

# Appendix:

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**PART 2 OF 3**

**MILWAUKEE ARENA**

# **Traffic Report**

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**FINAL**

**October 23, 2015**

# CHAPTER 1 - INTRODUCTION & EXECUTIVE SUMMARY

HNTB Corporation was contracted by the Milwaukee Bucks to conduct a traffic study in conjunction with the planned construction of a new Arena and the planned development of various residential, office and retail uses. The Arena and other proposed uses are located in an eight block area of downtown Milwaukee generally within the boundaries of Old World 3<sup>rd</sup> Street, 6<sup>th</sup> Street, McKinley Avenue and State Street. The traffic report assesses the future traffic needs given the trip generation created by the proposed development. Recommended intersection geometry and signal control improvements are presented based on the results of the traffic study.

## PART A - PURPOSE OF REPORT AND STUDY OBJECTIVES

The purpose of this report is to assess the peak hour traffic operations at the study area intersections in the vicinity of the proposed development and to recommend intersection improvements necessary that would be expected to achieve Level of Service (LOS) D or better operations or to at least maintain the existing level of service into the future. LOS D is the traffic industry standard and represents the traffic conditions generally acceptable during peak hour operations. The study reviews PM, Pregame and Postgame traffic operations at intersections around the proposed Arena development.

## PART B - EXECUTIVE SUMMARY

The planned Milwaukee Bucks Arena is expected to be located one block north of the existing BMO Harris Bradley Center, and provide a similar seating capacity to the existing facility. Additional developments in the vicinity of the planned Arena, relocation of parking facilities and modifications to the existing transportation network are also proposed. This report documents the development of traffic and pedestrian demands and the subsequent operational analysis on over 20 intersections in the vicinity of the planned Arena.

Traffic demands are projected to increase within the study area due to both the proposed developments and the application of an assumed 0.5% annual growth of background traffic traveling through the study area. 4th Street is proposed to be vacated between Highland Avenue and Juneau Avenue as part of the Arena project, which would redistribute traffic to other streets in the area.

### Existing LOS Issues

This analysis identifies traffic signal or geometric improvements to maintain acceptable LOS, or maintain the pre-existing Level of Service (LOS) conditions. Operational analysis of the study area intersections identified two intersections that have existing intersection-level LOS issues.

- The intersection of McKinley Avenue and 6th Street has LOS F conditions in the Postgame condition and is projected to still have LOS F with either alternative circulation pattern for the Block 7 parking structure between McKinley Avenue and Juneau Avenue.

- Interstate Highway (IH) 43 SB ramp terminal intersection with Fond du Lac Avenue also experiences LOS F in the existing condition and is projected to continue to operate at LOS F under the proposed condition.

### **Projected LOS Issues**

Below is a list of intersections that are projected to observe LOS E or worse conditions and require intersection geometry improvements, signal phasing improvements, signal timings improvements or additional services.

#### Intersection Geometry Improvements Necessary – Phases I, II & III

Intersections that have both heavier traffic volumes and nearby parking structures, which contribute to projected level of service issues include the following intersections. Intersection geometry improvements that are expected to be needed in all three phases (Phase I, II and III) are discussed below.

- McKinley Avenue and 6th Street intersection is projected to be directly affected by the operation of the proposed parking structure in its southeast quadrant, along with how vehicles are expected to access and egress that parking facility. Two operational plans have been identified for 5th Street between McKinley Avenue and Juneau Avenue. Each would impact McKinley Avenue and 6<sup>th</sup> Street in different ways, depending on the final design and operation of the adjacent parking structure in Block 7.
- Juneau Avenue and 6<sup>th</sup> Street intersection is projected to be directly affected by operations of the proposed parking structure in its northeast quadrant. The proposed Juneau Avenue cross-section reduces this intersection's lane geometry to have one eastbound through lane and one westbound through lane, along with one westbound right turn lane. The addition of a westbound left turn bay is recommended. Eastbound protected left turn phasing and westbound protected left turn phasing are recommended for Phases II and III. The proposed eastbound valet lane is recommended to begin where feasible to the east of the westbound left turn bay end taper.
- Highland Avenue and 6<sup>th</sup> Street intersection is projected to be directly affected by the operation of the proposed parking structure in its southeast quadrant. The design of the Block 2 parking structure has not been finalized yet. Currently, the main entrance is assumed to be along 5<sup>th</sup> Street, which would be expected to force many vehicles to perform the northbound right turn movement along 6<sup>th</sup> Street onto Highland Avenue during the Pregame time period. Therefore, investigation into a second right turn lane should be conducted. Options include either striping one of the two northbound through lanes as a shared through/right turn lane or utilizing temporary traffic control devices such as traffic cones along with police officer traffic control during the Pregame peak hour to route one of the two northbound through lanes as a second right turn lane. The exact needs for this intersection will become clearer when a more detailed design of the Block 2 parking facility exists.

Signal Phasing, Signal Timing & Lane Re-striping Improvements Necessary– Phases I, II & III

The following intersections require changes to signal phasing and signal timing in all three phases (Phases I, II and III) to achieve acceptable traffic operating conditions in the future with the proposed development in place or to maintain pre-existing LOS traffic operating conditions:

- McKinley Avenue and 4<sup>th</sup> Street intersection includes recommendations to remove the current northbound left turn protected signal phase and install an eastbound left turn protected signal phase. With the closure of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue reduced traffic demands occur along 4<sup>th</sup> Street, which removes the need for a northbound left turn protected phase and presents an opportunity to reduce the northbound approach to one left turn bay and one shared through/right turn lane. However, future development in the area is anticipated to increase eastbound left turn volumes, which would utilize the recommended protected phase.
- McKinley Avenue and Old World 3<sup>rd</sup> Street intersection includes a recommendation to install a westbound left turn protected signal phase. An eastbound left turn protected signal phase is already in place at this intersection. Future development in the area, along with the removal of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue increase the traffic that is expected to utilize the westbound left turn movement at this Old World 3<sup>rd</sup> Street intersection.
- Juneau Avenue and Old World 3<sup>rd</sup> Street includes a recommendation to re-stripe the westbound approach's two through lanes to be one through lane and one right turn only lane. Current plans include the westbound Juneau Avenue cross-section, west of Old World 3<sup>rd</sup> Street, to include one through lane and one continuous right turn lane. Therefore, re-striping the westbound Juneau Avenue approach at the intersection with Old World 3<sup>rd</sup> Street from two through lanes to one through lane creates better lane continuity with the downstream cross-section. In addition to the lane re-striping, eastbound protected left turn phasing is recommended in Phase III.
- State Street and 6<sup>th</sup> Street intersection includes a recommendation to remove the northbound left turn protected signal phase during the Postgame time period, depending on the final design of the Block 2 parking structure. The higher volumes traveling southbound and westbound at this intersection during the Postgame time period are expected to require more green time. It should also be noted that State Street is currently one-way westbound in the project study area. Two-way State Street operation would be expected to provide improved traffic access to better develop Block 2 and Block 3 for mixed-use development as proposed to be retail, office, residential and hotel uses. In addition, the two-way traffic operation would support the spirit of the urban design principles identified in the General Planned Development (GPD) document. Pending the final design of the parking structure ingress and egress on Block 2, a two-way State Street would likely improve the traffic flow at intersections near Block 2, and ultimately improve access to the new arena. A two-way State Street would also likely improve the connectivity of the new arena, ancillary development and other Wisconsin Center facilities to the cultural and entertainment facilities east of the Milwaukee River. Converting State Street to two-way operation should be examined further when the final design of the Block 2 parking structure is completed.

### Signal Timings Improvements Only Necessary

The following intersections require changes to signal timing to achieve acceptable traffic operating conditions in the future with the proposed development in place or to maintain pre-existing LOS traffic operating conditions. The specific phases and peak hours where signal timings adjustments are expected to be needed are also identified.

- Juneau Avenue and 4<sup>th</sup> Street intersection includes an opportunity to reduce the southbound approach to one left turn bay and one right turn lane, because of reduced southbound traffic volumes caused by the proposed closure of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue. This intersection includes signal timings adjustments in all phases and peak hours.
- Fond du Lac Avenue & IH 43 SB ramp – minor signal timings adjustment in Postgame Phase I Postgame hour.
- Highland Avenue & Southbound IH 43 ramp – minor signal timings adjustment in Phases I, II and III of Pregame peak hour.
- Knapp Street & Water Street – minor signal timings adjustment in Phases I, II and III in all peak hours.
- Juneau Avenue & Water Street – minor signal timings adjustment in PM Phase III only.
- State Street & Water Street – minor signal timings adjustment in Phases I, II and III of PM peak hour.
- Kilbourn Avenue & 6<sup>th</sup> Street – minor signal timings adjustment in Phases I, II and III of PM and Pregame peak hours.
- Wells Street & 6<sup>th</sup> Street – minor signal timings adjustment in Phases II and III of PM peak hour.

### Additional Services Needed– Phases I, II & III

The following intersections are planned to be unsignalized, but are anticipated to require police officer traffic control before and after events at the proposed Arena during all three phases.

- McKinley Avenue and 5<sup>th</sup> Street
- Juneau Avenue and 5<sup>th</sup> Street
- State Street and 5<sup>th</sup> Street (assuming the parking structure on Block 2 exits onto 5<sup>th</sup> Street)

### **No Projected LOS Issues, No Improvements Necessary**

The following intersections do not need improvements to achieve overall intersection LOS D or better conditions during the PM, Pregame and Postgame peak hour or to maintain pre-existing LOS traffic operating conditions:

- Fond du Lac Avenue & Northbound IH 43 ramps
- Highland Avenue & Old World 3<sup>rd</sup> Street
- Highland Avenue & 4<sup>th</sup> Street
- State Street & 4<sup>th</sup> Street
- Kilbourn Avenue & 4<sup>th</sup> Street

### Block 7 Parking Structure Traffic Routing Alternatives

Two routing alternatives were analyzed for the proposed parking facility on Block 7 between McKinley Avenue and Juneau Avenue. The main access to the parking facility is currently planned to be located along 5<sup>th</sup> Street. The two parking facility access alternatives are the following:

1. Two-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate with a two-way 5<sup>th</sup> Street. Parking facility traffic could enter and exit from northbound and southbound directions along 5<sup>th</sup> Street.
2. One-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate as one-way southbound only during Pregame and one-way northbound only during Postgame. This one-way requirement would route Arena traffic away from Juneau Avenue (and the Arena) during both Pregame and Postgame time periods onto McKinley Avenue. The one-way 5<sup>th</sup> Street operation would only take effect during Pregame and Postgame periods.

Both parking structure access alternatives present traffic operation results that benefit different nearby intersection approaches and turning movements. Generally, the two-way alternative allows traffic more routing options to and from the parking facility. However, the one-way alternative beneficially restricts parking facility traffic from accessing Juneau Avenue in front of the proposed Arena, which would likely include a high number of pedestrians. Furthermore, the one-way alternative may also require police officer traffic control at only one of the two 5<sup>th</sup> Street intersections at Juneau Avenue and McKinley Avenue, while additionally providing comparatively lower vehicle delays at two intersection approaches of particular interest to the City of Milwaukee – the northbound 6<sup>th</sup> Street approach at McKinley Avenue and the westbound Juneau Avenue approach at 6<sup>th</sup> Street. Therefore, the one-way access alternative is the preferred Block 7 parking facility access option during the Pregame and Postgame peak hours, pending final design of the parking facility. However, the two-way access alternative is preferred for the PM peak hour. The one-way access alternative is not preferred in the PM peak hour because it would force all of the commuters from the proposed large office component in Block 6 to exit onto Juneau Avenue, which is proposed to have a reduced cross-section with only one through lane in each direction. The two-way access alternative along 5<sup>th</sup> Street allows office commuters a second option during the PM peak hour to exit onto McKinley Avenue for better traffic operations and distribution in the study area.

## CHAPTER 2 - PROPOSED DEVELOPMENT

This chapter describes the proposed on-site development and the project study area.

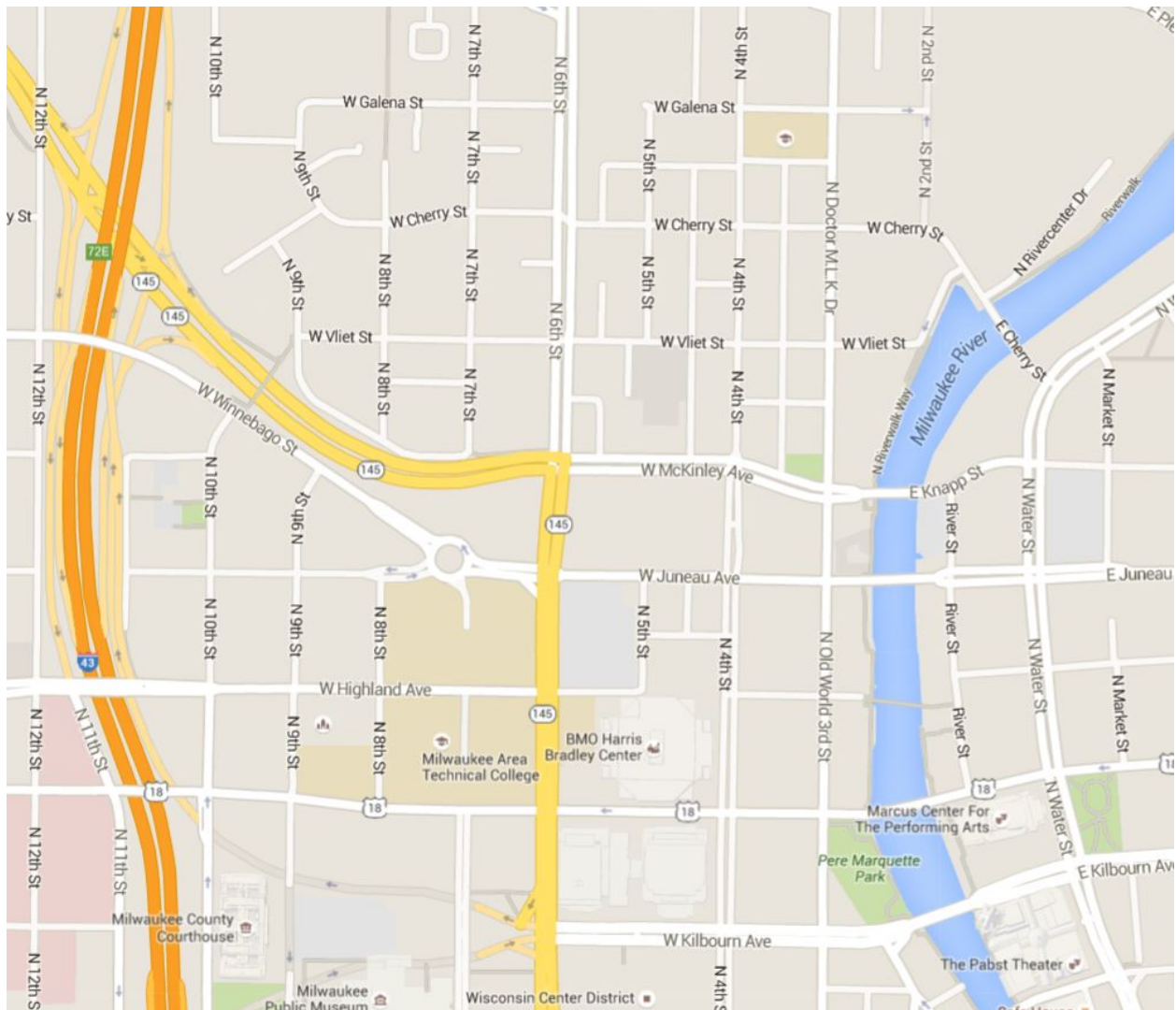
### PART A - ON-SITE DEVELOPMENT

The purpose of this section is to describe the proposed development site location, proposed site plan and the development phasing.

#### 1. Development Description and Site Location

Exhibit 2-1 shows the Site Location Map of the proposed development. It is located in the northwestern area of downtown Milwaukee generally between McKinley Avenue to the north, State Street to the south, 6<sup>th</sup> Street to the west and Old World 3<sup>rd</sup>/4<sup>th</sup> Street to the east. More specifically, the development site includes the current location of the Bradley Center and the vacant Park East Corridor land located just north of the Bradley Center.

### Exhibit 2-1: Site Location Map

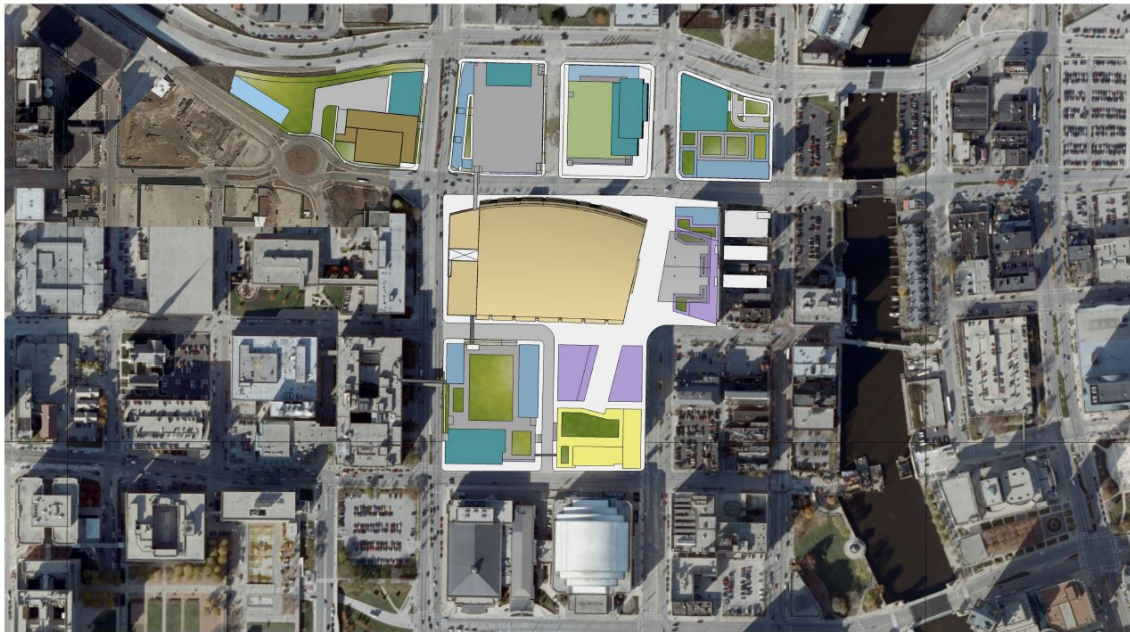


## 2. Land Use and Intensity

The proposed on-site development includes a new arena to host Milwaukee Bucks basketball games and other entertainment events. Other land uses planned for the development include apartments, a hotel, retail and office space, parking facilities and a practice facility for the Milwaukee Bucks.

## 3. Proposed Site Plan

Exhibit 2-2 shows the Site Plan, dated October 23, 2015. The proposed development includes eight proposed blocks

Exhibit 2-2: Site Plan**BUCKS ARENA DEVELOPMENT**

MASTERPLAN

espestein urban : architects  
10/23/2015 115423  
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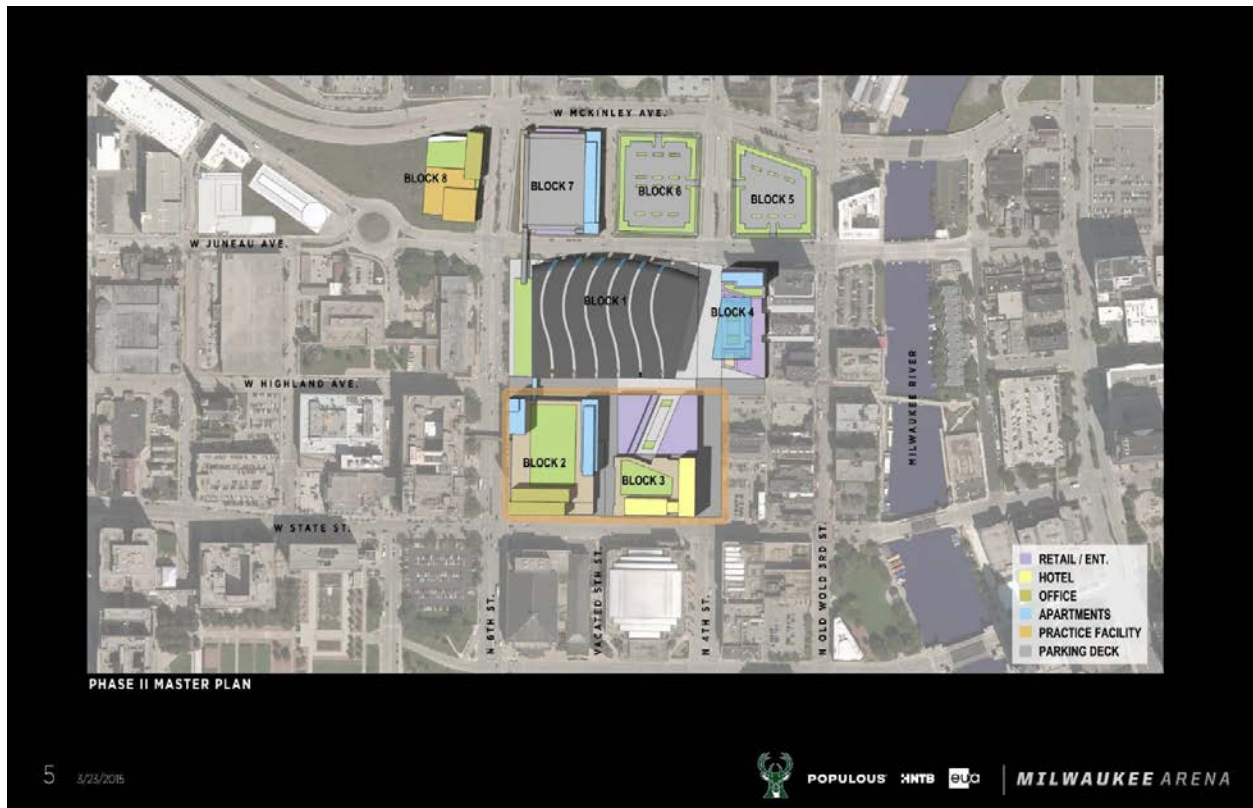
#### 4. Development Phasing and Timing

The development includes three phases expected to develop in Years 2018, 2022 and 2027, respectively. Exhibit 2-3A shows Phase I, which is comprised of Blocks 1, 4, 7 & 8. Exhibit 2-3B shows Phase II, which is comprised of Blocks 2 & 3. Exhibit 2-3C shows Phase III, which is comprised of Blocks 5 & 6. The specific land uses types and sizes are presented in Table 4-1 in a later chapter.

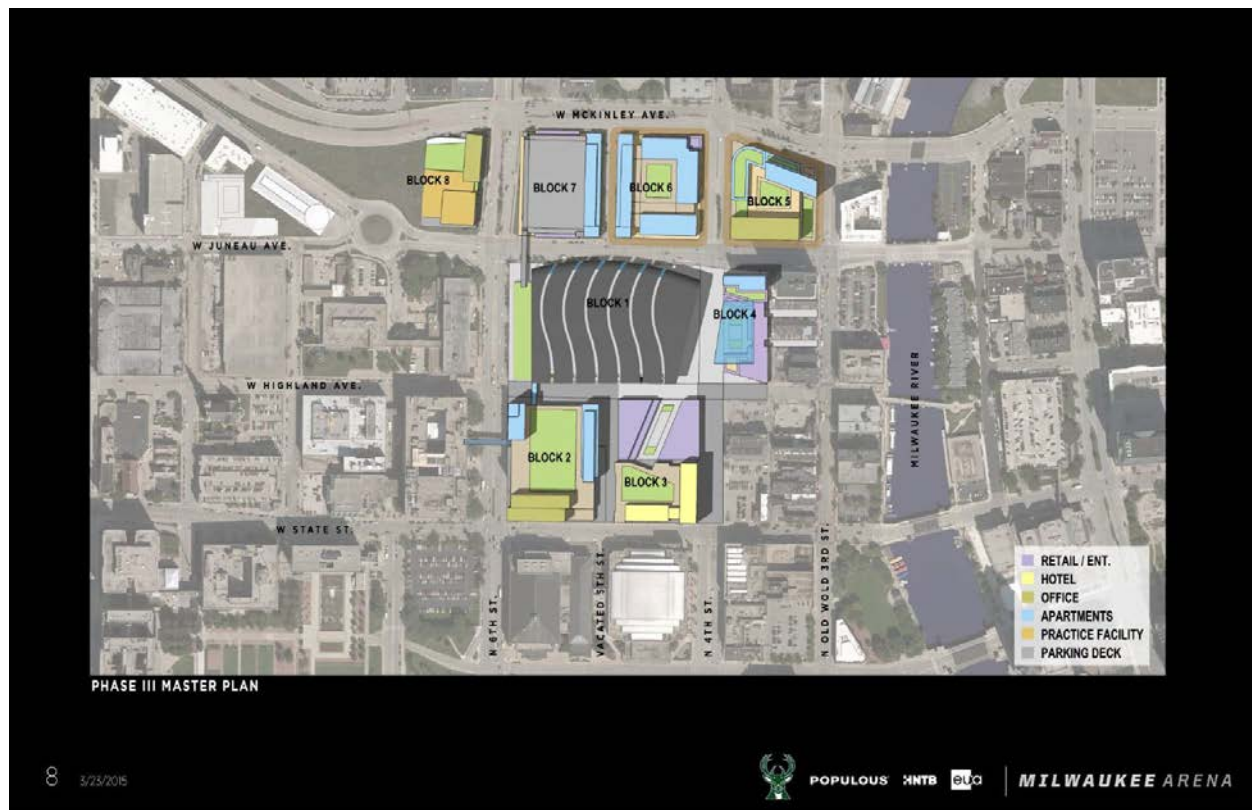
It should be noted that traffic circulation is expected to be modified as part of the proposed development. The segment of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue is proposed to be closed to vehicle traffic beginning in Phase I. This area is planned as a public plaza for use on Milwaukee Bucks gamedays and for other non-gameday events. Furthermore, it should be noted that 5<sup>th</sup> Street is expected to be open to all traffic in two new segments where 5<sup>th</sup> Street does not currently exist, between McKinley Avenue and Juneau Avenue and between Highland Avenue and State Street. The segment of 5<sup>th</sup> Street between Juneau Avenue and Highland Avenue is where the proposed arena is planned to be located.

Exhibit 2-3A: Phase I Proposed Development

## Exhibit 2-3B: Phase II Proposed Development



### Exhibit 2-3C: Phase III Proposed Development



## PART B - STUDY AREA

The purpose of this section is to describe the intersections that may be impacted by the proposed development, which make up the project study area.

### 1. Study Area Intersections

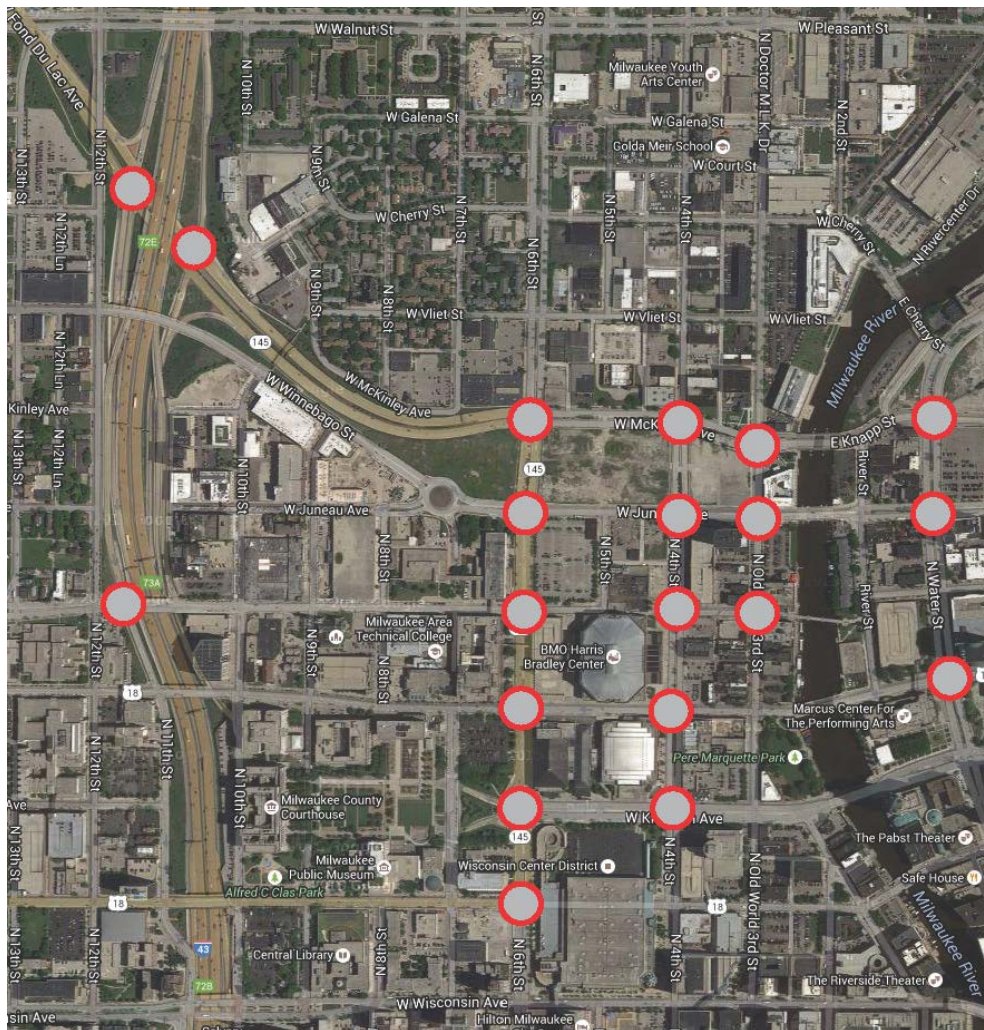
Twenty (20) existing intersections were determined to be within the influence area of the proposed development. All twenty (20) intersections were included in the traffic operations analysis. However, only twelve (12) of the twenty (20) are currently included in the micro-simulation traffic analysis. The list of intersections below identifies which eight (8) intersections were analyzed as part of the traffic operations analysis and not in the micro-simulation traffic analysis.

- Knapp Street & Water Street – Operations analysis only
- McKinley Avenue/Knapp Street & Old World 3<sup>rd</sup> Street
- McKinley Avenue & 4<sup>th</sup> Street
- McKinley Avenue/Fond du Lac Avenue & 6<sup>th</sup> Street
- Fond du Lac Avenue & Northbound IH 43 ramps
- Fond du Lac Avenue & Southbound IH 43 ramps

- Juneau Avenue & Water Street – Operations analysis only
- Juneau Avenue & Old World 3<sup>rd</sup> Street – Operations analysis only
- Juneau Avenue & 4<sup>th</sup> Street
- Juneau Avenue & 6<sup>th</sup> Street
- Highland Avenue & Old World 3<sup>rd</sup> Street – Operations analysis only
- Highland Avenue & 4<sup>th</sup> Street
- Highland Avenue & 6<sup>th</sup> Street
- Highland Avenue & Southbound IH 43 ramp – Operations analysis only
- State Street & Water Street – Operations analysis only
- State Street & 4<sup>th</sup> Street
- State Street & 6<sup>th</sup> Street
- Kilbourn Avenue & 4<sup>th</sup> Street – Operations analysis only
- Kilbourn Avenue & 6<sup>th</sup> Street
- Wells Street & 6<sup>th</sup> Street – Operations analysis only

Exhibit 2-4 below graphically shows the twenty (20) intersections that are considered study area intersections.

### Exhibit 2-4: Study Area Intersections



## PART C - OFF-SITE LAND USE AND DEVELOPMENT

The surrounding area outside of the proposed development area is downtown Milwaukee. Any new future land uses that will develop due to the construction of the proposed Site Plan area development are incorporated in the proposed development. Development in the vacant area of the former Park East corridor and in the future vacant area of the planned demolition of the Bradley Center are included as part of this proposed eight-block development. Therefore, no significant off-site development is incorporated as part of this traffic study. However, traffic growth due to any future development in the surrounding area outside of the proposed development area is incorporated by applying a 0.5% annual growth to Background traffic. Background traffic is identified as traffic in the study area not related to Arena events or to the proposed developments in the eight-block study area included in the Site Plan.

## PART D - SITE ACCESSIBILITY

The current site is largely served by IH 43, which is located about a one quarter-mile west of 6<sup>th</sup> Street. IH 43 interchanges are located at McKinley Avenue, at Highland Avenue and at Kilbourn Avenue. The McKinley Avenue/IH 43 interchange is a full access interchange serving both northbound and southbound IH 43 traffic. The Highland Avenue/IH 43 interchange serves only IH 43 traffic to and from the north. The Kilbourn Avenue/IH 43 interchange only serves northbound IH 43 traffic. Further to the south, an IH 43 southbound entrance ramp access is located at Wisconsin Avenue & 11<sup>th</sup> Street. In addition, IH 794 is located approximately one-half mile south of State Street. Several interchanges accessing IH 794 exist at Clybourn Street, James Lovell Street, St. Paul Avenue, 2<sup>nd</sup> Street and Plankinton Avenue. All interchanges are within one mile of the proposed development site and are expected to remain important for accessibility of vehicle traffic to and from the proposed development.

In addition, there are several city bus stops in the area around the proposed development site. Shuttles to and from local hotels and businesses are also used to transport large groups to events at the Bradley Center and are expected to continue to be used in conjunction with events at the proposed new arena.

Discussion of potential new and modified traffic signals and intersection sign controls are discussed in a subsequent chapter of this report where future traffic operations are analyzed.

## CHAPTER 3 - ANALYSIS OF EXISTING CONDITIONS

This chapter discusses the analysis of Existing traffic operations in the project study area.

### PART A - PHYSICAL CHARACTERISTICS

Twenty intersections surrounding the BMO Harris Bradley (Milwaukee Bucks) Arena were analyzed, from I-43 to Water St. and from Fond du Lac to Wells St. Of these, the 10 considered most challenging to the future Bucks Arena development underwent a closer evaluation through traffic microsimulation analysis to mitigate potential vehicle and pedestrian traffic concerns. Exhibit 2-4 previously identified the intersections to be analyzed. Exhibits 2-3A, 2-3B, and 2-3C show the planned transportation system, in Phases I, II, and III, respectively. These intersections were identified in a discussion between HNTB and the City of Milwaukee.

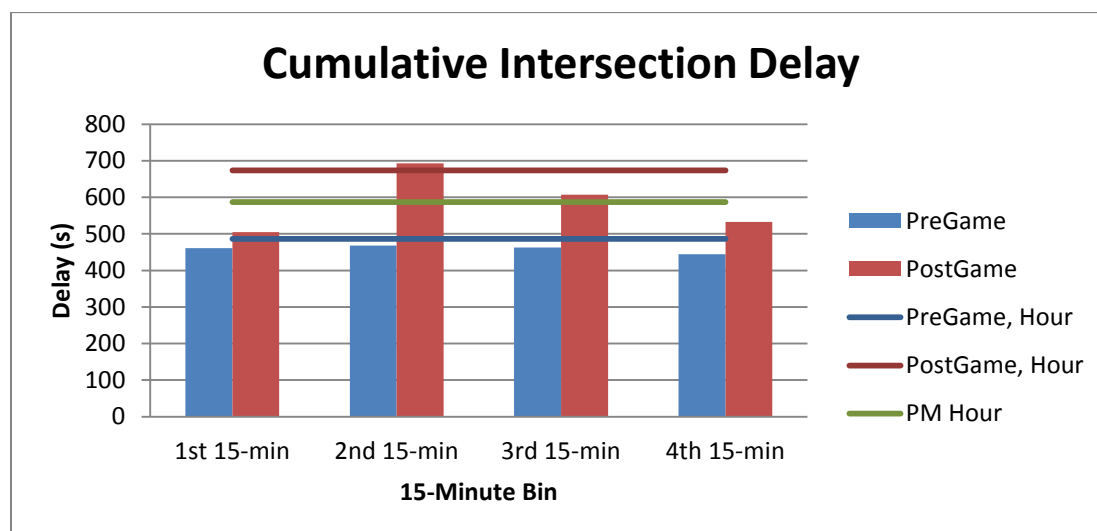
### PART B - TRAFFIC VOLUMES & LEVEL OF SERVICE

Based on traffic counts on April 23, 2015 during the PM Peak (4:45-5:45pm), the Pregame hour (6-7pm), and the Postgame hour (9:45-10:45pm), pedestrian and vehicle traffic was evaluated to determine the area of influence caused during a playoff game at the BMO Harris Bradley Center. This date was selected for the counts specifically due to the playoff status of the sold-out game against the Chicago Bulls, a worst-case traffic scenario due to the importance of the game and the proximity of the opposing team/fan base.

Exhibits 3-1 to 3-3 in the Appendix show the existing PM, Pregame, and Postgame intersection turning volumes in the study area.

Balanced vehicle counts and pedestrian crosswalk volumes were applied to Synchro models, with HCM 2010 (Highway Capacity Manual) reports then generated for both of these modes of travel. Additionally, Pregame and Postgame 15-minute hourly flow rates were analyzed within Synchro to further understand the atypical traffic peaks that happen before and after a special event such as a Milwaukee Bucks playoff basketball game (See Exhibit 3-4). Breaking these into 4, 15-minute hourly flow rate models vs. a cumulative 1-hour model with a traditionally calculated peak-hour factor (PHF; used to describe traffic distribution over time within analysis hour) applied has multiple advantages in the Pregame/Postgame situations. This assessment gives better detail in analyzing across intersections with imbalances due to parking facilities, as well as recognizes that not all movements may experience their worst traffic simultaneously. For reference, the full hour with PHF was included for PM/Pregame/Postgame. Full-hour delay is calculated based on the worst 15-minutes for each movement. Because the worst 15-minute period for each movement doesn't occur simultaneously, the full hour lines tend to represent higher than 15-minute component bins. Note, Pregame delay remains relatively flat, as PM commuter traffic declines, Arena traffic increases. Postgame delay experiences substantial peaking, as attendants tend to depart en masse as opposed to arrival patterns.

Exhibit 3-4: 15-Minute Intersection Delay Bins, HCM2000



### Vehicle Traffic Analysis

HCM 2010 data was exported for each of the 20 intersections for each period, PM/Pregame/Postgame. For vehicle operations, both movement-specific LOS and intersection LOS were taken into account for Exhibit 3-5 below. Select intersections had police manually directing traffic during the heaviest traffic periods for the Pre and Postgame, although ultimately the intersection analysis relies on a worst-case scenario of only the standard signal timing plans. The ring surrounding the intersection dot indicates the cumulative number of movements LOS E or F between PM/Pregame/Postgame. The fill indicates the worst intersection LOS during either the PM, Pregame, or Postgame conditions. Note, volumes for select movements, especially in the Postgame, were metered due to downstream congestion on Fond du Lac at IH 43. These lower metered volumes represent only those vehicles that got through, not the demand, and as such, operations are potentially positive. Intersections most affected are those along the McKinley Ave/Fond Du Lac Ave. Peak hour intersection LOS operations for each time period is shown in Table 3-1 below.

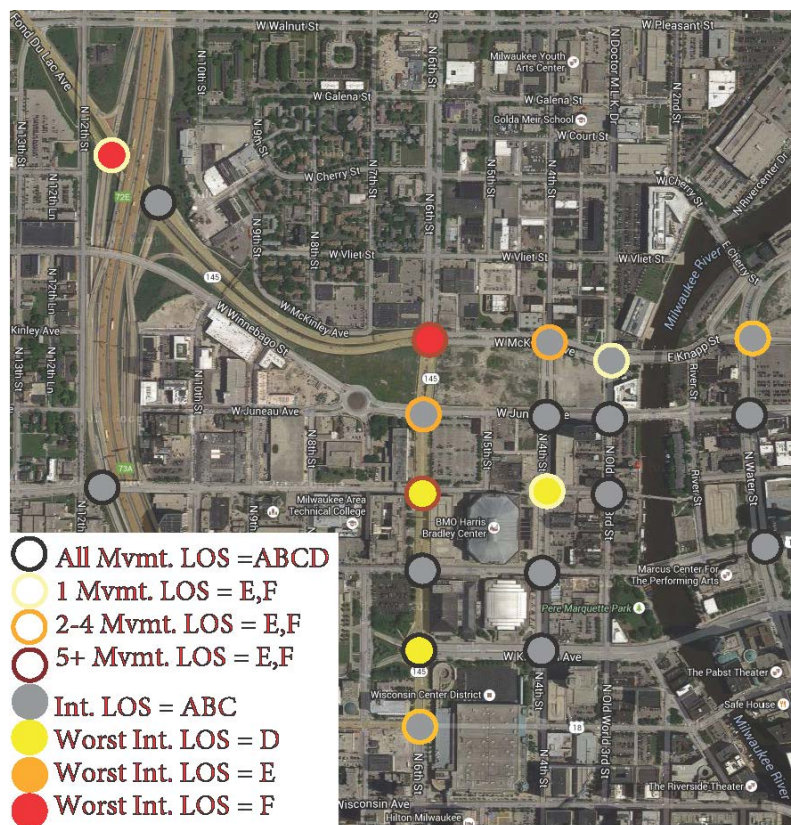
Table 3-1: Existing Intersection Peak Hour Traffic Operations

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Fond du Lac Ave & IH 43 SB ramps	Traffic Signal	Existing	PM	B	-	D	A	B	A	-	-	-	-	C	C	A
			Pregame	C	-	C	A	C	A	-	-	-	-	C	C	A
			Postgame	F	-	C	A	F	A	-	-	-	-	C	C	A
Fond du Lac Ave & IH 43 NB ramps	Traffic Signal	Existing	PM	B	A	A	-	-	B	A	D	D	-	-	-	-
			Pregame	A	A	A	-	-	B	A	C	C	-	-	-	-
			Postgame	B	A	A	-	-	B	A	C	C	-	-	-	-
Highland Ave & IH 43 SB ramp/ SB frontage road	Traffic Signal	Existing	PM	B	-	B	B	B	B	-	-	-	-	B	C	C
			Pregame	B	-	B	B	B	B	-	-	-	-	B	C	C
			Postgame	B	-	B	B	B	B	-	-	-	-	B	B	C
McKinley Ave & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	D	D	C	D	E	A	A	F	E	E	F	C	C
			Pregame	D	D	C	F	F	C	C	E	D	D	D	C	C
			Postgame	F	C	B	B	C	C	C	F	C	C	D	C	C
McKinley Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	F	B	C	E	D	D	B	A	A	C	C	C
			Pregame	B	C	B	C	E	A	A	B	A	A	C	C	C
			Postgame	B	B	B	B	A	A	A	C	A	A	C	C	C
McKinley Ave & Old World 3 <sup>rd</sup> Street	Traffic Signal	Existing	PM	C	E	A	A	C	C	B	C	A	A	C	D	D
			Pregame	B	B	A	A	C	B	B	B	A	A	C	D	D
			Postgame	B	A	A	A	B	B	B	B	A	A	C	C	C
Juneau Ave & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	D	C	A	C	C	C	D	C	C	F	B	B
			Pregame	B	C	C	A	C	C	C	C	B	B	C	B	B
			Postgame	C	E	C	A	C	C	D	B	B	B	C	B	A
Juneau Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	B	C	B	B	C	B	B	A	A	A	B	B	B
			Pregame	B	B	C	C	B	A	A	A	A	A	B	B	B
			Postgame	B	C	B	B	A	A	A	A	A	A	B	B	B
Juneau Ave & Old World 3 <sup>rd</sup> Street	Traffic Signal	Existing	PM	C	D	C	C	D	C	C	A	A	A	B	B	B
			Pregame	C	D	C	D	D	C	C	C	C	C	C	B	B
			Postgame	C	D	C	C	D	C	C	D	D	C	C	B	B
Highland Ave & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	D	F	F	C	E	E	A	C	B	B	E	D	C
			Pregame	D	F	F	C	F	F	A	B	A	A	D	C	C
			Postgame	C	C	C	B	E	E	A	B	A	A	C	C	C

Table 3-1 (continued): Existing Intersection Peak Hour Traffic Operations

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Highland Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	B	-	-	-	C	-	C	-	A	A	B	B	-
			Pregame	B	-	-	-	C	-	C	-	A	B	C	B	-
			Postgame	D	-	-	-	C	-	F	-	A	B	B	B	-
Highland Ave & Old World 3 <sup>rd</sup> Street	Traffic Signal	Existing	PM	A	C	C	C	C	B	A	A	A	A	A	A	A
			Pregame	A	C	C	C	C	B	A	A	A	A	A	A	A
			Postgame	B	C	C	C	C	B	A	A	A	A	A	A	A
State Street & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	D	-	C	B	B	B	C	B	-	-	C	C
			Pregame	C	D	-	C	C	B	C	B	B	-	-	C	C
			Postgame	B	C	-	C	C	B	B	B	B	-	-	C	C
State Street & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	B	-	-	-	B	B	B	B	B	-	-	A	B
			Pregame	B	-	-	-	B	B	B	C	C	-	-	B	C
			Postgame	B	-	-	-	B	B	B	B	B	-	-	B	D
Kilbourn Ave & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	D	C	C	A	D	C	D	D	D	C	D	D	A
			Pregame	C	D	C	A	C	C	D	B	C	C	C	C	A
			Postgame	C	C	C	A	C	D	D	C	C	C	B	D	A
Kilbourn Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	D	C	C	C	B	B	B	B	B	A	A	A
			Pregame	C	D	C	C	C	B	B	C	B	C	C	B	C
			Postgame	C	C	C	C	B	B	B	C	B	B	C	C	C
Wells Street & 6 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	E	B	B	C	C	D	C	C	B	E	C	C
			Pregame	C	C	B	B	C	C	C	C	C	C	D	B	B
			Postgame	C	C	B	B	C	C	C	B	B	B	B	B	B
Water Street & Knapp Street	Traffic Signal	Existing	PM	C	F	C	C	C	C	C	C	A	A	C	C	D
			Pregame	C	D	C	C	C	C	C	C	A	A	C	C	F
			Postgame	B	C	B	B	C	C	C	B	A	A	C	C	C
Water Street & Juneau Avenue	Traffic Signal	Existing	PM	B	D	D	D	D	C	C	C	A	A	B	C	B
			Pregame	B	C	B	B	C	C	C	B	A	A	B	C	B
			Postgame	B	C	B	C	D	C	C	B	A	A	B	B	B
Water Street & State Street	Traffic Signal	Existing	PM	C	-	-	-	C	C	C	C	C	-	-	D	D
			Pregame	B	-	-	-	B	B	B	B	B	-	-	B	B
			Postgame	B	-	-	-	B	B	B	B	B	-	-	B	B

Table 3-1 shows that the Fond du Lac Avenue intersection with IH 43 SB ramps and the McKinley Avenue intersection with 6<sup>th</sup> Street operate at an overall intersection LOS F in the existing Postgame peak hour. All other existing intersections observe overall intersection LOS operations of LOS D or better during the three peak hours. Various intersection traffic turning movements operate at LOS E or F conditions in the existing scenario.

Exhibit 3-5: Intersection LOS, Vehicles,  $\Sigma$  (PM, Pregame, Postgame)

## Pedestrian Traffic Analysis

Similar to vehicle LOS, pedestrian LOS was calculated from HCM 2010 via Synchro, exported, and summarized in Exhibit 3-6 below. The ring surrounding the intersection dot indicates sidewalk corner LOS of E or F, with yellow showing one corner and red indicating two or more. Corner crosswalk LOS is dependent purely on geometry; length, width, and curb radius. A large curb radius cuts further into the corner sidewalk queuing space; this reduces queuing space for pedestrians, increases crosswalk distance, and increases vehicle cornering speeds and therefore the perceived and real risk for pedestrians. Corner crosswalk LOS can be improved by reducing curb radius; a fix that doesn't compromise vehicle capacity. The fill within each intersection dot indicates circulation LOS, with yellow representing 1 crosswalk with LOS E or F, and red indicating 2 or more crosswalks with LOS E or F. Circulation LOS is dependent on both crosswalk width/length, as well as signal timing. While it may be challenging to add walk time for certain pedestrian crosswalks, widening it is another method to improve the circulation LOS. The takeaway for pedestrian LOS calculations is that it is much more dependent upon crosswalk width and sidewalk queue space, compared to vehicle operations that are more reliant on signal timing. Although components of pedestrian LOS still rely on signal timing, many pedestrian LOS issues can be resolved through basic sidewalk and crosswalk design.

Table 3-2: Intersections Recommended for Further Analysis

#1	Fond Du Lac & I-43 SB Ramp
#2	Fond Du Lac & I-43 NB Ramp
#3	Fond Du Lac/McKinley & 6 <sup>th</sup>
#4	McKinley & 4 <sup>th</sup>
#5	McKinley & Old World 3 <sup>rd</sup>
#6	Juneau & 6 <sup>th</sup>
#7	Juneau & 4 <sup>th</sup>
#8	Highland & 6 <sup>th</sup>
#9	Highland & 4 <sup>th</sup>
#10	State & 6 <sup>th</sup>
#11	State & 4 <sup>th</sup>
#12	Kilbourn & 6 <sup>th</sup>

## Existing Traffic Microsimulation Analysis

A traffic microsimulation analysis was conducted to assess the flow of traffic through the existing network and gauge the impact of event-going pedestrians cause on traffic operations within the study area. The VISSIM microsimulation software program was utilized with twelve of the twenty intersections. The following twelve intersections are included in the VISSIM microsimulation analysis:

- McKinley Avenue/Knapp Street & Old World 3<sup>rd</sup> Street
- McKinley Avenue & 4<sup>th</sup> Street
- McKinley Avenue/Fond du Lac Avenue & 6<sup>th</sup> Street
- Fond du Lac Avenue & Northbound IH 43 ramps
- Fond du Lac Avenue & Southbound IH 43 ramps
- Juneau Avenue & 4<sup>th</sup> Street
- Juneau Avenue & 6<sup>th</sup> Street
- Highland Avenue & 4<sup>th</sup> Street
- Highland Avenue & 6<sup>th</sup> Street
- State Street & 4<sup>th</sup> Street
- State Street & 6<sup>th</sup> Street
- Kilbourn Avenue & 6<sup>th</sup> Street

Two traffic microsimulation models were created to represent the existing conditions; one representing the PM peak & Pregame and the other representing the Postgame. Existing signal phasing and timings plans were input into the models to represent the control delay in the study area. Both models were calibrated using the GEH statistic. This statistic gauges the difference between the observed volumes compared to the modeled volumes. Calibration results of the existing conditions are provided in the Appendix. Within the PM peak & Pregame microsimulation models, PM peak volumes utilized consistent loading while the Pregame utilized profile loading to reflect traffic volume peaking characteristics observed in the traffic counts. The Postgame microsimulation model also utilized profile loading. For instance, during the Postgame the first 15-minute period would likely include the highest amount of vehicles exiting followed by subsequent 15-minute periods with waning traffic flows.

The existing traffic microsimulation model LOS results are shown in the Appendix. The results show that the microsimulation LOS results are similar to the traffic operations results shown in Table 3-1. The existing microsimulation results show some turning movements at the intersections of McKinley Avenue with 6<sup>th</sup> Street and with 4<sup>th</sup> Street operating at LOS E/F, and the westbound approach of Fond du Lac Avenue intersection with IH 43 Northbound Ramp operating at LOS F during the Postgame. Operations of LOS F are experienced due to significant lane changing in preparation of the southbound IH 43 entrance ramp. A significant amount of traffic is destined for southbound IH 43 which results in poor lane balance at the northbound ramp terminal. Most of the other turning movements in the existing microsimulation models are LOS D or better. The similarity between the existing traffic operations intersection LOS conditions (Table 3-1) and the existing microsimulation intersection LOS results suggest

that the existing microsimulation models are well calibrated and the multimodal auto-pedestrian interaction is represented in both software packages.

## Conclusions

Table 3-3 below highlights the different time periods of analysis, and when each network, pedestrian and vehicle, had the most issues with LOS. Important to note, LOS is calculated based on successful pedestrian and vehicle movements. As discussed previously the Postgame rapidly becomes over-saturated, metering vehicles and thus counts do not accurately capture demands. Based on a study by the Brooklyn Nets (*“Barclays Center TDM Effectiveness in Meeting Mode Split Objectives,”* June 7, 2013, which is provided in the Appendix), vehicle occupancy was estimated at 2.75 people/vehicle<sup>1</sup>, although not measured directly for the Bucks traffic analysis. This value of 2.75 was used to ensure sufficient attendees’ were accounted for via parking lot capacity.

Table 3-3: Total Movements System-wide of LOS E, F

TOTAL	Pedestrian Network	Vehicle Network
PM	1	16
Pregame	19	9
Postgame	11	5

## PART C - SOURCES OF DATA

Traffic counts were gathered via Miovision video traffic counting on April 23, 2015, and signal timings were provided by the City of Milwaukee.

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<sup>1</sup> *Barclays Center TDM Effectiveness in Meeting Mode Split Objectives*, June 7 2013. Table 3: Weekday Evening Nets Game Peak Hour Auto Trip Comparison, page 5.

## CHAPTER 4 - PROJECTED TRAFFIC

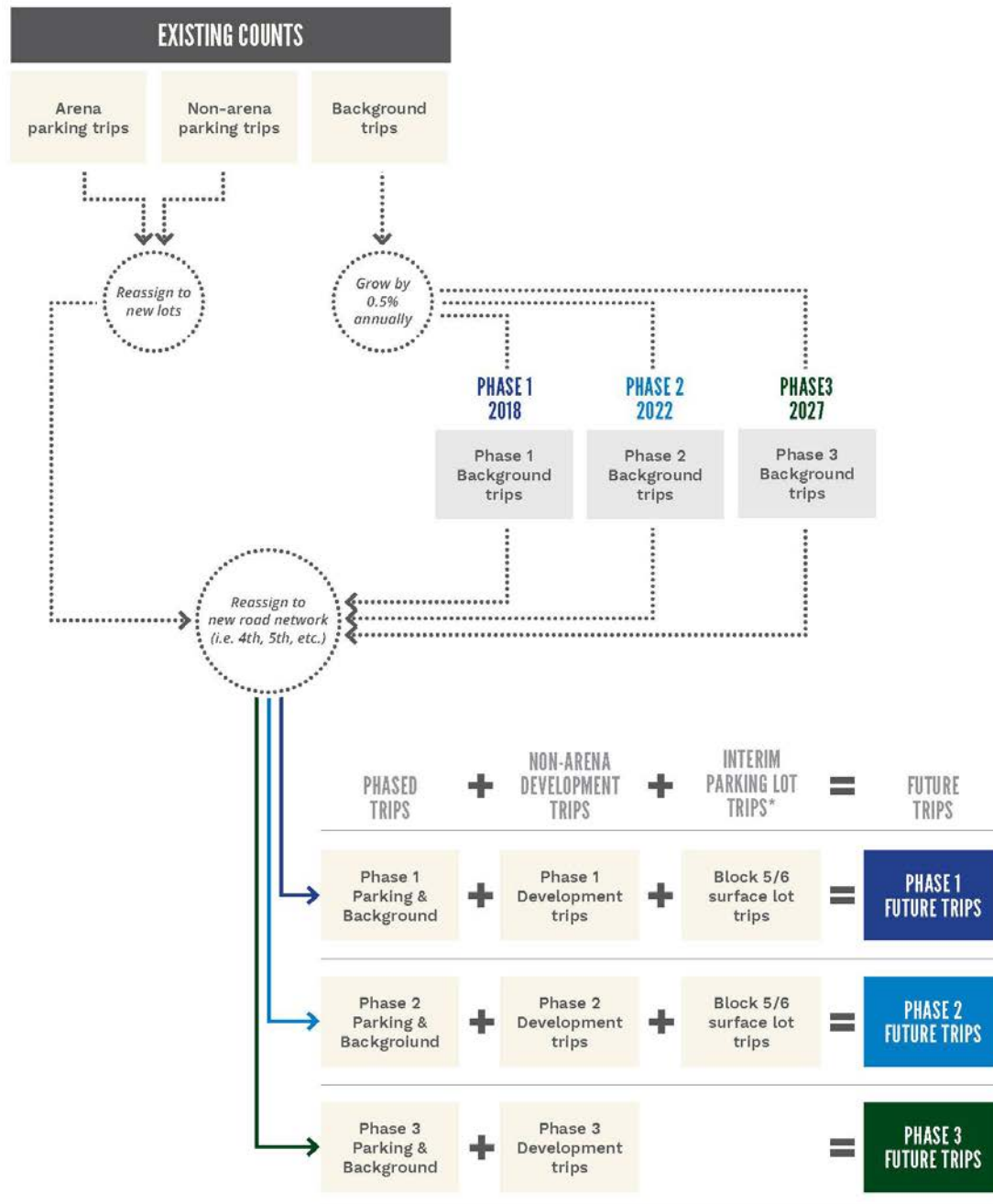
This chapter describes the expected trip generation of the proposed development and the calculation of future year traffic volumes.

The future year traffic volumes for this traffic study are calculated using a multi-step process. In summary, they include the following steps. The process is described in more detail in this chapter and subsequent chapters.

1. Collect intersection turning movement counts at twenty intersections within the core study area. Analyze the intersection volumes to estimate vehicles entering and exiting parking lot structures. These are considered “arena parking trips.” Subtract these “arena parking trips” from the Existing peak hour traffic volumes throughout the study area intersections to determine the Existing Year 2015 Background traffic volumes.  
Also, identify the Existing trips going to and from parking lots during the peak hours in the study area that are not related to a Bradley Center event. These are considered “non-arena parking trips,” which represent vehicles in the parking lot structures associated with non- event activities that are leaving the parking structure during the analysis period.
2. Apply an assumed annual 0.5% growth rate to the Existing Background traffic volumes to determine the Phase I, Phase II and Phase III future year Background traffic volumes. Phase I is in Year 2018 and includes three years of 0.5% annual Background traffic growth. Phase II is in Year 2022 and includes 7 years of 0.5% annual Background traffic growth. Phase III is in Year 2027 and includes 12 years of 0.5% annual Background traffic growth.
3. Re-assign the “arena parking trips” and the “non-arena parking trips” that utilize existing parking lots that are expected to be removed under the proposed development plans to new parking lots that are proposed to be constructed under development plans.
4. Adjust the routing and circulation of the Phase I, Phase II & Phase III Background traffic, and the arena and non-arena parking traffic, through the study area intersections of the proposed future network. This includes the proposed closure of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue, the proposed opening of Highland Avenue between 5<sup>th</sup> Street and 6<sup>th</sup> Street, and the proposed opening of 5<sup>th</sup> Street between McKinley Avenue & Juneau Avenue and between Highland Avenue & State Street to re-route traffic flow.
5. Determine Phase I, Phase II & Phase III non-arena development traffic volumes, respectively, and assign the non-arena development traffic to the proposed future network in the study area.
6. Add Phase I non-arena development trips to the Phase I Background traffic to determine Phase I future traffic volumes.  
Add Phase II non-arena development traffic to the Phase II Background traffic to determine Phase II future traffic volumes.  
Add Phase III non-arena development trips to the Phase III Background traffic to determine Phase III future traffic volumes.

Below is Figure 4-1, which is a simple flow chart that graphically shows the process used for calculating future year traffic volumes, which is summarized in the previous text.

Figure 4-1: Flow Chart of Process for Calculating Future Year Traffic Volumes



\* Interim parking lots that are redeveloped in Phase III. These lots provide parking in the study area to trips that are otherwise pedestrians in the study area.

## PART A - BACKGROUND TRAFFIC FORECASTING

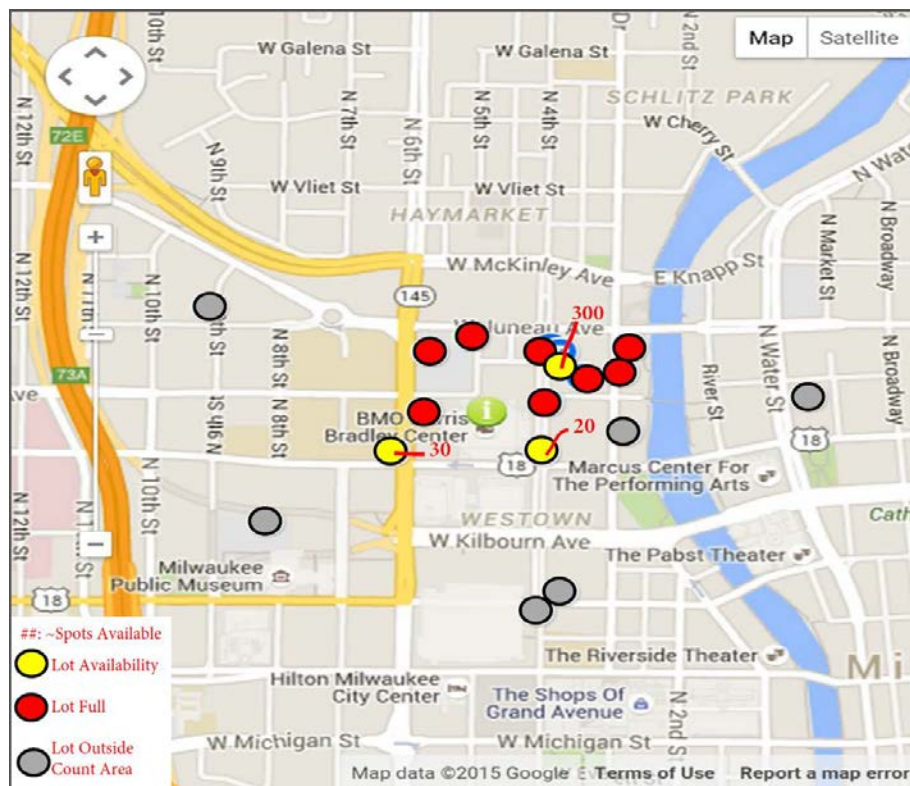
This section describes the process of determining the Background traffic.

- **Identify Arena Parking Trips and Non-arena Parking Trips**

The proposed development includes replacing the Bradley Center with a proposed arena of a similar seating capacity, therefore the trips related to the existing arena are not included in the Background traffic volumes. With the proposed arena seating capacity being similar to the existing arena, the number of vehicle trips coming to and from the proposed arena is not expected to increase in the future, therefore only the non-arena trips are expected to increase at the annual Background traffic growth rate. Therefore, the Existing trips related to the Bradley Center, i.e. the “arena parking trips”, were identified and then removed from the Existing traffic volumes at the study area intersections to determine the Existing Year 2015 Background traffic volumes, which were then balanced between intersections.

The Existing “arena parking trips” were identified by noting the imbalance of the Existing traffic volume counts between intersections in the study area. The imbalance was assumed to exist because of traffic entering and exiting parking lots located mid-block. During the PM and Pregame peak hours, the mid-block traffic imbalance was assumed to be due to inbound traffic and during the Postgame peak hour the mid-block traffic imbalance was assumed to be due to outbound traffic. The traffic imbalances were compared to the capacity of the parking lot at each location. The comparison showed that the sum of PM and Pregame traffic imbalances between intersections generally equated to the parking lot capacity at each location within about 5% except for the parking facility located along 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue. Figure 4-2 shows a graphic of this comparison.

Figure 4-2: Comparison of Existing Traffic Count Mid-block Imbalances to Parking Lot Capacities



Because the parking facility located along 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue is 300 vehicles short of its capacity based on the traffic imbalance between intersections, it is assumed to be caused by about 300 “non-arena” vehicles exiting the parking facility, probably during the PM peak hour after work. These 300 exiting vehicles reduce the mid-block imbalance by 300, thus canceling out the missing 300 inbound vehicles which would fill up the parking facility’s capacity. Therefore, it was assumed that 300 vehicles exited this parking facility during the PM peak hour and 300 entering vehicles were added to the number of vehicles entering the parking facility. These 300 exiting and 300 entering vehicles were already counted as part of the intersection traffic counts, but they are identified so that they can be later re-assigned to proposed parking facilities, because this particular parking facility is expected to be removed under the proposed development plans. The 300 entering vehicles are considered to be among the “arena parking trips” that are removed from the Existing traffic volumes to determine Existing Background traffic volumes. Similarly, the 300 exiting vehicles at this parking facility are considered to be the “non-arena parking trips.”

- **Apply the Annual Background Traffic Growth Rate**

After the Existing “arena parking trips” are removed from the Existing traffic volumes, the assumed Background traffic growth of 0.5% per year is applied to determine the Future Background traffic volumes. The Background annual growth rate value of 0.5% was used as a conservative value to represent potential redevelopment in the greater downtown Milwaukee area. Existing Background traffic is grown

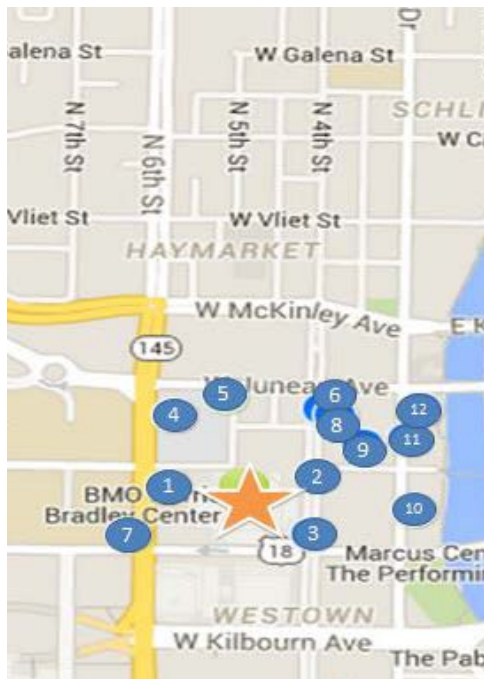
0.5% annually from Existing Year 2015 to Year 2018 to calculate Phase I Background traffic, to Year 2022 to calculate Phase II Background traffic and to Year 2027 to calculate Phase III Background traffic. Exhibits 4-1 to 4-7 in the Appendix show the Phase I, Phase II and Phase III Background peak hour intersection traffic volumes.

- **Re-assign the Arena Parking Trips and Non-Arena Parking Trips**

Because the proposed development plans call for some existing parking lots to be removed and new parking structures to be built and located elsewhere in the study area, the “arena parking trips” and the “non-arena parking trips” that utilize parking facilities slated for removal were re-assigned to new proposed parking facilities.

The proposed parking facilities are located in Block 2 and Block 7 (see Exhibits 2-2 and 2-3A, 2-3B, 2-3C). It should be noted that the number of existing parking spaces planned for removal under the development proposal is similar to the total of 2,704 parking spaces planned for the two new parking structures located in Block 2 (1,488 parking spaces) and Block 7 (1,216 parking spaces). Figure 4-3 below shows the existing parking lots in the project study area and their vehicle capacity. Note that the parking facilities labeled 1, 4, 5, 6 and 8 are slated for removal under the proposed development plans. These five existing parking facilities include a sum total of 2,293 parking spaces.

Figure 4-3 – Existing Parking Lots and Parking Capacities



Number	Lot/Structure	Address	Spaces
1	Bradley Center	1030 N. 6th Street	776
2	Turner Hall Lot	1034 N. 4th St.	54
3	Fourth and State Parking	1020 N. 4th St.	90
4	Amber Lot	1128 N. 6th St.	421
5	Bradley Center Lot	1150 N. 5th Street	72
6	1149 N. 4th St.	1149 N. 4th St.	31
7	6th and State St.	601 W. State St.	150
8	324 W Highland	324 W. Highland Blvd.	993
9	Lloyds Parking LLC	316 W. Highland Ave.	40
10	Vern's Parking 3rd & State	1030 N. Old World 3 <sup>rd</sup> St.	47
11	1110 N. Old World Third St (South Lot)	1110 N. Old World 3 <sup>rd</sup> Street	75
12	1124 N Old World Third St (West Lot)	1124 N Old World 3 <sup>rd</sup> St	34

Block 5 and Block 6 Surface Parking Lots during Phase I & Phase II

It should be noted that Phase I and Phase II include utilizing Blocks 5 and 6 as surface parking lots (see Exhibits 2-3A and 2-3B). For purposes of this traffic study, it is assumed that these Block 5 and Block 6 surface parking lots would be expected to fill to capacity on gamedays during Phase I and Phase II. Based on the existing 421 vehicle capacity of the surface parking lot at 1128 N. 6<sup>th</sup> Street, which is the southeast quadrant of the intersection of 6<sup>th</sup> Street and Juneau Avenue (see Figure 4-3), it is conservatively estimated that during Phases I and II, Blocks 5 & 6 would each carry a surface parking lot capacity of approximately 300 vehicles for a total of 600 vehicle parking capacity. The 600-vehicle capacity estimate is provided as a

worst case scenario, which may be slightly higher than what the final design plan shows when it is completed. In order to accommodate these surface parking facilities, 600 vehicles were assigned to and from these two surface parking lots during the Pregame and Postgame hours through the project area intersections. Access locations were assumed to be along Old World 3<sup>rd</sup> Street, 4<sup>th</sup> Street and 5<sup>th</sup> Street, because the assumed parking access locations for the parking facilities on Blocks 2 and 7 were also along the north-south streets. Traffic distribution was assumed to be similar to Pregame and Postgame traffic patterns coming into and out of the study area based on a screenline on the border of the project study area. This auto traffic distribution was calculated to be the following.

- 50% to/from the West
- 20% to/from the East
- 15% to/from the North
- 15% to/from the South

- **Re-route/Re-circulate the Background Trips and Parking Trips**

The proposed roadway network in the project study area includes some roadway segment closures that currently carry traffic as well as some new roadway segments that currently do not exist.

The roadway segment of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue is proposed to be closed under the development plans. In its place is a proposed public plaza for use on gamedays and also for special events on non-gamedays. It should be noted that 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue has a 2012 WisDOT annual daily volume count of 3,900 vehicles per day. The adjacent corridor to the west, 6<sup>th</sup> Street, has a 2012 daily count of 15,300 vehicles per day between Juneau Avenue and Highland Avenue. The adjacent corridor to the east, Old World 3<sup>rd</sup> Street, has a 2012 daily count of 5,200 vehicles per day between Juneau Avenue and Highland Avenue. 6<sup>th</sup> Street had functioned with over 22,000 vehicles per day in the past. Therefore, adequate daily capacity appears to be available on adjacent routes if 4<sup>th</sup> Street is closed between Juneau Avenue and Highland Avenue. According to the existing peak hour counts collected on the day of the sold-out Bucks playoff game that are used in this traffic study, the segment of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue carries 1,006 vehicles in the PM peak hour, 1,194 vehicles in the Pregame peak hour and 791 vehicles in the Postgame peak hour. These vehicles would be expected to divert to adjacent corridors such as Old World 3<sup>rd</sup> Street and 6<sup>th</sup> Street. According to the counts collected on the Bucks playoff gameday, Old World 3<sup>rd</sup> Street carries 1,096, 1,054 & 734 vehicles during the PM, Pregame and Postgame peak hours between Juneau Avenue and Highland Avenue. 6<sup>th</sup> Street carries 2,415, 1,748 & 1,138 vehicles in the PM, Pregame and Postgame peak hours between Juneau Avenue and Highland Avenue. Hourly volume traffic capacity is typically dependent on intersection operations. Later in the report, future intersection peak hour operations are analyzed in detail with 4<sup>th</sup> Street closed between Juneau Avenue and Highland Avenue. Future intersection operational analysis showed no lane geometric improvements were necessary at Old World 3<sup>rd</sup> Street and 6<sup>th</sup> Street intersection approaches due to the 4<sup>th</sup> Street closure.

The roadway segments of 5<sup>th</sup> Street between McKinley Avenue & Juneau Avenue and between Highland Avenue & State Street are expected to be open to traffic under the development plans. These segments of 5<sup>th</sup> Street do not currently exist because the segment between McKinley Avenue and Juneau Avenue is part of the vacant land in the former Park East Freeway corridor and the segment between Highland Avenue and State Street is part of the current Bradley Center footprint. The missing segment of 5<sup>th</sup> Street between Juneau Avenue and Highland Avenue is expected to be part of the proposed arena's footprint.

The Phase I, Phase II and Phase III Background traffic volumes, as well as the "arena parking trips" and the "non-arena parking trips", were re-assigned to the proposed future network given the proposed roadway changes. These re-assigned "arena parking trips" and "non-arena parking trips" were added to each of the Phase I, Phase II and Phase III Background traffic volumes, including the surface parking lot trips in Block 5 and Block 6 for the Phase I and Phase II Background traffic (described previously).

## **PART B - ON SITE AND OFF SITE DEVELOPMENT TRAFFIC FORECASTING**

This section describes the on-site development trip generation.

Any future land uses that are expected to develop due to the new Arena are included in the adjacent blocks incorporated in the proposed development. Development in the vacant area of the former Park East corridor and in the future vacant area of the razed Bradley Center are included as part of this proposed eight-block development. Any off-site trip generation included in this traffic study is incorporated by applying a 0.5% annual growth to Background traffic. Background traffic is identified as traffic not related to Arena events or to the proposed developments in the eight-block study area included in the Site Plan.

This section continues the summary points listed at the beginning of Chapter 4, therefore this section details point #5.

- **Development Trip Generation**

The proposed development is comprised of a multi-use sports and entertainment facility (NBA Arena), apartments, retail and office space, parking facilities and a professional basketball practice facility. The proposed development covers eight blocks in the northern part of Westtown in downtown Milwaukee and is comprised of three separate phases. The previously shown Exhibits 2-2, 2-3A, 2-3B, and 2-3C display the site plan and the development land uses and phasing. The three development phases are the following:

- Phase I – Blocks 1, 4, 7 & 8 in Year 2018.
- Phase II – Blocks 2 & 3 in Year 2022.
- Phase III – Blocks 5 & 6 in Year 2027.

The development trip generation is based on trip rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition*. Table 4-1 on the following pages shows the PM, Pregame and Postgame peak hour trip generation for the proposed development. The peak hour trip generation rates in the ITE *Trip Generation Manual, 9<sup>th</sup> Edition* are only provided for AM and PM peak hours. Therefore, the Pregame and Postgame peak hours' trips generation were estimated. The process of determining the Pregame and Postgame trip generation is discussed in more detail below. It should also be mentioned that the "Shopping Center" designation in the ITE's *Trip Generation Manual, 9<sup>th</sup> Edition* was used for Retail land uses, the "General Office Building" designation was used for Office land uses and the "Apartment" designation was used for the Student Housing land use.

Table 4-1: Proposed Development Trip Generation

Block	ITE Code	Development Type	Size	Daily Trips	PM Peak Hour			Pregame Peak Hour*			Postgame Peak Hour*		
					In	Out	Total	In	Out	Total	In	Out	Total
1	--	NBA Arena	--	Not calculated. Assumed to replace trips generated by current Arena.									
2	220	Apartments	102 units	678	40	25	65	25	15	40	5	5	10
	220	Student Housing	62 units	412	25	15	40	15	10	25	5	5	10
	820	Retail	34,079 sq. ft.	1,455	60	65	125	45	50	95	10	10	20
	710	Office	102,438 sq. ft.	1,130	25	130	155	15	80	95	5	25	30
3	310	Hotel	300 rooms	2,451	90	90	180	55	55	110	15	15	30
	820	Retail	89,805 sq. ft.	3,835	160	175	335	120	135	255	30	30	60
4	820	Retail	58,962 sq. ft.	2,518	105	115	220	80	90	170	20	20	40
	220	Apartments	48 units	319	20	10	30	10	5	15	5	0	5
5	220	Apartments	215 units	1,430	90	45	135	55	25	80	15	10	25
	820	Retail	16,519 sq. ft.	705	30	30	60	20	25	45	5	5	10
	710	Office	101,795 sq. ft.	1,123	25	125	150	15	75	90	5	20	25
6	220	Apartments	55 units	366	25	10	35	15	5	20	5	0	5
	710	Office	350,000 sq. ft.	3,861	90	430	520	55	255	310	15	75	90
	820	Retail	12,000 sq. ft.	512	20	25	45	15	20	35	5	5	10
7	220	Apartments	70 units	466	30	15	45	20	10	30	5	5	10
	820	Retail	11,402 sq. ft.	487	20	20	40	15	15	30	5	5	10
	710	Office	36,621 sq. ft.	404	10	45	55	5	25	30	0	10	10
8	710	Office	30,000 sq. ft.	331	10	35	45	5	20	25	0	5	5
	--	Practice Facility	45,000 sq. ft.	Not calculated. Assumed no trip generation during PM, Pregame, & Postgame peak hours on gamedays.									
<b>TOTAL</b>				<b>22,483</b>	<b>875</b>	<b>1,405</b>	<b>2,280</b>	<b>585</b>	<b>915</b>	<b>1,500</b>	<b>155</b>	<b>250</b>	<b>405</b>

\*The Pregame and Postgame peak hour trip generation is calculated as a function of the PM peak hour trip generation. The process is explained in the next section.

### Arena and Practice Facility Development Trips

Because the BMO Harris Bradley Center is proposed to be replaced with a new arena, and the new arena is expected to have a similar seating capacity, the trip generation of the proposed arena in Block 1 was not included in the table. Instead the current arena trips were identified and removed from the Existing traffic volume counts and later added back in after the Background traffic growth rate was applied. This task was covered and explained in more detail previously in Chapter 4, Part A.

The Practice Facility development trips in Block 8 were not included because it is assumed that little to no activity, and therefore little to no traffic, would be generated by the Practice Facility when a Milwaukee Bucks home game is played at the proposed arena.

#### Pregame and Postgame Development Trip Generation Discussion

ITE's *Trip Generation Manual, 9<sup>th</sup> Edition* only includes land use trip rates for the AM and PM peak hours. Because the Pregame and Postgame peak hours occur after the PM peak hour, a proportion of the PM peak hour trips was calculated to develop the proposed development's Pregame and Postgame peak hour trip generation. Information about the hourly distribution of retail Shopping Center trips from the ITE's *Trip Generation Manual, 9<sup>th</sup> Edition* was used to develop the Pregame and Postgame retail trip generation and hourly data information from WisDOT's "WisTransPortal" website was used to develop the Pregame and Postgame non-retail trip generation. The WisTransPortal system serves the data management needs of Wisconsin Traffic Operations and Safety (TOPS) laboratory and provides traffic volume data as well as crash data.

The ITE *Trip Generation Manual, 9<sup>th</sup> Edition* section detailing the Shopping Center (820) retail land use includes a discussion of the hourly distribution of volumes to and from Shopping Center retail land uses based on survey data collection. The volume distribution is given in hourly intervals between 10am to 10pm. The data shows that the amount of incoming Shopping Center trips occurring during the Pregame peak hour (6-7pm) was equal to about 74% of the PM peak hour Shopping Center incoming trips. The data also shows that the amount of outgoing Shopping Center trips occurring during the Pregame peak hour was equal to about 78% of the outgoing PM peak hour Shopping Center trips. During the Postgame peak period (9-10pm was the closest time interval available), the amount of Shopping Center trips was equal to about 19% of the PM peak hour Shopping Center trips and about 17% of the outgoing PM Shopping Center trips. Therefore, these proportions were applied to the PM Retail incoming and outgoing development trips to calculate the Pregame and Postgame incoming and outgoing Retail development peak hour trips. The ITE Shopping Center hourly distribution table is shown in the Appendix.

Because no such hourly distribution data was available for Apartment, Hotel and Office land uses in the ITE's *Trip Generation Manual, 9<sup>th</sup> Edition*, hourly data was instead gathered from WisDOT's "WisTransPortal" website. The hourly data includes 24 hour traffic volumes collected at various sites in the State of Wisconsin. Hourly data was selected from four roadway segments that were available that most closely surround the Bradley Center. They include the following locations (the hourly datasets for these four locations are shown in the Appendix):

- 4<sup>th</sup> Street, north of State Street
- 6<sup>th</sup> Street, between State Street and Juneau Avenue
- Juneau Avenue, between 4<sup>th</sup> Street and 6<sup>th</sup> Street
- State Street, west of 6<sup>th</sup> Street.

The hourly data is divided into hourly intervals. The hourly intervals that are closest in time to the Pregame and Postgame peak hour time periods were 6-7pm and 10-11pm. The proportion of daily traffic that occurred during 6-7pm and 10-11pm at each of the four roadway locations was calculated and compared against the PM peak hour. The average of the four datasets shows that traffic volumes during the Pregame peak hour (6-7pm hourly interval) was about 60% of the PM peak hour traffic volume. The Postgame peak hour (10-11pm) was about 18% of the PM peak hour traffic volume. These proportions were applied to the PM peak hour Apartment, Hotel and Office land use trips to calculate the Pregame and Postgame peak hour development trips for these land uses.

### **Passby, Internally-Linked, Multi-Linked, Externally-Linked Trips**

Although some passby and linked trips could be expected from the proposed development, no passby and linked trips are included in the analysis. Without any passby and linked trips the traffic analysis is considered a more conservative assessment of intersection operations.

## **PART C - BUILD AND TOTAL TRAFFIC**

This section details the Future Build traffic volumes and continues the summary points listed at the beginning of Chapter 4, therefore this section describes point #6.

- **Future Build Traffic - Phase I, Phase II & Phase III**

### Trip Distribution

The proposed development trips were distributed to the future proposed network based on existing intersection turning volume proportional splits. Some blocks have limited or no parking, while other land uses, such as Block 2 and Block 7, have large parking facilities. Therefore, development traffic was assigned to the future network with parking locations in mind. If traffic is generated by a block with limited or no parking, it was assumed that the traffic would likely travel to and from a parking facility at the closest adjacent block (usually Block 2 or Block 7). The non-arena development trips from the separate block were added together by their Phase I, Phase II and Phase III phasing periods. Exhibits 4-8 to 4-14 in the Appendix show the peak hour Phase I, Phase II and Phase III non-arena development trips assigned to the study area network.

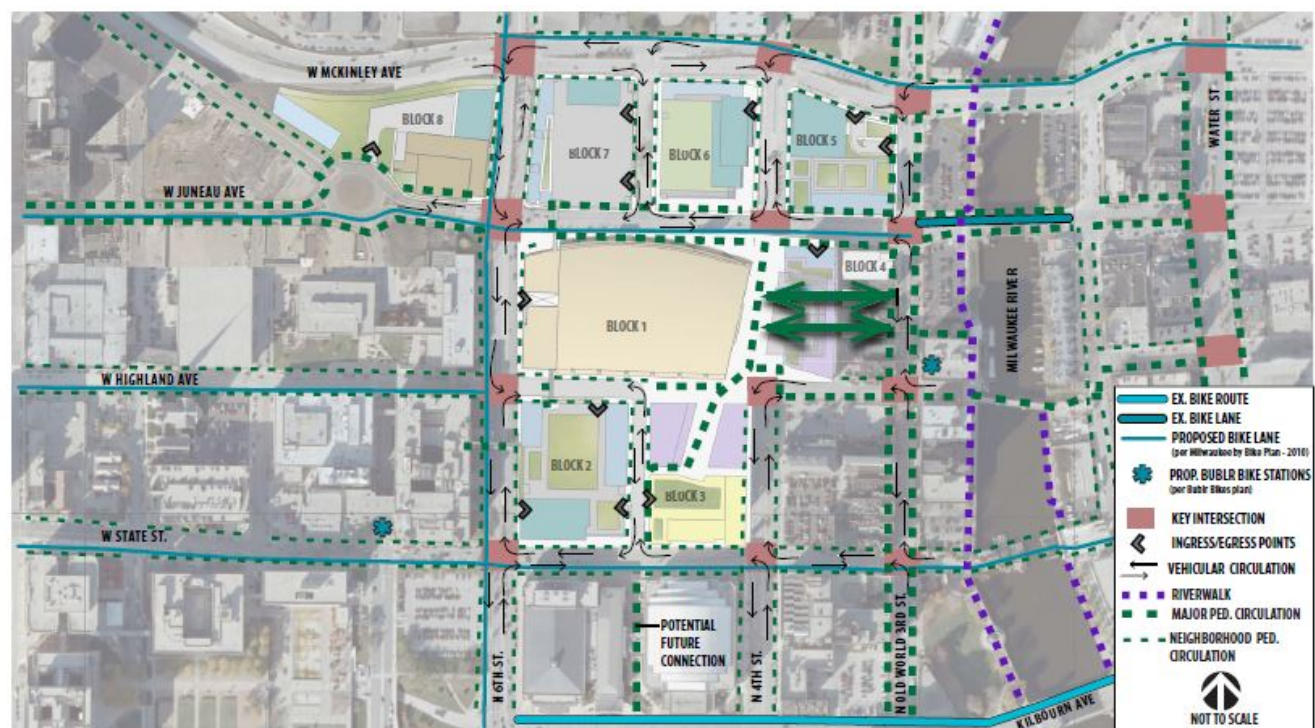
### Trip Assignment

The Phase I, Phase II and Phase III non-arena development trips are added to the Phase I, Phase II and Phase III Background traffic volumes (including the “arena parking trips” and “non-arena parking trips” as well as the surface parking lot trips in Block 5 and Block 6 during Phases I and II) to develop the Future Build Phase I, Future Build Phase II and Future Build Phase III traffic volumes. Exhibits 4-15 to 4-21 in the Appendix show the peak hour Phase I, Phase II, and Phase III Future Build Total traffic volumes.

## PART D - PEDESTRIAN DEMAND PROJECTIONS

Pedestrian data was collected for PM, Pregame and Postgame conditions during a Bucks basketball game. Existing analysis is identified in Chapter 3. Future pedestrian demands were forecasted by first accounting for the relocation of Arena and the associated parking structures. The proposed Arena has a seating capacity similar to the existing BMO Harris Bradley Center, therefore, the number of pedestrians destined to the new Arena is assumed to stay constant from the existing pedestrian demands. A conservative approach to vehicle trip generation was taken to assume limited or no pedestrian trips to new developments within the study area, making auto operations of the surrounding intersections a worst case analysis. Figure 4-4 shows expected auto, bike and pedestrian patterns in the project study area.

Figure 4-4 – Auto, Bike & Pedestrian Patterns



### BUCKS ARENA DEVELOPMENT AUTO, BIKE & PEDESTRIAN PATTERNS



## CHAPTER 5 - TRAFFIC AND IMPROVEMENT ANALYSIS

This section presents the Future peak hour traffic operations analysis during Phases 1, 2, and 3. Geometric and signal phasing/timing improvements are recommended based on intersection traffic operation needs. Intersection traffic operations improvements are identified through generally seeking to achieve LOS D or better conditions or by at least matching existing intersection traffic operations.

For purposes of this project, the PM and Pregame peak hours are analyzed under Phases 1, 2 and 3 scenarios, while the Postgame peak hour is only analyzed under Phase 1 scenarios.

### PART A - CAPACITY/LEVEL OF SERVICE OPERATIONAL ANALYSIS

This section presents the Future peak hour intersection traffic operations and the recommended improvements for Phases I, II and III. Synchro traffic engineering software was used with 2010 HCM (Highway Capacity Manual) methods to assess the future peak hour intersections traffic operations.

#### RECOMMENDED IMPROVEMENTS

The following are the recommended intersection geometry and signal phasing improvements for the study area intersections.

##### McKinley Avenue & 6<sup>th</sup> Street – Phases I, II & III

- The City of Milwaukee plans to install monotubes at McKinley Avenue and 6<sup>th</sup> Street. As part of this project, the City plans to install a lagging green phase for northbound left turn movements. In addition, the southbound left turn movement includes a leading protected-permitted phase. The eastbound and westbound left turn movements include permitted phasing under a flashing yellow signal. The Appendix includes the City of Milwaukee's proposed signal design graphic for this intersection. Future improved scenarios of this intersection include the proposed signal design phasing.
- Adjust traffic signal timings.

##### McKinley Avenue & 5<sup>th</sup> Street – Phases I, II & III

- Stop sign at northbound approach.
- Anticipate police officer traffic control needed during Pregame and Postgame peak hours.

##### McKinley Avenue & 4<sup>th</sup> Street – Phases I, II & III

- Remove northbound left protected phasing due to reduced traffic demands resulting from closure of 4<sup>th</sup> Street south of Juneau Avenue.
- Install eastbound left protected phasing.
- Northbound approach intersection lane geometry reduced to include a left turn bay with a shared through/right turn lane.
- Adjust traffic signal timings.

McKinley Avenue & Old World 3<sup>rd</sup> Street – Phases I, II & III

- Install westbound protected left turn phasing.
- Adjust traffic signal timings.

Juneau Avenue – between 6<sup>th</sup> Street & Old World 3<sup>rd</sup> Street – Phases I, II & III

- Juneau Avenue is proposed to be reduced to a three-lane cross section between 6<sup>th</sup> Street and west of Old World 3<sup>rd</sup> Street. The westbound direction includes one through lane and one continuous right turn lane. The eastbound direction includes one through lane (shared with left turning vehicles) along with a valet lane for pick up/drop off vehicles for events at the Arena that ends at 4<sup>th</sup> Street. East of 4<sup>th</sup> Street, the eastbound direction has two through lanes. The Appendix includes the proposed cross-section design for Juneau Avenue between 6<sup>th</sup> Street and Old World 3<sup>rd</sup> Street.

Juneau Avenue & 6<sup>th</sup> Street– Phases I, II & III

- Eastbound approach modified to one left turn bay, one through lane and one right turn bay to match the proposed one-lane eastbound Juneau Avenue cross-section described above.
- Westbound approach modified to one left turn bay, one through lane and one right turn lane.
- The eastbound segment, east of the intersection includes a valet lane that begins where feasible to the east of the proposed westbound left turn bay.
- Install protected left turn signal phasing for eastbound and westbound left turn movements in Phases II and III.
- Adjust traffic signal timings.

Juneau Avenue & 5<sup>th</sup> Street– Phases I, II & III

- Stop sign at southbound approach.
- Anticipate police officer traffic control needed during Pregame and Postgame peak hours.

Juneau Avenue & 4<sup>th</sup> Street– Phases I, II & III

- Southbound approach intersection lane geometry can be reduced to include a left turn bay with a right turn lane.
- Northbound leg is closed.
- Adjust traffic signal timings.

Juneau Avenue & Old World 3<sup>rd</sup> Street– Phases I, II & III

- Re-stripe the westbound approach to include one left turn bay, one through lane, and one right turn only lane. This intersection geometry will match better into the proposed westbound traffic cross-section along Juneau Avenue, west of Old World 3<sup>rd</sup> Street, which is proposed to include one westbound through lane and one continuous westbound right turn lane.
- Install protected left turn signal phasing for eastbound left turn in Phase III.
- Adjust traffic signal timings.

Highland Avenue & 6<sup>th</sup> Street– Phases I, II & III

- Westbound approach is assumed to include a left turn bay and shared through/right turn lane.
- Depending on the design of the parking structure on Block 2, investigate the Northbound approach geometry of one left turn bay, one through lane, one shared through/right turn lane and one right turn bay. The second right turn lane is needed to facilitate Pregame operations. Additionally, investigate the feasibility of a mid-block entrance to parking facility along 6<sup>th</sup> Street. Alternatively, maintain one left turn bay, two through lanes and one right-turn bay with police officer traffic control to facilitate ability for one through lane to include right-turning vehicles along with the dedicated right turn lane.
- Adjust traffic signal timings.

Highland Avenue & 4<sup>th</sup> Street– Phases I, II & III

- The northern leg is removed.
- The western leg will not allow traffic.
- The current traffic signal could be replaced with more pedestrian-friendly traffic controls, which could include stop sign control, yield control, pedestrian beacons, or other similar traffic controls.
- Only two traffic movements are allowed at this intersection: westbound left and northbound right.

State Street & 6<sup>th</sup> Street– Phases I, II & III

- Depending on the parking structure design on Block 2, remove northbound left turn protected phasing to facilitate Postgame operations, which require more green time for outgoing traffic.
- State Street is currently one-way westbound in the project study area. Two-way State Street operation would be expected to provide improved traffic access to better develop Block 2 and Block 3 for mixed-use development as proposed to be retail, office, residential and hotel uses. In addition, the two-way traffic operation would support the spirit of the urban design principles identified in the General Planned Development (GPD) document. Pending the final design of the parking structure ingress and egress on Block 2, a two-way State Street would likely improve the traffic flow at intersections near Block 2, and ultimately improve access to the new arena. A two-way State Street would also likely improve the connectivity of the new arena, ancillary development and other Wisconsin Center facilities to the cultural and entertainment facilities east of the Milwaukee River. Converting State Street to two-way operation should be examined further when the final design of the Block 2 parking structure is completed.
- Adjust signal timings.

**FUTURE NO BUILD ANALYSIS**

An intersection operations analysis was also conducted on study area intersections assuming no modifications associated with the Arena were made, including the relocation of parking structures, the associated land developments or the modifications to the roadway network. Traffic demands assumed existing Arena parking and grew the background trips by the 0.5% annual growth rate. This analysis

indicated that the following intersections would have LOS issues without the modifications identified as part of the planned Arena project.

- 1) 6<sup>th</sup> & McKinley: LOS E in Pre-Game
- 2) 6<sup>th</sup> & Highland: LOS E in PM

## FUTURE OPERATIONAL ANALYSIS

The twenty study area intersections, plus three additional intersections along the 5<sup>th</sup> Street corridor at McKinley Avenue, Juneau Avenue and State Street, were analyzed under future Phase 1, Phase 2 and Phase 3 conditions with improved intersection geometry, signal phasing and timings. Improvements were recommended in order to achieve LOS D or better conditions or to at least maintain existing LOS conditions. Tables 5-1 to 5-8 below present the future traffic operations analysis at the study area intersections, along with the existing traffic operations for comparative reference.

Four intersection approaches (Northbound 6<sup>th</sup> Street at McKinley Avenue, Northbound Old World 3<sup>rd</sup> Street at McKinley Avenue, Eastbound McKinley Avenue at Old World 3<sup>rd</sup> Street and Westbound Juneau Avenue at 6<sup>th</sup> Street) are denoted by a thick black border to identify the approaches that are of particular interest to the City of Milwaukee. These four approaches are discussed more in detail below.

It should also be noted that later in the report is a discussion comparing two potential access alternatives for the proposed parking facility on Block 7 along 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue. One alternative includes two-way operation along 5<sup>th</sup> Street, the other alternative includes one-way operation along 5<sup>th</sup> Street on gamedays before and after games only. A later section (Tables 5-9 to 5-11) compares the traffic operations of both alternatives, however the following LOS tables (Tables 5-1 to 5-8) include only the two-way 5<sup>th</sup> Street parking facility access alternative.

Table 5-1: Future Intersection Peak Hour Traffic Operations – IH 43 intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Fond du Lac Ave & IH 43 SB ramps • Adjust timings	Traffic Signal	Existing	PM	B	-	D	A	B	A	-	-	-	-	C	C	A
			Pregame	C	-	C	A	C	A	-	-	-	-	C	C	A
			Postgame	F	-	C	A	F	A	-	-	-	-	C	C	A
		Phase 1	PM	B	-	D	A	B	A	-	-	-	-	C	C	A
			Pregame	C	-	C	A	D	A	-	-	-	-	C	C	A
			Postgame	F	-	C	A	F	A	-	-	-	-	C	C	A
		Phase 2	PM	B	-	D	A	B	A	-	-	-	-	C	C	A
			Pregame	C	-	C	A	D	A	-	-	-	-	C	C	A
		Phase 3	PM	C	-	D	A	B	A	-	-	-	-	C	C	A
			Pregame	C	-	C	A	D	A	-	-	-	-	C	C	A
Fond du Lac Ave & IH 43 NB ramps	Traffic Signal	Existing	PM	B	A	A	-	-	B	A	D	D	-	-	-	-
			Pregame	A	A	A	-	-	B	A	C	C	-	-	-	-
			Postgame	B	A	A	-	-	B	A	C	C	-	-	-	-
		Phase 1	PM	B	A	A	-	-	B	A	D	D	-	-	-	-
			Pregame	A	A	A	-	-	B	A	C	C	-	-	-	-
			Postgame	B	A	A	-	-	B	A	C	C	-	-	-	-
		Phase 2	PM	B	A	A	-	-	B	A	D	D	-	-	-	-
			Pregame	A	A	A	-	-	B	A	C	C	-	-	-	-
		Phase 3	PM	B	A	A	-	-	B	A	D	D	-	-	-	-
			Pregame	A	A	A	-	-	B	A	D	D	-	-	-	-
Highland Ave & IH 43 SB ramp/ SB frontage road • Adjust timings	Traffic Signal	Existing	PM	B	-	B	B	B	B	-	-	-	-	B	C	C
			Pregame	B	-	B	B	B	B	-	-	-	-	B	C	C
			Postgame	B	-	B	B	B	B	-	-	-	-	B	B	C
		Phase 1	PM	B	-	B	B	B	B	-	-	-	-	C	C	C
			Pregame	C	-	B	B	C	B	-	-	-	-	B	D	D
			Postgame	C	-	B	B	B	B	-	-	-	-	B	C	C
		Phase 2	PM	B	-	B	B	B	B	-	-	-	-	C	C	C
			Pregame	D	-	B	B	C	B	-	-	-	-	B	D	D
		Phase 3	PM	C	-	B	B	B	B	-	-	-	-	C	C	C
			Pregame	D	-	B	B	C	B	-	-	-	-	B	D	D

Table 5-2: Future Intersection Peak Hour Traffic Operations – McKinley Avenue intersections

Intersection & Improvements	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
McKinley Ave & 6 <sup>th</sup> Street <ul style="list-style-type: none"> <li>City of Milwaukee: NBLT lag phase</li> <li>Adjust timings</li> <li>LOS issues identified without Arena development</li> </ul>	Traffic Signal	Existing	PM	D	D	C	D	E	A	A	F	E	E	F	C	C
			Pregame	D	D	C	F	F	C	C	E	D	D	D	C	C
			Postgame	F	C	B	B	C	C	C	F	C	C	D	C	C
		Phase 1	PM	D	F	C	E	F	C	D	F	D	D	E	C	C
			Pregame	D	D	D	F	F	B	B	E	D	D	D	C	C
			Postgame	F	D	B	B	C	C	C	F	C	D	C	C	C
		Phase 2	PM	D	F	C	F	F	C	C	E	E	E	D	D	D
			Pregame	D	C	C	F	F	A	A	E	D	D	D	C	C
		Phase 3	PM	E	F	D	F	F	C	C	E	E	E	E	D	D
			Pregame	D	C	C	F	F	A	A	F	D	D	D	C	C
McKinley Ave & 4 <sup>th</sup> Street <ul style="list-style-type: none"> <li>Remove NBLT protected phasing</li> <li>Add EBLT protected phasing</li> <li>Reduce NB approach to LT bay and shared TH/RT lane</li> <li>Adjust timings</li> </ul>	Traffic Signal	Existing	PM	C	F	B	C	E	D	D	B	A	A	C	C	C
			Pregame	B	C	B	C	E	A	A	B	A	A	C	C	C
			Postgame	B	B	B	B	A	A	A	C	A	A	C	C	C
		Phase 1	PM	C	D	A	A	C	D	D	B	B	B	C	C	C
			Pregame	B	C	A	A	C	D	D	B	B	B	C	C	C
			Postgame	C	C	C	C	B	C	C	C	B	B	B	B	B
		Phase 2	PM	B	C	A	A	A	B	B	B	B	B	C	C	C
			Pregame	A	B	A	A	A	A	A	D	C	C	C	C	C
		Phase 3	PM	C	D	A	A	C	D	D	D	C	C	C	C	D
			Pregame	C	D	A	A	C	D	D	D	D	C	C	C	C
McKinley Ave & Old World 3 <sup>rd</sup> Street <ul style="list-style-type: none"> <li>Add WBLT protected phasing</li> <li>Adjust timings</li> </ul>	Traffic Signal	Existing	PM	C	E	A	A	C	C	B	C	A	A	C	D	D
			Pregame	B	B	A	A	C	B	B	B	A	A	C	D	D
			Postgame	B	A	A	A	B	B	B	B	A	A	C	C	C
		Phase 1	PM	D	C	D	C	C	D	C	C	A	A	C	D	D
			Pregame	C	C	D	C	D	C	B	C	A	A	C	D	D
			Postgame	B	B	B	B	B	C	C	C	A	A	C	C	C
		Phase 2	PM	D	C	D	C	C	D	C	D	C	C	C	D	E
			Pregame	D	C	D	C	D	C	B	C	C	C	C	D	D
		Phase 3	PM	D	D	D	B	C	C	B	D	B	B	C	F	F
			Pregame	D	C	D	C	D	C	C	C	A	A	C	D	D

#### Northbound 6<sup>th</sup> Street approach at McKinley Avenue

- City of Milwaukee approach of interest

The northbound 6<sup>th</sup> Street approach operates at LOS E/F under existing conditions. Under future conditions, the northbound LOS conditions remain similar to existing conditions. The northbound left turn movement currently includes dual left-turn lanes with about 150 feet of storage per lane. Under

Postgame conditions the northbound left-turn movement can be expected to backup significantly. Aside from simply increasing the northbound left turn storage bay length, another option to improve northbound left turn operations and queuing would be to route Arena traffic from the proposed parking facility on Block 7 (southeast quadrant of McKinley Avenue/6<sup>th</sup> Street intersection) to travel northbound only along 5<sup>th</sup> Street. (Comparison of this parking facility's two different traffic routing options is discussed subsequently in this chapter.) Routing the exiting Postgame traffic northbound only from the parking facility's 5<sup>th</sup> Street exit would reduce the number of vehicles that require use of the northbound left turn movement on 6<sup>th</sup> Street at McKinley Avenue in order to access the IH 43 interchange at McKinley Avenue. Instead, exiting Postgame traffic would be diverted to use the westbound through movement on McKinley Avenue at 6<sup>th</sup> Street.

Eastbound McKinley Avenue approach at Old World 3<sup>rd</sup> Street &  
Northbound Old World 3<sup>rd</sup> Street approach at McKinley Avenue

- City of Milwaukee approaches of interest

The eastbound McKinley Avenue left turn movement operates at LOS E conditions during the existing PM peak hour. During Pregame and Postgame peak hours, the eastbound left turn operates at LOS A/B conditions. The eastbound left turn bay currently has about 100 feet of storage. The northbound left turn operates at LOS C conditions during the existing PM peak hour and at LOS B conditions during the Pregame and Postgame peak hours. The northbound left turn bay currently has about 100 feet of storage. In order to meet the future traffic needs of the westbound left-turn movement at this intersection, it is recommended that protected left-turn phasing be installed for the westbound approach. With the recommended protected westbound left-turn phasing, the signal timing can be adjusted while utilizing the existing eastbound and northbound left-turn protected phasing to achieve expected LOS D or better conditions in the future.

Table 5-3: Future Intersection Peak Hour Traffic Operations – Juneau Avenue intersections

Intersection & Improvements	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Juneau Ave & 6 <sup>th</sup> Street <ul style="list-style-type: none"><li>EB and WB approaches include 1 LT bay, 1 TH lane, 1 RT lane</li><li>Add EBLT &amp; WBLT protected phasing</li><li>Adjust timings</li></ul>	Traffic Signal	Existing	PM	C	D	C	A	C	C	C	D	C	C	F	B	B
			Pregame	B	C	C	A	C	C	C	C	B	B	C	B	B
			Postgame	C	E	C	A	C	C	D	B	B	B	C	B	A
		Phase 1	PM	D	D	C	A	D	C	C	D	C	C	F	B	B
			Pregame	C	C	C	A	D	C	C	C	B	C	D	B	B
			Postgame	F	C	B	A	D	C	F	C	C	C	C	B	B
		Phase 2	PM	D	D	C	A	D	D	C	D	D	C	F	B	B
			Pregame	C	C	D	A	D	D	D	C	C	C	E	B	B
		Phase 3	PM	D	D	C	A	D	D	C	D	B	B	F	B	B
			Pregame	C	C	D	A	D	D	D	C	C	C	D	B	B
Juneau Ave & 4 <sup>th</sup> Street <ul style="list-style-type: none"><li>Reduce SB approach to LT bay and RT lane</li><li>Adjust timings</li></ul>	Traffic Signal	Existing	PM	B	C	B	B	C	B	B	A	A	A	B	B	B
			Pregame	B	B	C	C	B	A	A	A	A	A	B	B	B
			Postgame	B	C	B	B	A	A	A	A	A	A	B	B	B
		Phase 1	PM	C	D	D	-	-	C	B	-	-	-	C	-	C
			Pregame	C	D	D	-	-	C	B	-	-	-	C	-	D
			Postgame	C	D	D	-	-	B	B	-	-	-	B	-	B
		Phase 2	PM	C	D	D	-	-	C	B	-	-	-	C	-	C
			Pregame	C	C	C	-	-	B	B	-	-	-	C	-	C
		Phase 3	PM	C	D	D	-	-	B	A	-	-	-	E	-	E
			Pregame	D	F	D	-	-	B	B	-	-	-	C	-	D
Juneau Ave & Old World 3 <sup>rd</sup> Street <ul style="list-style-type: none"><li>Change WB approach to 1 LT, 1 TH, 1 RT lane.</li><li>Adjust timings</li></ul>	Traffic Signal	Existing	PM	C	D	C	C	D	C	C	A	A	A	B	B	B
			Pregame	C	D	C	D	D	C	C	C	C	C	C	B	B
			Postgame	C	D	C	C	D	C	C	D	D	C	C	B	B
		Phase 1	PM	C	E	C	C	D	C	C	D	C	B	C	C	C
			Pregame	C	D	C	C	D	C	C	D	D	D	D	C	C
			Postgame	C	D	C	C	C	C	C	D	C	C	C	B	B
		Phase 2	PM	C	E	C	C	D	D	C	D	D	C	C	C	C
			Pregame	C	D	C	C	D	C	C	D	D	C	D	C	C
		Phase 3	PM	D	D	C	C	D	D	C	F	A	C	D	D	D
			Pregame	C	D	C	C	D	C	C	E	A	D	D	C	C

#### Westbound Juneau Avenue approach at 6<sup>th</sup> Street

- City of Milwaukee approaches of interest

The westbound Juneau Avenue left turn movement operates at LOS C conditions during the existing PM, Pregame and Postgame peak hours. The westbound left turn bay currently has less than 100 feet of storage. In order to meet, future traffic needs it is recommended that the westbound approach include a

left turn bay, through lane and right turn only lane. This would match into the proposed cross-section of Juneau Avenue that includes one westbound through lane and one continuous right turn lane between Old World 3<sup>rd</sup> Street and 6<sup>th</sup> Street. Keeping the westbound left turn lane would require a slight adjustment to the eastbound portion of the proposed Juneau Avenue cross-section between 6<sup>th</sup> Street and 4<sup>th</sup> Street, which includes one through lane and one valet lane. The valet lane would end at 4<sup>th</sup> Street. With the westbound left turn bay, the eastbound valet lane can begin where feasible to the east of the westbound left turn bay end taper. Additionally, similar to the northbound 6<sup>th</sup> Street left-turn movement at McKinley Avenue discussion previously, the traffic operations of Postgame Arena vehicles utilizing the Juneau Avenue westbound approach would be improved with the use of the one-way northbound only access alternative along 5<sup>th</sup> Street for the parking facility on Block 7. Requiring exiting vehicles from the Block 7 parking facility to travel northbound along 5<sup>th</sup> Street routes Postgame traffic away from Juneau Avenue, thus reducing the number of vehicles that would perform the westbound Juneau Avenue left turn and right turn movements. Instead, the number of vehicles traveling southbound through along 6<sup>th</sup> Street at Juneau Avenue would be expected to increase. Table 5-3 shows conditions under the two-way 5<sup>th</sup> street access alternative only. A subsequent table (Table 5-10) shows improved Postgame operations under the one-way 5<sup>th</sup> Street operation compared to the two-way 5<sup>th</sup> Street condition, which includes the westbound right turn operating at LOS F under the Postgame scenario.

Table 5-4: Future Intersection Peak Hour Traffic Operations – Highland Avenue intersections

Intersection & Improvements	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Highland Ave & 6 <sup>th</sup> Street* • NB approach includes LT bay, TH lane, TH/RT lane & RT bay • Adjust timings • LOS issues identified without Arena development	Traffic Signal	Existing	PM	D	F	F	C	E	E	A	C	B	B	E	D	C
			Pregame	D	F	F	C	F	F	A	B	A	A	D	C	C
			Postgame	C	C	C	B	E	E	A	B	A	A	C	C	C
		Phase 1	PM	C	C	C	C	C	C	B	D	C	C	A	D	D
			Pregame	C	D	C	C	D	C	B	C	A	C	C	D	D
			Postgame	B	C	C	C	A	C	C	B	A	A	C	C	D
		Phase 2	PM	C	C	C	C	D	C	B	D	B	B	D	D	D
			Pregame	C	D	C	C	F	B	B	C	A	D	D	D	D
		Phase 3	PM	C	D	C	C	D	C	B	D	B	C	D	D	C
			Pregame	C	C	C	C	F	B	B	C	A	B	D	D	D
Highland Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	B	-	-	-	C	-	C	-	A	A	B	B	-
			Pregame	B	-	-	-	C	-	C	-	A	B	C	B	-
			Postgame	D	-	-	-	C	-	F	-	A	B	B	B	-
	Stop Sign	Phase 1	PM	--	-	-	-	A	-	-	-	-	A	-	-	-
			Pregame	--	-	-	-	B	-	-	-	-	B	-	-	-
			Postgame	--	-	-	-	A	-	-	-	-	A	-	-	-
		Phase 2	PM	--	-	-	-	B	-	-	-	-	B	-	-	-
			Pregame	--	-	-	-	B	-	-	-	-	B	-	-	-
		Phase 3	PM	--	-	-	-	B	-	-	-	-	B	-	-	-
			Pregame	--	-	-	-	B	-	-	-	-	B	-	-	-
Highland Ave & Old World 3 <sup>rd</sup> Street	Traffic Signal	Existing	PM	A	C	C	C	C	B	A	A	A	A	A	A	A
			Pregame	A	C	C	C	C	B	A	A	A	A	A	A	A
			Postgame	B	C	C	C	C	B	A	A	A	A	A	A	A
		Phase 1	PM	B	C	C	C	C	B	A	B	B	B	A	A	A
			Pregame	B	C	C	D	C	B	A	B	B	B	A	A	A
			Postgame	B	C	C	C	C	B	A	B	B	B	A	A	A
		Phase 2	PM	B	C	C	D	C	B	A	B	B	B	A	A	A
			Pregame	B	C	C	D	C	B	A	C	B	B	B	B	B
		Phase 3	PM	B	C	C	D	C	B	A	B	B	B	A	A	A
			Pregame	B	C	C	D	C	B	A	B	B	B	A	A	A

\* The Block 2 parking structure still needs to be designed. This Highland Avenue & 6<sup>th</sup> Street analysis assumes one-way westbound State Street and access off of Highland Avenue and 5<sup>th</sup> Street.

It should be noted that without the second northbound right turn lane at the Highland Avenue intersection with 6<sup>th</sup> Street, a single northbound right turn during the Pregame time period would be expected to observe LOS F traffic operations during all three phases.

Table 5-5: Future Intersection Peak Hour Traffic Operations – State Street intersections

Intersection & Improvements	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
State Street & 6 <sup>th</sup> Street • Remove NBLT protected phasing during Postgame • Adjust timings	Traffic Signal	Existing	PM	C	D	-	C	B	B	B	C	B	-	-	C	C
			Pregame	C	D	-	C	C	B	C	B	B	-	-	C	C
			Postgame	B	C	-	C	C	B	B	B	B	-	-	C	C
		Phase 1	PM	C	D	-	C	B	B	B	C	C	-	-	D	C
			Pregame	C	D	-	C	B	A	B	C	B	-	-	C	C
			Postgame	C	A	-	A	C	A	A	D	C	-	-	C	C
		Phase 2	PM	C	E	-	C	B	A	A	D	C	-	-	D	C
			Pregame	C	D	-	C	B	A	B	C	B	-	-	C	D
		Phase 3	PM	C	E	-	C	C	B	B	D	C	-	-	D	C
			Pregame	C	D	-	C	B	A	B	C	B	-	-	C	D
State Street & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	B	-	-	-	B	B	B	B	B	-	-	A	B
			Pregame	B	-	-	-	B	B	B	C	C	-	-	B	C
			Postgame	B	-	-	-	B	B	B	B	B	-	-	B	D
		Phase 1	PM	B	-	-	-	B	B	B	C	B	-	-	C	B
			Pregame	B	-	-	-	B	B	B	D	B	-	-	C	C
			Postgame	B	-	-	-	B	B	B	B	B	-	-	C	C
		Phase 2	PM	B	-	-	-	B	B	B	D	B	-	-	C	B
			Pregame	B	-	-	-	B	B	B	D	B	-	-	C	C
		Phase 3	PM	B	-	-	-	B	B	B	D	B	-	-	C	B
			Pregame	B	-	-	-	B	B	B	D	B	-	-	C	C

\* The Block 2 parking structure still needs to be designed. This State Street & 6<sup>th</sup> Street analysis assumes one-way westbound State Street and access off of Highland Avenue and 5<sup>th</sup> Street.

Table 5-6: Future Intersection Peak Hour Traffic Operations – 5<sup>th</sup> Street intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
McKinley Avenue & 5 <sup>th</sup> Street • Anticipate police officer traffic control	Stop Sign	Existing	PM	--	-	-	-	-	-	-	-	-	-	-	-	-
			Pregame	--	-	-	-	-	-	-	-	-	-	-	-	-
			Postgame	--	-	-	-	-	-	-	-	-	-	-	-	-
		Phase 1	PM	--	-	A	A	F	A	-	F	-	F	-	-	-
			Pregame	--	-	A	A	F	A	-	A	-	A	-	-	-
			Postgame	--	-	A	A	A	A	-	F	-	F	-	-	-
		Phase 2	PM	--	-	A	A	F	A	-	F	-	F	-	-	-
			Pregame	--	-	A	A	F	A	-	A	-	A	-	-	-
		Phase 3	PM	--	-	A	A	F	A	-	F	-	F	-	-	-
			Pregame	--	-	A	A	F	A	-	A	-	A	-	-	-
Juneau Avenue & 5 <sup>th</sup> Street • Anticipate police officer traffic control	Stop Sign	Existing	PM	--	-	-	-	-	-	-	-	-	-	-	-	-
			Pregame	--	-	-	-	-	-	-	-	-	-	-	-	-
			Postgame	--	-	-	-	-	-	-	-	-	-	-	-	-
		Phase 1	PM	--	A	A	-	-	A	A	-	-	-	F	-	F
			Pregame	--	B	A	-	-	A	A	-	-	-	A	-	A
			Postgame	--	A	A	-	-	A	A	-	-	-	F	-	F
		Phase 2	PM	--	A	A	-	-	A	A	-	-	-	F	-	F
			Pregame	--	B	A	-	-	A	A	-	-	-	A	-	A
		Phase 3	PM	--	A	A	-	-	A	A	-	-	-	F	-	F
			Pregame	--	A	A	-	-	A	A	-	-	-	A	-	A
State Street & 5 <sup>th</sup> Street* • Anticipate police officer traffic control	Stop Sign	Existing	PM	--	-	-	-	-	-	-	-	-	-	-	-	-
			Pregame	--	-	-	-	-	-	-	-	-	-	-	-	-
			Postgame	--	-	-	-	-	-	-	-	-	-	-	-	-
		Phase 1	PM	--	A	A	-	-	A	A	-	-	-	A	-	A
			Pregame	--	A	A	-	-	A	A	-	-	-	A	-	A
			Postgame	--	A	A	-	-	A	A	-	-	-	C	-	C
		Phase 2	PM	--	A	A	-	-	A	A	-	-	-	A	-	A
			Pregame	--	A	A	-	-	A	A	-	-	-	A	-	A
		Phase 3	PM	--	A	A	-	-	A	A	-	-	-	A	-	A
			Pregame	--	A	A	-	-	A	A	-	-	-	A	-	A

\*Note: Highway Capacity Manual (HCM) 2010 does not support more than three through lanes on a major street approach at an unsignalized intersection. Therefore, HCM 2000 LOS is used at this intersection.

The traffic operations analysis at the 5<sup>th</sup> Street intersections in Table 5-6 does not factor in the gaps that occur from adjacent signals at 4<sup>th</sup> Street and 6<sup>th</sup> Street. The gaps generated by the signals would be expected to improve LOS conditions. Additionally, police officer traffic control before and after events at the Arena would be expected to improve LOS conditions.

Table 5-7: Future Intersection Peak Hour Traffic Operations – Kilbourn Ave &amp; Wells Street intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Kilbourn Ave & 6 <sup>th</sup> Street • Adjust timings	Traffic Signal	Existing	PM	D	C	C	A	D	C	D	D	D	C	D	D	A
			Pregame	C	D	C	A	C	C	D	B	C	C	C	C	A
			Postgame	C	C	C	A	C	D	D	C	C	C	B	D	A
		Phase 1	PM	D	C	C	A	D	C	D	D	D	C	D	D	A
			Pregame	D	D	C	A	D	D	D	C	C	C	D	C	A
			Postgame	C	C	C	A	C	C	D	C	C	C	C	B	A
		Phase 2	PM	D	D	D	A	D	D	E	D	D	C	D	D	A
			Pregame	D	E	C	A	D	D	D	C	D	C	D	C	A
		Phase 3	PM	D	D	D	A	E	D	F	D	D	C	D	D	A
			Pregame	D	D	C	A	C	D	D	C	D	C	D	C	A
Kilbourn Ave & 4 <sup>th</sup> Street	Traffic Signal	Existing	PM	C	D	C	C	C	B	B	B	B	B	A	A	A
			Pregame	C	D	C	C	C	B	B	C	B	C	C	B	C
			Postgame	C	C	C	C	B	B	B	C	B	B	C	C	C
		Phase 1	PM	C	C	C	C	C	B	B	B	B	B	A	A	A
			Pregame	C	D	C	C	C	B	B	C	B	C	C	B	B
			Postgame	B	C	C	C	B	B	B	C	B	B	C	B	C
		Phase 2	PM	C	D	C	C	C	B	B	B	B	B	A	A	A
			Pregame	C	D	C	C	C	B	B	C	B	C	C	B	B
		Phase 3	PM	C	D	C	C	C	B	B	B	B	B	A	A	A
			Pregame	C	D	C	C	C	B	B	C	B	C	C	B	B
Wells Street & 6 <sup>th</sup> Street • Adjust timings	Traffic Signal	Existing	PM	C	E	B	B	C	C	D	C	C	B	E	C	C
			Pregame	C	C	B	B	C	C	C	C	C	C	D	B	B
			Postgame	C	C	B	B	C	C	C	B	B	B	B	B	B
		Phase 1	PM	C	E	B	B	C	C	D	C	C	B	E	C	C
			Pregame	C	C	B	B	C	C	C	C	D	C	D	B	B
			Postgame	C	C	B	B	C	C	D	B	B	B	B	B	C
		Phase 2	PM	C	E	B	B	C	D	D	C	C	B	F	C	C
			Pregame	C	C	B	B	C	C	C	B	C	B	D	B	B
		Phase 3	PM	C	E	B	B	D	D	E	C	C	B	F	C	C
			Pregame	C	C	B	B	C	C	C	C	D	C	D	B	B

Table 5-8: Future Intersection Peak Hour Traffic Operations – Water Street intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	T H	RT	LT	TH	RT
Water Street & Knapp Street • Adjust timings	Traffic Signal	Existing	PM	C	F	C	C	C	C	C	C	A	A	C	C	D
			Pregame	C	D	C	C	C	C	C	C	A	A	C	C	F
			Postgame	B	C	B	B	C	C	C	B	A	A	C	C	C
		Phase 1	PM	C	F	C	C	C	C	C	D	A	A	C	C	D
			Pregame	D	D	C	C	C	C	C	C	A	A	C	C	F
			Postgame	C	D	B	B	D	D	D	B	A	A	C	C	C
		Phase 2	PM	D	F	C	C	C	C	C	D	A	A	C	C	D
			Pregame	D	D	C	C	C	C	C	C	A	A	C	C	F
		Phase 3	PM	D	F	C	C	D	C	C	D	A	A	C	C	E
			Pregame	D	D	C	C	C	D	D	C	A	A	C	C	F
Water Street & Juneau Avenue • Adjust timings	Traffic Signal	Existing	PM	B	D	D	D	D	C	C	C	A	A	B	C	B
			Pregame	B	C	B	B	C	C	C	B	A	A	B	C	B
			Postgame	B	C	B	C	D	C	C	B	A	A	B	B	B
		Phase 1	PM	C	D	D	D	D	C	C	C	A	A	B	C	B
			Pregame	B	C	B	B	C	C	C	B	A	A	B	C	B
			Postgame	B	B	B	C	C	C	C	B	A	A	B	B	B
		Phase 2	PM	B	D	C	C	D	C	C	C	A	A	B	C	B
			Pregame	B	C	B	C	C	C	C	B	A	A	B	C	B
		Phase 3	PM	C	D	C	C	D	C	C	D	A	A	C	C	C
			Pregame	B	C	B	C	C	C	C	B	A	A	B	C	B
Water Street & State Street • Adjust timings	Traffic Signal	Existing	PM	C	-	-	-	C	C	C	C	C	-	-	D	D
			Pregame	B	-	-	-	B	B	B	B	B	-	-	B	B
			Postgame	B	-	-	-	B	B	B	B	B	-	-	B	B
		Phase 1	PM	C	-	-	-	C	C	C	C	C	-	-	D	D
			Pregame	B	-	-	-	B	B	B	B	B	-	-	B	B
			Postgame	B	-	-	-	B	B	B	B	B	-	-	B	B
		Phase 2	PM	C	-	-	-	C	C	C	C	C	-	-	D	D
			Pregame	B	-	-	-	B	B	B	B	B	-	-	B	B
		Phase 3	PM	C	-	-	-	C	C	C	C	C	-	-	D	D
			Pregame	B	-	-	-	B	B	B	B	B	-	-	B	B

## Block 7 Parking Facility Access Alternative discussion

Two separate parking access alternatives were analyzed for the Block 7 parking facility. This parking facility is located between 5<sup>th</sup> and 6<sup>th</sup> Streets and between McKinley and Juneau Avenues. The main access to the parking facility is currently planned to be located along 5<sup>th</sup> Street. The two parking facility access alternatives are the following:

1. Two-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate with a two-way 5<sup>th</sup> Street. Parking facility traffic could enter and exit from northbound and southbound directions along 5<sup>th</sup> Street.
2. One-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate as one-way southbound only before an event at the Arena and one-way northbound only after an event at the Arena. This one-way requirement would route Arena traffic away from Juneau Avenue (and the Arena) onto McKinley Avenue. The one-way 5<sup>th</sup> Street operation would only take effect on gamedays during Pregame and Postgame periods.

Tables 5-9 to 5-11 below show the future traffic operations analysis with the two-way 5<sup>th</sup> Street and one-way 5<sup>th</sup> Street parking access alternatives at the six nearest surrounding intersections that are most impacted by the two potential alternatives: McKinley Avenue intersections with 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> Streets and Juneau Avenue intersections with 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> Streets.

Table 5-9: Future Intersection Peak Hour Traffic Operations – Block 7 Parking Ramp Access Comparison at Signalized McKinley Avenue Intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
McKinley Avenue & 6 <sup>th</sup> Street	Traffic Signal	Phase 1	PM – 2 way	D	F	C	E	F	C	D	F	D	D	E	C	C
			PRE – 2 way	D	D	D	F	F	B	B	E	D	D	D	C	C
			POST – 2 way	F	D	B	B	C	C	C	F	C	D	C	C	C
			PM – 1 way	D	E	C	E	F	C	C	F	E	E	E	D	D
			PRE – 1 way	D	D	D	F	F	B	B	E	D	D	E	C	C
			POST – 1 way	F	D	B	B	E	D	D	F	C	D	C	D	D
		Phase 2	PM – 2 way	D	F	C	F	F	C	C	E	E	E	D	D	D
			PRE – 2 way	D	C	C	F	F	A	A	E	D	D	D	C	C
			PM – 1 way	E	F	D	F	F	C	C	D	D	D	F	E	D
			PRE – 1 way	D	C	C	F	F	A	A	E	E	E	E	C	C
		Phase 3	PM – 2 way	E	F	D	F	F	C	C	E	E	E	E	D	D
			PRE – 2 way	D	C	C	F	F	A	A	F	D	D	D	C	C
			PM – 1 way	E	E	D	F	F	B	B	F	F	F	F	E	D
			PRE – 1 way	E	D	C	F	F	B	B	F	E	E	D	C	C
McKinley Avenue & 4 <sup>th</sup> Street	Traffic Signal	Phase 1	PM – 2 way	C	D	A	A	C	D	D	B	B	B	C	C	C
			PRE – 2 way	B	C	A	A	C	D	D	B	B	B	C	C	C
			POST – 2 way	C	C	C	C	B	C	C	C	B	B	B	B	B
			PM – 1 way	C	C	A	A	C	D	D	C	C	C	C	C	C
			PRE – 1 way	B	C	A	A	A	B	B	D	C	B	C	C	C
			POST – 1 way	C	C	C	C	B	C	C	C	C	B	B	B	B
		Phase 2	PM – 2 way	B	C	A	A	A	B	B	B	B	B	C	C	C
			PRE – 2 way	A	B	A	A	A	A	A	D	C	C	C	C	C
			PM – 1 way	C	C	A	A	C	D	D	D	C	C	C	C	C
			PRE – 1 way	C	C	A	A	C	D	D	D	D	C	C	C	C
		Phase 3	PM – 2 way	C	D	A	A	C	D	D	D	C	C	C	C	D
			PRE – 2 way	C	D	A	A	C	D	D	D	D	C	C	C	C
			PM – 1 way	C	D	A	A	C	E	E	D	D	C	D	D	E
			PRE – 1 way	C	D	A	A	C	D	D	E	D	C	C	C	C

Table 5-10: Future Intersection Peak Hour Traffic Operations – Block 7 Parking Ramp Access  
Comparison at Signalized Juneau Avenue Intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Juneau Avenue & 6 <sup>th</sup> Street	Traffic Signal	Phase 1	PM – 2 way	D	D	C	A	D	C	C	D	C	C	F	B	B
			PRE – 2 way	C	C	C	A	D	C	C	C	B	C	D	B	B
			POST – 2 way	F	C	B	A	D	C	F	C	C	C	C	B	B
			PM – 1 way	D	D	B	A	C	C	C	D	C	B	F	C	B
			PRE – 1 way	C	D	C	A	D	C	D	C	B	C	D	B	B
			POST – 1 way	C	C	B	A	C	B	C	C	C	C	C	B	B
		Phase 2	PM – 2 way	D	D	C	A	D	D	C	D	D	C	F	B	B
			PRE – 2 way	C	C	D	A	D	D	D	C	C	C	E	B	B
			PM – 1 way	E	D	C	A	C	D	E	D	D	C	F	B	B
			PRE – 1 way	C	D	C	A	D	C	D	C	C	C	E	B	B
		Phase 3	PM – 2 way	D	D	C	A	D	D	C	D	B	B	F	C	B
			PRE – 2 way	C	C	D	A	D	D	D	C	C	C	D	B	B
			PM – 1 way	E	E	C	A	C	D	F	E	D	C	F	C	B
			PRE – 1 way	C	D	C	A	D	D	E	D	C	C	E	B	B
Juneau Avenue & 4 <sup>th</sup> Street	Traffic Signal	Phase 1	PM – 2 way	C	D	D	-	-	C	B	-	-	-	C	-	C
			PRE – 2 way	C	D	D	-	-	C	B	-	-	-	C	-	D
			POST – 2 way	C	D	D	-	-	B	B	-	-	-	B	-	B
			PM – 1 way	C	D	D	-	-	C	B	-	-	-	D	-	D
			PRE – 1 way	F	F	F	-	-	C	C	-	-	-	C	-	D
			POST – 1 way	C	D	C	-	-	B	B	-	-	-	B	-	B
		Phase 2	PM – 2 way	C	D	D	-	-	C	B	-	-	-	C	-	C
			PRE – 2 way	C	C	C	-	-	B	B	-	-	-	C	-	C
			PM – 1 way	C	D	D	-	-	C	B	-	-	-	D	-	E
			PRE – 1 way	F	F	F	-	-	B	B	-	-	-	C	-	C
		Phase 3	PM – 2 way	C	D	D	-	-	B	A	-	-	-	E	-	E
			PRE – 2 way	D	F	D	-	-	B	B	-	-	-	C	-	D
			PM – 1 way	E	F	F	-	-	B	B	-	-	-	D	-	D
			PRE – 1 way	C	C	C	-	-	A	A	-	-	-	C	-	E

Table 5-11: Future Intersection Peak Hour Traffic Operations – Block 7 Parking Ramp Access  
Comparison at Unsignalized 5<sup>th</sup> Street Intersections

Intersection	Traffic Control	Scenario	Peak Hour	Level of Service per Movement by Approach												
				Int. LOS	Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
McKinley Avenue & 5 <sup>th</sup> Street	Stop Sign	Phase 1	PM – 2 way	--	-	A	A	F	A	-	F	-	F	-	-	-
			PRE – 2 way	--	-	A	A	F	A	-	A	-	A	-	-	-
			POST – 2 way	--	-	A	A	A	A	-	F	-	F	-	-	-
			PM – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
			PRE – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
			POST – 1 way	--	-	A	A	A	A	-	F	-	F	-	-	-
		Phase 2	PM – 2 way	--	-	A	A	F	A	-	F	-	F	-	-	-
			PRE – 2 way	--	-	A	A	F	A	-	A	-	A	-	-	-
			PM – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
			PRE – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
		Phase 3	PM – 2 way	--	-	A	A	F	A	-	F	-	F	-	-	-
			PRE – 2 way	--	-	A	A	F	A	-	A	-	A	-	-	-
			PM – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
			PRE – 1 way	--	-	A	A	F	A	-	-	-	-	-	-	-
Juneau Avenue & 5 <sup>th</sup> Street	Stop Sign	Phase 1	PM – 2 way	--	A	A	-	-	A	A	-	-	-	F	-	F
			PRE – 2 way	--	B	A	-	-	A	A	-	-	-	A	-	A
			POST – 2 way	--	A	A	-	-	A	A	-	-	-	F	-	F
			PM – 1 way	--	-	A	-	-	A	A	-	-	-	F	-	F
			PRE – 1 way	--	-	A	-	-	A	A	-	-	-	A	-	A
			POST – 1 way	--	A	A	-	-	A	A	-	-	-	-	-	-
		Phase 2	PM – 2 way	--	A	A	-	-	A	A	-	-	-	F	-	F
			PRE – 2 way	--	B	A	-	-	A	A	-	-	-	A	-	A
			PM – 1 way	--	-	A	-	-	A	A	-	-	-	F	-	F
			PRE – 1 way	--	-	A	-	-	A	A	-	-	-	A	-	A
		Phase 3	PM – 2 way	--	B	A	-	-	A	A	-	-	-	F	-	F
			PRE – 2 way	--	A	A	-	-	A	A	-	-	-	A	-	A
			PM – 1 way	--	-	A	-	-	A	A	-	-	-	F	-	F
			PRE – 1 way	--	-	A	-	-	A	A	-	-	-	F	-	F

The following general observations can be taken from a comparison of the LOS traffic operations in Tables 5-9 to 5-11:

1. Two-way 5<sup>th</sup> Street alternative benefits:

- Better northbound traffic operation along 6<sup>th</sup> Street at McKinley Avenue before the event. One-way 5<sup>th</sup> Street traffic operations require northbound traffic to avoid routing to 5<sup>th</sup>

Street to access parking facilities and must instead choose an adjacent corridor, such as 6<sup>th</sup> Street.

- Better southbound left turn traffic operations along 6<sup>th</sup> Street at McKinley Avenue before the event. One-way 5<sup>th</sup> Street traffic operations require southbound 6<sup>th</sup> Street traffic to turn left to access Block 7 parking facility. Two-way 5<sup>th</sup> Street operations allow the additional option to access the parking facility by turning left at Juneau Avenue.
- Better westbound traffic operations along McKinley Avenue at 6<sup>th</sup> Street during Postgame peak hour. One-way 5<sup>th</sup> Street traffic operations route all Postgame exiting traffic to McKinley Avenue.
- The intersection of McKinley Avenue and 4<sup>th</sup> Street operates slightly better before the event. The one-way 5<sup>th</sup> Street alternative forces some traffic to re-route to adjacent corridors, such as 4<sup>th</sup> Street.
- The intersection of Juneau Avenue and 4<sup>th</sup> Street operates better before the event. The one-way 5<sup>th</sup> Street alternative forces some traffic to re-route to adjacent corridors, such as 4<sup>th</sup> Street.
- The ability to enter and exit to/from the north or south along 5<sup>th</sup> Street gives drivers more routing options and better disperses out vehicles rather than requiring all vehicles to enter and exit the same direction.

2. One-way 5<sup>th</sup> Street alternative benefits:

- The intersection of McKinley Avenue & 6<sup>th</sup> Street includes several movements at LOS E/F in both alternatives, however the northbound left turn LOS F has a lower delay under the one-way alternative (10 minutes) than the two-way alternative (18 minutes) during the Postgame peak hour.
- The intersection of Juneau Avenue & 6<sup>th</sup> Street operates better, especially the westbound approach during Postgame.
- The intersection of Juneau Avenue & 5<sup>th</sup> Street operates better Pregame and Postgame.
- No traffic entering or exiting the parking facility from Juneau Avenue before or after the event.
- May not require police officers directing traffic at the unsignalized intersection of Juneau Avenue & 5<sup>th</sup> Street before and after the event, because the one-way 5<sup>th</sup> Street operation would route all traffic to and from the intersection McKinley Avenue and 5<sup>th</sup> Street during the Pregame and Postgame peak hours.

## PART B - FUTURE TRAFFIC MICROSIMULATION ANALYSIS

A traffic microsimulation analysis was conducted to assess the flow of future forecasted traffic through the network within the study area. Future traffic microsimulation models were created for the PM, Pregame and Postgame Phase I scenarios. The PM and Pregame peak hour models were combined into one PM-

Pregame model due to the proximity of their time periods. Model results were extracted for the PM and Pregame peak hours separately. The PM-Pregame and the Postgame models include future forecasted peak hour traffic volumes with improved intersection geometry, signal phasings and timings. The same twelve intersections from the existing microsimulation models were included in the future traffic simulation along with three additional 5<sup>th</sup> Street intersections at McKinley Avenue, Juneau Avenue and State Street. Similar to the existing microsimulation models, the future PM, Pregame and Postgame volumes utilized 15-minute profile loading to vary traffic volumes within the peak hour to better reflect traffic volume peaking characteristics. Both models were calibrated using the GEH statistic. This statistic gauges the difference between the observed volumes compared to the modeled volumes. Calibration results of the future Phase I conditions are provided in the Appendix.

The Phase 1 PM, Pregame and Postgame traffic microsimulation model LOS results are also shown in the Appendix. The results show that the microsimulation LOS results are similar to the traffic operations shown in Tables 5-1 through 5-8. The Phase 1 PM peak hour microsimulation results show some turning movements at the intersections of McKinley Avenue with 6<sup>th</sup> Street operating at LOS E/F, Juneau Avenue with 6<sup>th</sup> Street at LOS E, State Street with 6<sup>th</sup> Street at LOS E/F, and Kilbourn Avenue with 6<sup>th</sup> Street at LOS E. During the Pregame, the results show some turning movements at the intersections of McKinley Avenue with 6<sup>th</sup> Street operating at LOS F, McKinley Avenue with 4<sup>th</sup> Street at LOS E, Juneau Avenue with 4<sup>th</sup> Street at LOS F, and State Street with 6<sup>th</sup> Street at LOS F. Most of the other turning movements in the Phase 1 PM, Pregame and Postgame models are at LOS D or better. During the Postgame, the results show some turning movements at the intersections of McKinley Avenue with 6<sup>th</sup> Street operating at LOS E. The westbound approach of Fond du Lac Avenue intersection with the IH 43 Northbound Ramp operates at LOS F during the Postgame. Similar to the existing condition, traffic congestion is due to significant lane changing in preparation of the southbound IH 43 entrance ramp. A significant amount of traffic is destined for southbound IH 43 which results in poor lane balance at the northbound ramp terminal. The similarity between the Phase 1 traffic operations intersection LOS conditions (Tables 5-1 through 5-8) and the Phase 1 PM, Pregame and Postgame microsimulation intersection LOS results suggest that the Phase I microsimulation models are well calibrated and the multimodal auto-pedestrian interaction is represented in both software packages.

## **PART C - PEDESTRIAN, BICYCLE, AND MULTI-USE TRAIL ACCOMODATIONS**

Pedestrian Level of Service (LOS) was analyzed for selected alternatives. Few LOS issues were identified in the existing conditions analysis and those issues identified were typically not auto volume dependent.

## **PART D - TRAFFIC CONTROL NEEDS**

Police officer provided traffic control is currently in use with events at the BMO Harris Bradley Center. It is recommended that officer control be provided at the McKinley and 5<sup>th</sup> Street intersection to aid in the orderly flow of traffic, depending on the final design of the Block 7 parking structure. Police officer control may not be required in directing traffic at the unsignalized intersection of Juneau Avenue & 5<sup>th</sup> Street before and after the event if the one-way 5<sup>th</sup> Street operation is in effect, because the one-way 5<sup>th</sup>

Street operation would route all traffic to and from the intersection McKinley and 5<sup>th</sup> Street during the Pregame and Postgame peak hours, away from the intersection of Juneau Avenue and 5<sup>th</sup> Street.

The intersection of 6th and Highland may also require officer control depending on the design of the parking structure and surrounding streets. These traffic operational details will require further information regarding the design and operation of the parking ramps proposed near both of these locations.

## CHAPTER 6 - CONCLUSIONS AND RECOMMENDATIONS

The planned Milwaukee Bucks Arena is expected to be located one block north of the existing BMO Harris Bradley Center, and provide a similar seating capacity to the existing facility. Additional developments in the vicinity of the planned Arena, relocation of parking facilities and modifications to the existing transportation network are also proposed. This report documents the development of traffic and pedestrian demands and the subsequent operational analysis on over 20 intersections in the vicinity of the planned Arena.

Traffic demands are projected to increase within the study area due to both the proposed developments and the application of an assumed 0.5% annual growth of background traffic traveling through the study area. 4th Street is proposed to be vacated between Highland Avenue and Juneau Avenue as part of the Arena project, which would redistribute traffic to other streets in the area.

### Existing LOS Issues

This analysis identifies traffic signal or geometric improvements to maintain acceptable LOS, or maintain the pre-existing Level of Service (LOS) conditions. Operational analysis of the study area intersections identified two intersections that have existing intersection-level LOS issues.

- The intersection of McKinley Avenue and 6th Street has LOS F conditions in the Postgame condition and is projected to still have LOS F with either alternative circulation pattern for the Block 7 parking structure between McKinley Avenue and Juneau Avenue.
- Interstate Highway (IH) 43 SB ramp terminal intersection with Fond du Lac Avenue also experiences LOS F in the existing condition and is projected to continue to operate at LOS F under the proposed condition.

### Projected LOS Issues

Below is a list of intersections that are projected to observe LOS E or worse conditions and require intersection geometry improvements, signal phasing improvements, signal timings improvements or additional services.

#### Intersection Geometry Improvements Necessary – Phases I, II & III

Intersections that have both heavier traffic volumes and nearby parking structures, which contribute to projected level of service issues include the following intersections. Intersection geometry improvements that are expected to be needed in all three phases (Phase I, II and III) are discussed below.

- McKinley Avenue and 6th Street intersection is projected to be directly affected by the operation of the proposed parking structure in its southeast quadrant, along with how vehicles are expected to access and egress that parking facility. Two operational plans have been identified for 5th Street between McKinley Avenue and Juneau Avenue. Each would impact McKinley Avenue and 6<sup>th</sup> Street in different ways, depending on the final design and operation of the adjacent parking structure in Block 7.

- Juneau Avenue and 6<sup>th</sup> Street intersection is projected to be directly affected by operations of the proposed parking structure in its northeast quadrant. The proposed Juneau Avenue cross-section reduces this intersection's lane geometry to have one eastbound through lane and one westbound through lane, along with one westbound right turn lane. The addition of a westbound left turn bay is recommended. Eastbound protected left turn phasing and westbound protected left turn phasing are recommended for Phases II and III. The proposed eastbound valet lane is recommended to begin where feasible to the east of the westbound left turn bay end taper.
- Highland Avenue and 6<sup>th</sup> Street intersection is projected to be directly affected by the operation of the proposed parking structure in its southeast quadrant. The design of the Block 2 parking structure has not been finalized yet. Currently, the main entrance is assumed to be along 5<sup>th</sup> Street, which would be expected to force many vehicles to perform the northbound right turn movement along 6<sup>th</sup> Street onto Highland Avenue during the Pregame time period. Therefore, investigation into a second right turn lane should be conducted. Options include either striping one of the two northbound through lanes as a shared through/right turn lane or utilizing temporary traffic control devices such as traffic cones along with police officer traffic control during the Pregame peak hour to route one of the two northbound through lanes as a second right turn lane. The exact needs for this intersection will become clearer when a more detailed design of the Block 2 parking facility exists.

#### Signal Phasing, Signal Timing & Lane Re-striping Improvements Necessary– Phases I, II & III

The following intersections require changes to signal phasing and signal timing in all three phases (Phases I, II and III) to achieve acceptable traffic operating conditions in the future with the proposed development in place or to maintain pre-existing LOS traffic operating conditions:

- McKinley Avenue and 4<sup>th</sup> Street intersection includes recommendations to remove the current northbound left turn protected signal phase and install an eastbound left turn protected signal phase. With the closure of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue reduced traffic demands occur along 4<sup>th</sup> Street, which removes the need for a northbound left turn protected phase and presents an opportunity to reduce the northbound approach to one left turn bay and one shared through/right turn lane. However, future development in the area is anticipated to increase eastbound left turn volumes, which would utilize the recommended protected phase.
- McKinley Avenue and Old World 3<sup>rd</sup> Street intersection includes a recommendation to install a westbound left turn protected signal phase. An eastbound left turn protected signal phase is already in place at this intersection. Future development in the area, along with the removal of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue increase the traffic that is expected to utilize the westbound left turn movement at this Old World 3<sup>rd</sup> Street intersection.
- Juneau Avenue and Old World 3<sup>rd</sup> Street includes a recommendation to re-stripe the westbound approach's two through lanes to be one through lane and one right turn only lane. Current plans include the westbound Juneau Avenue cross-section, west of Old World 3<sup>rd</sup> Street, to include one through lane and one continuous right turn lane. Therefore, re-striping the westbound Juneau

Avenue approach at the intersection with Old World 3<sup>rd</sup> Street from two through lanes to one through lane creates better lane continuity with the downstream cross-section. In addition to the lane re-stripping, eastbound protected left turn phasing is recommended in Phase III.

- State Street and 6<sup>th</sup> Street intersection includes a recommendation to remove the northbound left turn protected signal phase during the Postgame time period, depending on the final design of the Block 2 parking structure. The higher volumes traveling southbound and westbound at this intersection during the Postgame time period are expected to require more green time. It should also be noted that State Street is currently one-way westbound in the project study area. Two-way State Street operation would be expected to provide improved traffic access to better develop Block 2 and Block 3 for mixed-use development as proposed to be retail, office, residential and hotel uses. In addition, the two-way traffic operation would support the spirit of the urban design principles identified in the General Planned Development (GPD) document. Pending the final design of the parking structure ingress and egress on Block 2, a two-way State Street would likely improve the traffic flow at intersections near Block 2, and ultimately improve access to the new arena. A two-way State Street would also likely improve the connectivity of the new arena, ancillary development and other Wisconsin Center facilities to the cultural and entertainment facilities east of the Milwaukee River. Converting State Street to two-way operation should be examined further when the final design of the Block 2 parking structure is completed.

#### Signal Timings Improvements Only Necessary

The following intersections require changes to signal timing to achieve acceptable traffic operating conditions in the future with the proposed development in place or to maintain pre-existing LOS traffic operating conditions. The specific phases and peak hours where signal timings adjustments are expected to be needed are also identified.

- Juneau Avenue and 4<sup>th</sup> Street intersection includes an opportunity to reduce the southbound approach to one left turn bay and one right turn lane, because of reduced southbound traffic volumes caused by the proposed closure of 4<sup>th</sup> Street between Juneau Avenue and Highland Avenue. This intersection includes signal timings adjustments in all phases and peak hours.
- Fond du Lac Avenue & IH 43 SB ramp – minor signal timings adjustment in Postgame Phase I Postgame hour.
- Highland Avenue & Southbound IH 43 ramp – minor signal timings adjustment in Phases I, II and III of Pregame peak hour.
- Knapp Street & Water Street – minor signal timings adjustment in Phases I, II and III in all peak hours.
- Juneau Avenue & Water Street – minor signal timings adjustment in PM Phase III only.
- State Street & Water Street – minor signal timings adjustment in Phases I, II and III of PM peak hour.
- Kilbourn Avenue & 6<sup>th</sup> Street – minor signal timings adjustment in Phases I, II and III of PM and Pregame peak hours.

- Wells Street & 6<sup>th</sup> Street – minor signal timings adjustment in Phases II and III of PM peak hour.

#### Additional Services Needed– Phases I, II & III

The following intersections are planned to be unsignalized, but are anticipated to require police officer traffic control before and after events at the proposed Arena during all three phases.

- McKinley Avenue and 5<sup>th</sup> Street
- Juneau Avenue and 5<sup>th</sup> Street
- State Street and 5<sup>th</sup> Street (assuming the parking structure on Block 2 exits onto 5<sup>th</sup> Street)

#### **No Projected LOS Issues, No Improvements Necessary**

The following intersections do not need improvements to achieve overall intersection LOS D or better conditions during the PM, Pregame and Postgame peak hour or to maintain pre-existing LOS traffic operating conditions:

- Fond du Lac Avenue & Northbound IH 43 ramps
- Highland Avenue & Old World 3<sup>rd</sup> Street
- Highland Avenue & 4<sup>th</sup> Street
- State Street & 4<sup>th</sup> Street
- Kilbourn Avenue & 4<sup>th</sup> Street

#### **Block 7 Parking Structure Traffic Routing Alternatives**

Two routing alternatives were analyzed for the proposed parking facility on Block 7 between McKinley Avenue and Juneau Avenue. The main access to the parking facility is currently planned to be located along 5<sup>th</sup> Street. The two parking facility access alternatives are the following:

3. Two-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate with a two-way 5<sup>th</sup> Street. Parking facility traffic could enter and exit from northbound and southbound directions along 5<sup>th</sup> Street.
4. One-way 5<sup>th</sup> Street – 5<sup>th</sup> Street between McKinley Avenue and Juneau Avenue would operate as one-way southbound only during Pregame and one-way northbound only during Postgame. This one-way requirement would route Arena traffic away from Juneau Avenue (and the Arena) during both Pregame and Postgame time periods onto McKinley Avenue. The one-way 5<sup>th</sup> Street operation would only take effect during Pregame and Postgame periods.

Both parking structure access alternatives present traffic operation results that benefit different nearby intersection approaches and turning movements. Generally, the two-way alternative allows traffic more routing options to and from the parking facility. However, the one-way alternative beneficially restricts parking facility traffic from accessing Juneau Avenue in front of the proposed Arena, which would likely include a high number of pedestrians. Furthermore, the one-way alternative may also require police officer traffic control at only one of the two 5<sup>th</sup> Street intersections at Juneau Avenue and McKinley Avenue, while additionally providing comparatively lower vehicle delays at two intersection approaches of

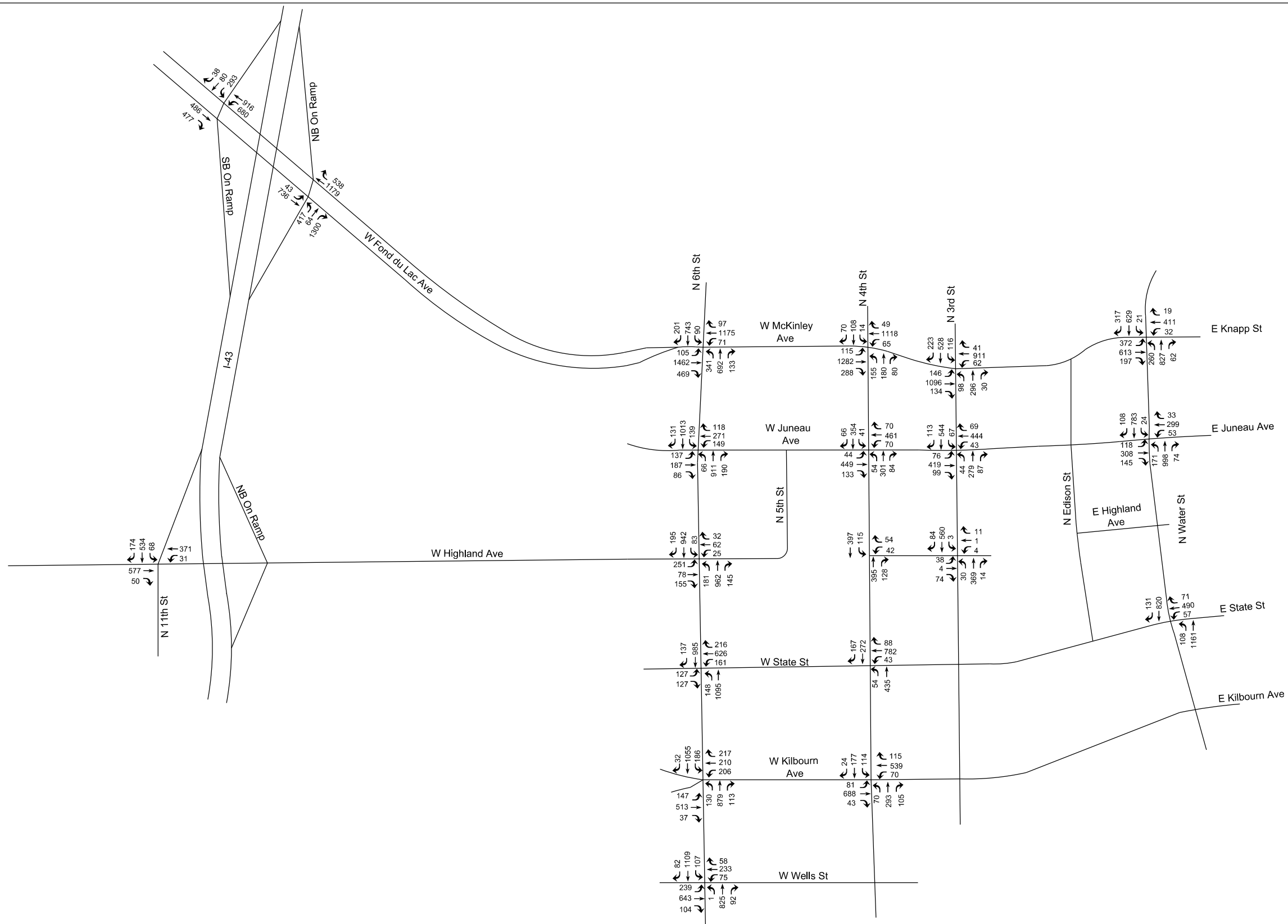
particular interest to the City of Milwaukee – the northbound 6<sup>th</sup> Street approach at McKinley Avenue and the westbound Juneau Avenue approach at 6<sup>th</sup> Street. Therefore, the one-way access alternative is the preferred Block 7 parking facility access option during the Pregame and Postgame peak hours, pending final design of the parking facility. However, the two-way access alternative is preferred for the PM peak hour. The one-way access alternative is not preferred in the PM peak hour because it would force all of the commuters from the proposed large office component in Block 6 to exit onto Juneau Avenue, which is proposed to have a reduced cross-section with only one through lane in each direction. The two-way access alternative along 5<sup>th</sup> Street allows office commuters a second option during the PM peak hour to exit onto McKinley Avenue for better traffic operations and distribution in the study area.

# APPENDIX

## **INTERSECTION TURNING VOLUME EXHIBITS**

- **EXISTING - EXHIBITS 3-1 to 3-3**
- **FUTURE BACKGROUND - EXHIBITS 4-1 to 4-7**
- **FUTURE DEVELOPMENT - EXHIBITS 4-8 to 4-14**
- **FUTURE TOTAL - EXHIBITS 4-15 to 4-21**

N

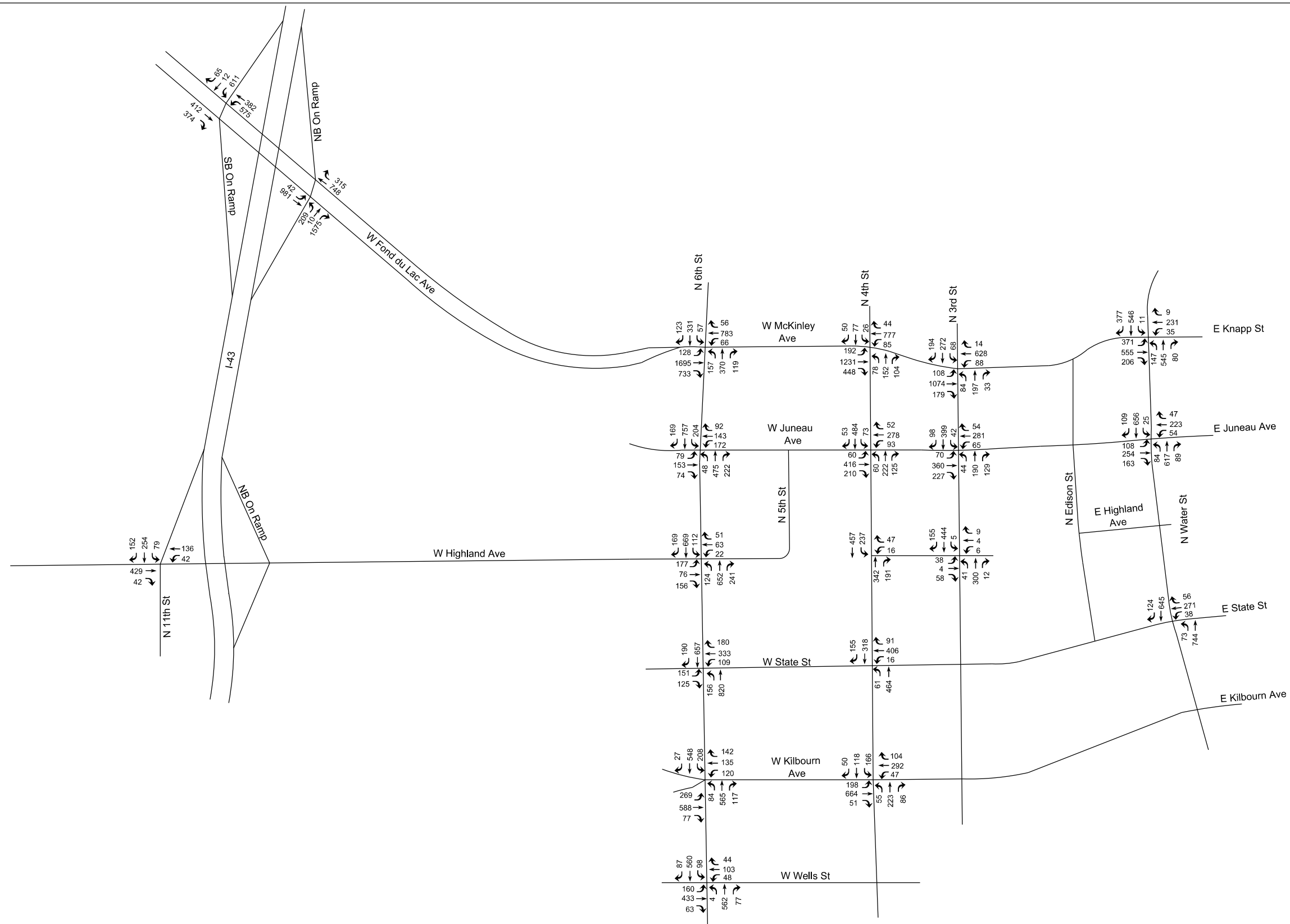


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## PM Existing Turning Movement Volumes

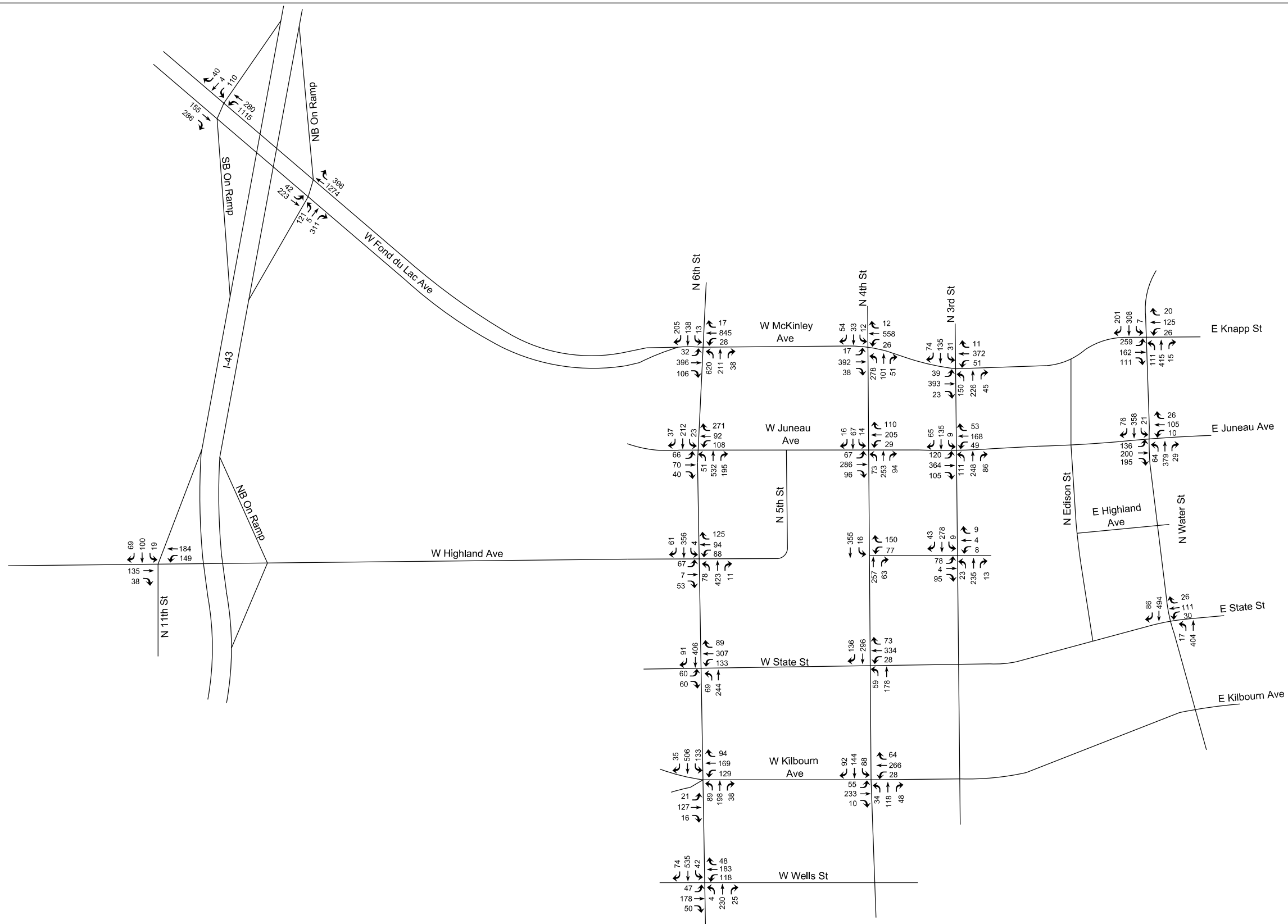


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Pregame Existing Turning Movement Volumes



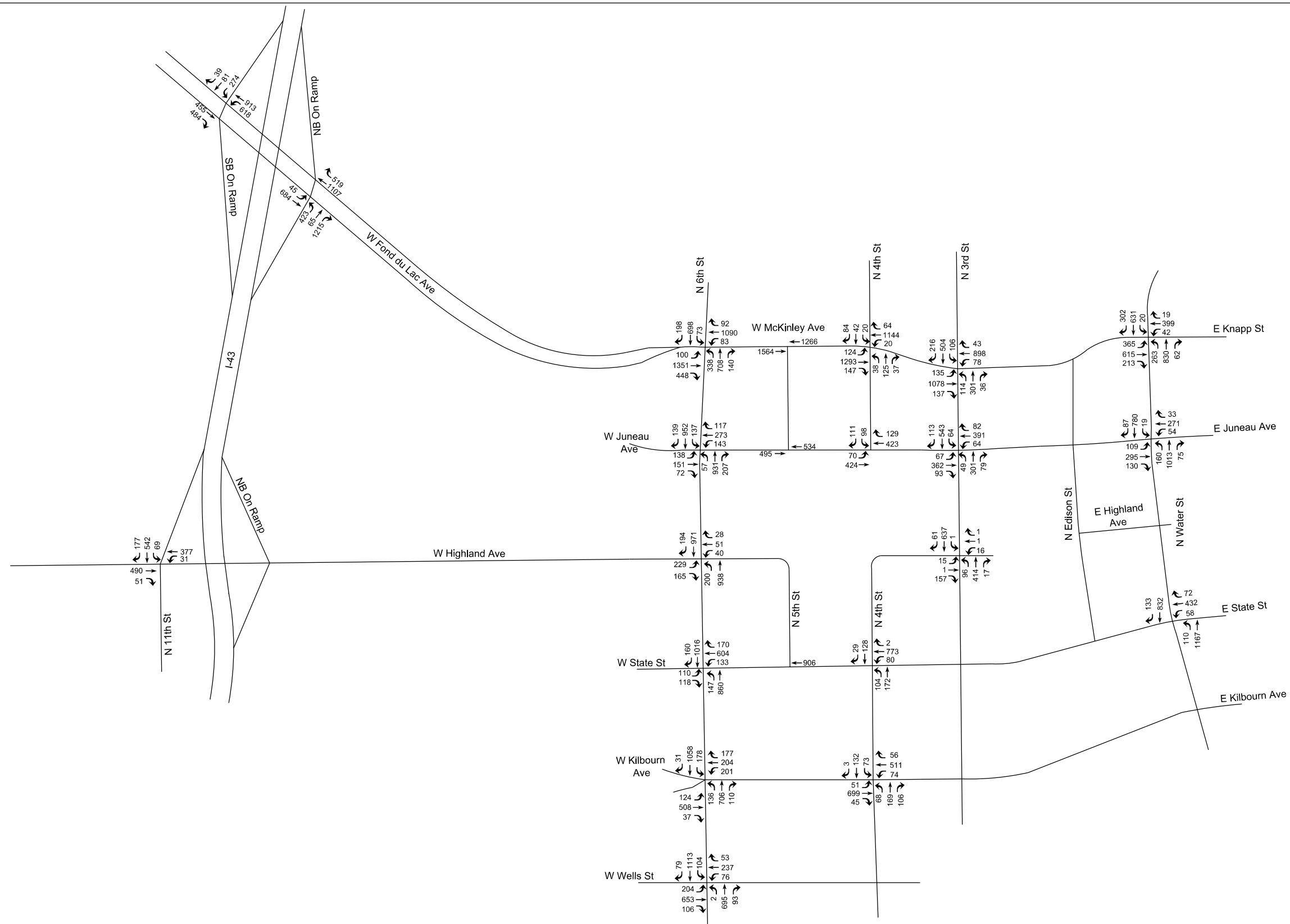
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# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Postgame Existing Turning Movement Volumes



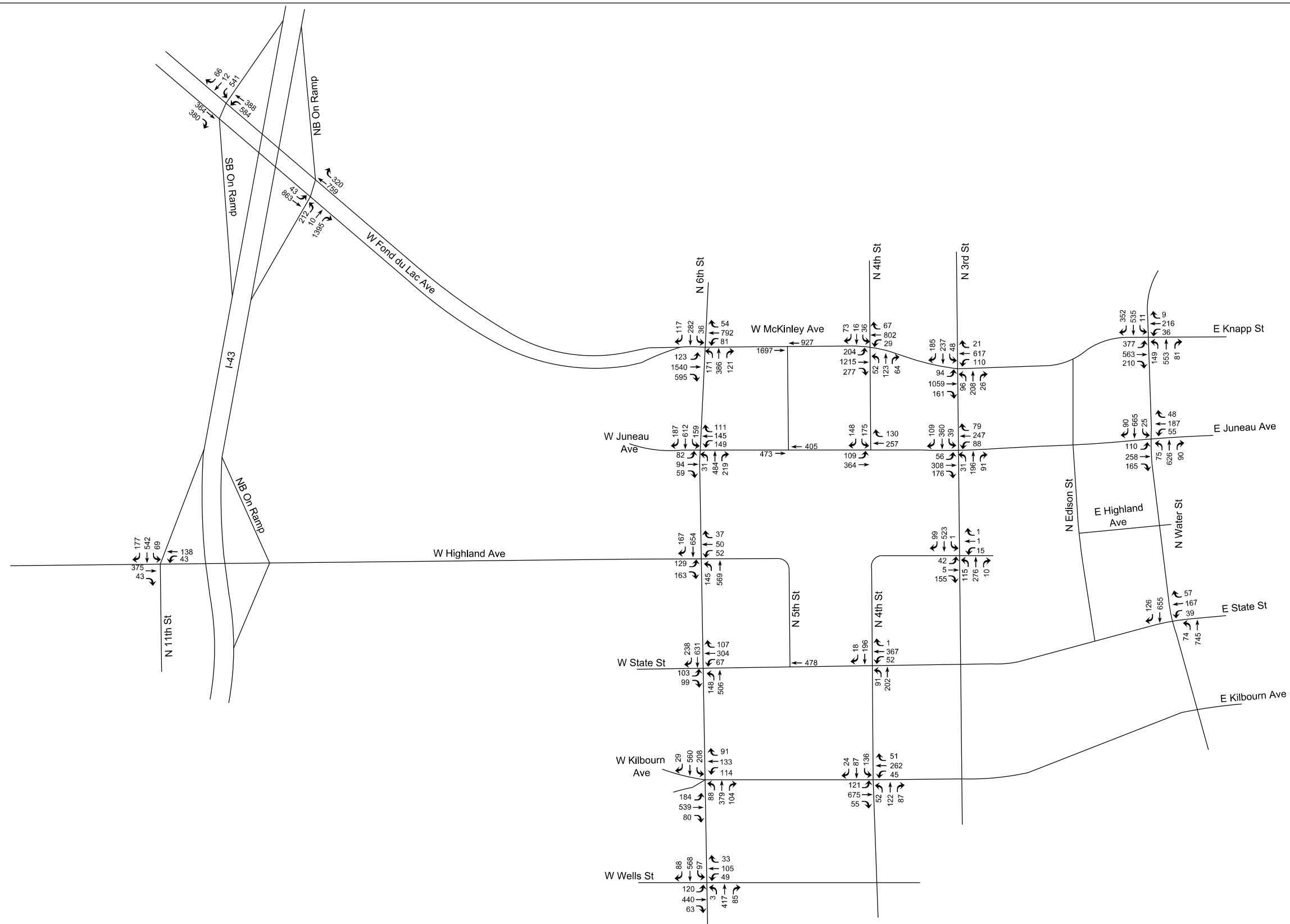
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# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase I PM Background Turning Movement Volumes

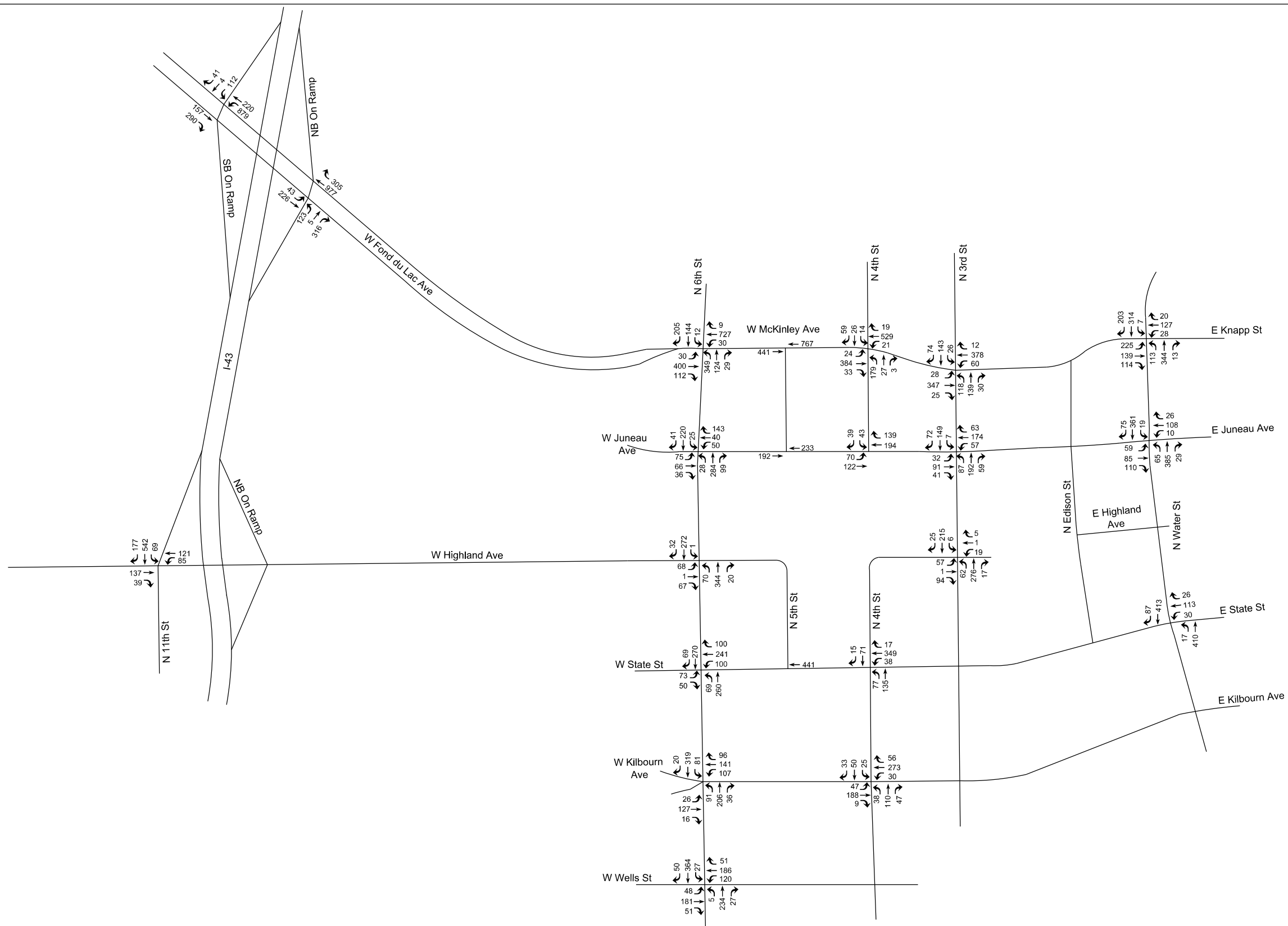


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase I Pregame Background Turning Movement Volumes

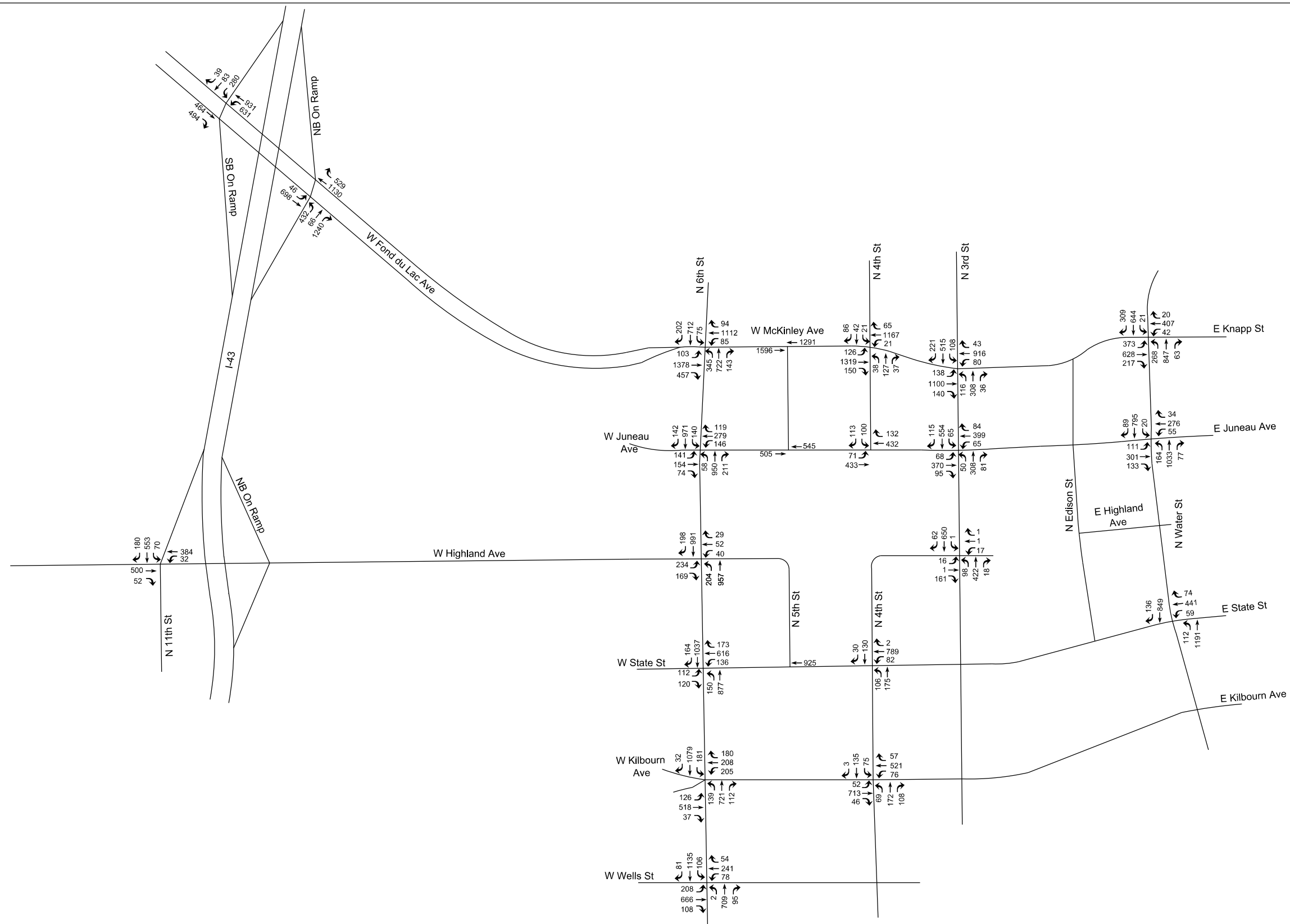


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase I Postgame Background Turning Movement Volumes

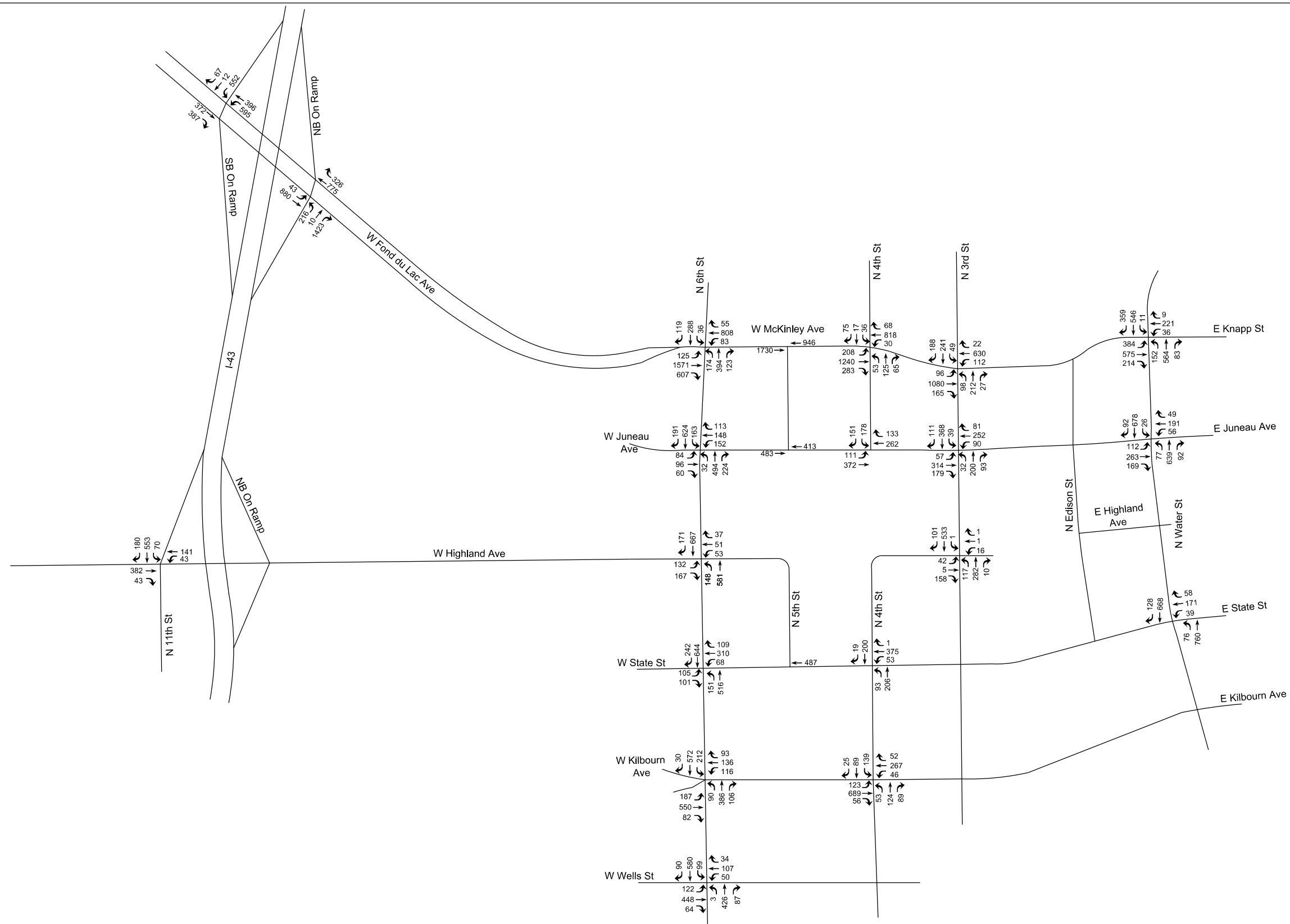


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase II PM Background Turning Movement Volumes

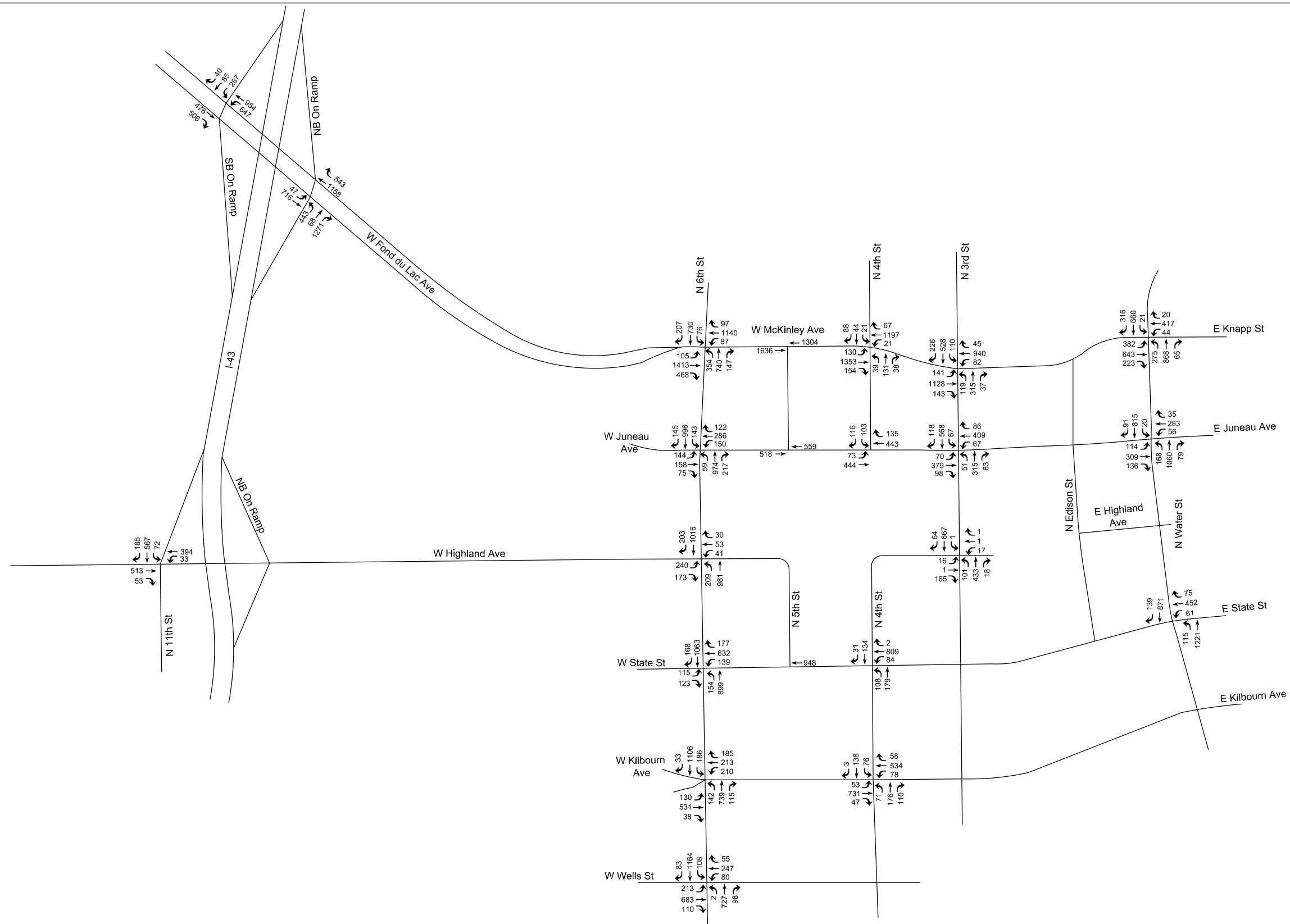


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase II Pregame Background Turning Movement Volumes



N

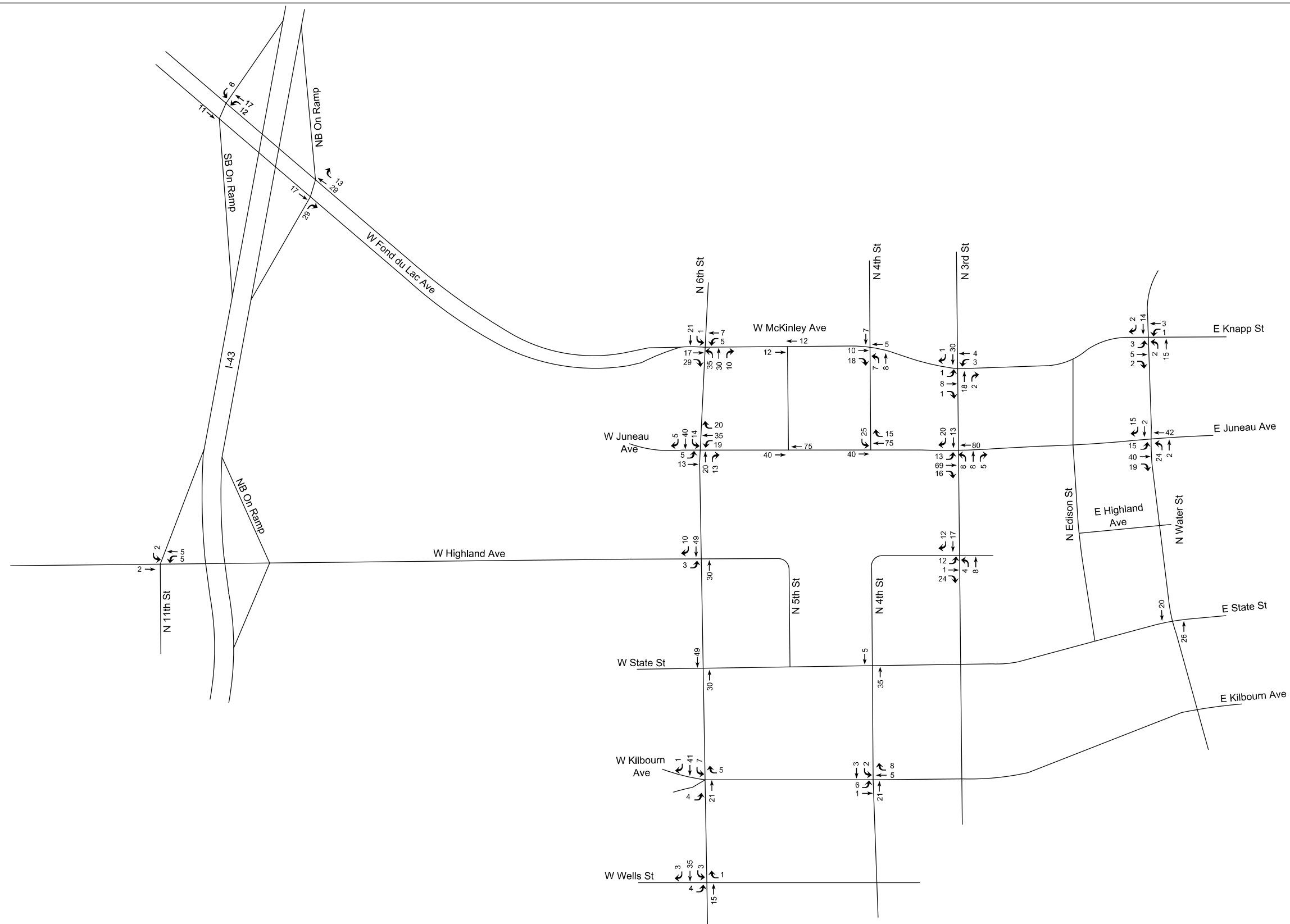
# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase III PM Background Turning Movement Volumes



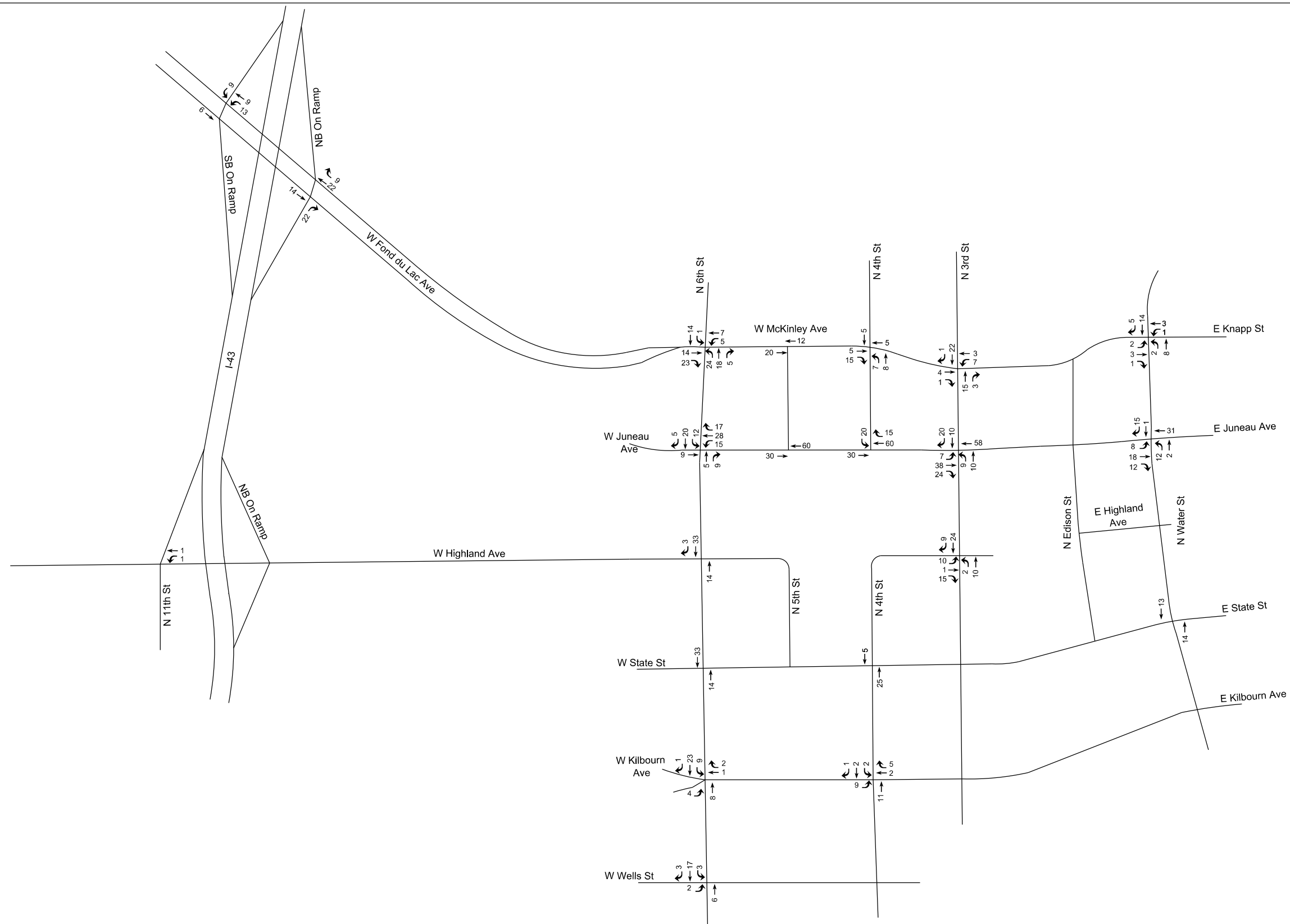


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase I PM Forecasted Development (Non-Arena) Trip Generation Volumes

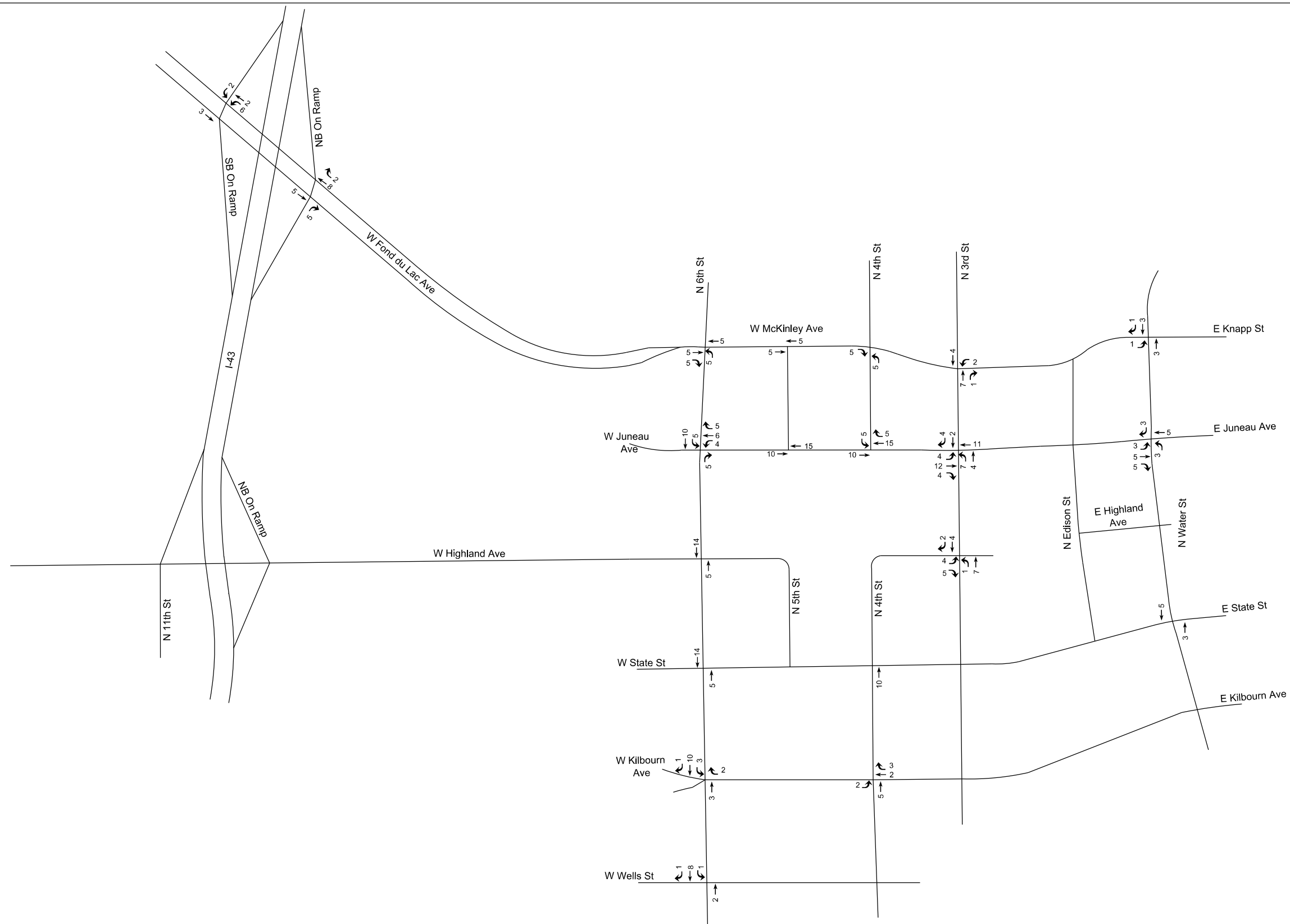


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase I Pregame Forecasted Development (Non-Arena) Trip Generation Volumes



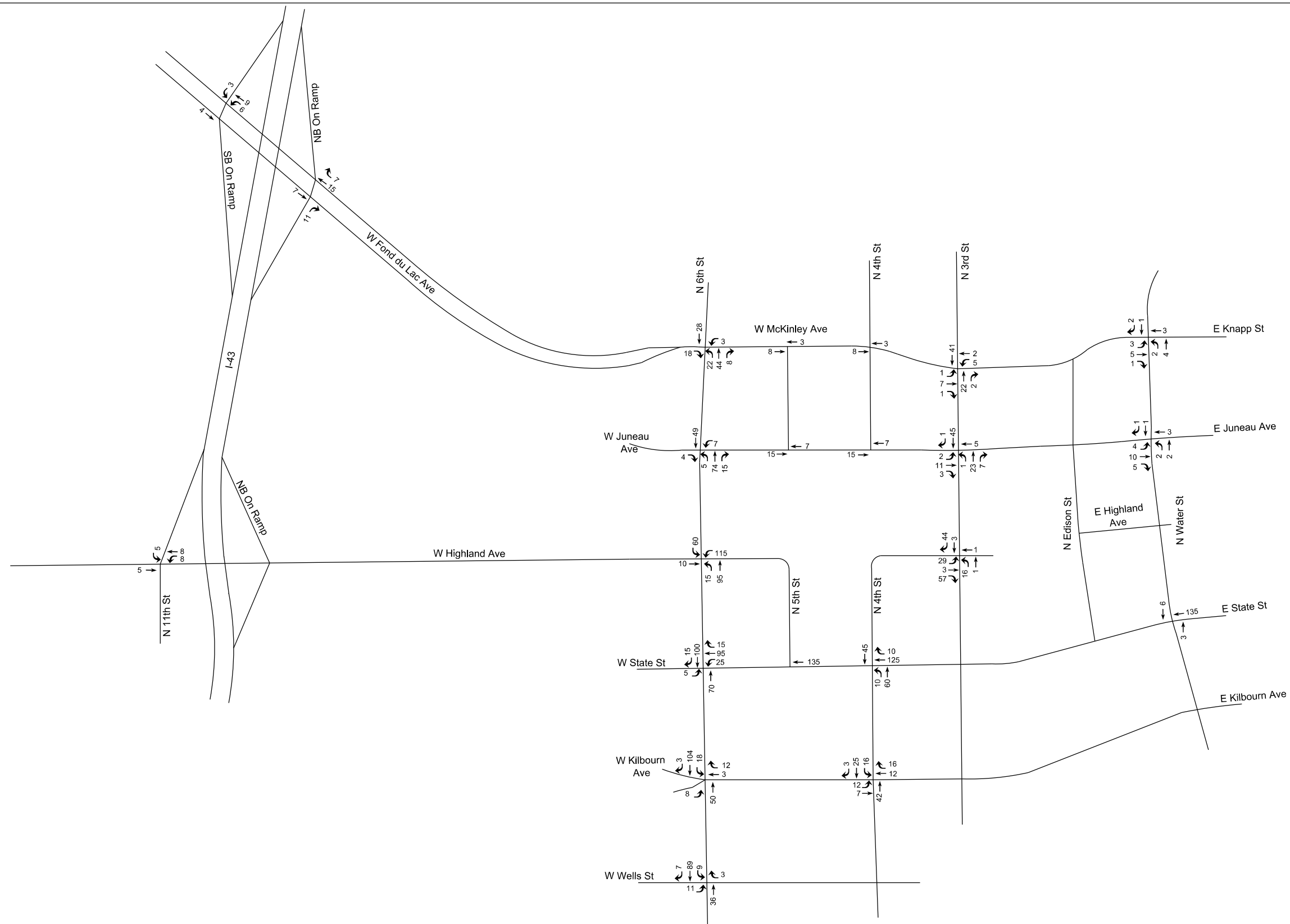
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## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase I Postgame Forecasted Development (Non-Arena) Trip Generation Volumes



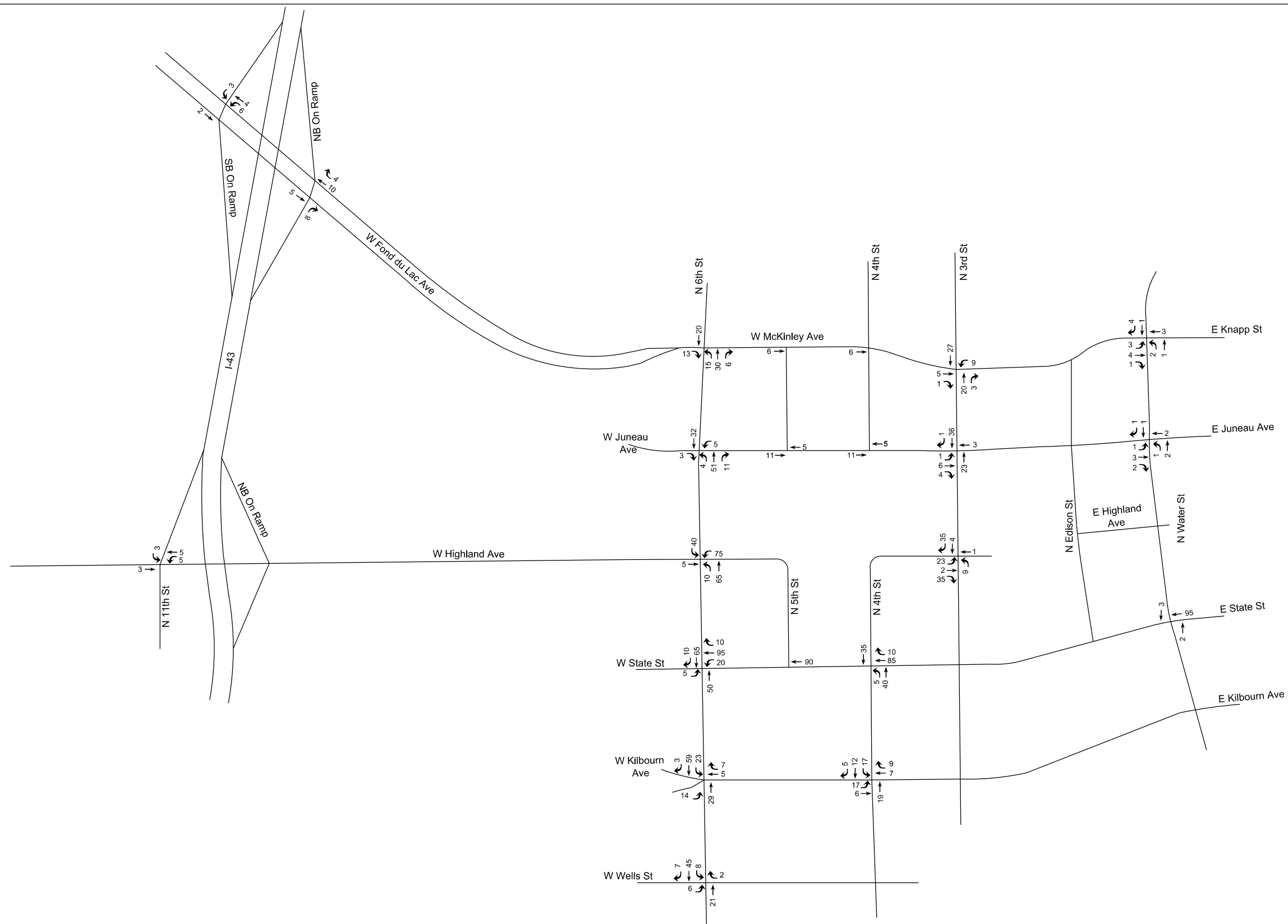
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# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase II PM Forecasted Development (Non-Arena) Trip Generation Volumes

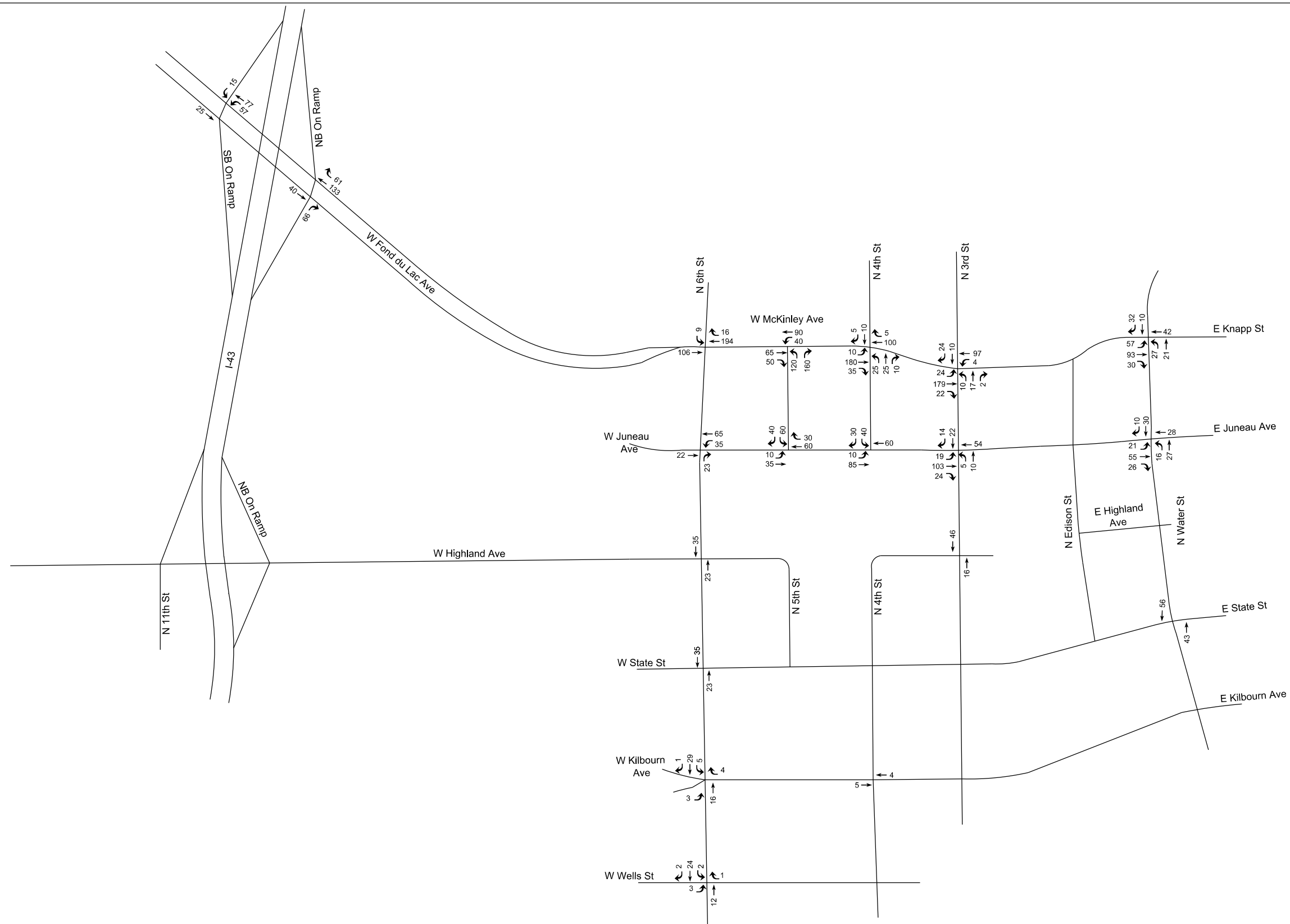


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase II Pregame Forecasted Development (Non-Arena) Trip Generation Volumes

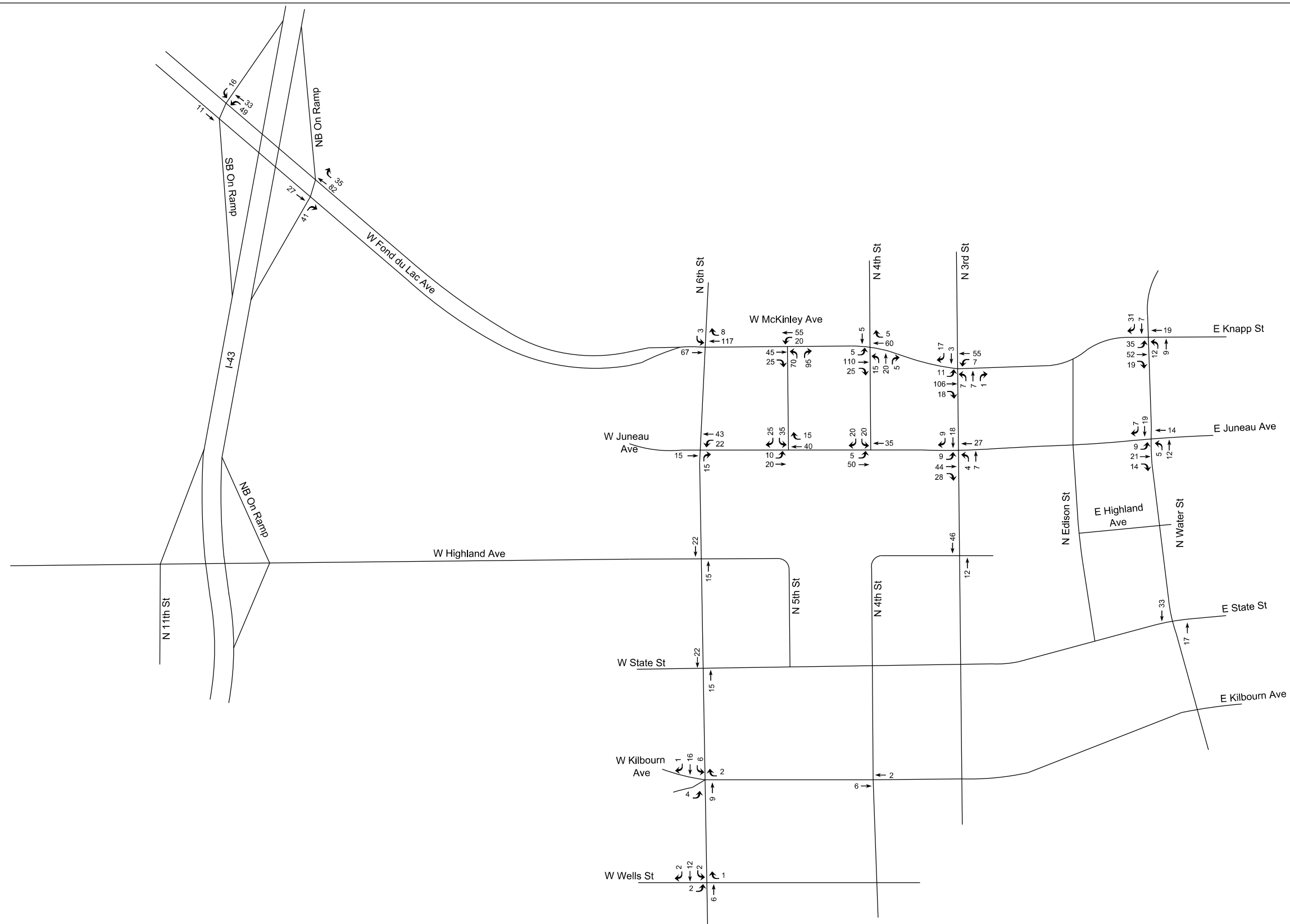


## Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

### Phase III PM Forecasted Development (Non-Arena) Trip Generation Volumes

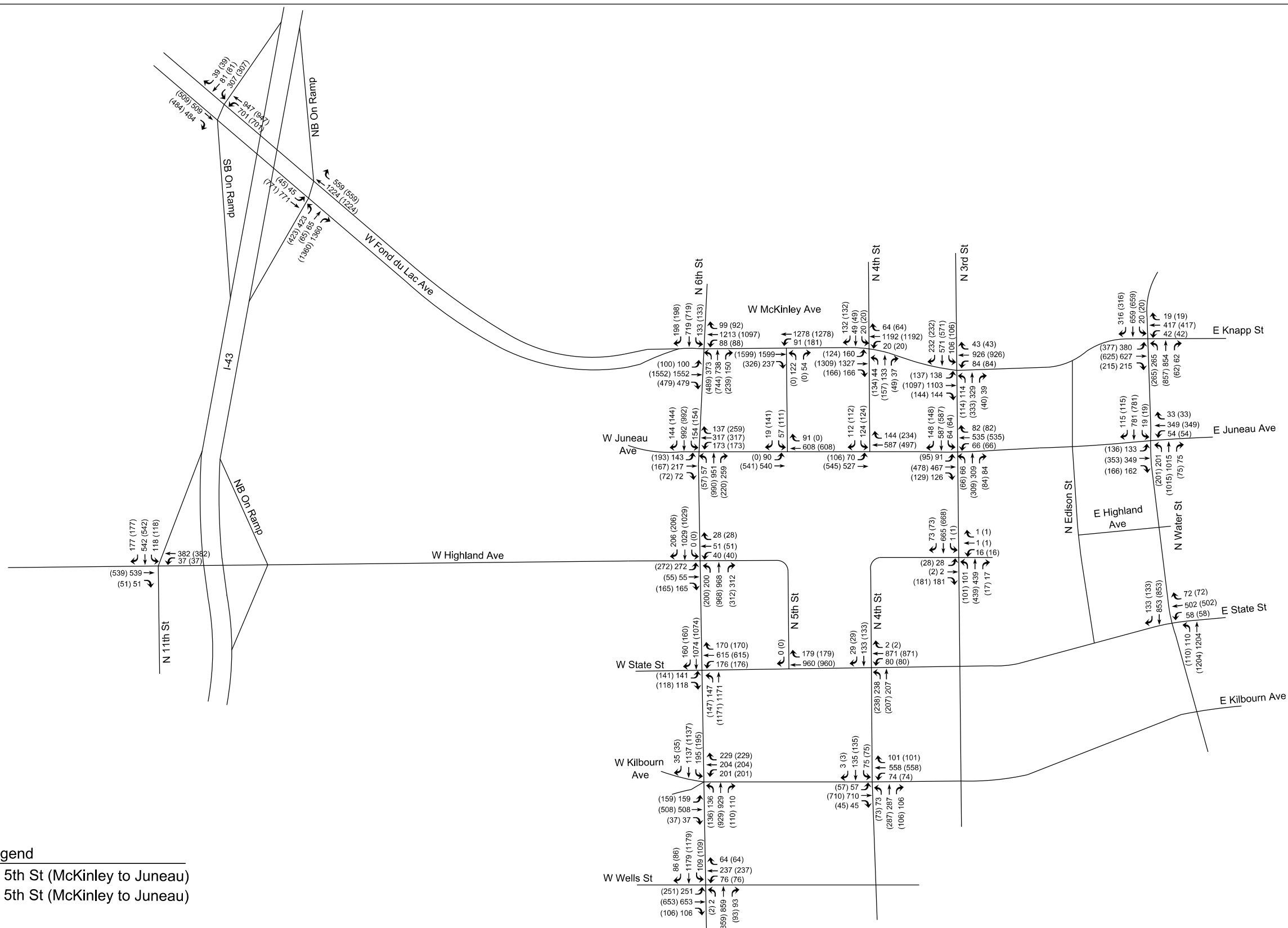


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase III Pregame Forecasted Development (Non-Arena) Trip Generation Volumes

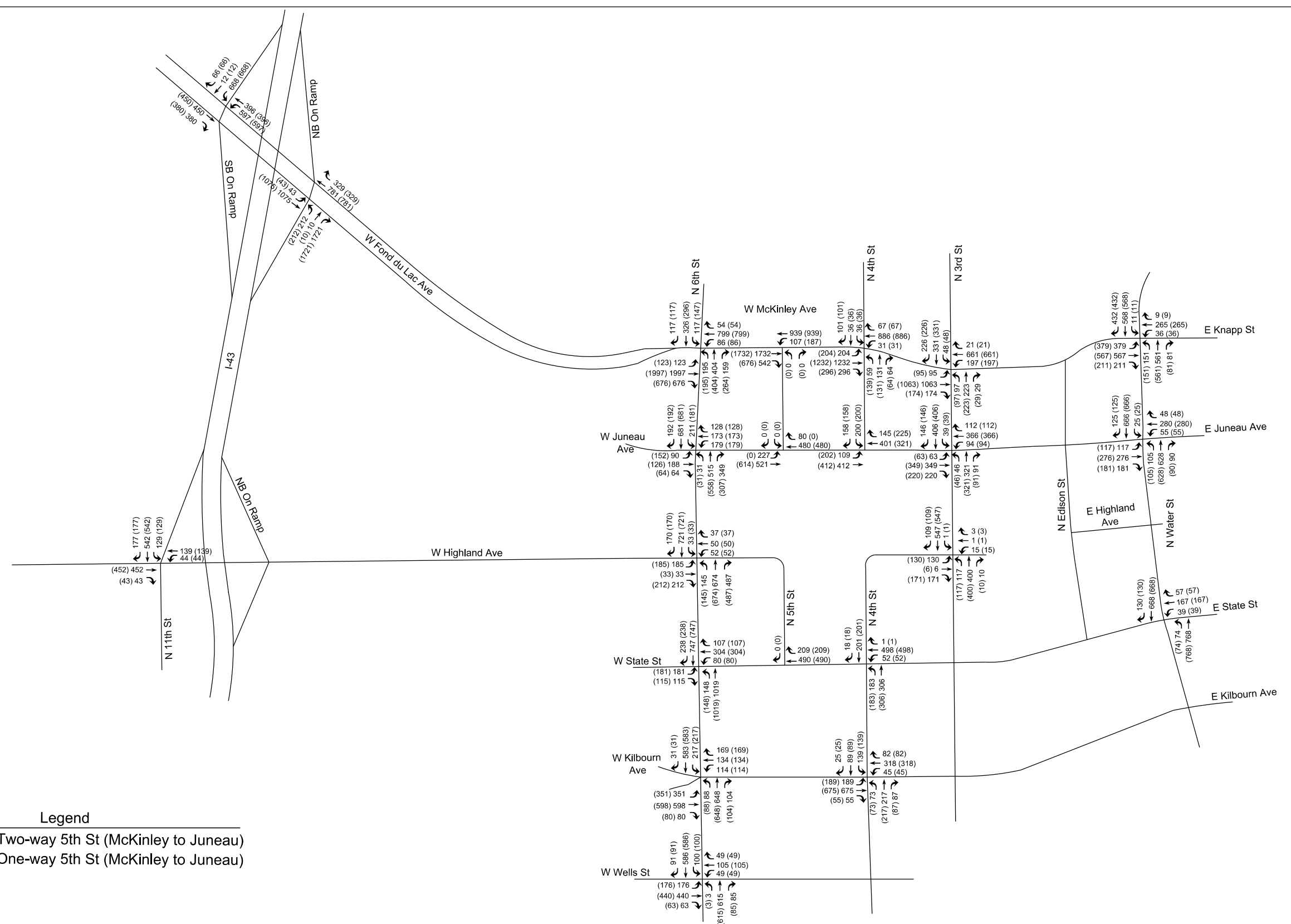


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase I PM Forecasted Total Turning Movement Volumes



Legend

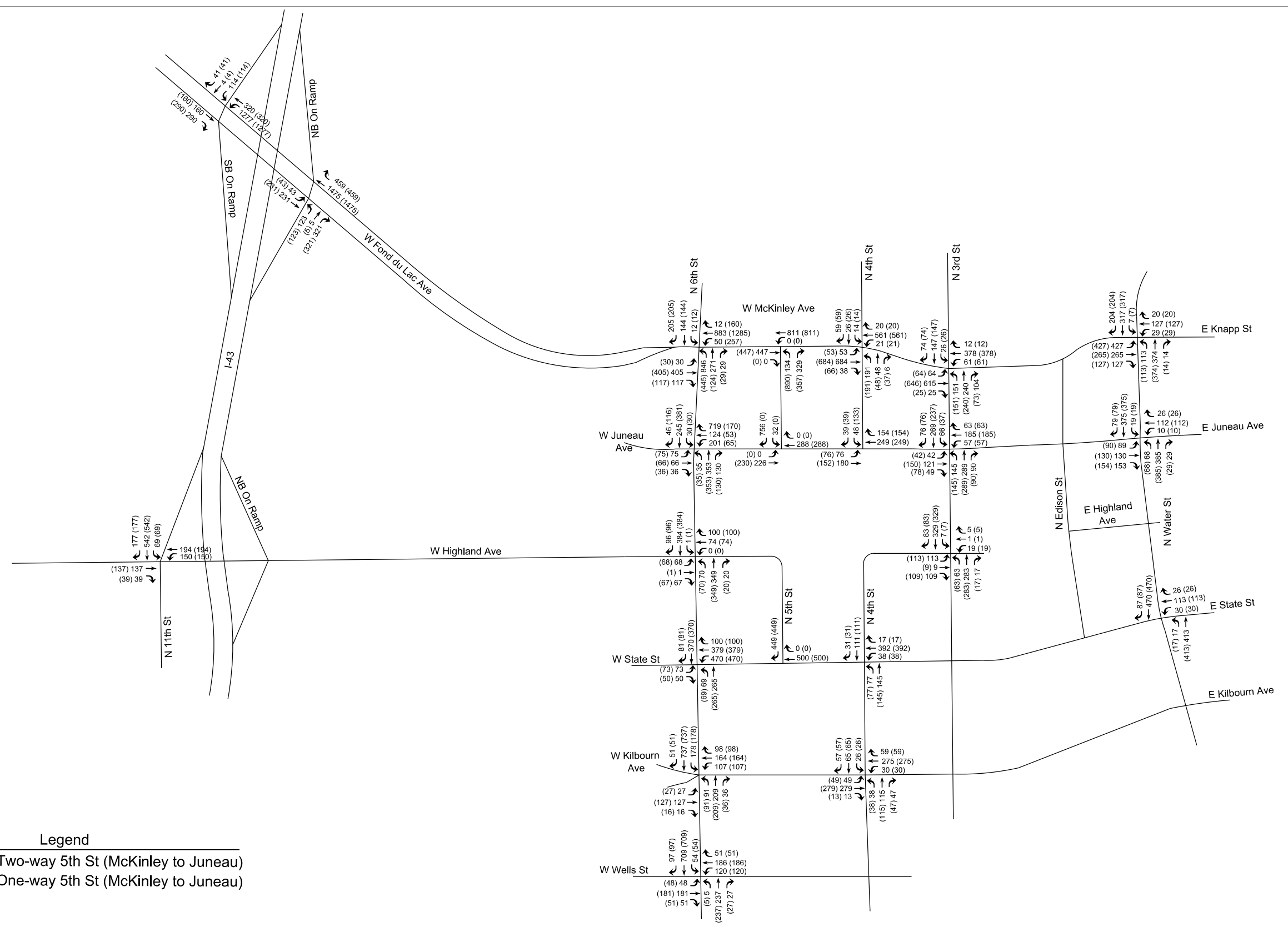
- XXXX = Two-way 5th St (McKinley to Juneau)
- (XXXX) = One-way 5th St (McKinley to Juneau)

Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

Phase I Pregame Forecasted Total Turning Movement Volumes



Legend

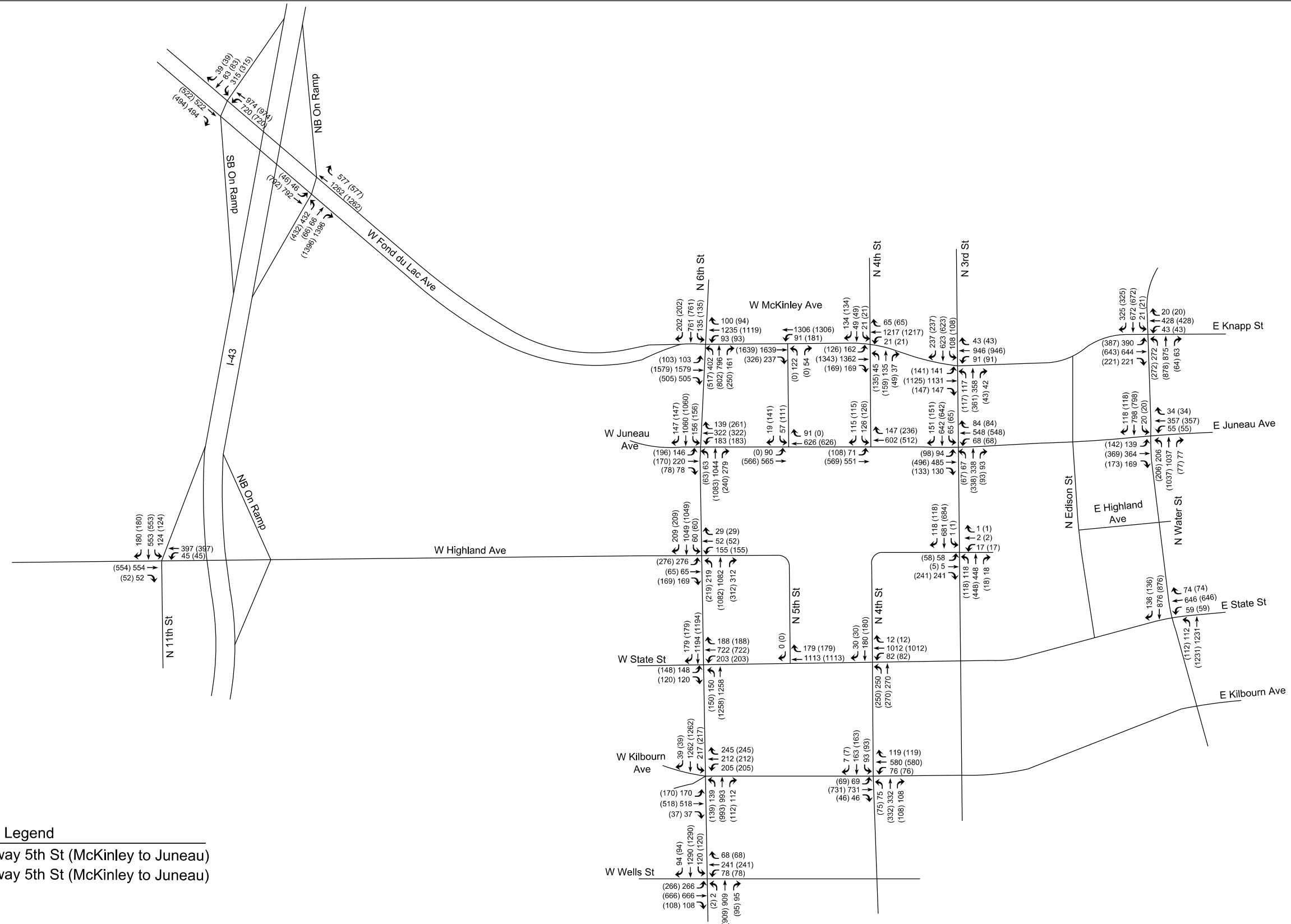
- XXXX = Two-way 5th St (McKinley to Juneau)
- (XXXX) = One-way 5th St (McKinley to Juneau)

Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

Phase I Postgame Forecasted Total Turning Movement Volumes

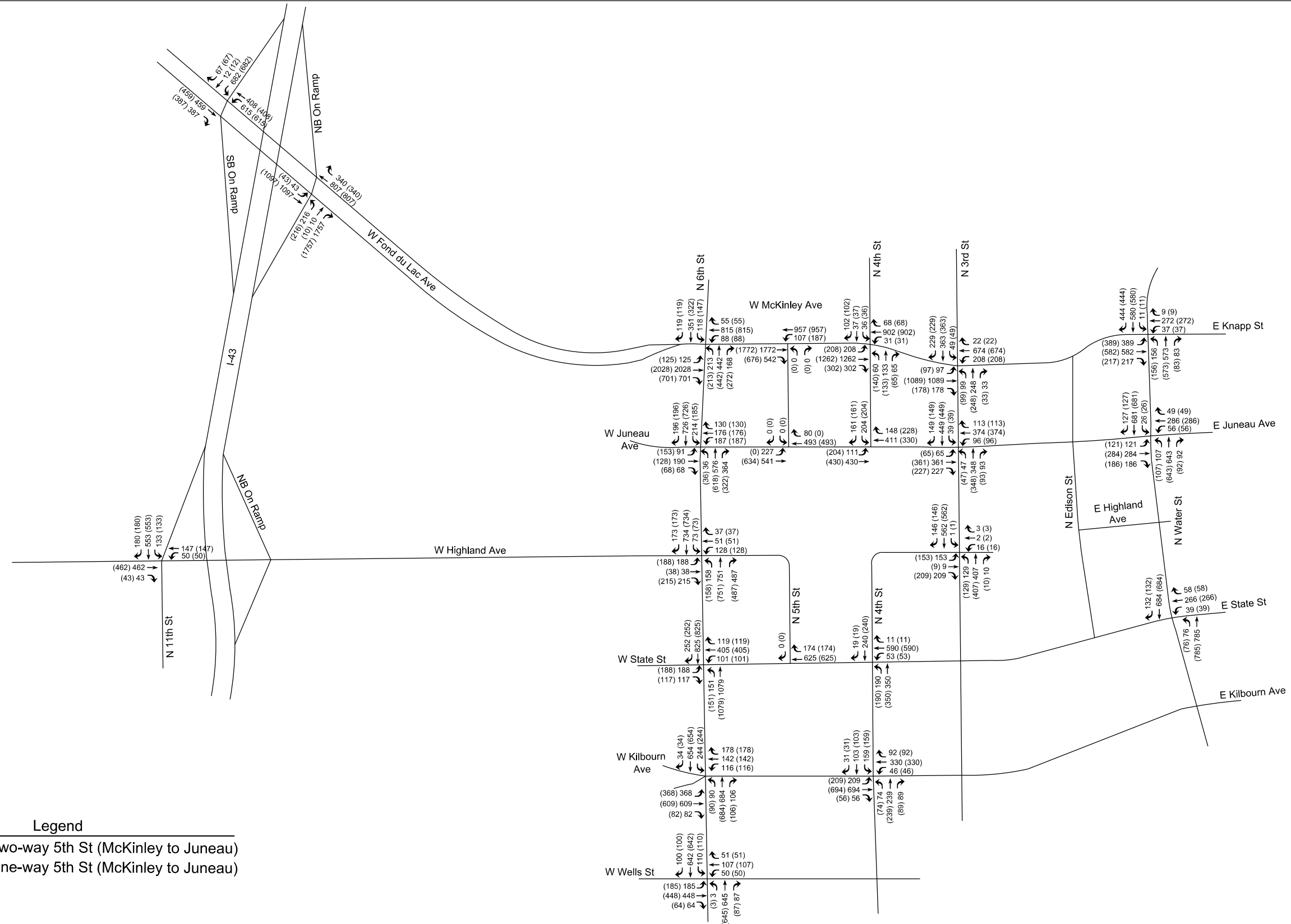


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase II PM Forecasted Total Turning Movement Volumes



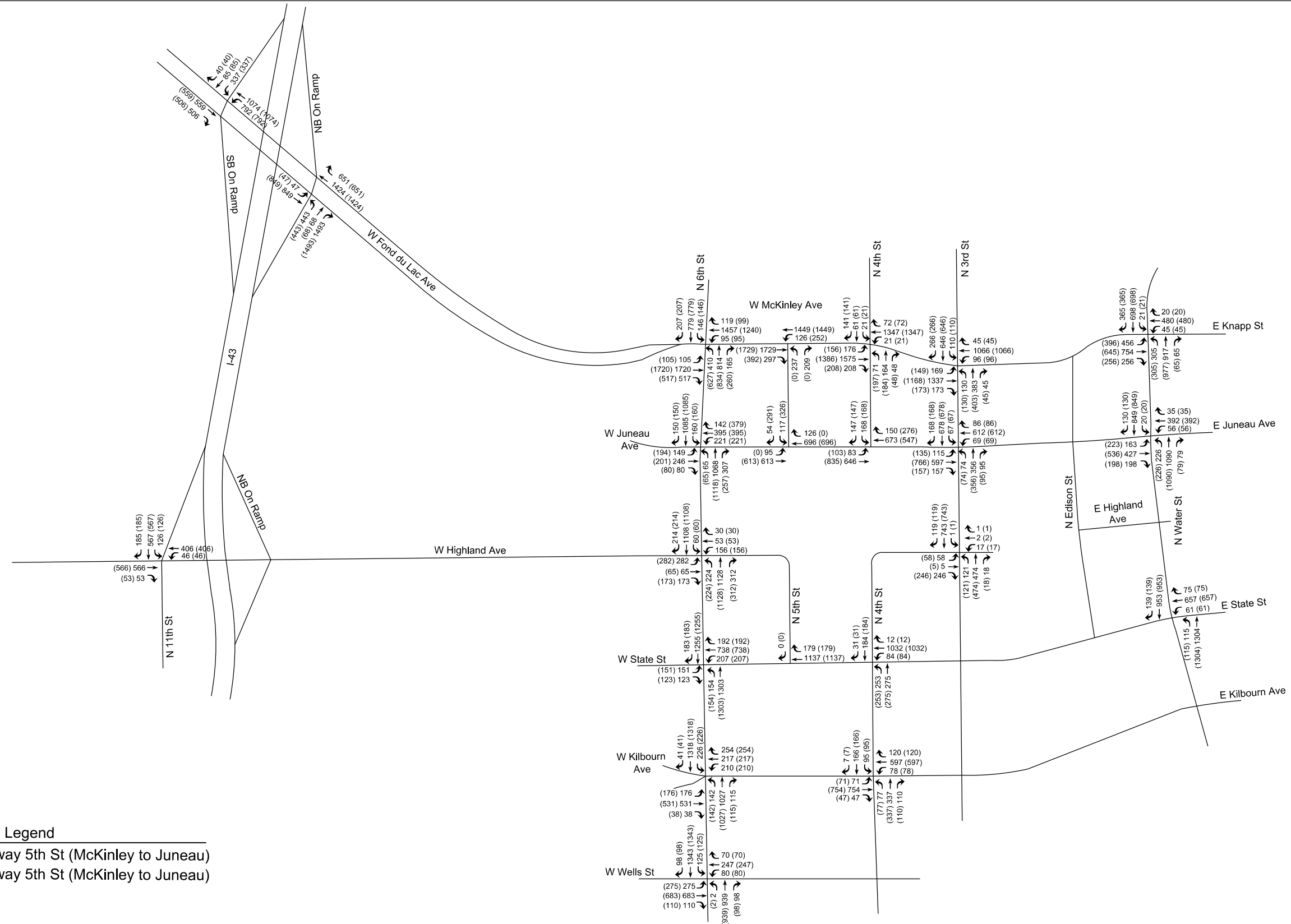
- Legend
- XXXX = Two-way 5th St (McKinley to Juneau)
  - (XXXX) = One-way 5th St (McKinley to Juneau)

# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase II Pregame Forecasted Total Turning Movement Volumes

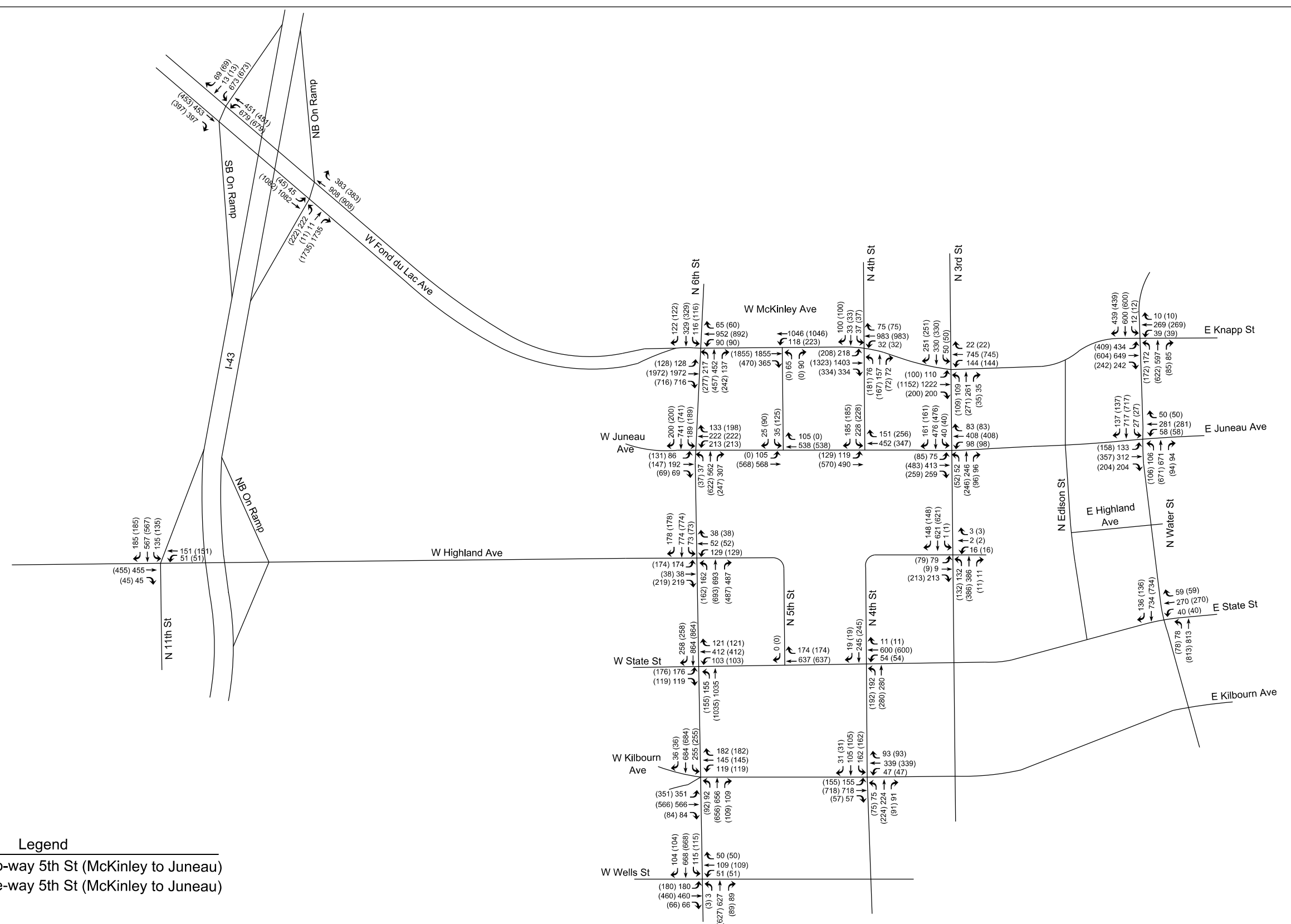


# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase III PM Forecasted Total Turning Movement Volumes



# Milwaukee Arena

I-43 to N Water St  
McKinley Ave to Wells St

Milwaukee County

## Phase III Pregame Forecasted Total Turning Movement Volumes

**BARCLAYS CENTER MODE SPLIT  
TRAFFIC STUDY REPORT**



S A M S C H W A R T Z  
E N G I N E E R I N G

# Memorandum

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To: Jane Marshall, Forest City Ratner Companies  
From: Daniel Schack, AICP, PTP  
Date: June 7, 2013  
Re: Barclays Center TDM Effectiveness in Meeting Mode Split Objectives  
Project No: 12-01-3540

## INTRODUCTION

At the request of Forest City Ratner Companies (FCRC), Sam Schwartz Engineering (SSE) has performed an evaluation of the effectiveness of the Barclays Center transportation demand management (TDM) plan at meeting specific objectives described in the Atlantic Yards Arena and Redevelopment Project Final Environmental Impact Statement (FEIS). The overall goals of the TDM plan are to minimize the number of vehicles that travel to the arena and to minimize the impact on the surrounding area from the patrons who insist on driving, regardless of the available alternatives.

These TDM plan goals are based on specific objectives to reduce the number of peak hour personal vehicle trips associated with arena operations. One specific objective of the TDM strategy was to reduce auto mode (i.e., personal vehicle) share projected in the FEIS Build 2010 Condition for Nets game attendees by 20% to achieve an average auto share<sup>1</sup> of 28.3% or less for weekday evening games and 32.0% or less for Saturday afternoon games. A second objective of the TDM plan was to reduce the volume of pre-game peak hour auto trips within ½ mile of the arena by 30% from the amounts projected in the FEIS.<sup>2</sup> For a weekday evening Nets game, this would correspond to a reduction from 1,979 to 1,395 pre-game peak hour auto trips and from 2,314 to 1,638 post-game peak hour auto trips. For a Saturday afternoon Nets game, this would correspond to a reduction from 1,944 to 1,367 pre-game peak hour auto trips and from 2,203 to 1,550 post-game peak hour auto trips.

To achieve the objectives specified above, a TDM plan (described in the “Proposed Transportation Demand Management Plan for Barclays Center,” prepared by SSE on August 15, 2012) has been in place for arena events since the venue opened on September 28, 2012. The TDM program includes a focus on marketing the robust transit service at the arena and strongly communicating the message that there is limited parking in the area. In addition, a host of other measures were implemented to minimize the number of vehicles traveling to the arena. In order to evaluate the program’s effectiveness, travel data for arena events was collected for comparison with FEIS project goals. The methodology and findings for the data collection and evaluation process are described in the following section.

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<sup>1</sup> Indicates the average between the arrival and departure auto shares.

<sup>2</sup> Atlantic Yards FEIS, Page 19-35.

## EVALUATION OF TDM EFFECTIVENESS

To assess fan travel patterns and establish typical mode splits for arena events, a series of travel surveys of arena patrons was conducted in early 2013 at a variety of arena events. These surveys collected data on patron origin, destination, travel mode, vehicle occupancy, parking location, and pre- and post-event activities. The results have been compared to the Atlantic Yards FEIS goals for auto mode share to assess the adequacy of the TDM program.

### *Methodology*

The surveys were designed by SSE and Clarion Research, a professional market research firm, and implemented by Clarion Research. Surveys were conducted at thirteen arena events, from January to March 2013, that were selected to examine a variety of typical arena events. Eight of the surveyed events were Nets games (five weekday evening games and three weekend evening games). It should be noted that the FEIS auto share goals were specifically tied to weekday evening and Saturday afternoon Nets games; however, no Saturday afternoon Nets games were scheduled in 2013 so three weekend evening games were surveyed. The specific Nets games surveyed are listed below:

- I. Five weekday evening Nets games
  - a. Tuesday, January 15: Nets vs. Raptors
  - b. Wednesday, January 30: Nets vs. Heat
  - c. Tuesday, February 5: Nets vs. Lakers
  - d. Wednesday, February 13: Nets vs. Nuggets
  - e. Tuesday, February 19: Nets vs. Bucks
- II. Three weekend evening Nets games
  - a. Saturday, January 5: Nets vs. Kings
  - b. Sunday, January 13: Nets vs. Pacers
  - c. Sunday, February 24: Nets vs. Grizzlies

At surveyed events, patrons inside the arena were asked (via oral interviews using surveys programmed onto tablets) about their travel patterns to and from the venue; this included questions about travel mode, trip origin/destination, vehicle occupancy rates, parking locations, and other metrics. A staff of 11 to 17 interviewers and supervisors covered each event and conducted surveys from 30 to 60 minutes before event began to approximately two hours after each event began. Interviewers were dispersed across arena levels to obtain a representative sample of each arena seating area.

At least 600 attendees, age 16 and over, were interviewed at each event to provide a robust, statistically significant sample that reflects as accurate a picture as possible of the travel patterns of the entire audience. This sample size provides a margin of error that is +/-4% per event. Survey results were then weighted to account for the actual distribution of attendees by broad seating sections based on ticket scan data and to account for children attending events, who were not eligible for the survey.

Survey findings for Nets games are included in the following section; findings for other events surveyed are included in **Appendix A**.

## Findings – Nets Games

For weekday evening Nets games, the majority of patrons travel via transit with an average (between arrival and departure) transit share of 57.7%; the average auto share is 25.7%; the average walk share is 7.8%; the average taxi share is 5.4%; and the remaining patrons travel via other modes. For weekend evening Nets games, the average transit share is 49.8%; the average auto share is 31.9%; the average walk share is 9.6%; the average taxi share is 5.7%; and the remaining patrons travel via other modes. Specific arrival and departure travel modes for average weekday and weekend Nets games are shown in **Table 1**.

**Table 1: Nets Weekday and Weekend Average Travel Modes**

TRAVEL MODE	Nets Weekday Average		Nets Weekend Average	
	Arrival	Departure	Arrival	Departure
<b>Transit</b>	59.6%	55.9%	49.8%	49.7%
Subway	52.5%	47.5%	39.3%	40.0%
LIRR	6.0%	7.2%	8.8%	8.6%
City Bus	1.1%	1.2%	1.7%	1.2%
<b>Charter Bus/School Bus</b>	2.5%	2.3%	2.2%	2.2%
<b>Barclays Center Shuttle</b>	0.1%	0.0%	0.1%	0.0%
<b>Auto</b>	25.1%	26.3%	31.9%	31.9%
<b>Taxi</b> (Yellow Cab + Car Service)	5.1%	5.8%	6.4%	5.0%
<b>Rented Limo/Luxury Vehicle</b>	0.6%	0.7%	0.2%	0.3%
<b>Walk</b>	6.9%	8.8%	8.9%	10.3%
<b>Bicycle</b>	0.1%	0.1%	0.2%	0.3%
<b>Other</b>	0.1%	0.1%	0.2%	0.3%

Note: Totals may not equal 100% due to rounding.

VEHICLE OCCUPANCY	Arrival	Departure	Arrival	Departure
<b>Auto</b>	2.75	2.74	3.22	3.22
<b>Taxi</b> (Yellow Cab + Car Service)	2.41	2.50	2.82	2.66
<b>Rented Limo/Luxury Vehicle</b>	4.72	4.89	3.68	4.81

The surveys also questioned patrons about their geographic origins and destinations, and their pre- and post-game activities. For weekday Nets games, the largest share of fans originated in Manhattan (36.4%) before the games and remained in Brooklyn (36.9%) after the games. For weekend Nets games, the largest share of fans originated in Brooklyn (34.5%) before the games and remained in Brooklyn (34.5%) after the games. Additionally, for weekday Nets games, 5.4% of fans visited a nearby location (e.g., restaurant, bar, etc.) before the games and 11.9% visited one after the games. For weekend Nets games, 8.8% of fans visited a nearby business before the game and 14.6% visited a nearby location after the games. Details on pre- and post-game locations and activities are shown in **Table 2**.

**Table 2: Nets Weekday and Weekend Average Origin/Destination and Pre-/Post-Game Locations**

TRIP ORIGIN & DESTINATION	Nets Weekday Average		Nets Weekend Average	
	Origin	Destination	Origin	Destination
<b>Brooklyn</b>	31.6%	36.9%	34.5%	34.5%
<b>Manhattan</b>	36.4%	24.3%	21.7%	20.5%
<b>Queens</b>	6.2%	7.4%	7.5%	7.1%
<b>Bronx</b>	2.7%	2.4%	3.0%	3.4%
<b>Staten Island</b>	1.6%	1.9%	3.1%	3.3%
<b>Nassau</b>	5.5%	6.8%	7.8%	8.0%
<b>Suffolk</b>	2.8%	3.2%	4.8%	4.5%
<b>Rockland</b>	0.4%	0.6%	0.7%	0.7%
<b>Westchester</b>	1.9%	2.5%	2.9%	3.1%
<b>Connecticut</b>	1.8%	1.8%	2.0%	2.1%
<b>New Jersey</b>	8.3%	9.8%	9.6%	9.6%
<b>Other</b>	1.0%	2.5%	2.6%	3.2%

*Note: Totals may not equal 100% due to rounding.*

PRE- & POST-GAME LOCATION	Pre-Game	Post-Game	Pre-Game	Post-Game
<b>Home/Dorm</b>	47.5%	77.0%	76.9%	75.5%
<b>Work/School</b>	39.9%	2.7%	4.0%	1.0%
<b>Somewhere Else</b> (beyond 1/2 mile)	7.2%	8.4%	10.3%	8.9%
<b>Nearby Location</b> (within 1/2 mile)	5.4%	11.9%	8.8%	14.6%
<i>Nearby Restaurant</i>	2.2%	2.7%	3.9%	4.4%
<i>Nearby Bar</i>	2.2%	8.5%	2.7%	8.8%
<i>Nearby Shopping</i>	0.6%	0.4%	0.8%	0.4%
<i>Other Nearby Location</i>	0.4%	0.4%	1.5%	1.0%

*Note: Totals may not equal 100% due to rounding.*

### Comparison with FEIS Goals

The specific goal of the TDM program described in the FEIS was to reduce the auto mode share projected for the FEIS Build 2010 Condition by 20% to achieve an average (between arrival and departure) auto share of 28.3% for weekday evening Nets games and 32.0% for Saturday afternoon Nets games. The remote parking facilities were expected to further reduce the volume of vehicles within ½ mile of the arena by diverting an additional 250 autos, resulting in the equivalent of a 30% reduction in peak hour autos within ½ mile of the arena.

For weekday evening Nets games, the actual average auto share is 25.7%, compared to the FEIS goal of 28.3%. The specific goals of the FEIS for auto volume would correspond to 1,395 pre-game peak hour auto trips and 1,638 post-game peak hour auto trips within ½ mile of the arena. The patron travel surveys found that there are actually 782 pre-game peak hour auto trips (approximately 44% fewer auto trips than the FEIS goal) and 1,264 post-game peak hour trips (approximately 23% fewer auto trips than the FEIS goal) within ½ mile of the arena. An auto trip volume comparison is shown in **Table 3**.

**Table 3: Weekday Evening Nets Game Peak Hour Auto Trip Comparison**

	FEIS Build 2010 Condition <sup>A</sup>		FEIS Mitigated 2010 Condition <sup>B</sup>		2013 Patron Survey <sup>C</sup>	
	In	Out	In	Out	In	Out
<b>Average Attendance</b>	18,000		18,000		15,444	
<b>Auto Share</b>	34.8%	35.9%	27.8%	28.7%	25.1%	26.3%
<b>Auto Occupancy</b>	2.35	2.35	2.35	2.35	2.75	2.74
<b>Total Auto Trips</b>	2,666	2,750	2,132	2,200	1,409	1,483
<b>Peak Hour Percentage</b>	75.0%	85.0%	75.0%	85.0%	55.7%	85.5%
<b>Peak Hour Auto Trips</b>	1,979	2,314	1,583	1,851	785	1,268
<b>Autos Diverted to Remote Parking</b>			188	213	3	4
<b>Peak Hour Auto Trips within 1/2 Mile of Arena</b>	<b>1,979</b>	<b>2,314</b>	<b>1,395</b>	<b>1,638</b>	<b>782</b>	<b>1,264</b>

A. Atlantic Yards FEIS, Tables 12-10 and 12-14.

B. Calculated by SSE per assumptions in Atlantic Yards FEIS, Table 12-10 and Page 19-35.

C. The maximum capacity for Nets games is ~17,700; actual attendance is lower, with a typical “no show” rate of 10% even for sold out games. Attendance shown represents the average of the five weekday games surveyed. Values shown are rounded.

For weekend evening Nets games, the actual average auto share is 31.9%, compared to the FEIS goal of 32.0%. The specific goals of the FEIS for auto volume would correspond to 1,367 pre-game peak hour auto trips and 1,550 post-game peak hour auto trips within ½ mile of the arena. The patron travel surveys found that there are actually 789 pre-game peak hour auto trips (approximately 42% fewer auto trips than the FEIS goal) and 1,222 post-game peak hour trips (approximately 21% fewer auto trips than the FEIS goal) within ½ of the arena. An auto trip volume comparison is shown in **Table 4**.

**Table 4: Weekend Nets Game Peak Hour Auto Trip Comparison**

	FEIS Build 2010 Condition <sup>A</sup>		FEIS Mitigated 2010 Condition <sup>B</sup>		2013 Patron Survey <sup>C</sup>	
	In	Out	In	Out	In	Out
<b>Average Attendance</b>	18,000		18,000		14,836	
<b>Auto Share</b>	40.0%	40.0%	32.0%	32.0%	31.9%	31.9%
<b>Auto Occupancy</b>	2.75	2.75	2.75	2.75	3.22	3.22
<b>Total Auto Trips</b>	2,618	2,618	2,095	2,095	1,470	1,470
<b>Peak Hour Arrivals/Departures</b>	75.0%	85.0%	75.0%	85.0%	54.3%	83.9%
<b>Peak Hour Auto Trips</b>	1,944	2,203	1,555	1,763	798	1,232
<b>Autos Diverted to Remote Parking</b>			188	213	9	10
<b>Peak Hour Auto Trips within 1/2 Mile</b>	<b>1,944</b>	<b>2,203</b>	<b>1,367</b>	<b>1,550</b>	<b>789</b>	<b>1,222</b>

A. Atlantic Yards FEIS, Tables 12-10 and 12-14.

B. Calculated by SSE per assumptions in Atlantic Yards FEIS, Table 12-10 and Page 19-35.

C. The maximum capacity for Nets games is ~17,700; actual attendance is lower, with a typical "no show" rate of 10% even for sold out games. Attendance shown represents the average of the five weekday games surveyed. Values shown are rounded.

## Conclusions

The overall goal of the TDM program described in the FEIS was to reduce peak hour auto traffic within ½ mile of the arena projected in the FEIS 2010 Build Condition by approximately 30%, by reducing the overall auto mode share and diverting 250 total autos to remote parking. The volume of peak hour autos generated by the arena were found to meet these goals, with approximately 40% fewer autos in the pre-game peak hour and approximately 20% fewer in the post-game peak hour than projected in the FEIS 2010 Mitigated Condition.

Although surveys found that remote parking facilities are minimally used, the combination of lower than projected auto mode share, lower overall attendance than assumed in the FEIS (which conservatively assumed an attendance of 18,000), higher vehicle occupancy, and lower peak hour percentages results in surpassing the auto trip reduction goals described in the FEIS.

## APPENDIX A – OTHER EVENTS

A variety of other, non-Nets events were also surveyed at the arena, including two weekday evening concerts, two weekend evening concerts, and three weekend family shows. The specific events surveyed are listed below:

- I. Two weekday evening concerts
  - a. Wednesday, February 6: Mumford & Sons concert
  - b. Monday, March 4: Swedish House Mafia concert
- II. Two weekend evening concerts
  - a. Saturday, February 16: Mark Anthony concert
  - b. Saturday, March 2: Swedish House Mafia concert
- III. One weekend family event day (three performances)
  - a. Saturday, January 26: Disney on Ice (11 AM, 3 PM, 7 PM shows)

The travel patterns were found to vary depending on the type of event, with the majority of patrons traveling via transit for the Mumford & Sons and Swedish House Mafia concerts, while a majority of patrons traveled via auto for the Marc Anthony concert and Disney on Ice shows. Event attendance, which is another factor in auto trip volumes, also varied. Specific travel modes, patron origin and destination, pre- and post-event locations, vehicle occupancy, and peak hour auto trip calculations for weekday concerts, weekend concerts, and the weekend Disney on Ice shows are shown in **Tables A1** through **Table A5**.

Table A1: Patron Travel Survey Results for Weekday Concerts

	Mumford & Sons Concert		Swedish House Mafia	
Date	Wednesday, 2/6/2013		Monday, 3/4/2013	
Scheduled Start	8:00 PM		8:00 PM	
TRAVEL MODE	Arrival	Departure	Arrival	Departure
Transit	69.2%	63.8%	56.9%	55.7%
Subway	60.2%	53.7%	48.8%	47.7%
LIRR	9.0%	10.0%	8.1%	8.1%
City Bus	0.0%	0.1%	0.0%	0.0%
Charter Bus/School Bus	0.0%	0.0%	0.7%	0.5%
Barclays Center Shuttle	0.0%	0.0%	0.1%	0.1%
Auto	18.0%	19.0%	28.2%	28.2%
Yellow Cab + Car Service	7.0%	10.4%	10.7%	11.7%
Rented Limo/Luxury Vehicle	1.0%	0.7%	1.1%	1.7%
Walk	4.7%	5.9%	2.2%	2.0%
Bicycle	0.1%	0.2%	0.1%	0.1%
Other	0.0%	0.0%	0.0%	0.0%

Note: Totals may not equal 100% due to rounding.

VEHICLE OCCUPANCY	Arrival	Departure	Arrival	Departure
Auto	2.49	2.59	3.34	3.40
Yellow Cab + Car Service	2.67	2.85	3.50	3.28
Rented Limo/Luxury Vehicle	8.05	9.21	9.93	7.97

TRIP ORIGIN & DESTINATION	Origin	Destination	Origin	Destination
Brooklyn	14.0%	15.7%	15.1%	15.6%
Manhattan	44.7%	34.3%	33.9%	30.5%
Queens	5.5%	7.1%	8.6%	10.1%
Bronx	2.0%	1.7%	1.9%	1.8%
Staten Island	1.0%	1.4%	3.4%	3.5%
Nassau	6.7%	8.0%	7.1%	8.1%
Suffolk	4.6%	5.4%	4.0%	3.5%
Rockland	1.0%	1.0%	0.3%	0.3%
Westchester	4.1%	4.5%	2.9%	2.8%
Connecticut	4.6%	5.3%	3.4%	2.8%
New Jersey	9.3%	11.6%	16.2%	17.2%
Other	2.5%	4.0%	3.2%	3.8%

Note: Totals may not equal 100% due to rounding.

PRE- & POST-EVENT LOCATION	Pre-Event	Post-Event	Pre-Event	Post-Event
Home/Dorm	40.4%	80.1%	55.3%	68.7%
Work/School	28.1%	0.8%	25.0%	1.5%
Somewhere Else (beyond 1/2 mile)	12.0%	9.2%	13.5%	17.3%
Nearby Location (within 1/2 mile)	19.5%	9.9%	6.2%	12.4%
Nearby Restaurant	11.4%	1.6%	3.2%	1.8%
Nearby Bar	7.0%	8.2%	2.6%	9.6%
Nearby Shopping	0.1%	0.0%	0.4%	0.3%
Other Nearby Location	1.0%	0.1%	0.0%	0.7%

Note: Totals may not equal 100% due to rounding.

**Table A2: Patron Travel Survey Results for Weekend Concerts**

	<b>Marc Anthony</b>		<b>Swedish House Mafia</b>	
<b>Date</b>	Saturday, 2/16/2013		Saturday, 3/2/2013	
<b>Scheduled Start</b>	8:00 PM		8:00 PM	
<b>TRAVEL MODE</b>	<b>Arrival</b>	<b>Departure</b>	<b>Arrival</b>	<b>Departure</b>
<b>Transit</b>	35.1%	33.4%	55.2%	52.8%
<i>Subway</i>	26.6%	25.9%	43.7%	43.4%
<i>LIRR</i>	8.1%	6.1%	11.2%	9.3%
<i>City Bus</i>	0.4%	1.4%	0.4%	0.1%
<b>Charter Bus/School Bus</b>	0.0%	0.0%	0.6%	0.2%
<b>Barclays Center Shuttle</b>	0.1%	0.0%	0.0%	0.0%
<b>Auto</b>	50.6%	50.9%	23.9%	24.2%
<b>Yellow Cab + Car Service</b>	10.9%	12.0%	16.2%	17.9%
<b>Rented Limo/Luxury Vehicle</b>	1.4%	1.3%	2.1%	2.4%
<b>Walk</b>	2.0%	2.2%	2.0%	2.5%
<b>Bicycle</b>	0.0%	0.2%	0.0%	0.0%
<b>Other</b>	0.0%	0.0%	0.0%	0.0%

*Note: Totals may not equal 100% due to rounding.*

<b>VEHICLE OCCUPANCY</b>	<b>Arrival</b>	<b>Departure</b>	<b>Arrival</b>	<b>Departure</b>
<b>Auto</b>	2.93	2.93	3.40	3.34
<b>Yellow Cab + Car Service</b>	3.99	3.77	3.59	4.01
<b>Rented Limo/Luxury Vehicle</b>	3.87	3.62	10.30	9.39

<b>TRIP ORIGIN &amp; DESTINATION</b>	<b>Origin</b>	<b>Destination</b>	<b>Origin</b>	<b>Destination</b>
<b>Brooklyn</b>	22.0%	21.3%	15.8%	15.5%
<b>Manhattan</b>	15.7%	18.3%	34.5%	42.1%
<b>Queens</b>	15.2%	16.1%	6.1%	4.2%
<b>Bronx</b>	12.0%	12.2%	2.0%	1.1%
<b>Staten Island</b>	3.8%	3.4%	3.0%	2.3%
<b>Nassau</b>	4.7%	4.1%	10.3%	7.4%
<b>Suffolk</b>	3.8%	3.1%	5.1%	5.0%
<b>Rockland</b>	0.5%	0.4%	0.6%	0.7%
<b>Westchester</b>	3.4%	2.9%	2.9%	2.5%
<b>Connecticut</b>	1.7%	1.8%	1.2%	1.7%
<b>New Jersey</b>	15.5%	13.6%	15.4%	13.5%
<b>Other</b>	1.6%	2.9%	3.0%	4.0%

*Note: Totals may not equal 100% due to rounding.*

<b>PRE- &amp; POST-EVENT LOCATION</b>	<b>Pre-Event</b>	<b>Post-Event</b>	<b>Pre-Event</b>	<b>Post-Event</b>
<b>Home/Dorm</b>	75.4%	54.7%	70.9%	45.5%
<b>Work/School</b>	5.8%	0.2%	3.2%	0.3%
<b>Somewhere Else (beyond 1/2 mile)</b>	10.6%	19.9%	18.0%	32.5%
<b>Nearby Location (within 1/2 mile)</b>	8.2%	25.2%	7.9%	21.6%
<i>Nearby Restaurant</i>	7.0%	7.4%	3.4%	2.2%
<i>Nearby Bar</i>	0.3%	17.0%	2.8%	18.0%
<i>Nearby Shopping</i>	0.5%	0.0%	0.4%	0.3%
<i>Other Nearby Location</i>	0.4%	0.8%	1.2%	1.1%

*Note: Totals may not equal 100% due to rounding.*

**Table A3: Patron Travel Survey Results for Weekend Disney on Ice Shows**

	<b>Disney on Ice</b>	
<b>Date</b>	Saturday, 1/26/2013	
<b>Scheduled Start</b>	11:00 AM; 3:00 PM; 7:00 PM	
<b>TRAVEL MODE</b>	<b>Arrival</b>	<b>Departure</b>
<b>Transit</b>	37.9%	40.2%
<i>Subway</i>	30.9%	31.7%
<i>LIRR</i>	4.2%	4.7%
<i>City Bus</i>	2.8%	3.9%
<b>Charter Bus/School Bus</b>	0.2%	0.2%
<b>Barclays Center Shuttle</b>	0.0%	0.0%
<b>Auto</b>	51.2%	50.7%
<b>Yellow Cab + Car Service</b>	6.6%	5.6%
<b>Rented Limo/Luxury Vehicle</b>	0.7%	0.7%
<b>Walk</b>	2.9%	2.4%
<b>Bicycle</b>	0.0%	0.0%
<b>Other</b>	0.4%	0.2%

*Note: Totals may not equal 100% due to rounding.*

<b>VEHICLE OCCUPANCY</b>	<b>Arrival</b>	<b>Departure</b>
<b>Auto</b>	4.15	4.20
<b>Yellow Cab + Car Service</b>	3.59	3.59
<b>Rented Limo/Luxury Vehicle</b>	14.35	14.35

<b>TRIP ORIGIN &amp; DESTINATION</b>	<b>Origin</b>	<b>Destination</b>
<b>Brooklyn</b>	46.6%	46.4%
<b>Manhattan</b>	10.6%	9.8%
<b>Queens</b>	15.1%	15.7%
<b>Bronx</b>	6.1%	6.2%
<b>Staten Island</b>	3.3%	3.4%
<b>Nassau</b>	4.3%	4.3%
<b>Suffolk</b>	2.0%	2.0%
<b>Rockland</b>	0.3%	0.3%
<b>Westchester</b>	3.1%	2.8%
<b>Connecticut</b>	0.8%	0.6%
<b>New Jersey</b>	7.4%	7.3%
<b>Other</b>	0.4%	1.0%

*Note: Totals may not equal 100% due to rounding.*

<b>PRE- &amp; POST-EVENT LOCATION</b>	<b>Pre-Event</b>	<b>Post-Event</b>
<b>Home/Dorm</b>	88.0%	65.4%
<b>Work/School</b>	3.5%	1.6%
<b>Somewhere Else (beyond 1/2 mile)</b>	5.3%	5.9%
<b>Nearby Location (within 1/2 mile)</b>	3.2%	27.2%
<i>Nearby Restaurant</i>	2.0%	19.1%
<i>Nearby Bar</i>	0.0%	0.2%
<i>Nearby Shopping</i>	0.6%	7.2%
<i>Other Nearby Location</i>	0.6%	0.6%

*Note: Totals may not equal 100% due to rounding.*

**Table A4: Peak Hour Auto Trips for Other Weekday Events**

	<b>Mumford &amp; Sons Concert</b>		<b>Swedish House Mafia</b>	
<b>Date</b>	Wednesday, 2/6/2013		Monday, 3/4/2013	
<b>Scheduled Start</b>	8:00 PM		8:00 PM	
	In	Out	In	Out
<b>Attendance</b>	15,761		14,929	
<b>Auto Share</b>	18.0%	19.0%	28.2%	28.2%
<b>Auto Occupancy</b>	2.49	2.59	3.34	3.40
<b>Total Auto Trips</b>	1,138	1,156	1,259	1,237
<b>Peak Hour Arrivals/Departures</b>	49.1%	87.5%	59.6%	86.0%
<b>Peak Hour Auto Trips</b>	559	1,012	750	1,064
<b>Autos Diverted to Remote Parking</b>	0	0	4	5
<b>Peak Hour Auto Trips within 1/2 Mile</b>	<b>559</b>	<b>1,012</b>	<b>746</b>	<b>1,059</b>

*Note: Values shown are rounded.*

**Table A5: Peak Hour Auto Trips for Other Weekend Events**

	<b>Marc Anthony</b>		<b>Swedish House Mafia</b>		<b>Disney on Ice</b>	
<b>Date</b>	Saturday, 2/16/2013		Saturday, 3/2/2013		Saturday, 1/26/2013	
<b>Scheduled Start</b>	8:00 PM		8:00 PM		11:00 AM, 3:00 PM, 7:00 PM	
	In	Out	In	Out	In	Out
<b>Attendance</b>	14,064		15,354		5,399 (average)	
<b>Auto Share</b>	50.6%	50.9%	23.9%	24.2%	51.2%	50.7%
<b>Auto Occupancy</b>	2.93	2.93	3.40	3.34	4.15	4.20
<b>Total Auto Trips</b>	2,430	2,442	1,081	1,112	666	651
<b>Peak Hour Arrivals/Departures</b>	51.3%	79.8%	71.9%	85.2%	66.4%	78.8%
<b>Peak Hour Auto Trips</b>	1,247	1,948	777	947	442	513
<b>Autos Diverted to Remote Parking</b>	17	18	12	14	0	0
<b>Peak Hour Auto Trips within 1/2 Mile</b>	<b>1,229</b>	<b>1,930</b>	<b>765</b>	<b>932</b>	<b>442</b>	<b>513</b>

*Note: Values shown are rounded.*

## ITE SHOPPING CENTER DISTRIBUTION

# Land Use: 820

## Shopping Center

### Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center's composition is related to its market area in terms of size, location and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Specialty retail center (Land Use 814) and factory outlet center (Land Use 823) are related uses.

### Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities (for example, ice skating rinks or indoor miniature golf courses). The centers ranged in size from 1,700 to 2.2 million square feet gross leasable area (GLA). The centers studied were located in suburban areas throughout the United States and therefore represent typical U.S. suburban conditions.

**Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.**

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Separate equations have been developed for shopping centers during the Christmas shopping season. Plots were included for the weekday peak hour of adjacent street traffic and the Saturday peak hour of the generator.

**Information on approximate hourly, monthly and daily variation in shopping center traffic is shown in Tables 1-4. It should be noted, however, that the information contained in these tables is based on a limited sample size. Therefore, caution should be exercised when applying the data. Also, some information provided in the tables may conflict with the results obtained by applying the average rate or regression equations. When this occurs, it is suggested that the results from the average rate or regression equations be used, as they are based on a larger number of studies.**

Time	Average Weekday <sup>a</sup>		Average Saturday <sup>b</sup>	
	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
10 a.m.-11 a.m.	7.6	6.5	6.8	5.8
11 a.m.-12 p.m.	7.6	8.4	8.8	8.9
12 p.m.-1 p.m.	7.6	8.2	9.4	8.8
1 p.m.-2 p.m.	6.9	7.5	10.0	10.1
2 p.m.-3 p.m.	9.0	7.8	9.7	8.4
3 p.m.-4 p.m.	9.6	9.5	10.3	9.6
4 p.m.-5 p.m.	9.7	10.4	10.7	10.7
5 p.m.-6 p.m.	10.3	11.0	9.4	8.7
6 p.m.-7 p.m.	7.4	8.3	7.3	8.3
7 p.m.-8 p.m.	5.4	5.3	5.0	5.7
8 p.m.-9 p.m.	4.2	4.3	3.2	3.9
9 p.m.-10 p.m.	1.9	1.8	2.0	3.3

<sup>a</sup> Source numbers - 95, 124; based on four studies

<sup>b</sup> Source numbers - 95, 124; based on four studies

Time	Average Weekday <sup>a</sup>		Average Saturday <sup>b</sup>		Average Sunday <sup>c</sup>	
	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
10 a.m.-11 a.m.	7.5	3.7	8.3	4.3	3.5	1.7
11 a.m.-12 p.m.	8.6	5.9	10.9	6.9	9.4	3.5
12 p.m.-1 p.m.	9.5	7.9	11.9	8.9	15.3	6.3
1 p.m.-2 p.m.	8.7	8.2	12.5	10.4	17.3	11.0
2 p.m.-3 p.m.	7.9	8.8	12.4	12.0	16.4	14.4
3 p.m.-4 p.m.	7.7	8.9	11.2	12.9	13.8	16.2
4 p.m.-5 p.m.	8.2	9.1	9.2	13.4	9.8	16.8
5 p.m.-6 p.m.	8.3	9.5	5.2	12.7	5.5	15.7
6 p.m.-7 p.m.	7.8	7.7	2.9	8.0	2.2	6.1
7 p.m.-8 p.m.	8.4	7.0	1.9	2.1	1.3	1.9
8 p.m.-9 p.m.	4.7	7.7	1.4	1.2	0.8	1.1
9 p.m.-10 p.m.	1.8	9.1	2.9	0.8	0.6	0.9

<sup>a</sup> Source numbers - 48, 73, 88, 124; based on seven studies

<sup>b</sup> Source numbers - 73, 88; based on three studies

<sup>c</sup> Source number - 88; based on two studies

# WisTransPortal HOURLY DATASETS

## Hourly Traffic Volume Report

*49 Hour Count - Averages and Graphs Do Not Include All Days*

**Total Traffic Volume By Day Type**

Time	Mon-Thu Ave	Friday	Saturday	Sunday	Annual Ave
00:00	50	50	50	50	50
01:00	40	40	40	40	40
02:00	30	30	30	30	30
03:00	30	30	30	30	30
04:00	30	30	30	30	30
05:00	40	40	40	40	40
06:00	100	100	100	100	100
07:00	320	320	320	320	320
08:00	420	420	420	420	420
09:00	220	220	220	220	220
10:00	200	200	200	200	200
11:00	230	230	230	230	230
12:00	290	290	290	290	290
13:00	270	270	270	270	270
14:00	250	250	250	250	250
15:00	290	290	290	290	290
16:00	410	410	410	410	410
17:00	580	580	580	580	580
18:00	290	290	290	290	290
19:00	180	180	180	180	180
20:00	190	190	190	190	190
21:00	150	150	150	150	150
22:00	100	100	100	100	100
23:00	80	80	80	80	80

Hour	Mon-Thurs Average			Mon-Fri Average			7 Day Average			Estimated Annual Ave		
	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total
00:00-00:59	30	19	48	-	-	-	-	-	-	26	16	42
01:00-01:59	17	6	23	-	-	-	-	-	-	14	5	20
02:00-02:59	5	11	15	-	-	-	-	-	-	4	9	13
03:00-03:59	8	8	15	-	-	-	-	-	-	7	7	13
04:00-04:59	9	4	13	-	-	-	-	-	-	8	4	11
05:00-05:59	21	16	37	-	-	-	-	-	-	18	13	32
06:00-06:59	47	50	97	-	-	-	-	-	-	41	44	85
07:00-07:59	122	198	319	-	-	-	-	-	-	106	172	278
08:00-08:59	164	250	414	-	-	-	-	-	-	144	219	364
09:00-09:59	114	110	223	-	-	-	-	-	-	101	97	198
10:00-10:59	105	97	202	-	-	-	-	-	-	93	86	179
11:00-11:59	127	112	239	-	-	-	-	-	-	113	99	212
12:00-12:59	155	136	291	-	-	-	-	-	-	137	121	258
13:00-13:59	157	115	272	-	-	-	-	-	-	139	102	241
14:00-14:59	134	120	253	-	-	-	-	-	-	118	106	224
15:00-15:59	150	148	297	-	-	-	-	-	-	132	131	263
16:00-16:59	241	171	412	-	-	-	-	-	-	214	151	365
17:00-17:59	365	207	571	-	-	-	-	-	-	323	183	506
18:00-18:59	194	103	297	-	-	-	-	-	-	172	91	263
19:00-19:59	122	66	188	-	-	-	-	-	-	108	58	166
20:00-20:59	127	58	184	-	-	-	-	-	-	112	51	163
21:00-21:59	99	49	147	-	-	-	-	-	-	87	43	130
22:00-22:59	67	42	109	-	-	-	-	-	-	59	37	96
23:00-23:59	58	32	90	-	-	-	-	-	-	51	28	79
Daily Total	2,632	2,121	4,753	-	-	-	-	-	-	2,328	1,873	4,201

AM Peak	164	250	414	-	-	-	-	-	144	219	364
Hour	08:00	08:00	08:00	-	-	-	-	-	08:00	08:00	08:00
MD Peak	157	136	291	-	-	-	-	-	139	121	258
Hour	13:00	12:00	12:00	-	-	-	-	-	13:00	12:00	12:00
PM Peak	365	207	571	-	-	-	-	-	323	183	506
Hour	17:00	17:00	17:00	-	-	-	-	-	17:00	17:00	17:00
Daily Peak	365	250	571	-	-	-	-	-	323	219	506
Hour	17:00	08:00	17:00	-	-	-	-	-	17:00	08:00	17:00
% of Total	13.8%	11.8%	12.0%	-	-	-	-	-	13.9%	11.7%	12.0%
Daily Ave	110	88	198	-	-	-	-	-	97	78	175

Seasonal Fctr						0.965	0.965		0.965	0.965		0.965	0.965							
Daily Fctr						0.929	0.929		0.923	0.923		0.900	0.900							
Axle Factor						0.496	0.496		0.496	0.496		0.496	0.496							
Pulse Fctr						2.000	2.000		2.000	2.000		2.000	2.000							
Overall Fctr	0.000	0.000		0.000	0.000	0.889	0.889		0.884	0.884		0.862	0.862		0.000	0.000		0.000	0.000	



## Hourly Traffic Volume Report

**2012-Oct-30 to 2012-Nov-01**

### Coverage Count

Time	Mon-Thu Ave	Friday	Saturday	Sunday	Annual Ave
00:00	50	50	50	50	50
02:00	30	30	30	30	30
04:00	20	20	20	20	20
06:00	100	100	100	100	100
08:00	320	320	320	320	320
10:00	220	220	220	220	220
12:00	280	280	280	280	280
14:00	250	250	250	250	250
16:00	380	380	380	380	380
18:00	220	220	220	220	220
20:00	120	120	120	120	120
22:00	60	60	60	60	60

Hour	Mon-Thurs Average			Mon-Fri Average			7 Day Average			Estimated Annual Ave		
	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total	Pos Dir	Neg Dir	Total
00:00-00:59	20	19	39	-	-	-	-	-	-	20	18	38
01:00-01:59	14	13	26	-	-	-	-	-	-	13	12	25
02:00-02:59	6	9	15	-	-	-	-	-	-	5	9	14
03:00-03:59	2	2	4	-	-	-	-	-	-	1	2	3
04:00-04:59	4	2	6	-	-	-	-	-	-	4	2	6
05:00-05:59	29	5	34	-	-	-	-	-	-	27	5	32
06:00-06:59	71	32	103	-	-	-	-	-	-	67	29	96
07:00-07:59	194	116	309	-	-	-	-	-	-	184	110	294
08:00-08:59	202	130	333	-	-	-	-	-	-	190	122	312
09:00-09:59	140	72	212	-	-	-	-	-	-	131	67	198
10:00-10:59	155	71	226	-	-	-	-	-	-	140	64	204
11:00-11:59	213	84	297	-	-	-	-	-	-	193	76	269
12:00-12:59	177	84	261	-	-	-	-	-	-	160	76	236
13:00-13:59	173	78	250	-	-	-	-	-	-	156	70	226
14:00-14:59	173	83	256	-	-	-	-	-	-	156	75	231
15:00-15:59	203	88	291	-	-	-	-	-	-	183	80	263
16:00-16:59	232	155	387	-	-	-	-	-	-	209	140	350
17:00-17:59	246	167	412	-	-	-	-	-	-	222	151	373
18:00-18:59	156	73	229	-	-	-	-	-	-	140	66	206
19:00-19:59	90	32	122	-	-	-	-	-	-	81	29	110
20:00-20:59	86	39	125	-	-	-	-	-	-	78	35	113
21:00-21:59	76	38	114	-	-	-	-	-	-	68	34	102
22:00-22:59	44	24	67	-	-	-	-	-	-	39	21	60
23:00-23:59	33	17	50	-	-	-	-	-	-	30	15	45
Daily Total	2,733	1,429	4,162	-	-	-	-	-	-	2,498	1,308	3,806

[illegible][illegible]



**McKINLEY AVENUE/6<sup>TH</sup> STREET  
SIGNAL DESIGN**

NOTE: ALL MAST ARMS

MOUNTING HEIGHT 19' ON POLE FROM BASE  
TO C OF MAST ARM, 17' CLEARANCE FROM  
PAVEMENT TO BOTTOM OF SIGNAL HOUSING.



5

5

W. Fond Du Lac Ave.

W. McKinley Ave.

N. 6th

SW361-1

DUCT ALLOCATION  
● TRAFFIC CONTROL  
● STREET LIGHTING  
● COMMUNICATIONS

MATERIAL TO BE INSTALLED  
MATERIAL TO BE RELOCATED  
MATERIAL IN SERVICE TO REMAIN  
MATERIAL TO BE REMOVED  
MATERIAL ON OTHER W.O.  
PROTECT & ADJUST

Program Number _____		Project Number _____		W.O.# _____	
W. Fond du Lac Av., W. McKinley Av. & N. 6th St.					
DATE	REVISIONS	APPR.	DPW-INFRASTRUCTURE SERVICES DIVISION TRAFFIC & LIGHTING DESIGN UNIT CITY OF MILWAUKEE		
0102	Park East Fwy. Demo	JHI	TRAFFIC CONTROL MATERIAL		
1102	Streetscape Revisions	JHI	TRAFFIC CONTROL MATERIAL		
1004	EBRT Arrows	RWB	DATE 09-28-01	DRAWN BY: SKB	DESIGNED BY: JCB
0205	SBLT Arrows	RWB	SUPERSEDES	F - - - T	DRG. #
1008	Remove EBWB LT Arrows	RWB	SUPERSEDED BY	- - -	F-01-545-T
0311	Countdown Grant #1	RWB			
0115	Mast Arm Monotubes	RWB			

SCALE, FEET 0 40

SHEET 1 OF 3

PROJECT NO: 2984-04-91

HWY: VARIOUS

COUNTY: MILWAUKEE

PLAN: TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : W:\bte\signals\PAVING AND DESIGN\State Projects-LFA\Preliminary Engineering\2984-04-91 Mast Arms at 3 Intersections\2984-04-71\2984-04-71 Traffic Plan Set.dgn

PLOT DATE : 19-FEB-2015 13:44

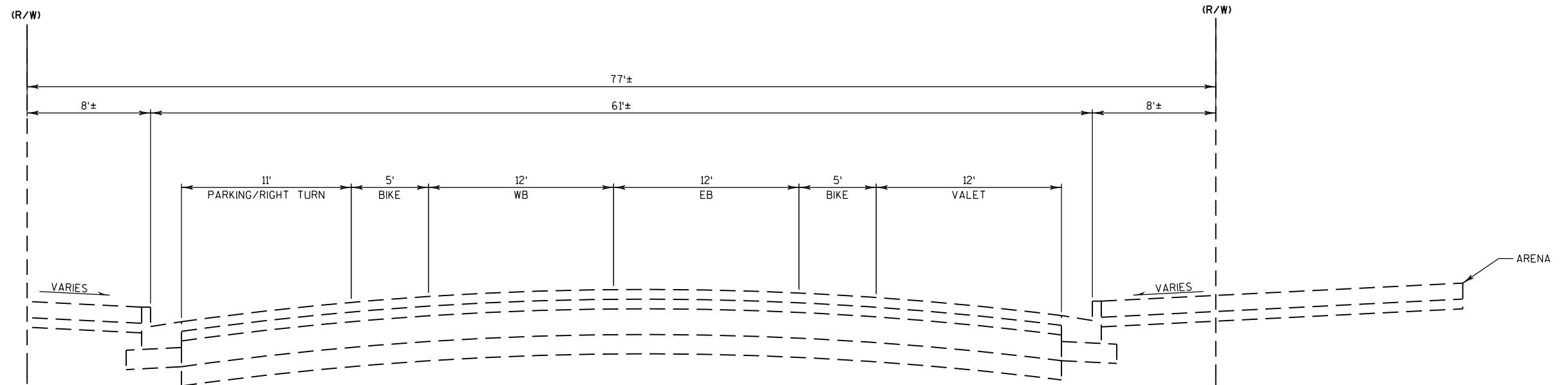
PLOT BY : jbond

PLOT NAME :

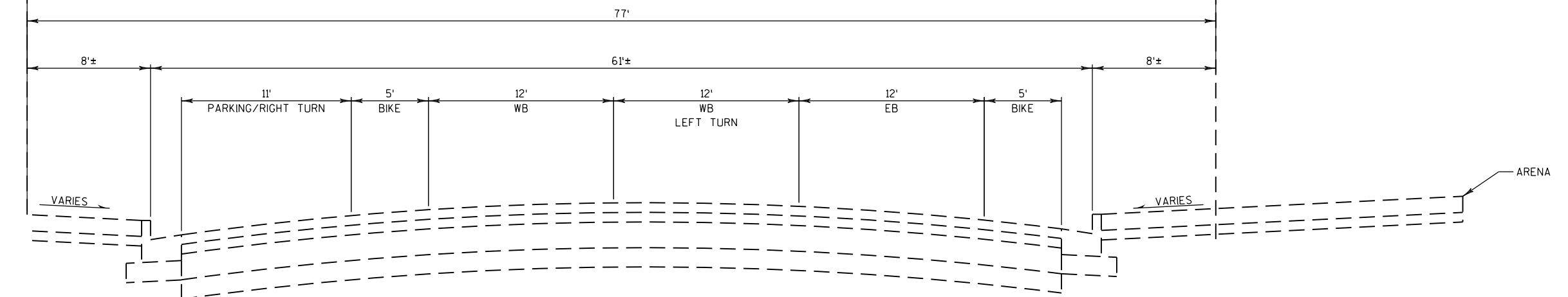
PLOT SCALE : 40.000000:1.000000

WISDOT\CADDs SHEET 42

**JUNEAU AVENUE  
PROPOSED CROSS-SECTION**



TYPICAL SECTION  
W. JUNEAU AVE.  
5TH ST. - 4TH ST.  
(FACING EAST)



TYPICAL SECTION  
W. JUNEAU AVE.  
6TH ST. - 5TH ST.  
(FACING EAST)



**LEVEL OF SERVICE RESULTS**  
**(2010 HIGHWAY CAPACITY MANUAL METHOD)**

- **EXISTING**
- **FUTURE - PHASE 1, PHASE 2 & PHASE 3**

## Vehicle Level of Service

Fond Du Lac & SB I-43 Ramps

Existing

Signalized

Phase I

Signalized

Phase II

Signalized

Phase III

Signalized

Fond Du Lac & NB I-43 Ramps

Existing

Signalized

Phase I

Signalized

Phase II

Signalized

Phase III

Signalized

Fond Du Lac/McKinley & 6th

Existing

Signalized

Phase I

Signalized

Phase II

Signalized

Phase III

Signalized



















Vehicle Level of Service

Intersection	Scenario	Traffic Control	Peak Hour	Level of Service per Movement by Approach												
				Eastbound			Westbound			Northbound			Southbound			
				LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
				Lanes	1	3>	0	1	3>	0	1	3>	0	1	2<	0
Kilbourn & 4th	Existing	Signalized	PM	Volume	81	688	43	70	539	115	70	293	105	114	177	24
				Peds	47	-	47	81	-	81	81	-	186	-	-	104
				PHF	0.84	0.87	0.81	0.83	0.9	0.77	0.73	0.84	0.88	0.79	0.87	0.67
				Delay	37.2	28.2	28.9	29.5	17.5	18.3	18.1	16.9	17.7	9	4.6	4.6
			Pre Game	LOS	D	C	C	C	B	B	B	B	B	A	A	A
				Volume	198	665	50	47	292	104	55	223	86	166	118	50
				Peds	-	-	450	-	-	283	-	-	453	-	-	660
				PHF	0.83	0.93	0.58	0.9	0.72	0.91	0.66	0.84	0.8	0.92	0.88	0.64
				Delay	43.8	26	27.6	24.5	14	15	24.4	19.2	21.1	33.8	19.2	20.2
				Vol. Dift	117	-23	7	-23	-247	-11	-15	-70	-19	52	-59	26
				LOS	D	C	C	C	C	B	C	B	C	B	C	C
			Post Game	Volume	55	233	10	28	266	64	34	118	48	88	144	92
				Peds	-	-	286	-	-	343	-	-	607	-	-	505
				PHF	0.72	0.74	0.47	0.58	0.65	0.8	0.66	0.58	0.75	0.7	0.64	0.41
				Delay	28.6	22.1	22.5	16.8	13.9	14.4	33.7	18.6	19.6	31	25.9	33.2
	Phase I	Signalized	PM	Vol Dift.	-26	-455	-33	-42	-273	-51	-36	-175	-57	-26	-33	68
				LOS	C	C	C	B	B	B	C	B	B	C	C	C
				Lanes	1	3>	0	1	3>	0	1	3>	0	1	2<	0
				Volume	57	710	45	74	558	101	73	287	106	75	135	3
			PM Preferred	Peds	47	-	47	81	-	81	81	-	186	-	-	104
				PHF	0.84	0.87	0.81	0.83	0.9	0.77	0.73	0.84	0.88	0.79	0.87	0.67
				Delay	34.7	28.4	29.2	30.8	17.5	18.3	17.7	16.9	17.6	7.3	4.4	4.4
				LOS	C	C	C	C	B	B	B	B	B	A	A	A
			Pre Game	Volume	57	710	45	74	558	101	73	287	106	75	135	3
				Peds	-	-	47	-	-	81	-	-	186	-	-	104
				PHF	0.84	0.87	0.81	0.83	0.9	0.77	0.73	0.84	0.88	0.79	0.87	0.67
				Delay	34.7	28.4	29.2	30.8	17.5	18.3	17.7	16.9	17.6	7.3	4.4	4.4
	Phase II	Signalized	PM Preferred	Vol. Dift	0	0	0	0	0	0	0	0	0	0	0	0
				LOS	C	C	C	C	B	B	B	B	B	A	A	A
				Lanes	1	3>	0	1	3>	0	1	3>	0	1	2<	0
				Volume	189	675	55	45	318	82	73	217	87	139	89	25
			Pre Game	Peds	-	-	450	-	-	283	-	-	453	-	-	660
				PHF	0.83	0.93	0.58	0.9	0.72	0.91	0.66	0.84	0.8	0.92	0.88	0.64
				Delay	42.5	26.3	28	24.8	14.1	14.8	23.9	19.2	21.1	30.8	18.5	19
				Vol. Dift	132	-35	10	-29	-240	-19	0	-70	-19	64	-46	22
			Pre Game Preferred	LOS	D	C	C	C	B	B	C	B	C	C	B	B
				Volume	189	675	55	45	318	82	73	217	87	139	89	25
				Peds	-	-	450	-	-	283	-	-	453	-	-	660
				PHF	0.83	0.93	0.58	0.9	0.72	0.91	0.66	0.84	0.8	0.92	0.88	0.64
	Phase III	Signalized	PM	Delay	42.5	26.3	28	24.8	14.1	14.8	23.9	19.2	21.1	30.8	18.5	19
				LOS	D	C	C	C	B	B	C	B	C	C	B	B
				Lanes	1	3>	0	1	3>	0	1	3>	0	1	2<	0
				Volume	49	279	13	30	275	59	38	115	47	26	65	57
			Post Game	Peds	-	-	286	-	-	343	-	-	607	-	-	505
				PHF	0.72	0.74	0.47	0.58	0.65	0.8	0.66	0.58	0.75	0.7	0.64	0.41
				Delay	28.2	22.6	23.2	17.8	13.9	14.4	25.9	18.6	19.6	21.5	19	22.6
				Vol. Dift	-140	-396	-42	-15	-43	-23	-35	-102	-40	-113	-24	32
			Pre Game Preferred	LOS	C	C	C	B	B	B	C	B	B	C	B	C
				Volume	49	279	13	30	275	59	38	115	47	26	65	57
				Peds	-	-	286	-	-	343	-	-	607	-	-	505
				PHF	0.72	0.74	0.47	0.58	0.65	0.8	0.66	0.58	0.75	0.7	0.64	0.41
			Post Game Preferred	Delay	28.2	22.6	23.2	17.8	13.9	14.4	25.9	18.6	19.6	21.5	19	22.6
				Vol. Dift	-140	-396	-42	-15	-43	-23	-35	-102	-40	-113	-24	32
				LOS	C	C	C	B	B	B	C	B	B	C	B	C







# **EXISTING TRAFFIC MICROSIMULATION LOS AND CALIBRATION RESULTS**

Intersection	PM Peak Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	396	59	1330				49	718			1121	541
		Target	417	64	1300				43	736			1179	538
		GEH	1.04	0.64	0.83				0.88	0.67			1.71	0.13
		Delay	43.79	39.81	4.43				11.6	8.47			9.81	2.38
		LOS	D	D	A				B	A			A	A
I-43 SB ramps at Fond du Lac	signal	Volume				279	70	30		490	465	477	1030	
		Target				293	80	38		486	477	680	916	
		GEH				0.83	1.15	1.37		0.18	0.55	8.44	3.65	
		Delay				25.68	22.9	4.59		33.65	10.28	12.95	3.99	
		LOS				C	C	A		C	B	B	A	
McKinley & 6th	signal	Volume	335	662	117	89	725	202	105	1420	486	58	1151	82
		Target	341	692	133	90	743	201	105	1462	469	71	1175	97
		GEH	0.33	1.15	1.43	0.11	0.66	0.07	0.00	1.11	0.78	1.62	0.70	1.59
		Delay	37.14	24.84	24.3	28.86	31.99	13.53	181.77	30.39	12.67	239.19	13.87	9.53
		LOS	D	C	C	C	C	B	F	C	B	F	B	A
McKinley & 4th	signal	Volume	171	169	78	15	108	74	81	1221	285	64	1050	51
		Target	155	180	80	14	108	70	115	1282	288	65	1118	49
		GEH	1.25	0.83	0.23	0.26	0.00	0.47	3.43	1.72	0.18	0.12	2.07	0.28
		Delay	19.93	19.2	22.34	32.01	25.71	13.72	76.28	59.38	35	102.98	22.72	22.92
		LOS	B	B	C	C	C	B	E	E	D	F	C	C
McKinley & Old World 3rd	signal	Volume	83	285	31	124	504	238	127	1033	131	50	848	46
		Target	98	296	30	116	528	223	146	1096	134	62	911	41
		GEH	1.58	0.65	0.18	0.73	1.06	0.99	1.63	1.93	0.26	1.60	2.12	0.76
		Delay	49.7	19.31	12.75	39.67	28.96	27.67	50.12	19.65	15.69	38.53	26.96	5.73
		LOS	D	B	B	D	C	C	D	B	B	D	C	A
Juneau & 6th	signal	Volume	57	881	174	133	1011	119	125	178	80	124	267	126
		Target	66	911	190	139	1013	131	137	187	86	149	271	118
		GEH	1.15	1.00	1.19	0.51	0.06	1.07	1.05	0.67	0.66	2.14	0.24	0.72
		Delay	31.73	14.35	5.26	29.72	22.02	3.13	37.3	25.09	7.89	28.55	25.49	21.62
		LOS	C	B	A	C	C	A	D	C	A	C	C	C
Juneau & 4th	signal	Volume	59	290	78	43	341	64	45	421	126	68	439	85
		Target	54	301	84	41	354	66	44	449	133	70	461	70
		GEH	0.67	0.64	0.67	0.31	0.70	0.25	0.15	1.34	0.62	0.24	1.04	1.70
		Delay	14.86	13.17	6.18	28.71	20.92	9.92	32	16.08	12.9	22.36	13.04	18.23
		LOS	B	B	A	C	C	A	C	B	B	C	B	B
Highland & 6th	signal	Volume	167	921	159	92	912	177	244	75	161	30	58	29
		Target	181	962	145	83	942	195	251	78	155	25	62	32
		GEH	1.06	1.34	1.14	0.96	0.99	1.32	0.44	0.34	0.48	0.95	0.52	0.54
		Delay	39.17	13.79	7.62	67.06	20.18	10.21	29.84	27.44	11.43	24.94	21.89	13.55
		LOS	D	B	A	E	C	B	C	C	B	C	C	B

Intersection	PM Peak Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 4th	signal	Volume		386	136	113	371					43		46
		Target		395	128	115	397					42		54
		GEH		0.46	0.70	0.19	1.33					0.15		1.13
		Delay		8.06	5.13	16.02	8.61					22.57		6.55
		LOS		A	A	B	A					C		A
State & 6th	signal	Volume	136	1054			960	133	114		110	137	609	206
		Target	148	1095			985	137	127		127	161	626	216
		GEH	1.01	1.25			0.80	0.34	1.18		1.56	1.97	0.68	0.69
		Delay	23.78	13.67			18.07	8.97	54.82		16.04	32.74	28.6	56.81
		LOS	C	B			B	A	D		B	C	C	E
State & 4th	signal	Volume	50	442			275	138				37	789	85
		Target	54	435			272	167				43	782	88
		GEH	0.55	0.33			0.18	2.35				0.95	0.25	0.32
		Delay	31.83	22.13			18.05	25.05				8.62	10.88	12.59
		LOS	C	C			B	C				A	B	B
Kilbourn & 6th	signal	Volume	130	830	114	174	991	24	143	498	46	183	204	221
		Target	130	879	119	186	1055	32	147	513	37	206	210	217
		GEH	0.00	1.68	0.46	0.89	2.00	1.51	0.33	0.67	1.40	1.65	0.42	0.27
		Delay	23.53	27.29	12.41	28.53	17.85	5.8	24.61	27.51	5.65	33.6	24.99	13.3
		LOS	C	C	B	C	B	A	C	C	A	C	C	B

Intersection	Pre Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	227	11	1648				37	1001			749	347
		Target	209	10	1575				42	981			748	316
		GEH	1.22	0.31	1.82				0.80	0.64			0.04	1.70
		Delay	45.93	56.12	16.87				7.16	7.66			11.89	6.58
		LOS	D	E	B				A	A			B	A
I-43 SB ramps at Fond du Lac	signal	Volume				604	15	71		432	376	468	517	
		Target				611	12	65		412	374	575	382	
		GEH				0.28	0.82	0.73		0.97	0.10	4.69	6.37	
		Delay				29.19	34.86	4.64		34.76	9.87	7.98	3.24	
		LOS				C	C	A		C	A	A	A	
McKinley & 6th	signal	Volume	174	403	121	51	357	130	143	1701	731	57	783	62
		Target	158	370	119	57	331	123	128	1695	733	66	783	55
		GEH	1.24	1.68	0.18	0.82	1.40	0.62	1.29	0.15	0.07	1.15	0.00	0.92
		Delay	33.24	25.41	45.13	35.05	26.29	11.07	90.86	67.09	71.08	232.74	9.76	8.52
		LOS	C	C	D	D	C	B	F	E	E	F	A	A
McKinley & 4th	signal	Volume	70	144	81	21	71	60	186	1237	446	66	788	34
		Target	78	152	107	25	78	51	192	1231	448	83	775	44
		GEH	0.93	0.66	2.68	0.83	0.81	1.21	0.44	0.17	0.09	1.97	0.47	1.60
		Delay	14.89	23.93	21.37	40.48	37.67	17.17	109.37	68.6	52.41	164.19	22.98	23.61
		LOS	B	C	C	D	D	B	F	E	D	F	C	C
McKinley & Old World 3rd	signal	Volume	58	191	22	71	262	210	117	1055	176	84	615	17
		Target	76	186	29	68	271	196	108	1074	178	86	630	14
		GEH	2.20	0.36	1.39	0.36	0.55	0.98	0.85	0.58	0.15	0.22	0.60	0.76
		Delay	25.26	14.83	13.17	30.74	28.22	29.8	33.42	19.38	11.3	44.39	21.81	4.41
		LOS	C	B	B	C	C	C	C	B	B	D	C	A
Juneau & 6th	signal	Volume	47	494	223	206	762	179	95	153	86	155	132	97
		Target	48	476	222	204	757	169	79	153	74	172	143	92
		GEH	0.15	0.82	0.07	0.14	0.18	0.76	1.72	0.00	1.34	1.33	0.94	0.51
		Delay	26.72	12.98	6.2	21.37	16.59	5.12	33.84	22.5	9.27	47.95	25.76	15.15
		LOS	C	B	A	C	B	A	C	C	A	D	C	B
Juneau & 4th	signal	Volume	60	191	131	62	466	53	57	419	189	98	264	47
		Target	60	222	125	72	484	53	60	416	210	93	278	52
		GEH	0.00	2.16	0.53	1.22	0.83	0.00	0.39	0.15	1.49	0.51	0.85	0.71
		Delay	33.96	25.59	16.01	41.26	25.02	14.09	28.58	16.94	17.38	28.78	14.83	20.37
		LOS	C	C	B	D	C	B	C	B	B	C	B	C
Highland & 6th	signal	Volume	120	636	226	110	658	151	194	63	172	20	61	50
		Target	124	652	241	112	669	169	177	76	156	22	63	51
		GEH	0.36	0.63	0.98	0.19	0.43	1.42	1.25	1.56	1.25	0.44	0.25	0.14
		Delay	21.17	12.68	9.47	32.55	19.38	11.21	40.48	45.94	11.86	27.26	26.79	19.32
		LOS	C	B	A	C	B	B	D	D	B	C	C	B

Intersection	Pre Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 4th	signal	Volume		322	186	223	473					10		37
		Target		342	191	237	457					16		47
		GEH		1.10	0.36	0.92	0.74					1.66		1.54
		Delay		19.31	38.03	67.62	17.22					30.17		11.85
		LOS		B	D	E	B					C		B
State & 6th	signal	Volume	177	824			669	188	142		124	101	359	160
		Target	156	820			657	190	151		125	109	333	180
		GEH	1.63	0.14			0.47	0.15	0.74		0.09	0.78	1.40	1.53
		Delay	21.78	15.94			19.06	13.25	54.69		14.7	37.12	24.56	12.41
		LOS	C	B			B	B	D		B	D	C	B
State & 4th	signal	Volume	62	431			311	156				18	397	94
		Target	51	464			318	155				16	406	91
		GEH	1.46	1.56			0.39	0.08				0.49	0.45	0.31
		Delay	35.42	20.93			26.5	131.27				14.46	11.48	18.12
		LOS	D	C			C	F				B	B	B
Kilbourn & 6th	signal	Volume	86	617	113	212	567	35	262	606	67	125	142	113
		Target	84	565	117	208	548	27	269	588	77	120	135	142
		GEH	0.22	2.14	0.37	0.28	0.80	1.44	0.43	0.74	1.18	0.45	0.59	2.57
		Delay	19.34	22.85	9.36	25.76	18.52	10.98	25.2	28.34	7.85	26.79	26.65	7.26
		LOS	B	C	A	C	B	B	C	C	A	C	C	A

Intersection	Post Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	135	10	307				42	192			922	384
		Target	121	5	311				42	223			1274	396
		GEH	1.24	1.83	0.23				0.00	2.15			10.62	0.61
		Delay	37.07	40.99	0.23				15.14	5.21			205.46	29.69
		LOS	D	D	A				B	A			F	C
I-43 SB ramps at Fond du Lac	signal	Volume				63	1	15		175	275	750	296	
		Target				110	4	40		155	286	1115	280	
		GEH				5.05	1.90	4.77		1.56	0.66	11.95	0.94	
		Delay				26.59	10.02	4.51		28	7.44	37.79	3.98	
		LOS				C	B	A		C	A	D	A	
McKinley & 6th	signal	Volume	639	211	49	20	132	206	34	353	116	19	694	11
		Target	620	211	38	13	138	205	32	396	106	28	845	17
		GEH	0.76	0.00	1.67	1.72	0.52	0.07	0.35	2.22	0.95	1.86	5.44	1.60
		Delay	52.5	16.14	18.88	13.66	28.46	22.45	68.66	37.27	8.31	51.67	63.5	35.23
		LOS	D	B	B	B	C	C	E	D	A	D	E	D
McKinley & 4th	signal	Volume	216	81	42	11	37	50	14	365	43	33	518	9
		Target	278	101	51	12	33	54	17	92	38	26	558	12
		GEH	3.94	2.10	1.32	0.29	0.68	0.55	0.76	18.06	0.79	1.29	1.72	0.93
		Delay	55.13	9.63	8.96	22.16	24.51	22.67	41.75	19.27	13.72	31.07	46.77	39.28
		LOS	E	A	A	C	C	C	D	B	B	C	D	D
McKinley & Old World 3rd	signal	Volume	127	224	52	44	139	73	32	360	27	42	376	11
		Target	150	226	45	31	135	74	39	393	23	51	372	11
		GEH	1.95	0.13	1.01	2.12	0.34	0.12	1.17	1.70	0.80	1.32	0.21	0.00
		Delay	23.85	17.23	10.06	29.5	25.21	13	26.05	14.45	4.15	23.23	17.24	6.12
		LOS	C	B	B	C	C	B	C	B	A	C	B	A
Juneau & 6th	signal	Volume	50	569	208	22	215	27	57	72	42	95	81	299
		Target	51	532	195	23	212	37	66	70	40	108	92	271
		GEH	0.14	1.58	0.92	0.21	0.21	1.77	1.15	0.24	0.31	1.29	1.18	1.66
		Delay	19.76	28.48	6.55	29.41	11.52	2.95	61.38	26.74	5.73	27.79	29.73	36.92
		LOS	B	C	A	C	B	A	E	C	A	C	C	D
Juneau & 4th	signal	Volume	77	213	81	16	86	12	64	299	82	19	219	80
		Target	73	253	94	14	67	16	67	286	96	29	205	110
		GEH	0.46	2.62	1.39	0.52	2.17	1.07	0.37	0.76	1.48	2.04	0.96	3.08
		Delay	12.11	18.95	6.66	30.57	20.01	8.54	32.37	16.62	10.95	24.01	14.83	27.29
		LOS	B	B	A	C	C	A	C	B	B	C	B	C
Highland & 6th	signal	Volume	83	442	11	6	352	61	65	10	62	86	96	137
		Target	78	423	11	4	356	61	67	7	53	88	94	125
		GEH	0.56	0.91	0.00	0.89	0.21	0.00	0.25	1.03	1.19	0.21	0.21	1.05
		Delay	14.14	13.4	3.49	19.04	14.56	8.2	25.96	27.7	6.82	24.84	27.01	17.2
		LOS	B	B	A	B	B	A	C	C	A	C	C	B

Intersection	Post Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 4th	signal	Volume		195	52	11	334					83		153
		Target		257	63	16	355					77		150
		GEH		4.12	1.45	1.36	1.13					0.67		0.24
		Delay		5.57	2.85	8.95	14.32					32.69		9.73
		LOS		A	A	A	B					C		A
State & 6th	signal	Volume	65	259			415	94	57		65	116	316	91
		Target	69	244			406	91	60		60	133	307	89
		GEH	0.49	0.95			0.44	0.31	0.39		0.63	1.52	0.51	0.21
		Delay	14.96	15.71			18.17	7.14	40.68		5.94	28.54	26.21	12.79
		LOS	B	B			B	A	D		A	C	C	B
State & 4th	signal	Volume	51	167			289	129				25	335	76
		Target	59	178			296	136				28	334	73
		GEH	1.08	0.84			0.41	0.61				0.58	0.05	0.35
		Delay	40.56	22.36			34.32	189.76				7.77	11.75	13.88
		LOS	D	C			C	F				A	B	B
Kilbourn & 6th	signal	Volume	104	205	46	141	499	31	14	137	17	104	175	105
		Target	89	198	38	133	506	35	16	127	21	129	169	94
		GEH	1.53	0.49	1.23	0.68	0.31	0.70	0.52	0.87	0.92	2.32	0.46	1.10
		Delay	14.07	21.75	5.11	17.9	17.86	3.81	16.02	23.84	4.1	18.4	23.98	8.51
		LOS	B	C	A	B	B	A	B	C	A	B	C	A

**FUTURE PHASE I PM, PREGAME &  
POSTGAME  
TRAFFIC MICROSIMULATION LOS AND  
CALIBRATION RESULTS**

Intersection	PM Peak Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	410	57	1396				49	743			1134	547
		Target	423	65	1360				45	771			1224	559
		GEH	0.64	1.02	0.97				0.58	1.02			2.62	0.51
		Delay	40.88	44.10	4.14				11.74	9.07			13.35	1.70
		LOS	D	D	A				B	A			B	A
I-43 SB ramps at Fond du Lac	signal	Volume				286	71	30		507	469	655	882	
		Target				307	81	39		509	484	701	947	
		GEH				1.22	1.15	1.53		0.09	0.69	1.77	2.15	
		Delay				27.16	27.09	5.01		28.97	11.62	25.76	5.02	
		LOS				C	C	A		C	B	C	A	
McKinley & 6th	signal	Volume	461	700	200	119	693	200	104	1508	480	65	1076	76
		Target	489	744	239	133	719	198	100	1552	479	88	1097	92
		GEH	1.28	1.64	2.63	1.25	0.98	0.14	0.40	1.12	0.05	2.63	0.64	1.75
		Delay	59.69	37.47	43.05	102.05	54.34	16.12	51.45	37.18	34.32	120.32	28.82	21.35
		LOS	E	D	D	F	D	B	D	D	C	F	C	C
McKinley & 5th	stop controlled	Volume								1526	294	172	1219	
		Target								1599	326	181	1278	
		GEH								1.85	1.82	0.68	1.67	
		Delay								1.44	0.51	19.83	2.24	
		LOS								A	A	C	A	
McKinley & 4th	signal	Volume	118	160	52	20	38	151	89	1258	166	18	1127	66
		Target	134	157	49	20	49	132	124	1309	166	20	1192	64
		GEH	1.43	0.24	0.42	0.00	1.67	1.60	3.39	1.42	0.00	0.46	1.91	0.25
		Delay	27.83	25.56	31.71	47.75	6.77	8.13	16.74	23.36	10.42	36.59	18.38	10.52
		LOS	C	C	C	D	A	A	B	C	B	D	B	B
McKinley & Old World 3rd	signal	Volume	99	315	44	110	550	247	119	1058	144	74	866	45
		Target	114	333	40	106	571	232	137	1097	144	84	926	43
		GEH	1.45	1.00	0.62	0.38	0.89	0.97	1.59	1.19	0.00	1.13	2.00	0.30
		Delay	45.64	19.48	16.29	38.52	35.96	31.97	22.24	18.78	12.82	35.73	33.65	7.38
		LOS	D	B	B	D	D	C	C	B	B	D	C	A
Juneau & 6th	signal	Volume	49	919	219	143	974	132	172	166	67	157	296	281
		Target	57	990	220	154	992	144	193	167	72	173	317	259
		GEH	1.10	2.30	0.07	0.90	0.57	1.02	1.55	0.08	0.60	1.25	1.20	1.34
		Delay	32.70	54.39	30.69	45.29	17.05	10.76	65.17	30.84	9.34	42.83	34.45	66.81
		LOS	C	D	C	D	B	B	E	C	A	D	C	E
Juneau & 5th	stop controlled	Volume				121		140		527			603	
		Target				111		141		541			608	0
		GEH				0.93		0.08		0.61			0.20	
		Delay				29.53		32.42		1.48			6.96	
		LOS				D		D		A			A	
Juneau & 4th	signal	Volume				111		107	111	535			496	222
		Target				124		112	106	545			497	234
		GEH				1.20		0.48	0.48	0.43			0.04	0.79
		Delay				39.31		10.96	10.83	7.02			4.56	3.23
		LOS				D		B	B	A			A	A

Intersection	PM Peak Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 6th	signal	Volume	187	906	299		998	189	262	52	172	45	49	21
		Target	200	968	312		1029	206	272	55	165	40	51	28
		GEH	0.93	2.03	0.74		0.97	1.21	0.61	0.41	0.54	0.77	0.28	1.41
		Delay	46.38	34.65	14.24		24.01	12.37	49.53	21.11	17.18	9.63	6.24	31.74
		LOS	D	C	B		C	B	D	C	B	A	A	C
Highland & 4th	signal	Volume			199							152		
		Target			209							162		
		GEH			0.70							0.80		
		Delay			8.62							8.748146		
		LOS			A							A		
State & 6th	signal	Volume	134	1125			1051	159	86		72	185	752	195
		Target	147	1171			1074	160	141		118	176	615	170
		GEH	1.10	1.36			0.71	0.08	5.16		4.72	0.67	5.24	1.85
		Delay	27.39	32.25			15.79	7.89	301.45		124.99	31.44	30.07	69.26
		LOS	C	C			B	A	F		F	C	C	E
State & 4th	signal	Volume	253	199			126	26				74	883	1
		Target	238	207			133	29				80	871	2
		GEH	0.96	0.56			0.62	0.57				0.68	0.41	0.82
		Delay	28.22	23.19			18.72	21.20				14.89	9.86	2.03
		LOS	C	C			B	C				B	A	A
Kilbourn & 6th	signal	Volume	134	884	111	184	1082	27	152	491	46	178	195	234
		Target	136	929	110	195	1137	35	159	508	37	201	204	229
		GEH	0.17	1.49	0.10	0.80	1.65	1.44	0.56	0.76	1.40	1.67	0.64	0.33
		Delay	47.84	64.68	40.11	35.64	15.82	2.66	45.34	29.80	6.16	30.00	26.98	62.23
		LOS	D	E	D	D	B	A	D	C	A	C	C	E

Intersection	Pre Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	203	14	1583				39	1088			751	349
		Target	212	10	1721				43	1075			781	329
		GEH	0.62	1.15	3.40				0.62	0.40			1.08	1.09
		Delay	54.36	50.62	28.77				15.27	16.13			11.79	1.05
		LOS	D	D	C				B	B			B	A
I-43 SB ramps at Fond du Lac	signal	Volume				667	17	74		462	398	471	490	
		Target				668	12	66		450	380	597	396	
		GEH				0.04	1.31	0.96		0.56	0.91	5.45	4.47	
		Delay				29.42	14.07	4.69		33.90	9.49	17.27	4.26	
		LOS				C	B	A		C	A	B	A	
McKinley & 6th	signal	Volume	229	446	263	166	323	122	116	1797	683	61	708	55
		Target	195	404	264	147	296	117	123	1997	676	86	799	54
		GEH	2.34	2.04	0.06	1.52	1.53	0.46	0.64	4.59	0.27	2.92	3.32	0.14
		Delay	39.63	29.29	41.96	260.09	90.66	31.80	120.31	94.32	40.49	441.67	24.91	20.11
		LOS	D	C	D	F	F	C	F	F	D	F	C	C
McKinley & 5th	stop controlled	Volume								1595	633	156	848	
		Target								1732	676	187	939	
		GEH								3.36	1.68	2.37	3.04	
		Delay								3.24	1.16	34.90	7.27	
		LOS								A	A	D	A	
McKinley & 4th	signal	Volume	106	125	58	29	32	101	192	1125	279	25	803	55
		Target	139	131	64	36	36	101	204	1232	296	31	886	67
		GEH	2.98	0.53	0.77	1.23	0.69	0.00	0.85	3.12	1.00	1.13	2.86	1.54
		Delay	47.79	27.95	42.80	56.13	27.74	61.48	30.92	22.36	43.13	57.50	33.05	23.24
		LOS	D	C	D	E	C	E	C	C	D	E	C	C
McKinley & Old World 3rd	signal	Volume	73	219	25	55	337	226	90	970	151	173	592	22
		Target	97	223	29	48	331	226	95	1063	174	197	661	21
		GEH	2.60	0.27	0.77	0.98	0.33	0.00	0.52	2.92	1.80	1.76	2.76	0.22
		Delay	29.21	19.23	18.00	35.14	31.70	32.75	20.18	17.39	8.31	41.57	27.83	4.65
		LOS	C	B	B	D	C	C	C	B	A	D	C	A
Juneau & 6th	signal	Volume	45	609	327	171	684	195	164	132	80	167	145	136
		Target	31	558	307	181	681	192	152	126	64	179	173	128
		GEH	2.27	2.11	1.12	0.75	0.11	0.22	0.95	0.53	1.89	0.91	2.22	0.70
		Delay	20.98	11.30	10.79	23.68	11.91	11.13	34.59	25.14	4.64	34.66	29.65	5.85
		LOS	C	B	B	C	B	B	C	C	A	C	C	A
Juneau & 5th	stop controlled	Volume								619			444	
		Target								614			480	
		GEH								0.20			1.67	
		Delay								1.20			0.40	
		LOS								A			A	
Juneau & 4th	signal	Volume				184		126	202	406			318	195
		Target				200		158	202	412			321	225
		GEH				1.15		2.69	0.00	0.30			0.17	2.07
		Delay				105.30		39.39	18.66	6.66			5.69	5.04
		LOS				F		D	B	A			A	A

Intersection	Pre Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 6th	signal	Volume	146	755	506	38	745	154	197	24	230	42	52	40
		Target	145	674	487	33	721	170	185	33	212	52	50	37
		GEH	0.08	3.03	0.85	0.84	0.89	1.26	0.87	1.69	1.21	1.46	0.28	0.48
		Delay	27.33	20.30	15.54	23.59	20.01	9.48	25.14	10.55	14.06	4.60	6.35	1.40
		LOS	C	C	B	C	C	A	C	B	B	A	A	A
Highland & 4th	signal	Volume			296							221		
		Target			305							219		
		GEH			0.52							0.13		
		Delay			9.36							9.84		
		LOS			A							A		
State & 6th	signal	Volume	172	1041			772	234	208		147	115	418	151
		Target	148	1019			747	238	181		115	80	304	107
		GEH	1.90	0.69			0.91	0.26	1.94		2.80	3.54	6.00	3.87
		Delay	23.84	17.86			17.17	10.64	165.45		94.18	32.47	24.66	18.49
		LOS	C	B			B	B	F		F	C	C	B
State & 4th	signal	Volume	163	291			201	19				50	488	3
		Target	183	306			201	18				52	498	1
		GEH	1.52	0.87			0.00	0.23				0.28	0.45	1.41
		Delay	34.20	25.95			18.43	47.76				17.85	9.37	9.52
		LOS	C	C			B	D				B	A	A
Kilbourn & 6th	signal	Volume	90	708	90	231	654	42	352	615	70	116	148	134
		Target	88	648	104	217	583	31	351	598	80	114	134	169
		GEH	0.21	2.30	1.42	0.94	2.85	1.82	0.05	0.69	1.15	0.19	1.18	2.84
		Delay	23.73	26.92	11.19	27.77	18.95	3.47	33.24	29.82	6.75	29.86	20.28	11.08
		LOS	C	C	B	C	B	A	C	C	A	C	C	B

Intersection	Post Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
I-43 NB ramps at Fond du Lac	signal	Volume	125	7	287				51	236			1463	455
		Target	123	5	321				43	231			1475	459
		GEH	0.18	0.82	1.95				1.17	0.33			0.31	0.19
		Delay	34.43	28.65	0.32				10.12	10.58			154.2	11.8
		LOS	C	C	A				B	B			F	B
I-43 SB ramps at Fond du Lac	signal	Volume				110	4	25		180	280	1200	377	
		Target				114	4	41		160	290	1277	320	
		GEH				0.38	0.00	2.79		1.53	0.59	2.19	3.05	
		Delay				31.65	18.66	4.93		34.05	9.82	29.29	6.16	
		LOS				C	B	A		C	A	C	A	
McKinley & 6th	signal	Volume	415	107	25	17	141	233	31	374	123	217	1374	147
		Target	445	124	29	12	144	205	30	405	117	257	1285	160
		GEH	1.45	1.58	0.77	1.31	0.25	1.89	0.18	1.57	0.55	2.60	2.44	1.05
		Delay	42	23.57	23.73	28.85	30.74	13.42	68	32.11	4.48	38.84	32.58	27.58
		LOS	D	C	C	C	C	B	E	C	A	D	C	C
McKinley & 5th	stop controlled	Volume	946		250					416			811	
		Target	890		357					447			811	
		GEH	1.85		6.14					1.49			0.00	
		Delay	22.64		22.37					10.08			18.64	
		LOS	C		C					B			C	
McKinley & 4th	signal	Volume	189	29	31	13	21	76	45	574	53	12	546	21
		Target	191	48	37	14	26	59	53	684	66	21	561	20
		GEH	0.15	3.06	1.03	0.27	1.03	2.07	1.14	4.39	1.69	2.22	0.64	0.22
		Delay	26.96	6.26	11.33	20.87	2.45	11	16.68	16.61	9.99	35.56	33.95	14.69
		LOS	C	A	B	C	A	B	B	B	A	D	C	B
McKinley & Old World 3rd	signal	Volume	134	240	80	27	134	82	53	551	17	56	362	19
		Target	151	240	73	26	147	74	64	646	25	61	378	12
		GEH	1.42	0.00	0.80	0.19	1.10	0.91	1.44	3.88	1.75	0.65	0.83	1.78
		Delay	30.05	21.89	17.81	28.7	26.03	15.26	19.37	23.08	4.97	34.46	25.76	4.28
		LOS	C	C	B	C	C	B	B	C	A	C	C	A
Juneau & 6th	signal	Volume	34	310	98	22	382	92	72	79	38	53	47	159
		Target	35	353	130	30	381	116	75	66	36	65	53	170
		GEH	0.17	2.36	3.00	1.57	0.05	2.35	0.35	1.53	0.33	1.56	0.85	0.86
		Delay	23.71	16.19	10.1	30.16	12.33	12.82	26.8	22.08	3.61	28.43	19.08	11.06
		LOS	C	B	B	C	B	B	C	C	A	C	B	B
Juneau & 5th	stop controlled	Volume								199			259	
		Target								230			288	
		GEH								2.12			1.75	
		Delay								0.43			0.47	
		LOS								A			A	
Juneau & 4th	signal	Volume				147		22	75	123			237	146
		Target				133		39	76	152			249	154
		GEH				1.18		3.08	0.12	2.47			0.77	0.65
		Delay				23.09		10.65	24.88	16.87			14.41	4.21
		LOS				C		B	C	B			B	A

Intersection	Post Game Hour		Movement											
			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Highland & 6th	signal	Volume	69	302	34	0	387	86	56	1	90		67	82
		Target	70	349	20	1	384	96	68	1	67		74	100
		GEH	0.12	2.61	2.69	1.41	0.15	1.05	1.52	0.00	2.60		0.83	1.89
		Delay	14.63	13.25	5.12	0	15.89	9.29	16.09	44.76	5.6		13.84	2.24
		LOS	B	B	A	A	B	A	B	D	A		B	A
Highland & 4th	signal	Volume			216							144		
		Target			230							143		
		GEH			0.94							0.08		
		Delay			13.85							10.16		
		LOS			B							B		
State & 6th	signal	Volume	67	264			381	96	60		58	426	357	81
		Target	69	265			370	81	73		50	470	379	100
		GEH	0.24	0.06			0.57	1.59	1.59		1.09	2.08	1.15	2.00
		Delay	2.43	22.81			24.36	6.15	35.26		5.39	35.06	46.76	25.02
		LOS	A	C			C	A	D		A	D	D	C
State & 4th	signal	Volume	71	114			108	37				32	366	21
		Target	77	145			111	31				38	392	17
		GEH	0.70	2.72			0.29	1.03				1.01	1.34	0.92
		Delay	38.04	35.14			21.2	38.6				10.64	8.37	18.37
		LOS	D	D			C	D				B	A	B
Kilbourn & 6th	signal	Volume	97	206	46	161	757	36	18	122	14	95	171	105
		Target	91	209	36	178	737	51	27	127	16	107	164	98
		GEH	0.62	0.21	1.56	1.31	0.73	2.27	1.90	0.45	0.52	1.19	0.54	0.69
		Delay	21.04	18.71	4.73	15.48	16.64	2.85	12.73	25.31	3.41	21.02	22.35	6.39
		LOS	C	B	A	B	B	A	B	C	A	C	C	A

# TRAFFIC COUNTS

Study Name Fond du Lac & NB I-43 TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	115	243	0	0	241	10	90	0	0	128	10	0
4:45 PM	0	0	0	0	127	255	0	0	308	18	95	0	0	164	10	0
5:00 PM	0	0	0	0	142	328	0	0	300	16	104	0	0	161	11	0
5:15 PM	0	0	0	0	159	326	0	0	333	17	101	0	0	200	7	0
5:30 PM	0	0	0	0	112	266	0	0	366	12	100	0	0	222	14	0
5:45 PM	0	0	0	0	97	184	0	0	418	0	62	0	0	244	7	0
6:00 PM	0	0	0	0	102	197	0	0	431	3	56	0	0	298	9	0
6:15 PM	0	0	0	0	80	203	0	0	411	0	46	0	0	277	7	0
6:30 PM	1	0	0	0	66	195	0	0	411	2	49	0	0	243	9	0
6:45 PM	0	0	0	0	62	145	0	0	338	4	43	0	0	172	9	0
9:30 PM	0	0	0	0	66	149	0	0	87	0	34	0	0	66	9	0
9:45 PM	0	0	0	0	67	148	0	0	78	2	29	0	0	58	8	0
10:00 PM	0	0	0	0	123	383	0	0	76	0	33	0	0	55	13	0
10:15 PM	0	0	0	0	115	394	0	0	97	0	31	0	0	57	15	1
10:30 PM	0	0	0	0	72	329	0	0	59	1	22	0	0	53	6	0
10:45 PM	0	0	0	0	58	192	0	0	47	0	25	0	0	38	6	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Buses

[illegible]

Study Name Fond du Lac & NB I-43 TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Trucks

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	1	1	0	0	2	0	1	0	0	2	0	0
5:00 PM	0	0	0	0	0	2	0	0	1	0	1	0	0	0	0	0
5:15 PM	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	1	0	2	0	0	1	0	0
6:00 PM	0	0	0	0	0	2	0	0	1	0	2	0	0	2	1	0
6:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
6:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0
9:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
10:30 PM	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0
10:45 PM	0	0	0	0	0	1	0	0	2	0	1	0	0	0	0	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Fond du Lac & NB I-43 TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Fond du Lac & NB I-43 TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		1	1		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	1		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Fond du Lac & NB I-43 TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	117	245	0	0	247	10	92	0	0	130	12	0
4:45 PM	0	0	0	0	128	258	0	0	310	18	97	0	0	169	10	0
5:00 PM	0	0	0	0	143	330	0	0	301	16	106	0	0	162	11	0
5:15 PM	0	0	0	0	161	328	0	0	336	17	109	0	0	200	7	0
5:30 PM	0	0	0	0	113	266	0	0	369	13	102	0	0	223	14	0
5:45 PM	0	0	0	0	98	186	0	0	421	0	67	0	0	247	7	0
6:00 PM	0	0	0	0	103	199	0	0	433	3	60	0	0	300	10	0
6:15 PM	0	0	0	0	81	204	0	0	411	0	46	0	0	279	7	0
6:30 PM	1	0	0	0	68	196	0	0	411	2	51	0	0	245	9	0
6:45 PM	0	0	0	0	62	147	0	0	339	4	45	0	0	173	9	0
9:30 PM	0	0	0	0	66	150	0	0	87	0	35	0	0	66	10	0
9:45 PM	0	0	0	0	67	148	0	0	78	2	30	0	0	61	8	0
10:00 PM	0	0	0	0	123	384	0	0	77	0	33	0	0	55	13	0
10:15 PM	0	0	0	0	115	396	0	0	98	0	32	0	0	57	15	1
10:30 PM	0	0	0	0	72	330	0	0	60	1	24	0	0	53	6	0
10:45 PM	0	0	0	0	58	193	0	0	49	0	26	0	0	38	6	0

Study Name Fond du Lac & SB I-43 TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	12	21	34	0	0	186	141	1	0	0	0	0	150	90	0	0
4:45 PM	8	25	59	0	0	220	139	0	0	0	0	0	117	109	0	0
5:00 PM	9	17	47	0	0	245	184	0	0	0	0	0	132	118	0	0
5:15 PM	13	23	71	0	0	251	193	1	0	0	0	0	108	126	0	0
5:30 PM	8	13	113	0	0	185	162	1	0	0	0	0	111	127	0	0
5:45 PM	11	7	105	0	0	125	138	2	0	0	0	0	82	141	0	1
6:00 PM	16	5	162	0	0	114	133	2	0	0	0	0	94	144	0	0
6:15 PM	14	3	168	0	0	97	150	0	0	0	0	0	100	116	0	0
6:30 PM	15	0	183	0	0	89	163	0	0	0	0	0	87	76	0	0
6:45 PM	18	3	101	0	0	81	135	0	0	0	0	0	86	81	0	0
9:30 PM	9	0	31	0	0	81	107	0	0	0	0	0	47	45	0	0
9:45 PM	14	0	32	0	0	55	119	0	0	0	0	0	47	32	0	0
10:00 PM	10	0	29	0	0	73	352	0	0	0	0	0	68	44	0	0
10:15 PM	13	1	27	0	0	86	351	0	0	0	0	0	107	41	0	0
10:30 PM	3	0	19	0	0	65	292	1	0	0	0	0	62	38	0	0
10:45 PM	10	0	18	0	0	48	163	0	0	0	0	0	32	26	0	0

Project Downtown Milwaukee during Bucks playoff game

## Classification Buses

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Fond du Lac & SB I-43 TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Fond du Lac & SB I-43 TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	1	0		1	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	1		0	1		1	0		1	0	
5:15 PM	0	1		0	0		0	0		0	0	
5:30 PM	0	3		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	1		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		1	1		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	1	0		0	0		0	0		0	0	

Study Name Fond du Lac & SB I-43 TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	12	22	35	0	0	188	142	1	0	0	0	0	155	92	0	0
4:45 PM	8	25	59	0	0	224	141	0	0	0	0	0	121	114	0	0
5:00 PM	9	19	48	0	0	248	186	0	0	0	0	0	134	118	0	0
5:15 PM	13	23	71	0	0	260	194	1	0	0	0	0	110	126	0	0
5:30 PM	8	13	115	0	0	188	162	1	0	0	0	0	112	127	0	0
5:45 PM	11	7	107	0	0	132	139	2	0	0	0	0	86	142	0	1
6:00 PM	16	5	164	0	0	118	135	2	0	0	0	0	96	146	0	0
6:15 PM	15	3	170	0	0	97	151	0	0	0	0	0	101	116	0	0
6:30 PM	16	0	185	0	0	92	163	0	0	0	0	0	88	76	0	0
6:45 PM	18	3	102	0	0	83	137	0	0	0	0	0	89	81	0	0
9:30 PM	9	0	31	0	0	82	109	0	0	0	0	0	47	46	0	0
9:45 PM	14	0	35	0	0	55	119	0	0	0	0	0	47	32	0	0
10:00 PM	10	0	29	0	0	73	353	0	0	0	0	0	70	44	0	0
10:15 PM	13	1	27	0	0	86	353	0	0	0	0	0	107	41	0	0
10:30 PM	3	0	19	0	0	67	293	1	0	0	0	0	62	38	0	0
10:45 PM	10	0	18	0	0	49	163	0	0	0	0	0	32	26	0	0

Study Name Highland and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				n/a Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM		90	10	2	13		9	0	17	79		1				
4:45 PM		93	13	1	13		7	0	24	81		0				
5:00 PM		101	19	0	15		11	0	30	120		0				
5:15 PM		107	40	0	17		17	0	36	89		0				
5:30 PM		96	43	0	9		8	0	37	102		1				
5:45 PM		108	58	0	17		10	0	33	83		0				
6:00 PM		119	56	0	11		9	0	44	92		0				
6:15 PM		104	68	0	9		6	0	33	83		1				
6:30 PM		118	56	0	17		10	0	62	83		0				
6:45 PM		123	58	0	10		7	0	52	84		0				
9:30 PM		73	2	0	17		7	1	19	54		1				
9:45 PM		50	0	2	14		12	0	13	44		0				
10:00 PM		128	3	0	30		2	0	23	123		0				
10:15 PM		103	8	3	63		24	0	15	62		2				
10:30 PM		52	4	3	41		24	0	12	28		1				
10:45 PM		35	2	3	43		16	0	4	34		0				

Study Name Highland and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				n/a Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM		0	1	0	0		0	0	0	0		0				
4:45 PM		0	0	0	0		0	0	0	0		0				
5:00 PM		0	0	0	0		0	0	0	1		0				
5:15 PM		1	0	0	0		0	0	0	0		0				
5:30 PM		1	0	0	0		0	0	0	0		0				
5:45 PM		2	0	0	0		0	0	0	0		0				
6:00 PM		4	0	0	0		0	0	0	0		0				
6:15 PM		1	0	0	0		0	0	0	0		0				
6:30 PM		3	0	0	0		0	0	0	0		0				
6:45 PM		3	0	0	0		0	0	0	0		0				
9:30 PM		8	0	0	0		0	0	0	0		0				
9:45 PM		0	0	0	0		0	0	0	0		0				
10:00 PM		4	0	0	1		0	0	0	0		0				
10:15 PM		3	0	0	0		1	0	0	0		0				
10:30 PM		1	0	0	1		0	0	0	0		0				
10:45 PM		1	0	0	0		0	0	0	0		0				

Study Name Highland and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Trucks

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				n/a Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM		0	1	0	0		0	0	0	0		0				
4:45 PM		0	0	0	0		0	0	1	0		0				
5:00 PM		0	0	0	0		0	0	0	2		0				
5:15 PM		0	0	0	0		1	0	0	0		0				
5:30 PM		0	0	0	0		0	0	0	0		0				
5:45 PM		0	0	0	0		0	0	0	0		0				
6:00 PM		1	0	0	0		0	0	0	0		0				
6:15 PM		1	0	0	0		1	0	0	0		0				
6:30 PM		0	0	0	0		0	0	0	0		0				
6:45 PM		0	0	0	0		0	0	0	0		0				
9:30 PM		0	0	0	0		0	0	0	0		0				
9:45 PM		0	0	0	0		0	0	0	0		0				
10:00 PM		0	0	0	0		0	0	0	0		0				
10:15 PM		0	0	0	0		0	0	0	0		0				
10:30 PM		0	0	0	0		0	0	0	0		0				
10:45 PM		0	0	0	0		0	0	0	0		0				

Study Name Highland and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				n/a Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM		0	1	0	0		0	0	0	0		0				
4:45 PM		0	0	0	0		0	0	1	1		0				
5:00 PM		0	0	0	0		1	0	0	2		0				
5:15 PM		1	0	0	0		0	0	0	3		0				
5:30 PM		0	0	0	0		0	0	0	1		0				
5:45 PM		0	0	0	0		0	0	0	0		0				
6:00 PM		0	0	0	0		0	0	1	0		0				
6:15 PM		0	0	0	0		0	0	0	0		0				
6:30 PM		0	0	0	0		0	0	0	0		0				
6:45 PM		0	0	0	0		0	0	0	0		0				
9:30 PM		0	0	0	0		0	0	0	0		0				
9:45 PM		0	0	0	0		0	0	0	0		0				
10:00 PM		0	0	0	0		0	0	0	0		0				
10:15 PM		0	0	0	0		0	0	0	0		0				
10:30 PM		0	0	0	0		0	0	0	0		0				
10:45 PM		0	0	0	0		0	0	0	0		0				

Study Name Highland and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			n/a Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds NB	Peds SB	Peds Combined
4:30 PM	1	0		0	0		0	0				
4:45 PM	0	0		0	0		2	1				
5:00 PM	0	0		0	0		0	0				
5:15 PM	0	0		1	0		0	0				
5:30 PM	0	0		0	0		0	0				
5:45 PM	0	0		0	0		0	0				
6:00 PM	0	0		0	0		0	0				
6:15 PM	0	0		0	0		0	0				
6:30 PM	0	0		0	0		0	0				
6:45 PM	0	0		0	0		0	0				
9:30 PM	0	0		0	0		0	0				
9:45 PM	0	0		0	0		0	0				
10:00 PM	0	0		0	0		0	0				
10:15 PM	0	0		0	0		0	0				
10:30 PM	0	0		0	0		0	0				
10:45 PM	1	0		0	0		0	0				

Study Name Highland and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			n/a Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds NB	Peds SB	Peds Combined
4:30 PM	5	25		7	6		9	4				
4:45 PM	19	28		31	18		38	22				
5:00 PM	19	26		34	18		15	19				
5:15 PM	27	30		32	10		40	28				
5:30 PM	31	100		36	12		82	32				
5:45 PM	25	131		77	20		96	38				
6:00 PM	19	166		96	19		128	29				
6:15 PM	16	230		49	20		203	21				
6:30 PM	13	514		11	6		283	8				
6:45 PM	13	549		31	12		409	8				
9:30 PM	12	0		3	9		2	29				
9:45 PM	514	7		5	247		8	889				
10:00 PM	794	0		37	430		5	747				
10:15 PM	59	4		28	14		10	24				
10:30 PM	27	1		18	21		0	9				
10:45 PM	18	9		11	17		5	3				

Study Name Highland and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				n/a Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM		90	13	2	13		9	0	17	79		1				
4:45 PM		93	13	1	13		7	0	26	82		0				
5:00 PM		101	19	0	15		12	0	30	125		0				
5:15 PM		109	40	0	17		18	0	36	92		0				
5:30 PM		97	43	0	9		8	0	37	103		1				
5:45 PM		110	58	0	17		10	0	33	83		0				
6:00 PM		124	56	0	11		9	0	45	92		0				
6:15 PM		106	68	0	9		7	0	33	83		1				
6:30 PM		121	56	0	17		10	0	62	83		0				
6:45 PM		126	58	0	10		7	0	52	84		0				
9:30 PM		81	2	0	17		7	1	19	54		1				
9:45 PM		50	0	2	14		12	0	13	44		0				
10:00 PM		132	3	0	31		2	0	23	123		0				
10:15 PM		106	8	3	63		25	0	15	62		2				
10:30 PM		53	4	3	42		24	0	12	28		1				
10:45 PM		36	2	3	43		16	0	4	34		0				

Study Name Highland and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	36	226	23	0	13	14	9	0	23	199	36	1	35	19	45	0
4:45 PM	54	208	15	1	10	12	9	0	19	205	47	3	36	18	50	0
5:00 PM	45	226	20	2	9	20	5	0	30	256	47	3	36	18	67	0
5:15 PM	44	240	21	0	8	16	6	0	48	271	46	1	43	22	74	0
5:30 PM	52	227	27	0	4	14	4	0	45	196	41	1	38	20	59	0
5:45 PM	50	218	21	0	2	10	6	0	54	175	34	2	46	21	42	0
6:00 PM	26	185	23	3	4	4	2	0	55	166	37	6	54	12	42	0
6:15 PM	46	169	30	0	10	8	0	0	49	189	32	3	41	13	56	0
6:30 PM	47	144	27	2	18	20	9	0	73	142	27	1	36	23	40	0
6:45 PM	45	157	32	0	19	30	11	0	62	145	28	2	27	19	36	0
9:30 PM	9	53	1	1	14	12	7	0	0	91	2	1	13	1	18	0
9:45 PM	10	66	0	0	30	14	15	0	0	96	9	2	8	0	12	0
10:00 PM	19	117	0	0	30	28	27	0	0	142	31	10	12	0	26	0
10:15 PM	26	92	0	1	38	27	28	0	0	114	31	2	14	0	22	0
10:30 PM	6	72	0	0	27	20	13	0	7	59	5	2	15	4	7	0
10:45 PM	6	40	1	0	25	7	7	0	5	50	5	2	5	2	10	0

Study Name Highland and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	11	0	0	0	0	0	0	0	7	0	0	0	0	1	0
4:45 PM	0	11	0	0	0	0	1	0	1	7	0	0	0	0	0	0
5:00 PM	0	7	0	0	0	0	0	0	0	7	0	0	0	0	0	0
5:15 PM	0	6	0	0	1	0	0	0	1	5	0	0	0	0	0	0
5:30 PM	0	3	0	0	0	0	0	0	1	7	0	0	0	0	1	0
5:45 PM	0	8	0	0	0	0	0	0	0	4	0	0	0	0	2	0
6:00 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0
6:15 PM	1	4	0	0	0	0	0	0	0	5	0	0	0	3	0	0
6:30 PM	3	1	0	0	0	0	0	0	0	2	0	0	0	3	1	0
6:45 PM	1	1	0	0	0	1	0	0	1	2	0	0	0	2	0	0
9:30 PM	0	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0
9:45 PM	0	1	0	0	0	1	1	0	0	2	0	0	0	0	0	0
10:00 PM	0	2	0	0	0	3	0	0	0	6	0	0	0	0	0	0
10:15 PM	0	1	1	0	0	1	0	0	0	1	2	0	0	0	0	0
10:30 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
10:45 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Study Name Highland and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0

Study Name Highland and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	1		1	0	
4:45 PM	0	1		0	1		0	0		0	1	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	1		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		1	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	1		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		1	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Highland and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	9	0		5	7		3	17		8	11	
4:45 PM	18	1		11	2		13	11		8	13	
5:00 PM	10	1		4	7		8	4		6	4	
5:15 PM	8	5		6	5		14	12		6	7	
5:30 PM	8	3		7	5		6	13		11	12	
5:45 PM	11	2		11	1		5	17		2	9	
6:00 PM	22	4		14	1		1	35		6	27	
6:15 PM	35	0		40	1		6	67		3	29	
6:30 PM	43	4		24	0		1	81		3	92	
6:45 PM	47	1		52	7		5	86		3	81	
9:30 PM	3	7		2	9		12	2		4	1	
9:45 PM	1	106		12	135		134	3		34	2	
10:00 PM	10	143		44	175		237	15		60	19	
10:15 PM	1	18		4	19		29	11		11	0	
10:30 PM	0	5		1	2		5	0		2	2	
10:45 PM	0	0		0	0		2	3		1	1	

Study Name Highland and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	36	239	23	0	13	14	9	0	23	208	36	1	35	20	48	0
4:45 PM	54	226	15	1	10	12	10	0	20	216	47	3	36	18	50	0
5:00 PM	45	238	20	2	9	21	5	0	30	264	47	3	36	18	67	0
5:15 PM	44	247	21	0	9	16	6	0	49	278	46	2	43	22	74	0
5:30 PM	52	230	27	0	4	14	4	0	46	205	41	1	38	20	60	0
5:45 PM	50	227	21	0	2	10	6	0	54	180	34	2	46	21	45	0
6:00 PM	26	192	23	3	4	4	2	0	56	167	38	6	54	13	42	0
6:15 PM	47	176	30	0	10	8	0	0	49	194	32	3	41	16	56	0
6:30 PM	50	146	27	2	18	20	9	0	73	144	27	1	36	26	42	0
6:45 PM	46	161	32	0	19	31	11	0	63	148	28	2	27	21	37	0
9:30 PM	9	55	1	1	14	12	8	0	0	99	2	1	13	1	18	0
9:45 PM	10	68	0	0	30	15	16	0	0	99	9	2	8	0	12	0
10:00 PM	19	121	0	0	31	31	27	0	0	148	31	10	12	0	26	0
10:15 PM	26	94	1	1	38	28	28	0	0	116	33	2	14	0	22	0
10:30 PM	6	73	0	0	27	20	13	0	8	60	5	2	15	4	7	0
10:45 PM	6	42	1	0	25	7	7	0	5	54	5	2	5	2	10	0

Study Name Highland and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	91	0	0	5	2	3	0	9	63	5	0	8	1	6	0
4:45 PM	20	133	2	0	5	0	0	0	4	67	7	0	13	0	9	0
5:00 PM	13	146	0	0	1	0	2	0	2	95	9	0	17	3	7	0
5:15 PM	29	130	1	0	2	0	2	0	5	104	5	0	23	0	12	0
5:30 PM	21	142	0	1	3	0	0	0	3	93	9	0	19	1	10	0
5:45 PM	28	134	3	0	6	0	1	0	5	69	16	0	18	1	10	0
6:00 PM	35	123	0	0	3	0	1	0	3	80	8	0	16	0	11	0
6:15 PM	29	124	0	0	3	0	0	0	2	73	10	0	17	0	10	0
6:30 PM	34	100	0	0	2	0	3	0	5	69	15	0	14	0	9	0
6:45 PM	56	93	2	1	1	0	0	0	2	72	8	0	11	0	7	0
9:30 PM	15	48	1	0	3	0	0	0	4	31	4	0	17	1	6	0
9:45 PM	9	43	1	0	3	1	1	0	2	31	8	0	11	0	5	0
10:00 PM	10	108	1	0	1	0	4	0	5	78	2	0	37	0	34	0
10:15 PM	15	76	4	0	2	0	0	0	2	66	7	0	25	0	23	0
10:30 PM	9	47	3	1	3	1	2	0	4	56	5	0	22	0	15	0
10:45 PM	16	45	2	1	4	1	0	0	2	43	11	0	4	1	6	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Buses

[illegible]

Study Name Highland and Old World 3rd TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Trucks

[illegible]

Study Name Highland and Old World 3rd TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Bicycles on Road

[illegible]

Study Name Highland and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		1	1		0	0		0	0	
5:15 PM	0	0		1	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	1	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		1	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Highland and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	11		6	11		9	5		7		13
4:45 PM	3	14		7	12		15	9		27		7
5:00 PM	5	19		5	12		9	10		14		17
5:15 PM	9	11		27	12		26	10		22		27
5:30 PM	16	21		25	12		37	8		26		56
5:45 PM	13	16		30	21		38	4		30		40
6:00 PM	3	35		29	21		47	2		28		62
6:15 PM	1	37		35	25		78	5		21		30
6:30 PM	5	60		58	17		165	0		16		20
6:45 PM	5	70		81	11		214	0		14		36
9:30 PM	0	3		3	2		3	3		22		7
9:45 PM	117	2		12	27		0	212		68		18
10:00 PM	147	18		9	57		7	280		249		89
10:15 PM	17	10		8	17		2	24		55		20
10:30 PM	13	4		3	10		4	18		28		11
10:45 PM	5	7		6	8		4	12		44		19

Study Name Highland and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	93	0	0	5	2	3	0	9	64	5	0	8	1	6	0
4:45 PM	20	136	2	0	5	0	0	0	4	70	7	0	13	0	11	0
5:00 PM	14	149	0	0	1	0	2	0	2	98	9	0	19	3	7	0
5:15 PM	30	135	1	0	2	0	2	0	5	107	5	0	23	0	12	0
5:30 PM	21	143	0	1	3	0	0	0	3	96	9	0	19	1	10	0
5:45 PM	28	137	3	0	6	0	1	0	5	71	16	0	18	1	10	0
6:00 PM	35	125	0	0	3	0	1	0	3	82	8	0	16	0	11	0
6:15 PM	30	125	0	0	3	0	0	0	2	75	10	0	17	0	10	0
6:30 PM	34	101	0	0	2	0	3	0	5	70	15	0	14	0	9	0
6:45 PM	56	94	2	1	1	0	0	0	2	73	8	0	11	0	8	0
9:30 PM	15	49	1	0	3	0	0	0	4	35	4	0	17	1	6	0
9:45 PM	9	43	1	0	3	1	1	0	2	33	8	0	11	0	5	0
10:00 PM	10	110	1	0	1	0	4	0	5	78	3	0	37	0	35	0
10:15 PM	15	76	4	0	2	0	0	0	2	67	7	0	25	0	24	0
10:30 PM	9	49	3	2	3	1	2	0	4	58	5	0	22	0	15	0
10:45 PM	16	46	2	1	4	1	0	0	2	43	11	0	4	1	7	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Lights

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

## Classification Buses

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Highland and SB I-43 TMC

Start Date 04/23/2015

Start Time 4:38 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:38 PM	0	0		0	0		0	0		0	0	
4:53 PM	0	0		0	0		0	0		0	0	
5:08 PM	0	0		0	0		0	0		0	0	
5:23 PM	0	0		0	0		1	0		0	0	
5:38 PM	0	0		0	0		0	0		0	0	
5:53 PM	0	0		0	0		0	0		0	0	
6:08 PM	0	0		0	0		0	0		0	0	
6:23 PM	0	0		0	0		0	0		0	0	
6:38 PM	0	0		0	0		0	0		0	0	
6:53 PM	0	0		0	0		0	0		0	0	
7:08 PM	0	0		0	0		0	0		0	0	
7:23 PM	0	0		0	0		0	0		0	0	
7:38 PM	0	1		1	0		1	0		0	0	
7:53 PM	0	1		0	0		0	0		0	0	
8:08 PM	0	0		0	0		0	0		0	0	
8:23 PM	0	0		0	0		0	0		0	0	
8:38 PM	0	0		0	0		0	0		0	0	
8:53 PM	0	0		0	0		0	0		0	0	
9:08 PM	0	0		0	0		0	0		0	0	
9:23 PM	0	0		0	0		0	0		0	0	
9:38 PM	0	0		0	0		0	0		0	0	
9:53 PM	0	0		0	0		0	0		0	0	
10:08 PM	0	0		0	0		0	0		0	0	
10:23 PM	0	0		0	0		0	0		0	0	
10:38 PM	0	0		0	0		0	0		0	0	
10:53 PM	0	0		0	0		0	0		0	0	
11:08 PM	0	0		0	0		0	0		0	0	
11:23 PM	0	0		0	0		0	0		0	0	
11:38 PM	0	0		0	0		0	0		0	0	

Study Name Highland and SB I-43 TMC

Start Date 04/23/2015

Start Time 4:38 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:38 PM	2	0		0	0		0	0		1	0	
4:53 PM	2	1		0	0		1	3		0	0	
5:08 PM	5	0		0	0		2	2		0	2	
5:23 PM	2	1		0	0		2	1		0	1	
5:38 PM	1	2		0	0		7	0		0	0	
5:53 PM	3	1		0	1		1	0		0	0	
6:08 PM	7	2		0	0		0	2		2	0	
6:23 PM	4	3		0	0		2	2		0	1	
6:38 PM	3	2		0	0		4	2		0	0	
6:53 PM	5	1		0	0		2	0		0	0	
7:08 PM	0	2		0	0		1	0		1	0	
7:23 PM	0	1		0	1		1	0		0	0	
7:38 PM	4	2		0	0		1	0		0	0	
7:53 PM	1	1		0	1		1	0		0	0	
8:08 PM	3	1		0	0		2	0		0	0	
8:23 PM	2	0		0	0		0	0		0	0	
8:38 PM	2	4		0	1		0	0		0	0	
8:53 PM	2	0		0	0		1	0		0	0	
9:08 PM	0	6		0	0		0	0		0	3	
9:23 PM	0	0		0	0		1	0		0	0	
9:38 PM	0	1		0	0		0	1		0	0	
9:53 PM	0	0		0	0		3	1		0	0	
10:08 PM	1	13		0	0		0	0		0	0	
10:23 PM	0	0		0	0		0	0		0	0	
10:38 PM	1	0		0	0		0	1		0	0	
10:53 PM	0	1		0	0		0	0		0	0	
11:08 PM	0	0		0	0		0	0		0	0	
11:23 PM	0	0		0	0		0	0		0	0	
11:38 PM	0	0		0	0		0	0		0	0	

## Project Downtown Milwaukee during Bucks playoff game

### Classification Totals

[illegible]

Study Name Juneau and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	25	65	10	0	12	86	13	0	16	65	15	0	33	103	8	0
4:45 PM	19	65	4	0	8	99	14	0	18	64	13	2	31	96	15	0
5:00 PM	13	91	8	0	24	130	13	0	20	90	17	1	28	116	11	0
5:15 PM	20	97	12	0	17	134	18	0	26	70	11	0	38	123	9	0
5:30 PM	15	100	18	0	20	93	22	0	19	78	13	0	33	109	10	0
5:45 PM	21	118	19	1	11	80	10	0	25	57	14	0	42	106	5	0
6:00 PM	10	120	13	0	14	75	27	0	25	61	15	0	45	95	11	0
6:15 PM	15	122	19	0	15	64	19	0	31	53	14	0	51	106	10	0
6:30 PM	17	105	23	0	13	56	20	0	31	56	17	0	54	95	20	0
6:45 PM	16	141	25	0	9	78	26	0	38	50	14	0	51	113	15	0
9:30 PM	3	16	5	0	6	20	16	0	22	36	10	1	34	30	3	0
9:45 PM	6	28	0	0	11	36	7	0	15	44	11	1	27	49	6	0
10:00 PM	8	15	8	0	38	93	17	0	32	71	27	2	28	99	15	0
10:15 PM	2	16	3	0	45	57	16	0	30	82	25	1	30	96	31	0
10:30 PM	1	11	4	1	35	45	15	0	17	46	10	0	7	42	7	0
10:45 PM	2	9	1	0	13	41	10	0	12	54	9	1	4	54	5	0

## Project Downtown Milwaukee during Bucks playoff game

## Classification Buses

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Study Name Juneau and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0

Study Name Juneau and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	1	0		0	0		0	0		0	1	
4:45 PM	0	0		0	0		0	0		1	0	
5:00 PM	0	0		0	1		0	0		0	1	
5:15 PM	0	0		2	0		0	0		0	0	
5:30 PM	0	0		0	1		0	0		0	0	
5:45 PM	0	0		0	0		0	0		1	0	
6:00 PM	0	0		0	0		0	1		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	1		0	0		0	0		1	1	
6:45 PM	0	1		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		1	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Juneau and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	5	2		7	1		1	2		10	8	
4:45 PM	10	3		9	5		6	10		14	13	
5:00 PM	5	2		17	3		2	11		5	21	
5:15 PM	2	7		19	1		9	8		2	33	
5:30 PM	2	7		20	2		19	8		4	26	
5:45 PM	3	10		36	2		25	4		5	76	
6:00 PM	2	6		43	2		40	7		4	83	
6:15 PM	0	33		42	1		70	5		1	184	
6:30 PM	1	36		109	0		60	6		5	157	
6:45 PM	0	37		74	1		42	10		3	167	
9:30 PM	0	0		2	1		2	4		8	1	
9:45 PM	21	0		3	120		6	177		275	1	
10:00 PM	34	0		1	150		17	459		604	1	
10:15 PM	0	0		2	3		3	23		23	0	
10:30 PM	2	1		1	11		7	15		13	6	
10:45 PM	0	0		2	4		1	6		8	0	

Study Name Juneau and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	25	66	10	0	12	88	13	0	16	65	15	0	34	104	8	0
4:45 PM	19	65	4	0	8	99	14	0	18	65	13	2	31	97	15	0
5:00 PM	13	91	8	0	24	130	13	0	21	92	17	1	28	116	11	0
5:15 PM	20	98	12	0	17	136	18	0	28	71	11	0	39	125	9	0
5:30 PM	15	101	18	0	20	93	22	0	19	79	13	0	35	111	11	0
5:45 PM	21	118	19	1	11	80	10	0	25	57	14	0	44	108	5	0
6:00 PM	10	122	13	0	14	75	27	0	25	61	15	0	48	96	11	0
6:15 PM	15	123	19	0	15	66	19	0	31	53	14	0	52	109	10	0
6:30 PM	17	106	23	0	13	59	20	0	31	56	17	0	55	97	21	0
6:45 PM	16	142	25	0	9	80	27	0	38	50	14	0	55	114	15	0
9:30 PM	3	16	5	0	6	20	19	0	22	36	10	1	39	30	3	0
9:45 PM	6	28	0	0	11	36	7	0	15	44	11	1	28	49	6	0
10:00 PM	8	15	8	0	38	93	17	0	32	71	27	2	30	99	15	0
10:15 PM	2	16	3	0	45	57	16	0	30	83	25	1	31	96	31	0
10:30 PM	1	11	4	1	35	45	15	0	17	48	10	0	7	42	7	0
10:45 PM	2	9	1	0	13	41	10	0	12	55	9	1	4	56	5	0

Study Name Juneau and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	20	254	21	0	19	47	33	0	30	186	9	0	12	47	22	0
4:45 PM	33	234	24	0	25	52	31	0	43	194	19	1	16	50	34	0
5:00 PM	17	244	27	2	38	71	38	0	43	226	17	1	21	44	32	0
5:15 PM	34	244	34	0	29	83	44	0	46	276	18	0	25	55	33	0
5:30 PM	38	252	45	0	14	60	35	0	53	171	9	0	21	37	26	0
5:45 PM	37	245	38	0	26	36	33	0	45	151	5	0	15	55	23	0
6:00 PM	41	210	55	1	19	40	34	0	55	123	10	0	19	43	19	0
6:15 PM	43	193	50	2	27	40	38	0	65	144	16	0	21	37	12	0
6:30 PM	38	172	42	0	23	28	47	0	42	109	3	0	22	35	14	0
6:45 PM	41	165	49	0	14	32	45	0	56	81	16	0	11	31	23	0
9:30 PM	5	43	11	0	13	16	9	0	51	65	4	0	6	12	9	0
9:45 PM	10	40	6	0	51	10	13	0	54	105	7	0	9	7	12	0
10:00 PM	12	63	5	0	79	36	44	0	50	195	23	0	7	17	14	0
10:15 PM	9	53	11	0	77	26	34	0	71	140	10	0	17	24	7	0
10:30 PM	6	50	1	0	46	20	17	0	16	69	9	0	5	22	17	0
10:45 PM	2	20	5	0	32	19	13	0	22	57	6	0	10	17	21	0

Study Name Juneau and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	1	9	0	0	0	0	0	0	1	6	0	0	1	0	1	0
4:45 PM	1	10	0	0	0	0	0	0	0	6	1	0	1	1	0	0
5:00 PM	0	7	0	0	1	1	0	0	0	8	0	0	0	0	0	0
5:15 PM	0	6	0	0	0	1	0	0	1	5	1	0	1	0	0	0
5:30 PM	1	2	2	0	0	0	0	0	2	6	0	0	0	0	0	0
5:45 PM	0	7	0	0	0	1	0	0	1	2	0	0	1	1	1	0
6:00 PM	0	4	0	0	0	0	0	0	1	1	1	0	0	1	0	0
6:15 PM	0	2	0	0	0	1	2	0	1	3	1	0	1	3	0	0
6:30 PM	0	1	0	0	0	1	3	0	1	4	0	0	0	2	0	0
6:45 PM	0	1	2	0	0	1	1	0	0	2	1	0	0	1	0	0
9:30 PM	0	1	0	0	0	0	0	0	6	1	1	0	1	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	2	2	1	0	1	0	0	0
10:15 PM	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
10:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Juneau and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	1	0		0	0		0	1		1	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Juneau and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	1		7	0		2	0		4		5
4:45 PM	0	0		9	3		3	0		6		5
5:00 PM	1	0		10	1		1	2		2		3
5:15 PM	0	3		2	3		6	6		2		10
5:30 PM	0	0		1	2		4	15		3		8
5:45 PM	0	0		0	1		1	23		6		4
6:00 PM	3	0		13	0		1	15		2		7
6:15 PM	0	0		26	0		1	38		0		8
6:30 PM	0	0		0	0		0	21		4		20
6:45 PM	1	0		17	2		0	20		2		24
9:30 PM	0	6		1	10		1	2		3		0
9:45 PM	2	10		0	63		26	0		20		0
10:00 PM	0	5		0	16		135	6		35		0
10:15 PM	0	0		0	12		9	0		4		1
10:30 PM	0	0		0	3		0	6		1		0
10:45 PM	0	1		0	4		2	2		2		1

Study Name Juneau and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	21	265	22	0	20	48	34	0	31	195	10	0	13	48	23	0
4:45 PM	34	250	24	0	25	52	31	0	43	202	20	1	18	51	35	0
5:00 PM	17	251	27	2	39	73	39	0	43	235	17	1	21	44	32	0
5:15 PM	34	251	34	0	29	86	44	0	49	284	19	0	26	55	33	0
5:30 PM	39	254	47	0	14	60	35	0	55	178	10	0	21	37	26	0
5:45 PM	37	253	38	0	27	37	33	0	49	154	5	0	16	56	24	0
6:00 PM	41	215	55	1	19	40	34	0	56	124	11	0	19	44	19	0
6:15 PM	43	197	50	2	27	41	41	0	66	147	17	0	22	40	14	0
6:30 PM	39	174	42	0	23	29	50	0	43	113	3	0	22	38	14	0
6:45 PM	41	168	51	0	14	33	47	0	57	83	17	0	11	32	23	0
9:30 PM	5	44	11	0	13	16	9	0	57	66	5	0	7	12	9	0
9:45 PM	10	42	6	0	51	10	13	0	56	106	7	0	9	7	12	0
10:00 PM	12	64	5	0	79	36	44	0	52	197	24	0	8	17	14	0
10:15 PM	9	54	11	0	77	26	34	0	71	142	11	0	17	24	7	0
10:30 PM	6	51	1	0	46	20	17	0	16	69	9	0	6	22	17	0
10:45 PM	2	20	5	0	32	19	13	0	22	57	7	0	11	17	21	0

Study Name Juneau and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	19	82	9	0	7	86	11	0	9	58	11	0	15	104	9	0
4:45 PM	22	132	11	0	16	95	14	1	15	56	9	0	12	98	13	0
5:00 PM	27	134	15	0	16	134	8	0	19	81	8	0	25	105	18	0
5:15 PM	35	125	21	0	22	128	13	0	28	66	18	0	37	114	21	2
5:30 PM	32	146	21	0	15	89	7	0	25	67	12	0	25	99	23	1
5:45 PM	17	121	8	0	11	74	17	0	21	43	13	0	29	90	27	2
6:00 PM	24	126	15	0	7	73	20	0	29	51	18	0	36	94	15	0
6:15 PM	26	108	13	0	15	66	12	0	32	39	7	0	45	77	27	0
6:30 PM	26	90	10	0	18	61	12	0	29	46	7	0	56	91	16	2
6:45 PM	25	75	7	0	15	77	21	0	38	50	9	0	89	93	12	1
9:30 PM	14	35	4	0	7	32	6	0	11	27	6	0	24	32	8	1
9:45 PM	5	32	4	0	5	26	6	1	12	36	11	0	17	36	14	0
10:00 PM	17	48	1	0	22	53	15	0	26	95	41	0	27	133	28	1
10:15 PM	10	35	4	0	20	36	13	1	25	61	20	0	36	131	47	0
10:30 PM	11	21	3	0	3	27	15	0	22	49	13	0	24	64	28	2
10:45 PM	10	37	2	0	2	28	10	0	19	27	13	0	17	45	24	0

Study Name Juneau and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0
5:15 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:45 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	1	1	0
6:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	1	0	0
6:15 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
6:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0
6:45 PM	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0
9:30 PM	0	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
10:30 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

[illegible]

Study Name Juneau and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	1	0		1	0		0	0		0	0	
5:15 PM	1	0		1	0		0	0		0	1	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	1		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Juneau and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	2	4		9	1		1	4		0	3	
4:45 PM	0	2		9	4		10	4		2	6	
5:00 PM	2	1		8	3		5	2		4	14	
5:15 PM	2	16		8	2		4	0		1	12	
5:30 PM	3	16		23	4		13	3		4	28	
5:45 PM	9	22		34	2		16	4		5	24	
6:00 PM	0	51		23	8		23	5		2	57	
6:15 PM	5	27		65	9		48	5		1	25	
6:30 PM	3	60		53	2		38	6		4	10	
6:45 PM	1	57		53	1		85	8		2	21	
9:30 PM	0	5		4	3		4	11		4	5	
9:45 PM	39	5		5	11		7	61		75	7	
10:00 PM	122	11		10	127		18	316		142	15	
10:15 PM	1	2		2	15		14	59		32	1	
10:30 PM	6	4		0	10		2	16		9	6	
10:45 PM	2	8		0	9		2	12		16	9	

Study Name Juneau and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	19	85	9	0	7	88	11	0	9	59	11	0	15	105	10	0
4:45 PM	23	134	11	0	16	96	14	1	16	60	9	0	12	98	13	0
5:00 PM	28	138	15	0	16	134	8	0	19	84	8	0	25	105	19	0
5:15 PM	36	130	21	0	22	129	14	0	28	69	18	0	37	116	22	2
5:30 PM	32	146	21	0	15	89	7	0	25	69	12	0	25	101	23	1
5:45 PM	17	126	8	0	11	74	17	0	21	45	13	0	29	92	28	2
6:00 PM	24	128	15	0	7	73	20	0	29	53	18	0	36	95	15	0
6:15 PM	26	108	13	0	15	68	12	0	32	40	8	0	46	79	27	0
6:30 PM	26	91	10	0	18	63	12	0	30	48	7	0	56	92	17	2
6:45 PM	25	76	7	0	15	79	21	0	39	51	10	0	89	94	12	1
9:30 PM	14	36	4	0	7	32	6	0	11	28	8	0	24	32	8	1
9:45 PM	5	32	4	0	5	26	6	1	12	38	11	0	17	36	14	0
10:00 PM	17	49	1	0	22	53	15	0	26	95	41	0	28	133	28	1
10:15 PM	10	35	4	0	20	36	13	1	26	62	20	0	36	131	47	0
10:30 PM	11	23	3	0	3	27	15	0	22	51	13	0	24	64	28	2
10:45 PM	10	38	2	0	2	28	10	0	20	27	13	0	17	47	24	0

Study Name Juneau and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	19	82	10	0	7	86	0	1	0	0	11	0	1	89	9	0
4:45 PM	22	132	7	0	16	95	0	0	0	0	9	0	0	93	13	0
5:00 PM	27	134	11	0	16	134	0	0	0	0	8	0	0	102	18	0
5:15 PM	35	125	17	0	22	128	0	0	0	0	18	0	0	108	21	2
5:30 PM	32	146	8	0	15	89	0	1	0	0	12	0	0	96	23	1
5:45 PM	17	121	10	0	11	74	0	0	0	0	13	0	0	110	27	2
6:00 PM	24	126	9	0	7	73	0	0	0	0	18	0	0	122	15	0
6:15 PM	26	108	6	0	15	66	0	1	0	0	7	0	0	105	27	0
6:30 PM	26	90	10	0	18	61	0	0	0	0	7	0	0	119	16	2
6:45 PM	25	75	7	0	15	77	0	0	0	0	9	0	0	124	12	1
9:30 PM	14	35	8	1	7	32	0	0	0	0	6	0	0	71	8	1
9:45 PM	5	32	13	0	5	26	0	1	0	0	11	0	0	52	14	0
10:00 PM	17	48	2	0	22	53	0	0	0	0	41	0	0	132	28	1
10:15 PM	10	35	24	0	20	36	0	2	0	0	20	0	0	105	47	0
10:30 PM	11	21	24	0	3	27	0	1	4	0	13	0	0	52	28	2
10:45 PM	10	37	16	0	2	28	0	0	0	0	13	0	0	35	24	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Buses

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Juneau and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		2	0		0	0		0	0	
5:00 PM	1	0		0	0		0	0		0	0	
5:15 PM	1	0		0	0		0	0		0	1	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Juneau and Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	2	4		9	4		14	8		0	3	
4:45 PM	0	2		37	22		34	4		2	6	
5:00 PM	2	1		15	21		20	10		4	14	
5:15 PM	2	16		40	24		17	14		1	12	
5:30 PM	3	16		77	31		28	24		4	28	
5:45 PM	9	22		93	37		29	28		5	24	
6:00 PM	0	51		120	28		41	18		2	57	
6:15 PM	5	27		203	20		38	15		1	25	
6:30 PM	3	60		294	6		40	38		4	10	
6:45 PM	1	57		385	8		19	103		2	21	
9:30 PM	0	5		2	27		8	5		4	5	
9:45 PM	39	5		9	705		240	45		75	7	
10:00 PM	122	11		4	723		372	31		142	15	
10:15 PM	1	2		10	25		32	13		32	1	
10:30 PM	6	4		0	8		0	0		9	6	
10:45 PM	2	8		5	3		0	2		16	9	

Study Name Juneau and Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	19	85	10	0	7	88	0	1	0	0	11	0	1	89	10	0
4:45 PM	23	134	7	0	16	96	0	0	0	1	9	0	0	93	13	0
5:00 PM	28	138	12	0	16	134	0	0	0	0	8	0	0	102	19	0
5:15 PM	36	130	18	0	22	129	0	0	0	0	18	0	0	110	22	2
5:30 PM	32	146	8	0	15	89	0	1	0	0	12	0	0	97	23	1
5:45 PM	17	126	10	0	11	74	0	0	0	0	13	0	0	112	28	2
6:00 PM	24	128	9	0	7	73	0	0	0	0	18	0	0	127	15	0
6:15 PM	26	108	7	0	15	68	0	1	0	0	8	0	0	107	27	0
6:30 PM	26	91	10	0	18	63	0	0	0	0	7	0	0	122	17	2
6:45 PM	25	76	7	0	15	79	0	0	0	0	10	0	0	127	12	1
9:30 PM	14	36	8	1	7	32	0	0	0	0	8	0	0	79	8	1
9:45 PM	5	32	13	0	5	26	0	1	0	0	11	0	0	52	14	0
10:00 PM	17	49	2	0	22	53	0	0	0	0	41	0	0	136	28	1
10:15 PM	10	35	25	0	20	36	0	2	0	0	20	0	0	108	47	0
10:30 PM	11	23	24	0	3	27	0	1	4	0	13	0	0	53	28	2
10:45 PM	10	38	16	0	2	28	0	0	0	0	13	0	0	36	24	0

Study Name Juneau and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	192	7	1	8	59	13	0	6	195	25	3	17	63	26	2
4:45 PM	24	212	3	0	5	69	13	0	11	237	24	0	34	61	25	1
5:00 PM	19	176	8	0	6	89	15	0	20	284	51	3	30	81	34	0
5:15 PM	28	197	5	1	10	88	11	0	15	249	52	2	45	75	40	0
5:30 PM	34	185	8	0	15	52	14	1	28	222	44	3	36	88	22	1
5:45 PM	29	186	12	1	14	44	16	0	14	200	37	4	30	66	24	0
6:00 PM	28	168	10	0	9	66	9	0	22	157	19	0	42	68	26	1
6:15 PM	23	164	6	0	14	49	14	0	24	177	23	1	28	59	34	0
6:30 PM	25	156	5	0	7	54	14	0	17	133	19	4	38	65	24	3
6:45 PM	33	159	4	0	18	51	17	0	24	144	23	0	51	60	25	3
9:30 PM	16	47	1	0	6	21	3	0	11	78	17	0	37	22	10	1
9:45 PM	13	68	3	0	2	16	0	0	3	86	11	1	28	23	15	2
10:00 PM	15	101	6	0	9	37	0	1	9	129	15	1	76	82	47	1
10:15 PM	27	118	9	0	9	32	0	1	14	99	21	0	62	58	37	1
10:30 PM	21	66	3	0	5	20	7	0	3	59	17	2	29	37	36	2
10:45 PM	13	58	1	0	8	19	3	0	4	54	14	4	30	27	18	1

Study Name Juneau and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0
4:45 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0
5:00 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0
5:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0
5:30 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:45 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0
6:00 PM	0	3	0	0	0	0	0	0	0	5	0	0	0	1	0	0
6:15 PM	0	1	0	0	0	0	0	0	0	3	0	0	1	0	0	0
6:30 PM	0	2	0	0	0	1	0	0	0	1	0	0	2	1	0	0
6:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:30 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Study Name Juneau and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	1	0	0	0	0	0	0	0	6	0	0	0	0	1	0
5:00 PM	0	7	0	0	0	1	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	8	0	0	0	0	0	0	0	3	0	0	0	0	1	0
5:30 PM	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
9:30 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0

Study Name Juneau and Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		1	0	
4:45 PM	0	0		0	0		0	0		1	0	
5:00 PM	0	0		0	1		0	1		1	0	
5:15 PM	0	0		0	0		0	0		1	1	
5:30 PM	0	1		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		1	1	
6:00 PM	0	0		0	0		0	0		1	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	1		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	1	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	1		0	0		0	0	

Study Name Juneau and Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	3	6		9	8		16	3		8	20	
4:45 PM	3	13		3	19		11	6		20	12	
5:00 PM	11	15		18	30		29	12		16	16	
5:15 PM	5	23		29	31		34	14		15	26	
5:30 PM	1	26		19	12		20	13		14	40	
5:45 PM	8	39		27	9		33	5		7	26	
6:00 PM	8	45		29	18		28	5		21	31	
6:15 PM	9	28		24	2		40	13		23	32	
6:30 PM	18	22		42	10		42	10		28	26	
6:45 PM	8	34		48	1		36	10		14	33	
9:30 PM	1	4		4	2		10	7		19	10	
9:45 PM	25	8		10	23		13	24		33	9	
10:00 PM	133	8		7	144		0	146		160	14	
10:15 PM	19	4		9	16		23	22		46	22	
10:30 PM	16	10		4	15		11	14		33	26	
10:45 PM	20	7		6	15		4	18		28	27	

Study Name Juneau and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	199	8	1	8	61	13	0	7	198	25	3	17	64	26	2
4:45 PM	25	218	3	0	5	69	13	0	11	245	24	0	34	61	26	1
5:00 PM	19	186	8	0	6	90	15	0	20	287	51	3	30	82	34	0
5:15 PM	31	208	5	1	10	89	11	0	15	256	52	2	45	76	41	0
5:30 PM	34	188	8	0	15	52	14	1	28	229	44	3	36	89	22	1
5:45 PM	29	191	12	1	14	44	16	0	14	206	37	4	30	68	24	0
6:00 PM	30	172	10	0	9	67	9	0	23	162	19	0	42	69	26	1
6:15 PM	23	166	6	0	14	49	14	0	24	182	23	1	29	59	34	0
6:30 PM	26	160	5	0	7	56	14	0	18	134	19	4	41	66	24	3
6:45 PM	33	160	4	0	18	51	17	0	24	148	23	0	51	60	26	3
9:30 PM	17	49	1	0	6	21	3	0	11	79	17	0	37	22	10	1
9:45 PM	13	68	3	0	2	16	0	0	3	88	11	1	28	23	15	2
10:00 PM	15	102	6	0	9	37	0	1	9	131	15	1	76	82	48	1
10:15 PM	27	121	9	0	9	32	0	1	14	99	21	0	62	58	38	1
10:30 PM	21	67	3	0	5	20	7	0	3	61	17	2	29	37	36	2
10:45 PM	13	60	2	0	8	19	4	0	4	56	14	4	30	28	18	1

Study Name Kilbourn and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	8	52	12	0	21	106	9	0	25	62	11	0	4	140	16	1
4:45 PM	1	46	21	0	24	121	21	0	28	65	11	0	8	155	14	0
5:00 PM	8	47	35	1	35	151	19	1	21	85	25	0	13	169	18	0
5:15 PM	9	50	25	0	22	135	18	0	30	75	22	0	11	158	20	0
5:30 PM	6	30	29	0	27	134	12	1	26	60	15	0	10	194	22	1
5:45 PM	4	54	27	0	15	111	19	1	27	63	26	0	16	191	32	0
6:00 PM	13	26	39	0	24	98	12	4	27	60	17	0	9	178	38	0
6:15 PM	3	30	38	0	24	64	11	3	25	67	12	0	10	169	58	0
6:30 PM	8	25	36	0	29	70	13	2	20	45	10	0	21	150	60	0
6:45 PM	9	25	42	0	29	50	11	0	14	53	6	1	9	165	43	0
9:30 PM	6	20	14	2	7	28	4	0	6	31	7	0	1	54	19	0
9:45 PM	3	19	17	1	16	25	4	0	5	15	4	0	2	47	16	1
10:00 PM	53	42	33	0	12	101	12	0	16	36	9	0	8	79	17	0
10:15 PM	21	57	23	0	15	93	9	0	15	45	11	0	4	63	8	0
10:30 PM	10	27	19	0	8	42	3	2	12	9	5	1	1	44	8	0
10:45 PM	1	24	8	0	5	29	0	0	12	9	6	0	1	40	6	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Buses

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Kilbourn and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		0	2		0	1		0	1	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		2	0		1	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	1		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Kilbourn and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	12	3		11	9		2	6		16	2	
4:45 PM	18	4		5	30		5	3		17	4	
5:00 PM	20	4		9	25		5	4		30	5	
5:15 PM	15	2		10	29		9	9		11	5	
5:30 PM	10	8		7	71		11	1		27	5	
5:45 PM	22	40		15	58		40	9		57	2	
6:00 PM	17	23		5	127		54	10		76	5	
6:15 PM	13	33		15	92		125	2		144	4	
6:30 PM	7	82		6	96		121	4		199	7	
6:45 PM	8	100		5	107		132	2		223	2	
9:30 PM	7	0		8	3		0	3		0	12	
9:45 PM	102	0		139	3		0	102		0	152	
10:00 PM	218	3		294	1		5	168		4	325	
10:15 PM	20	0		165	5		3	8		0	24	
10:30 PM	3	1		14	1		2	4		7	14	
10:45 PM	0	0		11	4		0	2		0	11	

Study Name Kilbourn and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	8	52	12	0	21	109	9	0	26	62	11	0	4	142	16	1
4:45 PM	1	46	21	0	24	122	21	0	29	69	11	0	8	158	14	0
5:00 PM	8	48	35	1	36	151	19	1	21	86	25	0	13	173	18	0
5:15 PM	10	52	25	0	22	136	18	0	30	79	22	0	11	159	20	0
5:30 PM	6	30	30	0	27	135	12	1	26	60	15	0	10	196	22	1
5:45 PM	4	55	27	0	15	112	20	1	28	63	26	0	16	196	32	0
6:00 PM	13	26	40	0	24	99	13	4	27	60	18	0	9	179	38	0
6:15 PM	3	30	38	0	24	65	11	3	25	67	12	0	10	169	59	0
6:30 PM	8	26	36	0	29	70	13	2	20	45	10	0	21	153	60	0
6:45 PM	9	26	42	0	29	51	11	0	14	53	6	1	10	166	44	0
9:30 PM	8	20	16	2	8	29	4	0	6	31	7	0	1	55	19	0
9:45 PM	3	19	17	1	16	26	4	0	5	15	4	0	2	48	16	1
10:00 PM	56	44	33	0	12	101	12	0	16	36	9	0	8	82	17	0
10:15 PM	22	59	23	0	15	95	9	0	15	45	11	0	4	64	8	0
10:30 PM	10	27	20	0	8	42	3	2	12	9	5	1	1	45	8	0
10:45 PM	1	25	9	0	5	30	0	0	12	9	6	0	1	41	6	0

Project Downtown Milwaukee during Bucks playoff game

### Classification Lights

[illegible]

Project Downtown Milwaukee during Bucks playoff game

## Classification Buses

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Kilbourn and 6th TMC

Start Date 04/23/2015

Start Time 4:00 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:00 PM	0	0		0	0		0	0		0	0	
4:15 PM	0	0		0	0		0	0		0	0	
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	1		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	

Study Name Kilbourn and 6th TMC

Start Date 04/23/2015

Start Time 4:00 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:00 PM	1	0		0	3		1	1		5	7	
4:15 PM	0	2		1	11		1	0		6	2	
4:30 PM	6	0		3	8		0	6		9	5	
4:45 PM	3	0		2	7		0	2		11	2	
5:00 PM	0	0		0	0		0	0		0	0	

## Project Downtown Milwaukee during Bucks playoff game

### Classification Totals

[illegible]

Study Name Kilbourn and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	6	253	30	2	42	45	38	0	27	184	33	0	9	108	20	1
4:45 PM	11	260	41	0	41	42	56	1	26	193	28	0	11	112	30	0
5:00 PM	10	238	47	3	65	68	52	0	29	233	46	0	13	128	43	0
5:15 PM	5	280	38	2	56	54	52	0	31	246	26	0	9	121	35	1
5:30 PM	6	242	52	3	53	46	48	1	26	174	30	0	5	151	37	0
5:45 PM	7	228	60	1	43	54	46	0	26	145	20	0	10	154	49	0
6:00 PM	6	150	58	5	49	43	46	0	34	158	32	0	19	140	64	0
6:15 PM	6	149	50	5	31	35	27	1	32	146	18	0	21	155	70	0
6:30 PM	10	115	42	0	27	30	27	0	21	148	16	0	15	154	80	0
6:45 PM	5	109	55	1	28	27	16	2	33	111	20	2	20	137	50	1
9:30 PM	8	61	31	0	18	15	10	1	6	35	26	0	3	36	9	0
9:45 PM	9	64	28	4	14	19	12	0	6	33	18	0	5	29	7	0
10:00 PM	12	193	50	0	42	76	37	0	11	68	36	2	3	39	3	0
10:15 PM	11	136	33	2	25	53	53	1	12	53	23	0	5	29	9	0
10:30 PM	2	106	16	0	8	20	28	0	9	36	12	1	3	30	1	0
10:45 PM	4	52	12	0	11	12	12	0	3	27	16	0	6	34	5	0

Study Name Kilbourn and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	7	1	0	2	0	0	0	0	5	0	0	0	0	0	0
4:45 PM	0	7	4	0	0	0	0	0	0	5	0	0	0	0	2	0
5:00 PM	0	4	2	0	0	0	0	0	0	9	1	0	0	1	0	0
5:15 PM	0	6	1	0	1	0	1	0	0	4	0	0	0	0	0	0
5:30 PM	0	2	1	0	0	0	0	0	1	8	0	0	0	0	0	0
5:45 PM	0	3	3	0	1	0	0	0	0	3	0	0	0	0	0	0
6:00 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:15 PM	0	1	0	0	1	0	0	0	1	2	1	0	0	0	0	0
6:30 PM	0	4	2	0	0	0	0	0	1	2	0	0	0	0	0	0
6:45 PM	0	4	1	0	1	0	0	0	1	1	0	0	0	0	0	0
9:30 PM	0	2	1	0	2	0	1	0	0	3	0	0	0	0	0	0
9:45 PM	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0	0
10:00 PM	0	3	3	0	1	1	0	0	0	4	0	0	0	0	0	0
10:15 PM	0	1	1	0	1	0	1	0	0	1	0	0	0	0	0	0
10:30 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Kilbourn and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	1		0	0		0	0	
5:00 PM	0	0		0	0		0	1		0	0	
5:15 PM	2	0		0	1		0	0		0	0	
5:30 PM	0	0		0	0		2	0		2	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		1	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Kilbourn and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	6	0		4	8		0	6		9	6	
4:45 PM	3	0		3	8		0	3		11	2	
5:00 PM	2	0		0	7		0	4		11	3	
5:15 PM	7	0		1	6		1	2		4	1	
5:30 PM	3	0		0	11		0	0		6	0	
5:45 PM	6	0		4	11		0	1		8	1	
6:00 PM	8	0		1	16		0	3		15	2	
6:15 PM	5	0		0	29		0	3		15	1	
6:30 PM	1	3		0	32		0	5		14	4	
6:45 PM	0	0		2	32		0	3		23	4	
9:30 PM	0	0		5	1		1	0		1	1	
9:45 PM	0	13		38	0		1	0		0	32	
10:00 PM	4	42		104	4		2	10		2	106	
10:15 PM	3	11		10	2		0	0		0	24	
10:30 PM	0	1		8	0		0	0		0	7	
10:45 PM	0	0		0	0		0	0		1	2	

Study Name Kilbourn and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	6	265	31	2	44	45	39	0	27	191	33	0	9	108	20	1
4:45 PM	11	276	45	0	42	42	56	1	26	200	28	0	11	112	32	0
5:00 PM	10	249	49	3	65	68	52	0	29	243	47	0	14	129	43	0
5:15 PM	5	290	39	2	57	54	53	0	31	252	26	0	9	121	35	1
5:30 PM	6	244	53	3	54	46	48	1	27	183	30	0	5	151	37	0
5:45 PM	7	234	64	1	44	54	46	0	26	149	20	0	10	154	49	0
6:00 PM	6	156	58	5	50	43	47	0	34	161	32	0	19	141	64	0
6:15 PM	6	155	50	5	32	35	27	1	33	149	19	0	21	155	70	0
6:30 PM	10	120	44	0	27	30	27	0	22	150	17	0	15	154	80	0
6:45 PM	5	116	56	1	29	27	16	2	34	112	20	2	20	138	50	1
9:30 PM	8	63	32	0	20	15	11	1	6	38	26	0	3	36	9	0
9:45 PM	9	69	29	4	14	19	12	0	6	35	19	0	5	29	7	0
10:00 PM	12	196	53	0	43	77	37	0	11	72	36	2	3	39	3	0
10:15 PM	11	137	34	2	26	53	54	1	12	54	23	0	5	29	9	0
10:30 PM	3	107	17	0	8	20	28	0	9	36	12	1	3	30	1	0
10:45 PM	4	53	13	0	12	12	12	0	3	28	17	0	6	34	5	0

Study Name Knapp & Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	62	146	3	0	1	100	6	0	9	158	56	0	42	115	89	0
4:45 PM	67	169	4	0	6	91	8	0	8	190	66	1	46	134	97	0
5:00 PM	87	145	5	2	4	139	6	0	16	225	68	0	40	148	78	0
5:15 PM	81	147	8	0	5	93	8	0	17	218	62	0	47	159	95	0
5:30 PM	81	153	3	1	4	87	10	0	18	182	59	0	63	169	100	0
5:45 PM	65	157	3	0	3	54	6	0	27	173	44	2	68	153	100	0
6:00 PM	80	126	4	0	2	74	11	0	16	139	46	2	63	148	97	0
6:15 PM	93	142	4	0	2	55	4	0	19	157	44	1	47	133	87	0
6:30 PM	109	126	1	0	4	58	11	0	17	116	25	2	49	142	88	0
6:45 PM	92	143	1	0	0	44	9	0	27	125	30	1	46	130	98	0
9:30 PM	52	54	3	0	1	31	3	0	7	72	18	2	15	38	39	0
9:45 PM	53	64	1	0	2	17	0	0	1	82	19	0	16	30	51	0
10:00 PM	57	78	3	0	9	61	16	0	4	135	50	1	35	56	81	0
10:15 PM	44	97	3	0	7	32	4	0	7	111	26	4	37	50	73	0
10:30 PM	47	65	0	1	2	15	5	0	4	79	14	7	22	26	53	0
10:45 PM	40	48	0	0	1	14	2	0	7	57	17	3	23	15	37	0

Study Name Knapp & Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	3	0	0	0	1	0	0	0	2	0	0	1	0	1	0
4:45 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0
5:00 PM	0	3	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0
5:30 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:45 PM	1	3	0	0	0	0	0	0	0	2	0	0	0	0	1	0
6:00 PM	0	3	0	0	0	0	0	0	0	3	1	0	0	1	0	0
6:15 PM	0	1	1	0	0	0	0	0	0	2	0	0	0	0	1	0
6:30 PM	0	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0
6:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:15 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:30 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0

Study Name Knapp & Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Trucks

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	2	1	0	0	0	0	0	0	0	2	0	0	1	0	1	0
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:00 PM	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
5:15 PM	0	2	0	0	0	1	0	0	0	0	1	0	0	0	1	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
6:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
6:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0

Study Name Knapp & Water St TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Bicycles on Road

[illegible]

Study Name Knapp & Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		1	1	
5:00 PM	0	0		0	0		0	0		1	0	
5:15 PM	0	0		0	0		0	0		0	1	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	1	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	1	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Knapp & Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	3		0	1		2	4		6	11	
4:45 PM	1	4		0	8		3	2		11	6	
5:00 PM	0	5		5	5		3	4		16	25	
5:15 PM	1	5		12	2		6	1		11	21	
5:30 PM	1	8		8	2		4	8		3	24	
5:45 PM	2	3		16	0		5	1		4	11	
6:00 PM	0	16		6	2		7	4		6	26	
6:15 PM	4	14		5	2		13	2		12	21	
6:30 PM	3	5		13	2		3	5		8	13	
6:45 PM	1	10		13	0		12	2		9	14	
9:30 PM	4	0		0	0		0	1		4	0	
9:45 PM	2	0		3	3		0	10		11	3	
10:00 PM	21	1		4	36		4	22		55	7	
10:15 PM	3	1		1	8		0	3		12	2	
10:30 PM	3	0		0	1		0	0		11	3	
10:45 PM	0	0		1	0		3	0		9	1	

Study Name Knapp & Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	64	152	3	0	1	101	6	0	9	162	56	0	45	115	91	0
4:45 PM	68	178	4	0	6	91	8	0	8	199	66	1	46	138	97	0
5:00 PM	88	154	6	2	4	139	6	0	16	229	68	0	41	148	78	0
5:15 PM	82	159	8	0	5	94	8	0	17	225	63	0	47	159	96	0
5:30 PM	81	156	3	1	4	87	10	0	18	189	59	0	63	169	101	0
5:45 PM	66	161	3	0	3	54	6	0	27	176	44	2	68	154	102	0
6:00 PM	81	130	4	0	2	74	12	0	16	142	47	2	63	149	97	0
6:15 PM	94	144	5	0	2	55	5	0	19	161	44	1	48	133	88	0
6:30 PM	109	130	1	0	4	58	11	0	17	117	26	2	49	143	88	0
6:45 PM	93	144	1	0	0	44	9	0	27	128	30	1	46	130	98	0
9:30 PM	52	57	3	0	1	31	3	0	7	72	18	2	15	38	39	0
9:45 PM	53	64	1	0	2	17	0	0	1	85	19	0	16	30	52	0
10:00 PM	57	79	3	0	9	61	16	0	4	137	51	1	35	56	81	0
10:15 PM	44	99	3	0	7	32	4	0	7	113	26	4	38	50	73	0
10:30 PM	47	66	0	1	2	15	5	0	4	81	14	7	22	26	53	0
10:45 PM	41	49	0	0	1	14	2	0	7	58	17	3	25	15	38	0

Study Name McKinnley & 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	17	36	0	0	6	241	19	0	10	33	37	0	46	248	25	0
4:45 PM	14	26	4	0	6	249	17	1	13	36	32	0	46	310	30	0
5:00 PM	17	32	6	0	12	328	12	0	24	56	42	0	67	300	23	0
5:15 PM	17	26	4	0	15	286	23	0	19	48	32	0	76	307	34	0
5:30 PM	20	23	3	0	17	254	13	0	26	37	46	0	97	361	26	0
5:45 PM	11	24	9	0	11	200	9	0	17	22	29	0	123	336	34	2
6:00 PM	12	9	4	0	10	216	17	0	29	35	28	0	119	336	47	1
6:15 PM	20	30	5	0	15	209	17	0	27	35	17	0	125	313	60	0
6:30 PM	8	20	5	0	11	206	25	2	20	47	22	1	99	309	59	1
6:45 PM	19	11	0	0	11	150	23	3	23	36	18	0	118	290	50	0
9:30 PM	5	8	1	0	1	110	3	0	5	15	24	0	13	101	4	0
9:45 PM	4	8	2	0	0	106	11	0	8	13	29	0	14	104	2	0
10:00 PM	31	8	2	0	5	167	5	0	15	34	77	0	11	111	3	0
10:15 PM	13	8	4	0	5	200	1	0	21	43	100	0	11	112	5	1
10:30 PM	5	6	1	0	2	110	2	0	11	11	82	0	5	77	8	1
10:45 PM	3	2	1	0	1	95	4	0	5	15	52	0	7	70	2	0

Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Buses[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Study Name McKinnley & 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Study Name McKinnley & 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		1	0	
5:00 PM	0	0		0	1		0	0		0	1	
5:15 PM	1	1		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	1		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	1		0	0	
9:30 PM	0	0		1	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		3	0	
10:00 PM	0	0		0	0		0	0		1	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name McKinnley & 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	4	1		4	1		0	0		4	7	
4:45 PM	5	1		5	1		0	0		7	13	
5:00 PM	8	0		18	0		2	0		1	13	
5:15 PM	4	7		15	0		2	1		1	26	
5:30 PM	1	3		13	2		3	4		2	18	
5:45 PM	4	10		27	1		1	0		1	51	
6:00 PM	2	19		19	1		6	2		1	65	
6:15 PM	2	54		59	3		19	3		0	114	
6:30 PM	2	39		35	0		9	0		4	78	
6:45 PM	0	26		23	0		2	0		2	97	
9:30 PM	0	1		1	1		0	0		7	1	
9:45 PM	17	0		3	50		0	15		99	0	
10:00 PM	52	5		0	160		0	57		324	1	
10:15 PM	0	0		1	3		0	1		20	4	
10:30 PM	1	0		1	6		0	0		15	0	
10:45 PM	0	1		0	3		0	0		8	0	

Study Name McKinnley & 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	17	36	0	0	6	244	19	0	10	33	37	0	47	252	25	0
4:45 PM	14	26	4	0	6	249	17	1	14	36	32	0	46	314	30	0
5:00 PM	18	32	6	0	12	329	12	0	24	56	42	0	67	300	24	0
5:15 PM	17	26	4	0	16	287	24	0	19	49	32	0	77	310	34	0
5:30 PM	20	23	3	0	17	254	13	0	27	37	46	0	97	362	26	0
5:45 PM	11	24	10	0	11	203	9	0	17	23	29	0	123	339	35	2
6:00 PM	12	10	5	0	10	219	17	0	29	35	28	0	120	336	47	1
6:15 PM	20	31	5	0	15	210	17	0	27	35	17	0	125	314	60	0
6:30 PM	8	20	5	0	11	207	25	2	20	47	22	1	100	310	59	1
6:45 PM	20	11	0	0	11	151	23	3	23	36	18	0	119	290	50	0
9:30 PM	6	8	1	0	1	111	3	0	5	15	24	0	13	101	4	0
9:45 PM	4	8	2	0	0	106	11	0	8	13	29	0	14	105	2	0
10:00 PM	31	9	2	0	5	167	5	0	15	34	77	0	11	111	3	0
10:15 PM	13	8	5	0	5	200	1	0	21	43	101	0	11	112	5	1
10:30 PM	5	6	1	0	2	110	2	0	11	13	82	0	5	77	9	1
10:45 PM	4	2	2	0	1	95	4	0	5	16	52	0	7	71	2	0

Study Name McKinnley/Fond du Lac & 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	41	191	19	0	13	252	28	0	38	147	66	0	83	258	25	0
4:45 PM	40	184	17	0	21	258	17	0	37	158	82	0	96	331	18	1
5:00 PM	53	190	23	0	28	312	16	0	32	185	108	0	90	343	22	0
5:15 PM	57	165	13	0	18	339	19	0	45	194	89	0	126	361	24	0
5:30 PM	42	180	36	0	29	259	25	0	30	143	60	0	142	404	25	0
5:45 PM	24	163	24	0	24	201	22	0	26	106	63	0	160	434	21	0
6:00 PM	42	98	18	0	9	211	18	0	20	91	49	0	205	447	18	0
6:15 PM	34	107	19	0	17	214	18	0	40	109	39	0	185	426	30	0
6:30 PM	28	66	15	0	18	199	12	0	36	89	44	0	173	426	34	0
6:45 PM	23	58	5	0	11	160	24	0	31	89	37	1	165	395	34	0
9:30 PM	30	31	4	0	4	134	9	0	10	30	49	0	26	116	14	0
9:45 PM	14	21	3	0	4	111	9	0	11	45	129	0	33	94	9	1
10:00 PM	120	60	6	0	3	229	4	0	17	56	235	0	19	94	7	0
10:15 PM	63	30	3	0	6	308	6	0	17	83	193	0	32	121	6	0
10:30 PM	26	25	1	0	5	219	7	0	7	44	100	0	21	84	7	0
10:45 PM	12	12	2	0	1	150	6	0	5	31	77	0	10	70	4	1

Study Name McKinnley/Fond du Lac & 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	9	0	0	0	2	0	0	0	3	1	0	3	3	0	0
4:45 PM	2	8	0	0	0	0	0	0	0	8	0	0	2	2	0	0
5:00 PM	0	5	0	0	0	0	0	0	0	5	1	0	1	0	0	0
5:15 PM	1	6	1	0	0	0	0	0	0	3	1	0	0	0	0	0
5:30 PM	0	3	0	0	0	0	0	0	0	4	1	0	2	0	0	0
5:45 PM	0	5	0	0	0	1	0	0	1	1	1	0	2	0	0	0
6:00 PM	1	1	0	0	0	0	0	0	0	1	0	0	2	1	1	0
6:15 PM	0	2	0	0	0	0	0	0	1	1	1	0	0	0	0	0
6:30 PM	0	1	0	0	0	1	0	0	0	2	1	0	0	1	0	0
6:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	2	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Study Name McKinnley/Fond du Lac & 6th TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Trucks

[illegible]

Study Name McKinnley/Fond du Lac & 6th TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Bicycles on Road

[illegible]

Study Name McKinnley/Fond du Lac & 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		0	1		0	0		0	0	
6:45 PM	0	0		1	0		0	0		0	1	
9:30 PM	0	0		1	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name McKinnley/Fond du Lac & 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		4	1		0	0		7		7
4:45 PM	3	0		15	0		0	0		2		7
5:00 PM	0	0		7	0		0	0		2		4
5:15 PM	0	0		9	2		0	0		1		11
5:30 PM	2	0		8	1		0	0		4		6
5:45 PM	7	1		14	1		0	0		5		5
6:00 PM	10	1		28	1		0	2		4		10
6:15 PM	12	0		37	2		1	0		0		15
6:30 PM	4	0		48	0		0	0		3		22
6:45 PM	21	0		69	1		0	1		1		22
9:30 PM	0	7		0	8		0	0		0		0
9:45 PM	0	10		0	58		0	0		0		0
10:00 PM	1	23		0	163		0	0		0		0
10:15 PM	0	1		1	14		0	0		0		0
10:30 PM	0	3		0	6		0	0		1		0
10:45 PM	0	0		0	8		0	0		0		1

Study Name McKinnley/Fond du Lac & 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	42	202	19	0	13	254	28	0	38	152	67	0	87	262	26	0
4:45 PM	42	198	17	0	22	259	17	0	37	166	84	0	99	334	18	1
5:00 PM	53	198	23	0	28	312	16	0	32	191	110	0	91	343	22	0
5:15 PM	58	172	14	0	18	339	19	0	45	198	91	0	126	363	24	0
5:30 PM	42	183	36	0	29	259	25	0	30	148	61	0	144	405	25	0
5:45 PM	24	169	24	0	24	203	23	0	28	108	65	0	162	435	22	0
6:00 PM	43	101	18	0	9	214	18	0	20	92	49	0	208	448	19	0
6:15 PM	34	109	19	0	17	215	18	0	41	110	40	0	190	426	30	0
6:30 PM	28	67	15	0	18	200	12	0	37	91	46	0	174	427	34	0
6:45 PM	23	61	5	0	11	162	24	0	31	90	37	1	167	395	35	0
9:30 PM	30	32	4	0	4	135	9	0	10	31	49	0	26	116	14	0
9:45 PM	14	21	3	0	4	111	9	0	12	45	129	0	33	94	9	1
10:00 PM	120	61	6	0	3	229	4	0	17	58	235	0	19	94	8	0
10:15 PM	63	31	3	0	6	308	6	0	17	83	195	0	32	121	6	0
10:30 PM	26	27	1	0	5	219	7	0	7	45	100	0	21	85	7	0
10:45 PM	12	12	2	0	1	151	6	0	5	32	77	0	10	71	5	1

Study Name McKinnley/Knapp & Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	53	91	28	0	14	196	4	0	7	53	17	0	12	224	27	0
4:45 PM	40	129	26	0	12	213	11	0	6	60	16	0	25	252	28	2
5:00 PM	60	123	33	0	17	272	14	0	7	83	26	0	30	262	42	2
5:15 PM	64	129	36	1	12	222	17	0	5	72	27	0	42	271	30	0
5:30 PM	57	137	21	0	0	200	18	0	12	73	28	0	32	304	42	2
5:45 PM	50	92	28	0	0	151	7	1	8	46	21	0	42	293	30	3
6:00 PM	47	98	24	0	0	175	20	0	4	49	18	0	50	287	32	0
6:15 PM	60	63	16	0	0	165	21	0	7	53	19	0	54	265	34	1
6:30 PM	44	62	12	0	9	150	22	0	11	42	26	0	41	267	25	2
6:45 PM	39	44	16	0	2	130	20	0	9	49	19	0	38	260	25	0
9:30 PM	7	31	2	0	0	88	11	0	8	17	17	0	13	80	11	0
9:45 PM	9	30	6	0	0	87	9	0	7	33	18	0	5	95	7	1
10:00 PM	25	41	13	0	3	95	20	0	16	69	56	0	2	103	6	0
10:15 PM	17	33	10	0	0	110	12	0	16	76	47	0	6	114	8	0
10:30 PM	11	22	2	0	6	72	6	0	9	49	24	0	5	77	14	0
10:45 PM	8	25	4	0	1	73	14	0	7	26	19	0	4	63	9	0

Study Name McKinnley/Knapp & Old World 3rd TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Buses[illegible]

Study Name McKinnley/Knapp & Old World 3rd TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Trucks

[illegible]

Study Name McKinnley/Knapp & Old World 3rd TMC  
Start Date 04/23/2015  
Start Time 4:30 PM  
Site Code  
Project Downtown Milwaukee during Bucks playoff game

Type Road  
Classification Bicycles on Road

[illegible]

Study Name McKinnley/Knapp & Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	2		0	0		0	0	
4:45 PM	0	0		0	0		0	0		0	0	
5:00 PM	0	0		1	1		0	0		0	0	
5:15 PM	0	1		1	1		0	0		0	1	
5:30 PM	0	1		0	0		0	1		0	0	
5:45 PM	0	0		0	0		0	1		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	0		0	0	
6:30 PM	0	0		1	0		1	0		0	0	
6:45 PM	0	1		0	0		0	1		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	1		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name McKinnley/Knapp & Old World 3rd TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	8	1		6	1		2	1		1	2	
4:45 PM	12	2		6	5		1	6		11	5	
5:00 PM	1	5		10	5		2	2		4	14	
5:15 PM	0	2		8	0		2	1		1	4	
5:30 PM	3	9		15	2		4	5		3	26	
5:45 PM	3	16		23	1		0	0		1	33	
6:00 PM	3	13		20	4		5	0		3	44	
6:15 PM	1	21		35	3		17	0		1	33	
6:30 PM	2	44		21	3		4	2		4	61	
6:45 PM	2	37		34	1		16	0		2	49	
9:30 PM	0	0		0	3		0	0		2	0	
9:45 PM	18	0		2	11		0	14		50	1	
10:00 PM	47	1		0	130		3	91		99	0	
10:15 PM	6	1		1	18		0	1		23	0	
10:30 PM	0	0		0	2		0	0		7	0	
10:45 PM	3	0		3	4		2	0		8	0	

Study Name McKinnley/Knapp & Old World 3rd TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	53	94	29	0	14	198	4	0	7	54	18	0	12	228	27	0
4:45 PM	40	131	26	0	12	213	11	0	6	64	16	0	25	255	28	2
5:00 PM	60	127	33	0	17	273	14	0	7	86	26	0	30	262	42	2
5:15 PM	64	133	36	1	12	225	17	0	5	74	27	0	42	271	30	0
5:30 PM	57	138	21	0	0	200	18	0	12	75	28	0	32	305	42	2
5:45 PM	50	97	28	0	0	154	7	1	8	48	21	0	42	297	30	3
6:00 PM	47	99	24	0	0	176	21	0	5	51	20	0	50	287	32	0
6:15 PM	60	63	16	0	0	166	21	0	7	54	19	0	54	267	34	1
6:30 PM	44	63	12	0	9	151	22	0	11	45	26	0	41	269	25	2
6:45 PM	39	46	16	0	2	131	20	0	9	50	19	0	38	260	25	0
9:30 PM	7	32	2	0	0	88	11	0	8	20	18	0	13	80	11	0
9:45 PM	9	30	6	0	0	87	9	0	7	35	18	0	5	96	7	1
10:00 PM	25	42	13	0	3	95	20	0	16	71	56	0	2	103	6	0
10:15 PM	17	33	10	0	0	110	12	0	16	77	47	0	6	115	8	0
10:30 PM	11	24	2	0	6	72	6	0	9	50	24	0	5	77	14	0
10:45 PM	8	26	4	0	1	73	14	0	7	26	19	0	4	65	9	0

Study Name State and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	33	65	0	0	10	169	4	0	0	88	13	0	0	0	0	0
4:45 PM	38	59	0	0	10	192	11	0	0	100	10	0	0	0	0	0
5:00 PM	38	81	0	0	21	232	13	0	0	128	14	0	0	0	0	0
5:15 PM	46	73	0	0	19	196	13	0	0	101	17	0	0	0	0	0
5:30 PM	38	57	0	0	37	149	8	0	0	110	12	0	0	0	0	0
5:45 PM	36	76	0	0	22	127	9	0	0	94	16	0	0	0	0	0
6:00 PM	43	79	0	0	25	112	6	0	0	118	14	0	0	0	0	0
6:15 PM	33	71	0	0	20	114	3	0	0	123	22	0	0	0	0	0
6:30 PM	39	80	0	0	26	98	6	0	0	117	20	0	0	0	0	0
6:45 PM	36	77	0	0	20	94	8	0	0	104	25	0	0	0	0	0
9:30 PM	36	40	0	0	22	39	3	0	0	53	10	0	0	0	0	0
9:45 PM	23	38	0	0	14	29	2	0	0	37	12	1	0	0	0	0
10:00 PM	14	112	0	0	28	146	10	0	0	82	6	0	0	0	0	0
10:15 PM	43	99	0	1	18	86	10	0	0	45	14	0	0	0	0	0
10:30 PM	33	50	0	0	13	36	2	0	0	25	8	0	0	0	0	0
10:45 PM	16	33	0	0	10	36	3	0	0	22	1	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

## Classification Buses

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

## Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name State and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	0		0	3		0	0		0	0	
5:00 PM	0	0		0	1		0	0		0	0	
5:15 PM	0	0		0	0		0	0		0	0	
5:30 PM	0	0		0	0		0	0		1	0	
5:45 PM	0	0		0	0		0	0		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	1	0		1	0		0	1		0	0	
6:30 PM	0	0		0	2		0	0		0	0	
6:45 PM	0	0		0	0		0	0		1	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	1	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name State and 4th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	29	9		6	7		6	2		12	8	
4:45 PM	24	14		3	23		3	9		26	13	
5:00 PM	16	18		18	15		14	9		41	20	
5:15 PM	24	38		11	22		18	13		39	17	
5:30 PM	29	41		17	50		18	3		54	13	
5:45 PM	69	56		31	41		57	7		144	12	
6:00 PM	31	120		18	54		120	8		258	15	
6:15 PM	31	181		12	52		140	10		354	15	
6:30 PM	33	258		5	52		153	0		426	12	
6:45 PM	14	435		11	91		166	1		513	8	
9:30 PM	14	1		7	2		0	3		0	25	
9:45 PM	348	4		162	7		6	192		4	820	
10:00 PM	426	8		332	2		15	221		18	514	
10:15 PM	63	15		31	2		5	15		0	48	
10:30 PM	11	15		15	2		0	4		3	17	
10:45 PM	6	16		9	9		5	2		0	11	

Study Name State and 4th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	33	65	0	0	10	169	4	0	0	88	14	0	0	0	0	0
4:45 PM	38	59	0	0	11	195	11	0	0	104	11	0	0	0	0	0
5:00 PM	39	81	0	0	21	233	13	0	0	131	14	0	0	0	0	0
5:15 PM	46	76	0	0	19	201	13	0	0	102	17	0	0	0	0	0
5:30 PM	38	58	0	0	37	150	8	0	0	111	12	0	0	0	0	0
5:45 PM	36	78	0	0	22	128	9	0	0	94	16	0	0	0	0	0
6:00 PM	46	80	0	0	25	112	6	0	0	118	14	0	0	0	0	0
6:15 PM	35	71	0	0	20	116	3	0	0	123	22	0	0	0	0	0
6:30 PM	40	81	0	0	26	103	6	0	0	117	21	0	0	0	0	0
6:45 PM	38	78	0	0	20	98	8	0	0	106	25	0	0	0	0	0
9:30 PM	40	43	0	0	22	39	3	0	0	53	11	0	0	0	0	0
9:45 PM	24	38	0	0	14	29	2	0	0	37	12	1	0	0	0	0
10:00 PM	15	115	0	0	28	148	10	0	0	82	6	0	0	0	0	0
10:15 PM	46	101	0	1	18	89	10	0	0	45	15	0	0	0	0	0
10:30 PM	34	51	0	0	13	37	2	0	0	26	9	0	0	0	0	0
10:45 PM	16	34	0	0	10	36	3	0	0	22	1	0	0	0	0	0

Study Name State and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	24	239	0	2	46	137	29	0	0	226	21	0	28	0	36	0
4:45 PM	26	237	0	0	60	150	32	0	1	226	33	0	36	0	33	0
5:00 PM	38	222	0	1	54	201	44	0	0	307	37	0	22	0	29	0
5:15 PM	42	254	0	0	56	153	46	0	0	306	35	1	28	2	31	0
5:30 PM	33	232	0	0	43	118	38	0	0	222	43	0	41	0	32	0
5:45 PM	40	229	0	0	44	96	32	0	0	196	40	1	33	0	44	0
6:00 PM	51	194	0	1	43	83	29	0	0	239	37	0	23	0	37	0
6:15 PM	40	163	0	0	51	86	24	0	0	217	46	7	40	0	35	0
6:30 PM	53	138	0	0	45	70	30	0	0	197	47	0	24	0	34	0
6:45 PM	46	155	0	0	40	85	18	0	0	168	32	5	37	0	44	0
9:30 PM	10	69	0	0	42	30	15	0	0	50	11	0	9	4	4	0
9:45 PM	16	70	0	1	27	31	20	0	0	51	7	0	8	0	12	0
10:00 PM	32	132	0	0	20	133	39	0	0	87	32	0	23	0	14	0
10:15 PM	23	120	0	0	25	88	44	0	0	69	25	0	17	0	20	0
10:30 PM	25	79	0	0	13	47	22	0	0	36	10	0	12	0	14	0
10:45 PM	10	44	1	0	9	35	14	0	0	33	10	0	12	0	9	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name State and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	1		0	0	
4:45 PM	1	0		0	0		0	0		0	0	
5:00 PM	0	2		0	0		0	0		0	1	
5:15 PM	0	1		0	1		0	1		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	1		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		0	0		0	3		0	0	
6:30 PM	0	0		0	0		0	0		1	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name State and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	19	7		2	11		4	9		14	3	
4:45 PM	34	17		3	15		4	12		24	2	
5:00 PM	17	15		0	7		6	11		19	5	
5:15 PM	39	16		3	12		3	23		20	1	
5:30 PM	119	11		1	9		10	16		38	4	
5:45 PM	65	26		6	31		3	37		37	5	
6:00 PM	133	4		1	76		3	63		51	3	
6:15 PM	140	8		5	115		1	124		123	2	
6:30 PM	208	2		3	104		5	106		186	5	
6:45 PM	210	3		1	110		1	101		120	5	
9:30 PM	2	16		12	1		4	0		1	1	
9:45 PM	3	258		283	3		101	0		2	154	
10:00 PM	22	467		409	33		302	12		23	216	
10:15 PM	14	52		22	5		16	3		4	26	
10:30 PM	7	16		9	0		2	0		0	6	
10:45 PM	0	14		0	0		4	0		1	4	

Study Name State and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	24	249	0	2	46	140	29	0	0	234	22	0	28	0	38	0
4:45 PM	26	256	0	0	61	152	32	0	1	236	33	0	36	0	34	0
5:00 PM	38	235	0	1	54	202	44	0	0	316	37	0	22	0	29	0
5:15 PM	42	261	0	0	58	154	47	0	0	314	35	1	28	2	32	0
5:30 PM	33	235	0	0	43	119	38	0	0	231	43	0	41	0	32	0
5:45 PM	40	237	0	0	44	96	33	0	0	200	40	1	33	0	44	0
6:00 PM	51	199	0	1	43	86	29	0	0	243	37	0	23	0	37	0
6:15 PM	41	167	0	0	51	88	25	0	0	221	46	7	40	0	35	0
6:30 PM	53	139	0	0	45	72	33	0	0	199	47	0	25	0	34	0
6:45 PM	46	157	0	0	41	88	22	0	0	171	32	5	37	0	45	0
9:30 PM	10	72	0	0	46	31	15	0	0	54	11	0	9	4	4	0
9:45 PM	16	74	0	1	27	33	22	0	0	53	7	0	8	0	12	0
10:00 PM	32	136	0	0	21	135	43	0	0	91	32	0	23	0	14	0
10:15 PM	23	122	0	0	27	91	45	0	0	69	25	0	17	0	20	0
10:30 PM	25	80	0	0	14	48	23	0	0	37	10	0	12	0	14	0
10:45 PM	10	46	1	0	9	35	14	0	0	35	10	0	12	0	11	0

Study Name State and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	27	183	0	0	8	107	18	0	0	201	23	1	0	0	0	0
4:45 PM	32	219	0	0	15	106	15	0	0	260	31	2	0	0	0	0
5:00 PM	35	189	0	0	19	160	20	0	0	321	27	0	0	0	0	0
5:15 PM	34	206	0	1	20	127	15	0	0	292	26	1	1	0	0	0
5:30 PM	30	191	0	0	17	94	7	0	0	278	21	3	0	0	0	0
5:45 PM	26	188	0	0	14	80	17	0	0	233	25	1	0	0	0	0
6:00 PM	30	157	0	1	18	76	6	0	0	187	17	0	0	0	0	0
6:15 PM	30	158	0	0	14	65	10	0	0	207	21	0	0	0	0	0
6:30 PM	33	147	0	0	10	66	11	0	0	170	19	1	0	1	0	0
6:45 PM	31	173	0	0	14	57	10	0	0	168	14	0	0	0	0	0
9:30 PM	17	52	0	0	6	19	3	0	0	113	6	1	0	0	0	0
9:45 PM	18	84	0	0	5	18	4	0	0	87	4	0	0	0	0	0
10:00 PM	27	170	0	0	12	43	17	0	0	124	3	1	0	0	0	0
10:15 PM	25	159	0	0	5	30	4	0	0	122	7	1	0	0	0	0
10:30 PM	16	77	0	1	4	14	5	0	0	65	2	0	0	0	0	0
10:45 PM	12	66	0	0	4	8	1	0	0	68	5	1	1	0	0	0

Study Name State and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0
4:45 PM	0	4	0	0	0	0	0	0	0	2	1	0	0	0	0	0
5:00 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	2	0	0	0	1	0	0	0	2	1	0	0	0	0	0
5:30 PM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:45 PM	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:00 PM	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0
6:15 PM	0	4	0	0	0	0	0	0	0	4	1	0	0	0	0	0
6:30 PM	0	1	0	0	0	3	0	0	0	1	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	4	0	0	0	1	1	0	0	0	0	0
9:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0
10:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	1	0	0	0	1	0	0	0	2	1	0	0	0	0	0
10:45 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Study Name State and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Bicycles on Road

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	3	0	0	0	1	0	0	0	1	0	0	1	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0
5:00 PM	2	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	7	0	0	0	0	0	0	0	4	0	0	0	0	0	0
5:30 PM	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0
5:45 PM	0	2	0	0	0	1	0	0	0	4	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Study Name State and Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	1		2	0	
4:45 PM	0	0		0	1		0	0		0	0	
5:00 PM	0	0		0	0		0	0		1	0	
5:15 PM	0	0		0	1		0	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	2		0	0	
6:00 PM	0	0		0	0		0	0		1	0	
6:15 PM	0	0		0	0		0	0		0	1	
6:30 PM	0	0		0	0		0	0		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name State and Water St TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	6	14		7	22		7	7		30	4	
4:45 PM	11	54		4	71		13	8		60	5	
5:00 PM	15	27		6	54		6	10		45	1	
5:15 PM	5	11		5	24		15	3		29	2	
5:30 PM	2	21		1	25		10	5		14	3	
5:45 PM	9	29		3	26		5	4		25	0	
6:00 PM	4	33		6	26		13	3		14	5	
6:15 PM	9	30		3	14		14	2		33	7	
6:30 PM	4	58		8	18		20	1		13	7	
6:45 PM	1	52		4	10		8	2		9	10	
9:30 PM	2	0		0	0		0	0		15	0	
9:45 PM	16	2		6	2		0	14		2	5	
10:00 PM	136	0		14	6		0	55		24	24	
10:15 PM	7	2		3	5		0	3		6	4	
10:30 PM	1	3		4	5		1	3		2	9	
10:45 PM	2	1		1	1		8	0		17	9	

Study Name State and Water St TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	27	190	0	0	8	108	18	0	0	206	23	1	1	0	0	0
4:45 PM	32	226	0	0	15	107	15	0	0	268	32	2	0	0	0	0
5:00 PM	37	194	0	0	19	161	20	0	0	324	27	0	0	0	0	0
5:15 PM	34	215	0	1	20	128	15	0	0	300	28	1	1	0	0	0
5:30 PM	30	197	0	0	17	94	7	0	0	285	21	3	0	0	0	0
5:45 PM	26	194	0	0	14	81	17	0	0	241	25	1	0	0	0	0
6:00 PM	30	161	0	1	18	76	6	0	0	192	17	0	0	0	0	0
6:15 PM	30	164	0	0	14	65	10	0	0	213	22	0	0	0	0	0
6:30 PM	33	150	0	0	10	69	12	0	0	172	19	1	0	1	0	0
6:45 PM	31	174	0	0	14	61	12	0	0	173	15	0	0	0	0	0
9:30 PM	17	54	0	0	6	19	3	0	0	114	6	1	0	0	0	0
9:45 PM	18	84	0	0	5	19	4	0	0	88	4	0	0	0	0	0
10:00 PM	27	171	0	0	12	45	17	0	0	126	3	1	0	0	0	0
10:15 PM	25	161	0	0	5	32	4	0	0	123	7	1	0	0	0	0
10:30 PM	16	78	0	1	4	15	5	0	0	67	3	0	0	0	0	0
10:45 PM	12	69	0	0	4	8	1	0	0	70	5	1	1	0	0	0

Study Name Wells and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Lights

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	273	13	0	9	46	20	0	19	196	0	0	35	132	40	0
4:45 PM	15	284	25	0	7	50	17	0	17	187	0	0	21	143	50	0
5:00 PM	14	247	21	0	28	61	22	0	28	215	0	0	35	169	73	0
5:15 PM	30	282	39	0	14	70	25	0	27	218	0	0	28	175	70	0
5:30 PM	20	256	20	0	9	52	10	0	20	177	0	0	17	148	43	0
5:45 PM	20	223	43	0	7	43	11	0	20	130	0	0	16	144	50	0
6:00 PM	26	166	30	0	13	29	15	0	28	158	0	0	14	109	45	0
6:15 PM	27	153	24	1	5	21	10	0	24	140	0	0	18	117	36	0
6:30 PM	19	114	22	1	14	21	8	0	13	135	0	0	11	114	34	0
6:45 PM	17	113	24	1	10	32	15	0	11	111	0	0	16	90	40	0
9:30 PM	6	65	4	0	8	27	19	0	8	49	0	0	4	20	6	0
9:45 PM	8	65	5	1	5	24	9	0	4	43	0	0	8	34	6	0
10:00 PM	30	184	13	0	22	74	53	0	9	73	0	0	14	64	23	0
10:15 PM	22	156	13	0	15	66	39	0	7	65	1	0	21	39	8	0
10:30 PM	12	118	8	0	6	19	17	0	5	44	1	0	7	39	6	0
10:45 PM	9	59	2	0	4	21	10	0	7	36	2	0	6	31	8	0

Study Name Wells and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Buses

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	0	7	0	0	0	0	0	0	0	5	0	0	0	2	0	0
4:45 PM	0	10	0	0	0	0	0	0	0	4	0	0	0	0	1	0
5:00 PM	0	5	0	0	0	0	0	0	0	8	0	0	0	2	0	0
5:15 PM	0	7	0	0	0	0	0	0	0	4	1	0	1	2	0	0
5:30 PM	0	3	0	0	0	0	0	0	0	7	0	0	0	4	2	0
5:45 PM	1	2	0	0	0	0	1	0	1	4	0	0	1	0	0	0
6:00 PM	0	5	0	0	0	0	0	0	1	2	0	0	0	1	0	0
6:15 PM	0	2	0	0	0	0	0	0	0	5	0	0	0	1	0	0
6:30 PM	0	4	1	0	0	0	0	0	0	3	0	0	0	1	0	0
6:45 PM	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0
9:30 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	2	0
9:45 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	1	0
10:00 PM	0	3	1	0	0	0	0	0	0	2	0	0	0	1	2	0
10:15 PM	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0

## Project Downtown Milwaukee during Bucks playoff game

### Classification Trucks

[illegible]

Project Downtown Milwaukee during Bucks playoff game

### Classification Bicycles on Road

[illegible]

Study Name Wells and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk

Classification Bicycles on Crosswalk

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined	Peds CW	Peds CCW	Peds Combined
4:30 PM	0	0		0	0		0	0		0	0	
4:45 PM	0	1		0	1		0	0		0	0	
5:00 PM	0	0		0	0		0	0		0	0	
5:15 PM	0	1		0	0		1	0		0	0	
5:30 PM	0	0		0	0		0	0		0	0	
5:45 PM	0	0		0	0		0	1		0	0	
6:00 PM	0	0		0	0		0	0		0	0	
6:15 PM	0	0		1	0		0	1		0	0	
6:30 PM	0	0		0	0		0	1		0	0	
6:45 PM	0	0		0	0		0	0		0	0	
9:30 PM	0	0		0	0		0	0		0	0	
9:45 PM	0	0		0	0		0	0		0	0	
10:00 PM	0	0		0	0		0	0		0	0	
10:15 PM	0	0		0	0		0	0		0	0	
10:30 PM	0	0		0	0		0	0		0	0	
10:45 PM	0	0		0	0		0	0		0	0	

Study Name Wells and 6th TMC

Start Date 04/23/2015

Start Time 4:30 PM

Site Code

Project Downtown Milwaukee during Bucks playoff game

Type Crosswalk  
Classification Pedestrians

Start Time	Southbound Approach Southbound			Westbound Approach Westbound			Northbound Approach Northbound			Eastbound Approach Eastbound		
	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combin	Peds CW	Peds CCW	Peds Combined
4:30 PM	6	4		5	5		5	3		3	5	
4:45 PM	6	2		4	3		1	4		5	3	
5:00 PM	2	2		1	7		1	11		9	3	
5:15 PM	4	2		3	7		4	5		3	3	
5:30 PM	6	2		1	6		7	5		7	4	
5:45 PM	5	0		7	8		2	11		10	2	
6:00 PM	9	2		3	9		1	12		10	1	
6:15 PM	8	4		0	26		3	22		21	3	
6:30 PM	4	2		2	19		0	13		25	2	
6:45 PM	4	1		3	20		3	13		40	4	
9:30 PM	0	1		4	0		9	1		1	2	
9:45 PM	0	12		22	0		10	0		0	16	
10:00 PM	0	53		68	3		23	5		1	103	
10:15 PM	2	3		16	0		8	0		0	24	
10:30 PM	0	2		9	0		1	2		1	8	
10:45 PM	0	2		1	0		0	1		1	2	

Study Name Wells and 6th TMC  
 Start Date 04/23/2015  
 Start Time 4:30 PM  
 Site Code  
 Project Downtown Milwaukee during Bucks playoff game

Type Road  
 Classification Totals

	Southbound Approach Southbound				Westbound Approach Westbound				Northbound Approach Northbound				Eastbound Approach Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
4:30 PM	14	285	13	0	9	46	20	0	19	202	0	0	35	134	41	0
4:45 PM	15	299	25	0	7	51	17	0	17	193	0	0	21	146	52	0
5:00 PM	15	259	21	0	28	62	24	0	28	224	0	0	35	177	73	0
5:15 PM	30	290	39	0	14	70	26	0	27	225	1	0	30	179	70	0
5:30 PM	20	259	20	0	9	52	10	0	20	185	0	0	18	153	45	0
5:45 PM	21	228	43	0	7	44	12	0	21	135	0	0	17	145	50	0
6:00 PM	27	174	30	0	13	31	15	0	29	161	0	0	14	111	45	0
6:15 PM	27	159	24	1	5	21	10	0	24	145	0	0	21	119	36	0
6:30 PM	19	119	23	1	14	21	8	0	13	139	0	0	12	116	34	0
6:45 PM	17	119	25	1	10	32	15	0	11	114	0	0	16	90	40	0
9:30 PM	6	68	4	0	8	27	19	0	8	50	0	0	4	20	8	0
9:45 PM	8	70	6	1	5	24	9	0	4	44	0	0	8	35	8	0
10:00 PM	30	188	14	0	22	74	53	0	9	75	0	0	14	66	25	0
10:15 PM	23	158	13	0	15	66	39	0	7	66	1	0	21	39	8	0
10:30 PM	12	119	8	0	6	19	17	0	5	44	1	0	7	40	6	0
10:45 PM	9	60	2	0	4	21	10	0	7	38	2	0	6	31	8	0

## EXISTING SIGNAL TIMING PLANS

ELECTRICAL: <b>3 #4/1 #8 LTP FED FROM WEPKO SERVICE AND VAULT IN ALLEY WP W. OF INTERSEC- TION AT 4TH (RED PHASE) 120V METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1		CYCLE 2		CYCLE 3		CYCLE 4					
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	<b>36</b>	OFFSET 1		OFFSET 1	<b>33</b>	OFFSET 1					
FLASH OUTPUT ASSIGN.										# OF INTER		6	<b>16</b>		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2					
										TYPE OF CAB.		7	<b>1</b>		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3			
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4			
										ACT. 1 LOCK		0			MAX. DWELL	<b>42</b>	MAX. DWELL		MAX. DWELL	<b>39</b>	MAX. DWELL		MAX. DWELL			
										ACT. 2 LOCK		1			CYCLE LENGTH		CYCLE LENGTH		CYCLE LENGTH		CYCLE LENGTH		CYCLE LENGTH			
AUXILIARY EQUIPMENT:										ACT. 1 DELAY		2			SEC		SEC		SEC		SEC					
										ACT. 2 DELAY		3			90	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
										PRE-EMPT 1 LOCK		5			SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4
										PRE-EMPT 2 LOCK		6			1	<b>1.5</b>					<b>1.5</b>					
										PRE-EMPT 3 LOCK		7			2	<b>7</b>					<b>0</b>					
PROGRAM: <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>  <b>ACTUATION #1: NBLT ARROWS (CYCLE 1 ONLY)</b> <b>ACTUATION #2: EBLT ARROWS (CYCLE 3 ONLY)</b>										PRE-EMPT 1 DELAY		8			3											
										PRE-EMPT 2 DELAY		9			4	<b>3</b>				<b>0</b>						
										PRE-EMPT 3 DELAY		A			5	<b>7</b>				<b>0</b>						
										B+3+KEY					6	<b>18</b>				<b>18</b>						
										LONG POWER DOWN		0	<b>4</b>		7	<b>4</b>				<b>4</b>						
TIME IN SERVICE: <b>9/30/09 @ 0900</b>										SHORT POWER DOWN		1	<b>4</b>		8	<b>2.5</b>				<b>2.5</b>						
										SPECIAL ACT. FUNCTIONS					9	<b>0</b>				<b>7</b>						
										ACT. SIGNAL PLAN		2			10	<b>0</b>				<b>3</b>						
										ACT. CYCLE		3			11	<b>0</b>				<b>3</b>						
										ACT. SPLIT		4			12	<b>0</b>				<b>3</b>						
										ACT. OFFSET		5			13	<b>0</b>				<b>3</b>						
										RESET INTERVAL		6			14	<b>27</b>				<b>24</b>						
										# OF CYCLES		7		15	<b>0</b>				<b>0</b>							
										NO T.B.C. FALL BACK		8		16	<b>13</b>				<b>13</b>							
										CRD. FROM ACT. MSTR.		9		17	<b>4</b>				<b>4</b>							
SIGNAL #: <b>2045</b>										C+C+KEY				18												
										DWELL METHOD A		A	<b>0</b>	19												
										COORD. MODE		E	<b>1</b>	20												
LOCATION:  <b>N. DR. MLK DR., W. McKINLEY AV., &amp; N. OLD WORLD 3RD ST.</b>										COORD. MASTER		F		21												
										SYSTEM DATA:				22												
										MASTER: <b>LOVELL AND MICHIGAN</b>				23												
										PRO. CL.: <b>LOVELL AND MICHIGAN</b>				24												
FL. CL.: <b>NONE</b>										DESIGNED BY:				DRAWN BY:			SUPERSEDES:									
										JCB				JCB			B-09-553-T									
										CHECKED BY:				APPROVED BY:			SUPERSEDED BY:									
DATE: <b>9/23/09</b>										KAL				DRG. NO.: <b>B-09-842-T</b>												

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFa	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>N. DR. MLK DR.,</b> <b>W. McKINLEY AV., &amp;</b> <b>N. OLD WORLD 3RD ST.</b>			<b>CHECKED BY:</b> <b>KAL</b>		<b>SUPERSEDES:</b> <b>B-09-553-T</b>
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>9/23/09</b>	<b>APPROVED BY:</b>		<b>DRG. NO.: B-09-842-T</b>

**LOCATION****N. DR. MLK DR.,****W. McKINLEY AV., &****N. OLD WORLD 3RD ST.**

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

NBLT	SB	EBLT	WB	-	NB	-

EB	WXW	NXW	EXW	SXW	CY3	"A"
					CY2	"B"
					D-1	"C"

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NBLT	SB DR. MLK DR.	EBLT	WB McKINLEY	SPARE	NB OLD WORLD 3RD	SPARE	EB McKINLEY	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 6/11/08 @ 1300

DRG. NO: B-09-842-T

SERVICE: <b>3 #2/1 #8 LTP SERVICE FED FROM          M.H. @ INTERSECTION, WEPKO.          FED FROM ALLEY @ FDL/12 W.P.          120V METER (RED Ø)</b>	<h2 style="margin: 0;"><u>170 CONTROLLER W4IKS PROGRAM</u></h2> <h3 style="margin: 10px 0 0 0;"><u>INTERSECTION PROGRAMMING DATA</u></h3>	
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>		

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	> W ≤	1	2	3	4	5	6	7	8	FUNCTION	> W ≤	1	2	3	4	5	6	7	8
MAX I	0			42	67		27		67	VEHICLE RECALL	0			X	X				X
MAX II / HFDW	1									PED. RECALL	1				X				
WALK	2				7					RED LOCK	2						X		
FDW	3				7					YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4			X	X		X	X	
MIN GREEN	5			7	7		12		7	PED PHASES	5				X				
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7				X			X	
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9						4			START UP GREEN	9				X			X	
MINIMUM GAP	A									OVERLAP A	A								
ADDED / ACTUATION	B									OVERLAP B	B								
YELLOW	C			3.5	4.5		4		4.5	OVERLAP C	C								
RED CLEARANCE	D			1	1		3		1	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								
PHASE ASSIGNMENT DESCRIPTION		PHASE 5 SPARE								OVERLAP B									
PHASE 1: SPARE		PHASE 6 NB I-43 RAMP ACT.								OVERLAP C									
PHASE 2: SPARE		PHASE 7 SPARE								OVERLAP D									
PHASE 3: SEB LT		PHASE 8 SEB FOND DU LAC								OVERLAP E									
PHASE 4: NWB FOND DU LAC N. X-WALK		OVERLAP A								OVERLAP F									
TIME IN: 11-7-13 @ 13:10		PROGRAM: CRD. PL. 4: 1430-1800 HRS. EX. S/S/H CRD. PL. 7: 0630-0900 HRS. EX. S/S/H  EVA: ON NW/SE FIRE CALL. EVA PHASE IS NWB/SEB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO EVA IS 19 SEC. OPTICOM DETECTION DISTANCE MUST BE AT LEAST 1300 FEET.  NOTE: SEB LT PUT ON MAX RECALL ON 9/18/06 @ 1310.								SYSTEM DATA									
SOFTWARE: W4IKS.60										MASTER: FDL AND ROOSEVELT									
SIGNAL NO: 4014										PRO. CL.: FDL AND ROOSEVELT									
LOCATION: <b>W. FOND DU LAC AV.          &amp;          NB I-43 RAMPS</b>										FL. CL.: NONE									
										PROGRAM INST:									
										AUXILLARY EQUIPMENT:									
										PE CONF. LIGHTS W/ 5A FUSES									

CHECKED BY: JCB		APPROVED BY: RWB		SUPERSEDED BY:		SUPERSEDES: B-06-693-T	
DESIGNED BY: SCR	DRAWN BY: SCR	DATE: 10/25/13		DRAWING NO: B-13-659-T			

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1									
FORCE OFF PH 2	2									
FORCE OFF PH 3	3	49			54			49		
FORCE OFF PH 4	4	0			0			0		
FORCE OFF PH 5	5									
FORCE OFF PH 6	6	34			39			34		
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	0			0			0		
OFFSET (SECONDS)	9	26			6			10		
PERMISSIVE LENGTH	A	0			0			0		
MAXIMUM DWELL	B	30			30			30		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
COORD PLAN 1										COORD PLAN 6									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F			X	X				X	MIN RECALL	F								
COORD PLAN 2										COORD PLAN 7									
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X	
COORD PHASES	D									COORD PHASES	D				X				X
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F			X	X				X
COORD PLAN 3										COORD PLAN 8									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
COORD PLAN 4										COORD PLAN 9									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F			X	X				X	MIN RECALL	F								
COORD PLAN 5										LOCATION: W. FOND DU LAC AV. & NB I-43 RAMPS									
LEAD PHASES	C									DATE: 10/25/13	SUPERSEDES: B-06-693-T								
COORD PHASES	D										SUPERSEDED:								
PERM 2 PHASES	E									APPROVED:	DRAWING: B-13-659-T								
MIN RECALL	F																		
DESIGNED BY: SCR	DRAWN BY: SCR				CHECKED BY: JCB														

**170 CONTROLLER - W4IKS PROGRAM**  
**MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL
		1	2	3	4	5	6	7	8						
B + O + KEY										B + O + KEY			9 + KEY		
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4
MRI PHASES	F						X			C + F + KEY			EV A DEL TYPE	2	1
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3	
FLASH YELLOW	C									OL A RED	4		EV C DEL TYPE	4	
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5	
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6	
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7	
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9
OL FL CIRC	D									ID NUMBER	2F	14	B OL	GREEN	A
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C
B + C + KEY										ADV WARN E O G	4E			YELLOW	D
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY		
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0	
C + F + KEY										EV INDICATORS	7F	5	PED PERM PLAN 1	1	
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2	
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3	
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4	
MAX RECALL	B			X						PERM 2 P3	B		PED PERM PLAN 5	5	
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6	
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7	
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8	
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9	
C + KEY										B + B + KEY			A + 3 + KEY		
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9	
EV A	A				X				X	PERM 2 P5	A		LEFT TURN TYPE	A	
EV B	B									PERM 2 P6	B		C + KEY		
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2
EV D	D									EV A	DELAY	0	15	DESIGNED BY:	SCR
HANDICAP PED	E										MIN	1	0	DRAWN BY:	SCR
E + KEY										EV B	DELAY	2		CHECKED BY:	JCB
RR CLEAR PH	B										MIN	3		DATE:	10/25/13
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:	
RR OL PERMIT	D										MIN	5		B-06-693-T	
LOCATION:  W. FOND DU LAC AV.  &  NB I-43 RAMPS										EV D	DELAY	6		SUPERSEDED BY:	
											MIN	7			
										OL RED REVERT		8		DRAWING NO:	
										RR	MIN	9			
											DELAY	A			
													B-13-659-T		

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	30	7											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		09	00	1											
3				88				89	8A	8B	19				C8				C9	CA	CB
		X	X	X	X	X		14	30	4											
4				8C				8D	8E	8F	20				CC				CD	CE	CF
		X	X	X	X	X		18	00	1											
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> <b>W. FOND DU LAC AV.</b> <b>&amp;</b> <b>NB I-43 RAMPS</b>			<b>CHECKED BY:</b> <b>JCB</b>		<b>SUPERSEDES:</b> <b>B-06-693-T</b>
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>SCR</b>	<b>DRAWN BY:</b> <b>SCR</b>	<b>DATE:</b> <b>10/25/13</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-13-659-T</b>	

## LOCATION

W. FOND DU LAC AV.

&amp;

NB I-43 RAMPS

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING


INDICATIONS

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

NB                      SEB    NWB    NXW                      SEBLT

R			R	R	D/W		R
Y			Y	Y			Y
G			G	G	W		G


 PE (EB/WB) CONF. LIGHTS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB I-43 RAMP	SPARE	SEB FDL	NWB FDL	SPARE	SEB LT			PE CONF. LIGHT				SPARE	N. X-WALK		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 9/15/06 @ 1400

DRG. NO: B-13-659-T

ELECTRICAL: 3 #2/1 #8 LTP. SERV. FED FROM WEPCO WP #05-04815 AT ALLEY ENTRANCE N/S OF WALNUT, W. OF 12TH. 120/240V 120V METER (BLACK Ø)										FUNCTION		KEY	VAL	INTERVAL																																			
FLASHING PROGRAM : NONE - EMERGENCY ALL RED										D+4+KEY																																							
										# OF INTER		6	21																																				
										TYPE OF CAB.		7	2																																				
										B+1+KEY																																							
FLASH OUTPUT ASSIGN. 8 9 A B C										ACT. 1 LOCK		0		CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4																							
										ACT. 2 LOCK		1																																					
										ACT. 1 DELAY		2																																					
										ACT. 2 DELAY		3																																					
										PRE-EMPT 1 LOCK		5																																					
AUXILIARY EQUIPMENT: PE CONF. LIGHTS W/ 5A FUSE										PRE-EMPT 2 LOCK		6		CYCLE LENGTH SEC				CYCLE LENGTH SEC				CYCLE LENGTH SEC				CYCLE LENGTH SEC																							
										PRE-EMPT 3 LOCK		7																																					
										PRE-EMPT 1 DELAY		8																																					
										PRE-EMPT 2 DELAY		9																																					
										PRE-EMPT 3 DELAY		A																																					
PROGRAM: ACTUATION #1: NWB LEFT TURN EXTENSION CYCLE 2: 1430-1800 HRS. EX. S/S/H CYCLE 3: 0630-0900 HRS. EX. S/S/H SIG. PL. 4, CYCLE 4: ON NW/SE FIRE CALL. PE PHASE IS NW/SE GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO PE IS 14 SEC. OPTICOM DETECTION DISTANCE MUST BE AT LEAST 1100 FEET.										B+3+KEY				90 90 0 0				90 90 0 0				90 90 0 0				90 90 0 0																							
										LONG POWER DOWN		0	4																																				
										SHORT POWER DOWN		1	4																																				
										SPECIAL ACT. FUNCTIONS																																							
										ACT. SIGNAL PLAN		2																																					
										TIME IN SERVICE: 11-7-13 @ 12:31 SIGNAL #: 4012										ACT. CYCLE		3		SP1 SP2 SP3 SP4				SP1 SP2 SP3 SP4				SP1 SP2 SP3 SP4				SP1 SP2 SP3 SP4													
																				ACT. SPLIT		4																											
																				ACT. OFFSET		5																											
																				RESET INTERVAL		6																											
																				# OF CYCLES		7																											
																				LOCATION: W. FOND DU LAC AV. & SB I-43 RAMPS										NO T.B.C. FALL BACK		8		1 1 1 1				1 1 1 1				1 1 1 1				1 1 1 1			
																														CRD. FROM ACT. MSTR.		9																	
																														C+C+KEY																			
																														DWELL METHOD A		A	0																
																														COORD. MODE		E	1																
DESIGNED BY: SCR DRAWN BY: SCR SUPERSEDES: B-06-659-T CHECKED BY: JCB APPROVED BY: RWB DATE: 10/28/13 DRG. NO.: B-12-654-T																														COORD. MASTER		F		2 2 2 2				2 2 2 2				2 2 2 2				2 2 2 2			
																														SYSTEM DATA:																			
																														MASTER: FDL AND ROOSEVELT																			
																														PRO. CL.: FDL AND ROOSEVELT																			
																														FL CL.: NONE																			

## LOCATION

W. FOND DU LAC AV.

&amp;

SB I-43 RAMPS

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

SB		SEB		NWB	NXW		NWB LT
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

AUX. OUTPUT A

PE CONF. LIGHTS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	SPARE	SB I-43 RAMP	SEB FDL	NWB FDL	SPARE	NWB LT			PE CONF. LIGHT				SPARE	N. X-WALK		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 1/20/06 @ 0930

DRG. NO: B-12-654-T

# SIGNAL PLAN #1

INTERVAL	SPARE								SEB FDL								NWB FDL								N. X-WALK								SPARE								NWB LT																								PE CONF. LT.																AUX. A								ACTUAT #1								RESET NO. 1								ACTUAT #2								RESET NO 2								TRANSITION								AUTO TIMING								MIN. TIMING								RESPONSE								PREEMPTION XFER								PLAN XFER								INTERVAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	-	-	-	R	Y	G	-	-	R	Y	G	R	Y	G	DW	W	-	-	-	R	Y	G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

# SIGNAL PLAN #4

INTERVAL	SPARE								SEB FDL								NWB FDL								N. X-WALK								SPARE								NWB LT								PE CONF. LT.								AUX. A								ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	-	-	-	R	Y	G	-	-	R	Y	G	R	Y	G	DW	W	-	-	-	R	Y	G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

PRE-EMPTION PLAN # 1 (SEB/NWB) OPTICOM [FIRE CALL]

STEP CODE PM #			
00	1	<b>32</b>	<b>21</b>
01	2	<b>34</b>	<b>1</b>
02	3	<b>32</b>	<b>2</b>
03	4	<b>32</b>	<b>3</b>
04	5	<b>35</b>	<b>1</b>
05	6	<b>36</b>	<b>2</b>
06	7	<b>37</b>	<b>16</b>
07	8	<b>32</b>	<b>20</b>
08	9	<b>33</b>	<b>1</b>
09	10	<b>32</b>	<b>10</b>
0A	11	<b>32</b>	<b>11</b>
0B	12	<b>33</b>	<b>2</b>
0C	13	<b>32</b>	<b>13</b>
0D	14	<b>32</b>	<b>14</b>
0E	15	<b>32</b>	<b>15</b>
0F	16	<b>35</b>	<b>1</b>
10	17	<b>36</b>	<b>2</b>
11	18	<b>37</b>	<b>16</b>
12	19	<b>32</b>	<b>18</b>
13	20	<b>32</b>	<b>19</b>
14	21	<b>35</b>	<b>1</b>
15	22	<b>36</b>	<b>2</b>
16	23	<b>37</b>	<b>20</b>
17	24		
18	25		
19	26		
1A	27		
1B	28		
1C	29		
1D	30		
1E	31		
1F	32		

STEP CODE PM #			
20	33		
21	34		
22	35		
23	36		
24	37		
25	38		
26	39		
27	40		
28	41		
29	42		
2A	43		
2B	44		
2C	45		
2D	46		
2E	47		
2F	48		
30	49		
31	50		
32	51		
33	52		
34	53		
35	54		
36	55		
37	56		
38	57		
39	58		
3A	59		
3B	60		
3C	61		
3D	62		
3E	63		
3F	64		

STEP CODE PM #			
40	65		
41	66		
42	67		
43	68		
44	69		
45	70		
46	71		
47	72		
48	73		
49	74		
4A	75		
4B	76		
4C	77		
4D	78		
4E	79		
4F	80		
50	81		
51	82		
52	83		
53	84		
54	85		
55	86		
56	87		
57	88		
58	89		
59	90		
5A	91		
5B	92		
5C	93		
5D	94		
5E	95		
5F	96		

LOCATION:
<b>W. FOND DU LAC AV.</b>
<b>&amp;</b>
<b>SB I-43 RAMPS</b>

170 CONTROLLER  
W9FT PROGRAM  
PRE-EMPTION SEQUENCE

PAGE 4 OF 6

PRE-EMPTION CODES

COMMAND	CODE	PARAMETER
DISPLAY	32	INTERVAL
JUMP	33	STEP #
HOLD	34	INTERVAL #
TEST	35	PRE-EMPT #
BRANCH IF ON	36	STEP #
RETURN	37	INTERVAL #
CLEAR	38	INTERVAL#

DESIGNED <b>SCR</b>	DRAWN <b>SCR</b>	CHECKED <b>JCB</b>	APPROVED	DATE <b>10/28/13</b>	SUPERSEDES <b>B-06-659-T</b>	DRG. NO. B-12-654-T
					SUPERSEDED BY	

**TIME OF DAY / DAY OF WEEK SETTINGS**  
**170 CONTROLLER - W9FT PROGRAM**  
**NORMAL OPERATION**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	30	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		14	30	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> W. FOND DU LAC AV. & SB I-43 RAMPS			<b>CHECKED BY:</b> JCB		<b>SUPERSEDES:</b> B-06-659-T
<b>DESIGNED BY:</b> SCR			<b>DRAWN BY:</b> SCR		<b>SUPERSEDED BY:</b>
<b>DATE:</b> 10/28/13			<b>APPROVED BY:</b>		<b>DRG. NO.:</b> B-12-654-T

SERVICE: <b>#4/1#8 LTP FED FROM WEPCO          WP #58-1504 @ 4TH ST ALLEY          120V METER</b>	<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1>	
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>	<h2 style="margin: 0;">INTERSECTION PROGRAMMING DATA</h2>	

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	> W <	1	2	3	4	5	6	7	8	FUNCTION	> W <	1	2	3	4	5	6	7	8
MAX I	0	21	53		58	7	53		58	VEHICLE RECALL	0		X		X		X		X
MAX II / HFDW	1									PED. RECALL	1				X		X		
WALK	2		6		5		6			RED LOCK	2	X							
FDW	3		21		18		21			YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4	X	X		X	X	X		X
MIN GREEN	5	7	21		18	7	21		18	PED PHASES	5		X		X		X		
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7		X		X		X		X
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9	1.5				3				START UP GREEN	9				X				X
MINIMUM GAP	A									OVERLAP A	A								
ADDED / ACTUATION	B									OVERLAP B	B								
YELLOW	C	4	4		4	4	4		4	OVERLAP C	C								
RED CLEARANCE	D	1	2.5		2		2.5		2	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								

PHASE ASSIGNMENT DESCRIPTION	PHASE 5 <b>SBLT</b> <span style="float: right;">ACT.</span>	OVERLAP B
PHASE 1: <b>NBLT</b> <span style="float: right;">ACT.</span>	PHASE 6 <b>NB 6TH E. X-WALK</b>	OVERLAP C
PHASE 2: <b>SB 6TH WXW (ACT.)</b>	PHASE 7 <b>SPARE</b>	OVERLAP D
PHASE 3: <b>SPARE</b>	PHASE 8 <b>EB FOND DU LAC</b>	OVERLAP E <b>EBRT</b>
PHASE 4: <b>WB McKINLEY N. X-WALK</b>	OVERLAP A	OVERLAP F

TIME IN: <b>5/7/09 @ 1300</b>	PROGRAM: CRD. PL. 7: 0600-0900 HRS. EX. S/S/H CRD. PL. 4: 1500-1800 HRS. EX. S/S/H	SYSTEM DATA <b>MASTER: LOVELL AND MICHIGAN</b>  <b>PRO. CL.: LOVELL AND MICHIGAN</b>  <b>FL. CL.: NONE</b>
SOFTWARE: <b>W4IKS.60</b>	EVA: ON N/S FIRE CALL. EVA PHASE IS NB/SB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO EVA IS 27.5 SEC. OPTI- COM DETECTION DISTANCE MUST BE AT LEAST 1800 FEET.	PROGRAM INST:
SIGNAL NO: <b>2031</b>		AUXILLARY EQUIPMENT: <b>OPTICOM FLOOD LIGHTS W/ 5A FUSE</b>
LOCATION: <b>W. FOND DU LAC AV.,          W. McKINLEY AV., &amp;          N. 6TH ST.</b>		

CHECKED BY: <b>JCB</b>	APPROVED BY:	SUPERSEDED BY:	SUPERSEDES: <b>B-08-755-T</b>
DESIGNED BY: <b>JCB</b>	DRAWN BY: <b>JCB</b>	DATE: <b>3/18/09</b>	DRAWING NO: <b>B-09-555-T</b>

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1	45			45			32		
FORCE OFF PH 2	2	67			67			64		
FORCE OFF PH 3	3									
FORCE OFF PH 4	4	0			0			0		
FORCE OFF PH 5	5	32			32			32		
FORCE OFF PH 6	6	67			67			64		
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	0			0			0		
OFFSET (SECONDS)	9	7			12			81		
PERMISSIVE LENGTH	A	20			20			20		
MAXIMUM DWELL	B	30			30			30		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
COORD PLAN 1										COORD PLAN 6									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 2										COORD PLAN 7									
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X	
COORD PHASES	D									COORD PHASES	D				X				X
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F		X		X		X		X
COORD PLAN 3										COORD PLAN 8									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
COORD PLAN 4										COORD PLAN 9									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 5										LOCATION: W. FOND DU LAC AV., W. MCKINLEY AV., & N. 6TH ST.									
LEAD PHASES	C																		
COORD PHASES	D									DATE:		SUPERSEDES: B-08-755-T							
PERM 2 PHASES	E									3/18/09		SUPERSEDED:							
MIN RECALL	F									APPROVED:		DRAWING: B-09-555-T							
DESIGNED BY: JCB		DRAWN BY: JCB				CHECKED BY: JCB													

**170 CONTROLLER - W4IKS PROGRAM  
MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL
		1	2	3	4	5	6	7	8						
B + O + KEY										B + O + KEY			9 + KEY		
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4
MRI PHASES	F	X				X				C + F + KEY			EV A DEL TYPE	2	1
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3	
FLASH YELLOW	C									OL A RED	4		EV C DEL TYPE	4	
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5	
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6	
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7	
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9
OL FL CIRC	D									ID NUMBER	2F	31	B OL	GREEN	A
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C
B + C + KEY										ADV WARN E O G	4E			YELLOW	D
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY		
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0	
C + F + KEY										EV INDICATORS	7F	5	PED PERM PLAN 1	1	51
OVERLAP E	8	X			X				X	B + A + KEY			PED PERM PLAN 2	2	
OVERLAP F	9									PERM 2 P1	9		PED PERM PLAN 3	3	
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4	51
MAX RECALL	B		X				X			PERM 2 P3	B		PED PERM PLAN 5	5	
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6	
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7	38
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8	
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9	
C + KEY										B + B + KEY			A + 3 + KEY		
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9	
EV A	A		X				X			PERM 2 P5	A		LEFT TURN TYPE	A	
EV B	B									PERM 2 P6	B		C + KEY		
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2
EV D	D									EV A	DELAY	0	0	DESIGNED BY:	JCB
HANDICAP PED	E									MIN	1	15	DRAWN BY:	JCB	
E + KEY										EV B	DELAY	2		CHECKED BY:	JCB
RR CLEAR PH	B									MIN	3		DATE:	3/18/09	
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:	
RR OL PERMIT	D									MIN	5		B-08-755-T		
LOCATION:  W. FOND DU LAC AV., W. McKINLEY AV., & N. 6TH ST.										EV D	DELAY	6		SUPERSEDED BY:	
										MIN	7				
										OL RED REVERT	8		DRAWING NO:		
										RR	MIN	9			
	DELAY	A	B-09-555-T												

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	00	7											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		09	00	1											
3				88				89	8A	8B	19				C8				C9	CA	CB
		X	X	X	X	X		15	00	4											
4				8C				8D	8E	8F	20				CC				CD	CE	CF
		X	X	X	X	X		18	00	1											
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> <b>W. FOND DU LAC AV.,</b> <b>W. McKINLEY AV., &amp;</b> <b>N. 6TH ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>		<b>SUPERSEDES:</b> <b>B-08-755-T</b>
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>3/18/09</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-555-T</b>	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NBLT	SB 6TH	SPARE	WB McKINLEY	SBLT	NB 6TH	SPARE	EB McKINLEY	W. X-WALK	N. X-WALK	E. X-WALK	SPARE		EBRT		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

**LOCATION**  
**W. FOND DU LAC AV.,**  
**W. McKINLEY AV., &**  
**N. 6TH ST.**

SHADED COMBINATIONS  
 ARE NOT PERMITTED  
 DIODES FOR CONFLICTING  
 INDICATIONS

CABINET SWITCH LOCATIONS

1	2	3	4	5	6	7
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8	9	10	11	12	13	14
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NBLT	SB	-	WB	SBLT	NB	-

EB	WXW	NXW	EXW	SXW	CY3	EBRT (OL-E)
					CY2	
					D-1	

EVA FLOOD LIGHT

MONITOR IN SERVICE: 11/14/08 @ 1020  
 DRG. NO: B-09-555-T

ELECTRICAL: <b>2 #4 LTP SERV. FED FROM WEPKO MH 120V METER</b>										FUNCTION		KEY	VAL	INTERVAL				CYCLE 1		CYCLE 2		CYCLE 3		CYCLE 4						
										D+4+KEY								OFFSET 1	39	OFFSET 1	35	OFFSET 1		OFFSET 1						
										# OF INTER		6	8					OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2						
										TYPE OF CAB.		7	2					OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3						
FLASHING PROGRAM : <b>2400-0900 HRS.; N/S-YELLOW, WB-RED</b>										B+1+KEY				OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4								
										ACT. 1 LOCK		0		MAX. DWELL	57	MAX. DWELL	57	MAX. DWELL		MAX. DWELL										
										ACT. 2 LOCK		1		CYCLE LENGTH	SEC	CYCLE LENGTH	SEC	CYCLE LENGTH	SEC	CYCLE LENGTH	SEC									
										ACT. 1 DELAY		2		90	0	0	0	0	0	0	0									
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	ACT. 2 DELAY	3		1	42		42														
	8		X			X				PRE-EMPT 1 LOCK	5		2	11		11														
	9				X					PRE-EMPT 2 LOCK	6		3	4		4														
	A									PRE-EMPT 3 LOCK	7		4																	
	B									PRE-EMPT 1 DELAY	8		5																	
AUXILIARY EQUIPMENT: <b>1 1/4" VENT PIPE POLICE HANDCORD OPERATION</b>	C									PRE-EMPT 2 DELAY	9		6																	
	PRE-EMPT 3 DELAY		A		B+3+KEY				7	4		8	1.5		1.5															
	LONG POWER DOWN		0	4	LONG POWER DOWN		0	4	9			10			10															
	SHORT POWER DOWN		1	4	SHORT POWER DOWN		1	4	11			11																		
PROGRAM: <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H</b>										SPECIAL ACT. FUNCTIONS				12																
										ACT. SIGNAL PLAN		2		13																
										ACT. CYCLE		3		14																
										ACT. SPLIT		4		15																
										ACT. OFFSET		5		16																
										RESET INTERVAL		6		17																
										# OF CYCLES		7		18																
										NO T.B.C. FALL BACK		8		19																
										CRD. FROM ACT. MSTR.		9		20																
										C+C+KEY				21																
										DWELL METHOD A		A	0	22																
										COORD. MODE		E	1	23																
TIME IN SERVICE: <b>2-7-12 @ 12:53</b>										SYSTEM DATA:				24																
										MASTER: <b>LOVELL AND MICHIGAN</b>																				
SIGNAL #: <b>2029</b>										PRO. CL.: <b>LOVELL AND MICHIGAN</b>																				
										FL. CL.: <b>LOCAL</b>																				
LOCATION:  <b>W. HIGHLAND AV.  &amp;  N. 4TH ST.</b>												DESIGNED BY:		DRAWN BY:		SUPERSEDES:														
												<b>JCB</b>		<b>JCB</b>		<b>B-09-568-T</b>														
												CHECKED BY:		APPROVED BY:		SUPERSEDED BY:														
												<b>JCB</b>		<b>RWB</b>																
												DATE:		DRG. NO.: <b>B-11-537-T</b>																
												<b>1/21/11</b>																		

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1	A80							A81	A82	A83	17	ACO							AC1	AC2	AC3
	X	X	X	X	X	X	X	00	00	11											
2	A84							A85	A86	A87	18	AC4							AC5	AC6	AC7
	X	X	X	X	X	X	X	09	00	12											
3	A88							A89	A8A	A8B	19	AC8							AC9	ACA	ACB
	X	X	X	X	X	X	X	09	00	11											
4	A8C							A8D	A8E	A8F	20	ACC							ACD	ACE	ACF
		X	X	X	X	X		15	00	21											
5	A90							A91	A92	A93	21	ADO							AD1	AD2	AD3
		X	X	X	X	X		18	00	11											
6	A94							A95	A96	A97	22	AD4							AD5	AD6	AD7
7	A98							A99	A9A	A9B	23	AD8							AD9	ADA	ADB
8	A9C							A9D	A9E	A9F	24	ADC							ADD	ADE	ADF
9	AAO							AA1	AA2	AA3	25	AEO							AE1	AE2	AE3
10	AA4							AA5	AA6	AA7	26	AE4							AE5	AE6	AE7
11	AA8							AA9	AAA	AAB	27	AE8							AE9	AEA	AEB
12	AAC							AAD	AAE	AAF	28	AEC							AED	AEE	AEF
13	ABO							AB1	AB2	AB3	29	AFO							AF1	AF2	AF3
14	AB4							AB5	AB6	AB7	30	AF4							AF5	AF6	AF7
15	AB8							AB9	ABA	ABB	31	AF8							AF9	AFA	AFB
16	ABC							ABD	ABE	ABF	32	AFC							AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>W. HIGHLAND AV.</b> <b>&amp;</b> <b>N. 4TH ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-09-568-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>1/21/11</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-537-T</b>

**LOCATION:****W. HIGHLAND AV.****&****N. 4TH ST.**

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	13	3	4	14	5	6
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**CONFLICT MONITOR CONNECTIONS**

NB	SB	E/W XWS	EB	WB	N/S XWS		
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB 4TH	SB 4TH	SPARE	WB HIGHLAND	SPARE	SPARE			SPARE				E: X-WALK	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 9/30/05 @ 0830

DRG. NO: B-11-537-T

SERVICE: 2 #4 LTP SERV. FED FROM WEPKO MH AT JUNEAU AND 6TH. 3 #4/1 #8 LTP SERV. FEEDS CONT. CAB. AT HIGHLAND AND 8TH. 120V METER FLASH PROGRAM: 2400-0600 HRS.; N/S-YELLOW, E/W-RED		<div>170 CONTROLLER W4IKS PROGRAM</div> <div>INTERSECTION PROGRAMMING DATA</div>																				
PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)												
		Y											Y									
FUNCTION		W	1	2	3	4	5	6	7	8	FUNCTION		W	1	2	3	4	5	6	7	8	
MAX I		0	7	62		34		62		34	VEHICLE RECALL		0		X		X		X		X	
MAX II / HFDW		1									PED. RECALL		1		X		X		X		X	
WALK		2		7		16		7		16	RED LOCK		2									
FDW		3		11		18		11		18	YELLOW LOCK		3									
MAX INITIAL		4									PERMIT		4	X	X		X		X		X	
MIN GREEN		5	7	11		18		11		18	PED PHASES		5		X		X		X		X	
TIME BEFORE REDUCTION		6									LEAD PHASES		6	X		X		X		X		
TIME TO REDUCE		7									DUAL ENTRY		7		X		X		X		X	
OBSERVE GAP		8									SEQ TIMING		8									
PASSAGE		9	3								START UP GREEN		9		X				X			
MINIMUM GAP		A									OVERLAP A		A									
ADDED / ACTUATION		B									OVERLAP B		B									
YELLOW		C	3.5	4		4		4		4	OVERLAP C		C									
RED CLEARANCE		D		1.5		2		1.5		2	OVERLAP D		D									
RED REVERT		E									EXCLUSIVE		E									
WALK II		F									SIM GAP		F									
PHASE ASSIGNMENT DESCRIPTION			PHASE 5 SPARE								OVERLAP B											
PHASE 1: NBLT ACT.			PHASE 6 NB 6TH E. X-WALK								OVERLAP C											
PHASE 2: SB 6TH W. X-WALK			PHASE 7 SPARE								OVERLAP D											
PHASE 3: SPARE			PHASE 8 EB HIGHLAND S. X-WALK								OVERLAP E											
PHASE 4: WB HIGHLAND N. X-WALK			OVERLAP A								OVERLAP F											
TIME IN:			PROGRAM:								SYSTEM DATA											
SOFTWARE: W4IKS.60			CRD. PL. 4: 1500-1800 HRS. EX. S/S/H								MASTER: LOVELL AND MICHIGAN											
SIGNAL NO: 2028			CRD. PL. 7: 0600-0900 HRS. EX. S/S/H								PRO. CL.: LOVELL AND MICHIGAN											
LOCATION: W. HIGHLAND AV.  & N. 6TH ST.			NOTE: NBLT ARROWS INHIBITED								FL. CL.: NONE											
			0600-0900 HRS. EX. S/S/H AND 2358-0002 HRS. DAILY (VIA COMMAND BOX PROG. AND AUX. C)								PROGRAM INST:											
			EVA: ON N/S FIRE CALL. EVA PHASE IS NB/SB GREEN (15 SEC. MIN.) MAX. DELAY IS 24 SEC. DET. DIST. > 1600 FEET.								PROGRAM COMMAND BOX TO INHIBIT PHASE 1 (NBLT) DURING CRD. PL. 7 AND 2358-0002 HRS. (VIA AUX. C)											
			EVB: ON EB FIRE CALL. EVB PHASE IS EB/WB GREEN (15 SEC. MIN.) MAX. DELAY IS 18 SEC. DET. DIST. > 1200 FEET.								AUXILIARY EQUIPMENT:											
											PE CONF. LIGHTS W/ 5A FUSES. POLICE HANDCORD OPERATION											
CHECKED BY: JCB			APPROVED BY:			SUPERSEDED BY:			SUPERSEDES: B-08-618-T													
DESIGNED BY: JCB	DRAWN BY: JCB		DATE: 3/18/09			DRAWING NO: B-09-569-T																

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1	65			65			-		
FORCE OFF PH 2	2	0			0			0		
FORCE OFF PH 3	3									
FORCE OFF PH 4	4	52			52			52		
FORCE OFF PH 5	5									
FORCE OFF PH 6	6	0			0			0		
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	52			52			52		
OFFSET (SECONDS)	9	70			74			65		
PERMISSIVE LENGTH	A	0			0			0		
MAXIMUM DWELL	B	30			30			30		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
COORD PLAN 1										COORD PLAN 6									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D		X				X			COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 2										COORD PLAN 7									
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X	
COORD PHASES	D									COORD PHASES	D		X				X		
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F		X		X		X		X
COORD PLAN 3										COORD PLAN 8									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
COORD PLAN 4										COORD PLAN 9									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D		X				X			COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 5										LOCATION: W. HIGHLAND AV. & N. 6TH ST.									
LEAD PHASES	C									DATE: 3/18/09	SUPERSEDES: B-08-618-T								
COORD PHASES	D										SUPERSEDED:								
PERM 2 PHASES	E									DRAWING: B-09-569-T									
MIN RECALL	F																		
DESIGNED BY: JCB	DRAWN BY: JCB				CHECKED BY: JCB				APPROVED:										

**170 CONTROLLER - W4IKS PROGRAM**  
**MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL	
		1	2	3	4	5	6	7	8							
B + O + KEY										B + O + KEY			9 + KEY			
SAMPLE DET	C									MODE (0-4)	4	1	SHORT POWER DOWN	0	4	
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4	
MRI PHASES	F	X								C + F + KEY			EV A DEL TYPE	2	1	
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3	1	
FLASH YELLOW	C		X					X		OL A RED	4		EV C DEL TYPE	4		
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5		
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6		
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7		
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8	
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9	
OL FL CIRC	D									ID NUMBER	2F	28	B OL	GREEN	A	
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B	
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C	
B + C + KEY										ADV WARN E O G	4E			YELLOW	D	
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E	
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F	
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY			
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0		
C + F + KEY										EV INDICATORS	7F	4	PED PERM PLAN 1	1		
OVERLAP E	8									B + A + KEY			PED PERM PLAN 2	2		
OVERLAP F	9									PERM 2 P1	9		PED PERM PLAN 3	3		
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4		
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5		
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6		
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7		
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8		
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9		
C + KEY										B + B + KEY			A + 3 + KEY			
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9		
EV A	A		X					X		PERM 2 P5	A		LEFT TURN TYPE	A		
EV B	B				X				X	PERM 2 P6	B		C + KEY			
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2	
EV D	D									EV A	DELAY	0	0	DESIGNED BY: JCB		
HANDICAP PED	E									EV B	MIN	1	15	DRAWN BY: JCB		
E + KEY										EV B	DELAY	2	0	CHECKED BY: JCB		
RR CLEAR PH	B									EV C	MIN	3	15	DATE: 3/18/09		
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:		
RR OL PERMIT	D									EV C	MIN	5		B-08-618-T		
LOCATION:  W. HIGHLAND AV.  &  N. 6TH ST.										EV D	DELAY	6		SUPERSEDED BY:		
										EV D	MIN	7		DRAWING NO:  B-09-569-T		
										OL RED REVERT			8			
										RR	MIN	9				
											DELAY	A				

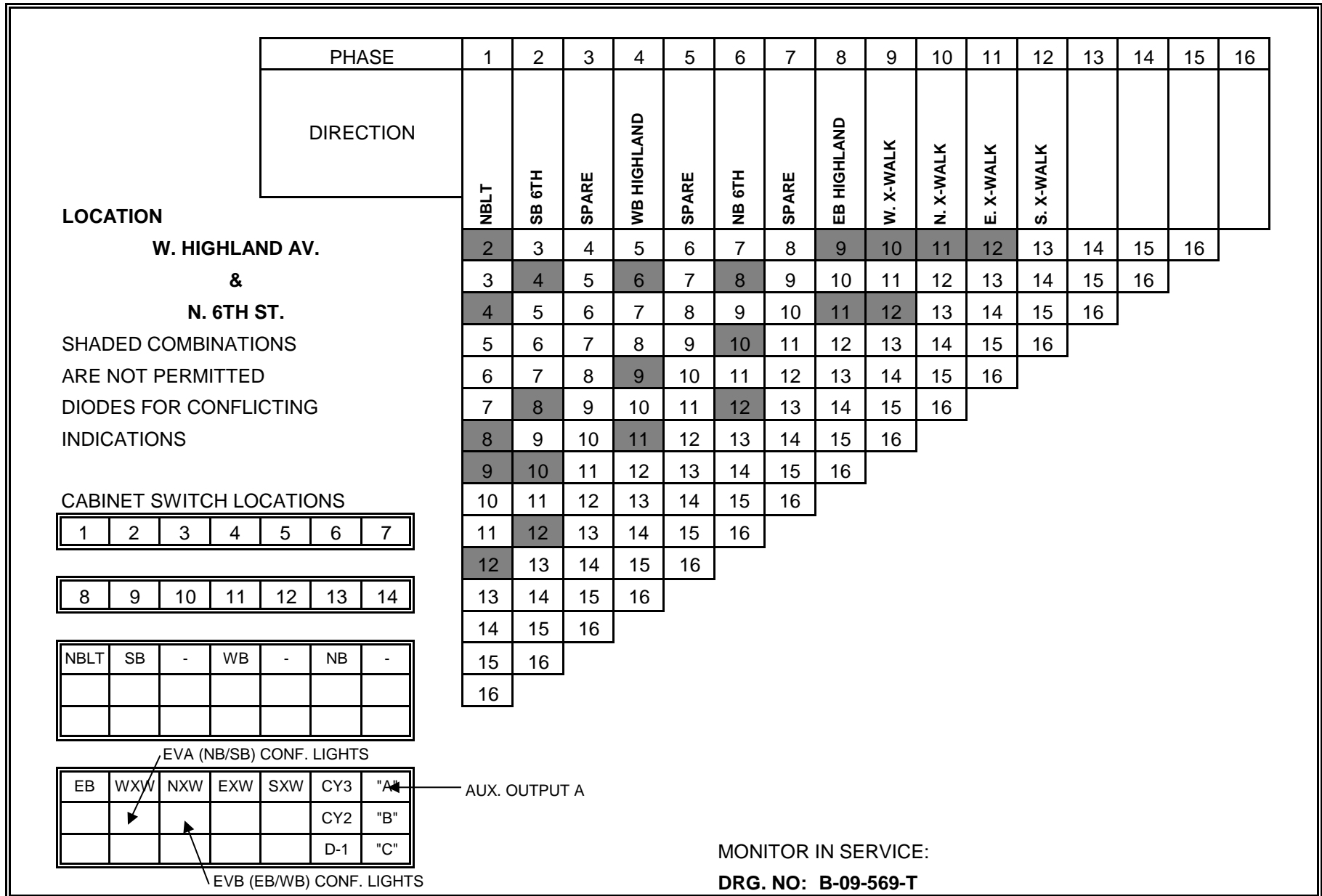
**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1	80							81	82	83	17	CO							C1	C2	C3
	X	X	X	X	X	X	X	00	00	33											
2	84							85	86	87	18	C4							C5	C6	C7
	X	X	X	X	X	X	X	00	02	83											
3	88							89	8A	8B	19	C8							C9	CA	CB
	X	X	X	X	X	X	X	06	00	32											
4	8C							8D	8E	8F	20	CC							CD	CE	CF
	X						X	06	00	1											
5	90							91	92	93	21	DO							D1	D2	D3
		X	X	X	X	X		06	00	7											
6	94							95	96	97	22	D4							D5	D6	D7
		X	X	X	X	X		06	00	73											
7	98							99	9A	9B	23	D8							D9	DA	DB
		X	X	X	X	X		09	00	83											
8	9C							9D	9E	9F	24	DC							DD	DE	DF
		X	X	X	X	X		09	00	1											
9	AO							A1	A2	A3	25	EO							E1	E2	E3
		X	X	X	X	X		15	00	4											
10	A4							A5	A6	A7	26	E4							E5	E6	E7
		X	X	X	X	X		18	00	1											
11	A8							A9	AAE	AB	27	E8							E9	EA	EB
	X	X	X	X	X	X	X	23	58	73											
12	AC							AD	AE	AF	28	EC							ED	EE	EF
13	BO							B1	B2	B3	29	FO							F1	F2	F3
14	B4							B5	B6	B7	30	F4							F5	F6	F7
15	B8							B9	BA	BB	31	F8							F9	FA	FB
16	BC							BD	BE	BF	32	FC							FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> W. HIGHLAND AV. & N. 6TH ST.			<b>CHECKED BY:</b> JCB		<b>SUPERSEDES:</b> B-08-618-T
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> JCB	<b>DRAWN BY:</b> JCB	<b>DATE:</b> 3/18/09	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-569-T</b>	



SERVICE: <b>2 #4 SERVICE FED FROM WEPCO MH IN INTERSECTION OF 12TH.</b>		<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1>							
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>		<h2 style="margin: 0;">INTERSECTION PROGRAMMING DATA</h2>							

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	> W <	1	2	3	4	5	6	7	8	FUNCTION	> W <	1	2	3	4	5	6	7	8
MAX I	0			4	66		33	7	66	VEHICLE RECALL	0			X	X		X	X	X
MAX II / HFDW	1									PED. RECALL	1		X		X		X		X
WALK	2		28		7		19		7	RED LOCK	2								
FDW	3		11		11		14		11	YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4		X	X	X		X	X	X
MIN GREEN	5			4	11		14	7	11	PED PHASES	5		X		X		X		X
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7		X		X		X		X
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9									START UP GREEN	9				X				X
MINIMUM GAP	A									OVERLAP A	A		X	X					
ADDED / ACTUATION	B									OVERLAP B	B							X	X
YELLOW	C			4	4		4	3.5	4	OVERLAP C	C								
RED CLEARANCE	D			2	1.5		2		1.5	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								
PHASE ASSIGNMENT DESCRIPTION		PHASE 5 SPARE								OVERLAP WB @ 12TH									
PHASE 1: SPARE		PHASE 6 NB/SB 12TH E/W XWS @ 12TH								OVERLAP B									
PHASE 2: EXW @ 11TH (OL-A)		PHASE 7 WBLT @ 12TH								OVERLAP C									
PHASE 3: DUMMY (OL-B)		PHASE 8 EB @ 12TH N/S XWS @ 12TH								OVERLAP D									
PHASE 4: EB/WB @ 11TH N/S XWS @ 11TH		OVERLAP A (SB I-43 OFF-RAMP)								OVERLAP E									
OVERLAP F										OVERLAP F									
TIME IN: 5/22/09 @ 0840		PROGRAM: CRD. PL. 4: 1500-1800 HRS. EX. S/S/H CRD. PL. 7: 0600-0900 HRS. EX. S/S/H  EVA: ON E/W FIRE CALL. EVA PHASE IS EB/WB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO EVA IS 19.5 SEC. OPTICOM DETECTION DISTANCE MUST BE AT LEAST 1300 FEET.								SYSTEM DATA									
SOFTWARE: W4IKS.60										MASTER: LOVELL AND MICHIGAN									
SIGNAL NO: 2025										PRO. CL.: LOVELL AND MICHIGAN									
LOCATION: <b>W. HIGHLAND AV., N. 11TH ST., &amp; N. 12TH ST.</b>										FL. CL.: NONE									
										PROGRAM INST:									
										AUXILLARY EQUIPMENT: PE CONF. LIGHTS W/ 5A FUSES JUMPER CABLE TO 11TH ST DUMMY CAB.									

CHECKED BY: JCB		APPROVED BY:		SUPERSEDED BY:		SUPERSEDES: B-08-744-T	
DESIGNED BY: JCB	DRAWN BY: JCB	DATE: 3/11/09		DRAWING NO: B-09-572-T			

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1									
FORCE OFF PH 2	2	57			57			57		
FORCE OFF PH 3	3	61			61			61		
FORCE OFF PH 4	4	0			0			0		
FORCE OFF PH 5	5									
FORCE OFF PH 6	6	51			51			51		
FORCE OFF PH 7	7	64			64			64		
FORCE OFF PH 8	8	0			0			0		
OFFSET (SECONDS)	9	56			56			53		
PERMISSIVE LENGTH	A	12			12			12		
MAXIMUM DWELL	B	30			30			30		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE								
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
COORD PLAN 1										COORD PLAN 6										
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C									
COORD PHASES	D				X				X	COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F			X	X		X	X	X	MIN RECALL	F									
COORD PLAN 2										COORD PLAN 7										
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X		
COORD PHASES	D									COORD PHASES	D				X				X	
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F									MIN RECALL	F			X	X		X	X	X	
COORD PLAN 3										COORD PLAN 8										
LEAD PHASES	C									LEAD PHASES	C									
COORD PHASES	D									COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F									MIN RECALL	F									
COORD PLAN 4										COORD PLAN 9										
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C									
COORD PHASES	D				X				X	COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F			X	X		X	X	X	MIN RECALL	F									
COORD PLAN 5										LOCATION: W. HIGHLAND AV., N. 11TH ST., & N. 12TH ST.										
LEAD PHASES	C									DATE:	SUPERSEDES: B-08-744-T									
COORD PHASES	D									3/11/09	SUPERSEDED:									
PERM 2 PHASES	E									DRAWING: B-09-572-T										
MIN RECALL	F																			
DESIGNED BY: JCB	DRAWN BY: JCB				CHECKED BY: JCB				APPROVED:											

**170 CONTROLLER - W4IKS PROGRAM**  
**MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL		
		1	2	3	4	5	6	7	8								
B + O + KEY										B + O + KEY			9 + KEY				
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4		
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4		
MRI PHASES	F									C + F + KEY			EV A DEL TYPE	2	1		
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3			
FLASH YELLOW	C									OL A RED	4	2	EV C DEL TYPE	4			
FLASH CIRCUIT	D									OL B RED	5	1.5	EV D DEL TYPE	5			
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6			
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7			
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8	0	
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9	4	
OL FL CIRC	D									ID NUMBER	2F	25	B OL	GREEN	A	0	
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B	4	
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C		
B + C + KEY										ADV WARN E O G	4E			YELLOW	D		
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E		
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F		
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY				
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0			
C + F + KEY										EV INDICATORS	7F	5	PED PERM PLAN 1	1			
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2			
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3			
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4			
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5			
FLASH GREEN	C		X							B + C + KEY			PED PERM PLAN 6	6			
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7			
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8			
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9			
C + KEY										B + B + KEY			A + 3 + KEY				
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9			
EV A	A				X				X	PERM 2 P5	A		LEFT TURN TYPE	A			
EV B	B									PERM 2 P6	B		C + KEY				
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2		
EV D	D									EV A	DELAY	0	0	DESIGNED BY:	JCB		
HANDICAP PED	E										MIN	1	15	DRAWN BY:	JCB		
E + KEY										EV B	DELAY	2		CHECKED BY:	JCB		
RR CLEAR PH	B										MIN	3		DATE:	3/11/09		
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:			
RR OL PERMIT	D										MIN	5		B-08-744-T			
LOCATION:  W. HIGHLAND AV., N. 11TH ST., & N. 12TH ST.										EV D	DELAY	6		SUPERSEDED BY:	B-09-572-T		
											MIN	7					
										OL RED REVERT			8				
										RR	MIN	9					
											DELAY	A					

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	00	7											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		09	00	1											
3				88				89	8A	8B	19				C8				C9	CA	CB
		X	X	X	X	X		15	00	4											
4				8C				8D	8E	8F	20				CC				CD	CE	CF
		X	X	X	X	X		18	00	1											
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> W. HIGHLAND AV., N. 11TH ST., & N. 12TH ST.			<b>CHECKED BY:</b> JCB		<b>SUPERSEDES:</b> B-08-744-T
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> JCB	<b>DRAWN BY:</b> JCB	<b>DATE:</b> 3/11/09	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-572-T</b>	

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	SPARE	OL-A (SB 11TH)	OL-B (WB @ 12TH)	EB/WB HIGHLAND @ 11TH	SPARE	NB/SB 12TH	WBLT @ 12TH	EB HIGHLAND @ 12TH	E. X-WALK @ 11TH	N/S X-WALKS @ 11TH	EW X-WALKS @ 12TH	N/S X-WALKS @ 12TH				
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

**LOCATION**  
**W. HIGHLAND AV.,**  
**N. 11TH ST., &**  
**N. 12TH ST.**

SHADED COMBINATIONS  
 ARE NOT PERMITTED  
 DIODES FOR CONFLICTING  
 INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

-	11TH	WB @ 12TH	E/W @ 11TH	-	12TH	WBLT

EB @ 12TH	EXW @ 11TH	N/S XW'S @ 11TH	E/W XW'S @ 12TH	N/S XW'S @ 12TH	CY3	"A"
		@ 11TH	@ 12TH	@ 12TH	CY2	"B"
					D-1	"C"

EB/WB OPTICOM FLOOD LIGHTS

MONITOR IN SERVICE: 8/11/06 @ 1120  
 DRG. NO: B-09-572-T

ELECTRICAL: <b>2 #8 LS SERV. FED FROM WEPCO MH @ INTERSECTION 120V METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4																																																	
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	<b>16</b>	OFFSET 1	<b>28</b>	OFFSET 1	<b>20</b>	OFFSET 1		OFFSET 1																																																					
										# OF INTER		6	<b>9</b>		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2																																																							
										TYPE OF CAB.		7	<b>2</b>		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3																																																							
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4																																																							
FLASH OUTPUT ASSIGN. <table border="1"> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr> <tr><td>8</td><td></td><td>X</td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td>9</td><td>X</td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td></tr> <tr><td>A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>C</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>											1	2	3		4	5	6	7	8	8		X			X				9	X			X					A									B									C									ACT. 1 LOCK		0		MAX. DWELL	<b>58</b>	MAX. DWELL	<b>58</b>	MAX. DWELL	<b>58</b>	MAX. DWELL	
											1	2	3		4	5	6	7	8																																																									
										8		X				X																																																												
										9	X				X																																																													
A																																																																												
B																																																																												
C																																																																												
ACT. 2 LOCK		1		CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC																																																																		
ACT. 1 DELAY		2		<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>																																																								
ACT. 2 DELAY		3		SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2		SP3	SP4	SP1	SP2	SP3	SP4																																																								
PRE-EMPT 1 LOCK		5		1	<b>43</b>			2	<b>43</b>			3	<b>43</b>																																																															
PRE-EMPT 2 LOCK		6		2	<b>9.5</b>			3	<b>9.5</b>			4	<b>9.5</b>																																																															
PRE-EMPT 3 LOCK		7		3	<b>4</b>			5	<b>4</b>			6	<b>4</b>																																																															
PRE-EMPT 1 DELAY		8		4	<b>1.5</b>			6	<b>1.5</b>			7	<b>1.5</b>																																																															
PRE-EMPT 2 DELAY		9		5	<b>9</b>			8	<b>9</b>			9	<b>9</b>																																																															
PRE-EMPT 3 DELAY		A		6	<b>6.5</b>			9	<b>6.5</b>			10	<b>6.5</b>																																																															
AUXILLARY EQUIPMENT: <b>POLICE HANDCORD</b>										B+3+KEY					11				11				11																																																					
										LONG POWER DOWN		0	<b>4</b>		12				12			13				13																																																		
										SHORT POWER DOWN		1	<b>4</b>		13				14			15				15																																																		
										SPECIAL ACT. FUNCTIONS				14				16			17				17																																																			
PROGRAM: <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H CYCLE 3: 0600-0900 HRS. EX. S/S/H  NOTE: N/S X-WALKS OPERATE WITH 9 SEC. WALK LEAD AT ALL TIMES EX. FLASH.</b>										ACT. SIGNAL PLAN		2		15				16			16			16																																																				
										ACT. CYCLE		3		16				17			18			18			18																																																	
										ACT. SPLIT		4		17				19			20			20			20																																																	
										ACT. OFFSET		5		18				21			22			22			22																																																	
										RESET INTERVAL		6		19				23			24			24			24																																																	
										# OF CYCLES		7		20																																																														
										NO T.B.C. FALL BACK		8																																																																
										CRD. FROM ACT. MSTR.		9																																																																
										C+C+KEY																																																																		
										DWELL METHOD A		A	<b>0</b>																																																															
										COORD. MODE		E	<b>1</b>																																																															
										COORD. MASTER		F																																																																
TIME IN SERVICE: <b>2-7-12 @ 13:00</b>										SYSTEM DATA:																																																																		
SIGNAL #: <b>2030</b>										MASTER: <b>LOVELL AND MICHIGAN</b>																																																																		
										PRO. CL.: <b>LOVELL AND MICHIGAN</b>																																																																		
										FL. CL.: <b>LOCAL</b>																																																																		
LOCATION:  <b>W. HIGHLAND AV. &amp; N. OLD WORLD 3RD ST.</b>														DESIGNED BY: <b>JCB</b>				DRAWN BY: <b>JCB</b>				SUPERSEDES: <b>B-09-850-T</b>																																																						
														CHECKED BY: <b>JCB</b>				APPROVED BY: <b>RWB</b>				SUPERSEDED BY:																																																						
														DATE: <b>1/21/11</b>				DRG. NO.: <b>B-11-538-T</b>																																																										

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		15	00	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>W. HIGHLAND AV.</b> <b>&amp;</b> <b>N. OLD WORLD 3RD ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-09-850-T</b>
<b>DESIGNED BY:</b> <b>JCB</b>			<b>DRAWN BY:</b> <b>JCB</b>	<b>SUPERSEDED BY:</b>
<b>DATE:</b> <b>1/21/11</b>			<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-538-T</b>

**LOCATION:****W. HIGHLAND AV.****&****N. OLD WORLD 3RD ST.**

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	13	3	4	14	5	6
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**CONFLICT MONITOR CONNECTIONS**

NB	SB	E/W XWS	EB	WB	N/S XWS		
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB OLD WORLD 3RD	SB OLD WORLD 3RD	EB HIGHLAND	WB HIGHLAND	SPARE	SPARE			SPARE				E/W X-WALKS	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 3/3/06 @ 1305

DRG. NO: B-11-538-T

SERVICE: <b>2 #4 LTP SERV. FROM WEPKO MH IN INTERSECTION</b>		<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1>																	
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>		<h2 style="margin: 0;">INTERSECTION PROGRAMMING DATA</h2>																	

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	KEY	1	2	3	4	5	6	7	8	FUNCTION	KEY	1	2	3	4	5	6	7	8
MAX I	0		39		65		39		65	VEHICLE RECALL	0		X		X		X		X
MAX II / HFDW	1									PED. RECALL	1		X		X		X		X
WALK	2		24		7		24		7	RED LOCK	2								
FDW	3		15		19		15		19	YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4		X		X		X		X
MIN GREEN	5		15		19		15		19	PED PHASES	5		X		X		X		X
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7		X		X		X		X
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9									START UP GREEN	9				X				X
MINIMUM GAP	A									OVERLAP A	A								
ADDED / ACTUATION	B									OVERLAP B	B								
YELLOW	C		4		4		4		4	OVERLAP C	C								
RED CLEARANCE	D		2		2		2		2	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								

PHASE ASSIGNMENT DESCRIPTION PHASE 1: <b>SPARE</b> PHASE 2: <b>SB 4TH W. X-WALK</b> PHASE 3: <b>SPARE</b> PHASE 4: <b>WB JUNEAU N. X-WALK</b>	PHASE 5: <b>SPARE</b> PHASE 6: <b>NB 4TH E. X-WALK</b> PHASE 7: <b>SPARE</b> PHASE 8: <b>EB JUNEAU S. X-WALK</b> OVERLAP A	OVERLAP B OVERLAP C OVERLAP D OVERLAP E OVERLAP F
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TIME IN: <b>5/8/09 @ 0850</b> SOFTWARE: <b>W4IKS.60</b> SIGNAL NO: <b>2002</b>	PROGRAM: CRD. PL. 4: 1500-1800 HRS. EX. S/S/H CRD. PL. 7: 0600-0900 HRS. EX. S/S/H	SYSTEM DATA MASTER: LOVELL AND MICHIGAN PRO. CL.: LOVELL AND MICHIGAN FL. CL.: NONE PROGRAM INST: AUXILLARY EQUIPMENT: POLICE HAND CORD
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LOCATION: <b>W. JUNEAU AV.  &amp;  N. 4TH ST.</b>	
--	--

CHECKED BY: <b>JCB</b>	APPROVED BY:	SUPERSEDED BY:	SUPERSEDES: <b>B-06-664-T</b>
DESIGNED BY: <b>JCB</b>	DRAWN BY: <b>JCB</b>	DATE: <b>3/18/09</b>	DRAWING NO: <b>B-09-563-T</b>

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1									
FORCE OFF PH 2	2	65			65			65		
FORCE OFF PH 3	3									
FORCE OFF PH 4	4	0			0			0		
FORCE OFF PH 5	5									
FORCE OFF PH 6	6	65			65			65		
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	0			0			0		
OFFSET (SECONDS)	9	15			11			5		
PERMISSIVE LENGTH	A	0			0			0		
MAXIMUM DWELL	B	15			15			15		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE								
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
COORD PLAN 1										COORD PLAN 6										
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C									
COORD PHASES	D				X				X	COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F		X		X		X		X	MIN RECALL	F									
COORD PLAN 2										COORD PLAN 7										
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X		
COORD PHASES	D									COORD PHASES	D				X				X	
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F									MIN RECALL	F		X		X		X		X	
COORD PLAN 3										COORD PLAN 8										
LEAD PHASES	C									LEAD PHASES	C									
COORD PHASES	D									COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F									MIN RECALL	F									
COORD PLAN 4										COORD PLAN 9										
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C									
COORD PHASES	D				X				X	COORD PHASES	D									
PERM 2 PHASES	E									PERM 2 PHASES	E									
MIN RECALL	F		X		X		X		X	MIN RECALL	F									
COORD PLAN 5										LOCATION:										
LEAD PHASES	C									W. JUNEAU AV. & N. 4TH ST.										
COORD PHASES	D																			
PERM 2 PHASES	E									DATE:	SUPERSEDES: B-06-664-T									
MIN RECALL	F									3/18/09	SUPERSEDED:									
DESIGNED BY: JCB	DRAWN BY: JCB				CHECKED BY: JCB				APPROVED:		DRAWING: B-09-563-T									

**170 CONTROLLER - W4IKS PROGRAM**  
**MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL			
		1	2	3	4	5	6	7	8									
B + O + KEY										B + O + KEY			9 + KEY					
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4			
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4			
MRI PHASES	F									C + F + KEY			EV A DEL TYPE	2				
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3				
FLASH YELLOW	C									OL A RED	4		EV C DEL TYPE	4				
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5				
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6				
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7				
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8			
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9			
OL FL CIRC	D									ID NUMBER	2F	02	B OL	GREEN	A			
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B			
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C			
B + C + KEY										ADV WARN E O G	4E			YELLOW	D			
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E			
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F			
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY					
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0				
C + F + KEY										EV INDICATORS	7F		PED PERM PLAN 1	1				
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2				
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3				
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4				
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5				
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6				
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7				
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8				
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9				
C + KEY										B + B + KEY			A + 3 + KEY					
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9				
EV A	A									PERM 2 P5	A		LEFT TURN TYPE	A				
EV B	B									PERM 2 P6	B		C + KEY					
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2			
EV D	D									EV A	DELAY	0	DESIGNED BY:	JCB				
HANDICAP PED	E									EV A	MIN	1	DRAWN BY:	JCB				
E + KEY										EV B	DELAY	2	CHECKED BY:	JCB				
RR CLEAR PH	B									EV B	MIN	3	DATE:	3/18/09				
RR PERMIT	C									EV C	DELAY	4	SUPERSEDES:					
RR OL PERMIT	D									EV C	MIN	5	B-06-664-T					
LOCATION:  W. JUNEAU AV.  &  N. 4TH ST.										EV D	DELAY	6	SUPERSEDED BY:	B-09-563-T				
										EV D	MIN	7	DRAWING NO:					
										OL RED REVERT		8						
										RR	MIN	9						
											DELAY	A						

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	00	7											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		09	00	1											
3				88				89	8A	8B	19				C8				C9	CA	CB
		X	X	X	X	X		15	00	4											
4				8C				8D	8E	8F	20				CC				CD	CE	CF
		X	X	X	X	X		18	00	1											
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	100
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	100
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> <b>W. JUNEAU AV.</b> <b>&amp;</b> <b>N. 4TH ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>		<b>SUPERSEDES:</b> <b>B-06-664-T</b>
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>3/18/09</b>	<b>APPROVED BY:</b>	<b>DRG. NO.:</b> <b>B-09-563-T</b>	

**LOCATION:****W. JUNEAU AV.****&****N. 4TH ST.**

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

	SB		WB		NB	

EB	WXW	NXW	EXW	SXW	CY3	"A"
					CY2	"B"
					D-1	"C"

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	SPARE	SB 4TH	SPARE	WB JUNEAU	SPARE	NB 4TH	SPARE	EB JUNEAU	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 3/1/06 @ 1015

DRG. NO: B-09-563-T

ELECTRICAL: <b>3 #6/1 #8 LTP FROM WEPKO MH @ INTERSECTION. 120V, 1 PHASE METER.</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1		CYCLE 2		CYCLE 3		CYCLE 4																																																							
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	<b>42</b>	OFFSET 1		OFFSET 1	<b>23</b>	OFFSET 1																																																							
										# OF INTER		6	<b>10</b>		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2																																																							
										TYPE OF CAB.		7	<b>1</b>		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3																																																							
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4																																																							
FLASH OUTPUT ASSIGN. <table border="1"> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr> <tr><td>8</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>A</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td>B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>C</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>											1	2	3		4	5	6	7	8	8				X					9		X						X	A						X			B									C									ACT. 1 LOCK		0		MAX. DWELL	<b>60</b>	MAX. DWELL		MAX. DWELL	<b>60</b>	MAX. DWELL	
											1	2	3		4	5	6	7	8																																																									
										8					X																																																													
										9		X							X																																																									
A						X																																																																						
B																																																																												
C																																																																												
ACT. 2 LOCK		1		CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC																																																																		
ACT. 1 DELAY		2		90	0	0	0	0	0	0	0																																																																	
ACT. 2 DELAY		3		SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4																																																																	
PRE-EMPT 1 LOCK		5		1	4			4			0																																																																	
PRE-EMPT 2 LOCK		6		2	30			30			15																																																																	
PRE-EMPT 3 LOCK		7		3	15			15			15																																																																	
PRE-EMPT 1 DELAY		8		4	4			4			4																																																																	
PRE-EMPT 2 DELAY		9		5	2			2			2																																																																	
PRE-EMPT 3 DELAY		A		6	4			4			4																																																																	
AUXILIARY EQUIPMENT: <b>PE CONF. LIGHT W/ 5A FUSE</b>										B+3+KEY					7	3.5			3.5			10																																																						
										LONG POWER DOWN		0	<b>4</b>		8	21			21			21																																																						
										SHORT POWER DOWN		1	<b>4</b>		9	4			4			4																																																						
														10	2.5			2.5			2.5																																																							
PROGRAM: <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>  <b>SIG. PL. 4, CYCLE 4: ON N/S FIRE CALL. PE PHASE IS NB/SB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX DELAY TO PE IS 27.5 SEC. OPTICOM DETECTION DISTANCE MUST BE AT LEAST 1800 FEET.</b>										SPECIAL ACT. FUNCTIONS				11																																																														
										ACT. SIGNAL PLAN		2		12																																																														
										ACT. CYCLE		3		13																																																														
										ACT. SPLIT		4		14																																																														
										ACT. OFFSET		5		15																																																														
										RESET INTERVAL		6		16																																																														
										# OF CYCLES		7		17																																																														
										NO T.B.C. FALL BACK		8		18																																																														
										CRD. FROM ACT. MSTR.		9		19																																																														
										C+C+KEY				20																																																														
										DWELL METHOD A		A	<b>0</b>	21																																																														
										COORD. MODE		E	<b>1</b>	22																																																														
COORD. MASTER		F		23																																																																								
TIME IN SERVICE:										SYSTEM DATA:				24																																																														
										MASTER: <b>LOVELL AND MICHIGAN</b>																																																																		
SIGNAL #: <b>2003</b>										PRO. CL.: <b>LOVELL AND MICHIGAN</b>																																																																		
		FL. CL.: <b>NONE</b>																																																																										
<b>LOCATION:</b>  <b>W. JUNEAU AV.</b> <b>&amp;</b> <b>N. 6TH ST.</b>										DESIGNED BY:		DRAWN BY:		SUPERSEDES:																																																														
										<b>JCB</b>		<b>JCB</b>		<b>B-09-564-T</b>																																																														
										CHECKED BY:		APPROVED BY:		SUPERSEDED BY:																																																														
										DATE:																																																																		
				<b>1/7/11</b>		<b>DRG. NO.: B-11-515-T</b>																																																																						

## SIGNAL PLAN #1

[illegible]

# SIGNAL PLAN #4

INTERVAL	SPARE	"	"	SB 6TH	"	"	SPARE	"	"	WB JUNEAU	"	"	SPARE	"	"	NB 6TH	"	"	SPARE	"	"	EB JUNEAU	"	"	W. X-WALK	PE CONF. LIGHT	W. X-WALK	N. X-WALK	"	"	E. X-WALK	"	"	S. X-WALK	"	"	ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL		
	-	-	-	R	Y	G	-	-	-	-	R	Y	G	-	-	-	R	Y	G	-	-	-	R	Y	G	DW	flid	W	DW	-	W	DW	-	W	DW	-	W												
1	1	2	3																						1	2	3	4	5	6	7	8																	
2																									F	1	2	3	4	5	6	7	8																
3																									F	2	3	4	5	6	7	8																	
4																									F	3	4	5	6	7	8																		
5																									F	4	5	6	7	8																			
6																									F	5	6	7	8																				
7																									F	6	7	8																					
8																									F	7	8																						
9																									F	8	9																						
10																									F	9	10																						
11																									F	10	11																						
12																									F	11	12																						
13																									F	12	13																						
14																									F	13	14																						
15																									F	14	15																						
16																									F	15	16																						
17																									F	16	17																						
18																									F	17	18																						
19																									F	18	19																						
20																									F	19	20																						
21																									F	20	21																						
22																									F	21	22																						
23																									F	22	23																						
24																									F	23	24																						
LOCATION : W. JUNEAU AV. & N. 6TH ST.										CYCLE XFER		FLASH ENTRY		DWELL		PLAN OPERATES ON N/S FIRE CALL				DATE 1/7/11		SUPERSEDES B-09-564-T SUPERSEDED BY																											
										DESIGNED BY: JCB				DRAWN BY JCB				CHECKED BY 0				APPROVED BY				DRG. NO.: B-11-515-T																							

PRE-EMPTION PLAN # 1 (NB/SB) OPTICOM [FIRE CALL]

STEP CODE PM #			
00	1	<b>32</b>	<b>2</b>
01	2	<b>33</b>	<b>4</b>
02	3	<b>33</b>	<b>4</b>
03	4	<b>34</b>	<b>3</b>
04	5	<b>32</b>	<b>4</b>
05	6	<b>32</b>	<b>5</b>
06	7	<b>35</b>	<b>1</b>
07	8	<b>36</b>	<b>4</b>
08	9	<b>37</b>	<b>6</b>
09	10	<b>32</b>	<b>8</b>
0A	11	<b>32</b>	<b>9</b>
0B	12	<b>32</b>	<b>10</b>
0C	13	<b>35</b>	<b>1</b>
0D	14	<b>36</b>	<b>4</b>
0E	15	<b>37</b>	<b>1</b>
0F	16		
10	17		
11	18		
12	19		
13	20		
14	21		
15	22		
16	23		
17	24		
18	25		
19	26		
1A	27		
1B	28		
1C	29		
1D	30		
1E	31		
1F	32		

STEP CODE PM #			
20	33		
21	34		
22	35		
23	36		
24	37		
25	38		
26	39		
27	40		
28	41		
29	42		
2A	43		
2B	44		
2C	45		
2D	46		
2E	47		
2F	48		
30	49		
31	50		
32	51		
33	52		
34	53		
35	54		
36	55		
37	56		
38	57		
39	58		
3A	59		
3B	60		
3C	61		
3D	62		
3E	63		
3F	64		

STEP CODE PM #			
40	65		
41	66		
42	67		
43	68		
44	69		
45	70		
46	71		
47	72		
48	73		
49	74		
4A	75		
4B	76		
4C	77		
4D	78		
4E	79		
4F	80		
50	81		
51	82		
52	83		
53	84		
54	85		
55	86		
56	87		
57	88		
58	89		
59	90		
5A	91		
5B	92		
5C	93		
5D	94		
5E	95		
5F	96		

LOCATION:
<b>W. JUNEAU AV.</b>
<b>&amp;</b>
<b>N. 6TH ST.</b>

170 CONTROLLER  
W9FT PROGRAM  
PRE-EMPTION SEQUENCE

PAGE 4 OF 6

PRE-EMPTION CODES

COMMAND	CODE	PARAMETER
DISPLAY	32	INTERVAL
JUMP	33	STEP #
HOLD	34	INTERVEAL #
TEST	35	PRE-EMPT #
BRANCH IF ON	36	STEP #
RETURN	37	INTERVAL #
CLEAR	38	INTERVAL#

DESIGNED <b>JCB</b>	DRAWN <b>JCB</b>	CHECKED <b>0</b>	APPROVED	DATE <b>1/7/11</b>	SUPERSEDES <b>B-09-564-T</b>	DRG. NO. <b>B-11-515-T</b>
					SUPERSEDED BY	

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>W. JUNEAU AV.</b> <b>&amp;</b> <b>N. 6TH ST.</b>			<b>CHECKED BY:</b> <b>0</b>	<b>SUPERSEDES:</b> <b>B-09-564-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>1/7/11</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-515-T</b>

**LOCATION:****W. JUNEAU AV.****&****N. 6TH ST.**

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

	SB		WB		NB	

EB	WXW	NXW	EXW	SXW	CY3	"A"
					CY2	"B"
					D-1	"C"

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	SPARE	SB 6TH	SPARE	WB JUNEAU	SPARE	NB 6TH	SPARE	EB JUNEAU	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 1/18/05 @ 0910

**DRG. NO: B-11-515-T**

ELECTRICAL: <b>2 #4 LTP SERVICE FED FROM WEPKO MH @ NE QUADRANT</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4			
										D+4+KEY					OFFSET 1	87	OFFSET 1	81	OFFSET 1	75	OFFSET 1									
										# OF INTER		6	8		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2			
										TYPE OF CAB.		7	2		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3			
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4			
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										ACT. 1 LOCK		0			MAX. DWELL	40	MAX. DWELL	40	MAX. DWELL	40	MAX. DWELL		MAX. DWELL		MAX. DWELL		MAX. DWELL			
										ACT. 2 LOCK		1																		
										ACT. 1 DELAY		2																		
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	ACT. 2 DELAY		3																		
	8	X			X					PRE-EMPT 1 LOCK		5																		
	9	X			X					PRE-EMPT 2 LOCK		6																		
	A									PRE-EMPT 3 LOCK		7																		
	B									PRE-EMPT 1 DELAY		8																		
										PRE-EMPT 2 DELAY		9																		
AUXILIARY EQUIPMENT: <b>POLICE HAND-CORD CONTROL W/ #242 CARD</b>										PRE-EMPT 3 DELAY		A																		
										B+3+KEY																				
										LONG POWER DOWN		0	4																	
										SHORT POWER DOWN		1	4																	
PROGRAM: <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H</b> <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>										SPECIAL ACT. FUNCTIONS																				
										ACT. SIGNAL PLAN		2																		
										ACT. CYCLE		3																		
										ACT. SPLIT		4																		
										ACT. OFFSET		5																		
										RESET INTERVAL		6																		
										# OF CYCLES		7																		
										NO T.B.C. FALL BACK		8																		
										CRD. FROM ACT. MSTR.		9																		
										C+C+KEY																				
										DWELL METHOD A		A	0																	
										COORD. MODE		E	1																	
										COORD. MASTER		F																		
TIME IN SERVICE: <b>2-7-12 @ 13:07</b>										SYSTEM DATA:																				
SIGNAL #: <b>2001</b>										MASTER: <b>LOVELL AND MICHIGAN</b>																				
										PRO. CL.: <b>LOVELL AND MICHIGAN</b>																				
										FL. CL.: <b>NONE</b>																				
LOCATION:  <b>W. JUNEAU AV.</b>  <b>&amp;</b>  <b>N. OLD WORLD 3RD ST.</b>										DESIGNED BY: <b>JCB</b>				DRAWN BY: <b>JCB</b>				SUPERSEDES: <b>B-09-562-T</b>												
										CHECKED BY: <b>JCB</b>				APPROVED BY: <b>RWB</b>				SUPERSEDED BY:												
										DATE: <b>1/21/11</b>				DRG. NO.: <b>B-11-543-T</b>																

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		15	00	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>W. JUNEAU AV.</b> <b>&amp;</b> <b>N. OLD WORLD 3RD ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-09-562-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>1/21/11</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-543-T</b>

## LOCATION

W. JUNEAU AV.

&amp;

N. OLD WORLD 3RD ST.

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

## CABINET SWITCH LOCATIONS

1	2	13	3	4	14	5	6
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## CONFLICT MONITOR CONNECTIONS

NB	SB	E/W XWS	EB	WB	N/S XWS		
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB OLD WORLD 3RD	SB OLD WORLD 3RD	EB JUNEAU	WB JUNEAU	SPARE	SPARE			SPARE				E/W X-WALKS	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 5/9/06 @ 1115

DRG. NO: B-11-543-T

ELECTRICAL: <b>2 #4/1 #8 LTP SERV. FED FROM WEPKO MH @ NW QUAD OF INTERSECTION 120V METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4										
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	16	OFFSET 1	16	OFFSET 1	6	OFFSET 1																
										# OF INTER		6	14		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2														
										TYPE OF CAB.		7	1		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3										
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4										
FLASH OUTPUT ASSIGN. 8 X 9 X A B C										ACT. 1 LOCK		0			MAX. DWELL	24	MAX. DWELL	28	MAX. DWELL	28	MAX. DWELL																
										ACT. 2 LOCK		1																									
										ACT. 1 DELAY		2																									
										ACT. 2 DELAY		3																									
AUXILLARY EQUIPMENT:										PRE-EMPT 1 LOCK		5			CYCLE LENGTH SEC	90	0	0	0	90	0	0	0	90	0	0	0	0	0	0							
										PRE-EMPT 2 LOCK		6			SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4							
										PRE-EMPT 3 LOCK		7			1	2.5			2.5				2.5														
										PRE-EMPT 1 DELAY		8			2	14			10				10														
PROGRAM: <b>ACTUATION #1: NBLT ARROWS CYCLE 2: 1500-1800 HRS. EX. S/S/H CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>										PRE-EMPT 2 DELAY		9			3	20				20				20													
										PRE-EMPT 3 DELAY		A			4	4			4				4														
										B+3+KEY					5	2.5			2.5				2.5														
										LONG POWER DOWN		0	4		6	7			7				7														
TIME IN SERVICE: <b>11/9/09 @ 1305</b>  SIGNAL #: <b>1057</b>										SHORT POWER DOWN		1	4		7	0			0			0															
										SPECIAL ACT. FUNCTIONS					8	0			0			0															
										ACT. SIGNAL PLAN		2			9	4			4			4															
										ACT. CYCLE		3			10	9			13			13															
										ACT. SPLIT		4			11	0			0			0															
										ACT. OFFSET		5			12	5			5			5															
										RESET INTERVAL		6			13	18			18			18															
										# OF CYCLES		7		14	4			4			4																
										NO T.B.C. FALL BACK		8		15																							
										CRD. FROM ACT. MSTR.		9		16																							
										C+C+KEY				17																							
										DWELL METHOD A		A	0	18																							
										COORD. MODE		E	1	19																							
										COORD. MASTER		F		20																							
										LOCATION:  <b>E. JUNEAU AV. &amp; N. WATER ST.</b>										SYSTEM DATA:				21													
																				MASTER:		MASON AND WATER		22													
PRO. CL.:		MASON AND WATER		23																																	
FL. CL.:		NONE		24																																	
DESIGNED BY: <b>JCB</b>  CHECKED BY: <b>KAL</b>  DATE: <b>11/9/09</b>										DRAWN BY: <b>JCB</b>  APPROVED BY:				SUPERSEDES: <b>B-09-818-T</b>  SUPERSEDED BY:																							
										DRG. NO.: <b>B-09-868-T</b>																											

## SIGNAL PLAN #1

INTERVAL	NBLT		SB WATER				SPARE		WB JUNEAU		SPARE				NB WATER		EB JUNEAU				W. X-WALK		AUX. OUTPUT A		W. X-WALK		N. X-WALK		E. X-WALK		S. X-WALK		ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL			
	R	Y	G	R	Y	G	-	-	-	R	Y	G	-	-	-	R	Y	G	DW	TC	W	DW	-	W	DW	-	W	DW	-	W	DW	-												W	DW	-
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32												33	34	35
1	1	2	3	1					1						1						1			1																						
2	2			2							2				2					2	2			2	2				2	2													5	2		
3	3			3							3				3					3			F			3				3			F										5	3		
4	4			4						4					4					4			4			4				4			4											5	4	
5	5			5					5						5					5			5			5				5			5											5	5	
6			6	6					6								6			6			6			6					6	6											5	6		
7			7	7					7								7			7			7			7					7	7											5	7		
8			8	8					8								8			8			8			8					8	8											5	8		
9		9		9					9								9			9			9			9					9	9											5	9		
10	10					10			10								10			10					10	10					10	10												5	10	
11	11					11			11								11			11					11	11					11	11												5	11	
12	12					12			12								12			12					12	12					12	12												5	12	
13	13					13			13								13			13			F			13				F			13											5	13	
14	14				14				14							14			14			14			14			14			14			14										5	14	
15																																														15
16																																														16
17																																														17
18																																														18
19																																														19
20																																														20
21																																														21
22																																														22
23																																														23
24																																														24
LOCATION : E. JUNEAU AV. & N. WATER ST.								CYCLE XFER 1		FLASH ENTRY 5		DWELL 10		PLAN OPERATES ALL TIMES								DATE 11/9/09				SUPERSEDES B-09-818-T SUPERSEDED BY																				
								DESIGNED BY: JCB				DRAWN BY JCB				CHECKED BY KAL				APPROVED BY				DRG. NO.: B-09-868-T																						

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		15	00	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFa	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>E. JUNEAU AV.</b> <b>&amp;</b> <b>N. WATER ST.</b>			<b>CHECKED BY:</b> <b>KAL</b>	<b>SUPERSEDES:</b> <b>B-09-818-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>11/9/09</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-868-T</b>

**LOCATION:****E. JUNEAU AV.****&****N. WATER ST.**

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
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NBLT	SB	-	WB	-	NB	-

EB	WXW	NXW	EXW	SXW	CY3	"A"
					CY2	"B"
					D-1	"C"

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NBLT	SB WATER	SPARE	WB JUNEAU	SPARE	NB WATER	SPARE	EB JUNEAU	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 3/31/05 @ 0920

DRG. NO: B-09-868-T

ELECTRICAL: <b>2 #4 LTP SERVICE FED FROM WB SUBSTATION FEEDER.</b> <b>120V, 1 PHASE SERV. (RED PHASE), NO METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4						
										D+4+KEY					OFFSET 1	86	OFFSET 1	84	OFFSET 1	88	OFFSET 1		OFFSET 1										
										# OF INTER		6	8		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2										
										TYPE OF CAB.		7	2		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3										
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4										
FLASHING PROGRAM : <b>2400-0600 HRS.; N/S-RED, E/W-YELLOW</b>										ACT. 1 LOCK		0			MAX. DWELL	39	MAX. DWELL	35	MAX. DWELL	39	MAX. DWELL		MAX. DWELL										
										ACT. 2 LOCK		1			CYCLE LENGTH SEC				CYCLE LENGTH SEC				CYCLE LENGTH SEC				CYCLE LENGTH SEC						
										ACT. 1 DELAY		2			90	0	0	0	90	0	0	0	90	0	0	0	0	0	0	0			
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	ACT. 2 DELAY		3			SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4			
	8	X			X					PRE-EMPT 1 LOCK		5			24				20				24										
	9		X			X				PRE-EMPT 2 LOCK		6			19				19				19										
	A									PRE-EMPT 3 LOCK		7																					
	B									PRE-EMPT 1 DELAY		8																					
										PRE-EMPT 2 DELAY		9																					
										PRE-EMPT 3 DELAY		A																					
AUXILLARY EQUIPMENT: <b>20A C.B. FEEDS AUX. POLE RECEPTS</b> <b>1 1/4" VENT PIPE, POLICE HANDCORD</b>										B+3+KEY					5	12					16				12								
										LONG POWER DOWN		0	4		6	22					22				22								
										SHORT POWER DOWN		1	4		7	4					4				4								
PROGRAM: <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H</b> <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>										SPECIAL ACT. FUNCTIONS					8	2.5					2.5				2.5								
										ACT. SIGNAL PLAN		2			9																		
										ACT. CYCLE		3			10																		
										ACT. SPLIT		4			11																		
										ACT. OFFSET		5			12																		
										RESET INTERVAL		6			13																		
										# OF CYCLES		7		14																			
										NO T.B.C. FALL BACK		8		15																			
										CRD. FROM ACT. MSTR.		9		16																			
										C+C+KEY				17																			
										DWELL METHOD A		A	0	18																			
										COORD. MODE		E	1	19																			
										COORD. MASTER		F		20																			
TIME IN SERVICE: <b>5/7/09 @ 1230</b>										SYSTEM DATA:				21																			
SIGNAL #: <b>2035</b>										MASTER: <b>LOVELL AND MICHIGAN</b>				22																			
										PRO. CL.: <b>LOVELL AND MICHIGAN</b>				23																			
										FL. CL.: <b>LOCAL</b>				24																			
LOCATION:  <b>W. KILBOURN AV.</b>  <b>&amp;</b>  <b>N. 4TH ST.</b>										DESIGNED BY: <b>JCB</b>				DRAWN BY: <b>JCB</b>				SUPERSEDES: <b>B-08-628-T</b>															
										CHECKED BY: <b>JCB</b>				APPROVED BY:				SUPERSEDED BY:															
										DATE: <b>3/18/09</b>				DRG. NO.: <b>B-09-605-T</b>																			

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1	A80							A81	A82	A83	17	ACO							AC1	AC2	AC3
	X	X	X	X	X	X	X	00	00	11											
2	A84							A85	A86	A87	18	AC4							AC5	AC6	AC7
	X	X	X	X	X	X	X	06	00	12											
3	A88							A89	A8A	A8B	19	AC8							AC9	ACA	ACB
	X						X	06	00	11											
4	A8C							A8D	A8E	A8F	20	ACC							ACD	ACE	ACF
		X	X	X	X	X		06	00	31											
5	A90							A91	A92	A93	21	ADO							AD1	AD2	AD3
		X	X	X	X	X		09	00	11											
6	A94							A95	A96	A97	22	AD4							AD5	AD6	AD7
		X	X	X	X	X		15	00	21											
7	A98							A99	A9A	A9B	23	AD8							AD9	ADA	ADB
		X	X	X	X	X		18	00	11											
8	A9C							A9D	A9E	A9F	24	ADC							ADD	ADE	ADF
9	AAO							AA1	AA2	AA3	25	AEO							AE1	AE2	AE3
10	AA4							AA5	AA6	AA7	26	AE4							AE5	AE6	AE7
11	AA8							AA9	AAA	AAB	27	AE8							AE9	AEA	AEB
12	AAC							AAD	AAE	AAF	28	AEC							AED	AEE	AEF
13	ABO							AB1	AB2	AB3	29	AFO							AF1	AF2	AF3
14	AB4							AB5	AB6	AB7	30	AF4							AF5	AF6	AF7
15	AB8							AB9	ABA	ABB	31	AF8							AF9	AFA	AFB
16	ABC							ABD	ABE	ABF	32	AFC							AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b> <b>W. KILBOURN AV.</b> <b>&amp;</b> <b>N. 4TH ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-08-628-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>3/18/09</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-605-T</b>

## LOCATION:

W. KILBOURN AV.

&amp;

N. 4TH ST.

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

## CABINET SWITCH LOCATIONS

1	2	13	3	4	14	5	6
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## CONFLICT MONITOR CONNECTIONS

NB	SB	E/W XWS	EB	WB	N/S XWS		
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB 4TH	SB 4TH	EB KILBOURN	WB KILBOURN	SPARE	SPARE			SPARE				E/W X-WALKS	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 10/22/04 @ 1350

DRG. NO: B-09-605-T

SERVICE: <b>3 #2 LTP SERV. FED FROM WEP- CO MH @ CENTER OF INTER- SECTION. 120V METER</b>		<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1> <h2 style="margin: 10px 0 0 0;">INTERSECTION PROGRAMMING DATA</h2>							
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>									

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	> W <	1	2	3	4	5	6	7	8	FUNCTION	> W <	1	2	3	4	5	6	7	8
MAX I	0	7	62	7	38	7	62	7	38	VEHICLE RECALL	0		X		X		X		X
MAX II / HFDW	1									PED. RECALL	1		X				X		
WALK	2		7		7		9		7	RED LOCK	2								
FDW	3		7		16		19		16	YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4	X	X	X	X	X	X	X	X
MIN GREEN	5	7	16	7	16	7	20	7	16	PED PHASES	5		X		X		X		X
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7		X		X		X		X
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9	3		3	3	3		3	3	START UP GREEN	9		X				X		
MINIMUM GAP	A									OVERLAP A	A								
ADDED / ACTUATION	B									OVERLAP B	B								
YELLOW	C	3.5	4	3.5	4	3.5	4	3.5	4	OVERLAP C	C								
RED CLEARANCE	D		2.5		2.5		2.5		2.5	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								

PHASE ASSIGNMENT DESCRIPTION	PHASE 5 <b>SBLT</b> <i>ACT.</i>	OVERLAP B
PHASE 1: <b>NBLT</b> <i>ACT.</i>	PHASE 6 <b>NB 6TH</b> <b>E. X-WALK</b>	OVERLAP C
PHASE 2: <b>SB 6TH</b> <b>W. X-WALK'S (2)</b>	PHASE 7 <b>WBLT</b> <i>ACT.</i>	OVERLAP D
PHASE 3: <b>EBLT</b> <i>ACT.</i>	PHASE 8 <b>EB KILBOURN</b> <b>S. X-WALK (ACT.)</b> <i>EXT.</i>	OVERLAP E
PHASE 4: <b>WB KILBOURN</b> <b>N. X-WALK (ACT.)</b> <i>EXT.</i>	OVERLAP A	OVERLAP F

TIME IN: <b>11-1-13 @ 15:10</b>	PROGRAM: CRD. PL. 4: 1500-1800 HRS. EX. S/S/H CRD. PL. 7: 0600-0900 HRS. EX. S/S/H  EVA: ON N/S FIRE CALL. EVA PHASE IS NB/SB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO EVA IS 22 SEC. OPTICOM DETECTION DISTANCE MUST BE AT LEAST 1200 FEET.	SYSTEM DATA <b>MASTER: LOVELL AND MICHIGAN</b>  <b>PRO. CL.: LOVELL AND MICHIGAN</b>  <b>FL. CL.: NONE</b>
SOFTWARE: <b>W4IKS.60</b>		PROGRAM INST:
SIGNAL NO: <b>2038</b>		AUXILLARY EQUIPMENT: <b>PE CONF. LIGHT W/ 5A FUSE</b> <b>1 1/4" VENT PIPE</b> <b>RADAR DETECTION FOR EB/EBLT, WB/WBLT</b>
LOCATION: <div style="text-align: center; font-weight: bold; margin-top: 10px;"> <b>W. KILBOURN AV.</b>   <b>&amp;</b>   <b>N. 6TH ST.</b> </div>		

CHECKED BY:	APPROVED BY: <b>RWB</b>	SUPERSEDED BY:	SUPERSEDES: <b>B-13-599-T</b>
DESIGNED BY: <b>SCR</b>	DRAWN BY: <b>SCR</b>	DATE: <b>10/18/13</b>	DRAWING NO: <b>B-13-658-T</b>

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1	67			67			67		
FORCE OFF PH 2	2	0			0			0		
FORCE OFF PH 3	3	21			21			21		
FORCE OFF PH 4	4	52			52			52		
FORCE OFF PH 5	5	67			67			67		
FORCE OFF PH 6	6	7			7			7		
FORCE OFF PH 7	7	21			21			21		
FORCE OFF PH 8	8	52			52			52		
OFFSET (SECONDS)	9	56			56			56		
PERMISSIVE LENGTH	A	8			8			8		
MAXIMUM DWELL	B	30			30			30		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
COORD PLAN 1										COORD PLAN 6									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D		X							COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 2										COORD PLAN 7									
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X	
COORD PHASES	D									COORD PHASES	D		X						
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F		X		X		X		X
COORD PLAN 3										COORD PLAN 8									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
COORD PLAN 4										COORD PLAN 9									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D		X							COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 5										LOCATION: W. KILBOURN AV. & N. 6TH ST.									
LEAD PHASES	C									DATE:	SUPERSEDES: B-13-599-T								
COORD PHASES	D									10/18/13	SUPERSEDED:								
PERM 2 PHASES	E																		
MIN RECALL	F																		
DESIGNED BY:	DRAWN BY:				CHECKED BY:				APPROVED:		DRAWING:								
SCR	SCR				0						B-13-658-T								

**170 CONTROLLER - W4IKS PROGRAM  
MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL	
		1	2	3	4	5	6	7	8							
B + O + KEY										B + O + KEY			9 + KEY			
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4	
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4	
MRI PHASES	F	X		X		X		X		C + F + KEY			EV A DEL TYPE	2	1	
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3		
FLASH YELLOW	C									OL A RED	4		EV C DEL TYPE	4		
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5		
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6		
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7		
B + B + KEY										D + KEY 1 + KEY 2			A OL B OL C OL D	GREEN	8	
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9	
OL FL CIRC	D									ID NUMBER	2F	38		GREEN	A	
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B	
OL B SWITCH P	F									REST IN WALK	3F	1		GREEN	C	
B + C + KEY										ADV WARN E O G	4E		YELLOW	D		
COORD MAX	C									ADV WARN S O G	4F		GREEN	E		
TOD RED REST	D									RR RED CLEAR	5E		YELLOW	F		
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY			
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0		
C + F + KEY										EV INDICATORS	7F	5	PED PERM PLAN 1	1	25	
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2		
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3		
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4	25	
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5		
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6		
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7	25	
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8		
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9		
C + KEY										B + B + KEY			A + 3 + KEY			
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9		
EV A	A		X						X	PERM 2 P5	A		LEFT TURN TYPE	A		
EV B	B									PERM 2 P6	B		C + KEY			
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2	
EV D	D									EV A	DELAY	0	0	DESIGNED BY:	SCR	
HANDICAP PED	E									EV A	MIN	1	15	DRAWN BY:	SCR	
E + KEY										EV B	DELAY	2		CHECKED BY:	0	
RR CLEAR PH	B									EV B	MIN	3		DATE:	10/18/13	
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:		
RR OL PERMIT	D									EV C	MIN	5		B-13-599-T		
LOCATION:  W. KILBOURN AV.  &  N. 6TH ST.										EV D	DELAY	6		DRAWING NO:  B-13-658-T		
										EV D	MIN	7				
										OL RED REVERT			8			
										RR	MIN	9				
										RR	DELAY	A				

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	00	7											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		09	00	1											
3				88				89	8A	8B	19				C8				C9	CA	CB
		X	X	X	X	X		15	00	4											
4				8C				8D	8E	8F	20				CC				CD	CE	CF
		X	X	X	X	X		18	00	1											
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> W. KILBOURN AV. & N. 6TH ST.		<b>CHECKED BY:</b> 0		<b>SUPERSEDES:</b> B-13-599-T	
<b>DESIGNED BY:</b> SCR		<b>DRAWN BY:</b> SCR		<b>DATE:</b> 10/18/13	
<b>APPROVED BY:</b>		<b>DRG. NO.:</b> B-13-658-T			

**LOCATION:****W. KILBOURN AV.****&****N. 6TH ST.**

SHADED COMBINATIONS  
ARE NOT PERMITTED  
DIODES FOR CONFLICTING  
INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

NBLT	SB	EBLT	WB	SBLT	NB	WBLT

EB	WXW'S (2)	NXW	EXW	SXW	-	"A"
						"B"
						"C"

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NBLT	SB 6TH	EBLT	WB KILBOURN	SBLT	NB 6TH	WBLT	EB KILBOURN	W. X-WALKS (2)	N. X-WALK	E. X-WALK	S. X-WALK				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 11/16/04 @ 1255

DRG. NO: B-13-658-T

ELECTRICAL: <b>3 #2/1 #8 LTP SERVICE FED FROM WEPSCO IN MH SYSTEM. 120V METER (RED PH.)</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4											
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	<b>13</b>	OFFSET 1			OFFSET 1		<b>89</b>	OFFSET 1			OFFSET 1												
										# OF INTER		6	<b>14</b>		OFFSET 2		OFFSET 2			OFFSET 2			OFFSET 2															
										TYPE OF CAB.		7	<b>1</b>		OFFSET 3		OFFSET 3			OFFSET 3			OFFSET 3															
										B+1+KEY					OFFSET 4		OFFSET 4			OFFSET 4			OFFSET 4															
FLASH OUTPUT ASSIGN.										ACT. 1 LOCK		0			MAX. DWELL	<b>23</b>	MAX. DWELL			MAX. DWELL		<b>23</b>	MAX. DWELL															
										ACT. 2 LOCK		1			CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC		CYCLE LENGTH SEC																	
										ACT. 1 DELAY		2			<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>								
										ACT. 2 DELAY		3			SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4	SP1	SP2	SP3	SP4								
AUXILIARY EQUIPMENT:										PRE-EMPT 1 LOCK		5			1	<b>2.5</b>					2	<b>7</b>																
										PRE-EMPT 2 LOCK		6			2	<b>7</b>																						
										PRE-EMPT 3 LOCK		7			3	<b>3</b>																						
										PRE-EMPT 1 DELAY		8			4	<b>7</b>																						
PROGRAM: <b>ACTUATION #1: EBLT ARROWS</b> <b>ACTUATION #2: NBLT ARROWS</b>  <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>										PRE-EMPT 2 DELAY		9			3	<b>3</b>					4	<b>7</b>																
										PRE-EMPT 3 DELAY		A			4	<b>7</b>																						
										B+3+KEY					5	<b>19</b>																						
										LONG POWER DOWN		0	<b>4</b>		6	<b>4</b>																						
TIME IN SERVICE: <b>10/11/10 @ 1405</b>  SIGNAL #: <b>1071</b>										SHORT POWER DOWN		1	<b>4</b>		7	<b>2.5</b>																						
										SPECIAL ACT. FUNCTIONS					8	<b>7</b>																						
										ACT. SIGNAL PLAN		2			9	<b>3</b>																						
										ACT. CYCLE		3			10	<b>4</b>																						
										ACT. SPLIT		4			11	<b>8</b>																						
										ACT. OFFSET		5			12	<b>0</b>																						
										RESET INTERVAL		6			13	<b>19</b>																						
										# OF CYCLES		7		14	<b>4</b>																							
										NO T.B.C. FALL BACK		8		15																								
										CRD. FROM ACT. MSTR.		9		16																								
										C+C+KEY				17																								
										DWELL METHOD A		A	<b>0</b>	18																								
										COORD. MODE		E	<b>1</b>	19																								
										COORD. MASTER		F		20																								
										LOCATION:  <b>E. KNAPP ST.</b> <b>&amp;</b> <b>N. WATER ST.</b>										SYSTEM DATA:				21														
																				MASTER:		<b>MASON AND WATER</b>		22														
PRO. CL.:		<b>MASON AND WATER</b>		23																																		
FL. CL.:		<b>NONE</b>		24																																		
DESIGNED BY: <b>JCB</b>  CHECKED BY: <b>JCB</b>  DATE: <b>5/21/10</b>										DRAWN BY:		<b>JCB</b>		SUPERSEDES:				<b>B-09-552-T</b>																				
										APPROVED BY:		SUPERSEDED BY:																										
										DRG. NO.: <b>B-10-583-T</b>																												

# SIGNAL PLAN #1

INTERVAL																																									ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	NBLT			SB WATER				EBLT				WB KNAPP				SPARE				NB WATER				SPARE				EB KNAPP				W. X-WALK				N. X-WALK				E. X-WALK														S. X-WALK																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	R	Y	G	R	Y	G	R	Y	G	R	Y	G	R	Y	G	R	Y	G	R	Y	G	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW												-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W	DW	-	W

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b>  <b>E. KNAPP ST. &amp; N. WATER ST.</b>			<b>CHECKED BY:</b>  <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-09-552-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b>  <b>JCB</b>	<b>DRAWN BY:</b>  <b>JCB</b>	<b>DATE:</b>  <b>5/21/10</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-10-583-T</b>

PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION		NBLT	SB WATER	EBLT	WB KNAPP	SPARE	NB WATER	SPARE	EB KNAPP	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
<b>LOCATION</b>  <b>E. KNAPP ST.</b>  <b>&amp;</b> <b>N. WATER ST.</b>  SHADED COMBINATIONS ARE NOT PERMITTED DIODES FOR CONFLICTING INDICATIONS  CABINET SWITCH LOCATIONS	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
	4	5	6	7	8	9	10	11	12	13	14	15	16				
	5	6	7	8	9	10	11	12	13	14	15	16					
	6	7	8	9	10	11	12	13	14	15	16						
	7	8	9	10	11	12	13	14	15	16							
	8	9	10	11	12	13	14	15	16								
	9	10	11	12	13	14	15	16									
	10	11	12	13	14	15	16										
	11	12	13	14	15	16											
	12	13	14	15	16												
	13	14	15	16													
	14	15	16														
	15	16															
	16																

1	2	3	4	5	6	7
---	---	---	---	---	---	---

8	9	10	11	12	13	14
---	---	----	----	----	----	----

NBLT	SB	EBLT	WB	-	NB	-

EB	WXW	NXW	EXW	SXW	CY3	"A"
					CY2	"B"
					D-1	"C"

MONITOR IN SERVICE: 9/28/04 @ 0937

DRG. NO: B-10-583-T

SERVICE: <b>3 #4/1 #8 LTP. FED FROM WEPCO          WP #58-1504 AT ALLEY BETWEEN          DR. MLK AND 4TH (RED 0)          120V METER</b>	<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1> <h2 style="margin: 10px 0 0 0;">INTERSECTION PROGRAMMING DATA</h2>	
FLASH PROGRAM: <b>2400-0600 HRS.; N/S-RED,          E/W-YELLOW</b>		

PHASE - TIMING DATA (PHASE + KEY)										PHASE FUNCTIONS (0 + KEY)									
FUNCTION	> W <	1	2	3	4	5	6	7	8	FUNCTION	> W <	1	2	3	4	5	6	7	8
MAX I	0	10	27		68		27		68	VEHICLE RECALL	0		X		X		X		X
MAX II / HFDW	1									PED. RECALL	1				X		X		X
WALK	2		7		7		7		7	RED LOCK	2								
FDW	3		20		17		20		17	YELLOW LOCK	3								
MAX INITIAL	4									PERMIT	4	X	X		X		X		X
MIN GREEN	5	10	13		24		20		24	PED PHASES	5		X		X		X		X
TIME BEFORE REDUCTION	6									LEAD PHASES	6	X		X		X		X	
TIME TO REDUCE	7									DUAL ENTRY	7		X		X		X		X
OBSERVE GAP	8									SEQ TIMING	8								
PASSAGE	9									START UP GREEN	9				X				X
MINIMUM GAP	A									OVERLAP A	A								
ADDED / ACTUATION	B									OVERLAP B	B								
YELLOW	C	3.5	4		4		4		4	OVERLAP C	C								
RED CLEARANCE	D		2.5		2		2.5		2	OVERLAP D	D								
RED REVERT	E									EXCLUSIVE	E								
WALK II	F									SIM GAP	F								
PHASE ASSIGNMENT DESCRIPTION		PHASE 5 SPARE								OVERLAP B									
PHASE 1: NBLT ACT.		PHASE 6 NB 4TH E. X-WALK								OVERLAP C									
PHASE 2: SB 4TH WXW (ACT.)		PHASE 7 SPARE								OVERLAP D									
PHASE 3: SPARE		PHASE 8 EB McKINLEY S. X-WALK								OVERLAP E									
PHASE 4: WB McKINLEY N. X-WALK		OVERLAP A								OVERLAP F									
TIME IN: 5/7/09 @ 1255		PROGRAM: CRD. PL. 4: 1500-1800 HRS. EX. S/S/H CRD. PL. 7: 0600-0900 HRS. EX. S/S/H (NBLT ARROWS INHIBITED - VIA AUX. OUTPUT A)								SYSTEM DATA									
SOFTWARE: W4IKS.60										MASTER: LOVELL AND MICHIGAN  PRO. CL.: LOVELL AND MICHIGAN  FL. CL.: NONE									
SIGNAL NO: 2039										PROGRAM INST:									
LOCATION:  <b>W. McKINLEY AV.          &amp;          N. 4TH ST.</b>										PROGRAM COMMAND BOX TO INHIBIT PHASE 1 (NBLT) DURING CRD. PL. 7 (VIA AUX. A ON) AND ON W. X-WALK ACT.									
										AUXILLARY EQUIPMENT:									

CHECKED BY: JCB		APPROVED BY:	SUPERSEDED BY:	SUPERSEDES: B-08-632-T
DESIGNED BY: JCB	DRAWN BY: JCB	DATE: 3/18/09	DRAWING NO: B-09-554-T	

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	90			90			90		
FORCE OFF PH 1	1	34			34			-		
FORCE OFF PH 2	2	51			51			51		
FORCE OFF PH 3	3									
FORCE OFF PH 4	4	0			0			0		
FORCE OFF PH 5	5									
FORCE OFF PH 6	6	51			51			51		
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	0			0			0		
OFFSET (SECONDS)	9	32			18			8		
PERMISSIVE LENGTH	A	0			0			0		
MAXIMUM DWELL	B	15			15			15		

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
COORD PLAN 1										COORD PLAN 6									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 2										COORD PLAN 7									
LEAD PHASES	C									LEAD PHASES	C	X		X		X		X	
COORD PHASES	D									COORD PHASES	D				X				X
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F		X		X		X		X
COORD PLAN 3										COORD PLAN 8									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
COORD PLAN 4										COORD PLAN 9									
LEAD PHASES	C	X		X		X		X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X		X		X		X	MIN RECALL	F								
COORD PLAN 5										LOCATION: W. McKINLEY AV. & N. 4TH ST.									
LEAD PHASES	C									DATE: 3/18/09	SUPERSEDES: B-08-632-T								
COORD PHASES	D										SUPERSEDED:								
PERM 2 PHASES	E									DRAWING: B-09-554-T									
MIN RECALL	F																		
DESIGNED BY: JCB	DRAWN BY: JCB				CHECKED BY: JCB				APPROVED:										

**170 CONTROLLER - W4IKS PROGRAM**  
**MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL		
		1	2	3	4	5	6	7	8								
B + O + KEY										B + O + KEY			9 + KEY				
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4		
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4		
MRI PHASES	F	X								C + F + KEY			EV A DEL TYPE	2			
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3			
FLASH YELLOW	C				X				X	OL A RED	4		EV C DEL TYPE	4			
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5			
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6			
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7			
B + B + KEY										D + KEY 1 + KEY 2			A OL B OL C OL D OL	GREEN	8		
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9		
OL FL CIRC	D									ID NUMBER	2F	39		GREEN	A		
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B		
OL B SWITCH P	F									REST IN WALK	3F	1	GREEN	C			
B + C + KEY										ADV WARN E O G	4E		YELLOW	D			
COORD MAX	C									ADV WARN S O G	4F		GREEN	E			
TOD RED REST	D									RR RED CLEAR	5E		YELLOW	F			
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY				
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0			
C + F + KEY										EV INDICATORS	7F		PED PERM PLAN 1	1			
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2			
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3			
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4			
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5			
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6			
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7			
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8			
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9			
C + KEY										B + B + KEY			A + 3 + KEY				
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9			
EV A	A									PERM 2 P5	A		LEFT TURN TYPE	A			
EV B	B									PERM 2 P6	B		C + KEY				
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2		
EV D	D									EV A	DELAY	0	DESIGNED BY:	JCB			
HANDICAP PED	E									MIN	1		DRAWN BY:	JCB			
E + KEY										EV B	DELAY	2	CHECKED BY:	JCB			
RR CLEAR PH	B									EV B	MIN	3	DATE:	3/18/09			
RR PERMIT	C									EV C	DELAY	4	SUPERSEDES:				
RR OL PERMIT	D									MIN	5		B-08-632-T				
LOCATION:  W. McKINLEY AV.  &  N. 4TH ST.										EV D	DELAY	6	SUPERSEDED BY:	B-09-554-T			
										EV D	MIN	7	DRAWING NO:				
										OL RED REVERT	8						
										RR	MIN	9					
										RR	DELAY	A					

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1	80							81	82	83	17	CO							C1	C2	C3
	X	X	X	X	X	X	X	00	00	33											
2	84							85	86	87	18	C4							C5	C6	C7
	X	X	X	X	X	X	X	06	00	32											
3	88							89	8A	8B	19	C8							C9	CA	CB
	X						X	06	00	1											
4	8C							8D	8E	8F	20	CC							CD	CE	CF
		X	X	X	X	X		06	00	7											
5	90							91	92	93	21	DO							D1	D2	D3
		X	X	X	X	X		06	00	71											
6	94							95	96	97	22	D4							D5	D6	D7
		X	X	X	X	X		09	00	81											
7	98							99	9A	9B	23	D8							D9	DA	DB
		X	X	X	X	X		09	00	1											
8	9C							9D	9E	9F	24	DC							DD	DE	DF
		X	X	X	X	X		15	00	4											
9	AO							A1	A2	A3	25	EO							E1	E2	E3
		X	X	X	X	X		18	00	1											
10	A4							A5	A6	A7	26	E4							E5	E6	E7
11	A8							A9	AAE	AB	27	E8							E9	EA	EB
12	AC							AD	AE	AF	28	EC							ED	EE	EF
13	BO							B1	B2	B3	29	FO							F1	F2	F3
14	B4							B5	B6	B7	30	F4							F5	F6	F7
15	B8							B9	BA	BB	31	F8							F9	FA	FB
16	BC							BD	BE	BF	32	FC							FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> W. MCKINLEY AV. & N. 4TH ST.			<b>CHECKED BY:</b> JCB		<b>SUPERSEDES:</b> B-08-632-T
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> JCB	<b>DRAWN BY:</b> JCB	<b>DATE:</b> 3/18/09	<b>APPROVED BY:</b>	<b>DRG. NO.: B-09-554-T</b>	

**LOCATION**

**W. McKINLEY AV.**

**&**

**N. 4TH ST.**

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

**CABINET SWITCH LOCATIONS**

1	2	13	3	4	14	5	6
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**CONFLICT MONITOR CONNECTIONS**

NB	SB	EXW	EB	WB	N/S XWS	NBLT	WXW
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB 4TH	SB 4TH	EB McKINLEY	WB McKINLEY	NBLT	W. X-WALK			SPARE				E. X-WALK	N/S X-WALKS		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 3/1/06 @ 1005

DRG. NO: B-09-554-T

<b>ELECTRICAL:</b> <b>3 #4 LTP SERV FED FROM (CITY) "WB"</b> <b>SUBSTATION FEEDER</b> <b>120V (RED Ø)</b> <b>NO METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1		CYCLE 2		CYCLE 3		CYCLE 4														
										D+4+KEY					OFFSET 1	65	OFFSET 1	63	OFFSET 1	65	OFFSET 1														
										# OF INTER		6	8		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2														
										TYPE OF CAB.		7	2		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3														
<b>FLASHING PROGRAM :</b> <b>NONE - EMERGENCY ALL RED</b>										B+1+KEY				OFFSET 4		OFFSET 4		OFFSET 4																	
										ACT. 1 LOCK		0		MAX. DWELL	46	MAX. DWELL	44	MAX. DWELL	36	MAX. DWELL															
										ACT. 2 LOCK		1		CYCLE LENGTH		CYCLE LENGTH		CYCLE LENGTH		CYCLE LENGTH															
										ACT. 1 DELAY		2		SEC		SEC		SEC		SEC															
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	ACT. 2 DELAY	3		90	0	0	0	90	0	0	0	90	0	0	0	0	0	0	0							
	8	X			X					PRE-EMPT 1 LOCK	5		31				29				21														
	9				X					PRE-EMPT 2 LOCK	6		18				18				18														
	A									PRE-EMPT 3 LOCK	7																								
	B									PRE-EMPT 1 DELAY	8		4				4				4														
C										PRE-EMPT 2 DELAY	9		2				2				2														
<b>AUXILIARY EQUIPMENT:</b> <b>POLICE HANDCORD OPERATION</b>										PRE-EMPT 3 DELAY		A		4	2				2				2												
										B+3+KEY				5	18				20				28												
										LONG POWER DOWN		0	4	6	11.5				11.5				11.5												
										SHORT POWER DOWN		1	4	7	4				4				4												
<b>PROGRAM:</b> <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H</b> <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>										SPECIAL ACT. FUNCTIONS				8	1.5				1.5				1.5												
										ACT. SIGNAL PLAN		2		9																					
										ACT. CYCLE		3		10																					
										ACT. SPLIT		4		11																					
										ACT. OFFSET		5		12																					
										RESET INTERVAL		6		13																					
										# OF CYCLES		7		14																					
										NO T.B.C. FALL BACK		8		15																					
										CRD. FROM ACT. MSTR.		9		16																					
										C+C+KEY				17																					
										DWELL METHOD A		A	0	18																					
										COORD. MODE		E	1	19																					
COORD. MASTER		F		20																															
<b>TIME IN SERVICE:</b>										SYSTEM DATA:				21																					
										MASTER: LOVELL AND MICHIGAN				22																					
<b>SIGNAL #:</b> <b>2036</b>										PRO. CL.: LOVELL AND MICHIGAN				23																					
										FL. CL.: LOCAL				24																					
<b>LOCATION:</b>  <b>W. STATE ST.</b> <b>&amp;</b> <b>N. 4TH ST.</b>										DESIGNED BY:		DRAWN BY:		SUPERSEDES:																					
										JCB		JCB		B-09-583-T																					
										CHECKED BY:		APPROVED BY:		SUPERSEDED BY:																					
										DATE:		DRG. NO.: B-11-525-T																							
										1/7/11																									

## SIGNAL PLAN #1

[illegible]

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		15	00	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b>  <b>W. STATE ST. &amp; N. 4TH ST.</b>			<b>CHECKED BY:</b>  <b>0</b>	<b>SUPERSEDES:</b>  <b>B-09-583-T</b>
<b>DESIGNED BY:</b> <b>JCB</b>			<b>DRAWN BY:</b> <b>JCB</b>	<b>SUPERSEDED BY:</b>
<b>DATE:</b> <b>1/7/11</b>			<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-525-T</b>

## LOCATION:

W. STATE ST.

&amp;

N. 4TH ST.

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

## CABINET SWITCH LOCATIONS

1	2	13	3	4	14	5	6
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## CONFLICT MONITOR CONNECTIONS

NB	SB	E/W XWS	WB	N/S XWS			
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB 4TH	SB 4TH	SPARE	WB STATE	SPARE	SPARE			SPARE				E/W X-WALKS	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 9/30/05 @ 0840

DRG. NO: B-11-525-T

ELECTRICAL: <b>3 #4 LTP SERV FED FROM CITY "WB"</b> <b>SUBSTATION @ KILBOURN &amp; 6TH</b> <b>NO METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4				
										D+4+KEY					OFFSET 1	89	OFFSET 1	81	OFFSET 1	82	OFFSET 1										
										# OF INTER		6	16		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2								
										TYPE OF CAB.		7	2		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3						
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4						
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										ACT. 1 LOCK		0			MAX. DWELL	41	MAX. DWELL	41	MAX. DWELL	38	MAX. DWELL		MAX. DWELL								
										ACT. 2 LOCK		1																			
										ACT. 1 DELAY		2																			
										ACT. 2 DELAY		3																			
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	PRE-EMPT 1 LOCK		5																			
	8	X			X					PRE-EMPT 2 LOCK		6																			
	9	X			X					PRE-EMPT 3 LOCK		7																			
	A				X					PRE-EMPT 1 DELAY		8																			
	B									PRE-EMPT 2 DELAY		9																			
AUXILLARY EQUIPMENT: <b>1 1/4" VENT PIPE, PE CONF. LTS. W/ 5A FUSE,</b> <b>ADA. POLARA PED. P.B. SYSTEM,</b> <b>EB "NTOR" LED SIGN W/ 5A FUSE</b>										PRE-EMPT 3 DELAY		A																			
										B+3+KEY																					
										LONG POWER DOWN		0	4																		
										SHORT POWER DOWN		1	4																		
PROGRAM: <b>ACTUATION #1: NBLT ARROW</b> <b>CYCLE 2: 1500-1800 HRS. EX. S/S/H</b> <b>CYCLE 3: 0600-0900 HRS. EX. S/S/H</b>  <b>SIG. PL. 4, CYCLE 4: ON N/S FIRE CALL. PE</b> <b>PHASE IS NB/SB GREEN (VAR. LENGTH BUT</b> <b>15 SEC. MIN.) MAX. DELAY TO PE IS 28 SEC.</b> <b>OPTICOM DETECTION DISTANCE MUST BE</b> <b>AT LEAST 1850 FEET.</b>										SPECIAL ACT. FUNCTIONS																					
										ACT. SIGNAL PLAN		2																			
										ACT. CYCLE		3																			
										ACT. SPLIT		4																			
										ACT. OFFSET		5																			
										RESET INTERVAL		6																			
										# OF CYCLES		7																			
										NO T.B.C. FALL BACK		8																			
										CRD. FROM ACT. MSTR.		9																			
										C+C+KEY																					
										DWELL METHOD A		A	0																		
										COORD. MODE		E	1																		
										COORD. MASTER		F																			
TIME IN SERVICE: <b>2-12-13 @ 09:50</b>										SYSTEM DATA:																					
SIGNAL #: <b>2037</b>										MASTER: <b>LOVELL AND MICHIGAN</b>																					
										PRO. CL.: <b>LOVELL AND MICHIGAN</b>																					
										FL. CL.: <b>NONE</b>																					
LOCATION:  <b>W. STATE ST.</b> <b>&amp;</b> <b>N. 6TH ST.</b>										DESIGNED BY: <b>SCR</b>				DRAWN BY: <b>SCR</b>				SUPERSEDES: <b>B-11-526-T</b>													
										CHECKED BY: <b>JCB</b>				APPROVED BY:				SUPERSEDED BY:													
										DATE: <b>1/25/13</b>				DRG. NO.: <b>B-13-512-T</b>																	

## SIGNAL PLAN #1

INTERVAL	NB 6TH								SB 6TH								W. X-WALK		EB STATE	WB STATE								N/S X-WALKS		E. X-WALK		NBLT																AUX. B.		PE CONF. LIGHT		ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	R	Y	G	R	Y	G	DW	W	R	Y	G	R	Y	G	DW	W	DW	-		W	R	Y	G											TC		fid																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

## SIGNAL PLAN #4

[illegible]

PRE-EMPTION PLAN # 1 (NB/SB) OPTICOM [FIRE CALL]

STEP CODE PM #			
00	1	32	3
01	2	32	4
02	3	32	5
03	4	35	1
04	5	36	14
05	6	37	6
06	7	32	9
07	8	32	10
08	9	33	14
09	10	32	11
0A	11	33	14
0B	12	32	12
0C	13	33	14
0D	14	34	14
0E	15	32	15
0F	16	32	16
10	17	35	1
11	18	36	14
12	19	37	1
13	20		
14	21		
15	22		
16	23		
17	24		
18	25		
19	26		
1A	27		
1B	28		
1C	29		
1D	30		
1E	31		
1F	32		

STEP CODE PM #			
20	33		
21	34		
22	35		
23	36		
24	37		
25	38		
26	39		
27	40		
28	41		
29	42		
2A	43		
2B	44		
2C	45		
2D	46		
2E	47		
2F	48		
30	49		
31	50		
32	51		
33	52		
34	53		
35	54		
36	55		
37	56		
38	57		
39	58		
3A	59		
3B	60		
3C	61		
3D	62		
3E	63		
3F	64		

STEP CODE PM #			
40	65		
41	66		
42	67		
43	68		
44	69		
45	70		
46	71		
47	72		
48	73		
49	74		
4A	75		
4B	76		
4C	77		
4D	78		
4E	79		
4F	80		
50	81		
51	82		
52	83		
53	84		
54	85		
55	86		
56	87		
57	88		
58	89		
59	90		
5A	91		
5B	92		
5C	93		
5D	94		
5E	95		
5F	96		

LOCATION:
<b>W. STATE ST.</b>
<b>&amp;</b>
<b>N. 6TH ST.</b>

170 CONTROLLER  
W9FT PROGRAM  
PRE-EMPTION SEQUENCE

PAGE 4 OF 6

PRE-EMPTION CODES

COMMAND	CODE	PARAMETER
DISPLAY	32	INTERVAL
JUMP	33	STEP #
HOLD	34	INTERVEAL #
TEST	35	PRE-EMPT #
BRANCH IF ON	36	STEP #
RETURN	37	INTERVAL #
CLEAR	38	INTERVAL#

DESIGNED <b>SCR</b>	DRAWN <b>SCR</b>	CHECKED <b>JCB</b>	APPROVED	DATE <b>1/25/13</b>	SUPERSEDES <b>B-11-526-T</b>	DRG. NO. <b>B-13-512-T</b>
					SUPERSEDED BY	

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		07	00	23											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		09	00	111											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		15	00	211											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
		X	X	X	X	X		18	00	24											
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
		X	X	X	X	X		18	00	111											
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A (NTOR SIGN INPUT)	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b>  <b>W. STATE ST. &amp; N. 6TH ST.</b>			<b>CHECKED BY:</b>  <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-11-526-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>SCR</b>	<b>DRAWN BY:</b> <b>SCR</b>	<b>DATE:</b> <b>1/25/13</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-13-512-T</b>

## LOCATION:

W. STATE ST.

&amp;

N. 6TH ST.

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

## CABINET SWITCH LOCATIONS

1	2	13	3	4	14	5	6
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## CONFLICT MONITOR CONNECTIONS

NB	SB	WXW	EB	WB	N/S XWS	EXW	NBLT
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PE CONF. LIGHTS

AUX. B (EB NTOR SIGNS)

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB 6TH	SB 6TH	EB STATE	WB STATE	E. X-WALK	NBLT			PE CONF. LIGHTS / AUX.-B.				W. X-WALK	N/S X-WALKS		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	4	5	6	7	8	9	10	11	12	13	14	15	16			
	5	6	7	8	9	10	11	12	13	14	15	16				
	6	7	8	9	10	11	12	13	14	15	16					
	7	8	9	10	11	12	13	14	15	16						
	8	9	10	11	12	13	14	15	16							
	9	10	11	12	13	14	15	16								
	10	11	12	13	14	15	16									
	11	12	13	14	15	16										
	12	13	14	15	16											
	13	14	15	16												
	14	15	16													
	15	16														
	16															

MONITOR IN SERVICE: 6/24/06 @ 0735

DRG. NO: B-13-512-T

ELECTRICAL: <b>2 #4 LTP SERV FED FROM WEPKO MH @ NW QUAD OF INTERSECTION 120V METER</b>										FUNCTION		KEY	VAL	INTERVAL	CYCLE 1				CYCLE 2				CYCLE 3				CYCLE 4				
FLASHING PROGRAM : <b>NONE - EMERGENCY ALL RED</b>										D+4+KEY					OFFSET 1	52	OFFSET 1	40	OFFSET 1	52	OFFSET 1					OFFSET 1					
										# OF INTER		6	21		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2		OFFSET 2								
										TYPE OF CAB.		7	2		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3		OFFSET 3								
										B+1+KEY					OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4		OFFSET 4								
AUXILLARY EQUIPMENT: <b>1 1/4" VENT PIPE POLICE HANDCORD</b>										ACT. 1 LOCK		0			MAX. DWELL	34	MAX. DWELL	34	MAX. DWELL	34	MAX. DWELL										
										ACT. 2 LOCK		1																			
										ACT. 1 DELAY		2																			
										ACT. 2 DELAY		3																			
FLASH OUTPUT ASSIGN.		1	2	3	4	5	6	7	8	PRE-EMPT 1 LOCK		5																			
	8	X			X					PRE-EMPT 2 LOCK		6																			
	9				X					PRE-EMPT 3 LOCK		7																			
	A				X					PRE-EMPT 1 DELAY		8																			
	B									PRE-EMPT 2 DELAY		9																			
PROGRAM: <b>ACTUATION #1: NBLT ARROW CYCLE 2: 1500-1800 HRS. EX. S/S/H CYCLE 3: 0600-0900 HRS. EX. S/S/H  SIG. PL. 4, CYCLE 4: ON N/S OR WB FIRE CALL. PE #1 PHASE IS NB/SB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO PE #1 IS 29.5 SEC. OPTICOM DET. DIST. &gt; 1800 FEET. PE #2 PHASE IS WB GREEN (VAR. LENGTH BUT 15 SEC. MIN.) MAX. DELAY TO PE #2 IS 23 SEC. OPTICOM DET. DIST. &gt; 1600 FEET.</b>										PRE-EMPT 3 DELAY		A		1	2.5				2.5				2.5				2.5				
										B+3+KEY																					
										LONG POWER DOWN		0	4	4				4				4			10.5						
										SHORT POWER DOWN		1	4	7	18			15				21			10.5						
TIME IN SERVICE: <b>2/28/11 @ 1115</b>										SPECIAL ACT. FUNCTIONS				8	10.5			10.5			10.5			15							
										ACT. SIGNAL PLAN		2		9	4			4			4			4							
										ACT. CYCLE		3		10	2			2			2			2							
										ACT. SPLIT		4		11	4			4			4			0							
										ACT. OFFSET		5		12	7			7			4			23							
										RESET INTERVAL		6		13	23			23			23			15							
										# OF CYCLES		7		14	4			4			4			4							
										NO T.B.C. FALL BACK		8		15	0			0			0			2.5							
										CRD. FROM ACT. MSTR.		9		16	0			0			0			10.5							
										C+C+KEY				17	0			0			0			10.5							
SIGNAL #: <b>1056</b>										DWELL METHOD A		A	0	18	0			0			0			4							
										COORD. MODE		E	1	19	0			0			0			2							
										COORD. MASTER		F		20	0			0			0			23							
										SYSTEM DATA:				21	0			0			0			4							
LOCATION:  <b>E. STATE ST. &amp; N. WATER ST.</b>										MASTER:		<b>MASON AND WATER</b>		22																	
										PRO. CL.:		<b>MASON AND WATER</b>		23																	
										FL. CL.:		<b>LOCAL</b>		24																	
DESIGNED BY: <b>JCB</b>										DRAWN BY: <b>JCB</b>				SUPERSEDES: <b>B-09-867-T</b>																	
										CHECKED BY: <b>JCB</b>				APPROVED BY:				SUPERSEDED BY:													
										DATE: <b>2/16/11</b>				DRG. NO.: <b>B-11-600-T</b>																	

# SIGNAL PLAN #1

INTERVAL	NB WATER	"	"	SB WATER	"	"	W. X-WALK	"	SPARE	"	"	WB STATE	"	"	N/S X-WALKS	"	E. X-WALK	"	"	NBLT	"	"												N/S PE CONF. LTS			E/W PE CONF. LTS		ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL					
	R	Y	G	R	Y	G	DW	W	-	-	-	R	Y	G	DW	W	DW	-	W	R	Y	G										fld		fld																				
1	1			1			1					1			1		1			1																																		
2			2	2			2					2			2				2				2																															
3			3	3			3					3			3				3				3																															
4			4	4			4					4			4				4				4																															
5			5	5			5					5			5				5				5																															
6			6			6	6					6			6				6	6																																		
7			7			7	7					7			7				7	7																																		
8			8			8	F					8			8		F		8																																			
9		9			9		9					9			9		9		9																																			
10	10			10			10					10			10		10		10																																			
11	11			11			11					11			11		11		11																																			
12	12			12			12					12			12		12		12																																			
13	13			13			13					13	F		13		13		13																																			
14	14			14			14					14			14		14		14																																			
15	15			15			15					15			15		15		15																																			
16			16			16	16					16			16		16		16	16																																		
17			17			17	F					17			17		F		17																																			
18		18			18		18					18			18		18		18																																			
19	19			19			19					19			19		19		19																																			
20	20			20			20					20	F		20		20		20																																			
21	21			21			21					21			21		21		21																																			
22																																																						
23																																																						
24																																																						
LOCATION : E. STATE ST. & N. WATER ST.								CYCLE XFER 1		FLASH ENTRY 1		DWELL 6		PLAN OPERATES				DATE		SUPERSEDES B-09-867-T																																		
								SPLIT XFER 1		FLASH EXIT 1		INITIALIZATION 6		ALL TIMES EX. FIRE PE				2/16/11		SUPERSEDED BY																																		
								DESIGNED BY: JCB				DRAWN BY JCB				CHECKED BY JCB				APPROVED BY				DRG. NO.: B-11-600-T																														

# SIGNAL PLAN #4

INTERVAL	NB WATER	"	"	SB WATER	"	"	W. X-WALK	"	SPARE	"	"	WB STATE	"	"	N/S X-WALKS	"	E. X-WALK	"	"	NBLT	"	"												N/S PE CONF. LTS			WB PE CONF. LTS		ACTUAT #1	RESET NO. 1	ACTUAT #2	RESET NO 2	TRANSITION	AUTO TIMING	MIN. TIMING	RESPONSE	PREEMPTION XFER	PLAN XFER	INTERVAL
	R	Y	G	R	Y	G	DW	W	-	-	-	R	Y	G	DW	W	DW	-	W	R	Y	G											fld			fld													
1	1			1			1					1			1		1			1												1		F			1								0	1			
2			2	2			2					2			2		F					2											F		2			1								0	2		
3		3		3			3					3			3		3				3												F		3												0	3	
4			4	4			4					4			4		F				4												4		F												0	4	
5			5			5	5					5			5		F			5													5		F												0	5	
6			6			6	6					6			6		F			6													6		F												0	6	
7			7			7	F					7			7		F			7													7		F												0	7	
8			8			8	8					8			8		8			8													8		F												0	8	
9		9			9		9					9			9		9			9													9		F												0	9	
10	10			10			10					10			10		10			10													10		F												0	10	
11	11			11			11						11		F		11			11													F		11												0	11	
12	12			12			12						12		F		12			12													F		12												0	12	
13	13			13			13						13		13		13			13													F		13												0	13	
14	14			14			14					14			14		14			14													F		14												0	14	
15	15			15			15					15			15		15			15													F		15												0	15	
16			16			16	16					16			16		F			16													F		16												0	16	
17			17			17	F					17			17		F			17													F		17												0	17	
18		18			18		18					18			18		18			18													F		18												0	18	
19	19			19			19					19			19		19			19													F		19												0	19	
20	20			20			20						20		F		20			20													20		F											0	20		
21	21			21			21					21			21		21			21													21		F												21		
22																																																22	
23																																																23	
24																																																24	
LOCATION : E. STATE ST. & N. WATER ST.								CYCLE XFER		FLASH ENTRY		DWELL		PLAN OPERATES		DATE		SUPERSEDES B-09-867-T																															
								SPLIT XFER		FLASH EXIT		INITIALIZATION		ON N/S OR E/W FIRE CALL		2/16/11		SUPERSEDED BY																															
DESIGNED BY: JCB								DRAWN BY JCB		CHECKED BY JCB		APPROVED BY		DRG. NO.: B-11-600-T																																			

PRE-EMPTION PLAN # 1 (NB/SB) FIRE CALL [OPTICOM]

STEP CODE PM #			
00	1	32	4
01	2	32	5
02	3	33	7
03	4	32	6
04	5	33	7
05	6	32	7
06	7	34	8
07	8	32	9
08	9	32	10
09	10	35	1
0A	11	36	7
0B	12	35	2
0C	13	36	24
0D	14	37	11
0E	15	32	20
0F	16	33	17
10	17	32	21
11	18	32	1
12	19	35	1
13	20	36	7
14	21	35	2
15	22	36	24
16	23	37	6
17	24	34	13
18	25	32	14
19	26	32	15
1A	27	35	2
1B	28	36	24
1C	29	35	1
1D	30	36	7
1E	31	37	6
1F	32		

STEP CODE PM #			
20	33		
21	34		
22	35		
23	36		
24	37		
25	38		
26	39		
27	40		
28	41		
29	42		
2A	43		
2B	44		
2C	45		
2D	46		
2E	47		
2F	48		
30	49		
31	50		
32	51		
33	52		
34	53		
35	54		
36	55		
37	56		
38	57		
39	58		
3A	59		
3B	60		
3C	61		
3D	62		
3E	63		
3F	64		

STEP CODE PM #			
40	65		
41	66		
42	67		
43	68		
44	69		
45	70		
46	71		
47	72		
48	73		
49	74		
4A	75		
4B	76		
4C	77		
4D	78		
4E	79		
4F	80		
50	81		
51	82		
52	83		
53	84		
54	85		
55	86		
56	87		
57	88		
58	89		
59	90		
5A	91		
5B	92		
5C	93		
5D	94		
5E	95		
5F	96		

LOCATION:
<b>E. STATE ST.</b>
<b>&amp;</b>
<b>N. WATER ST.</b>

170 CONTROLLER  
W9FT PROGRAM  
PRE-EMPTION SEQUENCE

PAGE 4 OF 7

PRE-EMPTION CODES

COMMAND	CODE	PARAMETER
DISPLAY	32	INTERVAL
JUMP	33	STEP #
HOLD	34	INTERVAL #
TEST	35	PRE-EMPT #
BRANCH IF ON	36	STEP #
RETURN	37	INTERVAL #
CLEAR	38	INTERVAL#

DESIGNED <b>JCB</b>	DRAWN <b>JCB</b>	CHECKED <b>JCB</b>	APPROVED	DATE <b>2/16/11</b>	SUPERSEDES <b>B-09-867-T</b>	DRG. NO. B-11-600-T
					SUPERSEDED BY	

**PRE-EMPTION PLAN # 2 (WB) FIRE CALL [OPTICOM]**

STEP CODE PM #			
00	1	<b>32</b>	<b>2</b>
01	2	<b>32</b>	<b>3</b>
02	3	<b>33</b>	<b>9</b>
03	4	<b>32</b>	<b>16</b>
04	5	<b>33</b>	<b>8</b>
05	6	<b>32</b>	<b>17</b>
06	7	<b>33</b>	<b>8</b>
07	8	<b>32</b>	<b>18</b>
08	9	<b>32</b>	<b>19</b>
09	10	<b>35</b>	<b>2</b>
0A	11	<b>36</b>	<b>16</b>
0B	12	<b>35</b>	<b>1</b>
0C	13	<b>36</b>	<b>24</b>
0D	14	<b>37</b>	<b>11</b>
0E	15	<b>32</b>	<b>12</b>
0F	16	<b>34</b>	<b>13</b>
10	17	<b>32</b>	<b>14</b>
11	18	<b>32</b>	<b>15</b>
12	19	<b>35</b>	<b>2</b>
13	20	<b>36</b>	<b>16</b>
14	21	<b>35</b>	<b>1</b>
15	22	<b>36</b>	<b>24</b>
16	23	<b>37</b>	<b>6</b>
17	24	<b>34</b>	<b>8</b>
18	25	<b>32</b>	<b>9</b>
19	26	<b>32</b>	<b>10</b>
1A	27	<b>35</b>	<b>1</b>
1B	28	<b>36</b>	<b>24</b>
1C	29	<b>35</b>	<b>2</b>
1D	30	<b>36</b>	<b>16</b>
1E	31	<b>37</b>	<b>11</b>
1F	32		

STEP CODE PM #			
20	33		
21	34		
22	35		
23	36		
24	37		
25	38		
26	39		
27	40		
28	41		
29	42		
2A	43		
2B	44		
2C	45		
2D	46		
2E	47		
2F	48		
30	49		
31	50		
32	51		
33	52		
34	53		
35	54		
36	55		
37	56		
38	57		
39	58		
3A	59		
3B	60		
3C	61		
3D	62		
3E	63		
3F	64		

STEP CODE PM #			
40	65		
41	66		
42	67		
43	68		
44	69		
45	70		
46	71		
47	72		
48	73		
49	74		
4A	75		
4B	76		
4C	77		
4D	78		
4E	79		
4F	80		
50	81		
51	82		
52	83		
53	84		
54	85		
55	86		
56	87		
57	88		
58	89		
59	90		
5A	91		
5B	92		
5C	93		
5D	94		
5E	95		
5F	96		

LOCATION:
<b>E. STATE ST.</b>
<b>&amp;</b>
<b>N. WATER ST.</b>

170 CONTROLLER  
W9FT PROGRAM  
PRE-EMPTION SEQUENCE

PAGE 5 OF 7

**PRE-EMPTION CODES**

COMMAND	CODE	PARAMETER
DISPLAY	32	INTERVAL
JUMP	33	STEP #
HOLD	34	INTERVAL #
TEST	35	PRE-EMPT #
BRANCH IF ON	36	STEP #
RETURN	37	INTERVAL #
CLEAR	38	INTERVAL#

DESIGNED <b>JCB</b>	DRAWN <b>JCB</b>	CHECKED <b>JCB</b>	APPROVED	DATE <b>2/16/11</b>	SUPERSEDES <b>B-09-867-T</b>	<b>DRG. NO. B-11-600-T</b>
				SUPERSEDED BY		

**TIME OF DAY / DAY OF WEEK SETTINGS  
170 CONTROLLER - W9FT PROGRAM**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				A80				A81	A82	A83	17				ACO				AC1	AC2	AC3
		X	X	X	X	X		06	00	311											
2				A84				A85	A86	A87	18				AC4				AC5	AC6	AC7
		X	X	X	X	X		09	00	111											
3				A88				A89	A8A	A8B	19				AC8				AC9	ACA	ACB
		X	X	X	X	X		15	00	211											
4				A8C				A8D	A8E	A8F	20				ACC				ACD	ACE	ACF
		X	X	X	X	X		18	00	111											
5				A90				A91	A92	A93	21				ADO				AD1	AD2	AD3
6				A94				A95	A96	A97	22				AD4				AD5	AD6	AD7
7				A98				A99	A9A	A9B	23				AD8				AD9	ADA	ADB
8				A9C				A9D	A9E	A9F	24				ADC				ADD	ADE	ADF
9				AAO				AA1	AA2	AA3	25				AEO				AE1	AE2	AE3
10				AA4				AA5	AA6	AA7	26				AE4				AE5	AE6	AE7
11				AA8				AA9	AAA	AAB	27				AE8				AE9	AEA	AEB
12				AAC				AAD	AAE	AAF	28				AEC				AED	AEE	AEF
13				ABO				AB1	AB2	AB3	29				AFO				AF1	AF2	AF3
14				AB4				AB5	AB6	AB7	30				AF4				AF5	AF6	AF7
15				AB8				AB9	ABA	ABB	31				AF8				AF9	AFA	AFB
16				ABC				ABD	ABE	ABF	32				AFC				AFD	AFE	AFF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
SIGNAL PLAN	1 - 4		OUTPUT A	21	22
FLASH	11	12	OUTPUT B	23	24
FREE	16	17	OUTPUT C	25	26
FUNCTION				ON	OFF
COORDINATION PLAN = CYCLE / SPLIT / OFFSET (EX. 111)				111 - 444	

<b>LOCATION:</b>  <b>E. STATE ST. &amp; N. WATER ST.</b>			<b>CHECKED BY:</b>  <b>JCB</b>	<b>SUPERSEDES:</b> <b>B-09-867-T</b>
				<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>2/16/11</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-600-T</b>

## LOCATION:

E. STATE ST.

&amp;

N. WATER ST.

SHADED COMBINATIONS

ARE NOT PERMITTED

DIODES FOR CONFLICTING

INDICATIONS

## CABINET SWITCH LOCATIONS

1	2	13	3	4	14	5	6
---	---	----	---	---	----	---	---

## CONFLICT MONITOR CONNECTIONS

NB	SB	WXW	WB	N/S XWS	EXW	NBLT	
1R	2R	13R	3R	4R	14R	5R	6R
1Y	2Y	9G	3Y	4Y	9Y	5Y	6Y
1G	2G	13G	3G	4G	14G	5G	6G

PE #2 (EB/WB) CONF. LIGHTS

PE #1 (NB/SB) CONF. LIGHTS

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION	NB WATER	SB WATER	SPARE	WB STATE	E. X-WALK	NBLT			PE CONF. LIGHTS				W. X-WALK	N/S X-WALKS		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4	5	6	7	8	9	10	11	12	13	14	15	16				
5	6	7	8	9	10	11	12	13	14	15	16					
6	7	8	9	10	11	12	13	14	15	16						
7	8	9	10	11	12	13	14	15	16							
8	9	10	11	12	13	14	15	16								
9	10	11	12	13	14	15	16									
10	11	12	13	14	15	16										
11	12	13	14	15	16											
12	13	14	15	16												
13	14	15	16													
14	15	16														
15	16															
16																

MONITOR IN SERVICE: 2/28/11 @ 1115

DRG. NO: B-11-600-T

SERVICE: <b>3 #2 LTP SERV. FED. FROM WB          SUBSTATION AT WISCONSIN          AND 6TH          120V, NO METER</b>		<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1> <h2 style="margin: 10px 0 0 0;">INTERSECTION PROGRAMMING DATA</h2> <p style="margin: 0;">PAGE 0 (DO NOT PAGE COPY)</p>							
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>									
PAGE 0 (DO NOT PAGE COPY)									
PHASE - TIMING DATA (PHASE + KEY)									
FUNCTION	> W <	1	2	3	4	5	6	7	8
MAX I	0		40	7	67		40		67
MAX II / HFDW	1								
WALK	2		28		7		28		7
FDW	3		12		18		12		18
MAX INITIAL	4								
MIN GREEN	5		12	7	18		12		18
TIME BEFORE REDUCTION	6								
TIME TO REDUCE	7								
OBSERVE GAP	8								
PASSAGE	9								
MINIMUM GAP	A								
ADDED / ACTUATION	B								
YELLOW	C		4	3.5	4		4		4
RED CLEARANCE	D		1.5		2		1.5		2
RED REVERT	E								
WALK II	F								
PHASE ASSIGNMENT DESCRIPTION		PHASE 5                      SBLT (O.O.S. PG. 0)							
PHASE 1:            SPARE		PHASE 6                      NB 6TH E. X-WALK							
PHASE 2:            SB 6TH W. X-WALK		PHASE 7                      SPARE							
PHASE 3:            EBLT		PHASE 8                      EB WELLS S. X-WALK							
PHASE 4:            WB WELLS N. X-WALK		OVERLAP A							
TIME IN:            9-10-11 @ 06:55		PROGRAM: PAGE 0 (SBLT ARROWS O.O.S.): 2200-0600 HRS. AND ALL DAY S/S/H PAGE 1: SBLT LAG ARROWS OPERATE EVA: ON FIREHOUSE OR EB/WB FIRE CALL. EVA PHASE IS EB/WB GREEN. (15 SEC. MIN.) MAX. DELAY TO EVA IS 18 SEC. DET. DIST. > 1200 FEET. EVB: ON NB/SB FIRE CALL. EVB PHASE IS NB/SB GREEN (15 SEC. MIN.) MAX. DELAY TO EVB IS 24 SEC. DET. DIST. > 1600 FEET.							
SOFTWARE:            W4IKS.60									
SIGNAL NO:            2074									
LOCATION: <div style="text-align: center; font-weight: bold; margin-top: 10px;">             W. WELLS ST.               &amp;               N. 6TH ST.           </div>		SYSTEM DATA <div style="text-align: center; margin-top: 10px;">             MASTER: LOVELL AND MICHIGAN               PRO. CL.: LOVELL AND MICHIGAN               FL. CL.: NONE           </div> PROGRAM INST:  AUXILLARY EQUIPMENT: 3 #2 LTP SERV. FED TO KILBOURN AND 6TH CONT. CAB.							

CHECKED BY: <b>JCB</b>	APPROVED BY: <b>RWB</b>	SUPERSEDED BY:	SUPERSEDES: <b>B-10-693-T</b>
DESIGNED BY: <b>JCB</b>	DRAWN BY: <b>JCB</b>	DATE: <b>7/27/11</b>	DRAWING NO: <b>B-11-688-T</b>

SERVICE: <b>3 #2 LTP SERV. FED. FROM WB          SUBSTATION AT WISCONSIN          AND 6TH          120V, NO METER</b>		<h1 style="margin: 0;">170 CONTROLLER W4IKS PROGRAM</h1> <h2 style="margin: 10px 0 0 0;">INTERSECTION PROGRAMMING DATA</h2> <p style="margin: 0;">PAGE 1 (DO NOT PAGE COPY)</p>							
FLASH PROGRAM: <b>NONE - EMERGENCY ALL RED</b>									
PAGE 1 (DO NOT PAGE COPY)									
PHASE - TIMING DATA (DC + PHASE + KEY)									
FUNCTION	> W ≤	1	2	3	4	5	6	7	8
MAX I	0		40	7	67	7	28		67
MAX II / HFDW	1								
WALK	2		28		7		16		7
FDW	3		12		18		12		18
MAX INITIAL	4								
MIN GREEN	5		12	7	18	7	12		18
TIME BEFORE REDUCTION	6								
TIME TO REDUCE	7								
OBSERVE GAP	8								
PASSAGE	9								
MINIMUM GAP	A								
ADDED / ACTUATION	B								
YELLOW	C		4	3.5	4	4	4		4
RED CLEARANCE	D		1.5		2	1.5	1		2
RED REVERT	E								
WALK II	F								
PHASE ASSIGNMENT DESCRIPTION		PHASE 5                      SBLT (LAG ARROWS)							
PHASE 1:        SPARE		PHASE 6                      NB 6TH E. X-WALK							
PHASE 2:        SB 6TH W. X-WALK		PHASE 7                      SPARE							
PHASE 3:        EBLT		PHASE 8                      EB WELLS S. X-WALK							
PHASE 4:        WB WELLS N. X-WALK		OVERLAP A							
TIME IN:            9-10-11 @ 06:55		PROGRAM: PAGE 0 (SBLT ARROWS O.O.S.): 2200-0600 HRS. AND ALL DAY S/S/H PAGE 1: SBLT LAG ARROWS OPERATE EVA: ON FIREHOUSE OR EB/WB FIRE CALL. EVA PHASE IS EB/WB GREEN. (15 SEC. MIN.) MAX. DELAY TO EVA IS 18 SEC. DET. DIST. > 1200 FEET. EVB: ON NB/SB FIRE CALL. EVB PHASE IS NB/SB GREEN (15 SEC. MIN.) MAX. DELAY TO EVB IS 24 SEC. DET. DIST. > 1600 FEET.							
SOFTWARE:            W4IKS.60									
SIGNAL NO:           2074									
LOCATION:  <div style="text-align: center; font-weight: bold; font-size: 1.2em;">           W. WELLS ST.             &amp;             N. 6TH ST.         </div>		SYSTEM DATA <div style="text-align: center; font-weight: bold;">           MASTER: LOVELL AND MICHIGAN             PRO. CL.: LOVELL AND MICHIGAN             FL. CL.: NONE         </div>							
LOCATION:  <div style="text-align: center; font-weight: bold; font-size: 1.2em;">           W. WELLS ST.             &amp;             N. 6TH ST.         </div>		PROGRAM INST:   							
		AUXILLARY EQUIPMENT: 3 #2 LTP SERV. FED TO KILBOURN AND 6TH CONT. CAB.							

CHECKED BY: <b>JCB</b>	APPROVED BY:	SUPERSEDED BY:	SUPERSEDES: <b>B-10-693-T</b>
DESIGNED BY: <b>JCB</b>	DRAWN BY: <b>JCB</b>	DATE: <b>7/27/11</b>	DRAWING NO: <b>B-11-688-T</b>

**170 CONTROLLER - 4IKS  
PROGRAM COORDINATION DATA**

FUNCTION		COORDINATION PLAN								
		1	2	3	4	5	6	7	8	9
CYCLE LENGTH	0	<b>90</b>								
FORCE OFF PH 1	1									
FORCE OFF PH 2	2	<b>65</b>								
FORCE OFF PH 3	3	<b>78</b>								
FORCE OFF PH 4	4	<b>0</b>								
FORCE OFF PH 5	5	<b>65</b>								
FORCE OFF PH 6	6	<b>65</b>								
FORCE OFF PH 7	7									
FORCE OFF PH 8	8	<b>0</b>								
OFFSET (SECONDS)	9	<b>0</b>								
PERMISSIVE LENGTH	A	<b>19</b>								
MAXIMUM DWELL	B	<b>30</b>								

FUNCTION	KEY	PHASE								FUNCTION	KEY	PHASE							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
<b>COORD PLAN 1</b>										<b>COORD PLAN 6</b>									
LEAD PHASES	C	X		X			X	X		LEAD PHASES	C								
COORD PHASES	D				X				X	COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F		X	X	X		X		X	MIN RECALL	F								
<b>COORD PLAN 2</b>										<b>COORD PLAN 7</b>									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
<b>COORD PLAN 3</b>										<b>COORD PLAN 8</b>									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
<b>COORD PLAN 4</b>										<b>COORD PLAN 9</b>									
LEAD PHASES	C									LEAD PHASES	C								
COORD PHASES	D									COORD PHASES	D								
PERM 2 PHASES	E									PERM 2 PHASES	E								
MIN RECALL	F									MIN RECALL	F								
<b>COORD PLAN 5</b>										<b>LOCATION:</b>	<b>W. WELLS ST. &amp; N. 6TH ST.</b>								
LEAD PHASES	C									DATE:	<b>7/27/11</b>								
COORD PHASES	D									SUPERSEDES:	<b>B-10-693-T</b>								
PERM 2 PHASES	E									SUPERSEDED:									
MIN RECALL	F																		
DESIGNED BY:	<b>JCB</b>		DRAWN BY:	<b>JCB</b>		CHECKED BY:	<b>JCB</b>		APPROVED:	<b>DRAWING: B-11-688-T</b>									

**170 CONTROLLER - W4IKS PROGRAM  
MISCELLANEOUS FUNCTIONS**

FUNCTION	KEY	PHASE NUMBER								FUNCTION	KEY	VAL	FUNCTION	KEY	VAL
		1	2	3	4	5	6	7	8						
B + O + KEY										B + O + KEY			9 + KEY		
SAMPLE DET	C									MODE (0-4)	4	2	SHORT POWER DOWN	0	4
ADV. WARN PH	E									MASTER (0=OFF)	5	0	LONG POWER DOWN	1	4
MRI PHASES	F									C + F + KEY			EV A DEL TYPE	2	1
B + A + KEY										PAGE ID	0		EV B DEL TYPE	3	1
FLASH YELLOW	C									OL A RED	4		EV C DEL TYPE	4	
FLASH CIRCUIT	D									OL B RED	5		EV D DEL TYPE	5	
TOD/DOW MAX	E									OL C RED	6		RR DEL TYPE	6	
OL B SWICH P	F									OL D RED	7		PED INHIBIT	7	
B + B + KEY										D + KEY 1 + KEY 2			A OL	GREEN	8
OL FL YELLOW	C									FLOATING PED	2E			YELLOW	9
OL FL CIRC	D									ID NUMBER	2F	74	B OL	GREEN	A
TOD/DOW PED	E									COORD PED RECALL	3E	0		YELLOW	B
OL B SWITCH P	F									REST IN WALK	3F	1	C OL	GREEN	C
B + C + KEY										ADV WARN E O G	4E			YELLOW	D
COORD MAX	C									ADV WARN S O G	4F		D OL	GREEN	E
TOD RED REST	D									RR RED CLEAR	5E			YELLOW	F
OL A SWITCH P	E									RR RED COLOR	5F		E + F + KEY		
OL D SWITCH P	F									EV MIN AFT C	7E		RR MAX II	0	
C + F + KEY										EV INDICATORS	7F	4	PED PERM PLAN 1	1	
OVERLAP E	9									B + A + KEY			PED PERM PLAN 2	2	
OVERLAP F	8									PERM 2 P1	9		PED PERM PLAN 3	3	
RED REST	A									PERM 2 P2	A		PED PERM PLAN 4	4	
MAX RECALL	B									PERM 2 P3	B		PED PERM PLAN 5	5	
FLASH GREEN	C									B + C + KEY			PED PERM PLAN 6	6	
FLASH WALK	D									PERM 2 P7	9		PED PERM PLAN 7	7	
ADV WALK	E									PERM 2 P8	A		PED PERM PLAN 8	8	
RESTR PHASE	F									PERM 2 P9	B		PED PERM PLAN 9	9	
C + KEY										B + B + KEY			A + 3 + KEY		
START UP YEL	9									PERM 2 P4	9		SAMPLING DETECTION	9	
EV A	A				X				X	PERM 2 P5	A		LEFT TURN TYPE	A	
EV B	B		X				X			PERM 2 P6	B		C + KEY		
EV C	C									E + KEY			TRIGGERS ON IN FLASH	8	2
EV D	D									EV A	DELAY	0	0	DESIGNED BY:	JCB
HANDICAP PED	E									EV B	MIN	1	15	DRAWN BY:	JCB
E + KEY										EV B	DELAY	2	0	CHECKED BY:	JCB
RR CLEAR PH	B									EV C	MIN	3	15	DATE:	7/27/11
RR PERMIT	C									EV C	DELAY	4		SUPERSEDES:	
RR OL PERMIT	D									EV C	MIN	5		B-10-693-T	
LOCATION:  W. WELLS ST.  &  N. 6TH ST.										EV D	DELAY	6		SUPERSEDED BY:	
										EV D	MIN	7			
										OL RED REVERT		8		DRAWING NO:  B-11-688-T	
										RR	MIN	9			
											DELAY	A			

**170 CONTROLLER - W4IKS PROGRAM  
TIME BASED COORDINATION PARAMETERS**

	DAY							HR	MN	FN		DAY							HR	MN	FN
	1	2	3	4	5	6	7					1	2	3	4	5	6	7			
1				80				81	82	83	17				CO				C1	C2	C3
		X	X	X	X	X		06	00	101											
2				84				85	86	87	18				C4				C5	C6	C7
		X	X	X	X	X		22	00	100											
3				88				89	8A	8B	19				C8				C9	CA	CB
4				8C				8D	8E	8F	20				CC				CD	CE	CF
5				90				91	92	93	21				DO				D1	D2	D3
6				94				95	96	97	22				D4				D5	D6	D7
7				98				99	9A	9B	23				D8				D9	DA	DB
8				9C				9D	9E	9F	24				DC				DD	DE	DF
9				AO				A1	A2	A3	25				EO				E1	E2	E3
10				A4				A5	A6	A7	26				E4				E5	E6	E7
11				A8				A9	AAE	AB	27				E8				E9	EA	EB
12				AC				AD	AE	AF	28				EC				ED	EE	EF
13				BO				B1	B2	B3	29				FO				F1	F2	F3
14				B4				B5	B6	B7	30				F4				F5	F6	F7
15				B8				B9	BA	BB	31				F8				F9	FA	FB
16				BC				BD	BE	BF	32				FC				FD	FE	FF

**TIME OF DAY / DAY OF WEEK FUNCTION CODES**

FUNCTION	ON	OFF	FUNCTION	ON	OFF
COORDINATION PLAN	1-18		OUTPUT B	72	82
RED REST	25	24	OUTPUT C	73	83
MAX RECALL	27	26	OUTPUT D	74	84
PED RECALL	29	28	TIME TRANSFER (PAGE 1)	101	
FLASH	33	32	TIME TRANSFER (PAGE 2)	102	
WALK II	55	54	TIME TRANSFER (PAGE 0)	100	
OUTPUT A	71	81	MAX II	129	128

<b>LOCATION:</b> <b>W. WELLS ST. &amp; N. 6TH ST.</b>			<b>CHECKED BY:</b> <b>JCB</b>		<b>SUPERSEDES:</b> <b>B-10-693-T</b>
					<b>SUPERSEDED BY:</b>
<b>DESIGNED BY:</b> <b>JCB</b>	<b>DRAWN BY:</b> <b>JCB</b>	<b>DATE:</b> <b>7/27/11</b>	<b>APPROVED BY:</b>	<b>DRG. NO.: B-11-688-T</b>	

PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIRECTION		SPARE	SB 6TH	EBLT	WB WELLS	SBLT	NB 6TH	SPARE	EB WELLS	W. X-WALK	N. X-WALK	E. X-WALK	S. X-WALK				
LOCATION  W. WELLS ST. & N. 6TH ST.  SHADED COMBINATIONS ARE NOT PERMITTED DIODES FOR CONFLICTING INDICATIONS  CABINET SWITCH LOCATIONS  1 2 3 4 5 6 7  8 9 10 11 12 13 14  - SB EBLT WB SBLT NB -  EB WXW NXW EXW SXW CY3 R CY2 Y D-1 G  NB/SB CONF. LIGHTS EB/WB CONF. LIGHTS OL-C.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
	4	5	6	7	8	9	10	11	12	13	14	15	16				
	5	6	7	8	9	10	11	12	13	14	15	16					
	6	7	8	9	10	11	12	13	14	15	16						
	7	8	9	10	11	12	13	14	15	16							
	8	9	10	11	12	13	14	15	16								
	9	10	11	12	13	14	15	16									
	10	11	12	13	14	15	16										
	11	12	13	14	15	16											
	12	13	14	15	16												
	13	14	15	16													
	14	15	16														
	15	16															
	16																

MONITOR IN SERVICE:  
DRG. NO: B-11-688-T