

Executive Summary

The Metropolitan Interstate Council (MIC), a division of Arrowhead Regional Development Commission (ARDC), and Alliant Engineering, Inc. have been leading a planning endeavor to improve the parking, traffic and wayfinding experiences during medium and large-scale events at the Bayfront/DECC/Canal Park area in Duluth, Minnesota. The “I-35/Bayfront/DECC/Canal Park area Traffic Modeling and Special Event Traffic Control Plan” project was initiated by documenting the existing event information and developing a short-term traffic control plan for a pilot test during the 2018 holiday season. The project then concluded an event parking, traffic and wayfinding analysis. This report summarizes the key findings from the analysis as well as recommendations for immediate and long-term strategies/improvements.

Key recommendations are summarized below:

Parking Management and System Improvements

- Use marketing outreach to advertise downtown parking options
- Establish Bayfront Area event parking management committee for planning, operation and system coordination
- Reduce processing time at parking entrances by using multiple entrance lanes and payment points
- Utilize apps to share information on events and parking availability; collaborate with Park Duluth app
- Assign parking at the DECC to reduce entrance queuing into the ramp
- Implement a preferential or prepaid parking strategy
- Upgrade parking systems and coordinate parking management and share facility occupancy

Wayfinding, Parking Access, and Vehicle Traffic Improvements

- Install traffic signs to split Bayfront Park and DECC traffic, utilize Harbor Drive, alternative/multiple parking entrance, and slip ramp
- Utilize apps to share information on events, traffic condition and parking availability; collaborate with Park Duluth app
- Improve signal timing and operations of I-35 ramp terminal intersections at 5th Avenue West and Lake Avenue
- Install Dynamic Message Sign (DMS) on local roadways and develop wayfinding messages and operation plans for events
- Install static freeway & local streets signs for downtown and Canal Park parking
- Separate traffic exiting the NB/EB I-35/5th Avenue ramp to mitigate right turn congestion, by installing dynamic lane assignment sign for the right lane to be either shared through/right or right-turn only
- Reconstruct roadway and sidewalk of 5th Avenue West, potentially add a bike lane, including a potential covered pedestrian walkway along 5th Avenue West
- Reconfigure northbound/eastbound 5th Avenue West exit off I-35 to add an additional right turn lane

Transit-related Improvements

- Use marketing outreach to advertise alternative transportation options
- Add dedicated bus lane via 5th Avenue West and Harbor Drive; Implement Transit Signal Priority (TSP); Add Park and Ride (P&R) shuttle options

Pedestrian-related Improvements

- Use marketing outreach to advertise downtown parking & alternative transportation options
- Install pedestrian access control at Bayfront Park entrance on Harbor Drive
- Improve signal timing and operations of I-35 ramp terminal intersections at 5th Avenue West and Lake Avenue to maximize pedestrian green time
- Use one vehicle lane on 5th Avenue West for pedestrian ingress
- Install permanent/temporary pedestrian wayfinding signs along 5th Avenue West, Harbor Drive and the pedestrian skyway
- Improve pedestrian access in the Bayfront area, including a potential pedestrian amenity upgrade on the portion of the Cross City Trail that connect Bayfront Park (near Railroad Street) and downtown Duluth (near Michigan St)
- Reconstruct the roadway and sidewalk of 5th Avenue West, including a potential covered pedestrian walkway along 5th Avenue West

Bicycle-related Improvements

- Use marketing outreach to advertise downtown parking & alternative transportation options
- Improve bicycle access in the Bayfront area by installing bicycle facilities
- Reconstruct the roadway and sidewalk of 5th Avenue West, potentially add a bike lane

Truck Traffic Considerations

Due to the large present of truck traffic in and around the Rice Point and Bayfront areas, the following should be taken into consideration to ensure that the trucking industry is not negatively impacted by the deployment of the recommendations:

- Turn restriction exemption
 - When a no left turn sign is set up on the looping ramp approach at Railroad Street from Harbor Drive, an “Except Trucks” panel can be added to allow trucks to access local business.
- Accommodate truck turning radius with permanent roadway design and temporary traffic control; maintain truck access during construction and setup/take-down
 - Accommodating the truck turning radius and access is a standard engineering practice and based on a preliminary assessment there appears to be no major constraints for these accommodations under the above strategies.
 - During events that attract large amount of traffic onto Railroad Street (e.g. Bentleyville) and/or draw ingress traffic before the end of business days, additional traffic control agents or traffic controls can be deployed at local business (e.g. Compass Minerals) driveway along Railroad Street to facilitate truck movement entering and exiting the site.
- “Recommended Truck Route”, “Avoid Conflict with Pedestrians and Bicycle” and “Expect Traffic Delay” messages during large-scale events

Long-term Project Recommendation

- For large-scale and overlapping events, recommended truck routes can be developed and communicated with trucking businesses for trucks to avoid congestion and potential conflicts with event traffic.
- Traffic delay should be expected before and after Bayfront area event if trucks choose to operate during those time windows.
- Truck traffic delay must be considered as a decision-making factor for the dedicated bus lane on 5th Avenue West and Harbor Drive, when it is ready for further evaluation in 5-7 years.