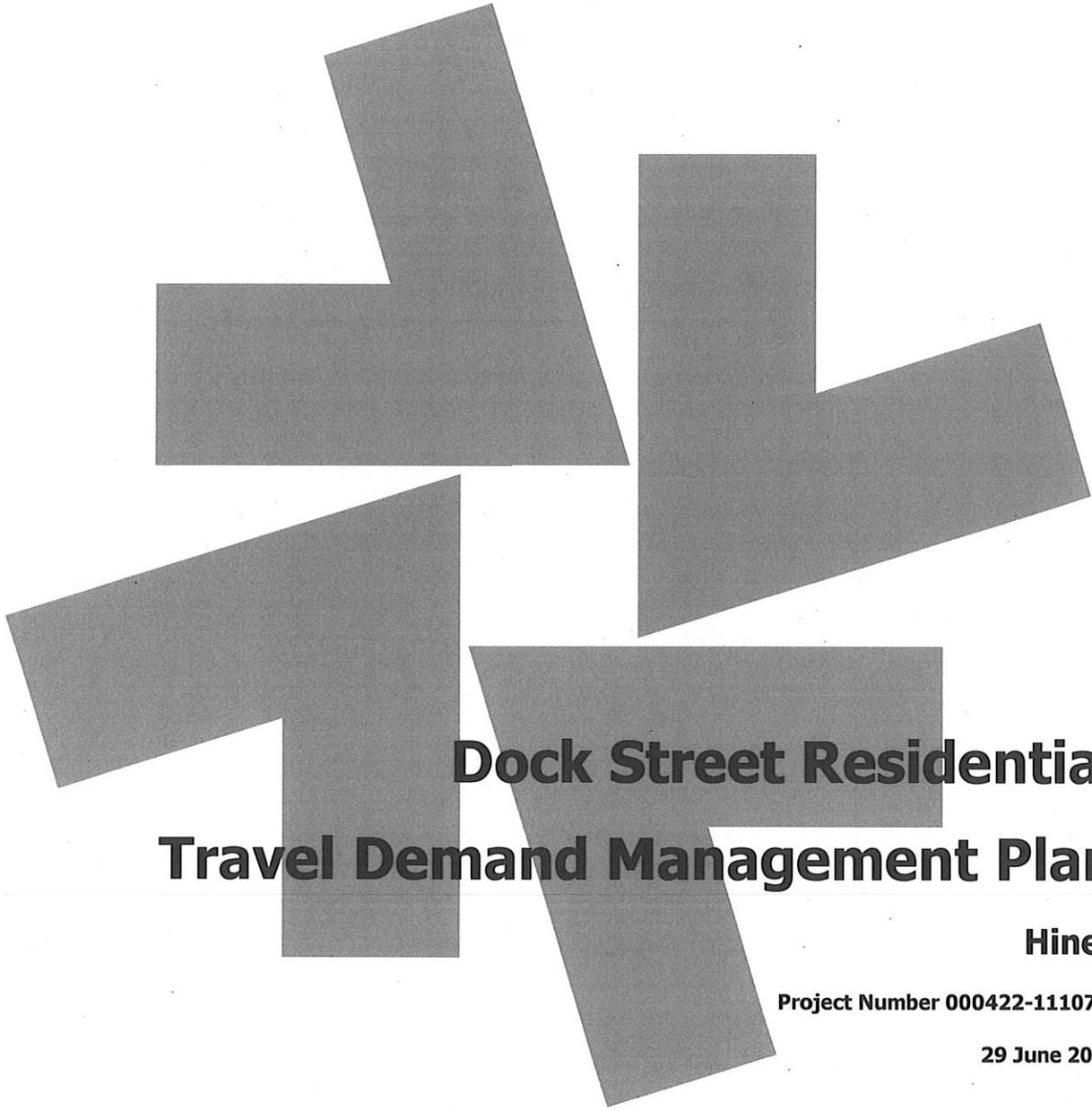


Appendix C



Dock Street Residential Travel Demand Management Plan

Hines

Project Number 000422-11107-0

29 June 2011

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I. Introduction

Hines proposes to develop a tract of land near The Interchange in the Warehouse District of Minneapolis, Minnesota. This project, as proposed, will be a mixed-use development consisting of retail, office, hotel, and residential land uses. The property is located immediately adjacent to the Northstar Commuter Rail Line, as well as the Hiawatha Light Rail Line. These rail routes, in addition to the property's close proximity to the central business district in downtown Minneapolis, offer a multitude of alternative modes of transportation.

The traffic analysis assesses the effect of redeveloping the 3.25-acre project area and traffic generated by mixed-use redevelopment projects in the vicinity for which a basis of expectation has been laid. The TDMP includes strategies for minimizing the use of SOV and enhancing the use of alternative modes of travel available in the immediate vicinity of the project area including Hiawatha LRT, Northstar Commuter Rail, Metro Transit buses, Cedar Lake Trail, Minneapolis bikeway system, pedestrian skyway system, and the planned Central LRT and Interchange projects. Specific TDM strategies will be proposed for each project. These strategies will be reviewed and approved by the City prior to development.

Development will consist of three phases and will have four access points, three of which are existing driveways. The study area included the following intersections:

- Washington Avenue N & 5th Avenue N
- Washington Avenue N & Dock Street (property access)
- Washington Avenue N & 3rd Avenue N (ramps to/from I-394)
- 3rd Avenue N & Traffic Street (property access)
- 3rd Avenue N & 3rd Street N (property access)
- 3rd Avenue N & 5th Street N
- 5th Street N & Access D (property access)
- Washington Avenue N & 2nd Avenue N

The study analyzed the following scenarios:

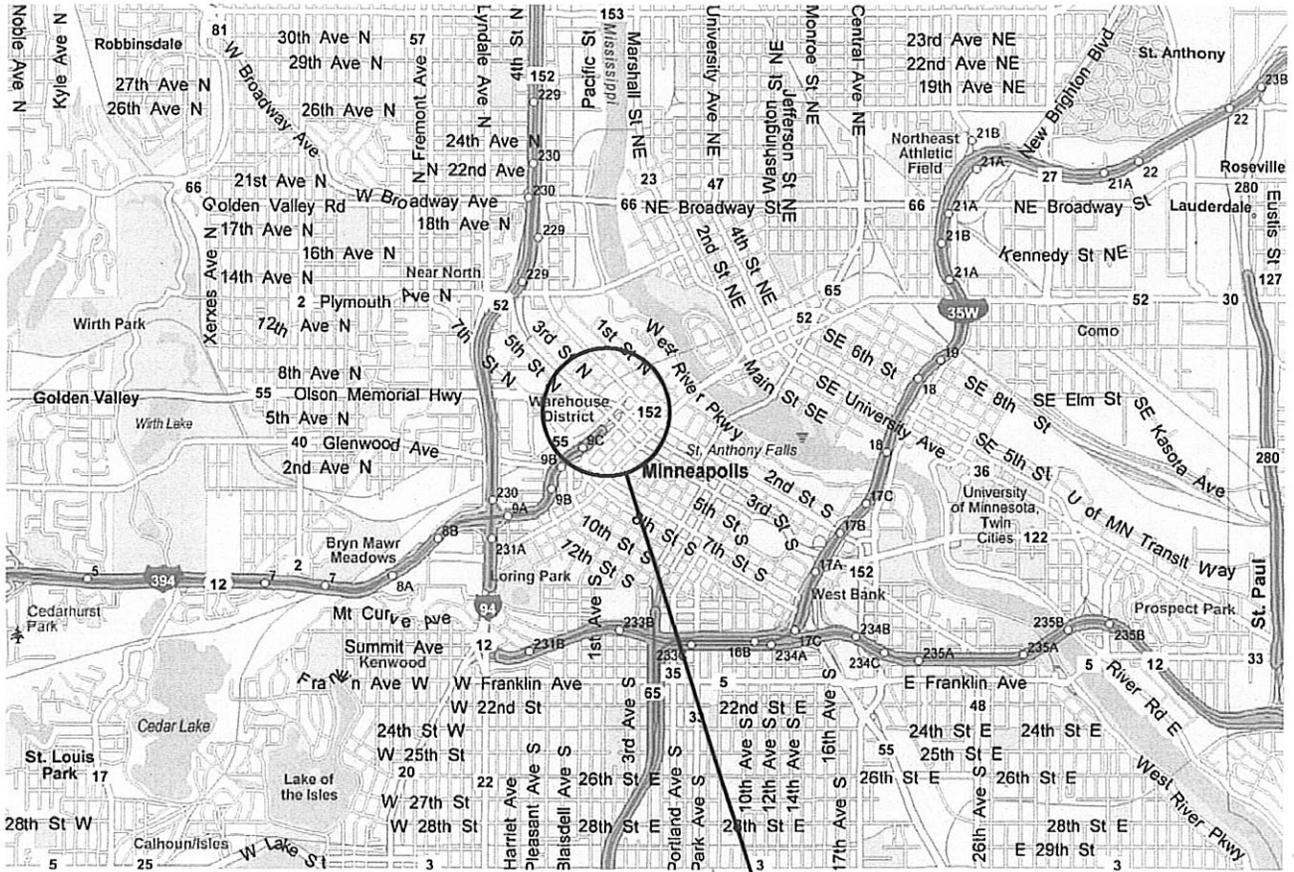
- 2011 Existing Conditions
- Future Phase A & B
- Future Full Build (with two scenarios examining different levels of alternate transportation mode selection)

The property is proposed to be developed in three phases and the full build analysis year for this project was 2020 (ten-year build-out).

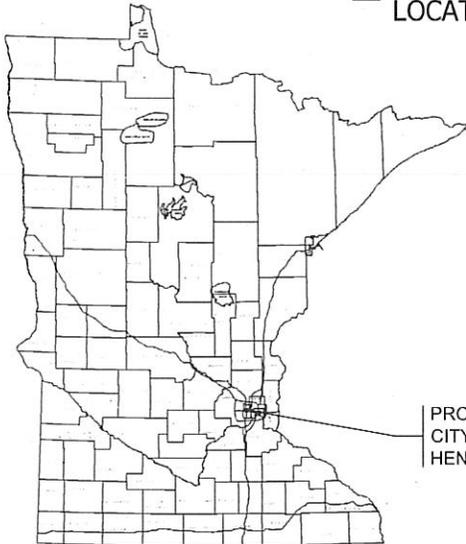
- Phase A consists of 200 units of High Rise apartments, and 5,000 SF of retail (Dock Street Apartments and Liner Buildings).
- Phase B will consist of another 200 units of High Rise apartments, and 16,500 SF of retail (Building #3).
- Phase C would consist of another 275 units of High Rise apartments, another 27,000 SF of retail, 400,000 square feet of office space, and a 100-room hotel. (Please note that these land uses are examples of what could be developed on this site and should not limit the developer's ability to revise Phase C and revise assumptions in the future).

The 3.25 acre site (Phase A & B) is located in the B4S-1 District. Phase C is located in the B4S-2 District.

Figure 1 shows the study location. Figure 2 shows the site plan.



STUDY
LOCATION



PROJECT LOCATION
CITY OF MINNEAPOLIS
HENNEPIN COUNTY



LOCATION MAP

FIGURE 1

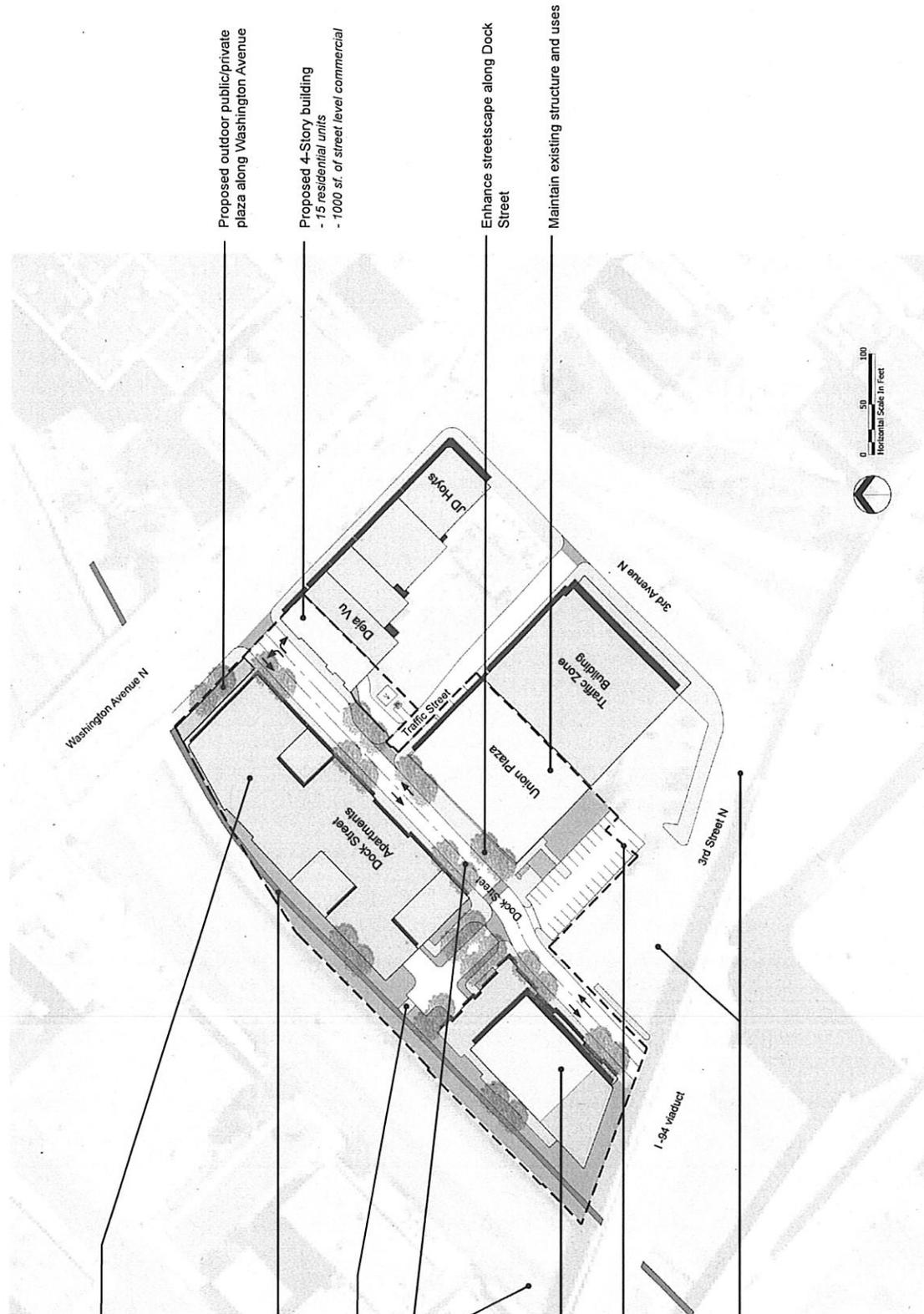
DOCK STREET APARTMENTS

HINES

Project 000422-11107

DATE: 20 MAY 2011





Proposed Dock Street
Apartment Building
- 185 residential units
- 4,000 sf. street level commercial
- 5-story building at Washington
Avenue street front
- 6-story building at parking
garage

Existing Cedar Lake Bike
and Pedestrian Trail

Proposed Cedar Lake Bike Trail
access

Proposed 26' wide roadway
- Shared bike access along roadway

Transit Lines
- Northstar Commuter Rail
- Hiawatha, Central, and proposed
SWLRT (beyond viaduct)

Conceptual 16-story building
- 200 residential units
- 16,500 sf. street level commercial

Maintain existing parking lot

Maintain existing access to site and
adjacent parking areas

Proposed outdoor public/private
plaza along Washington Avenue

Proposed 4-Story building
- 15 residential units
- 1000 sf. of street level commercial

Enhance streetscape along Dock
Street

Maintain existing structure and uses

May 20, 2011

ESG

ethers swenson graham architects inc.



Hines

DOCK STREET RESIDENTIAL - NORTH LOOP NEIGHBORHOOD
Minneapolis, Minnesota

Plan View

II. Existing Conditions

A. EXISTING ROADWAYS

Table 2.1 shows a summary of the study area roadway physical characteristics. Year 2008 Average Annual Daily Traffic (AADT) was collected from the MnDOT Office of Transportation Data and Analysis website.

Street Name	Functional Class	Typical Section	Posted Speed	AADT
Washington Avenue North (T.H. 152)	A Minor Arterial (Reliever)	five-lane urban	30 mph	20,400
3rd Avenue North	city street	two-lane one-way	30 mph	4,300
5th Street North	Collector	two-lane undivided	30 mph	5,300

It should be noted that 3rd Avenue North was disconnected at 5th Street North during construction of Target Field in 2009. Current AADT is likely fewer cars per day than noted above.

B. HOURLY TURNING MOVEMENT VOLUMES

Intersection turning movement counts were collected in April and May 2011. Figure 3 displays existing peak hour turning movement volumes, as well as the existing intersection lane geometry. These volumes can be found in the appendix.

C. OTHER PROPERTIES

The City has identified other properties that can be expected to redevelop and produce trips that could impact the study area.

The Jaguar property is located on the corner of Hennepin Avenue and Washington Avenue and is expected to consist of 250 units of residential, and 50,000 SF of commercial.

The Ford Center is located on the corner of 5th Avenue N and 5th Street N, and is expected to consist of 318,000 square feet of office space.

Jackson Square is located on the corner of Washington Avenue N & 3rd Avenue N, and will be comprised of 70 units of residential.

The other site is located on Washington Avenue N and 7th Avenue N and is expected to consist of 12,000 SF of retail space, and 120 dwelling units.

D. EXISTING PROPERTY TRIPS

The proposed development intends to use three existing access points for Phase A & B. These are:

- Washington Avenue S & Dock Street (full access)
- 3rd Avenue N & Traffic Street (right-in/right-out)

- 3rd Avenue N & 3rd Street S (right-in/right-out)

These driveways currently serve a 650-space surface parking lot. 250 parking spaces will be impacted by construction of Phase A and B, but it is reasonable to expect that this loss of parking spaces will not affect parking usage, and that the current driveway trips will remain during A and B. The remainder of the lot will be removed during construction of Phase C. It was agreed that the existing driveway trips will be subtracted for the Full Build scenario.

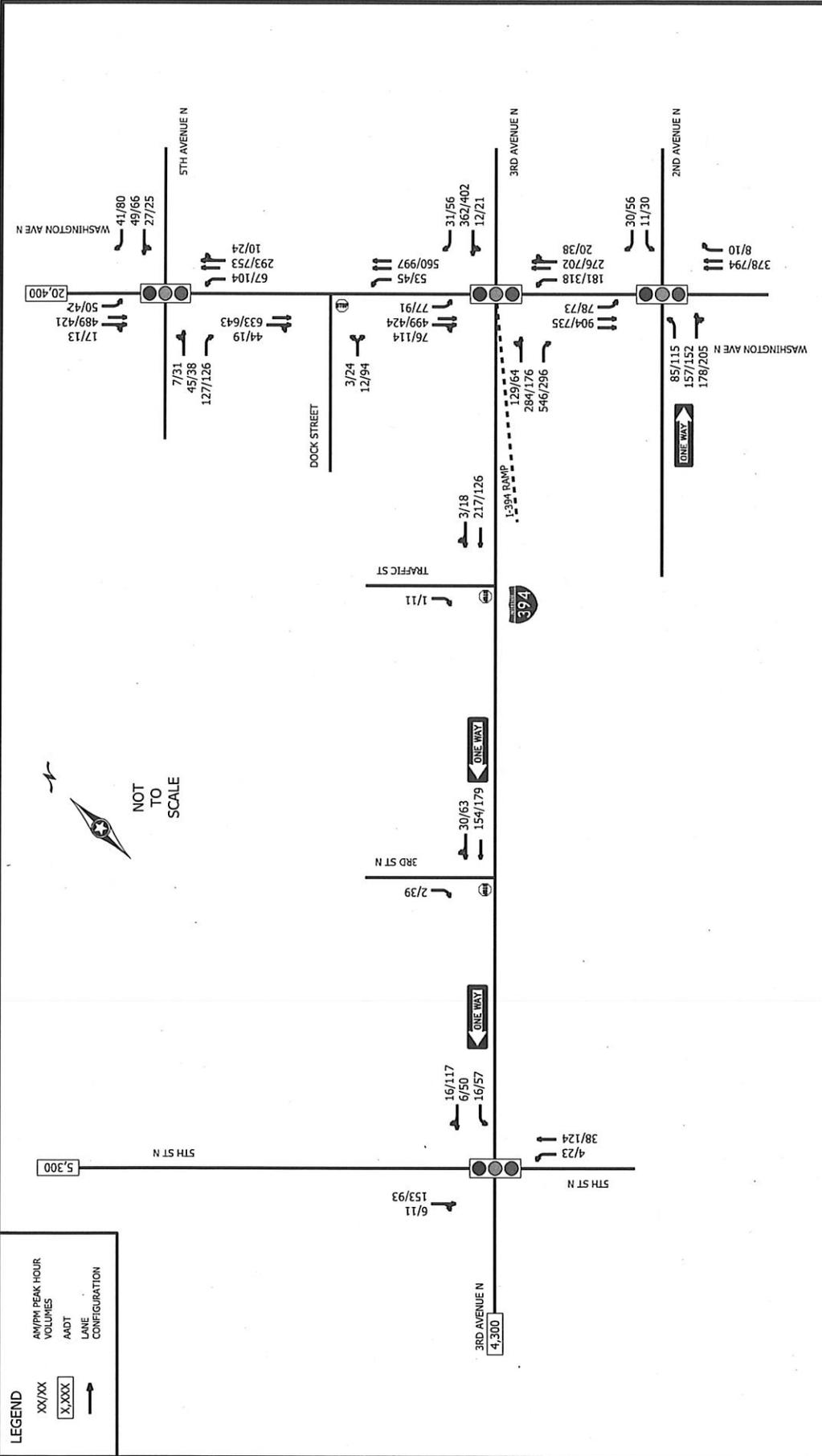
In Phase C, another full access driveway (to be known as "Access D") is proposed on 5th Street N. It should be noted that there are no designs for Phase C, but the intent is that a parking structure will be built with access to 5th Street N, as well as Dock Street.

The following table summarizes the current peak hour usage of the three driveways.

TABLE 2.2 – EXISTING DRIVEWAY TRIPS				
INTERSECTION	AM		PM	
	ENTER	EXIT	ENTER	EXIT
Washington Avenue S & Dock Street	97	15	64	118
3rd Avenue N & Traffic Street	3	1	18	11
3rd Avenue N & 3rd Street S	30	2	63	39
TOTAL DRIVEWAY TRIPS	130	18	145	168



The property viewed from 5th Street N on a Saturday morning



EXISTING LANE GEOMETRY AND VOLUMES
 FIGURE 3
 DOCK STREET APARTMENTS
 HINES
 Project 000422-11001
 DATE: 20 MAY 2011

III. Methodology

A. BASE ASSUMPTIONS

Intersection capacity analysis was conducted using Synchro/SimTraffic v7.0. Trip generation was calculated using the latest edition of the *Institute of Traffic Engineers (ITE) Trip Generation Manual*. Existing signal timing and phasing data was provided by the City of Minneapolis. Trip reduction by mode split was derived from Access Minneapolis.

B. TRIP REDUCTION

In general, for development sites located in close proximity to transit options, it is prudent to utilize trip reduction factors that reasonably reflect the number of persons that would use transit or other modes of travel to reach the development. For the Dock Street Apartments site, there are a number of alternative transportation mode choices available:

- The site is immediately adjacent to the Northstar Commuter Rail station,
- immediately adjacent to the Hiawatha Line LRT station, and the planned Central LRT
- The study area is served by multiple bus routes,
- The Cedar Lake Trail borders the west side of the property,
- It is located in close proximity to the Minneapolis skyway system, and
- Its location in downtown Minneapolis naturally encourages walking and biking.

It was decided to examine two scenarios that would analyze two different levels of alternate transportation usage. The first scenario examines a "worst case" where Travel Demand Management Plan (TDMP) recommendations would not accomplish their goals and trip reduction would be limited to that observed occurring naturally. The second scenario analyzes a "best case" where this site takes advantage of its close proximity to downtown as well as numerous transit opportunities.

The City of Minneapolis provided guidance on appropriate rates for both scenarios.

In both cases, Internal Capture was calculated using the worksheets provided by the *ITE Trip Generation Manual*, rather than assuming a straight percentage. The internal capture worksheets are included in the Appendix.

Table 3.1 shows the "worst case" trip reduction percentages by land use.

LAND USE	INTERNAL CAPTURE	TRANSIT	WALK/BIKE
Office	see worksheet	15%	5%
Residential		10%	20%
Retail		5%	15%
Hotel	0%	30%	5%

Table 3.2 shows the "best case" trip reduction percentages by land use.

TABLE 3.2 – TRIP REDUCTION ASSUMPTIONS "BEST CASE"			
LAND USE	INTERNAL CAPTURE	TRANSIT	WALK/BIKE
Office	see worksheet	35%	15%
Residential		25%	25%
Retail		20%	25%
Hotel	0%	35%	15%



The property site adjoins the Cedar Lake Trail and the Northstar Commuter Line

C. TRIP GENERATION (PHASE A & B)

Table 3.3 shows the estimated trip generation for Phase A & B.

TABLE 3.3 -ITE TRIP GENERATION (PHASE A & B)						
AVERAGE WEEKDAY DRIVEWAY VOLUMES			AM PEAK HOUR		PM PEAK HOUR	
Land Use	ITE Land Code	Size	Enter	Exit	Enter	Exit
High Rise	222	400 units	32	92	84	56
Specialty Retail	814	21,500 SF	0	0	26	33
Unadjusted Weekday Trips			32	92	110	89
Reduction (transit)	<i>10% for residential, 5% for retail</i>		-3	-9	-8 -1	-6 -2
Reduction (bike/ped)	<i>20% for residential, 15% for retail</i>		-6	-18	-17 -4	-11 -5
Internal Capture	<i>See worksheet</i>		0	0	-5	-5
Total Weekday Trips			23	65	75	60

D. TRIP GENERATION (FULL BUILD)

Table 3.4 shows the estimated trip generation for the "worst case" Full Build condition.

TABLE 3.4 -ITE TRIP GENERATION (FULL BUILD – "WORST CASE")						
AVERAGE WEEKDAY DRIVEWAY VOLUMES			AM PEAK HOUR		PM PEAK HOUR	
Land Use	ITE Land Code	Size	Enter	Exit	Enter	Exit
High Rise	222	675 units	51	152	139	89
Specialty Retail	814	48,500 SF	0	0	61	77
General Office Building	710	400,000 SF	500	68	90	437
Hotel	310	100 units	34	22	31	28
Unadjusted Weekday Trips			585	242	321	631
Reduction (transit)	<i>15% for office,</i>		<i>-75</i>	<i>-10</i>	<i>-14</i>	<i>-66</i>
	<i>10% for residential,</i>		<i>-10</i>	<i>-15</i>	<i>-14</i>	<i>-9</i>
	<i>5% for retail,</i>		<i>-0</i>	<i>-0</i>	<i>-3</i>	<i>-4</i>
	<i>30% for hotel</i>		<i>-10</i>	<i>-7</i>	<i>-9</i>	<i>-9</i>
Reduction (bike/ped)	<i>5% for office,</i>		<i>-25</i>	<i>-3</i>	<i>-5</i>	<i>-22</i>
	<i>20% for residential,</i>		<i>-10</i>	<i>-30</i>	<i>-28</i>	<i>-18</i>
	<i>15% for retail,</i>		<i>-0</i>	<i>-0</i>	<i>-9</i>	<i>-12</i>
	<i>5% for hotel</i>		<i>-2</i>	<i>-1</i>	<i>-2</i>	<i>-1</i>
Internal Capture	<i>See worksheet</i>		<i>-1</i>	<i>-1</i>	<i>-19</i>	<i>-19</i>
Total Weekday Trips			462	175	218	471

Table 3.5 shows the estimated new trips for the "best case" Full Build scenario.

TABLE 3.5 - ITE TRIP GENERATION (FULL BUILD – "BEST CASE")						
AVERAGE WEEKDAY DRIVEWAY VOLUMES			AM PEAK HOUR		PM PEAK HOUR	
Land Use	ITE Land Code	Size	Enter	Exit	Enter	Exit
High Rise	222	675 units	51	152	139	89
Specialty Retail	814	48,500 SF	0	0	61	77
General Office Building	710	400,000 SF	500	68	90	437
Hotel	310	100 units	34	22	31	28
Unadjusted Weekday Trips			585	242	321	631
Reduction (transit)	<i>35% for office,</i>		-175	-24	-32	-153
	<i>25% for residential,</i>		-13	-38	-35	-22
	<i>20% for retail,</i>		-0	-0	-13	-15
	<i>35% for hotel</i>		-12	-8	-11	-10
Reduction (bike/ped)	<i>15% for office,</i>		-75	-10	-14	-66
	<i>25% for residential,</i>		-13	-38	-35	-22
	<i>25% for retail,</i>		-0	-0	-15	-19
	<i>15% for hotel</i>		-5	-3	-5	-4
Internal Capture	<i>See worksheet</i>		-1	-1	-19	-19
Total Weekday Trips			291	120	142	301

As mentioned previously, the property site is currently home to a 650-space surface parking lot. This analysis subtracts current parking trips from the estimated trip generation to account for the removal of this surface lot. Table 3.6 summarizes the expected new trips in the Full Build conditions.

TABLE 3.6 – EXPECTED NEW TRIPS FULL BUILD – TRIPS GENERATED - EXISTING PARKING TRIPS				
SCENARIO	AM		PM	
	ENTER	EXIT	ENTER	EXIT
Full Build "worst case" trip generation	462	175	218	471
Existing driveway trips	<i>130</i>	<i>18</i>	<i>145</i>	<i>168</i>
"Worst Case" Expected New Trips	332	157	73	303
Full Build "best case" trip generation	291	120	142	301
Existing driveway trips	<i>130</i>	<i>18</i>	<i>145</i>	<i>168</i>
"Best Case" Expected New Trips	161	102	-3	133

E. TRIP DISTRIBUTION

Trips for this proposed development were distributed based on trip distribution calculated by the July 2007 study prepared by Biko & Associates for the North Loop Village Development, which consisted of essentially the same land-uses. The proposed trip distribution for this project can be found in Figure 4 for Phase A & B, and Figure 5 shows the peak hour volumes for Phase A & B.

The trip distribution for the Full Build condition is shown in Figure 6, future "worst case" Full Build peak hour volumes are shown in Figure 8, and Full Build "best case" traffic volumes are contained in Figure 9.

F. BACKGROUND GROWTH

According to the Minnesota Twins Ballpark EIS from 2007, the background growth rate in downtown Minneapolis is 0.5% per year.

The Jaguar property and other site redevelopments can be expected to produce new trips in this study area. The trips from these developments were assigned to the study area roadway network. This information can be found in the Appendix.

Year 2020 No-build volumes are shown in Figure 7.

G. PARKING

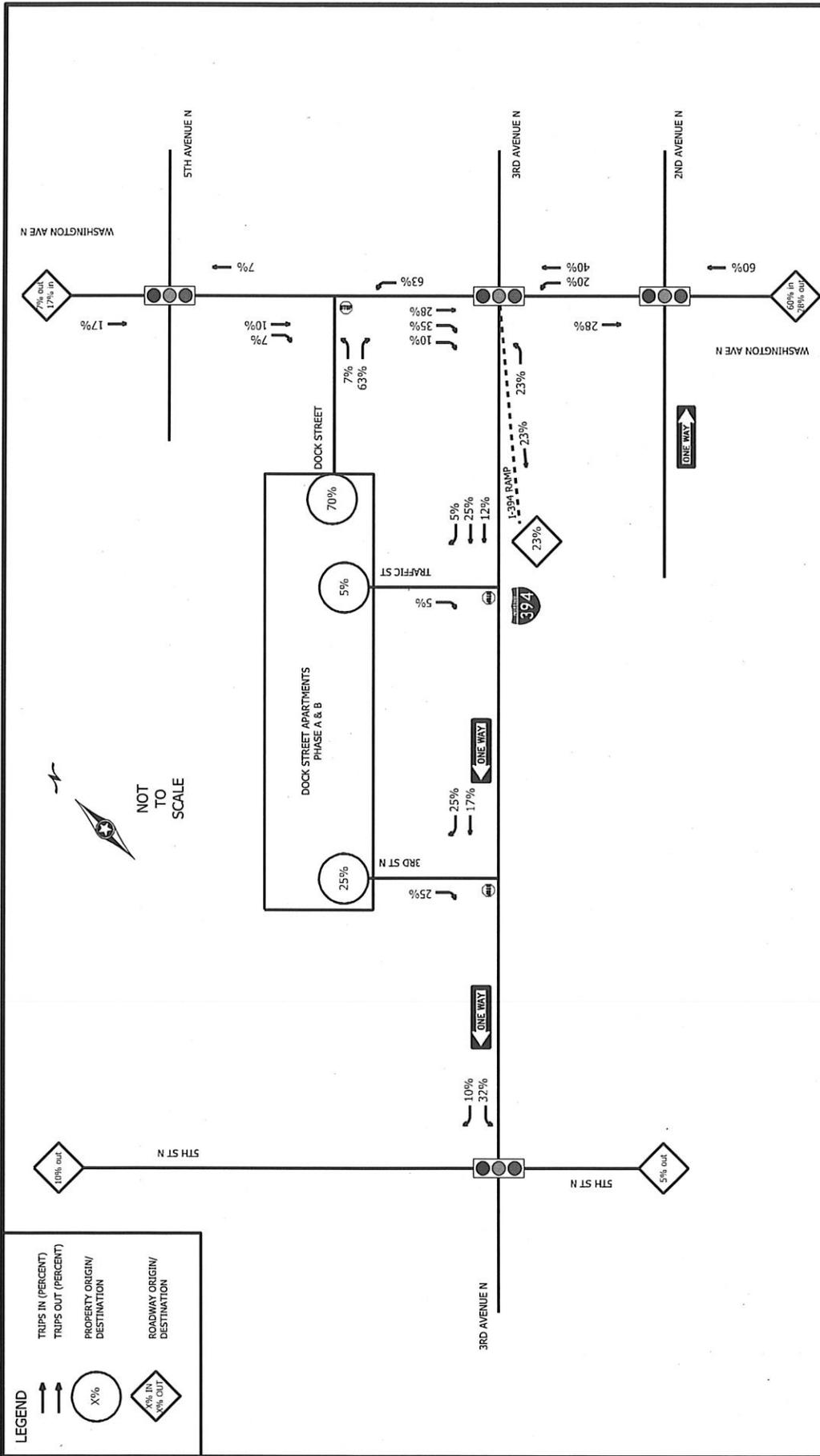
As mentioned previously, the property currently consists of a 650-space surface parking lot. Phase A & B of the proposed development would remove approximately 250 spaces of that lot, with approximately 400 spaces remaining.

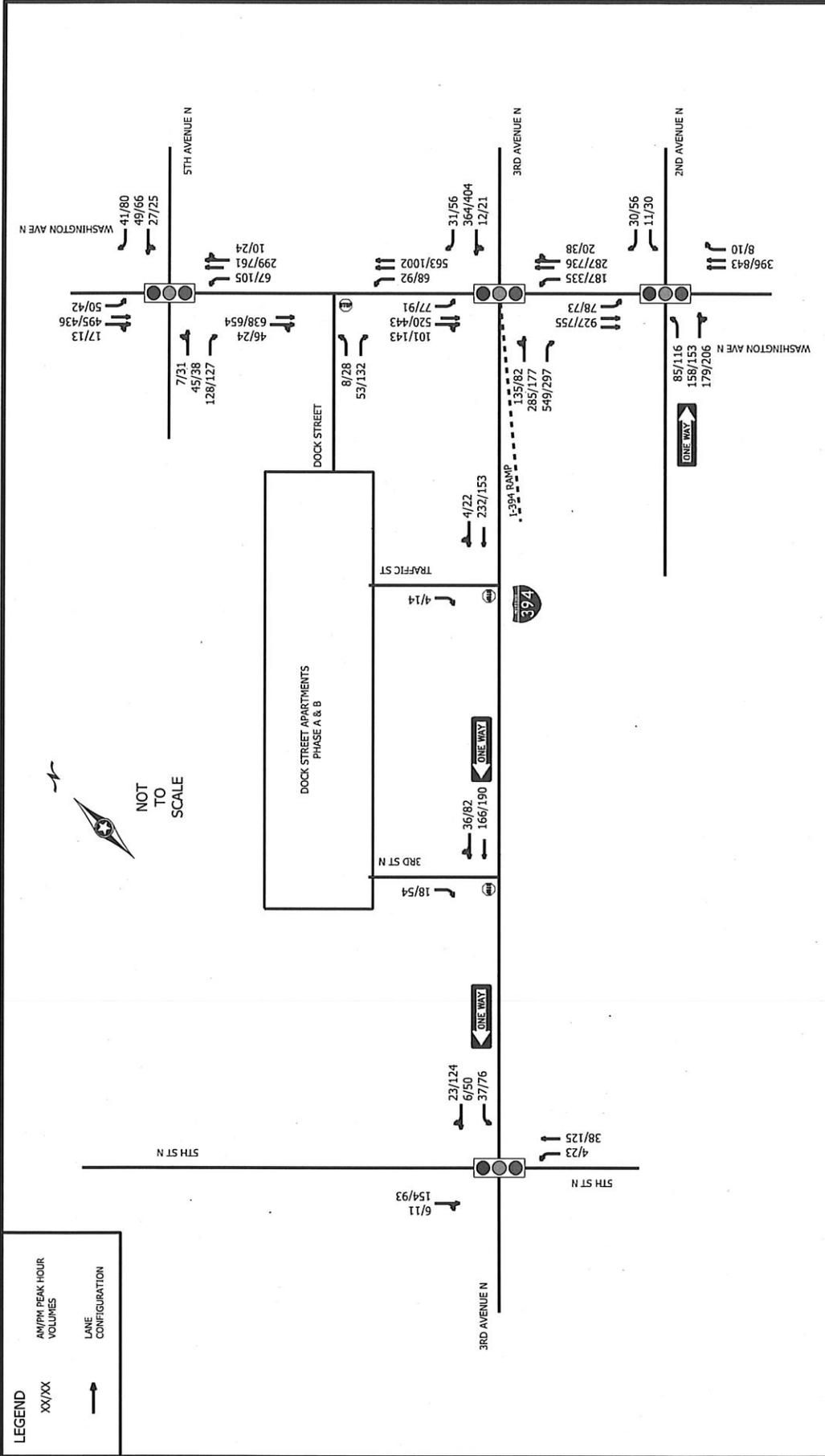
Phase A & B is located in the B4S-1 Zoning District. Minimum parking requirements are none for this zone except that multi-family dwellings of 50 or more units that provide off-street parking for residents shall also provide designated visitor parking at a ratio of not less than one visitor space per 50 dwelling units. The maximum allows 1.6 spaces per dwelling unit for residential uses, and 1 space per 5,000 SF of retail.

According to the *JTE Parking Generation Manual, 4th Edition*, weekday peak residential parking demand for Phase A & B would be 532 spaces. Demand for 21,500 SF of retail would be 88 spaces.

Structured parking is proposed for residential uses in the project area. A total of 204 structured parking spaces are proposed for Phase A of development. A maximum of 320 structured parking spaces could be allowed in the Conceptual Phase B 16-story building consistent with the maximum parking ratio allowed in Downtown (1.6 spaces per unit). Adjacent on-street parking and existing parking ramps will accommodate parking needs for proposed commercial uses.

Bicycle parking requirements for multiple-family dwellings with five or more units are 1 space per 2 dwelling units. There are currently 10 bicycle storage units underneath the I-394 viaduct. As part of the TDMP mitigation strategy, it is anticipated that Phase A & B will provide bicycle parking in excess of the City's requirements.





Bonestroo

PHASE A & B PEAK HOUR VOLUMES

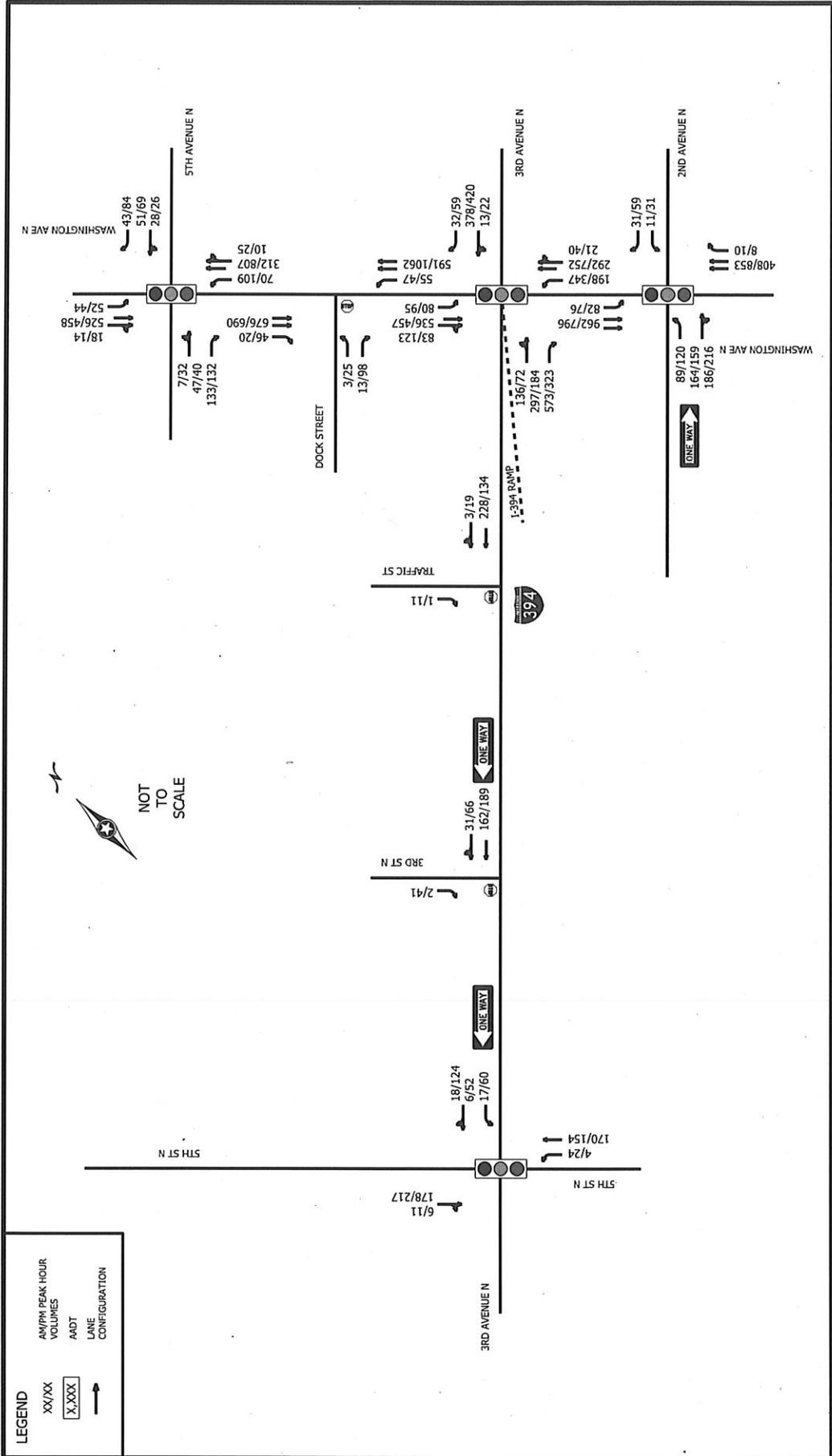
FIGURE 5

DOCK STREET APARTMENTS

HINES

Project 000422-11.001

DATE: 20 MAY 2011



Bonestroo

FUTURE YEAR 2020 NO-BUILD VOLUMES

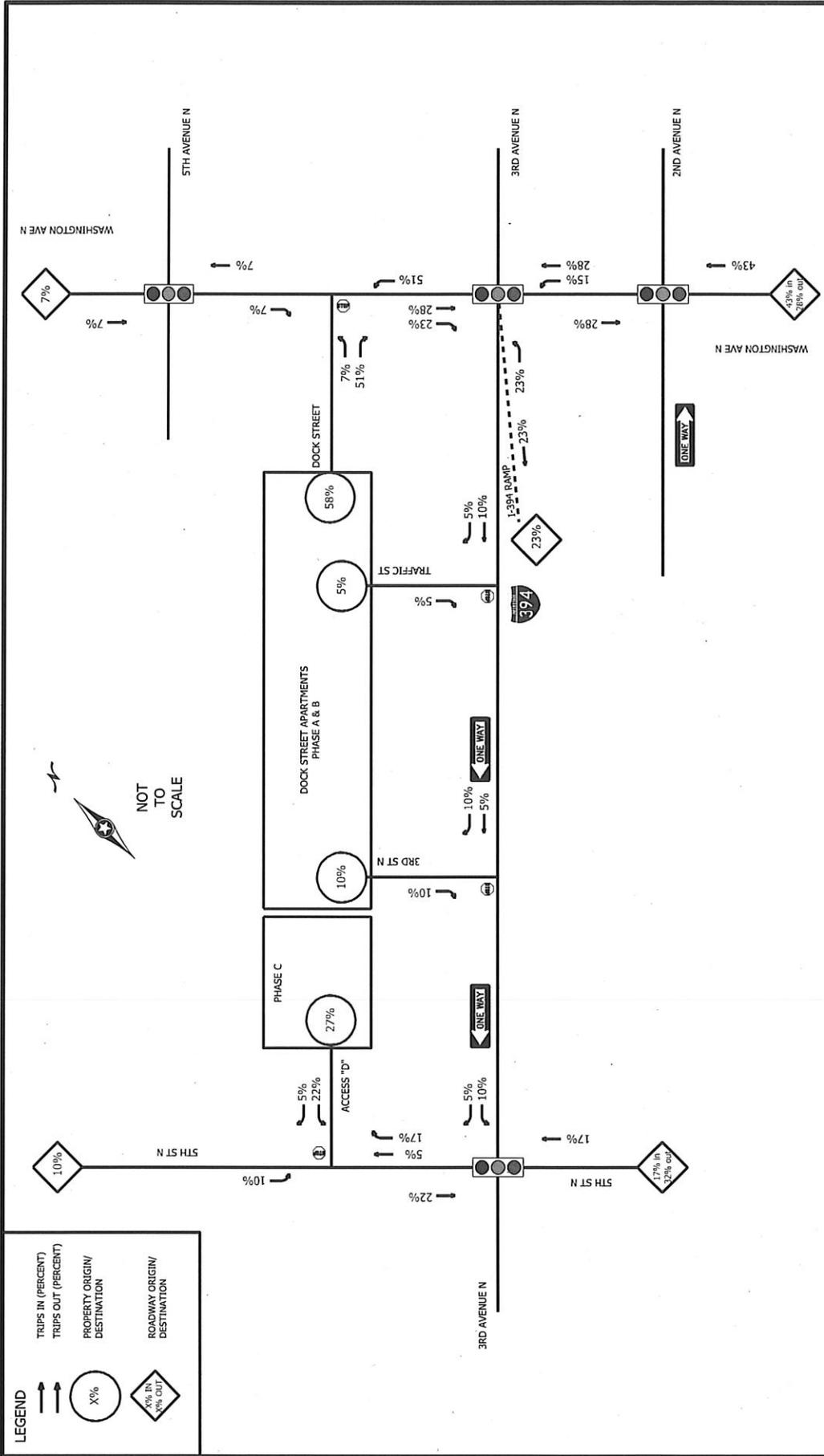
FIGURE 6

DOCK STREET APARTMENTS

HINES

Project 000422-11001

DATE: 31 MAY 2011



Bonestroo

TRIP DISTRIBUTION (FULL BUILD)

FIGURE 7

DOCK STREET APARTMENTS

HINES

Project 000432-11001

DATE: 31 MAY 2011

IV. Capacity Analysis - Phase A & B

A. LEVEL OF SERVICE SUMMARY

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" to measure how traffic operates in intersections. There are currently six levels of service ranging from A to F. Level of service "A" represents the best conditions and Level of Service "F" represents the worst. Synchro Traffic Modeling software was used to determine the level of service for studied intersections. All worksheet reports from the analyses can be found in the Appendix.

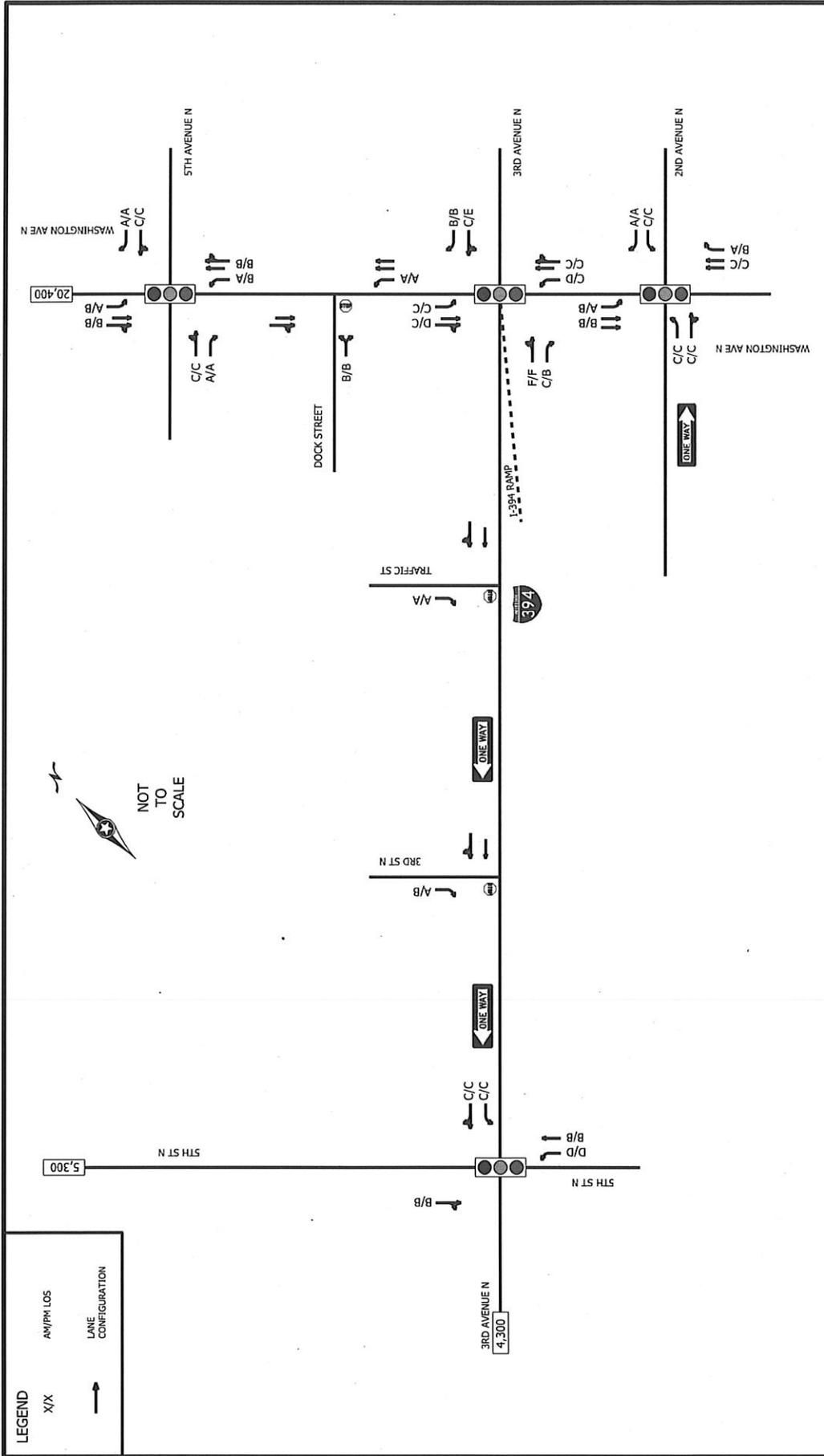
TABLE 4.1 – HIGHWAY CAPACITY MANUAL LEVELS OF SERVICE AND CONTROL DELAY			
SIGNALIZED INTERSECTION		UNSIGNALIZED INTERSECTION	
Level of Service	Control Delay per Vehicle (sec)	Level of Service	Control Delay per Vehicle (sec)
A	≤ 10	A	≤ 10
B	> 10 and ≤ 20	B	> 10 and ≤ 15
C	> 20 and ≤ 35	C	> 15 and ≤ 25
D	> 35 and ≤ 55	D	> 25 and ≤ 35
E	> 55 and ≤ 80	E	> 35 and ≤ 50
F	> 80	F	> 50

Table 4.2 represents the summary of the level of service analysis for this project.

TABLE 4.2 – OVERALL LEVEL OF SERVICE (DELAY PER VEHICLE)				
INTERSECTIONS	EXISTING		YEAR 2012 PHASE A & B	
	AM	PM	AM	PM
Washington Avenue N & Dock Street (unsignalized – NB exit)	B (12.1)	B (13.9)	C (21.5)	C (23.7)
Washington Avenue N & 5th Avenue N	B (16.4)	B (12.6)	B (16.4)	B (12.8)
Washington Avenue N & 3rd Avenue N	E (57.4)	D (49.7)	E (59.8)	E (69.0)
3rd Avenue N & Traffic Street (unsignalized – EB right-turn)	A (9.8)	A (10.0)	A (9.8)	B (10.1)
3rd Avenue N & 3rd Street N (unsignalized – EB right-turn)	A (9.5)	B (12.4)	A (9.7)	B (12.8)
3rd Avenue N & 5th Street N	B (15.9)	C (25.1)	B (17.2)	C (25.9)
Washington Avenue N & 2nd Street N	B (18.2)	C (20.6)	B (18.3)	C (20.9)

It should be noted that the software model used to develop level of service (LOS) for the study intersections simply produces results based on the data input, and does not account for queues and other operational problems occurring on Washington Avenue North outside of the study area, which nevertheless physically impact those intersections. It is useful to interpret the results as the degree to which the proposed development would impact the intersections.

Figure 10 shows level of service for existing conditions, and Figure 11 shows LOS for Phase A & B.



EXISTING LEVEL OF SERVICE
 FIGURE 10
 DOCK STREET APARTMENTS
 HINES

DATE: 20 MAY 2011

Project 006422-11001

B. WASHINGTON AVENUE N & DOCK STREET

TABLE 4.3 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT				
	TH	Free			
	RT				
Westbound	LT	A/ 9.2/ --	A/ 9.1/ --	A/ 9.3/ --	A/ 9.4/ --
	TH	Free			
	RT				
Northbound	LT	B/ 12.1/ --	B/ 13.9/ 22'	C/ 21.5/ --	C/ 23.7/ --
	RT			B/ 10.2/ --	B/ 11.5/ --

The current driveway is a full access driveway to Washington Avenue N. It is about 28 feet wide, and is located approximately 275 west of the Washington Avenue N & 3rd Avenue N intersection. The driveway profiles down to the surface lot, although it is nearly level at the stop bar. The drivers line-of-sight extends both east and west along Washington Avenue N.

From 2006 to 2008, there were two crashes that occurred at or near the driveway: one was a rear-end crash on Washington Avenue, and the other was a right-angle crash involving a vehicle turning left out of the driveway.

As part of the proposed development, the Dock Street exit would consist of exclusive left- and right-turn lanes.

Analysis of existing conditions shows that exiting vehicles experience LOS B in both peaks.

For the Phase A & B scenario, in both peak hours, the driveway is expected to function acceptably.

C. WASHINGTON AVENUE N & 5TH AVENUE N

TABLE 4.4 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT	A/ 10.0/ 29'	B/ 10.4/ 26'	A/ 10.0/ 29'	B/ 10.4/ 26'
	TH	B/ 19.7/ 162'	B/ 18.1/ 131'	B/ 19.8/ 164'	B/ 18.2/ 135'
	RT				
Westbound	LT	B/ 10.2/ 28'	A/ 5.7/ 22'	B/ 10.1/ 28'	A/ 5.8/ 23'
	TH	B/ 15.8/ 61'	B/ 10.0/ 127'	B/ 15.8/ 63'	B/ 10.1/ 124'
	RT				
Northbound	LT	C/ 23.0/ 51'	C/ 23.7/ 63'	C/ 23.0/ 51'	C/ 23.7/ 63'
	TH				
	RT	A/ 5.9/ 51'	A/ 6.0/ 40'	A/ 5.9/ 51'	A/ 6.0/ 40'
Southbound	LT	C/ 24.1/ 69'	C/ 24.1/ 79'	C/ 24.1/ 69'	C/ 24.1/ 79'
	TH				
	RT	A/ 7.5/ 21'	A/ 6.6/ 32'	A/ 7.5/ 21'	A/ 6.6/ 32'

Washington Avenue N & 5th Avenue N is a signalized intersection with protected/permited left-turn phasing for EB and WB Washington Avenue N, and permitted left-turn phasing for NB and SB 5th Avenue N. Parking is permitted on all four approaches. Bicycle lanes are striped on both sides of 5th Avenue N.

Metro Transit Route 14 runs east-west along Washington Avenue N at this intersection. Near side bus stops are located at both approaches.

Analysis of existing conditions shows that the intersection functions acceptably in both peak hours. All individual movements function at LOS C or better.

The Phase A & B scenario has minimal impact on this intersection.

D. WASHINGTON AVENUE N & 3RD AVENUE N/I-394 RAMPS

TABLE 4.5 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT	C/ 22.5/ 78'	C/ 22.2/ 82'	C/ 21.9 / 77'	C/ 22.0/ 81'
	TH	D/ 39.9/ 238'	C/ 32.7/ 215'	D/ 37.8/ 252'	C/ 32.6/ 230'
	RT				
Westbound	LT	C/ 20.4/ 135'	D/ 48.6/ 830'	C/ 22.3/ 141'	E/ 69.5/ 881'
	TH	C/ 23.3/ 114'	C/ 28.0/ 307'	C/ 23.5/ 121'	C/ 28.5/ 321'
	RT				
Northbound	LT	F/ 193.3/ 497'	F/ 201.3/ 343'	F/ 207.5/ 508'	F/ 375.5/ 393'
	TH				
	RT	C/ 30.0/ 884'	B/ 14.1/ 134'	C/ 30.9/ 891'	B/ 15.5/ 145'
Southbound	LT	C/ 30.0/ 279'	E/ 59.3/ 441'	C/ 30.1/ 282'	E/ 60.4/ 443'
	TH				
	RT	B/ 12.7/ 25'	B/ 17.5/ 46'	B/ 12.7/ 25'	B/ 17.5/ 46'

Washington Avenue N & 3rd Avenue N is a signalized intersection with protected/permited left-turn phasing for EB and WB Washington Avenue N, and permitted left-turn phasing for NB and SB 5th Avenue N. Parking is permitted on the Washington Avenue N and SB 3rd Avenue N approaches. The northbound approach from I-394 has a channelized right-turn with yield condition. 3rd Avenue N south of the intersection is one-way heading south.

Metro Transit Route 14 runs east-west along Washington Avenue N at this intersection. Routes 3, 16, 50, and 94 head west along Washington Avenue N and turn left on 3rd Avenue N. Near side bus stops are located at both eastbound and westbound approaches.

In the AM and PM peak hours, the intersection experiences an overall LOS of E and D, respectively. The northbound shared through-left lane fails with queues extending along the I-394 exit ramp in both peak hours. The westbound left-turn in the PM peak hour shows LOS D but a 95th percentile queue of over 800 feet, indicating a spillover condition at the Washington Avenue N & 2nd Avenue N intersection, which has been verified during intersection observations. The southbound shared through-left lane experiences LOS E and long queues.

For the Phase A & B, the already long delays and queues for certain movements are increased. The movements most affected by the development are the NB through-left in both peaks, and the WB left-turn in the PM peak hour.

E. 3RD AVENUE N & TRAFFIC STREET

TABLE 4.6 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT				
	TH				
	RT	A/ 9.8/ --	A/ 10.0/ --	A/ 9.8/ --	B/ 10.1/ --
Southbound	LT				
	TH	Free			
	RT				

Traffic Street functions as a right-in/right-out access to 3rd Avenue N.

The driveway functions at LOS B or better in both existing conditions and the Phase A & B scenario.

F. 3RD AVENUE N & 3RD STREET N

TABLE 4.7 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT				
	TH				
	RT	A/ 9.5/ --	B/ 12.4/ --	A/ 9.7/ --	B/ 12.8/ --
Southbound	LT				
	TH	Free			
	RT				

Similar to Traffic Street, 3rd Street N functions as a right-in/right-out access to 3rd Avenue N.

The driveway functions at LOS B or better in both existing conditions and the Phase A & B scenario.

G. 3RD AVENUE N & 5TH STREET N

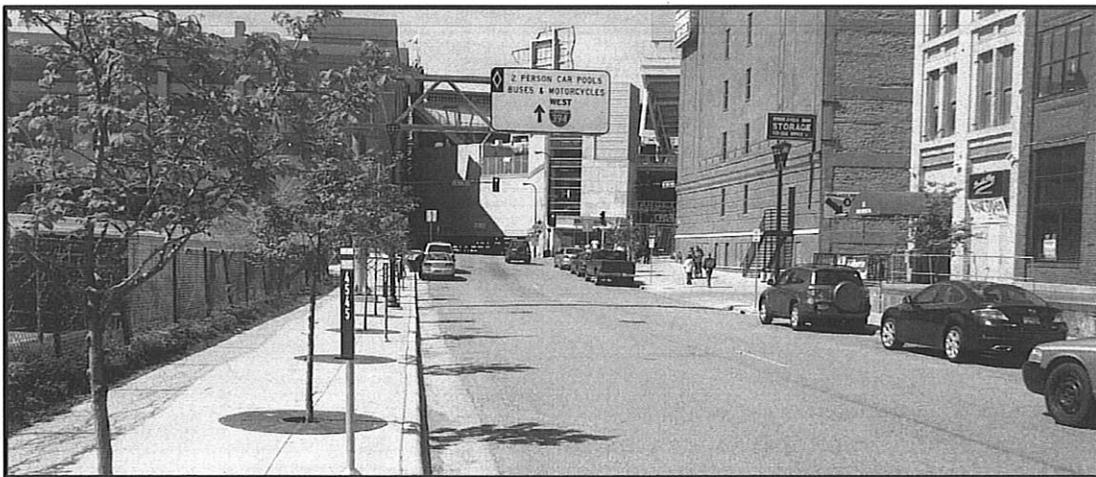
TABLE 4.8 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT	/		/	
	TH	B/ 13.7/ 115'	B/ 17.4/ 85'	B/ 13.7/ 115'	B/ 17.4/ 85'
	RT				
Westbound	LT	D/ 49.5/ --	D/ 52.8/ 44'	D/ 49.5/ --	D/ 52.8/ 44'
	TH	B/ 10.1/ 26'	B/ 11.5/ 73'	B/ 10.1/ 26'	B/ 11.5/ 73'
	RT	/		/	
Southbound	LT	C/ 26.9/ 26'	C/ 29.8/ 67'	C/ 28.1/ 47'	C/ 31.5/ 86'
	TH	C/ 27.0/ 31'	C/ 34.6/ 171'	C/ 27.4/ 38'	D/ 35.2/ 178'
	RT				

3rd Avenue N & 5th Street N is a signalized intersection with protected left-turn phasing for the WB 5th Avenue N approach. 3rd Avenue N is a one-way heading south. Parking is permitted on the 3rd Avenue N approach on both sides.

The Hiawatha Light Rail line runs east-west along 5th Street N at this intersection.

Analysis of existing conditions shows that the intersection functions acceptably. Westbound left-turns experience LOS D in both peak hours, but volumes are low and queues are not extensive.

For the Phase A & B scenario, the intersection is expected to perform similarly to existing conditions.



Looking south on 3rd Avenue N towards 5th Street N

H. WASHINGTON AVENUE N & 2ND AVENUE N

TABLE 4.9 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE					
DIRECTION	MOVEMENT	2011 EXISTING		2012 PHASE A & B	
		AM	PM	AM	PM
Eastbound	LT	A/ 9.2/ 36'	B/ 12.2/ 51'	A/ 8.9/ 32'	B/ 11.9/ 48'
	TH	B/ 15.3/ 221'	B/ 16.0/ 201'	B/ 15.4/ 227'	B/ 15.7/ 205'
	RT				
Westbound	TH	C/ 20.4/ 127'	C/ 22.7/ 255'	C/ 20.6/ 132'	C/ 23.4/ 276'
	RT	B/ 10.4/ --	A/ 9.1/ --	B/ 10.4/ --	A/ 9.1/ --
Northbound	LT	C/ 22.3/ 72'	C/ 24.8/ 93'	C/ 22.3/ 72'	C/ 24.8/ 94'
	TH	C/ 25.7/ 231'	C/ 28.0/ 242'	C/ 25.8/ 233'	C/ 28.2/ 244'
	RT				
Southbound	LT	C/ 21.2/ --	C/ 25.5/ 36'	C/ 21.2/ --	C/ 25.5/ 36'
	TH				
	RT	A/ 7.8/ --	A/ 7.1/ 26'	A/ 7.8/ --	A/ 7.1/ 26'

Washington Avenue N & 2nd Avenue N is a signalized intersection with protected/permitted left-turn phasing for EB Washington Avenue N, and permitted left-turn phasing for NB and SB 5th Avenue N. 2nd Avenue N is one-way south of the intersection heading north. Parking is permitted on all four approaches.

Metro Transit Route 14 runs east-west along Washington Avenue N at this intersection. Routes 3, 16, 50, and 94 head west along Washington Avenue N. Near side bus stops are located at both approaches.

Analysis shows LOS C for existing conditions, but this intersection experiences the effects of queues from adjacent intersections that are not reflected in software models.

The Phase A & B scenario is expected to have minimal impact on this intersection.

IV. Capacity Analysis – Future Scenarios

A. LEVEL OF SERVICE SUMMARY

This study examines the cumulative effect of future developments in the study area. This analysis examines the future No-Build conditions, and the "worst case" and "best case" Phase C impacts to the surrounding roadway network.

Table 5.1 represents the summary of the level of service analysis for the future scenarios.

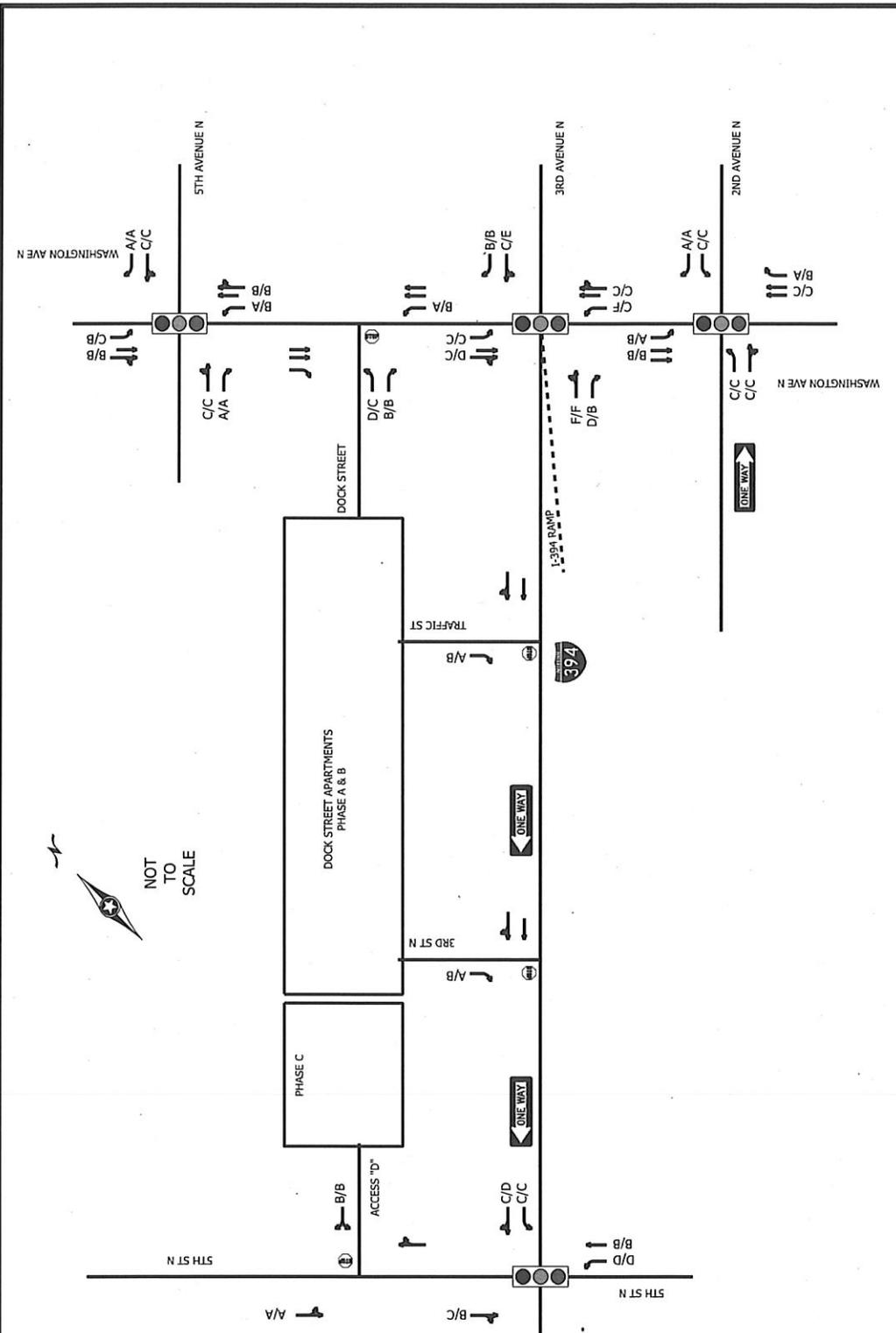
TABLE 5.1 – OVERALL LEVEL OF SERVICE (DELAY PER VEHICLE)						
INTERSECTIONS	YEAR 2020 NO BUILD		YEAR 2020 FULL BUILD WORST CASE		YEAR 2020 FULL BUILD BEST CASE	
	AM	PM	AM	PM	AM	PM
Washington Avenue N & Dock Street (unsignalized – NB exit)	B (12.0)	B (14.11)	F (53.5)	D (25.2)	D (30.3)	C (20.6)
Washington Avenue N & 5th Avenue N	B (16.7)	B (12.9)	B (17.0)	B (13.2)	B (16.8)	B (13.0)
Washington Avenue N & 3rd Avenue N	E (68.3)	E (68.9)	F (104.4)	F (97.9)	F (84.7)	E (71.1)
3rd Avenue N & Traffic Street (unsignalized – EB right-turn)	A (9.8)	B (10.0)	B (10.0)	B (10.2)	A (9.9)	B (10.1)
3rd Avenue N & 3rd Street N (unsignalized – EB right-turn)	A (9.5)	B (12.5)	A (10.0)	B (14.3)	B (10.2)	B (13.2)
3rd Avenue N & 5th Street N	B (14.7)	C (24.3)	B (15.8)	C (25.9)	B (15.4)	C (25.0)
Washington Avenue N & 2nd Street N	B (18.8)	C (21.3)	B (19.2)	C (21.4)	B (19.0)	C (21.3)
5th Street N & Access D (unsignalized – SB exit)			B (12.2)	B (13.9)	B (11.4)	B (12.5)

Figure 12 shows LOS for the Full Build "worst case" scenario, and Figure 13 shows LOS for the "best case" Full Build scenario.

LEGEND

X/X AM/PM LOS

→ LANE CONFIGURATION



FULL BUILD "BEST CASE" LEVEL OF SERVICE

FIGURE 13

DOCK STREET APARTMENTS

HINES

Project 000422-11001

DATE: 31 MAY 2011



B. WASHINGTON AVENUE N & DOCK STREET

TABLE 5.2 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 NO-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "TYPICAL CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT						
	TH						
	RT						
Westbound	LT	A/ 9.3/ --	A/ 9.3/ --	B/10.6/27'	A/ 9.5/ --	A/ 9.8/ --	A/ 9.3/ --
	TH						
	RT						
Northbound	LT	B/ 12.0/ --	B/ 14.1/ 24'	F/53.5/ --	D/ 25.2/ --	D/ 30.3/ --	C/ 20.6/ --
	RT			B/10.4/--	B/ 13.3/ 44'	B/ 10.2/ --	B/ 11.9/ 24'

The No-Build scenario output is comparable to existing conditions.

In the Full Build "worst case" scenario AM peak hour, westbound left-turners into the development would see their LOS drop from A to B, and northbound left-turners would experience LOS F.

The Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD) provides warrants for signalization of an intersection. If in the future, actual conditions match the "worst case" conditions, a Signal Warrant analysis would be performed to determine if the driveway meets warrants. This will depend on how Phase C develops, what land uses are included, and how quickly they generate trips. If the driveway meets the thresholds for signalization, the developer would be required to participate in the costs.

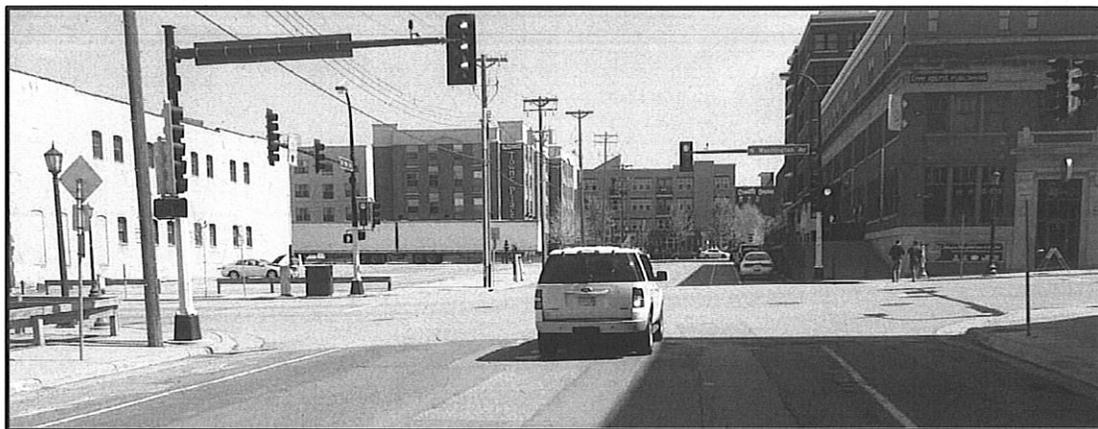
In the Full Build "best case" scenario, northbound left-turning vehicles in the AM peak are expected to see LOS D, and function at LOS C in the PM peak hour.

C. WASHINGTON AVENUE N & 5TH AVENUE N

TABLE 5.3 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 NO-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "BEST CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT	B/ 10.1/ 30'	B/ 10.6/ 27'	B/ 10.1/ 30'	B/ 10.6/ 27'	B/ 10.1/ 30'	B/ 10.6/ 27'
	TH	C/ 20.2/ 175'	B/ 18.4/ 142'	C/ 20.6/ 184'	B/ 18.5/ 144'	C/ 20.4/ 180'	B/ 18.4/ 143'
	RT						
Westbound	LT	B/ 10.5/ --	A/ 5.8/ 22'	B/ 10.6/ 29'	A/ 6.0/ 23'	B/ 10.6/ 29'	A/ 5.8/ 22'
	TH	B/ 16.0/ 66'	B/ 10.4/ 140'	B/ 16.2/ 63'	B/ 11.0/ 149'	B/ 16.1/ 64'	B/ 10.6/ 144'
	RT						
Northbound	LT	C/ 23.1/ 52'	C/ 23.8/ 66'	C/ 23.1/ 52'	C/ 23.8/ 66'	C/ 23.1/ 52'	C/ 23.8/ 66'
	TH						
	RT	A/ 5.9/ 33'	A/ 6.0/ 41'	A/ 5.9/ 33'	A/ 6.0/ 41'	A/ 5.9/ 33'	A/ 6.0/ 41'
Southbound	LT	C/ 24.2/ 71'	C/ 24.2/ 82'	C/ 24.2/ 71'	C/ 24.2/ 82'	C/ 24.2/ 71'	C/ 24.2/ 82'
	TH						
	RT	A/ 7.4/ 21'	A/ 6.5/ 33'	A/ 7.4/ 21'	A/ 6.5/ 33'	A/ 7.4/ 21'	A/ 6.5/ 33'

The No-Build scenario output is comparable to existing conditions.

For both Full Build scenarios, operations are expected to perform similarly to the No-Build scenario. This development is not expected to adversely affect this intersection.



Looking north on 5th Avenue N towards Washington Avenue N

D. WASHINGTON AVENUE N & 3RD AVENUE N/I-394 RAMPS

TABLE 5.4 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 NO-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "BEST CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT	C/ 22.4/ 81'	C/ 22.8/ 85'	C/ 21.5/ 78'	C/ 21.2/ 80'	C/ 21.8/ 79'	C/ 22.0/ 82'
	TH	D/ 40.8/ 255'	C/ 33.6/ 233'	D/ 41.6/ 281'	C/ 33.9/ 284'	D/ 41.2/ 272'	C/ 33.4/ 254'
	RT						
Westbound	LT	C/ 23.7/ 149'	E/ 77.2/ 401'	D/ 41.8/ 200'	F/ 161.0/ 461'	C/ 31.1/ 199'	F/ 103.0/ 421'
	TH	C/ 23.5/ 123'	C/ 28.7/ 327'	C/ 25.2/ 171'	C/ 29.0/ 335'	C/ 24.4/ 146'	C/ 28.7/ 327'
	RT						
Northbound	LT	F/ 249.8/ 533'	F/ 358.7/ 387'	F/ 424.3/ 652'	F/ 577.6/ 430'	F/ 333.0/ 592'	F/ 358.7/ 387'
	TH						
	RT	D/ 35.6/ 422'	B/ 16.0/ 157'	D/ 44.7/ 452'	B/ 17.4/ 167'	D/ 40.0/ 437'	B/ 16.0/ 157'
Southbound	LT	C/ 31.1/ 296'	E/ 68.5/ 469'	C/ 34.4/ 308'	E/ 69.0/ 469'	C/ 31.3/ 296'	E/ 68.5/ 469'
	TH						
	RT	B/ 13.1/ 26'	B/ 17.9/ 48'	B/ 13.1/ 26'	B/ 17.9/ 48'	B/ 13.1/ 26'	B/ 17.9/ 48'

For the Full Build "worst case" scenario, we can expect the westbound left-turn movement to experience worse delays and queues, particularly in the PM peak hour, and increase delays and queues on the I-394 exit movements, which are already experiencing LOS F. The "best case" scenario can be expected to function similarly to the No-Build scenario, except for the westbound left-turn movement.

E. 3RD AVENUE N & TRAFFIC STREET

TABLE 5.5 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 No-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "TYPICAL CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT						
	TH						
	RT	A/ 9.8/ --	B/10.0/ --	B/ 10.0/ --	B/ 10.2/ --	A/ 9.9/ --	B/ 10.1/ --
Southbound	LT						
	TH	Free					
RT							

The driveway functions at LOS B or better in all scenarios.

F. 3RD AVENUE N & 3RD STREET N

TABLE 5.6 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 No-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "TYPICAL CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT						
	TH						
	RT	A/ 9.5/ --	B/ 12.5/ --	A/ 10.0/ --	B/ 14.3/ 24'	A/ 9.8/ --	B/ 13.2/ --
Southbound	LT						
	TH	Free					
RT							

The driveway functions at LOS B or better in all scenarios.

G. 3RD AVENUE N & 5TH STREET N

TABLE 5.7 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 No-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "BEST CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT						
	TH	B/ 14.0/ 132'	B/ 19.5/ 179'	B/ 14.6/ 157'	C/ 21.1/ 236'	B/ 14.4/ 148'	C/ 20.1/ 203'
	RT						
Westbound	LT	D/ 49.5/ --	D/ 53.0/ 45'	D/ 49.5/ --	D/ 53.0/ 45'	D/ 49.5/ --	D/ 53.0/ 45'
	TH	B/ 11.6/ 93'	B/ 11.9/ 89'	B/ 12.4/ 124'	B/ 12.0/ 95'	B/ 12.0/ 108'	B/ 11.9/ 89'
	RT						
Southbound	LT	C/ 27.0/ 26'	C/ 30.1/ 71'	C/ 28.4/ 49'	C/ 34.9/ 119'	C/ 27.8/ 41'	C/ 32.0/ 90'
	TH	C/ 27.2/ 34'	D/ 35.3/ 180'	C/ 27.6/ 41'	D/ 36.9/ 196'	C/ 27.4/ 38'	D/ 36.0/ 187'
	RT						

The No-Build scenario output is comparable to existing conditions.

For both Full Build scenarios, operations are expected to perform similarly to the No-Build scenario. This development is not expected to adversely affect this intersection.

H. WASHINGTON AVENUE N & 2ND AVENUE N

TABLE 5.8 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE							
DIRECTION	MOVEMENT	2020 NO-BUILD		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "TYPICAL CASE"	
		AM	PM	AM	PM	AM	PM
Eastbound	LT	A/ 9.0/ 33'	B/ 12.2/ 49'	A/ 8.4/ 27'	B/ 11.0/ 36'	A/ 8.6/ 30'	B/ 11.7/ 43'
	TH	B/ 15.8/ 230'	B/ 16.2/ 215'	B/ 15.9/ 244'	B/ 16.6/ 246'	B/ 16.0/ 242'	B/ 16.5/ 231'
	RT						
Westbound	TH	C/ 20.7/ 136'	C/ 23.6/ 280'	C/ 22.3/ 183'	C/ 24.1/ 292'	C/ 21.4/ 158'	C/ 23.6/ 280'
	RT	B/ 10.4/ --	A/ 9.1/ --	B/ 10.4/ --	A/ 9.1/ --	B/ 10.4/ --	A/ 9.1/ --
Northbound	LT	C/ 22.5/ 75'	C/ 25.1/ 97'	C/ 22.5/ 75'	C/ 25.2/ 97'	C/ 22.5/ 75'	C/ 25.1/ 97'
	TH	C/ 26.8/ 246'	C/ 29.6/ 259'	C/ 26.8/ 246'	C/ 29.6/ 259'	C/ 26.8/ 246'	C/ 29.6/ 259'
	RT						
Southbound	LT	C/ 21.4/ --	C/ 26.2/ 38'	C/ 21.4/ --	C/ 26.2/ 38'	C/ 21.4/ --	C/ 26.2/ 38'
	TH						
	RT	A/ 7.7/ 20'	A/ 7.1/ 27'	A/ 7.7/ 20'	A/ 7.1/ 27'	A/ 7.7/ 20'	A/ 7.1/ 27'

The No-Build scenario output is also comparable to existing conditions.

For both Full Build scenarios, operations are expected to perform similarly to the No-Build scenario. This development is not expected to adversely affect this intersection.

I. 5TH STREET N & ACCESS D

TABLE 5.9 – INTERSECTION LEVEL OF SERVICE/DELAY PER VEHICLE/95TH QUEUE

DIRECTION	MOVEMENT	2020 No-Access		2020 FULL BUILD "WORST CASE"		2020 FULL BUILD "TYPICAL CASE"	
		AM	PM	AM	PM	AM	PM
		Eastbound	LT			A/ 1.4/ --	A/ 0.1/ --
	TH			Free			
	RT						
Westbound	LT						
	TH			Free			
	RT						
Southbound	LT			B/ 12.2/ --	B/ 13.9/ --	B/ 11.4/ --	B/ 12.5/ --
	RT						

Access D is intended to be part of Phase C of the proposed development, and serve as a full access driveway to 5th Street N. The existing roadway spans the connection from the parking lot to Target Field, as well as the Cedar Lake Trail and the Northstar Commuter Rail line. This access would provide access to a parking structure, which would have a connection to Dock Street and the rest of the proposed development on its ground floor. Access D would then necessarily adjoin the parking structure on one of its upper levels.

5th Street North rises in profile to the west, so design of the future parking garage access must account for driver line-of sight to the west.

It is important to note that Phase C is conceptual, so for the analysis, Access D is located at a point west of the 5th Street N & 3rd Avenue N intersection, consists of a single exit lane, and no turn lanes from 5th Street N into the driveway.

For both Full Build scenarios, the driveway would function at LOS B.

VI. Summary and Conclusion

Hines proposes to develop a property near The Interchange in downtown Minneapolis, MN. This project, as proposed, will consist of three phases; the first two consisting of high-rise apartments and retail land uses. This analysis examined the impacts to the following intersections:

- Washington Avenue N & 5th Avenue N
- Washington Avenue N & Dock Street (property access)
- Washington Avenue N & 3rd Avenue N (ramps to/from I-394)
- 3rd Avenue N & Traffic Street (property access)
- 3rd Avenue N & 3rd Street N (property access)
- 3rd Avenue N & 5th Street N
- 5th Street N & Access D (property access for future Phase C)
- Washington Avenue N & 2nd Avenue N

Phase A & B of the development as proposed generates 23 entering and 65 exiting trips in the AM peak hour, and 75 entering and 60 exiting trips in the PM peak hour, when accounting for reductions due to alternate modes of travel.

Analysis of Phase A & B shows impacts to the Washington Avenue N & 3rd Street N intersection. This intersection is experiencing already poor operations in the peak hours. At the proposed Dock Street driveway, it is necessary to provide exclusive left- and right-turn lanes exiting the property. All other intersections in the study area show negligible impacts.

Analysis of Year 2020 traffic conditions reveal greater delays and queues at the Washington Avenue N & 3rd Street N intersection, which are increased by the full build out of the entire 6-acre property under option by the developer. With little room for physical improvements for capacity, it is imperative that trips generated by the development be mitigated by travel demand management practices. The project area offers an unprecedented opportunity to use alternative modes of transportation to and from the site due to its location adjacent to the Target Field LRT Station, Northstar Commuter Rail Station, Cedar Lake Trail, pedestrian skyway system, and numerous bus routes.

Overall Mitigation Strategies

- The residences, office, and hotel land use should designate a Transportation Coordinator to work on plan implementation. This coordinator will function as a liaison with the Minneapolis TMO.
- Each designated Transportation Coordinator will manage its buildings' involvement in a shared car program. The "HOURCAR" system, detailed at www.hourcar.org is an example of such a program. An existing HOURCAR station is located two blocks from the project site at North 6th St and Washington Avenue North.
- Host commuter fairs on site. Events may include bicycle tune-up days.
- Transit schedules and downtown walk/bike facilities should be prominently displayed in the lobbies for each land use.
- The Transportation Coordinator for the residences and office land use will develop ongoing travel behavior surveys in conjunction with the Minneapolis TMO. Surveys should be conducted every two years.
- Preferential parking for car and vanpooling

- Provide a connection from the Cedar Lake Trail to the development and the North Loop Neighborhood.
- Accommodate shared bicycle access from the Cedar Lake Trail connection along Dock Street with an on-street shared-lane marking or "sharrow". This marking is placed in the center of a travel lane to indicate that a bicyclist may use the full lane.
- Accommodate Nice Ride station(s) (bike sharing program)
- Maintain clear, well-lit sidewalks for pedestrian ease of use.
- Parking will be designated for retail and office uses or by residential permit. The general public will not be allowed to park in the development under threat of towing.

Residential Use Mitigation Strategies

- All parking costs should be itemized during pricing of the units. Any additional parking will only be leased or sold to residential or commercial tenants.
- All units will be provided with internet access, which will provide tenants with the option to telecommute.
- Secure bicycle racks and/or storage provided is anticipated to exceed the City's minimum requirement of 1 space per 2 residential units.

Office Use Mitigation Strategies

- Car and vanpooling for employees should be actively encouraged.
- The office tenants should be encouraged to provide flex-schedules for their employees.
- Office tenants should be encouraged to contribute towards employee purchase of transit passes.
- Provide preferential parking and/or reduced fees for carpoolers.
- Consider providing on-site locker rooms with shower for pedestrian/bicycle commuters.
- The amount of secure bicycle storage and bicycle racks are anticipated to exceed the City's minimum requirements for employees and visitors.
- Provide commuter fairs with bicycle tune-up days.

Hotel Use Mitigation Strategies

- Provide a subsidized airport shuttle for guests.
- Provide information to guests regarding travel to/from local airports and train stations on transit.
- Secure bicycle storage and bicycle racks provided are anticipated to exceed the City's minimum requirements.

It should be noted that the future office and hotel development are still conceptual. Specific TDM strategies will be proposed for each project. These strategies will be reviewed and approved by the City prior to development.

We, the undersigned, grant our approval to the Travel Demand Management Plan presented in this document.

David Spillman, Senior Construction Manager, Hines Date

Steve Mosing, Traffic Operations Engineer, City of Minneapolis Public Works Date

Barb Sporlein, Planning Director, City of Minneapolis CPED Date

Appendix

Site Information

Traffic Volumes

Other Developments in Study Area

Existing Signal Timing

Trip Generation

Trip Distribution

Synchro Output