

Memorandum

DATE: September 15, 2015

TO: Jim Alexander
Director of Design and Engineering, Southwest LRT Project

CC: Kim Proia, PE, Project Manager, ADC
Mark Bishop, PE, Civil Lead, ADC

FROM: Ted Axt, PE, Deputy Project Manager, ADC

SUBJECT: Traffic Changes from Southwest Light Rail Transit Operation at Historic Properties within the 21st Street Station and West Lake Station Areas of Potential Effect

A. Introduction

The Southwest Light Rail Transit (SWLRT) project is a 14.5-mile light rail project with 15 new stations that will operate from downtown Minneapolis through St. Louis Park, Hopkins, Minnetonka, and Eden Prairie. The SWLRT line will serve as an extension of the METRO Green Line (Central Corridor) and will also connect to the METRO Blue Line (Hiawatha Corridor) in downtown Minneapolis.

This technical memorandum has been prepared to describe the anticipated traffic patterns to and from the 21st Street Station and West Lake Station resulting from the introduction of light rail transit into the neighborhoods surrounding each station and which includes identified historic properties. This memorandum includes an overview of existing conditions, including traffic volumes, pedestrians, bicycles and parking in the station areas, and also describes the anticipated traffic changes in the horizon year 2040.

This memorandum does not address the potential temporary impacts of traffic during construction of SWLRT. The Southwest Project Office (SPO) will address traffic generated by SWLRT construction as part of the Construction Mitigation Plan that it will develop as part of the advancement of engineering for the Project.

B. Issues and Concerns – Potential Impact to Historic Properties

The issue presented to the Southwest Project Office was to evaluate the potential effects of traffic on several historic properties, specifically architecture/history resources with residential and park uses, within the Areas of Potential Effect (APEs) for the proposed 21st Street and West Lake stations from the introduction and operation of light rail transit.

There are a number of architecture/history resources within the APEs for these two stations:

- Freida & Henry J. Neils House (HE-MPC-6068), 2801 Burnham Boulevard;
- Mahalia & Zachariah Saveland House (HE-MPC-6766), 2405 West 22nd Street;
- Frank & Julia Shaw House (HE-MPC-6603), 2036 Queen Avenue South;
- Grand Rounds Historic District (XX-PRK-001);
 - Cedar Lake (HE-MPC-1820);
 - Kenwood Parkway (HE-MPC-1796);

- Lake of the Isles Parkway (HE-MPC-1820);
- Lake of the Isles (HE-MPC-1824); and
- Lake Calhoun (HE-MPC-1811)
- Kenwood Parkway Residential Historic District (HE-MPC-18059), 1805 to 2216 Kenwood Parkway;
 - Kenwood Parkway (HE-MPC-1796)
- Lake of the Isles Residential Historic District (HE-MPC-9860), vicinity of East and West Lake of the Isles Parkway;
 - Lake of the Isles Parkway (HE-MPC-1820)
- Hoffman Callan Building (HE-SLC-055), 3907 Highway 7; and
- Minikahda Club (HE-MPC-17102), 3205 Excelsior Boulevard.

During the Section 106 consultation process some consulting parties have expressed concern that there may be a potential change in traffic and parking patterns as a result of the operation of the 21st Street and West Lake stations that could adversely affect several of these properties, specifically:

21st Street Station area:

- Freida & Henry J. Neils House;
- Mahalia & Zachariah Saveland House;
- Frank & Julia Shaw House;
- Grand Rounds Historic District, including Kenwood Parkway and Lake of the Isles Parkway;
- Kenwood Parkway Residential Historic District, including Kenwood Parkway; and
- Lake of the Isles Residential Historic District including Lake of the Isles Parkway.

West Lake Station area:

- Lake Calhoun.

The impacts of traffic and parking generated by the 21st Street and the West Lake stations on their respective station areas are described and discussed individually in Sections D and E below.

C. Data Collection and Existing Traffic Volumes

Traffic, geometric, and area data elements were collected as part of Preliminary Engineering and the Final EIS evaluation and included the following:

- 13-hour weekday counts at intersections including passenger vehicles, heavy vehicles, pedestrians, and bicycles. The count locations included 21st Street, Cedar Lake Parkway, Sunset Boulevard, Burnham Road, Dean Boulevard, West Lake Street, Drew Avenue and Market Plaza;
- On-site field survey to collect roadway geometry, lane configurations, speed limits, signing/markings, and other relevant data on intersections and roadway segments within the vicinity of the 21st Street Station and West Lake Station;
- Average Annual Daily Traffic (AADT) from City of Minneapolis records;
- Intersection operations (traffic signals or stop control); and
- Bus routes, stops, and passenger loading/unloading.

This data was used to develop existing conditions models and evaluate the traffic operations in the vicinity of the 21st Street Station and West Lake Station.

D. Traffic Analysis – 21st Street Station Area

21st Street Station Plan and Adjacent Roadway Network

The 21st Street station is a neighborhood walk up station located between Cedar Lake and Lake of the Isles. The station area is generally bounded by West Lake Street to the south, France Avenue to the west, I-394 to the north, and Hennepin Avenue to the east. Sidewalk and bike connections are provided to link the existing Kenilworth trail to the station and neighborhood area. There are no plans included in the SWLRT project for park and ride lots or any future development that would draw traffic to the 21st Street station area. The station is located in a neighborhood setting with only local street and parkway connections to the surrounding area. This makes the 21st Street station less desirable for commuters who will be able to access park and ride facilities at other locations which are adjacent to larger street arterials. The station plan as prepared for SWLRT Preliminary Engineering is shown in Figure 1.

The 21st Street Station area character includes the following street elements that dissuade non-neighborhood-based traffic:

- Weekday morning (7:00 AM-9:00 AM) left turning restrictions from eastbound Cedar Lake Parkway to Burnham Road prevent through commuter traffic from the Cedar-Isles-Dean and Kenwood neighborhoods.
- There is no roadway access from the west to the 21st Street Station, due to Cedar Lake.
- There is no roadway access from the north to the 21st Street Station, due to the railroads and topographic constraints.
- The SWLRT West Lake Station is approximately one mile south of the 21st Street Station and is located on major street arterials (West Lake Street, Excelsior Boulevard). For passengers being dropped off at a station, it would generally be easier for drivers to drop them at the West Lake Station than to traverse through the local and turning-restricted residential streets.
- The SWLRT Penn Avenue and Van White stations are located northeast of the 21st Street Station and provide easier and more direct connections for vehicle traffic coming from the north and northeast.

The existing roadway network in the 21st Street area consists of low volume City of Minneapolis and Minneapolis Park and Recreation Board (MPRB) maintained streets serving the residential area and providing access to the lake areas. While there are no county or state aid routes extending through the neighborhood that would increase the potential for cut-through traffic, Lake of the Isles Parkway, Dean Parkway, and Cedar Lake Parkway do currently serve as a commuter shortcuts through the area.

Parking restrictions are already in place around the 21st Street Station. Parking is designed for residents only on the south side of 21st Street, east of the freight tracks. West of the freight tracks, residential permit parking is in effect in front of homes, and overnight parking is not allowed. Parking on Thomas Avenue south of 22nd Street is not currently permitted on either side of the street. Access for pedestrians and bikes is provided to the station area via the Chain of Lakes, Kenilworth Trail, and the Grand Rounds system.

Local bus route connections are planned to be maintained via Metro Transit Route 25 service. The route runs through the neighborhood via West Lake of the Isles Parkway, Upton Avenue, and Sheridan Avenue, serving the station via 22nd Street, and along 21st Street. There are typically 3 to 4 buses in the AM peak and 3 to 4 in the PM peak. There is no weekend service.

SWLRT Generated Traffic

2040 traffic forecasts were prepared by the SPO in December 2014, which were based on traffic count data collected by the SPO, preliminary 2040 socioeconomic data prepared by the City of Minneapolis, and area traffic studies. The traffic projections (AADTs and turning movements) were then compared to existing and historic traffic counts, as well as to the previous 2030 forecast roadway volumes contained in the 2030 Comprehensive Plans of Minneapolis and Hennepin County. The data prepared for the SWLRT project includes No Build (Opening Year and 2040) and Build (Opening Year and 2040) scenarios. The forecast traffic was applied to 21st Street, Kenwood Parkway, and the Lake of the Isles Parkway.

Figure 2 shows the local neighborhood average daily traffic volumes based on 2011 data based on City of Minneapolis traffic data counts and includes streets at the three individual historic properties and on streets within the three historic districts. The 21st Street volume was collected by the SPO in 2013. The low existing volumes reflect the residential nature of the area and limited through streets that prevent cut through traffic in the neighborhood.

Table 1 shows the AADT, anticipated growth, and increases due to the 21st Street Station. The increase in traffic between Existing Conditions and the 2040 No Build or 2040 Build is represented by annual growth rates of 0.4% for 21st Street, 0.1% for Kenwood Pkwy, and 0.3% for Lake of the Isles Pkwy.

Table 1 – AADT Volumes from SWLRT Traffic Evaluation- 21st Street Station

<i>Alternatives</i>	<i>21st St. (at RR crossing)</i>	<i>Kenwood Pkwy. (at 21st St.)</i>	<i>Lake of the Isles Pkwy. (at Sheridan Ave.)</i>
Existing Conditions	400	2,040	5,040
2040 No Build	450	2,100	5,550
2040 Build	450	2,130	5,580

Station area ridership data was developed for the entire corridor from the Regional Travel Demand Model for the 2040 horizon year. The Regional Travel Demand Model is maintained by the Metropolitan Council, and uses forecasted socio-economic information (population, number of households, employment) and transportation networks (roadway and transit) to predict roadway traffic volumes and transit ridership.

Table 2 shows the ridership data for the 21st Street Station by mode of access. The primary mode of station access is projected to be walking. Walk access is identified as an area approximately one mile away from station. There are a very low number of daily drop-off and pick-up volumes projected from the Travel Demand Model as a result of the limited access to the station via the local roadway networks. This would imply that most of the traffic would be from local area residents.

Table 2 – Predicted Daily Station Boardings/Alightings- 21st Street Station (Year 2040)

	<i>Walk</i>	<i>Drop-offs</i>	<i>Park & Ride</i>	<i>Transfer</i>	<i>Total</i>
Peak Period	485	37	N/A	0	521
Off-Peak	462	18	N/A	0	480
Totals	947	54	N/A	0	1,001

SWLRT Parking

The Travel Demand Model results shown in Table 2 above do not show any park and ride trips, as there is no station park and ride facility planned. This is a conservative approach when performing travel forecasts – as the project is not claiming park and ride ridership where no parking is provided. That is not to say that there may be some “hide and ride” trips parking in the neighborhood. However, on-street parking in the immediate area of the station is very limited, due to existing parking space availability, parking restrictions, and the limited number of streets adjacent to the station. This will severely restrict the potential number of station generated traffic not represented in the travel demand results.

Conclusion – 21st Street Station

Table 3 provides a summary of the traffic changes at the three individual historic properties and on streets within the three historic districts. The traffic volumes were adjusted based on the background traffic and distribution. The table shows the minor daily increase in traffic for some streets between existing and 2040. The traffic analysis indicates that the anticipated difference in traffic volumes between the Build and No Build alternatives is minimal and the Build alternative will not result in any substantial changes in traffic volumes at the three individual historic properties and on streets within the three historic districts within the 21st Street Station APE.

Table 3 – AADT Summary of Traffic at Historic Properties

<i>Alternatives</i>	<i>Neils House</i>	<i>Saveland House</i>	<i>Shaw House</i>		<i>Kenwood Parkway Residential Historic District</i>	<i>Grand Rounds Historic District</i>	<i>Lake of the Isles Residential Historic District</i>
<i>Street</i>	<i>Burnham Blvd.</i>	<i>22nd St.</i>	<i>Queen Ave.</i>	<i>21st St.</i>	<i>Kenwood Pkwy.</i>	<i>Lake of the Isles Pkwy.</i>	
<i>Existing Conditions</i>	10	1,080	400	400	2,040	5,040	
<i>2040 No Build</i>	10	1,140	410	450	2,100	5,550	
<i>2040 Build</i>	10	1,140	410	450	2,130	5,580	

The following summarizes the key findings of the impacts related to traffic associated with the 21st Street Station when the LRT is in operation:

- Daily traffic volumes on 21st Street have a minor increase between existing and year 2040;
- The neighborhood character and smaller limited access streets discourage cut-through traffic;
- The station is being designed as a walk-up, neighborhood station with no planned park and ride or development included in the SWLRT project; and
- Limited parking quantity that is controlled by parking restrictions will restrict the number of opportunities for station generated traffic.

E. Traffic Analysis – West Lake Station Area

West Lake Station Plan and Adjacent Roadway Network

The West Lake Station is located in a dense, transit oriented development neighborhood area. The station area is generally bounded by West 38th Street to the south, Highway 100 to the west, Cedar Lake Road and I-394 to the north, and West Calhoun Parkway to the east. High and medium density residential buildings are in the immediate area, as well as retail, business, dining, and recreational activities. Vehicle access to the station is via the West 32nd Street, Chowen Avenue South, West 31st Street, and the Abbott Avenue South loop. On-street parking is limited and in high demand. Adjacent business employee and customer parking also is in high demand and has time duration restrictions. The area has a strong urban sidewalk and trail system, with sidewalk gaps on West 32nd Street, Chowen Avenue South, West 31st Street, and the Abbott Avenue South loop being improved as part of the SWLRT project. The station plan, as prepared for SWLRT Preliminary Engineering, is shown in Figure 3.

In order to identify measures to enhance pedestrian connections and safety around the West Lake Station, the City of Minneapolis is conducting a West Lake Multi-Modal Transportation Study for the station area. The outcome of this study will be to identify improvements that may be implemented outside of the SWLRT project or further refinement of currently scoped project elements.

SWLRT Generated Traffic

Table 4 shows the AADT and anticipated growth on West Lake Street west of the Excelsior Boulevard split. The increase in traffic between Existing Conditions and the 2040 No Build or 2040 Build is represented by annual growth rates of 0.3%.

Table 4 – AADT Volumes from SWLRT Traffic Evaluation- West Lake Station

<i>Alternatives</i>	<i>West Lake Street (west of Excelsior Blvd. split)</i>
Existing Conditions	26,600
2040 No Build	29,000
2040 Build	29,000

Table 5 shows the Travel Demand Model ridership data results for the West Lake Station by mode of access. The results show there are approximately 50 daily forecast boardings involving passenger drop-offs at the station. These trips are spread over the entire day and involve individual pick-up or drop off of light rail passengers at the station.

Table 5 – Predicted Daily Station Boardings/Alightings- West Lake Station (Year 2040)

	<i>Walk</i>	<i>Drop-offs</i>	<i>Park & Ride</i>	<i>Transfer</i>	<i>Total</i>
Peak Period	475	34	N/A	925	1,434
Off-Peak	425	17	N/A	866	1,307
Totals	900	51	N/A	1,790	2,741

The other source of station generated traffic is local bus access servicing the station. Routes 601 and 602 are new bus routes that will serve the West Lake Station via West 32nd Street, Chowen Avenue South, West 31st Street, and the Abbott Avenue South loop that connects to Excelsior Boulevard east of the station. Routes 601 and 602 will operate on 30 minute headways through most of the day. A new route 612 will replace the existing Route 12 and will serve the station in the same way as Routes 601 and 602.

Route 17 and 21 are existing bus routes that will be modified to serve the station from stops on the West Lake Street bridge. Connections between route 17 and 21 stops on the bridge and the West Lake Station will be via vertical circulation including elevators and stairs located on both sides of the bridge at each bus stop. All bus routes serving the West Lake Station will operate on either Excelsior Boulevard or West Lake Street, and will not create any new traffic impacts to the Grand Rounds - Lake Calhoun Parkway.

SWLRT Parking

The Travel Demand Model results shown in Table 5 above do not show any park and ride trips, as there are no formal station park and ride facilities planned for the West Lake Station. This is a conservative approach when performing travel forecasts – as the project is not claiming park and ride ridership where no formal parking is provided. That is not to say that there may potentially be some “hide and ride” trips parking in the station area. However, the on-street parking near the station is very limited, due to the high parking demand and parking restrictions.

South of Excelsior Boulevard, the Grand Rounds and Lake Calhoun Playing Fields are approximately 1/4 to 1/3 of a mile away from the West Lake Station. The Grand Rounds generally has parking restrictions from 10:00 PM to 6:00 AM that limit overnight parking. There are no current restrictions limiting the parking to “park only” activities for shorter durations.

The MPRB also operates a parking lot at the Calhoun Executive Center that is available to the public on weekends (6:00 AM to 10:00 PM) and weekday evenings (6:00 PM to 10:00 PM). Under the current signing and operations, the Calhoun Executive Center parking is available to the public, regardless of if it is used to access retail, dining, or the parks on nights and weekends. As such, this parking is available to West Lake Station park and riders. However, the limited weekday hours (6:00 PM to 10:00 PM) will prevent most work trips from using the lot.

Conclusion – West Lake Station

Drop-off traffic associated with the West Lake Station is expected to be minimal throughout the day (approximately 50 additional vehicle trips per day) and will arrive and depart via Excelsior Boulevard. This will not change the traffic characteristics of the surrounding roadway network when compared against existing and future forecasted traffic volumes (26,600 vehicles per day and 29,000 vehicles per day) generated by existing and future retail, office and residential land uses. In addition, only a small portion of those new trips would access the station via the Grand Rounds – Parkway system (Dean Parkway or Calhoun Parkway). In the worst case, even if all 50 daily drop-off trips were using Calhoun Parkway, the minimal daily increase in traffic is not anticipated to adversely impact the historic property.

Parking associated with the West Lake Station that would be located along the Grand Rounds – Lake Calhoun Parkway or at the MPRB shared parking site at the Calhoun Executive Center parking is anticipated to be negligible due to the:

- Restricted amount of local on-street parking in the entire station area;
- Existing heavy parking demand, which produces limited parking availability;
- Inconvenience of the ¼ mile+ distance to the West Lake Station plus the added time of having to wait at the traffic signal to cross Excelsior Boulevard;
- Limited permitted times for parking at the Calhoun Executive Center; and
- The indirect pedestrian access to the station using public sidewalk via Excelsior Boulevard and Abbott Avenue, or the inconvenience of walking through active retail parking lots to access the station.

All the factors above combine to severely restrict the number of station generated parking uses of the Grand Rounds Historic District including the area around the Lake Calhoun Playing fields, and Calhoun Executive Center shared parking area. As such, there are no anticipated adverse impacts to the historic property.

Figure 1 – 21st Street Station-Preliminary Engineering Plan

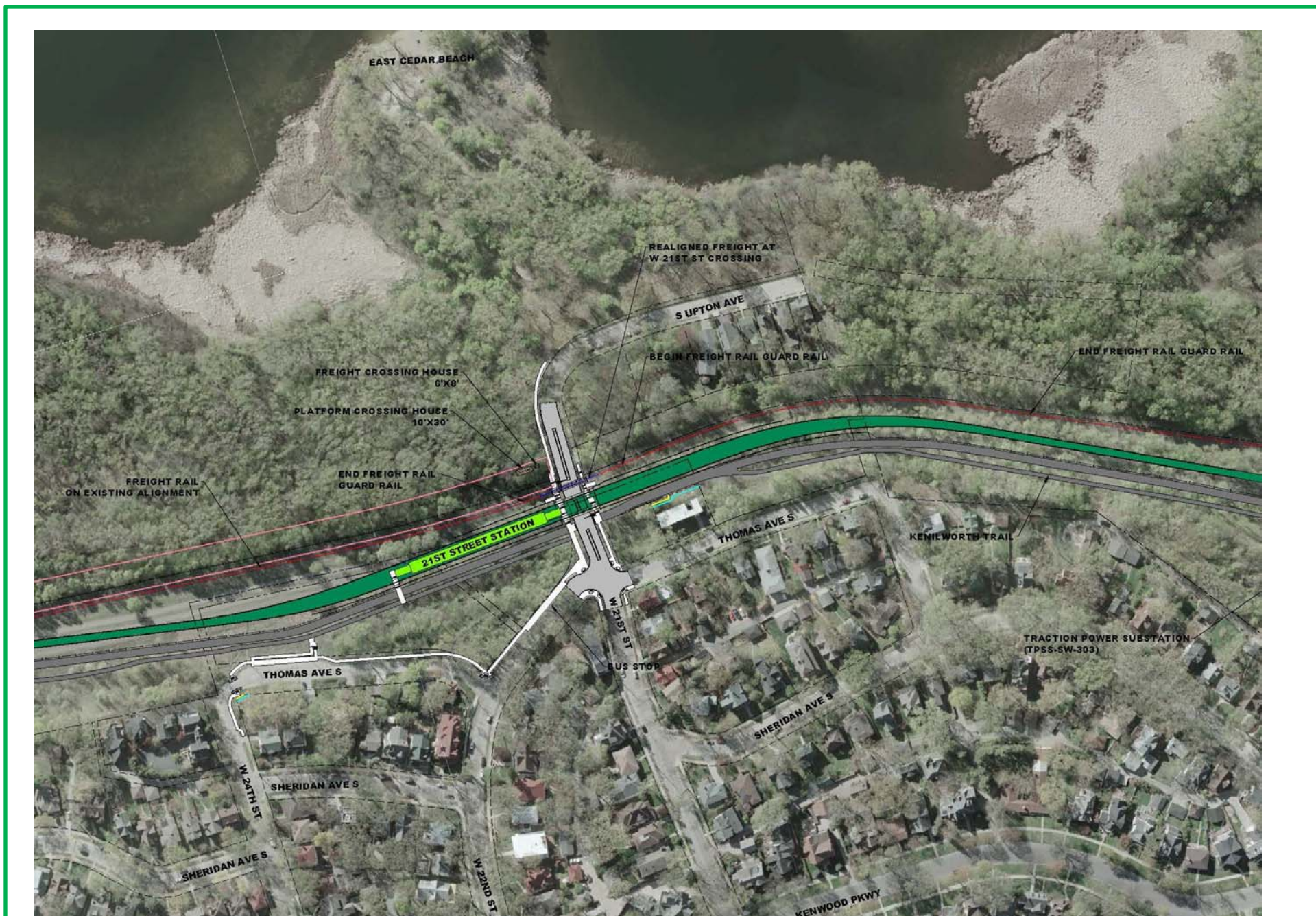
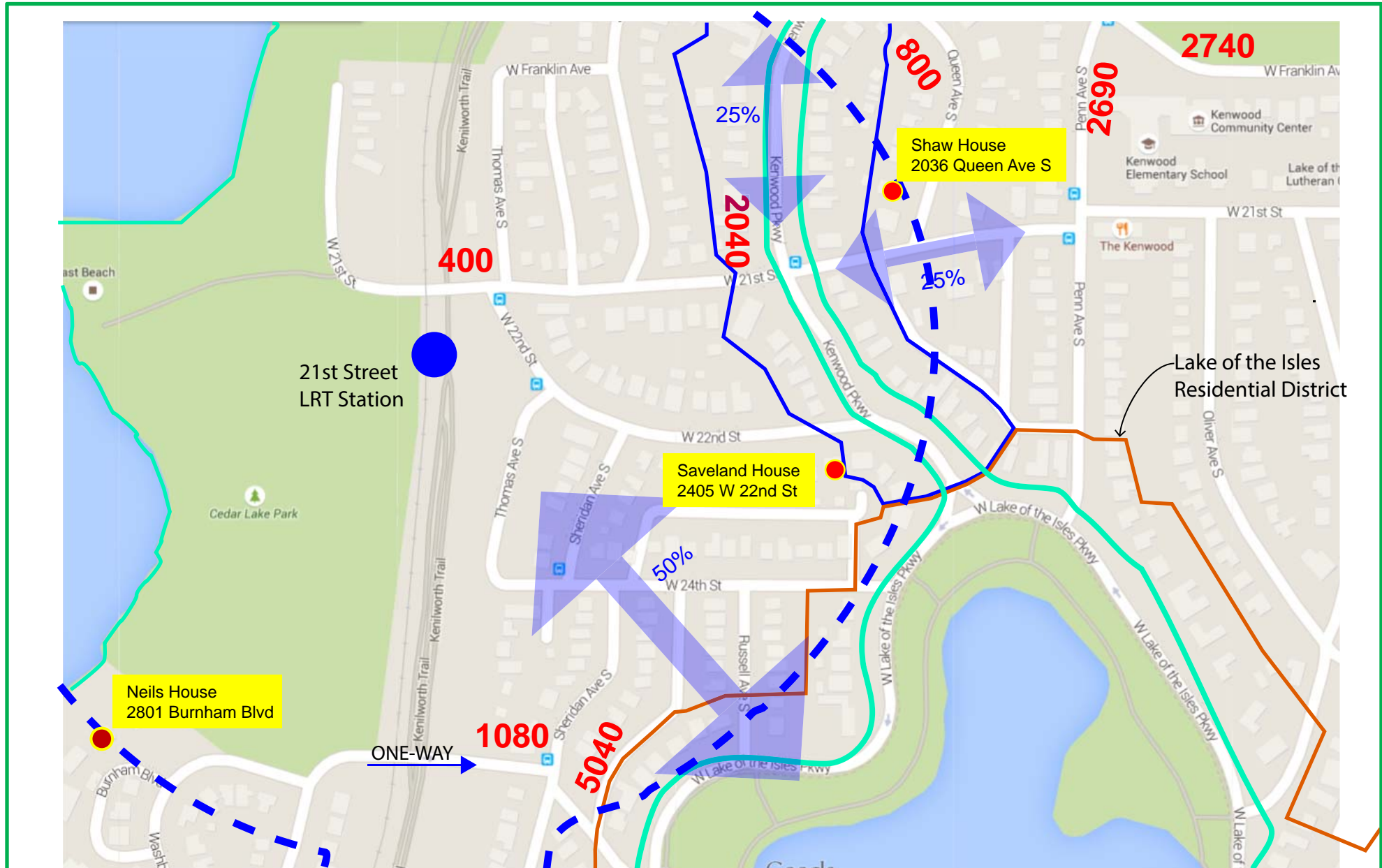


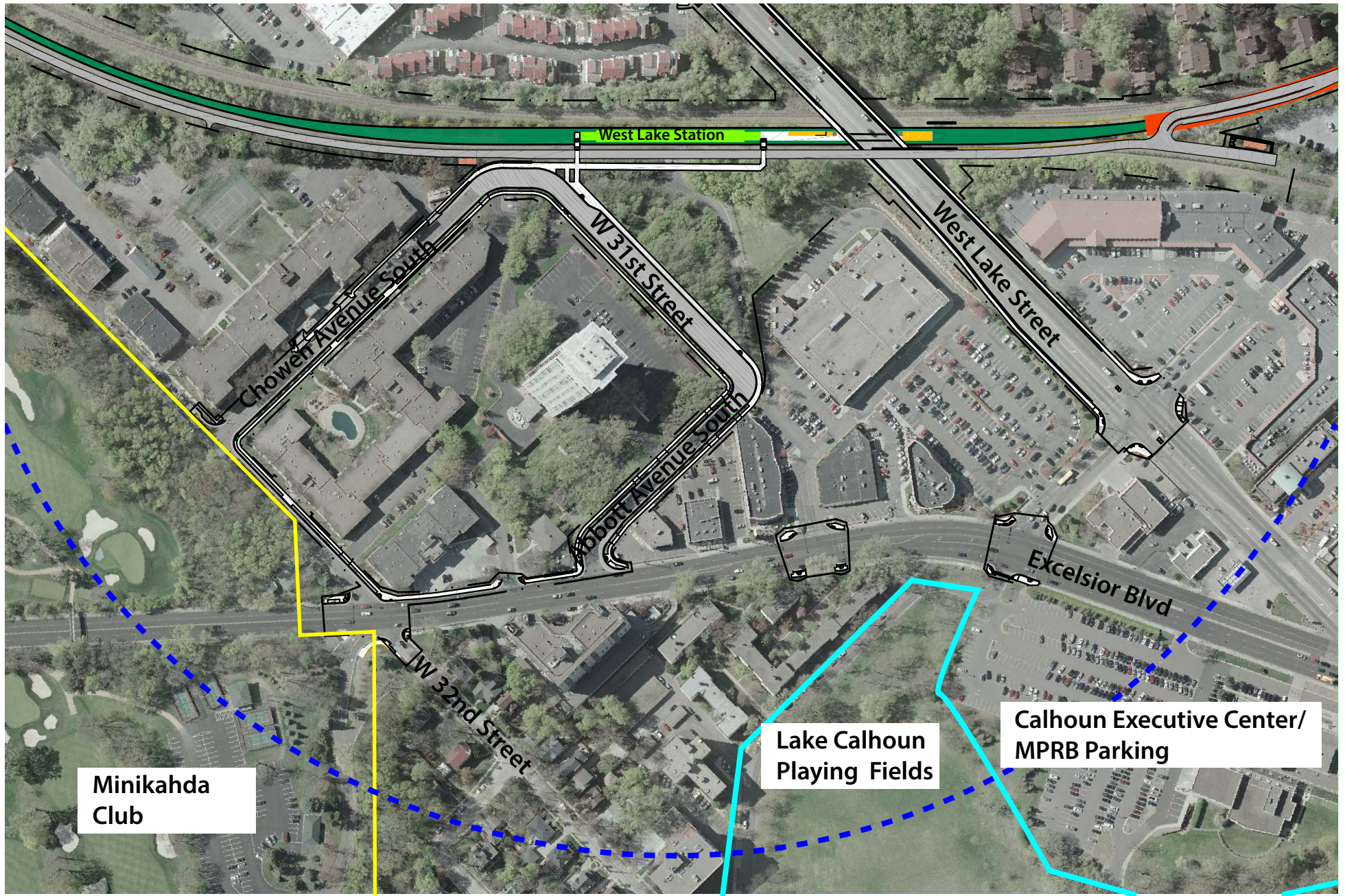
Figure 2 - Average Daily Traffic 2013




Existing Conditions Lake of the Isles Residential District



	Project Area of Potential Effect (APE)		Eligible Grand Rounds Historic District		Park		500 Daily Traffic	
	Individual Historic Resource		Eligible Kenwood Parkway Residential Historic District		Bus Stop		10% Arrival/Departure of Station Drop-Off Traffic	
	Eligible Lake of the Isles Residential Historic District		Directional Distribution of Station Generated Traffic					

Figure 3 West Lake Station-Preliminary Engineering Plan



-  Project Area of Potential Effect (APE)
-  Eligible Grand Rounds Historic District
-  Individual Historic Resource Boundary



20 August 2015

Greg Mathis
Minnesota Department of Transportation
Office of Environmental Services, Cultural Resources Unit
Mailstop 620
395 John Ireland Boulevard
St. Paul, Minnesota 55155
greg.mathis@state.mn.us

RE: Cedar-Isles-Dean Neighborhood Association (CIDNA)
Comments on 29 July 2015 Consultation on Potential Effects of Southwest Light Rail Transit Project
SHPO #2009-0080

Dear Mr. Mathis:

Thank you for the opportunity to participate in the July 29, 2015 consultant meeting for the Southwest Light Rail Transit Project and to review the Section 106 materials provided at that meeting. The Cedar-Isles-Dean Neighborhood Association (CIDNA) appreciates the efforts made to design a crossing for the Kenilworth Channel and Lagoon that minimizes the impact of the crossing on the historic channel—including fewer piers in the water and a desire to let light into the channel. However, CIDNA feels that there are still too many unknowns to sign off on any one bridge configuration. Based on situations that have arisen with new residential construction in the area, specifically additional foundation support due to inadequate soil, CIDNA is particularly concerned about the ability of the soil to support any of the proposed bridge structures as shown in the renderings at this time. In an effort to ensure that the adverse effect on the Kenilworth Channel and Lagoon is not greater than anticipated, CIDNA would like to request evidence that the proposed foundation type is adequate for the new loading conditions and existing soils, and that the installation and construction process for the foundation system will not have an impact on historic resources.

Again, thank you for the opportunity to review these materials and to participate in future consultation for the Section 106 review.

Best regards,

Craig Westgate
Cedar-Isles-Dean Neighborhood Association



**Minneapolis
Park & Recreation Board**

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August 21, 2015

Mr. Greg Mathis
Office of Environmental Services, Cultural Resources Unit
Minnesota Department of Transportation
Mail Stop 620
395 John Ireland Boulevard
St. Paul, Minnesota 55155-1899

RE: Southwest Light Rail Transit Project, Hennepin County, Minnesota;
design of new crossing over Kenilworth Lagoon, SHPO #2009-0080

Dear Mr. Mathis:

The Minneapolis Park & Recreation Board (MPRB) appreciates the continued opportunity to comment on the design of the proposed Southwest Light Rail Transit (SWLRT) project bridges over the Kenilworth Channel. The channel is an important recreation resource within the Minneapolis Chain of Lakes Regional Park and it carries historic significance as a connection created as part of the development of the park. The Kenilworth Channel is under the jurisdiction of the MPRB and the proposed bridges are a central component of a Memorandum of Understanding between the Metropolitan Council and the MPRB (approved the MPRB Board of Commissioners on March 4, 2015). This letter addresses the MPRB's comments based on a request from the MnDOT Cultural Resources Unit dated July 21, 2015.

Staff of MPRB has been directly involved in the development of bridge concepts. The narrowing of concepts for the bridge by eliminating designs that employed a skewed alignment and an overlook as a part of the bridge deck proceeded without objection from the MPRB. However, staff at the Southwest Project Office (SPO) prepared additional concepts for review that included options for two bridges; the MPRB has stated previously and remains firm in its belief that a three bridge option is the less impactful crossing alternative because of the ability to separate expanses of bridge deck to allow light to penetrate to the channel itself.

The information provided to the MPRB indicates a preference of the State Historic Preservation Office for a thinner bridge deck at the freight rail that results in a five span configuration supported by four piers, two of which extend into the channel. The MPRB understands the desire to minimize the visual impact of the freight rail bridge by reducing the thickness of the bridge, but that visual impact is not recognized as a channel user passes under the

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bridge. In fact, the visual impact for a channel user passing under the bridge is based on the mass of piers, not the mass of the bridge deck. The MPRB has stated previously and remains firm in its belief that a bridge design that reduces bridge components IN THE CHANNEL should be pursued wherever practicable.

A trail bridge that spans the channel without piers, as noted in the letter of July 21, 2015 and the supporting information, achieves the MPRB's goals of reduced impacts on the channel itself. The MPRB strongly supports a trail bridge that does not require piers.

The LRT bridges described in the letter of July 21, 2015 and the supporting information include two alternatives: one a thinner deck and multiple pier design and the other a single span with no piers. The MPRB continues to believe that a solution that reduces the number of piers in the water is less impactful on the channel as a recreation and historic resource, therefore the MPRB supports the single span LRT bridge. However, the solution must also consider the ways in which the three bridges interact and the MPRB suggests that:

- If a trail bridge is pursued that utilizes a steel structure, it establishes itself as a unique element of the Kenilworth Channel experience and might best stand alone as a designed element. In this case, the LRT bridge might be best designed to complement the freight bridge and might have piers in the channel. However, if this direction is pursued, the MPRB desires the piers to have the smallest possible cross-section and least visual presence practicable, and that the piers match as closely as practicable the materials of the bridge deck and the piers used to support the freight rail bridge. As stated above, the thinness of the deck, particularly for the LRT bridge, is of lesser consequence because the bridge is most directly experienced from below. Its visual quality is not a primary concern of the MPRB because, from a view at nearly any distance, it is largely screened by the trail bridge and the freight bridge.
- If a trail bridge is pursued that utilizes a concrete structure, it might establish itself more directly with the adjacent concrete LRT bridge. In this case, the MPRB desires the LRT bridge to be designed as a single span with no piers.

The July 21, 2015 letter and supporting information reference the need to determine walls along the banks of the channel. Several alternatives have been considered but the MPRB suggests that a logical conclusion can be reached for a stone wall that would have extended continuously under the existing bridge on the south bank of the channel. While the letter describes conditions of that bank with missing stones, the MPRB believes that stone matching the existing stone can be obtained, that the obtained stone will be substantially the same age as any existing stone along the banks of the channel, and that the methods of constructing a contemporary stone wall can be substantially the same as methods employed to construct the extant stone wall. To believe that any other type of wall existed in the gap on the south bank is not logical, and to believe that this gap of stone wall was created when the current bridge was constructed is wholly plausible. For continuity of the experience of trail users, the MPRB urges the use of a stone wall along the south bank that substantially matches the extant stone wall.

On the north bank, no evidence has been provided that a stone wall existed under the location of the proposed bridges. While there may or may not have been a stone in this location, the MPRB believes it is entirely reasonable to construct a more ecologically-appropriate channel edge using coir logs (or a

similar material) at the bank with the riprap of the slope under the bridge extending the land side of the coir logs.

The slope under the bridge has been demonstrated with various types of stone. The MPRB has no strong preference for a material at this time, but notes that park users might easily displace the stones. In addition, the MPRB encourages the use of plantings at the edges of a stone slope that might someday find paths of growth past the "shadow" of the bridge above. In essence, the MPRB prefers a slope that is as informal as possible. As the MPRB is suggesting the continuation of the extant stone wall on the south bank of the channel, it seems possible that the slope at the north bank could be constructed using very similar material (as opposed to using another introduced material) since the stone is used in a very different way than in the extant stone walls.

Attachment C to the Memorandum of Understanding between the MPRB and the Metropolitan Council notes:

The MPRB undertook a study of the channel crossing and determined visual quality and noise as the MPRB's highest priorities for consideration in the design of the bridge.

As a result, the MPRB believes the design the bridges at the Kenilworth Channel must equally address visual quality and noise. In fact, directions for noise mitigation may run contrary to the idea of a thin deck as a "wall" may extend as much as two feet above the elevation of the LRT rails and result in the appearance of a more substantial bridge deck. To remain faithful to the terms of the Memorandum of Understanding, the design of the bridges proposed by the Metropolitan Council and the SPO MUST mitigate, to the degree practicable, noise generated by light rail vehicles. Because the mass of the bridge (above the piers) will result from the combination of the bridge deck AND the noise mitigation (and not from the bridge deck alone), the MPRB believes the more important visual quality factors relate to piers and their impact on the channel.

While much attention is being directed to the design of the bridge, the MRPB has stated and continues to believe the channel is the primary resource. The design of bridges, particularly as they impact upon the water in the channel, best derive from the ways in which they respect the channel as the primary resource.

Thank you for the opportunity to offer these comments. Please let me know if you have any questions.

Sincerely,



Michael Schroeder, Assistant Superintendent for Planning
Minneapolis Park & Recreation Board

STATE HISTORIC PRESERVATION OFFICE

August 21, 2015

Mr. Greg Mathis
MnDOT Cultural Resources Unit
395 John Ireland Boulevard, Mail Stop 620
St. Paul, MN 55155-1899

RE: Southwest Light Rail Transit Project (Project)
Multiple Communities, Hennepin County
SHPO Number: 2009-0080

Dear Mr. Mathis:

We are continuing consultation on the above project which is being reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800, and to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We have completed our review of the correspondence and review materials submitted by your office on July 21, 2015 which, along with the informative consultation meeting on July 29th, provided a comprehensive summary of the consultation and design work completed thus far in an effort to minimize adverse effects caused by the Project's proposed construction of new crossing structures over the Kenilworth Lagoon, a contributing element in the NRHP-eligible Grand Rounds Historic District.

We appreciate the fact that the Project has continued to consider and incorporate measures to minimize the adverse effect through sensitive design and by eliminating previously reviewed design elements which included a proposed overlook platform on and a skewed alignment for the pedestrian/bicycle trail bridge. We also have taken into consideration your agency's justification for elimination of the two-bridge option and agree with the determination that, while the two-bridge option did provide a narrower corridor width of combined new crossing structures, this option had the potential to have a more pronounced negative effect on the integrity and use of the historic property especially at the park's waterway level. Thus, the refinement of the proposed new crossing design to a combination three-bridge option is an appropriate minimization effort.

In regards to the two (2) different three-bridge options presented – both of which include a thin deck, five-span freight rail bridge –we do not have an overwhelming preference of one over the other in regards to minimizing adverse impacts to the historic property. While the clear span arch option for the LRT bridge does allow for more openness at the waterway level, it also introduces much heavier deck and abutment features at each end. The three-span thinner deck LRT bridge, while introducing additional piers in the water, is compatible with the adjacent thin deck of the freight rail bridge and therefore offers uniformity of spans and the structure is lighter at the abutments.

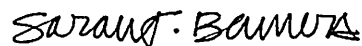
Regarding the clear span pedestrian/bicycle bridge, our preference tilts slightly towards the concrete bridge over the steel structure primarily for the additional material uniformity it provides with the other two crossing structures. We would still be willing to consider the steel crossing structure option, especially taking into consideration options for material types, colors, and other design details.

For whichever of the two three-bridge options that your agency chooses to move forward with, we will continue to consult regarding crossing structure design details - such as lighting and railings - as well as those pertaining to the crossing site, including vegetation, landscape grading, and bank treatments.

Regarding the potential impacts that construction of the new crossing structures will have on the WPA wing walls, we agree that the proposed measures outlined in your July 21st letter are appropriate. As indicated in the consultation meeting on July 29th, although your agency has not found pictorial or other documentation pertaining to this feature, we feel that it is safe to assume that the existing WPA wall on the south side of the channel most was most likely of continuous construction and that the missing section under the current freight and trail bridges was demolished or removed at some time in the past. Therefore, it is appropriate per the Standards to reconstruct a continuous wall in this section matching the WPA wall in design and materials. For the north side of the channel, we may assume that the WPA wall may have never been constructed here as it appears to end just east of the existing crossing and there are no other remnants to the west. In this case, to meet Standards it is appropriate to design the required new channel bank wall to be differentiated from and compatible with the massing, size, scale and architectural features of the adjacent WPA wall.

We look forward to continuing consultation on this aspect of the project. If you have any questions or concerns regarding this comment letter, please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org.

Sincerely,

A handwritten signature in black ink that reads "Sarah Beimers". The signature is written in a cursive, slightly slanted style.

Sarah Beimers, Manager
Government Programs & Compliance

25 August 2015

Greg Mathis
Minnesota Department of Transportation
Office of Environmental Services
Cultural Resources Unit
Mailstop 620
395 John Ireland Boulevard
St. Paul, Minnesota 55155
greg.mathis@state.mn.us

RE: Kenwood Isles Area Association (KIAA) Comments on 29 July 2015 Consultation on Potential Effects of Southwest Light Rail Transit Project, SHPO #2009-0080

Dear Mr. Mathis:

Thank you for the opportunity to participate in the July 29, 2015 consultant meeting and to review the revised materials provided at that meeting. The Kenwood Isles Area Association (KIAA) has the following comments on the materials:

- 1) KIAA believes that in addition to the historicity of the Kenilworth Lagoon, part of its defining character is its natural quality. We urge designs and materials that are consistent with this character.
- 2) KIAA's view is that the combination design #1 with the three-bridge layout best reflects the area's historic, built and natural environment. However, we concur with CIDNA in requesting evidence that the installation and construction process for the foundation system will not have an impact on historic resources.
- 3) We were informed at the July 29th meeting that low walls with dampers are being studied to address the auditory impacts of LRT trains on the bridge. We appreciate this consideration. The auditory impacts of the freight trains were mentioned but not discussed. The new freight bridge and the trains that will cross it are a critical element of the SWLRT project; a temporary situation will be replaced with new, permanent infrastructure. We therefore urge designers to be vigilant about the setting and feeling of the historic channel, including minimizing visual and audible intrusions and sounds associated with modern rail infrastructure, including freight rail, that may alter the park-like setting of the lagoon, a vital element of its historic character.
- 4) KIAA does not have an opinion on the treatment of the WPA walls at this time.
- 5) Construction of three bridges will require removal of large trees and dense greenery on the Lagoon banks. This will substantially reduce the visual quality of the Lagoon and significantly impact its character and feeling as well as the experience of passing through the waterway. We would value a consideration of this issue at a future point in our discussions of bridge design.

Thank you for continuing to work to answer KIAA's questions regarding area impacts and for the opportunity to review these materials and to participate in future consultation for the Section 106 review of the Southwest Light Rail Transit Project.

Sincerely,

Jeanette Colby
Kenwood Isles Area Association

cc: Kenwood Isles Area Association
Cedar Isles Dean Neighborhood Association
Michael Schroeder, Minneapolis Park and Recreation Board
Sarah Beimers, Minnesota State Historic Preservation Office
Tamara Ludt, Preservation Design Works

Greg Mathis
Minnesota Department of Transportation- Cultural Resources Unit
395 John Ireland Boulevard
St. Paul, MN 55155

August 25, 2015

RE: Southwest Light Rail Transit Project, Hennepin County; Minnesota; Comments from July 21, 2015 consultation on potential effects. (SHPO#2009-0080)

Dear Mr. Mathis,

Thank you for providing the materials included in your July 21, 2015 transmittal submittal and facilitating the consultation meetings on July 29, 2015, which we unfortunately could not attend. The focus of this round of consultation was the Kenilworth Channel Crossing. The City of Minneapolis CPED Long Range Planning Division submits the following comments on behalf the Minneapolis HPC, a consulting party to the Section 106 review.

Two versus Three Bridge Configuration

CPED-Long Range Planning has reviewed the materials provided on July 21, 2015. We agree with your assessment in the July 21, 2015 transmittal letter that the two bridge configuration "...results in a more pronounced adverse effect on the feeling of the historic property at the waterway level... ." Given the materials and analysis provided for this consultation, CPED-Long Range Planning believes that the three bridge configuration minimizes the adverse effect compared to the two bridge configuration.

Bridge Piers

CPED-Long Range Planning supports the four pier bridge concept for the freight rail bridge and the zero pier concept for the trail bridge. The materials provided were very useful in understanding the dimensional differences between the bridge concepts and the renderings were useful in visualizing the no-pier vs two pier LRT bridge concepts; however, it is very difficult to determine the which design further minimizes the negative effects- one that provides a larger bridge deck and lower bridge structure versus a thinner deck and higher clearance.

CPED-Long Range Planning looks forward to continued consultation. Thank you for the opportunity to comment.

Sincerely,



Brian Schaffer
Principal City Planner, AICP
City of Minneapolis- CPED-Long Range Planning
105 5th Avenue South, Suite 200
Minneapolis, MN 55415
Phone: (612) 673-2670
brian.schaffer@minneapolismn.gov

cc: Sarah Beimers. MN SHPO (via email)
Jack Byers, CPED-Long Range Planning (via email)



Minnesota Department of Transportation

Office of Environmental Services

Mail Stop 620

395 John Ireland Boulevard

Office Tel: (651) 366-4292

Fax: (651) 366-3603

greg.mathis@state.mn.us

September 18, 2015

Sarah Beimers
State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. W.
St. Paul, MN 55102

RE: Southwest Light Rail Transit Project, Hennepin County, Minnesota; consultation on project effects, SHPO #2009-0080

Dear Ms. Beimers,

We are writing to continue consultation regarding the Southwest Light Rail Transit (LRT) Project (Project). Following standard practice, all Section 106 consulting parties for the Project are copied on this letter.

First, we want to provide you with an update on the Project and Section 106 process. In April 2015, the Project's cost estimate was updated and was higher than the allocated funding. Therefore the project sponsor, the Metropolitan Council, worked with the project partners to identify cost reductions for the Project, resulting in a revised scope which maintains the federal New Starts Cost Effectiveness, meets the purpose and need, and reduces the project cost by \$250 million. The main changes identified during this process were in Eden Prairie, where there are no historic properties in the Project's Areas of Potential Effect (APEs), and included the elimination of the westernmost (Mitchell) station and the deferral of the Eden Prairie Town Center Station. Other changes included reductions in the amount of station amenities, the size of park-and-ride facilities, and in the number of vehicles to be purchased. Following these adjustments, the Metropolitan Council reinitiated the municipal consent process in order to provide for public comment on the preliminary design plans. This process, which is based on 30 percent design plans for the Project, is expected to be completed by early October. Provided there are no additional adjustments to the Project's scope as a result of municipal consent, the Project expects to complete 60 percent design plans in October. The Federal Transit Administration (FTA) will use these plans to make a Final Determination of Effect. Upon completion of these plans, we will review them and determine if any revisions to the Project APEs are warranted and, if so, if any additional survey is required to identify historic properties in any newly added areas. Additionally, provided any survey work that may be required as a result of revisions to the Project APEs does not identify any additional historic properties that would need to be reviewed by your office, the Federal Transit Administration intends use these plans to make a Final Determination of Effect by the end of the year.

Many of the measures for avoiding and minimizing adverse effects to historic properties within the current Project APEs have been identified and agreed to through consultation with your office and other consulting parties. Therefore, over the next few months we will focus our ongoing consultation efforts on the development of a Section 106 Memorandum of Agreement (MOA) for the Project. Specifically, we plan to consult to develop stipulations to document measures for which there is general agreement and also identify mitigation measures for adverse effects on the Kenilworth Lagoon and the Grand Rounds Historic District.

Pursuant to our letter of February 3, 2015, in which we notified your office that the Minnesota Department of Transportation Cultural Resources Unit (MnDOT CRU), per authority delegated by the FTA, would be holding a series of meetings with consulting parties to consider and resolve adverse effects on historic properties, we have held six meetings. The most recent of these meetings was held on July 29, 2015, and focused on the design of the Project crossing over Kenilworth Lagoon. Thank you for participating in these meetings and for the comments you provided. Per our previous communication, we are holding the next meeting on September 23, 2015 at 1:00 p.m. at:

Southwest Light Rail Project Office
6465 Wayzata Boulevard, Suite 500
St. Louis Park, MN

This meeting will cover the following:

1. Traffic effects from Project operation on historic properties

During the consultation process, we have received several comments and questions from consulting parties regarding the potential effects of traffic and parking from Project operation on several historic properties in Minneapolis. These comments focused on traffic generated by two stations: 21st Street Station and West Lake. Therefore, the Project has completed an analysis of traffic generated by the operation of these stations and the corresponding change in traffic around historic properties in the architecture/history APE for each. Enclosed is a technical memorandum documenting the results of the traffic analysis for historic properties near these two stations. The memorandum confirms that operation of the Project will generate slightly higher traffic counts than a No Build alternative at some, but not all historic properties. However, in locations where traffic counts will increase, at most average daily counts will increase by less than two percent, or about one to two vehicles per hour. Based on this analysis, we have determined that the operation of the 21st Street and West Lake stations will not significantly change traffic and parking in a way, or to a degree, that would alter any characteristics the of the historic properties in the architecture/history APEs for these stations that qualify them for the National Register in a manner that would diminish any aspect of their historic integrity and request your concurrence.

2. Project Memorandum of Agreement

During this portion of the meeting, we plan to provide a brief overview of MOAs, review previously agreed to measures for avoiding and mitigating potential effects to historic properties, and begin framing stipulations for inclusion in the MOA.

3. Update on the design of the new crossing over the Kenilworth Lagoon element of the Grand Rounds Historic District

This portion of the meeting will provide the Project with an opportunity to update consulting parties on advancing design for the new crossing over Kenilworth Lagoon. Based on comments received in response to the materials provided on July 20, 2015, including input provided at the July 29, 2015, consultation meeting (comments and meeting notes are enclosed), the Project plans to utilize a three-bridge configuration for the Kenilworth Lagoon crossing in order to minimize the adverse effect on the lagoon and the Grand Rounds Historic District. This configuration will include a five-span, thin deck concrete freight-rail bridge, a clear-span concrete arch LRT bridge, and a clear-span concrete arch trail bridge. This configuration will be used to make the final determination of effect. Additional details will be presented at the meeting.

Please provide any comments on the enclosed materials by October 19, 2015.

Sincerely,



Greg Mathis
MnDOT Cultural Resources Unit

Enclosures: SWLRT Section 106 Consultation 9/23/2015 meeting agenda
Memorandum: Traffic Changes from Southwest LRT Operations at Historic Properties within
the: 21st Street Station and West Lake Station Area of Potential Effect, September 15, 2015

Letter from the Minnesota State Historic Preservation Office to MnDOT CRU, dated 8/21/2015

Letter from the Minneapolis Park and Recreation Board to MnDOT CRU, dated 8/21/2015

Letter from the City of Minneapolis to MnDOT CRU, dated 8/25/2015

Letter from the Cedar-Isles-Dean Neighborhood Association to MnDOT CRU, dated 8/20/2015

Letter from the Kenwood Isles Area Association to MnDOT CRU, dated 8/25/2015

SWLRT Section 106 Consultation 7/29/2015 meeting notes – draft

cc: Bill Wheeler, Federal Transit Administration
Maya Sarna, Federal Transit Administration
Amy Zaref, Federal Transit Administration
Melissa Jenny, United States Army Corps of Engineers
Brad Johnson, United States Army Corps of Engineers
Nani Jacobson, Metropolitan Council
David Jaeger, Hennepin County
John Doan, Hennepin County
Kim Zlimen, Hennepin County
Lori Creamer, City of Eden Prairie
Regina Rojas, City of Eden Prairie
Nancy Anderson, City of Hopkins
Brian Schaffer, City of Minneapolis
John Byers, City of Minneapolis
Elise Durbin, City of Minnetonka
Meg McMonigal, City of St. Louis Park
Jennifer Ringold, Minneapolis Park and Recreation Board
Michael Schroeder, Minneapolis Park and Recreation Board
Bill Walker, Three Rivers Park District
Jeanette Colby, Kenwood Isles Area Association
Craig Westgate, Cedar-Isles-Dean Neighborhood Association
Tamara Ludt, Preservation Design Works

Meeting Title: SWLRT Section 106 Consultation – Meeting Notes

Date: 7/29/2015 **Time:** 1:00 **Duration:** 2.0 hrs

Location: Southwest LRT Project Office, Conference Room A
6465 Wayzata Boulevard, Suite 500
St Louis Park, MN 55426

Meeting called by: Greg Mathis, MnDOT Cultural Resources Unit (CRU)

Attendees: SHPO: Sarah Beimers, Natascha Wiener
MPRB: Michael Schroeder
KIAA: Jeannette Colby
Preservation Design Works (PVN): Tamara Ludt
Hennepin County: Dave Jaeger, Kim Zlimen
CIDNA: Craig Westgate
SPO: Nani Jacobson, Ryan Kronzer, Leon Skiles, Nkongo Cigolo, Jenny Bring, Kelcie Campbell, Andrea Arnoldi, Kelli Andre Kellerhals
MnDOT: Greg Mathis, Jon Vimr

Purpose of Meeting: Meeting with consulting parties to continue Section 106 consultation process

--- Agenda & Discussion ---

- | | |
|-----------|---|
| 1. | <p>Welcome & Introductions</p> <ul style="list-style-type: none"> • Greg Mathis from MnDOT CRU welcomed and thanked everyone for attending, led participant introductions, and provided an overview of the agenda, which will focus on the Kenilworth Lagoon crossing. <ul style="list-style-type: none"> ○ Bridge designs were discussed at the April meeting, and the designs were updated in June based on all comments received and in an attempt to minimize the effect of the crossing on the Kenilworth Lagoon and on the Grand Rounds Historic District. The goal of the meeting today is to get agreement on which designs best minimize effects; none avoid an adverse effect. ○ Greg explained the changes in bridge designs for the Kenilworth Crossing: <ul style="list-style-type: none"> ▪ November 2014: a two bridge concept with an out-and-out width of 82.5 feet ▪ April 2015: a three-bridge concept that widened the width of the combined structures by about 5 feet ▪ June 2015: <ul style="list-style-type: none"> • The two-bridge option shown in the meeting materials has an out-and-out width of 80 feet, 5 inches. The amount of coverage over the water is the same as shown in the November plans, but there is less space between the two bridges. Since April, the skewed pedestrian bridge option has also been dropped based on the width of the crossing and overall coverage of |
|-----------|---|

	<p>the waterway.</p> <ul style="list-style-type: none"> ○ The options presented are various combinations of how the bridges could be laid out based on number of piers in the water and what types of structures can be built based on that. Greg reiterated that all crossing options do still result in an adverse effect, but the intent is to identify bridge designs that would help minimize the adverse effect. ○ Although the three-bridge configuration results in a wider overall crossing compared to the two-bridge configuration, it reduces the width of each structure, thus breaking up their scale when experienced from the waterway level. While the two-bridge configuration results in a slightly narrower overall crossing, it results in a more pronounced adverse effect on the feeling of the historic property at the waterway level given its more intimate scale and spatial relationships. This adverse effect is greater than the impact of the slightly wider width of the three-bridge configuration on the feeling of the historic property as a whole given the much larger scale and spatial relationships of the broader landscape. Therefore, MnDOT CRU’s opinion is that the three-bridge configurations better minimize the adverse effect than the two-bridge configurations.
<p>2.</p>	<p>Review Kenilworth Crossing Bridge Design – Two Bridges</p> <ul style="list-style-type: none"> ● Ryan from SPO showed photographs of existing conditions at the crossing and explained plans for the two-bridge and three-bridge configurations. <ul style="list-style-type: none"> ○ The two-bridge design is not the same one that was presented in November. The LRT alignment has changed based on new details on the tunnel, and the gap between the freight and combined LRT and trail bridge is now 2 feet narrower. ○ All three-bridge concepts include a five-span freight bridge and a clear-span trail bridge. The two-bridge concepts also include a five-span freight bridge and either a clear-span combined LRT and trail bridge, or a three-span combined LRT and trail bridge. ○ The WPA walls were also noted on the plans. ● Craig Westgate from CIDNA asked if, according to the plans, there are walls that are shown as stopping before the bridges (south side of the crossing back from the bridges). <ul style="list-style-type: none"> ○ Ryan responded that those are retaining walls at the beginning of the tunnels and begin at-grade. ● Jeannette Colby from KIAA asked if there were crash barriers and/or a fence between the trail and LRT. Ryan confirmed there is a separation between the two and showed where fencing/crash barriers would be located on the plans. ● Ryan explained the two designs: <ul style="list-style-type: none"> ○ Combination Design 1: a clear-span arch combination trail/LRT bridge and a five-span thin deck freight rail bridge with piers in the water. In this option, the abutments for the clear-span combination bridge are pushed closer to the shore. ○ Combination Design 2: a three-span thin deck combination trail/LRT bridge and a five-span thin deck freight railbridge, both with piers in the water. ○ In views from the water level, looking at the underside of the bridges, in both two-bridge options, the combined trail/LRT bridge presents a solid, continuous smooth surface of bridge until there is a separation between it and the freight rail bridge. ● Ryan also explained that the two-bridge configurations have a slightly narrower out-and-out width than the three-bridge configurations. <ul style="list-style-type: none"> ○ Jeannette asked for clarification that the three-bridge options are wider, when looking

underneath the bridges. In the two-bridge options, it is slightly narrower. Ryan confirmed this was correct: the width of the combination of all structures is about 5 feet, 6 inches narrower in the two-bridge options versus the three-bridge options.

- Ryan explained the three, three-bridge options. All options have a five-span thin deck freight rail bridge and a clear-span arched trail bridge. The differences are:
 - Combo Design 1: a clear-span arched LRT bridge and a clear-span concrete arch trail bridge.
 - Combo Design 2: a three-span thin deck LRT bridge and a clear-span steel trail bridge.
 - Combo Design 3: a three-span thin deck LRT bridge and a clear-span concrete arch trail bridge.
- Greg reminded consulting parties that they can provide written comments, but asked for initial comments or questions.
 - Jeannette asked if the footprint difference between the two- and three-bridge layouts is only a few feet. Ryan confirmed the footprint for the three-bridge layout is 5 feet, 6 inches wider than the two-bridge layout.
 - Jeannette said she preferred the three-bridge options and believes there was solid reasoning presented to favor that option, which the photos and illustrations help to show. She also indicated that in person, it currently does not appear there is 5 feet to spare in the right-of-way (ROW). Ryan responded by showing where the ROW boundaries are on the drawings, noting that they are consistent among all concepts and the bridges will fit within the existing ROW.
 - Craig asked what will happen to the ground/walls underneath the bridges. Greg responded that this would be addressed later in the meeting.

3. Review Kenilworth Crossing Bridge Design – Three Bridges

- Greg explained that the current three-bridge options are the results of combining the best elements of the previous designs to try to address consulting party comments and concerns.
- Ryan provided an overview of the three-bridge options, illustrating the changes and differences among them.
 - All three-bridge options have the same freight rail bridge design: a five-span (four piers) thin deck bridge. This is the most minimal design that can be built for freight rail.
 - There are two LRT bridge options: one is a three-span thin deck bridge with piers in the water, and the other is a clear-span arch bridge.
 - The trail bridge is a clear-span arch bridge: one option is concrete, the other is steel.
 - Combo Design 1: a clear-span concrete LRT bridge and a concrete arch trail bridge. This option has wider abutments. There would be a protected barrier/fence along the LRT entrance to the tunnel. There would be a 6-foot, 7-inch space between the LRT and freight rail bridges, and a 5-foot space between the LRT and trail bridges.
 - Craig asked why there was a bigger difference in span between the freight rail and LRT bridges. Ryan explained that it has to do with the way the tracks line up next to each other from I-394 through the corridor
 - Combo Design 2: a four-span LRT bridge with piers in the water; the abutments for the LRT bridge are farther up the banks compared to Combo Design 1. The trail bridge is a 110-foot long steel arch span. The abutments for the steel bridge are closer to the water compared to the concrete trail bridge design in Combo Design 1.

- Natascha Wiener from SHPO noted that the benefit of having LRT piers in the water is that the bridge deck can be thinner.
 - Combo Design 3: same as Combo Design 2, but the trail bridge is a 100-foot long concrete span. The trail bridge is a little thinner in this option.
- Jeannette asked for clarification that the design differences do not have to do with steel versus concrete, but rather with the number of piers in the water. Andrea Arnoldi from SPO confirmed this was correct and noted that all three-bridge design options for the three-bridge plans also have very subtle grading differences.
- Craig asked if the views would include fences, and whether they can be added in the drawings. Ryan noted that fence designs can be added in once they have been finalized, but this is also part of the landscape design process.
- Jeannette asked if there is any difference in the amount of fencing in the two- versus three-bridge layouts. Ryan replied that there would need to be a protective barrier regardless of the design option and that there will need to be some sort of parapet wall on the LRT bridge for noise mitigation. Currently, they are looking at the 2-foot wall with dampers on the rails instead of the 4-foot wall, as it is the least intrusive option. Jeannette asked for clarification that both parapet wall options would achieve a similar degree of mitigation. Nani Jacobson from SPO indicated that both would meet noise mitigation requirements, but the 2-foot versus 4-foot option presents more of a visual difference.
- Jeannette stated that, in her view, the difference in placement of abutments is not a significant issue. She indicated that the banks would not be attractive and that weeds would be growing in a few years; to her it is not a factor in deciding which bridges would be visually favorable.
- Jeannette noted that noise is one of KIAA's biggest concerns and asked if there is any difference in how the design options function in terms of noise. Nani responded that the drawings currently show the proposed two feet height of the walls, but the length of the walls can be part of ongoing discussion.
- Jeannette indicated that in terms of the feel of the area, whatever can be done in terms of re-vegetation would be good. Nani responded that vegetation in the channel would be the next topic discussed at this meeting.
- Craig asked about the 2-foot versus 4-foot noise walls and the measurement locations to determine that they are equal in terms of noise mitigation. Nani explained that the measurements were taken northeast of the channel. The project team then modeled mitigation options to see what is most effective (noise, cost, etc), which all factor into what is best option. Craig asked if they were trying to make sure mitigation efforts go over what is necessary, or just address what is necessary. Nani indicated that the project is required to mitigate noise impacts that are above FTA noise impact criteria and the goal is to identify and implement mitigation that is effective at bringing noise levels to below the impacted noise level.. Both the 2-foot and 4-foot wall options are effective.
- Jeannette indicated that KIAA is in disagreement as to the level of noise and how it was measured. KIAA believes that the freight rail is a new permanent condition. Nani explained that they have to do noise assessment based on existing conditions, which includes freight rail operations in their current location.
- Jeannette requested that the project team try to mitigate noise to the highest degree possible. Nani confirmed they would, while weighing other impacts, such as visual, with high noise walls, for example. Jeannette said she appreciated the effort being put towards this process.
- Sarah Beimers from SHPO noted that the significance of the park is important, and she asked

Michael Schroeder of MPRB what his opinion was of the bridge options. Michael responded:

- The piers and structures out of the water were compelling. MPRB was encouraged when the trail bridge and LRT bridge were designed without piers in the water. With the four-pier configuration for the freight rail bridge, as long as those piers provide a clear view/channel through the piers that is their preference.
- The skewed bridge option that had been previously discussed was not preferable as it resulted in the loss of the long, linear quality perspective of the historic corridor through the area. This opinion was not related to the adverse effect of the crossing, but rather the experience of people using the trail.
- When considering the bridge options in totality, MPRB wants to keep the focus on the channel. MPRB has gone back and forth on what materials would be preferable. The introduction of steel would add another element and another distraction to the corridor. Concrete would be better as it does not add more distraction to the corridor as it uses an element that has already been introduced to the area.
- Jeannette indicated she agrees about the steel, but appreciates that it was tried as an option.
- Michael provided some additional comments on what the MPRB prefers:
 - Bridges that clear span the channel are compelling versus bridges that put piers in the water.
 - The three-bridge options allow the bridges to most authentically express what they are; the MPRB did not like the extra mass/structure of the combined bridge of the two-bridge options.
 - Bridges that are interesting, but not dominating to the surrounding landscape.
 - Would not like to see adding mass to make aesthetics work, and there may be more mass in the curving/arching bridge options, which may be acceptable.
 - Bridges should reflect that they are from the present day.
 - Looking for the lightest possible bridge, yet still having the bridges serve their functions.
- Craig asked why there is a greater distance between the LRT and freight rail bridges versus between LRT and trail. He wondered, since it is a long corridor, why the bridge cannot move over 1-1½ feet the other way. Ryan explained that the freight rail tracks, just south of Cedar Lake Parkway, shift and push west. Then, with the addition of the LRT tunnel and the tunnel's specific requirements, as well as wanting to keep LRT and freight as far away from each other as possible, there is not room within the corridor to shift alignments, and what is presented is the best possible location for all of these specific, individual elements. Andrea added that as the LRT comes out of the tunnel, there are limits to what curvature is feasible to get across the channel. Nani also noted that the current discussion was focusing on elements outside of the area we are focusing on; this specific area (Kenilworth Crossing) is constrained by those external elements and factor into the design options for this area.
- Michael stated that the three-bridge design options allow light down into the channel. MPRB's focus was not on distances between bridges, but on finding ways to break up the expansive darkness that may be caused by certain crossing options. Jeannette noted that KIAA would also prefer a three-bridge design if freight rail remains in the corridor.
- Natascha noted that regarding the authenticity of structure, the four spans for LRT are more authentic. She is not sure if adding arches is good as it adds mass and structure to the slab; this is the trade-off between slab thickness and piers. More piers allow for a thinner slab that gives the bridge a lighter feel. She also likes the steel as it seems a more natural material, is darker in color

(like the existing timber pile bridges), and breaks up the large concrete mass that some of the other options present. The steel creates a more variegated experience since the monotony of just concrete will be large.

- Jeannette mentioned that at a previous meeting there were discussions about different facing on the concrete. She asked if would that help break up the concrete mass. Nani replied that once a specific design is settled on, we will focus on more aesthetic elements.
- Greg stated that, based on the discussion, it appears that there is general agreement on the three-bridge configuration as the preferred option for the crossing and asked for confirmation. He also mentioned that Brian Schaffer from the City of Minneapolis had called him earlier to confirm that he could not attend the meeting, but that the City also preferred the three-bridge configuration. With the three-bridge configurations being generally agreed as preferable, Greg noted that it now comes down to whether the designs focus on a thin deck with piers, or an arch for the LRT bridge.
- Sarah asked when these options would be presented to public. Ryan answered that there is a landscape workshop on August 8th where they would share the three-bridge options.
- Sarah asked if they considered putting the options on the website and soliciting comments that way. She indicated SHPO would look to Greg to determine when to present to the public, but that it would be good to get more public comment. Ryan indicated that the challenge is that there would need to be a good way to ask specific questions to get responses focused on the design of the bridge related to historic properties, versus general comments related to the general aesthetics or preferences. Sarah agreed and noted it would be tied to how the questions were asked.
 - Craig said that if a select number of questions were asked that required specific responses, they could email them out to a large network of people to receive comments.
 - Nani noted that the comprehension of the Section 106 process may be limited by those responding to the survey, but that there would be value in getting general opinions.
 - Sarah noted that the MPRB did a good job of briefly explaining the Section 106 process for the landslide that occurred at West River Parkway and that the project look at that example for guidance.
- Greg restated that the biggest question remaining is whether the LRT bridge should be an arch, or a thin deck with piers.
 - Jeannette said that she feels the piers out of the water makes for a better experience for users passing through the water. For the arch design, she is not bothered by the thicker deck, but likes the arch as it relates to the Lake of the Isles Parkway Bridge, which also has an arch design. She then asked if someone on a paddle board would fit underneath. Ryan confirmed that the minimum design clearance is 10 feet, 6 inches so, they will fit. Nani also noted that there is a 1½-foot difference at the center of the span between the thin deck and arch options.
 - Greg said the project will continue to consult on the design and asked if there was any preference to moving one or two designs forward, or if all options should move forward.
- Jeannette asked if the view from underneath (View 4) for the steel bridge (Combo Design 2) would also have a wall, not just a fence as currently shown on the drawing. Nani and Ryan indicated it would have a wall but that the fence/railing designs can be mixed and matched on each of the bridge options, although the views just showed one possibility. Greg added that the section plans show the sound walls would be set back a bit.
- Greg then moved the conversation to the walls and features beneath the bridges. He explained that, based on previous comments requesting that the WPA walls be kept in place, they have examined

if this is possible. Engineering does not think that they can keep the walls in place during construction since they overlap the area that needs to be excavated to place the bridge footings. Therefore, the project is proposing to document the walls, remove the portions within the limits of the new crossing during construction, and then reconstruct the walls in-kind after construction of the bridge is complete. This is also because the walls are currently in poor condition. The project is proposing to reconstruct the walls on the south bank of the waterway to the LRT bridge, then use a new material to construct the remaining walls underneath the new bridges. If there are extra stones after the reconstruction, they could be given to MPRB to use in repairs elsewhere along the channel.

- Michael told the group that they have gone back and forth about what to do with the walls and that the design of the bridges is almost less vexing. Historically there may have been walls there that are not currently there. It seems likely that there was a stone wall on the south side, as there it continues on either side of the proposed bridges. However, it is possible that it was never put back when the temporary bridge was built 80 some years ago. The design of the walls should match what was there.
- Greg explained that the concern from a Section 106 perspective is that we do not know what was there and we do not want to introduce conjectural features that create a false sense of history. Michael agreed and said the MPRB does not have a lot of historical photos of this area that could provide insight.
- Sarah indicated that the plan sheets show existing walls of the same type east and west of the crossing, on the south side of the channel, so it seems logical to assume that the area in between historically had the same type of wall. Natascha added that the plans show the two walls coming together, then they change in the middle. It would seem logical that what was there historically was likely cohesive.
- Greg stated that there may be remnants of walls there, but they would likely be dismantled.
- Natascha then noted that the two sides are different (the north and the south), and these two sides may require two different treatments. If you put in concrete walls, then people would read those concrete walls as indicating there was never a wall there historically.
- Ryan asked if the WPA would have historically treated two sides of a channel differently, doing a wall on one side and not on the other. Natascha responded that the WPA did their work in response to natural conditions, so it is possible. Ryan suggested it may be possible to extrapolate from what the WPA did historically to understand how to treat the walls.
- Natascha asked if there is any indication that there were walls on both sides. Greg said the evidence is inconclusive. There was a regular history of shoreline erosion and the WPA walls were the second wave of improvements to address it. WPA treatments vary throughout the lagoon and reflect its varying character. There are Classical Revival style walls at the Lake of the Isles Bridge, Rustic style walls in this section, and wood sheet pile walls along the channel to Cedar Lake.
- Natascha asked if there is a wall depicted on the plans because it is needed and, if a wall is indeed needed, she would presume it would be best to select the wall type based on the character of this section of the channel.
- Jeannette asked if there would be a problem with restoring the WPA wall and then continuing the wall onward. Natascha replied that the intent is not to create a false sense of history. If you are going to bring something back, then you need to have evidence that that element was there historically. If you have no evidence, then you would want to make sure there is a differentiation of materials to indicate that it is a new feature. Natascha stated that to her, it does not appear that we are conjecturing that the wall continued on the south

	<p>side. It is less conclusive on the north side, so she suggested creating a wall to fit within the character of the area, but differentiate it from the WPA walls. She thought that some sort of stone wall that was rustic in nature would be needed, to make it a continuation of the wall, but differentiate it from the historic wall. By adding a concrete wall, we would be making a statement that we do not think there was a wall here and we want people to know that. Sometimes in these situations, it is about going with the option that is logical and typical. She also pointed out that it is possible that they stopped the wall on the right (north side) but not the left (south side).</p> <ul style="list-style-type: none"> • Michael asked that if it cannot be demonstrated that a wall existed on the north side, but bank stabilization is needed, if using riprap would be possible. Riprap would be a like material, but distinguishable from historic materials. Natascha stated that they would need to make sure it did not appear to look like a ruined wall that fell apart and is laying there. She noted that in some cases the DNR has installed riprap that was covered with dirt or grass to make it look more like a natural shoreline. <ul style="list-style-type: none"> ○ Jeannette asked if that would include putting plants in the riprap. Natascha said the DNR was able to make it look like a natural grassy bank. Michael added that MPRB has used various methods around waterways to encourage stabilization. He said that he always assumed a wall was needed, but perhaps that assumption was premature and maybe they need to consider other ways of stabilization. ○ Natascha then asked if retaining walls on waterways are troubling for wildlife. Michael responded that they can be and that there are ways of reestablishing a natural shoreline. ○ Natascha said that if this area does not have a historic answer, there would be a variety of options and answers that could be applied in this situation. Sarah added that if there is not a wall in this location and it was an area that was historically, consciously dredged, the boundary should be a harder, defined edge, not a soft, natural edge. • Ryan gave a brief presentation on different types of rock options, including varying colors and large drop rocks that could be used in this situation. <ul style="list-style-type: none"> ○ Natascha expressed her opinion that riprap looks unnatural when it is all the same size. She asked if a range of rock sizes could be used. Andrea said that they currently have 4-10 inch materials used in the model. ○ Jeannette cautioned that rocks and stones that were very small in size would likely end up being thrown into the channel.
<p>4.</p>	<p>Kenilworth Landscape Design Process Overview</p> <ul style="list-style-type: none"> • Ryan gave a brief overview of the status of the landscaping design along the Kenilworth corridor, which encompasses the area between West Lake Station and Penn Avenue Station and includes the Kenilworth Lagoon crossing. The landscape design process came out of the MOU with the City of Minneapolis. Perkins + Will was hired as the landscape design consultant. They will design the vegetation that comes into and along the bridges within this corridor. There is a meeting/workshop scheduled for August 8th where they will present two design concepts for the landscaping along the Kenilworth corridor. The three-bridge design options will also be presented at that meeting.
<p>5.</p>	<p>7/8 Council Scope and Budget Action</p> <ul style="list-style-type: none"> • Nani provided an overview of the Met Council action that occurred on July 8th. The majority of these actions do not directly affect historic properties, as most pertain to the project within the city of Eden Prairie. These changes: <ul style="list-style-type: none"> ○ Bring the total cost of the project down to an estimated \$1.744 billion.

	<ul style="list-style-type: none"> ○ Keep a projected 2040 average weekday ridership of 34,000. ● The changes to the project scope as a whole include: <ul style="list-style-type: none"> ○ Project ends at SouthWest Station instead of at Mitchell Station. ○ The proposed Eden Prairie Town Center station is now a deferred station; the project will be laying the groundwork for the station, but not actually building it now. ○ Reduce station furnishings by 50%. ○ Reduce station art by 100%. ○ Reduce landscaping by 75%. ○ Reduce the number of light rail vehicles to be purchased by five. ○ Reduce OMF storage space to 30 LRVs. ○ Track modifications at Shady Oak Station. ○ OMF and loop track modifications and value engineering. ○ Finance charge. ○ Change Park and Ride accommodations.
6.	<p>Schedule and Next Steps</p> <ul style="list-style-type: none"> ● Written comments on the bridge designs are due August 23rd. ● A date has not yet been set for the next consultation meeting, but it will likely be in September. ● MOA development will begin in the next or a subsequent meeting. Due to some schedule challenges, discussion of the MOA stipulations will begin before FTA makes a final determination of effect.

	ACTION ITEMS:	PERSON RESPONSIBLE:	DEADLINE:
1.	Follow up with the City of Minneapolis and begin planning for mitigation through interpretation incorporated into the Royalston Station Design.	Greg Mathis	
2.	Consider the bridge design options after the meeting and provide any additional comments to SPO	Consulting parties	8/23