of development in a manner that aligns with the planned development patterns of each district by regulating features such as minimum and maximum building heights, minimum and maximum floor area, yards, lot coverage, impervious surfaces, and lot sizes. All new and remodeled buildings must be consistent with the Built Form Overlay Districts.

Under the Built Form Overlay Districts, maximum building heights in non-residential districts may be increased if the development meets certain premiums and findings. According to the regulations, "these premiums are established to promote development of exceptional quality by allowing the maximum height and floor area ratio of structures on a zoning lot to be increased where it is determined that the development on such zoning lot includes features that further advance policies of the City's comprehensive plan." Increases in building height are also required to obtain a conditional use permit where they exceed the MRCCA and Shoreland Overlay District requirements.

**Mississippi River Corridor Critical Area Overlay District**

Minnesota Statute 116G.15 establishes Minnesota policy and authority for the MRCCA rules (Minnesota Rules, part 6106.0010 – 6106.0180) requiring the development of local government plans and ordinances. In January 2021, the updated MRCCA Overlay District was added to the City's zoning code to establish these rules and implement the MRCCA section of the Minneapolis 2040 comprehensive plan. Within the AUAR study area, the boundary of the MRCCA Overlay District is the same as the MRCCA. This overlay district is divided into various sub-districts that regulate land disturbance, vegetation removal, development scale, and location within the MRCCA.

Structures within the MRCCA's CA-UM3 District are regulated at 65 feet in height (see Table 8). In addition to the heights regulated by the MRCCA Overlay District, the administrative height increase standards in the Built Form Overlay Districts also apply. The MRCCA ordinance states "where an increase in maximum height exceeds the maximum height requirements of the MRCCA Overlay District, but not the maximum height requirements of the Built Form Overlay District, the height increase is subject to a conditional use permit in the CA-UM District."<sup>8</sup>

Structures and impervious surfaces must not be located in the Shore Impact Zone and must meet setback requirement from the ordinary high water level of the Mississippi River, which is 50 feet in the CA-UM District. There are exemptions for shoreline facilities that adjoin public waters, public utility infrastructure, historic properties, and access infrastructure for shoreline facilities are from Shore Impact Zone setback requirements. This includes public trails, public water access points, and public recreational facilities. Public roads and public parking lots may also be placed within the Shore Impact Zone if no other alternative exists.

Structures and impervious surface are also prohibited in the Bluff Impact Zone, which includes bluffs and land within 20 feet of bluffs. Additionally, structures and facilities are required to be set back 40 feet from the top of the bluff/bluff line. Figure 11 shows bluffs and Bluff Impact Zones within the AUAR study area parcels; however, due to the methodology of the data collected, these areas are stockpiles of industrial material and were classified incorrectly.

### Scenario 1 and Scenario 2

The existing riverbank slope is steeply graded and dominated by invasive species. The herbaceous layer is composed almost entirely of non-native species such as smooth brome, common mugwort and a variety of annual weeds. The slope appears to have been filled with sandy material and includes visible debris including concrete pieces and rip rap at the end of the slope. Within the Shoreland and Impact Zones shown in Figure 11, the project would replace four acres of existing low-quality vegetation with a regraded slope and higher quality riparian habitat. The more gently graded river shoreline would provide opportunities for an interspersed of rock shoreline, driftwood arrangements, and native riparian vegetation to protect the shoreline from erosion and enhance habitat diversity. Grading, debris removal, and restoration could occur below the ordinary high water level, depending on the slopes achievable between the pedestrian trail and the shoreline.

The development scenarios do not include development within the MRCCA Shore Impact Zone, Bluff Impact Zone, or within the setback requirements (see Table 8 for

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<sup>8</sup> Source: City of Minneapolis Zoning Code.

summary of regulations). Public recreational facilities are allowed within the Shore and Bluff Impact Zones if no alternatives exist.<sup>9</sup>

*Shoreland and Floodplain Overlay Districts*

The City's SH Shoreland Overlay District covers the portion of the Upper Harbor Terminal site located within 300 feet from the shoreline of the Mississippi River (see Figure 11). This overlay zoning district was established to preserve and enhance the environmental qualities of surface waters and the natural and economic values of shoreland areas within the city, to provide for the efficient and beneficial utilization of those waters and shoreland areas, to comply with the requirements of state law regarding the management of shoreland areas, and to protect the public health, safety, and welfare.. This overlay zoning district regulates building height, removal of vegetation, and stormwater management within the City's shoreland areas. This district limits height to 2.5 stories or 35 feet for buildings within 300 feet of the shoreline of a river or stream; however, height increases may be allowed through a variance or conditional use permit (see Table 9).

The City of Minneapolis established the FP Floodplain Overlay District to regulate development in flood hazard areas of the city. The purpose of this overlay zoning district is to mitigate potential losses during flooding events, comply with the National Flood Insurance Program, and preserve natural watercourse features. Portions of Parcel 2 adjacent to the river fall within this overlay zoning district (see Figure 11 and Table 10).

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<sup>9</sup> Per Minnesota Rules, part 6106.0180



Table 6: Existing Zoning<sup>10</sup>

District	Description	Permitted Uses	Parcels Applicable
<b>I2 Medium Industrial District</b>	The industrial districts are established to provide locations for industrial land uses engaged in production, processing, assembly, manufacturing, packaging, wholesaling, warehousing, or distribution of goods and materials. Regulations for the industrial districts are established to promote industrial development and to maintain and improve compatibility with surrounding areas.	Medium industrial uses include: <ul style="list-style-type: none"> <li>• Metal working, glass, and other uses which have the potential to produce greater amounts of noise, odor, vibration, glare, or other objectionable influences</li> <li>• Processing of raw materials or production of primary materials</li> </ul>	3, 4, 5, 6a, 6b, 7a, 7b
<b>I3 General Industrial District</b>	In addition to industrial uses, limited commercial uses, parking facilities, institutional and public uses, and public services and utilities are allowed.	General industrial uses include: <ul style="list-style-type: none"> <li>• High impact and outdoor uses that are likely to have a substantial adverse effect on the environment or on surrounding properties</li> </ul> Processing of raw materials and production of primary materials	1a, 1b, 2, 3

<sup>10</sup> Source: City of Minneapolis Zoning Code.

Table 7: Built Form Overlay Zoning District<sup>11</sup>

Zoning District Name	Floor-Area Ratio Requirements (Min. – Max.)	Height Requirements	Lot Dimension Requirements (Min. – Max.)	Maximum Lot Coverage	Maximum Impervious Surface Coverage	Parcels Applicable
<b>Corridor 6</b>	Residence or Office Residence Districts: 1.0 - 3.0 Commercial, Industrial, or Downtown Districts: 1.0 - 3.4	New buildings must be between 2 stories (20 feet) and 6 stories (84 feet) <i>With Permit:</i> 10 stories (140 feet) is the maximum height	Residential Uses: 5,000 square feet - 43,560 square feet Commercial Uses and Parking Facilities: no minimum - 43,560 square feet	Residence or Office Residence Districts: 70% Commercial, Industrial, or Downtown Districts: 100%	Residence or Office Residence Districts: 85% Commercial, Industrial, or Downtown Districts: 100%	1a, 1b, 3, 4, 5, 6a, 6b, 7a, 7b
<b>Parks</b>	N/A	The maximum building height for new buildings is 2.5 stories (35 feet) <i>With Permit:</i> 6 stories (84 feet) is the maximum height	5,000 square feet – no maximum Commercial Uses and Parking Facilities: no minimum – no maximum	45%	60%	2

<sup>11</sup> Source: City of Minneapolis. <http://www2.minneapolismn.gov/cped/planning/WCMSP-222487>

Table 8: Mississippi River Corridor Critical Area Overlay District<sup>12</sup>

District	Description	Setback	Maximum Height	Parcels Applicable
<b>CA-Urban Mixed</b>	Includes large areas of highly urbanized mixed use that are a part of the urban fabric of the river corridor, including institutional, commercial, industrial, and residential areas and parks and open space. The CA-UM district must be managed in a manner that allows for future growth and potential transition of intensely developed areas that does not negatively affect public river corridor views and that protects bluffs and floodplains. Restoring and enhancing bluff and shoreline habitat, minimizing erosion and flow of untreated storm water into the river, and providing public access to and public views of the river are priorities in the district.	50 feet from Mississippi River	65 feet <sup>13</sup>	1a, 1b, 2, 3, 4, 5, 6a, 6b,
<b>Bluff Impact Zone (BIZ)</b>	The BIZ includes bluffs and land within 20 feet of bluffs. Bluffs are features that rise at least 25 feet and have a slope of 18% or greater. Structures and impervious surfaces must not be located in the BIZ and must meet the setback requirement for the bluff lines.	40 feet from top of bluff	N/A	1b, 2, 3, 4, 5 <sup>14</sup>
<b>Shore Impact Zone (SIZ)</b>	The SIZ is an environmentally sensitive area that, when naturally vegetated, provides wildlife habitat and safe movement corridor to a wide variety of animal species. Structures and impervious surfaces must not be located in the SIZ, except as otherwise allowed by the MRCCA Rules and the Minneapolis Zoning Ordinance.	25 feet from the ordinary high water level of the Mississippi River	N/A	2

<sup>12</sup> Source: Minneapolis, Minn., Municipal Code § 551-ARTICLE VIII

<sup>13</sup> Greater height allowed with conditional use permit

<sup>14</sup> NOTE: Several bluffs and Bluff Impact Zones indicated by the DNR spatial data at this site are stockpiles of industrial material present during the DNR’s LiDAR survey that were incorrectly identified as natural river bluffs. Due to the methodology of the data collection, the DNR data is not edited to remove man-made features and an on-site survey would be necessary to identify verifiable bluff structures.

Table 9: Shoreland Overlay District<sup>15</sup>

District	Description	Setback	Building Height	Parcels Applicable
<b>SH Shoreland Overlay District</b>	The SH overlay district is intended to protect surface waters and shoreland areas in the city.	Development shall be prohibited on steep slopes or within 40 feet of the top of a steep slope or bluff, and shall not be located within 50 feet of the ordinary high water mark of any protected water.	For all structures within 300 feet of the Mississippi River, the maximum building height is 2.5 stories or 35 feet, whichever is less	1a, 1b, 2, 3, 4, 5

<sup>15</sup> Source: Minneapolis, Minn., Municipal Code § 551-ARTICLE VI.

Table 10: Floodplain Overlay District<sup>15</sup>

District	Description	Land Use	Parcels Applicable
<b>Floodway</b>	The Floodway District includes those areas within Zone AE that have a floodway delineated or Zone AO as shown on the flood insurance rate map adopted in section 551.560(c) of the Minneapolis Code of Ordinances.	Standards for permitted uses in the Floodway District: 1. The use must have low flood damage potential. 2. The use must not obstruct flood flows or cause any increase in flood elevations and must not involve structures, obstructions, or storage of materials or equipment. 3. Any facility that will be used by employees or the general public must be designed with a flood warning system that provides adequate time for evacuation if the area is inundated to a depth and velocity such that the depth (in feet) multiplied by the velocity (in feet per second) would exceed a product of four (4) upon occurrence of the regional 1 percent chance flood.	2
<b>Flood Fringe</b>	The portion of the special flood hazard area (1 percent annual chance flood) located outside of the floodway.	Permitted uses are those uses of land or structures allowed in the underlying zoning district(s) that comply with the standards in section 551.610(b) of the Minneapolis Code of Ordinances.  All structures, including accessory structures, must be elevated on fill so that the lowest floor, as defined, is at or above the regulatory flood protection elevation. The finished fill elevation for structures must be no lower than 1 foot below the regulatory flood protection elevation and the fill must extend at the same elevation at least 15 feet beyond the outside limits of the structure.	2

Figure 9: Minneapolis Primary Zoning

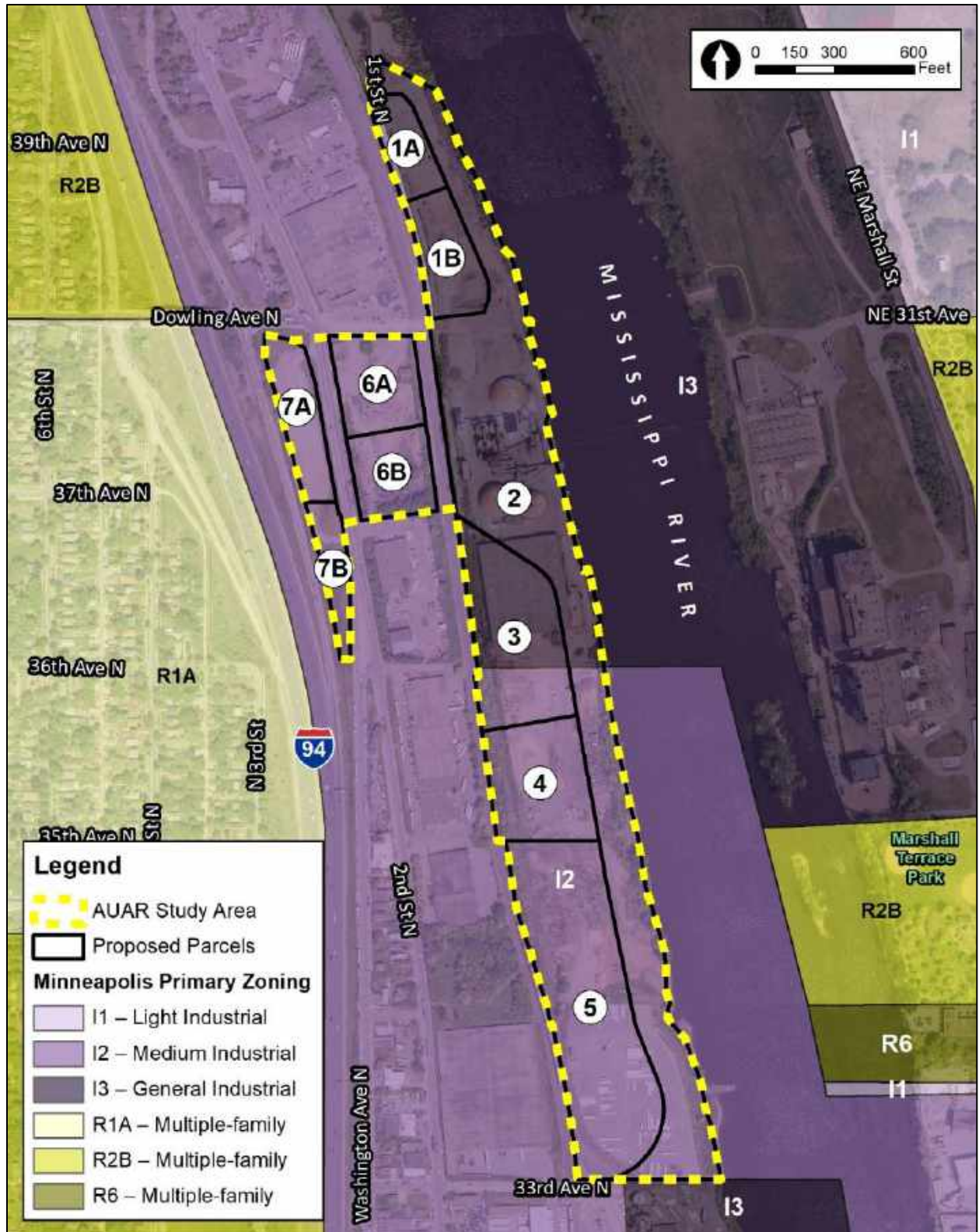


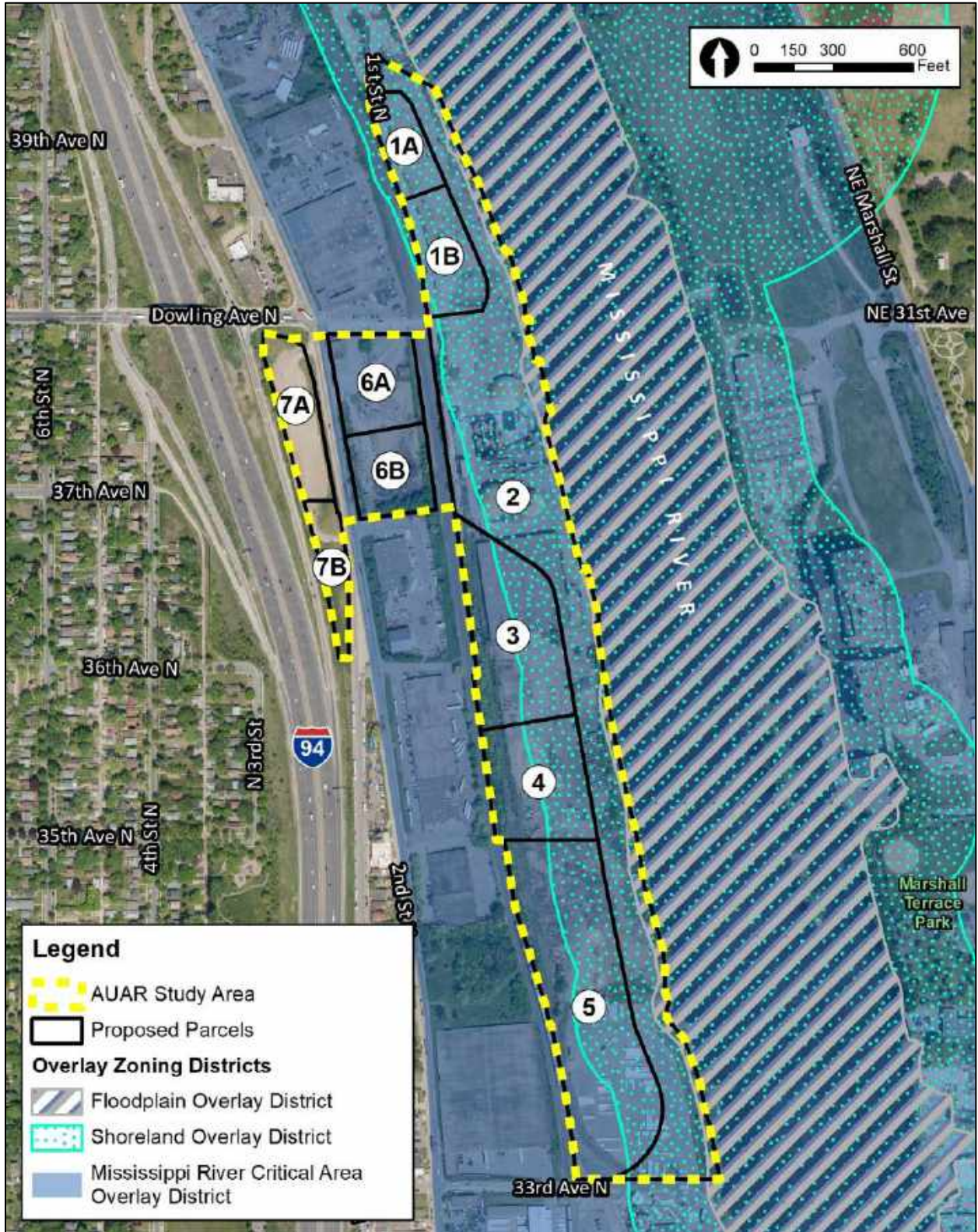


Figure 10: City of Minneapolis Built Form Overlay Zoning Map





Figure 11: Water Resources Overlay Zoning





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

*AUAR Guidance: The extent of conversion of existing farmlands anticipated in the AUAR should be described. If any farmland will be preserved by special protection programs, this should be discussed.*

*If development of the AUAR will interfere or change the use of any existing designated parks, recreation areas, or trails, this should be described in the AUAR. The RGU may also want to discuss under this item any proposed parks, recreation areas, or trails to be developed in conjunction with development of the AUAR area.*

*The AUAR must include a statement of certification from the RGU that its comprehensive plan complies with the requirements set out at Minnesota Rules, part 4410.3610, subpart 1. The AUAR document should discuss the proposed AUAR area development in the context of the comprehensive plan. If this has not been done as part of the responses to Items 6, 9, 11, 18, and others, it must be addressed here; a brief synopsis should be presented here if the material has been presented in detail under other items. Necessary amendments to comprehensive plan elements to allow for any of the development scenarios should be noted. If there are any management plans of any other local, state, or federal agencies applicable to the AUAR area, the document must discuss the compatibility of the plan with the various development scenarios studied, with emphasis on any incompatible elements.*

*Existing Primary Zoning*

**No Build Scenario**

The No Build Scenario is consistent with the existing industrial zoning.

**Scenario 1 and Scenario 2**

Both Scenario 1 and Scenario 2 propose land uses that are consistent with the future land uses for the site; however, the uses are inconsistent with the existing I2 and I3 industrial zoning. Both scenarios would require a zoning change for the parcels within the study area. The City of Minneapolis is planning to rezone the entire city by the end of 2022 to comply with the 2040 Comprehensive Plan.

The proposed outdoor amphitheater, as part of the community performing arts center on Parcel 3, is not a recognized use in the Minneapolis Zoning Code. A zoning code text amendment would be required to allow this use.

*Built Form Overlay Zoning Districts*

**No Build Scenario**

The No Build Scenario is consistent with the Built Form Overlay Districts. The current site conditions could remain indefinitely as a nonconforming use, unless any building expansions are

proposed. However, if any building expansions are proposed, they would be required to comply with the Built Form Overlay District requirements.

### *Scenario 1 and Scenario 2*

Under Scenario 1 and Scenario 2, the built form regulations align with the proposed parcels, identifying the majority of the site (except Parcel 2) as BFC6 Corridor 6 Built Form Overlay District. According to the Built Form Overlay Districts ordinance, the building heights of new and remodeled buildings within this district should be between 2 stories (20 feet) and 6 stories (84 feet). An inconsistency exists with Parcel 7A, where the proposed building height is 180 feet. According to the regulations in the Built Form Overlay Districts, the maximum building height for the BFC6 Corridor 6 Built Form Overlay District may only be increased up to 10 stories or 140 feet, provided all applicable sections of Built Form Overlay Districts ordinance section 552.530 are met. This would require a comprehensive plan amendment to allow additional building height.

### *Mississippi River Corridor Critical Area Overlay District*

#### *No Build Scenario*

The existing industrial structures could remain; however, if any building expansions are proposed then they would be required to comply with the MRCCA land use and building requirements.

### *Scenario 1 and Scenario 2*

The City of Minneapolis's MRCCA Overlay District seeks to minimize impacts to primary conservation areas by establishing design standards that are consistent with those in the MRCCA section of the Minneapolis 2040 comprehensive plan.<sup>16, 17</sup> A relevant policy from this plan states, "In general, structures within the Critical Area should be shorter when located closer to the river with height increasing as distance from the river increases. However, taller buildings can be considered closer to the river when the existing built character is similar or where measures are taken to provide significant landscaping and buffering of the structure. In addition, buildings should utilize tapered profiles as building height increases to allow views of and from the river and to avoid overly wide buildings that can create a wall along the riverfront significantly blocking views for other structures, development sites, and neighborhoods."<sup>18</sup> Both Scenario 1 and Scenario 2 are consistent with this policy, designating a large park along the riverfront in Parcel 2, medium building heights in Parcels 1A, 1B, 3, 4, 5 and 6B, and taller building heights in Parcels 6A and 7A.

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<sup>16</sup> Source: Minneapolis, Minn., Municipal Code § 551-1800.

<sup>17</sup> For locations of Primary Conservation Areas on site, see Figure 5-1 of the *Minneapolis 2040: Appendix A - Mississippi River Corridor Critical Area Plan*. [https://minneapolis2040.com/media/1479/pdf\\_minneapolis2040-just-app-a.pdf](https://minneapolis2040.com/media/1479/pdf_minneapolis2040-just-app-a.pdf)

<sup>18</sup> Source: City of Minneapolis. *Minneapolis 2040: Appendix A - Mississippi River Corridor Critical Area Plan*. [https://minneapolis2040.com/media/1479/pdf\\_minneapolis2040-just-app-a.pdf](https://minneapolis2040.com/media/1479/pdf_minneapolis2040-just-app-a.pdf)

The land uses and building scales proposed in the Draft Coordinated Development Plan (Scenario 1) are generally consistent with the allowable heights and uses in this area stipulated by the MRCCA Overlay District. An inconsistency between the comprehensive plan and Scenario 1 exists in Parcel 6A where the Draft Coordinated Development Plan proposes a building height of 75 feet. The MRCCA CA-UM3 district stipulates a building height maximum of 65 feet.

The land uses proposed by Scenario 2 are generally consistent with those proposed by the MRCCA Overlay District. A built form inconsistency exists in the 2040 Comprehensive Plan on parcels within the Corridor 6 Built Form District, which overlap with the MRCCA's CA-UM3 district. Corridor 6 allows for building heights up to 6 stories or 84 feet, while the overlay district only allows for up to 65 feet in height. According to the City's MRCCA rules, an increase in building height may be allowed through a conditional use permit to comply with the MRCCA regulations, provided any impacts to any resources identified in the 2040 MRCCA Plan are mitigated proportionally.

#### *MRCCA Bluff and Shore Impact Zones, Shoreland and Floodplain Overlay Districts* **No Build Scenario**

The No Build Scenario is compatible with the MRCCA Bluff and Shore Impact Zones and the Shoreland and Floodplain Overlay Districts.

#### **Scenario 1 and Scenario 2**

Both scenarios are generally compatible with the MRCCA Bluff and Shore Impact Zones, as well as the Shoreland and Floodplain Overlay Districts. The MRCCA Plan requires that structures and impervious surfaces not be in the Shore Impact or Bluff Impact Zones and must meet setback requirements from the ordinary high water level of the Mississippi River. The portions of the MRCCA Shore and Bluff Impact Zones within the study area fall inside the planned park in both scenarios. A small building is proposed within the park but would be located outside of the Bluff and Shore Impact Zones. Public recreational facilities planned within the park are allowed within these overlays if no alternatives exist.

One inconsistency in both scenarios is that all buildings proposed on parcels within the Shoreland Overlay District are above the allowed 35 feet maximum (includes Parcels 1A, 1B, 3, 4, and 5).

The MPRB's plans for the park include shoreline restoration, which is within the Shoreland and Floodplain Overlay Districts as well as the MRCCA Bluff and Shore Impact Zones. All modifications within these areas would need to comply with the provisions of these overlays and the MRCCA regulations.

#### *Minneapolis 2040: Future Land Use* **No Build Scenario**

The No Build Scenario is inconsistent with the 2040 Future Land Use. All of the parcels are currently used for industrial land uses; however, Parcels 1A, 1B, 6A, 6B, 7A, and 7B are

designated as Corridor Mixed Use, Parcel 2 is designated as Parks and Open Space, and Parcels 3, 4, and 5 are designated as Production Mixed Use. The uses allowed in Corridor Mixed Use include commercial, retail, mixed use, and residential. Parks and Open Space allows amphitheaters, food service, parkways, and equipment rentals. The uses allowed within Production Mixed Use include production and non-production uses, retail, commercial, and residential.

### *Scenario 1 and Scenario 2*

Both scenario's proposed land uses are generally compatible with the adopted Minneapolis 2040 Comprehensive Plan, with the exceptions listed below. The City of Minneapolis has certified that the Comprehensive Plan complies with the requirements set forth in Minnesota Rules, part 4410.3610, subpart 1.

The proposed residential and commercial uses align with Corridor Mixed Use designated parcels, which allows for both retail and/or residential uses (Parcels 1A, 1B, 6A, 6B, 7A, and 7B). Areas designated by the comprehensive plan as Parks and Open Space align with the proposed park (Parcel 2). The proposed production and processing uses as well as the community performing arts center on Parcels 3, 4, and 5 align with the parcels identified for Production Mixed Use, which allows employment uses (including production and non-production uses, retail, commercial, and residential).

### *Minneapolis 2040: Policies*

#### *No Build Scenario*

The No Build Scenario is inconsistent with future City policies that are guiding this site. The No Build Scenario does not provide housing, pedestrian/bicycle facilities, parks, or improved access to the Mississippi River.

### *Scenario 1 and Scenario 2*

Both Scenario 1 and Scenario 2 are consistent with several policies of *Minneapolis 2040* that should inform the redevelopment of the Upper Harbor Terminal Site. The most relevant of these policies include:

- Policy 1: Access to Housing – There are currently no residences within the study area. Both Scenario 1 and Scenario 2 would increase the supply of housing stock in the city and increase the diversity of the housing stock by providing a mix of housing types in a new location.
- Policy 18 and Policy 19: Pedestrians and Bicycling – Currently, the study area contains limited bike and pedestrian infrastructure (see Section 18). Bicycle and pedestrian infrastructure proposed in Scenarios 1 and 2 within and adjacent to the site includes sidewalks, off-street trails, and separated bicycle lanes serving to better integrate the Upper Harbor Terminal site into the existing bike and pedestrian network.



- Policy 29: Arts and Creative Spaces, Venues, and Districts – This policy seeks to ensure growth and sustainability in the creative sector economy by providing artists, creative workers, and cultural organizations with the resources and support they need to create and thrive.
- Policy 43: Housing Displacement – According to *Minneapolis 2040*, as of 2019, the area surrounding the Upper Harbor Terminal site is experiencing early stages of gentrification. Both Scenario 1 and 2 involve several strategies aimed at anticipating and preventing involuntary displacement (see Section 20).
- Policy 61: Environmental Justice and Green Zones – The study area is located within the boundaries of the Northside Green Zone. Scenario 1 and 2 seek to coordinate environmental implementation strategies with Northside Green Zone goals (see Section 20).
- Policy 70: Ecology and Habitat – This policy states that the City’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions.
- Policy 76: New Parks – There are no parks within or adjacent to the study area. Both scenarios involve the creation of a new 19.5-acre park.
- Policy 87: Northside – Scenario 1 and 2 involve several community wealth building strategies.
- Policy 97: Preserving and Enhancing Public Lakes and Waterways – The Upper Harbor Terminal site borders the Mississippi River. Currently it is an industrial site with limited vegetation; however, the MPRB’s park plans include shoreline restoration on the site to improve ecological functions.

#### *Above the Falls Regional Park Master Plan*

##### **No Build Scenario**

The No Build Scenario is inconsistent with the *Above the Falls Regional Park Master Plan* as it does not include a public park or bicycle and pedestrian facilities.

##### **Scenario 1 and Scenario 2**

The master plan calls for creating a continuous regional park system along the Mississippi River in the city and identifies the Upper Harbor Terminal area as a key location to achieve this goal. The proposed parks and trails included in Scenario 1 and Scenario 2 are compatible with adjacent land uses and make connections into the city and regional trail network. For both scenarios, 19.5 acres of the site is planned to be a public park that will be owned and operated by the MPRB. It will function as a linear connection to trails and parkway that will eventually extend further up and down the river, and it will include public gathering and amenity areas, restored river corridor vegetation, bicycle and pedestrian circulation, stormwater treatment areas, and a parkway.

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

*Existing Primary Zoning*

Any proposed development for Scenario 1 or Scenario 2 would require a zoning change to the parcels within the study area to allow for residential, commercial, retail, and park uses. The City is planning to complete a future rezoning study to implement land use regulations that will complement the Comprehensive Plan and built form regulations.

The proposed amphitheater (as part of the community performing arts center) is currently not an allowable use under the existing primary zoning and would require a zoning code text amendment to be permitted.

*Built Form Overlay District*

The existing industrial buildings under the No Build Scenario would remain a legal nonconforming use until any expansions are proposed.

Under Scenario 1 and Scenario 2, a 15-story high-rise residential building is proposed in Parcel 7A within the Corridor 6 overlay district, which would exceed the allowable height of 6 stories. According to the Built Form Overlay District ordinance, requests to exceed 6 stories in height in a Corridor 6 overlay district may be approved if proposed buildings meet certain premiums. Height increase premiums allow developments to increase the allowed height for their built form districts in exchange for providing features that further achieve comprehensive plan goals. The maximum allowed height with premiums in a Corridor 6 overlay district is 10 stories.

*MRCCA Shore and Bluff Impact Zones, Shoreland and Floodplain Overlay Districts*

A variance would be required for both Scenario 1 and Scenario 2 to increase the building height over the maximum of 35 feet on all parcels within the Shoreland Overlay District (Parcels 1A, 1B, 3, 4, and 5).

*Minneapolis 2040 Future Land Use*

All proposed land uses are allowed under the 2040 future land use plan.

*Minneapolis 2040: MRCCA*

The land uses and building heights proposed in Scenario 1 and Scenario 2 are generally consistent with those proposed by the MRCCA Plan; however, the Built Form Corridor 6 district overlaps with the MRCCA's CA-UM3 district. Corridor 6 allows building height up to 6 stories or 84 feet while the MRCCA only allows for up to 65 feet in height. In these instances, the MRCCA height restrictions would supersede the built form, but a conditional use permit to increase height in the MRCCA is allowed.

An incompatibility exists for Parcel 6A, where Scenario 1 and Scenario 2 propose a building height of 75 feet, which is higher than what the MRCCA Plan allows (maximum of 65 feet). The Draft Coordinated Development Plan (Scenario 1) proposes mitigating this by placing this building as the second layer of development from the river behind shorter buildings to avoid a

looming effect on the river. A conditional use permit would be required to increase the building height. Minnesota Rules, part 6106.0120(D) provides criteria for allowing the City to grant a conditional use permit for an increase in height in the CA-UM district, including:

1. An assessment of the visual impact of the proposed building on public river corridor views, including views from other communities.
2. The identification and application of techniques to minimize the perceived bulk of the proposed building, such as:
  - Placing the long axis of the building perpendicular to the river;
  - Stepping back of portions of the façade;
  - Lowering the roof pitch or use of a flat roof;
  - Using building materials or mitigation techniques that will blend in with the natural surroundings such as green roofs, green walls, or other green building materials;
  - Narrowing the profile of upper floors of the building; or
  - Increasing the setbacks of the building from the Mississippi River or blufflines;
  - Identification of techniques for preservation of those view corridors identified in the MRCCA Plan; and
  - Opportunities for creation or enhancement of public river corridor views; and
  - Compliance with Minnesota B3 Guidelines, version 3.2, Site and Water Guidelines: S.5 Animal Habitat Support.

*Summary*

A summary of the proposed building heights by parcel is shown in Table 11. The building heights are assumed to be same in both Scenario 1 and Scenario 2. Shaded boxes highlight potential inconsistencies between proposed building heights and the building heights allowed by the zoning regulations.

**Table 11: Scenario 1 and Scenario 2 Building Height Summary by Parcel and Zoning**

Parcel	Use Description	Proposed Height	Shoreland Overlay District	MRCCA	Built Form Overlay Zoning District
1A	Senior housing	65 feet	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)

Parcel	Use Description	Proposed Height	Shoreland Overlay District	MRCCA	Built Form Overlay Zoning District
1B	Mixed-income, affordable housing for families with ground floor commercial space	65 feet	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
2	Park	1 story	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFA</u> : 0 stories - 2.5 stories (35 feet)
3	Community performing arts center	65 feet	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
4	Urban food production and processing	48 feet	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
5	Manufacturing, production, and processing	24 feet	2.5 stories or 35 feet	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
6A	Mixed-income, affordable housing with ground floor commercial space	75 feet	N/A	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
6B	Health and wellness hub	65 feet	N/A	CA-UM3: max height 65 feet	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
7A	Future housing with district parking ramp or surface parking and ground floor commercial space	Parking ramp: 55 feet Residence: 180 feet	N/A	Not in MRCCA	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)
7B	Future flexibility	55 feet	N/A	Not in MRCCA	<u>BFC6</u> : 2 stories (20 feet) - 6 stories (84 feet)



When specific building and park plans are finalized with more design details (i.e., floor area ratio, setbacks, circulation, land cover, etc.), the proposed development and infrastructure plans would be reviewed for compatibility with the City of Minneapolis’s primary zoning and Built Form Overlay Districts, and provisions for the MRCCA Overlay, Shoreland Overlay, and Floodplain Overlay Districts as part of the City’s land use and zoning review.

## 10. GEOLOGY, SOILS, AND TOPOGRAPHY/LANDFORMS

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

*AUAR Guidance: A map should be included to show any groundwater hazards identified.*

The AUAR study area is underlain by alluvial deposits, glacial till, glacial outwash, shale, and sandstone. The upper layer of sediment within the AUAR study area is fill material as a result of previous construction activities within the area. The fill materials range in depth from 4 to 7 feet below ground surface (bgs) and consist of poorly graded sand with silt (SP-SM) and silty sand (SM) with varying amounts of organics.

Bedrock is encountered at varying depths across the AUAR study area, ranging in depth from approximately less than 50 feet bgs to 150 feet bgs. Bedrock is comprised of limestone, sandstone, and shale. In descending order, the upper four formations are the Decorah Shale, the Platteville Limestone, the Glenwood Shale, and the St. Peter Sandstone.

Groundwater is present at approximately 10 to 35 feet below the surface.

There are no known groundwater hazards (sinkholes, unconfined/shallow aquifers, or karst conditions) located within the AUAR study area.<sup>19</sup>

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

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<sup>19</sup> The following sources were consulted for this section: developer geotechnical report, Hennepin County Geologic Atlas (geologic atlas), Minnesota Well Index, and the Hennepin County Soil Survey.

*AUAR Guidance: The number of acres to be graded and number of cubic yards of soil to be moved need not be given; instead, a general discussion of the likely earthmoving needs for development of the area should be given, with an emphasis on unusual or problem areas. In discussing mitigation measures, both the standard requirements of the local ordinances and any special measures that would be added for AUAR purposes should be included. A standard soils map for the area should be included.*

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the area is comprised of four different soil types. The erosion hazard rating included in Table 12 indicates the hazard of soil loss from off-road areas after disturbance activities that expose the soil surface. Within the project site, none of the soils are rated, meaning that erosion is unlikely under ordinary climatic conditions. The soils information is included in Table 12 and Figure 12.

**Table 12: Soil Types**

Soil Type	Map Unit Symbol	Acres within Study Area	Percent of Site	Erosion Hazard
Urban land-Hubbard complex, Mississippi River Valley, 0 to 8 percent slopes	D64B	5.2	9.9%	Not rated
Urban land-Moon complex, 2 to 8 percent slopes	L53B	0.1	0.3%	Not rated
Urban land-Udipsamments (cut and fill land) complex, 0 to 2 percent slopes	U4A	1.3	2.5%	Not rated
Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes, rarely flooded	U5A	46.0	87.4%	Not rated
<b>Total</b>		<b>52.7</b>	<b>100%</b>	

Geotechnical borings completed within the AUAR study area found that the upper layer of soil consists of fill material generally comprised of graded sand with silt, sandy soils, and clay layers.

Much of the riverbank is steeper than a one to three (1V:3H) slope with areas of riprap and mixed vegetation near the waters edge of the Mississippi River. The overall site slopes generally from west to east with the highest elevations along the western edge of the study area. The proposed grades vary from 817 feet to 823 feet along the CP Rail corridor on the west to an elevation of about 820 feet along the parkway on the east. The proposed slope to the river’s normal water level will not be steeper than 1V:3H and will generally be 1V:3.5H. In some cases where there’s not enough room east of the parkway, grading will not extend all the way to the normal water level, which could leave the existing steeper slopes closer to the shoreline. The grading of Parcels 6 and 7 will be driven by adjacent street grades of Washington Avenue North and Dowling Avenue North.

Grading activities are anticipated to begin in late 2022 or early 2023. Where required, slope stabilization will be provided by means of vegetation establishment, wildlife-friendly erosion control blankets, or other standard methods of erosion and sediment control to prevent erosion

along the river and minimize sedimentation within the river. During construction, sediment control best management practices such as silt fence, biologs, and silt curtains will be used where appropriate. The proposed development within the AUAR study area will require compliance with the City’s current erosion and sediment control standards, as well as the Shoreland Overlay, Floodplain Overlay, and MRCCA regulations.

A National Pollutant Discharge Elimination System (NPDES) and Stormwater Pollution Prevention Program Construction Stormwater Permit (SWPPP) will be obtained prior to any earthwork or grading activities within the AUAR study area.

Figure 12: Soil Types





**11. WATER RESOURCES**

*AUAR Guidance: The information called for on the EAW form should be supplied for any of the infrastructure associated with the AUAR development scenarios, and for any development expected to physically impact any water resources. Where it is uncertain whether water resources will be impacted depending on the exact design of future development, the AUAR should cover the possible impacts through a “worst case scenario” or else prevent impacts through the provisions of the mitigation plan.*

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

The AUAR study area is a highly disturbed area with no known wetlands. One wetland was identified on the National Wetlands Inventory and the Hennepin County Wetland Inventory within the AUAR study area; however, based on a review of current aerial photography, this area is now a parking lot (impervious surface).

No DNR Public Waters or other waterways are within the AUAR study area. The Mississippi River is adjacent to the study area.

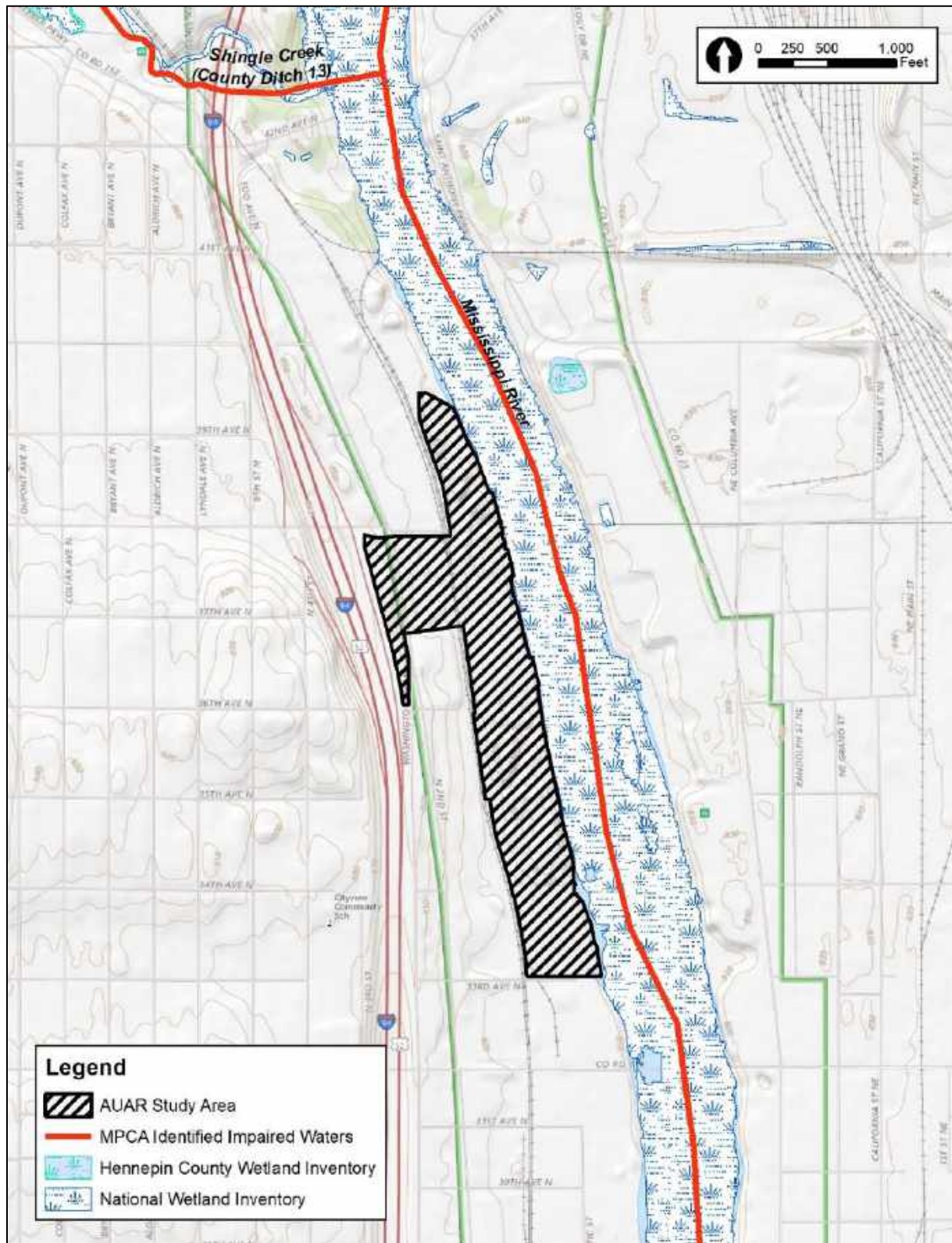
Two impaired waters on the Minnesota Pollution Control Agency’s (MPCA) Part 303d Impaired Waters List are within one mile of the study area (see Table 13).

Drainage from the project area flows east toward the Mississippi River.

**Table 13: Impaired Waters**

Impaired Waters	ID Number	Impairments
Mississippi River	07010206-805	Mercury, PCB, fecal coliform, nutrients
Shingle Creek	07010206-506	Aquatic macroinvertebrate bioassessments, chloride, dissolved oxygen, escherichia coli

Figure 13: Water Resources



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

The depth to groundwater within the AUAR study area is 10 to 35 feet below the surface beneath the St. Peter Sandstone formation (Prairie Du Chien-Jordan aquifer).<sup>20</sup>

Based on the Minnesota Department of Health’s Minnesota Well Index, there are no wells located within the AUAR study area. If unknown wells are encountered on site, they will be sealed and abandoned following Minnesota Department of Health and MPCA protocols.

The AUAR study area is not located within a wellhead protection area or drinking water supply management area.

- b. **Describe effects from project activities on water resources and measures to minimize or mitigate the effects below.**

- i. **Wastewater – For each of the following, describe the sources, quantities, and composition of all sanitary, municipal/domestic, and industrial wastewaters projected or treated at the site.**

*AUAR Guidance: Observe the following points of guidance in an AUAR:*

- *Only domestic wastewater should be considered in an AUAR—industrial wastewater would be coming from industrial uses that are excluded from review through an AUAR process*
- *Wastewater flows should be estimated by land use subareas of the AUAR area; the basis of flow estimates should be explained*
- *The major sewer system features should be shown on a map and the expected flows should be identified*
- *If not explained under Item 6, the expected staging of the sewer system construction should be described*
- *The relationship of the sewer system extension to the RGU’s comprehensive sewer plan and (for metro area AUARs) to Metropolitan Council regional systems plans, including MUSA expansions, should be discussed. For non-metro area AUARs, the AUAR must discuss the capacity of the RGU’s wastewater treatment system compared to the flows from the AUAR area; any necessary improvements should be described.*

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<sup>20</sup> Source: Preliminary Geotechnical Evaluation Report for the Upper Harbor Terminal site (Braun Intertec, 2016)

- *If on-site systems will serve part of the AUAR, the guidance in the February 2000 edition of the EAW Guidelines on page 16 regarding item 18b under Residential development should be followed.*

**1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.**

There is an existing sanitary sewer underneath Washington Avenue North owned by the City of Minneapolis as well as a sanitary interceptor owned by the Metropolitan Council Environmental Services (MCES) that flows to the south underneath the CP Rail corridor. These sanitary sewer pipes transport wastewater to the Metropolitan Wastewater Treatment Plant. The plant currently treats 178 million gallons per day (GPD) with a total capacity of up to 314 million gallons per day.

***No Build Scenario***

The estimated daily flow under the No Build Scenario is not expected to change relative to existing site conditions and no modifications to the existing sanitary sewer infrastructure is anticipated.

***Scenario 1 and Scenario 2***

In both Scenario 1 and Scenario 2, sanitary sewer services for all the parcels, except for Parcels 6 and 7, will connect into the MCES interceptor pipe. From the midpoint of Parcel 4 to the north, the MCES interceptor pipe is located underneath the CP Rail corridor and east of the main rail. It shifts to the west side of the rail corridor in the southern part of Parcel 4 and in Parcel 5. Depending on the final layout of the development, the sanitary sewer serving Parcel 6 will be evaluated to either utilize an existing connection into the MCES interceptor pipe or will connect into the City sanitary sewer underneath Washington Avenue North. Parcel 7 will connect to the existing sanitary sewer line under Washington Avenue North. Parcels 4 and 5 will be required to connect directly to the MCES interceptor pipe. Exhibits for the routing of the sanitary sewer have been included in Appendix C.

No land uses that would generate wastewater requiring pretreatment are anticipated for Scenario 1 and Scenario 2.

Based on the MCES Sewer Availability Charge (SAC) program, the estimated daily flow for Scenario 1 is 0.225 million GPD.

Based on the MCES SAC program, the estimated daily flow for Scenario 2 is 0.364 million GPD.



Itemized SAC calculations are included in Appendix C. A peaking factor of 4 was used to determine the peak flow. Based upon these flows, both the City sanitary sewer and Metropolitan Council interceptor sewer are capable of handling the new development. The Metropolitan Wastewater Treatment Plant has excess capacity to handle future development in the seven-county metro area.

- 2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.**

Not applicable.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods, discharge points, and proposed effluent limitations to mitigation impacts. Discuss any effects to surface or groundwater from wastewater discharges.**

Not applicable.

- 4) Stormwater – Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential Best Management Practices site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control, or stabilization measures to address soil limitations during and after project construction.**

*AUAR Guidance: For an AUAR the following additional guidance should be followed in addition to that in EAW Guidelines:*

- It is expected that an AUAR will have a detailed analysis of stormwater issues*
- A map of the proposed stormwater management system and of the water bodies that will receive stormwater should be provided*
- The description of the stormwater systems would identify on-site and “regional” detention ponding and also indicate whether the various ponds will be new water bodies or converted existing ponds or wetlands. Where onsite ponds will be used but have not yet been designed, the discussion should indicate the design standards that will be followed.*
- If present in or adjoining the AUAR area, the following types of water bodies must be given special analyses:*

- *Lakes: Within the Twin Cities metro area, a nutrient budget analysis must be prepared for any “priority lake” identified by the Metropolitan Council. Outside of the metro area, lakes needing a nutrient budget analysis must be determined by consultation with the MPCA and DNR staffs.*
- *Trout streams: If stormwater discharges will enter or affect a trout stream, an evaluation of the impacts on the chemical composition and temperature regime of the stream and the consequent impacts on the trout population (and other species of concern) must be included.*

The AUAR study area is adjacent to the Mississippi River. Stormwater within the study area discharges to multiple storm sewer outfalls that flow directly into the river. No stormwater management currently exists on site.

#### **No Build Scenario**

No changes to stormwater management would occur under the No Build Scenario, and no changes to the impervious surfaces are anticipated.

#### **Scenario 1 and Scenario 2**

The existing impervious surface area within the study area totals approximately 39.5 acres. Scenario 1 proposes a decrease in impervious area to approximately 35 acres within the AUAR study area. It is anticipated that Scenario 2 would have similar impervious surface areas within the study area.

The following stormwater management requirements will be adhered to:

- 1) The City of Minneapolis Code of Ordinances Chapter 54, which is currently under revision. The revised rules will be adhered to and include meeting existing rates for the 2, 10, and 100-year 24-hour storm events, removing 70 percent of total suspended solids (TSS), and retaining 1.1 inches of runoff on all newly constructed or fully reconstructed impervious surfaces on site without infiltration restrictions. For linear projects, 0.55 inches of runoff needs to be retained for newly constructed or fully reconstructed impervious surfaces, or 1.1 inches of runoff over the net increase in impervious surfaces, whichever is greater.
- 2) National Pollution Discharge Elimination System permit requirements will be determined for each new development within the AUAR study area.
- 3) B3 (buildings, benchmarks, and beyond) will be required for Parcel 3 because the project is receiving State bonding funding. Additionally, this parcel will be required to meet pre-settlement rates for the 2 and 10-year storm events, retain 1.1 inches of rainwater on-site, and remove 80 percent of TSS and 60 percent of phosphorous. If infiltration is not feasible on site, rainwater re-use will be required to the greatest

extent possible. Irrigation or using water for flushing toilets are two of the options available to meet the requirements.

Two options for stormwater management are being evaluated for Scenarios 1 and 2. Stormwater will either be managed using individual stormwater systems for each parcel or by using a district stormwater management system that creates a shared stormwater system for the AUAR study area.

- **Individual Stormwater Systems**

For this option, each parcel would need to construct its own stormwater management system to meet the stormwater regulation requirements and discharge to the municipal storm sewer system. The proposed parkway proposes to use bioretention basins within the right-of-way. The proposed park areas will likely utilize green space for surface basins (underground stormwater systems are a possibility, but unlikely), and the remaining parcels would have the potential to utilize underground stormwater systems or above ground infiltration or filtration systems. The individual systems would be required to be maintained by their respective property owners.

- **District Stormwater System**

A district stormwater approach has been proposed and is being further evaluated for the site (see Appendix B for the District Stormwater System figure). When coupled with the regional stormwater management system (described below), the plan would create an expanded public realm, provide opportunities for stormwater reuse for irrigation purposes in the park and development parcels, and create economic and land use efficiencies in managing stormwater in shared systems across property boundaries.

Adjacent to the AUAR study area, the Mississippi Watershed Management Organization (MWMO), in partnership with the City of Minneapolis Public Works Department, is planning to create a regional stormwater management system that would provide a storage and underground filtration system west of I-94. This system could provide base flow to the Upper Harbor Terminal stormwater district system and stormwater for reuse for irrigation purposes. The system could also help mitigate flash flooding events by diverting some of the untreated stormwater from 160 plus acres that drains into the City storm sewer line underneath Dowling Avenue North and eventually flows into the river, with the goal of improving water quality.

Both stormwater system options will utilize as much surface stormwater management on-site as feasible. In addition, other techniques such as permeable pavements, tree trenches, and water re-use for irrigation will be explored in the design phase.

At a minimum, Scenario 1 and Scenario 2 will meet existing rates for the 2-, 10-, and 100-year 24-hour storm events, remove 70 percent of TSS, and provide as much infiltration on site as possible. Temporary erosion control measures will be implemented during construction. Because the study area is adjacent to the Mississippi River, erosion protection and sediment control will be provided upstream and, in the water, (as appropriate) while work is conducted along or near the riverbank. Additionally, temporary sedimentation ponds, storm sewer inlet protection, silt fence, floating silt curtains, biologs, erosion mats, and construction entrance protection will be provided.

Due to the proximity to the Mississippi River, the project will have additional requirements during construction, including stabilizing soils within seven days (Parcel 3 will be within 48 hours due to B3 requirements), providing temporary sedimentation basins for acres of drainage area, and providing redundant erosion control within 50 feet of surface waters. These requirements will be included in the stormwater pollution prevention plans that will be developed for each project.

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

*AUAR Guidance: If the area requires new water supply wells, specific information about that appropriation and its potential impacts on groundwater levels should be given; if groundwater levels would be affected, any impacts resulting on other resources should be addressed.*

#### **No Build Scenario**

No water appropriation or dewatering is anticipated under the No Build Scenario. No reconstruction of existing or construction of new watermains would occur.

#### **Scenario 1 and Scenario 2**

No permanent dewatering is anticipated as no underground structures will be constructed along the river. However, existing footings, foundation, and utilities may encounter some groundwater and would require dewatering during construction. A DNR temporary water appropriation permit will be obtained for any dewatering that will be needed for construction.



The water supply for the study area will be obtained from the City of Minneapolis. The Mississippi River is the sole source of drinking water for the city.

There is existing city watermain infrastructure within and near the AUAR study area. A new 12-inch watermain from 36th Avenue North to 33rd Avenue North will be constructed along the private driveway on Parcel 4 and Parcel 5. This connection will close a loop for the City and will provide sufficient capacity for both scenarios. There is an existing 36-inch watermain in Washington Avenue North and a 24-inch watermain in 33rd Avenue North. The existing 12-inch watermain under Parcel 3 will be reconstructed and encased to allow construction near or over the watermain.

### iii. Surface Waters

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

No wetlands are located within the AUAR study area; therefore, no impacts are anticipated.

**iv. Other surface waters – Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal, and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.**

*AUAR Guidance: Water surface use need only be addressed if the AUAR area would include or adjoin recreational water bodies.*

#### **No Build Scenario**

No impacts to surface waters are anticipated under the No Build Scenario. No shoreline restoration would occur, and access to the Mississippi River would not be improved.

### Scenario 1 and Scenario 2

The existing riverbank slope is steeply graded including some visible concrete debris and rip rap at the toe-of-the-slope. Some upland shoreline restoration is being proposed within the AUAR study area for the park area, which will regrade a portion of the upland shoreline. The proposed grading and restoration of the riverbank would provide opportunities for an interspersed of rock shoreline, driftwood arrangements, and native riparian vegetation to protect the shoreline from erosion. The project area also includes an existing riverwall that will remain in place. Grading, debris removal, and restoration may occur below the ordinary high water level.

The upland restoration will be coordinated with the DNR and the City of Minneapolis to confirm the proposed work will be in compliance with the City's MRCCA Plan and consistent with DNR plans for upland shoreline restoration in this section of the river.

Improved water access from the proposed park may increase the number of watercraft on the Mississippi River.

No additional surface water features have been identified within the AUAR study area; therefore, no impacts to surface waters are anticipated.

## 12. CONTAMINATION/HAZARDOUS MATERIALS/WASTES

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

Phase I and Phase II Environmental Site Assessments (ESA) of the Upper Harbor Terminal site were conducted in 2015 by Braun Intertec. The reports identified potential environmental hazards at the site that include potentially contaminated fill, petroleum contaminated soil and groundwater, former aboveground storage tanks (AST), Diesel Range Organics (DRO) contaminated soil and groundwater, arsenic and dissolved lead in surface water, an elevated concentration of 1,2-dichloroethane, and 1,3-Butadiene in soil vapor. No remediation activities were noted to have occurred to date. Additional Phase II assessments may be required to assess the extent of existing contaminants. Any redevelopment of the property will require coordination with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.

- b. Project Related Generation/Storage of Solid Wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss**

**potential environmental effects from solid waste handling, storage, and disposal. Identify measures to avoid, minimize, or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.**

*AUAR Guidance: Generally, only the estimated total quantity of municipal solid waste generated and information about any recycling or source separation programs of the RGU need to be included.*

According to Hennepin County Ordinance 2 and Ordinance 7, Hennepin County will ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes, section 473.811.

### **No Build Scenario**

No project related construction is planned under the No Build scenario, and changes to waste generation are not anticipated.

### **Scenario 1 and Scenario 2**

Under Scenario 1 and Scenario 2, demolition debris and earth materials will be generated during demolition of existing structures within the AUAR study area. Demolition debris is inert materials such as concrete, brick, bituminous, and rock. The solid wastes generated during demolition will be recycled or disposed of at a state-permitted landfill.

Construction of either development scenario would generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would either be recycled or disposed of in accordance with state regulations and guidelines.

Toxic or hazardous substances may be used during project construction and operations (e.g., petroleum products, hydraulic fluid, and chemical products such as sealants). Products will be kept in their original containers unless they cannot be resealed. Original labels and Material Safety Data Sheets will be retained on site and will be accessible. If surplus product must be disposed of, the recommendations of the manufacturer or local or state guidelines will be followed.

Scenarios 1 and 2 would generate new demands on solid waste management and sanitation services provided in the project area. It is estimated that 4.9 pounds of municipal solid waste (MSW) will be generated per person per day. An average household occupancy of 2.62 was applied to the estimated residential units based on US Census Bureau 2014-2019 data. The resulting range of residential MSW generated per year based upon the densities proposed in Scenario 1 and Scenario 2 is 1,170 tons and 2,085 tons, respectively. It is estimated that the non-residential (commercial/industrial) waste stream will range from 5,475 to 10,425 tons per year under Scenario 1 and Scenario 2, respectively.<sup>21</sup>

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<sup>21</sup> The US Environmental Protection Agency's website titled "National Overview: Facts and Figures on Materials, Wastes and Recycling" was consulted as a basis for estimating municipal solid waste generation for the proposed development.

Recycling for residential units and commercial buildings in the AUAR study area will be conducted in accordance with the 2016 Recycling Law (Minnesota Statutes, sections 115A.151 and 115A.552). Furthermore, Hennepin County Ordinance 13 § 2.1 requires mandatory source separation and curbside pick-up within the city as of January 1, 2022.

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

*AUAR Guidance: Not required for an AUAR. Potential locations of storage tanks associated with commercial uses in the AUAR should be identified (e.g., gasoline tanks at service stations).*

**No Build Scenario**

On-site usage or storage of chemicals/hazardous materials would not change under the No Build Scenario.

**Scenario 1 and Scenario 2**

No underground or above ground storage tanks have been identified for the proposed development scenarios. Industrial uses have not been determined and the storage of bulk materials may be required. Diesel fuel tanks may be needed for emergency generators for the commercial, office, and residential buildings. The actual location of these tanks will be determined as design progresses, and the location and use of storage tanks will comply with all state and local rules and regulations.

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

*AUAR Guidance: Not required for an AUAR.*

This section is not required for an AUAR.



### 13. FISH, WILDLIFE, PLANT COMMUNITIES, AND SENSITIVE ECOLOGICAL RESOURCES (RARE FEATURES)

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

*AUAR Guidance: The description of fish and wildlife resources should be related to the habitat types depicted on the cover types map. Any differences in impacts between development scenarios should be highlighted in the discussion.*

The existing AUAR study area provides limited and low-quality native vegetation habitat and provides no fish habitat as there are no streams, rivers, lakes, or ponds located within the study area. The Mississippi River is adjacent to the study area which provides habitat for fish, amphibians, mussels, and other aquatic organisms. Minimal wildlife habitat is located within the AUAR study area due to the prior extent of continued ground disturbance in an urban setting and minimal natural vegetation. Wildlife that can be found within the study area include birds and small mammals that have adapted to the highly disturbed urban environment. The AUAR study area is within the Mississippi Flyway, which is considered a migration corridor for birds.

There are no Minnesota Biological Survey (MBS) Sites of Biodiversity Significance or native plant communities located within one mile of the study area. No Regionally Significant Ecological Areas are within or adjacent to the study area.

Although much of the existing shoreline slope is steeply graded and presents a risk of erosion and instability, there are some existing native plant species including several cottonwoods near the water line.

Existing and proposed cover types are shown in Figure 6 and Table 3.

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

*AUAR Guidance: For an AUAR, prior consultation with the DNR Division of Ecological Resources for information about reports of rare plant and animal species in the vicinity is required. Include the reference numbers called for on the EAW form in the AUAR and include the DNR's response letter. If such consultation indicates the need, an on-site habitat survey for rare species in the appropriate portions of the AUAR area is required. Areas of on-site surveys should be depicted on a map, as should any "protection zones" established as a result.*

Based on a review of the state-listed threatened, endangered, and special concern species (per license agreement LA-965), there are no records within the AUAR study area and four records

within one mile of the AUAR study area: black sandshell mussel, rusty patched bumble bee, peregrine falcon, and a great blue heron nesting site.

A record for the black sandshell mussel (*Ligumia recta*), a state-listed special concern species, is located approximately 0.1 miles from the AUAR study area in the Mississippi River. The preferred habitat for this species includes the riffle and run areas of medium to large rivers in areas dominated by sand or gravel.

A record for the rusty patched bumble bee (*Bombus affinis*), a federally-listed endangered species, is located approximately 0.7 miles from the AUAR study area. The preferred habitat for this species includes grasslands and tallgrass prairies with numerous flowering species. The site has been previously developed for industrial uses and does not contain significant potential suitable habitat for the rusty patched bumble bee.

A record for the peregrine falcon (*Falco peregrinus*), a state-listed special concern species, is located approximately 0.2 miles from the AUAR study area. The preferred habitat for this species includes cliff ledges along rivers or lakes. In urban contexts, this species nests primarily on bridges and tall buildings.

Based on DNR survey data from 2004, a record for a great blue heron nesting site (*Ardea herodias*) is located approximately 0.6 miles north of the AUAR study area. The preferred heron nesting habitat is remote and inaccessible locations including islands, wetlands, or riparian zones. The heron nesting site has rotated between islands over time due to natural disasters and destruction of trees and habitat due to high numbers of birds nesting and roosting in the trees on the island. Based on a desktop aerial review in 2021, a heron rookery has been noted on islands in the Mississippi River to the southeast of the AUAR study area. The rookery identified in the DNR's 2004 survey north of the AUAR study area is no longer present.

The results of the Natural Heritage Information System data were provided to the DNR, and the DNR concurred that negative impacts to known occurrences of rare features are not anticipated (see letter in Appendix A).

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

#### **No Build Scenario**

Wildlife habitat and endangered species found within the AUAR study area vicinity are not expected to significantly change relative to existing conditions at the site under the No Build Scenario as the land use and study area conditions will remain in the current condition.

### *Scenario 1 and Scenario 2*

#### *Impacts to Threatened and Endangered Species*

No adverse impacts are anticipated to state-listed or federally-listed species. The AUAR study area is highly disturbed with a lack of bumble bee suitable habitat.

#### *Wildlife Habitat*

No adverse impacts are anticipated for wildlife or wildlife habitat within the AUAR study area. As noted above, the wildlife currently utilizing the AUAR study area are highly adapted to a disturbed urban environment. The wildlife habitat within the AUAR study area is low-quality dominated by invasive species. The project will involve regrading much of the shoreline, removal of concrete and other debris, and establishing high quality shoreline and floodplain vegetation on a more stable slope. Habitat restoration could include grading (flattening the slope), debris removal, and native vegetation establishment along the riverbank area that may be below the ordinary high water level of the river. Some cottonwoods will be retained, if possible. The project will also incorporate deadwood and snags for habitat enhancement.

#### *Stormwater*

The proposed development scenarios include stormwater management and treatment of all stormwater run-off within the AUAR study area, which will improve water quality. Currently, most stormwater run-off sheet flows across the site into the Mississippi River, with some small catchment areas collected in storm pipes that discharge directly to the river. During construction, erosion and sediment control best management practices (BMPs) will be implemented to prevent erosion and sedimentation of the river. These measures will improve water quality on the site and will prevent impacts to the species in the river.

#### *Noise*

Based on a desktop aerial review, a heron rookery has been noted on two islands in the Mississippi River to the southeast of the Upper Harbor Terminal site. Noise generated from the proposed community performing arts center was identified as a potential concern for the herons. The City of Minneapolis permits outdoor noise up to 90 decibels at 50 feet from the source. Using this limit, AECOM's February 2021 noise assessment for the community performing arts center found the predicted maximum sound level generated by the proposed venue to be comparable to or less than minimum background noise levels measured in 2017 at these islands as the community performing arts center has been located and oriented to minimize impacts to the islands. Therefore, there would be minimal auditory effects expected for the heron rookery concerning noise from the proposed amphitheater. The noise assessment is included in Appendix F. The birds utilizing the island near the AUAR study area are highly adapted to nesting and living in an urban environment, including loud noises, lights, and flashing light from surrounding roadways, industrial facilities, and residential areas.

### *Invasive Species*

Invasive species will be controlled on-site during construction. During construction, materials moved to and from the site would follow standard protocols (i.e., equipment cleaning, use of certified weed-free materials, etc.) to avoid the spread of invasive weedy species. The AUAR study area will utilize turf grass and other native landscaping to promote a more natural environment and pollinator habitat and to reduce run-off and improve water quality in the AUAR study area. The native plantings may provide additional habitat for wildlife utilizing the site.

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

### *No Build*

No adverse impacts are anticipated for wildlife or wildlife habitat on or near the site; therefore, no mitigation is proposed.

### *Scenario 1 and Scenario 2*

#### *Wildlife Habitat*

The project will restore native vegetation and wildlife habitat in areas of either no or marginal quality vegetation and reduce invasive species.

The proposed project would increase the presence of natural habitats in this highly industrial area through the establishment of native vegetation. This is anticipated to serve as a functional lift to the site's ecology by providing diverse habitat wildlife utilizing the AUAR study area. The additional stormwater treatment areas proposed by the project will also support wildlife, help to protect water quality and protect the shoreline.

Scattered trees are found along the perimeter of the AUAR study area. Due to the highly disturbed nature of the area, negligible suitable rusty patched bumble bee habitat is located within the AUAR study area. Both Scenario 1 and Scenario 2 include areas of upland shoreline restoration and green space with native plantings that will provide suitable habitat for bees and other pollinators.

#### *Erosion*

Wildlife friendly erosion control methods will be used within the study area to minimize impacts to wildlife using the site during construction. Erosion and sediment control practices will be incorporated into the stormwater management plan to minimize impacts to species found in the Mississippi River.

#### *Bird-Safe Design*

The AUAR study area's proximity to the Mississippi River augments the importance of incorporating bird safe lighting strategies in the design of the development. As building and site

design progresses, the Audubon Minnesota Bird-Safe Building Guidelines will be used to develop strategies to avoid and minimize impacts to migrating birds to the extent practical. Bird-safe practices will be utilized in the design of the outdoor landscape to minimize the effect of reflected vegetation in glass facades. Building design will also take into consideration bird-safe strategies related to the type and placement of building materials, glazing, and interior window treatments. The lighting from the community performing arts center will be directed at the seating and stage areas, which will minimize impacts to birds using the islands and migrating birds near the site. All lighting will be required to conform to City of Minneapolis ordinances, including the City's MRCCA ordinance.

#### *Stormwater*

The project will include above ground stormwater management areas within the AUAR study area. These areas will allow for stormwater treatment in diverse environments that can support pollinators and other wildlife. In addition to protecting the river from additional stormwater runoff from the AUAR study area, the stormwater areas add to the diverse habitat in the AUAR study area.

## 14. HISTORIC PROPERTIES

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

*AUAR Guidance: For an AUAR, contact with the State Historic Preservation Office and State Archeologist is required to determine whether there are areas of potential impacts to these resources. If any exist, an appropriate site survey of high probability areas is needed to address the issue in more detail. The mitigation plan must include mitigation for any impacts identified.*

#### *Historic Designations*

There are not locally or nationally designated historic buildings, structures, archeological sites, or traditional cultural properties within the Upper Harbor Terminal site.

The City of Minneapolis is in ongoing consultation with the Minnesota State Historic Preservation Office (SHPO) regarding the National Register of Historic Places (NRHP) eligibility of the Upper Harbor Terminal site. In correspondence dated February 5, 2021, the SHPO agreed with the City's consultant's recommendation that the Upper Harbor Terminal site is not considered individually eligible for the NRHP (see Appendix D).

In the February 5, 2021 correspondence, the SHPO noted that:



*...based on information that is available to us at this time, we have determined that the Upper Harbor Terminal Historic District is a contributing element to the larger Upper Harbor Historic District, which we recommend is eligible for listing in the NRHP. The Upper Harbor Historic District is a 1.5 mile section of harbor containing a collection of bridges and shipping terminal facilities at the northern end of the Upper Harbor. The Upper Harbor Historic District is a component of the larger Upper Mississippi Harbor Development, which is significant for its association with the extension of the original 1937 nine-foot channel. The Upper Mississippi Harbor Development allowed for the expanded shipping terminal facilities above St. Anthony Falls in Minneapolis. Resources associated with the Upper Mississippi Harbor Development include but are not limited to, the Mississippi River, the Lower Lock and Dam, the Upper Lock and Dam, bridges and navigation utilities constructed or altered to facilitate the use of the river, and public and private industrial and terminal facilities constructed to take advantage of the newly expanded commercial opportunities. Based on the information provided to date, we concluded that the period of significance for the Upper Harbor Historic District begins in 1948, the year dredging began to extend the nine-foot channel, and ends in 2015, when the locks and dams ceased transportation operations.*

A memorandum proposing a period of significance that begins in 1948 and ends in 1976 was prepared by the historical consulting firm Hess Roise and submitted to the SHPO for consideration on March 22, 2021. The findings included in the March 22, 2021 memorandum state that, “with the exception of the nearly 3.1 million tons shipped in 1976, Minneapolis never met the annual tonnage goals set by the Army Corps of Engineers for the locks,” and that the shipping volume seen in 1976 represents the peak of river shipping in Minneapolis, making 1976 an appropriate end date for the period of significance for the Upper Harbor Historic District.

In a letter dated April 20, 2021, the SHPO concurred with the proposed period of significance, writing:

*...we agree that the period of significance for the entire UMHD extends from 1948, the year dredging of the Upper Harbor Mississippi River began, through 1976, the year that shipping peaked on the river.*

Based on the letter from SHPO, the Upper Harbor Historic District is considered eligible for the NRHP under Criterion A in the areas of Commerce, Maritime History, Transportation, and Industry and under Criterion Consideration G as a property that has achieved significance within the past 50 years (see Appendix D).

The three remaining extant monolithic domes were evaluated for NRHP eligibility under Criterion C in the area of engineering. The SHPO agreed that the domes are likely eligible for the NRHP under Criterion C but that they are unlikely to meet the rigorous standards required for properties that are less than 50 years old to be eligible under Criterion Consideration G. The SHPO did recommend that the domes be re-evaluated in 2032, when they are 50 years of age.

The Upper Harbor Terminal site has been identified as potentially eligible as a local City of Minneapolis historic district. The City is further evaluating the site under local designation criteria

and will present the evaluation to the City of Minneapolis Heritage Preservation Commission for consideration.

Historic resources on the Upper Harbor Terminal site are listed in Table 14.

**Table 14: Historic Resources on the Upper Harbor Terminal Site**

Inventory Number	Resource Name	Construction Date	Contributing Status
HE-MPC-9244	Office Building	1968	Contributing
HE-MPC-9250	North Dock	1968	Contributing
HE-MPC-9276	Rail and Roadway System	c. 1968-1985	Contributing
HE-MPC-9279	Open Commodity Storage Area	1968-1986	Contributing
HE-MPC-9280	Open Commodity Storage Area	1968-1986	Contributing
HE-MPC-9281	Open Commodity Storage Area	1968-1986	Contributing
HE-MPC-9282	Open Commodity Storage Area	1968-1986	Contributing
HE-MPC-9283	Open Commodity Storage Area	1968-1986	Contributing
HE-MPC-9245	Scale House	c. 1970	Contributing
HE-MPC-9246	Truck Scale	c. 1970	Contributing
HE-MPC-9252	South Dock	c. 1971	Contributing
HE-MPC-9254	Warehouse	1971	Contributing
HE-MPC-9258	Rail Dump	1973	Contributing
HE-MPC-9257	Conveyor	c. 1973-1988	Contributing
HE-MPC-9251	Three Loading Area Mooring Cells	c. 1974	Contributing
HE-MPC-9253	Petroleum Dock	1974	Contributing
HE-MPC-9256	Load-out Tower	c. 1974	Contributing
HE-MPC-9277	Rail and Roadway System	c. 1974-1985	Contributing
HE-MPC-9270	Two Asphalt Tanks (non-extant)	c. 1975	Non-contributing
HE-MPC-9271	Dike Wall	c. 1975	Contributing
HE-MPC-9272	Boiler Shed	c. 1975	Contributing
HE-MPC-9273	Petroleum Pumping Spout (partially demolished)	c. 1975	Non-contributing
HE-MPC-9259	Grain Elevator	c. 1978	Non-contributing
HE-MPC-9260	Truck Dump/Hoist	c. 1978	Non-contributing
HE-MPC-9261	Control Building	c. 1978	Non-contributing
HE-MPC-9262	Four Dust Tanks	c. 1978	Non-contributing
HE-MPC-9263	Dome (1,800-ton capacity)	1982	Non-contributing
HE-MPC-9247	Scale House	c. 1983	Non-contributing
HE-MPC-9248	Truck Scale	c. 1983	Non-contributing
HE-MPC-9249	North Mooring Cell	c. 1984	Non-contributing
HE-MPC-9265	Dome (8,000-ton capacity)	1984	Non-contributing
HE-MPC-9266	Dome (16,000-ton capacity)	1984	Non-contributing
HE-MPC-9268	Load-out Shelters (adj. to paired domes)	1984	Non-contributing
HE-MPC-9255	Shipping/Receiving Building	c. 1985	Non-contributing

Inventory Number	Resource Name	Construction Date	Contributing Status
HE-MPC-9274	Petroleum Pumping Spout (non-extant)	c. 1985	Non-contributing
HE-MPC-9275	Truck Staging Area	c. 1985	Non-contributing
HE-MPC-9264	Dome (12,000-ton capacity)	1987	Non-contributing
HE-MPC-9267	Load-out Shelter (adj. to 12,000-ton dome)	1988	Non-contributing
HE-MPC-9269	Truck/Rail Dump	1988	Non-contributing
HE-MPC-9278	Rail Scale Shed (scale extant, shed non-extant)	1991	Non-contributing

As part of the NRHP eligibility evaluation of the Upper Harbor Historic District, Nienow Cultural Consultants completed a Phase 1a archaeological literature review of the Upper Harbor Terminal site. According to the Phase 1a, based on “available historic maps, drawings, and images for the project area, there is the potential for multiple historic cultural resources dating back as far as the 1880s. Given the project area’s proximity to the Mississippi River, which acted as a corridor for travel and exchange in Native American cultures for thousands of years, there is potential in undisturbed areas to encounter Native American features across the project area as well.”

The Phase 1a “identified 109 structures within the entirety of the Upper Harbor Terminal Project area.” Following completion of the Phase 1a, the boundary of Parcel 7B was extended further south, resulting in the identification of “five additional non-extant residential structures... in this extended area using 1912 and 1951 Sanborn fire insurance mapping,” bringing the total count of structures in the project area to 114.

Historic maps of the area show lumber mills and warehouses, including the mills of the Bovey-De Laitre Lumber Company and the “Log Cottage Company” as well as single-family homes located within the Upper Harbor Terminal study area. City of Minneapolis building and wrecking permits indicate that the clearing of the area that comprises the Upper Harbor Terminal study area began in the 1960s, through both the construction of I-94 and the development of the Upper Harbor Terminal.

### *Potential Impacts and Mitigation*

When elements of the site redevelopment require federal funds, permits, or authorization and results in a federal undertaking, the responsible federal agency will consult with the SHPO under Section 106 of the Historic Preservation Act of 1966 (36 CFR 800).

Given that the Upper Harbor Terminal site is considered contributing to a larger historic district, the mitigation measures discussed below will be implemented to avoid and minimize adverse effects to historic properties on site.

During community engagement it has been clear that there are many ways to send messages about who a space is for and who is welcomed and celebrated. The project will balance industrial history and relevance with Indigenous and community culture and history. Community members have

expressed a desire for an honest examination of what industry on the river has meant to this area and how the related development, infrastructure, trade, and pollution have impacted people and the land. The project will provide places for language, history, culture, and environmental education and learning.

Some of the specific ways to incorporate messages about water, connectivity, and Indigenous perspectives into places for teaching, learning, and reflecting may include:

- Highlighting that the Dakota language and people, land, water, culture, and art are intertwined and not separate. Words and meaning come from the land and learning the language forms a kinship with the land.
- Clarifying the connectivity between different events and places through an Indigenous lens. Upstream, the river connects to the Rum River Bdote (confluence) and the water that flows through sacred wild rice fields. Downstream are connections to the sacred Owanmiiyomni (St. Anthony Falls) and Mississippi and Minnesota Bdote. Industry at the Upper Harbor Terminal is connected to industry, logging, land theft, and treaties to the North, as well as industry at the Falls and the destruction of Spirit Island.
- Look to Indigenous language, cultural, growing, and healing practices to heal the land, which is connected to healing the water and the people. Make holistic practices such as phytoremediation to heal the soil an educational opportunity with Indigenous art and language.
- Interpretation of the Indigenous relationships with native plants and the river corridor including medicine gardens, food harvesting areas, and other living examples.

The project will preserve and interpret aspects of the industry; however, the overall interpretive message will emphasize the reclamation of this space by people and nature. The five Northside Storylines listed below were developed with local designers and artists. The project will include art, language, stories, restoration, creative infrastructure, and a focus on green infrastructure education and jobs to begin this process of change.

- Histories of ecological harm and disconnection from this place
- Environmental justice work and vision
- Appropriation and reappropriation of this place
- Settlement history of the Northside
- Food sovereignty in Black, Native and people of color communities

Many of the existing industrial buildings and structures are located on future public parkland. In order to provide adequate space for public use and allow for views through the park and to the river, many of the existing structures may be partially or entirely removed. Specific retention, adaptive reuse, or interpretation of industrial structures could include the following:

- Show the outlines of Domes HE-MPC-9265 and HE-MPC-9266 and retain some lower portions of the walls or interpret the location of the walls. Keep some remnants of Dome HE-MPC-9264 outline in suitable locations.
- Re-use some of the smaller steel structural elements and concrete pieces onsite for bollards, bike racks, public art, site furnishings, etc.

- In the short term, stabilize and reuse the four grain elevators for outdoor storage. Keep one or two elevators to house a water reuse cistern or for other storage.
- Maintain portions of the red grain elevator. At a minimum maintain some of the steel posts and structure in place as a vertical presence on the site.
- Stabilize and repurpose some of the overhead conveyors. Repurposing will likely involve hanging shade structures, lights, security cameras, swings, hammocks, or other public amenities from them.

A significant amount of documentation of historic resources (including industrial buildings, structures, sites, and objects) including site survey, digital photography of structural remains, narrative written descriptions, and information of construction methodology have been compiled and will inform relevant interpretive planning efforts.

## 15. VISUAL

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

*AUAR Guidance: Any impacts on scenic views and vistas present in the AUAR should be addressed. This would include both direct physical impacts and impacts on visual quality or integrity. EAW Guidelines contains a list of possible scenic resources.*

*If any non-routine visual impacts would occur from the anticipated development, this should be discussed here along with appropriate mitigation.*

### *Public River Corridor Views and Potential Impacts*

The Minneapolis 2040 Comprehensive Plan and the MRCCA Plan identify significant Public River Corridor Views (PRCVs) in the city. PRCVs is a term within the MRCCA rules that is used to identify and protect scenic river views determined important by the community. Within the MRCCA section of the Minneapolis 2040 Comprehensive Plan, these PRCVs are views from public parks, overlooks, bridges, historic properties, street corridors, and the lower gorge. According to this plan, “new development should be designed to improve views by providing a striking background to the river’s shoreline through building and site landscape design.” The MRCCA Plan identifies surface parking, outdoor storage, and transmission lines as structures that have a negative impact on river views. Additionally, the plan mentions screening, structural tiering, restoration of natural vegetation, and striking architecture that can be used as additional mitigation measures to improve public river views. There are several PRCVs that the Upper Harbor Terminal site is visible from (Table 15 and Figure 14). See Appendix E for renderings of Scenario 1 from these PRCVs.

### **No Build Scenario**

There are several existing structures that are detrimental to public river views, including a 110,000 square foot warehouse, a large amount of impervious outdoor industrial storage space, and several



dilapidated accessory industrial structures. Under the No Build Scenario, the Xcel transmission line would not be relocated, and the towers would not be replaced. Existing structures at the site would remain, and views from PRCVs would be unchanged.

### *Scenario 1 and Scenario 2*

Potential visual effects would be consistent between Scenario 1 and Scenario 2 as summarized below and in Table 15.

The Draft Coordinated Development Plan uses several different strategies mentioned in the MRCCA Plan to improve PRCVs. Both scenarios propose the removal or relocation of several existing structures that are detrimental to public views, including a 110,000 square foot warehouse, a large amount of impervious outdoor industrial storage space, and several dilapidated accessory industrial structures. Both scenarios also propose the removal of three concrete storage domes on the site (see Section 14). Existing transmission powerlines that bisect the site will also be relocated (for more information about Xcel’s relocation of these powerlines, see Section 19). Additionally, new buildings proposed would be structurally tiered in a way that their heights increase in every layer further from the Mississippi River. Both scenarios also include the creation of a large park along the entire riverfront portion of the site that will protect public access and views to and from the Mississippi River. This park will serve to both screen development and restore vegetation at the Upper Harbor Terminal site.

Visualizations from identified river corridor views were prepared to simulate the visual effect of the redevelopment proposed in Scenario 1 from several PRCVs near the AUAR study area. These visualizations demonstrate that the buildings proposed in Scenario 1 do not significantly alter or block public river corridor views in any location (see the visualizations in Appendix E).

The proposed community performing arts center described in the Draft Coordinated Development Plan will include outdoor lighting to be used during shows. In January 2021, the updated MRCCA Overlay District was added to the City’s zoning code, including regulations regarding exterior lighting. These rules require all exterior lighting to be fully cut off or shielded and stipulate that architectural uplighting is not allowed unless by conditional use permit and is subject to being turned off during defined bird migration periods. A conditional use permit is allowed for non-compliant lighting for certain outdoor recreational and entertainment uses. First Avenue’s lighting plan for the proposed community performing arts center depicts shielded lights, consistent with the MRCCA ordinance.

Both Scenario 1 and Scenario 2 would adhere to all the visual guidelines laid out in the MRCCA section of the comprehensive plan, including restoration of natural vegetation, structural tiering, and preservation of public views. Therefore, visual impacts are not anticipated.

Table 15: PRCVs near the AUAR Study Area

PRCV Type	PRCV Location	Description	Development Impact
Parks	Marshall Terrace Park*	Views from Marshall Terrace Park are identified due to its high banks and good observation points. The western border of the park offers expansive views. To the south is the downtown skyline and Lowry Bridge, and to the north are views of the upstream islands and southern portion of the Upper Harbor Terminal site. The islands are home to blue herons, sandpipers, and peregrine falcons, adding an ecological element to the views.	The shoreline along Marshall Terrace Park offers clear views of the Upper Harbor Terminal site. Shoreline restoration proposed in Scenario 1 and Scenario 2 would improve this PRCV. See Appendix E for a visual rendering of Scenario 1 from this PRCV.
	Edgewater Park*	Adjacent to the Lowry Avenue Bridge, Edgewater Park grants the public clear views of the bridge and a slight view of downtown from its high bank outlook. In warmer seasons views of downtown are hindered by the overgrown shoreline vegetation. Pruning measures could improve the view shed in the future. Across the river, on the west bank are possible opportunities to create landscapes which add visual interest to the shoreline and enhance the view.	The Lowry Avenue Bridge obscures views of Upper Harbor Terminal from this location. Scenario 1 and Scenario 2 would not significantly impact this PRCV.
	MWMO Headquarters*	This location gives the public an up-close view of the Lowry Avenue Bridge and southern portion of the Upper Harbor Terminal site.	The shoreline along MWMO’s property offers clear views of the Upper Harbor Terminal site. Shoreline restoration proposed in Scenario 1 and Scenario 2 would improve this PRCV. See Appendix E for a visual rendering of Scenario 1 from this PRCV.

PRCV Type	PRCV Location	Description	Development Impact
	St. Anthony Parkway*	The Grand Rounds Trail along St. Anthony Parkway provides a scenic view of the river’s west bank. Upstream is a view of a historic railroad bridge, while downstream is a unique scene that contains the downtown skyline, Lowry Bridge, and visually interesting structures at the Upper Harbor Terminal. In warmer seasons the shoreline vegetation may hinder these views.	The shoreline at the western extent of St. Anthony Parkway offers clear views of the Upper Harbor Terminal site. Shoreline restoration proposed in Scenario 1 and Scenario 2 would improve this PRCV. See Appendix E for a visual rendering of Scenario 1 from this PRCV.
<b>Bridges</b>	Lowry Avenue Bridge Lookout*	Upstream are views of multiple bridges, parkland, Upper Harbor Terminal, the heron rookery, and Betty Danger’s famous Ferris wheel to the east. Downstream has a wide and central view of the entire downtown skyline. The banks on both sides of the river present opportunities for visual enhancements.	The north side of the Lowry Avenue Bridge offers clear views of the Upper Harbor Terminal site. Scenario 1 and Scenario 2 would not change the view from this PRCV except that the proposed buildings would also be visible. See Appendix E for a visual rendering of Scenario 1 from this PRCV.
	42nd Avenue Bridge	The 42nd Avenue Bridge makes an important connection for the Grand Rounds over the river between Northeast Minneapolis and the Northside. Upstream, this vantage point offers views of Olson’s Island Heron Rookery, Shingle Creek, and North Mississippi Regional Park. To the south are views of the downtown skyline, Lowry Avenue Bridge, and the northern portion of the Upper Harbor Terminal site.	Although the south side of the 42nd Avenue Bridge offers partials views of the Upper Harbor Terminal site, the site is located over 2,000 feet from this PRCV. Scenario 1 and Scenario 2 would not significantly impact this PRVC.

PRCV Type	PRCV Location	Description	Development Impact
<b>Street Corridors</b>	33rd Avenue North	The 33rd Avenue North street corridor terminates at the southern end of the Upper Harbor Terminal site. Although the river is visible in this location, access to the shore is currently blocked by private property.	Several aspects of Scenario 1 and Scenario 2, including shoreline restoration and the removal of a large surface parking lot, would improve this PRCV.
	34th Avenue North	The 34th Avenue North street corridor terminates at the east side of Perkins Hill Park. Existing vegetation and the I-94 sound wall blocks views of the river and the Upper Harbor Terminal site from this location. One block of 34th Avenue North exists east of I-94, terminating at North 2nd Street.	Currently, the view from 34th Avenue North is blocked by the I-94 sound wall. An extension of 34th Avenue North to the parkway that is proposed in Scenario 1 and Scenario 2 could improve this PRCV.
	35th Avenue North	The 35th Avenue North street corridor terminates at the sound wall west of I-94. In this location, the sound wall is too tall to view the river or the Upper Harbor Terminal from the street.	Currently, the view from 35th Avenue North is blocked by the I-94 sound wall. An extension of 35th Avenue North to the parkway that is proposed in Scenario 1 and Scenario 2 could improve this PRCV.
	36th Avenue North	The 36th Avenue North street corridor terminates at the sound wall west of I-94. Although the Mississippi River may be visible during winter months, in the warmer seasons views of the river are hindered by the overgrown shoreline vegetation. This location overlooks the Upper Harbor Terminal site. One block of 36th Avenue North exists east of I-94, terminating at the CP rail line.	Currently, the view from 36th Avenue North is largely obscured by the I-94 sound wall. Although some buildings proposed in Scenario 1 and Scenario 2 may be partially visible from this location, it is unlikely the PRCV would be significantly impacted. See Appendix E for a visual rendering of Scenario 1 from this PRCV.

PRCV Type	PRCV Location	Description	Development Impact
	37th Avenue North	The 37th Avenue North street corridor terminates west of I-94, adjacent to a sound wall. This location offers a partial lookout above the sound wall to the tops of the Upper Harbor Terminal site and the Xcel Energy site across the river.	Currently, the view from 37th Avenue North is largely obscured by the I-94 sound wall. Although some buildings proposed in Scenario 1 and Scenario 2 may be partially visible from this location, it is unlikely the PRCV would be significantly impacted. See Appendix E for a visual rendering of Scenario 1 from this PRCV.
	Dowling Avenue North	Dowling Avenue North terminates at the heart of the Upper Harbor Terminal site. This location offers up close views of the industrial structures at the Upper Harbor Terminal.	Several aspects of Scenario 1 and Scenario 2, including shoreline restoration, tiered buildings, and the removal of several dilapidated industrial buildings and structures visible from this location, would significantly improve this PRCV. See Appendix E for a visual rendering of Scenario 1 from this PRCV.
	39th Avenue North	The 39th Avenue North street corridor terminates at the sound wall west of I-94. In this location, the I-94 sound wall is too tall to view the river or the Upper Harbor Terminal from the street.	The I-94 sound wall obscures views from this location. Scenario 1 and Scenario 2 would not impact this PRCV.
<b>River</b>	Mississippi River	The Mississippi River is the City’s most important water resource. From the river along Upper Harbor Terminal, boaters may view nearly the entire Upper Harbor Terminal site lining the river’s western shore. Downstream, sights of the downtown skyline can be glimpsed through the Lowry Avenue Bridge.	Several aspects of Scenario 1 and Scenario 2, including shoreline restoration, removal of several existing structures, and the removal of a large surface parking lot, would improve this PRCV.

\*PRCV sites are mapped and described in Appendix A of Minneapolis 2040 Comprehensive Plan



Figure 14: Impacts to Public River Corridor Views from Scenario 1 and 2



## 16. AIR

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

*AUAR Guidance: This item is not applicable to an AUAR. Any stationary air emissions source large enough to merit environmental review requires individual review.*

Stationary sources such as boilers or exhaust stacks are not proposed as part of the No Build Scenario, Scenario 1, or Scenario 2. The MPCA monitors 10 air pollutants and reviews the Air Quality Index (AQI) to confirm that the Twin Cities metropolitan area continues to be an attainment area. As part of the Clean Air Act, the US Environmental Protection Agency (EPA) calculates the AQI for five major air pollutants. The data collected from the MPCA monitoring stations is compared to the EPA AQI ranges. Currently, there are three air quality monitoring stations within 0.5-miles of the AUAR study area. As of April 8, 2021, the air quality index was 9 and 10 respectively, meaning the air quality in the vicinity of the AUAR study area is considered good.<sup>22</sup>

The adjacent GAF Manufacturing Facility (GAF), located directly south of the AUAR study area, is currently in compliance with all state air permits and local city ordinances. GAF continues to work with the City of Minneapolis on addressing neighborhood concerns and is currently investigating the installation of a regenerative oxidizer that would reduce volatile organic compounds (VOCs) and emissions from the facility. Additionally, as described in the Draft Coordinated Development Plan, the project proposers are in discussions with the MPCA regarding the placement of an air quality monitor within the development site to monitor air quality within the AUAR study area. The proposed development will be designed to meet LEED certification standards. The project proposers are also considering designing the site to meet LEED for Communities standards, which is a more stringent scorecard for energy consumption and greenhouse gas emissions management.

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

*AUAR Guidance: Although the MPCA no longer issues Indirect Source Permits, traffic-related air quality may still be an issue if the analysis in Item 18 indicates that development would cause or*

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<sup>22</sup> Source: <https://www.airnow.gov/?city=Minneapolis&state=MN&country=USA>



*worsen traffic congestion. The general guidance from the EAW form should still be followed. Questions about the details of air quality analysis should be directed to MPCA staff.*

Motorized vehicles affect air quality by emitting airborne pollutants. Changes in traffic volumes, travel patterns, and roadway locations affect air quality by altering the number of vehicles in an area and possible congestion. The air quality impacts from the proposed development scenarios are analyzed by addressing criteria pollutants, a group of common air pollutants regulated by the EPA on the basis of criteria (information on health and/or environmental effects of pollution). The criteria pollutants identified by the EPA are ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Potential impacts resulting from these pollutants are assessed by comparing projected concentrations to National Ambient Air Quality Standards (NAAQS).

In addition to the criteria air pollutants, the EPA also regulates a category of pollutants known as mobile source air toxics (MSATs), which are generated by emissions from mobile sources. A qualitative evaluation of MSATs has been performed for this project, as documented below. The scope and methods of the analysis performed were developed in collaboration with the Minnesota Department of Transportation (MnDOT), MPCA, and the Federal Highway Administration (FHWA).

#### *Conformity*

The study area is designated by the EPA as in attainment (or complying) with the NAAQS for all air pollutants. While the study area is in attainment with the carbon monoxide (CO) NAAQS, part of the project area was formerly a nonattainment area for CO and is currently a “maintenance” area for this pollutant. Therefore, Transportation Conformity rules (40 CFR 93, Subpart A) apply only to vehicle emissions of CO in the AUAR study area.

CO evaluation is performed by evaluating the worst-operating (hot spot) intersections in the AUAR study area. The EPA has approved a screening method to determine which intersections need hot-spot analysis. The hot-spot screening method uses a traffic volume threshold of 82,300 entering vehicles per day. None of the intersections in the study area exceed the criteria that would lead to a violation of the air quality standards. The busiest city street within the vicinity of the study area, Lowry Avenue North, reports a daily traffic volume of around 15,000 vehicles per day. This is less than a fifth of the traffic volume identified by MnDOT that could cause significant CO impacts.

Improvements in vehicle technology and in motor fuel regulations continue to result in reductions in vehicle emission rates. The EPA MOVES 2010b emissions model estimates that emission rates will continue to decline from existing rates through year 2040. Consequently, year 2040 vehicle-related CO concentrations in the project area are likely to be lower than existing concentrations even considering the increase in development-related and background traffic.

On November 8, 2010, the EPA approved a limited maintenance plan request for the Twin Cities maintenance area. Under a limited maintenance plan, the EPA has determined that there is no requirement for project emissions over the maintenance period and that "an emission budget may be treated as essentially non-constraining for the length of the maintenance period. The reason is that it is unreasonable to expect that our maintenance area will experience so much growth within this period that a violation of CO National Ambient Air Quality Standard (NAAQS) would result."<sup>23</sup>

The study area is also within a maintenance area for sulfur dioxide. The MPCA's *2020 Annual Air Monitoring Network Plan for Minnesota*<sup>24</sup> shows that eight sites were monitored for sulfur dioxide in the Twin Cities metropolitan area from 2016 to 2018. The NAAQS for sulfur dioxide is met if the three-year average of the annual 99<sup>th</sup> percentile daily maximum one-hour sulfur dioxide concentration is less than 75 parts per billion. The maximum of the monitoring sites was found to be 16 parts per billion, well below the 75 parts per billion threshold. The MPCA also states that approximately 57 percent of sulfur dioxide emissions released into the air in Minnesota are generated by electric utilities.<sup>25</sup> A much smaller proportion of the total sulfur dioxide released into the air in Minnesota is attributable to on-road mobile sources. The MPCA has concluded that long-term trends in both ambient air concentrations and total sulfur dioxide emissions in Minnesota indicate steady improvement. Hennepin County has been in attainment with the sulfur dioxide NAAQS since 1997.<sup>26</sup>

### *Air Toxics*

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS).<sup>27</sup> In addition, the EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA).<sup>28</sup> These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to

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<sup>23</sup> US Environmental Protection Agency, Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas (October 6, 1995)

<sup>24</sup> Minnesota Pollution Control Agency. *2020 Annual Air Monitoring Network Plan*. July 2019. Available at <https://www.pca.state.mn.us/air/air-monitoring-network-plan>.

<sup>25</sup> Minnesota Pollution Control Agency. *2016 Pollution Report to the Legislature*. April 2016. Available at <https://www.pca.state.mn.us/about-mpca/2016-legislative-reports>.

<sup>26</sup> US Environmental Protection Agency. Minnesota Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at [https://www3.epa.gov/airquality/greenbook/anayo\\_mn.html](https://www3.epa.gov/airquality/greenbook/anayo_mn.html).

<sup>27</sup> US Environmental Protection Agency, Limited Risk Information System; available at <http://www.epa.gov/iris/>

<sup>28</sup> US Environmental Protection Agency, Technical Air Pollution Resources; available at <http://www.epa.gov/ttn/atw/nata1999/>

change and may be adjusted in consideration of future EPA rules. The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines.

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions. The AUAR study area is currently meeting all NAAQS for the criteria air pollutants. For the foreseeable future the trend of lower per vehicle emissions is expected to at least offset growth in vehicle volumes. Therefore, the AUAR study area is expected to continue meeting NAAQS, with or without implementation of the development scenarios. Based on the proposed volumes, the proposed development scenarios do not exceed thresholds that would require a quantitative MSAT analysis; therefore, the project is not expected to adversely affect air quality.

- c. **Dust and Odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under Item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

*AUAR Guidance: Dust and odors need not be addressed in an AUAR, unless there is some unusual reason to do so. The RGU might want to discuss as part of the mitigation plan, however, any dust control ordinances in effect.*

#### **No Build**

Dust suppression and sweeping of material that may cause dust issues will continue to be managed on site. All activities will also continue to be regulated by Section 47.150. of the Minneapolis Code or Ordinances related to odors and air contaminants generated on site. Changes to dust and odor are not anticipated under the No Build Scenario.

#### **Scenario 1 and Scenario 2**

Scenario 1 and Scenario 2 would generate temporary fugitive dust emissions during construction. Section 89.30.(6) of the Minneapolis Code of Ordinances states that dust control during construction is the responsibility of the construction contractor. In accordance with this ordinance, contractors must address any dust problems encountered during construction or demolition immediately upon receiving notice from the City. These emissions can be controlled by sweeping, watering, or sprinkling as appropriate or as prevailing weather and soil conditions dictate. Dust emissions are not anticipated during operations as all ground surfaces will either be impervious or vegetated.



## 17. NOISE

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

*AUAR Guidance: Construction noise need not be addressed in an AUAR, unless there is some unusual reason to do so. The RGU might want to discuss as part of the mitigation plan, however, any construction noise ordinances in effect.*

*If the area will include or adjoin major noise sources, a noise analysis is needed to determine if any noise levels in excess of standards would occur, and if so, to identify appropriate mitigation measures. With respect to traffic-generated noise, the noise analysis should be based on the traffic analysis of Item 18.*

### *Construction Noise*

As stated in the AUAR guidelines, construction noise need not be addressed unless there is some unusual reason to do so. No unusual circumstances have been identified that would necessitate a detailed construction noise analysis. To the extent possible, construction activities will be conducted to minimize noise levels and nighttime construction activities. Normal construction hours are 7:00 a.m. to 6:00 p.m., Monday through Friday. Any activity with construction equipment outside these hours would require an afterhours permit from the City. Additionally, all equipment used in the construction phases of the project will be muffled and will use quieter backup alarms, where appropriate.

### *Traffic Generated Noise*

A sound increase of 3 dBA is barely noticeable by the human ear, a 5 dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (i.e., the amount of traffic doubles), there is a 3 dBA increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases by a factor of 10, the resulting sound level will increase by about 10 dBA and be heard as twice as loud.

Traffic volumes in the project area are either on roadways that do not have receivers that are sensitive to noise, or, the traffic levels attributable to the project are well below the amount that would generate a sound increase that could be noticeable. The change in traffic noise levels is not anticipated to be readily perceptible.

### *Operational Noise*

#### **No Build Scenario**

Noise monitoring was performed at seven locations on and around the AUAR study area in 2017 to characterize the existing background noise levels on the site and in the noise-sensitive areas closest to the site. One continuous 24-hour reading was taken near the proposed community performing

arts center to document the variation of background noise levels over the course of a typical day, and six short-term (15- to 20-minute) readings were taken at the locations representative of the closest residences to the facility. Short-term readings were taken between 6:00 p.m. and 8:00 p.m. to document the background levels at the times when events would be taking place at the facility. The background levels in the area are generally in the low 50s to mid-60s range on the dBA scale. The dominant background noise source during all of the readings was traffic on local roadways, especially I-94 (which is located between the project site and the residential community to the west).

Changes to operational noise are not anticipated under the No Build Scenario.

### *Scenario 1 and Scenario 2*

The development scenarios include residential buildings and planned green space. These spaces would be considered the second-strictest Noise Area Classification (NAC 2) as defined by state noise standards. Highway noise is anticipated to be the primary source of background noise in the AUAR study area vicinity. Noise monitoring was completed in the project vicinity, and the background noise levels in the surrounding area range from the mid-50's to mid-60's dBA. The background noise analysis has been incorporated into the report included in Appendix F. Reasonably available noise mitigation measures, as described in the mitigation plan, will be employed to abate noise in accordance with state requirements for the proposed development.

The proposed development under Scenario 1 and Scenario 2 will be designed so the residential outdoor spaces are buffered from the surrounding roadways by the buildings, which will act as a noise barrier to mitigate some of the traffic noise from the surrounding roadways. The residential buildings are a couple hundred feet from the nearest major roadway, which also provides a buffer between the residential areas and the surrounding roadways. Building materials and other strategies will be utilized during the design and construction of the residential buildings to minimize noise for the tenants in those buildings. The proposed 19.5-acre park is located along the river and is farthest from the highway, which will minimize background traffic noise within the park area.

### *Community Performing Arts Center Noise Assessment*

A community performing arts center is proposed on Parcel 3 as part of Scenarios 1 and 2. This use will result in elevated noise levels during major events. The venue operator, First Avenue Productions, will adhere to the City's permitted noise limit of 90 dBA 50 feet from the source of the sound. Based on this 90 dBA limit, AECOM completed a draft noise assessment to evaluate the potential noise impacts from this proposed outdoor amphitheater (see Appendix F). The following is a summary of the findings from the noise assessment.

The community performing arts center is an outdoor amphitheater with the stage facing to the north. This venue is planned to have a 7,000- to 10,000-person capacity, including fixed seats and a lawn seating/standing area. There are existing residences located 1,500 feet west of Parcel 3, and Scenario 1 and Scenario 2 propose residences approximately 1,000 feet north of the venue as well. A

heron rookery is located on islands in the Mississippi River to the southeast of the proposed amphitheater.

The State of Minnesota has established noise standards for daytime and nighttime periods. These standards differentiate between daytime and nighttime hours, L<sub>50</sub> and L<sub>10</sub> time periods, and noise area classifications. The MPCA defines daytime hours as the hours between 7:00 a.m. to 10:00 p.m. and nighttime hours as the hours between 10:00 p.m. to 7:00 a.m. According to the statute, L<sub>10</sub> means sound levels exceeded 10 percent of the time during a one-hour survey and L<sub>50</sub> means sound levels exceeded 50 percent of the time during a one-hour survey. The noise area classifications are land use activities as defined in Minnesota Rules, part 7030.0050, subpart 3. In general, residential uses fall under Noise Area 1, commercial uses fall under Noise Area 2, and industrial uses fall under Noise Area 3.

**Table 16: The State of Minnesota’s Noise Standards<sup>29</sup>**

Noise Area Classification	Daytime		Nighttime	
	L <sub>50</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>10</sub>
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

Section 389.60 of the City Code provides sound level limits for non-exempted sources, and these limits match the State’s limits defined in Minnesota Rules, part 7030.0050 (Table 16). Provided the proposed community performing arts center receives a permit for sound amplifying equipment, the venue will be exempt from the Section 389.60 noise limits and instead will be subject to Section 389.105 of the City Code. This section pertains specifically to permitted sound amplifying equipment. Under Section 389.105, daytime permits for sound amplifying equipment are subject to the following relevant conditions:<sup>30</sup>

- A daytime permit limits the use of outside sound amplifying equipment to between the hours of 7:00 a.m. and 10:00 p.m. An extended hours permit is required for outside sound amplifying equipment used outside of this time.
- Sound amplification that does not meet the non-permitted limits in Section 389.60 shall be limited to 12 hours in any one day, 24 hours in any seven-day period, and 36 hours in any 28-day period for the same property.
- Sound measured at 50 feet from the source shall not exceed 90 dBA for standard and large block event permits.

<sup>29</sup> Source: Minnesota Rules, part 7030.0030 (2003)

<sup>30</sup> Source: Minneapolis, Minn., Municipal Code § 389.105(c)(3)

- Sound measured off the property where the equipment is allowed under the permit shall never be more than 15 dBA above the State’s daytime residential noise standard for standard and large block event permits.

First Avenue Productions anticipates around 54 events per year at this amphitheater over an 18-week timeframe. Attendance of anticipated events would range from 100 to 10,000 visitors, with an average event attendance of approximately 2,000 people. All of these events would take place within the daytime permit hours between 7:00 a.m. and 10:00 p.m. The noise assessment found the maximum facility-generated noise level of the proposed amphitheater does not exceed the City’s permitted limit in any location of proposed or existing residences. Additionally, the noise assessment found that while the industrial structures currently located in the proposed park provide some noise shielding, the proposed amphitheater would not exceed the City’s permitted noise limit in any location regardless of whether or not these are removed. According to the noise assessment, the proposed amphitheater complies with the permitted limits of the City’s noise ordinance.

## 18. TRANSPORTATION

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

The redevelopment of the Upper Harbor Terminal site is expected to start in 2022 and will be ongoing for the next five years, depending on market conditions. For purposes of developing traffic forecasts and evaluating future conditions, an opening year of 2024 and horizon year of 2040 were used. Traffic forecasts were developed for three future conditions, including year 2040 no-build; year 2040 Coordinated Development Plan (Scenario 1); and year 2040 Comprehensive Plan Maximum Build (Scenario 2). Due to the extended timeline of development, it is anticipated that traffic patterns and volume will incrementally change and be spread out over a number of years as development occurs, affording the ongoing opportunity for data collection and modification of the transportation networks over time.

### *Existing Traffic Volumes*

To analyze the traffic operations at the study intersections, weekday peak period turning movement counts were collected in March 2018 for the intersections along Dowling Avenue North and in March 2020 at the four study intersections on Lowry Avenue North and 33rd Avenue North. Traffic volumes collected during March 2020 were adjusted to account for business and school closures due to the COVID-19 pandemic.

Based on the analysis, the study intersections are currently operating at level of service (LOS) D or better during the a.m. and p.m. peak hours with the following exceptions:

- In the p.m. peak hour, the intersection of Lyndale Avenue North and Dowling Avenue North operates at LOS E. The northbound and southbound approaches at the intersection experience excessive delays.
- The intersection of Washington Avenue North and Dowling Avenue North operates at LOS F in the p.m. peak hour. The northbound leg has excessive delay and queuing as there are a substantial amount of northbound left turns with only a single lane approach and no turn lanes. The signal at the intersection currently operates with split phasing on the east and west approaches due to the offset intersection, which leads to higher delays at the intersection.

The movement LOS results at the study intersections are summarized in Appendix G.

### *Parking*

A parking study was completed to document the number of existing on-street parking spaces by block along the following street segments:

- Washington Avenue North, between Lowry Avenue North and 36th Avenue North
- North 2nd Street, between Lowry Avenue North and 36th Avenue North
- 34th Avenue North, between Washington Avenue North and North 2nd Street
- 33rd Avenue North, between Washington Avenue North and the dead end east of North 2nd Street
- North 4th Street/39th Avenue North, loop connected to Washington Avenue North at each end

The existing on-street parking supply in the study area totals 394 spaces based on passenger vehicles (see Appendix G for locations). There are existing sidewalk gaps by the on-street parking in the vicinity of the AUAR study area. These gaps are anticipated to be addressed as site planning progresses to improve access to the proposed development.

Parking occupancy counts were taken during the weekday and weekend in February-March 2021 to determine the demand for on-street parking. Parking counts taken during this time were not adjusted to account for the ongoing COVID-19 pandemic. The parking counts show that 28 to 37 percent of the curb space is occupied throughout the day. The mid-day time periods had the highest parking occupancy, which is likely due to the existing industrial land uses in the area. Between 12 and 19 percent of the curb space is occupied by trucks. The parking study is included in Appendix G.

### *No Build Scenario*

Parking demand is not anticipated to change under the No Build Scenario.



### *Scenario 1 and Scenario 2*

The anticipated parking demand for each development parcel under Scenario 1 and Scenario 2 was calculated and compared to the preliminary parking supply.<sup>31</sup> For Scenario 1 and Scenario 2, event parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs. Therefore, parking demand for Parcel 3 was not included in the calculations.

For Scenario 1, each individual parcel provides adequate parking supply to meet the parking demand within the parcel, except for Parcels 1B and 6A. However, the calculated parking demand does not account for shared parking between compatible land uses and the parking demand was not reduced based on mode share goals. In addition, Parcel 7B may be used for additional parking supply during Phase 1 of the development, providing approximately 316 surface spaces. Interim improvements would be required for this parcel to function as a parking lot through a conditional use permit and provide access to nearby development parcels.

For Scenario 2, the overall parking demand is more than double the proposed parking supply. Only Parcel 1A and Parcel 2 would have adequate parking. If the site is developed at the Scenario 2 density, parking and travel demand management measures should be reevaluated.

### *Trip Generation*

Trip generation was calculated based on the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation, 10<sup>th</sup> Edition. Standard ITE trip rates were used to calculate the total trips generated by each parcel based on each land use. A mode split, as agreed upon by the City, has been applied to the trip generation forecast to account for non-automobile trips.

Traffic associated with the community performing arts center was not included in the peak hour traffic analysis because this land use is not expected to generate traffic during a typical weekday peak hour. Traffic impacts and mitigation associated with event traffic are discussed further in the Mitigation Plan section of this report.

### *No Build Scenario*

Trip generation is anticipated to remain the same for the No Build Scenario.

### *Scenario 1*

Based on the results of the traffic analysis, Scenario 1 is anticipated to generate approximately 461 a.m. peak hour and 547 p.m. peak hour external vehicular trips. The proposed development is also anticipated to generate approximately 45 a.m. peak hour and 53 p.m. peak hour external non-automotive trips. The a.m. peak hour represents a typical weekday from 7:15 a.m. to 8:15 a.m., while the p.m. peak hour represents a typical weekday from 4:30 p.m. to 5:30 p.m. These trips represent the total external trip generation by transportation mode, as summarized in Table 17.

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<sup>31</sup> This does not include event parking. An event management plan will be required to manage traffic and parking needs off-site.

### Scenario 2

Based on the results of the traffic analysis, Scenario 2 is anticipated to generate approximately 816 a.m. peak hour and 905 p.m. peak hour external vehicular trips. The proposed development is also anticipated to generate approximately 72 a.m. and 85 p.m. peak hour external non-automotive trips. The a.m. peak hour represents a typical weekday from 7:15 a.m. to 8:15 a.m., while the p.m. peak hour represents a typical weekday from 4:30 p.m. to 5:30 p.m. These trips represent the total external trip generation by transportation mode, as summarized in Table 17.

**Table 17: External Vehicle Trip Generation Summary**

Parcel Group	Scenario 1	Scenario 2
<b>A.M. Peak Hour External Trips</b>		
Parcel 1A and Parcel 1B	235	278
Parcel 2 and Parcel 6B	53	105
Parcel 3, Parcel 4, and Parcel 5	172	339
Parcel 6A, Parcel 7A, and Parcel 7B	185	320
<b>Total Site Trips</b>	<b>645</b>	<b>1,042</b>
Internal Site Capture	-139	-154
Mode Split Reduction -7% Non-Auto	-45	-72
<b>Total External Vehicle Trips</b>	<b>461</b>	<b>816</b>
<b>P.M. Peak Hour External Trips</b>		
Parcel 1A and Parcel 1B	247	299
Parcel 2 and Parcel 6B	93	162
Parcel 3, Parcel 4, and Parcel 5	169	323
Parcel 6A, Parcel 7A, and Parcel 7B	246	432
<b>Total Site Trips</b>	<b>755</b>	<b>1,216</b>
Internal Site Capture	-155	-226
Mode Split Reduction -7% Non-Auto	-53	-85
<b>Total External Vehicle Trips</b>	<b>547</b>	<b>905</b>

### Transit

There are currently no transit routes that directly serve the development site. The closest bus stops that could be accessed from the development are located at Dowling Avenue North and North 6th Street, Dowling Avenue North and Lyndale Avenue North, and on Lowry Avenue North between Washington Avenue North and North 2nd Street. Metro Transit Route 22, Route 721, and Route 32 operate at these bus stops (Figure 16). The City's Transportation Action Plan identifies a mode shift goal of three of every five trips being made by walking, biking, or transit by 2030. Both the Transportation Action Plan and the City's Vision Zero Action Plan promote narrower roadways that prioritize pedestrian and bicycle access, comfort and safety. Potential future transit routes through the development are under consideration and will be coordinated between the City, MPRB, and Metro Transit.

### Bicycle and Pedestrian Infrastructure

Currently, the AUAR study area and the surrounding roads contain limited bicycle and pedestrian infrastructure (see Figure 17). All the streets within and adjacent to the study area

contain sidewalk gaps on one or both sides. The nearest off-street bike and pedestrian opportunities are in the North Mississippi Regional Park to the north of the AUAR study area, on the other side of I-94, and across the Mississippi River from the site.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project’s impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation’s Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance.**

*AUAR Guidance: For AUAR reviews, a detailed traffic analysis will be needed, conforming to the MnDOT guidance as listed on the EAW form. The results of the traffic analysis must be used in the response to Items 16 and 17.*

#### **No Build Scenario**

The traffic analysis for the No Build Scenario in 2024 showed that the study intersections are expected to operate at the same LOS as the existing conditions in the a.m. and p.m. peak hours with the following exceptions:

- Dowling Avenue North and Lyndale Avenue North - This intersection operated at LOS D in the existing condition a.m. peak hour and is expected to operate at LOS E in the opening year a.m. peak hour.

The traffic conditions for the No Build Scenario in 2040 are expected to operate at the same LOS as 2024 with the following exceptions:

- During the p.m. peak hour, the intersection of Lyndale Avenue North and Dowling Avenue North is anticipated to operate at LOS E; however, the delays are near the LOS F threshold.

The No Build Scenario includes no improvements to pedestrian, bicycle, or transit facilities.

#### **Scenario 1 and Scenario 2**

A motor vehicle traffic impact study was completed in December 2020 for the AUAR because the trip generation is anticipated to exceed the 250 trip peak hour vehicle threshold. The results of this study can be found in Appendix G. Based on the detailed findings of the Upper Harbor Terminal Traffic Analysis Report, the area’s transportation network is expected to support redevelopment within the AUAR study area with mitigation. Additionally, the AUAR traffic analysis identified motor vehicle turn lanes and through lanes that could be constructed to mitigate possible future motor vehicle traffic impacts associated with development within the AUAR study area. Metrics for traffic analysis include intersection delay as measured by LOS and queue lengths.

The traffic analysis report includes intersection capacity analyses for intersections immediately adjacent to the AUAR study area along Dowling Avenue North, Washington Avenue North, North 2nd Street, and Lowry Avenue North as well as intersection operations at site access points (see locations identified on Figure 15). Based on the results of the study and the estimated traffic generated by the proposed development scenarios within the AUAR study area, several intersections operate poorly in the build conditions without mitigation.

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

***Scenario 1 and Scenario 2***

The analysis of the Opening Year Build conditions demonstrated that the existing transportation network would be expected to have operational issues for motor vehicle traffic as a result of the development proposed under Scenario 1 and Scenario 2. The City of Minneapolis' policy guidance provides direction on the type and scope of mitigation measures that should be considered for this development. The City's Transportation Action Plan identifies a mode shift goal of 3 of every 5 trips being made by walking, biking, or transit by 2030. Both the Transportation Action Plan and the Vision Zero Action Plan promote narrower roadways that prioritize pedestrian and bicycle access, comfort, and safety.

As a result, the Mitigation Plan for this development seeks to balance the need for motor vehicle mobility with the City's adopted policies to expand non-motorized transportation with designs that promote safe and comfortable travel. The mitigation measures identified in this plan address key issues such as expanding space for walking and biking, supporting expansion of transit service, and vehicle queuing onto mainline I-94 without overbuilding the roadway capacity, which would serve to encourage growth in motor vehicle traffic as well as facilitating higher vehicle speeds.

The Mitigation Plan for the transportation network is identified in two phases (Phase A and Phase B) that implement transportation improvements only as they are needed based on development intensity and increasing levels of travel generated by the development. Parcels included in Phase 1 and in Phase 2 of the development under both Scenario 1 and Scenario 2 are illustrated on Figure 2.

- Phase A – Development intensity generates less than 6,000 vehicle trips per day and forecast daily vehicle volumes on Dowling Avenue North at Washington Avenue North (with development traffic) are less than 15,000 vehicles per day. This mitigation is expected to be applicable to both development scenarios:
  - Scenario 1 - Phase 1 and Phase 2 development
  - Scenario 2 - Phase 1 development
- Phase B – Development intensity generates 6,000 vehicle trips per day or more and forecast daily vehicle volumes on Dowling Avenue North at Washington Avenue North

(with development traffic) are 15,000 vehicles per day or more. This mitigation is expected to be applicable only to Scenario 2.

- Scenario 2 - Phase 2 Development

Additionally, there are several plans to improve bicycle, pedestrian, and transit access to and through the site:

- A design concept for Dowling Avenue North includes the construction of new walking, biking, and rolling infrastructure from Lyndale Avenue North to the Upper Harbor Terminal site.
- A design concept for the construction of a north-south parkway includes a new alignment adjacent to the park property to support accessibility along the riverfront. The design provides space for separated bicycle trails and walking paths adjacent to the park and sidewalk adjacent to development sites.
- Bike and pedestrian safety improvements for the CP rail crossings on 33rd Avenue North.
- A design concept for 33rd Avenue North includes the construction of walking, biking, and rolling infrastructure along 33rd Avenue North from 2nd Street North to the Upper Harbor Terminal site.
- The proposed park will include pedestrian and bike trails connecting to existing or planned city sidewalks, bicycle lanes, and trails. These connections will seek to create multimodal connections to reconnect the rest of North Minneapolis to the Mississippi River.
- The City will continue to work with Metro Transit to coordinate improvements that support existing and future transit service upgrades.

#### *Event Transportation Management Plan*

##### **No Build Scenario**

An event transportation management plan (ETMP) would not be necessary under the No Build Scenario because the community performing arts center and the park would not be constructed.

##### **Scenario 1 and Scenario 2**

A comprehensive event ETMP will be required for the community performing arts center that is proposed on Parcel 3 and the public park that is proposed on Parcel 2 of the development. See the mitigation plan section for more details about the ETMP. The development of the ETMP is an identified mitigation measure that addresses the range of events that would be expected to occur at the site, including:

- Weekend evening capacity event at music venue or park
- Weekend day capacity event at music venue or park



## Upper Harbor Terminal – AUAR

- Weekend non-capacity event at music venue or park
- Weekend capacity events at both the music venue and the park
- Weekday evening capacity event at music venue or park, which includes overlap and interaction with p.m. peak traffic.

Figure 15: Study Intersections





Figure 16: Existing Transit Service Serving the AUAR Study Area

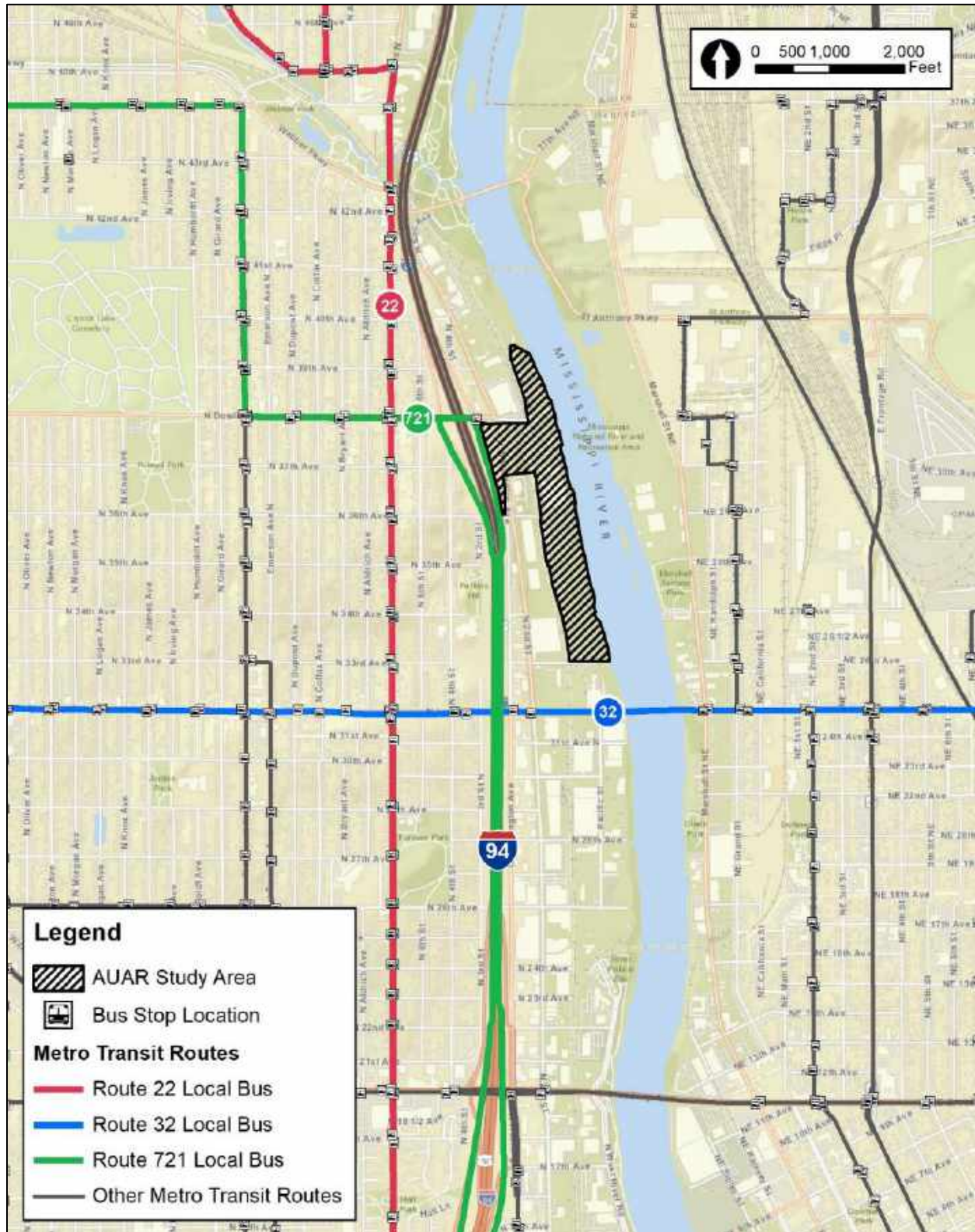




Figure 17: Existing and Proposed Bicycle and Pedestrian Infrastructure



## 19. CUMULATIVE POTENTIAL EFFECTS

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*AUAR Guidance: Because the AUAR process by its nature is intended to deal with cumulative potential effects from all future developments within the AUAR area, it is presumed that the responses to all items on the EAW form automatically encompass the impacts from all anticipated developments within the AUAR area.*

*However, the total impact on the environment with respect to any of the items on the EAW form may also be influenced by past, present, and reasonably foreseeable future projects outside of the AUAR area. The cumulative potential effect descriptions may be provided as part of the responses to other appropriate EAW items, or in response to this item.*

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

Cumulative potential effects are defined as the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.”<sup>32</sup> The geographic areas considered for cumulative effects are those areas adjacent to the AUAR study area, and the timeframe considered includes projects that would be constructed in the reasonably foreseeable future.

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

The following reasonably foreseeable future projects may interact with environmental effects of the proposed development:

- Outfall Repairs - The City of Minneapolis is planning storm sewer repair work at the 60-inch outfall to the Mississippi River located at Dowling Avenue. The repair work is required due to maintenance purposes and will be completed in coordination with the Dowling Avenue North and 33rd Avenue North reconstruction projects to minimize construction disruption to the neighborhood.
- Upper Dowling Reconstruction – This project includes a full reconstruction of Dowling Avenue North between Lyndale Avenue North and the Upper Harbor Terminal site to address aging and deteriorating infrastructure, as well as to improve safety, access, and mobility for pedestrian, bicycle, and vehicular traffic along the corridor. The project will also provide green infrastructure stormwater management and habitat improvements within the reconstructed right-of-way along the corridor. The project will significantly

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<sup>32</sup> Minnesota Rules, part 4410.0200, subpart 11a



improve access to the Upper Harbor Terminal site while providing green infrastructure and stormwater management. Additionally, the project will facilitate coordination with CP Rail to make safety improvements to the two railroad crossings on Dowling Avenue North. The City of Minneapolis is completing a separate, concurrent environmental review for this roadway project. Construction is anticipated to begin in 2023. This project does not include construction activities for the bridge over I-94, however restriping, bollard placement and a 2-foot curb may be considered as necessary.

- 33rd Avenue North Reconstruction (west of the CP Rail line) – This project includes a full reconstruction of 33rd Avenue North from North 2nd Street to the Upper Harbor Terminal site to address aging and deteriorating infrastructure, as well as to improve safety, access, and mobility for pedestrian, bicycle, and vehicular traffic. Construction is anticipated to begin in 2023.
- Xcel Energy – 115 kv double unit overhead electrical transmission lines and pole structures are currently located on the Upper Harbor Terminal site between the rail line and the Mississippi River and cross to the east bank of the river. The proposed relocation plan would relocate the north-south alignment of the overhead high transmission powerlines and existing 84-foot and 131-foot pole structures to the western edge of the site, adjacent to the north/south CP Rail tracks, and raise the heights of these structures to 90 feet and 155 feet in order to minimize the impact on the future park and development on the Upper Harbor Terminal site. These poles will change from lattice towers to monopoles. The relocation plan will also maximize the development of the Upper Harbor Terminal site and proposed park area. Xcel Energy also has underground 13.8 kv distribution feeder and manholes in the 35th Avenue North right-of-way. As part of the vacation of right-of-way process, Xcel Energy will retain a utility easement over the feeder and manholes for access and maintenance. Xcel Energy is in the process of completing an environmental review and will obtain any necessary permits or approvals for the transmission line relocation.
- Highway 252 and I-94 – MnDOT is currently evaluating transportation alternatives on Highway 252 between Highway 610 in Brooklyn Park and I-94/I-694 in Brooklyn Center as well as on I-94 between I-94/I-694 in Brooklyn Center and the 4th Street exit to downtown Minneapolis and will complete an environmental review. Construction is anticipated to begin in 2026.

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

The development of the AUAR study area would affect land use, geology/soils, water resources, contamination/hazardous waste, fish/wildlife, historic properties, visual, air, noise, and transportation. The outfall repairs will have minimal cumulative potential effects within the

AUAR study area. Although the Upper Dowling and 33rd Avenue North road projects may have impacts on traffic, which are identified in the AUAR transportation analysis and mitigation plan, these planned future road improvements will result in a cumulative benefit to bicycle, pedestrian, and motorized travel within the Upper Harbor Terminal site and the surrounding area. The relocation of the Xcel Energy transmission lines may have impacts related to water and visual resources; however, the relocation would also maximize development and park area of the Upper Harbor Terminal site and the powerline easement area could be re-used for co-locating public utilities, loading, circulation, parking, and stormwater management. The Highway 252 and I-94 project may have an impact on traffic adjacent to the Upper Harbor Terminal site.

All other impacts from these future projects will be addressed via regulatory permitting and approval measures; therefore, they will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources.

## 20. OTHER POTENTIAL ENVIRONMENTAL EFFECTS

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

The items described below are potential environmental effects specific to this project that are not covered under the other items in the AUAR.

### *Railroad Coordination*

#### **No Build Scenario, Scenario 1, and Scenario 2**

A CP Rail line runs north-south through the AUAR study area and continues to provide rail shipping service to properties south of the Upper Harbor Terminal site. During normal operating hours (8:00 a.m. to 5:00 p.m.), there is an average of five trains per week on the main spur line.

The Federal Railroad Administration has determined the crossings at Dowling Avenue North and 33rd Avenue North will retain pre-rule quiet zone status regardless of any modifications introduced during the redevelopment of the site. Pre-rule quiet zone designation refers to the crossing warning system that includes constant warning time devices.

### *Crossing Signal Improvements*

#### **Scenario 1 and Scenario 2**

Scenario 1 and Scenario 2 propose gate arm protections for motor vehicles on the east and west sides of the two CP Rail mainline tracks that cross Dowling Avenue North where the rail for the siding track will be removed as part of the redevelopment. Additionally, any trails will require gate arm protection with both auditory and visual warning systems. Pedestrian sidewalks will not require a separate gate mast or separate gate arm.

There are two mainline CP Rail tracks that cross 33rd Avenue North within the AUAR study area. Currently, overhead cantilever flashers and gate arm protections are provided west of the tracks. East of the tracks, only vertical flasher and gate arm protection is provided. Prior to finalizing Preliminary Engineering active warning device layout, coordination with CP Rail may be needed for providing the following safety measures:

- Confirm there is no need to provide cantilever protection east of the mainline tracks at 33<sup>rd</sup> Avenue North.
- Confirm pedestrian and shared use trail protection at 33rd Avenue North and Dowling Avenue North is enough and still warranted in all instances.

### *Emergency Services*

#### **Scenario 1 and Scenario 2**

The City's Emergency Response Plan (fire/police/EMS) for the redevelopment of the Upper Harbor Terminal site will be coordinated through the City's Public Works Department and Fire Department to identify any potential access issues for the site. This plan will be prepared as part of the Preliminary Development Review (PDR) process during the Land Use Application and will be reviewed by the City's Public Works Department and Fire Department. An event traffic management plan will also be developed for the community performing arts center and the park as part of the PDR process and will include access for fire/police/EMS services. The Emergency Response Plan and traffic event management plan will be shared with Metro Transit to facilitate coordination with Metro Transit Street Operations and the Metro Transit Police Department.

### *Sustainability*

#### **Scenario 1 and Scenario 2**

In 2014, the City of Minneapolis adopted the *Minneapolis Climate Action Plan (CAP)*. This plan provides several action steps for the City to take towards reducing citywide greenhouse gas emissions. Scenario 1 and Scenario 2 support several strategies identified in the CAP, including:

- **Plan for and encourage “complete neighborhoods”** – Scenario 1 and Scenario 2 propose a diversity of uses to create a neighborhood with several goods and services within walking distance for residents living in and around the Upper Harbor Terminal site.
- **Promoting natural landscapes in Minneapolis** – Scenario 1 and Scenario 2 propose shoreline restoration and natural vegetation within the proposed park and stormwater management on site.
- **Support implementation of the Pedestrian Master Plan and Bicycle Master Plan** – Scenario 1 and Scenario 2 augment the City's bicycle and pedestrian network by creating critical network connections and addressing infrastructure gaps.

- **Encourage “net-zero” energy buildings** – Scenario 1 and Scenario 2 will complete and make public a feasibility study for achieving Net Zero and Carbon Free projects for each development parcel.

As noted in Section 18, the City’s Transportation Action Plan also identifies a mode shift goal of three of every five trips being made by walking, biking, or transit by 2030 and promote narrower roadways that prioritize pedestrian and bicycle access, comfort and safety.

Additionally, one of the goals of the Draft Coordinated Development Plan is to repair environmental injustices through sustainable development, and the Draft Coordinated Development Plan outlines specific objectives, outcomes, and strategies to accomplish this. Table 18 includes the measures from the Draft Coordinated Development Plan plus additional sustainability measures developed as part of the AUAR process.

Table 18: Scenario 1 Sustainability and Environmental Justice Measures

Objectives	Outcomes	Strategies
<p>Increase native vegetation and protect natural, open, green, and river wildlife and pollinator habitat</p>	<ul style="list-style-type: none"> <li>• 25% of site area excluding building footprints should be planted using native species.</li> <li>• Design the site to provide habitats (food, nesting, cover, and shelter) for wildlife that utilizes the Mississippi River. Wildlife includes migratory and other birds, aquatic and riparian species, insects and pollinators.</li> <li>• Improve ecological systems on the River.</li> </ul>	<ol style="list-style-type: none"> <li>1. Provide green infrastructure and landscaping that will increase native vegetation and pollinator habitats.</li> <li>2. Improve habitat connectivity between the Mississippi River and Northside Neighborhoods.</li> <li>3. Provide connected natural spaces and green infrastructure throughout all parcels.</li> <li>4. Naturalize the shoreline and uplands between the river and the pedestrian path.</li> <li>5. Look for opportunities to maintain any existing high quality vegetation where proposed grades allow.</li> <li>6. Design necessary lighting to minimize harm to wildlife, by controlling light pollution, application of lighting controls to reduce unnecessary lighting and adjust to migratory seasons and patterns.</li> </ol>
<p>Increase access to the Mississippi River</p>	<ul style="list-style-type: none"> <li>• Provide pedestrian and multi-modal connections across I-94 connecting North Minneapolis to Mississippi River.</li> <li>• Provide protected bike paths and sidewalks to the Mississippi River.</li> <li>• Provide protected bike paths and sidewalks along the Mississippi River to connect into the City bicycle network.</li> <li>• Work with Metro Transit to incorporate and support new/expanded bus routes to the site.</li> </ul>	<ol style="list-style-type: none"> <li>1. Provide wide boulevards that offer separation from vehicle traffic and allow for healthy trees, landscaping, furnishings, public art, snow storage, green stormwater infrastructure, signage and pedestrian level street lighting.</li> <li>2. Explore funding and partnership opportunities with MnDOT to reconfigure the Dowling Avenue Bridge and construct a new nonmotorized bridge across I-94.</li> <li>3. Upgrade bicycle lanes to off-street trails that are separated from sidewalks and pedestrian paths.</li> <li>4. Look for opportunities to use connected natural spaces throughout the site as public space to connect all portions of the site to parks and the river.</li> <li>5. Flatten slopes along the shoreline to provide increased access.</li> </ol>



Objectives	Outcomes	Strategies
<p>Improve environmental conditions in North Minneapolis</p>	<ul style="list-style-type: none"> <li>• Reduce registered air pollutants by 25% from 2020 levels.</li> <li>• Manage more than 90% of site stormwater on-site.</li> <li>• Enhance long term soil quality through vegetation and water management.</li> <li>• Maximize carbon storage in soil through revegetation with native plants.</li> <li>• Clean contaminated soils on site, using phytoremediation and long-term solutions to amend soil in place where feasible.</li> <li>• Create areas (gardens/food forests) to grow and harvest healthy foods.</li> <li>• Create educational areas for ecological jobs/careers training and public/group immersive learning.</li> </ul>	<ol style="list-style-type: none"> <li>1. Coordinate implementation strategies with Northside Green Zone goals.</li> <li>2. Meet or exceed Minneapolis regulations and MWMO’s stormwater standards.</li> <li>3. Install an air quality monitor to track air pollutants.</li> <li>4. Implement restrictions to reduce air pollution from construction vehicles.</li> <li>5. Construct safe and comfortable walking and biking facilities that connect to the existing transportation network.</li> <li>6. Incorporate sustainable landscaping and tree canopy throughout the proposed development.</li> </ol>
<p>Use clean energy generated from local renewable resources and improve energy efficiency of buildings</p>	<ul style="list-style-type: none"> <li>• Provide 50% of the building’s needs with on-site local renewable energy.</li> <li>• Achieve LEED for Communities Silver certification for the overall project.</li> <li>• Enroll 50% of multifamily buildings in the energy efficiency programs.</li> <li>• Lower energy costs to businesses that relocate to Upper Harbor Terminal.</li> </ul>	<ol style="list-style-type: none"> <li>1. Achieve LEED for Communities v4.1 for the overall site and LEED -NC Silver for all private developments.</li> <li>2. Achieve B3 standards for the community performing arts center.</li> <li>3. Provide energy efficient housing that complies with the Minneapolis Unified Housing Plan.</li> <li>4. Complete and make public a feasibility study for achieving Net Zero and Carbon Free projects for each development parcel.</li> </ol>

### *Environmental Justice*

The City of Minneapolis defines environmental justice as “the right to a clean, safe, and healthy quality of life for people of all races, incomes, and cultures.”<sup>33</sup>

Historically, public investment opportunities in Minneapolis and nationwide have often disproportionately adversely affected communities of color, including North Minneapolis. These historic choices have and continue to create environmental and socioeconomic disparities for residents living in these communities.

Adopted in 2016, the Green Zones Initiative is part of implementation of the City’s 2014 Climate Action Plan. It strives to remedy the environmental justice overburden in certain areas of Minneapolis and is one of the City’s most direct efforts to address environmental inequality. The Green Zones Initiative is a place-based policy initiative aimed at improving health and supporting economic development using environmentally conscious efforts in communities that face the cumulative effects of environmental pollution, as well as social, political, and economic vulnerability.<sup>34</sup> In 2017, the City designated the Southside Green Zone and the Northside Green Zone as part of this initiative. The Upper Harbor Terminal is located within the Northside Green Zone.

### *No Build Scenario*

The No Build Scenario remains consistent with the existing conditions and land uses of the site and does not advance efforts to address environmental justice, improve health, and support economic development.

### *Scenario 1 and Scenario 2*

The Draft Coordinated Development Plan seeks to coordinate implementation strategies with Northside Green Zone goals. One of the goals of the plan is to “significantly advance community-wide efforts to repair environmental injustices, particularly to Northside residents, and more specifically to the Northside’s Black community.” After several years of public engagement, the Draft Coordinated Development Plan has identified development solutions intended to benefit residents of color. These include strategies aimed at providing economic opportunities for residents in the neighborhood, disrupting gentrification and displacement, creating a diverse housing stock in the neighborhood, repairing environmental injustices, and creating inclusive public spaces in the Northside. The development team will create an advisory group to assist in the implementation of the environmental justice strategies identified in the Draft Coordinated Development Plan (see Table 17).

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<sup>33</sup> Source: City of Minneapolis. Minneapolis 2040: Policies – Environmental Justice and Green Zones.  
<https://minneapolis2040.com/policies/environmental-justice-and-green-zones/>

<sup>34</sup> Source: City of Minneapolis. Green Zones Initiative.  
<https://www2.minneapolismn.gov/government/departments/coordinator/sustainability/policies/green-zones-initiative/>

American Community Survey data from 2015-2019 was used to determine if residents of color and/or low-income populations are present in or adjacent to the AUAR study area. The project falls within or is adjacent to five block groups (see Figure 18). A demographic summary by block group is shown in Table 20 and Table 21.

All five block groups have a higher percentage of residents of color than the citywide average (ranging from 7 percent to 44 percent higher). Additionally, all five block groups have higher percentages of residents below the poverty level than the citywide average (ranging from 4 percent to 17 percent higher) (see Figure 18 and Figure 19).

The Draft Coordinated Development Plan was informed by more than a decade of community engagement in this area as summarized in Table 19.

**Table 19: Community Engagement Involving the Upper Harbor Terminal Site**

Year(s)	Organization(s)	Purpose
2010–2012	RiverFirst, MPRB	RiverFirst was an initiative to refocus attention on the inaccessible sections of the Mississippi River, and re-envision the industrialized land as public green space. The MPRB and the Minneapolis Parks Foundation conducted community engagement to inform the upcoming master plans.
2012-2013	Above the Falls Master Plan Update and Above the Falls Regional Park Master Plan	The City of Minneapolis and MPRB collaborated on adjacent park and city master plans in the Above the Falls area, including the Upper Harbor Terminal site.
2015 – 2016	City of Minneapolis, MPRB	The City of Minneapolis and MPRB conducted community engagement to raise awareness of the upcoming project, build community partners and relationships, increase familiarity with the site and area, and inform the search for a master developer.
2017	City of Minneapolis, MPRB, and United Properties / Thor / First Avenue	Collaborative community engagement was conducted to inform the 2018 draft redevelopment concept plan.
2018	City of Minneapolis, MPRB, and United Properties / Thor / First Avenue	Community engagement was conducted to receive feedback on the draft redevelopment Concept Plan, which was revised based on community feedback received and approved by the Minneapolis City Council in March 2019.

Year(s)	Organization(s)	Purpose
2019	City of Minneapolis	The Minneapolis City Council established the Upper Harbor Terminal Collaborative Planning Committee, comprised of local North and Northeast Minneapolis residents that represent defined North and Northeast communities, diverse cultural groups, and other stakeholder groups.
2019-2021	MPRB	The MPRB established the Upper Harbor Terminal Community Advisory Committee as a deliberation group comprised of community volunteers. MPRB hired local teams to assist with targeted outreach to under-represented community members and conducted broader public engagement work outside public meetings and the advisory committee.
2019 – 2020	Public Policy Project-Environmental Justice Coordinating Council (PPP-EJCC), Pillsbury United Communities (PUC), McKnight Foundation	Learning Tables community engagement events were convened monthly by PPP-EJCC with the support of PUC and the McKnight Foundation and with participation by the City and United Properties. The purpose of the Learning Tables was to ensure the development at Upper Harbor Terminal creates a space that enhances the social fabric of Minneapolis, brings greater wealth and local ownership to the community, and fosters strong relationships between Minneapolis and the river.
2020-2021	City of Minneapolis	Engagement activities focused on enhancing community awareness of the redevelopment and gathering feedback on the Draft Coordinated Plan for redevelopment.



Figure 18: Block Groups with Higher than Average Low-Income Residents

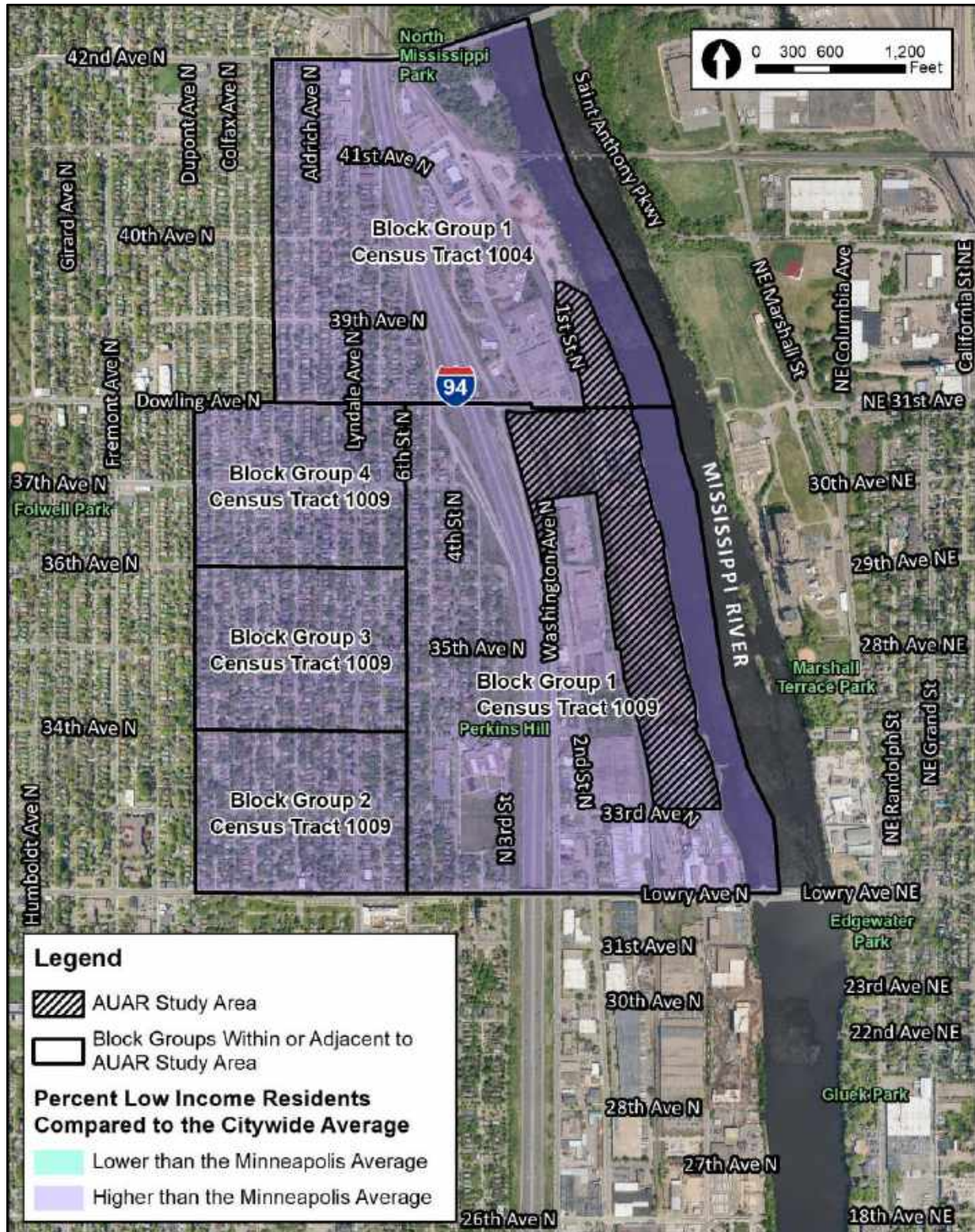




Figure 19: Block Groups with Higher than Average Residents of Color

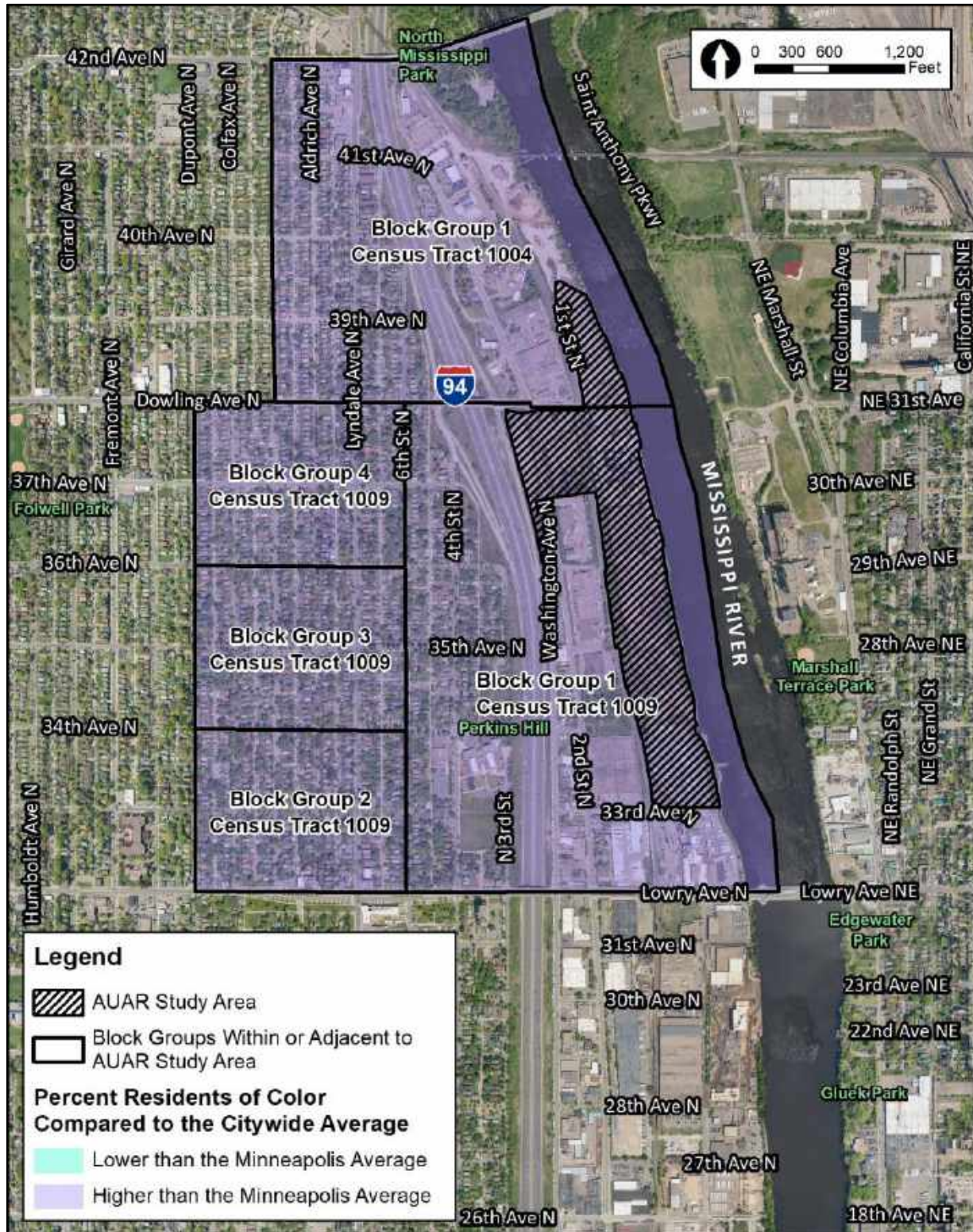


Table 20: Demographic Analysis Summary by Race

	Total Population	Total White, not Hispanic or Latino	Total Residents of Color	% Total Non-White	Difference from City
Minneapolis	429,605	252,180	177,425	41%	--
Block Group 1, Census Tract 1004	1,207	256	951	79%	+38%
Block Group 1, Census Tract 1009	578	140	438	76%	+35%
Block Group 2, Census Tract 1009	1,273	193	1080	85%	+44%
Block Group 3, Census Tract 1009	533	197	336	63%	+22%
Block Group 4, Census Tract 1009	700	362	338	48%	+7%

Table 21: Demographic Analysis Summary by Poverty Status

	Population for Whom Poverty Status is Determined	Population Below Poverty Level	% Below Poverty Level	Difference from City
Minneapolis	414,119	72,208	17%	--
Block Group 1, Census Tract 1004	1,207	419	34%	+17%
Block Group 1, Census Tract 1009	578	125	22%	+5%
Block Group 2, Census Tract 1009	1,273	270	21%	+4%
Block Group 3, Census Tract 1009	533	143	27%	+10%
Block Group 4, Census Tract 1009	700	190	27%	+10%

## Final Mitigation Plan

This Mitigation Plan is submitted as part of the Final AUAR to provide reviewers and regulators with an understanding of the actions that are advisable, recommended, or necessary to protect the environment and minimize potential impacts by the proposed development scenarios. This Final was revised and updated based on comments received during the Draft AUAR comment period. Responses to these comments are included in Appendix H and copies of the comment letters are included in Appendix I.

This Mitigation Plan is intended to satisfy the AUAR rules that require the preparation of a mitigation plan that specifies measures or procedures that will be used to avoid, minimize, or mitigate the potential impacts of development within the AUAR study area. Although mitigation strategies are discussed throughout the AUAR document, this plan will be formally adopted by the RGU as their action plan to prevent potentially significant environmental impacts.

The primary mechanism for mitigation of environmental impacts is the effective use of ordinances, rules, and regulations. The plan does not modify the regulatory agencies’ responsibilities for implementing their respective regulatory programs nor create additional regulatory requirements. The plan specifies the legal and institutional arrangements that will assure that the adopted mitigation measures are implemented.

These AUAR items have identified regulatory requirements and/or mitigation measures that reduce the level of potential impact of development within the study area.

The following mitigation summary applies to Scenario 1 and Scenario 2. No mitigation strategies have been identified for the No Build Scenario.

**Table 22: Anticipated Permits and Approvals**

Unit of Government	Type of Application	Status
<b>Federal</b>		
U.S. Army Corps of Engineers	Section 404	To be applied for, if needed
<b>State</b>		
Minnesota Department of Natural Resources	Water Appropriation Permit	To be applied for, if needed
	Public Waters Permit	To be applied for, if needed
Minnesota Pollution Control Agency	National Pollutant Discharge Elimination System Stormwater Permit for Construction Activities	To be applied for
	Section 401 Water Quality Certification	To be applied for, if needed
	Sanitary Sewer Extension Permit	To be applied for
	Industrial Stormwater Permit	To be applied for, if needed
	Notice of Intent of Demolition	To be applied for
	Construction Contingency Plan and Response Action Plan approval	To be applied for, if needed



Unit of Government	Type of Application	Status
Minnesota Department of Health	Water Main Installation Permit	To be applied for
<b>Regional</b>		
Metropolitan Council	Sewer Connection Permit	To be applied for
	Standard Industrial Discharge Permit	To be applied for
	Encroachment Agreement	To be applied for
Hennepin County	Right-of-Way Permits	To be applied for
	Road Access Permits	To be applied for
<b>Local</b>		
City of Minneapolis	Plumbing Permits	To be applied for
	Water Main Installation	To be applied for
	Alternative Urban Areawide Review	In process
	Development Agreements	To be applied for
	Land Use Applications, including but not limited to comprehensive plan amendments, rezonings, conditional use permits, variances, site plan review, etc.	To be applied for, if needed
	Permit for Stormwater Management, Erosion and Sediment Control, Wetland Management	To be applied for
	Preliminary and Final Plat	To be applied for
	Zoning code text amendment to allow outdoor amphitheaters	To be applied for
	Sign Permit	To be applied for
	Building Permit	To be applied for
	Excavation and Grading Permit	To be applied for
	Certificate of Occupancy	To be applied for
	Emergency Generator Fuel Storage Permit	To be applied for
	Erosion and Sedimentation Control Plan Approval and Grading Permit	To be applied for
	Demolition Permit	To be applied for
	Right-of-Way and Utility Easement Vacations	To be applied for, if needed
	Temporary Water Discharge Permit	To be applied for, if needed
	After Hours Work Permit	To be applied for, if needed
	Lane Obstruction Permit	To be applied for, if needed
	Utility Repair Permit	To be applied for, if needed
Sidewalk Construction Permit	To be applied for, if needed	
Testing and Inspection Permit	To be applied for, if needed	
Floodplain – No Rise Certificate	To be applied for, if needed	
Water Discharge for Dewatering or Storm Water Ponds	To be applied for, if needed	

Unit of Government	Type of Application	Status
	Well Permit	To be applied for, if needed
	Tank Permit	To be applied for, if needed
	Temporary On-Site Storage of Impacted Soil Approval	To be applied for, if needed
	Approval of Impacted Soil Reuse	To be applied for, if needed
	Noise permit for amphitheater events	To be applied for, if needed
	Coordinated Development Plan Approval	In process
	Mississippi River Corridor Critical Area (MRCCA) Vegetation Removal Permit	To be applied for, if needed
	MRCCA Land Alteration Permits	To be applied for, if needed
<b>Other</b>		
CP Rail	Flagging Agreement Permit	To be applied for
	Minimum safety Requirements Permit	To be applied for
	Right of Entry Permit	To be applied for
	Funding Agreement with MnDOT Permit	To be applied for
	Crossing Agreement in coordination with MnDOT	To be applied for

Implementation of feasible mitigation measures will be addressed through site plan review, permitting, and developer agreements with the City of Minneapolis. The following definitions relate to the entities identified in the “responsible party” column in Table 23:

- **Applicable Developer:** refers to the entity responsible for the construction or work related to the applicable development component which may be (i) a development entity for a particular development parcel, (ii) the City for public infrastructure construction, or (iii) the MPRB for the park improvements.
- **Contractor/Permit Holder:** refers to the contractor hired by one of the applicable developers listed above to which a permit has been issued or to transferred.



Table 23: Mitigation Summary for Scenario 1 and Scenario 2

Resource Area	Mitigation	Responsible Party
<p><b>Land Use</b></p>	<p><b>Comprehensive Plan Amendment</b> – A comprehensive plan amendment will be required to align the proposed parcels with the future land use and built form districts included in the Comprehensive Plan.</p>	<p>City of Minneapolis</p>
	<p><b>Transportation Analysis Zone (TAZ) Changes</b> - Coordinate with the Metropolitan Council regarding TAZ forecast changes for the AUAR study area. If any modifications are needed, those will be coordinated with the Metropolitan Council directly.</p>	<p>City of Minneapolis</p>
	<p><b>Rezoning</b> – All Parcels: Any proposed development for Scenario 1 or Scenario 2 would require a zoning change to the parcels within the study area to allow for residential, commercial, retail, and park uses.</p>	<p>City of Minneapolis</p>
	<p><b>Zoning Code Text Amendment</b> – Parcel 3: The proposed outdoor amphitheater, as part of the community performing arts center on Parcel 3, is not a recognized use in the Minneapolis Zoning Code. A zoning code text amendment would be required to allow this use.</p>	<p>City of Minneapolis</p>
	<p><b>Conditional Use Permit</b> – Parcel 6A: The height of the proposed building on Parcel 6A is 75 feet, which is higher than the 65-foot maximum height allowed in the City’s MRCCA Overlay District. A Conditional Use Permit would be required to increase the allowable height on this parcel. (See Section 9 for height increase permit criteria)</p>	<p>Applicable Developer</p>
	<p><b>Height Premiums</b> – Parcel 7A: A 15-story building is proposed on Parcel 7A. This building would require height premiums in order to exceed the standard allowable height of its built form overlay district.</p>	<p>Applicable Developer</p>
	<p><b>Comprehensive Plan Amendment</b> - Parcel 7A: A 15-story building is proposed on this parcel, designated Corridor 6. The maximum building height for the BFC6 Corridor 6 Built Form Overlay District may only be increased up to 10 stories or 140 feet, provided all applicable sections of Built Form Overlay Districts ordinance section 552.530 are met. This would require a comprehensive plan amendment to allow additional building height.</p>	<p>Applicable Developer and City of Minneapolis</p>
	<p><b>Conditional Use Permits</b> – Parcels 1A, 1B, 3, 4, and 5: A conditional use permit would be required to increase the building height over the maximum of 35 feet on all parcels within the Shoreland Overlay District.</p>	<p>Applicable Developer</p>

Resource Area	Mitigation	Responsible Party
<p><b>Geology, Soils, and Topography</b></p>	<p><b>Erosion and Sediment Control</b> - Temporary erosion and sediment control measures will be implemented during construction. Because the study area is located on the Mississippi River, erosion and sediment protection will be provided upstream and in the water (where appropriate) while work is conducted along the riverbank. Additionally, storm sewer inlet protection, silt fence, floating silt fence, biologs, erosion mats, and construction entrance protection will be provided. The contractor will need to prepare a Construction Contingency Plan and Response Action Plan for MPCA approval to document plans for handling unknown materials during construction.</p> <p>Erosion prevention and sediment control practices will be implemented on-site per the NPDES General Stormwater Permit requirements.</p>	<p>MPRB and City of Minneapolis for any work required as part of preliminary site delivery or Phase 1 infrastructure.</p> <p>Applicable Developer or Contractor/ Permit Holder after conveyance of any property from the City to the Applicable Developer.</p>
<p><b>Water Resources</b></p>	<p><b>Surface Waters</b></p> <p>Shoreline Restoration – Regrading the steep shoreline to a flatter slope (approximately 1:3.5) is proposed as part of the ecological restoration approach outside of the riverwall areas, Depending on the available shoreline width between the pedestrian path and the shoreline, the grading could extend down to the normal water level, which is below the ordinary high water level. In places where there is limited area, the regrading may terminate higher. As part of the shoreline restoration, debris will be selectively removed and native plantings will be used to stabilize the slopes. This work could require permitting with the DNR and US Army Corps of Engineers.</p> <p><b>Stormwater</b></p> <p>Stormwater management infrastructure will be constructed to comply with the City of Minneapolis Code of Ordinances Chapter 54. This includes meeting existing rates for the 2, 10, and 100-year 24-hour storm events, removing 70 percent of total suspended solids (TSS), and retaining 1.1 inches of runoff on all newly constructed impervious surfaces on sites without infiltration restrictions. For linear projects, 0.55 inches of runoff needs to be retained for newly constructed or fully reconstructed impervious surfaces, or 1.1 inches of runoff over the net increase in impervious surfaces, whichever is greater.</p>	<p>MPRB</p> <p>Applicable Developer</p>

Resource Area	Mitigation	Responsible Party
	<p>Two stormwater management approaches are being considered:</p> <p><i>Individual Stormwater Systems:</i> Each parcel would construct its own stormwater management areas to help achieve the appropriate water quality treatment. The City of Minneapolis would construct required stormwater systems in City right-of-way.</p> <p>Maintenance and monitoring of the stormwater management areas will be performed by facility owners to ensure long-term effectiveness of the facilities.</p>	Applicable Developer
	<p><i>District Stormwater System:</i> A district stormwater approach has been proposed and is being further evaluated for the site (see Appendix B) to manage stormwater in shared systems across parcel boundaries.</p>	Applicable Developers, MWMO
	<p>The district stormwater approach would require a defined maintenance approach with the costs and responsibilities of maintenance allocated to the benefitting parties.</p>	Applicable Developers, City of Minneapolis, MWMO
<b>Wastewater / Water Supply</b>		
	<p>A DNR temporary water appropriation permit will be obtained for any dewatering that will be needed for construction.</p>	Contractor/Permit Holder, Applicable Developer
	<p>Obtain a permit from the Metropolitan Council and MPCA for a sewer extension and permit to connect.</p>	Contractor/ Permit Holder
	<p>Obtain a permit from MDH for a watermain installation.</p>	Applicable Developer
	<p>Groundwater monitoring wells abandoned prior to construction within the AUAR study area per MPCA and MDH well sealing requirements.</p>	Applicable Developer
<b>Contamination/ Hazardous Waste</b>	<p>Development would both generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which would be either recycled or disposed of in the proper facilities. Products will be kept in their original containers unless they cannot be resealed. Original labels and Material Safety Data Sheets will be made available. Surplus materials will be properly removed from the property upon completion of use.</p>	Contractor/ Permit Holder
	<p>Ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes 2020, section 473.811, subdivision 5c.</p>	Contractor/ Permit Holder

Resource Area	Mitigation	Responsible Party
	Coordinate with the MPCA regarding the required plans, material handling, and disposal.	Contractor/Permit Holder/ Applicable Developer
	Construction Contingency Plan and Response Action Plan for handling unknown materials during construction.	Contractor/Permit Holder, Applicable Developer, City of Minneapolis
	Notice of Intent of Demolition for removal of buildings.	Contractor/ Applicable Developer
<b>Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources</b>	Effective erosion prevention and sediment control practices will be incorporated into any stormwater management plan and also must be implemented and maintained near the Mississippi River to protect species in the river.	Contractor(s)/ Permit Holder, Applicable Developers, City of Minneapolis
	As building and site design progresses, the Audubon Minnesota Bird-Safe Building Guidelines and the American Bird Conservancy’s Bird-Friendly Building Design (2015) will be used to develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical. These guidelines include strategic selections of the types and placements of building materials, landscaping vegetation, exterior window glazing, and interior window treatments to minimize impacts to birds.	Applicable Developer
	Wildlife friendly erosion control methods will be prioritized within the study area to minimize impacts to land and aquatic wildlife using the site during construction, such as biodegradable or other woven natural fiber netting.	Contractor(s)/ Permit Holder
	Native plantings and vegetation restoration to promote pollinator habitat and wildlife habitat.	Applicable Developer
	Shoreline restoration in regarded areas near the river to improve ecological functions and remove invasive species.	MPRB
<b>Historic Properties</b>	Consult with the SHPO under Section 106 of the Historic Preservation Act of 1966 (36 CFR 800) when acquiring federal funds, permits, or authorizations in a federal undertaking.	Applicable Developer
	Evaluate options for adaptive reuse, preservation, removal, redevelopment, interim stabilization measures (10- to 20-year timeframe) for existing buildings or structures based on community input and design development. Prepare construction drawings for adaptive reuse or stabilization of existing buildings or structures, as needed.	MPRB

Resource Area	Mitigation	Responsible Party
	Use existing documentation of historic resources (such as industrial buildings, structures, sites, and objects) including site survey, digital photography of structural remains, narrative written descriptions, and available information about construction methodology) to inform relevant interpretive planning.	MPRB, City of Minneapolis
	Explore interpretive planning that allows for phased implementation and balances the significance of the site through time and across cultures. This interpretive work could incorporate the history and culture associated with the site into physical features and site programming and function.	MPRB, City of Minneapolis
<b>Archaeology</b>	Use the Archaeological Plan (Appendix D) as a guide and continue work with a professional archaeologist to determine whether historical structures remain beneath the surface and to determine whether buried pre-contact materials may be present along the Mississippi’s previous river line. In areas where no ground disturbing activities are planned, no archaeological survey is required.	Applicable Developer/ City of Minneapolis for the warehouse demolition
	Should archaeological materials be identified, follow established communication protocols with the Office of the State Archaeologist and other organizations as appropriate.	
	Evaluate potential impacts to any materials identified; work with a professional archaeologist to create a treatment plan if mitigation may be necessary. Evaluate potential for unexpected discoveries and include in the treatment plan, as applicable.	
<b>Visual</b>	All lighting will be subject to the MRCCA Plan requirements. The use of outdoor lighting for the Community Performing Arts Center is subject to a conditional use permit.	Applicable Developer
	Visual impacts will be regulated through the City of Minneapolis’s development review, site plan, and permitting process.	Applicable Developer
<b>Air</b>	Development will generate temporary fugitive dust emissions during construction. These emissions will be controlled by sweeping, watering, or sprinkling, as appropriate or as prevailing weather and soil conditions dictate. In accordance with Minneapolis Ordinances (Section 89.30.), contractors are responsible for dust control during construction of the proposed development	Contractor/ Permit Holder



Resource Area	Mitigation	Responsible Party
	and immediately address any dust problems upon receiving notice from the City.	
<b>Noise</b>	Construction activities may result in temporarily elevated noise levels. To the extent possible, construction activities will be conducted to minimize noise levels and nighttime construction activities. Permits related to construction noise will be obtained from the City, if needed. All equipment used in the construction phases of the project will be muffled and will use quieter backup alarms, where appropriate.	Contractor/ Permit Holder
	An outdoor noise permit will need to be obtained before operating the Community Performing Arts Center for all events.	Applicable Developer/ Permit Holder
	Installation of appropriate noise attenuation features in residential buildings and the Community Performing Arts Center.	Applicable Developer
<b>Transportation</b>	<p>The following mitigation measures were identified in the December 2020 Upper Harbor Terminal Traffic Analysis found in Appendix G. Development may result in increased motorized and non-motorized travel on the regional roadway network within and surrounding the study area. Mitigation will be regulated through the City of Minneapolis development review, site plan, and permitting process. Implementation of feasible mitigation measures will be addressed through permitting and developer agreements with the City of Minneapolis. The Mitigation Plan for motor vehicle traffic is identified in two phases (Phase A and Phase B) that implement traffic improvements only as they are needed based on development intensity and vehicle traffic levels.</p> <p><i>Phase A Mitigation Plan</i> The Phase A Mitigation Plan addresses both phases of development under Scenario 1 and the first phase of development under Scenario 2 (see the description of the development phase starting on page 5). The plan consists of measures to reduce motor vehicle traffic demand of the development, manage motor vehicle traffic operations and improve conditions for non-motorized travel. Phase A mitigation is included in Phase 1 of development for both scenarios.</p>	City of Minneapolis

Resource Area	Mitigation	Responsible Party
	<ul style="list-style-type: none"> <li>• The City will continue to work with Metro Transit to coordinate improvements that support existing and future transit service upgrades.</li> <li>• Improve the bikeway on Dowling Avenue North from on-street bicycle lanes to a shared used path from Lyndale Avenue North to the I-94 Eastbound ramps and a sidewalk level protected bikeway from the I-94 Eastbound ramps to the new parkway to make bicycling a safer and more comfortable option for users of all ages and abilities.</li> <li>• Construct a westbound right-turn lane at the Dowling Avenue North and westbound I-94 ramps intersection. The turn lane should extend the full distance between the westbound I-94 ramps and Washington Avenue North due to the short distance between these intersections. There is no existing turn lane and the recommended turn lane length is 190 feet.</li> <li>• Extend the eastbound left-turn lane at the Dowling Avenue North and Washington Avenue North intersection to the full distance between Washington Avenue North and the westbound I-94 ramps due to the short distance between these intersections. The existing left-turn lane is approximately 90 feet long and the recommended turn lane length is 190 feet.</li> <li>• Construct a northbound left-turn lane at the Dowling Avenue North and Washington Avenue North intersection. There is no existing turn lane, and the recommended turn lane length is 300 feet based on the existing and projected left-turn volumes.</li> <li>• Install protected/permissive left-turn signal phasing for all left-turn movements at the Dowling Avenue North and Washington Avenue North intersection.</li> <li>• Install protected/permissive left-turn phasing for the eastbound left-turn movement at the Lowry Avenue North and Washington Avenue North intersection. The left-turn phase should operate as a leading phase only because a left-turn lane is not proposed to be constructed.</li> <li>• Install protected/permissive left-turn phasing for the eastbound left-turn movement at the Lowry Avenue North and North 2nd Street intersection. The left-turn</li> </ul>	

Resource Area	Mitigation	Responsible Party
	<p>phase should operate as a leading phase only because a left-turn lane is not proposed to be constructed.</p> <ul style="list-style-type: none"> <li>• Upgrade existing on-street bike lanes on Washington Avenue North to an on-street two-way protected bikeway from Dowling Avenue North to Lyndale Avenue North/41st Avenue North.</li> <li>• Upgrade existing on-street bike lanes on Washington Avenue North south of Dowling Avenue North to a sidewalk level protected bikeway within the Phase I limits, that will also be compatible with future upgrade and conversion to a two-way bikeway extending to the south.</li> <li>• Coordinate non-motorized access to and within the AUAR study area with applicable parties and any new easements for rail crossing at 36th Avenue North.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Develop robust travel demand management plans (TDMP) with each phase or sub-phase of the development. The TDMPs should be completed in parallel with the City’s land use application process and should detail comprehensive strategies to encourage pedestrian and bicycle travel, enhance safety and comfort of the pedestrian and bicycling environment, reduce parking demand, increase transit, and create a balance between all users of the local transportation system.</li> <li>• Upgrade the public realm to include appropriate streetscape, such as street lighting, sidewalks, landscaping, bike racks, and bikeways (compatible with two-way).</li> <li>• Develop a comprehensive ETMP for the Community Performing Arts Center and the park. Strategies that will be considered include transit, neighborhood parking regulations, interim use of Parcels 7A/7B for parking, rideshare, shuttles from other locations, and ensure access to the park during events.</li> <li>• Upgrade non-motorized access to and within the AUAR study area, rail crossing improvements, and provide new easements for rail crossing at 36th Avenue North.</li> </ul>	Applicable Developer
	<i>Phase B Mitigation Plan</i>	City of Minneapolis

Resource Area	Mitigation	Responsible Party
	<p>The Phase B Mitigation Plan addresses Phase 2 of development under Scenario 2. The operations of the Horizon Year (2040) conditions with Phase A mitigation showed significant remaining operational issues and queues that would extend the length of Dowling Avenue North and the I-94 ramps to mainline I-94. If development intensity and traffic volumes reach these levels, additional measures may warrant additional review to mitigate the impacts of the development motor vehicle traffic. All strategies should continue to encourage pedestrian and bicycle travel, enhance safety and comfort of the pedestrian and bicycling environment, reduce parking demand, increase transit, and create a balance between all users of the local transportation system. Along with the implementation of the mitigation measures identified in Phase A, the following additional mitigation measures are identified for Phase B:</p> <ul style="list-style-type: none"> <li>• Extend the eastbound left-turn lane at the Dowling Avenue North and westbound I-94 ramps intersection to the full distance between the westbound I-94 ramps and the east I-94 ramps. The existing left-turn lane is approximately 145 feet long and the recommended turn lane length is 380 feet.</li> <li>• Extend the westbound left-turn lane at the Dowling Avenue North and eastbound I-94 ramps intersection to the full distance between the eastbound I-94 ramps and Washington Avenue North. The lane would be designated as an additional westbound through lane at the west I-94 ramps intersection. The existing left-turn lane is approximately 125 feet long and the recommended turn lane length is 600 feet.</li> <li>• Construct an eastbound right-turn lane at the Dowling Avenue North and Washington Avenue North intersection to the full distance between Washington Avenue North and the west I-94 ramps. There is no existing turn lane and the recommended turn lane length is 190 feet. The addition of this right turn lane would require mitigating the removal of the separated bikeway and/or sidewalk in this location.</li> <li>• Revise access along Washington Avenue North for Parcels 6a, 6b, 7a, and 7b to maximize the distance</li> </ul>	

Resource Area	Mitigation	Responsible Party
	<p>from the intersection and minimize the number of driveways.</p> <p>The Phase B mitigation measures, in addition to the Phase A mitigation, may require either widening of the Dowling Avenue North bridge over I-94 or removal of the bicycle facility on the existing bridge. Any changes to the existing Dowling Avenue North bridge that remove pedestrian and/or bicycle facilities will need to be mitigated by constructing a new non-motorized bridge along Dowling Avenue North over I-94 to allow for continuous pedestrian and/or bicycle facilities. Reconfiguring the bridge and constructing a new nonmotorized bridge across I-94 supports the environmental justice strategies in the Draft Coordinated Plan.</p>	
	<p><i>Community Performing Arts Center ETMP</i></p> <p>An ETMP will be needed to mitigate traffic and mobility impacts related to events at the community performing arts center proposed on Parcel 3 of the development in Scenario 1 and Scenario 2. The implementation of the ETMP could include the following:</p> <ul style="list-style-type: none"> <li>• The park will remain open for at least bicycle and pedestrian access.</li> <li>• Close off a portion of West River Parkway to general traffic during medium and large events (residents would maintain access).</li> <li>• Close off a portion of Dowling Avenue North east of Washington Avenue North to general traffic during medium and large events (residents would maintain access).</li> <li>• Explore solutions enabling the management of the proposed park’s surface parking lot to remain available for public park users during events.</li> <li>• Manage on-street parking and loading along Washington Avenue North and North 2nd Street between 34th Avenue North and 36th Avenue North.</li> <li>• Monitor event parking in the neighborhoods that are within walking distance west of the study area.</li> <li>• Manage temporary event staging on Parcels 7A and 7B for shuttle and transportation network companies (TNC) during events that occur prior to the development of these parcels. This would involve interim improvements to the parking lot.</li> </ul>	<p>First Avenue</p>



Resource Area	Mitigation	Responsible Party
	<ul style="list-style-type: none"> <li>• Place traffic control agents at key locations throughout the surrounding streets.</li> <li>• Establish disability and shuttle drop-off locations.</li> <li>• Construct on-site bicycle parking at the proposed community performing arts center or nearby/adjacent private development.</li> <li>• Create a geofence to manage where TNC requests and pick-ups are permitted.</li> <li>• Distribute transportation information to all event ticket holders.</li> <li>• Incentivize attendees to utilize TNC or public transportation.</li> <li>• Monitor and make adjustments to this ETMP as needed.</li> </ul>	
	Complete an ETMP for large events if planned in the proposed park.	MPRB
	<p>Obtain the following permits with CP Rail for work within the rail right of way:</p> <ul style="list-style-type: none"> <li>• Flagging agreement permit</li> <li>• Minimum safety requirements permit</li> <li>• Right of entry permit</li> <li>• Funding agreement with MnDOT permit</li> <li>• Crossing Agreement in coordination with MnDOT</li> </ul>	Applicable Developers

## Appendices

**Appendix A: DNR Correspondence**

**Appendix B: Water Quality Treatment Memo and Stormwater Exhibits**

**Appendix C: Sanitary Sewer Supporting Information**

**Appendix D: Historic Properties Supporting Information**

**Appendix E: Visual Renderings of Scenario 1**

**Appendix F: Noise Report**

**Appendix G: Traffic and Parking Reports**

**Appendix H: Responses to Agency and Public Comments on the Draft AUAR**

**Appendix I: Agency and Public Comment Letters**

# Appendix A:

## DNR Correspondence

**From:** [Bump, Samantha \(DNR\)](#)  
**To:** [Payne, Ashley](#)  
**Cc:** [Bunge, Leila](#); [Haase, Rachel](#); [Collins, Melissa \(DNR\)](#)  
**Subject:** RE: NHIS Review Request for Upper Harbor Terminal, Minneapolis, MN  
**Date:** Friday, April 30, 2021 2:55:15 PM  
**Attachments:** [image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

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Hi Ashley,

I have reviewed the attached assessment of the potential for the above project to impact rare features, and concur with your assessment that negative impacts to known occurrences of rare features are not anticipated. Given that nearby storm sewer inlets discharge to the river, effective erosion prevention and sediment control practices must be implemented and maintained throughout the duration of any project and incorporated into any stormwater management plan. Thank you for notifying us of this project, and for the opportunity to provide comments.

Have a great day,

**Samantha Bump**

NHIS Review Specialist | Ecological & Water Resources

**Minnesota Department of Natural Resources**

[Samantha.Bump@state.mn.us](mailto:Samantha.Bump@state.mn.us)



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**From:** Payne, Ashley <Ashley.Payne@kimley-horn.com>  
**Sent:** Wednesday, February 10, 2021 8:30 AM  
**To:** MN\_NHIS, Review (DNR) <Review.NHIS@state.mn.us>  
**Cc:** Bunge, Leila <leila.bunge@kimley-horn.com>; Haase, Rachel <Rachel.Haase@kimley-horn.com>  
**Subject:** NHIS Review Request for Upper Harbor Terminal, Minneapolis, MN

Hello,

Kimley-Horn has been contracted to prepare an AUAR for the Upper Harbor Terminal redevelopment project located adjacent to the Mississippi River on a 53-acre site in Minneapolis, Hennepin County, Minnesota. A project location map is attached.

A review of the DNR Natural Heritage Inventory System (LA-965) database was conducted for the project site and the area within one mile of the project site. This review identified no records within the project site and four records within one mile of the project site.

A record for the Black Sandshell mussel (*Ligumia recta*), a state-listed special concern species, is located approximately 0.1 miles from the project site. The preferred habitat for this species includes the riffle and run areas of medium to large rivers in areas dominated by sand or gravel. Although the project is located adjacent to the Mississippi River, the study area does not encroach within river. No impacts to the Black Sandshell are anticipated.

A record for the Rusty Patch Bumble Bee (*Bombus affinis*), a federally-listed endangered species, is located approximately 0.7 miles from the project site. The preferred habitat for this species includes grasslands and tallgrass prairies. The site has been previously developed for industrial uses and does not contain natural prairie vegetation, so no impacts to the Rusty Patch Bumble Bee are anticipated.

A record for the Peregrine Falcon (*Falco peregrinus*), a state-listed special concern species, is located approximately 0.2 miles from the project site. The preferred habitat for this species includes cliff ledges along rivers or lakes. No impacts to the peregrine falcon are anticipated.

A record for a Great Blue Heron nesting site (*Ardea herodias*) is located approximately 0.6 miles north of the project site. The preferred heron nesting habitat is located in remote and inaccessible locations including islands, wetlands, or riparian zones. It has been noted that a heron rookery is located near the Upper Harbor Terminal site. This appears to be to in a different location than what has been previously recorded by the DNR.

There are no MCBS Sites of Biodiversity Significance or native plant communities located within one mile of the site. No Regionally Significant Ecological Areas are within or adjacent to the study area.

Two DNR Public Watercourses, Shingle Creek and the Mississippi River, are located within one mile of the project site and neither are classified as trout streams. No Public Water basins are in the project area. All development will be designed to avoid any adverse impacts to the Mississippi River.

Please confirm our conclusions and let us know if you have any questions or need additional information.

Thank you,

**Ashley Payne**

**Kimley-Horn** | 323 South Broadway, Rochester, MN 55904  
Direct: 507 216 0763 | Mobile: 507 251 6096

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# Appendix B:

## Water Quality Treatment Memo and Stormwater Exhibits



**To:** Nathan Koster, Transportation Planning Manager  
Alexander Kado, Transportation Planner  
Ahmed Omer, PE, Transportation Engineer  
Stephanie Johnson, PE, PhD, Director of Surface Water and Sewers  
Jeremy Strehlo, PE, Professional Engineer  
Katie Kowalczyk, PE, Water Resources Coordinator  
City of Minneapolis

**From:** Erin Hunker, PE  
Lisa Breu, PE

**Date:** January 20, 2021

**Subject:** Upper Harbor Terminal Public Infrastructure– Preliminary Green Infrastructure Design Summary

## Introduction

The goal of the preliminary public infrastructure green infrastructure design and cost estimating exercise is to understand costs for water quality treatment that meets City goals and to help inform decisions to be made about whether the BMPs will be part of a ‘District’ system that is shared with private development and/or MPRB. The City’s consultant team conducted conceptual design of green infrastructure BMPs to provide water quality treatment for public infrastructure, completed a cost estimate, and determined potential reduction in pollutants compared to City water quality goals and requirements for the Upper Harbor Terminal Public Infrastructure. The preliminary design and cost estimating of the green infrastructure BMPs has been completed prior to the preliminary design of the roadway and trails. The BMPs will continue to be refined as the overall project design progresses.

## Goals

The Upper Harbor Terminal Public Infrastructure project includes reconstruction of Dowling Avenue and 33<sup>rd</sup> Avenue, and construction of a new Parkway within the UHT site. The City’s established goals for water quality treatment for the UHT project are:

- Capture and retain 0.55 inches of runoff from new and fully reconstructed impervious surface (MIDS requirement for linear projects)

- Remove 70% TSS from the 1.25-inch event for projects that include over one acre of new impervious surface (city ordinance)

The MWMO has developed goals and concept design for both a regional and ‘District’ stormwater system within the UHT site. The MWMO’s goals for water quality treatment are:

- Option 1 – Capture and retain 1.1 inches of runoff from proposed impervious surfaces (MIDS requirement for non-linear projects)
- Option 2 – Capture and retain approximately 1.75 times MIDS-level runoff

Based on review of the soil investigations conducted at the site to date and information provided by the MWMO’s engineer (Barr), we have assumed infiltration is feasible at all BMP locations. While soil contamination has been found on site, fill is generally only 4 feet deep and depending on parkway designs, and due to the flat nature of the existing site, significant grading will likely occur and infiltration practice bottoms may be designed below existing fill and contamination. Both the City’s goal of retaining 0.55 inches of runoff and the MWMO’s goal of retaining 1.1” inches of runoff in infiltration BMPs have been included in this analysis for comparison.

To provide comparative analysis to the MWMO “District” stormwater approach, proposed public infrastructure has been split up according to the same drainage areas along with the addition of Dowling Avenue and 33<sup>rd</sup> Avenue. Proposed impervious has been measured in each drainage area and multiplied by 0.55” and 1.1” to determine required water quality treatment volumes for each drainage area. In addition, given that Dowling and 33<sup>rd</sup> are constrained by existing right of way, overtreatment may have to happen nearer to the Parkway to achieve needed treatment volumes for these areas. Treatment volumes have not been modeled but have been roughly graded in CAD to ensure that they fit within preliminary right-of-way boundaries. BMPs have been offset from the right of way and roadway edge, but freeboard has not been taken into consideration. BMPs on Dowling Avenue and 33<sup>rd</sup> Avenue are assumed to be tree trenches and were only located where boulevards were 6’ or wider to accommodate tree planting.

## **BMP Design and Cost Estimate Assumptions**

This conceptual water quality design includes tree trenches along Dowling Avenue and 33<sup>rd</sup> Avenue, bioretention swales along the Parkway, and bioretention basins at four locations along the Parkway where there is not enough space to fit a swale adjacent to the road. The volume provided in the attached figure is larger than what is needed to meet the 0.55” and 1.1” goals for new or reconstructed impervious within the public infrastructure project. The volume provided is based on the space available within the right-of-way and parcel lines in the attached figure. The design is very high level and will be refined further as the design progresses and the roadway geometry and profiles are developed and finalized. The design only considers water quality treatment volumes but the BMPs will also be used for rate control, which may require the additional volume. The cost estimate provided is based on the 0.55” and 1.1” treatment volume. The cost will be refined as the design

progresses, but the quantities provided are based on the typical sections described below and the rough footprints graded into the attached layout.

### **Tree Trenches**

The tree trenches are assumed to be within the boulevards of the roadways and do not extend beneath the sidewalks, and therefore do not include structural soil. The tree trenches are assumed to have a trapezoidal section and contain 3' of filter topsoil borrow.

### **Bioretention Swales and Basins**

The bioretention swales and basins are assumed to include 5.0 feet of excavation from the existing ground surface to mitigate for potential need to remove contaminated material or decompact in-situ soils to facilitate infiltration. The cost estimate assumes excavated material will be reused on site. The BMPS will be 1.5 feet deep at the surface (live storage), include 1.5 feet of filter topsoil borrow and 2 feet of select granular borrow. To maintain a continuous swale that provides water quality volume and conveyance in the south portion of the Parkway (Phase 2), the overall volume will need to be larger than required for water quality treatment. If the swale is sized to only provide the required water quality treatment volume, additional gray infrastructure will need to be incorporated to provide conveyance for the system.

Costs estimated for the bioretention BMPs include excavation of the BMP volume, including the soil correction, placement of 1.5' of filter topsoil borrow within the basins, and a 2' over excavation and placement of select granular borrow to mitigate for poor or contaminated soils. A landscape allowance of 50% of the price of filter topsoil borrow has been applied for BMP plantings assuming a mixture of seeding and potted plants. Capital costs are based on average bids from recent projects within City limits.

The cost estimate also includes pretreatment structures, similar to the Rain Guardian Bunker, to be included upstream of the bioretention BMPs. The cost does not include any regional pretreatment structures, similar to a CDS unit, that may be recommended if the BMPs pick up regional stormwater runoff from the existing trunk storm sewer system on Dowling Avenue. At this time, we have assumed regional pretreatment will be included in the MWMO's regional stormwater system.

At this stage of design, removal of contaminated soils has not been incorporated into BMP costs. There is more space within the right of way than required for BMPs and their placement can be influenced by avoiding contamination. Much of the contaminated soil should be able to be reused on site, so hauling and disposal could potentially be avoided.

Gray infrastructure costs assume that roadway reconstruction and geometry changes will require the replacement of all catch basin and laterals on Upper Dowling Avenue and 33<sup>rd</sup> Avenue and adds a 60" CBMH at the upstream end of all tree trenches. At this point, it has been assumed that the

trunk and associated manholes will be able to remain. Since the design has not changed significantly since the Alliant cost estimate, grey infrastructure costs on the parkway section have remained the same.



**0.55" Treatment Volume Costs**

Upper Dowling (Lyndale to Washington) Stormwater Costs				
Common Excavation	219	C Y	\$33	\$7,227.00
Filter Topsoil Borrow	219	C Y	\$63	\$13,797.00
Underdrain	441	LF	\$55	\$24,255.00
Pretreatment	5	EA	\$300	\$1,500.00
Stormwater Basin Planting				\$6,898.50
Remove Sewer Pipe Storm	301	LF	\$25	\$7,525.00
Remove Manhole or Catch Basin	11	EA	\$750	\$8,250.00
Construct Drainage Structure Design N	11	EA	\$2,000	\$22,000.00
Construct Drainage Structure Design 60-4020	5	EA	\$10,000	\$50,000.00
18" RC Sewer Pipe DES 3006	301	LF	\$50	\$15,050.00
Connect to Existing	5	EA	\$2000	\$10,000.00
Contingency	30	%		\$49,950.75
<b>TOTAL</b>				<b>\$216,453.25</b>

33rd (2nd to RR) Stormwater Costs				
Common Excavation	99	C Y	\$33	\$3,267.00
Filter Topsoil Borrow	99	C Y	\$63	\$6,237.00
Underdrain	260	LF	\$55	\$14,300.00
Pretreatment	2	EA	\$300	\$600.00
Stormwater Basin Planting				\$3,118.50
Remove Sewer Pipe Storm	182	LF	\$25	\$4,550.00
Remove Manhole or Catch Basin	6	EA	\$750	\$4,500.00
Construct Drainage Structure Design N	6	EA	\$2,000	\$12,000.00
Construct Drainage Structure Design 60-4020	2	EA	\$10,000	\$20,000.00
18" RC Sewer Pipe DES 3006	182	LF	\$50	\$9,100.00
Connect to Existing	4	EA	\$2,000	\$8,000.00
Contingency	30	%		\$25,701.75
<b>TOTAL</b>				<b>\$111,374.25</b>

Lower Dowling and Parkway Stormwater Costs				
Common Excavation	2834	C Y	\$33	\$93,522.00
Select Granular Borrow	726	C Y	\$30	\$21,780.00
Filter Topsoil Borrow	911	C Y	\$63	\$57,393.00
Underdrain	2633	LF	\$55	\$144,815.00
Outlet Control Structures	4	EA	\$12,000	\$48,000.00
Pretreatment	7	EA	\$300	\$2,100.00
Stormwater Basin Planting				\$28,686.58
Remove Sewer Pipe(Storm)	2310	LF	\$25	\$57,750.00
Remove Manhole or Catch Basin	26	EA	\$750	\$19,500.00
Lining Sewer Pipe 18"	595	LF	\$150	\$89,250.00
18" RC Pipe Sewer Design3006	2118	LF	\$85	\$180,030.00
72" RC Pipe Sewer Design3007	840	LF	\$375	\$315,000.00
Construct Drainage Structure Design N	18	EA	\$2,000	\$36,000.00
Construct Drainage Structure Design J	4	EA	\$6,500	\$26,000.00
Construct Drainage Structure Design Special	3	EA	\$2,500	\$7,500.00
Construct Drainage Structure Design 60-4020	8	EA	\$10,000	\$80,000.00
Construct Drainage Structure Design 96-4020	2	EA	\$18,000	\$36,000.00
Connect to Existing Storm Sewer	6	EA	\$1,200	\$7,200.00
Connect to Existing Drainage Structure	3	EA	\$2,000	\$6,000.00
Recon of Dowling/Washington Special	1	LS	\$100,000	\$100,000.00
Recon of Dowling Outfall	1	LS	\$150,000	\$150,000.00
Contingency	30%			\$451,960.95
<b>TOTAL</b>				<b>\$ 1,958,497.45</b>

**1.1" Treatment Volume Costs**

Upper Dowling (Lyndale to Washington) Stormwater Costs				
Common Excavation	409	C Y	\$33	\$13,497.00
Filter Topsoil Borrow	409	C Y	\$63	\$25,767.00
Underdrain	441	LF	\$55	\$24,255.00
Pretreatment	5	EA	\$300	\$1,500.00
Stormwater Basin Planting				\$12,883.50
Remove Sewer Pipe Storm	301	LF	\$25	\$7,525.00
Remove Manhole or Catch Basin	11	EA	\$750	\$8,250.00
Construct Drainage Structure Design N	11	EA	\$2,000	\$22,000.00
Construct Drainage Structure Design 60-4020	5	EA	\$10,000	\$50,000.00
18" RC Sewer Pipe DES 3006	301	LF	\$50	\$15,050.00
Connect to Existing	5	EA	\$2000	\$10,000.00
Contingency	30	%		\$57,218.25
<b>TOTAL</b>				<b>\$247,945.75</b>

33rd (2nd to RR) Stormwater Costs				
Common Excavation	170	C Y	\$33	\$5,610.00
Filter Topsoil Borrow	170	C Y	\$63	\$10,710.00
Underdrain	260	LF	\$55	\$14,300.00
Pretreatment	2	EA	\$300	\$600.00
Stormwater Basin Planting				\$5,355.00
Remove Sewer Pipe Storm	182	LF	\$25	\$4,550.00
Remove Manhole or Catch Basin	6	EA	\$750	\$4,500.00
Construct Drainage Structure Design N	6	EA	\$2,000	\$12,000.00
Construct Drainage Structure Design 60-4020	2	EA	\$10,000	\$20,000.00
18" RC Sewer Pipe DES 3006	182	LF	\$50	\$9,100.00
Connect to Existing	4	EA	\$2,000	\$8,000.00
Contingency	30	%		\$28,417.50
<b>TOTAL</b>				<b>\$123,142.50</b>

Lower Dowling and Parkway Stormwater Costs				
Common Excavation	3579	C Y	\$33	\$118,107.00
Select Granular Borrow	1023	C Y	\$30	\$30,690.00
Filter Topsoil Borrow	1134	C Y	\$63	\$71,442.00
Underdrain	2633	LF	\$55	\$144,815.00
Outlet Control Structures	4	EA	\$12,000	\$48,000.00
Pretreatment	7	EA	\$300	\$2,100.00
Stormwater Basin Planting				\$35,721.00
Remove Sewer Pipe(Storm)	2310	LF	\$25	\$57,750.00
Remove Manhole or Catch Basin	26	EA	\$750	\$19,500.00
Lining Sewer Pipe 18"	595	LF	\$150	\$89,250.00
18" RC Pipe Sewer Design3006	2118	LF	\$85	\$180,030.00
72" RC Pipe Sewer Design3007	840	LF	\$375	\$315,000.00
Construct Drainage Structure Design N	18	EA	\$2,000	\$36,000.00
Construct Drainage Structure Design J	4	EA	\$6,500	\$26,000.00
Construct Drainage Structure Design Special	3	EA	\$2,500	\$7,500.00
Construct Drainage Structure Design 60-4020	8	EA	\$10,000	\$80,000.00
Construct Drainage Structure Design 96-4020	2	EA	\$18,000	\$36,000.00
Connect to Existing Storm Sewer	6	EA	\$1,200	\$7,200.00
Connect to Existing Drainage Structure	3	EA	\$2,000	\$6,000.00
Recon of Dowling/Washington Special	1	LS	\$100,000	\$100,000.00
Recon of Dowling Outfall	1	LS	\$150,000	\$150,000.00
Contingency	30	%		\$468,331.50
<b>TOTAL</b>				<b>\$ 2,029,436.50</b>

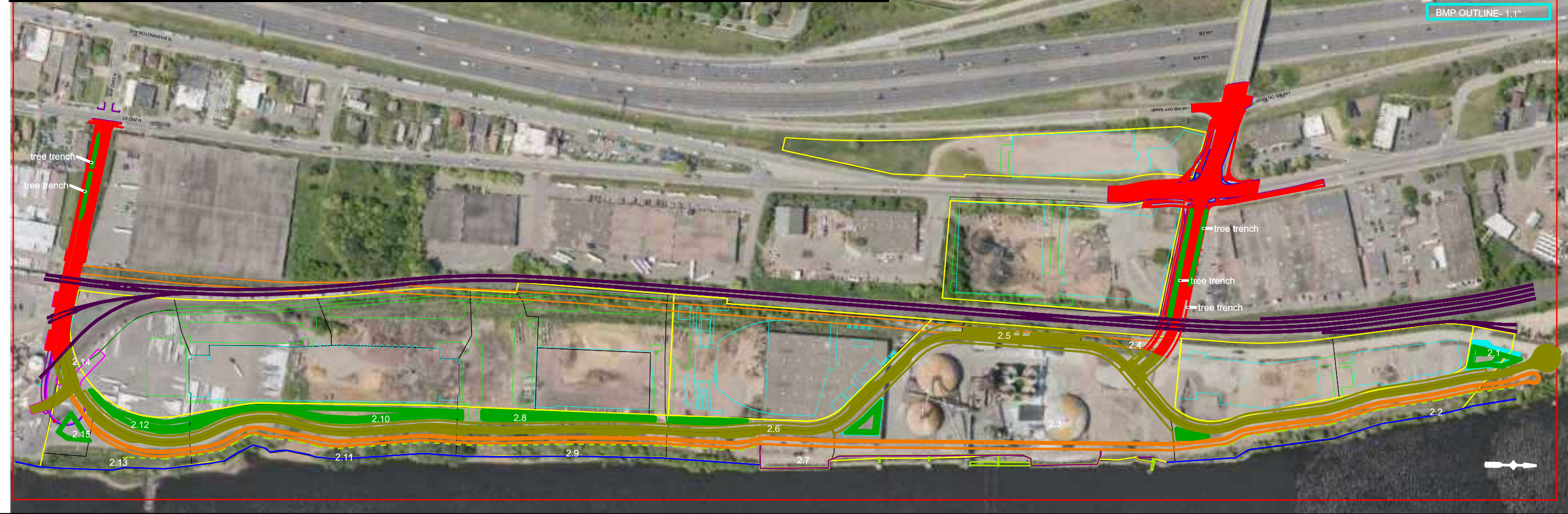
## Maintenance Considerations

While maintenance needs are dependent on sediment loading from the subwatersheds and litter and debris from the surrounding area, some assumptions can be made. City crews will have to clean out sump structures anywhere from 1-4 times per year. Weeding, cleaning out debris, and other surface activities for bioretention BMPs will likely cost less than \$1/square foot annually. The life span for these BMPs is around 10 years at which point, replacement of planting soil and reseeded may be necessary. For more site-specific information, we recommend reviewing other similar planted infiltration BMPs with pretreatment that the City maintains to inform maintenance costs.

**Attachment 1 – Water Quality Treatment Map**



Area	0.55" treatment volume (CF)	0.55 Bottom Area (SF)	0.55 Top Area (SF)	Volume Provided (CF)	MIDS treatment volume - 1.1" (CF)	1.1 Bottom Area (SF)	1.1 Top Area (SF)	Volume Provided (CF)
2.1-2.2	3017	1697	3811	4131	6035	5012	7991	9752
Upper Dowling	2240	620	3313	1770	4481	620	3313	1770
Dowling at Washington	3866	989	4361	2408	7733	989	4361	2408
2.3-2.5	2795	1675	3167	3632	5590	2373	4105	4859
<b>Phase 1 Total</b>	<b>11919</b>	<b>4981</b>	<b>14652</b>	<b>11940</b>	<b>23838</b>	<b>8994</b>	<b>19770</b>	<b>18788</b>
2.6-2.7	1603	416	1871	1715	3207	416	1871	1715
2.8-2.9	1490	2025	8294	7739	2981	2025	8294	7739
2.10-2.15	3288	3986	16138	15093	6577	3986	16138	15093
33rd	1742	410	1373	802	3484	410	1373	802
<b>Phase 2 Total</b>	<b>8124</b>	<b>6837</b>	<b>27676</b>	<b>25350</b>	<b>16248</b>	<b>6837</b>	<b>27676</b>	<b>25350</b>
<b>Total</b>	<b>20043</b>			<b>37290</b>	<b>40086</b>			<b>44138</b>



SDGNS



## DRAINAGE AREAS AND STORMWATER BMPS

Watershed Parcel	Parcel Area (S.F)	Impervious Area (SF)	MIDS Treatment Volume (CF)	BMP Volume Shown (CF)	Watershed Parcel	Parcel Area (S.F)	Impervious Area (SF)	MIDS Treatment Volume (CF)	BMP Volume Shown (CF)
1.1	136,874	80,973	7,423	8,446	2.13	37,137	10,776	988	0
1.2	28,241	21,687	1,988	2,439	2.14	2,753	2,504	230	0
2.1	52,522	25,577	2,345	0	2.15	26,567	5,819	533	2,130
2.2	84,079	28,999	2,658	0	3	209,651	181,040	16,595	16,596
2.3	304,102	132,778	12,171	23,022	4.2	89,620	67,814	6,216	4,776
2.4	17,130	6,050	555	0	4.3	63,718	58,549	5,367	0
2.5	13,616	10,791	989	0	4.4	72,864	31,401	2,878	9,510
2.6	35,153	19,411	1,779	0	5.1	74,257	46,682	4,279	0
2.7	50,974	16,162	1,481	0	5.2	140,208	126,718	11,616	0
2.8	34,143	7,568	694	0	5.3	62,537	36,134	3,312	4,196
2.9	51,053	20,184	1,850	0	5.4	33,971	3,917	359	0
2.10	52,050	8,948	820	3,796	5.5	74,796	26,166	2,399	15,789
2.11	67,592	25,143	2,305	0	6	220,152	180,525	16,550	4,830
2.12	25,694	5,651	518	0	7	141,614	62,876	5,764	19,392
<b>TOTAL</b>	<b>2,203,068</b>	<b>1,250,843</b>	<b>114,662</b>	<b>114,922</b>					





## DRAINAGE AREAS AND STORMWATER BMPS

Watershed Parcel	Parcel Area (S.F)	Impervious Area (SF)	MIDS Treatment Volume (CF)	BMP Volume Shown (CF)	Watershed Parcel	Parcel Area (S.F)	Impervious Area (SF)	MIDS Treatment Volume (CF)	BMP Volume Shown (CF)
1.1	136,874	80,973	7,423	14,783	2.13	37,137	10,776	988	0
1.2	28,241	21,687	1,988	4,822	2.14	2,753	2,504	230	0
2.1	52,522	25,577	2,345	0	2.15	26,567	5,819	533	5,381
2.2	84,079	28,999	2,658	0	3	209,651	181,040	16,595	18,725
2.3	304,102	132,778	12,171	45,674	4.2	89,620	67,814	6,216	7,850
2.4	17,130	6,050	555	0	4.3	63,718	58,549	5,367	0
2.5	13,616	10,791	989	0	4.4	72,864	31,401	2,878	15,166
2.6	35,153	19,411	1,779	0	5.1	74,257	46,682	4,279	12,740
2.7	50,974	16,162	1,481	0	5.2	140,208	126,718	11,616	0
2.8	34,143	7,568	694	11,956	5.3	62,537	36,134	3,312	5,459
2.9	51,053	20,184	1,850	0	5.4	33,971	3,917	359	0
2.10	52,050	8,948	820	8,795	5.5	74,796	26,166	2,399	21,607
2.11	67,592	25,143	2,305	0	6	220,152	180,525	16,550	4,830
2.12	25,694	5,651	518	714	7	141,614	62,876	5,764	24,729
<b>TOTAL</b>	<b>2,203,068</b>	<b>1,250,843</b>	<b>114,662</b>	<b>203,231</b>					



# Appendix C:

## Historic Properties Supporting Information



**Archaeological Plan for  
Upper Harbor Terminal  
Minneapolis, Hennepin County, Minnesota**



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Final Report  
April 8, 2021



**Archaeological Plan for  
Upper Harbor Terminal  
Minneapolis, Hennepin County, Minnesota**

**Prepared for:**

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## 1.0 INTRODUCTION

The Minneapolis Parks & Recreation Board (MPRB) is working with the City of Minneapolis to redevelop the Upper Harbor Terminal in Minneapolis, Minnesota. In the spring of 2020, the MPRB contracted Hess, Roise, and Company (HRC) to assist in the assessment of historical resources around the project area. Under contract with HRC, Nienow Cultural Consultants (NCC) completed a Phase Ia Archaeological Literature Review of the project area on June 25, 2020 (Nienow and Sutherland 2020). NCC identified numerous non-extant historical structures within the project area which may have subsurface archaeological remains. In the archaeological Phase Ia report, NCC outlined recommendations for how to proceed prior to construction around areas with high potential for intact historical and/or prehistoric archaeological deposits. Kimley-Horn is preparing an Alternative Urban Areawide Review for the Upper Harbor Terminal on behalf of the City of Minneapolis and United Properties. As part of the AUAR, Kimley-Horn contracted NCC to complete this more expansive archaeological plan for the site. This document was designed using the best practices and industry methods for cultural resource management with the understanding it will be implemented in consultation with a licensed archaeologist.

## 2.0 PROJECT LOCATION

The project location is 53-acre property located between 3300 North 2<sup>nd</sup> Street and 3900 North 1<sup>st</sup> Street in Minneapolis, Minnesota. The boundaries are within the East 1/2 of the SE1/4 of Section 3, Township 29N, Range 24W. The project area is bordered by North 1st Street to the north and the Mississippi River to the east. The western boundary begins along North 2<sup>nd</sup> Street from 3300 to 3700, Highway I-94 between 3700 and Dowling Ave. North, and lastly from Dowling Ave. North to 3900 by North 1<sup>st</sup> Street. The southern boundary is along 33<sup>rd</sup> Avenue North (Figure 1). The project area contains multiple industrial storage and loading facilities including warehouses, storage tanks, grain elevator, and multiple storage piles in large open-air yards.

## 3.0 SUMMARY OF ARCHAEOLOGICAL PHASE IA RESULTS

During the research for the archaeological Phase Ia report, NCC referenced a parcel map of the project area dividing it into seven parcels labeled A through H. During the writing for this archaeological plan, NCC was provided an updated parcel map illustrating a distinct shift in and division of the previous parcels. These are now labeled 1A through 7B (Figure 1).

The Phase Ia literature review (Nienow and Sutherland 2020) identified 109 structures within the entirety of the Upper Harbor Terminal Project area. The project area has since been slightly modified to extend what was referred to in the archaeological Phase Ia report as Area H (now 7B) further south. Five additional non-extant residential structures were identified in this extended area using 1912 and 1951 Sanborn fire insurance mapping bringing the total count to 114 structures. The earliest map depicting structures within the project area is the 1889 Sanborn fire insurance maps for Minneapolis.

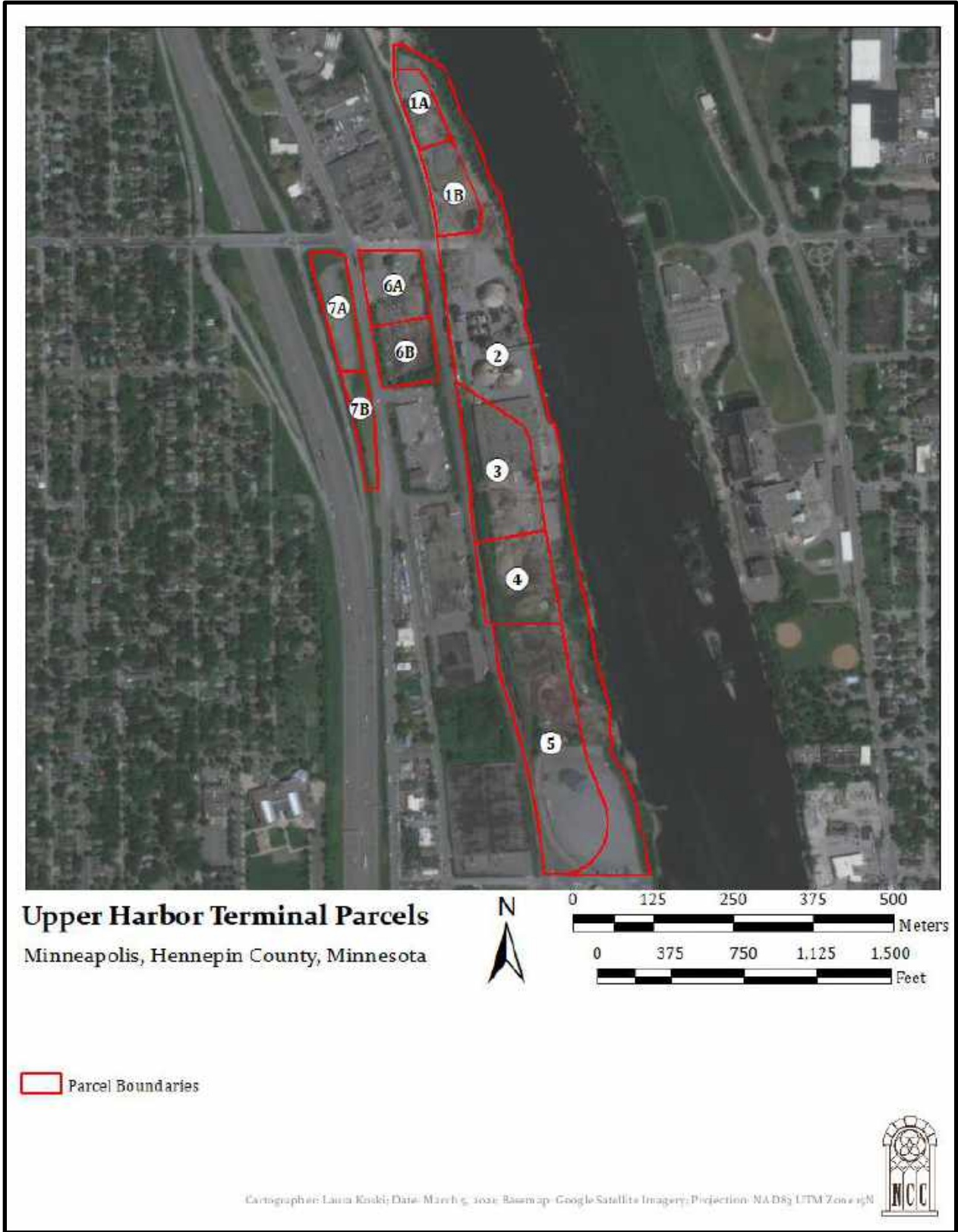


Figure 1. Illustration of parcel boundaries referred to in this report.

The map shows a lumber mill at the northern end of the project area between 38<sup>th</sup> and 39<sup>th</sup> Ave. North (Parcels 2, 7A, and 7B). The saw and shingle mills of the Bovey-De Laittre Lumber Company are surrounded by lumber yards to the north and west. The facility includes a pump house, engine house, machine shop, and blacksmith shop, along with various smaller wood frame sheds, log slides, and platforms. The 1912 Sanborn map reveals the Bovey-De Laittre Lumber Mill was no longer in operation with a notation about the equipment scheduled to be removed and the site converted into an ice house. It is unclear if an ice house was ever established at this location. The adjacent Bovey Planing Mill appears to still be operating in 1912. Building or demolition episodes of the mill structures prior to the building permits for the 1960s Upper Harbor Terminal construction are not recorded in the permit files available at the City of Minneapolis Development Review Office.

Two small residential blocks of housing appear in Parcels 7A and 7B starting in 1892 on the C.M. Foote Map. In 1892 the only structures depicted are three frame buildings along the northern tip of the block along Dowling Ave. N. Historical building permits for the block report most homes in this area were built in 1910 by the “Nichols-Frissell Company”. On the 1912 Sanborn map there are about a dozen one to one and-a-half story residential buildings present within the block. In 1952, another Sanborn map of the block shows nearly one home per lot for a total of at least 30 structures. According to demolition permits, house removals and demolitions started in 1962 and continued through 1980 in preparation for the construction of I-94. Aerial imagery of the area corroborates this, with houses visibly being removed after 1960 until only six homes are standing by 1971 (Figure 2). By the mid-1980s, aerial imagery demonstrates most of the block has been replaced by the eastern shoulder to the I-94 highway corridor currently passing to the west of the project area.

In 1960, the Minneapolis demolition or ‘wrecking’ ordinance code states “the foundation of all buildings or structures moved, torn down or wrecked shall be taken down to the level of the adjoining ground...all debris, waste, and unsightly materials shall be removed from the premises.” Open foundations would be allowed as long as “substantial guards” or barriers are placed around them (Minneapolis City Code 1960:880). In 1982, soon after the last documented removal or demolition in the block, the Minneapolis ordinance was changed. This updated ordinance required wrecking crews to remove all material above and below the surface. Any depressions from demolition had to be leveled with clean fill up to the current surface grade (Minneapolis City Council 1982). Remains of the residential block were likely buried or removed by highway development in 1984.

The only other previously standing structures in the project area are three depicted in the 1952 Sanborn map: a small storage building for the “Log Cottage Company” with a nearby lumber pile and log chute located near the corner of 33<sup>rd</sup> Ave. North and North 1<sup>st</sup> Street (Parcel 5); and five unnamed wooden structures depicted on the 1892 C.M. Foote Map (Parcels 2 and 4).

The remainder of the project area is occupied by lumber yards and vacant fields from the late 19<sup>th</sup> to the middle of the 20<sup>th</sup> century (visible in aerial photography starting in 1938). Aerial images





Figure 2: 1971 aerial image of dwellings yet to be removed between 37<sup>th</sup> Ave N and Dowling Ave N. Area of Parcel 7A highlighted in red.

from 1964 onward for the easternmost project areas 1A through 5 illustrate how rapid roadway and shoreline development reshaped the land surface. From the early 1970s to the 1980s, the property takes on the appearance it has today with warehouses, storage tanks, fuel dock, grain elevators and stockpiles of material. The largest visual change, besides the additional industrial structures, is the shifting of the Mississippi River shoreline along the eastern boundaries in project Parcels 2 and 5, demonstrating filling and leveling activities along the southern portion of the project area, moving the river line westward.

#### 4.0 THE ARCHAEOLOGICAL PROCESS

The archaeological process as it is conducted in the U.S. today is heavily purposed and guided by Section 106 of the National Historic Preservation Act of 1966 (NHPA) and Title 36 Code of Federal Regulations Part 800: Protection of Historic Properties, which further details and amends the process set forth by Section 106. While the regulatory power of Section 106 of the NHPA is intended for considering cultural resources potentially affected during ground disturbing projects on federal land and/or paid for with federal funds, the process itself has been adapted and modified by state-level regulatory powers to apply to a multitude of cultural resource management (CRM) circumstances.

Drawing from the Section 106 process, the major stages of CRM-related archaeological endeavors include **Identification**, **Evaluation**, and **Mitigation**. The purpose of each stage, and whether the next stage is required, is mandated by the goals of the project requiring the archaeological work. The Minnesota State Historic Preservation Office (SHPO) and Minnesota Office of the State Archaeologist (OSA) have slightly adapted these steps to address each agency's primary concerns. As the MN SHPO is concerned with the preservation of both archaeological and standing architectural properties and their potential for listing in the National Register of Historic Places, their focus is different than that of the MN OSA, which is oriented toward identification and preservation of archaeological sites and protection of burial sites (Anfinson 2005; OSA 2011).

#### 4.1 Identification

The first question an archaeologist needs to answer when contracted to complete an archaeological review for a proposed ground-disturbing project is whether archaeological materials are present within the project area. Both the SHPO and OSA refer to this initial stage as Phase I. As the Minnesota Office of the State Archaeologist terms it, this stage determines "presence or absence" of sites (OSA 2011:16). First, the archaeologist completes a Literature Review (dubbed Phase Ia). This review includes going through previously recorded archaeological site files maintained by SHPO and OSA to determine if sites have already been recorded within or nearby the project area. This search can also include an examination of topographic maps, LiDAR data, soils data, environmental history, etc. to develop a probability assessment of the potential for archaeological materials to be present within the project area. The Literature Review assists in determining whether further archaeological review will be necessary and, if so, how to conduct it.

If the Literature Review indicated the potential for archaeological sites within the project area, it is followed by an archaeological survey (or Phase Ib). Depending on the state of the project area, this could be pedestrian survey through recently plowed and rained-on agricultural fields, or, in nearly all other conditions, shovel testing. Shovel test pits (shortened to STP) are hand-dug holes dug approximately 40 centimeters wide (16 inches) and one meter (36 inches) deep or otherwise stopped by an obstruction (water, bedrock, etc.). Soils from shovel tests are processed through a ¼” screen to sift for artifacts. Depending on the state of the project area, shovel tests can be dug systematically in transects or grid patterns, or intuitively based on landforms or likely archaeological feature locations. In appropriate circumstances, this stage can also utilize geophysical detection methods, such as Ground Penetrating Radar and Magnetometry, to identify possible archaeological deposits prior to shovel testing.

Field results should determine presence/absence of archaeological materials within the project area and, ideally, their extent. If archaeological materials are present, the archaeologist then reports the identified site(s) to the Office of the State Archaeologist and communicates their results to their client in a report. Based on the materials identified, the archaeologist may recommend further archaeological testing if the identified sites(s) cannot be avoided during ground disturbing activities, or recommend no further archaeological work is needed.

#### *Geophysical Detection Methods*

Geophysical survey (a form of Remote Sensing) includes a variety of tools to detect geological and archaeological conditions. The two methods most utilized in archaeology include Ground Penetrating Radar (GPR) and Magnetometry. Ground Penetrating Radar sends radar waves into the ground to detect differences in density between looser ground deposits and solid features. It is especially useful for finding foundation walls, utility lines, and large deposits with a different density than surrounding soils. The device is able to investigate large open areas with minimal ground vegetation or other cover much faster than shovel testing or other excavation methods. When a skilled operator views the GPR data, anomalies can be identified for further investigation (ArchaeoPhysics 2017:3-4).

Magnetometry is a form of remote sensing using a magnetometer device. This device sends electrical signals through the ground to measure the variation in the magnetic fields being generated. This device is ideal for locating metal pipes, metal reinforced concrete features, masonry, and areas which have experienced extensive heating such as a furnace or fireplace. These larger features can be found at deeper depths, up to a meter (or three feet) deep (ArchaeoPhysics 2017:3-4).

## **4.2 Evaluation**

If, after the Identification stage, the archaeologist recommends further archaeological work because of the potential to be nominated to the National Register, and this is confirmed with the client by SHPO or OSA, then the archaeological process moves to the Evaluation stage (generally termed Phase II, and called Intensive Survey by SHPO). During this stage, the archaeologist works to refine the horizontal and vertical site(s) limits, determine the cultural context and integrity of

the site, and ultimately to determine the site's potential to "answer *important* research questions without significantly harming site integrity," (OSA 2011:17, emphasis source). Archaeological methods at this stage rely on Test Units strategically placed where archaeologically dense areas or potential features were identified via shovel or geophysical testing during the Identification stage. This may also include placing Test Units where nothing was identified during the first stage as a control measure. Test Units are at a minimum one-meter by one-meter square holes excavated in either 5 or 10-centimeter levels until the unit has been excavated 20 centimeters into culturally sterile soils.

Once fieldwork and follow-up lab analysis are complete, the archaeologist files an update to the site form(s) with the Office of the State Archaeologist, and communicates their results to the client in another report. If after this stage the site's vertical and horizontal limits were well-defined, the cultural context(s) identified, the site(s) determined to have further potential to answer important research questions, as detailed by the National Register of Historic Places process, the archaeologist will recommend steps to avoid damaging the site, or avoid Adverse Effects. According to the Section 106 process, an Adverse Effect is "found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (Protection of Historic Properties 2004). At this stage, the archaeologist typically works with clients to avoid or minimize impacts to National Register eligible sites. However, if the site meets the above-mentioned conditions, and Adverse Effects cannot be avoided, the archaeological process moves on to the Mitigation stage.

### **4.3 Mitigation**

This stage (also referred to as Data Recovery, or Phase III) attempts to gather enough data from the site(s) within the project area to learn as much information as the site can provide before it is destroyed during ground disturbing activities. This is usually the stage one thinks of when hearing "archaeological excavation". Field methods typically include excavating multiple adjoining gridded formal excavation units, called blocks, to define and recover data from cultural horizons, use-areas, features, and artifact concentrations. Soil samples, charcoal samples, and all artifacts are collected for further lab analysis such as examination of diagnostic artifacts, C<sup>14</sup> analysis, phytolith and botanical analysis, etc. This is a labor and time-intensive process.

Construction Monitoring is often recommended as part of the Mitigation stage. This refers to one or more archaeologists actively on-site during ground-disturbing construction activities and monitoring those activities in areas of archaeological interest. The archaeologist carefully observes for potential archaeological deposits as soils are mechanically excavated and moved. If an archaeological deposit is encountered, the archaeologist will likely pause construction. Avoidance and mitigation are again exercised in this instance. If the deposit cannot be avoided, the archaeological team takes the time necessary to identify and document the deposit. Once the deposit is properly documented, construction may continue.

## 5.0 SPRING 2021 FIELD VISIT

On March 11, 2021, Dr. Jeremy Nienow (NCC) and subconsultants Dr. Fred Sutherland (Sutherland Relics and Rust LLC) and Laura Koski (Zooarchaeo Consulting, LLC) visited the Upper Harbor Terminal project area. The team walked all parcels and identified obstructions which should be moved prior to archaeological testing, potential areas of disturbance, and several utility access points (storm sewer drains, sanitary sewer manholes, water hydrants, and gas line markers).

After noting existing utilities may impact the archaeological recommendations, Nienow procured utility maps for Upper Harbor Terminal from Thomas J. Lincoln of Kimley-Horn (SEH Inc. 2018). An examination of these utility maps demonstrated known utilities may only minorly affect archaeological recommendations for a small area of Parcel 2. Otherwise, very few underground utilities appear to exist within the project area (SEH Inc. 2018).

During the field visit, obstructions which would block archaeological work resulting from the following recommendations were noted and mapped. Obstructions included soil, sand, gravel, and crushed rock piles; piles of concrete, scrap metal, and lumber; and large bins. All obstructions within select areas should be moved prior to archaeological testing. Parcels containing obstructions are noted in the following section.

## 6.0 PARCEL BY PARCEL ARCHAEOLOGICAL PLAN

Based on the results of the archaeological Phase 1a, the archaeologists' working knowledge of the project, development plans dated to January 25, 2021 provided by Kimley-Horn, and current Minnesota archaeological practices, Table 1. provides a summary of recommended archaeological methods to identify the potential presence of subsurface cultural resources within each parcel. An 'X' indicates this method is advised. An 'O' indicates this method may be advised depending on the results of the initially suggested methods for those parcels. A '-' indicates this method is not advised for that parcel.

**Table 1. Suggested Archaeological Methods for Each Parcel**

<b>Parcel</b>	<b>Shovel Test Pit (STP)</b>	<b>Soil Core</b>	<b>Ground Penetrating Radar (GPR)</b>	<b>Magnetometry</b>	<b>Mechanical Trenching</b>
<b>1A</b>	X	X	X	X	O
<b>1B</b>	X	X	X	X	O
<b>2</b>	X	X	X	-	X
<b>3</b>	O	X	X	-	O
<b>4</b>	O	X	X	-	O
<b>5</b>	O	X	X	-	O
<b>6A</b>	-	-	-	-	-
<b>6B</b>	-	-	-	-	-
<b>7A</b>	O	X	X	-	O
<b>7B</b>	O	X	X	-	O



The accompanying maps used in this section use recent Google Satellite Imagery to demonstrate existing conditions. Refer to Appendix A to see historically mapped structures and recommended work over development plans.

## 6.1 Parcel 1A (Figure 3)

**Archaeological Potential:** The Bovey-De Laitre planing mill facilities in Parcel 1A stood on heavy masonry foundations built to withstand machine vibrations. There should be multiple machine mountings within each structure likely to have survived demolition. These machine locations and the foundation footprint can inform archaeologists about how the flow of work was conducted in each facility and how it may have changed over time (Gordon and Malone 1994: 299-300). Nearby examples of contemporary 19<sup>th</sup>-century mills or industrial facilities studied by archaeologists include the North Star Sawmill (21HE113), the North Star Iron Works (21HE195), and the Pacific Sawmill (21HE115) (Anfinson 1989:39-44; Nienow and Sutherland 2019).

The blacksmith shops located along the southern end of the planing mill building visible on the 1889 and 1912 Sanborn maps are likely survived by some buried remnants of the blacksmith forges, which could contain intact deposits of the tools and equipment being maintained there. The constant heating of the surrounding ground at the blacksmith shop should create a strong magnetic signature in the soil for magnetometers to detect. The steam engines attached to several of the mill facilities will contain service pits where fragments of engine parts, tools, or other trash disposed by the workers could remain. Lastly, a 6" water pipe is mapped on the 1912 Sanborn starting just southeast of the blacksmith shop, extending southwest then northwest. The northeast to southwest segment is the major portion of the water pipe within Parcel 1A, but considering it may not have been taken out of the ground prior to the parcel's agricultural use, it still likely remains there today. Most of the wood frame sheds and support buildings around these facilities are not expected to remain. The only exception to this would be if any deeply dug privy pits have been preserved. While none are listed on maps or other documents, these structures can hold a wealth of information about the habits and behaviors of workers at the mills.

**Suggested Archaeological Methods:** A long stretch of gravel piles were noted within this parcel during the field visit on March 11, 2021. These piles, and any obstructions placed within the parcel after the field visit, would need to be removed prior to archaeological survey.

A soil core taken by Braun-Intertec in 2015 (#106), located near the southeastern corner of Parcel 1B, reported cinders in the top two feet of soil (Lee and Shaffer 2015). This could indicate a nearby dumping area of furnace and forge waste related to the Bovey-De Laitre mill complex. The shallow depth of the cinder deposits also indicates minimal filling activities may have occurred in the areas of Parcels 1A, 1B, and the northern portion of 2 prior to the historic occupation of the parcels. This is corroborated by aerial imagery from 1938 up to 1960, which demonstrate the area was utilized for agriculture with small pockets of trees around the border of Parcels 1A and 1B. However, two push probes were completed by Braun Intertec in subsequent years in Parcel 1A. These indicated fill soils ranging from four to six feet across the parcel. It is unclear whether these

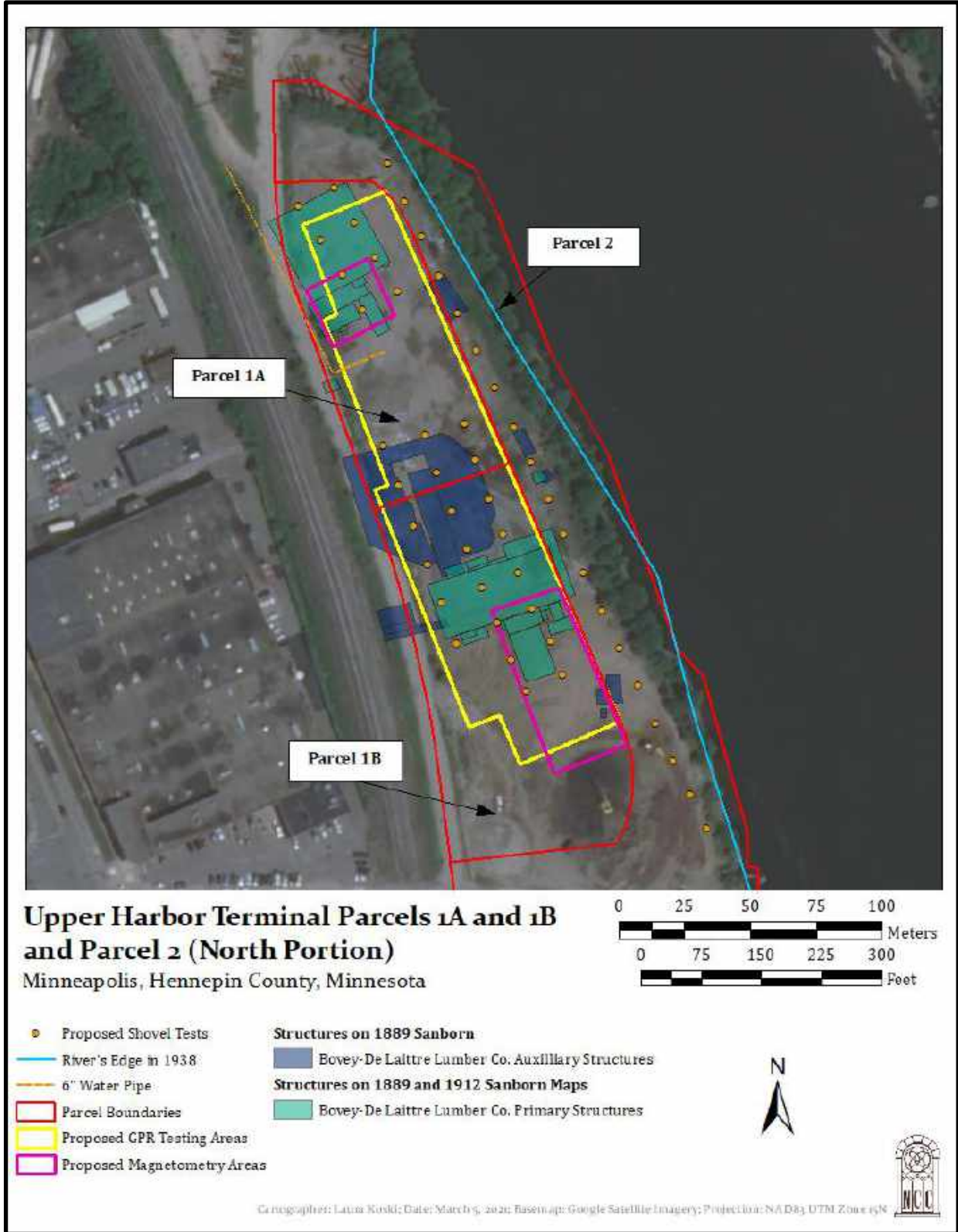


Figure 3: Suggested archaeological methods for Parcels 1A, 1B, and the northern portion of 2.

soils may have been present during lumber mill activities within the parcel, or if these soils were added at a later time. In their March 2021 report, Braun Intertec recommends the completion of eight geotechnical bores along with four additional push probes within the building pad. Archaeologists should be present while these bores and push probes are being completed and all cored soils should be sifted through a ¼” mesh by an archaeologist if possible. The results of these cores could inform any further archaeological work.

If, after additional soil coring, it is determined archaeological deposits may only lie beneath reasonably shallow layers of agricultural and fill soils, the following recommendations can be completed from the existing ground surface. If additional soil coring indicates fill soils are consistently deeper than three feet across the parcel, then the following archaeological recommendations should be completed after the fill soils are removed within the building pad (as recommended by Braun Intertec in their March 2021 report) and before additional fill soils are brought in.

GPR combined with shovel testing is recommended to identify whether the structural and machinery footings, portions of the blacksmith forges, possible privies, and the segment of 6” water pipe still remain. GPR survey should cover as much of Parcel 1A as possible. This should be followed by magnetometry surrounding the planing mill’s blacksmith shop. The magnetometry results could verify anomalies picked up by the radar as blacksmith-related, and may detect other metal deposits in the general area. Shovel tests should be laid out on a 15-meter grid of two transects across the location of the planing mill structures and should also be placed to target anomalies of interest picked up by GPR and magnetometry. Considering the parcel’s gravel and patchy asphalt pavement, and its use as a soils and gravel storage lot, the ground may be too compact or obstructed for hand-dug shovel tests. If this is the case, or if the geophysical testing detected anomalies beyond a meter in depth, focused mechanical trenching will be required to aid archaeologists in reaching and verifying these anomalies.

If GPR, magnetometry, and shovel testing gather sufficient data to indicate subsurface presence of the above-mentioned features, and considering ground disturbing activities are currently planned within the parcel (per the Jan. 25, 2021 development plans provided by Kimley-Horn) archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the Bovey-De Laittre Mill subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. Archaeological work within Parcel 1A would then likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

If GPR, magnetometry, and shovel testing do not identify any archaeological deposits likely to be related to the Bovey-De Laittre Lumber Mill complex, no further archaeological testing is required.

**Methods Summary:** Identification – Soil Cores followed by GPR, Magnetometry, and Shovel Testing possibly aided by Mechanical Trenching. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## 6.2 Parcel 1B (Figure 3)

**Archaeological Potential:** The Bovey-De Laittre sawmill facilities in Parcel 1B contained heavy masonry foundations to withstand machine vibrations. There should be multiple machine mountings within each structure which are likely to have survived demolition. The remains of internal supports and footings appear to be visible in the 1938 Aerial image of the project area surrounded by agricultural fields and clumped trees. These machine locations and the foundation footprint can inform archaeologists about how the flow of work was conducted in each facility and how it may have changed over time (Gordon and Malone 1994: 299-300). Nearby examples of contemporary 19<sup>th</sup>-century mills or industrial facilities studied by archaeologists include the North Star Sawmill (21HE113), the North Star Iron Works (21HE195), and the Pacific Sawmill (21HE115) (Anfinson 1989:39-44).

The blacksmith shops located along the southern end of the sawmill building seen in the 1889 and 1912 maps should have remnants of the blacksmith forges which could contain remnants of the tools and equipment being maintained there. The constant heating of the surrounding ground at the blacksmith shop should create a strong magnetic signature in the soil for magnetometers to detect. The steam engines attached to several of the mill facilities will contain service pits where fragments of engine parts, tools, or other trash disposed by the workers could remain.

Features like the timber or log conveyor systems may also survive around the lumber mill. These wide linear features may be detectable using GPR. Most of the wood frame sheds and support buildings around these facilities are not expected to survive. The only exception to this would be if any deeply dug privy pits survive. While none are listed on maps or other documents, these structures can hold a wealth of information about the habits and behaviors of workers at the mills.

**Suggested Archaeological Methods:** A large sand pile, concrete sewer pipe sections, and standing water were noted within this parcel during the field visit on March 11, 2021. These piles, concrete sewer pipe sections, and any obstructions placed within the parcel after the field visit, would need to be removed prior to archaeological survey. If possible, the standing water should also be drained or naturally dried.

A soil core taken by Braun-Intertec in 2015 (#106), located near the southeastern corner of Parcel 1B, reported cinders in the top two feet of soil (Lee and Shaffer 2015). This could indicate a nearby dumping area of furnace and forge waste related to the Bovey-De Laittre mill complex. The shallow depth of the cinder deposits also indicates minimal filling activities occurred in the areas of Parcels 1A, 1B, and the northern portion of 2. This is corroborated by Aerial imagery from 1938 up to 1960, which demonstrated the area was utilized for agriculture with small pockets of trees

around the border of Parcels 1A and 1B. However, two push probes were completed by Braun Intertec in subsequent years in Parcel 1B. These indicated fill soils ranging from four to six feet across the parcel. It is unclear whether these soils may have been present during lumber mill activities within the parcel, or if these soils were added at a later time. In their March 2021 report, Braun Intertec recommends the completion of eight geotechnical bores along with four additional push probes within the building pad. Archaeologists should be present while these bores and push probes are being completed and all cored soils should be sifted through a ¼” mesh by an archaeologist if possible. The results of these cores could inform any further archaeological work.

If, after additional soil coring, it is determined archaeological deposits may only lie beneath reasonably shallow layers of agricultural and fill soils, the following recommendations can be completed from the existing ground surface. If additional soil coring indicates fill soils are consistently deeper than three feet across the parcel, then the following archaeological recommendations should be completed after the fill soils are removed within the building pad (as recommended by Braun Intertec in their March 2021 report) and before additional fill soils are brought in.

GPR combined with shovel testing is recommended to identify whether the structural and machinery footings, portions of the blacksmith forges, and the possible privies still remain. GPR survey should cover as much of Parcel 1B as possible. This should be followed by magnetometry surrounding the sawmill’s blacksmith shop. The magnetometry results could verify anomalies picked up by the radar as blacksmith-related, and may detect other metal deposits in the general area. Shovel tests should be laid out on a 15-meter grid of three transects across the location of the sawmill structures and should also be placed to target anomalies of interest picked up by GPR and magnetometry. Considering the parcel’s gravel and patchy asphalt pavement, and its use as a soils and gravel storage lot, the ground may be too compact or obstructed for hand-dug shovel tests. If this is the case, or if the geophysical testing detected anomalies beyond a meter in depth, focused mechanical trenching will be required to aid archaeologists in reaching and verifying these anomalies.

If GPR, magnetometry, and shovel testing gather sufficient data to indicate subsurface presence of the above-mentioned features, and considering ground disturbing activities are currently planned within the parcel (per the Jan. 25, 2021 development plans provided by Kimley-Horn) archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the Bovey-De Laittre Mill subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. Archaeological work within Parcel 1B would then likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.



If GPR and magnetometry do not identify any anomalies likely to be related to the Bovey-De Laittre Lumber Mill complex, no further archaeological testing is likely required.

**Methods Summary:** Identification – Soil Cores followed by GPR, Magnetometry, and Shovel Testing possibly aided by Mechanical Trenching. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

### 6.3 Parcel 2 (Figure 4)

**Archaeological Potential:** The entire Mississippi River shoreline of the project area is encompassed in Parcel 2. Primarily, this long and narrow parcel has the potential to contain deeply buried prehistoric cultural materials along the position of the former river line. Additionally, the 1892 C.M. Foote Map illustrates a grouping of unnamed wooden structures within Parcel 2. When georeferenced, these structures appear to land primarily in Parcel 2 with no overlap into Parcel 3 and a slight overlap into Parcel 4. The C.M. Foote Map is not intended to be especially precise, meaning the mapped locations should be considered broad approximations compared to the structures mapped from the far more precise Sanborn Fire Insurance Map series. With this in mind, it should be considered the grouping of structures mapped in Parcel 2 may have stood further west in actuality, and the foundations of some of these structures may still lie buried within portions of Parcels 2, 3, and 4.

These buildings only appear on the 1892 C.M. Foote Map and not in the 1889 Sanborn map or 1903 map released by the Minneapolis Real Estate Board, indicating these structures stood for less than four years. Their purpose is unknown, but their orientation along the river with buildings standing deeply inset from the road (36<sup>th</sup> Ave N) indicates they may have been part of a short-lived industrial complex. Identifying and studying the remains of this complex may help inform what other industries and businesses started and failed along the Mississippi in early Minneapolis, and help expand upon the rich history of industry and adaptation along Minneapolis' riverbanks.

**Suggested Archaeological Methods:** Large gravel, sand, and soil piles were noted within the northern portion of this parcel (east of Parcels 1A and 1B) during the field visit on March 11, 2021. Additional obstructions, including lumber piles, concrete blocks, a dirt pile, a crushed rock pile, and large storage bins were noted along the shoreline in the mid-portion of Parcel 2 (east of Parcels 3, 4, and 5) These piles, and any obstructions placed within the parcel after the field visit, would need to be removed prior to archaeological survey.

To identify presence/absence, location, and depth of possible buried prehistoric cultural materials, two different methods of subsurface testing should be utilized. These will vary between shovel testing and soil cores depending on the area within the parcel.

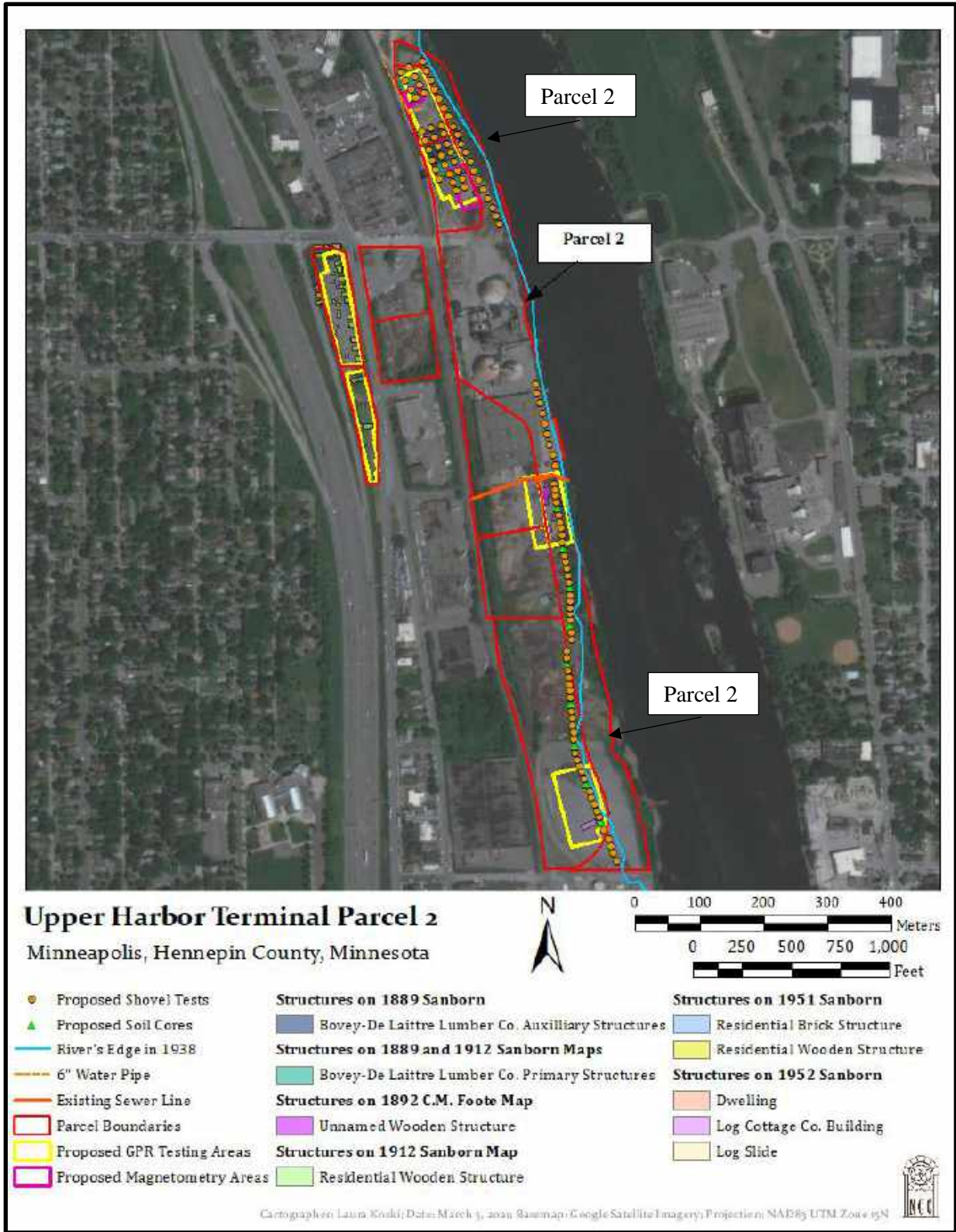


Figure 4. Suggested archaeological methods for Parcel 2.

In the northern portion of Parcel 2, between Parcels 1A and 1B and the previous river line, shovel tests should be excavated at 15-meter intervals in a transect following the angle of the river's edge stopping before Dowling Ave N. Soil core #106, completed by Braun Intertec in 2015, was located just north of Dowling Ave N several meters in from the river's edge. This soil core resulted in cinders within the top two feet of soil (Lee and Shaffer 2015). The shallow depth of the cinder deposits indicates minimal filling activities in this portion of Parcel 2 north of Dowling Ave N. This is corroborated by Aerial imagery from 1938 up to 1960, which demonstrated the area was utilized for agriculture with small pockets of trees. Stripping should not be required prior to these shovel tests being completed.

However, the recent use of this area for soils and gravel storage may cause soils to be too compact for hand-digging. Mechanical assistance from a backhoe or other equipment may be needed to expedite excavations along the transect. Two tests and opposing ends of the transect should be attempted by hand first, and based on compaction and resulting profiles, mechanical assistance may be required to help archaeologists dig past compacted soils. If no prehistoric materials associated with buried A horizon soils are identified, or if the prehistoric materials are located strictly in fill soils, no further archaeological work is likely necessary. If shovel testing identifies intact prehistoric features and artifacts, archaeological work in this area would likely move to the Evaluation stage. This would involve digging bracket shovel tests and excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the vertical and horizontal extent of the subsurface deposits and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

The next line of shovel tests should be completed between the warehouse north of 36<sup>th</sup> Ave N (3800 1<sup>st</sup> Street N) and the previous river line. According to soil cores in this area taken by Braun-Intertec in 2015 fill soils extend at least five feet below the current ground surface (#103-105) (Lee and Shaffer 2015). A series of mechanical excavations four feet deep would assist archaeologists in placing shovel tests along this former shoreline to determine if any intact topsoil horizons or cultural features exist below the existing fill lens. Shovel tests should be completed at 15-meter intervals in a single transect. These will likely be the most logistically difficult shovel tests to complete at Upper Harbor Terminal. Additionally, the mechanical trenching required prior to shovel testing may Adversely Affect the rail line running through the area parallel to the shore if an architectural historian finds the rail line eligible in association with the remainder of the standing industrial complex in Parcel 2. To avoid this potential damage, the soil cores in Parcel 5 and the shoreline shovel test transect at the northern end of Parcel 2 should be completed first. If the soil cores and shovel tests are negative for intact prehistoric materials, the shovel tests east of 3800 1<sup>st</sup> Street N would likely not need to be completed, and the rail line left unaffected. If intact prehistoric materials are recovered, and the rail line has not yet been found eligible in relation to

the industrial complex in Parcel 2, the shovel tests recommended east of 3800 1<sup>st</sup> Street N should be completed to determine the extent of the prehistoric component.

Georeferencing and observation of historical aerial imagery dating to 1938 and 1945 indicates the previous Mississippi river line in the southern portion of Parcel 2 was actually significantly further west than it is today, reaching 65 meters west at its furthest. The previous river's edge aligned somewhat closely with the eastern edge of Parcel 5, and encroached a little westward of the eastern boundary in the southern half of the parcel. Of the entirety of the Upper Harbor Terminal property, the areas along the previous river line hold the highest potential for prehistoric cultural materials, but soil cores recorded by American Engineering Testing on Dec. 2, 2020 indicate fill soils in the western portions of Parcels 4 and 5 to be at least two to four feet in depth. Considering fill soils across Parcels 2, 4, and 5 may vary along the previous river line, additional 2"-diameter soil cores placed every 60 meters along the previous river's edge and screened through ¼" screen by an archaeologist would likely advise methods to be utilized to fill in the spaces between these soil cores (OSA 2011:26-27). If fill soils are found to be less than two feet deep, hand-dug shovel would then be excavated every 15 meters along the transect between the soil cores. If soil cores identify fill soils reaching depths between two and three feet deep, mechanical trenching would be required to aid the archaeologists in reaching the proper depths for shovel testing. If soil cores identify fill soils reaching further than three feet in depth, soil cores should then be completed every ten meters along the transect between the previous soil cores to continue searching for potential prehistoric deposits beyond practically hand-excavated depths. If no prehistoric materials associated with buried A horizon soils are identified, or if the prehistoric materials are located strictly in fill soils, no further archaeological work is likely necessary. If prehistoric features and artifacts associated with a buried A horizon are identified, and ground disturbing activities cannot be avoided, further archaeological work starting with Evaluation will likely be required.

The above-mentioned soil cores should also be completed prior to GPR survey in Parcel 2 adjacent to Parcels 3 and 4 in the area of the structures noted on the 1892 C.M. Foote Map. Soil core results would help determine whether GPR can be conducted on the existing ground surface, or if mechanical stripping would be required prior to GPR testing. If fill soils are found to be past 1.5 meters in depth, mechanical stripping would be required prior to GPR survey.

If GPR does not detect any anomalies possibly related to the non-extant structures, this would indicate the structures have been so thoroughly demolished and removed, not enough remains for further archaeological survey.

If GPR gathers sufficient data to indicate foundations or possible privy deposits, further archaeological survey should be completed. This should include shovel tests dug in the identified anomaly areas to verify whether the anomalies are archaeological in nature. Considering the parcel's use as a soils and gravel storage lot, the ground may be too compact for hand-dug shovel tests. If this is the case, or if the geophysical testing detected anomalies beyond a meter in depth, focused mechanical trenching will be required to aid archaeologists in reaching and verifying these anomalies. If shovel tests identify intact features and artifacts related to the structures and, ground

disturbing activities cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

**Methods Summary:** Identification - Soil Cores followed by GPR, and Shovel Testing aided by Mechanical Trenching where necessary. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

#### **6.4 Parcel 3 (Figure 5)**

**Archaeological Potential:** No historically mapped features land directly within Parcel 3. However, the 1892 C.M. Foote Map illustrates a grouping of unnamed wooden structures in this general area. When georeferenced, these structures appear to land primarily in Parcel 2 with no overlap into Parcel 3, and a slight overlap into Parcel 4. The C.M. Foote Map is not intended to be especially precise, meaning the mapped locations should be considered broad approximations compared to the structures mapped from the far more precise Sanborn Fire Insurance Map series. With this in mind, it should be considered the grouping of structures mapped in Parcel 2 may have stood further west in actuality, and the foundations of some of these structures may still lie buried within the southeastern corner of Parcel 3.

These buildings only appear on the 1892 C.M. Foote Map and not in the 1889 Sanborn map or 1903 map released by the Minneapolis Real Estate Board, indicating these structures stood for less than four years. Their purpose is unknown, but their orientation along the river with buildings standing deeply inset from the road (36<sup>th</sup> Ave N) indicates they may have been part of a short-lived industrial complex. Identifying and studying the remains of this complex may help inform what other industries and businesses started and failed along the Mississippi in early Minneapolis, and help expand upon the rich history of industry and adaptation along Minneapolis' riverbanks.

Two push probes completed beneath the floor of the existing warehouse indicate the warehouse's slab on grade construction placed it directly on top of intact soils. Of all parcels within the project area, the location beneath the existing warehouse may contain the highest potential for intact prehistoric archaeological materials.





Figure 5. Suggested archaeological methods for Parcel 3 and mid-portion of Parcel 2.

**Suggested Archaeological Methods:** GPR testing is recommended for the southeastern portion of Parcel 3 to attempt to locate the structure foundations and possible privy deposits of the complex of unnamed non-extant wooden structures currently mapped within Parcel 2. In their March 2021 report, Braun Intertec recommends six additional push probes and one soil test pit be completed within the planned building pad. This should be completed prior to any GPR work with an archaeologist present and all tested soils should be sifted through a ¼” mesh by an archaeologist if possible. The results of these soil tests can be used to determine the depth of fill layers covering potential archaeological remains. If fill layers are deeper than 1.5 meters (4.9 feet), mechanical stripping should be utilized prior to use of GPR. If fill layers are shallower than 1.5 meters, GPR can proceed at the ground surface.

If GPR does not detect any anomalies possibly related to the non-extant structures, this would indicate the structures were either not located within Parcel 3, or these structures have been so thoroughly demolished and removed, not enough remains for further archaeological survey.

If GPR gathers sufficient data to indicate foundations or possible privy deposits, further archaeological survey should be completed. This should include shovel tests dug in the identified anomaly areas to verify whether the anomalies are archaeological in nature. Considering the parcel’s use as a soils and gravel storage lot, the ground may be too compact for hand-dug shovel tests. If this is the case, or if the geophysical testing detected anomalies beyond a meter in depth, focused mechanical trenching will be required to aid archaeologists in reaching and verifying these anomalies. If shovel tests identify intact features and artifacts related to the structures and ground disturbing activities cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

In regards to the possible intact soils beneath the existing warehouse, once the slab comprising the warehouse’s current floor is removed, shovel testing on a 15-meter grid is recommended in this area to test for potentially intact prehistoric archaeological deposits.

**Methods Summary:** Identification - Soil Cores followed by GPR and Shovel Testing aided by Mechanical Trenching in some areas depending on results. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## 6.5 Parcel 4 (Figure 6)

**Archaeological Potential:** The 1892 C.M. Foote Map illustrates a grouping of unnamed wooden structures which, when georeferenced, appear to land primarily in Parcel 2 with a slight overlap into Parcel 4. The C.M. Foote Map is not intended to be especially precise, meaning the mapped locations should be considered broad approximations compared to the structures mapped from the far more precise Sanborn Fire Insurance Map series. With this in mind, it should be considered the grouping of structures mapped in Parcel 2 may have stood further west in actuality, and the foundations of some of these structures may still lie buried within the northeastern corner of Parcel 4.

These buildings only appear on the 1892 C.M. Foote Map and not in the 1889 Sanborn map or 1903 map released by the Minneapolis Real Estate Board, indicating these structures stood for less than four years. Their purpose is unknown, but their orientation along the river with buildings standing deeply inset from the road (36<sup>th</sup> Ave N) indicates they may have been part of a short-lived industrial complex. Identifying and studying the remains of this complex may help inform what other industries and businesses started and failed along the Mississippi in early Minneapolis, and help expand upon the rich history of industry and adaptation along Minneapolis' riverbanks.

**Suggested Archaeological Methods:** GPR testing is recommended for the northeastern corner of Parcel 4 to attempt to locate the structure foundations and possible privy deposits of the complex of unnamed non-extant wooden structures currently mapped only slightly in Parcel 4. In their March 2021 report, Braun Intertec recommends ten additional geotechnical bores be completed within the planned building pad. This should be completed prior to any GPR work with an archaeologist present and all tested soils should be sifted through a ¼" mesh by an archaeologist if possible. The results of these soil tests can be used to determine the depth of fill layers covering potential archaeological remains. If fill layers are deeper than 1.5 meters (4.9 feet), mechanical stripping should be utilized prior to use of GPR. If fill layers are shallower than 1.5 meters, GPR can proceed at the ground surface.

If GPR does not detect any anomalies possibly related to the non-extant structures, this would indicate the structures were either not located within Parcel 4, or these structures have been so thoroughly demolished and removed, not enough remains for further archaeological survey.

If GPR gathers sufficient data to indicate foundations or possible privy deposits, further archaeological survey should be completed. This should include shovel tests dug in the identified anomaly areas to verify whether the anomalies are archaeological in nature. Considering the parcel's use as a soils and gravel storage lot, the ground may be too compact for hand-dug shovel tests. If this is the case, or if the geophysical testing detected anomalies beyond a meter in depth, focused mechanical trenching will be required to aid archaeologists in reaching and verifying these anomalies. If shovel tests identify intact features and artifacts related to the structures and ground disturbing activities cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test

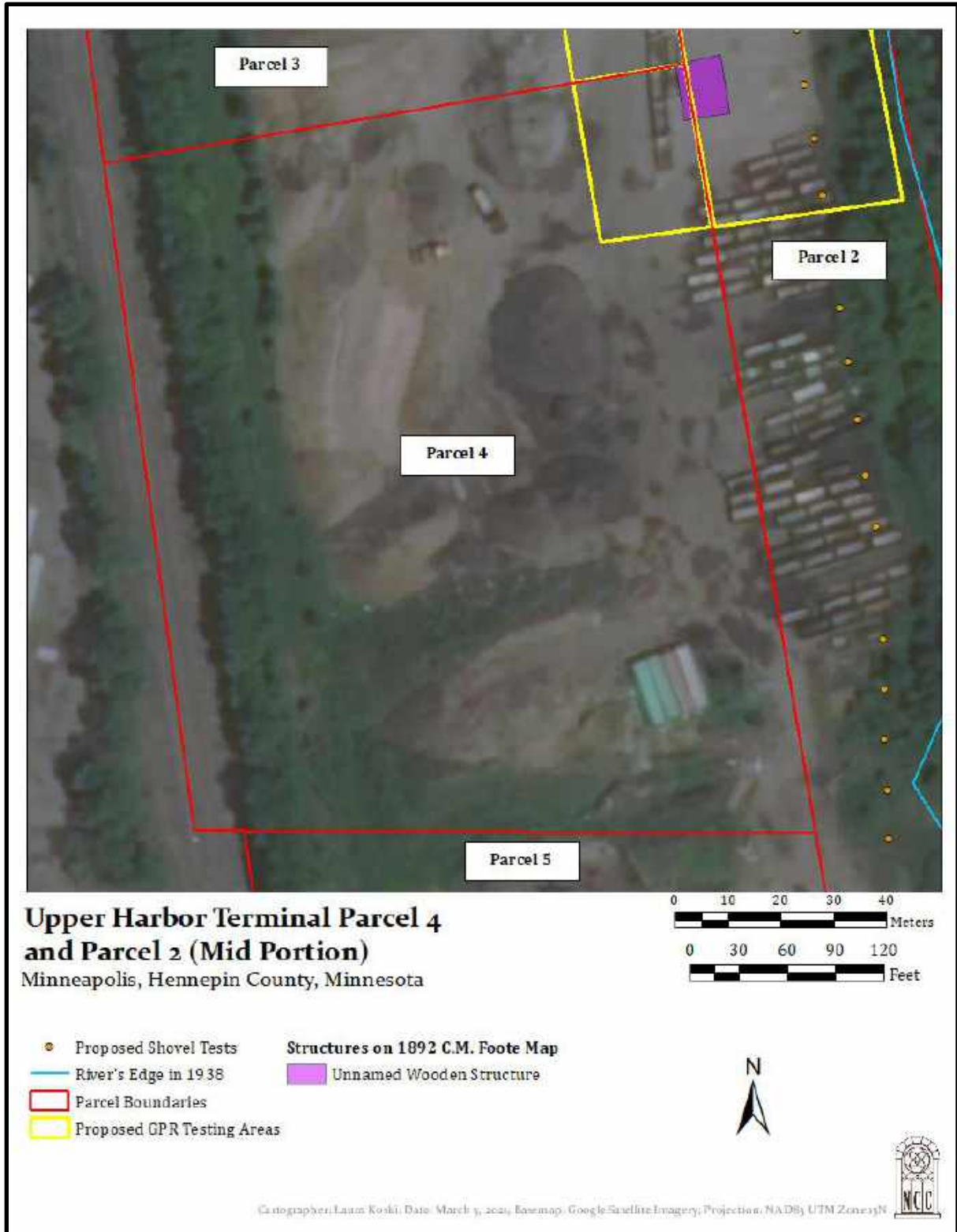


Figure 6. Suggested archaeological methods for Parcel 4 and mid-portion of Parcel 2.

units in areas of interest after any fill soils have been removed to determine the extent of the subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

**Methods Summary:** Identification - Soil Cores followed by GPR with potential for Shovel Testing aided by Mechanical Trenching depending on results. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## 6.6 Parcel 5 (Figure 7)

**Archaeological Potential:** Georeferencing and observation of historical aerial imagery dating to 1938 and 1945 indicates the previous Mississippi river line in this area was actually significantly further west than it is today, reaching 65 meters west at its furthest. The previous river's edge aligned somewhat closely with the eastern edge of Parcel 5, and encroached a little westward of the eastern boundary in the southern half of the parcel. Of the entirety of the Upper Harbor Terminal property, the areas along the previous river line hold the highest potential for prehistoric cultural materials.

Historically, the only mapped structures within Parcel 5 are the Log Cottage Co. Building, a log sled extending from the building and reaching over the previous river line, and a nearby dwelling as drawn on the 1952 Sanborn Map. The Sanborn map indicates a boiler and log slide are present at the facility. The remnants of any footings for the boiler, slide foundations, or the dwelling foundations could be located using GPR.

**Suggested Archaeological Methods:** Large crushed rock piles were noted within this parcel during the field visit on March 11, 2021. These piles, and any obstructions placed within the parcel after the field visit, would need to be removed prior to archaeological survey.

Soil coring should be the first step taken in this area. Soil cores will serve the dual purpose of acting as archaeological tests searching for deeply buried prehistoric materials along the previous river line and assessing the depth of fill soils and whether soils need to be stripped back prior to GPR.

Georeferencing and observation of historical aerial imagery dating to 1938 and 1945 indicates the previous Mississippi river line was actually significantly further west than it is today, reaching 65 meters west at its furthest. The previous river's edge aligned somewhat closely with the eastern edge of Parcel 5, and encroached a little westward of the eastern boundary in the southern half of the parcel. Of the entirety of the Upper Harbor Terminal property, the areas along the previous



river line hold the highest potential for prehistoric cultural materials, but soil cores recorded by American Engineering Testing on Dec. 2, 2020 indicate fill soils in the western portions of Parcels 4 and 5 to be at least two to four feet in depth. Considering fill soils across Parcels 2, 4, and 5 may vary along the previous river line, additional 2”-diameter soil cores placed every 60 meters along the previous river’s edge and screened through ¼” screen by an archaeologist would likely advise methods to be utilized to fill in the spaces between these soil cores (OSA 2011:26-27). If fill soils are found to be less than two feet deep, hand-dug shovel would then be excavated every 15 meters along the transect between the soil cores. If soil cores identify fill soils reaching depths between two and three feet deep, mechanical trenching would be required to aid the archaeologists in reaching the proper depths for shovel testing. If soil cores identify fill soils reaching further than three feet in depth, soil cores should then be completed every ten meters along the transect between the previous soil cores to continue searching for potential prehistoric deposits beyond practically hand-excavated depths. In their March 2021 report, Braun Intertec recommends the completion of 16 additional soil cores within the planned building footprint within Parcel 5. Depending on the final number, orientation, core type (ideally at least 2” diameter) and placement of these cores, and on the condition an archaeologist is allowed to be present to examine and screen the soils, this could satisfy the recommended archaeological soil testing within the building’s footprint.

If prehistoric features and artifacts associated with a buried A horizon are identified, and ground disturbing activities cannot be avoided, further archaeological work starting with Evaluation will likely be required. This would involve digging bracket shovel tests and excavation of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the horizontal and vertical extent of the subsurface deposits and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

If no prehistoric materials associated with buried A horizon soils are identified, or if the prehistoric materials are located strictly in fill soils, no further archaeological work is likely necessary. If soil cores result in prehistoric materials identified strictly in fill soils, these materials can be presumed to have been brought in from a disturbed archaeological context, and no further archaeological work is likely required.

Following the completion of soil cores, GPR should be completed in the southern portion of Parcel 5 in an attempt to identify the remains of the Log Cottage Co. If fill layers are deeper than 1.5 meters (4.9 feet), mechanical stripping should be utilized prior to use of GPR. If fill layers are shallower than 1.5 meters, GPR can proceed at the ground surface.

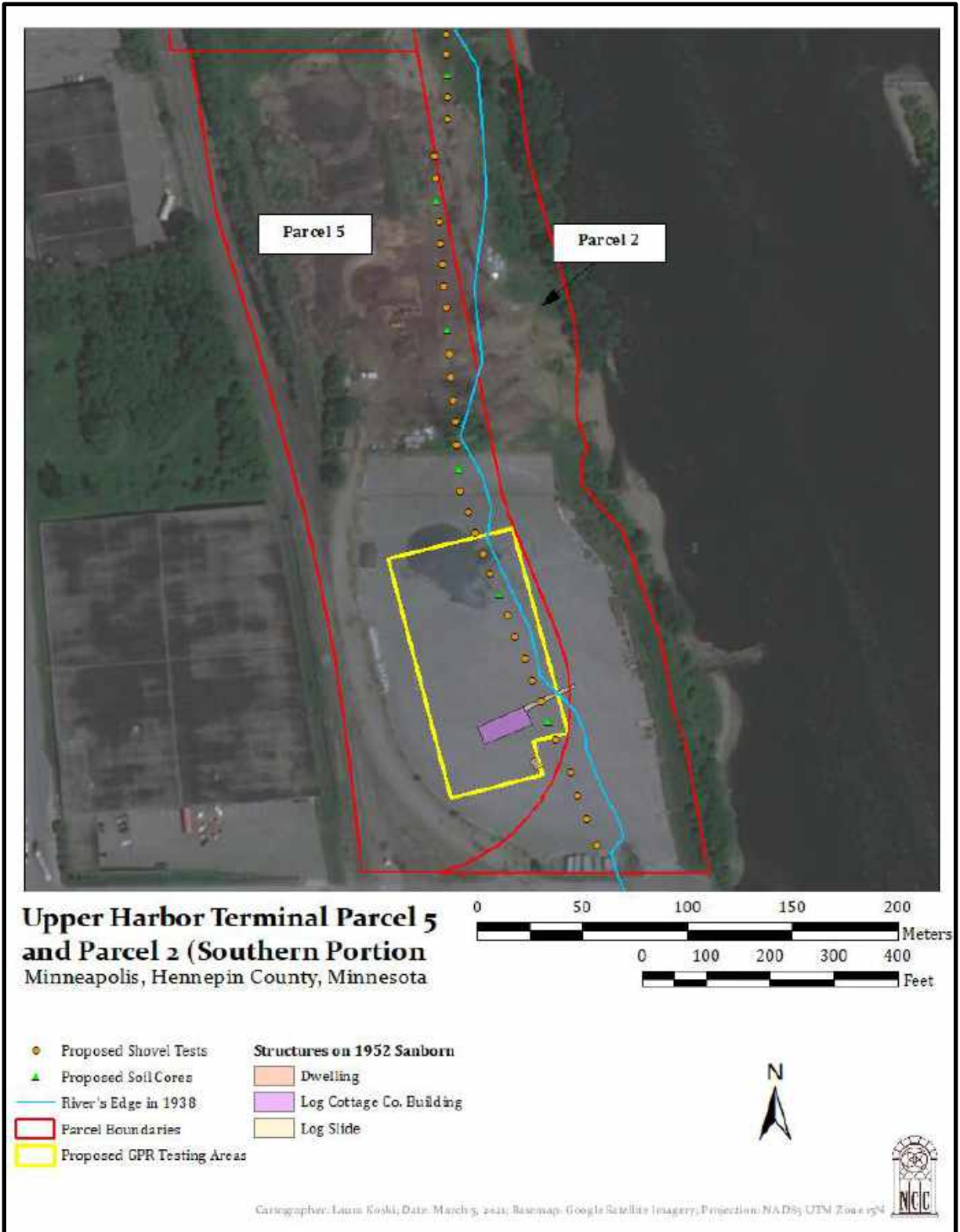


Figure 7: Suggested archaeological methods for Parcel 5 and southern portion of Parcel 2.

If the soil cores are negative for a buried A horizon and prehistoric materials, and the GPR does not detect any anomalies possibly related to the Log Cottage Co. and/or nearby dwelling, then no further archaeological testing is likely necessary.

If GPR detects anomalies likely associated with the Log Cottage Co. structures and/or nearby dwelling, this would likely be followed by shovel testing to verify if the anomalies are archaeological in origin. If the anomalies are detected at more than a meter in depth from the ground surface, and the asphalt has not already been stripped back for the GPR testing, mechanical trenching will be required to aid archaeologists in reaching the proper depth to complete hand-dug shovel tests. If shovel tests identify intact features and artifacts related to the Log Cottage Co. structures and ground disturbing activities in this area cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would likely involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the subsurface Log Cottage Co. deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains of the Log Cottage Co. are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

**Methods Summary:** Identification - Soil Cores followed by GPR with potential for Shovel Testing aided by Mechanical Trenching depending on results. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## **6.7 Parcel 6A (Figure 8)**

**Archaeological Potential:** No previously mapped structures were identified in Parcel 6A. The parcel is also not considered to have high enough potential to contain prehistoric archaeological materials as it is approximately 470 feet from the river's edge.

**Suggested Archaeological Methods:** No archaeological survey is recommended for Parcel 6A.

**Methods Summary:** No archaeology required.

## **6.8 Parcel 6B (Figure 8)**

**Archaeological Potential:** No previously mapped structures were identified in Parcel 6A. The parcel is also not considered to have high enough potential to contain prehistoric archaeological materials as it is approximately 500 feet from the river's edge.

**Suggested Archaeological Methods:** No archaeological survey is recommended for Parcel 6A.

**Methods Summary:** No archaeology required.

## 6.9 Parcel 7A (Figure 9)

**Archaeological Potential:** In 1892, the only structures depicted are two two-story frame buildings and a one-and-a-half story frame dwelling along the northern tip of the block along Dowling Ave. Historic building permits for the block report most homes were built in 1910 by the “Nichols-Frissell Company”. Most permits after this period call this area “Block 1 of the Nichol-Frissell Co. Lyndale Addition” (Historical Permits 1910). By the 1912 Sanborn map depiction of this area there are about a dozen one to one and-a-half story residential buildings present within the block. In 1952 another Sanborn map of the block from this time shows nearly one home per lot for a total of at least 30 structures.

In preparation for the construction of I-94, houses begin to be demolished in Parcel 7A in 1962 continuing through 1980. City ordinance at the time required building foundations of demolished homes should be taken down to ground level, and all debris removed from the area (Minneapolis City Code 1960:880). It was not until 1982, after the final structure in the parcel had already been removed, the ordinance changed to order all remaining structural materials be removed from both above and below the surface and all debris removed from the area (Minneapolis City Council 1982). Considering the ordinance in place at the time, foundations for these structures were likely either buried, removed, or demolished during I-94 construction. The three late 19<sup>th</sup>-century structures may also have had undocumented privies prior to the addition of water and sewer lines to the area in the late 19<sup>th</sup> to early 20<sup>th</sup> century. Instead of being cleaned out, these privies were likely filled in and buried, and may still be intact.

**Suggested Archaeological Methods:** The key question in Parcel 7A is whether the foundations and potential privies within the parcel were entirely leveled and stripped away per the ordinance, or were buried and are still intact. Soil cores should be the first testing strategy used in Parcel 7A to record whether deep lenses of fill soils are present possibly burying archaeological remains, or if instead the previous soils were stripped back to remove all structural debris. While Braun Intertec has already completed minimal soil testing within this parcel, in their March 2021 report, they recommend 11 additional geotechnical bores. These should be completed with an archaeologist present and all tested soils should be sifted through a ¼” mesh by an archaeologist if possible. The results of these tests can help answer the above questions and, depending on those answers, would inform methods for further archaeological work.

If the results of soil cores imply the historical ground surface is intact, GPR is then recommended to attempt to locate any potentially intact foundation or privy remains. Depths of soil bores within the flat turn-around area will help determine whether GPR can be completed from the existing ground surface, or if GPR should be completed after the fill soils are removed (as recommended in Braun Intertec’s March 2021 report). If fill layers are deeper than 1.5 meters (4.9 feet),

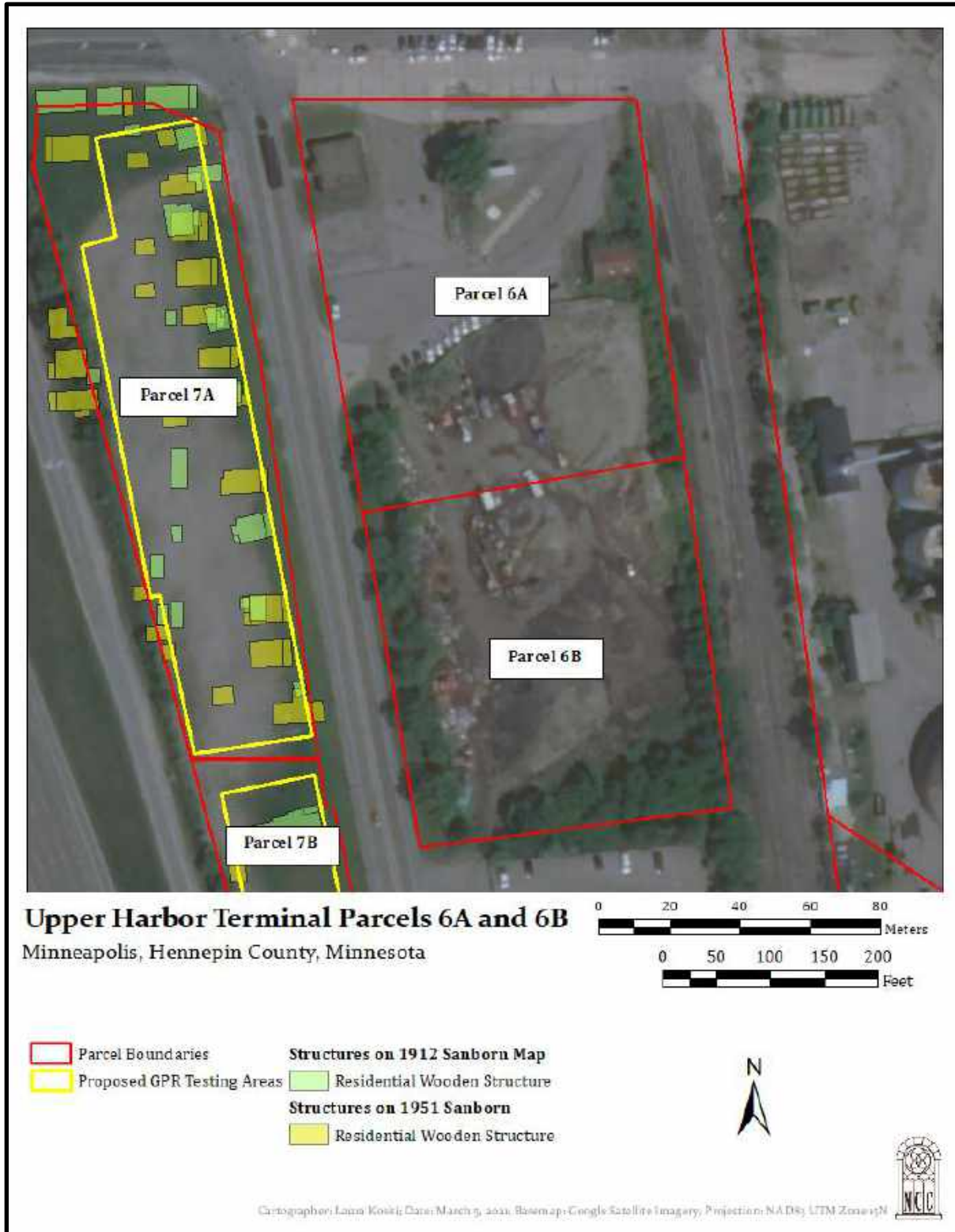


Figure 8: No suggested archaeological methods for Parcels 6A and 6B.



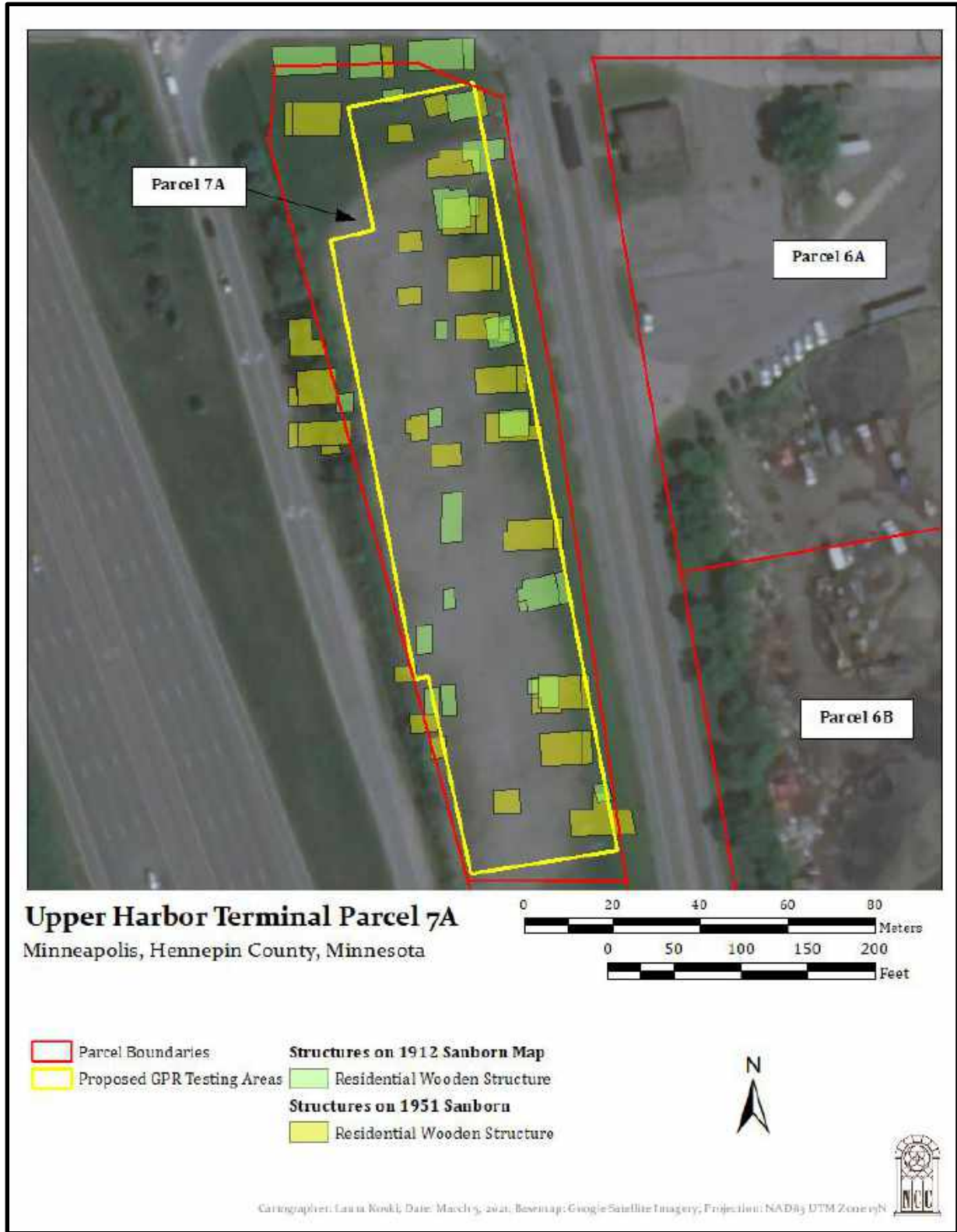


Figure 9: Suggested archaeological methods for Parcel 7A.

mechanical stripping should be utilized prior to use of GPR. If fill layers are shallower than 1.5 meters, GPR can proceed at the ground surface.

If soil cores demonstrate the original previous ground surface was buried with fill, and GPR detects anomalies potentially related to the non-extant structures in Parcel 7A, this would likely be followed by shovel testing to verify if the anomalies are archaeological in origin. If the anomalies are detected at more than a meter in depth from the ground surface, mechanical trenching will be required to aid archaeologists in reaching the proper depth to complete hand-dug shovel tests. If shovel tests identify intact features and artifacts related to the structures and ground disturbing activities cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator. Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

If soil cores demonstrate the original ground surface was stripped down, and GPR does not detect anomalies potentially related to the non-extant structures, no further archaeological work is likely required.

**Methods Summary:** Identification - Soil Cores followed by GPR with potential for Shovel Testing and/or Mechanical Trenching depending on results. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## **6.10 Parcel 7B** (Figure 10)

**Archaeological Potential:** On the 1912 Sanborn there are five wooden residential structures within Parcel 7B. By 1951, the Sanborn map illustrates two additional wooden residential structures and two brick structures.

In preparation for the construction of I-94, houses in Parcel 7B were demolished between 1960 and 1980. City ordinance at the time required building foundations of demolished homes should be taken down to ground level, and all debris removed from the area (Minneapolis City Code 1960:880). In 1982, the ordinance changed to order all remaining structural materials be removed from both above and below the surface and all debris removed from the area (Minneapolis City Council 1982). Considering the ordinance in place at the time, foundations for these structures were likely either buried, removed, or demolished during I-94 construction. The three late 19<sup>th</sup>-century structures may also have had undocumented privies prior to the addition of water and sewer lines to the area in the late 19<sup>th</sup> to early 20<sup>th</sup> century. Instead of being cleaned out, these privies were

likely filled in and buried, and may still be intact if I-94 construction did not heavily disturb soils within the parcel.

**Suggested Archaeological Methods:** As of Jan. 25, 2021, per development plans provided by Kimley-Horn, no ground disturbing activities are planned within Parcel 7B. However, ground disturbing development is planned within this parcel in the future, the following archaeological recommendations should be considered.

The key question in Parcel 7B is whether the foundations and potential privies within the parcel were entirely leveled and stripped away per the ordinance, were buried and are still intact, or if I-94 construction may have impacted the parcel too heavily for any buried remains to still be present. Soil cores should be the first testing strategy used in Parcel 7B to record whether deep lenses of fill soils are present possibly burying archaeological remains, if instead the previous soils were stripped back to remove all structural debris, or if clear disturbance can be documented. While Braun Intertec has already completed minimal soil testing within this parcel, in their March 2021 report, they recommend six additional geotechnical bores. These should be completed with an archaeologist present and all tested soils should be sifted through a ¼” mesh by an archaeologist if possible. The results of these tests can help answer the above questions and, depending on those answers, would inform methods for further archaeological work.

Soil bore profiles will help determine whether GPR can be completed from the existing ground surface, or if mechanical stripping is required to allow the GPR to work within a reasonable range of the likely archaeological deposit depth. If fill layers are deeper than 1.5 meters (4.9 feet), mechanical stripping should be utilized prior to use of GPR. If fill layers are shallower than 1.5 meters, GPR can proceed at the ground surface. If soil bores reflect reasonably shallow fill soils, GPR is then recommended to attempt to locate any potentially intact foundation or privy remains.

If soil bores demonstrate the original ground surface was buried with fill, and GPR detects anomalies potentially related to the non-extant structures in Parcel 7B, and ground disturbing activities are planned in the identified areas, this should be followed by shovel testing to verify if the anomalies are archaeological in origin. If the anomalies are detected at more than a meter in depth from the ground surface, and the asphalt has not already been stripped back for the GPR testing, mechanical trenching will be required to aid archaeologists in reaching the proper depth to complete hand-dug shovel tests. If shovel tests identify intact features and artifacts related to the structures and ground disturbing activities cannot be avoided, archaeological work in this area would likely move to the Evaluation stage. This would involve excavating a series of one-by-one or one-by-two-meter test units in areas of interest after any fill soils have been removed to determine the extent of the subsurface deposits, and whether they may remain intact and provide enough valuable information to warrant eligibility for the National Register. If the remains are determined eligible to the National Register and Adverse Effects cannot be avoided, the archaeological work would likely move to the Mitigation stage. Necessary archaeological excavation at this stage would be determined by the archaeological Principal Investigator.



Figure 10. Suggested archaeological methods for Parcel 7B.

Archaeological practice typically involves a Memorandum of Agreement outlining the mitigation process.

If soil cores demonstrate the original ground surface was stripped down or heavily disturbed, and GPR does not detect anomalies potentially related to the non-extant structures, no further archaeological work is required.

**Methods Summary:** Identification - Soil Cores followed by GPR with potential for Shovel Testing and/or Mechanical Trenching depending on results. If Evaluation is necessary – Test Units possibly aided by Mechanical Trenching. If Mitigation is necessary – determined by the archaeological Principal Investigator.

## 7.0 PROJECT AND ARCHAEOLOGICAL TIMING

The above plan has been written from the perspective that each parcel may be developed by separate entities and at varying times. If the majority of the parcels remain leased by the City of Minneapolis, as appears to be the current plan, the recommended archaeological testing could be completed strategically in line with development timing and on a parcel by parcel basis. If, however, it is decided it is more efficient to examine the entire project area at one time, in the interest of efficiency, and determining whether all recommended archaeological testing may be necessary, the archaeological work in Parcels 5, 7A, and the northern portion of 2 (east of Parcels 1A and 1B) should be completed to inform the work required for the remaining parcels.

The transect of shovel tests planned within Parcel 2 (just east of Parcel 3 and the warehouse at 3800 1<sup>st</sup> Street N) will likely be the most logistically difficult shovel tests to complete at Upper Harbor Terminal. Additionally, the mechanical trenching required prior to shovel testing may Adversely Affect the rail line running through the area parallel to the shore if an architectural historian finds the rail line eligible in association with the remainder of the standing industrial complex in Parcel 2. To avoid this potential damage, the soil cores in Parcel 5 and the shoreline shovel test transect at the northern end of Parcel 2 should be completed first. If the soil cores and shovel tests are negative for intact prehistoric materials, the shovel tests east of 3800 1<sup>st</sup> Street N would likely not need to be completed, and the rail line left unaffected. If intact prehistoric materials are recovered, and the rail line has not yet been found eligible in relation to the industrial complex in Parcel 2, the shovel tests recommended east of 3800 1<sup>st</sup> Street N should be completed to determine the extent of the prehistoric component.

In regards to Parcels 7A and 7B, the soil cores and GPR should be completed in 7A prior to 7B. The soil profiles identified in 7A would help inform the likely original ground surface, and the results could help reduce the archaeological testing required in Parcel 7B.

Broadly, all cores recommended in Braun Intertec’s March 2021 report for all parcels besides 6A and 6B should be completed in tandem with archaeological work if possible. Archaeologists can record and screen the soil cores as the soil assessment team is completing their record of each core for the developer. This could ultimately save time and money. Similarly, if mechanical trenching is required to aid archaeologists in reaching the proper depths for archaeological testing, this could



be done while fill soils are being removed where already necessary (per Braun Intertec's recommendation in their March 2021 report), and as the obstructions noted within a number of the parcels would need to be relocated prior to development, the archaeological work could be timed with when these obstructions are moved for development purposes.

## 8.0 CONCLUSION

The Minneapolis Parks & Recreation Board (MPRB) is working with the City of Minneapolis to redevelop the Upper Harbor Terminal in Minneapolis, Minnesota. Nienow Cultural Consultants (NCC) completed an archaeological Phase Ia Archaeological Literature Review of the project area on June 25, 2020 (Nienow and Sutherland 2020). In total, NCC has identified 114 non-extant historical structures within the project area, many of which may have subsurface archaeological remains. Kimley-Horn is preparing an Alternative Urban Areawide Review for the Upper Harbor Terminal on behalf of the City of Minneapolis and United Properties. As part of the AUAR, Kimley-Horn contracted NCC to complete this more expansive archaeological plan for the site. This document was designed using the best practices and industry methods for implementation by a licensed archaeologist.

Work on this plan began Monday, March 1, 2021. NCC completed a field visit on March 11, 2021 and noted existing field conditions, obstructions, and potential subsurface utility locations. The above recommendations were made after a consideration of the results of the archaeological Phase Ia and field conditions observed during the site visit as well as development plans dated Jan. 25, 2021 provided by Kimley-Horn. Recommendations range from no archaeological survey required (i.e. Parcels 6A and 6B) to a combination of GPR, soil cores, and shovel testing in an attempt to identify whether the historical structures which once stood within Upper Harbor Terminal may still remain beneath the surface. NCC has also recommended a combination of soil cores and shovel tests specifically aimed to determine whether deeply buried prehistoric materials may be present along the Mississippi's previous river line. If development plans are altered, the archaeological recommendations could be shifted dependent on where ground disturbing activities may in actuality take place. In areas where no ground disturbing activities are planned, no archaeological survey may ultimately be required.

It should be noted, the obstructions within the parcels may change by the time the recommendations in this plan are taken into action. By the time the archaeological work begins, any and all obstructions blocking the recommended testing areas should be cleared. Additionally, while NCC referenced a utility map as part of these recommendations (SEH Inc. 2018), a Gopher One utility call should still be completed prior to any ground disturbing work.

Should archaeological materials surface during any future construction, it is advised a professional archaeologist be consulted. Minnesota Statute 307.8 protects unplatted cemeteries (including burial mounds) and issues guidelines for dealing with unexpected finds. Should human remains be encountered during earth moving activity, all work must stop and local law enforcement be called.

## REFERENCES CITED

Anfinson, Scott

- 1989 Archaeology of the Central Minneapolis Riverfront, Part 1: Historical Overview and Potentials. *The Minnesota Archaeologist* 48.
- 1990 Archaeology of the Central Minneapolis Riverfront, Part 2: Archaeological Explorations and Interpretive Potentials. *The Minnesota Archaeologist* 49:1-2.
- 2005 *SHPO Manual for Archaeological Projects in Minnesota*. Minnesota Historical Society, St. Paul, MN. <http://www.mnhs.org/shpo/survey/archsurvey.pdf>

ArchaeoPhysics

- 2017 “Survey Logistics and Site Preparation,” “Interpretation and Ground-Truthing”. Shallow Subsurface Geophysical Survey. Whitepapers. Minneapolis, Minnesota.

Braun Intertec

- 2021 Re: Environmental and Geotechnical Considerations Review. Completed by Braun Intertec for United Properties Development LLC.

Gordon, Robert B. and Patrick M. Malone

- 1994 *The Texture of Industry: An Archaeological View of the Industrialization of North America*. Oxford, England: Oxford University Press.

Lee, Robert P. and Ronald A. Shaffer

- 2015 Phase 1 Environmental Site Assessment: Upper Harbor Terminal, Nine Parcels North of 33<sup>rd</sup> Avenue North, West of Mississippi River, Minneapolis, Minnesota. Report to City of Minneapolis and Minneapolis Park and Recreation Board, from Braun Intertec Minneapolis, Minnesota.

Kimley-Horn

- 2020 UHT Parcel Areas. Upper Harbor Terminal. Prepared by Kimley-Horn.

Minneapolis City Code of Ordinances

- 1960 Title 5: Buildings, Chapter 150.050: Guards, etc. On file at the Minneapolis County Clerk’s Office. Minneapolis, Minnesota.

Minneapolis City Council

- 1982 “An Ordinance of the City of Minneapolis Amending Title 5 Chapter 117 of the Minneapolis Code of Ordinances Relating to Building Code: Wrecking.” Motion Passed August 13, 1982. On file at the Minneapolis County Clerk’s Office. Minneapolis, Minnesota.

Minnesota Office of the State Archaeologist

- 2011 State Archaeologist’s Manual for Archaeological Projects in Minnesota. Office of the State Archaeologist.

Nienow, Jeremy and Fred Sutherland

- 2019 Archaeological Identification of Potential Cultural Resources: Heritage Landing Parking Ramp, Federal Reserve Bank, Minneapolis, Minnesota. Report completed for Federal Reserve Bank of Minneapolis by Nienow Cultural Consultants LLC, St. Paul, Minnesota.
- 2020 Phase Ia Archaeological Literature Review Upper Mississippi Harbor Terminal, Minneapolis, Minnesota. Prepared for Hess, Roise, and Company by Nienow Cultural Consultants LLC.

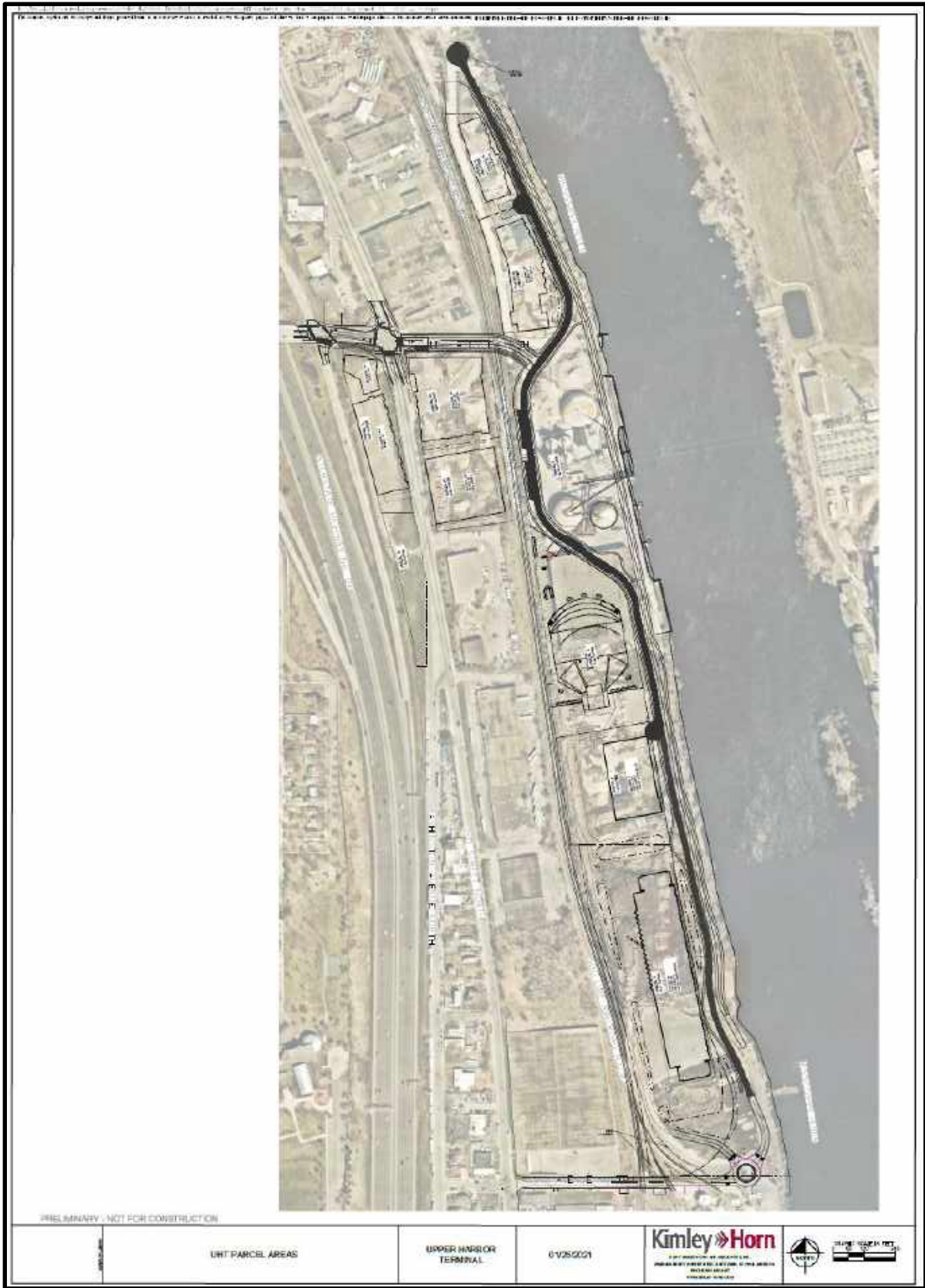
Protection of Historic Properties

- 2004 Title 36 Code of Federal Regulations § 800.

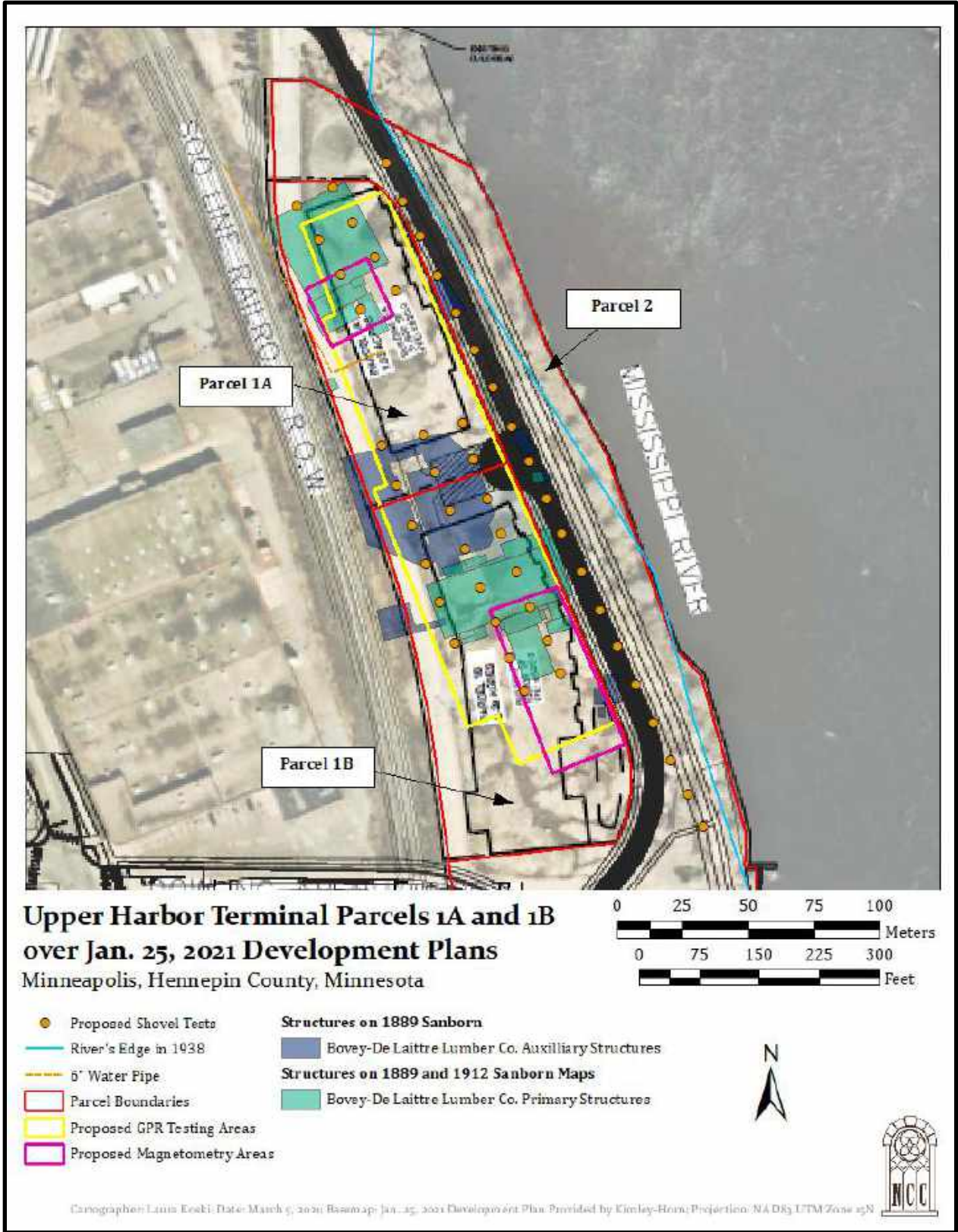
SEH Inc.

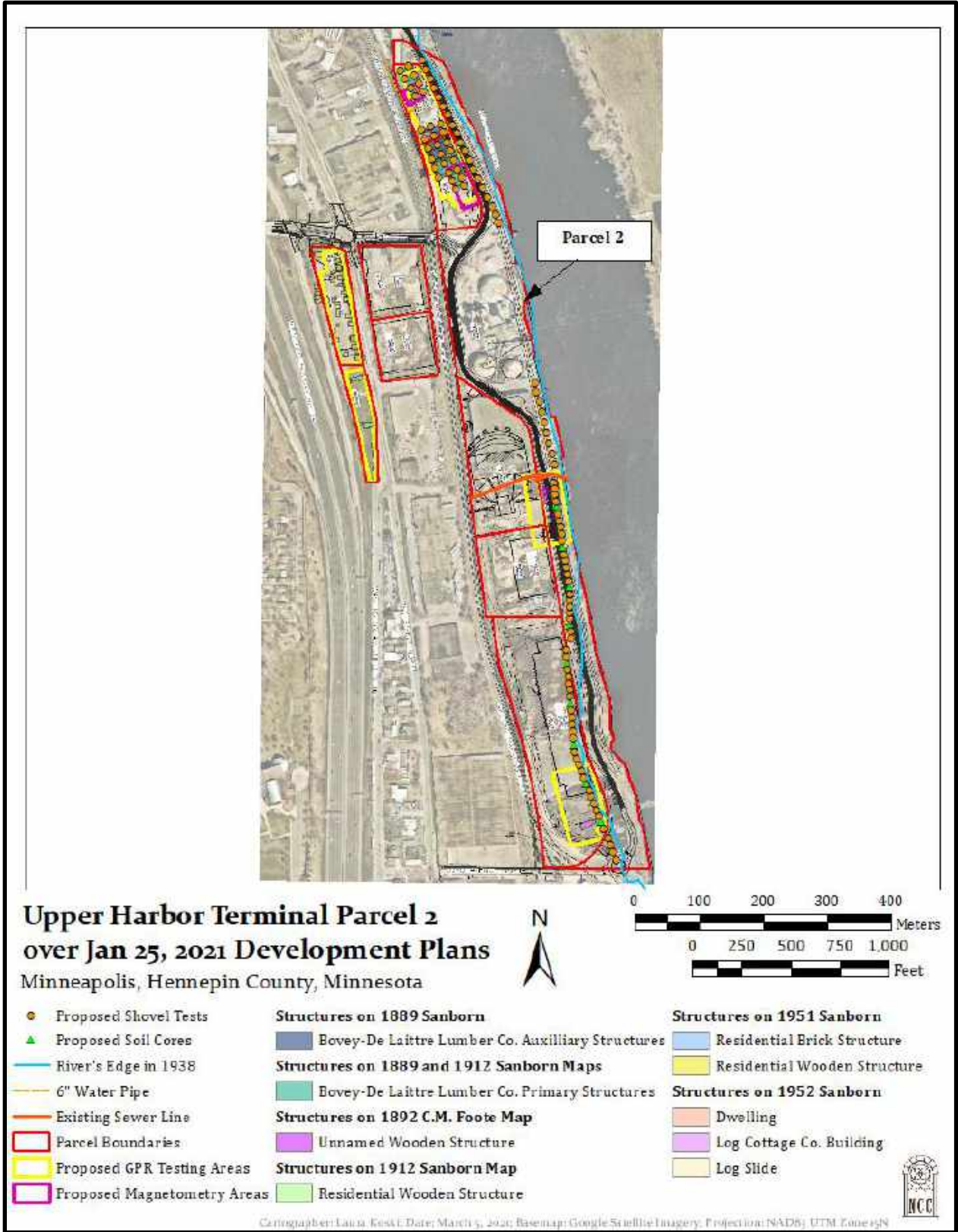
- 2018 Alta/ACSM Land Title Survey For. Prepared for the City of Minneapolis by SEH Inc, St. Paul, Minnesota.

APPENDIX A:  
DEVELOPMENT PLANS

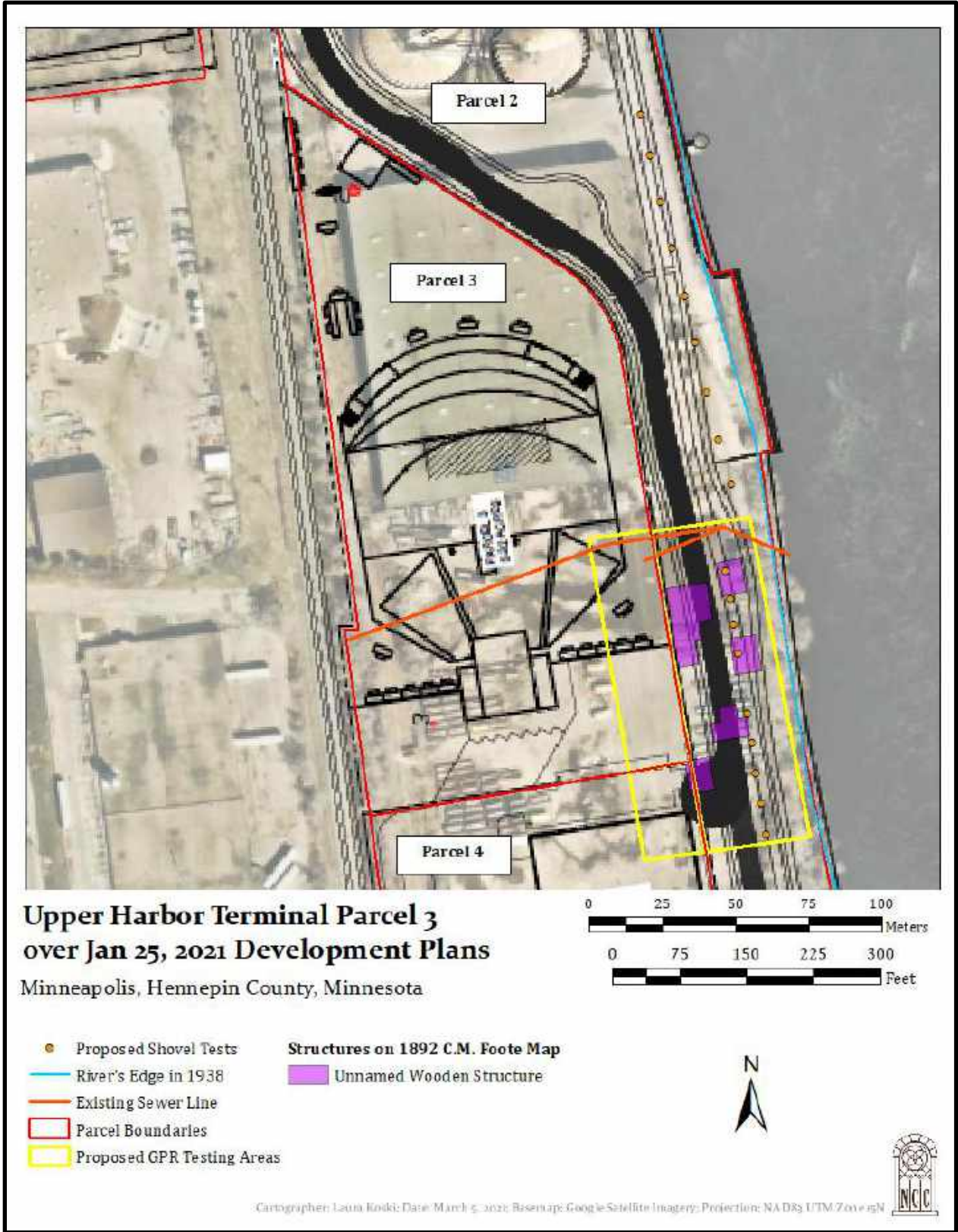


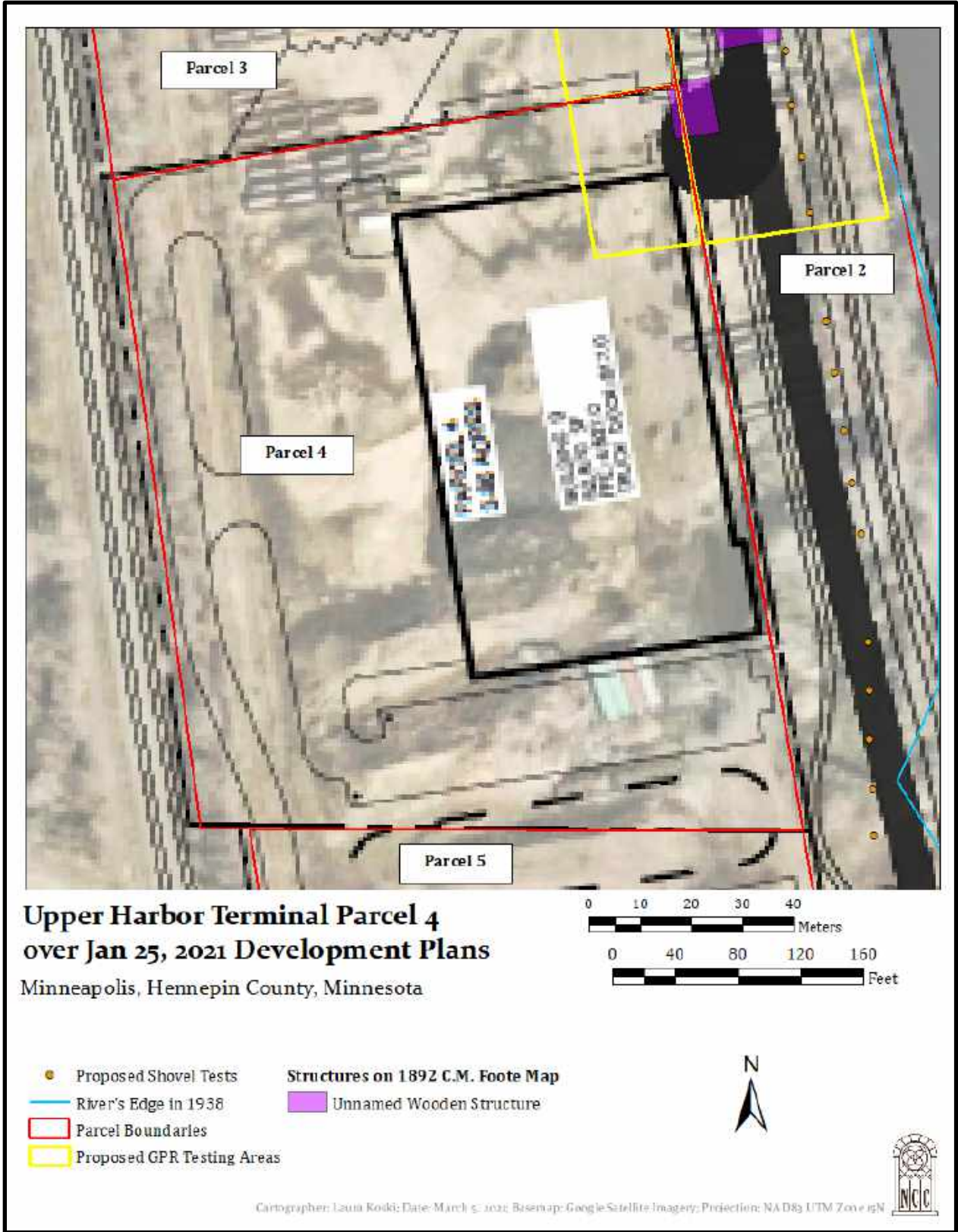




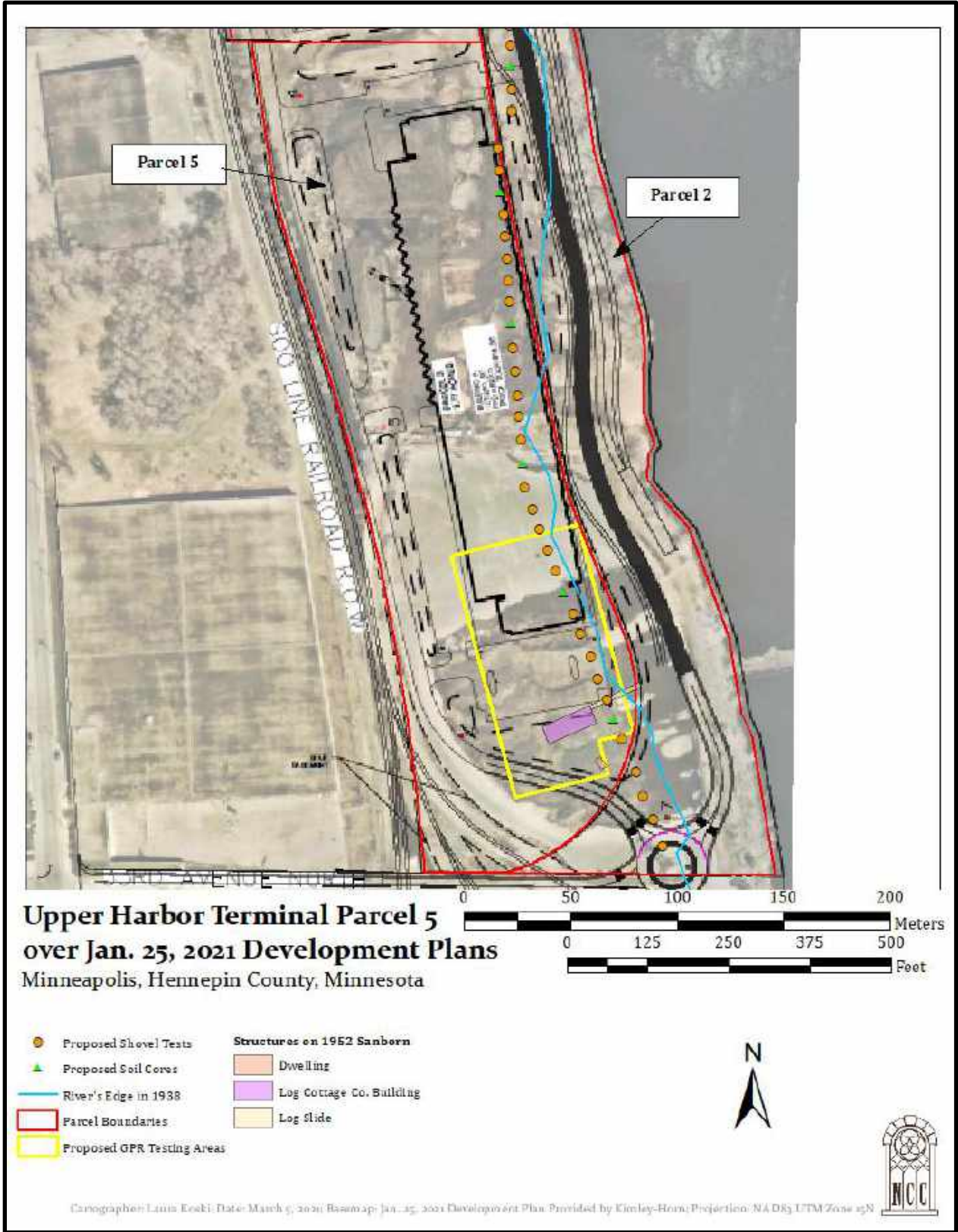




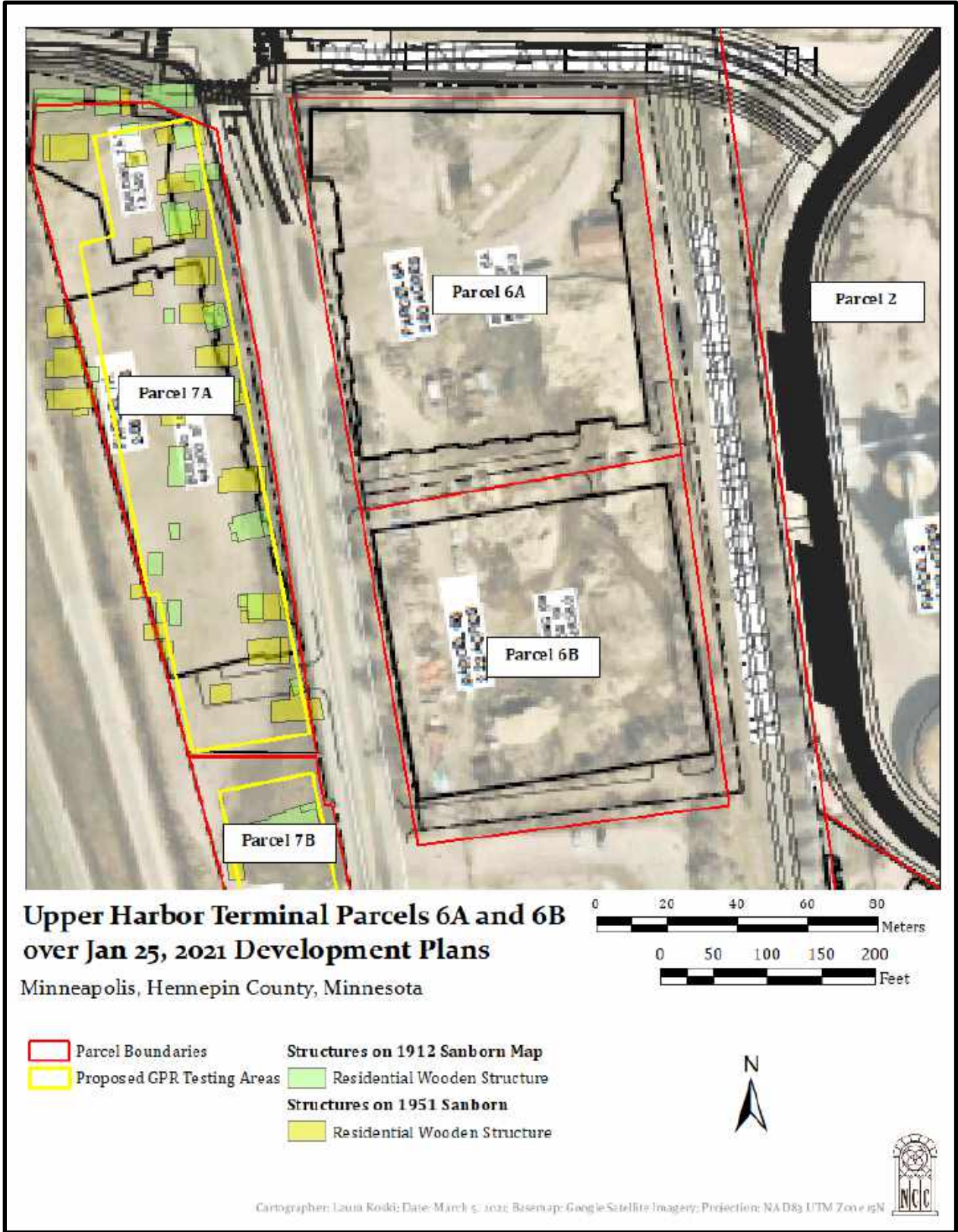


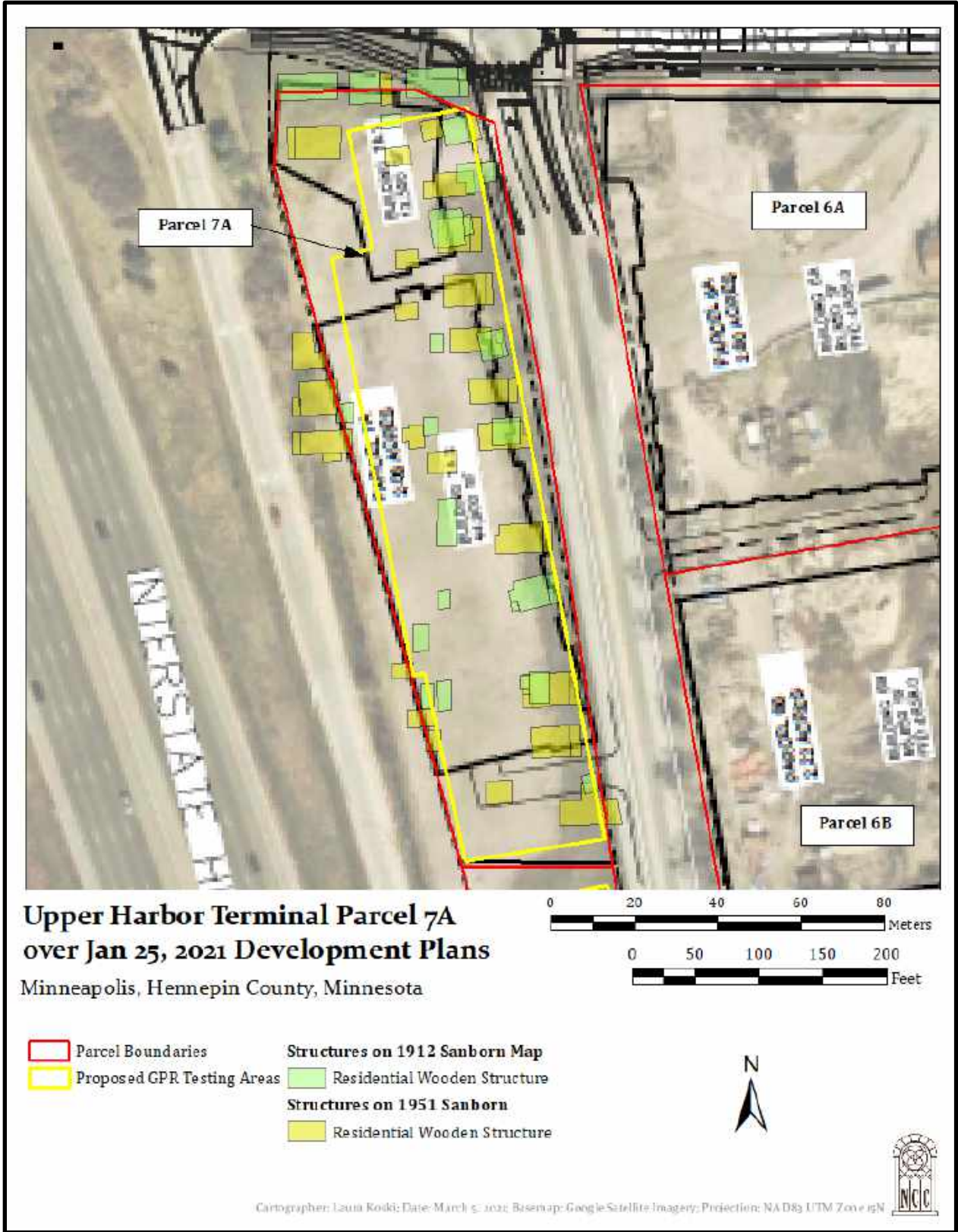
















**Upper Harbor Terminal Parcel 7B  
over Jan 25, 2021 Development Plans**

Minneapolis, Hennepin County, Minnesota

- Parcel Boundaries
- Proposed GPR Testing Areas
- Structures on 1912 Sanborn Map**
- Residential Wooden Structure
- Structures on 1951 Sanborn**
- Residential Brick Structure
- Residential Wooden Structure



Cartographer: Laura Kodik; Date: March 5, 2022; Basemap: Google Satellite Imagery; Projection: NAD83 UTM Zone 18N

February 5, 2021

VIA E-MAIL

Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
CPED – Land Use, Design and Preservation  
250 South 4<sup>th</sup> Street, #300  
Minneapolis, MN 55415

RE: Upper Harbor Terminal Development  
Evaluation Study of the Upper Harbor Historic District and Upper Harbor Terminal Historic District  
Minneapolis, Hennepin County  
SHPO Number: 2020-2763

Dear Ms. Dvorak:

Thank you for continuing consultation on the above referenced project. As we understand it, the City of Minneapolis and the Minneapolis Park and Recreation Board will be partnering with a private developer to transform the Upper Harbor Terminal's forty-eight acres into a mix of private development and public parkland. The City has retained the services of Hess, Roise and Company to evaluate the National Register eligibility of the Upper Harbor Historic District and Upper Harbor Terminal Historic District in advance of the development project.

We previously provided comments on the report titled *Upper Harbor Historic District and Upper Harbor Terminal: Survey and Reevaluation for Historic Eligibility* (Hess, Roise and Company, August 2020) and associated inventory forms. In our letter dated November 12, 2020, we requested clarification on the areas of significance and period of significance for the Upper Harbor Historic District and additional analysis under Criterion C for the Upper Harbor Terminal Historic District. We also participated in a follow-up consultation meeting with the City and your consultant on November 25<sup>th</sup>. In response to comments and recommendations made by our office, you have now submitted the revised report as prepared by Hess Roise (December 2020). Our comments regarding the revised report and the evaluation of these properties are provided below.

### **History/Architecture Properties**

#### **Upper Harbor Historic District (HE-MPC-19792)**

At this time, a formal period of significance for the Upper Harbor Historic District is still in question. Because the historic significance of the Upper Harbor Historic District has been firmly established, eligibility for listing in the National Register of Historic Places (NRHP) rests in analyzing the integrity of the resources within the Historic District boundaries. A firm and agreed upon period of significance is essential to doing that work. In an effort to understand the full context of the Upper Harbor Historic District, SHPO National Register Architectural Historian, Ginny Way, has thoroughly reviewed the following documents included in our inventory:

- Berg, Erin Hanafin, and Charlene Roise, Hess, Roise and Company, "Upper Mississippi Harbor Development Architectural/Historical Survey" (October 2007).

- Schmidt, Andrew, Streamline Associates, “St. Anthony Falls Locks and Dams Historic District” *Minnesota Multiple Property Inventory Form, HE-MPC-19496* (November 2019).
- Schmidt, Andrew, Streamline Associates, “Mississippi River” *Minnesota Multiple Property Inventory Form, HE-MPC-19497* (November 2019).
- Gales, Elizabeth, Hess, Roise and Company, “Upper Harbor Historic District and Upper Harbor Terminal: Survey and Reevaluation for Historic Eligibility” (Revised December 2020).
- Anfinson, John O, PhD, U.S. Department of the Interior, National Park Service, Letter to State Historic Preservation Office and City of Minneapolis Regarding: Upper Harbor Historic District, Determination of National Register Eligibility, (December 30, 2020).

The 2007 Report states that the “Upper Harbor’s value as a historic area is intrinsically tied to the nine-foot channel as a whole and is historically significant in the same context as the Saint Anthony Falls lock and dam facilities” (p 24).

The 2019 Inventory Form for the St. Anthony Locks and Dams Historic District (HE-MPC-19496) states that the Upper Mississippi Harbor Development was “a planned extension of the original project authorized in 1937, and it allowed for development of expanded shipping terminal facilities in Minneapolis” (p 2).

The 2020 Report states that “All of the privately and publicly owned complexes would not have been built without the government-backed promise and investment of making the river navigable above St. Anthony Falls.” The period of significance applies to the areas of significance associated with the Upper Harbor Historic District including Commerce, Maritime History, and Transportation (p. 32). We would argue that the statement also applies to the area of Industry, which appears to have been inadvertently removed from the discussion. The 2007 Report clearly states that the Upper Harbor Historic District is eligible for listing in the NRHP under Criterion A related to four areas of significance (p 26).

Because the Upper Mississippi Harbor Development encompasses the two historic districts identified in the 2007 Report - the Upper Harbor Historic District and the St. Anthony Falls Locks and Dams Historic District - and is eligible under the same context, Criterion A, and share areas of significance with these two historic districts, it is logical to assume that they also share a similar period of significance. The recommended period of significance for the Upper Harbor Historic District begins in 1948, the year dredging of the Mississippi River upriver from the previous head of navigation began. While the precise end date of the period of significance is still unknown, the 2007 Report successfully argues that the Upper Harbor Historic District meets Criterion Consideration G because the “resources have achieved exceptional importance because of their role in the industrial development of the city” and the “barge terminals of the Upper Harbor are the only remaining industry intrinsically tied to the Mississippi River in the City of Minneapolis; as such, they are resources that are fragile” (p 30).

After considering the various documents, we are left to conclude that the Upper Mississippi Harbor Development is significant for its association with the development of the nine-foot channel. It was a planned extension of the original project authorized in 1937 and it allowed for expanded shipping terminal facilities above St. Anthony Falls in Minneapolis. Resources associated with the Upper Mississippi Development Area include but are not limited to, the Mississippi River, the Lower Lock and Dam, the Upper Lock, bridges and navigation utilities constructed or altered to facilitate the use of the river, and public and private industrial and terminal facilities constructed to take advantage of the newly expanded commercial opportunities. And, importantly, the Upper Mississippi Harbor Development encompasses both the Upper Harbor Historic District and St. Anthony Falls Locks and Dams Historic District.



Based on the information provided to date, we conclude that the period of significance for the Upper Harbor Historic District begins in 1948, the year dredging began to facilitate construction of the channel, and ends in 2015 when the locks and dams ceased transportation operations. The 2020 Report (p 32) proposes 1971 as the end of the period of significance because it is the date most closely associated with the “end of construction of terminals and major river structures in the Upper Harbor” but this does not take into account the continued use of those structures, which presumably continued until the locks and dams ceased operation. We acknowledge that the peak of transportation and commerce may have come prior to 2015. The December 30, 2020 letter from the National Park Service suggests that the end of the period of significance should be 1992, which may very well be a more appropriate end date, however, sufficient justification has not yet been provided.

Based on the construction dates in Table 3 of the 2020 Report (pp 34-44), major changes to the properties were completed within the period of significance stated above (1948-2015). **Therefore, based on information that is available to us at this time, we disagree with the City’s determination that the Upper Harbor Historic District is not eligible for listing in the National Register of Historic Places (NRHP). We believe that the Upper Harbor Historic District has sufficient integrity to convey its historic significance and is therefore eligible for listing in NRHP.**

While we understand that this may be out of scope for this project review, we recommend that a comprehensive reevaluation be completed for the Upper Mississippi Harbor Development as defined by the U.S. Army Corp of Engineers in 1937. The boundaries defined for this development area “extends upriver from the Northern Pacific Railway Bridge (Bridge #9) below St. Anthony Falls to the Soo Line Railway Bridge near the Minneapolis city limits, a total distance of 4.3 miles.” (2007 Report, p 3)

### **Individual Properties**

We acknowledge that assessment of individual eligibility for the following properties is out of scope for this project. The hard copies of the inventory forms should clearly state that additional documentation is required to assess individual National Register eligibility for: Northern Pacific Railroad Bridge (HE-MPC-9640); Huron Cement Terminal (HE-MPC-19788); American Iron and Supply Company (HE-MPC-19786); J. L. Shiely Yard “D” (HE-MPC-19789) and related Northside Dock and Boat Ramp (HE-MPC-9642 and HE-MPC-9643). As stated previously, we concur with the consultant’s determination that the Dundee Cement Terminal (HE-MPC-19787) and the Riverside Station Power Plant Terminal (HE-MPC-19790) are not individually eligible for listing in the NRHP based on substantial loss of integrity. See the comments below regarding the eligibility of the Upper Harbor Terminal Historic District (HE-MPC-9699). We also acknowledge that the recent construction date of the Lowry Avenue Bridge (HE-MPC-19791) would necessitate substantial additional research and application of Criterion Consideration G to support individual National Register eligibility. Based on the date of construction, no additional documentation is necessary to determine the individual eligibility of the Lowry Avenue Bridge.

### **Upper Harbor Terminal Historic District (HE-MPC-9699)**

Thank you for providing additional documentation regarding the evaluation of this property under Criterion C. Based on the information provided, we agree with the consultant’s recommendation that the Upper Harbor Terminal Historic District is **not individually eligible** for listing in the NRHP as a distinctive example of a resource type. We agree that the Monolithic Domes within the Upper Harbor Terminal Historic District are likely significant for their engineering under Criterion C but are unlikely to meet the exacting requirements of Criterion Consideration G. Therefore, the domes are considered not eligible for listing in the NRHP at this time but should be reevaluated in 2032. We agree that the Grain Elevator, Storage Bins, Control House, and Warehouse within the Upper Harbor Terminal Historic District do not require individual property evaluation.

Please provide our office with a hard copy of the revised report titled *Upper Harbor Historic District and Upper Harbor Terminal: Survey and Reevaluation for Historic Eligibility* as prepared by Hess, Roise and Company (Rev. December 2020). We would also appreciate receiving hard copies of the revised inventory forms.

**Archaeological Resources**

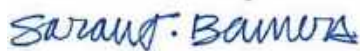
As stated previously, we agree with the consultant's recommendation that a Phase I archaeological survey be completed. The survey scope and methods outlined in the 2020 Phase Ia archaeological report by Nienow Cultural Consultants (June 25, 2020) are appropriate. The recommended survey methods include a combination of remote sensing and targeted shovel testing depending on the terrain, surface conditions, and plans for future ground disturbance.

Please provide our office with a hard copy of the report titled *Phase Ia Archaeological Literature Review Upper Mississippi Harbor Terminal Minneapolis, Hennepin County, Minnesota* as prepared by Nienow Cultural Consultants (June 25, 2020).

As a reminder, consulting parties should also be offered an opportunity to review and comment on the results of the survey efforts prior to development.

Please feel free to contact Kelly Gragg-Johnson in our Environmental Review Program at [kelly.graggjohnson@state.mn.us](mailto:kelly.graggjohnson@state.mn.us) if you have any questions regarding our review of this project or would like to schedule a meeting to discuss our comments.

Sincerely,



Sarah J. Beimers  
Environmental Review Program Manager

cc: Kate Lamers, Minneapolis Park & Recreation Board  
Andrea Burke, City of Minneapolis  
Dan Ott, National Park Service

April 20, 2021

VIA E-MAIL

Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
CPED – Land Use, Design and Preservation  
250 South 4<sup>th</sup> Street, #300  
Minneapolis, MN 55415

RE: Supplemental Evaluation of Period of Significance  
Upper Harbor Terminal Development  
Evaluation Study of the Upper Harbor Historic District and Upper Harbor Terminal Historic District  
Minneapolis, Hennepin County  
SHPO Number: 2020-2763

Dear Ms. Dvorak:

Thank you for continuing consultation on the above referenced project. As noted in earlier correspondence, the City of Minneapolis and the Minneapolis Park and Recreation Board will be partnering with a private developer to transform the Upper Harbor Terminal's forty-eight acres into a mix of private development and public parkland.

We last provided comments on this project in February and March 2021 following our review of the revised report, *Upper Harbor Historic District and Upper Harbor Terminal: Survey and Reevaluation for Historic Eligibility (rev. December 2020)* as prepared by Hess Roise. Based on the documentation provided, we concluded that although a formal period of significance had not been firmly established for the Upper Harbor Historic District, we believe that the Upper Harbor Historic District retains sufficient integrity to convey its historic significance and is therefore eligible for listing in the National Register of Historic Places (NRHP). We also concluded that the Upper Harbor Terminal Historic District is not *individually eligible* for listing in the NRHP but is a contributing element to the larger Upper Harbor Historic District.

As part of our previous comments, we recommended that a comprehensive reevaluation be completed for the entire Upper Mississippi Harbor Development (UMHD). The UMHD encompasses the Upper Harbor Historic District and is significant for its association with the development of the nine-foot channel. It was a planned extension of the original project authorized in 1937 and it allowed for expanded shipping terminal facilities above St. Anthony Falls in Minneapolis. Resources associated with the UMHD include but are not limited to, the Mississippi River, the Lower Lock and Dam, the Upper Lock, bridges and navigation utilities constructed or altered to facilitate the use of the river, and public and private industrial and terminal facilities constructed to take advantage of the newly expanded commercial opportunities.

The City has determined that resurveying all of the properties in the UMHD is outside the scope of this project and therefore, for the purposes of this review, the entire UMHD will be treated as a potential historic district that is eligible for listing in the NRHP. Hess Roise has conducted additional research and has prepared

supplemental documentation regarding the period of significance for the UMHD. Based on the additional information provided in the document, *Supplemental Evaluation of Period of Significance Related to the Upper Harbor Terminal Development Evaluation Study of the Upper Harbor Historic District and Upper Harbor Terminal Historic District, Minneapolis, Hennepin County* (March 22, 2021), we agree that the period of significance for the entire UMHD extends from 1948, the year dredging of the Upper Harbor Mississippi River began, through 1976, the year that shipping peaked on the river. The entire UMHD is significant under Criterion A in the areas of Commerce, Maritime History, Transportation, and Industry. Individual resources within the UMHD may have individual significance under other criteria or areas of significance. We continue to believe that the UMHD has exceptional significance to the City of Minneapolis, as supported in previous documentation, and therefore the property also meets Criterion Consideration G.

We look forward to continuing consultation on the Upper Harbor Terminal Development project. Please feel free to contact Kelly Gragg-Johnson in our Environmental Review Program at [kelly.graggjohnson@state.mn.us](mailto:kelly.graggjohnson@state.mn.us) if you have any questions regarding our comments.

Sincerely,



Sarah J. Beimers  
Environmental Review Program Manager

cc: Kate Lamers, Minneapolis Park & Recreation Board  
Andrea Burke, City of Minneapolis  
Dan Ott, National Park Service  
Elizabeth Gales, Hess Roise

September 29, 2020

Hilary Dvorak, Principal City Planner  
City of Minneapolis  
CPED – Land Use, Design and Preservation  
250 South 4th Street  
Room 300  
Minneapolis, MN 55415  
hilary.dvorak@minneapolismn.gov

RE: Upper Harbor Terminal and Upper Harbor Historic District, Minneapolis, Hennepin County

Dear Hilary Dvorak:

I appreciate being given the opportunity to comment on the Upper Harbor Terminal project. There are currently no previously recorded archaeological or burial sites in the Upper Harbor Terminal project area. However, I concur with the recommendation put forth in the literature review conducted by Nienow Cultural Consultants, LLC (*Phase Ia Archaeological Literature Review Upper Mississippi Harbor Terminal Minneapolis, Hennepin County, Minnesota, 2020, p 19-20*) for a phase I reconnaissance survey to determine if development could impact previously unrecorded archaeological or burial sites. As outlined in the report, the survey should include remote sensing techniques combined with excavation where appropriate.

Please contact me if you have any questions or concerns.

Sincerely,



Jennifer Tworzyanski  
Assistant to the State Archaeologist  
Kellogg Center  
328 West Kellogg Blvd  
St Paul, MN 55102  
651.201.2265  
Jennifer.tworzyanski@state.mn.us





# Appendix D:

## Visual Renderings of Scenario 1

# upper~harbor

AUAR PERSPECTIVES: DRAFT  
05 March 2021



ELDORADO

C+P

Kimley»Horn



PIERCE PINI &  
ASSOCIATES, INC  
Consulting Civil Engineers



THE  
MEADOWS  
GROUP

LSE  
ARCHITECTS



View 01: St. Anthony Parkway





View 02: Marshall Terrace Park





View 03: MWMO





View 04: Lowry Ave Bridge





View 05: 37th Ave





View 06: 36th Ave





View 07: N Dowling Ave Bridge



View 08: N Dowling Ave Bridge and N Washington Ave



# Appendix E: Noise Report

**Project name:**  
Upper Harbor Terminal Amphitheater AUAR Noise  
Assessment

**Project ref:**  
60641039

**From:**  
James P. Cowan, INCE Bd.Cert.

**Date:**  
February 25, 2021

**To:**  
First Avenue Productions  
701 First Avenue North  
Minneapolis, MN 55403  
Attn: Dayna Frank, CEO

**CC:**  
Tom Lincoln, Kimley-Horn

# Memo

**Subject:** Upper Harbor Terminal Amphitheater AUAR Noise Assessment

This memo summarizes the acoustical evaluation of the proposed Upper Harbor Terminal site in Minneapolis, MN, for an outdoor amphitheater with electronic sound amplification. Preliminary plans show the amphitheater site on the vacant lot between 1<sup>st</sup> Street North and the Mississippi River near the end of North Dowling Avenue, with the stage facing to the north. The facility is planned to have an 8,000- to 9,000-person capacity, including fixed seats and a lawn seating/standing area. The land use plan for the site is shown in **Figure 1**, with existing residential communities roughly 1,500 feet to the west and 2,500 feet to the southeast of the facility, new residences to the north of the theater, and heron habitats on the islands to the southeast of the facility in the Mississippi River. As is shown in **Figure 1**, the amphitheater is part of a larger development which is described with the numbered parcels in the figure, although this evaluation is not considering the noise generated by the other proposed buildings in the development. Parcel 3 in **Figure 1** is the planned location of the amphitheater.

## Relevant Noise Criteria

Acoustics criteria relevant to this site are the noise regulations associated with the State of Minnesota and the City of Minneapolis. The State of Minnesota noise standards are published in Minnesota Administrative Rule 7030.0040 (latest version published December 17, 2003), which lists noise limits by noise area classification (NAC) in terms of daytime (between 7 AM and 10 PM) and nighttime (between 10 PM and 7 AM) L<sub>10</sub> and L<sub>50</sub> sound pressure level values. L<sub>10</sub> and L<sub>50</sub> are statistical sound pressure levels representing the levels exceeded 10% and 50% of the time-of-interest, respectively, with the time-of-interest being one hour for the State standards. **Table 1** lists the limits in this statute in terms of A-weighted sound pressure levels.

A-weighted sound pressure levels are denoted in units of decibels (dBA), which are adjusted to model the mid-level frequency sensitivity associated with human hearing, and are therefore used in most published environmental noise criteria. The dBA scale emphasizes the mid-frequency (500 to 4,000 Hz) range and has reduced emphasis on frequencies below and above that range. **Table 2** lists common noise sources and environments as they relate to A-weighted sound pressure levels for reference. Note that a 3 dBA change is just noticeable to most people while a 10 dBA increase is commonly perceived as a doubling of loudness and a 10 dBA reduction is perceived as a halving of loudness. As this is the case for each change of 10 dBA, an increase of 20 dBA would be perceived as four times the loudness and a decrease of 20 dBA would be perceived as being ¼ as loud as the original sound.

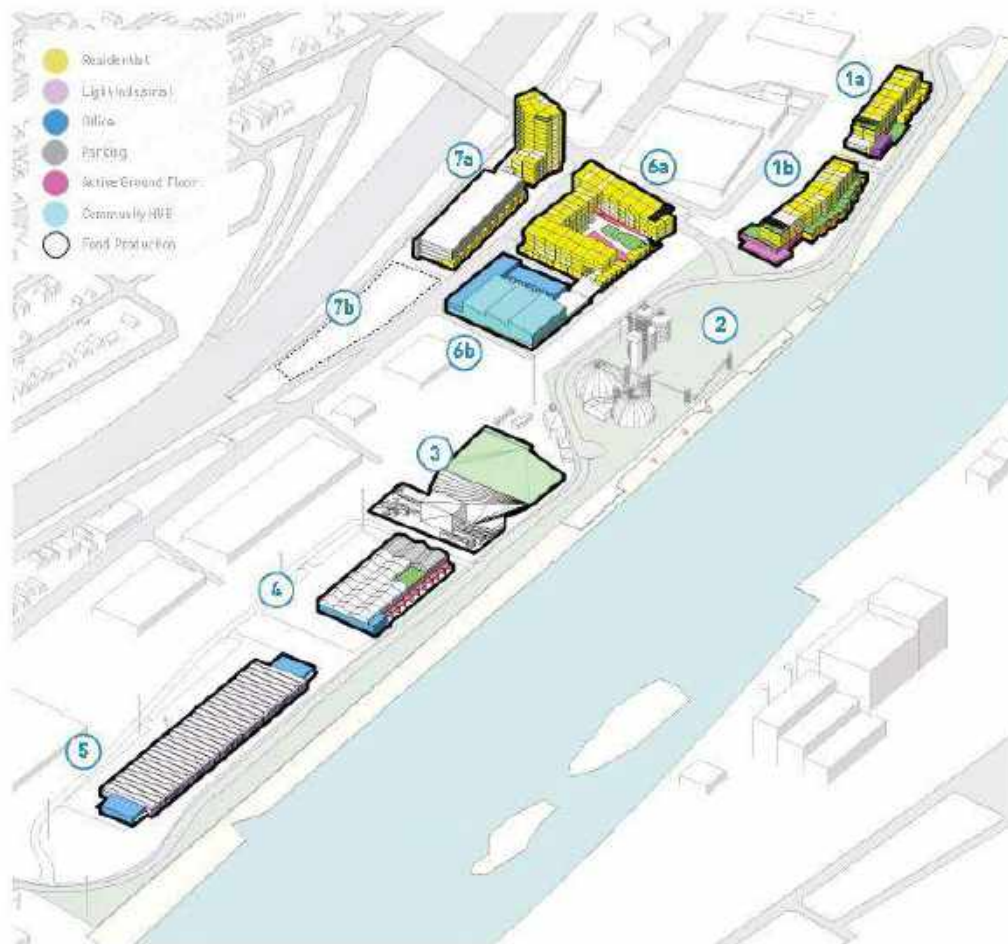
There are four NAC categories defined in Minnesota Administrative Rule 7030.0050, denoted NAC 1 through NAC 4, for which residential and typical noise-sensitive uses fall under the NAC 1 category; commercial land

uses fall under the NAC 2 category; manufacturing, amusement parks, and agricultural uses fall under the NAC 3 category; and undeveloped and unused lands fall under the NAC 4 category. There are no limits associated with NAC 4 properties.

The Minneapolis noise ordinance, as of September 21, 2020, is published in Title 15, Chapter 389 of the City Code. Although Section 389.60 provides sound pressure level limits for non-exempted sources, Section 389.105 deals specifically with sound amplifying equipment, making it the most relevant stipulation for this facility. Under this stipulation, amplified sound can exceed the limits in Section 389.60 if an event has a permit and amplification is limited to a total of:

- 12 hours in any single day,
- 24 hours in any week, and
- 36 hours in any four week period.

In addition to that limitation, sound levels from the facility cannot exceed 15 dBA over the background levels of the property and dominant sound sources from these kinds of facilities cannot exceed 90 dBA at 50 feet.. The City defines background levels by the Minnesota L<sub>50</sub> limits listed in **Table 1** for each NAC. Therefore, these levels are being used as the baseline for this study.



**Figure 1. Land use map of the full proposed UHT project site (Parcel 3 is the amphitheater)**

**Table 1. Minnesota noise criteria (1-hour sound pressure levels in dBA)**

Noise Area Classification	Daytime (7 AM to 10 PM)		Nighttime (10 PM to 7 AM)	
	L <sub>50</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>10</sub>
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

**Table 2. Sound pressure levels (in dBA) associated with common sources and environments**

Noise Source (at a Given Distance)	Sound Pressure Level (dBA)	Noise Environment	Human Judgment of Noise Loudness (Relative to a Reference Level of 70 Decibels*)
Military Jet Take-off with After-burner (50 ft) Civil Defense Siren (100 ft)	140 130	Aircraft Carrier Flight Deck	
Commercial Jet Take-off (200 ft)	120		Threshold of Pain *32 times as loud
Pile Driver (50 ft)	110	Rock Music Concert	*16 times as loud
Ambulance Siren (100 ft) Newspaper Press (5 ft) Power Lawn Mower (3 ft)	100		Very Loud *8 times as loud
Motorcycle (25 ft) Propeller Plane Flyover (1,000 ft) Diesel Truck, 40 mph (50 ft)	90	Boiler Room Printing Press Plant	*4 times as loud
Garbage Disposal (3 ft)	80	High Urban Ambient Sound	*2 times as loud
Passenger Car, 65 mph (25 ft) Vacuum Cleaner (10 ft)	70		Moderately Loud *70 decibels (Reference Loudness)
Normal Conversation (5 ft) Air Conditioning Unit (100 ft)	60	Data Processing Center Department Store	*1/2 as loud
Light Traffic (100 ft)	50	Private Business Office	*1/4 as loud
Bird Calls (distant)	40	Lower Limit of Urban Ambient Sound	Quiet *1/8 as loud
Soft Whisper (5 ft)	30	Quiet Bedroom	
	20	Recording Studio	Very Quiet
	10		
	0		Threshold of Hearing



## Outdoor Sound Propagation

Sound pressure levels outdoors generally dissipate at a rate of 3 to 6 decibels with each doubling of distance from a source due to the spreading of sound energy over a constantly increasing area as it travels away from the source. In addition to this effect, sound energy travelling more than 500 feet from a source can be significantly affected by atmospheric absorption, ground cover, physical barriers, and atmospheric conditions such as changes in temperature and wind currents. Atmospheric absorption generally adds roughly 3 dBA of sound reduction with each 1,600 feet of sound travel. Ground cover can impede or enhance sound travel, depending on whether it is acoustically absorptive or reflective. Soft ground cover, such as loose soil or fresh snow, can provide extra absorption in the sound travel path, thereby increasing the sound reduction with distance; whereas hard ground cover is acoustically reflective and minimizes sound reduction with distance. Included in the reflective ground cover category are still bodies of water and hard snow or ice. The Mississippi River to the east of the project site provides such an environment to enhance sound propagation in that direction.

Physical barriers that block the line-of-sight between a sound source and listener can provide between 5 and 15 dBA of sound reduction, depending on the distances between the source, barrier, and listener. The highest reductions occur close to the barrier, as long as the barrier is less than 100 feet from the source. Minimum sound reduction results from barriers that are more than 200 feet from listeners and sources, even if the line-of-sight is broken, due to diffraction (for which sound waves bend over and around barriers, similar to what happens to light when it is visually shielded by a barrier).

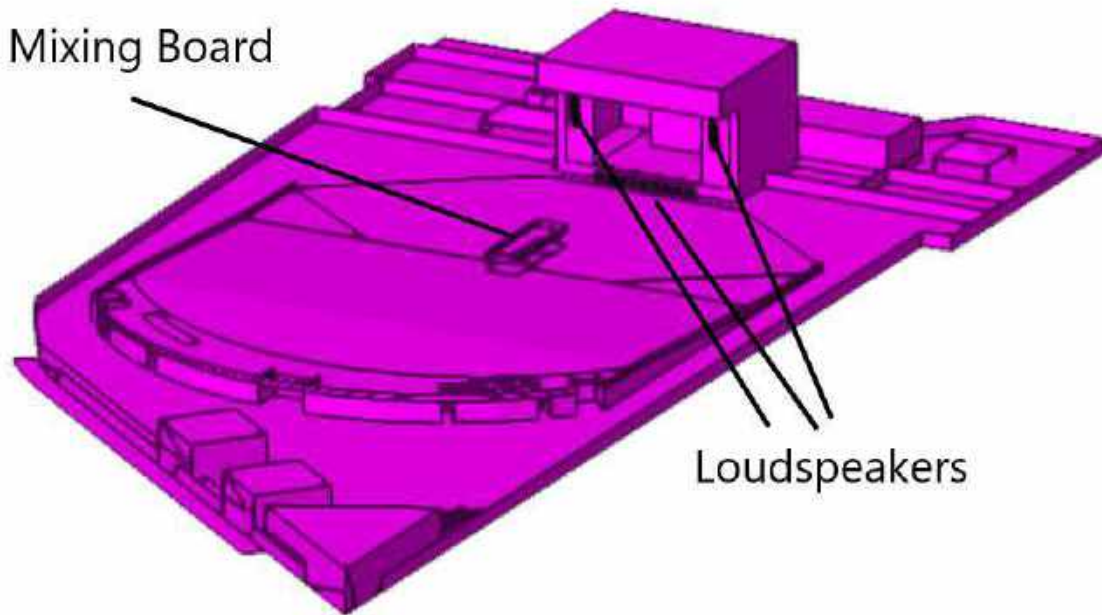
The atmospheric conditions that most affect sound travel at significant distances from sources are temperature and wind gradients, which can change continually over the course of a 24-hour period. Without wind current involvement, air temperatures typically decrease with increasing elevation during a cloudless day. The opposite tends to occur late at night since the ground tends to take longer to change temperature than does the air above it, causing a temperature inversion, for which air temperatures can be cooler closer to the ground than they are at higher elevations.

Refraction generally causes sound waves to bend toward regions with cooler temperatures. This results in shadow zones during clear afternoons, where sound waves bend upward through the atmosphere, yielding lower than expected sound levels more than 500 feet from sources at ground level. Temperature inversions generate the opposite results, with sound waves bending down toward the ground, enhancing sound travel over acoustically reflective ground cover (especially hard surfaces and still bodies of water). This is why conversations can sometimes be heard clearly from opposite sides of a still lake.

The audibility of a distant sound source depends on its magnitude, its directional characteristics, the background sound level in the listening area, and the factors mentioned above. Since this project will involve a powered loudspeaker system intended to deliver high levels of sound to a large audience, the sound clearly has the potential to be audible outside of the site; however, the elevated background sound levels generated by vehicles on the nearby highway (I-94 to the west) will reduce the potential audibility in the nearby residential communities. Audibility does not imply annoyance and that is why this evaluation relies more on the regulatory limits than mere audibility. Audibility is also very complicated and subjective, highly dependent on frequency characteristics in comparison with those of the background sound.

## Amphitheater Characteristics and Potential Effects on the Closest Sensitive Locations

**Figure 2** shows the conceptual layout of the amphitheater, with the stage facing to the north, away from the existing residential communities to the west and southeast.

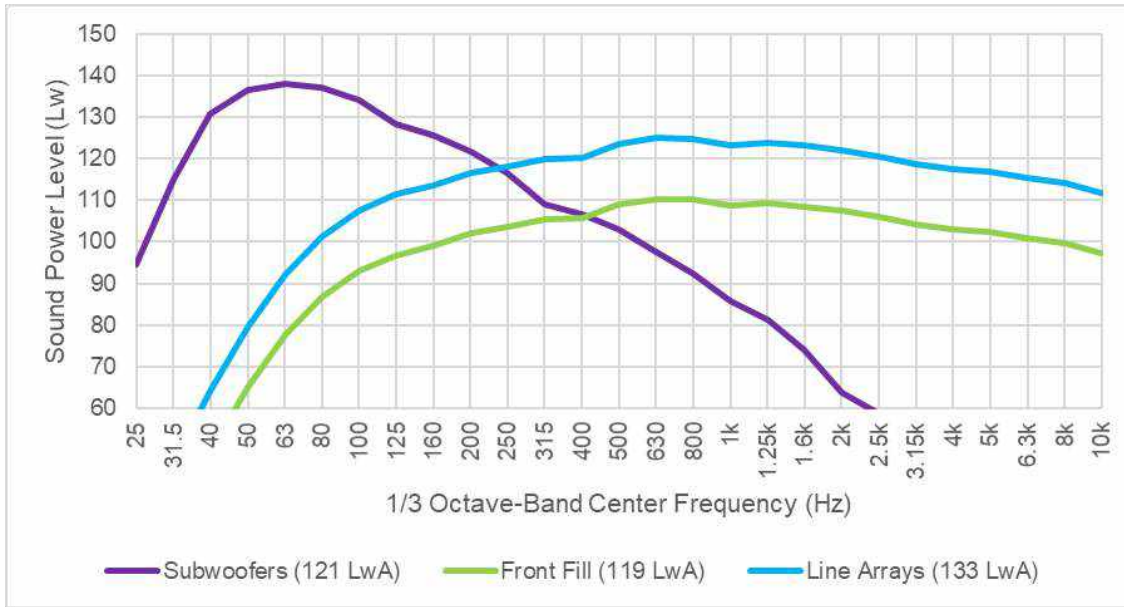


**Figure 2. Conceptual amphitheater layout showing the mixing board and loudspeaker locations**

Fifty-four major events are anticipated per year at the facility within an 18-week window, assuming 3 events per week at 3 hours each (6:30 PM to 9:30 PM), occurring within the City’s defined “daytime” period of 7:00 AM to 10:00 PM. This schedule would result in a total of 9 hours per week or 36 hours per 4-week period, which complies with the City’s limit of 12 hours in any single day, 24 hours in any week, and 36 hours in any 4-week period for sound amplifying equipment. Although the sound levels generated by the facility’s loudspeaker system are adjustable and the sound from the loudspeakers can be focused to the audience area according to the loudspeaker selection and layout, the developer is planning to meet the City’s limit of 90 dBA 50 feet from the front of the stage in the seating area. The sound mixing board location is planned to be roughly 130 feet from the front of the stage. The sound system is planned to be comprised of two hanging loudspeaker line arrays (with 16 cabinets in each array) above each side of the stage, a row of 6 front-fill loudspeakers at the front edge of the stage, and a row of 18 subwoofer loudspeakers on the seating area floor in front of the stage, as shown conceptually in **Figure 2**. The loudspeakers are all planned to be d&b audiotechnik models – J-Series J8 and J12 speakers for the line arrays, V-Series for the front-fill speakers, and J-Series J-SUB for the subwoofers.

Using the loudspeaker manufacturer’s coverage patterns along with 3-dimensional drawings of the facility layout supplied by the project architects, the CadnaA program (Version 2020 MR 2) was used to calculate sound pressure level contours (lines of constant sound pressure level) between the expected dominant sound sources at the facility (the loudspeakers) and the surrounding communities. CadnaA is a commercially-available sound prediction program accepted internationally by the acoustics professional community for environmental noise assessments, based on ISO-9613 sound propagation algorithms. Per the City’s limit, an assumption of a maximum of 90 dBA 50 feet from the stage was used in the analysis as the worst case. The spectral composition of the signal was derived from *Supplement to the Saxon Leisure Noise Study*, Table 15 (Ederer, Handel, Nicht, Roy, Seifert, Stuber, Trepte, Zschaler 2018), which provides frequency weighting data for a typical large outdoor concert line array and subwoofer system. Since wind currents can affect sound propagation, the neutral assumption of no wind was used for the analysis. The existing highway noise barrier along I-94 was also included in the model.

**Figure 3** shows the frequency responses of the different types of loudspeakers, based on data from the manufacturer and the spectral composition reference mentioned above.

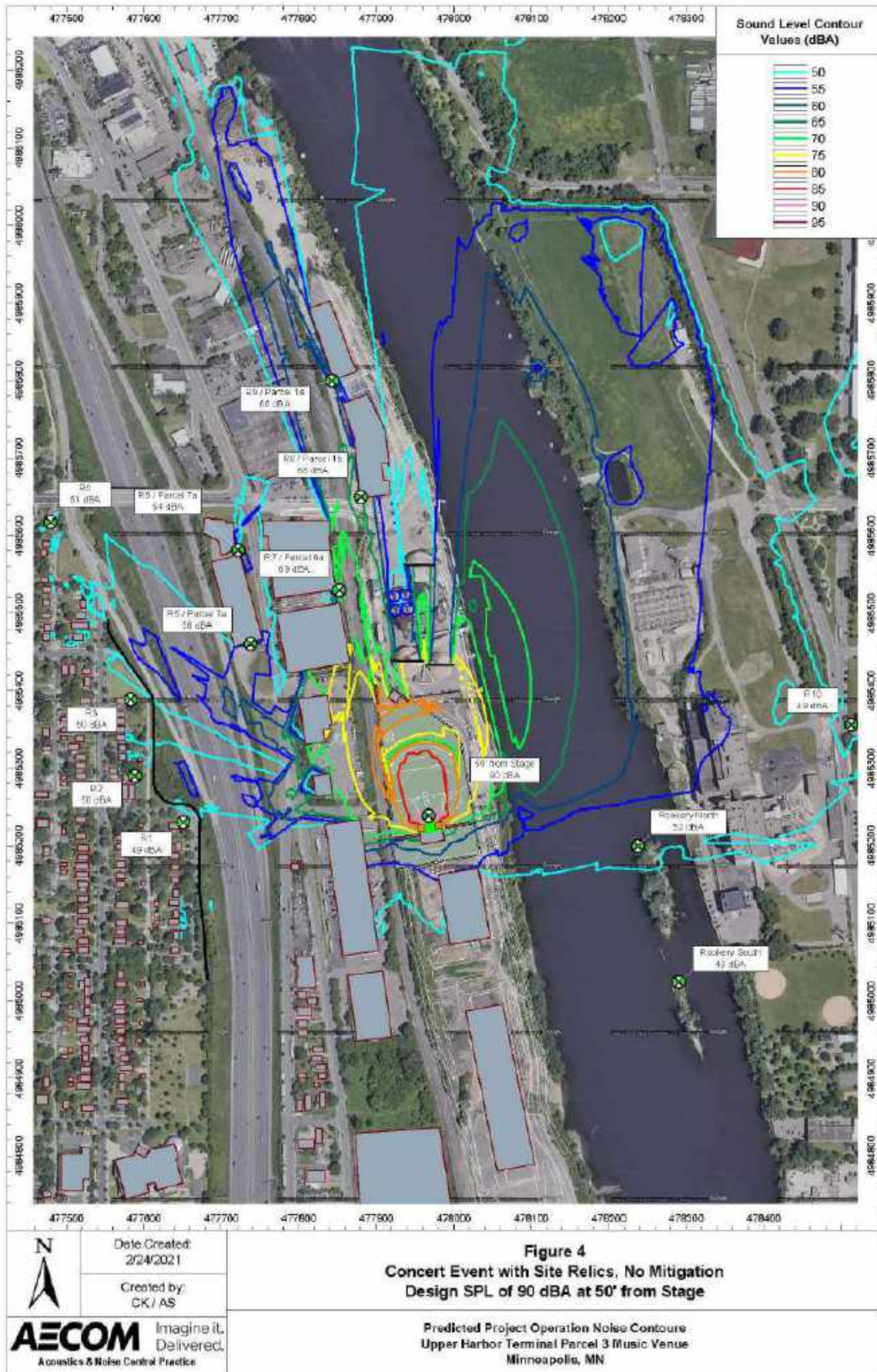


**Figure 3. Modeled loudspeaker characteristics**

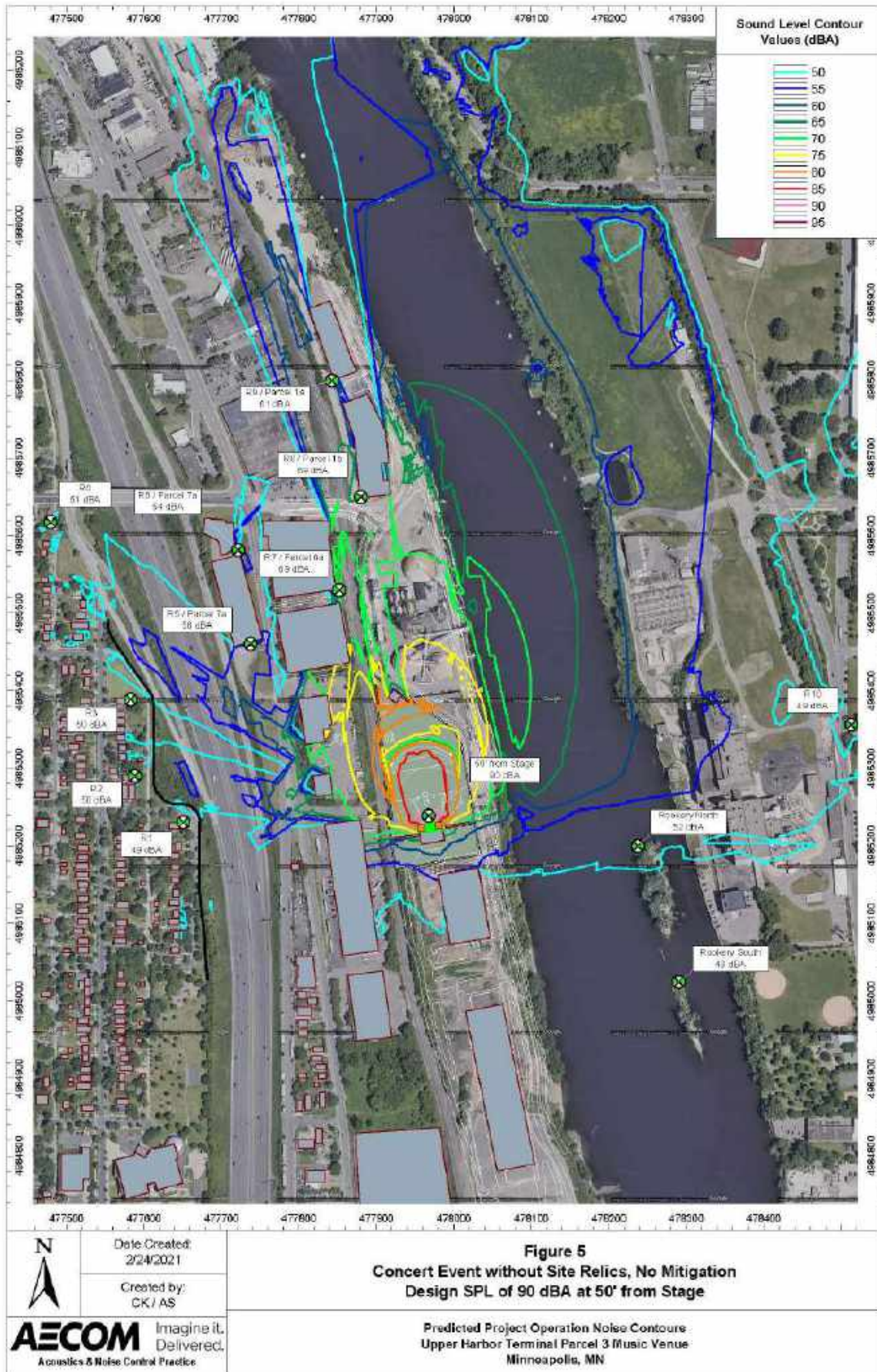
Two site configurations were evaluated – one with and one without existing relic structures to the north of the theater (Parcel 2 in **Figure 1**). **Figures 4** and **5** show maximum level noise contours for the operating facility for the with and without relics conditions, respectively. As **Figure 4** shows, the relics provide some acoustical shielding for buildings to the north of the facility. The closest residential buildings are labeled with an “R” prefix in the figures, with spot calculated sound levels noted.

Considering the City’s limit of 15 dBA above the background and the daytime residential background level of 60 dBA defined by **Table 1**, the facility would exceed the limit if predicted levels exceed 75 dBA at the closest residences. As **Figures 4** and **5** show, there are no locations for which this exceedance is predicted.











## Potential Effects on Wildlife

The only wildlife habitats near the amphitheater are the two islands to the southeast of the facility, labeled as “Rookery North” and “Rookery South” in **Figures 4** and **5**, which are known to be heron refuges. The effects of noise on birds has not been studied widely, but there are some references that can have been used for these types of evaluations. One of those is *Technical Guidance for Assessment and Mitigation of the Effects of Highway and Road Construction Noise on Birds*, published in 2016 by the California Department of Transportation.<sup>1</sup> This guideline provides a comprehensive summary of current studies and provides noise limits for bird exposures in terms of hearing loss, communication disruption, and potential behavioral effects. Hearing loss is not an issue for the levels that would be generated by the facility at the refuge areas, and the communication disruption limit is considered to be a continuous level of 60 dBA or the ambient level without the new source. Behavioral effects can occur for any audible sounds, but these are generally of little concern.

**Figures 4** and **5** show the predicted maximum sound levels (52 dBA for the north rookery and 43 dBA for the south rookery) associated with the proposed facility at the heron refuges, and they are unaffected by whether or not the relic structures will remain. These are below the 60 dBA limit and are comparable to or less than minimum background levels ( $L_{50}$  values between 54 and 65 dBA) measured in the area in 2017 as part of a preliminary study for this project. Therefore, although sounds from the facility may be audible at times, there would be minimal behavioral effects expected for the heron refuges to the southeast.

## Conclusions

The following general conclusions can be drawn from this evaluation:

- Whether or not the relic structures in Parcel 2 of the Upper Harbor Terminal site are preserved, the sound generated by the proposed amphitheater will meet the limits of the City of Minneapolis’ noise ordinance Section 389.105 under the conditions listed in this report, assuming the developer will file for an appropriate permit with the City. Therefore, there are no noise impacts predicted from the operation of the proposed amphitheater for the existing and proposed residential communities.
- Whether or not the relic structures in Parcel 2 of the Upper Harbor Terminal site are preserved, the sound generated by the proposed amphitheater is not predicted to cause a significant impact to the heron refuges on the islands to the southeast of the facility under the conditions listed in this report.

Although the City’s sound level limits would be satisfied with this planned facility design combined with an imposed limit of 90 dBA 50 feet from the front of the stage, the audience experience at the facility would be enhanced if a higher limit is imposed in the seating area for some of the concerts. This can be accomplished without reducing the predicted sound levels at the closest residential properties outside the theater by orienting the vertical loudspeaker arrays to direct the sound more toward the audience area than is in the current design. The developer will discuss these options with the City as part of the final design process of the facility.

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<sup>1</sup> Dooling, R.J., and A.N. Popper, *Technical Guidance for Assessment and Mitigation of the Effects of Highway and Road Construction Noise on Birds*, Report No. CTHWANP-RT-15-306.04.2, California Department of Transportation, June 2016.

# Appendix F:

## Traffic and Parking Reports



# TRAFFIC ANALYSIS REPORT

## UPPER HARBOR TERMINAL MINNEAPOLIS, MINNESOTA

DECEMBER 2020

**Kimley»Horn**



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## APPENDIX

- A. Figures
- B. Site Layout and Phasing
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## INTRODUCTION

United Properties is preparing an Areawide Urban Alternative Review (AUAR) for the development of the Upper Harbor Terminal in Minneapolis, which is generally bounded by Dowling Avenue N and Lowry Avenue N to the north and south, and Interstate 94 and the Mississippi River to the west and east.

There are two development scenarios that are being considered for the Upper Harbor Terminal site. The first is the Coordinated Plan which was developed in consultation with the community. The second is the Comprehensive Plan that is based on the maximum build-out allowed by the Minneapolis 2040 Comprehensive Plan. Both the Comprehensive Plan and the Coordinated Plan are analyzed as part of the AUAR. **Table 1** shows the land uses with their densities for the two development scenarios.

*Table 1: Development Scenarios*

Land Use	Coordinated Plan	Comprehensive Plan
Residential	522 Units	890 Units
Retail and Public Market	15,300 Square Feet	26,300 Square Feet
Restaurant	15,000 Square Feet	15,000 Square Feet
Office	31,000 Square Feet	62,000 Square Feet
Industrial	203,000 Square Feet	406,000 Square Feet
Event Hall	3,000 Square Feet	6,000 Square Feet
Community Garden	9,600 Square Feet	9,600 Square Feet
Music Venue	10,000-person capacity	10,000-person capacity
Public Park	19.5 Acres	19.5 Acres
Child Care	2,200 Square Feet	2,200 Square Feet
Health & Wellness	20,000 Square Feet	40,000 Square Feet
Youth Sports	40,000 Square Feet	80,000 Square Feet
Clinic	4,700 Square Feet	4,700 Square Feet
Flexible Community Space	6,000 Square Feet	12,000 Square Feet
Training Center	15,000 Square Feet	30,000 Square Feet

The site is currently industrial land uses with some parcels undeveloped. The site is anticipated to be constructed by 2024. **Figure 1** shows the proposed project location. All figures are included in **Appendix A**.

## EXISTING CONDITIONS

The proposed development is located east of I-94 along Washington Avenue N and the proposed Parkway Street in Minneapolis, Minnesota. East of the proposed site is the Mississippi River. The site is currently industrial land use. The following existing intersections will be included in the traffic capacity analysis:

- Lyndale Avenue N & Dowling Avenue N
- West I-94 Ramp & Dowling Avenue N
- East I-94 Ramp & Dowling Avenue N
- Washington Avenue N & Dowling Avenue N
- Washington Avenue N & 2nd Street N & 36th Street N
- 2nd Street N & 33rd Avenue N
- Washington Avenue N & 33rd Avenue N
- Lowry Avenue N & Washington Avenue N
- Lowry Avenue N & 2nd Street N

The existing study intersections listed above are shown in **Figure 1**. Figure 1 also shows two additional intersections (10 and 11) and site access locations that are included in the Build conditions. The site accesses were assumed for the purposes of the traffic analysis and the final access locations and configurations will be determined through the City of Minneapolis site plan review process.

## EXISTING ROADWAYS

The following provides a detailed description of existing roadways near the proposed site.

**Dowling Avenue N (Municipal State Aid (MSA) 169)** is an east-west two-lane undivided roadway that connects Victory Memorial Drive from the west to I-94 in the east and continues east to the site. In the vicinity of the site, there are left turn lanes at the signalized intersections. There is a bike lane in each direction on Dowling Avenue N. The MnDOT Functional Classification System Map identifies Dowling Avenue N as a Major Collector. The MnDOT Traffic Mapping Application reports an annual average daily traffic (AADT) of 9,500 vehicles per day (vpd) in 2017 near the site. The 2017 AADT on Dowling Avenue N between the I-94 Ramps and Lyndale Avenue N was 16,700 vpd and was 10,300 vpd west of Lyndale Avenue N. The posted speed limit on Dowling Avenue N is 25 mph.

**Lyndale Avenue (MSA 342)** is a north-south roadway that begins near the I-94/I-694 interchange in Brooklyn Center in the north and runs south to Bloomington. Near the study area, Lyndale Avenue is a two-lane undivided roadway and is classified as an A-Minor Reliever by the MnDOT Functional Classification System Map. The reported AADT on the MnDOT Traffic Mapping Application was 9,000 vpd north of Dowling Avenue N and 8,000 vpd south of Dowling Avenue N. On-street parking is permitted on the west side of Lyndale Avenue both north and south of Dowling Avenue N. The posted speed limit on Lyndale Avenue is 25 mph.

**Washington Avenue N (County State Aid Highway (CSAH) 152)** is a Hennepin County roadway that runs primarily north-south from the University of Minnesota East Bank campus through downtown Minneapolis to just north of Dowling Avenue N. Near the study area, Washington Avenue N is a two-lane undivided roadway with bike lanes in each direction. It is classified as a Major Collector according to the MnDOT Functional Classification System Map. The MnDOT Traffic Mapping Application reports an AADT of 5,900 vpd on Washington Avenue N north of its intersection with 2<sup>nd</sup> Street N and 3,550 vpd south of the intersection with 2<sup>nd</sup> Street N. The speed limit on Washington Avenue N is 30 mph.

**2<sup>nd</sup> Street N (MSA 215)** is a primarily north-south roadway that runs from downtown Minneapolis until the intersection with Washington Avenue N near the site. Near the site, it is a two-lane undivided roadway with bike lanes in both directions. It is classified as a major collector in the MnDOT Functional Classification System Map. The MnDOT Traffic Mapping Application reports an AADT of 6,800 vehicles per day (vpd) in 2017 on 2<sup>nd</sup> Street N north of Lowry Avenue N. The posted speed limit on 2<sup>nd</sup> Street N is 25 mph.

**Lowry Avenue N (CSAH 153)** is a Hennepin County roadway that runs east-west and is located south of the site. Lowry Avenue N begins in the west near Bottineau Boulevard/Broadway Avenue and runs east to Stinson Parkway. In the site area, Lowry Avenue N is a four-lane undivided roadway. It is classified as an A-Minor Augmentor in the MnDOT Functional Classification System Map. The MnDOT Traffic Mapping Application reports an AADT of 15,000 vpd in 2017 on Lowry Avenue N east of Washington Avenue N and an AADT of 13,700 vpd in 2017 west of Washington Avenue N. The speed limit on Lowry Avenue N is 30 mph.

**33<sup>rd</sup> Avenue N** is an east-west local roadway that is located along the south end of the site. It is a two-lane undivided roadway with on-street parking on both sides of the road. Near the site, 33<sup>rd</sup> Avenue N connects Washington Avenue N and 2<sup>nd</sup> Street N and is bounded by I-94 and the Mississippi River. There is no AADT information available for 33<sup>rd</sup> Avenue N on the MnDOT Traffic Mapping Application. The speed limit on 33<sup>rd</sup> Avenue N is proposed to change to 20 mph in fall 2020.

**Figure 2** provides the existing intersection geometry and intersection control for the study intersections.

## EXISTING TRANSIT SERVICE

There are currently no transit routes that directly serve the development site. The closest bus stops that could be accessed from the development are located at Dowling Avenue & 6<sup>th</sup> Street, Dowling Avenue & Lyndale Avenue, and on Lowry Avenue between Washington Avenue and 2<sup>nd</sup> Street.

The following routes operate at these bus stops:

**Route 22** is a local bus route from the VA Medical Center south of Minneapolis to the Brooklyn Center Transit Center. This route operates seven days a week with 10-20 minute headways during weekday peak periods and 20-30 minute headways during off-peak hours and weekends. Route 22 operates on Lyndale Avenue near the project site, with the closest stops on Lyndale Avenue at Dowling Avenue.

**Route 721** is a local bus route from downtown Minneapolis to Hennepin Technical College in Brooklyn Park. This route operates seven days a week with 30-60 minute headways. Route 721 exits I-94 and then runs to the west on Dowling Avenue, with the closest stops to the project site on Dowling Avenue at 6<sup>th</sup> Street and at Lyndale Avenue.

**Route 32** is a local bus route from the Robbinsdale Transit Center to the Rosedale Transit Center. This route operates seven days a week with 30 minute headways. Route 32 operates on Lowry Avenue near the project site, with stops on Lowry Avenue between Washington Avenue and 2<sup>nd</sup> Street.

## EXISTING TRAFFIC VOLUMES

To analyze the traffic operations at the study intersection, weekday peak period turning movement counts were collected on Thursday March 22, 2018 for the intersections along Dowling Avenue N and on Tuesday March 17, 2020 at the four study intersections on Lowry Avenue and 33<sup>rd</sup> Avenue. At the time the March 2020 counts were collected, traffic volumes were affected due to COVID-19 related business and school

closures. Historic counts on Lowry Avenue were compared to the 2020 counts and adjustment factors were identified by intersection approach to normalize the volumes. **Table 2** shows the adjustment factors used for each roadway for both the AM and PM peak hours.

*Table 2: March 2020 Volume Adjustment Factors*

Approach	AM Peak Hour		PM Peak Hour	
	2020 Traffic Volumes (% of Historic Vol.)	Volume Adjustment	2020 Traffic Volumes (% of Historic Vol.)	Volumes Adjustment
EB Lowry Avenue	75%-104%	+25%	96-127%	0%
WB Lowry Avenue	83-94%	+20%	88-122%	+5%
NB 2 <sup>nd</sup> Street	80-112%	+25%	59-84%	+60%
SB 2 <sup>nd</sup> Street	65-93%	+55%	89-119%	+10%
NB Washington Avenue	79-112%	+15%	42-64%	+100%
SB Washington Avenue	22-74%	+110%	53-85%	+60%

The percentage of historic volumes on Lowry Avenue and 2<sup>nd</sup> Street were generally consistent with reports by INRIX and other big data companies regarding the reduction in traffic volumes in mid-March 2020 due to COVID-19.<sup>1</sup> Approaches with low traffic volumes tended to have larger percentage differences in traffic, since a reduction of a few vehicles made up a relatively larger percentage of the overall traffic on that approach.

The 2018 intersection counts were also adjusted based on an annual growth rate of 0.25 percent per year to get the Existing Year (2020) volumes.

For the study, existing and no-build volumes were rounded to the nearest 5 vehicles and were balanced between the intersections where it was appropriate. **Figure 3** provides a summary of the weekday AM and PM peak hour turning traffic volumes.

The network peak hours and peak hour factors were used for the analysis. The network AM peak hour was determined to be 7:15 AM to 8:15 AM and the network PM peak hour was determined to be 4:30 PM to 5:30 PM. The network peak hour factors were determined to be 0.91 for the AM peak hour and 0.96 for the PM peak hour.

## EXISTING CONDITIONS CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the study intersections during the weekday AM and PM peak hours. The capacity analysis was performed using Synchro/SimTraffic. The City of Minneapolis provided the existing signal timings.

The capacity of an intersection quantifies its ability to accommodate traffic volumes and is measured in average delay per vehicle. It is expressed in terms of level of service (LOS) which ranges from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM) 6<sup>th</sup> Edition, quantify and categorize

<sup>1</sup> INRIX U.S. National Traffic Volume Synopsis, March 14-20, 2020. <https://inrix.com/blog/2020/03/covid19-us-traffic-volume-synopsis/>

drivers' experience as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating and the corresponding average delays are shown in **Table 3**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings.

*Table 3 – Level of Service Information*

Level of Service	Average Control Delay (seconds/vehicle)		Description
	Unsignalized	Signalized	
<b>A</b>	0-10	0-10	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
<b>B</b>	>10-15	>10-20	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
<b>C</b>	>15-25	>20-35	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
<b>D</b>	>25-35	>35-55	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
<b>E</b>	>35-50	>55-80	High control delay; average travel speed no more than 33 percent of free flow speed.
<b>F</b>	>50	>80	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

The traffic volumes shown in **Figure 3** in **Appendix A** were used in the Existing Year (2020) analysis. **Table 4** shows the overall intersection LOS and delay for the study intersections under Existing Year (2020) conditions during the AM and PM peak hours.

Based on the analysis, the study intersections are currently operating at LOS D or better during the AM and PM peak hours with the following exception:

- In the PM peak hour, Lyndale Avenue & Dowling Avenue operates at LOS E. The northbound and southbound approaches at the intersection experiences excessive delays.
- Washington Avenue & Dowling Avenue operates at LOS F in the PM peak hour, the northbound leg has excessive delay and queuing as there are a substantial amount of northbound left turns with only a single lane approach and no turn lanes. The signal at the intersection currently operates with split phasing on the east and west approaches due to the offset intersection, which leads to higher delays at the intersection.

The movement LOS results at the study intersections are summarized in **Appendix C**.



Table 4 – Existing Year (2020) Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	49.6	D	55.6	E
Dowling Avenue & East I-94 Ramps	Signalized	13.2	B	13.9	B
Dowling Avenue & West I-94 Ramps	Signalized	16.5	B	20.9	C
Dowling Avenue & Washington Avenue	Signalized	29.3	C	81.4	F
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	0.8	A	4.8	A
Washington Avenue & 33rd Avenue	Side Street Stop	0.5	A	1.2	A
2nd Street & 33rd Avenue	Side Street Stop	1.1	A	1.7	A
Lowry Avenue & Washington Avenue	Signalized	10.8	B	27.7	C
Lowry Avenue & 2nd Street	Signalized	14.8	B	32.3	C

The average and 95th percentile queues are summarized in **Table 5** for the I-94 ramps and the signalized approaches that are within 1/8 mile of another signalized intersection. The queuing was evaluated for these movements because of the potential safety and operations impacts at these locations if the queues regularly exceed the available storage. In the Existing Conditions, the 95th percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The average queues for these movements are all less than the available storage distance and significantly less than the 95th percentile queues, which indicates that the 95th percentile queue lengths would be expected to occur only a few times in the peak hour.

Table 5 – Existing Year (2020) Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour		
				Average Queue (feet)	95th Percentile Queue (feet)	Average Queue (feet)	95th Percentile Queue (feet)	
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	50	92	56	148	
		TH/RT	570	122	213	170	310	
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	104	185	102	183	
		TH/RT	1,355	83	179	138	303	
	Eastbound	TH	570	95	169	74	140	
		Westbound	LT	150	24	63	36	79
			TH	400	26	67	28	74
Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	129	228	267	438	
		RT	540	35	94	52	154	
	Eastbound	LT	165	106	201	88	169	
		TH	410	84	162	54	121	
	Westbound	TH/RT	185	80	198	125	203	
		LT	120	82	154	100	160	
Dowling Avenue & Washington Avenue	Eastbound	TH/RT	185	119	229	88	218	
		LT/TH	215	73	145	160	228	
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	73	145	160	228	
Lowry Avenue & 2nd Street	Eastbound	LT/TH	215	43	97	134	228	

## FUTURE NO-BUILD CONDITIONS CAPACITY ANALYSIS

### BACKGROUND GROWTH

No-Build traffic volumes were calculated by applying a 0.25 percent annual growth rate. This growth rate percentage was determined based on historic AADTs in the vicinity of the site, knowledge of the area, and discussions with the City of Minneapolis. This growth rate is appropriate due to the fully developed nature of the surrounding areas and no known source of significant background growth that will impact the traffic volumes on the roadways surrounding the site. The No-Build scenario volumes assumed the same peak hours and peak hour factors as the Existing Conditions.

### OPENING YEAR NO-BUILD CAPACITY ANALYSIS

A capacity analysis was performed for Opening Year No-Build (2024) conditions in order to develop baseline operating conditions for the opening year. All signal cycles remained the same as the Existing Conditions (2020) but some splits were slightly adjusted. With a 0.25 percent annual background growth rate, there is not a significant change in traffic volumes between the Existing Year (2020) and the Opening Year No-Build (2024) conditions. **Figure 4** shows the Opening Year No-Build (2024) turning movement volumes.

The results of the analysis are provided in **Table 6** for the Opening Year No-Build weekday AM and PM peak hours. Based on the capacity analysis, the study intersections are expected to operate at the same LOS as the Existing Conditions in the AM and PM peak hours with the following exceptions:

- Dowling Avenue & Lyndale Avenue - This intersection operated at LOS D in the Existing Condition AM peak hour and is expected to operate at LOS E in the Opening Year No-Build AM peak hour.

The movement LOS results for the study intersections are summarized in **Appendix C**.

*Table 6 – Opening Year No-Build (2024) Intersection Analysis*

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	57.1	E	58.2	E
Dowling Avenue & East I-94 Ramps	Signalized	13.3	B	13.9	B
Dowling Avenue & West I-94 Ramps	Signalized	17.7	B	21.4	C
Dowling Avenue & Washington Avenue	Signalized	28.8	C	88.9	F
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	0.8	A	12.0	B
Washington Avenue & 33rd Avenue	Side Street Stop	0.5	A	1.2	A
2nd Street & 33rd Avenue	Side Street Stop	1.2	A	1.7	A
Lowry Avenue & Washington Avenue	Signalized	10.4	B	24.9	C
Lowry Avenue & 2nd Street	Signalized	15.7	B	28.9	C

The average and 95th percentile queues are summarized in **Table 7**. In the Opening Year No-Build Conditions, the 95<sup>th</sup> percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The 95<sup>th</sup> percentile queues that exceed the storage are generally the same as the Existing Conditions. The 95<sup>th</sup> percentile queue of the westbound left-turn movement at Dowling Avenue & Lyndale Avenue exceeded the available storage, which was not

identified in the Existing Conditions. However the 95<sup>th</sup> percentile queue increased by only 6 feet in the PM Peak hour.

Of the movements where the 95<sup>th</sup> percentile queue exceeds the storage distance, the average queues are all less than the available storage distance and significantly less than the 95<sup>th</sup> percentile queues, which indicates that the 95<sup>th</sup> percentile queue lengths would be expected to occur only a few times in the peak hour.

Table 7 – Opening Year No-Build (2024) Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	52	111	54	154
		TH/RT	570	132	217	174	358
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	100	189	108	208
		TH/RT	1,355	81	165	129	305
	Eastbound	TH	570	93	172	74	135
	Westbound	LT	150	25	70	37	83
		TH	400	28	69	28	73
Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	131	230	259	431
		RT	540	36	105	62	181
	Eastbound	LT	165	117	229	96	185
		TH	410	104	257	61	151
	Westbound	TH/RT	185	81	191	124	193
		LT	120	85	158	99	161
Dowling Avenue & Washington Avenue	Eastbound	TH/RT	185	112	225	90	222
		LT/TH	215	63	132	154	225
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	63	132	154	225
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	48	111	136	236

## HORIZON YEAR NO-BUILD CAPACITY ANALYSIS

A capacity analysis was performed for Horizon Year No-Build (2040) conditions in order to develop baseline operating conditions for the horizon year. The signal timing cycle lengths remained the same as the Existing Conditions, however, the phase splits were optimized. **Figure 5** shows the Horizon Year No-Build (2040) turning movement volumes. With a 0.25 percent annual growth rate, there is not a substantial change in traffic volumes between the Existing Year (2020) and the Horizon Year No-Build (2040) conditions.

The results of the Horizon Year No-Build (2040) analysis are provided in **Table 8** for the weekday AM and PM peak hours. Based on the capacity analysis, the study intersections are expected to operate at the same LOS as the Opening Year No Build (2024) conditions with the following exceptions:

- During the PM peak hour, Lyndale Avenue & Dowling Avenue is anticipated operate at LOS E however the delays are near the LOS F threshold.

The movement LOS results at the study intersections are summarized in **Appendix C**.

Table 8 – Horizon Year No-Build (2040) Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	67.6	E	77.5	E
Dowling Avenue & East I-94 Ramps	Signalized	13.6	B	13.4	B
Dowling Avenue & West I-94 Ramps	Signalized	16.2	B	21.8	C
Dowling Avenue & Washington Avenue	Signalized	28.7	C	84.5	F
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	0.8	A	14.6	B
Washington Avenue & 33rd Avenue	Side Street Stop	0.5	A	1.2	A
2nd Street & 33rd Avenue	Side Street Stop	1.1	A	1.7	A
Lowry Avenue & Washington Avenue	Signalized	10.7	B	38.4	D
Lowry Avenue & 2nd Street	Signalized	15.6	B	35.6	D

The average and 95th percentile queues are summarized in **Table 9**. The 95<sup>th</sup> percentile queues that exceed the available storage are generally the same as the Opening Year No-Build Conditions. The average queues for these movements are all less than the available storage distance and significantly less than the 95<sup>th</sup> percentile queues, which indicates that the 95<sup>th</sup> percentile queue lengths would be expected to occur only a few times in the peak hour. The 95<sup>th</sup> percentile queue of the westbound through/right-turn movement at Dowling Avenue & West I-94 Ramps did not exceed the available storage, which was previously identified in the Opening Year No-Build Conditions. However the 95<sup>th</sup> percentile queue decreased by only 14 feet in the AM Peak hour.

Table 9 – Horizon Year No-Build (2040) Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	55	117	59	154
		TH/RT	570	131	216	194	371
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	117	203	111	196
		TH/RT	1,355	87	212	131	275
	Eastbound	TH	570	97	165	80	137
		Westbound	LT	150	25	65	36
Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	136	251	272	443
		RT	540	34	93	73	218
	Eastbound	LT	165	123	238	91	172
		TH	410	97	212	67	150
	Westbound	TH/RT	185	79	177	127	202
		Eastbound	LT	120	93	158	106
Dowling Avenue & Washington Avenue	Eastbound	TH/RT	185	123	233	104	239
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	70	135	164	237
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	50	113	137	235

## PROPOSED DEVELOPMENT

Two development scenarios are being considered for the Upper Harbor Terminal site – the Coordinated Plan and the Comprehensive Plan. The Coordinated Plan was developed in consultation with the community and the Comprehensive Plan is based on the maximum development densities allowed by the Minneapolis 2040 Comprehensive Plan.

The Upper Harbor Terminal site has been divided into seven different parcels as shown on the site plan in **Appendix B**. A new roadway is planned to be constructed as a part of the project, under either development scenario. The new roadway would be a parkway under the jurisdiction of the Minneapolis Park and Recreation Board and would run north-south just west of the Mississippi River from just north of Dowling Avenue to 33<sup>rd</sup> Avenue. The parkway is identified as Parkway Drive the figures in **Appendix A**. The parkway provides access to several of the parcels located within the development.

The trip-generating potential of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Tenth Edition*. Standard ITE trip rates were used to calculate the total trips generated by each parcel based on each land use code (LUC). **Table 10** provides the planned land uses of the development and the assumed ITE LUC.

*Table 10: Development Land Uses and Assumed ITE Land Use Codes*

Development Land Use	Assumed ITE LUC
Residential	Multifamily Housing (Mid-Rise): LUC 221
Retail and Public Market	Shopping Center: LUC 820
Restaurant	High-Turnover (Sit-Down) Restaurant: LUC 932
Office	General Office Building: LUC 710
Industrial	General Light Industrial: LUC 110
Event Hall	Not analyzed for peak hour trip generation
Community Garden	Assumed to be 100 percent internal site capture
Music Venue	Not analyzed for peak hour trip generation
Parkland	Public Park: LUC 411
Child Care	Day Care Center: LUC 565
Health & Wellness	Recreational Community Center: LUC 495
Youth Sports	Recreational Community Center: LUC 495
Health Clinic	Clinic: LUC 630
Flexible Community Space	Recreational Community Center: LUC 495
Training Center	General Office Building: LUC 710



The average peak hour trip generation rates for LUC 495 were reduced for the purposes of this study based on the anticipated peak hour activity at the sites proposed in this development.

Internal capture accounts for trips between the land uses on the site and was calculated based on the National Cooperative Highway Research Program (NCHRP) Report 684 *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. A mode split reduction of 7% was applied to account for non-motorized modes of transportation. This mode split reduction was applied to the trip generation of all parcels on the site.

The trip generation calculated for each parcel was distributed to the adjacent roadways based on current traffic patterns in the area and a general assessment of the major regional roadways surrounding the study area.

The parcels were grouped together for trip generation as well as trip distribution based on similar land uses and similar access locations:

- Parcel 1A and Parcel 1B
- Parcel 2 and Parcel 6B
- Parcel 3, Parcel 4, and Parcel 5
- Parcel 6A, Parcel 7A, and Parcel 7B

The following sections detail the trip generation and the trip distribution by parcel groups for both the Coordinated Plan and the Comprehensive Plan.

Traffic associated with the Event Hall (Parcel 1b) and the Music Venue were not included in the peak hour traffic analysis because these land uses are not expected to generate traffic during a typical weekday peak hour. Traffic impacts and mitigations associated with event traffic are discussed further in the Mitigation Plan section of this report.

## COORDINATED PLAN SITE TRIP GENERATION

A summary of the trip generation for the Coordinated Plan is provided for each parcel grouping and for the total site.

### PARCEL 1A AND PARCEL 1B

The land uses, development intensity, and associated land use codes for Parcel 1A and Parcel 1B are as follows:

- Residential, 168 units: ITE LUC 221
- Child Care, 2,200 square feet: ITE LUC 565
- Office, 1,500 square feet: ITE LUC 710
- Restaurant, 15,000 square feet: ITE LUC 932
- Event Hall, 3,000 square feet: Not analyzed for AM and PM peak hours

The average rate for each ITE LUC was used to calculate the expected trip generation of the parcels. **Table 11** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 1A and Parcel 1B of the Coordinated Plan.

Table 11 – Coordinated Plan: Parcel 1A and Parcel 1B Trip Generation

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
221	Multifamily Housing (Mid-Rise)	168 Dwelling Units	16	44	60	45	29	74
565	Day Care Center	2,200 S.F.	12	12	24	11	13	24
710	General Office Building	1,500 S.F.	2	0	2	0	2	2
932	High-Turnover (Sit-Down) Restaurant	15,000 S.F.	16	44	60	45	29	74
<b>Total Trips</b>			<b>112</b>	<b>123</b>	<b>235</b>	<b>147</b>	<b>100</b>	<b>247</b>
Internal Site Capture			-39	-37	-76	-32	-34	-66
Mode Split Reduction – 7% Non-Auto			-8	-8	-16	-10	-7	-17
<b>Total External Vehicle Trips</b>			<b>65</b>	<b>78</b>	<b>143</b>	<b>105</b>	<b>59</b>	<b>164</b>

## PARCEL 2 AND PARCEL 6B

The land uses, development intensity, and associated land use codes for Parcel 2 and Parcel 6B are as follows:

- Parkland, 19.504 acres: ITE LUC 411
- Youth Sports, 40,000 square feet: ITE LUC 495
- Health and Wellness, 20, 000 square feet: ITE LUC 495

The average rate for the Public Park LUC was used to calculate the expected trip generation of the parcel. The Recreational Center LUC used a reduced peak hour trip generation rate, as stated previously in this report. **Table 12** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 2 and Parcel 6B of the Coordinated Plan.

Table 12 – Coordinated Plan: Parcel 2 and Parcel 6B Trip Generation

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
411	Public Park	19.504 Acres	0	0	0	13	11	24
495	Recreational Community Center	60,000 S.F.	35	18	53	33	36	69
<b>Total Trips</b>			<b>35</b>	<b>18</b>	<b>53</b>	<b>46</b>	<b>47</b>	<b>93</b>
Internal Site Capture			0	0	0	-5	-8	-13
Mode Split Reduction – 7% Non-Auto			-2	-2	-4	-3	-4	-7
<b>Total External Vehicle Trips</b>			<b>33</b>	<b>16</b>	<b>49</b>	<b>38</b>	<b>35</b>	<b>73</b>

## PARCEL 3, PARCEL 4, AND PARCEL 5

The land uses, development intensity, and associated land use codes for Parcel 3, Parcel 4, and Parcel 5 are as follows:

- Industrial, 203,000 square feet: ITE LUC 110
- Office, 22,000 square feet: ITE LUC 710
- Retail, 4,300 square feet: ITE LUC 820
- Music Venue, 10,000-person capacity: Not analyzed for AM and PM peak hours
- Community Garden, 9,600 square feet: Assumed to be 100 percent internal site capture

The average rate for each ITE LUC was used to calculate the expected trip generation of the parcels. **Table 13** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 3, Parcel 4, and Parcel 5 of the Coordinated Plan.

*Table 13 – Coordinated Plan: Parcel 3, Parcel 4, and Parcel 5 Trip Generation*

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
110	General Light Industrial	203,000 S.F.	125	17	142	17	111	128
710	General Office Building	22,000 S.F.	22	4	26	4	21	25
820	Shopping Center	4,300 S.F.	2	2	4	8	8	16
<b>Total Trips</b>			<b>149</b>	<b>23</b>	<b>172</b>	<b>29</b>	<b>140</b>	<b>169</b>
Internal Site Capture			-20	-12	-32	-9	-10	-19
Mode Split Reduction – 7% Non-Auto			-10	-2	-12	-2	-10	-12
<b>Total External Vehicle Trips</b>			<b>119</b>	<b>9</b>	<b>128</b>	<b>18</b>	<b>120</b>	<b>138</b>

#### PARCEL 6A, PARCEL 7A, AND PARCEL 7B

The land uses, development intensity, and associated ITE land use codes for Parcel 2 and Parcel 6B are as follows:

- Residential, 354 units: ITE LUC 221
- Flexible Community Space, 6,000 square feet: ITE LUC 495
- Health Clinic, 4,700 square feet: ITE LUC 630
- Training Center, 15,000 square feet: ITE LUC 710
- Office, 7,500 square feet: ITE LUC 710
- Public Market, 11,000 square feet: ITE LUC 820

The average rates for the Multifamily Housing, Clinic, Office, and Retail ITE LUC were used to calculate the expected trip generation of the parcels. The Recreational Center LUC used a reduced peak hour trip generation rate, as stated previously in this report. **Table 14** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 6A, Parcel 7A, and Parcel 7B of the Coordinated Plan.

*Table 14 – Coordinated Plan: Parcel 6A, Parcel 7A, and Parcel 7B Trip Generation*

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
221	Multifamily Housing (Mid-Rise)	354 Dwelling Units	33	95	128	95	61	156
495	Recreational Community Center	6,000 S.F.	3	2	5	3	4	7
630	Clinic	4,700 S.F.	13	4	17	4	11	15
710	General Office Building	22,500 S.F.	22	3	25	4	22	26
820	Shopping Center	11,000 S.F.	7	3	10	20	22	42
<b>Total Trips</b>			<b>78</b>	<b>107</b>	<b>185</b>	<b>126</b>	<b>120</b>	<b>246</b>
Internal Site Capture			-11	-20	-31	-31	-26	-57
Mode Split Reduction – 7% Non-Auto			-5	-8	-13	-9	-8	-17
<b>Total External Vehicle Trips</b>			<b>62</b>	<b>79</b>	<b>141</b>	<b>86</b>	<b>86</b>	<b>172</b>

## COORDINATED PLAN TOTAL SITE TRIP GENERATION

**Table 15** provides a summary of the total number of trips expected to be generated for all parcels and land uses during the weekday AM and PM peak hours for the Coordinated Plan.

*Table 15 – Coordinated Plan: Total Site Trip Generation*

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
110	General Light Industrial	203,000 S.F.	125	17	142	17	111	128
221	Multifamily Housing (Mid-Rise)	522 Dwelling Units	49	139	188	140	90	230
411	Public Park	19.504 Acres	0	0	0	13	11	24
495	Recreational Community Center	66,000 S.F.	38	20	58	36	40	76
565	Day Care Center	2,200 S.F.	12	12	24	11	13	24
630	Clinic	4,700 S.F.	13	4	17	4	11	15
710	General Office Building	46,000 S.F.	46	7	53	8	45	53
820	Shopping Center	15,300 S.F.	9	5	14	28	30	58
932	High-Turnover (Sit-Down) Restaurant	15,000 S.F.	82	67	149	91	56	147
<b>Total Site Trips</b>			<b>374</b>	<b>271</b>	<b>645</b>	<b>348</b>	<b>407</b>	<b>755</b>
Internal Site Capture			-70	-69	-139	-77	-78	-155
Mode Split Reduction – 7% Non-Auto			-25	-20	-45	-24	-29	-53
<b>Total External Vehicle Trips</b>			<b>279</b>	<b>182</b>	<b>461</b>	<b>247</b>	<b>300</b>	<b>547</b>

## COMPREHENSIVE PLAN SITE TRIP GENERATION

A summary of the trip generation for the Comprehensive Plan is shown below for each parcel grouping and for the total site. The same land uses are assumed for each parcel, but with increased development intensity compared to the Coordinated Plan.

### PARCEL 1A AND PARCEL 1B

The average rate for each ITE LUC was used to calculate the expected trip generation of the parcels. **Table 16** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 1A and Parcel 1B of the Comprehensive Plan.

*Table 16 – Comprehensive Plan: Parcel 1A and Parcel 1B Trip Generation*

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
221	Multifamily Housing (Mid-Rise)	283 Dwelling Units	27	75	102	76	49	125
565	Day Care Center	2,200 S.F.	12	12	24	11	13	24
710	General Office Building	3,000 S.F.	3	0	3	0	3	3
932	High-Turnover (Sit-Down) Restaurant	15,000 S.F.	82	67	149	91	56	147
<b>Total Trips</b>			<b>124</b>	<b>154</b>	<b>278</b>	<b>178</b>	<b>121</b>	<b>299</b>
Internal Site Capture			-38	-36	-74	-42	-44	-86
Mode Split Reduction – 7% Non-Auto			-9	-10	-19	-12	-9	-21
<b>Total External Vehicle Trips</b>			<b>77</b>	<b>108</b>	<b>185</b>	<b>124</b>	<b>68</b>	<b>192</b>

## PARCEL 2 AND PARCEL 6B

The average rate for the Public Park LUC was used to calculate the expected trip generation of the parcel. The Recreational Center LUC used a reduced peak hour trip generation rate, as stated previously in this report. **Table 17** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 2 and Parcel 6B of the Comprehensive Plan.

*Table 17 – Comprehensive Plan: Parcel 2 and Parcel 6B Trip Generation*

Land Use Code and Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
411	Public Park	19.504 Acres	0	0	0	13	11	24
495	Recreational Community Center	120,000 S.F.	70	35	105	64	74	138
<b>Total Trips</b>			<b>70</b>	<b>35</b>	<b>105</b>	<b>77</b>	<b>85</b>	<b>162</b>
Internal Site Capture			0	0	0	-6	-13	-19
Mode Split Reduction – 7% Non-Auto			-5	-2	-7	-5	-6	-11
<b>Total External Vehicle Trips</b>			<b>65</b>	<b>33</b>	<b>98</b>	<b>66</b>	<b>66</b>	<b>132</b>

The trip generation of the public park represents a typical weekday. The park could draw additional regional trips on weekends, but this scenario is not included as part of the traffic analysis since it would have lower traffic volumes than the weekday AM and PM peak hours. The park could also potentially host events, which would attract regional trips. This scenario is addressed in the Event Transportation Management Plan section of this report.

## PARCEL 3, PARCEL 4, AND PARCEL 5

The average rate for each ITE LUC was used to calculate the expected trip generation of the parcels. **Table 18** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 3, Parcel 4, and Parcel 5 of the Comprehensive Plan.

*Table 18 – Comprehensive Plan: Parcel 3, Parcel 4, and Parcel 5 Trip Generation*

Land Use Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
110	General Light Industrial	406,000 S.F.	250	34	284	33	223	256
710	General Office Building	44,000 S.F.	44	7	51	8	43	51
820	Shopping Center	4,300 S.F.	2	2	4	8	8	16
<b>Total Trips</b>			<b>296</b>	<b>43</b>	<b>339</b>	<b>49</b>	<b>274</b>	<b>323</b>
Internal Site Capture			-24	-17	-41	-11	-13	-24
Mode Split Reduction – 7% Non-Auto			-21	-3	-24	-3	-20	-23
<b>Total External Vehicle Trips</b>			<b>251</b>	<b>23</b>	<b>274</b>	<b>35</b>	<b>241</b>	<b>276</b>

## PARCEL 6A, PARCEL 7A, AND PARCEL 7B

The average rates for the Multifamily Housing, Clinic, Office, and Retail ITE LUC were used to calculate the expected trip generation of the parcels. The Recreational Center LUC used a reduced peak hour trip generation rate, as stated previously in this report. **Table 19** provides a summary of the number of trips anticipated to be generated during the weekday AM and PM peak hours for Parcel 6A, Parcel 7A, and Parcel 7B of the Comprehensive Plan.



Table 19 – Comprehensive Plan: Parcel 6A, Parcel 7A, and Parcel 7B Trip Generation

Land Use Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
221	Multifamily Housing (Mid-Rise)	607 Dwelling Units	56	162	218	163	104	267
495	Recreational Community Center	12,000 S.F.	7	4	11	7	7	14
630	Clinic	4,700 S.F.	13	4	17	4	11	15
710	General Office Building	45,000 S.F.	45	8	53	9	43	52
820	Shopping Center	22,000 S.F.	14	7	21	40	44	84
<b>Total Trips</b>			<b>135</b>	<b>185</b>	<b>320</b>	<b>223</b>	<b>209</b>	<b>432</b>
Internal Site Capture			-15	-24	-39	-54	-43	-97
Mode Split Reduction – 7% Non-Auto			-9	-13	-22	-16	-14	-30
<b>Total External Vehicle Trips</b>			<b>111</b>	<b>148</b>	<b>259</b>	<b>153</b>	<b>152</b>	<b>305</b>

## COMPREHENSIVE PLAN TOTAL SITE TRIP GENERATION

In addition to determining the trip generation for each parcel group, the overall site trip generation potential was also calculated. **Table 20** provides a summary of the number of trips anticipated to be generated for all parcels and land uses during the weekday AM and PM peak hours for the Comprehensive Plan.

Table 20 – Comprehensive Plan: Total Site Trip Generation

Land Use Description		Intensity	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
110	General Light Industrial	406,000 S.F.	250	34	284	33	223	256
221	Multifamily Housing (Mid-Rise)	890 Dwelling Units	83	237	320	239	153	392
411	Public Park	19.504 Acres	0	0	0	13	11	24
495	Recreational Community	132,000 S.F.	77	39	116	71	81	152
565	Day Care Center	2,200 S.F.	12	12	24	11	13	24
630	Clinic	4,700 S.F.	13	4	17	4	11	15
710	General Office Building	92,000 S.F.	92	15	107	17	89	106
820	Shopping Center	26,300 S.F.	16	9	25	48	52	100
932	High-Turnover (Sit-Down) Restaurant	15,000 S.F.	82	67	149	91	56	147
<b>Total Site Trips</b>			<b>625</b>	<b>417</b>	<b>1,042</b>	<b>527</b>	<b>689</b>	<b>1,216</b>
Internal Site Capture			-77	-77	-154	-113	-113	-226
Mode Split Reduction – 7% Non-Auto			-44	-28	-72	-36	-49	-85
<b>Total External Vehicle Trips</b>			<b>504</b>	<b>312</b>	<b>816</b>	<b>378</b>	<b>527</b>	<b>905</b>

## SITE TRIP DISTRIBUTION AND ASSIGNMENT

The site trips for each parcel group were distributed to the adjacent roadways based on the current traffic patterns in the area and the major regional roadway network surrounding the study area. A separate distribution was determined for each parcel group and was used for both the Coordinated Plan and Comprehensive Plan.

Note that the site access locations shown in Figures 6-9 were assumed for the purposes of the traffic analysis. The final access locations and configurations will be determined through the City of Minneapolis site plan review process.

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## PARCEL 1A AND PARCEL 1B

Parcel 1A and Parcel 1B are located in the northeast quadrant of the proposed site along the Mississippi River. Access to the parcels would be provided on Parkway Drive. The following trip distribution was assumed for the parcel group:

- 25% to/from the north on I-94
- 20% to/from the north on Washington Avenue
- 20% to/from the south on Washington Avenue and 2nd Street
- 25% from the south on I-94
- 10% to/from the west on Dowling Avenue

The trip distribution for Parcel 1A and Parcel 1B is shown in **Figure 6**.

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## PARCEL 2 AND PARCEL 6B

Parcel 2 and Parcel 6B are generally located in the central and eastern portions of the site. The two parcels are divided by Parkway Drive. Access would be provided to Parcel 2 on Parkway Drive, and access to Parcel 6B would be provided on Washington Avenue N. For typical weekdays with no event, these parcels were assumed to attract local neighborhood traffic rather than regional traffic, and therefore it was assumed that no trips access the site to/from I-94. The park could draw additional regional trips on weekends, but this scenario is not included as part of the traffic analysis since it would have lower traffic volumes than the weekday AM and PM peak hours. The park could also potentially host events, which would attract regional trips. This scenario is addressed in the Event Transportation Management Plan section of this report.

The following trip distribution was assumed for the parcel group:

- 30% to/from the north on Washington Avenue
- 50% to/from the south on Washington Avenue and 2<sup>nd</sup> Street
- 20% to/from the west on Dowling Avenue

The trip distribution for Parcel 2 and Parcel 6b is shown in **Figure 7**.

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## PARCEL 3, PARCEL 4, AND PARCEL 5

Parcel 3, Parcel 4, and Parcel 5 are located in the southeast quadrant of the site along the Mississippi River. Access is planned to be provided to all parcels on Parkway Drive, and a private road would provide additional access to Parcel 4 and Parcel 5. The following trip distribution was assumed for the parcel group:

- 25% to/from the north on I-94
- 10% to/from the north on Washington Avenue
- 30% to/from the south on Washington Avenue and 2<sup>nd</sup> Street
- 25% from the south on I-94
- 10% to/from the west on Dowling Avenue

The trip distribution for Parcel 3, Parcel 4, and Parcel 5 is shown in **Figure 8**.

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## PARCEL 6A, PARCEL 7A AND PARCEL 7B

Parcel 6A, Parcel 7A, and Parcel 7B are generally located in the central and western portions of the site. Access to all parcels is planned to be provided along Washington Avenue. The following trip distribution was assumed for the parcel group:

- 25% to/from the north on I-94
- 10% to/from the north on Washington Avenue N
- 30% to/from the south on Washington Avenue N and 2<sup>nd</sup> Street N
- 25% from the south on I-94
- 10% to/from the west on Dowling Avenue N

The trip distribution for Parcel 6A, Parcel 7A, and Parcel 7B is shown in **Figure 9**.

## TOTAL SITE TRIP DISTRIBUTION

The total external vehicle trips calculated from the site trip generation were assigned to the network based on the trip distributions developed for each parcel group. The total site trip assignment for the Coordinated Plan is shown in **Figure 10** and the Comprehensive Plan total site trip assignment is shown in **Figure 11**.

## OPENING YEAR BUILD CAPACITY ANALYSIS

### OPENING YEAR COORDINATED PLAN BUILD

Opening Year Coordinated Plan Build (2024) conditions were analyzed to determine the traffic impacts from the addition of the site traffic. Opening Year Coordinated Plan Build (2024) turning movement volumes were developed by adding the Coordinated Plan site trips to the Opening Year No-Build (2024) turning movement volumes in **Figure 4**. The Opening Year Coordinated Plan Build (2024) turning movement volumes are shown in **Figure 12**. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions, however, the splits were optimized. As part of the development, the Dowling Avenue & Washington Avenue intersection was assumed to be realigned to allow the signal to operate with east/west concurrent phasing, rather than split phasing as in the Existing and No Build conditions. The results of the analysis are provided in **Table 21** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Opening Year Coordinated Plan Build (2024) capacity analysis for the AM and PM peak hours, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at LOS F in the AM and PM peak hours compared to LOS E in the Opening Year No-Build Conditions. The operations at this intersection were already at capacity in the No-Build conditions and the increase in traffic exacerbated the issues.
- Dowling Avenue & Washington Avenue – The model outputs show the intersection operating at LOS D in the AM and PM peak hours, however some of the approaches operate at LOS F and the overall intersection delay does not fully represent the delay of vehicles that queue beyond adjacent upstream intersections and access points. The Dowling Avenue & Washington Avenue intersection had insufficient capacity to accommodate the Opening Year Coordinated Plan Build Condition traffic in the PM peak hour.

Table 21 – Opening Year Coordinated Plan Build (2024) Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	91.9	F	89.0	F
Dowling Avenue & East I-94 Ramps	Signalized	30.1	C	50.6	D
Dowling Avenue & West I-94 Ramps	Signalized	34.0	C	45.2	D
Dowling Avenue & Washington Avenue	Signalized	37.9	D	40.4	D
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	1.2	A	7.4	A
Washington Avenue & 33rd Avenue	Side Street Stop	1.0	A	1.6	A
2nd Street & 33rd Avenue	Side Street Stop	2.3	A	2.6	A
Lowry Avenue & Washington Avenue	Signalized	18.0	B	32.3	C
Lowry Avenue & 2nd Street	Signalized	21.4	C	33.3	C
Parkway Drive & Dowling Avenue	Side Street Stop	3.4	A	3.5	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.1	A	1.2	A
Parkway Drive & Parcel 1a Access	Side Street Stop	2.0	A	1.9	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.6	A	1.8	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.3	A	0.3	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.2	A	0.6	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.4	A	1.6	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.4	A	1.2	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	2.9	A	28.1	D
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	1.1	A	12.8	B

The average and 95th percentile queues are summarized in **Table 22**. In the Opening Year Coordinated Plan Build Conditions, the average and 95<sup>th</sup> percentile queues of multiple movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The queuing issues involve multiple movements not identified in the Opening Year No-Build Conditions and the average queue lengths for several movements exceed the available storage, indicating that the queues would be expected to exceed the storage for most or all of the peak hour.

Table 22 – Opening Year Coordinated Plan Build (2024) Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	62	153	128	302
		TH/RT	570	175	306	412	650
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	284	475	364	670
		TH/RT	1,355	137	329	288	610
	Eastbound	TH	570	154	417	203	497
		LT	150	39	88	114	237
	Westbound	TH	400	43	122	210	429
		LT/TH	1,750	143	286	320	578
Dowling Avenue & West I-94 Ramps	Northbound	RT	540	169	451	253	587
		LT	165	145	293	178	338
	Eastbound	TH	410	206	471	266	553
		TH/RT	185	74	176	135	250
	Westbound	LT	120	97	183	134	174
		TH/RT	185	216	294	228	287
Dowling Avenue & Washington Avenue	Eastbound	LT/TH	215	117	187	165	242
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	124	202	131	224
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	124	202	131	224

## OPENING YEAR COMPREHENSIVE PLAN BUILD

Opening Year Comprehensive Plan Build (2024) conditions were analyzed to determine the traffic impacts from the addition of the site traffic. Opening Year Comprehensive Plan Build (2024) turning movement volumes were developed by adding the Comprehensive Plan site trips to the Opening Year No-Build (2024) turning movement volumes in **Figure 4**. The Opening Year Comprehensive Plan Build (2024) turning movement volumes are shown in **Figure 13**. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions (2020), however, the splits were optimized. As part of the development, the Dowling Avenue & Washington Avenue intersection was assumed to be realigned to allow the signal to operate with east/west concurrent phasing, rather than split phasing as in the Existing and No Build conditions. The results of the analysis are provided in **Table 23** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Opening Year Comprehensive Plan Build (2024) capacity analysis for the AM and PM peak hours, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at LOS F in the AM and PM peak hours compared to LOS E in the Opening Year No-Build Conditions. The operations at this intersection were already at capacity and the increase in traffic exacerbated the issues.
- Dowling Avenue & East I-94 Ramps – Anticipated to operate at LOS E in the AM peak compared to LOS B in the Opening Year No-Build Conditions. The change in LOS is due to the southbound left turn movement not having adequate space to turn onto Dowling Avenue due to eastbound spillback on Dowling Avenue from the Washington Ave intersection.



- Dowling Avenue & Washington Avenue – The model outputs show the intersection operating at LOS D in the AM and PM peak hours, however some of the approaches operate at LOS F and the overall intersection delay does not fully represent the delay of vehicles that queue beyond adjacent upstream intersections and access points. The Dowling Avenue & Washington Avenue intersection had insufficient capacity to accommodate the Opening Year Comprehensive Plan Build Condition traffic in the PM peak hour.
- Washington Avenue & Parcel 7a/6a Access – The intersection operated at LOS F in the PM peak hour as a result of northbound queues on Washington Avenue from the Dowling Avenue intersection.
- Washington Avenue & Parcel 7b/6b Access – The intersection operated at LOS E in the PM peak hour as a result of northbound queues on Washington Avenue from the Dowling Avenue intersection.

Table 23 – Opening Year Comprehensive Plan Build (2024) Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	100+	F	83.9	F
Dowling Avenue & East I-94 Ramps	Signalized	76.9	E	45.6	D
Dowling Avenue & West I-94 Ramps	Signalized	43.0	D	32.5	C
Dowling Avenue & Washington Avenue	Signalized	48.8	D	43.8	D
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	5.0	A	21.7	C
Washington Avenue & 33rd Avenue	Side Street Stop	1.1	A	1.9	A
2nd Street & 33rd Avenue	Side Street Stop	2.7	A	3.3	A
Lowry Avenue & Washington Avenue	Signalized	18.9	B	51.1	D
Lowry Avenue & 2nd Street	Signalized	21.7	C	40.5	D
Parkway Drive & Dowling Avenue	Side Street Stop	3.8	A	3.8	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.4	A	1.6	A
Parkway Drive & Parcel 1a Access	Side Street Stop	2.0	A	1.9	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.7	A	1.8	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.4	A	0.5	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.5	A	0.5	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.8	A	1.6	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.8	A	2.2	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	33.0	D	51.0	F
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	16.2	C	43.9	E

The average and 95th percentile queues are summarized in **Table 24**. In the Opening Year Comprehensive Plan Build Conditions, the average and 95<sup>th</sup> percentile queues of multiple movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The queuing issues involve multiple movements not identified in the Opening Year No-Build Conditions and the average queue lengths for several movements exceed the available storage, indicating that the queues would be expected to exceed the storage for most or all of the peak hour. The queues on the East I-94 exit ramp are expected to extend to mainline I-94 during the AM and PM peak hours.

Table 24 – Opening Year Comprehensive Plan Build (2024) Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	51	130	106	270
		TH/RT	570	179	319	360	594
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	626	1,357	662	1,335
		TH/RT	1,355	363	1,166	533	1,249
	Eastbound	TH	570	325	684	265	611
		LT	150	62	130	122	243
	Westbound	TH	400	85	196	193	386
		LT/TH	1,750	150	275	266	454
Dowling Avenue & West I-94 Ramps	Northbound	RT	540	157	336	317	720
		LT	165	227	364	178	346
	Eastbound	TH	410	368	567	326	587
		TH/RT	185	56	154	139	263
	Westbound	LT	120	94	192	132	180
		TH/RT	185	236	263	228	276
Dowling Avenue & Washington Avenue	Eastbound	LT/TH	215	110	178	169	244
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	134	219	150	256
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	134	219	150	256

## HORIZON YEAR BUILD

Due to the traffic operations issues identified in the Opening Year Build scenarios, the Horizon Year Build scenarios without mitigation were not analyzed. These scenarios would be expected to demonstrate increasingly poor traffic operations as background traffic grows. Therefore, the Horizon Year Build scenarios were only analyzed with mitigation, as documented in the next section.

## MITIGATION PLAN

The analysis of the Opening Year Build conditions demonstrated that the existing transportation network would be expected to have operational issues as a result of the development vehicle traffic. The City of Minneapolis' policy guidance provides direction on the type and scope of mitigation measures that should be considered for this development. The city's draft Transportation Action Plan (TAP) identifies a mode shift goal of 3 of every 5 trips being made by walking, biking, or transit by 2030. Both the TAP and the Vision Zero Action Plan promote narrower roadways that prioritize pedestrian and bicycle access, comfort and safety.

As a result, the Mitigation Plan for this development seeks to balance the need for vehicle mobility with the city's desire to expand non-motorized transportation. The mitigation measures identified in this plan address key issues such as queuing onto mainline I-94 without overbuilding the roadway capacity, which would serve to encourage growth in vehicle traffic as well as facilitating higher vehicle speeds.

The Mitigation Plan for vehicle traffic is identified in two phases that implement traffic improvements only as they are needed based on development intensity and vehicle traffic levels.

- Phase A – Development intensity generates less than 6,000 trips per day and forecast daily vehicle volumes on Dowling Avenue at Washington Avenue (with development traffic) are less than 15,000 vehicles per day. This mitigation is expected to be applicable to both development scenarios:
  - Coordinated Plan Phase 1 and Phase 2 Development
  - Comprehensive Plan Phase 1 Development
- Phase B – Development intensity generates 6,000 trips per day or more and forecast daily vehicle volumes on Dowling Avenue at Washington Avenue (with development traffic) are 15,000 vehicles per day or more. This mitigation is expected to be applicable only to the Comprehensive Plan development.
  - Comprehensive Plan Phase 2 Development

## PHASE A MITIGATION PLAN

The Phase A Mitigation Plan consists of measures to reduce vehicle traffic demand of the development as well as to manage vehicle traffic operations.

1. Develop robust travel demand management plans (TDMP) with each phase or sub-phase of the development. The TDMPs should be completed in parallel with the city's site plan review process and should detail comprehensive strategies to encourage the use of alternative modes of travel, enhance the pedestrian environment, reduce parking demand, and create a balance between all users of the local transportation system.
2. Work with Metro Transit to bring convenient and frequent transit service closer to the site. This is consistent with the city's modal transportation goals and will reduce the reliance on motor vehicles.
3. Develop a comprehensive event transportation management plan (TMP) for the music venue and the park. The parameters for the event TMP are detailed in a later section of this report.
4. Improve the bikeway on Dowling Avenue from on-street bicycle lanes to a protected bikeway to make bicycling a safer and more comfortable option for users of all ages and abilities.
5. Construct a westbound right-turn lane at the Dowling Avenue & West I-94 Ramps intersection. The

turn lane should extend the full distance between the West I-94 Ramps and Washington Avenue due to the short distance between these intersections. There is no existing turn lane, and the recommended turn lane length is 190 feet.

6. Extend the eastbound left-turn lane at the Dowling Avenue & Washington Avenue intersection to the full distance between Washington Avenue and the West I-94 Ramps due to the short distance between these intersections. The existing left-turn lane is approximately 90 feet long and the recommended turn lane length is 190 feet.
7. Construct a northbound left-turn lane at the Dowling Avenue & Washington Avenue intersection. There is no existing turn lane, and the recommended turn lane length is 300 feet based on the existing and projected left-turn volumes.
8. Install protected/permissive left-turn signal phasing for all left-turn movements at the Dowling Avenue & Washington Avenue intersection.
9. Install protected/permissive left-turn phasing for the eastbound left-turn movement at the Lowry Avenue & Washington Avenue intersection. The left-turn phase should operate as a leading phase only because a left-turn lane is not proposed to be constructed.
10. Install protected/permissive left-turn phasing for the eastbound left-turn movement at the Lowry Avenue & 2<sup>nd</sup> Street intersection. The left-turn phase should operate as a leading phase only because a left-turn lane is not proposed to be constructed.

Roundabouts were considered for the intersections on Dowling Avenue but were not included in the mitigation plan based on the following:

- Roundabouts sized to accommodate the projected traffic volumes could encompass a large land expanse, impacting developable area.
- The City of Minneapolis has concerns with the priority of pedestrians and bicycles at a roundabout.
- A roundabout or system of roundabouts could conflict with the pedestrian- and neighborhood-focused environment the City endeavors to create in this portion of the City.

The geometric and traffic signal improvements included in the Phase A mitigation plan are shown in **Figure 14**. The traffic analysis results of the Opening Year Coordinated Plan Build, Opening Year Comprehensive Plan Build, and Horizon Year Coordinated Plan Build with the Phase A mitigations are detailed in the following sections.

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## OPENING YEAR COORDINATED PLAN BUILD WITH PHASE A MITIGATION

Opening Year Coordinated Plan Build (2024) with Phase A Mitigation conditions were analyzed to determine the traffic impacts from the addition of the Coordinated Plan site traffic with the Phase A mitigation measures. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions (2020), however, the splits were optimized. The signal timing on Dowling Avenue was set to favor the traffic on the I-94 ramps and avoid queues onto mainline I-94. The results of the analysis are provided in **Table 25** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Opening Year Coordinated Plan Build (2024) with Phase A Mitigation capacity analysis for the AM and PM peak hours, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at LOS E in the AM peak, which is the same as the Opening Year No Build Conditions, and LOS F in the PM peak which is worse than LOS E reported for the Opening Year No Build Conditions. The operations at this intersection improve slightly with mitigation due to the reduced queuing on Dowling Avenue.

Table 25 – Opening Year Coordinated Plan Build (2024) with Phase A Mitigation Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	62.4	E	80.2	F
Dowling Avenue & East I-94 Ramps	Signalized	22.7	C	41.2	D
Dowling Avenue & West I-94 Ramps	Signalized	23.2	C	51.6	D
Dowling Avenue & Washington Avenue	Signalized	23.5	C	29.8	C
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	1.1	A	2.4	A
Washington Avenue & 33rd Avenue	Side Street Stop	1.1	A	1.6	A
2nd Street & 33rd Avenue	Side Street Stop	2.3	A	2.5	A
Lowry Avenue & Washington Avenue	Signalized	18.0	B	37.2	D
Lowry Avenue & 2nd Street	Signalized	20.2	C	30.1	C
Parkway Drive & Dowling Avenue	Side Street Stop	3.1	A	3.4	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.2	A	1.3	A
Parkway Drive & Parcel 1a Access	Side Street Stop	1.9	A	1.9	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.6	A	1.7	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.3	A	0.3	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.2	A	0.6	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.4	A	1.5	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.4	A	1.7	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	1.4	A	2.7	A
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	0.9	A	1.7	A

The average and 95th percentile queues are summarized in **Table 26**. In the Opening Year Coordinated Plan Build Conditions with Phase A Mitigation, the 95th percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The 95th percentile queues that exceed the storage are generally the same as the Opening Year Coordinated Plan Build Conditions without mitigation in the PM peak hour. However, there are fewer 95th percentile queue issues in the AM peak hour, and none of the average queues exceed the available storage distance. The average queues being less than the available storage distance and significantly less than the 95th percentile queues, which indicates that the 95th percentile queue lengths would be expected to occur only a few times in the peak hour. The queues on the I-94 ramps are not expected to reach mainline I-94. The geometric improvements significantly reduced the northbound queuing on Washington Avenue at Dowling Avenue and queues no longer blocked the site accesses for parcels 6 and 7.

The City of Minneapolis prioritizes non-auto movements and safety. The intersections continue to function for vehicle traffic with the queues identified during peak hours, therefore improvements to increase vehicle capacity and address these queues are not being considered for the Opening Year Build scenario.



Table 26 – Opening Year Coordinated Plan Build (2024) with Phase A Mitigation Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	58	163	143	318
		TH/RT	570	182	318	466	709
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	238	374	265	483
		TH/RT	1,355	133	289	209	372
	Eastbound	TH	570	95	225	141	341
		LT	150	42	88	117	256
	Westbound	TH	400	32	105	235	500
		LT/TH	1,750	146	264	324	719
Dowling Avenue & West I-94 Ramps	Northbound	RT	540	160	454	324	910
		LT	200	91	191	145	288
	Eastbound	TH	410	91	240	177	448
		TH	160	30	86	100	192
	Westbound	LT	160	57	129	135	210
		TH/RT	160	139	185	128	207
Dowling Avenue & Washington Avenue	Eastbound	LT/TH	215	119	192	164	243
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	113	192	137	236
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	113	192	137	236

## OPENING YEAR COMPREHENSIVE PLAN BUILD WITH PHASE A MITIGATION

Opening Year Comprehensive Plan Build (2024) with Phase A Mitigation conditions were analyzed to determine the traffic impacts from the addition of the Comprehensive Plan site traffic with the Phase A mitigation measures. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions (2020), however, the splits were optimized. The signal timing on Dowling Avenue was set to favor the traffic on the I-94 ramps and avoid queues onto mainline I-94.

The results of the analysis are provided in **Table 27** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Opening Year Comprehensive Plan Build (2024) with Phase A mitigation capacity analysis for the AM peak hour, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at LOS E in the AM peak, which is the same as the Opening Year No Build Conditions, and LOS F in the PM peak which is worse than LOS E reported for the Opening Year No Build Conditions. The operations at this intersection improve slightly with mitigation due to the reduced queuing on Dowling Avenue.

Table 27 – Opening Year Comprehensive Plan Build (2024) with Phase A Mitigation Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	72.6	E	87.2	F
Dowling Avenue & East I-94 Ramps	Signalized	32.4	C	40.5	D
Dowling Avenue & West I-94 Ramps	Signalized	53.0	D	47.5	C
Dowling Avenue & Washington Avenue	Signalized	27.3	C	35.0	C
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	1.4	A	3.6	A
Washington Avenue & 33rd Avenue	Side Street Stop	1.3	A	1.8	A
2nd Street & 33rd Avenue	Side Street Stop	2.9	A	3.1	A
Lowry Avenue & Washington Avenue	Signalized	18.2	B	38.2	D
Lowry Avenue & 2nd Street	Signalized	20.2	C	39.0	D
Parkway Drive & Dowling Avenue	Side Street Stop	3.7	A	3.8	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.5	A	1.6	A
Parkway Drive & Parcel 1a Access	Side Street Stop	2.0	A	1.9	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.7	A	1.8	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.4	A	0.5	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.2	A	0.6	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.7	A	1.8	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.8	A	2.1	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	2.3	A	13.0	B
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	1.7	A	10.4	B

The average and 95th percentile queues are summarized in **Table 28**. In the Opening Year Comprehensive Plan Build Conditions with Phase A Mitigation, the 95<sup>th</sup> percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The 95<sup>th</sup> percentile queues that exceed the storage are generally the same as the Opening Year Comprehensive Plan Build Conditions without mitigation in the PM peak hour. However, only one movement has an average queue that exceeds the available storage distance. The average queues being less than the available storage distance and significantly less than the 95<sup>th</sup> percentile queues indicates that the 95<sup>th</sup> percentile queue lengths would be expected to occur only a few times in the peak hour. The queues on the I-94 ramps are not expected to reach mainline I-94 but the queues in the PM peak hour are expected to reach over 1,000 feet at times. Similar to the Opening Year Coordinated Plan Build with Phase A Mitigation, the geometric improvements significantly reduced the northbound queuing on Washington Avenue at Dowling Avenue. Queues are still anticipated to block the site accesses for parcels 6 and 7 for a brief period during the PM peak hour.

The City of Minneapolis prioritizes non-auto movements and safety. The intersections continue to function for vehicle traffic with the queues identified during peak hours, therefore improvements to increase vehicle capacity and address these queues are not being considered for the Opening Year Build scenario.

Table 28 – Opening Year Comprehensive Build (2024) with Phase A Mitigation Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	61	167	150	328
		TH/RT	570	197	336	504	672
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	351	672	326	715
		TH/RT	1,355	138	307	207	416
	Eastbound	TH	570	167	380	152	387
	Westbound	LT	150	54	112	128	260
		TH	400	39	105	233	473
	Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	171	390	424
RT			540	420	997	370	1,095
Eastbound		LT	200	154	313	144	287
		TH	410	247	494	196	470
Westbound		TH/RT	160	57	139	115	218
Dowling Avenue & Washington Avenue		Eastbound	LT	160	52	115	139
	TH/RT		160	178	194	145	216
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	114	189	172	246
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	113	201	154	251

#### HORIZON YEAR COORDINATED PLAN BUILD WITH PHASE A MITIGATION

Horizon Year Coordinated Plan Build (2040) with Phase A Mitigation conditions were analyzed to determine the traffic impacts from the addition of the Coordinated Plan site traffic with the Phase A mitigation measures. Horizon Year Coordinated Plan Build (2040) turning movement volumes were developed by adding the Coordinated Plan site trips to the Horizon Year No-Build (2040) turning movement volumes in **Figure 5**. The Horizon Year Coordinated Plan Build (2040) turning movement volumes are shown in **Figure 15**. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions (2020), however, the splits were optimized. The results of the analysis are provided in **Table 29** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Opening Year Coordinated Plan Build (2040) with Phase A Mitigation capacity analysis for the AM and PM peak hours, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at LOS E in the AM peak hour, which is the same as the Horizon Year No Build Conditions, and LOS F in the PM peak which is slightly worse than the LOS E reported for the Horizon Year No Build Conditions.

Table 29 – Horizon Year Coordinated Plan Build (2040) with Phase A Mitigation Intersection Analysis

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	68.4	E	77.0	F
Dowling Avenue & East I-94 Ramps	Signalized	23.8	C	34.5	C
Dowling Avenue & West I-94 Ramps	Signalized	30.2	C	52.8	D
Dowling Avenue & Washington Avenue	Signalized	23.9	C	31.2	D
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	1.1	A	2.3	A
Washington Avenue & 33rd Avenue	Side Street Stop	1.1	A	1.6	A
2nd Street & 33rd Avenue	Side Street Stop	2.4	A	2.4	A
Lowry Avenue & Washington Avenue	Signalized	18.0	B	26.7	C
Lowry Avenue & 2nd Street	Signalized	20.5	C	40.0	D
Parkway Drive & Dowling Avenue	Side Street Stop	3.4	A	3.5	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.2	A	1.3	A
Parkway Drive & Parcel 1a Access	Side Street Stop	2.0	A	1.9	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.7	A	1.7	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.3	A	0.3	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.2	A	0.6	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.5	A	1.7	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.4	A	1.8	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	1.5	A	3.5	A
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	1.1	A	1.8	A

The average and 95th percentile queues are summarized in **Table 30**. In the Horizon Year Coordinated Plan Build Conditions with Phase A Mitigation, the 95th percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. The 95th percentile queues that exceed the storage are the same as the Opening Year Coordinated Plan Build Conditions with Phase A Mitigation. The average queues for these movements are all less than the available storage distance and significantly less than the 95th percentile queues, which indicates that the 95th percentile queue lengths would be expected to occur only a few times in the peak hour. Queues along Dowling Avenue will still extend through multiple intersections. Queues along Washington Avenue are expected to stay within their storage capacity with the 95th percentile queues briefly extending to the Parcel 7a & 6a site access. Queues on the I-94 ramps are anticipated to stay within the ramp capacity and not extend onto mainline I-94.

The City of Minneapolis prioritizes non-auto movements and safety. The intersections continue to function for vehicle traffic with the queues identified during peak hours. However, if traffic volumes exceed 15,000 vehicles per day on Dowling Avenue at Washington Avenue or the traffic congestion causes broader operational or safety issues, then the City may consider the Phase B mitigation measures.

Table 30 – Horizon Year Coordinated Plan Build (2040) with Phase A Mitigation Queue Summary

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	80	208	139	313
		TH/RT	570	209	357	463	683
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	251	422	279	584
		TH/RT	1,355	145	312	205	364
	Eastbound	TH	570	118	246	113	258
	Westbound	LT	150	46	92	106	243
		TH	400	41	111	202	464
	Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	173	382	357
RT			540	244	724	412	1,109
Eastbound		LT	200	101	198	148	298
		TH	410	108	265	180	448
Westbound		TH	160	33	90	86	186
Dowling Avenue & Washington Avenue		Eastbound	LT	160	58	129	140
	TH/RT		160	144	186	128	211
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	113	182	103	167
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	109	190	87	154

## PHASE B MITIGATION PLAN

The operations of the Horizon Year Comprehensive Plan Build conditions with Phase A mitigation showed significant remaining operational issues and queues that would extend the length of Dowling Avenue and the I-94 Ramps. If development intensity and traffic volumes reach these levels, additional measures would be needed to mitigate the impacts of the development vehicle traffic. Along with the implementation of the mitigation measures identified in Phase A, the following additional mitigation measures are identified for Phase B:

1. Extend the eastbound left-turn lane at the Dowling Avenue & West I-94 Ramps intersection to the full distance between the West I-94 Ramps and the East I-94 Ramps. The existing left-turn lane is approximately 145 feet long and the recommended turn lane length is 380 feet.
2. Extend the westbound left-turn lane at the Dowling Avenue & East I-94 Ramps intersection to the full distance between the East I-94 Ramps and Washington Avenue. The lane would be designated as an additional westbound through lane at the West I-94 Ramps intersection. The existing left-turn lane is approximately 125 feet long and the recommended turn lane length is 600 feet.
3. Construct an eastbound right-turn lane at the Dowling Avenue & Washington Avenue intersection to the full distance between Washington Avenue and the West I-94 Ramps. There is no existing turn lane and the recommended turn lane length is 190 feet.

The combination of Phase B mitigation measures 1 and 2, in addition to the Phase A mitigation, will require either widening of the Dowling Avenue bridge over I-94 or removal of the bicycle facility on the existing bridge.



The geometric improvements included in the Phase B mitigation plan are shown in **Figure 14**. The traffic analysis results of the Horizon Year Comprehensive Plan Build with the Phase B mitigations are detailed in the following section.

## HORIZON YEAR COMPREHENSIVE PLAN BUILD WITH PHASE B MITIGATION

Horizon Year Comprehensive Plan Build (2040) with Phase B Mitigation conditions were analyzed to determine the traffic impacts from the addition of the site traffic. Horizon Year Comprehensive Plan Build (2040) turning movement volumes were developed by adding the Comprehensive Plan site trips to the Horizon Year No-Build (2040) turning movement volumes in **Figure 5**. The Horizon Year Comprehensive Plan Build (2040) turning movement volumes are shown in **Figure 16**. The signal timing cycle lengths were assumed to remain the same as the Existing Conditions (2020), however, the splits were optimized. The results of the analysis are provided in **Table 31** for the weekday AM and PM peak hours. The movement LOS results at the study intersections are summarized in **Appendix C**.

Based on the Horizon Year Comprehensive Plan Build (2040) with Phase B Mitigation capacity analysis for the AM and PM peak hours, the study intersections are anticipated to operate at LOS D or better except for the following:

- Dowling Avenue & Lyndale Avenue – Anticipated to operate at the LOS E/F threshold in the AM peak hour and LOS F in the PM peak hour, compared with LOS E in the Horizon Year No-Build Conditions.

*Table 31 – Horizon Year Comprehensive Plan Build (2040) with Phase B Mitigation Intersection Analysis*

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
Dowling Avenue & Lyndale Avenue	Signalized	76.0	E	76.5	E
Dowling Avenue & East I-94 Ramps	Signalized	23.0	C	32.6	C
Dowling Avenue & West I-94 Ramps	Signalized	15.0	B	30.3	C
Dowling Avenue & Washington Avenue	Signalized	24.3	C	40.4	D
Washington Avenue & 36th Avenue & 2nd Street	Side Street Stop	1.3	A	3.0	A
Washington Avenue & 33rd Avenue	Side Street Stop	1.2	A	1.8	A
2nd Street & 33rd Avenue	Side Street Stop	3.0	A	3.3	A
Lowry Avenue & Washington Avenue	Signalized	18.2	B	48.3	D
Lowry Avenue & 2nd Street	Signalized	22.6	C	48.8	D
Parkway Drive & Dowling Avenue	Side Street Stop	3.8	A	4.1	A
33rd Avenue/Parkway Drive & Parcel 4 & Parcel 5	Side Street Stop	1.5	A	1.5	A
Parkway Drive & Parcel 1a Access	Side Street Stop	2.1	A	2.0	A
Parkway Drive & Parcel 1b Access	Side Street Stop	1.7	A	1.9	A
Parkway Drive & Parcel 2 Access	Side Street Stop	0.5	A	0.4	A
Parkway Drive & Parcel 3 Access	Side Street Stop	0.6	A	0.8	A
Parkway Drive & Parcel 4 Access	Side Street Stop	0.8	A	1.8	A
Parkway Drive & Parcel 5 Access	Side Street Stop	0.8	A	2.3	A
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	2.2	A	10.2	B
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	1.5	A	7.5	A

The average and 95th percentile queues are summarized in **Table 32**. In the Horizon Year Comprehensive Plan Build Conditions with Phase B Mitigation, the 95<sup>th</sup> percentile queues of several movements on Dowling Avenue and Lowry Avenue exceed the storage distance in the AM and PM peak hours. Fewer movements

have 95<sup>th</sup> percentile queues that exceed their storage compared to the Opening Year Comprehensive Build Conditions with Phase A Mitigation and the queuing is similar to the Horizon Year Coordinated Build Conditions with Phase A Mitigation. The additional mitigation measures for the Comprehensive Plan development in the horizon year does not eliminate all the queuing along Dowling Avenue. However, the additional lanes provide the stacking distance to avoid excessive queuing that would result in gridlocked intersections or impacts to mainline I-94. Queues along Washington Avenue are expected to stay within their storage capacity with the 95<sup>th</sup> percentile queues briefly extending to the Parcel 7a & 6a site access. With the Phase B mitigation, queues on the I-94 ramps are anticipated to stay within the ramp storage distance and not extend onto I-94.

*Table 32 – Horizon Year Comprehensive Build (2040) with Phase B Mitigation Queue Summary*

Intersection	Approach	Movement	Storage Length (feet)	AM Peak Hour		PM Peak Hour	
				Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)	Average Queue (feet)	95 <sup>th</sup> Percentile Queue (feet)
Dowling Avenue & Lyndale Avenue	Westbound	LT	150	65	173	136	307
		TH/RT	570	203	362	414	684
Dowling Avenue & East I-94 Ramps	Southbound	LT	450	280	424	298	585
		TH/RT	1,355	118	238	248	514
	Eastbound	TH	570	128	267	71	237
	Westbound	LT	150	53	107	105	223
		TH	400	52	133	157	354
Dowling Avenue & West I-94 Ramps	Northbound	LT/TH	1,750	156	280	258	459
		RT	540	114	296	207	600
	Eastbound	LT	200	92	172	155	286
		TH	410	52	134	164	406
	Westbound	TH/RT	160	33	92	78	179
		LT	160	77	149	133	211
Dowling Avenue & Washington Avenue	Eastbound	TH/RT	160	111	190	53	121
		LT/TH	215	112	179	89	179
Lowry Avenue & Washington Avenue	Westbound	LT/TH	215	112	179	89	179
Lowry Avenue & 2 <sup>nd</sup> Street	Eastbound	LT/TH	215	110	199	123	224

## EVENT TRANSPORTATION MANAGEMENT PLAN

The development of a comprehensive event transportation management plan (TMP) is an identified mitigation measure for the music venue that is proposed on parcel 3 of the development and the public park that is proposed on parcel 2 of the development. The event TMP needs to define and address the range of events that would be expected to occur at the site, which could include:

- Weekend evening capacity event at music venue or park
- Weekend day capacity event at music venue or park
- Weekend non-capacity event at music venue or park
- Weekend capacity events at both the music venue and the park
- Weekday evening capacity event at music venue or park, which includes overlap and interaction with PM peak traffic

- Weekday non-capacity event at music venue or park, which includes overlap and interaction with PM peak traffic
- Weekday evening capacity events at both the music venue and the park, which includes overlap and interaction with PM peak traffic

The event transportation management plan will address the following transportation topics, at a minimum:

- Estimated trip generation, including automobile vehicle occupancy
- Identified goals for event mode shares
- Site area access and controls including loading and deliveries
- Communications plan to event attendees
- Transit plan including staging areas and bus stops for regular route transit and shuttles
- Parking plan including on-street vehicle parking, on-site vehicle and bicycle parking, neighborhood vehicle parking, and remote vehicle parking
- Traffic management plan including taxi and ride share areas, pick-up and drop-off zones for persons with mobility needs, and management strategies such as street closures, traffic control agents, and traffic signal timing
- Evaluation plan for event operations

## APPENDIX

- A. Figures**
- B. Site Layout and Phasing**
- C. Intersection Delay and LOS**

## APPENDIX A. FIGURES





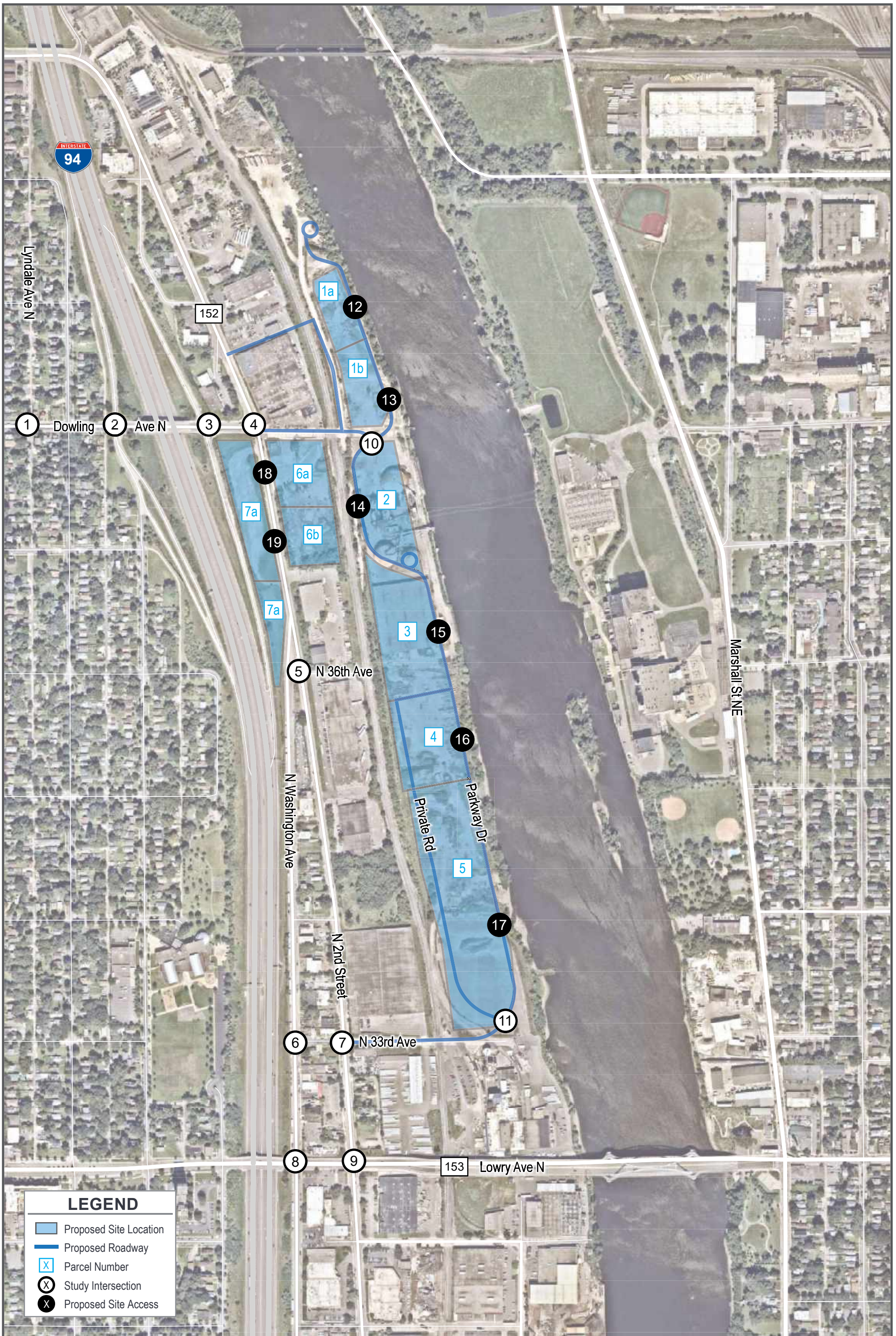


FIGURE 1  
PROJECT SITE LOCATION AND STUDY AREA





**LEGEND**

- Proposed Site Location
- Proposed Roadway
- X Parcel Number
- X Study Intersection
- X Proposed Site Access
- Existing Stop Sign
- ⊕ Existing Traffic Signal
- ▲ Protected Right-Turn

**FIGURE 2**  
**EXISTING GEOMETRY AND INTERSECTION CONTROL**





**FIGURE 3**  
**EXISTING CONDITIONS (2020) PEAK HOUR TRAFFIC VOLUMES**









**FIGURE 5**  
**HORIZON YEAR NO-BUILD CONDITIONS (2040)**  
**PEAK HOUR TRAFFIC VOLUMES**



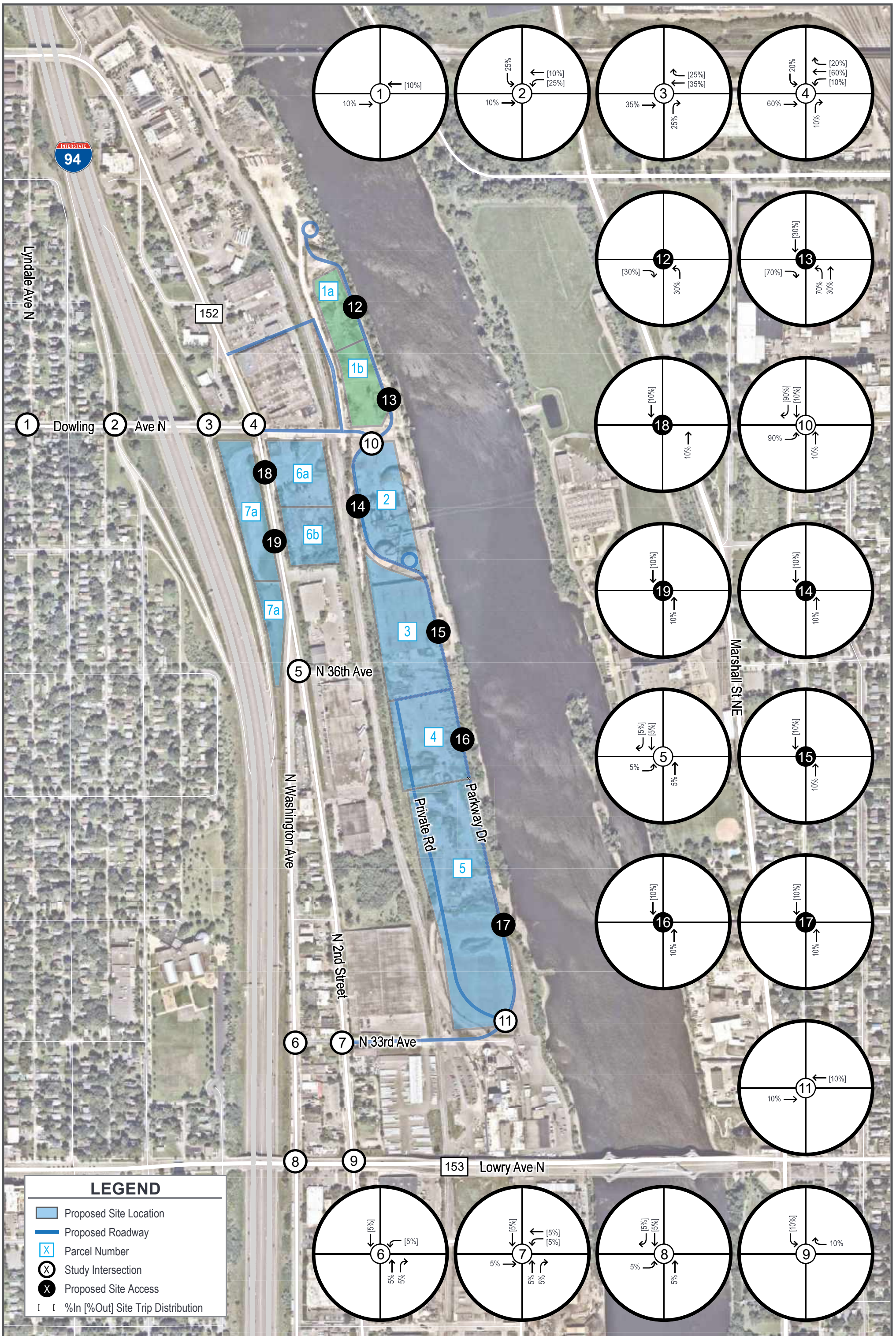
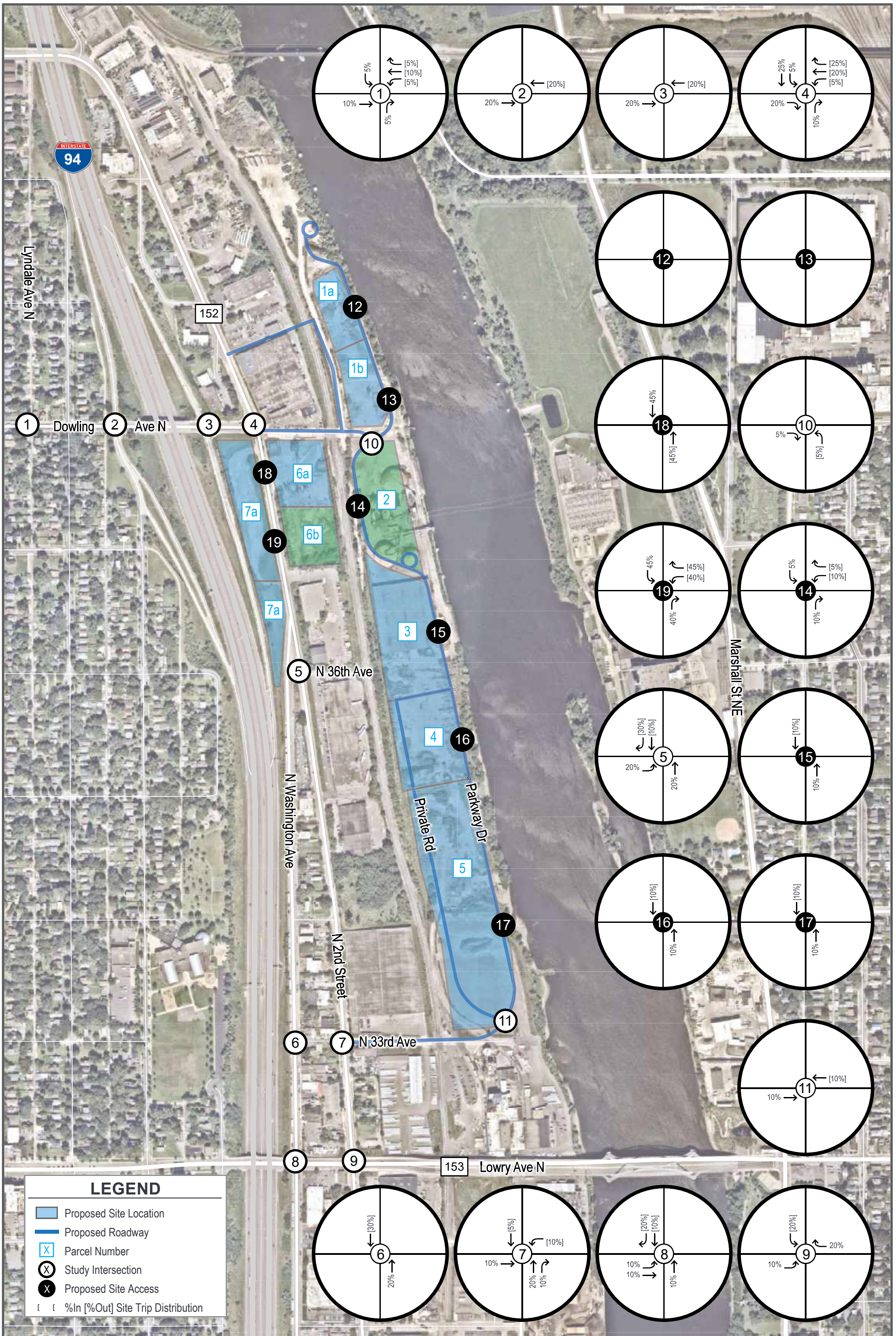
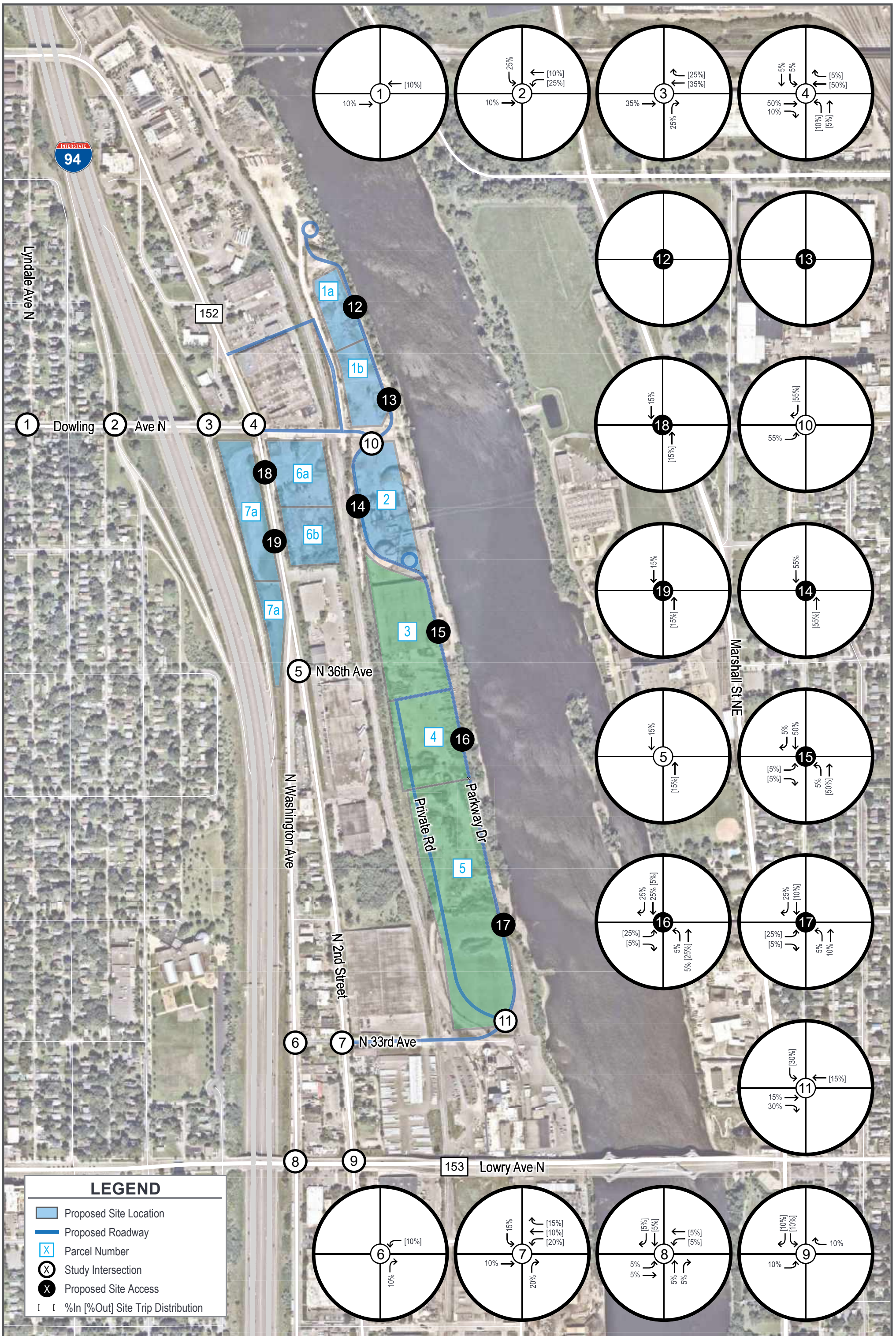


FIGURE 6  
**PARCELS 1A/1B SITE TRIP DISTRIBUTION**



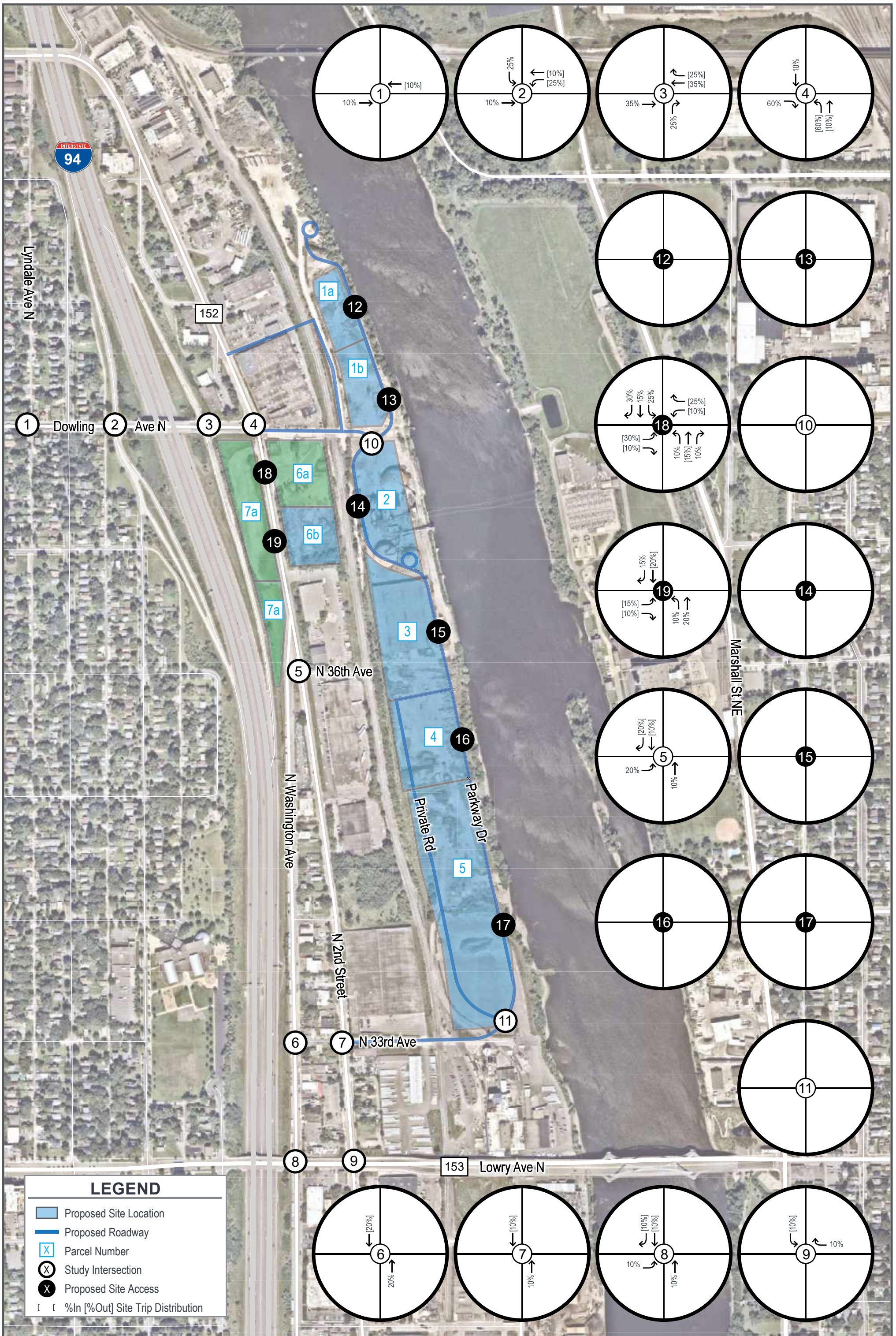






**FIGURE 8  
PARCELS 3/4/5 SITE TRIP DISTRIBUTION**







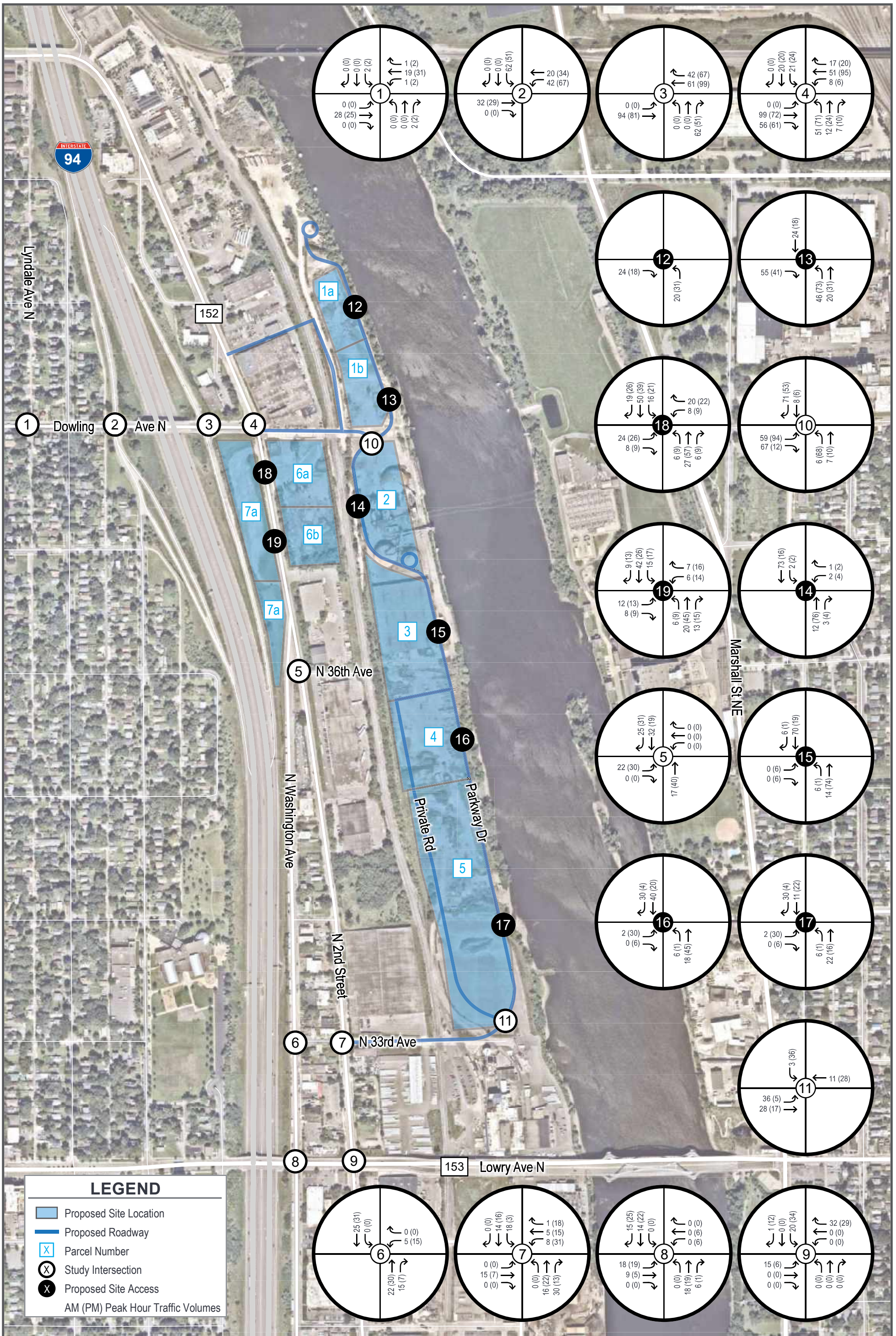


FIGURE 10  
COORDINATED PLAN TOTAL SITE TRIP ASSIGNMENT



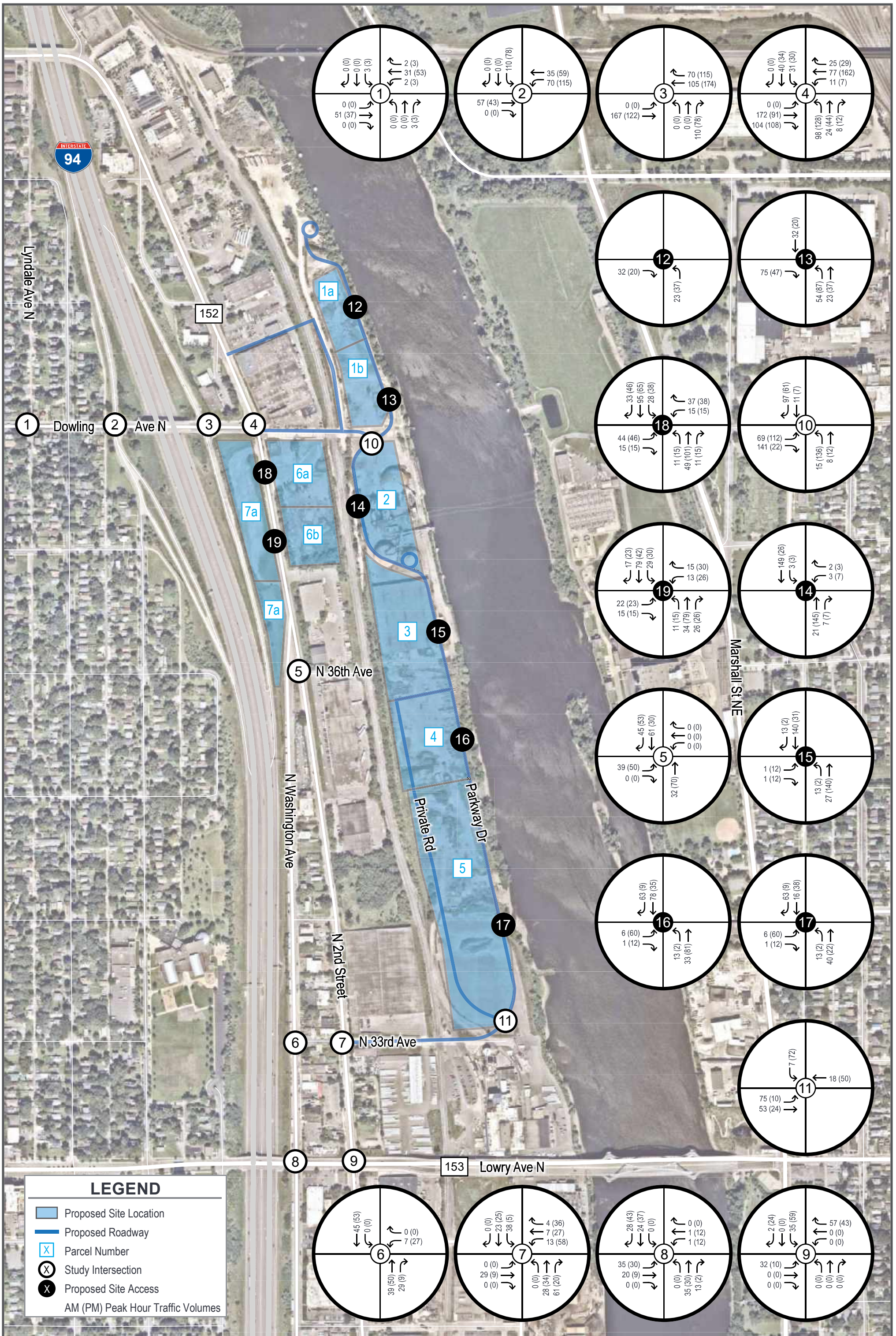
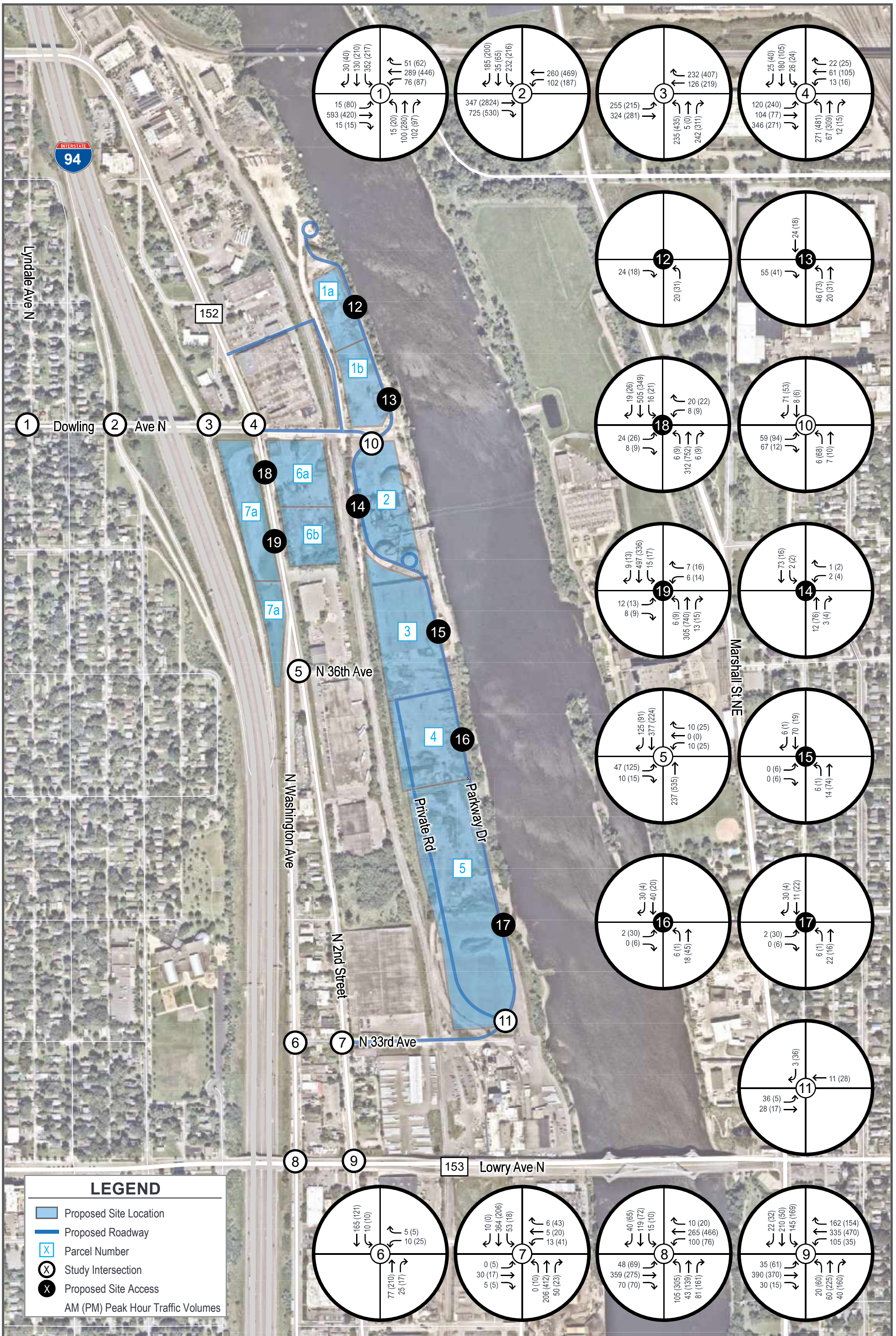


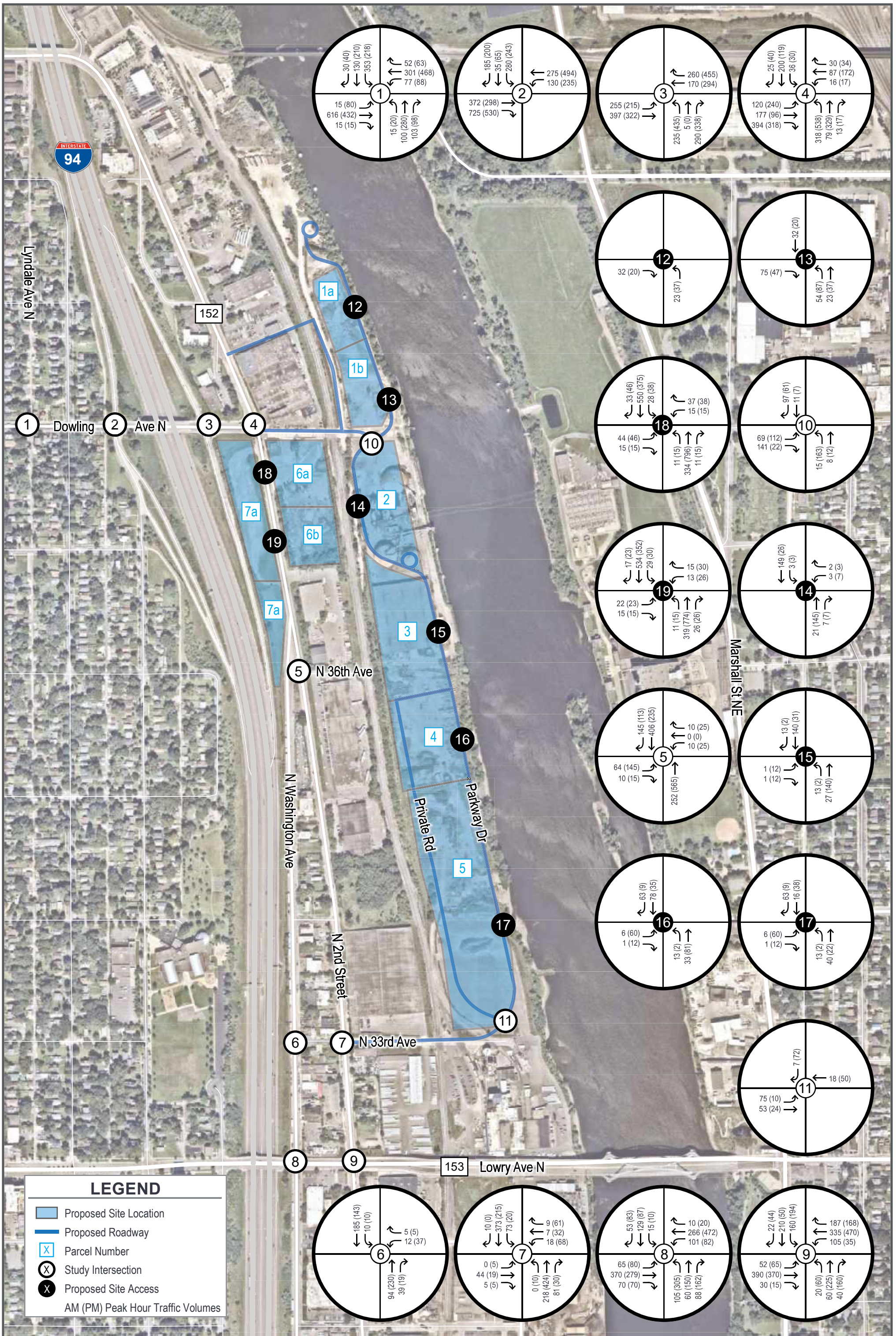
FIGURE 11  
**COMPREHENSIVE PLAN TOTAL SITE TRIP ASSIGNMENT**





**FIGURE 12**  
**COORDINATED PLAN OPENING YEAR CONDITIONS (2024)**  
**PEAK HOUR TRAFFIC VOLUMES**



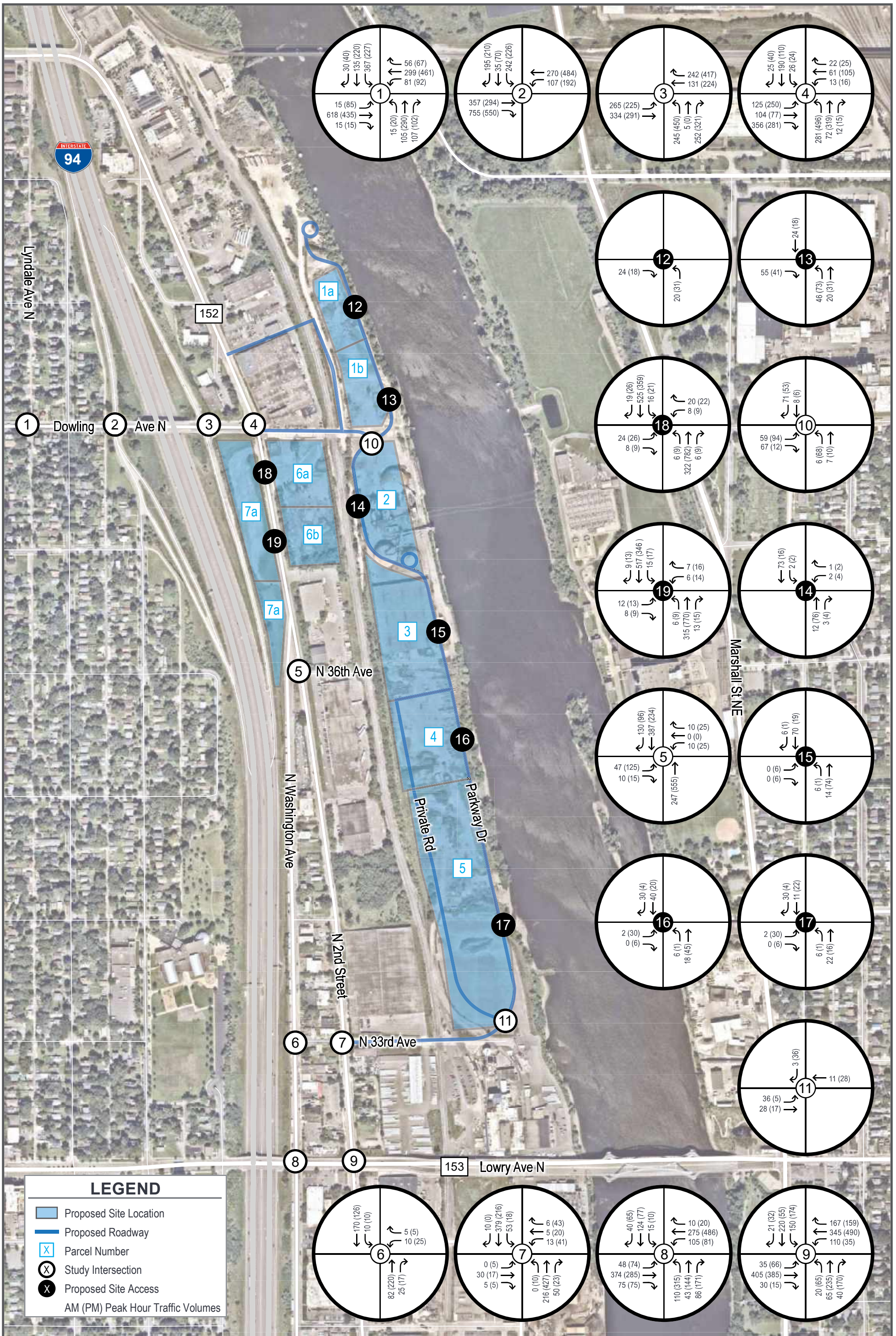


**FIGURE 13**  
**COMPREHENSIVE PLAN OPENING YEAR CONDITIONS (2024)**  
**PEAK HOUR TRAFFIC VOLUMES**



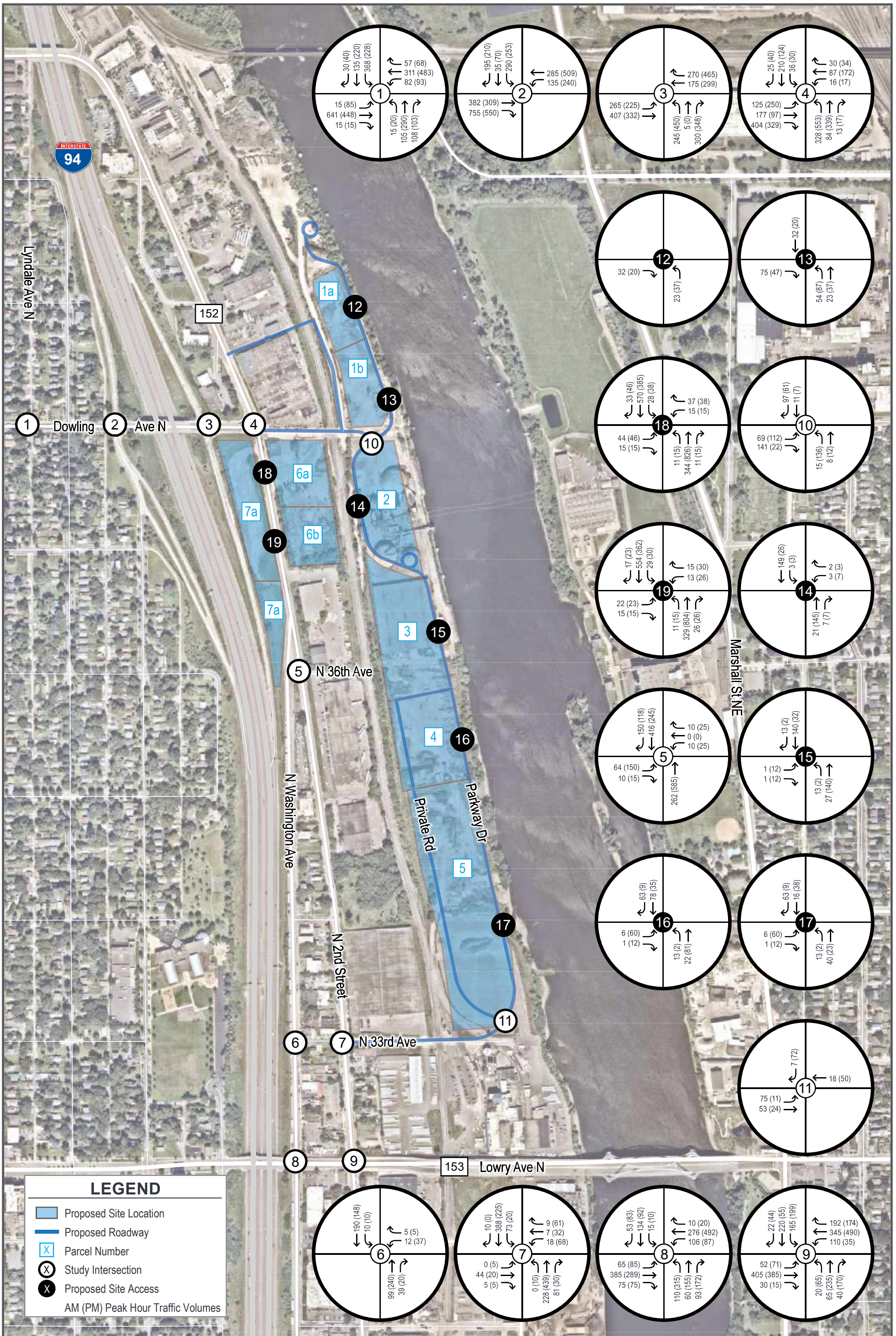






**FIGURE 15**  
**COORDINATED PLAN HORIZON YEAR CONDITIONS (2040)**  
**PEAK HOUR TRAFFIC VOLUMES**





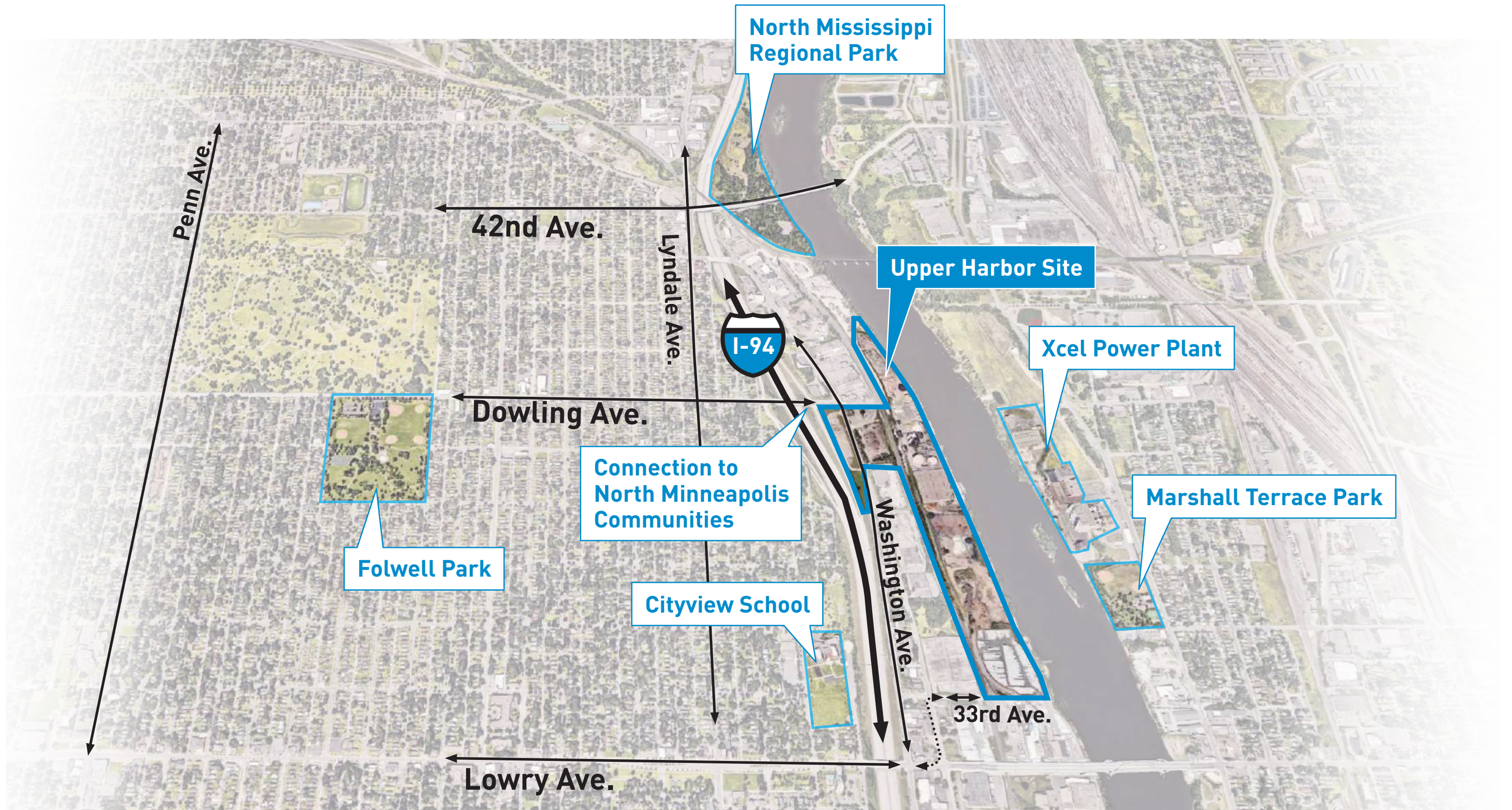
**FIGURE 16**  
**COMPREHENSIVE PLAN HORIZON YEAR CONDITIONS (2040)**  
**PEAK HOUR TRAFFIC VOLUMES**



## APPENDIX B. SITE LAYOUT AND PHASING

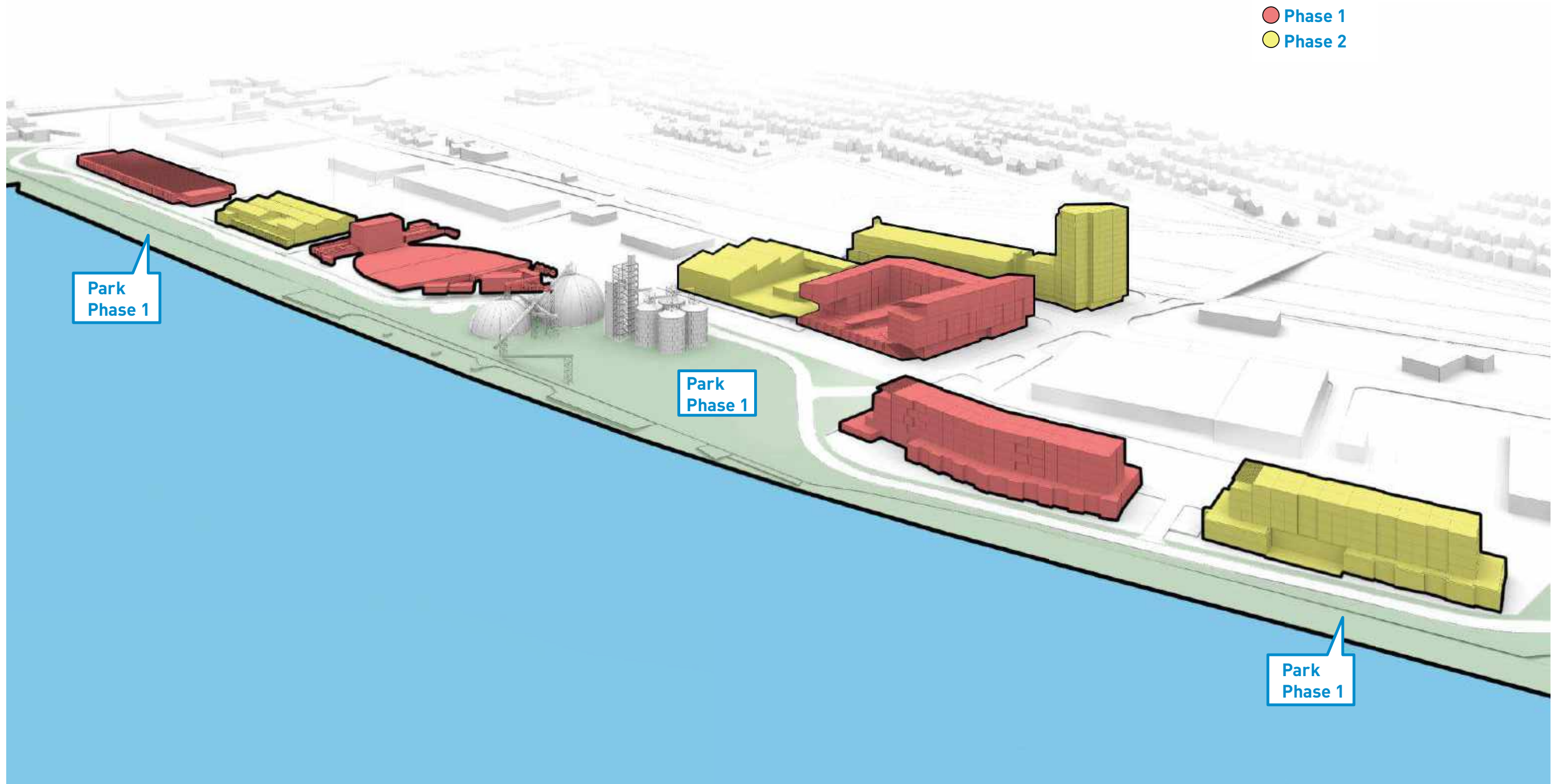






**Location:** Upper Harbor Terminal and Surrounding Neighborhood





**The Coordinated Plan:** Phasing Plan

## APPENDIX C. INTERSECTION DELAY AND LOS



Delay Summary - 2020 Existing AM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	62.4	E	65.3	E	58.2	E	49.6	D
		WB	34.2	C	19.7	B	15.9	B		
		NB	51.2	D	46.2	D	38.6	D		
		SB	60.7	E	47.2	D	53.2	D		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	16.9	B	9.4	A	13.2	B
		WB	6.6	A	3.7	A	-	-		
		NB	-	-	-	-	-	-		
		SB	35.8	D	27.9	C	12.3	B		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	19.7	B	14.3	B	-	-	16.5	B
		WB	-	-	30.3	C	10.3	B		
		NB	26.4	C	24.3	C	3.5	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	45.6	D	23.2	C	17.4	B	29.3	C
		WB	57.7	E	61.2	E	20.1	C		
		NB	47.5	D	21.0	C	27.0	C		
		SB	20.6	C	20.8	C	7.2	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	7.7	A	-	-	3.9	A	0.8	A
		WB	7.4	A	-	-	3.7	A		
		NB	-	-	0.2	A	-	-		
		SB	-	-	0.5	A	0.6	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	0.5	A
		WB	4.1	A	-	-	2.4	A		
		NB	-	-	0.7	A	0.5	A		
		SB	1.7	A	0.1	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	6.3	A	2.8	A	1.1	A
		WB	7.3	A	-	-	2.9	A		
		NB	-	-	1.0	A	0.7	A		
		SB	2.7	A	0.7	A	0.2	A		
Washington Ave & Lowry Ave	Signal	EB	14.2	B	9.3	A	4.6	A	10.8	B
		WB	16.0	B	7.5	A	4.1	A		
		NB	20.9	C	12.3	B	7.4	A		
		SB	18.6	B	13.1	B	8.6	A		
2nd St & Lowry Ave	Signal	EB	15.2	B	6.5	A	5.3	A	14.8	B
		WB	24.5	C	17.3	B	5.9	A		
		NB	25.8	C	22.0	C	19.1	B		
		SB	25.8	C	18.6	B	15.6	B		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2020 Existing PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	37.6	D	28.5	C	20.1	C	55.6	E
		WB	24.9	C	19.9	B	17.8	B		
		NB	100+	F	100+	F	89.0	F		
		SB	100+	F	82.9	F	81.2	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	14.2	B	6.4	A	13.9	B
		WB	6.7	A	3.4	A	-	-		
		NB	-	-	-	-	-	-		
		SB	38.3	D	44.6	D	29.6	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	20.2	C	10.9	B	-	-	20.9	C
		WB	-	-	34.3	C	12.9	B		
		NB	37.3	D	-	-	4.7	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	33.7	C	9.3	A	9.9	A	81.4	F
		WB	48.3	D	39.0	D	17.1	B		
		NB	100+	F	100+	F	100+	F		
		SB	-	-	21.0	C	6.2	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	33.5	D	-	-	29.5	D	4.8	A
		WB	9.1	A	-	-	7.1	A		
		NB	-	-	1.5	A	-	-		
		SB	-	-	0.2	A	0.2	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.2	A
		WB	6.0	A	-	-	4.0	A		
		NB	-	-	1.4	A	1.1	A		
		SB	2.6	A	0.1	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	7.1	A	9.0	A	3.3	A	1.7	A
		WB	9.2	A	8.9	A	4.2	A		
		NB	4.1	A	1.6	A	1.0	A		
		SB	3.7	A	0.3	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	51.2	D	21.8	C	13.0	B	27.7	C
		WB	30.9	C	24.5	C	19.1	B		
		NB	40.1	D	35.9	D	29.1	C		
		SB	23.8	C	10.6	B	5.4	A		
2nd St & Lowry Ave	Signal	EB	100+	-	25.0	C	19.0	B	32.3	C
		WB	53.5	D	34.4	C	17.3	B		
		NB	44.3	D	39.3	D	36.6	D		
		SB	22.0	C	9.2	A	7.6	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2024 Opening Year No Build AM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	84.4	F	85.5	F	86.1	F	57.1	E
		WB	37.4	D	21.8	C	16.7	B		
		NB	48.9	D	49.3	D	42.8	D		
		SB	60.1	E	49.7	D	50.2	D		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	17.5	B	9.7	A	13.3	B
		WB	7.8	A	3.7	A	-	-		
		NB	-	-	-	-	-	-		
		SB	34.0	C	32.2	C	12.2	B		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	26.5	C	14.1	B	-	-	17.7	B
		WB	-	-	33.2	C	10.4	B		
		NB	24.3	C	20.5	C	4.2	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	43.6	D	18.4	B	17.4	B	28.8	C
		WB	56.8	E	51.6	D	21.0	C		
		NB	47.3	D	22.4	C	28.1	C		
		SB	21.9	C	18.6	B	5.9	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	7.2	A	-	-	3.5	A	0.8	A
		WB	7.6	A	-	-	3.6	A		
		NB	-	-	0.2	A	-	-		
		SB	-	-	0.5	A	0.5	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	0.5	A
		WB	4.6	A	-	-	2.5	A		
		NB	-	-	0.8	A	0.5	A		
		SB	2.0	A	0.2	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	7.9	A	4.1	A	1.2	A
		WB	8.7	A	-	-	3.2	A		
		NB	-	-	1.0	A	0.6	A		
		SB	2.9	A	0.7	A	0.2	A		
Washington Ave & Lowry Ave	Signal	EB	18.7	B	9.3	A	5.2	A	10.4	B
		WB	14.4	B	6.3	A	3.8	A		
		NB	20.3	C	12.7	B	7.1	A		
		SB	14.8	B	12.8	B	8.4	A		
2nd St & Lowry Ave	Signal	EB	17.6	B	7.5	A	5.2	A	15.7	B
		WB	28.7	C	18.5	B	6.1	A		
		NB	26.4	C	22.1	C	21.9	C		
		SB	24.0	C	18.7	B	14.6	B		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



Delay Summary - 2024 Opening Year No Build PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	43.5	D	27.4	C	23.5	C	58.2	E
		WB	22.2	C	21.0	C	19.2	B		
		NB	91.2	F	82.9	F	69.7	E		
		SB	100+	F	100+	F	81.3	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	14.5	B	6.5	A	13.9	B
		WB	6.6	A	3.5	A	-	-		
		NB	-	-	-	-	-	-		
		SB	36.3	D	48.7	D	27.6	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	21.0	C	13.1	B	-	-	21.4	C
		WB	-	-	36.3	D	12.6	B		
		NB	37.6	D	-	-	6.4	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	31.9	C	9.0	A	10.4	B	88.9	F
		WB	48.3	D	52.8	D	13.2	B		
		NB	100+	F	100+	F	100+	F		
		SB	-	-	24.2	C	5.0	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	60.0	F	-	-	36.4	E	12.0	B
		WB	24.1	C	-	-	46.6	E		
		NB	-	-	7.3	A	-	-		
		SB	-	-	0.2	A	0.2	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.2	A
		WB	5.0	A	-	-	4.5	A		
		NB	-	-	1.4	A	1.1	A		
		SB	2.2	A	0.1	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	8.9	A	7.4	A	3.3	A	1.7	A
		WB	9.1	A	9.0	A	4.3	A		
		NB	3.4	A	1.6	A	1.4	A		
		SB	3.6	A	0.2	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	45.2	D	19.3	B	11.2	B	24.9	C
		WB	30.3	C	24.8	C	19.7	B		
		NB	33.9	C	29.9	C	24.7	C		
		SB	17.3	B	9.0	A	6.2	A		
2nd St & Lowry Ave	Signal	EB	78.2	E	25.6	C	16.6	B	28.9	C
		WB	54.4	D	29.8	C	14.9	B		
		NB	37.4	D	33.9	C	32.5	C		
		SB	19.3	B	9.2	A	6.4	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2040 Horizon Year No Build AM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	100+	F	100+	F	92.4	F	67.6	E
		WB	40.2	D	21.6	C	15.6	B		
		NB	69.1	E	57.4	E	51.8	D		
		SB	72.5	E	56.9	E	65.1	E		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	17.1	B	9.3	A	13.6	B
		WB	8.0	A	3.6	A	-	-		
		NB	-	-	-	-	-	-		
		SB	34.7	C	35.5	D	13.5	B		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	21.5	C	14.2	B	-	-	16.2	B
		WB	-	-	29.3	C	8.9	A		
		NB	24.8	C	25.9	C	2.9	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	43.1	D	14.8	B	17.7	B	28.7	C
		WB	48.8	D	44.8	D	16.7	B		
		NB	47.6	D	22.7	C	27.0	C		
		SB	19.8	B	19.8	B	6.9	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	7.3	A	-	-	3.4	A	0.8	A
		WB	7.9	A	-	-	3.4	A		
		NB	-	-	0.2	A	-	-		
		SB	-	-	0.5	A	0.6	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	0.5	A
		WB	5.0	A	-	-	2.5	A		
		NB	-	-	0.7	A	0.4	A		
		SB	2.0	A	0.1	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	7.5	A	5.0	A	1.1	A
		WB	7.7	A	-	-	4.6	A		
		NB	-	-	1.0	A	0.6	A		
		SB	2.8	A	0.6	A	0.4	A		
Washington Ave & Lowry Ave	Signal	EB	16.8	B	9.2	A	4.9	A	10.7	B
		WB	17.2	B	7.3	A	3.4	A		
		NB	20.7	C	14.0	B	8.0	A		
		SB	15.3	B	13.2	B	6.7	A		
2nd St & Lowry Ave	Signal	EB	18.5	B	7.2	A	5.2	A	15.6	B
		WB	26.6	C	18.2	B	6.6	A		
		NB	25.5	C	24.1	C	21.8	C		
		SB	26.0	C	18.8	B	15.5	B		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2040 Horizon Year No Build PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	54.0	D	29.5	C	21.9	C	77.5	E
		WB	25.6	C	23.4	C	23.8	C		
		NB	100+	F	100+	F	100+	F		
		SB	100+	F	100+	F	100+	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	14.2	B	6.9	A	13.4	B
		WB	6.3	A	3.1	A	-	-		
		NB	-	-	-	-	-	-		
		SB	36.6	D	42.6	D	25.4	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	20.7	C	12.7	B	-	-	21.8	C
		WB	-	-	37.9	D	13.4	B		
		NB	38.8	D	-	-	5.9	A		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	33.1	C	11.5	B	11.6	B	84.5	F
		WB	45.2	D	49.1	D	30.8	C		
		NB	100+	F	100+	F	100+	F		
		SB	-	-	21.6	C	5.2	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	86.2	F	-	-	63.3	F	14.6	B
		WB	26.1	D	-	-	64.6	F		
		NB	-	-	4.7	A	-	-		
		SB	-	-	0.2	A	0.2	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.2	A
		WB	5.5	A	-	-	3.4	A		
		NB	-	-	1.3	A	0.9	A		
		SB	2.3	A	0.2	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	11.1	B	8.8	A	2.9	A	1.7	A
		WB	8.6	A	8.8	A	3.9	A		
		NB	3.2	A	1.6	A	1.1	A		
		SB	3.0	A	0.2	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	100+	F	44.8	D	28.3	C	38.4	D
		WB	31.3	C	25.2	C	22.6	C		
		NB	52.1	D	44.5	D	46.3	D		
		SB	32.2	C	9.9	A	7.9	A		
2nd St & Lowry Ave	Signal	EB	100+	-	25.0	C	19.3	B	35.6	D
		WB	53.9	D	37.9	D	21.1	C		
		NB	53.6	D	43.1	D	42.3	D		
		SB	21.5	C	8.3	A	5.4	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



Delay Summary - 2024 Opening Year Build Coordinated Plan AM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	100+	F	100+	F	100+	F	91.9	F	
		WB	31.4	C	27.6	C	23.4	C			
		NB	83.5	F	77.3	E	76.7	E			
		SB	100+	F	100+	F	100+	F			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	26.6	C	13.5	B	30.1	C	
		WB	9.4	A	5.4	A	-	-			
		NB	-	-	-	-	-	-			
		SB	100+	F	60.3	E	27.5	C			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	27.6	C	57.4	E	-	-	34.0	C	
		WB	-	-	14.4	B	6.1	A			
		NB	32.0	C	42.2	D	49.5	D			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	46.1	D	48.1	D	37.3	D	37.9	D	
		WB	100+	F	61.9	E	100+	F			
		NB	41.5	D	18.3	B	18.1	B			
		SB	21.6	C	18.0	B	4.9	A			
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	8.5	A	0.1	A	4.0	A	1.2	A	
		WB	6.5	A	-	-	3.7	A			
		NB	-	-	0.5	A	-	-			
		SB	-	-	0.7	A	0.6	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.0	A	
		WB	5.3	A	-	-	3.3	A			
		NB	-	-	1.2	A	1.1	A			
		SB	2.4	A	0.6	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	-	-	8.5	A	3.5	A	2.3	A	
		WB	9.1	A	7.5	A	2.6	A			
		NB	-	-	1.2	A	0.9	A			
		SB	4.1	A	2.3	A	2.0	A			
Washington Ave & Lowry Ave	Signal	EB	24.4	C	16.0	B	10.8	B	18.0	B	
		WB	23.7	C	16.9	B	10.0	A			
		NB	35.7	D	24.8	C	11.9	B			
		SB	20.5	C	15.1	B	9.5	A			
2nd St & Lowry Ave	Signal	EB	32.5	C	21.7	C	16.9	B	21.4	C	
		WB	28.8	C	20.0	B	6.1	A			
		NB	33.1	C	23.3	C	21.2	C			
		SB	27.6	C	23.6	C	16.6	B			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	6.5	A	3.5	A	4.7	A	3.4	A	
		WB	-	-	-	-	-	-			
		NB	2.1	A	0.1	A	-	-			
		SB	-	-	0.5	A	0.3	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.4	A	0.7	A	-	-	1.1	A	
		WB	-	-	0.1	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.7	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	2.0	A	
		WB	-	-	-	-	-	-			
		NB	1.7	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.6	A	
		WB	-	-	-	-	-	-			
		NB	2.1	A	0.7	A	-	-			
		SB	-	-	0.3	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A	
		WB	3.2	A	-	-	2.4	A			
		NB	-	-	0.1	A	0.1	A			
		SB	1.7	A	0.3	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	2.1	A	0.1	A	0.1	A	0.2	A	
		WB	0.2	A	-	-	0.2	A			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.0	A	-	-	-	-	0.4	A	
		WB	-	-	-	-	-	-			
		NB	2.4	A	0.2	A	-	-			
		SB	-	-	0.3	A	0.1	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	3.3	A	-	-	-	-	0.4	A	
		WB	-	-	-	-	-	-			
		NB	2.2	A	0.2	A	-	-			
		SB	-	-	0.3	A	0.2	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	13.9	B	-	-	5.0	A	2.9	A	
		WB	13.7	B	-	-	17.6	C			
		NB	11.0	B	3.9	A	0.7	A			
		SB	3.2	A	1.3	A	1.0	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	8.1	A	-	-	4.4	A	1.1	A	
		WB	9.0	A	-	-	3.4	A			
		NB	4.7	A	0.8	A	0.5	A			
		SB	3.2	A	0.8	A	0.4	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2024 Opening Year Build Coordinated Plan PM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	100+	F	79.1	E	68.2	E	89.0	F	
		WB	52.3	D	61.2	E	60.0	E			
		NB	100+	F	93.8	F	88.9	F			
		SB	100+	F	100+	F	97.4	F			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	47.6	D	16.4	B	50.6	D	
		WB	19.0	B	21.4	C	-	-			
		NB	-	-	-	-	-	-			
		SB	100+	F	74.7	E	54.4	D			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	54.0	D	95.7	F	-	-	45.2	D	
		WB	-	-	17.6	B	8.2	A			
		NB	47.0	D	-	-	57.0	E			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	60.8	E	51.9	D	37.8	D	40.4	D	
		WB	100+	F	62.4	E	95.9	F			
		NB	39.5	D	25.3	C	23.7	C			
		SB	20.4	C	16.4	B	6.8	A			
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	32.8	D	6.1	A	13.2	B	7.4	A	
		WB	15.2	C	-	-	35.8	E			
		NB	-	-	3.7	A	-	-			
		SB	-	-	0.5	A	0.6	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.6	A	
		WB	6.9	A	-	-	4.7	A			
		NB	-	-	1.6	A	1.4	A			
		SB	3.0	A	0.5	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	10.5	B	8.2	A	4.2	A	2.6	A	
		WB	10.2	B	10.6	B	6.0	A			
		NB	3.6	A	1.7	A	1.4	A			
		SB	4.6	A	1.3	A	-	-			
Washington Ave & Lowry Ave	Signal	EB	68.4	E	24.0	C	13.6	B	32.3	C	
		WB	32.1	C	25.8	C	18.6	B			
		NB	50.0	D	44.5	D	38.3	D			
		SB	22.8	C	11.1	B	8.1	A			
2nd St & Lowry Ave	Signal	EB	99.3	F	25.9	C	16.6	B	33.3	C	
		WB	55.3	E	34.2	C	19.5	B			
		NB	43.8	D	37.1	D	37.6	D			
		SB	29.3	C	19.1	B	22.1	C			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	6.7	A	3.2	A	4.6	A	3.5	A	
		WB	-	-	-	-	-	-			
		NB	2.2	A	0.4	A	-	-			
		SB	-	-	0.5	A	0.2	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.6	A	0.7	A	-	-	1.2	A	
		WB	-	-	0.2	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.4	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.9	A	
		WB	-	-	-	-	-	-			
		NB	1.8	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.8	A	
		WB	-	-	-	-	-	-			
		NB	2.1	A	0.8	A	-	-			
		SB	-	-	0.2	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A	
		WB	3.6	A	-	-	2.8	A			
		NB	-	-	0.2	A	0.1	A			
		SB	2.0	A	0.2	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	4.4	A	2.8	A	1.3	A	0.6	A	
		WB	0.3	A	-	-	0.1	A			
		NB	-	-	0.0	A	-	-			
		SB	-	-	0.6	A	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.1	A	-	-	2.8	A	1.6	A	
		WB	-	-	-	-	-	-			
		NB	2.6	A	0.5	A	-	-			
		SB	-	-	0.1	A	0.1	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.0	A	-	-	2.8	A	2.0	A	
		WB	-	-	-	-	-	-			
		NB	1.0	A	0.1	A	-	-			
		SB	-	-	0.1	A	0.1	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	100+	F	-	-	100+	F	28.1	D	
		WB	100+	F	-	-	100+	F			
		NB	24.2	C	24.2	C	20.2	C			
		SB	8.8	A	2.0	A	1.1	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	100+	-	-	-	57.8	F	12.8	B	
		WB	38.3	E	-	-	78.5	F			
		NB	17.3	C	13.5	B	15.6	C			
		SB	7.8	A	1.2	A	0.4	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2024 Opening Year Build Comprehensive Plan AM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	100+	F	100+	F	100+	F	100+	F
		WB	27.2	C	25.9	C	20.1	C		
		NB	100+	F	100+	F	100+	F		
		SB	100+	F	100+	F	100+	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	80.2	F	28.2	C	76.9	E
		WB	16.6	B	11.4	B	-	-		
		NB	-	-	-	-	-	-		
		SB	100+	F	58.7	E	32.4	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	41.8	D	100+	F	-	-	43.0	D
		WB	-	-	10.2	B	4.7	A		
		NB	33.6	C	34.6	C	27.3	C		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	38.0	D	39.2	D	34.4	C	48.8	D
		WB	100+	F	66.5	E	100+	F		
		NB	82.4	F	43.5	D	49.6	D		
		SB	26.2	C	27.8	C	10.1	B		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	29.9	D	3.6	A	31.7	D	5.0	A
		WB	7.4	A	-	-	18.0	C		
		NB	-	-	6.1	A	-	-		
		SB	-	-	0.7	A	0.7	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.1	A
		WB	6.4	A	-	-	2.9	A		
		NB	-	-	1.4	A	1.0	A		
		SB	2.7	A	0.5	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	9.3	A	3.6	A	2.7	A
		WB	8.6	A	10.5	B	3.7	A		
		NB	-	-	1.3	A	1.0	A		
		SB	4.7	A	2.5	A	2.0	A		
Washington Ave & Lowry Ave	Signal	EB	26.5	C	17.9	B	9.9	A	18.9	B
		WB	23.8	C	17.1	B	9.7	A		
		NB	33.3	C	26.6	C	15.1	B		
		SB	19.2	B	14.1	B	10.9	B		
2nd St & Lowry Ave	Signal	EB	50.8	D	22.9	C	19.3	B	21.7	C
		WB	31.8	C	21.1	C	7.4	A		
		NB	23.1	C	20.9	C	20.9	C		
		SB	26.2	C	20.2	C	13.2	B		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.3	A	3.9	A	5.2	A	3.8	A
		WB	-	-	-	-	-	-		
		NB	2.3	A	0.2	A	-	-		
		SB	-	-	0.7	A	0.3	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.6	A	0.8	A	-	-	1.4	A
		WB	-	-	0.2	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	2.2	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	2.0	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.3	A	1.7	A
		WB	-	-	-	-	-	-		
		NB	2.2	A	0.8	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.4	A
		WB	5.0	A	-	-	2.4	A		
		NB	-	-	0.3	A	0.0	A		
		SB	2.4	A	0.3	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	2.9	A	2.9	A	2.4	A	0.5	A
		WB	0.3	A	-	-	0.3	A		
		NB	-	-	0.1	A	-	-		
		SB	-	-	0.5	A	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.5	A	-	-	2.9	A	0.8	A
		WB	-	-	-	-	-	-		
		NB	2.4	A	0.3	A	-	-		
		SB	-	-	0.8	A	0.2	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.1	A	-	-	2.4	A	0.8	A
		WB	-	-	-	-	-	-		
		NB	2.0	A	0.4	A	-	-		
		SB	-	-	0.6	A	0.5	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	100+	F	-	-	81.8	F	33.0	D
		WB	100+	F	-	-	100+	F		
		NB	46.8	E	56.6	F	61.0	F		
		SB	3.6	A	1.7	A	1.1	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	92.1	F	-	-	39.1	E	16.2	C
		WB	25.3	D	-	-	45.0	E		
		NB	25.4	D	34.0	D	25.7	D		
		SB	3.3	A	1.0	A	0.5	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



Delay Summary - 2024 Opening Year Build Comprehensive Plan PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	77.3	E	59.6	E	50.4	D	83.9	F
		WB	43.4	D	49.1	D	51.6	D		
		NB	100+	F	98.5	F	87.8	F		
		SB	100+	F	100+	F	100+	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	36.4	D	14.8	B	45.6	D
		WB	15.6	B	14.0	B	-	-		
		NB	-	-	-	-	-	-		
		SB	100+	F	64.1	E	45.7	D		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	49.7	D	63.4	E	-	-	32.5	C
		WB	-	-	14.2	B	6.6	A		
		NB	34.0	C	-	-	34.1	C		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	45.4	D	40.4	D	31.1	C	43.8	D
		WB	100+	F	67.4	E	100+	F		
		NB	51.2	D	34.8	C	46.1	D		
		SB	23.3	C	23.5	C	6.6	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	100+	F	44.1	E	71.2	F	21.7	C
		WB	12.7	B	-	-	53.1	F		
		NB	-	-	8.4	A	-	-		
		SB	-	-	0.6	A	0.7	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.9	A
		WB	7.5	A	-	-	4.3	A		
		NB	-	-	1.7	A	1.2	A		
		SB	3.3	A	0.6	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	7.4	A	10.6	B	3.2	A	3.3	A
		WB	10.9	B	11.9	B	7.2	A		
		NB	3.7	A	1.9	A	1.5	A		
		SB	4.4	A	1.2	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	100+	F	42.4	D	22.9	C	51.1	D
		WB	36.7	D	27.5	C	20.6	C		
		NB	84.1	F	82.2	F	79.8	E		
		SB	31.9	C	10.5	B	7.9	A		
2nd St & Lowry Ave	Signal	EB	100+	-	26.3	C	20.8	C	40.5	D
		WB	61.1	E	48.7	D	35.5	D		
		NB	43.3	D	38.1	D	34.6	C		
		SB	31.2	C	18.8	B	29.7	C		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.8	A	3.6	A	4.8	A	3.8	A
		WB	-	-	-	-	-	-		
		NB	2.9	A	0.9	A	-	-		
		SB	-	-	0.6	A	0.4	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.7	A	0.9	A	-	-	1.6	A
		WB	-	-	0.4	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	2.8	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.9	A
		WB	-	-	-	-	-	-		
		NB	1.7	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.8	A
		WB	-	-	-	-	-	-		
		NB	2.3	A	1.0	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.5	A
		WB	3.8	A	-	-	3.7	A		
		NB	-	-	0.3	A	0.2	A		
		SB	2.5	A	0.3	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	4.6	A	2.8	A	2.0	A	0.5	A
		WB	0.3	A	-	-	0.3	A		
		NB	-	-	0.0	A	-	-		
		SB	-	-	0.8	A	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.2	A	-	-	3.0	A	1.6	A
		WB	-	-	-	-	-	-		
		NB	2.3	A	0.5	A	-	-		
		SB	-	-	0.1	A	0.2	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.3	A	-	-	2.8	A	2.2	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	0.2	A	-	-		
		SB	-	-	0.2	A	0.1	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	100+	F	-	-	100+	F	51.0	F
		WB	100+	F	-	-	100+	F		
		NB	33.3	D	40.6	E	46.5	E		
		SB	12.4	B	3.4	A	3.3	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	100+	-	-	-	100+	-	43.9	E
		WB	100+	-	-	-	100+	-		
		NB	46.7	E	38.5	E	37.8	E		
		SB	7.7	A	1.5	A	0.9	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

**Delay Summary - 2024 Opening Year Build Coordinated Plan w/ Phase A Mitigation - AM Peak Hour**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	62.2	E	71.3	E	63.0	E	62.4	E
		WB	32.5	C	29.8	C	26.8	C		
		NB	51.8	D	43.8	D	36.4	D		
		SB	95.4	F	75.2	E	85.2	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	12.2	B	9.6	A	22.7	C
		WB	9.3	A	3.9	A	-	-		
		NB	-	-	-	-	-	-		
		SB	92.9	F	65.2	E	32.5	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	16.7	B	17.0	B	-	-	23.2	C
		WB	-	-	9.4	A	3.1	A		
		NB	32.6	C	27.6	C	55.0	D		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	42.7	D	32.9	C	21.8	C	23.5	C
		WB	73.6	E	27.1	C	33.6	C		
		NB	17.4	B	6.2	A	4.3	A		
		SB	30.1	C	25.7	C	7.2	A		
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	8.0	A	0.1	A	4.1	A	1.1	A
		WB	7.4	A	-	-	4.5	A		
		NB	-	-	0.5	A	-	-		
		SB	-	-	0.6	A	0.7	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.1	A
		WB	5.2	A	-	-	3.8	A		
		NB	-	-	1.2	A	0.9	A		
		SB	2.4	A	0.6	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	7.9	A	3.7	A	2.3	A
		WB	8.6	A	10.0	A	2.9	A		
		NB	-	-	1.2	A	0.8	A		
		SB	4.2	A	2.1	A	1.6	A		
Washington Ave & Lowry Ave	Signal	EB	21.5	C	15.5	B	8.7	A	18.0	B
		WB	24.5	C	16.8	B	10.9	B		
		NB	34.9	C	24.4	C	12.3	B		
		SB	24.0	C	15.3	B	11.6	B		
2nd St & Lowry Ave	Signal	EB	28.9	C	17.4	B	15.9	B	20.2	C
		WB	21.6	C	15.6	B	5.2	A		
		NB	39.8	D	28.3	C	23.6	C		
		SB	32.4	C	27.5	C	27.6	C		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	5.9	A	2.9	A	4.6	A	3.1	A
		WB	-	-	-	-	-	-		
		NB	2.3	A	0.0	A	-	-		
		SB	-	-	0.7	A	0.2	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.4	A	0.8	A	-	-	1.2	A
		WB	-	-	0.1	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	1.9	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.9	A
		WB	-	-	-	-	-	-		
		NB	1.7	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.6	A
		WB	-	-	-	-	-	-		
		NB	2.2	A	0.7	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A
		WB	2.8	A	-	-	1.8	A		
		NB	-	-	0.0	A	0.0	A		
		SB	1.7	A	0.3	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	1.9	A	0.1	A	0.2	A	0.2	A
		WB	0.0	A	-	-	0.3	A		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.1	A	-	-	-	-	0.4	A
		WB	-	-	-	-	-	-		
		NB	1.7	A	0.1	A	-	-		
		SB	-	-	0.3	A	0.2	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.4	A	-	-	-	-	0.4	A
		WB	-	-	-	-	-	-		
		NB	2.0	A	0.1	A	-	-		
		SB	-	-	0.1	A	0.2	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	9.6	A	-	-	4.8	A	1.4	A
		WB	7.5	A	-	-	3.1	A		
		NB	4.1	A	0.6	A	0.2	A		
		SB	3.5	A	1.3	A	0.9	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	8.4	A	-	-	3.9	A	0.9	A
		WB	9.1	A	-	-	3.2	A		
		NB	3.9	A	0.7	A	0.6	A		
		SB	2.9	A	0.6	A	0.3	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

**Delay Summary - 2024 Opening Year Build Coordinated Plan w/ Phase A Mitigation - PM Peak Hour**

Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	81.5	F	56.4	E	48.8	D	76.1	E
		WB	62.7	E	71.8	E	69.9	E		
		NB	48.5	D	49.4	D	40.7	D		
		SB	100+	F	100+	F	100+	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	25.2	C	10.9	B	36.6	D
		WB	19.8	B	29.2	C	-	-		
		NB	-	-	-	-	-	-		
		SB	100+	F	71.1	E	53.2	D		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	52.6	D	41.5	D	-	-	45.3	D
		WB	-	-	19.3	B	5.2	A		
		NB	54.1	D	-	-	100+	F		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	54.8	D	34.6	C	23.9	C	27.7	C
		WB	64.8	E	40.3	D	70.3	E		
		NB	26.1	C	9.5	A	8.6	A		
		SB	34.9	C	31.9	C	9.7	A		
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	12.9	B	0.3	A	4.0	A	2.5	A
		WB	8.2	A	-	-	6.9	A		
		NB	-	-	1.1	A	-	-		
		SB	-	-	0.5	A	0.6	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.6	A
		WB	6.9	A	-	-	5.1	A		
		NB	-	-	1.5	A	1.1	A		
		SB	2.7	A	0.6	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	10.7	B	8.8	A	4.2	A	2.6	A
		WB	9.9	A	10.3	B	5.2	A		
		NB	3.8	A	1.8	A	1.3	A		
		SB	4.9	A	1.2	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	89.3	F	37.2	D	25.1	C	35.0	C
		WB	32.6	C	25.6	C	20.4	C		
		NB	47.0	D	43.2	D	38.6	D		
		SB	42.3	D	9.2	A	7.8	A		
2nd St & Lowry Ave	Signal	EB	94.7	F	26.8	C	20.3	C	30.1	C
		WB	53.5	D	32.4	C	17.1	B		
		NB	33.0	C	30.4	C	31.6	C		
		SB	23.8	C	14.4	B	14.9	B		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	6.8	A	2.6	A	4.9	A	3.5	A
		WB	-	-	-	-	-	-		
		NB	2.2	A	0.4	A	-	-		
		SB	-	-	0.7	A	0.3	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.1	A	0.9	A	-	-	1.2	A
		WB	-	-	0.1	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	2.4	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.9	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.8	A
		WB	-	-	-	-	-	-		
		NB	2.3	A	1.0	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A
		WB	3.9	A	-	-	2.0	A		
		NB	-	-	0.1	A	0.2	A		
		SB	2.2	A	0.2	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	5.0	A	2.5	A	0.0	A	0.6	A
		WB	0.3	A	-	-	0.1	A		
		NB	-	-	0.1	A	-	-		
		SB	-	-	0.7	A	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.2	A	-	-	2.6	A	1.6	A
		WB	-	-	-	-	-	-		
		NB	0.0	A	0.4	A	-	-		
		SB	-	-	0.1	A	0.1	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.0	A	-	-	2.5	A	1.7	A
		WB	-	-	-	-	-	-		
		NB	-	-	0.0	A	-	-		
		SB	-	-	0.1	A	0.1	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	15.5	C	-	-	5.5	A	3.6	A
		WB	23.9	C	-	-	11.2	B		
		NB	5.1	A	3.7	A	3.0	A		
		SB	6.4	A	1.8	A	1.4	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	18.0	C	-	-	4.6	A	2.2	A
		WB	14.8	B	-	-	10.5	B		
		NB	4.5	A	1.8	A	1.0	A		
		SB	7.2	A	1.3	A	2.0	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



Delay Summary - 2024 Opening Year Build Comprehensive Plan w/ Phase A Mitigation - AM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	83.8	F	85.0	F	88.0	F	72.6	E
		WB	33.0	C	28.8	C	23.1	C		
		NB	67.1	E	53.0	D	46.7	D		
		SB	100+	F	95.4	F	92.9	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	22.5	C	12.2	B	32.4	C
		WB	12.2	B	4.8	A	-	-		
		NB	-	-	-	-	-	-		
		SB	100+	F	58.5	E	27.3	C		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	33.1	C	48.3	D	-	-	53.0	D
		WB	-	-	11.4	B	3.9	A		
		NB	32.9	C	35.2	D	100+	F		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	40.7	D	32.0	C	26.7	C	27.3	C
		WB	68.7	E	24.7	C	35.1	D		
		NB	27.2	C	7.7	A	7.2	A		
		SB	33.1	C	33.9	C	8.7	A		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	8.1	A	0.2	A	4.1	A	1.4	A
		WB	7.5	A	-	-	4.6	A		
		NB	-	-	0.5	A	-	-		
		SB	-	-	0.7	A	0.8	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.3	A
		WB	6.0	A	-	-	4.1	A		
		NB	-	-	1.4	A	1.2	A		
		SB	2.9	A	0.7	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	-	-	10.4	B	4.1	A	2.9	A
		WB	8.7	A	9.8	A	3.4	A		
		NB	-	-	1.3	A	1.0	A		
		SB	4.8	A	2.7	A	2.1	A		
Washington Ave & Lowry Ave	Signal	EB	24.3	C	14.9	B	10.5	B	18.2	B
		WB	24.8	C	16.5	B	10.4	B		
		NB	36.0	D	26.1	C	16.1	B		
		SB	20.4	C	15.0	B	10.3	B		
2nd St & Lowry Ave	Signal	EB	30.0	C	15.3	B	13.6	B	20.2	C
		WB	23.2	C	16.0	B	5.8	A		
		NB	40.4	D	27.2	C	26.5	C		
		SB	33.7	C	29.0	C	25.1	C		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.0	A	3.3	A	5.2	A	3.7	A
		WB	-	-	-	-	-	-		
		NB	2.9	A	0.2	A	-	-		
		SB	-	-	0.9	A	0.3	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.6	A	0.9	A	-	-	1.5	A
		WB	-	-	0.2	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	2.0	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	2.0	A
		WB	-	-	-	-	-	-		
		NB	1.7	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.3	A	1.7	A
		WB	-	-	-	-	-	-		
		NB	2.1	A	0.7	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.4	A
		WB	3.8	A	-	-	2.3	A		
		NB	-	-	0.2	A	0.1	A		
		SB	2.1	A	0.3	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	3.2	A	3.6	A	2.6	A	0.2	A
		WB	0.2	A	-	-	0.3	A		
		NB	-	-	0.2	A	-	-		
		SB	-	-	0.5	A	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.4	A	-	-	2.4	A	0.7	A
		WB	-	-	-	-	-	-		
		NB	2.4	A	0.2	A	-	-		
		SB	-	-	0.8	A	0.3	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.4	A	-	-	2.6	A	0.8	A
		WB	-	-	-	-	-	-		
		NB	2.2	A	0.2	A	-	-		
		SB	-	-	0.4	A	0.5	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	13.3	B	-	-	6.5	A	2.3	A
		WB	10.2	B	-	-	4.1	A		
		NB	5.8	A	1.1	A	1.5	A		
		SB	4.2	A	1.7	A	1.1	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	11.8	B	-	-	4.6	A	1.7	A
		WB	13.7	B	-	-	4.1	A		
		NB	4.9	A	1.0	A	0.6	A		
		SB	3.8	A	1.1	A	0.6	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2024 Opening Year Build Comprehensive Plan w/ Phase A Mitigation - PM Peak Hour										
Intersection	Control	Approach	Operations by Movement						Overall Intersection	
			Left		Through		Right		Delay (sec/veh)	LOS
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS		
Dowling Ave & Lyndale Ave	Signal	EB	95.4	F	72.6	E	58.9	E	87.2	F
		WB	68.0	E	75.8	E	79.5	E		
		NB	100+	F	91.3	F	72.3	E		
		SB	100+	F	100+	F	99.5	F		
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	29.9	C	13.5	B	40.5	D
		WB	19.7	B	26.7	C	-	-		
		NB	-	-	-	-	-	-		
		SB	100+	F	69.2	E	52.5	D		
Dowling Ave & I-94 Northbound Ramp	Signal	EB	55.4	E	42.4	D	-	-	47.5	D
		WB	-	-	16.5	B	5.9	A		
		NB	84.5	F	-	-	84.6	F		
		SB	-	-	-	-	-	-		
Dowling Ave & Washington Ave	Signal	EB	56.7	E	28.7	C	22.4	C	35.0	C
		WB	83.7	F	49.9	D	72.1	E		
		NB	42.6	D	11.8	B	12.0	B		
		SB	46.5	D	45.3	D	13.7	B		
Washinton Ave & 2nd Street/36th Ave	Side Street Stop	EB	19.1	C	0.4	A	4.5	A	3.6	A
		WB	9.7	A	-	-	10.0	A		
		NB	-	-	1.4	A	-	-		
		SB	-	-	0.6	A	0.8	A		
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.8	A
		WB	7.7	A	1.2	A	5.4	A		
		NB	-	-	1.5	A	1.4	A		
		SB	2.7	A	0.7	A	-	-		
2nd St & 33rd Ave	Side Street Stop	EB	8.8	A	8.3	A	4.4	A	3.1	A
		WB	11.1	B	10.6	B	6.2	A		
		NB	3.5	A	1.9	A	1.4	A		
		SB	4.2	A	1.2	A	-	-		
Washington Ave & Lowry Ave	Signal	EB	92.2	F	35.5	D	20.0	B	38.2	D
		WB	32.3	C	25.4	C	17.8	B		
		NB	56.9	E	52.8	D	53.7	D		
		SB	28.8	C	11.9	B	8.3	A		
2nd St & Lowry Ave	Signal	EB	100+	-	28.6	C	19.6	B	39.0	D
		WB	74.0	E	45.8	D	27.2	C		
		NB	47.0	D	39.0	D	38.3	D		
		SB	27.1	C	16.6	B	23.6	C		
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.9	A	2.9	A	4.8	A	3.8	A
		WB	-	-	-	-	-	-		
		NB	2.4	A	1.1	A	-	-		
		SB	-	-	1.1	A	0.3	A		
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.4	A	0.8	A	-	-	1.6	A
		WB	-	-	0.3	A	-	-		
		NB	-	-	-	-	-	-		
		SB	-	-	-	-	2.8	A		
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.9	A
		WB	-	-	-	-	-	-		
		NB	1.8	A	-	-	-	-		
		SB	-	-	-	-	-	-		
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.8	A
		WB	-	-	-	-	-	-		
		NB	2.2	A	0.9	A	-	-		
		SB	-	-	0.3	A	-	-		
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.5	A
		WB	3.7	A	-	-	2.9	A		
		NB	-	-	0.3	A	0.2	A		
		SB	1.8	A	0.3	A	-	-		
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	4.6	A	2.7	A	2.1	A	0.6	A
		WB	0.3	A	-	-	0.2	A		
		NB	-	-	0.0	A	-	-		
		SB	-	-	0.8	A	-	-		
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.6	A	-	-	2.9	A	1.8	A
		WB	-	-	-	-	-	-		
		NB	1.6	A	0.5	A	-	-		
		SB	-	-	0.2	A	0.1	A		
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.1	A	-	-	2.7	A	2.1	A
		WB	-	-	-	-	-	-		
		NB	2.0	A	0.1	A	-	-		
		SB	-	-	0.3	A	0.1	A		
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	66.6	F	-	-	39.3	E	13.0	B
		WB	81.3	F	-	-	73.7	F		
		NB	14.9	B	11.5	B	9.4	A		
		SB	8.7	A	3.0	A	2.4	A		
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	90.0	F	-	-	24.8	C	10.4	B
		WB	56.6	F	-	-	57.2	F		
		NB	5.8	A	8.3	A	6.8	A		
		SB	8.4	A	2.3	A	1.4	A		

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2040 Horizon Year Build Coordinated Plan w/ Phase A Mitigation - AM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	69.4	E	77.1	E	75.6	E	68.4	E	
		WB	35.1	D	32.4	C	29.0	C			
		NB	80.2	F	62.7	E	59.0	E			
		SB	96.8	F	83.7	F	76.5	E			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	13.8	B	10.0	A	23.8	C	
		WB	10.1	B	4.5	A	-	-			
		NB	-	-	-	-	-	-			
		SB	92.3	F	66.9	E	34.5	C			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	19.2	B	19.1	B	-	-	30.2	C	
		WB	-	-	10.0	A	3.4	A			
		NB	34.8	C	36.7	D	90.2	F			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	41.1	D	30.5	C	22.1	C	23.9	C	
		WB	57.0	E	26.2	C	31.0	C			
		NB	20.3	C	5.6	A	5.0	A			
		SB	31.7	C	29.3	C	11.1	B			
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	8.5	A	0.1	A	3.5	A	1.1	A	
		WB	6.2	A	-	-	4.0	A			
		NB	-	-	0.5	A	-	-			
		SB	-	-	0.6	A	0.7	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.1	A	
		WB	5.2	A	-	-	3.4	A			
		NB	-	-	1.1	A	1.0	A			
		SB	2.9	A	0.6	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	-	-	8.8	A	5.0	A	2.4	A	
		WB	8.6	A	8.5	A	3.5	A			
		NB	-	-	1.1	A	0.8	A			
		SB	4.6	A	2.4	A	2.0	A			
Washington Ave & Lowry Ave	Signal	EB	27.5	C	16.2	B	10.0	A	18.0	B	
		WB	22.3	C	15.7	B	11.6	B			
		NB	34.9	C	25.9	C	14.2	B			
		SB	20.9	C	13.9	B	9.9	A			
2nd St & Lowry Ave	Signal	EB	27.4	C	17.1	B	14.7	B	20.5	C	
		WB	23.8	C	16.8	B	5.7	A			
		NB	35.2	D	26.4	C	24.1	C			
		SB	34.1	C	27.2	C	28.8	C			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	6.4	A	2.9	A	4.7	A	3.4	A	
		WB	-	-	-	-	-	-			
		NB	1.9	A	0.1	A	-	-			
		SB	-	-	0.9	A	0.3	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.5	A	0.8	A	-	-	1.2	A	
		WB	-	-	0.2	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.2	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	2.0	A	
		WB	-	-	-	-	-	-			
		NB	1.8	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.7	A	
		WB	-	-	-	-	-	-			
		NB	2.2	A	0.7	A	-	-			
		SB	-	-	0.4	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A	
		WB	5.8	A	-	-	3.0	A			
		NB	-	-	0.0	A	0.0	A			
		SB	1.5	A	0.3	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	2.5	A	0.1	A	0.2	A	0.2	A	
		WB	0.1	A	-	-	0.3	A			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.4	A	-	-	-	-	0.5	A	
		WB	-	-	-	-	-	-			
		NB	2.1	A	0.1	A	-	-			
		SB	-	-	0.5	A	0.1	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.0	A	-	-	-	-	0.4	A	
		WB	-	-	-	-	-	-			
		NB	2.3	A	0.1	A	-	-			
		SB	-	-	0.2	A	0.3	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	10.4	B	-	-	4.9	A	1.5	A	
		WB	10.6	B	-	-	3.5	A			
		NB	3.6	A	0.7	A	0.3	A			
		SB	3.4	A	1.4	A	0.9	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	9.8	A	-	-	5.0	A	1.1	A	
		WB	8.8	A	-	-	3.8	A			
		NB	5.3	A	0.8	A	0.4	A			
		SB	3.3	A	0.8	A	0.4	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



Delay Summary - 2040 Horizon Year Build Coordinated Plan w/ Phase A Mitigation - PM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	100+	F	70.8	E	61.2	E	77.0	E	
		WB	60.9	E	68.2	E	69.2	E			
		NB	47.2	D	53.3	D	45.7	D			
		SB	100+	F	100+	F	100+	F			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	18.4	B	9.8	A	34.5	C	
		WB	17.3	B	25.9	C	-	-			
		NB	-	-	-	-	-	-			
		SB	100+	F	69.6	E	49.8	D			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	52.7	D	41.9	D	-	-	52.8	D	
		WB	-	-	19.0	B	4.9	A			
		NB	60.4	E	-	-	100+	F			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	54.7	D	34.5	C	23.4	C	31.2	C	
		WB	89.6	F	58.2	E	90.7	F			
		NB	28.8	C	10.0	A	14.7	B			
		SB	43.2	D	35.3	D	12.7	B			
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	12.6	B	0.3	A	3.9	A	2.3	A	
		WB	8.4	A	-	-	7.3	A			
		NB	-	-	1.0	A	-	-			
		SB	-	-	0.5	A	0.6	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.6	A	
		WB	7.1	A	-	-	4.6	A			
		NB	-	-	1.6	A	1.3	A			
		SB	3.4	A	0.5	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	6.4	A	8.4	A	4.1	A	2.4	A	
		WB	9.7	A	10.2	B	5.0	A			
		NB	4.1	A	1.7	A	1.2	A			
		SB	4.1	A	1.1	A	-	-			
Washington Ave & Lowry Ave	Signal	EB	38.0	D	17.8	B	9.6	A	26.7	C	
		WB	28.6	C	19.9	B	17.0	B			
		NB	46.2	D	38.9	D	35.2	D			
		SB	24.1	C	11.0	B	7.3	A			
2nd St & Lowry Ave	Signal	EB	32.9	C	13.8	B	9.8	A	40.0	D	
		WB	71.8	E	57.5	E	44.0	D			
		NB	58.8	E	48.4	D	50.0	D			
		SB	30.2	C	19.4	B	17.6	B			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.1	A	2.5	A	4.6	A	3.5	A	
		WB	-	-	-	-	-	-			
		NB	2.4	A	0.8	A	-	-			
		SB	-	-	0.8	A	0.2	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	3.0	A	0.9	A	-	-	1.3	A	
		WB	-	-	0.2	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.5	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.9	A	
		WB	-	-	-	-	-	-			
		NB	1.8	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.1	A	1.7	A	
		WB	-	-	-	-	-	-			
		NB	2.3	A	0.9	A	-	-			
		SB	-	-	0.3	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.3	A	
		WB	3.8	A	-	-	2.2	A			
		NB	-	-	0.1	A	0.0	A			
		SB	2.0	A	0.2	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	4.2	A	2.7	A	1.1	A	0.6	A	
		WB	0.3	A	-	-	0.1	A			
		NB	-	-	0.0	A	-	-			
		SB	-	-	0.6	A	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.3	A	-	-	2.5	A	1.7	A	
		WB	-	-	-	-	-	-			
		NB	-	-	0.5	A	-	-			
		SB	-	-	0.1	A	0.1	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	3.9	A	-	-	2.9	A	1.8	A	
		WB	-	-	-	-	-	-			
		NB	-	-	0.0	A	-	-			
		SB	-	-	0.1	A	0.0	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	16.9	C	-	-	5.7	A	3.5	A	
		WB	14.2	B	-	-	7.8	A			
		NB	7.1	A	3.7	A	4.1	A			
		SB	6.6	A	1.5	A	1.1	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	12.2	B	-	-	3.7	A	1.8	A	
		WB	16.4	C	-	-	9.1	A			
		NB	4.4	A	1.5	A	1.1	A			
		SB	6.7	A	0.9	A	0.5	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2040 Horizon Year Build Comprehensive Plan w/ Phase B Mitigation - AM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	78.8	E	78.3	E	67.2	E	76.0	E	
		WB	30.8	C	29.1	C	24.4	C			
		NB	67.7	E	60.2	E	52.2	D			
		SB	100+	F	100+	F	100+	F			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	15.4	B	11.3	B	23.0	C	
		WB	11.1	B	6.3	A	-	-			
		NB	-	-	-	-	-	-			
		SB	78.8	E	57.9	E	25.5	C			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	19.9	B	6.1	A	-	-	15.0	B	
		WB	-	-	9.7	A	3.7	A			
		NB	34.6	C	29.8	C	20.1	C			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	51.8	D	36.1	D	7.4	A	24.3	C	
		WB	86.5	F	41.3	D	64.5	E			
		NB	18.0	B	4.2	A	3.5	A			
		SB	30.2	C	30.3	C	12.4	B			
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	10.0	A	0.1	A	4.1	A	1.3	A	
		WB	7.1	A	-	-	4.3	A			
		NB	-	-	0.5	A	-	-			
		SB	-	-	0.6	A	0.7	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.2	A	
		WB	5.8	A	-	-	4.2	A			
		NB	-	-	1.3	A	1.0	A			
		SB	2.7	A	0.6	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	-	-	10.2	B	6.4	A	3.0	A	
		WB	11.1	B	10.7	B	3.9	A			
		NB	-	-	1.6	A	1.0	A			
		SB	5.0	A	2.7	A	1.8	A			
Washington Ave & Lowry Ave	Signal	EB	21.5	C	15.4	B	10.3	B	18.2	B	
		WB	22.8	C	16.0	B	13.0	B			
		NB	35.8	D	26.9	C	16.2	B			
		SB	25.2	C	15.9	B	9.4	A			
2nd St & Lowry Ave	Signal	EB	27.8	C	15.5	B	13.9	B	22.6	C	
		WB	22.7	C	15.7	B	5.9	A			
		NB	39.7	D	30.7	C	30.7	C			
		SB	43.8	D	37.6	D	31.3	C			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	7.5	A	2.6	A	5.8	A	3.8	A	
		WB	-	-	-	-	-	-			
		NB	2.6	A	0.3	A	-	-			
		SB	-	-	1.1	A	0.3	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.7	A	0.9	A	-	-	1.5	A	
		WB	-	-	0.4	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.3	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.3	A	2.1	A	
		WB	-	-	-	-	-	-			
		NB	1.8	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.3	A	1.7	A	
		WB	-	-	-	-	-	-			
		NB	2.2	A	0.8	A	-	-			
		SB	-	-	0.3	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.5	A	
		WB	4.8	A	-	-	2.1	A			
		NB	-	-	0.2	A	0.1	A			
		SB	1.5	A	0.4	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	2.4	A	3.1	A	2.7	A	0.2	A	
		WB	0.3	A	-	-	0.4	A			
		NB	-	-	0.2	A	-	-			
		SB	-	-	0.6	A	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.0	A	-	-	2.1	A	0.8	A	
		WB	-	-	-	-	-	-			
		NB	2.7	A	0.3	A	-	-			
		SB	-	-	0.8	A	0.5	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.2	A	-	-	3.2	A	0.8	A	
		WB	-	-	-	-	-	-			
		NB	2.2	A	0.2	A	-	-			
		SB	-	-	0.8	A	0.5	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	12.9	B	-	-	6.0	A	2.2	A	
		WB	11.8	B	-	-	4.5	A			
		NB	5.9	A	0.9	A	0.4	A			
		SB	3.7	A	1.7	A	1.2	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	10.7	B	-	-	4.6	A	1.5	A	
		WB	10.1	B	-	-	4.3	A			
		NB	4.0	A	1.1	A	0.7	A			
		SB	3.6	A	1.0	A	0.7	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"

Delay Summary - 2040 Horizon Year Build Comprehensive Plan w/ Phase B Mitigation - PM Peak Hour											
Intersection	Control	Approach	Operations by Movement						Overall Intersection		
			Left		Through		Right		Delay (sec/veh)	LOS	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS			
Dowling Ave & Lyndale Ave	Signal	EB	84.5	F	53.1	D	47.6	D	76.5	E	
		WB	54.0	D	56.5	E	57.2	E			
		NB	91.1	F	72.0	E	66.3	E			
		SB	100+	F	100+	F	100+	F			
Dowling Ave & I-94 Southbound Ramp	Signal	EB	-	-	13.8	B	6.5	A	32.6	C	
		WB	17.1	B	14.8	B	-	-			
		NB	-	-	-	-	-	-			
		SB	100+	F	83.3	F	74.1	E			
Dowling Ave & I-94 Northbound Ramp	Signal	EB	50.7	D	47.6	D	-	-	30.3	C	
		WB	-	-	14.6	B	6.7	A			
		NB	31.4	C	-	-	44.0	D			
		SB	-	-	-	-	-	-			
Dowling Ave & Washington Ave	Signal	EB	49.1	D	23.5	C	4.8	A	40.4	D	
		WB	81.6	F	53.6	D	81.7	F			
		NB	35.0	C	14.2	B	16.8	B			
		SB	100+	F	100+	F	100+	F			
Washinton Ave & 2nd Street/ 36th Ave	Side Street Stop	EB	15.9	C	0.3	A	4.2	A	3.0	A	
		WB	10.8	B	-	-	8.4	A			
		NB	-	-	1.1	A	-	-			
		SB	-	-	0.7	A	0.8	A			
Washington Ave & 33rd Ave	Side Street Stop	EB	-	-	-	-	-	-	1.8	A	
		WB	7.5	A	0.0	A	5.2	A			
		NB	-	-	1.6	A	1.3	A			
		SB	3.3	A	0.8	A	-	-			
2nd St & 33rd Ave	Side Street Stop	EB	10.5	B	9.7	A	5.1	A	3.3	A	
		WB	12.1	B	11.9	B	7.2	A			
		NB	4.2	A	1.9	A	1.3	A			
		SB	4.8	A	1.3	A	-	-			
Washington Ave & Lowry Ave	Signal	EB	100+	F	69.8	E	46.3	D	48.3	D	
		WB	18.4	B	15.7	B	18.5	B			
		NB	63.2	E	53.6	D	52.9	D			
		SB	27.8	C	14.2	B	11.3	B			
2nd St & Lowry Ave	Signal	EB	73.2	E	20.1	C	11.3	B	48.8	D	
		WB	92.5	F	77.9	E	56.6	E			
		NB	49.9	D	48.0	D	47.9	D			
		SB	30.2	C	15.9	B	20.2	C			
Parkway Drive & Dowling Avenue	Side Street Stop	EB	9.0	A	2.1	A	5.2	A	4.1	A	
		WB	-	-	-	-	-	-			
		NB	2.6	A	0.9	A	-	-			
		SB	-	-	0.5	A	0.3	A			
33rd Avenue/Parkway Drive & Parcel 4 & 5 Access	Side Street Stop	EB	2.2	A	0.8	A	-	-	1.5	A	
		WB	-	-	0.3	A	-	-			
		NB	-	-	-	-	-	-			
		SB	-	-	-	-	2.8	A			
Parkway Drive & Parcel 1a Access	Side Street Stop	EB	-	-	-	-	2.2	A	2.0	A	
		WB	-	-	-	-	-	-			
		NB	1.9	A	-	-	-	-			
		SB	-	-	-	-	-	-			
Parkway Drive & Parcel 1b Access	Side Street Stop	EB	-	-	-	-	2.2	A	1.9	A	
		WB	-	-	-	-	-	-			
		NB	2.3	A	1.1	A	-	-			
		SB	-	-	0.3	A	-	-			
Parkway Drive & Parcel 2 Access	Side Street Stop	EB	-	-	-	-	-	-	0.4	A	
		WB	3.8	A	-	-	2.6	A			
		NB	-	-	0.3	A	0.3	A			
		SB	1.9	A	0.2	A	-	-			
Parkway Drive & Parcel 3 Access	Side Street Stop	EB	4.6	A	2.8	A	1.9	A	0.6	A	
		WB	0.4	A	-	-	0.1	A			
		NB	-	-	0.1	A	-	-			
		SB	-	-	0.8	A	-	-			
Parkway Drive & Parcel 4 Access	Side Street Stop	EB	4.4	A	-	-	2.8	A	1.8	A	
		WB	-	-	-	-	-	-			
		NB	2.7	A	0.6	A	-	-			
		SB	-	-	0.2	A	0.1	A			
Parkway Drive & Parcel 5 Access	Side Street Stop	EB	4.3	A	-	-	2.7	A	2.3	A	
		WB	-	-	-	-	-	-			
		NB	1.5	A	0.1	A	-	-			
		SB	-	-	0.2	A	0.1	A			
Washington Ave & Parcel 7a & 6a Access	Side Street Stop	EB	58.3	F	-	-	41.9	E	10.2	B	
		WB	47.2	E	-	-	42.9	E			
		NB	9.8	A	9.1	A	5.6	A			
		SB	9.8	A	3.1	A	2.9	A			
Washington Ave & Parcel 7b & 6b Access	Side Street Stop	EB	43.8	E	-	-	21.4	C	7.5	A	
		WB	57.7	F	-	-	63.1	F			
		NB	8.0	A	5.3	A	3.7	A			
		SB	9.8	A	2.5	A	2.1	A			

Note: delays in excess of 100 seconds per vehicle are reported as "100+"



## MEMORANDUM

**Date:** April 7, 2021

**To:** Brandon Champeau  
Senior Vice President – Commercial Development  
United Properties

**From:** JoNette Kuhnau, P.E.  
Jacob Rojer, P.E.

**Subject:** Upper Harbor Terminal Redevelopment – Parking Study  
Minneapolis, Minnesota

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### Introduction

United Properties is preparing an Alternative Urban Areawide Review (AUAR) for the development of the Upper Harbor Terminal in Minneapolis, which is generally bounded by Dowling Avenue N and Lowry Avenue N to the north and south, and Interstate 94 and the Mississippi River to the west and east. The purpose of the parking study is to document the existing parking conditions in the study area and the proposed parking conditions of the development.

### Existing Conditions

Existing on-street parking supply was calculated using aerial imagery and existing parking-related signing to measure the number of parking spaces on public streets in the study area bounded by Washington Avenue, Lowry Avenue, 41<sup>st</sup> Avenue N, and the Mississippi River. **Table 1** documents the length of curb space where parking is allowed, along with the estimated number of parking spaces on each street segment. All the distance measurements were rounded to the nearest five feet, and the standard parking space size was assumed to be 20 feet.

Parking occupancy counts were collected during the weekday and weekend in February-March 2021 to determine the current parking demand for the on-street parking. Parking occupancy data was collected along the following street segments:

- Washington Avenue, between Lowry Avenue and 36<sup>th</sup> Avenue N<sup>1</sup>
- 2<sup>nd</sup> Street N, between Lowry Avenue and 36<sup>th</sup> Avenue N
- 34<sup>th</sup> Avenue N, between Washington Avenue and 2<sup>nd</sup> Street N
- 33<sup>rd</sup> Avenue N, between Washington Avenue and the train tracks
- 4<sup>th</sup> Street N/39<sup>th</sup> Avenue N, loop connected to Washington Avenue at each end

These locations are generally within ¼ mile of the proposed development.

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<sup>1</sup> Parking is not allowed on Washington Avenue between 36<sup>th</sup> Avenue N and 41<sup>st</sup> Avenue N/Lyndale Avenue N

**Table 1: Existing On-Street Parking Supply**

Roadway	Location	Parking Capacity (Feet)		Parking Capacity (Passenger Vehicles)	
		West	East	West	East
<b>NORTH-SOUTH STREETS</b>		<b>West</b>	<b>East</b>	<b>West</b>	<b>East</b>
Washington Avenue	Between 36 <sup>th</sup> Avenue N and 34 <sup>th</sup> Avenue N	1215	1030	60	51
	Between 34 <sup>th</sup> Avenue N and 33 <sup>rd</sup> Avenue N	575	475	28	23
	Between 33 <sup>rd</sup> Avenue N and Lowry Avenue	530	425	26	21
2 <sup>nd</sup> Street N	Between 36 <sup>th</sup> Avenue N and 34 <sup>th</sup> Avenue N	780	0	39	0
	Between 34 <sup>th</sup> Avenue N and 33 <sup>rd</sup> Avenue N	395	40	19	2
	Between 33 <sup>rd</sup> Avenue N and Lowry Avenue	370	0	18	0
4 <sup>th</sup> Street N/ 39 <sup>th</sup> Avenue N	Loop connected to Washington Avenue at each end	800	700	40	35
<b>EAST-WEST STREETS</b>		<b>North</b>	<b>South</b>	<b>North</b>	<b>South</b>
34 <sup>th</sup> Avenue N	Between 2 <sup>nd</sup> Street N and Washington Avenue	110	40	5	2
33 <sup>rd</sup> Avenue N	Between 2 <sup>nd</sup> Street N and Washington Avenue	60	120	3	6
	East of N 2 <sup>nd</sup> Street	0	335	0	16
<b>Total On-Street Parking Supply (Passenger Vehicles)</b>				<b>394</b>	

**Table 2** documents the parking occupancy counts collected on each street segment. The counts are broken down by each side of the street and the type of vehicle. The following vehicle types were used for this study:

- Passenger vehicles – includes cars, vans, pickup trucks, and sport utility vehicles (SUVs)
- Medium truck – includes single-unit delivery and box trucks
- Semi-trucks – these vehicles were captured in two subcategories based on whether the semi-truck had an attached trailer (Semi+Trailer) or whether the semi cab was parked alone (no trailer)

**Table 2: Existing On-Street Parking Occupancy (Vehicles)**

Roadway	Location	Vehicle Type	Number of Vehicles							
			Weekday Mid-Day (12:00PM)		Weekday Late Night (10:00PM)		Saturday Mid-Day (12:00PM)		Saturday Evening (7:00PM)	
NORTH-SOUTH STREETS			West	East	West	East	West	East	West	East
Washington Avenue	Between 36th Avenue N and 34th Avenue N	Passenger Vehicles	3	7	2	9	0	8	7	7
		Medium Truck	1	0	2	3	3	2	3	2
		Semi+Trailer	2	3	3	1	8	1	2	1
		Semi Cab	0	0	0	0	3	0	0	0
	Between 34th Avenue N and 33rd Avenue N	Passenger Vehicles	3	8	3	6	6	9	3	8
		Medium Truck	5	0	5	0	1	0	3	0
		Semi+Trailer	0	0	1	0	1	0	1	0
		Semi Cab	0	0	2	0	0	0	0	0
	Between 33rd Avenue N and Lowry Avenue	Passenger Vehicles	0	2	1	2	1	6	2	2
		Medium Truck	0	0	0	0	0	0	0	0
		Semi+Trailer	2	0	0	0	1	0	0	0
		Semi Cab	2	0	1	0	0	0	1	0
2nd Street N	Between 36th Avenue N and 34th Avenue N	Passenger Vehicles	3	N/A	6	N/A	7	N/A	6	N/A
		Medium Truck	1		1		1		1	
		Semi+Trailer	3		3		2		2	
		Semi Cab	1		1		2		2	
	Between 34th Avenue N and 33rd Avenue N	Passenger Vehicles	17	0	10	0	13	1	10	0
		Medium Truck	0	0	0	0	0	0	0	0
		Semi+Trailer	0	0	0	0	0	0	0	0
		Semi Cab	0	0	0	0	0	0	0	0
	Between 33rd Avenue N and Lowry Avenue	Passenger Vehicles	7	N/A	1	N/A	1	N/A	1	N/A
		Medium Truck	0		0		0		0	
		Semi+Trailer	0		0		0		0	
		Semi Cab	0		0		0		0	
4th Street N/ 39th Avenue N	Loop connected to Washington Avenue at each end	Passenger Vehicles	0	0	0	1	0	0	0	0
		Medium Truck	0	0	0	0	0	0	0	0
		Semi+Trailer	0	0	0	0	0	0	0	0
		Semi Cab	0	0	0	0	0	0	0	0
EAST-WEST STREETS			North	South	North	South	North	South	North	South
34th Avenue N	Between 2nd Street N and Washington Avenue	Passenger Vehicles	2	1	1	1	1	2	2	1
		Medium Truck	0	0	0	0	0	0	0	0
		Semi+Trailer	0	0	0	0	0	0	0	0
		Semi Cab	0	0	0	0	0	0	0	0
33rd Avenue N	Between 2nd Street N and Washington Avenue	Passenger Vehicles	3	5	1	4	1	5	1	5
		Medium Truck	0	0	0	0	0	0	0	0
		Semi+Trailer	0	0	0	0	0	0	0	0
		Semi Cab	0	0	0	0	0	0	0	0
	East of N 2nd Street	Passenger Vehicles	N/A	9	N/A	7	N/A	10	N/A	9
		Medium Truck		1		1		1		1
		Semi+Trailer		2		1		0		0
		Semi Cab		0		0		0		0
<b>TOTAL</b>			93		80		97		83	



To calculate the percentage of curb space occupied by parked vehicles, the following lengths were assumed for each vehicle type:

- Passenger Vehicle – 20 feet
- Medium Truck – 40 feet
- Semi-truck and Trailer – 80 feet
- Semi-Cab – 30 feet

Based on the number of vehicles and their length, **Table 3** provides a summary of the percent of the curb space occupied in each block segment and time period. The existing parking occupancy are also shown graphicly on **Exhibits 1 - 4** for each time period.

**Table 3: Existing On-Street Parking Occupancy (Percent)**

Roadway	Location	Percent of Filled On-Street Space							
		Weekday Mid-Day (12:00PM)		Weekday Late Night (10:00PM)		Saturday Mid-Day (12:00PM)		Saturday Evening (7:00PM)	
<b>NORTH-SOUTH STREETS</b>		<b>West</b>	<b>East</b>	<b>West</b>	<b>East</b>	<b>West</b>	<b>East</b>	<b>West</b>	<b>East</b>
Washington Avenue	Between 36th Avenue N and 34th Avenue N	21%	37%	30%	37%	70%	31%	35%	29%
	Between 34th Avenue N and 33rd Avenue N	45%	34%	70%	25%	42%	38%	45%	34%
	Between 33rd Avenue N and Lowry Avenue	42%	9%	9%	9%	19%	28%	13%	9%
2nd Street N	Between 36th Avenue N and 34th Avenue N	47%	N/A	55%	N/A	51%	N/A	49%	N/A
	Between 34th Avenue N and 33rd Avenue N	86%	0%	51%	0%	66%	50%	51%	0%
	Between 33rd Avenue N and Lowry Avenue	38%	N/A	5%	N/A	5%	N/A	5%	N/A
4th Street N/ 39th Avenue N	Loop connected to Washington Avenue at each end	0%	0%	0%	3%	0%	0%	0%	0%
<b>EAST-WEST STREETS</b>		<b>North</b>	<b>South</b>	<b>North</b>	<b>South</b>	<b>North</b>	<b>South</b>	<b>North</b>	<b>South</b>
34th Avenue N	Between 2nd Street N and Washington Avenue	36%	50%	18%	50%	18%	100%	36%	50%
33rd Avenue N	Between 2nd Street N and Washington Avenue	100%	83%	33%	67%	33%	83%	33%	83%
	East of N 2 <sup>nd</sup> Street	N/A	90%	N/A	78%	N/A	72%	N/A	66%
<b>TOTAL</b>		<b>34%</b>		<b>30%</b>		<b>37%</b>		<b>28%</b>	

As shown in **Table 1**, the total on-street parking supply in the study area is 394 spaces based on passenger vehicles. The existing conditions parking counts show that 28 to 37 percent of the curb space is occupied throughout the day. The weekday late night and Saturday mid-day time periods had the highest parking occupancy. Between 12 and 19 percent of the curb space is occupied by trucks.

## Proposed Development

There are two development scenarios that are being considered for the Upper Harbor Terminal site. Scenario 1 represents the density of the development proposed in the Upper Harbor Coordinated Development Plan (December 2020 Draft for Public Comment). Scenario 2 represents the maximum density allowed under the Minneapolis 2040 Comprehensive Plan. Both the scenarios are analyzed as part of the AUAR. **Table 4** shows the proposed land uses and densities for the two development scenarios.

**Table 4: Development Scenarios**

Land Use	Scenario 1 (Coordinated Plan)	Scenario 2 (Comprehensive Plan)
Residential	522 Units	890 Units
Retail and Public Market	15,300 Square Feet	26,300 Square Feet
Restaurant	15,000 Square Feet	15,000 Square Feet
Office	31,000 Square Feet	62,000 Square Feet
Industrial	203,000 Square Feet	406,000 Square Feet
Event Hall	3,000 Square Feet	6,000 Square Feet
Community Garden	9,600 Square Feet	9,600 Square Feet
Music Venue	10,000-person capacity	10,000-person capacity
Public Park	19.5 Acres	19.5 Acres
Child Care	2,200 Square Feet	2,200 Square Feet
Health & Wellness	20,000 Square Feet	40,000 Square Feet
Youth Sports	40,000 Square Feet	80,000 Square Feet
Clinic	4,700 Square Feet	4,700 Square Feet
Flexible Community Space	6,000 Square Feet	12,000 Square Feet
Training Center	15,000 Square Feet	30,000 Square Feet

The parcel parking demand was calculated using the ITE Parking Generation Manual, 5<sup>th</sup> Edition. The land uses assumed ITE land use code (LUC), preliminary proposed parking supply in the development, and the calculated development parking demand for Scenario 1 is provided in **Table 5**. The Scenario 2 parking demand was also calculated. Scenario 2 does not have preliminary site plans for the comprehensive plan density, but it was assumed that the parking supply would remain the same as Scenario 1 as there are site restrictions that may not allow for additional parking to be built. **Table 6** shows the calculated supply and demand for Scenario 2.

**Table 5: Proposed Parking Supply and Calculated Demand – Scenario 1 (Coordinated Plan)**

Parcel	Development Land Use	Land Use/Density	Proposed Parking Stalls	Calculated Peak Parking Demand
1A	Senior Housing	ITE LUC 252 - Senior Housing - 90 Units	100	55
1B	Family Housing and Active Ground Floor	ITE LUC 221 - Mid-Rise Apartments - 78 Units	132	59
		ITE LUC 565 - Day Care - 2,200 Sq. Ft.		5
		ITE LUC 932 - High Turnover Restaurant - 15,000 Sq. Ft.		142
		ITE LUC 710 - Office - 1,500 Sq. Ft.		4
		<b>Subtotal</b>		<b>132</b>
2	Public Park	ITE LUC 411 - Public Park - 19.5 Acres	20	9
3	Concert Venue	10,000 Person Concert Venue	12*	N/A*
4	Food Production and/or Manufacturing	ITE LUC 110 - General Light Industrial 45,870 Sq. Ft.	71	31
		ITE LUC 710 - Office - 7,000 Sq. Ft.		17
		<b>Subtotal</b>		<b>71</b>
5	Manufacturing, Production, and Processing	ITE LUC 820 - Shopping Center - 4,300 Sq. Ft.	170	8
		ITE LUC 110 - General Light Industrial 111,950 Sq. Ft.		73
		ITE LUC 710 - Office - 11,000 Sq. Ft.		26
		<b>Subtotal</b>		<b>170</b>
6A	Mixed Income Housing and Community Center	ITE LUC 221 - Mid-Rise Apartments - 187 Units	120	140
		ITE LUC 495 - Community Center - 6,000 Sq. Ft.		12
		ITE LUC 630 - Clinic - 4,700 Sq. Ft.		18
		ITE LUC 710 - Office - 22,500 Sq. Ft.		54
		<b>Subtotal</b>		<b>120</b>
6B	Health, Wellness, and Fitness HUB	ITE LUC 495 - Community Center - 60,000 Sq. Ft.	194	124
7A	Unrestricted Housing and Parking	ITE LUC 221 - Mid-Rise Apartments - 167 Units	270	125
		ITE LUC 820 - Shopping Center - 11,000 Sq. Ft.		21
		270 Stall Parking Ramp		N/A
		<b>Subtotal</b>		<b>270</b>
7B	Future Flex Parcel	Short Term: 316 Parking Spaces Long Term: Housing	Short Term: 316 Long Term: TBD	Short Term: N/A Long Term: TBD
<b>Total Short Term – Scenario 1 (Coordinated Plan)</b>			<b>1405</b>	<b>923</b>
<b>Total Long Term – Scenario 1 (Coordinated Plan)</b>			<b>1089</b>	<b>923</b>

\* Concert venue parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs.



**Table 6: Proposed Parking Supply and Calculated Demand – Scenario 2 (Comprehensive Plan)**

Parcel	Development Land Use	Land Use/Density	Proposed Parking Stalls	Calculated Peak Parking Demand
1A	Senior Housing	ITE LUC 252 - Senior Housing - 152 Units	100	93
1B	Family Housing and Active Ground Floor	ITE LUC 221 - Mid-Rise Apartments - 131 Units	132	172
		ITE LUC 565 - Day Care - 2,200 Sq. Ft.		5
		ITE LUC 932 - High Turnover Restaurant - 15,000 Sq. Ft.		142
		ITE LUC 710 - Office - 3,000 Sq. Ft.		7
		<b>Subtotal</b>		<b>132</b>
2	Public Park	ITE LUC 411 - Public Park - 19.5 Acres	20	9
3	Concert Venue	10,000 Person Concert Venue	12*	N/A*
4	Food Production and/or Manufacturing	ITE LUC 110 - General Light Industrial 111,000 Sq. Ft.	71	72
		ITE LUC 710 - Office - 17,100 Sq. Ft.		41
		<b>Subtotal</b>		<b>71</b>
5	Manufacturing, Production, and Processing	ITE LUC 820 - Shopping Center - 4,300 Sq. Ft.	170	8
		ITE LUC 110 - General Light Industrial 288,000 Sq. Ft.		187
		ITE LUC 710 - Office - 26,900 Sq. Ft.		64
		<b>Subtotal</b>		<b>170</b>
6A	Mixed Income Housing and Community Center	ITE LUC 221 - Mid-Rise Apartments - 321 Units	120	421
		ITE LUC 495 - Community Center - 12,000 Sq. Ft.		25
		ITE LUC 630 - Clinic - 4,700 Sq. Ft.		18
		ITE LUC 710 - Office - 45,000 Sq. Ft.		108
		<b>Subtotal</b>		<b>120</b>
6B	Health, Wellness, and Fitness HUB	ITE LUC 495 - Community Center - 120,000 Sq. Ft.	194	248
7A	Unrestricted Housing and Parking	ITE LUC 221 - Mid-Rise Apartments - 286 Units	270	375
		ITE LUC 820 - Shopping Center - 22,000 Sq. Ft.		43
		270 Stall Parking Ramp		N/A
		<b>Subtotal</b>		<b>270</b>
7B	Future Flex Parcel	Short Term: 316 Parking Spaces Long Term: Housing	Short Term: 316 Long Term: TBD	Short Term: N/A Long Term: TBD
<b>Total Short Term – Scenario 2 (Comprehensive Plan)</b>			<b>1405</b>	<b>2038</b>
<b>Total Long Term – Scenario 2 (Comprehensive Plan)</b>			<b>1098</b>	<b>2038</b>

\* Concert venue parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs.

It should be noted that peak parking demand for residential uses is overnight while retail/office/industrial peak parking demand typically occurs during the day/early evening. The anticipated parking demand in Tables 5 and 6 show the peak parking demand for each land use without accounting for time-of-day or potential shared parking between uses. It should also be noted that no reductions were made to the parking demand to account for mode share goals. Therefore, the calculated peak parking demand represents a worst-case scenario in terms of the potential number of parked vehicles.

Concert venue parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs. Therefore, parking demand for this parcel is not included in the calculations.

As noted previously, the calculated parking demand does not account for shared parking between compatible land uses. For example, the residential parking demand on parcel 6A would typically occur at night while the office and clinic land uses on parcel 6A would likely have peak parking demand during the day. In addition, the development is proposed to occur in two phases. During the first phase, parcel 7b may be used for additional parking supply if needed, providing approximately 316 surface spaces. Interim improvements would be required to this parcel to function as a parking lot. The calculation of shared use parking demands and calculation of city code parking requirements should be completed as part of the City's site plan review process.

For Scenario 1 (Coordinated Plan), the overall development provides more parking spaces than the calculated demand. In addition, each individual parcel provides adequate parking to meet the calculated parking demand within the parcel, except for Parcels 1B and 6A.

- The anticipated parking demand at Parcel 1B is greater than the projected supply.
- Parcel 6A – the parcels peak parking demand is greater than the projected parking on the site. There is a potential for shared parking as the residential peak parking demand is overnight while the community center, office, and clinic land uses have their peak parking demand during the day.

For Scenario 2 (Comprehensive Plan), the overall parking demand is more than double the proposed parking supply. As previously mentioned, Scenario 2 does not have preliminary site plans for the comprehensive plan density, but it was assumed that the parking supply would remain the same as Scenario 1 as there are site restrictions that may not allow for additional parking to be built. If additional parking is not provided, all parcels will not have adequate parking except for Parcels 1A and 2. If parcels on the UHT site are developed at the Scenario 2 density, parking and travel demand management measures should be reevaluated for the parcels.

The existing on-street parking supply is not proposed to be impacted by the proposed Upper Harbor Terminal development. The development has not assumed that existing on-street parking will be used to meet parking demands of the development.

## **Conclusions**

The proposed Upper Harbor Terminal development in Minneapolis is generally bounded by Dowling Avenue N and Lowry Avenue N to the north and south, and Interstate 94 and the Mississippi River to the west and east. The purpose of the parking study is to document the existing parking conditions and the proposed parking conditions with the development.

The existing on-street parking supply in the study area totals 394 spaces based on passenger vehicles. The existing conditions parking counts show that 28 to 37 percent of the curb space is occupied throughout the day. The weekday late night and Saturday mid-day time periods had the highest parking occupancy. Between 12 and 19 percent of the curb space is occupied by trucks.

The anticipated parking demand for each development parcel under Scenario 1 was calculated and compared to the preliminary parking supply. For Scenario 1 (Coordinated Plan), each individual parcel provides adequate parking supply to meet the parking demand within the parcel, except for Parcels 1B and 6A. However, the calculated parking demand does not account for shared parking between compatible land uses and the parking demand was not reduced based on mode share goals. In addition, parcel 7b may be used for additional parking supply during Phase 1 of the development, if needed, providing approximately 316 surface spaces. Interim improvements would be required to this parcel to function as a parking lot.

For Scenario 2 (Comprehensive Plan), the overall parking demand is more than double the proposed parking supply. All parcels will not have adequate parking except for Parcels 1A and 2. If parcels on the UHT site are developed at the Scenario 2 density, parking and travel demand management measures should be reevaluated for the parcels.

The calculation of shared use parking demands and calculation of city code parking requirements should be completed as part of the City's site plan review process.

The existing on-street parking supply is not proposed to be impacted by the proposed Upper Harbor Terminal development. The development has not assumed that existing on-street parking will be used to meet parking demands of the development.

## **ATTACHMENTS**

1. Exhibits
2. Site layout and Phasing



**ATTACHMENT 1. EXHIBITS**





**LEGEND**

- Proposed Site Location
- Parcel Number
- 0% - 50% Parking Occupied
- 50% - 75% Parking Occupied
- 75% - 90% Parking Occupied
- 90% - 100% Parking Occupied

**FIGURE 1**  
**EXISTING STREET PARKING CONDITIONS**  
**WEEKDAY MID-DAY**



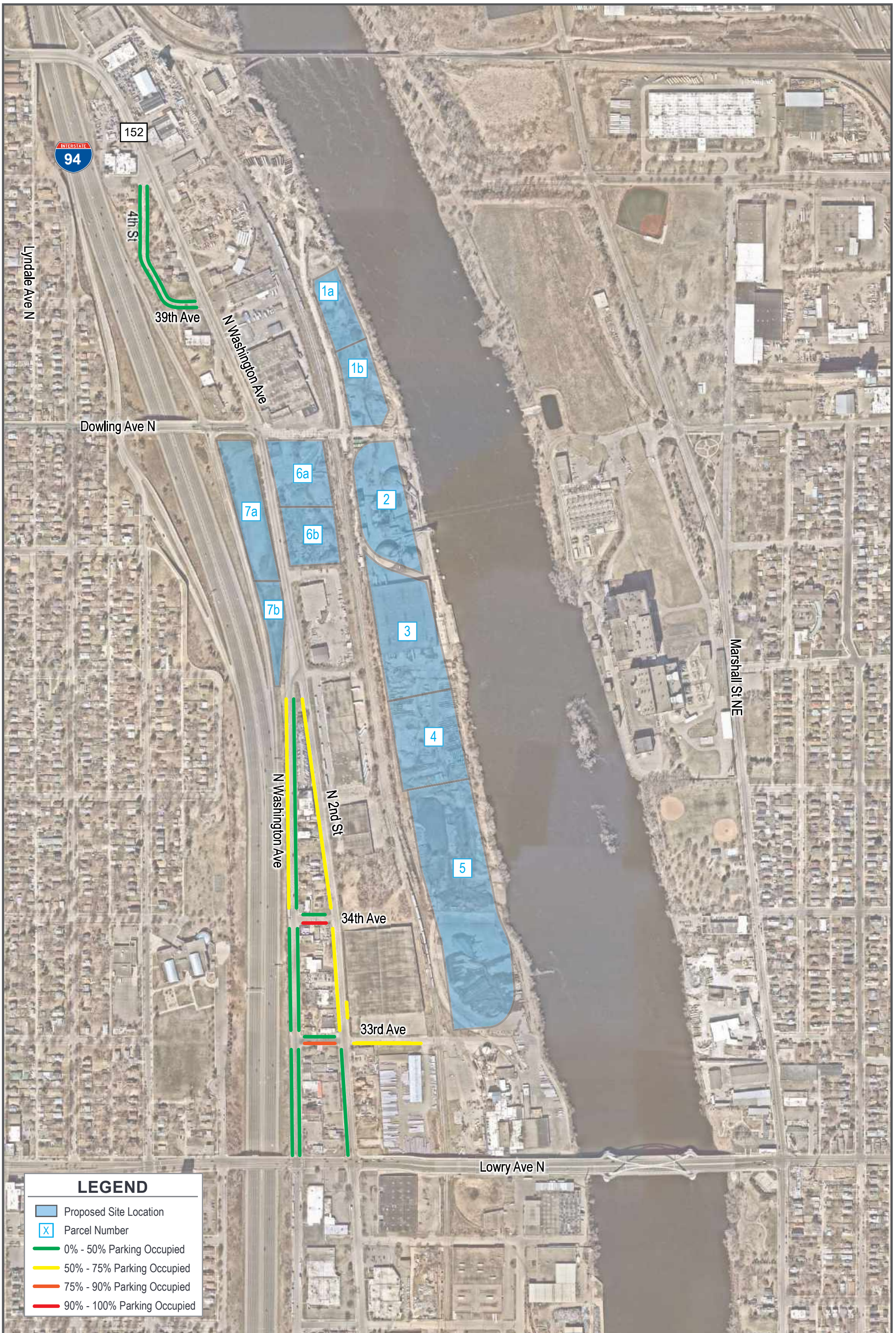


**LEGEND**

- Proposed Site Location
- Parcel Number
- 0% - 50% Parking Occupied
- 50% - 75% Parking Occupied
- 75% - 90% Parking Occupied
- 90% - 100% Parking Occupied

**FIGURE 2**  
**EXISTING STREET PARKING CONDITIONS**  
**WEEKDAY LATE NIGHT**









**LEGEND**

- Proposed Site Location
- Parcel Number
- 0% - 50% Parking Occupied
- 50% - 75% Parking Occupied
- 75% - 90% Parking Occupied
- 90% - 100% Parking Occupied

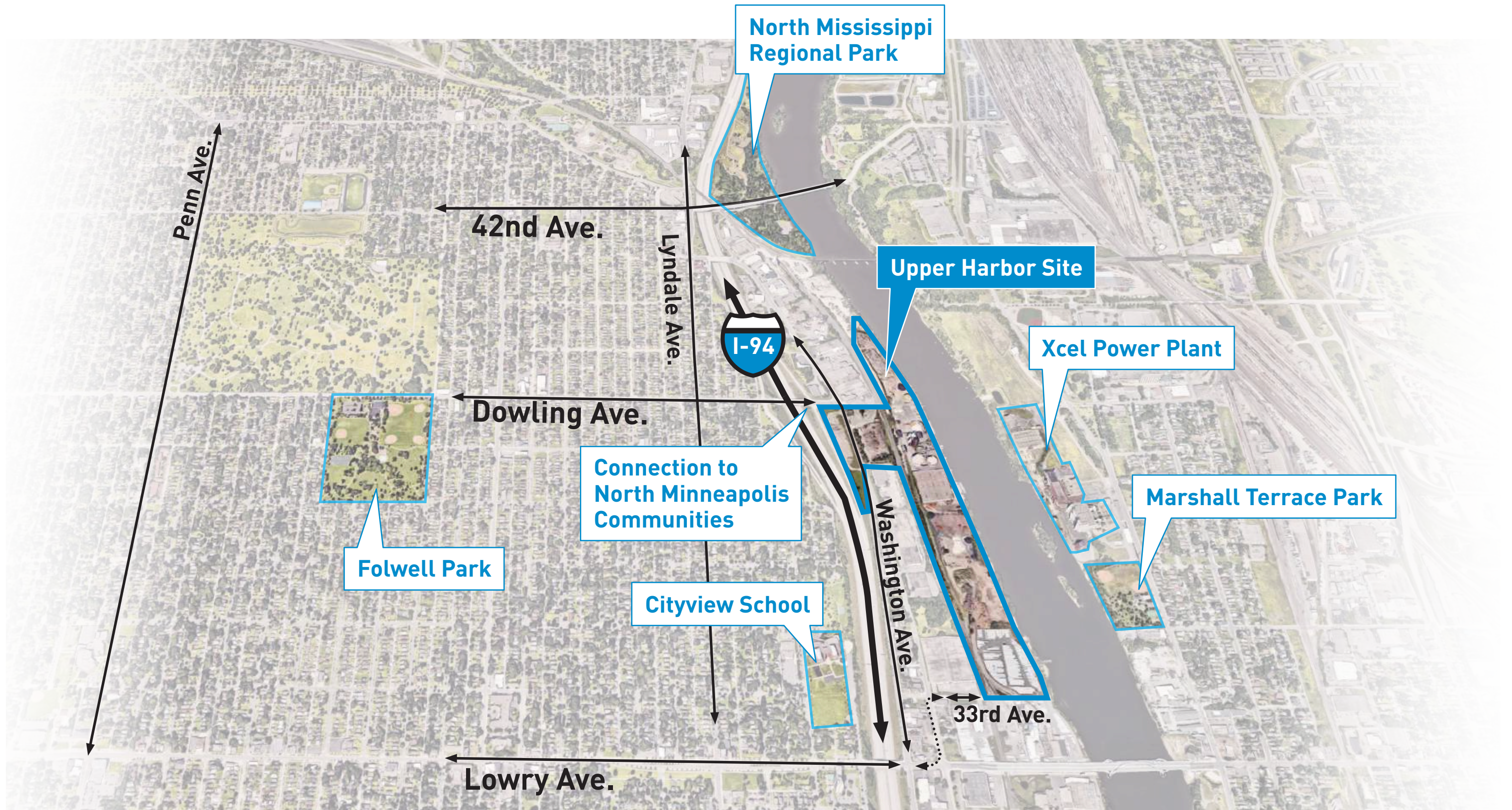
**FIGURE 4**  
**EXISTING STREET PARKING CONDITIONS**  
**WEEKEND EVENING**





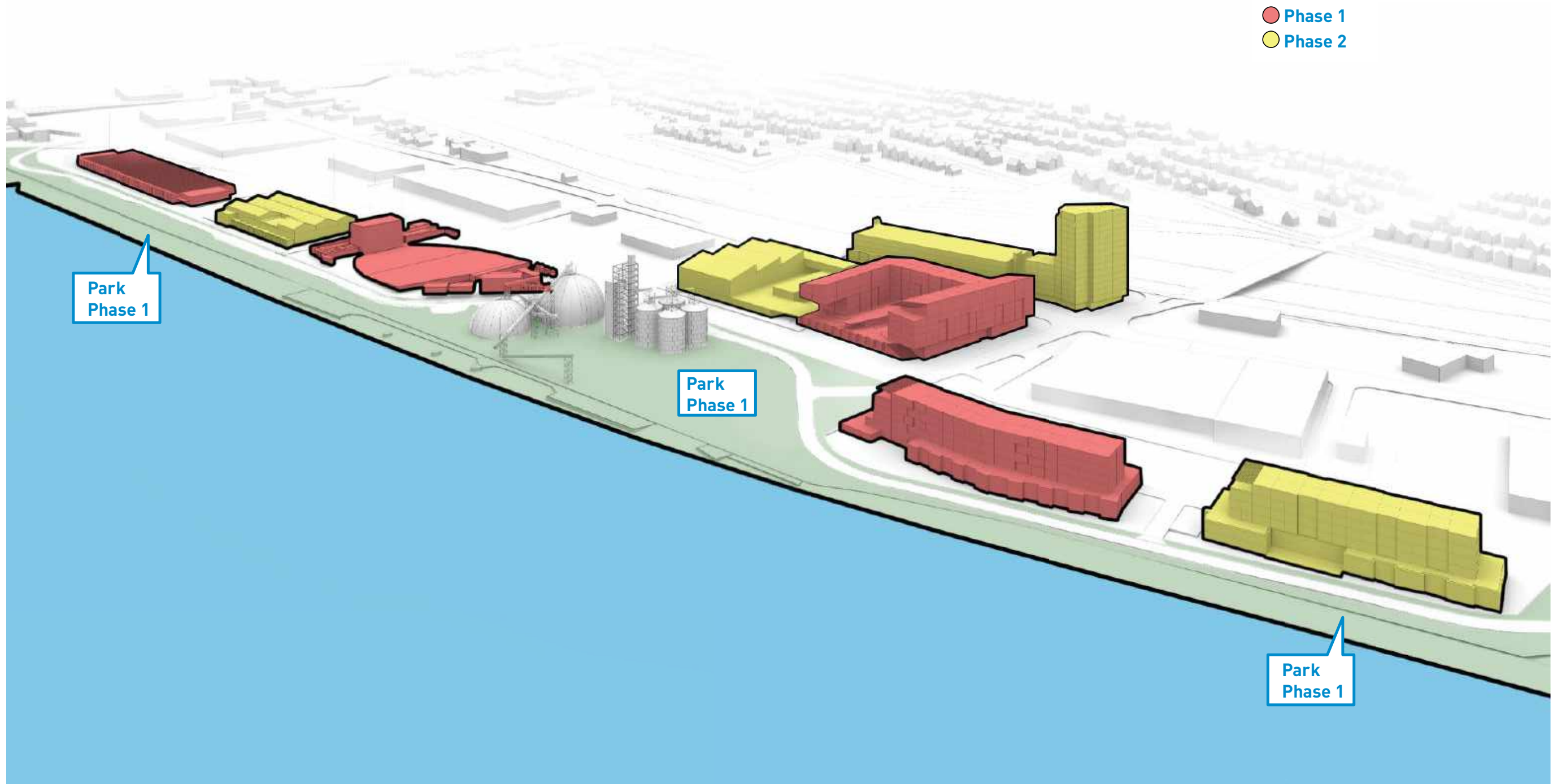
## **ATTACHMENT 2. SITE LAYOUT AND PHASING**





**Location:** Upper Harbor Terminal and Surrounding Neighborhood





**The Coordinated Plan:** Phasing Plan

# Appendix H:

## Responses to Agency and Public Comments on the Draft AUAR



## Introduction

Pursuant to Minnesota Rules, part 4410.3610, subpart 5c, the Responsible Governmental Unit (RGU) shall revise the environmental analysis document based on comments received during the comment period. The RGU shall include in the document a section specifically responding to each timely, substantive comment received that indicates in what way the comment has been addressed.

The 30-day Alternative Urban Areawide Review (AUAR) comment period began May 25, 2021, and comments were accepted through June 24, 2021. Five comment letters were received from government agencies and 21 public comments were received. Responses to those comments are included in the following sections, and copies of the comment letters are included in Appendix I.

## Agency Comments

### HENNEPIN COUNTY

Comment	Response
<p>It was noted that the following intersection movements get significantly worse in the build scenarios. These LOS changes should be looked at further to mitigate the significant LOS increases in these movements.</p> <p><u>2024 Build Coordinated Plan w/ Phase A Mitigation PM Peak</u></p> <ul style="list-style-type: none"> <li>Washington &amp; Lowry: EB left</li> </ul> <p><u>2024 Build Comprehensive Plan w/ Phase A Mitigation PM Peak</u></p> <ul style="list-style-type: none"> <li>Washington &amp; Lowry: EB left</li> </ul> <p><u>2040 Build Comprehensive Plan w/ Phase B Mitigation PM Peak</u></p> <ul style="list-style-type: none"> <li>Dowling &amp; Washington: SB movements</li> <li>2nd &amp; Lowry: WB left</li> </ul>	<p>The City will continue to work with Hennepin County on the public infrastructure design and site access, as well as review and implement the mitigation strategies outlined in the Final AUAR. The Mitigation Plan for this development seeks to balance the need for motor vehicle mobility with the City’s adopted policies to expand non-motorized transportation with designs that promote safe and comfortable travel.</p>
<p>Recognizing the need to coordinate access, we feel there is a need to discuss specific site access when United Properties (the developer) is in the concept phase for development plans. Of note, since we will need to serve 7a and 7b via Washington, generally speaking, the further from the Dowling intersection the better for a single shared driveway (at least 300’ from signal). Other considerations include:</p> <ul style="list-style-type: none"> <li>Will a RIRO access sufficient?</li> <li>Turn lanes should be considered essential option for any agreed upon movements.</li> </ul>	<p>Specific site plans including site access for Parcels 7a and 7b have not been finalized. The City will continue to work with Hennepin County through the Preliminary Development Review (PDR) process to evaluate the site plans and access.</p>

Comment	Response
<p>Seeing that Phase B is 20-30 years out, if it occurs, county staff would like to retain space available to leave option to add right turn lane(s) in the future (for EBR along Dowling and NBR along Washington Aves). This should include wider boulevard, and appropriately placing bikeway / sidewalk to allow for right turn lane addition in future if needed. This suggests any agreed upon access(es) should be outside of this area of influence.</p> <ul style="list-style-type: none"> <li>• Similarly, we would suggest that buildings, trees, sidewalks and bikeways be placed such that the right turn lane(s) can be added without impacting these items.</li> </ul>	<p>The City will continue to work with Hennepin County on the public infrastructure design and site access. The need for Phase B mitigation is not expected to be triggered by the land uses and densities in Scenario 1 but could be triggered by the land uses and densities in Scenario 2. Phase B mitigation would not be triggered based only on background traffic growth. The Mitigation Plan for this development seeks to balance the need for motor vehicle mobility with the City’s adopted policies to expand non-motorized transportation with designs that promote safe and comfortable travel.</p>

**METROPOLITAN COUNCIL**

Comment	Response
<p><b>Item 9. Land Use – Comprehensive Plan</b></p>	
<p>Most of the AUAR Study Area falls within Transportation Analysis Zones (TAZ) #1189 and 1190. Should development in the study area proceed based on Scenario 1, Council staff would recommend the following forecast changes through a future comprehensive plan amendment.</p> <ul style="list-style-type: none"> <li>• Communitywide forecast increase of +500 households and +1000 population, with 50% allocation of each of TAZ #1189 and TAZ #1190.</li> <li>• Communitywide forecast increase of +200 jobs allocated to TAZ #1190.</li> </ul> <p>The City has received and acknowledged this comment earlier, during the Scoping AUAR process. Please contact Council Research staff to discuss this or other scenarios.</p>	<p>Comment noted. The City will coordinate with the Metropolitan Council regarding the TAZ forecasts for the area. If any modifications are needed, those will be coordinated with the Metropolitan Council directly.</p>

Comment	Response
<p><b>Item 11. Water Resources – Wastewater</b></p>	
<p>Metropolitan Council Interceptor (1-MN-310) runs from north to south through the Study Area. The interceptor was built in 1936 and is a 54-inch Reinforced Concrete Pipe. From the midpoint of Parcel 4 and points north, Interceptor 1-MN-310 is located underneath the CP Rail corridor and east of the main rail. It shifts to the west side of the rail corridor in the southern part of Parcel 4 and in Parcel 5.</p> <p>Sanitary sewer services for all the parcels, except for Parcels 6 and 7, will connect directly into Interceptor 1-MN-310. Depending on the final layout of the development, sanitary sewer service would occur as follows:</p> <ul style="list-style-type: none"> <li>• Parcels 4 and 5 will be required to connect directly to Interceptor 1-MN-310.</li> <li>• Parcel 6 will be evaluated to either utilize an existing connection into the interceptor pipe or will connect into the City sanitary sewer underneath Washington Avenue North.</li> <li>• Parcel 7 will connect to the existing sanitary sewer under Washington Avenue North.</li> </ul> <p>No land uses that would generate wastewater requiring pretreatment are anticipated for either scenario. Based on the Metropolitan Council Environmental Services (MCES) Sewer Availability Charge (SAC) program, the estimated daily flow for Scenarios 1 and 2 are 0.234 million GPD and 0.364 million GPD, respectively.</p> <p>There are specific processes that must be followed before encroachment on our property or a direct connection to our Interceptor can be made. Before encroachment on our property an Encroachment Agreement will be required; and before direct connection to the Metropolitan Council Interceptor a Sewer Connection Permit will be required. To obtain a Sewer Connection Permit or an Encroachment Application, contact Tim Wedin, Interceptor Engineering Assistant Manager (651-602-4571) at MCES.</p>	<p>The AUAR identifies the Metropolitan Council interceptor located within the study area. An Encroachment Agreement and a Sewer Connection Permit will be obtained by the developer/permit holder. The permits and approvals table in the Final AUAR has been revised accordingly.</p>



Comment	Response
<b>Item 11. Water Resources – Stormwater</b>	
<p>Council staff commend the consideration of both individual and district stormwater management systems for the Study Area. These include the application bioretention basins within the right-of-way, utilization of green space as surface basins, and the use of underground or above ground infiltration / filtration systems. Council staff also recommend the integration of intensive green roof systems including over proposed surface parking lots.</p>	<p>Comment noted.</p>
<b>Item 16. Air</b>	
<p>Council staff recommend the adoption and integration of either electric vehicle charging infrastructure or electric vehicle-ready charging infrastructure. Guidance can be found in the Great Plains Institute’s “Becoming Electric Vehicle Ready” guideline document.</p> <p>Council staff also recommend planning for the integration of multi-modal, shared electric vehicle hubs throughout the AUAR Study Area, including electric bikes, scooters, automobiles, and shuttles.</p> <p>Implementation of the approaches above would be most cost-effective at the time of development. It would also support the City’s Transportation Action Plan, which identifies a mode shift goal of three of every five trips being made by walking, biking, or transit by 2030. It would also prioritize the “Environmental Justice Measures” mentioned multiple times in the AUAR by reducing “the energy, carbon, and health impacts of transportation through reduced single-occupancy vehicle trips and phasing out of fossil fuel vehicles” (Policy 16 of the Minneapolis 2040 Plan).</p> <p>Implementation of the approaches above would also support the following specific Policy Action Steps in the City’s 2040 comprehensive plan:</p> <ul style="list-style-type: none"> <li>• Policy 16: Environmental Impacts of Transportation, Action Step G “Explore incentives and requirements for electric vehicle charging infrastructure in new development and in the public right-of-way.”</li> </ul>	<p>Comment noted. Implementation of electric vehicle charging stations and shared mobility hubs will be considered as site and building design advances. The <i>Upper Harbor Coordinated Development Plan</i> (Final Draft, February 2021) includes strategies aimed at promoting bicycle and pedestrian connections from the site to the adjacent neighborhoods and will continue to work with Metro Transit to expand new local, limited stop, and/or express service to the Upper Harbor Terminal site to encourage and support multi-modal access.</p>

Comment	Response
<ul style="list-style-type: none"> <li>• Policy 24: Shared Mobility, Action Step A “Prioritize innovation through pilots and experimentation, as well as design, regulatory, and policy initiatives.”</li> <li>• Policy 25: Innovations in Transportation and Infrastructure, Action Step D “Encourage and support electric vehicles by prioritizing associated public and private infrastructure including in the right of way and ensure that electric vehicle charging infrastructure incentivizes the use of renewable generated electricity.”</li> </ul>	
<p><b>Item 20. Other Potential Environmental Effects</b></p>	
<p><u>Sustainability:</u> Council staff recommend integrating passive heating and cooling design elements into the design and operations of future buildings in the Study Area.</p> <p>Council staff also recommend the integration of rooftop solar, building-integrated solar, and/or intensive green roof systems at each new building constructed on site, as well as above any surface parking lots. These measures could result in energy efficiency gains, increase habitat, support renewable energy generation goals, increase stormwater retention and detention capacity and function, create rooftop recreation and/or amenity space, and/or mitigate existing and/or future urban heat island effects.</p> <p>Council staff also recommend exploring a district heating and cooling system to maximize the efficiency of HVAC delivery, minimize the potential for energy burden, minimize the carbon footprint of the project, and increase operational resilience for the project.</p>	<p>Comment noted. The <i>Upper Harbor Coordinated Development Plan</i> (Final Draft, February 2021) includes goals and objectives related to sustainability such as:</p> <ul style="list-style-type: none"> <li>• Designing the site to increase native vegetation and protect natural, open, green, and pollinator habitat</li> <li>• Provide energy efficient housing that complies with Minneapolis Unified Housing Plan</li> <li>• Complete and make public a feasibility study for achieving Net Zero and Carbon Free projects for each development parcel</li> <li>• Achieve LEED for Communities Silver certification for the overall project</li> <li>• Enroll 50% of multifamily buildings in the energy efficiency programs</li> <li>• Lower energy costs to businesses that relocate to UHT</li> </ul>

Comment	Response
<b>Appendix F. Traffic Analysis Report</b>	
<p>Phase A Mitigation Plan states, as one measure, “Work with Metro Transit to bring convenient and frequent transit service closer to the site”. Metro Transit continues to coordinate with the project to ensure that site designs accommodate potential future transit service. Service details such as potential frequency are not determined at this time, and Metro Transit will monitor conditions and opportunities for potential service as they develop.</p>	<p>Comment noted.</p>

**MINNESOTA DEPARTMENT OF TRANSPORTATION (MnDOT)**

Comment	Response
<b>Traffic</b>	
<p>MnDOT is concerned about the possibility of queues extending to mainline I-94. Please provide details for event transportation management plan and associated traffic modeling files for MnDOT review. Were plans for raised crosswalks across I-94 ramps at Dowling Ave considered in the traffic modeling? How will traffic operations at I-94 and Dowling Ave be impacted?</p>	<p>A full Event Transportation Management Plan (ETMP) will be developed by First Avenue and the City as part of the site design process for the community performing arts center. Event management strategies that reduce or eliminate queuing onto mainline I-94 would be considered. The Phase 1 ETMP, which is posted on the project website, identifies MnDOT as a partner in developing, implementing, evaluating and refining the full ETMP.</p> <p>The traffic modeling completed for the AUAR was provided to MnDOT in July 2020. The traffic modeling did not show queues extending onto mainline I-94 in Scenario 1 during weekday AM and PM peak hours (no event). The Phase B mitigation measures were identified to address the queuing issues identified in Scenario 2, which assumed increased land use density.</p> <p>The traffic modeling assumed typical vehicle speeds for vehicles turning off the I-94 ramp onto Dowling Avenue: 15 mph for left turns and 9 mph for right turns. The traffic models were previously provided to MnDOT for review. The</p>



Comment	Response
	City will continue to work with MnDOT on the public infrastructure design and traffic operations.
<b>Pedestrian and Bicycle</b>	
MnDOT supports the improvements to the bicycle, pedestrian, and transit access to and through the site as a means to minimize/mitigate project related transportation effects. Metro Ped and Bike will continue to work with the City to ensure safe and comfortable transportation for non-motorized users.	Comment noted.

**MINNESOTA POLLUTION CONTROL AGENCY (MPCA)**

Comment	Response
<b>Water Resources (Item 11)</b>	
<p><u>Wastewater:</u></p> <ul style="list-style-type: none"> <li>• Design wastewater flow calculations should be included for average daily flow and peak flow.</li> <li>• The total number of each development type and the design flow per unit should be itemized. Table 1 is good basic summary of the types of development that should be itemized or, a summary table of the Metropolitan Council Environmental Services (MCES) Sewer Access Charge determination could be included.</li> <li>• The general sewer connection locations to the city sewer, direction of flow, and the sewer route to the wastewater treatment plant should be mapped.</li> <li>• A discussion of both the city and MCES sewer system capacity and capability of handling future flows from the Project and other future flows from area tributary to the regional sewer systems should be included.</li> </ul>	The design wastewater flow calculations have been updated in the Final AUAR. Additional information for the sanitary sewer has been included in Appendix C.

Comment	Response
<p><u>Stormwater:</u></p> <ul style="list-style-type: none"> <li>The Draft AUAR stormwater section should include a description of additional stormwater Best Management Practices (BMPs) required due to the Mississippi and Shingle Creek water impairments that will apply to the entire site. These include stabilizing inactively worked soils within 7 days and providing temporary sediment basins for 5 acres that will drain to a common location. In addition, redundant down gradient sediment control BMPs will be required for disturbance within 50 feet of the surfaces waters. The floating curtain mentioned in the Draft AUAR can be utilized as a sediment control BMP for work in water, but is not considered a downgradient sediment control BMP for soil disturbances on the land.</li> <li>Stormwater reuse is highly encouraged as part of the permanent management of stormwater to reduce flows to the Mississippi. In addition, other means of achieving volume reduction requirements of the National Pollutant Discharge Elimination System/State Disposal System General Construction Stormwater permit could include use of pervious pavements, infiltration trenches in parking areas, tree boxes and green roofs, which also help reduce energy use. The use of bioinfiltration areas, planted with native vegetation, would also be encouraged. Soil testing is needed to ensure that soil contamination will not prohibit the use of infiltration basins. Please direct questions regarding CSW Permit requirements to Roberta Getman at 507-206-2629 or roberta.getman@state.mn.us.</li> </ul>	<p>The stormwater section has been updated in the Final AUAR to include additional best management practices as outlined by the MPCA.</p>

Comment	Response
<p><u>Wetlands:</u></p> <p>No wetlands are located within the Draft AUAR study area; therefore, no impacts are anticipated. However, Table 4 includes the US Army Corps of Engineers Section 404 permit if needed. If the 404 Permit is required, the MPCA 401 certification must also be included. A Section 401 water quality certification is required for any project with a federally issued license or permit that authorizes an activity that results in a discharge to a Water of the United States. The 401 certification becomes an enforceable component of the associated federal license or permit – issued under either Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. The scope of a Clean Water Act Section 401 certification is limited to assuring that a discharge from a federally licensed or permitted activity will comply with water quality requirements. Revisions to the 401 rule became effective in September 2020 and now require applicants to request a pre-filing meeting from the certifying agency at least 30 days prior to submitting a 401 water quality certification request. The MPCA is the certifying authority in the State of Minnesota.</p> <p>Also, please keep in mind that in accordance with Minnesota Statutes, the Upper Harbor Terminal project should include the MPCA as a regulator of all surface waters as defined by Minn.Stat. § 115.01 subd. 22. Waters of the state. "Waters of the state" means all streams, lakes, ponds, marshes, watercourse, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. Even though there maybe surface waters that are determined to be USACE non-jurisdictional, or exempt from WCA, all surface waters are regulated by the MPCA and any surface water impact needs to be described in the application, may require mitigation.</p>	<p>The Final AUAR has been updated to include a Section 401 certification in the list of permits needed.</p>



Comment	Response
<b>Noise (Item 17)</b>	
<p>The MPCA appreciates the opportunity to review the discussion of noise at the proposed Project site. Based on the modeling conducted by AECOM and the proposed noise attenuation techniques to be incorporated into new residences and recreational areas, as well as mitigation techniques identified to reduce impacts to existing residents, it seems unlikely that there will be any long-term noise impacts if the Project moves forward as described. The MPCA does, however, want to address several points made in the Draft AUAR regarding the build scenarios 1 and 2.</p> <p>The Project proposers have relied on Minneapolis Ordinances 389.60 and 389.105 as the basis of their assessment of noise impacts, particularly regarding the proposed Community Performing Arts Center (CPAC), stating that “[p]rovided the [venue] receives a permit for sound amplifying equipment, the venue will be exempt from the Section 389.60 noise limits and instead will be subject to Section 389.105 of the City Code” (p. 80). Ordinance 389.105 applies specifically to permitting for amplified sound equipment. The amplified noise ordinance limits sound measured at 50 feet from the source to 90dBA for “standard” and “large block” event permits. The state noise standards contained in Minn. R. 7030 still apply to the Project, regardless of Minneapolis code.</p>	<p>According to the noise assessment included in Appendix F, the proposed community performing arts center complies with the permitted limits of the City’s noise ordinance, which match the State’s limits defined in Minnesota Rules, part 7030.0050.</p>

**NATIONAL PARK SERVICE – MISSISSIPPI NATIONAL RIVER AND RECREATION AREA**

Comment	Response
<p>We appreciate that the City of Minneapolis and the development team acknowledged comments from the AUAR Scoping Document and incorporated those into the Draft AUAR. Inclusion of the recently adopted Mississippi River Corridor Critical Area (MRCCA) ordinances has also made great strides in caring for the Mississippi River and river-dependent resources. While the inclusion of these elements has been an improvement, we still have</p>	<p>Comment noted.</p>

Comment	Response
<p>recommendations for the Draft AUAR we would like to see moving forward with the UHT Development.</p>	
<p><b>Building Heights:</b></p> <p>While the building heights discussed in the Draft AUAR are mostly in line with the MRCCA Urban Mix District maximums, we would like to see all structures at 65’ or less in maximum height. While the separation from the river for the proposed structure in parcel 6A (75’ height) does decrease its mass from the river, it is still 10’ taller than the maximum for the Urban Mixed District. In all other Urban Mixed Districts of MRCCA in Minneapolis the city has established sub-districts based on proximity to the Mississippi River and park spaces. This was to decrease heights and building impacts closer to these public spaces. The proposed development at UHT would benefit greatly from that same structure requirements and should at least follow the maximum heights allowed within the Urban Mixed District where applicable in the UHT development area.</p> <p>In addition to the heights, creative building design should be incorporated to minimize the massing of structures within the MRCCA, especially along the river and park spaces. Aspects listed in the Minneapolis MRCCA Overlay District Ordinance 551.1850(d)(3) should be incorporated into the design to decrease massing and negative impacts to public river corridor views within the area.</p>	<p>The AUAR discusses compatibility of the development scenarios with the MRCCA plan in Item 9 (Land Use). As stated in the AUAR, the City may pursue flexibility in building height and/or district designation in the MRCCA plan. The applicable developer will continue to work with the City to evaluate compatibility of the proposed development with the MRCCA policy that guides development. The proposed development will follow MRCCA policies, which identify landscaping requirements including any vegetative screening, structure orientation, creative building design, and structural tiering as strategies to minimize massing of structures along the river. The City will review the proposed developments to confirm they follow the MRCCA policies.</p> <p>The potential need for a conditional use permit or variance has been identified in the Mitigation Plan.</p>
<p><b>MRCCA Vegetation Removal Permit:</b></p> <p>There are several portions of the Draft AUAR that state the Mississippi River shoreline would be reshaped to a less aggressive slope as part of the shoreline restoration process. This would take place in the Shore Impact Zone and would require a MRCCA Vegetation Removal Permit and the City of Minneapolis would need to approve a Vegetation Restoration Plan as part of this permit. This may be the first Vegetation Restoration Plan reviewed by the City of Minneapolis under the newly established MRCCA ordinance. Careful planning should be taken to rehabilitate the riverfront to protect what would</p>	<p>Comment noted. The MRCCA Vegetation Removal Permit is included in the table of anticipated permits and approvals in the AUAR. This information will be taken into consideration during the design of the shoreline restoration plans.</p>

Comment	Response
<p>be a significant portion of the nearly mile-long development site. Many Mississippi River communities suffer from shoreline erosion from river flooding and large rain events. Restoration of a robust natural shoreline along the Mississippi could be a guide to other communities to protect their shoreline using similar procedures.</p>	
<p>Cultural Resources and Historic Properties:</p> <p>The Mississippi NRRA appreciates the City’s March 24, 2020 recognition of the Upper Harbor Historic District’s (UHHD) National Register eligibility. Consistent with our agency’s December 30, 2020 correspondence, the UHHD is eligible for the National Register of Historic Places under Criteria A with Criterion Consideration G for significance in the last 50 years, and has a period of significance that extends from 1948 to 1992. Importantly the development of the UHHD in conjunction with the completion of the Upper Saint Anthony Falls Lock and Dam, and the larger 9-foot channel project on the Mississippi River expanded the head of navigation on the river above the falls, and incorporated the north Minneapolis riverfront into the largest navigable inland water system in the world. Recognizing the last terminal developed in the UHHD at J.L. Shiely Yard “D” in 1992 as the end of the period of significance is a clearer temporal marker of the district’s river-oriented development and larger historic importance than its year of “peak usage,” suggested by Hess Roise in its March 22, 2021 memo. We will continue to apply this determination as it relates to assessing impacts of the UHT redevelopment on historic properties within federal Undertakings, as well as future federal processes elsewhere within the UHHD site.</p> <p>Placing the details of the UHHD’s National Registry-eligibility aside, we greatly appreciate the City’s robust plan for mitigating the impacts of the UHT’s redevelopment on historic properties. We recognize that redevelopment of the historic property is appropriate given that it is now closed as a terminal and been cut-off from larger Mississippi basin navigation system with the closure of the Upper Saint Anthony Lock and Dam in 2015. Our agency is glad to see the city adopt a broadly inclusive interpretive and educational</p>	<p>Comment noted.</p>



Comment	Response
<p>approach to the site’s history which includes indigenous significance as well as narratives of ecological harm, community exclusion and appropriation alongside the industrial and settlement history of the district. Additionally, the City’s plan to incorporate signature elements of the historic industrial landscape into development of the park are an excellent tool for suggesting the deeper history of the site to the public. We support these concepts as appropriate tools for mitigating the impacts of the project on historic properties. We look forward to continuing to consult with the City, Minneapolis Park &amp; Recreation Board, and other stakeholders as these mitigation concepts are finalized into implementable and specific plans.</p>	
<p>UHT Development Design:</p> <p>The Mississippi NRRRA appreciates the concern the City of Minneapolis has taken with some aspects of the Draft Mitigation Plan in the Draft AUAR. Mitigation with bird safe building design and lighting address some concerns for the Mississippi River Flyway. Directing noise and lighting from events at the Community Performing Arts Center (CPAC) from the adjacent heron rookery will reduce detrimental impacts to this specific primary conservation area. While the noise and light is being blocked to the south, it will be directed onto the largest portion of new proposed park space, towards Mississippi River Park and Saint Anthony Parkway to the NNE, and North Mississippi Regional Park to the NNW. Design and management of the new CPAC should take these other nearby primary conservation areas, and the Mississippi River Flyway into consideration to mitigate detrimental harm to wildlife.</p> <p>We look forward continued discussion regarding design of the CPAC and other aspects of the UHT Development design more as the project moves forward.</p>	<p>Comment noted. The City will continue to encourage developers to implement bird safe design elements into new development along the Mississippi River.</p>

## Public Comments

### AUDUBON CHAPTER OF MINNEAPOLIS

Comment	Response
<b>6. Project Description</b>	
<p>According to the Minnesota Environmental Quality Board, the AUAR is a planning tool to understand how different development scenarios will affect the environment of a community before the development occurs. In response to citizen concerns regarding the two virtually identical development scenarios contained in the draft scoping document, a third “no build” development scenario was added to this draft. This “no build” scenario is disingenuous since no one has asked for the site to remain undeveloped. Instead, community members have requested more parkland, wildlife habitat, and mixed use housing. At a minimum, development scenarios excluding the concert venue should be included based on continuing concerns over potential impacts of the venue related to noise, light pollution, vehicle emissions, and increased traffic on humans and birds and other wildlife. Please add a new development scenario that incorporates these concerns and excludes the concert venue.</p>	<p>The intent of the AUAR is to identify the worst-case potential impacts and the mitigation required to compensate for those impacts. The AUAR studied a range of scenarios and the impact of development under each scenario, from no redevelopment (the No Build Scenario) to maximum development (Scenario 2). These scenarios were vetted during the AUAR Order and Scoping process and were approved by the City Council in May 2021. One of the primary factors influencing site density is the site-generated traffic volumes, which are driven by the proposed mix of land uses. If changes in the market require adjustments to the proposed land use, adjustments could be made as long as the total traffic generated under Scenario 2 is not exceeded and the proposed development is still compatible with the <i>Minneapolis 2040 Comprehensive Plan</i>.</p>
<b>8. Permits and Approvals Required</b>	
<p>The AUAR states on p. 13, “Both Scenarios 1 and 2 are anticipated to receive public financial assistance, including State General Obligation Bond funds for the community performing arts center and proposed parkway, and federal HOME Investment Partnerships Program funds and Low-Income Housing Tax Credits for affordable housing.”</p> <p>The concert venue’s receipt of \$20 million in general obligation bonds triggers the Minnesota Sustainable Building (B3) Guidelines. However, Table 4. Anticipated Permits and Approvals omits the B3 Guidelines in the list of permits and approvals. The B3 Guidelines must be added to Table 4.</p>	<p>As noted in the AUAR in Item 9 (Land Use) and Item 15 (Visual), both Scenario 1 and Scenario 2 would adhere to all the environmental and visual guidelines laid out in the Mississippi River Corridor Critical Area (MRCCA) section of the comprehensive plan, including restoration of natural vegetation, structural tiering, and preservation of public views.</p>

Comment	Response
<p>Because the UHT development falls within the Mississippi River Corridor Critical Area (MRCCA) district, the city’s MRCCA ordinance applies to the project. Although Table 4. Anticipated Permits and Approvals includes entries for “Mississippi River Corridor Critical Area Vegetation Removal” and “MRCCA Land Alteration permits,” the table omits references to MRCCA regulations governing exterior lighting and bird and other wildlife management. These references must be added to Table 4.</p>	
<p><b>9. Land Use</b></p>	
<p><b>ii. Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.</b></p> <p><b>Minneapolis 2040: Policies</b></p> <p>The AUAR sets out policies in the 2040 Comprehensive Plan that are relevant to and should inform the UHT redevelopment. The following 2040 Plan policy should also be included in this list and applied to the UHT project.</p> <p>Policy 70: Ecology and Habitat – This policy states that the city’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions. According to the policy, “Conserving Minneapolis’ natural heritage makes the city more livable, resilient, and attractive – not only for people but for migrant bird and wildlife populations in our habitat corridors, for endangered bee pollinators in our parklands, and for native plant communities in our landscapes.”</p>	<p>Policy 70 has been added to the Final AUAR in Item 9 a ii.</p>
<p><b>b. Discuss the project’s compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.</b></p> <p><b>Mississippi River Corridor Critical Area Overlay District</b></p> <p>The majority of the AUAR study area is located within the Mississippi River Corridor Critical Area (MRCCA). The city’s MRCCA ordinance, approved in December 2020, provides significant environmental protections for the river</p>	<p>The AUAR discusses compatibility of the development scenarios with the MRCCA plan in Items 9, 10, 11, 13, and 15. The Final AUAR under Item 9 b has been updated to include a reference to the maps within the MRCCA Plan that identify Primary Conservation Areas.</p>



Comment	Response
<p>corridor. ACM expects that the AUAR will rigorously apply the MRCCA requirements to all UHT development scenarios, particularly with regard to structure placement, height standards, and protections for birds and other wildlife including requirements governing exterior lighting and construction during nesting and bird migration seasons. In 2021, the city will incorporate additional requirements for bird-safe buildings and lighting and bird-friendly habitat, and all development scenarios must be assessed for compliance with these requirements.</p> <p>Primary conservation areas (PCAs) are natural and cultural resources with rules and local zoning regulations that provide protection from development, vegetation removal, and land alteration activities. The AUAR draft fails to map all of the PCAs documented in the city’s MRCCA Plan. Please revise the AUAR to map, describe, and assess impacts to all Plan-identified PCAs that are present at the UHT site, including the colonial waterbird nesting site on the islands identified as Shore Impact Zones in Figure 6: Cover Types.</p>	
<p><b>Minneapolis 2040: Policies</b></p> <p>Add the following 2040 Plan policy to the list of policies that inform the redevelopment of the UHT site:</p> <p>Policy 70: Ecology and Habitat – This policy states that the city’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions. According to the policy, “Conserving Minneapolis’ natural heritage makes the city more livable, resilient, and attractive – not only for people but for migrant bird and wildlife populations in our habitat corridors, for endangered bee pollinators in our parklands, and for native plant communities in our landscapes.”</p>	<p>Policy 70 has been added to the Final AUAR in Item 9.</p>
<p><b>13. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)</b></p>	
<p><b>a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.</b></p>	<p>The AUAR study area is the 53-acre site proposed for redevelopment, as illustrated in Figure 2 in the AUAR. As shown, the Mississippi River is within the AUAR study area; however, it is an adjacent resource. Item 13.a. states that the</p>

Comment	Response
<p>This subsection states “Minimal wildlife habitat is located within the AUAR study area due to the prior extent of continued ground disturbance and minimal natural vegetation. Wildlife that can be found within the study area include birds and small mammals that have adapted to the highly disturbed urban environment.”</p> <p>The Mississippi River comprises a complex ecosystem that is essential to the ecological health of the North American continent. Many more species than birds and small mammals can be found within the study area than the draft AUAR acknowledges or identifies, including an array of fish and aquatic species. The AUAR should assess impacts on the river environment as home to an array of plant and animal species.</p> <p>This subsection also fails to acknowledge the Great Blue Heron colony located on two islands in the Mississippi River across from the project site. The AUAR should note that these islands are listed in Figure 8. MRCCA Boundary as having Significant Vegetation and that they were previously identified in the UHT AUAR scoping document as being included in the National Wetlands inventory area.</p> <p>This subsection should also acknowledge the development site’s location in the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Potential impacts to birds and other wildlife that use the Mississippi River corridor for migration and nesting must be addresses in the AUAR.</p>	<p>Mississippi River is adjacent to the study area and provides habitat for fish, amphibians, mussels, and other aquatic organisms. It also states that the study area is within the Mississippi Flyway. The heron rookery is described in Item 13.b. As described in Item 11.a.i., one wetland was identified on the National Wetlands Inventory and the Hennepin County Wetland Inventory within the AUAR study area; however, based on a review of current aerial photography, this area is now a parking lot (impervious surface). The AUAR also includes several erosion and sedimentation strategies in the mitigation plan along with anticipated shoreline restoration strategies to protect and improve habitat within and adjacent to the Mississippi River.</p>
<p><b>b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site.</b></p> <p>This subsection acknowledges four relevant species and features within one mile of the AUAR study area: the black sandshell mussel, the rusty patched bumble bee, the peregrine falcon and the abovementioned colonial waterbird</p>	<p>The AUAR identifies state listed species and other wildlife that may utilize the site, including the Mississippi Flyway. Several mitigation strategies are also discussed to improve potential habitat for pollinator species along with improving water quality within the AUAR study area.</p>

Comment	Response
<p>nesting site. This subsection also requires acknowledgment of “other sensitive ecological resources.” Again, because the study area is located in the Mississippi Flyway, this section should address potential impacts of the UHT development on birds and other wildlife that use the Mississippi River corridor for migration and nesting.</p>	
<p><b>c. Discuss how the identified fish, wildlife, plant communities, rare features, and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.</b></p> <p><b>Noise</b></p> <p>While the Great Blue Heron colony may so far have survived the existing “highly disturbed urban environment” referenced in section 13a, further disruption of this environment could be catastrophic. According to the Minnesota Department of Natural Resources, “Because colonial waterbirds nest in groups, disturbance in a colony has the potential to interfere with reproductive success of many individuals, sometimes thousands of nesting pairs. Their foraging habits have been threatened by wetland drainage development and recreation.” Nest failure and colony abandonment have been documented at rookeries in Minnesota and elsewhere as a result of human disturbance. The heron colony is located within the MRCCA district, and city ordinances impose restrictions on construction and other activities during nesting and migration seasons. The AUAR must identify and consider the impacts of such disturbances on the colony and identify specific ways to prevent and mitigate any harm.</p>	<p>A noise study was completed and is included in Appendix F. The noise study for the music venue included a receptor on the island with the heron rookery. The results of the noise study are summarized, and noise mitigation strategies are addressed in the AUAR. The results of the Natural Heritage Information System data were provided to the Minnesota Department of Natural Resources (DNR), and the DNR concurred that negative impacts to known occurrences of rare features, including the heron rookery, are not anticipated (see letter in Appendix A).</p> <p>Applicable city ordinances related to lighting and restrictions on construction and other activities during nesting and migration seasons will be followed to the extent practical.</p>
<p><b>Lighting</b></p> <p>Add a Lighting subsection to the draft AUAR that addresses light pollution in the project site. Bird populations are declining due to growing threats, including light pollution, loss of habitat, collisions with buildings, and climate change. In 2019, the Twin Cities region was named one of the worst urban areas in the country for migrating birds by the Cornell Lab of Ornithology, as a</p>	<p>The Mississippi River Flyway and lighting is discussed in the AUAR in Item 13 (Fish, Wildlife, Plant Communities and Sensitive Ecological Resources (Rare Features) and Item 15 (Visual), respectively.</p>



Comment	Response
<p>result of bright artificial light at night (ALAN) and the city’s location in the Mississippi Flyway. It is crucial that Minneapolis protect birds and other wildlife and their habitat in order to ensure ecosystem health, which benefits both humans and animals.</p>	
<p><b>d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.</b></p> <p><b>Bird-Safe Design</b></p> <p>The mitigation strategy for bird safe design is inadequate. First, the UHT development is governed by the MRCCA ordinance regarding bird-safe buildings, habitat, and lighting, and the concert venue is governed by the Minnesota B3 Guidelines, which address bird-safe building requirements, among other topics.</p> <p>Second, the referenced Audubon Minnesota Bird-Safe Building Guidelines was published in 2010 and does not reflect current best practices. At minimum, please refer to the American Bird Conservancy’s Bird-Friendly Building Design (2015) at <a href="https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf">https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf</a> as well as the updates at <a href="https://abcbirds.org/glass-collisions/">https://abcbirds.org/glass-collisions/</a>. Note that this publication is only advisory; the MRCCA regulations and the B3 Guidelines take precedence.</p> <p>Third, the stated goal to “develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical” is insufficient. The UHT development is located within the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Bird populations are declining due to growing threats, including loss of habitat, collisions with buildings, climate change, and light pollution. In 2019, the Twin Cities region was named one of the worst urban areas in the country for migrating birds by the Cornell Lab of Ornithology, as a result of bright artificial light at night (ALAN) and the city’s location in the Mississippi Flyway. In order to ensure</p>	<p>The Mitigation Plan has been updated to reference the American Bird Conservancy’s Bird-Friendly Building Design (2015). To the extent practical, these guidelines will be utilized in the design of the proposed buildings and outdoor landscaping. These guidelines include strategic selections of the types and placements of building materials, landscaping vegetation, exterior window glazing, and interior window treatments to minimize impacts to birds.</p>

Comment	Response
<p>ecosystem health, which benefits both humans and animals, it is crucial that the UHT development does more than protect birds and their habitat “to the extent practical.”</p>	
<p><b>17. Noise</b></p>	
<p><b>Construction Noise</b></p> <p>The AUAR must address the MRCCA ordinance requirements governing construction and wildlife. Section 551.1870, Performance standards for public facilities, states:</p> <p>(a) General design standards. All public facilities must be designed and constructed to:</p> <p>(5) Minimize disturbance of spawning and nesting times by scheduling construction at times when local fish, birds, and wildlife are not spawning or nesting; and</p> <p>(6) During bird migration times, schedule construction, or implement mitigation measures, to minimize disturbance in primary conservation areas.</p>	<p>Construction noise and compliance with City noise ordinances and the MRCCA plan are discussed in the AUAR in Item 17 (Noise).</p>
<p><b>20. Other Potential Environmental Effects</b></p>	
<p><b>Table 18: Scenario 1 Sustainability and Environmental Justice Measures</b></p> <p>In the Strategies section for the Objective “Increase native vegetation and protect natural, open, green, and river wildlife and pollinator habitat,” add a new Strategy 7: Incorporate bird-safe design in all infrastructure in the UHT development site.</p>	<p>Comment noted.</p>
<p><b>Draft Mitigation Plan</b></p>	
<p><b>Table 22: Anticipated Permits and Approvals</b></p> <p>The concert venue’s receipt of \$20 million in general obligation bonds triggers the Minnesota B3 Guidelines, which must be included in Table 22. Anticipated Permits and Approvals. MRCCA regulations governing exterior lighting and bird and other wildlife management must also be included in Table 22.</p> <p><b>Table 23: Mitigation Summary for Scenario 1 and Scenario 2</b></p>	<p>The Mitigation Plan has been updated to reference the American Bird Conservancy’s Bird-Friendly Building Design (2015). These guidelines will be used to develop strategies to avoid and minimize impacts to nearby and migrating birds.</p> <p>To the extent practical, these guidelines will be utilized in the design of the proposed buildings and outdoor landscaping. These guidelines include strategic selections of the types and</p>

Comment	Response
<p><i>Resource Area – Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources</i></p> <p>The mitigation strategy for bird safety listed in this section of Table 23 is inadequate. First, the UHT development is governed by the MRCCA ordinance regarding bird-safe buildings, habitat, and lighting, and the concert venue is governed by the Minnesota B3 Guidelines, which address bird-safe building requirements, among other topics.</p> <p>Second, the referenced Audubon Minnesota Bird-Safe Building Guidelines was published in 2010 and does not reflect current best practices. At minimum, please refer to the American Bird Conservancy’s Bird-Friendly Building Design (2015) at <a href="https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf">https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf</a> as well as the updates at <a href="https://abcbirds.org/glass-collisions/">https://abcbirds.org/glass-collisions/</a>. Note that this publication is only advisory; the MRCCA regulations and the B3 Guidelines take precedence.</p> <p>Third, the stated goal to “develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical” is insufficient. The UHT development is located within the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Bird populations are declining due to growing threats, including loss of habitat, collisions with buildings, climate change, and light pollution. In 2019, the Twin Cities region was named one of the worst urban areas in the country for migrating birds by the Cornell Lab of Ornithology, as a result of bright artificial light at night (ALAN) and the city’s location in the Mississippi Flyway. In order to ensure ecosystem health, which benefits both humans and animals, it is crucial that the UHT development does more than protect birds and their habitat “to the extent practical.”</p> <p>In summary, any negative impacts on birds and other wildlife will reduce biodiversity and harm our environment and livability in numerous ways. Please revise the AUAR draft to ensure identification and mitigation of all</p>	<p>placements of building materials, landscaping vegetation, exterior window glazing, and interior window treatments to minimize impacts to birds.</p>



Comment	Response
negative environmental and climate impacts of the project on birds and other wildlife.	

**CITY OF MINNEAPOLIS COMMUNITY ENVIRONMENTAL ADVISORY COMMISSION**

Comment	Response
<p><b>Process</b></p> <p>The 30-day comment period on the Draft AUAR is a minimum requirement and we recognize that there will be another comment period when the Final AUAR is completed. However, the comment period on the Draft version is very important to community groups and the City’s Appointed Boards &amp; Commissions; it provides us with the time needed to identify concerns that need to be further addressed in the Final AUAR. The 30-day timeframe does not provide CEAC space to respond effectively because CEAC itself meets once a month. It prevents us from having a discussion that includes helping all commissioners understand the project, hearing commissioners’ perspectives, and determining exact language for our input and feedback. The depth and breadth of the AUAR, combined with the generations-long impacts that the Upper Harbor Terminal development will have on the community and City, call for a more meaningful and accessible public input process.</p>	<p>Comment noted. As outlined in Minnesota Rules, part 4410.3610, subpart 5B, “Reviewers shall have 30 days from the date of notice of availability of the draft environmental analysis in the EQB Monitor to submit written comments to the RGU.” The Upper Harbor Terminal AUAR also went through a scoping process, which provided an additional 30-day public comment period on the scenarios, study area, and scope of analysis.</p>
<p><b>Affordable Housing</b></p> <p>We echo concerns about affordable housing expressed during the Northern Green Zone Task Force meeting in early June. The AUAR identifies the area around the Upper Harbor Terminal site as an area experiencing early stages of gentrification. The 2040 Plan’s Policy 43 seeks to minimize the involuntary displacement of people of color and vulnerable communities. Affordable housing needs to be affordable to those in the neighborhood; otherwise, it is less likely that the new housing on site will be used by people in the surrounding community.</p>	<p>Comment noted.</p>

Comment	Response
<p><b>Ownership of Land</b></p> <p>Ownership of the land at the Upper Harbor Terminal site continues to be an ongoing concern. We recognize that this is still being discussed as the State’s rules are changing. CPED has proposed public ownership of the site through MPRB, but there are different rules for the music venue. After the 63 year long-term ground lease, the site will fall into First Ave and community split ownership. Given the value of this land for flood control, connection to the river, and more, keeping the land in City ownership is invaluable.</p> <p>Members of the Northern Green Zone Taskforce (NGZTF) feel an ongoing tension between the City’s willingness to change zoning to allow for certain kinds of development including conditional permitting versus changes to zoning to reduce pollution. It could be beneficial for the City to be clearer on how this project meets the twelve principles laid out in the enabling resolution for the NGZTF. In addition, understanding alignment between the plans for Upper Harbor Terminal and the draft “Criteria for Development” created by the NGZTF could be helpful.</p>	<p>Comment noted.</p>
<p><b>Cumulative Impacts on Air Quality</b></p> <p>Neighborhoods that suffer environmental injustices should have a higher set of standards for developers to meet, which is part of why the NGZTF has been creating criteria for development. There are foreseeable future projects which may interact with environmental effects of the UHT development (p.91-92). All other impacts from these future projects will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources. Is there a way to better understand the possible cumulative impacts at the outset of the UHT development to help identify ways to mitigate impacts as these future projects are implemented?</p> <p>The AUAR notes that air quality was considered good at monitoring stations within 0.5 miles of the study area. Air quality monitoring has not been placed within the site. Understanding cumulative impacts from stationary and mobile sources is harder to predict without this more specific information.</p>	<p>All potential impacts from foreseeable future projects will be addressed via regulatory permitting and approval measures and will be mitigated to ensure no cumulative impacts occur to environmental and community resources.</p> <p>The adjacent GAF Manufacturing Facility (GAF) is currently in compliance with all state air permits and local city ordinances. GAF continues to work with the City of Minneapolis on addressing neighborhood concerns and is currently investigating the installation of a regenerative oxidizer that would reduce volatile organic compounds (VOCs) and emissions from the facility. Additionally, as described in the Draft Coordinated Development Plan, the project proposers are in discussions with the MPCA regarding the placement of an air quality monitor within the development site to monitor air quality within the AUAR</p>

Comment	Response
<p>Completing this monitoring should be required for any proposal that promotes building housing on the site. We have a responsibility to determine if the air quality will be safe for the community members who live and breathe there. In addition, CEAC specifically wishes to call out the ongoing Minnesota Department of Transportation (MNDOT) project to review possible changes to I-94 in the vicinity. With the possibility of additional pollution from mobile sources that are largely out of the City’s control, CEAC believes that it is the City’s duty to take aggressive steps to mitigate cumulative effects that could arise not just from this project but also the effects of current and future transportation infrastructure in an area that has disproportionately borne the burden of environmental racism over past decades.</p> <p>With the high amount of industrial uses nearby, CEAC remains concerned about mobile sources of pollution, even though the site currently meets air quality standards and modeling shows that future use will as well. Mobile air pollution is still a concern in this area, especially with increased rates of asthma. Could the City include some level of ongoing monitoring in the plans, especially in high traffic days for use of new buildings on the site? While talking about mobile sources, why doesn’t the proposed parking monitoring plan include monitoring south of N. 36th Ave?</p>	<p>study area. The proposed development will be designed to meet LEED certification standards. The project proposers are also considering designing the site to meet LEED for Communities standards, which is a more stringent scorecard for energy consumption and greenhouse gas emissions management.</p> <p>Additionally, a qualitative evaluation of mobile source air toxics (MSATs) has been performed for this project and is documented in Item 16 (Air). The proposed development scenarios also include elements that can help improve air quality such as improved bike and pedestrian infrastructure and additional green space.</p>
<p><b><u>Sustainable Building</u></b></p> <p>The Sustainability Division is currently working on a Sustainable Building Policy. While such a policy has not been passed by the City Council, CEAC recommends that buildings on the UHT site should aim for building sustainability goals above and beyond LEED Silver. The new City policy will mirror the State’s SB 2030 requirements and we recommend that all buildings, including but not limited to the performance venue, meet these standards. We commend the efforts of the development team’s intentions to secure a LEED for neighborhoods designation and encourage working with the Sustainability Division and community to secure the designation.</p>	<p>Comment noted. The proposed development will be designed to meet LEED certification standards. The project proposers are also considering designing the site to meet LEED for Communities standards, which is a more stringent scorecard for energy consumption and greenhouse gas emissions management.</p>
<p><b><u>Greenhouse Gas Emissions</u></b></p>	<p>Comment noted. The Minnesota Environmental Quality Board is considering changes to the Environmental Review</p>



Comment	Response
<p>Similarly to the forthcoming building policy, the City of Minneapolis will soon be updating their existing greenhouse gas (GHG) emissions reduction goals. As such, the UHT development should demonstrate how it will fit into an accelerated GHG reduction schedule, and should disclose a GHG emissions analysis of the embedded emissions of materials used in construction, the expected annual emissions rate of the site once it is operational, and should propose methods to minimize GHG emissions of the project. CEAC strongly encourages any development to avoid the reliance on fracked fossil gas; an investment in fossil gas infrastructure now will work against the City’s emissions reduction goals while creating new buildings with a reliance on fossil fuels for decades to come. Instead, it will be more cost-effective, lead to improved health outcomes through improved indoor air quality, and reduce emissions to build to higher building standards and to utilize efficient electric technology for building uses that have historically relied on fossil fuels. A GHG emissions analysis and mitigation plan will provide the City and the public with important data to understand how UHT will minimize their contributions to climate change.</p> <p>The City should fully assess the impacts from the project's construction and operation on energy consumption and climate change, and in particular, on the State's and City's climate mitigation goals. There should be an analysis of how to reduce greenhouse gas emissions from construction and operation, with an adherence to low-carbon green building design principles. How the buildings will be heated and the materials used are all important factors.</p>	<p>Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p> <p>The proposed development scenarios will incorporate elements of sustainability identified by the City’s Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City’s Climate Action Plan and the City’s Transportation Action Plan.</p>
<p><b><u>Building Height</u></b></p> <p>The AUAR states the intention of developers to request conditional permits to build higher than the building height requirement from the Shoreland Overlay and Critical Area Overlay districts and the Mississippi River Corridor Critical Area Program (MRCCA). Minnesota State Rules, part 6106.0120(D), give the City permission to grant conditional permits to go above height limits. The AUAR does not describe the impact of increased building height on birds or why this plan would ask for an exemption. While we recognize that the CPC</p>	<p>The AUAR discusses compatibility of the development scenarios with the Mississippi River Corridor Critical Area (MRCCA) plan in Item 9 (Land Use). As stated in the AUAR, the City may pursue flexibility in building height and/or district designation in the MRCCA plan. The applicable developer will continue to work with the City to evaluate compatibility of the proposed development with the MRCCA policy that guides development. The proposed development</p>

Comment	Response
<p>recommended going above the height limit if it meant increasing the supply of affordable housing on site, the plan does not state why the increased height is needed or how it would mitigate impacts that the MRCCA seeks to reduce. Related, we also have concerns around the impacts of outdoor lighting for the amphitheater and the conditional use to allow for more intense lighting. While we have concerns about the long-term impacts of the site on migratory patterns, we also have continued questions about how construction planning will take the patterns of migratory species into consideration.</p>	<p>will follow MRCCA policies, which identify landscaping requirements including any vegetative screening, structure orientation, creative building design, and structural tiering as strategies to minimize massing of structures along the river. The City will review the proposed developments to confirm they follow the MRCCA policies.</p> <p>The AUAR also identifies wildlife that may utilize the site, including the Mississippi Flyway, in Item 13. Potential impacts to wildlife and mitigation strategies are also discussed.</p>
<p><b>Water Challenges</b></p> <p>Based on our understanding from stormwater engineers and planners, current rules in place around sediment and erosion controls during construction are relatively lax. Being along the Mississippi River, having measures that go above and beyond the requirements would show the commitment Minneapolis has to our downstream neighbors and to our local aquatic species. This is especially important as the project will involve regrading much of the shoreline, removing concrete and debris to form a more stable slope (p.59). CEAC supports creating a more natural shoreline in this area. However, while wetlands are not currently located within the AUAR study area, changes to the shoreline could create wetland areas that need protection and maintenance.</p> <p>The AUAR does little to address water challenges that are likely to arise with climate change, or how disturbance of the land could impact contaminated soils from interacting with water, in turn impacting water quality. The site at present is highly impervious and while this would decrease by over 10% in Scenario 1 and Scenario 2, the maximum amount of impervious surface of 85% within certain development zones, seems extreme. What are some other ways the City can think proactively about reducing flooding concerns and managing water flow more naturally?</p>	<p>As described in the Mitigation Plan, the applicable developer is investigating ways to better manage stormwater on site, either in a district or individual stormwater system. Table 18 of the Final AUAR lists sustainability goals for the project, which includes the strategy to meet or exceed Minneapolis regulations and the Mississippi Watershed Management Organization’s stormwater standards to improve environmental conditions on site.</p> <p>Contaminated soils will be handled in accordance with state and federal standards and disposed of in a regulated facility. Erosion and sedimentation control best management practices will be used during construction to minimize impacts to downstream waters.</p>

Comment	Response
<p><b>Soil Contamination Plans</b></p> <p>The AUAR states “Additional Phase II assessments may be required to assess the extent of existing contaminants. Any redevelopment of the property will require coordination with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.” (p.55) What will the criteria be for undertaking additional Phase II assessments? The MPCA already knows of many contaminants onsite, including VOCs, asphalt, metals, gasoline, pesticides, and PAHs. We would recommend that the City and developers be proactive and include a Phase II assessment prior to AUAR approval. However, at the very least, the City should share the protocol for additional assessments to increase transparency around how this decision will be made.</p>	<p>Prior to any development, the applicable developer will need to coordinate with the Minnesota Pollution Control Agency to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.</p>
<p><b>Public Access</b></p> <p>This project is a once-in-a-generation opportunity to intentionally cultivate how the City will relate to and interact with one of its most valuable and cherished amenities, the Mississippi River. This project should provide public water access through a boat launch and ability to rent recreational watercrafts (such as kayaks), to allow not just Minneapolitans, but visitors from all over, to experience and enjoy the Mississippi River firsthand.</p>	<p>As described in Item 6 (Project Description), the proposed park will include accessible water access for small watercraft. Final design of the proposed park is in progress, and the Minneapolis Park and Recreation Board continues to seek community input on proposed park amenities.</p>

**FRIENDS OF THE MISSISSIPPI RIVER**

Comment	Response
<p><b>Development scenarios</b></p> <p>We maintain our displeasure at the use of a “no-build” scenario as the alternative to the development scenario in the city’s draft coordinated plan. Community members, including FMR, requested that the AUAR scope include an alternative scenario that gave genuine consideration to whether other community-created ideas for the site provided better environmental outcomes. Responding to that request by using a no-build scenario was not</p>	<p>The intent of the AUAR is to identify the worst-case potential impacts and the mitigation required to compensate for those impacts. The AUAR studied a range of scenarios and the impact of development under each scenario, from no redevelopment (the No Build Scenario) to maximum development (Scenario 2). These scenarios were vetted during the AUAR Order and Scoping process and were approved by the City Council in May 2021. One of the primary</p>



Comment	Response
<p>an act of good faith. We are not aware of anyone interested in leaving the UHT site as-is. A nobuild scenario doesn't provide what residents asked for in their scoping comments and doesn't provide any real opportunity to explore and compare the environmental impacts of different development scenarios sought by the community.</p> <p>We also question why buildings that exceed the city's zoning and overlay district height limits were included in Scenario 2. If Scenario 2 "represents the maximum density allowed" under the 2040 Comprehensive Plan, then it should incorporate the Mississippi River Corridor Critical Area (MRCCA) portion of that plan (Appendix A), which states the structure height limits, tiering requirements, and other clear guidance for development. Therefore Scenario 2 should not include any structures incompatible with the MRCCA plan and ordinance. A similar inconsistency exists on page 39. The report notes that the maximum building height (with premiums) allowed on Parcel 7A is ten stories, due to the 2040 plan's designation of this parcel as Corridor 6. Why, then, is a proposed height of 15 stories stated as being in alignment with the city's comprehensive plan as part of Scenario 2?</p> <p>Scenario 2 should be revised in compliance with all district and built form designations included in the 2040 Comprehensive Plan.</p>	<p>factors influencing site density is the site-generated traffic volumes, which are driven by the proposed mix of land uses. If changes in the market require adjustments to the proposed land use, adjustments could be made as long as the total traffic generated under Scenario 2 is not exceeded and the proposed development is still compatible with the <i>Minneapolis 2040 Comprehensive Plan</i>.</p>
<p><b>Mississippi River Corridor Critical Area Overlay District</b></p> <p>We would like to restate our continued opposition to building height increases in Scenarios 1 and 2 within MRCCA and the Shoreland Overlay districts. These height limits promote strong urban form, improve river views (including for sites further back from the river that may be redeveloped in the future), and create a more welcoming sense of scale and relationship to the river. The MRCCA ordinance, which was approved by city leaders just months ago, was developed through years of extensive stakeholder participation and should not be disregarded at the first opportunity.</p> <p>The proposed MRCCA height conditional use permits (CUPs) at UHT would require the city to examine the environmental and scenic impacts of such CUPs and mitigate any impacts that it allows to occur. The AUAR should</p>	<p>Comment noted.</p> <p>The description of setbacks in the Land Use section (Item 9) of the Final AUAR has been updated to clarify requirements.</p> <p>It has been noted in the Land Use section (Item 9) and the Mitigation Plan state that any proposed development would be required to meet the Mississippi River Corridor Critical Area (MRCCA) ordinance or request a variance or conditional use permit from the ordinance similar to other entitlement reviews through the City of Minneapolis.</p>

Comment	Response
<p>include a thorough examination of the proposed projects’ impacts to MRCCA resources and whether or not the proposed development will be able to meet the environmental standards contained in the city’s new MRCCA ordinance. Mitigation measures should be included for any documented impacts.</p> <p>If the city were serious about conducting a full examination of this project's potential environmental impacts and whether or not its draft coordinated plan can even meet the city’s own MRCCA requirements, it would include that analysis in this environmental review.</p> <p>Instead, the city proposes to consider those impacts at some later date, with less public engagement and awareness. The variance processes will be less visible, with little to no proactive outreach by the city and little time (typically just days) for community members to review and respond to the CUP request. This obfuscates a potentially significant level of environmental impacts from the proposed development.</p> <p>The AUAR also excludes a complete description of the MRCCA criteria that a CUP must meet. The list of criteria and mitigation strategies on pages 39-40 should include the full text from the city’s MRCCA ordinance.</p>	
<p>Also, on page 24, the description of setback requirements within MRCCA is worded poorly and confusingly. This section should be rewritten for clarity. The MRCCA setback requirement is 50 feet from the river’s Ordinary High Water Level for structures and 25 feet for impervious surfaces.</p>	<p>This sentence has been revised in the Final AUAR for clarity.</p>
<p><b>Existing environmental injustices and cumulative impacts ignored</b></p> <p>One persistent theme in the AUAR is a lack of true consideration of cumulative impacts. The Environmental Quality Board’s guidance for AUARs states that “the total impact on the environment with respect to any of the items on the [form] may also be influenced by past, present, and reasonably foreseeable future projects outside of the AUAR area.”</p> <p>This isn’t the standard the city adhered to in this AUAR. There is little discussion of existing environmental burdens experienced by area residents</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The</p>

Comment	Response
<p>and no acknowledgment of any potential for development to add to these, particularly in terms of noise and air quality.</p> <p>As one example of the city’s failure to fully consider cumulative impacts, the AUAR states that “year 2040 vehicle-related CO concentrations in the project area are likely to be lower than existing concentrations even considering the increase in development-related and background traffic” (p.75).</p> <p>We find this statement concerning for a few reasons. First, this statement should include attribution to a reputable source. Second, it appears that the city’s goal is “just don’t make things worse.” This is not a high enough bar in a community already disproportionately burdened with environmental impacts. In accordance with the Northside Green Zone, the city should be striving to improve environmental conditions for residents in this area, not just hoping to maintain the status quo. And third, 2040 is 19 years away. Residents are suffering from poor air quality now. The AUAR should examine the more immediate impacts of the development and what environmental impacts already exist and need remediation, not just hope that things won’t be worse in 19 years.</p> <p>One way to mitigate vehicle emissions would be to implement strategies to improve non-automobile mode share. The traffic analysis report in the AUAR’s appendices assumes only seven percent of site trips will use non-motorized transportation modes. It doesn’t appear to assume much transit use (given the site’s poor transit service). Yet the AUAR also acknowledges the city’s Transportation Action Plan goal of having 60 percent of trips use walking, biking, or transit by 2030. While this citywide goal might be achieved differently in different areas, it’s disappointing to see the city have such low expectations of reducing automobile traffic at UHT. How will the city achieve its climate goals without taking advantage of opportunities to design big, new redevelopment sites with automobile reduction in mind?</p> <p>A similar lack of effort is apparent in the discussion of noise impacts. The study notes that noise from I-94 dominates the area, including the existing residential neighborhoods. But it makes no attempt to explore whether the</p>	<p>Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>The proposed development scenarios will incorporate elements of sustainability identified by the City’s Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City’s Climate Action Plan and the City’s Transportation Action Plan.</p> <p>Additionally, the City will continue to coordinate with Metro Transit regarding service planning as the AUAR study area is developed. The Metropolitan Council’s comment letter on the Draft AUAR affirmed this, stating, “Metro Transit continues to coordinate with the project to ensure that site designs accommodate potential future transit service. Service details such as potential frequency are not determined at this</p>



Comment	Response
<p>UHT project can mitigate this burden. Instead, it states that the freeway noise will help overpower music venue noise. We don't believe that "don't make things worse" is a suitable standard to seek in a massive new development subsidized heavily with public funds. The AUAR should include mitigation strategies to address existing noise impacts in the area.</p> <p>We also note the statement on page 93 about future projects in the area. The AUAR states that future projects "will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources." Yet the UHT AUAR doesn't accomplish that for this project because it doesn't provide full mitigation of impacts. It just states that the cumulative impacts won't be severe enough to worry about because existing conditions are already poor. If that pattern continues for future projects, we'll end up with conditions slowly worsening over time, with each new project contributing "minor" negative impacts and no assessment of the long-term cumulative impacts. The UHT AUAR should provide full mitigation of current cumulative impacts, as discussed in more detail throughout this letter.</p>	<p>time, and Metro Transit will monitor conditions and opportunities for potential service as they develop."</p>
<p><b>Climate change not addressed</b></p> <p>The UHT AUAR should include a discussion about climate change and greenhouse gas emissions because of the potential for the project to have significant environmental impacts in this realm. This analysis would be aligned with the city's Climate Action Plan goals and the higher level of scrutiny to which any project in the Northside Green Zone should be subjected.</p> <p>The Minnesota Environmental Quality Board (EQB) is in the process of recommending changes to the environmental review program to better address climate change. For guidance, the city could look to the EQB's draft recommendations. We would like to see the following analyses included in the AUAR:</p> <ul style="list-style-type: none"> <li>• The proposed project's greenhouse gas emissions and carbon footprint</li> <li>• Impacts of these greenhouse gas emissions</li> </ul>	<p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project's effect on climate change has not been finalized.</p> <p>The proposed development scenarios will incorporate elements of sustainability identified by the City's Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City's Climate Action Plan and the City's Transportation Action Plan. Additionally, project-specific sustainability goals and strategies for the project are listed in</p>

Comment	Response
<ul style="list-style-type: none"> <li>• How climate change may influence these impacts</li> <li>• Whether these impacts may worsen problems already accentuated by climate change</li> <li>• Mitigation measures to reduce or eliminate these impacts</li> </ul>	<p>Table 18 of the Final AUAR. These include providing green infrastructure and landscaping that will increase native vegetation and pollinator habitats, improving habitat connectivity between the Mississippi River and Northside Neighborhoods, and using clean energy generated from local renewable resources and designing energy efficient buildings, among others.</p>
<p><b>Air quality review inadequate</b></p> <p>As FMR requested in its comments on the AUAR draft scoping document, the AUAR should include air-quality impact analysis of the proposed industrial uses. Even if the site only contains “light” industrial use, this may include significant truck traffic. Truck emissions, both due to the nature of the vehicles as well as idling during loading/unloading, are usually more significant than emissions from a passenger vehicle. This should be added to the AUAR and analyzed for both air quality and climate change impacts.</p>	<p>Vehicle emissions and the effect of the project’s traffic generation on air emissions is discussed in the AUAR under Item 16.B. (Air). The AUAR study area is currently meeting all National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants.</p>
<p><b>Inconsistent statements regarding music venue parking and traffic</b></p> <p>The AUAR appears to dodge the question asked by many residents about how music venue parking will be provided and whether parking and traffic will impact nearby residents, park visitors, etc.</p> <p>The report states, “event parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs. Therefore, parking demand for Parcel 3 was not included in the calculations” (p. 83). It’s hard to reconcile that statement with that on page</p>	<p>The June 2021 Phase 1 Event Transportation Management Plan (ETMP) referenced is a draft framework prepared after publication of the Draft AUAR in accordance with the Draft Mitigation Plan. The purpose of the Phase 1 ETMP is to define the transportation needs and strategies that will be used to manage travel to and from events at the community performing arts center (CPAC) and limit traffic impacts on the surrounding neighborhoods.</p>

Comment	Response
<p>114 noting that some event parking may indeed be included on the properties within the AUAR boundary. The June 2021 Transportation Management Plan (TMP) published by Kimley-Horn also clearly states an intention for some venue parking to be within the AUAR study area and surrounding neighborhoods. If the event venue is signaling this clear plan to provide some parking at UHT, then that parking need must be included in the AUAR calculations.</p> <p>The AUAR also includes contradictory statements about whether the music venue will contribute to rush-hour traffic. On page 83, the report states, “traffic associated with the community performing arts center was not included in the peak hour traffic analysis because this land use is not expected to generate traffic during a typical weekday peak hour.” That seems in blatant contradiction to the statement just a few pages later that a “weekday evening capacity event at music venue or park... includes overlap and interaction with p.m. peak traffic” (p. 87). The traffic analysis should be rewritten to reconcile these statements and provide more precise information about potential impacts of weekday evening events at the venue.</p> <p>The AUAR also states an intention to “close off a portion of West River Parkway to general traffic during medium and large events” (p. 115). This contradicts the recommendations of the Minneapolis Park and Recreation Board’s UHT Community Advisory Committee (CAC), which urged that public park and riverfront access, including to the MPRB-owned parkway, be prioritized above the needs of private uses.</p> <p>In the CAC’s January 2021 recommendations to the city, they stated that “pedestrian, bicycle, and vehicular access to the park should stay open, regardless of events at the venue or elsewhere in the private development. Any traffic management or event management plans should not close Dowling Avenue or other direct access routes to the park including the public parking area.” Parkway closure should be removed from the TMP and should not be considered as an appropriate traffic mitigation strategy in the AUAR.</p>	<p>A full ETMP will be developed by First Avenue and the City as part of the site design process for the community performing arts center. The ETMP includes consideration of people traveling by walking, biking, using a scooter, using a rideshare service, taking transit, and driving.</p> <p>Event traffic was not analyzed for the weekday peak hour because only 10 Large or Capacity events per year are anticipated to occur on weekdays. Therefore, on a typical weekday there would be no event.</p> <p>It is not known if event parking will be provided on other parcels within the development. The Phase 1 ETMP states that parking on Parcels 4, 5, and 6 “could potentially be used for event parking and would have parking management strategies due to the limited number of spaces and limited access to the sites during events” (page 8).</p> <p>The June 2021 Phase 1 ETMP states that “there will be little or no off-street parking on the CPAC site and none of this parking is anticipated to be available to event patrons” (page 7). Parking in the neighborhoods west of I-94 is not planned to be part of the ETMP.</p>



Comment	Response
<p><b>Inconsistent statements regarding music venue size</b></p> <p>Throughout the report, including the Noise section, the maximum capacity of the music venue is stated as 10,000 people. Yet the included AECOM noise assessment states the venue capacity as being 8,000-9,000 people. This assessment, then, doesn't seem to be based on the same venue design and size as that being proposed in Scenarios 1 and 2. If this noise assessment is providing the basis for the city's claim of "no impacts" then it should be revised in accordance with the planned venue size as stated in the AUAR.</p>	<p>The primary source of additional noise would be the electronic sound amplification system. The maximum size of the community performing arts center is 10,000 people, and the design of the sound amplification system would be consistent with what was evaluated in the noise assessment.</p>
<p><b>Sustainability strategies lacking</b></p> <p>We're puzzled by the sustainability outcomes and strategies discussed in Table 18 (p. 96). In particular, the objective to "improve environmental conditions in North Minneapolis" and the related outcomes are not supported by the strategies. As one example, one stated outcome is to "reduce registered air pollutants by 25 percent." But there is no strategy that can clearly accomplish this; the only strategies related to air pollution are about monitoring (not reducing) pollution and reducing air pollution from construction vehicles. These strategies are not sufficient.</p> <p>The same is true of the other outcomes listed in this section. One outcome is to "create educational areas for ecological jobs/careers training and public/group immersive learning," but there is not a single strategy included to advance this. Table 18 should be completely revised to include strategies sufficient to meet all stated outcomes.</p>	<p>The sustainability measures listed in Table 18 of the AUAR are based on the Draft Coordinated Development Plan, which was a plan developed in coordination with United Properties and the City of Minneapolis. The strategies are policies, practices, and tools that the City and development team will utilize to fulfill the objectives and achieve the outcomes and may be refined as redevelopment contracts and a future Community Benefits Agreement are developed.</p>
<p><b><u>Parks within the study area</u></b></p> <p>Pages 15 and 18 both state that "there are no existing parks within the study area." This is incorrect and should be revised. The majority of the site is within the boundary of a national park: the Mississippi National River and Recreation Area. A portion of the site is also within the boundary of Above the Falls Regional Park.</p>	<p>The Final AUAR has been updated to include the location of the MRCCA and the Above the Falls Regional Park locations related to the site.</p>

Comment	Response
<p>While the property may not be presently being used for recreation or conservation purposes typically associated with a “park,” the property’s presence within national and regional parks is of immense significance to its future.</p>	

**MINNESOTA CENTER FOR ENVIRONMENTAL ADVOCACY AND COMMUNITY MEMBERS FOR ENVIRONMENTAL JUSTICE<sup>1</sup>**

Comment	Response
<p>The City of Minneapolis (the “City”) is once again sweeping aside concerns from one of its most vulnerable communities in favor of enriching private developers and other entrenched interests. Like with its proposed campus expansion in the East Phillips neighborhood, the City’s Upper Harbor Terminal proposal (the “Project”), as outlined in the Draft Alternative Urban Areawide Review (“AUAR”) noticed in the EQB Monitor on May 25, 2021, fails to fully analyze the Project’s full environmental justice impacts and ignores local groups advocating for cooperative development, true democratic collaboration, and community wealth building. The City also ignores or fails to adequately engage with other critical components of environmental review. In the AUAR, the climate change impacts attendant to construction and operation of the Project are not considered, and the City’s analysis of the Project’s cumulative potential effects are understudied.</p> <p>As drafted, the City’s environmental review obligations remain incomplete. North Minneapolis and the broader community deserve a full assessment of the Project’s environmental impacts before construction begins. The City cannot proceed unless its AUAR is properly updated to reflect these vital environmental considerations.</p> <p><b>The Project’s AUAR fails to engage with the community and account for environmental justice concerns.</b></p>	<p>The Draft Coordinated Development Plan was informed by more than a decade of community engagement as summarized in Table 19 in the AUAR. One of the goals of the plan is to “significantly advance community-wide efforts to repair environmental injustices, particularly to Northside residents, and more specifically to the Northside’s Black community.” After several years of public engagement, the Draft Coordinated Development Plan has identified development solutions intended to benefit residents of color. These include strategies aimed at providing economic opportunities for residents in the neighborhood, disrupting gentrification and displacement, creating a diverse housing stock in the neighborhood, repairing environmental injustices, and creating inclusive public spaces in the Northside. The development team will create an advisory group to assist in the implementation of the environmental justice strategies identified in the Draft Coordinated Development Plan.</p>

<sup>1</sup> The comment letter has been summarized in this table due to the length. The comment letter is included in its entirety in Appendix H.

Comment	Response
<p>The City proposes to build the Project in North Minneapolis. Compared with other parts of the City, residents in the Northside disproportionately suffer from environmentally-traceable health outcomes exacerbated by historical and structural racism that concentrates pollution into poor neighborhoods. The Project provides the City with a tangible opportunity to make good on its promises to invest in the Northside and begin to repair the environmental harms to the land and people of this area.</p> <p>But the AUAR does not meet the moment. Instead of engaging in a meaningful discussion of the environmental justice concerns that plague this part of Minneapolis, the City presses forward with its vision of a project that will largely benefit corporations and communities beyond the neighborhoods that are adjacent to the Project site. In so doing, the City continues to ignore pleas from community members who for years have pushed the City to develop more inclusively and with an eye towards restoring the land and air that heavy industries have tainted for decades. The City must do better.</p>	
<p><b>The AUAR fails to comply with MEPA.</b></p> <p>The AUAR does not adequately account for the project’s cumulative potential effects.</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect</p>



Comment	Response
	<p>to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p>
<p>The AUAR fails to analyze the greenhouse gas emissions from the project.</p>	<p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>

**NORTHSIDE GREEN ZONE TASK FORCE**

Comment	Response
<p><b>Cumulative Impacts.</b> In our March 8, 2021 letter, we wrote: “An expanded cumulative impacts analysis of current pollution sources (surrounding facilities, I-94, etc.) must be conducted to assure a reduction in the cumulative pollution legacy in this area. Doing an overall cumulative impact assessment is particularly important as the UHT site neighbors facilities, such as GAF, do not have to undergo permit review (since they are grandfathered in). We would like to know how the City is assessing the cumulative impacts of this development and assuring the community that a reduction and net benefit is occurring during any project’s construction, remediation, and operation.”</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to</i></p>

Comment	Response
<p>The AUAR interpreted the rules for cumulative impacts to only include future related projects. While it is important to consider future and related construction phases, the Task Force would specifically like to see an analysis of the existing impacts and how the proposed development will increase or decrease impacts in this environmental justice community. The AUAR states that “All other impacts from these future projects will be addressed via regulatory permitting and approval measures; therefore, they will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources.” How do you “individually mitigate” cumulative impacts?</p> <p>Specifically, the Task Force would like to see an analysis akin to the cumulative levels and effects law authored by Representatives Clark and Berglund. The cumulative levels and effects law states that a permit (or in this case a project’s environmental review) should not be approved without “analyzing and considering the cumulative levels and effects of past and current environmental pollution from all sources on the environment and residents of the geographic area within which the facility’s emissions are likely to be deposited.” The Task Force would include pollution from I-94, industrial facilities in the vicinity, traffic emissions, and onsite operations as past, current (and future) sources.</p>	<p><i>Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>Potential impacts from foreseeable future projects will be addressed via regulatory permitting and approval measures and will be mitigated to ensure no cumulative impacts occur to environmental and community resources.</p>
<p><b>Air pollution.</b> As noted in the section above, the Task Force is particularly concerned about existing air pollution from mobile and stationary sources that cumulatively create some of the worst air quality in the state in the Northside Green Zone. In the Northside Green Zone residents experience some of the highest rates of asthma and other respiratory and cardiovascular diseases, exacerbated by air pollution.</p> <p>The AUAR states: “The AUAR study area is currently meeting all NAAQS for the criteria air pollutants. For the foreseeable future the trend of lower per vehicle emissions is expected to at least offset growth in vehicle volumes. Therefore, the AUAR study area is expected to continue meeting NAAQS, with or without implementation of the development scenarios. Based on the</p>	<p>The AUAR addresses vehicle emissions consistent with Minnesota Environmental Quality Board guidance and in consultation with the Minnesota Pollution Control Agency (MPCA).</p> <p>The MPCA reviews the Air Quality Index (AQI) to confirm the Twin Cities Metro Area continues to be an Attainment Area for Air Quality.</p> <p>The MPCA monitors ten air pollutants throughout the Twin Cities Metropolitan Area. As part of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) calculates the AQI for</p>

Comment	Response
<p>proposed volumes, the proposed development scenarios do not exceed thresholds that would require a quantitative MSAT analysis; therefore, the project is not expected to adversely affect air quality.”</p> <p>First, the NAAQS is a floor, not a ceiling and should not be interpreted to mean that air quality is “healthy” even if standards are being met. Also, it is unclear how the increased number of vehicle trips generated during and after construction will have no impact on the air pollution volumes in the community. Due to the heightened impact of air pollution in this area, a qualitative analysis is not sufficient. The Task Force reinforces its recommendation for a quantitative, cumulative levels and effects analysis before the AUAR can be approved.</p>	<p>five major air pollutants. The data collected from the MPCA monitoring stations is compared to the EPA AQI ranges. The Twin Cities AQI on June 29, 2021 was 36, meaning the air quality in the Twin Cities Metro area is considered good (<a href="https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA">https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA</a>).</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>
<p><b>Site Contamination.</b> The AUAR states “Additional Phase II assessments may be required to assess the extent of existing contaminants. Any redevelopment of the property will require coordination with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.” The Task Force would like to know what will the criteria be for undertaking additional phase II assessments? The MPCA already knows of many contaminants onsite, including VOCs, asphalt, metals, gasoline, pesticides, and PAHs. The Task Force would recommend that the City and developers be proactive and include a Phase II assessment prior to AUAR approval. However, at the very least, the City should share the protocol for additional assessments to increase transparency around how this decision will be made.</p>	<p>Prior to any development, the applicable developer will need to coordinate with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.</p>
<p><b>Permitting Concerns.</b> The Northside Green Zone Task Force understands that under the MRCCA, developers may legally request increased height allowances through conditional use permits. However, we would like it noted on record that we are frustrated with the inequity of the City having a process for conditional permits to increase building height but not having a process to address the non-expiring permits of industrial facilities such as GAF. Community members have experienced the negative health impacts of</p>	<p>As stated in the AUAR, the City may pursue flexibility in building height and/or district designation in the MRCCA plan. The applicable developer will continue to work with the City to evaluate compatibility of the proposed development with the MRCCA policy that guides development. The proposed development will follow MRCCA policies, which identify landscaping requirements including any vegetative screening,</p>

Comment	Response
<p>pollution from GAF and other facilities for decades, yet have been repeatedly told that the City cannot do anything to get rid of these facilities due to zoning and their permit types from the MPCA. We would ask the AUAR to address the necessity of conditional use permits for the UHT coordinated plan.</p>	<p>structure orientation, creative building design, and structural tiering as strategies to minimize massing of structures along the river. The City will review the proposed developments to confirm they follow the MRCCA policies.</p>

**CATHERINE FLEMING**

Comment	Response
<p>"On the substance, the environmental review is not complete. It skips all mention of CO2 / GHG emissions. And on cumulative impact, it ignores the existing air emission from all the industries in North. (And on GAF it says that GAF is " currently investigating the installation of a regenerative oxidizer...")</p> <p>"Oh, and it says the air quality is good in the area, because they checked the data for one day -- April 8, 2021 -- and it was fine that day. Amazing! (See page 74)."</p> <p>CONFLICT of INTEREST</p> <p>Isn't it a conflict for the company (Kimley-Horn) conducting the AUAR for the Upper Harbor project is also the firm currently working with the master developer for the site, United Properties? Kimley-Horn works for the company that has a vested interest in the AUAR favoring their development agenda! Is the fox guarding the hen-house?</p> <p>Where does this leave the community! Who is looking out for us? MPCA? (yeah, right). Under what theory is Kimley-Horn claiming they can be objective when their paycheck is tied to United Properties? Can we, the community, get some clarity on this concern.</p> <p>Note: Some elected officials have tried to paint me and my organizations as being "anti-development" when I am "anti-music venue at the UHT site" only. Local developers will attest to my support (verbally and financially of several development projects in Minneapolis). Community members will also confirm</p>	<p>The MPCA monitors 10 air pollutants throughout the Twin Cities Metropolitan Area. As part of the Clean Air Act, the EPA calculates the AQI for five major air pollutants. The data collected from the MPCA monitoring stations is compared to the EPA AQI ranges. The Twin Cities AQI on June 29, 2021 was 36, meaning the air quality in the Twin Cities Metro area is considered good</p> <p><a href="https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA">https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA</a>).</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project's effect on climate change has not been finalized.</p>



Comment	Response
<p>my goal of seeing robust development for ADOS folks in north Minneapolis and will not allow these tactics to take away from our ultimate goals.</p>	

**KARL HAKANSON**

Comment	Response
<p>Many of us feel like no one is listening to the many alternative community voices on this so-called development.</p> <p>The entertainment venue is, frankly, gross. We need it like a hole in the head. The TCs are full of struggling local arts venues that sure could use a little love. Except First Ave! They are doing just fine!</p> <p>So we get to see Beyonce shake her booty, with tickets we can't afford. A giant money sucking machine taking money out of the neighborhood. A whole bunch of traffic, pollution, massive parking lot, people parking all across the neighborhood as they don't want to pay for parking, lighting, noise, garbage, etc. Entirely not needed! We do not need more mega solutions. Mega solutions are killing us.</p> <p>This is NOT development. What's this I hear about First Avenue owners having title to all the property? WHaa? The whole thing has gone off the rails. This is not the future. This is not in Mpls' or Hennepin Co's or Met Council's sustainability/climate action plans. Why do we even bother with these plans when those with all the money swoop in and make even more money and disregard the locals? Crazy. Same old. Same old.</p> <p>It is the Mississippi River! Think about that for one minute. That is the focus.</p> <p>Here's what I recommend:</p> <p>Scratch the entertainment venue. Note period.</p> <p>Clean up the entire site. Get rid of ALL the buildings, garbage and contaminated soil and all of it. Bring in compost and re-shape the entire area. Plant flowers and native grasses. Let it heal.</p>	<p>Comment noted. The Draft Coordinated Development Plan, which includes the community performing arts center, was informed by more than a decade of community engagement as summarized in Table 19 in the AUAR.</p>

Comment	Response
<p>Invite Lakota and Ojibwe leaders to talk about the river and what it means for all of us. Invite the very best eco-builders and conservationists to show how to build a true green future (hint: concrete is a major GHG source). Hire the young men and women from the neighborhood to build their own futures (think habitat for humanity). Beautiful, simple housing. A lot more room for native ecology, gardens and park land for people to enjoy. Peace. Quiet. Beauty. Nature.</p> <p>An education training incubator site focused on green skills would be great. Actually needed.</p> <p>A blueprint for future "development". No token advisory committees and listening sessions.</p> <p>As is, this is just yet another development that will not change anything.</p> <p>You may have heard about climate change and the desperate need for equity in all things?</p> <p>Thanks for listening. Share with anyone that might actually read this. The UHT web page is a mess. It actually discourages participation.</p>	

**ADAM REINHARDT**

Comment	Response
<p>I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.</p> <p>First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to</i></p>

Comment	Response
<p>and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?</p> <p>Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.</p> <p>This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.</p>	<p><i>Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions. Potential impacts from foreseeable future projects will be addressed via regulatory permitting and approval measures and will be mitigated to ensure no cumulative impacts occur to environmental and community resources.</p> <p>The AUAR addresses both noise and vehicle emissions consistent with Minnesota Environmental Quality Board guidance and in consultation with the Minnesota Pollution Control Agency (MPCA).</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>

**CHRISTINE POPOWSKI**

Comment	Response
<p>I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.</p> <p>First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?</p> <p>Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.</p> <p>This AUAR is wholly inadequate. I am requesting a response that explains the City’s justification and how it plans to address my concerns.</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions. Potential impacts from foreseeable future projects will be addressed via regulatory permitting and approval measures and will be mitigated to ensure no cumulative impacts occur to environmental and community resources.</p>



Comment	Response
	<p>The AUAR addresses both noise and vehicle emissions consistent with Minnesota Environmental Quality Board guidance and in consultation with the Minnesota Pollution Control Agency (MPCA).</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>

**JOANNE GODDARD**

Comment	Response
<p>I am writing to express my concern about the environmental study being proposed for the Upper Harbor Terminal. I believe it is currently inadequate in its scope and depth.</p> <p>As I understand, the city has decided that the redevelopment of the Upper Harbor Terminal will have negligible impact on wildlife in the area. I find that difficult to believe as any industrialization of an area always seems to have an impact on wildlife. There are a few endangered species in the area, I know this as I live in the area and often see heron and eagles fly over my house in their trips to and from the river.</p> <p>The impacts on wildlife must be fully investigated before redevelopment begins.</p>	<p>Item 13 of the AUAR discusses state listed species and other wildlife that may utilize the site, as well as potential impacts and mitigation. As noted in the AUAR, the wildlife using the study area for habitat are species that are accustomed to a highly urbanized area with human influences. The Minnesota Department of Natural Resources concurred that negative impacts to known occurrences of rare features, including the heron rookery, are not anticipated.</p>
<p>Also the current city position on the impacts on traffic in the development area is laughable. Of course there is going to be significant impact on traffic. The Dowling bridge can barely handle the daily traffic load as it is. Increased truck traffic will substantially overload the streets in specifically the McKinley neighborhood.</p>	<p>The transportation analysis reviewed the anticipated increase in traffic and impacts on potential congestion and safety within the vicinity of the AUAR study area. Mitigation measures have been identified within the AUAR to minimize</p>

Comment	Response
<p>I believe a traffic plan needs to be thoroughly updated before the redevelopment takes place.</p> <p>The AUAR doesn't begin to address the impacts on the neighborhoods in the Upper Harbor Terminal site. McKinley and Hawthorne already are overburdened with horrendous air quality and the increase in diesel truck traffic, rerouting of "normal" traffic and other incidentals will most definitely decrease air quality.</p> <p>Environment measures must be put in place to protect the surrounding neighborhoods during this redevelopment. My first suggestion would be the use of only electric vehicles to decrease emissions in the neighborhood.</p>	<p>congestion and impacts to the surrounding transportation network.</p> <p>The AUAR addresses both noise and vehicle emissions consistent with Minnesota Environmental Quality Board guidance and in consultation with the Minnesota Pollution Control Agency (MPCA).</p>
<p>But finally, the AUAR doesn't address the number one concern I have. Every city meeting starts with recognition that we are on stolen land. The AUAR does address what would happen if we did nothing to the Upper Harbor Terminal, but it says nothing about what could happen if the City of Minneapolis decided to address the mistakes of the past and return this section of the Mississippi to the indigenous people. I believe that returning this land to the original peoples would be the best redevelopment of all.</p> <p>We, as the city, have an opportunity to return stolen land and begin healing.</p>	<p>The Draft Coordinated Development Plan was informed by more than a decade of community engagement as summarized in Table 19 in the AUAR. The City has designated 19.5 acres of the site for community parkland, and the Minneapolis Park and Recreation Board continues to work with the community to design a park that allows for increased wildlife habitat and reflects the culture and history of the area.</p>

**KELLEY SKUMAUTZ**

Comment	Response
<p>I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month for the Upper Harbor Terminal (UHT) Coordinated Plan. First, the fact that the City of Minneapolis (City) will draft and review its own environmental standards for this project using an AUAR is highly problematic because there is no guarantee of accountability for the City to hold itself to the highest environmental standards in the process and presents a potential conflict of interest.</p>	<p>Assignment of the Responsible Governmental Unit (RGU) for environmental review is determined by state law as set forth in the rules promulgated by the Minnesota Environmental Quality Board. Pursuant to Minnesota Rules, part 4410.4400, the City of Minneapolis is the local governmental unit assigned by rule to be the RGU for this AUAR.</p>

Comment	Response
<p>Second, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment to the North Minneapolis community which is a design standard of the AUAR process as determined by the State of Minnesota Environmental Quality Board. Third, this study has no mention of the climate impacts of the development. Nor does it require any mitigation measures to reduce climate impact. By law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.</p>	<p>Cumulative potential effects are addressed in the AUAR consistent with Minnesota Rules, part 4410.0200, subpart 11a, and the Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i>, which provides additional guidance for evaluating cumulative potential effects.</p> <p>The AUAR addresses vehicle emissions consistent with Minnesota Environmental Quality Board guidance and in consultation with the Minnesota Pollution Control Agency (MPCA).</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>
<p>Furthermore, the fact that only two development scenarios are presented is insufficient especially when the two are not different enough from one another to give any real comparative value. At a minimum, the two development scenarios presented should compare the site both with and without the concert stadium (or, at least, with a smaller concert stadium) since the stadium itself would have a significant environmental impact.</p>	<p>The intent of the AUAR is to identify the worst-case potential impacts and the mitigation required to compensate for those impacts. The AUAR studied a range of scenarios and the impact of development under each scenario, from no redevelopment (the No Build Scenario) to maximum development (Scenario 2). These scenarios were vetted during the AUAR Order and Scoping process and were approved by the City Council in May 2021. One of the primary factors influencing site density is the site-generated traffic volumes, which are driven by the proposed mix of land uses. If changes in the market require adjustments to the proposed land use, adjustments could be made as long as the total traffic generated under Scenario 2 is not exceeded and the proposed development is still compatible with the <i>Minneapolis 2040 Comprehensive Plan</i>.</p>

Comment	Response
<p>The AUAR should address and mitigate the following concerns: parking, traffic congestion and emissions, noise (decibel levels, etc.), air quality, water quality, environmental review methodology and process, and any conflicts of interest. Some or all of these were omitted from the AUAR Scoping Document. Additionally, the AUAR should include the Bottineau and Marshall Terrace neighborhoods in any studies because they are very close to the site and noise carries uniquely across the water - they will be impacted by the activities proposed in the scenarios.</p> <p>The AUAR’s noise, water, and traffic studies are not comprehensive enough, especially in regard to the concert stadium. Also, an AUAR is required to study cumulative effects which in this case would take into account what already exists at or near the UHT site for noise, traffic, air, and water quality.</p> <p>There is a history of poor air quality in the area. This poor air quality has led to health problems like high levels of asthma in north Minneapolis and cancer clusters in NE Minneapolis. Cumulative impacts and a thorough analysis of air quality should be applied to all development scenarios.</p> <p>The noise levels in this area are also higher than average due to traffic from the I94, Marshall Street NE, and industrial businesses. Noise and traffic studies should also be cumulative and include neighborhoods in North and Northeast Minneapolis and use all scenarios.</p>	<p>The AUAR and Mitigation Plan address potential environmental impacts and strategies to mitigate the anticipated impacts for the proposed development scenarios, including transportation, noise, air, and water resources. Anticipated permits and approvals needed for redevelopment of the Upper Harbor Terminal site have also been identified in the AUAR and Mitigation Plan.</p> <p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to</p>



Comment	Response
	avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.
<p>The draft UHT coordinated plan lacks any substantive plan for public transit to service this site. The Minnesota Department of Transportation (MnDOT) is planning a highway expansion project along I94, which will run directly adjacent to this project. MnDOT has conducted a study which concluded that having Bus Rapid Transit along this corridor was highly competitive, however there is no funding to make this public transit option a reality. Without public transit included in the redevelopment plans for the Upper Harbor Terminal site, this project excludes many city residents from accessing the site and increases auto emissions in an area with poor air quality. Additionally, there should be a detailed plan presented for how First Avenue plans to get up to 10,000 people to concerts without using the designated park area for parking, without having people park in the surrounding neighborhoods, and/or without running shuttles from present amenities (such as parks) which would affect the normal parking needs for those entities.</p>	<p>The City will continue to coordinate with Metro Transit regarding service planning as the AUAR study area is developed. As identified in the Mitigation Plan, an Event Transportation Management Plan (ETMP) will be developed by First Avenue and the City as part of the site design process for the community performing arts center.</p>
<p>A thorough wildlife assessment should also be done. The Mississippi River is a major bird flyway and there are more birds using this corridor than identified in the Scoping document. The impact of light, noise, and air quality should be considered in regard to wildlife.</p>	<p>Item 13 of the AUAR describes wildlife resources and habitat in the study area, including the Mississippi Flyway. The AUAR identifies several mitigation strategies to minimize impacts to migratory birds within or near the AUAR study area. The redevelopment of the Upper Harbor Terminal site will provide improved habitat for birds and wildlife within the project vicinity with the implementation of 19.5 acres of park space, shoreline restoration, and increased landscaping within the AUAR study area.</p>
<p>The impact of density and structure height on residents, visitors, neighborhoods and wildlife should be considered as well. We oppose the use of Conditional Use Permits (CUP) and/or variances to increase the height of proposed developments at the UHT site in the Shoreland Overlay District and the Mississippi River Corridor Critical Area (MRCCA) Overlay District. If buildings are to exceed allowed height, they should be placed next to I94.</p>	<p>As stated in the AUAR, the City may pursue flexibility in building height and/or district designation in the MRCCA plan. The applicable developer will continue to work with the City to evaluate compatibility of the proposed development with the MRCCA policy that guides development. The proposed development will follow MRCCA policies, which identify</p>

Comment	Response
<p>Even with the newly adopted MRCCA ordinance, which allows 65 feet for buildings at this site, the proposed developments at UHT would exceed the allowed height limits – we believe the height proposed for the real-estate development at this site is unnecessarily excessive. A development on public land on the Northside should not be exempted from the city’s brand-new standards for good riverfront design.</p>	<p>landscaping requirements including any vegetative screening, structure orientation, creative building design, and structural tiering as strategies to minimize massing of structures along the river. The City will review the proposed developments to confirm they follow the MRCCA policies.</p>
<p>There is concern that the size of the necessary stormwater treatment will cut into recreational space. We think park, open space, and creative reuse and minimization of stormwater surface runoff should be prioritized over building a large concert stadium.</p>	<p>Both development scenarios include 19.5 acres of parkland. The development scenarios are required to meet City and state regulations for stormwater management. The AUAR and Mitigation Plan have identified two options for stormwater management (individual stormwater systems or a district stormwater system) that will improve water quality in the AUAR study area. The district stormwater system could serve to increase the public realm by creating green spaces in the development that are publicly accessible or expand the perceived size of the parkland by placing stormwater facilities that prioritize habitat adjacent to the park.</p>
<p>Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from I94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?</p> <p>This AUAR is wholly inadequate. I am requesting a response that explains the City’s justification and how it plans to address my concerns.</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used</p>

Comment	Response
	<p>as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>Traffic analysis, noise analysis, and air quality review were completed for the development scenarios, and the results were presented in the AUAR. Mitigation strategies for traffic, noise, and air pollution are identified within the Final Mitigation Plan.</p>

**TODD PIERSON**

Comment	Response
<p>I am a resident of North Minneapolis and have been closely following the development of the Upper Harbor Terminal. I also am an active leader for environmental justice in our community.</p> <p>The current AUAR overlooks several climate concerns. The cumulative effect of greenhouse gas emissions in the area with the adjoining I-94 corridor contributing to the pollution must be included in this review.</p> <p>This report must be amended to include all present and future environmental impacts.</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to</i></p>

Comment	Response
	<p><i>Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p>

**EVAN DAVIS**

Comment	Response
<p>I am submitting this public comment on the Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal development. As a resident of Minneapolis and a public affairs doctoral student at the University of Minnesota, I firmly believe that citizen participation in community development projects and environmental decision-making is an essential part</p>	<p>Comment noted.</p>



Comment	Response
<p>of the process. I hope that the city, the project developers, and other stakeholders engage critically and meaningfully with the public comments submitted in response to the AUAR.</p> <p>This project is a unique opportunity for the city of Minneapolis to lead by example and demonstrate real commitments to environmental justice, sustainability, and creative community development. That is why I have such high expectations for this project and appreciate the opportunity to submit the following questions, concerns, and recommendations:</p>	
<p><b>Cumulative Potential Impacts</b></p> <p>Section 19 on cumulative potential impacts focuses primarily on other projects that immediately surround the area rather than the cumulative effects of the new development, considered together with the effects of pre-existing sources of pollution. This section is a missed opportunity to address the redevelopment’s long-term effects in terms of greenhouse gas (GHG) emissions. The AUAR should provide estimates of GHG emissions or the carbon footprint of the two development scenarios.</p> <p>There is little specific information on the Net Zero and Carbon Free plans that the AUAR alludes to on page 97. What sort of timeline, strategies, and details exist for achieving carbon free projects for each development parcel? Moreover, why are only 50 percent of the buildings’ anticipated energy needs generated from on-site local renewable energy and only 50 percent of multifamily buildings enrolled in the energy efficiency programs? Are these minimal viable goals to still maintain affordable energy costs? A supplemental cost-benefit analysis could serve as a reasonable assessment for determining renewable energy options and balancing affordability.</p> <p>Further, are the 50 percent thresholds included in the mitigation plan and what specifically will the developers do to ensure compliance with these goals? A commitment to increasing the percentages in accordance with an aforementioned cost-benefit analysis and the increased availability of renewable energy generation options would be a more effective way to</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be</p>

Comment	Response
<p>achieve the environmental justice and sustainability outcomes that the project proposes.</p>	<p>imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p> <p>The sustainability measures listed in Table 18 of the AUAR are based on the Draft Coordinated Development Plan, which was a plan developed in coordination with United Properties and the City of Minneapolis. Scenario 1 and 2 will complete and make public a feasibility study for achieving Net Zero and Carbon Free projects for each development parcel. Sustainability measures as listed in the Draft Coordinated Plan will be included in redevelopment contracts with the City and a future Community Benefits Agreement, where appropriate.</p>
<p><b>Transit and Traffic Congestion</b></p> <p>Despite a focus on the Transportation Action Plan and the City’s Vision Zero Action Plan, the AUAR provides no transit routes with direct access to the development area. While the AUAR states that, “potential future transit routes through the development are under consideration and will be coordinated between the City, MPRB, and Metro Transit”, this statement relies on good faith negotiations rather than any formal commitments. The AUAR should provide details about what potential future transit routes are under consideration.</p> <p>Furthermore, the traffic analysis in Appendix F seems to indicate decreases in level of service. In particular, Dowling Avenue and its associated intersections</p>	<p>The City will continue to coordinate with Metro Transit regarding service planning as the AUAR study area is developed. The Metropolitan Council’s comment letter on the Draft AUAR affirmed this, stating, “Metro Transit continues to coordinate with the project to ensure that site designs accommodate potential future transit service. Service details such as potential frequency are not determined at this time, and Metro Transit will monitor conditions and opportunities for potential service as they develop.”</p> <p>Overall intersection LOS A through D is generally considered acceptable within the Twin Cities Metropolitan Area, although longer delays for short periods of time and/or for</p>

Comment	Response
<p>are frequently rated at an F level of service which indicates “extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow”. The main issues associated with traffic congestion are twofold:</p> <ul style="list-style-type: none"> <li>• Increased vehicular idling and reduced air quality from mobile source air toxics (MSATs)</li> <li>• Enhanced mobility restrictions and risks for residents of proximate neighborhoods</li> </ul> <p>Are there additional or more clear mitigation measures that the development can adopt to minimize the negative externalities associated with increased congestion? This would align with the project’s purported commitment to environmental justice and proposals to reduce air quality inequities and health disparities in the North Minneapolis community.</p>	<p>specific movements are often considered acceptable as well. In urban areas, it is common for intersections to operate at LOS E or LOS F for short periods of time, particularly when balancing other transportation modal priorities. Mobile source air toxics are discussed in Item 16 of the AUAR, and traffic mitigation strategies are included in the Mitigation Plan.</p>
<p><b>Soil Remediation</b></p> <p>On page 55, The AUAR states, “Phase II assessments may be required to assess the extent of existing contaminants.” Given that earlier reports identified potential environmental hazards at the site, confirmation of contaminated soil and full remediation procedures should be integrated into the mitigation plan. The plan identifies phytoremediation strategies, and while these methods can be effective, they are an incomplete approach to contaminant cleanup. Without a full assessment and complete remediation process, the project risks trapping the contaminated soil under new development. Since different methods of remediation have distinct types and levels of impact on the environment and public health, each type should be explored in the AUAR. Finally, the AUAR should indicate a more explicit commitment to working with the Minnesota Pollution Control Agency and specifically develop a contingency plan or response action plan accordingly.</p>	<p>Prior to any development, the applicable developer will need to coordinate with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered. The Mitigation Plan states that the contractor will need to prepare a Construction Contingency Plan and Response Action Plan for MPCA approval.</p>
<p><b>Indigenous Perspectives and Educational Opportunities</b></p>	<p>Part of the vision statement of the Coordinated Development Plan is to, “implement specific solutions with a focus on healing with historically Black/American Descendants of</p>

Comment	Response
<p>Page 65 hosts a number of bullet points implying “specific ways to incorporate messages about water, connectivity, and Indigenous perspectives into places for teaching, learning, and reflection.” Two specific examples are:</p> <ul style="list-style-type: none"> <li>• “Industry at the Upper Harbor Terminal is connected to industry, logging, land theft, and treaties to the North, as well as industry at the Falls and the destruction of Spirit Island.”</li> <li>• “Make holistic practices such as phytoremediation to heal the soil an educational opportunity with Indigenous art and language.”</li> </ul> <p>Among these two examples are other vague points which lack specific strategies to meaningfully incorporate Dakota and Ojibwe people or their interests into the project. For instance, what connections does the development offer between its proposed phytoremediation strategies and indigenous education? Will landmarks and signage be “interpretations” of indigenous perspectives or will they be determined, designed, written, and implemented by indigenous Minnesotans? What other specific ways will the city and developers work with the Dakota and Ojibwe Nations of Minnesota during this project?</p> <p>Given the stakes involved in this development and the history of environmental injustices in the area, a conventional environmental review with platitudes and equivocation is insufficient. I strongly urge the city and developers to make more specific, formal, and explicit commitments to robust mitigation strategies and ongoing engagement with the community. I look forward to responses to this statement and a continued dialogue on this process.</p>	<p>Slavery and American Indian/Indigenous communities, recognizing that the issues of anti-Blackness and Native sovereignty continue to perpetuate harm against all groups.” As identified in the Mitigation Plan, the development will explore interpretive planning that balances the significance of the site through time and across cultures. The development team continues to work with the community to design a park that reflects the culture and history of the area.</p>



**KELSEY BRODT**

Comment	Response
<p>I don't know where to begin because there seems to be less than complete review of the environmental impact of this project, let alone the quality of life of the residents in the area.</p> <ol style="list-style-type: none"> <li>1. If the builder completes the music venue first won't the zoning laws prevent a housing complex because of the noise disturbance.</li> </ol>	<p>A noise analysis was completed for the AUAR and is summarized in Item 17 of the AUAR. This noise analysis included modeling of noise receptors at both the nearest existing and proposed residences and found the maximum facility-generated noise level of the proposed amphitheater does not exceed the City's permitted limit in any location of proposed or existing residences.</p> <p>The proposed development will follow the design guidelines that have been established as part of the City's Comprehensive Plan. The Comprehensive Plan designates the majority of the site as either Production Mixed Use or Corridor Mixed Use. Both of these designations allow for the construction of both residences as well as additional uses.</p>
<ol style="list-style-type: none"> <li>2. The AUAR does not look at CUMULATIVE effects of the pollution (ie. Concrete for building, fracked gas for heating, pollution from more traffic, parking lots creating more heat in the already hot urban area). If you are not taking into account GAF &amp; Northern metal how can you justify the accuracy of this.</li> </ol>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the "effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects." The Minnesota Environmental Quality Board's <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that "the 'current aggregate effects' of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect</p>

Comment	Response
	to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.
3. Minnesota Dept. of Health is already concerned about the incredibly high rates of asthma in residents in the area so using the space in a way that doesn’t help their health is absurd.	Comment noted. As noted in Table 18 in the AUAR, one of the objectives identified of the Coordinated Development Plan is to improve environmental conditions in North Minneapolis.
4. There is no mention of true conservation or sustainable policies (ie. Collecting storm water runoff like US Bank stadium, compost & recycling of products sold at the venue, wind or solar energy).	The proposed development scenarios will incorporate elements of sustainability identified by the City’s Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City’s Climate Action Plan and the City’s Transportation Action Plan.
I think there is a much better way to use the land and especially since it doesn’t seem like the venue is actually geared toward those who live in this neighborhood in the first place. Their current levels of noise and pollution are already high and this project does not access any of that. This project will not get Minneapolis to its 2040 goals.	The AUAR includes a discussion of the compatibility of the proposed land uses with the goals of <i>Minneapolis 2040</i> .

**JOE MULLERY**

Comment	Response
The company that did the AUAR should lose their ability to do anything in the environmental field in view of the incredibly phony way they downplayed and apparently falsified the negative environmental effects. And the City should pay millions to the state in fines for this farce.	The MPCA monitors 10 air pollutants throughout the Twin Cities Metropolitan Area and reviews the Air Quality Index (AQI) to confirm the Twin Cities Metro Area continues to be an Attainment Area for Air Quality. As part of the Clean Air

Comment	Response
<p>Their treatment of the significant pollution and health effects as if they were insignificant is deplorable. There is absolutely no question that there will be significant pollution and health effects.</p> <p>The area near the UHT is so polluted that in 2015 when the Minnesota Department of Health and the Minnesota Pollution Control Agency released their very important Life and Breath Report, they chose to have the press conference on its release just a few blocks from UHT, because that area is probably the worst in the state. There was an update in the State Report in 2019, and they have the data and are putting together an upgrade of the State Report for release soon.</p> <p>The AUAR is so deficient that it doesn't even address the report or these serious issues. The State Report addresses the extremely dangerous effects of the existing pollution in the area on serious asthma, COPD, and other respiratory and cardiovascular conditions in the area, especially for children and seniors. The State Report is very in-depth and the study even analyzed records for death, hospitalizations and emergency visits and showed they were more than two times what the rates were for most of the metro area and state. The State Report showed the disgraceful way the City of Minneapolis is treating the people in the area, most of whom are of color and low income.</p> <p>The State Report studied both PM2.5s and ozone, with most of the problems created by 2.5s. 2.5s have been labelled by vast numbers of scientists as the most harmful air pollution, and they are estimated to be responsible for 95% of the health impact of air pollution.</p> <p>While businesses in the area create a huge amount of 2.5s, (GAF, next door, and many others in the area are proven big polluters) the cars and trucks create the most. Enormous amounts of 2.5s are created in the combustion process and are expelled into the air by the exhaust. There is a surprisingly large amount of additional 2.5s created by tires and brakes. Moreover, the exhaust contains huge additional amounts of Precursor 2.5s which are</p>	<p>Act, the EPA calculates the AQI for five major air pollutants. The data collected from the MPCA monitoring stations is compared to the EPA AQI ranges. The Twin Cities AQI on June 29, 2021 was 36, meaning the air quality in the Twin Cities Metro area is considered good (<a href="https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA">https://www.airnow.gov/?city=Minneapolis&amp;state=MN&amp;country=USA</a>).</p> <p>The adjacent GAF Manufacturing Facility (GAF), located directly south of the AUAR study area, is currently in compliance with all state air permits and local city ordinances. GAF continues to work with the City of Minneapolis on addressing neighborhood concerns and is currently investigating the installation of a regenerative oxidizer that would reduce volatile organic compounds (VOCs) and emissions from the facility.</p> <p>Additionally, as described in the Draft Coordinated Development Plan, the project proposers are in discussions with the MPCA regarding the placement of an air quality monitor within the development site to monitor air quality within the AUAR study area. The proposed development will be designed to meet LEED certification standards. The project proposers are also considering designing the site to meet LEED for Communities standards, which is a more stringent scorecard for energy consumption and greenhouse gas emissions management.</p>

Comment	Response
<p>indirectly combining with other pollutants in the air to generate very large numbers of secondary 2.5s</p> <p>All this huge amount of dangerous pollution doesn't just disappear; it hangs around and causes enormous proven health issues.</p> <p>It is unthinkable that the City of Minneapolis has allowed this to go on. With the City's Plan for UHT they intend to greatly exacerbate the situation.</p> <p>The AUAR is such a despicable phony farce that it greatly downplays this extremely dangerous issue.</p>	
<p>There is no doubt that the Plan will bring in a lot more auto, truck and bus traffic. (The AUAR is so ridiculous that in one place it basically denies there will be any additional pollution from all the extensive additional traffic.) Are the authors of the AUAR so clueless they don't know the pollution doesn't just disappear the moment it is released; but rather it hangs around to destroy people's health. On many days, there will be vast amounts of additional pollution in the area and it all combines into much worse pollution levels, leading to even more health problems for the mostly people of color and low income.</p> <p>Even on days when there is no event there will be a lot more air pollution than exists now or would happen if UHT were open space or park land.</p> <p>There have also been other studies of the area pointing to the already dangerous levels of air pollution in the area, including the major effect of traffic. The area is already way beyond the tipping point, and now the City wants to greatly exacerbate the situation.</p> <p>It seems impossible to believe that the author of the AUAR doesn't understand that a doubling of the 2.5 releases doesn't just double the pollution. It creates higher multiples of it.</p> <p>And the effect on people's health is not just doubling. It creates multiple times the negative health effects. People can put up with a certain amount of pollution but the negative health effects don't just double because of</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p>



Comment	Response
<p>doubling the pollution. Bodies have many tipping points where a little more pollution causes multiplying the great negative effects.</p> <p>Yet the authors of the AUAR don't account or even really consider the cumulative effects of adding some pollution onto the existing high levels of pollution, and the big jump in negative health effects from even a small increase in pollution.</p> <p>Traffic wasn't even studied from all directions. And the fact was not studied that in the real world during events cars will be driven up and down streets looking for parking places. (When I was going to the University I often walked a couple miles each way for parking.)</p>	<p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p> <p>As identified in the Mitigation Plan, an Event Transportation Management Plan (ETMP) will be developed by First Avenue and the City as part of the site design process for the community performing arts center.</p> <p>The Traffic Report in Appendix G studied the following intersections within the AUAR study:</p> <ul style="list-style-type: none"> <li>• Lyndale Avenue &amp; Dowling Avenue N</li> <li>• West I-94 Ramp &amp; Dowling Avenue N</li> <li>• East I-94 Ramp &amp; Dowling Avenue N</li> <li>• Washington Avenue N &amp; Dowling Avenue N</li> <li>• Washington Avenue N &amp; 2nd Street N &amp; 36th Street N</li> <li>• 2nd Street N &amp; 33rd Avenue N</li> <li>• Washington Avenue N &amp; 33rd Avenue N</li> <li>• Lowry Avenue N &amp; Washington Avenue N</li> <li>• Lowry Avenue N &amp; 2nd Street N</li> <li>• Two site access locations that are included in the Build conditions</li> </ul> <p>Weekday peak period turning movement counts were collected in March 2018 for the intersections studied and traffic volumes were collected during March 2020 and were adjusted to account for business and school closures due to the COVID-19 pandemic.</p> <p>The Parking Study in Appendix G included collecting parking counts for all street segments within the AUAR study area</p>

Comment	Response
	<p>and was collected during the weekday and weekend in February-March 2021 to determine the current parking demand for the on-street parking. The studied street segments included:</p> <ul style="list-style-type: none"> <li>• Washington Avenue North, between Lowry Avenue North and 36th Avenue North</li> <li>• North 2nd Street, between Lowry Avenue North and 36th Avenue North</li> <li>• 34th Avenue North, between Washington Avenue North and North 2nd Street</li> <li>• 33rd Avenue North, between Washington Avenue North and the dead end east of North 2nd Street</li> <li>• North 4th Street/39th Avenue North, loop connected to Washington Avenue North at each end</li> </ul>
<p>For 20 years I was part of numerous legislator groups studying the environment. And both river and ocean stewardship were part of the environmental studies. The UHT Plan rates an F for its anti-river environment. Everything about the Plan is anti-river. The worst of course is the 19th century idea of putting manufacturing and production near the river. They are extremely off-putting to anyone thinking of using the waterfront. And of course they produce more pollution.</p> <p>If the AUAR were submitted for a university course it would receive somewhere from a D- to an F-. And I am very serious that analysis needs to be made of whether the author should be allowed to continue in the environmental field</p>	<p>Comment noted.</p>

MELISSA WINN

Comment	Response
<p>I believe the 7,000 - 10,000 concert venue with its related parking and traffic is concerning. It would be more appropriate to place in a location with infrastructure rather than erecting more structures. The 94/252 expansion will more than likely increase traffic with related sound and air impacts.</p>	<p>Comment noted.</p>
<p>As temperatures increase due to climate change, there will be a greater need for green space. Heat island impacts will be even more intense. Both air pollution and increased heat will have serious impacts on the health of people. (Hennepin County Climate Action Plan May 2021; September 2, 2020 Racist housing have created some hot neighborhoods, National Geographic). I think the area needs more green space than it does a concert venue in the form of gardens, native plants and trees.</p>	<p>The development scenarios include 19.5 acres of parkland and will reduce impervious surface within the AUAR study area. MPRB continues to work with the community to design a park that allows for increased wildlife habitat and green space.</p>
<p>I am concerned about the impact of this development on bird life. According to the AUAR the wildlife currently the in the area are adapted to this disturbed urban site (p.59). The report only identifies two bird species from the area. The Mississippi River is a major bird flyway and there are more birds using this corridor than identified in this report (<a href="https://www.threeriversparks.org/blog/mississippi-flyway-bird-highway-through-twin-cities">https://www.threeriversparks.org/blog/mississippi-flyway-bird-highway-through-twin-cities</a>) . According to the Minnesota Audubon Guide to Urban Bird Conservation, natural resource management without monitoring and research is only half the equation. This guide was prepared after the City entered an Urban Bird Treaty with the US Fish &amp; Wildlife Service in 2011. While this document may not be binding, it is does indicate a form of commitment. A survey of birds in this area, including birds using the River as a migration route, should be done. I do not believe a thorough mitigation plan can be made without further information.</p>	<p>As described in the Mitigation Plan, the Audubon Minnesota Bird-Safe Building Guidelines and the American Bird Conservancy’s Bird-Friendly Building Design will be used to develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical. These guidelines include strategic selections of the types and placements of building materials, landscaping vegetation, exterior window glazing, and interior window treatments to minimize impacts to birds.</p>

**COLETTE ALTFILLISCH**

Comment	Response
<p>I have been made aware of the Upper Harbor Project and I have some major concerns.</p> <p>I don't think this was thought through properly or properly notified the neighborhood.</p> <p>I would like to see this project not be given approval to move forward.</p> <p>I am happy to discuss with you.</p>	<p>Comment noted.</p>

**LESLIE DAVIS**

Comment	Response
<p>CONCLUSION</p> <p>The AUAR is inadequate in addressing the environmental consequences of developing the UHT as being proposed.</p> <p>The current Agreement to give away 19 acres of the 48 acre Upper Harbor Terminal (UHT) site and develop the rest should be canceled and a new Request for Proposal issued.</p> <p>The current UHT development proposal, and the giveaway of 19 acres of prime industrially zoned land to the Park and Recreation Board is improper, illegal, and if implemented would be environmentally destructive to the North Minneapolis community. When Thor Development dropped out of the project as the minority partner it should have voided the Development Agreement and a new Request for Proposal should have been issued.</p> <p>For 20+ years I have been a resident and business owner in the Mckinley Neighborhood of North Minneapolis, where the Upper Harbor Terminal (UHT) is located, and at no time was I ever notified, by any means, that the UHT was available for development.</p>	<p>The Draft Coordinated Development Plan was informed by more than a decade of community engagement as summarized in Table 19 in the AUAR.</p> <p>Air quality and traffic are discussed in Item 16 and Item 18 of the AUAR, respectively. As identified in the Mitigation Plan, an Event Transportation Management Plan (ETMP) will be developed by First Avenue and the City as part of the site design process for the community performing arts center.</p>



Comment	Response
<p>Once I became aware of the proposed development I attended a dozen meetings and commented several times to the Minneapolis City Council and Minneapolis City Staff regarding the illegality and impropriety of the projects being proposed at the UHT and offered the following thoughts:</p> <p>Improper uses for the UHT:</p> <ol style="list-style-type: none"> <li>1. A 19 acre land give-away of the 48 acre UHT site for a park 1.8 miles from the 62.5 acre under-used North Mississippi Regional Park is not needed or wanted and will destroy the opportunity for the 19 acres to be used for generating wealth on the valuable industrially zoned land.</li> <li>2. Liquor bar music venue for 10,000 patrons, many of whom will be public urinating drunks seeking prostitutes at bar closing time, just like they do downtown when departing the numerous First Avenue Production venues.</li> <li>3. Housing – poisonous air emissions such as formaldehyde and other volatile organic compounds (VOC) from the GAF shingle manufacturing facility, adjacent to the south, will waft over the UHT site for more than 5 months of the year as the wind blows from the south and southeast, according to weather maps, thus rendering it uninhabitable for families to live at the UHT full time. In addition, the Minnesota Pollution Control Agency has stated that low doses (under permitting limits) over long periods of time of toxic air, such as formaldehyde, can cause serious illness. Especially to children in their developing years.</li> </ol> <p>Location benefits of the UHT:</p> <ol style="list-style-type: none"> <li>1. Interstate Highway on/off ramp.</li> <li>2, Railroad spur.</li> <li>3. Direct river access.</li> <li>4. Limitless water supply.</li> <li>5. Vast labor pool nearby.</li> </ol>	

Comment	Response
<p>6. Zoned industrial.</p> <p>Proper use for the UHT property:</p> <p>1. Hydroponically growing PRE-SOLD organic products such as vegetables, bamboo, and non-psychoactive hemp in dozens of greenhouses, using wind, solar, and hydro generated electricity for energy purposes. The PRE-SOLD products would generate great wealth after being processed, especially the hemp which would be used as feedstock for:</p> <ul style="list-style-type: none"> <li>a. construction materials</li> <li>b. fabrics (clothing, carpeting)</li> <li>c. human food and pet food</li> <li>d. body oils, lotions, hair care</li> <li>e. plastic and paper</li> <li>f. bio-fuels</li> <li>g. hundreds of other products</li> </ul> <p>SUMMARY OF ILLEGAL DEVELOPMENT AGREEMENT</p> <p>The Pohlad and Frank families illegally obtained control of the UHT through their insider participation on the Park Foundation Board (a separate entity from the Park and Recreation Board) where they gave cash bribes to the Park and Recreation Board for more than a million dollars to gain their UHT Development Agreement. Then the Park and City of Minneapolis illegally gave 19+ acres of land rightfully owned by the people of Minneapolis, to the Park and Recreation Board for an unneeded park a short distance from a huge under-used sixty two acre park with many amenities.</p> <p>AUAR FAILURES</p> <p>The AUAR fails to adequately address the following:</p>	

Comment	Response
<p>1. Traffic emissions from thousands of vehicles attending a proposed music venue.</p> <p>2. Parking for thousands of music venue patrons. The time to address parking is now, NOT when a project is being built. To suggest waiting for the developers to provide the parking and its environmental details is putting the cart before the horse.</p> <p>2. Emissions from GAF during the 5 months when winds blow from the south and southeast.</p> <p>3. Identify the direction, type and quantity of air emissions at the site from proposed projects.</p> <p>REMARKS MADE PREVIOUSLY THAT ARE DUPLICATIVE BUT IMPORTANT</p> <p>The UHT is an important industrial and commercial property that should be used to produce lucrative jobs and generational wealth through indoor growing and processing of PRE-SOLD hydroponically grown organic products ranging from vegetables to herbs to hemp to bamboo and more. Having 19+ acres of vacant land dedicated to a park a short distance from an under-used sixty two acre park would deprive my community of needed jobs and wealth generation in order to benefit a group of racist downtown Minneapolis developers who bribed their way into the theft of the property.</p> <p>My proposed “New Community UHT Development” will require significant amounts of electricity that will be met using modern wind, water, and solar technologies. These modern and efficient technologies would range from hydro water wheels to bladeless wind generators.</p> <p>Housing for families at the UHT would not be appropriate due to the toxic air emissions from the GAF shingle manufacturing facility that would waft over the UHT many months of the year when the wind blows from the south as it currently does. Even if GAF installs their promised thermal oxidizer the formaldehyde and other toxic air emissions, in addition to the proposed newly added thousands of cars emitting additional emissions, renders the</p>	

Comment	Response
<p>UHT unhealthy regardless if GAF emissions meet or don't meet Minnesota air quality standards which are not based on hundreds of young children living under a constant plume of toxic air.</p> <p>A liquor bar with music at the UHT is too senseless to debate, but I will comment. According to the Police Department, when downtown Minneapolis liquor bars, such as those operated by the Frank family, release their highly intoxicated patrons in the middle of the night, they frequently urinate publicly because they are shoved out the door right after their last drink, and then after urinating they seek prostitutes of either gender as they lurk about in the neighborhood. This disgusting practice is not what North Minneapolis needs nor are the part-time low-paying jobs they create. And the payoffs of a ticket toke attached to each liquor bar ticket to allow the whore-masters to invade my neighborhood is typical of the behavior Frank displayed by the bribery to obtain the Development Agreement along with Pohlad in the first place. We would like Pohlad and Frank to keep their whores and customers at their current establishments. Or they can invite them to their homes if they like...not ours.</p> <p>The AUAR is inadequate to address the proposed UHT development.</p> <p>LASTLY – WHERE WILL THE MUSIC VENUE FIND 11+ ACRES AT THE UHT TO PARK THE CARS OF THEIR PATRONS?</p>	

**TESS DORNFIELD**

Comment	Response
<p>First of all, a 30-day comment period on the AUAR is insufficient for a project of this magnitude, and to only allow for this minimum length of time for public response indicates the City is only complying with the requirement, and not out of a genuine interest in public input. A single open house event is also not in line with a true commitment to public engagement. This contradicts the City's positions on environmental racism and environmental</p>	<p>As outlined in Minnesota Rules, part 4410.3610, subpart 5B, "Reviewers shall have 30 days from the date of notice of availability of the draft environmental analysis in the EQB Monitor to submit written comments to the RGU." The Upper Harbor Terminal AUAR also went through a scoping process, which provided an additional 30-day public comment period on the scenarios, study area, and scope of analysis. In</p>



Comment	Response
<p>justice, and the public engagement for the Final AUAR and all future comment periods must be more robust.</p>	<p>addition to the virtual open house meeting on June 10, 2021, the City and development team presented at the Northside Green Zone meeting on June 1, 2021 and the Upper Harbor Terminal CPC meeting on June 9, 2021 during the AUAR comment period.</p> <p>The City is committed to a long-term, comprehensive approach to address environmental justice issues. As noted in the AUAR, the Coordinated Development Plan is guided by over a decade of public engagement with the Northside community (see Table 19 for a full summary of these public engagement activities). The AUAR details several solutions proposed by the Coordinated Development Plan intended to advance the City’s environmental justice initiatives and provide benefits to residents below the poverty level and residents of color.</p>
<p>The AUAR itself is also inadequate and requires significant further assessment if it is to gain the City's approval. Of special concern is its failure to address climate and greenhouse gas emissions impacts. This site is within the Northside Green Zone, which was created as part of the City's Climate Action Plan, and yet the AUAR completely lacks any climate analysis. If fracked fossil gas is used to heat buildings including the event venue, this will be a highly significant impact that must be addressed.</p>	<p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project’s effect on climate change has not been finalized.</p> <p>The proposed development scenarios will incorporate elements of sustainability identified by the City’s Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City’s Climate Action Plan and the City’s Transportation Action Plan.</p>

Comment	Response
<p>If housing units are equipped with gas-burning stoves, that would not only contribute to climate impacts as well, but have unconscionable health consequences, including exacerbation of health inequities if it is used in low-income housing, as reported here: <a href="https://rmi.org/press-release/health-air-quality-impacts-of-cooking-with-gas">https://rmi.org/press-release/health-air-quality-impacts-of-cooking-with-gas</a> The AUAR also fails to address this or any plans to mitigate emissions from the construction process, materials, or operations of the development.</p>	<p>The proposed development scenarios will incorporate elements of sustainability identified by the City’s Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City’s Climate Action Plan and the City’s Transportation Action Plan.</p>
<p>Furthermore, the air quality assessment does not take into account cumulative impacts from I-94 or the GAF facility, or provide consistent or adequate analysis of traffic and parking impacts.</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Item 18 of the AUAR summarizes the traffic and parking analysis completed for the development scenarios. The scope</p>

Comment	Response
	and analysis were reviewed by the City, Hennepin County, and MnDOT.

**RIVER GORDON**

Comment	Response
<p>I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.</p> <p>First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?</p>	<p>As defined in Minnesota Rules, part 4410.0200, subpart 11a, cumulative potential effects are the “effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.” The Minnesota Environmental Quality Board’s <i>Guide to Minnesota Environmental Review Rules</i> provides additional guidance for evaluating cumulative potential effects and how to account for past projects in the evaluation. It states that “the ‘current aggregate effects’ of past projects can be used as a surrogate for an inventory of the effects from individual past projects....Typically, the existing conditions with respect to an environmental resource will be equal to the current aggregate effects from past projects.” The No Build Scenario evaluated in the AUAR provides the existing conditions information used to account for past projects, consistent with this guidance.</p> <p>Minnesota Rules, part 4410.3610, subpart 5, item C, states that the AUAR shall specify mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts. It does not provide rules or guidance to mitigate existing conditions.</p>

Comment	Response
	<p>A noise analysis was completed for the proposed community performing arts center and was included in the AUAR. Mitigation strategies for noise have also been included in the Final Mitigation Plan.</p> <p>The traffic analysis was completed for both development scenarios and is included in the AUAR. Strategies to mitigate potential impacts to traffic are outlined in the Final Mitigation Plan. As identified in the Mitigation Plan, an Event Transportation Management Plan (ETMP) will be developed by First Avenue and the City as part of the site design process for the community performing arts center.</p>
<p>Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.</p> <p>This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.</p>	<p>The Minnesota Environmental Quality Board is considering changes to the Environmental Review Program to address climate change; however, these changes have not yet been implemented and guidance on how to evaluate a specific site or individual project's effect on climate change has not been finalized.</p> <p>The proposed development scenarios will incorporate elements of sustainability identified by the City's Climate Action Plan. Item 20 of the AUAR lists several elements of the Coordinated Development Plan that call for sustainable development strategies, green infrastructure, and prioritizing pedestrian and bicycle improvements that support action steps of the City's Climate Action Plan and the City's Transportation Action Plan.</p>



LA SHELLA SIMS

Comment	Response
<p>1-One copy of report only at 1 library- Central Library- in downtown Mpls.</p> <p>This library is not even located in the North Side communities/neighborhoods. Is this library even open.</p>	<p>Minneapolis Central Library is open 9 a.m. – 5 p.m. Mondays, Tuesdays, Thursdays, and Saturdays as well as 12 p.m. – 8 p.m. Wednesdays.</p> <p>The AUAR has been available on the City of Minneapolis’s website since May 21, 2021:  <a href="https://www2.minneapolismn.gov/business-services/planning-zoning/environmental-assessments-worksheets/eaw-upper-harbor-terminal/">https://www2.minneapolismn.gov/business-services/planning-zoning/environmental-assessments-worksheets/eaw-upper-harbor-terminal/</a> .</p> <p>The City also presented the AUAR findings and mitigation plan at the June 1, 2021 Northside Green Zone Meeting, the June 9, 2021 Upper Harbor Terminal Collaborative Planning Committee (CPC) Meeting, and at the June 10, 2021 virtual open house. The June 10<sup>th</sup> virtual open house provided an opportunity for community members to ask questions of the City and development team related to the analysis completed for the AUAR and mitigation strategies outlined in the Draft Mitigation Plan.</p> <p>Additionally, the City sent out the following Upper Harbor Terminal Gov Delivery email updates with information on the AUAR process:</p> <ul style="list-style-type: none"> <li>February 12, 2021 – Email update announcing the notice of availability for the Draft AUAR Order &amp; Scoping Document and publishing date in the <i>EQB (Environmental Quality Board) Monitor</i>. This announcement also included information on the new Environmental Review page on the Upper Harbor project website and the City’s environmental review webpage with more information on the AUAR.</li> </ul>

Comment	Response
	<ul style="list-style-type: none"> <li>• May 26, 2021 – Email update announcing the notice of availability for the Draft AUAR, the public comment period, and information about the three public meetings.</li> <li>• June 8, 2021 - Reminder email regarding the CPC meeting, AUAR virtual open house, and public comment period on Draft AUAR.</li> </ul>
<p>2. How are you complying with the Ex Order 12898, President Clinton, 1994 on Environmental Justice?</p>	<p>Executive Order 12898 applies to federal agencies and federally funded projects. The City has demonstrated a comprehensive long-term commitment to address environmental justice. Item 20 of the AUAR details several solutions proposed by the Coordinated Development Plan intended to advance environmental justice initiatives and provide benefits to residents below the poverty level and residents of color.</p>
<p>3. How are you complying with the Ex Order 19-24 of Governor Walz, April 4, 2019.</p>	<p>Executive Order 19-24 applies to state agencies defined in the executive order and relates to consultation between the State of Minnesota and the Minnesota Tribal Nations. It does not apply to the City of Minneapolis.</p> <p>Part of the vision statement of the Coordinated Development Plan is to “implement specific solutions with a focus on healing with historically Black/American Descendants of Slavery and American Indian/Indigenous communities, recognizing that the issues of anti-Blackness and Native sovereignty continue to perpetuate harm against all groups.” The Draft Coordinated Development Plan was informed by more than a decade of community engagement in this area. The community engagement that has happened to date is summarized in a table in Section 20 of the Final AUAR.</p>

Comment	Response
<p>4. How are you complying with the HUD Housing Complaint of 2014-2015.?</p>	<p>The complaint was settled by agreement and the US Department of Housing and Urban Development (HUD) has determined that the City satisfied all provisions of the settlement. The City continues to pursue affirmative actions to overcome impediments to fair housing, including inclusionary zoning, elimination of single-family zoning, and renter screening limitations. The City prohibits housing discrimination on the basis of race, sex, religion, familial status, disability, national origin, color, creed, sexual orientation, ancestry, marital status, and receipt of public assistance.</p>
<p>If one espouses equity, one has the duty and responsibility of doing equity. Otherwise, you are being disingenuous and less than candid. -la sims</p> <p>You are receiving a repeat of my Comments on the AUAR of the Upper Harbor Terminal because when I put your e-mail address in to send my comments someone else's named appeared in the address line. Thereby, I wanted to make sure your name apprehended so I've resent my message making sure it got to you in today's comment time limit.</p> <p>It continues to baffle me as to why organizations continue to put a time limit on being able to comment on various issues related to equality/ environment justice. Does having open-ended comment periods stop one from doing equity or their job?</p> <p>As you will notice I included 2 EPA addresses on the message because the community's lack of trust from the Mpls City Council, even from own advisory committee, continue to this day. very strongly. I met Charles and Alan in my capacity as a member of the MPCA's Environmental Justice Advisor Group.</p> <ul style="list-style-type: none"> <li>EPA- Charles Lee- Deputy Associate Administrator for Environmental Justice</li> </ul>	<p>The Draft Coordinated Development Plan seeks to coordinate implementation strategies with Northside Green Zone goals. One of the goals of the plan is to “significantly advance community-wide efforts to repair environmental injustices, particularly to Northside residents, and more specifically to the Northside’s Black community.” After several years of public engagement, the Draft Coordinated Development Plan has identified development solutions intended to benefit residents of color. These include strategies aimed at providing economic opportunities for residents in the neighborhood, disrupting gentrification and displacement, creating a diverse housing stock in the neighborhood, repairing environmental injustices, and creating inclusive public spaces in the Northside.</p> <p>The Draft Coordinated Development Plan was informed by more than a decade of community engagement in this area. The community engagement that has happened to date is summarized in a table in Section 20 of the Final AUAR.</p>

Comment	Response
<ul style="list-style-type: none"> <li>EPA - Alan Walts - Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples, (Up until 2019 I believe Alan also dealt with enforcement of violations in some capacity.)</li> </ul> <p>Residents of North Minneapolis, and their supporters, have had to push and pull the City council to meet its full requirements in justly and equitably dealing/communicating about the Upper Harbor Terminal and the residents of North Mpls. I feel someone from the Federal level needs to be an advocate for me and my fellow North Mpls residents.</p> <p>Finally, in going over various documents, I could find no one who seems to be legally explaining/representing residents of North Mpls in fully explaining to them their Civil Rights and the 2 executive orders related to equitably in dealing with said issue: Executive Orders from President Clinton and Governor Tim Walz.</p>	



# Appendix I:

## Agency and Public Comment Letters

# HENNEPIN COUNTY

## MINNESOTA

Ms. Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
250 South 4th Street, Room 300  
Minneapolis

June 24, 2021

Re: Hennepin County staff comments on the Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal development as advertised in the EQB Monitor May 25, 2021.

Project Description: This AUAR studies the proposed Upper Harbor Terminal development located at 3800 1st St N, 2 36th Ave N, 51 36th Ave N, 51 34th Ave N, 3360 1st St N, 3700 Washington Ave N, 3648 Washington Ave N, 3701 Washington Ave N, and 3639 Washington Ave N in Minneapolis. The AUAR study area encompasses an area totaling approximately 53 acres. United Properties, in partnership with First Avenue Productions, the Minneapolis Park and Recreation Board (MPRB), and the City of Minneapolis, is proposing to redevelop the 53-acre Upper Harbor Terminal site, which was formerly used as a barge shipping terminal and is currently made up of city-owned land and quasi-public entities, including utilities and Canadian Pacific (CP) rail lines. The proposed development would include residential, hospitality, retail/service, office/employment, light industrial, community performing arts center (includes an outdoor amphitheater), and recreational land uses.

Dear Ms. Dvorak:

We offer the following staff comments on the AUAR for the above-mentioned project:

- It was noted that the following intersection movements get significantly worse in the build scenarios. These LOS changes should be looked at further to mitigate the significant LOS increases in these movements.

2024 Build Coordinated Plan w/ Phase A Mitigation PM Peak

- Washington & Lowry: EB left

2024 Build Comprehensive Plan w/ Phase A Mitigation PM Peak

- Washington & Lowry: EB left

2040 Build Comprehensive Plan w/ Phase B Mitigation PM Peak

- Dowling & Washington: SB movements
- 2nd & Lowry: WB left

- Recognizing the need to coordinate access, we feel there is a need to discuss specific site access when United Properties (the developer) is in the concept phase for development plans. Of note, since we will need to serve 7a and 7b via Washington, generally



speaking, the further from the Dowling intersection the better for a single shared driveway (at least 300' from signal). Other considerations include:

- Will a RIRO access sufficient?
- Turn lanes should be considered essential option for any agreed upon movements.
- Seeing that Phase B is 20-30 years out, if it occurs, county staff would like to retain space available to leave option to add right turn lane(s) in the future (for EBR along Dowling and NBR along Washington Aves). This should include wider boulevard, and appropriately placing bikeway / sidewalk to allow for right turn lane addition in future if needed. *This suggests any agreed upon access(es) should be outside of this area of influence.*
  - Similarly, we would suggest that buildings, trees, sidewalks and bikeways be placed such that the right turn lane(s) can be added without impacting these items.

We appreciate your consideration of Hennepin County comments and look forward to your response. If you have any questions, please contact myself Dave Jaeger at 612-348-5714/david.jaeger@hennepin.us or Jason Gottfried, at (612) 596-0394 /jason.gottfried@hennepin.us.

Thank you for your consideration,

David Jaeger

David Jaeger  
Environmental Specialist  
Hennepin County

June 23, 2021

Hilary Dvorak, Principal City Planner  
City of Minneapolis  
505 Fourth Avenue South, Room 320  
Minneapolis, MN 55415

**RE: City of Minneapolis – Upper Harbor Terminal  
Draft Alternative Urban Areawide Review (AUAR)**  
Metropolitan Council Review File No. 22537-2  
Metropolitan Council District No. 7

Dear Ms. Dvorak:

Metropolitan Council staff completed its review of the Upper Harbor Terminal Draft AUAR to determine its accuracy and completeness in addressing regional concerns. Staff concludes that the Draft AUAR is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies. However, staff offers the following comments for your consideration:

**Item 9. Land Use - Comprehensive Plan** (*Todd Graham, 651-602-1322*)

The AUAR discusses two scenarios: Scenario 1 (*Upper Harbor Coordinated Development Plan*) includes 520 housing units, 365,000 square feet of non-residential space, a music venue, and 19.5 acres of park. Scenario 2 (allowable under the Minneapolis 2040, the City's comprehensive plan) allows for 890 housing units, 695,000 square feet of nonresidential space, a music venue, and 19.5 acres of park.

Most of the AUAR Study Area falls within Transportation Analysis Zones (TAZ) #1189 and 1190. Should development in the study area proceed based on Scenario 1, Council staff would recommend the following forecast changes through a future comprehensive plan amendment.

- Communitywide forecast increase of +500 households and +1000 population, with 50% allocation of each of TAZ #1189 and TAZ #1190.
- Communitywide forecast increase of +200 jobs allocated to TAZ #1190.

The City has received and acknowledged this comment earlier, during the Scoping AUAR process. Please contact Council Research staff to discuss this or other scenarios.

**Item 11. Water Resources - Wastewater** (*Roger Janzig, roger.janzig@metc.state.mn.us*)

Metropolitan Council Interceptor (1-MN-310) runs from north to south through the Study Area. The interceptor was built in 1936 and is a 54-inch Reinforced Concrete Pipe. From the midpoint of Parcel 4 and points north, Interceptor I-MN-310 is located underneath the CP Rail corridor and east of the main rail. It shifts to the west side of the rail corridor in the southern part of Parcel 4 and in Parcel 5.

Sanitary sewer services for all the parcels, except for Parcels 6 and 7, will connect directly into Interceptor 1-MN-310. Depending on the final layout of the development, sanitary sewer service would occur as follows:



- Parcels 4 and 5 will be required to connect directly to Interceptor 1-MN-310.
- Parcel 6 will be evaluated to either utilize an existing connection into the interceptor pipe or will connect into the City sanitary sewer underneath Washington Avenue North.
- Parcel 7 will connect to the existing sanitary sewer under Washington Avenue North.

No land uses that would generate wastewater requiring pretreatment are anticipated for either scenario. Based on the Metropolitan Council Environmental Services (MCES) Sewer Availability Charge (SAC) program, the estimated daily flow for Scenarios 1 and 2 are 0.234 million GPD and 0.364 million GPD, respectively.

There are specific processes that must be followed before encroachment on our property or a direct connection to our Interceptor can be made. Before encroachment on our property an Encroachment Agreement will be required; and before direct connection to the Metropolitan Council Interceptor a Sewer Connection Permit will be required. To obtain a Sewer Connection Permit or an Encroachment Application, contact Tim Wedin, Interceptor Engineering Assistant Manager (651-602-4571) at MCES.

**Item 11. Water Resources – Stormwater** (*Cameran Bailey, 651-602-1212*)

Council staff commend the consideration of both individual and district stormwater management systems for the Study Area. These include the application bioretention basins within the right-of-way, utilization of green space as surface basins, and the use of underground or above ground infiltration / filtration systems. Council staff also recommend the integration of intensive green roof systems including over proposed surface parking lots.

**Item 16. Air** (*Cameran Bailey, 651-602-1212*)

Council staff recommend the adoption and integration of either electric vehicle charging infrastructure or electric vehicle-ready charging infrastructure. Guidance can be found in the Great Plains Institute’s “Becoming Electric Vehicle Ready” guideline document.

Council staff also recommend planning for the integration of multi-modal, shared electric vehicle hubs throughout the AUAR Study Area, including electric bikes, scooters, automobiles, and shuttles.

Implementation of the approaches above would be most cost-effective at the time of development. It would also support the City’s Transportation Action Plan, which identifies a mode shift goal of three of every five trips being made by walking, biking, or transit by 2030. It would also prioritize the “Environmental Justice Measures” mentioned multiple times in the AUAR by reducing “the energy, carbon, and health impacts of transportation through reduced single-occupancy vehicle trips and phasing out of fossil fuel vehicles” (Policy 16 of the Minneapolis 2040 Plan).

Implementation of the approaches above would also support the following specific Policy Action Steps in the City’s 2040 comprehensive plan:

**Policy 16: Environmental Impacts of Transportation, Action Step G**

*“Explore incentives and requirements for electric vehicle charging infrastructure in new development and in the public right-of-way.”*

**Policy 24: Shared Mobility, Action Step A**

*“Prioritize innovation through pilots and experimentation, as well as design, regulatory, and policy initiatives.”*

**Policy 25: Innovations in Transportation and Infrastructure, Action Step D**  
*“Encourage and support electric vehicles by prioritizing associated public and private infrastructure including in the right of way and ensure that electric vehicle charging infrastructure incentivizes the use of renewable generated electricity.”*

**Item 20. Other Potential Environmental Effects - Sustainability and Environmental Justice**  
(Cameran Bailey, 651-602-1212)

Council staff recommend integrating passive heating and cooling design elements into the design and operations of future buildings in the Study Area.

Council staff also recommend the integration of rooftop solar, building-integrated solar, and/or intensive green roof systems at each new building constructed on site, as well as above any surface parking lots. These measures could result in energy efficiency gains, increase habitat, support renewable energy generation goals, increase stormwater retention and detention capacity and function, create rooftop recreation and/or amenity space, and/or mitigate existing and/or future urban heat island effects.

Council staff also recommend exploring a district heating and cooling system to maximize the efficiency of HVAC delivery, minimize the potential for energy burden, minimize the carbon footprint of the project, and increase operational resilience for the project.

**Appendix F. Traffic Analysis Report** (Victoria Dan, 612-349-7648)

Phase A Mitigation Plan states, as one measure, *“Work with Metro Transit to bring convenient and frequent transit service closer to the site”*. Metro Transit continues to coordinate with the project to ensure that site designs accommodate potential future transit service. Service details such as potential frequency are not determined at this time, and Metro Transit will monitor conditions and opportunities for potential service as they develop.

The Council will not take formal action on the AUAR. If you have any questions or need further information, please contact Michael Larson, Principal Reviewer, at 651-602-1407 or via email at Michael.Larson@metc.state.mn.us.

Sincerely,



Angela R. Torres, AICP, Manager  
Local Planning Assistance

CC: Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division  
Robert Lilligren, Metropolitan Council District No. 7  
Judy Sventek, Water Resources Manager  
Michael Larson, AICP, Sector Representative/Principal Reviewer  
Reviews Coordinator

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June 25, 2021

Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
250 South 4th Street, Room 300  
Minneapolis, MN 55415

**SUBJECT:** Upper Harbor Terminal Draft AUAR  
MnDOT Review #AUAR21-001A  
SE quadrant of I-94 and Dowling Ave N  
Control Section: 2781  
Minneapolis, Hennepin County

Dear Hilary Dvorak,

Thank you for the opportunity to review the Upper Harbor Terminal Draft alternative urban areawide review (AUAR). Please note that the Minnesota Department of Transportation's (MnDOT) review of this AUAR does not constitute approval of a regional traffic analysis and is not a specific approval for roadway modifications. As plans are refined, we would like the opportunity to meet with our partners and to review the updated information. This is the second review of this AUAR. First comments were sent on March 17, 2021. MnDOT's staff has reviewed the document and has the following comments:

### ***Traffic***

MnDOT is concerned about the possibility of queues extending to mainline I-94. Please provide details for event transportation management plan and associated traffic modeling files for MnDOT review. Were plans for raised crosswalks across I-94 ramps at Dowling Ave considered in the traffic modeling? How will traffic operations at I-94 and Dowling Ave be impacted?

Please contact Eric Lauer-Hunt, West Area Traffic Safety, at 651-234-7353 or [eric.lauer-hunt@state.mn.us](mailto:eric.lauer-hunt@state.mn.us) with any questions.

### ***Pedestrian and Bicycle***

MnDOT supports the improvements to the bicycle, pedestrian, and transit access to and through the site as a means to minimize/mitigate project related transportation effects. Metro Ped and Bike will continue to work with the City to ensure safe and comfortable transportation for non-motorized users.

Please contact Jesse Thorsen, Ped and Bike Planning, at 651-234-7788 or [jesse.thorsen@state.mn.us](mailto:jesse.thorsen@state.mn.us) with any questions.

### ***Review Submittal Options***

MnDOT's goal is to complete reviews within 30 calendar days. In order of preference, review materials may be submitted as:

1. Email documents and plans in PDF format to [metrodevreviews.dot@state.mn.us](mailto:metrodevreviews.dot@state.mn.us). Attachments may not exceed 20 megabytes per email. Documents can be zipped as well. If multiple emails are necessary, number each message.
2. For files over 20 megabytes, upload the PDF file(s) to MnDOT's web transfer client site at: <https://mft.dot.state.mn.us>. Contact MnDOT Planning development review staff at [metrodevreviews.dot@state.mn.us](mailto:metrodevreviews.dot@state.mn.us) for uploading instructions, and send an email listing the file name(s) after the document(s) has/have been uploaded.
3. A flash drive or hard copy can be sent to the address below. Please notify development review staff via the above email if this submittal method is used.

MnDOT  
Metro District Planning Section  
Development Reviews Coordinator  
1500 West County Road B-2  
Roseville, MN 55113

Please do not submit files via a cloud service or SharePoint link.

You are welcome to contact me at 651-234-7792, or [david.kratz@state.mn.us](mailto:david.kratz@state.mn.us) with any questions.

Sincerely,



Digitally signed  
by David Kratz  
Date: 2021.06.25  
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David Kratz  
Senior Planner

**Copy sent via email:**

Jason Swenson, Water Resources  
Buck Craig, Permits  
Doug Nelson, Right of Way  
Eric Lauer-Hunt, Traffic  
Mathias Dall, Traffic  
Jason Junge, Transit  
Natalie Ries, Noise  
Aaron Tag, Area Engineer

April Crockett, Area Manager  
Mackenzie Turner Barger, Ped/Bike  
Jesse Thorsen, Ped/Bike  
Lance Schowalter, Design  
Cameron Muhic, Planning  
Tod Sherman, Planning  
Russell Owen, Metropolitan Council



June 24, 2021

Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
505 4<sup>th</sup> Avenue South, Room 320  
Minneapolis, MN 55415

RE: Upper Harbor Terminal Draft Alternative Urban Areawide Review

Dear Hilary Dvorak:

Thank you for the opportunity to review and comment on the Draft Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal project (Project) in the city of Minneapolis, Hennepin County, Minnesota. The Project consists of mixed-use redevelopment of the Upper Harbor Terminal site. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility or other interests, the MPCA staff has the following comments for your consideration.

**Water Resources (Item 11)**

*Wastewater*

- Design wastewater flow calculations should be included for average daily flow and peak flow.
- The total number of each development type and the design flow per unit should be itemized. Table 1 is good basic summary of the types of development that should be itemized or, a summary table of the Metropolitan Council Environmental Services (MCES) Sewer Access Charge determination could be included.
- The general sewer connection locations to the city sewer, direction of flow, and the sewer route to the wastewater treatment plant should be mapped.
- A discussion of both the city and MCES sewer system capacity and capability of handling future flows from the Project and other future flows from area tributary to the regional sewer systems should be included.

*Stormwater*

- The Draft AUAR stormwater section should include a description of additional stormwater Best Management Practices (BMPs) required due to the Mississippi and Shingle Creek water impairments that will apply to the entire site. These include stabilizing inactively worked soils within 7 days and providing temporary sediment basins for 5 acres that will drain to a common location. In addition, redundant down gradient sediment control BMPs will be required for disturbance within 50 feet of the surfaces waters. The floating curtain mentioned in the Draft AUAR can be utilized as a sediment control BMP for work in water, but is not considered a downgradient sediment control BMP for soil disturbances on the land.

- Stormwater reuse is highly encouraged as part of the permanent management of stormwater to reduce flows to the Mississippi. In addition, other means of achieving volume reduction requirements of the National Pollutant Discharge Elimination System/State Disposal System General Construction Stormwater permit could include use of pervious pavements, infiltration trenches in parking areas, tree boxes and green roofs, which also help reduce energy use. The use of bioinfiltration areas, planted with native vegetation, would also be encouraged. Soil testing is needed to ensure that soil contamination will not prohibit the use of infiltration basins. Please direct questions regarding CSW Permit requirements to Roberta Getman at 507-206-2629 or [roberta.getman@state.mn.us](mailto:roberta.getman@state.mn.us).

#### *Wetlands*

No wetlands are located within the Draft AUAR study area; therefore, no impacts are anticipated. However, Table 4 includes the US Army Corps of Engineers Section 404 permit if needed. If the 404 Permit is required, the MPCA 401 certification must also be included.

A Section 401 water quality certification is required for any project with a federally issued license or permit that authorizes an activity that results in a discharge to a Water of the United States. The 401 certification becomes an enforceable component of the associated federal license or permit – issued under either Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. The scope of a Clean Water Act Section 401 certification is limited to assuring that a discharge from a federally licensed or permitted activity will comply with water quality requirements. Revisions to the 401 rule became effective in September 2020 and now require applicants to request a pre-filing meeting from the certifying agency at least 30 days prior to submitting a 401 water quality certification request. The MPCA is the certifying authority in the State of Minnesota.

Also, please keep in mind that in accordance with Minnesota Statutes, the Upper Harbor Terminal project should include the MPCA as a regulator of all surface waters as defined by Minn.Stat. § 115.01 subd. 22. Waters of the state. "Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. Even though there maybe surface waters that are determined to be USACE non-jurisdictional, or exempt from WCA, all surface waters are regulated by the MPCA and any surface water impact needs to be described in the application, may require mitigation. For further information about the 401 Water Quality Certification process, please contact Bill Wilde at 651-757-2825 or [william.wilde@state.mn.us](mailto:william.wilde@state.mn.us).

#### **Noise (Item 17)**

The MPCA appreciates the opportunity to review the discussion of noise at the proposed Project site. Based on the modeling conducted by AECOM and the proposed noise attenuation techniques to be incorporated into new residences and recreational areas, as well as mitigation techniques identified to reduce impacts to existing residents, it seems unlikely that there will be any long-term noise impacts if the Project moves forward as described. The MPCA does, however, want to address several points made in the Draft AUAR regarding the build scenarios 1 and 2.

The Project proposers have relied on Minneapolis Ordinances 389.60 and 389.105 as the basis of their assessment of noise impacts, particularly regarding the proposed Community Performing Arts Center (CPAC), stating that “[p]rovided the [venue] receives a permit for sound amplifying equipment, the venue will be exempt from the Section 389.60 noise limits and instead will be subject to Section 389.105 of the City Code” (p. 80). Ordinance 389.105 applies specifically to permitting for amplified sound equipment. The amplified noise ordinance limits sound measured at 50 feet from the source to 90dBA for “standard” and “large block” event permits.

The state noise standards contained in Minn. R. 7030 still apply to the Project, regardless of Minneapolis code. For noise related questions, please contact Fawkes Char at 651-757-2327 or [fawkes.char@state.mn.us](mailto:fawkes.char@state.mn.us).

We appreciate the opportunity to review this Project. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this Draft AUAR please contact me by email at [karen.kromar@state.mn.us](mailto:karen.kromar@state.mn.us) or by telephone at 651-757-2508.

Sincerely,

*Karen Kromar*

*This document has been electronically signed.*

Kären Kromar  
Project Manager  
Resource Management & Assistance Division

cc: Dan Card, MPCA, St. Paul  
Roberta Getman, MPCA, Rochester  
Bill Wilde, MPCA, St. Paul  
Fawkes Char, MPCA, St. Paul

KK:vs



## United States Department of the Interior

NATIONAL PARK SERVICE  
Mississippi National River and Recreation Area  
111 E. Kellogg Blvd., Ste 105  
St. Paul, Minnesota 55101-1256

IN REPLY REFER TO:

1.A.1

June 24, 2021

Hilary Dvorak  
Principal City Planner  
Community Planning and Economic Development  
City of Minneapolis  
Public Service Building  
505 Fourth Ave. S, 320  
Minneapolis, MN 55415

Upper Harbor Terminal Draft AUAR

Dear Hilary Dvorak:

The Mississippi National River and Recreation Area (Mississippi NRRA), a unit within the National Park Service, is pleased to provide comments on the Draft Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal (UHT) Development. The proposed project would lie mostly within the boundary of the Mississippi NRRA. Congress established the Mississippi NRRA in 1988 to preserve, protect, and enhance the significant values of the Mississippi River Corridor in the Twin Cities metropolitan area.

The redevelopment of the UHT is a unique opportunity to improve the environment and livability of the North Minneapolis riverfront. Transitioning from a shipping terminal to an activated mixed-use residential community with significant riverfront parkland is a laudable goal. This such redevelopment will have an impact on the Mississippi River resources, natural, historic, and scenic. The AUAR for the UHT should recognize the unique relationship of the property to the river and address potential effects.

We appreciate that the City of Minneapolis and the development team acknowledged comments from the AUAR Scoping Document and incorporated those into the Draft AUAR. Inclusion of the recently adopted Mississippi River Corridor Critical Area (MRCCA) ordinances has also



made great strides in caring for the Mississippi River and river-dependent resources. While the inclusion of these elements has been an improvement, we still have recommendations for the Draft AUAR we would like to see moving forward with the UHT Development.

### **Building Heights:**

While the building heights discussed in the Draft AUAR are mostly in line with the MRCCA Urban Mix District maximums, we would like to see all structures at 65' or less in maximum height. While the separation from the river for the proposed structure in parcel 6A (75' height) does decrease its mass from the river, it is still 10' taller than the maximum for the Urban Mixed District. In all other Urban Mixed Districts of MRCCA in Minneapolis the city has established sub-districts based on proximity to the Mississippi River and park spaces. This was to decrease heights and building impacts closer to these public spaces. The proposed development at UHT would benefit greatly from that same structure requirements and should at least follow the maximum heights allowed within the Urban Mixed District where applicable in the UHT development area.

In addition to the heights, creative building design should be incorporated to minimize the massing of structures within the MRCCA, especially along the river and park spaces. Aspects listed in the Minneapolis MRCCA Overlay District Ordinance 551.1850(d)(3) should be incorporated into the design to decrease massing and negative impacts to public river corridor views within the area.

### **MRCCA Vegetation Removal Permit:**

There are several portions of the Draft AUAR that state the Mississippi River shoreline would be reshaped to a less aggressive slope as part of the shoreline restoration process. This would take place in the Shore Impact Zone and would require a MRCCA Vegetation Removal Permit and the City of Minneapolis would need to approve a Vegetation Restoration Plan as part of this permit. This may be the first Vegetation Restoration Plan reviewed by the City of Minneapolis under the newly established MRCCA ordinance. Careful planning should be taken to rehabilitate the riverfront to protect what would be a significant portion of the nearly mile-long development site. Many Mississippi River communities suffer from shoreline erosion from river flooding and large rain events. Restoration of a robust natural shoreline along the Mississippi could be a guide to other communities to protect their shoreline using similar procedures.

### **Cultural Resources and Historic Properties:**

The Mississippi NRRRA appreciates the City's March 24, 2020 recognition of the Upper Harbor Historic District's (UHHD) National Register eligibility. Consistent with our agency's December

30, 2020 correspondence, the UHHD is eligible for the National Register of Historic Places under Criteria A with Criterion Consideration G for significance in the last 50 years, and has a period of significance that extends from 1948 to 1992. Importantly the development of the UHHD in conjunction with the completion of the Upper Saint Anthony Falls Lock and Dam, and the larger 9-foot channel project on the Mississippi River expanded the head of navigation on the river above the falls, and incorporated the north Minneapolis riverfront into the largest navigable inland water system in the world. Recognizing the last terminal developed in the UHHD at J.L. Shiely Yard “D” in 1992 as the end of the period of significance is a clearer temporal marker of the district’s river-oriented development and larger historic importance than its year of “peak usage,” suggested by Hess Roise in its March 22, 2021 memo. We will continue to apply this determination as it relates to assessing impacts of the UHT redevelopment on historic properties within federal Undertakings, as well as future federal processes elsewhere within the UHHD site.

Placing the details of the UHHD’s National Registry-eligibility aside, we greatly appreciate the City’s robust plan for mitigating the impacts of the UHT’s redevelopment on historic properties. We recognize that redevelopment of the historic property is appropriate given that it is now closed as a terminal and been cut-off from larger Mississippi basin navigation system with the closure of the Upper Saint Anthony Lock and Dam in 2015. Our agency is glad to see the city adopt a broadly inclusive interpretive and educational approach to the site’s history which includes indigenous significance as well as narratives of ecological harm, community exclusion and appropriation alongside the industrial and settlement history of the district. Additionally, the City’s plan to incorporate signature elements of the historic industrial landscape into development of the park are an excellent tool for suggesting the deeper history of the site to the public. We support these concepts as appropriate tools for mitigating the impacts of the project on historic properties. We look forward to continuing to consult with the City, Minneapolis Park & Recreation Board, and other stakeholders as these mitigation concepts are finalized into implementable and specific plans.

### **UHT Development Design**

The Mississippi NRRRA appreciates the concern the City of Minneapolis has taken with some aspects of the Draft Mitigation Plan in the Draft AUAR. Mitigation with bird safe building design and lighting address some concerns for the Mississippi River Flyway. Directing noise and lighting from events at the Community Performing Arts Center (CPAC) from the adjacent heron rookery will reduce detrimental impacts to this specific primary conservation area. While the noise and light is being blocked to the south, it will be directed onto the largest portion of new proposed park space, towards Mississippi River Park and Saint Anthony Parkway to the NNE, and North Mississippi Regional Park to the NNW. Design and management of the new CPAC should take these other nearby primary conservation areas, and the Mississippi River Flyway into consideration to mitigate detrimental harm to wildlife.

We look forward continued discussion regarding design of the CPAC and other aspects of the UHT Development design more as the project moves forward.

If you any questions regarding these comments, please contact my staff, Adam Muilenburg at [adam\\_muilenburg@nps.gov](mailto:adam_muilenburg@nps.gov) or by calling 651-293-8440.

Sincerely,

**CRAIG**

**HANSEN**

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CRAIG HANSEN  
Date: 2021.06.24  
13:13:56 -05'00'

Craig Hansen  
Acting Superintendent

June 24, 2021

Hilary Dvorak  
Principal City Planner  
Community Planning and Economic Development  
City of Minneapolis



Dear Ms. Dvorak:

Audubon Chapter of Minneapolis (ACM) appreciates the opportunity to submit comments on the Upper Harbor Terminal (UHT) Alternative Urban Areawide Review (AUAR) draft. We are concerned that certain elements of the UHT project will have negative impacts that are not adequately assessed by the draft document. We urge you to revise the following sections of the AUAR to address these concerns, particularly bird and wildlife protections that must be included in the AUAR.

## **6. Project description**

According to the Minnesota Environmental Quality Board, the AUAR is a planning tool to understand how different development scenarios will affect the environment of a community before the development occurs. In response to citizen concerns regarding the two virtually identical development scenarios contained in the draft scoping document, a third “no build” development scenario was added to this draft. This “no build” scenario is disingenuous since no one has asked for the site to remain undeveloped. Instead, community members have requested more parkland, wildlife habitat, and mixed use housing. At a minimum, development scenarios excluding the concert venue should be included based on continuing concerns over potential impacts of the venue related to noise, light pollution, vehicle emissions, and increased traffic on humans and birds and other wildlife. Please add a new development scenario that incorporates these concerns and excludes the concert venue.

## **8. Permits and Approvals Required**

The AUAR states on p. 13, “Both Scenarios 1 and 2 are anticipated to receive public financial assistance, including State General Obligation Bond funds for the community performing arts center and proposed parkway, and federal HOME Investment Partnerships Program funds and Low-Income Housing Tax Credits for affordable housing.”

The concert venue’s receipt of \$20 million in general obligation bonds triggers the Minnesota Sustainable Building (B3) Guidelines. However, *Table 4. Anticipated Permits and Approvals* omits the B3 Guidelines in the list of permits and approvals. The B3 Guidelines must be added to *Table 4*.

Because the UHT development falls within the Mississippi River Corridor Critical Area (MRCCA) district, the city’s MRCCA ordinance applies to the project. Although *Table 4. Anticipated Permits and Approvals* includes entries for “Mississippi River Corridor Critical Area Vegetation Removal” and “MRCCA Land Alteration permits,” the table omits references to MRCCA regulations governing exterior lighting and bird and other wildlife management. These references must be added to *Table 4*.



## 9. Land Use

ii. **Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.**

### **Minneapolis 2040: Policies**

The AUAR sets out policies in the 2040 Comprehensive Plan that are relevant to and should inform the UHT redevelopment. The following 2040 Plan policy should also be included in this list and applied to the UHT project.

Policy 70: Ecology and Habitat – This policy states that the city’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions. According to the policy, “Conserving Minneapolis’ natural heritage makes the city more livable, resilient, and attractive – not only for people but for migrant bird and wildlife populations in our habitat corridors, for endangered bee pollinators in our parklands, and for native plant communities in our landscapes.”

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

### **Mississippi River Corridor Critical Area Overlay District**

The majority of the AUAR study area is located within the Mississippi River Corridor Critical Area (MRCCA). The city’s MRCCA ordinance, approved in December 2020, provides significant environmental protections for the river corridor. ACM expects that the AUAR will rigorously apply the MRCCA requirements to all UHT development scenarios, particularly with regard to structure placement, height standards, and protections for birds and other wildlife including requirements governing exterior lighting and construction during nesting and bird migration seasons. In 2021, the city will incorporate additional requirements for bird-safe buildings and lighting and bird-friendly habitat, and all development scenarios must be assessed for compliance with these requirements.

Primary conservation areas (PCAs) are natural and cultural resources with rules and local zoning regulations that provide protection from development, vegetation removal, and land alteration activities. The AUAR draft fails to map all of the PCAs documented in the city’s MRCCA Plan. Please revise the AUAR to map, describe, and assess impacts to all Plan-identified PCAs that are present at the UHT site, including the colonial waterbird nesting site on the islands identified as Shore Impact Zones in *Figure 6: Cover Types*.

### **Minneapolis 2040: Policies**

Add the following 2040 Plan policy to the list of policies that inform the redevelopment of the UHT site:

Policy 70: Ecology and Habitat – This policy states that the city’s growth presents challenges and opportunities to protect, support, and increase biodiversity in our ecological habitats while restoring ecological functions. According to the policy, “Conserving Minneapolis’ natural heritage makes the city more livable, resilient, and attractive – not only for people but for migrant bird and wildlife populations in our habitat corridors, for endangered bee pollinators in our parklands, and for native plant communities in our landscapes.”

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

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

This subsection states “Minimal wildlife habitat is located within the AUAR study area due to the prior extent of continued ground disturbance and minimal natural vegetation. Wildlife that can be found within the study area include birds and small mammals that have adapted to the highly disturbed urban environment.”

The Mississippi River comprises a complex ecosystem that is essential to the ecological health of the North American continent. Many more species than birds and small mammals can be found within the study area than the draft AUAR acknowledges or identifies, including an array of fish and aquatic species. The AUAR should assess impacts on the river environment as home to an array of plant and animal species.

This subsection also fails to acknowledge the Great Blue Heron colony located on two islands in the Mississippi River across from the project site. The AUAR should note that these islands are listed in *Figure 8. MRCCA Boundary* as having Significant Vegetation and that they were previously identified in the UHT AUAR scoping document as being included in the National Wetlands inventory area.

This subsection should also acknowledge the development site’s location in the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Potential impacts to birds and other wildlife that use the Mississippi River corridor for migration and nesting must be addresses in the AUAR.

#### **b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site.**

This subsection acknowledges four relevant species and features within one mile of the AUAR study area: the black sandshell mussel, the rusty patched bumble bee, the peregrine falcon and the above-mentioned colonial waterbird nesting site. This subsection also requires acknowledgment of “other sensitive ecological resources.” Again, because the study area is located in the Mississippi Flyway, this section should address potential impacts of the UHT development on birds and other wildlife that use the Mississippi River corridor for migration and nesting.

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

#### **Noise**

While the Great Blue Heron colony may so far have survived the existing “highly disturbed urban environment” referenced in section 13a, further disruption of this environment could be catastrophic. According to the [Minnesota Department of Natural Resources](#), “Because colonial waterbirds nest in groups, disturbance in a colony has the potential to interfere with reproductive success of many individuals, sometimes thousands of nesting pairs. Their foraging habits have been threatened by wetland drainage development and recreation.” Nest failure and colony abandonment have been documented at rookeries in Minnesota and elsewhere as a result of human disturbance. The heron colony is located within the MRCCA district, and city ordinances impose restrictions on construction and other activities during nesting and migration seasons. The AUAR must identify and consider the impacts of such disturbances on the colony and identify specific ways to prevent and mitigate any harm.

## Lighting [new subsection]

Add a *Lighting* subsection to the draft AUAR that addresses light pollution in the project site. Bird populations are declining due to growing threats, including light pollution, loss of habitat, collisions with buildings, and climate change. In 2019, the Twin Cities region was named one of the [worst urban areas in the country for migrating birds](#) by the Cornell Lab of Ornithology, as a result of bright artificial light at night (ALAN) and the city's location in the Mississippi Flyway. It is crucial that Minneapolis protect birds and other wildlife and their habitat in order to ensure ecosystem health, which benefits both humans and animals.

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

#### **Bird-Safe Design**

The mitigation strategy for bird safe design is inadequate. First, the UHT development is governed by the MRCCA ordinance regarding bird-safe buildings, habitat, and lighting, and the concert venue is governed by the Minnesota B3 Guidelines, which address bird-safe building requirements, among other topics.

Second, the referenced *Audubon Minnesota Bird-Safe Building Guidelines* was published in 2010 and does not reflect current best practices. At minimum, please refer to the American Bird Conservancy's *Bird-Friendly Building Design* (2015) at [https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide\\_LINKS.pdf](https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf) as well as the updates at <https://abcbirds.org/glass-collisions/>. Note that this publication is only advisory; the MRCCA regulations and the B3 Guidelines take precedence.

Third, the stated goal to "develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical" is insufficient. The UHT development is located within the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Bird populations are declining due to growing threats, including loss of habitat, collisions with buildings, climate change, and light pollution. In 2019, the Twin Cities region was named one of the [worst urban areas in the country for migrating birds](#) by the Cornell Lab of Ornithology, as a result of bright artificial light at night (ALAN) and the city's location in the Mississippi Flyway. In order to ensure ecosystem health, which benefits both humans and animals, it is crucial that the UHT development does more than protect birds and their habitat "to the extent practical."

## **17. Noise**

### **Construction Noise**

The AUAR must address the MRCCA ordinance requirements governing construction and wildlife. Section 551.1870, Performance standards for public facilities, states:

- (a) *General design standards.* All public facilities must be designed and constructed to:
  - (5) Minimize disturbance of spawning and nesting times by scheduling construction at times when local fish, birds, and wildlife are not spawning or nesting; and
  - (6) During bird migration times, schedule construction, or implement mitigation measures, to minimize disturbance in primary conservation areas.

## 20. Other Potential Environmental Effects

### Table 18: Scenario 1 Sustainability and Environmental Justice Measures

In the *Strategies* section for the *Objective* “Increase native vegetation and protect natural, open, green, and river wildlife and pollinator habitat,” add a new Strategy 7: Incorporate bird-safe design in all infrastructure in the UHT development site.

### Draft Mitigation Plan

### Table 22: Anticipated Permits and Approvals

The concert venue’s receipt of \$20 million in general obligation bonds triggers the Minnesota B3 Guidelines, which must be included in *Table 22. Anticipated Permits and Approvals*. MRCCA regulations governing exterior lighting and bird and other wildlife management must also be included in *Table 22*.

### Table 23: Mitigation Summary for Scenario 1 and Scenario 2

#### *Resource Area – Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources*

The mitigation strategy for bird safety listed in this section of *Table 23* is inadequate. First, the UHT development is governed by the MRCCA ordinance regarding bird-safe buildings, habitat, and lighting, and the concert venue is governed by the Minnesota B3 Guidelines, which address bird-safe building requirements, among other topics.

Second, the referenced *Audubon Minnesota Bird-Safe Building Guidelines* was published in 2010 and does not reflect current best practices. At minimum, please refer to the American Bird Conservancy’s *Bird-Friendly Building Design* (2015) at [https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide\\_LINKS.pdf](https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf) as well as the updates at <https://abcbirds.org/glass-collisions/>. Note that this publication is only advisory; the MRCCA regulations and the B3 Guidelines take precedence.

Third, the stated goal to “develop strategies to avoid and minimize impacts to nearby and migrating birds to the extent practical” is insufficient. The UHT development is located within the Mississippi Flyway, a major migratory corridor used by more than 325 bird species and millions of birds during their epic round trip journeys to and from their breeding grounds. Bird populations are declining due to growing threats, including loss of habitat, collisions with buildings, climate change, and light pollution. In 2019, the Twin Cities region was named one of the [worst urban areas in the country for migrating birds](#) by the Cornell Lab of Ornithology, as a result of bright artificial light at night (ALAN) and the city’s location in the Mississippi Flyway. In order to ensure ecosystem health, which benefits both humans and animals, it is crucial that the UHT development does more than protect birds and their habitat “to the extent practical.”

In summary, any negative impacts on birds and other wildlife will reduce biodiversity and harm our environment and livability in numerous ways. Please revise the AUAR draft to ensure identification and mitigation of all negative environmental and climate impacts of the project on birds and other wildlife.

Thank you,

Keith Olstad  
Chair, Audubon Chapter of Minneapolis  
[klbolstad2@gmail.com](mailto:klbolstad2@gmail.com)  
612.940.1534



**From:** City of Minneapolis Community Environmental Advisory Commission

**To:** Hilary Dvorak, Principal City Planner, Community Planning and Economic Development

**Cc:** City Council; Office of the Mayor; Sustainability Division

**Regarding:** AUAR for Upper Harbor Terminal

**Date:** June 23, 2020

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The Community Environmental Advisory Commission (CEAC) is writing with comments on the Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal Site.

### **Process**

The 30-day comment period on the Draft AUAR is a minimum requirement and we recognize that there will be another comment period when the Final AUAR is completed. However, the comment period on the Draft version is very important to community groups and the City's Appointed Boards & Commissions; it provides us with the time needed to identify concerns that need to be further addressed in the Final AUAR. The 30-day timeframe does not provide CEAC space to respond effectively because CEAC itself meets once a month. It prevents us from having a discussion that includes helping all commissioners understand the project, hearing commissioners' perspectives, and determining exact language for our input and feedback. The depth and breadth of the AUAR, combined with the generations-long impacts that the Upper Harbor Terminal development will have on the community and City, call for a more meaningful and accessible public input process.

### **Affordable Housing**

We echo concerns about affordable housing expressed during the Northern Green Zone Task Force meeting in early June. The AUAR identifies the area around the Upper Harbor Terminal site as an area experiencing early stages of gentrification. The 2040 Plan's Policy 43 seeks to minimize the involuntary displacement of people of color and vulnerable communities. Affordable housing needs to be affordable to those in the neighborhood; otherwise, it is less likely that the new housing on site will be used by people in the surrounding community.

### **Ownership of Land**

Ownership of the land at the Upper Harbor Terminal site continues to be an ongoing concern. We recognize that this is still being discussed as the State's rules are changing. CPED has proposed public ownership of the site through MPRB, but there are different rules for the music venue. After the 63 year long-term ground lease, the site will fall into First Ave and community split ownership. Given the value of this land for flood control, connection to the river, and more, keeping the land in City ownership is invaluable.

Members of the Northern Green Zone Taskforce (NGZTF) feel an ongoing tension between the City's willingness to change zoning to allow for certain kinds of development including conditional permitting versus changes to zoning to reduce pollution. It could be beneficial for the City to be clearer on how this project meets the twelve principles laid out in the enabling resolution for the NGZTF. In addition, understanding alignment between the plans for Upper Harbor Terminal and the draft "[Criteria for Development](#)" created by the NGZTF could be helpful.

### **Cumulative Impacts on Air Quality**

Neighborhoods that suffer environmental injustices should have a higher set of standards for developers to meet, which is part of why the NGZTF has been creating criteria for development. There are foreseeable future projects which may interact with environmental effects of the UHT development (p.91-92). All other impacts from these future projects will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources. Is there a way to better understand the possible cumulative impacts at the outset of the UHT development to help identify ways to mitigate impacts as these future projects are implemented?

The AUAR notes that air quality was considered good at monitoring stations within 0.5 miles of the study area. Air quality monitoring has not been placed within the site. Understanding cumulative impacts from stationary and mobile sources is harder to predict without this more specific information. Completing this monitoring should be required for any proposal that promotes building housing on the site. We have a responsibility to determine if the air quality will be safe for the community members who live and breathe there. In addition, CEAC specifically wishes to call out the ongoing Minnesota Department of Transportation (MNDOT) project to review possible changes to I-94 in the vicinity. With the possibility of additional pollution from mobile sources that are largely out of the City's control, CEAC believes that it is the City's duty to take aggressive steps to mitigate cumulative effects that could arise not just from this project but also the effects of current and future transportation infrastructure in an area that has disproportionately borne the burden of environmental racism over past decades.

With the high amount of industrial uses nearby, CEAC remains concerned about mobile sources of pollution, even though the site currently meets air quality standards and modeling shows that future use will as well. Mobile air pollution is still a concern in this area, especially with increased rates of asthma. Could the City include some level of ongoing monitoring in the plans, especially in high traffic days for use of new buildings on the site? While talking about mobile sources, why doesn't the proposed parking monitoring plan include monitoring south of N. 36th Ave?

### **Sustainable Building**

The Sustainability Division is currently working on a Sustainable Building Policy. While such a policy has not been passed by the City Council, CEAC recommends that buildings on the UHT site should aim for building sustainability goals above and beyond LEED Silver. The new City policy will mirror the State's SB 2030 requirements and we recommend that all buildings, including but not limited to the performance venue, meet these standards. We commend the efforts of the development team's intentions to secure a LEED for neighborhoods designation

and encourage working with the Sustainability Division and community to secure the designation.

### **Greenhouse Gas Emissions**

Similarly to the forthcoming building policy, the City of Minneapolis will soon be updating their existing greenhouse gas (GHG) emissions reduction goals. As such, the UHT development should demonstrate how it will fit into an accelerated GHG reduction schedule, and should disclose a GHG emissions analysis of the embedded emissions of materials used in construction, the expected annual emissions rate of the site once it is operational, and should propose methods to minimize GHG emissions of the project. CEAC strongly encourages any development to avoid the reliance on fracked fossil gas; an investment in fossil gas infrastructure now will work against the City's emissions reduction goals while creating new buildings with a reliance on fossil fuels for decades to come. Instead, it will be more cost-effective, lead to improved health outcomes through improved indoor air quality, and reduce emissions to build to higher building standards and to utilize efficient electric technology for building uses that have historically relied on fossil fuels. A GHG emissions analysis and mitigation plan will provide the City and the public with important data to understand how UHT will minimize their contributions to climate change.

The City should fully assess the impacts from the project's construction and operation on energy consumption and climate change, and in particular, on the State's and City's climate mitigation goals. There should be an analysis of how to reduce greenhouse gas emissions from construction and operation, with an adherence to low-carbon green building design principles. How the buildings will be heated and the materials used are all important factors.

### **Building Height**

The AUAR states the intention of developers to request conditional permits to build higher than the building height requirement from the Shoreland Overlay and Critical Area Overlay districts and the Mississippi River Corridor Critical Area Program (MRCCA). Minnesota State Rules, part 6106.0120(D), give the City permission to grant conditional permits to go above height limits. The AUAR does not describe the impact of increased building height on birds or why this plan would ask for an exemption. While we recognize that the CPC recommended going above the height limit if it meant increasing the supply of affordable housing on site, the plan does not state why the increased height is needed or how it would mitigate impacts that the MRCCA seeks to reduce. Related, we also have concerns around the impacts of outdoor lighting for the amphitheater and the conditional use to allow for more intense lighting. While we have concerns about the long-term impacts of the site on migratory patterns, we also have continued questions about how construction planning will take the patterns of migratory species into consideration.

### **Water Challenges**

Based on our understanding from stormwater engineers and planners, current rules in place around sediment and erosion controls during construction are relatively lax. Being along the Mississippi River, having measures that go above and beyond the requirements would show the commitment Minneapolis has to our downstream neighbors and to our local aquatic species.

This is especially important as the project will involve regrading much of the shoreline, removing concrete and debris to form a more stable slope (p.59). CEAC supports creating a more natural shoreline in this area. However, while wetlands are not currently located within the AUAR study area, changes to the shoreline could create wetland areas that need protection and maintenance.

The AUAR does little to address water challenges that are likely to arise with climate change, or how disturbance of the land could impact contaminated soils from interacting with water, in turn impacting water quality. The site at present is highly impervious and while this would decrease by over 10% in Scenario 1 and Scenario 2, the maximum amount of impervious surface of 85% within certain development zones, seems extreme. What are some other ways the City can think proactively about reducing flooding concerns and managing water flow more naturally?

### **Soil Contamination Plans**

The AUAR states “Additional Phase II assessments may be required to assess the extent of existing contaminants. Any redevelopment of the property will require coordination with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.” (p.55) What will the criteria be for undertaking additional Phase II assessments? The MPCA already knows of many contaminants onsite, including VOCs, asphalt, metals, gasoline, pesticides, and PAHs. We would recommend that the City and developers be proactive and include a Phase II assessment prior to AUAR approval. However, at the very least, the City should share the protocol for additional assessments to increase transparency around how this decision will be made

### **Public Access**

Finally, this project is a once-in-a-generation opportunity to intentionally cultivate how the City will relate to and interact with one of its most valuable and cherished amenities, the Mississippi River. This project should provide public water access through a boat launch and ability to rent recreational watercrafts (such as kayaks), to allow not just Minneapolitans, but visitors from all over, to experience and enjoy the Mississippi River firsthand.

In summary, the Community Environmental Advisory Commission appreciates the opportunity to submit these comments to the City of Minneapolis and asks that the City conduct further quantitative analysis of air pollution and cumulative pollution impacts prior to approving the AUAR. We look forward to seeing a response to our questions and concerns in the Final AUAR.

Best,

Members of the Community Environmental Advisory Commission  
Erin Niehoff, Chair





Working to protect the Mississippi River  
and its watershed in the Twin Cities area.

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June 23, 2021

Hilary Dvorak, Principal City Planner  
Community Planning and Economic Development  
City of Minneapolis

Dear Hilary:

Friends of the Mississippi River (FMR) appreciates the opportunity to share our comments on the Upper Harbor Terminal (UHT) draft Alternative Urban Areawide Review (AUAR).

As you know, FMR has been involved in planning for the future of UHT for decades. We have substantial principled objections to the city's draft coordinated development plan, including concerns about its environmental impacts. We hoped that the AUAR process would be expansive and transparent in responding to community questions about how the proposed development will impact the health and quality of life of nearby residents, the river, and all plants and animals with whom we share this land.

But the draft AUAR is inadequate in significant ways, particularly when examining and mitigating cumulative environmental and climate impacts. The study does not fully respond to the questions and concerns we've heard community members raise about the project, and it does not fully address well-documented environmental justice issues.

Given the existing pollution and environmental disparities around UHT, and the site's presence in the Northside Green Zone, the AUAR ought to be as comprehensive and transparent as possible. But we've found so many contradictory statements and so much missing information in the draft AUAR that we're left with an impression of careless work. This document does not reassure residents and stakeholders that their concerns were given full consideration and honest answers.

### **Development scenarios**

We maintain our displeasure at the use of a "no-build" scenario as the alternative to the development scenario in the city's draft coordinated plan. Community members, including FMR, requested that the AUAR scope include an alternative scenario that gave genuine

consideration to whether other community-created ideas for the site provided better environmental outcomes. Responding to that request by using a no-build scenario was not an act of good faith. We are not aware of anyone interested in leaving the UHT site as-is. A no-build scenario doesn't provide what residents asked for in their scoping comments and doesn't provide any real opportunity to explore and compare the environmental impacts of different development scenarios sought by the community.

We also question why buildings that exceed the city's zoning and overlay district height limits were included in Scenario 2. If Scenario 2 "represents the maximum density allowed" under the 2040 Comprehensive Plan, then it should incorporate the Mississippi River Corridor Critical Area (MRCCA) portion of that plan (Appendix A), which states the structure height limits, tiering requirements, and other clear guidance for development. Therefore Scenario 2 should not include any structures incompatible with the MRCCA plan and ordinance.

A similar inconsistency exists on page 39. The report notes that the maximum building height (with premiums) allowed on Parcel 7A is ten stories, due to the 2040 plan's designation of this parcel as Corridor 6. Why, then, is a proposed height of 15 stories stated as being in alignment with the city's comprehensive plan as part of Scenario 2?

Scenario 2 should be revised in compliance with all district and built form designations included in the 2040 Comprehensive Plan.

### **Mississippi River Corridor Critical Area Overlay District**

We would like to restate our continued opposition to building height increases in Scenarios 1 and 2 within MRCCA and the Shoreland Overlay districts. These height limits promote strong urban form, improve river views (including for sites further back from the river that may be redeveloped in the future), and create a more welcoming sense of scale and relationship to the river. The MRCCA ordinance, which was approved by city leaders just months ago, was developed through years of extensive stakeholder participation and should not be disregarded at the first opportunity.

The proposed MRCCA height conditional use permits (CUPs) at UHT would require the city to examine the environmental and scenic impacts of such CUPs and mitigate any impacts that it allows to occur. The AUAR should include a thorough examination of the proposed projects' impacts to MRCCA resources and whether or not the proposed development will be able to meet the environmental standards contained in the city's new MRCCA ordinance. Mitigation measures should be included for any documented impacts.

If the city were serious about conducting a full examination of this project's potential environmental impacts and whether or not its draft coordinated plan can even meet the city's own MRCCA requirements, it would include that analysis in this environmental review.

Instead, the city proposes to consider those impacts at some later date, with less public engagement and awareness. The variance processes will be less visible, with little to no proactive outreach by the city and little time (typically just days) for community members to review and respond to the CUP request. This obfuscates a potentially significant level of environmental impacts from the proposed development.

The AUAR also excludes a complete description of the MRCCA criteria that a CUP must meet. The list of criteria and mitigation strategies on pages 39-40 should include the full text from the city's MRCCA ordinance.

Also, on page 24, the description of setback requirements within MRCCA is worded poorly and confusingly. This section should be rewritten for clarity. The MRCCA setback requirement is 50 feet from the river's Ordinary High Water Level for structures and 25 feet for impervious surfaces.

### **Existing environmental injustices and cumulative impacts ignored**

One persistent theme in the AUAR is a lack of true consideration of cumulative impacts. The Environmental Quality Board's guidance for AUARs states that "the total impact on the environment with respect to any of the items on the [form] may also be influenced by past, present, and reasonably foreseeable future projects outside of the AUAR area."

This isn't the standard the city adhered to in this AUAR. There is little discussion of existing environmental burdens experienced by area residents and no acknowledgment of any potential for development to add to these, particularly in terms of noise and air quality.

As one example of the city's failure to fully consider cumulative impacts, the AUAR states that "year 2040 vehicle-related CO concentrations in the project area are likely to be lower than existing concentrations even considering the increase in development-related and background traffic" (p.75).

We find this statement concerning for a few reasons. First, this statement should include attribution to a reputable source. Second, it appears that the city's goal is "just don't make things worse." This is not a high enough bar in a community already disproportionately burdened with environmental impacts. In accordance with the Northside Green Zone, the city should be striving to improve environmental conditions for residents in this area, not just hoping to maintain the status quo. And third, 2040 is 19 years away. Residents are suffering from poor air quality now. The AUAR should examine the more immediate impacts of the development and what environmental impacts already exist and need remediation, not just hope that things won't be worse in 19 years.

One way to mitigate vehicle emissions would be to implement strategies to improve non-automobile mode share. The traffic analysis report in the AUAR's appendices assumes only seven percent of site trips will use non-motorized transportation modes. It doesn't appear to assume much transit use (given the site's poor transit service). Yet the AUAR also acknowledges the city's Transportation Action Plan goal of having 60 percent of trips use walking, biking, or transit by 2030. While this citywide goal might be achieved differently in different areas, it's disappointing to see the city have such low expectations of reducing automobile traffic at UHT. How will the city achieve its climate goals without taking advantage of opportunities to design big, new redevelopment sites with automobile reduction in mind?

A similar lack of effort is apparent in the discussion of noise impacts. The study notes that noise from I-94 dominates the area, including the existing residential neighborhoods. But it makes no attempt to explore whether the UHT project can mitigate this burden. Instead, it states that the freeway noise will help overpower music venue noise. We don't believe that "don't make things worse" is a suitable standard to seek in a massive new development subsidized heavily with public funds. The AUAR should include mitigation strategies to address existing noise impacts in the area.

We also note the statement on page 93 about future projects in the area. The AUAR states that future projects "will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources." Yet the UHT AUAR doesn't accomplish that for this project because it doesn't provide full mitigation of impacts. It just states that the cumulative impacts won't be severe enough to worry about because existing conditions are already poor. If that pattern continues for future projects, we'll end up with conditions slowly worsening over time, with each new project contributing "minor" negative impacts and no assessment of the long-term cumulative impacts. The UHT AUAR should provide full mitigation of current cumulative impacts, as discussed in more detail throughout this letter.

### **Climate change not addressed**

The UHT AUAR should include a discussion about climate change and greenhouse gas emissions because of the potential for the project to have significant environmental impacts in this realm. This analysis would be aligned with the city's Climate Action Plan goals and the higher level of scrutiny to which any project in the Northside Green Zone should be subjected.

The Minnesota Environmental Quality Board (EQB) is in the process of recommending changes to the environmental review program to better address climate change. For guidance, the city could look to the EQB's draft recommendations. We would like to see the following analyses included in the AUAR:

- The proposed project's greenhouse gas emissions and carbon footprint
- Impacts of these greenhouse gas emissions



- How climate change may influence these impacts
- Whether these impacts may worsen problems already accentuated by climate change
- Mitigation measures to reduce or eliminate these impacts

### **Air quality review inadequate**

As FMR requested in its comments on the AUAR draft scoping document, the AUAR should include air-quality impact analysis of the proposed industrial uses. Even if the site only contains “light” industrial use, this may include significant truck traffic. Truck emissions, both due to the nature of the vehicles as well as idling during loading/unloading, are usually more significant than emissions from a passenger vehicle. This should be added to the AUAR and analyzed for both air quality and climate change impacts.

### **Inconsistent statements regarding music venue parking and traffic**

The AUAR appears to dodge the question asked by many residents about how music venue parking will be provided and whether parking and traffic will impact nearby residents, park visitors, etc.

The report states, “event parking for attendees will be provided off-site and an event management plan will be required to manage traffic and parking needs. Therefore, parking demand for Parcel 3 was not included in the calculations” (p. 83). It’s hard to reconcile that statement with that on page 114 noting that some event parking may indeed be included on the properties within the AUAR boundary. The June 2021 Transportation Management Plan (TMP) published by Kimley-Horn also clearly states an intention for some venue parking to be within the AUAR study area and surrounding neighborhoods. If the event venue is signaling this clear plan to provide some parking at UHT, then that parking need must be included in the AUAR calculations.

The AUAR also includes contradictory statements about whether the music venue will contribute to rush-hour traffic. On page 83, the report states, “traffic associated with the community performing arts center was not included in the peak hour traffic analysis because this land use is not expected to generate traffic during a typical weekday peak hour.” That seems in blatant contradiction to the statement just a few pages later that a “weekday evening capacity event at music venue or park... includes overlap and interaction with p.m. peak traffic” (p. 87). The traffic analysis should be rewritten to reconcile these statements and provide more precise information about potential impacts of weekday evening events at the venue.

The AUAR also states an intention to “close off a portion of West River Parkway to general traffic during medium and large events” (p. 115). This contradicts the recommendations of the Minneapolis Park and Recreation Board’s UHT Community Advisory Committee (CAC),

which urged that public park and riverfront access, including to the MPRB-owned parkway, be prioritized above the needs of private uses.

In the CAC's January 2021 recommendations to the city, they stated that "pedestrian, bicycle, and vehicular access to the park should stay open, regardless of events at the venue or elsewhere in the private development. Any traffic management or event management plans should not close Dowling Avenue or other direct access routes to the park including the public parking area." Parkway closure should be removed from the TMP and should not be considered as an appropriate traffic mitigation strategy in the AUAR.

### **Inconsistent statements regarding music venue size**

Throughout the report, including the Noise section, the maximum capacity of the music venue is stated as 10,000 people. Yet the included AECOM noise assessment states the venue capacity as being 8,000-9,000 people. This assessment, then, doesn't seem to be based on the same venue design and size as that being proposed in Scenarios 1 and 2. If this noise assessment is providing the basis for the city's claim of "no impacts" then it should be revised in accordance with the planned venue size as stated in the AUAR.

### **Sustainability strategies lacking**

We're puzzled by the sustainability outcomes and strategies discussed in Table 18 (p. 96). In particular, the objective to "improve environmental conditions in North Minneapolis" and the related outcomes are not supported by the strategies. As one example, one stated outcome is to "reduce registered air pollutants by 25 percent." But there is no strategy that can clearly accomplish this; the only strategies related to air pollution are about monitoring (not reducing) pollution and reducing air pollution from construction vehicles. These strategies are not sufficient.

The same is true of the other outcomes listed in this section. One outcome is to "create educational areas for ecological jobs/careers training and public/group immersive learning," but there is not a single strategy included to advance this. Table 18 should be completely revised to include strategies sufficient to meet all stated outcomes.

### **Parks within the study area**

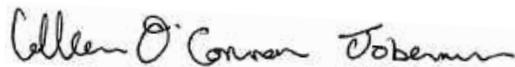
Pages 15 and 18 both state that "there are no existing parks within the study area." This is incorrect and should be revised. The majority of the site is within the boundary of a national park: the Mississippi National River and Recreation Area. A portion of the site is also within the boundary of Above the Falls Regional Park.

While the property may not be presently being used for recreation or conservation purposes typically associated with a “park,” the property’s presence within national and regional parks is of immense significance to its future.

To summarize our comments: the draft UHT AUAR is incomplete and inadequate. It glosses over essential questions and concerns that community members have raised for several years. And the presence of so many obvious errors and inconsistencies suggests that this process was not taken seriously nor given sufficient time and scrutiny.

We’re left wondering why the community should trust an environmental review filled with fundamental flaws, omissions, and contradictions. We urge the city to slow down its AUAR process until all community concerns can be fully addressed and more opportunity has been given for community members to engage in this vital process.

Sincerely,

A handwritten signature in black ink that reads "Colleen O'Connor Toberman". The signature is written in a cursive style and is positioned above the typed name.

Colleen O’Connor Toberman  
River Corridor Director



**Minnesota Center for  
Environmental Advocacy**

June 24, 2021

Hilary Dvorak  
Principal City Planner  
City of Minneapolis  
505 4<sup>th</sup> Ave South, Room 320  
Minneapolis, MN 55415  
hillary.dvorak@minneapolismn.gov

**VIA EMAIL**

Re: Comments of Minnesota Center for Environmental Advocacy and Community Members for Environmental Justice on the Alternative Urban Areawide Review for the Upper Harbor Terminal Development Project

Dear Ms. Dvorak:

Please find attached the joint comment of Minnesota Center for Environmental Advocacy and Community Members for Environmental Justice on the Alternative Urban Areawide Review (“AUAR”) for the Upper Harbor Terminal Development Project. We look forward to reviewing the City's response.

Please feel free to contact us if you have any questions or concerns.

Sincerely,

Minnesota Center for Environmental Advocacy

/s/Evan Mulholland

Evan Mulholland

/s/Jay Eidsness

Jay Eidsness

cc: Rebecca Farrar, City of Minneapolis (via e-mail)  
Erik Hansen, City of Minneapolis (via e-mail)

**Using the law and science to defend Minnesota's environment.**

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## INTRODUCTION

The City of Minneapolis (the “City”) is once again sweeping aside concerns from one of its most vulnerable communities in favor of enriching private developers and other entrenched interests. Like with its proposed campus expansion in the East Phillips neighborhood, the City’s Upper Harbor Terminal proposal (the “Project”), as outlined in the Draft Alternative Urban Areawide Review (“AUAR”) noticed in the *EQB Monitor* on May 25, 2021, fails to fully analyze the Project’s full environmental justice impacts and ignores local groups advocating for cooperative development, true democratic collaboration, and community wealth building. The City also ignores or fails to adequately engage with other critical components of environmental review. In the AUAR, the climate change impacts attendant to construction and operation of the Project are not considered, and the City’s analysis of the Project’s cumulative potential effects are understudied.

As drafted, the City’s environmental review obligations remain incomplete. North Minneapolis and the broader community deserve a full assessment of the Project’s environmental impacts before construction begins. The City cannot proceed unless its AUAR is properly updated to reflect these vital environmental considerations.

This comment is submitted on behalf of Community Members for Environmental Justice (“CMEJ”), a coalition of Minneapolis residents advocating for clean air and water and fighting to eliminate the inequitable and disparate impact of toxic pollution and unsustainable development on the lives and health of BIPOC community members, and Minnesota Center for Environmental Advocacy, a Minnesota non-profit organization whose mission is to use the law, science, and

research to preserve and protect Minnesota's natural resources, its wildlife, and the health of its people.<sup>1</sup>

**I. THE PROJECT'S AUAR FAILS TO ENGAGE WITH THE COMMUNITY AND ACCOUNT FOR ENVIRONMENTAL JUSTICE CONCERNS**

The City proposes to build the Project in North Minneapolis. Compared with other parts of the City, residents in the Northside disproportionately suffer from environmentally-traceable health outcomes exacerbated by historical and structural racism that concentrates pollution into poor neighborhoods.<sup>2</sup> The Project provides the City with a tangible opportunity to make good on its promises to invest in the Northside and begin to repair the environmental harms to the land and people of this area.

But the AUAR does not meet the moment. Instead of engaging in a meaningful discussion of the environmental justice concerns that plague this part of Minneapolis, the City presses forward with its vision of a project that will largely benefit corporations and communities beyond the neighborhoods that are adjacent to the Project site. In so doing, the City continues to ignore pleas from community members who for years have pushed the City to develop more inclusively and with an eye towards restoring the land and air that heavy industries have tainted for decades. The City must do better.

**A. The Project's AUAR Does Not Sufficiently Benefit Northside Residents And Communities.**

CMEJ is deeply invested in the future of North Minneapolis and was optimistic the City would pursue the Project in a manner that would mainly benefit North Minneapolis. Instead the

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<sup>1</sup> Minnesota Center for Environmental Advocacy counts among its supporters nearly 300 households that live near the proposed Project site.

<sup>2</sup> *Promise Zone Goals*, City of Minneapolis, <https://www2.minneapolismn.gov/government/programs-initiatives/promise-zone/goals/> (last visited June 23, 2021); *see generally Asthma: Zip Code Maps*, Minn. Dep't of Health, [https://data.web.health.state.mn.us/asthma\\_staticmaps](https://data.web.health.state.mn.us/asthma_staticmaps) (last visited Mar. 22, 2021).

AUAR seeks more of the same; the Project will enrich United Properties, one of the state's largest commercial real estate companies, and expand the holdings of First Avenue without adequately uplifting neighboring communities. The Project's shortcomings are compounded by the City's complete failure to acknowledge that the Project is sited in the North Minneapolis Promise Zone ("NMPZ"), and to take tangible steps to pursue its three goals: 1) build an inclusive economy that ensures dollars are reinvested into the community and builds capital investments that create jobs for NMPZ residents; 2) improve the health and safety of NMPZ residents by increasing access to affordable, healthy food; and 3) promote stable housing for NMPZ residents by facilitating partnerships between housing stakeholders working in the NMPZ.<sup>3</sup>

The Project does not build an inclusive economy that ensures dollars are reinvested into the community and nor does it provide enough employment opportunities for NMPZ residents. The two main beneficiaries of the Project, United Properties and First Avenue, are not part of the Northside community and have no obligation to the area. The City should require these companies to invest in the Northside by incentivizing local hiring and utilizing the skills of the Northside residents instead of out of town contractors. The limited references in the AUAR to employment opportunities do not provide sufficient assurances that Northside residents will find employment opportunities if the Project is constructed as drafted. For example, one of the AUAR's objectives is to "[i]mprove environmental conditions in North Minneapolis," which the Project aims to accomplish by, among other things, "[c]reat[ing] educational areas for ecological

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<sup>3</sup> *Promise Zone Boundaries*, The City of Minneapolis, <https://www2.minneapolismn.gov/government/programs-initiatives/promise-zone/boundaries/> (last visited June 23, 2021).

jobs/careers training and public/group immersive learning.”<sup>4</sup> But the AUAR does not take the next steps of estimating the number of jobs or setting up a framework to ensure residents in the NMPZ will have equal access to obtain the promised employment. The City ostensibly hopes that available jobs will be filled by neighbors. The City should put substance behind its hope and develop a framework to ensure nearby residents have equal footing to find work at the Project.

The AUAR also fails to establish sources of local, healthy food available to Northside residents. For generations, the Mississippi River floodplain has provided indigenous populations with rich soil and ample water to facilitate crop production. Commercial enterprises later utilized the river for shipping and trade, and agricultural production near the river’s banks was ceded to warehouses and shipping containers. The City has an opportunity not only to revitalize a neighborhood but also to repair the soil and restore the shores of the Mississippi to their historical greatness. The City should set aside land for community agriculture and work with Northside residents and community groups to establish opportunities for the development of urban farming businesses. The Northside currently suffers from a lack of healthy food options and nearby grocery stores are scarce compared to other parts of the City. According the data from the United States Department of Agriculture, the neighborhoods adjacent to the Project lack convenient access to a grocery store.<sup>5</sup> Providing agricultural opportunities here will rejuvenate the land, reconnect nearby residents to the land, and provide access to healthy foods.

Finally, the AUAR does not honor the NMPZ’s goal of providing stable housing for nearby residents. While we applaud the City’s commitment to construct affordable housing, we

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<sup>4</sup> Upper Harbor Terminal Draft Alternative Urban Areawide Review, at 97 (May 2021), *available at* <https://www2.minneapolismn.gov/media/content-assets/www2-documents/business/UHT-Draft-AUAR-Order.pdf>.

<sup>5</sup> *Food Access Research Atlas*, U.S. Dep’t of Agric., <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/> (last visited June 23, 2021).



are concerned about the impacts the Project will have on the housing supply in the neighboring communities. The AUAR acknowledges that “the census tract surrounding the [Project] site [is] an area experiencing early stages of gentrification.”<sup>6</sup> But neither the AUAR nor the City has explained to residents how it will slow the accelerating gentrification problem plaguing the Northside. The AUAR must be revised to account for this serious concern and to provide assurances to nearby residents that the Project will not threaten their housing stability.

**B. The City Must Address Environmental Justice In The AUAR.**

In performing environmental review, the City elected to undergo this assessment through the framework of an AUAR. While the AUAR does not specifically demand an environmental justice assessment, the City’s analysis is “not limited” to the AUAR form.<sup>7</sup> Instead, the City must take a “hard look” at all sources of potential significant environmental effects, including socioeconomic effects.<sup>8</sup> This also includes environmental justice, which answers questions related to the health of the proposed project’s neighboring community, elements the Minnesota

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<sup>6</sup> Upper Harbor Terminal Draft Alternative Urban Areawide Review, *supra* note 4, at 18.

<sup>7</sup> *In re Denial of a Contested Case Hearing*, Nos. A19-0207, A19-0209, 2019 WL 5106666, at \*7-8 (Minn. App. Oct. 14, 2019); *see also* Minn. R. 4410.1700, subp. 7 (2018) (explaining criteria for determining potential for significant environmental effects, and not limiting analysis to issues on the EAW form); *Minn. Ctr. for Env’tl. Advocacy v. Holsten*, No. A08-2171, 2009 WL 2998037, at \*3 (Minn. App. Sept. 22, 2009) (finding that the agency had adequately considered the impact of the project’s GHG emissions and thereby implying that such consideration was a required part of the review). While these cases involved the Environmental Assessment Worksheet, the most common type of environmental assessment under MEPA, EQB guidance states that “the content and format [of an AUAR document] must be similar to that of an EAW, but must provide for a level of analysis comparable to that of an EIS for impacts.” Minn. R. 4410.3610, subp. 4.

<sup>8</sup> *Citizens Advocating Responsible Dev. v. Kandiyohi Cty. Bd. of Commr’s*, 713 N.W.2d 817, 832 (Minn. 2006); Minn. Stat. § 116D.04, subd 2a (“The environmental impact statement must also analyze those economic, employment, and sociological effects that cannot be avoided should the action be implemented.”). While an AUAR is not an EIS, the AUAR must address all issues required to be included in an EIS. Minn. Stat. § 116D.04, subd. 4a.

Environmental Policy Act (“MEPA”) considers pertinent during environmental review.<sup>9</sup> Project proposers therefore must undertake this analysis whenever they propose new sources of pollution in communities with known environmental justice concerns.

The Project is one of these proposals and the Hawthorne and McKinley neighborhoods are these communities. However, the AUAR completely avoids engaging with the Project’s environmental justice impact. Instead, the AUAR simply lists the major sources of pollution that formerly occupied the Project site and identifies the likely constituents of that pollution.<sup>10</sup> The City must do more. It must assess the impact the decades of pollution have had on the neighboring communities using analytical modeling tools and readily available data. The residents of the nearby communities deserve to know this critical information.

**1. The Hawthorne and McKinley neighborhoods deserve environmental justice.**

The City proposes building the UHT in and near the Hawthorne and McKinley Neighborhoods, two of the most diverse neighborhoods in North Minneapolis.<sup>11</sup> In addition to their diversity, Hawthorne and McKinley are also economically disadvantaged compared to greater Minneapolis. Over 50% of Hawthorne households and over 25% of McKinley households have income below 2010 poverty thresholds.<sup>12</sup> Data analyzed by the Minnesota Pollution Control Agency (“MPCA”) shows that over 40% of the people living near the Project

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<sup>9</sup> See Minn. Stat. §§ 116D.01 (noting MEPA’s purpose is to “stimulate the health and welfare of human beings”), 116D.02, subd. 1 (noting MEPA’s policy of promoting the general welfare).

<sup>10</sup> Upper Harbor Terminal Draft Alternative Urban Areawide Review, *supra* note 4, at 55.

<sup>11</sup> *North Minneapolis Neighborhood Demographics*, Minn. Bureau of Mediation Servs., <https://mn.gov/bms-stat/assets/Exhibit%2520J%2520-%2520North%2520Minneapolis%2520Neighborhood%2520Demographics.pdf> at 1 (last visited June 23, 2021).

<sup>12</sup> *Id.* at 2.

area reported income less than 195% of the federal poverty level.<sup>13</sup> These neighborhoods are also affected by poor air quality. Census Tract 1009, which encompasses the Project site, has an air pollution score of 4.20, which is in the highest 10% of air scores throughout the state.<sup>14</sup> The largest contributing emission sources in this area are emissions from traffic, which is unsurprising considering Interstate 94 passes directly through the Hawthorne and McKinley neighborhoods.<sup>15</sup>

For these reasons, MPCA recognizes that the Hawthorne and McKinley neighborhoods are areas of “environmental justice concern.”<sup>16</sup> These areas are of specific importance for MPCA and its mission to eradicate community-wide disproportionate impacts from air pollution.<sup>17</sup> These impacts include, for example, elevated asthma rates for residents of these communities.<sup>18</sup> But these disproportionate burdens cannot be alleviated unless they are studied and understood. The AUAR presents the City with a valuable opportunity to dig into these impacts and develop a project that addresses these real concerns. As drafted, however, the AUAR avoids engaging with this important issue.

The significance of conducting this analysis in environmental review for this Project is undeniable. The City’s 2040 Plan explicitly recognizes that “[l]ow-income residents, Indigenous people and residents of color in Minneapolis are disproportionately impacted by the cumulative

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<sup>13</sup> *Understanding Environmental Justice in Minnesota*, Minn. Pollution Control Agency, <https://mpca.maps.arcgis.com/apps/MapSeries/index.html?appid=f5bf57c8dac24404b7f8ef1717f57d00> (last visited June 23, 2021).

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> *MPCA and Environmental Justice*, Minn. Pollution Control Agency, <https://www.pca.state.mn.us/about-mpca/mpca-and-environmental-justice> (last visited June 23, 2021).

<sup>17</sup> *Id.*

<sup>18</sup> *Asthma Hospitalizations*, Minn. Dep’t of Health, <https://mndatamaps.web.health.state.mn.us/interactive/asthma.html> (last visited June 23, 2021).

effects of traffic, stationary sources of air pollution, brownfield sites, blight, substandard housing, lack of access to jobs, and the adverse effects of climate change.”<sup>19</sup> Environmental justice directly advances the City’s number one goal of the 2040 Plan to “[e]liminate disparities” that cause people of color and indigenous people to disproportionately shoulder the public health burdens imposed by industrial pollution.<sup>20</sup> Multiple state agencies, including MPCA and the Minnesota Department of Transportation, announced commitments “to making sure that pollution does not have a disproportionate impact on any group of people—the principle of environmental justice.”<sup>21</sup>

The AUAR does not engage with these topics and ignores that the Project’s neighboring communities are part of the Northside Green Zone, an area formally recognized as “overburdened by environmental conditions such as traffic and stationary pollution sources.”<sup>22</sup> Designated by the City Council in 2017, the Northside Green Zone “exists to address the environmental justice overburden in North and Northeast Minneapolis through the design and implementation of a plan of action to improve environmental and population health, and social, economic and environmental justice.”<sup>23</sup> The Northside Green Zone Council has adopted 12 goals

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<sup>19</sup> *Environmental Justice and Green Zones: Establish Environmental Justice Frameworks for Policy, Resources, and Regulation*, City of Minneapolis, <https://minneapolis2040.com/policies/environmental-justice-and-green-zones/> (last visited June 23, 2021).

<sup>20</sup> *Eliminate Disparities*, City of Minneapolis, <https://minneapolis2040.com/goals/eliminate-disparities/> (last visited June 23, 2021).

<sup>21</sup> *MPCA and Environmental Justice*, *supra* note 16; *see also Environmental Justice at MNDOT*, Minn. Dep’t of Transp., <http://www.dot.state.mn.us/environmentaljustice/> (last visited June 23, 2021).

<sup>22</sup> *Green Zones Initiative*, City of Minneapolis, <https://www2.minneapolismn.gov/government/departments/coordinator/sustainability/policies/green-zones-initiative/> (last visited Mar. 25, 2021).

<sup>23</sup> City of Minneapolis Northside Green Zone 5-Year Work Plan, at 4 (March 2020), *available at* [https://www2.minneapolismn.gov/media/content-assets/www2-documents/departments/Northside-Green-Zone-Work-Plan-\(2020-2025\).pdf](https://www2.minneapolismn.gov/media/content-assets/www2-documents/departments/Northside-Green-Zone-Work-Plan-(2020-2025).pdf).



for the area that focus on air, soil, and water restoration; advancing environmental awareness and education; increasing green jobs and career opportunities; and increasing access to health food options.<sup>24</sup>

The Northside Green Zone is a particularly sensitive area that demands heightened scrutiny of environmental impacts prior to development. The AUAR must be modified to account for the historical and ongoing pollution and economic impacts the Hawthorne and McKinley neighborhoods have long endured.<sup>25</sup> By leveraging existing tools and drawing upon available data, the City can design and develop a Project that works to repair polluted air and soil and provide meaningful change for nearby residents. By failing to engage with this analysis, the City's current proposal lacks critical insight into how it can best uplift the goals of the Northside Green Zone and honor its commitments to fighting environmental justice.

**2. The City can complete an environmental justice analysis using established tools.**

Existing tools are capable of assessing of performing an environmental justice assessment. The EPA's EJSCREEN, for example, combines environmental and demographic indicators into an index that shows how much a defined group contributes to a variety to predefined disparities, such as cancer risk.<sup>26</sup> In November 2020, a Louisiana District Court Judge cited EJSCREEN in ordering further permit assessment for a proposed petrochemical complex in "Cancer Alley," a strip running along the Mississippi River primarily composed of communities

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<sup>24</sup> *Id.* at 5.

<sup>25</sup> CMEJ and MCEA recognize that the Northside Green Zone includes other neighborhoods in North and Northeast Minneapolis and encourages the City to study the environmental justice impacts the Project may impose on neighborhoods non-adjacent to the Project site.

<sup>26</sup> *EJSCREEN: Environmental Justice Screening Tool*, U.S. Evtl. Prot. Agency, [https://www.epa.gov/sites/production/files/2014-10/documents/ejscreen\\_102914.pdf](https://www.epa.gov/sites/production/files/2014-10/documents/ejscreen_102914.pdf) (last visited June 23, 2021).

of color.<sup>27</sup> The Biden Administration is using EJSCREEN to spearhead its efforts to “inform equitable decision making across the federal government.”<sup>28</sup> The City can use EJSCREEN to inform its decision to site the Project in East Phillips.

Other environmental justice assessment tools are also available. Some states, like California, have developed their own models to aid quantifying environmental justice considerations. Developed by an environmental justice working group in 2010, CalEnviroScreen provides an assessment of cumulative impact screening across California communities.<sup>29</sup> Similar to EJSCREEN, CalEnviroScreen operates to account for the reality that “people are simultaneously exposed to multiple contaminants from multiple sources and also have multiple stressors based on their health status as well as living conditions.”<sup>30</sup> It works by assigning scores to 21 indicators that characterize pollution and population characteristics, and then using the total score to compare how a specific population set compares relative to other places in the state.<sup>31</sup> These indicators capture traffic, particular matter, ozone, and other environmental stressors the

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<sup>27</sup> Lisa Whitley Coleman, *EJSCREEN: The Environmental Litigation Tool of the Future?* EHS Daily Advisor (Mar. 10, 2021), <https://ehsdailyadvisor.blr.com/2021/03/ejscreen-the-environmental-litigation-tool-of-the-future/>.

<sup>28</sup> Press Release, The White House, President Biden Takes Executive Actions to Tackle the Climate Crisis at Home and Abroad, Create Jobs, and Restore Scientific Integrity Across Federal Government, (Jan. 27, 2021), *available at* <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/27/fact-sheet-president-biden-takes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restore-scientific-integrity-across-federal-government/>.

<sup>29</sup> *Update to the California Communities Environmental Health Screening Tool: CALENVIROSCREEN 4.0 Public Review Draft*, Cal. Env'tl. Prot. Agency 6 (Feb. 2021) <https://oehha.ca.gov/media/downloads/calenviroscreen/document/calenviroscreen40reportd12021.pdf>.

<sup>30</sup> *Id.* at 7.

<sup>31</sup> *Id.* at 11.

Project will impose on the nearby community.<sup>32</sup> Other jurisdictions assess environmental justice before taking development actions;<sup>33</sup> so, too, should the City here.

## II. THE AUAR FAILS TO COMPLY WITH MEPA

### A. The AUAR Does Not Adequately Account For The Project's Cumulative Potential Effects.

MEPA also requires project proposers to assess a project's cumulative potential effects.<sup>34</sup> "Cumulative potential effects" is defined in the Minnesota Rules to "mean the effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources."<sup>35</sup> These "other projects" include existing facilities and other sources of pollution that are continuing to impact the environment and people's health. This analysis is vital to ensuring an adequate AUAR.

Here, the City has not conducted a cumulative potential effects analysis. In response to the AUAR form's prompt, "[d]iscuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects," but for a brief discussion about projects that may impact traffic, the City claims that "[a]ll other impacts from these future

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<sup>32</sup> *Id.* at 23.

<sup>33</sup> *See, e.g., Environmental Justice Guidelines*, Va. Dep't of Transp., [http://www.virginiadot.org/business/resources/Civil\\_Rights/ENVIRONMENTAL\\_JUSTICE\\_GUIDELINES.pdf](http://www.virginiadot.org/business/resources/Civil_Rights/ENVIRONMENTAL_JUSTICE_GUIDELINES.pdf) (last visited June 23, 2021).

<sup>34</sup> *Finalized EAW Form*, Minn. Env'tl. Quality Bd. (July 2013), <https://www.eqb.state.mn.us/sites/default/files/documents/Finalized%20EAW%20Form%20July2013.pdf>; *see also* Minn. R. 4410.3610, subp. 4 (AUAR); Minn. R. 4410.2300(H) (EIS).

<sup>35</sup> Minn. R. 4410.0200, subp. 11a.

projects will be addressed via regulatory permitting and approval measures; therefore . . . no cumulative impacts [will] occur.”<sup>36</sup>

But MEPA requires more. To fully discharge its duty to assess cumulative potential effects, the City must, at a minimum, conduct an analysis includes an understanding of environmental impacts not just from the Project but also of from other *existing* sources and activities.<sup>37</sup> As the Minnesota Supreme Court has explained, the purpose of this inquiry is to “determine whether the project, which may not individually have the potential to cause significant environmental effects, could have a significant effect when other local projects already in existence or planned for the future are considered.”<sup>38</sup> For example, to complete this needed analysis to assess cumulative potential effects related to air pollution, the City must first discuss a pre-Project or baseline condition, which will inform the selected area of impact.<sup>39</sup> The City must then 1) identify meteorological and air monitoring data in the Project area; 2) map a comprehensive list of emissions sources and activities within the selected area; 3) determine an emissions inventory that includes both annual and daily time scales; and 4) properly identify the type and quantity of Project emissions.<sup>40</sup> Once the City collects this information, it can then complete a cumulative impact analysis that is a standard assessment in many government ordered environmental reviews, such as the National Environmental Policy Act (“NEPA”).<sup>41</sup> In addition to being a required component of an AUAR, the Project’s cumulative impact analysis

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<sup>36</sup> Upper Harbor Terminal Draft Alternative Urban Areawide Review, *supra* note 4, at 93.

<sup>37</sup> *Citizens Advocating Responsible Development*, 713 N.W.2d at 829.

<sup>38</sup> Dr. Ranajit Sahu, *Comments on the Environmental Assessment Worksheet (EAW) for the Hiawatha Maintenance Facility (HMF) Expansion Focusing on Air Quality Impacts 2* (Mar. 19, 2021), attached as Exhibit 1.

<sup>39</sup> *Id.* at 3.

<sup>40</sup> *Id.* at 4.

<sup>41</sup> *Id.*



will provide additional environmental transparency and engender community trust in an area that has been burdened by prior, injudicious governmental action.<sup>42</sup>

The above approach is consistent with the Minnesota Supreme Court's directive in *CARD*. There, the Court explained that a cumulative potential effects analysis must identify a geographical limitation for studying existing and reasonably foreseeable projects "that might reasonably be expected to affect the same natural resources . . . as the proposed project."<sup>43</sup> The City can only discharge this duty by taking a "hard look" at this issue.<sup>44</sup>

The justifications for requiring these additional analyses are eminently sound. "[T]he environment is a dynamic system wherein one action may have an effect on another, or when considered in conjunction with another."<sup>45</sup> Air pollution, for example, is a composite of toxins in a predefined area of space that is the product of various nearby emission sources. If a new source of emissions were merely tasked with measuring only its own contribution to air quality, it would often be impossible to determine if that new source would potentially violate local, state, or federal air quality limits, or be harmful to community health. Indeed, it is the collection of air pollution in the area that is relevant for, for example, federal national ambient air quality standards, not the total emissions from a single emissions source.<sup>46</sup> A project's contribution to air quality must, therefore, be considered in context, which is what the cumulative potential effects analysis demands.

Unless the City revises the AUAR to include the required cumulative potential effects analysis, the City cannot make a legally sound decision on the adequacy of the AUAR and on the

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<sup>42</sup> *Id.*

<sup>43</sup> *Citizens Advocating Responsible Development*, 713 N.W.2d at 830.

<sup>44</sup> *Reserve Mining Co. v. Herbst*, 256 N.W.2d 808, 825 (Minn. 1977).

<sup>45</sup> *Citizens Advocating Responsible Development*, 713 N.W.2d at 829.

<sup>46</sup> *NAAQS Table*, U.S. Env'tl. Prot. Agency, <https://www.epa.gov/criteria-air-pollutants/naaqs-table> (last visited June 24, 2021).

Project itself. It is arbitrary and capricious for an agency to make a decision without considering all of the important aspects of the problem.<sup>47</sup> The City must undertake this analysis now or risk remand from the Court of Appeals.

**B. The AUAR Fails To Analyze The Greenhouse Gas Emissions From The Project.**

The AUAR entirely omits another potentially significant environmental impact: the Project's Greenhouse Gas ("GHG") emissions and its contribution to climate change. Without considering the Project's climate impacts, the AUAR is legally inadequate and the City cannot make a reasoned decision regarding the Project. The AUAR fails to consider and analyze the climate impacts of the Project, despite the statutory mandate that every AUAR must cover the same issues with the same depth of analysis as would an EIS for a similar project.<sup>48</sup> This analysis must include (1) the amount of GHG emissions that will result from the Project's construction and operation, (2) mitigation measures that could reduce those emissions, and (3) the impacts of climate change on the Project.<sup>49</sup>

GHG emissions are already impacting Minnesota's climate, and these changes are affecting the health and well-being of the state's residents.<sup>50</sup> Without rapid action to drive down

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<sup>47</sup> See *Citizens Advocating Responsible Development*, 713 N.W.2d 817, 832 (Minn. 2006) (noting that an agency's decision is arbitrary and capricious where an agency "entirely failed to consider an important aspect of the problem").

<sup>48</sup> Minn. Stat. 116D.04, subd. 4a; Minn. R. 4410.3610, subp. 4

<sup>49</sup> See Minn. Stat. 116D.04, subd. 2a (EIS must analyze significant environmental effects and explore ways to mitigate those effects. See also *In re Enbridge Energy, Ltd. P'ship*, 930 N.W.2d 12, 29 (Minn. App. 2019) (noting that an EIS conducted pursuant to federal law must address impacts of GHG emissions); *In re Determination of Need for Env't Impact Statement for Mankato Motorsports Park*, No. A20-0952, 2021 WL 1604359, at \*11 (Minn. App. Apr. 26, 2021) (holding that an RGU's failure to assess GHG emissions in an EAW for a motor sports park was legal error).

<sup>50</sup> *Greenhouse Gas Emissions in Minnesota: 1990-2016*, Minn. Pollution Control Agency & Minn. Dep't of Commerce 3 (Jan. 2019), <https://www.pca.state.mn.us/sites/default/files/lraq-2sy19.pdf>.

GHG emissions from all economic sectors, people and ecosystems across the globe will suffer incalculable harm.<sup>51</sup> These impacts are particularly significant for lower-income communities and communities of color, who already experience disproportionate environmental health burdens and who are often less able than others to adapt to or recover from climate impacts.<sup>52</sup> Additionally, these previously red-lined, environmental justice neighborhoods will be harmed first and most by the local impacts of a hotter climate, due to the legacy disinvestment in infrastructure, making GHG and climate assessment even more critical. For instance the urban heat island effect exacerbates the already worse air quality through greater production of ozone, harming already vulnerable residents.<sup>53</sup>

For these reasons, the City must revise the AUAR to address GHG emissions from the Project, to develop ways to mitigate those emissions, and to consider the effects climate change will have on the Project.

- 1. The City must revise the AUAR to analyze all the greenhouse gases the Project will emit.**

The AUAR fails to analyze the GHG emissions that the Project will produce. The AUAR fails to quantify, or even mention, the GHG emissions from the construction of the Project, such as direct emissions from construction vehicles. The AUAR also neglects to mention or discuss the indirect “upstream” emissions from the production of cement and steel that will be used in the

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<sup>51</sup> See *Cut Global Emissions By 7.6 Percent Every Year For Next Decade To Meet 1.5°*, United Nations Environment Programme, <https://www.unep.org/news-and-stories/press-release/cut-global-emissions-76-percent-every-year-next-decade-meet-15degc> (last visited June 23, 2021); *Emissions Gap Report*, United Nations Environment Programme (2020), <https://www.unep.org/emissions-gap-report-2020>).

<sup>52</sup> *Climate Change, Public Health and Environmental Justice: Caring for Our Most Vulnerable Communities*, Env'tl. Prot. Agency (Jan. 5, 2017), <https://blog.epa.gov/2017/01/05/ej-climate-change>.

<sup>53</sup> *Heat Island Impacts*, Env'tl. Prot. Agency, <https://www.epa.gov/heatislands/heat-island-impacts> (last visited June 24, 2021).

Project. And the AUAR also fails to quantify or mention the GHG emissions from the operation of the Project, including the emissions from heating and cooling the buildings and the emissions from the increase in vehicular traffic of workers and patrons traveling to and from the Project site. The City must amend the AUAR and estimate the GHG emissions from the Project by completing a GHG analysis based on guidance issued by the Council for Environmental Quality (“CEQ”), or by using various tools and models that have been created to help quantify GHG emissions.<sup>54</sup>

**i. Minnesota law and public policy require the examination of GHG emissions in the Project AUAR**

MEPA specifically allows for the EQB to develop and promulgate by rule alternative forms of environmental review.<sup>55</sup> The Alternative Urban Areawide Review is one such form of review.<sup>56</sup> Minn. Stat. § 116D.04, subd 4a is clear, however, that any alternative form of review must “address the same issues and utilize similar procedures as an environmental impact statement.” EQB interprets this mandate to mean that any alternative review must identify, among other things, a project’s “potential environmental impacts” and must discuss “measures to mitigate the potential environmental impacts.”<sup>57</sup> The AUAR rule, Minn. R. 4410.3610, is consistent with this interpretation, stating that the AUAR “must provide for a level of analysis comparable to that of an EIS for direct, indirect, and cumulative potential effects typical of urban

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<sup>54</sup> *DRAFT Recommendations: Integrating Climate Information into MEPA Program Requirements*, Minn. Env'tl. Quality Bd. (Dec. 2020), [https://www.eqb.state.mn.us/sites/default/files/documents/DRAFT%20Recommendations%20-%20Integrating%20Climate%20Information%20into%20MEPA%20Program%20Requirements\\_0.pdf](https://www.eqb.state.mn.us/sites/default/files/documents/DRAFT%20Recommendations%20-%20Integrating%20Climate%20Information%20into%20MEPA%20Program%20Requirements_0.pdf).

<sup>55</sup> Minn. Stat. 116D.04, subd 4a.

<sup>56</sup> Minn. R. 4410.3610.

<sup>57</sup> Minn. R. 4410.3600, subp. 1.



residential, commercial, warehousing, and light industrial development and associated infrastructure.”<sup>58</sup>

EQB’s identification of an alternative environmental review does not exempt the RGU from doing environmental review or exempt it from complying with MEPA. Rather, it exempts the RGU from specific rules governing the process for preparing and issuing EAWs and EISs.<sup>59</sup> Alternative environmental review is not exempt from all other MEPA rules, nor from MEPA itself. The AUAR process does not allow for a weakened or lesser form of environmental review. An AUAR’s analysis of a Project’s potentially “significant environmental effects” must comply with MEPA and be on the level of the analysis required in an EIS.

There is no question that an EIS that completely ignores the project’s GHG emissions would violate Minnesota law. In preparing an EIS, an RGU must identify and discuss and potentially significant adverse effects that would be generated by a project, whether they be direct, indirect, or cumulative.<sup>60</sup> This includes an analysis of GHG emissions. For example, in the recent Line 3 decision, the Court of Appeals noted that the EIS for Line 3 appropriately included both the pipeline’s upstream GHG emissions (from oil extraction) and downstream GHG emissions (from oil combustion), noting that recent federal NEPA caselaw supported this level and type of analysis.<sup>61</sup> And more recently, the Court of Appeals reversed and remanded a RGU’s negative determination on the need for an EIS, holding that the RGU’s failure to address

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<sup>58</sup> Minn. R. 4410.3610, subp. 4.

<sup>59</sup> Minn. R. 4410.3600, subp. 2 (“[P]rojects reviewed under [an] alternative review procedure shall be exempt from environmental review under parts 4410.1100 to 4410.1700, and 4410.2100 to 4410.3000. . . .”).

<sup>60</sup> Minn. R. 4410.2300(H).

<sup>61</sup> *In re Enbridge Energy, Ltd. P'ship*, 930 N.W.2d at 29.

climate change and GHG emissions in an EAW was arbitrary and capricious.<sup>62</sup> In this case, the AUAR's analysis of GHGs and climate change is not comparable to the analysis typically conducted in an EIS. Ignoring the significant amount of GHG emissions that will result from the Project during construction and operation makes the AUAR legally inadequate.

Public policy demands a similar analysis. Minnesota leaders have called for steep reductions in GHG emissions throughout the state—reductions that will not be accomplished without significant action across all sectors. Minnesota's 2007 Next Generation Energy Act acknowledged the threat GHG emissions pose to public health and welfare by setting a goal to reduce statewide emissions 80 percent below 2005 levels by 2050.<sup>63</sup> Unfortunately, Minnesota is not on track to meet this goal.<sup>64</sup> Recognizing that a coordinated approach is needed to address the existential threat of climate change, the governor's office has created a Climate Change Subcabinet, which will identify strategies to help Minnesota meet or exceed its goals for reduction of GHG emissions and enhance climate resiliency in Minnesota.<sup>65</sup> Incorporating an analysis of GHG emissions into the Project's AUAR, therefore, will advance a critical goal of the State of Minnesota.<sup>66</sup>

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<sup>62</sup> *In re of Determination of Need for Env't Impact Statement for Mankato Motorsports Park*, 2021 WL 1604359, at \*11.

<sup>63</sup> Minn. Stat. § 216H.02, subd. 1, subd. 2 (2019).

<sup>64</sup> Gov. Tim Walz, Executive Order 19-37, *Establishing the Climate Change Subcabinet and the Governor's Advisory Council on Climate Change to Promote Coordinated Climate Change Mitigation and Resilience Strategies in the State of Minnesota* (Dec. 2, 2019), [https://mn.gov/governor/assets/2019\\_12\\_2\\_EO\\_19-37\\_Climate\\_tcm1055-412094.pdf](https://mn.gov/governor/assets/2019_12_2_EO_19-37_Climate_tcm1055-412094.pdf).

<sup>65</sup> *Id.*

<sup>66</sup> *See, e.g., Minnesota Takes Action on Climate Change*, State of Minn., <https://climate.state.mn.us/> (last visited Mar. 24, 2021) (noting state's goals and progress towards reaching climate goals).

Minneapolis itself has adopted a Climate Action Plan.<sup>67</sup> This Plan, first adopted in 2013, sets a goal of reducing the City’s GHG emissions by 30% from 2006 levels by 2025. The Plan acknowledges that reducing emissions from buildings (emissions primarily resulting from heating and cooling), is vital to this goal because building emissions comprise two thirds of the City’s total emitted GHG (including emissions associated with the generation of electricity).<sup>68</sup> Despite the City’s efforts, Minneapolis is not on track to meet its 2025 target.<sup>69</sup> This is one reason why the City supports assessing GHG emission in environmental review documents.<sup>70</sup> Without calculating the new GHG emissions from major proposals, like this Project, the City cannot assess potential mitigation strategies nor determine whether proposals are consistent with its own Climate Action Plan.<sup>71</sup>

The Minnesota Attorney General (“AG”) has also endorsed including a GHG emissions accounting and analysis in environmental review. In a comment to the federal Council on Environmental Quality (“CEQ”), the Minnesota Attorney General joined other states’ attorneys general in asserting that their agencies’ obligation under the National Environmental Policy Act (“NEPA”), the federal analog to MEPA, is to carefully consider every significant environmental impact of a project. This review “must necessarily include examining a project’s contribution to climate change through its GHG emissions.”<sup>72</sup> Disclosing and examining GHG impacts, the AG

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<sup>67</sup> *Minneapolis Climate Action Plan*, City of Minneapolis (June 28, 2013), <https://www2.minneapolismn.gov/media/content-assets/www2-documents/government/Minneapolis-Climate-Action-Plan.pdf>.

<sup>68</sup> *Id.* at 7.

<sup>69</sup> Letter from Kim Havey, Director, Minneapolis Division of Sustainability to April 9, 2021 letter to EQB (Apr. 9, 2021), attached as Exhibit 2.

<sup>70</sup> *Id.* at 2.

<sup>71</sup> *See id.* (noting that retrofitting existing buildings to reduce GHG emissions is less effective than designing lower-emitting projects in advance).

<sup>72</sup> Comments of the Attorneys General of California, Colorado, Connecticut, Delaware, the District of Columbia, Illinois, Maine, Maryland, Massachusetts, Minnesota, New Mexico, New

explained, provides the public with information that increases their ability to ask agencies and project proponents to move toward greener and sustainable projects.<sup>73</sup> Accordingly, to comply with the “hard look” at environmental issues required by NEPA (the same standard used in MEPA) an analysis of the project’s likely climate change impacts is required.<sup>74</sup> Analyzing GHG emissions in the Project’s AUAR, therefore, is needed to comply with the AG’s interpretation of the laws governing environmental review.

Finally, EQB—the state agency tasked with developing rules for the environmental review process under MEPA—agrees that GHG emissions must be addressed in environmental review. In January 2020, EQB convened a team to provide recommendations for including climate change-related information—including a discussion of mitigation, adaptation, and resiliency planning—in environmental review documents.<sup>75</sup> This decision was based on the “general agreement” that climate information must be gathered during environmental review to inform decision making on proposed projects.<sup>76</sup> In creating the task force, EQB specifically noted that an effective climate change assessment must include a GHG emissions analysis and discuss mitigation, adaptation, and resiliency planning. Draft recommendations to amend the

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Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington to the Council on Environmental Quality 10 (Aug. 26, 2019), *available at* [https://oag.ca.gov/system/files/attachments/press-docs/NEPA%20GHG%20Guidance%20Multistate%20Comments\\_8-26-19.finals submission-w-Attachments.pdf](https://oag.ca.gov/system/files/attachments/press-docs/NEPA%20GHG%20Guidance%20Multistate%20Comments_8-26-19.finals submission-w-Attachments.pdf).

<sup>73</sup> *Id.* at 11.

<sup>74</sup> *Id.* at 11.

<sup>75</sup> *Environmental Review Implementation Subcommittee*, Minn. Env’tl. Quality Bd., 1 (Jan. 22, 2020), [https://www.eqb.state.mn.us/sites/default/files/documents/ERIS\\_Meeting\\_Jan\\_2020%20\\_final.pdf](https://www.eqb.state.mn.us/sites/default/files/documents/ERIS_Meeting_Jan_2020%20_final.pdf).



EAW form to align it with State law with respect to GHG emissions have been published by the EQB.<sup>77</sup>

At present, the Project's AUAR fails to fully analyze the Project's GHG emissions. In order to comply with Minnesota law, the Minneapolis Climate Action Plan, the AG's interpretation, and EQB's approach, the City must revise the AUAR to include a climate analysis because the Project will emit GHGs with the potential for significant environmental effects.

**ii. The Project will produce GHG emissions with the potential to cause significant environmental effects**

Developments such as this one have the potential to generate significant GHG emissions, including from the following sources:

- **Demolition and construction** – GHGs result from producing construction materials such as cement and steel, as well as transporting materials and operating heavy equipment.<sup>78</sup>
- **Electricity generation** – Although greenhouse gases from the electric sector are decreasing, electricity generation is the single largest source of greenhouse gas emissions in buildings.<sup>79</sup> While Minnesota's energy grid is becoming cleaner and the electrical sector overall has decreased its GHG emissions, electricity is still a significant source of GHGs.
- **Space and water heating** – Particularly when powered with gas or propane rather than electricity, water heaters and furnaces can be a significant source of emissions—in

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<sup>76</sup> *Id.*

<sup>77</sup> *DRAFT Recommendations, supra* note 54.

<sup>78</sup> *Buildings and Built Infrastructure*, Env'tl. & Energy Study Inst., <https://www.eesi.org/topics/built-infrastructure/description> (last visited June 24, 2021).

<sup>79</sup> Oswaldo Lucon, et al., *Buildings*, in IPCC, *Climate Change 2014: Mitigation of Climate Change, Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* 678 (2014).

Minnesota, natural gas is the largest contributor to emissions within the residential and commercial sectors.<sup>80</sup>

- **Vehicle Operation** – Gasoline, propane, and diesel-powered cars, trucks, and other vehicles, such as forklifts, emit GHGs during operation. Emissions from vehicles are a large and increasing portion of the State’s total GHG emissions.<sup>81</sup>

This Project has the potential to produce significant GHG emissions through demolition, construction, operation, and from mobile sources such as cars, trucks, and other equipment. Its large building footprint will require significant energy to power, heat, and cool. And the planned, frequent concerts will consume considerable electricity for lighting and sound. These activities will produce GHG emissions during construction and throughout the lifetime of the project. These emissions must, at minimum be quantified and included in the AUAR.

The City must revise the AUAR to analyze the climate impact of the Project, despite the challenges associated with quantifying direct climate impacts from an individual development or source. As explained by the CEQ, climate change manifests from the incremental addition of GHG emissions from millions of individual sources that collectively have a large impact.<sup>82</sup> Any single project, no matter how large, is unlikely to cause a measurable change in the global climate on its own. If a RGU could simply avoid assessing GHGs by stating that any individual source is not significant because it alone will not have a global impact, then no project’s

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<sup>80</sup> *Greenhouse Gas Emissions Data*, Minn. Pollution Control Agency, <https://www.pca.state.mn.us/air/greenhouse-gas-emissions-data> (last visited June 24, 2021).

<sup>81</sup> *Id.*

<sup>82</sup> Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51866 (Aug. 5, 2016), *available at* <https://www.govinfo.gov/content/pkg/FR-2016-08-05/pdf/2016-18620.pdf>.

emissions will ever be reviewed.<sup>83</sup> Because emissions from the Project will be significant in quantity and will add to the effects of climate change, the City must analyze them in the AUAR.

**iii. The City may use guidance from CEQ and other tools to guide its GHG emissions analysis**

For direction in performing a GHG analysis for the Project, the City may look to the CEQ—the agency charged with overseeing the implementation of the National Environmental Policy Act (“NEPA”). Under the Obama Administration, CEQ issued guidance for agencies to use when assessing a project’s climate impacts.<sup>84</sup> It is well established in Minnesota that interpretations of NEPA’s requirements may be used when interpreting the requirements of MEPA, making use of this guidance appropriate here.<sup>85</sup>

CEQ guidance provides a structure for agencies to use when assessing the impacts of a project on the climate. Moreover, it explains common pitfalls and ways that agencies *should not* perform a GHG analysis. Among other things, the guidance instructs agencies to:

- Quantify a proposal’s projected direct and indirect GHG emissions using available GHG quantification tools;<sup>86</sup>
- Analyze the cumulative impacts and short- and long-term effects of the GHG emissions;<sup>87</sup> and
- Consider alternatives and mitigation measures that would reduce GHG emissions or increase carbon sequestration and how those alternatives would contribute to the federal, state, or local plans for GHG emission reductions.<sup>88</sup>

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<sup>83</sup> *Id.*

<sup>84</sup> *Id.* While the CEQ guidance issued under the Obama administration was officially withdrawn and replaced by the Trump administration, the CEQ rescinded the Trump guidance and reinstated the previous guidance issued under the Obama administration. 86 Fed. Reg. 10252 (February 19, 2021).

<sup>85</sup> See *In re N.D. Pipeline Co. LLC*, 869 N.W.2d 693, 698 (Minn. App. 2015) (explaining that Minnesota courts may look to federal courts’ interpretation of NEPA when applying MEPA).

<sup>86</sup> Final Guidance, *supra* note 82.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*; see also Comments of the Attorneys General, *supra* note 72, at 18, 21

The RGU should start by creating a GHG inventory that quantifies projected emissions. In so doing, the RGU should estimate the primary sources of GHG emissions to the extent possible. This is necessary to both understand the full environmental impacts of the project, and to identify opportunities to reduce the project’s impacts on the climate. In circumstances where quantifying emissions is prohibitively difficult, a California guide to environmental review recommends performing a qualitative analysis based on “scientific and factual data.”<sup>89</sup>

There are several resources available that can assist the City in assessing the GHG emissions from the Project. The Greenhouse Gas Protocol has developed worksheets and guidance for calculating GHG emissions from specific sectors, including specific resources for calculating emissions from refrigeration and air conditioning as well as stationary combustion.<sup>90</sup> These calculation tools include step-by-step guides to quantifying emissions data. The World Resources Institute has also developed a guidebook for developing a customized GHG calculation tool based off The Greenhouse Gas Protocol’s guidance.<sup>91</sup> In addition, EQB has staff who can assist local governments with conducting environmental review.<sup>92</sup>

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(supporting the approach of the Obama administration CEQ guidance with respect to consideration of cumulative, short- and long-term effects; and mitigation measures).

<sup>89</sup> *Evaluating Greenhouse Gas Emissions as Part of California’s Environmental Review Process: A Local Official’s Guide*, Inst. for Local Gov’t 5 (Sept. 2011), <https://lagunabeachcity.net/civicax/filebank/blobdload.aspx?BlobID=7751>.

<sup>90</sup> *Calculation Tools*, The Greenhouse Gas Protocol, <https://ghgprotocol.org/calculation-tools> (last visited June 24, 2021).

<sup>91</sup> Florence Daviet, *Designing a Customized Greenhouse Gas Calculation Tool*, World Res. Inst. (June 2006), <https://www.wri.org/publication/designing-customizedgreenhouse-gas-calculation-tool>.

<sup>92</sup> *See Guidance for Practitioners and Proposers*, Minn. Env’tl. Quality Bd., <https://www.eqb.state.mn.us/content/environmental-review-guidance-practitioners-and-proposers> (last visited June 24, 2021).



In addition to ample guidance, there are a number of calculator tools available to quantify GHG emissions. For many sources of emissions, simple calculations are enough and additional modeling software is not necessary. For instance, emissions from electricity generation and space and water heating can be estimated by multiplying EPA emissions factors by anticipated energy or fuel usage.<sup>93</sup> In instances where expected energy usage is unknown, the RGU could consider using average estimates. For example, the City could assume the average 16,750 kilowatt hours of energy usage per thousand square feet of commercial floor space,<sup>94</sup> and use a simple modeling tool to estimate expected residential energy use given total square footage and occupancy.<sup>95</sup>

The tools exist for the City to complete this necessary assessment. Modeling software tools are also available to assist with calculating expected emissions. The Massachusetts Executive Office of Energy and Environmental Affairs recommends using energy modeling software such as eQUEST, Energy-10, Visual DOE, and DOE2 to calculate projected energy usage from stationary sources and energy consumption for use in environmental review.<sup>96</sup> This type of modeling software can be particularly useful for comparing emissions under various

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<sup>93</sup> *Emission Factors for Greenhouse Gas Inventories*, Env'tl. Prot. Agency, (2018), [https://www.epa.gov/sites/production/files/2018-03/documents/emission0-factors\\_mar\\_2018\\_0.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/emission0-factors_mar_2018_0.pdf).

<sup>94</sup> *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, Cal. Air Pollution Control Officers Ass'n 75 (Jan. 2008), <https://www.contracosta.ca.gov/DocumentCenter/View/34122/CAPCOA-2008-CEQA-and-Climate-Change-PDF>.

<sup>95</sup> See, e.g., *Energy Use Calculator*, Compare Power, <https://comparepower.com/kwh-electricity-energy-usage-calculator/> (last visited June 24, 2021).

<sup>96</sup> *MEPA Greenhouse Gas Emissions Policy and Protocol*, Mass. Executive Office of Energy and Env'tl. Affairs, <http://eeaonline.eea.state.ma.us/eea/emepa/pdf/misc/GHG%20Policy%20FINAL.pdf> (last visited June 24, 2021).

mitigation scenarios: eQUEST can be used to determine the energy performance of up to nine different design alternatives.<sup>97</sup>

In sum, guidance and calculation tools are readily available for the City to use in performing its GHG emissions analysis. These tools will allow the City to reasonably and properly assess the GHG emissions from the Project, which in turn will allow the City to determine the scale of the impacts of the Project and actions that can best be taken to mitigate those impacts.

## **2. The City must revise the AUAR to include mitigation measures.**

The AUAR contains a Mitigation Plan, as required by Minn. R. 4410 3610, subp 5(C). However, this Mitigation Plan does not include any measures to reduce or limit the GHGs from the Project.<sup>98</sup> Minnesota environmental law, rules, and guidance all instruct the RGU to provide a robust discussion of mitigation measures when analyzing a project’s climate change impacts. To comply, the City must revise the AUAR to provide the required analysis.

### **i. A full analysis of mitigation measures is required as part of environmental review**

To fulfill the purpose of environmental review, the RGU must provide a robust discussion of potential mitigation measures sufficient for meaningful public review. MEPA’s purpose includes “understanding the impact which a proposed project will have on the environment,” and making the information about impacts “available to governmental units and

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<sup>97</sup> *eQUEST...the Quick Energy Simulation Tool*, Energy Design Res. 5, <http://www.doe2.com/download/equest/eQUESTv3-Overview.pdf> (last visited June 24, 2021).

<sup>98</sup> The AUAR does note that the City “will complete and make public a feasibility study for achieving Net Zero and Carbon Free projects for each development parcel[,]” but studying a problem is not a plan to mitigate emissions. Upper Harbor Terminal Draft Alternative Urban Areawide Review, *supra* note 4, at 95.

citizens early in the decision making process.”<sup>99</sup> The Minnesota Supreme Court has agreed with the U.S. Supreme Court’s analysis in *Robertson v. Methow Valley Citizens Council* that a mitigation analysis in an EAW “gives the public the assurance that the agency has indeed considered environmental concerns in its decisionmaking process . . . and, perhaps more significantly, provides a springboard for public comment.”<sup>100</sup> Here, the public is entitled to information about mitigation measures that could reduce the Project’s environmental effects, and in particular, effects on the climate, early enough to allow meaningful comments on how the Project should be modified and improved.

MEPA regulations require that all AUARs include a plan for mitigation, “specifying the mitigation measures that will be imposed upon future development within the area in order to avoid or mitigate potential environmental impacts.”<sup>101</sup> According to the EQB, the mitigation plan is a “commitment” that certain mitigations will be applied.<sup>102</sup> If the mitigation plan is not adopted or is inadequate, it may not be sufficient to exempt specific aspects of the Upper Harbor Terminal Plan from individual environmental review.<sup>103</sup>

While a mitigation plan for an AUAR must contain commitments for mitigation, the AUAR should also include a discussion of mitigation practices that *could be* implemented. The AUAR should analyze the effectiveness of these optional measures to encourage public involvement in the development of the mitigation plan and to allow City officials to select enhanced mitigation for the adverse environmental effects of a proposed development. The

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<sup>99</sup> Minn. R. 4410.0300, subd. 3.

<sup>100</sup> *Minn. Ctr. for Env'tl. Advocacy v. Minn. Pollution Control Agency*, 644 N.W.2d 457, 468 (Minn. 2002) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)).

<sup>101</sup> Minn. R. 410.3610, subp. 5(C). See also *Recommended Content and Format Alternative Urban Areawide Review Documents*, Minn. Env'tl. Quality Bd. (September 2008), attached as Exhibit 3.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

EQB's guidance for EAWs is consistent with this recommendation. According to the EQB's EAW guidance:

Information that reduces uncertainties about impacts and their significance belongs in an EAW. Any information that helps clarify the likelihood or level of significance of a potential impact is useful in an EAW because it helps the RGU make a better determination about the need for an EIS. It could be . . . information about how the impact *could be mitigated* and how that mitigation will be imposed.”<sup>104</sup>

In addition, CEQ, the Minnesota Attorney General, and EQB have all stated that when GHG emissions are evaluated during environmental review, a discussion of mitigation measures should be included. In its guidance on assessing a project's climate impacts, CEQ instructed agencies to “[c]onsider alternatives and mitigation measures that would reduce GHG emissions . . . and how those alternatives would contribute to the federal, state, or local plans for GHG emission reductions.”<sup>105</sup> The Minnesota Attorney General agreed, noting in its comment to CEQ that when a proposed project has climate change impacts, a robust analysis of mitigation measures from GHG emissions is required.<sup>106</sup> And EQB, in creating the task force to provide recommendations regarding the addition of climate-change related information to environmental review documents, specified that an effective climate change assessment must include a discussion of mitigation measures.<sup>107</sup>

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<sup>104</sup> *EAW Guidelines: Preparing Environmental Assessment Worksheets* Minn. Env'tl. Quality Bd. 5 (2013), <https://www.eqb.state.mn.us/sites/default/files/documents/EAW%20guidelines%202013%20revision.pdf>.

<sup>105</sup> Final Guidance, *supra* note 82, at 18-19.

<sup>106</sup> Comments of the Attorneys General, *supra* note 72, at 22.

<sup>107</sup> *Environmental Review Implementation Subcommittee*, Minn. Env'tl. Quality Bd. (Jan. 22, 2020), [https://www.eqb.state.mn.us/sites/default/files/documents/ERIS\\_Meeting\\_Jan\\_2020%20\\_final.pdf](https://www.eqb.state.mn.us/sites/default/files/documents/ERIS_Meeting_Jan_2020%20_final.pdf).



In sum, to comply with the requirements of environmental review, the Project's AUAR should include mitigation for the Project's impact on climate change. The AUAR for this Project does not perform this critical component.

**ii. The City must revise the AUAR to analyze potential mitigation measures**

For a development like the Project, numerous types of mitigating measures could reduce the emissions of climate-harming GHGs from construction or operation. It is possible that the Project already includes certain design features that could be considered mitigations. Without an identification and analysis of these features, however, the AUAR is incomplete.

There are a number of mitigation measures that can reduce the Project's GHG emissions. First, adopting improved efficiency measures and onsite renewable energy generation are effective mitigation measures that should be explored. Guidance from California and New York likewise recommend measures such as: installing efficient appliances and light bulbs; constructing LEED certified buildings; maximizing interior daylighting; and installing solar or wind generation onsite.<sup>108</sup>

Another option to reduce GHG emissions from new buildings is electrification of space and water heating. In most regions of the United States, electrification reduces carbon emissions compared with burning natural gas.<sup>109</sup> And as Minnesota's electric grid continues to decarbonize,

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<sup>108</sup> *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, Cal. Governor's Office of Planning and Research, (June 19, 2008), <http://opr.ca.gov/docs/june08-ceqa.pdf>; *Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements*, N.Y. State Dep't of Env'tl. Conservation, (July 15, 2009), [https://www.dec.ny.gov/docs/administration\\_pdf/eisghgpolicy.pdf](https://www.dec.ny.gov/docs/administration_pdf/eisghgpolicy.pdf).

<sup>109</sup> Sherri Billimoria et al., *The Economics of Electrifying Buildings*, Rocky Mountain Inst. 20 (2018), <https://rmi.org/insight/the-economics-of-electrifying-buildings/>.

GHG emissions from electric appliances will continue to drop.<sup>110</sup> In addition, by eliminating the cost of extending gas mains, constructing service lines, and installing meters, completely electrified new buildings will generally be less expensive than buildings that rely on both electricity and natural gas, over the long run.<sup>111</sup> Finally, electric space and water heaters can be used as flexible energy storage, allowing electricity demand to more closely track generation, which permits deeper penetration and utilization of renewable energy sources.<sup>112</sup> The AUAR neglects to consider or discuss a commitment to install electric heat pumps, induction stovetops, or geothermal heating.

Finally, commercial buildings can be constructed using building materials with recycled content or with low-carbon or “green” concrete. Cement production, which is a key component of concrete, results in about seven percent of the world’s carbon dioxide emissions.<sup>113</sup> The use of green concrete can therefore significantly reduce a building’s emissions and has been endorsed by the U.S. Conference of Mayors as a tool in the fight against climate change.<sup>114</sup> New York State guidance also recommends constructing green roofs and using high-albedo roofing materials.<sup>115</sup>

**3. The City must revise the AUAR to analyze the effects of climate change on the Project.**

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<sup>110</sup> *Id.*

<sup>111</sup> *Id.* at 36, 46.

<sup>112</sup> *Id.* at 41.

<sup>113</sup> Cailin Crow, *How “green” Concrete Can Help Cities Fight Climate Change*, Smart Cities Dive (Aug. 15, 2019), <https://www.smartcitiesdive.com/news/us-conference-of-mayors-urges-cities-to-use-green-concrete-material-carbon-/560977/>.

<sup>114</sup> *Id.*

<sup>115</sup> *Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements*, *supra* note 106, at 20.

In addition to analyzing the GHG emissions and mitigation methods, the AUAR must also consider the effects that a changing climate will have on the Project, particularly with regard to an increase in heavy rainfalls that lead to greater-than-expected volumes of stormwater. Minnesota’s climate is already changing, and the AUAR presents an opportunity to look forward and prepare in advance for events that could be hazardous to the environment and residents if not addressed.

**i. An assessment of the effects of climate change on the Project is needed as part of environmental review**

Multiple sources, including CEQ, EQB, and the Minnesota Attorney General, call for analyzing the effects of climate change on a project during environmental review. As stated by CEQ, climate change can make communities more susceptible to some impacts and lessen their resilience to others, thereby exacerbating the expected environmental impacts of a project.<sup>116</sup> Accordingly, the City should consider the effects of climate change, such as increasing drought, high intensity precipitation events, increased fire risk, and ecological change.<sup>117</sup> As the Minnesota Attorney General explains, “[i]ncreasing resiliency to a changing climate is a critically important challenge for many communities. . . . To protect residents, infrastructure, and industries, states must adapt to address these impacts.”<sup>118</sup> Similarly, when EQB created the task force to recommend climate-change related additions to environmental review forms, the board expressly noted that to be effective, a climate change assessment would need to discuss resiliency planning.<sup>119</sup>

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<sup>116</sup> Final Guidance, *supra* note 82, at 21.

<sup>117</sup> *Id.* at 24.

<sup>118</sup> Comments of the Attorneys General, *supra* note 72, at 22.

<sup>119</sup> *Environmental Review Implementation Subcommittee*, *supra* note 107, at 9.

Clearly, planning for the changes that Minnesotans are already seeing in their communities is an important part of reviewing the environmental impacts of any project. Currently, the City does not have any adaptation or resiliency assessment as part of this AUAR. It should revise the AUAR to include this important information.

**ii. The City should analyze the potential for increased stormwater and other effects of climate change**

One of the effects of climate change already affecting Minnesotans is an increase in rainfall and extreme precipitation events. Minnesota has seen a 20 percent increase in one-inch storm events and a 65 percent increase in three-inch storm events over the past 100 years.<sup>120</sup> Furthermore, “mega-rains” covering large areas are four times more common after the year 2000 than in the 30 years before 2000.<sup>121</sup> The changing climate is impacting stormwater management. Accordingly, the AUAR should reference climate change in its consideration of stormwater infrastructure and management on site. Unless these increasingly likely precipitation events are considered, precipitation from a large weather event is likely to overcome the stormwater retention system and lead to surface water and groundwater contamination. To ensure that the Project will be able to adapt to the increasingly wet weather resulting from climate change, the City should revise the AUAR to consider those increases and their potential impacts on the watershed.

The City must revise the AUAR to better inventory the GHG emissions anticipated from the Project, identify mitigation measures, and assess how the Project itself will be impacted by climate change.

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<sup>120</sup> 2019 Environment and Energy Report Card: Climate, Minn. Env'tl. Quality Bd. (2019), <https://www.eqb.state.mn.us/content/2019-environment-and-energy-report-card-climate>.

<sup>121</sup> *Id.*



## **CONCLUSION**

The Project presents the City with an opportunity. By honoring its commitments to advance environmental justice and cut climate change emissions, the City can be a model for what meaningful environmental review looks like. Many are excited by the prospect of transforming a blighted stretch of our Nation's most cherished waterway into useable space. In redeveloping this tract of land, the City must actually listen to community demands and the voices of its own offices and elected officials. The City must modify the AUAR to properly account for the Project's complete environmental impact.

**March 19, 2021 Comments on the  
Environmental Assessment Worksheet (EAW)  
for the  
Hiawatha Maintenance Facility (HMF) Expansion  
focusing on  
Air Quality Impacts  
by  
Dr. Ranajit (Ron) Sahu<sup>1</sup>**

As noted in the EAW “The Minneapolis Public Works Department is proposing to expand their Hiawatha Maintenance Facility, located at 1911 East 26<sup>th</sup> Street, into the property immediately to the south. This will involve the relocation and consolidation of water distribution maintenance office, shop, yard and vehicle/equipment storage functions, and sewer and stormwater office staff from elsewhere, requiring the demolition of the former Roof Depot warehouse building, and construction of approximately 328,000 square feet of new buildings, and parking (surface and structured) for an additional 360 City and personal vehicles.”<sup>2</sup>

My comments below focus on the broad air quality aspects of this proposed HMF Expansion project that the City of Minneapolis (City) should have included in the EAW. I provide these comments based on my professional experience and background and careful review of the EAW including all attachments relevant to air quality matters. This includes Section 16 (Air Quality) and Attachment G as well as Section 6 (Project Description), Section 10 (Geology, Soils, and Topography/land Forms), Section 11 (Water Resources), Section 12 (Contamination/Hazardous

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<sup>1</sup> Resume provided in Attachment A.

<sup>2</sup> EAW, p. 2.

Materials/Wastes), Section 18 (Transportation), and finally, Section 19 (Cumulative Potential Effects).

The EAW is deficient in three material respects. The City 1) failed to discuss the potential risk to human health caused by the air pollution from the HMF; 2) improperly narrowed the scope of the air quality analysis; and 3) applied an incorrect emissions calculation, resulting in a possible underestimation of the pollution from the project.

**(a) Omission of Any Discussion of Risk in the EAW**

The EAW completely omits any discussion of risk associated with the anticipated air pollution. This is surprising because air pollution is regulated largely because of the human and ecological risks posed by air pollutants.<sup>3</sup> Of course environmental risk is not just from [the project's] air pollution generating activities and sources. Therefore, I urge the City to include explicit discussions and analyses for risk, including characterizing baseline risks to persons living near the proposed HMF site and then the incremental risk increase due to the additional pollution the project will emit. This analysis would provide a more meaningful and holistic picture of the impacts of this project on the surrounding area.

The City can perform baseline and incremental risk assessments by reviewing the extensive guidance put forth by US EPA and the Minnesota PCA. So, in the interest of brevity, I am not including specifics of such guidance. Standard formalism of identifying hazards, addressing toxicity inputs for various health endpoints such as cancer, non-cancer chronic, and acute conditions should be included. All likely routes of exposure such as inhalation, ingestion, dermal contact, home-grown gardens, mother's milk for infants, etc. should be included. The risk assessment should also explicitly consider not just adults but also infants, children, the elderly and other sensitive sub-populations that are present in the general vicinity of the project area.

**(b) Incomplete Air Quality Analysis Presented in the EAW**

The EAW mistakenly focuses very narrowly on the permit status of the proposed HMF Expansion facility as opposed to providing a broader understanding of the air quality conditions in the area

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<sup>3</sup> Air pollution is also regulated for nuisance reasons.

that the project is located. A proper air quality analysis includes an understanding of not just the HMF Expansion project but also air quality impacts from other existing sources and activities. The EAW should address air quality broadly from all nearby sources and activities, and for all potential air pollutants that can be emitted.

Thus, the EAW must first discuss the current baseline (i.e., pre-project) conditions. This, in turn, should first select an appropriate area of impact.<sup>4</sup> Then, it should identify:

(i) meteorology in the area based on monitored or other reliable meteorological data. Wind speed and wind direction should be depicted on monthly wind rose diagrams and the data should also be summarized in tables. This information will inform the movement of air pollution from the HMF Expansion;

(ii) all air monitoring data in this area – i.e., for each monitor and for each pollutant. This should be summarized for at least the last 5 years, if possible, to enable not just the concentration values to be easily discerned, but also to determine any trends. Explanations for any observed trends should be discussed in the EAW.

To the extent that there are insufficient nearby monitors to properly characterize this area, the EAW should identify that as a data-gap and explain how that gap should be filled either by the City or other entities such as the MPCA;

(iii) next, the baseline analysis should provide a comprehensive list of emissions sources and activities within the selected area. In addition to permitted stationary emissions sources, this analysis should also include all smaller, non-permitted stationary sources as well as the traffic volumes in the major roadways (i.e., highways, arterials) within the project area; and finally, any other sources of air emissions such as construction or demolition activities. This source list should be depicted on a map;

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<sup>4</sup> Identifying the area of impact can be an iterative exercise, depending on modeling leading to adjustments to the impacted area. But, as a starting point, a radius of several miles centered around the proposed project is appropriate since vehicle traffic from the proposed project will be routed to surrounding streets.



(iv) next, the City should attempt to determine the emissions from the sources in (iii) above – i.e., an emissions inventory. This inventory should include at least two time scales: annual as well as a shorter scale (typically daily). Seasonal or periodic sources should be addressed on respective time scales or their durations should be noted, such as for construction or demolition-related activities. The inventory should address the major (criteria) pollutants including PM<sub>2.5</sub>, PM<sub>10</sub>, total suspended PM, NO<sub>x</sub>, SO<sub>2</sub>, CO, and VOCs as well as major hazardous pollutants, as applicable from specific sources/activities – such as lead (a criteria pollutant), diesel particulate matter (DPM), benzene/toluene/ethylbenzene/xylenes (BTEX), 2,3-butadiene, formaldehyde, etc.

It is important to note that depending on where air monitors are located, the impacts of some of the baseline sources may be accounted in the air monitoring data, depending on meteorological conditions. The EAW should attempt to define which sources/activities are already likely to be affecting specific monitors so as to avoid double-counting of such sources and their impacts in subsequent analyses. It is likely that, for baseline purposes, expert judgments will be needed to complete the inventory and address, qualitatively, the source emissions/monitored concentrations nexus;

(iv) project emissions, much like has been done in the EAW in Attachment G subject to the comments on the inappropriateness of the emissions calculations methods noted in the next comment, below.

(v) cumulative impacts analysis, including project emissions and actual or projected emissions from the baseline sources plus any new or modified sources or activities that are expected or likely to begin emitting in the same time frame as the project emissions. This is a standard analysis in most environmental assessment under the National Environmental Protection Act (NEPA) and various state assessments.

Given the prior adverse environmental impacts that have occurred in the general vicinity of the project, it is entirely appropriate to complete a thorough assessment of baseline, project, and cumulative impacts as briefly described above; identify data gaps such as the need for more monitoring if needed; and ultimately engender community trust building by conducting complete and technically competent analyses.

### **(c) Incorrect Emissions Calculations Used to Support the Permitting Analysis**

Tables in Attachment G make clear that most of the emissions calculations for the proposed project relied on EPA's AP-42 compilation of emission factors,<sup>5</sup> as seen in the footnotes to the various tables (see, for example, Table 2, Table 3, Table 5, Table 6, body of Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, and Table 15). As explained below, the City must revise its calculations to accurately show the emissions from the project and to reassess whether the HMF Expansion will require an air emissions permit.

AP-42 was not meant to be the source of emissions data for the purpose of calculating potential-to-emit (PTE) or maximum emissions estimates, necessary for the purposes for permit applicability determinations. As explained in the AP-42 documentation itself, an AP-42 emission factor (even if rated at a high level<sup>6</sup>) represents an average of emission rates in a particular sector and is therefore not a reliable indicator of emissions from a particular source or activity:

Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. *As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance.*<sup>7</sup>

EPA has recently reaffirmed its position regarding the unreliability of AP-42 emission factors in an enforcement alert issued in November 2020.<sup>8</sup> EPA reminded permitting agencies, consultants, and regulated entities that AP-42 emission factors are only based on averages of data from multiple sources, and therefore “are not likely to be accurate predictors of emissions from any one specific

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<sup>5</sup> <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors>

<sup>6</sup> AP-42 factor generally have letter-grade ratings A through F, with A being the highest rated factors. Factors rated D and below are especially poor.

<sup>7</sup> AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, at 2 (emphasis added), <https://www.epa.gov/sites/production/files/2020-09/documents/c00s00.pdf>.

<sup>8</sup> U.S. EPA, Enforcement Alert: EPA Reminder About Inappropriate Use of AP-42 Emission Factors,” Nov. 2020, <https://www.epa.gov/sites/production/files/2021-01/documents/ap42-enforcementalert.pdf>. Provided in Attachment B.

source, except in very limited scenarios.”<sup>9</sup> EPA also explained that “[i]n developing emission factors, test data are typically taken from normal operating conditions and generally avoid conditions that can cause short-term fluctuations in emissions” which “can stem from variations in process conditions, control device conditions, raw materials, ambient conditions, or other similar factors.” EPA emphasized that “even factors that are rated ‘A’ or ‘B’ are not designed to be used by a single source where other, more reliable, site-specific, data are available.” EPA declared: “Remember, AP-42 emission factors should only be used as a last resort.”<sup>10</sup>

As just one example of a poor emission factor from AP-42 used in the permit emission calculations in Attachment G (Table 2, Table 3, Table 5, Table 6, Table 9, and Tale 13), I excerpt below the cited Table 1.4-2 from AP-42 used to estimate PM emissions. Note that the PM (total) factor 7.6 lb/million scf) is rated D, a very poor and unreliable rating.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION<sup>a</sup>

Pollutant	Emission Factor (lb/10 <sup>6</sup> scf)	Emission Factor Rating
CO <sub>2</sub> <sup>b</sup>	120,000	A
Lead	0.0005	D
N <sub>2</sub> O (Uncontrolled)	2.2	E
N <sub>2</sub> O (Controlled-low-NO <sub>x</sub> burner)	0.64	E
PM (Total) <sup>c</sup>	7.6	D
PM (Condensable) <sup>c</sup>	5.7	D
PM (Filterable) <sup>c</sup>	1.9	B
SO <sub>2</sub> <sup>d</sup>	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

<sup>9</sup> *Ibid* at 1.

<sup>10</sup> *Ibid* at 3 (emphasis in original).

This is just one example. All of the AP-42 emission factors used are similarly deficient and the emissions calculations should be redone. As alternatives, the City should look to actual measured emissions data from stack tests for similar sources which should be available from state agencies, including the MPCA. If AP-42 is to be used, the underlying data should be reviewed and maximum or high values from the underlying supporting data should be used instead of the average data typically reported in AP-42. As it stands, the EAW's reliance on the permitting analysis is not only too narrow, as noted by the absence of air quality and risk analyses discussed above, it is also flawed given the almost total reliance on unreliable calculations.



## Attachment A – Resume

**RANAJIT (RON) SAHU, Ph.D, QEP, CEM (Nevada)**

**CONSULTANT, ENVIRONMENTAL AND ENERGY ISSUES**

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### EXPERIENCE SUMMARY

Dr. Sahu has over thirty one years of experience in the fields of environmental, mechanical, and chemical engineering including: program and project management services; design and specification of pollution control equipment for a wide range of emissions sources including stationary and mobile sources; soils and groundwater remediation including landfills as remedy; combustion engineering evaluations; energy studies; multimedia environmental regulatory compliance (involving statutes and regulations such as the Federal CAA and its Amendments, Clean Water Act, TSCA, RCRA, CERCLA, SARA, OSHA, NEPA as well as various related state statutes); transportation air quality impact analysis; multimedia compliance audits; multimedia permitting (including air quality NSR/PSD permitting, Title V permitting, NPDES permitting for industrial and storm water discharges, RCRA permitting, etc.), multimedia/multi-pathway human health risk assessments for toxics; air dispersion modeling; and regulatory strategy development and support including negotiation of consent agreements and orders.

He has over twenty eight years of project management experience and has successfully managed and executed numerous projects in this time period. This includes basic and applied research projects, design projects, regulatory compliance projects, permitting projects, energy studies, risk assessment projects, and projects involving the communication of environmental data and information to the public.

He has provided consulting services to numerous private sector, public sector and public interest group clients. His major clients over the past twenty six years include various trade associations as well as individual companies such as steel mills, petroleum refineries, chemical plants, cement manufacturers, aerospace companies, power generation facilities, lawn and garden equipment manufacturers, spa manufacturers, chemical distribution facilities, land development companies, and various entities in the public sector including EPA, the US Dept. of Justice, several states (including Oregon, New Mexico, Pennsylvania, and others), various agencies such as the California DTSC, and various municipalities. Dr. Sahu has performed projects in all 50 states, numerous local jurisdictions and internationally.

In addition to consulting, for approximately twenty years, Dr. Sahu taught numerous courses in several Southern California universities including UCLA (air pollution), UC Riverside (air pollution, process hazard analysis), and Loyola Marymount University (air pollution, risk assessment, hazardous waste management). He also taught at Caltech, his alma mater (various engineering courses), at the University of Southern California (air pollution controls) and at California State University, Fullerton (transportation and air quality).

Dr. Sahu has and continues to provide expert witness services in a number of environmental areas discussed above in both state and Federal courts as well as before administrative bodies (please see Annex A).

### EXPERIENCE RECORD

2000-present **Independent Consultant.** Providing a variety of private sector (industrial companies, land development companies, law firms, etc.), public sector (such as the US Department of Justice), and public interest group clients with project management, environmental consulting, project management, as well as regulatory and engineering support consulting services.

- 1995-2000 Parsons ES, **Associate, Senior Project Manager and Department Manager for Air Quality/Geosciences/Hazardous Waste Groups**, Pasadena. Responsible for the management of a group of approximately 24 air quality and environmental professionals, 15 geoscience, and 10 hazardous waste professionals providing full-service consulting, project management, regulatory compliance and A/E design assistance in all areas.
- Parsons ES, **Manager for Air Source Testing Services**. Responsible for the management of 8 individuals in the area of air source testing and air regulatory permitting projects located in Bakersfield, California.
- 1992-1995 Engineering-Science, Inc. **Principal Engineer and Senior Project Manager** in the air quality department. Responsibilities included multimedia regulatory compliance and permitting (including hazardous and nuclear materials), air pollution engineering (emissions from stationary and mobile sources, control of criteria and air toxics, dispersion modeling, risk assessment, visibility analysis, odor analysis), supervisory functions and project management.
- 1990-1992 Engineering-Science, Inc. **Principal Engineer and Project Manager** in the air quality department. Responsibilities included permitting, tracking regulatory issues, technical analysis, and supervisory functions on numerous air, water, and hazardous waste projects. Responsibilities also include client and agency interfacing, project cost and schedule control, and reporting to internal and external upper management regarding project status.
- 1989-1990 Kinetics Technology International, Corp. **Development Engineer**. Involved in thermal engineering R&D and project work related to low-NO<sub>x</sub> ceramic radiant burners, fired heater NO<sub>x</sub> reduction, SCR design, and fired heater retrofitting.
- 1988-1989 Heat Transfer Research, Inc. **Research Engineer**. Involved in the design of fired heaters, heat exchangers, air coolers, and other non-fired equipment. Also did research in the area of heat exchanger tube vibrations.

## EDUCATION

- 1984-1988 Ph.D., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.
- 1984 M. S., Mechanical Engineering, California Institute of Technology (Caltech), Pasadena, CA.
- 1978-1983 B. Tech (Honors), Mechanical Engineering, Indian Institute of Technology (IIT) Kharagpur, India

## TEACHING EXPERIENCE

### Caltech

- "Thermodynamics," Teaching Assistant, California Institute of Technology, 1983, 1987.
- "Air Pollution Control," Teaching Assistant, California Institute of Technology, 1985.
- "Caltech Secondary and High School Saturday Program," - taught various mathematics (algebra through calculus) and science (physics and chemistry) courses to high school students, 1983-1989.
- "Heat Transfer," - taught this course in the Fall and Winter terms of 1994-1995 in the Division of Engineering and Applied Science.
- "Thermodynamics and Heat Transfer," Fall and Winter Terms of 1996-1997.

### U.C. Riverside, Extension

- "Toxic and Hazardous Air Contaminants," University of California Extension Program, Riverside, California. Various years since 1992.
- "Prevention and Management of Accidental Air Emissions," University of California Extension Program, Riverside, California. Various years since 1992.

"Air Pollution Control Systems and Strategies," University of California Extension Program, Riverside, California, Summer 1992-93, Summer 1993-1994.

"Air Pollution Calculations," University of California Extension Program, Riverside, California, Fall 1993-94, Winter 1993-94, Fall 1994-95.

"Process Safety Management," University of California Extension Program, Riverside, California. Various years since 1992-2010.

"Process Safety Management," University of California Extension Program, Riverside, California, at SCAQMD, Spring 1993-94.

"Advanced Hazard Analysis - A Special Course for LEPCs," University of California Extension Program, Riverside, California, taught at San Diego, California, Spring 1993-1994.

"Advanced Hazardous Waste Management" University of California Extension Program, Riverside, California. 2005.

#### Loyola Marymount University

"Fundamentals of Air Pollution - Regulations, Controls and Engineering," Loyola Marymount University, Dept. of Civil Engineering. Various years since 1993.

"Air Pollution Control," Loyola Marymount University, Dept. of Civil Engineering, Fall 1994.

"Environmental Risk Assessment," Loyola Marymount University, Dept. of Civil Engineering. Various years since 1998.

"Hazardous Waste Remediation" Loyola Marymount University, Dept. of Civil Engineering. Various years since 2006.

#### University of Southern California

"Air Pollution Controls," University of Southern California, Dept. of Civil Engineering, Fall 1993, Fall 1994.

"Air Pollution Fundamentals," University of Southern California, Dept. of Civil Engineering, Winter 1994.

#### University of California, Los Angeles

"Air Pollution Fundamentals," University of California, Los Angeles, Dept. of Civil and Environmental Engineering, Spring 1994, Spring 1999, Spring 2000, Spring 2003, Spring 2006, Spring 2007, Spring 2008, Spring 2009.

#### International Programs

"Environmental Planning and Management," 5 week program for visiting Chinese delegation, 1994.

"Environmental Planning and Management," 1 day program for visiting Russian delegation, 1995.

"Air Pollution Planning and Management," IEP, UCR, Spring 1996.

"Environmental Issues and Air Pollution," IEP, UCR, October 1996.

#### **PROFESSIONAL AFFILIATIONS AND HONORS**

President of India Gold Medal, IIT Kharagpur, India, 1983.

Member of the Alternatives Assessment Committee of the Grand Canyon Visibility Transport Commission, established by the Clean Air Act Amendments of 1990, 1992.

American Society of Mechanical Engineers: Los Angeles Section Executive Committee, Heat Transfer Division, and Fuels and Combustion Technology Division, 1987-mid-1990s.

Air and Waste Management Association, West Coast Section, 1989-mid-2000s.

## PROFESSIONAL CERTIFICATIONS

EIT, California (#XE088305), 1993.

REA I, California (#07438), 2000.

Certified Permitting Professional, South Coast AQMD (#C8320), since 1993.

QEP, Institute of Professional Environmental Practice, since 2000.

CEM, State of Nevada (#EM-1699). Expiration 10/07/2021.

## PUBLICATIONS (PARTIAL LIST)

"Physical Properties and Oxidation Rates of Chars from Bituminous Coals," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **67**, 275-283 (1988).

"Char Combustion: Measurement and Analysis of Particle Temperature Histories," with R.C. Flagan, G.R. Gavalas and P.S. Northrop, *Comb. Sci. Tech.* **60**, 215-230 (1988).

"On the Combustion of Bituminous Coal Chars," PhD Thesis, California Institute of Technology (1988).

"Optical Pyrometry: A Powerful Tool for Coal Combustion Diagnostics," *J. Coal Quality*, **8**, 17-22 (1989).

"Post-Ignition Transients in the Combustion of Single Char Particles," with Y.A. Levendis, R.C. Flagan and G.R. Gavalas, *Fuel*, **68**, 849-855 (1989).

"A Model for Single Particle Combustion of Bituminous Coal Char." Proc. ASME National Heat Transfer Conference, Philadelphia, **HTD-Vol. 106**, 505-513 (1989).

"Discrete Simulation of Cenospheric Coal-Char Combustion," with R.C. Flagan and G.R. Gavalas, *Combust. Flame*, **77**, 337-346 (1989).

"Particle Measurements in Coal Combustion," with R.C. Flagan, in "**Combustion Measurements**" (ed. N. Chigier), Hemisphere Publishing Corp. (1991).

"Cross Linking in Pore Structures and Its Effect on Reactivity," with G.R. Gavalas in preparation.

"Natural Frequencies and Mode Shapes of Straight Tubes," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Optimal Tube Layouts for Kamui SL-Series Exchangers," with K. Ishihara, Proprietary Report for Kamui Company Limited, Tokyo, Japan (1990).

"HTRI Process Heater Conceptual Design," Proprietary Report for Heat Transfer Research Institute, Alhambra, CA (1990).

"Asymptotic Theory of Transonic Wind Tunnel Wall Interference," with N.D. Malmuth and others, Arnold Engineering Development Center, Air Force Systems Command, USAF (1990).

"Gas Radiation in a Fired Heater Convection Section," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1990).

"Heat Transfer and Pressure Drop in NTIW Heat Exchangers," Proprietary Report for Heat Transfer Research Institute, College Station, TX (1991).

"NOx Control and Thermal Design," Thermal Engineering Tech Briefs, (1994).

"From Purchase of Landmark Environmental Insurance to Remediation: Case Study in Henderson, Nevada," with Robin E. Bain and Jill Quillin, presented at the AQMA Annual Meeting, Florida, 2001.

"The Jones Act Contribution to Global Warming, Acid Rain and Toxic Air Contaminants," with Charles W. Botsford, presented at the AQMA Annual Meeting, Florida, 2001.



### PRESENTATIONS (PARTIAL LIST)

"Pore Structure and Combustion Kinetics - Interpretation of Single Particle Temperature-Time Histories," with P.S. Northrop, R.C. Flagan and G.R. Gavalas, presented at the AIChE Annual Meeting, New York (1987).

"Measurement of Temperature-Time Histories of Burning Single Coal Char Particles," with R.C. Flagan, presented at the American Flame Research Committee Fall International Symposium, Pittsburgh, (1988).

"Physical Characterization of a Cenospheric Coal Char Burned at High Temperatures," with R.C. Flagan and G.R. Gavalas, presented at the Fall Meeting of the Western States Section of the Combustion Institute, Laguna Beach, California (1988).

"Control of Nitrogen Oxide Emissions in Gas Fired Heaters - The Retrofit Experience," with G. P. Croce and R. Patel, presented at the International Conference on Environmental Control of Combustion Processes (Jointly sponsored by the American Flame Research Committee and the Japan Flame Research Committee), Honolulu, Hawaii (1991).

"Air Toxics - Past, Present and the Future," presented at the Joint AIChE/AAEE Breakfast Meeting at the AIChE 1991 Annual Meeting, Los Angeles, California, November 17-22 (1991).

"Air Toxics Emissions and Risk Impacts from Automobiles Using Reformulated Gasolines," presented at the Third Annual Current Issues in Air Toxics Conference, Sacramento, California, November 9-10 (1992).

"Air Toxics from Mobile Sources," presented at the Environmental Health Sciences (ESE) Seminar Series, UCLA, Los Angeles, California, November 12, (1992).

"Kilns, Ovens, and Dryers - Present and Future," presented at the Gas Company Air Quality Permit Assistance Seminar, Industry Hills Sheraton, California, November 20, (1992).

"The Design and Implementation of Vehicle Scrapping Programs," presented at the 86th Annual Meeting of the Air and Waste Management Association, Denver, Colorado, June 12, 1993.

"Air Quality Planning and Control in Beijing, China," presented at the 87th Annual Meeting of the Air and Waste Management Association, Cincinnati, Ohio, June 19-24, 1994.

## Annex A

### Expert Litigation Support

#### A. Occasions where Dr. Sahu has provided Written or Oral testimony before Congress:

1. In July 2012, provided expert written and oral testimony to the House Subcommittee on Energy and the Environment, Committee on Science, Space, and Technology at a Hearing entitled “Hitting the Ethanol Blend Wall – Examining the Science on E15.”

#### B. Matters for which Dr. Sahu has provided affidavits and expert reports include:

2. Affidavit for Rocky Mountain Steel Mills, Inc. located in Pueblo Colorado – dealing with the technical uncertainties associated with night-time opacity measurements in general and at this steel mini-mill.
3. Expert reports and depositions (2/28/2002 and 3/1/2002; 12/2/2003 and 12/3/2003; 5/24/2004) on behalf of the United States in connection with the Ohio Edison NSR Cases. *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).
4. Expert reports and depositions (5/23/2002 and 5/24/2002) on behalf of the United States in connection with the Illinois Power NSR Case. *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).
5. Expert reports and depositions (11/25/2002 and 11/26/2002) on behalf of the United States in connection with the Duke Power NSR Case. *United States, et al. v. Duke Energy Corp.*, 1:00-CV-1262 (Middle District of North Carolina).
6. Expert reports and depositions (10/6/2004 and 10/7/2004; 7/10/2006) on behalf of the United States in connection with the American Electric Power NSR Cases. *United States, et al. v. American Electric Power Service Corp., et al.*, C2-99-1182, C2-99-1250 (Southern District of Ohio).
7. Affidavit (March 2005) on behalf of the Minnesota Center for Environmental Advocacy and others in the matter of the Application of Heron Lake BioEnergy LLC to construct and operate an ethanol production facility – submitted to the Minnesota Pollution Control Agency.
8. Expert Report and Deposition (10/31/2005 and 11/1/2005) on behalf of the United States in connection with the East Kentucky Power Cooperative NSR Case. *United States v. East Kentucky Power Cooperative, Inc.*, 5:04-cv-00034-KSF (Eastern District of Kentucky).
9. Affidavits and deposition on behalf of Basic Management Inc. (BMI) Companies in connection with the BMI vs. USA remediation cost recovery Case.
10. Expert Report on behalf of Penn Future and others in the Cambria Coke plant permit challenge in Pennsylvania.
11. Expert Report on behalf of the Appalachian Center for the Economy and the Environment and others in the Western Greenbrier permit challenge in West Virginia.
12. Expert Report, deposition (via telephone on January 26, 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women’s Voices for the Earth (WVE) and the Clark Fork Coalition (CFC)) in the Thompson River Cogeneration LLC Permit No. 3175-04 challenge.
13. Expert Report and deposition (2/2/07) on behalf of the Texas Clean Air Cities Coalition at the Texas State Office of Administrative Hearings (SOAH) in the matter of the permit challenges to TXU Project Apollo’s eight new proposed PRB-fired PC boilers located at seven TX sites.
14. Expert Testimony (July 2007) on behalf of the Izaak Walton League of America and others in connection with the acquisition of power by Xcel Energy from the proposed Gascoyne Power Plant – at the State of

- Minnesota, Office of Administrative Hearings for the Minnesota PUC (MPUC No. E002/CN-06-1518; OAH No. 12-2500-17857-2).
15. Affidavit (July 2007) Comments on the Big Cajun I Draft Permit on behalf of the Sierra Club – submitted to the Louisiana DEQ.
  16. Expert Report and Deposition (12/13/2007) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case. *Plaintiffs v. Allegheny Energy Inc., et al.*, 2:05cv0885 (Western District of Pennsylvania).
  17. Expert Reports and Pre-filed Testimony before the Utah Air Quality Board on behalf of Sierra Club in the Sevier Power Plant permit challenge.
  18. Expert Report and Deposition (October 2007) on behalf of MTD Products Inc., in connection with *General Power Products, LLC v MTD Products Inc.*, 1:06 CVA 0143 (Southern District of Ohio, Western Division) .
  19. Expert Report and Deposition (June 2008) on behalf of Sierra Club and others in the matter of permit challenges (Title V: 28.0801-29 and PSD: 28.0803-PSD) for the Big Stone II unit, proposed to be located near Milbank, South Dakota.
  20. Expert Reports, Affidavit, and Deposition (August 15, 2008) on behalf of Earthjustice in the matter of air permit challenge (CT-4631) for the Basin Electric Dry Fork station, under construction near Gillette, Wyoming before the Environmental Quality Council of the State of Wyoming.
  21. Affidavits (May 2010/June 2010 in the Office of Administrative Hearings)/Declaration and Expert Report (November 2009 in the Office of Administrative Hearings) on behalf of NRDC and the Southern Environmental Law Center in the matter of the air permit challenge for Duke Cliffside Unit 6. Office of Administrative Hearing Matters 08 EHR 0771, 0835 and 0836 and 09 HER 3102, 3174, and 3176 (consolidated).
  22. Declaration (August 2008), Expert Report (January 2009), and Declaration (May 2009) on behalf of Southern Alliance for Clean Energy in the matter of the air permit challenge for Duke Cliffside Unit 6. *Southern Alliance for Clean Energy et al., v. Duke Energy Carolinas, LLC*, Case No. 1:08-cv-00318-LHT-DLH (Western District of North Carolina, Asheville Division).
  23. Declaration (August 2008) on behalf of the Sierra Club in the matter of Dominion Wise County plant MACT.us
  24. Expert Report (June 2008) on behalf of Sierra Club for the Green Energy Resource Recovery Project, MACT Analysis.
  25. Expert Report (February 2009) on behalf of Sierra Club and the Environmental Integrity Project in the matter of the air permit challenge for NRG Limestone’s proposed Unit 3 in Texas.
  26. Expert Report (June 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al.*
  27. Expert Report (August 2009) on behalf of Sierra Club and the Southern Environmental Law Center in the matter of the air permit challenge for Santee Cooper’s proposed Pee Dee plant in South Carolina).
  28. Statements (May 2008 and September 2009) on behalf of the Minnesota Center for Environmental Advocacy to the Minnesota Pollution Control Agency in the matter of the Minnesota Haze State Implementation Plans.
  29. Expert Report (August 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
  30. Expert Report and Rebuttal Report (September 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.
  31. Expert Report (December 2009) and Rebuttal reports (May 2010 and June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).

32. Pre-filed Testimony (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
33. Pre-filed Testimony (July 2010) and Written Rebuttal Testimony (August 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions*, No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.
34. Expert Report (August 2010) and Rebuttal Expert Report (October 2010) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Liability Phase.
35. Declaration (August 2010), Reply Declaration (November 2010), Expert Report (April 2011), Supplemental and Rebuttal Expert Report (July 2011) on behalf of the United States in the matter of DTE Energy Company and Detroit Edison Company (Monroe Unit 2). *United States of America v. DTE Energy Company and Detroit Edison Company*, Civil Action No. 2:10-cv-13101-BAF-RSW (Eastern District of Michigan).
36. Expert Report and Deposition (August 2010) as well as Affidavit (September 2010) on behalf of Kentucky Waterways Alliance, Sierra Club, and Valley Watch in the matter of challenges to the NPDES permit issued for the Trimble County power plant by the Kentucky Energy and Environment Cabinet to Louisville Gas and Electric, File No. DOW-41106-047.
37. Expert Report (August 2010), Rebuttal Expert Report (September 2010), Supplemental Expert Report (September 2011), and Declaration (November 2011) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (District of Colorado).
38. Written Direct Expert Testimony (August 2010) and Affidavit (February 2012) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).
39. Deposition (August 2010) on behalf of Environmental Defense, in the matter of the remanded permit challenge to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
40. Expert Report, Supplemental/Rebuttal Expert Report, and Declarations (October 2010, November 2010, September 2012) on behalf of New Mexico Environment Department (Plaintiff-Intervenor), Grand Canyon Trust and Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. Public Service Company of New Mexico* (PNM), Civil No. 1:02-CV-0552 BB/ATC (ACE) (District of New Mexico).
41. Expert Report (October 2010) and Rebuttal Expert Report (November 2010) (BART Determinations for PSCo Hayden and CSU Martin Drake units) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.
42. Expert Report (November 2010) (BART Determinations for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) to the Colorado Air Quality Commission on behalf of Coalition of Environmental Organizations.
43. Declaration (November 2010) on behalf of the Sierra Club in connection with the Martin Lake Station Units 1, 2, and 3. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Case No. 5:10-cv-00156-DF-CMC (Eastern District of Texas, Texarkana Division).
44. Pre-Filed Testimony (January 2011) and Declaration (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).
45. Declaration (February 2011) in the matter of the Draft Title V Permit for RRI Energy MidAtlantic Power Holdings LLC Shawville Generating Station (Pennsylvania), ID No. 17-00001 on behalf of the Sierra Club.



46. Expert Report (March 2011), Rebuttal Expert Report (June 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).
47. Declaration (April 2011) and Expert Report (July 16, 2012) in the matter of the Lower Colorado River Authority (LCRA)'s Fayette (Sam Seymour) Power Plant on behalf of the Texas Campaign for the Environment. *Texas Campaign for the Environment v. Lower Colorado River Authority*, Civil Action No. 4:11-cv-00791 (Southern District of Texas, Houston Division).
48. Declaration (June 2011) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.
49. Expert Report (June 2011) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).
50. Declaration (August 2011) in the matter of the Sandy Creek Energy Associates L.P. Sandy Creek Power Plant on behalf of Sierra Club and Public Citizen. *Sierra Club, Inc. and Public Citizen, Inc. v. Sandy Creek Energy Associates, L.P.*, Civil Action No. A-08-CA-648-LY (Western District of Texas, Austin Division).
51. Expert Report (October 2011) on behalf of the Defendants in the matter of *John Quiles and Jeanette Quiles et al. v. Bradford-White Corporation, MTD Products, Inc., Kohler Co., et al.*, Case No. 3:10-cv-747 (TJM/DEP) (Northern District of New York).
52. Declaration (October 2011) on behalf of the Plaintiffs in the matter of *American Nurses Association et al. (Plaintiffs), v. US EPA (Defendant)*, Case No. 1:08-cv-02198-RMC (US District Court for the District of Columbia).
53. Declaration (February 2012) and Second Declaration (February 2012) in the matter of *Washington Environmental Council and Sierra Club Washington State Chapter v. Washington State Department of Ecology and Western States Petroleum Association*, Case No. 11-417-MJP (Western District of Washington).
54. Expert Report (March 2012) and Supplemental Expert Report (November 2013) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v. ExxonMobil Corporation et al.*, Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).
55. Declaration (March 2012) in the matter of *Center for Biological Diversity, et al. v. United States Environmental Protection Agency*, Case No. 11-1101 (consolidated with 11-1285, 11-1328 and 11-1336) (US Court of Appeals for the District of Columbia Circuit).
56. Declaration (March 2012) in the matter of *Sierra Club v. The Kansas Department of Health and Environment*, Case No. 11-105,493-AS (Holcomb power plant) (Supreme Court of the State of Kansas).
57. Declaration (March 2012) in the matter of the Las Brisas Energy Center *Environmental Defense Fund et al., v. Texas Commission on Environmental Quality*, Cause No. D-1-GN-11-001364 (District Court of Travis County, Texas, 261<sup>st</sup> Judicial District).
58. Expert Report (April 2012), Supplemental and Rebuttal Expert Report (July 2012), and Supplemental Rebuttal Expert Report (August 2012) on behalf of the states of New Jersey and Connecticut in the matter of the Portland Power plant *State of New Jersey and State of Connecticut (Intervenor-Plaintiff) v. RRI Energy Mid-Atlantic Power Holdings et al.*, Civil Action No. 07-CV-5298 (JKG) (Eastern District of Pennsylvania).
59. Declaration (April 2012) in the matter of the EPA's EGU MATS Rule, on behalf of the Environmental Integrity Project.
60. Expert Report (August 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana) – Harm Phase.
61. Declaration (September 2012) in the Matter of the Application of *Energy Answers Incinerator, Inc.* for a Certificate of Public Convenience and Necessity to Construct a 120 MW Generating Facility in Baltimore City, Maryland, before the Public Service Commission of Maryland, Case No. 9199.

62. Expert Report (October 2012) on behalf of the Appellants (Robert Concilus and Leah Humes) in the matter of Robert Concilus and Leah Humes v. Commonwealth of Pennsylvania Department of Environmental Protection and Crawford Renewable Energy, before the Commonwealth of Pennsylvania Environmental Hearing Board, Docket No. 2011-167-R.
63. Expert Report (October 2012), Supplemental Expert Report (January 2013), and Affidavit (June 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.
64. Pre-filed Testimony (October 2012) on behalf of No-Sag in the matter of the North Springfield Sustainable Energy Project before the State of Vermont, Public Service Board.
65. Pre-filed Testimony (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.
66. Expert Report (February 2013) on behalf of Petitioners in the matter of Credence Crematory, Cause No. 12-A-J-4538 before the Indiana Office of Environmental Adjudication.
67. Expert Report (April 2013), Rebuttal report (July 2013), and Declarations (October 2013, November 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
68. Declaration (April 2013) on behalf of Petitioners in the matter of *Sierra Club, et al., (Petitioners) v. Environmental Protection Agency et al. (Respondents)*, Case No., 13-1112, (Court of Appeals, District of Columbia Circuit).
69. Expert Report (May 2013) and Rebuttal Expert Report (July 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).
70. Declaration (August 2013) on behalf of A. J. Acosta Company, Inc., in the matter of *A. J. Acosta Company, Inc., v. County of San Bernardino*, Case No. CIVSS803651.
71. Comments (October 2013) on behalf of the Washington Environmental Council and the Sierra Club in the matter of the Washington State Oil Refinery RACT (for Greenhouse Gases), submitted to the Washington State Department of Ecology, the Northwest Clean Air Agency, and the Puget Sound Clean Air Agency.
72. Statement (November 2013) on behalf of various Environmental Organizations in the matter of the Boswell Energy Center (BEC) Unit 4 Environmental Retrofit Project, to the Minnesota Public Utilities Commission, Docket No. E-015/M-12-920.
73. Expert Report (December 2013) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).
74. Expert Testimony (December 2013) on behalf of the Sierra Club in the matter of Public Service Company of New Hampshire Merrimack Station Scrubber Project and Cost Recovery, Docket No. DE 11-250, to the State of New Hampshire Public Utilities Commission.
75. Expert Report (January 2014) on behalf of Baja, Inc., in *Baja, Inc., v. Automotive Testing and Development Services, Inc. et al.*, Civil Action No. 8:13-CV-02057-GRA (District of South Carolina, Anderson/Greenwood Division).
76. Declaration (March 2014) on behalf of the Center for International Environmental Law, Chesapeake Climate Action Network, Friends of the Earth, Pacific Environment, and the Sierra Club (Plaintiffs) in the matter of *Plaintiffs v. the Export-Import Bank (Ex-Im Bank) of the United States*, Civil Action No. 13-1820 RC (District Court for the District of Columbia).

77. Declaration (April 2014) on behalf of Respondent-Intervenors in the matter of *Mexichem Specialty Resins Inc., et al., (Petitioners) v Environmental Protection Agency et al.*, Case No., 12-1260 (and Consolidated Case Nos. 12-1263, 12-1265, 12-1266, and 12-1267), (Court of Appeals, District of Columbia Circuit).
78. Direct Prefiled Testimony (June 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17319 (Michigan Public Service Commission).
79. Expert Report (June 2014) on behalf of ECM Biofilms in the matter of the US Federal Trade Commission (FTC) v. ECM Biofilms (FTC Docket #9358).
80. Direct Prefiled Testimony (August 2014) on behalf of the Michigan Environmental Council and the Sierra Club in the matter of the Application of Consumers Energy Company for Authority to Implement a Power Supply Cost Recovery (PSCR) Plan in its Rate Schedules for 2014 Metered Jurisdictional Sales of Electricity, Case No. U-17317 (Michigan Public Service Commission).
81. Declaration (July 2014) on behalf of Public Health Intervenors in the matter of *EME Homer City Generation v. US EPA* (Case No. 11-1302 and consolidated cases) relating to the lifting of the stay entered by the Court on December 30, 2011 (US Court of Appeals for the District of Columbia).
82. Expert Report (September 2014), Rebuttal Expert Report (December 2014) and Supplemental Expert Report (March 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and Pacificorp (Defendants)*, Civil Action No. CV 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).
83. Expert Report (November 2014) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).
84. *Declaration (January 2015) relating to Startup/Shutdown in the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.*
85. Pre-filed Direct Testimony (March 2015), Supplemental Testimony (May 2015), and Surrebuttal Testimony (December 2015) on behalf of Friends of the Columbia Gorge in the matter of the Application for a Site Certificate for the Troutdale Energy Center before the Oregon Energy Facility Siting Council.
86. Brief of Amici Curiae Experts in Air Pollution Control and Air Quality Regulation in Support of the Respondents, On Writs of Certiorari to the US Court of Appeals for the District of Columbia, No. 14-46, 47, 48. *Michigan et al., (Petitioners) v. EPA et al., Utility Air Regulatory Group (Petitioners) v. EPA et al., National Mining Association et al., (Petitioner) v. EPA et al.*, (Supreme Court of the United States).
87. Expert Report (March 2015) and Rebuttal Expert Report (January 2016) on behalf of Plaintiffs in the matter of *Conservation Law Foundation v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).
88. Declaration (April 2015) relating to various Technical Corrections for the MATS Rule (EPA Docket ID No. EPA-HQ-OAR-2009-0234) on behalf of the Environmental Integrity Project.
89. Direct Prefiled Testimony (May 2015) on behalf of the Michigan Environmental Council, the Natural Resources Defense Council, and the Sierra Club in the matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy and for Miscellaneous Accounting Authority, Case No. U-17767 (Michigan Public Service Commission).
90. Expert Report (July 2015) and Rebuttal Expert Report (July 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et al., v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).

91. Declaration (August 2015, Docket No. 1570376) in support of “Opposition of Respondent-Intervenors American Lung Association, et. al., to Tri-State Generation’s Emergency Motion;” Declaration (September 2015, Docket No. 1574820) in support of “Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors for Remand Without Vacatur;” Declaration (October 2015) in support of “Joint Motion of the State, Local Government, and Public Health Respondent-Intervenors to State and Certain Industry Petitioners’ Motion to Govern, *White Stallion Energy Center, LLC v. US EPA*, Case No. 12-1100 (US Court of Appeals for the District of Columbia).
92. Declaration (September 2015) in support of the Draft Title V Permit for Dickerson Generating Station (Proposed Permit No 24-031-0019) on behalf of the Environmental Integrity Project.
93. Expert Report (Liability Phase) (December 2015) and Rebuttal Expert Report (February 2016) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., Environmental Law and Policy Center, and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).
94. Declaration (December 2015) in support of the Petition to Object to the Title V Permit for Morgantown Generating Station (Proposed Permit No 24-017-0014) on behalf of the Environmental Integrity Project.
95. Expert Report (November 2015) on behalf of Appellants in the matter of *Sierra Club, et al. v. Craig W. Butler, Director of Ohio Environmental Protection Agency et al.*, ERAC Case No. 14-256814.
96. Affidavit (January 2016) on behalf of Bridgewatch Detroit in the matter of *Bridgewatch Detroit v. Waterfront Petroleum Terminal Co., and Waterfront Terminal Holdings, LLC.*, in the Circuit Court for the County of Wayne, State of Michigan.
97. Expert Report (February 2016) and Rebuttal Expert Report (July 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.
98. Direct Testimony (May 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.
99. Declaration (June 2016) relating to deficiencies in air quality analysis for the proposed Millenium Bulk Terminal, Port of Longview, Washington.
100. Declaration (December 2016) relating to EPA’s refusal to set limits on PM emissions from coal-fired power plants that reflect pollution reductions achievable with fabric filters on behalf of Environmental Integrity Project, Clean Air Council, Chesapeake Climate Action Network, Downwinders at Risk represented by Earthjustice in the matter of *ARIPPA v EPA, Case No. 15-1180*. (D.C. Circuit Court of Appeals).
101. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
102. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Backus Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
103. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Drakulic Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
104. Expert Report (January 2017) on the Environmental Impacts Analysis associated with the Apex Energy Deutsch Well Pad on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
105. Affidavit (February 2017) pertaining to deficiencies water discharge compliance issues at the Wood River Refinery in the matter of *People of the State of Illinois (Plaintiff) v. Phillips 66 Company, ConocoPhillips Company, WRB Refining LP (Defendants)*, Case No. 16-CH-656, (Circuit Court for the Third Judicial Circuit, Madison County, Illinois).



106. Expert Report (March 2017) on behalf of the Plaintiff pertaining to non-degradation analysis for waste water discharges from a power plant in the matter of *Sierra Club (Plaintiff) v. Pennsylvania Department of Environmental Protection (PADEP) and Lackawanna Energy Center*, Docket No. 2016-047-L (consolidated), (Pennsylvania Environmental Hearing Board).
107. Expert Report (March 2017) on behalf of the Plaintiff pertaining to air emissions from the Heritage incinerator in East Liverpool, Ohio in the matter of *Save our County (Plaintiff) v. Heritage Thermal Services, Inc. (Defendant)*, Case No. 4:16-CV-1544-BYP, (US District Court for the Northern District of Ohio, Eastern Division).
108. Rebuttal Expert Report (June 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight (Plaintiffs) v Coyote Creek Mining Company LLC (Defendant)*, Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).
109. Expert Affidavit (August 2017) and Penalty/Remedy Expert Affidavit (October 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant.)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).
110. Expert Report (August 2017) on behalf of Appellant in the matter of *Patricia Ann Troiano (Appellant) v. Upper Burrell Township Zoning Hearing Board (Appellee)*, Court of Common Pleas of Westmoreland County, Pennsylvania, Civil Division.
111. Expert Report (October 2017), Supplemental Expert Report (October 2017), and Rebuttal Expert Report (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant.)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).
112. Declaration (December 2017) on behalf of the Environmental Integrity Project in the matter of permit issuance for ATI Flat Rolled Products Holdings, Breckenridge, PA to the Allegheny County Health Department.
113. Expert Report (Harm Phase) (January 2018), Rebuttal Expert Report (Harm Phase) (May 2018) and Supplemental Expert Report (Harm Phase) (April 2019) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).
114. Declaration (February 2018) on behalf of the Chesapeake Bay Foundation, et. al., in the matter of the Section 126 Petition filed by the state of Maryland in *State of Maryland v. Pruitt (Defendant)*, Civil Action No. JKB-17-2939 (Consolidated with No. JKB-17-2873) (US District Court for the District of Maryland).
115. Direct Pre-filed Testimony (March 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of *NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC*, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington).
116. Expert Affidavit (April 2018) and Second Expert Affidavit (May 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.
117. Direct Pre-filed Testimony and Affidavit (December 2018) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).
118. Expert Report (February 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.
119. Declaration (March 2019) on behalf of Earthjustice in the matter of comments on the renewal of the Title V Federal Operating Permit for Valero Houston refinery.

120. Expert Report (March 2019) on behalf of Plaintiffs for Class Certification in the matter of *Resendez et al v Precision Castparts Corporation* in the Circuit Court for the State of Oregon, County of Multnomah, Case No. 16cv16164.
121. Expert Report (June 2019), Affidavit (July 2019) and Rebuttal Expert Report (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellees) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.
122. Affidavit/Expert Report (August 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.
123. Expert Report (October 2019) relating to the appeal of air permit (Plan Approval) on behalf of Appellants in the matter of *Clean Air Council and Environmental Integrity Project (Appellants) v. Commonwealth of Pennsylvania Department of Environmental Protection and Sunoco Partners Marketing and Terminals L.P.*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-057-L.
124. Expert Report (December 2019), Affidavit (March 2020), and Supplemental Expert Report (July 2020) on behalf of Earthjustice in the matter of *Objection to the Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation*, Dale, Indiana, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.
125. Affidavit (December 2019) on behalf of Plaintiff-Intervenor (Surfrider Foundation) in the matter of *United States and the State of Indiana (Plaintiffs), Surfrider Foundation (Plaintiff-Intervenor), and City of Chicago (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2:18-cv-00127 (US District Court for the Northern District of Indiana, Hammond Division).
126. Declarations (January 2020, February 2020, May 2020, July 2020, and August 2020) in support of Petitioner's Motion for Stay of PSCAA NOC Order of Approval No. 11386 in the matter of the *Puyallup Tribe of Indians v. Puget Sound Clean Air Agency (PSCAA) and Puget Sound Energy (PSE)*, before the State of Washington Pollution Control Hearings Board, PCHB No. P19-088.
127. Expert Report (April 2020) on behalf of the plaintiff in the matter of Orion Engineered Carbons, GmbH (Plaintiff) vs. Evonik Operations, GmbH (formerly Evonik Degussa GmbH) (Respondent), before the German Arbitration Institute, Case No. DIS-SV-2019-00216.
128. Expert Independent Evaluation Report (June 2020) for *PacifiCorp's Decommissioning Costs Study Reports dated January 15, 2020 and March 13, 2020 relating to the closures of the Hunter, Huntington, Dave Johnston, Jim Bridger, Naughton, Wyodak, Hayden, and Colstrip (Units 3&4) plants*, prepared for the Oregon Public Utility Commission (Oregon PUC).
129. Direct Pre-filed Testimony (July 2020) on behalf of the Sierra Club in the matter of *the Application of the Ohio State University for a certificate of Environmental Compatibility and Public Need to Construct a Combined Heat and Power Facility in Franklin County, Ohio*, before the Ohio Power Siting Board, Case No. 19-1641-EL-BGN.
130. Expert Report (August 2020) and Rebuttal Expert Report (September 2020) on behalf of WildEarth Guardians (petitioners) in the matter of *the Appeals of the Air Quality Permit No. 7482-MI Issued to 3 Bear Delaware Operating – NM LLC (EIB No. 20-21(A) and Registrations Nos. 8729, 8730, and 8733 under General Construction Permit for Oil and Gas Facilities (EIB No. 20-33 (A))*, before the State of New Mexico, Environmental Improvement Board.
131. Expert Report (July 2020) on the *Initial Economic Impact Analysis (EIA) for A Proposal To Regulate NOx Emissions from Natural Gas Fired Rich-Burn Natural Gas Reciprocating Internal Combustion Engines (RICE) Greater Than 100 Horsepower* prepared on behalf of Earthjustice and the National Parks Conservation Association in the matter of Regulation Number 7, Alternate Rules before the Colorado Air Quality Control Commission.

132. Expert Report (August 2020) and Supplemental Expert Report (February 2021) on the Potential Remedies to Avoid Adverse Thermal Impacts from the Merrimack Station on behalf of Plaintiffs in the matter of *Sierra Club Inc. and the Conservation Law Foundation (Plaintiffs) v. Granite Shore Power, LLC et. al., (Defendants)*, Civil Action No. 19-cv-216-JL (US District Court for the District of New Hampshire.)
133. Expert Report (August 2020) and Supplemental Expert Report (December 2020) on behalf of Plaintiffs in the matter of *PennEnvironment Inc., and Clean Air Council (Plaintiffs) and Allegheny County Health Department (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2-19-cv-00484-MJH (US District Court for the Western District of Pennsylvania.)
134. Pre-filed Direct Testimony (October 2020) and Sur-rebuttal Testimony (November 2020) on behalf of petitioners (Ten Persons Group, including citizens, the Town of Braintree, the Town of Hingham, and the City of Quincy) in the matter of Algonquin Gas Transmission LLC, Weymouth MA, No. X266786 Air Quality Plan Approval, before the Commonwealth of Massachusetts, Department of Environmental Protection, the Office of Appeals and Dispute Resolution, OADR Docket Nos. 2019-008, 2019-009, 2019010, 2019-011, 2019-012 and 2019-013.
135. Expert Report (November 2020) on behalf of Protect PT in the matter of *Protect PT v. Commonwealth of Pennsylvania Department of Environmental Protection and Apex Energy (PA) LLC*, before the Commonwealth of Pennsylvania Environmental Hearing Board, Docket No. 2018-080-R (consolidated with 2019-101-R)(the “Drakulic Appeal”).
136. Expert Report (December 2020) on behalf of Plaintiffs in the matter of *Sierra Club Inc. (Plaintiff) v. GenOn Power Midwest LP (Defendants)*, Civil Action No. 2-19-cv-01284-WSS (US District Court for the Western District of Pennsylvania.)
137. Pre-filed Testimony (January 2021) on behalf of the Plaintiffs (Shrimpers and Fishermen of the Rio Grande Valley represented by Texas RioGrande Legal Aid, Inc.) in the matter of the Appeal of Texas Commission on Environmental Quality (TCEQ) Permit Nos. 147681, PSDTX1522, GHGPSDTX172 for the Jupiter Brownsville Heavy Condensate Upgrader Facility, Cameron County, before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-21-0111, TCEQ Docket No. 2020-1080-AIR.

C. Occasions where Dr. Sahu has provided oral testimony in depositions, at trial or in similar proceedings include the following:

138. Deposition on behalf of Rocky Mountain Steel Mills, Inc. located in Pueblo, Colorado – dealing with the manufacture of steel in mini-mills including methods of air pollution control and BACT in steel mini-mills and opacity issues at this steel mini-mill.
139. Trial Testimony (February 2002) on behalf of Rocky Mountain Steel Mills, Inc. in Denver District Court.
140. Trial Testimony (February 2003) on behalf of the United States in the Ohio Edison NSR Cases, *United States, et al. v. Ohio Edison Co., et al.*, C2-99-1181 (Southern District of Ohio).
141. Trial Testimony (June 2003) on behalf of the United States in the Illinois Power NSR Case, *United States v. Illinois Power Co., et al.*, 99-833-MJR (Southern District of Illinois).
142. Deposition (10/20/2005) on behalf of the United States in connection with the Cinergy NSR Case. *United States, et al. v. Cinergy Corp., et al.*, IP 99-1693-C-M/S (Southern District of Indiana).
143. Oral Testimony (August 2006) on behalf of the Appalachian Center for the Economy and the Environment re. the Western Greenbrier plant, WV before the West Virginia DEP.
144. Oral Testimony (May 2007) on behalf of various Montana petitioners (Citizens Awareness Network (CAN), Women’s Voices for the Earth (WVE) and the Clark Fork Coalition (CFC)) re. the Thompson River Cogeneration plant before the Montana Board of Environmental Review.
145. Oral Testimony (October 2007) on behalf of the Sierra Club re. the Sevier Power Plant before the Utah Air Quality Board.

146. Oral Testimony (August 2008) on behalf of the Sierra Club and Clean Water re. Big Stone Unit II before the South Dakota Board of Minerals and the Environment.
147. Oral Testimony (February 2009) on behalf of the Sierra Club and the Southern Environmental Law Center re. Santee Cooper Pee Dee units before the South Carolina Board of Health and Environmental Control.
148. Oral Testimony (February 2009) on behalf of the Sierra Club and the Environmental Integrity Project re. NRG Limestone Unit 3 before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
149. Deposition (July 2009) on behalf of MTD Products, Inc., in the matter of *Alice Holmes and Vernon Holmes v. Home Depot USA, Inc., et al.*
150. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Coletto Creek coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
151. Deposition (October 2009) on behalf of Environmental Defense, in the matter of permit challenges to the proposed Las Brisas coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
152. Deposition (October 2009) on behalf of the Sierra Club, in the matter of challenges to the proposed Medicine Bow Fuel and Power IGL plant in Cheyenne, Wyoming.
153. Deposition (October 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed Tenaska coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH). (April 2010).
154. Oral Testimony (November 2009) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
155. Deposition (December 2009) on behalf of Environmental Defense and others, in the matter of challenges to the proposed White Stallion Energy Center coal fired power plant project at the Texas State Office of Administrative Hearings (SOAH).
156. Oral Testimony (February 2010) on behalf of the Environmental Defense Fund re. the White Stallion Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
157. Deposition (June 2010) on behalf of the United States in connection with the Alabama Power Company NSR Case. *United States v. Alabama Power Company*, CV-01-HS-152-S (Northern District of Alabama, Southern Division).
158. Trial Testimony (September 2010) on behalf of Commonwealth of Pennsylvania – Dept. of Environmental Protection, State of Connecticut, State of New York, State of Maryland, and State of New Jersey (Plaintiffs) in connection with the Allegheny Energy NSR Case in US District Court in the Western District of Pennsylvania. *Plaintiffs v. Allegheny Energy Inc., et al.*, 2:05cv0885 (Western District of Pennsylvania).
159. Oral Direct and Rebuttal Testimony (September 2010) on behalf of Fall-Line Alliance for a Clean Environment and others in the matter of the PSD Air Permit for Plant Washington issued by Georgia DNR at the Office of State Administrative Hearing, State of Georgia (OSAH-BNR-AQ-1031707-98-WALKER).
160. Oral Testimony (September 2010) on behalf of the State of New Mexico Environment Department in the matter of Proposed Regulation 20.2.350 NMAC – *Greenhouse Gas Cap and Trade Provisions*, No. EIB 10-04 (R), to the State of New Mexico, Environmental Improvement Board.
161. Oral Testimony (October 2010) on behalf of the Environmental Defense Fund re. the Las Brisas Energy Center before the Texas State Office of Administrative Hearings (SOAH) Administrative Law Judges.
162. Oral Testimony (November 2010) regarding BART for PSCo Hayden, CSU Martin Drake units before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.
163. Oral Testimony (December 2010) regarding BART for TriState Craig Units, CSU Nixon Unit, and PRPA Rawhide Unit) before the Colorado Air Quality Commission on behalf of the Coalition of Environmental Organizations.



164. Deposition (December 2010) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).
165. Deposition (February 2011 and January 2012) on behalf of Wild Earth Guardians in the matter of opacity exceedances and monitor downtime at the Public Service Company of Colorado (Xcel)'s Cherokee power plant. No. 09-cv-1862 (D. Colo.).
166. Oral Testimony (February 2011) to the Georgia Office of State Administrative Hearings (OSAH) in the matter of Minor Source HAPs status for the proposed Longleaf Energy Associates power plant (OSAH-BNR-AQ-1115157-60-HOWELLS) on behalf of the Friends of the Chattahoochee and the Sierra Club).
167. Deposition (August 2011) on behalf of the United States in *United States of America v. Cemex, Inc.*, Civil Action No. 09-cv-00019-MSK-MEH (District of Colorado).
168. Deposition (July 2011) and Oral Testimony at Hearing (February 2012) on behalf of the Plaintiffs MYTAPN in the matter of Microsoft-Yes, Toxic Air Pollution-No (MYTAPN) v. State of Washington, Department of Ecology and Microsoft Corporation Columbia Data Center to the Pollution Control Hearings Board, State of Washington, Matter No. PCHB No. 10-162.
169. Oral Testimony at Hearing (March 2012) on behalf of the United States in connection with the Louisiana Generating NSR Case. *United States v. Louisiana Generating, LLC*, 09-CV100-RET-CN (Middle District of Louisiana).
170. Oral Testimony at Hearing (April 2012) on behalf of the New Hampshire Sierra Club at the State of New Hampshire Public Utilities Commission, Docket No. 10-261 – the 2010 Least Cost Integrated Resource Plan (LCIRP) submitted by the Public Service Company of New Hampshire (re. Merrimack Station Units 1 and 2).
171. Oral Testimony at Hearing (November 2012) on behalf of Clean Wisconsin in the matter of Application of Wisconsin Public Service Corporation for Authority to Construct and Place in Operation a New Multi-Pollutant Control Technology System (ReACT) for Unit 3 of the Weston Generating Station, before the Public Service Commission of Wisconsin, Docket No. 6690-CE-197.
172. Deposition (March 2013) in the matter of various Environmental Petitioners v. North Carolina DENR/DAQ and Carolinas Cement Company, before the Office of Administrative Hearings, State of North Carolina.
173. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
174. Deposition (August 2013) on behalf of the Sierra Club in connection with the Luminant Martin Lake Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 5:10-cv-0156-MHS-CMC (Eastern District of Texas, Texarkana Division).
175. Deposition (February 2014) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).
176. Trial Testimony (February 2014) in the matter of *Environment Texas Citizen Lobby, Inc and Sierra Club v. ExxonMobil Corporation et al.*, Civil Action No. 4:10-cv-4969 (Southern District of Texas, Houston Division).
177. Trial Testimony (February 2014) on behalf of the Sierra Club in connection with the Luminant Big Brown Case. *Sierra Club v. Energy Future Holdings Corporation and Luminant Generation Company LLC*, Civil Action No. 6:12-cv-00108-WSS (Western District of Texas, Waco Division).
178. Deposition (June 2014) and Trial (August 2014) on behalf of ECM Biofilms in the matter of the *US Federal Trade Commission (FTC) v. ECM Biofilms* (FTC Docket #9358).
179. Deposition (February 2015) on behalf of Plaintiffs in the matter of *Sierra Club and Montana Environmental Information Center (Plaintiffs) v. PPL Montana LLC, Avista Corporation, Puget Sound Energy, Portland General Electric Company, Northwestern Corporation, and PacifiCorp (Defendants)*, Civil Action No. CV 13-32-BLG-DLC-JCL (US District Court for the District of Montana, Billings Division).

180. Oral Testimony at Hearing (April 2015) on behalf of Niagara County, the Town of Lewiston, and the Villages of Lewiston and Youngstown in the matter of CWM Chemical Services, LLC New York State Department of Environmental Conservation (NYSDEC) Permit Application Nos.: 9-2934-00022/00225, 9-2934-00022/00231, 9-2934-00022/00232, and 9-2934-00022/00249 (pending).
181. Deposition (August 2015) on behalf of Plaintiff in the matter of *Conservation Law Foundation (Plaintiff) v. Broadrock Gas Services LLC, Rhode Island LFG GENCO LLC, and Rhode Island Resource Recovery Corporation (Defendants)*, Civil Action No. 1:13-cv-00777-M-PAS (US District Court for the District of Rhode Island).
182. Testimony at Hearing (August 2015) on behalf of the Sierra Club in the matter of *Amendments to 35 Illinois Administrative Code Parts 214, 217, and 225* before the Illinois Pollution Control Board, R15-21.
183. Deposition (May 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).
184. Trial Testimony (October 2015) on behalf of Plaintiffs in the matter of *Northwest Environmental Defense Center et. al., (Plaintiffs) v. Cascade Kelly Holdings LLC, d/b/a Columbia Pacific Bio-Refinery, and Global Partners LP (Defendants)*, Civil Action No. 3:14-cv-01059-SI (US District Court for the District of Oregon, Portland Division).
185. Deposition (April 2016) on behalf of the Plaintiffs in *UNatural Resources Defense Council, Respiratory Health Association, and Sierra Club (Plaintiffs) v. Illinois Power Resources LLC and Illinois Power Resources Generation LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (Central District of Illinois, Peoria Division).
186. Trial Testimony at Hearing (July 2016) in the matter of Tesoro Savage LLC Vancouver Energy Distribution Terminal, Case No. 15-001 before the State of Washington Energy Facility Site Evaluation Council.
187. Trial Testimony (December 2016) on behalf of the challengers in the matter of the Delaware Riverkeeper Network, Clean Air Council, et. al., vs. Commonwealth of Pennsylvania Department of Environmental Protection and R. E. Gas Development LLC regarding the Geyer well site before the Pennsylvania Environmental Hearing Board.
188. Trial Testimony (July-August 2016) on behalf of the United States in *United States of America v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS (Eastern District of Missouri, Eastern Division).
189. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Huntley and Huntley Poseidon Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
190. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Backus Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
191. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Drakulic Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
192. Trial Testimony (January 2017) on the Environmental Impacts Analysis associated with the Apex energy Deutsch Well Pad Hearing on behalf citizens in the matter of the special exception use Zoning Hearing Board of Penn Township, Westmoreland County, Pennsylvania.
193. Deposition Testimony (July 2017) on behalf of Plaintiffs in the matter of *Casey Voight and Julie Voight v Coyote Creek Mining Company LLC (Defendant)* Civil Action No. 1:15-CV-00109 (US District Court for the District of North Dakota, Western Division).
194. Deposition Testimony (November 2017) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).

195. Deposition Testimony (December 2017) on behalf of Plaintiff in the matter of *Wildearth Guardians (Plaintiff) v Colorado Springs Utility Board (Defendant)* Civil Action No. 1:15-cv-00357-CMA-CBS (US District Court for the District of Colorado).
196. Deposition Testimony (January 2018) in the matter of National Parks Conservation Association (NPCA) v. State of Washington Department of Ecology and British Petroleum (BP) before the Washington Pollution Control Hearing Board, Case No. 17-055.
197. Trial Testimony (January 2018) on behalf of Defendant in the matter of *Oakland Bulk and Oversized Terminal (Plaintiff) v City of Oakland (Defendant,)* Civil Action No. 3:16-cv-07014-VC (US District Court for the Northern District of California, San Francisco Division).
198. Trial Testimony (April 2018) on behalf of the National Parks Conservation Association (NPCA) in the matter of NPCA v State of Washington, Department of Ecology and BP West Coast Products, LLC, PCHB No. 17-055 (Pollution Control Hearings Board for the State of Washington).
199. Deposition (June 2018) (harm Phase) on behalf of Plaintiffs in the matter of *Natural Resources Defense Council, Inc., Sierra Club, Inc., and Respiratory Health Association v. Illinois Power Resources LLC, and Illinois Power Resources Generating LLC (Defendants)*, Civil Action No. 1:13-cv-01181 (US District Court for the Central District of Illinois, Peoria Division).
200. Trial Testimony (July 2018) on behalf of Petitioners in the matter of *Coosa River Basin Initiative and Sierra Club (Petitioners) v State of Georgia Environmental Protection Division, Georgia Department of Natural Resources (Respondent) and Georgia Power Company (Intervenor/Respondent)*, Docket Nos: 1825406-BNR-WW-57-Howells and 1826761-BNR-WW-57-Howells, Office of State Administrative Hearings, State of Georgia.
201. Deposition (January 2019) and Trial Testimony (January 2019) on behalf of Sierra Club and Texas Campaign for the Environment (Appellants) in the contested case hearing before the Texas State Office of Administrative Hearings in Docket Nos. 582-18-4846, 582-18-4847 (Application of GCGV Asset Holding, LLC for Air Quality Permit Nos. 146425/PSDTX1518 and 146459/PSDTX1520 in San Patricio County, Texas).
202. Deposition (February 2019) and Trial Testimony (March 2019) on behalf of Sierra Club in the State of Florida, Division of Administrative Hearings, Case No. 18-2124EPP, Tampa Electric Company Big Bend Unit 1 Modernization Project Power Plant Siting Application No. PA79-12-A2.
203. Deposition (June 2019) relating to the appeal of air permits issued to PTTGCA on behalf of Appellants in the matter of *Sierra Club (Appellants) v. Craig Butler, Director, et. al., Ohio EPA (Appellees)* before the State of Ohio Environmental Review Appeals Commission (ERAC), Case Nos. ERAC-19-6988 through -6991.
204. Deposition (September 2019) on behalf of Appellants relating to the NPDES permit for the Cheswick power plant in the matter of *Three Rivers Waterkeeper and Sierra Club (Appellees) v. State of Pennsylvania Department of Environmental Protection (Appellee) and NRG Power Midwest (Permittee)*, before the Commonwealth of Pennsylvania Environmental Hearing Board, EHB Docket No. 2018-088-R.
205. Deposition (December 2019) on behalf of the Plaintiffs in the matter of David Kovac, individually and on behalf of wrongful death class of Irene Kovac v. BP Corporation North America Inc., Circuit Court of Jackson County, Missouri (Independence), Case No. 1816-CV12417.
206. Deposition (February 2020) and testimony at Hearing (August 2020, virtual) on behalf of Earthjustice in the matter of *Objection to the Issuance of PSD/NSR and Title V permits for Riverview Energy Corporation*, Dale, Indiana, before the Indiana Office of Environmental Adjudication, Cause No. 19-A-J-5073.
207. Hearing (July 14-15, 2020, virtual) on behalf of the Sierra Club in the matter of *the Application of the Ohio State University for a certificate of Environmental Compatibility and Public Need to Construct a Combined Heat and Power Facility in Franklin County, Ohio*, before the Ohio Power Siting Board, Case No. 19-1641-EL-BGN.
208. Hearing (September 2020, virtual) on behalf of WildEarth Guardians (petitioners) in the matter of *the Appeals of the Air Quality Permit No. 7482-M1 Issued to 3 Bear Delaware Operating – NM LLC (EIB No. 20-21(A))*

*and Registrations Nos. 8729, 8730, and 8733 under General Construction Permit for Oil and Gas Facilities (EIB No. 20-33 (A), before the State of New Mexico, Environmental Improvement Board.*

209. Deposition (December 2020, March 4-5, 2021, all virtual) in support of Petitioner's Motion for Stay of PSCAA NOC Order of Approval No. 11386 in the matter of the *Puyallup Tribe of Indians v. Puget Sound Clean Air Agency (PSCAA) and Puget Sound Energy (PSE)*, before the State of Washington Pollution Control Hearings Board, PCHB No. P19-088.
210. Hearing (September 2020, virtual) on the *Initial Economic Impact Analysis (EIA) for A Proposal To Regulate NOx Emissions from Natural Gas Fired Rich-Burn Natural Gas Reciprocating Internal Combustion Engines (RICE) Greater Than 100 Horsepower* prepared on behalf of Earthjustice and the National Parks Conservation Association in the matter of Regulation Number 7, Alternate Rules before the Colorado Air Quality Control Commission.
211. Deposition (December 2020, virtual and Hearing February 2021, virtual) on behalf of the Plaintiffs (Shrimpers and Fishermen of the Rio Grande Valley represented by Texas RioGrande Legal Aid, Inc.) in the matter of the Appeal of Texas Commission on Environmental Quality (TCEQ) Permit Nos. 147681, PSDTX1522, GHGPSDTX172 for the Jupiter Brownsville Heavy Condensate Upgrader Facility, Cameron County, before the Texas State Office of Administrative Hearings, SOAH Docket No. 582-21-0111, TCEQ Docket No. 2020-1080-AIR.
212. Deposition (January 2021, virtual) on behalf of Plaintiffs in the matter of *PennEnvironment Inc., and Clean Air Council (Plaintiffs) and Allegheny County Health Department (Plaintiff-Intervenor) v. United States Steel Corporation (Defendant)*, Civil Action No. 2-19-cv-00484-MJH (US District Court for the Western District of Pennsylvania.)
213. Deposition (February 2021) on behalf of Plaintiffs in the matter of *Sierra Club Inc. (Plaintiff) v. GenOn Power Midwest LP (Defendants)*, Civil Action No. 2-19-cv-01284-WSS (US District Court for the Western District of Pennsylvania.)



## **Attachment B – EPA Enforcement Alert**

# Enforcement Alert

Publication no. EPA 325-N-20-001

November 2020

## EPA Reminder About Inappropriate Use of AP-42 Emission Factors

### Purpose

This purpose of this Enforcement Alert is to remind permitting agencies, consultants, and regulated entities that improperly using AP-42 emission factors can be costly to their businesses, inefficient, and in some circumstances, can subject regulated entities to enforcement and penalties. The Environmental Protection Agency (EPA) is concerned that some permitting agencies, consultants, and regulated entities may incorrectly be using AP-42 emission factors in place of more representative source-specific emission values for Clean Air Act permitting and compliance demonstration purposes.

### Consequences of Using AP-42 Factors

Permitting agencies, consultants, and regulated entities should be aware that even emission factors with more highly rated AP-42 grades of “A” or “B” are only based on averages of data from multiple, albeit similar, sources (See the Attachment for an overview of the history of AP-42 emission factors and the AP-42 emission factor rating system). Accordingly, these factors are not likely to be accurate predictors of emissions from any one specific source, except in very limited scenarios. While emission factors are helpful in making emission estimates for area-wide inventories for specific source types, AP-42 provides the following warning:

“Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance.”<sup>1</sup>

With the advent of 1-hour and short-term National Ambient Air Quality Standards (NAAQS), permit limits must be able to account for short term fluctuations. AP-42 emission factors also do not account for short term variation in emissions as the emission factors are intended for use in developing area-wide annual or triannual inventories. In developing emission factors, test data are typically taken from normal operating conditions and generally avoid conditions that can cause short-term fluctuations in emissions. These short-term fluctuations in emissions can stem from variations in process conditions, control device conditions, raw materials, ambient conditions, or other similar factors. This means that if facilities use AP-42 emission factors as permit limits, facilities increase their chances of violating their short-term permit limits. It also increases the likelihood of a geographic area’s non-compliance with the NAAQS.

**DISCLAIMER:** This document aims to explain the application of certain EPA regulatory provisions using plain language. Nothing in this Alert revises or replaces any regulatory provisions, any other part of the Code of Federal Regulations, the Federal Register, or the Clean Air Act. Following the approaches for determining a single storage vessel’s potential for VOC emissions and attempting to comply with the closed vent system requirements as discussed in this Alert do not equate to or guarantee compliance with the Clean Air Act, its implementing regulations, and associated state/local requirements. For more information, visit: [www.epa.gov/compliance](http://www.epa.gov/compliance).

<sup>1</sup> AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 2 (emphasis added).

It is also important to understand that there is a great deal of variability in the emissions data that are used to generate the emission factors. This variability is not necessarily reflected in the emission factor. AP-42 describes this as follows:

“The extent of between-source variability that exists, even among similar individual sources, can be large depending on process, control system, and pollutant. Although the causes of this variability are considered in emission factor development, this type of information is seldom included in emission test reports used to develop AP-42 factors. As a result, some emission factors are derived from tests that may vary by an order of magnitude or more. Even when the major process variables are accounted for, the emission factors developed may be the result of averaging source tests that differ by factors of five or more.”<sup>2</sup>

In addition to potential permit noncompliance, or increased risk of area noncompliance with the NAAQS, using an emission factor as an emission limit could have monetary implications for an individual source or permitting agency. For example, many permitting agencies collect permitting fees based on the amount of pollution emitted. If a facility uses an emission factor to estimate and report emissions, but the actual emission rate is lower than the emission factor, then the facility will report more emissions and consequently pay more in fees. On the other hand, if a facility emits at a rate above the emission factor, not only is the source violating its permit limit and the Clean Air Act, it is also not paying the appropriate amount in fees.

Another potential monetary implication for facilities is an enforcement action assessing penalties for violating the Clean Air Act. As described in a 2006 report issued by the EPA Inspector General:

“...according to EPA enforcement records, three industries – petroleum refineries, wood products, and ethanol production – operated with insufficient control equipment primarily because emission limits were significantly underestimated due to the emission factors used. EPA, through separate enforcement actions, required companies in these industries to install additional emission controls, resulting in the combined reduction of over 1,000,000 tons of pollutants.”<sup>3</sup>

For example, the EPA Inspector General’s 2006 report documented an EPA investigation in the Wood Products industry that found a nationwide pattern of Clean Air Act violations by one company. EPA found that the company had used an AP-42 emission factor designated as “poor” for volatile organic compound (VOC) emissions that resulted in the company underestimating such emissions and claiming that its facilities were not subject to permitting requirements. To resolve the violations, the company entered into a consent decree with the United States, which required the company to pay a civil penalty of \$1.1 million and to install air pollution control equipment at a cost of \$70 million.<sup>4</sup>

One example of a present-day concern is the use of a default vapor pressure value for estimating VOC emissions from heated tanks that store heavy refinery liquids such as No. 6 fuel oil. The true vapor pressure (TVP) of a stored liquid is important when calculating the emissions from tanks using the equations in AP-42, Chapter 7, Liquid Storage Tanks. The default vapor pressure is only an estimate and may not be correct for every blend of No. 6 fuel oil. Direct emissions testing of No. 6 fuel oil tanks and TVP testing in 2012 and 2013, suggested that in those cases the use of the default vapor pressure in AP-42 had resulted in emissions estimates that were understated by a factor of 100 for permitting and reporting purposes. Reliance on the default vapor pressure in AP-42 and the resulting emission factors, instead of directly measuring VOC emissions and vapor pressure, can be very costly for businesses as shown by two recently concluded cases, summarized in the following two boxes.

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<sup>2</sup> AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 3 (emphasis added).

<sup>3</sup> U.S. EPA Office of Inspector General, *EPA Can Improve Emissions Factors Development and Management*, Report No. 2006-P-00017, March 22, 2006.

<sup>4</sup> Id.

**Sprague Resources LP** operates heated asphalt and No. 6 fuel oil storage tanks at seven facilities across New England. Applying VOC testing results rather than AP-42 estimates, EPA found that Sprague had unpermitted facilities that required permits, and also had facilities with permits that failed to fully account for VOC emissions. Sprague entered into a settlement with the United States and the Commonwealth of Massachusetts that required the company to pay \$350,000 civil penalties, obtain revised state air pollution control permits, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at six facilities, and provide odor controls on tanks at two facilities.

**Global Partners LP** operates heated asphalt and No. 6 fuel oil storage tanks at a facility in South Portland, Maine. Applying VOC testing results rather than AP-42 estimates, EPA found that Global's permit failed to fully account for VOC emissions. Global entered into a settlement with the United States that required the company to obtain a revised state air pollution control permit, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at the facility, install odor controls on tanks, pay a \$40,000 penalty, and invest \$150,000 in a local wood-stove replacement project.

Regulated entities of any size who voluntarily discover, promptly disclose, expeditiously correct, and take steps to prevent recurrence of potential violations may be eligible for a reduction or elimination of any civil penalties that otherwise might apply. Most violations can be disclosed and processed via EPA's automated online "eDisclosure" system (see <https://www.epa.gov/compliance/epas-edisclosure>). To learn more about the EPA's violation disclosure policies, including conditions for eligibility, please review EPA's Audit Policy website at <https://www.epa.gov/compliance/epas-audit-policy>. Many states also offer incentives for self-policing; please check with the appropriate state agency for more information.

#### What Can Be Done?

Consultants and facility owners/operators should obtain and use the most representative emissions data, which in many cases may be source-specific emissions data, when determining applicability, applying for a permit, or demonstrating compliance with permit limits.

Various EPA publications (e.g., <https://www.epa.gov/emc>) describe the benefits and limitations of different ways to quantify source-specific emissions. These techniques in order of accuracy are:

- **Continuous Emissions Monitoring System (CEMS)** – CEMs offers a highly accurate source-specific method that continuously monitors the emissions coming out of a particular stack; however, although the accuracy of this method is high, the cost is also the highest at \$20,000-\$50,000 per year.
- **Stack Testing** – Like a CEMS, source-specific data are generated at a particular stack but emissions are only measured for a specific time, typically for a few hours during normal operations. Costs for stack testing typically run \$20,000, but testing may only be necessary every 2 to 5 years.
- **Vendor Guarantees and Stack Test Data from Similar Facilities** – If representative source-specific data cannot be obtained, emissions information from equipment vendors, particularly emission performance guarantees or actual test data from similar equipment, is a better source of information for permitting decisions than an AP-42 emission factor.
- **Material Balance Calculations** – While the material balance calculations are not generally considered as accurate as direct measurements, they may provide more reliable average emission estimates for certain sources where a high percentage of material is lost to the atmosphere (e.g., solvent VOC emissions). The costs for recordkeeping are approximately \$2,000-\$10,000 per year. This method works well for materials and processes that are well understood.
- **Optical Remote Sensing** – Measurement techniques involving differential absorption light detection and ranging (known as DIAL) and solar occultation flux or SOF can be used to measure emissions from sources such as coke ovens, storage tanks, wastewater treatment plants, and process units that are otherwise difficult to measure by other means. Measurement bias on the order of ±30 percent is expected but the data can be more accurate than engineering estimates or emission factors.
- **Emission Factors** – When source-specific emissions or other more reliable approaches are unavailable, AP-42 emission factors may be the only way to estimate emissions. Again, the limitations of the factor in accurately representing the facility's emissions and the environmental/financial risk of using the emission factor for a particular situation should be carefully considered. **Remember, AP-42 emission factors should only be used as a last resort. Even then the facility assumes all risk associated with their use!**



## Attachment – History of AP-42

Before the EPA existed, the U.S. Public Health Service (PHS) published “A Compilation of Air Pollutant Emission Factors” in 1968.\* The purpose of the report was to assist the various agencies responsible for compiling air pollution emission inventories for communities across the nation by providing them with relevant data. PHS recognized that measuring each individual source of air pollution in a particular airshed was impractical, and so, to simplify the airshed emission inventory process, while still maintaining a reasonably accurate inventory, PHS developed emission factors based on the technical literature and a limited number of source-specific tests. The resulting emission factors were simple averages of the rate at which pollutants were emitted from the burning or processing of a given quantity of material. In some cases, emission factors were based on only one or two data points.

\* The PHS assigned the number 999-AP-42 to this publication. 999 was the series number, AP was an abbreviation for air pollution, and 42 was the document number. Thus, the origin of today’s AP-42!

With the creation of the EPA, publication of the emission factors was continued with “Compilation of Air Pollutant Emission Factors, Second Edition,” by the EPA Office of Air Quality Planning and Standards in 1973. The 3<sup>rd</sup> and 4<sup>th</sup> editions of AP-42 were released in 1977 and 1985. EPA published the most recent AP-42, the 5<sup>th</sup> edition in 1995<sup>5</sup>, and has published multiple supplements and updates since. Currently, AP-42 contains more than 21,500 emission factors for over 200 air pollutants. Within AP-42, each emission factor is given a rating between “A” (excellent) and “E” (poor) (see Table 1 below). It is important to note that half of the emission factors are rated “D” or “E” and one-fifth are unrated. This means that less than one-third of the emission factors are rated between “Excellent” and “Average.”

As we work to improve our ability to estimate emissions nationally, the grading in AP-42 helps us better understand the quality of the data. But even factors that are rated “A” or “B” are not designed to be used by a single source where other, more reliable, site-specific, data are available.

**Table 1: Explanation of AP-42 Emission Factor Quality Ratings**

Rating	Explanation
<b>“A” – Excellent</b>	Emission factor is developed from tests conducted with sound, or generally sound, methodology. Test data are from many randomly chosen facilities and the source category population is sufficiently specific to minimize variability. Data may, or may not, be reported in enough detail for adequate validation.
<b>“B” – Above Average</b>	Same as “A,” but test data are from a “reasonable number” of facilities. Although no specific bias is evident, it’s not clear if the facilities represent a random sample of the industry. The source category population is sufficiently specific to minimize variability.
<b>“C” – Average</b>	Same as “B,” but the factor can be developed from an unproven or new methodology. Test data may be lacking a significant amount of background information. Although no specific bias is evident, it’s not clear if the facilities tested represent a random sample of the industry. The source category population is specific enough to minimize variability.
<b>“D” – Below Average</b>	Same as “C,” but test data are from a small number of facilities, and there may be reason to suspect the facilities do not represent a random sample of the industry. There may also be evidence of variability within the source population.
<b>“E” – Poor</b>	Factor is developed from: (1) tests based on an unproven or new methodology, or tests that may be lacking a significant amount of background information, or (2) tests based on a generally unacceptable method, but the method may provide an “order of magnitude” value for the source. Facilities tested may not represent a random sample of the industry and there is evidence of variability within the source category population.

<sup>5</sup> AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, pp. 9-10.

April 9, 2021

Environmental Quality Board  
520 Lafayette Road N.  
Saint Paul, Minnesota 55155

Re: Draft Recommendations: Integrating Climate Information into MEPA Program Requirements

Dear Members of the EQB and the ER Climate Technical Team:

The City of Minneapolis (“Minneapolis”), a municipality as defined in Minn. Stat. § 216B.02, subd. 2b, is home to more than 430,000 residents and 44,000 businesses. We appreciate the opportunity to provide comments on the Environmental Quality Board (“EQB”) Member Environmental Review Interagency Climate Technical Team’s (“ER Climate Technical Team”) recommendations to integrate climate analysis into Minnesota Environmental Policy Act of 1973 program requirements.

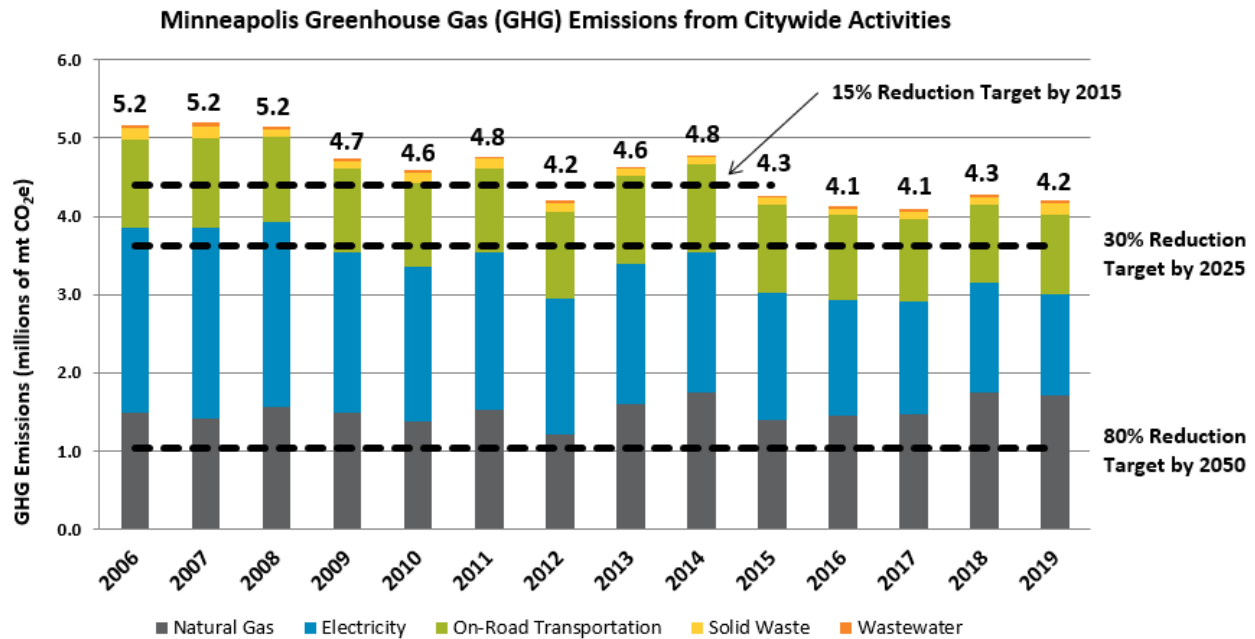
Minneapolis strongly supports the ER Climate Technical Team proposals to both update the Environmental Assessment Worksheet (“EAW”) Form and create a new Environmental Impact Statement category for greenhouse gas (“GHG”) pollution.

The proposed modifications align with longstanding state climate goals established under the Next Generation Energy Act of 2007 (Minnesota Statute § 216H) to limit GHG emissions. State agency regulatory support is needed for Minnesota to achieve these goals.

Additionally, Minneapolis, along with many other local units of government has adopted the science-based climate goals from the Next Generation Energy Act. Minneapolis’s resulting Climate Action Plan is intended to protect our residents and the global community from the most harmful impacts of climate change. Many of our residents have been impacted by extreme heat, flooding, and storms, and in 2020 we all became more aware of the effects air pollution can have on a person’s ability to fight COVID-19. To reduce negative environmental impact on communities, we must first analyze and report the effects on the individual project level. Minneapolis has long studied the impact of environmental pollution on its residents and businesses and found that the current federal and state standards are not restrictive enough to ensure its citizens’ health or nor to meet Minneapolis’s climate action goals.” Moreover, some state laws, including Minnesota Statute § 116.07, subd. 2, which limits our ability to regulate GHG pollution consistent with state and local goals.

For these reasons, we are supportive of the ER Climate Technical Team’s proposed changes, and additionally recommend that **EQB require a cumulative impact analysis that includes an analysis of whether the project will result in disproportionate negative impacts on surrounding communities.** Evaluation and reporting criteria should include an assessment of the risk that cumulative impacts will place undue, disproportionate burden on surrounding communities that have significant pollution levels that impact human health, socioeconomic resources, and quality of life.

Minneapolis tracks and reports on GHG annually. While Minneapolis met its target to reduce citywide GHG emissions by 15 percent by 2015, neither Minneapolis nor the State is on track to meet the 2025 target of 30 percent reduction compared to 2006 levels. Below is our most recent GHG inventory showing that citywide GHG emissions have remained relatively unchanged since 2015.



These facts demonstrate that the proposed climate analysis is urgently needed. We support the ER Climate Technical Team’s recommendation as an important tool to encourage sustainable, climate-responsive development that better protects public health. Fortunately, the proposed updates are within the technical capacity of the analysts completing EAW analyses and preparing reports on behalf of developers.

Additionally, Minneapolis recommends EQB take the following actions:

- Reduce the proposed MR 4410.4400 subp. XX. Greenhouse Gas Pollution threshold from 100,000 tons per year for an EIS to 25,000 tons per year, as very few projects would meet the proposed threshold. (As a reference point, we note that Minneapolis’ citywide emissions total 5 million tons annually.)
- Remove the minimum threshold for mitigations as proposed. The analysis should apply to all projects subject to an EAW review. All projects should identify what mitigations are available, how much those mitigations would reduce emissions, and how the project would comply with the Next Generation Energy Act, among other required analyses.
- Provide guidance on the use of a social cost of carbon and update it regularly.
- Require a comparison of the emissions associated with a proposed project with those of similar, recently developed projects.
- Require every project undergoing an EAW or EIS review to conduct an analysis of how emissions associated with the development could be reduced.
- Require all projects to include Scope 3 emissions in GHG estimates.
- Bi-annually update the requirements associated with review to ensure timely modifications that are responsive to the latest science-based best practices for evaluating projects.

Research shows that communities of color and under-resourced communities are disproportionately vulnerable to climate change. Adopting the proposed rules is necessary for reducing exposures in vulnerable and overburdened communities here and worldwide. State actions, such as the modifications proposed by the ER Climate Technical Team, are critical for doing our part to address environmental justice concerns.

In conclusion, local governments need support from the State to reduce climate impacts and improve public health. The ER Climate Technical Team's thoughtful proposals are a positive step to address GHG pollution from major development and renovation. In our experience, designing for success is most effective in the planning stages of projects. While Minneapolis has a benchmarking program and invests municipal funds to help businesses with reducing GHG emissions, retrofitting is expensive, has fewer financing options, and is less effective than thoughtful planning in the development stage.

The longer the State defers action, the more retrofitting will be required at a future date, resulting in unnecessary expense for businesses, residents, and all levels of government. For these reasons, we strongly support the ER Climate Technical Team proposals to address climate as part of the EAW and EIS processes.

Should EQB or the ER Climate Technical Team wish to discuss our comments further, please contact me at (612) 673-3666.

Respectfully,

A handwritten signature in black ink that reads "K. W. Havey". The signature is written in a cursive, slightly slanted style.

Mr. Kim W. Havey, LEED AP, AICP  
Director, Division of Sustainability





**Environmental Quality Board**  
300 Centennial Building  
658 Cedar Street  
St. Paul, MN 55155  
Voice: 651.201.2492  
Fax: 651.296.3698

## **Recommended Content and Format Alternative Urban Areawide Review Documents**

Updated by EQB staff September 2008

This guidance has been prepared by the EQB staff to assist in the preparation of AUAR documents. It is based on the directive of 4410.3610, subp. 4 that “the content and format [of an AUAR document] must be similar to that of an EAW, but must provide for a level of analysis comparable to that of an EIS for impacts typical of urban residential, commercial warehousing, and light industrial development and associated infrastructure.”

### General Guidance

This guidance is based on the items of the standard EAW form (August 2008 revised version); the numbers listed below refer to the item numbers of that form. Except where stated otherwise, the information requested here is intended to augment (or clarify) the information asked for on the EAW form; therefore, the EAW form and the guidance booklet *EAW Guidelines* (February 2000 edition) must be consulted along with this guidance. Both documents are available at the EQB website:

[www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm](http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm)). Although *EAW Guidelines* dates from 2000, and some of the content is out-of-date, this document still provides useful advice for answering the questions on the EAW form.

The information requested must be supplied for each of the major development scenarios being analyzed, and it is important to clearly explain the differences in impacts between the various scenarios.

If this guidance indicates that an EAW item is not applicable to the AUAR, the item # and its title (the text in bold print on the EAW form) should be included with an indication that the EQB guidance indicates that no response is necessary in an AUAR (as opposed to just skipping reference to that item at all).

One general rule to keep in mind throughout the preparation of the AUAR document is that whenever a certain impact may or may not occur, depending on the exact design of future developments, the AUAR should cover the possible impacts through a “worst case scenario” analysis or else prevent the impacts through the provisions of the mitigation plan. Failure to cover possible impacts by one of these means risks the invalidation of the environmental review exemption for specific development projects.

### Specific Guidance by EAW Form Item

1. **Title.** An appropriate descriptive title for the geographical area of the AUAR should be chosen.
2. **Proposer.** It is not necessary for AUAR purposes to identify property owners within the AUAR area (although it may be useful to use such names as identifiers of various land parcels).

3. **RGU.** No changes from EAW form
4. **Reason for EAW preparation.** Not applicable to AUAR.
5. **Location and maps.** a. The county map is not needed for an AUAR. b. The USGS map should be included. c. Instead of a site plan, include: (1) a map clearly depicting the boundaries of the AUAR and any subdistricts used in the AUAR analysis; (2) land use and planning and zoning maps as required in conjunction with items 9 and 27; and (3) a cover type map as required for item 10. Additional maps may be included throughout the document wherever maps are useful for displaying relevant information.
6. **Description.** Instead of the information called for on the form, the description section of an AUAR should include the following elements for each major development scenario included:
  - anticipated types and intensity (density) of residential and commercial/warehouse/light industrial development throughout the AUAR area;
  - infrastructure planned to serve development (roads, sewers, water, stormwater system, etc.)
 Roadways intended primarily to serve as adjoining land uses within an AUAR area are normally expected to be reviewed as part of an AUAR. More “arterial” types of roadways that would cross an AUAR area are an optional inclusion in the AUAR analysis; if they are included, a more intensive level of review, generally including an analysis of alternative routes, is necessary;
  - information about the anticipated staging of various developments, to the extent known, and of the infrastructure, and how the infrastructure staging will influence the development schedule.

**Important Note:** Every AUAR document MUST review one or more development scenarios based on and consistent with the RGU’s Comprehensive Plan in effect when the AUAR is officially ordered. (This is equivalent to reviewing the “no-build” alternative in an EIS.) If an RGU expects to amend its existing Comprehensive Plan, it has the options of deferring the start of the AUAR until after adopting the amended plan or reviewing developments based on both the existing and amended comprehensive plans; however, it cannot review *only* a development based on an expected amendment to the existing plan. Also, the rules require that one or more development scenarios analyzed must be consistent with known development plans of property owners within the AUAR area.

7. **Project magnitude data.** No changes from the EAW form, except that the information should be given for each major development scenario.
8. **Permits and approvals required.** A listing of major approvals (including any comprehensive plan amendments and zoning amendments) and public financial assistance and infrastructure likely to be required by the anticipated types of development projects should be given for each major development scenario. This list will help orient reviewers to framework that will protect environmental resources. The list can also serve as a starting point for the development of the implementation aspects of the mitigation plan to be developed as part of the AUAR.
9. **Land use.** No changes from the EAW form.
10. **Cover types.** The following information should be provided instead:
  - a. cover type map, at least at the scale of a USGS topographic map, depicting:
    - wetlands – identified by type (Circular 39)
    - watercourses – rivers, streams, creeks, ditches

- lakes – identify public waters status and shoreland management classification
- woodlands – breakdown by classes where possible
- grassland – identify native and old field
- cropland
- current development

- b. an “overlay” map showing anticipated development in relation to the cover types; this map should also depict any “protection areas,” existing or proposed, that will preserve sensitive cover types. Separate maps for each major development scenario should generally be provided.

11. **Fish, wildlife, and ecologically sensitive resources.**

- a. The description of wildlife and fish resources should be related to the habitat types depicted on the cover types maps (of item 10). Any differences in impacts between development scenarios should be highlighted in the discussion.
- b. For an AUAR, prior consultation with the DNR Division of Ecological Resources for information about reports of rare plant and animal species in the vicinity is required. Include the reference numbers called for on the EAW form in the AUAR and include the DNR’s response letter. If such consultation indicates the need, an on-site habitat survey for rare species in the appropriate portions of the AUAR area is required. Areas of on-site surveys should be depicted on a map, as should any “protection zones” established as a result.

12. **Physical impacts on water resources.** The information called for on the EAW form should be supplied for any of the infrastructure associated with the AUAR development scenarios, and for any development expected to physically impact any water resources. Where it is uncertain whether water resources will be impacted depending on the exact design of future development, the AUAR should cover the possible impacts through a “worst case scenario” or else prevent impacts through the provisions of the mitigation plan.

13. **Water Use.** If the area requires new water supply wells specific information about that appropriation and its potential impacts on groundwater levels should be given; if groundwater levels would be affected, any impacts resulting on other resources should be addressed.

14. **Water-related Land Use Management Districts.** Such districts should be delineated on appropriate maps and the land use restrictions applicable in those districts should be described. If any variances or deviations from these restrictions within the AUAR area are envisioned, this should be discussed.

15. **Water surface use.** This item need only be addressed if the AUAR area would include or adjoin recreational water bodies.

16. **Erosion and sedimentation.** The number of acres to be graded and number of cubic yards of soil to be moved need not be given; instead, a general discussion of the likely earthmoving needs for development of the area should be given, with an emphasis on unusual or problem areas. In discussing mitigation measures, both the standard requirements of the local ordinances and any special measures that would be added for AUAR purposes should be included.

17. **Water Quality-stormwater runoff.** For an AUAR the following additional guidance should be followed in addition to that in *EAW Guidelines*:

- it is expected that an AUAR will have a detailed analysis of stormwater issues;

- a map of the proposed stormwater management system and of the water bodies that will receive stormwater should be provided;
- the description of the stormwater systems would identify on-site and “regional” detention ponding and also indicate whether the various ponds will be new water bodies or converted existing ponds or wetlands. Where on-site ponds will be used but have not yet been designed, the discussion should indicate the design standards that will be followed.
- if present in or adjoining the AUAR area, the following types of water bodies must be given special analyses:
  - lakes: within the Twin Cities metro area a nutrient budget analysis must be prepared for any “priority lake” identified by the Metropolitan Council. Outside of the metro area, lakes needing a nutrient budget analysis must be determined by consultation with the MPCA and DNR staffs;
  - trout streams: if stormwater discharges will enter or affect a trout stream an evaluation of the impacts on the chemical composition and temperature regime of the stream and the consequent impacts on the trout population (and other species of concern) must be included;

18. **Water Quality-Wastewater.** Observe the following points of guidance in an AUAR:
  - only domestic wastewater should be considered in an AUAR—industrial wastewater would be coming from industrial uses that are excluded from review through an AUAR process;
  - wastewater flows should be estimated by land use subareas of the AUAR area; the basis of flow estimates should be explained;
  - the major sewer system features should be shown on a map and the expected flows should be identified;
  - if not explained under item 6, the expected staging of the sewer system construction should be described;
  - the relationship of the sewer system extension to the RGU’s comprehensive sewer plan and (for metro area AUARs) to Metropolitan Council regional systems plans, including MUSA expansions, should be discussed. For non-metro area AUARs, the AUAR must discuss the capacity of the RGU’s wastewater treatment system compared to the flows from the AUAR area; any necessary improvements should be described;
  - if on-site systems will serve part of the AUAR the guidance in *EAW Guidelines* on page 16 regarding item 18b under Residential development should be followed.
19. **Geologic hazards and soil conditions.** A map should be included to show any groundwater hazards identified. A standard soils map for the area should be included.
20. **Solid wastes; hazardous wastes; storage tanks.** For a, generally only the estimated total quantity of municipal solid waste generated and information about any recycling or source separation programs of the RGU need to be included. No response is necessary for b. For c, potential locations of storage tanks associated with commercial uses in the AUAR should be identified (e.g., gasoline tanks at service stations).
21. **Traffic.** For AUAR reviews a detailed traffic analysis will be needed, conforming to the MnDOT guidance as listed on the EAW form. The results of the traffic analysis must be used in the response to item 22 and in the noise aspect of item 24.
22. **Vehicle-related air emissions.** Although the Pollution Control Agency no longer issues Indirect Source Permits, traffic-related air quality may still be an issue if the analysis in item 21 indicates that development would cause or worsen traffic congestion. The general guidance for item 22 in *EAW*



*Guidelines* should still be followed. Questions about the details of air quality analysis should be directed to the MPCA staff.

23. **Stationary source air emissions.** This item is not applicable to an AUAR. Any stationary air emissions source large enough to merit environmental review requires individual review.
24. **Dust, odors, noise.** Dust, odors, and construction noise need not be addressed in an AUAR, unless there is some unusual reason to do so. The RGU might want to discuss as part of the mitigation plan, however, any dust control or construction noise ordinances in effect.

If the area will include or adjoin major noise sources a noise analysis is needed to determine if any noise levels in excess of standards would occur, and if so, to identify appropriate mitigation measures. With respect to traffic-generated noise, the noise analysis should be based on the traffic analysis of item 21.

25. **Sensitive resources:**
  - Archeological, historic, and architectural resources. For an AUAR, contact with the State Historic Preservation Office and State Archeologist is required to determine whether there are areas of potential impacts to these resources. If any exist, an appropriate site survey of high probability areas is needed to address the issue in more detail. The mitigation plan must include mitigation for any impacts identified.
  - Prime or unique farmlands. The extent of conversion of existing farmlands anticipated in the AUAR should be described. If any farmland will be preserved by special protection programs, this should be discussed.
  - Designated parks, recreation areas, or trails. If development of the AUAR will interfere or change the use of any existing such resource, this should be described in the AUAR. The RGU may also want to discuss under this item any proposed parks, recreation areas, or trails to be developed in conjunction with development of the AUAR area.
  - Scenic views and vistas. Any impacts on such resources present in the AUAR should be addressed. This would include both direct physical impacts and impacts on visual quality or integrity. *EAW Guidelines* contains a list of possible scenic resources on page 13.
26. **Adverse visual impacts.** If any non-routine visual impacts would occur from the anticipated development, this should be discussed here along with appropriate mitigation.
27. **Compatibility with Plans.** *The AUAR must include a statement of certification from the RGU that its comprehensive plan complies with the requirements set out at 4410.3610, subpart 1.* The AUAR document should discuss the proposed AUAR area development in the context of the comprehensive plan. If this has not been done as part of the responses to items 6, 9, 18, 21, and others, it must be addressed here; a brief synopsis should be presented here if the material has been presented in detail under other items. Necessary amendments to comprehensive plan elements to allow for any of the development scenarios should be noted. If there are any management plans of any other local, state, or federal agencies applicable to the AUAR area, the document must discuss the compatibility of the plan with the various development scenarios studied, with emphasis on any incompatible elements.
28. **Impact on infrastructure and public services.** This item should first of all summarize information on physical infrastructure presented under items (such 6, 17, 18 and 21). Other major infrastructure or public services not covered under other items should be discussed as

well — this includes major social services such as schools, police, fire, etc.

*The RGU must be careful to include project-associated infrastructure as an explicit part of the AUAR review if it is to exempt from project-specific review in the future.*

29. **Cumulative potential effects.** Because the AUAR process by its nature is intended to deal with cumulative potential effects from all future developments within the AUAR area, it is presumed that the responses to all items on the EAW form automatically encompass the impacts from all anticipated developments within the AUAR area.

However, the total impact on the environment with respect to any of the items on the EAW form may also be influenced by past, present, and reasonably foreseeable future projects outside of the AUAR area. The cumulative potential effect descriptions may be provided as part of the responses to other appropriate EAW items, or in response to this item.

30. **Other potential environmental impacts.** If applicable, this item should be answered as requested by the EAW form.

31. **Summary of Issues.** The RGU may answer this question as asked by the form, or instead may choose to provide an Executive Summary to the document that basically covers the same information. Either way, the major emphasis should be on: potentially significant impacts, the differences in impacts between major development scenarios, and the proposed mitigation.

**Certification by the RGU.** For an AUAR document, no certifications as listed at the end of the EAW form are necessary. (The RGU is legally responsible for the accuracy and completeness of the document and for properly distributing it nonetheless.)

**Mitigation Plan.** The draft and final AUAR documents must include an explicit mitigation plan. It must be understood that the mitigation plan is a commitment by the RGU to prevent potentially significant impacts from occurring from specific projects. It is more than just a list of ways to reduce impacts—it must include information about how the mitigation will be applied and assurance that it will. Otherwise, the AUAR may not be adequate and/or specific projects may lose their exemption from the individual review.

The RGU's final action on the AUAR must specifically adopt the mitigation plan; therefore, the plan has a "political" as well as a technical dimension.

**Response to comments on the draft AUAR document.** The final AUAR document must include a section specifically responding to each timely and substantive comment on the draft that indicates the way in which the comment has been addressed. Similar comments may be combined for purposes of responding.

June 17, 2021

Hilary Dvorak, Principal City Planner  
Community Planning and Economic Development  
505 4th Avenue South, Rm 320  
Minneapolis, MN 55415  
(612) 273-2639  
Hilary.Dvorak@minneapolismn.gov

Dear Ms. Dvorak,

The Northside Green Zone Task Force submits these comments in response to the draft Alternative Urban Areawide Review (AUAR) of the Upper Harbor Terminal redevelopment project. The Northside Green Zone Task Force appreciates the City of Minneapolis completing this necessary environmental review and the opportunity to provide comment.

In reviewing the UHT AUAR, the Northside Green Zone Task Force was specifically looking for responses to the questions and content proposed in its March 8, 2021 comment letter on the AUAR scoping document. The Task Force requests that further research and documentation is needed around **cumulative impacts, air pollution from both stationary and mobile sources, and clean-up of site contamination**. The City should consider the AUAR incomplete until these issues are addressed.

**Cumulative Impacts.** In our March 8, 2021 letter, we wrote: “An expanded cumulative impacts analysis of current pollution sources (surrounding facilities, I-94, etc.) must be conducted to assure a reduction in the cumulative pollution legacy in this area. Doing an overall cumulative impact assessment is particularly important as the UHT site neighbors facilities, such as GAF, do not have to undergo permit review (since they are grandfathered in). We would like to know how the City is assessing the cumulative impacts of this development and assuring the community that a reduction and net benefit is occurring during any project’s construction, remediation, and operation.”

The AUAR interpreted the rules for cumulative impacts to only include future related projects. While it is important to consider future and related construction phases, the Task Force would specifically like to see an analysis of the existing impacts and how the proposed development will increase or decrease impacts in this environmental justice community. The AUAR states that “All other impacts from these future projects will be addressed via regulatory permitting and approval measures; therefore, they will be individually mitigated to ensure no cumulative impacts occur to environmental and community resources.” How do you “individually mitigate” cumulative impacts?

Specifically, the Task Force would like to see an analysis akin to the cumulative levels and effects law authored by Representatives Clark and Berglund. The cumulative levels and effects law states that a permit (or in this case a project’s environmental review) should not be approved without “analyzing and considering the cumulative levels and effects of past and current environmental pollution from all sources on the environment and residents of the geographic area within which the facility’s emissions are likely to be deposited.” The Task Force would include pollution from I-94, industrial facilities in the vicinity, traffic emissions, and onsite operations as past, current (and future) sources.

**Air pollution.** As noted in the section above, the Task Force is particularly concerned about existing air pollution from mobile and stationary sources that cumulatively create some of the worst air quality in

the state in the Northside Green Zone. In the Northside Green Zone residents experience some of the highest rates of asthma and other respiratory and cardiovascular diseases, exacerbated by air pollution.

The AUAR states: “The AUAR study area is currently meeting all NAAQS for the criteria air pollutants. For the foreseeable future the trend of lower per vehicle emissions is expected to at least offset growth in vehicle volumes. Therefore, the AUAR study area is expected to continue meeting NAAQS, with or without implementation of the development scenarios. Based on the proposed volumes, the proposed development scenarios do not exceed thresholds that would require a quantitative MSAT analysis; therefore, the project is not expected to adversely affect air quality.”

First, the NAAQS is a floor, not a ceiling and should not be interpreted to mean that air quality is “healthy” even if standards are being met. Also, it is unclear how the increased number of vehicle trips generated during and after construction will have no impact on the air pollution volumes in the community. Due to the heightened impact of air pollution in this area, a qualitative analysis is not sufficient. The Task Force reinforces its recommendation for a quantitative, cumulative levels and effects analysis before the AUAR can be approved.

**Site Contamination.** The AUAR states “Additional Phase II assessments may be required to assess the extent of existing contaminants. Any redevelopment of the property will require coordination with the MPCA to determine the appropriate remediation measures and handling of known and unknown contaminants encountered.” The Task Force would like to know what will the criteria be for undertaking additional phase II assessments? The MPCA already knows of many contaminants onsite, including VOCs, asphalt, metals, gasoline, pesticides, and PAHs. The Task Force would recommend that the City and developers be proactive and include a Phase II assessment prior to AUAR approval. However, at the very least, the City should share the protocol for additional assessments to increase transparency around how this decision will be made.

**Permitting Concerns.** The Northside Green Zone Task Force understands that under the MRCCA, developers may legally request increased height allowances through conditional use permits. However, we would like it noted on record that we are frustrated with the inequity of the City having a process for conditional permits to increase building height but not having a process to address the non-expiring permits of industrial facilities such as GAF. Community members have experienced the negative health impacts of pollution from GAF and other facilities for decades, yet have been repeatedly told that the City cannot do anything to get rid of these facilities due to zoning and their permit types from the MPCA. We would ask the AUAR to address the necessity of conditional use permits for the UHT coordinated plan.

In summary, the Northside Green Zone Task Force appreciates the opportunity to submit these comments to the City of Minneapolis and asks that the City conduct further quantitative analysis of air pollution and cumulative pollution impacts prior to approving the AUAR. The Northside Green Zone was designated by the Minneapolis City Council and the community is eager to see the City take action in accordance with the values and goals established by the Green Zone resolution to protect the health and wellbeing of overburdened residents.

Sincerely,  
Minneapolis Northside Green Zone Task Force

Adopted June 17, 2021



CC: Minneapolis City Council  
Mayor Jacob Frey  
Minneapolis Sustainability Division

From: C Fleming <[cefleming14@gmail.com](mailto:cefleming14@gmail.com)>

Sent: Wednesday, May 26, 2021 10:07 AM

To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolis.gov](mailto:Hilary.Dvorak@minneapolis.gov)>

Subject: [EXTERNAL] UHT AUAR and its substandard information and Conflict of Interest

Environmentalists comments on the AUAR for the Upper Harbor

"On the substance, the environmental review is not complete. It skips all mention of CO2 / GHG emissions. And on cumulative impact, it ignores the existing air emission from all the industries in North. (And on GAF it says that GAF is " currently investigating the installation of a regenerative oxidizer...")

"Oh, and it says the air quality is good in the area, because they checked the data for one day -- April 8, 2021 -- and it was fine that day. Amazing! (See page 74)."

## **CONFLICT of INTEREST**

Isn't it a conflict for the company (Kimley-Horn) conducting the AUAR for the Upper Harbor project is also the firm currently working with the master developer for the site, United Properties? Kimley-Horn **works** for the company that has a vested interest in the AUAR favoring their development agenda! Is the fox guarding the hen-house?

Where does this leave the community! Who is looking out for us? MPCA? (yeah, right). Under what theory is Kimley-Horn claiming they can be objective when their paycheck is tied to United Properties? Can we, the community, get some clarity on this concern.

Note: Some elected officials have tried to paint me and my organizations as being "anti-development" when I am "anti-music

venue at the UHT site" only. Local developers will attest to my support (verbally and financially of several development projects in Minneapolis). Community members will also confirm my goal of seeing robust development for ADOS folks in north Minneapolis and will not allow these tactics to take away from our ultimate goals.

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: Karl Hakanson <[karl.ivar.h@gmail.com](mailto:karl.ivar.h@gmail.com)>  
Sent: Thursday, June 17, 2021 2:18 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolis.gov](mailto:Hilary.Dvorak@minneapolis.gov)>  
Subject: [EXTERNAL] UHT

Dear Ms. Dvorak,

I hope this day finds you well. Thank you for your service.

Many of us feel like no one is listening to the many alternative community voices on this so-called development.

The entertainment venue is, frankly, gross. We need it like a hole in the head. The TCs are full of struggling local arts venues that sure could use a little love. Except First Ave! They are doing just fine!

So we get to see Beyonce shake her booty, with tickets we can't afford. A giant money sucking machine taking money out of the neighborhood. A whole bunch of traffic, pollution, massive parking lot, people parking all across the neighborhood as they don't want to pay for parking, lighting, noise, garbage, etc. Entirely not needed! We do not need more mega solutions. Mega solutions are killing us.

This is NOT development. What's this I hear about First Avenue owners having title to all the property? WHaa? The whole thing has gone off the rails. This is not the future. This is not in Mpls' or Hennepin Co's or Met Council's sustainability/climate action plans. Why do we even bother with these plans when those with all the money swoop in and make even more money and disregard the locals? Crazy. Same old. Same old.

It is the Mississippi River! Think about that for one minute. That is the focus.

Here's what I recommend:

Scratch the entertainment venue. Note period.

Clean up the entire site. Get rid of ALL the buildings, garbage and contaminated soil and all of it. Bring in compost and re-shape the entire area. Plant flowers and native grasses. Let it heal.

Invite Lakota and Ojibwe leaders to talk about the river and what it means for all of us. Invite the very best eco-builders and conservationists to show how to build a true green future (hint: concrete is a major GHG source). Hire the young men and women from the neighborhood to build their own futures (think habitat for humanity). Beautiful, simple housing. A lot more room for native ecology, gardens and park land for people to enjoy. Peace. Quiet. Beauty. Nature.

An education training incubator site focused on green skills would be great. Actually needed.

A blueprint for future "development". No token advisory committees and listening sessions.

As is, this is just yet another development that will not change anything.  
You may have heard about climate change and the desperate need for equity in all things?

Thanks for listening. Share with anyone that might actually read this. The UHT web page is a mess. It actually discourages participation.



Kindest Regards,

--

Karl Hakanson

*We know how to transform this world to reduce our impact on nature by several fold, how to provide meaningful, dignified living-wage jobs for all who seek them, and how to feed, clothe, and house every person on earth. What we don't know is how to remove those in power, those whose ignorance of biology is matched only by their indifference to human suffering. This is a political issue. It is not an ecological problem.*

*--Paul Hawken, from a speech at the Bioneers conference in Oct. 2002*

**[EXTERNAL]** This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

-----Original Message-----

From: reinh222@everyactioncustom.com <reinh222@everyactioncustom.com>

Sent: Friday, June 18, 2021 11:43 AM

To: Dvorak, Hilary A. <Hilary.Dvorak@minneapolismn.gov>

Subject: [EXTERNAL] My public comment on the Upper Harbor Terminal draft environmental study

Dear Principal City Planner Hilary Dvorak,

I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.

First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?

Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.

This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.

Thank you.

Sincerely,

Adam Reinhardt

3740 Bryant Ave S Apt 2 Minneapolis, MN 55409-1194 reinh222@d.umn.edu [EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

## Bunge, Leila

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**From:** Payne, Ashley  
**Sent:** Monday, June 21, 2021 8:32 AM  
**To:** Bunge, Leila; Haase, Rachel; Simmons, Koehl  
**Cc:** Lincoln, Tom  
**Subject:** FW: [EXTERNAL] My public comment on the Upper Harbor Terminal draft environmental study

Ashley Payne  
Kimley-Horn  
Direct: 507 216 0763 | Mobile: 507 251 6096

-----Original Message-----

From: Dvorak, Hilary A. <Hilary.Dvorak@minneapolismn.gov>  
Sent: Monday, June 21, 2021 8:07 AM  
To: Payne, Ashley <Ashley.Payne@kimley-horn.com>  
Subject: FW: [EXTERNAL] My public comment on the Upper Harbor Terminal draft environmental study

AUAR comment letter.

Hilary Dvorak  
Principal City Planner- Land Use, Design and Preservation City of Minneapolis – Community Planning and Economic Development  
505 4th Avenue South, #320  
Minneapolis, MN 55415

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hilary.dvorak@minneapolismn.gov  
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-----Original Message-----

From: cpopowski2009@everyactioncustom.com <cpopowski2009@everyactioncustom.com>  
Sent: Sunday, June 20, 2021 1:36 PM  
To: Dvorak, Hilary A. <Hilary.Dvorak@minneapolismn.gov>  
Subject: [EXTERNAL] My public comment on the Upper Harbor Terminal draft environmental study

Dear Principal City Planner Hilary Dvorak,

I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.

First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as

part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?

Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.

This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.

Thank you.

Sincerely,

Christine Popowski

2630 Pleasant Ave Apt 101 Minneapolis, MN 55408-1448 cpopowski2009@gmail.com [EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.



From: joanne goddard <[jbcgoddard@yahoo.com](mailto:jbcgoddard@yahoo.com)>  
Date: June 21, 2021 at 6:24:37 PM CDT  
To: "Dvorak, Hilary A." <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] UHT AUAR  
Reply-To: joanne goddard <[jbcgoddard@yahoo.com](mailto:jbcgoddard@yahoo.com)>

I am writing to express my concern about the environmental study being proposed for the Upper Harbor Terminal. I believe it is currently inadequate in its scope and depth.

As I understand, the city has decided that the redevelopment of the Upper Harbor Terminal will have negligible impact on wildlife in the area. I find that difficult to believe as any industrialization of an area always seems to have an impact on wildlife. There are a few endangered species in the area, I know this as I live in the area and often see heron and eagles fly over my house in their trips to and from the river.

The impacts on wildlife must be fully investigated before redevelopment begins.

Also the current city position on the impacts on traffic in the development area is laughable. Of course there is going to be significant impact on traffic. The Dowling bridge can barely handle the daily traffic load as it is. Increased truck traffic will substantially overload the streets in specifically the McKinley neighborhood.

I believe a traffic plan needs to be thoroughly updated before the redevelopment takes place.

The AUAR doesn't begin to address the impacts on the neighborhoods in the Upper Harbor Terminal site. McKinley and Hawthorne already are overburdened with horrendous air quality and the increase in diesel truck traffic, rerouting of "normal" traffic and other incidentals will most definitely decrease air quality.

Environment measures must be put in place to protect the surrounding neighborhoods during this redevelopment. My first suggestion would be the use of only electric vehicles to decrease emissions in the neighborhood.

But finally, the AUAR doesn't address the number one concern I have. Every city meeting starts with recognition that we are on stolen land. The AUAR does address what would happen if we did nothing to the Upper Harbor Terminal, but it says nothing about what could happen if the City of Minneapolis decided to address the mistakes of the past and return this section of the Mississippi to the indigenous people. I believe that returning this land to the original peoples would be the best redevelopment of all.

We, as the city, have an opportunity to return stolen land and begin healing.

Joanne Goddard  
3714 North 6th Street  
Minneapolis  
Northside for Life

[Sent from Yahoo Mail on Android](#)

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: Kelley Skumautz <[kelley@13trees.net](mailto:kelley@13trees.net)>  
Sent: Wednesday, June 23, 2021 1:02 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] Comments about UHT AUAR

Ms. Dvorak,

I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month for the Upper Harbor Terminal (UHT) Coordinated Plan. First, the fact that the City of Minneapolis (City) will draft and review its own environmental standards for this project using an AUAR is highly problematic because there is no guarantee of accountability for the City to hold itself to the highest environmental standards in the process and presents a potential conflict of interest. Second, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment to the North Minneapolis community which is a design standard of the AUAR process as determined by the State of Minnesota Environmental Quality Board. Third, this study has no mention of the climate impacts of the development. Nor does it require any mitigation measures to reduce climate impact. By law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.

Furthermore, the fact that only two development scenarios are presented is insufficient especially when the two are not different enough from one another to give any real comparative value. At a minimum, the two development scenarios presented should compare the site both with and without the concert stadium (or, at least, with a smaller concert stadium) since the stadium itself would have a significant environmental impact.

The AUAR should address and mitigate the following concerns: parking, traffic congestion and emissions, noise (decibel levels, etc.), air quality, water quality, environmental review methodology and process, and any conflicts of interest. Some or all of these were omitted from the AUAR Scoping Document. Additionally, the AUAR should include the Bottineau and Marshall Terrace neighborhoods in any studies because they are very close to the site and noise carries uniquely across the water - they will be impacted by the activities proposed in the scenarios.

The AUAR's noise, water, and traffic studies are not comprehensive enough, especially in regard to the concert stadium. Also, an AUAR is required to study **cumulative** effects which in this case would take into account what already exists at or near the UHT site for noise, traffic, air, and water quality.

There is a history of poor air quality in the area. This poor air quality has led to health problems like high levels of asthma in north Minneapolis and cancer clusters in NE Minneapolis. Cumulative impacts and a thorough analysis of air quality should be applied to all development scenarios.

The noise levels in this area are also higher than average due to traffic from the I94, Marshall Street NE, and industrial businesses. Noise and traffic studies should also be cumulative and include neighborhoods in North and Northeast Minneapolis and use all scenarios.

The draft UHT coordinated plan lacks any substantive plan for public transit to service this site. The Minnesota Department of Transportation (MnDOT) is planning a highway expansion project along I94, which will run directly adjacent to this project. MnDOT has conducted a study which concluded that having Bus Rapid Transit along this corridor was highly competitive, however there is no funding to make this public transit option a reality. Without public transit included in the redevelopment plans for the Upper Harbor Terminal site, this project excludes many city residents from accessing the site and increases auto emissions in an area with poor

air quality. Additionally, there should be a detailed plan presented for how First Avenue plans to get up to 10,000 people to concerts without using the designated park area for parking, without having people park in the surrounding neighborhoods, and/or without running shuttles from present amenities (such as parks) which would affect the normal parking needs for those entities.

A thorough wildlife assessment should also be done. The Mississippi River is a major bird flyway and there are more birds using this corridor than identified in the Scoping document. The impact of light, noise, and air quality should be considered in regard to wildlife.

The impact of density and structure height on residents, visitors, neighborhoods and wildlife should be considered as well. We oppose the use of Conditional Use Permits (CUP) and/or variances to increase the height of proposed developments at the UHT site in the Shoreland Overlay District and the Mississippi River Corridor Critical Area (MRCCA) Overlay District. If buildings are to exceed allowed height, they should be placed next to I94. Even with the newly adopted MRCCA ordinance, which allows 65 feet for buildings at this site, the proposed developments at UHT would exceed the allowed height limits – we believe the height proposed for the real-estate development at this site is unnecessarily excessive. A development on public land on the Northside should not be exempted from the city's brand-new standards for good riverfront design.

There is concern that the size of the necessary stormwater treatment will cut into recreational space. We think park, open space, and creative reuse and minimization of stormwater surface runoff should be prioritized over building a large concert stadium.

Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from I94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?

This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.

Thank you.

Kelley Skumautz  
[kelly@13trees.net](mailto:kelly@13trees.net)  
3142 Garfield St NE  
Minneapolis MN 55418  
310-871-6934 / 612-564-3478  
(she/her) [Why pronouns matter.](#)

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Sent: Tuesday, June 22, 2021 11:00 AM  
To: Payne, Ashley <[Ashley.Payne@kimley-horn.com](mailto:Ashley.Payne@kimley-horn.com)>  
Subject: Fwd: [EXTERNAL] AUAR comment

UHT AUAR comment.

Sent from my iPhone

Begin forwarded message:

From: Todd Pierson <[todd.pierson@gmail.com](mailto:todd.pierson@gmail.com)>  
Date: June 22, 2021 at 9:45:48 AM CDT  
To: "Dvorak, Hilary A." <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] AUAR comment

I am a resident of North Minneapolis and have been closely following the development of the Upper Harbor Terminal. I also am an active leader for environmental justice in our community.

The current AUAR overlooks several climate concerns. The cumulative effect of greenhouse gas emissions in the area with the adjoining I-94 corridor contributing to the pollution must be included in this review.

This report must be amended to include all present and future environmental impacts.

Todd Pierson  
2400 Vincent Ave. N  
Minneapolis, 55411

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.



**June 24, 2021**

Hilary Dvorak, Principal City Planner  
Community Planning and Economic Development  
505 4th Avenue South, Rm 320  
Minneapolis, MN 55415  
(612) 273-2639  
[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)

Dear Ms. Dvorak,

I am submitting this public comment on the Alternative Urban Areawide Review (AUAR) for the Upper Harbor Terminal development. As a resident of Minneapolis and a public affairs doctoral student at the University of Minnesota, I firmly believe that citizen participation in community development projects and environmental decision-making is an essential part of the process. I hope that the city, the project developers, and other stakeholders engage critically and meaningfully with the public comments submitted in response to the AUAR.

This project is a unique opportunity for the city of Minneapolis to lead by example and demonstrate real commitments to environmental justice, sustainability, and creative community development. That is why I have such high expectations for this project and appreciate the opportunity to submit the following questions, concerns, and recommendations:

### **Cumulative Potential Impacts**

Section 19 on cumulative potential impacts focuses primarily on other projects that immediately surround the area rather than the cumulative effects of the new development, considered together with the effects of pre-existing sources of pollution.. This section is a missed opportunity to address the redevelopment's long-term effects in terms of greenhouse gas (GHG) emissions. The AUAR should provide estimates of GHG emissions or the carbon footprint of the two development scenarios.

There is little specific information on the Net Zero and Carbon Free plans that the AUAR alludes to on page 97. What sort of timeline, strategies, and details exist for achieving carbon free projects for each development parcel? Moreover, why are only 50 percent of the buildings' anticipated energy needs generated from on-site local renewable energy and only 50 percent of multifamily buildings enrolled in the energy efficiency programs? Are these minimal viable goals to still maintain affordable energy costs? A supplemental cost-benefit analysis could serve as a reasonable assessment for determining renewable energy options and balancing affordability.

Further, are the 50 percent thresholds included in the mitigation plan and what specifically will the developers do to ensure compliance with these goals? A commitment to increasing the percentages in accordance with an aforementioned cost-benefit analysis and the increased availability of renewable energy generation options would be a more effective way to achieve the environmental justice and sustainability outcomes that the project proposes.

### **Transit and Traffic Congestion**

Despite a focus on the Transportation Action Plan and the City's Vision Zero Action Plan, the AUAR provides no transit routes with direct access to the development area. While the AUAR states that, "potential future transit routes through the development are under consideration and will be coordinated between the City, MPRB, and Metro Transit", this statement relies on good faith negotiations rather than any formal commitments. The AUAR should provide details about what potential future transit routes are under consideration.

Furthermore, the traffic analysis in Appendix F seems to indicate decreases in level of service. In particular, Dowling Avenue and its associated intersections are frequently rated at an F level of service which indicates "extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow". The main issues associated with traffic congestion are twofold:

- Increased vehicular idling and reduced air quality from mobile source air toxics (MSATs)
- Enhanced mobility restrictions and risks for residents of proximate neighborhoods

Are there additional or more clear mitigation measures that the development can adopt to minimize the negative externalities associated with increased congestion? This would align with the project's purported commitment to environmental justice and proposals to reduce air quality inequities and health disparities in the North Minneapolis community.

### **Soil Remediation**

On page 55, The AUAR states, "Phase II assessments may be required to assess the extent of existing contaminants." Given that earlier reports identified potential environmental hazards at the site, confirmation of contaminated soil and full remediation procedures should be integrated into the mitigation plan. The plan identifies phytoremediation strategies, and while these methods can be effective, they are an incomplete approach to contaminant cleanup. Without a full assessment and complete remediation process, the project risks trapping the contaminated soil under new development. Since different methods of remediation have distinct types and levels of impact on the environment and public health, each type should be explored in the AUAR. Finally, the AUAR should indicate a more explicit commitment to working with the Minnesota Pollution Control Agency and specifically develop a contingency plan or response action plan accordingly.

### **Indigenous Perspectives and Educational Opportunities**

Page 65 hosts a number of bullet points implying "specific ways to incorporate messages about water, connectivity, and Indigenous perspectives into places for teaching, learning, and reflection." Two specific examples are:

- "Industry at the Upper Harbor Terminal is connected to industry, logging, land theft, and treaties to the North, as well as industry at the Falls and the destruction of Spirit Island."
- "Make holistic practices such as phytoremediation to heal the soil an educational opportunity with Indigenous art and language."

Among these two examples are other vague points which lack specific strategies to meaningfully incorporate Dakota and Ojibwe people or their interests into the project. For instance, what connections does the development offer between its proposed phytoremediation strategies and indigenous education? Will landmarks and signage be “interpretations” of indigenous perspectives or will they be determined, designed, written, and implemented by indigenous Minnesotans? What other specific ways will the city and developers work with the Dakota and Ojibwe Nations of Minnesota during this project?

Given the stakes involved in this development and the history of environmental injustices in the area, a conventional environmental review with platitudes and equivocation is insufficient. I strongly urge the city and developers to make more specific, formal, and explicit commitments to robust mitigation strategies and ongoing engagement with the community. I look forward to responses to this statement and a continued dialogue on this process.

Sincerely,  
Evan A. Davis

From: Kelsey Brodt <[kelseybrodt@gmail.com](mailto:kelseybrodt@gmail.com)>  
Sent: Wednesday, June 23, 2021 2:58 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] Upper Harbor Terminal AUAR

Hilary,

I don't know where to begin because there seems to be less than complete review of the environmental impact of this project, let alone the quality of life of the residents in the area.

1. If the builder completes the music venue first won't the zoning laws prevent a housing complex because of the noise disturbance.
2. The AUAR does not look at CUMULATIVE effects of the pollution (ie. Concrete for building, fracked gas for heating, pollution from more traffic, parking lots creating more heat in the already hot urban area). If you are not taking into account GAF & Northern metal how can you justify the accuracy of this.
3. Minnesota Dept. of Health is already concerned about the incredibly high rates of asthma in residents in the area so using the space in a way that doesn't help their health is absurd.
4. There is no mention of true conservation or sustainable policies (ie. Collecting storm water runoff like US Bank stadium, compost & recycling of products sold at the venue, wind or solar energy).

I think there is a much better way to use the land and especially since it doesn't seem like the venue is actually geared toward those who live in this neighborhood in the first place. Their current levels of noise and pollution are already high and this project does not access any of that. This project will not get Minneapolis to its 2040 goals.

Thank you for your time.  
Kelsey Brodt

Sent from [Mail](#) for Windows 10

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: Joe Mullery <[joemullery@gmail.com](mailto:joemullery@gmail.com)>  
Sent: Wednesday, June 23, 2021 7:53 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] UHT AUAR

The company that did the AUAR should lose their ability to do anything in the environmental field in view of the incredibly phony way they downplayed and apparently falsified the negative environmental effects. And the City should pay millions to the state in fines for this farce.

Their treatment of the significant pollution and health effects as if they were insignificant is deplorable. There is absolutely no question that there will be significant pollution and health effects.

The area near the UHT is so polluted that in 2015 when the Minnesota Department of Health and the Minnesota Pollution Control Agency released their very important Life and Breath Report, they chose to have the press conference on its release just a few blocks from UHT, because that area is probably the worst in the state. There was an update in the State Report in 2019, and they have the data and are putting together an upgrade of the State Report for release soon.

The AUAR is so deficient that it doesn't even address the report or these serious issues. The State Report addresses the extremely dangerous effects of the existing pollution in the area on serious asthma, COPD, and other respiratory and cardiovascular conditions in the area, especially for children and seniors. The State Report is very in-depth and the study even analyzed records for death, hospitalizations and emergency visits and showed they were more than two times what the rates were for most of the metro area and state. The State Report showed the disgraceful way the City of Minneapolis is treating the people in the area, most of whom are of color and low income.

The State Report studied both PM2.5s and ozone, with most of the problems created by 2.5s. 2.5s have been labelled by vast numbers of scientists as the most harmful air pollution, and they are estimated to be responsible for 95% of the health impact of air pollution.

While businesses in the area create a huge amount of 2.5s, (GAF, next door, and many others in the area are proven big polluters) the cars and trucks create the most. Enormous amounts of 2.5s are created in the combustion process and are expelled into the air by the exhaust. There is a surprisingly large amount of additional 2.5s created by tires and brakes. Moreover, the exhaust contains huge additional amounts of Precursor 2.5s which are indirectly combining with other pollutants in the air to generate very large numbers of secondary 2.5s

All this huge amount of dangerous pollution doesn't just disappear; it hangs around and causes enormous proven health issues.

It is unthinkable that the City of Minneapolis has allowed this to go on. With the City's Plan for UHT they intend to greatly exacerbate the situation.

The AUAR is such a despicable phony farce that it greatly downplays this extremely dangerous issue.

There is no doubt that the Plan will bring in a lot more auto, truck and bus traffic. (The AUAR is so ridiculous that in one place it basically denies there will be any additional pollution from all the extensive additional traffic.) Are the authors of the AUAR so clueless they don't know the pollution doesn't just disappear the moment it is released; but rather it hangs



around to destroy people's health. On many days, there will be vast amounts of additional pollution in the area and it all combines into much worse pollution levels, leading to even more health problems for the mostly people of color and low income.

Even on days when there is no event there will be a lot more air pollution than exists now or would happen if UHT were open space or park land.

There have also been other studies of the area pointing to the already dangerous levels of air pollution in the area, including the major effect of traffic. The area is already way beyond the tipping point, and now the City wants to greatly exacerbate the situation.

It seems impossible to believe that the author of the AUAR doesn't understand that a doubling of the 2.5 releases doesn't just double the pollution. It creates higher multiples of it.

And the effect on people's health is not just doubling. It creates multiple times the negative health effects. People can put up with a certain amount of pollution but the negative health effects don't just double because of doubling the pollution. Bodies have many tipping points where a little more pollution causes multiplying the great negative effects.

Yet the authors of the AUAR don't account or even really consider the cumulative effects of adding some pollution onto the existing high levels of pollution, and the big jump in negative health effects from even a small increase in pollution.

Traffic wasn't even studied from all directions. And the fact was not studied that in the real world during events cars will be driven up and down streets looking for parking places. (When I was going to the University I often walked a couple miles each way for parking.)

For 20 years I was part of numerous legislator groups studying the environment. And both river and ocean stewardship were part of the environmental studies. The UHT Plan rates an F for its anti-river environment. Everything about the Plan is anti-river. The worst of course is the 19th century idea of putting manufacturing and production near the river. They are extremely off-putting to anyone thinking of using the waterfront. And of course they produce more pollution.

If the AUAR were submitted for a university course it would receive somewhere from a D- to an F-. And I am very serious that analysis needs to be made of whether the author should be allowed to continue in the environmental field.

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: Melissa Winn <[mwinn@hotmail.com](mailto:mwinn@hotmail.com)>  
Sent: Thursday, June 24, 2021 1:32 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] Comments - Upper Harbor Terminal Draft AUAR 05 17 2021

I believe the 7,000 - 10,000 concert venue with its related parking and traffic is concerning. It would be more appropriate to place in a location with infrastructure rather than erecting more structures. The 94/252 expansion will more than likely increase traffic with related sound and air impacts.

As temperatures increase due to climate change, there will be a greater need for green space. Heat island impacts will be even more intense. Both air pollution and increased heat will have serious impacts on the health of people. (Hennepin County Climate Action Plan May 2021; September 2, 2020 Racist housing have created some hot neighborhoods, National Geographic). I think the area needs more green space than it does a concert venue in the form of gardens, native plants and trees.

I am concerned about the impact of this development on bird life. According to the AUAR the wildlife currently the in the area are adapted to this disturbed urban site (p.59). The report only identifies two bird species from the area. The Mississippi River is a major bird flyway and there are more birds using this corridor than identified in this report (<https://www.threeriversparks.org/blog/mississippi-flyway-bird-highway-through-twin-cities>). According to the Minnesota Audubon Guide to Urban Bird Conservation, natural resource management without monitoring and research is only half the equation. This guide was prepared after the City entered an Urban Bird Treaty with the US Fish & Wildlife Service in 2011. While this document may not be binding, it does indicate a form of commitment. A survey of birds in this area, including birds using the River as a migration route, should be done. I do not believe a thorough mitigation plan can be made without further information.

Melissa Winn  
4242 Irving Ave N  
Minneapolis MN 55412

[mwinn@hotmail.com](mailto:mwinn@hotmail.com)

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

-----Original Message-----

From: Colette Altfillisch <colette\_alt@yahoo.com>

Sent: Thursday, June 24, 2021 2:59 PM

To: Dvorak, Hilary A. <Hilary.Dvorak@minneapolismn.gov>

Subject: [EXTERNAL] Upper Harbor Terminal Project

Hello Hilary,

I have been made aware of the Upper Harbor Project and I have some major concerns.

I don't think this was thought through properly or properly notified the neighborhood.

I would like to see this project not be given approval to move forward.

I am happy to discuss with you.

Colette Altfillisch

952-484-4082

Sent from my iPhone

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

Leslie Davis and Earth Protector Companies  
P.O. Box 11688  
Minneapolis, MN 55411  
612-529-5253

June 24, 2021

Ms. Hilary Dvorak, Principal City Planner  
City of Minneapolis  
505 - 4<sup>th</sup> Avenue South  
Room 320  
Minneapolis, MN 55415

Re: Alternative Urban Areawide Review (AUAR) comments for Upper Harbor Terminal

Dear Ms. Dvorak:

### **CONCLUSION**

**The AUAR is inadequate in addressing the environmental consequences of developing the UHT as being proposed.**

**The current Agreement to give away 19 acres of the 48 acre Upper Harbor Terminal (UHT) site and develop the rest should be canceled and a new Request for Proposal issued.**

The current UHT development proposal, and the giveaway of 19 acres of prime industrially zoned land to the Park and Recreation Board is improper, illegal, and if implemented would be environmentally destructive to the North Minneapolis community. When Thor Development dropped out of the project as the minority partner it should have voided the Development Agreement and a new Request for Proposal should have been issued.

For 20+ years I have been a resident and business owner in the Mckinley Neighborhood of North Minneapolis, where the Upper Harbor Terminal (UHT) is located, and at no time was I ever notified, by any means, that the UHT was available for development.

Once I became aware of the proposed development I attended a dozen meetings and commented several times to the Minneapolis City Council and Minneapolis City Staff regarding the illegality and impropriety of the projects being proposed at the UHT and offered the following thoughts:

Improper uses for the UHT:

1. A 19 acre land give-away of the 48 acre UHT site for a park 1.8 miles from the 62.5 acre under-used North Mississippi Regional Park is not needed or wanted and will destroy the opportunity for the 19 acres to be used for generating wealth on the valuable industrially zoned land.
2. Liquor bar music venue for 10,000 patrons, many of whom will be public urinating drunks seeking prostitutes at bar closing time, just like they do downtown when departing the numerous First Avenue Production venues.
3. Housing – poisonous air emissions such as formaldehyde and other volatile organic compounds (VOC) from the GAF shingle manufacturing facility, adjacent to the south, will waft over the UHT site for more than 5 months of the year as the wind blows from the south and southeast, according to

weather maps, thus rendering it uninhabitable for families to live at the UHT full time. In addition, the Minnesota Pollution Control Agency has stated that low doses (under permitting limits) over long periods of time of toxic air, such as formaldehyde, can cause serious illness. Especially to children in their developing years.

Location benefits of the UHT:

1. Interstate Highway on/off ramp.
2. Railroad spur.
3. Direct river access.
4. Limitless water supply.
5. Vast labor pool nearby.
6. Zoned industrial.

Proper use for the UHT property:

1. Hydroponically growing PRE-SOLD organic products such as vegetables, bamboo, and non-psychoactive hemp in dozens of greenhouses, using wind, solar, and hydro generated electricity for energy purposes. The PRE-SOLD products would generate great wealth after being processed, especially the hemp which would be used as feedstock for:
  - a. construction materials
  - b. fabrics (clothing, carpeting)
  - c. human food and pet food
  - d. body oils, lotions, hair care
  - e. plastic and paper
  - f. bio-fuels
  - g. hundreds of other products

### **SUMMARY OF ILLEGAL DEVELOPMENT AGREEMENT**

The Pohlad and Frank families illegally obtained control of the UHT through their insider participation on the Park Foundation Board (a separate entity from the Park and Recreation Board) where they gave cash bribes to the Park and Recreation Board for more than a million dollars to gain their UHT Development Agreement. Then the Park and City of Minneapolis illegally gave 19+ acres of land rightfully owned by the people of Minneapolis, to the Park and Recreation Board for an unneeded park a short distance from a huge under-used sixty two acre park with many amenities.

### **AUAR FAILURES**

The AUAR fails to adequately address the following:

1. Traffic emissions from thousands of vehicles attending a proposed music venue.
2. Parking for thousands of music venue patrons. The time to address parking is now, NOT when a project is being built. To suggest waiting for the developers to provide the parking and its environmental details is putting the cart before the horse.
2. Emissions from GAF during the 5 months when winds blow from the south and southeast.
3. Identify the direction, type and quantity of air emissions at the site from proposed projects.

### **REMARKS MADE PREVIOUSLY THAT ARE DUPLICATIVE BUT IMPORTANT**



The UHT is an important industrial and commercial property that should be used to produce lucrative jobs and generational wealth through indoor growing and processing of PRE-SOLD hydroponically grown organic products ranging from vegetables to herbs to hemp to bamboo and more. Having 19+ acres of vacant land dedicated to a park a short distance from an under-used sixty two acre park would deprive my community of needed jobs and wealth generation in order to benefit a group of racist downtown Minneapolis developers who bribed their way into the theft of the property. My proposed “New Community UHT Development” will require significant amounts of electricity that will be met using modern wind, water, and solar technologies. These modern and efficient technologies would range from hydro water wheels to bladeless wind generators.

Housing for families at the UHT would not be appropriate due to the toxic air emissions from the GAF shingle manufacturing facility that would waft over the UHT many months of the year when the wind blows from the south as it currently does. Even if GAF installs their promised thermal oxidizer the formaldehyde and other toxic air emissions, in addition to the proposed newly added thousands of cars emitting additional emissions, renders the UHT unhealthy regardless if GAF emissions meet or don't meet Minnesota air quality standards which are not based on hundreds of young children living under a constant plume of toxic air.

A liquor bar with music at the UHT is too senseless to debate, but I will comment. According to the Police Department, when downtown Minneapolis liquor bars, such as those operated by the Frank family, release their highly intoxicated patrons in the middle of the night, they frequently urinate publicly because they are shoved out the door right after their last drink, and then after urinating they seek prostitutes of either gender as they lurk about in the neighborhood. This disgusting practice is not what North Minneapolis needs nor are the part-time low-paying jobs they create. And the payoffs of a ticket toke attached to each liquor bar ticket to allow the whore-masters to invade my neighborhood is typical of the behavior Frank displayed by the bribery to obtain the Development Agreement along with Pohlad in the first place. We would like Pohlad and Frank to keep their whores and customers at their current establishments. Or they can invite them to their homes if they like...not ours.

**LASTLY – WHERE WILL THE MUSIC VENUE FIND 11+ ACRES AT THE UHT TO PARK THE CARS OF THEIR PATRONS?**

The AUAR is inadequate to address the proposed UHT development.

Respectfully,

*s/ Leslie Davis*

Leslie Davis, McKinley Resident

and

President of the Earth Protector Companies

From: Tess Dornfeld <[t.e.dornfeld@gmail.com](mailto:t.e.dornfeld@gmail.com)>  
Sent: Thursday, June 24, 2021 4:01 PM  
To: Dvorak, Hilary A. <[Hilary.Dvorak@minneapolismn.gov](mailto:Hilary.Dvorak@minneapolismn.gov)>  
Subject: [EXTERNAL] Upper Harbor Terminal AUAR comment

First of all, a 30-day comment period on the AUAR is insufficient for a project of this magnitude, and to only allow for this minimum length of time for public response indicates the City is only complying with the requirement, and not out of a genuine interest in public input. A single open house event is also not in line with a true commitment to public engagement. This contradicts the City's positions on environmental racism and environmental justice, and the public engagement for the Final AUAR and all future comment periods must be more robust.

The AUAR itself is also inadequate and requires significant further assessment if it is to gain the City's approval. Of special concern is its failure to address climate and greenhouse gas emissions impacts. This site is within the Northside Green Zone, which was created as part of the City's Climate Action Plan, and yet the AUAR completely lacks any climate analysis. If fracked fossil gas is used to heat buildings including the event venue, this will be a highly significant impact that must be addressed.

If housing units are equipped with gas-burning stoves, that would not only contribute to climate impacts as well, but have unconscionable health consequences, including exacerbation of health inequities if it is used in low-income housing, as reported here: <https://rmi.org/press-release/health-air-quality-impacts-of-cooking-with-gas> The AUAR also fails to address this or any plans to mitigate emissions from the construction process, materials, or operations of the development.

Furthermore, the air quality assessment does not take into account cumulative impacts from I-94 or the GAF facility, or provide consistent or adequate analysis of traffic and parking impacts.

Tess Dornfeld  
614 19th Ave NE  
Minneapolis 55418

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

-----Original Message-----

From: skeletonmachinery@everyactioncustom.com <skeletonmachinery@everyactioncustom.com>

Sent: Thursday, June 24, 2021 4:43 PM

To: Dvorak, Hilary A. <Hilary.Dvorak@minneapolismn.gov>

Subject: [EXTERNAL] My public comment on the Upper Harbor Terminal draft environmental study

Dear Principal City Planner Hilary Dvorak,

I am writing to you to express serious concern with the inadequacy of the draft environmental study - the AUAR - that was published late last month.

First, the study fails to adequately address the Cumulative Potential Effects of the proposed redevelopment of Upper Harbor Terminal to the North Minneapolis community. Why were the existing pollution effects in the area that are already causing disparate health impacts to the community, like the air and noise pollution from 94, not considered as part of the AUAR? How will the development of a large concert venue that will produce additional traffic and noise compound the existing noise and air pollution in North Minneapolis and the surrounding area?

Further, this study has no mention of the climate impacts of this proposal. Nor does it require any mitigation measures to reduce the impact. The Upper Harbor Terminal is in a Green Zone, where promises have been made for sustainable development, accessible and green housing and green industry opportunities for community members. And, by law under MEPA, all projects that require environmental review must include an analysis of greenhouse gas emissions.

This AUAR is wholly inadequate. I am requesting a response that explains the City's justification and how it plans to address my concerns.

Thank you.

Sincerely,  
River Gordon

2323 Charles Ave Apt 201 Saint Paul, MN 55114-2402 skeletonmachinery@gmail.com [EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

Simmons, Koehl

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From: la sheila sims <[lasims3@gmail.com](mailto:lasims3@gmail.com)>

Date: Thu, Jun 24, 2021 at 4:06 PM

Subject: Comments on the AUAR Process on the Upper Harbor Terminal

To: <[rebecca.farrar@minneapolismn.gov](mailto:rebecca.farrar@minneapolismn.gov)>, <[Lee.Charles@epa.gov](mailto:Lee.Charles@epa.gov)>, <[swatson@lawyerscommittee.org](mailto:swatson@lawyerscommittee.org)>, alan walts, EPA <[walts.alan@epa.gov](mailto:walts.alan@epa.gov)>

Cc: <[Laura.Bishop@state.mn.us](mailto:Laura.Bishop@state.mn.us)>, tim (Timonthy) Sexton <[timothy.sexton@state.mn.us](mailto:timothy.sexton@state.mn.us)>, Sophia Ginis <[Sophia.Ginis@metrotransit.org](mailto:Sophia.Ginis@metrotransit.org)>

*If one espouses equity, one has the duty and responsibility of doing equity.*

*Otherwise, you are being disingenuous and less than candid. -la sims*

**1-One copy of report only at 1 library- Central Library- in downtown Mpls.**

*This library is not even located in the North Side **communities**/neighborhoods. Is this library even open.*

**2. How are you complying with the Ex Order 12898, President Clinton, 1994 on Environmental Justice?**

**3. How are you complying with the Ex Order 19-24 of Governor Walz, April 4, 2019.**

**4. How are you complying with the HUD Housing Complaint of 2014-2015.?**

--

la sheila sims

*If one espouses equity, one has the duty and responsibility of doing equity.*

*Otherwise, you are being disingenuous and less than candid. -la sims*

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: la sheila sims <[lasims3@gmail.com](mailto:lasims3@gmail.com)>

Sent: Thursday, June 24, 2021 5:22:57 PM

To: Holmes, Hilary E <[hilary.holmes@minneapolismn.gov](mailto:hilary.holmes@minneapolismn.gov)>

Cc: alexispennie <[alexispennie@gmail.com](mailto:alexispennie@gmail.com)>; Kelley Skumautz <[kelley@serendripityspot.com](mailto:kelley@serendripityspot.com)>; Erika schlaeger dos Santos <[soularscenes@gmail.com](mailto:soularscenes@gmail.com)>; MississippiRiversOurRelative <[MississippiRiversOurRelative@gmail.com](mailto:MississippiRiversOurRelative@gmail.com)>; candace bakion <[candybakion@hotmail.com](mailto:candybakion@hotmail.com)>; catherine fleming <[cefleming14@gmail.com](mailto:cefleming14@gmail.com)>

Subject: [EXTERNAL] Fwd: Comments on the AUAR Process on the Upper Harbor Terminal

Ms Holmes,

You are receiving a repeat of my Comments on the AUAR of the Upper Harbor Terminal because when I put your e-mail address in to send my comments someone else's named appeared in the address line. Thereby, I wanted to make sure your name apprehended so I've resent my message making sure it got to you in today's comment time limit.

It continues to baffle me as to why organizations continue to put a time limit on being able to comment on various issues related to equality/ environment justice. Does having open-ended comment periods stop one from doing equity or their job?

As you will notice I included 2 EPA addresses on the message because the community's lack of trust from the Mpls City Council, even from own advisory committee, continue to this day. very strongly. I met Charles and Alan in my capacity as a member of the MPCA's Environmental Justice Advisor Group.

- EPA- Charles Lee- Deputy Associate Administrator for Environmental Justice
- EPA - Alan Walts - [Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples](#), (Up until 2019 I believe Alan also dealt with enforcement of violations in some capacity.)

Residents of North Minneapolis, and their supporters, have had to push and pull the City council to meet its full requirements in justly and equitably dealing/communicating about the Upper Harbor Terminal and the residents of North Mpls. I feel someone from the Federal level needs to be an advocate for me and my fellow North Mpls residents.

Finally, in going over various documents, I could find no one who seems to be legally explaining/representing residents of North Mpls in fully explaining to them their Civil Rights and the 2 executive orders related to equitably in dealing with said issue: Executive Orders from President Clinton and Governor Tim Walz.

Ever,  
la sheila sims

--

la sheila sims

*If one espouses equity, one has the duty and responsibility of doing equity.*

*Otherwise, you are being disingenuous and less than candid. -la sims*