A6

Green Urban Network

The TDIP identifies extending the green amenities of Fanno Creek throughout the Downtown as an important goal of Tigard residents. The new downtown will be book ended between the green of Fanno Creek and the commercial districts at Hwy 99W and Hall Blvd.

The future of Downtown Tigard will be to create a more dense urban fabric while also “greening” the urban network. The coexistence of higher building volumes with more green requires coordinated planning of green elements within streets, plazas, parks, businesses and housing.

The Downtown Streetscape Design Plan, developed in 2005/2006, provides a base level greening study for the existing downtown. In this chapter we further extend the concept of the green urban network within Tigard.

First, it is important to look at green streets, plazas, parking lots, roof tops, runoff retention and treatments, and other detailed elements in order to understand the potential role that each holds as part of extending the green into the City.

A6.1 Public Spaces

Parks

Fanno Creek Park serves as a green anchor providing a natural setting to contrast with the urban core. Extending the green eastward from the park along streets into the core will connect these two dimensions of Tigard: the natural watershed and the metropolitan hub. Fanno Creek also passes under Main Street, providing an opportunity to highlight the park and for a direct connection between it and the Downtown. This will be a crossroads for pedestrians and vehicles using Main Street, and hikers and cyclists using the Fanno Creek Trail. This connection will embody Tigard's philosophy of creating green space and should be seen as a major design opportunity in the Downtown.

Acquisition of additional public park space within the Downtown core will be limited due to the cost and available property. Yet "pocket parks" - small green spaces for meeting and resting- will greatly enhance the Downtown environment and encourage pedestrian movement. Businesses can be incentivized to help implement a network of publicly accessible pocket parks as a part of their landscaped areas.

Plazas

Public squares and plazas are not always necessarily green. In fact, in Europe there is a tradition of squares that are not green at all. When you look at piazzas an plazas in Southern Europe, such as Italy, Spain, and Greece, public squares are usually not green but they are surrounded by masonry buildings, and their surfaces are usually stone too. When we look at the Piazza Navona in Rome, Piazza d'Herbe in Verona, or the Main square in Athens, they are all without trees and green. In Northern Europe the picture is similar, but here we also find squares and market places, that are green or have green features, such as the square in the city of Cottbus in Eastern Germany.

Historically, many communities in the U.S. developed public spaces that were literally a square piece cut out of the general urban grid. Traditionally, these squares had park-like features with green lawns and trees. Plazas and squares that have developed later, such as Pioneer Courthouse Square in Portland don't always have these green features, but have other features and programmed events to attract people.

Tigard currently does not have a public plaza in the downtown area but wishes to create one near Main Street and connecting to Fanno Creek Park. The value of such a space is unquestionable. Acquisition and development of the required land will be a major project of significant expense. Such a space, however, will form an important element in extending the green from the park into the urban space.

A6.2 Streets

Pedestrian

In any downtown setting pedestrian access and safety are critical to the success of the business and community environment. Pedestrian access may be promoted through a variety of mechanisms. For example, curb extensions at mid-points and ends of blocks to provide clearly identifiable points of crossing; while pedestrian paths through built areas encourage walking by providing shorter paths between destinations. Well designed and maintained streets reduce the stress on pedestrians caused by automobile traffic, particularly in wet and rainy conditions.

Downtown Tigard provides a number of opportunities as well as challenges to pedestrian access. While relatively flat and small enough to be readily accessible, the presence of Hwy 99W, the railroad right of way, and the large size of the existing block structure, prevent efficient pedestrian movement. These barriers must be addressed through reduced block sizes or creation of publicly available intra-block pass ways as well as the use of pedestrian underpasses / overpasses across the railroad.

Cyclist

In April of 2008, the Portland Metro area was named as a "Platinum Cycling Friendly City" by the League of American Bicyclists. Cycling is an active part of the Portland Region and is associated with health benefits and reduced transportation costs while incurring relatively minor additional infrastructure costs.

The Downtown area of Tigard will see bicycle transportation used in three primary forms: as a destination for those traveling to and from work; as a pathway for cyclists moving through the Downtown space; and as a connecting point where the bicycle is used in conjunction with the other mass transit systems such as bus, light rail, and commuter rail systems.

In support of these uses the City will provide safe and friendly mechanisms and access for cyclists. Secure bicycle storage facilities should be provided at transit stops and at strategic points throughout the Downtown. Explicit bicycle pathways are valuable on larger arteries, while lesser streets are often best served by promoting shared use of the right of way. Street markings and roadside signage identifying cycle routes are particularly helpful in providing wayfinding for cyclists and increasing awareness amongst automobiles to their presence.

Automobile

Because of the pre-existing Downtown bypass of Hwy 99W, and the major arterial of Hall Boulevard, automobile traffic within the actual Downtown core will be composed primarily of destination travel to and from local destinations. Automobiles will serve both Downtown businesses and residential developments within the area.

To mitigate the infrastructure and environmental impact of automobiles, parking will be provided at strategic locations to convert the automobile users into pedestrian visitors as quickly and conveniently as possible. Public, easily accessed, parking in the vicinity of Downtown businesses will allow customers to visit multiple locations after parking once, thus reducing both traffic and parking requirements for each individual business.

On the other hand, Tigard does not wish to become merely a park-and-ride location for access to mass transit. Real estate within the Downtown core is too valuable to be devoted to the use of absent travelers. Mass transit access points should be designed such that they also provide access to local businesses as well. Thus, transit parking in conjunction with a grocery store at which a commuter may purchase a gallon of milk on the way home is a success; while one which requires that they get off a train, into a car, and drive on to a grocery store a mile further down the road, a failure.

In keeping with the concept of an automobile destination rather than thruway, Downtown streets will have a high number of traffic calming devices such as curb extensions and street hierarchy. Traffic within the core will be kept slow and local while encouraging pedestrian and bicycle safety, stopping and visiting businesses within the core, and in general providing a welcoming ambiance as an environment in which to work and live.

High Capacity Transit

High capacity transit will provide visitors with access to Downtown businesses and residents with transportation to jobs in the surrounding metropolitan area. Because of its position as an urban hub, it is important that infrastructure be designed to encourage interaction with surrounding businesses, parks and other Downtown amenities.

Encouraging businesses to locate closely to the high capacity transit stops, and providing high quality pedestrian pathways between the two, will help to promote using transit for shopping as well as commuting. Transit sites are excellent opportunities for urban artwork and green spaces, providing a welcoming environment and landmarks for wayfinding. Local businesses should also consider implementation of a transit "validation" program and a delivery system by which large purchases could be brought home with a minimum of difficulty.

A6.3 Streets

Bioswales

The urban landscape can be partially accomplished through the use of bioswales and street side plantings, as previously proposed in the Tigard Downtown Streetscape Design Plan. Over the past several years, the City of Portland has engaged in a highly successful program of green street and bioswale development through retrofitting existing streets and promoting business involvement in new streets and developments as well. The Tigard Downtown would do well to follow the same paths, simplifying, where possible, to fit the needs of the downtown.

In Tigard, storm water percolation is limited due to the low porosity of the underlying soil. Thus, bioswales are most useful for controlling runoff volumes and as a first line of storm water treatment between the urban landscape and the natural one of Fanno Creek.

Impervious & Pervious Water Collection

A variety of pervious pavements are available to help percolate storm water into the sub soil before it carries sediment and pollution into the primary drainage system. Because of the proximity of the Downtown core area to the Fanno Creek watershed, Tigard has a particular obligation to prevent oil and chemical deposits left by automobiles on hard surfaces from being carried into the creek by storm water runoff.

The most effective and least costly mechanism for reducing storm water pollution is natural filtration distributed throughout the collection area; however, because Tigard's undersoil is not highly porous, the City must create filtration systems and alternative storm water paths through bioswales and paving systems which avoid concentrating and channeling water directly into the creek, the Willamette River and on into the Pacific Ocean.

A6.4 Green Roofs

Green roofs have become a common and successful mechanism for reducing the environmental impact of urban areas. They moderate the thermal impact of the built environment by insulating the building itself and by reducing the heat island effect externally. Green roofs may provide accessible green spaces as patios or gardens. Furthermore, green roofs can provide a more attractive urban landscape when buildings are viewed from a height; such as is the case in Tigard where a common view of the downtown is from the raised Hwy 99W viaduct adjacent to the core.

Vertical Park

Providing green heights in the City and staggered terraces rising from the urban plain; green roofs create vertical parks, softening the skyline and welcoming visitors. The rooftop garden of Portland's Eco Trust building is an example of a popular location for a variety of events and weddings.

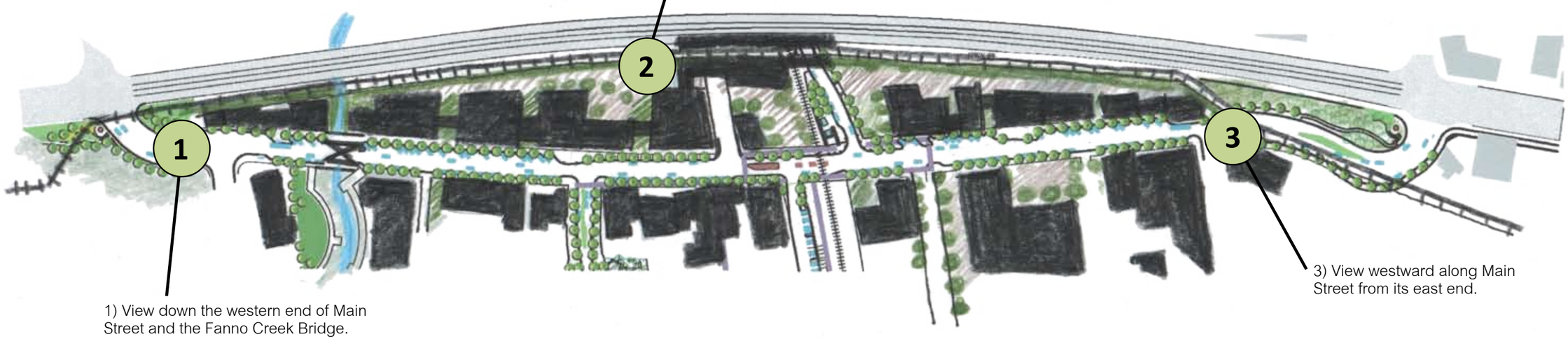
Green Wall

In addition to green roofs, green walls can be used to mitigate thermal issues. Deciduous plants are advantageous as shading devices because they naturally increase and decrease shading with the changing seasons. The ivy shown on the Capital Hill Branch Library in Seattle climbs a projecting screen to keep it away from the masonry wall behind. Windows project through the ivy and provide window seats for readers.

A6.5 Green Street Focus Studies

Images on the following pages help to visualize the future, green Tigard Downtown. Three viewpoints are used to highlight differing elements and design alternatives along Main Street.

2) The Backstreet Service/Pedestrian corridor providing connections between Main Street, the high capacity transit line along the edge of the Hwy 99 Viaduct, and proposed parking structures underneath the viaduct.



1) View down the western end of Main Street and the Fanno Creek Bridge.

3) View westward along Main Street from its east end.

A6.5.1 Main Street Focus Area

Drawing 1a

This alternative shows the south entrance to Main Street at the crossing of Fanno Creek. The proposed bridge over Fanno Creek of the TDIP shows the possibility using the bridge design as an entrance landmark to the Downtown. It would be a pedestrian crossing, a lighted viewing platform of the creek with a passageway for vehicles entering a new Main Street.

Main Street has been planted with columnar type trees with on street parking staggered between. The view includes 7-foot wide sidewalks, crosswalks with special patterns at selected points and in special seating areas.

Drawing 1b

This alternative shows the south entrance to Main Street at the crossing of Fanno Creek. The proposed bridge over Fanno Creek of the TDIP shows the possibility using the bridge design as an entrance landmark to the Downtown. It would be a pedestrian crossing, a lighted viewing platform of the creek with a passageway for vehicles entering a new Main Street.

Main Street has been planted with spread canopy type trees with on street parking staggered between. The view includes 7-foot wide sidewalks, crosswalks with special patterns at selected points and in special seating areas.

A6.5.2 Back Street Pedestrian/Service Green Corridor

Drawing 2a

In this future alternative, the existing embankment and Hwy 99W viaduct has been replaced to allow for expanded Downtown development and improved connections.

In this future possibility, Hwy 99W has been turned into a transit corridor built over a limited amount of parking and new building development. Areas of existing natural vegetation have been retained for water retention functions and pedestrian connections. A lane between the new structure and the backs of existing Downtown buildings would serve pedestrian movement as well as service needs.

Drawing 2b

In this alternative, more of the existing embankment and its vegetation would be retained to create a continuous green parkway along Hwy 99W connecting with the south entrance of town. A pedestrian tunnel on the right would connect pedestrians to west side neighborhoods.

Drawing 2c

In this future alternative, the existing embankment and Hwy 99W viaduct has been rebuilt to allow for both new and rehabilitated 2-3 story buildings Downtown development and improved connections. A pedestrian connection would be carried over the alley corridor via a pedestrian bridge that would step down to historic Main Street and directly connect to a new transit station at the existing Hwy 99W level.

A6.5.3 East Main Street

Drawing 3a

At the east end of Main Street the existing park has been expanded with wider sidewalks lined with bioswales. Additional tree plantings and new 1-2 story buildings on both sides carry the eye into the historic Main Street.