

Crossroads Center Plan Transportation Review

September 12, 2006

All of the land use alternatives for the Crossroads Center Plan have the potential to result in transportation impacts and improvements, as does future development that could occur under the existing Comprehensive Plan and zoning. This issue paper considers how the planning for Crossroads might affect traffic, transit, and non-motorized forms of transportation.

Traffic Impacts

Existing Conditions

Crossroads area roads carry a lot of traffic, plus pedestrians, bicyclists and busses. A look at the 2005 traffic counts verifies the perception:

- On 156th Avenue NE, on the west side of the Crossroads Shopping Center, the number of vehicles per weekday in 2005 averaged 27,300.
- On NE 8th Street, on the south side of the Crossroads Shopping Center, the number of vehicles per weekday in 2005 averaged 18,400.

By comparison, Factoria Boulevard carried 42,400 vehicles per day, NE 8th Street closer to downtown carried 51,900 vehicles, and 164th Avenue NE carried 9,700 vehicles on a typical day in 2005. While thousands of vehicles travel through Crossroads intersections throughout the day, key intersections function relatively well. Level of service (LOS) is a measurement that describes the volume of traffic relative to the ability of an intersection to handle that volume. Letter “grades” are assigned to intersections that reflect the level of service. In Crossroads, the area wide average level of service is B, which means that, on the whole, congestion levels are limited and drivers typically experience little delay. That does not mean that some intersections during rush hour don’t get busy, but that excessive congestion is not common throughout the day.

To keep traffic flowing, Bellevue employs a series of actuated time signals, where the length of green time is adjusted depending on the volume of traffic. Most traffic signals in the Crossroads area operate on a cycle length ranging from 90-140 seconds. The objective is to allow for traffic queued up at the red to clear the intersection during a single green cycle. In addition, the traffic signal timing is coordinated to safely move the greatest number of vehicles along the major arterials with the fewest stops. Signal timing is set in consideration of the spacing of signals, the cycle length, the volume of traffic, and the speed of traffic. One possible consequence is an increase in delay for vehicles approaching on the side streets. Real-time traffic conditions are available at the following websites.

- The Bellevue Real Time traffic map: <http://trafficmap.cityofbellevue.net/> shows the roadway network with a color-coded system that indicates levels of congestion.
- The traffic camera map: <http://www.cityofbellevue.org/trafficcams/> lets you see actual images of the intersections you plan to drive through.

Existing Plans

The Transportation Facility Plan (TFP) is a compilation of planned future transportation projects. For the Crossroads area, one project is identified, but not yet funded: Northrup Way between 156th Avenue NE and 164th Avenue NE, calling for adding a second eastbound lane and undergrounding utilities, plus intersection improvements at 156th Avenue NE. Currently there are no funded transportation projects in the Crossroads area.

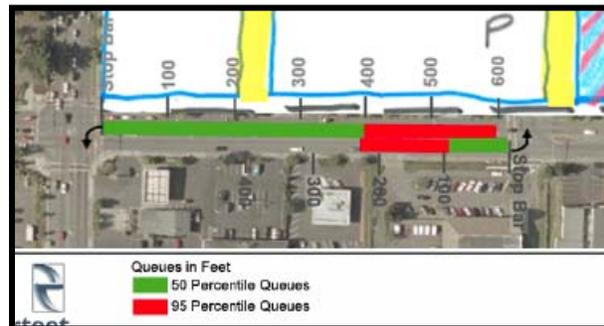
North of the Crossroads area, long range transportation planning is coordinated with the City of Redmond through the Bel-Red Overlake Transportation Study (BROTS). BROTS includes a set of planned transportation facilities to support development of 15.4 million square feet in Redmond, and 12.2 million square feet in the Bellevue BROTS area by 2012. Freeway, arterial, transit, pedestrian, bicycle, and transportation demand management needs were considered with the intent to mitigate the impacts of growth and maintain established level of service standards.

What kind of traffic impacts would result from the Crossroads Center Plan alternatives?

In 2005, Bellevue conducted a traffic modeling exercise intended to demonstrate the traffic impacts that would result from up to 900 new residential units, a 5,000 square feet new library, and 20,000 square feet of new office space. Under that hypothetical scenario, the model demonstrated that the 2030 PM peak traffic conditions at key intersections remained within accepted congestion levels. While additional uses, such as housing, would generate some additional traffic, the amount of new traffic at Crossroads is likely to be a very small percentage of overall traffic volumes. The three concept alternatives developed in 2006 include fewer residential units than the 2005 concept, but also include other additional uses, such as a hotel. While the three concept alternatives vary from the 2005 modeled scenario, the anticipated traffic impacts of the alternatives are thought to be generally within the range of the modeled scenario.

In addition to Crossroads, the city is considering land use changes in other parts of the city. In December 2006, the city plans to model the cumulative effects of the Crossroads plans, Lake Hills shopping center development, and alternatives being considered for the Bel-Red study. Mitigation may be proposed as part of the Bel-Red study to off-set anticipated cumulative impacts.

The 2005 modeling exercise also showed some areas of congestion issues that were between intersections, such as in the vicinity of the Post Office. Just east of 156th Avenue NE on NE 8th Street, near the Post Office, there is a cluster of driveways and poor on-site circulation that results in congestion from vehicles vying for position to turn both north and south. During the traffic analysis in 2005



Peak traffic queuing on NE 8th at 156th in year 2030.

when the city looked at the long-term effects of additional development on the Crossroads Shopping Center site, the city looked at the issue of queuing and congestion on NE 8th Street near the Post Office. Analysis showed that long queues, shown in the graphics as green and red lines, impair access to several driveways on both the north and the south sides of NE 8th Street.

Traffic eastbound on NE 8th Street turning southbound on 156th Avenue NE was predicted to back up about 600 feet. Traffic bound for the shopping center from the west, queues varied depending on the location of driveways, but ranged in length between 200 and 300 feet. In some instances, queues overlap to create the congestion problems.

The city is investigating whether improvements to the traffic flow on NE 8th could be identified as part of the Crossroads Center Plan. This may include talking with the Post Office about reviewing its onsite traffic flow pattern. In the near term, the city monitors the congestion near that intersection and makes periodic adjustments to signal timing.

Transit Service

Existing and Planned Service

Many Crossroads area residents, employees and shoppers rely on the bus to get around. Bus service is generally pretty good and there are plans to make it better.

Existing transit service

156th Ave NE

Route # 229 (peak hour only): Overlake Transit Center to downtown Seattle

Route # 245: Kirkland to Factoria via Crossroads.

Route # 253: Bear Creek Park and Ride to the Bellevue Transit Center

Route # 261 (peak hour only): Bear Creek Park and Ride to downtown Seattle

Route # 926 (weekdays): Eastgate to Crossroads

NE 8th St

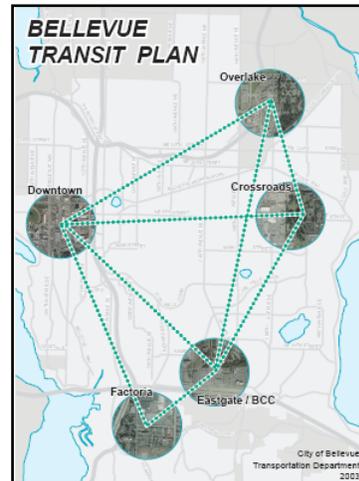
Route # 230: Kingsgate Park and Ride to Redmond Park and Ride

Route # 272 (peak hour only): Somerset to the University of Washington

Route # 926 (weekdays): Eastgate to Crossroads

164th Ave NE

Route # 225 (peak hour only): Microsoft Main Campus to downtown Seattle



Crossroads is identified in the Bellevue Transit Plan as a transit hub. What this means is that special emphasis is placed on connecting transit hubs to neighborhoods and to each other with frequent and direct service. Other transit hubs in Bellevue are: Downtown;

Eastgate/Bellevue Community College; Factoria; and Overlake. These transit hubs are shown on the accompanying graphic. With voter approval in November 2006, King County's "Transit NOW" initiative would provide express, or bus rapid transit (BRT), service between Downtown, Crossroads and Overlake.

Since King County Metro provides the transit service, not the City of Bellevue, improvements in service and facilities (bus stops and shelters) require coordination between agencies. A recent example of such coordination is the "Crossroads In Motion" program. In the fall of 2005, Metro Transit teamed with the City of Bellevue, Hopelink and other local organizations to encourage healthier travel options like the bus, carpooling, bicycling and walking in the Crossroads neighborhood. One important element of Crossroads In Motion is the availability of Residential Transportation Coordinators (RTCs) — multi-lingual individuals trained and paid by King County Metro to help their neighbors find transportation solutions that work for them. The Bellevue RTCs all live or work in the Crossroads neighborhood, and speak several languages including: Spanish; Vietnamese; Korean; Mandarin/Taiwanese; Russian; French; and English. Please go to the Crossroads In Motion web site for more information: <http://www.metrokc.gov/kcdot/transit/inmotion/crossroads/index.htm>

How do the Crossroads Center Plan alternatives address transit service?

The Crossroads Center Plan alternatives, as discussed in the non-motorized section below, would enhance pedestrian access from the shopping center to the transit stops as redevelopment occurs, making transit more accessible. While Metro is responsible for providing transit service, the city could work with Metro and Metrovation (the Crossroads Shopping Center property owner) to explore options for transit access directly on the shopping center site. The city is also interested in whether the Microsoft shuttle could be expanded to connect to the shopping center. Development of additional uses at Crossroads would be able to take advantage of the transit service provided and would help support use of new transit options.

Non-motorized Transportation

Existing Facilities

The Crossroads area currently has a lot of pedestrians and bicyclists, in large part due to the amount of housing and proximity to neighborhood shopping, parks and recreation facilities, and good transit service. There are sidewalks along all the arterial streets and on some of the walkways on private shopping center and residential sites. However, large parking lots and existing landscaping sometimes acts as barriers between transit stops, the shopping center and other destinations. There have been fewer documented pedestrian accidents occurring in recent years, principally due to improved facilities and heightened awareness.

A completed project on 156th Avenue NE transformed the five-lane arterial with a two-way center left turn lane to one that functions better for pedestrians, bicycles and vehicles. The project provided new landscaped medians, u-turns, sidewalks, pedestrian crossings, landscape buffering along sidewalks, and public art. Accidents between

vehicles and conflicts with pedestrians have been reduced since the project was completed.

164th Avenue NE is a “primary” north-south bike route. Another primary north-south route is 140th Avenue NE, where bike lanes exist and traffic volumes are lower.

Pedestrian and Bicycle Transportation Plan

The City’s Pedestrian and Bicycle Transportation Plan (Ped/Bike Plan) provides citywide recommendations, which include better connections between the Crossroads Shopping Center and the Crossroads Park/Community Center as explored by the Crossroads Center Plan alternatives. The Ped/Bike Plan also call for additional pathways between 156th Avenue NE and 164th Avenue NE, and five-foot wide bike lanes on both sides of 164th Avenue NE between I-90 and NE 30th Street. Elsewhere, bicyclists share the roadway with vehicles, usually on a wider outside lane. The Ped/Bike Plan will be updated in 2007, and additional projects can be added to enhance non-motorized transportation Crossroads.

Neighborhood Walking Audit

In May, 2005 City staff and the pedestrian advocacy organization Feet First conducted a Neighborhood Walking Audit focused on the Crossroads shopping center site. The audit explored existing conditions and future possibilities and proposed changes to make it easier to get around Crossroads without a car. General recommendations included improving connections between the Shopping Center and the park, improving signage; improving walkways within and surrounding the Shopping Center; and improving transportation options in the neighborhood. As a result of that work, the city and the shopping center are jointly planning for a better pedestrian crossing at 160th Avenue at the Crossroads Community Center that should be constructed in 2007 (this will be a relatively small crosswalk improvement that is not at the scale of the pedestrian park connections considered by the three planning alternatives).

How do the Crossroads Center Plan Alternatives address pedestrian and bike circulation?

Each Crossroads Center Plan alternative proposes enhanced pedestrian and bicycle circulation on the shopping center site, between the shopping center and adjacent roads, and transit stops, and to Crossroads Park. Pedestrian and bicycle ways would be constructed through the existing expanses of surface parking as development occurs, allowing for more comfortable pedestrian and bicycle circulation and for more convenient access to transit stops. Improvements to the internal street system will be more accommodating to bicyclists and will have sidewalks that provide pedestrians with accessible routes, improving east-west and north-south connectivity.

Issues

- Traffic congestion and turning movements near Post Office on NE 8th Street.
- Incomplete sidewalk system between the street and the buildings on the Crossroads Shopping Center site and other smaller commercial centers.

- Need better pedestrian connections to transit stops from retail and housing, especially along 156th Avenue NE
- Weak pedestrian connections between the east side of the Crossroads Shopping Center and Crossroads Park and Community Center.
- Some accessibility gaps and some poor walkway design on the Crossroads Shopping Center site, and other smaller commercial centers
- Personal safety concerns due to low lighting levels and encroaching vegetation on some pathways east of the Crossroads Shopping Center, especially along the north side of the Park.

Opportunities

- Review turning movements on NE 8th at the Post Office and consider turn lane restrictions or working with the Post Office to reconfigure its on-site flow pattern.
- Improve the pedestrian flashing crosswalk on 156th Ave NE north of NE 15th St. This may include additional beacon warning lights or other considerations to make drivers more aware of pedestrians in the crosswalk.
- Improve the system of internal circulation/connection roadways within the Crossroads Shopping Center area over time as the Crossroads Shopping Center redevelops to increase pedestrian and bicycle access and comfort.
- Increased pedestrian and bicycle connections through the site and to transit stops should be developed.
- Look for opportunities to reduce the number of driveways along 156th Ave NE with redevelopment to enhance pedestrian and bicycle safety.
- Develop a sign program to assist pedestrians in finding their way throughout the Crossroads area and on the Crossroads Shopping Center site.
- Install more bicycle parking.

(These opportunities are in addition to existing ped/bike plans. In addition, the Crossroads Pedestrian and Bicycle Advisory Committee provided more detailed comments that should be referred to as projects are defined.)