

University Area Transportation Action Strategy  
Appendices

**I. Roosevelt/11th Couplet Memorandum**

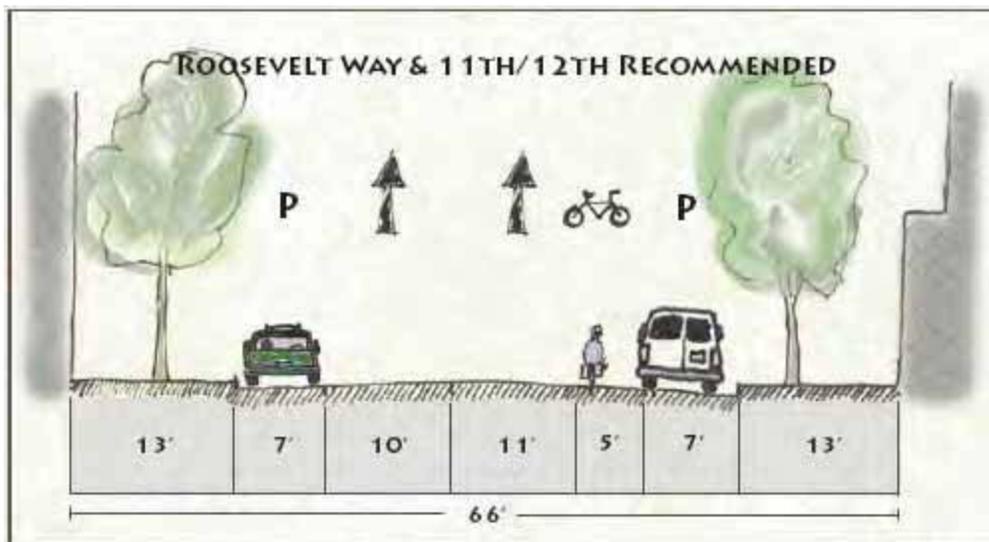


## MEMORANDUM

**To:** Eric Widstrand, Traffic Operations Manager, SDOT  
**From:** Tom Noguchi and John Davies  
**Subject:** UATAS Roosevelt Way/11th Avenue Couplet Recommendation  
**Date:** December 20, 2007 (Revised January 7, 2008)

This memorandum summarizes the traffic analysis of the University Area Transportation Action Strategy recommendation for the Roosevelt Way/11th Avenue Couplet. The proposed change to the configuration would be to eliminate the peak hour lanes in both directions and to add on-street parking and bicycle lanes. The proposed limits would be from NE 41st Street to NE 65th Street on Roosevelt Way and NE 11th/12th Street. At the major intersections of NE 45th Street and NE 50th Street, instead of the bicycle lane and on-street parking, three through travel lanes would be provided, which would then transition back to two lanes on the far side of the intersection. **Figure 1** shows a typical cross-section.

**Figure 1. Proposed 11th Avenue and Roosevelt Way Cross-Section**



## Existing Conditions Analysis

The 2007 data collected for the UATAS indicate that the proposed configuration would provide adequate capacity for vehicle movements during the PM peak hour. To assess the AM peak hour, older turning count data obtained from SDOT was used to assess the AM peak hour. **Table 1** shows the AM and PM peak hour turning movement volumes used in this analysis.

The bicycle and parking lanes would extend the length of the corridor, except at NE 45th Street and NE 50th Street where up to three through lanes would be available for vehicle movements. While the current peak hour configuration is preferred for the NE 45th Street/Roosevelt Way and NE 45th Street/11th Avenue NE, the following intersection channelization is recommended at NE 50th Street:

- NE 50th Street/Roosevelt Way – Adds a left turn lane by changing the existing configuration (LT | T | TR) to a left turn lane, two through lanes and a right turn lane (L | T | T | R).
- NE 50th Street/11th Avenue NE – Changes the existing configuration (LT | T | TR) by adding a left turn lane (L | T | T | TR).

**Table 2** compares the peak hour levels of service with and without the recommended action and describes the assumed channelization changes assumed in the analysis. For northbound traffic, the table describes the PM peak hour and for the southbound traffic the AM peak hour.

## Areas for further study

The limited street width (39 to 40 feet) limits the ability to carry the bicycle lane through the major intersection of NE 45th Street and NE 50th Street. A sharrow indication along with special signage or other pavement marking may be required to safely indicate the end of the bicycle lane and the path which bicycles must follow.

Other areas of concern include the removal of curb bulbs on NE 50th Street and the need sizing of the parking lane to avoid door swings issues between parked vehicles and bicycles.

**Table 1. AM and PM Peak Hour Volumes**

**AM PEAK HOUR**

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NE 65nd St & Roosevelt Way NE				106	1298	97		366	54	140	556	
NE Ravenna Blvd WB & Roosevelt Way NE												
NE Ravenna Blvd EB & Roosevelt Way NE												
NE 50th St & Roosevelt Way NE				70	1108	107		649	172	78	349	
NE 47th St & Roosevelt Way NE				75	1204	14		46	53	40	10	
NE 45th St & Roosevelt Way NE				90	1297	76		769	246	258	773	
NE 43rd St & Roosevelt Way NE				88	1900					53		
NE 42nd St & Roosevelt Way NE				96	1857					96		
NE 42nd S St & Roosevelt Way NE					1673	263			50			

**PM PEAK HOUR**

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
NE 42nd St & 11th Av NE	22	1164	104				64	85			70	53
NE 43rd St & 11th Av NE	26	1230	55				30	36			147	89
NE 45th St & 11th Av NE	295	816	146					963			839	47
NE 47th Street & 11th Av NE	70	892	72				78	111			213	113
NE 50th St & 11th Av NE	221	758	107				140	692			839	44
NE Ravenna Blvd EB & 12th Ave NE		1047	36				34	338				
NE Ravenna Blvd WB & 12th Av NE	90	991									522	124
NE 65nd St & 12th Av NE	95	828	94				149	470			463	84

**Table 2. Peak Hour Level of Service (PM Peak Hour – Northbound and AM Peak Hour – Southbound)**

		2007 Existing Configuration		2007 Proposed Configuration		
		LOS	Delay	LOS	Delay	Change in NB/SB Lane Configuration
<b>Northbound (11th Avenue NE) PM Peak Hour</b>						
NE 42nd St	11th Ave NE	A	5	A	7	
NE 43rd St	11th Ave NE	A	9	D	48	
NE 45th St	11th Ave NE	D	46	D	48	
NE 47th St	11th Ave NE	B	11	B	15	
NE 50th St	11th Ave NE	E	57	D	43	Add left turn lane (L T T TR for NB leg)
NE Ravenna Blvd	11th Ave NE	B	11	C	14	
NE Ravenna Blvd	12th Ave NE	B	16	B	13	
NE 65th St	12th Ave NE	C	28	C	28	
<b>Southbound (Roosevelt) AM Peak Hour</b>						
NE 65th St	Roosevelt Way	D	36	E	67	
NE Ravenna Blvd	Roosevelt Way	No data				
NE Ravenna Blvd	Roosevelt Way	No data				
NE 50th St	Roosevelt Way	D	37	C	35	Add left turn lane (L T T R for SB leg)
NE 47th St	Roosevelt Way	B	11	B	11	
NE 45th St	Roosevelt Way	C	30	D	52	
NE 42nd St	Roosevelt Way	B	13	B	11	
NE 42nd St	Roosevelt Way	A	8	A	9	