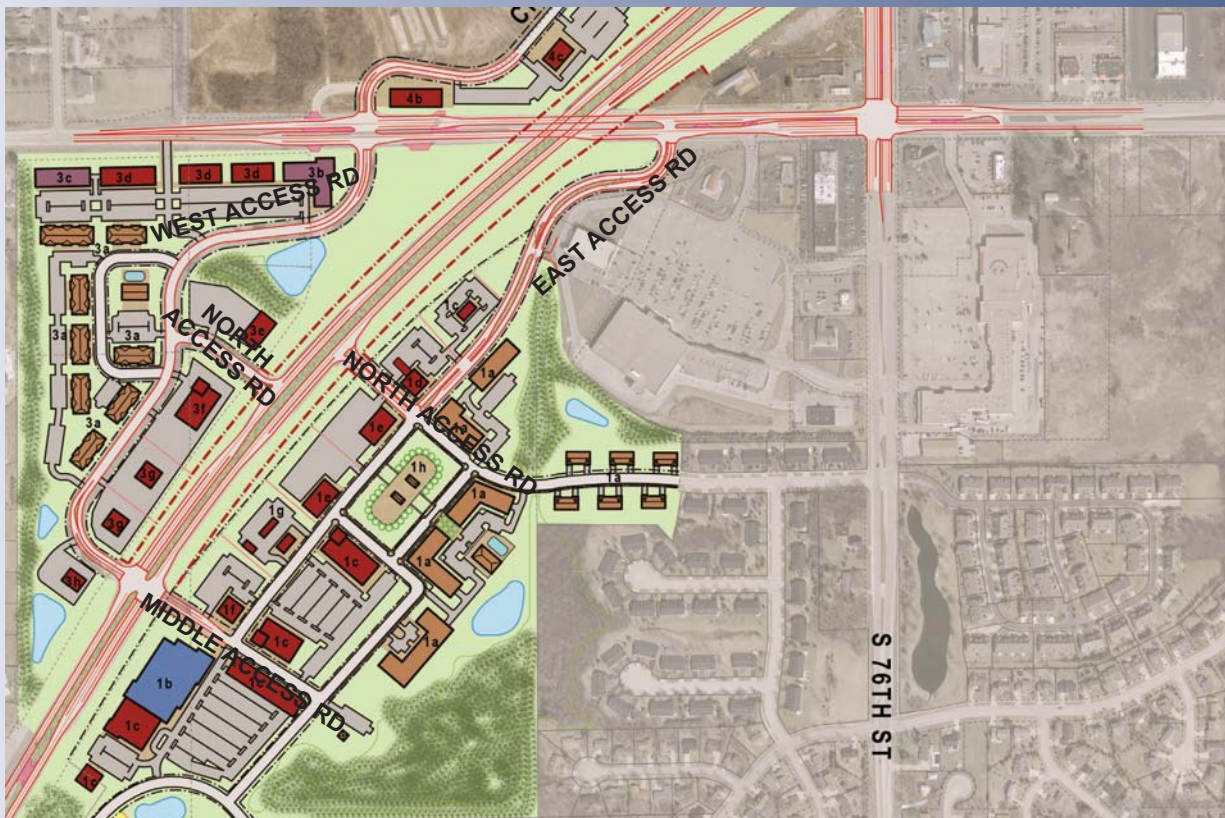


TRAFFIC IMPACT STUDY

Franklin Area A Development

Franklin, Wisconsin



DRAFT

Prepared by: GRAEF

Date Submitted: January 8, 2016



Franklin Area A Development Traffic Impact Study

WisDOT Log #601

Franklin, Wisconsin

Date Submitted: January 8, 2016

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"I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."

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**Franklin Area A Development
Traffic Impact Study
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CHAPTER I – INTRODUCTION AND EXECUTIVE SUMMARY

PART A – PURPOSE OF REPORT AND STUDY OBJECTIVES

The Franklin Area A Development is a mixed use development proposed to be located along STH 36 (W. Loomis Road) at the interchanges with W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U) in the City of Franklin. The mixed use development includes four specific areas along STH 36 (W. Loomis Road). The development plan requires the removal of the W. Rawson Avenue ramps and realignment of the S. 76th Street ramps. The realignment of the ramps is planned to occur by 2017 with full build out of the development by 2027.

This traffic impact report documents the recommended improvements based on existing intersection geometrics, background traffic volumes, and additional traffic expected to be generated by the proposed development within the limits of the study area. This report documents the procedures, findings and recommendations of the traffic impact analysis.

PART B – EXECUTIVE SUMMARY

A summary of the proposed development and recommended improvements are described below. The details of the complete traffic impact study follow this summary.

Study Area

A site location map for the Franklin Area A Development is shown in [Exhibit 1-1.1](#) and a copy of the conceptual site plan is shown in [Exhibit 1-1.2](#). Based on discussions with WisDOT staff, the study area includes the following nine intersections and three new proposed site access intersections:

- STH 36 (W. Loomis Road) & W. Drexel Avenue
- W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive (*future West Access*)
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps (*ramps proposed to be removed*)
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps (*ramp proposed to be removed, future East Access*)
- W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)
- W. Rawson Avenue (CTH BB) & S. 68th Street
- S. 76th Street (CTH U) & W. Crystal Ridge Drive (CTH K)
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps
- STH 36 (W. Loomis Road) & 3 Proposed Access Locations (North, Middle & South)

The study area intersections were analyzed for the weekday evening and Saturday midday peak traffic hours.

On-Site Development

The Franklin Area A development is planned to be built in multiple phases, which are not yet know, and is expected to start in 2017 with full build out by the Year 2027. The mixed use development contains four specific areas of development as shown in the conceptual site plan on [Exhibit 1-1.2](#). The development is proposed to include the following land uses:

Area 1 (East of STH 36 (W. Loomis Road)):

- Apartments –232 units
- Destination Retail (Discount Store) – 75,000 sf
- General Retail – 95,000 sf
- Bank –3 drive-in lanes
- High-Turnover Sit-Down Restaurants – 16,000 total sf
- Fast Food Restaurant with Drive Through – 4,000 sf
- Gas Station with Convenience Market & Car Wash – 12 fueling positions
- Town Square Park – 2 acres

Area 2 (Southeast on STH 36 (W. Loomis Road)):

- Single Family Houses – 50 lots

Area 3 (West of STH 36 (W. Loomis Road)/ South of W. Rawson Avenue):

- Apartments –108 units
- Health Club – 60,000 sf
- Medical Office Building – 30,000 sf
- General Retail – 60,000 sf
- Specialty Grocery – 15,000 sf
- Pharmacy with Drive Through – 18,000 sf
- High-Turnover Sit-Down Restaurant – 8,000 sf
- Fast Food Restaurant with Drive Through – 4,000 sf

Area 4 (West of STH 36 (W. Loomis Road)/ North of W. Rawson Avenue):

- Apartments – 48 units
- General Retail – 65,000 sf
- High-Turnover Sit-Down Restaurant – 8,000 sf

Off-Site Development

Based on discussions with the City of Franklin, the Rock Complex, which is located in west of Crystal Ridge Drive between W. Rawson Avenue and S. 76th Street, is proposing future development in the vicinity of the Franklin Area A development. The Rock complex currently has six baseball fields. It is planning for two additional baseball fields, four soccer fields and four futsal fields and potentially adding a 3,000 seat minor league stadium. Since the minor league stadium funding has not yet been determined the City of Franklin requested that the traffic analysis was performed with and without the stadium. The Existing access for the Rock Complex is located on the north side of Crystal Ridge Drive. Future access for the Rock complex is currently being evaluated. The following land uses were used for the additional development of the Rock Complex:

Option 1 - The Rock Complex Including Minor League Stadium

- 3,000 seat minor league baseball stadium
- 2 Baseball Fields
- 4 Soccer Fields
- 4 Futsal Fields

Option 2 - The Rock Complex Excluding Minor League Stadium

- 2 Baseball Fields
- 4 Soccer Fields
- 4 Futsal Fields

Traffic generated by the off-site development was included in the Year 2017 and 2032 total traffic analysis.

Trip Generation & Assignment

To address any potential future impacts within the study area, it is necessary to identify the volume of traffic generated by the proposed development. The proposed on-site development is expected to generate 2,010 total new trips (1,060 entering/950 existing) during the weekday evening peak hour and 2,580 total new trips (1,335 entering/1,245 exiting) during the Saturday midday peak hour. The proposed future off-site development Option 1 (with Stadium), is expected to generate 350 total new trips (265 entering/65 exiting) during the weekday evening peak hour and 300 total new trips (150 entering/ 150 exiting) during the Saturday midday peak hour. The proposed future off-site development Option 2 (without Stadium), is expected to generate 175 total new trips (115 entering/60 exiting) during the weekday evening peak hour and 300 total new trips (150 entering/150 exiting) during the Saturday midday peak hour.

The traffic generated by the proposed development was assigned to the study area intersections based on anticipated travel patterns of the adjacent roadways.

Initial build of the development is planned for Year 2017 and full build of the development is anticipated by the Year 2027. Therefore, the analysis years were determined to be Year 2017 and Year 2032. The development trips, along with the off-site development trips, were added to the Year 2017 background traffic volumes to develop the Year 2017 total traffic volumes with and without the minor league baseball stadium. The development trips, along with the off-site development trips, were added to the Year 2032 background traffic volumes to develop the Year 2032 total traffic volumes with and without a minor league baseball stadium.

Recommended Improvements

The following section identifies improvements recommended for the traffic conditions with and without the proposed development.

The study area intersections were analyzed based on the procedures set forth in the *2010 Highway Capacity Manual* (HCM) using Synchro 8. Intersection operation is defined by "level of service". Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. For the purpose of this study, LOS D or better was used to define acceptable peak hour operating conditions. These improvements are recommended to WisDOT, Milwaukee County, and the City of Franklin for their consideration. All agencies reserve the right to determine alternative solutions.

It should be noted that the trip generation for the off-site scenario for the Rock Complex - Option 1 (with Stadium), which is included in the total traffic analysis of the Franklin Area A development, is for peak hours of the adjacent roadway. The peak hours studied for the Area A development is the weekday evening peak hour of 4:30-5:30pm and Saturday midday peak hour of 11:30am-12:30pm. When and if a Minor League Stadium obtains funding, a separate traffic study should be performed for the off-site development to analyze the peak hours before and after a game. The peaking characteristics of the entering and exiting of a stadium event may lead to additional improvements not identified in this report.

Based on the results of the analysis performed the following improvements are recommended for the study intersections.

Year 2017 and Year 2032 Background Traffic - Recommended Improvements

Year 2017 and Year 2032 background traffic volumes do not include any development. The analysis was conducted using the existing intersection geometrics, traffic control and the existing traffic signal timings. The following improvements, as shown on [Exhibit 1-2.1](#) and [Exhibit 1-2.2](#), are recommended to WisDOT, Milwaukee County and the City of Franklin for consideration to accommodate the Year 2017 and Year 2032 background traffic volumes.

STH 36 (W. Loomis Road) & W. Drexel Avenue:

- Revise the signal timings.

W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)

- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

W. Rawson Avenue (CTH BB) & S. 68th Street:

- Revise the signal timings.

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps

- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps

- Install traffic signal when warranted;
- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

It should be noted that the extension of the turn lanes on the east and north approaches at W. Rawson Avenue & S. 76th Street will require access restrictions of median openings.

Year 2017 Total Traffic - Recommended Improvements

The Year 2017 total traffic volumes include the full buildout of Franklin Area A and the off-site developments at the Rock. The following improvements, as shown in [Exhibit 1-4](#), are recommended to accommodate the Year 2017 total traffic volumes. The improvements were the same for both Option 1 (with Stadium) & Option 2 (without Stadium) except at the S. 76th Street (CTH U) & W. Crystal Ridge Drive intersection. Option 1 (with Stadium) requires a longer northbound left turn lane to accommodate the higher volume and queuing. In order prevent the northbound left-turn queues from blocking the westbound ramp, it is recommended to relocate W. Crystal Ridge Drive north a minimum of 400' or to align with Highview Drive as shown on [Exhibit 1-4](#).

STH 36 (W. Loomis Road) & W. Drexel Avenue

- Revise signal timings;
- Provide protected/permitted eastbound left-turn phasing at the existing traffic signal;
- Coordinate timings and offsets with the proposed traffic signal at STH 36 (W. Loomis Road) & Middle Access Road intersection

STH 36 (W. Loomis Road) & South Access Road

- Provide stop controlled full access roadway for the South Access Road;
- Provide a dedicated right-turn lane on the south approach;
- Provide a dedicated left-turn lane with in the median on the north approach.

STH 36 (W. Loomis Road) & Middle Access Road

- Install traffic signal;
- Provide protected/permitted left-turn phasing for the eastbound and southbound left-turn phases;
- Provide a dedicated left-turn and a dedicated exclusive right-turn lane on the south approach;
- Provide a dedicated left-turn and a dedicated exclusive right-turn lane on the north approach;
- Provide a dedicated left-turn lane and a shared through/right-turn lane on the west approach;
- Provide a dedicated left-turn lane, through lane and a dedicated right-turn lane on the east approach;
- Coordinate timings and offsets between the proposed traffic signal and the traffic signal located at STH 36 (W. Loomis Road) & W. Drexel Avenue.

STH 36 (W. Loomis Road) & North Access Road

- Provide right-in/ right-out stop sign control access for the west and east North Access Roadways.
- Provide a dedicated right-turn lane on the south approach;
- Provide a dedicated right-turn lane on the north approach.

W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road

- Provide a stop controlled full access for the south approach (West Access Road) to be located opposite W. Crystal Ridge Drive from the north;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the south approach;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the north approach.

W. Rawson Avenue (CTH BB) & East Access Road

- Provide a stop controlled full access for the south approach (East Access Road) to be located on W. Rawson Avenue at the former STH 36 eastbound ramp location;
- Provide a dedicated eastbound right-turn lane on the west approach;
- Provide a dedicated westbound left-turn lane on the east approach;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the south approach.

W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)

- Update traffic signal and revise signal timings;

- Provide protected-only left-turn phasing for the eastbound phase and southbound left-turn phases and provide a protected/permitted westbound right-turn overlap phase;
- Provide dedicated dual left-turn lanes for the west approach;
- Provide dedicated dual left-turn lanes for the north approach.

S. 76th Street (CTH U) & W. Crystal Ridge Drive

- Install traffic signal;
- Provide protected/permitted left-turn phasing for the eastbound and northbound left-turn phases;
- Provide a dedicated left-turn lane and a shared through/right-turn lane for the west approach;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps

- Revise signal timings;
- Provide protected/permitted left-turn phasing for the northbound left-turn phase;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps

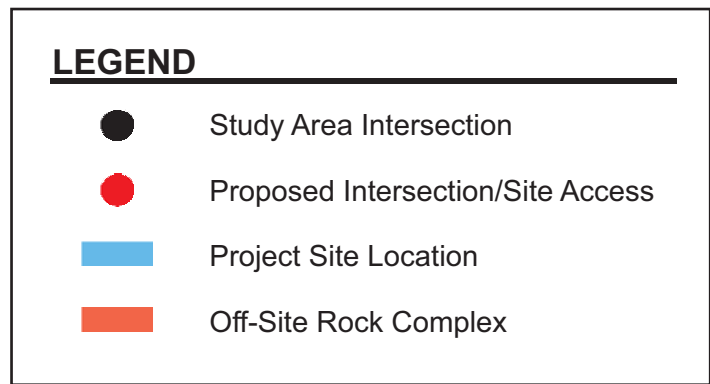
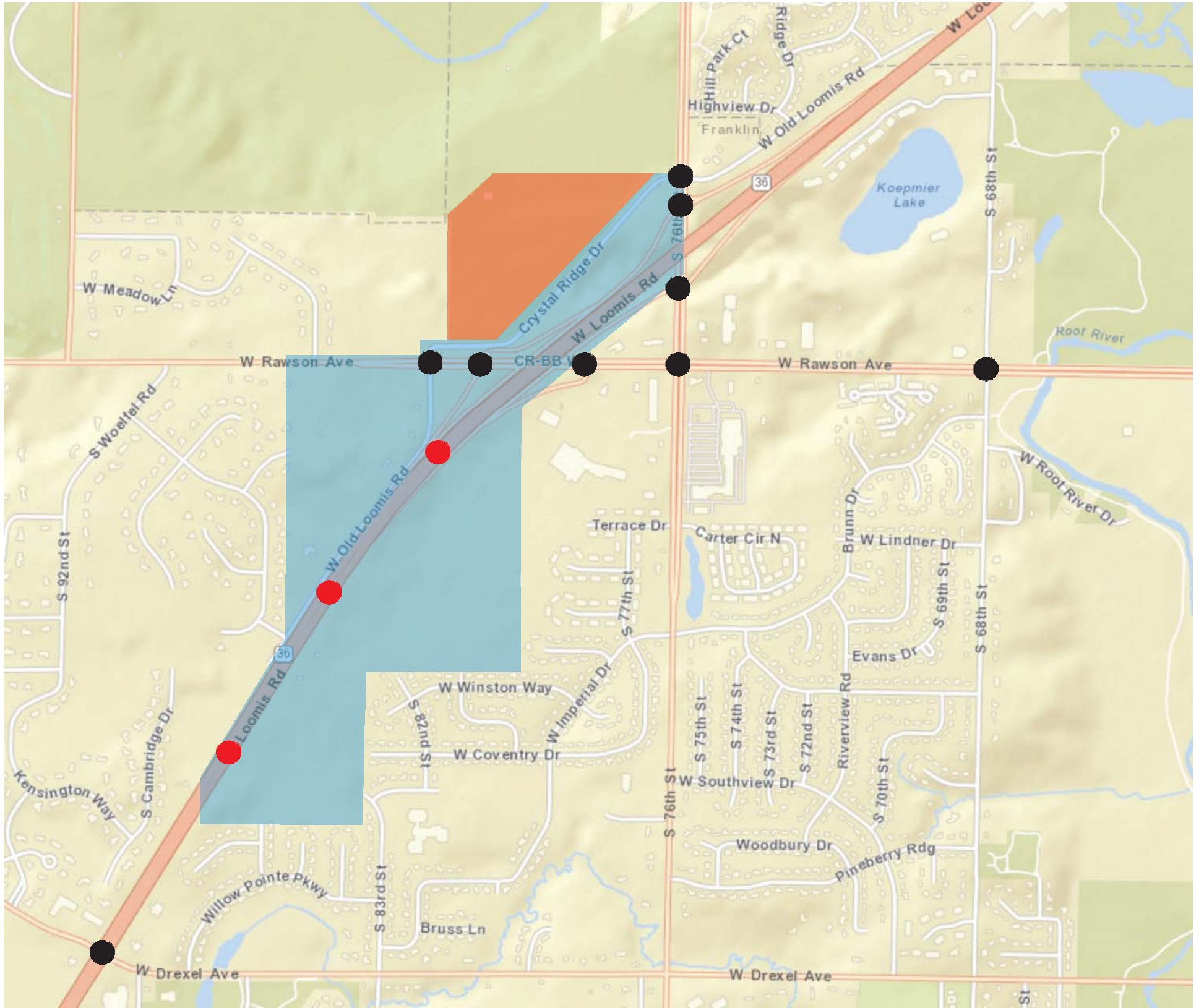
- Install traffic signal;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

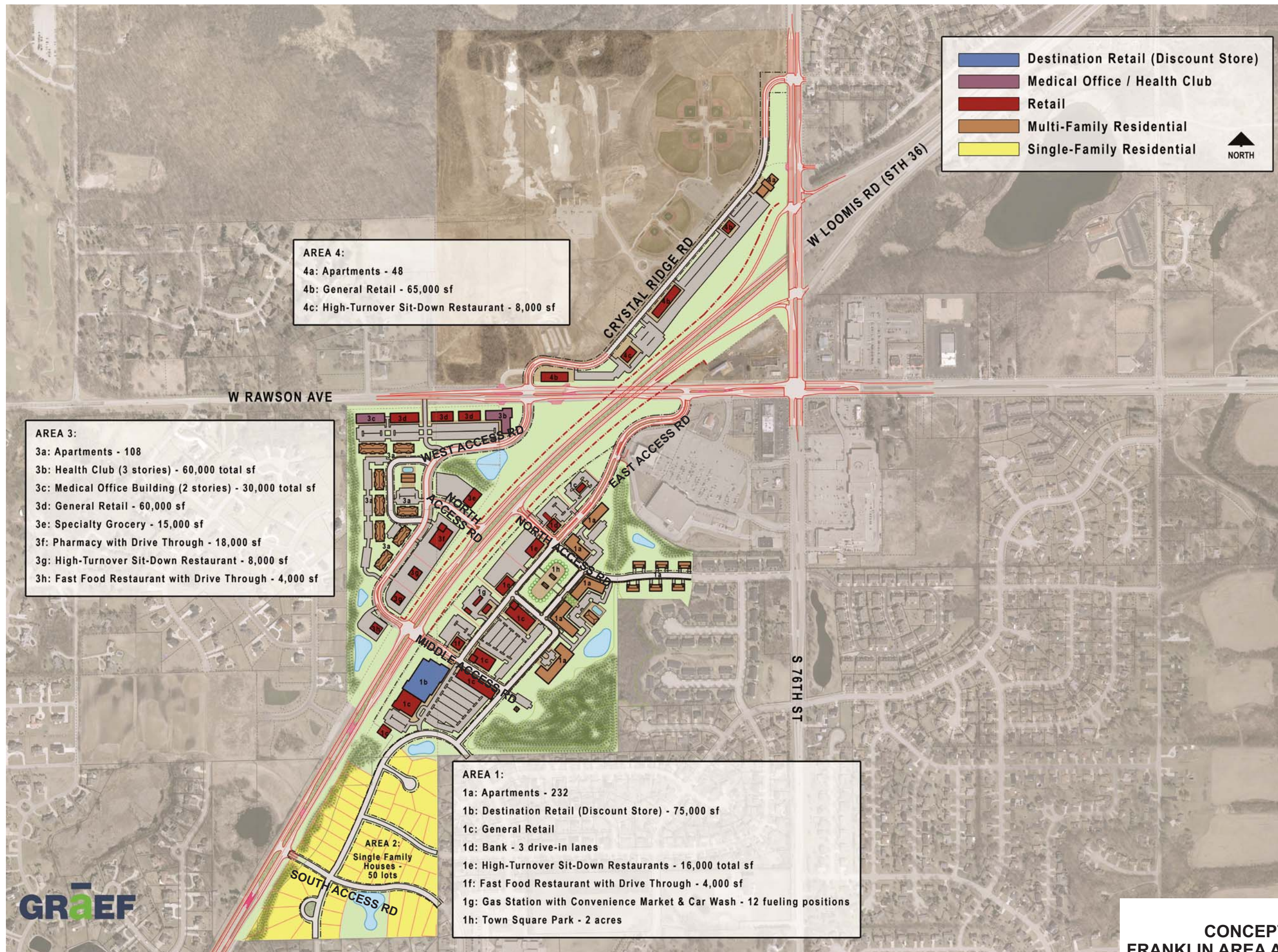
Year 2032 Total Traffic Recommended Improvements

The Year 2032 total traffic recommended improvements are the same for both Option 1 (with Stadium) & Option 2 (without Stadium). Other than extending turn lanes, no additional improvement, as shown in [Exhibits 1-10](#), above and beyond the Year 2017 total traffic volume recommended improvements are proposed to accommodate the Year 2032 total traffic volumes.

Conclusion

To accommodate the full build out of the Franklin Area A development it is necessary to remove of the STH 36 Ramps to/from W. Rawson Avenue and provide new access to the development on STH 36. With the recommended improvements, the study area intersections are expected to continue to operate acceptably through the horizon Year 2032.





AREA 4:
 4a: Apartments - 48
 4b: General Retail - 65,000 sf
 4c: High-Turnover Sit-Down Restaurant - 8,000 sf

AREA 3:
 3a: Apartments - 108
 3b: Health Club (3 stories) - 60,000 total sf
 3c: Medical Office Building (2 stories) - 30,000 total sf
 3d: General Retail - 60,000 sf
 3e: Specialty Grocery - 15,000 sf
 3f: Pharmacy with Drive Through - 18,000 sf
 3g: High-Turnover Sit-Down Restaurant - 8,000 sf
 3h: Fast Food Restaurant with Drive Through - 4,000 sf

AREA 1:
 1a: Apartments - 232
 1b: Destination Retail (Discount Store) - 75,000 sf
 1c: General Retail
 1d: Bank - 3 drive-in lanes
 1e: High-Turnover Sit-Down Restaurants - 16,000 total sf
 1f: Fast Food Restaurant with Drive Through - 4,000 sf
 1g: Gas Station with Convenience Market & Car Wash - 12 fueling positions
 1h: Town Square Park - 2 acres

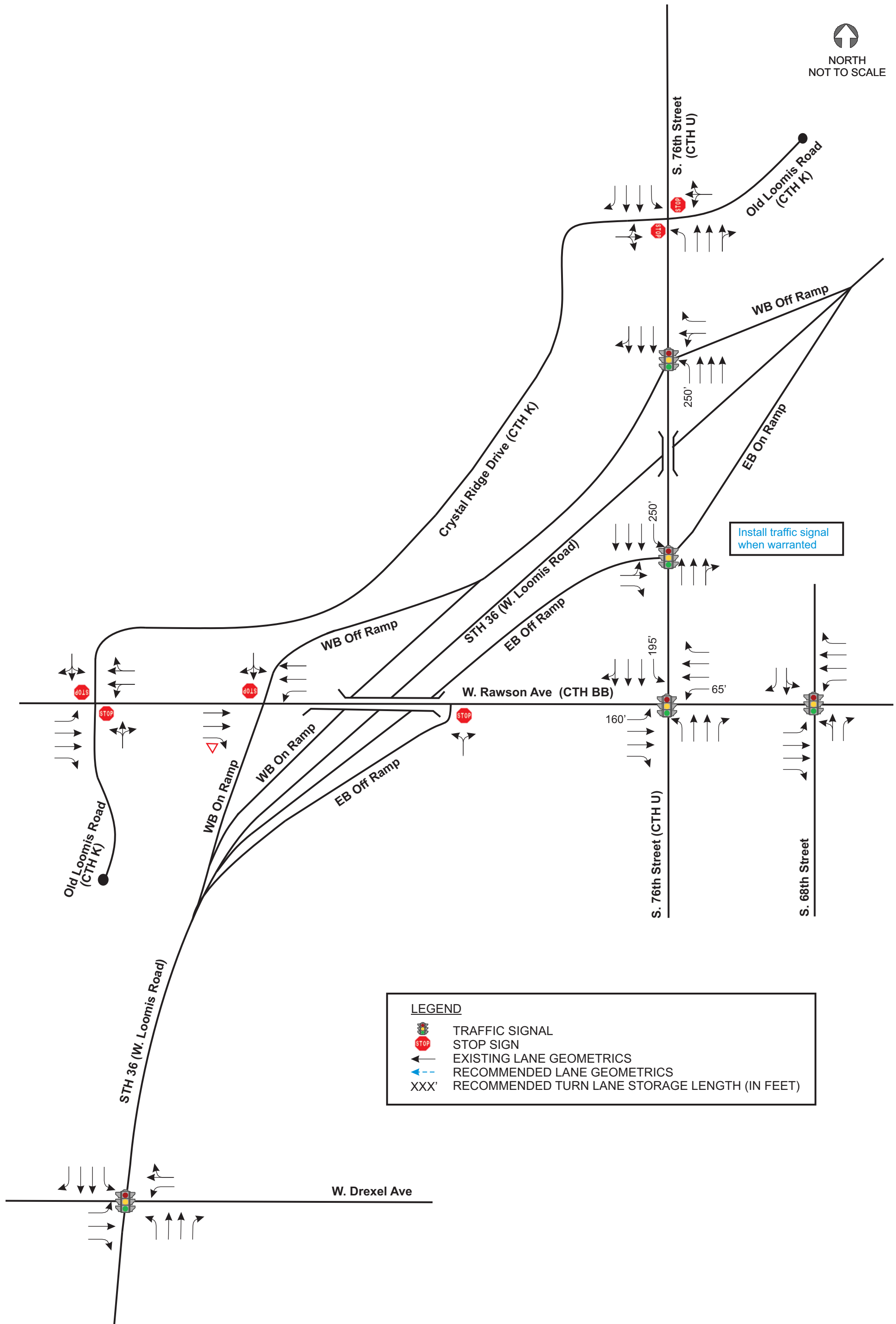
AREA 2:
 Single Family Houses - 50 lots

Destination Retail (Discount Store)
 Medical Office / Health Club
 Retail
 Multi-Family Residential
 Single-Family Residential

NORTH

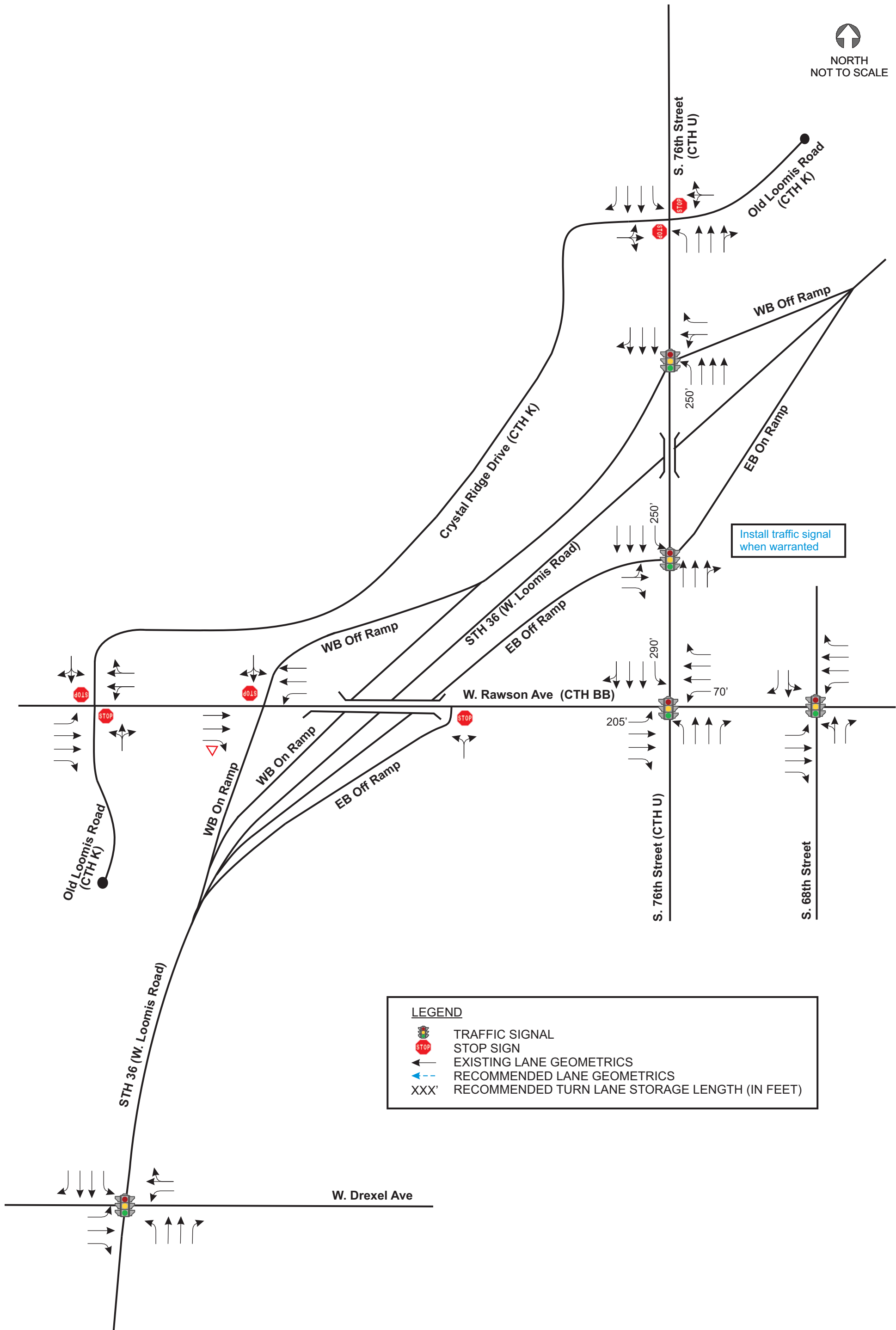


EXHIBIT 1-1.2
CONCEPTUAL SITE PLAN
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



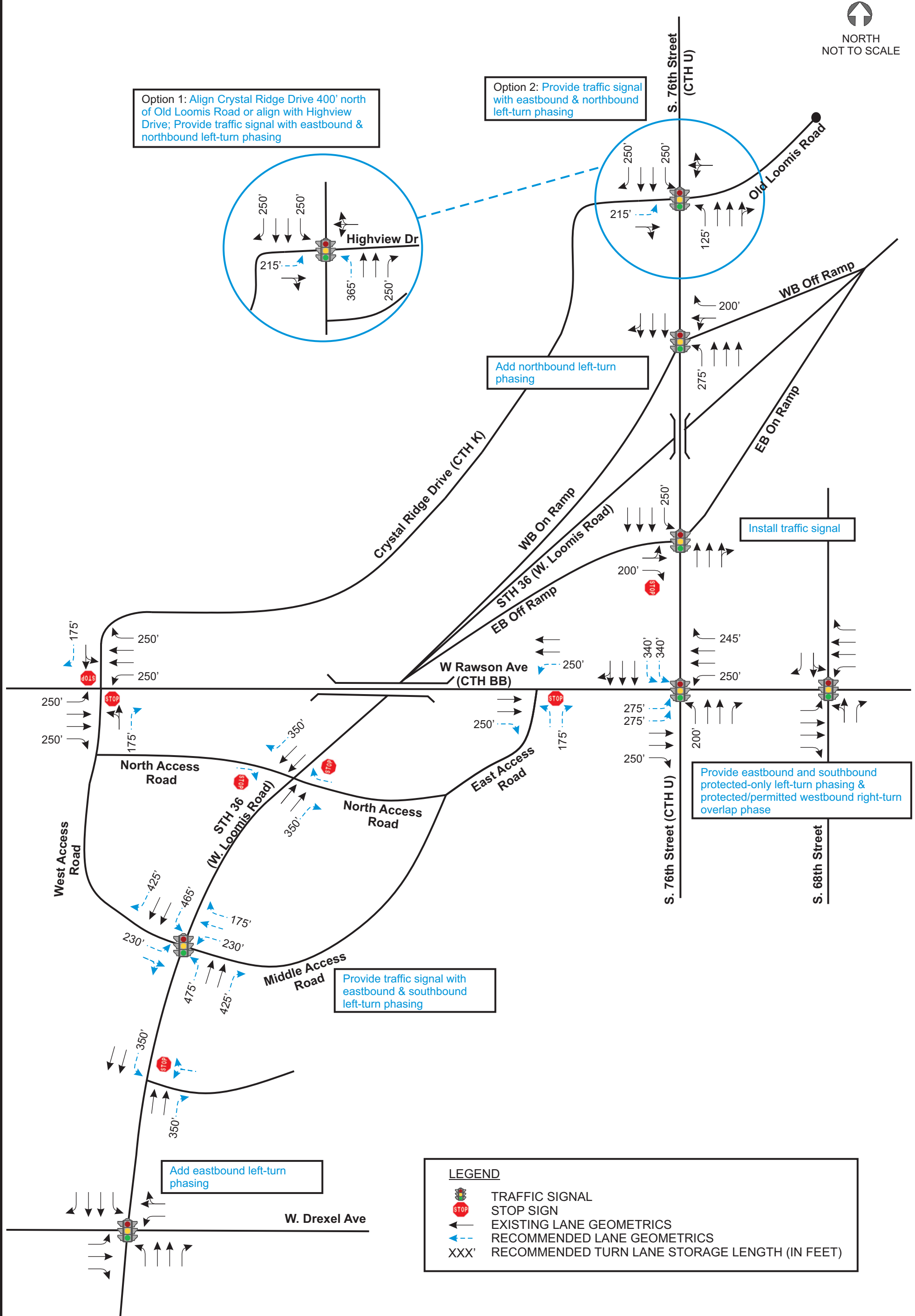
LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- EXISTING LANE GEOMETRICS
- RECOMMENDED LANE GEOMETRICS
- XXX' RECOMMENDED TURN LANE STORAGE LENGTH (IN FEET)



LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
	EXISTING LANE GEOMETRICS
	RECOMMENDED LANE GEOMETRICS
	RECOMMENDED TURN LANE STORAGE LENGTH (IN FEET)

EXHIBIT 1-2.2
YEAR 2032 BACKGROUND TRAFFIC
RECOMMENDED IMPROVEMENTS
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



Option 1: Align Crystal Ridge Drive 400' north of Old Loomis Road or align with Highview Drive; Provide traffic signal with eastbound & northbound left-turn phasing

Option 2: Provide traffic signal with eastbound & northbound left-turn phasing

Add northbound left-turn phasing

Install traffic signal

Provide eastbound and southbound protected-only left-turn phasing & protected/permitted westbound right-turn overlap phase

Provide traffic signal with eastbound & southbound left-turn phasing

Add eastbound left-turn phasing

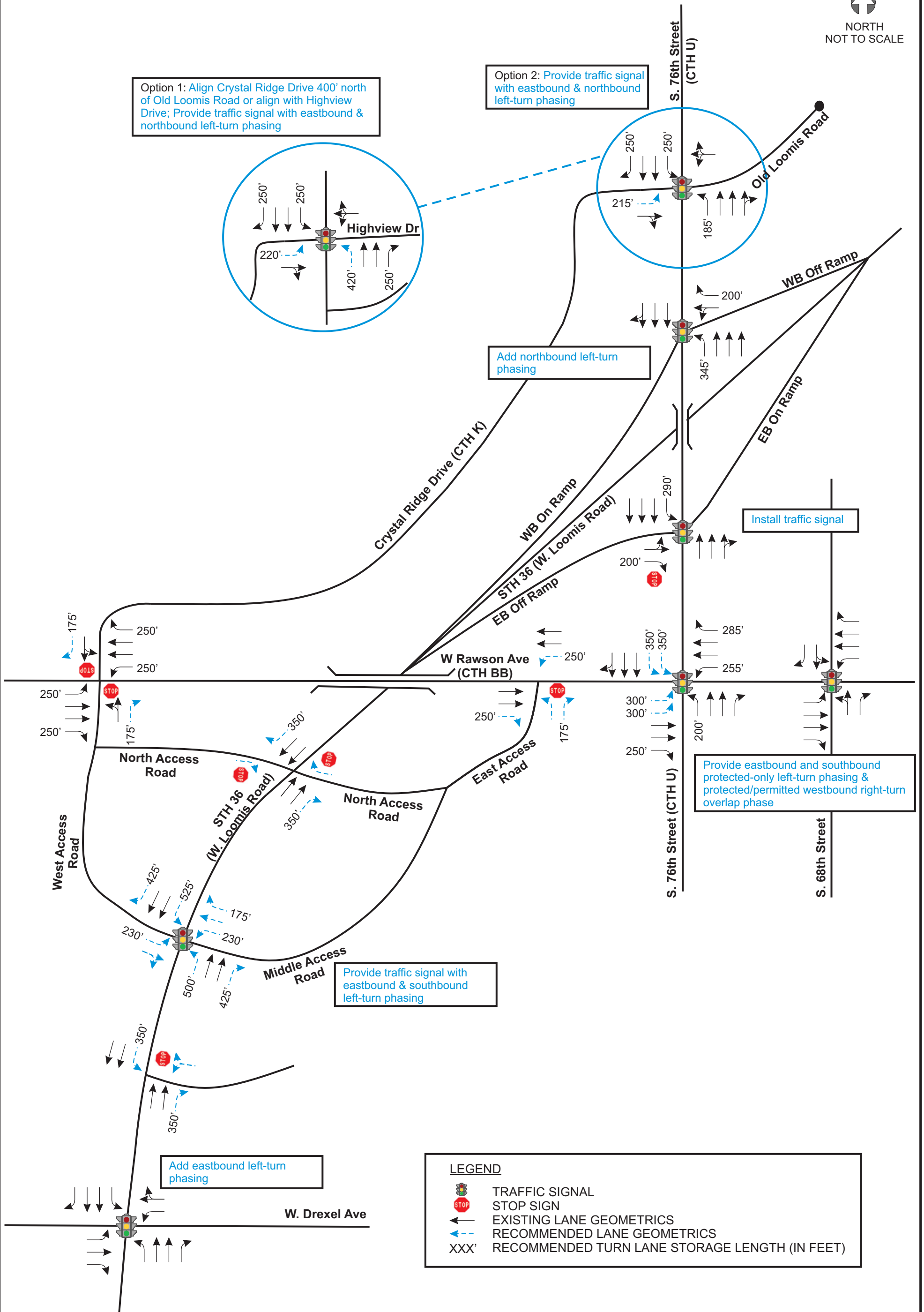
LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- EXISTING LANE GEOMETRICS
- RECOMMENDED LANE GEOMETRICS
- XXX' RECOMMENDED TURN LANE STORAGE LENGTH (IN FEET)

EXHIBIT 1-4
YEAR 2017 TOTAL TRAFFIC
RECOMMENDED IMPROVEMENTS
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

Option 1: Align Crystal Ridge Drive 400' north of Old Loomis Road or align with Highview Drive; Provide traffic signal with eastbound & northbound left-turn phasing

Option 2: Provide traffic signal with eastbound & northbound left-turn phasing



LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- EXISTING LANE GEOMETRICS
- RECOMMENDED LANE GEOMETRICS
- XXX' RECOMMENDED TURN LANE STORAGE LENGTH (IN FEET)

**EXHIBIT 1-10
YEAR 2032 TOTAL TRAFFIC
RECOMMENDED IMPROVEMENTS
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI**

CHAPTER II – PROPOSED DEVELOPMENT

PART A – ON-SITE DEVELOPMENT

A1 Development Description and Site Location

The Franklin Area A Development is a mixed use development proposed to be located along STH 36 (W. Loomis Road) at the interchanges with W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U) in the City of Franklin.

[Exhibit 2-1](#) shows the site location for the proposed development.

A2 Land Use and Intensity

The Franklin Area A development is proposed to include the following land uses:

- Apartments –388 units
- Single Family Houses – 50 lots
- Destination Retail (Discount Store) – 200,000 sf
- General Retail – 95,000 sf
- Drive-in Bank (3 drive-in lanes)
- High-Turnover Sit-Down Restaurants – 32,000 total sf
- Fast Food Restaurant with Drive Through – 8,000 sf
- Gas Station with Convenience Market & Car Wash
- Health Club – 60,000 sf
- Medical Office Building – 30,000 sf
- Pharmacy with Drive Through – 18,000 sf
- Specialty Grocery – 15,000 sf
- Town Square Park – 2 acres

A3 Site Plan

A conceptual site plan for the proposed development is shown on [Exhibit 2-2](#). As shown on the site plan, there are three planned access locations to the development on STH 36. The future South Access Road intersection with STH 36 is planned to be located approximately 2,140 feet north of W. Drexel Avenue. The future Middle Access Road intersection with STH 36 is planned to be located approximately 1,870 feet north of the future South Access Road. The future North Access Road intersection with the west side of STH 36 is planned to be located approximately 900 feet north of the future Middle Access Road. The future North Access Road intersection with the east side of STH 36 is planned to be located approximately 1,200 feet north of the future Middle Access Road. On W. Rawson Avenue the West Access Road will align with the Crystal Ridge Drive. This intersection is proposed to be relocated approximately 200' east of its current location. The East Access Road will connect on W. Rawson Avenue at former STH 36 eastbound ramp location. Area 4 of the development will also have access to S. 76th Street using Crystal Ridge Drive.

A4 Development Phasing and Timing

The development is planned to be constructed in multiple phases beginning in the year 2017, the base year. Full build of the development is anticipated by the year 2027. The horizon year shall be is typically 10 years after the opening of the proposed development or five years after full buildout, whichever is greater. Therefore the horizon year for the Franklin Area A development traffic impact study will be Year 2032.

PART B – STUDY AREA

Based on discussions with the WisDOT staff, the study area includes the following intersections:

- STH 36 (W. Loomis Road) & W. Drexel Avenue
- W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive (*future West Access*)
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps (*ramps proposed to be removed*)
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps (*ramp proposed to be removed, future East Access*)
- W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)
- W. Rawson Avenue (CTH BB) & S. 68th Street
- S. 76th Street (CTH U) & W. Crystal Ridge Drive (CTH K)
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps
- STH 36 (W. Loomis Road) & 3 Proposed Access Locations (North, Middle & South)

PART C – OFF-SITE LAND USE AND DEVELOPMENT

One off-site development was identified within the limits of the study area which is the build out of the Rock Complex.

PART D – SITE ACCESSIBILITY

The study area roadways are described below:

STH 36 (W. Loomis Road) is a four-lane northeast/southwest divided principal arterial that passes under S. 76th Street and W. Rawson Avenue with ramp connections to both roadways. According to the Wisconsin Department of Transportation (WisDOT), the Year 2014 Annual Average Daily Traffic (AADT) along STH 36 ranged from 16,700 vehicles per day (vpd) north of W. Drexel Avenue to 18,600 vpd north of S. 76th Street. STH 36 has a 45 mph speed limit from the south study limits to 0.3 miles north of W. Drexel Avenue where the speed limit increases to 55 mph. The 55 mph speed limit continues for 1.9 miles through the W. Rawson Avenue and S. 76th Street ramps and then decreases to 45 mph near S. 68th Street.

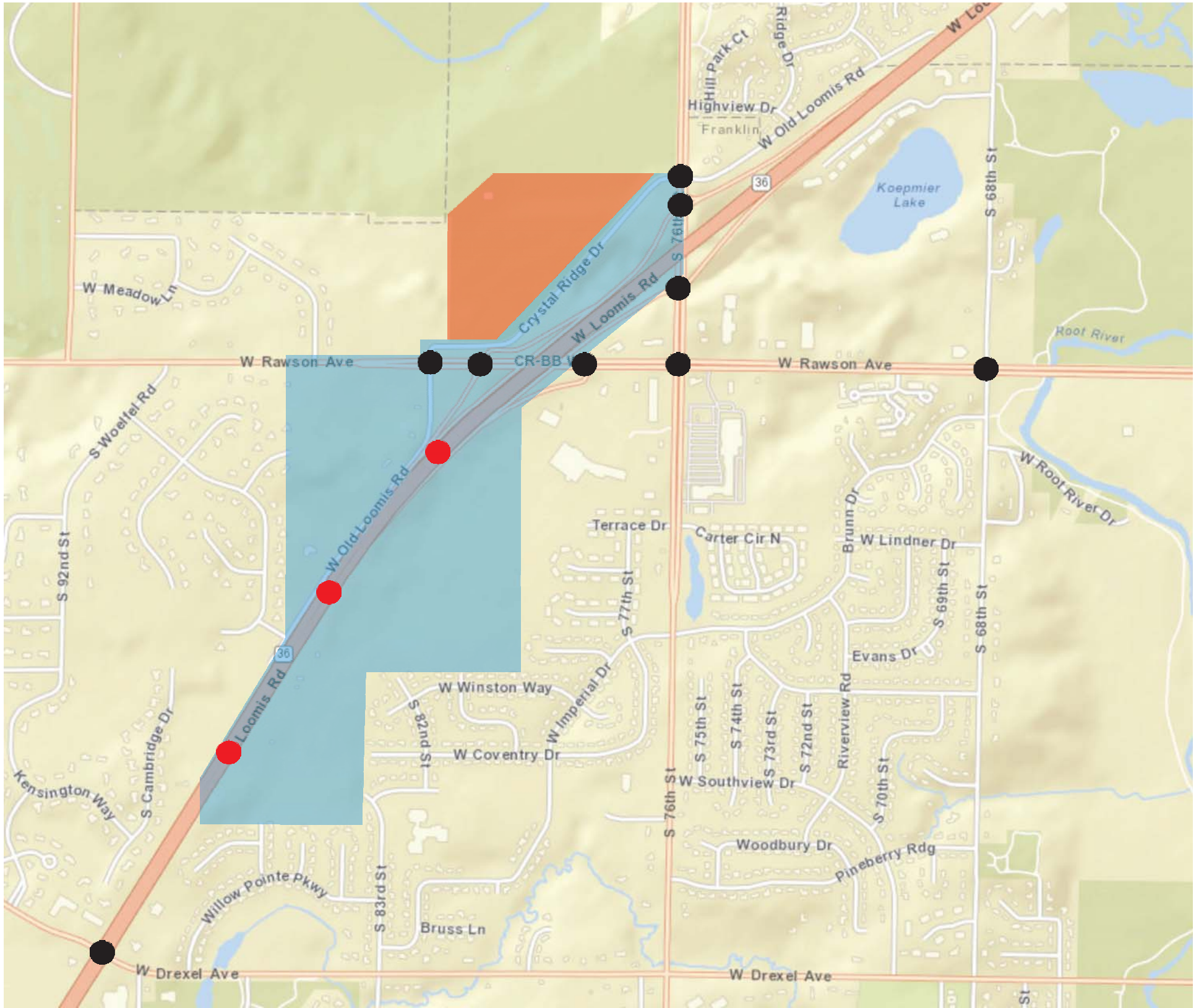
W. Rawson Avenue (CTH BB) is an east/west principal arterial that transitions from a two-lane undivided roadway section to a four-lane divided roadway section west of Crystal Ridge Drive. The median width through the study area is at least 25 feet wide allowing for two-stage crossing movements (vehicles can wait in the median before completing their maneuver) at stop controlled intersections. W. Rawson Avenue has a 40 mph speed limit within the study area. According to the WisDOT, the Year 2014 AADTs along W. Rawson Avenue ranged from 23,900 vpd east of S. 76th Street to 9,700 vpd west of Crystal Ridge Drive.

S. 76th Street (CTH U) is a six-lane divided north/south principal arterial with a posted speed limit of 40 mph through the study area. According to WisDOT, the most recent AADTs along S. 76th Street were 18,100 vpd north of Crystal Ridge Drive (Year 2014), 24,700 vpd north of W. Rawson Avenue (Year 2011) and 12,400 vpd north of W. Drexel Avenue (Year 2011).

S. 68th Street is a two-lane undivided north/south collector roadway with a posted speed limit of 30 mph through the study area. According to WisDOT, the Year 2011 AADT on S. 68th Street was 2,300 vpd north of W. Rawson Avenue and 2,600 vpd south of W. Rawson Avenue.

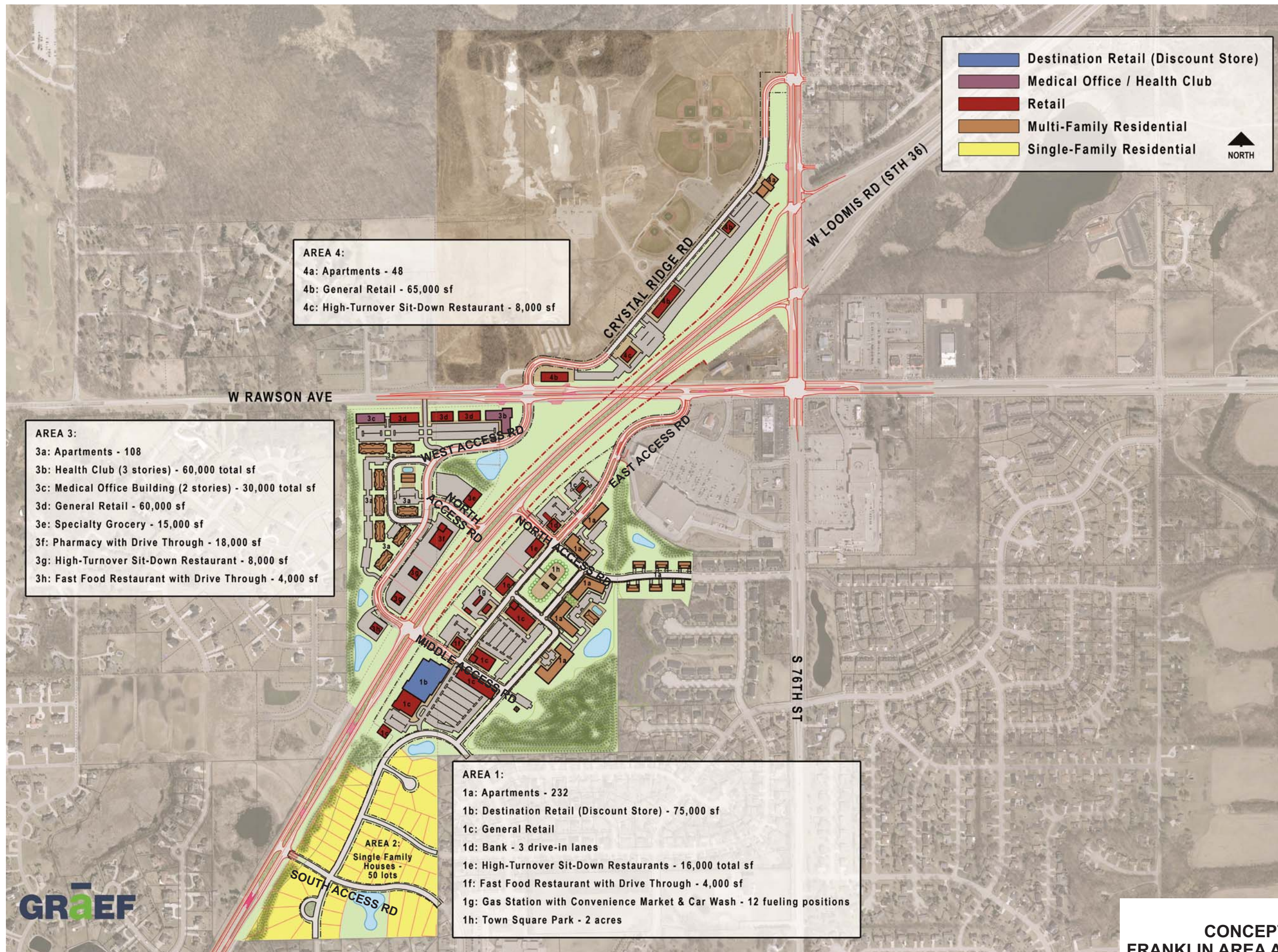
W. Drexel Avenue is a two-lane undivided east/west minor arterial roadway with a posted speed limit of 35 mph through the study area. The Year 2014 WisDOT AADT on W. Drexel Avenue ranged from 13,700 vpd west of STH 36 to 4,100 vpd east of STH 36.

Crystal Ridge Drive / Old Loomis Road (CTH K) is a two-lane northeast/southwest undivided local roadway that provides access through the Rock Sports Complex. The posted speed limit on Crystal Ridge Drive / Old Loomis Road is posted at 35 mph.



LEGEND

- Study Area Intersection
- Proposed Intersection/Site Access
- Project Site Location
- Off-Site Rock Complex



AREA 4:
 4a: Apartments - 48
 4b: General Retail - 65,000 sf
 4c: High-Turnover Sit-Down Restaurant - 8,000 sf

AREA 3:
 3a: Apartments - 108
 3b: Health Club (3 stories) - 60,000 total sf
 3c: Medical Office Building (2 stories) - 30,000 total sf
 3d: General Retail - 60,000 sf
 3e: Specialty Grocery - 15,000 sf
 3f: Pharmacy with Drive Through - 18,000 sf
 3g: High-Turnover Sit-Down Restaurant - 8,000 sf
 3h: Fast Food Restaurant with Drive Through - 4,000 sf

AREA 1:
 1a: Apartments - 232
 1b: Destination Retail (Discount Store) - 75,000 sf
 1c: General Retail
 1d: Bank - 3 drive-in lanes
 1e: High-Turnover Sit-Down Restaurants - 16,000 total sf
 1f: Fast Food Restaurant with Drive Through - 4,000 sf
 1g: Gas Station with Convenience Market & Car Wash - 12 fueling positions
 1h: Town Square Park - 2 acres

AREA 2:
 Single Family Houses - 50 lots

Destination Retail (Discount Store)
 Medical Office / Health Club
 Retail
 Multi-Family Residential
 Single-Family Residential

NORTH



EXHIBIT 2-2
CONCEPTUAL SITE PLAN
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

CHAPTER III – ANALYSIS OF EXISTING CONDITIONS

PART A – PHYSICAL CHARACTERISTICS

[Exhibit 3-1A](#) shows the existing transportation system for the study area intersections and roadways. Specifically, this exhibit illustrates the intersection traffic control and the geometrics for the study area intersections. The geometrics planned for the Franklin Area A development are shown on [Exhibit 3-1B](#).

PART B – TRAFFIC VOLUMES

In March and April of 2015, GRAEF collected 13 hour weekday turning movement counts from 6:00 am to 7:00 pm at the following intersections:

- W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps
- W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps

GRAEF collected weekday evening turning movement counts from 3:00 pm to 7:00 pm at the following intersections:

- STH 36 (W. Loomis Road) & W. Drexel Avenue
- W. Rawson Avenue (CTH BB) & S. 68th Street
- S. 76th Street (CTH U) & W. Crystal Ridge Drive
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps
- S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps

GRAEF collected Saturday turning movement counts at the nine study intersections from 10:00 am to 2:00 pm. The traffic counts are included in [Appendix A1](#).

Based on the traffic counts, the weekday evening peak traffic hour was identified to be 4:30 to 5:30 pm and the Saturday midday peak traffic hour was identified to be 11:30 am to 12:30 pm. These peak hours are expected to coincide with the peak hours of the proposed development. The existing (Year 2015) peak hour traffic volumes are shown on [Exhibit 3-2A.1](#).

The existing Rock Complex (6 baseball fields) was not in-use when the traffic counts were conducted. Therefore, the existing off-site traffic was developed using data published in the Institute of Transportation Engineer's (ITE's) *Trip Generation, 9th Edition (2012)* as shown in [Exhibit 4-3.2](#). The existing (Year 2015) off-site development peak hour traffic volumes are shown on [Exhibit 3-2A.2](#). Existing off-site traffic volumes were added to the existing peak hour volumes to get the existing (Year 2015) total peak hour traffic volumes, shown on [Exhibit 3-2A.3](#).

PART C – CAPACITY / LEVEL OF SERVICE

Level of Service Definition

The study area intersections were analyzed using procedures set forth in the *2010 Highway Capacity Manual* (HCM) using Synchro 8. For analysis and design purposes, Level of Service (LOS) 'D' was used to define acceptable peak hour operating conditions. Level of Service is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. Descriptions of the various levels of service are presented below:

LOS A is the highest level of service that can be achieved. Under this condition, intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation. At signalized intersections, average delays are less than 10 seconds. At unsignalized intersections, average delays are less than 10 seconds.

LOS B represents stable operation. At signalized intersections, average vehicle delays are 10 to 20 seconds. At unsignalized intersections, average delays are 10 to 15 seconds.

LOS C still represents stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so. At signalized intersections, average vehicle delays are 20 to 35 seconds. At unsignalized intersections, average delays are 15 to 25 seconds.

LOS D represents increasing traffic restrictions as the intersection approaches instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs, thus preventing excessive backups. At signalized intersections, average vehicle delays are 35 to 55 seconds. At unsignalized intersections, average delays are 25 to 35 seconds.

LOS E represents the capacity of the intersection. At signalized intersections, average vehicle delays are 55 to 80 seconds. At unsignalized intersections, average delays are 35 to 50 seconds.

LOS F represents jammed conditions where the intersection is over capacity and acceptable gaps for unsignalized intersections in the mainline traffic flow are minimal. At signalized intersections, average vehicle delays exceed 80 seconds. At unsignalized intersections, average delays exceed 50 seconds.

Table 1 summarizes the delay associated with the levels of service.

Table 1
Intersection Level of Service (LOS) Designations

Level of Service (LOS)	Traffic Signals	Unsignalized
	Average Delay per Vehicle (sec/veh)	Average Delay per Vehicle (sec/veh)
A	<10.0	<10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	>80.0	>50.0

Year 2017 Background Traffic Conditions – No Improvements

[Exhibit 3-3](#) shows the peak hour operating conditions for the Year 2017 background traffic at the study area intersections. The traffic analysis is based on the existing intersection geometrics and traffic control shown on [Exhibit 3-1A](#) and the Year 2017 background traffic volumes shown in [Exhibit 3-2B.1](#).

As shown in [Exhibit 3-3](#), all movements at the study area intersections are expected to operate acceptably at LOS D or better conditions with the existing intersection geometrics, except the following:

- The eastbound shared through/left-turn movement at the S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The northbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening and Saturday midday peak hour.
- The southbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening peak hour.

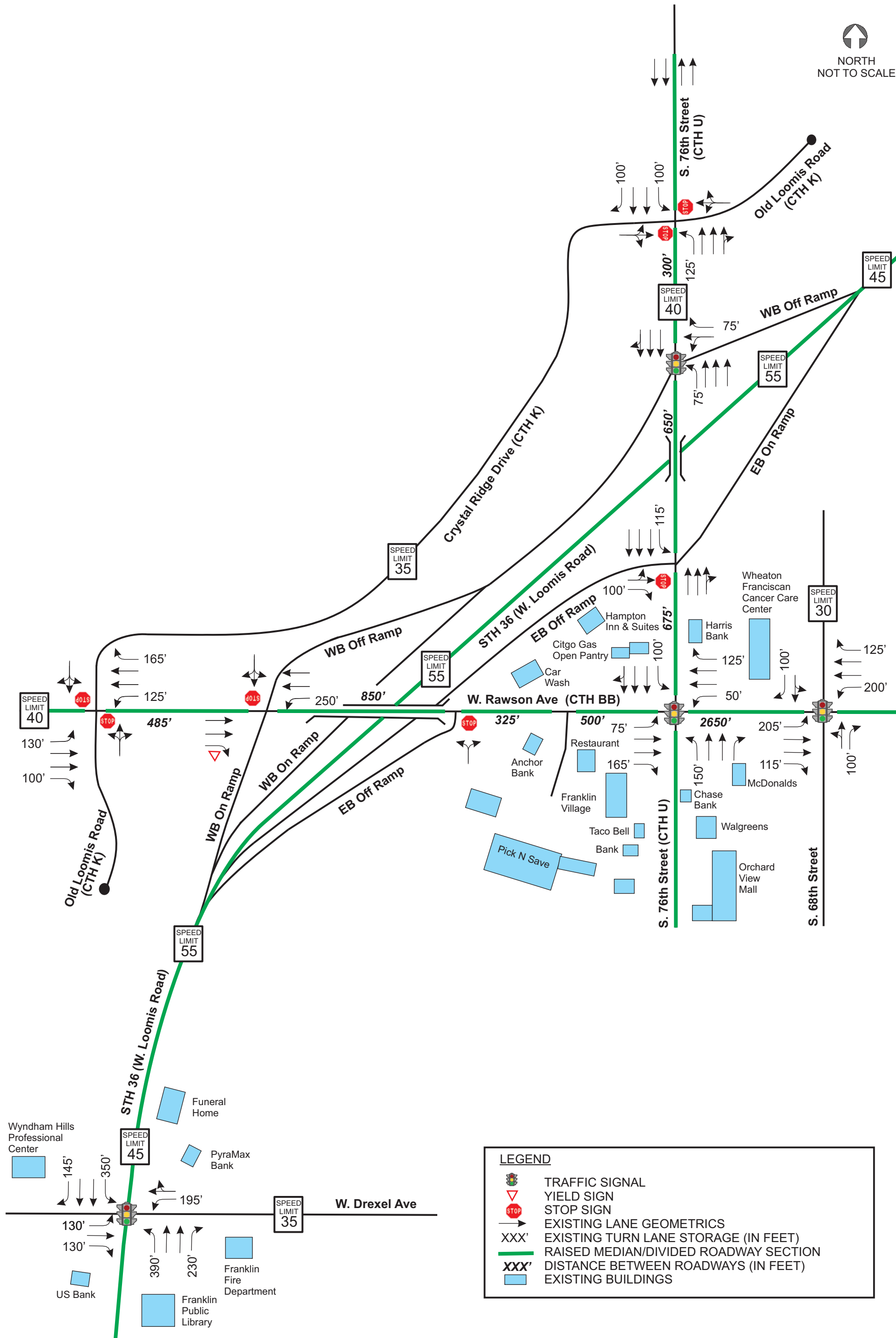
The Year 2017 traffic operational analysis with the existing transportation system is provided in Appendix B1.

Improvement operations and recommendations are discussed in Chapter V and Chapter VI respectively.

PART D – SOURCES OF DATA

The following sources of data were used for the traffic impact analysis:

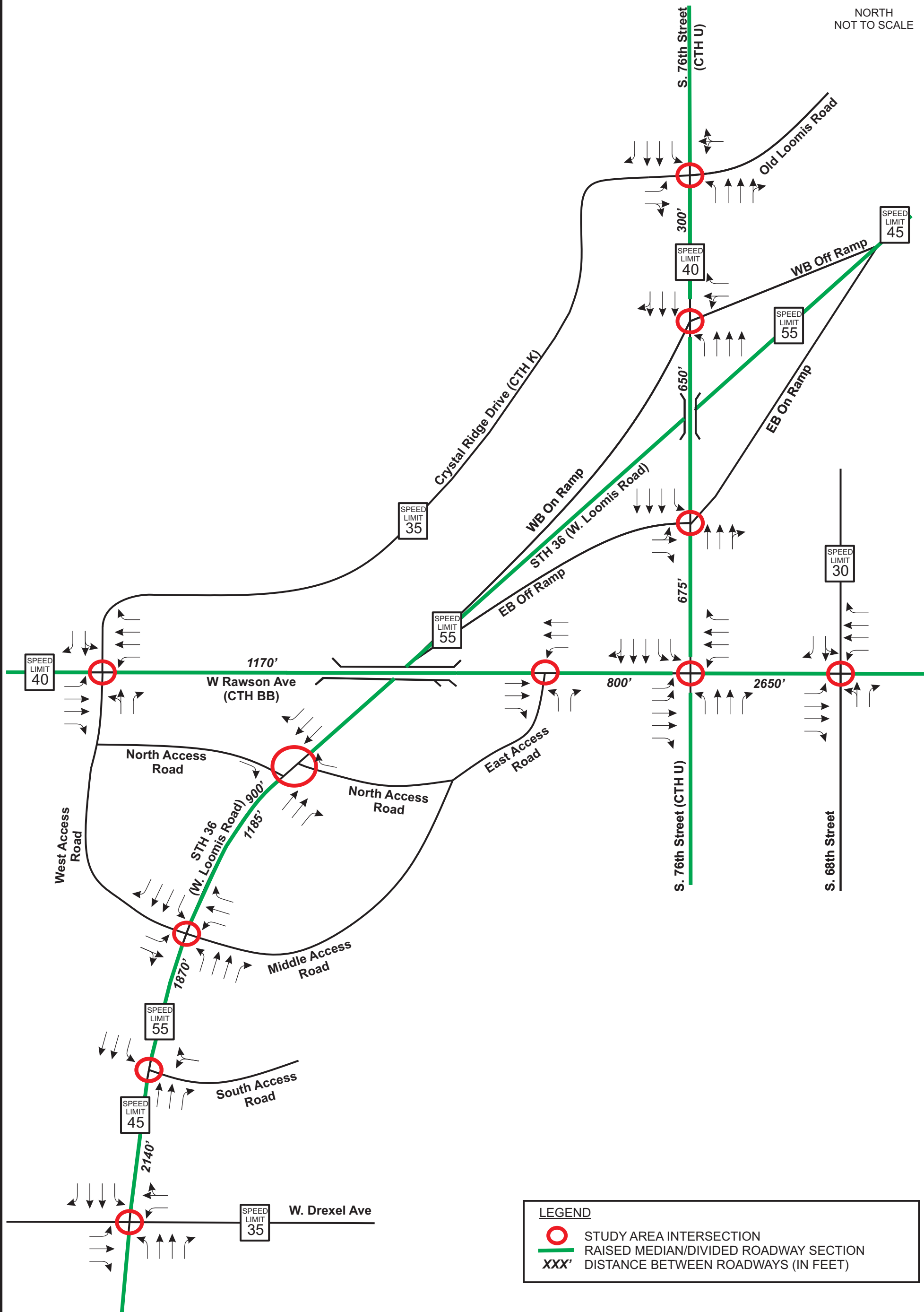
- Intersection turning movement counts: GRAEF – *March/ April 2015* and WisDOT - *August 2015*
- Annual Average Daily Traffic (AADTs): WisDOT
- Traffic Forecast: WisDOT – September 7, 2015
- Existing traffic signal timings: WisDOT and Milwaukee County
- Development Information: City of Franklin planning and GRAEF planning



LEGEND

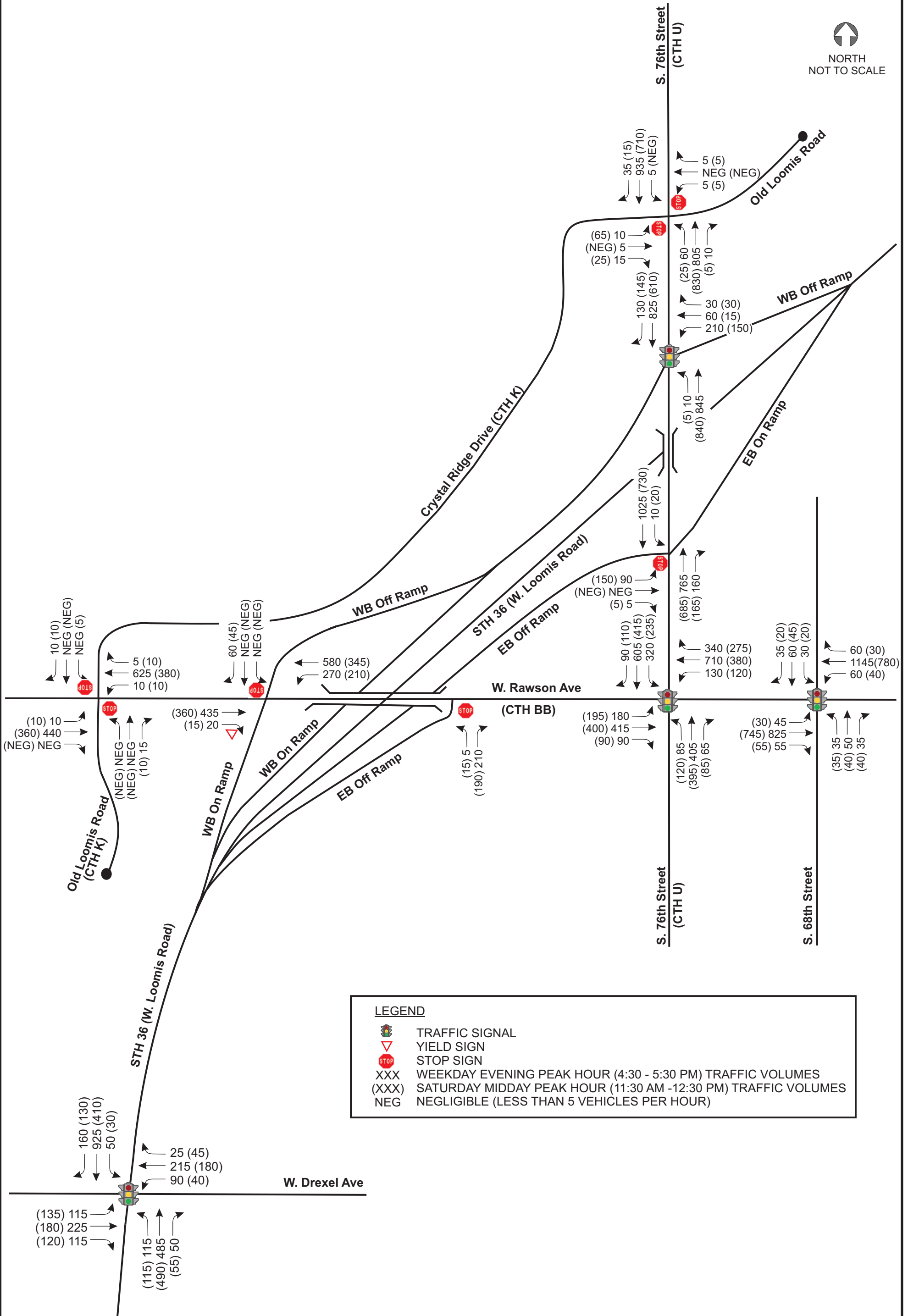
- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- EXISTING LANE GEOMETRICS
- XXX' EXISTING TURN LANE STORAGE (IN FEET)
- RAISED MEDIAN/DIVIDED ROADWAY SECTION
- XXX' DISTANCE BETWEEN ROADWAYS (IN FEET)
- EXISTING BUILDINGS

EXHIBIT 3-1A
EXISTING TRANSPORTATION SYSTEM
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND

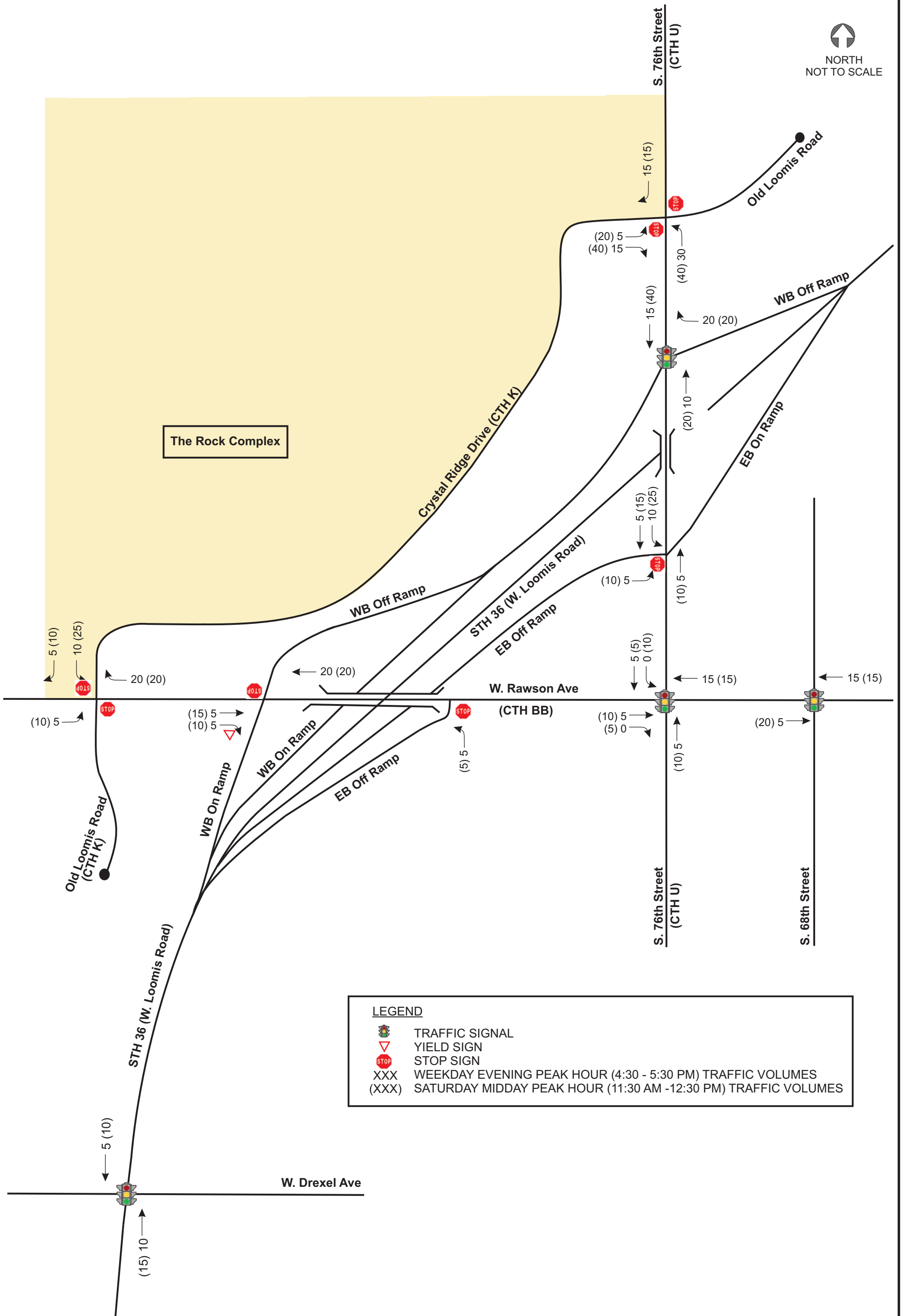
- STUDY AREA INTERSECTION
- RAISED MEDIAN/DIVIDED ROADWAY SECTION
- XXX' DISTANCE BETWEEN ROADWAYS (IN FEET)



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
- NEG NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

EXHIBIT 3-2A.1
EXISTING (YEAR 2015) PEAK HOUR TRAFFIC VOLUMES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES

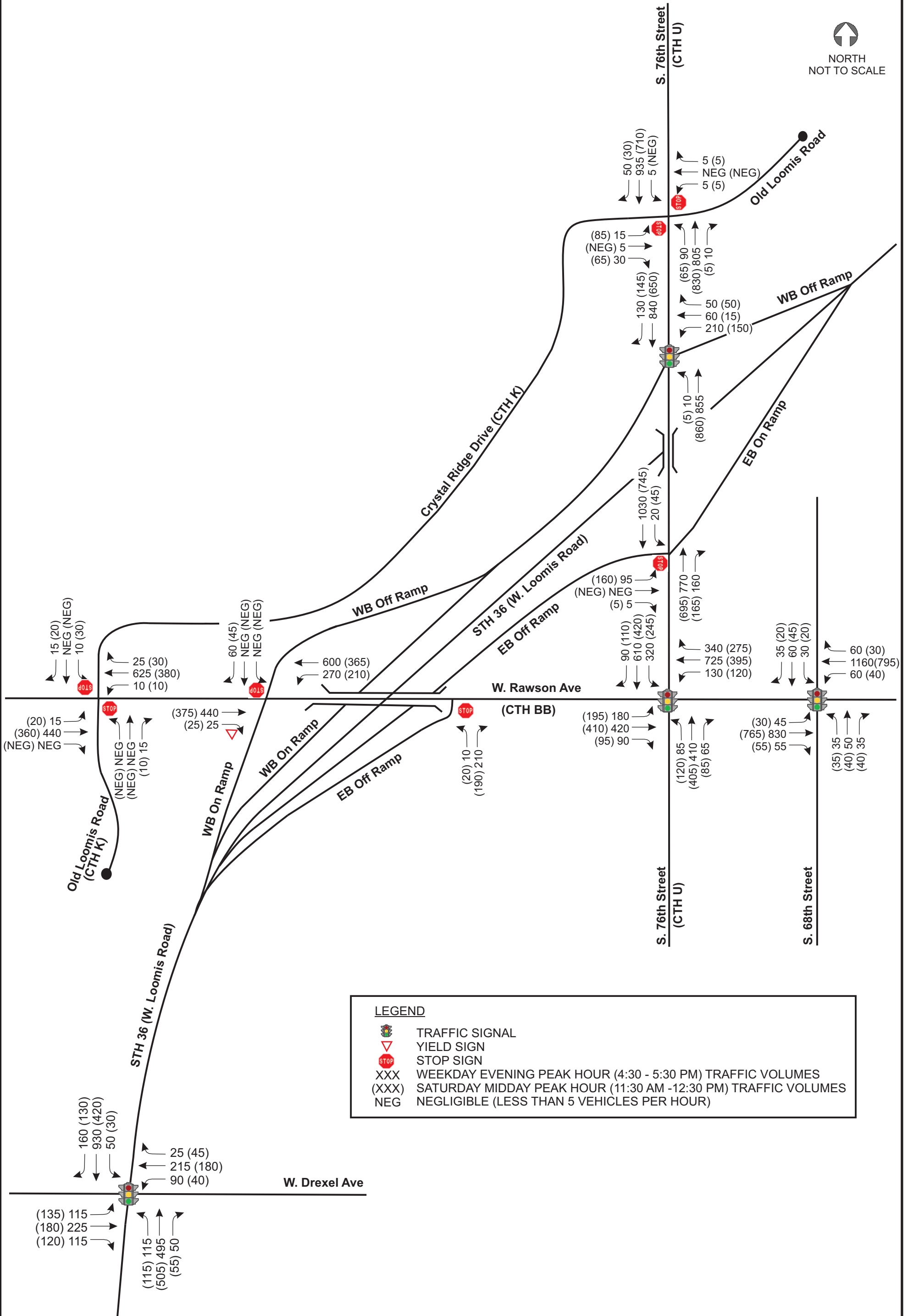
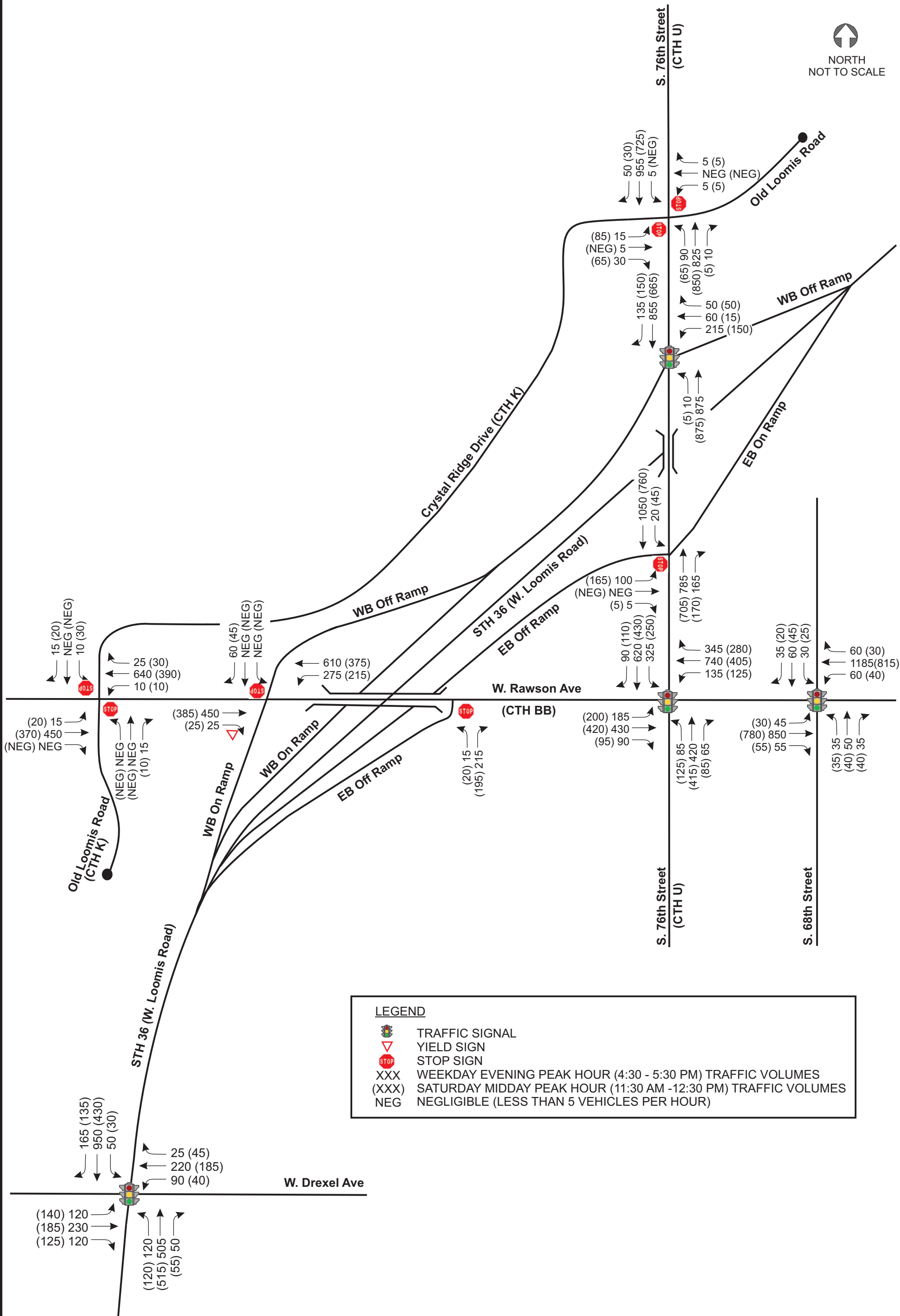


EXHIBIT 3-2A.3
EXISTING (YEAR 2015) TOTAL PEAK HOUR TRAFFIC VOLUMES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
- NEG NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

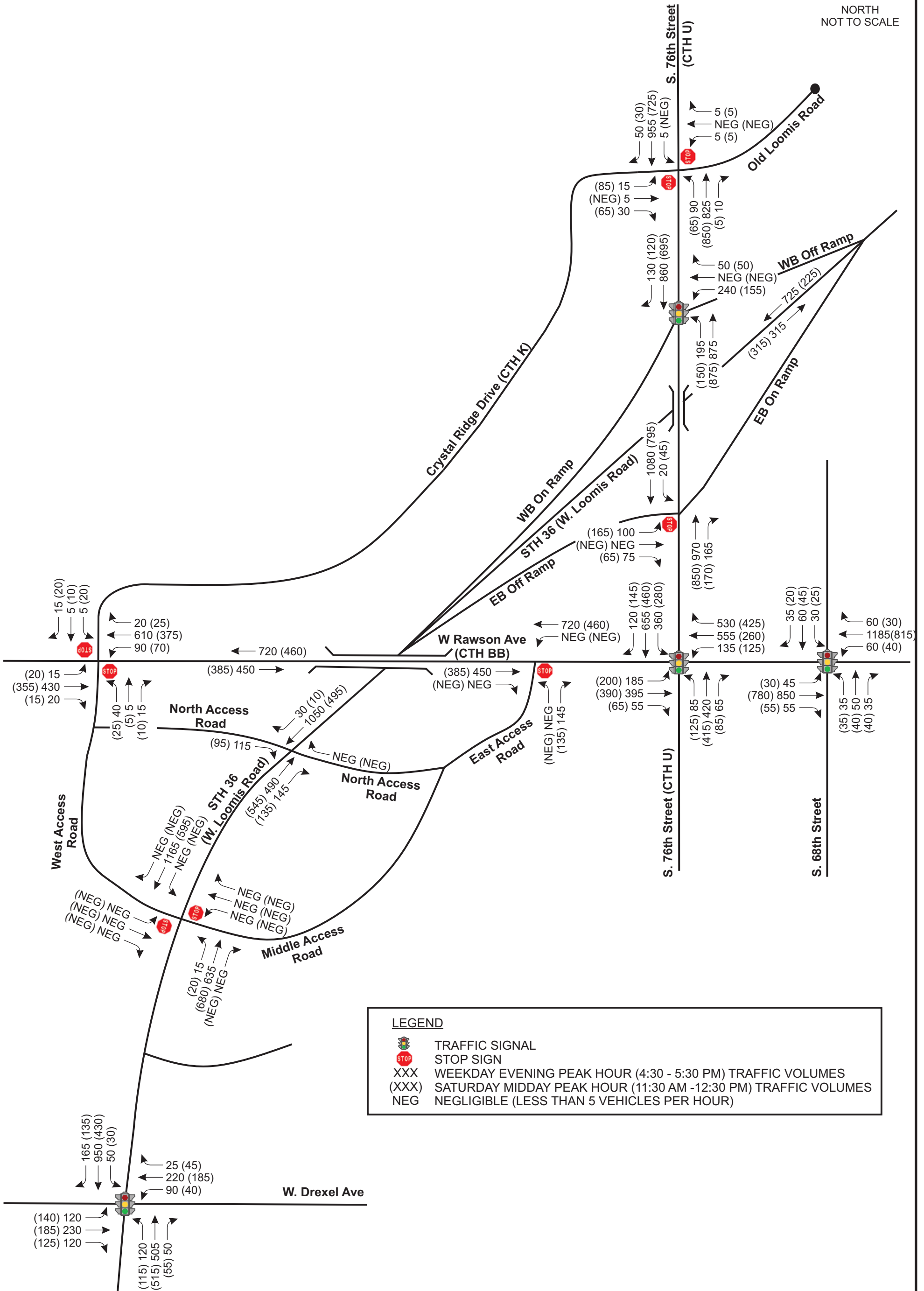


EXHIBIT 3-2B.2
YEAR 2017 REDISTRIBUTED BACKGROUND TRAFFIC VOLUMES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	C	B	B	C		B	A	A	B	C	B	B	
		SAT	C	B	B	B		B	A	A	B	B	B	B	
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	A	A	A	A	A	A	B			B			--
		SAT	A	A	A	A	A	A	B			B			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps	Two-Way Stop Control	PM	--	A	A	A	A	--	--	--	--	B			--
		SAT	--	A	A	A	A	--	--	--	--	A			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	--	A	--	--	A	--	B			--	--	--	--
		SAT	--	A	--	--	A	--	B			--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	C	C	C	B	B	B	C	D	C	C	C	C	C
		SAT	B	C	B	B	B	B	C	D	C	C	C	C	C
W. Rawson Avenue (CTH BB) & S. 68th Street	Traffic Signal	PM	A	A	A	A	B	A	E ¹		C	E ²		C	B
		SAT	A	C	B	A	B	A	E ³		C	D		C	B
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	C			D			B	A	A	B	A	A	--
		SAT	D			C			A	A	A	B	A	A	--
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	B		A	B	A	--	--	A		A
		SAT	--	--	--	B		A	A	A	--	--	A		A
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	F ⁴		B	--	--	--	--	A	A	B	A	--	--
		SAT	F ⁵		B	--	--	--	--	A	A	B	A	--	--

Notes: (--) indicates a movement that is not possible

¹ delay = 68.8 sec; v/c = 0.79

² delay = 55.7 sec; v/c = 0.74

³ delay = 60.8 sec; v/c = 0.75

⁴ delay = 57.5 sec; v/c = 0.63

⁵ delay = 51.4 sec; v/c = 0.72

CHAPTER IV – PROJECTED TRAFFIC

PART A – BACKGROUND TRAFFIC FORECASTING

The WisDOT developed background traffic forecasts for the Year 2017 and Year 2032. Annual growth rates of approximately 1.0% were applied to the existing traffic volumes to account for background traffic growth. No off-site developments were identified by the City staff to include in the traffic forecasts. The Year 2017 and 2032 background traffic volumes are shown on [Exhibits 3-2B.1](#) and [4-2.1](#), respectively.

PART B – DEVELOPMENT TRAFFIC AND OFF-SITE DEVELOPMENT TRAFFIC FORECASTING

B1 Trip Generation

On-Site Trip Generation

To address any potential future traffic impacts within the study area, it is necessary to identify the hourly volume of traffic generated by the proposed development as well as the identified off-site development. The expected traffic volumes generated by the development are based on the size and type of proposed land uses, and on trip data published in the Institute of Transportation Engineer's (ITE's) *Trip Generation, 9th Edition (2012)*.

The expected trip generation for the full build out of the Franklin Area A development is shown on [Exhibit 4-3.1](#). It can be expected that approximately 20 percent of the development trips will be internally linked trips for Areas 1, 3 and 4. It can be expected that approximately 10 percent of the development trips for Areas 1 and 3 will be multi-linked trips. Additionally, it can be expected that approximately 10 percent of the retail and restaurant development trips will be pass-by trips during the weekday peak hours. Approximately 6 percent of the retail and restaurant development will be pass-by trips during the Saturday peak hour.

The proposed development is expected to generate 2,960 total vehicle trips (1,550 entering vehicles/1,410 exiting vehicles) during the weekday evening peak hour. Of the 2,960 total vehicle trips, 580 trips are expected to be linked trips, 180 trips are expected to be pass-by trips, and 190 trips are expected to be multi-linked trips resulting in 2,010 new development generated trips.

During the Saturday peak hour, the proposed development is expected to generate 3,695 total vehicle trips (1,905 entering vehicles/1,790 exiting vehicles). Of the 3,695 total vehicle trips, 730 trips are expected to be linked trips, 140 trips are expected to be pass-by trips, and 245 trips are expected to be multi-linked trips resulting in 2,580 new development generated trips.

Off-Site Trip Generation

[Exhibit 4-3.2](#) shows the off-site trip generation tables for The Rock Sports Complex.

Existing Rock Sports Complex

The Rock Sports Complex currently has an umbrella bar, six ball fields, BMX bike track, lodge and hill equipped with chairlifts for downhill skiing (winter) and mountain bike runs (summer). The lodge bar and umbrella bar are primarily used by spectators and visitors already at the Rock Sports Complex. The ITE manual does not have trip generation rates for baseball/softball fields, but the activity is expected to be similar to a soccer field. Therefore trip generation rates for a soccer field was used for the ball fields. The existing six ball fields at the Rock Sports Complex generate 105 total vehicle trips (70 entering vehicles/35 exiting vehicles) during the weekday evening peak hour and 180 total vehicle trips (85 entering vehicles/95 exiting vehicles) during the Saturday midday peak hour. The Rock Complex had no games while the intersection counts were performed in March/April 2015. The existing Rock Complex trip generation was added to the existing traffic counts in order to develop the background traffic as described in Chapter III.

Rock Sports Complex – Future Development

Future development for the includes two additional baseball fields, four soccer fields and four futsal fields and potentially adding a 3,000 seat minor league stadium. Since the minor league stadium funding has not yet been determined the City of Franklin requested that the traffic analysis was performed with and without the stadium. The ITE manual does not have trip generation rates for baseball/softball or futsal fields, but the activity is expected to be similar to a soccer field. Therefore trip generation rates for a soccer field were also used for the ball and futsal fields. Additionally, the ITE manual does not have trip generation rates for a minor league stadium. Therefore trip generation was developed based on the following information:

- The minor league stadium is expected to have games starting at 6:30pm on weekdays and Saturdays. Early arrival for the game is expected to occur during the weekday evening peak hour (4:30 to 5:30 pm). There is not expected to be trips generated by the stadium during the Saturday midday peak hour (11:30 am to 12:30 pm) due to the games later in the evening.
- The attendance rate was calculated by averaging five years of average game attendance recorded for the Wisconsin Timber Rattlers minor league baseball team (www.milb.com/milb/stats). Based on the data from 2009-2013, average attendance was approximately 3,724 (63 percent) at the 5,900 seat Fox Cities Stadium in Appleton, Wisconsin. The proposed 3,000 seat minor league baseball stadium attendance is anticipated to have average attendance of 1,890 based on 63 percent attendance rate.
- The vehicle occupancy rate was obtained from the *Allentown Arena and City Center Development Traffic Analysis* report (<http://www.allentownpa.gov/Portals/0/files/ANIZDA/Documents/Allentown%20Arena%20Traffic%20Analysis.pdf>) dated May 5, 2014. This report referenced a 3.3 vehicle-occupancy rate for stadiums as published on page 69 of the ULI *Shared Parking Manual*. With a 3.3 vehicle occupancy rate, the stadium is expected to generate approximately 1,150 total trips for a game (575 entering vehicles/575 exiting vehicles).
- Based on *Allentown Arena and City Center Development Traffic Analysis* report, there is a 61 percent arrival rate for the hour prior to the start of the game. This report cited several studies, including their own which corroborated a 61 percent arrival rate in the hour prior to events. These studies included a 2002 post development study of a minor league baseball stadium prepared by The Traffic Group, a 2001 study of large special events prepared by the Transportation Research Board, and two field studies conducted by Traffic Planning and Design at minor league stadiums in Allentown, Pennsylvania and Aberdeen, Maryland. The following arrival rates are estimated for 6:30 pm games at the stadium:
 - 4:30 to 5:30 pm – 29 percent (coincides with weekday evening peak hour)
 - 5:30 to 6:30 pm – 61 percent (hour prior to game start)
 - 6:30 to 7:30 pm – 10 percent (after game start)

As shown on [Exhibit 4-3.2](#), the future development for the Rock Sports Complex for Option 1 (with Stadium) is expected to generate 350 total vehicle trips (285 entering vehicles/65 exiting vehicles) during the weekday evening peak hour and 300 total vehicle trips (150 entering vehicles/150 exiting vehicles) during the Saturday midday peak hour.

The future development for the Rock Sports Complex for Option 2 (without the minor league stadium) is expected to generate 175 total vehicle trips (115 entering vehicles/60 exiting vehicles) during the weekday evening peak hour and 300 total vehicle trips (150 entering vehicles/150 exiting vehicles) during the Saturday midday peak hour.

B2 Mode Split

This study conservatively estimates that no trip reduction for alternative travel modes would be included in the analysis of the proposed development.

B3 Determination of Pass-By, Internally Linked, Multi Linked and Externally Linked Trip Traffic

A linked trip occurs when a motorist has more than one destination within the specific development area. It can be expected that approximately 20 percent of the development trips will be internally linked trips for Areas 1, 3 and 4. A multi-linked trip occurs when a motorist visits more than one of the specific development areas. It can be expected that approximately 10 percent of the development trips for Areas 1 and 3 will be multi-linked trips.

Additionally, pass-by trips occur when vehicles that are already on the roadway system stop at the development prior to continuing on their intended route. It can be expected that approximately 10 percent of the retail and restaurant development trips will be pass-by trips during the weekday peak hours. Approximately 6 percent of the retail and restaurant development will be pass-by trips during the Saturday peak hour.

B4 Trip Distribution

The trip distribution for the Franklin Area A development was developed by evaluating the existing roadway network, the existing daily traffic volumes and anticipated market area for this type of development. [Exhibit 4-4](#) illustrates the following expected trip distribution for the proposed development.

- 25% to/from the northeast on STH 36
- 20% to/from the north on S. 76th Street
- 20% to/from the east on W. Rawson Avenue
- 15% to/from the southwest on STH 36
- 10% to/from the south on S. 76th Street
- 10% to/from the west on W. Rawson Avenue

B5 Trip Assignment

Traffic generated by the proposed development and off-site developments were assigned to the adjacent roadway system based on the directional distributions shown above and in [Exhibit 4-4](#).

Franklin Area A Development

The following is a list of the trip assignments for the Franklin Area A development under the full build traffic scenarios:

- [Exhibit 4-7A](#) – Full Build On-Site Total New Trips
- [Exhibit 4-7A.1](#) – Full Build On-Site New Trips – Area 1
- [Exhibit 4-7A.2](#) – Full Build On-Site New Trips – Area 2
- [Exhibit 4-7A.3](#) – Full Build On-Site New Trips – Area 3
- [Exhibit 4-7A.4](#) – Full Build On-Site New Trips – Area 4
- [Exhibit 4-7B](#) – Full Build On-Site Multi-linked Trips
- [Exhibit 4-7C](#) – Full Build On-Site Total Pass-by Trips
- [Exhibit 4-7C.1](#) – Full Build On-Site Pass-by Trips – Area 1
- [Exhibit 4-7C.2](#) – Full Build On-Site Pass-by Trips – Area 3
- [Exhibit 4-7C.3](#) – Full Build On-Site Pass-by Trips – Area 4
- [Exhibit 4-7D](#) – Full Build On-Site Total Driveway Trips
- [Exhibit 4-7D.1](#) – Full Build On-Site Driveway Trips – Area 1
- [Exhibit 4-7D.2](#) – Full Build On-Site Driveway Trips – Area 2
- [Exhibit 4-7D.3](#) – Full Build On-Site Driveway Trips – Area 3

- [Exhibit 4-7D.4](#) – Full Build On-Site Driveway Trips – Area 4

Off-Site Developments

The following is a list of the trip assignments for The Rock Sports Complex off-site development under the full build traffic scenarios:

- [Exhibit 4-10A.1](#) – Off-Site New Trips – Future Development - Option 1 (with Stadium)
- [Exhibit 4-10A.2](#) – Off-Site New Trips – Future Development - Option 2 (without Stadium)

PART C – TOTAL TRAFFIC

Year 2017 Total Traffic

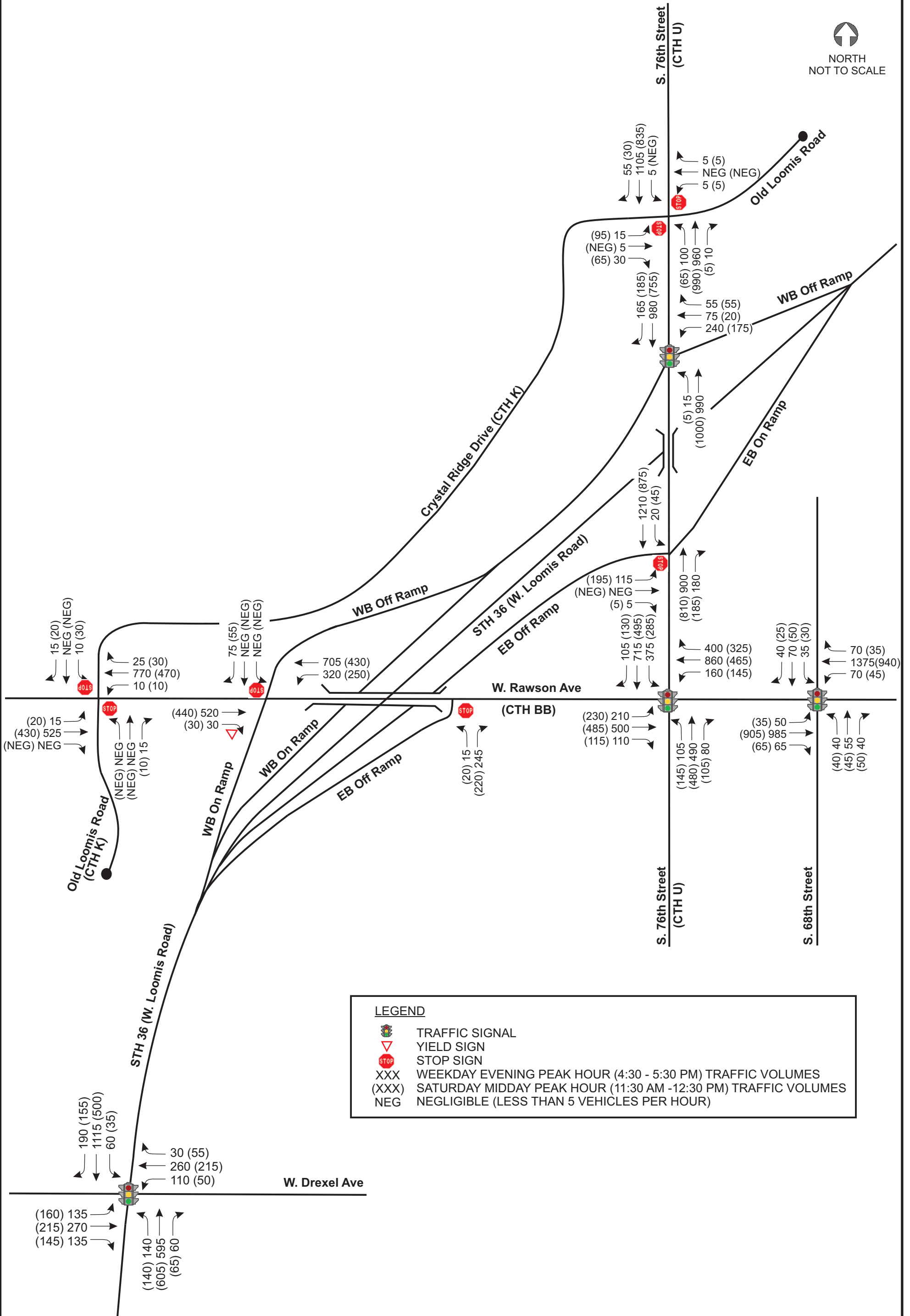
The Year 2017 total traffic volumes include the full build out of the Franklin Area A on-site development as well as the build out of the off-site Rock Sports Complex.

- [Exhibit 4-14.1](#) – Year 2017 Total Traffic Volumes – Option 1 (with Stadium), was determined by adding the Year 2017 Redistributed Background Traffic Volumes shown in [Exhibit 3-2B.2](#) to the Full Build On-Site Total Driveway Trips shown in [Exhibit 4-7D](#) as well as the off-site new trips with the stadium shown in [Exhibit 4-10A.1](#).
- [Exhibit 4-14.2](#) – Year 2017 Total Traffic Volumes – Option 2 (without Stadium), was determined by adding the Year 2017 Redistributed Background Traffic Volumes shown in [Exhibit 3-2B.2](#) to the Full Build On-Site Total Driveway Trips shown in [Exhibit 4-7D](#) as well as the off-site new trips without the stadium shown in [Exhibit 4-10A.2](#).

Year 2032 Total Traffic

The Year 2032 total traffic volumes include the full build out of the Franklin Area A on-site development as well as the build out of the off-site Rock Sports Complex.

- [Exhibit 4-16.1](#) – Year 2032 Total Traffic Volumes – Option 1 (with Stadium), was determined by adding the Year 2032 Redistributed Background Traffic Volumes shown in [Exhibit 4-2.2](#) to the Full Build On-Site Total Driveway Trips shown in [Exhibit 4-7D](#) as well as the off-site new trips with the stadium shown in [Exhibit 4-10A.1](#).
- [Exhibit 4-16.2](#) – Year 2032 Total Traffic Volumes – Option 2 (without Stadium), was determined by adding the Year 2032 Redistributed Background Traffic Volumes shown in [Exhibit 4-2.2](#) to the Full Build On-Site Total Driveway Trips shown in [Exhibit 4-7D](#) as well as the off-site new trips without the stadium shown in [Exhibit 4-10A.2](#).



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
- NEG NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

Franklin Area A
Trip Generation
2014-0960

Area 1

ITE Code	ITE Land Use	Trip Rates and Directional	Daily			Weekday PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total	In	Out
220	Apartment 232 Dwelling Units	Trip Rates and Directional	6.65	65%	35%	0.62	50%	50%	0.52		
		Trips	1,545	95	50	145	60	60	120		
815	Discount Store (Destination Retail) 75,000 Square Feet	Trip Rates and Directional	57.24	50%	50%	4.98	51%	49%	7.39		
		Trips	4,295	190	185	375	285	270	555		
820	General Retail (Shopping Center) 95,000 Square Feet	Trip Rates and Directional	42.70	48%	52%	3.71	52%	48%	4.82		
		Trips	4,055	170	180	350	240	220	460		
912	Drive-in Bank 3 Drive-in Lanes	Trip Rates and Directional	139.25	49%	51%	33.24	49%	51%	28.78		
		Trips	420	50	50	100	40	45	85		
932	High-Turnover (Sit-Down) Restaurants 16,000 Square Feet	Trip Rates and Directional	127.15	60%	40%	9.85	53%	47%	14.07		
		Trips	2,035	95	65	160	120	105	225		
934	Fast Food Restaurant with Drive-Through 4,000 Square Feet	Trip Rates and Directional	496.12	52%	48%	32.65	51%	49%	59.00		
		Trips	1,985	70	60	130	120	115	235		
946	Gas Station With Convenience Market & Car Wash 12 Fueling Positions	Trip Rates and Directional	152.84	51%	49%	13.86	50%	50%	19.46		
		Trips	1,835	85	80	165	120	115	235		
Total Trips			16,170	755	670	1,425	985	930	1,915		
Minus Linked Trips 20%			(3,235)	(150)	(135)	(285)	(195)	(185)	(380)		
Driveway Trips			12,935	605	535	1,140	790	745	1,535		
Minus Multi-Linked Trips for Area 3 (815, 820, 912, 932, 934 & 946) 10%			(1,170)	(55)	(50)	(105)	(75)	(70)	(145)		
Minus Weekday Pass-By Trips (815, 820, 912, 932, 934 & 946) 10%			(1,170)	(50)	(50)	(100)					
Minus Saturday Pass-By Trips (815, 820, 912, 932, 934 & 946) 6%							(40)	(40)	(80)		
New Trips			10,595	500	435	935	675	635	1,310		

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	2,120	100	85	185	135	125	260
South on 76th Street	10%	1,060	50	45	95	70	65	130
Northeast on STH 36	25%	2,650	125	110	235	170	160	330
Southwest on STH 36	15%	1,590	75	65	140	100	95	200
East on Rawson Avenue	20%	2,120	100	85	185	135	125	260
West on Rawson Avenue	10%	1,055	50	45	95	65	65	130
Total		10,595	500	435	935	675	635	1,310

Area 2

ITE Code	ITE Land Use	Trip Rates and Directional	Daily			Weekday PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total	In	Out
210	Single Family Detached Housing 50 Dwelling Units	Trip Rates and Directional	9.52	63%	37%	1.00	54%	46%	0.93		
		Trips	475	30	20	50	25	20	45		
Total Trips			475	30	20	50	25	20	45		

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	95	5	5	10	5	5	10
South on 76th Street	10%	50	5	0	5	5	0	5
Northeast on STH 36	25%	120	10	5	15	5	5	10
Southwest on STH 36	15%	70	5	5	10	5	5	10
East on Rawson Avenue	20%	95	5	5	10	5	5	10
West on Rawson Avenue	10%	45	0	0	0	0	0	0
Total		475	30	20	50	25	20	45

Area 3

ITE Code	ITE Land Use	Trip Rates and Directional	Daily			Weekday PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total	In	Out
220	Apartment 108 Dwelling Units	Trip Rates and Directional	6.65	65%	35%	0.62	50%	50%	0.52		
		Trips	720	40	25	65	30	25	55		
492	Health/Fitness Club 60,000 Square Feet	Trip Rates and Directional	32.93	57%	43%	3.53	45%	55%	2.78		
		Trips	1,975	120	90	210	75	90	165		
720	Medical Office Building 30,000 Square Feet	Trip Rates and Directional	36.13	28%	72%	3.57	57%	43%	3.63		
		Trips	1,085	30	75	105	65	45	110		
820	General Retail (Shopping Center) 60,000 Square Feet	Trip Rates and Directional	42.70	48%	52%	3.71	52%	48%	4.82		
		Trips	2,560	110	115	225	150	140	290		
850	Specialty Grocery (Supermarket) 15,000 Square Feet	Trip Rates and Directional	102.24	51%	49%	9.48	51%	49%	10.65		
		Trips	1,535	70	70	140	80	80	160		
881	Pharmacy/Drugstore with Drive-through window 18,000 Square Feet	Trip Rates and Directional	96.91	50%	50%	9.91	49%	51%	8.20		
		Trips	1,745	90	90	180	75	75	150		
932	High-Turnover (Sit-Down) Restaurant 8,000 Square Feet	Trip Rates and Directional	127.15	60%	40%	9.85	53%	47%	14.07		
		Trips	1,015	50	30	80	60	55	115		
934	Fast Food Restaurant with Drive-Through 4,000 Square Feet	Trip Rates and Directional	496.12	52%	48%	32.65	51%	49%	59.00		
		Trips	1,985	70	60	130	120	115	235		
Total Trips			12,620	580	555	1,135	655	625	1,280		
Minus Linked Trips 20%			(2,525)	(115)	(110)	(225)	(130)	(125)	(255)		
Driveway Trips			10,095	465	445	910	525	500	1,025		
Minus Multi-Linked Trips for Area 1 (492, 720, 820, 850, 881, 932 & 934) 10%			(950)	(45)	(40)	(85)	(50)	(50)	(100)		
Minus Weekday Pass-By Trips (820, 850, 881, 932 & 934) 10%			(705)	(30)	(30)	(60)					
Minus Saturday Pass-By Trips (820, 850, 881, 932 & 934) 6%							(20)	(20)	(40)		
New Trips			8,440	390	375	765	455	430	885		

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	1,690	75	75	150	90	85	175
South on 76th Street	10%	845	40	35	75	45	40	85
Northeast on STH 36	25%	2,110	100	95	195	115	110	225
Southwest on STH 36	15%	1,265	60	55	115	70	65	135
East on Rawson Avenue	20%	1,690	75	75	150	90	85	175
West on Rawson Avenue	10%	840	40	40	80	45	45	90
Total		8,440	390	375	765	455	430	885

Area 4

ITE Code	ITE Land Use	Trip Rates and Directional	Daily			Weekday PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total	In	Out
220	Apartment 48 Dwelling Units	Trip Rates and Directional	6.65	65%	35%	0.62	50%	50%	0.52		
		Trips	320	20	10	30	15	10	25		
820	General Retail (Shopping Center) 65,000 Square Feet	Trip Rates and Directional	42.70	48%	52%	3.71	52%	48%	4.82		
		Trips	2,775	115	125	240	165	150	315		
932	High-Turnover (Sit-Down) Restaurant 8,000 Square Feet	Trip Rates and Directional	127.15	60%	40%	9.85	53%	47%	14.07		
		Trips	1,015	50	30	80	60	55	115		
Total Trips			4,110	185	165	350	240	215	455		
Minus Linked Trips 20%			(820)	(35)	(35)	(70)	(50)	(45)	(95)		
Driveway Trips			3,290	150	130	280	190	170	360		
Minus Weekday Pass-By Trips (820 & 932) 10%			(305)	(10)	(10)	(20)					
Minus Saturday Pass-By Trips (820 & 932) 6%							(10)	(10)	(20)		
New Trips			2,985	140	120	260	180	160	340		

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	595	30	25	55	35	35	70
South on 76th Street	10%	300	15	10	25	20	15	35
Northeast on STH 36	25%	745	35	30	65	45	40	85
Southwest on STH 36	15%	450	20	20	40	25	25	50
East on Rawson Avenue	20%	595	25	25	50	35	30	65
West on Rawson Avenue	10%	300	15	10	25	20	15	35
Total		2,985	140	120	260	180	160	340

Area A Total

		Daily			Weekday PM Peak			Saturday Peak		
		Trips	In	Out	Total	In	Out	Total	In	Out
Total Trips		33,375	1,550	1,410	2,960	1,905	1,790	3,695		
	Minus Total Linked Trips	(6,580)	(300)	(280)	(580)	(375)	(355)	(730)		
Total Driveway Trips		26,795	1,250	1,130	2,380	1,530	1,435	2,965		
	Minus Total Multi-Linked Trips	(2,120)	(100)							

Off-Site Developments
Preliminary Trip Generation
2014-0960

The Rock - Existing

ITE Code	ITE Land Use	Trip Rates and Directional	Daily	PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total
488	6 Ball Fields	Soccer Complex 6 Fields	71.33 430	67%	33%	17.70	48%	52%	30.34
Total Trips			430	70	35	105	85	95	180

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	85	15	5	20	15	20	35
South on 76th Street	10%	45	5	5	10	10	10	20
Northeast on STH 36	25%	110	20	10	30	20	25	45
Southwest on STH 36	15%	65	10	5	15	15	10	25
East on Rawson Avenue	20%	85	15	5	20	15	20	35
West on Rawson Avenue	10%	40	5	5	10	10	10	20
Total		430	70	35	105	85	95	180

The Rock - Future Development Option 1 (With Stadium)

ITE Code	ITE Land Use	Trip Rates and Directional	Daily	PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total
	Minor League Baseball Stadium 3,000 Seats		0.383 1150	98%	2%	0.058	50%	50%	0.00
488	2 Ball Fields	Soccer Complex 2 Fields	71.33 145	67%	33%	17.70	48%	52%	30.34
488	4 Soccer Fields	Soccer Complex 4 Fields	71.33 285	67%	33%	17.70	48%	52%	30.34
488	4 Futsal Fields	Soccer Complex 4 Fields	71.33 285	67%	33%	17.70	48%	52%	30.34
Total Trips			1,865	285	65	350	150	150	300

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	375	55	15	70	30	30	60
South on 76th Street	10%	185	30	5	35	15	15	30
Northeast on STH 36	25%	465	70	15	85	40	40	80
Southwest on STH 36	15%	280	45	10	55	20	20	40
East on Rawson Avenue	20%	375	55	15	70	30	30	60
West on Rawson Avenue	10%	185	30	5	35	15	15	30
Total		1865	285	65	350	150	150	300

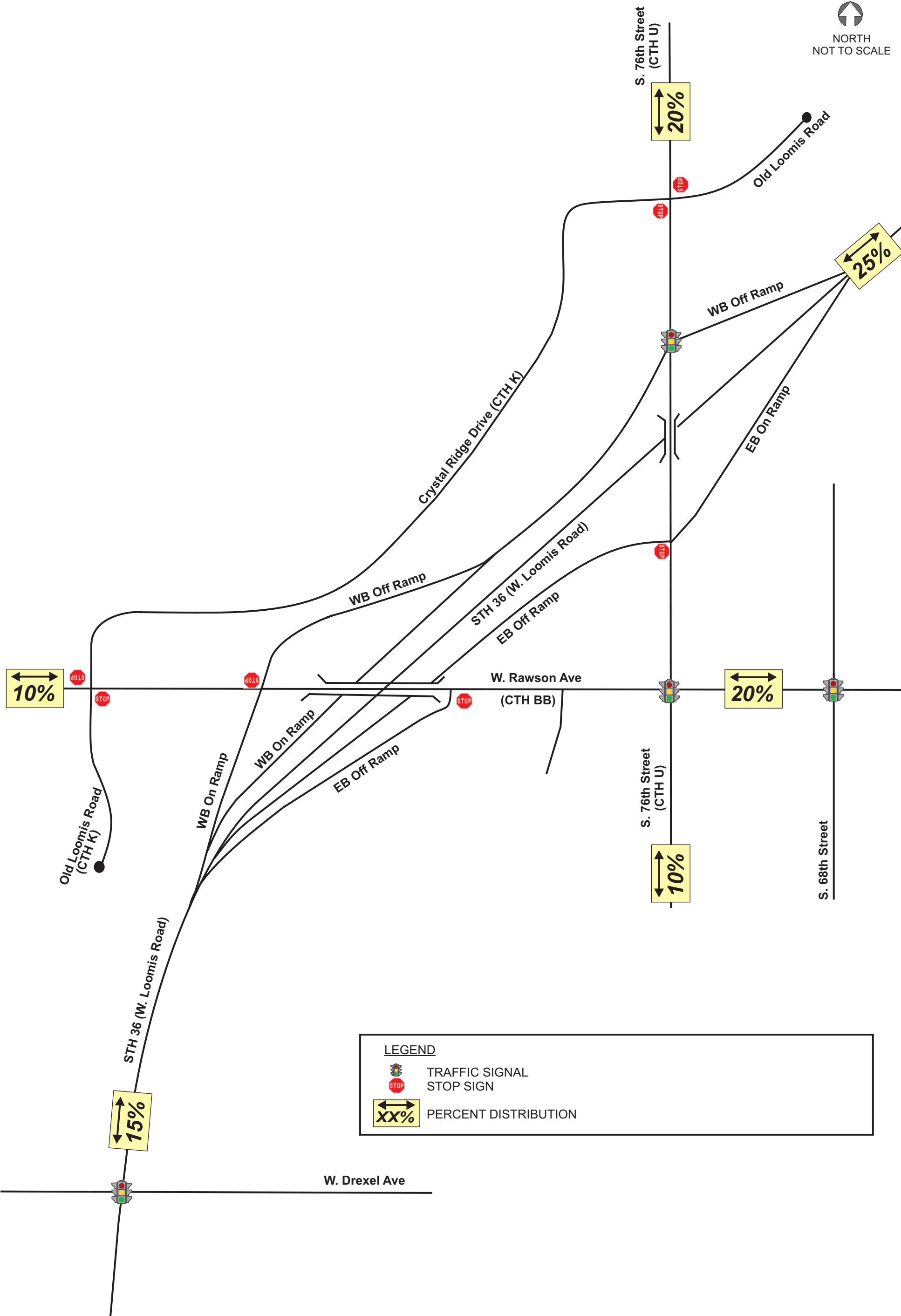
The Rock - Future Development Option 2 (Without Stadium)

ITE Code	ITE Land Use	Trip Rates and Directional	Daily	PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total
488	2 Ball Fields	Soccer Complex 2 Fields	71.33 145	67%	33%	17.70	48%	52%	30.34
488	4 Soccer Fields	Soccer Complex 4 Fields	71.33 285	67%	33%	17.70	48%	52%	30.34
488	4 Futsal Fields	Soccer Complex 4 Fields	71.33 285	67%	33%	17.70	48%	52%	30.34
Total Trips			715	115	60	175	150	150	300

Origin/Destination	Trip Distribution %	Daily Trips	Weekday PM Peak			Saturday Peak		
			In	Out	Total	In	Out	Total
North on 76th Street	20%	145	25	15	40	30	30	60
South on 76th Street	10%	70	10	5	15	15	15	30
Northeast on STH 36	25%	180	30	15	45	40	40	80
Southwest on STH 36	15%	105	15	10	25	20	20	40
East on Rawson Avenue	20%	145	25	10	35	30	30	60
West on Rawson Avenue	10%	70	10	5	15	15	15	30
Total		715	115	60	175	150	150	300

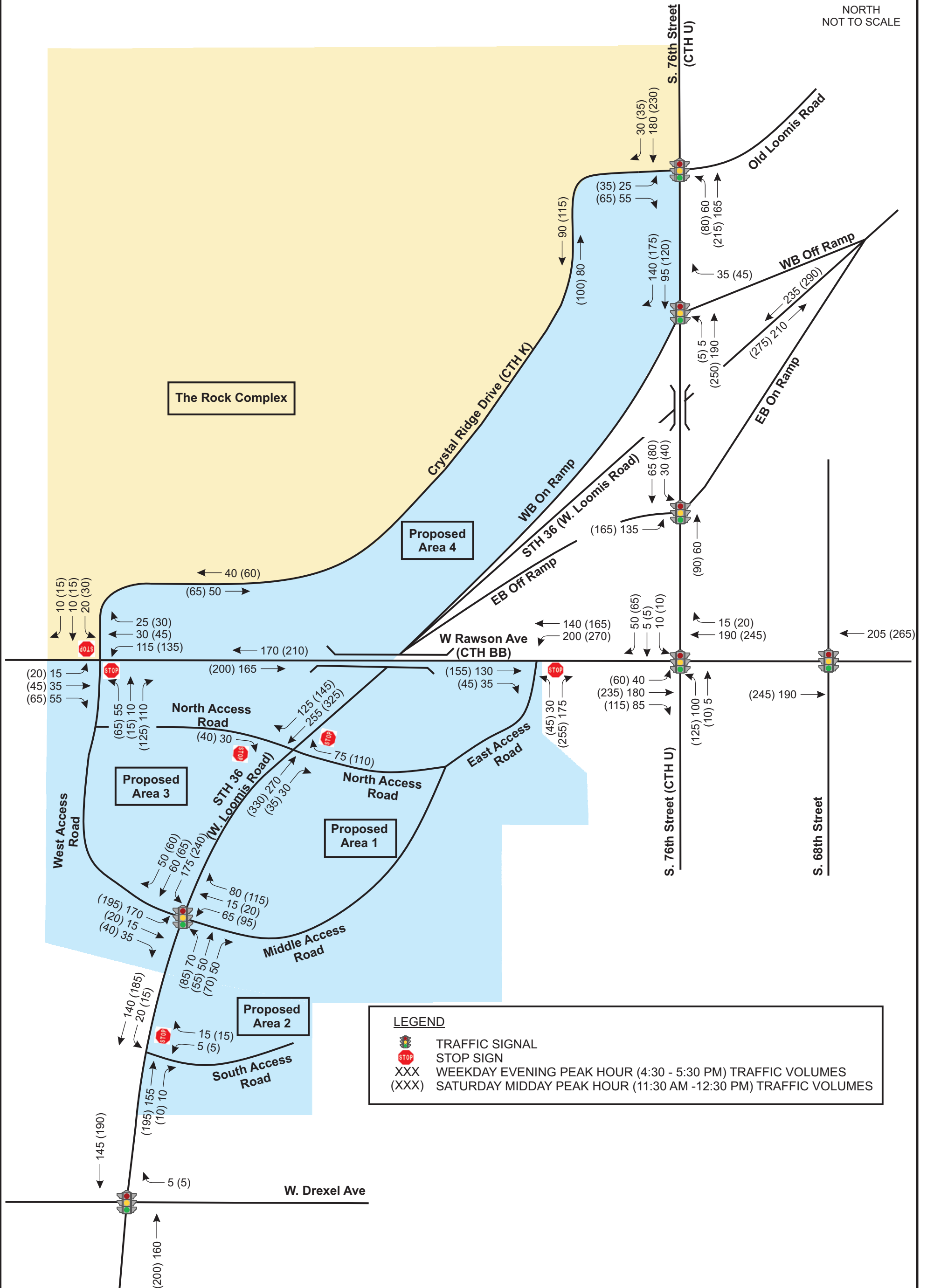
Hampton Inn & Suites, 6901 South 76th Street, Franklin

ITE Code	ITE Land Use	Trip Rates and Directional	Daily	PM Peak			Saturday Peak		
			Trips	In	Out	Total	In	Out	Total
310	Hotel 100 Rooms		8.17 815	51%	49%	0.60	56%	44%	0.72
Total Trips			815	30	30	60	40	30	70



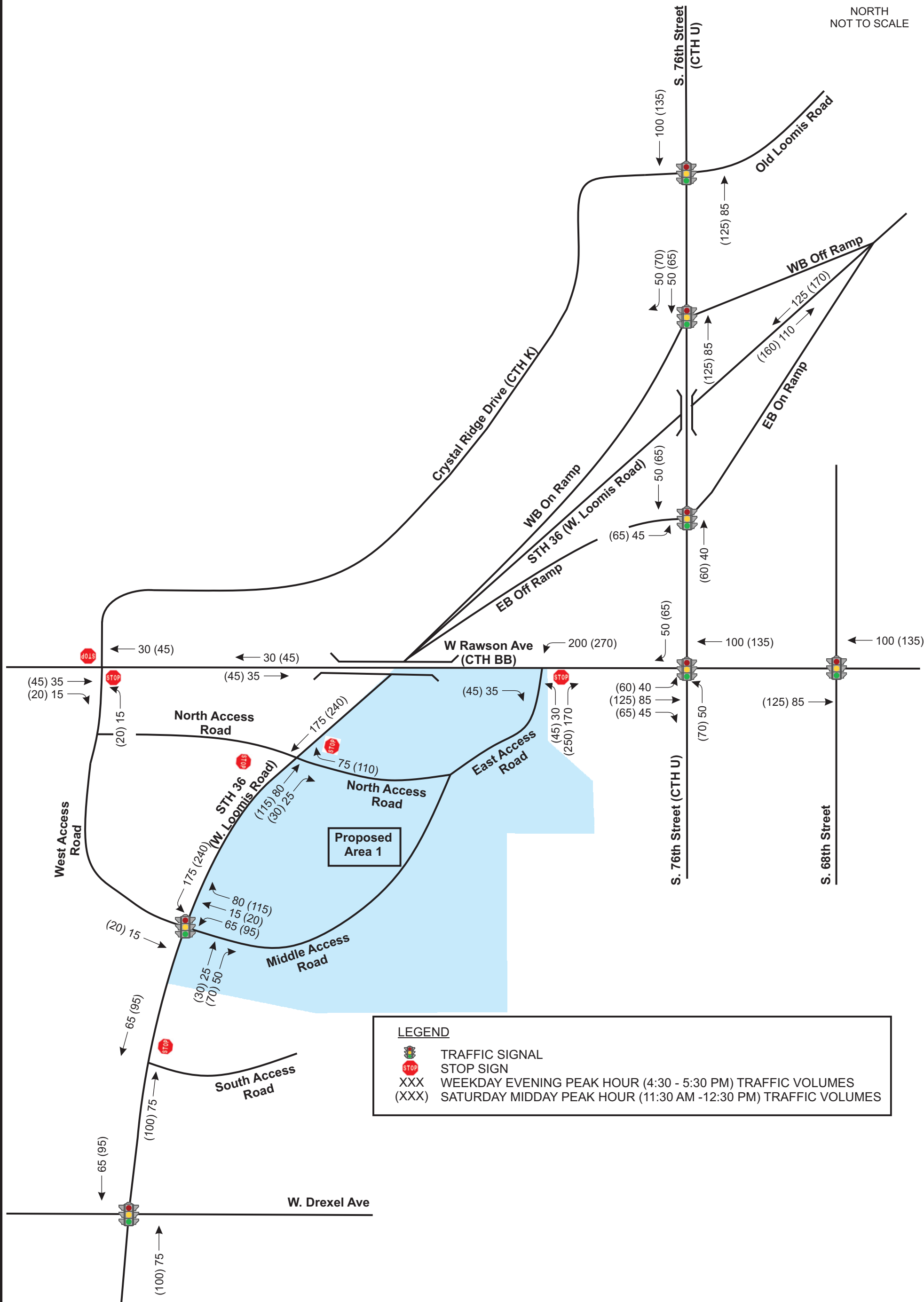
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- TRAFFIC SIGNAL
- STOP SIGN
- PERCENT DISTRIBUTION



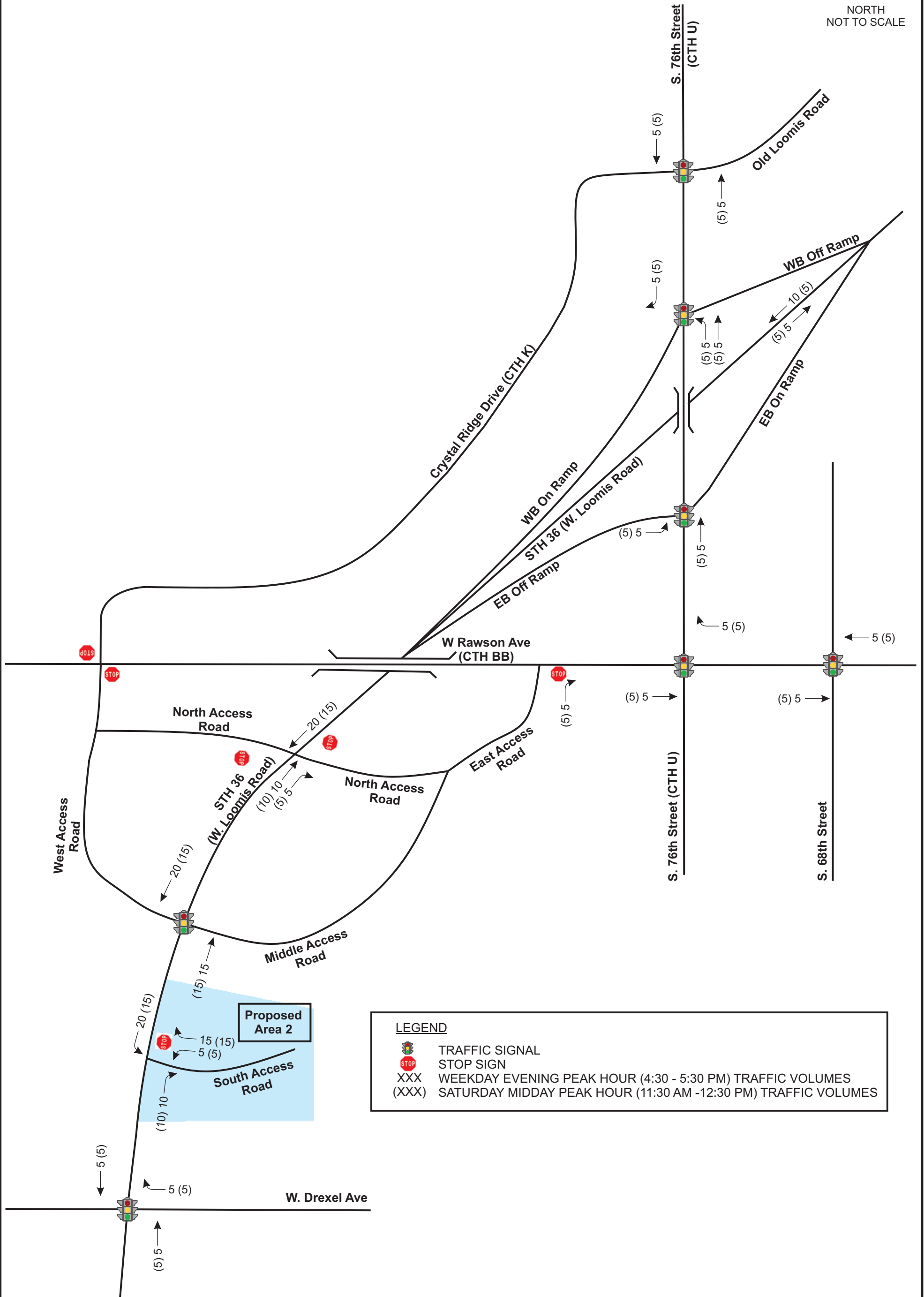
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



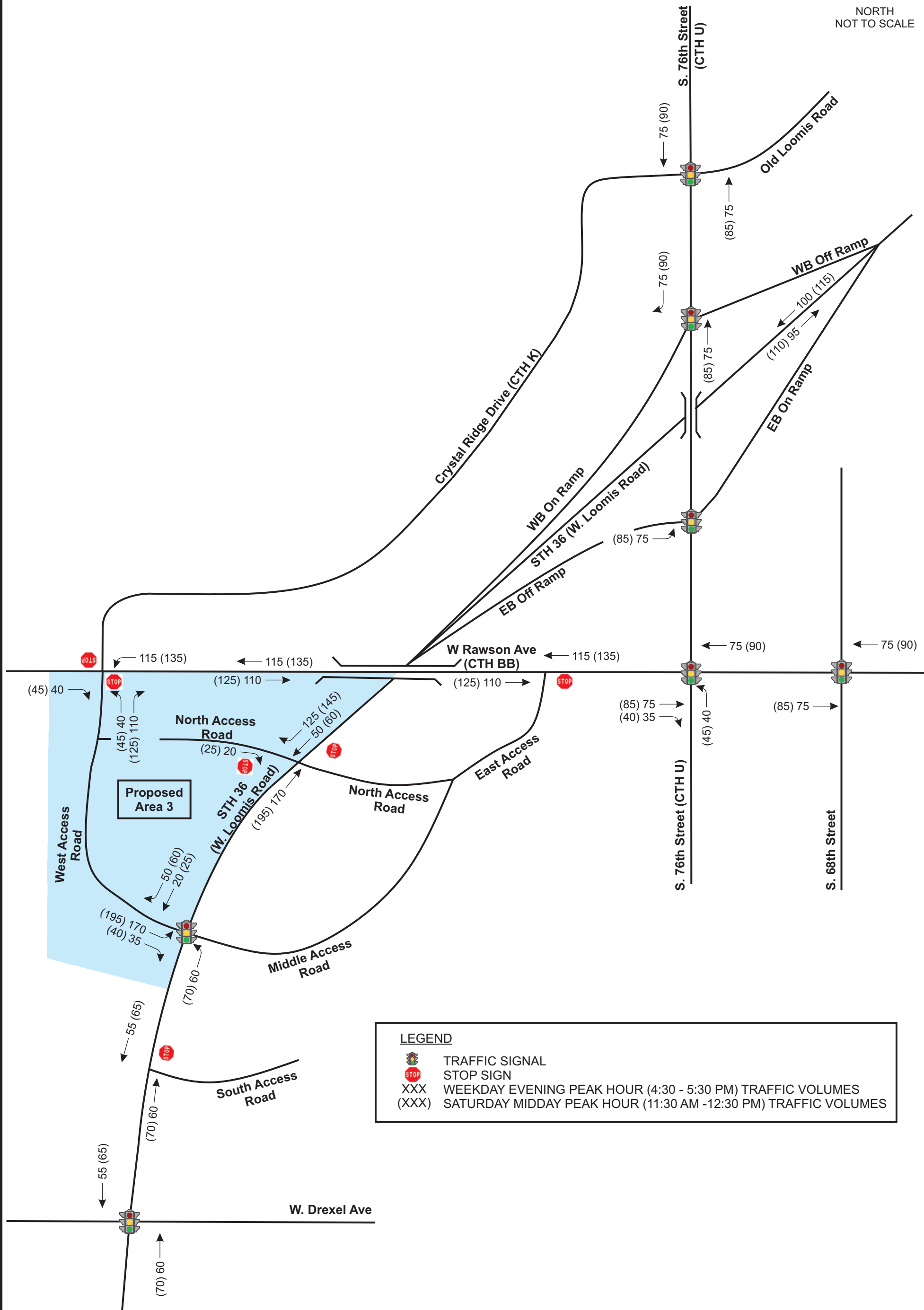
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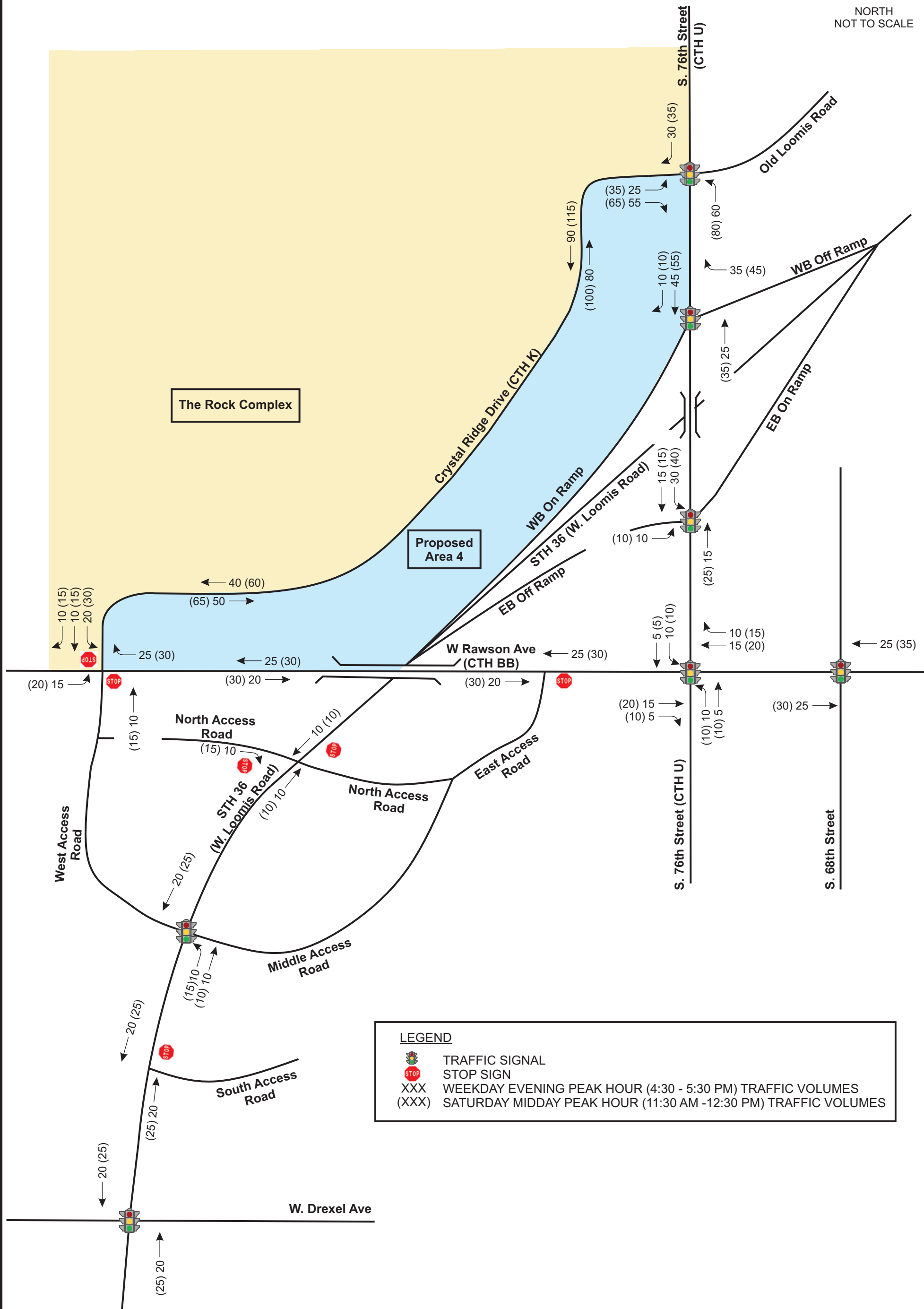


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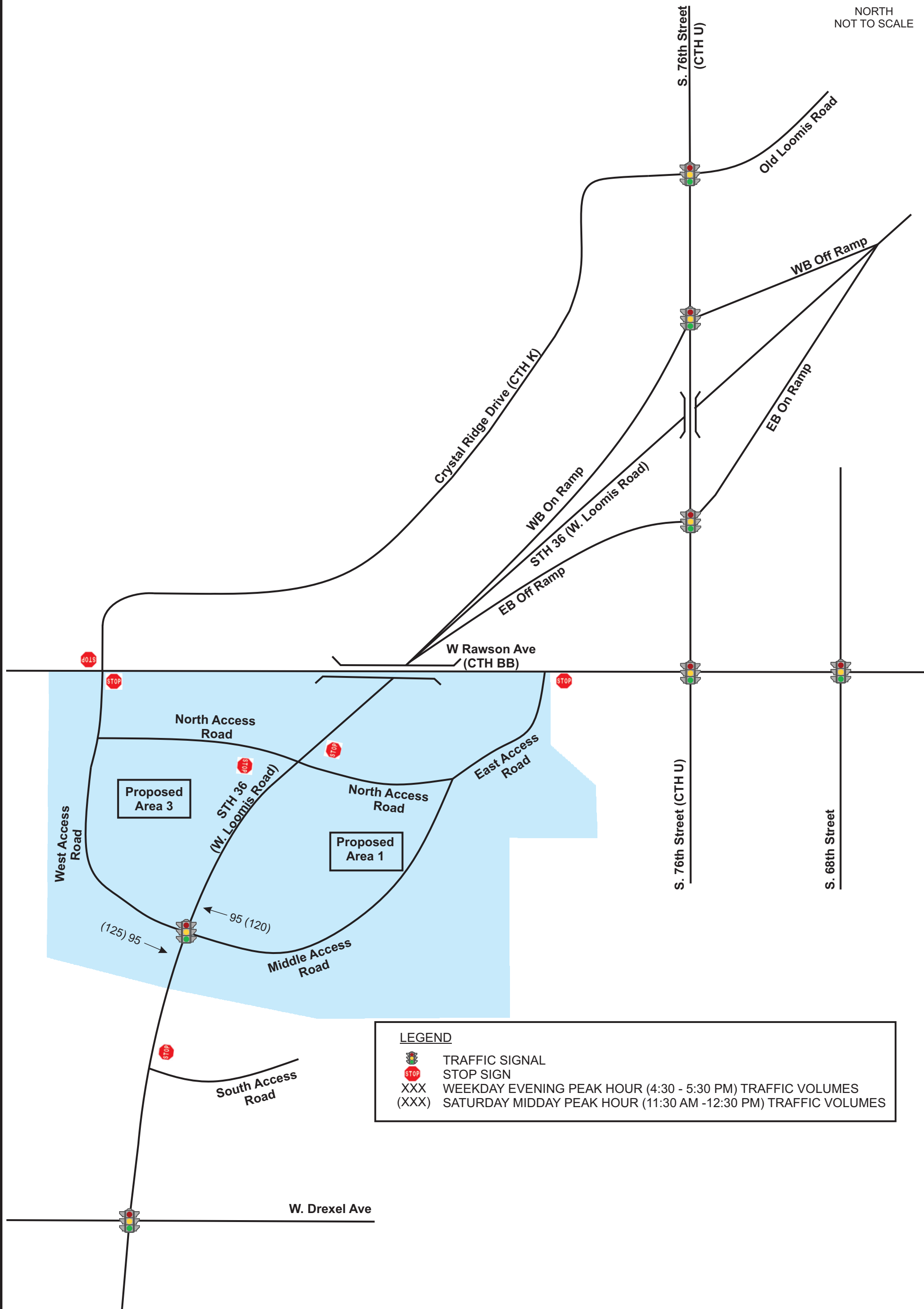


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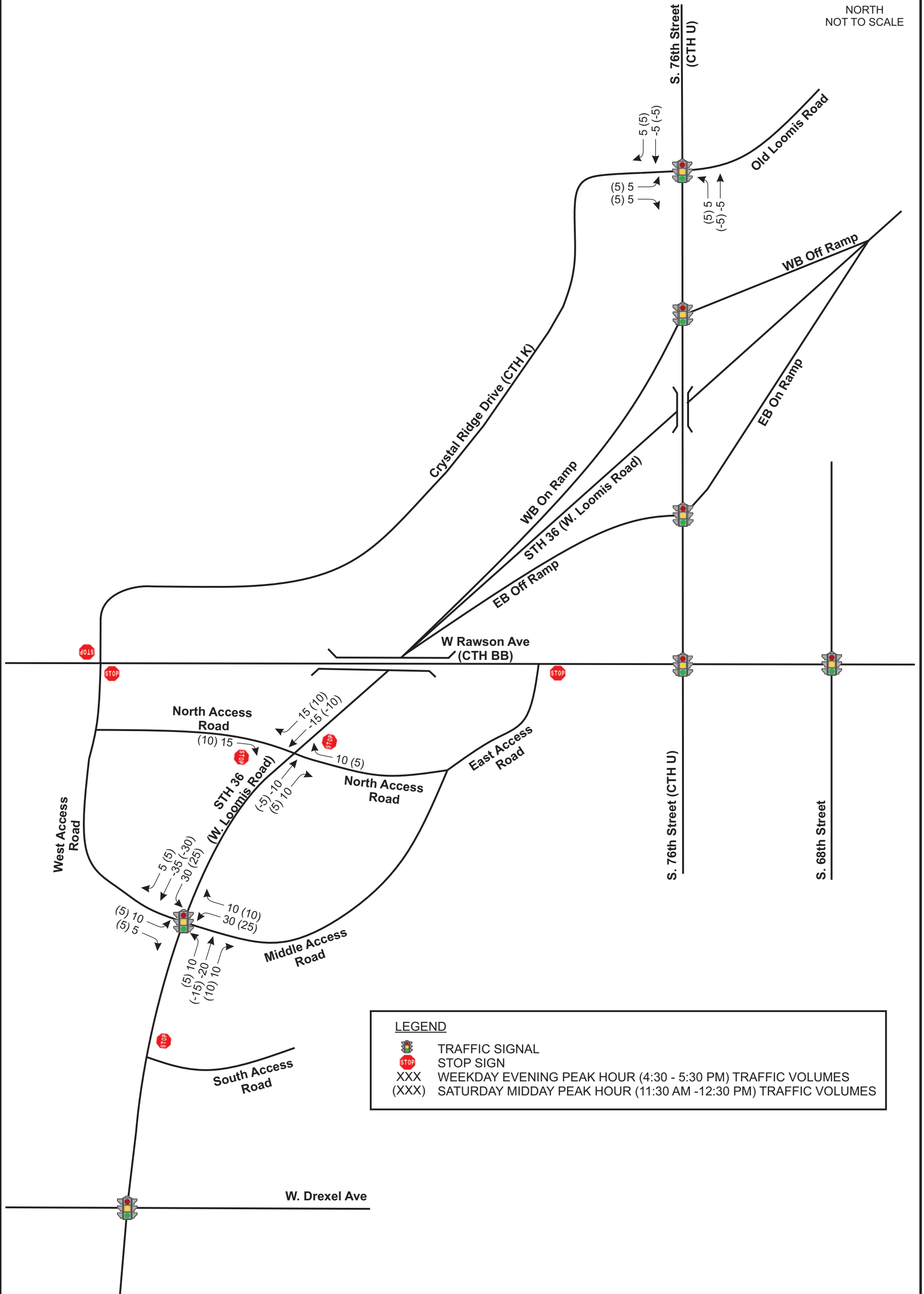
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(XXX)	SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES

EXHIBIT 4-7A.4
FULL BUILD ON-SITE NEW TRIPS - AREA 4
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



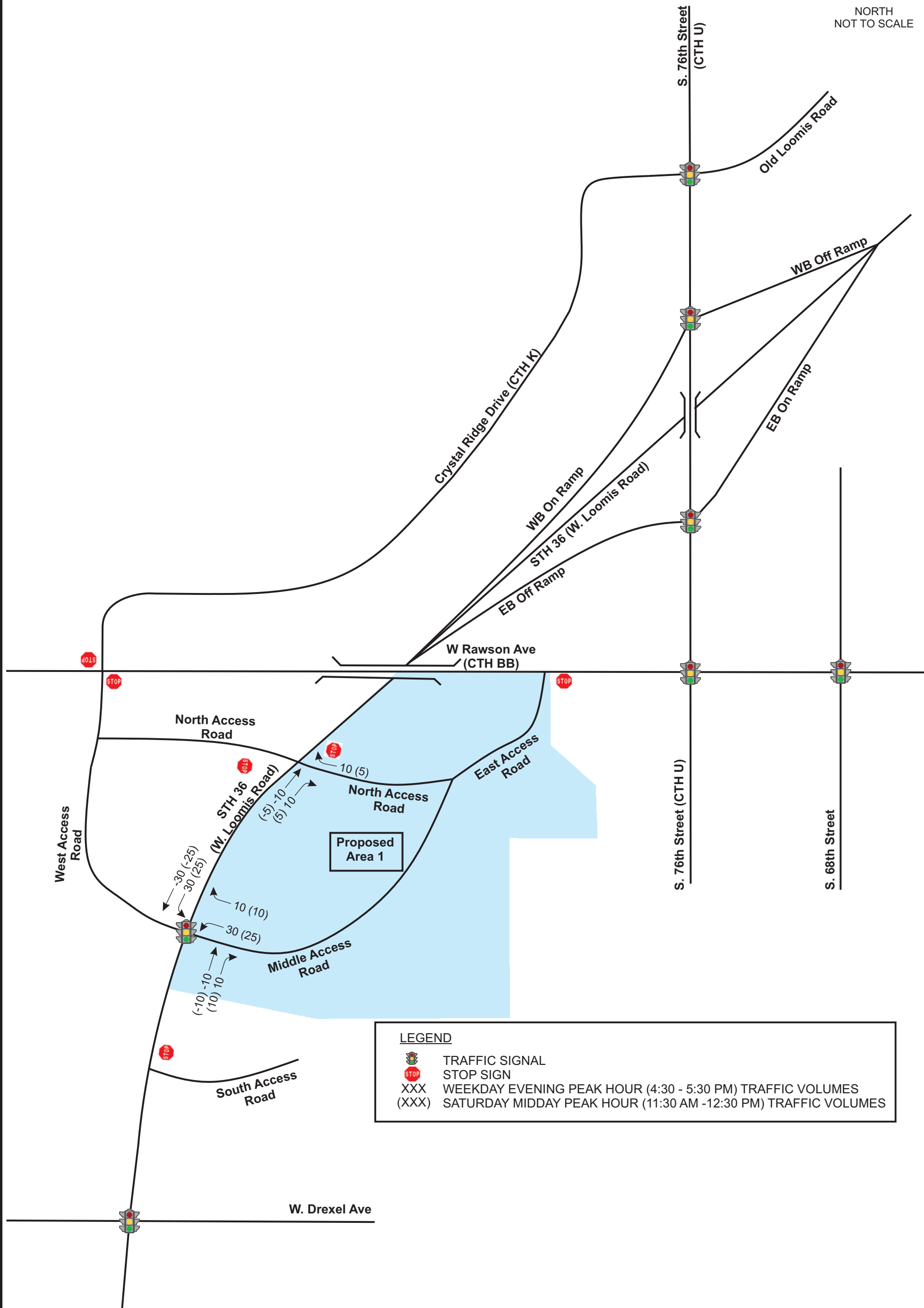
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM -12:30 PM) TRAFFIC VOLUMES



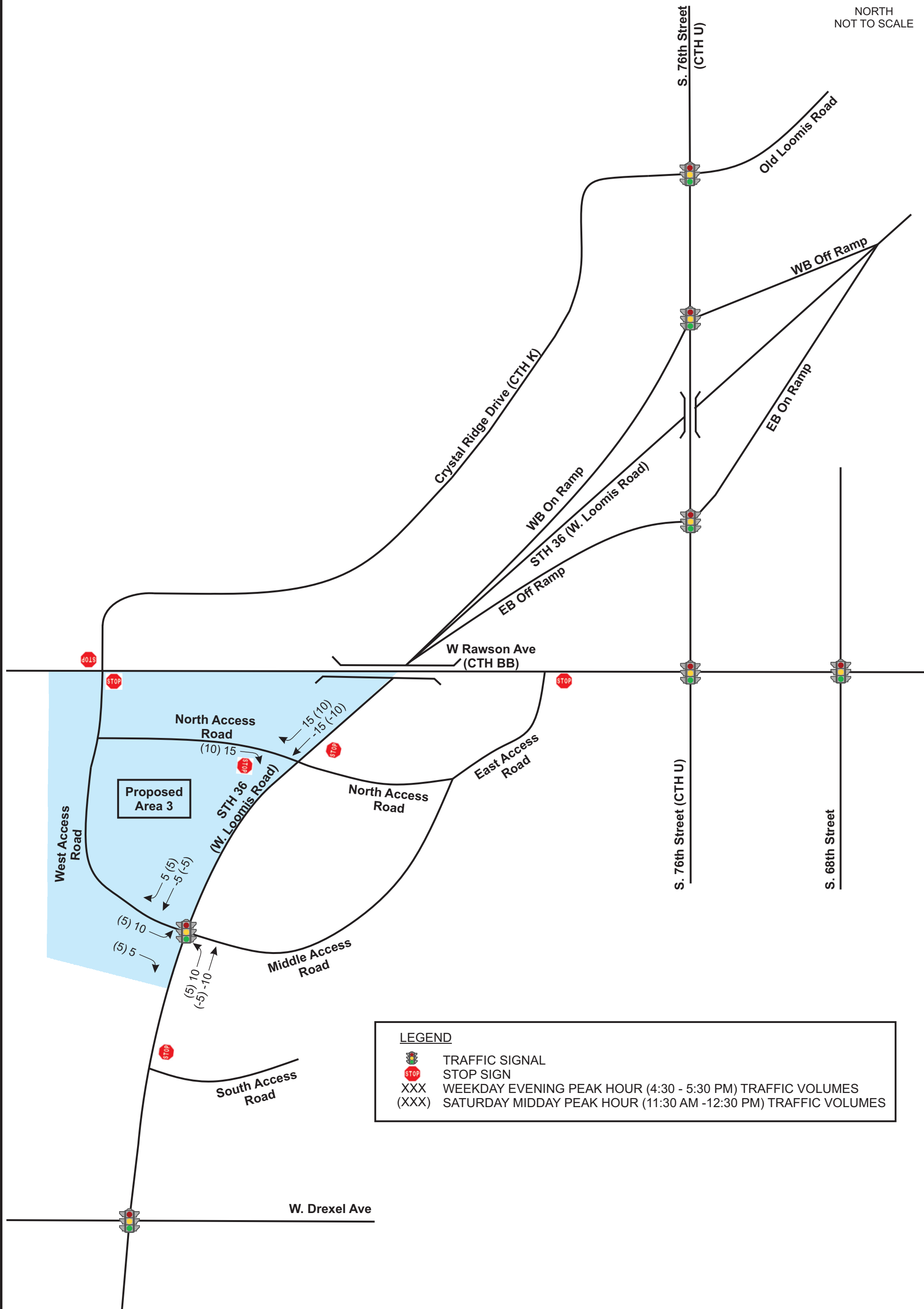
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



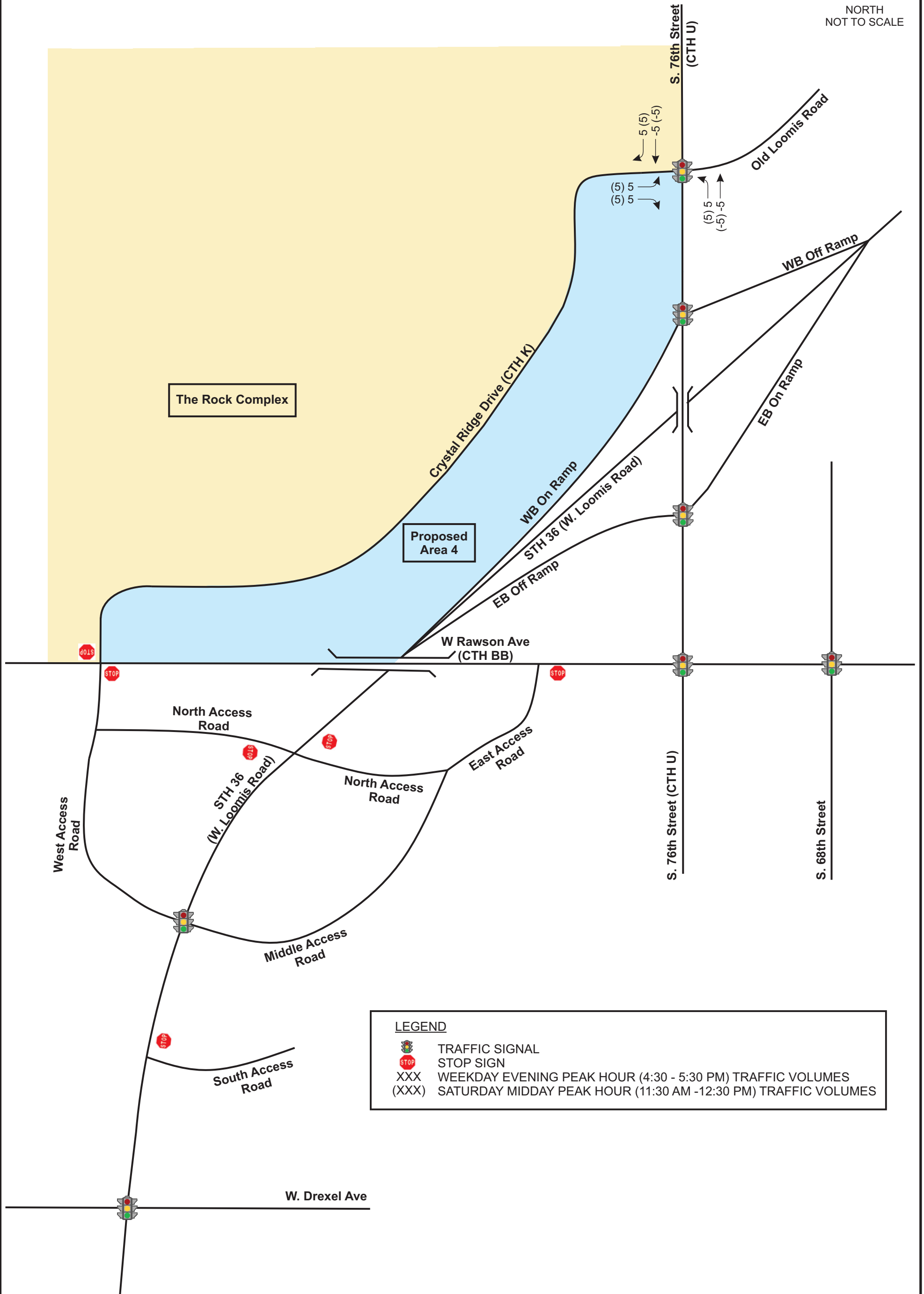
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



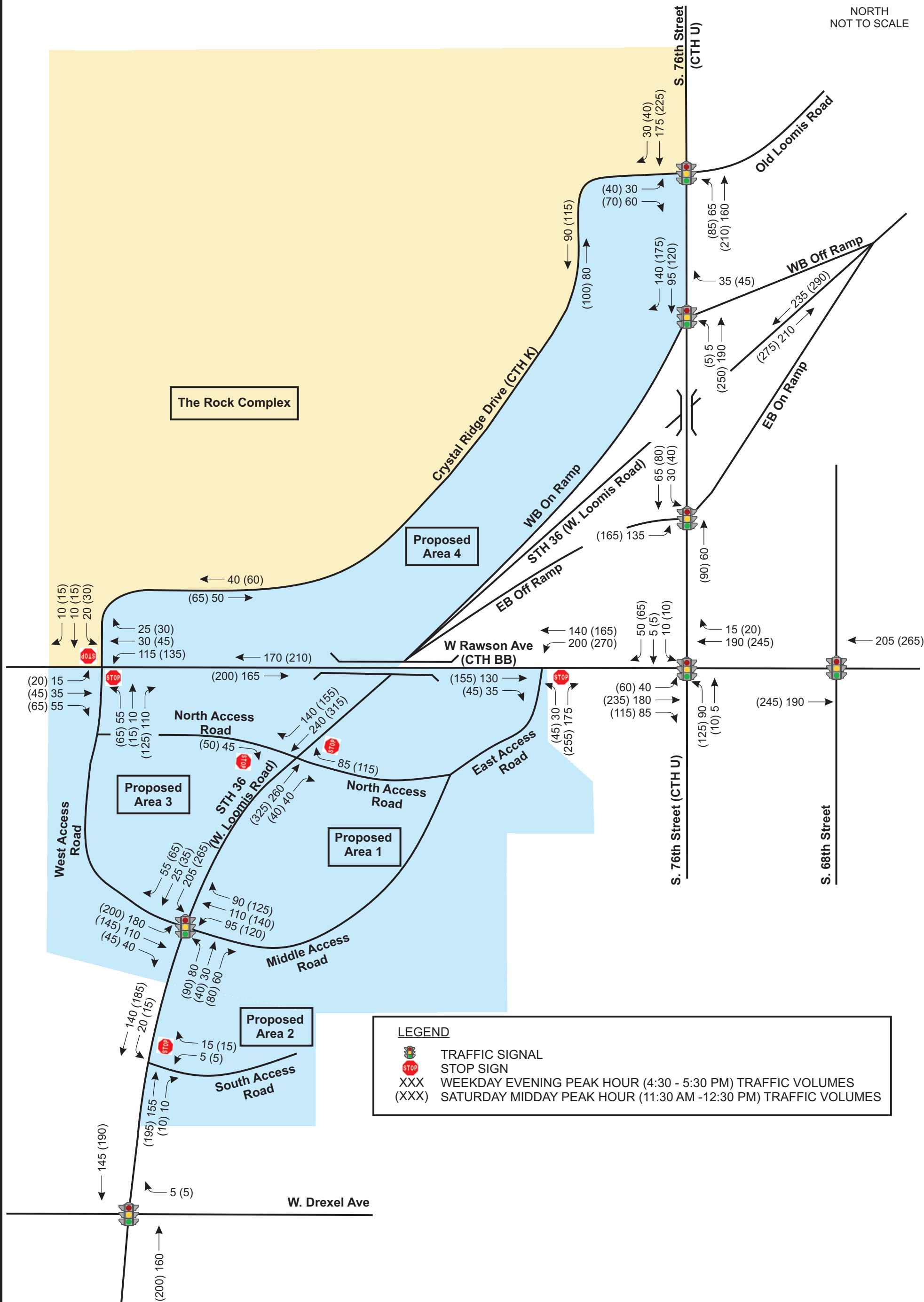
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



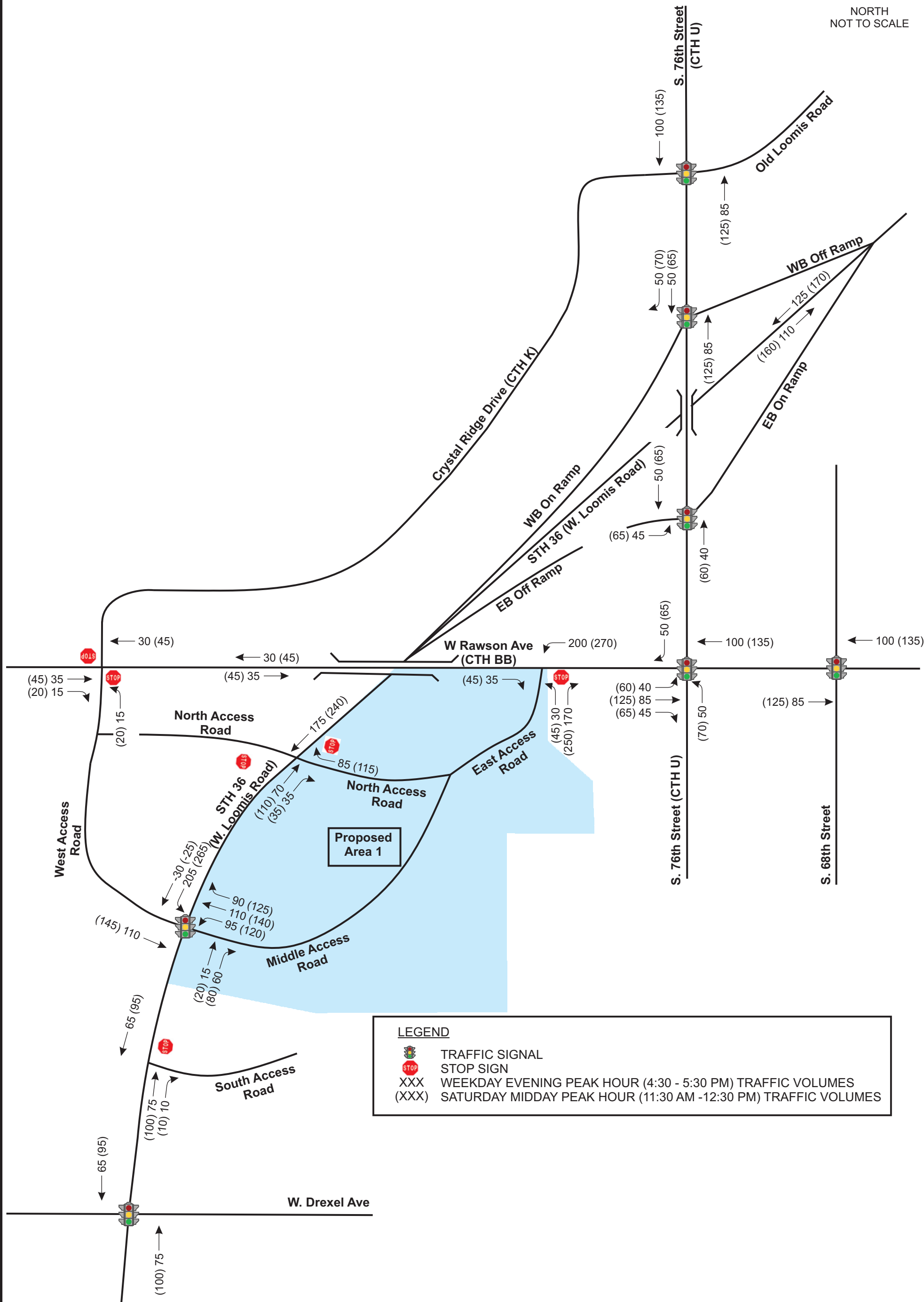
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- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM -12:30 PM) TRAFFIC VOLUMES



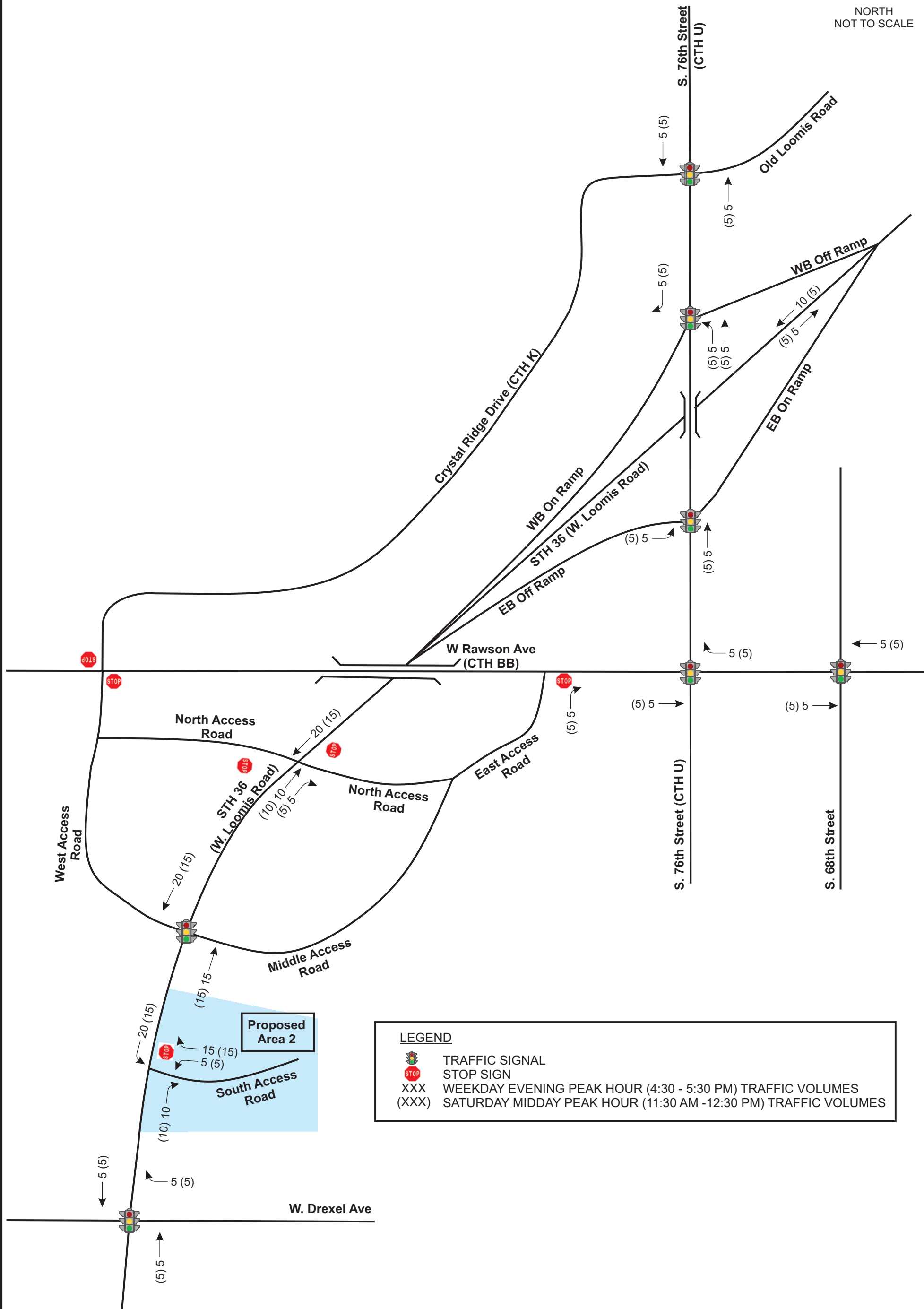
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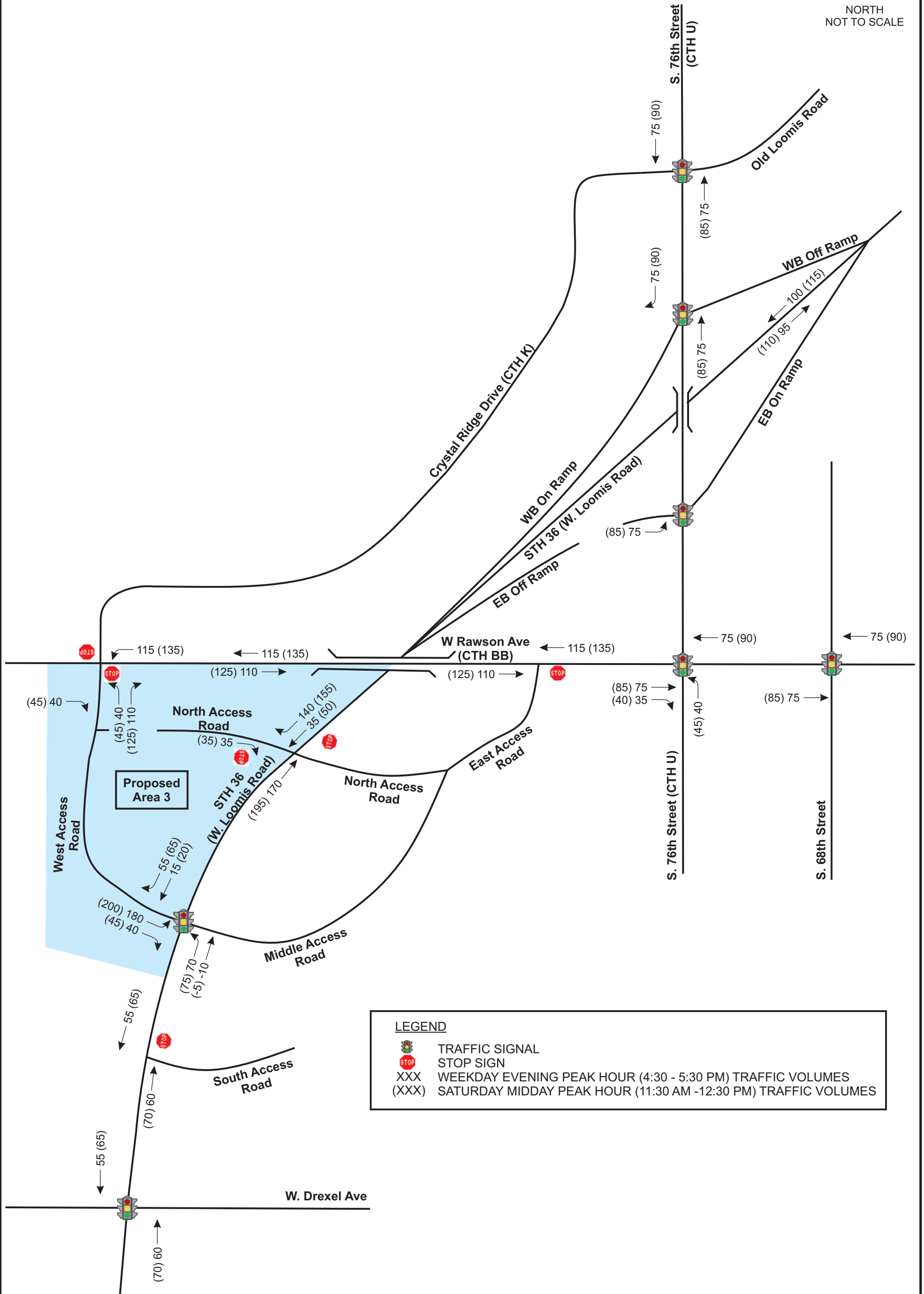
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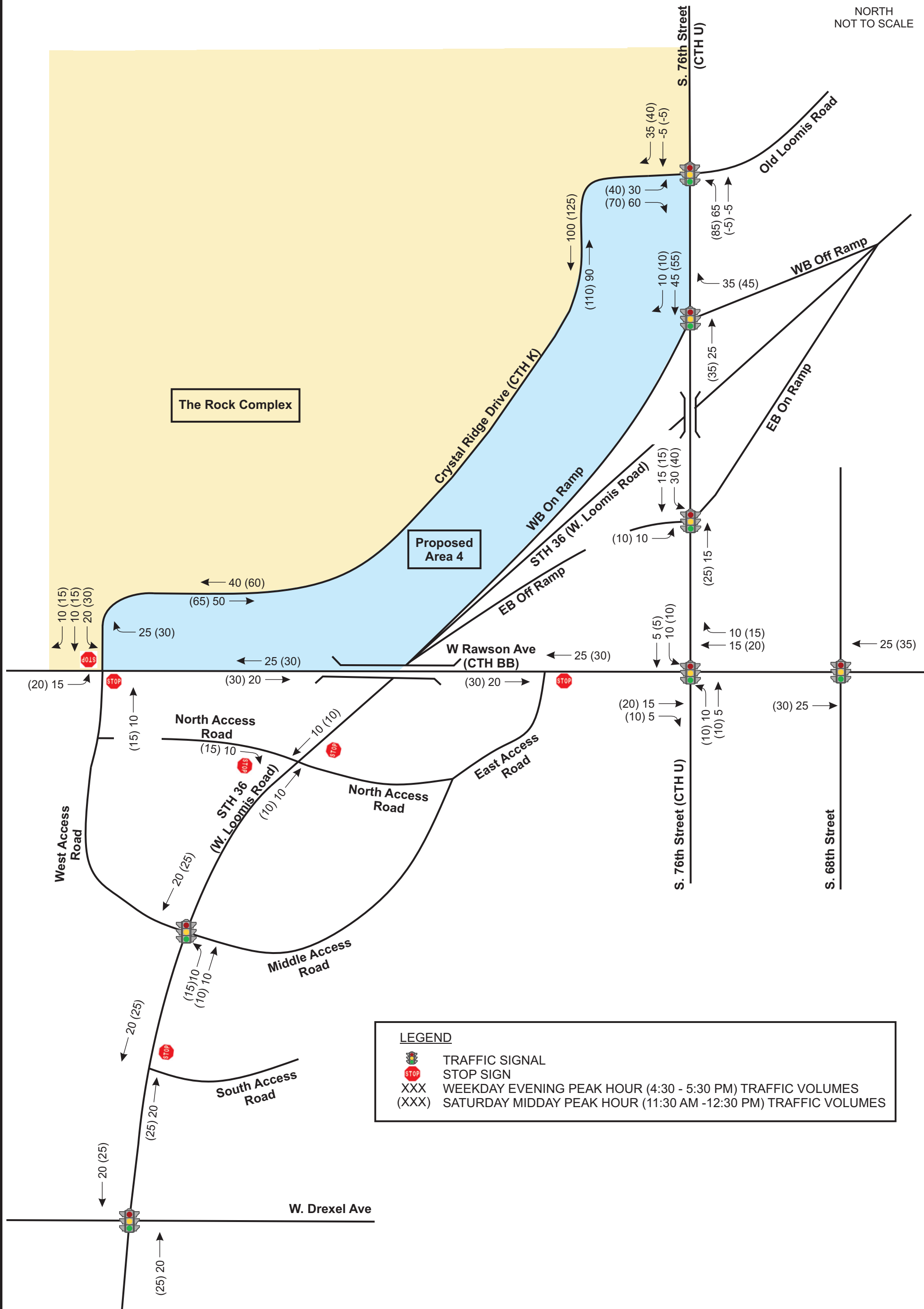
- TRAFFIC SIGNAL
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- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



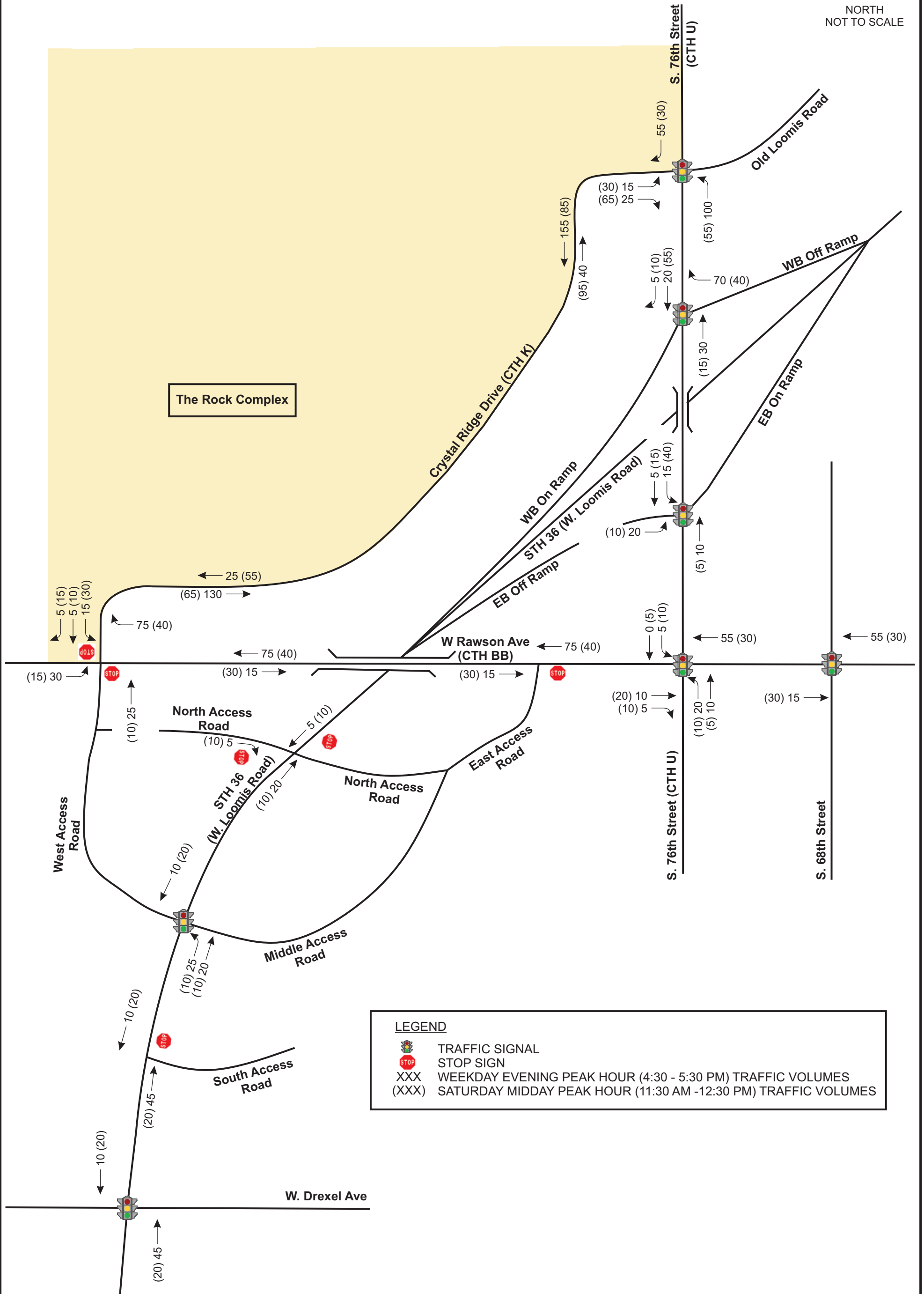
LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



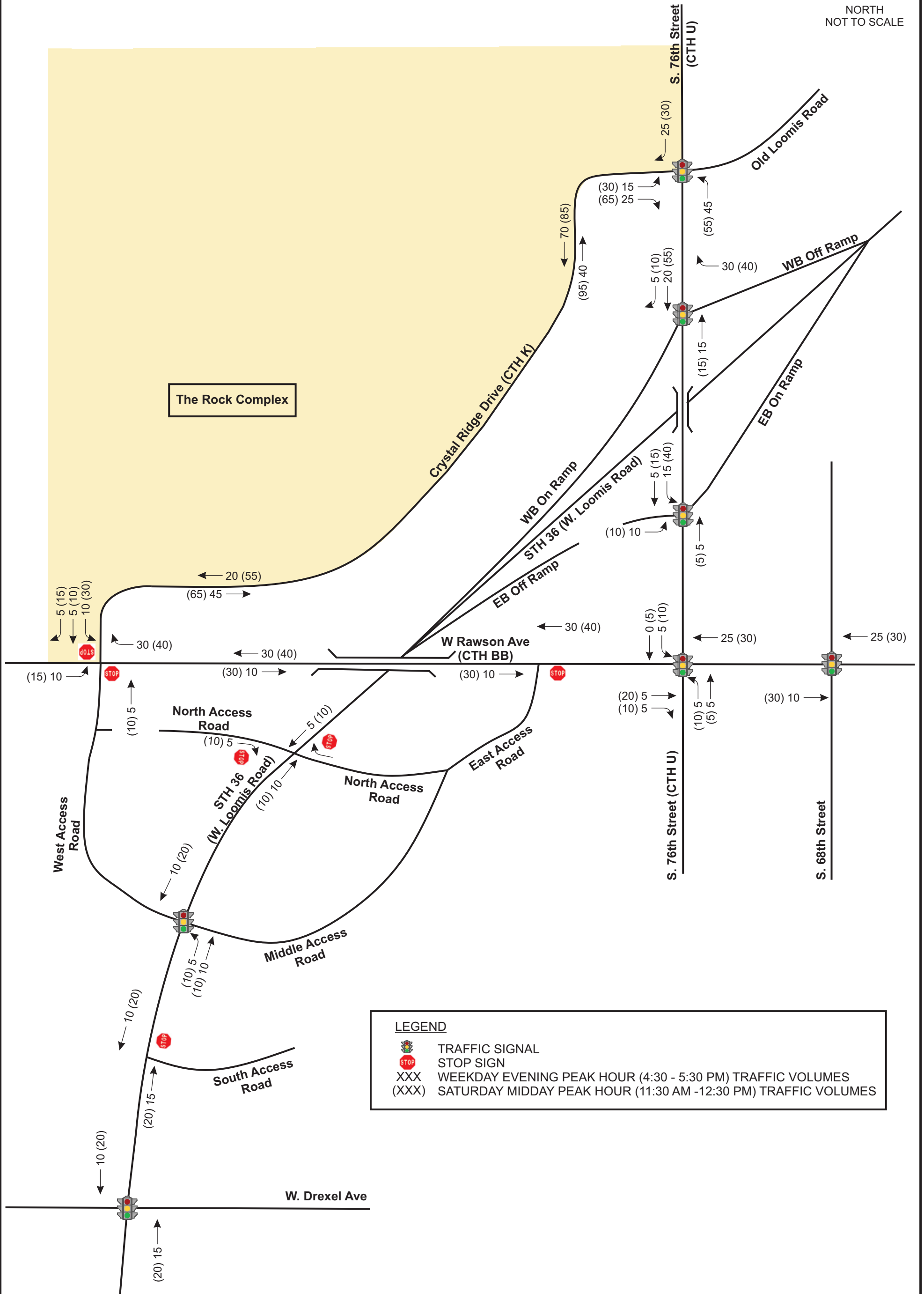


LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
XXX	WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
(XXX)	SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



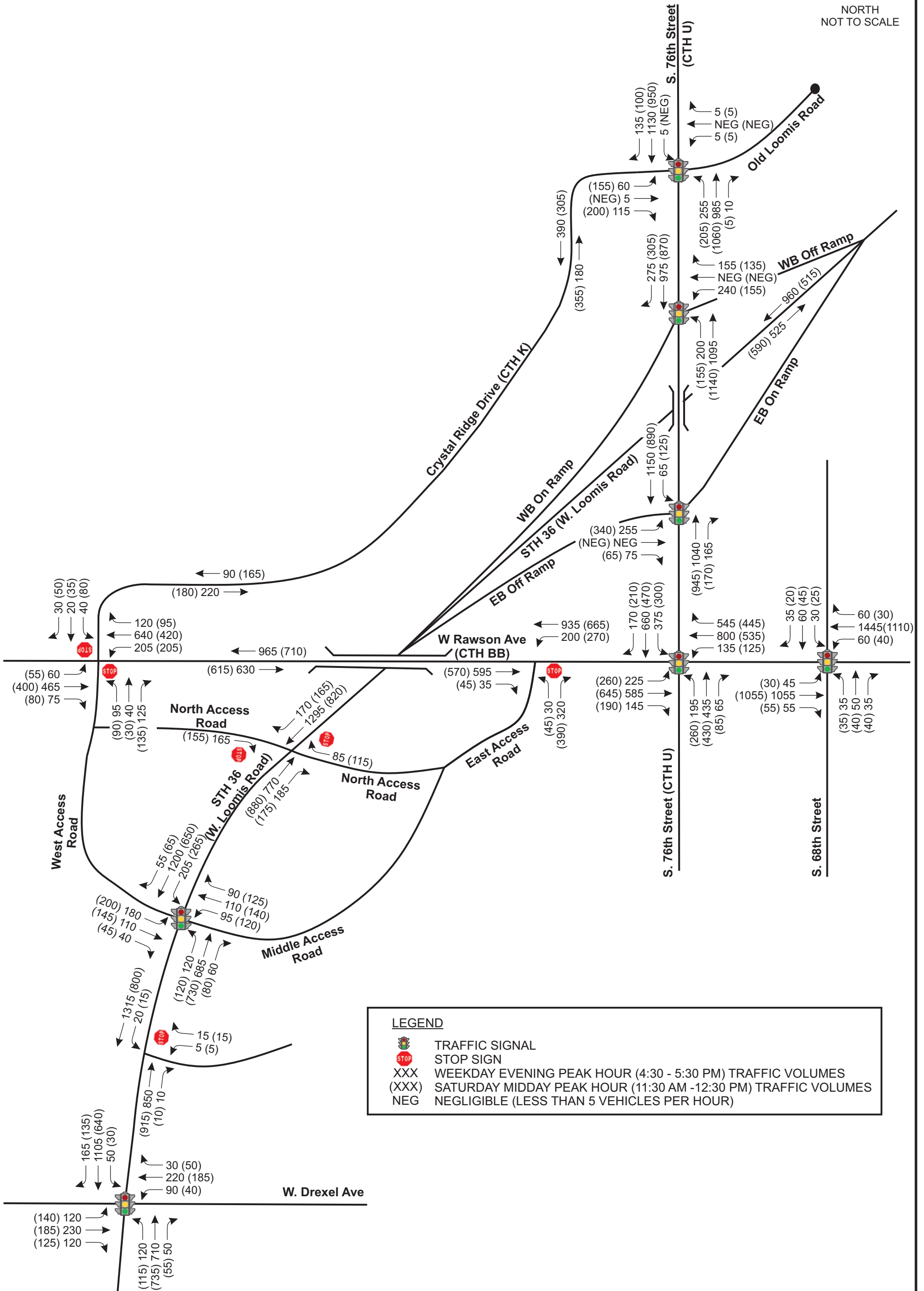
LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- XXX WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
- (XXX) SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES



The Rock Complex

EXHIBIT 4-10A.2
OFF-SITE NEW TRIPS -
FUTURE DEVELOPMENT - OPTION 2 (WITHOUT STADIUM)
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
XXX	WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
(XXX)	SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
NEG	NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

EXHIBIT 4-14.1
YEAR 2017 TOTAL TRAFFIC VOLUMES -
OPTION 1 (WITH STADIUM)
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

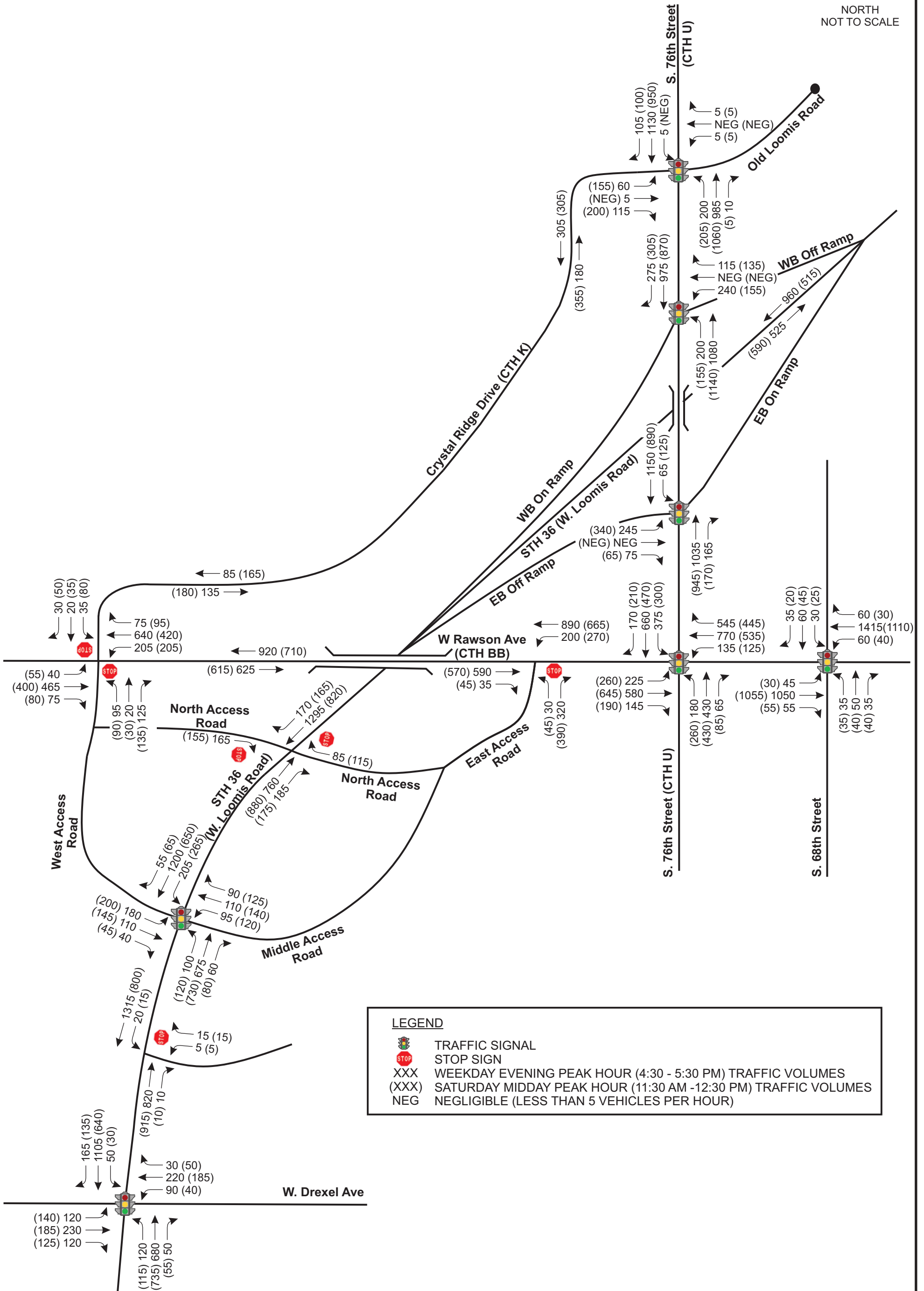
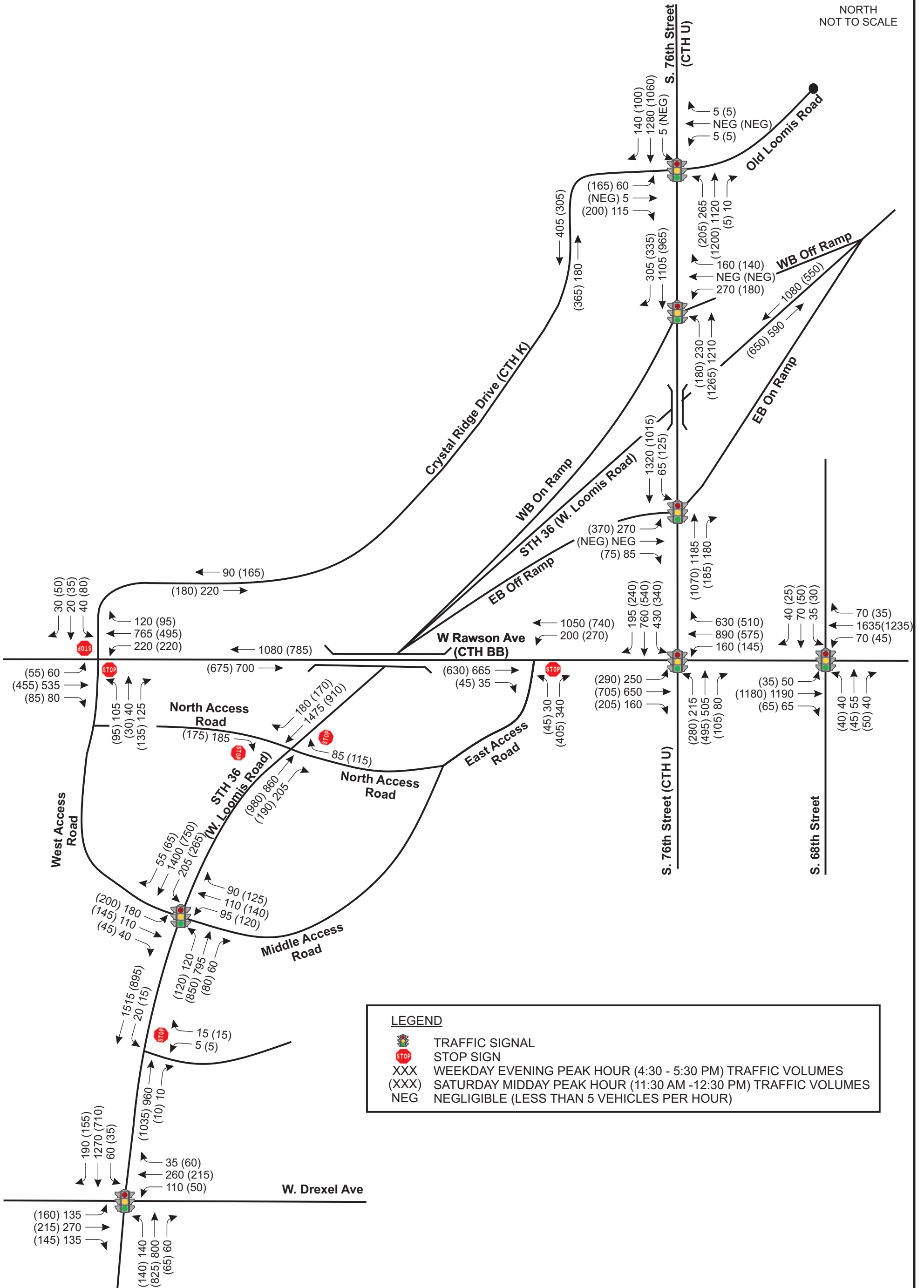
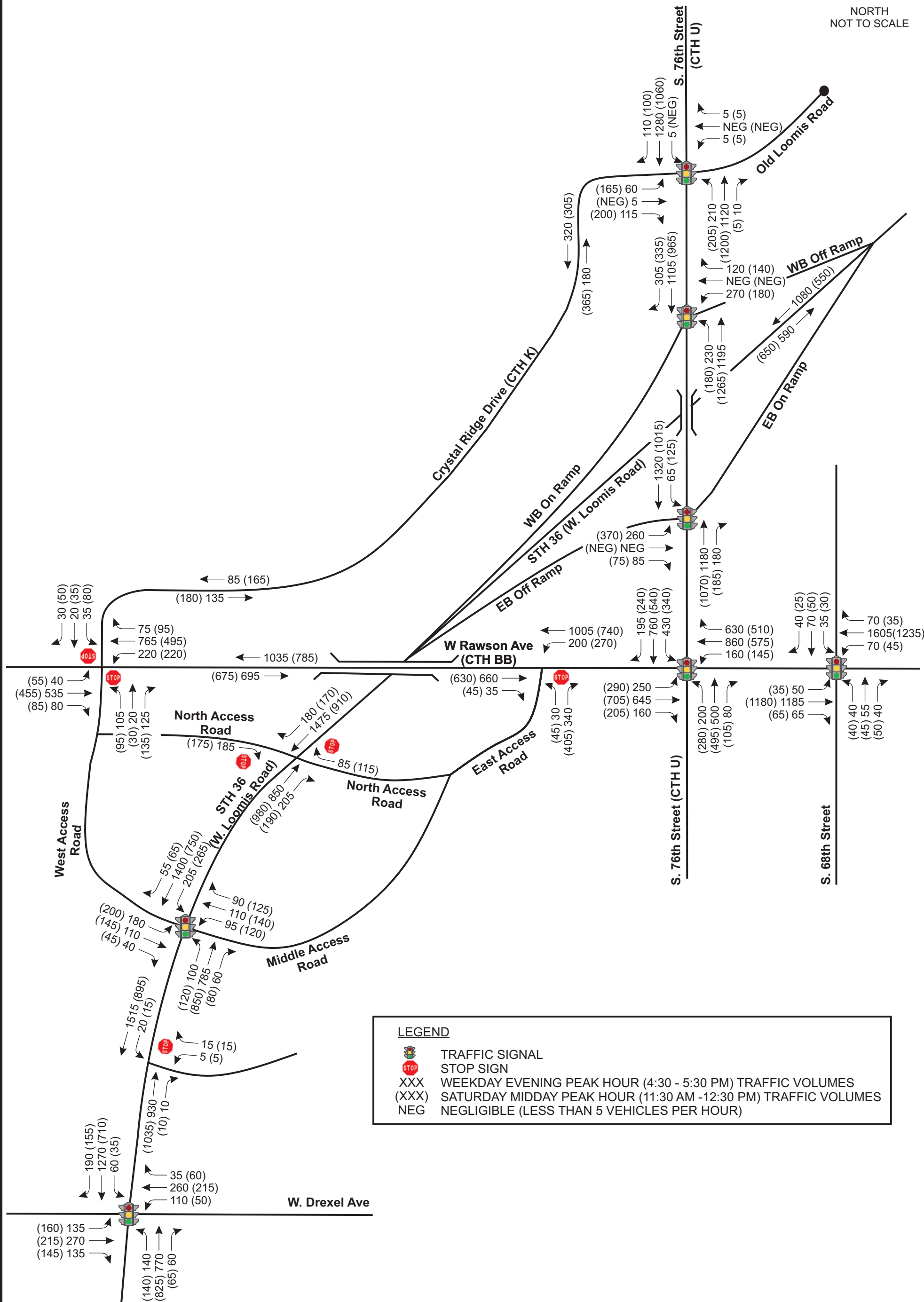


EXHIBIT 4-14.2
YEAR 2017 TOTAL TRAFFIC VOLUMES -
OPTION 2 (WITHOUT STADIUM)
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
XXX	WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
(XXX)	SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
NEG	NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

EXHIBIT 4-16.1
YEAR 2032 TOTAL TRAFFIC VOLUMES -
OPTION 1 (WITH STADIUM)
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
XXX	WEEKDAY EVENING PEAK HOUR (4:30 - 5:30 PM) TRAFFIC VOLUMES
(XXX)	SATURDAY MIDDAY PEAK HOUR (11:30 AM - 12:30 PM) TRAFFIC VOLUMES
NEG	NEGLIGIBLE (LESS THAN 5 VEHICLES PER HOUR)

EXHIBIT 4-16.2
YEAR 2032 TOTAL TRAFFIC VOLUMES -
OPTION 2 (WITHOUT STADIUM)
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

CHAPTER V – TRAFFIC AND IMPROVEMENT ANALYSIS

PART A – SITE ACCESS

STH 36 (W. Loomis Road) is currently access controlled and WisDOT has the final approval for any new access to the state highway. In order to create acceptable access locations on STH 36 for the proposed development, it is necessary to eliminate the ramps to W. Rawson Avenue and realign the existing ramps to S. 76th Street.

[Exhibit 6-1.1D](#) shows the feasibility of realigning the ramps to S. 76th Street. The piers for the existing W. Rawson Avenue bridge over STH 36 have 27 feet of horizontal clearance from the edge of the travel lane. Therefore the ramp will fit adjacent to the through lanes without impacting the structure. The proposed development access locations to STH 36 are summarized below.

South Access Road: The South Access Road is proposed to be a full access T-intersection with stop control on the minor approach. The intersection is approximately 1,850 feet north of W. Drexel Avenue on STH 36 and would provide access to the residential Area 2 of the development.

Middle Access Road: The Middle Access Road is proposed to be signalized and to provide full access to both sides of STH 36. The proposed middle access is approximately 2,170 feet north of the South Access Road. This signal is located approximately 2,415 feet south of the proposed STH 36 on-ramp taper from S 76th Street and 2,360 feet south of the proposed STH 36 off-ramp taper to S 76th Street.

North Access Road: The North Access Roadways are proposed to be right-in/ right-out with stop control on the minor approaches. A North Access Road proposed on both sides of STH 36. The North Access Road on the west side of STH 36, servicing Area 3, will be located approximately 900 feet north of the Middle Access location and 1515' south of the proposed STH 36 on-ramp taper from S 76th Street. The North Access Road on the east side of STH 36, servicing Area 1, will be located approximately 1,200 feet north of the Middle Access location and 1,175 feet south of the proposed STH 36 off-ramp taper to S 76th Street.

The Middle and North access roads will be internally connected on each side of STH 36 and are proposed access W. Rawson Avenue (CTH U). The West Access Road servicing Area 3 will connect to W. Rawson Avenue across from W. Crystal Ridge Drive. The East Access Road servicing Area 1 will connect to W. Rawson Avenue at former STH 36 eastbound ramp intersection. Both of the East and West Access Roads on W. Rawson Avenue are proposed to operate under stop control on the minor street approaches. It is expected that utilizing the North Access Road / East Access Road will be the quickest route to W. Rawson Avenue for northbound vehicles on STH 36. It should be noted that Milwaukee County has the final approval for access to W. Rawson Avenue (CTH BB) and S. 76th Street (CTH U).

PART B – CAPACITY / LEVEL OF SERVICE ANALYSIS

Year 2032 Background Traffic Operating Conditions – *No Improvements*

The Year 2032 background traffic volumes (no development) for the study area intersections are shown on [Exhibit 4-2.1](#). [Exhibit 5-2](#) shows the peak hour operating conditions at the study area intersections with the Year 2032 background traffic. The Year 2032 background traffic analysis is based on the existing intersection geometrics (no ramp removal) and the existing traffic control shown on [Exhibit 3-1A](#).

As shown on [Exhibit 5-2](#), all movements are expected to operate at LOS D or better at the study area intersections under the Year 2032 background traffic volumes during the weekday evening and Saturday midday peak periods except the following:

- The eastbound shared through/left-turn movement at the S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The northbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The southbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening peak hour.
- The eastbound approach at the S. 76th Street (CTH U) & W. Crystal Ridge Drive intersection which is expected to operate at LOS E during the Saturday midday peak hour.

The Year 2032 background traffic operational analysis with the existing transportation system is provided in Appendix B2.

Improvement operations are discussed later in this chapter and recommendations are discussed in Chapter VI.

Year 2017 and Year 2032 Background Traffic Operating Conditions – *With Improvements*

The Year 2017 background traffic volumes (no development) for the study area intersections are shown on [Exhibits 3-2B.1 and 4-2.1](#). [Exhibits 5-9 and 5-11](#) shows the Year 2017 and Year 2032 background traffic peak hour operating conditions with improvements at the study area intersections. Year 2017 and Year 2032 background traffic intersection improvements are discussed in Chapter VI.

As shown on [Exhibits 5-9 and 5-11](#), all movements are expected to operate at LOS D or better at the study area intersections under the Year 2017 and Year 2032 background traffic volumes during the weekday evening and Saturday midday peak periods except the following:

- The northbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening and Saturday midday peak hour.
- The southbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening peak hour.

In discussions with Milwaukee County, since operations of W. Rawson Avenue (CTH BB) & S. 68th Street intersection do not change with the total traffic, no improvements were recommended for the intersection. In order to improve this background operations dedicated left turn lanes would need to be added on S. 68th Street. The Year 2017 and Year 2032 background traffic operational analysis with improvements is provided in Appendix E1 and E2.

Year 2017 Total Traffic Operating Conditions – *With Improvements*

The Year 2017 total traffic volumes, for Option 1 (with Stadium) and Option 2 (without Stadium), are shown on [Exhibits 4-14.1 and 4-14.2](#) respectively. [Exhibits 5-15.1 and 5-15.2](#) show the peak hour operating conditions at the study area intersections with the Year 2017 total traffic volumes, Option 1 (with stadium) and Option 2 (without stadium) respectively. The Year 2017 total traffic analysis is based on the intersection improvements mentioned in *Chapter VI – Recommendations and Conclusion* and the intersection geometrics shown on [Exhibit 1-4](#).

As shown on [Exhibit s5-15.1 and 5-15.2](#), all movements are expected to operate at LOS D or better at the study area intersections under the Year 2017 total traffic volumes, with and without the minor league baseball stadium, during the weekday evening and Saturday midday peak periods except the following:

- The northbound and southbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The northbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening and Saturday midday peak hour.
- The southbound shared through/left-turn movement at the W. Rawson Avenue (CTH BB) & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening peak hour.

The Year 2017 total traffic operational analysis with the planned transportation system is provided in Appendix G1.

Year 2032 Total Traffic Operating Conditions – *With Improvements*

The Year 2032 total traffic volumes, for Option 1 (with Stadium) and Option 2 (without Stadium), are shown on [Exhibit 4-16.1 and 4-16.2](#) respectively. [Exhibits 5-17.1 and 5-17.2](#) show the peak hour operating conditions at the study area intersections with the Year 2032 total traffic volumes, Option 1 (with stadium) and Option 2 (without stadium) respectively. The Year 2032 total traffic analysis is based on the intersection improvements mentioned in *Chapter VI – Recommendations and Conclusion* and the intersection geometrics shown on [Exhibit 1-10](#).

As shown on [Exhibits 5-17.1 and 5-17.2](#), all movements are expected to operate at LOS D or better at the study area intersections under the Year 2032 total traffic volumes, with and without the minor league baseball stadium, during the weekday evening and Saturday midday peak periods except the following:

- The northbound and southbound shared through/left-turn movement at the W. Rawson Avenue & W. Crystal Ridge Drive intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The northbound shared through/left-turn movement at the W. Rawson Avenue & S. 68th Street intersection which is expected to operate at LOS F during the weekday evening and Saturday midday peak hour.
- The southbound shared through/left-turn movement at the W. Rawson Avenue & S. 68th Street intersection which is expected to operate at LOS E during the weekday evening peak hour.

The Year 2032 total traffic operational analysis with the planned transportation system is provided in Appendix G2.

PART C – QUEUING ANALYSIS

To estimate storage length requirements for turn bays at the study area intersections with improvements, a queuing analysis has been conducted. The 95th percentile queues were evaluated using Synchro for each of the following analysis scenarios:

- Year 2017 Background Traffic with Improvements – Maximum Queues ([Exhibit 5-18](#))
- Year 2032 Background Traffic with Improvements – Maximum Queues ([Exhibit 5-20](#))
- Year 2017 Total Traffic – Option 1 (with Stadium) – Maximum Queues ([Exhibit 5-24.1](#))
- Year 2017 Total Traffic – Option 2 (without Stadium) – Maximum Queues ([Exhibit 5-24.2](#))
- Year 2032 Total Traffic – Option 1 (with Stadium) – Maximum Queues ([Exhibit 5-26.1](#))
- Year 2032 Total Traffic – Option 2 (without Stadium) – Maximum Queues ([Exhibit 5-26.2](#))

Note that the 95th percentile queue lengths were used for the design of the turn bay storage lengths as noted in *Chapter VI*.

PART D – PEDESTRIAN, BICYCLE, AND MULTI-USE TRAIL CONSIDERATIONS

Pedestrian sidewalks are currently provided as follows:

- Both sides of Rawson Avenue from Crystal Ridge through the limits of the study area
- West side of S. 76th Street from the south study limits to 200' south of the STH 36 Eastbound ramp.
- East Side of S. 76th Street through the limits of the study area

It should be noted that pedestrian accommodations are proposed to be incorporated with the proposed Franklin Area A roadways with connectivity to the existing sidewalks as part of the development.

PART E – SPEED CONSIDERATIONS / SIGHT DISTANCE EVALUATION

All new or improved intersections throughout the study area should be designed for ISD in accordance with the latest edition of the American Association of State Highway Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets. All WisDOT controlled intersections throughout the study area should be designed for ISD in accordance with the latest Facilities Development Manual (FDM) design guidelines (Procedure 11-10-5). ISD has been checked at the proposed WisDOT controlled south, middle and north access driveways on STH 36.

ISD was conducted using the following parameters:

- For STH 36, a design speed of 5 mph above the posted speed limit, or 60 mph.
- A single-unit trunk (SU vehicle) eye height of 7.6 feet was checked for the South Access.
- A semi-trunk (WB vehicle) eye height of 7.6 feet was checked for the Middle and North Access locations.
- The height of the object to be seen on STH 36 of 3.5-feet.
- WisDOT desirable ISD guidelines were used. All calculations are provided in Appendix A4.

As shown in Exhibits 5-27.1-3, the WisDOT desirable ISD is expected to be met in both directions of STH 36 at all three proposed access points.

No speed limit changes were evaluated as a part of this TIA.

PART F – TRAFFIC CONTROL NEEDS / WARRANT ANALYSIS

The decision to choose a specific traffic control alternative for a specific intersection is best left to WisDOT, Milwaukee County and the local community. However, due to the presence of existing coordinated traffic signals along S. 76th Street (CTH U) and W. Rawson Avenue (CTH BB), traffic signal control is expected to be the preferred traffic control alternative for any new signals on these roadways. The intersection of STH 36 & W.

Drexel Avenue is currently signalized and the proposed middle access intersections on STH 36 would be coordinated with this intersection.

PART G – TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses were conducted in accordance with the 2009 Edition of the *Manual on Uniform Traffic Control Devices (MUTCD)* to determine if a traffic signal is warranted.

Note that traffic signal warrants should be viewed as guidelines to help decide whether a traffic signal may be installed. Meeting traffic signal warrants does not translate to a legal requirement for their installation. Per WisDOT guidelines, where traffic signal warrants are expected to be met, both a traffic signal improvement option and a roundabout improvement option should be considered.

Chapter 4C of the 2009 Manual on Uniform Traffic Control Devices (MUTCD) outlines the standards for determining the need for traffic signals at a particular location. For a traffic signal to be installed, at least one of the following warrants must be satisfied. The nine signal warrants are listed below:

- Warrant 1, Eight-Hour Vehicular Volume.
- Warrant 2, Four-Hour Vehicular Volume.
- Warrant 3, Peak Hour.
- Warrant 4, Pedestrian Hour.
- Warrant 5, School Crossing.
- Warrant 6, Coordinated Signal Systems.
- Warrant 7, Crash Experience.
- Warrant 8, Roadway Network.
- Warrant 9, Intersection Near a Grade Crossing

The MUTCD has different criteria based on urban speeds (less than or equal to 40-mph) and rural speeds (greater than 40-mph). In addition, the MUTCD has different criteria for communities with populations less than 10,000. Per the MUTCD, the urban traffic signal warrant analysis volume thresholds (100%) were used for analyzing traffic signals on S. 76th Street and the rural traffic signal warrant analysis volume thresholds (70%) were used for analyzing traffic signals on STH 36.

For this study, Warrants 1, 2 and 3 were evaluated as described below:

Warrant 1, Eight Hour Vehicular Volume states that a traffic signal may be considered if one of the following conditions exists for at least eight hours of an average day:

- A. The vehicles per hour given on the major street meet or exceed 600 and the vehicles per hour on the higher volume minor street approach (Crystal Ridge Drive) meet or exceed 200; or
- B. The vehicles per hour given on the major street meet or exceed 900 and the vehicles per hour on the higher volume minor 100. Table 4C-1, MUTCD p. 4C-3.

Or if the following two conditions exist for eight hours of an average day after adequate trial of other alternatives that could cause less delay and inconvenience has failed to solve traffic problems:

- A. The vehicles per hour on the major street and the higher volume minor street approach meet or exceed 80% of the values stated in A (480 major, 160 minor), and
- B. The vehicles per hour on the major street and the higher volume minor street approach meet or exceed 80% of the values stated in B (720 major, 80 minor).

Warrant 2, Four Hour Volume is satisfied if during any four hours of an average day the major street and higher volume minor street approach volumes fall above the 100% four-hour curve shown in the Appendix.

Warrant 3, Peak Hour Volume is satisfied if during any hour of an average day the major street and higher volume minor street approach fall above the 100% peak hour curve shown in the Appendix. Note that this signal warrant is applied by WisDOT only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

STH 36 (W. Loomis Road) & Middle Access Road

To provide safe and efficient traffic operations along the STH 36 corridor at the Middle Access Road, the preferred option is to install traffic signals at the intersection. The need for traffic signals at this intersection was investigated by GRAEF under the Year 2017 total traffic volume – Option 2 (without Stadium) conditions. The Year 2017 total traffic volumes – Option 1 (with Stadium) are greater than Option 2, therefore if warrants are met for Option 2 they are also expected to be met for Option 1. The signal warrant study for the intersection included the following parameters:

- ADT count collected by WisDOT in 2011 at Site# 400320
- Background traffic growth to year 2017 based on WisDOT growth rates from WisDOT traffic Forecast
- On-site development traffic – Option 2 (without stadium) expected to pass by through the intersection, distributed for 12 hours using WisDOT- developed distribution percentages averaged for the Franklin Area A development.
- Two or more lanes evaluated for the mainline, STH 36
- One lane evaluated for the minor streets with zero percentage right-turns included for eastbound traffic and 100 percent right-turns included for westbound traffic.

With the recommended improvements, Warrants 1, 2 and 3 are expected to be met for the Year 2017 total traffic under both Option 1 and Option 2 scenarios. The hourly volume worksheets and WisDOT signal warrant worksheets is provided in Appendix I1.

S. 76th Street (CTH U) & Crystal Ridge Drive (CTH K)

The S. 76th Street (CTH U) & Crystal Ridge Drive intersection is expected to operate with unacceptable delays for the eastbound approach and northbound left movement with the Year 2017 total traffic. S. 76th Street (CTH U) is a coordinated signalized corridor and the preferred option is to install traffic signals at the intersection when warranted. The signal warrant study for the intersection included the following parameters:

- 4-hour traffic count collected by GRAEF in April 2015
- Background traffic growth to year 2017 based on WisDOT growth rates from WisDOT traffic forecast
- On-site development traffic – Option 2 (without stadium) expected to pass by through the intersection, distributed for 12 hours using WisDOT- developed distribution percentages averaged for the Franklin Area A development. The Year 2017 total traffic volumes – Option 1 (with Stadium) are greater than Option 2, therefore if warrants are met for Option 2 they are also expected to be met for Option 1.
- Two or more lanes evaluated for the mainline, S. 76th Street (CTH U)

- One lane evaluated for the minor streets with zero percentage right-turns included for eastbound traffic and 100 percent right-turns included for westbound traffic.

With the recommended improvements, Warrants 2 and 3 are expected to be met for the Year 2017 total traffic under both Option 1 and Option 2 scenarios. Warrant 1 was not evaluated since 8 hours of traffic counts were not available. The hourly volume worksheets and WisDOT signal warrant worksheets is provided in Appendix 12.

S. 76th Street (CTH U) & STH 36 Eastbound Ramps

The S. 76th Street (CTH U) & STH 36 Eastbound Ramps intersection is expected to operate with unacceptable delays for the eastbound approach with the Year 2017 background and total traffic scenarios. S. 76th Street (CTH U) is a coordinated signalized corridor and the preferred option is to install traffic signals at the intersection when warranted. The signal warrant study for the intersection included the following parameters:

- 13-hour traffic count collected by WisDOT in August 2015
- Background traffic growth to year 2017 based on WisDOT growth rates from WisDOT traffic forecast
- On-site development traffic – Option 2 (without stadium) expected to pass by through the intersection, distributed for 12 hours using WisDOT- developed distribution percentages averaged for the Franklin Area A development. The Year 2017 total traffic volumes – Option 1 (with Stadium) are greater than Option 2, therefore if warrants are met for Option 2 they are also expected to be met for Option 1.
- Two or more lanes evaluated for the mainline, S. 76th Street (CTH U)
- One lane evaluated for the minor streets with zero percentage right-turns included for westbound traffic.

With the recommended improvements, Warrants 1, 2 and 3 are expected to be met for the Year 2017 total traffic under both Option 1 and Option 2 scenarios. The hourly volume worksheets and WisDOT signal warrant worksheets is provided in Appendix 13.

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	C	B	B	C	C	B	A	A	B	D	B	C	
		SAT	C	B	B	B	B	B	B	A	B	B	B	B	
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	A	A	A	A	A	A	B			C			--
		SAT	A	A	A	A	A	A	B			B			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps	Two-Way Stop Control	PM	--	A	A	B	B	--	--	--	--	B			--
		SAT	--	A	A	A	A	--	--	--	--	B			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	--	A	--	--	A	--	B			--	--	--	--
		SAT	--	A	--	--	A	--	B			--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	C	C	C	B	C	B	C	D	C	D	C	C	C
		SAT	B	C	C	B	B	B	C	D	C	C	C	C	C
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	A	A	A	A	B	A	F ¹		C	E ²		C	B
		SAT	A	C	B	A	B	A	F ³		C	D		C	C
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	D			D			B	A	A	B	A	A	--
		SAT	E ⁴			D			B	A	A	B	A	A	--
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	B		A	B	A	--	--	A		B
		SAT	--	--	--	B		A	A	A	--	--	A		A
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	F ⁵		C	--	--	--	--	A	A	C	A	--	--
		SAT	F ⁶		B	--	--	--	--	A	A	C	A	--	--

Notes: (--) indicates a movement that is not possible

¹ delay = 97.8 sec; v/c = 0.91

² delay = 78.5 sec; v/c = 0.86

³ delay = 80.9 sec; v/c = 0.85

⁴ delay = 42.1 sec; v/c = 0.66

⁵ delay = 125.6 sec; v/c = 0.93

⁶ delay = 119.9 sec; v/c = 1.02

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	C	B	B	C	B	B	A	A	B	C	B	B	
		SAT	C	B	B	B	B	B	A	A	B	B	B	B	
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	A	A	A	A	A	A	B			B		--	
		SAT	A	A	A	A	A	A	B			B		--	
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps	Two-Way Stop Control	PM	--	A	A	A	A	--	--	--	--	B		--	
		SAT	--	A	A	A	A	--	--	--	--	A		--	
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	--	A	--	--	A	--	B			--	--	--	
		SAT	--	A	--	--	A	--	B			--	--	--	
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	C	C	C	C	C	B	C	C	C	C	C	C	
		SAT	C	C	C	C	D	D	B	C	B	B	C	C	
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	A	A	A	A	B	A	E ¹		C	E ²		B	
		SAT	A	B	B	A	B	A	E ³		C	D		B	
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	C			D			B	A	A	B	A	A	--
		SAT	C			B			A	A	A	A	A	A	--
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D		A	A	A	--	--	A		A
		SAT	--	--	--	D		A	A	A	--	--	A		A
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	D		A	--	--	--	--	B	B	A	A	--	A
		SAT	D		A	--	--	--	--	A	A	A	A	--	A

Notes: (--) indicates a movement that is not possible

¹ delay = 68.8 sec; v/c = 0.79

² delay = 55.7 sec; v/c = 0.74

³ delay = 60.8 sec; v/c = 0.75

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	C	B	B	C	C		B	A	A	B	D	B	C
		SAT	C	B	B	B	B		B	B	A	B	B	B	B
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	A	A	A	A	A	A	B			C			--
		SAT	A	A	A	A	A	A	B			B			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Westbound ramps	Two-Way Stop Control	PM	--	A	A	B	B	--	--	--	--	B			--
		SAT	--	A	A	A	A	--	--	--	--	B			--
W. Rawson Avenue (CTH BB) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	--	A	--	--	A	--	B			--	--	--	--
		SAT	--	A	--	--	A	--	B			--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	D	C	C	C	D	C	C	D	C	D	B	B	C
		SAT	C	C	C	C	D	D	B	C	C	B	A	A	C
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	A	A	A	A	B	A	F ¹		C	E ²		C	B
		SAT	A	C	B	A	B	A	F ³		C	D		C	C
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Two-Way Stop Control	PM	C			C			B	A	A	A	A	A	--
		SAT	D			C			B	A	A	A	A	A	--
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D		A	B	B	--	--	A		B
		SAT	--	--	--	D		A	A	A	--	--	A		A
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Two-Way Stop Control	PM	D		A	--	--	--	--	A	A	A	A	--	A
		SAT	D		A	--	--	--	--	A	A	A	A	--	A

Notes: (--) indicates a movement that is not possible

¹ delay = 97.8 sec; v/c = 0.91

² delay = 78.5 sec; v/c = 0.86

³ delay = 80.9 sec; v/c = 0.85

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	D	C	C	D	C		B	B	A	B	C	B	C
		SAT	C	C	C	C	D		B	B	A	B	B	B	C
STH 36 (W. Loomis Road) & South Access Road	Two-Way Stop Control	PM	--	--	--	C			--	A	A	A	A	--	--
		SAT	--	--	--	C			--	A	A	B	A	--	--
STH 36 (W. Loomis Road) & Middle Access Road	Traffic Signal	PM	D	C		D	D	D	C	B	B	B	B	A	B
		SAT	D	C		D	D	D	C	C	B	B	B	A	C
STH 36 (W. Loomis Road) & North Access Road	Two-Way Stop Control	PM	--	--	C	--	--	B	--	A	A	--	A	A	--
		SAT	--	--	B	--	--	B	--	A	A	--	A	A	--
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road	Two-Way Stop Control	PM	A	A	A	A	A	A	F ¹		B	F ²		B	--
		SAT	A	A	A	A	A	A	F ³		B	F ⁴		B	--
W. Rawson Avenue (CTH BB) & East Access Road	Two-Way Stop Control	PM	--	A	A	A	A	--	D	--	C	--	--	--	--
		SAT	--	A	A	B	A	--	D	--	C	--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	D	C	C	C	C	B	C	C	C	D	C	C	C
		SAT	D	D	C	C	C	B	C	C	C	D	C	D	C
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	A	B	A	A	B	A	E ⁵		C	E ⁶		C	B
		SAT	A	A	A	A	B	A	E ⁷		C	D		C	B
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Traffic Signal	PM	C	C		D			C	B	B	B	B	B	C
		SAT	C	C		D			B	B	B	B	B	B	B
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D		A	B	B	--	--	C	C	C
		SAT	--	--	--	D		A	A	A	--	--	C	C	B
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Traffic Signal	PM	D		A	--	--	--	--	A	A	A	A	--	A
		SAT	D		A	--	--	--	--	A	A	A	A	--	A

Notes: (--) indicates a movement that is not possible

¹ delay = 120.1 sec; v/c = 0.94

² delay = 72.7 sec; v/c = 0.56

³ delay = 88.6 sec; v/c = 0.83

⁴ delay = 107.2 sec; v/c = 0.88

⁵ delay = 68.8 sec; v/c = 0.79

⁶ delay = 55.7 sec; v/c = 0.74

⁷ delay = 64.0 sec; v/c = 0.75

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	D	C	C	D	C		B	B	A	B	C	B	C
		SAT	C	C	C	C	D		B	B	A	B	B	B	C
STH 36 (W. Loomis Road) & South Access Road	Two-Way Stop Control	PM	--	--	--	C			--	A	A	A	A	--	--
		SAT	--	--	--	C			--	A	A	B	A	--	--
STH 36 (W. Loomis Road) & Middle Access Road	Traffic Signal	PM	D	C		D	D	D	C	B	B	B	B	A	B
		SAT	D	C		D	D	D	C	C	B	B	B	A	C
STH 36 (W. Loomis Road) & North Access Road	Two-Way Stop Control	PM	--	--	C	--	--	B	--	A	A	--	A	A	--
		SAT	--	--	B	--	--	B	--	A	A	--	A	A	--
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road	Two-Way Stop Control	PM	A	A	A	A	A	A	F ¹		B	F ²		B	--
		SAT	A	A	A	A	A	A	F ³		B	F ⁴		B	--
W. Rawson Avenue (CTH BB) & East Access Road	Two-Way Stop Control	PM	--	A	A	A	A	--	D	--	C	--	--	--	--
		SAT	--	A	A	B	A	--	D	--	C	--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	D	C	C	C	C	B	C	C	C	D	C	C	C
		SAT	D	D	C	C	C	B	C	C	C	D	C	D	C
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	A	B	A	A	B	A	E ⁵		C	E ⁶		C	B
		SAT	A	A	A	A	B	A	E ⁷		C	D		C	B
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Traffic Signal	PM	C	C		D			B	A	A	B	B	B	B
		SAT	C	C		D			B	A	A	B	B	B	B
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D		A	B	B	--	--	C	C	C
		SAT	--	--	--	D		A	A	A	--	--	C	C	B
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Traffic Signal	PM	D		A	--	--	--	--	A	A	A	A	--	A
		SAT	D		A	--	--	--	--	A	A	A	A	--	A

Notes: (--) indicates a movement that is not possible

¹ delay = 70.5 sec; v/c = 0.72

² delay = 55.4 sec; v/c = 0.45

³ delay = 88.6 sec; v/c = 0.83

⁴ delay = 107.2 sec; v/c = 0.88

⁵ delay = 68.8 sec; v/c = 0.79

⁶ delay = 55.7 sec; v/c = 0.74

⁷ delay = 64.0 sec; v/c = 0.75

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	D	C	C	D	C	C	B	A	B	C	B	C	
		SAT	C	C	C	C	D	B	B	B	C	C	B	C	
STH 36 (W. Loomis Road) & South Access Road	Two-Way Stop Control	PM	--	--	--	D	--	A	A	B	A	--	--	--	
		SAT	--	--	--	C	--	A	A	B	A	--	--	--	
STH 36 (W. Loomis Road) & Middle Access Road	Traffic Signal	PM	D	C	D	D	D	D	B	B	B	B	A	B	
		SAT	D	C	D	D	D	C	C	B	B	B	A	C	
STH 36 (W. Loomis Road) & North Access Road	Two-Way Stop Control	PM	--	--	D	--	--	B	--	A	A	--	A	A	
		SAT	--	--	C	--	--	B	--	A	A	--	A	A	
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road	Two-Way Stop Control	PM	A	A	A	A	A	A	F ¹	B	F ²	B	--	--	
		SAT	A	A	A	A	A	A	F ³	B	F ⁴	B	--	--	
W. Rawson Avenue (CTH BB) & East Access Road	Two-Way Stop Control	PM	--	A	A	B	A	--	D	--	C	--	--	--	
		SAT	--	A	A	B	A	--	D	--	C	--	--	--	
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	D	C	C	C	C	B	C	D	C	D	D	D	
		SAT	D	D	C	C	D	C	C	C	C	D	C	C	
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	B	B	A	A	B	A	F ⁵	C	E ⁶	C	B		
		SAT	A	B	A	A	B	A	F ⁷	C	D	C	B		
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Traffic Signal	PM	C	C	D	D	B	B	B	C	B	C	B		
		SAT	C	C	D	B	A	A	B	B	B	B	B		
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D	A	C	A	--	--	C	C		
		SAT	--	--	--	D	A	A	A	--	--	C	C		
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Traffic Signal	PM	D	A	--	--	--	--	A	A	B	B	--		
		SAT	D	A	--	--	--	--	A	A	C	B	--		

Notes: (--) indicates a movement that is not possible

¹ delay = 260.1 sec; v/c = 1.31

² delay = 126.1 sec; v/c = 0.75

³ delay = 163.7 sec; v/c = 1.06

⁴ delay = 188.9 sec; v/c = 1.11

⁵ delay = 97.8 sec; v/c = 0.91

⁶ delay = 78.5 sec; v/c = 0.86

⁷ delay = 84.2 sec; v/c = 0.85

Intersection	Traffic Control	Peak Hour	Level of Service per Movement by Approach												Overall LOS
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
STH 36 (W. Loomis Road) & W. Drexel Avenue	Traffic Signal	PM	D	C	C	D	C	C	B	A	B	C	B	C	
		SAT	C	C	C	C	D	B	B	B	C	C	B	C	
STH 36 (W. Loomis Road) & South Access Road	Two-Way Stop Control	PM	--	--	--	D			--	A	A	B	A	--	--
		SAT	--	--	--	C			--	A	A	B	A	--	--
STH 36 (W. Loomis Road) & Middle Access Road	Traffic Signal	PM	D	C	D	D	D	D	B	B	B	B	A	B	
		SAT	D	C	D	D	D	C	C	B	B	B	A	C	
STH 36 (W. Loomis Road) & North Access Road	Two-Way Stop Control	PM	--	--	D	--	--	B	--	A	A	--	A	A	--
		SAT	--	--	C	--	--	B	--	A	A	--	A	A	--
W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road	Two-Way Stop Control	PM	A	A	A	A	A	A	F ¹	B	F ²	B	--	--	
		SAT	A	A	A	A	A	A	F ³	B	F ⁴	B	--	--	
W. Rawson Avenue (CTH BB) & East Access Road	Two-Way Stop Control	PM	--	A	A	B	A	--	D	--	C	--	--	--	--
		SAT	--	A	A	B	A	--	D	--	C	--	--	--	--
W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)	Traffic Signal	PM	D	C	C	C	C	B	C	D	C	D	C	D	C
		SAT	D	D	C	C	D	C	C	C	C	D	D	D	D
W. Rawson Avenue (CTH BB) & S. 68 th Street	Traffic Signal	PM	B	B	A	A	B	A	F ⁵	C	E ⁶	C	B	B	
		SAT	A	B	A	A	B	A	F ⁷	C	D	C	B	B	
S. 76th Street (CTH U) & W. Crystal Ridge Drive	Traffic Signal	PM	C	C	D			C	A	A	B	C	B	B	
		SAT	C	C	D			B	A	A	B	B	B	B	
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps	Traffic Signal	PM	--	--	--	D	A	C	A	--	--	C	C	C	
		SAT	--	--	--	D	A	A	A	--	--	C	C	B	
S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps	Traffic Signal	PM	D		A	--	--	--	A	A	B	B	--	B	
		SAT	D		A	--	--	--	A	A	A	A	--	A	

Notes: (--) indicates a movement that is not possible

¹ delay = 144.6 sec; v/c = 0.99

² delay = 85.4 sec; v/c = 0.59

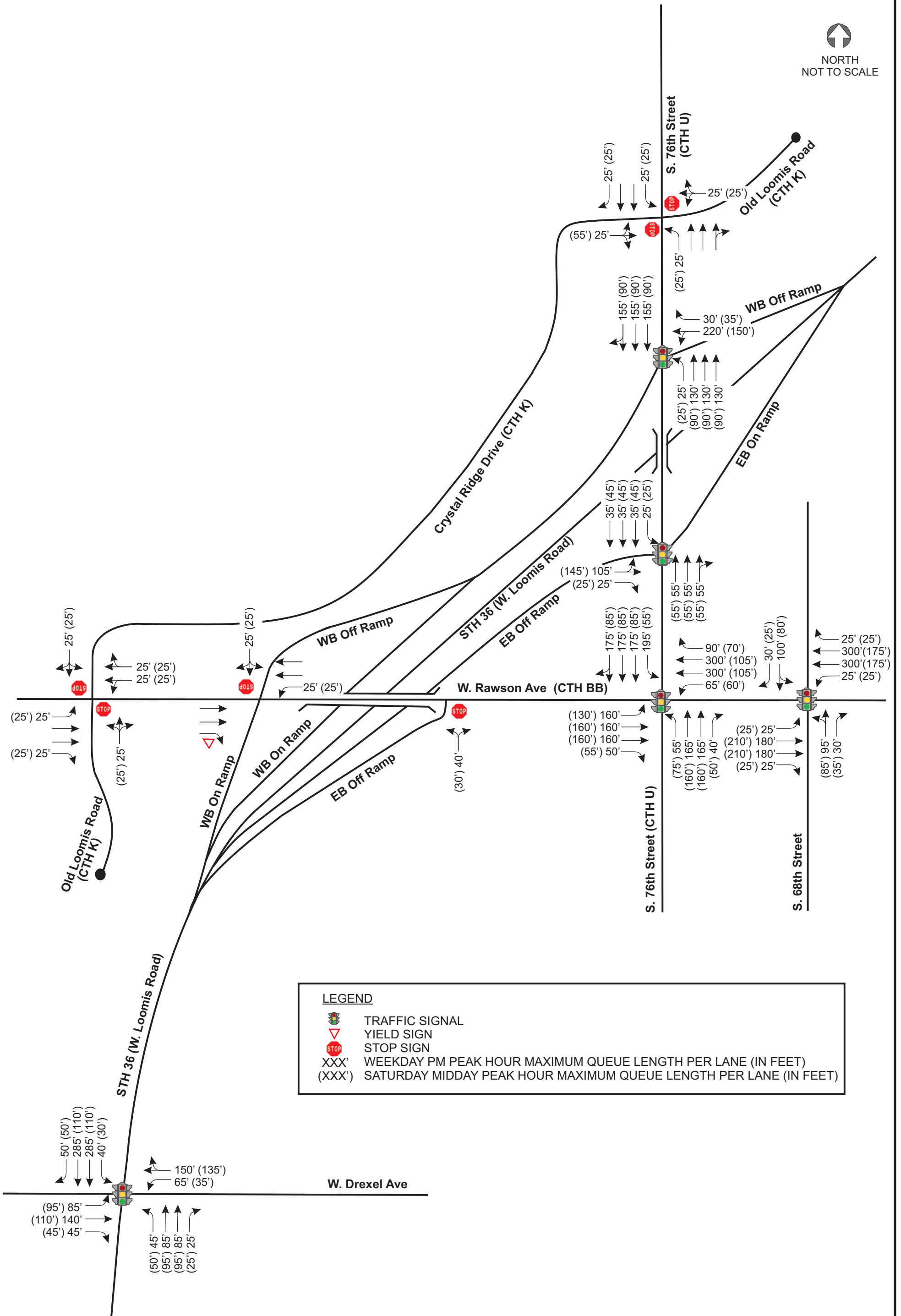
³ delay = 163.7 sec; v/c = 1.06

⁴ delay = 188.9 sec; v/c = 1.11

⁵ delay = 97.8 sec; v/c = 0.91

⁶ delay = 78.5 sec; v/c = 0.86

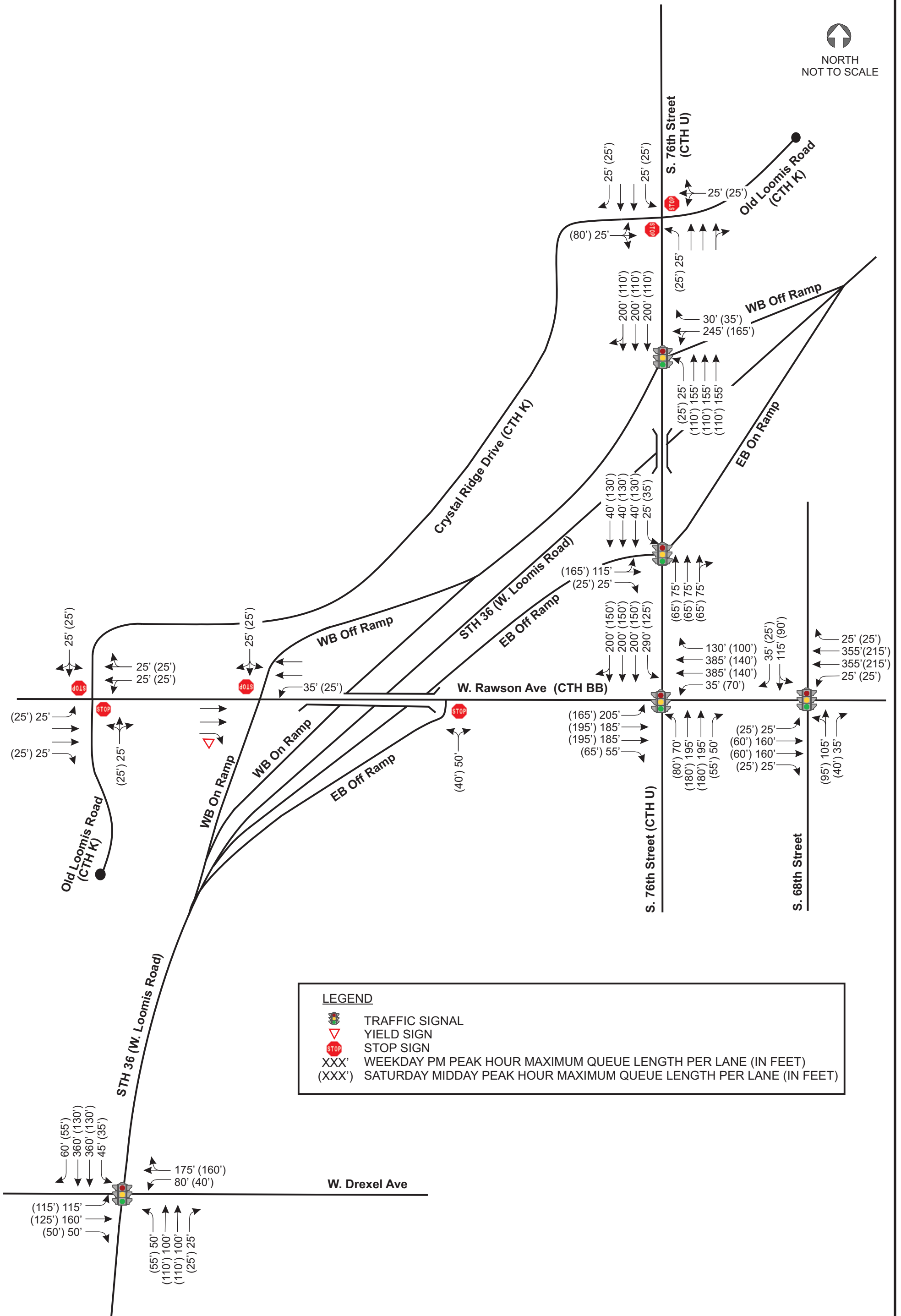
⁷ delay = 84.2 sec; v/c = 0.85



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX' WEEKDAY PM PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)
- (XXX') SATURDAY MIDDAY PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)

EXHIBIT 5-18
YEAR 2017 BACKGROUND TRAFFIC
WITH IMPROVEMENTS - MAXIMUM QUEUES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND

- TRAFFIC SIGNAL
- YIELD SIGN
- STOP SIGN
- XXX' WEEKDAY PM PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)
- (XXX') SATURDAY MIDDAY PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)

EXHIBIT 5-20
YEAR 2032 BACKGROUND TRAFFIC
WITH IMPROVEMENTS - MAXIMUM QUEUES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



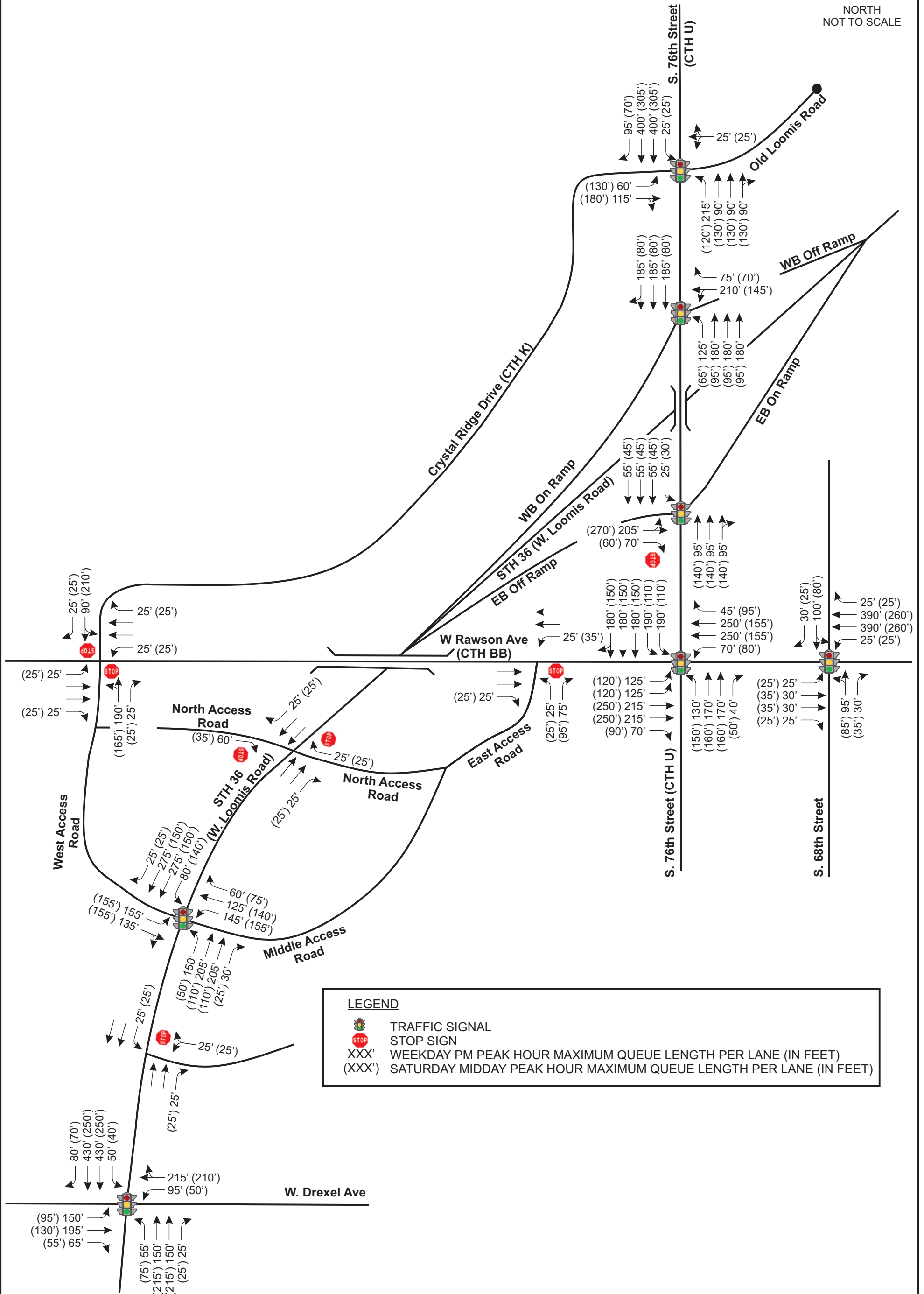
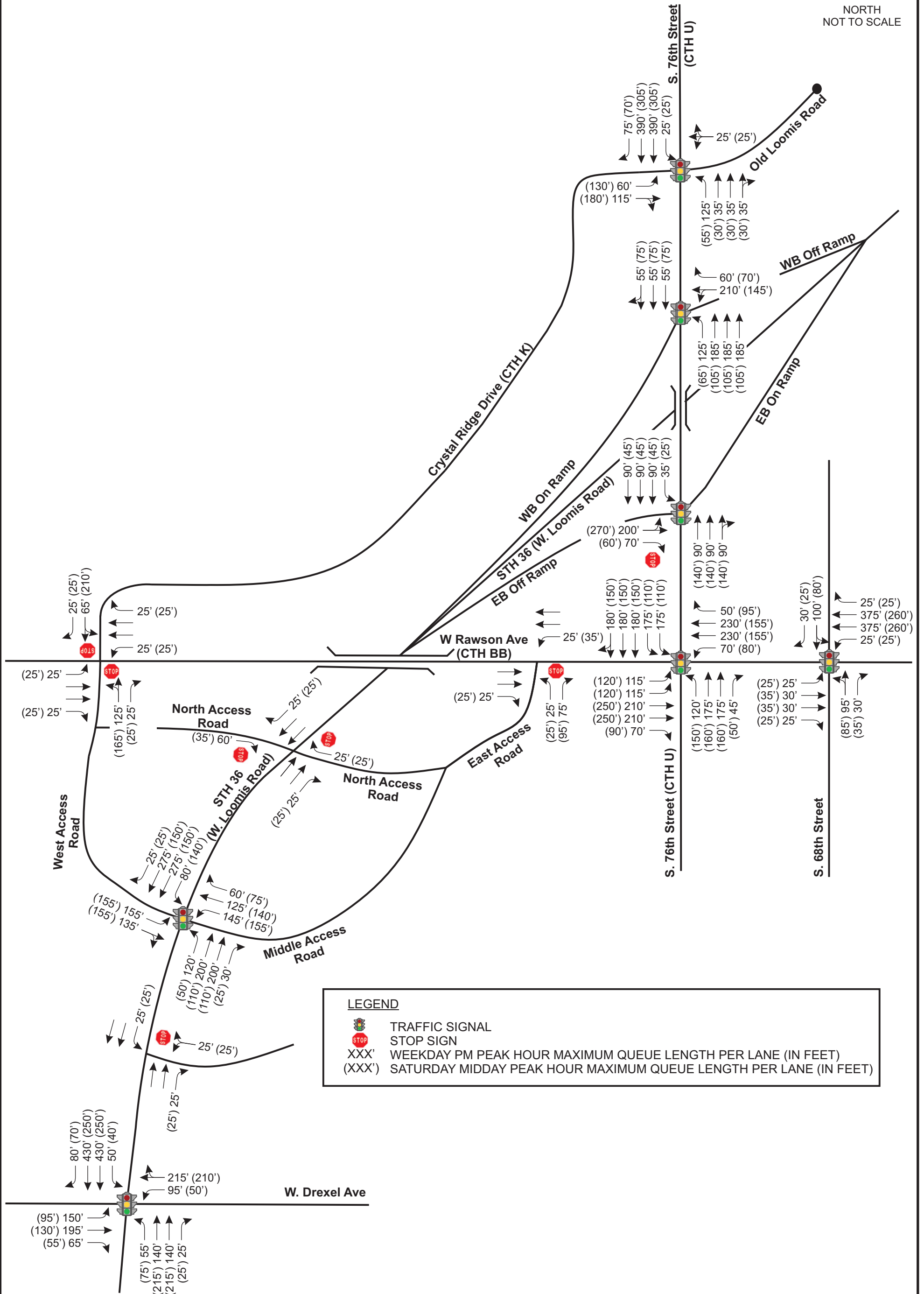
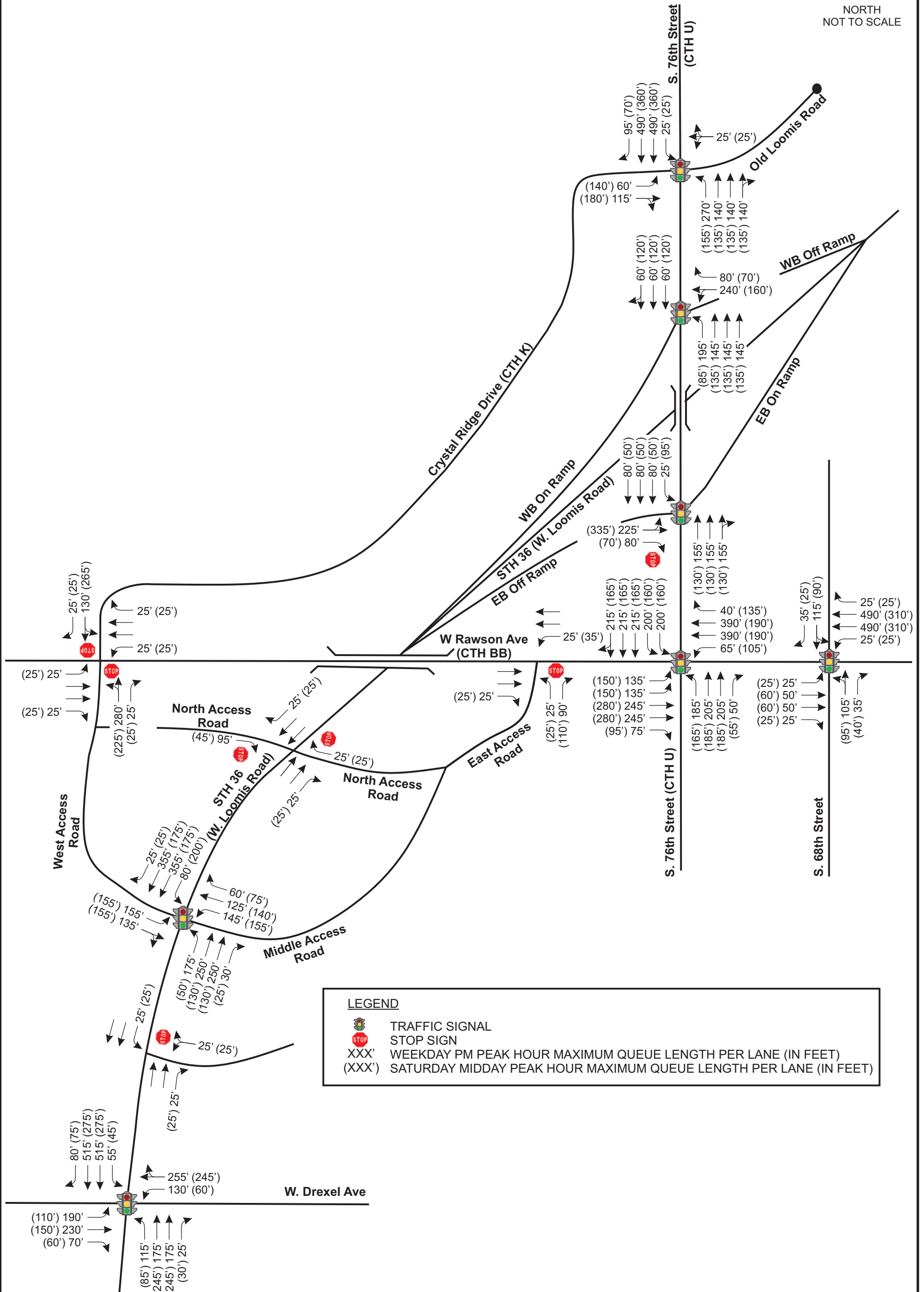


EXHIBIT 5-24.1
YEAR 2017 TOTAL TRAFFIC - OPTION 1
(WITH STADIUM) - MAXIMUM QUEUES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



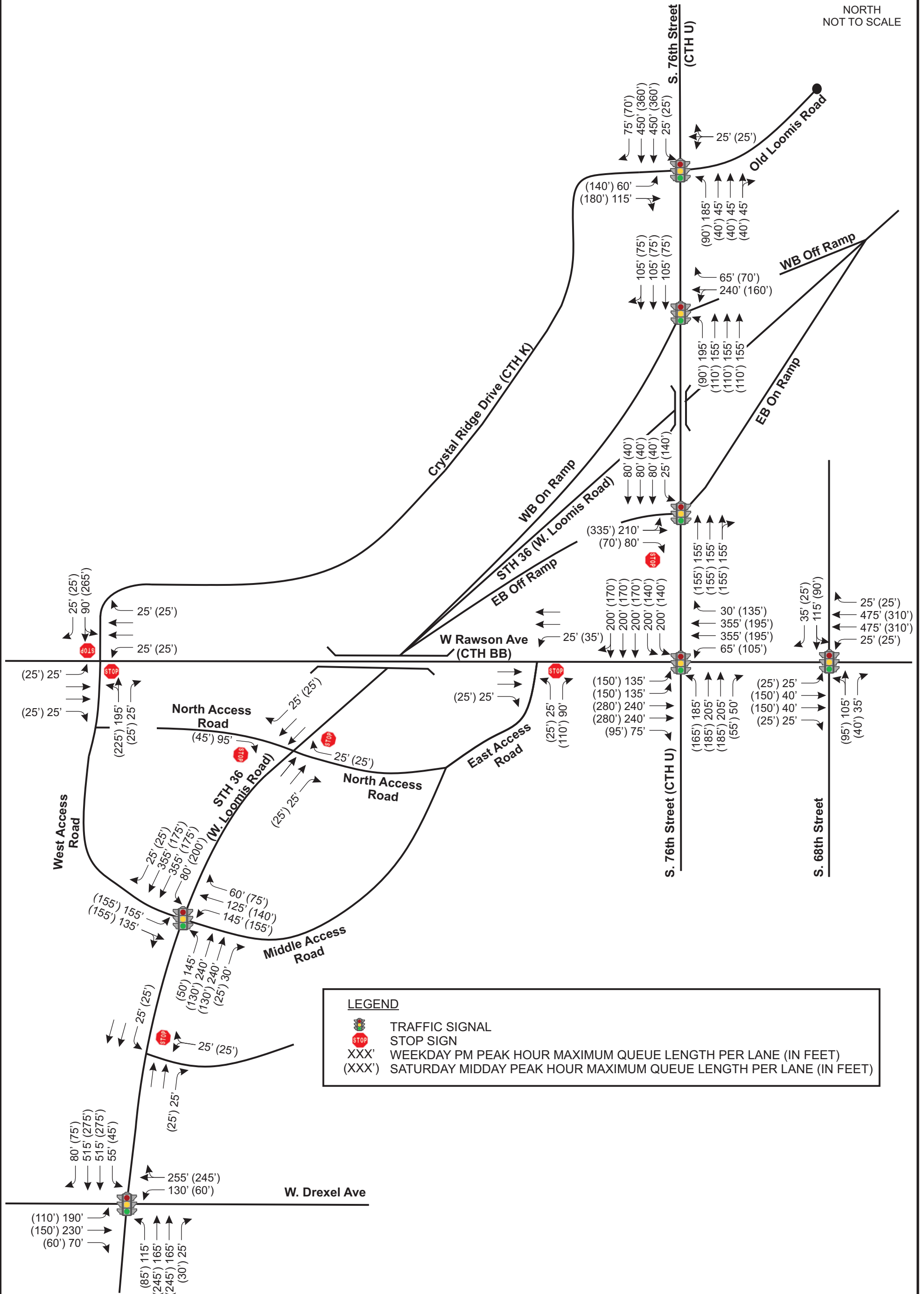
LEGEND	
	TRAFFIC SIGNAL
	STOP SIGN
XXX'	WEEKDAY PM PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)
(XXX')	SATURDAY MIDDAY PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)

EXHIBIT 5-24.2
YEAR 2017 TOTAL TRAFFIC - OPTION 2
(WITHOUT STADIUM) - MAXIMUM QUEUES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LEGEND

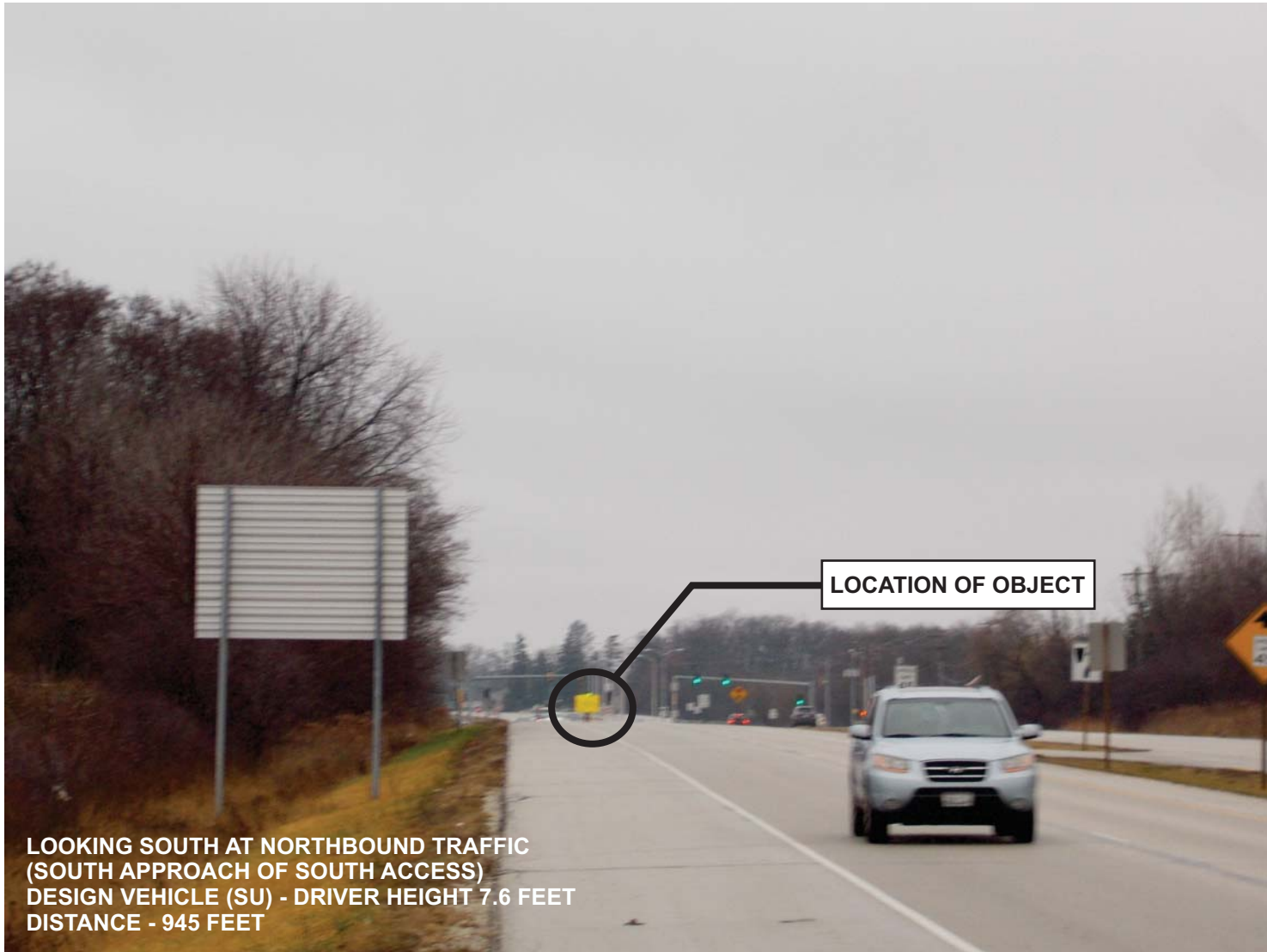
- TRAFFIC SIGNAL
- STOP SIGN
- XXX' WEEKDAY PM PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)
- (XXX') SATURDAY MIDDAY PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)



LEGEND

- TRAFFIC SIGNAL
- STOP SIGN
- XXX' WEEKDAY PM PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)
- (XXX') SATURDAY MIDDAY PEAK HOUR MAXIMUM QUEUE LENGTH PER LANE (IN FEET)

EXHIBIT 5-26.2
YEAR 2032 TOTAL TRAFFIC - OPTION 2
(WITHOUT STADIUM) - MAXIMUM QUEUES
FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI



LOOKING SOUTH AT NORTHBOUND TRAFFIC
 (SOUTH APPROACH OF SOUTH ACCESS)
 DESIGN VEHICLE (SU) - DRIVER HEIGHT 7.6 FEET
 DISTANCE - 945 FEET



LOOKING NORTH AT SOUTHBOUND TRAFFIC
 (NORTH APPROACH OF SOUTH ACCESS)
 DESIGN VEHICLE (SU) - DRIVER HEIGHT 7.6 FEET
 DISTANCE - 1370 FEET



LOOKING SOUTH AT NORTHBOUND TRAFFIC
 (SOUTH APPROACH OF MIDDLE ACCESS)
 DESIGN VEHICLE (WB) - DRIVER HEIGHT 7.6 FEET
 DISTANCE - 1120 FEET



LOOKING NORTH AT SOUTHBOUND TRAFFIC
 (NORTH APPROACH OF MIDDLE ACCESS)
 DESIGN VEHICLE (WB) - DRIVER HEIGHT 7.6 FEET
 DISTANCE - 1120 FEET



CHAPTER VI – RECOMMENDATIONS AND CONCLUSIONS

PART A – RECOMMENDED IMPROVEMENTS

The following section addresses the improvements recommended to accommodate the traffic conditions in the study area with or without the proposed development.

The study area intersections were analyzed based on the procedures set forth in the *2010 Highway Capacity Manual* (HCM) using Synchro 8. Intersection operation is defined by “level of service”. Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. For the purpose of this study, LOS D or better was used to define acceptable peak hour operating conditions. These improvements are recommended to WisDOT, Milwaukee County, and the City of Franklin for their consideration. All agencies reserve the right to determine alternative solutions.

It should be noted that the trip generation for the off-site scenario for the Rock Complex - Option 1 (with Stadium), which is included in the total traffic analysis of the Franklin Area A development, is for peak hours of the adjacent roadway. The peak hours studied for the Area A development is the weekday evening peak hour of 4:30-5:30pm and Saturday midday peak hour of 11:30am-12:30pm. When and if a Minor League Stadium obtains funding, a separate traffic study should be performed for the off-site development to analyze the peak hours before and after a game. The peaking characteristics of the entering and exiting of a stadium event may lead to additional improvements not identified in this report.

Based on the results of the analysis performed the following improvements are recommended for the study intersections.

Year 2017 and Year 2032 Background Traffic - Recommended Improvements

Year 2017 and Year 2032 background traffic volumes do not include any development. The analysis was conducted using the existing intersection geometrics, traffic control and the existing traffic signal timings. The following improvements, as shown on [Exhibit 1-2.1](#) and [Exhibit 1-2.2](#), are recommended to WisDOT, Milwaukee County and the City of Franklin for consideration to accommodate the Year 2017 and Year 2032 background traffic volumes.

STH 36 (W. Loomis Road) & W. Drexel Avenue:

- Revise the signal timings.

W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)

- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

W. Rawson Avenue (CTH BB) & S. 68th Street:

- Revise the signal timings.

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps

- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps

- Install traffic signal when warranted;
- Revise signal timings for coordination with signalized intersections on S. 76th Street (CTH U);
- Extend turn lanes to accommodate 95th percentile queues.

It should be noted that the extension of the turn lanes on the east and north approaches at W. Rawson Avenue & S. 76th Street will require access restrictions of median openings.

Year 2017 Total Traffic - Recommended Improvements

The Year 2017 total traffic volumes include the full buildout of Franklin Area A and the off-site developments at the Rock. The following improvements, as shown in [Exhibit 1-4](#), are recommended to accommodate the Year 2017 total traffic volumes. The improvements were the same for both Option 1 (with Stadium) & Option 2 (without Stadium) except at the S. 76th Street (CTH U) & W. Crystal Ridge Drive intersection. Option 1 (with Stadium) requires a longer northbound left turn lane to accommodate the higher volume and queuing. In order prevent the northbound left-turn queues from blocking the westbound ramp, it is recommended to relocate W. Crystal Ridge Drive north a minimum of 400' or to align with Highview Drive as shown on [Exhibit 1-4](#).

STH 36 (W. Loomis Road) & W. Drexel Avenue

- Revise signal timings;
- Provide protected/permitted eastbound left-turn phasing at the existing traffic signal;
- Coordinate timings and offsets with the proposed traffic signal at STH 36 (W. Loomis Road) & Middle Access Road intersection

STH 36 (W. Loomis Road) & South Access Road

- Provide stop controlled full access roadway for the South Access Road;
- Provide a dedicated right-turn lane on the south approach;
- Provide a dedicated left-turn lane with in the median on the north approach.

STH 36 (W. Loomis Road) & Middle Access Road

- Install traffic signal;
- Provide protected/permitted left-turn phasing for the eastbound and southbound left-turn phases;
- Provide a dedicated left-turn and a dedicated exclusive right-turn lane on the south approach;
- Provide a dedicated left-turn and a dedicated exclusive right-turn lane on the north approach;
- Provide a dedicated left-turn lane and a shared through/right-turn lane on the west approach;
- Provide a dedicated left-turn lane, through lane and a dedicated right-turn lane on the east approach;
- Coordinate timings and offsets between the proposed traffic signal and the traffic signal located at STH 36 (W. Loomis Road) & W. Drexel Avenue.

STH 36 (W. Loomis Road) & North Access Road

- Provide right-in/ right-out stop sign control access for the west and east North Access Roadways.
- Provide a dedicated right-turn lane on the south approach;
- Provide a dedicated right-turn lane on the north approach.

W. Rawson Avenue (CTH BB) & W. Crystal Ridge Drive/ West Access Road

- Provide a stop controlled full access for the south approach (West Access Road) to be located opposite W. Crystal Ridge Drive from the north;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the south approach;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the north approach.

W. Rawson Avenue (CTH BB) & East Access Road

- Provide a stop controlled full access for the south approach (East Access Road) to be located on W. Rawson Avenue at the former STH 36 eastbound ramp location;
- Provide a dedicated eastbound right-turn lane on the west approach;
- Provide a dedicated westbound left-turn lane on the east approach;
- Provide a shared through/left-turn lane and dedicated right-turn lane on the south approach.

W. Rawson Avenue (CTH BB) & S. 76th Street (CTH U)

- Update traffic signal and revise signal timings;
- Provide protected-only left-turn phasing for the eastbound phase and southbound left-turn phases and provide a protected/permitted westbound right-turn overlap phase;
- Provide dedicated dual left-turn lanes for the west approach;
- Provide dedicated dual left-turn lanes for the north approach.

S. 76th Street (CTH U) & W. Crystal Ridge Drive

- Install traffic signal;
- Provide protected/permitted left-turn phasing for the eastbound and northbound left-turn phases;
- Provide a dedicated left-turn lane and a shared through/right-turn lane for the west approach;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Westbound ramps

- Revise signal timings;
- Provide protected/permitted left-turn phasing for the northbound left-turn phase;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

S. 76th Street (CTH U) & STH 36 (W. Loomis Road) Eastbound ramps

- Install traffic signal;
- Coordinate timings and offsets between with the signal on S. 76th Street (CTH U).

Year 2032 Total Traffic Recommended Improvements

The Year 2032 total traffic recommended improvements are the same for both Option 1 (with Stadium) & Option 2 (without Stadium). Other than extending turn lanes, no additional improvement, as shown in [Exhibit 1-10](#), above and beyond the Year 2017 total traffic volume recommended improvements are proposed to accommodate the Year 2032 total traffic volumes.

PART B – CONCEPTUAL DRAWINGS

Conceptual drawings showing the Year 2032 total traffic recommended improvements are shown in [Exhibits 6-1A-I](#). It should be noted that restrictions are many of the median openings along S. 76th Street (CTH U) and W. Rawson Avenue (CTH BB) will be required to provide the recommended turn bay lengths. Milwaukee County and the City of Franklin and will need to coordinate with business to implement the necessary access changes.

PART C – CONCLUSIONS

To accommodate the full build out of the Franklin Area A development it is necessary to remove of the STH 36 Ramps to/from W. Rawson Avenue and provide new access to the development on STH 36. With the recommended improvements, the study area intersections are expected to continue to operate acceptably through the horizon Year 2032.

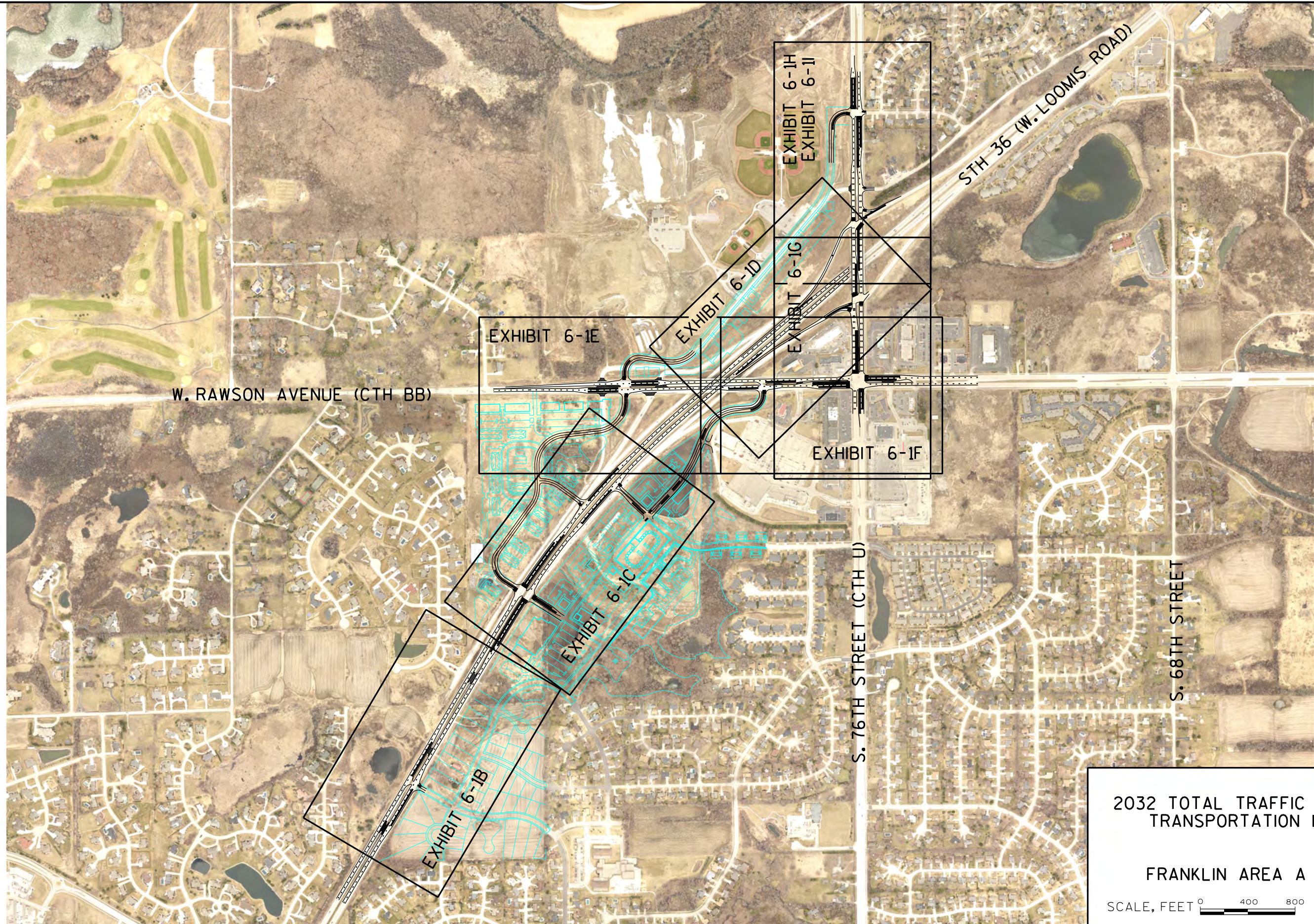


EXHIBIT 6-1A
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS
 OVERVIEW

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 400 800



EXHIBIT 6-1B
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI
 SCALE, FEET 0 60 120

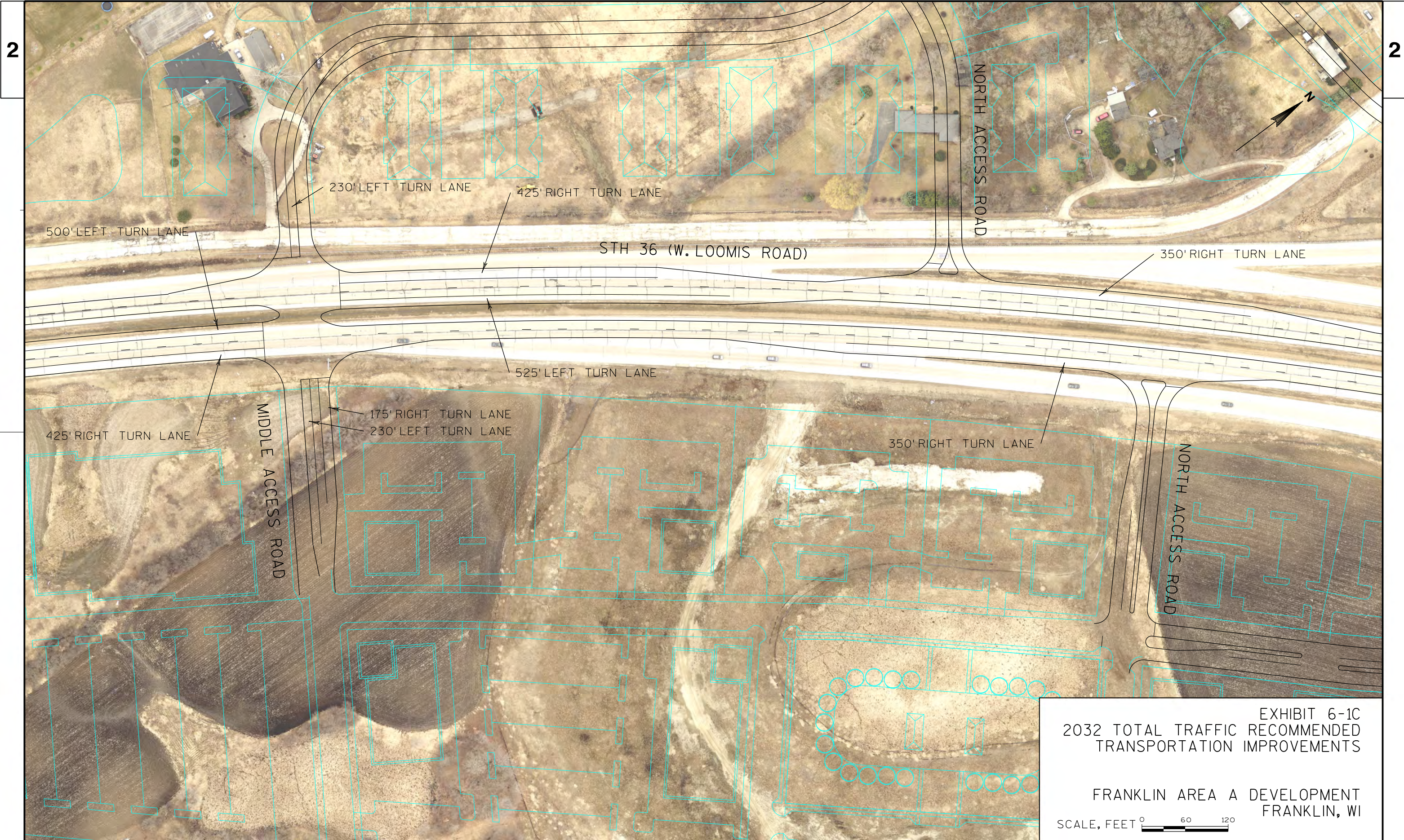


EXHIBIT 6-1C
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120

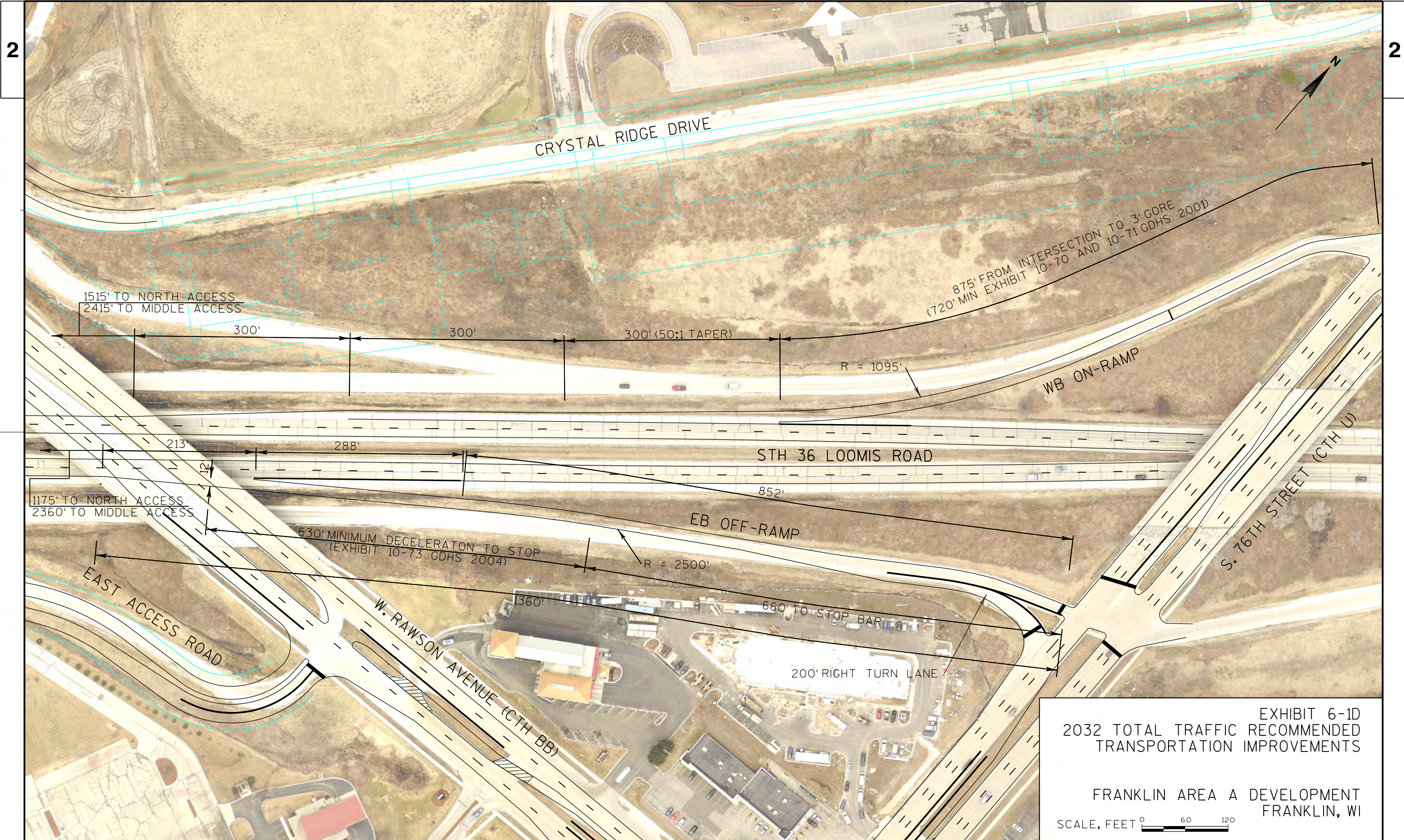


EXHIBIT 6-1D
2032 TOTAL TRAFFIC RECOMMENDED
TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
FRANKLIN, WI

SCALE, FEET 0 60 120

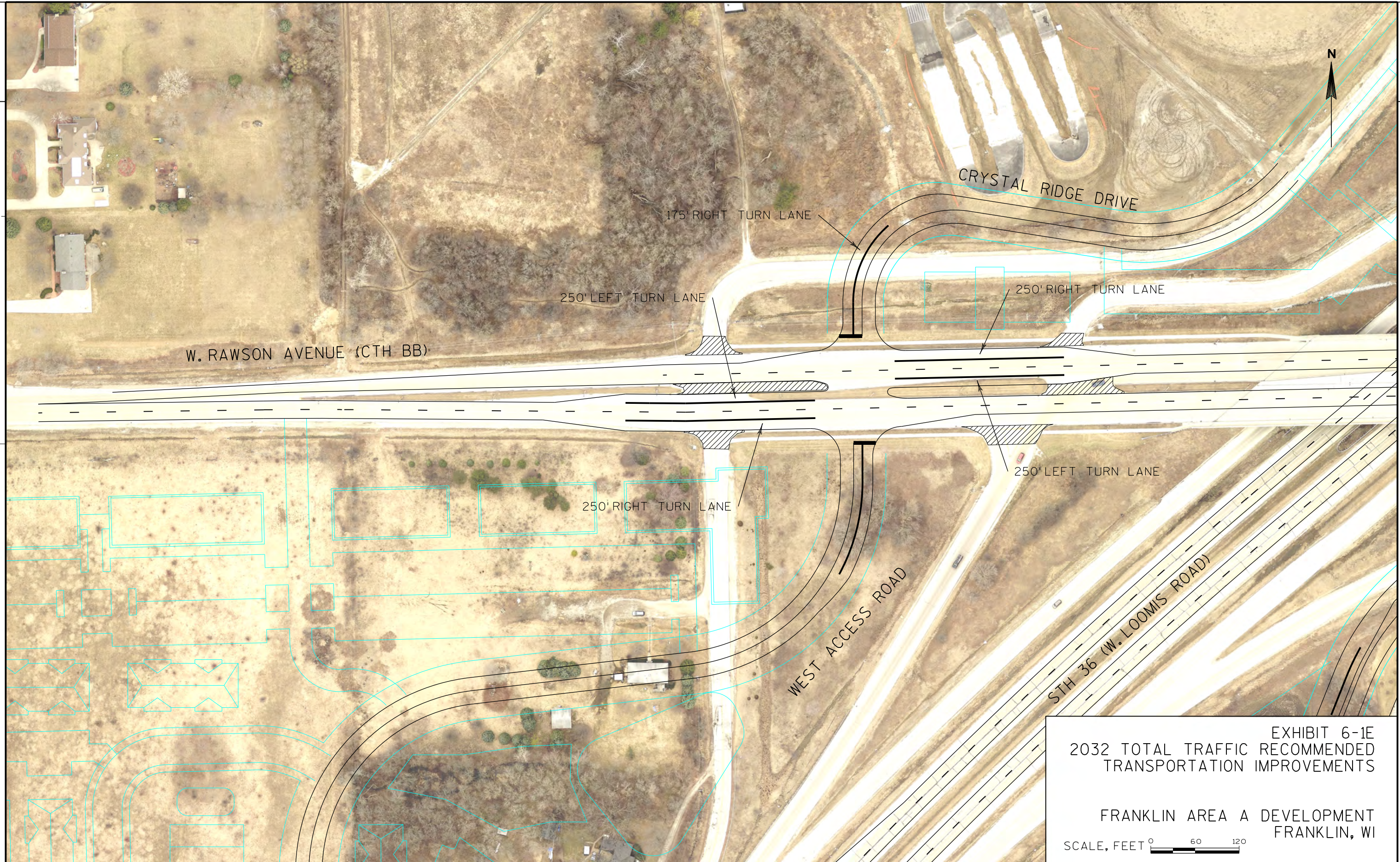


EXHIBIT 6-1E
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120

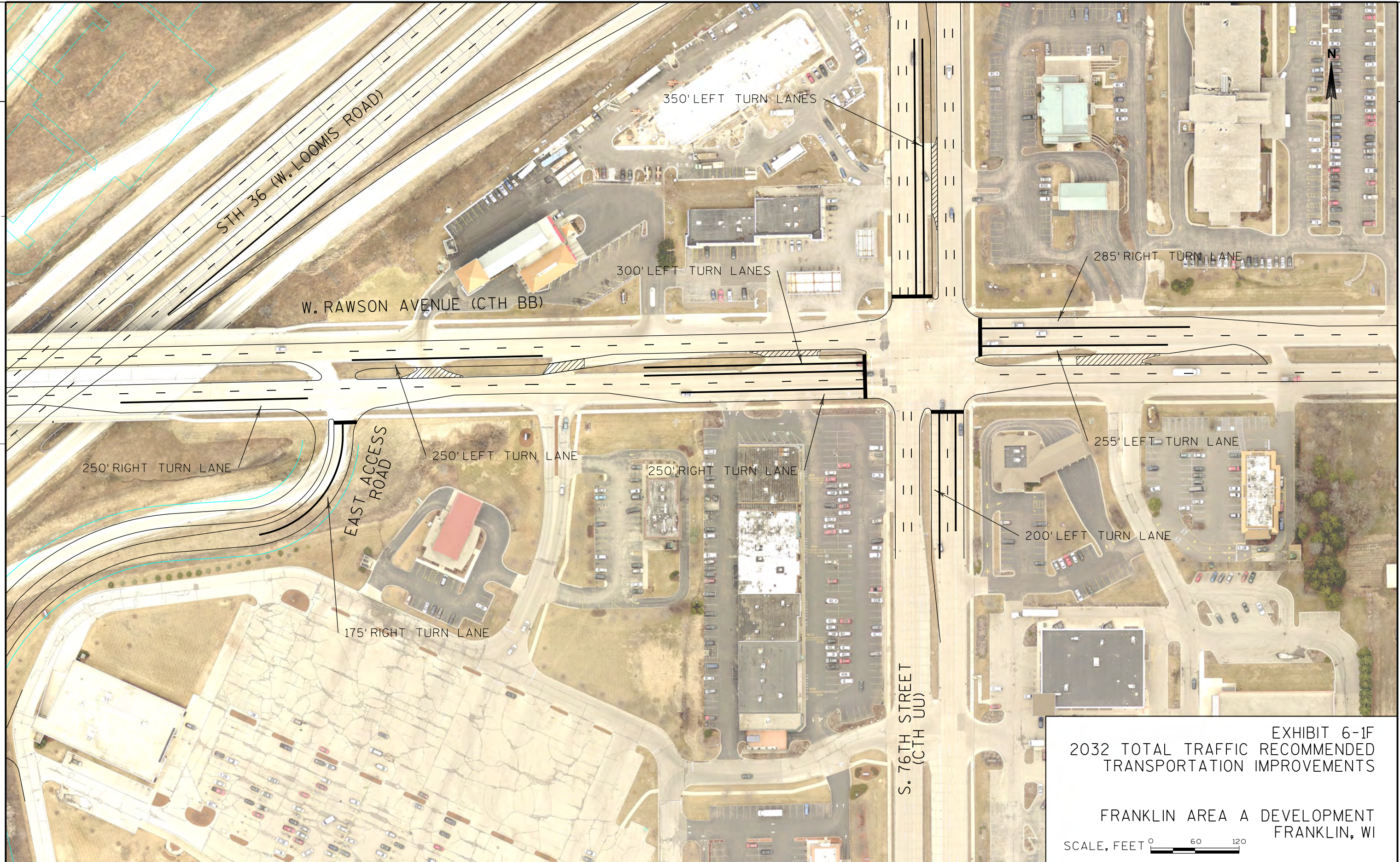


EXHIBIT 6-1F
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120

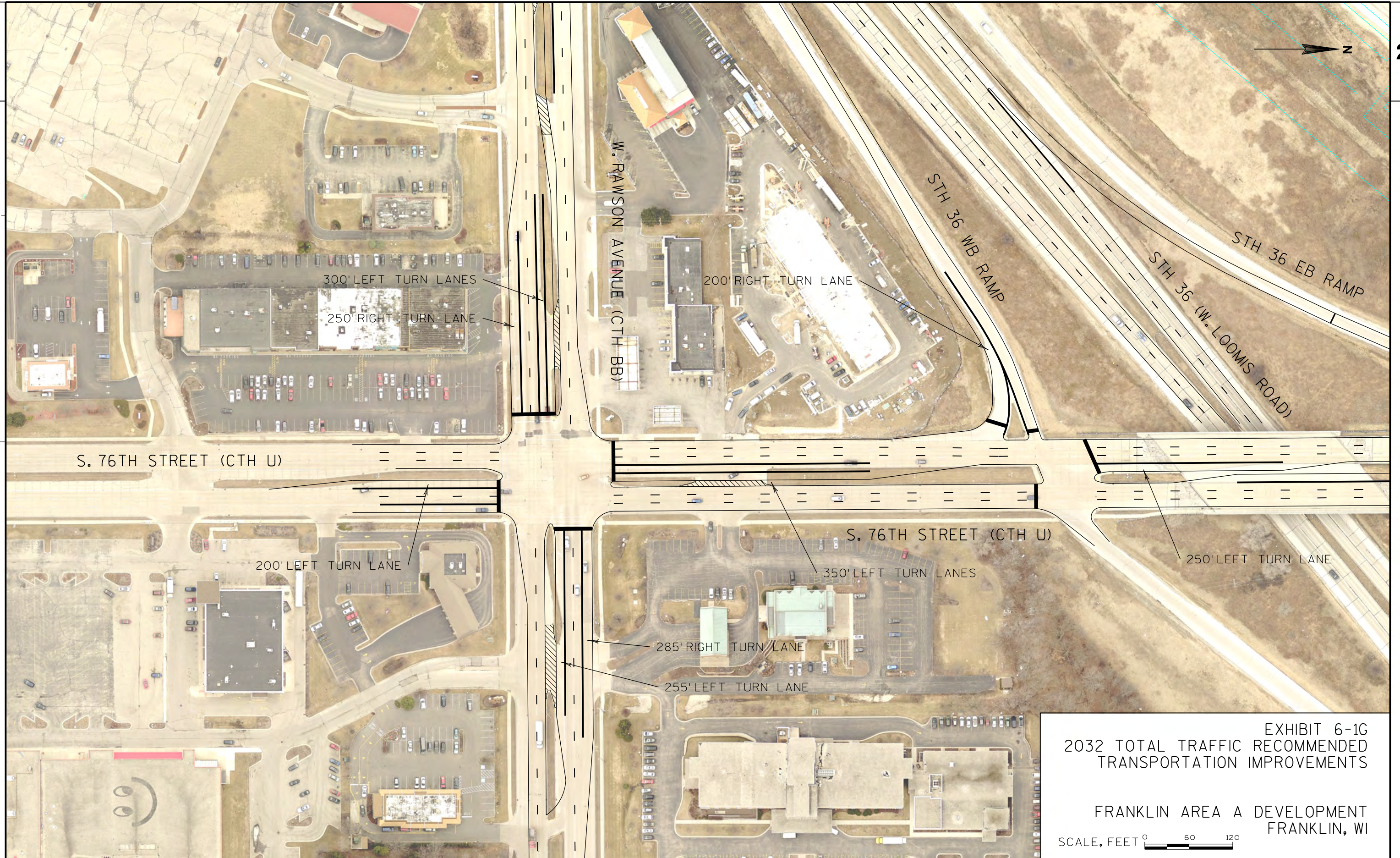


EXHIBIT 6-1G
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120

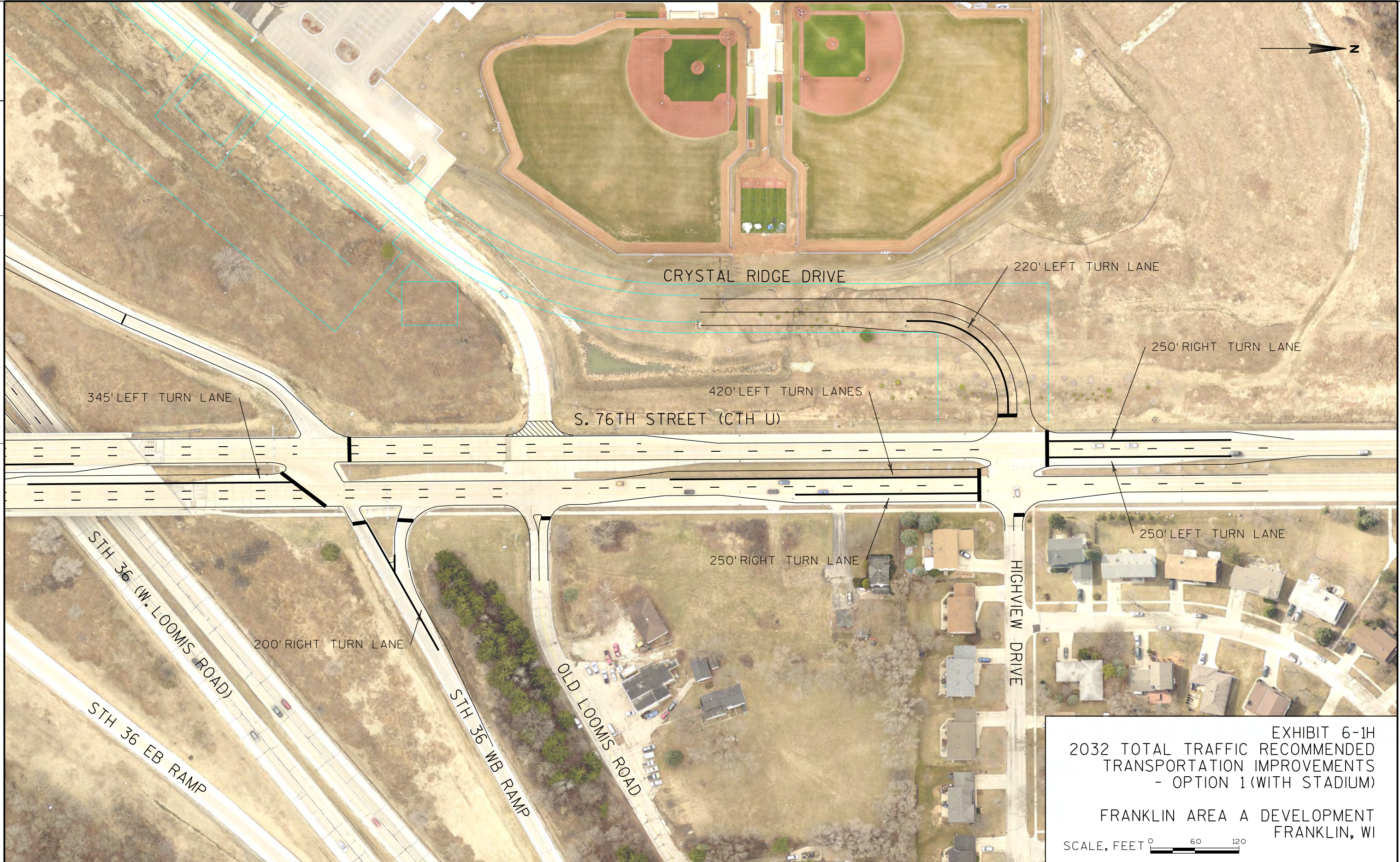


EXHIBIT 6-1H
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS
 - OPTION 1 (WITH STADIUM)

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120

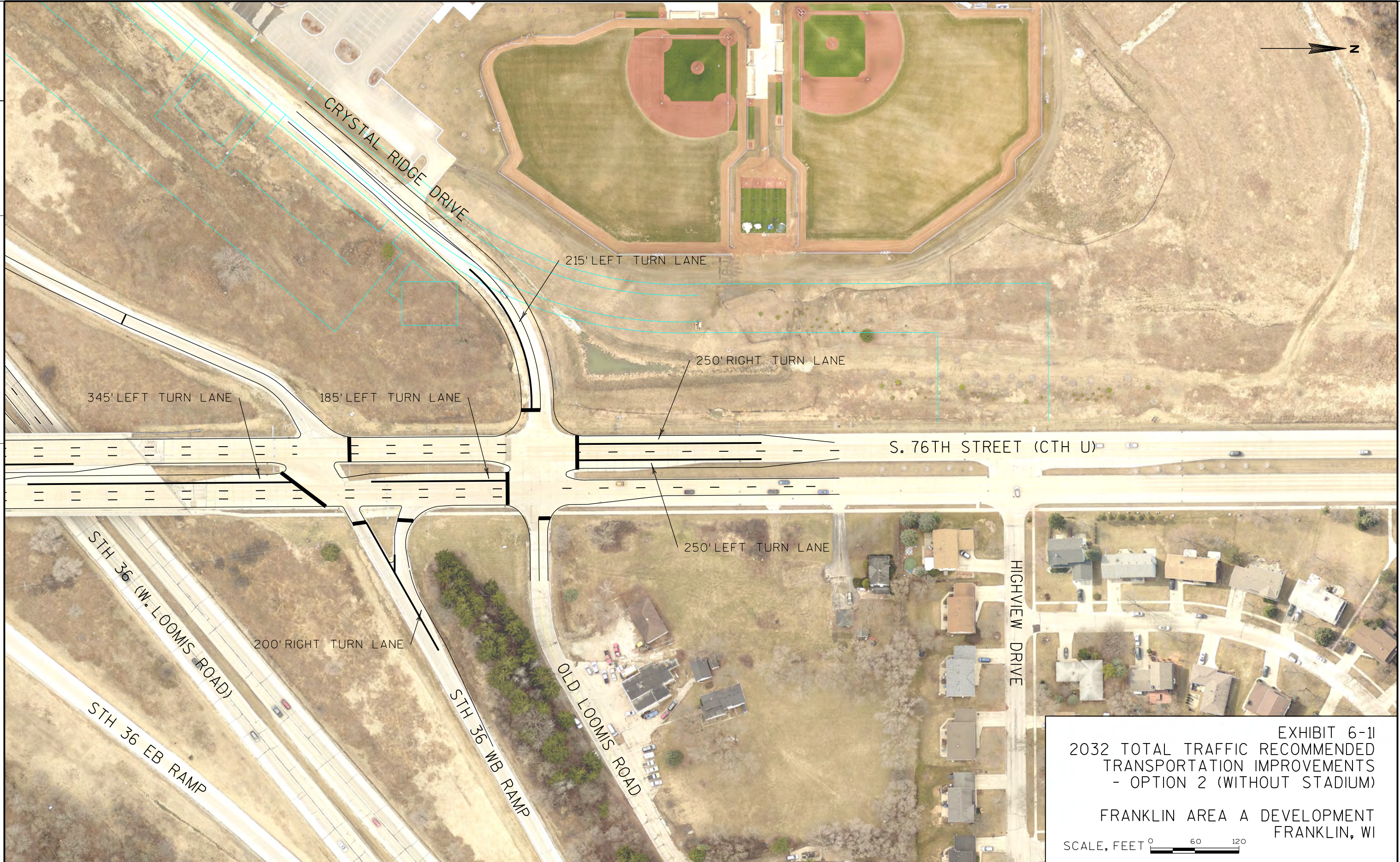


EXHIBIT 6-11
 2032 TOTAL TRAFFIC RECOMMENDED
 TRANSPORTATION IMPROVEMENTS
 - OPTION 2 (WITHOUT STADIUM)

FRANKLIN AREA A DEVELOPMENT
 FRANKLIN, WI

SCALE, FEET 0 60 120