#### **APPENDIX A**

# TRAFFIC OPERATIONS REVIEW SEGMENT OPERATIONS ANALYSIS

## Segment Operations Analysis - Existing Enhanced Bus Route

Sagment Limits	Notes	<b>Existing Cross-Section</b>	Posted Approximate Maximum Existing Existing		Existing Existing
Segment Linits			Speed Limit	Daily Capacity	ADT Roadway Operations
France Ave to Excelsior Blvd		Four-Lane Divided Urban (Five-Lane)	35 mph	32,000	26,550 Under Capacity
Excelsior Blvd to Thomas Ave		Six-Lane Divided Urban	35 mph	45,000	39,500 Approaching Capacity
Thomas Ave to E Calhoun Pkwy		Six-Lane Divided Urban	35 mph	45,000	39,500 Approaching Capacity
E Calhoun Pkwy to Hennepin Ave	On-St parallel parking	Three-Lane One-Way (EB) Urban	30 mph	27,000	17,100 Under Capacity
Hennepin Ave to Dupont Ave	On-St parallel parking	Three-Lane One-Way (EB) Urban	30 mph	27,000	17,100 Under Capacity
Dupont Ave to Hennepin Ave	On-St parallel parking Parking allowed in left through lane during off-peak hours	Three-Lane One-Way (WB) Urban	30 mph	27,000	14,200 Under Capacity
Hennepin Ave to E Calhoun Pkwy	On-St parallel parking Parking allowed in left through lane during off-peak hours	Three-Lane One-Way (WB) Urban	30 mph	27,000	13,800 Under Capacity
Dupont Ave to Lyndale Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	22,600 Over Capacity
Lyndale Ave to Blaisdell Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	20,250 Approaching Capacity
Blaisdell Ave to 2nd Ave		Four-Lane Undivided Urban	30 mph	22,000	20,250 Approaching Capacity
2nd Ave to Portland Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	20,100 Approaching Capacity
Portland Ave to Elliot Ave	Limited on-st parallel parking	Four-Lane Divided Urban (Five-Lane)	30 mph	32,000	21,600 Under Capacity
Elliot Ave to Cedar Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	21,600 Approaching Capacity
Cedar Ave to 21st Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	21,600 Approaching Capacity
21st Ave to Minnehaha Ave		Four-Lane Divided Urban (Five-Lane)	30 mph	32,000	23,100 Under Capacity
	Excelsior Blvd to Thomas Ave Thomas Ave to E Calhoun Pkwy E Calhoun Pkwy to Hennepin Ave Hennepin Ave to Dupont Ave Dupont Ave to Hennepin Ave Hennepin Ave to E Calhoun Pkwy Dupont Ave to Lyndale Ave Lyndale Ave to Blaisdell Ave Blaisdell Ave to 2nd Ave 2nd Ave to Portland Ave Portland Ave to Elliot Ave Elliot Ave to Cedar Ave Cedar Ave to 21st Ave	France Ave to Excelsior Blvd  Excelsior Blvd to Thomas Ave Thomas Ave to E Calhoun Pkwy  E Calhoun Pkwy to Hennepin Ave On-St parallel parking  Hennepin Ave to Dupont Ave On-St parallel parking Parking allowed in left through lane during off-peak hours On-St parallel parking Parking allowed in left through lane during off-peak hours On-St parallel parking Parking allowed in left through lane during off-peak hours On-St parallel parking Parking allowed in left through lane during off-peak hours On-St parallel parking On-St parallel parking Undale Ave to Blaisdell Ave On-St parallel parking Dupont Ave to Portland Ave On-St parallel parking Undale Ave to Portland Ave Undale Ave to Portland Ave On-St parallel parking Undale Ave to Cedar Ave On-St parallel parking On-St parallel parking	France Ave to Excelsior Blvd Four-Lane Divided Urban (Five-Lane)  Excelsior Blvd to Thomas Ave Six-Lane Divided Urban  Thomas Ave to E Calhoun Pkwy Six-Lane Divided Urban  E Calhoun Pkwy to Hennepin Ave On-St parallel parking Three-Lane One-Way (EB) Urban  Hennepin Ave to Dupont Ave On-St parallel parking Three-Lane One-Way (EB) Urban  Dupont Ave to Hennepin Ave Parking allowed in left through lane during off-peak hours  On-St parallel parking Parking allowed in left through lane during off-peak hours  Dupont Ave to E Calhoun Pkwy On-St parallel parking Parking allowed in left through lane during off-peak hours  Dupont Ave to Lyndale Ave On-St parallel parking Four-Lane Undivided Urban  Lyndale Ave to Blaisdell Ave On-St parallel parking Four-Lane Undivided Urban  Blaisdell Ave to 2nd Ave Four-Lane Undivided Urban  Portland Ave to Portland Ave On-St parallel parking Four-Lane Divided Urban  Portland Ave to Elliot Ave Limited on-st parallel parking Four-Lane Divided Urban  Four-Lane Divided Urban (Five-Lane)  Elliot Ave to Cedar Ave On-St parallel parking Four-Lane Undivided Urban  Four-Lane Undivided Urban	Segment Limits Notes Existing Cross-Section Speed Limit France Ave to Excelsior Blvd Four-Lane Divided Urban (Five-Lane) 35 mph Excelsior Blvd to Thomas Ave Six-Lane Divided Urban 35 mph Thomas Ave to E Calhoun Pkwy Four-Lane Divided Urban 35 mph E Calhoun Pkwy to Hennepin Ave On-St parallel parking Dupont Ave to Dupont Ave Hennepin Ave to E Calhoun Pkwy Four-Lane One-Way (EB) Urban 30 mph Three-Lane One-Way (WB) Urban 30 mph Dupont Ave to E Calhoun Pkwy Parking allowed in left through lane during off-peak hours Three-Lane One-Way (WB) Urban 30 mph Dupont Ave to Lyndale Ave On-St parallel parking Four-Lane Undivided Urban 30 mph Blaisdell Ave to Blaisdell Ave On-St parallel parking Four-Lane Undivided Urban 30 mph Portland Ave to Portland Ave On-St parallel parking Four-Lane Undivided Urban 30 mph Portland Ave to Elliot Ave Limited on-st parallel parking Four-Lane Divided Urban 30 mph Elliot Ave to Cedar Ave On-St parallel parking Four-Lane Undivided Urban 30 mph	Segment Limits         Notes         Existing Cross-Section         Speed Limit         Daily Capacity           France Ave to Excelsior Blvd         Four-Lane Divided Urban (Five-Lane)         35 mph         32,000           Excelsior Blvd to Thomas Ave         Six-Lane Divided Urban         35 mph         45,000           Thomas Ave to E Calhoun Pkwy         On-St parallel parking         Three-Lane One-Way (EB) Urban         30 mph         27,000           E Calhoun Pkwy to Hennepin Ave         On-St parallel parking         Three-Lane One-Way (EB) Urban         30 mph         27,000           Bupont Ave to Hennepin Ave         On-St parallel parking Parking allowed in left through lane during off-peak hours         Three-Lane One-Way (WB) Urban         30 mph         27,000           Hennepin Ave to E Calhoun Pkwy         On-St parallel parking Parking allowed in left through lane during off-peak hours         Three-Lane One-Way (WB) Urban         30 mph         27,000           Updale Ave to Lyndale Ave         On-St parallel parking Parking allowed in left through lane during off-peak hours         Three-Lane One-Way (WB) Urban         30 mph         22,000           Lyndale Ave to Islaidell Ave         On-St parallel parking         Four-Lane Undivided Urban         30 mph         22,000           Blaidell Ave to 2nd Ave         On-St parallel parking         Four-Lane Undivided Urban         30 mph         22,000

#### Streetcar Route (Midtown Greenway)

Intersecting Roadway Traffic Control	Notes	Evicting Cross Section	Posted Approximate Maximum Existing Existing			
	Trainic Control	Notes	Existing Cross-Section	Speed Limit	Daily Capacity	<b>ADT Roadway Operations</b>
James Ave	Stop Sign	On-St parallel parking	Two-Lane Undivided Urban	30 mph	10,000	600 Under Capacity
Irving Ave	Stop Sign	On-St parallel parking	One-Lane One-Way (NB) Urban	30 mph	9,000	2,000 Under Capacity
Humboldt Ave	Stop Sign	On-St parallel parking	One-Lane One-Way (SB) Urban	30 mph	9,000	2,000 Under Capacity
5th Ave	Stop Sign	On-St parallel parking	Two-Lane Undivided Urban	30 mph	10,000	4,300 Under Capacity
20th Ave	Stop Sign		Two-Lane Undivided Urban	30 mph	10,000	1,000 Under Capacity
21st Ave	Stop Sign		Two-Lane Undivided Urban	30 mph	10,000	2,900 Under Capacity

Assumed Value

## **Segment Operations Analysis - Year 2030**

#### **Enhanced Bus Route**

Roadway	Segment Limits	Notes	Proposed (2030) Cross-Section	Posted Speed Limit	Approximate Maximum Daily Capacity	Forecasted Year 2030 2030 ADT Roadway Operations
Lake St	France Ave to Excelsior Blvd		Four-Lane Divided Urban (Five-Lane)	35 mph	32,000	28,900 Approaching Capacity
Lake St	Excelsior Blvd to Thomas Ave		Six-Lane Divided Urban	35 mph	45,000	43,000 Approaching Capacity
Lake St	Thomas Ave to E Calhoun Pkwy		Six-Lane Divided Urban	35 mph	45,000	43,000 Approaching Capacity
Lake St	E Calhoun Pkwy to Hennepin Ave	On-St parallel parking	Three-Lane One-Way (EB) Urban	30 mph	27,000	18,700 Under Capacity
Lake St	Hennepin Ave to Dupont Ave	On-St parallel parking	Three-Lane One-Way (EB) Urban	30 mph	27,000	18,700 Under Capacity
Lagoon Ave	Dupont Ave to Hennepin Ave	On-St parallel parking Parking allowed in left through lane during off-peak hours	Three-Lane One-Way (WB) Urban	30 mph	27,000	15,500 Under Capacity
Lagoon Ave	Hennepin Ave to E Calhoun Pkwy	On-St parallel parking Parking allowed in left through lane during off-peak hours	Three-Lane One-Way (WB) Urban	30 mph	27,000	15,100 Under Capacity
Lake St	Dupont Ave to Lyndale Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	24,600 Over Capacity
Lake St	Lyndale Ave to Blaisdell Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	22,100 Over Capacity
Lake St	Blaisdell Ave to 2nd Ave		Four-Lane Undivided Urban	30 mph	22,000	22,100 Over Capacity
Lake St	2nd Ave to Portland Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	21,900 Approaching Capacity
Lake St	Portland Ave to Elliot Ave	Limited on-st parallel parking	Four-Lane Divided Urban (Five-Lane)	30 mph	32,000	23,600 Under Capacity
Lake St	Elliot Ave to Cedar Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	23,600 Over Capacity
Lake St	Cedar Ave to 21st Ave	On-St parallel parking	Four-Lane Undivided Urban	30 mph	22,000	23,600 Over Capacity
Lake St	21st Ave to Minnehaha Ave		Four-Lane Divided Urban (Five-Lane)	30 mph	32,000	25,200 Under Capacity

#### Streetcar Route (Midtown Greenway)

Intersecting Roadway Traffic Control	Notos	Proposed (2030)	Posted	Approximate Maximum	Forecasted Year 2030	
	Traffic Control	Notes	Cross-Section	Speed Limit	Daily Capacity	2030 ADT Roadway Operations
James Ave	Stop Sign	On-St parallel parking	Two-Lane Undivided Urban	30 mph	10,000	650 Under Capacity
Irving Ave	Stop Sign	On-St parallel parking	One-Lane One-Way (NB) Urban	30 mph	9,000	2,180 Under Capacity
Humboldt Ave	Stop Sign	On-St parallel parking	One-Lane One-Way (SB) Urban	30 mph	9,000	2,180 Under Capacity
5th Ave	Stop Sign	On-St parallel parking	Two-Lane Undivided Urban	30 mph	10,000	4,680 Under Capacity
20th Ave	Stop Sign		Two-Lane Undivided Urban	30 mph	10,000	1,090 Under Capacity
21st Ave	Stop Sign		Two-Lane Undivided Urban	30 mph	10,000	3,160 Under Capacity

Assumed Value

#### **APPENDIX B**

# TRAFFIC OPERATIONS REVIEW INTERSECTION OPERATIONS ANALYSIS

### **Existing Intersection Operations Analysis**

		<b>Existing AM</b>	<b>Existing PM</b>
<b>Proposed Eastbound Station</b>	<b>Nearest Intersection</b>	Intersection LOS	Intersection LOS
West Lake	Lake St/Market Plaza	В	С
Calhoun Parkway West	Lake St/W Calhoun Pkwy	С	D
Knox Ave	Lake St/E Calhoun Pkwy	В	С
Hennepin Ave	Lake St/Hennepin Ave	С	D
Dupont Ave	Lake St/Dupont Ave	В	В
Lyndale Ave	Lake St/Lyndale Ave	В	С
Nicollet Ave	Lake St/Nicollet Ave	С	С
I-35W	Lake St/2nd Ave	В	В
Portland Ave	Lake St/Portland Ave	В	С
Chicago Ave	Lake St/Chicago Ave	С	С
Bloomington Ave	Lake St/Bloomington Ave	В	В
Cedar Ave	Lake St/Cedar Ave	В	С
Midtown	Lake St/Hiawatha Ave	С	С
Minnehaha Ave	N/A	N/A	N/A

Proposed Westbound Station	Nearest Intersection	Existing AM Intersection LOS	Existing PM Intersection LOS
Minnehaha Ave	N/A	N/A	N/A
Midtown	Lake St/Hiawatha Ave	С	С
Cedar Ave	Lake St/Cedar Ave	В	С
Bloomington Ave	Lake St/Bloomington Ave	В	В
Chicago Ave	Lake St/Chicago Ave	С	С
Portland Ave	Lake St/Portland Ave	В	С
I-35W	Lake St/3rd Ave	А	А
Nicollet Ave	Lake St/Nicollet Ave	С	С
Lyndale Ave	Lake St/Lyndale Ave	В	С
Dupont Ave	Lake St/Dupont Ave	В	В
Hennepin Ave	Lagoon Ave/Hennepin Ave	С	D
Knox Ave	Lagoon Ave/E Calhoun Pkwy	В	В
Calhoun Parkway West	Lake St/W Calhoun Pkwy	С	D
West Lake	Lake St/Market Plaza	В	С

### **Year 2030 Intersection Operations Analysis**

Proposed Eastbound Station	Nearest Intersection	2030 AM Intersection LOS	2030 PM Intersection LOS
West Lake	Lake St/Market Plaza	С	D
Calhoun Parkway West	Lake St/W Calhoun Pkwy	С	D
Knox Ave	Lake St/E Calhoun Pkwy	В	С
Hennepin Ave	Lake St/Hennepin Ave	С	E
Dupont Ave	Lake St/Dupont Ave	В	В
Lyndale Ave	Lake St/Lyndale Ave	С	D
Nicollet Ave	Lake St/Nicollet Ave	С	С
I-35W	Lake St/2nd Ave	В	В
Portland Ave	Lake St/Portland Ave	В	С
Chicago Ave	Lake St/Chicago Ave	С	С
Bloomington Ave	Lake St/Bloomington Ave	В	В
Cedar Ave	Lake St/Cedar Ave	С	С
Midtown	Lake St/Hiawatha Ave	С	D
Minnehaha Ave	N/A	N/A	N/A

Proposed Westbound Station	Nearest Intersection	2030 AM Intersection LOS	2030 PM Intersection LOS
Minnehaha Ave	N/A	N/A	N/A
Midtown	Lake St/Hiawatha Ave	С	D
Cedar Ave	Lake St/Cedar Ave	С	С
Bloomington Ave	Lake St/Bloomington Ave	В	В
Chicago Ave	Lake St/Chicago Ave	С	С
Portland Ave	Lake St/Portland Ave	В	С
I-35W	Lake St/3rd Ave	А	А
Nicollet Ave	Lake St/Nicollet Ave	С	С
Lyndale Ave	Lake St/Lyndale Ave	С	D
Dupont Ave	Lake St/Dupont Ave	В	В
Hennepin Ave	Lagoon Ave/Hennepin Ave	С	D
Knox Ave	Lagoon Ave/E Calhoun Pkwy	В	В
Calhoun Parkway West	Lake St/W Calhoun Pkwy	С	D
West Lake	Lake St/Market Plaza	С	D