NE 92nd Street Corridor (West of 5th Avenue NE)

NE 92nd Street west of 5th Avenue NE is one of the three arterials in the study area that cross I-5. It connects North Seattle Community College with the communities east of I-5 and the Transit Center.

Key Transportation Issues

The CTIP study identified the following transportation issues in this corridor:

- While NE 92nd Street between 1st Avenue N and 5th Avenue NE is a collector arterial, it carries relatively high volumes of traffic: 5,900 vehicles per day. This section of NE 92nd Street abuts single-family houses.
- The intersection of N 92nd Street and 1st Avenue NE, which is unsignalized, will operate at LOS F before 2010.

Transportation Improvement Concepts

The CTIP study identified the following improvement concepts for this corridor, shown in **Figure 5-16**:

D-1. Provide curbs, gutters, and sidewalks on both sides of NE 92nd Street from 1st Avenue NE to 5th Avenue NE. Provide curb bulbs as appropriate to assist pedestrian crossings.

D-2. Install a traffic signal after adopted warrants have been met at the NE 92nd Street and 1st Avenue NE intersection. When traffic signal is installed, replace existing speed humps with humps that are consistent with the most current SDOT design and construction standards.

Figure 5-16. NE 92nd Street: Sidewalks and Signal Locations (D-1, D-2)

N/NE Northgate Way Corridor (East of I-5)

N/NE Northgate Way is a principal east-west arterial. (Northgate Way becomes "N Northgate Way at 1st Avenue NE and westward; it is NE Northgate Way east of 1st Avenue NE). This five-lane street carries high volumes of traffic in the vicinity of I-5 and the Northgate commercial areas between Meridian Avenue N and Roosevelt Way NE. The Seattle Land Use Code (SMC 23.71.004) designates the section of NE Northgate Way from 3rd Avenue NE to 11th Avenue NE a "Major Pedestrian Street," requiring future development to provide ground-level streetfront uses geared toward pedestrians.

However, high traffic volumes and the I-5 interchange ramps make pedestrian crossings difficult along this corridor. The NACP recommended a sky bridge across NE Northgate Way somewhere between 3rd Avenue NE and 5th Avenue NE. The CTIP does not recommend a sky bridge because it would depress pedestrian activity at the street level. In addition, many pedestrians are reluctant to use sky bridges because of the extended walking distance and concerns about personal safety. A sky bridge is very costly to construct and may be difficult to build in a tight urban space. The CTIP's recommendations will ease street-level pedestrian crossings and encourage safe crossings at the intersections.

Transportation Issues

The CTIP study identified the following transportation issues in this corridor:

NE Northgate Way carries high traffic volumes, shown in **Figure 5-17:** the highest section is under I-5 at 40,900 vehicles per day. The sections of N/NE Northgate Way between Meridian Avenue N and Roosevelt Way carry 30,000 to 35,000 vehicles per day.

Several mid-block sections of NE Northgate Way have a high incidence of traffic crashes over the past 5 years, ranging from 9.6 to 26.4 crashes per year (1999–2003). **Figure 5-18** highlights the mid-block crashes on N/NE Northgate Way.

Figure 5-17. 2004 N/NE Northgate Way Daily Traffic Volumes (Average Weekday Traffic)

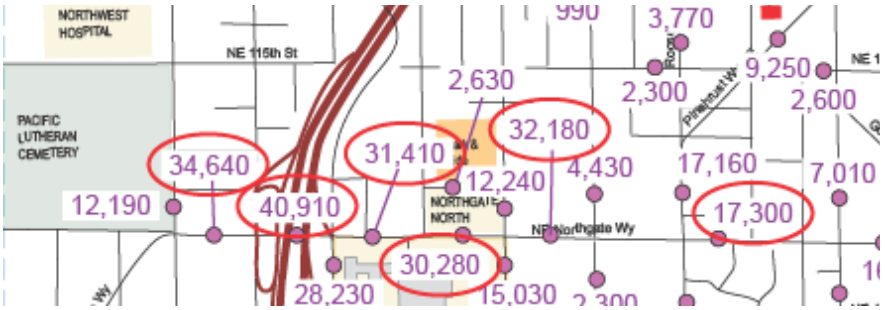
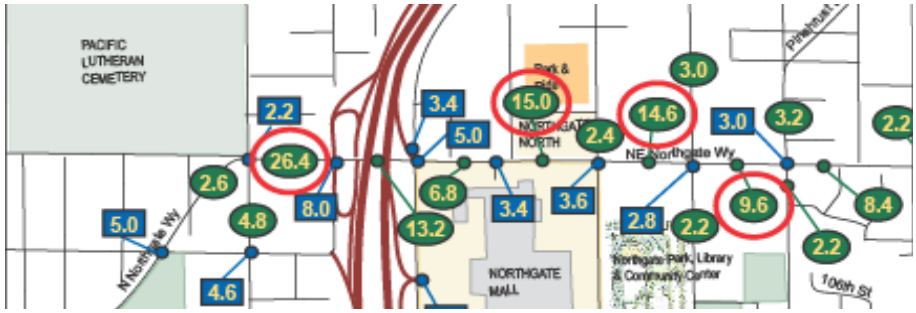
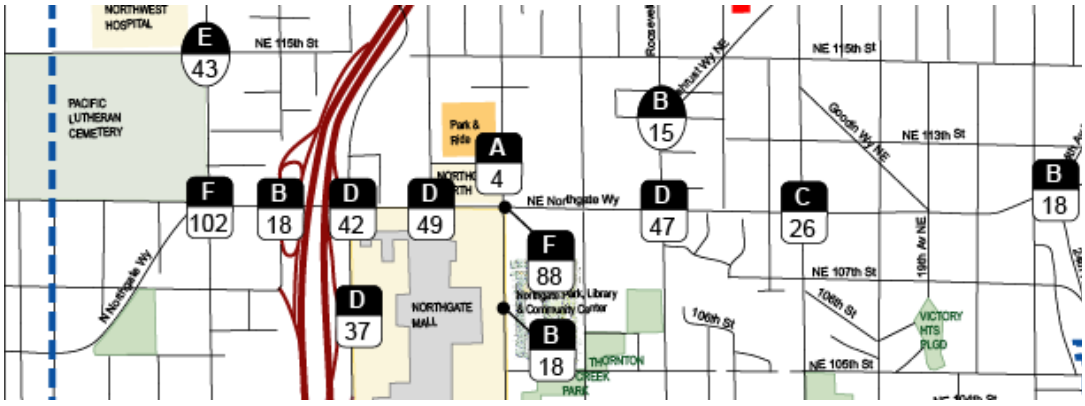


Figure 5-18. N/NE Northgate Way Mid-Block Crashes (Annual Average Collisions, 1999–2003)



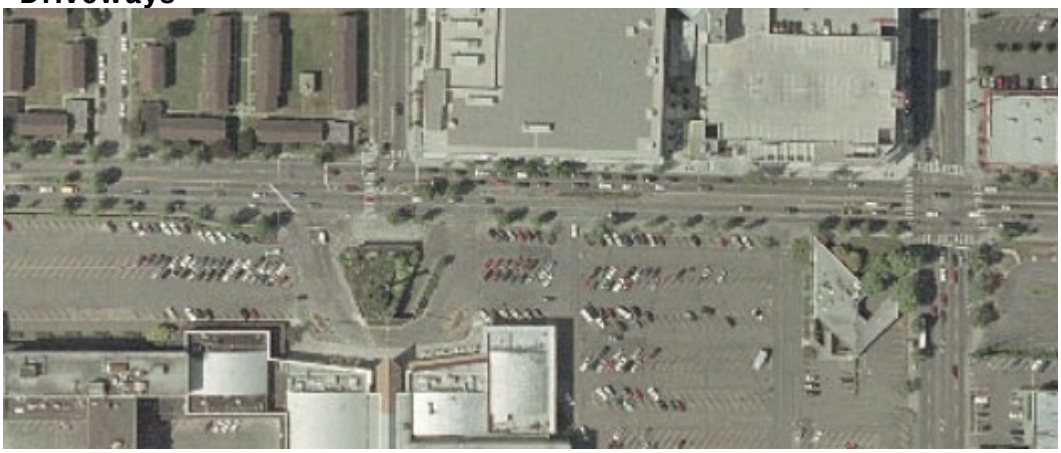
Increasing through traffic and redevelopment within the study area will increase future traffic volumes on N/NE Northgate Way. As shown on **Figure 5-19**, two intersections on N/NE Northgate Way, one at Meridian Avenue N and the other at 5th Avenue NE, will operate at LOS F in 2010, which represents long vehicle delay.

Figure 5-19. 2010 Intersection Levels of Service along N/NE Northgate Way



The Northgate Open Space and Pedestrian Connections Plan (2004) identified this location as needing improvement for pedestrian crossings. While it appears that the number is not large, some pedestrians are crossing illegally at busy mid-block locations between 3rd Avenue NE and 5th Avenue NE. Part of this may be attributed to the confusing and ill-defined pathways at this location. The existing intersection with 3rd Avenue NE, the semi-circular Northgate Mall driveways and placement of landscaping on the Northgate Mall side, and the unused bus shelter discourage pedestrians from using the crosswalks at this important location (see **Figure 5-20**).

Figure 5-20. Existing NE Northgate Way / 3rd Avenue NE and Northgate Mall Driveways



Transportation Improvement Concepts

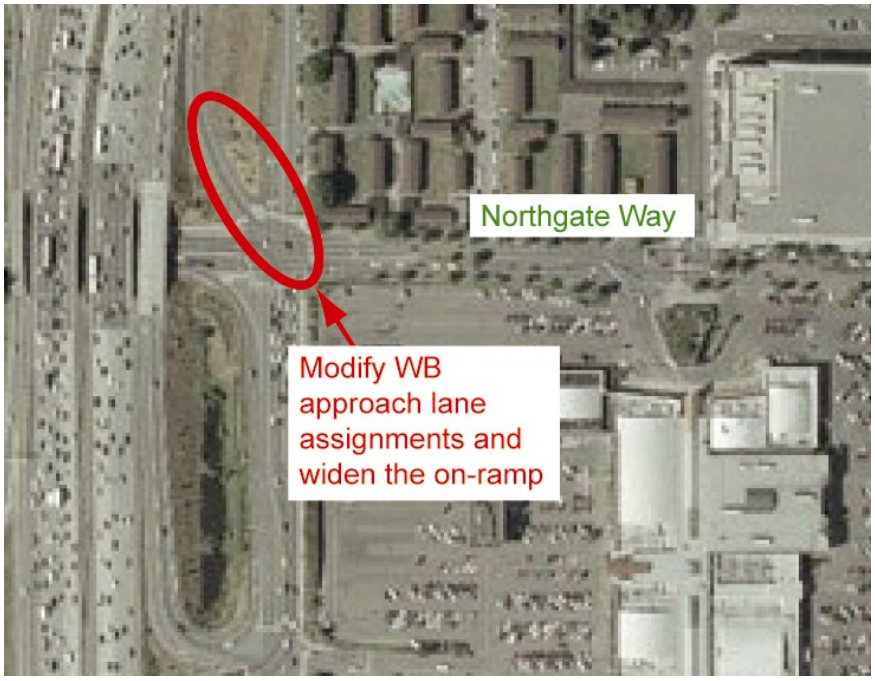
The proposed improvement concepts on N/NE Northgate Way between I-5 and Meridian Avenue N are discussed in the upcoming "West of I-5" section. This section identifies transportation improvement concepts for the sections of NE Northgate Way between I-5 and 15th Avenue NE:

E-1. Coordinate all signals and optimize signal operation for peak/non-peak weekdays and weekend days based on vehicle volumes on N/NE Northgate Way.

E-2. Modify the westbound approach at the NE Northgate Way/1st Avenue NE/I-5 on-ramp intersection to achieve the following configuration: Curb lane: right and I-5 on-ramp, 2nd lane: I-5 on-ramp and through, and 3rd lane: through only. Widen the I-5 northbound on-ramp to two lanes (see **Figure 5-21**).

E- 3. Monitor safety performance of westbound traffic on NE Northgate Way approaching 1st Avenue intersection to determine whether future channelization improvements are warranted.

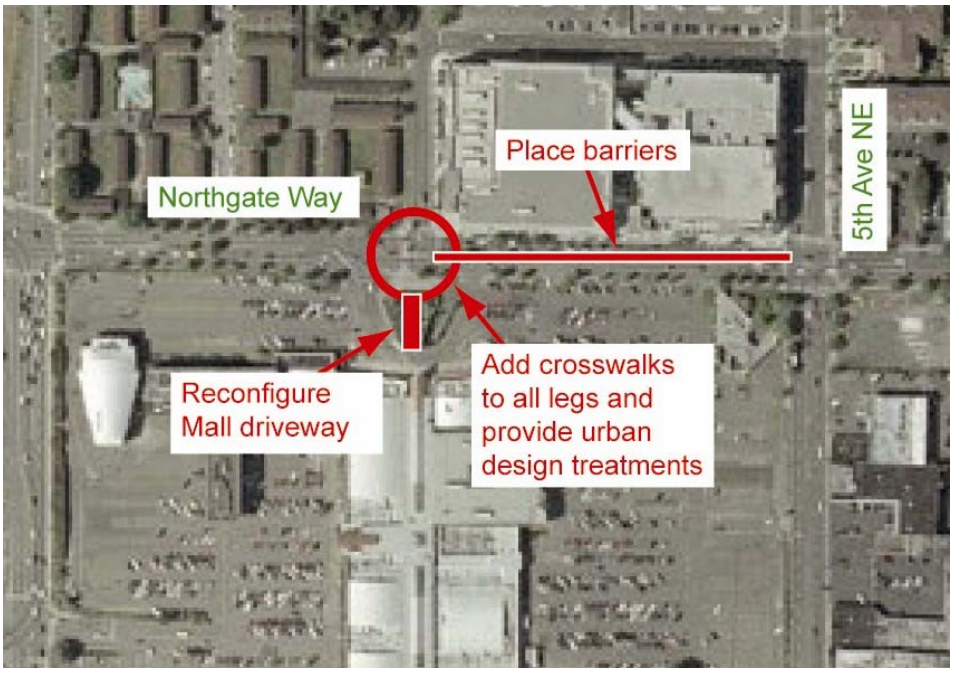
Figure 5-21. NE Northgate Way and 1st Avenue NE (E-2)



E-4 and E-5. Working with the Northgate Mall owner, add a new access driveway to the 3rd Avenue NE alignment at the NE Northgate Way/3rd Avenue NE intersection and eliminate the existing semi-circular, two-intersection Northgate Mall driveway. It may require widening of 3rd Avenue north of NE Northgate Way to align the approach lane with the Northgate Mall side. Provide crosswalks on all legs at the NE Northgate Way/3rd Avenue NE intersection. Place barriers at the edge of the north sidewalk or in the median (possibly landscaping) between 3rd Avenue NE and 5th Avenue NE to discourage mid-block street crossings by pedestrians.

Figure 5-22 illustrates the E-4 and E-5 concepts.

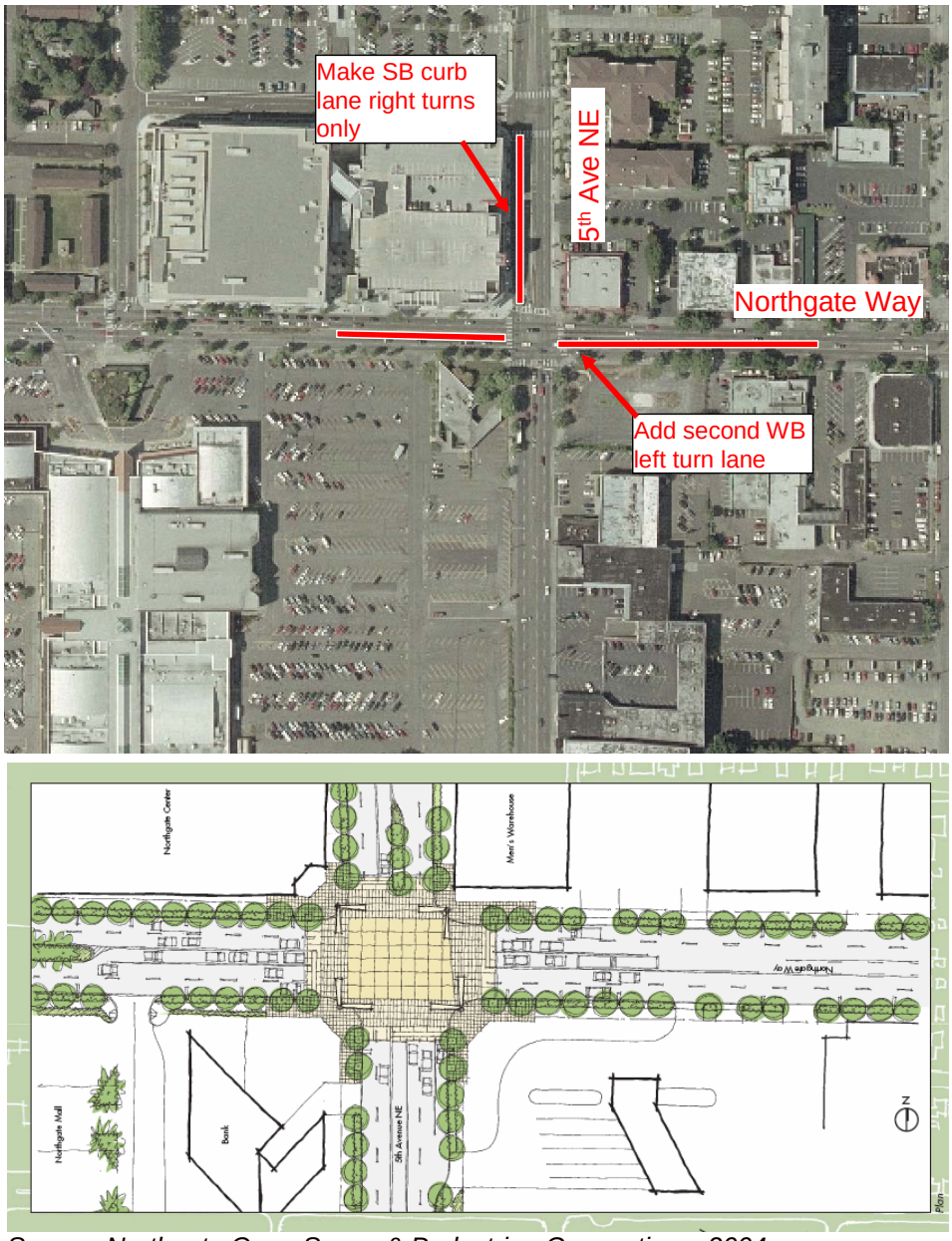
Figure 5-22. NE Northgate Way: 3rd Avenue NE to 5th Avenue NE (E-4, E-5)



E-6. Add a second westbound left turn lane on NE Northgate Way at 5th Avenue by widening the south side of NE Northgate Way from approximately 8th Avenue to 3rd Avenue. Assign southbound curb lane to right turns only. Realign the southbound through lane to eliminate the "offset" condition. Provide urban design treatments to enhance pedestrian crossings at the NE Northgate Way/5th Ave NE intersection. These improvement concepts are shown in **Figure 5-23.**

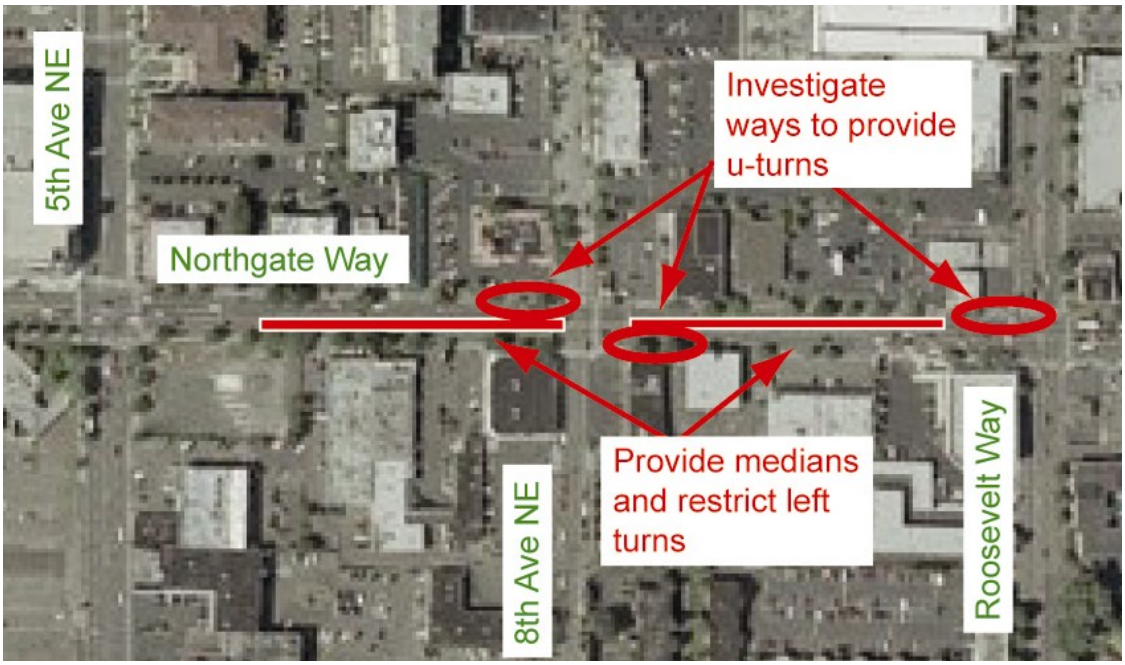
E-7. Work with the businesses along NE Northgate Way to develop an access management plan that includes construction of medians and limitation of mid-block left turns from 5th Avenue NE to Roosevelt Way NE. Consider where breaks in the medians may be allowed for access, or U-turns at intersections. These improvements are shown in **Figure 5-24**.

Figure 5-23. NE Northgate Way / 5th Avenue NE Intersection with Urban Design Concept (E-6)



Source: Northgate Open Space & Pedestrian Connections, 2004

Figure 5-24. NE Northgate Way: 5th Ave NE -Roosevelt Way NE (E-7)



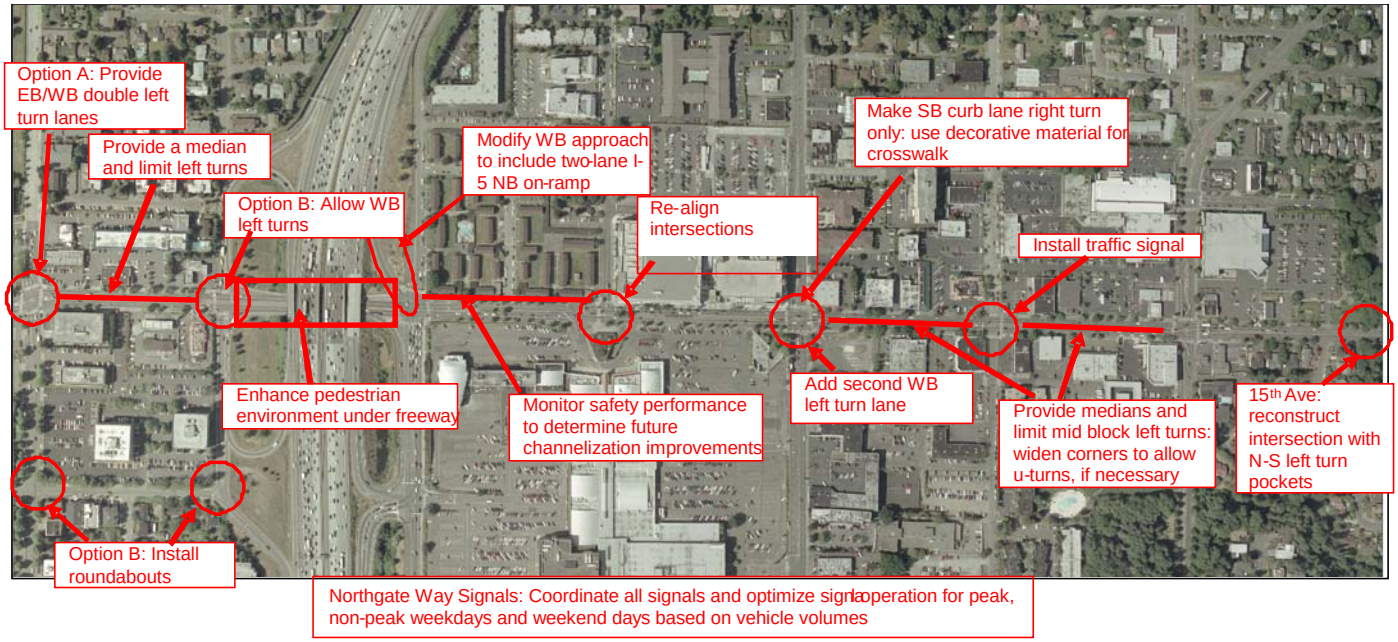
E-8. Replace the existing pedestrian signal with a traffic signal and allow left turns on all approaches at the NE Northgate Way/8th Ave NE intersection. **Figure 5-25** shows the location of this proposed signal.

Figure 5-25. NE Northgate Way / 8th Avenue NE (E-8)

Summary of N/NE Northgate Way Improvement Concepts

Figure 5-26 shows all improvement concepts proposed for the N/NE Northgate Way corridor within the CTIP study area. Improvements on NE Northgate Way east of I-5 are discussed in the previous section; those west of I-5 are in the following section.

Figure 5-26. N/NE Northgate Way Corridor Improvement Concepts



CTIP Study Area West of I-5

The study area west of I-5 includes major institutions such as Northwest Hospital, North Seattle Community College, and many medical offices along Meridian Avenue N. This area also includes N/NE Northgate Way between Meridian Avenue N and I-5.

Key Transportation Issues

The CTIP study identified the following transportation issues in this area:

- Limited bicycle riding space and high traffic speeds on Meridian Avenue N and 1st Avenue N west of I-5, resulting in low bicycle level of service.

- The highest number of mid-block traffic crashes between 1999 and 2003 was recorded on N/NE Northgate Way between Meridian Avenue N and the I-5 southbound off-ramp/Corliss Avenue N: an average of 26 crashes per year. The crash rate (accidents per million vehicles) on this road segment was also high during that same time period.
- High vehicle crash rates on Meridian Avenue N between N Northgate Way and N 107th Street, and at the intersection of Meridian Avenue N and N 107th Street (1999–2003).
- The signalized intersection of Meridian Avenue N and N Northgate Way will operate at LOS F by 2010.
- The unsignalized intersection of Meridian Avenue N and N 115th Street will operate at LOS E in 2010. Although the unsignalized intersection of College Way N and N 92nd Street is projected to operate at LOS F, it appears that this intersection will nevertheless function adequately because it is a three-legged intersection.

Transportation Improvement Concepts

The following transportation improvement concepts would address the issues listed above:

C-1. Add bicycle lanes or widen shoulders to accommodate bike traffic on 1st Avenue NE from N 117th Street to N 130th Street.

C-2. Add bike lanes and sidewalks on Meridian Avenue N from N 115th Street to N 122nd Street.

Figure 5-27 shows the locations of C-1 and C-2 on an aerial photo.

C-3. Install a traffic signal after adopted warrants have been met at the N 115th Street/Meridian Avenue N intersection.

C-4. Provide bicycle lanes on both sides of Meridian Avenue N from N 100th Street to N Northgate Way.

C-5. Provide bicycle lanes on both sides of College Way N from N 92nd Street to N 100th Street by converting the curb lanes to bicycle lanes. Work with Metro to ensure that transit service standards for speed and reliability of service are maintained. **Figure 5-28** shows the locations of the C-4 and C-5 bicycle lane improvement concepts.

Figure 5-27. Sidewalk & Bicycle Improvements on 1st Avenue N and Meridian Avenue N (C-1, C-2)

Figure 5-28. Meridian Avenue N/College Way N Bicycle Improvements (C-4, C-5)

C-6. Add double left turn lanes on westbound N Northgate Way at the intersection with Meridian Avenue N. (Note: This improvement conflicts with the location of an existing four-story building at the southeast corner of the intersection. To implement this project would require purchase of this building. This project received a low evaluation score due to high cost, particularly in relation to the greater safety benefit and the lower cost of the alternative approach {i.e. the Corliss Avenue N "bypass" concept described in C-9, C-10 and C-11}).

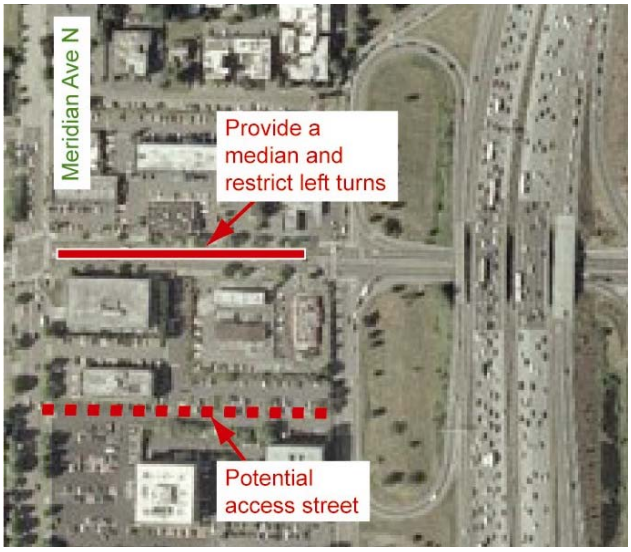
C-7. Allow westbound left turns from NE Northgate Way to southbound Corliss Avenue at the southbound I-5 off-ramp/Corliss Ave/NE Northgate Way intersection. Extend the westbound left turn lane on NE Northgate Way under the I-5 overpass by placing sidewalks behind the columns. This improvement is tied with C-9 and C-10 described below, which should be implemented together.

Figure 5-29 shows the locations of C-7, C-9, and C-10.

Figure 5-29. Meridian Avenue N, Corliss Avenue N Roundabouts and I-5/Corliss Avenue N Left-Turn Pocket (C-7, C-9, C-10)

C-8. Provide a median and limit mid-block left turns on N Northgate Way from Meridian Ave N to the Corliss Ave N/I-5 off-ramp. Consider where a break in the median may be allowed. Investigate feasibility of providing a business access street south of N Northgate Way. This access is illustrated in **Figure 5-30**.

Figure 5-30. N/NE Northgate Way Access Management West of I-5 (C-8)



C-9. Provide a roundabout at the southbound I-5 On Ramp/Corliss Avenue N/N 107th Street intersection. C-9, C-10, C-11 and J-5 work together to form an alternative westbound route to Meridian Avenue (see **Figure 5-29**).

What are Roundabouts?

Modern roundabouts can provide safe and cost-effective traffic control at some intersections. A roundabout separates through and turning traffic into designated lanes with "splitter islands" to minimize traffic weaving. Well-designed and appropriately placed roundabouts also provide safer pedestrian crossings and can accommodate large turning radii required by trucks and emergency vehicles.

Hilton Head, South Carolina, courtesy of Kansas State University Center for Transportation Research & Training

Today's roundabouts do not function like the large, high-speed traffic circles found in Washington, D.C., (Dupont Circle) and Paris (Arc de Triomphe). These large traffic circles have high crash rates, largely due to high volumes, high speeds, and a considerable amount of weaving between entries and exits. Roundabouts are not the small circles used primarily for neighborhood speed control.

Studies of modern roundabouts show a reduction in serious crashes, as well as reduced delay and queue length compared to other forms of traffic control, such as four-way stops and traffic signals. However, engineering analysis will not always support a roundabout over a traffic signal or other traffic control measure. Consideration must be given to traffic volumes, capacity requirements, available right of way, and cost.

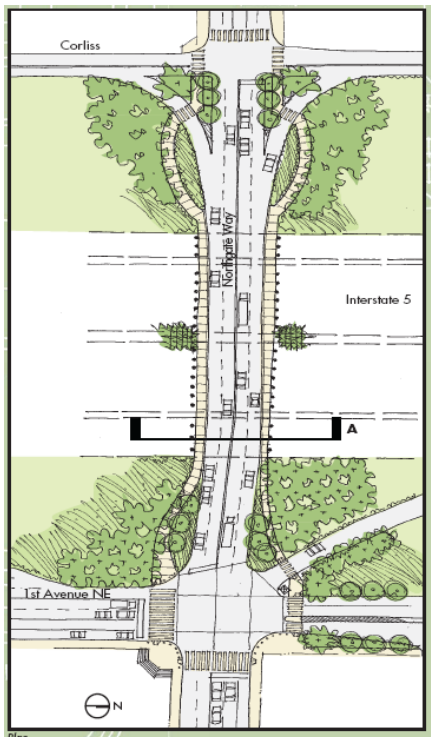
C-10. Provide a roundabout at the Meridian Ave N/N 107th Street intersection (see **Figure 5-29**).

J-5. Re-classify Corliss Avenue from NE Northgate Way to N 107th Street and N 107th Street from Corliss Avenue N to Meridian Avenue N from a local street to a collector arterial.

C-11. Provide curbs, gutters, and sidewalks on N 107th Street from Meridian Ave N to Corliss Ave N/SB I-5 on ramp.

C-12. Apply the DPD Open Space/Pedestrian Connections Plan for design treatments that enhance the pedestrian connection on NE Northgate Way between Corliss Avenue N and 1st Avenue NE particularly under I-5. A key CTIP recommendation is to place the sidewalks behind the I-5 bridge columns. This project should be implemented together with C-7, C-9 and C-10 as a package. **Figure 5-31** shows the design concept for this improvement.

Figure 5-31. NE Northgate Way Pedestrian Walkway Under I-5 (C-12)



Source: Open Space & Pedestrian Connections Plan, 2004

C-13. Upgrade N Northgate Way from Meridian Avenue N to Aurora Avenue N to meet the City's principal arterial roadway design standards. Key improvements needed within this corridor are adding sidewalks along the north edge of North Seattle Park, improving substandard sidewalks, adding urban design treatments, and expanding vehicular capacity at the N Northgate Way/Aurora Avenue intersection.